



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
10120024

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
PAUL REYNOLDS 304-558-0468

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF HIGHWAYS
 JOBSITE
 SEE SPECIFICATIONS

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
08/04/2011				

BID OPENING DATE: 08/31/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001		LS		210-16		
17" PRESTRESSED CONCRETE BOX BEAMS						
REQUEST FOR QUOTATION (RFQ)						
<p>THE WEST VIRGINIA STATE DIVISION OF PURCHASING FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF HIGHWAYS IS SOLICITING BIDS TO FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE 17" PRESTRESSED CONCRETE BOX BEAMS, GUARDRAILS AND RELATED HARDWARE TO THE WEST VIRGINIA DIVISION OF HIGHWAYS JOBSITE LOCATED AT WYCO HOLLOW ARCH OVER ALLEN CREEK NEAR WYCO, WV.</p> <p>TECHNICAL QUESTIONS CONCERNING THIS SOLICITATION MUST BE SUBMITTED IN WRITING TO PAUL REYNOLDS IN THE WEST VIRGINIA STATE PURCHASING DIVISION VIA MAIL AT THE ADDRESS SHOWN IN THE BODY OF THIS RFQ, VIA FAX AT 304-558-2596, OR VIA EMAIL AT PAUL.REYNOLDS@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 08/26/2011, AT THE CLOSE OF BUSINESS. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL ADDENDUM TO BE ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED.</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
 2. The State may accept or reject in part, or in whole, any bid.
 3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
 4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
 5. Payment may only be made after the delivery and acceptance of goods or services.
 6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
 7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
 8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
 9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
 10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
 11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
 12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
 13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
 14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
 15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
 16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.
- I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.
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INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>AGENCY AS A CONDITION OF AWARD.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: PAUL REYNOLDS FILE 33</p> <p>RFQ. NO.: 10120024</p> <p>BID OPENING DATE: 08/31/2011</p> <p>BID OPENING TIME: 01:30 P.M.</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p> <p style="text-align: center;">-----</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY):</p>						

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EXHIBIT 10						
REQUISITION NO.:						
ADDENDUM ACKNOWLEDGEMENT						
I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.						
ADDENDUM NO.'S:						
NO. 1						
NO. 2						
NO. 3						
NO. 4						
NO. 5						
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.						
VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.						

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LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
				SIGNATURE	
				COMPANY	
				DATE	
NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.						
REV. 09/21/2009						
***** THIS IS THE END OF RFQ 10120024 ***** TOTAL:						_____

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Specifications

Purpose: To furnish all labor, materials and equipment necessary to provide 17" prestressed concrete box beams, guardrail and related hardware.

1.0 DEFINITIONS

- A. The "Agency" shall be defined as the West Virginia Division of Highways
- B. The "Vendor" shall be defined as the successful bidder.
- C. The "Purchase Order" shall be defined as the binding agreement that is entered into between the State of West Virginia and the Vendor to provide the services as herein specified.
- D. "Mandatory Requirements: The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the State.

2.0 SCOPE OF WORK

The successful Vendor shall provide all labor, materials and equipment necessary to provide 17" prestressed concrete box beams, guardrail and related hardware.

2.1 Technical Requirements:

Bridge Beams are to be manufactured according to the attached plan sheets 1 thru 9 of 9 entitled WYCO HOLLOW ARCH OVER ALLEN CREEK and specifications listed there in.

2.1.1 Delivery

The prestressed concrete box beams, guardrail and related hardware are to be delivered to the West Virginia Department of Transportation Bridge Number 55-12/1-1.10 which is near Wyco in Raleigh County

3.0 INVOICING

3.1 Payment

3.1 The Vendor must send an invoice to:
WV Division of Highways
270 Hardwood Lane
Princeton, WV 24740

4.0 AWARD

Purchase order will be awarded complete and not split.

STATE PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
S355-12/1-1.10	10	WYOMING	1	9

GOVERNING SPECIFICATIONS

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, ADOPTED 2000 AS AMENDED BY THE CURRENT SUPPLEMENTAL SPECIFICATIONS, THE CONTRACT PLANS AND CONTRACT SPECIAL PROVISIONS ARE THE GOVERNING PROVISIONS APPLICABLE TO THIS PROJECT.

ALL BEAMS ARE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 1998 AS AMENDED BY THE 2003 INTERIM SPECIFICATIONS.

DESIGN NOTES

ALL STANDARD ADJACENT PRESTRESSED CONCRETE BRIDGE BEAMS ARE DESIGNED TO MEET THE FOLLOWING CRITERIA:

- DESIGN LOADS:
 - HS-20 LIVE LOAD IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
 - FUTURE WEARING SURFACE OF 50 PSF OF ROADWAY.
 - TYPE F PARAPET WEIGHING 320 PLF.
 - DIAPHRAGM DEAD LOAD, NUMBER REQUIRED BASED ON 15'-0" MAX. SPACING.
2. TWO LANE BRIDGE WITH AN OVERALL WIDTH OF 24'-5" (INCL. 3" GAP BETWEEN ADJ. BEAMS), A CURB-TO-CURB WIDTH OF 22'-4", TRANSVERSE POST-TENSIONING AND ZERO SKEW.
- DESIGN STRENGTH AND LIMIT STRESSES:

MINIMUM CONCRETE STRENGTH @ STRAND RELEASE	6000 PSI
MINIMUM CONCRETE STRENGTH @ 28 DAYS	8000 PSI
TEMPORARY STRESS LIMITS IN CONCRETE BEFORE LOSSES:	
COMPRESSION STRESS LIMIT @ STRAND RELEASE	3600 PSI
TENSION STRESS LIMIT @ STRAND RELEASE	-200 PSI
COMPRESSION STRESS LIMITS IN CONCRETE @ SERVICE I AFTER LOSSES:	
@ FINAL 1 (FSQ-LL)	4800 PSI
@ FINAL 2 (FSQ-D)	3000 PSI
@ FINAL 3 (FSQPS-QJ-LL)	3200 PSI
TENSILE STRESS LIMIT IN CONCRETE @ SERVICE III AFTER LOSSES:	
@ FINAL 1 (FSQ-LL)	-270 PSI
TENSION STRESS LIMIT PRIOR TO TRANSFER:	2025 KSI
TENSION STRESS LIMIT AFTER ALL LOSSES:	1544 KSI
- DEBONDING OR SHIELDING OF STRANDS TO REDUCE TEMPORARY TENSILE STRESSES IS PERMITTED, HOWEVER DEBONDING IS LIMITED TO 40% PER ROW AND 25% TOTAL. IN NO INSTANCES SHALL OUTER STRANDS BE DEBONDED. DEBONDED STRANDS SHALL BE SEPARATED BY AT LEAST ONE FULLY BONDED STRAND AND SHALL BE SYMMETRICAL ABOUT THE \bar{X} OF THE BEAM. SHIELDING OF STRANDS SHALL BE ACCOMPLISHED BY TAPING OR TIGHT FITTING PLASTIC TUBES TAPED AT EACH END.
- THE ELASTOMERIC BEARING PADS PROVIDED IN THE STANDARD DESIGNS ARE BASED ON ZERO GRADE AND ARE LIMITED TO A MAXIMUM OF SIX GRADE. IN INSTANCES OF GRADES EXCEEDING THIS LIMIT, PADS SHALL BE SPECIFICALLY DESIGNED. INDIVIDUAL PAD DESIGNS SHALL BE IN ACCORDANCE WITH SECTION 14, AASHTO LRFD. RECYCLED SOLE PLATES ARE PERMITTED.
- MAXIMUM BEAM SKEW SHALL BE 30 DEGREES.
- WHEN ALTERNATE DESIGNS OR SITE SPECIFIC DESIGNS ARE PROVIDED, CRITERIA SET FORTH IN THESE STANDARDS SHALL APPLY.
- NEGATIVE DESIGN CAMBER AFTER ALL LOSSES IS NOT PERMITTED.
- EACH BEAM PROVIDED IN THESE STANDARD DESIGNS HAS BEEN LOAD RATED IN ACCORDANCE WITH SECTION 325 OF THE WEST VIRGINIA DIVISION OF HIGHWAYS BRIDGE DESIGN MANUAL, 2004. ADDITIONALLY, LOAD RATING PROCEDURES ARE IN ACCORDANCE WITH THE AASHTO MANUAL FOR CONDITION EVALUATION AND LOAD AND RESISTANCE FACTOR RATING OF HIGHWAY BRIDGES, 2003.

BEAM SIZE	NO. 3	NO. 4	NO. 5	NO. 6
SPlice LEN.	21"	28"	34"	41"

THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-01A & B THRU BR-04E & B, BR-09A, BR-09C & B, BR-09D, BR-09E & B, BR-10A, BR-10C & B, BR-10D AS APPLICABLE.

MATERIALS & FABRICATION NOTES

THE PRESTRESSED CONCRETE BEAMS SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF SECTION 603 OF THE STANDARD SPECIFICATIONS.

WILD REINFORCEMENT

- ALL WILD REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BILLET STEEL AND SHALL BE EPOXY COATED EXCEPT WHERE NOTED. ALL UNGRADED REINFORCING SHALL MEET THE REQUIREMENTS OF AASHTO M31. ALL EPOXY COATED REINFORCING SHALL MEET THE REQUIREMENTS OF AASHTO M284, EXCEPT WHERE AMENDED BY SECTION 700J OF THE STANDARD SPECIFICATIONS.
- ALL TENSION LAP SPICES SHALL BE A CLASS B CONTACT TYPE. MINIMUM LAP SPICE LENGTHS SHALL BE AS GIVEN IN THE "LAP SPICE TABLE". THIS SHEET. ADDITIONALLY, IF LAP SPICING OF ET, LR, AND BT BARS IS USED, TERMINATION OF THE SPICE SHALL BE NO CLOSER TO THE END OF THE BEAM THAN 1/10 OF THE SPAN LENGTH.
- MINIMUM BAR BENDING DIAMETER SHALL BE 6 BAR DIAMETERS, EXCEPT THAT NO. 4 AB BARS MAY HAVE A MINIMUM BEND DIAMETER OF 4 BAR DIAMETERS.
- MINIMUM CONCRETE COVER SHALL BE AS SPECIFIED IN SECTION 603S OF THE STANDARD SPECIFICATIONS, EXCEPT WHERE NOTED ON THE PLANS.

PRESTRESSING STRAND

- ALL PRESTRESSING STEEL SHALL BE #4, GRADE 270.7 WIRE UNGRADED, LOW-RELAXATION STRAND MEETING THE REQUIREMENTS OF AASHTO M203, SUPPLEMENT S1.
- ALL BEAMS DESIGNED IN THESE STANDARDS UTILIZE STRANDS WITH A NOMINAL AREA OF 0.07 SQ. IN. STRANDS WITH A NOMINAL AREA OF 0.053 SQ. IN. IS PERMITTED FOR INDIVIDUAL OR ALTERNATE DESIGNS, HOWEVER THE DESIGNER IS ENCOURAGED TO USE THE LARGER STRAND FOR UNIFORMITY REASONS. IN NO CASES WILL STRESS-RELIEVED STRAND BE PERMITTED.
- ALL STRANDS SHALL BE ENCLOSED INSIDE THE STIRRUP CAGE FOR THE FULL LENGTH OF THE BEAM.
- ALL EXPOSED PRESTRESSING STRAND AT EACH BEAM END SHALL BE SHOP COATED WITH A LIQUID COLD-APPLIED BITUMINOUS ELASTOMERIC WATERPROOFING MEMBRANE. MATERIAL SHALL MEET ASTM D636-04.

CONCRETE

- ALL CONCRETE USED IN MANUFACTURING PRESTRESSED CONCRETE BEAMS SHALL MEET THE REQUIREMENTS OF SECTION 603.6 OF THE STANDARD SPECIFICATIONS. DESIGN STRENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES SET FORTH IN THESE PLANS.
- ALL CONCRETE USED IN PARAPETS AND CURBS SHALL BE CLASS K CONCRETE.

ELASTOMERIC BEARING PADS

- ALL BEARING PADS SHALL MEET THE APPLICABLE REQUIREMENTS AS SET FORTH IN SECTION 18.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 1998 EDITION WITH CURRENT INTERIMS. ALL BEARINGS SHALL BE STEEL REINFORCED LAMINATED BEARINGS.
- THE ELASTOMERIC MATERIAL SHALL BE 60 DIAMETERS WITH A MINIMUM LOW TEMPERATURE GRADE OF 3 (ZONE C).
- ALL STEEL REINFORCING SHALL MEET THE REQUIREMENTS OF AASHTO M20, GRADE 36.

GUARDRAIL, GUARDRAIL POSTS, TUBING & INSERTS

- ALL W-106CM GUARDRAIL AND ATTACHMENT HARDWARE SHALL BE IN ACCORDANCE WITH SECTION 712.4 OF THE STANDARD SPECIFICATIONS. GUARDRAIL POSTS, STRUCTURAL TUBING, POST ATTACHMENT INSERTS, AND HARDWARE SHALL MEET THE LISTED MATERIAL AND COATING SPECIFICATIONS.

ITEM	DESCRIPTION	MATERIAL SPEC.	COATING SPEC.
POST	W6x25	AASHTO M20, GR 36	AASHTO M11
PLATE	1/2" x 7"	AASHTO M20, GR 36	AASHTO M11
TUBING	TS 8x4.5/16	ASTM A500, GR B	AASHTO M11
CHANNEL	C10x8	AASHTO M20, GR 36	AASHTO M11
FERRULE	TYPE CA	ASTM A188 (MLI STEEL)	AASHTO M232
WIRE	ANCHOR	ASTM A50 (N88 STEEL)	AASHTO M232
STUDS	1/2" # x 8" LONG	ASTM A308 (N85 C.D. STEEL)	AASHTO M232
NUTS	1/2" #	AASHTO M284, CLASS C	AASHTO M232
COUPLERS	TYPE 1A	ASTM A308 (N214 STEEL)	AASHTO M232
DOLTS	ANCHOR	1/2" # x 12" LONG	AASHTO M232
DOLTS		1/2" # x ALL LEN.	AASHTO M232
NUTS		1/2" #	AASHTO M232
WASHERS	ALL	AASHTO M293	AASHTO M232

WELDING

- TACK WELDING OF REINFORCEMENT IS NOT PERMITTED. REINFORCING CAGES AND LONGITUDINAL STEEL SHALL BE ADEQUATELY TIED WITH APPROVED MEANS TO PREVENT TRACKING AND MISALIGNMENT.
- ALL WELDING OF FABRICATED ITEMS, AS SHOWN IN THESE PLANS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF AASHTO/AWS D15.2002.

POST-TENSIONING DATA

- POST-TENSIONING THREAD BARS SHALL BE ONE INCH DIAMETER, 150 KSI STEEL, AND SHALL CONFORM TO AASHTO M25, TYPE II. STEEL THREAD BARS SHALL BE DESIGNED TO ALLOW THE USE OF HEAVY HEX NUTS AND COUPLERS THAT THREAD ONTO THE END OF THE DEFORMATIONS. HEAVY HEX NUTS AND COUPLERS SHALL BE OF A DESIGN AND MATERIAL RECOMMENDED BY THE BAR MANUFACTURER TO DEVELOP THE FULL TENSILE STRENGTH OF THE BAR. PROPERLY DOCUMENTED CERTIFIED WILL TEST REPORTS SHALL BE PROVIDED FOR EACH HEAT OF STEEL THREAD BARS.
- ALL POST-TENSIONING THREAD BARS, NUTS, BEARING PLATES, COUPLERS, AND ANCHILLARY HARDWARE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M11. THE GALVANIZING PLANT SHALL ADMINISTER ADEQUATE QUALITY CONTROL MEASURES TO SAFEGUARD AGAINST HYDROGEN EMBRITTLEMENT. QUALITY CONTROL MEASURES SHALL COMPLY WITH ASTM A443. CERTIFICATION FOR HOT-DIP GALVANIZING SHALL BE PROVIDED BY THE GALVANIZING PLANT.
- ALL POST-TENSIONING BEARING PLATES SHALL CONFORM TO AASHTO M270, GRADE 36.

SHEAR KEY GROUT

- SHEAR KEY GROUT SHALL BE A GROUT THAT IS RECOMMENDED BY THE MANUFACTURER FOR A POURABLE GROUT APPLICATION AND THAT BASED ON THE MANUFACTURER'S TEST DATA WILL ATTAIN A MINIMUM OF 4500 PSI COMPRESSIVE STRENGTH IN 3 DAYS UNDER CONDITIONS REPRESENTATIVE OF THE CONDITIONS TO BE EXPERIENCED AT THE SITE. THE GROUT MUST BE LISTED ON THE APPROVED LIST OF GROUTS PUBLISHED BY THE WEST VIRGINIA DIVISION OF HIGHWAYS, MATERIALS CONTROL, SOIL AND TESTING DIVISION. THE CONTRACTOR SHALL PRE-TEST THE PROPOSED GROUT FOR COMPRESSIVE STRENGTH AT 3 AND 7 DAYS AND SUBMIT THE RESULTS TO THE BRIDGE PROJECT MANAGER FOR APPROVAL PRIOR TO INSTALLATION OF THE GROUT IN THE STRUCTURE. THE TESTS WILL BE BASED ON A POURABLE CONSISTENCY WITH THE SAME WATER/GROUT MIXTURE RATIO TO BE USED IN THE STRUCTURE.

THE CONTRACTOR SHALL BE REQUIRED TO SUGMIT FOR EACH PROJECT, THE GROUT PRE-TEST RESULTS OBTAINED IN THE NOTE ABOVE. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A NEW PRE-TEST AND SUBMISSION FOR APPROVAL UNDER ANY OF THE FOLLOWING CONDITIONS:

- A PERIOD OF 18 MONTHS HAS ELAPSED SINCE LAST PRE-APPROVAL TESTING.
 - GROUT MANUFACTURER HAS REVISED OR CHANGED THE GROUT SPECIFICATIONS.
 - THE CONTRACTOR ALTERS THE WATER/GROUT MIXTURE RATIO.
 - THE CONTRACTOR CHANGES GROUT MANUFACTURER.
 - THE CONTRACTOR IS REQUIRED TO COMPLETE THE GROUT STRENGTH TABLE ON BR-803.
- TEST PROCEDURE FOR DETERMINING THE COMPRESSIVE STRENGTH OF GROUT SHALL USE CUBE SPECIMENS IN ACCORDANCE WITH ASTM C109, AS MODIFIED BY ASTM C109. GROUT TESTING IN ACCORDANCE WITH AASHTO T23 (STANDARD CYLINDER TEST) IS NOT ACCEPTABLE.

PROTECTIVE SURFACE TREATMENT

- EACH PRESTRESSED CONCRETE BEAM SHALL BE TREATED BY THE MANUFACTURER AT THE FABRICATION PLANT WITH AN APPROVED CONCRETE SEALER/ISLANDER. AN APPROVED LIST OF CONCRETE SEALERS ARE ON FILE AT THE WEST VIRGINIA DIVISION OF HIGHWAYS, MATERIALS CONTROL, SOIL AND TESTING DIVISION. COVERAGE SHALL INCLUDE TOP AND BOTTOM OF INTERIOR BEAMS, AND TOP, BOTTOM AND EXTERIOR SIDE OF EXTERIOR BEAM. APPLICATION RATE SHALL BE PER TREATMENT MANUFACTURER'S RECOMMENDATION.
- AFTER COMPLETION OF THE SILANE TREATMENT BY FABRICATOR AND A MAXIMUM OF FIVE WORKING DAYS PRIOR TO SHIPMENT OF THE BEAMS, THE FABRICATOR SHALL BE RESPONSIBLE FOR AGGRESSIVE BLAST CLEANING TO CLEAN WHITE CONCRETE THE INTERIOR SIDES OF BEAMS FOR THE FULL LENGTH. CLEAN WHITE CONCRETE SHALL MEAN REMOVAL OF ALL DIRT, GREASE, OIL, AND LOOSE CONCRETE LANTANCE AND PROVIDE A ROUGHENED CONCRETE SURFACE. BLASTING MEDIUM SHALL BE APPROVED BY THE DIVISION OF HIGHWAYS.

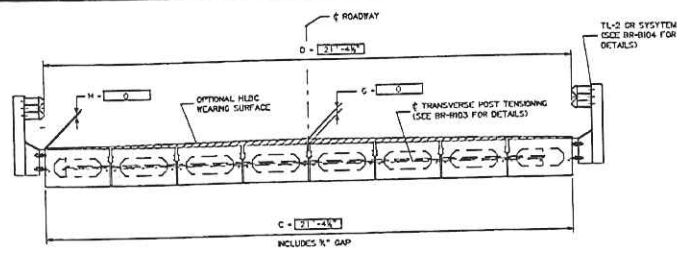
SHOP DRAWINGS

THE FABRICATOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF SHOP DRAWINGS IN ACCORDANCE WITH THE WEST VIRGINIA DIVISION OF HIGHWAYS DOCUMENTS, D0-102 AND THE STANDARD SPECIFICATIONS. ADDITIONAL INFORMATION IS PROVIDED IN SECTION 7 OF THE BRIDGE DESIGN MANUAL. SHOP DRAWINGS SHALL INCLUDE THE FABRICATOR'S DETENSIONING PLAN.

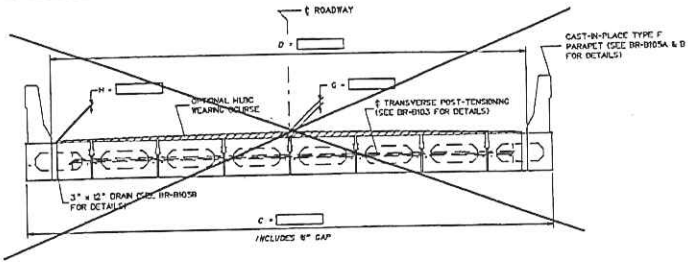
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS ENGINEERING DIVISION		DESIGNED BY: TMB/EA DRAWN BY: TMB/EA CHECKED BY: TMB REVIEWED BY: TMB DATE: SCALE: SHEET NO. 1 OF 9 DIVISION NUMBER 10989
WYCO HOLLOW ARCH OVER ALLEN CREEK		
PRESTRESSED CONCRETE BEAM DESIGN & ASSEMBLY NOTES		

 DATE: 10-25-07 DIVISION: DIVISION OF HIGHWAYS ENGINEERING DIVISION PRESTRESSED CONCRETE BEAM DESIGN & ASSEMBLY NOTES STANDARD SHEET BR-1100	
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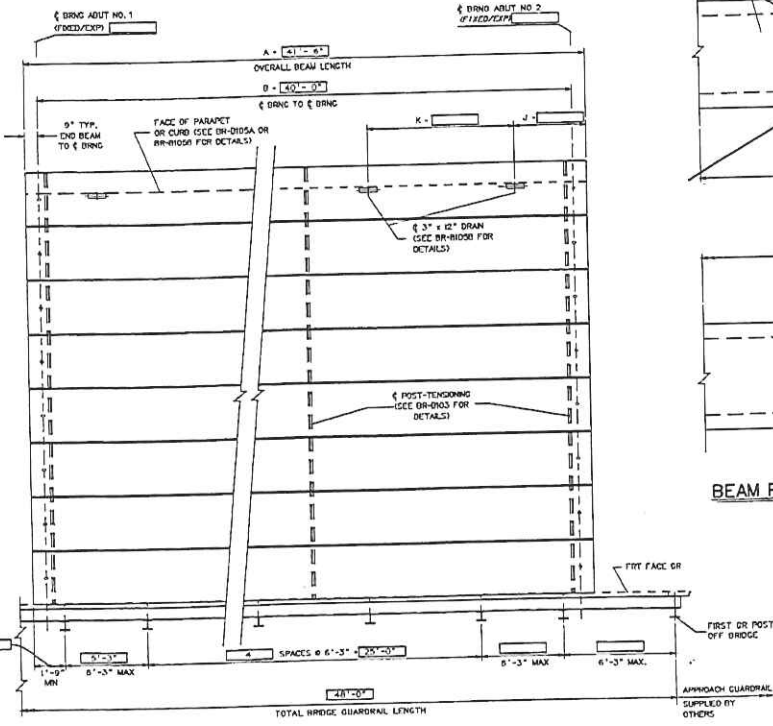
STATE PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
S355-12/1-1.10	10	WYOMING	2	9



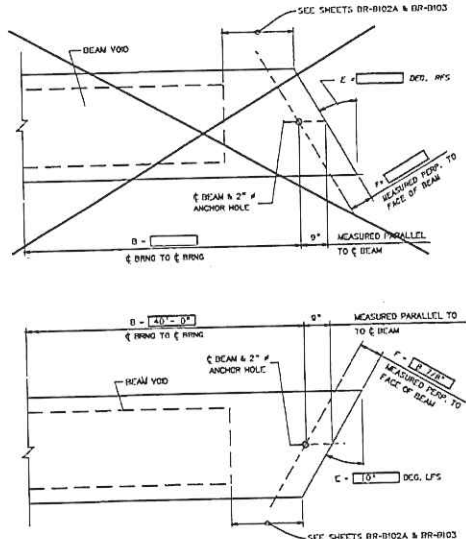
TYPICAL CROSS-SECTION WITH GUARDRAIL



TYPICAL CROSS-SECTION WITH PARAPET OR CURB



DECK PLAN VIEW



BEAM PLAN VIEW - SKEWED ENDS

CONTROL DIMENSIONS		
DESCRIPTION	CODE	VALUE
OVERALL BEAM LENGTH	A	41'-6"
SPAN LENGTH, ϕ BEARING TO ϕ BEARING	B	40'-0"
SUPERSTRUCTURE WIDTH - OUT TO OUT	C	21'-4 1/2"
ROADWAY WIDTH - FACE GR/PARAPET TO FACE GR/PARAPET	D	21'-4 1/2"
NUMBER OF BEAMS REQUIRED		7
BEAM SIZE (WIDTH x DEPTH)		36" x 17"
SKEW ANGLE (NORMAL, DEC. R/S OR DEC. L/S)	E	10° L/S
PERPENDICULAR DISTANCE FROM FACE OF BEAM TO ϕ BEARING	F	R 7/8"
HURB WEARING COURSE REQUIRED (YES/NO)		NO
THICKNESS OF WEARING COURSE ϕ ϕ OF DECK ON ROADWAY	G	----
THICKNESS OF WEARING COURSE ϕ EDGE OF DECK ON PARAPET	H	----
TL-2 BRIDGE GUARDRAIL SYSTEM REQUIRED (YES/NO)		YES
FABRICATOR TO SUPPLY TL-2 BRIDGE GUARDRAIL (YES/NO)		YES
FABRICATOR TO INSTALL BRIDGE GUARDRAIL PRIOR TO SHIPMENT (YES/NO) (IF NO, FABRICATOR TO SHIP LOCKS)		NO
NUMBER OF GUARDRAIL POST INSERTS REQUIRED PER SIDE		7
TYPE F PARAPET REQUIRED (YES/NO)		NO
DRAINS REQUIRED (YES/NO)		NO
NUMBER OF DRAINS REQUIRED PER SIDE		----
10" CURB REQUIRED (YES/NO)		NO

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
60306-007	PRESTRESSED CONCRETE BOX BEAM	LF	290.5

- NOTES:
- WHEN BRIDGE GUARDRAIL IS TO BE SUPPLIED BY THE BEAM FABRICATOR, COST OF ALL BRIDGE GUARDRAIL ITEMS TO INCLUDE POSTS, RAIL ELEMENTS, ATTACHMENT HARDWARE, AND MISCELLANEOUS ITEMS NEEDED TO COMPLETELY INSTALL BRIDGE GUARDRAIL SHALL BE INCLUDED IN ITEM NUMBER PRESTRESSED CONCRETE BOX BEAM.
 - THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-817A & B THRU BR-842A & B, BR-810C, BR-8102A & D, BR-8103, BR-8104, BR-8105A & B AND BR-8106.

APPROVED: *[Signature]* DATE: 10-25-07
 WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ENGINEERING DIVISION
 PRESTRESSED CONCRETE BEAM
 DESIGN AND ASSEMBLY NOTES
 STANDARD SHEET BR-8101

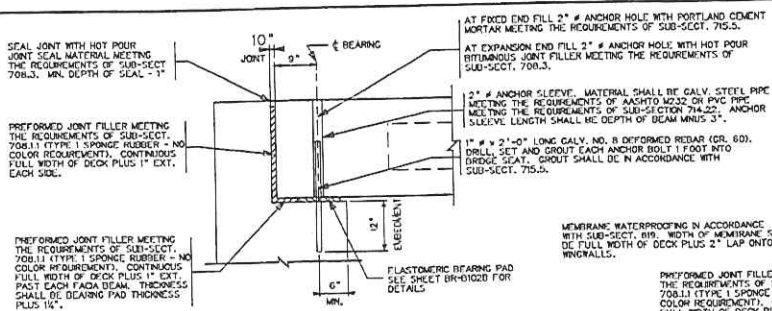
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ENGINEERING DIVISION

WYCO HOLLOW ARCH
 OVER
 ALLEN CREEK

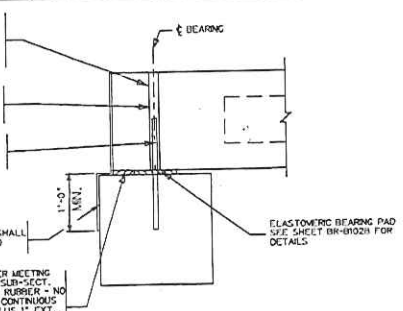
PRESTRESSED CONCRETE BEAM
 DESIGN & ASSEMBLY NOTES

DESIGNED BY: TTB/JJA
 DRAWN BY: TTB/JJA
 CHECKED BY: TWJ
 REVIEWED BY: TWJ
 DATE:
 SCALE:
 SHEET NO 2 OF 9
 BRIDGE NUMBER
 10989

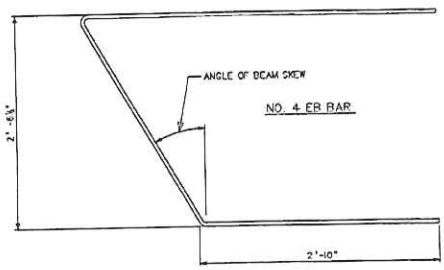
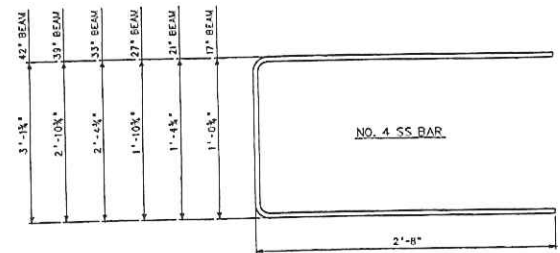
STATE PROJECT NUMBER	FISCAL DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
S355-12/1-1, 10	10	WYOMING	3	9



END BEARING DETAIL WITH BACKWALL

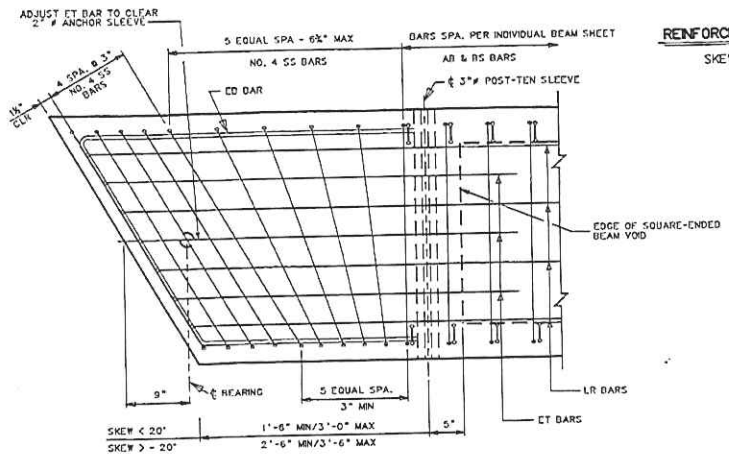


END BEARING DETAIL WITHOUT BACKWALL



REINFORCING BAR DETAIL

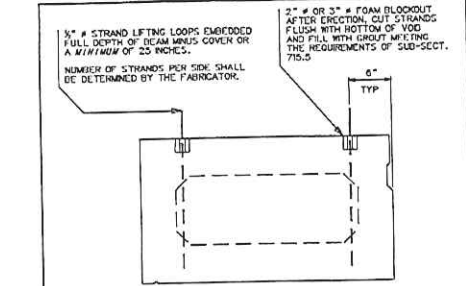
SKEWED BEAMS



END BLOCK DETAIL - SKEWED BEAMS
W/O/POST-TEN. ACCESS POCKET

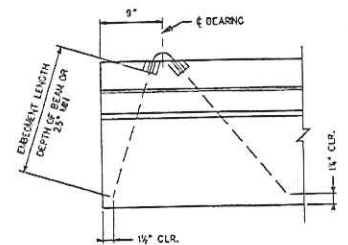
THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-817A & B, THRU BR-8142A & B, BR-8100, BR-8101, BR-8102, BR-8103, BR-8104, BR-8105A & B AND DR-8106 AS APPROPRIATE.

SHEAR KEY DETAIL



END VIEW

LIFTING DETAILS



SIDE VIEW



BLOCKOUT DETAILS

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

WYCO HOLLOW ARCH
OVER
ALLEN CREEK

APPROVED: *James D. Kelly* DATE: 10-25-07
DIRECTOR, ENGINEERING DIVISION

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

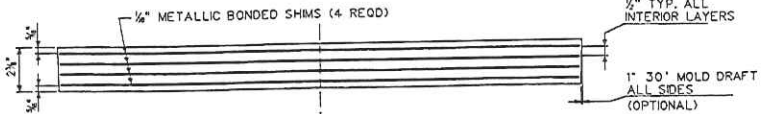
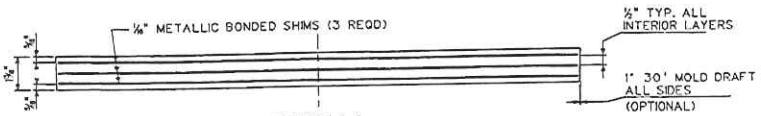
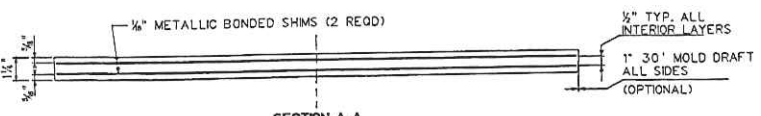
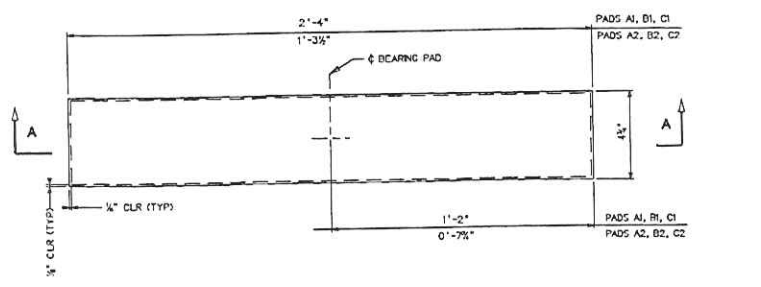
PREPARED: 07-02-07

PRESTRESSED CONCRETE BEAM
SKEWED END REINFORCING
MISC. DESIGN AND ASSEMBLY DETAILS

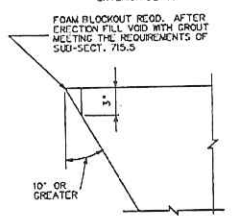
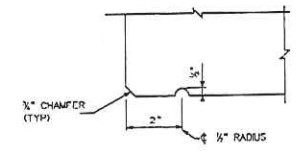
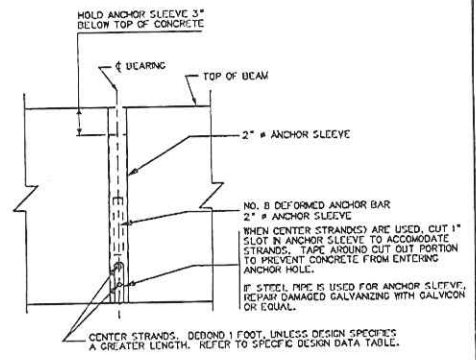
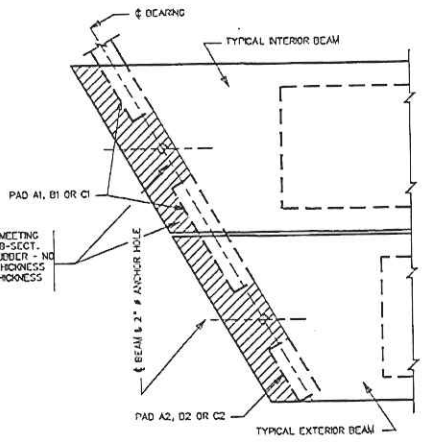
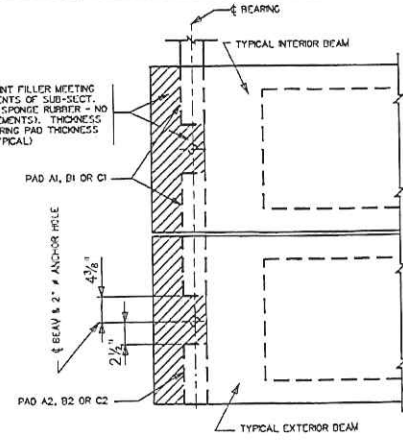
STANDARD SHEET BR-8102A

DESIGNED BY: TRW
DRAWN BY: TRW
CHECKED BY: TRW
REVIEWED BY: TRW
DATE:
SCALE:
SHEET 3 of 9
BRIDGE NO. 10989

STATE PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
S355-12/1-1.10	10	WYOMING	4	9



PERFORMED JOINT FILLER MEETING THE REQUIREMENTS OF SUB-SECT. 708.11 (TYPE 1 SPONGE RUBBER - NO COLOR REQUIREMENTS). THICKNESS SHALL BE BEARING PAD THICKNESS PLUS 1/4". (TYPICAL)



NOTES:

- ELASTOMERIC BEARING PADS ARE DESIGNED IN ACCORDANCE WITH DESIGN METHOD B CONTAINED IN SECTION 14. OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. FABRICATION SHALL BE IN ACCORDANCE WITH SECTION B OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.
- ALL BEARINGS ARE DESIGNED FOR A LOW TEMPERATURE ZONE C AND SHALL HAVE A DUREMETER HARDNESS OF 80. METALLIC REINFORCEMENT SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI.
- BEARING PADS ARE DESIGNED FOR ZERO BRIDGE GRADE. FOR BRIDGE GRADES GREATER THAN 5%, PADS SHALL BE SPECIFICALLY DESIGNED FOR THE GRADE. AS AN ALTERNATE, CAST-IN-PLACE BEVELED SOLE PLATES MAY BE USED.
- DESIGNER, FABRICATOR AND ERECTOR SHALL BE AWARE THAT SKEWED END BEAMS MAY TWIST OR WARP, CAUSING UNEVEN BEAM SEATING AT THE BEARINGS. THE CONTRACTOR IS REQUIRED TO CORRECT AT THE TIME OF ERECTION, BEFORE THE BEAMS ARE SECURED IN PLACE. METHOD OF CORRECTION SHALL PROVIDE AN EVEN, TOTAL BEARING AND A LEVEL TOP BEAM SURFACE. TOLERANCE AFTER CORRECTION SHALL BE + 1/8 INCH. THE FABRICATOR SHALL NOTIFY THE CONTRACTOR AND DESIGNER IF CORRECTIONS ARE REQUIRED PRIOR TO SHIPMENT.
- FOR BEAMS WITH STEPPED ENDS USE PADS A2, B2, OR C2 ON BOTH SIDES OF EACH BEAM.
- ELASTOMERIC BEARING PADS SHALL BE INCLUDED IN THE PRICE OF THE BEAMS.
- THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-B17A & B THRU BR-B42A & B, BR-B100, BR-B101, BR-B102A, BR-B103, BR-B104, BR-B105A & B AND BR-106 AS APPROPRIATE.

BOX BEAM BEARING PAD CONTROL DIMENSIONS								
PAD	LENGTH	WIDTH	HEIGHT	NO. SHIMS	SHIM SIZE	SPAN RANGES	MAXIMUM REACTION	MAXIMUM MOVEMENT ONE DIRECTION
A1	4 1/2"	28"	1 1/2"	2	1/2" x 4 1/2" x 2'-3 3/4"	20' - 38'	85 KIPS	0.39"
B1	4 1/2"	28"	1 1/2"	3	1/2" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"
C1	4 1/2"	28"	2 1/4"	4	1/2" x 4 1/2" x 2'-3 3/4"	80' - 100'	89 KIPS	1.02"
A2	4 1/2"	16 1/2"	1 1/2"	2	1/2" x 4 1/2" x 1'-3 3/4"	20' - 38'	28 KIPS	0.39"
B2	4 1/2"	15 1/2"	1 1/2"	3	1/2" x 4 1/2" x 1'-3 3/4"	40' - 78'	38 KIPS	0.80"
C2	4 1/2"	15 1/2"	2 1/4"	4	1/2" x 4 1/2" x 1'-3 3/4"	80' - 100'	45 KIPS	1.02"

PLAN VIEW - BEARING PLACEMENT

APPROVED: *James D. Kelly* DIRECTOR, ENGINEERING DIVISION DATE: 10-25-07

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS ENGINEERING DIVISION

PREPARED: 07-02-07

REVISION:

PRESTRESSED CONCRETE BEAM ELASTOMERIC BEARING PAD DETAILS MISC. DESIGN AND ASSEMBLY DETAILS

STANDARD SHEET BR-B102B

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS ENGINEERING DIVISION

DESIGNED BY: TRW
DRAWN BY: TRW
CHECKED BY: TRW
REVIEWED BY: TRW
DATE:
SCALE:
SHEET 4 OF 9
PROJECT NO. 10989

WYCO HOLLOW ARCH OVER ALLEN CREEK

PRESTRESSED CONCRETE BEAM ELASTOMERIC BEARING PAD DETAILS MISC. DESIGN AND ASSEMBLY DETAILS

STATE PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
S355-12/1-1.10	10	WYOMING	9	9

DESIGN DATA FOR 17" DEPTH ADJACENT BOX BEAM

SPAN LENGTH @ TO & BEARING	20'-0"	22'-0"	24'-0"	26'-0"	28'-0"	30'-0"	32'-0"	34'-0"	36'-0"	38'-0"	40'-0"
OVERALL LENGTH OF BEAM	21'-6"	23'-6"	25'-6"	27'-6"	29'-6"	31'-6"	33'-6"	35'-6"	37'-6"	39'-6"	41'-6"
NO. OF 270 KSI, 1/2" # LOW-RELAXATION STRANDS, AREA/STRAND - 0.07 SQ. IN.	10	10	10	10	12	12	14	14	16	16	16
STRAND POSITION NUMBER	ROW 1	12.012	12.012	12.012	12.012	12.71314	12.71314	12.71314	12.51010	12.51010	12.51010
	ROW 2	17.012526	17.012526	17.012526	17.012526	17.012526	17.012526	17.012526	17.012526	17.012526	17.012526
	ROW 3										
	ROW 4	33.34	33.34	33.34	33.34	33.34	33.34	33.34	33.34	33.34	33.34
PRESTRESSING FORCE IMMEDIATELY AFTER STRAND RELEASE, Pp, (KIPS/BEAM)	326	326	326	326	389	389	491	491	502	502	503
EFFECTIVE PRESTRESSING FORCE AFTER ALL LOSSES, P _{eff} (KIPS/BEAM)	293	293	294	294	345	346	396	397	403	405	407
REQUIRED FACTORED MOMENT @ STRENGTH I, M ₁ (FT-KIPS/BEAM)	204	231	260	289	319	349	382	415	453	488	531
FACTORED FLEXURAL RESISTANCE, M _r (FT-KIPS/BEAM)	408	408	408	408	495	495	566	566	646	646	646
TOTAL NO. DERONDED STRANDS											
DERONDED STRAND POSITION NUMBER & SHIELDING LENGTH FROM EACH END	ROW 1										
	ROW 2										
NUMBER & LENGTH #4 CT TOP TENSION BARS @ EACH END	3 - #4 x 3'-6"	3 - #4 x 3'-6"	3 - #4 x 3'-6"	3 - #4 x 3'-6"	3 - #4 x 4'-0"	3 - #4 x 4'-6"	3 - #4 x 4'-6"	3 - #4 x 5'-0"	3 - #4 x 5'-0"	3 - #4 x 5'-0"	3 - #4 x 5'-6"
NUMBER & LENGTH #5 BY BOTTOM TENSION BARS @ EACH END	2 - #5 x 4'-0"	2 - #5 x 4'-0"	2 - #5 x 4'-6"	2 - #5 x 4'-6"	2 - #5 x 4'-6"	2 - #5 x 5'-0"	2 - #5 x 5'-0"	2 - #5 x 5'-0"	2 - #5 x 5'-6"	2 - #5 x 5'-6"	2 - #5 x 6'-0"
DESIGN CAMBER ** POSITIVE (UP) (INCHES)	@ RELEASE	0.13	0.14	0.16	0.17	0.23	0.20	0.40	0.42	0.50	0.53
	@ ERECTION	0.20	0.24	0.26	0.27	0.41	0.40	0.64	0.65	0.83	0.95
	@ FINAL	0.27	0.29	0.30	0.30	0.38	0.33	0.71	0.69	0.93	0.92
NO OF INSERTS REQD.											
NUMBER & SPACING OF TL-2 GUARDRAIL INSERTS											
SEE NOTE G											
WEIGHT OF TYPICAL BEAM INCLUDING DIAPHRAGM (TONS)	5.6	6.1	6.6	7.1	7.7	8.3	8.8	9.1	9.6	10.1	10.6

MIN. CONCRETE STRENGTH @ RELEASE	- 5500 PSI
MIN. CONCRETE STRENGTH @ 28 DAYS	- 8000 PSI
INITIAL PULL/STRAND	- 33,820 LBS
CROSS-SECTION AREA/STRAND	- 0.167 SQ. IN.

- NOTES:**
1. BEAM WEIGHTS LISTED IN THE DESIGN TABLE ARE BASED ON ZERO SKEW, 2 FT. LONG ENDLOCK AND DIAPHRAGM SPACING @ 15 FT. C/C. WEIGHTS FOR SKEWED BEAMS, LONGER ENDLOCKS AND ADDITIONAL DIAPHRAGMS SHOULD BE ADJUSTED ACCORDINGLY. FOR ADDITIONAL DIAPHRAGMS, ADD 135 LBS/DIAPHRAGM. FOR SKEW ADD 1 LBS/DEGREE OF SKEW/END. FOR LONGER ENDLOCK, ADD 163 LBS/LF/END.
 2. DESIGNERS SHOULD NOTE THAT DATA IN STANDARD TABLE IS BASED ON EVEN SPAN LENGTHS, A TWO LANE STRUCTURE B BEAMS WIDE AND ZERO SKEW. SUPERIMPOSED DEAD LOADS INCLUDE TYPE F PARABOL (30) FL1 AND A FWS OF 50 PSF. FOR NON-STANDARD BRIDGES DATA SHOULD BE VERIFIED AND IF REQUIRED NEW DESIGN DATA ENTERED INTO BLANK COLUMNS. IN NO CASE SHALL THE STANDARD DESIGN TABLE BE ALTERED.
 3. PREDICTED DESIGN CAMBER VALUES LISTED IN THE TABLE ARE BASED ON EMPIRICAL FORMULAS AND AS SUCH ARE APPROXIMATE. FOR MEMBERS WITH SPAN-TO-DEPTH RATIOS AT OR EXCEEDING 25, THE TOLERANCE VALUES LISTED IN APPENDIX B OF PCI MANUAL FOR QUALITY CONTROL, MKL-98, MAY NOT APPLY. MEASUREMENT OF CAMBER FOR COMPARISON TO PREDICTED DESIGN VALUES SHOULD BE COMPLETED WITHIN 72 HOURS OF RELEASE. ADDITIONALLY, CAMBER SHOULD BE EVALUATED UNDER CONDITIONS THAT MINIMIZE THE EFFECT OF TEMPERATURE VARIATION.

4. DESIGNER, FABRICATOR, AND ERECTOR SHALL BE AWARE THAT SKEWED END BEAMS MAY TWIST OR WARP, CAUSING UNEVEN BEAM SEATING AT THE BEARINGS. THE CONTRACTOR IS REQUIRED TO CORRECT AT THE TIME OF ERECTION, BEFORE THE BEAMS ARE SECURED IN PLACE. METHOD OF CORRECTION SHALL PROVIDE AN EVEN, TOTAL BEARING AND A LEVEL TOP BEAM SURFACE. TOLERANCE, AFTER CORRECTION, SHALL BE 1/4" X INCH. THE FABRICATOR SHALL NOTIFY THE CONTRACTOR AND DESIGNER IF CORRECTIONS ARE REQUIRED PRIOR TO SHIPMENT.
5. MAXIMUM BEAM SKEW SHALL BE 30 DEGREES.
6. DESIGNER INPUT VALUES OF NUMBER OF INSERTS, DISTANCE FROM END OF BEAM TO @ FIRST INSERT, AND @ FIRST INSERT TO @ SECOND INSERT. ABOVE VALUES SHALL BE BASED ON THE REQUIRED 6'-3" GUARDRAIL POST SPACING ACROSS THE BRIDGE.
7. SPECIAL STRAND NOTE FOR 17" BOX SECTION ONLY: WHEN TL-2 GUARDRAIL INSERTS ARE REQUIRED THE BOTTOM INSERT (TYPE DA ANCHOR) CONFLICTS WITH STRAND NO. 15. STRANDS 15 AND 16 HAVE BEEN MOVED TO POSITIONS 17 AND 18. FOR UNIFORMITY PURPOSES, ALL BEAMS OF THE SAME DESIGN SHALL USE SAME STRAND PATTERN.
8. THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-017A, BR-010, BR-011, BR-012A & B, BR-103, BR-104, BR-105A & B AND BR-016 AS APPLICABLE.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

DESIGN TABLE FOR 17"
PRESTRESSED BOX BEAM
STANDARD SHEET BR-017B

DATE: 10-25-07
BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

WYCO HOLLOW ARCH
OVER
ALLEN CREEK

DESIGN TABLE FOR 17"
PRESTRESSED BOX BEAM

DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
REVIEWED BY: [Signature]
DATE: [Blank]
SCALE: [Blank]
SHEET NO. 9 OF 9
BRIDGE NUMBER: 10989

Cost Sheet
RFQ #: 10120024

Item Number	Quantity	Description	Unit Price	Amount
1	622.5 S.F.	17" PRESTRESSED CONCRETE BOX BEAM		
2	249 S.F.	17" PRESTRESSED CONCRETE BOX BEAM		
3	14 EA	SKEWED END 17" BOX BEAM		
4	16 EA	ELASTOMERIC BEARING PADS		
5	14 EA	SWEDGED ANCHOR BOLT OR #8 GALVANIZED DEFORMED REBAR		
6	14 EA	GUARDRAIL ATTACHMENT ASSEMBLY FOR BOX BEAMS		
7	98 LF	1" DIAMETER POST TENSIONING BAR WITH NUTS AND WASHERS		
8	8 EA	9" X 9" X 1" PLATES		
9	14 EA	TYPE TL-2 BRIDGE GUARDRAIL POSTS, INSTALLED		
10	96 LF	TYPE TL-2 BRIDGE GUARDRAIL INSTALLED		
11	28 SF	2" THICK SPONGE RUBBER PREFORMED JOINT FILLER 22 LF @ 6-5/8" WIDE = 12.1 SF/END, 25 SF TOTAL 3.5 LF @ 4-3/4" WIDE = 1.4 SF/END, 3 SF TOTAL		
12	74 SF	1" THICK SPONGE RUBBER PREFORMED JOINT FILLER 50' X 17-3/4" WIDE		

TOTAL AMOUNT _____

State of West Virginia **VENDOR PREFERENCE CERTIFICATE**

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or** 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or**,
2. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,
3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,
4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or**,
5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or**,
6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: _____ Signed: _____

Date: _____ Title: _____

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: _____

Authorized Signature: _____ Date: _____

State of _____

County of _____, to-wit:

Taken, subscribed, and sworn to before me this ____ day of _____ 20____

My Commission expires _____, 20 _____

AFFIX SEAL HERE

NOTARY PUBLIC _____