BENCHMARK: BM 0770802 - RR spike in power pole at Sta. 834+93, 30'± Lt., Elev. 333.76 (NAVD 88) See sheet 2 of 20 for Structure STATE OF ILLINOIS Index of Sheets. DEPARTMENT OF TRANSPORTATION Traffic Barrier Terminal, Type 6A - Max All-Time H.W. Elev. 334.2 Hwy. Std. 631032 (typ. all corners) 27"x48" PPC Deck Beams (March 21, 2008) Elev. 334.60 - 1₈" min. Approach Footing, typ. EXISTING STRUCTURE: STATION 829+89.15 vert. cl. SN 077-0016 was originally built in 1920 as S.B.I. Rte. 51, Section 15-B&C. Elev. ±326.3 RE-BUILT 20__ BY Remove existing Wing The superstructure was replaced and a . Wing PC Bridge Slab STATE OF ILLINOIS Extension new pier was added in 1984, and precast Extension Existing ground line Footing, typ. .S. RT. 2936 SEC. 14BRconcrete bridge slabs were used to widen Streambed LOADING HL-93 the approaches. The superstructure Elev. ±317.0 STR. NO. 077-0016 consists of two simple spans, 27"x48" PPC deck beams. The substructure consists of reinf. conc. closed abutments on untreated NAME PLATE timber piles and a reinf. conc. pier on metal shell piles. The back-to-back abutment length is 122'-11'4", the out-to-out deck width
is 32'-0" and the clear width between rails Exist. Metal Exist. Timber Piles Shell Piles **Existing Name Plate shall be cleaned Exist. Timber Piles s 31'-4". The existing superstructure and ELEVATION and relocated next to new Name Plate. bridge approach slabs shall be removed and replaced utilizing stage construction. Cost included with Name Plates, Boring No. 1-S (1980) ±14' Salvage existing Gage Station, see Plan for location. No other items to be salvaged. Sta. 829+75, 52' Lt. 💠 Channel Bottom Exist. R.O.W. Remove exist. PC Bridge Slab at approach shoulder, typ. **APPROVED** 記録 FOR STRUCTURAL ADEQUACY ONLY *Section A-A on sheet 2 of 20 Relph & anderson (TOD) HMA Shid. Stage II Construction @ Pier € FAS 2936 Bk. N. Abut. Stage Sta. 829+89.15 Bk. S. Abut. Sta. 830+50.62 (Old US 51) & Out Sta. 829+27.68 Const. Str Elev. 337.23 Profile Grade Elev. 337.23 line Elev. 337.23 40 30'-0" Bridge Approach Slab, typ. of 32'-Temporary Sheet CWS construction Piling, typ. ioint **D**-No. 7 ** Name Plate Location 59'-14" 59'-14" STRUCTURAL Stone Dumped Riprap, ₽ Brg (1) Approximate location of Gage EXPIRES 11-30-10 Station to be removed and 122'-11'4" Bk. to Bk. Exist. Abut. re-attached to new rail. Cost RILD 1. P. 10'-0" included with Removal of PLAN typ. Existing Superstructures No. 1. Exist. R.O.W. Range IW 3rd P.M. 05-18-10 **DESIGN STRESSES** DATE 336.86 NEW CONSTRUCTION PRECAST PRESTRESSED UNITS FIELD UNITS GENERAL PLAN 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) OLD US 51 OVER CACHE RIVER f'c = 5,000 psi (CWS only) fy = 60,000 psi (Reinforcement) FAS ROUTE 2936 - SECTION 14BR-1 <u>LOADING HL-93 (NEW CONST.)</u> EXISTING CONSTRUCTION PROFILE GRADE PULASKI COUNTY LOADING HS20-44 (EXIST. CONST. FIELD UNITS STATION 829+89.15 No allowance for future wearing surface ABUTMENT CAPS AND PIER (1984) ORIGINAL ABUTMENT ELEMENTS (1920) **DESIGN SPECIFICATIONS** (ASSUMED VALUES) f'c = 3,500 psi STRUCTURE NO. 077-0016 LOCATION SKETCH fy = 60,000 psi (Reinforcement) f'c = 3,000 psi NEW CONSTRUCTION fy = 32,000 psi (Reinforcement) 2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims SEISMIC DATA TOTAL SHEET SHEETS NO. CONSULTANTS, INC. SECTION SHEET NO. 1 DESIGNED BY: MTD 01/10 EXISTING CONSTRUCTION **EXISTING CONSTRUCTION** 2936 4BR-1 68 16 DRAWN BY: DWH/KAH 01/10 Seismic Performance Category (SPC) = B 20 SHEETS 2002 AASHTO Bridge Design Specifications 1995 FHWA Seismic Retrofitting Manual for Highway Bridges CONTRACT NO. 78071 CHECKED BY MTD 01/10 Horizontal Bedrock Acceleration Coeficient (A) = 0.168g Site Coefficient (S) = 10APPROVED B RDP 05/10 FED. R049 Dist NO. ILLINOIS FED. AID TOUR