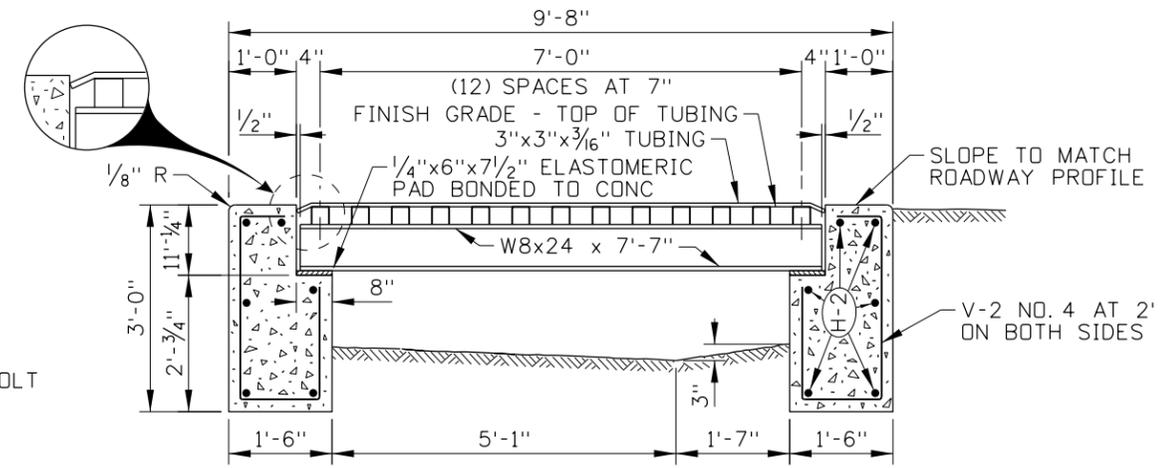


PLAN



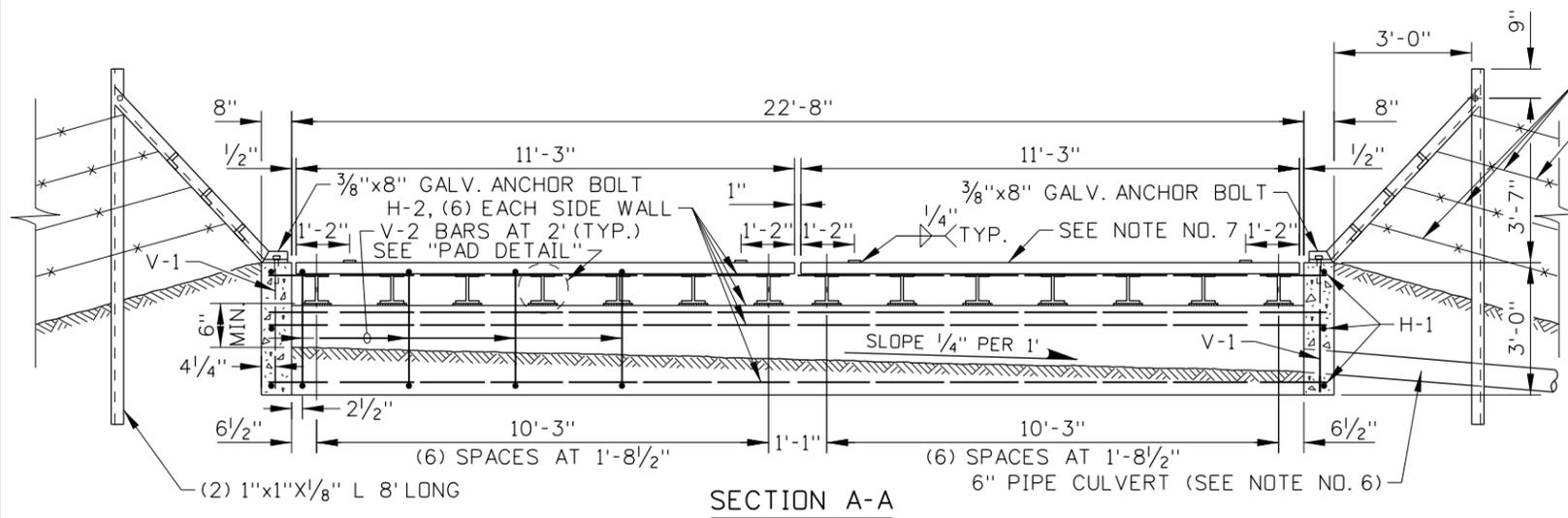
SECTION B-B

REINFORCEMENT STEEL				
MARK	LOCATION	SIZE NO.	BAR LENGTH	NO. REQ'D
V-1	END WALLS	4	2'-8"	18
V-2	SIDE WALLS	4	6'-0"	11
H-1	END WALLS	4	9'-4"	6
H-2	SIDE WALLS (TIE BARS)	4	23'-8"	12
454 LIN. FT. NO. 4 BARS @ 0.668 LB./FT. = 304 LBS.				

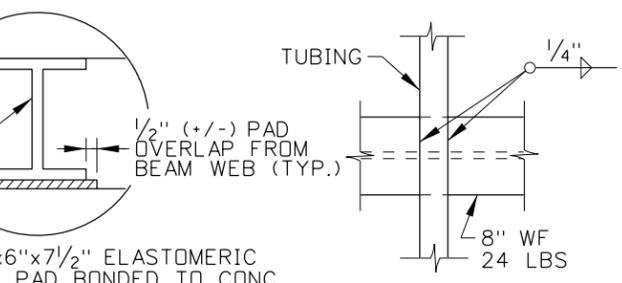
BILL OF MATERIALS	
CONCRETE, CLASS 30	8.2 C.Y.
METAL REINFORCEMENT	304 LBS
STRUCTURAL STEEL	4600 LBS

NOTES

- ENSURE THAT CATTLE GUARD MEETS THE REQUIREMENTS OF SECTION 611 - CATTLE GUARDS OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- ENSURE THAT THE EXPOSED STEEL SURFACES ARE BLASTED CLEAN TO AN SSPC SP-10 AND PAINTED WITH PAINT SYSTEM D IN ACCORDANCE WITH SECTION 627 - PAINTING OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- ENSURE THAT THE CATTLE GUARD AND SUPPORTS ARE DESIGNED FOR HS-25 LOADING. ENSURE THAT THE ELASTOMERIC BEARING PADS ARE 50 DUROMETER IN HARDNESS.
- PLACE THE CATTLE GUARD ON BASE AGGREGATE, 3" MINIMUM THICKNESS OVER HAND LEVELED SOIL COMPACTED TO 95% DENSITY.
- GALVANIZE CATTLE GUARD HARDWARE FASTENERS.
- GRADE TO DRAIN.
- PLACE THE CATTLE GUARD TO MATCH THE ROADWAY SLOPE, CROWN, OR BOTH.
- ALTERNATE CATTLE GUARD DESIGNS MAY BE USED. PRIOR APPROVAL, BY THE ENGINEER, OF SHOP DRAWINGS IS REQUIRED FOR THE USE OF ALTERNATE CATTLE GUARDS.
- NOT TO SCALE.

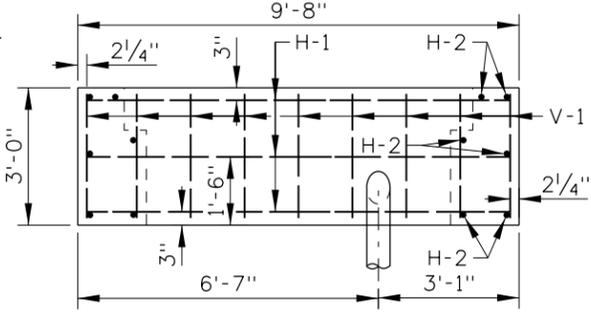


SECTION A-A



TYPICAL WELD DETAIL

PAD DETAIL (SEE NOTE NO. 3)



END VIEW

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	12-72		6	5-95	IJR	11	12-12
2	12-73		7	1-00	MSM		
3	2-74		8	9-02	MSM		
4	3-81		9	10-05	MSM		
5	6-81		10	08-11	RSC		

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: f1a\_1212.std  
 DRAWING DATE: JANUARY, 1971

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
 HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
 CHIEF ENGINEER

STANDARD DRAWING

**CATTLE GUARD TYPE A**

**English**

STANDARD DRAWING NO.  
**F-1-A**

SHEET 1 OF 1

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: RYAN D. LANCASTER  
 DATE ORIGINAL SIGNED: DECEMBER 17, 2012