Welcome to the Online Environmental Procedures Manual

Welcome to the Georgia Department of Transportation's Environmental Procedures Manual. This manual will provide the project team (both environmentalists and design engineers) with adequate information so that projects can be developed in compliance with applicable federal and state environmental laws. Adherence to the procedures outlined in this manual will assist in developing uniform, complete and quality environmental documents.

Environmental analysis is a critical element of determining how a project should be developed – environmental impacts are factored into the decisions made. The environmental document also publicly discloses this decision-making process. The manual approaches project advancement through an interdisciplinary effort requiring the involvement of a full complement of team members. Collaboration and communication amongst all team members (environmental and design) are critical for the successful advancement of a project. This manual cannot replace project team interaction.

The manual is divided into 11 chapters covering the range of required activities. Topics covered include a glossary of commonly used terms, early project activities, field surveys for environmental resources, assessment of project impacts, agency consultations, required documentation and local government responsibilities.

While many of these activities can occur concurrently, there are certain dependencies embedded in the process – specific activities that cannot proceed without the work of another team member being complete. For example, the design team cannot develop an alternative that minimizes harm to environmental resources until the findings of field surveys have been transmitted to the Project Manager. Similarly, the environmental team cannot assess project impacts and begin agency consultations until receipt of the least damaging alternative.

If you have any questions or comments concerning this manual, Gail A. D'Avino can be reached at 404-631-1075 or gdavino@dot.ga.gov.

Regards,

Glenn Bowman, P.E.
State Environmental/Location Engineer

CHAPTER I – INTRODUCTION

1.0 Purpose

Environmental analysis is part of determining how a project should be developed – environmental impacts are factored into the decisions made. The overarching law for federal-aid projects, the National Environmental Policy Act (NEPA), requires federal agencies to consider the impacts of their actions on the environment and the public disclosure of environmental impacts before project decisions are made. The NEPA document should not be written to defend a project decision that has already been made. Environmental concerns must be factored into decisions made as a project is developed and advanced. The NEPA document also publicly discloses the decision-making process.

The NEPA requires compliance with a variety of environmental laws, regulations and executive orders. This multi-disciplinary approach requires a project team with expertise in a number of environmental disciplines. Consultations with a variety of environmental agencies also are required. *Thus, **collaboration** and **communication** amongst all team members (environmental and design) are critical for the successful advancement of a project.* This manual cannot replace project team interaction.

The Georgia Environmental Policy Act (GEPA) must be complied with for state-aid projects. Several federal environmental laws concern federal actions (and not merely federal funds) so the Project Manager (PM) and local government sponsors should check with the Office of Environmental Services to determine which federal requirements apply to state-funded projects.

This manual will provide the environmental analyst and the PM with ample information so that projects can be developed in compliance with applicable federal and state laws. The information provided will aid in developing uniform and quality documents.

Use of this manual by project development staff will ensure document consistency, quality, and completeness throughout the project development phase. The procedures and documentation requirements provided herein, will fully meet the requirements of NEPA and other related federal and state laws, rules, and regulations. Use of this manual should expedite projects from preliminary engineering through construction by providing guidance for sound practices, procedures, and decisions. The manual approaches the environmental process through an interdisciplinary team approach as required by NEPA and the Council on Environmental Quality (CEQ).

The interdisciplinary approach combines the strengths of engineering with the findings of the natural and social science disciplines throughout project development. With this approach, a sound and needed public works project will serve the needs of the community and ensure that the public has access to the transportation decision-making process at the project level.

This manual contains sections that describe in detail the process by which transportation projects should be developed by the Georgia Department of Transportation (GDOT) and their consultants. Each section provides the environmental analysts with an understanding of the project development process and its

requirements including agency coordination, situational solutions, technical assistance with engineering and environmental documentation, and public involvement. Links are provided to document templates throughout this manual. A general link to document libraries (organized by discipline) also can be used.

Local governments preparing documents for Transportation Enhancement (TE) projects (funding codes C220, L220, Q22, or 33B) and Congestion Mitigation and Air Quality (CMAQ) projects (funding code L400) should refer to Chapter XI of this manual for procedures specific to these two project types.

Environmental analysis does not end with the approval of the NEPA document. Issues such as project changes must be considered as project development advances. Local government sponsors should retain the services of an environmental team throughout project development.

2.0 Authority

Official Code of Georgia Annotated (OCGA), Title 32 – Highways, Bridges, and Ferries, also known as the Georgia Code of Public Transportation states "the department shall be the state agency to receive and shall have control and supervision of all funds appropriated for public road work by the state and activities incident thereto . . . ."

The Plan Development Process (PDP) "sets forth the current procedures and steps necessary for the GDOT to administer federal-aid projects in accordance with the policies and objectives of Titles 23, 40, and 42 United States Code, and to administer state-aid projects to fulfill the policies and objectives of Title 32, Official Code of Georgia Annotated."

3.0 Scope (User)

Although this manual can be used and referenced by any entity interested in the environmental documentation process, it is intended to provide guidance to those who prepare and review environmental documents for GDOT projects.

4.0 Quality Control/Quality Assurance (QC/QA)

4.1 Introduction

Georgia DOT's environmental technical reports and documents provide information and analysis critical to project delivery, team decisions, environmental document preparation, and public input. Careful, consistent, and concise Quality Control and Quality Assurance (QC/QA) procedures allow GDOT to provide information effectively, respond to public and state/federal regulatory agency inquiries, and fulfill environmental responsibilities pursuant to state and federal environmental laws and regulations. The GDOT Office of Environmental Services is ultimately responsible for ensuring that each technical report and document is prepared by a qualified subject matter expert (SME), uses standard formats and content, and meets applicable policies and regulations. Consultants are expected to have internal QC/QA protocols to ensure that their environmental reports and documents are of the highest quality prior to submittal to GDOT. The ultimate goal of rigorous QC/QA is to "get it right the first time," and GDOT strives to meet that goal on every project in partnership with consultants.

4.1.1 Quality Control (QC)

Quality Control (QC) refers to daily processes, practices, and checks in place to control the quality of environmental field work and technical reports and documents.

4.1.2 Quality Assurance (QA)

Quality Assurance (QA) refers to the higher level review of technical reports and documents after the SME QC review.

4.2 Qualifications of subject matter experts (SMEs)

A SME must have two years of experience working in the appropriate field as described below. Newer staff may perform the work if they are closely supervised by a SME.

4.2.1 NEPA professionals

Georgia DOT and consultant NEPA staff will conduct field work and prepare documents in compliance with NEPA as well as GEPA. All NEPA SMEs must possess a combination of skills, experience, and training that meet the standards noted below. The minimum amount of training is identified in the GDOT training matrix.

National Environmental Policy Act SMEs will have a Bachelor's degree in a related field and experience in preparing documents in compliance with NEPA and GEPA. They will possess an understanding of the requirements of NEPA and GEPA as well as an understanding of the GDOT Plan Development Process (PDP). They also will possess competencies in the areas of Section 4(f) of the USDOT Act, Environmental Justice, Indirect & Cumulative Impact analysis, and assessing project effects on communities. They will have the ability to read and interpret project maps and plans.

4.2.2 Cultural resource professionals

Georgia DOT and consultant cultural resource staff will conduct field work and prepare cultural resource technical documents. All cultural resource SMEs must possess a combination of skills, experience, and training that meet the standards noted below. The minimum amount of training is identified in the GDOT training matrix.

Cultural resource SMEs will have experience in preparing documents in compliance with federal and state cultural resource laws. They will have a Bachelor's or Master's degree in keeping with the Secretary of Interior Qualification Standards.

Cultural resource professionals must possess an understanding of the requirements of federal and state cultural resource laws, including but not limited to the National Historic Preservation Act and Section 4(f) of the USDOT Act. This includes competencies in identifying National Register eligible resources as well as assessing project effects. They also will possess an understanding of the GDOT PDP and the ability to read and interpret project maps and plans.

4.2.3 Ecologists

Georgia DOT and consultant ecological staff will conduct field work and prepare ecological technical documents. All ecology SMEs must possess a combination of skills, experience, and training that meet the standards noted below. The minimum amount of training is identified in the GDOT training matrix.

Ecology SMEs will have a Bachelor's degree in a related field and experience in preparing documents in compliance with federal and state natural resource laws. They will possess an understanding of the requirements of federal and state laws concerning ecological resources, including but not limited to the Clean Water Act, the Endangered Species Act, the Migratory Bird Treaty Act, and the Georgia Erosion and Sedimentation Act. They also will possess an understanding of the GDOT PDP and the ability to read and interpret project maps and plans.

Ecology SMEs will possess competencies in delineating jurisdictional waters of the US and state buffered waters. They also will possess competencies in identifying protected species and their habitats. Additional competencies in assessing project effects also are required.

4.2.4 Noise specialists

Georgia DOT and consultant noise staff will conduct field work and prepare noise assessment technical documents. All noise SMEs must possess a combination of skills, experience, and training that meet the standards noted below. The minimum amount of training is identified in the GDOT training matrix.

Noise SMEs will have a Bachelor's degree in a related field and experience in preparing documents in compliance with federal noise assessment requirements. They will possess an understanding of the requirements of 23 CFR 772 (Procedures for Abatement of Highway Traffic Noise) and GDOT's Working Guideline for Highway Noise Barrier Construction, as well as an understanding of the GDOT PDP. They will have the ability to read and interpret project maps and plans.

Noise SMEs will possess competencies in assessing projects using FHWA's Traffic Noise Model (TNM), taking existing noise readings, assessing project effects and evaluating the reasonableness of abatement.

4.2.5 Air quality specialists

Georgia DOT and consultant air quality staff will conduct field work and prepare air quality assessment technical documents. All air quality SMEs must possess a combination of skills, experience, and training that meet the standards noted below. The minimum amount of training is identified in the GDOT training matrix.

Air quality SMEs will have a Bachelor's degree in a related field and experience in preparing documents in compliance with federal air quality regulations. They will possess an understanding of the requirements of the Clean Air Act, as well as an understanding of the GDOT PDP. They will have the ability to read and interpret project maps and plans.

Air quality SMEs will possess competencies in assessing project effects using FHWA's Cal3QHC and MOVES models.

4.3 Document preparation and QC requirements

Georgia DOT QC requires all environmental studies, technical reports and documents to utilize previously established methodologies, templates, scope-of-work, and style/format guidance found in this procedures manual. Where a document template is not available, consultant SMEs should contact

the GDOT environmental staff for further guidance. The technical report or document should present the study findings in a logical manner and not contain contradictory information.

Individuals performing QC reviews must be intimately familiar with GDOT's Environmental Procedures Manual; SMEs functioning in a QC role also must successfully complete training as outlined in the GDOT training matrix.

All studies, reports, and documents must undergo several QC reviews. The first QC review is the responsibility of the SME who conducts the study and prepares the document. A second review is performed by a SME who did not perform the work. The second review must confirm that the technical report or document accurately presents the study findings and meets all current requirements. The work product also must be reviewed for spelling, grammar, and formatting.

For technical reports and NEPA documents prepared by consultants, a second consultant SME who did not prepare the report or document will provide the QC review. For technical reports and NEPA documents prepared by GDOT's Office of Environmental Services, the preparer's Team Leader will provide the second QC review. For NEPA documents prepared by district environmentalists, a GDOT environmental Team Leader or Manager will provide the second QC review. District design staff also will provide a review to ensure that the analyses contained in the document matches the proposed project.

For technical reports, analysts preparing NEPA documents essentially provide a third QC review. They must confirm that information being discussed in the NEPA document is consistent with the supporting study, even if they did not author the supporting study. They must question the results of the supporting study if it is not consistent with what is known about the project or about the discipline. They also must ensure that the various sections of the NEPA document are consistent and do not present contradictory information.

All project teams including GDOT environmental staff, consultants, and local governments, must strive to submit high quality technical documents that can be approved after the QC review on the first submission. Subject Matter Experts are professionally responsible for the content and quality of the studies, reports and technical documents submitted. A sloppy presentation calls into question the substantive quality of the evaluations being presented.

4.4 Document submission and QA requirements

Prior to the submittal of a technical report or document to a review agency, an independent reviewer who serves as a "cold reader" to ensure that the information is presented in a logical and coherent manner must perform a Quality Assurance (QA) review. The QA reviewer need not be a SME, but a representative that initially responds to issues about the product in question. The QA review ensures that the document meets all procedural and regulatory requirements pursuant to GDOT's Environmental Procedures Manual and regulatory requirements set forth in state and federal laws and regulations.

For technical reports and documents prepared by consultants, a minimum of one QA review will be provided by either the GDOT environmental office Team Leader, Manager, or Assistant State

Environmental Administrator, or a (different) consultant assignee pre-approved by GDOT. For environmental technical reports and documents prepared by GDOT environmental staff, the QA review will be performed by the Manager and or an Assistant State Environmental Administrator.

Upon completion of review, the QA reviewer may request that the SME preparer make additional document revisions in order to bring the technical document up to GDOT and state/federal agency standards. The SME will make the necessary revisions and/or meet to discuss the comments with the QA reviewer. The SME will make necessary revisions and, in the case of consultant reports and documents, submit the revised document for internal QC and QA review prior to resubmitting to GDOT. After receiving final QA approval from the appropriate party noted above, the document will be ready for submission to state/federal agencies. Additional revisions may be necessary based on comments from state/federal agencies, in which case the same QC/QA review process will need to be repeated.

4.5 Consultant prepared environmental technical reports and documents submitted to GDOT

4.5.1 Georgia DOT review

All environmental technical reports and documents will be submitted to the GDOT NEPA analyst assigned to the project and must include the QC/QA review sheet consistent with guidance. Consultant reports and documents will not be circulated or reviewed without this sheet. The information presented on the QC/QA review sheet must include the name and contact information of the SME preparing the document and the QC and QA reviewers overseeing the work. Overall the QC/QA review sheet must detail the complete administrative record of the environmental report or technical document that is being submitted.

Depending on work schedules, the GDOT environmental staff may perform or assign the QA review of consultant technical documents to a pre-approved (different) consultant assignee. A consultant assignee will review the quality and content of consultant technical documents on behalf of the GDOT environmental staff. The GDOT environmental staff reserves the right to conduct additional review of any technical document reviewed by a consultant assignee on a case-by-case basis and will perform a periodic audit of all QA reviews to ensure compliance with applicable laws and GDOT policies.

Any deficiencies, corrective measures, or related correspondence must be documented and retained in the project file until final document approval at which time all working drafts will be destroyed. The consultant is responsible for addressing all GDOT comments (if required) associated with the environmental report or document and for preparing a separate attachment detailing how the comments were addressed prior to resubmitting the document to GDOT for additional review.

4.5.2 Resolution of technical document disagreements and inadequate QC/QA

Environmental technical reports and documents will not be circulated for further state/federal agency review and consultation until all comments have been addressed. Disagreements over review comments at staff level will be brought to the attention of the GDOT environmental Team Leader or Manager and consultation to resolve the disagreement will be completed within the GDOT/consultant arena. If resolution cannot be reached after consultation, the Assistant State Environmental Administrator, GDOT personnel, consultant personnel, and client personnel (e.g., local governments) will

be notified of the disagreement. Additional face-to-face meetings may be scheduled to resolve the disagreement or GDOT environmental staff will forward the technical document to state/federal agencies for review and consultation with correspondence noting the subject of the GDOT disagreement with the consultant technical report or document.

Technical documents requiring more than two QA reviews by GDOT environmental staff or consultant assignees will be brought to the attention of the Assistant State Environmental Administrator and a face-to-face meeting will be scheduled with GDOT personnel, consultant personnel, and client personnel to correct the deficiencies on the subject submittal and provide guidance for future submittals.

4.5.3 GDOT acceptance of consultant technical documents

An environmental Team Leader, Manager or an Assistant State Environmental Administrator (or approved consultant assignee) will carefully review as needed the consultant descriptions, determinations, intended actions, effects findings, commitments, and staff review comments in association with GDOT applicable standards and policies. Upon concurrence, the environmental Team Leader, Manager or an Assistant State Environmental Administrator will sign the transmittal letter as an approval (unless otherwise noted) for use in further state/federal agency review and consultation. This will also serve as an acknowledgement of any GDOT obligations contained within the technical document for these purposes. As required, additional QC/QA and document changes may be needed after state/federal agency review and consultation.

4.6 Common issues with QC/QA review

4.6.1 Common omissions

1. The plans being analyzed during the environmental process do not match the plans being authorized for right-of-way (ROW) and construction funds. Each team member must utilize the same plans and project information when conducting their studies.
2. All technical reports and documents not prepared in accordance with the most current regulations and methodologies. If changes to the regulations have occurred since the study began, the study must be updated prior to submittal of the NEPA document to the federal agency for approval. If methodologies have changed, the preparer must discuss the change with environmental Team Leaders and Managers as well as agency personnel to determine if the study must be redone.
3. Appropriate agency consultations not conducted.

4.6.2 Additional common errors

1. Unsubstantiated conclusions,
2. Lack of consistency between sections,
3. Lack of consistency between text and table,
4. Lack of consistency between the plans and the cultural resource analysis,
5. Details discussed in text not displayed on graphics (ROW limits, survey corridor, etc.),
6. Sections missing,

7. Statements not in keeping with GDOT policy statements (e.g., definitions of substantial noise impacts, commitments for Conditions for No Adverse Effect),
8. Statements not in keeping with regulations (e.g., buffer variance not required since encroachment is the result of a perpendicular crossing, ineligible evaluations for archaeological sites when the site has not been fully delineated outside the project),
9. Statements not in keeping with federal agency policy (e.g., not addressing all three aspects of logical termini, not adhering to FHWA's 4(f) policy paper),
10. Graphics and/or table not cited in the narrative,
11. Inconsistent style (e.g., capitalization convention, acronym use, change in font type/size, "Department" v. "GDOT"),
12. Not defining terms not used by the general public,
13. Not spell-checked,
14. Incorrect grammar,
15. Comments in previous review not addressed.

5.0 Plan Development Process (PDP) overview and timing of environmental activities

The PDP establishes the process by which a project advances from concept development through final design. The two major phases of the PDP are Preliminary and Final Design. Preliminary Design begins with concept development and culminates in the completion of ROW plans. Final Design results in the completion of construction documents suitable for letting. Right-of-way acquisition occurs concurrently with Final Design.

The environmental document is prepared during Preliminary Design as project decisions are being made. According to 23 CFR 771.113, final design activities and ROW acquisition cannot commence until the NEPA document has been approved.

During concept development, environmental resources (except archaeological resources) should be identified. These include

- Historic resources and their boundaries,
- Non-historic Section 4(f) resource boundaries (publicly owned parks, recreation areas, wildlife and waterfowl refuges),
- Jurisdictional Waters of the US (wetlands, streams, and open waters),
- Vegetative buffers (25 feet for warm water streams and state waters, 50 feet for cold-water trout streams),
- Cemeteries,
- Threatened and Endangered species and their habitat,
- Community facilities.

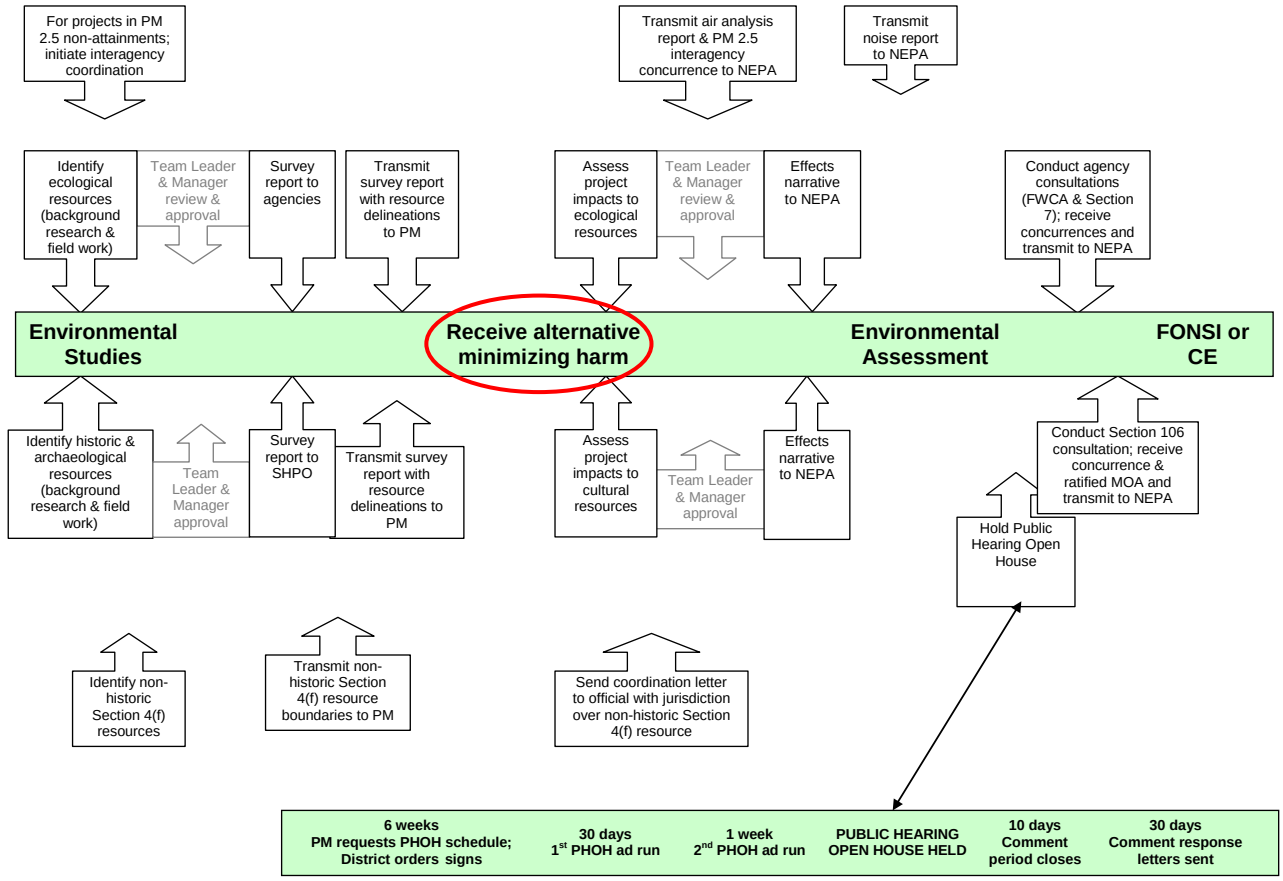
A public involvement strategy also should be developed during the concept phase to ensure that the public, including environmental justice communities, are appropriately engaged during the decision-

making process. Public involvement is critical as decisions are made concerning the expenditure of public funds. Major projects may require a stand-alone Public Involvement Plan.

Once a preliminary alignment has been developed, archaeological resources can be identified. Once the project centerline has been established, the noise analysis can commence.

Environmental resources identified during the concept development and any time thereafter should be considered when developing/designing a project. Various environmental laws require that every effort be made to avoid and/or minimize harm to environmental resources. A timeline is shown below.

Timeline of NEPA activities for CEs and EA/FONSIs



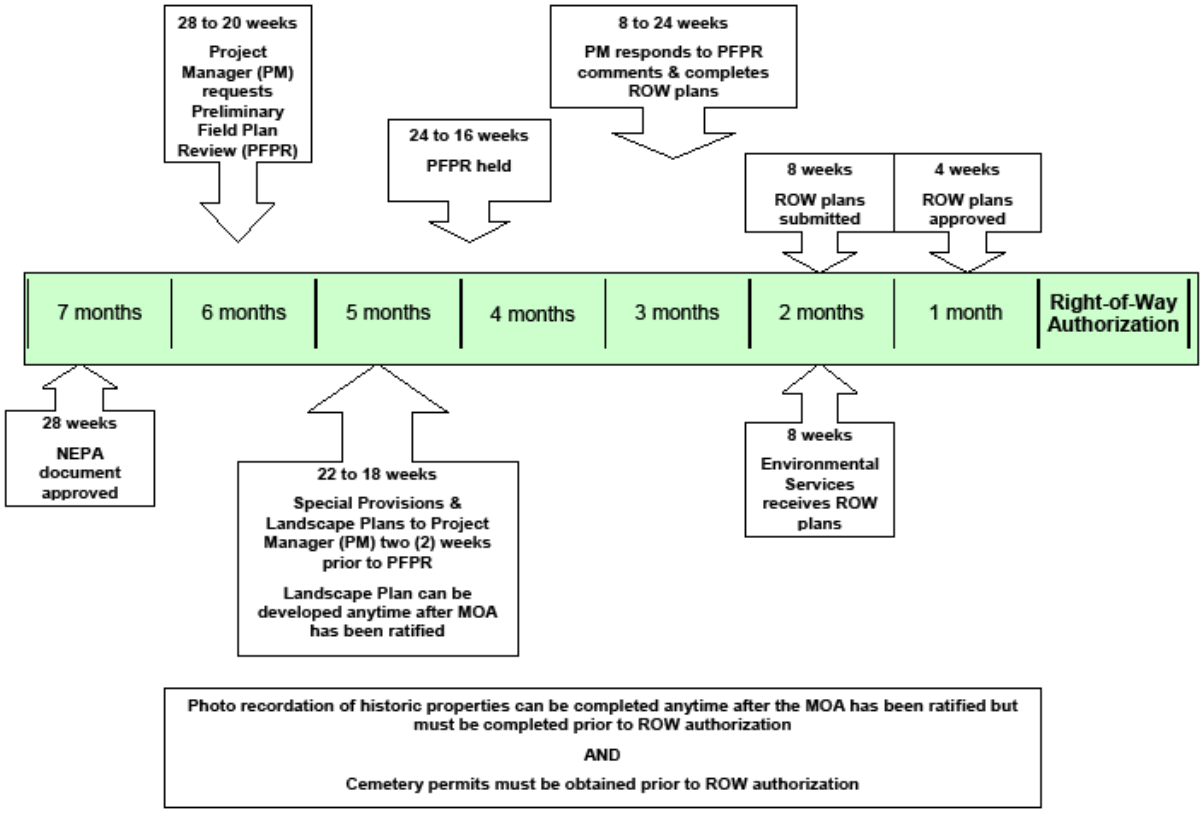
The PM should ensure that all environmental resources are shown on project displays and plans as soon as possible to ensure that the design team (e.g., roadway, bridge, utilities) can make every effort to avoid or minimize harm. When the project cannot avoid an identified resource, the designer must coordinate with the NEPA analyst to develop the most desirable alternative that meets all design criteria. A design exception or variance may be applicable in some situations to minimize environmental impacts. Once the most desirable alternative is developed, one that weighs and balances environmental impacts with solving the transportation problem expressed by the project's purpose and need, the environmental team members will assess project impacts and conduct the appropriate agency consultations.

Environmental approvals are valid until the project footprint changes or impacts to environmental resources change (e.g., the extension of a culvert within the ROW). Any project change considered must be coordinated with the NEPA analyst to evaluate the need for and timely completion of environmental reevaluations.

The project team must consider all issues before making a change to the project. *Again, **collaboration** and **communication** amongst all team members (environmental and design) are critical for the successful advancement of a project.*

The environmental team should strive to have the NEPA document approved seven months prior to the scheduled date for ROW authorization to allow the design team adequate time to prepare for and hold the Preliminary Field Plan Review (PFPR) and to finalize ROW plans. The project team should be mindful of the scheduled date to request the PFPR. Major plan changes resulting from the PFPR jeopardize the scheduled ROW authorization date. Please see below for a timeline of environmental activities needed prior to ROW authorization.

Project development activities prior to ROW authorization



When seeking a major authorization (i.e., ROW or construction), the environmental document also must be reconsidered. The approval must match the project plans prior to the Federal Highway Administration (FHWA) granting the authorization. So if changes have been made since the last NEPA

approval, a reevaluation will be needed. Please keep in mind that if new regulations have been enacted or if environmental studies are not current, studies may need to be updated before the next federal authorization can occur.

6.0 Maintenance and availability of this manual

The GDOT's Office of Environmental Services maintains this manual. Copies of the manual can be found on GDOT's ROADS webpage.

7.0 Amendments

As needed, amendments to this manual will be adopted and posted on the website. Revisions will be noted at the front of this manual. It will be the user's responsibility to utilize the most current version of this manual.

Users can be added to an email list for notification of changes or updates to manuals posted on the "Design Policies, Guidelines and Procedures" section of the ROADS webpage. Updates for this Environmental Procedures Manual will be included in these notifications.

8.0 Training

To be determined and scheduled in the future.

9.0 Style Guide

A style guide has been developed to ensure consistent usage of common terms. Since style has been pre-established, reviewers will be able to focus on substantive issues.

10.0 Glossary of Acronyms

Below are common acronyms used throughout this manual. Definitions for these terms can be found in Section 11.0.

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AOE	Assessment of Effects
APE	Area of Potential Effect
ARPA	Archaeological Resource Protection Act
ATIS	Advanced Traveler Information Systems
ATMS	Advanced Traffic Management Systems
BA	Biological Assessment
BO	Biological Opinion
CA	Certification Acceptance
CAA	Clean Air Act
CAC	Citizens' Advisory Committee
CE or CatEx	Categorical Exclusion
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response Compensation and Liability Act of 1980, as

	amended
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CO	Carbon monoxide
CR	Cultural Resources
CSD/CSS	Context Sensitive Design/Context Sensitive Solutions
CWA	Clean Water Act
CWP	Construction Work Program
DEIS	Draft Environmental Impact Statement
DHV	Design Hour Volumes
DJW	Description of Jurisdictional Wetlands
DNR	Department of Natural Resources
DOE	Request for Determination of Eligibility
DOI	United States Department of the Interior
EA	Environmental Assessment
EAOE	Ecological Assessment of Effects
EER	Environmental Effects Report
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EPD	Environmental Protection Division
ESA	Endangered Species Act, 1973
ESA	Environmentally Sensitive Area
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FFPR	Final Field Plan Review
FHWA	Federal Highway Administration
FOIA	Freedom of Information Act
FONSI	Finding of No Significant Impact
FOS	Full Oversight Project
FPR	Field Plan Review
FRA	Federal Rail Administration
FTA	Federal Transit Administration
FWCA	Fish and Wildlife Coordination Act
FY	Fiscal Year
GDOT	Georgia Department of Transportation
GEPA	Georgia Environmental Policy Act of 1991
GIS	Geographic Information Systems
GPS	Global Positioning System
GRIP	Governor's Road Improvement Program
GRTA	Georgia Regional Transportation Authority
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HOV	High Occupancy Vehicle
HPD	Historic Preservation Division
HUD	Department of Housing and Urban Development
IJR	Interchange Justification Report

IMR	Interchange Modification Report
IP	Individual Permit
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation System
JCP	Joint Coordination Procedures
JPN	Joint Public Notice
L&D	Location and Design Approval
LCP	Local Coordination Procedures
LGPA	Local Government Project Agreement
LOS	Level of Service
MOA	Memorandum of Agreement
MOG	Manual of Guidance
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriations Act
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NHS	National Highway System
NOD	Notice of Decision
NOX	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System Permitting Program
NPS	National Park Service
NR	National Register of Historic Places
NRCS	Natural Resources Conservation Service
NWP	Nationwide Permit
O3	Ozone
OCGA	Official Code of Georgia Annotated
ORR	Open Records Request
P&N	Purpose and Need
P&P	Policies and Procedures
PA	Programmatic Agreement
PAR	Practical Alternatives Review
PCN	Pre-Construction Notification
PDP	Plan Development Process
PE	Preliminary Engineering
PFPR	Preliminary Field Plan Review
PHOH	Public Hearing Open House
PIF	Property Information Form
PIOH	Public Information Open House
PM	Particulate Matter
PM	Project Manager
$PM_{2.5}$	Fine Particulate Matter
PMA	Project Management Agreement
PNRC	Project Nomination Review Committee
PPG	Plan Presentation Guide

PPM	Parts Per Million
PS&E	Plans, Specifications, and Estimates
RDC	Regional Development Center
RFP	Request for Proposal
RFQ	Request for Qualifications
ROD	Record of Decision
ROW	Right-of-way
RP	Regional Permit
RTP	Regional Transportation Plan
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SHIP	State Highway Improvement Plan
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SOP	Standard Operating Procedure
SOV	Single Occupancy Vehicle
SOW	Scope of Work
SR	State Route
STIP	State Transportation Improvement Program
STURAA	Surface Transportation and Uniform Relocation Assistance Act of 1987
T&E	Threatened and Endangered Species
TCM	Transportation Control Measures
TCP	Traditional Cultural Property
TDM	Travel Demand Management
TE	Transportation Enhancement Activity
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TMA	Transportation Management Association
TOPPS	Transportation Online Policy and Procedure System
TSM	Transportation Systems Management
USACE	US Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USNMFS	United States National Marine Fisheries Service
VE	Value Engineering
VPD	Vehicles Per Day

11.0 Common terms defined

Advanced Traveler Information Systems (ATIS) – The ATIS portion of Georgia's Transportation Management System (TMS) allows the dissemination of information to the traveler so that intelligent decisions can be made; the Georgia Department of Transportation's (GDOT) goal is to have that information updated almost instantly on a 24-hour per day basis. See also Intelligent Transportation System (ITS).

Advanced Traffic Management Systems (ATMS) – The ATMS portion of Georgia's Transportation Management System (TMS) is designed to gather information allowing the GDOT to detect problems, verify their existence, and respond with the proper solutions; it does so in real time. See also Intelligent Transportation System (ITS).

Advisory Council on Historic Preservation (ACHP) - An independent federal agency that provides guidance for federal activities, programs and policies as they affect historic properties.
www.achp.gov

American Association of State Highway and Transportation Officials (AASHTO) – A nonprofit, nonpartisan, national organization that advocates transportation related policies and provides technical services to support the states; AASHTO represents highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico.

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Annual Average Daily Traffic (AADT) – A convention for measuring traffic volumes; the average of a yearlong traffic count that includes weekend traffic.

Archaeological Resource Protection Act (ARPA) Permit - 16 USC 470Hh. Passed in 1979, and its 1988 amendments, ARPA prohibits the professional excavation and removal of archaeological resources on federal and tribal lands without a permit issued by relevant land management agencies. Permits for excavation and removal are site specific and require approval of a technical research design or treatment plan prepared by a qualified applicant.

Area of Potential Effect (APE) - The area in which effects may occur to environmental resources.

Assessment of Effects (AOE) - Document prepared in compliance with Section 106 of the National Historic Preservation Act (NHPA) and submitted to the Historic Preservation Division (HPD) of the Georgia Department of Natural Resources (DNR) and the Federal Highway Administration (FHWA). It discusses the effects of the implementation of the proposed project to historic and archaeological resources that are listed in or determined eligible for listing in the National Register of Historic Places (NR). This document requires concurrence of the State Historic Preservation Officer (SHPO).

Attainment Area – An area considered to have air quality that meets or exceeds the US Environmental Protection Agency (USEPA) health standards used in the Clean Air Act (CAA). An area may be in attainment for one pollutant and a non-attainment area for others. Non-attainment areas are areas considered to not have met these standards for designated pollutants.

Authorization of a project - The process by which funds are approved for various stages of a project's development, such as preliminary engineering (PE), right-of-way (ROW) authorization, or construction.

Average Daily Traffic (ADT) – A convention for measuring traffic; the average number of vehicles passing a fixed point in a 24-hour timeframe (weekday).

Biological Assessment (BA) – Document prepared in compliance with formal Section 7 of the Endangered Species Act (ESA) and submitted to US Fish and Wildlife Service (USFWS) discussing potential impacts to protected species.

Biological Opinion (BO) – The US Fish and Wildlife Service (USFWS) response to a Biological Assessment (BA); lists conditions needed for a project to proceed.

Carbon monoxide (CO) - A colorless, odorless, tasteless, poisonous gas that impedes oxygenation of blood; it is produced by incomplete burning of carbon-based fuels, including gasoline, oil, and wood.

Categorical Exclusion (CE or CatEx) – A determination made under the National Environmental Policy Act (NEPA); a CE demonstrates that the proposed action will not individually or cumulatively have a significant environmental effect. According to 23 CFR 771.115(b), a CE is a Class II action.

Certification Acceptance (CA) - The procedure authorized by 23 USC 117(a) for state administration of federal-aid projects.

Citizens' Advisory Committee (CAC) – Representative group of stakeholders that meets regularly to discuss project issues of common concern. Citizens' Advisory Committees are project specific and meet to provide input on project decisions.

Clean Air Act (CAA) – 1970 comprehensive federal law that regulates air emissions from area, stationary and mobile sources. It authorizes the US Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public, health and the environment.

Clean Water Act (CWA) – Congress enacted the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA). The Act established the basic structure for regulating discharges of pollutants into the waters of the United States. Many Georgia Department of Transportation (GDOT) projects require permits pursuant to Section 404 of this act.

Coast Guard (USCG) – Agency within the Department of Homeland Security that ensures the safe transportation of America's waterways and the protection of the marine environment.

Code of Federal Regulations (CFR) – Publication of codified federal regulations.

Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended (CERCLA) – Provides for liability, compensation, clean-up and emergency response for hazardous substances released into the environment and the clean-up of inactive hazardous waste disposal sites.

Concept - A consensus beginning recommendation, idea, or starting point of a transportation solution to an identified transportation need.

Conformity – A process to assess the compliance of any transportation plan, program, or project with air quality implementation plans. The Clean Air Act (CAA) defines the conformity process.

Congestion Mitigation and Air Quality Improvement Program (CMAQ) – The primary purpose of this program is to fund transportation projects and programs in non-attainment and maintenance areas, which reduce transportation related emissions; CMAQ funds generally cannot be used for projects that result in the construction of new capacity available for Single Occupancy Vehicles (SOV).

Construction Work Program (CWP) - A listing of state and federally funded projects approved by the State Transportation Board with one or more elements, preliminary engineering (PE), right-of-way (ROW) authorization, or construction, scheduled in the current and next five fiscal years.

Consultant Pre-qualification – Georgia Department of Transportation (GDOT) has adopted rules for the qualification of consultants prior to consideration for providing engineering and environmental services. The qualification period is three years from the date of qualification unless updated. http://www.dot.state.ga.us/doingbusiness/consultants/prequal/Pages/default.aspx

Context Sensitive Design/Context Sensitive Solutions (CSD/CSS) - Context Sensitive Design/Context Sensitive Solutions (CSD/CSS) is a collaborative approach to design that weaves together design principles, environmental concerns and community quality of life into one complete package. It balances the concerns and desires of the community for their environment and way of life with the sound engineering practices endorsed by American Association of State Highway and Transportation Officials (AASHTO). It also firmly involves the public in the decision-making process to encourage ownership and responsibility for the final product. The GDOT has published a Context Sensitive Design Manual.

Controlling Criteria - Those controlling design guidelines as defined by the American Association of State Highway and Transportation Officials (AASHTO) and accepted by the Federal Highway Administration (FHWA), that a project should be designed to meet using good engineering judgment. A design exception or variance will be obtained when one or more of these controlling criteria cannot be met. See Chapter 8 of the Plan Development Process (PDP) for a listing of the controlling criteria.

Cooperating Agency - As defined in the Council on Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (NEPA) (40 CFR Parts 1500-1508), "any organization other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in . . . [a] major federal action significantly affecting the quality of the human environment." The CEQ emphasizes that agency cooperation should begin early in the NEPA process.

Corps of Engineers (USACE) – Part of the Department of the Army within the Department of Defense; administers permitting activities under Section 404 of the Clean Water Act (CWA).

Council on Environmental Quality (CEQ) - Coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and

initiatives. The Council's Chair who is appointed by the President with advice and consent of the Senate serves as the principal environmental advisor to the President and Vice President. In addition, CEQ reports annually to the President on the state of the environment; oversees federal agency implementation of the environmental impact assessment process; and acts as referee when agencies disagree over the adequacy of such assessments. The Council on Environmental Quality was established by Congress within the Executive Office of the President with passage of the National Environmental Policy Act (NEPA) of 1969.

Cultural Resources (CR) – Historic and archaeological resources.

dBA – The decibel (**dB**) is used to measure sound levels. It describes the ratio between the quantity of two levels, the level being measured and a reference. The '**A**' weighted frequency scale is used in traffic noise measurement and abatement because it best approximates the frequency response of the human ear.

De minimis – Provision in the transportation bill enacted in August 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which states that the requirements of Section 4(f) will be considered to be satisfied if the Section 4(f) protected resource will not be adversely affected by the proposed action.

Department of the Interior (DOI) – Federal agency with responsibility for most of our nationally owned public lands and natural resources. From its establishment in 1849, DOI has managed many varied programs including Indian Affairs, administering land grants, improving historic western emigrant routes, marking boundaries, and conducting research on geological resources. Two agencies within DOI often consulted with during environmental studies are the Fish and Wildlife Service (USFWS) and the National Park Service (NPS).

Department of Natural Resources (DNR) – The state agency whose mission is to sustain, enhance, protect, and conserve Georgia's natural, historic, and cultural resources for present and future generations. Both the Environmental Protection Division (EPD) and the Historic Preservation Division (HPD) are part of DNR.
www.gadnr.org

Description of Jurisdictional Wetlands (DJW) - Describes the results of the wetlands survey and is included in the ecology report.

Design Exception – Permission must be obtained whenever a new construction or reconstruction project (this excludes maintenance resurfacing projects and resurfacing, restoration, and rehabilitation [3R projects]) contains design features that do not meet the current American Association of State Highway and Transportation Officials (AASHTO) publications, "A Policy on Geometric Design of Highways and Streets" (Green Book) and "The Policy on Design Standards - Interstate System," as adopted by the Federal Highway Administration (FHWA). For interstate projects, the FHWA will be the agency that grants design exceptions. For all other projects, both federal and state funded, the Georgia Department

of Transportation (GDOT) Chief Engineer grants design exceptions. See Chapter 8 of the Plan Development Process (PDP).

Design Hour Volumes (DHV) - Peak hour traffic in the design year.

Design Variance - Whenever a new construction or reconstruction project contains nonstandard items that are not controlling criteria or which do not meet Georgia Department of Transportation (GDOT) policy/guidelines, a design variance must be requested from the GDOT Chief Engineer. See Chapter 8 of the Plan Development Process (PDP).

Determination of Eligibility (DOE) – See Request for Determination of Eligibility.

Draft Environmental Impact Statement (DEIS) – The draft phase of a Class I NEPA document (23 CFR 771.115(a) – see Environmental Impact Statement, below); it evaluates all reasonable alternatives to a federal action and discusses the reasons why other alternatives have been eliminated from a detailed study; the DEIS also summarizes studies, reviews, consultation and coordination required under environmental laws and executive orders to the extent appropriate at this stage in the environmental process.

Ecological Assessment of Effects (EAOE) – This is the Phase II document that is prepared to assess project effects to ecological resources.

Endangered Species Act, 1973 (ESA) – A federal law that provides a program for the conservation and recovery of threatened and endangered plants and animals, and the habitats in which they are found.

Environmental Assessment (EA) – One of three classes of action (Class III, 23 CFR 771.115(c)) under the National Environmental Policy Act (NEPA). An EA must be prepared for federal actions in which the significance of the environmental impacts is not clearly established. Both draft (DEA) and final (FEA) documents are required.

Environmental Effects Report (EER) – A report prepared for state-funded projects in accordance with the Georgia Environmental Policy Act (GEPA) for projects that will have a significant adverse effect on the quality of the environment.

Environmental Impact Statement (EIS) – One of three classes of action (Class I, 23 CFR 771.115(a)) under the National Environmental Policy Act (NEPA). An EIS must be prepared for federal actions in which a significant social, economic, or environmental impact is anticipated. Both draft (DEIS) and final (FEIS) documents are required.

Environmental Justice (EJ) – Executive Order (EO) 12898, signed in 1994 that requires the fair treatment and meaningful involvement of all people regardless of race, color, or economic status with respect to the development, implementation and enforcement of federal environmental laws, regulations and policies. Fair treatment means that no group of people shall bear a disproportionately high share of the negative environmental impacts that result from a particular project or program and shall share in the benefits derived from such projects and programs.

Environmental Protection Agency (USEPA) – A federal agency charged with protecting public health and the environment.
www.epa.gov

Environmental Protection Division (EPD) – A division within the Georgia Department of Natural Resources (DNR) charged with protecting public health and the environment.
www.georgiaepd.org

Environmentally Sensitive Area (ESA) – An area designated on project plans in which any environmental resource given consideration during environmental studies has been identified.

Essential Fish Habitat (EFH) – Waters and bottom habitats that are necessary to federally managed marine species' lifecycle including their spawning, breeding, feeding or growth into maturity. Impacts to EFH are considered in accordance with the Magnuson-Stevens Fishery Conservation and Management Act. Essential Fish Habitat can be found in Georgia's coastal counties, i.e., Camden, Glynn, McIntosh, Liberty, Bryan and Chatham.

Executive Order (EO) – An order, having the force of law that is signed by the President of the United States.

Exempt Projects - A federal-aid project whose plans are not subject to Federal Highway Administration (FHWA) oversight. However, the FHWA retains approval authority for the environmental document. See Chapter 8 of the Plan Development Process (PDP).

Federal Emergency Management Agency (FEMA) - An independent federal agency founded in 1975 and charged with reducing the loss of life and property and the protection of our nation's critical infrastructure. This federal agency is charged with the enforcement of EO 11988 (protection of floodplains). The primary function of the agency is to avoid long and short term adverse impacts associated with the occupancy and modification of floodplains and to restore and preserve the natural and beneficial values served by floodplains. The agency assesses floodplain hazards in all construction of federal and federally-aided buildings, structures, roads, or facilities, which encroach upon or affect the base floodplain.
www.fema.gov

Federal Highway Administration (FHWA) - An agency of the US Department of Transportation (USDOT), it is headquartered in Washington, D.C., with field offices across the United States. The FHWA administers the Federal-aid Highway Program in cooperation with the states. It also administers the Federal-lands Highway Program.
www.fhwa.dot.gov

The FHWA Georgia Division Office is located at:

Georgia Division Office (HDA-GA)
61 Forsyth Street, SW, Suite 17T100

Atlanta, Georgia 30303-3104
Telephone: 404-562-3630

Federal Rail Administration (FRA) – An agency of the US Department of Transportation (USDOT), the FRA promotes safe, environmentally sound, successful rail transportation to meet current and future needs.
www.fra.dot.gov

Federal Transit Administration (FTA) – An agency of the US Department of Transportation (USDOT), the FTA helps cities and communities nationwide provide mobility to their citizens. Through its grant programs, the FTA provides financial and planning assistance to help plan, build, and operate rail, bus, and para-transit systems.
www.fta.dot.gov

Field Plan Review (FPR) – Field inspection of project plans and special provisions conducted at various stages of the Plan Development Process (PDP) (see entries under Preliminary Field Plan Review [PFPR] and Final Field Plan Review [FFPR]).

Final Environmental Impact Statement (FEIS) – National Environmental Policy Act (NEPA) document prepared after circulation of the Draft Environmental Impact Statement (DEIS) and consideration of comments received.

Final Field Plan Review (FFPR) - A review of final plans and specifications, special provisions, permits, environmental commitments and right-of-way agreements. The FFPR is to be held a minimum of 22 weeks prior to letting. (See also Field Plan Review [FPR])

Finding of No Significant Impact (FONSI) – A National Environmental Policy Act (NEPA) document concluding that federal actions evaluated in an Environmental Assessment (EA) will not significantly affect the quality of the environment.

Fiscal Year (FY) - The State of Georgia fiscal year is July 1 to June 30. All budgets and state programs, including transportation plans, adhere to this fiscal year. The federal fiscal year is October 1 to September 30.

Fish and Wildlife Coordination Act (FWCA) – Requires coordination with the US Fish and Wildlife Service (USFWS) and the Federal Highway Administration (FHWA) for all stream channel changes unless covered under the Joint Coordination Procedures (JCP).

Fish and Wildlife Service (USFWS) – A part of the US Department of the Interior (DOI); the principle federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants, and their habitats.
www.fws.gov

Freedom of Information Act (FOIA) – A federal law passed in 1996 that provides that any person can make request for government information.

Full Oversight Project (FOS) - Those projects administered by the Federal Highway Administration (FHWA) for which the FHWA has full responsibility for review, approval and authorization. An FOS Project was formally known as a "Non-CA" project.

Functional Classification - A grouping of roads, streets, and highways into an integrated system, within which each roadway facility is ranked by its relative importance and function in providing access and mobility within the integrated system. Based on guidelines issued by Federal Highway Administration (FHWA), the Georgia Department of Transportation (GDOT) ranks roadways as local roads, major or minor collectors, and minor or principal arterials. Functional Classification Systems are developed, in cooperation with local officials, for each county and city and submitted to the FHWA for approval.

General Section 404 Permits – Projects below certain thresholds to impacts to Waters of the US may qualify for one of two general permits – Nationwide or Regional.

Geographic Information Systems (GIS) – A computer system capable of holding and using spatial data describing places on the earth's surface.

Georgia Department of Transportation (GDOT) – State agency responsible for planning, constructing, maintaining and improving the state's roads and bridges. The GDOT also provides planning and financial support for other modes of transportation such as mass transit and airports. It also provides airport and air safety planning. Formerly the State Highway Department (created on August 16, 1916 by an act of the Legislature), the GDOT was created in 1972 by former Governor Jimmy Carter.

The primary design and right-of-way staff are located in the General Office (GO) at:

One Georgia Center
600 West Peachtree NW
Atlanta, Georgia 30308
(404) 631-1990 Main Office

The environmental analysis staff is located at:

Office of Environmental Services
One Georgia Center
16th floor
600 West Peachtree Street, NW
Atlanta, Georgia 30308
(404) 631-1100

GDOT Homepage: www.dot.state.ga.us

Georgia Environmental Policy Act of 1991 (GEPA) - This act requires the evaluation and disclosure of environmental effects of proposed state-funded actions. In general, a proposed action by a government agency must be assessed by the responsible official (the Commissioner is the responsible Georgia Department of Transportation [GDOT] official) of that agency to determine and document whether or not the proposed action may significantly affect the quality of the environment. In the event of a determination of a significant adverse effect, GEPA requires an evaluation of alternatives that would avoid the adverse impact, as well as any measures to minimize harm.

Georgia Regional Transportation Authority (GRTA) – This 15–member board is responsible for assuring that local governments meet state requirements for land use planning; also charged with combating air pollution, traffic congestion and poorly planned development in metropolitan Atlanta.
www.grta.org

Global Positioning System (GPS) – GPS is funded by and controlled by the US Department of Defense. While there are many thousands of civil users of GPS worldwide, the system was designed for and is operated by the US military. GPS provides specially coded satellite signals that can be processed in a GPS receiver, enabling the receiver to compute position, velocity and time. Four GPS satellite signals are used to compute positions in three dimensions and the time offset in the receiver clock.

Governor's Road Improvement Program (GRIP) – Initiated in 1989 by a resolution of the state legislature and the Governor to connect 95 percent of the cities in Georgia with a population of 2,500 or more to the interstate system. The GRIP system will also ensure that 98 percent of all areas of Georgia will be within 20 miles of a four-lane road.

High Occupancy Vehicle (HOV) – HOV lanes have been built to reduce traffic congestion and air pollution by giving a faster travel time for those who carpool, vanpool or ride buses. The lanes are identified by the white diamonds on signs above and painted on the lanes, and the white double lines or barriers separating them from the other lanes of traffic. High Occupancy Vehicle lanes are reserved for vehicles carrying two or more persons. Exceptions include motorcycles and registered alternative fuel vehicles.

Historic American Building Survey (HABS) – A program administered by the National Park Service (NPS); operates under Congressional authority from the Historic Sites Act of 1935 to document historic properties and make available to the public an archive of America's architectural heritage.
www.nps.gov/history/hdp/habs/index.htm

Historic American Engineering Record (HAER) – A program administered by the National Park Service (NPS); documents important engineering and industrial sites.
www.nps.gov/history/hdp/haer/index.htm

Historic Preservation Division (HPD) – A division of the Georgia Department of Natural Resources (DNR) that serves as the State Historic Preservation Office (SHPO) in Georgia. Working in partnership with the

US Department of the Interior (DOI) and local communities, HPD carries out the mandates of the National Historic Preservation Act of 1966 (NHPA), as amended, and works to preserve the historical, architectural and archaeological resources of Georgia.
www.gashpo.org

Housing and Urban Development, Department of (HUD) – Cabinet level federal agency; promotes a decent, safe, and sanitary home and suitable living environment for every American. Their mission includes creating opportunities for home ownership; providing housing assistance for low-income persons; working to create, rehabilitate and maintain the nation's affordable housing; enforcing the nation's fair housing laws; helping the homeless; spurring economic growth in distressed neighborhoods; and helping local communities meet their development needs.
www.hud.gov

Individual Permit (IP) – Pursuant to Section 404 of the Clean Water Act (CWA); an IP is required from the US Army Corps of Engineers (USACE) for projects having a specific level of impacts to Waters of the US.

Intelligent Transportation System (ITS) – The use of computer and communications technology to facilitate the flow of information between travelers and system operators. Intelligent Transportation System also includes enhancements to existing transportation infrastructures to enable them to function at a higher, more efficient level. The major goals for such systems are to proactively manage congestion, improve traveler safety, reduce operational cost for commercial vehicles, and enhance coordination between multimodal transit operations and users. By minimizing congestion of freeway and arterial infrastructure, and maximizing the convenience of mass transportation alternatives for travelers, more efficient use of existing infrastructure is achieved with an associated reduction of environmental pollution. These enhancements are for the most part intelligent solutions made possible by new technologies. Advanced Traffic Management Systems (ATMS) and Advanced Traveler Information Systems (ATIS) are two of the technologies under the umbrella of ITS.

Interchange Justification Report (IJR) - An analysis, prepared in accordance with Federal Highway Administration (FHWA) guidelines, for any proposed new interchange on the Interstate System. The IJR is typically a Georgia Department of Transportation (GDOT) Office of Planning activity prepared with the assistance of the GDOT Division of Engineering. Due to its nature, the IJR provides planning level information for a tentative location with the concept displayed on aerial photography. The GDOT Office of Planning submits the IJR to FHWA for consideration.

Interchange Modification Report (IMR) - An operational analysis, prepared in accordance with Federal Highway Administration (FHWA) guidelines, for the addition of access points to an existing Interstate interchange. The IMR addresses Interstate access point changes that are needed to improve operations and safety of an existing interchange. The IMR is a Georgia Department of Transportation (GDOT) Division of Engineering activity, prepared with the assistance of the GDOT Office of Planning. Due to its

nature, the IMR is engineering oriented, providing detailed analyses and preliminary design plans. The GDOT Office of Planning submits the IMR to FHWA for consideration.

Joint Coordination Procedures (JCP**)** – Streamlining procedures for coordination for 404 Permits, consultation for Section 7 of the Endangered Species Act (ESA) and coordination under the Fish and Wildlife Coordination Act (FWCA). This procedure typically involves a modification to agencies standard application requirements to help streamline the overall review process. Minor projects subject to this streamlining agreement include but are not limited to traffic signal upgrades, resurfacing with minimal shoulder rebuilding, intersection improvements, and Intelligent Transportation System (ITS) improvements.

Joint Public Notice (JPN) – US Army Corps of Engineers (USACE) notification to natural resource agencies that an Individual Permit (IP) has been applied for; this notice also is a solicitation for public comment.

L10 – One of two noise descriptors (Leq is the other) used in abatement procedures. A weighted decibel, the sound level that is exceeded 10 percent of the time (the 90th percentile) in the noisiest hour of the day.

Leq – One of two noise descriptors (L10 is the other) used in abatement procedures. Leq is the equivalent steady-state sound level that in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period. Leq is essentially an average reading over a 10 minute period.

Let Date – The date that bid construction bid proposals will be opened for Georgia Department of Transportation (GDOT) projects. The Let Date generally ends the Plan Development Process (PDP). Projects are advertised four weeks before the Let Date.

Level of Service (LOS) - Describes conditions for motorists in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Level of Service is defined with designations ranging from A to F; LOS "A" represents the best operating conditions and LOS "F" represents the worst operating conditions.

Local Coordination Procedures (LCP**)** – Streamlining procedures for the Section 404(b)(1) guidelines of the Clean Water Act (CWA) for projects requiring an Individual Permit (IP); agreed to by the Federal Highway Administration (FHWA), US Army Corps of Engineers (USACE), and the Georgia Department of Transportation (GDOT) in coordination with the Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (USNMFS), the US Environmental Protection Agency (USEPA), and the Environmental Protection Division (EPD).

Local Government Project Agreement (LGPA) - The LGPA delineates the local government's role in advancing a project through design to construction. The local government's role may include such items as responsibility for design, environmental reports and documents, public and private utility relocations, purchasing of right-of-way (ROW), letting, construction supervision, or construction. The LGPA also

serves to indicate the local government's support and financial commitment to the proposed project. The Georgia Department of Transportation (GDOT) Office of Programming normally prepares the LGPA (see Project Management Agreement [PMA])

Location and Design Approval (L&D):

1. **Federal-aid projects:**
   Location and design approval is granted by the Federal Highway Administration (FHWA) with their approval of the project's environmental document acknowledging that Georgia Department of Transportation (GDOT) has selected an appropriate location and has committed to a specific design of the proposed project.

2. **State-funded projects:**
   Location and design approval is granted by the Chief Engineer with the certification that Georgia Department of Transportation (GDOT) has completed the required public involvement process, the Georgia Environmental Policy Act (GEPA) documentation, has selected an appropriate location, and has committed to a specific design of the proposed project.

Logical Termini - A term used to describe the beginning and ending points of a proposed transportation improvement and whether the selection of these points has a rational basis when viewed in light of the project's Purpose and Need. Federal regulations [23 CFR 771.111(f)] note that for termini to be logical they must be of sufficient length to address environmental matters on a broad scope, have independent utility, and not restrict consideration of alternatives for reasonable foreseeable transportation improvements.

Magnuson-Stevens Fishery Conservation & Management Act – Requires the identification of unavoidable adverse impacts to Essential Fish Habitat (EFH). It also requires consultation with the US National Marine Fisheries Service (USNMFS).

Manual of Guidance (MOG) - Georgia Department of Transportation (GDOT) manual addressing personnel guidelines; first replaced by the Transportation Online Policy and Procedure System (TOPPS) and currently found in Policies and Procedures (P&P).

Major Project - A project that significantly changes the function of the facility being improved, or requires the acquisition of significant amounts of right-of-way (ROW), or has a significant impact on abutting property, or has significant changes in traffic patterns, or has significant social, economic, or environmental effects. A Major Project will not follow "Time Saving Procedures." A Major Project will require a Public Hearing Open House (PHOH) or the opportunity for a PHOH and Location and Design (L&D) Approval.

Memorandum of Agreement (MOA) - Document developed during the Section 106 process when adverse effects to historic or archaeological resources cannot be avoided; stipulates mitigation measures to be carried out to compensate for the adverse effect.

Memorandum of Understanding (MOU) – An interagency agreement often concerning procedural issues.

Metropolitan Planning Organization (MPO) - A local government agency charged with planning, including transportation planning, of a metropolitan area. The MPO performs its mission through a series of committees composed of local professional planning staffs, Georgia Department of Transportation (GDOT) planning and design staffs (in the case where the MPO crosses state lines, the DOT staffs of the affected states), local elected officials (both city and county), citizens, and public input.

Minor Project - A project that does not require a significant amount of right of way and whose environmental analysis can be accomplished with a Categorical Exclusion (CE). Examples of projects that are generally considered minor are bike/pedestrian projects, Transportation Enhancement Activities (TE) and ride sharing projects, transit enhancements, transportation bridge rehabilitation, bridge replacements, signage, lighting, landscaping, traffic barriers, guardrail projects, greenway projects, recreational trail projects, Intelligent Transportation System/Advanced Traffic Management Systems (ITS/ATMS) project less than $1 million, and maintenance resurfacing projects less than $1 million.

Mobile Source – Mobile sources include motor vehicles, aircrafts, seagoing vessels, and other transportation modes. The mobile source related air pollutants are carbon monoxide (CO), hydrocarbons (HC) or volatile organic compounds (VOCs), nitrogen oxides (NOX), and small particulate matter (PM_{10}).

Mobile Source Air Toxics (MSAT) – The Clean Air Act (CAA) identified 188 air toxics, also known as hazardous air pollutants. The US Environmental Protection Agency (USEPA) has assessed this expansive list and identified a group of 21 knows as Mobile Source Air Toxics (MSATs). The USEPA also extracted a subset of this list of 21 that is labeled as the six priority MSATs. These are benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene.

National Ambient Air Quality Standards (NAAQS) – The Clean Air Act (CAA) last amended in 1990, requires the US Environmental Protection Agency (USEPA) to set NAAQS for pollutants considered harmful to public health and the environment; pollutants include carbon monoxide, nitrogen dioxide, ozone, lead, particulate matter, and sulfur dioxide.

National Environmental Policy Act of 1969 (NEPA) - A federal law requiring compliance with a variety of federal environmental laws, regulations and executive orders to insure that information on environmental impacts of any federal action is available to public officials and citizens before decisions are made and before actions are taken. Thus, environmental compliance is about making project decisions while being aware of environmental impacts. Environmental studies utilize an interdisciplinary approach to identifying environmental considerations. This process must weigh and balance concerns, e.g., historic properties v. wetlands, threatened and endangered species v. community impacts.

National Highway System (NHS) - An interconnected system of principal arterial routes which serve major population centers, international border crossings, ports, airports, public transportation facilities, intermodal transportation facilities, major travel destinations, national defense requirements and

interstate and interregional travel. As of January 1999, the NHS contained 161,653 miles of highways, including all Interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and major highway connectors.

National Historic Preservation Act (NHPA) – Passed in 1966, the NHPA directed the federal government to accelerate its historic preservation programs and activities, to give maximum encouragement to agencies and individuals undertaking preservation by private means, and to assist state and local governments and the National Trust for Historic Preservation in the United States to expand and accelerate their historic preservation programs and activities.

National Marine Fisheries Service (USNMFS) – A federal agency within the National Oceanic Atmospheric Administration (NOAA), which is part of the US Department of Commerce. The USNMFS has jurisdiction over threatened and endangered species of a marine nature such as whales, turtles and migrating fish such as sturgeon. It also has jurisdiction over Essential Fish Habitat (EFH).
www.nmfs.noaa.gov

National Pollutant Discharge Elimination System Permitting Program (NPDES) – The purpose of this program is to protect human health and the environment; the Clean Water Act (CWA) requires that all point sources (discrete conveyances such as pipe or man-made ditches) discharging pollutants into Waters of the US must obtain an NPDES permit.

National Park Service (NPS) – A part of the US Department of the Interior (DOI); preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The NPS cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.
www.nps.gov

National Register of Historic Places (NR) - A program administered by the National Park Service (NPS); for the purpose of Section 106 of the National Historic Preservation Act (NHPA) and Section 4(f) of the US Department of Transportation (USDOT) Act, properties currently listed in or determined eligible for listing in the NR are considered to be historic.

Nationwide Permits (NWP) – One of two general permits granted under Section 404 of the Clean Water Act (CWA). For a project to qualify for a NWP, impacts to Waters of the US must fall below certain thresholds. A Preconstruction Notification (PCN) must be submitted to the Corps of Engineers (USACE).

The six most commonly used by Georgia Department of Transportation (GDOT):

- NW 3 for maintenance,
- NW 14 for linear transportation projects,
- NW 23 for projects cleared with Categorical Exclusion (CE),
- NW 25 for structural discharges into tightly sealed forms,
- NW 27 for wetland/stream mitigation sites, and

- NW 33 for temporary impacts.

Native American Graves Protection and Repatriations Act (NAGPRA) – A federal law passed in 1990 requiring that all past, present and future plans to disturb Native American graves, grave goods, or sacred objects be coordinated with the appropriate Native American groups and that previously removed remains and artifacts be coordinated with and repatriated to the determined ancestral group.

Natural Resources Conservation Service (formerly the Soil Conservation Service) – The lead conservation agency of the US Department of Agriculture; speaks for the health and fate of America's private land, particularly farms and ranches.
www.nrcs.usda.gov

Nitrogen Oxide (NOX) –The primary criteria pollutant of diesel trucks and buses and a primary contributor to exceedances of ground level ozone.

Non-Attainment Area – A geographic region of the United States that the US Environmental Protection Agency (USEPA) has designated as not meeting the National Ambient Air Quality Standards (NAAQS). In Georgia, USEPA has designated both ozone and $PM_{2.5}$ non-attainment areas. A map of Georgia's non-attainment areas can be found on GDOT's Office of Planning website.
Non-CA (Non-Certificate Acceptance) Projects - This term is no longer used. See Full Oversight (FOS) Project.

Notice of Decision (NOD) - A formal decision document prepared and published following the circulation of an Environmental Effects Report (EER) under the Georgia Environmental Policy Act (GEPA); it takes public comment into account.

Official Code of Georgia Annotated (OCGA) – Publication of state laws.

Open Records Request – Request made pursuant to the Georgia Open Records Act that allows private individuals to inspect Georgia Department of Transportation (GDOT) files. See Policies and Procedures (P&P) 3A-3 for procedures and exceptions.

Ozone (O3) – Ozone is a colorless gas with a sweet odor. Ozone is not a direct emission from transportation sources. It is a secondary pollutant formed when Hydrocarbons (HC) [colorless gaseous compounds originating from evaporation and the incomplete combustion of fossil fuels] and Nitrogen Oxide (NOx) combine in the presence of sunlight. Ozone is associated with smog or haze conditions. Although the ozone in the upper atmosphere protects us from harmful ultraviolet rays, ground-level ozone produces an unhealthy environment in which to live. Ozone is created by human and natural sources.

Particulate Matter (PM), (PM_{10}), ($PM_{2.5}$) – Any material that exists as solid or liquid in the atmosphere; particulate matter may be in the form of fly ash, soot, dust, fog, fumes, etc. Small and fine particulate matter is too small to be filtered by the nose and lungs. Small particulate matter, also referred to as

PM_{10}, is less than 10 microns in size. Fine particulate matter, also referred to as $PM_{2.5}$, is less than 2.5 microns on size. A micron is one-millionth of a meter.

Parts Per Million (PPM) - Volume based unit of measurement; measurement used by the US Environmental Protection Agency (USEPA) to set National Ambient Air Quality Standards (NAAQS) for six principal pollutants.

Plan Development Process (PDP) **– A** document describing the Georgia Department of Transportation's (GDOT) process from a project's inception and concept development through construction.

Plan Presentation Guide (PPG) **– A** guide developed to assist designers in the presentation of the work to be accomplished.

Plans, Specifications, and Estimates (PS&E) - A plan, specification, and estimate review performed on all Full Oversight (FOS) projects by the Federal Highway Administration (FHWA). The Georgia Department of Transportation (GDOT) Office of Bidding Administration prepares the PS&E package with input from the GDOT Project Manager (PM).

Policies and Procedures (P&P) **–** Online Georgia Department of Transportation (GDOT) wide policies and procedural directives; formerly called TOPPS.

Practical Alternatives Review (PAR) - A review conducted for those projects that require an Individual Permit (IP) under Section 404 providing an analysis of alternatives to avoid and to minimize harm to Waters of the US including wetlands, streams and open waters. It is developed by the location or design engineer who is responsible for development of the concept. The PAR report describes at least two alignments for a project, including the Wetlands Minimization Alternative (WMA) that avoids all wetlands, and the Best Fit Alternative that balances the avoidance of all types of resources.

Pre-Construction Notification (PCN) – The US Army Corps of Engineers' (USACE) notification to natural resource agencies that a General Permit (Nationwide Permit [NWP] or Regional Permit [RP]) in compliance with Section 404 of the Clean Water Act (CWA) has been applied for.

Preliminary Engineering (PE) – Activities concerned with preparing project plans for letting; includes environmental studies and public involvement.

Preliminary Field Plan Review (PFPR) - A field review of the preliminary plans and draft special provisions conducted by or for the Georgia Department of Transportation (GDOT) Office of Engineering Services prior to the development and approval of right-of-way (ROW) plans. This review occurs after the approval of the National Environmental Policy Act (NEPA) document. The emphasis of this review is the coordination of ROW, utilities, bridges and walls, constructability, signs and signals, drainage, and environmental considerations and commitments. For Major Projects, the approval of the PFPR Report defines the beginning of final design and the completion of the ROW plans. See Field Plan Review.

Programmatic Agreement (PA) – An interagency agreement establishing alternative program procedures. The Georgia Department of Transportation (GDOT) has entered into several PAs to streamline environmental agency review of minor projects.

Project Management Agreement (PMA) - The PMA replaces the Local Government Project Agreement Long Form (LGPALF). The Project Management Agreement is the contract instrument used by GDOT to define the responsibilities between GDOT and the local government/sponsor. The local government/sponsor responsibilities may include design, public and private utility relocations, purchasing of right-of-way, letting, construction supervision, or construction.

Project Management System (also known as TPRO) - A project database used by the Georgia Department of Transportation (GDOT) as a data management tool for storing, updating, and reporting data in the GDOT's computer system. GDOT managers use reports from this database for reviewing and evaluating plan development progress and in making program decisions.

Project Manager (PM) - The person in responsible charge of a project who makes the day-to-day scope, schedule and budget decisions and is responsible for steering, coordinating, and managing a project through the Plan Development Process (PDP) and through the construction phase. The PM must possess and maintain excellent communications and strong organizational skills to ensure projects are ready-to-let on time.

Project Nomination Review Committee (PNRC) - The committee chaired by the State Transportation Planning Administrator, appointed to review projects nominated for inclusion into the Georgia Department of Transportation's (GDOT's) Construction Work Program (CWP). The committee consists of the Director of Program Delivery, Director of Construction, Director of Engineering, Director of Operations, Director of Field Districts, and as a non-voting member, the Chief Engineer. This committee was formerly called State Highway Improvement Plan (SHIP).

Project Schedule - The project schedule includes the planned start and finish dates, based on confirmed assignments and required resources, for each detail activity necessary for the completion of the Plan Development Process (PDP). The approved project schedule, called the schedule baseline, provides the basis for measuring and reporting schedule performance.

Property Information Form (PIF) – A document submitted to the Historic Preservation Division (HPD) and the Federal Highway Administration (FHWA) which discusses the qualities and characteristics of a historic property and is used to determine whether a property not already listed in the National Register of Historic Places (NR) would qualify for listing. This document requires concurrence from the State Historic Preservation Officer (SHPO). See also Request for Determination of Eligibility (DOE).

Public Hearing Open House (PHOH) - The legal (required by state law and federal regulations) meeting held by the Georgia Department of Transportation (GDOT). A PHOH is conducted as an "open forum meeting" allowing the public to attend during a three hour time frame to discuss the project with GDOT representatives, to ask questions, and to make a comment. There are no formal presentations unless prior approval has been received from the Director of Engineering. A PHOH can only be held after the

draft environmental document has been signed by FHWA. State law requires the PHOH be advertised twice, no less than thirty days prior to the meeting and no less than five days prior to the meeting [OCGA 32-3(f)(5)(A)]. All PHOH's are coordinated through GDOT's Office of Environmental Services. The Plan Development Process (PDP) describes the GDOT's procedures for advertising, preparation, and conducting open houses.

Public Information Open House (PIOH) - An informal advertised meeting held by the Georgia Department of Transportation (GDOT) to inform the public of a proposed project/action and to receive comments from the public on this project/action. The PIOH is conducted as an "open forum meeting" allowing the public to attend during a two or three hour time frame to discuss the project with GDOT representatives, to ask questions, and to comment. There are no formal presentations. A PIOH can be held anytime during project development. Often, the PIOH is held after concept approval, and several PIOHs can be held during the project development. The GDOT policy is to advertise PIOHs twice, three weeks prior to the meeting and one week prior to the meeting. All PIOH s are coordinated through the GDOT Office of Environmental Services.

Purpose and Need (P&N) - A statement identifying and describing the proposed action and the transportation problem(s) or other needs, which the action is intended to address (40 CFR 1502.13). This statement should clearly demonstrate that a "need" exists and should define the "need" in terms understandable to the general public. Data must be provided to support each conclusion. The stated P&N provides the basis of the alternatives discussion, including the no-build. It also provides the criteria by which to identify reasonable alternatives and to identify a preferred, and ultimately a selected alternative. While project impacts are compared to one another, project impacts also are weighed against the stated P&N (i.e., is the need great enough to warrant the impacts on the environment).

Record of Decision (ROD) - Presents the basis for the decision to proceed with a federal action evaluated in an Environmental Impact Statement (EIS).

Regional Development Center (RDC) – Public and private sector representatives of each of the state's regions advise the state in the development and implementation of regionally significant community and economic development initiatives. There are 16 RDCs throughout Georgia. These organizations currently are referred to as Regional Commissions.

Regional Permit (RP) – General Section 404 permit under the Clean Water Act (CWA) that allow impacts higher than Nationwide (NWP) permits but project types and impacts that are much lower than those requiring an Individual Permit (IP). A Pre-construction (PCN) must be submitted to the US Army Corps of Engineers (USACE).

The two most common for Georgia Department of Transportation (GDOT) projects:

- RP 1 – linear transportation projects
- RP 96 – federally funded bridge and culvert replacements

Regional Transportation Plan (RTP) - A long range, multi-modal plan for defined geographic regions in the state. The RTP addresses the region's transportation needs over a 20-year period and is developed

in cooperation with local, state and federal planning partners and the general public. Federal regulations require regional transportation plans to ensure a transportation system that serves economic, mobility and accessibility needs, and in non-attainment areas to conform to federal air standards. A RTP must include a financial plan demonstrating the consistency of proposed transportation investments with existing and projected sources of revenue. The RTP must be updated at least every four years.

Request for Determination of Eligibility (DOE) - A document submitted to the Historic Preservation Division (HPD) and the Federal Highway Administration (FHWA) which discusses the qualities and characteristics of an archaeological site and is used to determine whether a site not already listed in the National Register of Historic Places (NR) would qualify for listing. This document requires concurrence from the State Historic Preservation Officer (SHPO). See also Property Information Form (PIF).

Request for Proposal (RFP) - Solicitation outlining needed consultant services and requesting a proposal based response from private firms.

Request for Qualifications (RFQ) - Solicitation outlining needed consultant services and requesting a qualifications based response from private firms.

Right-of-way (ROW) - Publicly owned corridor in which a transportation facility exists.

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) – Authorizes the federal surface transportation programs for highway, highway safety and transit for five years, 2005-2009. It includes provisions for environmental stewardship and environmental streamlining.

Schedule Review Committee - A committee chaired by the Georgia Department of Transportation (GDOT) Director of Program Delivery that reviews and approves all submitted project schedules. Other members of the committee consist of the Engineering Office Heads, Program Control Office Heads and the State Scheduling Engineer.

Scope of Work (SOW) - Appended to consultant contracts detailing services to be provided.

Section 4(f) (USDOT Act of 1966) (49 USC 303) - Requires that before land from a significant publicly owned park, recreation area, national wildlife or waterfowl refuge; or any significant historic site (regardless of ownership) can be converted to a transportation use, it must be demonstrated that there is no prudent or feasible alternative to that use and that the project includes all possible planning to minimize harm.

Section 6 (f) (Land and Water Conservation Fund Act) – Before land from a site that was purchased or improved with funds administered under this act can be converted to another use, the Secretary of the Interior must approve the conversion and replacement land must be provided.

Section 7 (Endangered Species Act [ESA]) – A detailed consultation (formal and informal) process with the USFWS when protected species or suitable habitat for a protected species is identified on a proposed project.

Section 9 (Endangered Species Act [ESA]) – A violation of the requirements of this act.

Section 9 (Rivers and Harbors Act, 1899) – Permit issued under the provisions of this act; prohibits the construction of any bridge, dam, dike or causeway over or in any historically navigable waterway of the US without Congressional approval. Administration of Section 9 has been delegated to the Coast Guard (USCG).

Section 10 (Rivers and Harbors Act, 1899) – Permit issued under the provisions of this act; prohibits the unauthorized obstruction or alteration of any historically navigable waterway of the US; the construction of any structure in or over any navigable Water of the US, excavating from or depositing of material in such waters, or the accomplishment of any work affecting the course, location, condition, or capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army.

Section 106 (National Historic Preservation Act of 1966 [NHPA]) - Requires that with all federal undertakings, consideration be given to the effects and the minimization of harm to historic resources (historic and archaeological) that are listed in or eligible for listing in the National Register of Historic Places (NR).

Section 303(d) (Clean Water Act [CWA]) – A list of impaired waters (whose contaminants exceed established limits) established by the US Environmental Protection Agency (USEPA).

Section 404 Permit (Clean Water Act [CWA]) - Authorization by the US Army Corps of Engineers (USACE) required before fill can be placed or dredging can take place in Waters of the US (includes wetlands, streams and open waters).

Section 404(b)(1) Guidelines (Clean Water Act [CWA]) - Guidelines used to evaluate proposed discharges of dredged or fill material in Waters of the United States as required by provisions of Section 404 of the CWA.

Single Occupancy Vehicle (SOV) – SOVs cannot utilize lanes marked for High Occupancy Vehicles (HOV).

Standard Operating Procedure (SOP) – The Standard Operating Procedure (SOP) for calculating compensatory mitigation requirements for adverse impacts to wetlands, open waters, and/or streams; developed as a tool for administration of wetland and steam mitigation sites in current use by the Savannah District of the Army Corps of Engineers. For the purposes of mitigation banking in Georgia, use of the SOP is required.

State Highway Improvement Plan (SHIP) Committee – Refer to the Project Nomination Review Committee (PNRC). The SHIP Committee no longer exists.

State Historic Preservation Officer (SHPO) - The official appointed or designated pursuant to Section 101(b)(1) of the National Historic Preservation Act (NHPA) of 1966 to administer the state historic preservation program. In Georgia, the Historic Preservation Division (HPD) at the Department of Natural Resources (DNR) serves as the state preservation office.

www.gashpo.org

State Implementation Plan (SIP) - The SIP is prepared by the State designated agency (Environmental Protection Division [EPD]) containing procedures to monitor, control, maintain and enforce compliance with National Ambient Air Quality Standards (NAAQS). Transportation plans must be in conformity with air quality goals established in the SIP. Conformity with the SIP is a condition of federal funding of transportation capacity projects in non-attainment areas.

State Route (SR) – The numerical designation for a highway on the state system.

State Transportation Improvement Program (STIP) - A list of federally funded and state funded priority transportation project elements (preliminary engineering [PE], right-of-way [ROW], or construction) proposed to be carried out in the current and next three years (a four year plan). It is financially constrained (dollar value of projects programmed is equal to the anticipated revenues per program year), and includes projects consistent with the Statewide Transportation Plan. The STIP is approved by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and includes all Transportation Improvement Program (TIP) projects as adopted by the Metropolitan Planning Organization (MPO) and approved by the Governor.

Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURAA) – Section 123(f) requires the completion of on- and off-system bridges to determine their historic significance; and to encourage the rehabilitation, reuse and preservation of historic bridges.

Team Leader - The individual appointed by the Georgia Department of Transportation (GDOT) Project Manager (PM) and charged with the responsibility to coordinate the various activities of the Plan Development Process (PDP).

Threatened and Endangered Species (T&E) - Refers to threatened, endangered and/or species of management concern formally listed by the Fish and Wildlife Service (USFWS) relative to the Endangered Species Act (ESA). The USFWS publishes lists of T&E species by county.

Time Saving Procedures - A procedure by which a project is advanced to the right-of-way (ROW) authorization state, eliminating the public hearing requirements and the approval of a location and design report. Time Saving Procedures are appropriate for those projects for which the right-of-way requirements are not significant and a Categorical Exclusion (CE) is the appropriate level of environmental documentation. A statement of the appropriateness of time saving procedures will be addressed in the Project Concept Report.

Title VI of the Civil Rights Act of 1964 - (Nondiscrimination in Federally Assisted Programs) - Each federal agency is required to ensure that no person, on the ground of race, color, or national origin, is excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance.

Title VIII of the Civil Rights Act of 1968 - (Fair Housing Act) – Unlawful to make unavailable a dwelling to any person because of race, color, religion, sex, or national origin.

TPro - The project management, reporting, and scheduling system portion of the Transportation Information System (TIS) used by the Georgia Department of Transportation (GDOT) to effectively utilize personnel and fiscal and material resources. TPro is sometimes referred to as the "Project Management System."

Traditional Cultural Property (TCP) – Generally defined as a property that is eligible for inclusion in the National Register of Historic Places (NR) because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

Traffic Engineering Report - A document based on a detailed evaluation and study of an "at-grade" intersection based on current traffic volumes, existing lane configurations, identification of problems associated with traffic control, road geometry (turn lanes), sight distance issues, and accident data evaluation. The report will include a signal warrants analysis and concept design signal (if warranted). Existing condition sketches and figures for any proposed modifications also will be included.

Transportation Control Measures (TCM) – Actions to adjust traffic patterns or reduce vehicle use to reduce air pollutant emissions. These may include High Occupancy Vehicle (HOV) lanes, provisions for bicycle facilities, ridesharing, telecommuting, etc. Such actions may be included in the State Implementation Plan (SIP) if needed to demonstrate attainment of the National Ambient Air Quality Standards (NAAQS).

Transportation Enhancement Activity (TE) - First authorized under Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991; 10 percent of Surface Transportation Program (STP) funds committed to TE projects that include multi-use facilities, transportation aesthetics, and preservation of historic and scenic resources relating to the intermodal transportation system; reauthorized under Transportation Equity Act for the 21st Century (TEA-21) and Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Transportation Improvement Program (TIP) - A short-term list of funded projects covering at least four years, the current year plus the next three years in the urbanized areas of the state. It is financially constrained, conforms to the State Implementation Plan (SIP) in air quality non-attainment areas and updated at least every two years. The TIP includes the list of priority project elements (preliminary engineering [PE], right-of-way [ROW], and construction) to be carried out in each program year. Projects included in the TIP must be consistent with the Transportation Plan adopted by the Metropolitan Planning Organization (MPO). The Governor approves each TIP.

Transportation Management Association (TMA) – A voluntary association of public and private agencies and firms joined to cooperatively develop transportation enhancing programs in a given area.

Transportation Online Policy & Procedure System (TOPPS) – Online Georgia Department of Transportation (GDOT) wide policies and procedural directives. Replaced by the Policies and Procedures (P&P) website.

Transportation Systems Management (TSM) – Refers to a strategy of improving the existing transportation system through a series of efficiency improvements that are typically low in cost and impact; e.g., intersection improvements.

Travel Demand Management (TDM) – Refers to a strategy of limiting demand for the use of the existing transportation system; strategies designed to increase the efficiency of a transportation system without increasing its capacity; e.g., van-pooling, car-pooling, altered work hours.

United States Code (USC) – Publication of federal laws.

United States Department of Transportation (USDOT) - Established by Congress in 1966, the USDOT consists of the Office of the Secretary and ten individual administrations: the Bureau of Transportation Statistics, the Federal Aviation Administration (FAA), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Maritime Administration, the National Highway Traffic Safety Administration, the Research and Special Programs Administration, the St. Lawrence Seaway Development Corporation, and the Administration, and the Federal Carrier Safety Administration.
www.dot.gov

United States Forest Service (USFS) – Part of the US Department of Agriculture; a federal agency that manages public lands in national forests and grasslands. The USFS is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry agencies.
www.fs.fed.us

Utility - All privately, publicly, or cooperatively owned water distribution and sanitary sewer facilities, and systems for producing, transmitting or distributing communication, cable television, power, electricity, light, heat, gas, oil, crude products, steam, waste and storm water not connected with highway drainage, including river gauges, fire and police signals, traffic control devices (including Intelligent Transportation System [ITS]), and street lighting systems, which directly or indirectly serve the public or any part thereof. The term "utility" may also be used to refer to the owner of any above described utility or utility facility.

Value Engineering (VE) - The systematic application of recognized techniques by a multi-disciplined team to identify the function of a product or service, establish a worth for that function, generate alternatives through the use of creative thinking, and provide the needed functions to accomplish the original purpose of the project, reliability, and at the lowest life-cycle cost without sacrificing safety, necessary quality, and environmental attributes of the project. This study is required of all federal-aid highway projects on the National Highway System (NHS) with an estimated total cost of $25 million or more.

Vehicles Per Day (VPD) - A convention for measuring traffic; a one day, weekday count of traffic.

CHAPTER II - EARLY PROJECT ACTIVITIES

1.0 Purpose and Need

The Purpose and Need (P&N) statement or section is the critical foundation for a project's approval. The process of defining, evaluating, and reducing alternatives is dependent upon:

- Establishing a transportation need based on objective analysis, and
- Defining a purpose for the proposed improvements that would address the need.

Put another way, the need is the transportation problem that needs to be addressed; the purpose states why the problem should be addressed.

The P&N discussion can vary in length, but it must be detailed enough to provide clear justification for the project in the National Environmental Policy Act (NEPA) document. In addition, the P&N statement will be necessary components of other consultations, e.g., Section 106 of the National Historic Preservation Act and Section 7 of the Endangered Species Act.

The specific contents and depth of the P&N statement will vary by project, ranging from brief overviews of less than five pages to detailed analyses requiring more than 15 pages of documentation. The key for successful documentation is to match the depth of discussion with the overall magnitude of the project and its reasons for being proposed. Projects such as the widening of a rural highway may have a specific purpose due to mandates by the Georgia State Legislature (e.g., the Governor's Road Improvement Program [GRIP]). In such cases, the documentation will rely mostly on the background for the legislation, the reasons for it, and the needs identified in the legislation. Projects defined as safety improvements (e.g., new grade separation of an existing intersection or rail crossing) typically will have needs associated with traffic or accident conditions at a specific location. For larger-scale projects such as roadway or highway segments on new location, the full range of needs should be reviewed to help reduce the range of reasonable alternatives. In this case, the need may be a combination of capacity, safety, economic, or legislative issues.

While the needs for a project will vary, the following topics should be reviewed for their applicability (consistent with Federal Highway Administration [FHWA] Technical Advisory 6640.8A). Where appropriate, analysis and discussion of these topics should be included as subsections of the Purpose and Need statement. Generally, if analysis of a particular topic does not indicate a specific need for the project, the P&N discussion should not include that topic. For instance, if traffic projections for a rural, two-lane highway never approach capacity, the need for widening the highway would not be strengthened with a discussion on traffic demand.

- Project Status – Background details on the project are a key component of every Purpose and Need statement. The discussion should include project history, actions taken by other agencies, recommended schedules, and any pending actions.
- System Linkage – The project should be placed in context for the reader within the surrounding transportation system. It may be part of a longer series of projects with

separate NEPA studies, or an important link to existing facilities. Often, this discussion will correlate closely with legislation, so the text may be combined to cover both topics.

- Capacity – Where traffic is a concern, the project's need should include a discussion of existing and projected traffic volumes. Tables and/or graphics may help illustrate the traffic problem. Capacity analyses should be completed where appropriate to determine Levels of Service (LOS). (Highway Capacity Software and SYNCHRO are examples of traffic modeling software that can be used.)
- Transportation Demand – The project may be a critical component of a regional or statewide transportation plan. The project's relationship to adopted plans should be discussed. The FHWA Technical Advisory also recommends discussing traffic forecasts in this section if they differ substantially from those derived for the adopted plans. In other words, newer or more refined data for a specific project area may demonstrate a greater traffic need than is apparent in existing transportation plans.
- Legislation – Related to the project status, legislation might be the primary reason for a project, such as the GRIP program enacted in the 1980s. Actions by the Georgia legislature or Congress could affect funding of particular projects or new safety benchmarks that would require modifications to roadway facilities.
- Social Demands or Economic Development – Changes in surrounding land uses may be the reason for growth in existing or future traffic volumes. If applicable, the discussion should address how projected economic development and land use plans will impact the capacity of the relevant roadways and/or intersections. New schools, recreational facilities, or other uses may be planned that would substantially increase the number of vehicular trips. The discussion in this section should focus on the impact to highway capacity and the resulting need for improvement. Other sections of the NEPA document will be appropriate for more detailed analysis of land use and cumulative impacts of the development activities in the vicinity.
- Modal Interrelationships – Transit and airport facilities may not apply to most Georgia Department of Transportation (GDOT) improvement projects, but the project's relationship to other modes of transportation needs to be considered including bike and pedestrian facilities. Rural widening projects may improve access to transit, an airport, or other services in a nearby metropolitan area. An intersection or roadway modification may be coordinated with a rail crossing or new station.
- Safety – Safety concerns often are a major reason for roadway improvements. Intersections and multi-lane highways often include safety as a need. However, the local perception should be balanced with objective analysis to determine whether safety is a real issue. Accident data should be reviewed to derive and compare rates with state and county rates at similar facilities. If the results do not indicate a high accident rate, safety should not be relied upon as the project justification. If the rates are high, then summary discussion along with a table and/or graphic can help convey the severity of the accidents and the corresponding importance of the proposed improvements.
- Discussion of studies conducted during the planning process, if available.

The purpose of a project may be difficult to separate conceptually from its need, because the terms are interrelated. The description of the project's purpose is an early indication in the NEPA text of the alternatives that will follow. It may simply be a paragraph describing how intersection improvements would address the need of separating a rail crossing and reducing the accident rate. The purpose for addressing economic needs may be to improve a highway to four lanes. In this example, alternatives will then be developed and evaluated according to their ability to provide a four-lane highway through the project area as an economic development incentive.

The bottom line on the P&N statement is that it should clearly identify and support the basic problems that will occur without proposed improvements. Proper documentation will serve to both justify the project's need and provide the framework for reasonable alternatives to be defined and evaluated.

Graphics that improve and facilitate the reader's understanding of the P&N should be included. These could include:

- Project Vicinity/Location Exhibit showing the project area in context with nearby major routes, land use features, and nearby transportation features identified.
- A location map illustrating other projects in the area,
- A table illustrating projects in the area and their status,
- A table illustrating traffic projections,
- A table illustrating accident data, and
- A table with LOS of appropriate links.

1.1Logical Termini

Logical termini are an important concept to include in the discussion of P&N as well as alternatives. The intent of using logical termini is to look at the proposed project within a context broad enough to adequately consider the traffic characteristics, benefits, and environmental consequences. The FHWA guidelines include three specific components to determine whether logical termini have been determined for a proposed project:

- Sufficient length to address broad environmental concerns;
- Independent utility; and
- Allowing consideration of alternatives for other improvements, either connecting or nearby, which are reasonably foreseeable.

Several adjoining projects may need to be included in the NEPA document to satisfy the requirement for logical termini.

From a legal perspective, using logical termini means that a project can withstand the scrutiny over whether or not segmentation has occurred to lessen the perception of impacts. The project will have a clear P&N apart from other improvements and will fit within the context of the overall transportation plan.

The discussion of logical termini will be based largely upon the coordination between GDOT and FHWA during the early concept stage of a project. If there is any question concerning the logic of project termini, the NEPA analyst and the Project Manager (PM) will meet with FHWA. This discussion will be recorded in a brief report on the termini analysis which will be sent to FHWA for their review and written concurrence prior to submission of the NEPA document. The report will include the rationale for the termini and a description of the project area; supporting data may include traffic data, LOS, accident data and any additional information justifying the termini. If technical studies commenced prior to FHWA concurrence on termini, the NEPA analyst must confirm that the studies encompass the correct project area.

The text in the NEPA document should explain how the proposed termini are adequate to identify traffic and safety concerns, how the length is appropriate to evaluate impacts, and how impacts of adjacent improvements will be addressed in separate documentation.

1.2 Consultant Deliverables

Consultants should deliver two copies of the P&N Statement for review and approval by the GDOT's Office of Planning and Office of Environmental Services. If a meeting has been held with FHWA to discuss logical termini, the consultant also will prepare the report for FHWA review and concurrence. Two copies of this report will be needed.

After receiving comments from GDOT or FHWA on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultant will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

1.3 References

- 40 CFR 1502.13
- FHWA Technical Advisory 6640.8A, pp. 13-14.
- 23 CFR Part 771.111 (f), (h)
- The Importance of Purpose and Need in Environmental Documents

2.0 Environmental Screenings

2.1 Natural, Archaeological, Historic Resource Geographical Information System (NAHRGIS)

The Natural, Archaeological, and Historic Resources Geographical Information System (NAHRGIS) is a web-based GIS specifically designed for prescreening and researching natural and cultural resources on transportation projects. NAHRGIS should be consulted at the earliest stages of project development and environmental analysis to determine if there is the potential for impacts to streams, wetlands, protected species, archaeological sites and historic structures.

Most of the information contained in NAHRGIS is open for public use, but certain sensitive data such as archaeological site and protected species locations require a password for access. These are generally only available to professional archaeologists and ecologists. The archaeological site files data also require a user's fee. The website provides direction on becoming a registered user.

2.2 Database Searches

The US Environmental Protection Agency (USEPA) provides a free on-line GIS based "EnviroMapper" that includes several useful information layers such as hazardous material sites, flood zones, demographic boundaries, surface water features and Environmental Justice (EJ) communities.

2.3 Windshield surveys

Team members should conduct windshield surveys to assess the presence of community resources, potential hazardous waste sites and underground storage tanks (USTs), the potential for ecological resources as well as to evaluate the potential for historic and other Section 4(f) resources. Please be aware that windshield surveys cannot substitute for a full evaluation of the National Register (NR) eligibility of historic properties or ecological resource delineations and that project decisions should not be made based upon windshield surveys.

A preliminary public involvement strategy also should be developed based upon existing project conditions. A windshield survey can assist in identifying appropriate groups, including low income and minority communities, to target during public outreach activities.

3.0 Early Coordination

Early Coordination is the means by which federal, state, and local agencies, and project stakeholders are informed of a proposed project. The Early Coordination process gives federal, state, local and agencies, and project stakeholders the opportunity to become involved early in the project development phase and share information concerning the proposed project and surrounding area that could be potentially impacted.

3.1 Applicability

All Categorical Exclusions (CE), Environmental Assessments (EA), and Environmental Impact Statements (EIS) are subject to Early Coordination. In some instances, minor projects may not require Early Coordination. Consultants working on minor projects must check with a GDOT Office of Environmental Services NEPA Team Leader or Manager to determine if the Early Coordination requirement can be waived. Please be aware that in addition to NEPA early coordination, all disciplines conduct early coordination activities.

3.2 Initiation

This section will focus on the efforts of the NEPA analyst and the ecology staff when an Individual Permit (IP) is required pursuant to Section 404 of the Clean Water Act (CWA). Efforts undertaken by cultural resource staff can be found in Chapter V.3 of this manual.

Early Coordination is initiated by the NEPA analyst during the concept development phase of the proposed project. All federal agencies that have an action to take on the project should be included. Consultants should coordinate the development of Early Coordination letters with the GDOT Office of Environmental Services. Copies of the Early Coordination letters will be maintained in the project file. A copy of the basic letter and a distribution list should be included in the appendix of the NEPA document with reference made to the Early Coordination Letter and distribution list. Comments received must be responded to; comment and response letters also must be included in the appendix of the NEPA document. Consultants will coordinate responses with GDOT. Also, the comment will be addressed in the document, as appropriate.

An Early Coordination letter will contain a somewhat detailed description of the project (proposed typical section, right-of-way, and termini), a request for the addressee to advise of any known project area conditions that may be of special concern, and a list of other projects in the area. It should note whether or not the project will utilize federal funds. It also will state that the design for the proposed project is being developed in conjunction with the environmental documentation and in compliance with applicable environmental laws and regulations.

A project location map will be enclosed with the Early Coordination letter. The project location map will show the general vicinity of the proposed project and roadways, bridges, etc., involved. The map also will include the GDOT Project Number (if one has been assigned), the P.I. Number, name of the proposed project, and the county and/or city. The project beginning and end points will be labeled. A north arrow and a scale will also be included on this graphic.

All Early Coordination responses will be reviewed and considered in the planning of the specific project. Responses and any subsequent correspondence including how the project is modified to address the specific comments also will be included in the NEPA document.

3.3 Sample letters

Early coordination letters will be on GDOT letterhead unless a consultant is under contract to a local government, in which case the consultant's letterhead will be used. Letters on GDOT letterhead will be signed by an Office of Environmental Services Team Leader or Manager. Additional letter templates are available through the Document Library.

3.4 Coordination with federal land owning agencies

Georgia DOT projects occasionally require land owned by a federal agency. For example, throughout the state, there are National Parks, National Forests, military bases and the US Army Corps of Engineers lake property. The PM and NEPA analyst must coordinate with these agencies early in project development. The right-of-way staff must be included in this coordination. Federal agencies often have specific NEPA requirements; be sure to discuss these needs early in project development. Specific requirements for the National Park Service are discussed below.

3.4.1 Coordination with the National Park Service (NPS) (when NPS land is needed for the project)

The following are the major steps involved in requests to transfer lands for highway purposes. *These steps assume that the NPS has entered into the initial planning and environmental analysis process at the earliest possible stage of the project. National Park Service involvement should start when the GDOT/FHWA begins looking at the possibility of any activity that may impact NPS lands.*

1. Initial Notification.
   This step is usually very informal at one or more first-round meetings. The GDOT informs the FHWA project contact person of the proposed use of NPS lands. The FHWA, with the GDOT, immediately invites the NPS to a joint meeting to discuss the proposed use of NPS land. At this meeting, GDOT gives as full a description as possible of what is being requested. If the initial information provided by GDOT from this meeting indicates that the request would not meet the standards in 23 U.S.C. 317 (i.e., the project is clearly inconsistent with the purposes for which the park was established, or would obviously cause impairment or derogation of park resources or values), and additional consultation would not result in development of satisfactory alternatives, then the park should so indicate at the meeting. This should be followed by a letter of summary denial, sent by the regional director, listing the park's objections and the reasons for them. Evidence of the contrary public interest or inconsistency of the proposed transportation activity with the purposes for which the park was established can be determined through an examination of the park's enabling legislation, general management plan, or other related documents. If the initial information is not sufficient to make a decision, the process continues to the Section 4(f) and NEPA evaluation stage detailed below. Note that if the highway project involves an Interstate Highway, 23 U.S.C. 107(d) applies, rather than 23 U.S.C. 317. 23 U.S.C. 138 (commonly referred to as Section 4(f)) applies in either case. (See Chapter VI for a discussion on Section 4(f).)
2. Preliminary Evaluation Prior to Official Request.
   This is the stage where most, if not all, of the compliance and Section 4(f) evaluations are done, and the process switches from informal to more formal. If the initial request does not result in a summary denial, then the GDOT (as the recipient of FHWA funds), in consultation with the NPS, prepares a draft of the required Section 4(f) evaluation described in 23 CFR 771.135 (see RM-87D). Note that the Section 4(f) and other evaluations and environmental compliance are completed prior to any official submission of a request for NPS lands by FHWA. Note also that Department of the Interior's (DOI) official review of Section 4(f) and NEPA compliance documents is managed by the DOI's Office of Environmental Policy and Compliance (OEPC), under 51 DM 7. The NPS is generally designated as lead bureau for the DOI in these matters. In that role, the NPS receives other bureau comments on certain Section 4(f) and NEPA documents, and consolidates them into the DOI comments, which are signed by the Director, OEPC. If the NPS disagrees with the Section 4(f) evaluation, then the NPS should meet with

FHWA to discuss the reasons for such disagreement. This should be followed by a letter of denial of the project, sent by the regional director, listing the park's objections and the reasons for them. If the NPS agrees with the Section 4(f) evaluation, then the process continues on to the environmental (and cultural, if applicable) evaluations. With the NPS as a joint lead or cooperating agency, the GDOT and FHWA prepare an environmental analysis as required under NEPA and related laws for public review and comment (including National Historic Preservation Act [NHPA] Section 106 evaluations and Clean Air Act Section 176(c) transportation conformity requirements). Note that these processes are also completed prior to FHWA's official submission of a request for NPS lands. At the close of the NEPA public review period, the NPS participates with the GDOT and FHWA in a review of the public comments and the potential environmental and cultural impacts resulting from the proposed use of park land. If it is clear from the environmental analysis and public review comments that the proposed use would be inconsistent with the park's purposes and values, the NPS will so advise the FHWA through a letter of denial from the regional director, and the process is terminated. If the final compliance analysis and public review do not result in a finding that the proposed use is inconsistent, the GDOT should proceed in seeking approval and finalization of all compliance documents. Once all compliance documents have been approved, the GDOT sends the proposal requesting use of NPS lands to the FHWA Division Administrator for the state where the requested land is located.

3. Official Request by FHWA for NPS Land.

At this stage most, if not all, compliance documents have been completed and approved. For the first time, the FHWA sends an "official" letter to the NPS requesting the land for highway purposes. Most, if not all, of the preliminary decisions have been made at this point, and the primary purpose should be to allow the NPS the opportunity to make a final check on the documentation, and edit the conditions in the draft Highway Easement Deed (HED). The FHWA sends the request, together with copies of all executed and approved compliance documents to the appropriate NPS regional director requesting a letter of consent to, or denial of, the request. The required four month period begins with receipt by the regional director of the request from FHWA. The regional director then consults with the appropriate park superintendent and responds to the request within the statutory deadline of 4 months. The park superintendent originates a letter of denial or consent, indicating either:

a. Agreement to consent subject to terms, conditions and stipulations, to be placed in the HED; or

b. Conditional denial, pending further consideration of possible modification of the proposed project that might be taken; or

c. Denial with no chance of modification, specifying the reasons for denial. The regional director signs the letter and returns it and the requesting package to the originating FHWA office. If the NPS denies the request for transfer of NPS lands, the FHWA will so advise the GDOT. The FHWA will cite the NPS reasons for such a ruling, and advise the GDOT that the project cannot use the park lands as proposed. If the

NPS has agreed to the request for transfer of park lands, the FHWA will communicate this, including all conditions, stipulations, and modifications specified by the NPS in the letter of consent to the GDOT. The GDOT will then prepare an HED in accordance with the terms and conditions specified in the NPS letter of consent.

4. The Highway Easement Deed (HED)
   The recommended method of dealing with an HED is for the GDOT and NPS to discuss what will be needed in step 2 above, then send a first draft to the NPS in step 3 above. That way, all three parties are familiar with its contents and final wording settled on more quickly. The GDOT sends the draft HED to the FHWA and NPS for review. After review and approval by NPS, the FHWA signs the resulting document for the United States and sends it back to GDOT. The GDOT signs and records the deed in the appropriate municipal land records office. The GDOT provides a copy of the signed and recorded deed to the NPS.

CONDITIONS IN A HED

A Letter of Consent signed by a regional director normally should require that at least two specific conditions be included in every HED:

1. A prohibition on "piggy-back" permits; and
2. A reversionary clause.

Suggested language for, and explanations of, these and several other useful conditions may be found in RM-87D. There are also occasions when the GDOT road design, engineering, or construction style would cause practical, environmental, and/or esthetic value concerns with the NPS. While this situation might not arise very often, these instances should be handled on a case by case basis, with the NPS consulting with the FHWA to assure compliance where applicable.

Note that, whether the Letter of Consent includes these clauses or not, if the NPS consents to the request for land, the grant is for a non-exclusive easement to the GDOT for HIGHWAY PURPOSES ONLY. The GDOT cannot:

- Issue subsidiary permits for utilities within the highway right-of-way covered by the Deed;
- Allow any other construction such as houses or office buildings, or material storage areas unless specifically included within the request; or
- Approve requests to do anything on that portion of the roadway covered by the Deed other than for highway purposes.

Any new highway or road improvement requiring additional land will require an HED as described here. Any conversion of an existing instrument, such as a Special Use Permit, even though it does not involve use of undisturbed land not covered by the original permit, must also follow this procedure and meet the criteria in section D.3. Conversion from another instrument might, however, qualify for a NEPA and/or NHPA categorical exclusion

[The statements above were provided by NPS's Southeast Regional Office and taken from Director's Order 87D, National Park Service Policies.]

3.5 Coordination with the US Coast Guard (USCG)

If the project involves a historically navigable water, the NEPA analyst must complete a bridge permit questionnaire and submit it to FHWA for a determination of the need for a USCG permit. If FHWA indicates that the project will require a USCG permit, the Office of Bridge Design will prepare and submit the permit application.

The USCG permit limits for navigable rivers in Georgia, interstate or foreign commerce navigation in fact, are as follows:

- Chattahoochee River – from the dam at West Point Reservoir, downstream to the Georgia-Florida border;
- Flint River – from the dam at the Georgia Power Company Reservoir at Albany, downstream to its junction at the Chattahoochee River;
- Coosa River – from the junction of the confluence of the Etowah River and the Oostanaula River, downstream to the Georgia-Alabama border;
- Etowah River – from the Norfolk-Southern Railway bridge immediately east of the US 27/SR 1 bridge near Rome, downstream to the junction with the Coosa River;
- St. Mary's River – from the US 301 bridge near Folkston, downstream to the Coastal Boundary Area;
- Altamaha River – from the confluence of the Oconee River and the Ocmulgee River, downstream to the Coastal Boundary Area; and
- Savannah River – from the dam at Clarks Hill Reservoir, downstream to the Coastal Boundary Area.

3.6 Early Coordination mailing list

Current agency contact information can be found in the distribution list. Please note that this is not a comprehensive list.

3.6.1 Federal agencies

- US Department of Housing and Urban Development, Regional Office of Environment
- National Center for Environmental Health
- US Department of Housing and Urban Development
- US Department of the Interior
- US Fish and Wildlife Service
- US Geological Survey, Environmental Affairs Program
- US Environmental Protection Agency, Region Four

If in North Georgia counties: Catoosa, Dade, Fannin, Rabun, Towns, Union, and Walker.

- Tennessee Valley Authority

If in Coastal Counties or Estuarine Systems (tidal or salt water marsh) include:

- Habitat Conservation Division, National Marine Fisheries Service

If in Coastal Counties or Estuarine Systems (tidal or salt water marsh) and marine species are listed in the county:

- National Marine Fisheries Service, Southeast Regional Office

If an Individual Permit will be obtained, coordinate with cooperating Agency Letter:

- US Army Corps of Engineers, Savannah District, Regulatory Functions Branch

If Coast Guard permit is required, coordinate with cooperating Agency Letter:

- 7th Coast Guard District, Commander OAN

FEMA letter for Regulatory Floodways

- Federal Emergency Management Agency, Mitigation Division

Carbon copy the FEMA letter to:

- Georgia Department of Natural Resources, Floodplain Management Office and
- Federal Highway Administration, Georgia Division

3.6.2 State agencies

- Georgia Department of Natural Resources, Natural Heritage Program
- Natural Resources Conservation Service
- Georgia Forestry Commission
- Coastal Resources Division, Department of Natural Resource (if in a coastal county)

3.6.3 Regional Commissions

An Early Coordination letter should be sent to the appropriate Regional Commission for the proposed project. Letters to Regional Commissions should include a request for information concerning low income and minority communities. For a map showing counties within each Regional Commission's jurisdiction, as well as websites and contact information, go to http://www.gardc.com/.

3.6.4 Other Agencies

Any other association, governmental unit, or organization that is anticipated to have an interest in, or be affected by, the proposed project should be sent a copy of the Early Coordination letter. Other agencies may include the following:

- National Resources Conservation Service in addition to standard letter, if there is involvement with farmland
- Metropolitan Planning Organizations

- County Commissions
- Mayors
- Official Federal Cooperating Agencies not already listed
- Federally Recognized Tribes Culturally Affiliated with Georgia (see 106 notification in Chapter V.3 of this manual)

4.0 Preliminary surveys for environmental resources

Surveys for environmental resources that have the greatest potential to influence alignment decisions should be conducted during concept development. These include

- Historic resources and their boundaries,
- Non-historic Section 4(f) resource boundaries (publicly owned parks, recreation areas, wildlife & waterfowl refuges),
- Jurisdictional Waters of the US (wetlands, streams, & open waters),
- Vegetative buffers (25 feet for warm water streams and state waters, 50 feet for cold-water trout streams),
- Cemeteries, and
- Threatened & Endangered species and their habitat.

Appropriate agency consultations concerning resource identification also should be conducted at this time.

The archaeologist also can provide an archaeological evaluation and ranking based on high site potential/sensitivity using archaeological environmental screening results to support, in association with other special studies, the narrowing down of alternatives. Not until a preliminary alignment has been developed will the field survey for archaeological resources be conducted.

Once the environmental team members have transmitted survey reports to the PM, all environmental resources must be shown on all project layouts and plans.

5.0 Practical Alternatives Review (PAR) process (see Chapter V.4 for details)

A Practical Alternatives Review (PAR), including a PAR Report, will be prepared for those projects that require an Individual Permit (IP) in accordance with Section 404 of the CWA. The report will justify the alignment preferred by GDOT and will include construction cost estimates for the various alternatives considered. See Chapter V.4 for more information about the PAR process.

6.0 Approved Concept Report

While an approved project Concept Report is not needed before Early Coordination can be initiated, the project concept should be far enough along in the conceptual phase such that an accurate project description and location map can be included with the letter.

7.0 References

- Federal Register, 1982. Presidential Executive Order 12372. FR Vol. 47, No. 137.
- USDOT. FHWA - The Environmental Guidebook - Interagency Coordination. August 19, 1983.

CHAPTER III - National Environmental Policy Act (NEPA) DOCUMENTATION

1.0 Overview

An increase in environmental awareness in the 1960s brought about concern for the pressure that people and development were placing on the environment. Due to this concern Congress passed the National Environmental Policy Act of 1969 (NEPA). This Act expressed three major goals:

- Set national environmental policy;
- Established a basis for Environmental Impact Statements (EISs); and
- Created the Council on Environmental Quality (CEQ).

This law also requires that the policies, regulations, and laws of the federal government be interpreted and administered in accordance with the goals of the law to the greatest extent possible. Additionally, it requires that federal agencies use an interdisciplinary approach in planning and decision making for actions that impact the environment. Finally, NEPA requires the preparation of an EIS on all major federal actions significantly affecting the human environment.

The lead federal agency for NEPA on Georgia Department of Transportation (GDOT) project compliance is typically the Federal Highway Administration (FHWA). However, on rare occasions, other federal agencies may take the lead agency role. The lead state agency is the GDOT.

2.0 Mandatory NEPA compliance projects

Compliance with NEPA is mandatory when one of the following conditions is met:

- Federal funds or assistance are used at some phase of the project;
- Federal permit(s) is (are) required;
- Federal approval of an action is required; or
- Federal funding or assistance eligibility must be maintained.

Whenever federal funds are used or when an interstate encroachment occurs, GDOT and FHWA are responsible for the preparation of NEPA documents. For other federal actions, check with the permitting agency to determine responsibility for the NEPA document preparation.

There are two reasons for documenting the NEPA process:

- To provide complete disclosure of the environmental analysis process, and
- To present the results (i.e., the decision).

Transportation projects have varying degrees of severity or potential to affect the environment. There are **three** classes of actions [23 CFR 771.115], defining the way that compliance with NEPA is documented in terms of the action's impacts.

- **Class I, Environmental Impact Statements (EIS)** are prepared for projects whose action will have a significant effect on the environment.
- **Class II, Categorical Exclusions (CE)** are prepared for projects that do not individually or cumulatively have a significant environmental effect.
- **Class III, Environmental Assessments (EA)** are prepared for projects in which the significance of the environmental impact is not clearly defined. All actions that are not Class I or II are Class III. All actions in this class require the preparation of an EA to determine the appropriate environmental document required.

Determining the level of documentation begins with the Early Coordination process (see Chapter II). Once responses are received and preliminary special studies are performed, an evaluation and consultation with FHWA is undertaken. The FHWA can anticipate a level of documentation; however, a final decision on the level of documentation is not made until the environmental studies (discussed in Chapter V.1 through V.7) are complete.

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) establishes an 180-day statute of limitations on claims against the US Department of Transportation (USDOT) and other federal agencies for certain environmental and other approval actions. The FHWA must publish a notice in the Federal Register announcing that the agency has taken an action on a transportation project that is final under the federal law pursuant to which the action was taken. The decision to publish a notice and invoke the statute of limitations will be made by FHWA and GDOT on a project by project basis.

3.0 Environmental Impact Statements (EIS)

3.1 Overview

In accordance with NEPA, an EIS must be prepared for all major federal actions that would significantly affect the quality of the human environment. The EIS process is carried out in two separate phases that result in the preparation of a Draft EIS (DEIS) and a Final EIS (FEIS). The FEIS is followed by a Record of Decision (ROD). Both the DEIS and the FEIS are full disclosure documents that provide a full description of the proposed project, the existing environment, and identification of the anticipated beneficial and adverse environmental effects of all reasonable alternatives.

The SAFETEA-LU established several new requirements for EISs, particularly with regard to agency and public involvement as discussed below. The FHWA's SAFETEA-LU guidance can be found at www.fhwa.dot.gov/hep/section6002.

General guidance for preparing an EIS can be found at http://environment.fhwa.dot.gov/projdev/docueis.asp.

A suggested format for an Environmental Impact Statement can be found in the FHWA Technical Advisory T6640.8A (http://www.environment.fhwa.dot.gov/projdev/impTA6640.asp).

3.2 Notice of Intent (NOI)

Once it has been determined that an EIS will be completed for the project, it is necessary to notify the public and other affected government agencies of GDOT's intentions. This would be the first step of the NEPA early coordination process, which is initiated with the publication of the Notice of Intent (NOI). A draft NOI is submitted to FHWA or the lead federal agency, which is responsible for publishing it in the Federal Register. The NOI typically will be utilized as a tool to officially begin the EIS process. At a minimum the NOI will briefly describe the proposed project and possible alternatives, provide a brief Purpose & Need (P&N), note any proposed scoping meetings, and provide a contact person with the lead agencies. An example can be found at the following website: http://environment.fhwa.dot.gov/projdev/impTA6640.htm.

3.3 Agency involvement

The SAFETEA-LU established roles and responsibilities for three levels of agency involvement during EIS development: lead, cooperating and participating.

3.3.1 Lead Agencies

For transportation projects, USDOT must act as lead federal agency(ies). Established based on funding source, FHWA generally serves as lead federal agency for GDOT projects. Occasionally, the Federal Transit Administration (FTA) will act as a joint lead federal agency. On state-funded projects, the US Army Corps of Engineers (USACE) may serve as the lead federal agency. During the early coordination process, the lead federal agency(ies) must be identified.

The SAFETEA-LU requires that lead agencies provide increased oversight in managing the environmental process and resolving issues. Lead agency responsibilities include:

- Identifying and involving participating agencies (discussed below);
- Developing coordination plans (discussed below);
- Providing opportunities for public and cooperating & participating agency involvement in defining P&N and determining the range of alternatives (discussed below); and
- Collaborating with participating agencies in determining methodologies and level of detail for the alternative analysis.

3.3.2 Cooperating Agencies

A cooperating agency assists the lead federal agency(ies) in developing an EIS. The CEQ regulations implementing NEPA define a cooperating agency as any agency that has jurisdiction by law or special expertise for proposals covered by NEPA (40 CFR 1501.6). Any federal agency, state agency, local government, or tribal government with such qualifications may become a cooperating agency on an EIS by agreement with the lead federal agency. For example, if a county has jurisdiction by law over some aspect of a proposed project or has special expertise, and wishes to assist in analyzing impacts, it may request cooperating agency designation from the lead federal agency.

During the initiation of the NEPA process, the lead federal agency through GDOT may invite state, local or tribal government entities to participate as cooperating agencies, or these same entities may request that the lead federal agency grant them cooperating agency status. The lead federal agency will determine whether the proposed cooperating agency meets the CEQ requirements for cooperating agency status (40 CFR §1501.6, and 2). More than one agency or government entity may be designated as a cooperating agency.

The lead federal agency maintains the responsibility of preparing the EIS; however, a cooperating agency participates in the preparation of EIS. Typical responsibilities of a cooperating agency include the following:

- Assisting in the NEPA analysis at the earliest possible time;
- Participating in the scoping process, which helps define and frame the issues to be addressed in the NEPA document;
- Developing information and preparing environmental analyses (upon request of the lead federal agency) for portions of the EIS over which the cooperating agency has special expertise;
- Contributing staff support and other resources at the lead federal agency's request to enhance the NEPA team's interdisciplinary capability;
- Sharing freely any information and data relevant to the NEPA analysis, thereby facilitating rational, fact-based decision-making; and
- Relying on its own funds to support its participation in the EIS.

The lead federal agency retains the exclusive authority to make decisions on projects for which it has responsibility by law, and similarly a cooperating agency will maintain its authority to make decisions on issues under its legal jurisdiction.

The lead federal agency also retains decision-making authority over issues relating to the completion of the EIS due to it being the federal agency charged with carrying out the NEPA process. If parties find they cannot agree on issues related to the preparation of the EIS, each will be free to proceed independently in order to meet respective schedules for rendering decisions.

Cooperating agencies have similar roles as participating agencies (see below), but have a greater degree of authority, responsibility and involvement in the environmental process.

3.3.3 Participating Agencies

Federal and state agencies and tribal, regional and local governments that may have an interest in the project should be invited to serve as a participating agency. Lead agencies should identify and invite participating agencies early so that concerns can emerge early in the process and issues can be resolved quickly.

Roles and responsibilities include:

- Early participation, particularly in the development of the P&N, range of alternatives, methodologies and level of detail in the alternatives analysis;
- Early identification and resolution of issues; and
- Participation in scoping.

Participating agencies are not afforded any increased oversight or approval authority. Non-governmental organizations and private entities cannot serve as participating agencies.

3.4 Scoping

As stated in 23 CFR 771.123, "[t]he scoping process will be used to identify the range of alternatives and impacts and the significant issues to be addressed in the EIS and to achieve the other objectives of 40 CFR 1501.7." The scoping process is utilized to invite participation in the NEPA process, determine the scope of the project and the study area, determine both important and minor issues, allocate assignments, determine activities and their timing, and identify other activities (if any). Scoping is the first major public outreach effort inviting public and governmental agency participation and should clearly be defined as part of the project Public Involvement Plan (PIP). While the NOI will be utilized as a method of announcing the scoping meetings, the project team also will solicit comments and input from both the public and governmental agencies. In addition to publication of the NOI, proposed scoping meetings will be announced through the project public outreach process including direct mailings, newsletters and other local publications (see Chapter IV).

During scoping it is important to clearly define the action proposed as part of the project, define objectives, define scope, identify decisions that need to be made, focus resources, and initiate public participation.

The following are the main components of the scoping process:

- Obtaining input from appropriate federal and state, and local and tribal governments, and from the public;
- Determining all possible alternatives to be evaluated in the DEIS;
- Determining lead agency(ies);
- Determining cooperating agencies;
- Determining participating agencies;
- Determining if existing documents address the proposed action;
- Identifying public involvement needs; and
- Identifying significant environmental issues to be analyzed further and those insignificant issues requiring less evaluation [narrow the scope of analysis, 40 CFR 1501.1(d)].

3.5 Coordination Plans

The SAFETEA-LU requires that the lead agencies establish a plan for coordinating public and agency participation and comment during the environmental process. According to FHWA's guidance, the Coordination Plan should outline

- How the lead agencies have divided the responsibilities for compliance with the various aspects of the environmental review process, and
- How the lead agencies will provide the opportunities for input from the public and other agencies.

The plan also should identify coordination points, such as

- Publication of the NOI and scoping activities;
- Development of the P&N;
- Identification of the range of alternatives;
- Collaboration on methodologies;
- Completion of the DEIS;
- Identification of the preferred alternative and the level of design detail;
- Completion of the FEIS;
- Completion of the ROD; and
- Completion of permits, licenses, or approvals after the ROD.

The plan also may establish a schedule of regular meetings and may identify the appropriate agencies, organizations or personnel to be included for each coordination point.

3.6 Purpose & Need (P&N) and Alternative Analysis

Increased agency and public input into the development of the project's P&N and the alternatives analysis is required by SAFETEA-LU. These steps may occur concurrently or sequentially (see Chapter II).

3.6.1 Purpose and Need

The lead agencies are responsible for the project's P&N statement; however, they must provide opportunities for the involvement of participating agencies and the public. After considering their input, the lead agencies will decide on the project's P&N.

3.6.2 Alternatives Analysis

Similarly, the lead agencies are responsible for developing the range of alternatives. Participating agencies and the public must be given the opportunity to provide input. But again, after considering this input, the lead agency(ies) will determine the appropriate range of alternatives for evaluation.

The project's Coordination Plan will establish the timing and form of involvement opportunities as well as the timing of the decision on the range of alternatives.

In accordance with SAFETEA-LU, the lead agency(ies) also must collaborate with participating agencies on the appropriate methodologies to be used and the level of detail required for the evaluation of alternatives. The lead agency(ies) can decide to develop the preferred alternative (after it has been identified in the approved DEIS) to a higher level of detail. However, developing the preferred alternative in greater detail cannot prevent the lead agency(ies) from making an impartial decision.

3.7 Draft Environmental Impact Statement (DEIS) format/procedure

The DEIS documents the results of studies conducted on the social, economic and environmental impacts of all alternatives under consideration. Thus all reasonable alternatives must be identified and analyzed, and compliance with applicable state and local environmental regulations must be demonstrated in accordance with NEPA. The analysis for each of the alternatives should identify the type and severity of environmental impacts anticipated, how adverse impacts have been avoided, and the measures to minimize and/or mitigate unavoidable impacts.

The level of analysis will vary by project and topic, depending on the particulars of each project. Chapter V includes a wide range of environmental studies; some or all of which may apply to a particular project. At a minimum, the analyses for an EIS must include the following:

- Cover Sheet
- Summary
- Table of Contents
- Purpose and Need
- Alternatives Considered
- Affected Environment
- Environmental Consequences
    - Air Quality
    - Noise Quality
    - Conceptual Stage Study
    - Economic Impacts
    - Land Use
    - State and Federal Waters
    - Protected Species
        - Threatened & Endangered
        - Migratory birds
        - Other, e.g., bats
    - Floodplains
    - Water Quality
    - Cultural Resources
        - Historic Properties
        - Archaeological Sites
    - Environmental Justice populations
    - Hazardous Waste sites/Underground Storage Tanks (UST)
    - Indirect & Cumulative Impacts
- List of Preparers
- EIS Distribution
- Comments and Coordination
- Appendices (if any)

Special studies may be warranted to address specific impacts. For topics such as coastal zone, floodplains, and wild and scenic rivers, the project may or may not require detailed analysis. Review of files, secondary data, and other materials will suffice as the basis for describing these sections. For projects with specific impacts to resources such as floodplains or a wild and scenic river, the analysis will be more in-depth. The level of detail of the analysis should be commensurate with the context and intensity of the impacts.

Upon completion of the environmental studies and other research/coordination required, the results need to be compiled into a well-organized document.

3.7.1 Documentation

The documentation for the DEIS needs to be clear and concise. Essentially, the EIS serves dual purposes of informing the public and disclosing the technical analyses and findings. Therefore, the writing style needs to keep a balance between summarizing the findings and providing appropriate details to support the findings in the document. The format of the EIS can be tailored to meet the needs of the project. The project team should work together to determine the most appropriate format.

Where appropriate, tables and graphics will be used to clarify or simplify the discussion. The graphics should be consistent and include a north arrow, scale, project limits, and surrounding land uses. The graphics are typically referred to by exhibit number and also include page numbers and GDOT project numbers.

3.7.2 DEIS processing

Completion and approval of the DEIS occurs through several steps. Correspondence, the interested public, and inter-agency input resulting from early coordination and scoping efforts serve as a background for the EIS preparation. Documentation occurs throughout the subsequent environmental analyses, agency coordination, and public involvement process. The document should include a concise description of the proposed action, other actions and proposals in the area, reasonable alternatives, major environmental impacts, areas of controversy, unresolved issues (if any), and other federal actions (e.g., permits, 106 compliance).

3.7.3 Document submittal/review

Upon completion, the documentation will be submitted in the form of a DEIS. Upon completion of the document review and final revisions, GDOT will submit the document to FHWA for review and approval. Approval of the DEIS by FHWA authorizes the process to move to the public hearing phase.

Copies of the approved DEIS will be submitted to US Environmental Protection Agency's (USEPA) Office of Federal Activities EIS Filing Section. Guidance on filing EIS's with USEPA can be found at http://www.epa.gov/compliance/nepa/submiteis/index.html.

Copies of the approved DEIS also will be submitted to the Director of the Office of Environmental Policy and Compliance, Department of the Interior (DOI). Guidance on filing EISs with DOI can be found at http://www.doi.gov/oepc/Environmental_Review_Process.pdf.

3.8 Public Hearing Open House (PHOH)

A formal Notice of Availability (NOA) is published in the Federal Register by USEPA announcing the date(s) and location(s) of the Public Hearing Open House(s) (PHOH) and establishing a deadline for comments. The DEIS is also made available for public review at several locations (e.g., at public libraries, GDOT offices, other government buildings) for a minimum of 45 days. The PHOH(s) will be held during this same period with a minimum of 30 days between the NOA publication and the hearing date(s), and a minimum of 10 days between the last hearing date and the end of the comment period. At the end of the comment period, GDOT and FHWA will review all comments received and prepare responses to all comments. The number of PHOHs for a project is dependent on the scope of the project, the project impacts and degree of community interest or controversy.

Upon completion of the public comment period, the Final Environmental Impact Statement (FEIS) will be prepared.

3.9 Final Environmental Impact Statement (FEIS)

The FEIS, identifies the preferred alternative (if the draft did not) and summarizes all comments received during the DEIS circulation period and public hearing(s). It must demonstrate compliance to the greatest extent possible with all applicable environmental laws and Executive Orders, and identify how regulatory compliance would be met. The document also will note where the EIS was changed in response to comments, and any other changes or corrections.

3.9.1 FEIS processing

The FEIS is processed similar to the DEIS and is submitted to FHWA for approval. Upon approval of the FEIS, a NOA allowing a minimum 30-day public review period is published in the Federal Register. Circulation of the FEIS generally will follow the same standards as those implemented during the DEIS circulation including circulation to USEPA and DOI.

3.10 Record of Decision (ROD)

At the conclusion of the FEIS circulation, the FHWA issues its ROD. The ROD summarizes the impacts and mitigation commitments made in the FEIS and formalizes the FHWA's decision. The ROD must be issued before any project approvals (e.g., for final design, right-of-way acquisition, construction) can be given on the selected course of action. The ROD may not be issued sooner than 30 days after the approved FEIS is distributed, nor 90 days after the DEIS is circulated. It should

- State the basis for the decision;
- Identify all the alternatives considered and specify the "environmentally preferable alternative;" and

- State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted and, if not, why they were not.

The ROD also will be made available to the public in the same way as the DEIS and FEIS. Providing that there are no changes in the scope of the project, the ROD is the conclusion of the NEPA process.

3.11 Supplemental Environmental Impact Statement (SEIS)

If at any time during or after approval of the DEIS, FEIS, or issuance of the ROD there is a substantial change in the proposed project that affects the environmental issues, or there are significant new circumstances or information relevant to environmental concerns that alter the proposed action or its impacts, a SEIS will be prepared. In the event the significance of the new impacts is not clear, the appropriate environmental studies to assess the impacts will be necessary.

Implementation of the SEIS will follow all procedures for preparation of the DEIS, FEIS, and the ROD. This process will include the NOI to file an SEIS and appropriate outreach to ensure public involvement needs are met.

3.12 Re-evaluation of EISs

If an acceptable FEIS is not submitted to FHWA within three years from the date of the DEIS circulation a re-evaluation of the previously completed documentation will be prepared. The purpose of this re-evaluation is to determine whether or not a supplement to the DEIS or a new DEIS is needed.

A re-evaluation may also be required if major steps to advance the action (e.g., authority to undertake final design, authority to acquire a significant portion of the right-of-way, or construction) have not occurred within three years after the approval of the FEIS, FEIS supplement, or the last major federal approval or grant.

See Chapter VII for a discussion on reevaluations.

3.13 EIS references

The agency rules which define the requirements have been codified in the Code of Federal Regulations (CFR) in two different areas, 23 CFR 771 and also at 40 CFR 1500. The regulations defined in Section 40 are those established by the CEQ, the body established by Congress to ensure that NEPA conformance is followed by all federal agencies; 40 CFR 1500 contains guidelines for implementing NEPA. The following is a list of the sections within the CFR where guidance for each phase of the EIS process can be found:

- Early coordination/Scoping - 23 CFR 771.111 and 40 CFR 1501.7
- Notice of Intent - 40 CFR 1507.3(e)
- Cooperating Agencies - 40 CFR 1501.6, 1503.3, and 1506.2
- Draft EIS - 23 CFR 771.123, and 40 CFR 1502.6-1502.18 and 1506.10
- Public Hearing/Circulation - 23 CFR 1502.19, 1503.1, 1503.4, and 1506.6

- Final EIS - 23 CFR 771.125, and 40 CFR 1502.9, 1503.4, 1506.9, 1506.10
- Supplemental EIS - 23 CFR 771.130, and 40 CFR 1502.9, 1503.4, 1506.9, 1506.10
- Record of Decision - 23 CFR 771.127, and 40 CFR 1505.2, 1506.6 and 1506.9

In addition to the CFR, FHWA's Technical Advisory (T6640.8A) provides detailed guidance on the preparation of the NOI, the scoping process, and the information that should be included in the EIS.

4.0 Categorical Exclusions (CE)

4.1 Overview

The FHWA regulations on Environmental Impact and Related Procedures define CE as "actions which do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts." [23 CFR 771.117(a)]

A list of actions generally not requiring NEPA documentation can be found in 23 CFR 771.117(c). These actions have been predetermined to qualify as CEs. Other projects, pursuant to 23 CFR 771.117(d), may qualify as CEs if appropriately documented. These regulations caution that for some projects, a CE may not be appropriate due to unusual circumstances.

The FHWA ultimately decides the appropriate level of documentation. As discussed previously, the level of documentation can be anticipated; however, environmental studies must be completed to determine the appropriate level of documentation. Any action that normally would be classified as a CE but could involve unusual circumstances will require appropriate environmental studies to determine if the CE determination is appropriate. Such unusual circumstances may include

- Significant environmental impacts;
- Substantial controversy on environmental grounds;
- Significant impact on properties protected by Section 4(f) of the US Department of Transportation (USDOT) Act or Section 106 of the National Historic Preservation Act; or
- Inconsistencies with any federal, state, or local laws, requirements or administrative determinations relating to the environmental aspects of the action.

[23 CFR 771.117(b)]

4.2 CE Forms/Procedures

If the proposed project is a CE action, it is a type listed in the June 2008 Programmatic CE (PCE) Agreement, and it meets the thresholds established in the June 2008 PCE Agreement, the CE will be developed utilizing the PCE Eligibility Determination Form. Through an agreement

between FHWA and GDOT, the PCE is not forwarded to FHWA but is approved by the Office of Environmental Services. These CEs do not require an FHWA signature for approval; only the Office of Environmental Services can approve PCEs. The PCE is typically prepared for projects that are very small in scale and have minor to no environmental impacts. Please see the June 2008 PCE Process Agreement.

If the proposed action does not meet the conditions established in the June 2008 PCE Process Agreement, a CE will be prepared. More guidance can be found in the document library.

The CE is to include in this order:

- Environmental Commitments Table
    - Commitments made during project development should be characterized as "Pre-construction," "During construction," or "Post-construction" (see Chapter XI)
- A signed CE Checklist
    - Each entry in Section V should be marked "Involvement" (the resource type is present and will be affected), "No Involvement" (the resource type is present but will not be affected), or "None" (the resource type is not present)
- Attachment I, Effects Evaluation
    - Purpose & Need Statement (see Chapter II)
    - Project Description
    - Location Map including
        - North Arrow
        - Legend (if appropriate)
        - Project No., P.I. Number, County, and Project Title
        - Source
        - Scale
        - Project Termini
    - Effects evaluation discussion for all resource types marked as "Involvement" or "No Involvement."
- Attachment II, Correspondence – all correspondence including but not limited to:
    - All items listed in Section IV, Table A, Actions Requiring Concurrences Prior to CE Approval
    - Practical Alternatives Review (PAR) related correspondence (if an Individual Section [IP] 404 Permit is required)
    - Copy of the Early Coordination letters and a list of recipients
        - Federal Emergency Management Agency (FEMA) early coordination letter (if project encroaches on regulatory floodway)
        - Early coordination letter with USFWS and GDNR (if state species are in the project area)
    - All letters received from others during the early coordination process
- Attachment III, Report Coordination
    - Letters and/or emails transmitting environmental studies to FHWA

    - Environmental studies should not be attached to the CE as they will have been transmitted to FHWA prior to completing the CE
- Attachment IV, Concept Report
    - If the concept report is not yet approved, a copy of the draft report should be attached
- Attachment V, Programmatic Section 4(f), if required (see Chapter VI)
- Attachment VI, Conceptual Stage Study, if required (see Chapter IV)
- Attachment VII, Public Information Open House Materials, if applicable
    - Include the synopsis, summary of comments, a copy of all comments received, and the response letters
- Attachment VIII, QCQA Forms, if applicable
    - QCQA forms that have documented the consultant and GDOT's review of the previous submittals of the CE

4.3 CE submittal

The CE cannot be submitted for review and approval until all environmental studies are approved and concurrences are received.

4.3.1 Submit to FHWA

Upon review of the CE, it will be submitted to the FHWA for approval, unless it meets the conditions set out in the PCE agreement.

4.4 CE references

- 40 CFR 1508.4
- 23 CFR 771.117(a)
- 23 CFR 771.117(b)
- 23 CFR 771.117(c)
- 23 CFR 771.117(d)

5.0 Environmental Assessments (EA)

5.1 Overview

An EA is typically prepared when it is uncertain whether there will be significant impacts resulting from a project. The purpose of an EA is to document the analysis of the project and its effects in order to determine if there will be significant impacts resulting from the proposed project. The EA process is carried out in two separate phases that result in the preparation of a Draft EA and a Final EA/Finding of No Significant Impact (FONSI) if it is determined that significant impacts would not occur due to the proposed project. If it is determined that the proposed project would result in significant impacts, the preparation of an EIS is required.

All technical studies must be reviewed and approved prior to submittal of the Draft EA. However, agency consultations (e.g., Section 106 and Section 7) do not need to be complete at this time. However, the environmental team should have a good indication of the effects determination and agency decisions. These decisions may affect an alignment so the team

should have a good degree of certainty that these agency consultations will not substantially change the project alignment or design. The one exception is that the PAR must be complete prior to FHWA approval of the Draft EA.

From a practical perspective, most projects not included in specific Categorical Exclusion listings are processed as EAs. Typical examples in Georgia include highway widening, large-scale safety projects (those requiring additional right-of-way), and roadway projects on new location. Environmental Assessments require two approvals by FHWA. The first is the approval of the Draft EA that allows the project to advance to a PHOH. The second FHWA approval is of the Final EA that concludes with a FONSI or that an EIS should be prepared. Three components of the EA must be completed successfully to assure timely approval;

1. The specific analyses required for the project,
2. The documentation, and
3. The steps to process the documentation.

Following FHWA approval of the Draft EA, the public availability period, and receipt of comments on the Draft EA, the next step is a determination of significance of impacts:

- If, after completing the process, it is evident that there are no significant impacts associated with the project, a Final EA and a FONSI may be prepared; or
- If, at any point in the process of preparing or processing an EA, it is discovered that the project would result in any significant impacts to the environment, then an EIS must be prepared.

5.2 Analysis

The level of analysis will vary by project and topic, depending on the particulars of each project. Chapter V of this manual includes a wide range of environmental studies; some or all of which may apply to a particular project. The analyses for an EA must include, at a minimum, the following:

- Purpose and Need
- Alternatives Considered
- Air Quality
- Noise Quality
- Conceptual Stage Study
- Economic Impacts
- Land Use
- State and Federal Waters
- Protected Species
    - Threatened & Endangered
    - Migratory birds
    - Other, e.g., bats
- Floodplains

- Water Quality
- Cultural Resources
    - Historic Properties
    - Archaeological Sites
- Environmental Justice populations
- Hazardous Waste sites/USTs
- Indirect & Cumulative Impacts

Other special studies may be warranted to address specific impacts. For topics such as coastal zone, essential fish habitat, parks and recreation facilities, and wild and scenic rivers, the project may or may not require detailed analysis. Review of files, secondary data, and other materials will suffice as the basis for describing these sections. For projects with specific impacts to resources such as environmental justice or a wild and scenic river, the analysis will be more in-depth. The level of detail of the analyses should be commensurate with the context and intensity of the impacts.

Upon completion of the special studies and other research/coordination required, the results need to be compiled into a well-organized document.

5.3 Documentation

The documentation for the EA needs to be clear and concise. Essentially, the EA serves dual purposes of informing the public and disclosing the technical analyses and findings. Therefore, the writing style needs to keep a balance between summarizing the findings and providing appropriate details to support the findings in the document. An EA template is provided; the template is flexible and can be customized to best fit the project. The EA should follow this basic outline:

- Cover Sheet (signature page)
- Environmental Commitments Table (green sheet) (see Chapter IX)
- Table of Contents
- Purpose and Need
- Alternatives Considered
- Environmental Consequences
- Section 4(f) Evaluation (if any)
- Comments and Coordination (Agencies)
- Appendices (if any)
    - Correspondence
    - Project Concept Report
    - Conceptual Stage Study
    - Public involvement meeting materials (Handouts, Summary, Comments, GDOT responses)
- Other Compliance Information

Where appropriate, tables and graphics should be used to clarify or simplify the discussion. The graphics should be consistent and include a north arrow, scale, project limits, and surrounding land uses. The graphics are typically referred to by exhibit number and also include page numbers and GDOT project numbers. While specific characteristics of a project may dictate additional exhibits, the following elements are needed at a minimum:

- Project Location
- Typical Section
- Location(s) of Waters of the US (if present)
- Location(s) of historic resources (if present)
- Floodplains (if present)

5.4 Processing the Draft EA and the Public Hearing Open House (PHOH)

The Draft EA is subject to FHWA approval before it is made available to the public for review and comment. The approved Draft EA must be made available for public inspection; it must be made available at the PHOH. The PHOH advertisement announces the availability of the approved document. The availability period for an approved Draft EA is 15 days; however, state law [OCGA 32-3(f)(5)(A)] requires that PHOHs be advertised no less than 30 days in advance. The approved Draft EA often is sent to other agencies who have expressed an interest in the project.

Once FHWA approves the Draft EA, the project enters Public Hearing phase, where the availability of the EA and the Public Hearing Open House are advertised. At the PHOH and during a subsequent 10-day comment period, the public is invited to ask questions and make comments on the project and the EA. All PHOH comments will be responded to within 60 days of the meeting.

If an Individual Section 4(f) Evaluation (discussed in Chapter VI) is required, the evaluation is attached to the EA and twelve copies of the approved Draft EA/Section 4(f) Evaluation must be submitted to the Department of the Interior (DOI) and other resource agencies with jurisdiction over the Section 4(f) resource for comment. The transmittal letter comes from FHWA. The resource agency has 45 days to respond. The response letter will be included in the appendix of the Final EA/Section 4(f) Evaluation. Two copies of the document will be submitted to the Department of Housing and Urban Development (HUD).

Courtesy copies of the Draft EA (and if applicable, the Section 4(f) evaluation) should be sent to the City or County Manager for comment. See Chapter IV for more information about the public involvement process.

5.5 Finalizing/revising the EA

5.5.1 Overview

The Final EA is modified to reflect all applicable comments and responses received at the PHOH. The Final EA must include the identification of a selected alternative.

5.5.2 Analysis and documentation

Subsequent to the availability of the Draft EA and the PHOH comment period, a Final EA is prepared. The Final EA focuses primarily on bringing closure to the alternatives process, summarizing the PHOH, and providing more specific environmental commitments for the project. The following items must be addressed in the Final EA.

- Any changes, such as possible shifts to avoid residential or commercial property, cemeteries, etc., that might result from comments received at the PHOH, must be analyzed and the results must be summarized in the Final EA.
- The selected alternative must be identified in the document (whether or not the draft identified a preferred alternative).
- If not already covered in the Draft EA, include in the Final EA a discussion of all the alternatives no longer under consideration and why they have been rejected. Ensure that the avoidance alternatives for Waters of the US and mitigation discussions are complete.
- Make sure the wetland alternatives and mitigation discussion are complete. If the wetland mitigation has not been determined, ask the Ecologist to make an educated guess about what type of mitigation will be done and where it will take place. More specific details or changes in the mitigation can be covered in future reevaluations. If the wetland section of the document does not already contain a "wetland finding" statement, add it.
- If Section 7 of the ESA and FWCA consultation were incomplete in the Draft EA, include USFWS concurrence letters in Appendix A.
- If the project is in a $PM_{2.5}$ non-attainment area and if multiple alternatives were considered in the Draft EA, $PM_{2.5}$ interagency coordination must be undertaken and documented in the Final EA. The PHOH handout also must include the $PM_{2.5}$coordination information.
- If the Section 106 coordination was incomplete in the Draft EA, it must be complete for the Final EA and the document must reflect this (i.e., change all statements that say a finding "is anticipated" to "has been determined"). Include the SHPO concurrence letter and ratified MOA, if applicable, in Appendix A.
- If the document includes an Individual Section 4(f) Evaluation, the wording in the alternative section should be finalized to show that each alternative is not feasible or not prudent. One or both of the not feasible and not prudent findings can apply to each alternative. Measures to minimize harm to the Section 4(f) resource should be discussed for all alternatives.
- In the Coordination and Comments section, discuss the PHOH. Include major concerns and discuss what is being done to address them. Add the PHOH handout, summary, comments and responses to the Appendix and include it in the Table of Contents.
- Add a list of recipients of the document. This list may be placed with the early coordination list after the last page of text of the document. This list should not include internal (GDOT) recipients. This list should include:

    - Local government officials,
    - The Office of Planning and Budget,
    - The DOI and HUD if the EA contains an Individual Section 4(f) Evaluation,or
    - Other appropriate federal agencies, such as the Corps of Engineers (USACE) or National Park Service (NPS), if right-of-way is required from them.
- Confirm that the remainder of the document is accurate and make any appropriate changes.
- Update the Environmental Commitments Table (green sheet).

5.5.3 Processing

Based on the analysis summarized in the EA, a determination is made whether or not the project would have significant impacts. All minimization and mitigation efforts should be factored into this determination. If it is determined that a project would result in no significant environmental impacts, a FONSI will be prepared to conclude the EA process and document the decision. If it is determined that the project would have significant impacts, an EIS is prepared.

5.6 Finding of No Significant Impact (FONSI)

5.6.1 Overview

A FONSI is issued when environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment. A FONSI is a document that briefly presents why an action does not have a significant impact on the environment and is the final decision documentation for an EA (unless significant impacts are determined to require an EIS). The document is made up of a Final EA and FONSI cover sheet.

A sample of the language used for a FONSI can be found in the FHWA Technical Advisory T6640.8A (http://environment.fhwa.dot.gov/projdev/impTA6640.htm).

5.6.2 Form/procedure

Because the FONSI serves as a decision document, specific statements and signatures are required. The GDOT State Environmental Administrator signs a certificate of the project's compliance with applicable laws. This certification states that GDOT has considered the social, economic, and environmental effects of the project and that the project has fulfilled the requirements of 23 USC 128 relating to public hearings. This certification should be placed after the EA title page. After its review and approval of the Final EA, FHWA signs the EA title sheet again. In addition, FHWA signs a finding that the project would have no significant impact on the human environment. Officially, this finding is included as a FONSI sheet inside the EA title sheet, bearing the signature of the FHWA Division Administrator. After approval, a NOA and copies of the EA/FONSI are submitted to the state clearinghouse.

5.7 EA/FONSI references

- 23 CFR 771.119 Environmental Assessments (EA)
- 23 CFR 117.121 Finding of No Significant Impacts (FONSI)
- 23 USC 128 -- Public Hearings

6.0 Consultant Deliverables

After receiving comments from GDOT or FHWA on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

6.1 EIS deliverables

Draft EISs, Final EISs, RODs, and Supplemental EISs should be not submitted in a three-ring binder.

Product		**Number of copies**
Draft Notice of Intent		1
Scoping materials		
	Draft for review	1
	For distribution at meeting	Adequate number for participant list
DEIS		
	For GDOT review	1
	For transmittal to FHWA	4
	Approved (w/o 4(f) evaluation)	25
	Approved (w/ 4(f) evaluation)	26
Draft Notice of Availability		1
	PHOH Ad	1
PHOH Handout		
	For review	3
	For distribution at open house	Adequate number for expected attendance
PHOH response letter		
	For review	1
	Signed & mailed copies	2
FEIS		
	For GDOT review	1
	For transmittal to FHWA	4
	Approved (w/o 4(f) evaluation)	25
	Approved (w/ 4(f) evaluation)	26
ROD		
	For review	1
	For publication	3
SEIS		
	For GDOT review	1
	For transmittal to FHWA	4
	Approved (w/o 4(f) evaluation)	24

	Approved (w/ 4(f) evaluation)	25
EIS reevaluation		4

6.2 CE deliverables

One copy of the CE will be submitted for review. Three copies will be submitted for transmittal to FHWA. The CE should not be submitted in a three-ring binder.

6.3 EA/FONSI deliverables

Draft EAs and Final EA/FONSIs should not be submitted in a three-ring binder.

Product		**Number of copies**
Draft EA		
	For GDOT review	1
	For transmittal to FHWA	4
	Approved (w/o 4(f) evaluation)	11
	Approved (w/ 4(f) evaluation) -	15-20
	check with the GDOT NEPA analyst	
PHOH Ad		1
PHOH Handout		
	For review	3
	For distribution at open house	Adequate number for expected attendance
PHOH response letter		
	For review	1
	Signed & mailed copies	2
Final EA/FONSI		
	For GDOT review	1
	For transmittal to FHWA	4
	Approved (w/o 4(f) evaluation)	11
	Approved (w/ 4(f) evaluation) -	15-20
	Check with GDOT NEPA analyst	

CHAPTER IV - PUBLIC INVOLVEMENT

1.0 Overview

The Georgia Department of Transportation's (GDOT) Public Involvement Guidelines (Policies & Procedures 4055-1) currently are being revised. Until that revision is complete, the following guidelines should be followed.

1.1 When is Public Involvement necessary?

Public involvement, an integral part of the GDOT's Plan Development Process (PDP), encourages and solicits public input while providing an opportunity for the public to become informed about project development. Public involvement activities are also intended to provide the public access to the decision-making process. According to the PDP, "efforts to reach the public and be responsive to their concerns are an important element of project development and will be made on all projects." The goal of public involvement is to foster two-way communication and trust between governing agencies and the public.

Seeking meaningful public involvement is important for sharing the concerns of communities and for determining the final outcome of a project. Public involvement should be tailored to the specific project. The project team should consider the appropriate strategies to reach the communities within the project area. The project team should consult very early (such as during the initial concept team meeting) to determine the appropriate public involvement strategy. This strategy should build on public outreach efforts made during the project's planning phase.

Categorical Exclusions (CE) are the lowest level of environmental documentation and are appropriate for projects that would result in limited environmental impact. These projects tend to be non-controversial and do not require a Public Hearing Open House (PHOH). However, in some instances, small projects may have some adverse effect on the community, or may be controversial, and in that case, a Public Information Open House (PIOH) should be held. For example, if a project changes permanent access to a property (or properties), public outreach to affected property owners will be required even if overall project impacts are minor.

Environmental Assessments (EA) are prepared when the level of environmental impact is unknown. PIOHs may be held at any time during the preparation of the draft document. To meet federal requirements, after the Federal Highway Administration (FHWA) has approved the Draft EA, a PHOH must be held (or, with FHWA's concurrence, the opportunity for a PHOH must be advertised). In addition to PIOHs and PHOHs, the project team should consider other public outreach initiatives such as those discussed in Section 3.0, below. While many EAs do not have a stand-alone Public Involvement Plan, consideration should be given to developing one for projects that are controversial or result in community impacts.

An Environmental Impact Statement (EIS) is the appropriate level of environmental document for projects that have the potential to result in significant environmental impacts. These include

projects that are very controversial. At a minimum, a PHOH will be held after the Draft EIS (DEIS) is approved. Other public involvement strategies may be appropriate. Most EIS's will have a stand-alone Public Involvement Plan.

Public involvement needs also must be reconsidered during the reevaluation phase if substantial time has elapsed since the last outreach effort or if project changes warrant additional outreach.

For those projects involving the closing of a roadway and/or bridge during construction and result in an off-site detour, see Section 2.4.

1.2 Legislation and Executive Orders

The following are just some of the major laws governing public involvement.

The Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR]) require that agencies make a diligent effort to involve the public in preparing and implementing their NEPA procedures. They also require that agencies provide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies that may be interested or affected.

The environmental regulations of the US Department of Transportation (USDOT), the FHWA, and the Federal Transit Administration (FTA) can be found in 23 CFR Part 771. In accordance with CEQ requirements, these regulations were adopted to implement NEPA requirements for surface transportation projects. Under 23 CFR Part 771, agencies involved with federally funded transportation activities must make decisions in the overall public interest and inform the public and other governmental entities and involve them in making decisions.

Direct Federal Nationwide Action Plan. Section 136(b) of the 1070 Federal-aid Highway Act (23 USC 109(h)) directed the Secretary of Transportation to promulgate guidelines designed to assure that possible adverse Social, Economic, and Environmental (SEE) effects of federal-aid highway projects are fully considered and that final decisions are made in the best overall public interest.

Americans with Disabilities Act (ADA) encourages the involvement of people with disabilities in the development and improvement of transportation and paratransit plans and services.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA); its 1998 successor, Transportation Equity Act for the 21st Century (TEA-21); and the current transportation bill, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), enacted in 2005, emphasize public participation in the transportation planning process.

Executive Order (EO) 12898 – Environmental Justice (EJ) – emphasizes the need for the full and fair participation of minority and low-income communities in public involvement and the decision-making process.

2.0 Advertised Public Meetings

The Project Manager (PM) must request that Public Information Open Houses (PIOH) and Public Hearing Open Houses (PHOH) be scheduled. The Public Involvement Worksheet should be used to request the meeting.

Open Houses will be advertised twice in the local newspaper having general circulation in the county or counties in which the project is located. Either legal or retail ads may be used. Advertisements for PIOHs will be published three weeks and one week prior to the meeting date. Advertisements for PHOHs will be published 30 to 40 days and 5 to 9 days prior to the meeting date. In doing this, it is important to consider individual newspaper submission deadlines.

The NEPA analyst will prepare the advertisement and furnish it to the District Planning and Programming Engineer (DPPE) who will arrange for publication. The appropriate ad should be used:

- Public Information Open House (PIOH), see Section 2.1 below
- Public Hearing Open House (PHOH) for an approved Environmental Assessment (EA) or Environmental Effects Report (EER), see Section 2.2 below.
- An Opportunity for a PHOH for an Environmental Assessment (EA), see Section 2.3 below
- An Opportunity for a PHOH for an Environmental Effects Report (EER)
- Detour Meeting, see Section 2.4 below
- Information Detour Meeting (30 days prior to the road closure), see Section 2.4 below.

The NEPA analyst will prepare an open house handout. The handout will be provided to each attendee and will include:

- Welcome letter signed by the GDOT PM office head
- Project description
- Project location map
- Comment form

If the open house is a PHOH, the handout also will include:

- Purpose and Need
- Summary of Environmental Impacts (including any PM 2.5 requirements or *de minimis* findings)
- Right-of-way (ROW) statement

A dry run will be held at least 10 days prior to the scheduled open house. The dry run will be coordinated by the NEPA analyst and project displays, the open house handout, and the project fact sheet will be available at the dry run. The Public Involvement Worksheet should be utilized at the meeting.

Comment forms are provided in the meeting handouts for attendees choosing to submit written comments; court reporters are made available at open houses to record verbal comments. The comment period remains open for 10 days.

All open house materials are posted on GDOT's public involvement website. The public also may submit project comments via the website. The Office of Environmental Service's Public Involvement staff is responsible for posting open house materials on the website. The NEPA analyst will submit the meeting handout and the PM will submit the project layouts for posting at least one week prior to the open house.

2.1 Public Information Open House (PIOH)

The PIOH is an informal meeting with an open house format and generally lasts two to three hours. The purpose is to inform the public of a project that is proposed in their area, gather information from the public and to receive comments from the public about the proposed project. Generally, formal presentations are not made at these meetings. Should the project team determine that a formal presentation should be made, the PM will discuss with the GDOT Director of Engineering. This decision must be made prior to the PIOH advertisement so that the presentation time can be announced. Georgia DOT representatives (including consultants working on the project) must attend these meetings and must be prepared to discuss the project and answer questions. These meetings should be held early in the project development stage.

2.2 Public Hearing Open House (PHOH)

State and federal laws require that public hearings be held after the Draft EA or after the DEIS is signed by FHWA, or after the GDOT Commissioner approves the Environmental Effects Report (EER) (if 100 citizens request), whichever is appropriate. A PHOH is held to exchange information between GDOT and the public prior to making a commitment to the location and design of the project. The approved draft NEPA document or the approved EER must be made available at this meeting. The PHOH is conducted in the same manner as the PIOH and generally last three hours. Generally, formal presentations are not made at these meetings. Should the project team determine that a formal presentation should be made, the PM will discuss with the GDOT Director of Engineering. This decision must be made prior to the PHOH advertisement so that the presentation time can be announced. Representatives of GDOT (including consultants working on the project) must attend these meetings and be prepared to discuss the project and answer questions.

The approved NEPA document must be made available to the public for 15 days prior to the PHOH; however, state law [OCGA 32-3(f)(5)(A)] requires that PHOHs be advertised no less than 30 days in advance.

2.3 Opportunity for a Public Hearing Open House

The requirements for holding a PHOH may be satisfied by publishing two notices of an opportunity for a PHOH in a newspaper with general circulation in the vicinity of the proposed project.

For NEPA documents, this may be appropriate if a PIOH has been held in the months prior to the approval of the EA. However, FHWA must concur with the decision to advertise for the opportunity as opposed to holding a PHOH. If there are requests for a PHOH, then GDOT will decide on the appropriate action.

For EERs, the PHOH must be held if 100 citizens request one.

2.4 Detour Meetings

For projects involving the closure of a roadway and/or bridge during construction and resulting in an off-site detour, public outreach must occur unless the closure and detour were presented at a previous open house. Detours include even minor changes in access to a property or properties during construction. This public outreach effort must be made prior to the NEPA document approval so that specific public concerns can be identified and addressed. If the detour is proposed following approval of the NEPA document, this effort must occur prior to approval of a NEPA reevaluation.

While a PIOH can be an effective means of obtaining public input on detours, there may be another public outreach tool that is a more effective means of reaching the target audience.

In addition to obtaining public input during the NEPA process, the public must be notified of the detour 30 days prior to the road closure.

2.5 Responding to Open House Comments

Every effort will be made to respond to public comments in a timely manner. All comments received will be responded to within 30 days of the meeting date.

By the close of business of the day following the open house, the NEPA analyst will prepare and circulate a Synopsis. This Synopsis will provide a broad overview of the meeting attendance, the number in favor & opposed to the project, major concerns/comments, and the officials in attendance. It will be circulated to the appropriate Board Member, the Chief Engineer, Director of Engineering, the Office Head of the Project Manager, the State Environmental Administrator, the Office of Environmental Services Public Involvement Coordinator, the State Planning Administrator, the District Engineer, the District Preconstruction Engineer, the DPPE, the Director of Communications, and FHWA.

Following the close of the 10-day comment period and the receipt of the court reporter's transcript, the NEPA analyst will prepare a Summary of Comments that lists each comment received and assigns it to the appropriate office with the expertise to prepare (or approve) a response to the comment.

For responses prepared by GDOT, the Summary of Comments will request that the assigned office prepare a response to the appropriate comments. The NEPA analyst will circulate the Summary of Comments within 14 days of the meeting date. Responses must be received within seven days of the request.

For consultant prepared responses, the Summary of Comments will include the proposed responses to each of the comments for review and approval by the appropriate GDOT office. The GDOT NEPA analyst will circulate the Summary of Comments within 15 days of the meeting date and request approval within seven days of the request.

The Summary of Comments will be circulated to the Director of Engineering, the Office Head of the Project Manager, the State Environmental Administrator, the State Planning Administrator, the District Engineer, the District Preconstruction Engineer and FHWA.

The NEPA analyst will utilize the responses prepared and approved by the subject matter expert to develop one response letter for all meeting attendees. This letter will be reviewed by the State Environmental Administrator, approved and mailed within 30 days of the meeting date.

Georgia DOT ROW staff will prepare separate response letters which should be coordinated with the project team and mailed in a timely manner.

2.6 Summary of Open House Responsibilities

Scheduling & Advertising

Action	**Responsible team member**	**Days* prior to open house**
Request	PM	60
Schedule open house	Office of Environmental Services Public Involvement staff	45
Ad strategy Targeted audiences Flyers Radio announcements Multi-lingual Etc.	NEPA analyst	75-90
Identify & arrange for open house location	DPPE	45-60
Advertisement preparation	NEPA analyst	30-45
Ad publication	DPPE	30-40
Invitation to officials	DPPE	30-40
Sign fabrication (announcing open house)	DPPE	30-40
Determine sign locations	DPPE in consultation with PM	45
Sign installation	DPPE	15-20
Hire Court Reporter (transcript due within 7 calendar days)	DPPE	14
Schedule dry run	Office of	17

	Environmental Services Public Involvement staff	
Hold dry run	NEPA Analyst	10

Open House

Action	**Responsible team member**	**Days* prior to open house**
Handout Welcome letter (signed by PM office head) Project description (provided by PM) Project location map (provided by PM) Comment form	NEPA analyst	10
Handout Purpose & Need Summary of environmental impacts RW statement	NEPA analyst	10
Handout for posting on website	NEPA analyst	7
Project displays	PM	10
Project displays for posting on website	PM	7
Project fact sheet	PM	10
press release announcing open house	GDOT Communications staff	3-4

Post open house

Action	**Responsible team member**	**Days* prior to open house**
Synopsis (GDOT & Consultant)	NEPA analyst	1
Summary of Comments (GDOT)	NEPA analyst	14
Summary of Comments with proposed responses (Consultant)	NEPA analyst	15
Response to Summary of Comments (GDOT)	Team subject matter experts	21
GDOT Response to Consultant Summary of Comments	Team subject matter experts	22
Response letters (GDOT & Consultant) to State Environmental Administrator	NEPA with input from team	26
Response letters mailed	NEPA analyst	30

*Calendar days

3.0 Additional Tools for Public Involvement

A variety of methods to involve and inform the public could include direct participatory techniques such as brainstorming sessions and task forces or indirect participatory techniques such as mailing lists and use of the mass media. The involvement techniques used should fit the scope of the project and its impacts by providing adequate notification and involvement opportunity.

3.1 Direct Participatory Techniques

The public is normally less likely to be suspicious about an agency and its projects if given the chance to become informed and involved. Many times the public simply wants to feel that they have been heard and to lend their voice to decisions affecting their neighborhood or community. Involving people in face-to-face meetings provides an opportunity for the public to learn and express opinions/concerns about a project.

Bringing together a core participation group is a technique used to help agencies establish a working relationship with a community and participate in decision-making. The following are two examples of core participation groups.

A Citizens' Advisory Committee (CAC) is a representative group of stakeholders that meets regularly to discuss issues of common concern. A CAC has five basic features:

1. Interest groups from throughout the project area or region are represented,
2. Meetings are regularly held,
3. Participant comments are recorded,
4. Consensus on issues is sought but not required, and
5. A CAC is part of the planning process and project development process.

A CAC acts primarily in an advisory role, studying issues and presenting a mosaic of opinions.

A Collaborative Task Force is a group assigned a specific task, with a time limit for reaching a conclusion and resolving a difficult issue, subject to ratification by official decision-makers. Its membership usually involves local people or representatives from interest groups, appointed by elected officials or agency executives. A collaborative task force usually helps solve a specific problem, working strenuously toward consensus and presenting a strong and unified voice.

To encompass the full range of community interests, efforts should be made to include traditionally underserved people in public involvement. Effective public involvement requires a full range of community interests; however, those people with limited transportation knowledge often do not participate. There are several possible ways to involve traditionally underserved people in the decision-making process, including involving community organizations and their leaders to build communication. Also, community groups and religious organizations can provide access to individuals and can serve as forums for participation.

Effective public involvement may also require understanding an ethnic group's customs and language. Translations and bilingual speakers can be essential for relaying and gathering

information. Understanding how different cultures communicate is important. For instance, some cultures feel that it is improper to disagree with authority, while other cultures discuss the issues with the entire community before leaders or elders relay decisions.

In addition to PIOHs and PHOHs discussed above, other face-to-face meetings could include the following:

- Brainstorming can be a highly effective method of moving participants out of conflict and toward consensus. Brainstorming has four basic components:
  1. Generate as many solutions to a problem as possible,
  2. List every idea presented without comment or evaluation,
  3. Group and evaluate ideas to reach consensus, and
  4. Prioritize ideas.

  Brainstorming is useful for bringing up new ideas, defining ideas, and reducing conflict.

- A charrette is a meeting used to resolve a problem or issue within a specified time limit. A charrette is often used early in the planning process to provide useful ideas and perspectives from concerned interest groups. In mid-process, a charrette helps resolve sticky issues. Late in the process, it is useful to resolve an impasse between groups. A charrette can help reduce feelings of alienation by offering the public the opportunity to interact with public agencies. Because a charrette focuses on a specific problem to be resolved or an issue to be addressed, it is usually a one-time event.
- A workshop format consists of reorganizing a larger group into small discussion groups (less than 10 people) that address planning or project-related issues, prioritize those issues, and later report the results to the larger group of participants. It maximizes participation by all attendees, while also discouraging dominance by a few individuals. The workshop is particularly useful in the early stages of project development.

3.2 Indirect Participatory Techniques and Methods of Communication

In order to have effective public involvement, communication needs to be a two-way street. This can be accomplished by providing substantive information in a variety of communication techniques. The following are just a few of the techniques available.

- Mailing lists are used to reach an audience about upcoming events, meeting invitations, newsletters, summary reports, and other information. Mailing lists can be an easy and effective way to reach the public, especially if address lists are kept up to date in a database format. A drawback to mailing lists is the time and effort required to set up a list, especially when tax maps are the sole source of identifying property owners. Often information from tax maps may not be up to date or may possibly be inaccurate. Additional drawbacks to mailing lists are printing and postage costs for large lists.
- Public information materials provide information about a project that is underway or in the planning stage. These materials should be concise and clear when providing information and may consist of advertisements, billboards, web sites, press releases or

radio announcements. A drawback to public information materials is that these materials are not normally interactive and can have potentially high production costs.

- Videotapes or continuous PowerPoint loops are recorded visual and oral messages to present information to the public. These can be used in several settings, including meetings and open houses. For instance, it can be set to replay endlessly so that the same message is shown to the public, such as project description, the project development process, and perhaps the project's schedule. Drawbacks to this method of relating information may include production costs, equipment needs, and the simple fact that it is not interactive.
- Major projects often also have a project website and project hotline established.

4.0 Consultant deliverables

After receiving comments from GDOT or FHWA on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal letter and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

1. Public Involvement Plan (if appropriate)
2. PIOH/PHOH
    a. Advertisement
    b. Handouts
    c. Synopsis
    d. Summary
    e. Response letters
3. Other meetings
    a. Meeting materials
    b. Meeting minutes

CHAPTER V - ENVIRONMENTAL STUDIES

1.0 Overview

Throughout the National Environmental Policy Act (NEPA) process for a project, analyses will need to be completed to address specific impacts. Either Georgia Department of Transportation (GDOT) staff or a project consultant can complete the analyses and related documentation. Specific reports are described as environmental studies that support the overall NEPA document. The subjects will vary by project, but they will typically include the

- Social environment
    - Land use
    - Community impacts
    - Conceptual stage (displacements/relocations)
    - Churches, cemeteries & institutions
    - Parks/recreation facilities/wildlife & waterfowl refuges
    - Visual impacts
- Cultural Resources
    - Historic resources
    - Archaeological resources
- Natural Resources
    - Jurisdictional waters of the US
    - Threatened & endangered species
    - Essential fish habitat
    - Migratory birds
    - Invasive species
    - Floodplains/regulatory floodways
    - Farmland/forest land
- Physical environment
    - Noise
    - Air quality
    - Underground storage tanks (UST)/hazardous waste sites
- Indirect and Cumulative Impacts (ICI)

The studies need to be completed during the early stages of project development, beginning during concept development and continuing into preliminary design. Many studies occur in two phases: resource identification and evaluation of project impacts. These studies provide key information for use in project development as well as agency coordination. Within the actual NEPA document, the environmental study findings are summarized in text. Copies of the technical reports for each of the studies are referred to in the NEPA document and maintained at GDOT and the Federal Highway Administration (FHWA).

To insure that the project advances, the appropriate information must be available for the environmental study to be conducted. For example, field surveys require a project description and project layouts; air and noise analyses require traffic information.

1.1 Alternatives Analysis

The analysis of alternatives is a vital part of all environmental studies. Once all environmental resources have been identified, the project team must work collaboratively to identify and develop the alternative that both satisfies the project's Purpose and Need (P&N) and also minimizes environmental impacts. Given the number of resource types considered during project development and the environmental studies, impacts must be weighed and balanced, and trade-offs often occur.

Within an Environmental Assessment (EA), a range of reasonable alternatives must be discussed. For an Environmental Impact Statement (EIS), a much more rigorous review and documentation of alternatives often are required. The discussion should provide the reader with an understanding of the alternatives considered through the project development, how the alternatives meet the identified P&N, and the preferred alternative.

Many environmental laws, including NEPA, require the consideration of alternatives that avoid adverse impacts and minimize harm. All such alternatives should be considered in the context described below.

1.1.1 Analysis

The level of analysis will vary depending on such factors as level of local controversy, complexity of the project, and length. For projects involving multiple sections of new roadway and potential community impacts, a thorough screening may be necessary to document the decisions that ultimately lead to the alternatives evaluated as part of the environmental studies. FHWA guidance recommends alternatives screening in such cases, with a tiered approach where applicable. In the first tier of screening, alternatives are compared with the P&N. Only alternatives that would address the P&N should be further considered. Criteria should be developed to focus on the most important issues and potential impacts. Generally for an EIS, measures of effectiveness are developed to evaluate an alternative's ability to meet the project need (e.g., attract a certain amount of traffic or result in a certain Level of Service [LOS]). The alternatives that remain after this screening would typically be carried into the impact analysis as "reasonable" alternatives and evaluated and compared with regard to environmental impacts.

However, in most GDOT projects, the level of detail is simplified. Often, the concept report and Practical Alternatives Review (PAR) process (see, Chapter V.4, Section 6.5.C) will have an adequate level of documentation of alternatives and why they would or would not be reasonable. The concept report typically will culminate in one alignment or only a few variations of an alignment. Accordingly, the GDOT guidance does not specify the exact contents of the alternatives section. Instead, the text should be tailored to the type of project, amount of study completed on early alignments, and level of interest in the affected community. For the projects involving primarily widening or geometric improvements, the text should describe the proposed alignment as the Build Alternative. In addition, the discussion should include the No-Build and other alternatives considered.

1.1.2 Documentation

For most GDOT documents, the alternatives section will be fairly brief, focusing more on descriptions and less on quantifying and comparing the impacts and resulting benefits. The typical subsections are described below, including graphics where required.

- Build Alternative – Where only one alignment is recommended, the project should be clearly described in terms of length, proportion of widening/improvement versus new location, cross streets in the project area, and type of traffic control proposed. The existing and proposed typical sections need to be described, including number and width of lanes, type of median, sidewalks, shoulders, and right-of-way.

In cases where more than one build alternative is being evaluated each alternative should be described and evaluated at the same level of detail.

- No-Build Alternative – Discussion of the No-Build Alternative is required to address Council on Environmental Quality (CEQ) guidelines. Typically, the text will identify the disadvantages of this alternative. Technically, the No-Build Alternative is defined as a "do nothing" alternative, although it can include minor construction activities such as pavement maintenance and safety measures. No modifications to the roadway network would be included (i.e., no new access roads, extensions, or increases in capacity). The discussion should include acknowledgement of impacts and costs that would be avoided by the No-Build Alternative. These advantages are weighed against the disadvantages from failing to meet the project's P&N.
- Other Alternatives Considered – This subsection will include either the early alignments that were eliminated and incorporated into a single Build Alternative, or alternatives other than the Build Alternative that were considered but not found to be feasible. One example, sometimes required by FHWA, is Transportation System Management (TSM) techniques. A TSM refers to minor construction, operational, and institutional actions that could improve efficiency of the existing roadway. Examples include turn lanes, signal progression, and travel demand reduction strategies. While these measures rarely are considered reasonable alone, they may be applied to proposed build alternatives to further improve the cost-effectiveness of the proposed project. The TSM discussion is most often found in an EIS; it is not typically required in the EA document for GDOT.
- Graphics Needed:
    - Typical Section Exhibit(s);
    - Build Alternative(s) Exhibit (one for each alternative carried forward into detailed documentation).

1.1.3 Consultant deliverables

Most alternatives analyses will be contained within the individual environmental reports and documents. However, for EIS projects, a stand-alone alternative analysis report will be prepared. Three copies of this report will be submitted for review and approval by the GDOT.

After receiving comments from GDOT or FHWA, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved report, consultants will provide a CD (with the requested hard copies of the report) that includes a pdf (or a series of pdfs) and a Word copy of the completed approved report.

1.1.4 References

- 40 CFR Parts 1501, 1502, 1505, 1507, 1508
- 46 Federal Register 18026 (March 23, 1981), 51 Fed. Reg. 15618 (April 25, 1986) – Forty Most Asked Questions and Answers Concerning EQ's NEPA Regulations (40 Questions), questions 1-5.
- FHWA Technical Advisory T 6640.8A, October 30, 1987, pp. 14-16.

2.0 Social Environment

2.1 Land use

The purpose of this section is to describe the existing and proposed land uses for a project corridor and to determine whether or not the proposed action would alter the land use patterns planned and if so, identify the areas where change would occur and whether the changes are consistent with future land use plans. This discussion should detail how the proposed project will assist the county and/or state in meeting its growth management objectives as set out in the State Comprehensive Plan, local land use, and transportation plans.

The Metropolitan Planning Organization (MPO), Regional Commissions (RC) or local level officials can provide land use plans. The long-term land use plan is called the Regional Development Plan, a document that details the MPO's regional priorities and vision. Local governments may have comprehensive plans. The transportation plans include the Statewide Transportation Plan, the Regional Transportation Plan (RTP), the State Transportation Improvement Program (STIP), and the Transportation Improvement Program (TIP). These plans are produced with the input of the MPO, local government officials, including the Georgia Department of Transportation (GDOT), the private sector, and the public. Transportation plans generally discuss regional goals on travel demand management, including upgrades to their public transit system, roadway classifications (highway, urban collector, etc.), as well as future bike lanes and sidewalks. Other sources of land use information may include environmental documents for other types of projects in the area, master plans, the area chamber of commerce, and newspaper articles. The following website provides a link to local and county comprehensive plans:
http://www.dca.state.ga.us/development/PlanningQualityGrowth/programs/currentplans.asp.

2.1.1 Analysis

Contacting the MPO, RC or local planning officials is essential in assessing compatibility of the proposed project with land use. Analysis should consist of the breakdown of land use types, discussion of the

development trends, including the name of developments, the status of each development (i.e., existing, under construction, proposed), and the size of each development.

The analysis should include an explanation of the proposed project's consistency with the existing and future land use planning. If land use controls such as growth management or economic incentives are part of the local planning, then they should be discussed here. The discussion should ultimately demonstrate how the local plan and growth strategies relate to the planning at the state level and why the project is compatible with these plans. The discussion should provide references to the plans. If there are inconsistencies between land use at the local and state levels, then these should be discussed.

The land use section should discuss the effect of the proposed project on local land use and community development, especially in the context of indirect (also referred to as secondary) impacts. One example would be planned or unplanned growth. The type of growth and the facilities and services should also be included (more detailed information provided in the Indirect and Cumulative Impacts discussion in Chapter V.7). Existing and future land use maps should be included and referenced. The discussion should indicate whether land use changes shown are effects of the project.

2.1.2 Consultant deliverables

Land use analysis does not require a separate report; analysis and findings will be submitted as part of the National Environmental Policy Act (NEPA) document.

2.1.3 Reference/guidance

http://www.dca.state.ga.us/index.asp - Georgia's Coordinated Planning Program

Potential Data Sources

- Churches
- Existing land use plan
- Proposed future land use
- Transportation plans
- Local and regional development plans
- MPOs
- RDCs
- County and local officials

2.2 Community Impact Assessment (CIA)

2.2.1 Overview

Community Impact Assessment (CIA) is the process that evaluates the potential impacts of proposed transportation projects on a local community and its sub-populations throughout the transportation decision-making process. The goal of CIA is to focus on the quality of life of the community. Topics that fall under the CIA heading include: access, mobility, social isolation/splitting of neighborhoods, history of the community, new development impacts, changes in the quality of life, changes in neighborhood identification, changes in property values, separation of the neighborhood from community facilities,

displacements, impacts on community centers of activity whether formal or informal, noise, visual, urban renewal, removal of urban blight, joint land use, and disruption of the natural and human environment.

2.2.2 Analysis

Conducting a CIA includes public involvement, defining the project area and the area of impact, determining the community composition, analyzing impacts, and identifying solutions. This can be accomplished in a number of ways. Census data can be used at the block group level to determine the composition of the neighborhoods in the proposed project area. By holding public involvement sessions, the transportation officials can discuss the proposed project with the community and obtain valuable information, such as level of support for the project, areas of controversy, and key stakeholders. A Citizens Advisory Committee (CAC) may be involved in a CIA (see Chapter IV and GDOT's Context Sensitive Design Manual). In addition to general public involvement sessions, interviews with social services agencies and employers in the area can assist in characterizing the needs and wishes of the community. The communities and neighborhoods should be defined. An on-site investigation combined with census data can assist in defining the community, determining the number of owner-occupied residential units, owner-occupied business units, tenant-occupied residential units, tenant-occupied mobile homes, and tenant-occupied businesses that would be displaced. A CIA should also include the number of residences that would exceed the noise abatement criteria with the proposed project (see Chapter V.6). A discussion of the project's visual effects on the community should be discussed (see Section 2.5 of this chapter). The CIA should identify any parklands or public areas, which have either a formal or informal significance for the community. The CIA should weigh the benefits and burdens of the proposed transportation facility against impacts on the local community and users of the facility. This discussion should cover both Environmental Justice (EJ) (see Section 2.2.4 of this chapter) and non-EJ communities. A CIA should also identify residents who not only live in the community, but who may commute from outside to work in the community. The CIA should determine the impact of the proposed project on emergency vehicles, community facilities, and other public services.

2.2.3 Social Impacts Assessment (SIA)

A Social Impacts Assessment (SIA) is an element of the CIA. The SIA should focus on impacts of the proposed project on specific groups of individuals within a community.

The following groups should be given special consideration when analyzing the impact of a transportation project:

- Elderly persons;
- Handicapped persons;
- Non-drivers and transit dependent persons;
- Minorities (see also Section 2.2.4 of this chapter); and
- Welfare-to-work, Temporary Assistance for Needy Families (TANF) Program recipients, and low-income persons (see also Section 2.2.4 of this chapter).

A SIA should include the size of the population, the neighborhood boundaries, and community cohesion. A description of the relevant ethnic/income data for the census tracts affected, the character of the adjacent communities, and the value and availability of housing should be included. Unemployment rates of the community should be noted. The SIA should discuss the location, types, and access to community facilities, including principal hours of use. In the SIA, the relevant housing characteristics should be identified, such as, type of occupancy (e.g., renters or owners), density of housing, condition of housing, and occupancy rate. The age and ethnic distribution of the community should also be part of the SIA. An SIA should consider public facilities (e.g., police/health), the school districts, recreation areas, churches, medical facilities, and community centers. The discussion should identify these services, define the service areas, discuss the relationship with the community, and determine if these might be adversely affected by right-of-way requirements, noise, construction activities, traffic diversion, changes in land use, and changes in tax and revenue base. The potential displacements should be determined. The SIA should consist of mitigation options to eliminate, reduce, or minimize adverse socio-economic effects.

2.2.4 Environmental Justice (EJ)

Overview

Analysis of EJ in relation to transportation projects funded by the federal government has been mandated by Title VI of the Civil Rights Act of 1964, NEPA, Federal-aid Highway Act of 1970 (23 United States Code 109(h)), Executive Order (EO) 12898, United States Department of Transportation (USDOT) Order to "Address Environmental Justice in Minority Populations and Low-Income Populations," (DOT Order 5610.2) and FHWA's Order to "Address Environmental Justice in Minority Populations and Low-Income Populations," (FHWA Order 6640.23, December 2, 1998). Under Title VI, "each federal agency is required to ensure that no person, on the ground of race, color, or national origin, is excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance." The EO 12898 mandates that "each federal agency identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The concept of EJ resembles such issues as transportation equity, community impacts, and accessibility.

According to FHWA Order 6640.23, minority means a person who is Black, Hispanic, Asian American, American Indian, or Alaskan Native. It further defines a person having low-income as a person whose household income is at or below the Department of Health and Human Services poverty guidelines (66 FR 17083, Mar. 29, 2001).

The EJ analysis expands on the community impacts and social/economic demographic analyses by focusing on minority and low-income populations, or traditionally underserved populations. The identification and addressing of EJ is a requirement through all stages of federal processes and decision-making, including planning of alternatives and mitigation. Public involvement, a key component in the USDOT order, ensures that procedures are inclusive for all people.

The legal EJ precedents consist of Supreme Court, Court of Appeals, and District Court cases regarding land use impacts such as landfills and highway construction. The transportation sector has the

responsibility of addressing EJ at various levels: the transportation facility, the corridor, and the region. An EJ study evaluates disproportionately high and adverse impacts to minority and low-income populations, considers alternatives, conducts public involvement, and develops mitigation efforts. A disproportionately high and adverse effect pertains to significant individual or cumulative effects.

Analysis

Qualitative and quantitative methods of EJ analyses are used to evaluate transportation projects with respect to social, economic, environmental, and public health matters at both local and corridor levels. A quantitative data source is the Census. Quantitative approaches also include geographical information systems (GIS), statistics, and modeling. One qualitative approach is public involvement (see Chapter IV for a discussion on Public Involvement). The EO specifically states that minority and low-income persons not be disproportionately impacted by a proposed federal action. The analysis also may consider other factors such as whether the project may result in displacements, community isolation, destruction of community cohesion, disruption of community economic vitality, air/water pollution, or destruction of natural resources. In addition, the analysis may take into account how the project may affect handicapped, elderly, non-drivers, transit dependent.

In accordance with the USDOT Order 5610.2 and EO 12898, an EJ evaluation should address the issue of possible disproportionate impacts to racial and socio-economic minority groups. An important element in conducting an EJ study is determining a reference population. The population in the area of impact should be compared with the city, county, state, and/or country in order to evaluate the status of disproportionate effect.

There are numerous ways to conduct an EJ analysis. The most important item to remember is that, although the federal government has provided no "official" or prescriptive guidance to analyze EJ, documentation is necessary. The census data, which is easily accessible, can be used to perform a preliminary quantitative analysis to determine if a project may have a disparate impact for minorities and persons of low-income that would be affected by the proposed project. The most detailed data available to the public is provided at the level of the block group (BG). However, the BG will likely be larger than just the corridor of the proposed project.

Several methods can be used to determine if a project area includes an EJ community:

- Early coordination letters (see Chapter II, Section 3.0),
- Field surveys.

No Disproportionate Impacts

If it is determined that there are no disproportionately high and adverse impacts, then the EJ analysis can be augmented with any information acquired at the Public Information Open House (PIOH) or Public Hearing Open House (PHOH). In addition, if there are data, analysis, documentation, and/or knowledge from the regional or statewide planning level, or through GDOT planning that has reviewed EJ for a proposed project area, then this information should also be included in the NEPA document EJ section. Once the documentation provides evidence that there would be no disproportionate impacts to low-income or minority groups, the EJ study would be complete.

Disproportionate Impacts

If the data demonstrate that there may be a disproportionately high and adverse impact to a minority or low-income community, then additional public involvement must be conducted. Public involvement can define the community, as well as the community's the needs and wishes, determines the community's views towards a project and project alternatives, and identify programs that may serve as mitigation for project impacts. In these public involvement activities, local minority leaders, local religious leaders, and local community leaders are good points of contact. With respect to the finding of a disproportionately high and adverse impact to a minority or low-income group, USDOT Order Part 8.d. states the following:

"Operating Administrators and other responsible DOT officials will also ensure that any of their respective programs, policies or activities that will have a disproportionately high and adverse effect on populations protected by Title VI ('protected populations') will only be carried out if:

1. A substantial need for the program, policy or activity exists, based on the overall public interest; and
2. Alternatives that would have less adverse effects on protected populations (and that still satisfy the need identified in subparagraph (1) above), either (i) would have other adverse social, economic, environmental or human health impacts that are more severe, or (ii) would involve increased costs of extraordinary magnitude."

The USDOT Order, therefore, does permit a transportation project to proceed even if it would have a disproportionate and adverse impact to a low-income or minority group. However, the agency must demonstrate that (1) and (2) above holds true. Documentation to this effect would be required.

Once the EJ study is completed, it is advisable to look back at the Conceptual Stage Study (CSS) (Section 2.3, below) and ensure that the two analyses corroborate each other and do not have conflicting information.

2.2.5 Economic Impacts Assessment (EIA)

Analysis

An Economic Impacts Assessment (EIA) also should be considered part of the CIA. The EIA focuses on the following:

- General employment data (i.e., local businesses, unemployment rate, type of employment, employment distribution, dominant businesses, stability of businesses, ownership of businesses);
- Per capita income levels;
- Economic generators, activities, markets;
- Property values;
- Tax base and revenues;
- Orientation of local and regional businesses;
- Number of employees;
- Growth trends; and
- Income distribution.

Data sources to obtain information about the economic status of a community can include community contact or secondary sources. The local business newspaper, the MPOs, the RDCs, local government, and businesses are suitable sources to obtain the information for an EIA. An EIA should identify the potential problems that a project would bring, such as potentially decreasing the tax base of the community through the acquisition of right-of-way.

2.2.6 Consultant deliverables

Community impact analysis does not require a separate report; analysis and findings will be submitted as part of the NEPA document.

2.2.7 Reference/guidance

Community Impact Assessment Program
http://www.dot.state.fl.us/emo/pubs/Phys_Soc/Phys_Soc_Sci.htm

FHWA Citizen's Guide to Transportation Decision-making.
http://www.fhwa.dot.gov/planning/decisionmaking/

Community Impact Assessment, A Handbook for Transportation Professionals, Florida DOT and the Center for Urban Transportation Research (November, 2000)

Community Impact Assessment Strategic Plan, Florida DOT in cooperation with FHWA (September, 1999)

National Community Impact Assessment Research Design Team Recommendations for Development of the Strategic Plan, Prepared for FHWA by the Center for Urban Transportation Research, University of South Florida (April, 1999)

Community Impact Mitigation Handbook Case Studies, Publication No. FHWA-PD-98-024 (May, 1998)

Flexibility in Highway Design, Publication No. FHWA-PD-97-062

Community Impact Assessment, A Quick Reference for Transportation, Publication No. FHWA-PD-96-036 (September, 1996)

US Bureau of Census
http://factfinder.census.gov/servlet/BasicFactsServlet
http://www.fhwa.dot.gov/planning/census/data.htm

Georgia Department of Community Affairs
http://www.dca.state.ga.us/snapshots/default.asp

Rural Community Empowerment Zones/Enterprise Communities
http://www.ezec.gov/

FHWA- DOT Order, Executive Order, other documentation
http://www.environment.fhwa.dot.gov/guidebook/chapters/V2ch16.htm

http://www.fhwa.dot.gov/environment/ejustice/facts/index.htm

FHWA- Background, history, guidebook on EJ
http://www.fhwa.dot.gov/environment/ej2000.htm

U.S. Department of Health & Human Services Poverty Guidelines
http://aspe.hhs.gov/poverty/index.shtml

2.2.8 Legislation

- Highway Beautification Act of 1965
- National Environmental Policy Act of 1969 (P.L. 91-190)
- Federal-aid Highway Act of 1970
- Environmental Quality Improvement Act of 1970 (P.L. 91-224)
- Farmland Protection Policy Act, Title XV of the Agriculture and Food Act of 1981 (P.L. 98-98)
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Surface Transportation and Uniform Relocation Assistance Act of 1987, (STURRA, P.L. 100-17)
- National Highway System Designation Act of 1995 (P.L. 104-59)
- Transportation Equity Act for the 21st Century-Section 1221
- U.S.C. 4201-09
- 23 U.S.C. 109, 109(h), 109(i), 109(n)
- 23 U.S.C. 128, 131, 133, 134, 135
- 23 U.S.C. 138, 143, 217, 315
- 42 U.S.C. 4321-4347
- 42 U.S.C. 4371-4374
- 42 U.S.C. 4601 et seq.
- 49 U.S.C. 303

Federal Regulations:

- CFR 658
- 23 CFR 450, 710, 750, 771, 771.111, 777
- 40 CFR 1500-1508
- 49 CFR 24

Executive Order 12898

2.3 Conceptual Stage Study (CSS)

2.3.1 Overview

The Conceptual Stage Study (CSS) documents displacements and probable displacements associated with a project and the anticipated method of relocation under the Uniform Relocation Assistance and Real Properties Acquisition Act of 1970. Although the complexity of the CSS will tend to mirror the complexity of the proposed project, the following information is standard in all CSS documents.

2.3.2 Analysis

For both residential and business displacements, the CSS will detail the number, type (owner or tenant occupied), and rental or fair market value of the residence or business structures to be displaced. The type of neighborhood in which the structure is located (residential, commercial, or mixed) also will be noted for all anticipated relocations. For business relocations, the CSS also will provide an estimate of the numbers of employees who will be affected and the estimated financial standing of the business.

When applicable, the CSS will provide the same information for probable displacements. Probable displacements are structures that are likely to be relocated due to consequential project impacts such as loss of access.

The CSS will take particular care to focus on the anticipated relocation of any public or non-profit organizations that provide services within the geographic area of the project and which therefore may require special relocation assistance (e.g., a fire station, post office, etc.).

When applicable, the CSS will include an estimate of the number of handicapped and elderly occupants or employees to be displaced (including elderly people who are not capable of self care) and discuss any special relocation services that may be necessary for these displacees.

A discussion will be included regarding the availability of decent, safe, and sanitary housing in the areas with residential displacements. This discussion will include price ranges, size, multi vs. single family, condition, availability and vacancy rate, occupancy rate, location with respect to the displaced structures, and the owner/tenant status. Local newspapers and Multiple Listing Service data may be consulted to determine the availability of housing. The CSS will discuss actions that would be taken to remedy insufficient relocation housing.

The CSS will include a discussion of Last Resort Housing. Last Resort Housing is used when there is no replacement housing available for sale or rent within the GDOT's current limitations. When Last Resort Housing becomes necessary, supplemental payments or other housing options, as determined by GDOT, can be implemented through procedure provided for in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

In the event there are no replacement sites available at the time of acquisition, or if relocation is not within their financial means, some businesses may qualify for "in lieu of" payments. An "in lieu of" payment is defined as a payment to be made to a business that: (1) cannot be relocated without a substantial loss of its "existing patronage"; and (2) is not part of a commercial enterprise having more than three similar establishments not being acquired by GDOT. Existing patronage is the average net annual earnings or clientele of the business during the previous two taxable years immediately preceding the taxable year in which the business is being displaced. Any such payment determined will not be less than $1,000 or more than $20,000.

The CSS will address each alternative under consideration by GDOT. Sources of information must be documented. If special considerations are to be made, then the GDOT Office of Right-of-Way (ROW) will be contacted for further discussion.

2.3.3 Consultant deliverables

For GDOT acquired projects, the Office of ROW will prepare the requested study and directly coordinate activities and information with the GDOT Office of Environmental Services representative, and when necessary FHWA. The request for CSS should be sent to the Right of Way Administrator, Attn: Relocation Manager.

For GDOT acquired projects, being handled through the Office of Program Delivery (OPD) (e.g., turn-key projects), the contracting consultant is responsible for submitting the CSS from a qualified preparer or subcontractor. This preparer must be qualified (i.e., on the Pre- Right of Way Plans Consultant List). The consultant will deliver two copies of the CSS to the GDOT NEPA analyst who will forward with request (for review) to GDOT's Office of ROW.

For Local Government projects, the local government will prepare the CSS as directed and coordinated by the GDOT NEPA analyst. The preparer/consultant must be qualified (i.e., on the Pre- Plans Right of Way List). The CSS will be submitted to the Office of ROW for review and approval prior to its inclusion within the NEPA document. The completed study is to be sent to the Right-of-Way Administrator, Attn: Relocation Manager.

After receiving comments from GDOT, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

2.3.4 References

Uniform Relocation Assistance and Land Acquisition Policies Act of 1970
http://uscode.house.gov/download/pls/42C61.txt
http://www.fhwa.dot.gov/realestate/

2.4 Churches, cemeteries, and institutions

Public institutions typically found within a project study area include any public services provided by local government agencies and institutions such as fire and rescue, public safety, educational, and parks and recreational areas. Other examples of public institutions include religious institutions and cemeteries. Many of these land uses are closely associated with the quality of life within a community. Therefore, effort will be made to inventory their locations within a study area, involve institutional representatives in the transportation decision process, and consider the potential impacts any proposed project might have on their location and operation.

2.4.1 Institution identification

It is important that any churches and public service institutions located within the project's study area be identified early in the project's planning process. Identification of churches/institutional buildings can aid in the development of project alternatives that avoid or minimize effects to these facilities. While some buildings associated with institutional operation can be located through the use of United

States Geological Survey (USGS) 1:24,000 topographic maps, a more detailed windshield survey of the study area is required. A key goal of any survey effort will be to ascertain proper names for the establishments (cemetery names, school names, church names, etc.). This will ensure appropriate environmental documentation.

2.4.2 Stakeholder identification

Because individuals and groups associated with many of these public institutions will be considered stakeholders in the public involvement process, the survey will also identify key decision-makers for the institution (principals, pastors, etc.). Efforts will be made to involve these people in the coordination process to ensure that they understand the need for the proposed project and any potential effects the project might have on their operation. In addition, they should be informed of public opportunities to review and comment on the project (public involvement meetings, public hearings, and small group meetings).

2.4.3 Impact documentation

Because public institutions are often so varied in function and services provided, documentation of impacts will focus on the specific needs of the various facilities. The following is a recommendation of issues/questions to address for various public institutions. This list should not be considered exhaustive and should be modified to reflect unique project issues. It is important to consult with the facilities officials when determining whether the functions and services provided by it are impacted or impaired.

General Questions:

- Where is the facility located? (a map showing location relative to the project would be helpful with this question)
- What services does the facility provide?
- How long has the facility been in the area?
- What are the hours of operation for the facility?
- What is the approximate service area for the facility?
- Would the project require the relocation of that facility? If so,
    - Has this relocation been documented in the CSS?
    - What efforts have been taken to avoid this relocation?
    - Is a similar facility located in close proximity to provide service?
    - Has the public been made aware of this relocation through public involvement measures and what was their response? (controversy potential)
    - If not, would the project impact the facility in other ways?
- Is access affected?
- Is internal site circulation (e.g., bus routes) affected?
- Is there a noise impact?

2.4.4 Cemeteries

Cemeteries are a unique public institution with specific regulations that regulate their protection and care. Issues that should be addressed when documenting cemeteries should include the following:

- Where is the cemetery located? (a map showing location relative to the project would be helpful with this question)
- How long has the cemetery been in the area?
- What are the boundaries of the cemetery and where are the approximate locations of gravesites?
- Would the project require the relocation of the graves within the cemetery? If so,
    - What efforts have been taken to avoid this relocation?
    - What social/environmental factors exist that require the relocation impact?
    - Has the entity that oversees the cemetery's upkeep been made aware of this relocation?
    - Is there potential for controversy?

The Official Code of Georgia Annotated (OCGA), Section 36-72, addresses the conversion of land from cemeteries and, in instances where a cemetery (or isolated grave site) is located within the project study area a boundary needs to be established. The tax record and land deed will be obtained to determine if the cemetery boundary is legally defined. If the land records do not denote the cemetery boundary, an archaeologist will be consulted to determine the number and location of graves and establish a boundary. Refer to Chapter V.3 for application requirements.

2.4.5 Consultant deliverables

Institutional analysis does not require a separate report; analysis and findings will be submitted as part of the NEPA document. However, if the project requires the use of land from a cemetery or burial ground and the local government has adopted the provisions of the Abandoned Cemetery & burial Ground Act (OCGA 36-72), the consultant will submit two copies of a completed cemetery permit package in accordance with Section 3.1.6.E.2.

After receiving comments from GDOT, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

2.5 Visual impacts

Visual Impacts is a special study requirement for an Environmental Impact Statement (EIS) document. Visual Impacts should also be addressed in reports such as Section 4(f) Evaluations and in cultural resource discussions.

A description of the visual environment will assist in determining and understanding the level of visual changes that may arise from project implementation. When considering visual impacts, focus should be placed on the existing landscape, visually sensitive resources, and an individual's view in the study area.

2.5.1 Existing landscape

The existing landscape should identify the setting of the project area. The limits of the visual environment are generally established by an area of potential effect (APE) or determined view shed such as the surface area visible from the highway and areas from which the highway can be seen.

- Topography such as mountains, rolling hills, valleys, beaches, etc. should be considered in the visual assessment of a project.
- Water resources such as streams, creeks, lakes, marshes, wetlands, etc. should be discussed.
- Vegetative elements should be described to fully appreciate the existing environment. Some different vegetative types are as follows: coniferous or deciduous woods, scrubland, grassland, street trees, orchards, parks, pastures, etc.
- Manmade development should be discussed to determine the character of the existing environment.

2.5.2 Visually sensitive receptors

Resources such as topography, manmade development, vegetative elements, historic, or recreational facilities may be important to a local community. Although the resources may not appear to be visually exceptional, discussion should be provided that describes their local importance to a community.

2.5.3 Visual consequences

An EIS should include a discussion of the beneficial or adverse visual effects of project implementation. This should be accomplished with consideration being given to the changes the project will cause to landscape components that have been noted as visually sensitive.

Construction of a roadway whether on an existing or new alignment will always cause some degree of visual change. These changes may not be adverse and often are beneficial. Elements of a road project that may have impacts include, but are not limited to, the following:

- Cut Slopes
- Fill Slopes
- Pavement surface
- Retaining walls
- Curbing
- Vegetative clearing
- Noise barriers
- Structures
- Lighting
- Fencing
- Median breaks
- Guardrails

2.5.4 Mitigation

The project features referenced above in addition to the overall project effects should be identified as positive or negative effects. If the effect is negative, mitigation measures may be required. Mitigation includes the enhancement of positive effects as well as the minimization or elimination of negative effects. The mitigation measure discussion should address specific visual impacts associated with project alternatives, including the likelihood of the mitigation measure being implemented. The measures must be realistic to ensure their full realization.

2.5.5 Consultant deliverables

The consultant will submit two copies of the Visual Impact Assessment to GDOT's environmental office for review and approval.

After receiving comments from GDOT, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

2.5.6 References

Visual Impact Assessment for Highway Projects, FHWA, Contract DOT-FH-11-9694

3.0 Cultural Resources

3.1 Section 106 Procedures

3.1.1 Purpose of Section 106

Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires federal agencies to take into account the effects of their undertakings on historic and archaeological properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings.

The Section 106 process seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation between agency officials and other parties interested in the effects of the undertaking on historic and archaeological properties. The goal of consultation is to identify historic properties that have the potential to be affected by an undertaking, assess the effects of the undertaking on identified historic and archaeological properties and identify ways to avoid, minimize harm or mitigate any adverse effects on historic and archaeological properties. It is important that the agency initiate the Section 106 process early in the planning process in order to insure that a broad range of alternatives may be considered during the planning process for the undertaking.

3.1.2 Participants in the Section 106 Process

The federal agency official with jurisdiction over an undertaking holds the legal responsibility for compliance with Section 106. For Georgia Department of Transportation (GDOT) projects, the Federal Highway Administration (FHWA) generally is the agency official with jurisdiction; however, on state funded projects, another federal agency such as the US Army Corps of Engineers (USACE) may be the agency official with jurisdiction. The State Historic Preservation Officer (SHPO) plays a key role in the Section 106 process by consulting and concurring on resource identification and project effects.

The GDOT notifies Regional Commissions (RC), local governments, and federally recognized Indian governments (Indian tribes) to request their input during project development. Other individuals and organizations with a demonstrated interest in the undertaking also are invited to participate in the Section 106 process.

All employees or consultants of the agency must meet professional standards under regulations developed by the Secretary of the Interior, found at http://www.nps.gov/history/local-law/Prof_Qual_83.htm.

3.1.3 Initiation of the Section 106 Process

A. Establish Undertaking

In accordance with 36 CFR Part 800.16(y), an undertaking is defined as "a project, activity or program funded in whole or part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; those requiring a federal permit, license or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency." When initiating the Section 106 process, the agency official must first determine whether the proposed federal action constitutes an undertaking as defined above, and if so, whether it has the potential to cause effects on historic properties (districts, buildings, structures, objects, and archaeological sites).

B. Determination of Potential to Cause Effects

If it has been determined by the agency official that the undertaking does not have the potential to cause effects on historic properties, then the agency official has no further obligations under Section 106.

Within the state of Georgia, a Memorandum of Understanding (MOU) between FHWA, GDOT and the SHPO has been established to serve as a consensus determination that certain GDOT maintenance and minor highway projects constitute an undertaking, but do not have the potential to cause an effect on historic properties (see the 2007 MOU: No Potential to Cause Effects for GDOT Maintenance and Minor Highway Projects for a list of applicable projects). As part of the MOU, the finding of No Potential to Cause Effects is documented in the Finding of No Potential to Cause Effects document. Following review and approval of this finding, copies of the document are provided to the NEPA analyst.

3.1.4 Initiating the identification of historic properties (historic structures and archaeological sites)

A. Determine the Scope of the Identification Efforts

1. Determine and Document the Area of Potential Effect (APE)
   If it has been determined that an undertaking does have the potential to cause an effect on historic properties, then the Section 106 process continues with the identification of such properties by first defining the APE for the proposed undertaking. The APE, as defined in 36 CFR 800.16(d), "is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist." The APE is based on the nature and the scope of the undertaking, the guidance in the GDOT/FHWA Historic Resources Survey Guidelines and past experience with similar projects. Generally, for historic structures the APE includes anything within the view shed of the project, while for archaeological sites, the APE is limited to the footprint of the project including all existing and required rights-of-way (ROW) and easements.
2. Review existing information on historic properties
   Once the APE is established, a review of existing information on historic and archaeological properties is conducted. See Section 3.1.5.A and Section 3.1.6.A for required background resources.
3. Seek information from consulting parties (Notification)
   Information regarding known historic properties within the APE of the undertaking will be obtained from consulting parties, American Indian tribes, and other individuals or organizations that may have knowledge of, or concerns with, known historic properties. The Notification should be tailored to the project and indicate whether GDOT is seeking information in compliance with the Georgia Environmental Policy Act (GEPA) or in compliance with Section 106. The project description in the Notification must be thorough and complete. It should include specific locations of the beginning and ending points of the project, amounts of existing and proposed ROW, median and lane widths (if applicable), and the total project length. Furthermore, the project description in any subsequent Section 106 documentation should be consistent with the project description in the Notification. If the scope of the project is modified after the distribution of the Notification but prior to the completion of the Section 106 process, it is appropriate to revise the project description in subsequent documentation and explain why the description has changed since the distribution of the Notification. Upon review and approval, the GDOT archaeologist will mail the finalized Notification to the appropriate American Indian tribes per government-to-government coordination. The historian (both GDOT and consultant) will distribute all other copies of the Notification. The GDOT Tribal Liaison maintains a list of current American Indian tribal contacts.

The Notification also serves as an invitation to potential consulting parties to participate in the Section 106 process and to inform potential consulting parties of the identification efforts made up to this point in the Section 106 process. The Notification is always sent to the SHPO, representatives of local governments with jurisdiction over the area in which the undertaking will occur, the local RC, local historic preservation organizations and any individuals or organizations with a demonstrated interest in the undertaking due to the nature of their legal or economic relationship

to the undertaking. A copy of the Notification also will be sent to all American Indian tribes that recognize Georgia as their ancestral home, as noted above.

The consultant will provide GDOT copies of any correspondence received in response to the Notification, in the event that the GDOT historian is not copied on the original response. In turn, GDOT will provide consultants copies of any correspondence received related to a particular project, including the SHPO's Early Coordination Memorandum, which will indicate the HP or GP number assigned to the project by the SHPO. Because this number is SHPO's primary method of tracking a project, always include it in all subsequent documentation and correspondence pertaining to a specific project.

The agency official also will ensure that a copy of the Notification is sent to the ACHP and the Secretary of the Interior where appropriate. In situations where the undertaking may have substantial impacts on important historic properties, important questions of policy or interpretation are encountered or anticipated, procedural problems are encountered or foreseen, or issues of concern to Indian tribes are identified, the ACHP must receive a copy of the Notification. The Secretary of the Interior also must receive a copy of the Notification if an adverse effect is anticipated to a National Historic Landmark (NHL).

3.1.5 Historic resource surveys

A survey for historic resources will be conducted within the project's APE to identify all individual properties, districts, and multiple property areas that currently are listed in or eligible for listing in the National Register of Historic Places (NR). The historian performing this work must meet professional standards under regulations developed by the Secretary of the Interior, found at http://www.nps.gov/history/local-law/Prof_Qual_83.htm.

Generally speaking, the resource must be a minimum of 50 years of age (though exceptions are made if the resource is of great significance, e.g., associated with the Civil Rights Movement). It must then be evaluated under the four NR Criteria, A through D; Criterion A: association with an event that made a significant contribution to the broad patterns of our history; Criterion B: association with a person significant in our past, Criterion C: significant for its design or construction, and, Criterion D: significant due to the information it may yield on prehistory or history. A resource may be eligible under one of three levels of significance: national, state, or local recognition of importance.

A resource must retain integrity to be considered eligible for the NR. Integrity is critical to the application of the criteria of eligibility. All qualified properties must meet one or more of the criteria of eligibility and must have integrity of location, design, setting, materials, workmanship, feeling, and association. Integrity does not demand absolute purity, but does demand enough purity to retain a "preservable entity" that communicates its relevant significance. Integrity also should be evaluated in the context of what makes a property significant; not all aspects of integrity mentioned are necessarily valid or relevant for each property.

This survey will be conducted in accordance with the following standards which outline the minimum amount of information required for the reviewer to clearly understand the nature of a particular project,

to adequately assess the potential eligibility of historic resources, and to assess the potential impacts of a transportation project to eligible historic properties. Historians should not interpret these guidelines as limits on the amount of information that can be incorporated into a specific report. Instead, historians should use their own discretion in incorporating additional information they feel might be relevant in helping reviewers, including the SHPO and GDOT better understand the nature of a project or a historic resource.

A. Background research

Prior to the field survey the following work efforts will be accomplished:

1. The county/city-wide surveys for historic resources completed under the direction of the Georgia Department of Natural Resources (DNR), Historic Preservation Division (HPD) will be consulted in order to locate previously identified historic resources along the project corridor. Survey forms for any previously identified resource(s) along the project corridor, on file at the HPD, will be copied and the location(s) of the resource(s) delineated on an appropriate map for use in the field. Much of the survey data is available online through Georgia's Natural, Archaeological, and Historic Resources Geographical Information System (GNAHRGIS).
2. The county listing of existing and proposed NR properties will be consulted in order to locate existing and proposed NR properties along the project corridor. The NR Nomination Form(s) and the Proposed NR Summary Form(s), on file at the HPD will be copied for any NR or proposed NR property/properties located along the project corridor and the locations of any such properties will be delineated on an appropriate map for use in the field. The NR Information System, a searchable database of the information on NR listed and eligible properties, is available online (http://www.nr.nps.gov/).
3. Aerial photographs and United States Geological Survey (USGS) quadrangle maps will be examined to determine if any structures are located in the project area.
4. The Georgia Historic Bridge Survey (GHBS) will be consulted to determine if any NR eligible bridges are located along the project corridor. If a bridge is identified in this database as being within the APE, a copy of the bridge survey form will be included in the Notification and in all subsequent Section 106 documentation. A copy of the GHBS can be obtained by contacting the History Unit Supervisor. The GHBS is currently being updated to pick up chronologically where the 1994 version ended. Any bridges identified in the APE, dating between 1955 and 1965 should be evaluated for eligibility by the historian in the field. Consultants can contact the History Team Leader for a copy of the draft bridge form from the updated survey to assist with identification and evaluation.
5. The online listing of NHL's will be consulted to determine if any are located within the APE of the project (http://tps.cr.nps.gov/nhl/default.cfm).
6. Georgia's State Traffic and Report Statistics (STARS) is an online GIS system that may be used to locate community resources such as cemeteries or churches that are located within the APE of a project (http://www.dot.ga.gov/statistics/stars/Pages/default.aspx).
7. Where available, online county tax assessor's records should be searched prior to the field survey in order to help identify properties that are older than 50 years of age within the APE

of a project. However, since tax records are not entirely reliable, discretion and professional judgment should be used when using tax assessor dates. Referencing the tax assessor is optional for all resources pre-dating 1940; however, the tax assessor should be referenced for all resources post-dating 1940. Tax records are more likely to be accurate for younger resources, and knowing the precise date for these resources is critical considering how close their age is to the 50 year threshold.

B. Survey methodology/field survey

The field survey will be conducted in order to identify and locate on maps and aerial photography all proposed and existing NR properties and all buildings 50 years of age or older, bridges and railroads (including those within possible, not yet listed, historic districts and multiple property areas, if any). A Property Information Form (PIF) will be completed for each resource surveyed as part of the Historic Resources Survey Report.

Since historic contexts have been developed for bridges, surveys for these property types less than 50 years of age will be conducted as noted below. Since the historic contexts have established periods of significance, these property types do not need to meet the special considerations required under Criterion Consideration G in order to be considered eligible for listing in the NR.

1. Bridges

   The 2008 update of the GHBS established a period of significance for bridges built between 1955 and 1965, so bridges built as late as 1965 will be surveyed and evaluated for NR eligibility using this context.

For resources less than 50 years of age, the historian is to exercise professional judgment using historic contexts and personal experience and include in their historic resource surveys, resources that have exceptional importance per Criterion Consideration G.

C. Survey criteria

1. The historian will accomplish the following tasks for each individual building, district, multiple property area, landscape, structure, object, other NR recognized historic property type, bridge, and railroad that is 50 years of age or older along the project corridor:

   a. Individual buildings

      The following work will be accomplished for all properties 50 years of age or older:

      - Each building 50 years of age or older will be inspected. Information recorded will include a description of the architectural details including additions and alterations as well as a description of both the immediate and general settings.
      - Each building will be digitally photographed. All exterior elevations of the resource, including photographs of any significant or unusual architectural features will be photographed if the owner permits access to the property. If access to the property is denied, representative views will be taken from the ROW of the existing facility and an explanation for the lack of photographs will be included in the Historic Resources Survey Report. A panoramic view recording the building in its setting also will be taken

including any out buildings and a photograph illustrating the resource's set-back from the existing facility and any landscaping features (including ditches and swales) within this set-back.

- If owner access is permitted, appropriate interior features also will be digitally photographed. Such features will include mantles, staircases, representative photographs of historic building materials, built-in furniture, doors, windows, and other pertinent architectural features.
- If access is permitted, the interior floor plan of the building will be sketched on 8-1/2 inch x 11-inch paper. The floor plan does not have to be to scale but all room divisions, fireplaces, door and window openings will be identified.
- Universal Transverse Mercator (UTM) readings will be provided for all resources regardless of NR eligibility status.
- Whenever possible, the property owners or local residents will be interviewed in order to confirm the date of construction of the resource and dates of any alterations to the property. In addition, informants may provide information that helps to establish an historic context for the resource, which is especially important for resources that are evaluated under Criterion A, such as agricultural and commercial properties.
- If the resource is recommended eligible for listing in the NR, research will be conducted at the appropriate county courthouse to determine a date of construction and to establish a proposed NR boundary for the resource. Often, the proposed NR boundary and the legal boundary of a resource will be one in the same. However, for those resources that are located on large land holdings, a visual boundary is established unless the existing land holdings represent an intact historic boundary. In addition, the proposed NR boundaries of resources abutting a route/street name will be drawn at the existing ROW line of a route/street name unless vegetation (including an uninterrupted lawn) or other features associated with the resource such as steps or walls extend within the existing ROW. In these instances, the proposed NR boundary for resources abutting the project corridor will extend within the existing ROW to include these features. If the historic boundary is intact but has intrusions, a visual boundary may be appropriate. Research will consist of reviewing records at the appropriate tax assessor’s office to obtain the current owners name and the current legal boundary of the property. Deed research also will be conducted to determine a date of construction and the presence of an intact historic boundary.
- Based on the information obtained above, a proposed NR boundary will be delineated on aerial photography or on a county tax map if the proposed boundary corresponds to the current legal property boundary.

b. Districts

For any historic district(s) identified along the project corridor, the historian will accomplish the following tasks:

- Information recorded during the field survey will include a general description of the area and its setting as well as the prevailing architectural styles and types present.
- Photographically record (with digital photographs) the district by taking exterior photographs of representative architectural styles and types within the district and representative streetscapes. The district's setting abutting the existing facility also will be photographically recorded through a series of panoramic views.
- Establish and delineate the proposed NR boundary of the district on aerial photography. If the limits of the aerial photography do not provide total coverage of the district, the boundary will be recorded on a city or cadastral map.
- In the event that the aerial photography does not cover the limits of the district, a site sketch will be prepared to serve as a photograph key. If applicable, the sketch does not have to be to scale but it will accurately depict local streets, state routes and federal routes. A city or cadastral map of the area can be used in lieu of a site sketch.

c. Bridges

The historian will determine if any bridge located on the project is included in the 1994 GHBS. For those bridges included in the 1994 GHBS, the historian need only attach the bridge survey form to the survey report. An individual PIF is not required. For any bridge 50 years of age or older located on the project corridor not included in the 1994 GHBS, the historian will accomplish the following:

- Complete a PIF.
- Each bridge will be digitally photographed. Photographs will be taken with all elevations, the substructure, the super-structure, the approaches, and details of the bridge railings or other pertinent features such as a bridge plate or an incised date. A panoramic view recording the bridge in its setting will also be taken.
- The following information is needed for completion of the PIF (consultants can contact the History Team Leader for information on bridges identified in the draft 2008 GHBS update --- bridges dating from 1965 and earlier):
    - Name of bridge;
    - GDOT bridge serial number;
    - District;
    - Owner;
    - Date of construction;

- Number of trusses or spans;
- Overall length;
- Width of bridge; and
- Truss or span type and length.
- The proposed NR boundary of the bridge will be delineated on aerial photography. The proposed NR boundary will consist only of the dimensions of the bridge unless the bridge is sited in a dramatic or unique setting that would warrant its inclusion within the proposed NR boundary.
- The location of the bridge will be delineated on a map and UTM readings will be provided.

d. Railroads

For any railroad corridor located on, abutting, or crossed by the project, the historian will accomplish the following:

- For abandoned railroad corridors, consult "The Statewide Railroad Industry Context" prepared in September 1991 by The Georgia Rails into Trails Society, The Trust for Public Land, and the DNR HPD.
- Consult with the current or previous owner and conduct research to determine age of line, and associated history of the company and the line.
- Photographically record (with digital photographs) the railroad corridor within the project area. Photographs will include representative views of the rail bed in the immediate vicinity of the project corridor including cut and fill sections, representative photographs of bridges, trestles, overpasses and underpasses, any historic buildings, depots, warehouses, utility sheds, and any other structures related to the railroad corridor located on the length of the line.
- For that portion of the railroad corridor within the APE, determine if portions of the line have been obliterated by construction or development or altered by other activities and, if so, the locations of those portions of the line. The proposed NR boundary of railroad corridors is consistent with the railroad ROW limits and need not be delineated on mapping or aerial photography.
- If the resource is recommended as eligible for the NR, the location of the historic railroad corridor will be delineated on a map. UTM readings are not required for railroad corridors.

e. Cemeteries

All cemeteries located within the project APE and at least 50 years of age shall be considered historic resources and evaluated for NR eligibility utilizing NR Bulletin 41, "Guidelines for Evaluating and Registering Cemeteries and Burial Places" as guidance (http://www.nps.gov/history/nr/publications/bulletins/nrb41/).

3.1.6 Archaeological resources surveys

The archaeologist, acting as or under the supervision of a Principal Investigator who is a qualified archaeologist and meets the Secretary of the Interior's professional standards, will perform all data collection in accordance with the following. Depending on weather conditions and data gathered during the course of the survey, the archaeologist (in consultation with the GDOT archaeologist) reserves the right to make changes in the data collection strategy as long as it does not affect the final desired results.

A. Background research

An extensive background literature research will be conducted to document previously identified archaeological sites and to delineate areas of high site potential within and adjacent to the survey corridor, and to develop cultural contexts for the survey corridor. Background research will include a review of pertinent documents housed at the University of Georgia Archaeological Site Files in Athens (GNAHRGIS also may be utilized); the Map Library and the Georgia Room at the University of Georgia, Athens; the HPD, Atlanta; the Georgia Department of Archives and History, and the Surveyor General's Collections, Atlanta. The state's preservation plan, "A Vision for the Future," available at the HPD, its archaeological component, "A Strategy for Cultural Resource Planning in Georgia," and appropriate archaeological contexts will be consulted. In addition, site specific research at county level record sources including, libraries, courthouses, and historical and archaeological societies will be conducted, as required, during the site evaluation phase of the survey.

B. Landowner notification and permits

At least seven (7) days prior to field work, the archaeologist will be responsible for notifying by mail persons owning property to which access will be required during the archaeological survey. If the contract originates from the Office of Environmental Services, the consultant will send the letters to the Archaeology Unit Manager for signature by the State Environmental Administrator. All other letters should be signed by the originating office head (i.e., projects through the Office of Program Delivery should be signed by the State Program Delivery Engineer). In the case of reevaluation surveys, a new landowner notification must be sent out if the original letter is more than one (1) year old. A copy of the landowner notification letter should be carried in the field during survey. If survey requires access to hunting camps, fenced areas, active livestock areas, gated property, manicured lawns, etc. an effort should be made to make landowner contact in-person or by phone. All interactions with landowners and members of the public should be professional, courteous, and documented in the project file.

The archaeologist will be responsible for securing all required permits under the Archaeological Resource Protection Act (ARPA) etc. Consultants will obtain permits in consultation with the GDOT. Please note that the GDOT in consultation with the project's lead federal agency will conduct all early coordination with American Indian tribes.

C. Intensive archaeological survey/testing

The archaeologist will conduct the survey/testing for archaeological resources in accordance with methods based in general on those presented in the most current version of the Environmental Procedures Manual (EPM), the "Georgia Standards and Guidelines for Archaeological Surveys," from the Georgia Council of Professional Archaeologists (2001), as well as the "Archaeological Assessment Report Guidelines and Components," from the Historic Preservation Division, State Historic Preservation Office (1994) and the Secretary of the Interior's Standards and Guidelines [Federal Register 48(190):44734-44737].

1. Survey objectives

   The following survey objectives will be adopted for each project:

   a. Provide accurate and reliable location of archaeological resources in the project area including an accurate and concise map of all sites, structures, and features. These will also be plotted on USGS 7.5 minute quadrangle maps and aerial photography.
   b. Provide an evaluation of NR eligibility for all identified archaeological resources.
   c. Provide insight into necessities for avoidance of potentially NR eligible resources.
   d. Provide recommendations that include data recovery/research design strategies and research questions that can be addressed through mitigation, if avoidance is not possible.
   e. Any consultant requests to consult with the SHPO will be coordinated by the GDOT archaeologist.

2. Archaeological resource survey (Phase I)

   a. An intensive archaeological survey will be conducted for the entire length of the survey corridor (the identified APE that includes applicable existing ROW, required ROW, and easements) to include an additional 100-foot width Expanded Survey Corridor (ESC) beyond each side of the identified APE for preliminary engineering purposes. Throughout the length of the survey corridor, parallel survey transects and shovel tests will be spaced at 30 meter (m) intervals or less, as dictated by the nature of the APE, and in areas identified as having a high site potential and where ground surface visibility is less than 75 percent. Shovel test intervals may be expanded or eliminated in steeply sloping terrain (>15 degree slope), areas of standing water, and highly disturbed areas at the discretion of the Principal Investigator. Shovel tests will be generally 30 centimeter (cm) x 30 cm in size and will be excavated to a maximum depth of 80 cm below surface (cmbs), or to an impenetrable substrate, or to the water table, or 10 cm into sterile subsoil. Shovel tests shall be enlarged to 1 m x 1 m excavation units at the discretion of the Principal Investigator or as conditions warrant. Additional shovel tests will be excavated where micro-land forms suggest the potential for buried archaeological resources. Deep testing in areas adjacent to rivers and creeks may be facilitated by use of hand turned augers or other mechanical means. If mechanical means are used for deep testing, the deep testing plan should be developed in consultation with the GDOT archaeologist. All deep testing should comply with OSHA *Standards for Excavation Safety,* 29 CFR 1926 Subpart P.

Consultants are also encouraged to call 811 prior to conducting fieldwork in areas that may contain buried utilities.

Geophysical prospection will be utilized on archaeological sites at the discretion of the Principal Investigator (in consultation with the GDOT archaeologist) as conditions warrant. Metal detector surveys will also be utilized at the discretion of the Principal Investigator and survey methodology should be designed in consultation with the GDOT archaeologist.

b. All discovered sites, structural remains, and cultural features will be recorded as to width, length, depth, and nature of fill within the APE and ESC. Additional parallel survey transects and close interval shovel testing (i.e., 10 to 15 m intervals) will be excavated at all discovered sites within the APE and ESC. Close interval shovel test transects should also be excavated within the limits of all surface artifact distributions as well as artifact distributions identified by metal detector survey. Inside the APE and ESC, close interval shovel testing will be terminated on individual parallel transects and in cardinal directions when two consecutive negative shovel tests are recorded in association with each positive shovel test within the limits of the site or isolated find. Descriptive data recorded for each test shall include type of test (i.e., shovel test, 1 m x 1 m unit); topographic location; Munsell soil color, texture, and observed anomalies; depths of soil horizons; and the presence or absence of cultural material. A stratigraphic profile will be drawn and photographed for each excavation unit. All shovel test and excavation units will be backfilled. Structures, sites, stratigraphy, and cultural material will be recorded using standard archaeological techniques.

c. All excavated soil will be screened through 0.25 inch mesh hardware cloth. All archaeological sites will be plotted on aerial photography and 7.5 minute USGS quadrangle maps. Digital photographs will be taken of all aspects of the survey.

d. Consultants will provide all archaeological information in a GIS compatible with ESRI's ArcView 3x or ArcGIS 9x software versions. This information will include polygon coverage (i.e., shape files) for all survey areas and archaeological site boundaries, as well as point data for all shovel tests and other features. This information will be provided on a CD.

e. At each site identified during the intensive Phase I survey, data collection will be sufficient to support a recommendation of NR eligibility, if applicable. The National Park Service provides guidance on the evaluation of archaeological sites in the publications entitled How to Apply the National Register Criteria for Evaluation and Guidelines for Evaluating and Registering Archeological Properties. For those sites not determined eligible for the NR after the Phase I survey, a determination of potentially eligible for the NR will be accepted after the complete fulfillment of the Phase I survey

methodology. An evaluation of sites that are potentially eligible for the NR will include the following:

- Recommendations of avoidance alternatives (within and outside the APE [if applicable]) or measures to minimize harm within the APE that would avoid the site or contributing elements thereof; and
- Recommendations that include testing strategies sufficient to determine NR eligibility of the site within the APE, if applicable. Consultants will perform this work in consultation with the GDOT archaeologist.

f. Procedures for Addressing American Indian Interments and Discovered Historic Graves/Burials.
   - Stop all work or activity in the area immediately adjacent to the burial.
   - Report the burial immediately to the on-site archaeologist in charge so that the observation may be confirmed.
   - Notify immediately GDOT environmental office personnel, specifically the GDOT's Tribal Liaison, or the State Environmental Administrator.
   - Protect by reasonable means any pre-contact, historic, or American Indian remains, securing the area from unauthorized personnel or activity.
   - The archaeologist will refrain from discussing the presence or absence of American Indian burials with the news media or general public without prior consultation with the State Environmental Administrator.

g. If a historic period archaeological site is located during survey and may be related to a historic structure, building, object, or district, the archaeologist should make every effort to share information and collaborate with the project historian. The relationship between the related properties should also be referenced in the archaeological report.

h. All archaeological sites with a NR recommendation of eligible, potentially eligible, or unknown and whose boundaries extend beyond the limits of the APE will be regarded as Environmentally Sensitive Areas (ESA). Each ESA boundary will be transmitted to the GDOT Project Manager and GDOT NEPA planner via letter and associated figure (example letter). The ESA should be drawn based on all available evidence such as geographic features, surface features, or can be arbitrarily boxed. Orange Safety Fence should be drawn along the edge of the APE (existing right-of-way, required right-of-way, or easement) along the extent of the site at the APE.

3. Archaeological testing (Phase II)
   The archaeologist will perform all data collection in accordance with the following:
   a. A testing program of potentially eligible NR archaeological sites will be conducted. Consultants will develop the testing strategy for each site in consultation with GDOT's archaeologist. The testing strategy will include hand excavation of formal test units (1

m x 1 m, 1 m x 2 m, 2 m x 2 m etc.). The test unit locations will be at the discretion of the Principal Investigator (in consultation with GDOT's archaeologist) and based on the Phase I survey results. All test units will be excavated to a maximum depth of 150 cmbs and/or a minimum of 20 cm into culturally sterile subsoil and backfilled upon completion. All deep testing (units deeper than 150 cm) should comply with OSHA *Standards for Excavation Safety,* 29 CFR 1926 Subpart P. Geophysical prospection will be incorporated into the testing strategy (in consultation with GDOT's archaeologist) where conditions warrant on archaeological sites requiring Phase II testing.

b. All discovered archaeological features will be recorded as to width, length, depth, and nature of fill. Descriptive data recorded for each test shall include type of test (i.e., 1 m x 2 m unit); topographic location; Munsell soil color, texture, and observed anomalies; depths of soil horizons; and the presence or absence of cultural material and features. A stratigraphic profile will be drawn for each excavation unit to include documentation with digital photography. Structures, sites, stratigraphy, and cultural material will be recorded using standard archaeological techniques.

c. All excavated soil will be screened through 0.25 inch mesh hardware cloth. Whenever sub plow zone midden and features are encountered, a sufficient soil sample will be recovered from each level (if applicable), of the midden/feature for flotation and micro-artifact analysis. All archaeological sites shall be plotted on aerial photography and on 7.5 minute USGS quadrangle maps. Digital photographs will be taken of all aspects of the survey. The data collection strategy (testing, etc.) will be of sufficient scope to support an assessment of NR eligibility.

4. Evaluation of archaeological sites recommended eligible for the NR will also include the following in consultation with GDOT's archaeologist:

   a. Recommendations of avoidance alternatives (within and outside the APE [if applicable]) or measures to minimize harm within the APE that would avoid the site or contributing elements thereof; and
   b. Recommendations that include data recovery/research design strategies and research questions that can be addressed through mitigation, if applicable.

5. Mitigation/data recovery (Phase III)
   After the consideration of avoidance alternatives and measures to minimize harm (pursuant to 3.1.6:3[a]), and the NR Criteria of Adverse Effect have been applied, archaeological data recovery may be required to mitigate an adverse effect associated with a proposed undertaking. Due to the diverse nature of archaeological deposits and variety of archaeological site types, no standard data recovery methodology exists to adequately mitigate adverse effects to all archaeological sites. When an adverse effect is unavoidable to an archaeological site, the GDOT archaeologist will be required to consult with American Indian tribes, SHPO, other consulting parties, and the agency official to develop and

implement a research design/data recovery plan specific to the representative archaeological site to mitigate the adverse effect associated with the proposed undertaking.

D. Data analysis and curation

Artifact/data analysis generally should follow well-established classification schemes and typologies. The choice of a specific classification system will depend on the goals of the investigation, as discussed with the GDOT archaeologist, and should be fully defined and referenced in the project report (please see GDOT Archaeological Survey and Testing Report Guidelines). Regarding curation, the following points will be adhered to:

1. The archaeologist will permanently curate project documentation (records, field notes, etc.) associated with projects that result in negative findings. Consultants will submit one copy of this documentation to GDOT either in original form, electronic form, or as copies on acid-free paper, as determined in consultation with the GDOT archaeologist.

2. The archaeologist will also submit to GDOT one copy of documentation (records, maps, analysis forms, field notes, etc.) as well as any original photographic data gathered during investigations of sites at which artifact collections were not made (for example, documentary investigations). Documentation should be either in original form or copies on acid-free paper. Printed photographic media should be placed in acid-free envelopes, folders, or polypropylene sheets; photographic media may also be submitted in electronic format.

3. For projects yielding collections, the archaeologist will utilize the University of West Georgia's Antonio J. Waring, Jr. Archaeological Laboratory (Waring Laboratory) for permanent curation of project collections, defined as containing artifacts and associated documentation (records, maps, analysis forms, field notes, etc.). The archaeologist will comply with the most current version of the "Standards for Archaeological Collections" utilized by the Waring Laboratory concerning curation of the project collection, and the archaeologist is encouraged to consult with the GDOT archaeologist, the GDOT Laboratory Director, the Waring Laboratory Coordinator, and the Waring Laboratory Director early regarding processing issues and to resolve any questions regarding curation of the collection. In particular, the following points will be adhered to:

    a. All artifactual materials will be washed/cleaned or otherwise stabilized, prepared, packaged, and cataloged according to the guidelines established by the Waring Laboratory. The archaeologist should specifically adhere to Waring Laboratory's "Standards for Archaeological Collections" The original and two copies of the catalog must accompany the collection. Artifacts requiring special conservation (i.e., wood, metal, and shell) must be properly treated. Parts of the collection requiring special curation conditions (e.g., climate control) must be identified and packaged separately from the remainder of the collection.

b. Artifacts must be packaged in interlocking, heavy-duty plastic (minimum 4 mil thick) bags or small archival containers. Each bag must be properly labeled according to Waring Laboratory's "Collection Labeling and Packaging Guide," and should include information such as the catalog number, field context identification and other requisite information (Georgia Site File Number, GDOT Project Number [if assigned], and GDOT P.I. number). The same printed information must be inserted into the bag on a separate acid free paper tag.

c. All archaeological collections including artifacts and documentation must be packed in Hollinger archival boxes, 15-inch x 12.5-inch x 10-inch, with each box properly labeled on one outside end. An artifact and documentation inventory must accompany each box. Records must be boxed separately from their associated artifacts. The contents of each box cannot exceed 30 pounds in total weight.

d. Originals and copies of all documents (field and laboratory notes, final report, drawings, forms, and maps) will accompany the collection. These records must be packaged separately from the artifacts and must be on acid-free paper or placed within acid-free folders. All printed photographs, accompanying negatives (if appropriate), and other photographic materials must be placed in archival quality sleeves. A photographic log of these materials must be included in the document inventory. Digital photographs are accepted, and the preferred format is .tiff file. Any electronically stored data (e.g., computer discs, CDs) must accompany hard copies of the records and be identified as to the requisite software, operating system, disk density and computer type.

e. The consultant will submit the collection for permanent curation to the Waring Laboratory within sixty (60) days after the acceptance of the final report. Should more time be needed between completion of the project and submittal of the collection for permanent curation, the consultant, in consultation with the GDOT archaeologist, may continue to temporarily curate the collection at the consultant's facility, for a set period of time agreed upon by GDOT. Once the collection is ready to be submitted, the consultant will notify the GDOT archaeologist and, if necessary, obtain an affidavit of ownership for submittal with the collection. The GDOT archaeologist and GDOT Laboratory Director should be copied on all correspondence regarding project collections between the consultant and the Waring Laboratory.

f. The consultant will follow submission procedures for the Waring Laboratory as detailed in the "Standards for Archaeological Collections" and will be responsible for the acceptance and permanent curation of the collection at the Waring Laboratory. Retrieval of collections not meeting curation requirements will be the responsibility of the consultant. The consultant should consider packaging and submitting GDOT project collections as consolidated "multiple small collections";

doing so may require coordination with the Waring Laboratory, the GDOT archaeologist, and the GDOT Laboratory Director.

g. For consultant projects, permanent curation of the collection will be funded by the consultant and must be accounted for in the preparation of all preliminary engineering budget and proposal submittals to GDOT for archaeology. Consultants should contact Waring Laboratory prior to budget submittals to determine the current fees. Consultants will curate collections under the set fee contract option. Any requests for expedited service or processing services at the Waring Laboratory will be the sole responsibility of the consultant, and these costs will not be transferred to GDOT.

E. Cemeteries

All cemeteries located within the project APE and ESC should be treated as archaeological sites, if applicable, and evaluated for NR eligibility. While cemeteries are not generally eligible for the National Register, as archaeological sites, burials may meet Criterion D by yielding information important to our understanding of history or prehistory. The National Park Service provides a discussion of these issues in the publications entitled *Guidelines for Evaluating and Registering Archaeological Properties* (2000) and *Guidelines for Evaluating and Registering Cemeteries and Burial Places* (1992). The archaeologist will be responsible for securing a copy of the legal deed (from the applicable county seat) that establishes the boundary of the cemetery. If a legal deed does not exist establishing the cemetery boundary, then the archaeologist will be responsible for delineating the location and the boundary of the cemetery based on an archaeological report of findings (to include the number of graves believed to be present and their locations). All cemeteries should be noted on the archaeological resources location map and the results of the deed research and archaeological investigation should be included within the associated project report.

If the proposed project will require right-of-way or easements from a cemetery, however no graves would require relocation, then GDOT has no obligation to seek a permit from the County Superior Court for change in land use pursuant to OCGA 36-72-14(c), "Abandoned Cemeteries and Burial Grounds" (2011). The archaeologist will however need to comply with OCGA 36-72-5(2), which states that an archaeological report must be written detailing the investigation of the cemetery. The report shall detail the number of graves believed to be present, include a map of the cemetery including grave location and cemetery boundary, and a description of methods used to investigate the cemetery or burial ground.

If the proposed project would result in the relocation of graves then compliance with OCGA 36-72 must be undertaken and a permit pursuant to OCGA 36-72-4 (permit application 36-72-5) must be acquired. The following procedures will be completed by the archaeologist (in consultation with the GDOT archaeologist) in order to obtain the necessary items for the permit application as specified in OCGA 36-72-5.

1. Background research
   An extensive background literature review will be conducted to develop the historic context for said cemetery and will include a review of pertinent documents housed at the Map Library and the Georgia Room at the University of Georgia, Athens; and examination of county-level record sources to include local libraries and the courthouse. Census and other genealogical records will be examined and informant interviews will be conducted, as required, to yield information on descendants.
2. Preparation of permit package (OCGA 36-72-5)
   The archaeologist will be responsible for completing/obtaining the following items (in consultation with the GDOT):
   a. Title search to establish ownership and yield title opinion for parcel of land on which cemetery is located. If no legal deed exists defining the boundary of the cemetery, then it is the responsibility of the archaeologist to delineate an appropriate legal boundary that encompasses all contributing elements of the resource.
   b. Archaeological delineation of boundaries of cemetery to include number and location of burials therein.
   c. Survey by registered surveyor showing location and boundaries of cemetery based on the archaeological delineation. The location and boundary of the cemetery will be transferred to proposed project construction sheet for use in the permit application.
   d. Plan for identification and notification of descendants of those buried in cemetery.
   e. Plan for mitigation of cemetery if applicable to the removal and relocation of burials, or if not applicable, demonstrated efforts incorporated into the proposed project design that reflect minimization of harm relating to land use conversion from the cemetery parcel.
3. The completed permit package, above items a-e, shall be submitted to the GDOT. The archaeologist (consultant or GDOT, as appropriate) will be required to attend the Superior Court hearing as a witness when the court date is scheduled.

3.1.7 Survey report preparation

A. Historic Resources Survey Report

- The historian will prepare a separate Historic Resources Survey Report containing the results of the historic resources survey. The template is a guide for the minimum amount of information required. While the Survey Report template should be followed as closely as possible, if a resource requires more information than outlined in the template, the consultant should elaborate and expand the format of the template as necessary. The Historic Resources Survey Report will contain recommendations of eligibility for the NR for all resources 50 years of age or older. Eligibility recommendations will be based on the NR Criteria for Evaluation and guidance provided by the SHPO and GDOT. Any consultant requests to consult with the SHPO will be coordinated by the GDOT historian. All DNR survey forms, Proposed NR Summary Forms and NR Nomination Forms (including NR boundary graphics) for resources within the project's APE will be appended to the report along with the Notification and any correspondence received in response to the Notification. For bridges evaluated in the GHBS, a

bridge survey form will be appended to the report, regardless of the NR eligibility determination.

Terminology will be consistent throughout all reports. This not only applies when discussing the various types and styles of historic resources but also in identifying historic resources and in describing the project. For example, if a road is identified as "US 27/SR 1" in the project description, it should be referenced as such throughout the document. Additionally, if a resource is identified as "Resource 1" initially, this name should be used consistently throughout the document and on all graphics (e.g., it should not be later referenced as "Property 1" or "Resource HR 01"). The historic resources will be numbered sequentially, with any gaps in the numbering system explained in the Historic Resources Survey Report.

Pages will be numbered in Historic Resources Survey Reports that are greater than 10 pages in length.

A project location map and resource location map will be included as part of the documentation of the field survey (they may be combined into one graphic). A city street map, USGS quadrangle map or county map will be used to identify the limits of the proposed project and the location of all identified properties. The project location map will include the GDOT Project Number (where applicable), P.I. Number (where applicable), north arrow and a scale. The map will include enough information (roads, landmarks, towns, bodies of water, etc.) to give the reviewer a good sense of the project and resource locations.

For each newly identified building, district, multiple property area, landscape, structure, object, other NR recognized historic property type, bridge, and railroad that is 50 years of age or older along the project corridor, a PIF will be completed as part of the Historic Resources Survey Report. A PIF will not be prepared for a property already listed in or nominated for listing in the NR, for a bridge identified in the 1994 GHBS, or for a resource whose eligibility has been previously determined (i.e., during the Section 106 process for another transportation project). In the latter case, the previously prepared PIF for the resource will be appended to the Historic Resources Survey Report along with SHPO's concurrence letter.

All sections of the PIF will be completed. If a section does not apply to a particular resource, indicate this by using "N/A."

All eligible resources will be given a proper name (in addition to a number) that either corresponds to its historic name or the current owner's last name. This proper name will be used to identify the resource in all subsequent documentation of the Section 106 process. Proper names will not be used to identify ineligible resources, which will be identified by a number or letter.

The "Date(s) of Development" section will include a property's date of construction and the source of that date as well as dates and descriptions of alterations and/or additions to the resource. The section will also document any changes in the use of the property. The

discussion of a property's historic use is especially important for resources that are evaluated for eligibility under Criterion A, such as agricultural and commercial properties.

When describing residential resources, refer to *Georgia's Living Places: Historic Houses in Their Landscaped Settings*. The SHPO has accepted the terminology used in this context study as representative of Georgia's historic architecture. If a house does not fit a type or style identified in the study (with the exception of the American Small House, which has been identified since the publication of the study), it will be referred to as "No Academic Type or Style." Descriptions such as "lateral gable cottage," "rectangular wood frame vernacular residence," or "side-gabled dwelling," etc., are not acceptable.

Several points will be addressed when describing a resource including but not limited to the following: type, style, stylistic influences if several occur, decorative detailing, windows, doors, porches, chimneys, eaves, foundations, roofs, siding, materials, composition, alterations, and additions. The overall setting of the resource will be addressed and will include a description of any associated landscape features such as historic vegetation, retaining walls, fences, gates, gardens, etc. Outbuildings will be described and dates or approximate dates of construction will be given.

For all resources, eligible or ineligible, the historian will address all four Criteria of Eligibility and strongly argue why each should or should not be applied to a particular resource. Typically, historic resources that represent a type or style identified in *Georgia's Living Places: Historic Houses in Their Landscaped Settings* and that retain integrity will be recommended eligible for the NR under Criterion C in the area of architecture. Resources that are not addressed in "Georgia's Living Places: Historic Houses in Their Landscaped Settings" will be evaluated under Criterion A in addition to Criterion C. For example, a property with an association to the historic agriculture economy of an area should be evaluated under Criterion A in the area of agriculture following recommendations presented in "Tilling the Earth, Georgia's Historic Agricultural Heritage: A Context." Similarly, historic resources such as mills or commercial properties will be evaluated under Criterion A in the areas of industry and commerce. When a resource is evaluated under Criterion A, it is important to address its historic associations in depth. A resource will be recommended eligible under Criterion A if the historic event (or pattern of events) is deemed important, and if the resource's association with the event is important.

The eligibility of a resource hinges on it possessing the requisite integrity. All seven aspects of integrity will be addressed individually and supported with examples that provide a clear, convincing argument.

In recommending NR boundaries for eligible resources, "Defining Boundaries for National Register Properties" will be consulted. The proposed boundary will be established without regard to the transportation improvements proposed by the project. It is important that the boundaries are drawn to include all contributing elements of the resource and not drawn in

such a way to avoid potential conflict with the proposed project. The choice of a legal or visual boundary will be clearly justified in the PIF. The legal boundary will be used as a starting point for determining the eligible boundary. Aerial photographs, deed records, and property owner interviews will be used as necessary to determine the appropriate boundary. If non-historic development or an overall change in land use has altered the setting of a resource, the boundary will be drawn to include only contributing features, even if the historic legal boundary is intact. Conversely, the boundary for agricultural resources, for example, may exceed the current legal boundary of a resource if the surrounding land has maintained its historic use and appearance, even if the original parcel has been subdivided. When the recommended NR boundary corresponds to a legal boundary, it is not necessary to provide a written description of the dimensions. The legal parcel number and approximate acreage of the parcel is a sufficient description. When the recommended NR boundary is a visual boundary, the approximate dimensions of the boundary will be described either in the written boundary section of the PIF or on the boundary graphic.

A statement will be included in the boundary description that indicates whether the boundary extends to the existing ROW, edge of pavement, or other feature. In most situations the boundary will correspond to the existing ROW. However, if contributing elements (trees, shrubs, walls, fences, steps, etc.) are present within the existing ROW, the boundary should be extended past the ROW line to include them. If an eligible property's grassed lawn extends uninterrupted to the edge of pavement, or if a portion of the grassed lawn is present between a sidewalk and the roadway, the proposed boundary will correspond to the edge of pavement.

Universal Transverse Mercator coordinates will be provided for most resources, both eligible and ineligible. For large resources such as farm complexes and historic districts, one centrally located coordinate will be provided. For linear resources such as roads and railroads, UTM coordinates will not be provided.

The following items will be appended to each PIF:

- Photographs.
- Site plan sketch (if the property has been recommended eligible or if the complexity of an ineligible resource warrants a site map.
- A graphic depicting the proposed NR boundary (if appropriate).

Photographs will be clearly and consistently labeled, and each caption will identify the direction of the photograph (e.g., "west elevation, view facing east"). Georgia DOT does not have a preferred labeling or numbering system for photographs. They may be labeled simply using a number (1, 2, 3…) or can be identified as "Figure 1," "Caption 1," "Photo 1," etc. Also, it is acceptable to either number photographs sequentially throughout the entire report or to repeat a numbering sequence for each documented resource (i.e., begin with Photo #1 for each resource). Whatever numbering or labeling system is chosen will be used consistently throughout the document.

Digital color photographs will clearly depict all features that are used to determine a resource's particular type, style, integrity, eligibility, and boundary justification. When taking photographs, it is important to "fill the frame" with the resource (with the exception of views of the setting). Photographs that contain intrusions such as automobiles, roads, and side-view mirrors are not acceptable. Photographs in which a portion of a resource is cropped or heavily obscured by vegetation or other objects are not acceptable. If the setting of a resource results in difficulty obtaining clear and detailed photographs (e.g., because all or part of the property is surrounded by dense vegetation) a note explaining the lack of photographic documentation will be made in the "Description" section of the PIF.

While there is no limit to the number of photographs that can be appended to a PIF, the more photographs provided, the easier it is for the reviewer and the SHPO to make an accurate assessment of a resource's potential eligibility. At a minimum, photographs will include views of all elevations of the resource (straight on or oblique views are acceptable), the resource's immediate setting (lawn and/or structural features that might be associated with the property), and any 50+ year old outbuildings. If it is not possible to provide this level of photographic documentation, an explanation for the lack of photographs will be included in the Historic Resources Survey Report (e.g., if access was denied by the property owner or aggressive animals were present). For resources recommended eligible, at least one photograph illustrating the existing ROW is required where relevant. All photographs for eligible resources will be keyed to the site plan. Georgia DOT or the SHPO may request additional photographic documentation from consultants of a resource if the photographs provided do not adequately depict the resource or its condition/integrity.

The boundary graphic will include the following: resource name, project number (where applicable), county, P.I. number (where applicable), north arrow, and a scale (or state "not to scale" if the scale is unknown). Boundaries will be depicted on aerial photographs, unless the proposed boundary corresponds to an existing legal property boundary, in which case the boundary may be plotted on a county tax map. The boundary will not be depicted on construction plans or any other graphic that depicts transportation improvements proposed by the project. The dimensions of the proposed boundary will be labeled on the graphic if the boundary is a visual boundary and the dimensions are not described in the boundary section of the PIF. The graphic also will be labeled with enough information (roads, landmarks, bodies of waters, etc.) to give the reviewer a good sense of where the resource is located.

Appendices to the Historic Resources Survey Report will include the Notification and any correspondence from consulting parties. For NR listed or pending properties, the complete NR Nomination Form (including the boundary graphic) will also be included. For any bridges located within the APE, the GHBS bridge survey form will be attached.

- Should it be necessary to consult the SHPO during the Section 106 process, in determining the eligibility of resources or assessing the effects to them, Technical Assistance (TA) meetings will always be arranged through a GDOT historian, unless otherwise directed by GDOT. Historic

Preservation Division staff will refer consultants to GDOT if they should call HPD directly to arrange a meeting. If a GDOT historian has not been assigned to a particular project, consultants should contact the GDOT History Team Leader to request that a GDOT historian be assigned.

The consultant will meet with the GDOT historian prior to the TA meeting to review the eligibility determinations for the resources or effect determinations. The consultant will have made eligibility and effect recommendations prior to meeting with GDOT.

When arranging the TA meeting through the GDOT historian, the following information will be provided:

- The expected time needed for the meeting (i.e., 30 minutes, one hour, etc.),
- The number of attendees; the number of consultants attending the TA meeting will be kept to a minimum (one to two staff members),
- The number of resources, and
- The reason for the meeting (i.e., whether eligibility concurrence or assistance with effect determinations and mitigation will be discussed).

The following information will be provided to the SHPO for resources with potential significance under Criterion C:

- Photographs of two or more elevations,
- Photographs of significant architectural features,
- Photographs of the setting, and
- Photographs of the right-of-way where applicable.

Typically, prints of digital photographs are the preferred medium; however, a projector can be provided if the photographs are only on disk. Consultants should arrange for a projector when they contact the GDOT historian to set up the TA meeting.

In addition to the information above, the following information will be provided to the SHPO for resources with potential significance under Criteria A or B (i.e., commercial buildings, churches, schools, etc.):

- Detailed research – including oral histories, deed research, local histories, county histories or any other research that might be relevant towards making a clear and binding determination of eligibility

For potentially eligible resources, aerials, tax maps, or quadrangle maps will be provided in order to show the proposed NR boundary.

The eligibility and significance determinations will have been made prior to meeting with the SHPO. During the TA meeting, the presentation of the information to the SHPO will be organized and concise. The consultant should be able to justify the eligibility

recommendation(s) and demonstrate to the SHPO how he or she arrived at that determination.

All TA meetings will be followed up with a memo documenting the decisions made during the meeting. If a consultant is conducting the Historic Resources Survey, the consultant is responsible, rather than the GDOT historian, for drafting the memo documenting the determinations made at the meeting. The memo will be sent to the GDOT historian for review and transmittal.

- Consultants will submit copies with all appropriate attachments of the Historic Resources Survey Report to the GDOT NEPA analyst to circulate for review and comment. Upon approval, consultants will submit additional copies of the report. The GDOT historian will forward the copies to the appropriate parties who then have 30 days to respond.
- The consultant will provide all historic resource information in a GIS compatible with ESRI's ArcView 3x or ArcGIS 9x software versions. This information will include polygon coverage (i.e., shape files) for all survey areas and historic resource boundaries. It also will include point data for all individual structures evaluated for NR eligibility during the survey and other features. This information will be provided on a CD.

B. Archaeological Resources Survey Report

Consultants will adhere to the following:

- Within two weeks after completion of the fieldwork and prior to submitting archaeological site forms for official site number designations at the University of Georgia Archaeological Site File, the consultant will prepare a Management Summary (only applicable to projects that produce positive results regarding archaeological material) of the archaeological investigation results for submittal to GDOT. The Management Summary will include sufficient information (draft site forms, site maps, site shovel test data, artifact counts, site descriptions and locations, eligibility recommendations, etc.) for the development of alternatives for avoidance, site minimization, or testing strategies of potentially NR eligible resources. The Management Summary will include a separate curation attachment that includes the following: firm and Principal Investigator identification; summary of scope of work (approximate level of investigation); makeup of collection (approximate volume and type of material); curation issues/concerns; approximate date of anticipated collection submittal to Waring Laboratory at the University of West Georgia (it is recommended that the consultant notify the Waring Laboratory at the University of West Georgia after fieldwork completion if potential curation problems are indentified).

- After GDOT review and approval of the Management Summary, the consultant will submit Georgia Site Forms to the University of Georgia Archaeological Site File for official site number designations and will prepare an Archaeological Resources Survey and Testing Report using reporting procedures outlined in the GDOT "Archaeological Report Guidelines" as well as in accordance with standards acceptable to appropriate state and federal review agencies, as determined by the GDOT. These will include "Archaeological Assessment Report Guidelines and

Components" (DNR HPD), American Antiquity 1992 "Style Guide," and the Secretary of the Interior Standards and Guidelines (Federal Register 48[190]: 44734-447370).

- The draft report on the conduct of the proposed research will be prepared for review by GDOT within sixty (60) days after completion of field work. One copy of a draft report should be submitted to the GDOT Project NEPA, along with a cover sheet, detailing QA/QC procedures and personnel; the GDOT Project NEPA will forward to the GDOT archaeologist for review. Please consult with the GDOT Project NEPA and archaeologist regarding acceptable formats for this initial submittal. Once an initial internal review is done by the GDOT archaeologist, he/she will request a number of copies (including bound as well as electronic formats) for distribution to consulting parties, or revisions may be requested prior to draft distribution. Draft acceptance is at the discretion of GDOT. Upon receipt of GDOT comments on the draft report, consultants shall address all comments and submit a revised draft within thirty (30) days (unless an alternate schedule has been agreed upon by GDOT). Revised documents should always be accompanied by a letter or a list of comments with specific responses as to how particular comments have been addressed. After acceptance of the draft by GDOT, additional copies of the draft report will be required within thirty (30) calendar days after consultant receipt of request from GDOT. The GDOT archaeologist will forward copies to the appropriate parties who will have thirty (30) days to respond. Comments on the distributed draft or revised draft will be returned to the consultant, and further revisions or a request for finals may be made. Consultants will submit copies of the final report addressing all received comments. Final acceptance is at the discretion of GDOT. Final requested copies may total five (5) or more copies; two copies will also be requested in Adobe PDF format on CD.

- Further, the consultant will provide all archaeological information in a GIS compatible with ESRI ArcView 3x or ArcGIS 9x software versions. This information will include polygon coverage (i.e., shape files) for all survey areas and archaeological site boundaries, as well as point data for all shovel tests and other features. If available, electronic project files (such as dgns, etc.) should also be provided on a CD.

- If investigations are an extension or amendment to a previously submitted and reviewed project (report), an addendum to the existing report(s) may be prepared. Addendum reports should follow the guidelines for addendum reports presented in GDOT's "Archaeological Report Guidelines". Addendum reports should be submitted for review in the same manner described above for standard archaeological reports.

- If no archaeological resources are identified, a GDOT Archaeological Report Short Form for Negative Findings (Short Form) will be submitted in lieu of an Archaeological Resources Survey Report. The Short Form will be completed in PDF format according to the specified instructions. The Short Form should then be e-mailed to the Archaeology Unit Manager at the GDOT Office of Environmental Services along with corresponding graphics and attachments for review and comment. If revisions are necessary, the consultant will provide additional information and/or edit the Short Form and/or attachments to respond to GDOT comments. If the Short Form is determined acceptable, the consultant will transmit additional information as requested by GDOT to complete the final transaction associated with the report.

3.1.8 Requests for Determinations of Eligibility (DOE) (Archaeological sites only)

The archaeologist will prepare "Requests for Determinations of Eligibility" (DOEs), as outlined below, for those archaeological resources identified for inclusion in the Assessment of Effects (AOE) as detailed under Section 3.1.9. For Historic Resources, the PIF (see Section 3.1.7.A) used for the Historic Resources Survey Report will serve in lieu of a formal DOE.

A. Based on and utilizing information obtained during the field survey, the archaeologist will complete a DOE for each archaeological site recommended eligible for the NR which will detail the following:
    - Requesting agency;
    - Site name and Georgia Site Number;
    - Location;
    - Property owners name, address, and phone number (if available);
    - Representation in existing surveys;
    - Site description;
    - Significance;
    - Bibliography;
    - Geographical data, maps, and acreage; and
    - Name, title, firm and address of firm preparing documentation with vitae of key personnel (Principal Investigator and author) attached.

B. The following graphics will be included within or attached to the form in addition to representative photographs and the Georgia Site Form. All graphics will be mounted on 8-1/2 inch x 11-inch paper and will include a north arrow, scale and figure number, if applicable.
    - Project location map that delineates the project termini, project number and county, and the labeled location of the archaeological site.
    - A graphic delineating the site limits, the construction limits of the project, and locations of shovel tests and unit excavations within and around the periphery of the site.
    - An aerial photograph delineating the site limits.

3.1.9 Assessment of Effects (AOE)

A. No Historic Properties Affected

If no properties 50 years of age or older are identified within the project's APE, or concurrence has been received on the Historic Resources Survey Report and it has been determined that there are no NR eligible properties within the project's APE or because of the nature and scope of the undertaking, no effects to any eligible historic properties are anticipated, then a No Historic Properties Affected document will be prepared (it should be noted that for archaeological clearance, the Short Form or the Archaeological Resources Survey Report are used in lieu of the No Historic Properties Affected Document).

The No Historic Properties Affected document will include a project description, a description of the project's APE, a statement of efforts made to identify historic resources and a statement that no properties 50 years of age or older were identified in the project's APE (if appropriate). The appendix to this document also will include the Notification and correspondence from consulting parties.

In situations where properties 50 years of age or older have been identified within the project's APE, but have been determined not to be eligible for the NR, the No Historic Properties Affected document will also include a discussion of these identified historic properties and a statement that these properties have been determined not to be eligible for the NR by the SHPO. The appendix to the No Historic Properties Affected document will include the Notification and correspondence from consulting parties.

In situations where NR listed or eligible properties have been identified within the project's APE, but due to the nature and scope of the undertaking, the project would have no effect on those properties, the No Historic Properties Affected document will also include a discussion of these identified historic properties and why the project would have no effect on those properties. A copy of the PIFs for all eligible properties will be appended to the No Historic Properties Affected document. The appendix to the No Historic Properties Affected document will also include the Notification and correspondence from consulting parties, as well as a graphic showing the project in the area of any eligible resource.

Consultants will submit copies with all appropriate attachments to the NEPA analyst at GDOT's environmental office for review and comment. Additional copies of the report will be requested upon completion of the review process. The GDOT historian will forward the copies to the appropriate parties.

B. Assessments of Adverse and No Adverse Effects

1. Apply Criteria of Adverse Effect

   Please note that if both NR eligible historic and archaeological resources are identified on a project, one AOE will be prepared.

   An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic or archaeological property that qualify the property for inclusion in the NR in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

   Examples of adverse effects include but are not limited to:

   - Physical destruction or damage to all or part of a property;

- Alterations that are not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68 [http://www.nps.gov/history/hps/tps/standguide/];
- Removal of a property from its historic location;
- Change in the character of a property's use or physical features within the property's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of significant historic features;
- Deterioration by neglect; and
- Unrestricted transfer, lease or sale of a property out of federal ownership or control.

In consultation with the SHPO and any American Indian tribe that attaches religious and cultural significance to identified historic and archaeological properties within the project's APE, the agency official will apply the criteria of adverse effect to historic and archaeological properties within the project's APE.

2. Finding of No Adverse Effect
   The agency official, in consultation with the SHPO, may propose a finding of no adverse effect when:
   - The undertaking's effects do not meet the Criteria of Adverse Effect in 36 CFR Part 800.5(a)(1) (http://www.achp.gov/regs.html)
   - The undertaking is modified or conditions are imposed to ensure that the adverse effects are avoided. A Statement of Conditions for no adverse effect will be submitted along with the AOE, if applicable.

   The finding of no adverse effect is documented in the AOE document. Consultants will submit copies of the document to the NEPA analyst for review and comment, unless the AOE is prepared by the agency official (occasionally the USACE will prepare Section 106 documentation). Appendices to the AOE document will include the Notification and any correspondence from consulting parties, as well as a copy of the PIF or DOE (whichever is applicable) for each eligible NR property within the project's APE. For NR listed or pending properties, the complete NR Nomination Form will also be included. For any bridges located within the project's APE, the GHBS bridge survey form will be attached. For consultants, upon completion of the review process, GDOT's environmental office will request additional copies of the document; the GDOT historian or archaeologist will forward the document to the appropriate parties who will have 30 days to respond.

   If the project requires land from a historic property that constitutes a "use" as defined in Section 4(f) (see Chapter VI), the transmittal letter for the AOE will request the SHPO's acknowledgement of a *de minimis* finding. The GDOT NEPA Manager will be copied on this letter.

3. Finding of Adverse Effect

   If an adverse effect is found, an AOE document will be completed for use in complying with Section 106. Effects to existing and eligible NR historic and archaeological resources identified within the proposed project's APE will be discussed in accordance with 36 CFR Part 800 (http://www.achp.gov/regs.html). The AOE will utilize, as appropriate, information contained in the approved Historic Resources Survey Report and/or Archaeological Resources Survey Report. If historic and archaeological resources will be adversely affected, a three or four party Memorandum of Agreement (MOA) will be prepared depending upon the ACHP's response regarding the notification of adverse effect as discussed under Section 3.1.9.B.4.c, below, for submittal with the AOE. The AOE will follow the format set forth below.

   a. The AOE (Adverse or No Adverse Effect) will include the following:
      - An introduction,
      - The purpose and need statement as provided in the NEPA document,
      - The project description as provided in the NEPA document,
      - A discussion of the survey results that will include a brief description of the resources and their significance,
      - A discussion of the direct effects to the resources,
      - A discussion of the indirect effects to the resources,
      - A summary of the effects to resources,
      - A discussion of alternatives to avoid adverse effects, if applicable, and
      - A discussion of planning to minimize harm and proposed mitigation, if applicable.

   b. The following items will be included in or appended to all AOE documents used in complying with Section 106:
      - A project location map prepared as instructed under Section 3.1.7.A,
      - A resource location map, which may be combined with the project location map,
      - A graphic depicting the project in the area of the historic and archaeological resources (including existing and proposed edge of pavement, existing and proposed ROW and easements),
      - Copies of the DOEs and PIFs for all affected archaeological and historic resources,
      - The Notification and any correspondence from consulting parties,
      - The complete NR Nomination Form for NR listed or pending properties, and
      - The GHBS bridge survey form.

   c. Consultants will submit draft copies of the AOE to the GDOT NEPA analyst to circulate for review and comment. Additional copies of the report will be requested upon completion of the review process. The GDOT historian or archaeologist will forward the copies to the appropriate parties who then

have 30 days to respond. Should the project be determined to result in an adverse effect, the consultant will provide the GDOT historian with an electronic (pdf) version of the report for later submittal to the ACHP.

4. Resolution of Adverse Effects
    a. Continue consultation
    The GDOT historian or archaeologist will request that the agency official take steps to resolve adverse effects. The agency official will consult with the SHPO and other consulting parties to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties. The agency official will notify the ACHP of the adverse effects and provide documentation of the undertaking (see Section 3.1.4.A.3 and 3.1.9.B.3). The notice will invite the ACHP to participate in the consultation when the agency official deems it appropriate and in cases where the undertaking will have an adverse effect on a NHL or a Programmatic Agreement is proposed. The ACHP will respond to the request to participate in the consultation within 15 days and will advise the agency official of its decision to enter the process. Additional parties also may be invited to be consulting parties at this time. Any party who will have obligations under the (MOA) will be invited. All consulting parties will be provided a copy of the AOE document. It is also the responsibility of the agency official to make available to the public copies of the AOE document, and provide an opportunity for members of the public to express their views on resolving adverse effects of the undertaking.
    b. Resolution without the ACHP
    If the ACHP decides not to join in the consultation process, consultation with the SHPO and other consulting parties continues until an agreement on how to resolve the adverse effects of the undertaking is achieved. Once an agreement is achieved on how the adverse effects will be resolved, the parties will execute a MOA. The agency official will submit a copy of the MOA along with a copy of the AOE document to the ACHP prior to approving the undertaking.

    If the agency official and the SHPO fail to agree on the terms of a MOA, the agency official shall request the ACHP to join the consultation.

C. Resolution with the ACHP
If the ACHP decides to participate in the consultation process, consultation with the SHPO, the ACHP and other consulting parties continues until an agreement on how to resolve the adverse effects of the undertaking is achieved. Once an agreement is achieved on how the adverse effects will be resolved, the parties will execute a MOA.

3.1.10 Memorandum of Agreement (MOA)

All AOEs with findings of Adverse Effect must be submitted with a draft MOA. The MOA is a standalone document and should not be attached to the AOE or included as an appendix. The MOA specifies the measures that will be taken to mitigate the project adverse effects. These mitigation measures are set forth as stipulations. A MOA executed and implemented evidences the agency official's compliance with Section 106. After acceptance by the FHWA (or if applicable, the USACE) and the SHPO, and filing with the ACHP and ratification of the MOA, all stipulations contained in the ratified MOA will be satisfied. All MOA stipulations will be included in the project's green sheet. See Chapter IX of this manual.

A. Signatories
   The signatories have the sole authority to execute, amend or terminate the agreement. The signatories to a MOA always include the agency official and the SHPO. Other signatories may include the ACHP, an American Indian tribe or any party that assumes a responsibility under a MOA.
B. Duration
   Implementation of the undertaking in accordance with the stipulations for mitigating the adverse effects to historic properties as stated in the MOA must be executed within a period of seven years or the agreement will be considered null and void, and the agency official, if it chooses to continue with the undertaking, will reconsider the terms of the agreement.
C. Examples of mitigation and procedures for fulfilling requirements
   Examples of mitigation measures frequently utilized by GDOT include Historic American Building Survey or Historic American Engineering Record (HABS/HAER) documentation; medium format photography; landscape plans; marketing, rehabilitation and/or relocation of metal truss bridges; the relocation of historic properties; and, archaeological excavation.
   1. HABS/HAER documentation is undertaken for architecturally and structurally significant properties that warrant retention in the Library of Congress. HABS/HAER documentation will be coordinated with the National Parks Service (NPS) to determine the level of documentation required. This documentation generally includes a historic narrative and large format (four-inch by five-inch), archivally stable photographs.

      Procedures for completion of HABS/HAER documentation will be provided by the NPS.

      If HABS or HAER documentation is required, the draft documentation will be submitted to the FHWA and NPS for review. One final copy of the HABS or HAER documentation containing all originals will be submitted to NPS, one photocopy of the written documentation with one set of original photographs will be submitted to the SHPO, and two photocopied sets (one copy each) of the written information and photographs will be submitted for GDOT 's and FHWA's files.

   2. If a landscape plan is required, consultation with GDOT is necessary in order to determine the appropriate design and planting materials, as well as the appropriate format for producing the landscape plan. The landscape plan will be designed by experienced qualified staff with degrees in Landscape Architecture or Landscape Design,

or a closely allied field. The landscape plan also will be developed in consultation with the property owner if it cannot be contained within proposed ROW and an easement will be necessary. The following protocol will be followed during the development of landscape plans:

a. EARLY CONSULTATION-Before making a landscape plan commitment or during the earliest consideration in the development of a landscape plan, but prior to consultant selection when applicable, OES personnel or OES consultant representative (Ecology or Cultural Resources with OES oversight) will consult with GDOT Landscape Architects. OES will submit an existing documentation package to the Landscape Architects that will include the following: existing project documentation associated with the landscape site (such as project description or proposed speed limit, etc.); pictures of the existing conditions (vegetation, etc.) where the landscaping will occur; habitat description and list of species present from Ecology resources report, if available; Green Sheet, if completed, detailing why the landscaping is needed and for what purpose/environmental commitment (to screen a historic property from a proposed project); a generalized description of the proposed landscaping in concept (will trees be needed or ornamental vegetation); any relevant guidance from the regulating agency whom the landscaping plan intends to satisfy (e.g., Georgia Environmental Protection Division requires multi-trophic buffer restoration plan, if at all possible; U.S. Army Corps of Engineers requires native species be planted at mitigation sites, etc.); will riparian seed mix be required, etc.; proposed long term maintenance responsibility (GDOT, local government, private citizen); and, a plan sheet(s) where the landscaping will occur (for slope consideration, setback, etc. considerations).

b. INITIAL ASSESSMENT-GDOT Landscape Architects will review the documentation and provide an initial assessment of the appropriateness of the site under consideration in relation to the goals of the landscape plan. The assessment will provide recommendations that should be considered in the development of the landscape plan, whether it is to be completed in-house or by consultant services. The assessment will address such issues as the following: is a plan even needed; can existing landscape features be retained to serve the purpose of the environmental commitment; types of planting materials/species best suited for the landscaping initiative; utilizing aesthetic vegetation for screening purposes as opposed to volunteer growth; design considerations associated with the proposed landscaping (future maintenance, growing season restrictions during construction, clear zone, etc.); and a generalized estimate of cost potentially related to the implementation of the landscaping. Given current project loads, the initial assessment

should take no more than 30 days to complete; if assessments become overly burdensome to the Landscape Architect staff and schedules become difficult to maintain because of personnel obligations/duties on other projects, one alternative solution would be to increase Landscape Architect staff in Maintenance.

c. DEVELOPMENT OF DRAFT LANDSCAPE PLAN-Although the recommendations provided in the initial assessment are not binding, they should be considered as the foundation for the preparation of a successful landscape plan. When applicable, the assessment and associated documentation (dgn files, planting detail template) should assist OES in the completion of mitigation stipulations and the development of a consultant scope-of-work (primarily all Cultural Resource landscape plans utilize consultant services, while Ecology may or may not utilize consultants). If consultant services are used, a site visit by the consultant prior to developing the plan will be required. As always, the draft plan should include planting materials/species, planting details (using the template), height and caliper of proposed tree planting, and requirement of riparian seed mix or not. Preferably these items should be placed on one single plan sheet when feasible. The draft plan should include plan notes as to which Special Provisions are being utilized as a result of the proposed landscape implementation (primarily Special Provisions 700 and 702 or variations thereof will be used). The consultant will no longer be required to draft formal Special Provisions as a deliverable, given that recent revisions to Special Provisions 700 and 702 now accommodate almost all planting situations. If the development of the landscape plan occurs in-house, the same general steps should be followed. Upon acceptance, additional copies and an electronic version (compatible with the version of Microstation currently utilized by GDOT) of the landscape plan will be submitted to GDOT.

d. REVIEW OF DRAFT LANDSCAPE PLAN-OES will submit a copy of the draft landscape plan to GDOT Landscape Architects, Utilities, Design, Engineering Services, and the assigned Project Manager for review and comment. The review will focus on constructability, safety, long term maintenance issues, monitoring during construction requirements, and general comments, if needed, on plant species and planting details. All comments requiring changes to the landscape plan will be revised accordingly (whether in-house or by consultant) and will be routed to GDOT Landscape Architects for a final check. A final draft of the landscape plan will be forwarded to respective regulatory agencies for review, comment and ultimate concurrence. Revisions to the plan will be made accordingly based on regulatory agency coordination. The draft landscape plan will be rerouted to the Offices/Project Manager as needed

based on the level of comments that were received and how the revised plan may affect constructability.

e. FINAL LANDSCAPE PLAN-OES will submit the final landscape plan to the Project Manager and Design for inclusion in the preliminary plans and/or final plans and on the Environmental Resources Impact Table. The landscape plan will also be given to the NEPA specialist so that it can be placed on the Green Sheet (if not already completed). To ensure that the landscape plan is successful and achieves its desired goal during construction, the Contractor will be required to provide correspondence (letter report) and photographs detailing the success rate (or failure thereof) of the landscape plan. The requirement to provide this report can be specified as plan notes on the final landscape construction plans or as a list attached to the contract documents to be filled out according to the requirements in Special Provision 702.3.06 for the First Establishment Period, Second Establishment Period, and Final Inspection Period. The Project Manager shall be responsible for ensuring that the Contractor submits the required report and photographs as required so that OES can review the documentation.

f. IMPLEMENTATION, SCHEDULING, AND MONITORING DURING CONSTRUCTION-OES or their Consultant representative shall discuss the landscape plan and any special monitoring requirements with the GDOT on-site engineer prior to construction. The landscape plan will be implemented through project construction as needed. The Project Manager will ensure that required inspections and vegetation replacements are completed pursuant to the schedule outlined in 702.3.06 and that the Contractor provides correspondence and photographs of the landscape plan area to OES. GDOT Landscape Architects are available to assist in the review of Contractor provided documentation if needed. With Final Inspection approval, OES can consider that the success of the landscape plan, when applicable, has been achieved in the spirit of the environmental commitment and no further monitoring will be required. OES will provide final instructions, as needed, to parties responsible for the long term maintenance of the landscaping initiative (GDOT, local government, private citizen) and further consultation to regulatory agencies as required.

3. Medium format (2 ¼-inch) photography is completed for properties that do not warrant retention in the Library of Congress. This type of photography is used for the majority of all photo mitigation. Documentation for medium format photography generally includes photographs of each elevation of a property, significant architectural details or features, outbuildings and landscape and hardscape features as well as a brief description of the resource and a statement describing project effects to the resource. All photographs will be labeled and mounted on photograph mount cards. A site plan

with photograph key and an index to the photographs will accompany the photographs. A location map also will be included.

4. The GDOT attempts to market movable metal truss bridges for relocation, rehabilitation and perpetual maintenance. The GDOT has developed Guidelines for Marketing Historic Bridges.

5. Relocation of a historic property may be utilized to avoid its acquisition. This mitigation measure requires permission from the owner and consultation with the owner to select a new location for the property. Coordination with GDOT Office of ROW also must be undertaken to assure that the property is moved in accordance with the Secretary of the Interior's Guidelines for Moving Historic Properties.

6. Archaeological mitigation stipulations indicate the resource(s) to be mitigated, the professional qualifications required of those performing the mitigation (Secretary of Interior Standards and Guidelines), and the professional standards to be followed in conducting the mitigation (Secretary of Interior Standards and Guidelines).

D. Submittal requirements
Consultants will submit draft copies of the MOA document to the GDOT NEPA analyst to circulate for review and comment, unless the MOA is prepared by the agency official (occasionally the USACE will prepare the Section 106 documentation). Additional copies of the AOE/MOA will be requested upon completion of the review process. The GDOT historian or archaeologist will forward the copies to the appropriate parties who will have thirty (30) days to respond.

3.1.11 Failure to resolve Adverse Effects

A. Termination of consultation
The agency official, the SHPO or the ACHP may terminate consultations regarding adverse effects if it is believed that further consultation would be non-productive. The terminating party is responsible for notifying consulting parties and giving the reason for the termination. If the agency official initiates the termination, then the head of the agency must request ACHP comment. If the SHPO terminates consultation, the agency official and the ACHP may execute the MOA without SHPO participation. If the ACHP terminates consultation, the ACHP will notify the agency official, the agency's federal preservation officer and all consulting parties and then provide comments.

B. ACHP comments without termination
The ACHP may choose to provide additional advisory comments, even when a MOA will be executed. The ACHP will transmit its comments within forty-five (45) days of receipt of a request.

C. Response to ACHP comments
The head of the federal agency will take into account the ACHP's comments in reaching a final

decision on the undertaking. The agency head will document the final decision by preparing a summary that contains the rationale for the decision and evidence that ACHP comments were considered. This summary shall be provided to the ACHP and all consulting parties before approving the undertaking. The public will also be notified of the decision, and the record shall be made available for public inspection.

3.1.12 Emergency situations

A. Agency procedures

The agency official, in consultation with the SHPO, affected American Indian tribes and the ACHP, will develop procedures for taking historic properties into account during operations which respond to a disaster or emergency declared by the President, an Indian tribe or the Governor of Georgia or which respond to other immediate threats to life or property. If approved by the ACHP, the procedures will govern the agency's historic preservation responsibilities during a disaster or emergency. These procedures will only apply to undertakings that will be implemented within 30 days after the disaster or emergency has been formally declared by the appropriate authority. However, immediate rescue and salvage operations conducted to preserve life or property are exempt from the provisions of Section 106.

B. Alternatives to Agency procedures

In the event that the agency official has not developed procedures for taking historic properties into account during operations which respond to a disaster or emergency declared by the President, an American Indian tribe or the Governor of Georgia or which respond to other immediate threats to life or property, the agency official may comply with Section 106 by following a Programmatic Agreement that contains specific provisions for dealing with historic properties in emergency situations. The agency official also may notify the ACHP, the SHPO and any American Indian tribes that may attach religious and cultural significance to historic properties likely to be affected prior to the undertaking and afford them an opportunity to comment within seven (7) days of notification, if possible, or within the time available.

3.1.13 Post-review discoveries

In the event that historic properties are discovered or unanticipated effects on historic properties are found after the agency official has completed the Section 106 process, the agency official will make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties. The agency official, in consultation with the SHPO, may assume a newly-discovered property to be eligible for the NR for Section 106 purposes. If construction on an approved undertaking has not commenced, the agency official shall consult to resolve adverse effects as outlined in Section 3.1.9 of this document. If construction on an approved undertaking has commenced, the agency official will determine what actions will be undertaken to resolve adverse effects, and will notify the SHPO, any American Indian tribe that might attach religious or cultural significance to the affected property, and the ACHP within 48 hours of the discovery. The notification will describe the actions proposed by the agency official to resolve adverse effects. The SHPO, any affected American Indian tribe and the ACHP shall have 48 hours to respond to the notification. The agency official will take into account the recommendations made by

the SHPO, any affected American Indian tribe and the ACHP and carry out appropriate actions. The agency official will also provide the SHPO, any affected American Indian tribe and the ACHP a report of the actions when they are completed.

3.2 Consultant deliverables

As noted above and summarized here, consultants will deliver the following documents:

Product	Number of copies
Notification letter	1
Historic & archaeological survey data on CD (GIS compatible)	1
History Survey Report	
Draft	1
Final (one copy must be in digital color pdf)	7
Archaeology field notes	
Original	1
Photocopies	3
Archaeology artifact catalogue	4
Management Summary and Curation Statement	
Draft	1
Archaeology survey report	
Review draft	1
Approved draft (check with GDOT Archaeologist)	10-20
Final (two copies must be in digital color pdf on CD)	7
Archaeology Determination of Eligibility (DOE)	
Draft	1
Final (copy must be attached as an appendix in respective AOE)	1
No Historic Properties Affected	
Draft	1
Final (one copy must be in digital color pdf)	6
GDOT Archaeology Report Short Form for Negative Findings	
Emailed PDF version	1
Assessment of Effects (AOE)	
Draft	1
Final (one copy must be in digital color pdf)	6
Memorandum of Agreement (MOA)	
Draft	1
Final	1
Cemetery permit application	4
HABS/HAER	
Draft	1
Final, original photos & photocopied narrative	1

Final, photocopied photos & narrative	3
Landscape plan	
Draft	1
Final, paper copies	4
Final, electronic in Microstation	1
Medium format photographs	
Draft	1
Final	2

After receiving comments from GDOT, FHWA or the SHPO on any document, a disposition letter (including the comments and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

3.3 Useful websites

- ACHP: http://www.achp.gov/work106.html
- NPS: http://www.cr.nps.gov/nr/index.htm
- FHWA (Environmental): http://www.fhwa.dot.gov/environment/
- GNAHRGIS: https://www.itos.uga.edu/nahrgis

4.0 ECOLOGICAL RESOURCES

4.1 Ecology Scope of Work Outline and Schedule

Section 4.1 is an outline of the scope of ecology work required for Georgia Department of Transportation (GDOT) projects in the order in which the ecology surveys and reports will be completed. The survey methodology and reporting requirements are noted below in Section 4.2.

These procedures will be followed for all ecology work completed for GDOT after April 30, 2010 to ensure compliance with applicable laws and agreements with state and federal agencies. If the project is contained under an existing contract with a different scope of work for ecology, the consultant will contact the GDOT Project Manager (PM), GDOT NEPA Analyst and GDOT ecologist to discuss possible options to completing work in accordance with this scope of work.

The NEPA Analyst will issue a studies request to the ecologist which includes the limits of the survey area. If at the time of receipt, a preferred alignment has been identified, the ecologist will survey an additional 100-foot corridor along either side of the project corridor. The limits of the survey area are transmitted to the Georgia Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service (USFWS) to request early coordination for the known occurrences of protected species in or adjacent to the survey

area. At this time, the ecologist will gather and analyze all available data on the habitat, land use and other ecological resources within and adjacent to the survey area. At a minimum, the ecologist will review topographic maps, National Wetland Inventory (NWI) maps, soil maps, and protected species lists on the USFWS and DNR websites.

After the ecologist receives an element occurrence letter from DNR and has completed all preparatory research, a field survey will be scheduled and conducted. During the field survey, the ecologist will survey the entire survey area and identify and delineate all streams, wetlands, open waters, state-mandated buffers and habitats. Required data to be recorded is outlined in the Routine Wetland Determination Data Form (Wetland Data Form), North Carolina Division of Water Quality – Stream Identification Form (Stream Data Form), Expanded Preliminary Jurisdictional Determination Form (Expanded JD Form) and Ecology Survey Data Sheet. Streams, wetlands, open waters, state-mandated buffers and habitat will be delineated in the field using a Global Positioning System (GPS) Unit.

When the ecology survey is complete, GPS delineations of streams, wetlands, open waters, state-mandated buffers and habitat delineations will be transmitted to the PM. These are preliminary delineations. Preliminary delineations will be verified by the U.S. Army Corps of Engineers (USACE) and the Georgia Department of Natural Resources Environmental Protection Division (EPD). Habitat delineations are subject to review by the GDOT ecologist and USFWS.

Data recorded during the field survey will be included in an Ecology Survey Report. This report will be transmitted to (1) the USACE to request jurisdictional determinations on waters of the U.S., (2) EPD to request state waters determinations, and (3) the Federal Highway Administration (FHWA) for their files. Under certain circumstances, the Ecology Survey Report will be transmitted to other agencies as well. If suitable habitat for federal-protected species is identified within the survey area, the Ecology Survey Report will be transmitted to USFWS. If suitable habitat for state-protected species is identified within the survey area, the Ecology Survey Report will be transmitted to DNR. If Essential Fish Habitat (EFH) or suitable habitat for federal protected marine species is identified within the survey area, the Ecology Resources Report will be transmitted to the U.S. National Marine Fisheries Service (USNMFS).

If habitat for federal- or state-protected species is identified in the survey area, a protected species survey will be scheduled and conducted as per the GDOT approved survey schedule and methodology. If a GDOT approved methodology does not exist, one must be approved by the GDOT ecologist before the survey is conducted. Following the protected species survey, a Protected Species Survey Report will be written. Populations of protected species (and suitable habitat) will be delineated based on GPS data and labeled as Environmentally Sensitive Areas (ESA). These delineations will be transmitted to the PM immediately for placement on the plans. The Protected Species Survey Reports will be

transmitted to the agencies as an appendix to the Ecology Assessment of Effects (EAOE) Report.

Once the preliminary design is complete, impacts to resources will be calculated. These calculations will be described in an EAOE Report.

The EAOE Report will include (1) calculations of impacts to streams, wetlands, open water, state-mandated buffers and natural habitats, (2) proposed biological determinations for all federal and state protected species considered, and (3) an assessment of indirect and cumulative ecological impacts of the proposed project.

The EAOE Report will initiate coordination under the Fish and Wildlife Coordination Act (FWCA), coordination under Section 7 of the Endangered Species Act (ESA), and the 404b(1) process (Practicable Alternatives Review process), as needed.

Following the authorization of Right-of-Way and the start of final design, the ecologist will prepare applications for the following, as needed: (1) a permit with the USACE under Section 404 of the Clean Water Act, (2) a buffer variance under the National Pollutant Discharge Elimination System (NPDES) permit, (3) a revocable license and (4) a Tennessee Valley Authority License.

If the project area is expanded beyond the initial survey area after the Ecology Resource Survey Report has been approved, a field survey of the newly identified project area must be conducted and an addendum to the Ecology Survey Report will be written. The Ecology Survey Report Addendum will include all of the data required for an Ecology Survey Report for the newly identified project area.

If there is a change in the project design after the Assessment of Effects Report is written, an addendum to the Assessment of Effects Report will be written. The Addendum to the Assessment of Effects Report will describe the reason for the design change in addition to all data required for an Assessment of Effects Report for the entire project.

4.2 Assessment of Ecology Resources

4.2.1 Preparatory Research

Prior to an ecology resource survey, the ecologist will request early coordination for the known occurrences of protected species in or adjacent to the survey area from DNR and USFWS. At this time, the ecologist will gather and analyze all available data on the habitat, land use and other ecological resources within and adjacent to the survey area. At a minimum, the ecologist will review topographic maps, NWI maps, soil maps, and protected species lists on the USFWS and DNR websites.

4.2.2 Ecology Resource Survey

After the ecologist receives early coordination responses from DNR and USFWS and has completed all preparatory research, a field survey that consists of surveying the entire survey area will be scheduled and conducted. During the field survey, the ecologist will identify and delineate all streams, wetlands, open waters, state-mandated buffers and habitats. Required data to be recorded is outlined in the Wetland Data Form, Stream Data Form, Expanded JD Form and Ecology Survey Data Sheet.

4.2.3 Ecology Resource Survey Report

The Ecology Resource Survey Report identifies, describes and evaluates waters and habitats located within the survey area. The survey area will be clearly delineated by the PM on conceptual layouts with input from the ecologist.

The ecologist will transmit the resource delineation data to the PM for the ecological resources to be displayed on project layouts and plans. The PM will be notified that the stream, wetland, open water, state-mandated buffers and habitat delineations are preliminary at this time. Once the USACE and EPD have determined the federal and state jurisdictionality of the identified streams, wetlands, open waters, state-mandated buffers and the GDOT ecologist has approved the protected species habitat analyses, the PM will be provided final delineations.

Once the GDOT ecologist has approved the Ecology Resource Report, the consultant ecologist will provide electronic (in pdf and word format) and paper copies of the report (as requested by the GDOT ecologist).

The GDOT ecologist will transmit the report to (1) USACE to request Jurisdictional Determinations for all streams, wetlands and open waters, (2) EPD to request buffered state waters determinations for all streams, wetlands, and open waters, and (3) FHWA for their information. If habitat for protected species is identified, the report will be transmitted to (4) USFWS, (5) USNMFS (for marine species) and (6) DNR. Comments from these agencies will be included as an appendix to the EAOE Report. Response to comments received will be addressed in the body of the document or in a response letter. The USACE's jurisdictional determination is valid for five years at which time a new determination must be made. If environmental conditions change (e.g., drought), a new survey for buffered state waters may be warranted.

Additional copies of the report will be provided (by the consultant on consultant projects) for GDOT's Environmental Compliance Bureau Office, PM, ecology file and General file.

If habitat for a protected species is identified during the ecology resource survey, the ecologist will conduct a species survey in accordance with the approved methodology. If an approved methodology does not exist, then methodology will be approved by the GDOT ecologist and relevant state and federal agencies prior to the survey. The ecologist will record the location of protected species (if located) and the associated habitat. These data will be transmitted to the PM for delineation on the survey area layout. The ecologist also will transmit the report to USFWS, USNMFS, DNR, and FHWA for their information.

Once a preferred alignment is identified, the ecologist will complete the EAOE Report.

An outline of the Ecology Resource Report is listed below. The following sections detail the governing laws/regulations, necessary background research, and approved survey methodologies.

A. Transmittal Letter
   Write three transmittal letters for the Ecology Resource Survey Report.
   1. FHWA to inform them of the survey and its findings.
   2. EPD to request concurrence with the state waters determinations outlined in the report.
   3. USACE to request jurisdictional determinations on the streams, wetlands and open waters within the survey area.

B. Title Page
   Title: Ecology Resource Survey Report
   Project number: formatted XXX00-0000-00(00), if one has been assigned.
   County
   Project name: e.g., SR 84 Widening
   PI number
   Date
   Prepared by: Name of Firm, if prepared by a consultant
   For: Georgia Department of Transportation, if prepared by a consultant
   Name of individual preparer

C. Overview Table
   This table will provide a summary of the resources identified within the project area.

D. Executive Summary
   Include a brief project description, a brief description of the survey area, a brief description of survey methodology, a summary of the habitats that are located in the project area, state and federal waters that are located in the project area, buffered state waters, streams that should be designed to account for fish passage, biota

impaired streams located within one mile of the project site, and protected species that are located in the project area.

E. Table of Contents
Outline the layout of the report.

F. Project Description & Location
Describe the details of the proposed project. Include the location of the project (county, distance from nearest town/city) and size of the survey area in linear feet and acres.

G. Project Need and Purpose
Describe the need for and purpose of the project.

H. Habitats and Land Use Areas
Describe all habitat and land use types found within the survey area. Include soils, general terrain, and habitat size in acres. Illustrate this information in the Habitats Map.

I. Invasive Plant Species Identification
On February 3, 1999, Executive Order (EO) 13112 was signed establishing the National Invasive Species Council. Executive Order 13112 requires that federal actions not contribute to the spread of invasive species.

Review EO 13112 and be prepared to field identify the plant species classified as Class One by the Georgia Exotic Pest Plant Council. Class One species are defined as exotic plants that pose a serious problem in Georgia natural areas by extensively invading native plant communities and displacing native species. Detailed information on each of the listed species can be found at the website of the Georgia Exotic Pest Plant Council (http://www.gaeppc.org/list.cfm).

During the field survey, the ecologist will identify and record all invasive plant species that appear on the GDOT's listed of targeted species. The ecologist will record the locations of these species and enter the location into the Early Detection & Distribution Mapping System (EDDMaps) database (http://www.eddmaps.org/report/plants.cfm?id=us_ga). Illustrate invasive plant colonies greater than 1,000 ft^2 on the Habitat Map.

J. State and Federal Protected Species Habitat
1. Governing Laws
   a) Endangered Species Act

In compliance with Section 7 of the Endangered Species Act (ESA), GDOT must identify the presence of threatened and endangered species, and their designated critical habitat as well as evaluating project impacts.

Section 7 consultation is not required for candidate species though it is FHWA's policy to consider conservation measures to prevent their further decline and possibly eliminate the need to list them as endangered or threatened. This also should minimize project delays if a candidate species becomes federal listed before construction of a project has been completed. Identify candidate species and describe any planned conservation measures. (A February 20, 2002 FHWA memo notes this conservation policy.)

b) Wildflower Preservation Act of 1973
This state law provides for designation of and protection of plant species that are rare, unusual, or in danger of extinction. The protection offered to these species is limited to those that are found on public lands of the state. It is a misdemeanor to transport, carry, convey, sell, cut, pull up, dig up, or remove protected species listed by this act. No protected plants may be collected from state-owned lands without express permission of the Georgia DNR. Georgia law specifically states that rules and regulations related to the protection of state protected species will not impede construction of any nature. However, the Wildlife Resources Division routinely makes recommendations to guide more environmentally friendly development in areas where state protected plant and animal species are known to occur.

c) The Georgia Endangered Wildlife Act
This state law is similar to, but somewhat different from, the federal ESA. It prohibits the capture, killing, or selling of protected species and protects the habitat of these species on public lands.

The Georgia Endangered Wildlife Act is much narrower in scope than the federal ESA.

Federal funded projects require discussion of and survey for all federal threatened, endangered and candidate species known to occur within the project's county, as well as for those state threatened, endangered, rare and unusual species identified during early coordination with DNR as having occurrence records within 3 miles of the project.

State funded projects require discussion of and survey for all federal, candidate, and state listed species known to occur within the project's county.

d) Bald and Golden Eagle Protection Act of 1940
The Bald and Golden Eagle Protection Act of 1940 provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds.

e) Migratory Bird Treaty Act
The Migratory Bird Treaty Act (MBTA) and the Executive Order on the Responsibility of Federal Agencies to Protect Migratory Birds (EO 13186), requires the protection of migratory birds and their habitats. The habitats and structures potentially significant to migratory birds are to be identified within the survey corridor. Of particular concern are suitable migratory bird habitats and existing bridges, culverts, and pipes.

f) Magnuson-Stevens Fishery Conservation and Management Act
In compliance with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), GDOT must identify unavoidable adverse impacts to EFH.

2. Ecology Resource Survey Report Guidelines
   a) Federal Threatened and Endangered Species
   The following information will be included for each species listed as federal endangered or threatened on either the USFWS or Georgia DNR website.

   Include one or two sentences describing the identifying characteristics of the plant/animal species.

   Describe in detail the preferred habitat of the species. Include the known range, known occurrences (if in or adjacent to the project area), community associate species, preferred soil types and general terrain characteristics.

   Include a detailed description of all natural areas within/adjacent to the proposed project area. Include tree species, shrub species, forb species, soils, and general terrain characteristics.

   If it is determined that there is no suitable habitat in/adjacent to the proposed project area, this determination will be supported clearly by the information above.

   If it is determined that there is suitable habitat within the survey area, it will be stated that a species survey will be completed during the appropriate

survey season. The approved survey season will be stated, as well as the expected date(s) of the survey.

b) State Protected and Federal Candidate Species
Include the following information for each species listed as well as state endangered, threatened, rare or unusual within three miles of the survey area as listed on the element occurrence letter.

[Note: Protocol for state listed species is currently being revised. These requirements will be updated in 2010.]

Include one or two sentences describing the identifying characteristics of the plant/animal species.

Describe in detail the preferred habitat of the species. Include the known range, known occurrences (if in or adjacent to the project area), community associate species, preferred soil types and general terrain characteristics.

Include a detailed description of all natural areas within/adjacent to the proposed project area. Include tree species, shrub species, forb species, soils, and general terrain characteristics.

If it is determined that there is no suitable habitat in the proposed project area for any of the species being considered, then the information provided on the habitat present and habitat needs of each species should clearly support this determination.

If it is determined that there is suitable habitat within the survey area, it will be stated that a species survey will be completed during the appropriate survey season. The approved survey season will be stated, as well as the expected date(s) of the survey.

c) Bats
Include a list of bridges within the survey area. Assess each bridge for bat roosting potential. Signs of bat roosts include visible and audible identification, presence of guano, or staining from guano or body oils. If a bat roost is identified, the ecologist will notify the PM and DNR.

d) Bald and Golden Eagles
Be familiar with information available from the DNR and USFWS regarding the distance from a project area to the nearest recorded bald eagle nest. Element occurrence records by county and quarter quad are available at the

DNR website (http://www.georgiawildlife.com/node/1370). Records available through this website are based on nest locations. Sightings of foraging birds, migrating birds, and non-breeding residents are not included in these element occurrence records.

Identify any eagle nests, or suitable foraging habitat within the survey corridor.

Note the presence or absence of Bald Eagle nests located within one mile of the survey corridor and any suitable foraging habitat located in the project area in the Ecology Resource Survey Report. Delineate this habitat on the Habitat Map.

e) Migratory Birds

The significance of habitat suitable for breeding and non-breeding migratory birds is to be assessed in the field and analyzed in the Ecology Resource Survey Report. Roadway structures such as bridges, culverts, and pipes can provide a suitable nest site for migratory birds, particularly barn swallows, cliff swallows, and eastern phoebes. Existing structures within the survey area that provide suitable nest sites are to be identified in the field and described in the Ecology Resource Survey Report.

f) Essential Fish Habitat

Be familiar with the MSFCMA, and be prepared to identify any areas of EFH that would be impacted by the proposed project. EFH includes the waters and bottom habitats that are necessary to a species' life cycle. Essential Fish Habitat is designated for all Federal managed marine fish. In Georgia, EFH can be found in the following counties: Camden, Glynn, McIntosh, Liberty, Bryan, and Chatham. The ecologist will consult NMFS website; the South-Atlantic Fisheries Management Council website; and the Mid-Atlantic Fisheries Management Council website for additional information. If the proposed project does not occur in one of these counties, indicate that there will be no impacts to EFH.

Identify any areas where the proposed project could affect EFH, characterize the habitats, and map their locations.

Note the presence or absence of EFH in the survey corridor in the Ecology Resource Report. Delineate EFH on the Habitat Map.

g) Critical Habitat

Critical habitat, as defined under the ESA, identifies specific geographic areas that include physical and biological features essential to the conservation of a federal listed species. The federal listing of critical habitats for the protected species will be reviewed.

Address critical habitat in the Ecology Resource Survey Report in a section titled Critical Habitat. Identify critical habitat that has been designated in the project county.

K. State and Federal Water Identification and Description
Immediately prior to conducting a survey, review the precipitation data and the closest relevant U.S. Geological Survey (USGS) gage station data to determine hindering factors (weather conditions, increased flow) that could affect survey conditions (e.g., stormwater flow in ephemeral channels).

The USACE recommends that field surveys for jurisdictional waters be completed at least 72 hours after the most recent rainfall or subsiding of a flood event. This period of time enhances the chance that streams are classified and characterized appropriately when flows are not a direct response to recent precipitation.

Number state and federal jurisdictional waters occurring on proposed alignments according to the following system: Wetland site designations will begin with "W/L." Non-wetland waters site designations will begin with "Stream" or "Open Water" or "Canal." Ephemeral channels will begin with "Ephemeral." Wetland sites, other waters sites, and ephemeral channels will be numbered together consecutively. If a single water is impacted more than one time by the proposed alignment, number each crossing specifically.

In the description of each wetland include: wetland type (bottomland hardwood, scrub/shrub, emergent, seasonally flooded, seasonally saturated, etc.); dominant vegetation species; hydrologic indicators; existing condition of the wetland (Class 1 – Class 5, as defined by the USACE Compensatory Mitigation Definition of Factors) and types of impacts affecting quality; the approximate size of the wetland (in acres) if the wetland is considered jurisdictional and if not, why it did not qualify as a jurisdictional water; and if the wetland provides suitable habitat for any state or federal listed species.

In the description of each stream include: flow regime (perennial, intermittent) dominant riparian vegetation; approximate width and character of riparian vegetation; existing condition of the stream (fully functional, somewhat impaired, or fully impaired, as defined by the USACE Compensatory Mitigation Definition of Factors) and types of impacts affecting water quality; width and depth of the

bankfull stream channel; width and depth of the wetted channel; indication of flow conditions (high flow, low flow, normal flow); date and amount of last rain event; substrate composition; indication of water quality (e.g., water clarity, smell); if the stream is a warm water stream or a designated cold water/trout stream; if the stream is listed on the most current 303(d) list, or is a tributary of a stream on the most current 303(d) list, and if the stream is on the list, for what use the stream is classified, and what criteria were exceeded; if the resource is a state buffered stream and if so, why; a determination if design must consider fish passage; and if the stream provides suitable habitat for any state or federal listed species.

In the description of each open water include: approximate size (in acres) of the open water; apparent use (water livestock, fishing, etc); vegetation along banks; the existing condition of the open water (Class 1 – Class 5, as defined by the USACE Compensatory Mitigation Definition of Factors); if the resource is a state buffered open water and if so, why; if the open water is considered jurisdictional and if not, why it did not qualify as a jurisdictional water; and if the open water provides suitable habitat for any state or federal listed species.

In the description of each ephemeral channel include: dominant riparian vegetation; approximate width and character of riparian vegetation; width and depth of the bankfull channel; if the ephemeral channel is a tributary of a stream on the most current 303(d) list; if the resource is a state buffered stream and why; and if the channel is considered jurisdictional and if not, why it did not qualify as a jurisdictional water.

Include a description of each biota impaired stream segment that is one linear mile of, and within the same watershed as, a stream that has been classified by the USEPA as a "non-supporting" biota impaired stream. A list of the 305(b)/303(d) streams can be found on EPD's website.

Identify potential buffered state waters during the Assessment of Ecological Resources Survey. Label and delineate these state waters on the plans used during the field survey. The ecologist will coordinate with EPD to verify the buffered state waters within the survey area. The ecologist also will coordinate with designers to either avoid or minimize impacts to these resources.

L. Non-Jurisdictional Waters
Identify, record and delineate all non-jurisdictional waters, such as headwater ephemeral channels. Include a discussion of why the resource is not under the jurisdiction of the USACE and EPD.

M. Maps

Provide all maps in color on 8 ½ by 11 inch paper. For each map include a north arrow, scale bar, delineation of survey limits, and an inset map showing the survey area within the county boundary. A text box should include the project identification (PI) number, county name(s), a brief project name (e.g., "Bridge Replacement at SR 120 and Big Indian Creek"). If the survey polygon cannot be displayed on a single 8 ½ by 11 inch sheet (using the scales specified below), then "match lines" should be included and labeled to indicate where the survey polygon joins from one page to the next. Identify the source of the background used within the legend or a text box (e.g., "Source: USDA National Agriculture Imagery Program (NAIP)" or "Source: 7.5 minute USGS Topo Quads"). If multiple pages are required, the maps should be labeled as Map 1a, Map 1b, etc. The following is a description of the maps that should be included with each Ecology Resource Survey Report.

1. Survey Area Map with Aerial or Satellite Imagery
   Display a polygon of survey area over an aerial or satellite imagery background. The maximum scale for the survey area map is 1:12,000 (1 inch = 1,000 feet).

2. Survey Area Map with USGS Topographic Background
   Display a polygon of survey area over a USGS topo quad background. The maximum scale for the survey area map is 1:12,000 (1 inch = 1,000 feet).

3. Habitat Map
   Display and label all habitat types over an aerial or satellite imagery background. Also display waters, but do not label them. Habitat type polygons should be filled with a pattern or be transparent so that imagery layer is not obscured. Fill types for habitat polygons will be defined in the legend. The maximum scale for habitat map is 1:9,000 (1 inch = 750 feet).

4. State and Federal Water Map
   Display and label all streams, wetlands and open waters over a USGS topo quad background. The maximum scale for the waters map is 1:4,500 (1 inch = 375 feet).

5. Soil Map
   Display all soil polygons that are crossed by the survey area (available for most counties through the NRCS Soil Data Mart website: http://soildatamart.nrcs.usda.gov/) over a USGS topo quad background. Label all soil polygons with the Map Unit Symbol (MUSYM) and indicate which soil types are hydric. Include a legend that defines all MUSYMs within the survey area (for example, "VOD2 = Vaucluse-Hoffman complex, 8-12 percent slopes, eroded, not hydric"). Display survey limits, streams, wetlands and open waters;

waters do not need to be labeled. The maximum scale for the soils map is 1:9,000 (1 inch = 750 feet).

N. Tables
   1. Stream Summary Table
      In this table, include the stream label and type, HUC, latitude and longitude (in decimal degrees), if the stream contains habitat for protected species, and if the stream is subject to state-mandated buffer requirements.

   2. Wetland/Open Water Summary Table
      In this table, include the resource label and type, HUC, if the resource contains habitat for a protected species, if the resource is subject to state-mandated buffer regulations, and latitude and longitude coordinates in decimal degrees.

   3. Protected Species Summary Table
      In this table, include the species' Latin name, common name, federal status, state status, if habitat is present within the survey area, survey season, and proposed survey date.

O. Photographs
   Include a clearly labeled photograph of each stream, wetland, open water and habitat type.

   Format all photographs to fit four photographs per page.

P. Appendices
   1. Stream Data Forms
   2. Wetland Data Forms
   3. Expanded JD Forms
   4. Ecology Survey Data Sheet
   5. Agency Correspondence
      Include the record occurrence letter from DNR in addition to all other correspondence with state or federal agencies.

4.3 Plan Delineations

Delineate and label all streams, wetlands open waters, state-mandated buffers and protected species habitats on the plans. If protected species are found during a species survey, delineate the location of the species on the plans.

[Note: Guidance on plan delineation and resource labeling is forthcoming.]

4.4 State and Federal Protected Species Surveys

Complete surveys for federal protected species and state protected species known to occur within three miles of the project area, if potential habitat for the listed species is identified within the survey area. Conduct protected species surveys as per the approved methodologies during the approved survey season. If approved methodologies do not exist, obtain GDOT and relevant state and federal agency approval prior to conducting the survey. The State and Federal Protected Species Survey Report will be written for each species surveyed.

Complete an aquatic survey report for protected fish, mussels, crayfish, and snails. The approved aquatic survey methodologies and report are described below in Section 4.4.2. Please note that surveys for state protected burrowing crayfish are not included in this section of the GDOT's Environmental Procedures Manual.

4.4.1 State and Federal Protected Species Survey Report

A. Project Description
   Include an overview of proposed project.

B. Study Area
   Include size of habitat and area/type of potential impact.

C. Species Description
   Include a detailed description of the physical characteristics, life history, and habitat requirements of the species.

D. Survey Methodology
   Include detailed description of the approved methodology.

E. Preparatory Data
   Detail data acquired in preparation for survey; websites, literature, conversations with botanists, element occurrence. Include literature cited. Coordinate with GA DNR and USFWS biologists/botanists to offer participation in the survey and to determine optimal survey schedule.

F. Qualifying Statement
   State the experience of surveyors with the target species as well as relevant zoological experience or experience conducting botanical surveys.

G. Field Survey Description
   Detail date, time, weather conditions, number/name of surveyors, width/length of transects, length of time of survey.

H. Habitat Quality
Detail tree species, shrub species, forb species, soils, terrain characteristics. Make special note of invasive species.

I. Species Impact
Include an analysis of the habitat/individuals within the survey area as compared to the current population of the species.

J. Figures
1. Habitat Location Map
Display and label all habitat types over an aerial or satellite imagery background. Also display waters, but do not label them. Habitat type polygons should be filled with a pattern or be transparent so that imagery layer is not obscured. Fill types for habitat polygons will be defined in the legend. The maximum scale for habitat map is 1:9,000 (1 inch = 750 feet).

2. Species Range Map
Include a species range map and cite the source of the data. Display the range on a map of Georgia.

K. Photographs
Include photographs of all surveyed areas.

L. Appendices
1. Species Survey Data Sheet
2. Species Location Data Form
3. Agency Correspondence

4.4.2 Aquatic Survey Methodology and Report

A. Surveyor Qualifications
The lead surveyor will have sufficient knowledge within the basin in which the survey will be completed. This includes species-specific biological and ecological requirements, the ability to identify freshwater fish, mussel, crayfish, and snail species from the basin, and the ability to identify suitable habitat for fish, mussel, crayfish, and snail species. The lead surveyor will have sufficient experience, which includes documented field-time, and the ability to demonstrate skills in correctly executing survey methods and in locating and correctly identifying federal and state protected freshwater fish, mussel, crayfish, and snail species. Furthermore, the lead surveyor will be able to document experience in the safe-care and handling of federal and state protected freshwater fish, mussel, crayfish, and snail species.

Individuals familiar with southeastern U.S. freshwater fish, mussel, crayfish, and snail species but not with listed species in the area to be surveyed will work with an expert who has experience with the appropriate listed species. Documentation of field-time and/or a letter of recommendation regarding the surveyor's in-basin experience and their knowledge in surveying, handling, and identifying freshwater fish, mussel, crayfish and snail species, including federal and state protected species, may be requested. The individual will review and agree to abide by all applicable provisions of Chapter 4 of Title 27 of the Official Code of Georgia Annotated relating to fish.

Prior to any survey for federal protected species, a section 10(a)(1)(A) recovery permit from the USFWS, (http://permits.fws.gov) and the necessary scientific collecting permit from the Special Permit Unit of the Wildlife Resources Division of the Georgia DNR (Georgia Department of Natural Resources, Wildlife Resources Division; 770-761-3044) will be obtained.

Prior to any survey for a state protected species, the necessary scientific collecting permit from the Special Permit Unit of the Wildlife Resources Division of the Georgia DNR (Georgia Department of Natural Resources, Wildlife Resources Division; 770-761-3044) will be obtained.

B. Preliminary Research

The most recent protected species lists issued on a county by county basis by the USFWS Region 4 Georgia Ecological Services Office and DNR and the HUC8 Watershed Rare Elements List developed by DNR will be reviewed. A list of all federal and state protected fish, mussels, crayfish, and snails will be compiled using species from the USFWS/DNR County lists and the HUC8 Watershed list. These species will be the target species that will be addressed during the survey and subsequent report and will determine the types of survey conducted (i.e., fish survey, mussel survey, fish and mussel survey).

Please note that surveys for state protected burrowing crayfish are not included in this section of GDOT's Environmental Procedures Manual.

A thorough review of available resources pertaining to the target species will be conducted. Such resources include distributional maps, published journal articles, and field biologists who have experience with the relevant species or drainage area. Other resources include databases maintained by The Nature Conservancy and museums, identification keys (a suggested key is McMahon and Bogan 2001) or characteristics determining identification, historical distribution and previous collection locations, recovery plans, habitat descriptions, life history (especially spawning seasons), and applicable Federal Register documents.

Fish Atlas Maps
http://fishesofgeorgia.uga.edu/index.php?page=speciespages/list_species&class=fish

Prior to conducting a survey, precipitation data and the closest relevant USGS gage station data will be reviewed to determine hindering factors (weather conditions, increased flow) that could affect collecting conditions (i.e., turbidity, temperature, etc.). If gage stations are not available, every attempt will be made to determine the condition of the stream before the survey is executed to ensure conditions are appropriate for surveying. This may include contacting the local DNR, the USFWS, or other related natural resource offices.

Survey period for all aquatic species begins April 30th and ends November 30th (exceptions are for special surveys requiring life-history data, etc.). These are typically the timeframes in which flows and turbidity are low, allowing for good detectability. Consultation with the USFWS is required for surveys outside the survey season.

Landowner permission will be obtained, as necessary, to access each bridge or culvert crossing area prior to sampling. Prior to surveying, the local DNR wildlife office will be contacted and informed of proposed activities as stipulated in the state permit. If appropriate, local law enforcement officers will also be notified.

Additional consideration should be given to prevent the spread or introduction of non-indigenous species while conducting surveys. Before moving between basins, all gear, including, but not limited to, wetsuits, collecting bags, boats and trailers, must be washed and dried and deemed free of mud and aquatic plants. Boats and trailers must also be scrubbed and washed down with chlorine bleach, and live wells must be emptied over dry land or in the basin where the water was collected, especially when they have been in basins where zebra mussels (*Dreissena polymorpha*) have been detected.

Special care should be exercised when working in streams in the southern part of the state so that the non-native apple snails (*Pomacea insularum*) are not introduced to other basins. This should be of particular concern when working in the Satilla, St. Mary's, Suwannee, and possibly the Ochlockonee river basins.

C. Early Coordination

Early coordination will be completed prior to each survey. The ecologist will be contacted first to determine if early coordination with DNR has been conducted recently. If early coordination has not been completed within the past two years, an

email request will be sent to the DNR Wildlife Resources Division Georgia Natural Heritage Program and the USFWS requesting all known incidences of federal and state protected species within 3 miles of the proposed study area. The email will include a location map showing the general location of the project and a brief project description. For larger projects, a GIS shapefile showing the project boundaries should be included.

Early coordination will be completed with the USFWS and GDOT prior to the survey. The USFWS considers early coordination an important aspect in determining whether appropriate survey techniques are being adhered to and/or ensuring that deviations from this chapter will be accepted by the USFWS. At this stage, the USFWS may be contacted for technical assistance regarding the project location, fish, mussel, crayfish and snail species in the area, project impacts, and the survey methodologies. The USFWS office responsible for the area in which the survey will be conducted will be contacted for technical assistance. All correspondences regarding technical assistance to the lead USFWS office will be copied to the USFWS aquatic biologist in the appropriate region, as well as the GDOT ecologist.

If there are no deviations from this chapter or need for technical assistance from the USFWS, it is recommended that the surveyor provide the USFWS with the basic information below and time frames the aquatic survey will be conducted. This information can be informally provided to the USFWS via a brief letter and/or email, preferably 30 days prior to the start of the survey. Information to include in early coordination will include preliminary research; state the purpose of the survey; include a survey area description including a brief description of the proposed project that would impact the streams/rivers being surveyed; include a project location map represented on a 7.5 minute USGS topographical map; include a description of the area where the stream(s) to be surveyed is located, including physiographic area, general topography, land use, drainage basin, and potential suitable habitat; include a full text description of the equipment to be used; list the person(s) who will be conducting the field survey and provide a brief summary stating their affiliations, qualifications, and all valid permits; indicate the date(s) during which the survey will be completed; list the person(s) who will confirm all identifications and provide a brief summary of their affiliations and qualifications.

Deviation from this methodology is acceptable only as directed by and with the approval of both the USFWS and GDOT.

D. Field Work

The type of aquatic survey (e.g., mussel survey/fish survey) will be determined based on three factors: (1) species listed as protected on the DNR/USFWS County List or HUC8 watershed list, (2) species known range and the stream to be surveyed

occur within the same basin, and (3) potential habitat is identified within the survey area.

For example, if it is determined after reviewing the County/HUC8 Watershed lists that there are protected mussel species and no protected fish species within the basin, then only a mussel survey will be conducted. If it is determined that the target species occurs in a different basin than the stream within the project corridor, a survey will not be conducted. Note that surveys for state listed species will be conducted if the species is on the county lists or the HUC8 watershed list, suitable habitat is present, and the stream is within the same basin as the species. This is a change from the previous scope that only required surveys for state listed species with known occurrence records within three-miles of the project corridor.

Prior to conducting any aquatic surveys, it is recommended that the Office of Environmental Services is provided a list of target species to ensure that a survey is necessary. Surveys and reports will not be accepted if it is obvious that a survey was not warranted (i.e., conducted outside of the basin for a target species or conducted for a project which there is no target species listed on the County/HUC8 Watershed list) and GDOT was not contacted. If there is any doubt if a survey should be conducted, seek prior approval. Surveys and reports may be accepted if it is determined after conducting the survey that the habitat was not suitable for any target species.

If the target species include federal and state protected snail and mussel species, a qualitative survey will be conducted in accordance with the 2008 USFWS Freshwater Mussel Survey Protocol. In addition, the following will also be required for mussel surveys. For species photographs, if the periostracum of individuals is not visible in unionids, individuals should be gently scrubbed to expose the periostracum so that verification of identifications can be facilitated. Best judgment by an experienced surveyor should be used as to the extent of scrubbing so that the animals are not harmed. For aquatic invasives, the presence or absence of Corbicula and Sphaeriidae should be documented. For water quality, Total Alkalinity, Total Hardness, and Calcium Hardness will be measured using the appropriate test kits. For sexually dimorphic mussel species, the number of males and females collected during the survey will be recorded. It is not recommended that the animals be opened to check for gravidity due to the potential for increased mortality. This information should be included on the raw datasheets that are included in the report.

If a federal protected mussel or snail is identified during the qualitative survey, a follow-up quantitative survey may be required. This survey and subsequent report will be coordinated with USFWS and the GDOT ecologist.

If the target species include federal and state protected fish and stream dwelling crayfish, the survey reach will be determined as stated in the 2008 USFWS Freshwater Mussel Survey Protocol. Fish and crayfish surveys can be conducted concurrently. Surveys will be conducted with a 6 - 20 foot long by 4 - 6 foot deep seine net having 3/16-1/4 inch mesh. The length of the seine net used will be appropriate for the size of the stream to be surveyed, i.e., a 6 inch seine net may be employed on streams less than 10 inch wide. Although seining will be the principal collection method; species and site specific methods may be utilized as allowed by the surveyor's federal and state permits including: electroshocking, daytime/nighttime snorkeling, hoop nets, gill nets and flipping rocks for crayfish. Sampling techniques employed at each site should be based on the habitat observed within the survey reach and probability of collecting federal and state protected species. In areas where there is a high probability of collecting a federal or state protected mussel species or benthic fish species, use of any electroshocking equipment should be kept to a minimum. Electroshocking will not be employed in the Conasauga mainstem within the range of the Conasauga logperch (*Percina jenkinsi*) or amber darter (*Percina antesella*). There will be no electroshocking in amber or Etowah darter (*Etheostoma etowahae*) habitat within sections of the Etowah River drainage (Etowah mainstem, Amicalola Creek, Shoal Creek, etc). There will be no electroshocking in Brasstown Creek in Towns County without written permission from DNR Nongame Conservation Section. This is to protect the Sicklefin Redhorse (*Moxostoma* sp.).

A representative color photograph will be taken of each fish species observed during the survey. Photographs will be of good quality; sufficient to show the important diagnostic characteristics necessary to differentiate between species of similar appearance. It is recommended that these photographs be taken of the live fish while it is held in a viewing tank designed for photography. View tanks are easily made and can be very portable. The viewing tank should be filled with site water, and photographs should be taken streamside. An aerator should be used to ensure the fish is not be stressed by oxygen depletion.

A representative color photograph will be taken of each crayfish species observed during the survey. For each species, a photograph will be taken of the chela, rostrum, and carapace. The photograph of the chela and rostrum will be from directly above to adequately show the shape. The photograph of the carapace will be taken from the side.

All fish and crayfish species should be released in the stream unharmed, to appropriate habitats in the area of collection. After properly confirming identifications, voucher specimens may be taken in accordance with the surveyor's

federal and state permit and should be incorporated into the research collection of fishes at an accredited state school. Voucher specimens are not required.

The recommended field data sheets located in the 2008 USFWS Mussel Survey protocol will be completed for all streams surveyed for target species.

In addition, data sheets will be completed for perennial streams within the project corridor that were assessed for habitat and not surveyed because it was determined to not contain suitable habitat for target species. If surveys are not performed because the determination is made onsite that suitable habitat does not exist in the stream for the target species, the surveyor will document the stream by completing a data sheet which will be included along with a detailed discussion in the subsequent aquatic survey report (see below).

E. Report Preparation

A draft report sufficient to satisfy the requirements of the methodology stipulated in this chapter will be submitted. The Report will be titled, "Aquatic Protected Species Survey Report" hereinafter referred to as the Report. A separate Report for each GDOT project number (if one has been assigned) should be drafted, unless otherwise instructed.

1. Introduction

   Study Location and Purpose: Overview of the proposed project including a prose description of the proposed project, the general location of the project (such as county and approximate location to nearest town), latitude and longitude of the approximate center of the project, and the HUC in which the project occurs. Also include a justification statement for the aquatic survey (reference the three factors listed in 4.1; e.g., This report documents the results of a survey conducted in the Flint River for protected mussels).

   Background Information: Detail data acquired in preparation for survey; include information compiled from websites, literature, correspondence with experts, element occurrence data, and coordination with DNR and USFWS biologists. Include in this section a brief prose description of each target species including the common name and scientific name: federal and state designated status of the species; approximate species range; suitable habitat; and any known element occurrences data. The species description will be limited to 1 or 2 sentences and will provide a general description of the physical appearance of the species. The suitable habitat discussion will include a detailed description of the habitat requirements of the species.

2. Survey Protocols/Methodology

Include a brief discussion of the survey area including physiographic area, general topography, land use, drainage basin, length of survey reach, and indicate date(s) which the survey was completed. Include a full text description of the equipment and techniques used to collect each taxon (mussels, snails, fish, and crayfish). Include the equipment used to measure water quality and describe if/how specimens were preserved. Justifications as to why the survey methodologies were not followed will be included in the Report if necessary, as well as any correspondence or communication with the USFWS and GDOT regarding these deviations.

3. Results/Discussion

   Site Condition and Water Quality: For each stream assessed for habitat, include a prose description of the stream. This will include an in-depth discussion of each stream, detailing stream characteristics within the survey reach. Discussion will include in-stream features, water quality and riparian features. Information recorded using the USFWS data sheets should be reported here. The stream descriptions will include descriptions of key features found within the stream and a discussion of in-stream features by habitat type (e.g., riffle, pool, edge). Include a brief discussion on stream gage and recent rainfall data. The discussion on water quality should mention if the water quality data is within the excepted standards. For each stream description, state if a surveyed was conducted.

   If multiple streams were surveyed, and if the target species differed from stream to stream, state which species were sampled for in each stream.

   Biological Survey: summarize survey results by taxon. Indicate the number of species and individuals collected, and the number of target species collected. For target species, include information of location within the survey reach and proximity to the proposed project (e.g., The Chattahoochee crayfish was found throughout the survey reach commonly encountered in riffles with cobble. This species was found within the footprint of the proposed project.)

   Summary: For each target species, briefly summarize the habitat requirements of the species and discuss the presence/absence of suitable habitat within the survey reach of each stream. This should be a logical and in-depth discussion of the quality and suitability of the habitat for supporting the species. Summarize survey results and discuss how the proposed project may impact the species habitat or affect the species and recommend possible ways to avoid these impacts. This discussion should provide sufficient information so that a biological determination can be proposed by the ecologist.

If multiple streams were surveyed, a discussion of suitable habitat for each target species should be included for each stream. Habitat discussions for multiple streams can only be combined if the streams have the same characteristics. However, if the streams are determined to be unsuitable for different reasons, each stream should be discussed separately.

4. Qualifications Statement
   Include a list of persons who conducted the field surveys; list the persons who confirmed identifications for each taxon and give a brief summary of their affiliations/qualifications.

5. Appendix
   a) Figures
      All maps will be produced in 8 ½ X 11–inch format based on 7.5 minute USGS quad maps. A north arrow, a scale, and the source of the map will be indicated in the legend. An outline of the state of Georgia showing the all county boundaries with the relevant counties highlighted will also be included in the map legend. Graphic rendering of 7.5 minute USGS quad based maps will be clear, visually sharp and not affected by any computer graphics manipulations so as to diminish features such as topographic contour lines, stream courses, etc. For projects that are of such length that multiple map pages are required, match lines will be clearly indicated. The graphic rendering of the proposed alignment will not be so coarse as to visually obstruct important terrain or environmental mapping features. The use of a black dashed line to indicate the proposed alignment is recommended. The graphics included in the project report will be clear enough to allow for all pertinent information to remain legible during photocopying for any subsequent submittals to reviewing agencies. The report should include the following figures:

      - Project Location Map
        If the preferred alignment has not yet been determined, display a polygon of survey area over a USGS topo quad background. If a preferred project alignment has been determined, display the project alignment over a USGS topo quad background. The maximum scale for the survey area map is 1:12,000 (1 inch = 1,000 feet).

      - Aquatic Survey Limits
        Display and label the limits of the survey area over an aerial or satellite imagery background. The maximum scale for habitat map is 1:9,000 (1 inch = 750 feet).

b) Tables
Include a table for water quality, include a summary of the species, providing complete lists of the species found, including common name, scientific name, conservation status; for fishes and crayfishes include the number of individuals observed, number released, and number preserved; for mussels include the number of live or fresh dead observed, the number of relic shell observed, and the shell measurements of any listed individuals; for snails include the number of live or fresh dead observed, and the number of relic shell observed.

c) Photographs
Include photographs of the representative stream reach or reaches surveyed at each site; include representative photographs for species encountered.

d) Data Sheets
Include data sheets, field notes, and hand sketches of the individual habitats surveyed within each stream reach or reaches. The sketch maps will include unique stream features at the survey site, collecting locations of any species of interest, a north arrow, indication of direction of stream flow, and the survey limits must be labeled. All text in the hand sketches must be legible.

e) References
List of references used in preliminary research, in preparation for the survey and for the survey report including but not limited to journal articles, unpublished papers, and personal communication and any keys used in identification.

F. Deliverables

1. Written or Verbal Results
Within two weeks after completing the field survey, report verbally or in writing the results of the survey to GDOT's ecologist.

2. Field Notes
One full set of copies of all project field notes will be delivered with the Ecology Resource Survey Report.

3. Aquatic Protected Species Survey Report
Submit one full color draft copy of the report for comments and corrections. Submit revised drafts as necessary. Once reviews are complete, submit three (or more as requested) full color copies of the final Report for distribution. All copies of the report will be unbound or easily unbound and in 8 ½ X 11–inch format.

4. Coordination Letters

5. Additional Copies of Reports
   The copy of the final Report (including copies of original field data sheets) will be sent directly to:

   U.S. Fish and Wildlife Service
   Georgia Ecological Services
   c/o Sandy Tucker, Field Supervisor
   105 Westpark Drive, Suite D
   Athens, Georgia 30606

   Georgia Department of Natural Resources
   Nongame Conservation Section
   Wildlife Resources Conservation Center
   2065 U.S. Highway 278 SE

   Additionally, surveys conducted in Georgia within the Apalachicola-Chattahoochee-Flint River and Ochlockonee River basins will be sent directly to:

   U.S. Fish and Wildlife Service
   Panama City Field Office
   c/o Jerry Ziewitz
   1601 Balboa Ave.
   Panama City, Florida 32405

4.5 Ecology Assessment of Effects

Following the identification of a preferred alignment, the ecologist will write the EAOE Report. In this report, calculate impacts to protected species, ecological habitats, streams, wetlands and open waters. Detail the impact and related agency coordination required for the proposed project. State if any permits are required, and if so, which. Include a brief discussion of the direct, indirect, and cumulative impacts the project would have on ecological resources at the end of the report. Cumulative impacts would refer to all effects to the species in the past, present and future. Incremental effects of the proposed project or related projects could also be discussed.

4.5.1 Ecology Assessment of Effects Report

A. Transmittal Letters
   1. Transmittal to FHWA
      This letter will be written for all EAOE Reports.

2. Section 7 initiation
   This letter will be written for all projects that require coordination under Section 7 of the Endangered Species Act (ESA).

3. FWCA initiation
   This letter will be written for all projects that require coordination under FWCA.

B. Title Page
   1. Title: Ecology Assessment of Effects Report
   2. Project number: formatted STP00-0000-00(00), if assigned
   3. County
   4. Project name: e.g., SR 84 Widening
   5. PI number
   6. Date
   7. Prepared by: Name of Firm, if appropriate
   8. For: Georgia Department of Transportation, if appropriate
   9. Name of individual preparer
   10. Name of reviewer

C. Overview Table
   Provide a summary of the resources and proposed impacts identified within the project area.

D. Executive Summary
   Include a brief project description, a brief description of the survey area, a brief description of survey methodology, a summary of the habitats that are located in the project area, state and federal waters that are located in the project area, buffered state waters, streams crossings that should be designed to account for fish passage, biota impaired streams located within one mile of the project site, and protected species that are located in the project area.

E. Table of Contents
   The table of contents outlines the layout of the report.

F. Project Description and Location
   In this section describe the reason for and details of the proposed project. Include the location of the project (county, distance from nearest town/city) and size of the project in linear feet and acres. Include a summary of the need and purpose of the project.

G. Habitats within the Project Area

Describe all habitats found within the project area and the impact to these habitats resulting from the proposed project. Include habitat size, impact size and minimization measures. Illustrate the habitat delineations will on the Habitats Map.

H. Invasive Plant Species Control Methods
Using the field survey data, illustrate the invasive plant species locations on the Habitat Map. Describe the known range of each species identified and the range of the species within and adjacent to the project area. State specific measures that will be taken to control the spread of the species identified within the project area.

I. State and Federal Protected Species Effects
1. Federal Threatened and Endangered Species
If no habitat was identified during the ecology resource survey, state that the project will have "no effect" to the species and reference the data in the previous report. Include a summary of the data in the Ecology Resource Survey Report and Protected Species Survey Report that supports this determination.

If potential habitat was found for the species during the ecology resource survey but the Protected species survey found the habitat to not be suitable, state that the project will have "no effect" to the species. Include a summary of the data in the Ecology Resource Survey Report and Protected Species Survey Report that supports this determination.

If potential habitat was found for the species during the ecology resource survey and no individuals were found during the protected species survey, state that the proposed project "may affect, but not likely to adversely affect" the species. Reference the protected species survey report that is included in the appendix. The ecologist preparing the report will initiate informal Section 7 Consultation and prepare Special Provisions 107.23G.

If potential habitat is found during the ecology resource survey and the species is identified during the protected species survey, the ecologist preparing the report will initiate formal Section 7 Consultation and prepare Special Provisions 107.23G.

2. State Protected and Federal Candidate Species
If neither the species nor its suitable habitat is present, conclude the discussion of the federal candidate and state listed species with a determination of "no effect." If there is suitable habitat or if the species is present and GDOT has taken adequate measures to avoid impacts. Conclude the discussion with a determination of "no significant adverse affect." Conclude the discussion with a

determination of "significant adverse affect" if the species will be significantly impacted by the proposed project.

Complete a discussion of design measures to avoid and/or minimize impact to protected species. Include the location of limiting factors such as historic resources, residences, businesses, cemeteries, railroads, transmission lines, and design factors such as cost and horizontal and vertical alignment. After discussion with the Project Manager and other appropriate personnel, include all appropriate Special Provisions in the EAOE Report.

3. Bats
   Include a list of bridges within the project area that shows signs of active bat roosts. If bat roosts are identified, notify DNR and coordinate to plan avoidance of all unnecessary impact and minimization of any unavoidable impact to the roosts.

4. Bald Eagle
   The presence of suitable foraging habitat within the project area may require the implementation of Special Provision 107.23 G. The "1989 Recovery Plan Management Guidelines for the Southeastern Region" define the area within one mile of a bald eagle nest as the "secondary management zone."

   If there is no nest within one mile of the proposed project area, and if no suitable foraging habitat exists within the project area, then use the biological determination of "no effect." In such cases, include a brief statement supporting the "no effect" determination in the EAOE Report.

   If there is suitable foraging habitat identified within the proposed project area, include the location of the nearest recorded bald eagle nest in the EAOE Report. Precise distances and directions are not necessary (e.g., 22 miles to the south, beside the Ocmulgee River at the border of Wilcox and Dodge Counties), but a general description of the nearest nest location (e.g., located in the Abbeville North NW quarter-quad, which is located approximately twenty miles to the south) would be useful to agencies reviewing any proposed biological determination. If the project area is within one mile of a bald eagle nest, more specific location information will be required.

   If a project is located within one mile of an eagle nest, or if suitable foraging habitat exists within the project area, discuss the potential for "take" within the EAOE report. Include a discussion supporting a biological determination with a description of site variables, survey results, nest information, discussion of 2007 National Bald Eagle Management Guidelines and/or 1989 Recovery Plan

Management Guidelines for the Southeastern Region, and special provisions. Address each particular type of "take" that could occur as a result of the project.

The Bald and Golden Eagle Protection Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." For GDOT, the most likely "take" scenario would involve a project that could "disturb" bald eagles. The National Bald Eagle Management Guidelines, published by USFWS in May 2007, define "disturb" as: "'To agitate or bother a bald or golden eagle to the degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, causing injury, death, or nest abandonment.' In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment."

Do not employ the ESA wording (with the exception of "no effect") in the biological determination proposed in a report. Under the Bald and Golden Eagle Protection Act, there is no analogy to the ESA verbiage of "may affect, not likely to adversely affect" or "may affect, likely to adversely affect." Instead, describe the biological determination as the likelihood that "take" would occur as a result of the proposed project.

The guidance above was developed through consultation between the GDOT and USFWS in August 2007. If needed, technical assistance is available through USFWS Ecological Services.

5. Migratory Birds
   Based upon the selected alignment within the survey corridor, the anticipated impacts to migratory birds are to be described in the EAOE. Efforts to avoid and minimize impacts to suitable migratory bird habitat are to be detailed in the EAOE. Unavoidable impacts to suitable migratory bird habitat are to be quantified. Impacts to suitable migratory bird habitat may warrant the issuance of a special provision. For example, if a significant area of suitable migratory bird breeding habitat would be impacted, clearing or grubbing of the habitat would not be permissible during the breeding season of migratory birds, which extends from April 1 through August 31. Any roadway structure that provides a suitable nest site for migratory birds will require a special provision. The provision would restrict all activities that have the potential to "take" migratory birds that nest on roadway structures. In some cases, the provisions may allow for the installation of restrictive barriers on bridges to prevent nesting.

Restrictive barriers are not permissible on culverts or pipes. The special provision must be reviewed and approved by the PM.

6. Critical Habitat
   This section will identify which (if any) species listed for the county has had critical habitat designated and will identify if critical habitat has been designated in the project county.

   If no species listed in the county has had critical habitat designated and no critical habitat is designated for the county, state so in the section. No additional discussion on critical habitat would be required.

   If a species listed in the county has critical habitat designated and no critical habitat is designated for the county, state so in this section. Include a brief discussion of the location of nearest critical habitat and distance from project (e.g., critical habitat for the shiny-rayed pocketbook mussel has been designated in the Flint River approximately 25 miles southwest of the proposed project). Conclude this discussion with a biological determination of no effect; may affect, not likely to adversely affect; or may affect, likely to adversely affect.

   If a species listed in the county has critical habitat designated and critical habitat is designated for the county, state so in this section. Include a brief discussion of the location of critical habitat and the distance from the project. If critical habitat is located in close proximity to the proposed project corridor, or it is determined that the proposed project has the potential the affect critical habitat then discuss in detail each primary constituent element potentially affected by the proposed project. Include detailed avoidance and minimization measures addressing each constituent element and will conclude with a biological determination of no effect; may affect, not likely to adversely affect; or may affect, likely to adversely affect.

7. Essential Fish Habitat
   Impacts to areas that qualify as EFH will be discussed in a section of the EAOE Report under a separate heading. If impacts will occur, provide a brief discussion that describes the areas containing EFH, include a list of the species for which coordination will be done, what impacts may affect the EFH, how all issues have been addressed and resolved (including avoidance, minimization, and mitigation measures), and list the Fisheries Management Council or NMFS responsibility area within which the coordination will be conducted. Coordination letters will be prepared by the ecologist responsible for preparing the ecology report.

J. State and Federal Water Impact

Include the approximate extent of impact in acres for wetlands, open waters and ephemeral channels. Describe the types of impacts that would occur as a result of the proposed project. Impacts within construction limits are considered permanent and impacts between construction limits and the edge of ROW are considered temporary. Orange barrier fence will be labeled on plans and used during construction to avoid any unnecessary impact to resources.

Include the approximate extent of stream impacts in linear feet that would occur as a result of the proposed project. Impacts include bank armoring from placement of rip rap. If bridges are proposed, state if the bridge will clear span the stream or if pilings or bents will be required.

Include a discussion of the stream crossings designed for fish passage and a discussion of the stream crossings that will not be designed for fish passage. If the stream crossing is not being designed for fish passage, include justification to support this decision.

Include the approximate impacts (in acres) to each pond or lake as well as the type of impact that would occur as a result of the proposed project.

K. State Buffer Requirements

In compliance with the National Pollutants Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act, any encroachment within the designated 25-foot or 50-foot buffer of a state water will be described, and the need for a variance will be indicated. The description will include the location of the occurrence with respect to labeled, cited Waters of the US or state waters and the extent to which the proposed project encroaches on the buffer.

Buffer encroachments that will occur in conjunction with a bridge or culvert may be exempt from the need for a buffer variance. As of July 2007, the roadway drainage feature exemption includes/exempts all buffer encroachments within the 50-foot from edge of culvert, or 100-foot from edge of bridge footprint. This exemption also extends to the project ROW, though all encroachments must be necessary for construction to be considered exempt. The July 2007 interpretation includes all tributaries or unassociated state waters, including the water being crossed.

The ecologist will indicate the classification of the stream as defined in the Georgia Water Quality Control Act as a warm water stream or a cold water trout stream in the description of the stream. A list of designated cold water trout streams can be found in Section 15 at http://rules.sos.state.ga.us/docs/391/3/6/03.pdf.

(If a buffer variance is necessary, prepare an application package for submittal to EPD. See Section 4.6.4, below, - NPDES Permit Buffer Variance, for direction on preparing Vegetated Buffer Variance Applications.)

L. Avoidance Analysis

Once the Ecology Resource Report has been completed and transmitted to the PM and after all potential ecological impacts within the project corridor have been identified, mapped, qualified and quantified, evaluate the need to convene a project team meeting to discuss avoidance and minimization needs.

Include a detailed analysis of the alternatives examined to avoid impacts to state and federal waters as well as state and federal protected species. Include a discussion of the Alternative Alignment Impact Summary Table. Include a detailed discussion of how the preferred alignment avoids impacts.

The ecologist responsible for conducting the survey and preparing the report will initiate a discussion concerning avoidance and minimization of project impacts. If consultant ecologists are under contract directly with the Office of Environmental Services, they will discuss design and mitigation alternatives with the GDOT ecologist. If the GDOT ecologist determines that a meeting is necessary to research the location/design factors affecting the extent of the potential impacts on the proposed project, the GDOT ecologist will be responsible for making contact with GDOT's NEPA analyst to schedule a meeting with appropriate personnel. Appropriate personnel may include design engineers with GDOT or with a consulting firm and/or other environmental team members. This meeting will be fully documented for use in the EAOE Report.

M. Minimization Measures

Include a discussion of design measures and alternatives examined to minimize impact to state and federal waters and state and federal protected species with the location and numbers of limiting factors such as historic resources, residences, businesses, cemeteries, railroads, transmission lines, and other factors such as cost, intersection alignments, and horizontal and vertical alignment. Include any measures that may be used to remediate temporary impacts. If replanting is being used to remediate temporary impacts, a landscaping plan shall be developed following the protocol listed in Chapter V.3.1.10.C.2.

Include a brief description of all design efforts made and alternatives examined, with the design considerations for fish passage, to minimize impacts to each state and federal water along each alignment.

N. Indirect and Cumulative Impact Assessment

Per the Council on Environmental Quality's (CEQ) regulations (40 CFR §§ 1500 – 1508) implementing the procedural provisions of NEPA, "secondary impacts" (or "indirect impacts") are those that are "caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable" (40 CFR § 1508.8). Cumulative impacts are those which result from the incremental consequences of an action when added to other past, present and reasonably foreseeable future-actions (40 CFR § 1508.7).

Include a discussion of potentially significant secondary and/or cumulative ecological impacts that would be anticipated as a result of project implementation. Such impacts might include, but are not limited to: deleterious long-term effects to listed species due to habitat fragmentation; water quality impairment to waters downstream of the project vicinity; the potential for losses of complete wetland systems in areas of rapid commercial, industrial or residential development, even though the road project, itself, would only result in partial impacts to wetlands. Beneficial secondary or cumulative effects, such as improvements to aquatic habitat and fish passage from the replacement of a culvert with a bridge or arch span, would also be included in this discussion.

For guidance on the assessment of secondary and cumulative impacts, refer to the following documents:

"NEPA and Transportation Decisionmaking: Secondary and Cumulative Impact Assessment in the Highway Project Development Process" (Federal Highway Administration Project Development Branch)
http://www.environment.fhwa.dot.gov/projdev/tdm2_c_imp.asp

"Considering Cumulative Effects Under the National Environmental Policy Act" (Council on Environmental Quality)
http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm

O. Permit and Mitigation

If the proposed project will impact Jurisdictional Waters of the U.S., a permit will be required under Section 404 of the Clean Water Act. If a permit is required, state the permit type.

Both stream and wetland mitigation will be required if more than 0.10 acre of wetland or 100 linear feet of stream will be impacted by the proposed project. State the permit and mitigation requirements of the proposed project.

Reproduce and include the table entitled "Wetland SOP Worksheet" (refer to the SOP, Standard Operating Procedure for Calculating Compensatory Mitigation

Requirements for Adverse Impacts to Wetlands, Open Waters and/or Streams, at the website of the USACE, Savannah, Georgia District, Permits link) for the purpose of calculating the required mitigation credits for the reported wetland impacts for each alternative alignment surveyed. The table will express the numeric values applicable for each factor according to the professional judgment of the ecologist upon observing each wetland site during fieldwork. The table will show the computation of the sum of the factors for each wetland site, indicate the area of effect in acres for each wetland site, indicate the product of the sum of the factors multiplied by the area of effect for each wetland site, and will indicate the sum of those products to provide the total required mitigation credits for the proposed project.

Report the number of required wetland credits separately for each alignment. Document the cumulative required wetland credits for each eight-digit HUC crossed/impacted by the proposed project. The footer of each worksheet will contain the GDOT project number (if one has been assigned), county, PI number, the name of the preparer, and the date that the calculation was done.

Reproduce and include the table entitled "Stream SOP Worksheet" (refer to the SOP, Standard Operating Procedure for Calculating Compensatory Mitigation Requirements for Adverse Impacts to Wetlands, Open Waters and/or Streams, at the website of the USACE, Savannah, Georgia District, Permits link) for the purpose of calculating the required mitigation credits for the reported stream impacts for each alternative alignment surveyed. The table will express the qualitative and numeric values applicable for each factor according to the professional judgment of the ecologist upon observing each stream site during fieldwork. The table will show computation of the sum of the factors for each stream site, indicate the area of effect in linear feet for each stream site, indicate the product of the sum of the factors multiplied by the area of effect for each stream site, and will indicate the sum of those products to provide the total required mitigation credits for the proposed project. Stream sites will be designated according to the labeling system described in Section 4.4.1.B of this chapter.

Report the number of required stream credits separately for each alignment. Document the cumulative stream credits required for each eight-digit HUC crossed/impacted by the proposed project in the table. The footer of each worksheet will contain the GDOT project number (if one is assigned), county PI number, the name of the preparer, and the date that the calculation was done.

Determine if the required mitigation credits will be deducted from a GDOT mitigation bank or purchased from a commercial mitigation bank. consultant ecologists will make this determination in consultation with the GDOT ecologists.

A. Figures
   1. Project Area Map- Include project limits, north arrow, scale, project number (if one is assigned), and project vicinity. Create two maps; one projected on a topographic layer, the other on an aerial photograph.

   2. Habitats Map- Include project limits, north arrow, scale, project number (if one is assigned), project vicinity, streams, wetlands, open waters, and delineations of all habitat types. State and federal waters will be delineated but not labeled. Habitat types will be labeled. This map will be projected on an aerial photograph.

   3. State and Federal Waters Map- Include project limits, north arrow, scale, project number (if one is assigned), project vicinity, streams, wetlands and open waters. All state and federal waters will be labeled. This map will be projected on a topographic layer.

   4. Soil Map- Include project limits, north arrow, scale, project number (if one is assigned), project vicinity, streams, wetlands and open waters. All state and federal waters will be labeled. This map will be projected on a topographic layer.

B. Tables
   1. Stream Summary
   2. Stream SOP
   3. Wetland Summary
   4. Wetland SOP
   5. Buffered State Waters Summary
   6. Protected Species Summary
   7. Alternative Alignment Impact Summary

C. Appendix
   1. Protected Species Survey Report
   2. Correspondence

4.6 Agency Coordination

4.6.1 Section 7 of the Endangered Species Act

A. Section 7 Consultation (Informal)
   If a determination of "may affect" is made for any federal listed species, coordination under Section 7 of the ESA will be required. If a state listed species is observed in the proposed project corridor, coordination with DNR Natural Heritage will be required under the Georgia Wildflower Protection Act and/or the Georgia Endangered Wildlife Protection Act of 1973.

If a determination of "may affect, not likely to adversely affect" is reached for a federal listed species, the ecologist will prepare a coordination cover letter requesting the initiation of Informal Section 7 Consultation.

If Section 7 Consultation is being initiated for marine species such as the shortnose sturgeon, a protected sea turtle or a whale species, address the coordination letter to USNMFS copy/furnished to the lead agency. The consultant ecologist will contact the GDOT ecologist for specific contact information. If Section 7 Consultation is being initiated for any non-marine species, address the letter to the USFWS and a copy will be furnished to the lead federal agency and the Georgia DNR.

List the project number (if one is assigned), the county, the PI number and request initiation of Informal Section 7 Consultation under the ESA in the subject line of the coordination letter. The first paragraph of the letter will provide a brief description of the proposed project. The second paragraph will provide a brief summary of the total impacts to Waters of the US and the mitigation that would be required. The third paragraph will briefly summarize the impacts to the species for which a "may affect" determination has been recommended and indicate that a determination of "may affect, not likely to adversely affect" is recommended. The third paragraph will also list the species for which a "no effect" determination has been recommended. The fourth paragraph will respectfully request the concurrence of the lead agency and of the USFWS and/or USNMFS with the recommended determination. The fourth paragraph will also include the contact information of the GDOT ecologist and that ecologist's Team Leader. The GDOT ecologist will review and approve the consultant coordination letter and attach the appropriate report before the coordination letter is signed. The GDOT ecologist will transmit the Informal Section 7 Package to the lead federal agency, USFWS and/or USNMFS, and Georgia DNR.

B. Section 7 Consultation (Formal)
If a "may affect, likely to adversely affect" determination is made for a federal listed species, prepare a Biological Assessment Report. Also, draft a coordination cover letter requesting the initiation of Formal Section 7 Consultation.

If Section 7 Consultation is being initiated for marine species such as the shortnose sturgeon, a protected sea turtle, a whale species, or essential fish habitat, a coordination letter will be addressed to NMFS and copy/furnished to the lead agency. The consultant ecologist will contact the GDOT ecologist for specific contact information. If Section 7 Consultation is being initiated for any non-marine species, the letter will be addressed to the lead federal agency and a copy will be furnished to the USFWS and Georgia DNR.

List the project number (if one is assigned), the county, the PI number and request initiation of Formal Section 7 Consultation under the ESA in the subject line of the coordination letter. The first paragraph of the letter will provide a brief description of the proposed project. The second paragraph will provide a brief summary of the total impacts to Waters of the US and the mitigation that would be required. The third paragraph will briefly summarize the impacts to the species for which a "may affect" determination has been recommended and indicate that a determination of "may affect, likely to adversely affect" or "may affect, not likely to adversely affect" is recommended. The third paragraph will also list the species for which a "no effect" determination has been recommended. The fourth paragraph will respectfully request the concurrence of the lead agency and of the USFWS and/or NMFS with the recommended determination. The fourth paragraph will also include the contact information of the GDOT ecologist and that ecologist's Team Leader. The GDOT ecologist will review and approve the consultant coordination letter and attach the appropriate Report before the coordination letter is signed. The GDOT ecologist will transmit the Formal Section 7 Package to the lead federal agency, USFWS and/or USNMFS, and Georgia DNR.

4.6.2 Magnuson Stevenson Act

For projects on which unavoidable adverse impacts would occur to EFH, a letter addressed to the Habitat Conservation Division Office of the USNMFS in Charleston, South Carolina, will be prepared with the attached EAOE Report. This letter will be furnished to the lead federal agency. The letter will request that the USNMFS initiate coordination under the 1998 Amendment to Fishery Management Plans (FMP) which was prepared in accordance with MSFCMA.

List the project number (if one is assigned), the county, the PI number and request initiation of coordination under the 1998 Amendment to Fishery Management Plans which was prepared in accordance with MSFCMA in the subject line of the coordination letter. The first paragraph of the letter will provide a brief description of the proposed project, its Purpose & Need, its location, the Fisheries Management Council (FMC) in which the project occurs (either the South-Atlantic FMC or the Mid-Atlantic FMC). The second paragraph will provide a brief summary of the total impacts to Waters of the US and the mitigation that would be required. The third paragraph will briefly describe the areas containing EFH, list the species for which coordination will be done, detail the habitat elements that will be impacted by the proposed project, state what impacts may affect the EFH, and describe how all issues have been addressed and resolved, including avoidance, minimization, and mitigation measures. The fourth paragraph will respectfully request the agreement of the lead agency and of USNMFS that sufficient measures have been taken to protect EFH. The fourth paragraph also will include the contact information of the Project Manager and of the Ecology Manager at GDOT's environmental office. The GDOT ecologist will review and approve the consultant coordination letter and attach the

appropriate Report before the coordination letter is signed. The GDOT ecologist will transmit the Section 7 Package to the lead federal agency and USNMFS.

4.6.3 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act can be found on the USFWS Service website at: http://www.fws.gov/laws/lawsdigest/FWCOORD.HTML

For intermittent or perennial streams impacted by culverts on new location, by longitudinal encroachment, by morphologic change, or by culvert extensions greater than 100 feet as measured along the center of the impacted channel, the ecologist will draft a letter requesting initiation of FWCA coordination. All correspondence with the lead federal agency prepared by the ecology consultant will be reviewed, approved and signed by the GDOT ecologist prior to mailing.

Exemptions: Projects with impacts to intermittent and perennial streams that meet the following criteria will not require FWCA coordination:

- The extension of existing culverts or pipes in streams less than 100 feet where no listed species occur;
- Longitudinal encroachment on a former stream that has been previously channelized and is now considered a roadside ditch, or a roadside ditch that has been created by roadway construction;
- Re-channelization of an impacted stream (urbanized, no aquatic life, or otherwise polluted) where no loss of stream channel would occur.

Initiation: In order to initiate FWCA coordination, draft a letter addressed to the lead federal agency, copied to USFWS. Attach the EAOE Report to the coordination letter. The letter will request that the lead federal agency initiate coordination under the FWCA regarding the proposed stream encroachment or channel loss on the subject project.

List the project number (if one is assigned), the county, the PI number and request initiation of coordination under the FWCA in the subject line. Provide a brief description of the proposed project in the first paragraph of the letter. Provide a brief summary of the total impacts to state and federal waters and the mitigation that will be required in the second paragraph. Provide a summary of the nature and amount of the proposed stream channel impact. Fully disclose all efforts made in design to avoid or minimize the impact. Discuss any alternatives explored for the project that would reduce or avoid the impact, costs associated with those alternatives, any limitations on selection of those alternatives, and practical reasons for choice of the preferred alternative in the letter. Respectfully request the approval of the lead federal agency and of the

USFWS that all reasonable avoidance and minimization measures have been explored. In the fourth paragraph, also include the contact information of the GDOT ecologist and that ecologist's Team Leader.

4.6.4 NPDES Permit Buffer Variance

Buffers protected under the Georgia Erosion and Sedimentation Control Act of 1975 (the Act) are those vegetative corridors that border state waters. The Act defines state waters as "any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state, which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation."

In compliance with the Georgia Erosion and Sedimentation Act of 1975, as amended, any location where the proposed project would encroach within the designated 25-foot, or 50-foot buffer for cold water trout streams, of a state water will be described, and the need for a variance will be indicated. The ecologist will indicate the classification of the stream as defined in the Georgia Water Quality Control Act as a warm water stream or a cold water trout stream in the description of the stream. A list of designated trout streams can be found in Section 15 at http://rules.sos.state.ga.us/docs/391/3/6/03.pdf.

If buffer impacts cannot be avoided and have been minimized, determine which application criteria the impact(s) would fall under; A or H.

Criteria A is appropriate if the buffer is to be impacted, but not the water itself (i.e., impacts do not require a 404 permit).

Criteria H is appropriate if the buffer and the water itself are both to be impacted (i.e., impacts require a 404 permit). Such impacts also require the design of permanent stormwater mitigation. The design must remove 80% of the total suspended solids (TSS) from the water entering the buffered resource. A re-vegetation plan will also be required, which may include Special Provisions 700 and possibly a Special Provisions 702.

Exceptions- Buffer encroachments that will occur in conjunction with a bridge or culvert may be exempt from the need for a buffer variance. As of July 2007, the roadway drainage feature exemption includes/exempts all buffer encroachments within the 50-foot from edge of culvert, or 100-foot from edge of bridge footprint, for work necessary to construct the bridge/culvert.

If a buffer variance is necessary, prepare an application package for submittal to EPD. The variance application package will consist of a cover letter, the application, a map of the project area with impacted buffers labeled, and a set of erosion control plans. The plans will clearly label the resource, the area of impact described in the application, and the area of buffer that

will not be impacted. Under Criteria H, plans will also be included showing the design to address the removal of 80 percent TSS.

A. Application Type
The type of application that should be completed will be determined by the type of encroachment involved. A cold water trout stream will require an application for a 50-foot vegetative buffer encroachment. A warm water stream or pond will require an application for a 25-foot vegetative buffer encroachment. The discussion below concerns applications made under Criteria H (Projects Requiring a 404 Permit, a replanting plan, and 80 percent TSS removal). Consultants preparing an application under a different criterion should discuss this encroachment with the GDOT ecologist before completing the application.

B. Cover Letter
Place the cover letter on GDOT letterhead and address the letter to the location indicated at the front of the application. In the body of the cover letter include:

1. A subject line that reads "Application for a 25-foot Vegetative Buffer Encroachment for Project _____, _____ County" or "Application for a 50-foot Vegetative Buffer Encroachment for Project _____, _____ County,"
2. A brief project description,
3. A discussion of the purpose and need of the proposed project,
4. A statement that alternatives were considered,
5. The identification of the stream involved,
6. A description of the stream involved,
7. A statement that the proposed action will conserve the existing natural resources and protect the existing environmental conditions of the project site, and
8. A phone number and other contact information of the applicant.

C. Body of Application
1. Project information
   Page 1 of the application will solicit information concerning details of the proposed project. Provide accurate information for each request.
2. Details concerning encroachment
   The next several pages (Section B) of the application will include questions concerning the detailed nature of the buffer encroachment. The application must answer these questions, providing ample details.

D. Additional Application Attachments
The application also asks for the inclusion of several additional materials related to the project. These additional materials include erosion and sedimentation control plans, photographs of the encroachment site, the Section 404 permit (or application

if the permit has not been obtained yet), and a map of the project area with the state waters labeled. Once all of the additional project materials have been collected and included with the rest of the application package (cover letter and application), the consultant package will be sent to the GDOT for approval.

When the application is complete and all of the additional materials have been collected and included, the application package will be routed to EPD. Erosion and Sedimentation Control Unit personnel will review and evaluate the application package.

If EPD requires that a buffer restoration plan be developed and included with the application, then the protocol listed in Chapter V.3.1.10.C.2 shall be followed.

E. EPD's Public Advisory Notice

If the application is complete, EPD will publish their 30-day Public Advisory Notice in the legal organ (newspaper) local to the project site. This Public Advisory will be published only once, and the public will have 30 days from the date of publication to comment on the project. Once EPD has published their notice, EPD will route a copy of the Public Advisory Notice to GDOT. The applicant will then be required to publish their own 30-day Public Advisory Notice in the legal organ local to the project site.

F. GDOT's Public Advisory Notice

The package of information from EPD will include important information pertaining to the publication of GDOT's 30-day Public Advisory Notice. The GDOT's advisory is not required to be identical to the advisory published by EPD, but the following must be included:

1. the location of the project;
2. a description of the proposed buffer encroachment;
3. where the public can go to review site plans; and
4. where comments should be sent.

The GDOT's 30-day Public Advisory Notice will need to be published in the legal organ local to the project site. The advisory will be published only once, and the public will have 30 days from the date of publication to comment on the project. All comments will be directed to EPD's Erosion and Sedimentation Control Unit. After it is published, the tear sheet from the original newspaper clipping with the posted date of the published legal notice will be sent to EPD. The evaluation process cannot be completed until EPD receives these materials. Any comments received during the 30-day comment period must be addressed prior to the issuance of the variance.

EPD's decision to grant a vegetative buffer variance is based upon the evaluation of information collected from several resources. The Erosion and Sedimentation Control Unit will begin their evaluation by reviewing GDOT's package. For a 30-day period, the Erosion and Sedimentation Control Unit will evaluate comments made by the populace in response to their Public Advisory Notice. Subsequently, the Erosion and Sedimentation Control Unit will evaluate comments made by the populace in response to GDOT's Public Advisory Notice. Shortly after GDOT sends the tear sheet from the original newspaper clipping with the posted date of the published legal notice to EPD, a decision will be made to either allow or forbid the encroachment upon the vegetative buffer. Assuming that GDOT has been given permission to encroach upon the vegetative buffer, EPD will route a final correspondence letter explaining the conditions under which the variance has been approved. The variance must be routed to the PM after it has been received from EPD.

4.6.5 Section 404 of the Clean Water Act Permit

Section 404 of the Clean Water Act (CWA) established programs to regulate the discharge of dredged and/or fill material into Waters of the United States (US). These waters include, but are not limited to wetlands, streams, rivers, ponds and lakes. The program is regulated by the USACE. Activities in Waters of the US that are regulated under this program include fills for development, water resource projects (such as dams or levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. No discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. When applying for a permit, it must be demonstrated that steps have been taken to avoid and minimize impacts to jurisdictional Waters of the US and any remaining, unavoidable impacts will be mitigated through activities to restore, enhance or create Waters of the US.

The ecologist will apply for a USACE 404 Permit immediately following approval and transmittal of the EAOE Report and corresponding NEPA Document.

A. Nationwide and Regional Permits

Nationwide Permits (NWP), Regional Permits (RP), and Individual Permits (IP) are the three permits issued by the USACE. NWPs are the simplest form of the 404 permit and authorize a category of activities throughout the nation. These permits are valid only if the conditions applicable to the permit are met. The most commonly used NWP by GDOT are the NWP 3, 14, 23, 25, 27, and 33.

If the conditions of the NWP cannot be met, then an RP or IP will be required. RPs are issued by the USACE for a general category of activities when the activities are similar in nature and cause minimal impacts and when the regional permit would

reduce the duplication of regulatory control by state and federal agencies. RP 96 is used by GDOT for activities that are similar in nature and cause minimal environmental impact, both individually and cumulatively.

A Pre-Construction Notification (PCN) is an application sent to the USACE when applying for NWPs or RPs. For more information, go to the USACE website (http://www.sas.usace.army.mil/permit.htm). A PCN is generally required for all NWPs and RPs with one exception; NW 25 applications for projects that do not impact Section 10 Waters (see Section 4.6.5, E.) are exempted from the PCN requirements.

The applicant will submit a PCN to the USACE immediately following the transmittal of the EAOE Report to the agencies. Once the PCN is submitted, there is a 45 day review period and upon completion of the 45 day review period, the permit is issued. If comments are received, GDOT may be required to respond. The USACE has the final decision on whether the permit is issued or denied.

Include the following information in the PCN:

1. Project location or address and description.
2. Project impacts (ecological, historical, and archaeological).
3. Statement of construction and design measures taken to avoid/minimize impacts.
4. Statement of mitigation measures to be taken.
5. Statement regarding the presence of threatened or endangered species.
6. Statement regarding a Water Quality Management Plan for the site.
7. Statement regarding whether or not the project is located in a 303d stream.
8. Statement of whether or not the project is located in a trout stream.
9. Statement of whether or not the project will require a buffer variance.
10. Statement of whether or not culverts are proposed in streams and/or wetlands.
11. Statement regarding in-stream/wetland storm water management.
12. Statement of whether or not the project is located within 5 miles of an airport.
13. Statement of whether or not the project area is within a US Environmental Protection Agency (USEPA) priority watershed.
14. Transmittal letter.
15. A copy of the approved EAOE Report.
16. For a NWP 23, a copy of the approved Categorical Exclusion (CE) (commitments table and signature pages only) must be included.
17. Plan sheets illustrating the impacted areas.

B. Revocable License

Federal consistency concurrence for uses of NWPs within Bryan, Brantley, Camden, Charlton, Chatham, Effingham, Glynn, Liberty, Long, McIntosh, and Wayne Counties

is conditioned upon submission of documentation that the proposed project does not lay below the 5.6 foot mean tide level (MTL) elevation. Since there are no readily identifiable monuments (e.g., roads, railroads, political boundaries) depicting the geographic extent of estuarine areas below 5.6 feet MTL, the applicant must submit as part of the PCN a topographic map showing that a project is located above the six foot (two meter) contour and a statement that the impacts will be limited to that area located above the six foot (two meter) contour. The USACE also can determine if a project is located landward of the six foot (two meter) contour. If it is determined by the applicant with proper determination or by the USACE that the project will be located landward of the six foot (two meter) contour, this will be considered sufficient to establish that a project lies at an elevation above 5.6 feet MTL for the purposes of the NWP qualification and the USACE can conclude that the Georgia Coastal Management Program (GCMP) concurs with the federal consistency certification.

If information regarding the elevation of the project is not submitted or if a topographic map indicates that the project lies below the six foot (two meter) contour, federal consistency is denied for use with the NWPs for the counties listed above. The USACE will consider the response to Question 1 on the completed PCN to be conclusive with regard to the proximity of the project to tidal waters regulated by the Georgia Coastal Resources Division (CRD). If the answer to Question 1 is "Yes," then federal consistency is denied for the project and a site specific federal consistency determination must be obtained from the CRD. The USACE cannot authorize the use of a NWP for any project that does not meet federal consistency. In order for the GCMP to concur, an application for a revocable license must be submitted as part of the application process as an attachment to the PCN. The application can be found on the USACE's website (http://www.sas.usace.army.mil/permit.htm).

For projects that fall within the 11 counties, the answer to Question 1 must be "Yes." In addition, information must be provided as either part of the EAOE Report or as a separate topographic map which is part of the PCN application package that shows the elevation of the project corridor. If the project is located above the six foot (two meter) contour elevation, there does not need to be a copy of the Revocable License application; however, there needs to be a discussion of the project and why federal consistency concurrence is not required. If the project lies below 5.6 feet MTL a copy of the completed application for a Revocable License will be included as a part of the PCN application package.

For those projects that require a Revocable License, the PCN should be submitted to the USACE a minimum of eight months prior to the scheduled project Let date. In addition to the USACE, a copy of the PCN and the request for a Revocable License

must be submitted to the CRD. Once the request for a Revocable License has been received, CRD is allowed six months after receipt of the application and supporting materials to review the federal consistency determination (although CRD does not anticipate needing the full six months for review). Concurrence on the federal consistency certification will be granted if CRD determines that the project will have a minimal effect to coastal marshlands. If a response has not been received within six months after CRD has begun their review, it can be conclusively presumed that concurrence has been granted on the applicant's federal consistency determination.

C. Individual Permit

For proposed projects where the impacts to Waters of the US exceed the requirements of a NWP or an RP, and an IP will be required. Also if a project impacts a USACE approved mitigation site an IP is required. The GDOT has a two step process that is used for obtaining an IP; the Practical Alternatives Review (PAR) process and submittal of the permit application. This process should be initiated once the preferred alignment has been decided, but with ample time to discuss avoidance and minimization measures. The IP application must be submitted to the USACE immediately after the completion of the EAOE Report. If the proposed project will require an IP the ecologist will prepare for and participate in the PAR process.

Individual Permits are issued following a full public interest review. A public notice is distributed to all known interested parties after an application is made. The permit decision is generally based on the outcome of a public interest balancing process where the benefits of the project are balanced against the detriments of the project. After evaluating any comments received and after all the necessary information has been received, the USACE makes a final decision on the application and a permit is granted unless the proposal is found to be contrary to the public interest.

1. Phase 1 – The Practical Alternatives Review (PAR) Process

   The purpose of the PAR is to obtain resource agency input on project alternatives, as well as to gather information for the continued project review. The agencies involved include GDOT, USACE, FHWA, USEPA, USFWS, USNMFS, DNR (including EPD), and any other appropriate commenting agency. Because it has the potential to change the project alignment or alternative, the PAR must be concluded prior to FHWA's approval of the document prepared in compliance with NEPA: the CE, Draft Environmental Assessment (EA) or Draft Environmental Impact Statement (EIS) (see Chapter III).

   a) Inclusions- A PAR Report is forwarded to all agencies involved which contains the following information:
      - a project description,

- purpose and need statement,
- description of GDOT's preferred alternative,
- cultural impacts,
- ecological impacts associated with a preferred alternative,
- a description of any and all other alternatives reviewed and their associated cultural and ecological impacts, and
- layouts showing all alternatives

2. Phase 2 - Application

   Phase 2 will begin with the submittal of a permit application to the USACE after approval of the preferred alignment by the coordinating agencies. After the application is submitted to the USACE, they will determine if the application is complete and investigate alternatives. Once a determination is made that the permit package is complete, the USACE will issue a Joint Public Notice (JPN). Resource agencies and the public will have 30 days to comment. During and after the comment period ends, the USACE will forward all comments received from the JPN to GDOT for a response. After receiving GDOT's response to the comments and completion of any additional analysis, and adoption of the approved environmental document, the USACE will make the decision to either issue or deny the permit.

   The permit application will include the following:

   a) Transmittal Letter -

      The transmittal letter will include:

      - Brief project description.
      - Brief discussion of wetland and/or stream impacts.
      - Brief discussion of any threatened or endangered species issues.
      - Brief discussion of Section 106 issues.
      - Short statement discussing Section 401 (water quality).
      - List of Enclosures (noted in b., below).
      - The concluding paragraph will respectfully request issuance of the permit and a statement that a copy of the application is being sent to the appropriate resource agencies.

   b) Application Package

      The application package will include:

      - Application Form CESAS Form 19. A downloadable form can be found at http://www.sas.usace.army.mil/wetlndap.htm#prepare.
      - Reproducible drawings, size 8 ½ x 11-inch of the plan cover sheet and typical section(s).
      - Project location map, project need and purpose statement and project description.

- Volume of fill in cubic yards to be placed within the wetlands.
- EAOE Report.
- Section 106 documentation.
- Mailing labels of the adjacent property owners for distribution of the JPN
- Approved NEPA document (to USACE only).

D. Section 401 of the Clean Water Act Water Quality Certification
Section 401 of the CWA provides authority directly to the states to review certain federal permit actions which may affect waters of the state. The state will provide the applicant with a Section 401 Water Quality Certification (WQC) if it is determined that the project, as proposed, will not adversely affect the quality of the waters of the state. The state may add conditions to the WQC to insure protection of the waters.

The following is a summary of the WQC process.

1. A WQC is administered by the EPD.
2. A WQC is required on all projects that require an IP.
3. The application consists of a cover letter to EPD and copy of the EAOE Report.
4. The cover letter indicates the streams and wetlands where work is to be done, provides estimated fill quantities, and gives erosion control assurances.
5. An IP cannot be issued without Section 401 certification; provisional permits may be issued without WQC.

Projects cannot be certified for Let (11 weeks prior to the Let) until GDOT has received the appropriate 404 permit. A copy of the permit must be posted at the construction site. Non-compliance can result in the levying of heavy fines, and in some cases prison sentences. In addition, the USACE may require additional mitigation and the removal of the unpermitted fill.

E. Section 10 Permit
Section 10 Permits are required for any work in or over navigable Waters of the US or work that affects the course, location, condition, or capacity of such waters. Typical activities include construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats intake structures, cable or pipeline crossings, dredging and excavation. If the project requires both an IP and a Section 10 Permit, GDOT will submit a joint application.

A Section 10 application is to be submitted to the USACE immediately following the completion of the EAOE Report. Upon submittal of the application, the USACE places the application on JPN and the public has 30-days to submit comments. Upon completion of the 30-day review period, if no comments are received, the permit is

issued to GDOT. If comments are received during the 30-day review period, GDOT must respond satisfactorily to those comments. The USACE has the final decision on whether the permit is issued or denied.

1. Transmittal letter will include
   a) Brief project description.
   b) Brief discussion of wetland and/or stream impacts.
   c) Brief discussion of any threatened or endangered species issues.
   d) Brief discussion of Section 106 issues.
   e) List of Enclosures.
   f) The concluding paragraph will respectfully request issuance of the permit and a statement that a copy of the application is being sent to the appropriate resource agencies.

2. Application Package will include
   a) Application Form CESAS Form 19. A downloadable form can be found at http://www.sas.usace.army.mil/wetlndap.htm#prepare.
   b) Reproducible drawings, size 8 ½ x 11-inch of the plan cover sheet and typical section(s).
   c) Project location map, project need and purpose statement and project description.
   d) EAOE Report.
   e) Section 106 documentation.
   f) Mailing labels of the adjacent property owners for distribution of the JPN.
   g) Approved NEPA document (to USACE only).

F. Mitigation

Compensatory mitigation is required if proposed project impacts exceed 100 linear feet of stream and/or 0.10 acre of wetland and/or open water. Mitigation must be purchased from a USACE approved commercial mitigation bank that serves the same HUC as the project location. Include the proposed bank of purchase in the permit application. If credits are not available from a HUC in the primary service area, seek permission from the USACE to obtain credits from a secondary service area. If a local government is responsible for the Preliminary Engineering phase of plan development, then they are also responsible for obtaining the 404 permit and mitigation credits.

G. Tennessee Valley Authority (TVA)

Authorization from the TVA is required under Section 26a of the TVA Act for impacts to waters within the Tennessee River watershed. Along with regulated rivers and TVA reservoirs, TVA's jurisdiction includes the limits of the 500-year floodplain or to the upper limits of TVA flowage rights, whichever is higher. Along off-reservoir,

unregulated streams and rivers, TVA jurisdiction is typically applied to the limits of the 100-year floodplain. Georgia counties found within the Tennessee Valley watershed include Catoosa, Dade, Fannin, Gilmer, Rabun, Towns, Union, Walker and Whitfield.

1. Regulated Activities
   a) Placement of culverts in streams and relocation of stream channels
   b) Addition of lanes to highways that require culvert extensions
   c) New location roadways that would cross or relocate a stream
   d) Bridge replacements when lanes are added
   e) New bridge construction upstream or downstream of the existing bridge

2. Activities that are NOT regulated under the TVA
   a) Removal of trees, stumps, brush, or sand/gravel
   b) Excavation of a new channel
   c) Excavation of a trench for utilities
   d) Construction over intermittent streams
   e) Replacement of culverts or bridges of same or greater hydraulic capacity, creating no new or additional obstruction, and within the same highway alignment that is to be considered maintenance activity
   f) Directional boring under streams or rivers
   g) Discharges into the Tennessee River watershed unless they are made through or by an outfall pipe, etc.

3. Transmittal Letter Inclusions
   a) Brief project description
   b) Brief discussion of wetland and/or stream impacts and any threatened or endangered species issues
   c) Short discussion of any archaeology and/or history issues
   d) A short statement confirming approval of the NEPA document
   e) A short statement respectfully requesting issuance of the Section 26a permit

4. TVA Form 17423 Inclusions
   a) Name, address, and phone number of permittee (GDOT)
   b) Project location
   c) Date of the proposed letting
   d) List of any previous USACE/TVA permits/approvals granted to GDOT
   e) Statement as to whether any portion of the project is already complete
   f) List any other certifications or approval/denials received from other federal, state, or local agencies
   g) Statement as to whether any agency has denied approval of the project

5. Application Package Inclusions
   a) Project location map
   b) Half-size plans including the cover sheet, typical section(s), and plan and profiles
   c) EAOE Report and any addenda
   d) Copy of the hydraulic/hydrologic study for all the stream/river crossings
   e) Copy of the approved NEPA Document
   f) A **checklist** for the TVA application must be included. The above information must be submitted 12 months in advance of the anticipated project letting.

4.7 Consultant Deliverables

The consultant will submit a single copy of all first submittals. Multiple final drafts will be requested after the review has been completed. All maps and photographs will be in color and all text and tables in black. All documents will be submitted unbound.

After receiving comments from GDOT, FHWA or another agency, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, the consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

It is the responsibility of the consultant ecologist to transmit field survey data to the PM following the ecology resource survey.

The following is a list of all documents that may be required for each GDOT project.

- Ecology Resource Survey Report
- Ecology Resource Survey Report Transmittal Letter
- State Water Determination Request
- Jurisdictional Determination Request
- Resource Report Overview Table
- Resource Report Protected Species Summary Table
- Resource Report Stream Summary Table
- Resource Report WL/Open Water Summary Table
- Resource Report Buffered State Water Summary Table
- Resource Report Ecology Survey Data Sheet
- North Carolina Stream ID Form
- Wetland Data Form

- Expanded Preliminary Jurisdictional Determination Form
- Protected Species Survey Report
- Protected Species Location Data Form
- Protected Species Survey Data Sheet
- EAOE Report Text
- EAOE Report Transmittal Letter
- EAOE Report FWCA Letter
- EAOE Report Informal Section 7 Letter
- EAOE Report Formal Section 7 Letter
- EAOE Report Magnuson Stevenson Act Letter
- EAOE Report Overview Table
- EAOE Report Buffered State Water Table
- EAOE Report Protected Species Summary Table
- EAOE Report Stream Summary Table
- EAOE Report WL/Open Water Summary Table
- EAOE Alternative Alignment Impact Summary Table
- Wetland and Open Water SOP Worksheet
- Stream SOP Worksheet
- Pre-Construction Notification (PCN)
- PCN Supplemental Information
- PCN Cover Letter
- Buffer Variance Application
- Buffer Variance Application Transmittal Letter
- Individual Permit Application
- Water Quality Certification Request (for IP Application)
- Special Provisions 107.23G (forthcoming)
- Special Provisions 700 (forthcoming)
- Special Provisions 702 (forthcoming)

4.8 Templates

- Ecology Resource Survey Report
- Ecology Resource Survey Report Transmittal Letter
- Ecology Resource Survey Report State Water Determination Request Letter
- Jurisdictional Determination Request Form
- Ecology Resource Survey Report Overview Table
- Ecology Resource Survey Report Protected Species Summary Table
- Ecology Resource Survey Report Stream Summary Table
- Ecology Resource Survey Report WL/Open Water Summary Table
- Ecology Resource Survey Report Buffered State Water Summary Table
- Ecology Resource Survey Report Ecology Survey Data Sheet (forthcoming)
- North Carolina Stream ID Form

- North Carolina Stream ID Manual
- Wetland Data Form
- Expanded Preliminary Jurisdictional Determination Form
- Protected Species Survey Report
- Protected Species Location Data Form
- Protected Species Survey Data Sheet
- EAOE Report Text
- EAOE Report No Impacts Transmittal Letter
- EAOE Report FWCA Letter
- EAOE Report Informal Section 7 Letter
- EAOE Report Formal Section 7 Letter
- EAOE Report Magnusson Stevenson Act Letter
- EAOE Report Overview Table
- EAOE Report Buffered State Water Table
- EAOE Report Protected Species Summary Table
- EAOE Report Stream Summary Table
- EAOE Report WL/Open Water Summary Table
- EAOE Alternative Alignment Impact Summary Table
- Wetland and Open Water SOP Worksheet
- Stream SOP Worksheet
- Pre-Construction Notification (PCN)
- PCN Supplemental Information
- PCN Cover Letter (North GA)
- PCN Cover Letter (South GA)
- Buffer Variance Application
- Buffer Variance Application Transmittal Letter
- Individual Permit Application Transmittal Letter
- Water Quality Certification Request (for IP Application)
- Special Provisions 107.23G (forthcoming)
- Special Provisions 700 (forthcoming)
- Special Provisions 702 (forthcoming)
- Joint Coordination Procedures (JCP)
- Local Coordinat1ion Procedures (LCP)

4.9 Useful Websites

- http://www.gadnr.org/
- http://endangered.fws.gov/wildlife.html
- http://www.ganet.org/dnr/wild
- http://www.gaports.com
- http://www.nwi.fws.gov
- http://www.sas.usace.army.mil
- http://www.atlreg.com

- http://www.wetlands.com
- http://www.epa.gov
- http://www.epa.gov/OWOW/wetlands
- http://www.nps.gov/rivers

5.0 Additional Natural Resources

5.1 Wild and Scenic Rivers

In accordance with the Wild and Scenic Rivers Act (16 USC 1278), if the proposed action could have foreseeable adverse effects on a river on the National Wild and Scenic River System or a river under study for designation to the National Wild and Scenic River System, the draft National Environmental Policy Act (NEPA) document should identify early coordination undertaken with the agency responsible for managing the listed or study river (i.e., National Park Service [NPS], Fish and Wildlife Service [USFWS], or Forest Service [USFS]). For each alternative under consideration, the document will identify the potential adverse effects on the natural, cultural, and recreational values of the listed or study river. Adverse effects include alteration of the free-flowing nature of the river, alteration of the setting or deterioration of water quality. If it is determined that any of the alternatives could foreclose options to designate a study river under the Act, or adversely affect those qualities of a listed river for which it was designated, to the fullest extent possible, the draft document will reflect consultation with the managing agency on avoiding or mitigating the impacts (23 CFR 771.123(c)). The final document will identify measures that will be included in the preferred alternative to avoid or mitigate such impacts.

Publicly owned waters of designated wild and scenic rivers are protected by Section 4(f) of the US Department of Transportation (USDOT) Act (see Chapter VI). Additionally, public lands adjacent to a Wild and Scenic River may be subject to Section 4(f) protection. An examination of any adopted or proposed management plan for a listed river will be helpful in making the determination on applicability of Section 4(f). For each alternative that takes such land, coordination with the agency responsible for managing the river (e.g., NPS, USFWS, or USFS) will provide information on the management plan, specific affected land uses and any necessary Section 4(f) coordination.

There is only one "Wild and Scenic River" in Georgia, the Chattooga River in Rabun County. The St. Mary's River in South Georgia is a Wild and Scenic study river. A study river has the same protections as a Congressionally declared Wild and Scenic River. The study has been completed but has not been formally accepted.

5.1.1 Consultant deliverables

A separate report is not required; analysis and findings will be submitted as part of the NEPA document.

5.2 Floodplain impacts/FEMA coordination

Projects involving federal funding require the consideration of impacts to floodplains (if any) under the NEPA. If a floodplain impact may occur under a build alternative, the Georgia Department of Transportation (GDOT) must submit project proposals to the Federal Emergency Management Agency (FEMA) for comment.

To initiate this action, it should be determined if the community participates in the National Flood Insurance Program (NFIP). This is accomplished by reviewing the Federal Insurance Rate Maps (FIRMs) listed by county. The NEPA analyst must compare a project's design and location with the location of floodplains within the community. If no floodplains are located in the project area, then no further action is required. However, if a project will encroach on the 100-year floodplain or impact the regulatory floodway, coordination with FEMA must be initiated.

Coordination with FEMA will include a letter describing the project and the proposed impacts to the floodplain or floodway as well as the FIRM panel with the project located on the panel (this is part of project Early Coordination as discussed in Chapter II).

The Categorical Exclusion (CE), Draft Environmental Assessment (EA), or Environmental Impact Statement (EIS) should indicate the NFIP status of the affected community, the encroachments anticipated, and the need for the floodway or floodplain ordinance amendments.

Coordination means furnishing a Draft EA or EIS to FEMA and, upon selection of an alternative, provide a preliminary site plan and water surface elevation and technical data in support of a floodway revision request. If determination by FEMA would influence the selection of an alternative, a commitment from FEMA should be obtained prior to the Finding of No Significant Impact (FONSI) or Final EIS.

For projects that will be processed with a CE, coordination may be carried out during design if minimal impacts are anticipated; however, if impacts are substantial, the outcome of the coordination may change the classification of environmental documentation (see Chapter III).

In many situations it is possible to design and construct highways in a manner that is reasonable and no construction would occur within the floodway. This is the simplest way to be consistent with limiting floodway impacts and should always be a studied alternative. If a project element encroaches on the floodway but has minor effect on the floodway water surface elevation (such as piers in the floodway), the project may be considered consistent with the standards if hydraulic conditions can be improved so that no water surface elevation increase is reflected in the computer model for the new condition.

Where there is not a feasible alternate to design a highway crossing to avoid encroachment on an established floodway, a second alternative would be a modification of the floodway itself. A community may be willing to accept an alternative floodway configuration to accommodate a proposed crossing provided NFIP limitations or increases in the base flood elevation are not exceeded.

Floodway revisions must be based on the hydraulic model that was used to develop the currently effective floodway, but updated to reflect existing encroachment conditions. This will determine the amount of increase in the base flood elevation that has been caused by encroachment since the original floodway was established.

Computer modeling of rise/no-rise impacts to the floodway are generated by hydraulic engineers in the GDOT Office of Bridge Design. The hydraulic engineer must coordinate with the local authority and obtain a no-rise certificate. For guidance on the model and coordination with FEMA, refer to Federal Aid

Highway Program Manual (FHPM) 6-7-3-2 “Location and Hydraulic Design of Encroachments on Floodplains” (23 CFR 650, Subpart A).

The NEPA document will reflect the coordination efforts and FEMA concurrence for a proposed encroachment on the 100-year floodplain or floodway. Impacts and mitigative efforts will be discussed in the NEPA document.

5.2.1 Consultant deliverables

A separate report is not required; analysis and findings will be submitted as part of the NEPA document.

5.3 Farmland/Forestland involvement

Farmland includes 1) prime, 2) unique, 3) other than prime or unique that is of statewide importance, and 4) other than prime or unique that is of local importance.

Early coordination will be completed with the Natural Resources Conservation Service (NRCS). The NEPA analyst will review aerial photography for potential farmland involvement in accordance with the Farmland Protection Policy Act. If there is involvement, the NEPA analyst will complete Sections I, III and VI of the Form AD. 1006 (Farmland Conversion Impact Rating). If Section VI is less than 60 points, no further analysis is required; document project files. If Section VI is greater than 60 points, the NEPA analyst will send the rating form and a copy of Soil Conservation Map or topographical map showing the project alignment to the NRCS for coordination. If total project score is greater than 160 points, additional alternatives will be considered to reduce impacts. If avoidance is not possible, measures to minimize or reduce the impacts will be evaluated and, where appropriate, included in the proposed action.

The CE, Draft EA or EIS will summarize the results of early consultation with the NRCS and, as appropriate, state and local agriculture agencies where any of the four specified types of farmland could be directly or indirectly impacted by any alternative under consideration. Where farmland will be impacted, the NEPA document will contain a map showing the location of all farmlands in the project impact area, discuss the impacts of the various alternatives and identify measures to avoid or reduce the impacts. Form AD. 1006 will be processed, as appropriate, and a copy included in the draft NEPA document. Where the Land Evaluation and Site Assessment score (from Form AD. 1006) is 160 points or greater, the NEPA document will discuss alternatives to avoid farmland impacts.

5.3.1 Consultant deliverables

A separate report is not required; analysis and findings will be submitted as part of the NEPA document.

Items that must be submitted for GDOT review and approval prior to the NRCS include, as appropriate:

- Sections I, II and VI of the Form AD. 1006, transmittal letter & accompanying map;
- Farmland Impact Rating Form and transmittal letter

5.4 Coastal Barrier/Coastal Zone impacts

5.4.1 Coastal Barrier impacts

A. Overview

The Coastal Barrier Resources Act (CBRA) provides protection for coastal barriers often referred to as Coastal Barrier Resource Systems (CBRS). The statute identifies coastal areas that will be protected by placing restrictions on the use of federal funds for developmental activities within these units.

There are 186 individual areas in 15 states along the Atlantic and Gulf coasts. Individual areas are underdeveloped coastal features such as barrier islands, tombolos, bay barriers, and barrier spits. These units may contain a few man-made structures and show no significant alteration of the geomorphic and ecological processes common to barrier systems.

Verification that a proposed project falls within a unit restricted by the CBRA may be referenced with the Department of the Interior (DOI) maps depicting the boundaries of each CBRS unit. These maps are made available through affected counties as well as each state coastal zone agency. The USFWS Regional and Ecological Services field offices will have current maps available.

If a proposed project is not located within the coastal zone of Georgia, the following conditions and guidelines are not applicable. It should be noted in the environmental document that the project is not located within a coastal zone; therefore there is no involvement with coastal zone areas or management zones and not subject to restrictions of the CBRA.

However, should a project be proposed in an area within the boundaries of the CBRS, federal funds may be restricted. Section 5 of the CBRA prohibits new expenditures for highway projects occurring within the boundaries of a designated unit or for bridges and causeways leading directly to and extending into such units. A new federal expenditure is one in which a legally binding commitment for payment was made after October 18, 1982. Any project with committed federal funding prior to October 18, 1982 is exempted from Section 5 of the CBRA.

B. Exceptions to Section 5 of the CBRA

Section 6 of the CBRA allows for exceptions for certain actions after consultation with the USFWS. These actions may include the repair, reconstruction and replacement (but not expansion) of existing publicly owned roads that are essential links in a larger network system. These exceptions fall under two categories:

- Section 6(a)(3); repair, reconstruction, and replacement (excluding expansion) of existing publicly owned roads that are essential links in a larger system or network.
- Section 6(a)(6)(F); roadways that are eligible for exemption from the CBRA, but not deemed “essential” links by the USFWS.

When the GDOT proposes the use of federal funds for the replacement, repair, or reconstruction of an existing highway within a unit of the CBRS, the USFWS must be contacted

to initiate the consultation process (this can be started during the Early Coordination process, refer to Chapter II). The GDOT will coordinate the proposed project directly with the Regional Director of the USFWS. The written request should indicate if the project is exempt under Section 6(a)(3) or Section 6(a)(6)(F).

For all federal-aid projects subject to the CBRA, the GDOT and FHWA will not approve any funds until the USFWS has responded to a consultation request by providing comments on the project's consistency with the CBRA.

C. Project coordination under Section 6 of the CBRA
Coordination steps:
- Coordinate project with USFWS at the earliest stage of project development.
- Provide USFWS with a description of the proposed work identifying the appropriate unit of the CBRS.
- Allow 30 days for the USFWS response unless it is an emergency situation.
- The coordination request and USFWS response letter will be forwarded to the FHWA Division Administrator.

The USFWS letter should provide technical assistance as to whether a project is consistent with Section 6 of the CBRA or if the project falls under Section 6(a)(6)(F). Should the consultation result in the USFWS not agreeing that project is a proper exception to the CBRA, the final determination is made by the FHWA.

D. Documentation
- The proposed impacts and consultation will be summarized in the Draft EIS and thoroughly documented in the Final EIS.
- The proposed impacts and consultation will be indicated in an attachment to the CE.
- The proposed impacts and consultation will be indicated within the Draft EA and the FONSI.

5.4.2 Coastal Zone impacts

A. Overview
The term "coastal zone" means the coastal zone area delineated in a state's management program. All lands owned, leased, held in trust or whose use is otherwise by law subject solely to the discretion of the federal government are excluded from the coastal zone. The exclusion of federal lands does not remove the application of the federal consistency provisions when federal actions on such lands cause indirect or cumulative impacts that significantly affect the resources or uses within the coastal zone. Significant actions may include changes in the manner in which the land, water or other coastal zone natural resources are used and changes in the quality of the coastal zone natural resources. Impacts must be considered in terms of primary, secondary, and cumulative effects on the coastal zone.

For projects located in counties subject to the Coastal Zone Management Act, basic coordination is required. The federal agency (for GDOT projects, generally FHWA) funding a project that

would construct, modify or remove a public facility or other structure, acquire, utilize, or dispose of land or water resources that might significantly affect the coastal zone must notify the state agency of the proposal. In Georgia, coordination may be initiated with the Georgia Coastal Zone Management of the Department of Natural Resources (DNR) Coastal Resources Division (CRD).

B. Procedure

1. Federal action

   The federal agency must provide the state agency with notification at the earliest practicable time in the planning stage (see Chapter II). The proposed project should be provided to the state agency at least 90 days before final approval of the federal action (NEPA document).

   The coordination letter to the state agency will include a brief statement on the project's consistency with the state's coastal management program. Deviations from the management program are acceptable when unforeseen circumstances arise that present the federal agency with a substantial obstacle that prevents complete adherence to the program. In such a case, the federal agency will provide a detailed discussion on the proposed action sufficient to support the federal agency's conclusion.

2. State review of action

   The state agency will respond to the federal notification at the earliest practicable time. If a final response has not been received within 45 days of receipt, the federal agency can presume the state agency is in agreement. The state agency can request a review extension of no more than 15 days.

   Should the state agency disagree with the proposed project and feel the alternative does not meet to the maximum extent practicable for minimizing impacts to the coastal zone, the federal and state agencies should work together to resolve the issue. Should no agreement be made, mediation may be requested from the Secretary of Commerce. Judicial review should be a last resort.

   The federal agency will provide the state agency with a copy of the final environmental document. All coordination efforts and the resultant action will be discussed within the environmental document where appropriate and concurrence correspondence attached.

5.4.3 Consultant deliverables

A separate report is not required; the analysis and findings will be submitted as part of the NEPA document.

6.0 Physical environment

6.1 Noise Assessment

6.1.1 Regulations, Guidance and Policy

A noise impact assessment shall be conducted in compliance with Title 23 of the Code of Federal Regulation, Part 772—Procedures for the Abatement of Highway Traffic Noise and Construction Noise; the National Environmental Policy Act (NEPA) of 1969 as amended; the US Department of Transportation, Federal Highway Administration's (FHWA) Highway Traffic Noise: Analysis and Abatement Guidance (FHWA, Jan. 2011); Measurement of Highway-Related Noise (FHWA, May 1996); Federal Highway Administration's Traffic Noise Model (FHWA TNM), User's Guide (Version 2.5 Addendum) Final Report April 2004; Federal Highway Administration's 23 CFR 772 Final Rule and NEPA Reevaluations and Georgia Department of Transportation Highway Noise Abatement Policy for Federal-Aid Projects.

6.1.2 Applicability

A noise impact assessment or noise screening assessment will be completed for every federal-aid highway project in the state of Georgia authorized under title 23 United States Code. This includes federal-aid projects that are administered by GDOT, Local Public Agencies (LPAs), and roadways operated by others on behalf of the state of Georgia.

In accordance with 772.15, federal funds may be used for noise abatement measures when traffic noise impacts have been identified and abatement measures have been determined to be feasible and reasonable pursuant to 772.13(d).

For a Tiered Environmental Impact Statement (EIS), coordination with the FHWA Georgia Division Office is required for guidance regarding the application of a Type I designation. Typically, the Type I designation is made under the Tier 2 environmental document.

6.1.3 Project Classification

The federal rule 23 CFR 772 defines three project categories which are used to decide whether or not noise abatement should be considered in a formal study. They are Type 1, Type II or Type III.

Type I Project

Only Type I projects are considered for noise analysis and abatement. If any segment or component of an alternative meets the definition of a Type I project, then the entire alternative is considered to be Type I.

A Type I project is defined as follows:

(1) The construction of a highway on new location; or,

(2) the physical alteration of an existing highway where there is either:

(i) Substantial Horizontal Alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or,

(ii) Substantial Vertical Alteration. A project that removes shielding therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor; or,

(3) the addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a (high occupancy vehicle (HOV) lane, High-Occupancy Toll (HOT) lane, bus lane, or truck climbing lane; or,

(4) the addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or,

(5) the addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or,

(6) restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane, except for when the auxiliary lane is a turn lane; or,

(7) the addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza.

Each of the above criteria is discussed in detail in FHWA's Highway Traffic Noise: Analysis and Abatement Guidance (January 2011).

Type II Project

Federal regulation defines a Type II project as "A Federal or Federal-aid highway project for noise abatement on an existing highway." Georgia does not have a Type II program.

Type III Project

Type III projects are defined as a federal or federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require the preparation of a noise study or abatement of highway noise impacts.

6.1.4 Definitions

The definitions below are from the GDOT noise policy and have further defined certain criteria for use in Georgia and may vary from the definitions contained in 23 CFR 772.

Benefited Receptor: The recipient of an abatement measure that receives a noise reduction at or above the minimum threshold of 5 dB(A).

Common Noise Environment: A group of receptors within the same Activity Category in Table 1 below that are exposed to similar noise sources and levels; traffic volumes, traffic mix, and traffic speed; and topographic features. Generally, common noise environments occur between two secondary noise sources, such as interchanges, intersections, and cross-roads.

Date of Public Knowledge: The date of approval of the NEPA document (Categorical Exclusion [CE], the Finding of No Significant Impact [FONSI], or the Record of Decision [ROD]), as defined in 23 CFR part 771.

Design Year: The future year used to estimate the probable traffic volume for which a highway is designed *(Georgia highways are typically designed to function for 20 years beyond the year a project is opened to traffic.)*

Existing Noise Levels: The worst noise hour resulting from the combination of natural and mechanical sources and human activity usually present in a particular area.

Feasibility: The combination of acoustical and engineering factors considered in the evaluation of a noise abatement measure.

Impacted Receptor: The recipient that has a traffic noise impact.

L10: The sound level that is exceeded 10 percent of the time (the 90th percentile) for the period under consideration, with L10(h) being the hourly value of L10.

Leq: The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with Leq(h) being the hourly value of Leq.

Multifamily Dwelling: A residential structure containing more than one residence. Each residence in a multifamily dwelling shall be counted as one receptor when determining impacted and benefited receptors.

NEPA Document: The CE, FONSI or ROD as defined in 23 CFR 771.

Noise Abatement Criteria: A numerical impact criteria issued by the FHWA, published in 23 CFR 772 as Table 1 included below:

Table 1 to Part 772 - Noise Abatement Criteria

[Hourly A-Weighted Sound Level decibels, dB(A)]

Activity Category	Activity Leq(h)	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	Exterior	Residential
C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit

			institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F
F	-	-	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	-	-	Undeveloped lands that are not permitted

Source: (Federal Highways Administration) (23 CFR 772)

Note: These sound levels are only to be used to determine impact. These are the absolute levels above which abatement must be considered. Noise abatement is designed to achieve a substantial noise reduction. Noise abatement is not designed to achieve the noise abatement criteria.

Noise Barrier: A structure that is constructed between the highway noise source and the noise sensitive receptor(s) that lowers the noise level, including stand alone noise walls, noise berms (earth or other material), and combination berm/wall systems.

Noise Reduction Design Goal: The optimum desired dB(A) noise reduction determined from calculating the difference between future build noise levels with abatement, to future build noise levels without abatement. *GDOT has selected a design goal of 7 dB(A).*

Permitted: A definite commitment to develop land with an approved specific design of land use activities as evidenced by the issuance of a building permit.

Property Owner: An individual or group of individuals that holds a title, deed, or other legal documentation of ownership of a property or a residence.

Reasonableness: The combination of social, economic, and environmental factors considered in the evaluation of a noise abatement measure.

Receptor: A discrete or representative location of a noise sensitive area(s), for any of the land uses listed in Table 1.

Residence: A dwelling unit. Either a single family residence or each dwelling unit in a multifamily dwelling.

Statement of Likelihood: A statement provided in the NEPA document based on the feasibility and reasonableness analysis completed at the time the environmental document is being approved.

Substantial Construction: In Georgia this is defined as the granting of a building permit, prior to approval of the NEPA document.

Substantial noise increase: One of two types of highway traffic noise impacts. For a Type I project, an increase in noise level of 15 dB(A) in the design year over the existing noise level is considered substantial.

Traffic Noise Impacts: Design year build condition noise levels that approach or exceed the Noise Abatement Criteria (NAC) listed in Table 1 above for the future build condition; or design

year build condition noise levels that create a substantial noise increase over existing noise levels. A noise level which approaches the NAC is defined as 1 dB(A) less than the applicable NAC value.

Type II Project: A federal or federal-aid highway project for noise abatement on an existing highway. GDOT does not have a noise abatement program for Type II projects.

Type III Project: A federal or federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require the preparation of a noise study or abatement of highway noise impacts.

Validation: Process of verifying the accuracy of the traffic noise model inputs by measuring noise levels in the field and comparing the measured levels to the noise levels predicted in the model under the same traffic conditions.

6.1.5 Noise Impact Analysis

Objective

There are several objectives the noise assessment will accomplish:

- Document the corridor land use(s) and identify noise sensitive sites within the corridor;
- Establish a baseline noise condition presented as the existing condition, and predict design year noise levels so that changes in noise levels as a result of the proposed action can be evaluated;
- Identify existing and future noise impacts;
- Explore noise abatement options and provide noise mitigation;
- Identify residents and/or businesses that will likely be impacted by the noise; and
- Determine best strategies to reach the impacted residents and/or businesses.

Methodology

Georgia Department of Transportation does not have a customized noise analysis methodology. Federal Highway Administration noise analysis methodologies will be used. Please reference the US Department of Transportation, Federal Highway Administration's Highway Traffic Noise: Analysis and Abatement Guidance (FHWA, Jan. 2011); Measurement of Highway-Related Noise (FHWA, May 1996), and Federal Highway Administration's Traffic Noise Model (FHWA TNM), User's Guide (Version 2.5 Addendum) Final Report April 2004.

Required Information for Modeling

The information described below highlights some standard information and materials that are needed to evaluate highway noise levels. In general the Project Manager or design engineer should provide MicroStation dgn files, contour and elevation data, current aerial photography, and traffic data.

A. The MicroStation files will contain the main roadway for the existing and proposed condition, the centerline, property lines, right of way limits, structures and contours.

B. The aerial photography will include all structures located typically 500 feet from the build and no build alignment edge of pavement. The noise study area can be smaller or larger (up to 800

feet) based on the characteristics of the project area. Structures will be shown for both sides of the roadway even if the proposed action occurs in only one direction. The aerials will include a current representation of all facilities in the project corridor at the time of the noise evaluation. All applicable land use categories will be noted for receptors located within the noise study area and show structures on all sides of the roadway.

C. FHWA guidance requires that Type I or II sound level meters that perform in accordance with ANSI S1.4-1983 be used. Only sound level meters that have a valid certificate of calibration will be used to take readings.

D. The FHWA, Traffic Noise Model (TNM), version 2.5 is the current model approved for use on federal aid projects (23 CFR 772.17). The noise descriptor Leq will be used. The project noise model will be developed in accordance with the FHWA TNM User's Guide (FHWA, 2004). The noise analyst will model the existing, design year build and design year no build conditions. **Projects completed in STAMINA must be redone in TNM2.5.**

E. The traffic data used to develop the model must: 1) be approved by the GDOT Traffic Analysis Bureau in the Office of Planning; and 2) must be consistent with the traffic used in the planning and NEPA documents.

Sound Level Readings

Although GDOT uses FHWA prescribed methodologies, please note the information below.

Noise levels will be measured for all new location projects. This information will be used to establish and document a baseline noise condition in the undeveloped area.

Noise measurements will be made at representative locations, in the vicinity of noise sensitive receptors when traffic volumes would routinely produce the worst noise impact. Readings are taken in locations of frequent human use such as (but not limited to) a playground, patio, or outdoor eating area. Selected sites will exhibit conditions that are typical for the area being evaluated.

Each modeled project will be validated. Existing noise readings will be taken in 15 minute increments, traffic will be counted during the field noise reading and traffic speed will be estimated. The reading timeframe can be adjusted if needed but an explanation will be provided. For example, If a reading is taking place and a noise spike occurs near the end of the reading, e.g., a car backfires, extend the reading to 30 minutes so that the results are not skewed. This would count as two readings.

Atmospheric conditions at the time of measurement will also be noted.

Identification of Impacts

A noise impact in Georgia is identified in two ways: by comparison to the FHWA Noise Abatement Criterion (NAC) and/or by the identification of a substantial increase in noise from the existing condition. If predicted noise levels approach within 1 decibel or exceed the FHWA NAC for an activity category as

described in 23 CFR 772, Table 1, an impact is noted. A substantial increase in noise as defined in GDOT policy as an increase of 15 decibels or more from the existing noise level.

6.1.6 Report Preparation

Noise Impact Assessment

All federal aid projects must be evaluated for potential noise impacts. The GDOT has two types of noise analysis documentation: a Noise Screening Assessment and a two-phase evaluation consisting of the Noise Impact Assessment (Phase 1) and if needed, a Noise Barrier Assessment (Phase 2).The appropriate level of documentation required depends on the scope of the proposed action.

If the project does not meet the definition of a Type I project, a Noise Screening Assessment will be used. The noise screening assessment documents that the project does not require a TNM evaluation. All Type I projects will require at a minimum, the completion of a Noise Impact Assessment.

The Noise Impact Assessment is a comprehensive document that discusses in detail how the proposed project will change the noise environment within a project corridor. All Noise Impact Assessments will contain a cover page that includes standard project identification information (title, PI Number, month/year date), an executive summary, name of report preparer and firm (if applicable), and name of quality control/quality assurance (QC/QA) reviewer and firm. Please note the preparer and QC/QA reviewer cannot be the same person. It is acceptable to obtain a QC/QA review from a different firm if necessary. The report will contain a table of contents, project description, project location map, a summarized need and purpose statement, description of corridor land use, detailed analysis methodology, a discussion of the noise impact criteria, analysis results, abatement measures including a preliminary cost-benefit analysis for noise barriers, public outreach (if applicable), discussion of construction noise, receptor and impact location maps for the existing and design year conditions, and any other graphics and/or tables that meaningfully contribute to the report. The report appendices will include the project traffic data, TNM input data, TNM output files, field notes, public outreach materials such as informational materials, comments and responses, undeveloped parcel information, typical, and concept report. A CD or DVD of the noise assessment and TNM model including all files that support the model will be provided upon final acceptance of the study.

Noise Barrier Assessment

If the need for a noise barrier has been identified, a Noise Barrier Assessment will be completed when plans are sufficiently developed and elevation information is available. The Noise Barrier Assessment will contain a cover page that includes standard project identification information (title, PI Number, month/year date), an executive summary, name of report preparer and firm (if applicable), and name of quality control/quality assurance (QC/QA) reviewer and firm. The report will contain a table of contents, project description, project location map, a summarized need and purpose statement, description of corridor land use, a discussion of the noise impact criteria, summary of the noise impact assessment results, barrier analysis results including a discussion of feasibility and reasonableness (if applicable) of the proposed noise barrier, a summary of public outreach activities and findings (if applicable), discussion of construction noise, receptor location and proposed noise barrier location maps for the

existing and design year conditions, and any other graphics and/or tables that meaningfully contribute to the report. The report appendices will include the project traffic data, TNM input data, TNM output files, field notes, public outreach materials such as informational materials, comments and responses, undeveloped parcel information, typical, and concept report. A CD or DVD of the noise barrier assessment and TNM model including all files that support the model will be provided upon final acceptance of the study.

For each noise barrier considered, the report will discuss the optimum barrier location (referenced to project station numbers), height, top and bottom elevations, length, finalized abatement costs (both total cost and a breakdown of impacted and benefited receptors), and the decibel reduction anticipated for each barrier. This information will support the determination of whether or not each barrier considered is reasonable and feasible. A noise barrier location map, preferably on aerial photography, will be included. The noise barrier location map will allow the reader to see and understand the position of each barrier considered from the beginning to the end of the project.

Reevaluations

A reevaluation allows the lead federal agency to determine if the NEPA document and decision remain valid. A reevaluation of the noise analysis may be required if there are changes to policy, state or federal regulations or laws, design, traffic volumes, planning horizons or time. Please reference FHWA's question and answer reevaluation guidance, 23 CFR 772 Final Rule and NEPA Reevaluations.

Prior to completing a reevaluation, consultation between GDOT and the lead federal agency should occur to clarify what information should be evaluated and how the information should be presented.

6.1.7 Noise Abatement Consideration

Where noise impacts occur, abatement measures must be considered for each impacted receptor. Abatement options must be both feasible and reasonable. The evaluation and decision making process must be documented in the noise analysis. Abatement measures included in 23 CFR 772.15(c) are eligible for federal funding. At a minimum, reflective noise barriers will be considered for noise abatement.

Other acceptable traffic noise abatement measures include alterations to the horizontal or vertical alignment; traffic control measures (TCMs); acquisition of land to create a traffic noise buffer, and/or noise insulation of Category D land uses. These abatement measures can be considered any time the project corridor lends itself to the meaningful consideration of noise mitigation in some form other than a barrier. If an abatement measure other than a noise barrier will be considered, the project team should coordinate with GDOT and FHWA on a case be case bases prior to the submittal of the noise study.

The planting of vegetation or landscaping is not an acceptable abatement measure. Neither is the use of quieter pavements an acceptable noise abatement measure unless and until an approved Quiet Pavement Program is approved by FHWA for Georgia.

Feasibility

When evaluating the appropriateness of noise abatement, feasibility must first be established. The below criteria are considered for each noise abatement measure to evaluate feasibility.

- *Noise reduction:* a calculated noise reduction of at least 5 dB(A) must be achievable for a minimum of one impacted receptor. If interior noise impacts are identified for Activity Category D and exterior abatement measures are determined not feasible and reasonable, interior abatement measures will be considered. Each noise receptor which receives a 5 dB(A) reduction (whether classified as impacted or not) is considered to be a benefited receptor.
- *Constructability*: a noise abatement measure must be able to be constructed using reliable and common engineering practices.
- *Safety and Maintainability*: an exterior noise abatement measure should conform to the AASHTO Green Book and Roadside Design Guide and should be accessible to maintenance personnel and not prevent access to other highway appurtenances (e.g., drainage structures). The maximum barrier height that can feasibly be maintained is 30 feet.
- *Access:* an abatement measure must allow sufficient access to adjacent properties.

If all of the above requirements are satisfied, noise abatement is considered feasible.

Reasonableness

Reasonableness is only considered after the abatement measure has been determined to be feasible. The below criteria are considered for each feasible noise abatement measure to evaluate reasonableness. The first two must be satisfied before contacting property owners and residents:

1. *Noise Reduction:* at least one benefited receptor must receive a minimum noise level reduction of 7 dB(A) – i.e., the noise reduction design goal.

2. *Cost Effectiveness:* Using a $20 per square foot cost for the required noise barrier, the total cost must not exceed a $55,000 average allowance per benefited receptor. The $55,000 allowance was defined in January 2011 and will be reevaluated at an interval not to exceed five years.

3. *Property Owners and Residents:* The decision to provide abatement will be made in collaboration with the property owner and tenants of a benefited receptor. The outreach strategy will be customized for maximum effectiveness on each project. The minimum outreach method will be a certified letter survey provided to both property owners and tenants whose facility or home is identified as a benefited receptor. A noise barrier will only be constructed if at a minimum 50% plus one of the respondents vote in favor of noise abatement. Both property owners and tenants get a vote and their vote must be returned within 30 calendar days of receipt of the survey to receive consideration. Property owners will receive one vote per unit owned and an additional vote if they reside in the unit, and tenants will receive one vote for the benefited unit they occupy. For some projects, individual meetings,

community meetings or other outreach efforts may also be utilized to determine a majority consensus.

The final noise abatement measures cannot be determined until the design plans have sufficiently progressed to a point where the barrier analysis can be conducted; after which, the outreach above can be completed. GDOT will strive for a decision on abatement as soon as possible after this information is available, but no later than the final environmental document required for construction authorization.

If all three of the above requirements are satisfied, noise abatement is considered reasonable.

Where it has been determined that a noise barrier will be both feasible and reasonable, the noise barrier analysis will include a discussion of the following: optimum location, barrier height, top and bottom elevations, barrier length, costs and anticipated decibel reduction. This information will also be shown on graphics, maps and tables.

6.1.8. Public Outreach-- Noise Abatement Consideration

If it has been determined that a noise barrier is feasible and reasonable, public feedback will be solicited from the benefitted receptors for the proposed noise barrier to determine if the noise barrier is desired. If potential noise barriers are being shown to the public based on preliminary design, it should be made clear that the proposed noise barrier(s) are not guaranteed and a final decision about barrier feasibility and reasonableness cannot be made until more detailed design is available. In addition, there is no vote on the barrier at this time. Instead, the desired information is whether or not the benefitted receptors would be interested in the preliminarily proposed noise abatement. Final abatement measures cannot be determined until final design or when the plans have progressed to a point where the barrier analysis can be conducted, typically after preliminary design has been completed.

Noise focused outreach may include, but is not limited to an informational direct mail or email, noise focused community or public meetings. Noise outreach will be customized as necessary to be effective for the proposed action being evaluated. To the greatest extent practicable, property owners, residents, and businesses benefitted by the proposed noise barrier will be individually notified about the potential noise barrier and invited to participate in noise focused public outreach activities regarding the proposed barrier.

When public or community meetings are held for noise outreach, the project team will be prepared to provide information on the project in general in addition to the noise barriers. The date and time of the meeting will allow maximum participation. Information will be presented on aerial plots of a scale that readily conveys project details and included in a meeting handout. The meeting staff will be knowledgeable of the project and consist of at a minimum the Project Manager, design engineer, noise subject matter expert, greeter, right of way specialist (if necessary) and court reporter. Interpreters and translated materials will be provided as needed for the impacted community. The facility must be Americans with Disabilities Act (ADA) compliant and assessable to all citizens. The meeting handout will contain at a minimum a welcome letter, comment card and project description. It is preferred that maps of the proposed barriers also be included.

When public input is solicited via mail for noise abatement, the public should be provided at a minimum a non-technical description of the proposed action, a visual representation of the general location of the proposed abatement and a tool such as a comment card or post card to provide feedback.

Maps should not use lines to represent noise barriers unless adequate design is available to approximate a potential noise barrier location; a cloud or similar feature is preferred to represent the location of possible noise barriers. The goal of limiting the use of a line feature to represent a proposed noise barrier is to convey a possible location. The project team must clearly convey that a final decision on noise abatement has not been made.

Construction Noise Outreach

Although public outreach most often occurs prior to a project being constructed, there can be a need to develop and implement an outreach plan for a project under construction. The goal is to ensure quality communication between the affected community, GDOT, and the contractor. The contractor's initial plans for work should be carefully reviewed in construction meetings, and adjustments made to suggested construction noise activities scheduled for early morning or late evening. Once the times and dates of the construction activities are approved, an outreach plan can be developed to inform the public. The plan should:

- begin with clear identification of the location(s) of impacted residents and/or businesses;
- contain a strategy to inform the public of construction activities (such as blasting) that are expected to create noise above the usual construction machinery and equipment;
- include detailed information for the public on, and advance notice of, what times, what days, how long construction noise will occur;
- provide a point of contact at GDOT to receive questions, comments or concerns;
- acknowledge complaints within 24 hours and respond to complaints within three days;
- map complaint locations;
- include a way to maintain a record or summary of complaints received, responses provided and mitigation implemented, if any, to provide to the GDOT, Office of Environmental Services quarterly; and
- Communicate when the noise activities are complete, and thank residents and businesses for their patience and cooperation.

6.1.9 Consultant deliverables

One copy of the Noise Impact Assessment will be provided for review. Upon approval, one additional hard copy of the approved noise assessment and one electronic version will be submitted. One copy of the project's electronic TNM model files will also be submitted for the project file. A Word and pdf version of the report will also be included with the electronic file submittal.

One copy of the Noise Barrier Analysis will be submitted for review. Upon approval, one additional hard copy of the approved report and one electronic version will be submitted. One copy of the project's

electronic TNM model files will also be submitted for the project file. A Word and pdf version of the report will also be included with the electronic file submittal.

Reevaluations will be provided as needed.

Noise focused public outreach activities and deliverables should be developed on a case by case basis as a part of developing the project specific outreach strategy. When outreach is needed, typical consultant deliverables include but are not limited to: mailers, flyers, certified letters, door hangers, post cards, meeting layouts, handout packages, maps and other graphics that relay noise impact and abatement information visually, as well as any public comments and responses to comments.

6.1.10 Noise Templates

Noise Screening Assessment

Noise Cover Letter

Noise Assessment Template

Noise Assessment Checklist

6.2 Air Quality analysis

Both the National Environmental Policy Act (NEPA) and the Clear Air Act (CAA) Amendments require that air quality be considered during project development.

The NEPA requires a discussion of project-related carbon monoxide (CO) and Mobile Source Air Toxics (MSAT).

The CAA Amendments require that transportation investments conform to the state's air quality plan for meeting air quality standards. Referred to as "conformity," non-attainment areas must demonstrate that their transportation plan conforms to the region's air quality goals. A conforming transportation plan demonstrates that the emissions from traffic on the region's system are consistent with air quality goals found in the State Implementation Plan (SIP).

Georgia has areas in non-attainment for both ozone and fine particulate matter (PM 2.5). The state's non-attainment area for ozone includes 20 counties in the Atlanta region as well as Catoosa County in the Chattanooga region, Bibb and part of Monroe County in the Macon area, and part of Murray County around the Chattahoochee National Forest. The Atlanta non-attainment area for PM 2.5 overlaps the ozone non-attainment area but also includes a portion of Heard County and a portion of Putnam County. The PM 2.5 non-attainment area for Chattanooga includes Walker and Catoosa Counties, the Rome non-attainment area includes Floyd County and the Macon non-attainment area includes Bibb as well as a portion of Monroe County. A project level conformity also must be conducted for these pollutants; in addition to being included in a conforming plan, the NEPA document must include a project level analysis for the pollutant.

A map of Georgia's non-attainment areas can be found at GDOT's Office of Planning webpage.

The air quality report will address each of these four pollutants, including a notation if the project is exempt from analysis for any of the four.

6.2.1 Carbon Monoxide (CO)

The air specialist will perform all computer modeling for predicting ambient CO concentrations associated with the project, in accordance with the scope and procedures outlined below. All links associated with the proposed project will be evaluated along with signalized intersections, if applicable, for the existing year, the first year of operation and the design year. Worst case one-hour and eight-hour average ambient CO concentrations will be predicted using theoretical worst case inputs. The work by the air specialist will consist of the following:

A. Screen project for type and traffic volumes to determine the need to perform a detailed assessment.
    1. Determine if project adds capacity.
    2. Determine Level of Service (LOS) for intersections. Evaluate those with a LOS of D or worse.
    3. Screen design year traffic volumes to determine whether they exceed 10,000 vehicles per day (vpd).
B. Evaluate input data to determine worst-case conditions for CO dispersion near the project's corridor.
    1. Wind speed
    2. Stability Class
    3. Wind angles
C. Compile and format the signal cycle information (if applicable), the approach traffic volumes, speeds based on LOS, and emission factors using the latest Mobile emissions computer program.
    1. Use the Highway Capacity Software and the Highway Capacity Manual to help determine the LOS of intersections and projected speeds.
    2. Coordinate with the Georgia Department of Natural Resource's (DNR) Environmental Protection Division (EPD) to obtain all input parameters for running the latest Mobile Source Emissions model.
D. Run the models. Although either CALINE3 or CAL3QHC are accepted programs used to model uninterrupted flow roadways, GDOT only accepts CAL3QHC; CAL3QHC must be used to evaluate interrupted flow facilities.
E. Analyze the results produced by the CAL3QHC model to determine if any of the modeled receptors yielded concentrations greater than 9 ppm. If so, a persistence factor will be selected based on the recommendations of the US Environmental Protection Agency (USEPA) to convert the predictions to an 8-hour averaging time.

The air quality assessment will note the predicted peak one-hour concentration of CO and whether or not it is below the state and federal standards for one-hour averaging time (35 ppm). It also will note whether or not the predicted one-hour concentration is less than the eight-hour standard of 9 ppm. If it is less than 9 ppm, the assessment will state that an eight-hour concentration was not calculated.

6.2.2 Mobile Source Air Toxics (MSAT)

The USEPA identified 21 Mobile Source Air Toxics (MSAT) from the 188 air toxics listed the CAA. USEPA's six priority MSATs include benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene.

The FHWA has developed a three-tiered approach for analyzing MSATs in NEPA documents. The air specialist will screen the project based on type and traffic volumes to determine which approach is appropriate. The three tiers include:

- No analysis for projects with no potential for meaningful MSAT effects.
- Qualitative analysis for projects with low potential MSAT effects.
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

A. Exempt projects or projects with no meaningful potential MSAT effects
Exempt projects include:
    - Projects qualifying as a CE under 23 CFR 771.117(c) (www.fhwa.dot.gov/legsregs/legislat.html) or
    - Projects exempt under the CAA conformity rule under 40 CFR 93.126 (www.fhwa.dot.gov/environment/conformity/con_laws.htm).

    Although there is no analysis of MSATs required for exempt projects, a write-up is required in the NEPA document.

    Projects with no meaningful potential MSAT effects include:

    - Other projects with no meaningful impacts on traffic volumes or vehicle mix.

    The air specialist will document the basis for determining the project is one with "no meaningful potential MSAT effects." Appendix A in FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents (September 2009) includes the appropriate language needed to discuss the basis for this determination. This interim guidance can be found at http://www.fhwa.dot.gov/environment/airtoxic/100109guidmem.htm.

B. Qualitative analysis for projects with low potential MSAT effect
This category includes a broad range of projects, including those that serve to improve the operations of highway, transit or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase emissions. All projects not meeting the exempt projects noted in Section 6.2.2.A above, or not meeting the threshold criteria for higher potential effects noted below in Section 6.2.2.C are included in this category.

    The air specialist will conduct a qualitative assessment of emissions projections. According to FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents, "This qualitative assessment would compare, in narrative form, the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic, and the associated changes in MSAT for the

project alternatives, based on VMT [vehicle miles traveled], vehicle mix, and speed. It would also discuss national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by EPA."

Specific examples of appropriate language for this qualitative analysis can be found in Appendix B of the interim guidance noted above. Specific examples are included for

- Minor widening projects;
- A new interchange connecting an existing roadway with a new roadway;
- A new interchange connecting new roadways; and
- Minor improvements or expansions to intermodal centers or other projects that affect truck traffic.

The air specialist also will include a discussion of information that is incomplete or unavailable for a specific assessment of MSAT impacts. Appropriate language can be found in Appendix C of FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents located (http://www.fhwa.dot.gov/environment/airtoxic/100109guidmem.htm).

C. Projects with higher potential MSAT effects
FHWA anticipates that a limited number of projects will fall into this category – projects that have the potential for meaningful differences among project alternatives.

According to FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents, projects in this category must meet a two-pronged test:

- "Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location; or
- Create new or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT [annual average daily traffic] is projected to be in the range of 140,000 to 150,000, or greater by the design year;

And also

- Propose to be located in proximity to populated areas.

Projects falling in this category will require a quantitative analysis of MSATs. FHWA's Georgia Division and Headquarters will guide this quantitative analysis. Per FHWA's Interim Guidance, the air specialist should contact the Office of Natural and Human Environment (HEPN) and the Office of Project Development and Environmental Review (HEPE) in FHWA Headquarters for assistance in developing a specific approach for assessing impacts.

The FHWA Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents should be referenced for additional information on a Tier 3 MSAT analysis. The report will also include a discussion of information that is incomplete or unavailable for a specific assessment of

MSAT impacts. Appropriate language can be found in Appendix C of FHWA's interim guidance (http://www.fhwa.dot.gov/environment/airtoxic/100109guidmem.htm).

6.2.3 Ozone

A. Projects outside of an ozone non-attainment area
NEPA documents for projects located outside of areas in non-attainment or maintenance for ozone will note that "the project is in an area of the state that is in attainment for ozone."

B. Projects within an ozone non-attainment area
Projects located within areas in non-attainment or maintenance for ozone must be included in a conforming long range plan and short-term Transportation Improvement Program (TIP). Inclusion in a conforming plan also serves as project level analysis.

The NEPA document for projects located in areas of non-attainment or maintenance for ozone will include a statement that "the project is in an area that is in non-attainment for ozone. The Clean Air Act requires Transportation Plans and Transportation Improvement Programs in areas not meeting the National Ambient Air Quality Standards to conform to the emissions budget of the SIP for air quality."

This statement must reference the most current TIP that shows the region's highest transportation priorities and

- The name of the plan and TIP;
- The date the Metropolitan Planning Organization (MPO) adopted the plan and TIP;
- The date the US Department of Transportation (USDOT) approved the plan and TIP; and
- The project's reference number in the TIP.

6.2.4 Fine Particulate Matter (PM 2.5)

A. Projects outside of a PM 2.5 non-attainment area
The NEPA document for projects located outside of areas in non-attainment or maintenance for PM 2.5 will note that "the project is in an area of the state that is in attainment for PM 2.5."

B. Projects within a PM 2.5 non-attainment area
Projects located within areas in non-attainment or maintenance for PM 2.5 must be included in a conforming long range plan and short-term TIP.

Analysis for PM 2.5 is required for the preferred alternative. If the Draft EA evaluates several alternatives in equal detail, the PM 2.5 analysis will be deferred to the Final EA. Public notice for PM 2.5 must be given; a summary of the analysis must be included in the Public Hearing Open House handout.

Table 2 of 40 CFR Section 93.126 and 93.128 lists Exempt Projects which do not have to perform a PM 2.5 project level conformity determination, i.e., hot-spot analysis or regional emissions analysis. Exempt projects must be included on an exemption list reviewed by the interagency group. Consultants must confirm with the GDOT air specialist that the project has been included on the exempt list submitted to interagency.

C. Projects listed in Table 3 of 40 CFR Section 93.127 are only exempt from regional emissions analysis; local effects of these projects must be considered to determine if a hot-spot analysis is required. A PM2.5 work sheet will be filled out to assist with this determination.

For projects that are not exempt, a work sheet must be completed for review by the interagency group. State agencies represented include GDOT, EPD, and Georgia Regional Transportation Authority (GRTA); federal representatives include FHWA and USEPA. MPOs in non-attainment areas also are represented. This group will determine if the project is one of "air quality concern."

If the project is of "air quality concern" located in a PM 2.5 non-attainment area, the air specialist also will complete a qualitative PM 2.5 hot spot analysis. Quantitative analyses are not required at this time since quantitative hot spot modeling techniques and associated USEPA modeling guidance still do not exist.

Projects of "air quality concern" are outlined in 40 CFR Sections 93.123(b)(1)(i)-(v). These Sections are listed below with their associated preamble discussion.

Section 93.123(b)(1)(i): New or expanded highway projects that have a significant number of or a significant increase in diesel vehicles; Section 93.123(b)(1)(ii): Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

Examples of concern:

- A project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 AADT and 8% or more of such AADT is diesel truck traffic;
- New exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal;
- Expansion of an existing highway or other facility that affects a congested intersection (operated at LOS D, E, or F) that has a significant increase in the number of diesel trucks;
- Similar highway projects that involve a significant increase in the number of diesel transit busses and diesel trucks.
  Examples not of concern:
- Projects that do not meet the criteria under § 93.123(b)(1), such as any new or expanded highway project that primarily services gasoline vehicle traffic (i.e., does not involve a significant number or increase in the number of diesel vehicles), including such projects involving congested intersections operating at LOS D, E, or F;
- An intersection channelization project or interchange configuration project that involves turn lanes or slots, lanes or movements that are physically separated. These kinds of projects improve freeway operations by smoothing traffic flow and vehicle speeds by

improving weave and merge operations, which would not be expected to create or worsen PM 2.5 or PM 10 violations;

- Intersection channelization projects, traffic circles or roundabouts, intersection signalization projects at individual intersections, and interchange reconfiguration projects that are designed to improve traffic flow and vehicle speeds, and do not involve any increases in idling. Thus, they would be expected to have a neutral or positive influence on PM 2.5 or PM 10 emissions.

Section 93.123(b)(1)(iii): New bus and rail terminals, and transfer points, that have a significant number of diesel vehicles congregating at a single location;
Section 93.123(b)(1)(iv): Expanded bus and rail terminals, and expanded transfer points, which significantly increase the number of diesel vehicles congregating at a single location; and

Examples of concern:

- A major new bus or intermodal terminal that is considered to be a ‘‘regionally significant project’’ under 40 CFR 93.101;
- An existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel busses increases by 50% or more, as measured by bus arrivals.
  Examples not of concern:
- A new or expanded bus terminal that is serviced by non-diesel vehicles (e.g., compressed natural gas or hybrid electric vehicles);
- A 50% increase in daily arrivals at a small terminal (e.g., a facility with 10 buses in the peak hour).

Section 93.123(b)(1)(v): Projects in or affecting locations, areas, or categories of sites which are identified in the PM 10 or PM 2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The air quality report for projects located in areas of non-attainment or maintenance for PM 2.5 will include a statement that “the project is in an area that is in non-attainment for PM 2.5. Therefore conformity procedures apply to this project. The Clean Air Act requires Transportation Plans and Transportation Improvement Programs in areas not meeting the National Ambient Air Quality Standards to conform to the emissions budget of the State Implementation Plan for air quality.”

The air quality report will note that the project is included in a conforming plan and TIP. This statement must reference the most current TIP that shows the region’s highest transportation priorities and

- The name of the plan and TIP;
- The date the MPO adopted the plan and TIP;
- The date the USDOT approved the plan and TIP; and
- The project’s reference number in the TIP.

If the project is one of air quality concern, the report also must include the qualitative analysis noted above.

The regulations governing PM 2.5 analyses, 40 CFR 93, can be found at www.gpoaccess.gov/cfr/index.html.

6.2.5 Summary of air quality project level applicability

Pollutant	Region	Project level analysis
CO	Statewide	ADT > 10,000 & LOS D, E, or F
Pollutant	**Region**	**Project level analysis**
MSAT	Statewide	ADT < 140,000 – Qualitative ADT > 140,000 – Quantitative.
OZONE	Ozone non-attainment	NA
PM 2.5	PM 2.5 non-attainment	All projects, both exempt & non-exempt, must be reviewed the interagency group

6.2.6 Report preparation

Each Air Quality Impact Assessment will address all four pollutants and contain the following:

- An executive summary;
- An introduction citing air quality requirements;
- Project description;
- Traffic (existing and future) and LOS data;
- Assessment methodology;
- Interagency concurrence from USEPA for projects in a PM 2.5 non-attainment area; and
- Conclusions

An Air Report Checklist is available to help reduce the need for report revisions due to information omissions.

6.2.6a Air Templates

Air Assessment Cover Letter

Air Assessment Template

Air Screening Template

Air Assessment Checklist

PM 2.5 Determination Letter

6.2.7 Consultant deliverables

Consultants will deliver one copy of the draft Air Quality Impact Assessment, three paper copies of the approved report, and an electronic copy of the final report and air model.

For non-exempt projects located in a PM 2.5 non-attainment area, consultants also will prepare and submit the determination letter for use during inter-agency consultation. Consultants also must insure that that exempt projects have been placed on the list of exempt projects reviewed by the interagency group. If it is necessary to advertise the interagency determination for PM2.5 in the legal organ newspaper, the consultant will also be responsible for running the ad.

6.2.8 Useful websites

www.fhwa.dot.gov/environment/conformity/ref_guid/index.htm

6.2.9 Legislation and regulations

Clean Air Act Amendments, 42 USC Chapter 85
Clean Air Act Conformity Requirements, 42 USC 7506
EPA Conformity Regulations, 40 CFR 51 and 93

6.3 Energy supply and mineral resources

In compliance with NEPA, the potential impacts to natural resources and energy supplies must be addressed. It is agreed that transportation projects may result in a sizeable one-time increase in the demand for energy supplies. However, this one-time use should be mitigated by the efficiency a proposed action may create along an existing or new facility. The NEPA analyst will review natural resources facilities such as mining operations to ensure that a corridor would not negatively impact the production of mineral resources present in an area.

The NEPA document will address the following uses of natural resources and energy supplies in the appropriate section:

- One-time sizable use of fossil fuels for heavy machinery and other vehicles;
- Energy mining operations or mineral reserves in the project area; and
- Electrical requirements.

Typically, these potential impacts are mitigated because the proposed project is a one-time energy use that will ensure a more efficient facility; at present, there are no fuel shortages.

If a mining operation or mineral reserve is located in the project area, coordination with the mining operation should be initiated at the earliest practicable time (see Chapter II). Early Coordination allows ample time to shift the roadway design if possible in the area of the mining operation or provide the mining operation ample time to strip the area potentially affected by project implementation of valuable mineral sources.

6.4 Construction and utilities

Impacts associated with construction activities to the natural, social, and economic environments should be taken into account. These impacts (if any) are discussed within the appropriate sections of the NEPA document.

Discussion of construction impacts should include, but not be limited to, the following areas of potential impact:

- Inconvenience to motorists – During construction, will motorists be delayed for long periods of time? Would lane closures or detours be required?
- Loss of forested areas – Will the project require the clearing of substantial natural vegetation?
- Public Utilities – Will the project require the relocation of utilities (i.e., water, sewer, telephone, etc.); will there be an interruption of the service for a period of time during utility relocations? Will the relocation of the utilities impact other environmental resources, such as streams or historic properties?
- Noise – Will construction activities cause noise pollution?
- Air Quality – Will excessive fugitive dust impact the air quality within the project area; will watering be required to settle/limit dust particles?

Mitigation may be required for impacts resulting from construction activities.

6.5 Underground Storage Tank (UST)/hazardous waste

Hazardous materials and Underground Storage Tank (UST) surveys are performed for NEPA compliance to identify any possible present or future environmental concerns on or around a subject property or corridor. These assessments can help with early identification of potentially problem facilities affecting the project.

Please note that for NEPA documents prepared by GDOT, the NEPA analyst will perform a windshield survey of the project corridor for potential UST and hazardous waste sites. However, the Project Manager will request the UST/hazardous waste site field reconnaissance from the appropriate District and the Office of Materials and Research. The findings of this study will be summarized in the NEPA document. For more information on these procedures, see Policies and Procedures 5525-1.

Also please note that property owners must be notified prior to conducting a soil survey on their land.

7.0 Indirect and Cumulative Impacts (ICI)

7.1 Overview

Indirect (also referred to as secondary) impacts are changes that result from the proposed project facilitating development in the region. Indirect effects are those "caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable" (40 CFR 1508.8). Examples of indirect impacts are changes in land use, water quality, and population density.

Cumulative effects are impacts that result from the incremental impacts of the proposed transportation action when added to other past, present, and reasonably foreseeable future actions, regardless of the agency or person(s) that undertakes the project (40 CFR 1508.7). These impacts should describe the indirect consequences which result in the immediate project area and beyond at some point in the future. An example of cumulative effects is the cumulative commercial and residential development resulting from new highway construction that facilitates greater numbers of people to travel in the region.

An ICI analysis is required for all Environmental Assessment (EA) and Environmental Impact Statement (EIS) documents. If the previous approval did not include ICI, the next reevaluation must include this analysis. Occasionally, a Categorical Exclusion (CE) determination will require an ICI analysis so the NEPA analyst must discuss this requirement with the Federal Highway Administration (FHWA) reviewer.

The ICI analysis must address each resource type identified in the project area. Please note that if the project is not directly or indirectly affecting a resource, a cumulative effects analysis is not required.

7.2 Analysis

7.2.1 Indirect impacts

The discussion on indirect impacts should include the foreseeable indirect social, economic, and environmental changes caused by the development, which results from the proposed transportation project. This evaluation should note the existing conditions of the natural and human environment and document the changes that may occur. For example, if this wetland were lost, then what impact would its loss have on water quality? Another example is if this business were displaced, what impact would it have on the local economy? However, the functional relationship between cause and effect is not always well defined. The indirect impact evaluation should include how the alternatives (including the No- Build alternative) under consideration would stimulate low density, non-transit oriented, sprawl-type development, or assist in achieving sustainable development. In many cases, the historical development of a community or region can be an indicator of future development patterns. According to the FHWA Position Paper, the "acceptable guideline for determining the area of influence is the geographic extent to which the project will affect traffic levels." The area of influence for the indirect effects analysis should be clearly defined (and preferably shown in a graphic) and may vary from resource to resource.

The indirect effects discussion should demonstrate the impact of the proposed project on the community and how the proposed project would benefit the community. The study should also include the regional impact of the proposed project with respect to employment opportunities, infrastructure, tax revenues, and access to activity centers. The analysis should demonstrate the effect of the proposed action on the existing and foreseeable future connectivity of bike paths, pedestrian sidewalks, train, and automobile travel. The discussion on indirect impacts should delineate the cause and effect relationships among the proposed action and natural and human environments of concern. Once indirect impacts have been evaluated, mitigation of adverse impacts may include involvement of local planning agencies.

7.2.2 Cumulative impacts

Scoping is critical for a cumulative effects analysis. Scoping will identify the baseline conditions and the relevant past, present, and future actions that relate to the analysis. The evaluation should establish a geographic scope and time scale for the project impact area (these parameters may vary resource to resource). The baseline conditions and the meaningful changes in the natural and human environment should be described. The discussion on cumulative impacts should delineate the cause and effect relationships among the multiple actions and the natural and human environment of concern. The

study should also consider prior NEPA analyses of similar actions or nearby actions and also evaluate the proposed route in context with other planned projects in the region, including non-transportation projects. Elements of the discussion may include: culturally valued landscapes, air and water quality, demographic diversity, habitat fragmentation, vegetative resources, soils, wildlife, fisheries, land use, coastal zone, recreation, and socio-economics of the region. Determining the consequences should include analyzing the additive and long-term effects of the projects. Some topics to address in the cumulative impacts analysis include: traffic, induced growth, natural environment (i.e., soils, geology, groundwater), housing, energy, air quality, cultural resources, water quality, aquatic ecology, land use, hazardous waste, noise, access, socioeconomics, and visual changes.

If possible, quantifiable methods for analysis should be utilized for easy comparison. Possible methods of analysis include: interviews, checklists, matrices, modeling, GIS, ecosystem analysis, economic impact analysis, and social impact analysis. A table listing the resource, the past actions, the present actions, the proposed transportation action, the future action, and the cumulative effects would be a useful tool for analysis. A significant cumulative effect on the environment would mean that incremental individual effects on the environment would produce a substantial change in the physical conditions of the area.

According to the Council on Environmental Quality (CEQ) guidance, a step-by-step approach includes the following:

1. Identify the significant cumulative effects issues associated with the proposed action and define assessment goals.
2. Establish the geographic scope and time frame for the analysis.
3. Identify other actions affecting the resources, ecosystems, and human communities of concern.
4. Characterize the resources, ecosystems and human communities in terms of their response to change.
5. Characterize the stresses affecting these resources.
6. Define a baseline condition of the resources in the natural and human environment.
7. Identify the cause and effect relationships between human activities and resources.
8. Determine the magnitude and significance of the cumulative effects.
9. Modify or add alternatives to avoid, minimize, or mitigate the significant cumulative effects.
10. Monitor the cumulative effects of the selected alternative.

7.3 Consultant deliverables

A separate report is not required; analysis and findings will be submitted as part of the NEPA document. Phone logs of discussions with locals and any studies referenced should be referenced in the document and possibly attached in an appendix.

7.4 References

- Guidebook for Evaluating Indirect Land-use and Growth Impacts of Highway Improvements, Oregon DOT (April 2001)
- Considering Cumulative Effects Under the National Environmental Policy Act (January 1997)
- Consideration of Cumulative Impacts in EPA Review of NEPA Documents (May 1999)

- Guidance for Estimating the Indirect Effects of Proposed Transportation Projects (1998), NCHRP Report 403 (available from the National Academies Bookstore)

Regulations

- National Environmental Policy Act of 1969
- 23 CFR 771; 40 CFR 1508.7, 1508.8

CHAPTER VI - SECTION 4(f)

1.0 Overview

Section 4(f) dates to 1966 and the creation of the US Department of Transportation (USDOT). Initially codified in 49 United States Code (USC) 1653(f) (Section 4(f) of the USDOT Act of 1966), it was re-codified in 1983 in 49 USC 303, though the provision is still commonly referred to as "Section 4(f)." All USDOT agencies must comply with its requirements. The Section 4(f) regulations can be found in 23 CFR 774. FHWA's policy paper can be found at http://www.environment.fhwa.dot.gov/projdev/4fpolicy.asp.

Section 4(f) expressly prohibits USDOT agencies from using land from significant publicly owned parks, recreation areas, wildlife & waterfowl refuges or any significant historic site unless there is no prudent or feasible alternative to that use. The use of land includes:

- Purchase of right-of-way,
- Permanent incorporation of 4(f) property into a transportation facility,
- Temporary easements that impact 4(f) functions, or
- Constructive use that substantially impairs 4(f) activities.

A Section 4(f) Evaluation may be prepared as part of an Environmental Assessment (EA) or Environmental Impact Statement (EIS), allowing the preparer to reference other chapters in the National Environmental Policy Act (NEPA) document (e.g., Purpose and Need) or it may be developed as a stand-alone document, especially if the project will be covered with a Categorical Exclusion (CE) determination.

2.0 Applicability

Section 4(f) provisions apply to significant publicly owned parks, recreation areas, wildlife & waterfowl refuges as well as significant historic sites. The official having jurisdiction over the resource indicates whether or not the resource is significant. However, the USDOT agency makes the final applicability determination.

2.1 Significant publicly owned parks, recreation areas, wildlife & waterfowl refuges

The official (federal, state or local) having jurisdiction over the property must have officially designated the property as such and determined that one of its major purposes and functions is for park, recreation or as a refuge. For multiple use properties, the function of the area being impacted by the proposed project must be evaluated with the officials having jurisdiction. While all park, recreation and refuge properties should be considered during NEPA, only those that are publicly owned are given consideration under Section 4(f).

2.1.1 Significant public parks and recreation areas

The official with jurisdiction also must indicate that the facility plays a significant role in meeting the community's objectives with regard to park and recreation opportunities. Significant public parks and recreation areas must be open to the general public during normal operating hours to be subject to the provisions of Section 4(f). An example where Georgia Department of Transportation (GDOT) projects

occasionally impact publicly owned recreation lands that may or may not be subject to Section 4(f) considerations are public school playgrounds. Generally, if the playground is open to the general public after hours, it is given consideration under Section 4(f). Those playgrounds that restrict use to school hours by school children are not subject to the provisions of Section 4(f). Also, for a golf course to be subject to Section 4(f), it must be publicly owned.

2.1.2 Significant wildlife and waterfowl refuges

Similarly, the official with jurisdiction must indicate that the property plays a significant role in meeting their refuge objectives. However, unlike parks and recreation facilities, refuges do not need to be open to the public to be afforded protection under Section 4(f).

2.2 Significant historic sites

Properties currently listed in or eligible for listing in the National Register of Historic Places (NR), following consultation with the State Historic Preservation Officer (SHPO) (the official having jurisdiction), are subject to the provisions of Section 4(f). The USDOT agency official can determine that locally significant historic sites are also subject to Section 4(f).

2.2.1 Archaeological sites

Archaeological sites that are listed in or eligible for listing in the NR and that warrant preservation in place are protected under Section 4(f). This includes sites discovered during construction.

2.2.3 Historic districts

Section 4(f) applies to the use of properties within a historic district that are either individually eligible for listing in the NR or those that contribute to its eligibility. Unless an element within a historic district has been determined to be non-contributing, it is assumed that it contributes to the district's historic significance. If the proposed use of a non-contributing element results in an adverse effect to the district, further consideration should be given to whether or not the proposed action substantially impairs the features or attributes that contribute to its NR eligibility and thus results in a constructive use of the historic district.

2.3 Major Exceptions

Federal regulation (23 CFR 774.13) identifies a number of situations in which Section 4(f) is not applicable. What follows is a discussion of the most frequently encountered exceptions. For a complete list of situations in which Section 4(f) does not apply, the reader may consult 23 CFR 774.13.

2.3.1 Archeological sites not worthy of preservation in place

Section 4(f) does not apply to archaeological sites that, after consultation with the SHPO, have been determined to be important mainly for what can be learned from data recovery and have minimal value for preservation in place. Before FHWA determines that the use of land from an archaeological site is not subject to evaluation under Section 4(f), the SHPO must be consulted and not object to the proposed finding.

2.3.2 Historic transportation facilities

Historic transportation facilities, e.g., bridges, highways, railroads, depots, that are listed in or eligible for listing in the NR are subject to the provisions of Section 4(f) only if the project results in an adverse effect to the resource. The regulations implementing Section 106, specifically 36 CFR 800.5(b), note that rehabilitation work done in accordance with the Secretary of the Interior's "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings" can avoid a finding of adverse effect.

2.3.3 Non-contributing elements of historic districts

Section 4(f) is applicable to the use of properties within a historic district only if the project results in an adverse effect to the district or to an individually eligible property within the district. A no adverse effect determination for a district is made by the SHPO when the property being used does not contribute to the district's NR eligibility.

2.3.4 *Temporary use*

Federal regulation (23 CFR 774.13) notes that Section 4(f) does not apply to temporary occupancies/temporary easements if the following conditions are met:

- Duration is temporary (less than time of construction) and there is no change of ownership of the land;
- Scope of work is minor and the magnitude of changes to the Section 4(f) property are minimal;
- There are no anticipated permanent adverse physical impacts, nor any interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
- The land is fully restored to a condition that is at least as good as that which existed prior to the project; and
- There is documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

2.4 *De minimis*

The current transportation bill, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), states that the requirements of Section 4(f) will be considered to be satisfied if the Section 4(f) protected resource will not be adversely affected by the proposed action. If a *de minimis* finding is made, GDOT has met all requirements under Section 4(f) for that resource, and an analysis of avoidance alternatives is not required. *De minimis* findings must reference 23 CFR 774.3(b).

For historic properties, the Section 106 consultation must result in a finding of no adverse effect and the SHPO must acknowledge that FHWA will be utilizing the *de minimis* provision. The cover letter transmitting the Assessment of Effects (AOE) prepared for the Section 106 consultation will request the SHPO's acknowledgement.

For public parks, recreation areas, wildlife & waterfowl refuges, the official with jurisdiction over the property must concur that the proposed action will not adversely affect the activities, features, and attributes of the property that qualify it for protection under 4(f). Public notice and an opportunity for

public review and comment must be provided prior to FHWA making a *de minimis* finding for a public park, recreation area, wildlife or waterfowl refuge.

It is important to note that although the requirements of Section 4(f) are satisfied when a *de minimis* finding is made, Section 4(f) is still applicable to the use of the resource. For this reason, projects involving *de minimis* determinations, like all projects involving Section 4(f) determinations, are excluded from the Programmatic Categorical Exclusion (PCE) Agreement.

3.0 Alternatives analysis

Section 4(f) prohibits the use of land from a protected resource unless it can be shown that there is no prudent or feasible alternative to that use. If Section 4(f) is applicable to the use of a resource and if *de minimis* does not apply, a Section 4(f) Evaluation must be prepared to demonstrate that no prudent and feasible alternative to the use of the resource exists. Numerous legal decisions on Section 4(f) have established substantive standards for the prudent and feasibility test that are very high. Thus, a Section 4(f) Evaluation must be rigorous and systematic.

During the analysis, if an alternative that does not use Section 4(f) land is found to be prudent and feasible, it must be selected.

An alternative is feasible if it can be designed and built. Thus most alternatives are feasible. Determining whether or not an alternative is prudent, whether or not it makes sense, is more difficult. 23. CFR 774.17 notes that an alternative may be rejected as not prudent for the following reasons:

- It compromises the project to the degree that it does not meet its purpose and need;
- It results in unacceptable safety or operational problems;
- It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- It causes other unique problems or unusual factors;
- After reasonable mitigation, it still causes:
    - Severe social, economic, or environmental impacts;
    - Severe disruption to established communities;
    - Severe disproportionate impacts to minority or low income populations;
- An accumulation of factors, as opposed to an individual factor, which result in adverse impacts, present unique problems or reach extraordinary magnitude.

The Section 4(f) regulations, effective in April 2008, allow consideration of the value of the Section 4(f) resource when determining whether an alternative is prudent. The regulations establish a sliding scale where the severity of problems resulting from avoiding is evaluated in light of the significance of the protected resource. Thus more severe problems must exist to justify rejecting an avoidance alternative for a highly significant Section 4(f) resource; less severe problems may justify rejecting an avoidance alternative of a less significant Section 4(f) resource or one that is likely to be torn down by a private owner.

3.1 Avoidance alternatives

The project team must fully evaluate alternatives that avoid the use of Section 4(f) land. For the purposes of this analysis, *de minimis* impacts do not need to be considered further in the avoidance discussion. Traditionally, the Evaluation will analyze the impacts associated with:

- The No-build alternative,
- Widening to the opposite side of the highway (if applicable),
- New location alignment, and
- Reducing the scope of the project.

Enough analysis must be completed, and documented, to demonstrate whether or not an alternative is prudent and feasible. As noted, the regulations allow the consideration of the relative importance of the Section 4(f) protected resource in determining whether an alternative is prudent. Once the conclusion is reached that an alternative is not prudent and feasible, its consideration ends.

3.2 Minimization of harm

If the analysis concludes that a prudent and feasible alternative that avoids the use of Section 4(f) land does not exist, further consideration must be given to minimizing harm to each Section 4(f) resource. Minimization of harm includes both design changes that lessen the impact as well as mitigation measures that compensate for any remaining impacts. The official with jurisdiction over the resource must be consulted while considering minimization and mitigation efforts.

Mitigation of historic resource impacts generally are memorialized in the Memorandum of Agreement (MOA) prepared during the Section 106 process. Mitigation of impacts to public parks, recreation areas, or wildlife or waterfowl refuges may include the replacement of land or facilities of comparable value and function, or monetary compensation that could be used to improve the remaining land.

3.3 Least overall harm

If all prudent and feasible alternatives use land from Section 4(f) resources, an evaluation to determine which alternative results in the least overall harm to Section 4(f) resources must be conducted. Minimization and mitigation measures will be included in the least overall harm analysis. *The alternative resulting in the least overall harm must be selected.* This determination should not only consider impacts to the Section 4(f) resources but also the alternative's ability to meet the purpose and need, impacts to non-Section 4(f) resources and "substantial differences in cost" among the alternatives (see 23 CFR 774.3(c)).

A qualitative analysis is required since not all uses of Section 4(f) resources have the same magnitude of impact and not all Section 4(f) resources have the same quality. According to the FHWA Section 4(f) guidance paper, the evaluation of the net impact should consider whether the use of land involves:

- A large or small taking in relation to the overall size of the resource, or
- Shaving an edge of a property as opposed to cutting through its middle, or
- Altering part of the land surrounding a historic building rather than removing the building itself, or

- Examining key features of the Section 4(f) resource, or
- An unused portion of a park rather than a highly used portion.

When different prudent and feasible alternatives propose the use of different Section 4(f) resources, the importance of the resources must be considered. The FHWA policy paper compares the use of three marginal acres from a large park versus one acre from a small city park. The officials with jurisdiction over the Section 4(f) resource must be consulted and their opinions recorded in the administrative record.

4.0 Preparing a Section 4(f) Evaluation

The FHWA Section 4(f) policy paper notes that the written Section 4(f) Evaluation establishes an administrative record and ensures that FHWA has followed all regulatory and statutory requirements. The administrative record establishes, in writing, the basis for concluding that there is no prudent or feasible alternative to the use of Section 4(f) land and that all minimization of harm occurred.

A Section 4(f) Evaluation must include:

- Purpose and Need (if Evaluation is not embedded in an EA or EIS),
- Project description (if Evaluation is not embedded in an EA or EIS),
- Applicability or non-applicability of Section 4(f) to a property used by the project,
- Description of the Section 4(f) resource(s), including:
    - General description
    - Location
    - Boundary
    - Size
    - Maps or drawings
    - Ownership
    - Function
    - Description and location of existing and planned facilities
    - Access and usage
    - Relationship to other similar lands nearby
    - Unusual characteristics
- Impacts on Section 4(f) resource(s) for each alternative (including amount of land to be used),
- Avoidance alternatives that do not impact any Section 4(f) resource with a finding as whether or not they are prudent and feasible (*de minimis* impacts are not subject to this analysis),
- Measures to minimize harm (including those measure[s] adopted and those considered but not adopted),
- Coordination.

If an Individual Section 4(f) Evaluation is being prepared, the final Section 4(f) Evaluation will include a "finding of no feasible and prudent alternatives."

5.0 Processing/circulating a Section 4(f) Evaluation

There are two types of Section 4(f) Evaluations, Individual and Programmatic.

5.1 Individual Section 4(f) Evaluation

An Individual Section 4(f) Evaluation requires both a draft and a final evaluation. The process for obtaining approval of an Individual Section 4(f) Evaluation involves the following:

- Prior to circulating the draft evaluation
    - Preliminary coordination with the official of the agency owning or administering the resource;
    - For projects using land from the National Forest System, preliminary coordination with the US Department of Agriculture through the appropriate National Forest Supervisor;
    - For projects using a 4(f) resource where Housing and Urban Development (HUD) funds have been used, discuss with FHWA as to whether or not preliminary coordination with HUD is required.
- Once FHWA has approved the draft Section 4(f) Evaluation
    - Coordination with Department of Interior (DOI) and others;
    - Submit two copies to HUD (FHWA will prepare the transmittal letter);
    - 45-day comment period (from date of receipt);
    - If DOI does not respond within 15 days of the comment deadline, FHWA "may assume a lack of objection and proceed with the action."
    - Pre-review by FHWA Chief Counsel.
- Final Section 4(f) Evaluation
    - Legal sufficiency determination by FHWA Chief Counsel;
    - Review and approval by FHWA;
    - Submit two copies to HUD.

5.2 Programmatic Section 4(f) Evaluation

Programmatic Section 4(f) Evaluations have historically been used as an alternative to preparing an Individual Section 4(f) Evaluation, especially in situations where the use of a Section 4(f) property would not result in an adverse effect to the resource. However, the *de minimis* provision enacted in 2005 as part of SAFETEA-LU rendered all but one Programmatic Section 4(f) Evaluation virtually obsolete.

Although the FHWA Division Office has ultimate authority to determine if a Programmatic Section 4(f) Evaluation is applicable, these Evaluations have typically been restricted to projects that would improve the operational characteristics, safety, and/or physical condition of existing highways on essentially the same alignment. Compared to an Individual Section 4(f) Evaluation, a Programmatic Section 4(f) Evaluation has the virtue of saving time because higher-level review is not required and documentation is not formalized. However, compared to the use of *de minimis*, a Programmatic Section 4(f) Evaluation is highly time consuming because it requires the same rigorous analysis of alternatives as an Individual Section 4(f) Evaluation.

The four Nationwide Programmatic Section 4(f) Evaluations that have been used in Georgia are:

- Minor use of historic resources (for those projects with a "No Adverse" Effect finding under Section 106),
    - Cannot be used for the construction of a new location highway,
    - Cannot be used in conjunction with the preparation of an EIS;
- Minor use of park & recreation lands and wildlife & waterfowl refuges for those projects using a minor amount of land [< 10 acres – 10 percent; 10 to 100 acres – 1 acre; > 100 acres – 1 percent];
    - Cannot be used for the construction of a new location highway,
    - Cannot be used in conjunction with the preparation of an EIS;
- Historic bridges (even those that are adversely affected),
    - Cannot be used if the affected bridge is designated a National Historic Landmark;
- Net benefit.

Of these four evaluation types, the historic bridge evaluation retains the most currency because it can be applied in situations where *de minimis* is not applicable, i.e., when the Section 4(f) resource (bridge) would be adversely affected. Georgia DOT has conducted a historic bridge inventory and management plan. Each bridge (identified by its serial number) determined eligible for the NR was further studied for its preservation potential. The Programmatic Section 4(f) Evaluation must address issues raised in the management plan. At a minimum, alternatives must include

- No Build,
- Build a new structure on new location without affecting the historic bridge property, and
- Rehabilitation of old bridge without affecting its historic integrity

The Programmatic Section 4(f) approval is obtained when FHWA Division Office finds all criteria have been satisfied.

6.0 Consultant deliverables

If the Section 4(f) Evaluation is embedded in an EIS or EA, consultant deliverables noted in Chapter III, Sections 6.1 and 6.3 will apply. If a Programmatic Section 4(f) Evaluation is included in a CE determination or reevaluation, consultant deliverables noted in Chapter III, Section 6.2 and 6.3 will apply.

If a stand-alone Individual Section 4(f) Evaluation is being prepared, in conjunction with a CE or reevaluation, the consultant will submit four copies of the draft for review and submittal to FHWA, and a minimum of 13 copies of the approved draft for circulation. Three copies of the final will be submitted for review by GDOT; once GDOT has approved the final Individual 4(f) Evaluation, the consultant will deliver 4 copies for submittal to FHWA. Once FHWA has approved the final Section 4(f) Evaluation, the consultant will deliver a minimum of 13 copies for circulation. The consultant should also submit an electronic copy.

No Section 4(f) Evaluations should be submitted in three-ring binders.

7.0 References and website

http://www.environment.fhwa.dot.gov/guidebook/index.asp

The Sections Entitled “Environmental Documentation” and “General Environmental Requirements” contain regulations, environmental flow charts, and the FHWA Technical Advisory on writing environmental NEPA, Section 4(f) documents, and Categorical Exclusions. The Section 4 (f) section includes information on Nationwide Programmatic Agreements for certain types of 4 (f) impacts.

CHAPTER VII - ENVIRONMENTAL REEVALUATIONS

1.0 Overview

An environmental reevaluation determines whether or not the approved National Environmental Policy Act (NEPA) document matches the current project plans. An environmental approval is valid for six months or until the project design changes. This includes not only alignment changes but all footprint or right-of-way (ROW) and easement changes as well as design changes that alter the analysis presented in the approved NEPA document.

A few examples of frequent project changes are: alignment extensions, additional easements for sediment basins and driveways, slope changes, and structure changes (e.g., a previously proposed bridge changing to a culvert).

The environmental approval also may be invalidated due to changes in the affected environment or environmental regulations or requirements. Therefore, the reevaluation will address not only project design features, but also the affected environment (e.g., are there new residences or churches, new development, both commercial and residential), anticipated impacts of the project, and proposed mitigation. In addition, it must take into account any changes in environmental regulations and requirements.

As part of this process, all studies required at the time the reevaluation is being completed must be approved prior to the reevaluation being submitted to the Federal Highway Administration (FHWA), even if these studies were not required at the time of the previous approval. Such studies will be conducted in accordance with Chapter V.

Public Involvement needs also must be reconsidered during the reevaluation phase if substantial time has lapsed since the last outreach effort or if project changes warrant additional outreach.

Studies also must be current (see Section 4.0 for additional detail). Two common areas that require particular attention include changes in historic property designations and protected species listings.

If any of the aforementioned issues require opening or reopening agency consultation, the reevaluation cannot be approved prior to the receipt of agency concurrences.

During a reevaluation, commitments shown on a previously approved green sheet will be carried forward verbatim. If the commitment has changed or is no longer relevant, an explanation will be provided.

2.0 Major authorizations

A current environmental approval is required before major authorizations can be granted. Also refer to Chapter X, 2.0.

2.1. Right-of-way authorization

Several activities must occur between the NEPA approval and ROW authorization. Thus the project team must strive to obtain NEPA approval seven months prior to the scheduled ROW date. Environmental activities leading up to ROW authorization include:

- Project Manager (PM) requests Preliminary Field Plan Review (PFPR).
    - The NEPA analyst receives the plans, provides them to specialists, as needed, for review, and completes the environmental checklist for PFPR.
    - If the plans differ from what is covered in the NEPA document or most recent reevaluation, a reevaluation must be completed, as outlined in Section 4.0.
    - The reevaluation for project changes will be completed after the PFPR is held, and within six months of ROW authorization.
- If no changes have occurred to the project design, affected environment, or environmental regulations, the NEPA analyst must check the date of the most recent environmental approval.
    - If the most recent environmental approval occurred within six months, a reevaluation is not required.
    - If the most recent environmental approval occurred 6 to 12 months prior, the NEPA analyst must complete a "no change" reevaluation. The reevaluation will be approved by the Office of Environmental Services.
    - If the most recent environmental approval occurred more than 12 months prior, the NEPA analyst must complete a "no change" reevaluation and submit it to FHWA for approval.
- The reevaluation will include an updated environmental commitment (green) sheet. Mitigation that must be completed prior to ROW authorization includes:
    - Photo recordation of historic properties;
    - Landscape plans; and
    - Obtainment of cemetery permits.

2.2 Construction authorization

Several environmental activities occur between ROW authorization and construction authorization. These include:

- The Final Field Plan Review (FFPR) is held.
    - The NEPA analyst receives final plans, provides them to specialists, as needed, for review, and completes the environmental checklist for FFPR.
    - If the plans differ from what is covered in the most recently approved NEPA document, a reevaluation must be completed as outlined in Section 4.0.
    - The reevaluation for project changes will be completed after the FFPR is held. Approval must be obtained at least 11 weeks prior to the scheduled let.
- If no changes have occurred to the project design, affected environment, or environmental regulations, the NEPA analyst must check the date of the most recent environmental approval.
    - If the most recent environmental approval occurred more than 12 months prior, a "no change" reevaluation must be completed and submitted to FHWA for approval. All

preconstruction commitments don't need to be completed before the reevaluation can be sent to FHWA; however, they must be completed prior to environmental certification for let.

- Once FHWA signs the "no change" reevaluation and all preconstruction commitments have been met (including the obtainment of all permits, which could includes, but is not limited to, Section 404 permits and Buffer Variances), the NEPA analyst will certify the project for let. This certification must be completed 11 weeks prior to the let date and will include an updated environmental commitment (green) sheet. (See also Chapter X, 2.0.)
- If the most recent environmental approval occurred less than 12 months prior and all preconstruction commitments have been met (including the obtainment of all permits, which could include, but is not limited to, Section 404 permits and Buffer Variances), the NEPA analyst will certify the project for let. An updated environmental commitment (green) sheet will be included. This certification can also serve as a "no-change" reevaluation if the most recently approved NEPA document was signed 6 to 12 months prior. (See also Chapter X, 2.0.)

3.0 Completing an environmental reevaluation

Every Reevaluation should answer the following questions:

- Have the conditions of the project changed?
- Has the setting changed?
- Has the information presented changed (e.g., age of the studies; changes in the regulations; changes in survey methodology; new listing of a species)?
- Is the document still valid?
- If the information has changed, is agency coordination appropriate?

The reevaluation template will be the guide to completing the reevaluation procedure. The general procedure that needs to be followed is described below:

- Check the description of the most recently approved document. This will be the project description as stated in the approved Categorical Exclusion (CE), Environmental Assessment (EA)/Finding of No Significant Impact (FONSI), Record of Decision (ROD) or most recent reevaluation.
- Coordinate with the PM to obtain the most up-to-date project plans. Project design can change due to comments made at the PFPR or FFPR. If this is the case, the NEPA analyst needs to insure that the project description and plans they receive from the PM are furnished after the revisions suggested at the PFPR and FFPR have been made.
- Compare the project description from the most recently approved NEPA document with the latest set of plans.
- Update archaeology, history, ecology (including any 404 permit changes), noise and air studies as discussed in Section 4.0.

- The reevaluation form will be completed by either the NEPA analyst or an environmental consultant.
- Update other studies, as needed. Reference and include all revised special studies /memos/concurrence letters in the reevaluation attachment. Revised reports are transmitted to the appropriate agencies; therefore, they do not need to be attached to the NEPA document.
- Discuss any and all changes to effects in a reevaluation attachment.
- Include updated graphics, especially if the project limits have changed.
- Update the environmental commitment (green) sheet.
- Sign and date the form.
- Route to the NEPA analyst for initial review.
- Route to the NEPA supervisor/manager for review and approval.
- Submit to FHWA for approval, if necessary.

3.1 Consultant deliverables

The consultant shall provide one copy of the environmental reevaluation to the NEPA analyst for review. Once the document has been approved, the consultant may need to provide additional copies of the approved document, depending on the size of the document, and also an electronic version to the NEPA analyst.

After receiving comments from GDOT, FHWA on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

4.0 Updating environmental studies

Procedures for each of the special studies can be found in Chapter V of the manual. All pertinent templates are within subject folders in the document library.

4.1 History

If there are NO CHANGES to the effects of the project and if there are NO CHANGES in the resource identification:

- A new survey will not be required.
- The historian will prepare a memo to file noting that the design has changed from XXX to XXX, no change in effect will result from this change, and no further documentation/coordination/concurrence is necessary.
- The NEPA analyst will include this memo in the Correspondence section of the reevaluation.
- The NEPA analyst will check NO on the environmental reevaluation form.

If there is a CHANGE to the effects of the project or if there are CHANGES in the resource identification:

- The historian will conduct new surveys, as needed.
- The historian will prepare addendums to the survey report, Assessment of Effects (AOE) and/or the No Historic Properties Affected (NHPA) document, as required; consultants should coordinate this effort with the GDOT historian.
- The historian will route the revised documentation for review and approval.
- The GDOT historian will send the revised documentation to State Historic Preservation Officer (SHPO) and FHWA for approval.
- If there are changes to impacts, the NEPA analyst will check YES on the reevaluation form and discuss in the effects evaluation.
- If there are no changes to impacts, the NEPA analyst will check NO on the reevaluation form.
- The NEPA analyst will reference and include all revised special studies /memos/concurrence letters in the reevaluation attachment. Revised reports are transmitted to the appropriate agencies; therefore, they do not need to be attached to the NEPA document.
- The date of the most recent history survey of the entire corridor also will be checked. If this survey is over five years old and ROW has not been authorized, the historian will consult with the GDOT History Team Leader.

4.1.1 Consultant deliverables

Once the GDOT historian has approved the work product, the consultant will provide two copies of the approved deliverable.

If there are NO CHANGES to the effects of the project and if there are NO CHANGES in the resource identification, the consultant will deliver the following:

- A memo to file explaining the change in design and how it does not change the original effects finding.

If there is a CHANGE to the effects of the project or if there are CHANGES in the resource identification, the consultant will deliver the following:

- A Survey Report Addendum (for the newly identified resource[s] located within the expanded Area of Potential Effect (APE) or perhaps the loss of a resource).
- A Memo to File, if the newly identified historic resources are determined ineligible with SHPO concurrence. The memo will document the changes to the project, the reason for additional survey, and the results, i.e., that the original effects finding has not changed.
- An AOE Addendum and Memorandum of Agreement (MOA), if necessary (if there is a newly identified National Register (NR) eligible resource[s]).
- An AOE Addendum and MOA, if necessary (for the resource[s] where the effects have changed as a result of the design revision).
- If the most recent history survey of the entire corridor is over five years old and a new survey is conducted, the consultant will deliver the following:
    - A memo to file, if no additional historic resources are identified within the project corridor.

- A Survey Report Addendum, if additional historic resources are identified within the project corridor.
- An AOE Addendum or NHPA and Memorandum of Agreement, if necessary, if additional historic resources are identified within the project corridor.

After receiving comments from GDOT, FHWA or the SHPO on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

4.2 Archaeology

Consultants should contact the GDOT Archaeology Unit Manager prior to updating archaeological special studies to ensure that the correct documentation is being prepared commensurate to new design changes.

If the new design changes fall within the original special study APE (as noted in the applicable archaeological report) and these new design changes will not affect previously recorded archaeological sites determined to be eligible or unknown for the NR (e.g., avoidance of an eligible NR archaeological site in the original special study APE is maintained with new design changes):

- A new survey will not be required.
- The archaeologist will prepare a memo to files noting that the design has changed from XXX to XXX, no change in effect will result from this change, and no further documentation/coordination/concurrence is necessary. The memo will be forwarded to the GDOT NEPA analyst and archaeologist.
- The NEPA analyst will include this memo in the correspondence section of the reevaluation.
- The NEPA analyst will check NO on the environmental reevaluation form.

If the original special study does NOT cover the APE for the new design changes (e.g., easements and/or required right-of-way have been added to the project or the project has been lengthened beyond the original special study APE) and/or new design changes within the original special study APE will affect previously recorded archaeological sites determined to be eligible or unknown for the NR:

- The archaeologist will conduct field surveys, as needed.
- The archaeologist will update the archaeology report and AOE (if NR eligible historic properties are restricted to archaeological resources), as required, to cover the new APE. This update can take the form of a report addendum or AOE addendum, if necessary. Consultants should coordinate this effort with the GDOT archaeologist.
- The archaeologist will route the revised report for review and approval.
- The GDOT archaeologist will send the revised report to SHPO and FHWA for approval.
- If there are changes to impacts, the NEPA analyst will check YES on the reevaluation form and discuss the changes in the effects evaluation.

- If there are no changes to impacts, the NEPA analyst will check NO on the reevaluation form.
- The NEPA analyst will include the updated special study as a separate attachment to the reevaluation.

4.2.1 Consultant deliverables

Once the GDOT archaeologist has approved the work product, the consultant will provide two copies of the approved deliverable (GDOT NEPA analyst and archaeologist).

If the new design changes fall within the original special study APE (as noted in the applicable archaeological report) and these new design changes will not affect previously recorded archaeological sites determined to be eligible or unknown for the NR (e.g., avoidance of an eligible NR archaeological site in the original special study APE is maintained with new design changes), the consultant will deliver:

- An Archaeology memo demonstrating no change in effect due to design changes.

If the original special study does NOT cover the APE for the new design (e.g., easements and/or required right-of-way have been added to the project or the project has been lengthened beyond the original special study APE) and/or new design changes within the original special study APE will affect previously recorded archaeological sites determined to be eligible or unknown for the NR, the consultant will deliver:

- An Addendum to the Archaeological Survey Report for newly identified archaeological sites located in the APE resulting from the design change.
- An Addendum Archaeological Short Form for Negative Findings if the survey produces negative results in the APE due to design changes.
- An AOE Addendum, as required, due to design changes.

After receiving comments from GDOT, FHWA or the SHPO on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

4.3 Ecology

If the original special study covers the APE for the new design and NO CHANGES to the impacts will result from the design changes:

- A new survey will not be required.
- The ecologist will prepare an addendum to the most recent ecology report noting that the design has changed from XXX to XXX, no change in effect will result from this change, and no further documentation/coordination/concurrence is necessary.
    - The memo will contain updated mitigation information, if necessary.
- The NEPA analyst will include this memo along with any concurrence from FHWA or USFWS in the correspondence section of the reevaluation.

- The NEPA analyst will check NO on the environmental reevaluation form.

If there are CHANGES to the project impacts:

- The ecologist will conduct field surveys (including aquatics), as needed.
- The ecologist will prepare an ecology addendum to reflect the updated project description and the corresponding impacts (include updated mitigation information, if necessary).
- If the impacts will result in elevating the type of permit required, a team meeting will be held to discuss further avoidance and minimization measures.
- The ecologist will route the revised report for review and approval.
- The ecologist will write or modify any special provisions needed to protect ecological resources.
- The GDOT ecologist will send the revised report to FHWA and United States Fish and Wildlife Service (USFWS), if there are changes involving Section 7 or Fish and Wildlife Coordination Act (FWCA) consultation for review and approval.
- The NEPA analyst will check YES on the environmental reevaluation form and discuss in the attachment.
- The NEPA analyst will include any concurrence in the correspondence section of the reevaluation.

4.3.1 Consultant deliverables

Once the GDOT ecologist has approved the work product, the consultant will provide the requested quantity of hard and electronic copies of the approved deliverable.

If the original special study covers revised project limits and NO CHANGES to the impacts will result from the design changes, the consultant will deliver:

- An ecology memo demonstrating no change in effect due to design changes. This memo would follow the format of the Ecology Assessment of Effects.

If there is a CHANGE to the effects of the project, the consultant will deliver the following:

- Addendum to the ecology report.
- Field notes, if applicable.
- Additional stream, wetland, open water or protected species habitat data points, if applicable.
- Additional stream, wetland, open water, and protected species habitat delineations, as applicable.
- Additional buffer delineations, if applicable.
- Revised Standard Operating Procedure (SOP) calculations, if applicable.
- Transmittal letter to initiate report coordination, Section 7 consultation and/or FWCA coordination, as needed.

After receiving comments from GDOT, FHWA or any other agency on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

4.4 Noise

The noise study must be reconsidered if

- Alignment change[s] introduces receptors previously not considered for abatement; or
- The projected traffic increases by 33 percent or greater over the traffic considered in the original study. A traffic increase of 33 percent or greater has the potential to increase projected noise levels by at least one decibel. Updated traffic will be requested if five years or more have lapsed since the original noise study.

In accordance with Policies and Procedures 4415-11, "A Working Guideline for Highway Noise Barrier Construction," "[i]n order for a residential area to be considered for noise barriers, it must be 'planned, designed, and programmed' before the date of 'public knowledge' of the highway project. In determining the time relationship between residential development and public knowledge, the state a residential area is 'planned, designed, and programmed' means the date foundation construction begins and the date of 'public knowledge' of the highway project means the date of approval of the CE, FONSI or ROD document."

Therefore, if the NEPA document has been approved, an updated noise study will be conducted only for alignment changes or traffic increases. Studies updated for traffic increases only will consider those residential areas "planned, designed, and programmed" before the date of "public knowledge" of the highway project.

4.5 Air Quality

If the project is in a non-attainment or maintenance area for ozone or Particulate Matter (PM) 2.5, the air specialist must compare the facility as designed to the conforming long-range plan and Transportation Improvement Program (TIP) to make sure the project concept, as designed matches the concept that has been modeled.

For projects in non-attainment areas for PM 2.5, the NEPA analyst also must confirm that the project description in the reevaluation matches the project description presented to the Interagency group for their concurrence with the determination that the project is either "exempt" or "not of air quality concern."

If minor changes have been made, the NEPA analyst must provide the Interagency group with a revised write-up that includes the revised project description and the conclusion that the changes have been reevaluated and the determination that the project is either "exempt" or "not of air quality concern" remains valid. This documentation will be included in the reevaluation.

If major changes have occurred (e.g., additional lanes), a revised determination must be submitted to the Interagency group for their concurrence. This determination letter will be included in the reevaluation.

5.0 Consultant Deliverables

After receiving comments from GDOT, FHWA or any other agency on any document, a disposition letter (including the comment and how it was responded to) should be attached to the hard copy of the submittal and emailed to the GDOT reviewer for their use in facilitating the review of the document.

For any approved document, consultants will provide a CD (with the requested hard copies of the document) that includes a pdf (or series of pdfs) and a Word copy of the complete approved document.

The consultant will submit one copy of the reevaluation for review and approval. Three copies of the updated air and noise reports will be submitted for review and approval.

The reevaluation should not be submitted in three-ring binders.

Other updated studies will be submitted as noted previously (history, Section 4.1.1, archaeology, Section 4.2.1, and ecology, Section 4.3.1).

6.0 Reference

Re-evaluation - 23 CFR 771.129

CHAPTER VIII – COMMITMENTS TABLE (aka GREEN SHEET)

All National Environmental Policy Act (NEPA) documents require an Environmental Commitments Table (Green Sheet), a matrix (printed on green paper) that captures and tracks every commitment made during the environmental process.

Since the environmental document is completed fairly early on in project development, many efforts to avoid, minimize, or mitigate harm to environmental resources take the form of commitments. Therefore, the Green Sheet is drafted and updated as commitments are made and includes:

- The commitment made,
- An indication of how it will be administered (e.g., include it on the plans or as a special provision),
- Who is responsible for carrying it out,
- The estimated cost associated with implementing the commitment, and
- The status of the commitment.

Environmental commitments MUST be coordinated with the project team, especially the office responsible for carrying it out. **Every commitment made must be reasonable and doable.** Commitments should not be made for the sole purpose of moving a project through the environmental process without consideration of the likelihood that the commitment can be carried out. Therefore, the Responsible Office must concur in writing (an e-mail is acceptable) that the commitment is reasonable and doable.

This matrix also divides commitments based on when during the project's life they must be fulfilled. The table includes specific sections for each of the following:

- Pre-construction,
- During construction, and
- Post construction.

The Green Sheet follows the project throughout its development, so the header will indicate what phase the project is in and the date the Green Sheet was last updated.

The Georgia Department of Transportation (GDOT) is legally bound to fulfill all commitments made. However, the Green Sheet does not create a contractual obligation between GDOT and the contractor selected to construct the project. Therefore, an Environmental Resource Impact Table must be included in the General Notes section of all plans (if the project does not include any environmental commitments, this table will show "none"). This table will describe the type of environmental resource, the location of the resource on the plans, the type of construction activity planned, what is permitted, the controlling criteria, any required Special Provisions, and any additional comments deemed important for project construction personnel and contractors.

The Environmental Resource Impact Table template includes examples of the required entries. The designer of record is responsible for inserting the Environmental Resource Impact Table into the project plans. The General Notes sheets of both the roadway plans and the erosion control plans must include this table. The NEPA analyst for the project will confirm the accuracy of its content.

The Environmental Resource Impact Table must be closely coordinated with the project Green Sheet. As noted above, the environmental analysis is completed early on in project development so many efforts to avoid, minimize, or mitigate harm to environmental resources take the form of commitments. Including these commitments as part of the project plans and contract documents ensures that they get carried out during construction. Having the Environmental Resource Impact Table as part of the contract documents also ensures that environmental impacts reported and permitted during the environmental analysis are not increased during construction.

1.0 Common Commitments

The environmental commitments listed below are not all inclusive; there may be other environmental commitments required for a project that are not as common as those noted. A commitment may appear on the commitments table more than once (e.g., a commitment made to delineate resources and install orange fabric safety fencing on project plans during the pre-construction phase will appear during the construction phase requiring the contractor to install and maintain the fencing).

1.1 Delineations

The Plan Development Process (PDP) requires project plans address environmental features. Environmental resources will be delineated on the plans to ensure that the designer remains aware of these sensitive resources while the project advances and also to ensure that the contractor does not damage them during construction. Construction plans should show the boundaries of:

- Historic properties,
- Cemeteries,
- Wetlands,
- Streams and their appropriate buffers,
- Open waters and their appropriate buffers,
- Populations of protected species.

Any plan section that supports a roadway project and covering an activity that could affect environmental resources also must have the boundaries of environmental resources shown to ensure that the individual designing the action and the contractor carrying it out are aware of the environmental resources. The delineated area will be marked as an "Environmentally Sensitive Area" (ESA) with a note referring the contractor to the General Notes sheets for construction restrictions noted in the Environmental Resource Impact Table. Plan sections that may need the boundaries of all environmental resources delineated could include (but are not

limited to) construction staging plans, utility relocation plans, signing & marking plans, signal plans, Advanced Traffic Management Systems [ATMS]/Intelligent Transportation Systems [ITS] plans, landscaping plans, erosion control plans, lighting plans, bridge plans, traffic safety & design plans, landscaping plans, noise barrier plans and mitigation plans. Please see the GDOT's Plan Presentation Guide (PPG) outlining where and how environmental resources will be displayed.

1.2 Plan Notes

Plan notes often ensure that efforts to minimize impacts to environmental resources are carried out. Typical items that require plan notes and are included on the Green Sheet:

- Noise barrier locations,
- Landscaping at historic properties, including plantings in the median of new four-lane roadways,
- In-kind re-planting of vegetation that will be removed at historic resources,
- Historic markers (location of and removal notation),
- Soil excavation from a Underground Storage Tank (UST)/Hazardous Waste site, or
- Fencing during construction to protect a sensitive environmental feature (e.g., contributing elements of historic properties, habitat, or buffers). Please note that if the project impacts an environmental resource, the orange fencing will be placed at the edge of the impact area (required ROW or construction limits, as appropriate) to ensure that the impact disclosed in the NEPA document does not increase during construction.

1.3 Permits

All required permits are listed in the Green Sheet, such as:

- Section 404 permits (including if a Pre-Construction Notification [PCN] or Joint Public Notice [JPN] is required),
- Buffer Variances (BV),
- Tennessee Valley Authority (TVA) permits,
- NPDES, or
- Cemetery permits.

1.4 Special Provisions

Special provisions are added to the construction contract to protect environmental resources. Typical examples include:

- Platform construction at bridges that span waterways with protected aquatic species,
- Work cessation if a protected species is spotted during construction,
- Water quality monitoring during construction,
- Archaeological monitoring during construction, or
- Time restrictions on construction (e.g., no work on a bridge during bird nesting or during fish spawning).

All special provisions cited in the Green Sheet are to be attached for ease of reference.

1.5 Mitigation

The Green Sheet also documents mitigation required for unavoidable losses, including:

- Section 106 mitigation (e.g., Historic American Building Survey [HABS]/Historic American Engineering Record [HAER] documentation, historic structure relocation),
- Stream mitigation,
- Wetland mitigation.

2.0 Review of the Green Sheet

The NEPA analyst is responsible for creating and maintaining the Green Sheet. The specialists and the Project Manager (PM) are forwarded the Green Sheet to review and sign before the NEPA document is routed to FHWA (see Chapter III), before each certification is approved (see Chapter X), and before it is routed to Engineering Services for inclusion in the FPR Report (see Chapter X). At that time, the reviewers should verify that all appropriate commitments are listed, that the status of each commitment is up to date, and that any commitment that needs to be completed before the next action is complete. For example:

- The PM and Responsible Office should verify that all commitments are reasonable and doable before the NEPA document is routed to FHWA,
- The historian should verify that any commitment to prepare HABS/HAER or other photo-documentation is complete before right-of-way (ROW) authorization,
- Any commitment that could affect ROW needs should be complete before ROW authorization,
- The PM should verify that all commitments requiring delineations, plan notes, or special provisions are complete before the Final Field Plan Review (FFPR), and
- All pre-construction commitments (including permits and mitigation) must be completed prior to certification for Let (see Chapter X).

During a reevaluation, commitments shown on a previously approved Green Sheet will be carried forward verbatim. If a commitment has changed or is no longer relevant, an explanation will be provided in the status column.

Remember:

- The Green Sheet must always go on green paper. When reproducing a document for distribution, always put it on green paper.
- Standard specifications (such as erosion control) are omitted since they apply to every project.
- Even projects without commitments will need a Green Sheet.
- Plan sets must include an Environmental Resource Impact Table.
- Additional guidance can be found in the Environmental Commitments Table Guidance document.
- Subject matter experts must review every version of the Green Sheet. Concurrence should not be assumed.

CHAPTER IX - ENVIRONMENTAL CERTIFICATIONS

Introduction

An environmental certification is required at three milestones during the Plan Development Process (PDP):

1. Preliminary Field Plan Review (PFPR),
2. Final Field Plan Review (FFPR), and
3. Let.

1.0 Field Plan Reviews

The Georgia Department of Transportation's (GDOT) Office of Engineering Services conducts field inspections of project plans and special provisions at two stages of the PDP. In addition to Engineering Services, attendees include the Project Manager (PM), Design Office and representatives from the following offices: Bridge Design (if the project has a bridge or a retaining wall), Utilities, Construction, Materials and Research, Right-of-Way (ROW), Traffic Operations, Maintenance, the Area Engineer, and Environmental Services. The NEPA analyst is required to prepare for and attend these meetings (including GDOT and local government consultants). Environmental personnel in other disciplines also may be required to attend as needed to ensure that all environmental resources are properly delineated on the plans and all commitments/special provisions/plan notes are properly captured on the plans at the FPR (see Chapter VIII). The project team must pay particular attention to both the Green Sheet (Environmental Commitments Table) and the Environmental Resource Impact Table.

Potential conflicts between environmental commitments and construction MUST be identified during these field plan reviews. Resolution of such conflicts during construction often results in additional construction costs and project delays.

1.1 Preliminary Field Plan Review (PFPR)

The Office of Engineering Services conducts a field review of the preliminary plans and the draft special provisions prior to the approval of ROW plans. The emphasis of this review is the coordination of ROW, utilities, bridges and walls, constructability, signs and signals, drainage, and environmental considerations and commitments. For Major Projects, the approval of the PFPR Report defines the beginning of final design.

The GDOT NEPA analyst sends a PFPR Certification to the PM upon request. The certification notes the approval date of the environmental document and "that any change in the project as described in the approved environmental document will require additional review by Environmental Services and possible reevaluation." The project environmental commitments table (Green Sheet) will be attached to the certification (see Chapter VIII). Per the PDP, the PFPR cannot be held until the NEPA document is approved by the lead federal agency, so the certification cannot be completed until the NEPA document is approved.

Once the PFPR has been scheduled, the NEPA analyst will prepare the Field Plan Review Checklist, update the Green Sheet, and submit both to the Office of Engineering Services and the PM at least three days prior to the scheduled PFPR date.

As part of preparing the PFPR checklist, the NEPA analyst will notify the specialists of the date of the PFPR and circulate the plans with adequate time to ensure specialist review. The NEPA analyst will circulate the Field Plan and Green Sheet Review sheet as part of this review. This review sheet will go into the project file after the PFPR to demonstrate that all environmental team members reviewed the plans. The NEPA analyst will ensure that all commitments concerning plan development have been completed and will confirm that special provisions have been received by the PM. (For projects consulted out by the GDOT, the GDOT NEPA analyst and PM should ensure that man-hours are included so that the consultant can prepare for and attend all PFPRs. Local government consultants also must prepare for and attend PFPRs.)

Environmental commitments concerning plan development often include the delineation of environmental resources on the plans as well as plan notes ensuring that environmental impacts will be minimized during construction. This review also will confirm the content and accuracy of the Environmental Resource Impact Table.

1.2 Final Field Plan Review (FFPR)

The Office of Engineering Services conducts a review of final plans and specifications, special provisions, permits, environmental commitments and ROW agreements prior to the let at the FFPR.

The GDOT NEPA analyst sends a FFPR Certification to the PM upon request. The certification notes "that any change in the project as described in the approved environmental document will require additional review by Environmental Services and possible reevaluation." The Green Sheet will be attached to the certification (see Chapter VIII).

Once the FFPR has been scheduled, the NEPA analyst will prepare the Field Plan Review Checklist, update the Green Sheet, and submit both to the Office of Engineering Services and the PM at least three days prior to the scheduled FFPR. The NEPA analyst will ensure that all commitments concerning plan development have been completed and will confirm that special provisions have been received by the PM.

As part of preparing the FFPR checklist, the NEPA analyst will notify the environmental team members of the date of the FFPR and circulate the plans with adequate time to ensure specialist review. The NEPA analyst will circulate the Field Plan and Green Sheet Review sheet as part of this review. This review sheet will go into the project file after the FFPR to demonstrate that all environmental team members reviewed the plans. The NEPA analyst will ensure that all commitments concerning plan development and the construction contract have been completed. (For projects consulted out by the GDOT, the GDOT NEPA analyst and PM should ensure that man-hours are included so that the consultant can prepare for and attend all FFPRs. Local government consultants also must prepare for and attend FFPRs.)

Environmental commitments concerning plan development and the construction contract often include the delineation of environmental resources on the plans as well as plan notes insuring that environmental impacts will be minimized during construction. The NEPA analyst must ensure that any commitments made after the PFPR have been added to the project plans and will confirm that special provisions are included in the contract. This review also will confirm the content and accuracy of the Environmental Resource Impact Table.

2.0 Certification for Let

Eleven weeks prior to let, the GDOT NEPA analyst must certify the project for let. The Certification includes a checklist noting that a NEPA document has been approved, the date of the last approval (either the document itself or a reevaluation) and if any changes have occurred since the last approval date.

The project cannot be certified for let if the NEPA document has not been approved or if all preconstruction commitments have not been completed (e.g., Section 404 permit has not been obtained, all mitigation credits have not been obtained, etc).

The NEPA analyst must work with the PM and/or designer to determine if any changes have been made since the last environmental approval. The NEPA analyst also must determine if changes to the affected environment or environmental regulations have occurred. If project changes, changes to the affected environment or regulations have occurred since the last approval, the project cannot be certified for let and a reevaluation must be completed (see Chapter VII).

If the most recent approval occurred less than 12 months prior, there have been no project changes, and all preconstruction commitments have been completed (including the obtainment of all permits, which could include, but is not limited to, Section 404 permits and Buffer Variances), the GDOT NEPA analyst will certify the project for let. An updated environmental Green Sheet will be included (see Chapter VIII). The certification also can serve as a "no-change" reevaluation (see Chapter VII).

If the most recent environmental approval occurred more than 12 months prior to the certification date, a "no change" reevaluation must be completed and submitted to FHWA for approval prior to certifying the project for let.

CHAPTER X – GEORGIA ENVIRONMENTAL POLICY ACT (GEPA)

1.0 Overview

The 1991 Session of the Georgia Legislature passed Senate Bill 97, as amended, which was signed into law by Governor Miller on April 23, 1991. The new statute (OCGA 12-16-1), known as the Georgia Environmental Policy Act (GEPA), principally provides for the disclosure of the environmental effects of proposed state projects.

In passing GEPA, the General Assembly found that:

1. The protection and preservation of Georgia's diverse environment is necessary for the maintenance of the public health and welfare and the continued viability of the economy of the state and is a matter of the highest public priority;
2. State agencies should conduct their affairs with an awareness that they are stewards of the air, land, water, plants, animals, and environmental, historical, and cultural resources;
3. Environmental evaluation should be a part of the decision-making processes of the state; and
4. Environmental effects reports can facilitate the fullest practicable provision of the timely public information, understanding, and participation in the decision-making process of the state."

The GEPA includes any proposed governmental action by any department, board, bureau, commission, authority, or other agency of the state. Those actions undertaken by a municipality or county are also included under the Act if more than 50 percent of the total cost of the project is funded by a grant of a government agency (state) or a grant of more than $250,000.00 is made by a government agency (state). Projects that are let by the GDOT that fall below these limits also are subject to GEPA compliance. A proposed government action means the following:

- Any proposed land-disturbing activity (as further defined by GEPA) by a government agency (state) or funded by a grant from a government agency (state);
- Any proposed sale or exchange of more than five acres of state-owned land; or
- Any proposed harvesting of five acres or more of trees more than two inches in diameter at breast height.

The Georgia Department of Transportation's (GDOT) GEPA policy can be found in Policies and Procedures 4415-10. The Georgia Department of Natural Resources' (DNR) Environmental Protection Division (EPD) also has published GEPA guidelines.

2.0 Environmental studies

For projects that will cause land disturbance, certain studies will be undertaken. These studies will serve to document whether the GDOT should anticipate that a project might significantly adversely affect the quality of the environment. These studies may include historic and archaeological surveys, wetland and stream surveys, air assessments, water quality investigations, and state-protected species surveys. All

GEPA documents will include a commitments table (green sheet). Information for technical study procedures can be found in Chapter V.

3.0 Type A Letter

Non-land-disturbing activities and minor land-disturbing activities that would not be anticipated to significantly adversely affect the quality of the environment qualify for a Type A letter and include the following list:

A. Minor roadway and non-historic bridge projects, including:
    1. Modernization of an existing highway by resurfacing, restoring, rehabilitating, adding shoulders, widening a single lane or less in each direction, and adding a median within previously disturbed existing right-of-way (ROW).
    2. Adding auxiliary lanes for localized purposes (weaving, climbing, speed changes, etc.), and correcting substandard curves and intersections within previously disturbed existing ROW.
    3. Non-historic bridge replacement projects in existing alignment with no detour bridge.
B. Lighting, signing, pavement marking, signalization, freeway surveillance and control systems, and railroad protective devices.
C. Safety projects such as grooving, glare screen, safety barriers, energy attenuators, median barriers, etc.
D. Highway landscaping and landscape modification, rest area projects, and truck weigh stations within previously disturbed existing ROW.
E. Construction of bus shelters and bays within existing ROW.
F. Temporary replacement of a highway facility that is commenced immediately after the occurrence of a natural disaster or catastrophic failure to restore the highway for the health, welfare, and safety of the public.

Type A letters are prepared as an Interdepartmental memo and include a project description and a finding that the proposed project is of a type that would not significantly affect the quality of the environment. The letter also will indicate whether or not a Section 404 permit is required.

4.0 Significance determination

For actions that do not fit Type A projects, a determination regarding the significance of project impacts must be made. The EPD, in its 1991 guidelines, developed the following checklist to determine the significance of effects. Following the check list is a description of the issues to be considered for each category.

ENVIRONMENTAL CHECKLIST

The environmental checklist covers the following 24 areas/categories:

1. Wetlands
2. Floodplain/River Corridor
3. Water Supply

4. Water Resources
5. Groundwater Recharge Area
6. Stormwater
7. Wastewater
8. Air Quality
9. Solid Wastes
10. Soil Stability/Erodibility
11. Protected Mountains
12. Endangered Species
13. Critical Habitats
14. Historical
15. Archaeological
16. Parks/Recreation
17. Energy Supplies
18. Beaches
19. Dunes
20. Shoreline
21. Estuary
22. Forest Land
23. Barrier Island
24. Aquatic Life/Trout Streams

The evaluation will conclude whether or not the area is affected by the project, and if that effect is minor, medium or major.

1. **Wetlands** – Will the action occur in a "wetlands" area? The definition of wetlands is included in the Federal Regulation, 33 CFR 32.93. The DNR Rules for Environmental Planning, Chapter 391-3-16-03, incorporate the federal definition as well as both acceptable and unacceptable uses of wetlands. Under current federal law and state policy, alterations or degradations of wetlands should be avoided unless it can be demonstrated that there will be no long-term impacts or net loss of wetlands. A federal permit is required for most wetland activities.
2. **Floodplain/River Corridor** – Will the action occur in a floodplain or a river corridor? Floodplains are designated areas of land that become flooded with water during periods of rainfall, which increases the primary stream flow. Many floodplain areas are shown on Federal Floodplain Maps, which have been prepared in support of the National Flood Insurance Program. Additional maps and information on floodplains are available from the EPD. Most proposed government actions that occur directly in a floodplain area or that may alter the size or character of the floodplain area are considered significant. Under House Bill 643, passed by the 1991 Session of the General Assembly, lands adjacent to major rivers are protected from certain types of development. DNR is charged with developing rules for the River Corridor protection program.

3. **Water Supply** – Does the proposed action have the potential for decreasing either the quality or quantity of water available for water supply? Water supply refers to a source of water that is used for drinking water in addition to other consumptive purposes. The DNR Rules, Chapter 391-3-16, contain criteria for water supply watersheds. These criteria establish a basis to allow development in a water supply watershed without contaminating the water source to a point where it cannot be treated to meet drinking water standards. The EPD can provide information to state agencies as to whether their proposed projects lie within water supply watersheds.
4. **Water Resources** – Will the proposed action result in a large demand for water from the available water resources? Will the proposed action result in a degradation of the quality of waters of the state? The waters of the state include surface and groundwater that is not wholly confined to a single, privately owned piece of property. Water resources management is one of the most important issues facing Georgia now and in the future. A growing population and the potential for water shortages contribute to the importance of adequate amounts of good quality water. The DNR Rules for Surface Water Withdrawals, Chapter 391-3-6, provide the regulatory framework for withdrawal, diversion or impoundment of surface waters of the state. DNR Rules for Groundwater Use, Chapter 391-3-2, establish regulatory framework for withdrawal, diversion or impoundment of surface waters of the state and establish regulatory procedures for withdrawing, obtaining or utilizing groundwaters of the state.
5. **Groundwater Recharge Area** – Will the action result in the disturbance or altering of a groundwater recharge area? Groundwater recharge areas are those portions of the earth's surface where water infiltrates into the ground to replenish an aquifer. The Significant Recharge Areas of the state are those areas mapped by DNR in Hydrologic Atlas 18 (1989 Edition). The DNR Rules for Environmental Planning Criteria, Chapter 391-3-16, contain specific criteria for the protection of groundwater recharge areas.
6. **Stormwater** – Will the project result in an increase in the amount of stormwater runoff for downstream property owners? The primary concern related to stormwater is the creation of impervious surfaces that contribute to an increase in the amount of stormwater runoff to the point where there is damage or a threat to downstream property owners. Another very important issue is the potential contamination of through increased contact with contaminants.
7. **Wastewater** – Will the project produce wastewater that is discharged to a surface stream? Wastewater refers to contaminated water (sewage or other contaminants) that must be treated and disposed of either by direct discharge to a surface stream or by indirect discharge to an existing municipal sewer system. Even if the wastewater from a state project is to be discharged to a municipal sewer system, the effect can be significant if that wastewater causes the municipality to expand its sewage treatment system.
8. **Air Quality** – Will the action result in a release or discharge of contaminants into the ambient air? Any action that results in the release or discharge of contaminants into the air such that existing ambient air quality may be diminished is a significant action. All discharges or releases may be subject to regulation under the Georgia Air Quality Control Act and/or the US Clean Air Act (CAA). The air quality assessment will be done in accordance with Chapter V, Section 6.2; however, coordination with FHWA and the Interagency group will not be required.

9. **Solid Wastes** – Will the project result in the generation of solid wastes for disposal, or will the proposed actions occur near or in an active or closed landfill? Solid waste is defined in the Georgia Comprehensive Solid Waste Management Act. It includes different categories of wastes that exist in a solid form (household garbage, demolition material, land clearing debris, commercial non-hazardous waste material, etc). Whereas the amount of solid waste generated that requires disposal is of concern, another primary issue relates to a land-disturbing activity in the vicinity of an active or closed landfill.
10. **Soil Stability/Erodibility** – Will the action displace soils that will be carried off site and pose a threat to surface waters or property? Under the Georgia Soil, Erosion and Sedimentation Act, local governments that have authorized management programs under the Act establish control procedures and permit the project. If the action takes place in a county or municipality that does not have such authorization, EPD is the regulating agency. In either case, a technical guidance book is available from either the local government or EPD.
11. **Protected Mountains** – Will the project involve the alteration of lands with high elevations and steep slopes? Under House Bill 643, which was passed by the 1991 Session of the General Assembly, land that lies above 2,200 feet in elevation and has slopes of 25 percent or more are identified as Protected Mountains. In accordance with the Act, DNR is charged with promulgating Rules for implementation of a "Mountain Protection" program. At the time of preparation of this GEPA guidance, these rules are currently under development.
12. **Endangered Species** – Will the proposed action harm or reduce the population of protected species? The term endangered species is used in both the generic sense for protected species and in a more narrow definition sense under the US Endangered Species Act. With respect to GEPA, the term protected species is more applicable. Protected species include those plant and animal species protected by the state in accordance with the Georgia Wildflower Preservation Act of 1973 and the Georgia Endangered Wildlife Act of 1973. DNR Rules, Chapter 391-4-10, provide more detailed criteria for the state's protected species.
13. **Critical Habitats** – Is the proposed action expected to involve any critical habitats? Critical habitats are those sites on which the state's protected species are dependent for their survival. They also include US Forest Lands, US Wildlife Refugees, Wilderness Areas, and Wild or Scenic Rivers.
14. **Historical** – Will the proposed action involve disturbance of any historic property? GEPA specifies consideration of any structure on or eligible for the Georgia Register of Historic Places. In addition, the regulations of the President's Advisory Council on Historic Preservation (ACHP) (36 CFR 800), which implements Section 106 of the National Historic Preservation Act (NHPA), contains a definition of and criteria for adverse effect for the protection of historic properties.
15. **Archaeological**– Will the proposed action involve disturbance of any archaeological property? Archaeological properties are the physical remains of the past that can be studied by archaeologists and other scholars to answer questions about prehistory and history. In addition, the regulations of the President's Advisory Council on Historic Preservation (ACHP) (36 CFR 800), which implements Section 106 of the NHPA, contains a definition of and criteria for adverse effect for the protection of historic properties.

16. **Parks/Recreation** – Will the proposed action involve disturbance or otherwise have a significant impact on the state's cultural resources? The GEPA includes cultural resources within the area of potential effect of a proposed government action. In addition to the archaeological or historic value, cultural resources may also include park lands, preserves, and other public lands or areas of recognized scenic and/or recreational value.
17. **Energy Supplies** – Will the proposed action have significant impact or reduce available energy supplies? This primarily refers to the source of energy (electrical, gas/oil, solar, etc.) that will be consumed by the project in relation to the total available in the area.
18. **Beaches** – Will the proposed action involve the disturbance of any ocean beach area? The Georgia General Assembly has found that ocean beaches provide an unparalleled recreation resource, which is vitally linked to the economy of Georgia's Coastal Zone and to that of the entire state. Beaches are also part of the sand-sharing system, which provides habitats and acts as a protective buffer for other areas. This natural resource system is costly, if not impossible, to reconstruct or rehabilitate once adversely affected by man-related activities. Therefore, any action in these areas should be considered highly significant.
19. **Dunes** – Will the proposed activity alter coastal sand dunes? Coastal sand dunes, beaches, sandbars, and shoals comprise a vital natural resource system, known as the "sand-sharing system," which acts as a buffer to protect real and personal property and natural resources from the damaging effects of floods, winds, tides, and erosion. The coastal sand dunes are the most inland portion of the sand-sharing system and because they are a fragile product of shoreline evolution, they are easily disturbed by action harming their vegetation or inhibiting their natural development. They are protected under the Georgia Shoreline Assistance Act of 1979.
20. **Shoreline** – Will the project involve activities in the Georgia Coastal shoreline area or in areas covered under the river corridor protection requirements of Georgia House Bill 643? In accordance with DNR Rules, Chapter 391-2-2, protective measures and procedures are provided for the implementation of the Georgia Shoreline Assistance Act. Construction, erection, or engaging in any shoreline engineering activity or land alteration that alters the natural topography or vegetation of any area is highly regulated under the Act. In addition, the 1991 General Assembly passed House Bill 643, which also provides for the protection of coastal river corridors.
21. **Estuary** – Will the proposed action alter the Georgia coastal marshlands environment? Georgia's coast contains saltwater marshes that have been identified as one of the most extensive and productive marshland systems in the United States. Georgia's marshes, sands, and near-shore ocean water produce more food and energy than any other estuaries zone on the eastern seaboard. They are also an essential life support system for Georgia's multi-million dollar seafood industry. Any activities that affect this area are closely regulated under the Georgia Coastal Marshlands Protection Act.
22. **Forest Land** – Will the proposed action involve changes in forested areas? The GEPA specifically provides that a proposed government action includes the harvesting of five acres or more of trees over two inches in diameter at breast height. The secondary effects of tree removal as well as other land-disturbing activities that may impact a forested area are of concern. Depending on the type of harvesting methods, tract locations, and other variable criteria, a

potential may exist for erosion and sedimentation, habitat alteration, and other changes of concern. Manuals on Best Management Practices (common sense forestry associated practices that minimize the impact on the environment) are available from the Georgia Forestry Commission. These practices were developed by a statewide task force, appointed by the governor, with input from all aspects of the forestry industry in Georgia.

23. **Barrier Island** – Will the proposed action involve activity on or near a barrier island? Along the Georgia Coast, an extensive system of salt marshes, tidal estuaries, and sounds separate a chain of eight major and several smaller barrier islands from the mainland. Two-thirds of the Georgia barrier islands are parks, refuges, or preserves. Sand beaches and dunes protect the islands from erosion and flooding. The islands shelter the marshes from the force of storms. Any proposed action that involves the barrier islands should be considered highly significant.
24. **Aquatic Life/Trout Streams** – Will the proposed action involve an action that significantly impacts freshwater aquatic life? Georgia has an abundance of freshwater lakes, streams, and bodies of water that support aquatic life. The freshwater fisheries are important for the total food chain. Primary and secondary trout streams should be protected.

5.0 Type B Letter

Projects that qualify for a Type B letter include the following, if the studies conducted during the Significance Determination demonstrate that the project will not significantly adversely affect the environment:

A. Bridge replacement projects on new location or with a detour bridge, where there are no significant impacts to historic or archaeological resources, no involvement with federally listed threatened and endangered species, and no significant adverse impact to wetlands.
B. Passing lanes, median additions, and widening projects, where there are no significant adverse impacts to historic or archaeological resources, no involvement with federally listed threatened and endangered species, and no significant adverse impact to wetlands.
C. Safety and intersection improvements where there are no significant adverse impacts to historic or archaeological resources, no involvement with federally listed threatened and endangered species, and no significant adverse impact to wetlands.
D. Rest area projects and truck weigh stations with no purchase of additional ROW.
E. New location projects where there are no significant adverse impacts to historic or archaeological resources, no involvement with federally listed threatened and endangered species, and no significant adverse impact to wetlands.

Project files must be documented with the studies conducted during the Significance Determination. Type B letters are prepared as an Interdepartmental memo and include a project description and a finding that the proposed project is of a type that would not significantly affect the quality of the environment. The letter also should indicate whether or not a Section 404 permit is required

If studies demonstrate that the project may significantly adversely affect the quality of the environment, development of an Environmental Effects Report (EER) will be undertaken.

6.0 Environmental Effects Report (EER)

Projects that would qualify for an EER are those projects that may significantly adversely affect the quality of the environment. This category includes major widening and new location projects. If such projects result in a significant adverse effect, an EER will be prepared.

6.1 Procedure

The GEPA calls for consideration of the "cumulative effect of the proposed government actions on the environment" if a series of proposed government actions are related either geographically or as logical parts in a chain of contemplated actions. Therefore, EERs for sections of roadways to be widened or built as new location facilities will include all programmed projects that are connected geographically or as logical parts in a chain of contemplated actions.

A. During preparation of an environmental effects report, the GDOT will consult with and solicit comments from agencies that have jurisdiction by law, special expertise, or other interest with respect to environmental impact.
B. In compliance with GEPA, the following should be contained in the EER, at a minimum:
    1. Cover sheet
    2. Executive summary
    3. Alternatives, including the no-build
    4. Relevant environmental setting: geology, soils, water supply and wetlands, floral fauna, archaeology/history, economic environment, energy, and cultural resources
    5. The environmental impact of the proposed action of the relevant setting and mitigation measures proposed to avoid or minimize adverse impacts
    6. Unavoidable adverse environmental effects
    7. Value of short-term uses of the environment and maintenance and enhancement of its long-term value
    8. Beneficial aspects, both long term and short term, and economic advantages and disadvantages
    9. Comments of agencies that have jurisdiction by law, special expertise or other interest with respect to any environmental impact or resource
C. At least 45 days prior to making a decision as to whether to proceed with the undertaking, notice that an environmental effects report has been prepared is to be published in the "legal organ of each county in which the proposed government action or any part thereof is to occur."
D. The GDOT will send a copy of the EER and all other comments to the EPD Director.
E. The GDOT will make the document available to the public and agencies, upon request.
F. A Public Hearing Open House (PHOH) will be held in each affected county if at least 100 residents of the state of Georgia request one within 30 days of publication in the legal organ of an affected county. The responsible official or his or her designee may hold a public hearing if less than 100 requests are received.
G. Following the public notice period and/or public hearing open house, a summary of the document, comments received, and recommendation as to whether to proceed with the action

as originally prepared, to proceed with changes, or not to proceed will be prepared (Notice of Decision [NOD]).

H. This decision document, when signed by the Commissioner, will be sent to the director of the EPD, and an abbreviated notice of the decision will be published in the legal organ of each county in which the proposed governmental action or any part thereof is to occur.

CHAPTER XI – LOCAL GOVERNMENT RESPONSIBILITIES

1.0 Overview

When local governments are sub-recipients of federal funds, the Georgia Department of Transportation (GDOT) must ensure that the federally funded project complies with all federal requirements, including environmental requirements.

When local governments receive state-aid funds, the recipient is responsible for complying with the Georgia Environmental Policy Act (GEPA) and obtaining all applicable state and federal permits. Chapter X of this manual provides guidance on GEPA and Chapter V.4 provides guidance on environmental permits. The local government will certify that GEPA requirements have been met and that all permits have been obtained.

When a local government accepts responsibility for preliminary engineering, they also have agreed to prepare all of the environmental studies, documents and permits. As indicated throughout this manual, the environmental process is an integral part of project development and project decisions. Impacts to environmental resources are considered as project decisions are made. Environmental work should be completed early in project development before too many design decisions have been made to reduce the amount of redesign as environmental resources and concerns are identified.

The environmental process requires a multi-disciplinary team as well as input from environmental resource agencies. The work of this team must be closely coordinated to be certain that the project advances.

As a public agency utilizing public funds, including public input from the public into the decision making process is also critical. Local governments must ensure that public input is sought and that these efforts are documented.

The environmental process does not end with the approval of the National Environmental Policy Act (NEPA) document; the environmental team (including consultants hired by local governments) must be available throughout project development to perform reevaluations and to participate in field plan reviews.

Environmental studies, reports, documents and permit applications will be prepared in accordance with this manual except for Transportation Enhancement (TE) projects (funding codes C220, L220, Q22, and 33B) and Congestion Mitigation and Air Quality (CMAQ) projects (funding code L400). Projects within these funding codes are subject to an application and selection process; since these projects have been prescreened and reviewed prior to being funded; alternative procedures have been developed for the environmental process and agreed to by the Federal Highway Administration (FHWA) and the Historic Preservation Division (HPD). Projects with funding codes other than TE and CMAQ (e.g., MPO discretionary funds [L230]) do not qualify for the alternate procedures described below. Projects that have solely TE and/or CMAQ funds qualify for the alternative procedures; however, projects that have

multiple funding sources which include TE and/or CMAQ would not qualify. Instead, the procedures followed would have to be those for the more encompassing project type.

2.0 GDOT Review

All environmental studies, reports, documents and permit applications will be reviewed and approved by GDOT staff prior to submission to other agencies. Local government staff should include review times when establishing project schedules. All materials should be submitted to the GDOT NEPA analyst assigned to the project for circulation to the appropriate staff.

3.0 TE and CMAQ Procedures

3.1 NEPA Documentation

As noted in Chapter III of this manual, the NEPA document publicly discloses the project decision making process. Transportation projects have varying degrees of severity or potential to affect the environment. There are three classes of actions [23 CFR 771.115], defining the way that compliance with NEPA is documented in terms of the action's impacts:

1. **Class I, Environmental Impact Statements (EIS)** are prepared for projects whose action will have a significant effect on the environment.
2. **Class II, Categorical Exclusions (CE)** are for projects that do not individually or cumulatively have a significant environmental effect.
3. **Class III, Environmental Assessments (EA)** are prepared for projects in which the significance of the environmental impact is not clearly defined. All actions that are not Class I or II are Class III. All actions in this class require the preparation of an EA to determine the appropriate NEPA document required.

Since TE and CMAQ projects are designed to enhance the transportation system, most do not have significant adverse environmental effects and will qualify as Class II projects, thereby requiring the preparation of a CE. There is no streamlining of the CE for TE and CMAQ projects. Guidance on preparing CEs can be found in Chapter III, Section 4.0 of this manual.

All studies and consultations must be completed prior to submitting the CE for review and approval. Every CE should include a project's environmental commitments table (green sheet) that lists all commitments made during project development.

3.2 Public Involvement

While CEs do not require that a public open house or hearing be held, the document should disclose efforts made to engage the public. The CE should cite concerns raised by the public and efforts made to address those concerns. The project sponsor should be aware of project effects that have the potential to cause controversy and take steps to minimize those effects. The CE also should discuss project benefits that would offset the effects associated with the controversy.

This discussion should include meetings that have been held, when, where, number of attendees, etc. The comments received as well as responses to citizens should be included as an attachment to the NEPA document. Chapter IV of this manual discusses Public Involvement during project development.

3.3 Environmental Studies

3.3.1 Overview

Throughout the NEPA process for a project, analyses will need to be completed to address specific impacts. Specific reports are prepared to document environmental studies in support of the overall NEPA document as well as for compliance with other environmental laws. Environmental studies will be completed in accordance with Chapter V of this document, except as noted below. Should the preparer require additional information concerning any of this analysis, please refer back to Chapter V. All pertinent templates for special studies can be found in the document library, separated by subject.

3.3.2 Social Environment

A. Land Use

Land use has two components: change in land use within the footprint of the project and change in land use of adjacent properties. The CE will discuss if there are actual changes in land use and describe that change (e.g., a railroad bed being converted into a trail). The discussion should describe current land uses in the project area and the anticipated change.

B. Community Impacts

1. Community Cohesion

   Transportation Enhancement and CMAQ projects often have positive benefits for the community, such as providing greater non-motorized travel options, improving the aesthetics of a community or connecting formerly noncontiguous recreation areas.

2. Environmental Justice (EJ)/Title VI

   Environmental Justice (EJ) evaluates whether or not a project will result in a disproportionate and adverse effect to EJ populations (low income or minority). Title VI requires that "No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving [f]ederal financial assistance." Transportation Enhancement and CMAQ projects should not result in disproportionate adverse effects or denial of participation or benefits.

3. Economic

   If the project requires additional right-of-way (ROW), the CE should note whether or not it is minimal and whether or not it would affect the tax bases of the locality.

C. Relocation Potential

The CE should disclose whether or not the project will require the relocation of any homes or businesses. This does not refer to relocation of the project.

D. Churches and Institutions

This section will analyze the project effects on churches and other institutions located within the project area. Consideration should be given not only to building displacements but also to ways in which the project may affect the functions of the institution (e.g., loss of parking).

E. Parks/Recreation Areas/Wildlife Refuges

If any parks, recreation areas or wildlife refuges are located in the project area, this section will analyze project effects including the ability for the resource to continue to function with no impairments and still meet its intended purpose.

If the project corridor includes a Wildlife Management Area (WMA), the NEPA analyst should be informed prior to CE submission so that FHWA can be advised. If no land would be required from the WMA FHWA will determine if it should be included in the CE. If land IS required from the WMA, the owner or managing entity should be contacted. A WMA would be considered a Section 4(f) resource.

1. If the property is publicly owned, a determination as to the applicability of Section 4(f) of the USDOT Act will need to be made (see Chapter VI of this manual). This analysis will determine if the Section 4(f) resource is affected and whether there is a transportation use of the resource.

   Should the proposed project use land from a publicly owned park, recreation area or wildlife or waterfowl refuge, and adversely affect or otherwise impair the property, an individual Section 4(f) evaluation will be needed as described in Chapter VI.

2. If the proposed project uses land from such a resource but does not result in an adverse effect, the project may result in a *de minimis* finding under Section 4(f). The project sponsor must obtain a letter providing permission as well as stating that the project would not adversely affect or otherwise impair its current activities and acknowledge the *de minimis* finding. The public must be notified of *de minimis* findings for public lands. Please see Chapter VI for a discussion of public notification options.

3.3.3 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires all federal agencies to take into account the effects of their projects on historic and archaeological resources (collectively referred to as cultural resources). Should a project adversely affect a cultural resource, the sponsor must consider ways to avoid and minimize adverse effects and to mitigate any unavoidable adverse effects.

Since TE and CMAQ projects are reviewed and selected during an application process, a Section 106 worksheet has been developed. The project sponsor should fill out this worksheet and submit to GDOT for review and coordination with the Georgia Department of Natural Resources' (DNR) HPD. Following their review, the GDOT will submit it to HPD to for review and approval.

The HPD's review of the 106 worksheet will determine if the project has National Register (NR) eligible historic properties present and if the project will adversely affect them. With regard to archaeological resources, if the HPD review determines that a full Phase I archaeological field survey (Chapter V.3) is

required the sponsor must hire a GDOT prequalified archaeological consultant to perform the survey. The resulting report will be submitted to GDOT for review and coordination with HPD.

Should the proposed project use land from a NR eligible historic property, and adversely affect or otherwise impair the property, an individual Section 4(f) evaluation will be needed as described in Chapter VI. A Programmatic Section 4(f) evaluation may be appropriate for historic bridges, even those that are being adversely affected.

If the proposed project uses land from such a resource but does not result in an adverse effect, the project may result in a *de minimis* finding under Section 4(f). The HPD must concur that the project would not adversely affect or otherwise impair the historic property and acknowledge the *de minimis* finding. No coordination with the property owner is required for historic resources.

The HPD will have additional involvement in every project affecting historic resources. The HPD must be kept informed throughout all preconstruction and construction activities. A typical commitment for historic properties that will be included on the environmental commitments table (green sheet) is project plan reviews and site visits by HPD.

3.3.4 Ecological Resources

All TE and CMAQ projects must be evaluated for their potential to affect ecological resources. Ecological resources include protected waters (both jurisdictional waters of the US and buffered state waters) as well as protected species (threatened and endangered species as well as migratory birds). A full discussion on ecological resources can be found in Chapter V.4 of this manual.

The project areas of most streetscapes, facility restorations or in-town projects generally consist of previously disturbed areas. These types of projects generally will have no effect or minimal effects on ecological resources. Depending on their location, projects, such as trails, could involve wetlands, streams, protected species, or undisturbed/undeveloped lands if they are located in wooded areas, overgrown abandoned sites, or river walks that are adjacent to wetlands.

An ecological worksheet has been developed to assist sponsors in determining the ecological study requirements for their projects. The worksheet evaluates the project's potential to affect threatened and endangered species, protected waters, essential fish habitat and migratory birds. If the worksheet review determines that a full ecological field survey is required, the sponsor must hire a GDOT prequalified ecological consultant to perform the survey.

3.3.5 Additional Natural Resources

A. Wild and Scenic Rivers

   In accordance with the Wild and Scenic Rivers Act (16 USC 1271 - 1278), if the proposed action could have foreseeable adverse effects on a river on the National Wild and Scenic River System or a river under study for designation to the National Wild and Scenic River System, the NEPA document should identify early coordination undertaken with the agency responsible for managing the listed or study river. See Chapter V.5, of this manual. The Chattooga River is Georgia's only designated Wild and Scenic River.

B. Floodplain impacts
If the project encroaches into a floodplain, the project sponsor must evaluate impacts to that floodplain. If it involves a regulatory floodway, additional coordination is needed. See Chapter V.5 of this manual.

C. Farmland
If any farmland is impacted by the project, the sponsor must fill out the US Department of Agriculture's Form AD-1006 to determine farmland effects and coordinate with the Natural Resources Conservation Service (NRCS). See Chapter V.5 of this manual.

D. Coastal Zone Barrier/Coastal Zone Impacts
The Coastal Barrier Resources Act (CBRA) provides protection for coastal barriers often referred to as Coastal Barrier Resource Systems (CBRS). The statute identifies coastal areas that will be protected by placing restrictions on the use of federal funds for developmental activities within these units.

The term "coastal zone" means the coastal zone area delineated in a state's management program. For projects located in counties subject to the Coastal Zone Management Act, basic coordination is required. In Georgia, coordination may be initiated with the Georgia Coastal Zone Management of the Department of Natural Resources (DNR) Coastal Resources Division (CRD).

Chapter V.5 of this manual provides guidance for projects located in coastal barrier areas or coastal zones.

3.3.6 Physical Environment

A. Noise assessment
Transportation Enhancement and CMAQ projects generally will not require a noise analysis since this study is required for projects that increase through lane capacity or result in a significant change to the vertical or horizontal alignment of the transportation facility. In this case, a No Noise Required document should be submitted for review and approval. See Chapter V.6 for a full discussion on noise assessments.

B. Air Quality Analysis
Both NEPA and the Clean Air Act Amendments require the consideration for four pollutants: ozone, fine particulate matter (PM2.5), carbon monoxide (CO) and mobile source air toxics (MSAT). See Chapter V.6 for a full discussion on air quality analysis.

If a project is located in a non-attainment area for ozone or PM2.5, it must be included in a conforming Transportation Improvement Program (TIP). When checking the TIP, please remember that TE projects may be included as a "lump sum" item. Please refer to Chapter V.6 for discussion specific to PM 2.5.

Project level analysis for ozone is not required. Most TE and CMAQ projects should be exempt from project level PM2.5 analysis. However, the project must be included on the exempt list submitted to Interagency. A copy of the exemption list with the project highlighted as well as a

copy of the email concurrence from Interagency should be attached to the CE. Please refer to Chapter V.6 for discussion specific to PM 2.5.

Transportation Enhancement and CMAQ projects are also generally exempt from project level analysis for CO since their traffic and level of service (LOS) should be below the established thresholds. Please refer to Chapter V.6 for discussion specific to PM 2.5.

Transportation Enhancement and CMAQ projects also generally are exempt from project level analysis for MSATS. Exempt projects include projects with no meaningful potential MSAT effects. Exempt projects include:

- Projects qualifying as a CE under 23 CFR 771.117(c) (www.fhwa.dot.gov/legsregs/legislat.html) or
- Projects exempt under the CAA conformity rule under 40 CFR 93.126 (www.fhwa.dot.gov/environment/conformity/con_laws.htm).

Although there is no analysis of MSATs required for exempt projects, a statement regarding the exempt status will be included in the CE. While TE and CMAQ projects may be exempt from a full Air Assessment Analysis, the Air Screening Assessment (4-part Air Write-off) should be submitted for review and approval.

C. Energy supply and mineral resources
Most TE and CMAQ should not affect either energy or mineral resources.

D. Construction and utilities
If it is determined that your project will cause inconvenience due to construction or the relocation of utilities, please note this in the CE.

E. UST/Hazardous waste
If UST or hazardous waste sites are identified within the construction area, please refer to Chapter V.6.

3.4 Section 4(f)

Section 4(f) of the USDOT Act concerns the use of land from significant historic resources and publicly owned parks, recreation areas, wildlife & waterfowl refuges. Please see Sections 3.3.3 and 3.3.2.E, above. If a TE or CMAQ project requires the use of land from one of these types of resources, refer to Chapter VI of this manual.

FHWA has developed guidance specifically for Section 4(f) in regard to TE projects within their Section 4(f) Policy Paper, under number 24 of the Section 4(f) Applicability discussion.

3.5 Environmental Reevaluations/Validation

An environmental approval is valid until the project design changes. This includes not only alignment changes but all footprint, right-of-way, and/or easement changes as well as design changes that alter the analysis presented in the approved NEPA document. Project changes may result in the need to update environmental studies. Information for updating technical studies can be found in Chapters V

and VII. Depending upon the age of the most recent approval, a "no change" reevaluation may be required prior to the authorization of ROW or construction funds. Reevaluation requirements can be found in Chapter VII.

The environmental approval also may be invalidated due to changes in the affected environment or environmental regulations or requirements. Therefore, the reevaluation will address not only project design changes, but any that may have occurred to the affected environment (e.g., are there new residences or churches), anticipated impacts of the project, and proposed mitigation. In addition, it must take into account any changes in environmental regulations and requirements.

Within six months of the construction funds for TE or CMAQ project being authorized, the project sponsor will complete an Environmental Validation form to confirm that the project has not changed since the CE or reevaluation was approved. This document acts as a "no change reevaluation" so that a traditional reevaluation is not needed prior to the authorization of funds. This document can only be utilized for TE and CMAQ projects.

3.6 Environmental Permits

The project sponsor is responsible for acquiring all environmental permits, including but not limited to cemetery permits (see Chapter V.3), Section 404 permits (see Chapter V.4) and vegetative buffer variances (see Chapter V.4).

Cemetery permits must be obtained prior to right-of-way authorization; Section 404 permits and vegetative buffer variances (and required mitigation) must be obtained prior to the project being certified for let.

3.7 Commitments Table (aka Green Sheet)

All NEPA documents require a commitments table (green sheet), a matrix (printed on green paper) that captures every commitment made during the environmental process. Even projects without commitments will include this table, with "None" marked in each section of the table. Standard specifications such as erosion control are omitted since they are standard for every project. See Chapter VIII of this manual for a discussion on project green sheets.

Since the NEPA document is completed fairly early on in project development, many efforts to avoid and minimize harm to environmental resources take the form of commitments. Typical commitments include:

- The delineation of environmental resources on project plans,
- Mitigation, Permit, and Variance requirements,
- Orange fencing erected to protect environmental resource boundaries,
- Agency coordination, and
- Plan review and site visits by HPD.

Please remember that all commitments made are legally binding and must be fulfilled. Once the project is let to construction, any commitments that take place during or after construction need to have the

signature of the GDOT Area or Construction Engineer for GDOT let projects on the Commitment Table (green sheet). Locally let projects should have the signature of the local's PM on the Commitment Table (green sheet).