

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
--	00-P4003-00-BT	WILL.	57	16
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FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

CONTRACT NO. 83532

I GENERAL NOTES

- Standard Specifications, Construction Plans And Subsequent Details Referenced And Presented On The Plans Are All To Be Considered As Part Of The Contract. Incidental Items Or Accessories Necessary To Complete This Work May Not Be Specifically Noted But Are Considered A Part Of This Contract.
- No Construction Plans Shall Be Used For Construction Unless Specifically Marked For Construction. Prior To Commencement Of Construction, The Contractor Shall Verify All Dimensions And Conditions Affecting The Work With The Actual Conditions. If There Are Discrepancies Between The Job Site And What Is Shown On The Construction Plans, He Must Immediately Report To Engineer Before Doing Any Work, Otherwise The Contractor Shall Assume Full Responsibility. In The Event Of Disagreement And/or Special Details, The Contractor Shall Secure Written Instruction From The Engineer Prior To Proceeding With Any Part Of The Work Affected By Omissions Or Discrepancies. In Failing To Secure Such Instruction, The Contractor Will Be Considered To Have Proceeded At His Own Risk And Expense. In The Event Of Any Doubt Or Questions Arising With Respect To The True Meaning Of The Construction Plans Or Specifications, The Decision Of The Engineer Shall Be Final And Conclusive.
- The Net Allowable Bearing Capacity Used For The Design Of The Foundation Is 5000 psf Based On The Soil Report Prepared By Testing Service Corporation, File No. L-59,866 Dated May 12, 2004.
- The Contractor Is Responsible For Design, Installation And Removal Of All Excavation Support System.
- The Excavation And Work Area Shall Be Properly Drained At All Times During Construction. All Wet, Loose, Frozen Or Other Unsuitable Material Shall Be Removed Prior To Placement Of Concrete Or Compacted Backfill.
- Contractor Shall Verify All Topographic Information And Grade Elevations Adjacent To Bridge, Ramp And Stairs Prior To Proceeding And Inform Engineer Of Any Variation.

II CAST-IN-PLACE CONCRETE

- All Cast-In-Place Concrete Work Shall Be In Accordance With Section 503 Of The IDOT Standard Specifications For Road And Bridge Construction, Adopted January 1, 2002, And Supplemental Specifications And Recurring Special Provisions And As Noted Below.
- An Approved Testing Laboratory Shall Prepare Concrete Mix Designs. The Concrete Mix Design Shall Be Submitted To The Engineer For Approval A Minimum Of Seven Days Prior To Ordering Of The Concrete.
- Concrete Testing Shall Be The Responsibility Of The Contractor According To Article 1020.09 Of The IDOT Standard Specifications. Four Concrete Test Cylinders Shall Be Taken For Every Concrete Pour. Test Results Shall Be Determined By A Testing Laboratory And Provided To The Owner, Engineer And Contractor At The 7-day, 14-day And 28-day Breaks.
- All C.I.P. Concrete Shall Be Class SI Concrete And Shall Have A Minimum Compressive Strength Of 4,000 Psi @ 28 Days.
- Cover From The Face Of Concrete To Face Of Reinforcement Bars Shall Be 3" For Surfaces Formed Against Earth And 2" For All Other Surfaces Unless Otherwise Shown.
- All Reinforcing Steel Work Shall Be In Accordance With Section 508 Of The Standard Specifications.
- Reinforcement Bars Shall Conform To The Requirements Of AASHTO M-31, M-42 Or M-53 Grade 60. Field Bending Or Cutting Shall Not Be Permitted.
- Reinforcing Bar Bending Dimensions Are Out To Out.
- Reinforcing Bar Bending Details Shall Be In Accordance With The ACI "Manual Of Concrete Practice For Details And Detailing Of Concrete Reinforcement", ACI 315, Latest Edition. Shop Bending And Placement Drawings Shall Be Submitted To The Engineer For Review And Approval Prior To Fabrication.
- All Exposed Concrete Edges Shall Be Beveled 3/4".
- All Walking Surfaces Shall Receive a "Broom" Finish.
- Control Joints In Walls Shall Be Space Every 15'-0" o.c. Max. Or At Changes In Direction (Unless Noted Otherwise). Submit Control Joint Layout For Approval Prior To Proceeding.
- Concrete Wall Shall Be Paired In Maximum Lengths of 60' Between Vertical Construction Joints.

III CONSTRUCTION

- All Work And Materials Shall Be In Accordance With Illinois Department Of Transportation (IDOT) Standard Specifications For Road And Bridge Construction, Adopted January 1, 2002, And Latest Supplemental Specifications And Recurring Special Provisions, Unless Noted Otherwise.
- Do Not Scale Dimensions For Construction. Scale, If Shown, Applies Only To Full Size Drawings.
- No Construction Joints Will Be Allowed Unless Directed By The Engineer.
- Any Information Concerning Type Or Location Of Underground And Other Utilities Is Not Guaranteed To Be Accurate Or All Inclusive. The Contractor Is Responsible For Making His Own Determinations As To The Type And Location Of The Utilities As May Be Necessary To Avoid Damage Thereof. Contractor Shall Call J.U.L.I.E. Prior To Excavation.
- Shop, Working Or Layout Drawings (Including Reinforcement Bending And Placing Drawings) Pertaining To The Construction Of The Work, As May Be Required, Shall Be Submitted To The Engineer For Approval Prior To The Start Of Construction.
- Upon Completion, The Contractor Shall Collect And Remove All Construction Debris And Excess Material From The Site. Damaged Trees, Shrubs, And Other Landscape Features Resulting From Construction Activities Shall Be Replaced Or Repaired.
- All Bearing Surfaces Must Be True And Level.
- Contractor Must Coordinate With Bridge Manufacturer To Ensure Proper Placement Of Cast-In-Place Anchors. If The Contractor Elects To Use Post-Installed Anchors In Lieu Of Cast-In-Place Anchors, He Must Coordinate The Plate Dimensions, Bolt Spacing And Bolt Quantity With The Bridge Manufacturer Prior To Construction.
- All C.I.P. Concrete And Bridge Shall Be Placed From The West Side Of The I & M Canal.

IV PREFABRICATED PEDESTRIAN BRIDGE

The Bridge Shall Be Designed And Fabricated In Accordance With The American Association Of The State Highway And Transportation Officials (AASHTO) Standard Specifications For Highway Bridges, 17th Edition With Current Interims, The American Welding Society (AWS) Structural Welding Code D1.1 And Bridge Welding Code D1.5, And Conform To The Rules And Standards Of The AASHTO Guide Specifications For Design Of Pedestrian Bridges. The Bridge Manufacturer Shall Have Been In The Business Of Design And Fabrication Of Bridges For A Minimum Of Five Years.

- Style: Pratt Truss Or Approved Equal.
- Bridge Shall Be Fabricated To The Length And Width Shown On The Plans.
- Loading: Dead Load Of The Bridge Plus 85 Pounds Per Square Foot Evenly Distributed Live Load (Reduced Where Applicable Per AASHTO Guide Specification For Design Of Pedestrian Bridges) Or A 10,000 Pound Concentrated Vehicle Load. Vehicle Impact Is Not Required.
- Wind Loading: The Bridges Shall Be Designed For A Wind Load Of 35 Pounds Per Square Foot On The Full Vertical Projected Area Of The Bridge As If Enclosed. The Wind Load Shall Be Applied Horizontally At Right Angles To The Longitudinal Axis Of The Structure. The Wind Load Shall Be Considered In The Design Of The Lateral Load Bracing System And In The Design Of The Truss Vertical Members, Floor Beams And Their Connections. Wind Loads Shall Also Be Considered In Top Chord Stability Per 1.3.6 Of The AASHTO Guide Specifications For Design Of Pedestrian Bridges. A Wind Overturning Force Shall Be Applied According To Article 3.15.3 Of The AASHTO Standard Specification For Bridges, 2002.
- At No Point Along The Bridge Shall The Deck Slope Be Greater Than 5%. In Addition, All Truss Verticals Shall Be Plumb.
- Railings: The Top Chord Of The Trusses Shall Be Considered A Railing And Shall Be A Minimum Of 54" Above The Bridge Deck. Safety Rails Shall Be Placed On The Outside Of The Bridge With A Maximum Clear Spacing Of 4". Rub Rails Shall Be 42" From The Top Of The Deck, A Minimum Of 5" Tall And Located On The Inside Surface Of The Truss. All Railings Shall Have A Smooth Surface With No Depressions Or Protrusions Greater Than 3/8" As Per AASHTO 2.7.1.4. All Exposed Members, Railings, And Sharp Corners Shall Be Ground Smooth.
- Materials: No Structural Material Shall Be Less Than 3/16" Thick (0.1875").

- Bridge Shall Be Fabricated From Weathering Steel Conforming To The Following: Plates And Shapes: ASTM A588 Or A242 Gr.50 Or Equal
HSS: ASTM A847 Gr.50 Or Equal
Structural Fasteners: Astm A325- Type 3
Weld Electrode Low Hydrogen E70XX

Decking: Timber Decking Shall Be IPE Hardwood Or Approved Equal. The Wood Deck Shall Be Designed For A Minimum 100 Psf Local Loading Condition In Addition To Wheel Loads Associated With A 10,000 Lb Vehicle. Floor Planks Shall Be Attached To Supporting Members With At Least Two Plated Fasteners Per Support Point. Manufacturer Must Provide A 15 Year Warranty On Decking Material And Fasteners.
- Finishes: All Steel Shall Be Unpainted Weathering Steel Conforming To The Material Requirements Listed Above. A Minimum Corrosion Index of 6.0 Is Required. All Exposed Surfaces Of Steel Shall Be Blast Cleaned In Accordance With Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-off Blast Cleaning, SSPC- SP7 Latest Edition. Setting Plates And Anchor Bolts Shall Be Galvanized.
- Quality: The Bridge Manufacturer Shall Maintain Proper Records Assuring That All Steel, Bolts, And Materials Used Are In Accordance With Materials Specified. The Bridge Shall Be Identified And Marked With A Permanent Nameplate Showing The Manufacturer's Name, Location, Date Of Manufacture, And Load Carrying Capacity. Structural Material Shall Be Traceable To Each Bridge. All Welders Shall Be Qualified In Accordance With AWS D1.5:2002 Bridge Welding Code And AWS D1.1:2002 Structural Welding Code. All Workmanship Shall Be In Compliance With AASHTO And AISC Standard Practice. Full Penetration Weld Details Used In Shop Splices Shall Be Submitted To The Engineer To Determine Testing Required (If Any).
- Certified Copies Of All Material Certifications Shall Be Provided. The Bridge Manufacturer Shall Provide Certified Copies Of Shop Welding Procedure Specifications And Certified Copies Of Welder Qualifications I.A.W. AWS D1.5:2002 And AWS D1.1:2002.
- Delivery: Bridge Shall Be Delivered From The West Side Of The I & M Canal By Truck To A Location Nearest The Site.
- Four Sets Of Plans And Calculations Shall Be Submitted To The Engineer For Review. Submittal Shall Be Stamped And Sealed By A Structural Engineer Licensed In The State Of Illinois.

BILL OF MATERIAL (BRIDGE)

Structure Excavation	Cu. Yd.	40
Concrete Structures	Cu. Yd.	21
Reinforcement Bars	Lbs.	2100
Pedestrian Truss Superstructure	Sq. Ft.	1212

LAP SPLICE SCHEDULE

BAR SIZE	CLASS "B" SPLICE
#4	32"
#5	40"
#6	48"

I Certify That To The Best Of My Knowledge, Information And Belief, This Bridge Design Is Structurally Adequate For The Design Loading Shown On The Plans. The Design Is An Economical One For The Syle Of Structure And Complies With Requirements Of The Current "AASHTO Standard Specification For Highway And Bridges".



FEBRUARY 1, 2006

John P. Riley

JOHN P. RILEY
ILLINOIS REGISTRATION No. 081-004427 STRUCTURAL ENGINEER
EXPIRATION DATE: 11/30/06
STRUCTURAL SHEETS

REVISIONS NAME	DATE
STRUCTURE REVISIONS	7/5/02

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURAL GENERAL NOTES
SCALE: AS SHOWN
DATE 2/1/2006
DRAWN BY PDR
CHECKED BY JPR

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