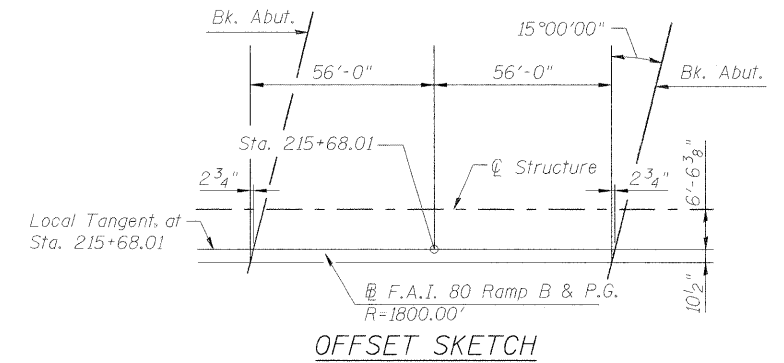
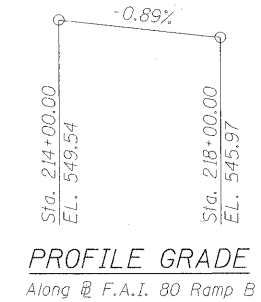
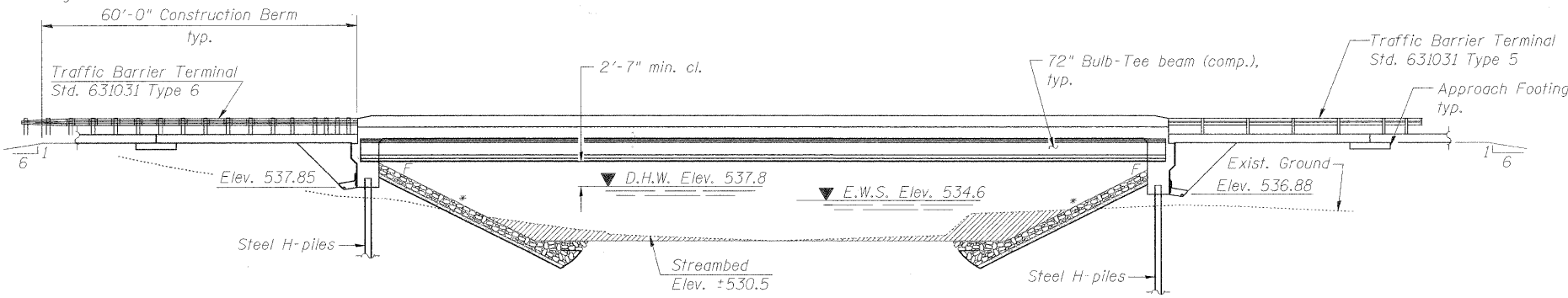


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark: B.M. #1409 chiseled square on S.E. wingwall of F.A.I. Route 80 bridge over Collins Run, S.N. 032-0104, Elev. 546.22.

Existing Structure: None



CURVE DATA

$\Delta = 27^\circ-11'-35''$
 $D = 3^\circ-10'-59''$
 $T = 435.35'$
 $L = 854.29'$
 $E = 51.90'$
 $R = 1800.00'$
 $S.E. = 0.046'/'$
 $P.C. = Sta. 212+45.83$
 $P.T. = Sta. 221+00.12$
 $P.I. = Sta. 216+81.17$

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 4th Edition with 2008 and 2009 Interims

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax. strands)
 $f_{si} = 201,960$ psi (1/2" ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Response Acceleration at 1.0 sec. (SD1) = 0.070g
 Design Spectral Response Acceleration at 0.2 sec. (SDS) = 0.128g
 Soil Site Class = C

STATION 215+68.01
 BUILT 20 BY
 STATE OF ILLINOIS
 F.A.I. 80 SEC. (32, 47-4) HKB-4
 LOADING HL-93
 STRUCTURE NO. 032-0117

NAME PLATE

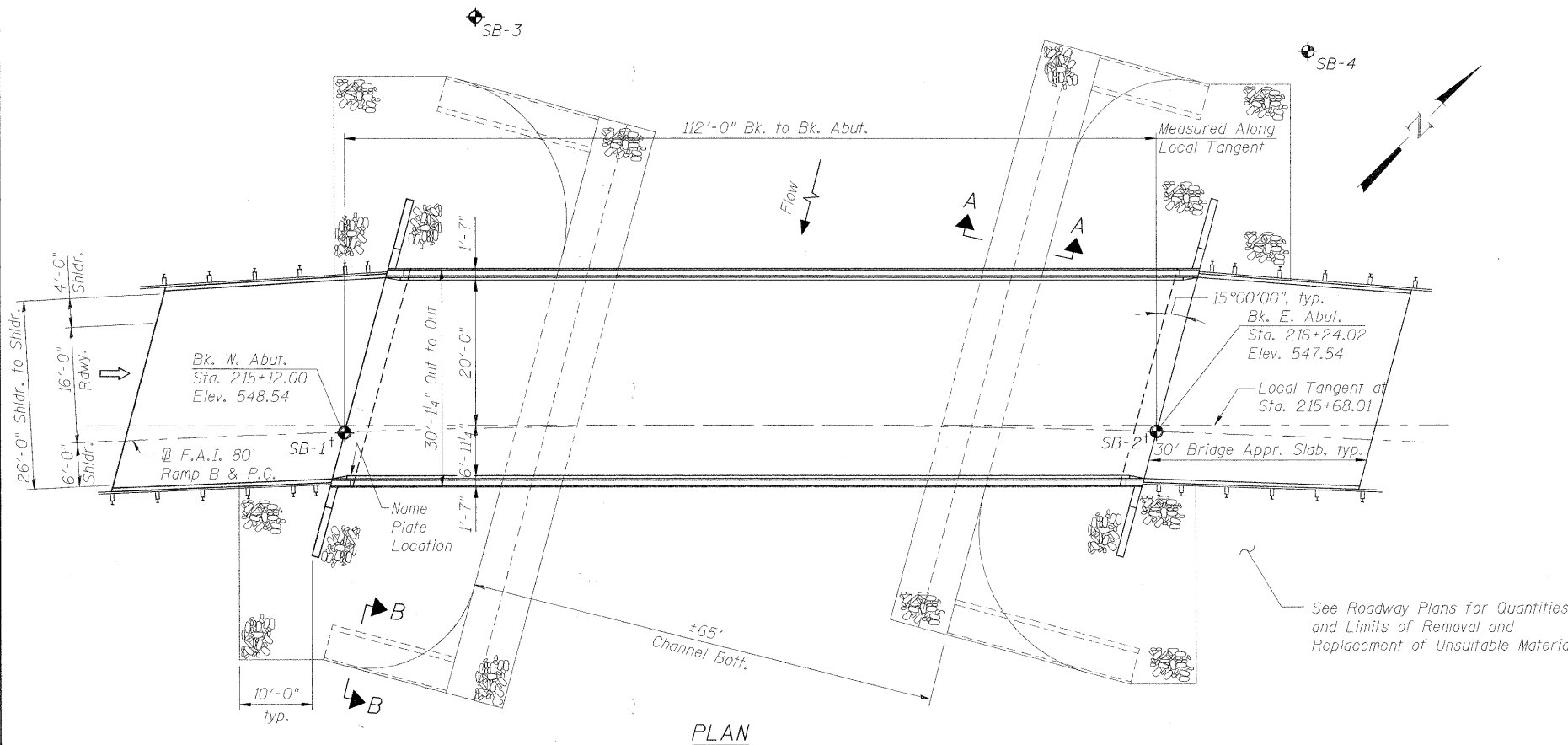
See Std. 515001

DESIGN SCOUR ELEVATION TABLE

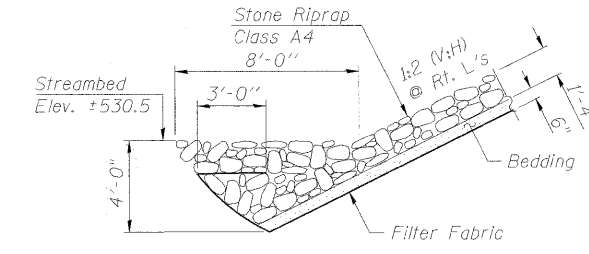
Design Scour Elevation (ft.)	W. Abut. E. Abut.	E. Abut.
	534.85	533.88

ELEVATION

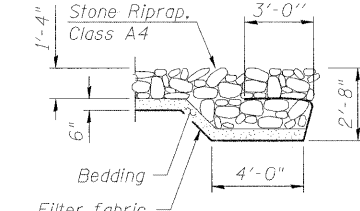
* 1:2 (V:H) @ Rt. L's



SECTION A-A



SECTION B-B



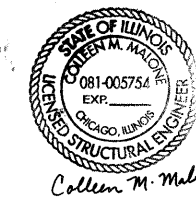
WATERWAY INFORMATION

Drainage Area = 30.30 S.M. Low Grade Elev. 547.07 @ Sta. 308+82.89

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	1227	470.4	536.9	0.33	0.33	537.2	537.2	537.2
Base	50	1801	494.1	561.9	0.39	0.23	538.2	538.1	538.1
Overtopping	100	2031	522.0	597.4	0.42	0.29	538.6	538.5	538.5
Max. Calc.	500	2560	576.9	670.6	0.42	0.36	539.3	539.2	539.2

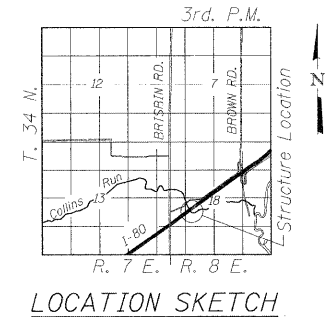
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



LOCHNER

H.W. LOCHNER, INC.
CONSULTING ENGINEERS & PLANNERS
20 NORTH WACKER DRIVE SUITE 1200
CHICAGO, IL 60606



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.I. 80 RAMP B OVER
COLLINS RUN, SEC. (32,47-4) HKB-4
GRUNDY COUNTY
STATION 215+68.01
STRUCTURE NO. 032-0117

LEGEND

- Soil Boring
- Channel Excavation
- Hand Auger Boring

DESIGNED - LJB
CHECKED - CMM
DRAWN - GJS
CHECKED - CMM

SHEET NO.	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1 OF 19 SHEETS	*	(32,47-4) HKB-4 & G(N)	GRUNDY	351	314
FED. ROAD DIST. NO. ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 66408					

* FAI 80 & FAS 297 / FAU 392

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