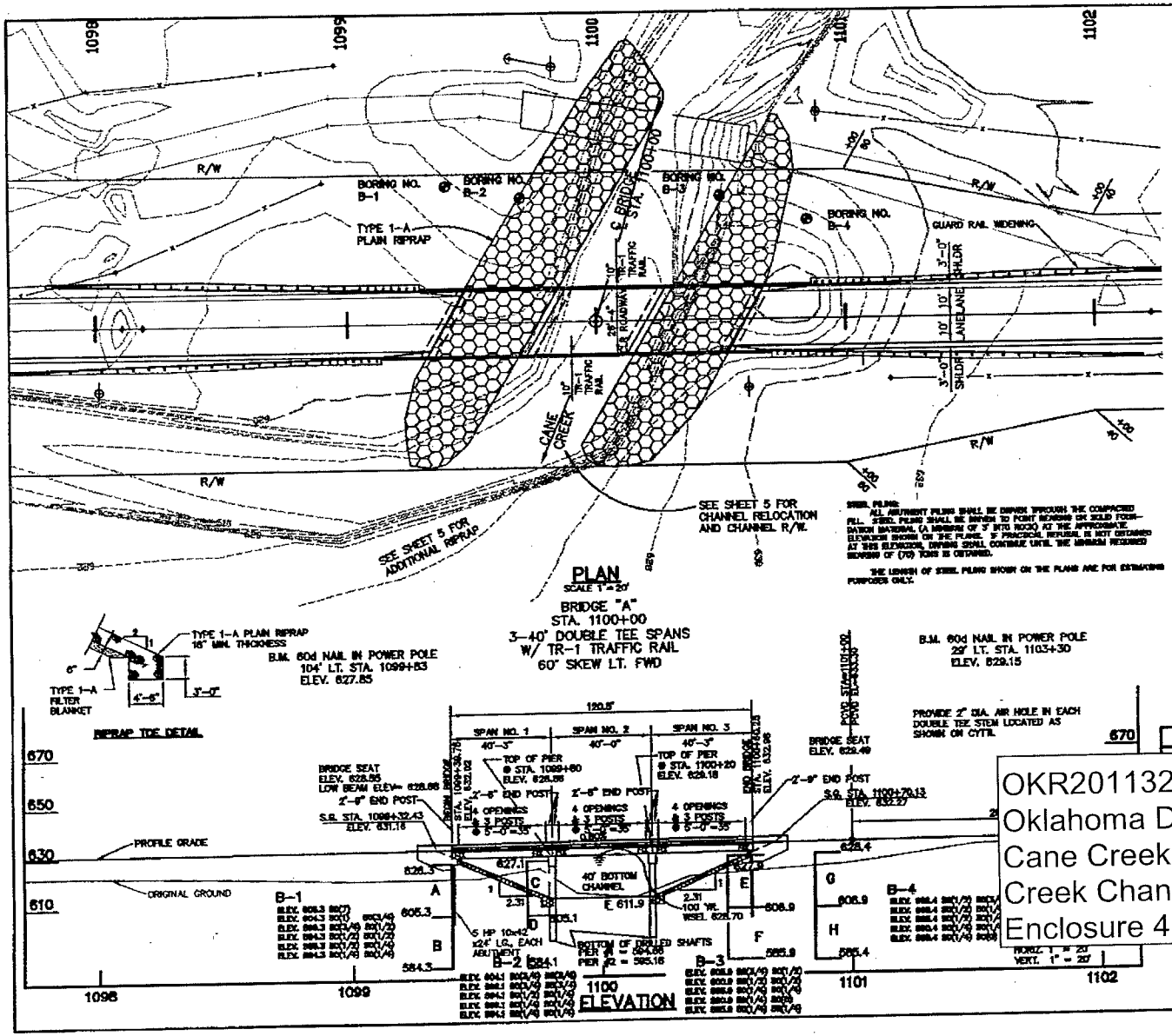

HYDRAULIC DATA

Total Drainage Area = 17.0 S.M.
Non-Contributing D.A. = 3.4 S.M.
Q50 = 4845 cfs
V50 = 4.88 fps
Q50 Overt. High Water Elev. = 828.96 M.S.L.
Q100 = 6230 cfs
V100 = 5.70 fps
Q100 Comp. High Water Elev. = 828.91 M.S.L.
Q500 = 7000 cfs
V500 = 6.80 fps
Q500 = Comp. High Water Elev. = 829.67 M.S.L.
Extreme High Water = N/A
Q OT = 9800 cfs @ 830.30 M.S.L.
V OT = 7.80 fps
Max. Scour = 14 ft.

DESIGN DATA

Design: AASHTO Specifications, 17th Edition & Interim and AISC Specifications
Loading: HS 20-44 plus 20 PSF future wear surface

LOAD FACTOR DESIGN

Reinforcing Steel (Grade 60) Fy = 60000 psi

Concrete:
Class "A": Fc = 3000 psi
Class "AA": Fc = 3600 psi

FOUNDATION LOADING:
ALLOWABLE LOADS- BEARING - 28.0 TSF
FRICTION - 3.0 TSF

DRILLED SHAFT FOUNDATION LOADS IN TONS/SHAFT

LOCATION	DESIGN LOAD PER SHAFT	CAPACITY FRICTION*	CAPACITY BEARING	TOTAL CAPACITY
PIER 1 & 2	167	113.1	141.3	254.4

* TOP 6' NEGLECTED FOR CALCULATING ALLOWABLE FRICTION

SUMMARY OF QUANTITIES

Item	Unit	Abutm.	Piers	Superstr.	Total
UNCLASSIFIED BORROW	C.Y.	60.			60.
SUBGRD. EXC. COMMON	C.Y.	80.			80.
PRETENSIONED CONC. DOUBLE TEE	L.F.			474.	474.
CLASS AA CONCRETE	C.Y.			87.0	87.0
CONCRETE RAIL	L.F.	80.		240.	320.
CLASS A CONCRETE	C.Y.	37.9	36.2		74.1
REINF. STEEL (GRADE 60)	LB.	8888.	5745.	12993.	27,626.
STEEL PILING (HP10x42)	L.F.	240.			240.
TYPE 1-A PLAIN RIPRAP	TON	1390.0			1390.0
TYPE 1-A FILTER BLANKET	TON	260.0			260.0
DRILLED SHAFTS 36" DIA.	L.F.		88.		88.
CORR. GALV. STEEL PIPE 36" DIA.	L.F.		34.		34.

BORING LOG

OKR2011328
Oklahoma Department of Transportation
Cane Creek
Creek Channellization
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GENERAL PLAN & ELEVATION

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