

SUPPORT ID	ITEM DESCRIPTION	QTY	UNIT
M1-M8	B2400-6, 6" PIPE CLAMP	9	EA
M10-M14	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	17.5	LF
	B22H, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA., W/ HOLES	20	LF
	B2400-6, 6" PIPE CLAMP	5	EA
	B340, SPLICE PLATE	10	EA
	3/8" DIAMETER GALV. THREADED ROD	20	LF
	3/8" DIAMETER GALV. NUT	40	EA
	3/8" DIAMETER GALV. LOCK WASHER	40	EA
	B201, 1-5/8" X 1-5/8" SQ. WASHER	40	EA
M15	3/8" DIAMETER GALV. U-BOLT TO FIT O.D. OF 6" PIPE	5	EA
	3/8" DIAMETER GALV. NUT	5	EA
	3/8" DIAMETER GALV. LOCK WASHER	5	EA
P4-P14	GUIDE/RETAINER ASSEMBLY LEFT HAND AS SHOWN IN DETAIL 10 B03	44	EA
	GUIDE/RETAINER ASSEMBLY RIGHT HAND MIRROR IMAGE TO THAT SHOWN IN DETAIL 10 B03	22	EA
	3/4" DIA X 3" LONG A325 BOLT	33	EA
	3/4" DIA X 3" LONG A325 HEX NUT	33	EA
	3/4" DIA DIAMETER LOCK WASHER	33	EA
P1-P3	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	66	LF
S80-S86	B2400-1, PIPE CLAMP	10	EA
	B2400-3/4, PIPE CLAMP	10	EA
	B2400-1/2, PIPE CLAMP	10	EA
	B-LINE 4LA-4	20	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	60	EA
	1/2" DIAMETER LOCK WASHER	60	EA
S7 S10 S18 S21	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	65	LF
S30 S33 S53 S56	B2400-1, PIPE CLAMP	10	EA
S65 S68	B2400-3/4, PIPE CLAMP	10	EA
	B2400-1/2, PIPE CLAMP	10	EA
	B-LINE 4LA-4	20	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	60	EA
	1/2" DIAMETER LOCK WASHER	60	EA
S8 S9 S19 S20	W10X33	100	LF
	1/2" PLATE/ANGLE ASSEMBLY AS SHOWN IN DETAIL 1 ON B03	16	EA
	3/4" X 2" LONG ASTM F1852 TENSION CONTROL BOLTS	64	EA
	3/4" HEX NUT	64	EA
	3/4" FLAT WASHER	64	EA
	U-BOLT 3/4" DIA X 10 1/2X6" ASTM A449	16	EA
	3/4" DIA DIAMETER A449 HEX NUT	16	EA
	3/4" DIA DIAMETER LOCK WASHER	16	EA
	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	43	LF
	B2400-1, PIPE CLAMP	4	EA
	B2400-3/4, PIPE CLAMP	4	EA
	B2400-1/2, PIPE CLAMP	4	EA
	B-LINE 4LA-8	8	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	24	EA
	1/2" DIAMETER LOCK WASHER	24	EA
	B-LINE FIGURE 4LA-6	4	EA
	B-LINE FIGURE 980	4	EA
	B-LINE FIGURE 828	4	EA
S11 S12 S31 S32	W10X33	200	LF
S54 S55 S66 S67	1/2" PLATE/ANGLE ASSEMBLY AS SHOWN IN DETAIL 1 ON B03	32	EA
	3/4" X 2" LONG ASTM F1852 TENSION CONTROL BOLTS	128	EA
	3/4" HEX NUT	128	EA
	3/4" FLAT WASHER	128	EA
	U-BOLT 3/4" DIA X 10 1/2X6" ASTM A449	32	EA
	3/4" DIA DIAMETER A449 HEX NUT	32	EA
	3/4" DIA DIAMETER LOCK WASHER	32	EA
	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	86	LF
	B2400-1, PIPE CLAMP	8	EA
	B2400-3/4, PIPE CLAMP	8	EA
	B2400-1/2, PIPE CLAMP	8	EA
	B-LINE 4LA-8	16	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	48	EA
	1/2" DIAMETER LOCK WASHER	48	EA
	B-LINE FIGURE 4LA-6	8	EA
	B-LINE FIGURE 980	8	EA
	B-LINE FIGURE 828	8	EA
S13-S17	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	306	LF
S22-S29	B2400-1, PIPE CLAMP	47	EA
S34-S52	B2400-3/4, PIPE CLAMP	47	EA
S57-S64	B2400-1/2, PIPE CLAMP	47	EA
S69-S75	B-LINE 4LA-4	94	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	282	EA
	1/2" DIAMETER LOCK WASHER	282	EA
	4" DIAMETER SCH 40 PIPE	10	LF
PS10 - PS14	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	33	LF
	B2400-1, PIPE CLAMP	5	EA
	B2400-3/4, PIPE CLAMP	5	EA
	B2400-1/2, PIPE CLAMP	5	EA
	B-LINE 4LA-4	10	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	30	EA
	1/2" DIAMETER LOCK WASHER	30	EA
PS8 PS9	W10X33	50	LF
	1/2" PLATE/ANGLE ASSEMBLY AS SHOWN IN DETAIL 1 ON B03	8	EA
	3/4" X 2" LONG ASTM F1852 TENSION CONTROL BOLTS	32	EA
	3/4" HEX NUT	32	EA
	3/4" FLAT WASHER	32	EA
	U-BOLT 3/4" DIA X 10 1/2X6" ASTM A449	8	EA
	3/4" DIA DIAMETER A449 HEX NUT	8	EA
	3/4" DIA DIAMETER LOCK WASHER	8	EA
	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	30	LF
	B2400-1, PIPE CLAMP	2	EA
	B2400-3/4, PIPE CLAMP	2	EA
	B2400-1/2, PIPE CLAMP	2	EA
	B-LINE 4LA-8	4	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	12	EA
	1/2" DIAMETER LOCK WASHER	12	EA
	B-LINE FIGURE 4LA-6	2	EA
	B-LINE FIGURE 980	2	EA
	B-LINE FIGURE 828	2	EA
304-307	W10X19	100	LF
	PL 1/2" X 3" X 1/8" AS SHOWN IN DETAIL 18 ON B04	8	EA
	PL 1/2" X 1/8" X 10" AS SHOWN IN DETAIL 18 ON B04	16	EA
	L3 X 3 X 1/4"	32	EA
	3/4" DIA DIAMETER X 1-1/2" LONG ASTM F1852 TENSION CONTROL BOLTS	24	EA
	3/4" HEX NUT	24	EA
	3/4" FLAT WASHER	24	EA
	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	59	LF
	B2400-1, PIPE CLAMP	4	EA
	B2400-3/4, PIPE CLAMP	4	EA
	B2400-1/2, PIPE CLAMP	4	EA
	B-LINE 4LA-8	4	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	32	EA
	1/2" DIAMETER LOCK WASHER	32	EA
	B-LINE FIGURE 4LA-6	4	EA
	B-LINE FIGURE 980	4	EA
	B-LINE FIGURE 828	4	EA

SECTION NUMBER OR DETAIL LETTER	ITEM DESCRIPTION	QTY	UNIT
305	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	24	LF
ADDITIONAL MODIFICATION	B2400-1, PIPE CLAMP	2	EA
	B2400-2, 2" PIPE CLAMP	3	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	12	EA
	1/2" DIAMETER LOCK WASHER	12	EA
	B-LINE 844-1-22	1	EA
	B-LINE B591-6	1	EA
	B-LINE 8212-3/8	4	EA
330-335	3/8" DIAMETER GALV. THREADED U-BOLT FOR 2" PIPE	6	EA
	PLATE 3/8" X 3" X 1/4" AS SHOWN IN DETAIL 11 ON B03	6	EA
	3/8" DIAMETER GALV. NUT	12	EA
	3/8" DIAMETER GALV. LOCK WASHER	12	EA
323-328	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	118	LF
	B2400-1, PIPE CLAMP	18	EA
	B2400-3/4, PIPE CLAMP	18	EA
	B2400-1/2, PIPE CLAMP	18	EA
	B-LINE 4LA-3 1/2	36	EA
	1/2" DIAMETER HEX HEAD CAP SCREW	108	EA
	1/2" DIAMETER LOCK WASHER	108	EA
PS1	3/4" DIAMETER ANCHOR BOLT, ASTM F1554, FY = 36KSI	20	LF
	3/4" DIAMETER GALV. HEX NUT	16	EA
	3/4" DIAMETER GALV. FLAT WASHER	16	EA
	W10X22, ASTM A992, FY = 50KSI	62	LF
	W8X18, ASTM A992, FY = 50KSI	75	LF
	L3X3X1/4, ASTM A36, FY = 36KSI	62	LF
	#3 REBAR, ASTM A615, FY = 60KSI	115	LF
	#4 REBAR, ASTM A615, FY = 60KSI	152	LF
	#5 REBAR, ASTM A615, FY = 60KSI	140	LF
	PL 12X12X1/2, ASTM A36, FY = 36KSI	4	EA
	CLASS "AA" CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH = 4000PSI	4.3	CY
	3/8" DIAMETER GALV. THREADED U-BOLT FOR 6" PIPE	5	EA
	3/8" DIAMETER GALV. NUT	10	EA
	3/8" DIAMETER GALV. LOCK WASHER	10	EA
	1/4" THICK PL TAB AT 2-BOLT COLUMN TAB CONNECTION	6	EA
	1/4" THICK PL TAB AT 1-BOLT COLUMN TAB CONNECTION	6	EA
	1/4" THICK PL TAB AT 2-BOLT AT BEAM-GIRDER CONNECTION	4	EA
	PL 6 3/4" X 16 3/4" X 1/4" AT COLUMN-BEAM CONNECTION	4	EA
	1/4" STIFFENER PLAT COLUMN-GIRDER CONNECTION	24	EA
	3/4" DIAMETER BOLT	58	EA
	3/4" DIAMETER NUT	58	EA
	3/4" DIAMETER GALV. WASHER	58	EA
PS2-PS4	HSS5X3/8, ASTM A500 GR. B	30	LF
	#7 REBAR, ASTM A615, FY = 60KSI	116	LF
	#3 REBAR, ASTM A615, FY = 60KSI	156	LF
	3/4" DIAMETER GALV. THREADED ROD, ASTM F1554, FY = 36KSI	17	LF
	3/4" DIAMETER GALV. HEX NUT	12	EA
	3/4" DIAMETER GALV. FLAT WASHER	12	EA
	PL 8X8X1/2, ASTM A36, FY = 36KSI	3	EA
	PL 6X6X1/4, ASTM A36, FY = 36KSI	3	EA
	B2900-6, 6" PIPE CLAMP	3	EA
	P1000 UNISTRUT OR B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	6	LF
	CLASS "AA" CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH = 4000PSI	1.8	CY
PS5	HSS5X3/8, ASTM A500 GR. B	12	LF
	#7 REBAR, ASTM A615, FY = 60KSI	38	LF
	#3 REBAR, ASTM A615, FY = 60KSI	52	LF
	3/4" GALV. THREADED ROD, ASTM F1554, FY = 36KSI	6	LF
	3/4" DIAMETER GALV. HEX NUT	4	EA
	3/4" DIAMETER GALV. FLAT WASHER	4	EA
	PL 8X8X1/2, ASTM A36, FY = 36KSI	1	EA
	PL 6X6X1/4, ASTM A36, FY = 36KSI	1	EA
	B2400-2, 2" PIPE CLAMP	1	EA
	P1000 UNISTRUT OR B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	2	LF
	CLASS "AA" CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH = 4000PSI	0.6	CY
PS6	HSS5X3/8, ASTM A500 GR. B	8	LF
	#7 REBAR, ASTM A615, FY = 60KSI	77	LF
	#3 REBAR, ASTM A615, FY = 60KSI	105	LF
	3/4" DIAMETER GALV. THREADED ROD, ASTM F1554, FY = 36KSI	11	LF
	3/4" DIAMETER GALV. HEX NUT	8	EA
	3/4" DIAMETER GALV. FLAT WASHER	8	EA
	PL 8X8X1/2, ASTM A36, FY = 36KSI	2	EA
	PL 6X6X1/4, ASTM A36, FY = 36KSI	2	EA
	B2400 PIPE CLAMP	1	EA
	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	15	LF
	B337 GUSSET PLATE	6	EA
	1/2" DIAMETER GALV. SPRING NUT (GALV.)	18	EA
	1/2" DIAMETER GALV. FLAT WASHER	18	EA
	1/2" DIAMETER GALV. SPRING NUT	18	EA
	CLASS "AA" CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH = 4000PSI	1.2	CY
PS7	HSS5X3/8, ASTM A500 GR. B	12	LF
	#7 REBAR, ASTM A615, FY = 60KSI	77	LF
	#3 REBAR, ASTM A615, FY = 60KSI	105	LF
	3/4" DIAMETER GALV. THREADED ROD, ASTM F1554, FY = 36KSI	11	LF
	3/4" DIAMETER GALV. HEX NUT	8	EA
	3/4" DIAMETER GALV. FLAT WASHER	8	EA
	PL 8X8X1/2, ASTM A36, FY = 36KSI	2	EA
	PL 6X6X1/4, ASTM A36, FY = 36KSI	2	EA
	B2400 PIPE CLAMP	1	EA
	B22, 1-5/8" X 1-5/8" MODULAR STRUT, 12 GA.	15	LF
	B337 GUSSET PLATE	6	EA
	1/2" DIAMETER GALV. SPRING NUT (GALV.)	18	EA
	1/2" DIAMETER GALV. FLAT WASHER	18	EA
	1/2" DIAMETER GALV. SPRING NUT	18	EA
	CLASS "AA" CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH = 4000PSI	1.2	CY

QUANTITIES SHOWN ARE ESTIMATED. INSTALLER IS RESPONSIBLE FOR OBTAINING ADDITIONAL PARTS IF REQUIRED. SUBSTITUTIONS MAY BE ALLOWED WITH PRIOR APPROVAL OF FRNP ENGINEERING.

SECTION NUMBER OR DETAIL LETTER

DRAWING ON WHICH SECTION OR DETAIL IS TAKEN

SECTION AND DETAIL KEY

TOLERANCES UNLESS OTHERWISE SPECIFIED

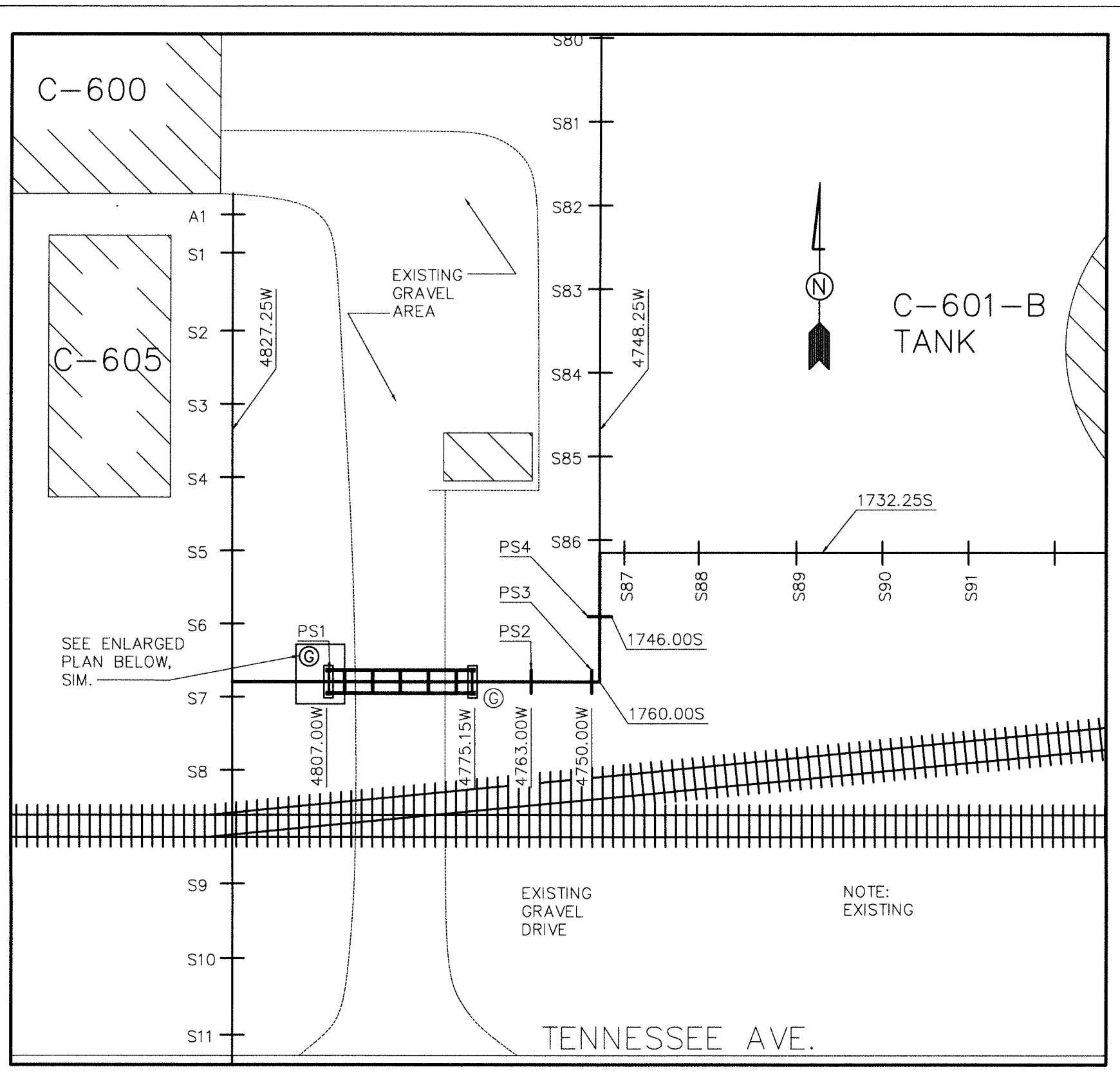
FRACTIONS ± 1/16"

XX DECIMALS ± .005"

XXX DECIMALS ± .001"

ANGLES BREAK SHARP EDGES MAX. FINISH

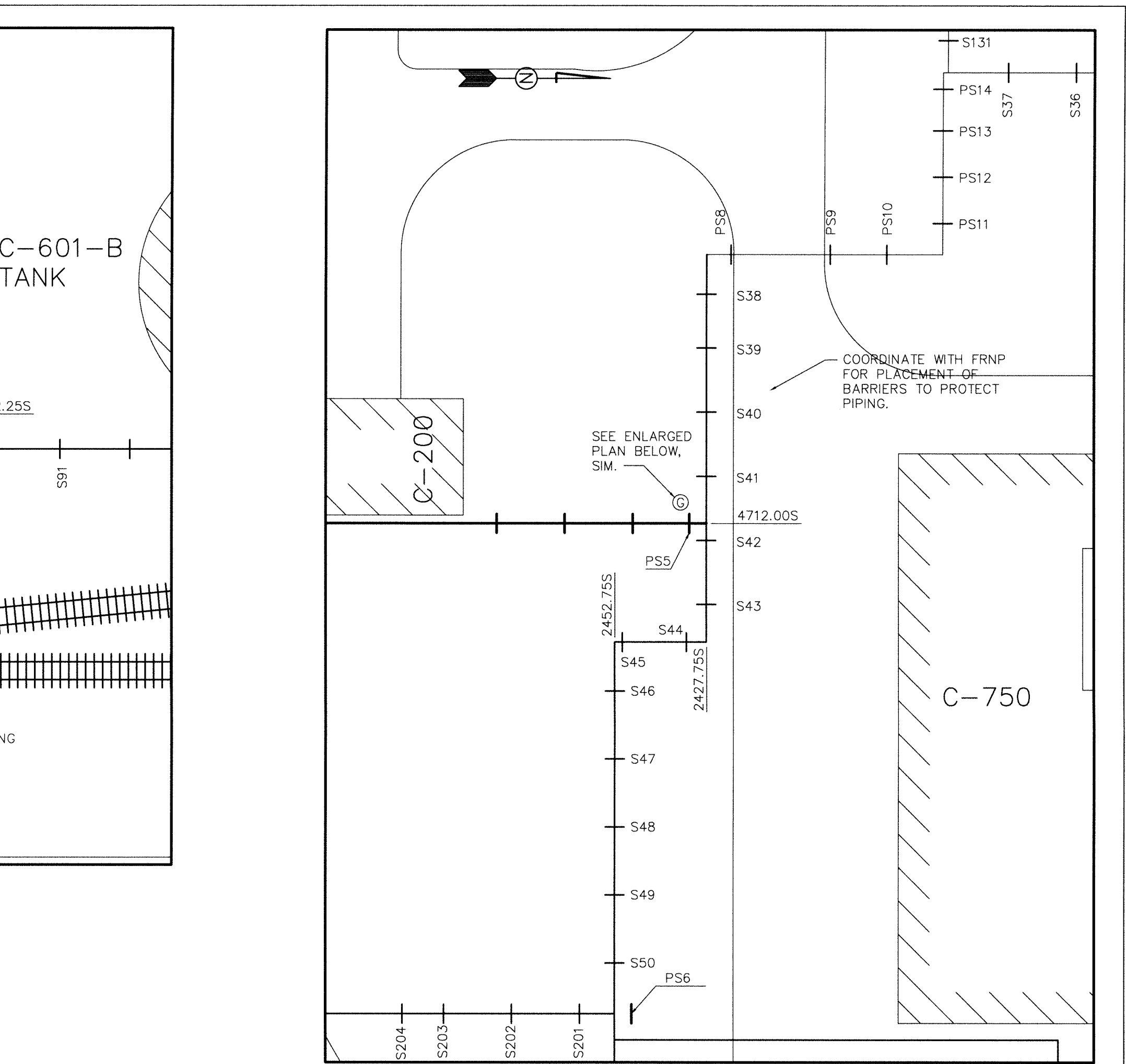
NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IS MADE THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF OR FOR DAMAGES RESULTING FROM THE USE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS.



PARTIAL PLAN VIEW C-600 AREA
SCALE: 1"=30'-0"

SUPPORT MODIFICATION SCHEDULE		
ID	MOD TYPE	COMMENTS
FOR SUPPORTS SHOWN ON S7DC6000A001		
M1-M8	SEE DET. 8 ON B03	NEW 6" DIA NATURAL GAS TO BEAR ON EXISTING STRUT
M10-M14	SEE DET. 15 ON B04	NEW 6" DIA NATURAL GAS TO BEAR ON NEW STRUT
M15	SEE DET. 4 ON B03	NEW 6" DIA NATURAL GAS TO BEAR ON STRUCTURAL STEEL CROSS MEMBER
FOR SUPPORTS SHOWN ON C45-1-5		
P4-P14	SEE DET. 6 ON B03	INSTALL BOLT-ON RETAINERS/GUIDES TO LIMIT LATERAL MOVEMENT AND PREVENT IMPACT BETWEEN NATURAL GAS AND AIR LINES DURING A SEISMIC EVENT. RELOCATE EXISTING NITROGEN LINE (NEW NAT. GAS LINE) NORTH TO ALLOW INSTALLATION OF RETAINER/GUIDES

FOR SUPPORTS SHOWN ON C15-1-5		
ID	MOD TYPE	COMMENTS
S80-S86	SEE DET. 2A ON B03	LATERALLY RESTRAIN HANGER RODS WITH STRUT/CLAMP ASSEMBLY
S7, S10, S18, S21, S30, S33, S53, S56, S65, S68, S8, S9, S19, S20	SEE DET. 2B ON B03	LATERALLY RESTRAIN HANGER RODS WITH STRUT/CLAMP ASSEMBLY
S11, S12, S31, S32, S54, S55, S66, S67	SEE DET. 16 ON B04	INSTALL STRUCTURAL STEEL BEAMS TO EACH VERTICAL LEG TO SPAN OVER RAILROAD
S13-S17, S22-S29, S34-S43, S45-S52, S57-S64, S69-S75	SEE DET. 2A ON B03	LATERALLY RESTRAIN HANGER RODS WITH STRUT/CLAMP ASSEMBLY
PS10-PS14*	SEE DET. 2A ON B03	LATERALLY RESTRAIN HANGER RODS WITH STRUT/CLAMP ASSEMBLY
PS8, PS9*	SEE DET. 16 ON B04	INSTALL STRUCTURAL STEEL BEAMS TO EACH VERTICAL LEG TO SPAN OVER ROAD
S44	SEE DET. 20 ON B04	REPAIR EXISTING BENT SUPPORT LEGS
	SEE DET. 2A ON B03	LATERALLY RESTRAIN HANGER RODS WITH STRUT/CLAMP ASSEMBLY



PARTIAL PLAN VIEW C-200 AREA
SCALE: 1"=30'-0"

FOR SUPPORTS SHOWN ON C19-501-M		
ID		