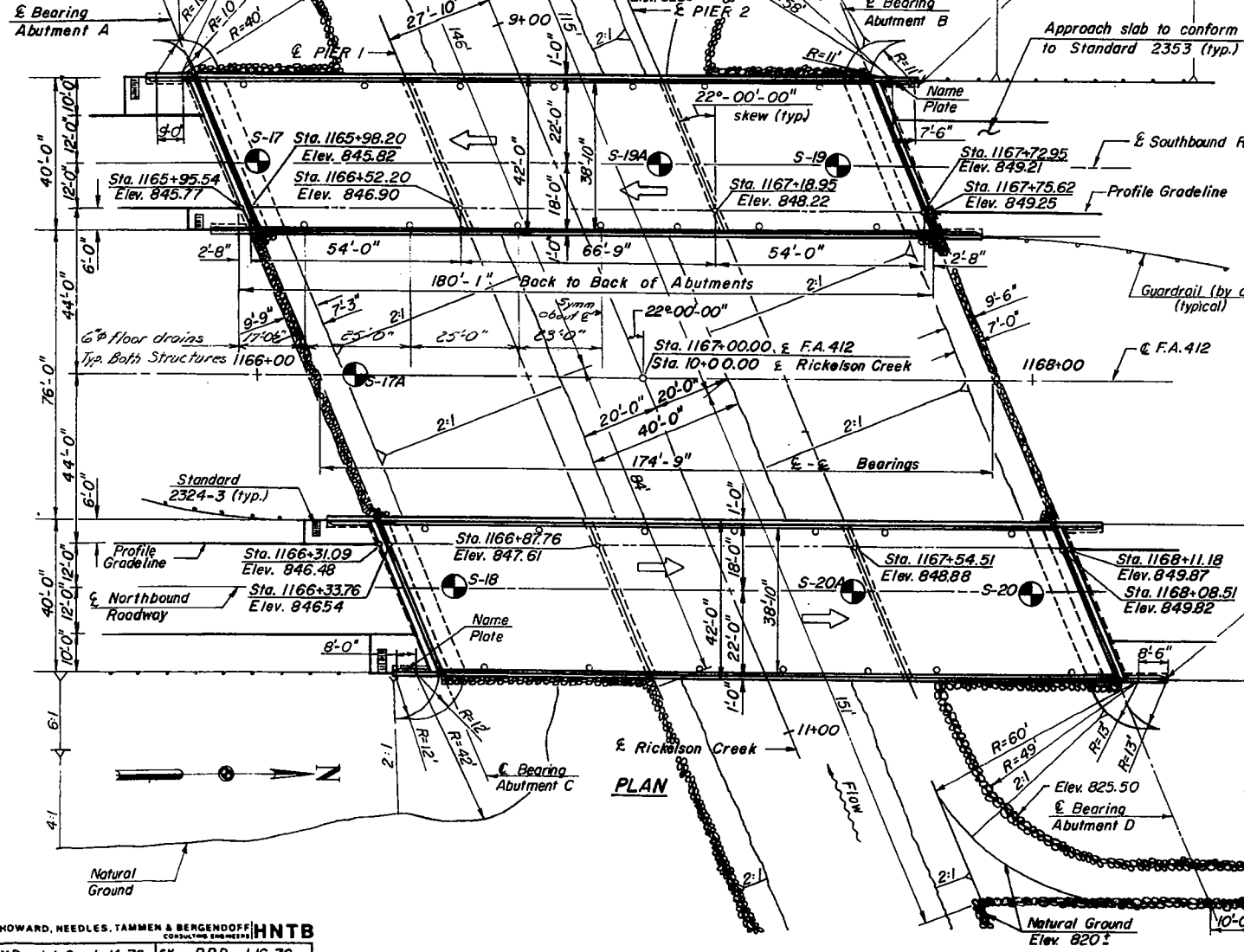
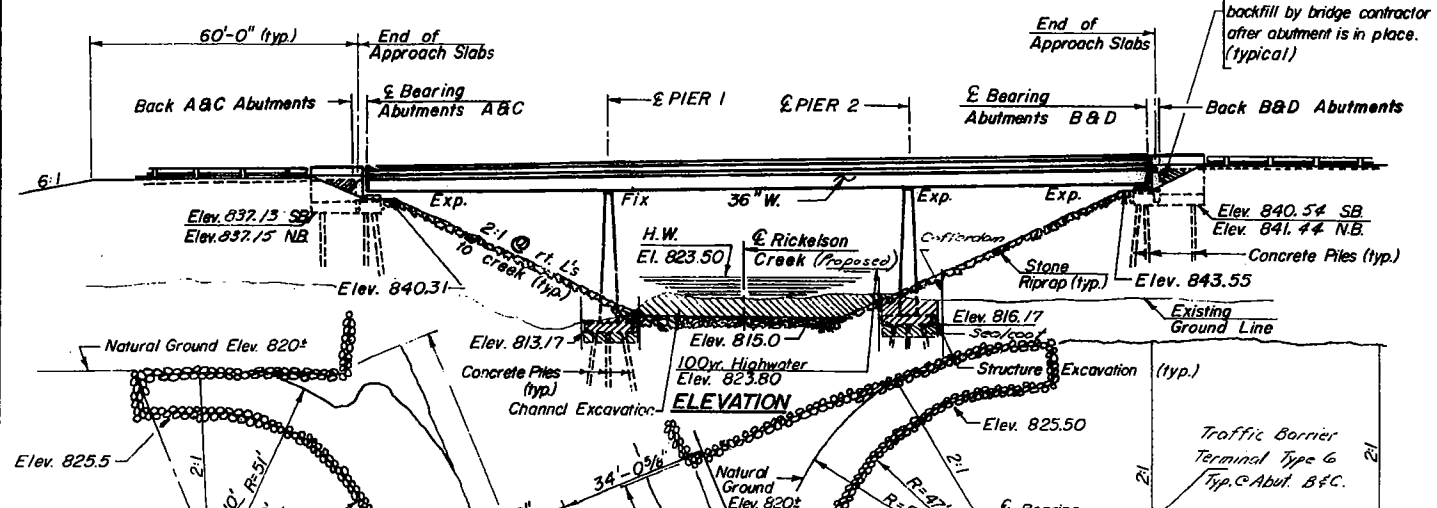
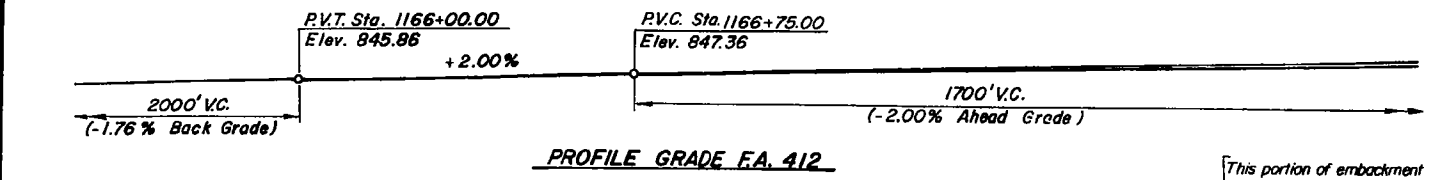


BENCHMARK: Benchmark No. 22 is railroad spike in 24 inch diameter tree 223 feet left of Station 1166+28.00 Elevation 820.67.



Reinforcement bars shall conform to the requirements of AASHTO M31 or M53, Gr. 60

DESIGN SPECIFICATIONS: American Association of State Highway and Transportation Officials Standard Specifications for Highway Bridges, 1973 with 1974 & 1975 Interims

DESIGN LOADING: A.A.S.H.T.O. HS20-44 @ 25 pounds per square foot for future wearing surface on bridge deck.

UNIT STRESSES:
Substructure Concrete: $f_c = 1400$ PSI
Deck Slab: $f'_c = 3500$ psi
Deck Rein: $f_y = 60,000$ psi

Reinforcing Steel:
 $f_s = 24,000$ PSI (Substructure)
Structural Steel M183, $f_s = 20,000$ PSI

EMBANKMENT: The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

TEST PILING: The Contractor shall drive eight concrete test piles in a permanent location, one at each abutment and each pier as directed by the Engineer, before ordering the remainder of the piles.

The main load carrying members subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness, Zone 2. These components are the splice plates & wide flange bms.

GENERAL NOTES

CONCRETE PILING: Concrete piles at all abutments shall be driven in holes precored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.

REINFORCING STEEL: Dimensions shown on the plans from the reinforcing steel to outside edge of concrete are all clear dimensions. All bar dimensions are out to out.

Expansion joint angles and attached bars shall be shop pointed with two coats of basic lead silico chromate paint.

PAINTING: The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel. Except where otherwise noted.

FIELD WELDING: 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 when approved by the Engineer.

The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. OF 17 SHEETS
FA 412	103-28	LEE	203	43	
STA.	TO STA.	FED. ROAD DIST. NO. 7	ILLINOIS PROJECT		

FIELD CONNECTIONS: Fasteners shall be high strength bolts. Bolts 1/2" diameter, open holes 3/4" diameter, unless otherwise noted.

STRUCTURAL STEEL: Structural steel for beams, beam splice plates, beam splice fill plates, all diaphragms, bearings, gusset plates, expansion joint angles, and attached bars shall conform to A.A.S.H.T.O. designation M183. Diaphragms shall be normal to the profile grade line.

Calculated weight of structural steel = 382,900 pounds.

ANCHOR BOLTS: Anchor bolts for bearing devices shall be set before bolting diaphragms over supports.

All contact surfaces of joints for diaphragms shall be free of paint or lacquer.

BEARING SEAT: Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustments shall be made either by grinding the surface or by shimming the bearing. Two inch adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

WATERWAY INFORMATION

Drainage area	16.17 Sq. Mi.
Design highwater	823.50 Feet
Proposed freeboard	4.00**Feet
Flow line elevation	814.92 Feet
Present waterway opening	U* Sq. Ft.
Required waterway opening	324 Sq. Ft.
Proposed waterway opening	480 Sq. Ft.
Q (50 years)	2397 cfs
Q (100 years)	2876 cfs
Created head (50 years)	0.79 Feet
Created head (100 years)	1.00 Feet

* U = Unrestricted
** Proposed freeboard is the difference in elevation between the design high water and the bottom of the track ballast of the adjacent Burlington Northern Railroad.

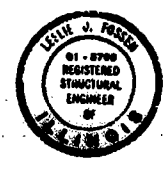
TOTAL BILL OF MATERIAL

ITEM	UNITS	Substructure	Superstructure	TOTAL
Reinforcement Bars (EpoxyCtd)	Pounds	0	69,780	69,780
Structure Excavation	Cu. Yd.	384	0	384
Protective Coat	Sq. Yd.	0	1848	1848
Class X Concrete	Cu. Yd.	206	445	651
Preformed Joint Seal (2 1/2")	Lin. Ft.	0	91	91
Preformed Joint Seal (4")	Lin. Ft.	0	91	91
Reinforcement Bars	Pounds	74,710	41,760	116,470
Structural Steel	Lump Sum	0	0.36	0.36
Floor Drains	Each	0	28	28
Test Piles (Conc.)	Each	8	0	8
Concrete Piles	Lin. Ft.	4658	0	4658
Class A Concrete	Cu. Yd.	617	0	617
Name Plates	Each	0	2	2
Channel Excavation	Cu. Yd.	5183	0	5183
Cofferdam Excavation	Cu. Yds.	703	0	703
Sealcoat Concrete	Cu. Yds.	212	0	212
Cofferdam	Each	4	0	4

Notes:
Remove clayey materials to top of sand at all 4 abutments - full depth to 4.5' (Elevation 816.5) at South Abutment (SB), 5.5' (Elevation 815.4) at South Abutment (NB), 4.5' (Elevation 816.9) at North Abutment (SB) and 5.0' (Elevation 817.0) at North Abutment (NB) - between the following limits: (a) outer point of end slopes and 10' behind back of abutments (or to merge with removal under roadways) and (b) between mid-points of side slopes. Replace with P.C.C. to 2'-0" above water level, if any, in excavation at time of replacement, and, above that level, with suitable earth embankment. (See Special Provisions)

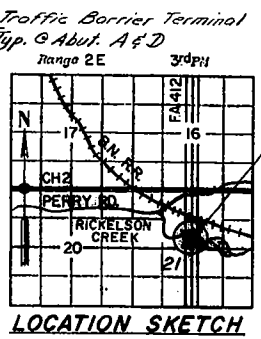
For Riprap quantities, see Highway Plans.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
[Signature]



GENERAL PLAN & ELEVATION
FA. 412 SECTION 103-28
FA. 412 OVER RICKELSON CREEK
LEE COUNTY
STATION 1167+00.00
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LEGEND
● Boring Locations
⊗ indicates limits of riprap



STATION 1167+00.00
BUILT 19 BY
STATE OF ILLINOIS
F.A. RT. 412 SEC. 103-28
F.A. PROJ. PD-412-4(36)
LOADING HS20
NAME PLATE
(See Standard 2113)
* Structure number to be supplied by the District.

I hereby certify that this plan and specification was prepared by me or under my direct personal supervision and that I am a duly registered Structural Engineer under the laws of the State of Illinois.

FOR INFORMATION ONLY

052-0047, 48