

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

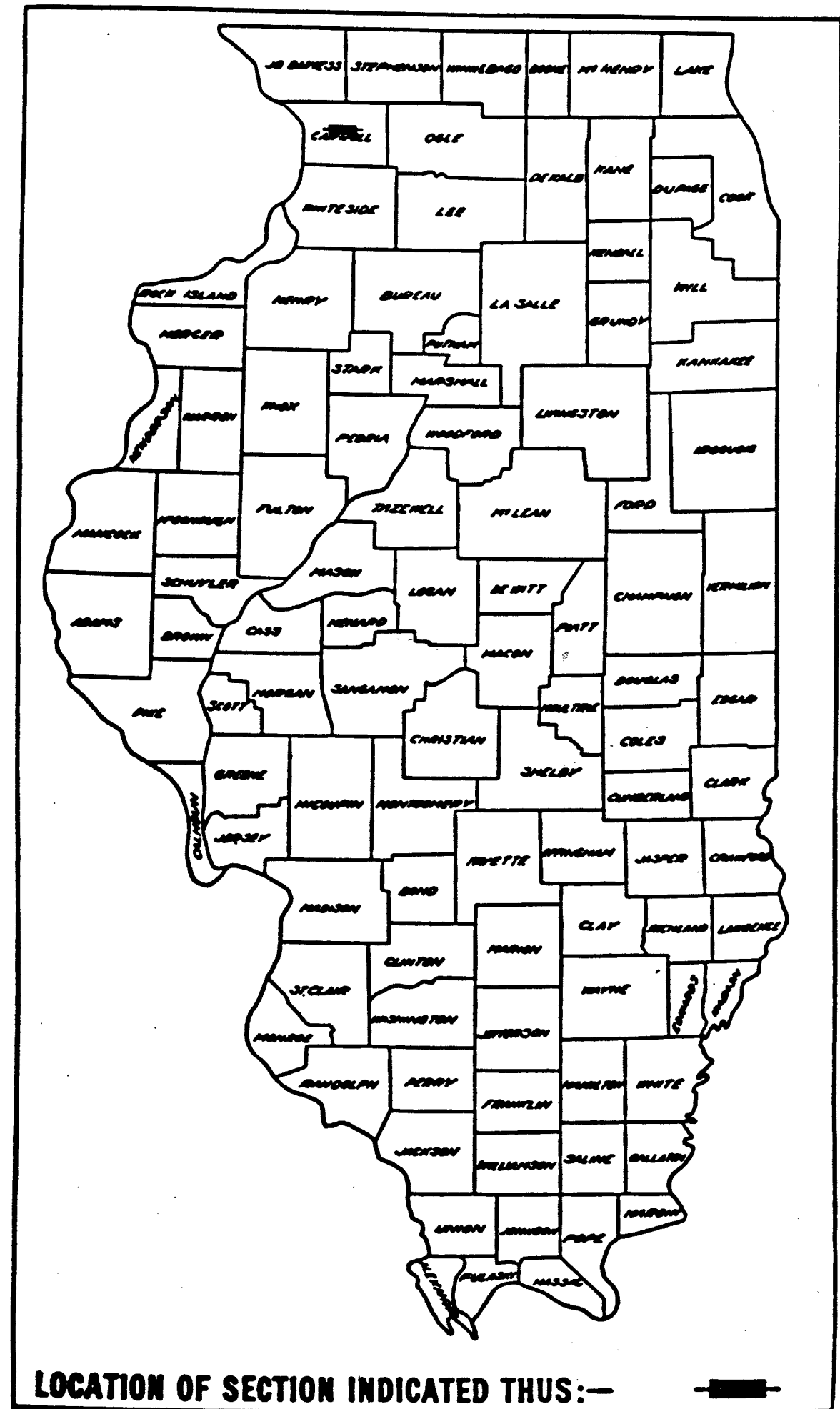
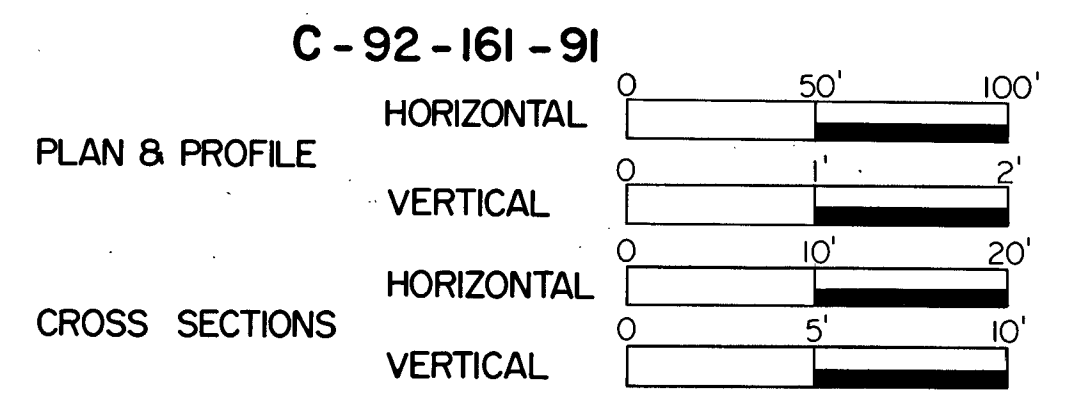
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 17	4BR-4	CARROLL	26	1
FHWA REG. 4		ILLINOIS	PROJECT BHF-17(98)	

D-92-016-87

## F.A. ROUTE 17 (IL. 64/U.S. 52) SECTION 4BR-4 PROJECT BHF-17(98) CARROLL COUNTY

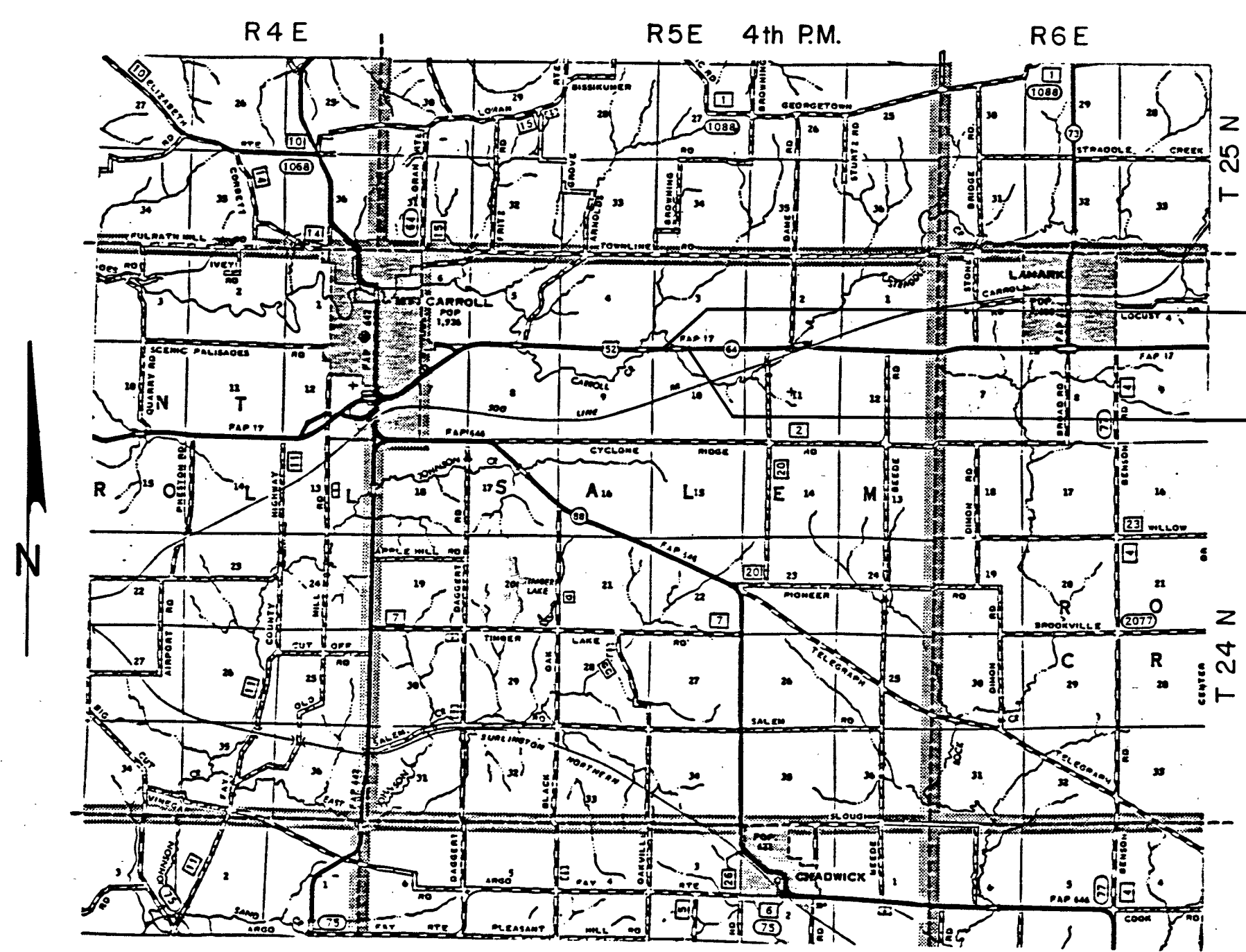
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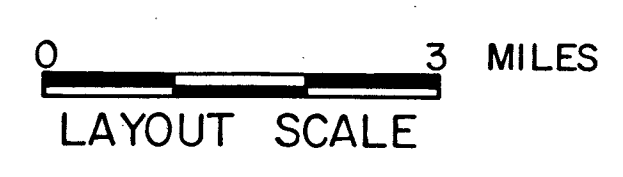
### STANDARDS

NUMBER	DESCRIPTION
1686-4	SYMBOLS AND ABBREVIATIONS
2113-2	NAME PLATE FOR BRIDGES
2135	PERMANENT SURVEY MARKERS
2228-4	METAL END SECTION FOR PIPE CULVERTS
2230-16	STEEL PLATE BEAM GUARDRAIL
2298-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2299-13	DESIGN OF TRAFFIC CONTROL DEVICES
2300-3	FLAGMAN TRAFFIC CONTROL SIGN
2302-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES - TWO LANE, TWO WAY TRAFFIC, RURAL DAY OR NIGHT OPERATIONS
2303-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES - TWO LANE, TWO WAY TRAFFIC, RURAL DAY
2306-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES - RURAL MOVING OPERATIONS, DAY OPERATIONS ONLY
2307-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES - SHORT TIME OPERATION, DAY OR NIGHT
2308-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES - RURAL DAY OR NIGHT MOVING OPERATIONS
2323-12	PAVEMENT JOINTS
2336-4	TRAFFIC BARRIER TERMINAL, TYPE 1 & 1A
2341-4	TRAFFIC BARRIER TERMINAL, TYPE 6
2370-1	DETAILS OF DETECTOR INSTALLATIONS
2381	TEMPORARY EROSION CONTROL SYSTEMS
2383-3	TEMPORARY CONCRETE BARRIER
2388-1	TRAFFIC BARRIER TERMINAL TYPE II
2394	TYPICAL LAYOUT FOR DETECTOR LOOPS
2409-1	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES - TWO LANE, TWO WAY TRAFFIC, RURAL ONE LANE CLOSURE ON BRIDGE DECKS, DAY OR NIGHT OPERATION
2310-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2311-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2305-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2441	P.C.C./BITUMINOUS STABILIZATION AT STEEL PLATE BEAM GUARDRAIL SECTION: 3, 10
2442	BRIDGE APPROACH PAVEMENT



BEGIN SECTION 4 BR-4  
STA. 187+45

END SECTION 4 BR-4  
STA. 201+55



NET LENGTH SECTION 4 BR-4 = 1410.00 = 0.267 MILES  
TOTAL LENGTH SECTION 4 BR-4 = 1410.00 = 0.267 MILES

"CALL J.U.L.I.E.  
BEFORE YOU DIG"  
800-892-0123

TWP: SALEM  
SECTION: 3, 10

SECTION 4BR-4 INCLUDES THE REPLACEMENT OF THE SUPERSTRUCTURE & PORTIONS OF THE SUBSTRUCTURE ON THE EXISTING 3 SPAN BRIDGE CARRYING IL 64 OVER STRADDLE CREEK.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED July 29 1992

EXAMINED \_\_\_\_\_ 19\_\_\_\_

PASSED Sept 4 1992

APPROVED Sept 4 1992

DISTRICT ENGINEER  
ENGINEER OF PLANS AND CONTRACTS  
ENGINEER OF DESIGN  
DIRECTOR, DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED \_\_\_\_\_

DIVISION ADMINISTRATOR DATE \_\_\_\_\_

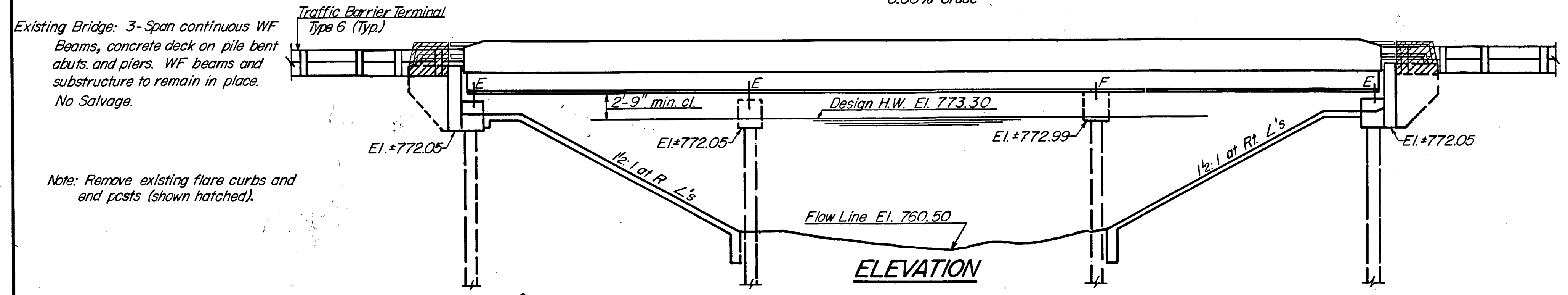
DISTRICT 2 - DIXON

CONSULTANT: SANDOVAL ENGINEERS, INC.  
PROJECT LEADER: PAT WARKINS

CONTRACT NO. 84491

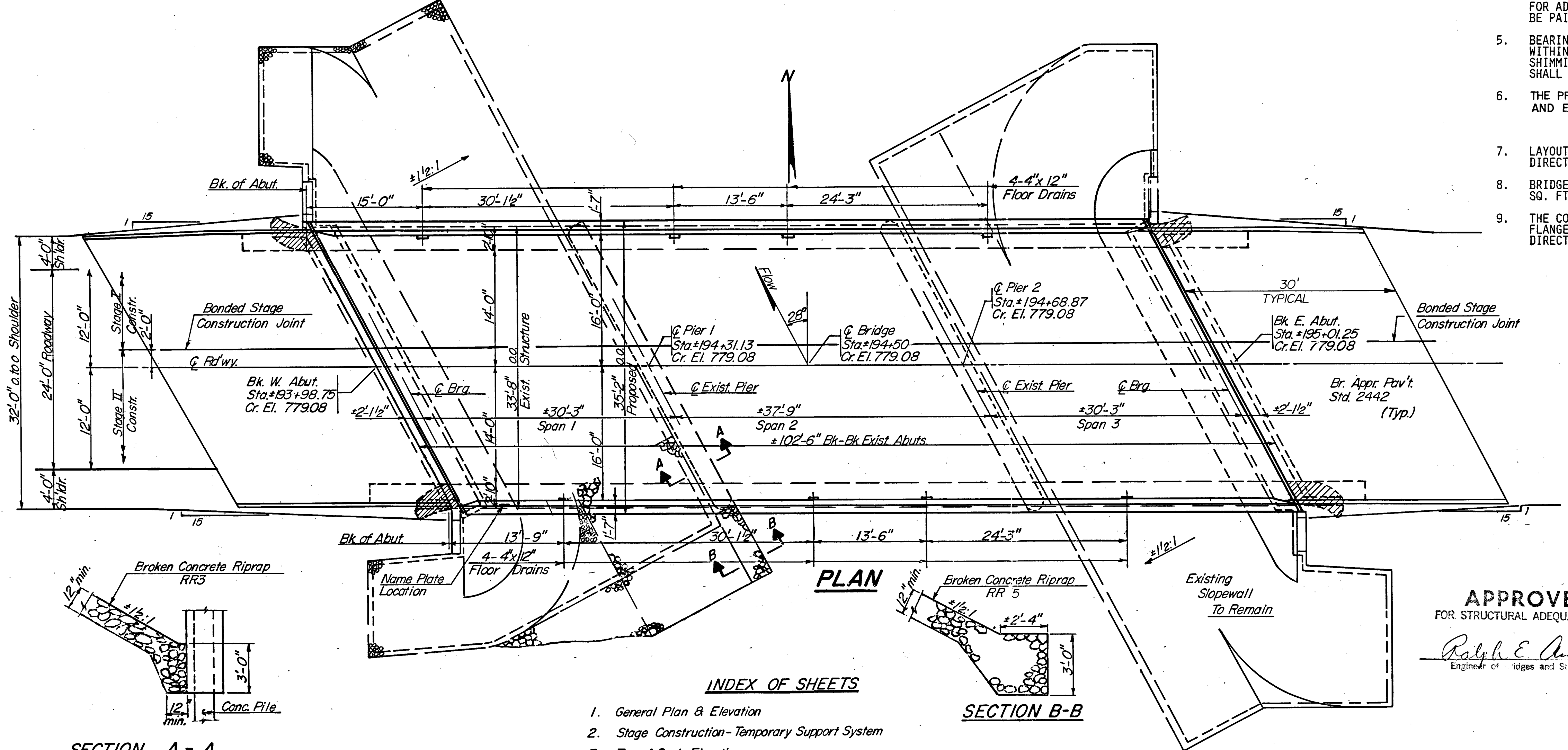
B.M. Bronze Tablet cast on top of southwest wingwall of structure at Sta #174+50 - Elev. 768.76.

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 17	4 BR-4	CARROLL	26	8
STA. 191+37		TO STA. 197+18		
FED. ROAD DIST. NO.	ILLINOIS PROJECT		Sh. # 1 of 13.	



GENERAL NOTES

- FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 3/4" ROUND, OPEN HOLES 13/16" ROUND, UNLESS OTHERWISE NOTED.
- FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- BEARING PAD SURFACES AT ABUTMENTS SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE TOP BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
- THE PROTECTIVE COAT IS TO BE APPLIED TO THE VERTICAL FACE AND TOP SURFACES OF THE PARAPET AND END POST.
- LAYOUT OF THE STONE RIPRAP REPAIR MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD, AS DIRECTED BY THE ENGINEER.
- BRIDGE SEAT SEALER SHALL BE APPLIED TO SEAT AREA OF THE ABUTMENTS. ESTIMATED QUANTITY = 175 SQ. FT.
- THE CONTRACTOR WILL BE REQUIRED TO MARK, ON TOP OF THE CONCRETE DECK, THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS. PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM FLANGES IS NOT PERMITTED.



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUBSTR.	TOTAL
Class X Concrete - Superstructure	Cu. Yds.	112.3	—	112.3
Class X Concrete	Cu. Yds.	—	46.8	46.8
Reinforcement Bars - Epoxy Coated	Lbs.	29,480	5,400	34,880
Concrete Removal	Cu. Yds.	—	14.6	14.6
Structural Steel	Lbs.	3,030	—	3,030
Stud Shear Connectors	Each	495	—	495
Preformed Joint Seal (2'2")	Lin. Ft.	73.0	—	73.0
* Protective Coat	Sq. Yds.	98.0	—	98.0
Elastomeric Bearing Assembly - Type I	Each	10	—	10
Temporary Bridge Rail	Lin. Ft.	103	—	103
Temporary Support System - Complete	Each	1	—	1
Name Plate	Each	1	—	1
Floor Drains	Each	8	—	8
Broken Concrete Riprap - Special	Sq. Yds.	—	320	320
Removal of Existing Concrete Deck	Each	1	—	1
Jack and Remove Existing Bearings	Each	10	—	10
Bridge Seat Sealer	Lump Sum	—	1	1
Bridge Deck Grooving	Sq. Yds.	365	—	365

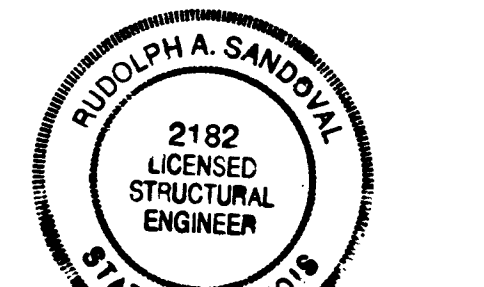
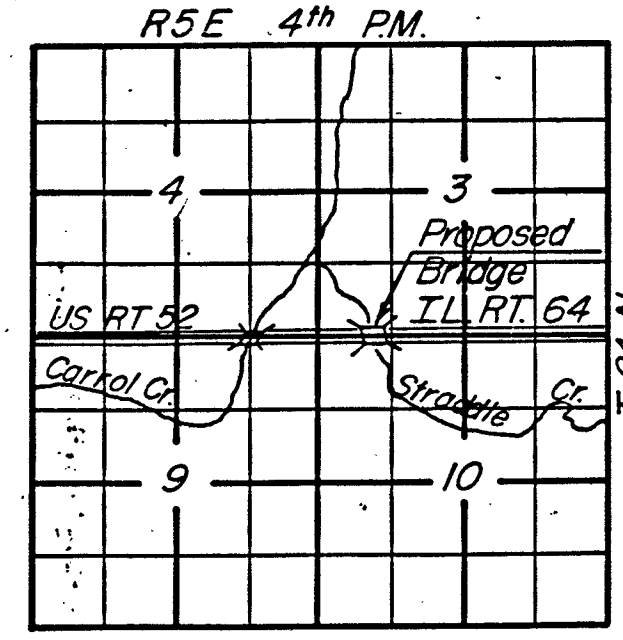
WATERWAY INFORMATION

Drainage Area = 35.5 sq.mi. Low Grade El. = 775.7 at Sta. 192+00

Flood	Freq. Yr.	Q c.f.s.	Opening sq.ft.	Nat. H.W.E.	Head - ft.	Headwater El.
Design	50	4,317	610	773.3	1.9	775.2
Base	100	4,907	649	773.8	2.2#	776.0
Overtopping	100	—	—	—	—	—
Max. Calc.	500	6,292	722	774.7	2.9#	777.6

# Will not occur due to flow over low approach roadway.

STATION 194 + 50  
BUILT 199 BY  
STATE OF ILLINOIS  
SECTION 4 BR-4  
PROJECT BHF-17(98)  
LOADING HS-20  
STR. NO. 008-0005



Ralph E. Sandoval  
Nov. 19, 1990

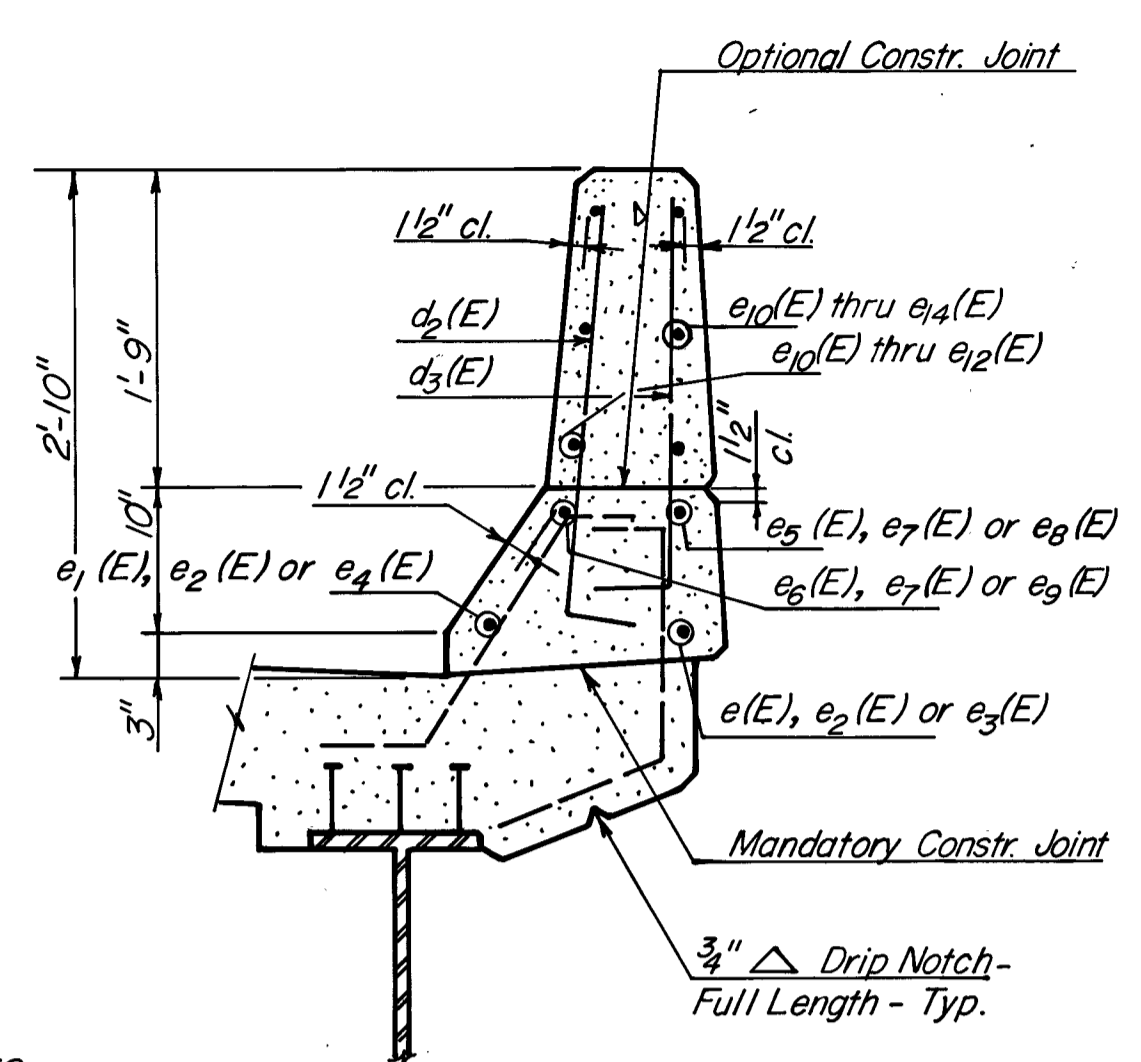
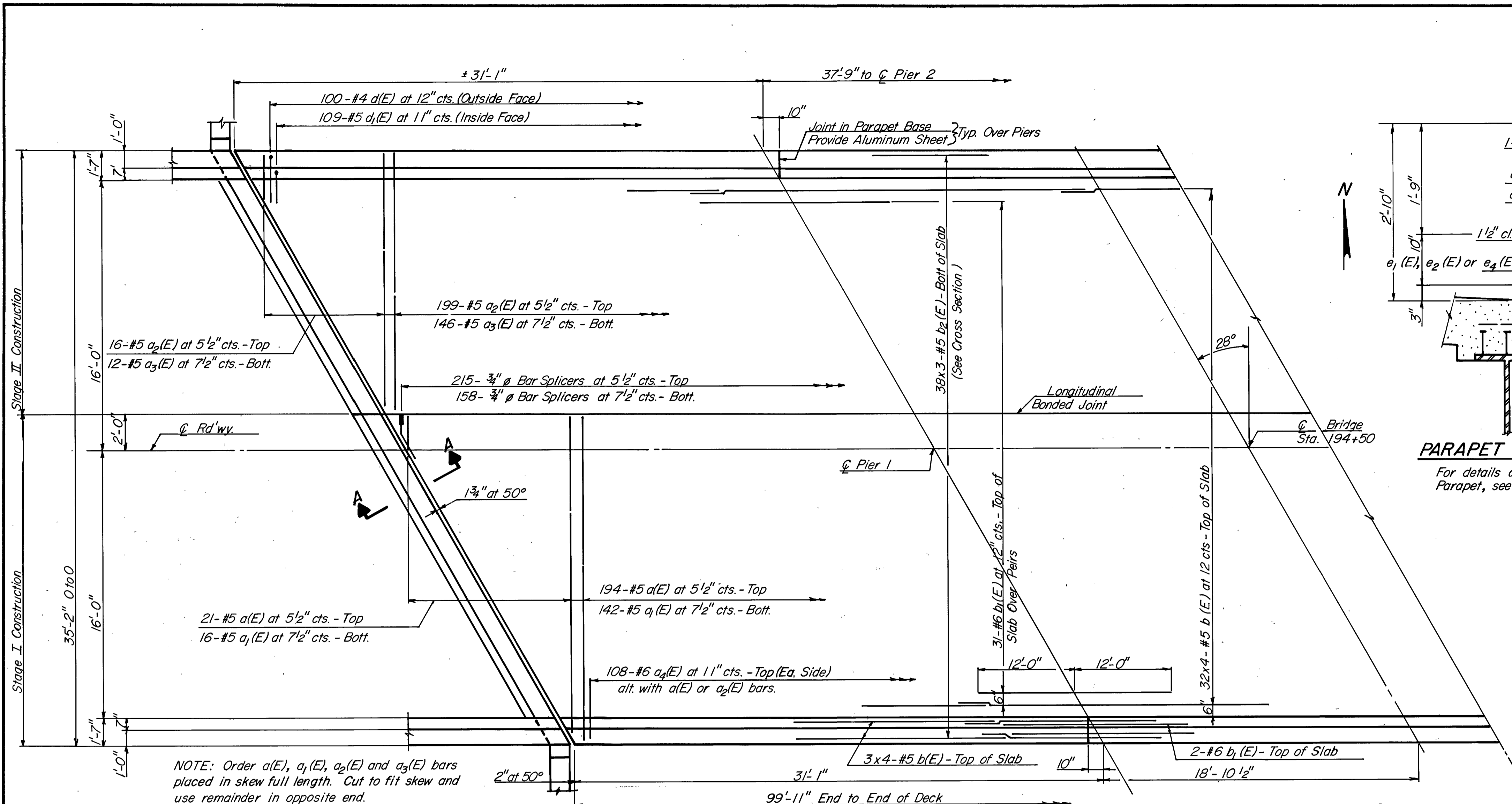
DESIGN SPECIFICATIONS  
AASHTO 1989 and 1990 Interims, and 1988 Seismic Guide Specifications

LOADING HS-20-44  
Allow 25#1 sq.ft. for future wearing surface

DESIGN STRESSES  
f'c = 3,500 psi fy = 60,000 psi (Reinf.)  
fy (Str. Steel) = 33,000 psi

GENERAL PLAN & ELEVATION

FA ROUTE 17  
SECTION 4BR-4  
US RTE. 52 & IL RTE. 64 over  
STRADDLE CREEK  
STA. 194 + 50  
CARROLL COUNTY  
STRUCTURE NO. 008-0005



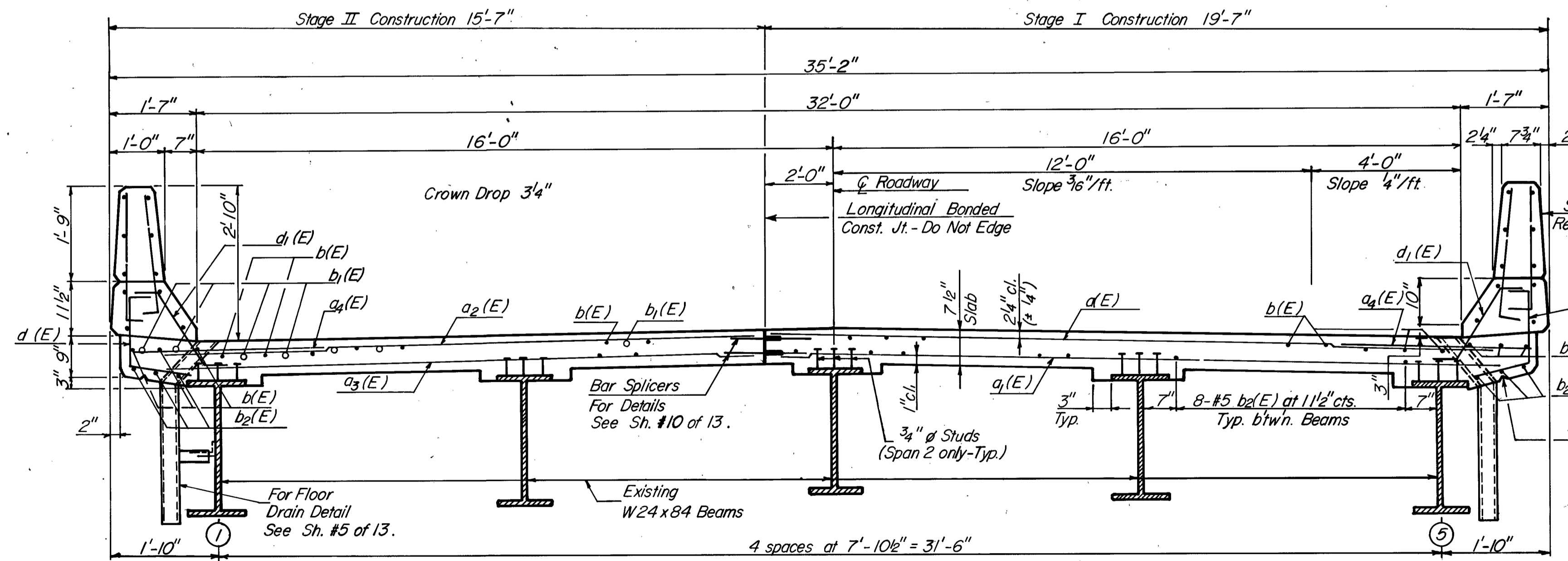
**PARAPET REINFORCEMENT**

For details and reinforcement of Parapet, see Sh. # 5 of 13.

**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGH	SHAPE
a(E)	215	#5	19'-0"	
a1(E)	158	#5	18'-3"	
a2(E)	215	#5	15'-0"	
a3(E)	158	#5	14'-3"	
a4(E)	216	#6	4'-0"	
b(E)	152	#5	26'-2"	
b1(E)	70	#6	24'-0"	
b2(E)	114	#5	35'-0"	
d(E)	200	#4	3'-4"	
d1(E)	218	#5	2'-7"	
d2(E)	218	#5	3'-0"	
d3(E)	200	#4	3'-0"	
e(E)	2	#5	30'-0"	
e1(E)	2	#5	30'-8"	
e2(E)	4	#5	37'-6"	
e3(E)	2	#5	31'-6"	
e4(E)	2	#5	30'-11"	
e5(E)	2	#8	30'-0"	
e6(E)	2	#8	30'-5"	
e7(E)	4	#8	37'-6"	
e8(E)	2	#8	31'-7"	
e9(E)	2	#8	31'-2"	
e10(E)	18	#4	15'-2"	
e11(E)	24	#4	18'-7"	
e12(E)	18	#4	15'-6"	
e13(E)	6	#4	16'-0"	
e14(E)	6	#4	14'-8"	

**HALF PLAN**



**CROSS-SECTION**  
Looking East

MIN. BAR LAP  
#5 = 1'-8"

ITEM	UNIT	QUANTITY
Class X Concrete-Super	Cu. Yd.	112.3
Reinf. Bars-Epoxy Coated	Lbs.	29,480
Removal of Exist. Conc. Deck	Each	1

NOTE: Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per lines.

**DECK SLAB DETAILS**

FA ROUTE 17  
SECTION 4BR-4  
US RTE. 52 & IL RTE. 64 over  
STRADDLE CREEK  
STA. 194+50  
CARROLL COUNTY  
STRUCTURE NO. 008-005

