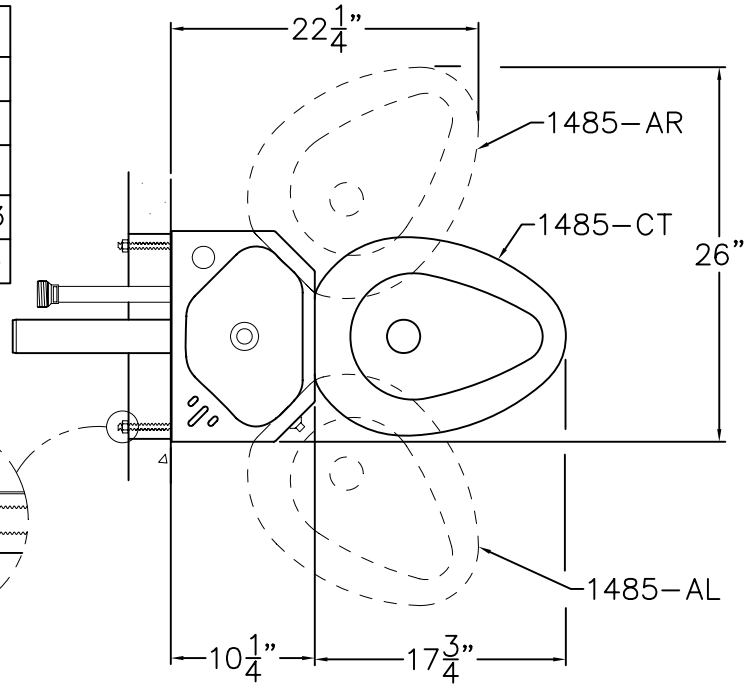
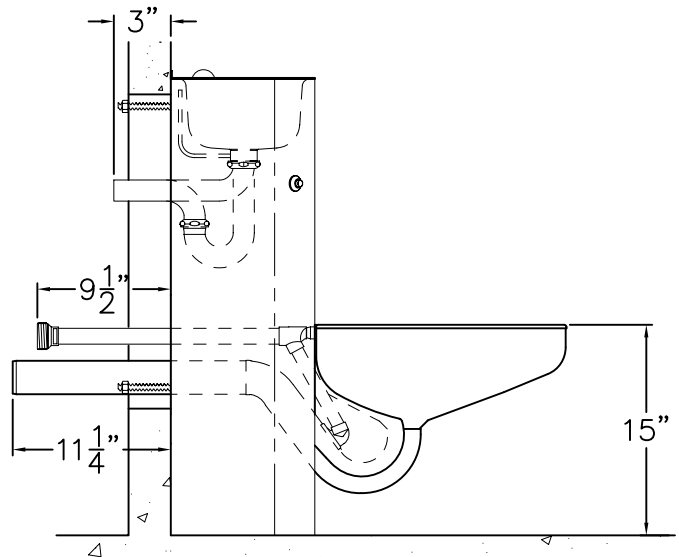
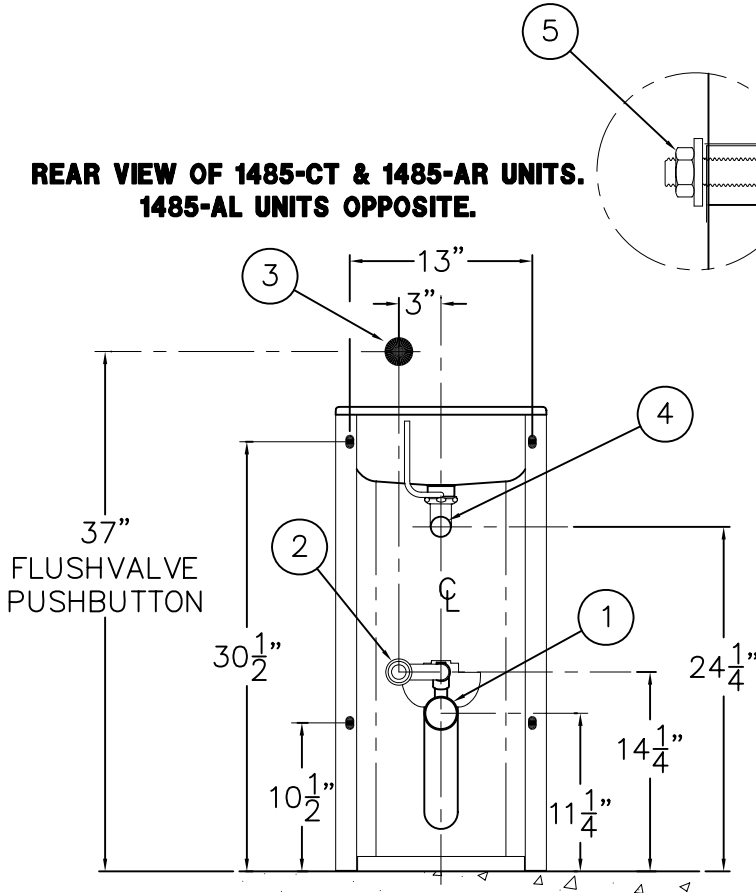




REFERENCE DRAWINGS	
-SW WALL SLEEVE	9925-254-001
MOUNTING HARDWARE	9957-900-001
<b>VALVE INSTALLATION:</b>	
-4 AIR-CONTROL (HOT & COLD)	9905-000-003
-3 AIR-CONTROL (SINGLE TEMP.)	9905-001-003



**REAR VIEW OF 1485-CT & 1485-AR UNITS.  
1485-AL UNITS OPPOSITE.**



**INSTALLATION INSTRUCTIONS:**

**IMPORTANT:** SOME OPTIONS MAY SLIGHTLY ALTER INSTALLATION PROCEDURES. READ ALL SUPPLEMENTAL DRAWINGS BEFORE INSTALLATION OF FIXTURE. ALL FASTENERS, WASHERS AND NUTS PROVIDED ARE ESSENTIAL IN PROPERLY ANCHORING THE FIXTURE. ACORN CANNOT ASSUME ANY RESPONSIBILITY FOR UNITS IMPROPERLY INSTALLED.

A- ROUGH-IN PLUMBING FOR THE FOLLOWING CONNECTIONS:

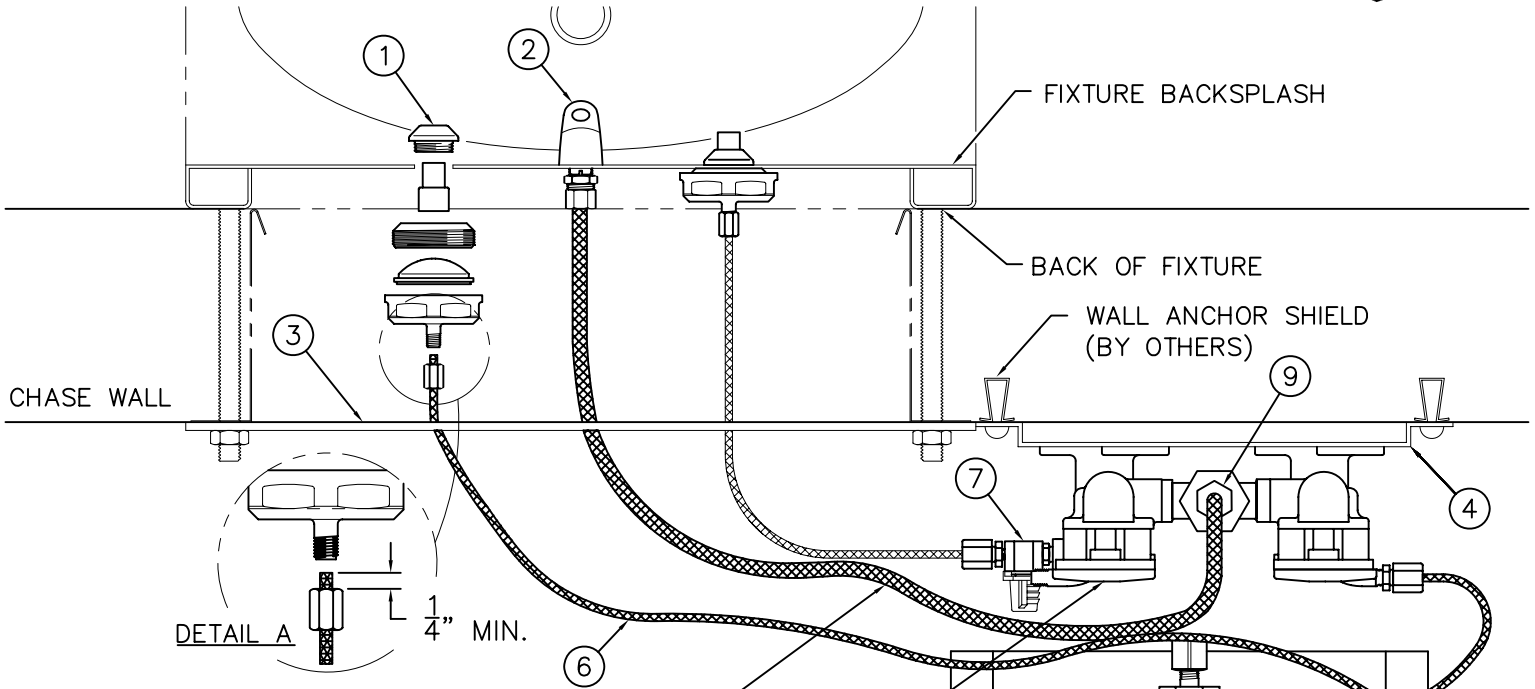
- TOILET WASTE OUTLET 2-3/8" O.D. PLAIN END (1).
- FLUSHING INLET CONNECTION 1-1/2" NPS MALE (2).
- FLUSHVALVE THRU WALL PUSHBUTTON LOCATION (3).
- LAVY WASTE OUTLET (4) 1-1/2" O.D. PLAIN END STANDARD. FOR OPTIONAL -CW COMBINED WASTE, NO OUTLET.
- SEE INDIVIDUAL VALVE SHEET FOR LAVY VALVE ROUGH-IN.

- B- PLACE 1/2"-13 STUDS WITH NUTS (5) THRU MOUNTING SLOTS ON FIXTURE TO ANCHOR ON WALL.
- C- LOCATE FIXTURE INTO PLACE, SLIDING STUDS AND PIPES THROUGH WALL OPENINGS.
- D- MAKE-UP LAVY WASTE CONNECTION (4) 1-1/2" O.D. PLAIN END. (SUITABLE FOR A COMPRESSION CONNECTION)
- E- MAKE-UP FLUSHING INLET (2) 1-1/2" NPT MALE CONNECTION WITH PUSHBUTTON MOUNTING (3) THRU WALL.
- F- SECURE FIXTURE TO WALL USING WASHERS AND NUTS.



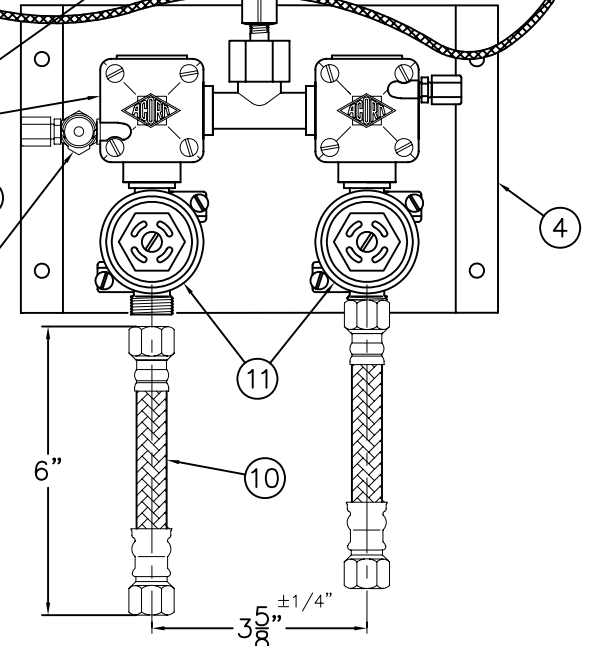
ACORN ENGINEERING COMPANY  
P.O. BOX 3527 INDUSTRY, CA. 91744  
(626) 336-4561 FAX (626) 961-2200

TITLE		
<b>15" LAV-TOILET COMBY ANCHORING INSTRUCTIONS CAT. #1485 -CT/AL/AR</b>		
MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
<b>MAY 1999</b>	<b>06/03/99</b>	<b>9925-028-001</b>
<b>TO PRESENT</b>	DATE REVISED	
	<b>04/20/04</b>	



REFERENCE DRAWINGS	
ASSEMBLIES	NUMBER
VALVE BODY	9955-005-003
CHECKSTOP	9956-040-003
FIXTURE TRIM	9957-050-001
-PBH/BPH TRIM	9957-060-001
AIR-CONTROL SERVOMOTORS	
METERING	9955-000-003
NON-METERING	9955-001-003

NOTE:  
THIS VALVE  
SHOWN w/ (-MH)  
METERING, HOT  
SIDE ONLY



NOTE:  
MAXIMUM RECOMMENDED WORKING WATER PRESSURE IS 100 PSI; TEMPERATURE IS 130° F; OUTLET TEMPERATURE IS RECOMMENDED AT A MAXIMUM OF 105° F.  
WARNING:  
PRIOR TO MAKING INSTALLATION, SUPPLY LINES MUST BE FLUSHED OF ALL FOREIGN MATERIAL SUCH AS PIPE DOPE, CHIPS, SOLDER, ETC. VALVE MUST BE DRAINED PRIOR TO BEING SUBJECTED TO FREEZING TEMPERATURES. MAXIMUM RECOMMENDED OUTLET WATER TEMPERATURE IS 105° F.

**INSTALLATION INSTRUCTIONS:**

- A- PRIOR TO INSTALLATION OF THE FIXTURE, MOUNT PUSHBUTTONS ① AND BUBBLER ② TO THE BACKSPLASH.
- B- INSTALL THE PLUMBING FIXTURE TO THE WALL INCLUDING UPPER SUPPORT PLATE ③.
- C- MOUNT THE AIR-CONTROL VALVE ASSEMBLY ④. LOCATE AS REQUIRED. MAXIMUM ALLOWABLE DISTANCE BETWEEN PUSHBUTTON ① AND AIR-CONTROL SERVOMOTOR ⑤ IS 10 FEET. WALL ANCHORING HARDWARE ARE BY OTHERS.
- D- CONNECT 1/8" O.D. POLYETHYLENE AIR LINES ⑥ TO PUSHBUTTONS ① AND SERVOMOTOR ⑤. HAND TIGHTEN USING FERRULE NUTS PROVIDED. SEE DETAIL A. NOTE: WHEN METERING VALVES ARE SPECIFIED, AIR LINES CONNECT DIRECTLY TO VALVE TIMER ⑦.
- E- CONNECT 1/4" O.D. POLYETHYLENE WATER LINE ⑧ TO BUBBLER ② AND COMPRESSION NUT ⑨. HAND TIGHTEN USING FERRULE NUTS PROVIDED.

- F- AFTER THOROUGHLY FLUSHING THE SUPPLY LINES, MAKE-UP 1/2" NPS FEMALE SUPPLY CONNECTIONS. NOTE: SUPPLY INLET CONNECTION WILL ACCOMODATE 1/2" NPT MALE ADAPTER. THREAD FLEX CONNECTOR HOSE ⑩ TO CHECKSTOPS ⑪ AND TO SUPPLY STUB OUTS.
- G- SEE APPROPRIATE SERVOMOTOR REFERENCE DRAWING FOR DETAILS AND TIMING INSRUCTIONS.

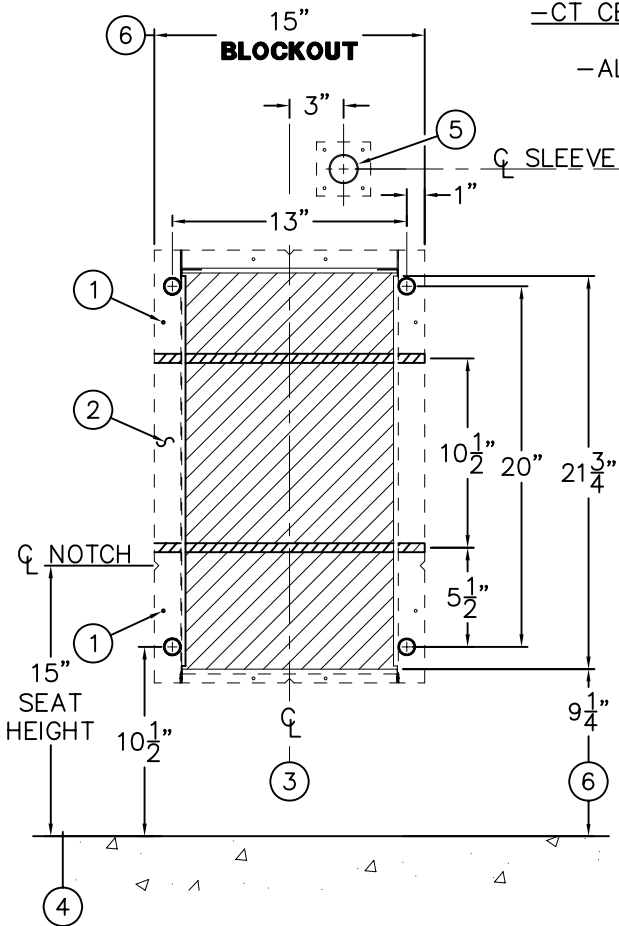
ACORN ENGINEERING COMPANY P.O. BOX 3527 INDUSTRY, CA. 91744 (626) 336-4561 FAX (626) 961-2200	TITLE <b>(04-SERIES) HOT &amp; COLD AIR-CONTROL VALVE ASSEMBLY - NEW STYLE</b>		
	MANUFACTURE DATE <b>SEPT 1995 TO PRESENT</b>	DATE ISSUED <b>11/1/95</b> DATE REVISED <b>07/15/10</b>	DRAWING NUMBER <b>9905-000-003</b>



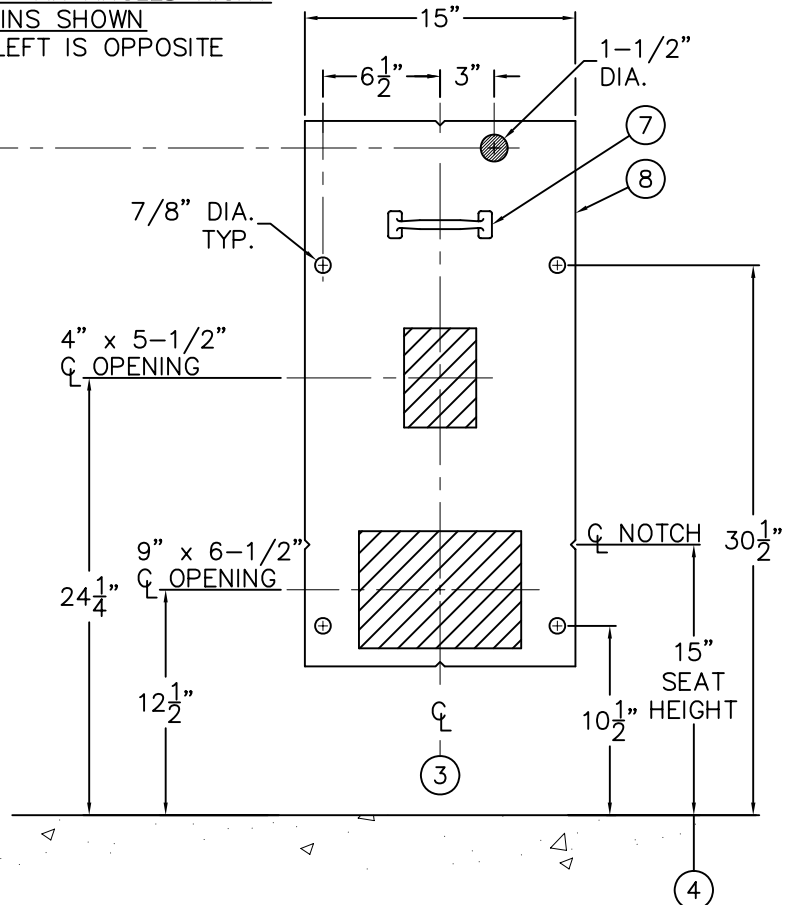
**-SW WALL SLEEVE**

**BOTH VIEWS ARE FROM CELL SIDE**

**-MT METAL TEMPLATE**



-CT CENTERED & -AR ANGLED RIGHT  
ROUGH-INS SHOWN  
-AL ANGLED LEFT IS OPPOSITE



**WALL SLEEVES (-SW)**

SLEEVES ARE INSTALLED IN FORMS (USING NAIL HOLES ① PROVIDED) OR GROUTED INTO BLOCK WALLS, BECOMING A PERMANENT PART OF THE WALL.

**NOTE:** FOR POURED WALL CONSTRUCTION, TEMPORARY BRACING SHOULD BE INSTALLED WITHIN SLEEVE OPENING TO PREVENT DEFORMATION TO SLEEVE WHICH MAY OCCUR DURING POUR. DO NOT POUR CONCRETE DIRECTLY ON TOP OF WALL SLEEVE.

- A- INSTALL SLEEVE WITH FLANGE ② ON CHASE SIDE OF WALL
- B- TOP AND BOTTOM NOTCHES TO BE LOCATED AT VERTICAL CENTERLINE ③ OF SLEEVE.
- C- SIDE NOTCHES ④ TO BE LOCATED AT 15" ABOVE FINISHED CELL SIDE FLOOR (INTEGRAL TOILET SEAT HEIGHT).
- D- SEPARATE SLEEVE ⑤ FOR FLUSHVALVE PUSHBUTTON TO BE LOCATED 37" ABOVE FINISHED CELL SIDE FLOOR.
- E- WHEN SLEEVES ARE NOT AVAILABLE USE BLOCKOUT DIMENSIONS SHOWN ⑥.

**METAL TEMPLATES (-MT)**

TEMPLATES ARE USED TO LAYOUT REQUIRED WALL OPENINGS FOR SUBSEQUENT FLAME CUTTING OR CORE DRILLING.

- A- STRIKE A HORIZONTAL CHALKLINE ④ ON WALL 15" ABOVE FINISHED CELL SIDE FLOOR. THIS WILL LOCATE CENTERLINE FOR HORIZONTAL NOTCHES ON TEMPLATE.
- B- STRIKE A VERTICAL CHALKLINE ③ ON THE WALL TO INDICATE CENTERLINE OF FIXTURE. THIS WILL LOCATE CENTERLINE FOR VERTICAL NOTCHES ON TEMPLATE.
- C- USING HANDLE ⑦ ON TEMPLATE ⑧, PLACE TEMPLATE AGAINST THE WALL, LOCATING NOTCHES AT CHALKLINES. MARK WALL FOR REQUIRED OPENINGS.

SHADED AREAS ARE REQUIRED WALL OPENINGS

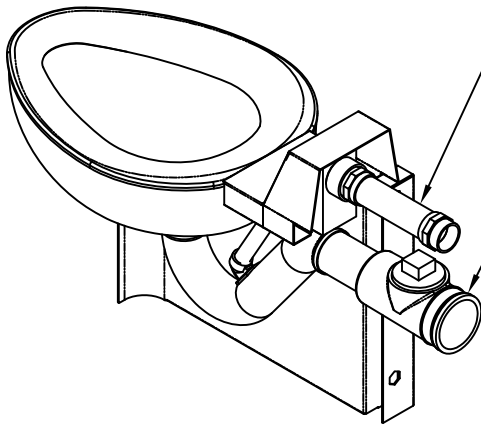
**NOTE:**

ON POURED WALL CONSTRUCTION, THE FLUSHVALVE PUSHBUTTON SLEEVE, ITEM ⑤ IS CAPPED. THIS CAP MUST BE REMOVED FROM THE CHASE SIDE OF THE WALL BEFORE INSTALLING FLUSHVALVE PUSHBUTTON.



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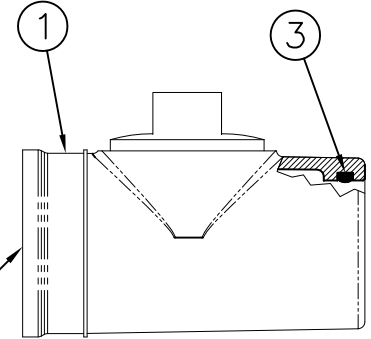
TITLE <b>-SW WALL SLEEVE/-MT METAL TEMPLATE; CAT: 1485-CT/AL/AR</b>		
MANUFACTURE DATE <b>APRIL 1999</b>	DATE ISSUED <b>08/12/02</b>	DRAWING NUMBER <b>9925-254-001</b>
<b>TO PRESENT</b>	DATE REVISED <b>10/02/03</b>	



Optional -FVT Flush Valve Thru Wall Connection. Shown For Reference.

Optional -CO1 Waste Fitting. Shown For Reference.

REFERENCE DRAWING	
WASTE CONNECTION WITH CLEANOUT -CO1	9985-125-002

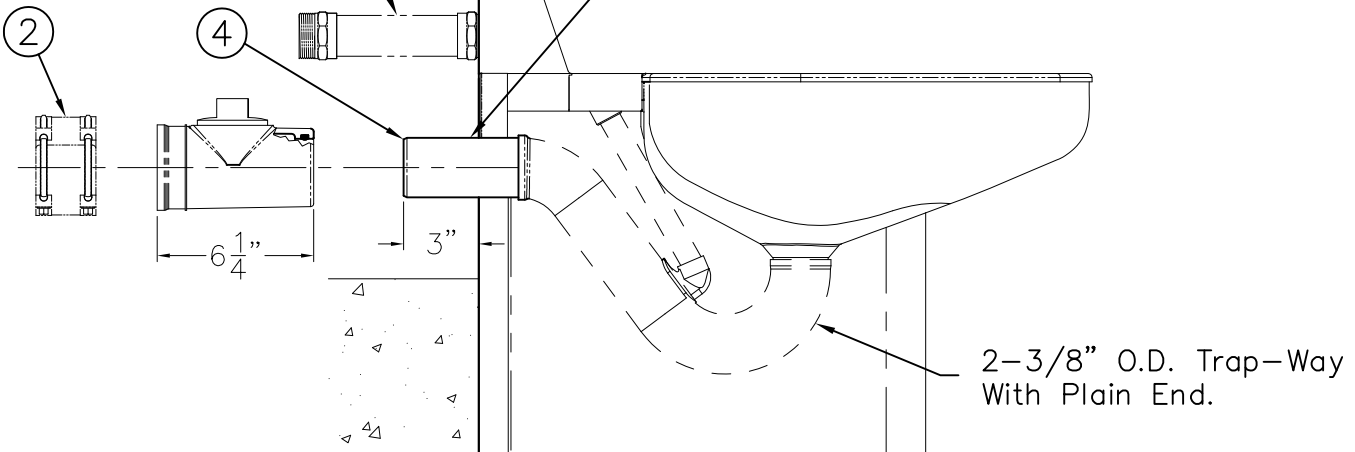


NOTE: Optional -CO1 Waste Fitting Available With 3" or 4" No-Hub

*Scaled: X 2*

Optional -FVT Flush Valve Thru Wall Connection Shown For Reference

Plain End Extends 3" Beyond Back Of Fixture. Optional Extended Waste Is Available -TWE



**MODEL #1685 SHOWN FOR REFERENCE**

**INSTALLATION INSTRUCTIONS**

A-INSERT O-RING ③ INTO GROOVE OF WASTE FITTING ①. LUBRICATE THE O-RING ③ WITH O-RING LUBRICANT.

B-INSTALL WASTE FITTING ① TO FIXTURE P-TRAP WASTE EXTENSION ④. ENGAGEMENT IS APPROXIMATELY 1-1/4". NOTE: TOILET WASTE

EXTENSION ④ IS 3" BEYOND BACK OF FIXTURE. LONGER WASTE EXTENSION IS AVAILABLE.

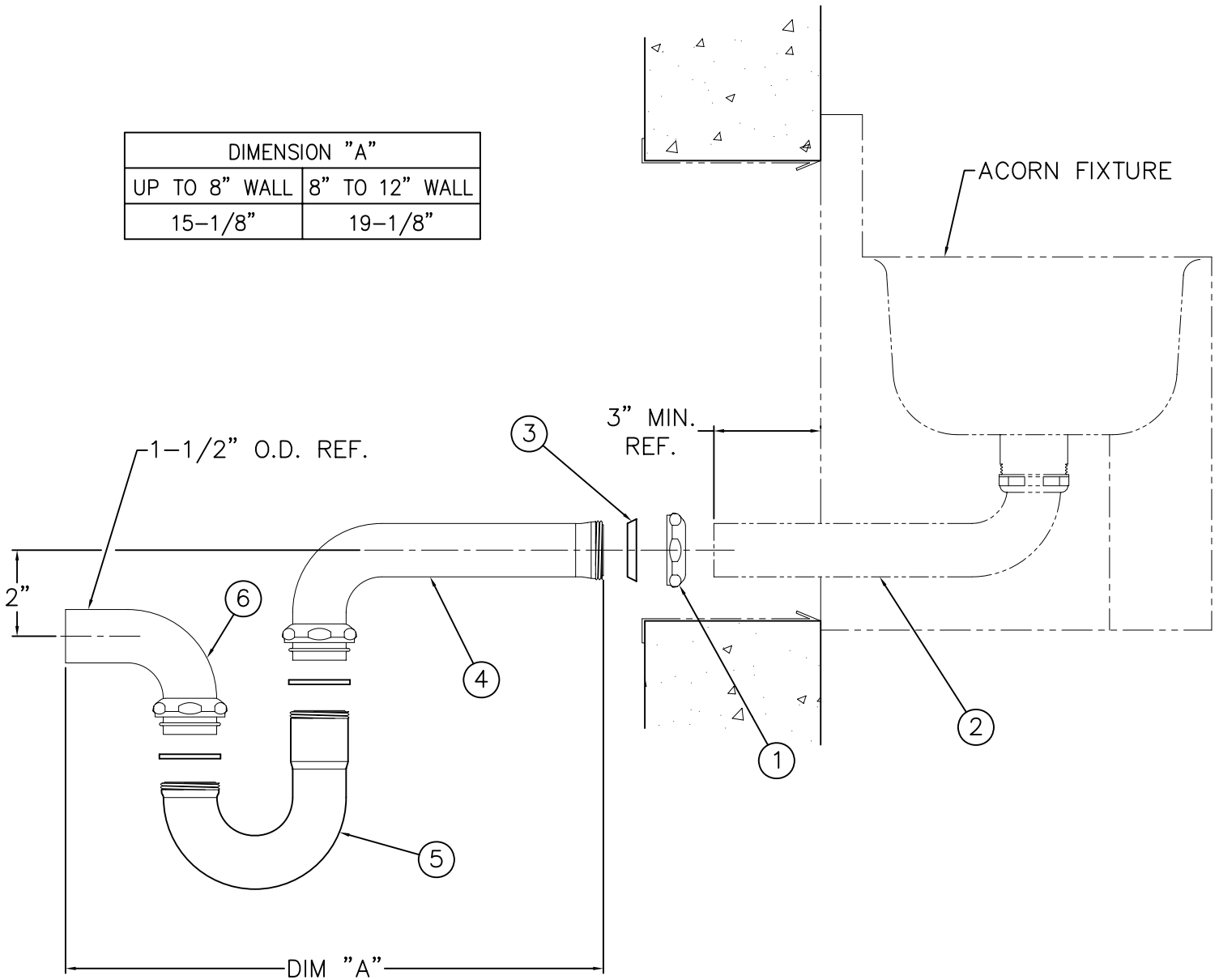
C-MAKE UP WASTE FITTING CONNECTION TO WASTE PIPING USING NO-HUB (BAND) CONNECTOR ② BY OTHERS.

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TITLE <b>NO-HUB WASTE CONNECTION WITH CLEANOUT -CO1</b>		
MANUFACTURE DATE <b>JULY 1975</b> <b>PRESENT</b>	DATE ISSUED <b>1/29/96</b>	DRAWING NUMBER <b>9925-054-001</b>
	DATE REVISED <b>11/08/13 D</b>	



DIMENSION "A"	
UP TO 8" WALL	8" TO 12" WALL
15-1/8"	19-1/8"



**INSTALLATION INSTRUCTIONS:**

A- AFTER INSTALLING ACORN UNIT ON FINISHED WALL, SLIP COMPRESSION NUT ① OVER 1-1/2" O.D. PLAIN END WASTE ②. USING COMPRESSION GASKET ③, AND NUT ① MAKE-UP COMPRESSION CONNECTION WITH SLIP JOINT ELBOW ④.

B- REMOVABLE TUBULAR P-TRAP ⑤ CONNECTS TO SLIP JOINT ELBOW ④ AND PLAIN END ELBOW ⑥ WITH COMPRESSION CONNECTIONS AS SHOWN.

NOTE: TUBULAR P-TRAP IS REMOVABLE IN ORDER TO ALLOW FOR WASTE CLEANOUT.

**ACORN ENGINEERING COMPANY**  
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<b>TITLE</b> <b>LAVATORY THRU-WALL WASTE CONNECTION w/ P-TRAP &amp; CLEANOUT CAT. # -LW1</b>		
<b>MANUFACTURE DATE</b> <b>APRIL 30, 1998</b> <b>TO PRESENT</b>	<b>DATE ISSUED</b> <b>3/19/98</b>	<b>DRAWING NUMBER</b> <b>9925-065-002</b>
	<b>DATE REVISED</b> <b>4/23/98</b>	