

Benchmark 1:
Northeast bolt on fire hydrant in the southwest quadrant of Stolp Avenue and Downer Place. Approximately Sta. 111+60, ±34' Rt. southwest of centerline of Downer Place and ±37' of the centerline of Stolp Avenue. Elevation: 638.31 (NAVD 88)

Benchmark 2:
Bolt on top flange of fire hydrant labeled "Bury" located in front of the "Grand Army of the Republic" (G.A.R.) building at the southwest quadrant of the intersection of Downer Place and the Fox River on the East side of the Island. Approximately Sta. 114+84, ±36'Rt. of the centerline of Downer Place. Elevation: 638.09 (NAVD 88)

Existing Structure:
SN 045-6006 constructed circa 1910 as a three span cast-in-place concrete closed spandrel arch with an out-to-out width of 63'-8" and a total length of 172'-11". The existing arch is to be removed and replaced with a PPC Deck Beam superstructure on built up piers and abutments. The existing foundations will be re-used.

No salvage

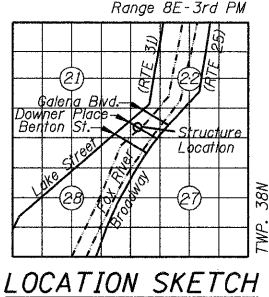
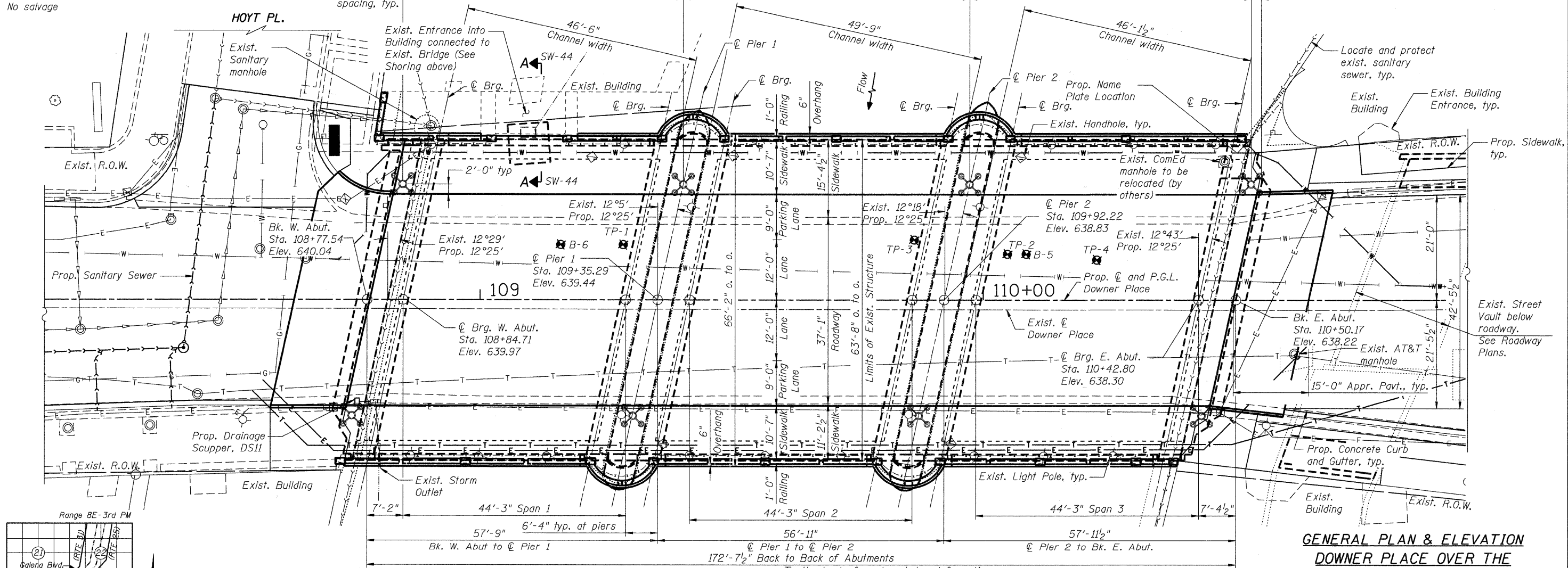
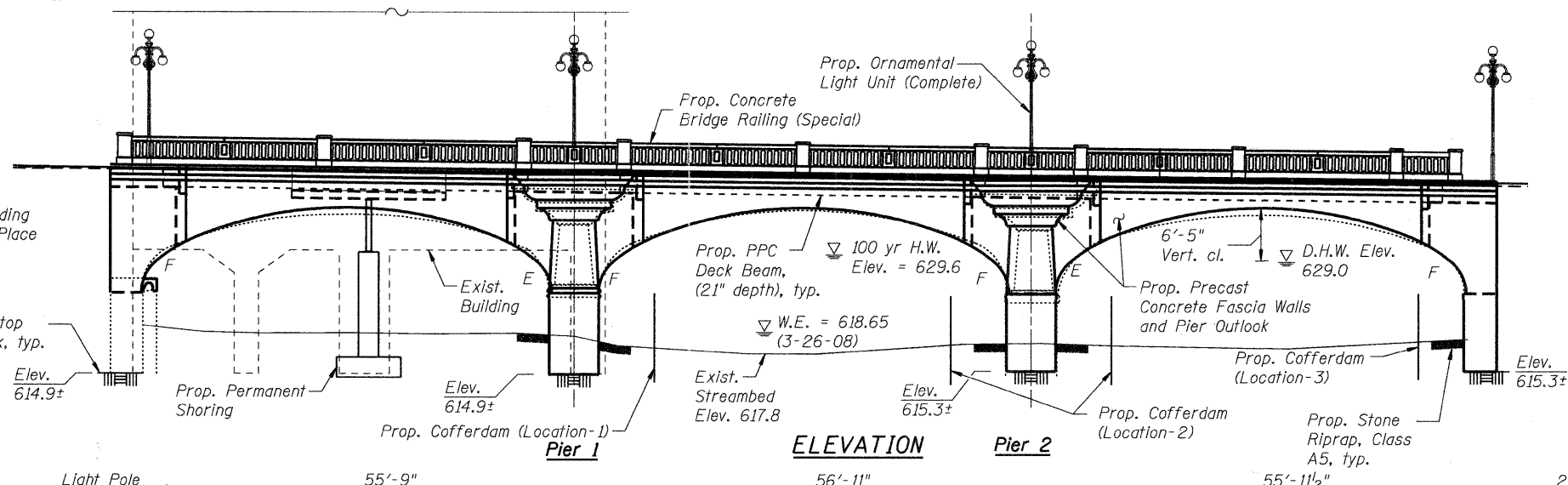
DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2" φ low lax. strands)
fpbt = 201,960 psi (1/2" φ low lax. strands)

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

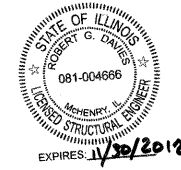
SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = .038g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = .103g
Soil Site Class = B



PLAN
See SW-3 for utility legend

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 LRFD Bridge Design Specifications".

Robert Sklar 7/1/2011
Structural Engineer
HR Green Inc. Date



GENERAL PLAN & ELEVATION
DOWNER PLACE OVER THE
WEST BRANCH OF THE FOX RIVER
PUBLIC WATER
SECTION NO. 07-00264-00-BR
KANE COUNTY
STATION 109+64.00
STRUCTURE NO. 045-6006

COMPANY NAME: HRGreen.com
PROJECT CONTACT: Michael G. Harara
CLIENT: City of Aurora
DATE PLOTTED: 7/1/2011 10:31:56 AM
FILE NAME: 86090412-W-0401.dgn
PLOT DRIVER: pdf.plt
PEN TABLE: Struct 22x34.tbl

HRGreen.com
Illinois Professional Design Firm
#194-001322

USER NAME = whoad	DESIGNED - MGH	REVISED -
PLLOT SCALE = N.T.S.	CHECKED - RGD	REVISED -
PLLOT DATE = 7/1/2011	DRAWN - WJH	REVISED -
	CHECKED -	REVISED -

CITY OF AURORA
DOWNER PLACE OVER THE WEST BRANCH
OF THE FOX RIVER

SHEET NO. SW-1 OF SW-48 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	07-00264-00-BR	KANE	164	53
			CONTRACT NO. 63620	

ILLINOIS FED. AID PROJECT