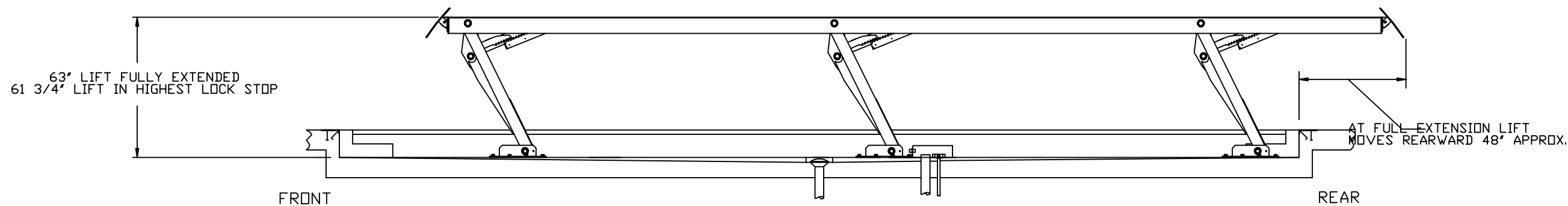
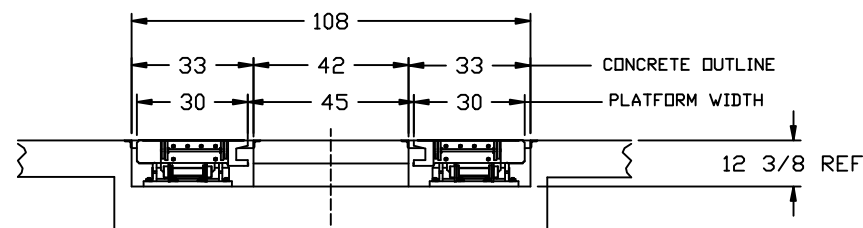


SIDE ELEVATION
LIFT FULLY RETRACTED



SIDE ELEVATION
LIFT FULLY EXTENDED



TYPICAL TRANSVERSE SECTION

SHEET	CONTENTS
REFR10075	LIFT UNIT ELEVATIONS AND SECTION VIEW
REFR20001	GENERAL NOTES
REFR30074	RECESS VIEW
REFR40050	CROSS SECTION VIEW
REFR50018	UNDER-FLOOR SERVICES SECTIONS AND DETAILS
REFR60001	CONTROL CONSOLE DETAILS
REFR70010	ANCHORAGE DETAILS
REFR80004	APPROVED ANCHOR BOLT DATA AND TORQUE SPECIFICATIONS
REFR90075	LIFT UNIT SPECIFICATIONS TABLE ONE AND MATERIALS LIST
REFR00020	PEAK FOUNDATION LOADS

REV	CD	NUM	DATE	BY
-		6992	9-21-07	KAK/BDM

TOLERANCE UNLESS OTHERWISE SPECIFIED:
 FRACTIONAL DIMENSIONS: $\pm 1/32"$ ($< 12"$)
 $\pm 1/16"$ ($> 12"$)
 DECIMAL DIMENSIONS: $\pm .010"$
 ANGULAR DIMENSIONS: $\pm 1^\circ$
 WELD BEAD SIZE: $+1/8"/-0$ WELD BEAD LENGTH: $+1/2"/-0$
 WELD BEAD POSITION: $\pm 1/2"$

NOTES:
 TYPICAL EQUIPMENT FOUNDATION REQUIREMENTS:
 CONSULT FACTORY PRIOR TO INSTALLATION, TO
 CONFIRM LATEST REVISION

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45/35 SURFACE IN RECESS
 GEN 4 LIFT UNIT ELEVATIONS
 AND SECTION VIEW

ROTARY LIFT
 A DOVER INDUSTRIES COMPANY

DRAWN: KAK SCALE: NONE SHEET: 1 of 1
 DRAWING NUMBER: REFR10075

APPROVED: BDM DATE: 9-21-07

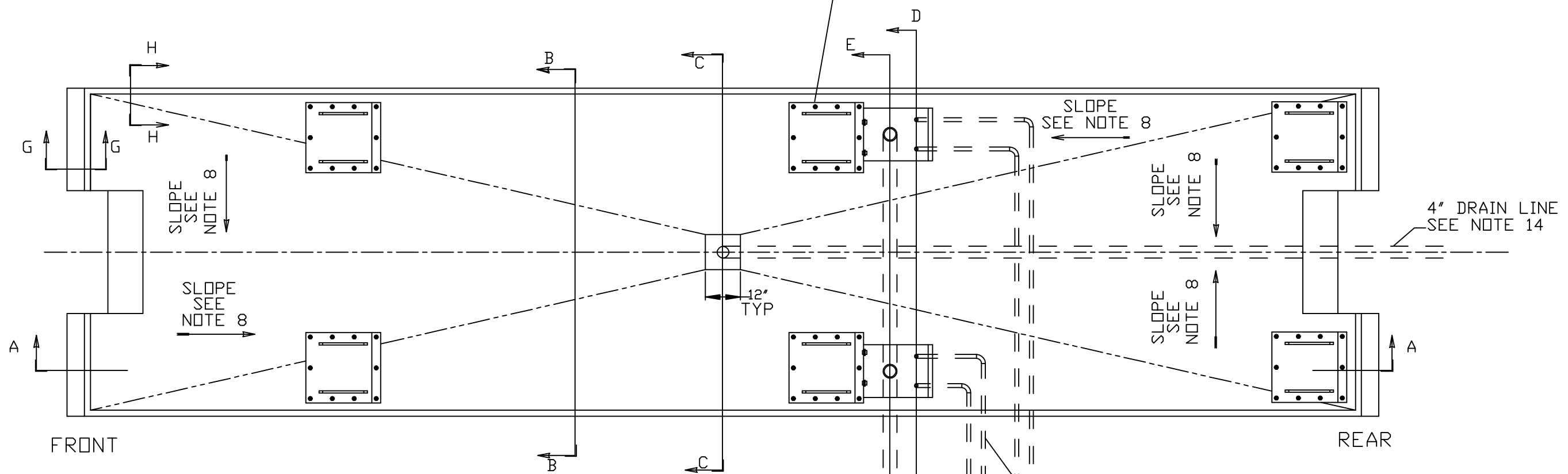
GENERAL NOTES

- NOTE 1:**
CONCRETE USED FOR THE BASE AND SIDE WALLS OF THE RECESS SHALL HAVE A MINIMUM STRENGTH OF F'c=4,000 psi AND A MAXIMUM STRENGTH OF F'c=5,500 psi WITH HEAVY AGGREGATE.
- NOTE 2:**
CONCRETE USED FOR THE BASE AND SIDE WALLS OF THE RECESS SHALL REACH ITS 28 DAY STRENGTH OF F'c = 4,000 psi BEFORE THE HOLES ARE DRILLED AND ANCHOR BOLTS INSTALLED. IN ADDITION TO SUPPORTING THE VERTICAL LOADS OF THE LIFT THE CONCRETE BASE PROVIDES HORIZONTAL RESTRAINT FOR THE LEG MEMBERS.
- NOTE 3:**
THE CONCRETE REINFORCEMENT SIZES AND REINFORCEMENT SPECIFICATIONS FOR THE SIDE WALLS AND BASE OF THE RECESS SHALL BE DETERMINED BY AN ARCHITECT OR ENGINEER AND SHALL BE DETERMINED CONSIDERING THE SOIL CONDITIONS AT THE SITE AND THE APPLIED LOADING. AS A MINIMUM, GRADE 60 DEFORMED REINFORCING BARS OF THE SIZES AND SPACINGS SHOWN IN THE DRAWING SHALL BE USED.
- NOTE 4:**
THE CONCRETE REINFORCEMENT SPECIFICATIONS FOR THE FLOOR SLAB AROUND THE RECESS SHALL BE DETERMINED BY THE ARCHITECT OR ENGINEER AND SHOULD BE DETERMINED CONSIDERING THE SOIL CONDITIONS AND THE APPLIED VEHICLE LOADING. AS A MINIMUM, GRADE 60 - 6x6 10/10 WELDED WIRE FABRIC SHALL BE USED AROUND THE VICINITY OF THE LIFT RECESS.
- NOTE 5:**
THE LIFT UNIT IS SUPPLIED WITH PRE-DRILLED BASE PLATES ON THE LOWER LEG BRACKETS FOR FIELD DRILLED WEDGE BOLT CONCRETE ANCHORS. THE PRESCRIBED NUMBER OF BOLTS MUST BE INSTALLED AS THE ANCHORAGE IS RELIED UPON TO PREVENT THE BASE PLATES FROM MOVING HORIZONTALLY. THE ROTARY LIFT INSTALLATION GUIDE PROVIDES DETAILED INSTRUCTIONS FOR INSTALLING THE LIFT AND PROPER PROCEDURES TO ACCURATELY LOCATE THE MACHINE IN THE RECESS.
- SPECIFIC ANCHOR BOLTS WHICH ARE APPROVED BY ROTARY LIFT FOR ANCHORING THE LOWER LEG BRACKETS ARE LISTED ON THE APPROVED ANCHOR BOLT DATA SHEET. ONLY APPROVED ANCHOR BOLTS SHALL BE USED AND NO OTHER SUBSTITUTIONS MAY BE USED UNLESS SPECIFICALLY APPROVED IN ADVANCE IN WRITING BY ROTARY LIFT, ENGINEERING SUPPORT GROUP. THIS APPROVAL SHALL BE ON A CASE BY CASE BASIS ONLY. PRODUCTS NOT APPROVED, MAY NOT HAVE THE DOCUMENTED CAPACITY TO WITHSTAND THE FORCES EXERTED ON THE ANCHORAGE AND THEREFORE MAY NOT MEET THE AUTOMOTIVE LIFT INSTITUTE CERTIFICATION REQUIREMENTS.
- IN CERTAIN CASES DRILLED AND EPOXY GROUTED THREADED ROD ANCHORAGE MAY BE USED. THIS TYPE OF ANCHORAGE MUST BE APPROVED BY ROTARY LIFT ENGINEERING SUPPORT GROUP ON A CASE BY CASE BASIS. A WRITTEN PROCEDURE FOR THIS TYPE OF ANCHORAGE IS AVAILABLE UPON REQUEST. THE WRITTEN PROCEDURE CONTAINS A LISTING OF THE APPROVED PRODUCTS AND HARDWARE FOR THIS TYPE OF ANCHORAGE AND NO SUBSTITUTIONS MAY BE MADE UNLESS SPECIFICALLY APPROVED IN ADVANCE IN WRITING BY ROTARY LIFT, ENGINEERING SUPPORT GROUP.
- NOTE 6:**
THE REINFORCING STEEL SHALL BE PLACED IN THE BASE SLAB NOT TO INTERFERE WITH THE ANCHOR BOLTS. THE LIFT IS INSTALLED USING DRILLED IN PLACE WEDGE BOLT CONCRETE ANCHORS. THE LOCATION OF THE BOLTS ARE SHOWN IN THE FOOTPRINT BOLT PATTERN DETAIL.
- NOTE 7:**
FOR PROPER LIFT OPERATION THE LIFT PLATFORMS SHOULD BE INSTALLED LEVEL. THEREFORE, THE BASE OF THE RECESS SHOULD BE FASHIONED ACCORDINGLY. IF SHOP FLOOR SLOPE IS REQUIRED AROUND THE RECESS FOR DRAINAGE, PROVIDE THE SLOPE IN SUCH A WAY THAT THE IMMEDIATE AREA OF THE FLOOR WILL BE LEVEL OVER THE FULL LENGTH OF THE RECESS.
- NOTE 8:**
SLOPE THE BASE OF THE RECESS 1/16 INCH PER FOOT TOWARD THE CATCH BASIN. AREAS OF THE RECESS WHERE THE LOWER LEG BRACKET BASE PLATES MAKE CONTACT SHOULD NOT BE SLOPED.
- NOTE 9:**
CARE MUST BE TAKEN TO ENSURE THE PROPER ELEVATION OF THE RECESS BASE IN THE VICINITY OF THE LOWER LEG BRACKET BASE PLATES. A MAXIMUM OF ONE INCH ADJUSTMENT IS PROVIDED IN THE LIFT DESIGN TO ENSURE A FLUSH INSTALLATION. THIS ADJUSTMENT IS ALSO PROVIDED TO ACCURATELY LEVEL THE LIFT FROM END TO END.

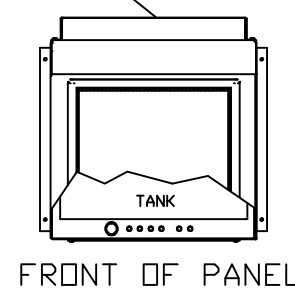
- NOTE 10:**
THE CONTROL PANEL MUST BE LOCATED IN THE IMMEDIATE VICINITY OF THE LIFT. IT SHOULD BE PLACED FAR ENOUGH AWAY TO ALLOW AMPLE WORK SPACE AROUND THE LIFT AND TO ALLOW FOR WHEEL REMOVAL OR OTHER ACTIVITIES. THE CONTROL PANEL MAY BE ON ANY SIDE OR AT EITHER END OF THE LIFT.
- NOTE 11:**
PROVIDE ONE 4 INCH SCH 40 PIPE AS A HYDRAULIC SERVICE SUPPLY CONDUIT RUNNING FROM THE CONTROL PANEL TO EACH PLATFORM SERVICE LEG AT THE LOCATION SPECIFIED ON THE PLAN VIEW. A MAXIMUM OF THREE 90 DEGREE ELBOWS MAY BE USED. THE ELBOW FITTINGS SHOULD BE STREET ELBOWS WITH WIDE BEND RADIUS TO ALLOW THE PULLING OF HYDRAULIC HOSES.
- NOTE 12:**
PROVIDE TWO (2) - 1 INCH RIGID CONDUITS PER LEG AS SERVICE SUPPLY CONDUITS RUNNING FROM THE CONTROL PANEL TO THE SERVICE LEG LOCATIONS SPECIFIED ON THE PLAN VIEW. THESE CONDUITS SHOULD BE INSTALLED ACCORDING TO ALL LOCAL AND NATIONAL ELECTRICAL CODES. A MAXIMUM OF FOUR 90 DEGREE BENDS MAY BE USED IN EACH RUN. EXPLOSION PROOF JUNCTION BOXES MUST BE USED.
- NOTE 13:**
PROVIDE TEMPORARY PLUGS OR CAPS FOR ALL SERVICE CONDUIT OPENINGS.
- NOTE 14:**
A 4 INCH DRAIN PIPE SHOULD BE PROVIDED TO CARRY DRAINAGE FROM CATCH BASIN TO AN OIL-WATER SEPARATOR. FLOOR DRAIN TRAPS SHOULD BE USED AND THE PIPE SHOULD SLOPE 1/8" PER FOOT TOWARDS THE SEPARATOR.
- NOTE 15:**
TWO CONDUITS MAY BE PROVIDED UNDER THE FLOOR RUNNING FROM THE BUILDING POWER SUPPLY TO THE CONTROL PANEL LOCATION. ONE CONDUIT MAY BE USED FOR POWER SUPPLY AND ONE MAY BE USED FOR SHOP AIR SUPPLY. ALTERNATIVELY THESE SUPPLY CONDUITS MAY BE BROUGHT TO THE CONTROL PANEL LOCATION OVERHEAD. THESE CONDUITS SHOULD BE INSTALLED IN ACCORDANCE WITH ALL LOCAL AND NATIONAL CODES.
- A FUSED ELECTRICAL DISCONNECT AND AN AIR FILTER/REGULATOR/LUBRICATOR ARE REQUIRED AT THE CONTROL CONSOLE FOR INCOMING POWER AND AIR. THESE ARE TO BE SUPPLIED BY THE GENERAL CONTRACTOR.
- NOTE 16:**
THE CONTROL SYSTEM REQUIRES A SEPARATE 115V/120V 1 PH 60 HZ CIRCUIT OF 15 AMPERE. THIS WILL BE ADEQUATE FOR THE INSTALLATION OF THE OPTIONAL PLATFORM LIGHTING KIT. THE TOTAL NUMBER OF LIGHT FIXTURES IN THE STANDARD OPTIONAL LIGHT KIT IS SHOWN IN TABLE 1.
- A FUSED ELECTRICAL DISCONNECT FOR THE CONTROL SYSTEM POWER SUPPLY SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
- NOTE 17:**
AIR CONSUMPTION REQUIREMENTS INDICATED IN TABLE 1 IS FOR LIFT UNIT OPERATION ONLY. IF THE OPTIONAL SHOP AIR KIT IS INSTALLED ON THE LIFT IT MUST BE CONSIDERED IN THE TOTAL AIR CONSUMPTION REQUIREMENTS. ALSO, EACH OPTIONAL ROLLING JACK CONSUMES 20 CFM AND REQUIRES 100 PSI OPERATING PRESSURE.
- NOTE 18:**
CONTACT ROTARY LIFT FOR APPROVAL PRIOR TO INSTALLATION OF ANY DEVIATIONS FROM THE REQUIREMENTS LISTED IN THIS DOCUMENT.
- NOTE 19:**
MEASURE THE ACTUAL RUNNING DIMENSIONS FROM THE PRODUCT BEFORE INSTALLATION.
- NOTE 20:**
INTRINSICALLY SAFE CONTROL WIRING MUST BE SEPARATED FROM NON-INTRINSICALLY SAFE WIRES BY A MINIMUM OF 2".

				TOLERANCE UNLESS OTHERWISE SPECIFIED: FRACTIONAL DIMENSIONS: ± 1/32" (≤ 12") DECIMAL DIMENSIONS: ± .010" ANGULAR DIMENSIONS: ± 1° WELD BEAD SIZE: 3/8"/0" WELD BEAD POSITION: 3/2"/0"	THIRD ANGLE PROJECTION	GENERAL NOTES SURFACE IN RECESS	
				DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES 1/32" MIN. CORNER BREAK REMOVE ALL BURRS	ROTARY LIFT A INDUSTRIES COMPANY		
REV	CD	NUM	DATE	BY	APPROVED	SCALE	SHEET
					SS	NONE	1 of 1
					BDM	9-9-2002	DRAWING NUMBER REFR20001

TYPICAL ANCHOR BOLT PATTERN (SEE ANCHORAGE DETAILS) OUTLINE REPRESENTS THE LEG BASE PLATE IT DOES NOT INDICATE A CONCRETE PIER. (TYP.)



CONTROL PANEL SEE NOTE 10 4" HYDRAULIC SERVICE SEE NOTE 11



AREA BETWEEN TANK AND CONTROL PANEL FOR STUB-UP OF CONDUIT

ALL INTRINSICALLY SAFE CONTROL WIRING CONDUIT
LIGHT CONDUIT ONLY
1" SERVICE CONDUITS SEE NOTE 12

REV	CD	NUM	DATE	BY
-	6992		9-24-07	KAK/BDM

TOLERANCE UNLESS OTHERWISE SPECIFIED:
 FRACTIONAL DIMENSIONS: $\pm 1/32"$ ($< 12"$)
 $\pm 1/16"$ ($\geq 12"$)
 DECIMAL DIMENSIONS: $\pm .010"$
 ANGULAR DIMENSIONS: $\pm 1^\circ$
 WELD BEAD SIZE: $+1/8"/-0$ WELD BEAD LENGTH: $+1/2"/-0$
 WELD BEAD POSITION: $\pm 1/2"$

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED:
 ALL DIMENSIONS IN INCHES
 1/32" MIN. CORNER BREAK
 REMOVE ALL BURRS

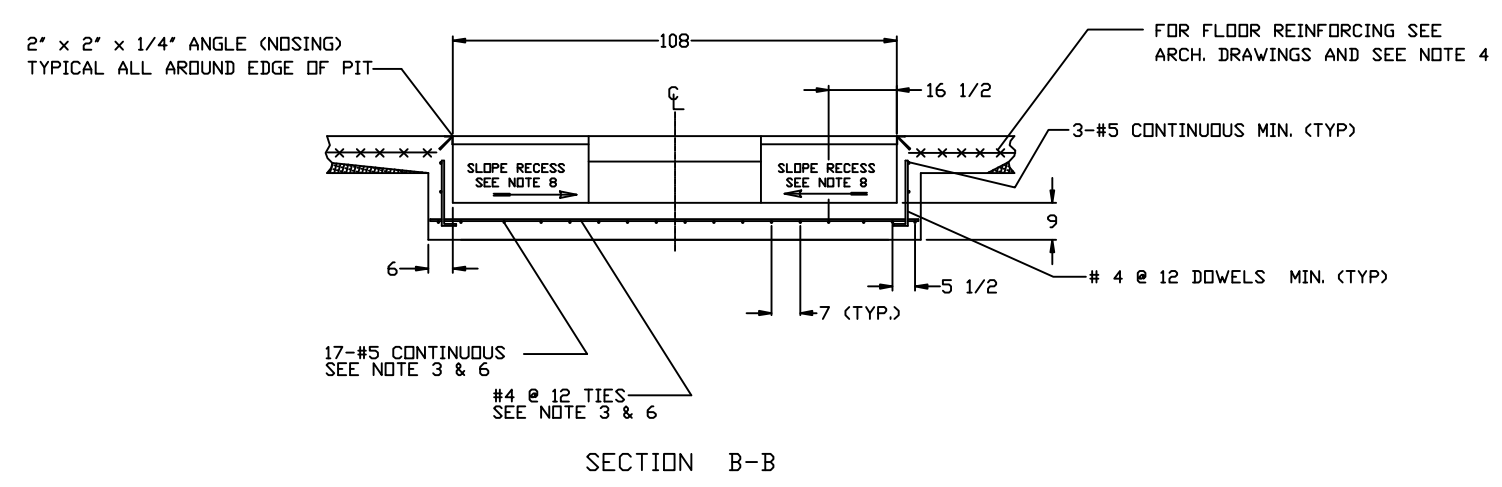
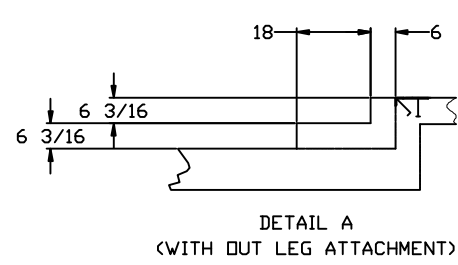
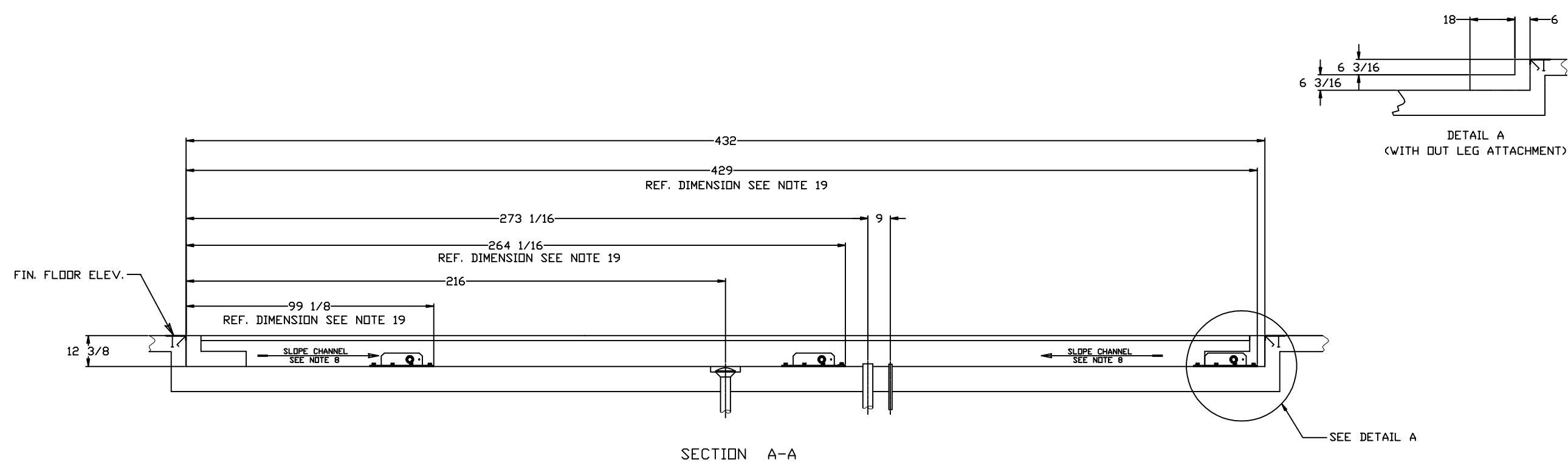
NOTES:
 TYPICAL EQUIPMENT FOUNDATION REQUIREMENTS:
 CONSULT FACTORY PRIOR TO INSTALLATION, TO
 CONFIRM LATEST REVISION

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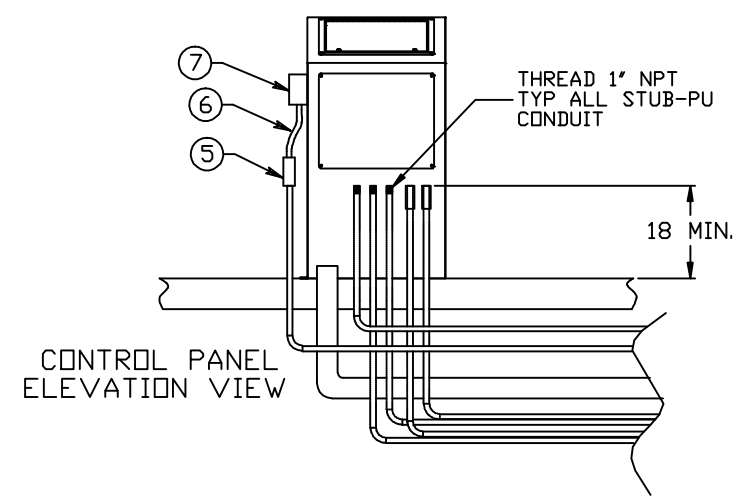
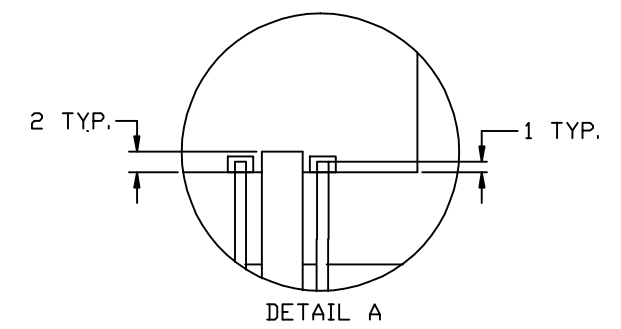
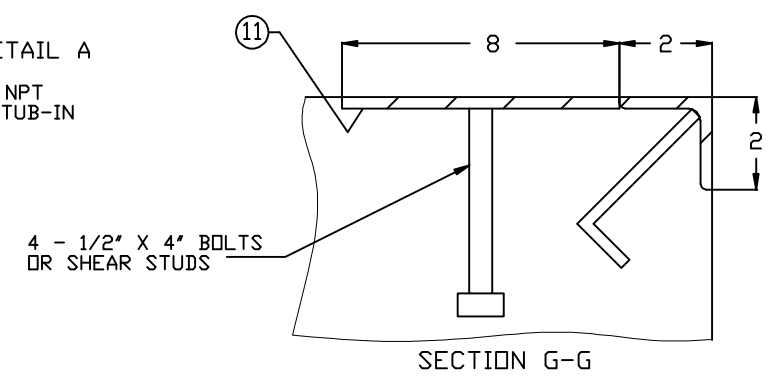
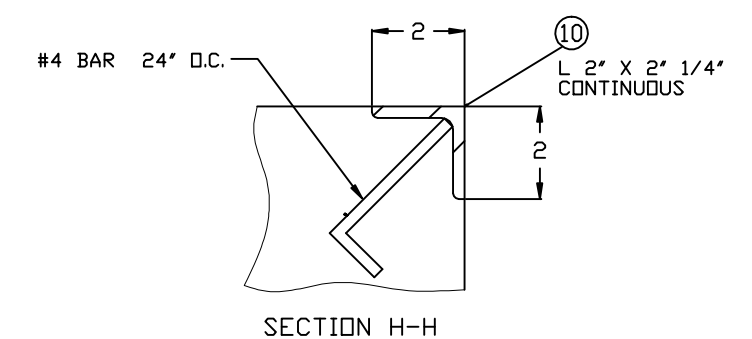
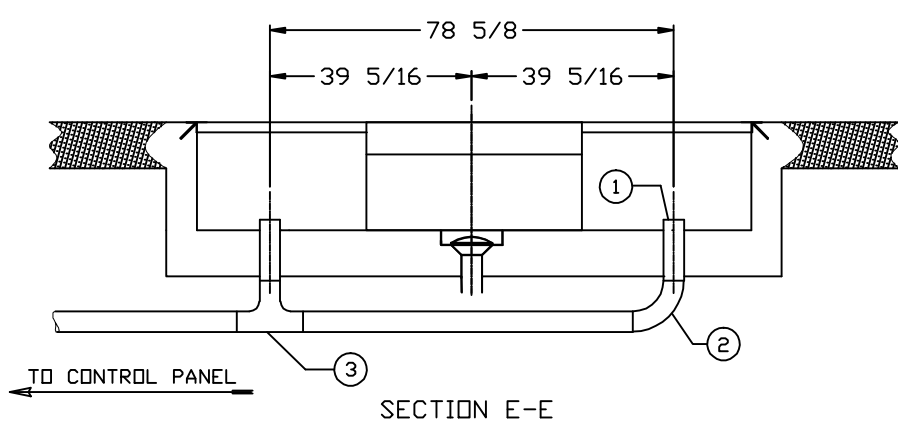
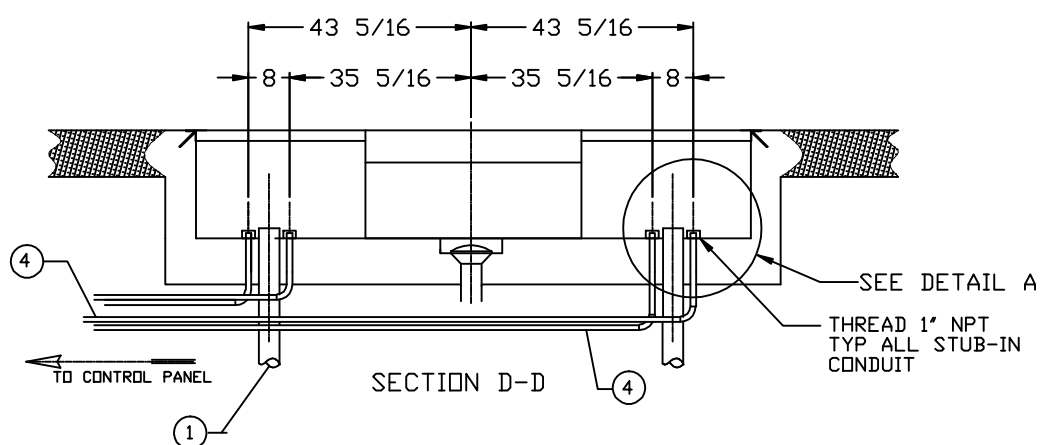
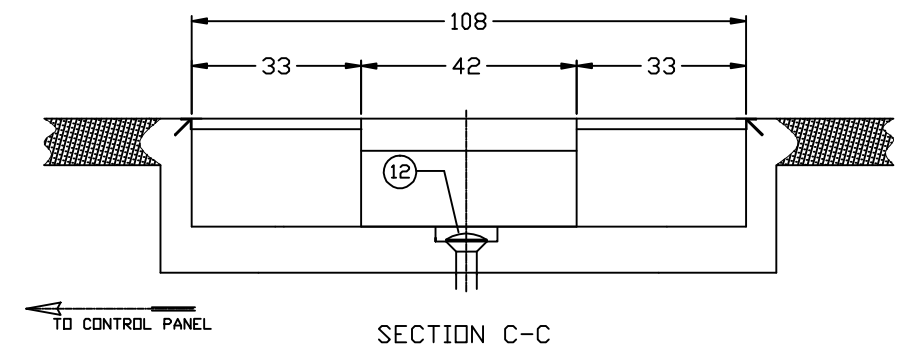
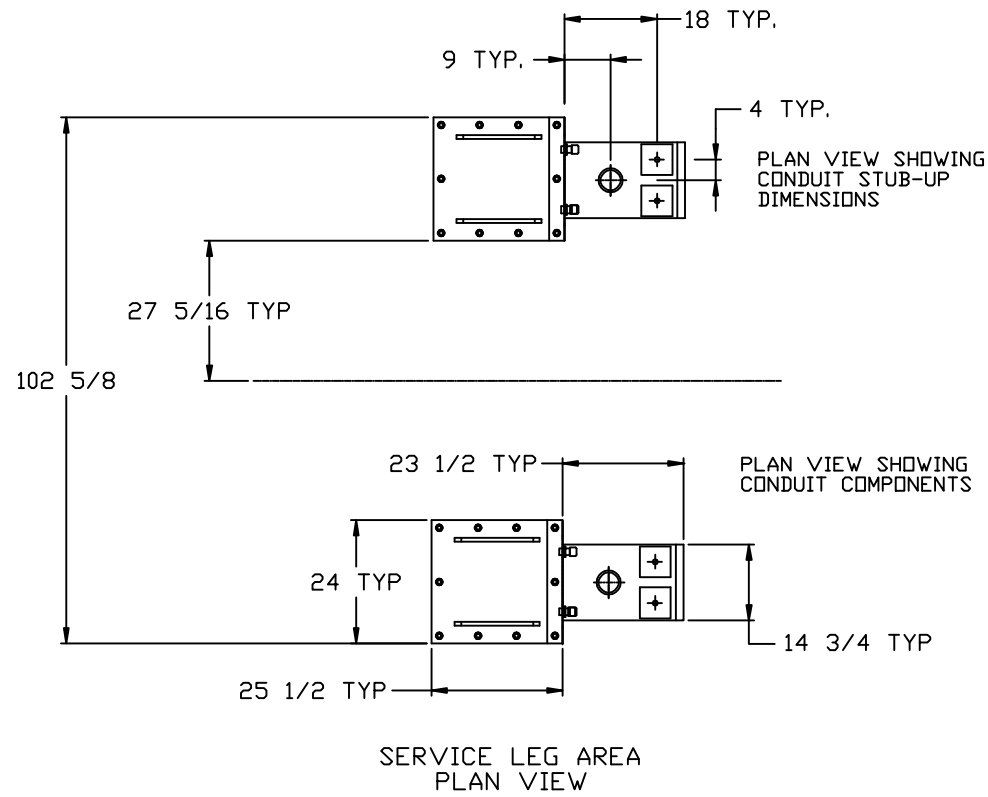
RECESS VIEW
SURFACE IN RECESS

ROTARY LIFT
A DOVER INDUSTRIES COMPANY

DRAWN	SCALE	SHEET	1 of 1
KAK	NONE	DRAWING NUMBER	
APPROVED	DATE		
BDM	9-24-2007	REFR30074	

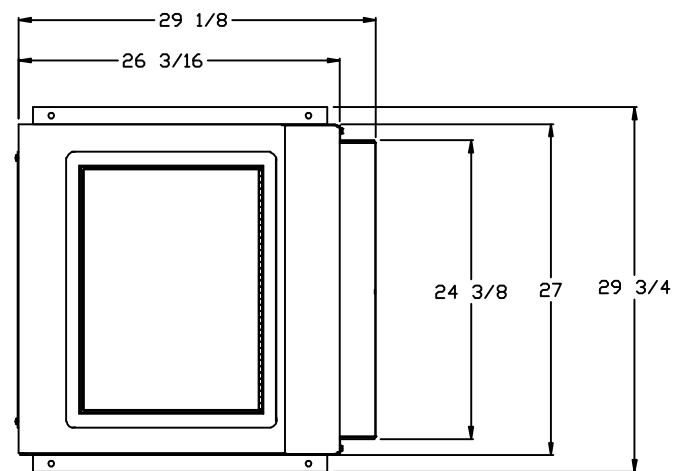


				TOLERANCE UNLESS OTHERWISE SPECIFIED:		THIRD ANGLE PROJECTION		CROSS SECTION	
				FRACTIONAL DIMENSIONS: ± 1/32" << 12"		DO NOT SCALE DRAWING		45/35 SURFACE IN RECESS	
				DECIMAL DIMENSIONS: ± .010"		UNLESS OTHERWISE SPECIFIED:		ROTARY LIFT	
				ANGULAR DIMENSIONS: ± 1°		ALL DIMENSIONS IN INCHES		A DOVER INDUSTRIES COMPANY	
				WELD BEAD SIZE: +1/8"/-0		1/32" MIN. CORNER BREAK		DRAWN SCALE SHEET 1 of 1	
				WELD BEAD LENGTH: +1/2"/-0		REMOVE ALL BURRS		KAK NONE	
				WELD BEAD POSITION: ± 1/2"				APPROVED DATE	
				NOTES:				BDM 9-21-07	
				TYPICAL EQUIPMENT FOUNDATION REQUIREMENTS:				DRAWING NUMBER	
				CONSULT FACTORY PRIOR TO INSTALLATION, TO				1 of 1	
				CONFIRM LATEST REVISION				REFR40050	
				The design and detail illustrated in this drawing is the property of Rotary Lift. It is being loaned with the expressed condition that it will not be duplicated or used except by permission and is subject to return upon request.					
REV	CD	NUM	DATE	BY					
-		6992	9-21-07	KAK/BDM					

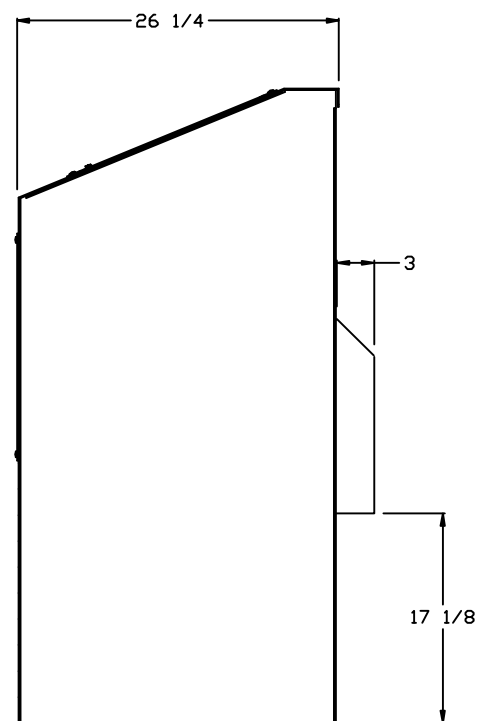


6" MACHINE SURFACE IN RECESS

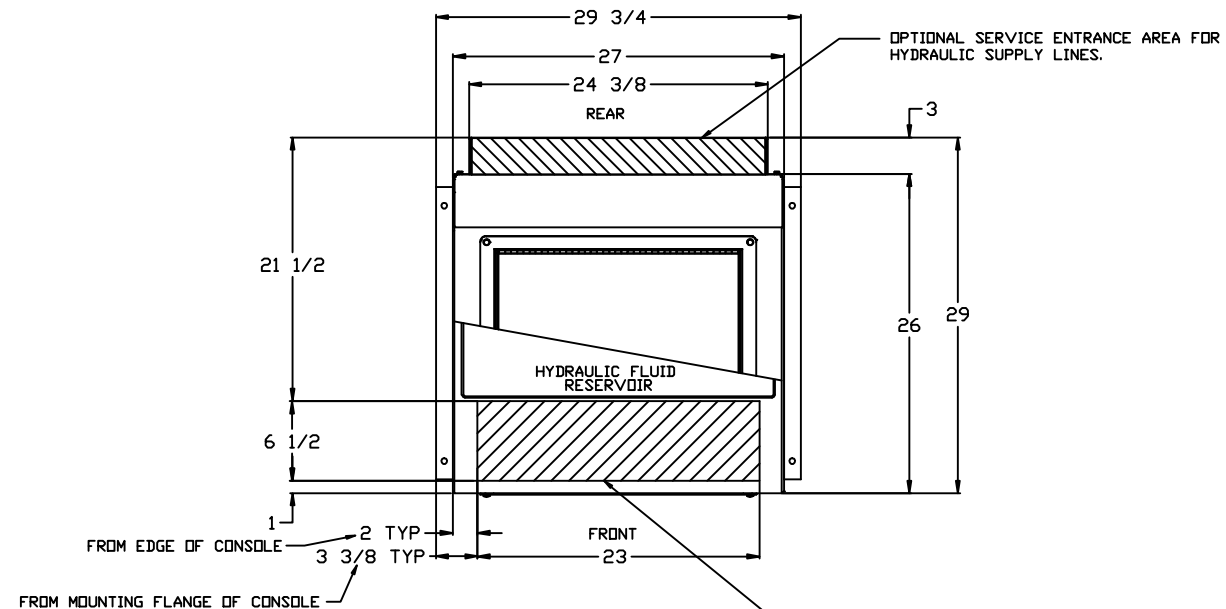
				TOLERANCE UNLESS OTHERWISE SPECIFIED:		THIRD ANGLE PROJECTION		UNDER-FLOOR SERVICES SECTIONS AND DETAILS	
				FRACTIONAL DIMENSIONS: ± 1/32" << 12"		DO NOT SCALE DRAWING		ROTARY LIFT	
				± 1/16" > OR = 12"		UNLESS OTHERWISE SPECIFIED:		A JOYCE INDUSTRIES COMPANY	
				DECIMAL DIMENSIONS: ± .010"		ALL DIMENSIONS IN INCHES		DRAWN SCALE SHEET 1 of 1	
				ANGULAR DIMENSIONS: ± 1°		1/32" MIN. CORNER BREAK		BDM NONE DRAWING NUMBER	
				WELD BEAD SIZE: +1/8"/-0 WELD BEAD LENGTH: +1/2"/-0		REMOVE ALL BURRS		APPROVED DATE	
				WELD BEAD POSITION: ± 1/2"				KAK 4-4-06	
				NOTES:					
				TYPICAL EQUIPMENT FOUNDATION REQUIREMENTS:					
				CONSULT FACTORY PRIOR TO INSTALLATION, TO					
				CONFIRM LATEST REVISION					
				The design and detail illustrated in this drawing is the property of Rotary Lift. It is being loaned with the expressed condition that it will not be duplicated or used except by permission and is subject to return upon request.					
REV	CD NUM	DATE	BY					REFR50018	



TOP VIEW

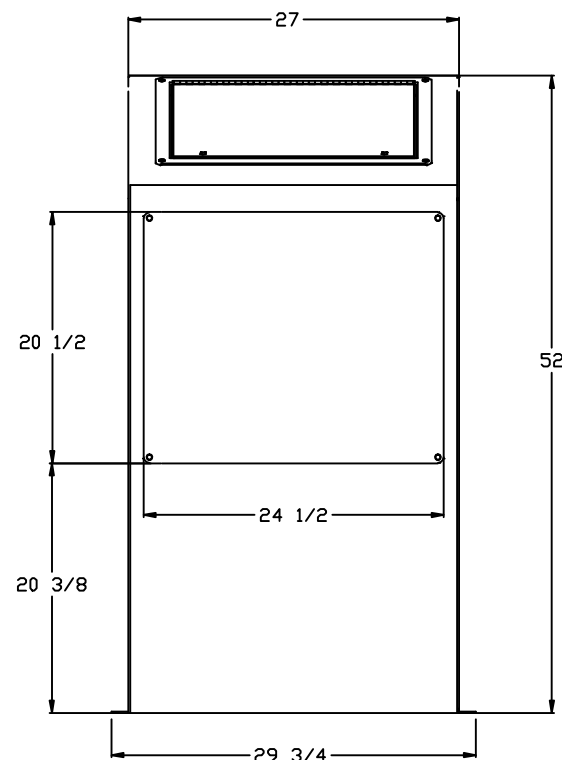


SIDE ELEVATION

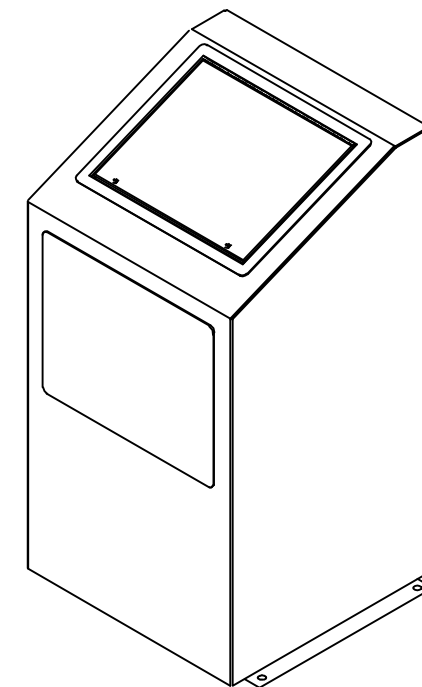


PLAN VIEW
SCALE 1 : 10

LOCATE UNDER-FLOOR UTILITY STUB-UPS IN HATCHED AREA. ALSO, USING THIS ACCESS AREA FOR THE HYDRAULIC SUPPLY LINES MAKES POWER UNIT REMOVAL MORE CONVENIENT.

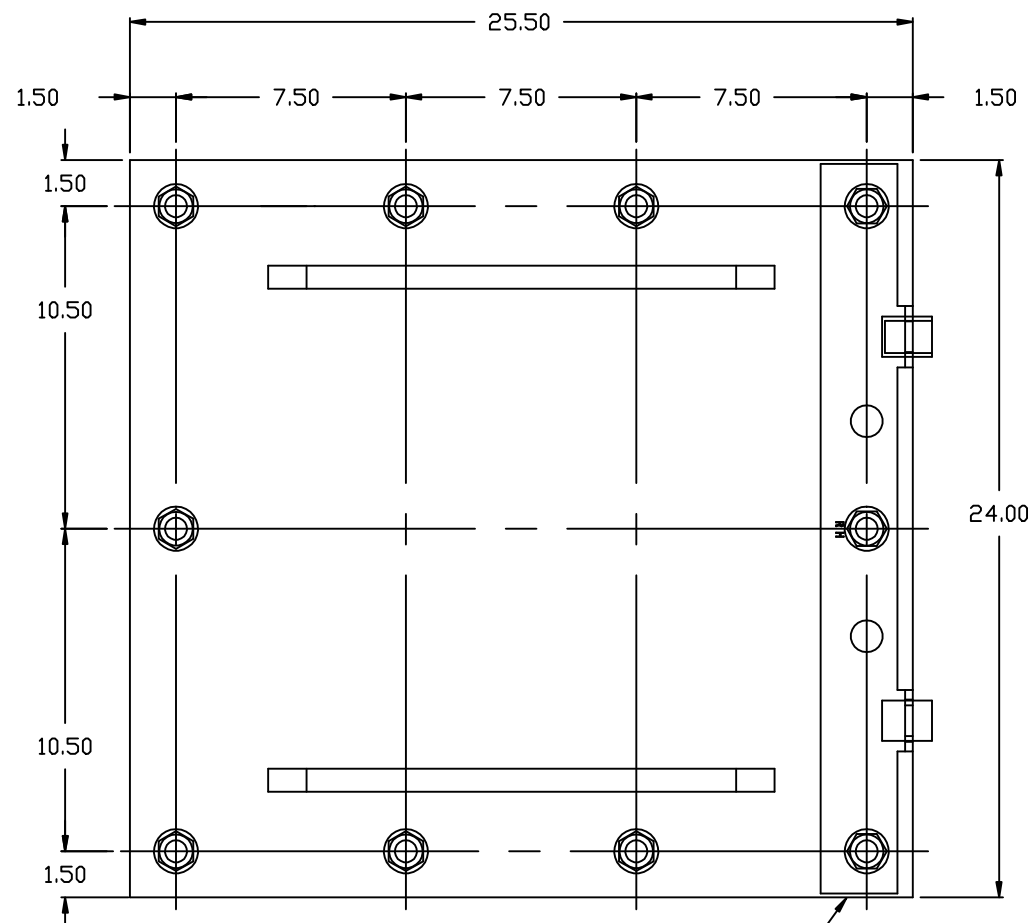


FRONT VIEW



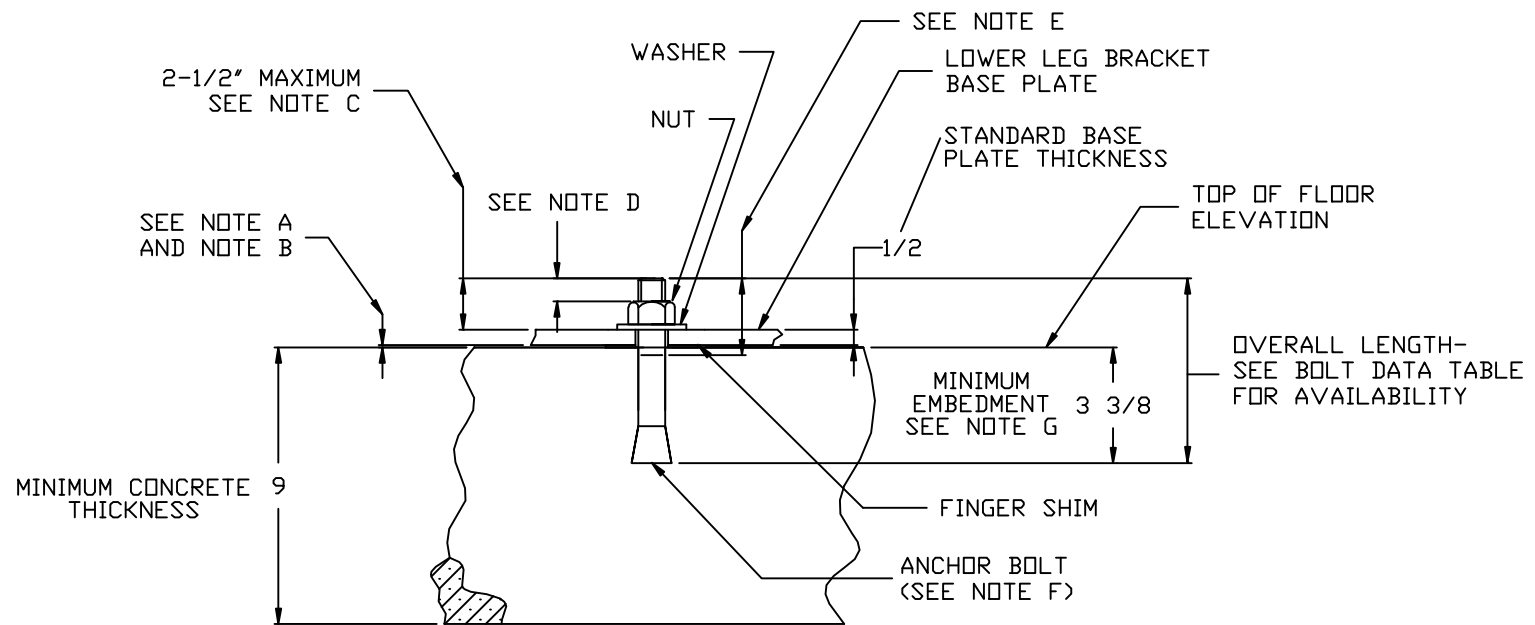
TRIMETRIC VIEW

				TOLERANCE UNLESS OTHERWISE SPECIFIED: FRACTIONAL DIMENSIONS: ± 1/32" << 12" ± 1/16" > OR = 12" DECIMAL DIMENSIONS: ± .010" ANGULAR DIMENSIONS: ± 1° WELD BEAD SIZE: +1/8"/-0 WELD BEAD LENGTH: +1/2"/-0 WELD BEAD POSITION: ± 1/2"		THIRD ANGLE PROJECTION DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN INCHES 1/32" MIN. CORNER BREAK REMOVE ALL BURRS		CONTROL CONSOLE DETAILS	
				NOTES: TYPICAL EQUIPMENT FOUNDATION REQUIREMENTS: CONSULT FACTORY PRIOR TO INSTALLATION, TO CONFIRM LATEST REVISION.		ROTARY LIFT A DOVER INDUSTRIES COMPANY		DRAWN: SS SCALE: NONE SHEET: 1 of 1 DRAWING NUMBER: REFR60001	
				The design and detail illustrated in this drawing is the property of Rotary Lift. It is being loaned with the expressed condition that it will not be duplicated or used except by permission and is subject to return upon request.		APPROVED: BDM DATE: 9-9-2002			
REV	CD NUM	DATE	BY						
-	5446	9-9-02	SS/BDM						



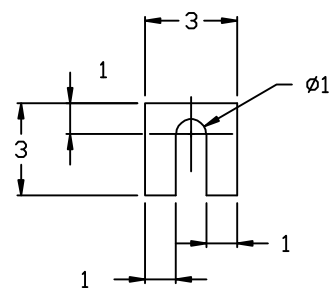
SERVICE ATTACHMENT BRACKET

6" CYLINDER FOOTPRINT BOLT PATTERN
3/4" ANCHORS
FLUSH/SURFACE IN RECESS



ANCHOR BOLT
DETAIL

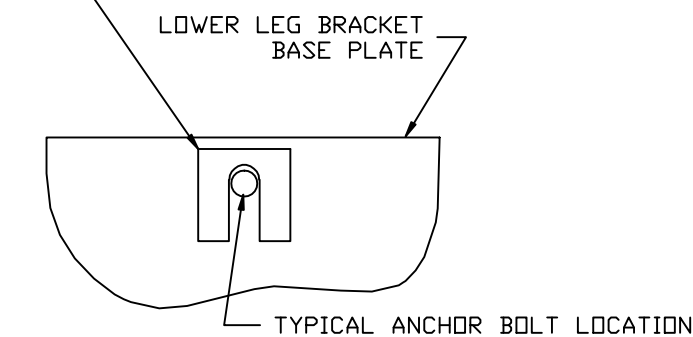
FOR NOTES SEE APPROVED ANCHOR BOLT DATA
AND TORQUE SPECIFICATIONS SHEET



FINGER SHIM
DETAIL

NOTE:
FINGER SHIMS ARE AVAILABLE IN A RANGE OF
THICKNESSES FROM 1/4" DOWN TO 20 GA

PLACE FINGER SHIMS IN A STRAIGHT AND
ARRANGED FASHION AT EACH ANCHOR BOLT
ON ALL LOWER LEG BRACKETS. USE THIN
SHIMS TO FULLY SHIM OUT EACH BOLT.



PLACEMENT OF FINGER SHIM
DETAIL

NOTE:
THE MAXIMUM HEIGHT OF ANY STACK OF
SHIMS IS 1 INCH

				TOLERANCE UNLESS OTHERWISE SPECIFIED:		THIRD ANGLE PROJECTION		ANCHORAGE DETAILS	
				FRACTIONAL DIMENSIONS: ± 1/32" (< 12")		DO NOT SCALE DRAWING		ROTARY LIFT	
				± 1/16" (> 12")		UNLESS OTHERWISE SPECIFIED:		A DOVER INDUSTRIES COMPANY	
				DECIMAL DIMENSIONS: ± .010"		ALL DIMENSIONS IN INCHES		DRAWN SCALE SHEET 1 of 1	
				ANGULAR DIMENSIONS: ± 1°		1/32" MIN. CORNER BREAK		DRAWING NUMBER	
				WELD BEAD SIZE: +1/8"/-0		WELD BEAD LENGTH: +1/2"/-0		KAK NONE	
				WELD BEAD POSITION: ± 1/2"		REMOVE ALL BURRS		APPROVED DATE	
				NOTES:		TYPICAL EQUIPMENT FOUNDATION REQUIREMENTS: CONSULT		BDM 6-23-2005	
				FACTORY PRIOR TO INSTALLATION, TO CONFIRM LATEST		REVISION.		REFR70010	
				The design and detail illustrated in this drawing is the property of Rotary		Lift. It is being loaned with the expressed condition that it will not be			
				duplicated or used except by permission and is subject to return upon request.					
REV	CD	NUM	DATE	BY					
-		6294.9	06-23-05	KAK/BDM					

APPROVED ANCHOR BOLT LIST

ANCHOR BOLTS WHICH ARE APPROVED FOR USE ARE:

STANDARD ANCHOR BOLT DIMENSIONS

RAWL CATALOG NUMBER	MARKSMEN CATALOG	OVERALL LENGTH	MAXIMUM SHIM THICKNESS	MARKSMEN MINIMUM SHIM THICKNESS
7444	TS-34-614	6-1/4"	7/8"	-
7446	TS-34-7	7"	1-5/8"	3/8"
7448	TS-34-812	8-1/2"	3-1/4" (SEE NOTE A)	1-5/8"
7449	TS-34-10	10"	4" (SEE NOTE A&B)	3-3/8"

HILTI CATALOG	OVERALL LENGTH	MAXIMUM SHIM THICKNESS
282537	7"	1-5/8"
282520	8"	2-5/8" (SEE NOTE A)
282538	10"	4" (SEE NOTE A&B)

NUTS AND WASHERS ARE SUPPLIED WITH ALL ANCHOR BOLTS

APPROXIMATE NUT DIMENSIONS

NUT SIZE	WIDTH ACROSS FLATS	HEIGHT
3/4"	1-1/8"	5/8"

APPROXIMATE WASHER DIMENSIONS

WASHER SIZE	INSIDE DIAMETER	OUTSIDE DIAMETER	THICKNESS
3/4"	13/16"	2"	5/32"

NOTE A: THIS DIMENSION REPRESENTS THE SHIM THICKNESS. THE MAXIMUM FINGER SHIM THICKNESS IS 1". WHEN MORE THAN 1" SHIM THICKNESS IS REQUIRED AT ANY ONE OR MORE ANCHOR BOLT ON ANY ONE OR MORE LOWER LEG BRACKET THEN A SPECIAL FULL SIZE CONTACT SHIM IS REQUIRED. THE FULL SHIM IS SUPPLIED BY ROTARY LIFT AND IS DESIGNED IN SUCH A WAY AS TO PREVENT BENDING OF THE ANCHOR BOLT GROUP.

NOTE B: WHEN MORE THAN 4" OF SHIM THICKNESS IS NEEDED, A SPECIAL SITE SPECIFIC ANCHORAGE DESIGN IS REQUIRED. CONTACT ROTARY LIFT, ENGINEERING GROUP FOR ASSISTANCE IN THIS CASE.

NOTE C: IN CERTAIN CIRCUMSTANCES THIS DIMENSION WILL NEED TO BE LIMITED TO A MAXIMUM OF 2-1/2" TO AVOID INTERFERENCE WITH THE PLATFORM TUBE MEMBERS AND THE TAPE SWITCH RUNNING THE LENGTH OF THE PLATFORM. IF ANCHOR BOLTS EXTEND ABOVE 2-1/2" THEN IN THOSE CASES THEY NEED TO BE CUT TO LENGTH AFTER INSTALLATION.

NOTE D: USE MINIMUM 3/4" BOLT LENGTH BEYOND THE NUT ON ALL LEG LOWER LEG BRACKETS. THIS WILL YIELD A MINIMUM OF 1/2" BOLT LENGTH AT THE SERVICE BRACKET ATTACHMENT. THIS PROCEDURE WILL PROVIDE ADEQUATE LENGTH THROUGHOUT.

NOTE E: THE THREAD LENGTH FOR 3/4" DIAMETER RAWL BOLTS VARIES, HOWEVER THE MINIMUM THREAD LENGTH IS 4-3/8". THE THREAD LENGTH FOR 3/4" DIAMETER MARKSMEN BOLTS IS 2". THE THREAD LENGTH FOR 3/4" DIAMETER HILTI KWIK BOLT 3'S VARIES, HOWEVER THE MINIMUM THREAD LENGTH IS 4-1/2". THE OVERALL BOLT LENGTH IS MEASURED FROM EXTREME END TO END.

NOTE F: THE REPAIR OF DAMAGED OR MISS-ALIGNED ANCHOR BOLTS SHALL BE MADE ACCORDING TO THE WRITTEN PROCEDURE "PARALLELOGRAM LIFT SYSTEMS PROCEDURE FOR REMOVAL, REPAIR, AND/OR RELOCATION OF EXPANSION WEDGE BOLT CONCRETE ANCHORS". THIS PROCEDURE IS AVAILABLE FROM ROTARY LIFT, ENGINEERING GROUP.

NOTE G: THE EMBEDMENT DEPTH IS DEFINED AS THE DISTANCE FROM THE SURFACE OF THE CONCRETE TO THE EXTREME BOTTOM OF THE ANCHOR BOLT PRIOR TO APPLYING THE INSTALLATION TORQUE. IT IS NATURAL FOR THE ANCHOR TO BE PULLED UP SLIGHTLY DUE TO THE SETTING ACTION OF THE ANCHOR

- POWER-STUD
CARBON STEEL OF THE DIAMETER SIZE SHOWN IN TABLE 1.
MANUFACTURED BY:

THE RAWLPLUG COMPANY, INC.
NEW ROCHELLE
NEW YORK, 10802
TELEPHONE NUMBER 914-235-6300

LOAD CAPACITY OF POWER-STUD ANCHORS ARE LISTED IN INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS REPORT NO. 5225. AND FOR 7/8", 1" AND 1-1/4" DIAMETER BOLTS LOAD CAPACITY IS LISTED IN SUMMARY REPORT BY CTI ENGINEERING REPORT NUMBER 5R17 DATED OCTOBER 31, 1995.

- MARKSMEN MANUFACTURING COMPANY
CARBON STEEL OF THE DIAMETER SIZE SHOWN IN TABLE 1.
MANUFACTURED BY:

MARKSMEN MANUFACTURING COMPANY
259 CORTLAND STREET
LINDENHURST, NY 11757
TELEPHONE NUMBER 631-226-0666

LOAD CAPACITY OF THUNDERSTUD ANCHORS ARE LISTED IN INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS REPORT NO. 2713.

- HILTI, INC.
CARBON STEEL OF THE DIAMETER SIZE SHOWN IN TABLE 1.
MANUFACTURED BY:

HILTI, INC.
5400 S. 122 E. AVENUE
TULSA, OK 74146
TELEPHONE NUMBER 1-800-879-8000


LOAD CAPACITY OF KWIK BOLT 3 ARE LISTED IN ICC REPORT NO. ESR-1385

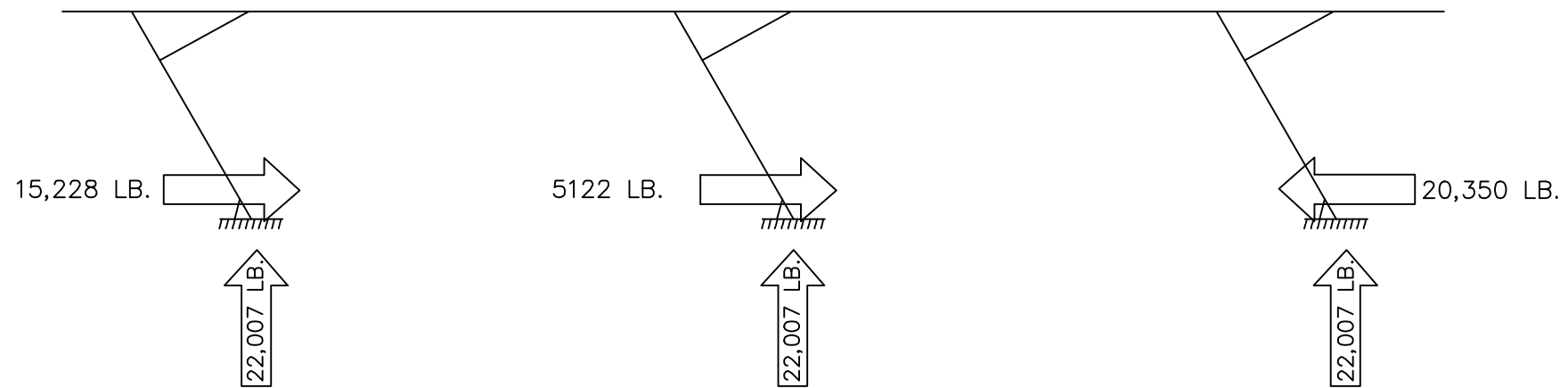
NO SUBSTITUTIONS SHALL BE MADE UNLESS PRIOR WRITTEN APPROVAL HAS BEEN GRANTED BY ROTARY LIFT, ENGINEERING SUPPORT GROUP ON A SPECIFIC LIFT INSTALLATION. THIS APPROVAL WILL ONLY BE GRANTED ON A CASE BY CASE BASIS. USE OF ANCHOR BOLTS WHICH ARE NOT APPROVED MAY NOT HAVE THE DOCUMENTED LOADCARRYING CAPACITY TO WITHSTAND THE FORCES EXERTED ON THE ANCHORAGE AND MAY, THEREFORE, NOT MEET THE REQUIREMENTS OF THE AUTOMOTIVE LIFT INSTITUTE CERTIFICATION CRITERIA



				TOLERANCE UNLESS OTHERWISE SPECIFIED: FRACTIONAL DIMENSIONS: ± 1/32" (< 12") ± 1/16" (≥ 12")		THIRD ANGLE PROJECTION		APPROVED ANCHOR BOLT DATA AND TORQUE SPECIFICATIONS	
				DECIMAL DIMENSIONS: ± .010"		DO NOT SCALE DRAWING		ROTARY LIFT A DOVER INDUSTRIES COMPANY	
				ANGULAR DIMENSIONS: ± 1°		UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN INCHES 1/32" MIN. CORNER BREAK REMOVE ALL BURRS			
				WELD BEAD SIZE: +1/8"/-0 WELD BEAD LENGTH: +1/2"/-0 WELD BEAD POSITION: ±1/2"		NOTES:		DRAWN SCALE SHEET 1 of 1 KAK NONE DRAWING NUMBER	
				- 6294.8 6-24-05 KAK/BDM		The design and detail illustrated in this drawing is the property of Rotary Lift. It is being loaned with the expressed condition that it will not be duplicated or used except by permission and is subject to return upon request.		APPROVED DATE BDM 6-24-2005	
REV CD NUM DATE BY								REFR80004	

TABLE ONE	45/35S IN RECESS		*TO BE SUPPLIED BY GENERAL CONTRACTOR			
TYPICAL MATERIAL LIST						
LIFT UNIT DATA						
MAXIMUM LOAD CAPACITY (LBS)	45,000	ITEM	QTY	DESCRIPTION	DESCRIPTION	
SHIPPING WEIGHT (LBS)	10,000	1*	AR	4" SCH 40 PIPE	PVC or STEEL	
ANCHORAGE		2*	AR	4" SCH 40 STREET ELBOW	PVC or STEEL	
ANCHOR BOLT DIAMETER	3/4"	3*	AR	4" SCH 40 TEE	PVC or STEEL	
NUMBER OF BOLTS PER LEG	10	4*	AR	1" RIGID CONDUIT	STEEL	
BOLT PATTERN	REFR70010	5*	AR	1" SEAL BARRIER	STEEL	
INSTALLATION TORQUE (FT-LBS.)	175	6*	AR	SEALTITE FLEXIBLE CONDUIT	STEEL	
ANCHOR RE-TIGHTENING TORQUE (FT-LBS.)	80	7*	1	4 X 4 X 2 NEMA 12 JUNCTION BOX	STEEL	
ANCHOR STATIC INSPECTION TORQUE (FT-LBS.)	60	8*	60	3/4" ANCHOR BOLTS	STEEL	
MINIMUM EMBEDMENT LENGTH (IN)	3 3/8"	9*	4	EXPLOSION PROOF BOX	ALUMINUM, APPLETON GRUE 100-A	
MINIMUM CONCRETE THICKNESS (IN)	9	10*	AR	L2 x 2 x 1/4 x 145 Ft. WITH ANCHORAGE	ASTM A36 PAINTED RED	
HYDRAULIC		11*	4	1/4 x 8 x 37 PLATE WITH ANCHORAGE	ASTM A36 PAINTED RED	
HYDRAULIC CYLINDER DIA. (IN)	6"	12*	1	FLOOR DRAIN TAP-ZURN MODEL	Z-415 TYPE N STRAINER	
RESERVOIR CAPACITY (GAL.)	25					
OIL TYPE	ISO32 OR AW32					
ELECTRICAL						
MOTOR HORSEPOWER	15					
208/230V. 3PH, MOTOR (FLA)	48/42					
OR 460V 3PH, MOTOR (FLA)	21					
CONTROLS - 120V 1PH	5 AMPERE					
OPTIONAL LIGHT PACKAGE	8 BULBS					
120V 1PH SEE NOTE 16						
SHOP AIR						
AIR PRESSURE (PSI)	90-110					
AIR VOLUME (CFM), LIFT ONLY, SEE NOTE 17	5					
AIR VOLUME (CFM) PER ROLLING JACK, SEE NOTE 17	20					

TOLERANCE UNLESS OTHERWISE SPECIFIED: FRACTIONAL DIMENSIONS: ± 1/32" << 12" ± 1/16" > OR = 12" DECIMAL DIMENSIONS: ± .010" ANGULAR DIMENSIONS: ± 1° WELD BEAD SIZE: +1/8"/-0 WELD BEAD LENGTH: +1/2"/-0 WELD BEAD POSITION: ± 1/2"				THIRD ANGLE PROJECTION  DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN INCHES 1/32" MIN. CORNER BREAK REMOVE ALL BURRS	LIFT UNIT SPECIFICATIONS TABLE ONE AND MATERIAL LISTS	
NOTES: The design and detail illustrated in this drawing is the property of Rotary Lift. It is being loaned with the expressed condition that it will not be duplicated or used except by permission and is subject to return upon request.				ROTARY LIFT A DOVER INDUSTRIES COMPANY		
REV	CD NUM	DATE	BY	DRAWN	SCALE	SHEET
-	6992	9-21-07	KAK/BDM	KAK	NONE	1 of 1
				BDM	9-21-07	DRAWING NUMBER
						REFR90075



NOTES:

THE FORCES SHOWN ARE PEAK FORCES FOR VARIOUS LIFT CONDITIONS AND RISE HEIGHTS.

THE FORCES SHOWN ARE PEAK FORCES AND THEREFORE ARE NOT EQUILIBRIUM WITH THE APPLIED LOADS.

FOUNDATION REQUIREMENTS ARE TO BE DESIGNED TO TAKE PEAK FORCES AT EVERY LEG DUE TO VARIABLE LOADING CONDITIONS. ABOVE DIAGRAM DEPICTS ONE TYPE OF LOADING CONDITION. FOR REFERENCE ONLY.

NO SAFETY FACTORS HAVE BEEN APPLIED TO THE FORCES SHOWN.

THE LOCATION OF EXPANSION JOINTS IN THE EXISTING FLOOR SYSTEM SHOULD BE CONSIDERED IN LOCATING THE LIFT UNIT. NONE OF THE LOWER LEG BRACKETS SHALL BE PLACED OVER AN EXPANSION JOINT. ALSO NONE OF THE LOWER LEG BRACKETS SHALL BE PLACED CLOSER THAN 12.5 INCHES TO AN EXPANSION JOINT OR ANY FREE EDGE OF THE SLAB. THE LOCATION OF CONSTRUCTION JOINTS IN THE FLOOR SYSTEM IS GENERALLY OF NO CONCERN PROVIDED THAT THE AREA IS IN GOOD CONDITION.

				TOLERANCE UNLESS OTHERWISE SPECIFIED:		THIRD ANGLE PROJECTION		PEAK FOUNDATION LOADS 45/35 SURFACE	
				FRACTIONAL DIMENSIONS: ± 1/32" (< 12") ± 1/16" (≥ 12")		DO NOT SCALE DRAWING			
				DECIMAL DIMENSIONS: ± .010"		UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN INCHES		ROTARY LIFT A DOVER INDUSTRIES COMPANY	
				ANGULAR DIMENSIONS: ± 1°		1/32" MIN. CORNER BREAK REMOVE ALL BURRS			
				WELD BEAD SIZE: +1/8"/-0		WELD BEAD LENGTH: +1/2"/-0		DRAWN: C.J.W. SCALE: NONE SHEET: 1 of 1 DRAWING NUMBER: REFR00020	
				WELD BEAD POSITION: ± 1/2"		APPROVED: K.K. DATE: 8-10-05			
				NOTES: TYPICAL EQUIPMENT FOUNDATION REQUIREMENTS: CONSULT FACTORY PRIOR TO INSTALLATION, TO CONFIRM LATEST REVISION					
				The design and detail illustrated in this drawing is the property of Rotary Lift. It is being loaned with the expressed condition that it will not be duplicated or used except by permission and is subject to return upon request.					
REV	CD	NUM	DATE	BY					
-		6294.2	8-10-05	CJW/KK					