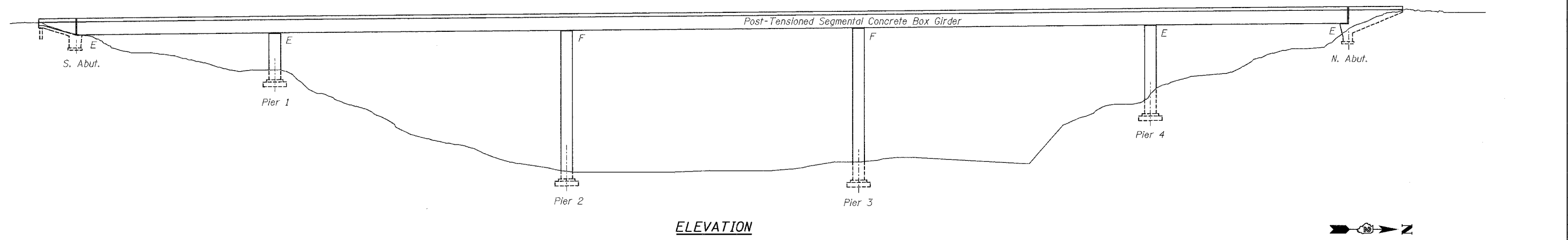
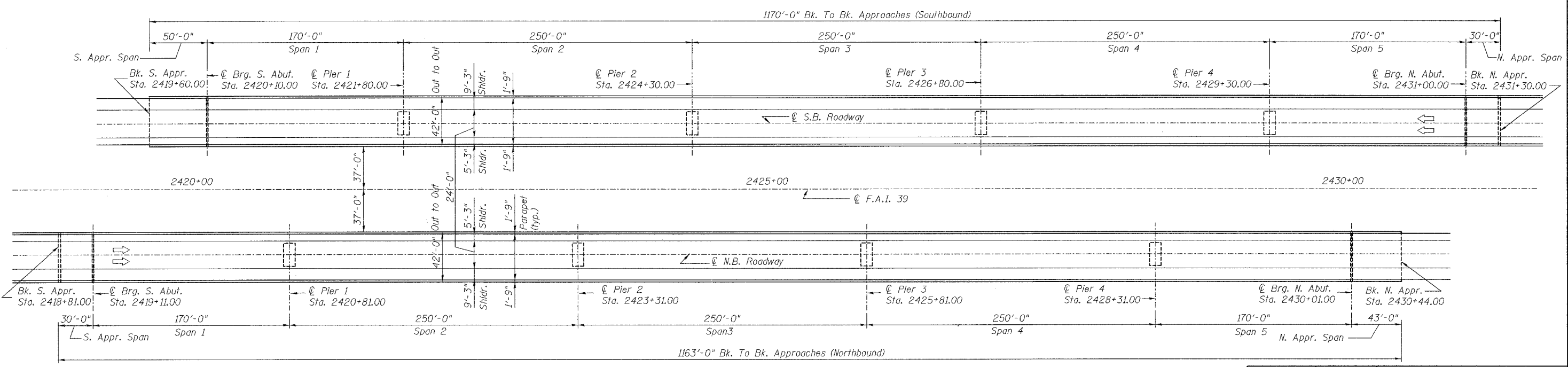


ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.I. 39	201-1BR	WINNEBAGO	12	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 64857	

Existing Structure
 S.N. 101-0133 (S.B.) and S.N. 101-0134 (N.B.)
 Built as F.A. Route 412, Section 201-1B in 1980. The Southbound and Northbound superstructures each consist of a 1090'-0" post-tensioned segmental concrete box girder. Traffic shall be maintained on existing S.N. 101-0133 during construction on S.N. 101-0134 and on S.N. 101-0134 during construction on S.N. 101-0133 by use of crossovers.



ELEVATION



PLAN

PROPOSED SCOPE OF WORK

1. Replace existing deck overlay and water proofing membrane
2. Install Fixed Anti-icing Spray Technology (FAST) system
3. Install external post-tensioning system
4. Extend deck drains
5. Repair concrete cracks, spalls, and screen wall connections.

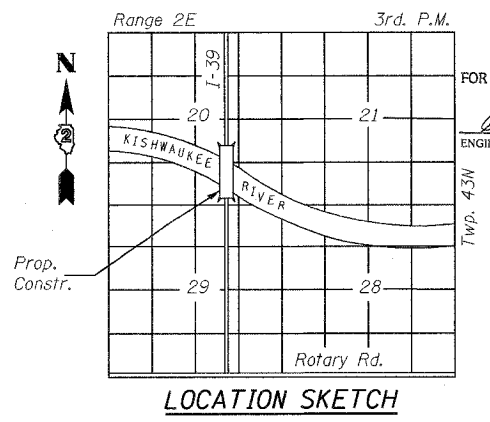
DESIGN SPECIFICATIONS

1. AASHTO 17th Edition, 2002
2. AASHTO Guide Specifications for Design and Construction of Segmental Concrete Bridges, 2nd Edition, 1999 with 2003 Interim.
3. AASHTO LRFD Bridge Design Specification, 3rd Edition, 2004 with 2005 Interim.
4. AASHTO LRFD Bridge Construction Specification, 2nd Edition, 2004.

DESIGN STRESSES

$f'_c = 4,000$ psi (Structural Repair of Concrete)
 $f'_c = f'_{ci} = 5,500$ psi (Superstructure)
 $f_y = 60,000$ psi (Reinf)
 PT Strand ($f'_s = 270,000$ psi, 0.6" ϕ low relax. strands)
 Max. jacking stress, 0.81 $f'_s = 218,700$ psi
 Max. stress @ anchorage after anchor set, 0.70 $f'_s = 189,000$ psi
 Max. stress elsewhere after anchor set, 0.74 $f'_s = 199,800$ psi
 PT Bars ($f'_s = 150,000$ psi)
 Max. jacking stress, 0.72 $f'_s = 108,000$ psi
 Max. stress after anchor set, 0.70 $f'_s = 105,000$ psi

LOADING HS 20-44



LOCATION SKETCH

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
 ENGINEER OF BRIDGES AND STRUCTURES

REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
GENERAL PLAN AND ELEVATION		
I-39 (FAI 39) OVER KISHWAUKEE RIVER SECTION 201-1BR WINNEBAGO COUNTY STATION 2425+00 STRUCTURE NOS. 101-0133 (S.B.) & 101-0134 (N.B.)		
PARSONS		CHICAGO, ILLINOIS
DRAWING NO. 12	SCALE N.T.S.	DATE FEB 2007
		SHEET NO. S-1

Date: 2/2/2007 Time: 4:04:11 PM
 File name: p:\646265-Kishwaukee-mr.f.cadd\final\sheet\ksgrpe01s.sht

Designed by: DL
 Checked by: WEE
 Drafted by: HH
 Checked by: GTH