

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET

This contract authorizes the professional services contractor
to provide professional services. (Authority: 1984 PA 431)

CONTRACT FOR PROFESSIONAL SERVICES

THIS CONTRACT, authorized this day of in the year two-thousand and **ten (2010)**, by the Director, Department of Management and Budget, BETWEEN the STATE OF MICHIGAN acting through the FACILITIES ADMINISTRATION, DESIGN AND CONSTRUCTION DIVISION of the DEPARTMENT OF MANAGEMENT AND BUDGET, First Floor, Stevens T. Mason **State Office** Building, Lansing, Michigan, hereinafter called the State,

and

the Prime Professional Services Contractor, hereinafter called the Professional,

FOR THE FOLLOWING PROJECT:

Index No.
File No.

Contract Order No. Y

NOW THEREFORE, the State and the Professional in consideration of the covenants of this Contract agree as follows:

- I. The Professional shall provide the professional environmental engineering/remedial study/design services for the Project scope of work in the environmental engineering/remedial study, design and construction Phase/Task sequence provided in this Professional Services Contract and to the extent authorized by the Department of Management and Budget, Facilities Administration, Design and Construction Division, the Department of Natural Resources and Environment, Remediation and Redevelopment Division and be solely responsible for their professional services. The Professional firm's environmental engineering/remedial study/design services shall be performed in strict accordance with this Professional Services Contract and be in compliance with the **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work requirements.
- II. The State of Michigan shall compensate the Professional firm for providing their professional environmental engineering/remedial study/design services for the Project scope of work services in accordance with the conditions of this Professional Services Contract.
- III. CENTURY DATE COMPLIANCE PROTECTION: All fixtures, equipment or operating systems which require firmware or software systems and that are provided with and/or incorporated into the work shall include, at no increase in Contract price or Contract time, design and performance such that they will not experience firmware or software abnormality and/or generate incorrect results or performance deficiencies due to date oriented processing.

If a Construction Contract is required for this Project, the Professional shall include the Century Date Compliance Protection language in the: (1) "Supplemental Conditions," of the Construction Contract of the Department of Management and Budget, Facilities Administration, Design and Construction Division, "MICHSPEC 2001 Edition of The Owner and Contractor Standard Construction Contract and General Conditions for Construction (Long Form)"; or the (2) Current Department of Management and Budget, Facilities Administration, Design and Construction Division," DMB Short Form 401 - Proposal and Contract/Front-End Package for Small Projects for Professional Services Contractors (PSC) with General Conditions for Construction and Instructions to Bidders" as adopted and modified by the State of Michigan and incorporated into the Construction Contract. The "Supplemental Conditions," Century Date Compliance Protection language will require the Professional to provide in the Construction Contract for this Project, the text provisions of the following paragraphs (A.) through (E.) below:

- A. The firmware and software design to ensure century date compliance capability, shall include, but not be limited to date structures (databases, date files, etc.) that provide four (4) digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system date; calculations and program logic (e.g. sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; and user interfaces (i.e. screen reports, etc.) that accurately treats four (4) digit year 2000 as a leap year within all calculations and calendar logic.
- B. When requested by the State of Michigan, the Construction Contractor shall promptly provide written assurances to the State from any manufacturer of any fixtures, equipment or operating systems provided with and/or incorporated into the work that its fixtures, equipment, or operating systems have been reasonably tested and will not experience any firmware or software abnormality and/or generate incorrect results or performance deficiencies due to date oriented processing. Whether the State chooses to request such assurances, and whether such assurances are provided, will not relieve the Construction Contractor from the Construction Contractor's obligation to provide fixtures, equipment and operating systems in accordance with the Professional firm's Phase 100 – Study, Final Report and **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial design drawings and specifications requirements or will represent acceptance of defective work.
- C. If the Construction Contractor knows or has reason to know of any incorrect results and/or performance deficiencies due to date oriented processing, the Construction Contractor shall promptly notify the Professional and the State in writing of any such defective work.
- D. The Construction Contractor specifically warrants and represents that all fixtures, equipment or operating systems provided with and/or incorporated into the work will not experience firmware or software abnormality and/or generate incorrect results or performance deficiencies due to date oriented processing. This Construction Contractor warranty shall extend until the applicable warranty otherwise covering the fixture, equipment or operating system at issue expires, whichever is later.
- E. The Construction Contractor shall take prompt corrective action upon receiving any written notice of any defective work because any fixtures, equipment or operating systems experience firmware or software abnormality and/or generate incorrect results or performance deficiencies.

IV. **DEFINITION OF TERMS:** The definition of terms and conditions of this Contract are described and outlined in the following Articles 1 through 14 and attached appendixes. The capitalized defined terms used in this Professional Services Contract shall have the following definitions:

ADDENDA: Written or graphic numbered documents issued by the Department of Management and Budget, Facilities Administration, Design and Construction Division, the Department of Natural Resources and Environment, Remediation and Redevelopment Division and/or the Professional firm prior to the execution of the Construction Contract which modifies or interprets the Project **Phase 500 - Final Design** Contract Bidding Documents, including environmental

engineering/remedial design drawings, and specifications, by additions, deletions, clarifications or corrections. The Addenda shall: (1) Be identified specifically with a standardized format; (2) Be sequentially numbered; (3) Include the name of the Project; (4) Specify the Project Index No., Project File No., the Contract Order No. Y, and a description of the proposed Addenda scope of work; and (5) Specify the date of Addenda issuance. As such, the Addenda are intended to become part of the Project Contract Bidding Documents when the Construction Contract is executed by the Professional firm's recommended lowest responsive, responsible qualified Construction Contractor. An Addendum issued after the competitive construction Bid opening to those construction Bidders who actually submitted a Bid, for the purpose of rebidding the Project work without re-advertising, is referred to as a post-Bid Addendum.

BID: A written offer by a competitive construction Bidder for the Department of Natural Resources and Environment, Remediation and Redevelopment Division and the Department of Management and Budget, Facilities Administration, Design and Construction Division's Project construction work, as specified, which designates the competitive construction Bidder's base bid and Bid price for all alternates.

BIDDER: The person acting directly, or through an authorized representative, who submits a competitive construction Bid directly to the Department of Management and Budget, Facilities Administration, Design and Construction Division.

BIDDING DOCUMENTS: The Professional firm's proposed Project **Phase 500 - Final Design** Contract Documents/architectural environmental and/or engineering drawings and specifications requirements as advertised, and all Addenda issued before the competitive construction Bid opening, and after the competitive construction Bid opening, if the Project construction work is rebid without re-advertising. Bidding Documents shall consist of: the **Phase 500 - Final Design** environmental engineering/remedial design drawings and specifications, any Addenda issued, special, general and supplemental conditions of the Construction Contract, and modifications, if any, to standard forms provided by the Department. Such forms consist of: the Project advertisement, the instructions to construction Bidders, the proposal forms, general, supplemental, and any special conditions of the Construction Contract, and the form of agreement between the Department and the Construction Contractor for the Project work requirements.

BID SECURITY: The monetary security serving as guarantee that the competitive construction Bidder will execute the offered Construction Contract or as liquidated damages in the event of failure or refusal to execute the Construction Contract.

BUDGET: The maximum legislatively authorized Budget amount to be provided by the State of Michigan and available for a specific purpose or combination of purposes to accomplish the Project scope of work for this Contract.

BULLETIN: A standard document form (DMB-485, Bulletin Authorization No. and the DMB-489, Instructions to Construction Contractors for Preparation of Bulletin Cost Quotations for Contract Change Orders) used by the Department of Management and Budget, Facilities Administration, Design and Construction Division to describe a sequence numbered change in the Project scope of work under consideration by the Department and the Professional and to request the Construction Contractor to submit a proposal for the corresponding adjustment in the Contract price and/or Contract time, if any. These standard document forms are a part of the "DMB-460, Project Procedures" documents package.

CONSTRUCTION CONTRACT: A separate written Contract agreement between the Construction Contractor and the Department for the construction, alteration, demolition, repair, or rebuilding of a State/Client Agency building or other State property.

CONSTRUCTION CONTRACTOR: Any construction firm under a separate Contract to the Department for construction services.

CONSTRUCTION INSPECTION SERVICES: The Professional firm's field Inspections of the Project scope of work during the construction Phase of this Contract which includes but is not limited to: (1) Document the quantity and quality of all Project construction work and verify that the Project construction work is properly completed; (2) Resolve Project problems that are affecting the Project construction work, certify payment requests, process Bulletins, Contract Change Order recommendations, and requests for information (RFI's) in a timely manner as prescribed in the Department of Management and Budget, Facilities Administration, Design and Construction Division, "MICHSPEC 2001 Edition of The Owner and Contractor Standard Construction Contract and General Conditions for Construction (Long Form)" or the current Department of Management and Budget, Facilities Administration, Design and Construction Division, "DMB Short Form 401 - Proposal and Contract/Front-End Package for Small Projects for Professional Services Contractors (PSC) with General Conditions for Construction and Instructions to Bidders" as adopted and modified by the State of Michigan and incorporated into the Construction Contract; and the (3) Inspection of Project construction work completed or in progress by the Construction Contractor to determine and verify to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative** that the Project construction work is in compliance with the Professional firm's design intent and that the Project scope of work has been completed by the Construction Contractor in accordance with the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications requirements.

The Professional shall provide sufficient Inspections of the Project scope of work during the construction Phase to administer the construction Phase field services and its related construction Phase administration office services, as directly related to the degree of Project complexity and scope of work requirements, up to and including full-time field Inspections. The construction field Inspections shall occur as the construction field conditions and the Project scope of work requirements may require and during the regularly scheduled monthly progress and payment meetings. The Professional shall use for their construction field Inspection services, only personnel having such professional expertise, experience, authority, and compatibility with departmental procedures as the Department may approve. The Professional agrees that such characteristics are essential for the successful completion of the Project scope of work. Such individuals shall be replaced for cause where the Department determines and notifies the Professional **firm**, in writing, of their unacceptable performance.

CONSULTANT: Any individual, firm, or employee thereof, not a part of the Prime Professional firm's staff, but employed by the Prime Professional and whose professional service cost is ultimately paid by the State of Michigan, either as a hourly billing rate cost or authorized direct cost reimbursement. This includes the recipient(s) of Contract Orders for material, support, and/or technical services. Also, included are persons and firms whose management and/or direction of services are assigned to the Prime Professional as may be provided elsewhere in this Contract.

CONTRACT CHANGE ORDER: A written order standard document form (DMB-403) issued and signed by the State of Michigan and signed by the Professional which amends the **Project Design Professional firm's final design** Contract Documents for changes in the **Department's approved and** attached Appendix 1 – Project/Program Statement scope of work requirements or an adjustment in Contract price and/or Contract time, or both.

CONTRACT DOCUMENTS: The Professional firm's Phase 100 – Study, Final Report and **Phase 500 - Final Design** environmental engineering/remedial plans/drawings, specifications, Construction Contract, instructions to construction Bidders, proposal, Bidding Documents, agreement, conditions of the Contract, payment bond, performance/labor and material bond, prevailing wages, all Addendums, and attachments as may be necessary to comprise a Construction Contract for the Project scope of work requirements. Specifications for this Contract will be prepared for Divisions 00 through 49, in the MasterFormat Outline by the Construction Specifications Institute (C.S.I.), as appropriate for the defined Project scope of work requirements (See Appendix 5).

CONTRACT MODIFICATION: A written amendment standard document form (DMB-410) to the Contract scope of work requirements signed by the Department and the Professional. The preparation of Bulletins and Contract Change Orders resulting from changes in the **Department's approved and** attached Appendix 1 – Project/Program Statement scope of work requirements or previously unknown on-site field conditions as approved by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director will be compensated to the Professional **firm** by way of the Contract Modification in accordance with the Article 2, Compensation text of this Contract. Any Contract Modification of this Professional Services Contract must be in writing, signed by duly authorized representatives of the parties, and shall be in such format and detail as the Department may require. No Contract Modification will be approved to compensate the Professional **firm** for correcting, or for responding to claims or litigation for the Professional firm's Phase 100 – Study, Final Report and **Phase 500 -Final Design** Contract Documents/environmental engineering/remedial study/design errors, omissions or neglect on the part of the Professional.

CONTRACT ORDER: A written order standard document form (DMB-402) issued and signed by the State of Michigan authorizing a professional firm to: (1) Begin to incur Project expenses and proceed with the Project work on-site; and (2) Provide the professional services stipulated in the fully executed Contract scope of work for the not-to-exceed dollar (\$) fee amount designated in the Phases of the Contract Order. Issuance of this standard document form by the State of Michigan to the Professional firm certifies that: (1) The State will enter into a Professional Services Contract for the professional services described in the **various** Phases of this Contract; and that (2) The proper three (3) sets of Original Certificates of Insurance documents have been received and accepted by the State along with the approval and signing of the Professional firm's Professional Services Contract by the Director of the Department of Management and Budget, Facilities Administration.

DEPARTMENT: The term "Department" shall mean the State of Michigan in its governmental capacity, including its departments, agencies, boards, commissions, officers, employees and agents; and for purposes of this Professional Services Contract, its duly authorized representative shall be the Director of the Department of Management and Budget, or their designee. The Department will represent the State of Michigan in all matters pertaining to this Professional Services Contract. The Department of Natural Resources and Environment, Remediation and Redevelopment Division will administer and interpret the Contract on a day-to-day basis during the term of the Contract scope of work. All other Contract matters will be administered through the Department of Management and Budget, Facilities Administration, Design and Construction Division.

DESIGN MANUAL: Provides the Professional with information regarding the Department of Management and Budget, Facilities Administration, Design and Construction Division's current "Major Project Design Manual for Professional Services Contractors and State/Client Agencies" review process requirements regarding the uniformity in Contract materials presented to it by the Professional and the State/Client Agency(ies). This manual contains the following noted standards, instructions, and procedures information for: (1) General instructions for planning documents from Phase 100-Study through Phase 500-Final Design; (2) Net and gross area/volume; (3) Project cost format; (4) Outline environmental engineering/remedial design specifications; (5) Specifications in documentation Phase; (6) Instructions for proposal; (7) Bidders questionnaire; and the (8) Project job sign.

DIRECTOR: The Director of the Department of Management and Budget or their authorized State of Michigan representative.

DIRECTOR-FA: The Director of the Department of Management and Budget, Facilities Administration or their authorized State of Michigan representative.

FIELD REPRESENTATIVE: An employee of the State under the direction of the Project Director who provides the Inspection of construction Projects for compliance with the study/design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/architectural and engineering drawings and specification requirements and the building construction codes. The Field Representative is the liaison between the Construction Contractor, the Professional **firm**, and the Project Director. The Project Director, or their Field Representative, has the authority to require the Professional **firm** to respond to and resolve study/design related problems, construction field problems and to attend Project meetings. Unless delegated by specific written notice from the Department, the Field Representative has no authority to order any changes in the Project scope of work or authorize any adjustments in Contract price or Contract time.

INSPECTION ON-SITE: The Professional **firm** and their **Consultant firm's** on-site and/or off-site examination of the Project construction work completed or in progress by the Construction Contractor to determine and verify to the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative** that the quantity and quality of all Project work is in accordance with the design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications requirements.

KEY PRINCIPAL PERSONNEL/EMPLOYEE: A Chief Executive Officer of a professional firm who is essential for the successful completion of this Project scope of work.

NOTICE OF INTENT TO AWARD: A written notice to the Construction Contractor, by the Department of Management and Budget, Facilities Administration, Design and Construction Division accepting the Project Professional firm's written recommendation to award the construction Bid to the lowest responsive, responsible construction Bidder. The Notice of Intent to Award letter will also, designate the Contract price and itemize the alternates that the Department, at its sole discretion has accepted.

PHASE: A discretely distinguishable design Phase step necessary to produce the Project's scope of work in the course of the Professional providing environmental engineering/remedial study, design and construction services.

PRIME PROFESSIONAL SERVICES CONTRACTOR/PROFESSIONAL: An individual, firm, partnership, corporation, association, or other legal entity who is legally permitted by law to sign and seal final design construction Contract Documents and licensed under the State of Michigan's professional licensing and regulation provisions of the Occupational Code (State Licensing Law), Act 299 of the Public Acts of 1980, Article 20, as amended, to practice architecture, engineering, environmental engineering, geology, **civil**, land surveying, or landscape architecture services in the State of Michigan.

The Prime Professional Services Contractor/Professional firm is also legally permitted by the State of Michigan's regulation provisions of the State Construction Code, Act 230 of the Public Acts of 1972, as amended, and designated in a Construction Contract by the Department of Management and Budget, Facilities Administration, Design and Construction Division to recommend construction progress payments to the Construction Contractor.

PROJECT: Any new construction, existing site, new utilities existing building renovation, additions, environmental engineering site remedial services, alteration, repair, installation, construction quality control and material testing services, painting, decorating, demolition, conditioning, reconditioning or improvement of public buildings, works, bridges, highways or roads authorized by the Department that requires professional **study/design** services as part of this Contract.

PROJECT COST: The total Project cost including, but not limited to, site purchase, site survey and investigation, hazardous material abatement, construction, site development, new utilities, telecommunications (voice and data), professional fees, construction quality control and material

testing services, testing and balancing services, furnishings, equipment, architectural and/or environmental engineering/remedial study/design plan(s)/drawing(s) design code compliance and plan review approval fees and all other costs associated with the Project.

PROJECT DIRECTOR: The professional licensed State of Michigan employee of the Department of Management and Budget, Facilities Administration, Design and Construction Division, Environmental Engineering discipline who is responsible for directing and supervising the Professional firm's **environmental engineering study/design services during the life of this environmental engineering/remedial study/design Professional Services Contract (See Department's approved and attached Appendix 1 – Project/Program Statement scope of work requirements for this Project)**. The Project Director is responsible for monitoring and coordinating the performance of the construction Phase services and also responsible for the overall administration and Inspection of Capital Outlay and miscellaneous operating projects (MOP's) construction activities to ensure quality control, **Phase 500 - Final Design Contract Documents** compliance and timely Project completion within the established Project construction Budget. The Project Director, **or** their Field Representative, has the authority to require the Professional to respond to and resolve study/design related problems, construction on-site field problems and to attend Project related meetings. Unless delegated by specific written notice from the Department, the Field Representative does not have any authority to order any changes in the Project scope of work or authorize any adjustments in Contract price or Contract time.

PROJECT/PROGRAM STATEMENT: The **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work requirements prepared by the State/Client Agency that defines the scope of the problem and describes why this Project is desirable, and provides a preferred resolution of the problem. The Project/Program Statement also requires the Professional **firm** to provide a Project schedule identifying critical study/design milestone dates that shall be required and achieved by the Professional for the Project requirements as well as construction milestone target dates anticipated for the Construction Contractor to achieve.

PROJECT TEAM: Consisting of the Professional **firm**, the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative**, the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager, the State Contract Administrator, the State Field Inspector, a representative of the State/Client Agency, and others as considered appropriate by the Department.

PUNCH LIST: A list of minor construction Project items to be completed or corrected by the Construction Contractor, any one of which do not materially impair the use of the Project work, or the portion of the Project work inspected, for its intended purpose. A Punch List shall be prepared by the Professional upon having made a determination that the Project work, or a portion of the Project construction work inspected, in concert with the Professional, the Construction Contractor, the Department of Management and Budget, Facilities Administration, Design and Construction Division's, **the** Project Director, the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and any construction manager, is substantially complete and shall be attached to the respective DMB-455, Certificate of Substantial Completion form. This standard document form is a part of the "DMB-460, Project Procedures" documents package.

SOIL EROSION AND SEDIMENTATION CONTROL: The planning, design and installation of appropriate Best Management Practices (as defined by the most current version of the Department's Soil Erosion and Sedimentation Control Guidebook) designed and engineered specifically to reduce or eliminate the off-site migration of soils via water runoff, wind, vehicle tracking, etc. and comply with the Soil Erosion and Sedimentation Control in the State of Michigan as regulated under the 1994 Public Act 451, as amended – The Natural Resources Environmental Protection Act, Part 91 – Soil Erosion and Sedimentation Control. Soil Erosion and Sedimentation Control associated with this Contract will be monitored and enforced by the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program.

STATE: The State of Michigan in its governmental capacity, including its departments, agencies, boards, commissions, officers, employees and agents. Non-capitalized references to a state refer to a state other than the State of Michigan.

STATE/CLIENT AGENCY: The State of Michigan, Department of Natural Resources and Environment, Remediation and Redevelopment Division for whose use the Project will ultimately serve, which requires professional environmental engineering study/design services. The term State/Client Agency does not include an institution of higher education or a community college.

STATE CONTRACT ADMINISTRATOR: The Chief of the Michigan Department of Natural Resources and Environment, Remediation and Redevelopment Division, Contract Procurement and Design/Operation and Maintenance Unit authorized by the State to administer and interpret the Contract on a day-to-day basis during the term of this Contract scope of work. However, administration of this Contract implies no authority to negotiate, change, modify, amend, or otherwise alter the terms, prices, conditions, and specifications of this Contract unless specified within the Contract. All other authority is retained by the Department of Management and Budget, Facilities Administration, Design and Construction Division.

STATE FIELD INSPECTOR: An employee of the State of Michigan under the direction of the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager who provides the on-site, Inspection of construction Projects for compliance with the study/design intent of the Professional firm's Contract Documents/environmental engineering/remedial drawings and specification requirements and the building construction codes. The State Field Inspector is the liaison between the Construction Contractor, the Professional, and the State Project Manager. The State Project Manager, or their State Field Inspector, has the authority to require the Professional to respond to and resolve study/design related problems, construction on-site field problems and to attend Project related meetings.

STATE PROJECT MANAGER: The assigned district staff of the Department of Natural Resources and Environment, Remediation and Redevelopment Division authorized by the State to represent and act on behalf of the State Contract Administrator on a given Project and to thereby provide direction and assistance to the Construction Contractor. The State Project Manager may designate in writing a person to act on behalf of the State Project Manager when they are unable to perform their required duties or is away from the office. In such cases, the State Project Manager must notify the Construction Contractor and the State Contract Administrator.

SUBSTANTIAL COMPLETION: The standard document form (DMB-445) for the Project work, or a portion of the Project work designated in the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications as eligible for separate Substantial Completion, has been completed in accordance with the design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications, to the extent that the Department of Natural Resources and Environment, Remediation and Redevelopment Division and the Department of Management and Budget, Facilities Administration, Design and Construction Division can use or occupy the entire Project work, or the designated portion of the Project work, for the use intended without any outstanding, concurrent work at the Project work site, except as may be required to complete or correct the Project work Punch List items. Prerequisites for Substantial Completion, over and above the extent of Project work completion required, shall include the following items; (a) Receipt by the Department of all required Contract operating and maintenance documentation; (b) All systems have been successfully tested and demonstrated by the Construction Contractor for their intended use; and (c) The Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director having received all required Contract certifications and/or occupancy approvals from the State of Michigan and those political subdivisions having jurisdiction over the Project work. Receipt of all required Contract certifications and/or occupancy approvals from those political subdivisions with jurisdiction in and of itself does not necessarily connote Substantial Completion.

SUSTAINABLE DESIGN: The Professional firm's use of a balance of appropriate materials, products and design methods that reduce the impact to the natural ecosystems and be within the Budget constraints of the Project. Sustainable Design shall be used wherever possible by the Professional in their Project design and an itemized list shall be provided with the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specification requirements that identifies the processes and products.

TASK: Shall mean the following: (1) A quantifiable component of design related professional environmental engineering Task services required to achieve a design Phase of the Project's scope of work; (2) The most manageable sub-element within a study/design Phase; (3) A unique item of work within a study/design Phase for which primary responsibility can be assigned; and (4) Has a time related duration and a cost that can be estimated within a study, design and construction Phase.

ARTICLE 1 PROFESSIONAL SERVICE

The Professional shall provide, without exception, every professional, scientific, technical, and environmental discipline, staff and support personnel, along with all supplies, equipment and testing apparatus, and all other specialized personnel, services necessary to achieve the Project scope of work as described in the **Department's approved and** attached Appendix 1 - Project/Program Statement(s), and to perform such work for compensation fee(s) according to the professional environmental engineering/remedial study/design services rendered and be within the Professional firm's not-to-exceed monetary compensation fee(s) amount authorized in this Contract and Department approved **Contract Order and** Contract Change Orders. The Professional shall field check, and verify the accuracy of all drawings and any data furnished by the Department, the State/Client Agency or any other Project related source. The Department, at its discretion, may incorporate by Contract Change Order(s) the work of one (1) or more Projects into this Contract. The Professional firm's services includes attendance at all Project related meetings and conferences. The Professional is ineligible to Bid on the construction work of any Bidding Documents produced under this Contract. The Professional may not employ in any element of design, specification or estimating of this Project any firm(s) who it anticipates will be a supplier or construction Bidder for the Project or firm(s) that have participated in the Project study or design Phase work, or any part thereof. The assignment of, or continuation of any assigned Project work is conditional upon satisfactory performance for the Department. All on-site management and supervisors directly responsible for, or who shall supervise personnel engaged in, hazardous waste operations shall have successfully completed the Department of Environmental Protection Agency's, Safety Training Program in accordance with the requirements of the General Industry Standards, 29 CFR 1910.120. The Professional shall provide a Health and Safety Plan (H.A.S.P.) before implementation of the approved Project work plan. Response to the assigned Project scope of work shall begin no later than two (2) business days from the date of written notification of the Department's need for Professional environmental engineering/remedial services. Where authorized, elsewhere in this Contract, the Professional may provide testing services, with a Department approved, and fully qualified laboratory on an authorized reimbursable expense basis. The Professional acknowledges that the Department is the first interpreter of the Professional firm's performance under this Contract.

The Professional shall reference current State of Michigan, federal statutes and current administrative rules when implementing response activities or corrective actions at the sites with environmental contamination to comply with the requirements of the Department of Natural Resources and the Department of Environmental Protection Act, 1994 PA 451, as amended.

Soil Erosion and Sedimentation Control in the State of Michigan is regulated under the 1994 Public Act 451, as amended – The Natural Resources Environmental Protection Act, Part 91 – Soil Erosion and Sedimentation Control. Soil Erosion and Sedimentation Control associated with this Contract will be monitored and enforced by the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program.

The Professional shall reference current operational memoranda including the Tier 1 Risk-Based Screening Levels (RBLs) look-up tables, the current edition of the American Society for Testing and Materials (ASTM), Standard Guide for Risk-Based Corrective Action (RBCA), E1739-95 including the policy decisions made to customize the standard Guide for Risk-Based Corrective Action process into a State of Michigan specific process and the General Guidance for Evaluating and Characterizing Petroleum Releases documents issued by the Department of Natural Resources and Environment, Remediation and Redevelopment Division as needed to assist in implementing the corrective action activities undertaken under Part 213 of the 1994 PA 451, as amended.

For sites with activities undertaken under Part 201 of the 1994 PA 451, as amended, the Professional is required to refer to the operational memoranda including Part 201 Generic Clean-up and Screening Levels and the Training Material issued by the Department of Natural Resources and Environment, Remediation and Redevelopment Division (RRD) as needed to determine whether a remedial plan/response activity complies with the requirements of Part 201 of the 1994 PA 451, as amended.

The Professional **firm** acknowledges by signing this Professional Services Contract, having a clear understanding of the requested Project scope of work requirements and of the professional environmental engineering/remedial study, design and construction administration services required by the Department to provide it, and further agrees that the terms and conditions of this Professional Services Contract provide adequate professional monetary compensation fee(s) for the Professional to provide the requested Project scope of work requirements. No increase in monetary compensation fee to the Professional will be allowed unless there is a material change made to the Project scope of work requirements as described in **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work requirements and the change in scope to the Project/Program Statement scope of work requirements is accepted and approved in writing, by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager, the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Professional **firm**. Professional services shall not be performed and no Project monetary expenses shall be incurred by the Professional firm prior to the issuance of a written and signed Professional Services Contract and a DMB Form 402 - Contract Order by the Department to the Professional, authorizing the Professional firm to start the Project work on-site. Compensation for Department directed changes to the Project or modifications to the Project scope of work requirements will be provided to the Professional firm by a Contract Modification and/or Contract Change Order signed by the Department and the Professional. The preparation of Bulletins and Contract Change Orders resulting from increases in the Project scope of work or previously unknown on-site field conditions will be compensated to the Professional firm, as approved by the Project Director, on an hourly billing rate basis in accordance with this article (and the attached Appendix 4 – Project Hourly Billing Rate \$ Compensation). This monetary compensation shall not exceed seven and one-half percent (7.5%) of the Construction Contractor's quotation for the Bulletin or Contract Change Order or an amount mutually agreed upon by the Professional firm, the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager, and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director.

Professional services for this Project shall be provided in the Phase/Task sequence shown below and shall be rendered in accordance with the Professional firm's attached Appendix 3 – Project Study, Design and Proposed Construction Schedule duration. The Professional firm's environmental engineering study, design and proposed construction schedule shall be detailed, undated, and time sequence related for all Phase/Task services appropriate for the Project scope of work.

The Professional shall immediately inform the Department whenever it is indicated that the Professional firm's authorized Project not-to-exceed Budget cost may be exceeded. The Professional shall make recommendations to the Department for revisions to the Project to bring the Project Cost back to the Professional firm's original authorized Budget amount. Any revision to the Project must be accepted and approved by the Department in writing.

No substitution of any "Key Principal Personnel/Employee" who is essential for the successful completion of the Project scope of work requirements and identified in the Professional firm's attached Appendix 2 – Project Organizational Chart will be allowed by the Professional firm for this Contract without the prior written consent from the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director. Before any "Key Principal Personnel/Employee" substitution takes place, the Professional firm shall submit a written request to the Project Director for personnel substitution and this substitution request shall include the following information: (1) A request in writing for a No Cost Contract Modification for this "Key Principal Personnel/Employee" substitution; (2) Detailed written justification for this "Key Principal Personnel/Employee" substitution; (3) The Professional firm's qualifications of any proposed "Key Principal Personnel/Employee" replacement; and (4) A written statement from the Professional firm assuring the Department that the Project scope of work will not be adversely affected by this "Key Principal Personnel/Employee" substitution change. This request by the Professional firm to modify their Professional Services Contract must be accepted and approved in writing by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager, the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Director of the Department of Management and Budget, Facilities Administration, on the Department's, Professional Services Contract Modification form (DMB-410).

The **Department of Management and Budget, Facilities Administration, Design and Construction Division** will designate an individual to serve as the Project Director for the Project scope of work and who shall be fully acquainted with the **Department's approved and** attached Appendix 1 – Project/Program Statement scope of work requirements and have the authority to render Project decisions and furnish information promptly. Except, in connection with issues under the Article 12 - Contract Claims and Disputes text, the Project Director will exercise general management and administration for the Professional firm's services in so far as they affect the interest of the State. Also, the Department may assign study, design and/or construction staff to oversee the Professional firm's performance of the various Project Phase(s) of this Contract. The Professional shall indemnify, defend, and hold harmless the State against exposure to claims arising from delays, negligence or delinquencies by the Professional for the services of this Contract.

During the study, design and construction Phase administration of this Project, the Professional shall be required to obtain from the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director, the on-site Inspection record form document titled "DMB-452, The Professional firm's Inspection Record" for all on-site Inspection visits to the Project site. This standard document form is a part of the "DMB-460, Project Procedures" documents package. The Professional firm's Inspection Record document shall be completed and signed by the Professional and compiled monthly with the original form document sent to the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Contract Administrator and a copy sent to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Construction Contractor. The on-site Inspection record standard document form shall be completed and accompany the Professional firm's monthly submitted payment request.

The "DMB-460, Project Procedures" documents package shall be completed by the Professional and contains the following Department of Management and Budget, Facilities Administration form documents: (1) DMB-413, General Release – Visitors; (2) DMB-426, Builder's Risk Claim; (3) DMB-434, Certification of Off-Site Material Storage; (4) DMB-437, Guarantee and Indebtedness Statement; (5) DMB-440, Payment Request; (6) DMB-441, Meeting Attendance Record; (7) DMB-445, Certificate of Substantial Completion; (8) DMB-452, Professional firm's Inspection Record; (9) DMB-485, Bulletin Authorization No.; (10) Instructions for Schedule of Value; (11) DMB-487, Material Stored on Project/Job Site; and (12) DMB-489, Instructions to Construction Contractors for Preparation of Bulletin Cost Quotations for Contract Change Orders.

The professional environmental engineering/remedial design services required for each Phase of this Contract shall be performed by the Prime Professional firm and their Consultants in accordance with the Task service descriptions in this article. The following environmental engineering/remedial study, design, and construction Phase/Task service descriptions outlined in this Professional Services Contract represents the Department of Management and Budget, Facilities Administration, Design and Construction Division and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's standard of care method for describing the Professional firm's responsibilities for providing the environmental engineering/remedial study/design services of this Contract, but by inclusion, or omission, do not limit or exclude any regular or normal professional services necessary to accomplish the Project scope of work as required by the governing environmental enforcing agency, in full compliance with all applicable safety and health regulations and be in accordance with the approved Project Budget and the best industries accepted requisites for occupational safety and health standards of professional environmental engineering/remedial practice. However, all of the Phase/Task service descriptions outlined in this Contract may or may not be applicable to the **Department's approved and** attached Appendix 1-Project/Program Statement scope of work requirements and will require the Professional to identify only the Phase/Task services that are applicable for their Project scope of work. The Professional shall determine and coordinate the interface of the environmental engineering/remedial study, design, and construction Phase/Task services required for their Project scope of work and be responsible for identifying any additional Task services necessary to successfully complete their Project scope of work.

Should litigation occur as a result of this Project, the Professional firm shall be compensated by the Department of Natural Resources and Environment, Remediation and Redevelopment Division and the Department of Management and Budget, Facilities Administration, Design and Construction Division on

an actual hourly billing rate basis at the rate set forth in this Contract by a Contract Modification and/or Contract Change Order, if required to assist the Department of Attorney General, State Affairs Division in providing the professional environmental engineering/remedial services necessary during the course of litigation.

The following professional services, if they become necessary, may be essential for completing the Project Contract scope of work. They will be individually rendered by the Professional, only upon specific written authorization by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director to the Professional and for the purpose, and to the extent so authorized.

LITIGATION: The Professional shall provide all information, presentations, depositions, testimony as "expert witness", and similar or related services, on behalf of the Department, as may be required in relation to the professional environmental engineering/remedial services of the study, design and construction of this Project.

ACCOUNTING: The Professional shall provide all specialized categorizations and distributions of the costs of environmental engineering/remedial study, design and construction services, construction costs, and operational costs, as may be required according to purpose specific parameters.

PUBLIC AWARENESS: The Professional shall provide all environmental engineering/remedial design and construction related services to assist in, and make presentations of the professional services of the environmental engineering/remedial study, design, construction and operational aspects of the Projects as may be required for public meetings, hearings, and similar informational activities.

PHASE 100 - ENVIRONMENTAL INVESTIGATION/STUDY SERVICES

Provide complete and comprehensive site and/or facility surveys, environmental engineering investigation/study services and analysis/reports thereof with itemized construction cost estimates to define the environmental circumstances of various sites, buildings and/or structures based upon the Department of Natural Resources and Environment, Remediation and Redevelopment Division's approved and attached Appendix 1 – Project/Program Statement scope of work requirements to fulfill the following purposes:

Task 101 **COORDINATION:** Meet with the Project Team consisting of a representative of the Department, the State/Client Agency, the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager and other enforcing agencies having Project jurisdiction, and others as considered appropriate by the Department. Soil Erosion and Sedimentation Control associated with this Contract is supervised and enforced by the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program. Define all areas of the Project scope of work investigation. Establish Project Team responsibilities and lines of communications. Present study documents to the State/Client Agency and Department for their review at the 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project scope of work. Preside at all Project related meetings. Prepare and distribute to the Project Team, copies of minutes of all meetings, reports of site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated and/or critical decisions are made, distribute copies to the Department and participants within two (2) business days of the date of occurrence, otherwise meeting minutes shall be distributed within five (5) business days. Provide five (5) additional copies and distribute as the Department may direct.

Task 101.01 Organize, facilitate and attend periodic workshops at the direction of the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager, coordinate the various agencies involved in the Project and assist in preparing responses to the Potential Responsible Parties (PRP's) documents, proposals and positions.

- Task 102 PHASE I - SITE ASSESSMENT: Conduct a Phase I - Site Characterization Assessment of the Project site, its buildings and/or structures, and the natural environment. The survey shall be performed, and reported, in accordance with the current edition of the American Society for Testing and Materials (ASTM) standard practice for **E1527-05** Environmental Site Assessment, the instructions for which are part of this Contract and its specifications. The subjects of investigation within the text of this standard practice guide shall be supplemented with such other topics of investigation as may be necessary, and appropriate, to completely describe the Project site. Upon finding any definitive indication of possible defect, or reaching any conclusion that a Phase II Site Assessment Investigation is necessary, photographs and additional site assessment investigations and sampling shall be performed while on-site, using manual and portable power tools and equipment.
- Task 102.01 PHASE II - SITE ASSESSMENT: Upon receiving the Department's written authorization, conduct the Phase II - Site Assessment Investigations to evaluate potential defects identified in the related Phase I - Site Characterization Assessment. Submit a summary report of the Phase II - Site Assessment Investigation in accordance with the Task 110 Report format.
- Task 102.02 SITE CLASSIFICATION: Determine which classification scenarios (Class 1 through Class 4) fit the Project site based on their threat to human health, safety or sensitive environmental receptors in accordance with the Department of Natural Resources and Environment, Remediation and Redevelopment Division operational memoranda and **the American Society for Testing and Materials, Standard Guide for Risk-Based Corrective Action process for sites under Part 213 of the 1994 PA 451, as amended.**
- Task 103 INITIAL RESPONSE INVESTIGATIONS: Conduct such on-site investigations as may be necessary to assess any potential for, verify the occurrence/circumstance of, and Project the implications of, fugitive contamination. Except as may be otherwise directed by the Department, the following work of this Task shall be commenced within twenty-four (24) hours of Project assignment by the Department:
- A. Perform site surveys and site investigations to identify, and initially assess, the extent of uncontrolled toxic/hazardous materials at the Project site. Conduct site Inspections to detect any immediate hazard to public health, safety, and welfare. Prescribe and oversee implementation of measures to arrest, stabilize, contain, and negate or remedy such hazards. In circumstances posing risk of fire, explosion, or release of toxic materials to the atmosphere, develop contingency response procedure plans for the affected area. Prepare submittals, and provide all information necessary to secure the approval of the State and the local disaster preparedness authority having governing jurisdiction at the Project site.
 - B. Recommend procedures for the safe execution of the affected State/Client Agency functions, consistent with the character and impacts of the site contamination. Provide appropriate information for notifications to personnel impacted by the site contamination, and/or for the Department of Natural Resources and Environment, Remediation and Redevelopment Division's use in its public information program regarding the site contamination. Provide no statements to State/Client Agency staff, wards of the State, inmates, news media, or the public, regarding any circumstance of the site contamination.
 - C. Provide, on the Department's behalf, the appropriate notifications to the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the local and State government agencies and identify any reportable quantities of hazardous materials that may have been released, as required by the 1994 PA 451, as amended. Provide reports required by the 1994 PA 451, as amended, and make all other required notifications to the respective enforcing agency(s). Prepare and provide the initial response investigation(s) reports for this

Task, in accordance with the Task 110 Report format or the format required by the enforcing agency.

- D. Provide initial response services including emergency response to a new spill or source area at the request of the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager.

Task 104

PRELIMINARY SITE INVESTIGATION: Conduct the following on-site Inspections, and research, as appropriate, to define the Project site and the circumstances of the site contamination:

- A. Identify and analyze the character, use, history, construction, utilities, and all other pertinent built and natural features of the site, and those within any proximate area which may be impacted by, subject to, responsible for, or contributory to, fugitive contamination. Secure, for reference, all site maps utility/building/structural drawings, well/boring records, surveys, any enforcement records, and all other applicable data. Conduct additional on-site surveys and investigations as necessary to adequately define and depict the Project site. Identify all known, and suspected, contaminants and those that may be predictable from previous site usage.
- B. Conduct an evaluation of the existing data based on preliminary site data and the characteristics of the contaminants, and to the extent that reasonable predictions can be made, project the source(s), routes, and consequences of active contamination and inspect for indications thereof. As applicable, prepare and submit, on the Department of Natural Resources and Environment, Remediation and Redevelopment Division's behalf, a site characterization plan in accordance with the 1994 PA 451, as amended. Prepare and provide preliminary site investigation report(s) for this Task in accordance with the Task 110 Report format requirements.
- C. Conduct Tier 1 Assessment for sites under Part 213 of the 1994 PA 451, as amended. Gather site assessment data on source characterization, potential for exposure and degradation of beneficial uses and extent of contamination. Evaluate Tier 1 results for no action, final corrective action, interim corrective action or tier upgrade-further analysis. Prepare and provide the ninety (90) calendar day initial assessment report in accordance with the report format required by the Department of Natural Resources and Environment, Remediation and Redevelopment Division.

Task 105

PROJECT WORK PLAN: Prepare a complete, cost effective, viable, and efficient, work plan to determine the extent and degree of environmental contamination at the Project site.

- A. The work plan shall be consistent with the **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work and the governing enforcing agency's guidelines for preparation of Project work plan(s). Incorporate the Project specific adapted Project Health and Safety Plan and Quality Control/Quality Assurance Plan of Tasks 602 and 603 and the cost and schedule estimate of Task 108 and Task 109. Summarize the preliminary site investigation findings of Task 104. Develop an appropriate program of sampling and other specialized, nondestructive, investigations to adequately characterize the Project site with respect to geologic, hydrogeologic, hydrologic, topographic, surface and ground water, soil, sediment, air quality, biota, demographics, and other parameters influencing, or, influenced by the contaminants, and/or affecting the vertical and horizontal dispersal and intensities of contaminants, and the migration of the same. Support each line of site investigation with the logic and principals underlying and being applied to define test indicators, detection levels, expected background levels, and the prescribed Project work.

- B. Where Project site sample analysis is to be by other than the Professional firm's own staff, or subcontracted laboratory, the work plan shall include, as appendixes, a listing of the type, method, and number, of environmental tests to be performed and an inventory of all sampling supplies required. The work plan shall be objectively composed and shall not identify the Professional, by name, as performing any part of the work plan. This document shall be so comprehensive, definitive, clearly presented, and self-contained, that the intended work may readily be competitively bid from that document. Review the work plan with the Project Team and revise as required. Where the Project requires, submit the work plan in accordance with the 1994 PA 451, as amended. Submit the work plan and report in accordance with the Task 110 Report work plan format requirements.

Task 106 REMEDIAL INVESTIGATION/SITE ASSESSMENT: Direct, or as appropriate supervise, the Phase 600 and 700 related Tasks of this Contract for site specific surveys, sampling and subsurface investigations as necessary to fully identify and/or monitor the circumstances of contamination.

Task 106.01 Conduct all site investigation work in accordance with the requirements of the accepted Project work plan (and such extensions and modifications thereof as the governing enforcement authority may require), and with the Project schedule. Notify the Department and the governing enforcing agency of all sampling with adequate advance notification to allow for their participation.

Task 106.02 Provide a summary report of all findings and determinations. Include and analyze the results of all laboratory testing. Conduct dispersion modeling as appropriate. Identify and define all geological parameters having influence. Depict the results of all data to graphically show the location(s), vertical and horizontal extent, profiles, and intensities of the site contamination, any plume orientation/rate of dispersion, and the characteristics of any impacted soils and surface/ground water. Identify all computer programs used to reduce, analyze, and otherwise use data. Analyze and provide a risk assessment of the site contamination consistent with the United States Environmental Protection Agency (USEPA) and the Department of Natural Resources and Environment, Remediation and Redevelopment Division criteria. The finalized report shall be sufficiently objective, comprehensive, and inclusive that no other reference will be required to understand the circumstances of the site contamination, determine the appropriate method of remediation, and submit proposals for its design. Submit the remedial investigations reports in accordance with the Task 110 Report format requirements.

Task 106.03 Conduct Tier 2 Assessment: Upon receiving the Department's written authorization, to consider site-specific target levels (SSTLs) and appropriate points of compliance in accordance with the Department of Natural Resources and Environment, Remediation and Redevelopment Division operational memoranda and the American Society for Testing and Materials, Standard Guide for Risk-Based Corrective Action process. Evaluate the results of Tier 2 for no action, final corrective action, interim corrective action or tier upgrade. Provide a summary report of the Tier 2 assessment in accordance with the report format required by the Department of Natural Resources and Environment, Remediation and Redevelopment Division.

Task 106.04 Conduct Tier 3 Assessment: Where the Project requires under Part 213 of the 1994 PA 451, as amended. Upon receiving the Department's written authorization, conduct Tier 3 assessment to consider a more refined site-specific target levels to improve the accuracy of the applicable models in accordance with the Department of Natural Resources and Environment, Remediation and Redevelopment Division operational memoranda and the American Society for Testing and Materials, Standard Guide for Risk-Based Corrective Action process. Evaluate the results of Tier 3 for no action, final corrective action or interim corrective action. Provide a summary report of the Tier 3 assessment in accordance with the report format required by the Department of Natural Resources and Environment, Remediation and Redevelopment Division.

- Task 106.05 **Conduct A Site Characterization:** By collecting sufficient data to understand source area(s), define the nature and extent of contamination, understand contaminant transport and exposure pathways and design a remediation system. Conduct a feasibility study to select a viable and most economical remedial alternative for implementation as a corrective action plan at the site. Prepare the final assessment three-hundred and sixty-five (365) calendar day report. Prepare a closure report for the sites qualified for closure under Part 213 of the 1994 PA 451, as amended. Provide the reports in accordance with the report format required by the Department of Natural Resources and Environment, Remediation and Redevelopment Division.
- Task 106.06 **BUILDINGS/AIR QUALITY:** Define and conduct the appropriate testing program to confirm and/or establish the existing baseline/ambient air quality for the site/building(s)/facility and to identify any level(s) of contamination therein.
- A. Determine the local air quality as reported by most current air quality report of the Department of Natural Resources and Environment, Air Quality Division. Such program shall consist of one (1) or more sampling stations on-site and upwind of buildings. Within buildings and structures, identify and sample appropriate areas of homogeneous use, common air supply/return/circulation. Provide a minimum of three (3) samples per area known to contain hazardous materials or sources of contamination as well as one (1) or more representing the main ventilation system air return within each mechanical room, boiler room, and utility tunnel, at all open space or above ceiling plenums, and at such other locations as may represent quantifiable areas having common air supply or circulation characteristics.
 - B. Present test results in comparison to standard limits of concentrations allowed and/or recommended by the Department of Community Health, the Department of Natural Resources and Environment, Remediation and Redevelopment Division, the Michigan Occupational Safety and Health Regulations, and the United States Environmental Protection Agency. Present findings in such format as the Department may prescribe. Verbally notify the governing enforcing agency and the Department of any test results exceeding allowable limits and confirm notice in writing. Provide a summary testing report in accordance with the Task 110 Report format requirements.
- Task 106.07 **HAZARDOUS MATERIALS:** Define and conduct an appropriate bulk sampling program for suspected toxic/hazardous materials and/or for waste characterization.
- A. **ASBESTOS:** Assess all asbestos containing materials and provide a management plan and operating/maintenance program in the following format:
 - (1) Assessment.
 - (2) Management Plan.
 - (3) Operations and Maintenance Program.
- Task 107 **RISK ASSESSMENT:** Provide support to the Department of Natural Resources and Environment, Remediation and Redevelopment Division to determine ecological and human health risks at the site due to the presence of contaminants. Conduct statistical analysis and data evaluations to support risk assessment. The Professional will evaluate site specific data on a reach by reach basis to develop statistically significant relations of contaminants, to the extent that the data allow.
- Task 107.01 **ECOLOGICAL RISK ASSESSMENT:** Provide support to the Department Environmental Quality, Remediation and Redevelopment Division to determine risks posed by contaminants at the site. Evaluate the studies, analysis, models and comments on the Ecological Risk Assessment provided by the Potential Responsible Parties (PRPs) and the United States Environmental Protection Agency (USEPA) and prepare a response to address the issues/comments.

Task 107.02 HUMAN HEALTH RISK ASSESSMENT: Provide support to the Department of Natural Resources and Environment, Remediation and Redevelopment Division to determine risks posed by contaminants at the site to humans. Evaluate the studies, analysis, models and comments on the Human Health Risk provided by the Potential Responsible Parties (PRPs) and the United States Environmental Protection Agency (USEPA) and prepare a response to address the issues/comments.

Task 108 PROJECT COST: Provide itemized construction cost(s) estimates for each Project and maintain current, the estimated cost for, and expenditures of each Task of each respective Phase. In addition to remediation costs, such costs shall include, and specifically identify, all professional, testing, construction, and remediation costs, as well as any costs to maintain the State/Client Agency facility operations. Project cost analysis shall consider funding sources availability, and all steps of the Project Budget and appropriation processes and similar allocation processes affecting funding availability. Such availability shall be compared to projected cash flows. Where any cost is projected to occur over more than one (1) fiscal year, the estimate shall reflect annual costs.

Task 109 PROJECT SCHEDULE: Provide and submit for the Department of Natural Resources and Environment, Remediation and Redevelopment Division's acceptance, and maintain current for each Project, a schedule for the events of Tasks 104, 105, 106, and 107. The schedule format will be prescribed by the Department. This schedule shall include the procedural steps of Project Budget submittal, legislative appropriation, and the allocation and release of funds. Project schedules shall be in total compliance with the requirements of any court order(s), consent agreement(s) or other governing directive(s). Prescribed, agreed upon, or historically reasonable schedule times shall be included for reviews and approvals by the governing enforcing agency and for budgetary processes. Such schedules shall be provided in undated unit time durations (day(s), week(s), month(s), etc.) Project schedule dates will be incorporated when approvals or other written orders to proceed become known. Adherence by the Professional, to the Project's accepted schedule time/duration is a condition for satisfactory performance of this Contract.

Task 110 PROJECT STUDY REPORTS: Submit weekly written reports for the work of Tasks 103, 104, 106, and 107 (or as the Department may require) which briefly summarize the on-site field investigation activities, findings, significant decisions, and accomplishment of the preceding period. These reports shall transmit and summarize the findings of the on-site field investigation reports of the Phase 700 Project Tasks. Give notice of identified, or anticipated, problems which require response by the Project Team. Project study reports shall identify any significant deviations from the accepted Project work plan, itemized construction cost estimate, or schedule, and provide explanations of the same.

A. Submit the Task 102, draft, preliminary, and final versions, of the Project written report in accordance with the **current edition of the American Society for Testing and Materials (ASTM) standard practice for E1527-05, Environmental Site Assessment** and as outlined in the **Department's approved and** attached Appendix 1 - Project/Program Statement, and the summary reports of Tasks 102, 103, 104, 106, and 107 as the Department may require. Prepare all revisions thereto as the Project Team may deem necessary to produce complete and acceptable report documents. The draft, preliminary, and final reports of Tasks 102.01, 103, 104, 105, 106, and 107 shall be as required by the governing enforcing agency or the Department, as appropriate, and shall include as a minimum the following items:

1. Problem
2. Conclusion
3. Recommendations
4. Discussion, details, and documentation

- B. Provide copies of the finalized work plan of Task 105 and summary reports of Tasks 102, 103, 104, 106, and 107 as necessary for submittal to the governing enforcing agency and the Department, along with one (1) camera-ready original, suitable for legible reproduction. In addition, copies of the work plan, and all study reports of this Phase shall be provided to the Project Team members along with up to five (5) additional copies to be distributed as the Department may direct. Provide the Department copies of all electronic/computer data records generated for the Project scope of work, suitable for reapplication to the Project by others.
- C. When directed by the Department, submit the Project work plan and reports to the governing enforcing agency on the Department of Natural Resources and Environment, Remediation and Redevelopment Division's behalf. Monitor the progress of the approval process. Attend all Project related meetings, make presentations, explain all submitted technical data and proposals, provide and submit such amending information, and make such revisions, as may be necessary for the governing enforcing agency's evaluation and approval of the Project work plan and report. Provide environmental investigation/study presentations as indicated in the Project scope of work plan for Department acceptance and incorporate all study review comments required for Department written acceptance of the Project program analysis report. Provide one (1) acceptable environmental investigation/study presentation to the Project Team for this Task. Any additional environmental investigation/study presentations requested by the Department will be considered extra professional services and the additional environmental investigation/study costs will be paid to the Professional firm by the Department with a Contract Change Order.

Task 111 DATA MANAGEMENT: Review data submitted by Potential Responsible Party (PRP) to determine completeness, integrity, and comparability to other data sets. Develop and manage a comprehensive database to allow the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager access to all electronically submitted data. Run queries on the data at the direction of the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director to support the Department of Natural Resources and Environment, Remediation and Redevelopment Division's analysis and decision making processes. Review and validate data submitted by Potential Responsible Party (PRP) on quarterly basis. Provide data queries, maps, and associated summaries as requested by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager.

Task 112 DOCUMENT MANAGEMENT: Provide services to the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager to organize, log, maintain document database, and manage the documents associated with the administrative records for the site. Assist the Department of Natural Resources and Environment, Remediation and Redevelopment Division in locating, copying, and distributing documents as requested through the Freedom of Information Act or as otherwise requested by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager.

PHASE 200 - PROGRAM ANALYSIS

Amplify the **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work requirements and Phase 100 – Study, Final Report to embody the physical, functional, and programmatic relationships required to achieve the Project scope of work objectives. The proposed resultant analysis, when accepted and approved by the Department, shall amend the Project/Program Statement to comprise the general scope of work requirements of the Project. Such acceptance does not limit subsequent inclusion of minor, but essential, programmatic or design details whose necessity and arrangement may best become apparent during subsequent Phases of the environmental/remedial, architectural and/or engineering design development evolution.

- Task 201 COORDINATION: Meet, as required, with representatives of the Department and other State/Client Agencies who, along with the Professional, comprise the Project Team. Soil Erosion and Sedimentation Control associated with this Contract is supervised and enforced by the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program. Assist the Project Team to finalize the attached Appendix 1 - Project/Program Statement and Phase 100 – Study, Final Report to **Department’s approved and** completely define the proposed Project scope of work, and to establish lines of communication, authority, and responsibility and to establish a method for the State/Client Agency's to formally sign-off on the respective data input, the program analysis thereof and appropriate elements of the resultant design. Present proposed program analysis documents to the State/Client Agency and the Department for their review at the 50 percent and 90 percent completion intervals and at such other times as the Department or other State/Client Agencies deems necessary to completely develop and monitor the Project scope of work. Preside at all Project related meetings. Prepare and distribute to the Project Team, copies of minutes of all meetings, reports of on-site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated and/or critical decisions are made, distribute copies to the Department and participants within two (2) business days of the date of occurrence, otherwise meeting minutes shall be distributed within five (5) business days. Provide up to five (5) additional copies and distribute as the Department or other State/Client Agencies may direct.
- Task 202 ANALYSIS: Identify and develop data to evaluate and clarify the proposed Project scope of work. Analyze the concepts as described in the **Department’s approved and** attached Appendix 1 - Project/Program Statement scope of work requirements and Phase 100 – Study, Final Report through discussions with the Project Team and establish the functional objectives of the State/Client Agency's program and operational needs, as well as operational factors, maintenance and other support features. Provide all additional research, studies, and analysis necessary to express such objectives and requirements in terms of a fully operable Project which will acceptably serve its intended use.
- Task 203 DEVELOPMENT: Correlate, describe, and by appropriate Project scope of work environmental engineering tables, graphs, and drawings (on 24-inch by 36-inch or 30-inch by 42-inch mylar sheets, or sheet size approved in writing by the Department), transcribe and consolidate all existing data, studies and the analysis of Task 202 into a comprehensive report summarizing spaces, physical features, systems, functions, capacities, relationships, and interactions to be achieved by the proposed Project scope of work requirements. Selection of remedial alternatives shall be consistent with the **Department’s approved and** attached Appendix 1 - Project/Program Statement, Phase 100 – Study, Final Report and Project Budget. Revise program development design as may be required to achieve the Project scope of work objectives and incorporate review comments by the Project Team.
- Task 209 PROJECT COST ESTIMATE: Provide an itemized cost estimate of the proposed Project program analysis design based on the **Department’s approved and** attached Appendix 1 - Project/Program Statement scope of work requirements, Phase 100 – Study, Final Report and the program analysis/physical, functional, and programmatic relationships review and development. Verify to the Department, in writing, that the Professional firm’s review of the **Department’s approved and** attached Appendix 1 - Project/Program Statement requirements, Phase 100 – Study, Final Report and the program analysis, and the legislatively approved Project Budget for the Project is adequate to achieve the proposed Project program analysis design scope of work objectives. Revise proposed program analysis design documents as necessary to provide an acceptable design within the Department's authorized Project Budget.
- Task 210 PROGRAM ANALYSIS REPORT: Submit ten (10) copies of the proposed program analysis report to the Department, along with one (1) camera-ready original and an electronic copy suitable for legible reproduction. Provide one (1) acceptable presentation to the Project Team for this Task. Any additional program analysis presentations

requested by the Department of Natural Resources and Environment, Remediation and Redevelopment Division will be considered extra professional services and the additional program analysis costs will be paid to the Professional firm by the Department with a Contract Change Order.

PHASE 300 - SCHEMATIC/DESIGN DEVELOPMENT

Provide and/or confirm feasibility comparisons of options for Project site remediation and develop the environmental remedial design/performance parameters of the remediation system/process to be produced and/or used based upon the **Department's approved and attached** Appendix 1 – Project/Program Statement scope of work requirements.

Task 301 **COORDINATION:** Meet with the Project Team consisting of a representative of the Department, the State/Client Agency, the Department of Natural Resources and Environment, Remediation and Redevelopment Division and other governing enforcing agencies having Project jurisdiction, and others as considered appropriate by the Department. Soil Erosion and Sedimentation Control associated with this Contract is supervised and enforced by the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program. Define all areas of Project site investigation. Establish Project Team responsibilities and lines of communications. Present proposed schematic design documents to the State/Client Agency and Department for their review at the 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project scope of work. Assist in obtaining data and timely decisions. Immediately notify the Project Team members of any unfulfilled commitments by the Department's Project personnel to provide any Project data and/or decisions necessary to perform the Project Phase/Tasks scope of work requirements. Determine and resolve any requirement for maintaining operation of current State/Client Agency facility, spaces, or systems. Preside at all design related Project meetings. Prepare and distribute to the Project Team, copies of minutes of all meetings, reports of site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated and/or critical decisions are made, distribute copies to the Department and participants within two (2) business days of the date of occurrence, otherwise meeting minutes shall be distributed within five (5) business days. Provide up to five (5) additional copies and distribute as the Department may direct.

Task 302 **COMPARATIVE REMEDIATION:** Develop, and present for the Project Team's review and acceptance an analysis of options for appropriate interim, and long-term site remediation which compares them with the Professional firm's recommended approach. All methods considered shall provide a cost effective balance of environmental engineering design feasibility, technologies, equipment, historical performance of similar systems, effectiveness, impact on State/Client Agency operations, public health risks, environmental effects, implementation and life cycle costs, and length of site remediation time, plus all other parameters as the Project Team may require.

Task 303 **SCHEMATIC PRESENTATION:** Define and outline the character and features, and the design, construction, and operation, of the Project's site remediation system or process.

A. Where the accepted option involves an in-situ processes and/or environmental engineered plants, facilities, or systems, provide schematic diagrams and written explanations to show the scientific and environmental engineering theories, technical principals, and operating parameters. Outline the historical performance of such systems. Proprietary systems may be used only where the effectiveness, cost, and site remediation time are all superior to other approaches and with these being "equal," systems produced in the State of Michigan shall be named and given first preference.

1. Show the proposed State/Client Agency facility/system relative to the site contamination, the site, local environmental projects, all existing on-site operations, surface waters, wetlands, traffic patterns, adjacent properties and land-use, and all other features and factors affecting, and affected by, the proposed operation. Identify the place and means of all disposal of contaminated material.
 2. Identify, provide the program for, and submit written justification of any proposed construction, implementation, and/or operation of any specialized equipment, systems, test runs, pilot plants, computer modeling, or any other experimental or developmental work.
 3. Specify all required construction and environmental permitting. Define the Project site clean-up and closure criteria.
- B. Where the accepted option involves the removal and/or replacement of structures or parts thereof, soils, or any other material, define the scope of work/volume thereof. Identify the available means and methods for treatment or disposal and the locations thereof. Define the Project site clean-up and closure criteria. Specify all Project required permitting.

Task 304 **REMEDIAL ACTION PLAN:** Prepare a complete, cost effective, viable, and efficient remedial action plan for the development, design, construction implementation and operation of the Project's site remediation system/process. Incorporate the amended Health and Safety Plan, and the Quality Control/Quality Assurance Plans of Tasks 602 and 603, cost and schedule estimates of Task 300 and Task 309, and the outline approach of Task 303. Include all subjects of concern to, and/or required by, the governing enforcing agency. Submit the Project remedial action plan report in accordance with Task 310.

Task 308 **PROJECT COST:** Provide cost(s) for each Project site, and maintain current, the estimated cost for, and expenditures of each, Task of each respective Phase. In addition to remediation costs, such costs shall include, and specifically identify, all professional, testing, construction, and remediation costs, as well as any costs to maintain State Client/Agency facility operations. Project cost analysis shall consider funding sources, availability, and all procedural steps of Budget and appropriation processes and similar allocation processes affecting funding. Such availability shall be compared to projected cash flows. Where any cost is projected to occur over more than one (1) State fiscal year, the estimate shall reflect annual costs.

Task 309 **PROJECT SCHEDULE:** Provide a schedule for each Project site, and submit for acceptance, and maintain current, a schedule for the Tasks/events of all Phases of the Project. The schedule format will be prescribed by the Department. Project schedules shall be in total compliance with the requirements of any court order(s), consent agreement(s) or other governing directive(s). Prescribed, agreed upon, or historically reasonable schedule times shall be provided in undated unit time durations (day(s), week(s), month(s), etc.) Dates will be incorporated when approvals by the governing enforcing agency, or other orders to proceed become known. Adherence by the Professional, to a Project's accepted schedule time/duration is a condition for satisfactory performance of this Contract.

Task 310 **PROJECT REPORTS:** Submit draft, preliminary, and final versions, of the Project work plan as the Department may require for review. Make all revisions as the Project Team may deem necessary to produce a complete and acceptable document. Provide copies of the finalized plan as necessary for submittal to the enforcing agency, along with one (1) camera-ready original and an electronic copy, suitable for legible reproduction. In addition, copies of the work plan and all reports of this Phase shall be provided to the Project Team members along with up to five (5) additional copies to be distributed as the Department may direct.

When directed by the Department, submit the Project work plan report to the governing enforcing agency's on the Department's behalf. Monitor the progress of the approval process. Attend all Project related meetings, make presentations, explain all submitted technical data and proposals, provide and submit such amending information, and make such revisions, as may be necessary for the governing enforcing agency's evaluation and approval of the Project work plan report. Revise schematic design documents, as necessary, to incorporate all requested review comments required for Department written acceptance of the Project schematic design scope of work. Provide one (1) acceptable schematic design/development presentation to the Project Team for this Task. Any additional schematic design/development presentations requested by the Department will be considered extra professional services and the additional schematic design costs will be paid to the Professional firm by the Department with a Contract Change Order.

PHASE 400 - PRELIMINARY DESIGN

Prepare progressive environmental engineering/remedial drawings to develop and portray the preliminary design for the Project site based upon the Department of Natural Resources and Environment, Remediation and Redevelopment **Division's approved and attached** Appendix 1 - Project/Program Statement scope of work requirements and any approved environmental remediation method. Refine any schematic design as necessary to produce an acceptable preliminary design. The proposed preliminary design, together with an outline draft specification, shall be of such completeness and detail to establish and define the function, arrangements, spaces, location, operation, size and parameters of performance of equipment and materials comprising the principal design details of structures, equipment, and systems. Prepare and render the proposed preliminary design documents, appropriate to the Project site scope of work requirements, on 24-inch by 36-inch or 30-inch by 42-inch mylar sheets, (or sheet size approved in writing by the Department) utilizing applicable State of Michigan standards as defined by the Department for all disciplines. The proposed preliminary environmental engineering/remedial design drawings and the draft specifications shall clearly depict the Professional firm's proposed design of the systems, materials, equipment, utilities, site improvements, and other elements of the Project scope of work through single line diagrams, system layout drawings and developed plans. The level of design thus achieved must constitute the complete proposed preliminary design basis for detailing into final design environmental engineering/remedial drawings and specifications.

Task 401 **COORDINATION:** Meet with the Project Team to review the **Department's approved and attached** Appendix 1 - Project/Program Statement, approved site remediation method and any approved schematic drawings to refine Project scope of work requirements. Soil Erosion and Sedimentation Control associated with this Contract is supervised and enforced by the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program. Present proposed preliminary design documents to the State/Client Agency and Department for their review at the 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project scope of work. Assist the Project Team to progressively review development of the proposed preliminary design documents and to develop input and timely decisions therefore. Incorporate any design refinements within the Project scope work. Establish and define any equipment and/or materials to be furnished by the State. Preside at all design related Project meetings. Prepare and distribute to the Project Team, copies of minutes of all meetings, reports of site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated and/or critical decisions are made, distribute copies to the Department and participants within two (2) business days of the date of occurrence, otherwise meeting minutes shall be distributed within five (5) business days. Provide five (5) additional copies and distribute as the Department may direct.

Task 402 **SPECIFICATIONS:** Prepare proposed preliminary design outline draft specifications for, Divisions 00 through 49, in the 2004 MasterFormat Outline by the Construction Specifications Institute (C.S.I.), as applicable for the defined Project scope of work (See Appendix 5).

Sustainable Design shall be utilized wherever possible by the Professional in their Project design and an itemized list shall be provided with the preliminary design drawings and specifications requirements that identifies the processes and products. Sustainable Design is defined in this Contract as the Professional firm's use of Project design resources with no negative impact to the natural ecosystems and when possible, achieving a net enhancement of the Project scope of work.

- Task 403 CIVIL/SITE INVESTIGATION/DESIGN: The Professional shall retain a site survey and geotechnical testing Consultant and coordinate their proposed environmental engineering services and prepare the site investigation survey program(s) required to establish and execute a complete proposed preliminary site design. Define the location of all State/Client Agency facilities and/or operations. Determine the Project site areas and volumes of contaminated/hazardous materials to be removed/replaced and/or treated. Identify proposed area(s) of disposal/discharge. Identify site areas having potential for soil erosion/sedimentation and storm run-off consequences. Secure, in writing, approval of any traffic regulating authority for traffic alterations arising from the Project scope of work. Illustrate and coordinate any off-site work necessary for a completely functioning Project. Revise site investigation/design as required.
- Task 404 STRUCTURAL: Prepare proposed structural calculations appropriate to the Project scope of work, and size major components. Prepare proposed preliminary design structural plans, sections, elevations, and details drawings. Revise structural engineering design as required.
- Task 405 MECHANICAL/HVAC/UTILITIES: Identify existing equipment and systems. Calculate heat loss, heat gains, and other demands for all spaces. Determine heating, ventilating and air conditioning (HVAC) system requirements. Calculate total loads, identify and size new equipment. Identify and/or calculate total utility loads. Include the needs of any original building or system design as well of those of the proposed Project. Provide basic engineering design appropriate for all principal site remediation components/systems and all pre-engineered equipment suitable, and acceptable for, the Project. This also applies to other utility systems. Verify clearances for all systems. Prepare proposed preliminary design mechanical/heating, ventilating, and air conditioning (HVAC)/utilities drawings. Review construction codes and incorporate applicable requirements. Revise as required. Secure in writing, the approval of capacities and connections for the Project scope of work from the appropriate utilities/ suppliers.
- Task 406 ELECTRICAL: Prepare load calculations, including electric loads for fixed, movable, and furnished equipment appropriate to this Project. Determine electric service requirements and size major transformer and service equipment. Develop and outline basic equipment and distribution systems for lighting, power, remediation system(s), building control, process monitoring/recording, fire, security, television, data, communications and other specialized systems of the Project and produce single line diagrams for each system. Provide a basic description of how each such system is to function. Verify clearances for all systems. Prepare proposed preliminary design electrical drawings. Review construction codes and incorporate all applicable requirements. Revise as required. Secure in writing, the approval of capacities and connections for the Project scope of work from the appropriate utilities/suppliers.
- Task 407 ENGINEERING: Prepare proposed preliminary design environmental engineering/remedial drawings, appropriate to the Project scope of work, to detail and define the Project affected remedial spaces. Coordinate design to integrate the Department of Natural Resources and Environment, Remediation and Redevelopment Division's design requirements. Where the Project scope of work involves work in an existing building and/or utility system, identify and locate, in writing, and by diagram, any building and site utility areas which may have potential hazardous materials or contamination which may require site remediation and/or removal prior to the renovation or new construction work of the Project. Coordinate the Project scope of work with any hazardous material removal required to implement the Project. Depict energy efficient

design features of the Project and provide summary calculations to demonstrate applicable compliance with the State of Michigan's current Energy Code requirements. Drawings will include plans, elevations, sections, and critical construction details in order that a detailed construction estimate can be made. Determine and prepare a list of proposed preliminary design drawings as related to the Project scope of work. Revise environmental engineering/remedial design as required.

- Task 408 **DRAFTING:** Prepare and render the proposed preliminary design environmental engineering/ remedial documents, appropriate to the Project scope of work requirements, on 24-inch by 36-inch or 30-inch by 42-inch mylar sheets, (or sheet size approved in writing by the Department), of all principal buildings/site utility systems, environmental remedial services and coordinate the proposed Project preliminary design with related environmental engineering design disciplines for completeness, accuracy and consistency. Prepare proposed preliminary design drawings utilizing applicable State of Michigan standards as defined by the Department of Management and Budget's, Facilities Administration, Design and Construction Division for all Project related environmental engineering design disciplines. The Professional shall field-check and verify the accuracy of all existing and proposed drawings and any data furnished by the Department, the State/Client Agency or any other Project related source.
- Task 408.01 **DESIGN DEVELOPMENT:** Prepare proposed preliminary design environmental engineering/ remedial drawings, specifications, operating procedures/instructions and other parameters as may be required to Bid, construct, and operate the specialized equipment, systems, or pilot plant, as may be necessary and authorized, to prove the performance of the environmental site remediation system, equipment, or process. Define the expected performance, the means by which it is to be measured, and the criteria against which it will be evaluated. Bid and assist in contracting for, and administer construction, in accordance with the Phases 600 and 700 services. Operate the system as authorized. Evaluate all findings and provide a summary report in the format and detail of the Phase 100, Task 110-A/Report requirements. Revise the proposed Project design parameters as appropriate to assure a functional environmental site remediation system.
- Task 409 **BUDGET/CONSTRUCTION SCHEDULE:** Prepare, or update previously developed itemized Project construction cost estimate(s) based upon factors prevailing or reasonably predictable for the proposed construction bidding period. Evaluate cost/benefits of multiprime construction. Recommend strategy method(s) and appropriate Phasing of contracting for construction. This shall be consistent with any approved Project Phasing. Include any early-order/long-lead items and/or any State provided materials, equipment or furnishings. Provide, in a format acceptable to the Department, the estimated operating utility cost for the completed Project. Prepare in standard bar chart format a detailed schedule of the design and proposed bidding and construction schedule, based on the Professional firm's attached Appendix 3 – Project Study, Design and Proposed Construction Schedule as amplified by the Task 308 cost and Task 309 schedule.
- Task 410 **PRELIMINARY DESIGN REVIEW:** Prepare, reproduce, submit, and make such preliminary design presentations, as necessary, to review the status of the design with the Project Team to achieve the Project design. Present proposed preliminary design documents for the Project Team design review at the 50 percent and 90 percent completion intervals and at such other times as the Department may deem necessary, for review, determination of required revisions and written acceptance. With the 50 percent review, provide design criteria/data calculations of principal environmental engineering/remedial, electrical, and mechanical systems demonstrating basic compliance with the State of Michigan's current Energy Code requirements. Provide a set of mylars suitable for legible reproduction and five (5) copies of completed proposed preliminary design documents to the Department for their review. Where legislative review is required upon completion of all revisions required by the Project Team and the Department's acceptance thereof, provide an additional twelve (12) copies of the Department approved preliminary design Phase documents to the Joint Capital Outlay Subcommittee. Make such legislative presentation as required. Revise proposed preliminary design Phase documents, as necessary, to incorporate all revisions found necessary to achieve legislative approval.

Revise proposed preliminary design documents, as necessary, to incorporate all requested design review comments required for Department written acceptance of the Project preliminary design scope of work. Provide one (1) acceptable preliminary design presentation to the Project Team for this Task. Any additional preliminary design presentations requested by the Department will be considered extra professional services and the additional preliminary design costs will be paid to the Professional firm by the Department with a Contract Change Order.

PHASE 500 - FINAL DESIGN

Prepare for progressive, periodic review, **Phase 500 Final Design Contract** Bidding Documents which shall revise, refine, amplify and depict/describe, in detail, the Project as described and required by the **Department's approved and attached** Appendix 1 - Project/Program Statement scope of work requirements and any approved preliminary design. Bidding Documents shall be prepared in Phases/Bid packages appropriate to the final design Project scope of work requirements and funding.

The proposed final design Contract Bidding Documents shall depict and document a complete and **constructible** Project. These documents shall incorporate and comply with all current, applicable regulations, environmental construction codes and statutes, and must have prior approval from appropriate federal, State or any local authorities having jurisdiction before presentation to the Department for written acceptance. Where design approvals are required, the Professional **firm** shall acquire and provide them. The final design Contract Documents shall be without ambiguity and must be so complete that no significant design decision or any decision is left to the discretion of any qualified construction Bidder, producer of materials or products, or to the Construction Contractor. The final design Contract Bidding Documents will not define, or quantify or in any other way represent any work as being assignable to, or to be performed by, any Consultant or subcontractor, **except for fire suppression systems**.

Bidding Documents shall consist of, but are not limited to, the **Phase 500 - Final Design** environmental engineering/remedial drawings, specifications, special, general and supplemental conditions of the Construction Contract, and modifications, if any, to standard document forms provided by the Department. Such standard document forms may consist of, but are not limited to: (1) Project Advertisement; (2) Instructions to construction Bidders; (3) Proposal Forms; (4) General Conditions; (5) Supplemental Conditions; (6) Any Special Conditions of the Construction Contract; and (7) Form of Agreement between the Department and the Construction Contractor for the work.

In addition to the requirements herein, the professional services for this Project shall include, but are not limited to, those set forth in the Department of Management and Budget, Facilities Administration, Design and Construction Division, "MICHSPEC 2001 Edition of The Owner and Contractor Standard Construction Contract and General Conditions for Construction (Long Form)" or the current Department of Management and Budget, Facilities Administration, Design and Construction Division, "DMB Short Form 401 - Proposal and Contract/Front-End Package for Small Projects for Professional Services Contractors (PSC) with General Conditions for Construction and Instructions to Bidders" as adopted and modified by the State of Michigan and incorporated into the Construction Contract, plus such other Department standard document forms general conditions as may be part of the Construction Contract. If the Professional **firm** intends to use any additional general condition requirements for this Project other than the Department's they must be accepted and approved by the Department in writing.

Contract Documents shall consist of the **Phase 500 - Final Design** environmental engineering/remedial drawings and specifications Bidding Documents and all Addendums and attachments thereto as may be necessary to comprise a complete Contract for the Project scope of work.

Task 501 **COORDINATION:** Review the **Department's approved and attached** Appendix 1 - Project/Program Statement and any approved schematic and/or preliminary drawings with the Project Team for revisions. Incorporate any design refinements within the Project scope. Soil Erosion and Sedimentation Control associated with this Contract is supervised and enforced by the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program. Present proposed final design documents to the State/Client Agency and Department for their review at the 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project scope of work. Preside at all

design related Project meetings. Prepare and distribute to the Project Team, copies of minutes of all meetings, reports of site visitations, correspondence, memoranda, telephone, and other conversations or communications, where essential or significant information is established or evaluated and/or critical decisions are made. Distribute copies to the Department and participants within two (2) business days of the date of occurrence, otherwise meeting minutes shall be distributed within five (5) business days. Provide five (5) additional copies and distribute as the Department may direct.

Task 502 SPECIFICATIONS: Prepare proposed final design environmental engineering/remedial specifications in such format and approved Phasing as appropriate for the Project scope of work requirements as approved from Task 402. Include a schedule of all required submittals, as well as all other schedules necessary to clearly and completely supplement the definition of the Project scope of work provided by the specifications for Divisions 00 through 49. Specifications shall be in coordinated with the final design environmental engineering/remedial drawings and shall be prepared in the 2004 MasterFormat Outline by the Construction Specifications Institute (C.S.I.) (See Appendix 5). The proposed final design environmental engineering/remedial specifications shall clearly define the Project design and construction requirements indicating the type and quality of materials, products, and workmanship.

Sustainable Design shall be used wherever possible by the Professional in their Project design and an itemized list shall be provided with the final design Contract Documents/environmental engineering/remedial drawings and specifications requirements that identifies the materials, finishes, processes and products. Sustainable Design is defined in this Contract as the Professional firm's use of Project design resources with no negative impact to the natural ecosystems and when possible, achieving a net enhancement of the Project scope of work.

Performance specifications shall be used when feasible. If performance specifications are not feasible, the Professional shall name at least three (3) acceptable materials, products or systems and the specifications shall contain an "or equal" clause. Whenever possible, products produced in the State of Michigan shall be named and given first preference. Proprietary specifications, or allowances, may be permitted, with the Department's acceptance and written approval, but only for special, unavoidable conditions. Provide Project specifications suitable for purchasing or construction bidding for any State-furnished materials, equipment or furnishings.

Task 503 CIVIL/SITE/STAGING/DESIGN: If this site testing and survey Task has not been performed, and the Professional did not obtain a site specific geotechnical testing program for this Project and advise the Department under the Task 403 Site Investigation/Design, the Professional shall retain a civil, site survey and geotechnical testing Consultant and coordinate their environmental engineering services to prepare and provide a final design geotechnical site investigation and site staging design as directly related to the Project scope of work requirements. Prepare and render complete final site and site staging design documents, as directly related to the defined Project scope of work as approved from Task 403. This includes, but is not limited to, survey reference(s), locations of all existing and proposed facilities and utilities access, traffic control, demolition, Soil Erosion and Sedimentation Control, engineered fill, utilities, removal of obstructions/contaminations, borrow and spoil areas, bracing, shoring, waterproofing, dewatering, dredging, paving and similar work. Incorporate Project site design scope of work requirements into the final design Contract Documents. Soil Erosion and Sedimentation Control shall be implemented in accordance with the current edition of the Department's compliance manual and the 1994 Public Act 451, as amended – The Natural Resources Environmental Protection Act Part 91 – Soil Erosion and Sedimentation Control. Conduct, site specific testing program to adequately discover, identify and/or confirm site underground conditions and to accurately specify contractual requirements. Submit final site design drawings depicting Soil Erosion and Sedimentation Control measures to the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program for their review.

Task 504 **STRUCTURAL:** Prepare and render complete structural final design documents as approved from the Task 404 defined Project scope of work.

- Task 505 MECHANICAL/HVAC/UTILITIES: Prepare and render complete mechanical and utility system final design documents as approved from the Task 405 defined Project scope of the work.
- Task 506 ELECTRICAL: Prepare and render complete electrical system final design documents as approved from the Task 406 defined Project scope of work.
- Task 507 ENGINEERING: Prepare and render complete environmental engineering/remedial final design documents as approved from the Task 407 defined Project scope of work. Assist the Department in the determination of and specification of furnishings as directly related to this defined Project scope of work.
- Task 508 DRAFTING: Prepare complete final design environmental engineering/remedial drawings for bidding documents, as directly related to the Project scope of work approved from Task 408, on 24-inch by 36-inch or 30-inch by 42-inch mylar sheets, (or sheet size approved in writing by the Department) utilizing applicable State of Michigan standards as defined by the Department of Management and Budget's, Facilities Administration, Design and Construction Division and the Department of Natural Resources and Environment, Remediation and Redevelopment Division. The Professional shall field-check and verify the accuracy of all existing and proposed drawings and any data furnished by the Department, the State/Client Agency or any other Project related source. Where the Professional firm's computerized drafting system is used, and is compatible with the Department's Auto CAD computer drafting system, the Project Bidding Documents derived from the **Phase 500 - Final Design** drawings and computer electronic/software system shall be made available and converted, when requested by the Department in writing, to the Department's Auto CAD computer drafting system. When requested by the Department in the scope of work for this Project, the Professional shall provide the computer/electronic data files for the final design Contract drawings of the Project for use by the Department. The software name and release number used to produce the **Professional firm's Phase 500 - Final Design** Contract drawings will be clearly identified on the computer tape or computer compact disk (CD). The sealed hard copy of the mylar environmental engineering/remedial **Phase 500 - Final Design** Contract drawings furnished by the Professional **firm** will be the controlling Contract Document for this Project.
- Task 509 CHECKING CONTRACT DOCUMENTS: Check and coordinate all proposed documents for completeness and accuracy. Prepare final design Contract Documents that will protect the Department from unexpected cost increases after award of the Construction Contract to a qualified construction Bidder, Project delays or claim settlements for reason of defective rendering of the Professional firm's environmental engineering/remedial plans/drawings or specifications or for any delinquency by the Professional for performance of the professional design services under this Contract. Check the adequacy of all spaces and clearances. Cross-check and coordinate all proposed designs between environmental engineering disciplines. Cross-check the requirements of all drawing sheets for completeness, accuracy, and consistency. Similarly, cross-check and coordinate all proposed drawings against the Project specifications. Mark each drawing with the name of the checker and with the written approval of the appropriate Professional firm's "Key Principal Personnel/Employee".
- Task 510 CONSTRUCTION CODES AND PERMITS: The Professional firm's final design environmental engineering Contract Documents shall comply with the State Construction Code, the State of Michigan Energy Code requirements, and all Project related environmental code requirements in effect at the time of award of this Contract. List all environmental permitting to be required for the Construction Contractor. Assist the Department in obtaining approval of the Project and its design by appropriate governmental regulating and/or environmental engineering/remedial construction code enforcement authorities. Except as otherwise provided for in this Contract, environmental engineering/remedial design code compliance and plan review approval(s) shall be performed by the Department of State Police, Fire Marshal Division, and the Department

of **Energy**, Labor and Economic Growth, Bureau of Construction Codes and Fire Safety and environmental engineering/remedial design code compliance and plan review approval fees shall be paid by the Department and are not the responsibility of the Professional **firm**. Any Project environmental engineering/remedial design code compliance and plan review fees paid by the Professional firm on the behalf of the Department will be compensated by the Department to the Professional firm as an authorized reimbursable expense item (See attached Appendix 5, Authorized Reimbursable Tests and \$ Expenses) in this Contract. Present and submit all modeling, testing, design data, and appropriate environmental engineering/remedial drawings/plans and applications for all permits, tests, and approvals, which the Department is required to secure as a prerequisite authorization for the Project's approval. Soil Erosion and Sedimentation Control environmental engineering/remedial final design plans/drawings will be submitted to the Department of Management and Budget, Facilities Administration, Soil Erosion and Sedimentation Control Program as the enforcing authority for this Project, no later than at the final design, 90 percent completion submittal stage. Provide energy efficient design features and summary calculations to demonstrate applicable Project compliance with the State of Michigan Energy Code requirements. Submit documents for review in a timely manner allowing appropriate time for review/permitting processes by respective authorities, such that the Project schedule is not unnecessarily delayed. Assist the State/Client Agency to secure any appropriate environmental engineering/remedial construction code waivers. Incorporate all required Contract Modifications into the Contract Bidding Documents. Follow through to ensure issuance of the construction codes and permits approvals. Secure all required design approvals before submitting the final design documents to the Project Team for the final design document review of Task 515. Any approval secured under this Task does not relieve the Professional from complying with the construction on-site field Inspections review/enforcement requirements.

Task 511 **CONSTRUCTION/ON-SITE TESTING PROGRAM:** Conduct on-site survey and appropriate research to identify site specific abnormal construction conditions. Coordinate site specific geotechnical testing program of areas, consistent with the Project design and siting, wherein underground construction problems could cause claims or delays. Conduct a testing program to adequately discover, identify and/or confirm underground conditions sufficient to accurately specify the Project scope of work contractual requirements. Establish at the 50 percent completion interval the required construction quality control testing program. Where the Project work involves the removal/replacement of soils or other bulk materials and which require environmental contamination testing to determine levels of contamination specify the testing program and procedures to be used. Define and specify types of on-site tests required and approximate quantities to be tested and projected cost thereof. Where such services are not provided by the Professional, prepare quality control testing **services** program Bidding Documents for construction Phase quality control testing services. The Department will retain a professional quality control testing **services** firm for construction Phase testing at the 50 percent Project document completion review of Task 515 (Construction Phase Testing services shall be estimated and identified as an authorized reimbursable expense item (See Appendix 5) in this Contract).

Task 512 **HAZARDOUS MATERIALS:** Except as may be part of the Project work, hazardous material testing and removal from existing facilities and/or utilities to allow construction of this Project, will be performed by the Department with specialized firms who are licensed and insured to perform this service. Notify the Department of any area suspected of containing hazardous material. Provide testing and Contract preparation for the related work. Coordinate the professional design services of this Contract with any hazardous material removal required to implement the Project. Where the Project involves work in an existing site utility system, as part of the 50 percent review of Task 515, identify and locate for the Department, in writing, and by diagram, any site utility areas which may have potential hazardous material contamination which may require remediation and/or removal prior to the construction work of the Project. Include for the Department's use, environmental engineering/remedial drawings and specifications for all site restoration necessary following completion of the removal/remediation Project. Also, identify the time frame for the removal remediation Project to be completed. Incorporate appropriate

provisions into the final design drawings and specifications of this Project to assure full coordination of all Project work.

Task 513 **DESIGN AND CONSTRUCTION BUDGET:** The Professional **firm** shall be responsible for all costs incurred by it, necessitated by for rebidding a Project if it is over Budget due to their design. Submit in writing the itemized estimate of the Project construction costs with each review. Include all construction Bid packaging and Phasing. Confirm, in writing, the estimated operating utility cost of the Project. Determine the amount and adequacy of any construction contingency. Upon submittal of 90 percent Bidding Documents, confirm, in writing to the Department, that in accordance with the Contract scope of work, an accurate itemized estimate of the construction cost is formulated and the total Project construction cost is predicted to be within the Project Budget.

Notify the Department, in writing, if it becomes evident, during the final design Phase schedule duration of the Project, that this Project cannot be constructed within the Professional firm's estimated construction Budget. Unless the Department determines the problem to be outside the control or responsibility of the Professional, the Professional shall to the extent required to bring the actual Project construction Budget cost back to the Professional firm's original estimated construction Budget cost, revise their final design drawings and specifications to produce a complete design for the Project, and will otherwise be responsible for any costs incurred by the Department in rebidding the Project.

Assist the Department to rebid the Project in accordance with the Task 516 construction bidding/contracting procedures.

Task 514 **CONSTRUCTION SCHEDULE:** Determine the appropriate Project proposed construction schedule period to be part of the Construction Contract. Give consideration to all principal influencing factors, including, but not limited to, current and projected material delivery time, local labor Contract periods, and other historical principal causes of delays. Amplify the Professional firm's attached Appendix 3 – Project Study, Design and Proposed Construction Schedule to consider construction bidding, Phasing, seasonal influences and to account for any elements of construction having critical deliveries and/or construction times and of the Task 512 required scope of work.

Task 515 **FINAL DESIGN BIDDING DOCUMENTS REVIEW:** Provide complete **Phase 500 - Final Design** Bidding Documents review. When the design is approximately 50 percent complete, submit documents to the Project Team for their review. If the design appears to exceed the Project Budget, review with the Department all cost reduction design options. Incorporate at 90 percent complete, all required design modifications applicable to the Project scope of work design criteria/data calculations for structural, engineering, mechanical/heating, ventilating, and air conditioning (HVAC), and electrical systems and resubmit to the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director. Determine and confirm in writing, that the final design can be achieved within the Project Budget and that all requirements of Tasks 509 and 510 have been met, submit 100 percent complete sets of final design Bidding Documents to the Project Team for their final review. Submit final design documents first to the State/Client Agency for their final design review of the Project programmatic design conformance adequacy. Submit final design Bidding Documents to the Department for their review and revise final design Bidding Documents, as necessary, to incorporate all requested final design review comments required for Department written acceptance of the final design Bidding Documents. Provide one (1) acceptable final design presentation to the Project Team for this Task. Any additional final design presentations requested by the Department will be considered extra professional services and the additional final design costs will be paid to the Professional firm by the Department with a Contract Change Order.

CONSTRUCTION BIDDING AND CONTRACTING PROCEDURES: Assist the Department in the construction bidding and contracting process. Advertisement and award of this Construction Contract will be by the State of Michigan. Provide the Department with a list of recommended qualified construction Bidders' appropriate to the Project scope of work requirements. Recommend the appropriate construction bidding and/or contracting method to the Department. Prepare and distribute Bidding Documents and instructions as required to accommodate predetermined Bid packages and/or Phases. Maintain a qualified construction Bidders' list. Conduct prebid meetings. Issue a preconstruction Addenda to all qualified construction Bidders as required. Include in each Addendum complete specifications for the Project scope of work requirements, if such specifications are not part of the final design Bidding Documents. Exert every practical means to obtain several, qualified construction Bidders for every Construction Contract. The Professional firm shall be compensated by the Department with a Contract Change Order for providing the professional services necessary to rebid the Project for reason of defaulted or disqualified construction Bidder(s) or unacceptable price range as required by the design and construction Budget text of Task 513. The Professional firm's construction bidding and contracting services for Task 516 are not complete until: (1) The lowest responsive, responsible qualified construction Bidder's Bid has been selected and accepted by the Department; and (2) The lowest responsive, responsible qualified construction Bidder's Contract has been executed.

Collect and Manage Construction Contract Bid Security Deposits: Administer receipt and return of Construction Contract Bid Security deposits. Within fifteen (15) business days of the award of the Construction Contract submit, to the Department, a full accounting of all associated Bid Security deposits, and turn over, to the Department, all defaulted Bid Security deposits. All Bid Security deposit checks will be payable to the "State of Michigan." Any returned or undistributed Bidding Documents shall be distributed as the Department may direct.

Construction Bid Evaluation and Recommendation of Construction Contract Awards: Review and evaluate the Department's submitted competitive construction Bids for the Project. Based on the Professional firm's review of the competitive construction Bids and the qualified construction Bidders, provide the Department with a written recommendation for the apparent lowest responsive, responsible qualified construction Bidder for the Project Construction Contract award(s) within five (5) business days of the date of the Department's construction Bid opening. Exempt from recommendation any firm that in the Professional firm's opinion is unqualified for the Project (documentation required) or that the Professional has a business association with on this Project, and any firm, that the Professional has used in preparation of the **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and/or specifications or for any estimating work related to the Project. The Professional shall conduct precontract meetings with responsive, responsible qualified construction Bidder(s) to review the following items: (1) The design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications; and (2) To advise and assist the Construction Contractor(s) in understanding the requirements of the Department of Management and Budget, Facilities Administration, Design and Construction Division's standard form of Construction Contract Documents, Project scope of work, and its Construction Contract award procedures (See attached Appendix 6, The Professional firm's MICHSPEC (Long Form) Documents Assistance Procedures for the Construction Contractor During the Project Construction Bidding, Bid Evaluation, and Recommendation of the Construction Contract Award).

Unless otherwise designated in the Department's, Notice of Intent to Award letter to the recommended Construction Contractor, within fifteen (15) calendar days from the date that the Notice of Intent to Award letter was mailed to the Construction Contractor, the Construction Contractor recommended for the award of the Construction Contract shall (a) Fill out and execute, the Department of Management and Budget, Facilities Administration, Design and Construction Division's, MICHSPEC 2001 Edition of the

Owner and Contractor Standard Construction Contract and General Conditions for Construction (Long Form)” standard form documents Section 00500, Contract Agreement and the Section 00800, Supplementary Conditions, in triplicate; (b) Execute Section 00610, Performance Bond, and the Section 00620, Payment Bond (and attach to each bond a separate, certified copy of Power of Attorney); and (c) Return to the Department, the Construction Contractor’s executed Section 00500, Contract Agreement, Section 00610, Performance Bond, and Section 00620, Payment Bond forms, evidence of original Certificates of Insurance and any other legal documents required for submittal by the Department’s, Notice of Intent to Award letter (See attached Appendix 6 text).

Task 517

FINAL DESIGN CORRECTION PROCEDURES: Correct at no additional cost to the Department any environmental engineering/remedial final design errors or omissions and/or other related deficiencies identified during the 600 and 700 Construction Phase. All reproduction costs for design interpretations and design clarifications and Bulletins related to the Professional firm’s environmental engineering/remedial final design errors or omissions and similar, or avoidable costs shall be accounted as part of the Professional firm’s calculated hourly billing rates. Provide design clarification and design interpretations of the Contract Documents requirements necessary to: (1) Adequately describe Project scope of work; (2) Adapt environmental engineering/remedial final design documents during construction to accommodate on-site field conditions identified during construction; (3) Refine design details that are not feasible and identified during construction; and (4) Comply with construction/building and environmental codes, and for all such other Project related design and construction matters as may be necessary to produce a complete Project.

Design Interpretations and Clarifications: For elements of construction having no respective change in cost to the State the Professional will: (1) Provide instructions, and/or design interpretations and design clarification for design details within five (5) business days of the Construction Contractor’s request, record same, in writing; and (2) Revise the Professional firm’s original final design environmental engineering/remedial drawings and/or specifications as appropriate to the Project scope of work requirements. Marking and initialing of drawings is not an acceptable form of written instruction.

Bulletin Authorization: Request authorization to issue each individual Bulletin. The Professional firm’s Bulletin Authorization request will: (1) Identify the problem requiring the change; (2) Describe clearly if such problem arises from environmental engineering/remedial final design errors or omissions; (3) Identify the anticipated design cost and the estimated construction cost to implement the change(s); and (4) Describe clearly in the Professional firm’s opinion which part, if any, of the design and/or construction costs are the obligation of the State, the Professional or the Construction Contractor. Include a Contract Modification request for any work outside the Project scope of work. Identify any anticipated Project design or construction schedule implications.

Bulletins: All reproduction costs for design interpretations and design clarifications and Bulletins related to the Professional firm’s environmental engineering/remedial final design errors or omissions and similar, or avoidable costs shall be accounted as part of the Professional firm’s calculated hourly billing rates. Describe, by Bulletin, design revisions necessary to correct environmental engineering/remedial final design errors or omissions, to address previously unidentified on-site field design conditions, to reduce costs and for all other matters approved by the Department involving costs or credit to the State. Postponement of action on items in order to accumulate multi-item Bulletins is not permitted.

Prepare and issue Bulletins within ten (10) business days of receipt of the Department’s authorization. Bulletins shall be in such form and detail as the Department may prescribe. All Bulletin revisions data shall be incorporated, by the Professional, into the appropriate originals of all applicable final design environmental engineering/remedial drawings and specifications, if such specifications are not provided by the Contract Documents. Such revised drawings and specifications shall be issued as part of Bulletins. Each Bulletin

shall prescribe a time frame for the Construction Contractor's response. Provide up to five (5) copies of each Bulletin to the Department and distribute as the Department may direct. Provide the Construction Contractor with the following number of Bulletin copies: (1) For construction costs less than one (1) million dollars, provide two (2) copies ; and (2) All others, provide five (5) copies.

Evaluate the Construction Contractor's price quotation(s) and review and attempt to negotiate with the Construction Contractor to provide the Department with costs that are consistent with the value of the associated Project Bulletin(s) scope of work requirements. Recommend appropriate action to the Department regarding the Construction Contractor's quotations within five (5) business days of receipt thereof.

PHASE 600 - CONSTRUCTION REMEDIATION/ADMINISTRATION - LABORATORY SERVICES

The Department of Natural Resources and Environment, Remediation and Redevelopment Division will appoint a State Project Manager to monitor and coordinate the performance of the Project construction/environmental remediation laboratory/office Phase services. Except where the Contract is assigned, the Professional is responsible to the State Project Manager for the adequacy and timeliness of their services.

During the construction Phase administration of this Project, the "DMB-460, Project Procedures" documents package shall be completed by the Professional and contains the following Department of Management and Budget, Facilities Administration form documents: (1) DMB-413, General Release – Visitors; (2) DMB-426, Builder's Risk Claim; (3) DMB-434, Certification of Off-Site Material Storage; (4) DMB-437, Guarantee and Indebtedness Statement; (5) DMB-440, Payment Request; (6) DMB-441, Meeting Attendance Record; (7) DMB-445, Certificate of Substantial Completion; (8) DMB-452, Professional firm's Inspection Record; (9) DMB-485, Bulletin Authorization No.; (10) Instructions for Schedule of Value; (11) DMB-487, Material Stored on Project/Job Site; and (12) DMB-489, Instructions to Construction Contractors for Preparation of Bulletin Cost Quotations for Contract Change Orders.

The Professional shall be required to obtain from the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director, the on-site Inspection record form document titled "DMB-452, The Professional firm's Inspection Record" for all on-site Inspection visits to the Project site. This standard document form is a part of the "DMB-460, Project Procedures" documents package. The Professional firm's Inspection Record document shall be completed and signed by the Professional and compiled monthly with the original form document sent to the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Contract Administrator and a copy sent to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Construction Contractor. The on-site Inspection record standard document form shall be completed and accompany the Professional's monthly payment request.

The Professional shall provide all required construction Phase administration services and timely professional and administrative initiatives as the circumstances of the construction scope of work may require in order to allow the design intent requirements of the Professional firm's final design Contract Documents/environmental engineering/remedial drawings and specifications to be successfully implemented into a completed Project through the Construction Contractors completion of the Construction Contract work. In addition to the requirements herein, the professional services for this Project shall include, but are not limited to, those set forth in the Department of Management and Budget, Facilities Administration, Design and Construction Division, "MICHSPEC 2001 Edition of the Owner and Contractor Standard Construction Contract and General Conditions for Construction (Long Form)" or the current Department of Management and Budget, Facilities Administration, Design and Construction Division," DMB Short Form 401 – Proposal and Contract/Front-End Package for Small Projects for Professional Services Contractors (PSC) with General Conditions for Construction and Instructions to Bidders" as adopted and modified by the State of Michigan and incorporated into the Construction Contract, plus such other Department general conditions as may be part of the Construction Contract. If the Professional intends to use any additional general condition requirements for this Project other than the Department's they must be accepted and approved by the Department in writing.

Provide all laboratory and office engineering services to test, analyze, evaluate and report the results of all environmental and construction/site remediation services. Conduct, prepare, and submit all tests and test result reports and any associated correspondence.

Provide all required construction Phase administration services and take such timely professional and administrative initiatives as the circumstances of the Project environmental site contamination and/or construction/environmental remediation may require in order to allow the design intent requirements of the Contract Documents to be successfully implemented and legally completed.

The Professional shall have access to the Construction Contractor(s) work at all times.

Establish and maintain effective construction administration laboratory/office procedures, systems and records to progressively, and exclusively, manage and control the Professional firm's obligations, commitments, achievements and expenditures under this construction Phase administration.

Monitor the quality and progress of the Project construction/site remediation work. Maintain all necessary Project records, provide on-site visitation reports and take such administrative office action as may be necessary to inform the Construction Contractor(s), in writing, to achieve the Project scope of work on schedule, within Project Budget, and be in accordance with the design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications requirements, and to defend the Department against exposure to claims arising from delays, negligence or delinquencies by the Professional.

Advise and assist the Department in taking all practical steps to address and complete the Project scope of work in the event of performance delays or defaults by the Construction Contractor(s).

In observed cases which may involve danger to human life, immediate safety hazards to personnel, existing or impending damage to the Project, to the Department of Natural Resources and Environment, Remediation and Redevelopment Division's property or to other property; as may be impacted by the Project, the Professional shall inform the Construction Contractor(s) of the situation and their observations. The Professional shall immediately record and report such situations to the Department and certify any accrued Project costs in writing.

Task 601 **COORDINATION:** Coordinate all the Professional firm's staff, Consultants staff, authorized hourly billing rates and direct cost reimbursement items, and other Project related resources. Preside at all Project related meetings. Prepare and distribute to the Project Team, copies of minutes of all meetings, site visitation reports of Phase 700 services, copies of correspondence, memoranda, records of telephone or other conversations and other communications. Where essential or significant Project information is established or evaluated, where critical problems are identified, or where crucial decisions are made, distribute copies to the Department and participants within two (2) business days following the date of occurrence, otherwise meeting minutes shall be distributed within five (5) business days. Provide five (5) additional copies and distribute as the Department may direct.

Task 602 **HEALTH AND SAFETY PLAN:** Within fifteen (15) business days of execution of this Contract, the Professional shall prepare and submit for acceptance, a basic Project Health and Safety Plan for all assigned work under this Contract. This plan must meet the following minimum requirements:

- 1.) 29 CFR 1910.120: Safety and Health Regulations for General Industry, Occupational Safety and Health Administration (OSHA), as amended December, 1986.
- 2.) Standard Operating Safety Guides, United States Environmental Protection Agency (EPA), November, 1984.

- 3.) Occupational Health and Safety Guidance Manual for Hazardous Waste Site Activities, National Institute of Occupational Safety and Health Administration (NIOSHA), Publication No. 85-115, October, 1985.
- 4.) Michigan Right-To-Know Law, 1986 PA 80, as amended.

All on-site management and supervisors directly responsible for, or who shall supervise personnel engaged in, hazardous waste operations shall have successfully completed the Environmental Protection Agency's Safety Training Program.

Within fifteen (15) business days of Project assignment, adapt and amend the accepted Health and Safety Plan as appropriate to include all provisions necessary for each Project site and its related work. No on-site or laboratory work may be performed without such a plan. Acceptance of the Professional firm's Health and Safety Plan imposes no expressed or implied responsibility, by the State, for the plan or its application. The Professional is exclusively responsible for their plan's effectiveness and for conducting all work in compliance with it. Production of an accepted plan, and amendments thereto, and adherence to the same, is a condition of satisfactory performance. Failure to do so is just and sufficient cause for suspension of the Professional firm's work, removal of their workers from any site, and any other actions, including termination of this Contract scope of work without prejudice to the State.

Task 603 **QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) PLAN:** Prepare a basic Quality Control/Quality Assurance Plan and adapt for individual Projects as assigned.

Within fifteen (15) business days of execution of this Contract, prepare and submit for acceptance a Quality Control/Quality Assurance Plan for all work to be performed under this Contract. This plan shall be consistent with the attached Appendix 9, Guidelines for Quality Control/Quality Assurance (QC/QA) Plan.

Within fifteen (15) business days of Project assignment, adapt and amend the accepted plan as appropriate to include all provisions necessary for each Project site and its related work. No on-site or laboratory work may be performed without such a plan. Acceptance of the Professional firm's work plan imposes no expressed or implied responsibility, on the State, for the plan or its application. The Professional is exclusively responsible for their Project work plan's effectiveness and for conducting all work in compliance with it. Production of an accepted plan, and amendments thereto, and adherence to the same, is a requisite condition of satisfactory performance. Failure to do so is just and sufficient cause for suspension of the Professional firm's work, removal of workers from any site, and any other actions, including termination of this Contract scope of work without prejudice to the State.

Task 604 **SHOP DRAWINGS/SUBMITTALS/APPROVALS:** Monitor, evaluate, and take such action as is necessary to achieve timely processing of shop drawings and other submittals and such other approvals as are the responsibility of the Professional. Prepare and maintain current, for Project records, a schedule documenting all required, received, rejected, and approved submittals of shop drawings, color/material samples, finishes, and other items requiring the Professional firm's approval. Notify the Construction Contractor(s), in writing, (copy to the Department) of delinquent submittals, the consequences of such delays, and prescribe a time for their submittal/resubmittal, which will not jeopardize the Contract completion date.

No design revisions will be made as part of the Professional firm's review and approval of shop drawings, or other submittals. In addition to all other functions, the Professional firm's approval of shop drawings shall verify the submittals furnished by the Construction Contractor(s) conforms to the design intent of the Professional firm's final design Contract Documents/environmental engineering/remedial drawings and specifications requirements. Provide written approval or rejection of shop drawings within ten (10) business days of

receipt in the Professional firm's office. Provide and distribute up to five (5) copies of approved submittals as directed by the Department.

Task 605

PAYMENT PROCEDURES: Monitor, evaluate, and provide timely administrative action, as necessary, to certify or reject, as appropriate, and process the Construction Contractor's schedule of costs and monthly submitted payment requests. Payment of the construction Phase professional fee, by the State of Michigan to the Construction Contractor, shall be based on the Construction Contractor's performance of authorized Contract professional service(s) expenses performed prior to the date of each monthly submitted payment request. Payment requests will be submitted monthly to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director as the Project progresses on a Department payment request form (DMB-440). Payment to the Construction Contractor by the Department for each monthly submitted payment request invoice shall be made to the Construction Contractor within thirty (30) consecutive calendar days following the Department's receipt and approval of an approved payment request invoice from the Professional. Certification or rejection of all submitted payment requests shall be made by the Professional, in writing, within ten (10) business days of receipt in the Professional firm's office. The Professional shall certify to the Department, in writing, the dollar (\$) amount the Professional determines to be due to the Construction Contractor for their monthly payment request or the Professional shall return the payment request to the Construction Contractor indicating the specific reasons in writing for rejecting the Construction Contractor's monthly payment request certification. If a monthly payment request is returned to the Construction Contractor, the Construction Contractor shall make the necessary corrections and resubmit that payment request to the Professional. Certification or rejection of all payment requests will be made by the Professional within ten (10) business days of receipt in the Professional firm's office.

Issue an appropriate certificate for payment only pursuant to a correctly prepared and accurate payment request and only for acceptable Project work. Payment certification shall constitute a written representation by the Professional, to the Department, that based on the Phase 700 on-site field Inspections, and the Professional firm's evaluations of field reports, test results, and other appropriate and available factors, the quantity and quality of Project work for which the payment request is certified has been accomplished by the Construction Contract or in accordance with the design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications requirements and that the payment request is consistent with the quantity and quality of acceptable Project work in place, and that acceptable materials are properly stored on-site and/or off-site.

No payment request certificate shall be submitted that requests payment for disputed Project work or any Project work showing deficient test results. No certificate may be submitted after the Contract completion date which does not provide for withholding of assessable and/or projected liquidated damages. Pursuant to the Department's notification, the Professional firm's certification shall reduce from the amount earned, two (2) times the amount of any current prevailing wage rate payment deficiency, as certified by the Department of **Energy**, Labor and Economic Growth, Wage and Hour Division against the Construction Contractor or any subcontractor or supplier thereof. Payment request rejections shall be accompanied with a written explanation and a copy shall be submitted to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative**.

Task 606

CONSTRUCTION SCHEDULE PROGRESS: Monitor, evaluate, and take timely administrative actions, as necessary, to determine whether the Construction Contractor's construction work schedule and progress appear to be adequate to achieve the Project scope of work by the Construction Contract completion date. Notify the Department, and Construction Contractor, in writing, within three (3) business days of the receipt of the Construction Contractor's proposed Project schedule, or amendments thereto, if in the Professional firm's opinion, if such schedule will produce the Project within the allotted Construction Contract time. Notify the Construction Contractor and the Department, in writing, if in the Professional firm's opinion such schedule should be accepted or rejected.

Revise the Professional firm's attached Appendix 3 – Project Study, Design and Proposed Construction Schedule of Task 514 to show that the proposed on-site visitations of Tasks 705-708 are consistent with the actual events of the Project construction schedule.

Give prompt, written notification to the Construction Contractor(s) and to the Department of inadequate construction schedule progress. Unless the Department determines that the needs of the Project require other action the Professional shall proceed as follows: (1) Investigate at the time of occurrence, any areas of inadequate construction schedule progress whose consequence may be a delay in, or increased cost for, a work item; (2) Notify the Construction Contractor(s) and the Department of the Professional firm's opinion of the problem and responsibility for the delay and costs. Advise whether the delay in any work may result in delays in the Project construction completion date; and (3) Advise the Construction Contractor(s) and the Department, in writing, of recommended action(s) by respective parties necessary to facilitate actions by the Construction Contractor to complete the Project construction work on schedule.

Bulletin Costs: During the 600 and 700 Construction Phase, review and evaluate the Construction Contractor's quotations for Bulletin work. Negotiate as appropriate to assure the Department's costs commensurate with the actual value of the Project work. Provide the Department with written recommendation(s) within five (5) business days of receipt of the quotation.

Evaluate any documentable impact on the Project construction schedule claimed by the Construction Contractor(s) arising from Bulletin work. Take appropriate and timely action under terms allowable under the Construction Contract, to implement any Bulletin work which the Professional and the Department consider critical to the Project schedule, but whose cost is disputed.

Within ten (10) business days of its receipt, evaluate and provide the Department with appropriate written recommendations, along with an analysis of any request by the Construction Contractor(s) for a time extension of their Construction Contract completion date. No recommendation for a Construction Contract time extension may be submitted to the Department which is not substantiated by the Professional firm's technical review and evaluation of the Project schedule showing critical path work, non-critical path work, and float time for the complete Project and any work at issue and having such detail as to clearly document the Construction Contractor's claim. The Professional must evaluate the Construction Contractor's performance/progress of the item(s) at issue and the Project in general. Any recommendation for an extension of the Construction Contractor's Contract completion date must include a complete analysis of all direct and indirect costs of the Construction Contractor, the Professional and the Department regarding the time extension. Where the Project is not substantially complete on the Construction Contract completion date, notify the Construction Contractor and the Department, in writing, of the expiration of the Contract completion date and of the assessability of liquidated damages.

Task 607

ENVIRONMENTAL TESTING/ANALYSIS: Where provided for in this Contract provide laboratory testing and analysis of Phase 700 environmental sampling services. All laboratory testing and analysis services shall be in accordance with the United States Environmental Protection Agency, Document SW-846, the American Society for Testing and Materials Procedures, and all requirements and standards prescribed by the Department of Natural Resources and Environment, Remediation and Redevelopment Division. Provide positive custody control records in such format and detail as the Department may require, or accept. The testing/analysis of Task 103 samples shall receive first priority in laboratory processing and, except where the method procedures may preclude, results shall be produced within five (5) business days of sampling. Analysis of samples from underground storage tank sites, having a confirmed release, shall be produced within ten (10) consecutive calendar days of sampling. All findings shall be reported, and graphically illustrated, in comparison to acceptable limits/standards as the Department may require. Notify the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director by telefax number at (517) 373-3562 or (517) 241-4968 of test results not meeting acceptable testing standards.

Hold, and legally dispose of all expended samples, drill cuttings, water, mud, and all other constituents, debris from sampling and testing. Where testing and analysis services are by others, evaluate and approve, or disapprove, test reports within two (2) business days of the receipt of such reports, provide copies thereof marked with the Professional firm's approval. Provide written reports and appropriate correspondence summarizing the findings of testing and analysis.

Task 607.01 CONSTRUCTION TESTING PROGRAM: Monitor, evaluate, and take timely administrative action, as may be required, in response to the results of the construction quality control and material testing program. In circumstances where the testing is not provided by the Department, evaluate and approve, or disapprove the Construction Contractor(s) work plan for providing all test reports. Provide the Construction Contractor(s) and the Department with written evaluation of all test reports, copies of test reports, marked with the Professional firm's approval or disapproval within five (5) business days of receipt of the report. Within five (5) business days of the receipt of any test reports not meeting the Construction Contract requirements direct the Construction Contractor(s), in writing, to take appropriate, corrective, or replacement measures within a prescribed time. Follow up, as appropriate, to require the Construction Contractor(s) to achieve the design intent of the Professional firm's final design Contract Documents/environmental engineering/remedial drawings and specifications requirements and avoid delays to any element of work which may, in the Professional firm's opinion, may result in a delay in the Construction Contract completion date. Notify the Construction Contractor, in writing, of any delinquent corrections/replacement and take administrative action in accordance with Task 608.

Task 608 CONSTRUCTION CONTRACTOR PERFORMANCE: Throughout the execution of this Contract, monitor and evaluate the Project Construction Contractor(s) performance and quality assurance labor procedures and provide timely, administrative action to cause the Construction Contractor(s) to correct deficiencies. With the Department's concurrence, the Professional may direct, in writing, the exposure and testing of any work, already in place or covered, which the Professional, and/or the Department believes may not meet the design intent of the Professional firm's final design Contract Documents/environmental engineering/remedial drawings and specifications requirements.

Notify the Construction Contractor, and the Department, in writing, within five (5) business days of its identification, of any aspect of the Construction Contractor's performance which is inconsistent with the Contract Documents requirements or which, in the Professional firm's opinion, is inconsistent with the design intent of the Professional firm's final design Contract Documents/environmental engineering/remedial drawings and specifications. Prescribe a reasonable time for correction which will not jeopardize the Project schedule completion date. Exert all practical administrative means necessary to require the Construction Contractor to perform as required by their Construction Contract to meet the design intent of the Professional firm's final design Contract Documents/environmental engineering/remedial drawings and specifications requirements.

Deficient Performance: Upon identification of deficient performance, where the Construction Contractor fails to provide timely or acceptable performance, the Professional shall proceed as follows: (1) Notify within three (3) business days the Department, the Construction Contractor and any affected surety, in writing, and by registered mail delivery, of the potential for the Construction Contractor's default action and the Professional firm's recommendation; (2) Identify applicable Construction Contract references, with design interpretation of such references, and clearly explain where the Construction Contractor's performance fails to meet the design intent of the Professional firm's final design Contract Documents/drawings and specifications requirements; and (3) Specify a time and date for the Construction Contractor to begin active and continuous work towards Contract compliance and a specific time and date for Project completion.

Potential Default: Upon notification by the Department of potential default by the Construction Contractor, where the Project Construction Contractor fails to adequately

perform, the Professional shall proceed as follows: (1) Document the potential default, in writing, to the Construction Contractor, the Construction Contractor's surety and the Department; (2) Provide an explanation of the consequences of the potential default to the Project; (3) Provide the Department with a complete set of Project record documentation necessary to assist the Department in the legal implementation of the Construction Contractor's default action; (4) Establish an appropriate amount and withhold from payment certification of the associated line item, include a **retainage** consisting of any costs expended for testing and other investigations necessary to establish unsatisfactory performance plus a contingency amount, adequate for the Department to correct such unacceptable performance by means other than the Construction Contractor; and (5) Notify the Construction Contractor and their surety, in writing, of the withholding.

Default: Upon notification of the Project Construction Contractor's default, the Professional shall proceed as follows: (1) Identify the extent of defaulted and/or remaining Project work; (2) Recommend a procedural program for the Department to achieve the defaulted work within the remaining Project construction time schedule if possible; and (3) Provide modified final design Contract Bidding Documents/drawings and specifications that will allow the Department to rebid the remaining portion of work using the Professional firm's recommendations. The Professional firm will be compensated by the Department with a Contract Change Order for providing the defaulted Construction Contractor assistance service.

Task 609 PUNCH LIST PROCEDURES: Prepare and distribute, as required, Punch Lists for each construction Contract. Prescribe a reasonable schedule for completion of all construction Punch List items and identify an amount to be withheld from payment consisting of a minimum of two (2) times the estimated value of the unacceptable construction work plus an amount sufficient to assure the Department sufficient funds to cover all costs as may become necessary to complete the remaining delinquent work. Distribute Punch Lists within five (5) business days of the on-site Inspection. Notify the Construction Contractor of any delinquent Punch List construction corrections and take appropriate action in accordance with Tasks 606 and 608.

Task 610 CLAIMS: Evaluate and respond to any claims (in whole or in part) against the Department within five (5) business days of the receipt of such claim, in the Professional firm's office. Where any element of claims or subsequent litigation, are based, in whole or in part, upon any deficiency or delinquency in the Professional firm's services, the Professional shall provide, in a timely manner, all professional services to defend the claim issue(s). No payment will be due for claim defense services accumulated under this Task until settlement or judgment of litigation concludes the claim issue. The claim settlement or judgment decision will be used as the basis for determining the Professional firm's obligation, if any, for the costs of such professional services and/or for any costs incurred by the Department for which performance by the Professional may be responsible or contributory. Billing under this Task will be in accordance with an appropriate Contract Modification and/or Contract Change Order.

Task 611 AS-BUILT DOCUMENTS: Incorporate and render the Construction Contractor's as-built environmental engineering/remedial drawings within ninety (90) consecutive calendar days after receipt of the properly prepared and submitted Construction Contractor documents into the Professional firm's original final design environmental engineering/remedial Contract Documents/drawings and specifications. The Professional shall provide the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager with the following two (2) types of Contract deliverable as-built original documents for Project close-out: (1) One (1) set of legible/reproducible mylars completely updated, as-built original tracings of the Contract Documents/environmental engineering/remedial drawings; and (2) Two (2) sets of completely updated as-built, close-out documents of the Project Contract Documents/environmental engineering/remedial drawings on computer compact disks (CD's) in an Auto CAD format that is "Auto CAD readable" and conforms to the American Institute of Architects (AIA) National CAD

Standard format. The as-built documents shall depict all construction modifications, additions, and deletions made either by Addendum, Bulletin, supplemental written instructions, and the written notations shown on the Construction Contractor's as-built drawings. The Professional firm's as-built environmental engineering/remedial drawings shall be of such clarity, detail, and completeness that reference to other documents will not be required to describe or depict, the Project. The above referenced as-built documents shall be free of the Professional firm's original environmental engineering/remedial final design errors and omissions. The Professional shall revise the final design as-built drawings as necessary to incorporate all requested Department revisions as required for the Department's formal written acceptance and approval of the Project as-built drawings and the Project final on-site Inspection. The Professional firm's services for the Task 609, As-Built Documents are not complete until: (1) The as-built environmental engineering/remedial drawings have been verified, in writing, by the Professional to the Project Director as being accurate and complete; and (2) The as-built environmental engineering/remedial drawings have been turned over and accepted by the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager in writing.

Task 612 REMEDIATION OPERATIONS: Monitor, analyze, and provide all necessary reports to the governing enforcing agency regarding the performance of construction and/or remediation facilities and/or equipment.

Task 613 PROJECT REPORT/CLOSE-OUT PROCEDURES: Maintain for the Project record a schedule of the Construction Contractor's required submittals for Project close-out. Review and approve or reject all submittals as appropriate. Within ninety (90) consecutive calendar days after Substantial Completion of the Project, after building or Project occupancy, verify to the Department's, Project Director and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager in writing, that the following documents have been received: (1.) All Project code compliance approvals; (2.) Final Inspections; (3.) Final occupancy permits; (4.) Construction Contractor's as-built final design marked-up environmental engineering/remedial drawings; (5.) Copies of "Operation and Maintenance Manuals" of the Project systems; and (6.) Equipment warranties and guarantees.

Prepare and provide to the Department's, Project Director and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager within ninety (90) consecutive calendar days after Substantial Completion of the construction and/or remediation process Project, three (3) copies of "Operation and Maintenance Manuals" of the Project systems and equipment. These close-out manuals shall include copies of reduced size, as-built environmental engineering/remedial drawings, specifications, and all instructions published or furnished by respective manufacturers, construction code compliance certificates, equipment warranties and guarantees. The manuals shall also include a complete description of the Professional firm's **Phase 500 - Final Design** intent concepts, operation, and required maintenance of each system. Participate in the Construction Contractor's start-up and in the training instruction of State/Client Agency personnel in the operation and use of the Project systems.

Provide four (4) bound and indexed copies of a Project close-out report of the "Operation and Maintenance Manuals" of the systems and equipment. This Project report must include, but may not be limited to:

1. Summary of the Project purpose, scope, and design criteria employed to achieve the Project scope of work.
2. Reduced size, approved, as-built environmental engineering/remedial drawings and shop drawings.
3. Narrative and graphic description of the operation of all major systems and equipment, and specific operating instructions, along with a listing of normal operating parameters.
4. Required maintenance program including spare parts requirements and specifications/source.
5. Records of all testing. Environmental test records must document that Project remediated site areas are within the legal limits acceptable to the governing enforcing agency. Construction testing must demonstrate full compliance with the final design Contract Documents/environmental engineering/remedial drawings and specifications requirements.
6. Record of all training provided as part of the Project scope of work along with all training aids and copies of certificates awarded.
7. Photographs showing the progress of the Project scope of work and principal, covered, or otherwise inaccessible, details of the work.
8. Copies of all permits, warranties, code compliance certifications from the respective governing enforcing agencies, records of legal disposal of debris and toxic/hazardous waste at treatment facilities or licensed landfill.
9. Where the construction Phase consists of the execution of a remediation process, provide legal documentation of site clearance or other certified verification that remediation/decontamination work has been legally completed to the satisfaction of the governing enforcing agency.
10. A narrative report on the conduct and conclusion of the Project.

This Project manual shall be so composed and complete as to be directly usable by individuals in the maintenance and operation of the State/Client Agency's site/facility.

Task 613.01 **PROJECT CLOSE-OUT:** When the remediation process and/or operation of the State/Client Agency facility has achieved remediation/decontamination, to within legal limits acceptable to the enforcing agency, provide all Project records, information, and analysis as may be required for the allowed type, or combination of types, of closure to be secured. When authorized by the Department, submit on the Department's behalf, request(s) for legal closure and provide all information as the governing enforcing agency may legally require for its consideration and approvals.

PHASE 700 - ENVIRONMENTAL RESPONSE/REMEDIAL ACTION - FIELD SERVICES

The Department may provide full- or part-time on-site State Field Inspectors to monitor the coordination and progress of the scope of work services of the Professional and the Project work of the remediation Construction Contractor(s). Such Inspections may generate reports, minutes of meetings, notes and documents, which will be available to, and may be useful for, the Professional. These Department State Field Inspectors will be under the direction of the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative**. The Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager, or their State Field Inspector has the authority to require

the Professional to respond to and resolve study/design related problems, construction field problems and to attend Project related meetings.

The Professional shall provide sufficient on-site field Inspections of the work to administer the construction field services Phase, and its related construction Phase remediation/administration office services, as directly related to the degree of Project complexity and scope of work requirements, up to and including full-time on-site field Inspections. These Inspections shall occur as the construction on-site field conditions may warrant, and during regularly-scheduled monthly progress meetings. Inspections shall be performed by professional disciplines appropriate to the status of the Project scope of work. The Professional shall use for their construction on-site field Inspection services, only personnel having such professional expertise, experience, authority, and compatibility with departmental procedures as the Department may approve. The Professional agrees that such characteristics are essential for the successful completion of the Project scope of work. Such individuals shall be replaced for cause where the Department determines and notifies the Professional, in writing, of their unacceptable performance.

The Professional shall review the Project construction work in place and that sequentially planned. The Professional shall determine whether the actual construction schedule progress appears to be in accordance with the approved schedule and whether the quality of the work appears to be in accordance with the design intent of the Professional firm's **Phase 500 - Final Design Contract Documents/environmental engineering/remedial drawings and specifications requirements** and are without apparent defects or deficiencies. No on-site advertising by, or of, the Professional or Project signs other than those appropriate to locate an approved field office will be permitted.

Task 701 **COORDINATION:** Coordinate all the Professional firm's staff, Consultant firm's staff, Construction Contractor and all other Project related resources.

Task 702 **ENVIRONMENTAL SAMPLING:** Conduct on-site surveys, investigations, sampling and monitoring procedures in accordance with the following Phase 100 Study/Task Services: (1.) Task 102, Site Assessments; (2.) Task 103, Initial Response Investigations; (3.) Task 104, Preliminary Investigations; (4) Task 106, Remedial Investigations; and (5) Task 107, Risk Assessments.

Where sampling by the Professional is required in this Contract, produce all sampling in accordance with the **United States Environmental Protection Agency, Document SW-846**, the Department of Natural Resources requirements, the American Society for Testing and materials procedures, and all other Project related governing regulations, standards, and procedures. Maintain positive custody control and records thereof in such format and detail as the State may prescribe or accept. Provide written report and appropriate analysis of all tests. Where testing services are by others, monitor, evaluate, and take timely action, as may be required, in response to the results of the testing program. Evaluate and approve, or disapprove as appropriate, all test reports. Verbally notify the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative** immediately of any field inspection/observation or test(s) not meeting applicable Project governing standards and confirm in writing. Provide the Department with copies of test reports, marked with the Professional firm's approval or disapproval within five (5) business days of receipt of the report. Provide up to five (5) additional copies and distribute as the Department may direct.

Task 703 **OPERATIONAL SERVICES:** Provide such operational and monitoring services as may be required in connection with the Task 408.01, Design Development scope of work.

Task 704 **PRECONSTRUCTION MEETING:** Preside at and record preconstruction/organizational meetings for each Construction Contract.

Task 705 **CONSTRUCTION ON-SITE INSPECTION/TESTING SERVICES:** Define, prepare, and conduct an appropriate in-field inspection/testing program in association with the Phase 100 and 600 operations requiring field inspection and testing services. Provide all field observations, sampling, testing, and inspections as necessary in association with Phase 100

and 600 services and testing program/requirements. Submit all tests, test result reports, and any Project associated correspondence. Verbally notify the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative** immediately of any field inspection/observation or test(s) not meeting applicable Projects governing standards and confirm in writing. Provide copies to the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director **and their Field Representative**.

The Professional **firm** and their Consultant **firm's** shall conduct, and record the principal events and status of the work of all scheduled, and other on-site Inspections/visitations and its appropriate contractors. The on-site field Inspections shall occur as the field conditions may warrant, and during the regularly scheduled monthly progress and payment meetings.

All on-site construction progress Inspections shall be recorded in the form of a written report to the Department and the Construction Contractor within five (5) business days of the Project construction progress Inspection. The purpose of such on-site Inspection/visitations includes, but is not limited to: (1) Achieve and maintain a working familiarity with the status and quantity of Project work in place; (2) Determine if the actual construction schedule progress is in accordance with the approved Project construction schedule; (3) Review the installation and determine the acceptability of preparations for, and installation of, pending critical construction components and activities; and (4) The Inspection of Project construction work completed or in progress by the Construction Contractor to determine and verify, in writing, to the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division, Project Director **and their Field Representative** that the quantity and quality of all Project work is in accordance with the design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications requirements.

Task 706 **PROBLEM SOLVING MEETINGS:** Conduct and record problem solving meetings between the Professional **firm** and the Professional firm's appropriate Consultants, the Construction Contractor(s), their subcontractors, the Department, the Project Director, the State Project Manager, and any construction managers and other affected parties on-site or elsewhere to assess the construction work progress, provide design interpretation decisions and to resolve problems affecting the construction work. These problem solving meetings shall be scheduled as the on-site field conditions and the Project scope of work requirements may require as a minimum, and/or shall be at such time as the Construction Contractor(s), the Professional, the Department of Management and Budget, Facilities Administration, Design and Construction Division, Project Director **and their Field Representative**, the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager, and any construction manager agree is appropriate to the work progress. Non-scheduled or emergency meetings shall be at such time as necessary to maintain schedule of various Project work items and to avoid delays in the Construction Contract completion date.

Task 707 **PROGRESS MEETINGS:** Conduct and record monthly scheduled on-site Project construction progress meetings with the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division, Project Director **and their Field Representative**, the Construction Contractor(s), and any construction manager. Assess Project construction work progress, and take such timely, administrative actions as necessary to maintain the Project construction work on schedule and respond to and resolve all design related and construction items affecting Project construction cost, and be in compliance with the design intent of the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications requirements, in accordance with Tasks 513 and 514.

Task 708 FINAL ON-SITE PROJECT INSPECTION: Conduct final on-site Inspections of the Project, in concert with the Construction Contractor(s), the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division, Project Director **and their Field Representative** and any construction manager. Final on-site Inspections shall be conducted to witness and record equipment start-up and all testing, to determine the status of any part of the Project construction work where the Department intends to take beneficial use or occupancy, to verify, in writing, that each Construction Contractor has achieved substantial completion, and prepare Punch List(s) items, and to verify completion of Punch List work. Verify to the Department **of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and their Field Representative**, in writing, the completeness and accuracy of the Construction Contractor's as-built drawings during the Project construction Phase on-site field Inspection(s) and identify any corrections required. The Professional shall revise the final as-built drawings as necessary to incorporate all requested Department revisions as required for the Department's formal written acceptance and approval of the Project as-built drawings and the Project final on-site Inspection. Verify and certify in writing, that all work has been completed in accordance with the design intent of the Professional firm's **Phase 500 - Final Design Contract Document/environmental engineering/remedial drawings and specifications requirements** and that all equipment and systems function without identifiable defects. Where the Construction Contractor fails to complete all Punch List work in a timely manner, take action in accordance with Tasks 606 and 706.

ARTICLE 2 COMPENSATION

In consideration of the performance of this Contract, the Department agrees to pay the Professional firm, as monetary compensation fee for the professional environmental engineering remedial site study, design and construction administration services, an hourly billing rate for each employee providing a direct service to this Project, on an estimated cost not-to-exceed basis as specified herein, subject to subsequent modification mutually agreeable to the parties hereto: provided, however, that the Professional firm may not incur monetary costs, or bill the Department, for professional environmental engineering/remedial design services in excess of the cost estimates set forth in this Contract without the prior written agreement of the Department.

The hourly billing rates shall include all direct and indirect monetary costs associated with the employment of personnel, Contract computer services, equipment, home office, field office, related operating expenses, indirect labor, overhead, and profit. Sick leave, vacation, and holiday pay shall be included in the overhead costs and shall not be billable to the Project. Hourly billing rates for this Contract shall remain fixed for the duration of this Project Contract. In the event the Professional firm is required to provide the Department with future environmental engineering/remedial design services beyond the duration of this Contract, the hourly billing rates will be subject to negotiation.

Compensation fee to the Professional firm by the Department for this Project scope of work services shall be on an hourly billing rate basis for the professional environmental engineering/remedial design services rendered by salaried and nonsalaried professional, technical and technical support employees performing a direct service for this Project, except for any authorized reimbursable expenses provided for in this Contract. Total compensation for any Phase may not exceed the monetary compensation fee amount authorized for that Phase. Compensation for professional services and authorized reimbursables shall not exceed the monetary compensation fee amount authorized in the Phases of the Contract Order or the Contract Change Order signed and issued by the Department to the Professional. Professional services shall not be performed and no Project monetary expense shall be incurred by the Professional firm prior to the issuance of a written and signed Professional Services Contract and a DMB Form 402 - Contract Order by the Department to the Professional, authorizing the Professional firm to start the Project work on-site.

Compensation to the Professional firm for professional environmental engineering/remedial design services and authorized technical and technical support employees performing a direct service for this Project shall be determined using the Professional firm's calculated hourly billing rate. The Professional firm's hourly billing rate shall include all direct and indirect monetary costs, but is not limited to, such overhead items as measuring, monitoring, testing instruments and equipment, fringe benefits, vacations, sick leave, insurance, meals, lodging, Project related travel, computer costs/operating costs and time, telephone services, postage, reproduction services for other than Bidding Documents, employees not providing a direct professional service, other indirect costs, profit, etc., (See Appendix 8). Hourly billing rate cost shall be the actual amount paid the employee for services on the Project exclusive of fringe benefits, vacations, sick leave, other indirect costs and profit. Such costs and the Professional firm's calculated hourly billing rates shall not change during the life of this Contract without written approval by the Department. The Professional firm's calculated hourly billing rates also includes: (1) All consumables used by the Professional or the Professional firm's Consultants for collection of samples to be tested and analyzed by others; and (2) The costs of owning, operating, maintaining, insuring, and replacing all direct reading/measuring and testing instruments designed for on-site field Inspection and testing work, along with their computer or data recorders, as the Professional may use for on-site field Inspections, investigations, measuring, sampling, or testing services. Reimbursement for the Project/Program Statement scope of work requirements will be provided only for Department approved items authorized for reimbursement compensation in this Contract. Compensation is approved and authorized by the Department on a per test basis for laboratory services by Professional firm(s) identified and listed in this Contract to: (1) Test and analyze samples collected by their technical employees; and (2) The Professional firm's per test costs shall be recognized by the Department to include all consumables necessary to prepare and secure the respective sample(s) and to conduct the required analytical testing procedures thereon.

The Professional **firm** acknowledges having a clear understanding of the requested Project scope of work requirements and of the professional environmental engineering/remedial study, design and construction administration services required by the Department to provide it, and further agrees that the terms of this Contract provide adequate professional monetary compensation fee(s) to provide the requested Project scope of work requirements. No increase in monetary compensation fee to the Professional will be allowed unless there is a material change made to the Project scope of work requirements as described in the **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work requirements and the change in scope to the Project/Program Statement scope of work requirements is accepted and approved in writing, by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager, the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Professional **firm**. Professional services shall not be performed and no Project expenses shall be incurred by the Professional firm prior to the issuance of a written and signed Professional Services Contract and a DMB Form 402 - Contract Order by the Department to the Professional. Compensation for Department directed changes to the Project or modifications to the Project scope of work will be provided to the Professional firm by a Contract Modification and/or Contract Change Order signed by the Department and the Professional. The preparation of Bulletins and Contract Change Orders resulting from increases in the Project scope of work or previously unknown on-site field conditions will be compensated to the Professional firm, as approved by the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director, on an hourly billing rate basis in accordance with this article. This monetary compensation shall not exceed seven and one-half percent (7.5%) of the Construction Contractor's quotation for the Bulletin or Contract Change Order or an amount mutually agreed upon by the Professional firm and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager.

No substitution of any "Key Principal Personnel/Employee" who is essential for the successful completion of the Project scope of work requirements and identified in the Professional firm's attached Appendix 2 – Project Organizational Chart will be allowed by the Professional firm for this Contract without the prior written consent from the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director. Before any "Key Principal Personnel/Employee" substitution takes place, the Professional firm shall submit a written

request to the Project Director for personnel substitution and this substitution request shall include the following information: (1) A request in writing for a No Cost Contract Modification for this “Key Principal Personnel/Employee” substitution; (2) Detailed written justification for this “Key Principal Personnel/Employee” substitution; (3) The Professional firm’s qualifications of any proposed “Key Principal Personnel/Employee” replacement; and (4) A written statement from the Professional firm assuring the Department that the Project scope of work will not be adversely affected by this “Key Principal Personnel/Employee” substitution change. This request by the Professional firm to modify their Professional Services Contract must be accepted and approved in writing by the Department of Natural Resources and Environment, Remediation and Redevelopment Division’s, State Project Manager and the Department of Management and Budget, Facilities Administration, Design and Construction Division’s, Project Director and the Director of the Department of Management and Budget, Facilities Administration, on the Department’s, Professional Services Contract Modification form (DMB-410).

Compensation to the Professional firm for providing the professional environmental engineering/remedial site study, design and construction administration services of this Contract shall be determined using the Professional firm’s current hourly billing rate costs for the employees performing a direct service for the Project. Such Project hourly billing rate costs shall not change during the life of this Contract without written approval by the Department. The Professional shall provide, but no additional monetary compensation shall be allowed, for the professional services necessary to respond to and resolve all Construction Contractor design related claims arising wholly or in part from the Professional firm’s **Phase 500 - Final Design Contract Documents/environmental engineering/remedial study/design errors or omissions** or other aspects of the Project’s design or the Professional firm’s performance which is inconsistent with the Professional or Construction Contract.

2.1 PREMIUM TIME/OVERTIME: This Contract anticipates that no premium or overtime is required to achieve the Project scope of work. No compensation will be allowed to the Professional for any premium or overtime cost incurred to achieve the proposed Project schedule of this Contract.

2.2 EMPLOYEE HOURLY BILLING RATES: The salaried employees hourly billing rate is determined by dividing the annual salary, exclusive of bonuses and profit sharing, by 2,080 and adjusting such rate to reflect the actual reduced per-hour cost if more than eight (8) hours per day or forty (40) hours per week are worked in any payroll period. Salaried employees shall be clearly identified. Hourly billing rates for nonsalaried employees is the basic hourly wage rate received by an employee exclusive of fringe benefits, vacations, sick leave, other indirect costs and profit. No lump-sum subcontracts for the professional services of any employee may be billed against this Contract. Any employee associated with this Project who performs the professional services of a subordinate or of a position classification having a lower classification/pay range shall be accounted and paid for at the lower hourly billing pay rate. The hourly billing rate charge of any employee may be changed by the Professional firm with a written and Department approved Contract Modification during the life of this Contract to account for normal personnel pay increases.

The Professional shall provide only one (1) “Key Principal Personnel/Employee” (Chief Executive Officer) from each design discipline to contribute direct services to this Project.

2.3 HOURLY BILLNG RATES: Hourly billing rates will include all direct and indirect monetary costs to the State for the Professional firm's services under this Contract other than the authorized and approved reimbursements (See Appendix 8). Hourly billing rates shall be based on the Professional firm’s documented historical operating expenses and adjusted for Project specific costs. In no case shall this documentation period include more than eighteen (18) months prior to the date of award of this Contract. The Professional firm’s use of providing different hourly billing rates for different Phases is not allowed. No personnel hourly billing rate may be increased during the life of this Contract without a Contract Modification approved by the Department in writing to account for normal personnel pay increases.

Hourly billing rates include, but are not limited to: Overhead items such as employee fringe benefits, vacations, sick leave, insurance, taxes, pension funds, retirement plans, meals, lodging, and all Project related travel expenses for Projects **less than** one-hundred (100) miles in each direction from the Professional firm's Michigan office. The cost of all telephone-related services computer costs/operating costs and time, and all reproduction services (except final design Contract Bidding Documents/environmental engineering/remedial final design drawings and specifications) and where specifically authorized elsewhere in this Contract, the reproduction of final design Contract Documents for legislative presentation. The hourly billing rate also includes, all reproduction costs for study/design interpretations, study/design clarifications and Bulletins related to the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial study/design errors or omissions, construction code compliance (precipitating either from design code compliance and plan review, study/design interpretations, or construction on-site/field Inspections), and similar, or avoidable costs shall be accounted as part of the Professional firm's calculated hourly billing rates. All postage, mail or other shipping or delivery services, acquisition, bad debts, previous business losses, employment fees, depreciation and operating costs for equipment, including computer design and/or computer drafting systems, and any specialized testing equipment are to be included. The hourly billing rate shall include, without exception, secretarial, typing/word processing, editing, and clerical services utilized in any way for the Project as well as other nontechnical and/or overhead employees. All other direct or indirect monetary costs, including that of processing the costs of the Professional firm's Consultant's, and reimbursable expense items shall be included. The hourly billing rate also includes all profit without regard to its form or distribution. Project related travel for Projects **more than** one-hundred (100) miles in each direction from the Professional firm's Michigan office shall be treated as an authorized reimbursable expense at the State of Michigan's current travel rates (See Article 2.5 text of this Contract).

The Professional firm's calculated hourly billing rates, include, but are not limited to: Any costs associated with litigation and settlements for the professional, or other liability suits, out-of-state offices and associated travel, bonuses, profit sharing, premium/overtime costs, public relations, entertainment, business promotion, contributions, and various speculative allowances.

All hourly billing rates must be substantiated in writing and accompanied with records justifying each Professional firm's calculated hourly billing rates.

The hourly billing rates for the Professional may not be applied to the work of the Professional firm's Consultant's. Each Consultant must submit a separate hourly billing rate with proper documentation for the Consultant services they will provide. The hourly billing rates of the respective Professional firm's Consultant shall be used for that Consultant firm's personnel only. No mark-up may be applied by the Professional to their Consultant's firm's hourly billing rate(s) charges. **The Professional firm's Consultant services shall be billed as an authorized reimbursable expense item.**

All Project reproduction costs for study/design clarifications and Bulletins dealing with the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial site study/design errors or omissions, construction code compliance (precipitating either from design code compliance and plan review, study/design interpretations, or construction on-site/field Inspections, or avoidable costs shall be accounted as part of the Professional firm's calculated hourly billing rates.

- 2.4 **RANGE OF EMPLOYEE HOURLY BILLING RATES:** The Professional shall identify the environmental engineering discipline service being provided and include the Primary Professional firm's Consultant's technical employee(s) full payroll signature names and position classifications for the Project and their current hourly billing rates at the beginning of the Project. Also, provide the technical employee(s) anticipated hourly billing rates at the end of the Project based on the Professional firm's estimated schedule duration. This range of current and anticipated hourly billing rates shall reflect the actual monetary costs currently being paid to all of the Primary Professional firm's Consultant's technical employees for the professional services within their specified position classification, and shall include any anticipated pay increases over the life of the Professional firm's Consultant's estimated Contract schedule. The range of hourly

billing rates for any employee position or classification may not be changed without a Contract Modification approved by the Department in writing. No mark-up of the Professional firm's Consultant's hourly billing rates will be allowed.

- 2.5 **DIRECT COST REIMBURSEMENT ITEMS: The Professional firm's Consultant services shall be treated as an authorized reimbursable expense item at a direct cost times a 1.0 multiplier.** Reimbursement of authorized expense items at direct cost times a 1.0 multiplier is intended only as a means to compensate the Professional for their direct costs. The Professional shall be responsible for: (1) The selection of the supplier of their professional services or materials; (2) The coordination, adequacy and application of their professional services, whether provided by the Professional firm's staff or provided by their Consultant; and (3) Any Project costs that exceed the Contract per Phase reimbursement Budget.

All Project reproduction costs for the Professional firm's **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial site study/design interpretations, design clarifications and Bulletins dealing with the Professional firm's Contract Documents/environmental engineering/remedial final study/design errors or omissions, construction code compliance (precipitating either from design code compliance and plan review, study/design interpretations, or construction on-site/field Inspections), or avoidable costs shall be accounted as part of the Professional firm's calculated hourly billing rates. Unless authorized elsewhere in this Contract, direct cost reimbursements times a 1.0 multiplier expense items shall be limited to: Printing and reproduction of the Phase 100 - Study Final Reports, the Phase 500 - Final Design Contract Bidding Documents/environmental engineering/remedial drawings and specifications and the United States (U.S.) Mail regular shipping postage and handling of final design Contract Bidding Documents, Design Code Compliance and Plan Review Approval Fees by the Department of State Police, Fire Marshal Division and the Department of **Energy**, Labor and Economic Growth, Bureau of Construction Codes and Fire Safety, documents for legislative presentation, artistic productions, mobilization of testing equipment, laboratory costs for testing samples, per-linear-foot cost of soil borings and specialized inspections of the structural, mechanical, electrical, chemical or other essential components of the Project. Where reproduction of final design Contract Bidding Documents is by the Professional, reimbursement shall be limited to the cost of materials only. In addition, the authorized reimbursement includes the number of final design Contract Bidding Documents and Addendums that are required to supply all prospective qualified construction Bidders.

The Professional firm's hourly billing rate (See Appendix 8) does not include and the Department of Management and Budget, Facilities Administration, Design and Construction Division will pay the Professional for (under Appendix 5 – Reimbursable Tests and \$ Expenses) travel mileage costs for State of Michigan Projects **more than** one-hundred (100) miles in each direction from the Professional firm's Michigan office if the Professional firm can demonstrate a cost savings to the State, if reimbursed for travel mileage in accordance with the current travel rates provided in the State of Michigan's, "Schedule of Travel and Meal Reimbursement Rates" versus an adjustment to the Professional firm's calculated hourly billing rates. Compensation to the Professional firm for Project related travel when authorized by the Department, will be in the attached Appendix 5 – Reimbursable Tests and \$ Expenses text and will be limited and reimbursed by the Department in accordance with the current travel rates provided in the State of Michigan's "Schedule of Travel and Meal Reimbursement Rates."

Compensation for Department directed changes to the original **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work requirements or modifications to the Project scope of work required by the Department will be provided to the Professional firm by a Contract Modification and/or Contract Change Order signed by the Department and the Professional.

Prime Professional Firm:

Position/ Classification	Individual	Hourly \$ Range		Total Hours	Total \$ Cost
		From	To		
				—	—
					\$

(See Attached Appendix 4 – Project Hourly Billing Rate \$ Compensation for the Actual Position/Classifications and the Anticipated Hourly Billing Rate \$ Compensation Range for this Contract.)

*Key Principal Personnel/Employee

Consultant Firm:
City, State

Position/ Classification	Individual	Hourly \$ Range		Total Hours	Total \$ Cost
		From	To		
				—	—
					\$

(See Attached Appendix 4 – Project Hourly Billing Rate \$ Compensation for the Actual Position/Classifications and the Anticipated Hourly Billing Rate \$ Compensation Range for this Contract.)

*Key Principal Personnel/Employee

Consultant Firm: As Selected ~ Printing and Reproduction of Phase 100 – Study Final Reports, the Phase 500 – Final Design Contract Bidding Documents, Drawings and Specifications**, Phase 600 – Construction/Remediation Administration-Laboratory Services and Phase 700 – Environmental Response/Remedial-Field Services Final Reports

Multiplier: 1.0

**Specifications will be prepared for Divisions 00 through 49, in the 2004 MasterFormat Outline by the Construction Specifications Institute (C.S.I.), as appropriate for the defined Project scope of work requirements (See Appendix 5).

2.6 DIRECT COST/REIMBURSABLE CONSULTANT SERVICES: **The Professional firm's Consultant services shall be treated as an authorized reimbursable expense item at a direct cost times a 1.0 multiplier.**

2.7 DIRECT COST REIMBURSEMENT ITEMS: Reimbursement of authorized expense items at direct cost times a 1.0 multiplier is intended only as a means to compensate the Professional for their direct costs. The Professional shall be responsible for: (1) The selection of the supplier of their professional services or materials; (2) The coordination, adequacy and application of their professional services, whether provided by the Professional firm's staff or provided by their Consultant; and (3) Any Project costs that exceed the Contract per Phase reimbursement Budget.

Reproduction costs for the Professional firm's **Phase 500 - Final Design Contract Documents/environmental engineering/remedial site study/design interpretations, study/design clarifications and Bulletins** necessary to achieve the Contract scope of work is not allowed for reimbursement and shall be accounted as part of the Professional firm's calculated hourly billing rates.

Compensation to the Professional firm for individual Tasks described in Article 1 shall not exceed the following amounts per Project Phase unless authorized by a Department approved Contract Change Order signed by the Department and the Professional.

<u>PROJECT PHASE</u>	<u>SUBTOTAL AMOUNTS</u>	<u>MULTIPLIER</u>	<u>COMPENSATION NOT TO EXCEED</u>
100 Environmental Investigation/Study			
Billing Rate Payroll**	\$	1.0	\$
Authorized Reimbursables		1.0	_____
TOTAL			\$
200 Program Analysis			
Billing Rate Payroll**	\$	1.0	\$
Authorized Reimbursables		1.0	_____
TOTAL			\$
300 Schematic/Design Development			
Billing Rate Payroll**	\$	1.0	\$
Authorized Reimbursables		1.0	_____
TOTAL			\$
400 Preliminary Design			
Billing Rate Payroll**	\$	1.0	\$
Authorized Reimbursables		1.0	_____
TOTAL			\$
500 Final Design			
Billing Rate Payroll**	\$	1.0	\$
Authorized Reimbursables		1.0	_____
TOTAL			\$
600 Construction/Remediation Administration-Laboratory Services***			
Billing Rate Payroll**	\$	1.0	\$
Authorized Reimbursables		1.0	_____
TOTAL			\$
700 Environmental Response/Remedial - Field Services			
Billing Rate Payroll**	\$	1.0	\$
Authorized Reimbursables		1.0	_____
TOTAL			\$
TOTAL CONTRACT AMOUNT			\$ _____

Reimbursable Expenses:

*See attached Appendix 5 for authorized reimbursable test items and \$ expenses. The compensation amounts provided in this Contract are not allowances, but comprise the Budget within which the Professional firm(s) can produce the **Department's approved and** attached Appendix 1 - Project/Program Statement scope of work requirements with reasonable and acceptable contingency.

*Printing and Reproduction of the Phase 100 - Study Final Reports and/or the Phase 500 - Final Design Contract Bidding Documents, Drawings and Specifications = \$_____.

**See attached Appendix 8 guideline form for computation instructions regarding the overhead items allowed by the Department for the Professional Services Contractor and their Consultant firm's hourly billing rates calculation.

***All environmental engineering/remedial services laboratory work, samples, and sample analysis, whether under Phases 100, 500 and/or 700, shall be itemized and listed in Phase 600 services.

ARTICLE 3 PAYMENTS

Payment of the professional services monetary compensation fee, by the State of Michigan to the Professional firm, shall be based on the Professional firm's performance of authorized Contract professional environmental engineering/remedial design services expenses performed prior to the date of each monthly submitted payment request. Payment requests shall be submitted monthly to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director (with a copy to the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager) as the Project progresses on a Department payment request form (DMB-440). Payment to the Professional by the Department for each monthly submitted payment request invoice shall be made to the Professional within thirty (30) consecutive calendar days following the Department's receipt and approval of an approved payment request invoice from the Professional. Payment for reimbursable expenses shall be made only for authorized Contract obligations in the amount incurred prior to the date of the payment request application. The Professional firm's payment requests to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director shall include signed certification by the Professional and shall graphically illustrate the following items: (1) The actual percentage (%) of work necessary to fulfill and complete the Contract requirements for the total Project; (2) The actual percentage (%) of Project work completed as of the date of the monthly payment request; and (3) The actual percentage (%) of work completed for each Task of the current Project Phase. This information shall be provided monthly with each submitted payment request and be graphically displayed on a copy of the Professional firm's original/revised submitted Project schedule.

Payment request applications shall be submitted monthly by the Professional to the Department, appropriately itemized, indicating the separate amounts being requested for each Phase of the Project service and reimbursement of each authorized expense and the total amount previously paid, if any, for such professional services. Payment request applications shall not be submitted to the Department, in amounts exceeding those indicated in the Department's signed Contract Order or Contract Change Order(s). Except as may be required by Department approved Contract Orders, and provisions for the Phase 500 - Design Correction/ clarification scope of work text, no payment request will be processed for Project work accounted against any previous Phase after the date that the Project submittals of that Phase have been finalized and accepted by the Department, and in no case later than the designated date that Project work on any subsequent Phase is authorized by the Department. All invoicing for payment requests for the professional environmental engineering/remedial design services work of a completed Phase must be finalized within sixty (60) calendar days of the end of the month in which the Project Phase scope of work is completed.

Payment request applications shall be submitted monthly on Department forms (DMB-440) and prepared in such detail as the Department may prescribe. The Professional firm's payment request applications shall summarize the amounts authorized, earned, previously paid and currently due for each Project Phase.

The Professional shall submit with their monthly application for payment a sworn statement stating that the amounts previously invoiced for professional environmental engineering/remedial design services performed by their Consultants have been paid to their Consultants. Payment request applications to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director shall be supported by itemized Project work documentation supporting the requested professional services fee amounts for each Project Phase and shall include, but not be limited to:

- a) Phase/Task Numbers for the professional environmental engineering/remedial design services provided for the Project scope of work.
- b) Name of individual providing professional service and position/classification title as defined in the Article 2 - Compensation text.
- c) Hours worked: Authorized reimbursable expense items provided.
- d) Current hourly billing rate charges for each individual position/classification.
- e) Copy of certified on-site visitation log or site visit report showing time on-site.
- f) Receipts for authorized reimbursable expense items.
- g) Itemized invoices from each of the Professional firm's Consultant's documenting that firm's professional services charge and the Project work related services provided.

ARTICLE 4 ACCOUNTING

Authorization for the Professional firm to begin to incur monetary compensation costs for the Project professional environmental engineering/remedial design services shall be made by the Department with a Department signed Professional Services Contract and a Department approved and signed DMB Form 402 - Contract Order, authorizing the Professional firm to start the Project work on-site. This Contract Order may authorize funds for all professional service Project Phases or authorizations may be made for sequential Phases according to the Project needs. It shall be the Professional firm's responsibility to carefully monitor their Project costs and their Consultant firm's professional service costs, activities, and progress and to give timely notification of any justifiable need to increase the authorized funds. Increases or decreases to the authorized Project Budget funds will be provided to the Professional by the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager by a revised and Department approved Contract Change Order signed by the Department and the Professional. No unauthorized Project work shall be performed by the Professional.

The Professional shall keep current and accurate records of Project monetary costs and expenses of hourly billing rates and authorized reimbursable expense items and all other Project related accounting document costs to support the Professional firm's monthly application for payment. Records shall be kept on a generally recognized accounting basis. Such records shall be available to the Department for a period of three (3) years after the Department's final payment to the Professional. The State of Michigan reserves the right to conduct, or have conducted, an audit and Inspections of these Project records at any time during the Project or following its completion.

ARTICLE 5 INSURANCE

The Professional shall submit original Certificate of Insurance documents or certify that it will obtain all of the required insurance documents under Section 21542 of Act 451. The Professional shall purchase, maintain and require that the insurance as required in this article text and the original Certificates of Insurance documents shall be attached to the Appendix 12 - Original Certificates of Insurance section, that will provide protection from claims set forth below which may arise out of or result from the Professional firm's services under this Contract, whether such service is performed by the Professional or performed by any of the Professional firm's Consultant's, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

The following insurance policy limits described below are intended to be the minimum coverage acceptable by the State and under Section 21542 of Act 451:

- a) Workers' Compensation Insurance for claims under the Michigan's Workers' Compensation Act or other similar employee benefit act of any other state applicable to an employee.

Employers' Liability Insurance, in conjunction with Workers' Compensation Insurance, for claims for damages because of bodily injury, occupational sickness or disease or death of an employee when workers' compensation may not be an exclusive remedy, subject to a limit of liability of not less than \$100,000 each accident.
- b) Automobile Insurance required by law of not less than \$1,000,000 per each occurrence for claims arising from ownership, maintenance or use of a motor vehicle.
- c) Commercial General Liability Insurance coverage not less than \$1,000,000 per occurrence and \$2,000,000 aggregate.
- d) Contractual Liability Insurance for claims for damages that may arise from the Professional firm's assumption of liability on behalf of the State under Article 6 concerning indemnification for errors, omissions, or negligent acts in the course of the professional service or other provision within this Contract to the extent that such kinds of contractual liability are insurable in connection with and subject to limits of liability not less than for the Professional professional liability insurance and commercial general liability insurance set forth in subsections (c) and (e).

- e) The Professional firm's Errors and Omissions coverage shall include coverage for claims resulting from acts of forbearance that cause or exacerbate pollution and claims of bodily injury and property damage in the amount of \$1,000,000 minimum coverage per occurrence. This insurance is required of all Professional firms who conduct professional environmental services including, but not limited to, any of the following services:
 - (i) Remedial System Design.
 - (ii) Remediation Management.
 - (iii) Feasibility Development and Implementation.
 - (iv) Hydrogeological Evaluation.
 - (v) Media Testing and Analysis.
 - (vi) Subsurface and Geophysical Investigation.
 - (vii) Other related activities as determined by the Department.

- f) Pollution Liability in the amount of not less than \$1,000,000 per occurrence is required.

Original signed Certificate of Insurance documents, acceptable to the State under Part 215 of Act 451, and under this rule shall be provided and filed with the State prior to commencement of the Professional firm's Project scope of work services unless otherwise approved, in writing, by the Department. Faxes or Portable Document Format (PDF) copies of the required original Certificate of Insurance documents will not be accepted, only the original documents are acceptable. **Signatures on the original Certificate of Insurance documents must be blue pen and ink** and cannot be laser facsimile. The insurance company shall attach evidence that it is authorized by the Department of **Energy**, Labor and Economic Growth, Office of Financial and Insurance Services to do business, as an insurer in the State of Michigan, and must have an insurance rating of "A-" or better, as listed by the A.M. Best Company unless, otherwise authorized in writing, by the State of Michigan. The original Certificate of Insurance documents must specify on the certificate in the oblong rectangle space labeled "Description of Operations/Locations/Vehicles/ Exclusions Added By Endorsement/Special Provisions/Special Items" the following items: (1) The Project Index No.; (2) The Project File No.; (3) The Project Title; (4) Description of the Project Scope of Work; and (5) The State of Michigan must be named as an "Additional Insured on the General Liability Insurance Policy." The original Certificate of Insurance documents shall contain a provision that the Project insurance coverage afforded under the insurance policies for this Contract will not be modified or canceled without at least thirty (30) consecutive calendar days prior to written notice to the State of Michigan, Department of Management and Budget, Facilities Administration, Design and Construction Division. To view the latest A.M. Best's Key Ratings Guide and the A.M. Best's Company Reports (which include the A.M. Best's Ratings) visit the A.M. Best Company internet web site at <http://www.ambest.com>.

The attached Appendix 12, Original Certificates of Insurance documents required for this Project shall be in force for this Project until the final payment by the State to the Professional **firm** is made and shall be written for not less than any limits of liability specified above. The Professional **firm** has the responsibility for having their Consultant firm's comply with these insurance requirements.

Also, be advised that the original surety bonds required for a Construction Contract for this Project will not be accepted by the State of Michigan unless, the surety bonding company is listed in the current United States Government, Department of Treasury's, Listing of Approved Sureties (bonding/insurance companies), Department Circular 570. This Circular 570 Listing is published annually every July 1, in the Federal Register solely for the information of providing a listing of companies holding certificates of authority as acceptable sureties on Federal bonds and as acceptable reinsuring companies required to provide surety bonds to the United States Government. Copies of the current Circular 570 Listing of approved surety bonding/insurance companies and interim changes may be obtained through the internet web site at <http://www.fms.treas.gov/c570/c570.html>.

ARTICLE 6 INDEMNIFICATION

- (a) To the extent permitted by law, the Professional shall indemnify, defend and hold harmless the State from liability, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Professional in the performance of this Contract and that are attributable to the negligence or tortious acts of the Professional or any of its Subcontractors/Consultants, or by anyone else for whose acts any of them may be liable.
- (b) Employee Indemnification

In any and all claims against the State of Michigan, its departments, divisions, agencies, boards, sections, commissions, officers, employees and agents, by any employee of the Professional or any of its Subcontractors/Consultants, the indemnification obligation under this Contract shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Professional or any of its Subcontractors/Consultants under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in provisions, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other provisions.

- (c) Patent/Copyright Infringement Indemnification

To the extent permitted by law, the Professional shall indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that such action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Professional or its Subcontractors/Consultants, or the operation of such equipment, software, commodity or service, or the use or reproduction of any documentation provided with such equipment, software, commodity or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, or services, or its operation, become or in the State's or Professional firm's opinion be likely to become the subject of a claim of infringement, the Professional shall at the Professional firm's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such option is not reasonably available to the Professional, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if such option is not reasonably available to Professional, (iii) accept its return by the State with appropriate credits to the State against the Professional firm's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Notwithstanding the foregoing, the Professional shall have no obligation to indemnify or defend the State for, or to pay any costs, damages or attorneys' fees related to, any claim based upon (i) equipment developed based on written specifications of the State; or (ii) use of the equipment in a configuration other than implemented or approved in writing by the Professional, including, but not limited to, any modification of the equipment by the State; or (iii) the combination, operation, or use of the equipment with equipment or software not supplied by the Professional under this Contract.

ARTICLE 7 OWNERSHIP OF DOCUMENTS

All final design Contract Documents/**environmental engineering/remedial design** drawings, specifications and Project related documents including the copyrights, prepared and furnished by the Professional shall become the property of the State of Michigan upon completion of the Project, completion and acceptance of the Professional firm's work, or upon termination of the Contract, and shall be delivered to the State of Michigan, Department of Management and Budget's, Facilities

Administration, Design and Construction Division upon their request. The Professional shall have no claim for further employment or additional monetary compensation as a result of this action taken by the State to request full rights of ownership of **the Professional firm's** final design Contract Documents and materials. However, the Professional may retain a copy of all Project scope of work documents for their record keeping files.

If the Professional firm is in default or breach of its obligations under this Contract Agreement, the State shall have full ownership rights of the final design Contract Documents and deliverables of this Contract, including all electronic data. If the Professional firm is in default or this Contract Agreement is terminated, the State shall not use the final design Contract Documents and deliverables of this Contract for completion of the Project by others without the involvement of other qualified Professional firms who shall assume the professional obligations and liability for the Project work not completed by the Professional firm. To the fullest extent allowed by law, the State releases the Professional, the Professional firms Consultant's and the agents and employees of any of them from and against legal claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of the State's use of the final design Contract Documents (Instruments of Service) other than in accordance with this Contract Agreement.

All Contract deliverables listed may be published or issued for informational purposes without additional compensation to the Professional. The Professional may not use any of the final design Contract Documents and Contract deliverables for any purpose that may misrepresent the professional services they provided.

The Professional shall retain full rights to the final design Contract Documents (Instruments of Service) and deliverables and the right to reuse component information contained in them in the normal course of the Professional firm's professional activities.

The final design Contract Documents Drawings, Specifications, or other documents produced under this Contract may be used by the Department, or others employed by the Department or State of Michigan, for reference in any completion, correction, remodeling, renovation, reconstruction, alteration, modification of or addition to the Project, without monetary compensation to the Professional firm.

The State of Michigan will not construct additional Projects or buildings based on the work of this Contract without notice to the Professional firm.

Whenever renderings, photographs of renderings, photographs or models, or photographs of the Project are released by the State of Michigan for publicity, proper credit for design shall be given **to** the Professional firm, provided the giving of such credit is without cost to the State of Michigan.

ARTICLE 8 TERMINATION

The State may, by written notice to the Professional, terminate this Contract in whole or in part at any time, either for the State's convenience or because of the failure of the Professional to fulfill their Contract obligations. Upon receipt of such notice, the Professional shall:

- a) Immediately discontinue all professional services affected (unless the notice directs otherwise), and
- b) Deliver to the State all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the Professional in performing this Contract, whether completed or in process.

8.1 If the termination is for the convenience of the State, an equitable adjustment in the Contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed professional services.

- 8.2 If the termination is due to the failure of the Professional to fulfill their Contract obligations, the State may take over the work and prosecute the same to completion by Contract or otherwise. In such case, the Professional shall be liable to the State for any additional cost occasioned to the State thereby.
- 8.3 If, after notice of termination for failure to fulfill Contract obligations, it is determined that the professional had not so failed, the termination shall be deemed to have been effected for the convenience of the State. In such event, adjustment in the Contract price shall be made as provided in Section 8.1 of this article.
- 8.4 The rights and remedies of the State provided in this article are in addition to any other rights and remedies provided by law or under this Contract.

ARTICLE 9 SUCCESSORS AND ASSIGNS

This Contract shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that neither of the parties hereto shall assign this Contract without the prior written consent of the other.

ARTICLE 10 GOVERNING LAW

This Contract shall be construed in accordance with the laws of the State of Michigan.

ARTICLE 11 NONDISCRIMINATION

In connection with the performance of the Project scope of work under this Contract, and in accordance with the attached Appendix 7 - Certificate of Awardability, the Professional agrees as follows:

- a) The Professional will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position. The Professional will provide equal employment opportunities to ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- b) The Professional will, in all solicitations or advertisements for employees placed by or on behalf of the Professional, state that all qualified applicants will receive equal employment opportunity consideration for employment without regard to race, color, religion, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position.
- c) The Professional or their collective bargaining representative will send to each labor union or representative of workers with which is held a collective bargaining agreement or other Contract or understanding, a notice advising the said labor union or workers' representative of the Professional firm's nondiscrimination commitments under this article.
- d) The Professional will comply with the Elliot-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2201 et seq; the Michigan Persons with Disabilities Civil Rights Act, 1976 PA 220, as amended, MCL 37.1101 et seq; and all published rules, regulations, directives and orders of the Michigan Civil Rights Commission which may be in effect on or before the date of award of this Contract.
- e) The Professional will furnish and file nondiscrimination compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission; said forms may also elicit information as to the practices, policies, program, and employment statistics of the

Professional and of each of their Consultant firm's. The Professional will permit access to all books, records, and accounts by the Michigan Civil Rights Commission, and/or its agent, for purposes of investigation to ascertain nondiscrimination compliance with this Contract and with rules, regulations, and orders of the Michigan Civil Rights Commission relevant to Article 6, 1976 PA 453, as amended.

- f) In the event that the Michigan Civil Rights Commission finds, after a hearing held pursuant to its rules, that the a Professional has not complied with the contractual nondiscrimination obligations under this Contract, the Michigan Civil Rights Commission may, as part of its order based upon such findings, certify said findings to the State Administrative Board of the State of Michigan, which the State Administrative Board may order the cancellation of the Contract found to have been violated, and/or declare the Professional ineligible for future Contracts with the State and its political and civil subdivisions, departments, and officers, and including the governing boards of institutions of higher education, until the Professional complies with said order of the Michigan Civil Rights Commission. Notice of said declaration of future ineligibility may be given to any or all of the persons with whom the Professional is declared ineligible to Contract as a contracting party in future Contracts. In any case before the Michigan Civil Rights Commission in which cancellation of an existing Contract is a possibility, the State shall be notified of such possible remedy and shall be given the option by the Michigan Civil Rights Commission to participate in such proceedings.
- g) The Professional shall also comply with the nondiscrimination provisions of 1976 PA 220, as amended, concerning the civil rights of persons with physical or mental disabilities.
- h) The Professional will include, or incorporate by reference, the nondiscrimination provisions of the foregoing paragraphs a) through g) in every subcontract or Contract Order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission, and will provide in every subcontract or Contract Order that said nondiscrimination provisions will be binding upon each of the Professional firm's Consultant's or seller.

ARTICLE 12 CONTRACT CLAIMS AND DISPUTES

In any claim or dispute by the Professional which cannot be resolved by negotiation, the Professional shall submit the claim or dispute for an administrative decision by the Department of Management and Budget, Director of Facilities Administration within thirty (30) consecutive calendar days of the end of the disputed negotiations, and any decision of the Director of Facilities Administration may be appealed to the Michigan Court of Claims within one (1) year of the issuance of the Director's decision. The Professional agrees that the Department's appeal procedure to the Director of Facilities Administration is a prerequisite to filing a suit in the Michigan Court of Claims.

ARTICLE 13 AS-BUILT DRAWINGS

Within ninety (90) consecutive calendar days after building or Project occupancy, the Professional shall obtain, incorporate, and render the Construction Contractor's as-built marked-up environmental engineering/remedial design drawings and specifications from the Construction Contractor depicting all construction Contract Modifications, additions, and deletions in connection with the Project scope of work for this Contract. These marked-up environmental engineering/remedial design drawings shall be transformed by the Professional into the following two (2) types of Contract deliverable as-built documents for the Department: (1) one set of legible/reproducible mylars completely updated, as-built original tracings of the final design Contract Documents/environmental engineering/remedial design drawings; and (2) Two (2) sets of completely updated as-built, close-out documents of the Project final design Contract Documents/environmental engineering/remedial design drawings on compact disks (CD's) and conforms to the American Institute of Architects (AIA) National CAD Standard format. The as-built and record environmental engineering/remedial design drawings shall be provided to the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Project Director and the Department of Natural Resources and Environment, Remediation and Redevelopment Division's, State Project Manager, as per the Article 2, Phase 600 – Construction Remediation/Administration – Laboratory Services, As-Built Documents, (Task 611) text.

The Professional shall provide the Department with the original final design Contract Documents/environmental engineering/remedial as-built/mylar drawings, specifications, and electronic data file record depicting all construction modifications, additions and deletions in connection with the Project for final record at the completion of their contracted work. The original final design Contract Documents/environmental engineering/remedial as-built drawings, specifications, computer software, and electronic data file record developed by the Professional for the Project scope of work services will be returned to the Professional upon their written request.

ARTICLE 14 COMPLETE AGREEMENT: MODIFICATION

This Professional Services Contract constitutes the entire agreement as to the Project between the parties. Any Contract Modification of this Contract and the **Department's approved and** attached Appendix 1 – Project/Program Statement scope of work requirements must be in writing, signed by duly authorized representatives of the parties, and shall be in such format and detail as the State may require. No Contract Modification may be entered into to compensate the Professional for correcting, or for responding to claims or litigation for the Professional firm's final design Contract Documents/environmental engineering/remedial study/design errors, omissions or neglect on the part of the Professional.

IN WITNESS, WHEREOF, each of the parties has caused this Professional Services **Contract to be executed in blue pen and ink** by its duly authorized representatives on the dates shown beside their respective signatures, with the Contract to be effective upon the date on which the Professional receives a copy executed by the authorized State representative(s) by regular, registered or certified mail or by delivery in person.

FOR THE PROFESSIONAL:

Signature

Date

Title

Federal Identification (I.D.) Number

FOR THE STATE OF MICHIGAN:

Director, Department of Management and Budget

Date

APPENDIX 1

PROJECT/PROGRAM STATEMENT(S)

APPENDIX 2

PROJECT ORGANIZATIONAL CHART

APPENDIX 3

PROJECT STUDY, DESIGN AND PROPOSED CONSTRUCTION SCHEDULE

APPENDIX 4

PROJECT HOURLY BILLING RATE \$ COMPENSATION

APPENDIX 5

AUTHORIZED REIMBURSABLE TESTS AND \$ EXPENSES

The professional services listed below are authorized by the Department of Management and Budget, Facilities Administration, Design and Construction Division for direct cost reimbursements times a 1.0 multiplier.

5.1 SUMMARY OF AUTHORIZED REIMBURSABLE EXPENSE ITEMS

(Complete for each firm)

Professional/Consultant Firm:
City, State

Multiplier: 1.0

<u>Project Phase No.</u>	<u>Description of Professional Services Provided</u>	<u>Total \$ Amount</u>
100*	Printing and Reproduction of Study Phase, Final Report Documents, Drawings and Specifications**	\$ _____
200*	Printing and Reproduction of Program Analysis Phase, Final Report Documents, Drawings and Specifications**	\$ _____
300*	Printing and Reproduction of Schematic Design Phase, Final Report Documents, Drawings and Specifications**	\$ _____
400*	Printing and Reproduction of Preliminary Design Phase, Final Report Documents, Drawings and Specifications**	\$ _____
500*	Design Code Compliance and Plan Review Approval Fees by the Department of State Police, Fire Marshal Division and the Department of Energy , Labor and Economic Growth, Bureau of Construction Codes and Fire Safety	\$ _____
500*	Printing and Reproduction of Final Design Phase, Contract Bidding Documents, Drawings and Specifications**	\$ _____
600*	Printing and Reproduction of Construction/ Remediation Administration-Laboratory Services Phase, Final Report Documents	\$ _____
700*	Printing and Reproduction of Environmental Response/ Remedial Action-Field Services Phase, Final Report Documents	\$ _____
	Total of Authorized Reimbursable Expense Items	\$ _____

*See the Article 2 – Compensation Format for the Authorized Reimbursable Expense Items of this Contract.

**Specifications will be prepared for Divisions 00 through 49, in the 2004 MasterFormat Outline by the Construction Specifications Institute (C.S.I.), as appropriate for the defined Project scope of work requirements.

APPENDIX 6

**THE PROFESSIONAL FIRM'S MICHSPEC (LONG FORM) DOCUMENTS
ASSISTANCE PROCEDURES FOR THE CONSTRUCTION CONTRACTOR
DURING THE PROJECT CONSTRUCTION BIDDING, BID EVALUATION,
AND RECOMMENDATION OF THE CONSTRUCTION CONTRACT AWARD**

**THE PROFESSIONAL FIRM'S MICHSPEC (LONG FORM) DOCUMENTS
ASSISTANCE PROCEDURES FOR THE CONSTRUCTION CONTRACTOR DURING
THE PROJECT CONSTRUCTION BIDDING, BID EVALUATION, AND
RECOMMENDATION OF THE CONSTRUCTION CONTRACT AWARD**

- A. Whenever the Professional firm is required to use the Department of Management and Budget, Facilities Administration, Design and Construction Division's, "MICHSPEC 2001 Edition of the Owner and Contractor Standard Construction Contract and General Conditions for Construction (Long Form)" standard form documents as adopted and modified by the State of Michigan and incorporated into the Construction Contract, plus such other Department general conditions as may be part of the Construction Contract. The following assistance procedures shall be followed by the Professional firm during the Project construction bidding, Bid evaluation, and recommendation of the Construction Contract award:

If MICHSPEC (Long Form) Contract Documents are used for this Project, all applicable Section 00500, Contract Agreement and related attachment documents shall be filled-out in triplicate (date field left blank) and executed in blue pen and ink by the Professional firm's recommended Construction Contractor.

CONSTRUCTION BIDDING AND CONTRACTING PROCEDURES: Assist the Department in the construction bidding and contracting process. Advertisement and award of this Construction Contract will be by the State of Michigan. Provide the Department with a list of recommended qualified construction Bidders' appropriate to the Project scope of work requirements. Recommend the appropriate environmental construction bidding and/or contracting method to the Department. Prepare and distribute Bidding Documents and instructions as required to accommodate predetermined environmental construction Bid packages and/or Phases. Maintain a qualified construction Bidders' list. Conduct prebid meetings. Issue a preconstruction Addenda to all qualified construction Bidders as required. Include in each Addendum complete specifications for the Project scope of work requirements, if such specifications are not part of the final design Bidding Documents. Exert every practical means to obtain several, qualified construction Bidders for every Construction Contract. The Professional will be compensated by the Department with a Contract Change Order for providing the professional services necessary to rebid the Project for reason of defaulted or disqualified construction Bidder(s) or unacceptable price range as required by the design and construction Budget text of Task 513. The Professional firm's construction bidding and contracting procedures services for Task 516 are not complete until: (1) The lowest responsive, responsible qualified construction Bidder's Bid has been selected and accepted by the Department; and (2) The lowest responsive, responsible qualified construction Bidder's Construction Contract has been executed.

Collect and Manage Construction Contract Bid Security Deposits: Administer receipt and return of Construction Contract Bid Security deposits. Within fifteen (15) business days of the award of the Construction Contract submit, to the Department, a full accounting of all associated Bid Security deposits and turn over, to the Department, all defaulted Bid Security deposits. All Bid Security deposit checks will be payable to the "State of Michigan." Any returned or undistributed Bidding Documents shall be distributed as the Department may direct.

Construction Bid Evaluation and Recommendation of Construction Contract Awards: Review and evaluate the Department's submitted competitive construction Bids for the Project. Based on the Professional firm's review of the competitive construction Bids and the qualified construction Bidders, provide the Department with a written recommendation for the apparent lowest responsive, responsible qualified construction Bidder for the Project Construction Contract award(s) within five (5) business days of the date of the Department's construction Bid opening. Exempt from recommendation any firm that in the Professional firm's opinion is unqualified for the Project (documentation required) or that the Professional has a business association with on this Project, and any firm, that the Professional has used in preparation of the **Phase 500 - Final Design** Contract Documents/environmental engineering/remedial drawings and specifications or for any estimating work related to the Project scope of work requirements. The Professional shall conduct precontract meetings with responsive, responsible qualified construction Bidder(s) to review the following items: (1) The design intent of the Professional firm's **Phase 500 - Final Design** Contract

Documents/environmental engineering/remedial drawings and specifications; and (2) To advise and assist the Construction Contractor(s) in understanding the requirements of the Department of Management and Budget, Facilities Administration, Design and Construction Division's standard form of Construction Contract Documents, Project scope of work, and its Construction Contract award procedures.

The Department will send the Notice of Intent to Award letter to the recommended Construction Contractor awarded the Construction Contract. The Notice of Intent to Award will designate the Contract price and itemize the alternates that the Department, at its sole discretion has accepted. Unless otherwise designated in the Department's, Notice of Intent to Award letter to the recommended Construction Contractor, within fifteen (15) calendar days from the date that the Notice of Intent to Award letter was mailed to the Construction Contractor, the Construction Contractor recommended for the award of the Construction Contract shall (a) Fill out and execute in blue pen and ink, the Department of Management and Budget, Facilities Administration, Design and Construction Division's, MICHSPEC 2001 Edition of the Owner and Contractor Standard Construction Contract and General Conditions for Construction (Long Form)" standard document forms Section 00500, Contract Agreement and the Section 00800, Supplementary Conditions, in triplicate; (b) Execute Section 00610, Performance Bond, and the Section 00620, Payment Bond (and attach to each bond a separate, certified copy of Power of Attorney); and (c) Return to the Department, the Construction Contractor's executed Section 00500, Contract Agreement, Section 00610, Performance Bond, and Section 00620, Payment Bond forms, evidence of original Certificate of Insurance and any other legal documents required for submittal by the Department's, Notice of Intent to Award letter.

Immediately upon the notice of intent of the Department of Management and Budget, Facilities Administration, Design and Construction Division's, Notice of Intent to Award letter to the Construction Contractor recommended in writing by the Professional firm to be the lowest responsive, responsible qualified Construction Contractor Bidder of the Construction Contract. The Professional firm shall fill-out where applicable for the Project scope of work and submit to the Professional firm's recommended apparent lowest responsive, responsible qualified Construction Contractor Bidder, three (3) sets of original, unsigned, MICHSPEC 2001 Edition, Section 00500, Contract Agreement (Long Form) documents for their review and signature in blue pen and ink for the Project Construction Contract.

The Professional firm's recommended apparent lowest responsive, responsible qualified Construction Contractor Contract Documents to be submitted for the Construction Phase scope of work of this Project shall contain the following Department of Management and Budget, Facilities Administration, Design and Construction Division's, MICHSPEC 2001 Edition, Construction Contract Agreement (Long Form) standard form documents and outline the Project scope of work procedures to be followed by the Professional firm's recommended Construction Contractor for their review and signature execution in blue pen and ink of the following Department of Management and Budget, Facilities Administration, Design and Construction Division's, MICHSPEC 2001 Edition, Section 00500, Contract Agreement documents:

- 1.) Section 00300, Bid Summary and Bid Form and Section 00310 and Section 00320, Bid Form Attachments;
- 2.) Section 00400, Qualified Submittals;
- 3.) Section 00500, Contract Agreement. (Note: The Professional shall fill-out the following Project scope of work articles of this MICHSPEC (Long Form) document and the Professional firm's recommended apparent lowest responsive, responsible qualified Construction Contractor Bidder shall fill-out and execute in blue pen and ink the remaining portions of this Contract Document:
 - a. Preface to Article 1 text
 - b. Article 1, The Contract; The Project; and The Work
 - c. Article 2, Contract Documents
 - d. Article 3, Contract Price
 - e. Article 4, Contract Time; Liquidated Damages
 - f. Article 6, The Professional Services Contractor

- 4.) Section 00520, Attachment "A" to Contract Agreement;
- 5.) Section 00610, Performance Bond;
- 6.) Section 00620, Payment Bond;
- 7.) Section 01301, Progress Schedule;
- 8.) Section 00800, Supplementary Conditions. (Note: The Professional firm shall fill-out this form where applicable for the Project scope of work);
- 9.) Original Certificates of Insurance;
- 10.) Certificate of Awardability, a legal form that is required for the Construction Contractor by the State of Michigan's, Department of Civil Rights for any Project Contract work that is valued at one-hundred thousand dollars (\$100,000) or more.

Each Construction Contractor's total Base Bid that is valued at one-hundred thousand dollars (\$100,000) or more shall enclose a copy of the Bidder's valid Certificate of Awardability issued by the State of Michigan's, Department of Civil Rights (concerning compliance with the State of Michigan's nondiscrimination requirements). FAILURE BY A CONSTRUCTION BIDDER TO ENCLOSE, WITH THE CONSTRUCTION BIDDER'S BASE BID, A COPY OF THE CONSTRUCTION BIDDER'S VALID CERTIFICATE OF AWARDABILITY SHALL JUSTIFY DISQUALIFICATION OF THAT CONSTRUCTION BIDDER, UNLESS A VALID CERTIFICATE OF AWARDABILITY EXISTED ON OR BEFORE THE CLOSING TIME FOR RECEIPT OF CONSTRUCTION BIDS, THE FAILURE TO ENCLOSE SUCH VALID CERTIFICATE OF AWARDABILITY WAS INADVERTENT AND THE CONSTRUCTION BIDDER SUBMITS A COPY OF ITS BIDDER'S CERTIFICATE OF AWARDABILITY WITHIN TWENTY-FOUR (24) HOURS AFTER NOTIFICATION BY THE DEPARTMENT THAT A COPY OF THE VALID CERTIFICATE OF AWARDABILITY WAS NOT SUBMITTED. The time required by the Department of Civil Rights to process Certificate of Awardability applications varies, with their workload, which changes from time to time. The construction Bidder is responsible for securing all pertinent information from the Department of Civil Rights prior to submitting their construction Bid and for keeping their Certificate of Awardability up-to-date. Firms will not be notified when their certificates are going to expire. All correspondence communications for the Certificate of Awardability shall be directed to:

State of Michigan
Department of Civil Rights
Contract Compliance Team
Cadillac Place State Office Building (former General Motors Building)
3054 West Grand Boulevard
Suite 3-600
Detroit, Michigan 48202
Telephone Number: (313) 456-3822 or 456-3823
Fax Number: (313) 456-3826

- B. ALSO, BE ADVISED: Before the Department of Management and Budget, Facilities Administration, Design and Construction Division can formally execute the Construction Contractor's Contract, the Construction Contractor must also provide, within fifteen (15) calendar days from the date that the Department's, Notice of Intent to Award letter was mailed to the Construction Contractor for the subject Project work, the following Construction Contract Documents:

- 1.) A certified copy of a resolution of corporate authority adopted by the Construction Contractor's Board of Directors or a certified copy of the articles of the Construction Contractor's By-Laws authorizing signature authority of the Construction Contract on behalf of the corporation. If a partnership, it is necessary to submit a copy of the Power-of-Attorney which authorizes signature authority on behalf of the partnership. A Power-of-Attorney is not required if each of the partners sign the Construction Contract individually.
- 2.) Original Certificate of Insurance documents covering Public Liability, Property Damage, and Worker's Compensation. NOTE: ALL ORIGINAL CERTIFICATE OF INSURANCE DOCUMENTS MUST SPECIFY THE SUBJECT PROJECT IDENTIFICATION AND LIST THE STATE OF MICHIGAN AS AN ADDITIONAL INSURED. THE INSURANCE COMPANY MUST HAVE AN INSURANCE RATING OF A- OR BETTER AS LISTED BY THE A.M. BEST COMPANY. To view the latest A.M. Best's Key Ratings Guide visit the A.M. Best Company internet web site at <http://www.ambest.com>.
- 3.) Original Performance, Labor, and Material Bonds must be made in favor of the State of Michigan and bear the Department's award date of the Construction Contract. NOTE: SURETY BONDS WILL NOT BE ACCEPTED BY THE STATE OF MICHIGAN UNLESS THE BONDING COMPANY IS LISTED IN THE CURRENT UNITED STATES GOVERNMENT, DEPARTMENT OF TREASURY'S, LIST OF APPROVED SURETIES (BONDING/INSURANCE COMPANIES), DEPARTMENT CIRCULAR NO. 570. Copies of the current Circular No. 570 Listing of approved surety bonding/insurance companies and interim changes may be obtained through the internet web site at <http://www.fms.treas.gov/c570/c570.html>.

FAXES OF THE REQUIRED CONSTRUCTION CONTRACT DOCUMENTS LISTED IN THE ABOVE SECTION (B) NO. 2 AND 3 WILL NOT BE ACCEPTED, ONLY THE ORIGINAL DOCUMENTS ARE ACCEPTABLE. IF YOU HAVE ANY QUESTIONS, PLEASE CALL MS. LINDA FELDPAUSCH AT THE DEPARTMENT OF MANAGEMENT AND BUDGET, FACILITIES ADMINISTRATION, DESIGN AND CONSTRUCTION DIVISION AT (517) 241-0122 FOR ASSISTANCE.

NOTE, BE ADVISED: THAT THE CONSTRUCTION CONTRACTOR IS NOT TO PROCEED WITH ANY CONSTRUCTION WORK OR PERFORM ANY ON-SITE ACTIVITIES UNTIL THE PROJECT CONSTRUCTION CONTRACT HAS BEEN EXECUTED BY BOTH PARTIES. AT THAT TIME, A PRECONSTRUCTION MEETING WILL BE ARRANGED.

The Construction Contractor shall mail and/or return all of the above Construction Contract Documents for the Construction Contract to the following address:

MAILING ADDRESS
 Department of Management and Budget
 Facilities Administration
 Design and Construction Division
 P.O. Box 30026
 Lansing, Michigan 48909
 Attention: Ms. Linda Feldpausch
 Telephone No. (517) 241-0122

EXPRESS MAIL ADDRESS
 Department of Management and Budget
 Facilities Administration
 Design and Construction Division
 First Floor, Stevens T. Mason State Office Building
 530 West Allegan Street
 Lansing, Michigan 48933
 Attention: Ms. Linda Feldpausch
 Telephone No. (517) 241-0122

NOTE: NEW CONSTRUCTION PROJECT PARTIALLY CLOSES STREETS AND AFFECTS PARKING SPACES: Capitol Loop – Downtown Lansing. Due to the new construction work, parking is at a premium in the area of the Stevens T. Mason State Office Building. Also, security measures and the new construction work may affect the delivery time of mail and packages sent via United Parcel Service (UPS), Federal Express (Fed. Ex.), and Airborne Express. If hand-delivering your Construction Contract Documents, please allow ample time to locate parking and be prepared to sign-in and present requested pictured identification to the security officer on-duty in the lobby of the

Stevens T. Mason State Office Building in order for your Construction Contract Documents to arrive at the Department of Management and Budget, Facilities Administration, Design and Construction Division. It remains the responsibility of the Construction Contractor firm to submit their Construction Contract Documents as specified on time.

APPENDIX 7

CERTIFICATE OF AWARDABILITY

APPENDIX 8

**OVERHEAD ITEMS ALLOWED FOR THE
PROFESSIONAL SERVICES CONTRACTOR FIRM'S
HOURLY BILLING RATE CALCULATION**

The following instructions are to be used by the Professional Services Contractor firm's to determine the hourly billing rate to use on State of Michigan Projects.

The Professional firm's Consultant must submit a separate hourly billing rate for the professional Consultant services they will provide for State of Michigan Projects. No mark-up of the Professional firm's Consultant services hourly billing rates will be allowed.

The Department of Management and Budget, Facilities Administration, Design and Construction Division will reimburse the Professional firm for the actual cost of printing and reproduction of the final design Contract Bidding Documents, soil borings, surveys and any required laboratory testing services. No mark-up of these Project costs will be allowed.

2010 HOURLY BILLING RATE

Based on 2009 Expenses

OVERHEAD ITEMS ALLOWED FOR THE PROFESSIONAL SERVICES CONTRACTOR FIRM'S HOURLY BILLING RATE CALCULATION

<u>SALARIES:</u>	<u>EQUIPMENT RENTALS:</u>	<u>EMPLOYEE BENEFITS:</u>
Principals (Not Project Related)	Computers	Hospitalization
Clerical/Secretarial	Typewriter	Employer's F.I.C.A. Tax
Technical (Not Project Related)	Bookkeeping	Unemployment Insurance
Temporary Help	Dictating	Federal Unemployment Tax
Technical Training	Printing	Disability
Recruiting Expenses	Furniture and Fixtures	Worker's Compensation
	Instruments	Vacation
		Holidays
		Sick Pay
<u>OFFICE FACILITIES:</u>	<u>TRAVEL:</u>	Medical Payments
Rents and Related Expenses	All Project-Related Travel*	Pension Funds
Utilities		Insurance - Life
Cleaning and Repair	<u>MISCELLANEOUS:</u>	Retirement Plans
	Professional Organization Dues	
<u>SUPPLIES:</u>	for Principals and Employees	<u>PRINTING AND DUPLICATION:</u>
Postage	Licensing Fees	Specifications (other than Contract Bidding Documents)
Drafting Room Supplies		Drawings (other than Contract Bidding Documents)
General Office Supplies	<u>SERVICES (NONPROFESSIONAL):</u>	Xerox/Reproduction
Library	Telephone and Telegram	Photographs
Maps and Charts	Messenger Services	
Magazine Subscriptions		<u>LOSSES:</u>
<u>SERVICES (PROFESSIONAL):</u>	<u>TAXES:</u>	Bad Debts (net)
Accounting	Franchise Taxes	Uncollectible Fee
Legal	Occupancy Tax	Thefts (not covered by Project/Contract bond)
Employment Fees	Unincorporated Business Tax	Forgeries (not covered by Project/Contract bond)
Computer Services	Property Tax	
Research	Single Business Tax	
	Income Tax	
<u>FINANCIAL:</u>	<u>INSURANCE:</u>	
Depreciation	Professional Liability Insurance	
	Flight and Commercial Vehicle	
	Valuable Papers	
	Office Liability	
	Office Theft	
	Premises Insurance	
	Key-Personnel Insurance	

HOURLY BILLING RATE DOES NOT INCLUDE AND THE DEPARTMENT OF MANAGEMENT AND BUDGET, FACILITIES ADMINISTRATION, DESIGN AND CONSTRUCTION DIVISION WILL PAY THE PROFESSIONAL FIRM FOR (UNDER REIMBURSABLE COSTS):

1. Printing and reproduction of Phase 100 Survey and/or Study Final Reports.
2. Printing and reproduction of Phase 500 Final Design Contract Bidding Documents/Drawings, and Specifications.
3. Design Code Compliance and Plan Review Approval Fees of the Phase 500 - Final Design Documents by the Department of State Police, Fire Marshal Division and the Department of **Energy**, Labor and Economic Growth, Bureau of Construction Codes and Fire Safety.
- 4.* Travel mileage costs for State of Michigan Projects **more than** one-hundred (100) miles in each direction from the Professional firm's Michigan office if the Professional firm can demonstrate a cost savings to the State, if reimbursed for travel mileage in accordance with the current travel rates provided in the State of Michigan's "Schedule of Travel and Meal Reimbursement Rates" versus an adjustment to the Professional firm's **calculated** hourly billing rates.

APPENDIX 9

GUIDELINES FOR QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) PLAN

INDEX

1. Guidelines for Project Quality
Control/Quality Assurance (QC/QA) Plan. Appendix 9A
2. Guidelines for Preparation of the Project
Quality Control/Quality Assurance (QC/QA) Plan Appendix 9B
3. Base Project Plan for Quality
Control/Quality Assurance (QC/QA).. Appendix 9C
4. Amendments to Project Quality
Control/Quality Assurance (QC/QA) Plan. Appendix 9D

APPENDIX 9A

GUIDELINES FOR QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) PLAN

The Guidelines for Quality Control/Quality Assurance (QC/QA) Plan is prepared to prescribe criteria and procedures for efficient, cost effective, and reliable, acquisition, and accurate analysis, of data from a specific contaminated site, and to govern the implementation of that process. The Quality Control/Quality Assurance (QC/QA) Plan describes, in specific detail the following items:

1. Policy
2. Organization
3. Functional Activities (sample collection, chemical analysis, description of the laboratory, field methodologies, etc.)
4. Quality Control and Quality Assurance (QC/QA) Procedures necessary to achieve intended Project data quality goals.

This Quality Control/Quality Assurance (QC/QA) Plan must be prepared by the Professional, and accepted by the governing enforcing agency before any sampling, data analysis, or monitoring may begin at any site, or combination of sites which comprise a Project.

APPENDIX 9B

GUIDELINES FOR PREPARATION OF THE PROJECT QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) PLAN

This guideline specifies sixteen (16) elements that must be addressed in a Quality Control/Quality Assurance (QC/QA) Plan. The Project description, Project organization and responsibility and the Quality Control/Quality Assurance (QC/QA) Plan objective should be written first. Other elements are self explanatory and must be consistent with the Project description and especially the intended use of the data.

1. Title Page

At the bottom of the title page, provisions must be made for the approval signatures. As a minimum, the Quality Control/Quality Assurance (QC/QA) Plan must be approved by the Department of Natural Resources and Environment, Remediation and Redevelopment Division and in the case of a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site also, by the federal governing enforcing agency having governing jurisdiction at the Project site.

- A. Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager
- B. Department of Natural Resources and Environment, Remediation and Redevelopment Division Quality Control/Quality Assurance Officer
- C. Construction Contractor's Project Officer
- D. Construction Contractor's Quality Control/Quality Assurance Officer

2. Table of Contents

The Table of Contents will address each of the following items:

- A. Introduction
- B. A serial listing of each of the sixteen (16) quality assurance Project plan components.
- C. A listing of any appendices included to augment the Quality Control/Quality Assurance (QC/QA) Plan as presented (i.e., standard operating procedures, etc.).

3. Project Description

Provide a general description of the Project. This description may be brief but must have sufficient detail to allow those individuals responsible for review and approval of the Quality Control/Quality Assurance Plan (QC/QA) to perform their Task. Where appropriate, include the following:

- A. A brief summary of background information from previous studies.
- B. Dates anticipated for start and completion.
- C. Intended end use of acquired data, such as future enforcement actions, remedial action alternatives, determination of hazardous waste characteristics, protection of public health, definition of the extent of environmental contamination or future regulatory action.
- D. A description of the monitoring network design and rationale.
- E. A discussion of the sample matrices and parameters to be measured and their frequency of collection, if appropriate. Parameters should include field measurements, hydrogeological measurements and laboratory parameters. Sample parameters and matrices are best listed in two (2) groups which may require different sampling, analytical and quality control procedures.

- F. Wastes including on-site sludges, barrels, liquids and contaminated soils, which are often analyzed to determine waste disposal alternatives.
- G. Ambient monitoring of air, ground water, soils, surface water, river sediments, fish, etc. These types of determinations usually are intended to measure the extent of environmental contamination and to assess public health risks. Specifications for filtered or unfiltered sample aliquots of ground water should be included.

Selection of analytical methods require familiarity with any regulatory requirements of intended data usage(s). For example, disposal of wastes during remedial removals will require testing of materials pursuant to the Resource Construction and Recovery Act (RCRA). In this case, the Resource Construction and Recovery Act (RCRA) codified regulations may dictate choices of analytical methods. Discharge of treated ground water to surface waters may require an National Pollutant Discharge Elimination System (NPDES) permit, monitoring requirements and use of Clean Water Act Methods. Similarly operation of an air stripper may require use of Clean Water Act Methods.

4. Project Organization and Responsibility

Include a table or chart showing the Project organization and line authority. List the key individuals, including the Quality Assurance Officer, who are responsible for ensuring the collection of valid measurement data and the routine assessment of measurement systems for precision and accuracy.

All laboratories including the State's contracted laboratory, the Professional firm's own, and all subcontracted laboratories must be identified. If a subcontractor laboratory has an existing Contract Laboratory Program (CLP) Contract and these same Contract Laboratory Program (CLP) protocols will be used, this arrangement should be described. If the Contract Laboratory Program (CLP) procedures are to be used then this element should identify final data review of routine Contract Laboratory Program (CLP) services.

5. Quality Control/Quality Assurance (QC/QA) Plan Objectives for Measurement Date in Terms of Provision, Accuracy, Detection Limits

For each martrix (or martrix groups) and parameter, objectives should be established for:

- A. Accuracy (sample spikes, surrogate spikes, reference sampled, etc.).
- B. Precision (replicate sample analyses, etc.).
- C. Sensitivity or Method Detection Limits.

These should be established on Project needs, if possible, but must be discussed with support laboratories so they are realistic. Quantitative limits should be established for these objectives.

For example, mean spike recoveries for volatile halogenated organic compounds in water using purge and trap gas chromatography techniques, should be 90-100 percent (%), and range between 80 and 120 percent (%) recovery. Reference sample results should be accurate within 20 percent (%) of true values. Precision objectives should be that duplicate sample aliquot values do not differ more than 10 percent (%) at the 95 percent (%) confidence level when concentrations are measured significantly larger than the method detection limit. Except for methylene chloride, method detection limits objectives can realistically be established at 0.2 ug/1 for this gas chromatography technique.

Screening of hazardous waste site liquids may well only require 50 to 150 percent (%) recoveries of spike surrogate compounds during the Gas Chromatograph/Mass Spectroscopy (GC/MS) determinations and method detection limits of 0 ug/1 for volatile halogenated organic compounds.

Quality Assurance objectives must be consistent with the capabilities of the analytical methods identified in element number 9 below. Sound objectives require careful thought and the talents of analysts and the people who are going to use the resulting data. These need to be established in advance of monitoring.

6. Sampling Procedures

For each major parameter(s), provide a description of the sampling procedures to be used. Where applicable, include the following:

- A. Description of techniques used to select sampling sites.
- B. Inclusion of specific sampling procedures to be used.
- C. A description of containers, procedures, reagents, etc., used for sample collection, preservation, transport, and storage.
- D. Special procedures for the preparation of sampling equipment and containers to avoid or measure sample contamination.
- E. Sample preservation methods and holding times.
- F. Time considerations for shipping samples promptly to the laboratory.
- G. Forms, notebooks, and procedures to be used to record sample history, sampling and conditions and analyses to be performed.

7. Sample Custody

Sample custody is a part of any good laboratory or field operation. Where samples may be needed for legal purposes, "chain-of-custody" control procedures must be used. However, as a minimum, the following sample custody procedures will be addressed in the Quality Control/Quality Assurance (QC/QA) Plan:

- A. Procedures and forms for recording the exact location associated with sample acquisition.
- B. Standardized field tracking reporting system to establish sample custody in the field prior to shipment.
- C. Identification of responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming, field samples, and verify the data entered onto the sample custody records.
- D. Provision for a laboratory sample custody log consisting of serially numbered standard laboratory tracking report sheets.
- E. Specifications of laboratory sample custody procedures for sample handling, storage and disbursement for analysis.
- F. Custody procedures for final evidence files. Final evidence files include all originals of laboratory reports and are maintained in a secure area.

This element should provide examples of chain-of-custody control records or forms used to record chain-of-custody control for samplers, laboratories and evidence files.

8. Calibration Procedures and Frequency

Calibration procedures are usually a part of specific analytical methodology. This element can be combined with element number 9, analytical procedures.

9. Analytical Procedures

For each measurement parameter, reference the applicable standard analytical procedure(s) or provide a written description of the analytical procedure(s) to be used. Provide performance information for each analytical procedure in terms of accuracy, precision and detection limits. Method performance information should meet or exceed the Quality Assurance objectives identified in element number 5. For the sake of convenience, all or part of elements number 8, 9, 10, 11, and 13 may be incorporated into this element.

The choice of when to reference a manual's test procedure and when to document a complete Standard Operating Procedure (SOP) can only be made on a case-by-case basis. It has been observed that few laboratories, external to the Contract Laboratory Program (CLP), follow exactly, all important details of a standard reference method. Other times standard reference methods provide or allow options (example - the use of different gas chromatography columns for polychlorinated biphenyl (PCB) determinations).

Reference to analytical methods in the United States Environmental Protection Agency (EPA) Publications, the American Society for Testing and Materials (ASTM) or "Standard Methods" can be appropriate; however, required sample preparation procedures (filtration, digestion, etc.) also need to be referenced. For example, the United States Environmental Protection Agency's "Methods for Chemical Analysis of Water and Wastes" provides three (3) different test procedures for most metal determinations and at least four (4) sample preparation protocols for each metal. Each combination of metal determination and sample preparation exhibits different degrees of accuracy, precision, and sensitivity of measurement. Different quality control audits are used for each combination of metal determination and sample preparation. The exact combination used for each metal must be specified.

10. Data Reduction, Validation and Reporting

For each major parameter, briefly describe:

- A. The data reduction scheme planned on collected data, including all equations used to calculate the concentration or value of the measured parameter and reporting units.
- B. The principal criteria that will be used to validate data integrity during collection and reporting of data.
- C. The methods used to identify and treat outliers.

11. Internal Quality Control Checks

The specific quality control procedures actually being followed for each test or determination should be specified i.e., sample spikes, surrogate spikes, independently prepared reference samples or controls, blanks, etc. The frequency of these audits should be specified. The compounds used for surrogate and sample spikes should be specified where appropriate - arsenic, mercury, priority pollutant organic compounds, etc. The acceptance limits or control chart limits for these audits should be in place so that analyses can be validated prior to reporting of data.

12. Performance and System Audits

This Quality Control/Quality Assurance (QC/QA) Plan must describe the performance audits which will be required to monitor the capability and performance of the total measurement system(s). The Quality Control/Quality Assurance (QC/QA) Plan should include a schedule for conducting performance audits for each parameter, including a performance audit for all measurement systems. Project plans should also indicate, where applicable, scheduled participation in inter-laboratory performance evaluation studies.

The Environmental Protection Agency performance evaluation samples, National Bureau of Standards reference samples or samples from inter laboratory studies may be used for this purpose.

13. Preventive Maintenance

The following preventive maintenance items should be considered and addressed in the Quality Control/Quality Assurance (QC/QA) Plan:

- A. A schedule of important preventive maintenance tasks that must be carried out to minimize downtime of the measurement systems.
- B. A list of any critical spare parts that should be on hand to minimize downtime.

14. Specific Routine Procedures Used to Assess Data Precision and Accuracy

For each major parameter, the Quality Control/Quality Assurance (QC/QA) Plan must describe the routine procedures used to assess the precision, and accuracy. These procedures should include the equations to calculate precision and accuracy, and the methods used to gather data for the precision and accuracy calculations.

15. Corrective Action

Corrective action procedures must include the following elements:

- A. The predetermined limits for data acceptability beyond which corrective action is required.
- B. Procedures for corrective action.

16. Quality Assurance Reports to Management

The Quality Control/Quality Assurance (QC/QA) Plan should provide a mechanism for periodic reporting to the Department of Natural Resources and Environment, Remediation and Redevelopment Division, State Project Manager on the performance of measurement systems and data quality. These reports should include:

- A. Periodic assessment of measurements data accuracy and precision.
- B. Results of performance audits.
- C. Results of system audits.
- D. Significant Quality Assurance problems and recommended solutions.

APPENDIX 9C

**BASE PROJECT PLAN
FOR QUALITY CONTROL/QUALITY ASSURANCE**

APPENDIX 9D

AMENDMENTS TO QUALITY CONTROL/QUALITY ASSURANCE PLAN

APPENDIX 10
PROJECT SITE HEALTH AND SAFETY PLAN

INDEX

1. Base Project Health and Safety
Plan Appendix 10A
2. Amendments to Project Health
and Safety Plan.Appendix 10B

APPENDIX 10A

BASE PROJECT HEALTH AND SAFETY PLAN

APPENDIX 10B

AMENDMENTS TO PROJECT HEALTH AND SAFETY PLAN

APPENDIX 11

STANDARD REFERENCE OF ACRONYMS

Acronyms

AE.....	Authorized Expeditor	FA.....	Facilities Administration
AHERA.....	Asbestos Hazard Emergency Response Act	O&M.....	Operation and Maintenance/Manual
AIA.....	American Institute of Architects	OSHA.....	Occupational Safety and Health Administration
AOC.....	Administrative Order of Consent	PA.....	Public Act
ARA.....	Acute Risk Abatement	PAHS.....	Polynuclear Aromatic Hydrocarbons
ARAR.....	Applicable or Appropriate, Relevant and to be Considered Requirement	PCB.....	Polychlorinated Biphenyls
AST.....	Aboveground Storage Tank	PE.....	Licensed Professional Engineer
ASTM.....	American Society for Testing and Materials	PPE.....	Personal Protective Equipment
BOA.....	Basic Ordering Agreement	PM.....	Project Management
BTEX.....	Benzene, Toluene, Ethylbenzene, Xylene	PRP.....	Potentially Responsible Parties
CA.....	Corrective Action	PSC.....	Professional Services Contractor
CAD.....	Computer-Aided Design	QAPP.....	Quality Assurance Project Plan
CAP.....	Corrective Action Plan	QA/TC.....	Quality Assurance/Technical Consultant
CD.....	Compact Disc	QC.....	Qualified Consultant
CERCLA.....	Comprehensive Environmental Response, Compensation, and Liability Act of 1980	QC/QA.....	Quality Control/Quality Assurance
CM.....	Construction Management	RA.....	Remedial Actions
CMS.....	Corrective Measures Study	RAP.....	Remedial Action Plan
CPA.....	Certified Public Accountant	RBCA.....	Risk-Based Corrective Action
CPFF.....	Cost Plus Fixed Fee	RBSLs.....	Risk Based Screening Levels
CPG.....	Certified Professional Geologist	RC.....	Remedial Construction
CPM.....	Critical Path Method	RCRA.....	Resource Conservation and Recovery Act
CS.....	Contract Specialist	RD.....	Remedial Design
CSI.....	Construction Specifications Institute	RFI.....	RCRA Facility Investigation
CWA.....	Clean Water Act	RFP.....	Request for Proposal
DMB.....	Department of Management and Budget	RI.....	Remedial Investigation
DCD.....	Design and Construction Division	RI/FS.....	Remedial Investigation/Feasibility Study
DNAPL.....	Dense Non-Aqueous Phase Liquid	RP.....	Responsible Party
EE/CA.....	Engineering Evaluation/Cost Analysis	RRD.....	Remediation and Redevelopment Division
ESA.....	Environmental Site Assessment	SA.....	Site Assessment
EVA.....	Earned Value Analysis	SARA.....	Superfund Amendments and Reauthorization Act
FAR.....	Final Assessment Report	SDWA.....	Safe Drinking Water Act
FM.....	Financial Manager	SHSC.....	Site Health and Safety Coordinator
FP.....	Fixed Price	SI.....	Site Investigation
FS.....	Feasibility Study	SM.....	Site Manager
FFS.....	Focused Feasibility Study	SOW.....	Scope of Work
GDRRA.....	Greater Detroit Resource Recovery Authority	SPCC.....	Spill Prevention Control and Countermeasures
GSI.....	Groundwater-Surface Water Interface	SSTLs.....	Site Specific Target Levels
H&S.....	Health and Safety	SVE.....	Soil Vapor Extraction
HASP.....	Health and Safety Plan	TAT.....	Technical Assistance Team
HAZWOPER ..	Hazardous Waste Operations and Emergency Response	TCE.....	Trichloroethylene
HSM.....	Health and Safety Manager	TM.....	Time and Materials
LOE.....	Level-of-Effort	TS.....	Technical Specialist
LS.....	Legal Specialist	TSCA.....	Toxic Substances Control Act
LUST.....	Leaking Underground Storage Tank	UP.....	Unit Price
MCL.....	Michigan Compiled Law	U.S. ATHAMA ..	U.S. Army Toxic and Hazardous Material Agency
MDEQ.....	Michigan Department of Natural Resources and Environment	U.S. EPA.....	United States Environmental Protection Agency
MDMB.....	Michigan Department of Management and Budget	UST.....	Underground Storage Tank
MDNR.....	Michigan Department of Natural Resources	USPS.....	United States Postal Service
MIOSHA.....	Michigan Occupational Safety and Health Act	VOC.....	Volatile Organic Compounds
MOP.....	Miscellaneous Operating Project yd ³	VSR.....	Verification of Soil Remediation
NEPA.....	National Environmental Policy Act	WPO.....	Work Plan Outline
NIOSH.....	National Institute for Occupational Safety and Health	yd ²	Square Yards
NREPA.....	National Resources Environmental Protection Act (Act 451 PA 1994 as amended)	yd ³	Cubic Yards

APPENDIX 12

ORIGINAL CERTIFICATES OF INSURANCE