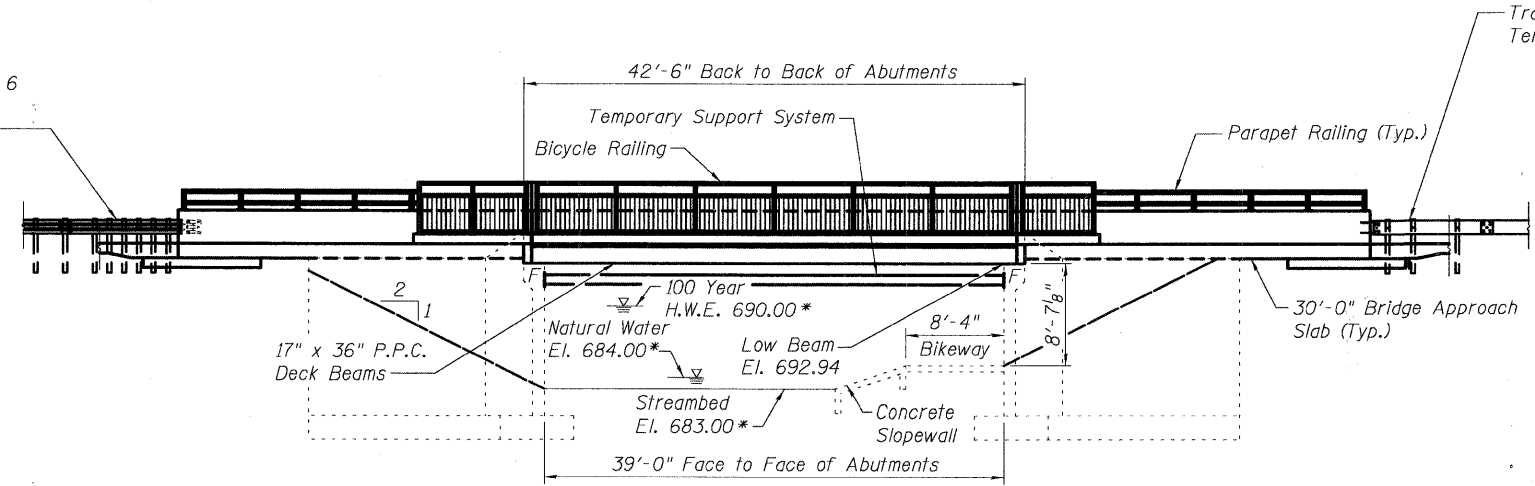


Traffic Barrier Terminal Type 6
(Attached to parapet in front
of bicycle railing)



Traffic Barrier
Terminal Type 5

Bench Mark:
FEMA Reference Mark RM261 - 1
(Effective Date: September 3, 1997)

Standard iron post with bronze cap stamped 1A 1925, located approximately 20 feet north of and approximately 53 feet east of the intersection of Arlington Heights Road and Checker Road.

Existing Structure:
S.N. 049-3040 (NB) & 049-3055 (SB) originally constructed in 1969 and widened in 1980. The single span superstructure consists of 17" precast, prestressed concrete (P.P.C.) deck beams. The substructure consists of reinforced concrete closed abutments on spread footings. The northbound traffic lane side of the bridge is the original structure, while the southbound side is from the 1980 widening. The structure measures 42'-6" from back to back of abutment and 86'-0" out to out of deck. The existing northbound superstructure is to be removed and replaced. One lane of northbound traffic will be maintained by using staged construction.

Salvage: No salvage

EXISTING WATERWAY INFORMATION

Drainage Area =	16.25 mi
Design Discharge (100 yr) =	1,000 c.f.s.
High Water Elevation (100 yr) =	690.0 *
Existing Opening (below H.W.E.) =	273 ft ²
Proposed opening (below H.W.E.) =	250 ft ²
Created Head =	Negligible

* These elevations were taken off the existing bridge plans and may not coincide with the current profile. They were included for background information only.

PROPOSED SCOPE OF WORK

1. Remove existing northbound superstructure, including bearing pads, and replace in-kind with new standard 17" x 36" P.P.C. deck beams, a 3" HMA wearing surface and waterproof membrane system.
2. Replace raised concrete curb with F-shaped concrete parapet with railing and replace outside concrete parapet with bicycle railing.
3. Remove existing 20'-0" approach slabs and replace with new IDOT standard 30'-0" bridge approach slabs.
4. Repair cracks in abutments with epoxy crack injection where necessary.
5. Repair deteriorated concrete with formed concrete repair where necessary.
6. Transition pavement back to existing grade by tapering asphalt.
7. Construction will be staged to maintain one lane of traffic in the northbound direction.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

LOADING HL-93

No future wearing surface allowed

DESIGN STRESSES

FIELD UNITS (EXISTING)

$f'_c = 3,500$ psi (Substructure)
 $f_s = 20,000$ psi (Substructure)

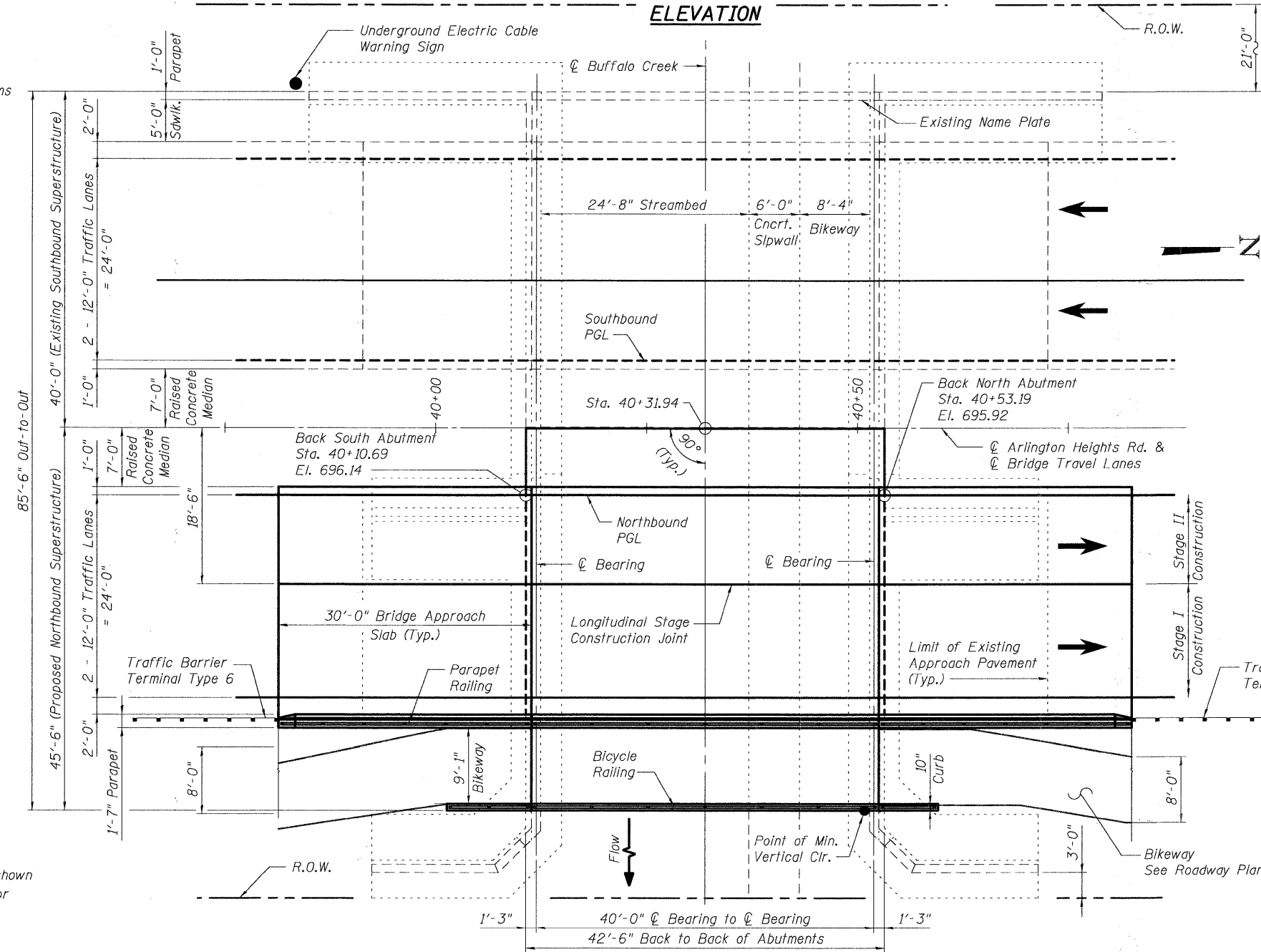
FIELD UNITS (PROPOSED)

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_{pbl} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)

ELEVATION



PLAN

William Malinowski
EXPIRATION DATE: 11/30/2010
DATE: 10/26/2010
DRAWING NO.: 12 - 26

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN & ELEVATION
ARLINGTON HEIGHTS ROAD OVER BUFFALO CREEK
F.A.U. R.T.E. 2626 - SEC. 05-00193-04-BR
LAKE COUNTY
STATION 40+34.94
STRUCTURE NO. 049-3040



FILE NAME = 0493040-63531-001-GPE.dgn	USER NAME = 320200907	DESIGNED - KO	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION STRUCTURE NO. 049-3040 (NB)	F.A.U. R.T.E. = 2626	SECTION = 05-00193-04-BR	COUNTY = LAKE	TOTAL SHEETS = 36	SHEET NO. = 12
PLOT SCALE = 20.0000' / IN.	DRAWN - KO	CHECKED - WPM	REVISD -			CONTRACT NO. 63531				
PLOT DATE = 11/2/2010	DRAWN - KO	CHECKED - WPM	REVISD -			ILLINOIS FED. AID PROJECT				
	CHECKED - WPM	REVISD -								