

DETAILED SPECIFICATIONS

Jefferson County solicits bids to furnish and deliver to specified sites, precast reinforced concrete culvert and bridge units, wingwalls, retaining walls and appurtenances. The bridge units shall consist of pre-engineered three sided and four sided structures of the span, leg, and skew angle as shown on the plans. These precast reinforced concrete culvert and bridge units shall be capable of withstanding the following loading:

- HL-93 highway loading and the NYSDOT Design Permit Vehicle
- 0' minimum to 4' maximum earth loading
- 6" (max) Bituminous wearing surface
- 6" (max) Portland Cement concrete wearing surface

The enclosed drawings depict a conceptual design that will support the proposed structure. The County seeks a proposal for a precast system equivalent to the depicted structure.

DESCRIPTION OF ITEMS

Three sided Rigid frame culvert system, that is interlocking and self forming. The system shall be designed against overturn, sliding, crushing, etc., as well as provide adequate capacity for "HL-93" loading and the NYS Design Permit vehicle. The system shall be so designed as per EI 11-004 and 562-3.01 and constructed as to allow assembly on a cast in place footing. Connections for customized end treatments such as wingwalls, retaining systems or headblocks (precast or sitecast) may be required for specific applications. Application of a NYSDoT approved waterproof coating may be required prior to delivery for specific applications and shall be so designed to comply with 706-17 Precast Concrete Box Culverts. Special inserts, imbeds, dowel bar splicer, grout sleeve or other anchorage accessories may be used and priced additional to bid price.

Four sided box culvert system, that is interlocking and self forming. The system shall be designed against overturn, sliding, crushing, etc., as well as provide adequate capacity for "HL-93" loading and the NYSDOT Design Permit Vehicle. The system shall be so designed and constructed as to allow assembly on a leveling pad or cast in place footing. Connections for customized end treatments such as wingwalls, retaining systems or headblocks (precast or sitecast) may be required for specific applications. Application of a NYSDoT approved waterproof coating may be required prior to delivery for specific applications. Special inserts, imbeds, dowel bar splicer, grout sleeve or other anchorage accessories may be used and priced additional to bid price.

Modular wingwall system that is interlocking and self forming. The system shall be designed and constructed against overturn, sliding, crushing, etc., while retaining the roadway embankment to a maximum depth of 16'. The system shall be so designed and constructed as to allow assembly on a leveling pad. All wingwalls shall have an integral soil anchor system. The wingwalls must be capable of interlock with the precast bridge system.

Modular retaining wall system that is interlocking and self forming. The system shall be designed against overturn, sliding, crushing, etc., while retaining the roadway embankment to a maximum depth of 16'. The system shall be designed and constructed as to allow assembly on a leveling pad. The retaining wall must be capable of interlock with the precast bridge system.

BASIS OF ACCEPTANCE

Acceptability shall be determined by the results of the concrete compressive strength tests described in Section 4, Materials, and by the inspection of the finished precast units.

MATERIAL REQUIREMENTS

All work performed not listed herein shall be governed by the provisions of the most recent "*Standard Specifications of Construction and Materials*" of the New York State Department of Transportation. Payments shall be made for requested services or materials measured in Customary US units.

Portland Cement Concrete:

The Portland Cement Concrete shall meet the requirements specified under the most recent New York State *Standard Specifications for Construction and Materials* and addenda, section 501- Portland Cement Concrete-General with the exception that the concrete shall have an air content of 5.0 to 8.0%, and a minimum compressive strength of 5000 psi at 28 days. High range water reducing admixtures meeting the requirements of ASTM C494 Type F may be used. Type 1, 2, or 3 cement may be used. The maximum allowable total chloride content in concrete shall not exceed 0.10 % by weight of cement.

Reinforcement:

All Structural Reinforcement shall consist of epoxy coated welded wire fabric conforming to ASTM specifications A185 or A 497 or epoxy coated deformed billet-steel bars conforming to ASTM Specification A615, Grade 60 and NYSDoT Specification 709-04. Additional reinforcement or embedded devices required for shipping and handling purposes shall be epoxy coated and/or hot dipped galvanized as approved on the shop drawings. Corrosion protection through the use of NYSDoT approved concrete additives may be substituted for epoxy coating.

Pozzolans:

The manufacturer may substitute fly ash meeting the requirements of Section 711-10 up to a maximum of 15% by weight of the total of cement plus pozzolan in the mix. Additional materials, listed below, shall meet the requirements of the following NYSDoT Standards subsections:

- Portland Cement, Type 1, 2, or 3 701-01
- Bar Reinforcement, Grade 60 709-01
- Wire Fabric for Concrete Reinforcement 709-02
- Bar Reinforcement, Epoxy Coated 709-04
- Quilted Covers (for curing) 711-02
- Polyethylene Coated Burlap Blankets (for curing) 711-03

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Fabrication:

Each manufacturer proposing to furnish precast units under this specification, shall submit for approval detailed working drawings and calculations, prepared and stamped by a Licensed Professional Engineer, which shall clearly indicate the following as in accordance with Section 562 of “The Standard Specifications of Construction and Materials” of the NYSDoT:

- Company name, location and contract number.
- Drawing number, title of drawing, date and preparer.
- Unit height, length, width, wall thickness, joint details, and working tolerances.
- Position of reinforcing and method of position maintenance during concrete placement.
- Concrete curing method.
- Revision space.
- Location and description of lift points and method of assembly.
- Calculations indicating Load Rating of Structure as determined in accordance with the current AASHTO “Manual for Bridge Evaluation” with all interim provisions in effect (562-3.02).

Curing:

All precast components shall be subjected to curing by steam or moisture retention as described below:

- Steam Curing. The provisions of Section 706-02 Reinforced Concrete Pipe, 3C-(1) Steam Curing shall apply.
- Moisture Retention Curing. The provisions of Section 706-01 Reinforced Concrete Pipe, 3C-(3) Water Spray Curing or Spray Curing 3C-(3) Saturated Cover Curing shall apply.

Fascia Units:

The exterior units shall be supplied with a smooth fascia on one side and a shear key or an approved gasketed key way system on the other. The fascia unit shall also have guide rail plates and bolts cast into the panel as detailed in shop drawings per Bridge Detail Sheets BD-CB7; BD-RL3; and BD-RL5. All interior units shall have shear keys or an approved gasketed key way system on both sides.

Repair:

Modules that contain minor defects associated with manufacture shall be repaired at the manufacturing site. The face of the units shall be thoroughly rubbed upon removal from the forms, and free from defects. Plastering to remove blemishes will not be allowed. Minor damage that occurs to the back of the units shall be repaired in accordance with the provisions of Section 701-04 Concrete Repair Materials. Minor defects shall be defined as honeycombing or spalls to such an extent that chipping away of honey-combed concrete does not result in exposed reinforcement. The repair shall withstand a moderate blow with a 16 ounce hammer.

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Sampling and Testing:

Testing shall be performed by the manufacturer, using the latest ASTM methods and procedures for testing plastic concrete for compliance to the air content and for compressive strength determination required by this specification. Test cylinders used to determine compressive strength shall be cured with the units they represent. Should the Department so desire, the manufacturer shall also test the hardened concrete by drilling 4" diameter cores as directed by the Department's Representative. The manufacturer shall provide certification of testing by a Department approved independent testing lab for specified air content and compressive strength of the hardened concrete.

REJECTION OF UNITS

Rejection of units and lots will be governed by the following:

- **Strength Requirements:** A lot represented by cylinders not meeting the required 28 day strength of concrete shall be rejected.
- **Exposed Reinforcing Steel:** Any unit that has exposed reinforcing steel shall be rejected.
- **Major Defect:** Any unit that has honey-combing or spalling to the extent that chipping away of the honey-combed concrete results in exposed reinforcement shall be rejected.
- **Cracks:** Any unit with a crack that is greater than 2" in depth and .025" in width shall be rejected.
- **Tolerances:** Any unit that does not conform to the tolerances outlined in the approved shop drawings shall be rejected.
- **Inspection:** Any unit that does not meet the approval of the Superintendent of Highways, or his project representative for quality or suitability of work shall be rejected.

SHIPPING

Each unit shall be clearly marked with each piece mark and date of fabrication. This mark shall be indelible and shall be placed on a surface which will not be exposed to view after construction is complete.

Units will be equipped with Swift lifter devices. Precaster shall supply lifting connections. Precaster shall be responsible for refilling any holes created by removing lifting devices.

QUALIFICATION OF CONTRACTOR

All material supplied shall be obtained from approved NYSDoT sources.

Price Quotation
Precast Concrete Bridge Systems

The bidder agrees to provide the following items specified herein for the following sum:

28c

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BID CHECKLIST

The documents required to complete this bid are indicated below.

- (X) Insurance Certificates See Exhibit A, pages F-G
(X) Iran Notice See Pages 28j – 28k

- _____ We have reviewed and have submitted the items required under the Mandatory Submission Requirements.
_____ The Bid Page(s), Signature/Non-Collusive Page, and Iran Notice are completed and included.
_____ Deviations are noted and explained.
_____ Insurance Certificates are enclosed if required.

**WAIVER OF IMMUNITY/NON-COLLUSIVE BIDDING CERTIFICATE PURSUANT TO
SECTION 103-D OF THE NEW YORK STATE GENERAL MUNICIPAL LAW**

- A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organizations, under penalty of perjury, that to the best of knowledge and belief:
1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.
 2. Unless otherwise required by law, the prices which have been quoted in this bid have not knowingly been disclosed by the bidder and will not knowingly be disclosed by the bidder, directly or indirectly, prior to opening, to any bidder or to any competitor.
 3. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A bid shall not be considered for award nor shall any award be made where 1,2, and 3 above have not been complied with; provided, however, that in any case the bidder cannot make to foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons thereof. Where 1, 2, and 3 above have not been complied with, the bid shall not be considered for any award nor shall any award be made unless the head of the Purchasing Unit to the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customer of proposed or pending publications of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of paragraph "A" above.

- B. Any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, local law, and where such bid contains the certification referred to in paragraph "A" of this section, shall be deemed to have been authorized by the Board of Directors of the bidder, and such authorization shall be deemed to include the submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

SIGNATURE PAGE ON REVERSE MUST BE SIGNED TO COMPLETE THE BID.

SIGNATURE PAGE

The undersigned proposes to furnish products or services to specifications included in this bid document, at the price(s) set forth, as required to meet the County's needs. Any deviation to the specifications must be noted on the bid form and fully explained or the deviations will not be considered part of the bid.

Deviations: Yes _____ No _____

By signing below I am certifying that I fully understand the complete requirements of the bid and agree to the non-collusive certification on the reverse of this page and additional documents as specified on the bid checklist. Bidder hereby acknowledges receipt of all addenda pertaining to this bid which are made part of the original bid specifications.

_____ COMPANY NAME

_____ ADDRESS (Principal Office)

_____ CITY, STATE, ZIP CODE

_____ AREA CODE/TELEPHONE NUMBER

_____ FAX NUMBER

_____ AUTHORIZED SIGNATURE

_____ PRINTED NAME

_____ TITLE

_____ DATE

_____ ADDRESS (Local Office)

_____ CITY, STATE, ZIP CODE

_____ AREA CODE/TELEPHONE NUMBER

_____ FAX NUMBER

_____ E-MAIL ADDRESS

Check One: Corporation _____ Partnership _____ Individual _____

Incorporated under the laws of the State of _____

Federal Identification # _____

State if authorized to do business in the State of New York: Yes _____ No _____

Names/Addresses of Partners:

Iranian Energy Sector Divestment

Contractor hereby represents that said Contractor is in compliance with New York State General Municipal Law Section 103-g entitled “Iranian Energy Sector Divestment”, in that said Contractor has not:

- a. Provided goods and services of \$20 Million or more in the energy sector of Iran including but not limited to the provision of oil or liquefied natural gas tankers or products used to construct or maintain pipelines used to transport oil or liquefied natural gas for the energy sector of Iran; or
- b. Acted as a financial institution and extended \$20 Million or more in credit to another person for forty-five days or more, if that person’s intent was to use the credit to provide goods or services in the energy sector in Iran.

Any Contractor who has undertaken any of the above and is identified on a list created pursuant to Section 165-a (3)(b) of the New York State Finance Law as a person engaging in investment activities in Iran, shall not be deemed a responsible Bidder pursuant to Section 103 of the New York State General Municipal Law.

Except as otherwise specifically provided herein, every Contractor submitting a bid in response to this Request for Bids must certify and affirm the following under penalties of perjury:

- a. “By submission of this bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief, that each Bidder is not on the list created pursuant to NYS Finance Law Section 165-a (3)(b).”

Jefferson County will accept this statement electronically in accordance with the provisions of Section 103 of the General Municipal Law.

Except as otherwise specifically provided herein, any Bid that is submitted without having complied with subdivision (a) above, shall not be considered for award. In any case where the Bidder cannot make the certification as set forth in subdivision (a) above, the Bidder shall so state and shall furnish with the bid a signed statement setting forth in detail the reasons therefore. The County reserves its rights, in accordance with General Municipal Law Section 103-g to award the Bid to any Bidder who cannot make certification, on a case-by-case basis under the following circumstances.

1. The investment activities in Iran were made before April 12, 2012, the investment activities in Iran have not been expanded or renewed after April 12, 2012, and the Bidder has adopted, publicized and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran; or
2. The County of Jefferson has made a determination that the goods or services are necessary for the County to perform its functions and that, absent such an exemption, the County of Jefferson would be unable to obtain the goods or services for which the Bid is offered. Such a determination shall be made by the County in writing and shall be a public document.

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Attachment
Certification Pursuant to Section 103-g
of the New York State
General Municipal Law

- A. By submission of this bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each Bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the New York State Finance Law.
- B. A Bid shall not be considered for award, nor shall any award be made where the condition set forth in Paragraph A above has not been complied with; provided, however, that in any case the Bidder cannot make the foregoing certification set forth in Paragraph A above, the Bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where Paragraph A above cannot be complied with, the Purchasing Unit to the political subdivision, public department, agency or official thereof to whom the bid is made, or his designee, may award a bid, on a case by case basis under the following circumstances:
1. The investment activities in Iran were made before April 12, 2012, the investment activities in Iran have not been expanded or renewed after April 12, 2012, and the Bidder has adopted, publicized and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran; or
 2. The political subdivision makes a determination that the goods or services are necessary for the political subdivision to perform its functions and that, absent such an exemption, the political subdivision would be unable to obtain the goods and services for which the contract is offered. Such a determination shall be made in writing and shall be a public document.

Signature

Title

Date

Company Name