Attachment 2 – Technical Specifications

Planning Services

Watershed Project Plan-Environmental Document

General

This Technical Specification describes the details and requirements of the Phases and subsidiary items described in the statement of work (SOW).

Engineering surveys, engineering hydrologic and hydraulic analyses, and geologic activities must be performed in accordance with NRCS-South Carolina (NRCS-SC), South Carolina Department of Health and Environmental Control (DHEC), and OSHA standards. The A-E must certify that all surveys and analyses meet the required criteria.

Deliverable items for each Phase and subsidiary items are due according to Attachment 3 - *Schedule of Work and Timelines*.

All activities shall comply with the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566) as amended by the Small Watershed Rehabilitation Amendments of 2000 (Section 313 of Public Law 106-472) and the NRCS National Watershed Program Manual (NWPM) and all other Federal, State, and Local laws and regulations.

Except for existing effective Flood Insurance Studies (FISs) using an older vertical datum, all modeling shall All modeling and mapping shall use South Carolina State Plane NAD83 datum US feet horizontal coordinates and NAVD88 US feet vertical datum. All map sheets and tables showing real world elevations shall include the datum and coordinate system used.

Reference Material

Upon request by the A-E, the CO and COR will furnish the following USDA-NRCS reference materials as needed for the prosecution of the work.

The following USDA-NRCS reference materials are available through the internet, except as otherwise noted, at http://directives.sc.egov.usda.gov/, and http://www.economics.nrcs.usda.gov/technical/technotes/index.html.

Non-NRCS documents will be obtained by the A-E. NOTE: This is not an all-inclusive list. Other reference information may be necessary as deemed appropriate.

1. NRCS National Engineering Manual (NEM).
2. NRCS National Engineering Handbook (NEH), Parts 628, 630, 631, 633, 636, 641, 642, 650, 651, 653, and 654 and Sections 3, 5, 6, 8, 11, and 14.
3. National Operation and Maintenance Manual
4. NRCS National Watershed Program Manual (NWPM)
5. NRCS National Watershed Program Handbook (NWPH)
6. NRCS National Planning Procedures Handbook (NPPH)

7. NRCS National Environmental Compliance Handbook (NECH)
8. NRCS National Handbook of Conservation Practices (NHCP)
9. Principles and Guidelines for Water Resource Projects, 1983
10. Principles and Requirements for Federal Investments in Water Resources, Chapters I - Principles and Chapter II – Requirements (PR&G), March 2013
11. Principles and Requirements for Federal Investments in Water Resources, Chapter III - Interagency Guidelines (PR&G), December 2014
12. USDA Guidance for Conducting Analyses Under the Principles, Requirements, And Guidelines for Water And Land Related Resources Implementation Studies And Federal Water Resource Investments, DM 9500-013
13. NRCS Technical Releases:

    TR 5 Structural Design of Underground Conduits
    TR17 Geologic Investigation for Watershed Planning
    TR 20 Computer Program for Project Formulation Hydrology *
    TR 24 Investigating Structural Problems
    TR 25 Design of Open Channels
    TR 26 The Use of Soils Containing More Than 5 Percent Rock Larger Than the Number 4 Sieve
    TR 55 Urban Hydrology for Small Watersheds *
    TR 62 Engineering Layout, Notes, Staking and Calculations
    TR 65 Procedure to Establish Priorities in Landscape Architecture
    TR 67 Reinforced Concrete Strength Design
    TR 74 Lateral Earth Pressures
    TR 77 Design and Installation of Flexible Conduits *
14. NRCS Design Note 24 Guide for the Use of Geotextiles
15. NRCS Soil Mechanics Note 8 Soil Mechanics Testing Standards
16. The following materials, and other materials not listed but pertinent to the design, shall be obtained by the A-E, as necessary.

    a. American Society for Testing and Materials (ASTM) technical standards.
    b. U. S. Army Corps of Engineers
       EM 1110-2-1902 Slope Stability
       EM 1110-2-1906 Laboratory Soils Testing
       EM 1110-1-2908 Rock Foundations, November 30, 1994
       EM 1110-2-4300 Instrumentation for Concrete Structures, November 30, 1987
    c. American Concrete Institute (ACI) - several references are applicable, a few are listed below
       318-Current – Building Code Requirements for Structural Concrete and Commentary
       350-Current – Code Requirements for Environmental Engineering Concrete Structures and Commentary
    d. American Institute of Steel Construction, 15th Edition Structural Steel Manual
    e. Bureau of Reclamation - several references are applicable, a few are listed below

Engineering Geology Field Manual, 2nd Ed. Volumes 1 and 2
Groundwater Manual, U.S. Department of Interior, Second Edition, 1995

f. American Society of Civil Engineers (ASCE), Minimum Design Loads for Buildings and Other Structures, current edition
g. International Code Council, Incorporated (ICC), International Building Code, current edition
h. USGS Earthquake Hazards Program

17. Hydrologic and Hydraulic Computer Models (use most current version): Hydrology: NRCS-Win TR20; NRCS-Win TR55; NRCS-SITES; HEC HMS Stream Hydraulics; US Army Corps of Engineers-HEC RAS Dam Breach Analysis; US Army Corps of Engineers-HEC1; NRCS TR 60; NRCS TR 66
18. NRCS National Bulletin 190-13-11, Release of Revised Form CPA-52, "Environmental Evaluation Worksheet"
19. NRCS National Bulletin 450-20-1, TCH-Field Office Technical Guide Resource Concerns and Planning Criteria List and Update
20. *NRAES-54*, *On-Farm Composting Handbook*, Plant and Life Sciences Publishing (PALS), Cooperative Extension, 1992

Quality of Work

Contractor will follow his/her Quality Assurance/Quality Control Plan (QA/QC) for the Project. Quality of work will be as described in the statement of work (SOW) for this project.

Reviews and Approvals

Review and approval of submittals will be as described in the SOW for this project.

Description of Work

The deliverable items for each Phase and subsidiary items may be portions of the Plan-Environmental Document or stand-alone items as part of the Project Folder as described. For Phases II and III deliverables that are portions of the Watershed Project Plan-Environmental Document (Plan-ED), draft versions shall be submitted for NRCS-SC for review and comment.

For the purpose of contract administration and payments, the work is divided into eight (8) Phases and the following related subsidiary items:

1-1 Plan of Work

I. Scope

Item 1-1 of the work must consist of performing the following items:

- Preparing a comprehensive plan of work defining the project goals and priorities
- A list of the tasks to be performed and their products
- The estimated staff hours and associated cost of performing each task
- The schedule for completing each task

The Plan of Work shown in the National Watershed Program Handbook (NWPH) 606.13 – Plan of Work can be used as a reference.

II. Conferences

Meetings between the A-E and the COR and COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #1**, Phase 1, Item 1-1, Plan of Work

Timing – After the task order is issued for the project.

Location – Teleconference

Topics – Discuss Plan of Work assignments and allocation of hours.

III. Review and acceptance of work

Item 1-1, *Plan of Work*: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the initial plan of work to the A-E within 14 days of receiving the document. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of Item 1-1 will be made by the COR after all corrections are made and all required material has been submitted.

1-2 Gather background data and develop a list of interested parties

I. Scope

The A-E will review available data provided by USDA-NRCS as well as partners and other agencies to assist in the development of the Plan of Work. Prepare a summary report that summarizes findings and initially identifies potential project sites for further examination during Phase 3.

A. Perform a record search of files of the USDA-NRCS, sponsor, South Carolina Department of Health and Environmental Control, Georgetown County Health Department, Georgetown County Planning Commission, and others as required for information relevant to planning (limited to the subject watersheds) to include:

1. best available county-wide base map/LiDAR data,
2. State and/or County inspection reports and reports of remedial actions,

B. Identification of Resource Problems and Opportunities (Affected Environment)

The work may include, but is not limited to, identifying watershed problems and opportunities for existing and future conditions. Provide data showing the magnitude, extent, duration and frequency of the natural resource problems for the watershed that are within the project scope. Determine problems related to the current condition of Sandy Island and its access road, related to flooding. This helps form the basis for the Purpose and Need for Federal Action.

C. Deliverable items include maps (as-necessary), testing results and conclusions, calculations, and the written analyses for the appropriate sections of the Plan-Environmental Document. Electronic input and output files in their native formats for all models shall be delivered as part of the Project Folder.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #2**, Phase 1, Item 1-2, Gather background data and develop a list of interested parties – findings.

Timing – After the reconnaissance and report is completed and the list for consultation is compiled.

Location – Teleconference.

Topics – Findings from the report and the list of consultees.

III. Review and acceptance of work

Item 1-2, *Gather background data and develop a list of interested parties:* The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. Comments from USDA-NRCS staff will be provided to the COR in as timely a fashion as possible. The COR will subsequently furnish all review comments on the report to the A-E within 14 days of receiving the document.

The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of item report will be made by the COR after all corrections are made and all required material has been submitted.

The A-E will provide a report and a mailing address list, along with a list of email addresses, for the list of interested parties. A separate list for persons and agencies that should be consulted will also be provided to the COR.

1-3 Public Participation Plan

I. Scope

The public participation plan (PPP) should guide how input from watershed stakeholders is obtained and focus the Plan-ED on the most relevant issues.

A public participation plan includes an outline of the planning or decision-making process and identifies stages when the public is to be invited to participate. Public participation should include meetings, workshops, tours, or open houses, as appropriate. Meetings shall adhere to the Commonwealth's open meeting laws. The PPP also includes notations of public hearings required by others. Implementation of the public participation plan should be documented and will become a part of the required reviewable record.

II. Development of the Public Participation Plan

A. Public participation during this subsidiary item will be conducted in accordance with an approved PPP and will include early opportunities forpublic and agency input through scoping.

B. Coordination with other Federal, State, or Tribal Governments shall be conducted during development of the plan-environmental document. The Contractor shall draft letters of invitation for USDA-NRCS signature to agencies that have specific expertise or jurisdiction by law (such as permitting authority) to be cooperating agencies in the planning process and preparation of the NEPA document. Those agencies will likely include US Fish and Wildlife, the US Army Corps of Engineers (USACE), the State Department of Transportation, South Carolina Department of Health and Environmental Control, Nature Conservancy, and affected local and County offices.

Public meetings will be coordinated with the Sponsor and USDA-NRCS and will be publicized in accordance with USDA-NRCS policy and the State of South Carolina's Open Meeting Laws. The Sponsor shall be the official lead for general public participation meetings on the project. USDA-NRCS must officially be the lead for any public scoping meetings on the Draft and Final Plan-Environmental Document. The Contractor shall organize, manage, and take minutes of all such meetings, with assistance from the USDA-NRCS. The contractor shall provide handouts and visual aids (posters, project area maps, wall charts, etc.) of pertinent information. NRCS will ensure that a laptop, projector, and screen are available for use in meeting room.

Results of public participation will be used to develop the scope of environmental document. Scoping will be used to identify the significant issues to be analyzed in detail and to eliminate from detailed study the issues that are not significant. Public participation results will be documented and summarized in the "Consultation, Coordination and Public Participation" sections of the Plan-Environmental Document.

A PPP will be developed, including development of a comprehensive mailing list of agencies, groups and individual stakeholders, in consultation with the Sponsor and USDA-NRCS. The list should include mailing information as well as points of contact email addresses. The plan will outline agency, State Historic Preservation Office (SHPO) and Tribal consultations.

C. The PPP Plan must note the inclusion of affected Environmental Justice Communities. The PPP will conform to or be equivalent to Attachment 4 – Sample Public Participation Plan. Based on the scoping process, there may need to be additional public engagement for any affected Environmental Justice Community or Tribal Government.

III. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #3**, Phase 1, Item 1-3, Public Participation Plan.

Timing – After the Plan of Work is accepted.

Location – Teleconference.

Topics – Discuss initial Public Participation Plan.

B. **Conference #4**, Phase 1, Item 1-3, Public Participation Plan – Technical entities, other participating agencies and non-governmental organizations (NGOs).

Timing – After the Public Participation Plan is accepted.

Location – At site.

A-E Role –USDA-NRCS will lead the conference with the A-E and support from Georgetown County Conservation District and the County of Georgetown. The A-E is responsible for organizing the meeting, managing the meeting, and taking minutes during the meeting.

Topics – Discuss the Public Participation Plan, the proposed project objectives, outline of the planning process and the role of technical entities, other participating agencies and non-governmental organizations (NGOs), and begin scoping process.

C. **Conference #5**, Phase 1, Item 1-3 Public Participation Plan – Initial Public Meeting.

Timing – After Conference #4.

Location – At site.

A-E Role – Georgetown County Conservation District, County of Georgetown, and USDA-NRCS will lead the conference with the A-E. The A-E is responsible for organizing the meeting, managing the meeting, and taking minutes during the meeting.

Topics – Discuss the Public Participation Plan, the proposed project objectives, outline of the planning process and the role of public participants, and begin scoping process. Comments by the public will become part of the official record.

D. **Conference #12**, Phase 6, Item 1-3, Public Participation Plan – Evaluate Alternatives Meeting.

Timing – After alternatives have been formulated, at the end of Phase 6.

Location – At site.

A-E Role –USDA-NRCS will lead the conference with the A-E. The A-E is responsible for organizing the meeting, managing the meeting, and taking minutes.

Topics – Discuss the identified alternatives to be examined and effects of each alternative.

IV. Review and acceptance of work

Item 1-3, Public Participation Plan: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The Comprehensive Mailing List shall be prepared in Microsoft Excel as well as Microsoft Word.

The COR will furnish review comments on the public participation plan to the A-E within 14 days of receiving the document. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of Item public participation plan will be made by the COR after all corrections are made and all required material has been submitted.

2-1 Document sponsor objectives, write purpose and need statement and write scope of plan.

I. Scope

The A-E will work with the sponsor to document the project objectives, write a purpose and need statement and develop a scope for the plan that meets applicable USDA-NRCS, PR&G and NEPA requirements.

A. This activity will be iterative throughout the planning process and will identify the Sponsor's objectives and assist the USDA-NRCS State Conservationist and NRCS-SC staff in developing the Purpose and Need based on consultations with the Sponsor, local jurisdictions, the public, and land users affected by the project. This activity will inform the above stakeholders of the impacts to identified resource concerns resulting from potential project alternatives developed during planning.

B. Deliverable items include written draft versions as items are completed or changes are made; and the final version of the written portions for the appropriate sections of the Plan-Environmental Document.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #6**, Phase 2, Item 2-1, Document sponsor objectives, write purpose and need statement and write scope of plan.

Timing – After the Item 1-3 report is accepted.

Location – Teleconference.

Topics – Sponsors objectives, the purpose and need for the project and any parameters that define the scope of the project.

III. Review and acceptance of work

Item 2-1, *Document sponsor objectives, write purpose and need statement and write scope of plan:* The A-E will document the SLO's objectives, write the purpose and needs statement and develop a scope for the plan that is acceptable to the SLO and USDA-NRCS.

3-1 Perform field reconnaissance

I. Scope

The A-E will perform field reconnaissance to prepare a report that describes the condition and status of previously constructed projects to address flooding as well as identify potential site for projects within the watershed. It is intended that this assessment will be mostly visual and non-intrusive. The report will also include a summary of findings and a conclusion/list of recommendations for any potential projects.

A. Perform oral interviews of up to 5 pre-identified Sandy Island residents to identify:

1. Volume and timing of flooding experienced.
2. Life safety issues resulting from flooding.
3. Potential challenges or obstacles to improvements.
4. Potential alternatives to address flooding.

B. Perform an on-site inspection of the identified potential project site including all areas of the facility, including approximate property line locations, wells, roads, and surface waters. Document and evaluate the status of existing erosion, height or water at road, condition of existing drainage system, including photographs and visual inspections. Visual inspections may be required in a variety of terrain including but are not limited to: tidal wetland areas, rural areas, wetlands, and uplands.

1. Document existing conditions at the sites with notes and photographs and/or video.
2. Engineering Surveying & LiDAR Topography

a. Detailed topographic engineering survey is required for this project.

i. For all survey work, the surveys horizontal coordinates will reference the State Plane US Feet NAD83 datum with a current reference frame. Corrections shall be made using either post processing of the base points in OPUS or by surveying NGS or South Carolina GS benchmarks. The reference frame and geoid used, and correction method shall be documented in the project folder. All elevation data shall be reported using the NAVD 88 US Feet and Geoid 2012A or newer datum. Elevations reported from project records shall be converted to the NAVD 88 datum.

b. The most current LiDAR may also be used as base mapping and for elevation determination.

b. Deliverable items include a narrative report of the site inspection(s) with photographs and plotted cross sections and profiles that may later be used to draft required information for the Affected Environment section and for the Investigation and Analysis Report (Appendix D) of the Plan-EA, and a topographic map of the surveyed areas, and text files of all surveyed points. The maps shall be delivered as part of the project folder as paper drawings and pdf files at a scale appropriate for 11” x 17”

exhibits in the Plan-EA, as well as AutoCAD drawings in dwg format including all points, surfaces and externally referenced files.

C. Identification of Resource Problems and Opportunities (Affected Environment)

Update Affected Environment document produced in Phase 1-2 for acquired field information. The work may include, but is not limited to, identifying watershed problems and opportunities for existing and future conditions. Provide data showing the magnitude, extent, duration and frequency of the natural resource problems for the watershed that are within the project scope. Determine problems related to flooding of the road on Sandy Island. This helps form the basis for the Purpose and Need for Federal Action.

D. Deliverable items include maps (as-necessary), test results and conclusions, calculations, and the written analyses for the appropriate sections of the Plan-Environmental Document. Electronic input and output files in their native formats for all models shall be delivered as part of the Project Folder.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CORRNFERENCES:

A. **Conference #7**, Phase 3, Item 3-1, Perform field reconnaissance – Findings.

Timing – After the reconnaissance and report is completed.

Location – Teleconference.

Topics – Findings from the report.

III. Review and acceptance of work

Item 3-1, *Perform field reconnaissance:* The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. Comments from USDA-NRCS staff will be provided to the COR in as timely a fashion as possible. The COR will subsequently furnish all review comments on the report to the A-E within 14 days of receiving the document.

The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of item report will be made by the COR after all corrections are made and all required material has been submitted.

The A-E will provide a report and a mailing address list, along with a list of email addresses, for the list of interested parties. A separate list for persons and agencies that should be consulted will also be provided to the COR.

3-2 Resource Inventories and Watershed Assessment

I. Scope

The Resource Inventory and Watershed Assessment should identify pertinent environmental information within the project area that may be impacted or affected by the implementation of the project measures.

The work may include, but is not limited to, conducting the resource inventories of the watershed by collecting environmental information on the resources that could be impacted by the project. Inventories will be adequate to establish ecological baseline conditions which are linked to environmental laws, Executive Orders, Codified Federal Rules, scoping issues, and/or USDA-NRCS policy. All study/inventory should be commensurate to the level of concern associated with the resource. General descriptions of the various ecological resources will normally suffice. For example, complete inventory of all common species of plants, fish, and or invertebrates present is usually not needed or appropriate. This information will provide the basis for forecasting project effects. Public/agency scoping sessions may result in additional inventories. The types of resources to be considered can be found in the NWPM Part 501.24 B. Results of the scoping process should be used to determine relevance:

- Erosion and sediment yield analysis for primary sources, such as ag, forest, etc., roads, streambanks, and bedload
- Water quality
- Water resources

A. Environmental (refer to NRCS-CPA-52)

1. Identify soils that are pertinent to the alternatives and create a map to be incorporated into the Plan-Environmental Document. (This does not necessarily require on-site sampling of mapped soils.)
2. Using remote sensing, identify potential wetland areas and approximate acres using the Cowardin system for project areas that may be impacted by any of the alternatives identified in Phase II.
3. Determine historic and current land use. Identify land use classification in acres (see NHCP).
4. Establish air quality conditions, including odor. (Based on readily available information. Air quality testing should not be required).
5. Identify water quality conditions in terms of designated uses. (Based on readily available information. Water quality testing should not be required).
6. Identify highly erodible cropland.
7. Characterize the floodplain impacted by any alternative upstream and downstream of the project area.
8. Characterize fish and wildlife habitat and generally describe species composition (sampling usually not required).

9. Characterize insect habitat and generally describe species composition (sampling usually not required).
    a. Include specific reference to the phorid fly.
10. Identify Threatened and Endangered Species population(s), including State listed species in the project area.
11. Characterize federally listed Threatened and Endangered critical habitat as well as that related to State listed species.
12. Conduct a Phase I Bog Turtle investigation on all potential project sites.
13. Characterize "Invasive Species" populations.
14. Characterize water quantity concerns.
15. Determine the topography of the project area.
16. Determine the climate of the project area.
17. Identify/characterize riparian areas.
18. Identify natural areas. (Specially designated areas).

B. Deliverable items include the appropriate completed portions of the NRCS-CPA-52, written portions for the appropriate sections of the Plan-Environmental Document and data sources for Appendix D of the plan; maps in paper and PDF versions, as part of the Project Folder; and ESRI shapefiles of resources that were mapped.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CORRNFERENCES:

A. As needed.

III. Review and acceptance of work

Item 3-1, Resource Inventories and Watershed Assessment: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. Federal and State requirements will require that the findings from the RIWA be shared with other appropriate agencies. Comments from USDA-NRCS staff and other agencies will be provided to the COR in as timely a fashion as possible. The COR will subsequently furnish all review comments on the Resource Inventories and Watershed Assessment to the A-E within 14 days of receiving the document.

The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of item Resource Inventories and Watershed Assessment will be made by the COR after all corrections are made and all required material has been submitted.

3-3 Economic and Social Assessment

I. Scope

The Economic and Social Assessment should at a minimum identify the infrastructure, demographic, health and safety and economic conditions and needs within the project area. An outline of many of the items to be assessed is provided in NWPH.

The work may include, but is not limited to, conducting the resource inventories of the watershed by collecting information on the economic, and social that could be impacted by the project. Inventories will be adequate to establish economic and social baseline conditions which are linked to environmental laws, Executive Orders, Codified Federal Rules, scoping issues, and/or USDA-NRCS policy. All study/inventory should be commensurate to the level of concern associated with the resource. Results of the scoping process should be used to determine relevance.

- Labor/Management
- Health and Safety
- Capital
- Risk
- Traffic and/or road conditions

A. Environmental (refer to NRCS-CPA-52)

1. Social

a. Document current watershed demographics (population, income, and poverty) which is to include an identification of any Environmental Justice Communities and Tribal communities.

b. Characterize public health and safety conditions.

c. Characterize commercial and residential structures affected and to what extent.

d. Characterize transportation networks and conditions.

e. Identify social/political factors that may impact land use in for the life of the project.

f. Identify any population centers.

2. Economic

a. Quantify current on-site and off-site damages/effects (amount, extent, duration).

i. Urban damages such as houses, commercial buildings, roads, bridges, rail, and utility damage from flooding. This could also include losses in property values and development.

ii. Ag damages such as crops, farm structures, and other rural infrastructure damage that may result from flooding, if applicable.

iii. Enhanced water quality treatment for public and private water supply.

b. Quantify enterprise input costs.

c. Quantify current productivity.

d. Quantify operations, maintenance and replacement costs.

B. Deliverable items include the appropriate completed portions of the CPA-52 and the written portions for the appropriate sections of the Plan-Environmental Document and data sources for Appendix D of the plan; maps in paper and PDF versions, as part of the Project Folder; and ESRI shapefiles of resources that were mapped.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CORRNFERENCES:

A. As needed.

III. Review and acceptance of work

Item 3-2, Economic and Social Assessment: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Economic and Social Assessment to the A-E within 14 days of receiving the document. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of item Economic and Social Assessment will be made by the COR after all corrections are made and all required material has been submitted.

3-4 Archeological and Historic Assessment

I. Scope

The A-E should work with USDA-NRCS and the State Historic Preservation Office to determine the required Archeological and Historic Assessment needs for the potential project area.

A. A Phase 1A cultural resource investigation shall be conducted to determine the presences of any historic structures within the potential project area. The South Carolina State Historic Preservation Office (SHPO) - Department of Archives and History (DAH) shall be consulted to determine the probability and presence of any archaeological sites that may be affected by the project.
B. Deliverable items include the appropriate completed portions of the NRCS-CPA-52 and the written portions for the appropriate sections of the Plan-Environmental Document and data sources for Appendix D of the plan; maps in paper and PDF versions, as part of the Project Folder; and ESRI shapefiles of resources that were mapped.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. As needed

III. Review and acceptance of work

Item 3-3, Archeological and Historic Assessment: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. Federal and State requirements will require that the findings from the Archeological and Historic Assessment be shared with other appropriate agencies. Comments from USDA-NRCS staff and other agencies will be provided to the COR in as timely a fashion as possible. The COR will subsequently furnish all review comments on the Archeological and Historic Assessment to the A-E within 14 days of receiving the document. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of item Archeological and Historic Assessment will be made by the COR after all corrections are made and all required material has been submitted.

3-5 Soils and Engineering Assessment

I. Scope

Prepare a Soils and Engineering Assessment for the potential project sites based on available remote sensing and data from Web Soil Survey. Depth to water table, leaching potential, USCS classification and depths of soil horizons, hydric soils, hydrologic soil group, depth to bedrock/refusal, and suitable usage for a composting pad, storage tank, or treatment area should be addressed.

A. Deliverable items include the appropriate completed portions of the NRCS-CPA-52 and the written portions for the appropriate sections of the Plan-ED and data sources for Appendix D of the plan; maps in paper and PDF versions, as part of the Project Folder; and ESRI shapefiles of resources that were mapped.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #8**, Phase 3, Inventory Resources.

Timing – After all Inventory Resources assessments have been completed.

Location – Teleconference.

Topics – Findings from the Resource Inventories and Watershed Assessment, the Economic and Social Assessment, the Archaeological and Historic assessment, the Soils and Engineering Assessment. Comparison of new information to original planning information.

III. Review and acceptance of work

Item 3-4, Soils and Engineering Assessment: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Soils and Engineering Assessment to the A-E within 14 days of receiving the document. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of item Soils and Engineering Assessment will be made by the COR after all corrections are made and all required material has been submitted.

4-1 Analyze Resource Data

I. Scope

The A-E will analyze collected resource information through statistics, maps and other analytical techniques and tools. An analysis of all initial alternatives including the future without project condition will be compiled as an Initial Alternatives Report.

A. For potential projects requiring the diversion, collection, storage and/or treatment of runoff, hydrology and hydraulics (H&H) models will be developed .

1. Develop H&H model input data

a. Delineate drainage area of project based on best available mapping/LiDAR data including any necessary field inspections.

b. Quantify current and future land uses using NEH Part 630, Chapter 8 and Chapter 9 and create maps to be incorporated into the Plan-Environmental Document.

- Land uses within the projects' drainage areas shall be mapped manually based on the most recent relative aerial photography, site visits, and other sources.
- Land use for the remaining watershed areas shall be based upon the most recent land use/land cover mapping available from the National Land Cover Database (NCLD) available through the Multi-Resolution Land Characteristics Consortium or other sources approved by the COR and revised to USDA-NRCS land use classes in NEH Part 630, Ch. 8 & Ch. 9.
- Land uses shall be identified for the fully-developed condition based on current development and available forecast information from local planning commissions and based on regional other environmental and social limitations through the life of the project. Provide GIS based maps showing future land use coverage.

c. Develop NRCS weighted Curve Numbers with Antecedent Runoff Condition II (ARC II) for existing-conditions and future-conditions land use with most recent USDA-NRCS Hydrologic Soil Groups

d. Acquire precipitation data (NRCS-PA EFH2 Supplement and/or NOAA Atlas 14) as appropriate for the project.

e. Compute times of concentration (T_c) for existing and future conditions for sub-basins upstream of the project area.

f. Compute runoff entering and existing project area using EFH-2 or WinTR-55, as appropriate. Use the appropriate NOAA rainfall distribution for Chester County, PA

g. Deliverable items include the above-mentioned maps and written analyses for the appropriate sections of the Plan-Environmental Document. Electronic input and output files in their native formats for all models and ESRI Shapefiles of the flood pool inundation areas shall be delivered as part of the Project Folder.

2. Compute Hydrology and Hydraulics models for existing and future conditions

a. This activity includes performing hydrologic and hydraulic (H&H) analyses to evaluate the sizing and proportioning of any proposed structures for the potential project areas. This could include diversions, leachate collection/transfer systems, and leachate storage/treatment systems.

b. Modeling shall be determined for the 1-year, 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year, 24-hour rainfall events.

c. Deliverable items include an Initial Alternatives Report and the written narrative for the appropriate sections of the Plan-Environmental Document. Electronic input and output files in their native formats for all models shall be delivered as part of the Project Folder.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #9**, Phase 4 Analyze Resource Data.

Timing – After all Resource Data assessments have been completed.

Location –Teleconference.

Topics – Findings from the Initial Alternatives Report

III. Review and acceptance of work

Item 4-1, Analyze Resource Data: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Initial Alternatives Report to the A-E within 14 days of receiving the document. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of item Initial Alternatives Report will be made by the COR after all corrections are made and all required material has been submitted.

5-1 Analysis of Initial Alternatives

I. Scope

A. The A-E will formulate reasonable alternatives based on the analysis of collected resource information. The completeness, effectiveness, efficiency and acceptability of each feasible alternative will be documented considering permits, project cost and required mitigation.

All reasonable alternatives that address the purpose and need for action must be presented, including those not within the program authority of USDA-NRCS and those not preferred by the sponsors. All federally assisted alternatives are to be developed to address the purpose and need of the project. Direct, indirect, and cumulative effects should be identified, and the narrative information should be presented in a summary form using supplemental tables, drawings, maps, and other graphics. Additionally, in accordance with PR&G and/or USDA-NRCS regulation and policy, the following alternatives shall be identified:

1. NEPA No Action (PR&G Future Without Federal Investment (FWOFI)) – this alternative shall be the most likely future condition identified in coordination with USDA-NRCS and the Sponsors. This alternative reflects the current conditions of the flooding.

2. Structural – This alternative or alternatives may include any combination of structural practices and best management practices to prevent flooding of the road on Sandy Island.

3. Sponsor's – the Sponsor's alternative shall be evaluated if different from the alternatives above.

All relevant public and USDA-NRCS identified resource concerns noted during scoping must be addressed by one or more alternatives and analyzed in the Plan-Environmental Document.

B. The Contractor will document the rationale for alternatives considered but eliminated from detailed study.

C. Deliverable items include the written analyses for the appropriate sections of the Plan-Environmental Document.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #10**, Phase 5, Analysis of Initial Alternatives.

Timing – After the A-E develops a list of initial alternatives.

Location – Teleconference.

Sponsor Role – Present for discussion.

Topics – Review Initial Alternatives Report and discuss any initial alternatives that may eventually be carried forward.

III. Review and acceptance of work

There will be no review segment for Item 5-1.

6-1 Summary and Comparison of Alternatives along with needed permits and mitigation requirements

I. Scope

Reasonable alternatives should be evaluated and impacts should be described for each alternative. In addition, a no-action alternative describing the most likely action by others without federal assistance must be developed.

A. Alternatives will be described and compared in substantial and equal detail. The following will be performed for alternatives identified in Phase 5 Formulate Alternatives, which are to be studied in detail:

1. Engineering Analyses of Alternatives

a. Conceptual/preliminary sketches and associated information showing existing and proposed features of the alternatives including borrow, spoil, and staging areas and including the preparation of refined cost estimates for installation, operation and maintenance, and cost sharing.

b. The models and maps from Phase 4 shall be used and updated to evaluate these alternatives for future land use and T_c conditions. All models and maps from Phase 4 shall be updated to reflect the analyzed alternatives. The H&H evaluation should culminate in a technically sound and cost-effective solution for the alternatives that are evaluated in detail.

c. Preliminary structural analyses shall be conducted for the alternatives.

d. Develop cost estimates for each feasible alternative.

e. Deliverable items include the written analyses for the appropriate sections of the Plan-Environmental Document and updated maps and models for the Project Folder as described in Phase 1.

2. Environmental and Social Effects and Economic Analysis of Alternatives

a. Evaluate effects of the alternatives for all resources and concerns identified during the scoping process and complete the Environmental Evaluation Worksheet (NRCS-CPA-52). Principles, Requirements, and Interagency Guidelines for Water Resource Projects (PR&G) are to be followed. Also addressing concerns included in the National Watershed Program Manual, section 501.24 B (Scoping).

b. Identify, generally locate utilities within or affected by the possible construction areas and prepare a map. Use call before you dig service, town files, site inspection, and other records.

c. Conduct wetland determinations and delineations and develop maps for wetlands that may be present and potentially impacted by the project. This may include areas potentially impacted by construction activities (construction access roads, barge access areas, etc.).

Current USACE methodology and/or South Carolina methods and requirements (as applicable) will be utilized. Wetland determinations do not need to be flagged or

surveyed in the field for the rehab Plan-Environmental Document. To the extent appropriate, off-site wetland determination methodologies based on aerial photography and other sources will be utilized with limited field verification.

d. Complete an economic analysis of each alternative according to the requirements of the National Watershed Program Manual, the Principles, Requirements, and Interagency Guidelines for Water Resource Projects (PR&G) and the National Resource Economics Handbook part 611 – Water Resource Handbook for Economics and procedures applicable to monetary economic analysis contained in Chapter 2 of Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G).

   i. Determine the economic benefits and costs of each fully evaluated alternative, including the Future Without Project alternative, and as needed for other alternatives considered. Evaluate costs associated with the projects and benefits retained, lost or added in the alternatives.

   ii. Economic evaluations will be conducted using the current Federal Watershed Project Discount Rate. The rate changes in October of each year and can be found at http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/eco n/.

   iii. Determine the most appropriate project period of analysis (evaluation life plus implementation period) must be for the time over which any alternative has significant beneficial or adverse effects, not to exceed 100 years.

   iv. Formulate project based on the principles outlined in the USDA-NRCS NWPM (In particular, Parts 501.11 A (2); 501.12. C; 505.35 B (1) (iii)-(iv); 505.35 E-F).

   v. Determine average annual values for all costs and benefits associated with each evaluated alternative.

   vi. Determine net monetary benefits and benefit/cost ratios for all with project alternatives (Future With Federal Investment under PR&G) as compared to the no action (Future Without Federal Investment).

   vii. Develop an Economic Section for Appendix D: Investigation and Analysis that details the methods, assumptions, and data to support the economics analysis and results. Further, disclose any monetizable benefits that were not evaluated along with the rationale for not developing the values. As part of this section disclose how not developing these monetized benefits will not affect the identification of the correct NEE plan.

   viii. Complete all required economic and structural tables per the NWPM Section 506, Subpart B and NWPH Section 606, Subpart B

e. The preferred alternative will be identified as the reasonable alternative that maximizes net public benefits to society. Identification of the tentative Preferred Alternative and other identifications per PR&G for water resource projects will include:

i. Identify the alternative that meets technical requirements and best addresses the environmental, social, and economic concerns for the project, which is the one that maximizes public benefits relative to cost, as the Preferred Alternative.

ii. Work with Sponsors to determine the Sponsor's Preferred Alternative.

iii. Work with USDA-NRCS to identify the Structural Alternative, that best meets the federal objectives and Guiding Principles of PR&G.

iv. Work with USDA-NRCS to identify the Environmentally Preferred alternative if the environmental document is an EIS.

v. Work with USDA-NRCS to identify the NEE alternative. Use this alternative as a basis for comparison of other federally assisted alternatives to highlight their environmental and social trade-offs.

vi. Develop a Summary and Comparison Table (NRCS NWPM Part 501.37D) to summarize the trade-offs of monetary and non-monetary benefits and costs of all alternatives. The analysis will include comparison of alternatives relative the PR&G federal objectives, and guiding principles, monetary and non-monetary effects using an ecosystem services framework, and trade-offs of monetary and non-monetary effects among alternatives.

vii. The preferred alternative will be described along with rationale for the preference. Economic and structural tables will be prepared.

f. Deliverable items include completion of the appropriate sections of the NRCS-CPA-52 and written narratives for all alternatives for the appropriate sections of the plan-environmental document, cost estimates, and preliminary drawings for each alternative studied in detail, economic and structural tables for the preferred alternative.

g. Ensure compliance with all Federal, State, and local laws and regulations.

3. Identify Expected Permits and Mitigation

   a. Contractor will identify and list expected permits required for the project(s).

   b. Contractor will identify likely compensatory mitigation based on coordination with federal regulatory agencies such as U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers

   c. The deliverable for this item shall be a list of expected permits and mitigation requirement included in the plan as well as completion of the appropriate sections of the NRCS-CPA-52.

4. Identification of the tentative Preferred Alternative and NEE alternative for land treatment projects

a. Identify the NEE Alternative that best addresses the technical, environmental, social, and economic concerns for the project. The NEE is the alternative which maximizes net economic benefits consistent with protecting the Nation's environment.

b. Deliverable items include the written analyses for the appropriate sections of the Plan-Environmental Document.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #11**, Phase 6, Item 6-1, Summary and Comparison of Alternatives along with needed permits and mitigation requirements.

Timing – After the A-E develops the Summary and Comparison of Alternatives table and the Environmental Consequences narrative.

Location – Onsite

Sponsor Role – Present for discussion.

Topics – Walk proposed project site with agencies that may require permits/mitigation. Discuss alternatives and possible permitting/mitigation that may be required.

III. Review and acceptance of work

Item 6-1, Summary and Comparison of Alternatives along with needed permits and mitigation requirements: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Summary and Comparison of Alternatives table and the Environmental Consequences narrative to the A-E within 14 days of receiving the documents. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of the Summary and Comparison of Alternatives table and the Environmental Consequences narrative will be made by the COR after all corrections are made and all required material has been submitted.

7-1 Compare and Review Alternatives with Sponsor

I. Scope

Information will be provided to the sponsor regarding the National Economic Efficiency (NEE), Environmental Quality (EQ), Other Social Effects (OSE), and Regional Economic Development (RED) accounts. The accounts and the alternatives they represent will be presented to the sponsor.

A. Work with Sponsors and USDA-NRCS to determine the Preferred Alternative. If the Preferred Alternative is different than the NEE alternative, then the Sponsors will need to pursue an exception from the Chief of NRCS.

Deliverable items include the written analyses for the appropriate sections of the Plan-Environmental Document.

B. Conceptual Design (of the Preferred Alternative)

1. The Contractor shall prepare sufficient data for the Preliminary Review to adequately convey the design approach and methods.

2. The Contractor shall prepare and submit preliminary drawings using Tabloid (11" x 17") paper and the NRCS-PA CAD Template; and a digital copy of the design folder to the COR for the Final Design/Peer Review.

3. Conceptual Drawings

The drawings shall consist of:

a. A cover sheet.

b. Overall site maps.

c. Detailed site maps.

d. Plans, profiles, elevations, cross sections, and details needed to describe the work to be constructed.

e. Conceptual (to-scale) structural drawings.

4. Preliminary Design Folder

The preliminary design folder(s) shall collect, organize, and summarize the calculations and results from the other subsidiary items. Additional calculations should not be needed. It will contain at a minimum the information sections listed in the NRCS NEM Subpart B, Documentation, 511.11 Design Folders. A partial list of design folder sections consists of design notes and computations pertinent to this subsidiary item of the work including correspondence, site investigation reports, soils reports, hydrology and hydraulics, foundation and structural design computations (if applicable), and a list of applicable NRCS Specifications and Standard Drawings required. The folder shall include a detailed design report to explain the design assumptions, methodology, and references used for each design component and or consideration. Drawings that are necessary for proper explanation of the subject matter shall be reproduced to 11 inches on the binding

edge and shall be included in the folder. The folder shall be partitioned and indexed in a logical manner.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #13**, Phase 7, Item 7-1, Compare and Review Alternatives with Sponsor.

Timing – After the A-E develops the NEE, EQ, OSE and RED account information.

Location – Teleconference

Sponsor Role – Present for discussion.

Topics – Review of accounts and alternatives, the SLO will select the preferred alternative.

III. Review and acceptance of work

There will be no review segment for Item 7-1.

7-2 Prepare Draft Environmental Document

I. Scope

The A-E will prepare the environmental document as outlined in USDA-NRCS, PR&G and NEPA policy. The appropriate sections of the USDA-NRCS NWPM and NWPH will be used as format and content guidance.

The NRCS-CPA-52 will also be finalized.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #14**, Phase 7, Item 7-2, Prepare Draft Environmental Document

Timing – After the A-E receives draft environmental documents comments from the COR.

Location – Teleconference

Topics – Review comments for draft environmental document.

III. Review and acceptance of work

Item 7-2, Prepare Draft Environmental Document: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Draft Environmental Document to the A-E within 14 days of receiving the documents. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of the Draft Environmental Document will be made by the COR after all corrections are made and all required material has been submitted.

8-1 Response to USDA-NRCS – National Water Management Center and SLO review

I. Scope

The A-E will address comments on the environmental document made by the USDA-NRCS National Water Management Center and SLO.

A. The NWMC will provide draft comments and concerns to NRCS-PA. The A-E will have the opportunity to comment on these draft comments before final NWMC Comments and Concerns are provided to the USDA-NRCS State Conservationist. The A-E must respond, in writing, to each of the final comments and make required changes in the Plan-ED. The NWMC Concerns will be reviewed and addressed by the A-E in writing.

B. The deliverables are the written response to the final NWMC comments incorporated into the draft document and also in a separate stand-alone document submitted to USDA-NRCS.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. **Conference #15**, Phase 8, Item 8-1, Response to USDA-NRCS – National Water Management Center and SLO review.

Timing – After the A-E receives draft environmental documents comments from the COR.

Location – At site or by teleconference

Topics – Review comments for draft environmental document made by the USDA-NRCS – National Water Management Center.

III. Review and acceptance of work

Item 8-1, USDA-NRCS – National Water Management Center comments: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Draft Environmental Document to the A-E within 45 days of receiving the documents. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of the Draft Environmental Document will be made by the COR after all corrections are made and all required material has been submitted.

8-2 Response to Participating and Cooperating Agencies and other interested parties' comments

I. Scope

The A-E will address comments on the environmental document made by participating and cooperating agencies and other interested parties.

A. Prepare Draft Plan-Environmental Document, incorporating comments from NWMC and provide to NRCS-PA and the Sponsor for review and concurrence.

B. The Contractor will facilitate a public and interagency review of the Draft Plan-Environmental Document as appropriate in accordance with the PPP.

C. The Contractor will provide specific and summary responses to public and interagency comments in Appendix A of the Plan-Environmental Document (NWPM 501.45A and NWPH 601.45A).

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. As needed.

III. Review and acceptance of work

Item 8-2, Review and Draft Environmental Document: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Draft Environmental Document to the A-E within 60 days of receiving the documents. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of the Draft Environmental Document will be made by the COR after all corrections are made and all required material has been submitted.

8-3 Response to USDA-NRCS – National Head Quarters Administrative review

I. Scope

The A-E will address comments on the final environmental document made during the USDA-NRCS National Programmatic Review.

A. Prepare revised Plan-ED and provide to NRCS-SC for USDA-NRCS Programmatic review and concurrence, typically a 30-day review. The USDA-NRCS Programmatic Concerns will be reviewed and addressed by the A-E.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. As needed.

III. Review and acceptance of work

Item 8-3, USDA-NRCS – National Programmatic review: The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Final Environmental Document to the A-E within 45 days of receiving the documents. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of the Final Environmental Document will be made by the COR after all corrections are made and all required material has been submitted.

8-4 Complete Plan-ED

I. Scope

Provide electronic and hard copies of the final Plan-ED.

II. Conferences

Meetings between the A-E and the COR for the subject work must be in accordance with Section G - MEETINGS AND CONFERENCES:

A. As needed.

III. Review and acceptance of work

Item 8-4, Complete Plan-ED - The A-E will provide electronic files to the COR as outlined in Section L - FORMAT FOR SUBMITTED ELECTRONIC DATA. The COR will furnish review comments on the Complete Plan-ED to the A-E within 14 days of receiving the document. The A-E must make all necessary corrections to the work and will document the responses and actions taken as a result of the COR's review comments. The documented responses must be submitted with the final submittals for this item.

Final approval and acceptance of the work will be made by the COR and concurred upon by the Sponsor after all corrections are made and all required material has been submitted. The required submittals are:

A. PDF of the final Complete Plan-ED.
B. All supporting files used in the development of the Plan-ED.

Upon notification that all of the Plan-ED corrections have been made and accepted, the A-E must also furnish twenty (20) original printed copies of the final Plan-ED. The A-E will also prepare one (1) bound copy and six (6) thumb drives of all supporting documents, reports, analysis and findings used to create the Plan-ED, including both the input data and output results for any computer analyses performed.