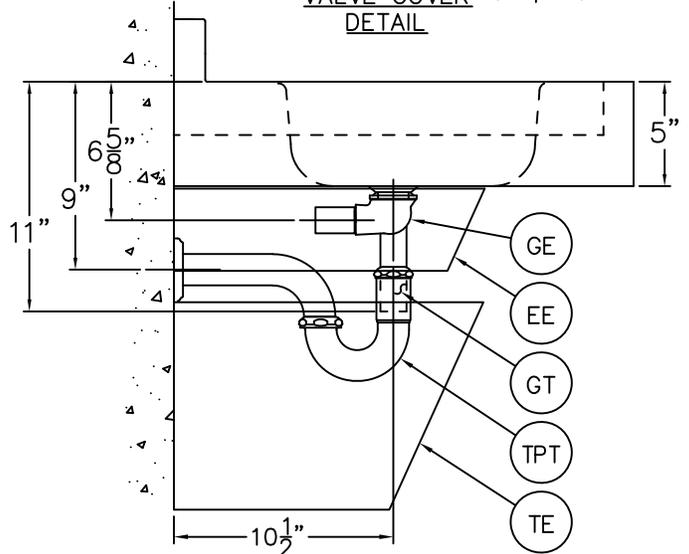
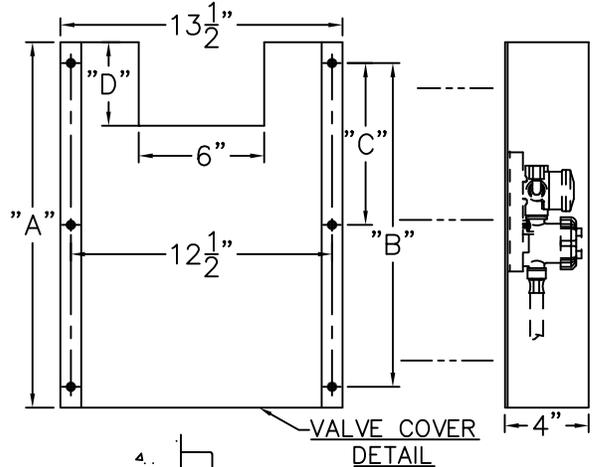


OPTION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
-EE	17-1/2"	15-1/2"	7-3/4"	4"
-TE	23-1/2"	21-1/2"	10-3/4"	10"



REFERENCE DRAWINGS	
Hot & Cold Valve	9908-105-002
Single Temp Valve	9908-106-002
Wristblade Valve	9908-110-001

RECOMMENDED CARRIER MODELS:
(PROVIDED BY OTHERS)

- SMITH #700 ZURN #Z-1231
- SMITH #720 ZURN #Z-1254
- OR EQUAL OR EQUAL

INSTALLATION INSTRUCTIONS

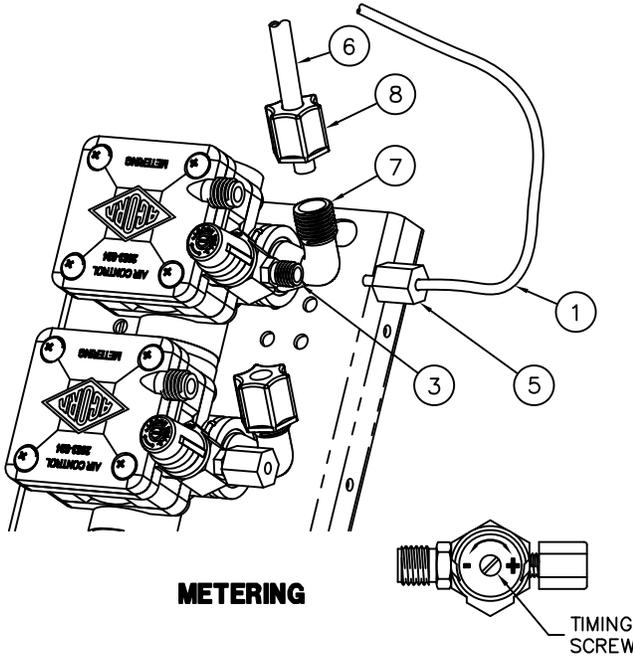
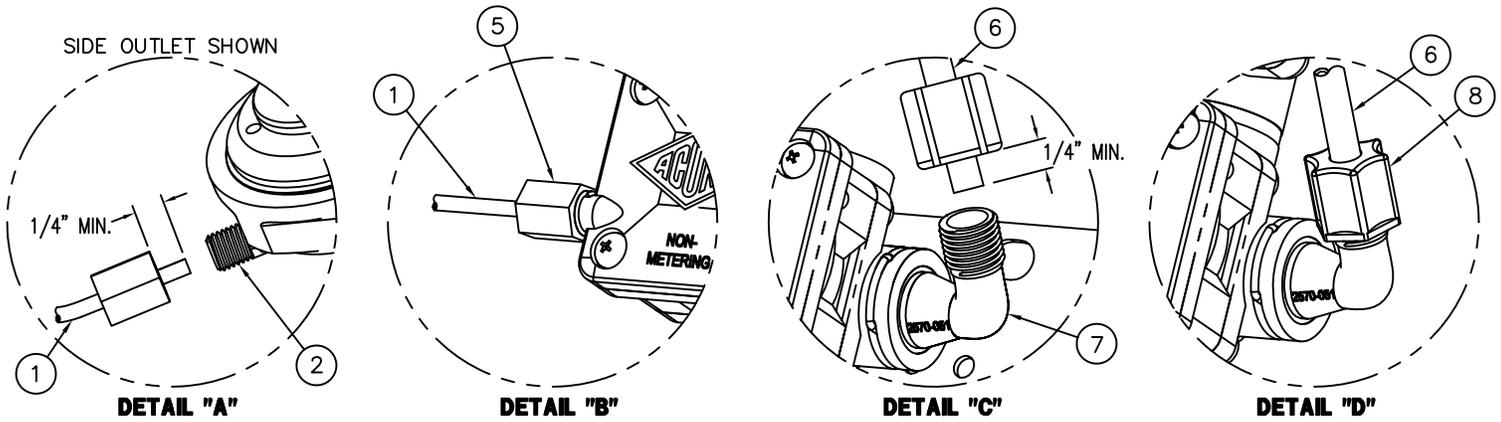
- A- SEE TABLE FOR VALVE INSTALLATION SHEET.
- B- INSTALL MOUNTING CARRIER PER CARRIER MANUFACTURER SPECIFICATIONS.
- C- MOUNT FIXTURE OVER CARRIER ARMS. SECURE CARRIER TO LAVY PER MANUFACTURER SPECIFICATIONS.

- D- MAKE WASTE CONNECTIONS. DIMENSIONS VARY DEPENDING ON OPTIONAL WASTE CONNECTION SELECTED:
 - GE GRID STRAINER WITH CLOSE ELBOW- 1-1/4" OD COMPRESSION CONNECTION
 - GT GRID STRAINER WITH TAILPIECE- 1-1/4" OD COMPRESSION CONNECTION
 - TPT TUBING P-TRAP 1-1/4" x 1-1/2" OD
- E- ROUGH-IN PLUMBING AND FLUSH SUPPLY LINES.

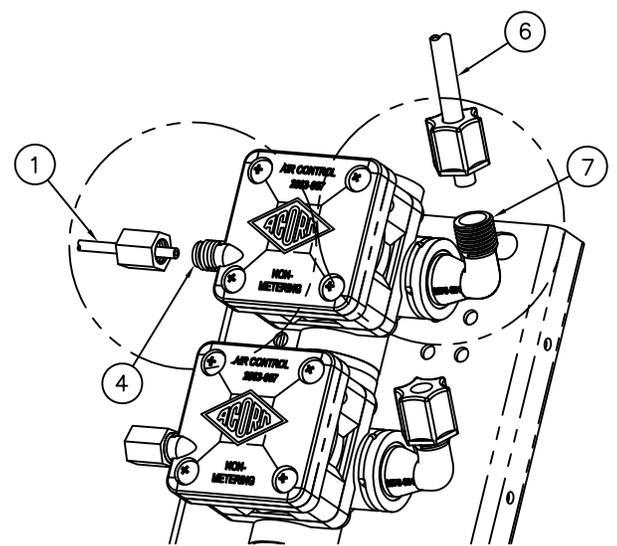


ACORN ENGINEERING COMPANY
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15125 Proctor Ave Industry, CA 91746
(626) 336-4561 FAX (626) 961-2200

TITLE DURA-WARE 1953-ADA LAVATORY WITH -LC MOUNTING CARRIER		
MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
JAN 1980	05/06/11	9908-011-001
TO PRESENT	DATE REVISED 11/09/22	



METERING



**NON-METERING
DIRECT ACTING**

TIMING IS ADJUSTABLE FROM 5 TO 60 SECONDS AND IS ACCOMPLISHED BY ROTATING TIMING SCREW. TURNING THE SCREW CLOCKWISE INCREASES WHILE COUNTERCLOCKWISE DECREASES TIMING.

INSTALLATION INSTRUCTIONS:

- A- MOUNT FIXTURE IN ACCORDANCE TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- B- ASSEMBLE SPOUTS AND PUSHBUTTONS TO FIXTURE.
- C- CONNECT 1/8" O.D. POLYETHYLENE AIR LINE (1) TO PUSHBUTTON (2), AND VALVE TIMER ASSEMBLY (3) SEE DETAIL "A". NOTE: FOR DIRECT ACTING: ASSEMBLE TO AIR PORT (4), SEE DETAIL "B". HAND TIGHTEN FERRULE NUT (5) PROVIDED.
- D- CONNECT 1/4" O.D. POLYETHYLENE WATER LINES (6) TO VALVE ASSEMBLY ELBOW (7) SEE DETAILS "C", AND "D". HAND TIGHTEN FERRULE NUT (8) PROVIDED.
- E- AFTER THOROUGHLY FLUSHING SUPPLY LINES MAKE UP CONNECTIONS TO VALVE ASSEMBLY INLET(S) 1/2" NPT OR 1/2" NPS FLEX HOSE AS REQUIRED.

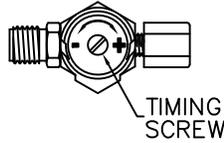
REFERENCE DRAWINGS	
ASSEMBLIES	DRAWING
VALVE BODY	9955-006-003
CHECKSTOP	9956-040-003
FIXTURE TRIM	9957-051-001
FIXTURE TRIM -DMS	9957-055-001
AIR-CONTROL SERVOMOTORS	
METERING	9955-000-003
NON-METERING	9955-001-003

NOTE:
 1) ALL TUBING SHOULD BE CUT SQUARE AND BE FREE OF BURRS OR DEFORMITIES TO ENSURE A WATER TIGHT CONNECTION.
 2) EXTEND TUBING AT LEAST 1/4" BEYOND FERRULE NUT BEFORE INSERTING TUBING INTO CONNECTION OPENING BEFORE TIGHTENING.
 3) TUBING SHOULD BE FREE OF KINKS FOR PROPER OPERATION
 4) 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.

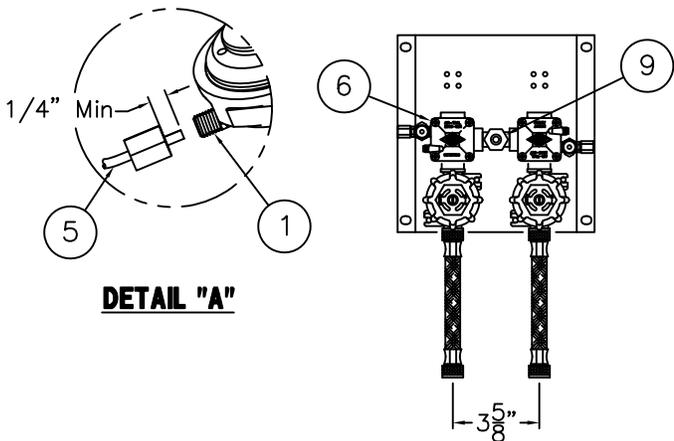
<p>MORRIS GROUP INTL P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200</p>	<p>TITLE HAND OPERATED AIR-CONTROL VALVE CONNECTIONS</p>		
	<p>MANUFACTURE DATE</p> <p>JANUARY 1999 TO PRESENT</p>	<p>DATE ISSUED</p> <p>04/22/10</p>	<p>DRAWING NUMBER</p> <p>9905-006-001</p>
		<p>DATE REVISED</p> <p>05/28/15</p>	



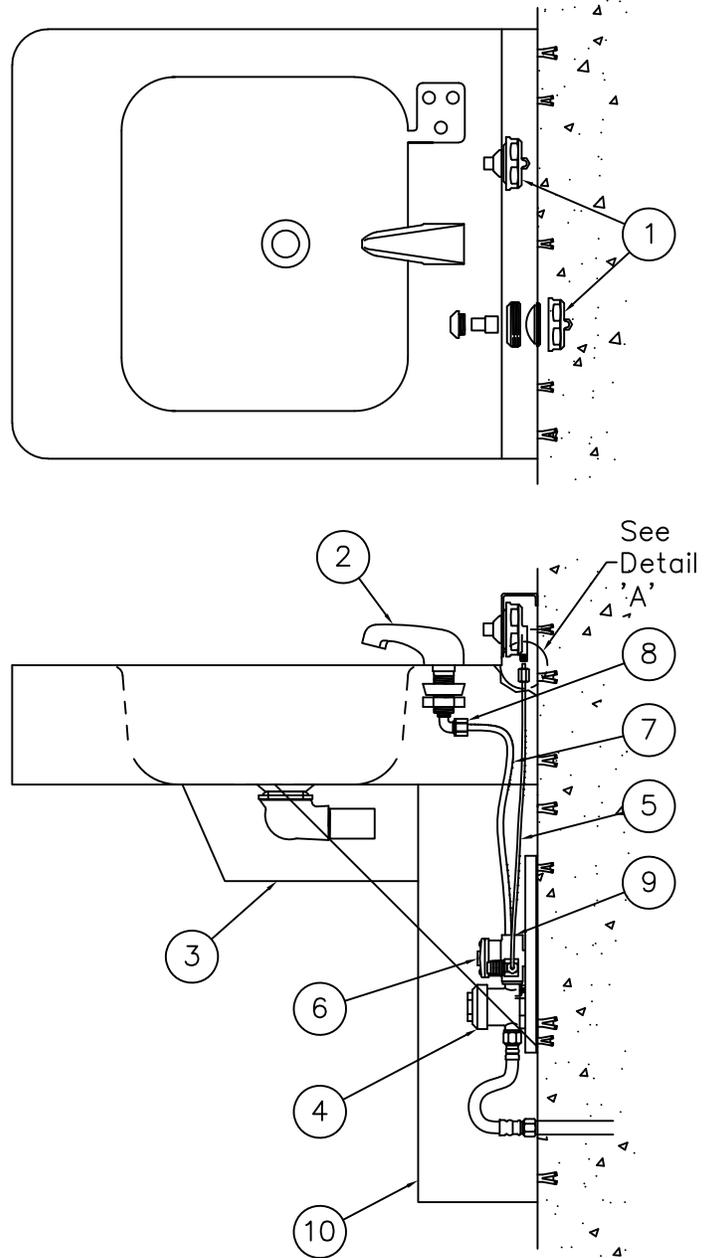
REFERENCE DRAWINGS	
ASSEMBLIES	NUMBERS
VALVE BODY	9955-005-003
STOP	9956-040-003
FIXTURE TRIM	9957-055-001
AIR-CONTROL SERVOMOTORS	
METERING	9955-000-003
NON-METERING	9955-001-003



TIMING IS ADJUSTABLE FROM 5 TO 60 SECONDS AND IS ACCOMPLISHED BY ROTATING TIMING SCREW. TURING THE SCREW CLOCKWISE INCREASES WHILE COUNTERCLOCKWISE DECREASES TIMING.



DETAIL "A"



INSTALLATION INSTRUCTIONS:

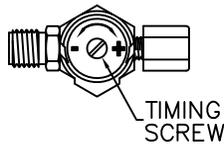
- A- PRIOR TO INSTALLATION OF THE FIXTURE, MOUNT PUSHBUTTON ① TO BACK SPLASH AND SPOUT ② TO DECK.
- B- INSTALL THE FIXTURE TO THE WALL PER DRAWING #9908-006-001.
- C- INSTALL OPTIONAL TRAP/ELBOW ENCLOSURE ③ TO WALL. MOUNT AIR-CONTROL VALVE ASSEMBLY ④ TO WALL BELOW ENCLOSURE. MOUNTING HARDWARE BY OTHERS.
- D- CONNECT 1/8" O.D. POLYETHEYENE AIR LINES ⑤ TO PUSHBUTTON ASSEMBLIES ① AND SERVOMOTORS ⑥. HAND TIGHTEN. USE FERRULE NUTS PROVIDED. SEE DETAIL 'A'.
- E- CONNECT 1/4" OD POLYETHYLENE WATER LINE ⑦ TO SPOUT COMPRESSION NUT ⑧ AND SERVOMOTOR COMPRESSION FITTING ⑨ USING FERRULE NUTS PROVIDED.
- F- AFTER THOROUGHLY FLUSHING THE SUPPLY LINES, MAKE-UP SUPPLY CONNECTIONS (1/2" NPT).
- G- SEE APPROPRIATE SERVOMOTOR REFERENCE DRAWING FOR DETAILS AND TIMING INSTRUCTIONS.
- H- INSTALL VALVE COVER ⑩ (SUPPLIED) TO WALL WITH NOTCH AROUND OPTIONAL TRAP/ELBOW ENCLOSURE ③. WALL FASTENERS BY OTHERS.

NOTE: WATER FLOW PRESSURE 25/100 PSI MIN/MAX. RECOMMENDED OUTLET TEMPERATURE 105° MAX. FLUSH ALL SUPPLY LINES THOROUGHLY BEFORE CONNECTING. DRAIN VALVE PRIOR TO FREEZING TEMPERATURES.

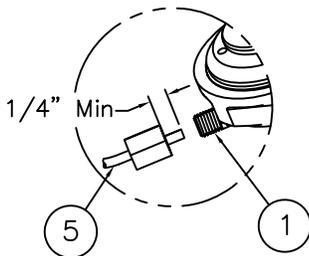
ACORN ENGINEERING COMPANY P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	TITLE FRONT MOUNTED HOT & COLD AIR-CONTROL VALVE CAT. #1953-ADA-04	
	MANUFACTURE DATE APRIL 1994 TO PRESENT	DATE ISSUED 05/18/94 DATE REVISED 05/27/15



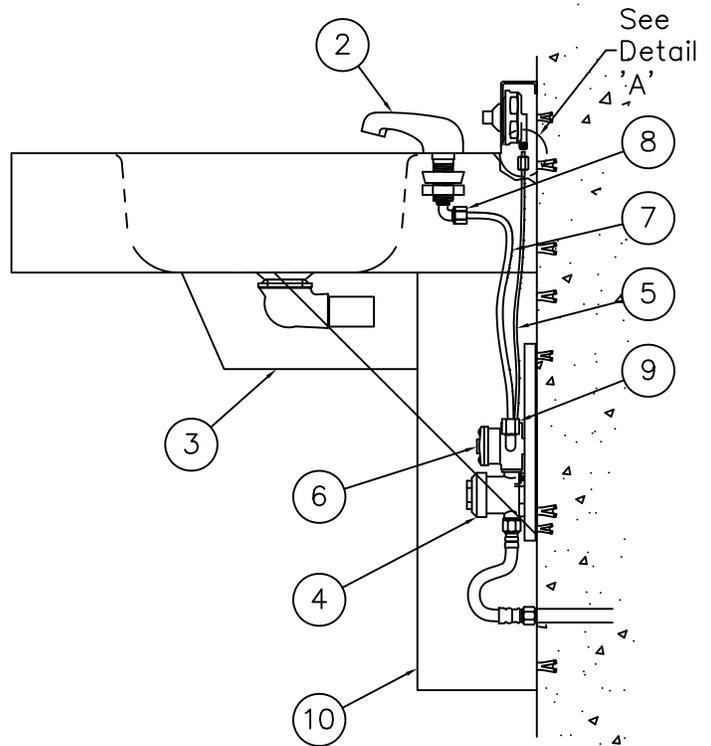
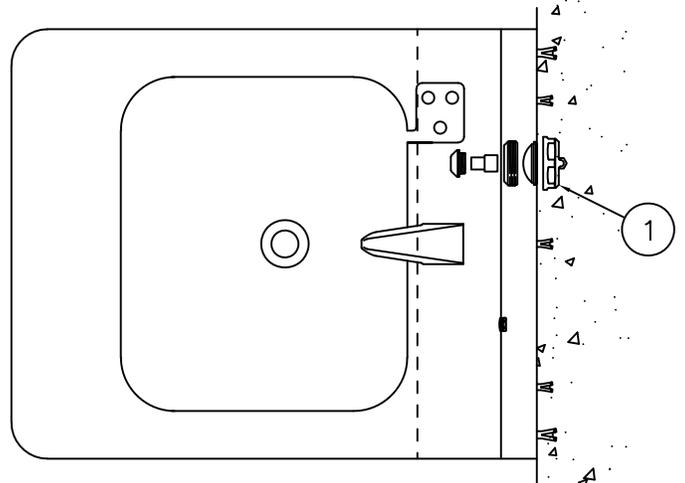
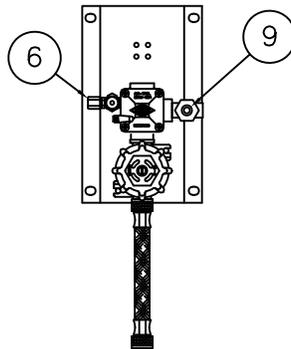
REFERENCE DRAWINGS	
ASSEMBLIES	NUMBERS
VALVE BODY	9955-005-003
STOP	9956-040-003
FIXTURE TRIM	9957-055-001
AIR-CONTROL SERVOMOTORS	
METERING	9955-000-003
NON-METERING	9955-001-003



TIMING IS ADJUSTABLE FROM 5 TO 60 SECONDS AND IS ACCOMPLISHED BY ROTATING TIMING SCREW. TURING THE SCREW CLOCKWISE INCREASES WHILE COUNTERCLOCKWISE DECREASES TIMING.



DETAIL "A"



INSTALLATION INSTRUCTIONS:

- A- PRIOR TO INSTALLATION OF THE FIXTURE, MOUNT PUSHBUTTON ① TO BACK SPLASH AND SPOUT ② TO DECK.
- B- INSTALL THE FIXTURE TO THE WALL PER DRAWING #9908-006-001.
- C- INSTALL OPTIONAL TRAP/ELBOW ENCLOSURE ③ TO WALL. MOUNT AIR-CONTROL VALVE ASSEMBLY ④ TO WALL BELOW ENCLOSURE. MOUNTING HARDWARE BY OTHERS.
- D- CONNECT 1/8" O.D. POLYETHEYENE AIR LINES ⑤ TO PUSHBUTTON ASSEMBLIES ① AND SERVOMOTORS ⑥. HAND TIGHTEN. USE FERRULE NUTS PROVIDED. SEE DETAIL 'A'.
- E- CONNECT 1/4" OD POLYETHYLENE WATER LINE ⑦ TO SPOUT COMPRESSION NUT ⑧ AND SERVOMOTOR COMPRESSION FITTING ⑨ USING FERRULE NUTS PROVIDED.
- F- AFTER THOROUGHLY FLUSHING THE SUPPLY LINES, MAKE-UP SUPPLY CONNECTIONS (1/2" NPT).
- G- SEE APPROPRIATE SERVOMOTOR REFERENCE DRAWING FOR DETAILS AND TIMING INSTRUCTIONS.
- H- INSTALL VALVE COVER ⑩ (SUPPLIED) TO WALL WITH NOTCH AROUND OPTIONAL TRAP/ELBOW ENCLOSURE ③. WALL FASTENERS BY OTHERS.

NOTE: WATER FLOW PRESSURE 25/100 PSI MIN/MAX. RECOMMENDED OUTLET TEMPERATURE 105° MAX. FLUSH ALL SUPPLY LINES THOROUGHLY BEFORE CONNECTING. DRAIN VALVE PRIOR TO FREEZING TEMPERATURES.



ACORN ENGINEERING COMPANY
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TITLE **FRONT MOUNTED SINGLE TEMP AIR-CONTROL VALVE CAT. #1953-ADA-03**

MANUFACTURE DATE

**APRIL 1994
TO PRESENT**

DATE ISSUED

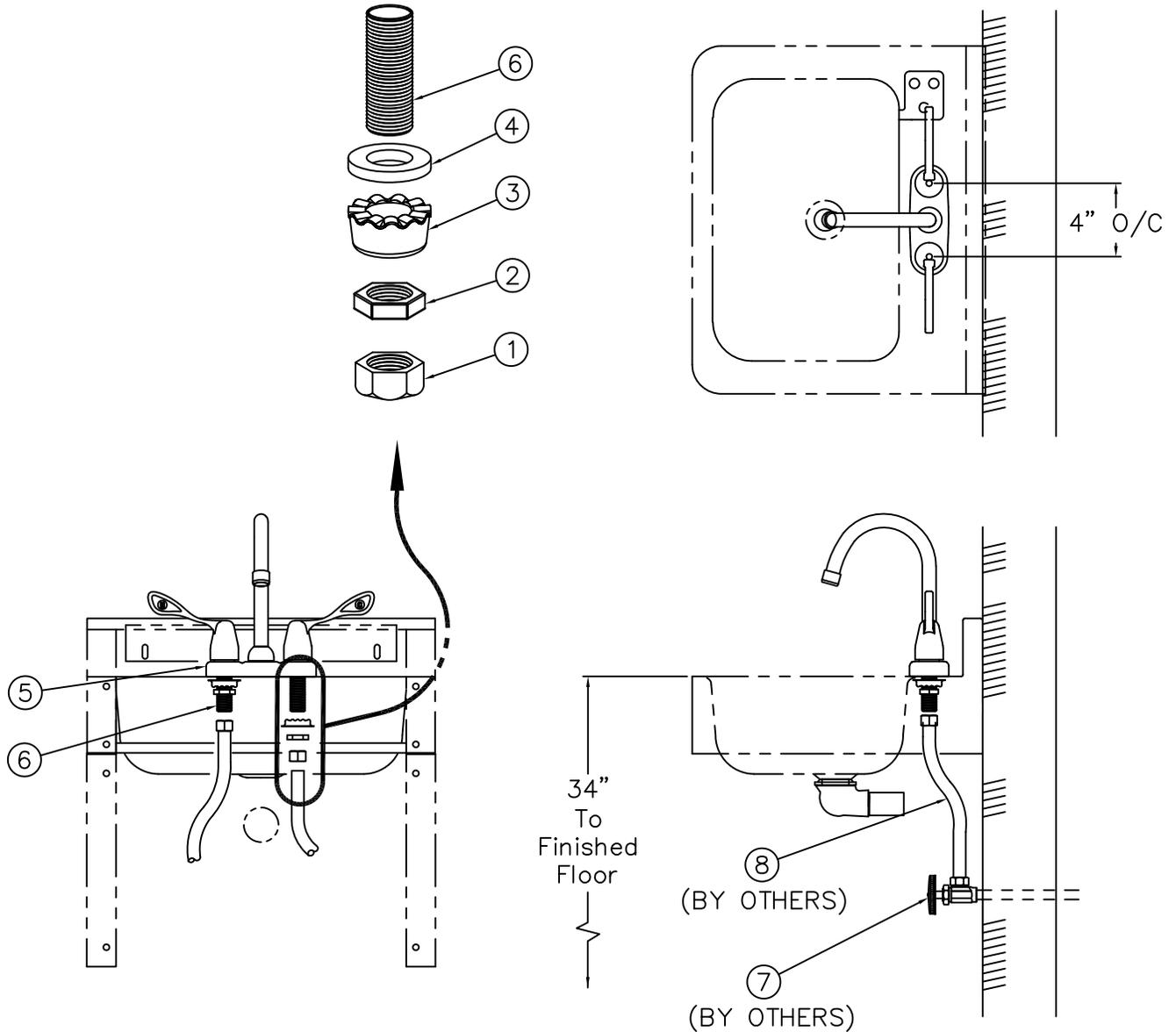
05/18/94

DATE REVISED

05/27/15

DRAWING NUMBER

9908-106-002



INSTALLATION INSTRUCTIONS

A—Remove The Following From The Gooseneck Assembly. Compression Nuts (1), Locknuts (2), Bell Spacers (3), And Washers (4).

B—Mount Remaining Gooseneck Valve Assembly (5) To Lavatory, Inserting Threaded Inlets (6) Thru Center Set Holes (4" O/C). Following Gooseneck Valve Manufacture's Installation Instructions.

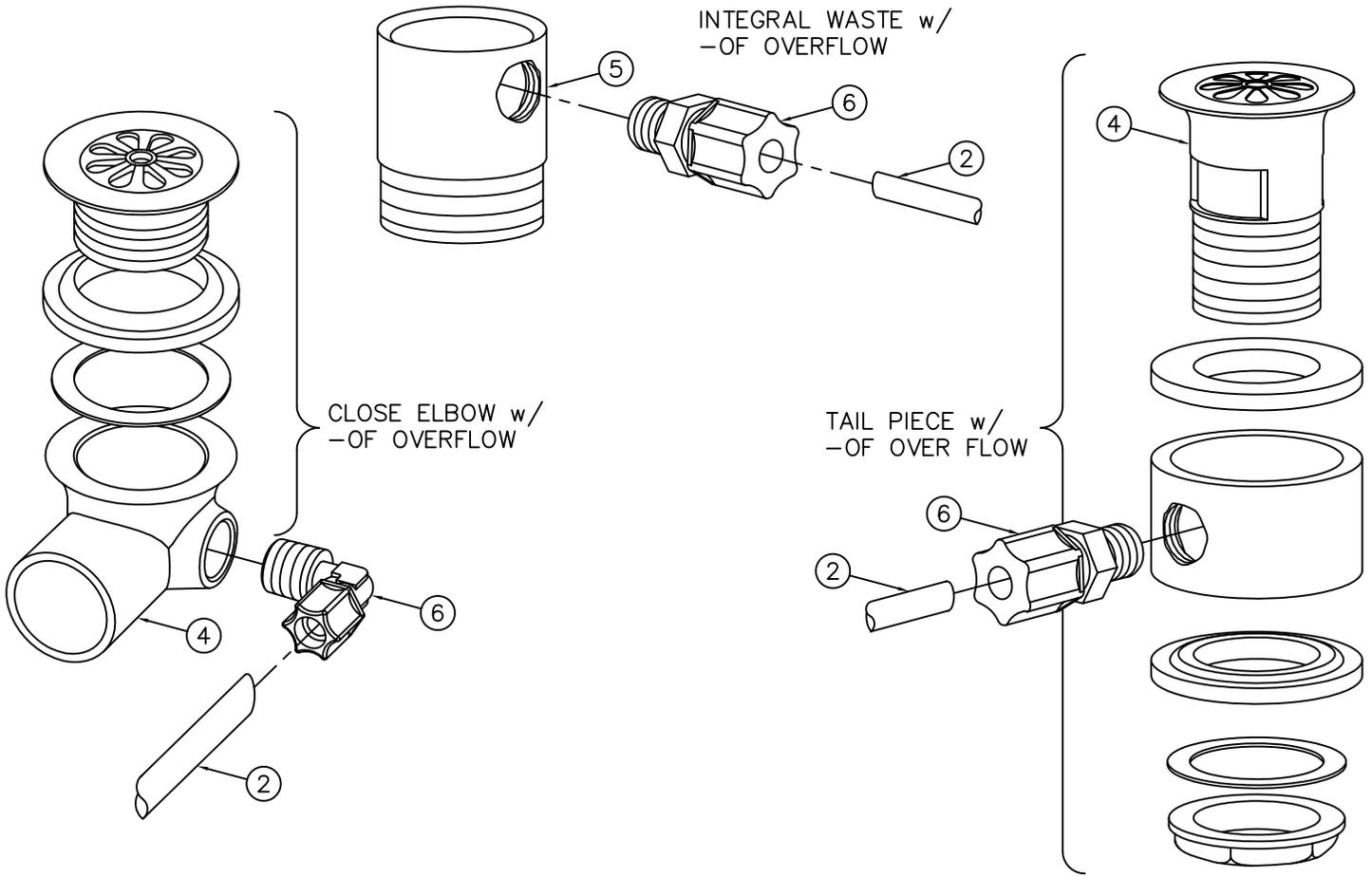
C—Reattach Washers (4), Bell Spacer (3), And Locknuts (2) To Threaded Inlets (6), And Tighten.

D—In Stall Riser (7) (BY OTHERS) To Angle Stop (8) (BY OTHERS) To Compression Nut (1). Screw Onto Threaded Stubs. Remove The Following From The Gooseneck Assembly. Compression Nuts (1), Locknuts (2), Bell Spacers (3), And Washers (4).



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TITLE DECK MOUNTED WRISTBLADE VALVE CAT. #1950, #1951, & #1953		
MANUFACTURE DATE JAN 1980 TO PRESENT	DATE ISSUED 06-01-90	DRAWING NUMBER 9908-110-001
	DATE REVISED 08/06/07	



NOTES:

- TEFLON TAPE IS RECOMMENDED FOR ALL THREAD CONNECTIONS.
- APPLY BEAD OF PLUMBER'S PUTTY TO DRAIN DEPRESSION ON BASIN PRIOR TO ASSEMBLING DRAIN TO UNIT. REMOVE ANY EXCESSIVE PUTTY IF NECESSARY.

INSTALLATION INSTRUCTIONS:

- A- ASSEMBLE 3/8" NPT x 3/8" OD ELBOW (1) TO 3/8" PE TUBE PROVIDED (2). THREAD OVERFLOW INSERT (3) THROUGH OVERFLOW OPENING(S) IN BASIN AND HAND TIGHTEN THE INSERT (3) TO THE ELBOW ASSEMBLY.
- B- ASSEMBLE APPLICABLE WASTE CONNECTION (4) TO DRAIN OPENING AS SHOWN. NOTE: INTEGRAL DRAIN (5) REQUIRES NO ASSEMBLY.

- C- FIT 3/8" OD PE TUBING (2) FROM OVERFLOW CONNECTION (1) TO OVERFLOW CONNECTION ON WASTE ASSEMBLY. NOTE: INSTALLER MAY CUT PE TUBING TO LENGTH. TIGHTEN 3/8" NPT x 3/8" OD TUBE CONNECTION PROVIDED (6) TO 3/8" OD PE TUBE (2). TIGHTEN TO (4) OR (5) WASTE ASSEMBLY AS SHOWN.



ACORN ENGINEERING COMPANY
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(626) 336-4561 FAX (626) 961-2200

TITLE OPTIONAL -OF OVERFLOW WASTE ASSEMBLY		
MANUFACTURE DATE JULY 2008 TO PRESENT	DATE ISSUED 07/21/08	DRAWING NUMBER 9927-008-001
	DATE REVISED 01/06/14	