

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 220 JOLLIFF BRIDGE ROAD	05-02111-00-BR	CLINTON	12	6

CONTRACT NO. 97329

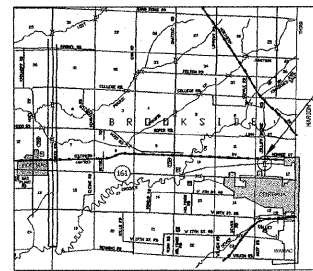
**BENCHMARK:** STA. 10+92.89, 17.85' RT. SPIKE SET IN POWER POLE ELEV. = 470.56  
 STA. 8+24.67, 17.44' RT. SPIKE SET IN POWER POLE ELEV. = 472.48

**EXISTING STRUCTURE S.N. 014-4001**

THE EXISTING STRUCTURE IS A SINGLE SPAN PRECAST CONCRETE CHANNEL BEAM BRIDGE MEASURING 29.6 FEET BACK TO BACK ABUTMENTS. THE EXISTING DECK PROVIDES A CLEAR ROADWAY WIDTH OF 20.3 FEET. THE SUBSTRUCTURE CONSISTS OF PRECAST CONCRETE PILE CAPS WITH TIMBER PILES AND TIMBER BACKWALLS.

THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING STRUCTURE IN ACCORDANCE WITH SECTION 501 OF THE STANDARD SPECIFICATIONS. EXCEPT THE ITEMS LISTED BELOW THAT ARE TO BE SALVAGED.

**SALVAGE:**  
 THE CONTRACTOR SHALL SALVAGE AND STOCKPILE THE EXISTING CONCRETE RAIL POST AS DIRECTED BY THE ENGINEER. THE RAIL POST SHALL BECOME THE PROPERTY OF AND SHALL BE REMOVED FROM THE JOBSITE BY THE CLINTON COUNTY HIGHWAY DEPARTMENT.



LOCATION SKETCH

A TRIB. TO CROOKED CREEK  
 BUILT 200\_ BY  
 BROOKSIDE ROAD DISTRICT  
 SECTION 05-02111-00-BR  
 STATION 10+00  
 STR.NO. 014-4054 LOADING HS-20

**NAME PLATE**

LOCATE NAME PLATE AS SHOWN IN PLAN VIEW. (SEE STD. CN)

**NORTH ABUTMENT**

Pile Type: Steel HP 10X42  
 Nominal Required Bearing: 162 Kips  
 Allowable Resistance Available: 54 Kips  
 Estimated Length: 35 FT.  
 Number of Test Piles: 1  
 Number of Production Piles: 4

**SOUTH ABUTMENT**

Pile Type: Steel HP 10X42  
 Nominal Required Bearing: 162 Kips  
 Allowable Resistance Available: 54 Kips  
 Estimated Length: 35 FT.  
 Number of Test Piles: 0  
 Number of Production Piles: 5

**DESIGN STRESSES**

**PRECAST PRESTRESSED UNITS**

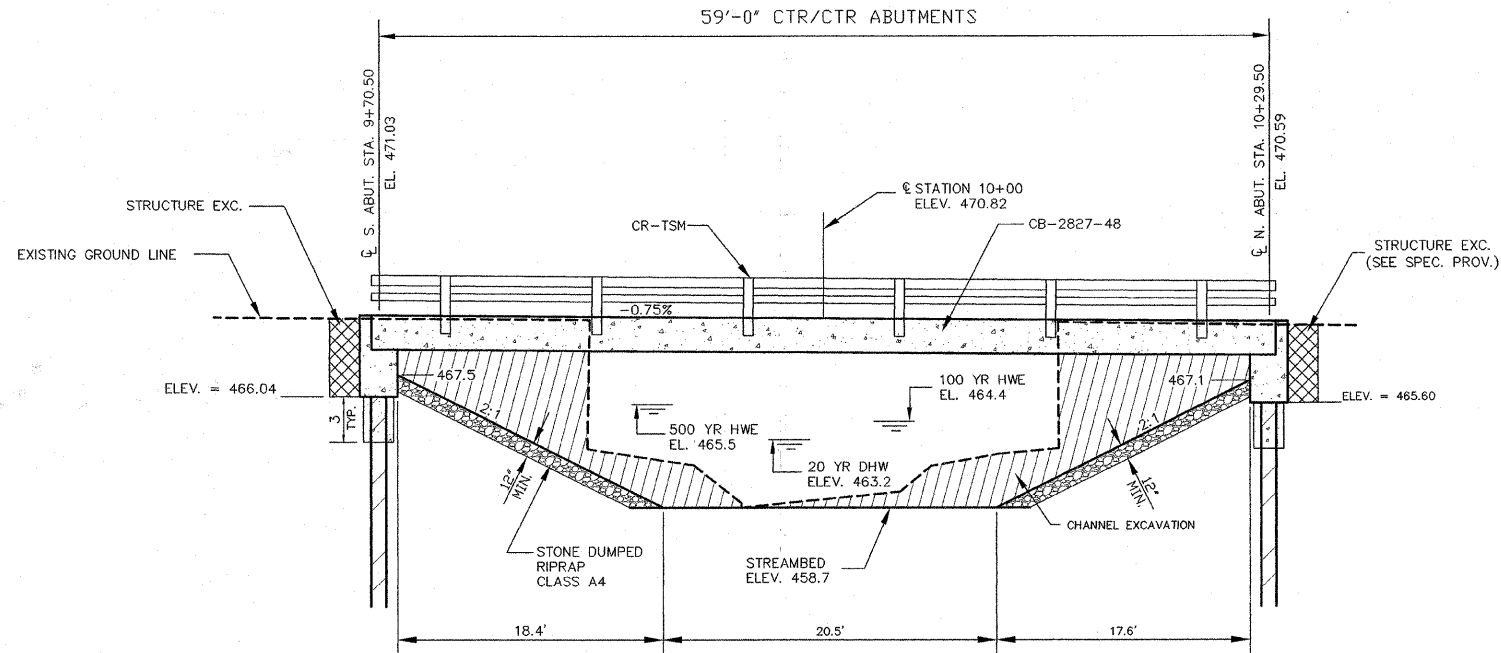
$f_c = 5000$  p.s.i.  
 $f_{ci} = 4000$  p.s.i.  
 $f_s = 270,000$  p.s.i. (1/2"  $\phi$  STRAND)  
 $f_{si} = 201,960$  p.s.i. (1/2"  $\phi$  STRAND)  
 $f_y = 60,000$  p.s.i.

**CAST IN PLACE CONCRETE**

$f_c = 3,500$  p.s.i.  
 $f_y = 60,000$  p.s.i. (REINF.)

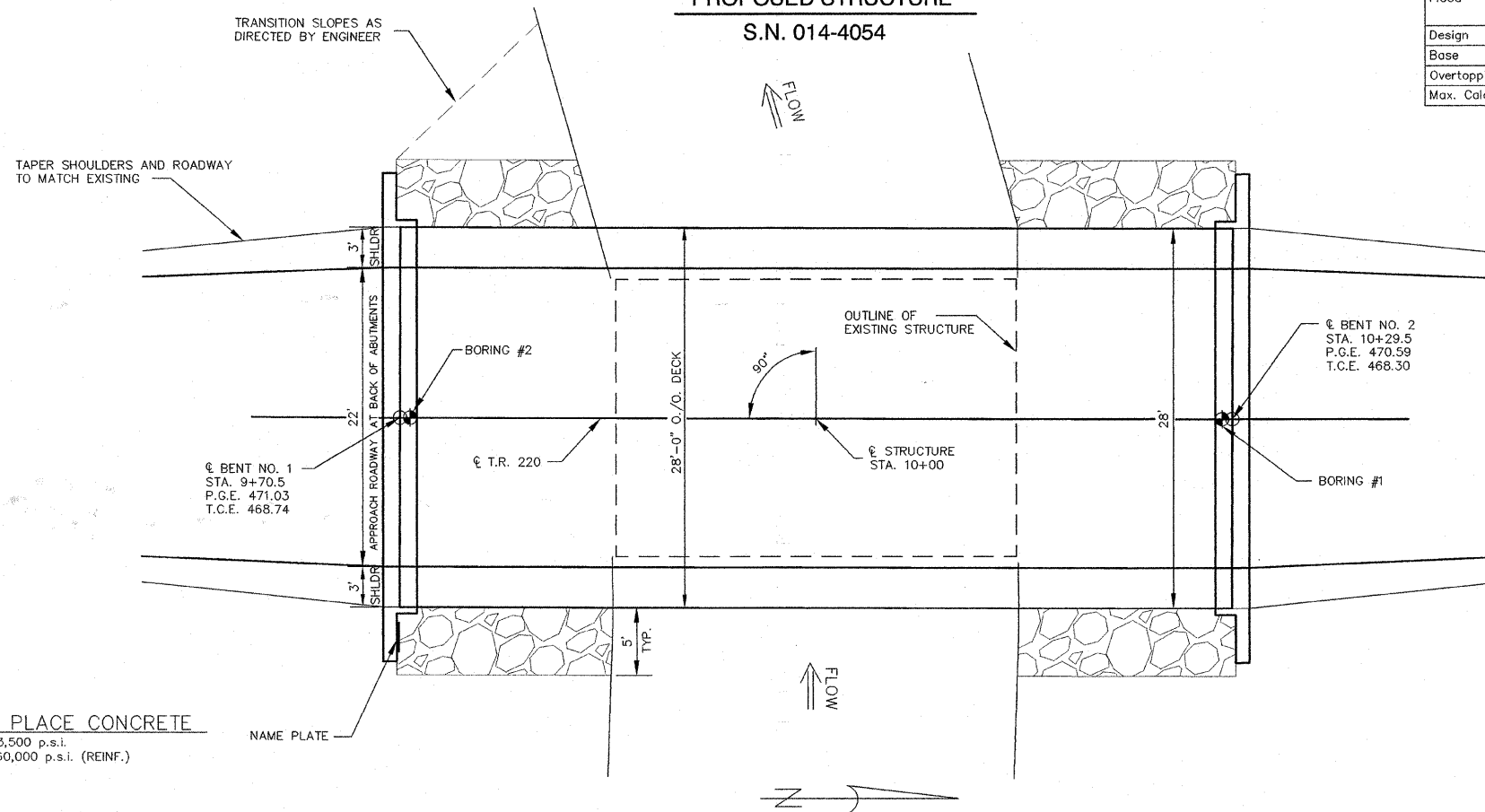
**LOADING HS 20-44 LOAD FACTOR DESIGN**

ALLOW 25 P.S.F. FOR FUTURE WEARING SURFACE  
 2002 AASHTO



**PROPOSED STRUCTURE**

S.N. 014-4054



**GENERAL NOTES**

- THE CONTRACTOR SHALL DRIVE (1) HP 10X42 TEST PILE, AT BENT #1 IN A PERMANENT LOCATION AS DIRECTED BY THE ENGINEER BEFORE ORDERING REMAINING PILES. THE TEST PILES SHALL BE DRIVEN TO 110 PERCENT OF THE NOMINAL REQUIRED BEARING INDICATED IN THE PILE DATA INFORMATION.
- IN ADDITION TO ALL OTHER REQUIREMENTS OF SECTION 512 OF THE STANDARD SPECIFICATION, SPLICES FOR HP 10X42 PILES SHALL DEVELOP THE FULL CAPACITY OF THE STEEL'S CROSS SECTIONAL AREA OF THE PILE FOR TENSION, SHEAR AND BENDING FORCES. ONE APPROVED METHOD OF ACHIEVING THIS REQUIREMENT IS FULL PENETRATION BUTT WELD OF THE CROSS SECTION. OTHER TYPES OF SPLICES MEETING THE FULL CAPACITY REQUIREMENT MAY BE ALLOWED SUBJECT TO THE APPROVAL OF THE ENGINEER. ANY PROPOSAL BY THE CONTRACTOR TO USE AN ALTERNATE SPLICE METHOD MUST INCLUDE ADEQUATE DOCUMENTATION THAT THE FULL TENSION, SHEAR AND BENDING CAPACITIES WILL BE MET. APPROPRIATE WELDER QUALIFICATIONS WILL BE REQUIRED FOR THE POSITION AND PROCESSING USED IN SPLICING ALL PILES. NONDESTRUCTIVE TESTING OF COMPLETED WELDS WILL BE LIMITED TO VISUAL INSPECTION.
- KEYWAY SURFACES SHALL BE CLEANED TO REMOVE FORM OIL OR OTHER BOND BREAKING MATERIALS PRIOR TO SHIPMENT OF BEAMS. CLEANING SHALL BE DONE BY SANDBLASTING THE KEYWAY AREAS BETWEEN THE TOP OF THE BEAM AND THE BOTTOM EDGE OF THE KEY.
- CLASS SI CONCRETE SHALL BE USED THROUGHOUT EXCEPT IN THE DECK BEAMS.
- A CORROSION INHIBITOR, PER ARTICLE 1020.05(b)(12) OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.
- SEE SPECIAL PROVISIONS FOR BORING LOGS.

**WATERWAY INFORMATION TABLE**

Drainage Area = 0.9 Sq. Mi.<sup>2</sup> Low Grade Elev. = 470.1 @ STA 11+00

Flood	Freq. Yr.	Q CFS	Opening Sq. ft.		Nat. H.W.E. F.T.	Head - Ft.		Headwater Elev. - Ft.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	555	71	172	463.2	1.3	0.2	464.5	463.4
Base	100	843	110	183	464.4	0.9	0.3	465.3	444.7
Overtopping	N/A								
Max. Calc.	500	1160	144	233	465.5	0.8	0.2	466.3	465.7

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	SUPER	SUB.	Total
Removal of Existing Structures	Each			1
Prec. Pres. Conc. Dk. Bms. 27" Depth	Sqr Ft.	1,680		1,680
Concrete Structures	Cu Yd.		20.8	20.8
Reinforcement Bars	Pound			2580
Furnishing Steel Piles, HP 10 X 42	Foot		315	315
Driving Piles	Foot		315	315
Test Piles Steel HP 10 X 42	Each		1	1
Steel Railing Type SM	Foot	120		120
Name Plates	Each			1
Channel Excavation	Cu Yd.			350
Stone Dumped RipRap, Class A4	Ton			88
Concrete Encasement	Cu Yd.		2.6	2.6

**INDEX OF BRIDGE SHEETS**

- GENERAL PLAN AND ELEVATION STANDARDS
- CS-2827-60
- CB-2827-48
- CA-2827-10
- CR-TSM
- CN
- CX-1

**GENERAL PLAN & ELEVATION**

T.R. 220 (JOLLIFF BRIDGE ROAD)  
 OVER TRIB. TO CROOKED CREEK  
 SECTION 05-02111-00-BR  
 CLINTON COUNTY  
 STATION 10+00  
 STRUCTURE NO 014-4054