

**GENERAL NOTES:**

1. SOIL TYPE:  
SOIL TYPE DETERMINE BY OSHA DEFINED COMPETENT PERSON ON SITE.
2. WATER TABLE LOCATION:  
AT OR BELOW BOTTOM OF EXCAVATION
3. THIS PLAN IS PROVIDED FOR WORKER PROTECTION ONLY TO ALLOW TEMPORARY ACCESS DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY THAT THE SHORING PROVIDES SUFFICIENT WORK SPACE AND CLEARANCES PRIOR TO ORDERING MATERIALS OR COMMENCING WORK.
4. THE SHORING IS ASSUMED TO BE IN PLACE THREE MONTHS OR LESS. ALL WORK IS ASSUMED TO BE COMPLETED DURING THE DRY SEASON AND DURING RAIN EVENTS, SLOPES SHALL BE PROTECTED WITH PLASTIC SHEET OR OTHER APPROVED MEANS TO PREVENT EROSION AND SLOUGHING.
5. THIS TAB DATA WAS GENERATED BASED ON GUIDELINES PROVIDED IN THE CALIFORNIA TRENCHING AND SHORING MANUAL.
6. EXCAVATION SHALL BE DUG NEAT AND TIGHT TO THE WALLS OF THE SHORING SYSTEM. FILL VOIDS BETWEEN THE SHORING AND EXCAVATION LINE WITH SOIL OR BEDDING MATERIAL.
7. ALL WORKERS SHALL REMAIN WITHIN THE PROTECTED AREA AT ALL TIMES.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION METHODS AND PROCEDURES AND SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT LIFE AND PROPERTY DURING CONSTRUCTION.
9. A COMPETENT PERSON SHALL PROVIDE INSPECTIONS DAILY, AFTER RAIN STORMS, AND AS REQUIRED FOR HAZARDOUS CONDITIONS. INSPECTIONS SHALL BE PROVIDED BEFORE WORKERS ENTER THE PROTECTED AREA AND AS NEEDED THROUGHOUT THE WORK PERIOD. THE COMPETENT PERSON SHALL CHECK FOR POTENTIAL CAVE-INS, INDICATIONS OF FAILURE OF THE PROTECTIVE SYSTEM, AND HAZARDOUS ATMOSPHERES. IF THE COMPETENT PERSON FINDS OR SUSPECTS A HAZARDOUS SITUATION, WORKERS SHALL BE REMOVED FROM THE PROTECTED AREA AND OUR OFFICE SHOULD BE NOTIFIED IMMEDIATELY. NO WORKERS SHALL RETURN TO THE PROTECTED AREA UNTIL REMEDIAL MEASURES THAT HAVE BEEN APPROVED BY B.K. WELLINGTON ENGINEERING (B.K.W.E) OFFICE ARE IN PLACE TO INSURE THEIR SAFETY
10. THE HYDRAULIC ALUMINUM SHORING SYSTEM TABULATED HERE IS BASED ON REQUIREMENTS OF FEDERAL OSHA 29CFR, PART 1926, SUBPART P-EXCAVATIONS AND TRENCHES
- 10.1. 1926.652(c)(2)-OPTION (2) - DESIGNS USING MANUFACTURER'S TABULATED DATA.  
1926.652(c)(2)(i) -DESIGN OF SUPPORT SYSTEMS, SHIELD SYSTEMS, OR OTHER PROTECTIVE SYSTEMS THAT ARE DRAWN FROM MANUFACTURER'S TABULATED DATA SHALL BE IN ACCORDANCE WITH ALL SPECIFICATIONS, RECOMMENDATIONS, AND LIMITATIONS ISSUED OR MADE BY THE MANUFACTURER.

ALL PROVISIONS OF SUBPART P APPLY WHEN UTILIZING THIS TABULATED DATA. THE CONTRACTOR'S COMPETENT PERSON SHALL USE THIS DATA TO SELECT ALLOWABLE TRENCH DEPTH, VERTICAL AND HORIZONTAL SHORE SPACING AND PLYWOOD USE REQUIREMENTS FOR PACIFIC SHORING VERTICAL HYDRAULIC SHORES. THE COMPETENT PERSON UTILIZING THIS TABULATED DATA SHALL BE EXPERIENCED AND KNOWLEDGEABLE OF ALL REQUIREMENTS OF SUBPART P, AND TRAINED IN THE USE AND SAFETY PROCEDURES FOR ALUMINUM HYDRAULIC SHORES.

11. USE OF THIS TABULATED DATA IS DEPENDENT ON FIRST CLASSIFYING THE SOIL IN ACCORDANCE WITH OSHA APPENDIX A, SOIL CLASSIFICATION. CLASSIFICATION SHALL BE JUST PRIOR TO INSTALLING TRENCH END PANELS. SOIL CONDITIONS MAY CHANGE AT A LATER DATE AND REQUIRE TRENCH END PANELS TO BE RESET AT A DIFFERENT SPACING.
12. HYDRAULIC VERTICAL SHORES ARE TABULATED BASED ON THE EFFECT OF A 20,000 LB SURCHARGE LOAD SET BACK 2 FT FROM THE EDGE OF THE TRENCH AND THE EQUIVALENT WEIGHT EFFECT OF THE OSHA SOIL TYPE, SEE CLASSIFICATION OF SOIL TYPES, 2.2.
13. THE DEPTH AND SPACING GIVEN IN TABLES GOVERNS THE USE OF SACRAMENTO SHORING SUPPLY VERTICAL SHORE END PANELS AND NOT TABULATIONS GIVEN IN OSHA APPENDIX C. THIS TABULATED DATA APPLIES EXCLUSIVELY TO HYDRAULIC SHORES MANUFACTURED BY PACIFIC SHORING. ANY ALTERATIONS TO THE SHORES OR VARIANCE FROM THIS TABULATED DATA SHALL BE INDICATED IN A SITE SPECIFIC PLAN PREPARED AND APPROVED BY A REGISTERED ENGINEER.
14. END SHORES SHALL BE SET NEAR VERTICAL.
15. END SHORES SHALL BE INSTALLED AND REMOVED FROM OUTSIDE THE TRENCH, SEE INSTALLATION AND REMOVAL PROCEDURE.
16. WORKERS SHALL ALWAYS ENTER, EXIT, AND WORK INSIDE THE SHORED AREA OF THE TRENCH.



SIGNATURE DATE:  
MAR 02 2018

**SHEET TITLE**  
MANUFACTURES TABULATED DATA SHEET

**B.K. WELLINGTON**  
Engineering, Inc.

122 CALISTOGA ROAD #591 - SANTA ROSA, CA 95409  
PH: (707) 595-5423

**ALUMINUM HYDRAULIC SHORING END BRACES**

MANUFACTURES TABULATED DATA

SACRAMENTO Shoring Supply

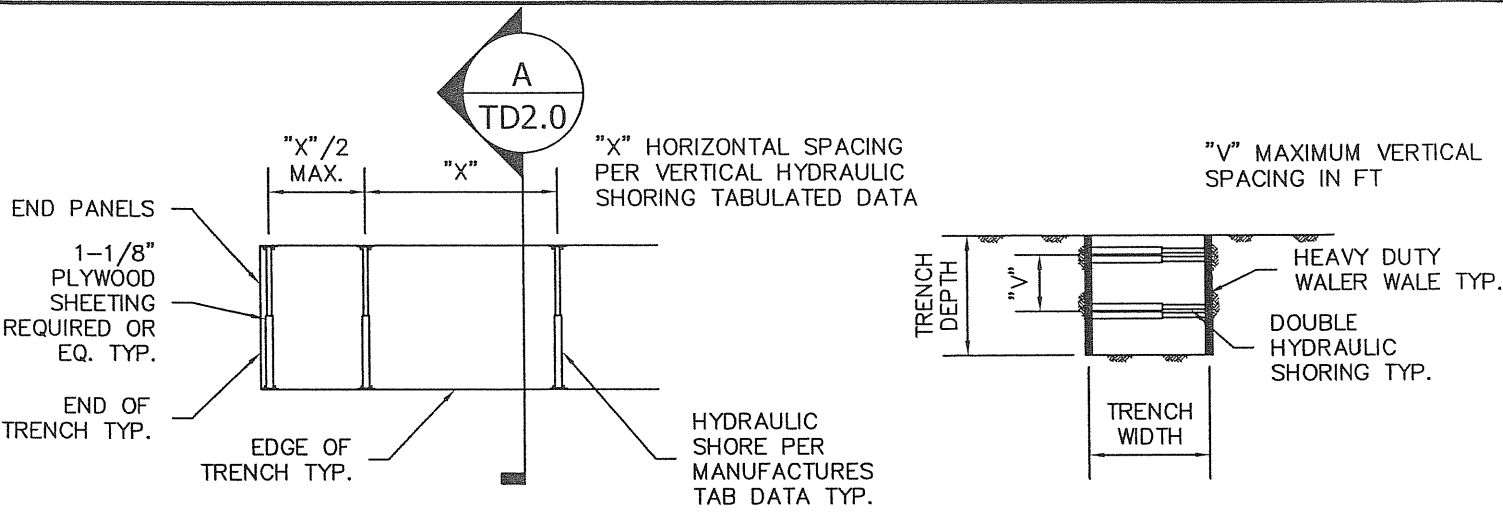
2175 ACOMA STREET  
SACRAMENTO, CA 95815

**SHEET NO.**  
TD1.0

**DATE**  
03/02/18

**DRAWN**  
BKW

**JOB NO.**  
18.073-01



**PLAN VIEW**

Scale: 1/8"=1'-0"



**SECTION**

Scale: 1/8"=1'-0"

MAXIMUM TRENCH DEPTH (FT)		MAXIMUM TRENCH WIDTH (FT)						
		4	6	8	10	12	14	16
		OSHA DEFINED TYPE "A" SOILS						
8 OR LESS	"V" MAXIMUM VERTICAL SPACING OF DOUBLE HYDRAULIC (FT)	4	4	4	3.75	2.5	2	1.5
8 TO 10		4	4	4	3.75	2.5	1.75	1.5
10 TO 12		4	4	4	3	2	1.5	1.25
12 TO 15		4	4	4	2.5	1.75	1.25	1
15 TO 20		4	4	3.25	2	1.5	1	
		OSHA DEFINED TYPE "B" SOILS						
8 OR LESS	"V" MAXIMUM VERTICAL SPACING OF DOUBLE HYDRAULIC (FT)	4	4	4	3	2	1.5	1
8 TO 10		4	4	4	2.5	1.75	1.25	
10 TO 12		4	4	3.25	2	1.5	1	
12 TO 15		4	4	2.75	1.75	1.25		
15 TO 20		4	3.75	2	1.25			
		TYPE "C-60" SOILS						
8 OR LESS	"V" MAXIMUM VERTICAL SPACING OF DOUBLE HYDRAULIC (FT)	4	4	3.5	2	1.5	1	
8 TO 10		4	4	2.75	1.75	1.25		
10 TO 12		4	4	2.5	1.5	1		
12 TO 15		4	3.5	2	1.25			
15 TO 20		4	2.75	1.5	1			

USE HSS 3x3x3/16" STEEL OVERSLEEVE REQUIRED ON ALL DOUBLE HYDRAULIC SHORES



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