LAKE LEMON
SHORELINE STABILIZATION
PROJECT
AREA 1b
PROJECT MANUAL
PROJECT NO. J01-04-054

PREPARED FOR:

LAKE LEMON CONSERVANCY DISTRICT
7599 N. TUNNEL ROAD
UNIONVILLE, IN 47468

PREPARED BY:

DONAN ENGINEERING, INC.
4342 N. HWY 231
JASPER, IN 47546
PHONE (812) 482-5611
FAX (812) 482-9165

JUNE 14, 2001

EDWARD J. KNUST, CPAg.
PROJECT MANAGER

JOHN G. DONAN, JR., P.E.
PRESIDENT

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ADVERTISEMENT FOR BIDS

LAKE LEMON CONSERVANCY DISTRICT

SHORELINE STABILIZATION PROJECT: AREA 1b
&
SHORELINE STABILIZATION PROJECT: AREA 3c

NOTICE IS HEREBY GIVEN, that the Lake Lemon Conservancy District of Monroe and Brown Counties, Indiana, by and through its Board of Directors, hereinafter referred to as the Owner, will receive separate, sealed proposals for the construction of the LAKE LEMON SHORELINE STABILIZATION PROJECT: AREA 1b and SHORELINE STABILIZATION PROJECT: AREA 3c in Monroe County, Indiana.

Sealed proposals are invited and may be forwarded by certified mail, addressed to the Lake Lemon Conservancy District in care of Robert Madden, Lake Manager, 7599 N. Tunnel Rd., Unionville, IN 47468 or delivered in person to the bid opening, and will be considered by the OWNER at a public meeting called to receive and open such proposals, provided that same shall have been received not later than 5:30 P.M. (local time) on July 18, 2001 at 1969 S. Henderson Street, Bloomington, Indiana 47401. Proposals received after such hour shall be returned unopened.

A pre-bid conference will be held at 9:00 A.M. (local time) on July 11, 2001 at the Lake Lemon spillway at the west end of Spillway Road for SITE 3c. All prospective bidders are encouraged to attend.

The SITE 3c project consists of Riprap revetment and berm for shoreline stabilization of area 3c.

A pre-bid conference will be held at 11:00 A.M. (local time) on July 11, 2001 at the Lake Lemon Shelter House, at Riddle Point Park, located at the end of North Tunnel Road, near the District Office at Lake Lemon for SITE 1b. ALL PROSPECTIVE BIDDERS FOR SITE 1b ARE REQUIRED TO ATTEND THE PRE-BID CONFERENCE.

The SITE 1b project relies on bioengineering methods and consists of coir log installation and vegetation establishment for shoreline stabilization of area 1b.

These projects are to be bid separately and are partially funded by IDNR- Lake and River Enhancement funds and local funds.

Plans and Specifications for the Projects are on file and may be examined at the following locations:

Donan Engineering Co., Inc., 4342 N. Hwy 231, Jasper, Indiana 47546
Lake Lemon Conservancy District, 7599 N. Tunnel Rd., Unionville, Indiana 47468
City of Bloomington Utilities, 1969 S. Henderson St, Bloomington, Indiana 47401

Copies of the Plans and Specifications may be obtained upon payment of a non-refundable fee of Fifty Dollars ($50.00) in the form of a check or money order made payable to Donan Engineering Co., Inc., 4342 North U.S. 231, Jasper, Indiana 47546, (812) 482-5611. Requests for plans and specifications must specify the project of interest and also include a return street address; post office box numbers are not acceptable. Partial sets of plans and/or specifications are not available. Copies of any and all addenda, which may be issued for these projects, shall be included with the purchased documents or shall be forwarded to all plan and specification holders.

The work to be performed and the proposal to be submitted shall include sufficient and proper sums for all General Construction, Mechanical Installation, Labor, Materials, Tools, Equipment, Taxes (both Federal and State), Permits, Licenses, Insurance, Service Costs, and so forth incidental to and required for the construction of the facilities.

Each proposal shall be accompanied by a certified check or acceptable bidder's bond made payable to the Owner, in a sum of not less than five percent (5%) of the total amount of the highest aggregate proposal, which check or bond will be held by the Owner as evidence that the bidder will, if awarded the contract, enter into the same with the Owner upon notification from him to do so within ten (10) days of said notification.

Approved performance and payment bonds guaranteeing faithful and proper performance of the work and materials, to be executed by an acceptable surety company, will be required of the Contractor at the time he executes his contract. The bond will be in the amount of 100% of the Contract Price and must be in full force and effect throughout the term of the Construction Contract plus a period of twelve (12) months from the date of Substantial Completion.

The Owner reserves the right to reject any proposal, or all proposals, or to accept any proposal or proposals, and to waive any and all informalities in bidding. Any proposal may be withdrawn prior to the above scheduled time for the opening of proposals or authorized postponement thereof. Any proposal received after the time and date specified shall not be considered. NO proposal may be withdrawn after the scheduled closing time for receipt of bids for a period of at least ninety (90) days.

A conditional or qualified Bid will not be accepted.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Projects throughout.

Proposals shall be properly and completely executed on proposal forms included in the Specifications. Proposals shall include all information requested by Indiana Form 96 or

latest revision. Under Section III of Form 96 the Bidder shall submit a financial statement. The Owner may make such investigations as deemed necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated therein.

Each bidder is responsible for inspecting the Project sites and for reading and being thoroughly familiar with the Contract Documents. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve any Bidder from any obligation in respect to its Bid.

The Project has no established wage rate scales.

Any contract awarded under this Advertisement for Bids is expected to be funded locally by the OWNER, in conjunction with a Lake and River Enhancement Program Grant from the Indiana Department of Natural Resources Division of Soil Conservation and the City of Bloomington Utilities.

LAKE LEMON CONSERVANCY DISTRICT

_____

/S/ Bill Cobb, Chairman

ATTEST:_____

/S/ Marty Mann, Vice-Chairman

DATED:_____

INFORMATION FOR BIDDERS

BIDS will be received by the Lake Lemon Conservancy District, Unionville, Indiana (herein after called the "OWNER"), for construction of the Shoreline Stabilization Project, until 5:30 p.m. (local time), on June 21, 2000.

Each BID must be submitted in a sealed envelope, addressed to the Lake Lemon Conservancy District, 7599 N. Tunnel Road, Unionville, Indiana 47468. Each sealed envelope containing a BID must be plainly marked on the outside as BID for the Shoreline Stabilization Project, and the envelope should bear on the outside the name of the BIDDER, his address, his license number if applicable and the name of the project for which the BID is submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at , 7599 N. Tunnel Road, Unionville, Indiana 47468.

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

All BIDDERS must complete and file with their BIDS Indiana State Board of Accounts Form 96, 1987 or latest revision.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within ninety (90) days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and contract documents including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the Project. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID bond payable to the owner for five percent (5%) of the total amount of the highest aggregate proposal for each individual Contract Division, with surety satisfactory to OWNER and in the form substantially as set forth herein. As soon as the Bid prices have been compared, the OWNER will return the BONDS of all except the three lowest responsible and responsive BIDDERS. When the Agreement is executed, the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment BOND and performance BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A performance BOND and a payment BOND in the form substantially as set forth herein, each in the amount of one hundred percent (100%) of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract. The Surety must be authorized to transact fidelity and surety business in the State of Indiana and must be on the U.S. Treasury Department's current Circular 570 "Companies Holding Certificate of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies". The underwriting limitations provided for in the said Treasury Department listing shall be applicable.

Attorneys-in-fact who sign BID BONDS or payment BONDS and performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may at his option consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER to the extent necessary to reimburse OWNER for the difference in the amount OWNER is obligated to pay the next lowest responsible and responsive BIDDER in order to execute a contract for the work.

The OWNER, within twenty (20) days of receipt of acceptable performance BOND, payment BOND, and Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within twenty (20) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the twenty (20) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as he deems necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the most responsive BIDDER for the Contract, as determined by the OWNER.

The award will be based from the Owner's selection of individual project alternatives as detailed in the bid forms.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when requested to do so by the OWNER.

The ENGINEER is Donan Engineering Co., Inc. His address is 4342 North U.S. 231, Jasper, Indiana 47546.

SUPPLEMENTAL INFORMATION

1. Exemption from Indiana Sales Tax

Governmental units are exempt from the Indiana Gross Retail Tax Act (sales tax). All materials incorporated as a material or integral part of construction work for the State, County, township, Municipality, its agencies and instrumentalities are exempt from this tax. The authorized person (Clerk or Clerk-Treasurer for municipalities) will furnish upon request to the successful bidder any needed information for purposes of filling out the Exemption Certificate form.

It is not a blanket exception but it provides that only the purchase of a tangible personal property used by a governmental agency in connection with a governmental function may be purchased exempt from sales tax. The Contractor shall apply for an "Exemption Certificate for Construction Contractors", Form ST-134, Indiana Department of Revenue.

The bidder shall include in all prices offered the cost of all Federal, State and Local income taxes and all taxes imposed on materials and equipment, whether it be sales tax, processing tax or any other form of tax whatsoever with the exception of the above referenced Indiana Sales Tax.

2. Award of Contract

The Owner may elect to make a tentative award of contract to the most responsive, bidder(s) pending the sale of bonds or the completion of other project arrangements. In such event and upon successful completion of the necessary arrangements to fund the total cost of the project, the Owner and the successful bidder to whom the tentative award has been made shall enter into a written contract at the price stated in the proposal and as specified; provided that the elapsed time from the date of the receipt of bids, as required by these specifications, has not expired. The time for execution of the written contract may be extended beyond the period set forth in these Specifications, if such time extension is mutually agreeable to the Owner and the successful bidder. This mutually agreeable extension must be done at no additional cost to the Owner.

3. Completion of Plans and Specifications

Upon issuance's to prospective bidders, the physical make-up and content of the plans, specifications and contract documents is intended to be complete for preparing and submitting of a proposal. However, each bidder shall verify to his own satisfaction that all material issued to him is indeed complete. Should he discover that a page, sheet, etc. is missing he shall notify the Engineer in writing and it will be forwarded to him. After bids have been submitted, no claims of ignorance of these requirements of bidding or of construction due to such missing or overlooked material will be recognized.

4. Interpretations

In general, no answer will be given in reply to an oral question if the question involves an interpretation of the intent or meaning of the drawings or contract documents, or the equality or use of products or methods other than those definitely designated or described on the plans or in the specifications. Any information given to the bidders other than by means of the plans and contract documents or by addenda as described below is given informally and shall not be used as the basis of a claim against the Owner or the Engineer.

To receive consideration, such questions shall be submitted in writing to the Owner at least seven days before the advertised date for receipt of bids. If the question involves equality or use of products or methods, it must be accompanied by drawings, specifications, or other data, in sufficient detail to enable the Owner to determine the quality of suitability of the product or method. In general the Owner will neither approve nor disapprove particular products prior to the opening of bids; such products will be considered when offered by the Contractor for incorporation into the work.

The Owner will arrange as addenda, which shall become a part of the contract, all questions received as above provided with his decision regarding each. At least five days prior to the receipt of bids, he will send a copy of those addenda to each of those who have taken out the plans and contract documents. Unless such action shall have been taken by the Contractor and approval obtained, he agrees to use the product or method designated or described in the specifications as amended by these addenda. Each bidder shall acknowledge receipt of all addenda issued, by number, on his proposal form.

The bidder must satisfy himself regarding the character, quantities, and conditions of the various materials and the work to be done. It further is agreed and understood that the Contractor will not use any of the information made available to him or obtained in any examination made by him in any manner as a basis or ground of claim or demand of any variance which may exist between the information offered and the actual materials or structures encountered during the construction work, except as may otherwise be provided for in the Contract Documents. It is further understood and agreed that the bidder or Contractor will not use any information made available to him or obtained by any examination made by him in any manner as a basis or ground of claim or demand of any nature against the Owner or Engineer, arising from or by any reason of any variance which may exist between the information offered and the actual materials and structures encountered during the construction work.

5. Modification Prior to Bid Opening

The right is reserved, as the interest of the Owner may require, to revise or amend the specifications and/or drawings prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an addendum or addenda to the Contract Documents.

Copies of such addenda as may be issued will be furnished to all prospective bidders. If the revisions and amendments are of a nature which requires material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the Owner's Engineer will enable bidders to revise their bids. In such case, the addendum will include an announcement of the new date for opening bids.

6. Safety and Health Regulations for Construction

The successful bidder shall be responsible for all obligations prescribed as employer obligations under Chapter XVII of Title 29, Code of Federal Regulations for Construction, OSHA (PL 91-596) and the Contract Work Hours and Safety Standards Act (PL 91-54).

All questions regarding compliance and enforcement, as well as requests for the regulations, should be directed to the Department of Labor:

7. Responsibility of the Contractor

Attention here is particularly directed to the provisions of the Contract whereby the Contractor shall be responsible for any loss or damage which may occur during process of the work or any part thereof, and also whereby the Contractor shall make good any faulty work or material which becomes evident within twelve months after its substantial completion, unless otherwise specified elsewhere herein.

8. Engineer's Responsibility with Respect to OSHA

The Engineer in the performance of his duties under either General Supervision or Resident observation shall not be responsible for the initiation or compliance of the safety of construction methods or procedures unless in his opinion it concerns permanent installations or permanent equipment. The Engineer shall not be held responsible for the initiation or enforcement of any OSHA Standards.

9. As-Built Drawings

The Contractor shall keep one (1) copy of all project specifications, plans, addenda, modifications, supplemental drawings, shop drawings and change orders at the project site in good order and annotated to show all changes made during the construction process. In addition, the Contractor shall keep one (1) set of "As-Built Drawings" for the project. These as-built drawings will show final elevations, pavement elevations, all final dimensions and tie downs for buried pipes, valves, fittings, structures, etc., all final dimensions and sizes for pipes and structures and all other information as necessary to constitute as-built records. These documents shall be kept daily by the Contractor and routinely checked by the Resident Project Representative for completeness and accuracy based on the Resident Project Representative's daily records and notes. It will be the Contractor's responsibility to furnish any and all information lost due to the Contractor's

loss of these record drawings. In addition to other Contract requirements, retainage will be partially based on the Contractor's ability to maintain good as-build records, as determined by the Engineer. Upon completion of the project or beneficial occupancy, whichever occurs first, these record "as-built" drawings together with any other annotated supplemental plans, drawings, sketches, etc. shall be delivered to the Resident Project Representative for his final review and approval. If approved, the documents will be delivered to the Engineer for the Owner's records. If disapproved, they will be returned to the Contractor for corrections, as necessary. Certified approved as-built drawings shall be forwarded to the IDNR-Division of Soil Conservation by the Owner at the completion of the project.

BID OF

_____
(Contractor)

_____
(Address)

_____

FOR
PUBLIC WORKS PROJECTS
OF

_____

_____

_____

_____

Filed _____, 19 _____

_____

Action taken _____

_____

_____

Prescribed by State Board of Accounts A.E. Boyce Co., Inc. Muncie, IN 1240-A Form No. 96 (Revised 1987)

CONTRACTORS BID FOR PUBLIC WORKS

PART I

(To be completed for all bids)
(Please type or print)

_____

Date: _____

1. Governmental Unit: _____
2. County: _____
3. Bidder (Firm): _____
   Address: _____
   City/State: _____
4. Telephone Number: _____
5. Agent of Bidder (if applicable): _____

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of _____ (Governmental Unit) in accordance with plans and specifications of said unit for the sum of _____ $ _____. The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, submit a proposal for each in accordance with the notice.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract. If the bid is to be awarded on a unit basis, the itemization of units shall be shown on a separate attachment. The Contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States. I.C. 5-16-8-2. I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

NON—COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

OATH AND AFFIRMATION

I affirm under the penalties of perjury that the foregoing facts and information are true and correct to the best of my knowledge and belief.

Dated at _____ this _____ day of _____, 19____.

_____
(Name of Organization)

By _____

_____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____ }
COUNTY OF _____ } ss:

_____ being duly sworn, deposes and says that he is

_____ of the above _____ and that the
(Title) (Name of Organization)

statements contained in the foregoing bid, certification and affidavit are true and correct.

Subscribed and sworn to before me this _____ day of _____, 19____.

_____
Notary Public

My Comission Expires: _____

ACCEPTANCE

The above bid is accepted this _____ day of _____ ,19____ , subject to the following conditions: _____

_____

Contracting Authority Members:

_____ _____

_____ _____

_____ _____

PART II

(Complete sections I,II,III, and IV for all state and local public works projects as required by statutes.)

Governmental Unit: _____

Bidder (Firm): _____

Date: _____

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed?

Contract Amount	Class of Work	When Completed	Name and Address of Owner

2. What public works projects has your organization now in process of construction?

Contract Amount	Class of Work	When to be Completed	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you?_____ If so, where and why?

_____

_____

_____

4. List references from private firms for which you have performed work.

_____

_____

_____

_____

_____

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work.
2. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you expect to require a bond.
3. What equipment do you intend to use for the proposed project?
4. Have you made contracts or received offers for all materials within prices used in preparing your proposal?

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.

SECTION IV OATH AND AFFIRMATION

I hereby affirm under the penalties of perjury that the facts and information contained in the foregoing bid for public works are true and correct to the best of my knowledge and belief.

Dated at _____ this _____ day of _____ ,19____

_____
(Name of Organization)

By _____

_____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF_____)
) ss:
COUNTY OF_____)

_____ being duly sworn, deposes and says that he is

_____ of the above _____ and that the
(Title) (Name of Organization)

answers to the questions in the foregoing questionnaires and all statements therein contained are true and correct.

Subscribed and sworn to before me this _____ day of_____, 19____ .

_____
Notary Public

My Commission Expires:_____

County of Residence: _____

BID

PROPOSAL OF _____

(hereinafter called "BIDDER), organized and existing under the laws of the State of _____

doing business as _____.

TO LAKE LEMON CONSERVANCY DISTRICT (hereinafter called "OWNER").

In compliance with your Request for Bids, BIDDER hereby proposes to perform all WORK for the construction of SHORELINE STABILIZATION PROJECT: SITE 1b _____, in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein and at the prices stated below.

I, the undersigned BIDDER, as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States. I.C. 5-16-8-2. I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project, if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

The undersigned BIDDER, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding or to induce anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further states that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within ____

consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum of $_____ for each consecutive calendar day thereafter as provided in Section 15 of the General Conditions.

BIDDER acknowledges receipt of the following ADDENDUM:

_____

_____

_____

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

NO.	ITEM	UNIT	UNIT PRICE	AMOUNT	**TOTAL PRICE**
1	Mobilization/ Demobilization	Lump Sum			
2	Vegetated Coir Log (12 Inch)	Lft		200	
3	Vegetated Coir Log (16 Inch) w/ Rockwrap	Lft		580	
4	Native Seeding & Establishment	Lump Sum			
GRAND TOTAL					

ALTERNATE BID

State the amount to deduct from the contract if the following work is reduced to suit the budget of the Project.

1 lineal foot of 12-inch Vegetated Coir Log with Native Seeding and Cocomat covering per Vegetated Coir Log Installation on the detail drawing sheet.	$

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____

_____ as Principal, and

_____ as Surety, are hereby held

and firmly bound unto _____ as OWNER in the penal sum

of _____ for the payment of which,

well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 20 _____.

The Condition of the above obligation is such that whereas the Principal has submitted to

_____ a certain BID, attached

hereto and hereby made a part hereof to enter into a contract in writing, for the

_____

_____

_____

NOW THEREFORE,

(a) If said BID shall be rejected, or

(b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ (L.S.)
Principal

_____
Surety

By: _____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

FORM OF NON-COLLUSION AFFIDAVIT

STATE OF _____)

)

COUNTY OF _____)

_____

being first duly sworn, deposes and says that he is _____

(Sole Owner, a Partner, President, Secretary, etc.) of _____

_____ the party making the foregoing proposal or bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly with any Bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion or communication or conference, with any person, to fix the bid price of affiant or any other Bidder, or to fix any overhead, profit, or cost element of said Bid price, or of that of any other Bidder, or to secure any advantage against the Owner, or any person interested in the proposed Contract; and that all statements contained in said proposal or bid are true; and further, that such Bidder has not, directly or indirectly submitted this Bid, or the contents thereof, or divulged information or data relative thereto any association or to any other member or agent thereof.

_____
Affiant

Subscribed and sworn to before me this _____ day of

_____, 20_____.

_____
Notary Public

My Commission Expires: _____

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20 _____, by and between Lake Lemon Conservancy District _____, hereinafter called "OWNER" and
(Name of Owner, (an Individual)

and _____doing business as (an individual,) or (a partnership,) or (a corporation) hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of

Shoreline Stabilization Project: Area 1b

2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein.

3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within ___ _____ calendar days after the date of the NOTICE TO PROCEED and will complete the same within _____ calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of $_____, or as shown in the BID schedule.

5. The term "CONTRACT DOCUMENTS" means and includes the following:

(A) Advertisement for Bids
(B) Information for Bidders
(C) Bid
(D) Bid Bond
(E) Agreement
(F) General Conditions
(G) Supplemental Information
(H) Special Conditions
(I) Payment Bond
(J) Performance Bond
(K) Notice of Award

(L) Notice to Proceed

(M) Change Order

(N) Escrow Agreement

(O) IDOC Contract Provisions

(P) DRAWINGS prepared or issued by Donan Engineering, Inc.

numbered 1 through 3, and dated June 14

20 01.

(Q) SPECIFICATIONS prepared or issued by Donan Engineering Co., Inc

entitled Lake Lemon Shoreline Stabilization Project Area 1b Project Manual Project No. J01-04-054

dated June 14 ,20 01.

(R) ADDENDA:

No. N/A, dated _____, 20 _____

No. _____, dated _____, 20 _____

No. _____, dated _____, 20 _____

No. _____, dated _____, 20 _____

No. _____, dated _____, 20 _____

No. _____, dated _____, 20 _____

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in (_____) (number of copies) each of which shall be deemed an original on the date first above written.

OWNER:

_____

BY _____

NAME _____
(Please type)

TITLE _____

(SEAL)

ATTEST:

_____

NAME _____
(Please type)

TITLE _____

CONTRACTOR:

_____

BY _____

NAME _____
(Please type)

TITLE _____

(SEAL)

ATTEST:

_____

NAME _____
(Please type)

TITLE _____

GENERAL CONDITIONS

1. Definitions
2. Additional Instructions and Detail Drawings
3. Schedules, Reports and Records
4. Drawings and Specifications
5. Shop Drawings
6. Materials, Services and Facilities
7. Inspection and Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in the Work
14. Changes in Contract Price
15. Time for Completion and Liquidated Damages
16. Correction of Work
17. Subsurface Conditions
18. Suspension of Work, Termination and Delay
19. Payments to Contractor
20. Acceptance of Final Payment as Release
21. Insurance
22. Contract Security
23. Assignments
24. Indemnification
25. Separate Contracts
26. Subcontracting
27. Engineer's Authority
28. Land and Rights-of-Way
29. Guaranty
30. Arbitration
31. Taxes

1. *DEFINITIONS*

1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.2 ADDENDA—Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.

1.3 BID—The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BIDDER—Any person, firm or corporation submitting a BID for the WORK.

1.5 BONDS—Bid, Performance, and Payment Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.6 CHANGE ORDER—A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.7 CONTRACT DOCUMENTS—The contract, including Advertisement For Bids, Information For Bidders, BID, Bid Bond, Agreement, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.

1.8 CONTRACT PRICE—The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.9 CONTRACT TIME—The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.

1.10 CONTRACTOR—The person, firm or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS—The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.

1.12 ENGINEER—The person, firm or corporation named as such in the CONTRACT DOCUMENTS.

1.13 FIELD ORDER—A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE OF AWARD—The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

1.15 NOTICE TO PROCEED—Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.16 OWNER—A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the WORK is to be performed.

1.17 PROJECT—The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.18 RESIDENT PROJECT REPRESENTATIVE—The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS—All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.20 SPECIFICATIONS—A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.21 SUBCONTRACTOR—An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

1.22 SUBSTANTIAL COMPLETION—That date as certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.

1.23 SUPPLEMENTAL GENERAL CONDITIONS—

Modifications to General Conditions required by a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS, or such requirements that may be imposed by applicable state laws.

1.24 SUPPLIER—Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK—All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.26 WRITTEN NOTICE—Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

2. *ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS*

2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional drawings and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. *SCHEDULES, REPORTS AND RECORDS*

3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.

3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part and, as applicable:

3.2.1. The dates at which special detail drawings will be required; and

3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.

3.3 The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK.

4. *DRAWINGS AND SPECIFICATIONS*

4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.

4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediate y reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. *SHOP DRAWINGS*

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

6. *MATERIALS, SERVICES AND FACILITIES*

6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.

6.5 Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the

CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7. *INSPECTION AND TESTING*

7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.5 Inspections, tests or approvals by the engineer or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR'S expense.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

8. *SUBSTITUTIONS*

8.1 Whenever a material, article or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9. *PATENTS*

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, however if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

10. *SURVEYS, PERMITS, REGULATIONS*

10.1 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR

observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

11. *PROTECTION OF WORK, PROPERTY AND PERSONS*

11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

12. *SUPERVISION BY CONTRACTOR*

12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

13. *CHANGES IN THE WORK*

13.1 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.

13.2 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or TIME, or both, in which event he shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

14. *CHANGES IN CONTRACT PRICE*

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

(a) Unit prices previously approved.

(b) An agreed lump sum.

(c) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the WORK to cover the cost of general overhead and profit.

15. *TIME FOR COMPLETION AND LIQUIDATED DAMAGES*

15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15.3 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To any preference, priority or allocation

order duly issued by the OWNER.

15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

16. *CORRECTION OF WORK*

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

17. *SUBSURFACE CONDITIONS*

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS; or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

18. *SUSPENSION OF WORK, TERMINATION AND DELAY*

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

18.2 If the CONTRACTOR is adjudged a bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the Contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK exe-

cuted and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days written notice to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19. PAYMENTS TO CONTRACTOR

19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within ten (10) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all work covered by the CONTRACT DOCUMENTS. The OWNER at any time, however, after fifty (50) percent of the WORK has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five (5%) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.

19.3 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.4 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.

19.6 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.7 If the OWNER fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

20. *ACCEPTANCE OF FINAL PAYMENT AS RELEASE*

20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance BOND and Payment BONDS.

21. *INSURANCE*

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

21.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

21.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

21.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that coverages afforded under the policies will not be cancelled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.

21.3 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, liability insurance as hereinafter specified;

21.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him, or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR under him. Insurance shall be written with a limit of liability of not less than $500,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than $500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than $200,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than $200,000 aggregate for any such damage sustained by two or more persons in any one accident.

21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.4 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the work is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the PROJECT and in case any work is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

21.5 The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, the ENGINEER, and the OWNER.

22. *CONTRACT SECURITY*

22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a Performance Bond and a Payment Bond in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by

the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

23. *ASSIGNMENTS*

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

24. *INDEMNIFICATION*

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

25. *SEPARATE CONTRACTS*

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefor as provided in Sections 14 and 15.

26. *SUBCONTRACTING*

26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty (50%) percent of the CONTRACT PRICE, without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

26.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

27. *ENGINEER'S AUTHORITY*

27.1 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The

ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

28. *LAND AND RIGHTS-OF-WAY*

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

28.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

28.3 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. *GUARANTY*

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

30. *ARBITRATION*

30.1 All claims, disputes and other matters in question arising out of, or relating to, the CONTRACT DOCUMENTS or the breach thereof, except for claims which have been waived by the making and acceptance of final payment as provided by Section 20, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

30.2 Notice of the demand for arbitration shall be filed in writing with the other party to the CONTRACT DOCUMENTS and with the American Arbitration Association, and a copy shall be filed with the ENGINEER. Demand for arbitration shall in no event be made on any claim, dispute or other matter in question which would be barred by the applicable statute of limitations.

30.3 The CONTRACTOR will carry on the WORK and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

31. *TAXES*

31.1 The CONTRACTOR will pay all sales, consumer, use and other similar taxes required by the law of the place where the WORK is performed.

Amendment to the General Conditions

Article 19 - Payments to Contractor

Under Article 19, paragraph 19.1 the sentence reading:
"The OWNER will, within ten (10) days of presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate less the retainage", shall be changed to read: "The OWNER will, within thirty (30) days of presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate less the retainage."

Article 21 - Insurance

Under Article 21, paragraph 21.3.1, the limits for insurance shall be as listed in the Special Conditions of the Contract Documents.

Article 30 - Arbitration

Under Article 30, paragraph 30.1, the Construction Industry Arbitration Rules of the American Arbitration Association may be used if both parties mutually agree.

SPECIAL CONDITIONS

Application of Special Conditions/Specifications

The purpose of these Special Conditions is to amplify the Information for Bidders, Supplemental Information, General Conditions, and/or the Technical Specifications. Whenever conditions as set forth in any of the Specifications conflict with conditions of other sections of the Specifications, the following order of precedence shall apply:

a. Special Conditions
b. General Conditions
c. Information for Bidders
d. Supplemental Information
e. Technical Specifications

1. CONTRACT DOCUMENTS

The "Contract Documents" are hereby defined as the Advertisement for Bids, Information to Bidders, Bid and Bid Bond Agreement, Payment and Performance Bond, Special Conditions, General Conditions, Supplemental General Conditions and Technical Specifications as contained in this volume and named Lake Lemon Conservancy District, Shoreline Stabilization Project: Area 1b Project Manual. The "Contract Documents" also include plan sheets numbered 1 through 3 found within the Project Manual. The Technical Specifications contain references to various independent, local, State and Federal codes and/or specifications which are also considered as part of the "Contract Documents" by reference. See Technical Specification Definitions, page TS-1 for definitions of key words used in these Special Conditions.

2. INSURANCE

The Contractor shall maintain the following minimum insurance:

FORM OF INSURANCE	BODILY INJURY LIABILITY	PROPERTY DAMAGE LIABILITY
Contractor's Public Liability	$1,000,000	$200,000/$200,000
Contractor's Protective Liability	$1,000,000	$200,000/$200,000
Automobile Liability (Owned Equipment)	$1,000,000	$200,000/$200,000
Automobile Liability (Non-Owned Equipment)	$1,000,000	$200,000/$200,000

Owner's Protective Liability or Contractual	$1,000,000 (both)	$200,000/$200,000

The Contractor shall purchase and maintain such insurance coverage sufficiently broad to insure the Owner, the Engineer, their consultants and each of their officers, agents and employees as additional insured under the requirements of this section.

3. PERMITS AND LAWS

The Owner has made application to the U.S. Army Corps of Engineers for a Regional General Permit and the Indiana Department of Environmental Management for Water Quality Certification for construction of the project.

Each bidder must familiarize himself with all laws, ordinances and regulations, whether Federal, State or Local, which by reason of being neglected or violated may affect the work contemplated and must secure and pay the fees required for any permits which may be necessary.

4. DIFFERING SITE CONDITIONS NOTIFICATION

The Contractor shall promptly and before such conditions are disturbed, notify the recipient in writing. The recipient in this case shall mean the Owner not the Engineer.

5. WASTE AREAS

All excess yardage resulting from the project earthwork shall be disposed of by the CONTRACTOR.

6. DAMAGE TO STRUCTURE AND PREMISES

The successful bidder must assume full responsibility for any damage done by him, or his employees, or his agent to the premises or any existing structure not scheduled for removal at the project location. Any such damage shall be repaired by him to the satisfaction of the OWNER. This shall include but is not limited to: field tile, fences, driveways, roadways, mailboxes, shrubs and/or trees, etc.

7. NOTE TO BIDDERS

Bidding contractors should make a visit to the project site and examine the site to satisfy themselves as to the nature and scope of the work and of any difficulties attending its execution. The submission of bid will be construed as evidence that a visit has been made. Later claims for labor, equipment or

materials required for difficulties encountered which could have been foreseen had such an examination been made will not be recognized.

8. TIME OF COMPLETION

This Contract is to be completed within ___240_____ calendar days after receipt of Notice to Proceed.

9. LIQUIDATED DAMAGES

As actual damages for any delay in completion are impossible of determination, the CONTRACTORS and their sureties shall be liable for and shall pay to the OWNER the sum of One Hundred Dollars ($100.00) per day, after the agreed upon time as liquidated damages, for each calendar day of delay until the work is completed.

10. DAMAGE TO EXISTING UTILITIES

Any damage to existing utilities incurred during construction shall be the sole responsibility of the CONTRACTOR. In the event that any utility is damaged, repairs must be carried out on an around the clock basis until the utility is restored.

11. BLASTING

No blasting shall be permitted.

12. DISCREPANCY

In case of a discrepancy in the extended amount of a bid item and the unit price per unit quantity the unit price per unit quantity will control. In case of a discrepancy between the bid amount in writing and figures, the amount in writing will control.

13. QUALITY CONTROL PLAN

The Contractor shall provide and maintain an effective quality control program. This program shall establish a means to perform sufficient inspection and tests of conformance to applicable Specifications and Drawings with respect to the materials, workmanship, construction, finish, functional performance and identification. This control will be established for all construction.

The Contractor shall furnish the Engineer within thirty (30) days after receipt of the Notice to Proceed a quality control plan which shall include the procedures, instructions and reports to be used. This document will include as a minimum:

A. The Quality Control Organization;

B. Authority and Responsibilities of Quality Control Personnel;

C. Methods of Quality Control, including that for his Subcontractor's work;

D. Test Methods, including as specified, name of qualified testing laboratory to be used;

E. Method of Documenting Quality Control Operation Inspection and Testing.

14. AUTHORITY AND DUTY OF RESIDENT PROJECT REPRESENTATIVE

The Resident Project Representative employed by the Owner shall observe the Contractor's work to:

A. Keep the Engineer informed as to the progress of the work and the manner in which it is being done.

B. Report whenever it appears that the materials furnished and the work performed by the Contractor fail to fulfill the requirements of the Specifications and Contract.

C. Call to the attention of the Contractor any deviation from or infringement upon the Plans and Specifications.

D. Check and verify that the Contractor is keeping and maintaining Project As-Built Drawings.

Resident Project Representatives shall be authorized to observe all work done and materials furnished and to exercise such additional authority as may be delegated to them in writing by the Engineer. Such observation may extend to all or any part of work done and material furnished. They shall have authority, as well as the Engineer, to inform the Contractor of defective work and material and to recommend the suspension of work to the owner.

Such observation shall not relieve the Contractor from any obligation to furnish acceptable materials or to perform all work strictly in accordance with the requirements of the Plans and Specifications.

Resident Project Representatives shall not be authorized to revoke, alter, enlarge, relax, or release any requirements of the Specifications, nor to approve or accept any portion of the work, nor to issue instructions contrary to the Plans and Specifications. They shall, in no case, act as foreman or perform other duties for the Contractor nor interfere with the management of the work by the latter. Any advice which Resident Project Representatives may give the Contractor shall in no way be

construed as binding the Engineer or the Owner in any way, or releasing the Contractor form the fulfillment of the terms of the Contract.

The Owner, the Engineer, and his authorized representatives will at all times have access to the WORK, to determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS. If in the opinion of the Owner, the Engineer and his authorized representative, the WORK is not proceeding in accordance with the CONTRACT DOCUMENTS, or the Contractor is utilizing undesirable construction practices, the Owner and/or through the Engineer and/or through his authorized representatives, may direct the Contractor to cease WORK and correct all DEFECTIVE WORK and undesirable construction practices. The Contractor will bear all expenses for correcting DEFECTIVE WORK, and will bear any and all monetary losses and expenses relating to and resulting from ceasing of WORK because of DEFECTIVE WORK. Such expenses to also include compensation to the Owner for non-productive observation expenses during the time lost while correcting DEFECTIVE WORK, the Contractor will not be granted an extension of the Project scheduled completion time.

15. PROPOSALS FOR EQUIPMENT AND MATERIALS

Proposals for the various equipment and materials to be furnished and installed shall conform with the specifications for all bid items, with respect to general design, performance, materials of construction, workmanship, overall functions, testing and accessories.

Where the names of two (2) manufacturers are specifically mentioned in the Detailed Specifications and followed by "or equal", the bidders may bid on either of the two (2) named manufacturers or on any alternate proposal, equal or superior to the two (2)named manufacturers, provided that the "or equal" conforms with the requirements of these Contract Documents.

Whenever equipment other than that named specifically in the Specifications and shown on the Plans is proposed in the proposal, the Contractor shall include in his bid on such "or equal" equipment:

A. The cost of redesign of any mechanical, electrical and/or structural changes necessary to make the "or equal" equipment to comply with the ratings, loadings, dimensions, etc., prescribed herein;

and

B. Any increase in the cost of structures, piping, electrical and/or mechanical appurtenances involved by the proposed "or equal" equipment.

16. LANDMARKS AND MONUMENTS

The Contractor, nor any of his employees, shall not molest or remove monuments or landmarks without the written consent of the Owner. Any monument or landmark so removed shall be replaced at the expense of the Contractor. The cost thereof shall be retained from monies due or to become due the Contractor under this Contract.

17. GUARANTY

In addition to all materials and workmanship, all sod, seed, trees, shrubs, bushes, flowers, etc. which are placed, sowed, planted or replanted by the Contractor to replace same destroyed or damaged by his operations, shall be guaranteed for a period of **TWO YEARS** from the date of acceptance of the work under this Contract. Should any of the above die or fail to grow, it shall be replaced, reseeded or replanted at no cost to the Owner.

18. USE OF CHEMICALS

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in accordance with instructions.

19. SUBSTANTIAL COMPLETION AND LIQUIDATED DAMAGES

The time for completion and liquidated damages is defined in Section 8 of these Special Conditions. For purposes of clarification, liquidated damages will begin if the work is not fully complete within the Contract time. Issuance of a Certificate of Substantial Completion with items of work still outstanding will not stop liquidated damages.

20. REVISIONS TO CONSTRUCTION SCHEDULE AND TIME EXTENSION REQUESTS

The Contractor shall submit to the Engineer with each monthly progress payment request an updated construction schedule for the Engineer's review and approval. In addition when applicable, the Contractor shall also submit with each monthly progress payment request any and all documentation necessary for any time extension that may be justified in the Contractors opinion and due to conditions encountered during the period for which the claim is being filed. A Change Order will then be prepared for this claim as soon as it is approved by the Owner and Engineer.

Requests for time extensions made after the above specified period and not reflected in the updated construction schedules previously submitted shall not be considered.

21. WITHHOLDING OF CONSTRUCTION PAYMENTS

The Engineer may recommend to the Owner and the Owner may withhold, or on account of subsequently discovered evidence, nullify the whole or part of any estimate to such extent as may be necessary to protect the Owner from loss on account of:

A. Defective Work Not Remedied;

B. Claims Filed or Reasonable Evidence Indicating Probability of the Filing of Claims;

C. Failure of the Contractor to Make Payments Properly to Subcontractors or Material Suppliers for Which the Contractor has been Paid by the Owner;

D. A Reasonable Doubt that the Contract can be Completed for the Balance then Unpaid;

E. Damage to Another Contractor;

F. Failure of the Contractor to Keep His Work Progressing in Accordance with His Time Schedule;

G. Performing of Work in Violation of the Terms of the Contract.

22. ESTABLISHED CONSTRUCTION TECHNIQUES-

All construction techniques and specialized equipment used to complete the work under this Contract shall be only those established as suitable and effective by extensive prior use in similar work. Unproven or experimental techniques shall be allowed only with written permission from the Engineer. Upon receipt of written request from the Engineer, the Contractor shall submit detailed documentation to establish the qualifications of any technique or specialized equipment being employed to complete the work. Minimum documentation shall include not less than three (3) references where the procedure has been employed in similar work and under similar circumstances. Each reference shall include the location, date, project owners name and address and the name and telephone number of a person to contact for a technical reference. Techniques and/or equipment adjudged by the Engineer to be unsuitable and/or unproven shall be immediately discontinued. Work performed utilizing these techniques shall be reworked by the Contractor at his expense and as directed by the Engineer.

23. SHOP DRAWINGS

In addition to the requirements relative to Shop Drawings as contained in Paragraph 5 of the General Conditions and Paragraph 16 of the General Construction Specifications, the Contractor shall also meet the following requirements:

23.1 Shop Drawing Submission

Within ten (10) days after being notified by the Engineer as to the Shop Drawings required for the Project, the Contractor shall submit to the Engineer a preliminary schedule of Shop Drawing submissions.

The finalized Shop Drawing Schedule shall be submitted to the Engineer within ten (10) days after the Contractor has received the Engineer's comments relative to the preliminary schedule.

23.2 Shop Drawings

After checking and verifying all field measurements and after complying with the applicable procedures previously specified, the Contractor shall submit to the Engineer for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see 20.1 above), six (6) copies of all Shop Drawings, which will bear a stamp or specific written indication that the Contractor has satisfied the Contractors responsibilities under the Contract Documents with respect to review of the submission. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable the Engineer to review the information as required.

23.2.1 Before submission of each Shop Drawing or sample, Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the work and the Contract Documents.

23.2.2 At the time of each submission- Contractor shall give Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

Engineer will review and approve with reasonable promptness Shop Drawings and samples; but Engineer's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of separate items as such will not indicate approval of the assembly in which the item functions. Contractor shall make corrections required by Engineer, and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review and approval. Contractor shall

direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

Engineer's review and approval of Shop Drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called the Engineer's attention to each such variation at the time of submission as required by paragraph 20.2.2 and Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by Engineer relieve Contractor from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 20.2. 1.

Where a Shop Drawing or sample is required by the Specifications, any related work performed prior to Engineer's review and approval of the pertinent submission will be the sole expense and responsibility of Contractor.

24. HAZARD COMMUNICATION STANDARD

Pursuant to the Code of Federal Regulations, 29 CFR Part 1926, as may be amended, all Contractors, Subcontractors and materials suppliers on this Project shall provide access to all persons on the job site at all times, the Material Safety Data Sheets (MSDS) for all hazards of all chemicals per the Federal Regulations.

In addition, contractors, sub-contractors and material suppliers shall provide training to their employees on the MSDS pursuant to the Federal Regulations.

25. EXCAVATION SAFETY REQUIREMENTS

It shall be the duty and responsibility of the Contractor and all of its Subcontractors to be familiar and comply with all requirements of Public Law 91-596 29 U.S.C., Sections 651 et. seq., the Occupational Safety and Health Act of 1970 (OSHA) and all amendments thereto and to enforce and comply with all of the provisions of the Act. In addition and as required by Indiana State Law, HB 2071, Section 14. of IC 4-13.6-5-12, the Contractor and all of its Subcontractors shall comply with Subpart P of 29 CFR 1926 dated October 31, 1989 as may be amended.

Costs of all Excavation Protection shall be included in the Bid.

26. ADVERSE WEATHER DELAYS

Unusually severe weather must actually cause a delay to the completion of the project to be considered as such. The delay must be beyond the control and without the fault or negligence of the Contractor. The following schedule of monthly anticipated adverse weather delays is based on the National Weather Service or similar data for the project area and will constitute the baseline for monthly weather time evaluations. The Contractors progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

Monthly Anticipated Adverse Weather Delay
Work Days Based On (5) Day Work Week

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(14)	(9)	(7)	(5)	(6)	(4)	(4)	(4)	(4)	(4)	(5)	(9)

Upon acknowledgment of the Notice To Proceed and continuing throughout the contract, the Contractor shall record the occurrence of adverse weather and the resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractors scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in the previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated herein, the Owner may convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____

_____

_____

(Address of Contractor)

a _____, hereinafter call Principal, and

(Corporation, Partnership, or Individual)

_____

(Name of Surety)

_____

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto Lake Lemon Conservancy District

7599 N. Tunnel Road

Unionville, IN 47468

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars, $(_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20 _____, a copy of which is hereto attached and made a part hereof for the construction of:

Lake Lemon Shoreline Stabilization Project Area 1b

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

Provided Further, that the said Surety, for value received hereby stipulates and agrees that:

1. A modification, omission, or addition to the terms and conditions of the contract;
2. A defect in the work provided for in the contract; or
3. A defect in the proceedings preliminary to the letting and awarding of the contract;

does not discharge the Surety or in any ways affect its obligation on this bond, and it does hereby waive notice of any such change, modification, omission, or addition to the terms of the contract.

Provided Further, should any proceedings by Owner be required to enforce this bond or defend claims made against Owner, Surety shall be responsible to Owner for its attorney's fees, in addition to other sums found due.

Provided Further, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ (_____) counterparts, each one of which shall be deemed an original, this _____ day of _____, 20 _____.

_____
Principal

ATTEST:

_____
Secretary (Principal)

By:_____

(SEAL)

_____
Witness as to Principal

Address _____

_____
Address

_____

_____
Surety

ATTEST:

_____	By:_____
Secretary (Surety)	
(SEAL)	
_____	_____
Witness as to Surety	Attorney-in-Fact
_____	_____
Address	Address
_____	_____

NOTE: Date of Bond must not be prior to date of Contract.

If Contractor is Partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____

_____

_____

(Address of Contractor)

a _____, hereinafter call Principal, and

(Corporation, Partnership, or Individual)

_____

(Name of Surety)

_____

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto Lake Lemon Conservancy District

7599 N. Tunnel Road

Unionville, IN 47468

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____

_____ Dollars, $(_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 20 _____, a copy of which is hereto attached and made a part hereof for the construction of:

Lake Lemon Shoreline Stabilization Project Area 1b

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the two year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

Provided Further, that the said Surety, for value received hereby stipulates and agrees that:

1. A modification, omission, or addition to the terms and conditions of the contract;
2. A defect in the work provided for in the contract; or
3. A defect in the proceedings preliminary to the letting and awarding of the contract;

does not discharge the Surety or in any ways affect its obligation on this bond, and it does hereby waive notice of any such change, modification, omission, or addition to the terms of the contract.

Provided Further, should any proceedings by Owner be required to enforce this bond or defend claims made against Owner, Surety shall be responsible to Owner for its attorney's fees, in addition to other sums found due.

Provided Further, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ (_____) counterparts, each one of which shall be deemed an original, this _____ day of _____, 20 _____.

_____
Principal

ATTEST:

_____
Secretary (Principal)

By:_____

(SEAL)

_____
Witness as to Principal

Address _____

_____
Address

_____

_____
Surety

ATTEST:

_____	By:_____
Secretary (Surety)	
(SEAL)	
_____	_____
Witness as to Surety	Attorney-in-Fact
_____	_____
Address	Address
_____	_____

NOTE: Date of Bond must not be prior to date of Contract.

If Contractor is Partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

NOTICE OF AWARD

To: _____

_____

_____

_____

PROJECT Description: Lake Lemon Shoreline Stabilization Project Area 1b

_____

_____

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated _____, 20 _____, and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of $_____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

Your are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 20 _____.

Lake Lemon Conservancy District
Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

by _____

this the _____ day of _____, 20 _____

By _____

Title _____

NOTICE TO PROCEED

To: _____

_____

_____

_____

Date: _____

Project: Lake Lemon

Shoreline Stabilization Project

Area 1b

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20 _____, on or before _____, 20 _____, and you are to complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20__.

Lake Lemon Conservancy District
Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED

is hereby acknowledge by _____

_____,

this the _____ day of

_____, 20 _____.

By _____

Title _____

DONAN ENGINEERING CO., INC.
ngineering, Environmental, Geology, Surveying
4343 North U.S. 231
Jasper, Indiana 47546
Phone 812-482-5611
FAX 812-482-9165

CHANGE ORDER

Page _____ of _____

hange Order No. _____ Date _____

roject No. _____

roject Name _____

roject Address _____

_____

ontractor's Name _____

riginal Contract Amount _____

dd or Deduct for Previous Change Orders _____

urrent Contract Amount Adjusted By Previous Change Orders _____

dd or Deduct for this Change Order _____

ew Contract Amount _____

he following changes are hereby made to the Contract Documents:

_____

_____

_____

_____

_____

_____

ccepted By:

Owner _____ Date _____

Contractor _____ Date _____

Engineer _____ Date _____

TECHNICAL SPECIFICATIONS

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SECTION I

TECHNICAL SPECIFICATIONS

GENERAL PROVISIONS

1.1 SCOPE

This specification sets forth several items of work or conditions which are required as integral parts of the successful completion of the Project.

1.2 CONTRACTOR'S FACILITIES

1.2.1 Utilities: The obtaining of all utilities which may be required for the construction shall be the responsibility of the CONTRACTOR.

1.3 PROJECT EXTENT

The CONTRACTOR shall be responsible for satisfying himself as to the construction limits of the Project. The CONTRACTOR shall consult the ENGINEER if questions arise as to the exact location of the construction limits. The CONTRACTOR shall not establish work, storage, or staging areas outside the Project limits, unless otherwise directed or approved by the ENGINEER.

1.4 PROJECT SIGN

A Project Sign is not required for this Project.

1.5 PERMITS

The OWNER shall obtain all permits, licenses and easements for permanent structures or permanent changes in existing facilities which may be required by county, state, and federal agencies. This will include, if required, a Construction in a Floodway permit (Indiana Department of Natural Resources), Dredge and Fill Permit (U.S. Army Corps of Engineers) and any county building permits.

The CONTRACTOR shall obtain all permits and licenses of a temporary nature necessary for the completion of the work. This shall include any burning, haul and access permits or licenses required.

1.6 PROJECT OBSERVATION

Observation of the Project shall be provided by the OWNER. The OWNER and/or his designated representatives shall at all times have ready access to the Project area.

1.7 WORKING HOURS

The CONTRACTOR shall work the hours necessary to complete the project in the allotted time. Work shall not be completed prior to sunrise or after sunset without the approval of the ENGINEER. If work is to be performed on weekends, the ENGINEER shall be notified one week in advance.

1.8 PROTECTION AND SECURITY

Care must be exercised by the CONTRACTOR in all phases of construction to prevent damage and/or injury to the life and property of others. In addition to other provisions of these Contract Documents, the CONTRACTOR shall be responsible for providing adequate security for his work areas, storage areas, equipment, and any other items or areas that he is using. The property owners will not be responsible for any damages attributable to insufficient site security, carelessness, or failure to comply with the provision and intent of these Contract Documents.

1.9 PROTECTION OF EXISTING UTILITIES AND STRUCTURES

The locations, elevations, sizes, and nature of the existing utilities and structures shown in the Drawings are approximate and are based on available information. No responsibility is assumed, therefore, by the owner with respect to the actual conditions encountered.

Care must be exercised in the routing and operating of construction equipment. The CONTRACTOR must satisfy himself as to the exact locations of utilities and structures within the Project limits. The CONTRACTOR shall protect all utilities and structures within his work area during his construction operations. Any damage to existing utilities and structures resulting from construction operations of this Contract shall be repaired by the

CONTRACTOR to the satisfaction of the ENGINEER and owner of the damaged utility and/or structure and at no additional cost to the OWNER.

All utility work shall be in accordance with the applicable codes used by the State of Indiana.

1.10 REPAIR OF DAMAGE

Any damage done by the CONTRACTOR during the term of this contract to structures, fills, roadways, trees, fences, landscape features or any other such feature or property area shall be repaired, replaced in kind or restored to the satisfaction of the ENGINEER and OWNER at the CONTRACTOR'S expense before final payment is made.

1.11 CLEAN UP

After all construction work is complete and prior to final observation, all exposed areas shall be cleaned and left in a sightly condition. All unused materials shall be removed and disposed of properly. Any unprotected disturbed areas shall be mulched and seeded in accordance with Section VII of these Technical Specifications.

The cleanup shall also include the removal of any trash and debris deposited during the contract period. The trash and debris shall be disposed of by removal to an approved landfill. The Project site and adjacent premises will be left in a condition satisfactory to the OWNER.

1.12 PROFILES AND TOPOGRAPHY

Profiles, topography, and details for the work are schematic in nature and, with the exception of dimensioned construction details, are presented only for the purpose of conveying the concept and limit of specified work. Existing contour lines on Drawings were established from a field survey. It is believed that the mapping has been performed with a degree of accuracy sufficient to meet the design criteria. The CONTRACTOR shall verify all details in the field prior to bid and shall have taken this fact into account when estimating the work required. The misuse of noted information for other than that indicated and subsequent suffering of damages as a result of misuse shall not be cause for any claim by the CONTRACTOR. Information is believed to be reasonably correct, but is not guaranteed.

Contour lines are shown to indicate stream and shoreline conditions as well as slopes and shapes of area outside of the shorelines. Lines and grades may be field altered to some

extent in the course of installing or constructing the shoreline stabilization techniques specified provided the desired drainage pattern is maintained.

1.13 INSTALLATION REQUIREMENTS

Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as suggested by the respective manufacturers, unless otherwise specified herein or directed by the ENGINEER.

1.14 PROOF OF COMPLIANCE

Whenever the Contract Documents require that a product be in accordance with Federal Specifications, ASTM designations, ANSI specifications, or other association standards, the CONTRACTOR shall present a certification from the manufacturer that the product complies therewith. A Certificate of Compliance is a notarized statement by the manufacturer or supplier, signed by a principal of either, to the effect that the item covered by the Certificate conforms to the Contract Documents, the Project name and location, and the quantity and date or dates of shipment or delivery to which the Certificates apply. When requested or specified, the CONTRACTOR shall submit supporting test data to substantiate compliance. The CONTRACTOR shall include the requirements of specified Certificates as part of purchase orders issued to his supplier. Timely submission and approval of Certificates of Compliance will prevent delays caused by material rejection. Certificates shall be submitted in three copies. All material incorporated into the work shall be approved on the basis of a Certificate of Compliance submitted to the ENGINEER before the material is incorporated into the work.

1.15 PROTECTION OF RESOURCES

Special attention shall be given to protecting and maintaining key shade, den, and food trees and visual resources. Trees to be left standing and uninjured within the clearing limits shall be marked by the contractor for verification by the Owner. Removal of any trees and brush shall be done in such a manner as to avoid damage to other trees and property. All loose downed trees, logs, drift, boulders, debris, and other obstructions lying wholly or partially in the area to be excavated shall be removed from the lake. Debris that is not biodegradable is to be buried or removed from the premises. Trees, logs, rootwads, etc. may be piled in wooded areas owned by the City of Bloomington and approved by the OWNER.

1.16 DUST CONTROL

The CONTRACTOR shall be responsible for minimizing the generation of dust outside of the Project limits. The CONTRACTOR shall be required to maintain all excavations, embankments, stockpiles, plant sites, waste areas, and all other work areas within the Project boundaries free from dust which would cause a hazard or nuisance to others. Approved temporary methods of stabilization may consist of sprinkling, chemical treatment, light bituminous treatment or any other similar method permitted by the

ENGINEER to control dust. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.

1.17 SEDIMENT CONTROL

The CONTRACTOR will be responsible for control of siltation and erosion from the Project within the construction limits of the Project site. Control shall include all necessary measures to minimize the deposition of materials in downstream areas and in the adjacent reservoirs.

The CONTRACTOR shall attempt to schedule construction activities so that the amount of exposed soil is minimized. This is to be accomplished by disturbing only those areas which are to be worked immediately and by revegetating or otherwise protecting each area as soon as practical.

If construction is completed prior to the allowable mulched seeding dates, the CONTRACTOR will be responsible for the control of siltation and erosion in disturbed areas within the construction limits shown in the Drawings.

1.18 BURNING

The CONTRACTOR shall inform all employed personnel of the strict rules and regulations governing the burning of combustibles, and shall take every precaution that accidental fires are not started. The CONTRACTOR shall obtain a burning permit from the proper authorities prior to any burning.

Open burning of any type of material will be accomplished in strict accordance with the following rules and precautions, and then only with the approval and under the direction of the ENGINEER.

The ENGINEER's permission to burn and/or his presence at the site shall not be construed as relieving the CONTRACTOR of any responsibility in the event damage occurs or a citizen's complaint arises. The OWNER accepts no responsibility for damage or costs associated with burning operations.

1.18.1 Precautions: The CONTRACTOR will adhere to the following list of precautions to help reduce the potential of forest fires.

(01) Burn only WHEN THE WINDS ARE CALM and there is no chance of gusts.

(02) Burn ONLY ON LEVEL GROUND. On slopes and in gullies, a fire can escape more easily and make a fast run uphill.

(03) When burning trash, use a BARREL or DEEP PIT with a screen over the top.

(04) CLEAR the AREA ten feet around where the fire will be. This creates a fire break. If possible, also plow around the area where the fire will be.

(05) Make sure THE AREA OVERHEAD IS CLEAR of material that could burn.

(06) HAVE TOOLS HANDY: buckets of water, rakes, hoes, shovels, wet sacks, etc. These items can be used to keep the flames inside the cleared area, subdue the flames if the wind picks up or the fire grows too big, to smother the fire, or put a control line around it if it is getting out of hand. (More sophisticated equipment may be required by the ENGINEER.)

(07) Have more than one person to watch the fire. Be sure THE FIRE IS ATTENDED at all times by responsible people.

(08) Watch for SPOT FIRES. Cinders and sparks can carry through the air and ignite material outside the burn area.

(09) FEED THE FIRE SLOWLY. Do not burn everything all at once. This will control the level of burning and intensity of the fire.

(10) Stay with the fire UNTIL THE LAST SPARK IS DEAD. Carefully reinspect the burned area the next morning.

(11) If your fire escapes out of control, IMMEDIATELY REPORT IT to the local fire department, county dispatcher, or state police. The Indiana Division of Forestry's District Forester may also help if you need to report a forest fire.

1.18.2 Disposal: The CONTRACTOR shall dispose of ash, and unburned or partially burned debris in a neat and safe fashion, as approved by the ENGINEER.

1.19 TEMPORARY SHUTDOWNS

The OWNER desires to complete the Project in the most timely manner. In the event an extended construction "shutdown" is requested by the CONTRACTOR, due to circumstances beyond the CONTRACTOR'S control; the CONTRACTOR will be required to complete all stabilization techniques which have been initiated, as approved by the ENGINEER, protect the areas in accordance with the provisions of these Technical Specifications, and maintain sediment and erosion control during this period. Such work may include the applications of mulch, netting and seeding, as directed by the ENGINEER. The OWNER shall incur no additional costs for such work, nor for the expense of demobilization or remobilization.

1.20 GUARANTEE

The CONTRACTOR shall assume responsibility for all workmanship and materials for a period of TWO YEARS from completion of the Project. Any work found to be defective shall be replaced at the CONTRACTOR'S expense.

Inasmuch as the establishment of vegetation to control soil erosion is critical on this Project, the CONTRACTOR shall take all necessary measures to prevent and repair any erosion areas or bare areas for a period of TWO YEARS after the date of final completion. In the event erosion, seed, seedling, and/or vegetative cuttings failure is observed the CONTRACTOR shall be notified in writing and will have a period of thirty (30) days to take measures to stabilize the affected area to the satisfaction of the ENGINEER. The actual area and extent of repair or prevention shall be at the discretion of the ENGINEER.

1.21 STAKING AND MARKING

The CONTRACTOR will be required to complete all grade staking in those areas where earthwork is required. Grade staking will be at a maximum of 50 feet apart at each section. The areas within the project limits where grade staking is required are indicated in the Drawings. The ENGINEER will be responsible for marking the baseline and maintaining the benchmarks throughout the construction.

The ENGINEER will establish the limits of construction where it is not readily discernible in the field. However, this will not relieve the CONTRACTOR of his responsibility to verify the location, scope and character of the Project as described in these Contract Documents.

1.22 SPECIAL HAZARDS AND PRECAUTIONS

The CONTRACTOR is advised that special hazards exist near water impoundments and reservoirs. The CONTRACTOR'S operations may provide the potential for worsening the existing hazards or creating additional ones. This condition causes great risk to life and property. As a result, the CONTRACTOR shall exercise every precaution in performing each item of work specified in this Contract.

1.23 SITE ACCESS

The CONTRACTOR shall have access to the project site off of John Young Road and the private road leading to the dam. Access to the sites targeted for techniques will be achieved by using the paved and unpaved roadways to the extent possible and as needed for equipment and materials to construct the project. The CONTRACTOR shall use discretion in transporting and hauling materials to the site to minimize negative impacts, specifically to the dam and the steep private road leading to the dam, and to the stability of the riparian areas adjacent to the lake in general. Access corridors shall be maintained in a manner equal to pre-construction conditions as determined by the ENGINEER.

The CONTRACTOR shall take into account the steep grade of the private access road and take appropriate precautions when having materials delivered to the site, so as to reduce hazards to life and property. Access corridors shall be maintained in a manner equal to pre-construction conditions as determined by the ENGINEER.

Following completion of the required construction and after acceptance of the required work by the ENGINEER, any access corridors that have been damaged during construction shall be repaired by the CONTRACTOR at his expense and meet the approval of the OWNER.

SECTION II

TECHNICAL SPECIFICATIONS

VIDEO TAPED INVENTORY CONTROL

2.1 SCOPE

The work shall consist of, prior to the beginning of construction, video taping, with audio sound, the entire project site and any off-site areas used for hauling, dumping, storage, etc. The limits of video taping shall be determined by the OWNER and the ENGINEER. The OWNER and the ENGINEER shall be present during the video taping. Upon completion of construction, the same areas shall be again video taped with audio sound.

The video tape shall provide a complete record of the physical conditions of the entire project before and after construction. The video tapes shall become the property of the OWNER, however, tapes shall be retained by the ENGINEER who shall maintain said tapes for viewing by the OWNER and the CONTRACTOR for a period not to exceed one (1) year after completion of the project.

2.2 MATERIALS

The video tape shall be one-half inch (1/2") color, cassette type, VHS series and of broadcast quality. The video camera shall be a high quality color unit.

2.3 REQUIRED DOCUMENTATION

No documentation is required.

2.4 MEASUREMENT AND PAYMENT

The video taping of the project area prior to and after the completion of the construction of the project shall not be paid directly, but shall be incidental to the Mobilization and Demobilization item of the contract in accordance with all specifications herein.

SECTION III

TECHNICAL SPECIFICATIONS

MOBILIZATION/DEMOBILIZATION

3.1 SCOPE

The work shall consist of furnishing all materials, labor, equipment and incidentals necessary for the mobilization and demobilization of the CONTRACTOR'S work forces. This work shall consist of the establishment and removal of facilities that are required by these Specifications, General Conditions, State laws, and local regulations. This item shall also include all costs of licenses, overhead, and every cost or charge necessary and incidental to the proposed work. This item includes the cost of required insurance and bonds and any other initial expense required for the start of the work. The clean-up of the Project site will also be performed under this item.

3.2 GENERAL

This specification covers mobilization for work required by the contract at the time of award. If additional mobilization costs are incurred during performance of the contract as a result of changed or added items of work for which the CONTRACTOR is entitled to an adjustment in contract price, compensation for such costs will be included in the price adjustment for the items of work changed or added.

3.3 REQUIRED DOCUMENTATION

No documentation is required.

3.4 MEASUREMENT AND PAYMENT

Payment of the total lump sum price for Mobilization and Demobilization will constitute full compensation for all labor, materials, equipment, and all other items necessary for and incidental to completion of this element of work. If the CONTRACTOR elects to demobilize and remobilize before completion of the work, no additional payment will be made.

Payment will not be made under this item for the purchase costs of materials having a residual value, the purchase costs of materials to be incorporated in the Project, or the purchase costs of operating supplies

SECTION IV

TECHNICAL SPECIFICATIONS

SHORELINE EXCAVATION

4.1 SCOPE

This specification shall consist of furnishing all materials, equipment, incidentals and labor necessary for all excavations and backfilling, fills and cuts, final grading and other work as required for the dressing of slopes to be stabilized with geogrid rock wraps, vegetated coir logs, native seeding, and cocomats, where appropriate, as shown on the Drawings. This work will include excavation, movement, placement, compaction, proper utilization or disposal of all materials, and the shaping and finishing of the project areas as shown in the Drawings.

4.2 EXCAVATION CLASSIFICATION

All excavation shall be unclassified. All materials to be excavated, graded, or reshaped shall include all on site material or designated debris which can be moved by equipment normally used in construction.

4.3 GENERAL

Earthwork shall include excavation to the designated depths and slopes, transporting of removed material from points of removal to points of final use, placement of fill material within the Project limits, and finishing of all areas to the lines and grades shown in the Drawings. Earthwork shall include the selective stockpiling of the topsoil and subsoil as directed by the ENGINEER, for use as a top cover material. The top cover shall be redistributed as directed by the ENGINEER.

Earthwork shall include the shaping and finishing (final grading) to accommodate the installation and construction of the shoreline stabilization techniques. The earthwork additionally includes the excavation and transportation of the materials from designated areas to specific sites and the spreading, compaction, and smoothing of these materials.

The Contractor will be responsible for working under these conditions and for supplying and installing materials by whatever method will be needed to complete the project. It must be recognized that winter drawdown to an elevation approximately 5 feet below pool elevation is anticipated. The annual winter drawdown is typically initiated in November however accomplishing the drawdown is contingent on winter time precipitation. Due to limitations with the primary outlet structure, above average winter time precipitation may decrease the drawdown increment. The Contractor will be responsible for working under

these conditions and for supplying and installing materials by whatever method will be needed to complete the project.

4.4 LINES AND GRADES

The Drawings include proposed typical cross-sections and contours, which establish lines and grades in certain areas. Minor deviations may be allowed provided positive surface drainage is maintained and the finished grade presents a uniform surface suitable for re-vegetation.

Finish grade will have been established when grading operations present a uniform surface for re-vegetation and/or installation of the appropriate stabilization techniques. Any proposed deviations from the grades shown on the Drawings shall be submitted by the CONTRACTOR in writing one week in advance of implementation into the project and be subject to the written approval of the ENGINEER.

4.5 PLACEMENT AND COMPACTION - MANUALLY

All areas, where fill material is to be placed, shall be constructed to the graded slopes shown on the Plans.

The CONTRACTOR shall maintain and protect all areas, where fill materials are to be placed, in a satisfactory condition at all times until final completion and acceptance of all work under the contract.

4.5.1 Preparation: Fill shall not be placed upon a frozen surface nor shall frozen material be incorporated into the fill. The fill shall be maintained at the same level to the extent feasible. Areas to receive fill material of any classification shall be stripped of vegetation and topsoil to a minimum depth of twelve (12) inches prior to the placement of any fill material. Fill areas shall be maintained in a free-draining condition throughout the construction period.

4.5.2 Placement of Material: The CONTRACTOR shall place the fill material in horizontal lifts not exceeding six (6) inches before compaction and extending the entire length and width of the fill area or as directed by the ENGINEER.

4.5.3 Compaction of Materials: The CONTRACTOR shall be responsible for checking compaction during fill placement. Random checks will be conducted by the ENGINEER. The CONTRACTOR shall be attentive and not use excessive compactive force resulting in displacement of installed rockwrap and/or coir log or other in-place structures. The random checks shall be conducted by the ENGINEER following the placement of no more than two lifts. After the lifts are approved by the ENGINEER, placement of material may continue.

A specific soil density for compaction is not required, but all soil placement must receive the ENGINEER's approval. Compaction is to be accomplished by light duty compacting equipment such as a backhoe mounted hydraulic compactor or hand tampers. The ENGINEER, if deemed necessary, may increase or decrease the thickness of lifts, and/or the number of passes by equipment during the construction of the fill.

4.6 CONSTRUCTION TOLERANCES

The CONTRACTOR shall make every reasonable effort to construct the Project uniformly. Tolerances which will be allowed, before reworking of the constructed item is required, are as follows: 1) All areas shall be graded to conform with the slopes shown on the Drawings. 2) No payment will be made for any earthwork performed outside the limits shown on the Drawings unless approved by the ENGINEER. No extra material shall be removed or placed outside these limits without written approval. 3) The design intent is to leave a uniform surface suitable for re-vegetation in accordance with these Technical Specifications. The nature of the Project does not lend itself to the establishment of numerical standards for permissible deviation from the Drawings.

4.7 CLEARING AND GRUBBING

4.7.1 General: This item is considered incidental to the areas requiring earthwork. Trees, snags, logs, stumps, shrubs and rubbish shall be removed only as is necessary to construct the shoreline stabilization measures in the targeted construction area shown on the Drawings. The Contractor shall consider all material to be encountered in this project. This shall include but not be limited to submerged trees and stumps.

The method of removal and disposal and equipment to be utilized shall be outlined in the Contractor's Plan of Operation to be submitted to the Owner prior to initiation of the actual work. The temporary stockpiling of excavation spoil shall be confined at all times so that sediment does not re-enter the lake.

4.7.2 Disposal: All cleared and grubbed material shall be disposed of in a manner acceptable to the ENGINEER and in a manner not detrimental to the inhabitants of the area. If the CONTRACTOR elects to dispose of these materials in a manner other than on site disposal, then the CONTRACTOR will be responsible for determining and complying with local ordinances regarding the disposal method and/or burning of such materials.

4.8 REQUIRED DOCUMENTATION

No documentation required.

4.9 MEASUREMENT AND PAYMENT

Excavation required for the project as listed in the scope of this specification shall not be paid directly, but shall be incidental to the installation of the shoreline stabilization techniques and shall be included in the various pay items of the contract in accordance with all specifications herein.

SECTION V

TECHNICAL SPECIFICATIONS

ROCKWRAP & VEGETATED COIR LOG

5.1 SCOPE

This work shall consist of furnishing all material, labor, equipment and incidentals necessary for rockwrap, vegetated coir log, and native seed armoring/re-vegetation of the designated sections of the shoreline as shown in the Drawings. The Contractor shall furnish and install rockwraps, vegetated coir logs, native seeds, and cocomats where specified on the Drawings as needed for shoreline armoring/re-vegetation. The contractor shall also furnish and install geotextile (filtration fabric) where specified on the Drawings as needed as a separation layer. All work will be performed in accordance with applicable provisions of these specifications and in reasonable close conformity with the lines, grades, and thicknesses shown in the Drawings.

5.2 SHAPING

Banks at which rockwraps and vegetated coir logs are to be placed are to be shaped only enough to provide fill as indicated in the plan details.

5.3 MATERIALS

5.3.1 Stone used in the construction of these structures shall meet the general requirements of the current INDOT Standard Specifications for #2 stone.

5.3.2 Filtration fabric to be placed for separation as indicated in the plan details as noted locations as directed by the engineer. Filtration fabric shall be Mirafi 140N or engineer approved equivalent.

5.3.3 All vegetated coir logs are to measure 16" diameter (12" diameter where installed without rockwrap) by 7' 6" in length, not including coupler. The density of the coir logs is to be 9 lbs/ft^3 uniformly compacted with 1 ft^3 = 15.25" at a maximum of 15% moisture content, with 3% maximum pith dust and foreign matter. All exterior netting is to be continuous and secure. The vegetated coir log is to have the following properties:

- Machine pressed uniformly compacted to 9 lbs/ft^3 (4.082 kg/m^3)
- Constant head permeability (ASTM D-2434) 16.3 cm/s.
- Hydraulic Transmissivity (ASTM D-4716) 0.00152 m^2/s @ 72 hrs
- Puncture Resistance (ASTM D488) 335.0 lbs. (152 kg)
- Moisture content 15% (WME) maximum
- Pith dust 2% maximum.
- Foreign matter (sand, etc.) 1% maximum
- Exterior Netting-

- Knotless polypropylene construction
- Thickness (ASTM D5199) 0.1" (0.254 cm)
- Grab Tensile (ASTM D 638) minimum 250 lbs. (113.4 kg)
- UV 250 kly
- Mesh bar length 1.0" (2.54 cm)

- Coupler-
  - Knotless polypropylene construction
  - 6" (15.24 cm) continuous extension of netting
  - Reference 6.3.2 for netting construction
  - 0.125" (3.175 mm) diameter by 4' 0" (1.219 m(long twisted nylon cinch cord
  - Stainless steel "S" hooks, wire diameter 0.1875" (4.762 mm) with an overall length of 1.81 " (4.597 cm), and a hook opening of 0.31" (7.874 mm).
  - 0.5 ft3 of loose coir fibre
- Vegetation – Vegetated coir logs must be installed in the fully vegetated condition. A minimum of three plant per lineal foot must be established and fully rooted through the bottom of the coir log. Planting of the coir log on site will not be permitted. Plant species are to include appropriate species of sedges, grasses, rushes, and forbs as submitted by qualified bidders subject to approval by the engineer.
- Anchoring System –
  - Hardwood Stakes
  - Rope
  - Geogrid

5.3.4 All geogrid for rock wrap construction shall be Tensar BX-1200 or engineer approved equivalent.

5.3.5 All cocomat for native seed installation shall be King Fibre Cocomat 7200 or engineer approved equivalent.

5.4 CONSTRUCTION METHODS

5.4.1 Rockwraps shall be placed at the locations shown on the Drawings. Minimum rockwrap depth is twelve inches. Minimum rockwrap width is 24". Rockwrap shape and construction to be in accordance with plan details. Geogrid for the rockwrap is to be lapped a minimum of twelve inches as shown on the Drawings.

5.4.2 Filtration fabric shall be placed as indicated in the plan details to provide separation. Fabric is to be lapped a minimum of twelve inches as shown on the Drawing.

5.4.3 Place vegetated coir logs onto the rockwrap and secure as indicated in the plan details. Install vegetated coir logs in prepared trenches or on prepared rockwrap seats that are continuous and parallel to the shoreline at the locations and elevations specified on the Detail Drawing

- Place vegetated coir log in trench end-to-end to create a continuous length
- Rotate vegetated coir log to orient plants in vertical upright position.

- Each vegetated coir log shall be installed end-to-end with coir fibre packed around the joint ensuring continuity allowing no gaps between adjacent vegetated coir logs.
- Extend coupler polypropylene netting to adjacent vegetated coir log resulting in a continuous log.
- Secure "S" hooks and cinch rope.
- Install anchoring systems in configuration and dimensions as indicated by the plan details.
- Secure vegetated coir log with appropriate anchoring technique as indicated by the plan details. Alternate anchoring as directed by site conditions shall be proposed in writing for engineer approval.
- Install ends of first and last vegetated coir logs in trench excavated at 45° to shoreline. Secure ends with appropriate anchoring technique and backfill trench and manually compact.

5.4.4 Place vegetated coir logs in the locations where no rock wrap is required in the manner indicated in section 5.4.3 and by the plan details. A rounded trench is to be excavated parallel to the shoreline. Trench is to be 4" deep and 10 ½" wide with a rounded bottom. Trench bottom is to be 2" below normal pool elevation and is to be excavated following the shoreline for the lengths and extents shown on the Drawings.

At beginning and end points of the vegetated coir log installation, a trench is to be excavated extending from the end of the 6" rounded trench to at least five feet into the shore at a 45° angle to the normal shoreline. Angled trench is to be at least 2' deep at the end of the trench for securing the end of the coir log. See Details Drawing. No vegetation is to be removed unnecessarily.

5.4.5 Place native seeds and cocomat in the locations and manner as indicated by the plan details.

5.5 MAINTENANCE

Begin maintenance of installed vegetated coir logs immediately after each installation and continue until acceptable vegetation is established, but not to be less than 60 days after date of Substantial Completion.

Maintain and establish Coir logs by watering, fertilizing, weeding, replanting, avoid mowing equipment, and other operations. Replant bare areas to produce a uniform vegetal cover. Watering: Provide and maintain temporary piping, hoses, or other lawn-watering equipment to convey water from sources and to keep Coir logs uniformly moist to a depth of 4 inches (100 mm). Provide a temporary watering system where a permanent system is not provided. Lay out temporary lawn-watering system and arrange watering schedule to prevent wilting. Ensure Coir logs receive water at a rate of 1-inch (25 mm) per week minimum.

5.6 REQUIRED DOCUMENTATION

The CONTRACTOR shall furnish Certificates of Compliance from the supplier of the riprap, #2 stone, filtration fabric, vegetated coir logs, native seeds, and cocomats in accordance with Article 1.14 of these Technical Specifications. The CONTRACTOR shall also submit to the OWNER all weigh tickets on the quantity of stone used.

5.7 MEASUREMENT AND PAYMENT

Payment for shoreline stabilizatrion shall be at the Unit Price specified in the Bid Schedule for the quantity installed and will constitute full compensation for materials, labor, equipment, and incidentals to the installation described herein.

SECTION VI

TECHNICAL SPECIFICATIONS

NATIVE SEEDING & ESTABLISHMENT

6.1 SCOPE

This work shall consist of furnishing all labor, equipment, and material for removing unwanted vegetation, controlling invasive species, preparing the seedbed, seeding, soil additives and their application, and mulching. All areas indicated by the plan details shall be re-vegetated in accordance with these specifications except when bank materials or land use conditions are such that vegetation is impractical and authorized by the Owner.

6.2 MATERIALS

6.2.1 Fertilizer: Never fertilize the native seed installation or established area.

6.2.2 Seed: Seed shall be applied to all areas in as indicated by the plan details. Any exception shall be authorized by written consent of the ENGINEER.

Seed shall be weed-free containing no noxious seed as listed in I.C. 15-4-1-3 (e) and in 360 I.A.C. 1-1-5 and 360 I.A.C. 1-1-6.

Certification of native seed from seed vendor for each seed mixture stating the botanical and common name and PLS, not bulk weight, of each species and variety, and percentage of purity, germination and weed seed. Include the year of production and date of packaging. Seed shall be furnished fully tagged and labeled in accordance with the state laws and the U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act in effect on the date of invitations for bids. All seed must be from the latest crop available, being harvested no more than nine (9) months prior to the date of delivery to the site. Any seed, which has become wet, moldy or otherwise damaged in transit or storage will not be accepted. Pre-mixed seed will be acceptable with appropriate certifications.

6.2.3 Mulch: Mulch shall be Cocomat 7200 or engineer approved equivalent.

6.2.4 Seeding Warranty: The CONTRACTOR shall be advised that he is required to establish and maintain for two years the specified stand of native vegetation. If during the warranty period, it becomes evident that any particular species is absent or weak, the CONTRACTOR shall take all steps necessary to meet the specifications, at no additional cost to the OWNER. The CONTRACTOR shall utilize all measures necessary, including irrigation and invasive weed control, to establish this native vegetation.

6.3 SEED APPLICATION: The permanent seed mixture shall consist of native grasses and native forbs from the following list.

Grasses

Little Bluestem	*Andropogon scoparius*
Virginia wild rye	*Elymus virginicus*
Canadian Wild Rye	*Elymus canadensis*
Indian Grass	*Sorghastrum nutans*
Riverbank Wild Rye	*Elymus riparius*
Switchgrass	*Panicum virgatum*
Big Bluestem	*Andropogon gerardii*

Wildflowers

Swamp milkweed	*Asclepias incarnata*
Butterflyweed	*Asclepias tuberosa*
New England aster	*Aster novae-angliae*
White False Indigo	*Babtisia leucantha*
Wild Senna	*Cassia hebecarpa*
Partridge Pea	*Cassia fasciculata*
Pale Purple Coneflower	*Echinacea pallida*
Purple Coneflower	*Echinacea purpurea*
Rattlesnake Master	*Eryngium yuccifolium*
False Sunflower	*Heliopsis helianthoides*
Autumn Sneezeweed	*Helenium autumnale*
Western Sunflower	*Helianthus occidentalis*
Wild Bergamot	*Monarda fistulosa*
Wild Quinine	*Parthenium integrifolium*
Foxglove beardtongue	*Penstemon digitalis*
White Prairie Clover	*Petalostemum candidum*
Purple Prairie Clover	*Petalostemum purpureum*
Grey Headed Coneflower	*Ratibida pinnata*
Black Eyed Susan	*Rudbeckia hirta*
Sweet Black Eyed Susan	*Rudbeckia subtomentosa*
Cupplant	*Silphium perfoliatum*
Prairie Dock	*Silphium terebinthinaceum*
Grey's Goldenrod	*Solidago nemoralis*
Stiff Goldenrod	*Solidago rigida*
Spiderwort	*Tradescantia ohioensis*
Hoary Vervain	*Verbena stricta*
Blue Vervain	*Verbena hastata*
Culvers Root	*Veronicastrum virginica*

Appropriate species are to be submitted by qualified bidders and are subject to engineer approval. Seed shall be applied at the rate of 12 to 20 pounds per 1,000 square feet. Hydro-seeding may not be utilized. No non-native cover crops will be allowed. Under no circumstances shall the site be stabilized with winter rye, grain rye, or winter wheat; these plants produce toxins, preventing native seed germination.

20% of all seed shall be saved and over-seeded the first fall after installation

6.4 SEEDBED PREPARATION

Herbicide application shall be performed a minimum of three times. Never apply fertilizer to the site. Examine areas to receive native seeding for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected. Verify the site is within 4 inches of specified grade. Verify that the seedbed is sufficiently firm. Verify that the site is clean and free of debris

Site shall have a firm seed bed. If walking compacts soil over ½ inch, the site shall be culti-packed. Seedbed preparation shall be suspended when soil conditions are not suitable for the preparation of a satisfactory seedbed.

6.5 SEEDING

The specified mixtures of pure live seed (PLS) will be used on all areas indicated by the plans and details.

6.6 MULCHING

100% Biodegradable Woven Coir Mat King Fibre CocoMat 7200 or engineers equivalent. Include manufacturer's recommended untreated, 11 gauge steel wire and wood staples, 8 inches long. Staples to be applied at a minimum rate of one staple per every 3 square feet.

6.7 MAINTENANCE

Begin maintenance of native seed installation immediately after each area is planted and continue until acceptable vegetal coverage is established. This will be a minimum of two years from the date of substantial completion. If cool season weed and/or invasive woody species growth is heavy after the completion of the two year maintenance agreement, the installing contractor shall train the owner or owner's agent regarding the continued control of cool season and invasive woody species. Maintain, establish, re-grade, replant, maintain, and establish bare or eroded areas and re-mulch to produce a uniformly smooth native seed installation free of eroded or bare areas.

Watering: Provide, maintain, and otherwise arrange temporary piping, hoses, or other watering equipment to convey water from sources and to keep native seed installation

uniformly moist to a depth of 4 inches (100 mm). Provide a temporary watering system where a permanent system is not provided.

1. Lay out temporary watering system and arrange watering schedule to prevent wilting, puddling, erosion and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly seeded area.
2. Ensure native seed installation receives water at a rate of 1 inch (25 mm) per week minimum.

6.8 REQUIRED DOCUMENTATION

The CONTRACTOR shall provide the ENGINEER with a copy of the soil analysis completed on the seeding areas as stated herein. If pre-mixed seed is used, the CONTRACTOR shall provide a copy of the appropriate certification to the ENGINEER. This documentation must be submitted before the work begins. The CONTRACTOR shall also submit to the ENGINEER certifications and weigh tickets on the seed mixture.

6.9 MEASUREMENT AND PAYMENT

Payment of the total lump sum price for Native Seeding and Establishment will constitute full compensation for all labor, materials, equipment, and all other items necessary for and incidental to completion of this element of work. If the CONTRACTOR elects to disturb areas beyond that which is absolutely necessary to accomplish the work, no additional payment will be made for restoration and mulched seeding of those additional areas.