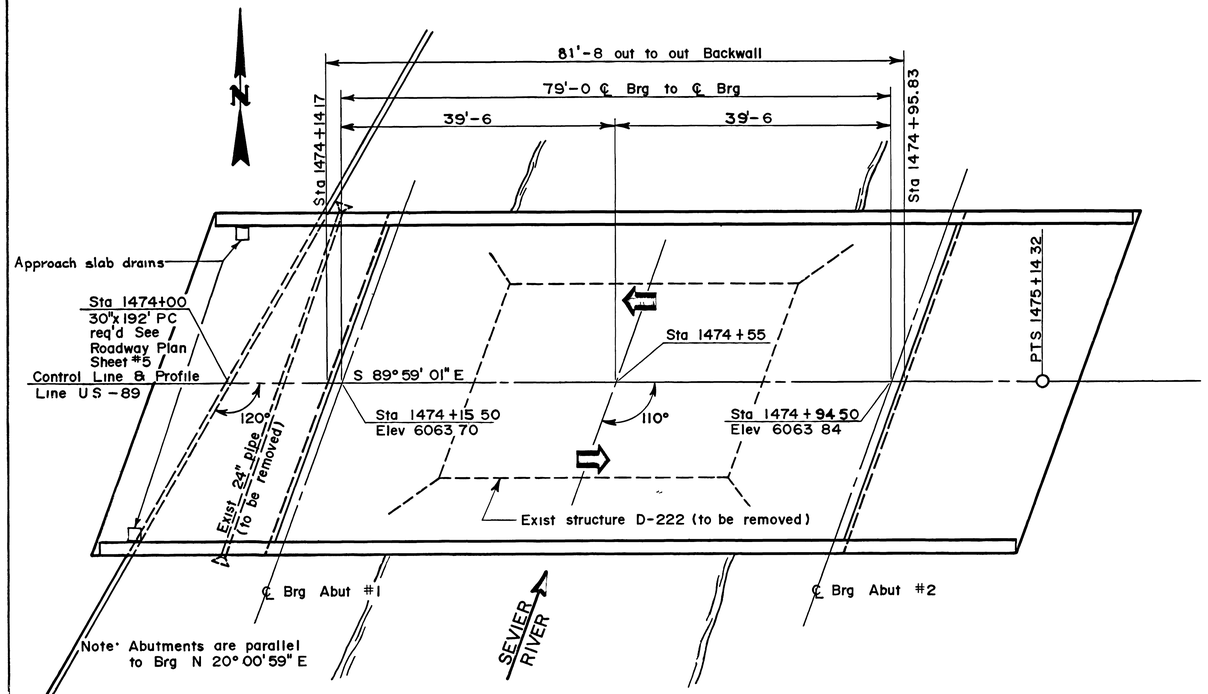
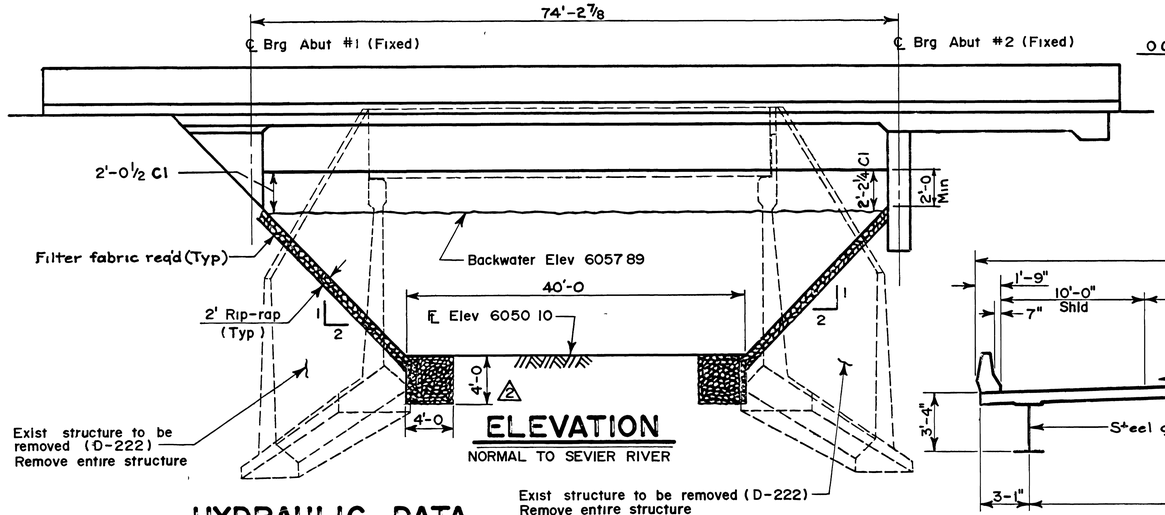


PLAN



ELEVATION

NORMAL TO SEVIER RIVER

HYDRAULIC DATA

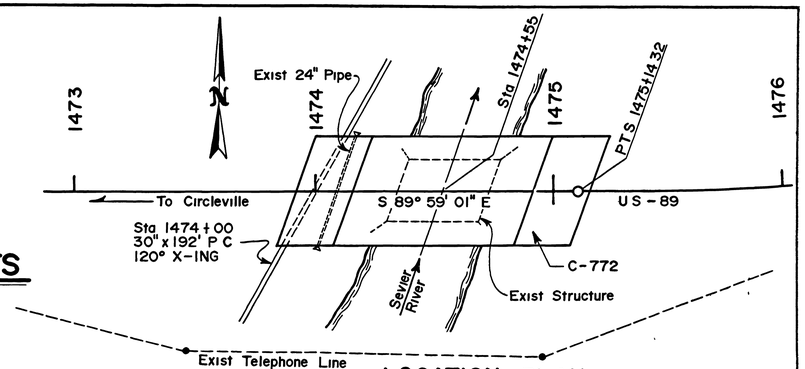
1 Drainage Area = 1015 sq mi
2 Design Flood (Q_d) = Q_{50} 2290 cfs
3 100-yr Flood (Q_{100}) = 2760 cfs
4 Normal Depth (d_n) for Q_d = 5.5 ft
5 Normal Water Surface Elev for Q_d = 6055.92 ft
6 Back-Water for Q_d = 1.97 ft
7 Back-Water Elev for Q_d = 6057.89 ft
8 Velocity Through Bridge Opening for Q_d = 10 ft/sec
8a Anticipated Total Scour Depth for Q_{50} = 5.2 ft
9 Normal Water Surface Elev for Q_{100} = 6056.15 ft
10 Back-Water for Q_{100} = 2.34 ft
11 Back-Water Elev for Q_{100} = 6058.49 ft
11a Anticipated Scour Depth for Q_{100} = 5.6 ft, Q_{500} = 7.5 ft
12 Overtopping Flood Frequency in years = N/A
13 Magnitude of Overtopping Flood ($Q_{overtopping}$) = N/A
14 Water Surface Elev for ($Q_{overtopping}$) = N/A

CURVE DATA

PI = 1484+07.44
Δ = 44° 57' 59" LT
D = 3° 15' 00"
R = 1762.95'
T = 893.12'
L = 1059.38'
Ls = 325.00'
N 549143.36'
E 1782319.89'

INDEX OF SHEETS

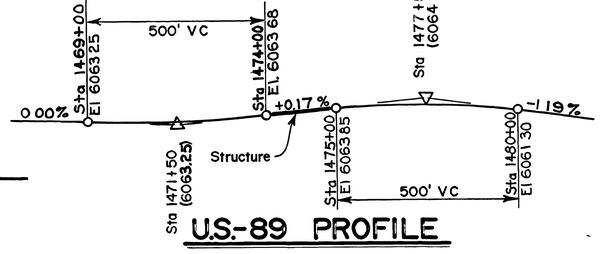
1 Situation and Layout
2. Soil Data
3. Foundation Plan
4 Abutment and Wingwall Details
5. Framing Plan
6. Girder Details and Camber Diagram
7 Steel Details
8 Screed Elevations
9. Deck and Approach Slab Details
10. Parapet Details
11 Approach Slab Drain Details
12 Reinforcing Steel Schedule



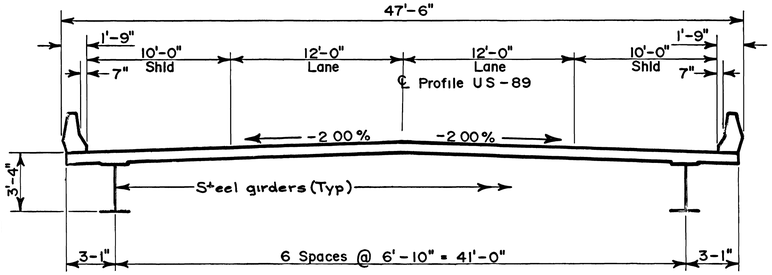
LOCATION PLAN

GENERAL NOTES

1. Materials, construction, and workmanship shall be in accordance with the Utah Department of Transportation Standard Specifications for Road and Bridge Construction, Edition of 1979, and Supplements thereto which are in effect at the date of request for bids
2. All reinforcing steel shall be deformed billet steel bars conforming to AASHTO designation M-31 Grade 60 and shall be epoxy coated.
3. All structural steel shall be structural carbon steel conforming to AASHTO designation M270 Gr 50W except where noted otherwise
4. Exposed concrete corners shall be chamfered ¾" except where noted otherwise
5. Cover to reinforcing steel shall be 2" except where noted otherwise
6. All cast-in-place concrete shall be Class AA(AE) except where specified otherwise



U.S.-89 PROFILE



TYPICAL SECTION THROUGH DECK

DESIGN DATA

HS 20-44 or Interstate Alternate Loading in accordance with AASHTO Specifications of 1989 and Interim Specifications

Cast-in-place Concrete fc = 1400 psi, fs(Reinf.) = 24,000 psi, n = 8

Structural Steel fs = 27,000 psi

Wearing Surface ½" Concrete, 35 lbs/sq ft. Future Wearing Surface

Design Speed: 55 mph ⚠

QUANTITIES

ITEM	ESTIMATED	UNIT	AS CONST
Granular Backfill Borrow	77	Cu Yds	
Drilled Caissons 3'-0" Dia	174	Lin Ft	
Concrete Class AA(AE)(Est Qty 296 Cu Yds)	1	Lump	
Reinforcing Steel (Epoxy Coated)	56153	Lbs	
Structural Steel (Est Qty 99,727 lbs) Spec Item	1	Lump	
Removal of Bridges	1	Lump	

NO	BY	DATE	REMARKS
2	AFM	7/6/90	Keying of the Riprap changed
1	AFM	7/9/90	Changed to 55 mph

REVISIONS

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY UTAH
STRUCTURES DIVISION

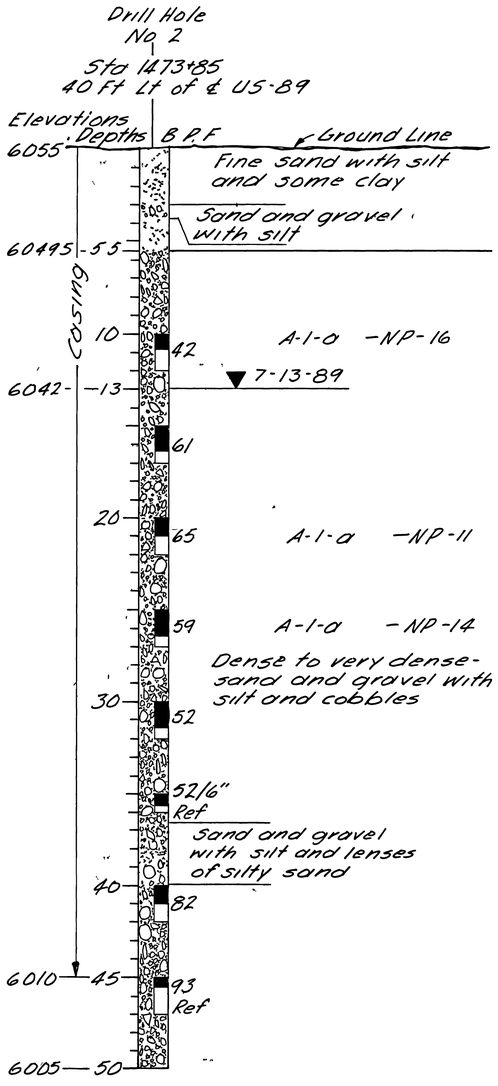
SEVIER RIVER BRIDGE
REPLACEMENT US-89
SITUATION & LAYOUT

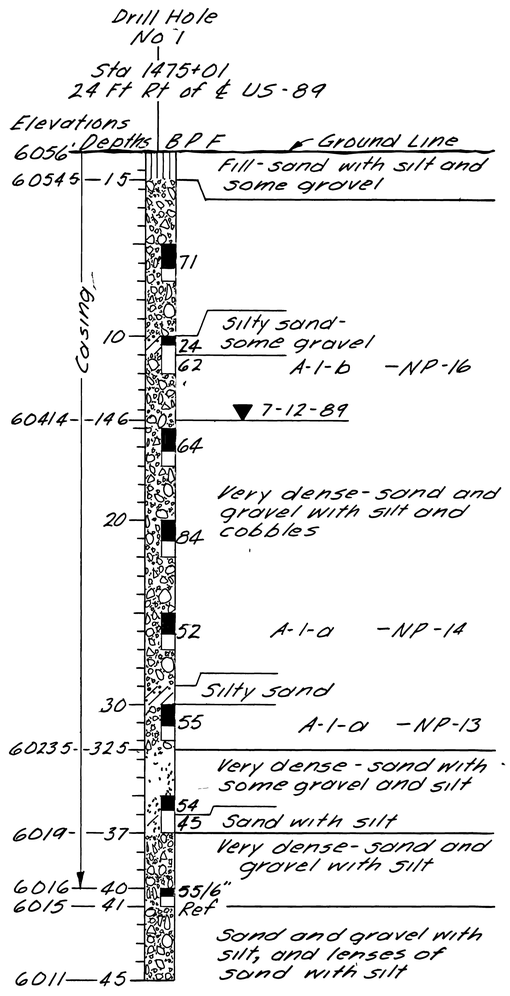
DESIGN AFM 4/17/90	CHECK GJT 4/25/90	1474+55 STATION
DRAWN AFM 5/89	CHECK VAB 8-15-89	
QUANT VAB 12-4-89	CHECK KMM 4-11-90	PIUTE COUNTY
APPROVAL RECOMM 4-23-90 DATE	GROUP LEADER	
APPROVED 4 27 90 DATE	DIV. STRUCTURAL ENGR	DRG NO C-772

BRF-027(26) PROJECT NUMBER

SHT 1 OF 12

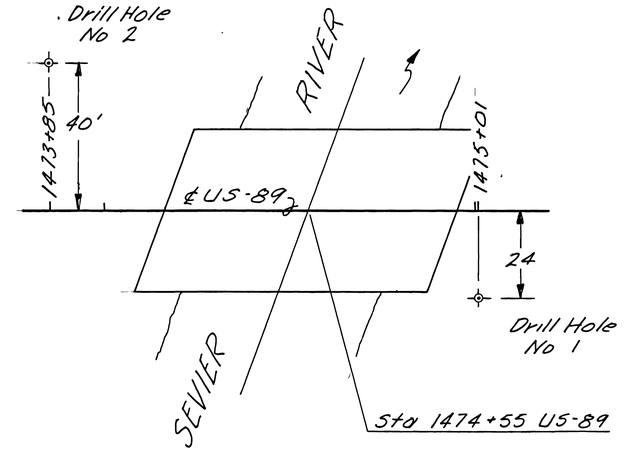
C-772





NOTE: The stratification lines represent the approximate boundaries between soil types and the the transition may be gradual

NOTE. Cobble- a rock fragment with an average dimension between 3 and 12 inches



NOTE The water table depths shown on the drill logs represent hole conditions on the date shown, either with casing still in place or with perforated plastic pipe installed it should be noted however, that other locations away from the test holes or at other times of the year the water table elevation may vary significantly

Rig Used: Mobile B-61

Date Drilled: July 1989

NO	BY	DATE

REVISIONS

KEY TO DRILLING LOG

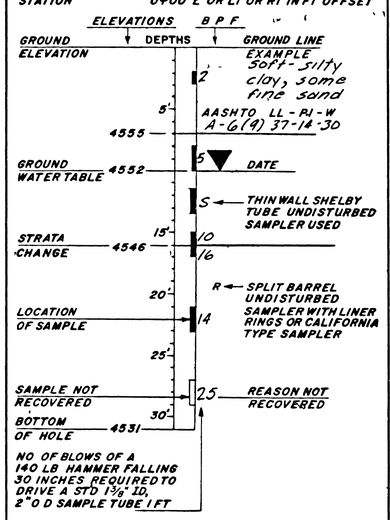
RELATIVE DENSITY (NON-PLASTIC SAND & SILT)

VERY LOOSE — LESS THAN 4 BLOWS PER FOOT
LOOSE — 4 TO 10 BLOWS PER FOOT
MEDIUM — 10 TO 30 BLOWS PER FOOT
DENSE — 30 TO 50 BLOWS PER FOOT
VERY DENSE — MORE THAN 50 BLOWS PER FOOT

CONSISTENCY (PLASTIC-SILT & CLAY)

VERY SOFT — LESS THAN 2 BLOWS PER FOOT
SOFT — 2 TO 4 BLOWS PER FOOT
MEDIUM — 4 TO 8 BLOWS PER FOOT
STIFF — 8 TO 15 BLOWS PER FOOT
VERY STIFF 15 TO 30 BLOWS PER FOOT
HARD — MORE THAN 30 BLOWS PER FOOT

TOPSOIL OR FILL · GRAVEL · SAND · SILT · CLAY · SHALE
IGNEOUS · LIMESTONE · CONGLOMERATE · DOLOMITE · SANDSTONE · SILTSTONE
SANDY CLAY · CLAYEY SAND · SILTY CLAY · CLAYEY SILT · SILTY SAND · SANDY SILT



ABBREVIATIONS

L L — LIQUID LIMIT IN %
P I — PLASTIC INDEX
w — NATURAL MOISTURE CONTENT IN %
Ref — REFUSAL ≥ 50 BLOWS PER 6"
PEN — PENETRATION
G W T — GROUND WATER TABLE
B P F — BLOWS PER FOOT
N P — NON PLASTIC
AASHTO — SOIL CLASSIFICATION SYSTEM

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY UTAH
MATERIALS and RESEARCH SECTION

SEVIER RIVER BRIDGE
REPLACEMENT ON US - 89
SOIL DATA

Drawn By Kistler	Checked By	BRF - 027 (26) Project Number
Checked By M. Basha	Checked By	
Checked By P. SYLVIORE	Checked By	1474+55 Station
Approval Recommended By Lynn H. Rausha		PIUTE County
Received 4 27 90 Date	Chief Structural Engr	
Foundations File No 89-7-FS-8	Drg No C-772	2 of 12

FIGURE 1