

DATE	BY

SUMMARY OF BRIDGE QUANTITIES

ITEM	BASE BID ITEM QUANTITY	UNIT	ALTERNATE NO. 1 ITEM QUANTITY	UNIT
Embankment (Granular Fill)	2,944	CY	-	-
Excavation (Class III)	919	CY	-	-
Concrete Grade 4.0 (AE) (Special)	0	CY	760	CY
Concrete Grade 4.0 (AE)	389	CY	-	-
Concrete Grade 4.0 (AE)	909	CY	(760)	CY
Concrete Masonry Coating	661	SY	(661)	SY
Concrete Sealer	661	SY	-	-
Griffith Control System	632	SY	-	-
Structural Steel (ASTM A709 Gr 50T2) (Bridge)	440,583	LBS	-	-
Structural Steel - (Pile) (ASTM A709 Gr 50T2) (Pile)	79,964	LBS	-	-
Structural Steel (ASTM A500, Gr B) (Collision Beam)	20,050	LBS	-	-
Expansion Device (Sliding Plate)	127	LF	-	-
Headed Stud Anchors	3,600	EA	-	-
Reinforcing Steel (Gr. 60)	121,590	LBS	-	-
Reinforcing Steel (Gr. 60) (Epoxy-Coated)	49,030	LBS	-	-
Steel Piles (HP 14X89)	9,900	LF	-	-
Test Pile (Special) (HP 14X89)	348	LF	-	-
Dynamic Pile Test	4	EA	-	-
Electric Bearing - Deck - (Pier) - (Bridge)	8	EA	-	-
Steel Bearing Device (EXP)	9,133	LBS	-	-
Steel Bearing Device (FIX)	11,950	LBS	-	-
Bridge Handrail (Steel-Type 2)	288	LF	-	-
Abutment Strip Drain	446	SY	-	-
Bridge Backwall Protection System (Type K)	446	SY	-	-
Waterproofing (Deck)	505	SY	-	-
Waterproofing - (Pier) - (Bridge)	154	SY	-	-

This sheet designed by:



ARCHITECTS ENGINEERS PLANNERS

BRIDGE GENERAL NOTES

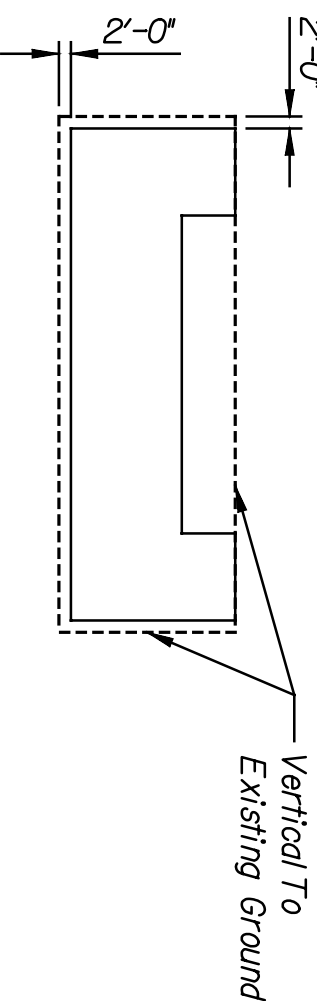
RAILROAD BRIDGE DESIGN SPECIFICATIONS: AREMA Manual for Railway Engineering, 2002.
 CONSTRUCTION SPECIFICATIONS Wichita Central Corridor Railroad Grade Separation Project, 25th Street to Waterman, Wichita, Kansas-Project Specifications, HNTB Corporation, 2005.
 MATERIAL and TESTING SPECIFICATIONS: The material and test specifications, current as of the publication of the project specifications, will be used. In cases of discontinuance or material changes to the specification, the engineer will be contacted for guidance.

REFERENCES:
 Wichita Central Corridor Railroad Grade Separation Project, Douglas Avenue to 21st Street, Wichita, Kansas-Final Geotechnical Investigation Report, HNTB Corporation, September 2003.
 Wichita Central Corridor Railroad Grade Separation Project, Douglas Avenue to 21st Street, Wichita, Kansas-Hazardous Materials Screening Report, HNTB Corporation, September 2000.
 BNSF Railway Guidelines, 2002.
 BNSF Railway / Union Pacific Railroad Standard Drawings
 Engineering and Shop Drawings for Existing Bridges at 2nd Street, 1st Street and Douglas Avenue.

HORIZONTAL & VERTICAL GEOMETRY CONTROL:
 Refer to Railroad and Street plans for horizontal and vertical geometry control.
 The track profile grade is at the top of rail.

All elevations shown are U.S.G.S. Datum (NGVD 29) City Datum = U.S.G.S. Datum - 1187.41.
 STRUCTURAL EXCAVATION:
 Structural excavation shall be in accordance with the plans and specifications.

STRUCTURAL BACKFILL:
 Structural backfill shall be located within the limits identified in the plans and specifications. Structural backfill shall meet or exceed the requirements of Embankment.



EXCAVATION FOR PAYMENT LIMITS

Abutment Footing Plan Shown

*NOTES:
 Negative quantities are denoted by the number surrounded by parentheses (xx).
 Negative quantities are subtractions from the base bid quantities, all other quantities are additions. The extension of the negative quantities on the official bid tab will reduce the overall cost of the Alternative. This project will be awarded to the Contractor with the lowest and best total base bid amount plus alternates selected by the City, the total of which is within the Owner's approved budget.

Alternate 1 - White Concrete

Sheets WC3.3 & WC3.6 replace sheets B3.3 & B3.6 respectively. For all other plan details, see Sheets B3.1 through B3.28.

Explanation: The bridge abutments are cast using Concrete Grade 4.0 (AE) (Special) with a concrete sealer and griffith control protection on the exposed surfaces. The purpose of this alternate is to provide an integrally colored white cement concrete

REINFORCING:
 All bar bending dimensions and tolerances are in accordance with CRSI's Manual of Standard Practice.

Reinforcing bars will be designated as follows: SSCOM SS = Bar Size (No. 3 to No. 18)
 CC = Component Designator, as follows:
 A-Abutment F-Footing D-Dowel
 P-Pier PB-Pier Beam PC-Pier Column
 PW-Pier Wall S-Slab/Deck R-Railing
 C-Curb

IN = Bar Mark Sequence (00-99)
 Reinforcing Bar Annotation Example:
 I1A12 A #11 Bar, located in the abutment, 12th bar in bar size/location sequence

EMBANKMENT:
 Fill material located within the volume bounded by the back face the abutment, back face of the wingwall(s), ends of the wingwall(s) and above the limits of structural backfill shall be classified as embankment.

Excavated materials not considered suitable for use as backfill or embankment shall be wasted off site. All embankment quantities are anticipated to be from an approved borrow site provided by the Contractor. Reuse of excavated materials in the embankment will only be permitted if the Contractor provides tests verifying the materials proposed for reuse meet the requirements for compacted granular fill. Embankment materials shall consist of compacted granular fill with a minimum effective internal friction angle of 32 degrees when tested by the standard direct shear test AASHTO T-236 utilizing a sample of the material compacted to 100% of maximum laboratory dry density of optimum moisture content. For all embankment materials placed on the project, except for the UPRR track construction work between 17th and 21st Streets, the moisture content of the fill at the time of placement and compaction shall be within the range of 3% below to 3% above the optimum moisture content value determined by the Standard Proctor (ASTM D-698). Embankment shall be compacted to at least 100% of the material's maximum Standard Proctor dry density (ASTM D-698). Embankment materials shall be free of organic material, debris and less than 10% by weight shall pass the no. 200 sieve. The fill shall be placed and compacted in lifts of 8 inches or less in loose thickness. Where the existing embankment is left in place, new embankment shall be stair-stepped into the existing embankment. The Contractor is responsible for furnishing and placing compacted granular fill that meets the design and performance requirements of the project. Payment for embankment shall be based on plan quantities. No additional payment will be authorized unless the Engineer approves embankment beyond the plan limits.

PROTECTIVE SHORING:
 Provide protective shoring as required by the BNSF Railway Federal, state and local regulations.
 Provide protective shoring as indicated in the plans and specifications.
 Additional shoring may be required.
 Protective shoring plans & calculations shall be designed and sealed by a professional engineer licensed in the State of Kansas.

Protective shoring calculations, plans and details shall be submitted eight (8) weeks prior to commencing shoring operations.
 Protective shoring calculations, plans and details shall be submitted to the Engineer and distributed to the BNSF, UPRR and WUTA for approval. Protective shoring construction shall not begin until approved by the Engineer and the railroads.

QUANTITIES:
 Items not listed separately in the Summary of Bridge Quantities are subsidiary to other items.

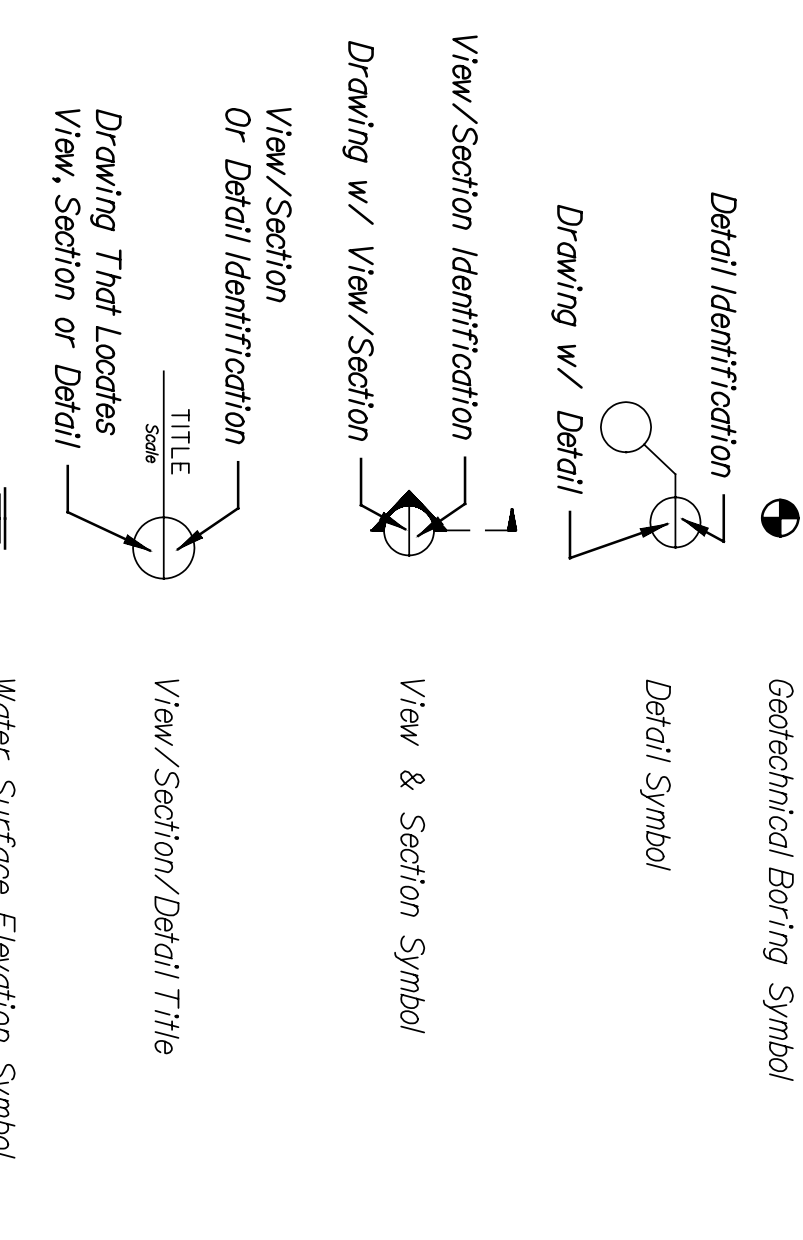
QUALITY CONTROL:
 Prior to placing structural steel, verify that the bridge seat elevations are equal to the plan elevation +/- 1/8" and submit the documentation of the elevations to the Engineer.

STATE	PROJECT NO.	YEAR	TOTAL SHEETS
KANSAS	472-84071	2005	WC3.3

ABBREVIATIONS:
 AASHTO American Association of State Highway & Transportation Officials
 ACI American Concrete Institute
 AISC American Institute of Steel Construction
 ANSI American National Standards Institute
 AREMA American Railway Engineering and Maintenance-of-Way Association
 ASME American Society of Mechanical Engineers
 ASTM American Society of Testing and Materials
 AWS American Welding Society

Bm Bottom of Burlington Northern and Santa Fe Railway Company Bottom
 BNSF BNSF
 CRSI Concrete Reinforcing Steel Institute (www.crsi.org)
 C.F. Cubic Feet
 C.S. Cubic Yards
 C.Y. dry fill thickness
 dft Each Face Equal Spaces Each Way
 E.F. Equal Spaces Each Way
 E.S. Each Face Equal Spaces Each Way
 E.W. Each Face Equal Spaces Each Way
 Fc Minimum 28-day Concrete Compressive Strength
 Fc/Fairmetl Fair Face
 F.F. Fair Face
 FT. Feel
 Golvulvized Galvanized
 IN. Inches
 KIP 1000 Pounds
 KSF Kips per Square Foot
 L.F. Linear Feet
 Lbs. Pounds
 max. 0.001 inches Minimum Maximum
 Min. Not Applicable
 N/A Near Face
 N.F. Pounds per Cubic Foot
 PCF Pounds per Linear Foot
 P.LF Point of Intersection (Horizontal Curves)
 P.V.C. Point of Vertical Curvature
 P.V.I. Point of Vertical Intersection
 P.V.T. Point of Vertical Tangency
 R Radius
 S.C. Spiral to Curve Point
 Sim. Similar
 S.T. Spiral to Tangent Point
 SSFC The Society for Protective Coatings
 SY Square Yards
 T/S Top of Tangent to Spiral Point
 TYP. Typical
 U.N.O. Unless Noted Otherwise
 USACOE U.S. Army Corps of Engineers
 UPRR Union Pacific Railroad
 WUTA Wichita Union Terminal Association

SYMBOLS
 Diameter Symbol
 Geotechnical Boring Symbol
 Detail Symbol
 View & Section Symbol
 Drawing w/ Detail
 Drawing w/ View/Section
 Drawing That Locates View, Section or Detail
 Water Surface Elevation Symbol



SHEET NO.	OF	SCALE AS NOTED	APPD.
DESIGNED	GAB	DETAILED	BLM
DESIGN	CR	DETAILED	CR
DATE	DATE	DATE	DATE
NO.	DATE	NO.	DATE
CITY OF WICHITA WICHITA CENTRAL CORRIDOR ALTERNATE 1 MURDOCK			
SUMMARY OF QUANTITIES AND GENERAL NOTES			
SHEET NO.	OF	SCALE AS NOTED	APPD.
DESIGNED	GAB	DETAILED	BLM
DESIGN	CR	DETAILED	CR
DATE	DATE	DATE	DATE
NO.	DATE	NO.	DATE
CITY OF WICHITA WICHITA CENTRAL CORRIDOR ALTERNATE 1 MURDOCK			
SUMMARY OF QUANTITIES AND GENERAL NOTES			
TRACTOR:	BNSF BR 2115		
LOCATION:	WICHITA, KS		
LINE SEGMENT	1400		
DATE	DATE	DATE	DATE
NO.	DATE	NO.	DATE