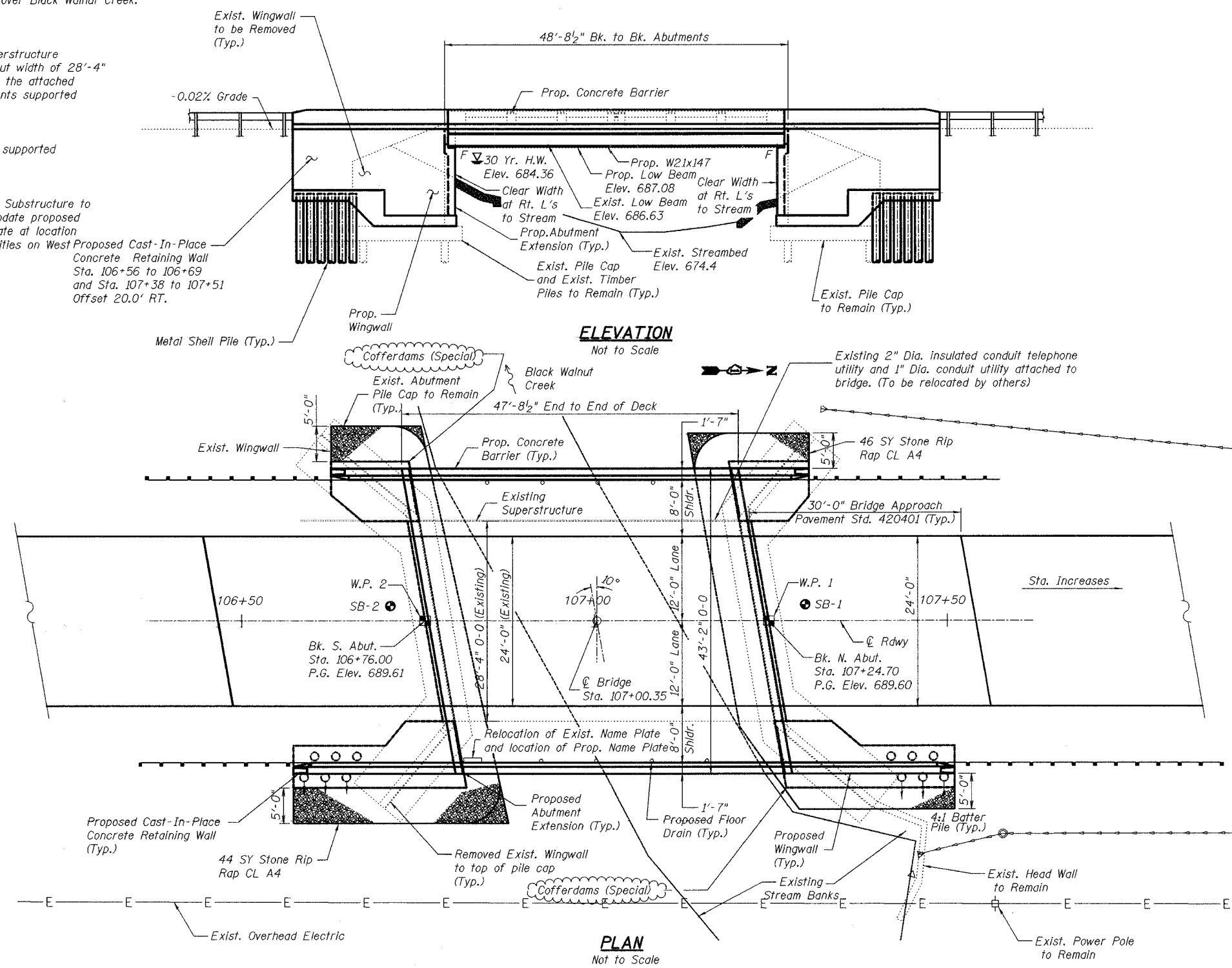


**Benchmarks:**  
 BM 1: Cut square in top of concrete wingwall at the South East corner of the Harlem Avenue Bridge over Black Walnut Creek. Elev. 689.71  
 BM 2: Cut square in top of concrete headwall adjacent to the wingwall at the North East corner of the Harlem Avenue Bridge over Black Walnut Creek. Elev. 685.35

**Existing Structure:**  
 Bridge Constructed in 1962 (S.N.# 099-3091). The Superstructure consists of a precast concrete bridge with an out-to-out width of 28'-4" and a total length of 48'-8 1/2" to be removed along with the attached bridge rail. The Substructure consists of closed abutments supported on untreated timber piles to remain.

**New Structure:**  
 One span composite concrete deck on Steel W sections supported on existing closed abutments.

**Salvage:**  
 Existing Superstructure to be removed and the existing Substructure to be partially demolished, repaired and modified to accommodate proposed Superstructure. Salvage and re-install existing Name Plate at location indicated below. Also salvage and re-install existing utilities on West Fascia of proposed bridge.



**DESIGN SPECIFICATIONS**  
 2002 AASHTO with 2003 & 2004 Interims

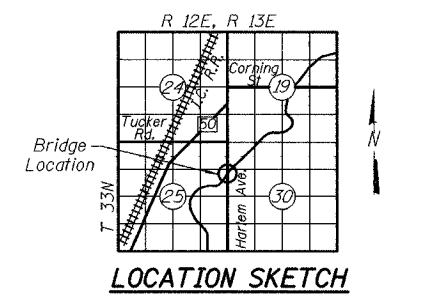
**\*LOADING HS20-44**  
 50#/sq. ft. for future wearing surface.  
 \* Also designed for 120,000 Lb. Permit loading

**DESIGN STRESSES**

**FIELD UNITS**  
 f<sub>y</sub> = 60,000 psi (Reinforcement Bars)  
 f'<sub>c</sub> = 4,000 psi (Class S1)  
 f'<sub>c</sub> = 3,500 psi (Class BD)  
 f<sub>s</sub> = 27,500 psi (Structural Steel)

**SEISMIC DATA**

Seismic Performance Category (SPC) = "A"  
 Bedrock Acceleration Coefficient (A) = 0.04g  
 Site Coefficient (S) = 1.0



DRECKLER BRIDGE  
 REBUILT 200- BY  
 WILL COUNTY  
 SEC. 01-00139-02-BR  
 LOADING HS20-44  
 S.N. 099-3091

**NAME PLATE**  
 See Std. 515001

**COFFERDAMS (SPECIAL)**  
 Description: Cofferdams (Special) shall conform to the applicable portions of Section 502 of the Standard Specifications except that the Contractor shall submit fabrication drawings to the Engineer signed and sealed by an Illinois Licensed Structural Engineer for the cofferdams. Installation and removal shall conform to Article 502.12

**WATERWAY INFORMATION**

Drainage Area = 15.7 mi <sup>2</sup>		Low Grade Elev. 689.45 ft. @ Sta. 107+76.2							
Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater El.		
		Exist.	Prop.		Exist.	Prop.	Exist.	Prop.	
Design	30	1455	323.0	323.0	684.36	0.09	0.09	684.45	684.45
Base	100	2091	397.0	384.6	686.09	0.00	0.16	686.04	686.19

DESIGNED	MGH
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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 style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

*Robert J. Duda*  
 IL Licensed Structural Engineer  
 Date 1-11-2006  
 Date 11-30-2006  
 Licensed Expires



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REVISIONS	
NAME	DATE
WJH	1-11-06

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
 General Plan and Elevation  
 Harlem Avenue/Dreckler Road  
 Over Black Walnut Creek  
 Will County  
 Section 01-00139-02-BR  
 S.N. 099-3091  
 DATE 5-26-2005