PROPOSAL
HENRY COUNTY
DEPARTMENT OF HIGHWAYS
REPLACEMENT OF HENRY COUNTY
BRIDGE V-11.80
PROJECT NO. B-1201

Timothy J. Schumm, County Engineer
Robert E. Hastedt, County Commissioner
Richard C. Myers, County Commissioner
Thomas H. VonDeylen, County Commissioner

LETTING – July 10, 2012 at 10:00 A.M.

DO NOT SUBMIT MORE THAN ONE PROPOSAL FOR EACH BID

Submitted By:_____

Street:_____

Post Office:_____

State:_____ Zip Code:_____

Telephone Number:_____ Fax Number:_____

E-Mail: _____

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Replacement of Henry County Bridge V-11.80

LEGAL NOTICE
NOTICE TO CONTRACTORS

Notice is hereby given that sealed proposals will be received at the office of the Board of County Commissioners, Henry County, Ohio until Tuesday, July 10, 2012 at 10:00 A.M. for furnishing all services, labor, materials and equipment necessary for the improvement of the following project:

Project	Section
B-1201	Replacement of Henry County Bridge V-11.80

Bidding documents, plans and specifications will be issued at the Office of the County Engineer upon receipt of a non-refundable charge of $10.00 per set. One display copy will be available for inspection at the Office of the County Engineer. The bidding documents are also available on the Henry County Engineer's website http://www.henrycountyengineer.com under the link "Bid Request Listing".

A portion of the project will be funded by the Local Transportation Improvements Program as administered by the Ohio Public Works Commission.

All Contractors and Subcontractors involved with the project will, to the extent practicable use Ohio products, materials, services and labor in the implementation of their project. Additionally, Contractor compliance with the equal employment opportunity requirements of the Ohio Administrative Code Chapter 123, the Governor's Executive Order of 1972 and the Governor's Executive Order 84-9 shall be required.

Domestic steel use requirements as specified in Section 153.011 of the Revised Code apply to this project. Copies of Section 153.011 of the Revised Code can be obtained from any of the offices of the Department of Administrative Services.

Each bidder is required to file with this bid a bid guarantee in the form of either:

1. A bond, executed by a surety company authorized to do business in the State of Ohio, for the full amount bid; or
2. A certified check, cashier's check or letter of credit pursuant to Chapter 1305 of the Ohio Revised Code, in the amount of ten (10%) percent of the bid.

Bid guarantee must be provided that if the contract be awarded on such bid, the bidder will enter into a contract and the performance of it will be properly secured. The successful bidder, if using a 10% bid guarantee, shall be required to provide a contract performance and payment bond, executed by a surety company authorized to do business in the State of Ohio, for the full amount of the bid.

Estimated total cost of the improvement is $178,100.00.

Prevailing Wage Rates per Section 4115 of the Ohio Revised Code shall prevail on said project.

The contract will be awarded to the lowest and best bidder.

The said Board reserves the right to reject any or all bids.

BY ORDER OF
THE BOARD OF HENRY COUNTY COMMISSIONERS
HENRY COUNTY, OHIO
By: Vicki R. Glick, Clerk

Please publish the above Legal Notice
June 19, 2012

NOTICE TO BIDDERS

INSURANCE

Bidders that are prequalified with the Ohio Department of Transportation as per Item 102.01 of ODOT's "Construction and Materials Specifications" at least ten (10) days before the date of the bid opening have demonstrated that they maintain proper insurance coverage may waive the insurance requirement of these specifications.

Those bidders that are not prequalified with the Ohio Department of Transportation must show proof, with Certificate of Insurance, the following insurance requirements.

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:

Claims under Worker's Compensation, disability benefit and other similar employee benefit acts;

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

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

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

Certificates of insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. The County, its elected officials and employees shall be named as additional insureds with respect to all activities under any contract resulting from this bidding. These certificates shall contain a provision that coverage afforded under policies will not be canceled unless at least thirty (30) days prior WRITTEN NOTICE has been given to the OWNER. The CONTRACTOR must replace certificates for any insurance expiring prior to the effective end date under any contract resulting from this bidding.

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

CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims from 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 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 $1,000,000 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 $1,000,000 aggregate for any damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than $1,000,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than $1,000,000 aggregate for any such damage sustained by two or more persons in any one accident.

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. Worker'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 Worker'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 are not protected under Worker'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. A copy of the CONTRACTOR'S valid Worker's Compensation certificate shall be submitted with this bid.

INDEMNIFICATION/HOLD HARMLESS

The CONTRACTOR shall indemnify and hold harmless the County, its agents and employees from any and all losses, claims, damages, lawsuits, costs, judgments, expenses or any other liabilities which they may incur as a result of bodily injury, sickness, disease or death, or injury to or destruction of tangible property including the loss of use resulting therefrom, caused in whole or part by the negligent act or omission of the CONTRACTOR, any SUBCONTRACTOR, any person directly or indirectly employed by any of them or any person for whose acts any of them may be liable.

PROJECT SCOPE

The project consists of the replacement of Henry County bridge V-11.80. The bridge is to be replaced with four-sided box culvert. The project location is on County Road V between State Route 108 and Road 13 in Freedom Township. All work shall be completed as per the project proposal and plans. An alternate bid for a cast-in-place reinforced concrete four-sided box culvert is included as bid item 23. Specifications for the cast-in-place reinforced concrete box culvert are included in Appendix D.

SPECIFICATIONS

The Standard Specifications of the State of Ohio Department of Transportation dated January 1, 2010 together with any modifications to same as stated in this proposal shall govern these improvements.

SPECIFIC PROJECT NOTES

The contractor shall supply the Engineer with load rating report signed by a professional engineer for each new bridge structure. The analysis shall be performed for AASHTO HS20 loading for both inventory and operating levels and for four Ohio Legal Loads (2F1, 3F1, 4F1 and 5C1) at operating level. Method of analysis and submission of report shall be per the requirements of the ODOT Bridge Design Manual section 900. Cost for the load rating report shall be included in the price for Item 603, Conduit Type A, 706.05 Precast Reinforced Concrete Box Sections.

Seeding and mulching to be completed by County.

ODOT Item 401.20 Asphalt Binder price adjustment does not apply.

All 448 material shall to the extent practicable, be placed at full width.

All aggregates used shall be quarry run aggregate from an O.D.O.T. approved source. The course aggregates used in the asphalt mixes shall be from crushed stone or gravel. The fine aggregates used in the mix designs shall be of natural sand or sand manufactured from stone or gravel. There shall be **NO** slag materials allowed in any mix design.

"Formed or Butt-Type" construction joints shall be constructed at all pavement termini and at all interruptions to the continuous placement of 448 material (weather, end of day, etc.). Cost for same shall be included in the price for Item 448 Concrete Surface Course, Type I.

The backfill for the Concrete Box shall be 304 aggregate under the roadway.

The Contractor shall confine his work area within the right-of-way and proposed work limits as shown on the plans.

MAINTENANCE AND GUARANTEE PERIOD

The CONTRACTOR shall be responsible for all construction for one (1) year after project completion and acceptance. The CONTRACTOR shall make corrections as necessary by reason of noted defects. The Trustees will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR fails to make repairs, adjustments or complete other work which may be required by such defects, the Engineer may do so and charge the CONTRACTOR the costs incurred.

TESTING

The Henry County Engineer reserves the right to engage an independent testing laboratory to obtain product and material samples, verify compaction, etc. to determine conformance with specifications of all material used at the project site. Materials deemed unacceptable shall be dealt with in accordance to ODOT Spec. 106.07 and related specification sections.

Unless otherwise designated, tests required on materials and products in accordance with AASHTO, ASTM or methods on file in the office of the Director will be made by and at the expense of the CONTRACTOR.

All aggregate used in conjunction with this project must be from an ODOT prequalified source.

MAINTAINING TRAFFIC

Local traffic only shall be maintained for access to and from home sites. Lights, signs and barricades shall be provided by the CONTRACTOR and placed in accordance with the Ohio Manual of Uniform Traffic Control Devices. Maintaining traffic in accordance with the above provisions shall be included for payment in the lump sum for Item 614, Maintaining Traffic.

The Contractor shall, in addition to the general requirements of Item 614 on the project, perform the following:

Provide, erect and maintain standard 48" x 30" "Road Closed" sign supports, and lights at the locations indicated on the plan sheets during the period in which the affected road is closed to traffic.

Sign supports and lights for "Road Closed" signs shall be as detailed in the Ohio Manual of Uniform Traffic Control Devices. Payment for providing, erecting, maintaining, and removing lights, signs, and sign supports shall be included in the lump sum price bid for Item 614, Maintaining Traffic.

UNDERGROUND UTILITIES

Prior to any construction requiring excavation activity, the CONTRACTOR shall contact the Ohio Utility Protection Service (OUPS) at 1-800-362-2764 for location of any underground utilities at least two (2) working days prior to any activity. Non-OUPS members must be called directly.

NOTICE OF INTENT TO COMMENCE WORK

The CONTRACTOR shall provide the Engineer with a minimum of 48 hours advance notice prior to the commencement of any work.

AWARD OF PROJECT

The bid will be tabled at the formal opening; award of the project will be made at the time designated by the County Commissioners following a review to verify bid compliance with all requirements. Bidders shall guarantee their bid for sixty (60) days from the date of the bid opening.

PROJECT COMPLETION DATE

The project shall be completed on or before October 31, 2012.

For each calendar day that any work shall remain uncompleted after the stated completion date the appropriate sum, in accordance with the schedule of liquidated damages per Section 108.07 of the Standard Specifications of the State of Ohio Department of Transportation, will be deducted from any monies due the CONTRACTOR, not as a penalty but as liquidated damages; provided however, that due account shall be taken of any adjustment of the completion date granted by the Board of County Commissioners of Henry County.

Once a roadway is closed for commencement of the project, the CONTRACTOR shall proceed without undue delay to complete the project in a timely manner and avoid prolonged interruption of traffic on the roadway. Delays in the work following an initial start which are not attributable to weather or seasonal conditions shall be considered days beyond completion and the CONTRACTOR will have deducted from any monies due him according to the schedule of liquidated damages per Section 108.07 of the Standard Specifications of the State of Ohio Department of Transportation.

A work day will be counted as lost if the CONTRACTOR'S efficiency is reduced more than fifty (50%) percent on the critical items under construction at that time. Weekends and holidays will not be counted as lost work days.

PREPARATION OF PROPOSAL

The blank spaces in the proposal must be filled in correctly, where indicated, and written in ink.

BID PROPER

The bidder is required to fill in, in the "Unit Price Bid" column, a unit price for addition opposite each item for which there is a quantity given in the "Approximate Unit Quantities" column. The gross sum of the totals in the "Total Amount Bid" column shall equal the sum (shown on Page 11 of this proposal) for the work.

The total given on Page 9 is only for the convenience of the Henry County Commissioners in reading bids.

The unit prices specified in the "Unit Price Bid" column will govern the award of the Contract. The unit prices bid shall remain in effect and held firm during the term of the

Contract.

The CONTRACTOR shall make extensions in the "Total Amount Bid" column and also add up the totals. However, the unit prices specified, together with the approximate quantities shall determine the total amount of the bid. If there is an error made in the extensions by the Bidder, the total shall be changed as only the unit prices shall govern.

The quantities in the "Approximate Unit Quantities" column are those given in the Engineer's approximate estimate and are those which will be used in determining the total amount of each proposal for this improvement and for the purpose of determining the lowest bidder. It is understood that these quantities are approximate only. The bidder must give a unit price for each item listed. Failure to do so will render the bid informal at the discretion of the Henry County Board of Commissioners.

BID GUARANTEE

Payable to the Henry County Board of Commissioners.

Each bidder is required to file with his bid a bid guarantee in the form of either:

1. A bond, executed by a surety company authorized to do business in the State of Ohio, for the full amount of the bid; or

2. A certified check, cashier's check or letter of credit pursuant to Chapter 1305 of the Ohio Revised Code, in the amount of ten (10%) percent of the bid, payable to the Henry County Board of Commissioners.

Bid guarantee must be provided as guarantee that if the contract be awarded on such bid, the bidder will enter a contract and the performance of it will be properly secured. The successful bidder if using a 10% bid guarantee, shall be required to provide a contract performance and payment bond, executed by a surety company authorized to do business in the State of Ohio, for the full amount of the bid.

ADDRESS

Proposal must be sealed and addressed:

Board of Henry County Commissioners
1853 Oakwood Avenue
Napoleon, OH 43545

with envelope marked: Project No. B-1201, Replacement of Henry County Bridge V-11.80 and with the name and address of the bidder.

TIME

Bids are to be opened at 10:00 A.M., Tuesday, July 10, 2012.

PLACE

Office of the Board of Henry County Commissioners
1853 Oakwood Avenue
Napoleon, OH 43545

OHIO PRODUCTS

CONTRACTORS and SUBCONTRACTORS shall, to the extent practicable, use Ohio products, materials, services and labor in connection with the project. Domestic steel use requirements as specified in Section 153.011 of the Revised Code apply to this project. Copies of Section 153.011 of the Revised Code can be obtained from any of the office of the Department of Administrative Services.

COMPLIANCE NOTES

PREVAILING WAGE RATES AS PER SECTION 4115 OF THE OHIO REVISED CODE SHALL PREVAIL ON THIS PROJECT.

A COPY OF THE APPLICABLE WAGE RATES MAY BE OBTAINED FROM THE STATE OF OHIO WAGE AND HOUR DIVISION VIA THE INTERNET AT THE FOLLOWING WEB SITE: http://www.com.ohio.gov/laws

SHOULD THE BIDDER NOT HAVE ACCESS TO THE INTERNET, A COMPLETE SET OF THE APPLICABLE WAGE RATES ARE AVAILABLE AT THE OFFICE OF THE HENRY COUNTY ENGINEER. A COPY WILL BE PROVIDED IF REQUESTED.

THE SUCCESSFUL BIDDER WILL BE PROVIDED A HARD COPY OF THE PREVAILING WAGE RATES AS A PART OF THE CONTRACT DOCUMENTS.

ANY RATE CHANGES RECEIVED FROM THE STATE WAGE AND HOUR DIVISION DURING THE TERM OF THE CONTRACT WILL BE PROVIDED IN HARD COPY TO THE CONTRACTOR.

THE HENRY COUNTY ENGINEER IS AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER. THE CONTRACTOR SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF 153.59 AND 153.60 OF THE OHIO REVISED CODE WITH RESPECT TO DISCRIMINATION AND INTIMIDATION ON ACCOUNT OF RACE, CREED, SEX ;HANDICAP OR COLOR.

THE CONTRACTOR IS REMINDED THAT COMPLETE COMPLIANCE WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS CURRENTLY IN EFFECT IS MANDATORY ON ALL WORK COMPLETED UNDER THIS PROPOSAL/CONTRACT.

To: Board of County Commissioner and
Engineer of Henry County, Ohio

The undersigned, having full knowledge of the site and specifications for the following improvements and the conditions of this proposal hereby agrees to furnish all services, labor, materials and equipment necessary to complete the entire project according to the specifications and completion time, and to the acceptance of the Board of County Commissioners and Engineer of Henry County, and to accept the unit prices specified for each item as full compensation for the work in this proposal.

The total amount of the bid, based on the approximate quantities given and the unit prices specified by the bidder amount the SUM OF _____

_____

DOLLARS ($_____).

UNIT PRICE CONTRACT

The undersigned further agrees to accept the following "Unit Bid Prices" in compensation for any additions or deductions caused by any changes or alterations in the specifications of the work. The unit prices bid shall remain in effect and held firm during the term of the contract.

The "Gross Sum" of the totals in the "Total" column shall equal the sum (Given Above) bid for the work.

(Bid sheets can also be found in Microsoft Excel format online)

Ref. No.	Item No.	Approx. Unit Quantities	Item	ITEMIZED PROPOSAL			
				Unit Price		Total Unit Price Bid	TOTAL AMOUNT BID
				Labor	Materials		
Bridge V-11.80							
			Roadway				
1	201	Lump Sum	Clearing and Grubbing	Lump	Sum		
2	202	169 LF	Guardrail Removed (As Per Plan)				
3	202	Lump Sum	Gabions Removed	Lump	Sum		
4	202	59 LF	Pipe Removed, 24” & Under				
5	202	Lump Sum	Structure removed (V-11.80) Over 20’ Span (Includes Concrete Approach Slab, Concrete Headwall, and Concrete Wingwalls)	Lump	Sum		
6	203	112 CY	Excavation (Includes Full Depth Pavement Removal As Shown on Plan)				
7	203	172 CY	Embankment				
8	204	231 SY	Subgrade Compaction				
			TOTAL ROADWAY				
			Erosion Control				
9	601	83 CY	Rock Channel Protection, Type D without Filer (As Per Plan)				
			TOTAL EROSION CONTROL				
			Drainage				
10	503	Lump Sum	Unclassified Excavation (includes any cuts and Fills Required to Satisfy any OSHA Trench Requirements)	Lump	Sum		
11	512	130 SY	Type 2 Membrane Waterproofing (See General Notes, Sheet 2)				
12	603	24 LF	15” Conduit, Type C, 707.33 (to include 2-15” 45° Elbows)				
13	Spec	1 EA	Tile Tap (6” Tile Tapped to 15” Tile)				
14	603	Lump Sum	Conduit, Type A, 706.05 Precast Reinforced Concrete Four Sided Box Culvert, 20’ Span x 9’ Rise x 36 LF - 0 degree skew, to include all Footings and Wingwalls (As Per Plan)	Lump	Sum		
			TOTAL DRAINAGE				

Ref. No.	Item No.	Approx. Unit Quantities	Item	ITEMIZED PROPOSAL Unit Price Labor	Unit Price Materials	Total Unit Price Bid	TOTAL AMOUNT BID
			Pavement				
15	301	30 CY	Asphalt Concrete Base				
16	304	37 CY	Aggregate Base				
17	407	10 GAL	Tack Coat (Applied at the Rate of 0.05 Gal/SY)				
18	448	8.5 CY	Asphalt Concrete Surface Course, Type 1				
			TOTAL PAVEMENT				
			MISCELLANEOUS				
19	614	Lump Sum	Maintaining Traffic	Lump	Sum		
20	623	Lump Sum	Construction Layout Stakes	Lump	Sum		
21	624	Lump Sum	Mobilization	Lump	Sum		
22	103.05	Lump Sum	Contract Performance and Payment Bond	Lump	Sum		
			TOTAL MISCELLANOUS				
			TOTAL AMOUNT BID				
			ALTERNATE BID				
23	Special	Lump Sum	Conduit, Type A, Cast-In-Place Reinforced Concrete Four Sided Box Culvert on Concrete Footings, 20' Span x 9' Rise x 36 LF - 0 degree skew, to include all Footings and Wingwalls (As Per Plan) – Alternate Bid	Lump	Sum		
			TOTAL AMOUNT BID				

If the alternate bid is awarded, it will replace ODOT Item 603, Conduit, Type A, 706.05 Precast Reinforced Concrete Four-Sided Box Culvert on Concrete Footings, 20' Span x 9' Rise x 36 LF – 0 degree skew, to include all footings and wingwalls (as per plan). If the alternate bid is awarded, the Bidder's bid total will then be the alternate bid added to the base bid less the amount bid for ODOT Item 603, Conduit, Type A, 706.05 Precast Reinforced Concrete Four-Sided Box Culvert on Concrete Footings, 20' Span x 9' Rise x 36 LF – 0 degree skew, to include all footings and wingwalls (as per plan).

(Name of Corporation)
* Please staple certified check, cashier's check, letter of credit, or bid guarantee bond here *
(This page must be executed, in the appropriate place, prior to submission of this bid.)

WRITTEN CONTRACT

On acceptance of the Proposal for said work, I/we do hereby bind myself/ourselves this _____day of _____, 2012, to enter into a written contract with the HENRY COUNTY BOARD OF COMMISSIONERS within ten (10) days from the notice of award.

IF AN INDIVIDUAL, SIGN BELOW:

_____ _____
(Name) (Post Office Address)

IF AN INDIVIDUAL DOING BUSINESS UNDER A TRADE NAME, SIGN BELOW:

_____ _____
(Trade Name) (Post Office Address)

_____Sole Owner

By:_____

IF A PARTNERSHIP, SIGN BELOW:

_____ _____
(Name of Partnership) (Post Office Address)

By_____ _____
(Post Office Address)

_____ _____
(Partner) (Post Office Address)

_____ _____
(Partner) (Post Office Address)

_____ _____
(Partner) (Post Office Address)

IF A JOINT BID, SIGN BELOW:

_____ _____
(Name) (Name)

By_____ By_____

_____ _____
(Post Office Address) (Post Office Address)

IF A CORPORATION BID, SIGN BELOW:

_____

Incorporated under the laws of the State of _____

By_____ (Signature)
_____ Title of Officer Signing

BID GUARANTY AND
CONTRACT BOND

_____
(Section 153.57l, Ohio Revised Code)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned_____
_____
(Name and Address)
as Principal and _____
_____
(Name of Surety)
_____ as Surety, are hereby held and firmly bound unto _____ Ohio as Obligee in the penal sum of the dollar amount of the bid submitted by the Principal to the Obligee on _____ to undertake the project known as:_____
_____

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, Incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee. In no case shall the penal sum exceed the amount of _____ dollars ($_____).
(if the above line is left blank, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if completed, the amount stated must not be less than the full amount of the bid, including alternates, in dollars and cents. A percentage is not acceptable.) For payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above named Principal has submitted a bid on the above referred to project;

NOW, THEREFORE, if the Obligee accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to the Obligee the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid and such larger amount for which the Obligee may in good faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the Obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the Principal will pay the Obligee the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing and mailing notices to prospective bidders, whichever is less, then his obligation shall be null and void, otherwise to remain in full force and effect. If the Obligee accepts the bid of the Principal, within ten days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein; and

IF THE SAID Principal shall well and faithfully perform each and every condition of such contract; and indemnify the Obligee against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefor; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any materialism or laborer having a just claim, as well as for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full 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 SAID Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans and specifications therefor shall in any wise affect the obligation of said Surety on its bond, and it does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED This _____day of _____, 2012.

PRINCIPAL:

_____

By:_____

Title:_____

Surety:_____

_____

By:_____
(Attorney-in-Fact)

SURETY COMPANY ADDRESS:

_____
Street

_____
City State Zip

_____
Telephone

SURETY AGENT'S ADDRESS:

_____
Agency Name

_____
Street

_____
City State Zip

_____
Telephone

NOTE: Failure by any party to sign Bid Guaranty and Contract Bond shall result in rejection of bid.

NON-COLLUSION AFFIDAVIT

State of Ohio
County of _____: ss.

I, _____, _____
(Name of Party Signing Affidavit) (Title)

being duly sworn, do depose and say:

That_____
(Insert name of individual, Co-partnership, or Corporation)

its agents, officers or employees have not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.

_____
(Signature)

_____
(Title)

Sworn to and subscribed before me this _____ day of _____, 2012.

_____
Notary Public in and for

_____ County, Ohio

(Seal)

My commission expires:

_____, 20____

VERIFICATION OF "NO FINDING FOR RECOVERY"

No political subdivision shall award a contract for goods, services, or construction to a person against whom a Finding for Recovery has been issued by the Auditor of State, if the Finding for Recovery is unresolved.

The undersigned, by their signature and title, document that no "Finding for Recovery" is outstanding for the bidder.

_____

By:

_____

Title

APPENDIX A

********** **FOR INSTRUCTIONAL USE ONLY** **********

READ BEFORE COMPLETING YOUR DMA FORM

Forms not conforming to the specifications listed below or not submitted to the appropriate agency or office will not be processed.

- To complete this form, you will need a copy of the Terrorist Exclusion List for reference. The Terrorist Exclusion List can be found on the Ohio Homeland Security Web site at the following address:

  http://www.homelandsecurity.ohio.gov/dma/dma.asp

- Be sure you have the correct DMA form. If you are applying for a state issued license, permit, certification or registration, the "State Issued License" DMA form must be completed (HLS 0036). If you are applying for employment with a government entity, the "Public Employment" DMA form must be completed (HLS 0037). If you are obtaining a contract to conduct business with or receive funding from a government entity, the "Government Business and Funding Contracts" DMA form must be completed (HLS 0038).

- Your DMA form is to be submitted to the issuing agency or entity. "Issuing agency or entity" means the government agency or office that has requested the form from you or the government agency or office to which you are applying for a license, employment or a business contract. For example, if you are seeking a business contract with the Ohio Department of Commerce's Division of Financial Institutions, then the form needs to be submitted to the Department of Commerce's Division of Financial Institutions. Do NOT send the form to the Ohio Department of Public Safety UNLESS you are seeking a license from or employment or business contract with one of its eight divisions listed below.

- Department of Public Safety Divisions:

  Administration
  Ohio Bureau of Motor Vehicles
  Ohio Emergency Management Agency
  Ohio Emergency Medical Services
  Ohio Homeland Security*
  Ohio Investigative Unit
  Ohio Criminal Justice Services
  Ohio State Highway Patrol

- * DO **NOT** SEND THE FORM TO OHIO HOMELAND SECURITY UNLESS OTHERWISE DIRECTED. FORMS SENT TO THE WRONG AGENCY OR ENTITY WILL NOT BE PROCESSED.

********** **FOR INSTRUCTIONAL USE ONLY** **********

OHIO DEPARTMENT OF PUBLIC SAFETY
EDUCATION · SERVICE · PROTECTION

OHIO HOMELAND SECURITY
http://www.homelandsecurity.ohio.gov

GOVERNMENT BUSINESS AND FUNDING CONTRACTS

In accordance with section 2909.33 of the Ohio Revised Code

DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE TO A TERRORIST ORGANIZATION

This form serves as a declaration by an applicant for a government contract or funding of material assistance/nonassistance to an organization on the U.S. Department of State Terrorist Exclusion List ("TEL"). Please see the Ohio Homeland Security Division Web site for a copy of the TEL.

Any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided. Failure to disclose the provision of material assistance to such an organization or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree.

For the purposes of this declaration, "material support or resources" means currency, payment instruments, other financial securities, funds, transfer of funds, and financial services that are in excess of one hundred dollars, as well as communications, lodging, training, safe houses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel, transportation, and other physical assets, except medicine or religious materials.

COMPLETE THIS SECTION ONLY IF YOU ARE AN INDEPENDENT CONTRACTOR

LAST NAME	FIRST NAME	MI

HOME ADDRESS

CITY	STATE	ZIP	COUNTY

HOME PHONE	WORK PHONE
( )	( )

COMPLETE THIS SECTION ONLY IF YOU ARE A COMPANY, BUSINESS OR ORGANIZATION

BUSINESS/ORGANIZATION NAME	PHONE
	( )

BUSINESS ADDRESS

CITY	STATE	ZIP	COUNTY

BUSINESS/ORGANIZATION REPRESENTATIVE NAME	TITLE

DECLARATION

In accordance with section 2909.32 (A)(2)(b) of the Ohio Revised Code

For each question, indicate either "yes," or "no" in the space provided. Responses must be truthful to the best of your knowledge.

1. Are you a member of an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☐ No
2. Have you used any position of prominence you have with any country to persuade others to support an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☐ No
3. Have you knowingly solicited funds or other things of value for an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☐ No
4. Have you solicited any individual for membership in an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☐ No
5. Have you committed an act that you know, or reasonably should have known, affords "material support or resources" to an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☐ No
6. Have you hired or compensated a person you knew to be a member of an organization on the U.S. Department of State Terrorist Exclusion List, or a person you knew to be engaged in planning, assisting, or carrying out an act of terrorism? ☐ Yes ☐ No

If an applicant is prohibited from receiving a government contract or funding due to a positive indication on this form, the applicant may request the Ohio Department of Public Safety to review the prohibition. Please see the Ohio Homeland Security Web site for information on how to file a request for review.

CERTIFICATION

I hereby certify that the answers I have made to all of the questions on this declaration are true to the best of my knowledge. I understand that if this declaration is not completed in its entirety, it will not be processed and I will be automatically disqualified. I understand that I am responsible for the correctness of this declaration. I understand that failure to disclose the provision of material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List, or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree. I understand that any answer of “yes” to any question, or the failure to answer “no” to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided by myself or my organization. If I am signing this on behalf of a company, business or organization, I hereby acknowledge that I have the authority to make this certification on behalf of the company, business or organization referenced on page 1 of this declaration.

APPLICANT SIGNATURE **X**	DATE

APPENDIX B

AFFIDAVIT IN COMPLIANCE WITH SECTION 3517.13 OF THE OHIO REVISED CODE

STATE OF OHIO

HENRY COUNTY

The undersigned personally appeared before me, as an individual or as a representative of

_____for a contract for_____
(Name of Entity) (Type of Product or Service)

to be let by the County of Henry, who, being duly cautioned and sworn, makes the following statement with respect to prohibited activities constituting a conflict of interest or other violations under Ohio Revised Code Section 3517.13, and further states that the undersigned has the authority to make the following representation on behalf of himself or herself or of the business entity:

1. That none of ***the*** following has **individually** made since April 4, 2007 and that, if awarded a contract for the purchase of goods or services in excess of $10,000, none of the following **individually** will make, beginning on the date the contract is awarded and extending until one year following the conclusion of the contract, as an individual, one or more campaign contributions totaling in excess of $10,000, to any elected official of the County of Henry or their individual campaign committees:

    a. Myself;
    b. Any partner or owner or shareholder of the partnership (if applicable);
    c. Any owner of more than 20% of the corporation or business trust (if applicable);
    d. Each spouse of any person identified in (a) through (c) of this section;
    e. Each child seven years of age to seventeen years of age of any person identified in divisions (a) through (c) of this section (only applicable to contributions made on or after April 4, 2007)

2. That none of the following have **collectively** made since April 4, 2007, and that, if awarded a contract for the purchase of goods or services in excess of $10,000, none of the following **collectively** will make, beginning on the date the contract is awarded and extending until one year following the conclusion of the contract, one or more campaign contributions totaling in excess of $10,000, to any elected official of the County of Henry or their individual campaign committees:

    a. Myself;
    b. Any partner or owner or shareholder of the partnership (if applicable);
    c. Any owner of more than 20% of the corporation or business trust (if applicable);
    d. Each spouse of any person identified in (a) through (c) of this section;
    e. Each child seven years of age to seventeen years of age of any person identified in divisions (a) through (c) of this section (only applicable to contributions made on or after April 4, 2007)

Signature_____

Title_____

Sworn to before me and subscribed in my presence this _____day of_____, 20_____.

Notary Public_____

My Commission expires_____

APPENDIX C

STATE OF OHIO EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS AND BID CONDITIONS FOR OPWC-ASSISTED CONSTRUCTION PROJECTS

NOTICE TO CONTRACTORS:

The provisions of the Ohio Administrative Code 123:2-3-02 regarding Equal Employment Opportunity on State Construction Contracts and State-assisted Construction Contracts, and the Ohio Administrative Code 123:2-3-02 regarding Equal Employment Opportunity and Female Utilization Goals are applicable to this project, and each contractor will be required to comply in all aspects to the provisions of said executive orders.

CERTIFICATE OF COMPLIANCE FOR EEO PURPOSES:

All prime contract bidders on the project must submit prior to the execution of a contract a copy of a valid Certificate of Compliance for Equal Employment Opportunity purposes as issued by the State Equal Employment Opportunity Coordinator.

>>> Does this bidder have a valid Certificate of Compliance? ____Yes ____No

>>> If "No" to the above, will this bidder be able to obtain a valid Certificate of Compliance prior to the execution of a contract? ____Yes ____No

Bidder must provide a "Yes" answer to one or the other of the above questions.

BIDDER'S AFFIRMATIVE ACTION REQUIREMENTS:

Each prime contract bidder must submit an Affirmative Action Program regarding equal employment opportunity to and receive approval from the State Equal Employment Opportunity Coordinator prior to the bid opening, **OR** the prime contract bidder must evidence within its bid the adoption of the Minority Manpower Utilization Goals and Timetables set forth in "Appendix A" and the Specific Affirmative Action Steps set forth in "Appendix B" of the State Equal Employment Opportunity Bid Conditions.

>>> The prime contract bidder has prepared and submitted an Affirmative Action Program to the State Equal Employment Opportunity Coordinator and that program has been approved by the State Equal Employment Opportunity Coordinator prior to the bid opening ? ____Yes ____No

O R

>>> With this bid response, the prime contract bidder hereby adopts the Minority Manpower Utilization Goals and Timetables set forth in Appendix "A" and the Specific Affirmative Action Steps set forth in Appendix "B" of the State Equal Employment Opportunity Bid Conditions ? ____Yes ____No

Bidder must provide a "Yes" answer to one or the other of the above affirmative action alternatives.

BIDDER'S EEO COVENANTS:

Throughout its performance of any contract awarded to it on this State-assisted project, the prime contract bidder agrees to the following covenants:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry or sex. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, ancestry or sex. Such action shall include, but is not limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will in all solicitations or advertisements for employees placed by or on behalf of the prime contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry or sex.

(3) The contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the State Administering Agency advising the said labor union or workers' representatives of the contractor's commitments under this covenant and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of the Ohio Department of Administrative Services, Division of Public Works' Regulations on Equal Employment Opportunity (hereinafter DPW Regulations) and with the implementing rules, regulations and applicable orders of the State Equal Employment Opportunity Coordinator.

(5) The contractor agrees to fully cooperate with the State Administering Agency, the State Equal Employment Opportunity Coordinator and with any other official or agency, or the State or Federal government which seeks to eliminate unlawful employment discrimination, and with all other State and Federal efforts to assure equal employment practices under its contract and the contractor shall comply promptly with all requests and directions from the State Administering Agency, the State Equal Employment Opportunity Coordinator and any of the State of Ohio officials and agencies in this regard, both before and during construction.

(6) Full cooperation as expressed in clause (5), above, shall include, but not be limited to, being a witness and permitting employees to be witnesses and complainants in any proceeding involving questions of unlawful employment practices, furnishing all information and monthly utilization work hour reports (OAC 123:2-9-01) required by the DPW Regulations and by the rules, regulations and orders of the State Equal Employment Opportunity Coordinator pursuant thereto, and permitting access to its books, records, and accounts by the State Administering Agency and the State Equal Employment Opportunity Coordinator for purposes of investigation to ascertain compliance with such rules, regulations and orders. Specifically, contractors will submit workforce utilization reports to the State Equal Opportunity Coordinator by the 10th of each month.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of its contract or with any of the said rules, regulations, or orders, its contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further State Contracts or State-assisted Construction Contracts in accordance with procedures authorized in the DPW Regulations and such other sanctions may be instituted and remedies invoked, as provided in said DPW Regulations or by rule, regulation, or order of the State Equal Employment Opportunity Coordinator, or as otherwise provided by law.

In the event that its contract is terminated for a material breach of DPW Regulations, the contractor shall become liable for any and all damages which shall accrue to the State Administering Agency and Applicant and the State of Ohio as a result of said breach.

(8) The contractor will require the inclusion of language reflecting these same eight covenants within every subcontract or purchase order it executes in the performance of its contract unless exempted by rules, regulations or orders of the State Equal Employment Opportunity Coordinator issued pursuant to O.A.C. 123:2-3-02 so that these provisions will be binding upon each subcontractor or vendor. The contractor will take such actions as the Administering Agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in any litigation with a subcontractor, vendor or other party as a result of such direction by the State Administering Agency, the contractor may be requested to protect the interests of the State.

>>> The prime contract bidder hereby adopts the foregoing covenants ? ___Yes ____No

BIDDER'S CERTIFICATION:

The undersigned, being a duly authorized officer of the prime contract bidder, does hereby certify to and agree with the foregoing statements and covenants regarding its subscription to the State's Equal Employment Opportunity Requirements for State-assisted Construction Contracts.

_____ ___/____/___
Signature of Authorized Officer Date

_____
Title

>>> PLEASE NOTE: Only a bidder possessing a valid certificate will be awarded a contract pursuant to Chapter 153 of the Revised Code by an owner referred to in section 153.01 of the Revised Code. Application shall be made at least ten working days prior to the date that the bidder expects to receive the certificate. The bidder's failure to elect one of the two Bidder's Affirmative Action Requirements, adopt the Bidder's EEO Covenants, and complete the foregoing certification may cause the bidder's proposal to be rejected as being non-responsive to the State's Equal Employment Opportunity Requirements and in non-compliance with the State Equal Employment Opportunity Bid Conditions. In addition, the bidder must, prior to the execution of a contract, submit to the local subdivision a valid Certificate of Compliance for Equal Employment Opportunity Purposes.

APPENDIX D

ITEM SPECIAL – 20’ x 9’ CONDUIT TYPE A, CAST-IN-PLACE REINFORCED CONCRETE BOX CULVERT – ALTERNATE BID

I. GENERAL REQUIREMENTS

A. Requirements of the General Conditions, Supplementary Conditions and Specifications apply to the work of this section.

II. GENERAL SCOPE OF WORK

A. This work shall consist of constructing a reinforced concrete box culvert in accordance with these specifications and in reasonably close conformity with the lines, grades, design and dimensions shown on the plans or as established by the Engineer. In situations where two or more specifications apply to this work, the most stringent requirement shall govern.

B. The work specified in this section consists of constructing a cast-in-place reinforced concrete box culvert to meet the required specifications as listed below. All footings, materials, labor and all associated appurtenances shall be included as part of this item.

C. The box culvert plans as shown in the contract drawings are shown for reference only. The design, construction and approval of the box culvert are the responsibility of the contractor.

III. TYPES

A. Cast-in-place reinforced concrete box culvert to be *flow*SPAN™ as designed and supplied by Engineered Concrete Structures Corp. or equal. Structures designed and supplied in accordance with this specification shall be designated by span, rise, and number of cells. Reinforced concrete endwalls, headwalls, parapet walls, and wingwalls designed and installed in accordance with this specification shall be designated by length and height.

IV. QUALITY ASSURANCE

A. Conscientiously supervise excavation, placement of steel reinforcement, placement of concrete, backfill and all aspects of the box culvert construction.

V. SUBMITTALS

A. All drawings shall be designed signed and stamped by a Professional Engineer licensed in the State of Ohio.

VI. MATERIALS

A. Concrete

1. The concrete for the structures shall be air-entrained when installed in areas subject to freeze-thaw conditions, composed of portland cement, fine and coarse aggregates, admixtures and water. Air-entrained concrete shall contain 6+/-2 percent air. The air entrained admixture shall conform to AASHT0 M154.

2. Portland Cement shall conform to the requirements of ASTM Specifications C150 -Type I, Type II, or Type III cement.

3. Coarse Aggregate shall consist of stone having a maximum size of 1 inch. Aggregate shall meet requirements for ASTM C 33.

4. Water Reducing Admixtures: the manufacturer may submit for approval by the Engineer a water-reducing admixture for the purpose of increasing workability and reducing the water requirement for the cement.

5. Calcium Chloride: the addition to the mix of calcium chloride or admixtures containing calcium will not be permitted.

B. Steel Reinforcement

1. All reinforcing steel for the structures shall be fabricated and placed in accordance with the detailed shop drawings submitted by the manufacturer.

2. Steel Reinforcement - Reinforcement shall consist of regular (uncoated) [epoxy-coated] deformed billet steel bars conforming to ASTM Specification A 615, Grade 60.

3. Reinforcing Bar Splices - Reinforcing bar splices shall be made per specifications from the State Department of Transportation Construction and Material Specifications (CMS) currently in effect.

4. Placement of Reinforcement - The cover of concrete over the outside circumferential reinforcement shall be 1 inch minimum. The cover of concrete inside the circumferential reinforcement shall be 1 inch minimum unless otherwise noted on the shop drawings. Reinforcement shall be assembled utilizing single or multiple layer of reinforcing bars (not to exceed 2 layers), supplemented by single deformed billet-steel bars when necessary. Longitudinal distribution reinforcement shall be deformed billet-steel bars. The ends of the longitudinal distribution reinforcement shall not be more than 3 inches and not less than 1 ½ inches from the ends of the structures.

5. Bending of Reinforcement - The outside and inside circumferential reinforcing steel for the corners of the structure shall be bent to such an angle that is approximately equal to the configuration of the structure's outside corner.

6. Laps, Weds, and Spacing - Tension splices in the circumferential reinforcement shall be made by lapping. Tack welding shall not be permitted. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 8.25. For splices other than tension splices, the overlap shall be a minimum of 12" for deformed billet-steel bars. The spacing center to center of the longitudinal distribution steel for either line of reinforcing on the top slab shall not be more than 16 inches.

VII. DESIGN

A. Design requirements:

1. Loading: HL-93

2. Culvert to be four-sided

3. Minimum clear rise: 9'-0"

4. Minimum clear span: 20'-0"

B. The structural dimension and reinforcement details shall be as prescribed in the plan and the shop drawings provided by the designer subject to the provisions of this specification. The minimum concrete compressive strength shall be as shown on the shop drawings. The minimum steel yield strength shall be 60,000 psi unless otherwise noted on the shop drawings.

C. The structure shall be designed in accordance with the "Standard Specifications for Highway Bridges" 17th Edition, adopted by the American Association of State Highway and Transportation Officials, 2002. There are no maximum and minimum values for cover over the structure's deck.

VIII. MANUFACTURE

A. Mixture - The aggregates, cement and water shall be proportioned and mixed in a batch mixer to produce a homogeneous concrete meeting the strength requirements of this specification. The proportion of portland cement in the mixture shall not be less than 600 pounds per cubic yard of concrete.

B. Curing - The reinforced concrete structure shall be cured for a sufficient length of time so that the concrete will develop the specified compressive strength in 28 days or less. Any one of the following methods of curing or combinations thereof shall be used:

1. Steam Curing - The units may be low pressure, steam cured by a system that will maintain a moist atmosphere.

2. Water Curing - The structure may be water cured by any method that will keep the sections moist.

3. Membrane Curing - A sealing membrane conforming to the requirements of ASTM Specifications C 309 may be applied and shall be left intact until the required concrete compressive strength is attained. The concrete temperature at the time of application shall be within + 10 degrees F of the atmospheric temperature. All surface shall be kept moist prior to the application of the compounds and shall be damp when the compound is applied.

C. Forms - The forms used to manufacture shall be sufficiently rigid and accurate to maintain the structure dimensions within the permissible variations given in these specifications. All casting surfaces shall be of a smooth material.

IX. PERMISSIBLE VARIATIONS

A. Internal dimensions shall vary not more than 2% from the design dimensions for more than 1½ inches, whichever is less. The haunch dimensions (if any) shall vary not more than ¾ inch from the design dimensions.

B. Slab and wall thickness shall not be less than that shown in the design by more than ½ inch. A thickness more than that required in the design shall not be cause for rejection.

C. The maximum variation in position of the reinforcement shall be + ½ inch. In no case shall the cover over the reinforcement be less than 1 inch for the outside circumferential steel or be less that 1 inch for the inside circumferential as measured to the external or internal surface. These tolerances or cover requirements do not apply to mating surfaces of the joints.

D. The areas of steel reinforcement shall be the design steel areas as shown in the manufacturer's shop drawings. Steel areas greater than those required shall not be cause for rejection. The permissible variation in diameter of any reinforcement shall conform to the tolerances prescribed in the ASTM Specification for the type of reinforcement.

X. TESTING AND INSPECTION

A. Type of Test Specimen - Concrete compressive strength shall be determined from compression tests made on cylinders or cores. For cylinder testing, a minimum of 4 cylinders shall be taken during each concrete pour. For core testing, one core shall be cut from each concrete pour in question. The location of the core(s) shall be selected at random.

B. Compression Testing - Cylinders shall be made and tested as prescribed by the ASTM C 39 Specification. Cores shall be obtained and tested for compressive strength in accordance with the provisions of the ASTM C497 Specification.

C. Acceptability of Cylinder Tests - When the average compressive strength of all cylinders tested is equal to or greater than the design compressive strength, and not more than 10% of the cylinders tested have a compressive strength less than the design concrete strength, and no cylinder tested has a compressive strength less than 80% of the design compressive strength, then the lot shall be accepted. When the compressive strength of the cylinders tested does not conform to this acceptance criterion, the acceptability of the lot may be determined as described below.

D. Acceptability of Core Tests - The compressive strength of the concrete in each production group is acceptable when the average core test strength is equal to or greater than the design concrete strength. When the compressive strength of the core tested is less than the design concrete strength, the concrete pour from which that core was taken may be re-cored. When the compressive strength of the re-core is equal to or greater than the design concrete strength, the compressive strength of the concrete in that pour is acceptable.

E. When the compressive strength of any recore is less than the design concrete strength, the concrete pour shall be rejected.

F. Plugging Core Holes - The core holes shall be plugged and sealed by the installer in a manner such that the structures will meet all of the test requirements of this specification. Structures so sealed shall be considered satisfactory for use.

G. Test Equipment - Every designer/installer of structures under this specification shall furnish all facilities and personnel necessary to carry out the test required.

XI. JOINTS

A. Structures shall be produced with flat butt ends. Joints are to occur in the transverse direction unless the design engineer approves another joint configuration. Reinforcing steel to be continuous through joint or, in the alternative, a mechanical bar splice is acceptable. The joint width shall not exceed 1/4 inch.

XII. WORKMANSHIP AND FINISH

A. The reinforced concrete box culvert shall be substantially free of fractures. The surfaces of the structure shall be true, plumb, and square unless specified otherwise in the shop drawings. Concrete surfaces shall be a smooth form finish or broom finish if the deck slab is at grade. Trapped air pockets causing surface defects shall be considered as part of a smooth form finish.

XIII. REPAIRS

A. Concrete surfaces may be repaired, if necessary, due to imperfections in production and will be acceptable if, in the opinion of the purchaser, the repairs are sound, properly finished and cured, and the repaired section conforms to the requirements of this specification.

XIV. INSPECTION

A. The quality of materials, the process of production, and the finished structures shall be subject to inspection by the purchaser.

XV. REJECTION

A. The reinforced concrete box culvert shall be subject to rejection on account of any of the specification requirements. Structures may be rejected due to any of the following:

1. Defects that indicate proportioning, mixing, and molding not in compliance with these specifications.
2. Honeycombed or open texture not repaired per these specifications.
3. Joints in excess of 1/4 inch not repaired per these specifications.

XVI. BACKFILL REQUIREMENTS

A. Backfill shall be defined as all replaced excavation and new embankment adjacent to the reinforced concrete box culvert. The project construction and material specifications which include the specifications for excavation for structures and roadway excavation and embankment construction shall apply except as modified in this section.

B. No backfill shall be placed against any structure until the structure's concrete has achieved 75% of design strength.

C. Backfill against a waterproofed surface shall be placed carefully to avoid damage to the waterproofing material.

D. If required by the surface material at finish grade, mechanical tampers or approved compacting equipment shall be used to compact all backfill and embankment immediately adjacent to each side and over the top of the structure.

E. In no case shall equipment operating in excess of the design load be permitted over the structure unless approved by the design engineer.