

STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA		1974	1	2
PROJECT NUMBER				
L74-13				

**STATE OF IOWA  
STATE HIGHWAY COMMISSION**

PLANS OF PROPOSED IMPROVEMENT  
ON THE

**SECONDARY ROAD SYSTEM**

**CRAWFORD COUNTY**

PROJECT NO.

L74-13

SCALES: AS NOTED

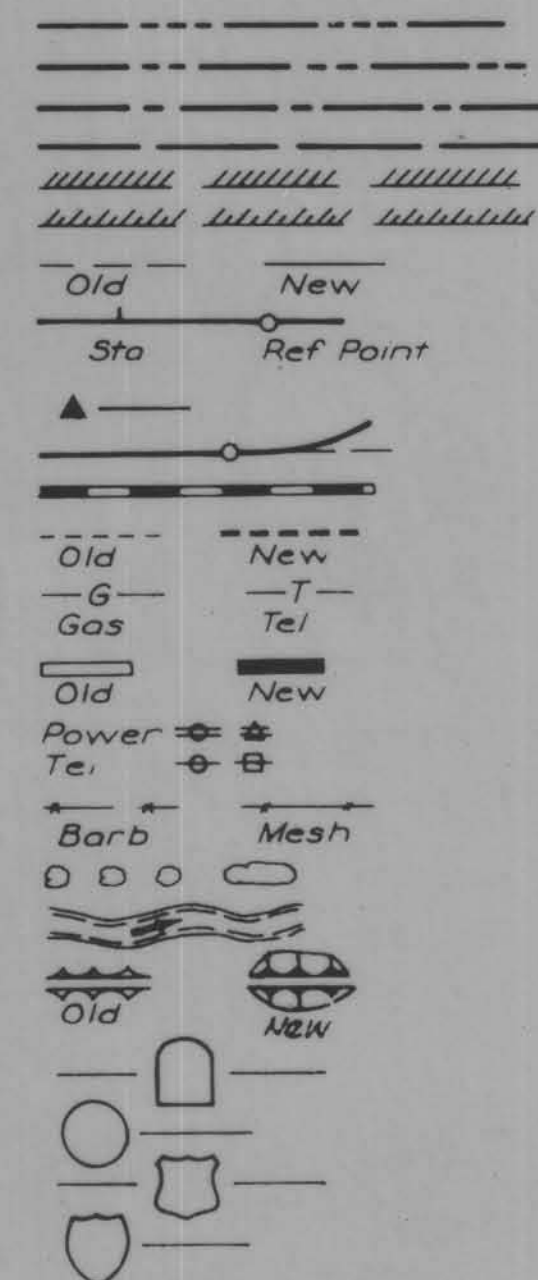
THE IOWA STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS  
FOR CONSTRUCTION WORK, SERIES OF 1972 SHALL  
APPLY TO WORK ON THIS PROJECT, PLUS  
CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

INDEX OF SHEETS

SHEET NO.	ITEM
1	TITLE SHEET, CONVENTIONAL SIGNS, LOCATION MAP, AND ESTIMATE OF QUANTITIES.
2	DETAILS OF STRUCTURAL PLATE.

CONVENTIONAL SIGNS

- State Line
- Co. Line
- Twp. Line
- Sec. Line
- Corp. Line
- Urban Bdry
- R.O.W. Lines
- Survey Line
- Sec. Corner
- Profile Grade
- Railroad
- Field Tile
- Underground Lines
- Culverts
- Utility Poles
- Fences
- Trees Or Brush
- Stream
- Dike
- County Road No.
- Primary Road No.
- U. S. Road No.
- Interstate Road No.



LETTING DATE

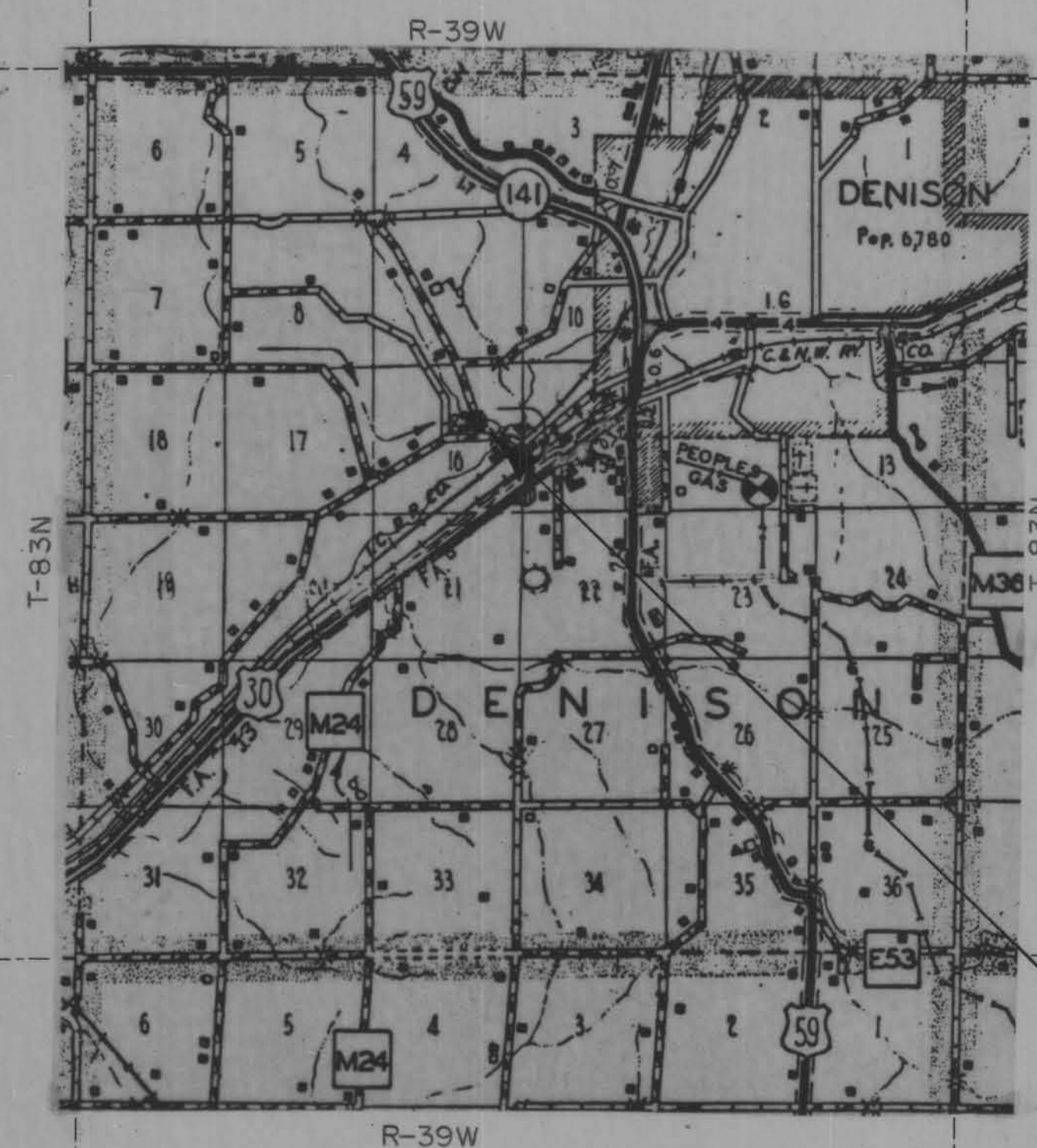
ESTIMATE OF QUANTITIES

PROJECT NO.	LOCATION			DESCRIPTION TYPE AND SIZE	PLACE ONLY	STRUCTURAL CONCRETE	REINFORCING STEEL	CLASS "20" EXCAVATION	CLASS "10" EXCAVATION	BACKFILL AS PER PLAN	CLEARING AND GRUBBING	REMOVALS AS PER PLAN
	SEC.	TWP.	STA.		20'-7" X 13'-2" STRUCTURAL-PLATE PIPE-ARCH L.F. ①	CLASS "C" CU. YDS.	LBS. ②	CU. YDS. ③	CU. YDS.		\$	LUMP SUM
L74-13	16	83-39	3+76.0	20'-7" X 13'-2" X 76' STRUCTURAL-PLATE PIPE-ARCH CONCRETE HEAD-WALLS.	76.0	23.56	1680	685.0	222	LUMP SUM	\$ 30.85	LUMP SUM

- ① BOTTOM  $\phi$  LENGTH, 7 GAGE, 2:1 BEVELED ENDS.
- ② HOOKBOLTS SHALL BE CONSIDERED INCIDENTAL TO REINFORCING STEEL.
- ③ CLASS "20" EXCAVATION INCLUDES EXCAVATION REMOVED FOR SPECIAL BACKFILL.

NOTE: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL WHICH IS NOT DESIRABLE TO BE INCORPORATED IN THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES.

NOTE: USABLE MATERIAL SHALL BECOME THE PROPERTY OF CRAWFORD COUNTY.



PROJ. NO. L74-13      STA. 3+76.0  
20'-7" x 13'-2" x 76' (BOTTOM  $\phi$  LENGTH)  
STRUCTURAL-PLATE PIPE ARCH.

APPROVED

*W. C. Stalk*

*Van Kester*

*Eileen Senter*

*Charles J. Smith*

*Morris Arnold*  
BOARD OF SUPERVISORS

*Thomas E. DeWitte* 7-22-74  
ASSISTANT DISTRICT ENGINEER      DATE  
SECONDARY ROADS  
IOWA HIGHWAY COMMISSION

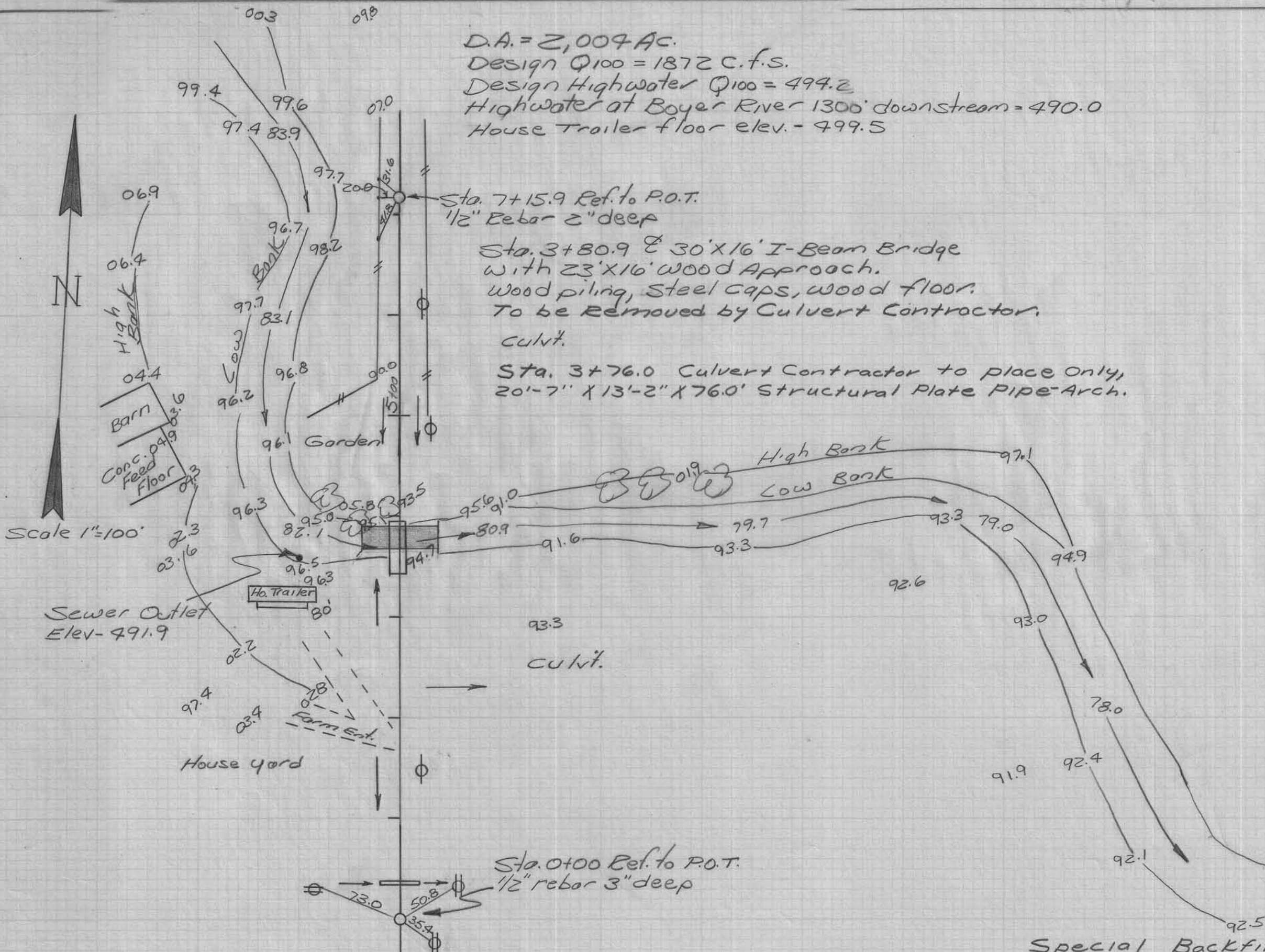
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION AND THAT ENGINEERING DECISIONS WITH REGARD TO THE DESIGN WERE MADE BY ME OR BY OTHER DULY REGISTERED PROFESSIONAL ENGINEERS UNDER THE LAWS OF THE STATE OF IOWA.  
*H. Dale Wright* July 1, 1974  
IOWA REGISTRATION NUMBER 57988 DATE

APPROVED

DEPUTY CHIEF ENGINEER  
IOWA HIGHWAY COMMISSION      DATE

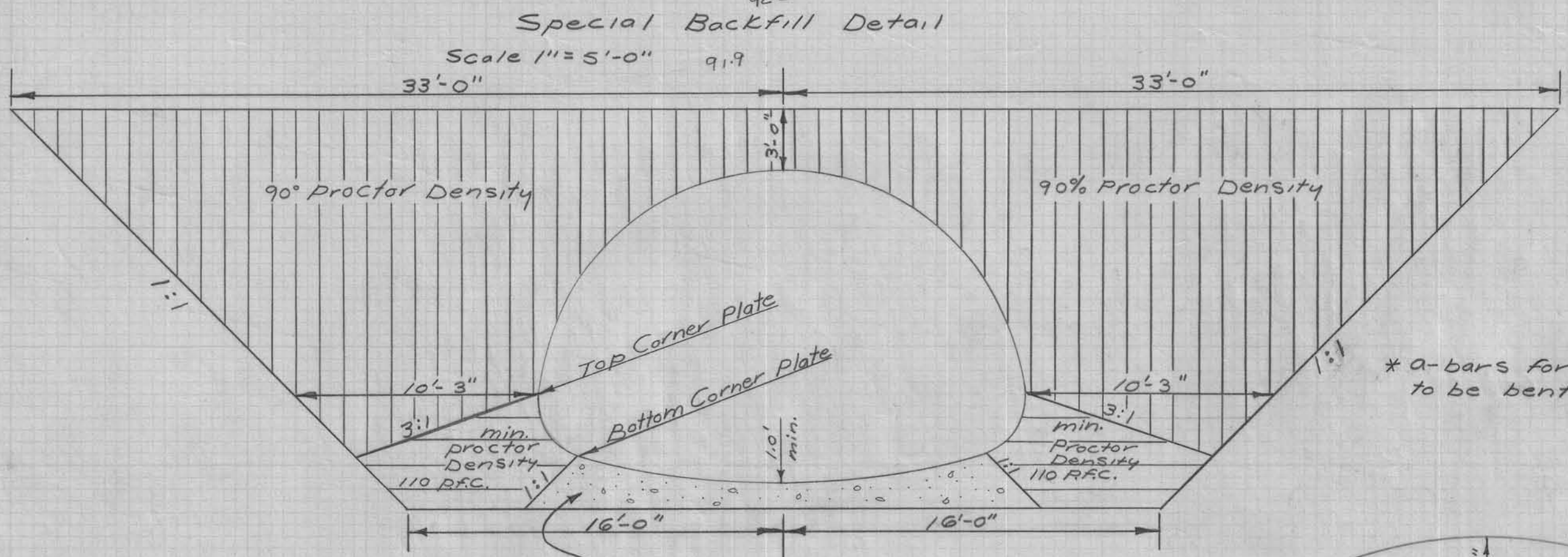


DA = 2,007 AC.  
 Design  $Q_{100} = 1872$  C.F.S.  
 Design Highwater  $Q_{100} = 499.2$   
 Highwater at Boyer River 1300' downstream = 490.0  
 House trailer floor elev. = 499.5



Sta. 0+100 Ref. to P.O.T.  
 1/2" rebar 3" deep

Special Backfill Detail  
 Scale 1"=5'-0"



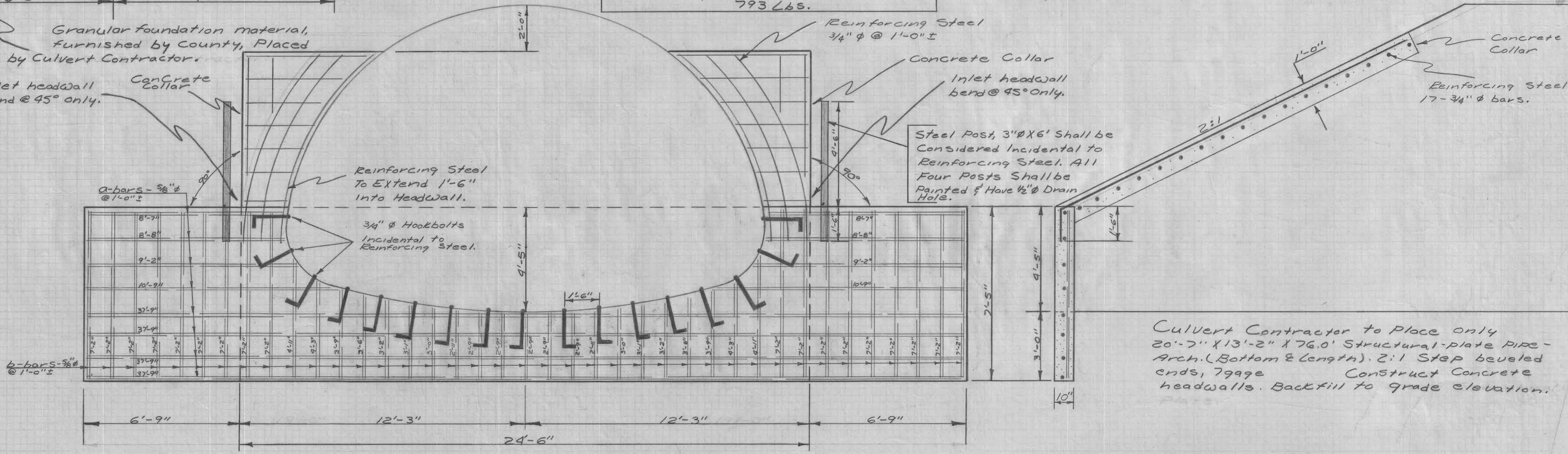
Two Headwalls	
Estimate of Class "C" Concrete	
13.0 Cu. yds.	

Reinforcing Steel - Two Headwalls					
Mark	Shape	Size	No.	Length	Linear Feet
a	*	5-24	Shown	450.7	
b	—	5-78	Shown	399.8	
				Length	850.5
				Weight	8870 lbs.

Class "C" Concrete - Inlet & Outlet Collar	10.56 Cu. yd.
Reinforcing Steel - Inlet & Outlet Collar	793 lbs.

Total Estimate of Quantities	
20'-7" X 13'-2" X 76.0' Structural Plate Pipe Arch - Place Only	
Class "C" Concrete	23.56 Cu. Yds.
Reinforcing Steel	1680 Lbs.
Class "10"	222 Cu. Yds.
Class "20" *	685.0 Cu. Yds.
Clearing & Grubbing	\$30.85
Backfill	Lump Sum
Removals	Lump Sum

\* Class "20" Excavation Includes Excavation Removed For Special Backfill.



DESIGN FOR  
 20'-7" X 13'-2" X 76.0' (BOTTOM & LENGTH) STRUCTURAL-PLATE PIPE-ARCH, 2:1 BEVELED ENDS. LOCATED IN SECTION 16 DENISON TOWNSHIP, CRAWFORD COUNTY. JUNE 1974, PROJECT NO. L74-13.