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College of San Mateo  
 Site Package  
 San Mateo, CA

Developed for  
 San Mateo County Community College District

CODE	ITEM	SCOPE
SS V	SANITARY WASTE AND VENT PIPING ABOVE & BELOW GRADE	NO HUB CAST IRON PIPE AND FITTINGS WITH STANDARD STAINLESS STEEL SHIELDED COUPLINGS WITH NEOPRENE GASKETS.
SD	STORM DRAIN ABOVE & BELOW GRADE	NO HUB CAST IRON PIPE AND FITTINGS WITH STANDARD STAINLESS STEEL SHIELDED COUPLINGS WITH NEOPRENE GASKETS.
PD	PUMPED DISCHARGE PIPING	TYPE "L" COPPER WITH DWV COPPER FITTINGS.
OH HW	ABOVE GRADE DOMESTIC WATER PIPING	TYPE "L" COPPER PIPE AND COPPER FITTINGS WITH LEAD-FREE SOLDER JOINTS SIZES 1/2"-2" VICTAULIC JOINTS SIZES 2 1/2"-4".
OW	BELOW GRADE DOMESTIC WATER PIPING	TYPE "L" COPPER PIPE AND COPPER FITTINGS WITH LEAD-FREE SOLDER JOINTS SIZES 1/2"-2" SILFOS 2 1/2" & LARGER.
CD	CONDENSATE DRAINS ABOVE GRADE	TYPE "M" COPPER PIPE AND COPPER FITTINGS WITH LEAD-FREE SOLDER JOINTS SIZES 1/2"-2".
CA	COMPRESSED AIR	PIPING TO COMPLY WITH NFPA-99.
V	VACUUM	PIPING TO COMPLY WITH NFPA-99.

SHEET NO.	SHEET TITLE	SCALE
PI.00	COVER SHEET	
P2.01	PLUMBING - LEVEL 1 - WEST DWV PIPING	1/8"=1'-0"
PR.01	PLUMBING - DETAILS	NONE
PR.02	PLUMBING - DETAILS	NONE

[Symbol]	EQUIPMENT IDENTIFICATION	CN	COLD WATER SUPPLY PIPE
[Symbol]	SECTION OR DETAIL IDENTIFICATION NUMBER SHEET ON WHICH SECTION OR DETAIL IS SHOWN	SS	SANITARY SEWER PIPE
[Symbol]	SHEET NOTES	SS	SANITARY SEWER PIPE U.G.
[Symbol]	GENERAL NOTES	OPD	OVERFLOW STORM DRAIN PIPE ABOVE FLOOR
[Symbol]	PLUMBING FIXTURE TAG	OPD	OVERFLOW STORM DRAIN PIPE BELOW FLOOR
φ	DIAMETER OR ROUND ELECTRICAL PHASE	SD	STORM DRAIN PIPE ABOVE FLOOR
-GV-	GATE VALVE	SD	STORM DRAIN PIPE BELOW FLOOR
-PRV-	PRESSURE REDUCING VALVE	GD	GARAGE DRAIN PIPE ABOVE FLOOR
-SHV-	SQUARE HEAD VALVE	GD	GARAGE DRAIN PIPE BELOW FLOOR
CKV	CHECK VALVE	CLG	CEILING
PTRV	PRESSURE AND TEMPERATURE RELIEF VALVE	FF	FINISH FLOOR
WHA	WATER HAMMER ARRESTOR	IE	INVERT ELEVATION
DN	PIPE DN	NPM	NOT IN PLUMBING WORK
UP	PIPE UP	NTS	NOT TO SCALE
HB	HOSE BIBB	R	RISE
CO	CLEAN OUT	TYP	TYPICAL
GCO	GRADE CLEAN OUT	UG	UNDERGROUND
2-CO	2-WAY CLEANOUT	VR	VENT RISER
WCO	WALL CLEAN OUT	VTR	VENT THRU ROOF
→	PIPE CONTINUES		
CFF	CAPPED FOR FUTURE		
FLOOR DRAIN, FLOOR SINK, AREA DRAIN (BELOW)			
NATURAL GAS OUTLET			
RISER TAG			

CODE	ITEM	SCOPE
SS V	SANITARY WASTE AND VENT PIPING ABOVE & BELOW GRADE	SANITARY WASTE AND VENT SYSTEM STUBBED OUT 5'-0" FROM BUILDING
SD	STORM DRAIN ABOVE & BELOW GRADE	SANITARY WASTE AND VENT SYSTEM STUBBED OUT 5'-0" FROM BUILDING. STORM WATER COLLECTION SYSTEM FROM PODIUM LEVEL TO OUTSIDE OF BUILDING STUBBED OUT 5'-0" FROM BUILDING.
OH HW	DOMESTIC WATER PIPING	DOMESTIC HOT AND COLD WATER SYSTEMS FROM METER TO FIXTURES INCLUDING BACKFLOW PREVENTORS. HOT WATER SYSTEM TO BE INSULATED TO TITLE 24.
CD	CONDENSATE	CONDENSATE PRIMARY AND SECONDARY DRAINS FROM COOLING COILS TO APPROPRIATE POINT OF CONNECTION
FIX	PLUMBING FIXTURES	FIXTURES SUPPLY, SET AND CONNECT ALL FIXTURES LISTED IN SCHEDULES. ALSO CONNECT DISHWASHERS AND DISPOSERS.
CA	COMPRESSED AIR	MEDICAL COMPRESSED AIR FOR DENTAL AREA. INDUSTRIAL COMPRESSED AIR FOR SIMULATED NURSING HEADWALLS.
V	VACUUM	MEDICAL VACUUM FOR DENTAL AREA. INDUSTRIAL VACUUM FOR SIMULATED NURSING HEADWALLS.

SIZE OF PIPE, INCHES (mm)	1-1/4 (32)	1-1/2 (40)	2 (50)	2-1/2 (65)	3 (80)	4 (100)	5 (125)	6 (150)	8 (200)	10 (250)	12 (300)
MAXIMUM UNITS DRAINAGE PIPING											
VERTICAL	1	2 <sup>1</sup>	3 <sup>3</sup>	4 <sup>4</sup>	5 <sup>5</sup>	6 <sup>6</sup>	8 <sup>8</sup>	10 <sup>10</sup>	15 <sup>15</sup>	20 <sup>20</sup>	25 <sup>25</sup>
HORIZONTAL	1	2 <sup>1</sup>	3 <sup>3</sup>	4 <sup>4</sup>	5 <sup>5</sup>	6 <sup>6</sup>	8 <sup>8</sup>	10 <sup>10</sup>	15 <sup>15</sup>	20 <sup>20</sup>	25 <sup>25</sup>
MAXIMUM LENGTH DRAINAGE PIPING											
VERTICAL, FEET											
HORIZONTAL (UNLIMITED)	45 (14)	65 (20)	85 (26)	148 (45)	212 (65)	300 (91)	390 (119)	510 (155)	750 (228)		
VENT PIPING (SEE NOTE)											
HORIZONTAL AND VERTICAL	1 (14)	3 <sup>3</sup> (18)	24 (37)	48 (55)	84 (65)	256 (65)	600 (91)	1380 (119)	3600 (155)		
MAXIMUM UNITS											
MAXIMUM LENGTHS, FT. (m)	1 (14)	3 <sup>3</sup> (18)	24 (37)	48 (55)	84 (65)	256 (65)	600 (91)	1380 (119)	3600 (155)		
1 EXCLUDING TRAP ARM. 2 EXCEPT SINKS, URINALS AND DISHWASHERS. 3 EXCEPT SIX-UNIT TRAPS OR WATER CLOSETS. 4 ONLY FOUR (4) WATER CLOSETS OR SIX-UNIT TRAPS ALLOWED ON ANY VERTICAL PIPE OR STACK, AND NOT TO EXCEED THREE (3) WATER CLOSETS OR SIX-UNIT TRAPS ON ANY HORIZONTAL BRANCH OR DRAIN. 5 BASED ON ONE-FOURTH (1/4) INCH PER FOOT (20.9 mm/m) SLOPE. FOR ONE-EIGHTH (1/8) INCH PER FOOT (10.4 mm/m) SLOPE, MULTIPLY HORIZONTAL FIXTURE UNITS BY A FACTOR OF 0.8.											

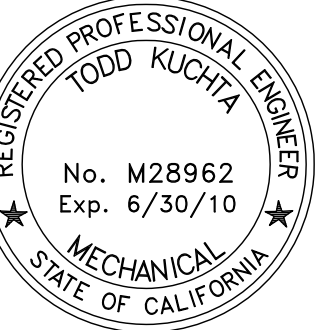
MECHANICAL MEASURES (EQUIPMENT & SYSTEMS EFFICIENCY)
EX) ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE.
EX) PIPING, EXCEPT THAT CONVEYING FLUIDS AT TEMPERATURES BETWEEN 80 AND 105°F, OR WITHIN HVAC EQUIPMENT, SHALL BE INSULATED IN ACCORDANCE WITH STANDARDS SECTION 123.
SERVICE WATER HEATING SYSTEMS
EX) IF A CIRCULATING HOT WATER SYSTEM IS INSTALLED, IT SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMP(S) WHEN HOT WATER IS NOT REQUIRED.
EX) LAVATORIES IN RESTROOMS OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH CONTROLS TO LIMIT THE OUTLET TEMPERATURE TO 110°F.
EX) OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.5 GPM IN PUBLIC LAVATORIES.

PIPE SIZES	4 FT/SEC		5 FT/SEC		6 FT/SEC	
	GPM	FU	GPM	FU	GPM	FU
3/4"	6	6	7.5	9	8.5	10
1"	10	12	13	16	15	20
1 1/4"	15	20	19	26	22	32
1 1/2"	22	32	27	46	32	55
2"	40	87	48	120	60	178
2 1/2"	62	175	74	250	95	350
3"	90	320	105	400	140	570
4"	148	650	185	850	223	1125
6"		418	2900	500	4000+	
WATER SIZING NOTES						
1. VELOCITY FOR ALL PIPING RISERS ARE SIZED AT 4 FT/SEC MAX.						
2. VELOCITY FOR ALL COLD WATER PIPING MAINS IS SIZED AT 6 FT/SEC MAX.						
3. VELOCITY FOR ALL HOT WATER PIPING MAINS IS SIZED AT 5 FT/SEC MAX.						
4. VELOCITY FOR ALL HOT WATER RETURN PIPING IS SIZED AT 4 FT/SEC MAX.						
5. VELOCITY VALUES SIZED BASED UPON CPC APPENDIX A CHARTS A-2 AND A-4.						

Date	
Revision/Description	

Date	09/19/08
Revision/Description	ISSA Submittal

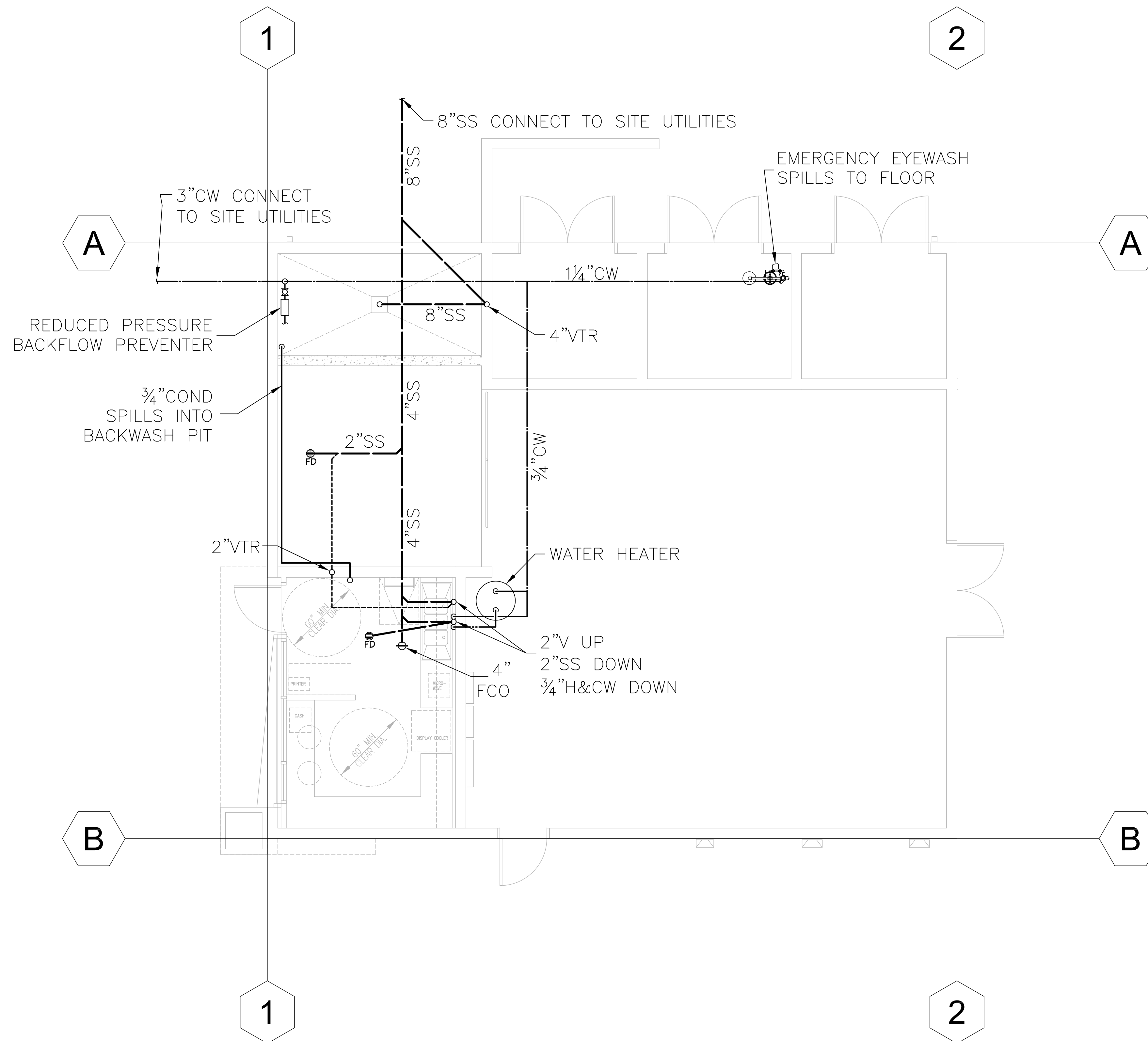
Job No.	27062.30
Date	19 SEPTEMBER 2008
Drawn by	SCC
Checked by	TK
Scale	AS SHOWN



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1 Plumbing Plan  
 P2.01 SCALE: 1/4"=1'-0"

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**RECORD DOCUMENT**  
 DATE February 03, 2012

College of San Mateo  
 Site Package  
 San Mateo, CA  
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 San Mateo County Community College District

Revision	Description	Date

Revision	Description	Date

Job No.	27062.30
Date	19 SEPTEMBER 2008
Drawn by	1/8" = 1'-0" SCC
Checked by	TK
Scale	AS SHOWN

Plumbing Plan  
**P2.01**

**TRANSVERSE RIGID BRACING FOR TRAPEZOID SUPPORTED PIPE OR CONDUIT SYSTEMS** [DETAIL 3]

APPROVED Fixed Equipment Anchorage OPA-0300 July 21, 2003

**TRANSVERSE AND LONGITUDINAL COMBINATION RIGID BRACING FOR TRAPEZOID SUPPORTED PIPE OR CONDUIT SYSTEMS** [DETAIL 3A]

APPROVED Fixed Equipment Anchorage OPA-0300 July 21, 2003

**LONGITUDINAL RIGID BRACING FOR TRAPEZOID SUPPORTED PIPE OR CONDUIT SYSTEMS** [DETAIL 4]

APPROVED Fixed Equipment Anchorage OPA-0300 July 21, 2003

**SPECIAL PIPE CLAMP TRANSVERSE RIGID BRACE** [DETAIL 1D]

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**SPECIAL PIPE CLAMP LONGITUDINAL RIGID BRACE** [DETAIL 2A]

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**"J" HANGER TRANSVERSE RIGID BRACE** [DETAIL 1B]

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**TOLCO FIG. 65 REVERSIBLE C-TYPE BEAM CLAMPS** 3/4" & 1 1/4" THROAT OPENING

ROD SIZE	PIPE SIZE	B	C	D	E	F	SECTION WEIGHT (LBS/FT)
1/2"	1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	410
3/8"	3/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	310
1/4"	1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	210

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**TOLCO FIG. 48 SPECIAL PIPE CLAMP**

PIPE SIZE	A	B	C	D	E	F	SECTION WEIGHT (LBS/FT)
1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	410
3/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	310
1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	210

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**TOLCO FIG. 4A PIPE CLAMP FOR SWAY BRACING**

PIPE SIZE	A	B	C	D	E	F	SECTION WEIGHT (LBS/FT)
1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	410
3/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	310
1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	210

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**TOLCO FIG. 3 "J" HANGER**

PIPE SIZE	A	B	C	D	E	F	SECTION WEIGHT (LBS/FT)
1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	410
3/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	310
1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	210

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**TOLTRUIT A-12 AND A-12AW CHANNEL**

CHANNEL SIZE	A	B	C	D	E	F	SECTION WEIGHT (LBS/FT)
12"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	410
10"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	310
8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	210

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**RISER JOINT BRACE ASSEMBLY FOR NO HUB PIPE** [DETAIL 2F]

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**MAXIMUM ALLOWABLE LENGTHS AND CONCENTRIC LOADS FOR BRACE MEMBERS**

PIPE DIAMETER	MAXIMUM LENGTH (FEET)	MAXIMUM HORIZONTAL LOAD (LBS)
1/2"	8'-0"	200
3/8"	6'-0"	150
1/4"	4'-0"	100

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**TOLCO FIG. 98 UNIVERSAL SWIVEL SWAY BRACE ATTACHMENT**

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**TOLCO FIG. 99 NO THROAT SWIVEL SWAY BRACE ATTACHMENT**

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**TOLCO FIG. 99 ALL THREAD ROD CUT TO LENGTH** [TOLCO FIG. 100 ALL THREAD ROD]

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**TOLCO FIG. 96 ROD STIFFENER**

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**TOLCO FIG. 1 STANDARD CLEVIS HANGER**

PIPE SIZE	A	B	C	D	E	F	SECTION WEIGHT (LBS/FT)
1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	410
3/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	310
1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	210

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**SINGLE PIPE HANGER BRACE SPACING CHART FOR CONCRETE WEDGE ANCHORS**

Anchor Spacing	Anchor Spacing	Anchor Spacing	Anchor Spacing
1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"

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1'-0"	1'-0"	1'-0"	1'-0"

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1'-0"	1'-0"	1'-0"	1'-0"

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Anchor Spacing	Anchor Spacing	Anchor Spacing	Anchor Spacing
1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"
1'-0"	1'-0"	1'-0"	1'-0"

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**ITW RAMSET / REDHEAD TRUBOLT WEDGE ANCHOR IN 3,000 PSI LIGHTWEIGHT CONCRETE OVER MIN. 2" DIA. HUB**

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**PIPE AND CONDUIT WEIGHTS**

PIPE SIZE	Weight (LBS/FT)
1/2"	410
3/8"	310
1/4"	210

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**SINGLE PIPE HANGER BRACE SPACING CHART FOR CONCRETE DECK INSERTS**  
LIGHT WEIGHT CONCRETE - 3000 PSI MIN.

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DATE: July 21, 2003

**SINGLE PIPE HANGER BRACE SPACING CHART FOR CONCRETE DECK INSERTS**  
NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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**SINGLE PIPE HANGER BRACE SPACING CHART FOR CONCRETE DECK INSERTS**  
NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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DATE: July 21, 2003

**SINGLE PIPE HANGER BRACE SPACING CHART FOR CONCRETE DECK INSERTS**  
NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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DATE: July 21, 2003

**SINGLE PIPE HANGER BRACE SPACING CHART FOR ATTACHMENT TO STEEL BEAM**  
Beam Parallel to Beam - Cast A

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DATE: July 21, 2003

**SINGLE PIPE HANGER BRACE SPACING CHART FOR ATTACHMENT TO STEEL BEAM**  
Beam Parallel to Beam - Cast B

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**TRAPEZOID BRACE SPACING CHART FOR ATTACHMENT TO STEEL BEAM**  
Beam Parallel to Beam - Cast A

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**TRAPEZOID BRACE SPACING CHART FOR ATTACHMENT TO STEEL BEAM**  
Beam Parallel to Beam - Cast B

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DATE: July 21, 2003

**TRAPEZOID BRACE SPACING CHART FOR CONCRETE WEDGE ANCHORS**  
LIGHT WEIGHT CONCRETE - 3000 PSI MIN.

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NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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**TOLCO FIG. 109 CONCRETE DECK INSERT IN 3,000 PSI LIGHTWEIGHT CONCRETE OVER METAL DECK - 20 GA (MIN.)**

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**TOLCO FIG. 109F CONCRETE DECK INSERT**

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**TRAPEZOID BRACE SPACING CHART FOR CONCRETE DECK INSERTS**  
LIGHT WEIGHT CONCRETE - 3000 PSI MIN.

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**TRAPEZOID BRACE SPACING CHART FOR CONCRETE DECK INSERTS**  
NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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**TRAPEZOID BRACE SPACING CHART FOR CONCRETE DECK INSERTS**  
NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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NORMAL WEIGHT CONCRETE - 4000 PSI MIN.

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