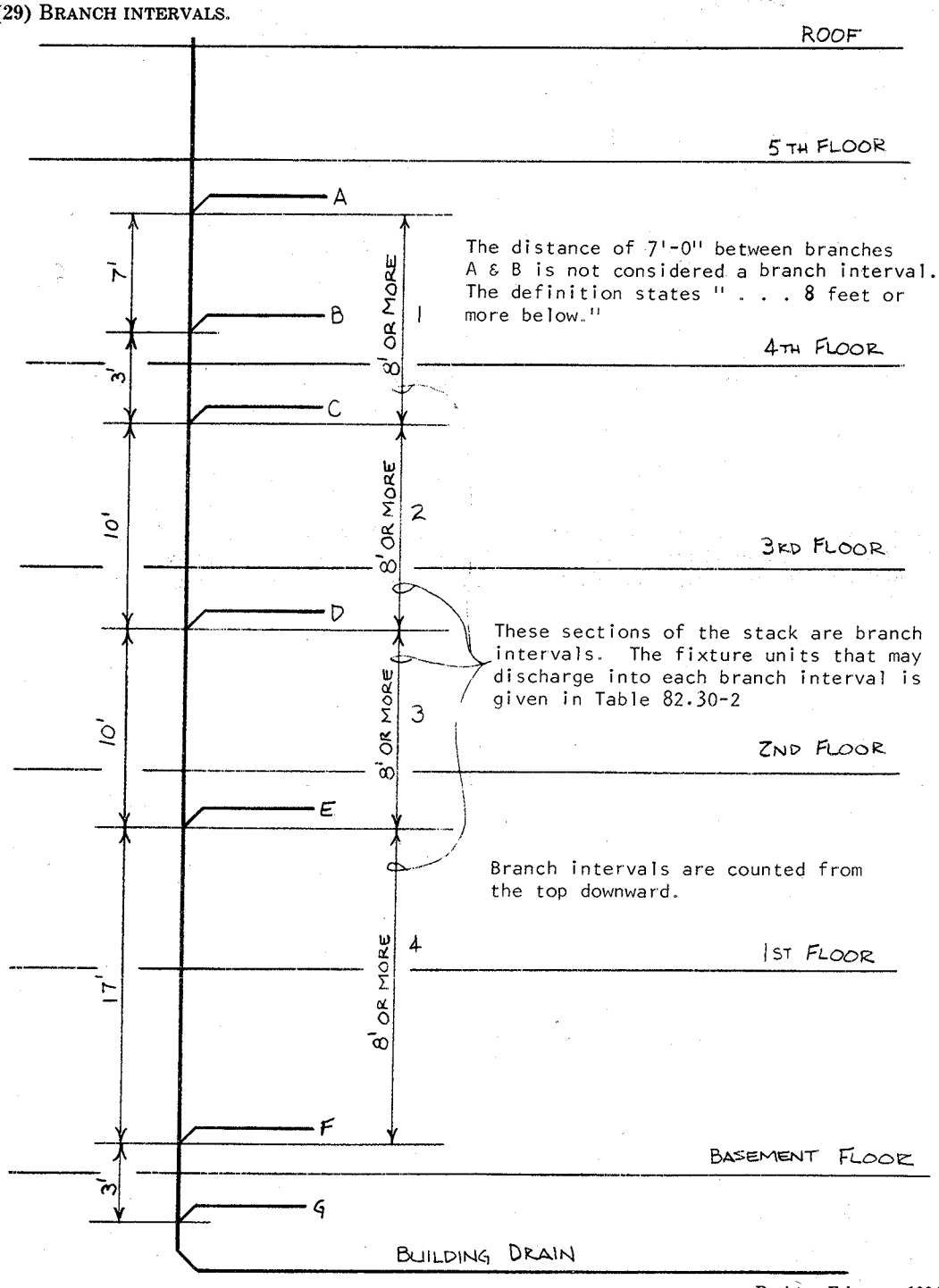
ILHR 82

APPENDIX

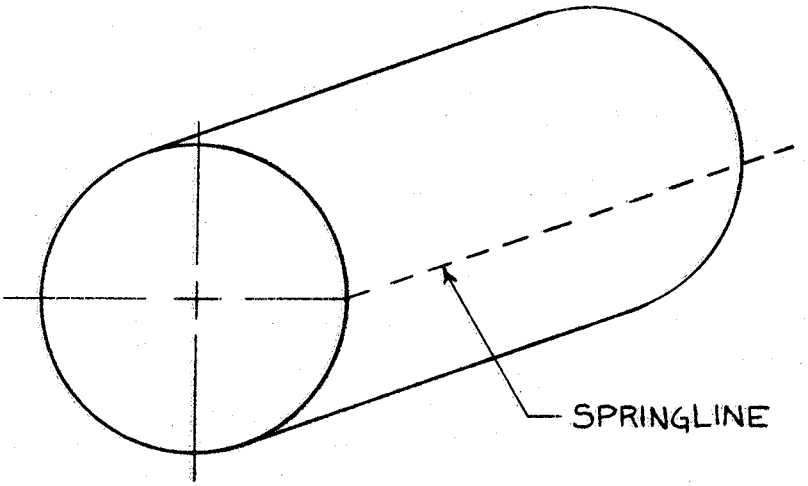
The material contained in this appendix is for clarification purposes only. The notes, illustrations, etc., are numbered to correspond to the number of the rule as it appears in the text of the code.

A-82.11 (29) BRANCH INTERVALS.



ILHR 82 Appendix

A-82.11 (140) SPRINGLINE OF PIPE.



On a round pipe the springline is along the horizontal centerline.

A-82.20 and A-82.21 FORMS. The following forms (DILHR SBD-8, SBD-6154, 6115, 6479 and 6192) are used by the department in administration of this administrative code. Copies of these forms are available from the Division of Safety and Buildings, Bureau of Building Water Systems, P.O. Box 7969, Madison, Wisconsin 53707.

Wisconsin Department of Industry
Labor and Human Relations
Safety and Buildings Division

GENERAL PLUMBING
PLAN APPROVAL APPLICATION

Bureau of Building Water Systems
201 E. Washington Avenue, Rm 141
P.O. Box 7969 Madison, WI 53707-7969
608-266-3815
FAX 608-267-0592

NOTE: Appointments for plan review should be made prior to submittal by calling any one of the offices shown at the bottom of this form.

INSTRUCTIONS: This form is required with each general plumbing plan submittal. Please complete both sides. Examination fees, as determined on this form, must accompany submittal. Data required in submittal is described on the reverse side of form.

1. PROJECT INFORMATION (type or print clearly)	Plan Review Appointment Date	Plan Identification Number
Name of Submitting Party (Plans returned to same)	Project Name	
Street & No.	Project Location - Street & No.	
City State Zip	City ☐ Village ☐ Town ☐ OF:	County
Telephone No. (Include area code)	Designer (Plumbing)	Telephone No. (Include area code)
2. PLANS FOR: ☐ New Building ☐ Addition/Remodel ☐ Revision to plumbing plan No. _____ 2a. Fee For Revisions - $60.00	Owners Name	Telephone No. (Include area code)
	Street & No. (current address)	
	City State Zip	

Office Use Only	Fees are pursuant to Wis. Admin. Code, Chapter ILHR 2, and may be subject to change annually. 3. THIS APPLICATION FOR: Check Appropriate Box(es)	CALCULATIONS (See Reverse Side for Additions/Remodeling Fees)		4. FEE SUBMITTED	Office Use Only
20.	3a. ☐ Sanitary Building Sewer **Only** (no drain and vent)	Sum of Sanitary Sewer Diameters	____ Inches X $20.00	= 4a.	
21.	3b. ☐ Sanitary Drain and Vent, with or w/o Sanitary Building Sewer	Sum of Sanitary Sewer Diameters	____ Inches x $35.00	= 4b.	
22.	3c. ☐ Sanitary Private Interceptor Main Sewer	Sum of Largest Diameters	____ Inches x $20.00	= 4c.	
23.	3d. ☐ Building Water Service **Only** (no water distribution system)	Sum of Water Service Diameters	____ Inches x $20.00	= 4d.	
24.	3e. ☐ Water Distribution System with or w/o Water Service	Sum of Water Service Diameters	____ Inches x $35.00	= 4e.	
25.	3f. ☐ Private Water Main	Sum of Water Main Diameters	____ Inches x $20.00	= 4f.	
27.	3g. ☐ Building Storm and Clear Water Drain System	Sum of Storm Sewer Diameters	____ Inches x $ 8.00	= 4g.	
28.	3h. ☐ Storm Private Interceptor Main Sewer	Sum of Largest Diameters	____ Inches x $ 8.00	= 4h.	
29.	3i. ☐ Controlled Roof Drainage System (Does Not Include Conventional Building Storm Piping)		$60.00 Required	= 4i.	
32.	3j. ☐ Reduced Pressure Principle Backflow Preventer	Number of Valves	____ x $110.00	= 4j.	
33.	3k. ☐ Reduced Pressure Principle Detector Assembly Backflow Preventer	Number of Valves	____ x $110.00	= 4k.	
34.	3l. ☐ Vacuum Breaker - Antisiphon Pressure Type	Number of Valves	____ x $110.00	= 4l.	
35.	3m. ☐ Grease Interceptor ★ (See Note Below)	Number of Grease Interceptors	____ x $60.00	= 4m.	
36.	3n. ☐ Chemical Waste System ★ (See Note Below)	Number of Chemical Waste Systems	____ x $60.00	= 4n.	
37.	3o. ☐ Garage Catch Basin ★ (See Note Below)	Number of Garage Catch Basins	____ x $60.00	= 4o.	
38.	3p. ☐ Oil Interceptor ★ (See Note Below)	Number of Oil Interceptors	____ x $60.00	= 4p.	
39.	3q. ☐ Car Wash Interceptor ★ (See Note Below)	Number of Car Wash Interceptors	____ x $60.00	= 4q.	
40.	3r. ☐ Sanitary Dump Station ★ (See Note Below)	Number of Sanitary Dump Stations	____ x $60.00	= 4r.	
	3s ☐ Mobile Home Parks and Campground/Recreational Vehicle Parks	1-25 Sites $250.00 26-50 Sites $300.00 51-125 Sites $350.00 Over 125 Sites $400.00		= 4s.	
	3t ☐ Engineered Plumbing System (Minimum $225.00--Calculate Fee in Accord with ITEM 8. - See Reverse Side of this Form)			= 4t.	
	3u ☐ Petition for Variance (must be submitted on form SB-8)	$225.00		= 4u.	
			SUBTOTAL =		
	3v ☐ Priority Review		Enter Same Amount as Subtotal =	4v.	
	★ **NOTE** ★ **No Additional Fee Required if Submitted With Sanitary Drain and Vent System**		TOTAL FEE (Minimum $60.00) =		

NOTE: Appointments for plan review should be made prior to submittal. You may contact one of the offices listed below.

Hayward Office
209 West First Street, Hwy 63
Rt. 8, Box 8072
Hayward, WI 54843
Phone (715) 634-4804
FAX (715) 634-5150

LaCrosse Office
2226 Rose Street
LaCrosse, WI 54603
Phone (608) 785-9352
FAX (608) 785-9330

Madison Office
201 E. Washington Ave
P.O. Box 7969
Madison, WI 53707-7969
Phone (608) 267-3606
FAX (608) 267-0592

Shawano Office
1053A E. Green Bay Street
P.O. Box 434
Shawano, WI 54166-0434
Phone (715) 524-3627
FAX (715) 524-3633

Waukesha Office
401 Pilot Court, Suite C
Waukesha, WI 53188
Phone (414) 548-8606
FAX (414) 548-8614

- CONTINUED ON REVERSE SIDE -

5. ENCLOSURES

☐ Enclosed ☐ Under separate cover please find the following;
☐ Two sets of plans and ☐ Three sets of plans and ☐ One set of Specifications

Check Number _____ In the amount of _____ Written by: _____

MAKE ALL CHECKS PAYABLE TO DILHR, SAFETY & BUILDINGS DIVISION.

6. BACKFLOW PREVENTER DATA;
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER, REDUCED PRINCIPLE BACKFLOW DETECTOR ASSEMBLY BACKFLOW PREVENTER, AND VACUUM BREAKER-ANTI-SIPHON, PRESSURE TYPE.
Indicate Valve Size, Manufacturer, Model No., and Location in Building (Room No., etc.) for each valve attach additional sheets if necessary.

1. _____ 3. _____

2. _____

7. PLAN SUBMITTAL SHALL INCLUDE THE FOLLOWING IN ACCORD WITH CODE SECTION ILHR 82.20

A. One complete set of plans and specifications (including materials and fixtures) with one additional copy of all plumbing drawings. Plans Shall Include:

1. Plot plan showing sanitary and/or storm sewer and water
2. Floor plan showing horizontal drains, water distribution mains and all fixtures and equipment to be installed.
3. Isometric/riser diagrams of the drain, vent and water distribution systems, with pipe sizes and fixture unit loads shown.
4. Complete water calculations in accord with s[illegible]
5. Complete storm drain sizing calculations
6. Remodeling or additions shall include existing loads
7. [illegible] Quality Management Letter if required by s. ILHR 82.20(4)(c).
8. All plans must be properly signed as per ILHR 82.20(4)(d) & (e).

8. EXAMINATION FEES FOR ADDITIONS AND REMODELING.
When new or relocated fixtures or both are connected to existing piping inside a building, the fee shall be determined in accordance with the following procedures:

A. *'Sanitary Building Sewer, Drain and Vent'*

1. Total all of the drainage fixture units that are being added or relocated using Table 82.30-1, Chapter ILHR 82.
2. Refer to Table 82.30-2, Chapter ILHR 82, and determine the horizontal drain size that would be required if all new or relocated fixtures discharged through one pipe.
3. Use that pipe size to determine fee based on line 3b which is found on the front of this form.

B. *Building Water Distribution System'*

1. Total all of the water supply fixture units that are being added or relocated, using ILHR Tables 82.40-1 and 2, and convert to gallons per minute (GPM) in accordance with ILHR Table 82.40-3
2. The fees shall be determined in accordance with the GPM demand of the new or relocated fixtures as specified in ILHR Table 2.64-2.

ILHR Table 2.64-2

GPM	FEE
1 - 6	$17.00
7 - 12	$26.00
13 - 21	$35.00
22 - 31	$43.00
32 - 46	$52.00
47 - 77	$70.00
78 - 119	$87.00
120 - 170	$105.00
171 - 298	$122.00

C. *'Building Storm Sewer and Drainage System.'*

1. Total each different type of area that the new or relocated drains serve and convert to GPM using Tables 82.36-1, 2, and 3, Chapter ILHR 82. To this add the GPM discharge from any added or relocated clear water drains located inside the building
2. Refer to Table 82.36-4, Chapter ILHR 82, using the column for 1/4"/ft. pitch, determine the horizontal drain size that would be required if all new or relocated fixtures discharged through one pipe
3. Use that pipe size to determine the fee based on line 3g which is found on the front of this form

SBD - 6154 (R 08/93)

Wisconsin Department of Industry, Labor and Human Relations

Please type or print.

PETITION FOR VARIANCE APPLICATION

Safety and Buildings Division
P.O. Box 7969
Madison, Wisconsin 53707
(608) 266-1542

OFFICE USE ONLY	Amount Paid	Receipt Number	Petition No.	E-Number

Owner/Petitioner's Name	Building Or Project	Agent, Architect or Engineering Firm
Company	Tenant's Name If Any	Street Address
Street Address	Location - Street Address	City, State, Zip Code
City, State, Zip Code	City, County	Telephone Number ( )
Telephone Number	Plan Number If Known	Contact Person's Name

1. The rule being petitioned reads as follows (cite specific rule number and language; one rule per application):

2. The rule being petitioned cannot be entirely satisfied because:

3. The following alternative(s) and supporting information are proposed as a means of providing an equivalent degree of health, safety or welfare as addressed by the rule:

Note: Please attach any pictures, plans, sketches or required position statements.

VERIFICATION BY OWNER - PETITION IS VALID ONLY IF NOTARIZED WITH AFFIXED SEAL AND ACCOMPANIED BY REVIEW FEE

See Section ILHR 2.52 for complete fee information

Note: Petitioner must be the owner of the building or project. Tenants, agents, designers, contractors, attorneys, etc., shall not sign petition unless Power of Attorney is submitted with the Petition For Variance Application

_____, being duly sworn, I state as petitioner that I have read the foregoing
Petitioner's Name (type or print)

petition and I believe it is true and that I have significant ownership rights to the subject building or project.

Petitioner's Signature:	Subscribed And Sworn To Before Me This Date:	Notary Public	My Commission Expires On:

SBD-8 (R. 09/92)

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER TEST REPORT

Please print or type in all the information and return to Division of Safety & Buildings
Bureau of Building Water Systems
P.O. Box 7969, Madison, WI 53707

Plan ID No._____

Manufacturer_____ Model_____ Size_____ Serial No._____

Name of Project_____ County_____

Address(street, city, zip)_____

	Check Valve #1	Check Valve #2	Relief Valve	Comments
INITIAL TEST	Leaked __ Closed tight __ at_____psid	Leaked __ Closed tight __ at_____psid	Opened at ____psid Did not open __	
REPAIRS	Cleaned __ Replaced: disc __ spring __ guide __ pin retainer __ hinge pin __ seat __ diaphragm __ other, __ describe	Cleaned __ Replaced: disc __ spring __ guide __ pin retainer __ hinge pin __ seat __ __ __ other, __ describe	Cleaned __ Replaced: disc: upper __ lower __ spring __ diaphragm: large: upper __ lower __ small __ seat: __ upper __ lower __ spacer: lower __ other, __ describe	
FINAL TEST	Closed tight __ at_____psid	Closed tight __ at_____psid	Opened at____psid	

SAMPLE

FOR TESTING OF A REPLACEMENT VALVE: If this test is for a replacement valve, please include all information for the replacement valve on this form, and include the same identifying information for the old valve on the back of this form.

The above report is certified to be true.

Initial test by_____Tester No._____ Date_____

Tester telephone no. (___)-_____

Repaired by_____Repair date_____

Final test by_____Tester No._____ Date_____

Tester telephone no. (___)-_____

SBD-6115 (R 03/92)

WATER CALCULATION WORKSHEET

Information Needed for Water Service Sizing

1. _____ Demand of building in gallons per minute.

2. _____ Low pressure at main in street (or at external pressure tank).

3. _____ Difference in elevation from main to meter (or external pressure tank to building control valve).

4. _____ Size of water meter (if applicable).

5. _____ Developed length from main to meter (or external pressure tank to building control valve).

You Must First Find the Available Pressure After the Water Meter (or at building control valve). To obtain this pressure, you must:

6. _____ Find pressure loss due to friction in ____ inch diameter water service.

7. _____ Find pressure loss due to elevation, main to meter (or external pressure tank to building control valve). Multiply the difference in elevation by .434 p.s.i./ft.

8. _____ Find pressure loss due to meter (from manufacturer or AWWA).

9. _____ Subtract the loss due to friction (Step 6), loss due to elevation (Step 7), and loss due to meter (Step 8) from the low main pressure (or low pressure at external pressure tank)(Step 2). This calculation is the available pressure after the water meter (or at the building control valve). This answer is entered in Line B, below.

Information Needed for Water Distribution Sizing

Using the following formula, find the pressure available for uniform loss (p.s.i/100' of pipe)

$$A = \frac{B-(C + D + E)}{F} \times 100$$

WHERE:

A. _____ Pressure available for uniform loss (p.s.i./100' of pipe).

B. _____ Available pressure after water meter (at the building control valve or low pressure at internal pressure tank). (See Step 9, above)

C. _____ Pressure needed at controlling fixture.

D. _____ Difference in elevation between water meter (building control valve or internal pressure tank) and controlling fixture in feet _____ x .434 p.s.i/ft.

E. _____ Pressure loss due to water softeners, water treatment devices, instantaneous water heaters and backflow preventers which serve the controlling fixture. Conventional water heaters usually do not have a pressure loss.

F. _____ Developed length from water meter (building control valve or internal pressure tank) to controlling fixture in feet _____ x 1.5

With pressure available for uniform loss, go to applicable table for distribution sizing.

SBD-6479 (R. 03/93)

ILHR 82 Appendix

Wisconsin Department of Industry,
Labor and Human Relations
Safety & Buildings Division
Bureau of Building Water Systems

INSPECTION REPORT

Inspection Date			
Name of Premises	Address or Legal Description	City/Township	County

Master Plumber Name and Address	Master Plumber Firm Name and Address	Plan I D. No.
		Sanitary Permit No
Journeyman Plumber/Soil Tester	Licensed Person's Name(s) and License Number(s)	
Owner's Name and Address		

Page _____ of _____

Signature of Responsible Licensed Person (only one needed)

Signature of Plumbing Consultant/Private Sewage Consultant

SBD-6192 (R. 11/90) Original: District Copies to: (Check all that apply) ☐ DILHR ☐ Plumber ☐ Owner ☐ County/Local Insp. ☐ Other _____

A-82.20 (2) AGENT MUNICIPALITIES. The department has designated to the following municipalities, the authority to review and approve plumbing plans and specifications for those plumbing installations to be located within the municipality's boundary limits and which require approval under s. ILHR 82.20 (1) (b).

Appleton
200 N. Appleton Street
Appleton, WI 54911-4799
(414) 832-6411

Eau Claire
203 South Farwell Street
Eau Claire, WI 54701
(715) 839-4947

Green Bay
100 N. Jefferson St., Rm. 403
Green Bay, WI 54301
(414) 448-3295

Greenfield
7325 W. Forest Home Ave.
Greenfield, WI 53220
(414) 543-5500, Ext. 332

Janesville
18 North Jackson Street
P.O. Box 5005
Janesville, WI 53546
(608) 755-3064

Kenosha
Kenosha City Hall
Dept. of Housing and
Neighborhood Development
625 52nd St., Rm. 100
Kenosha, WI 53140
(414) 653-4263

Madison
Building Insp. Dept., Rm. G100
215 M.L. King Jr. Blvd.
Madison, WI 53710
(608) 266-4568

Milwaukee
Municipal Bldg., Rm. 1013
841 N. Broadway Street
Milwaukee, WI 53202
(414) 278-2596

Oshkosh
P.O. Box 1130
Oshkosh, WI 54902
(414) 236-5049

Racine
730 Washington Avenue
Racine, WI 53403
(414) 636-9164

Sheboygan
City Hall - 3rd Floor
828 Center Avenue
Sheboygan, WI 53081
(414) 459-3479

Two Rivers
City Hall
P.O. Box 87
Two Rivers, WI 54241
(414) 793-5580

A-82.20 (4) The following is a list of Designated Management Agencies and the counties they serve.

DESIGNATED MANAGEMENT AGENCY	COUNTIES SERVED
Clearing House Review Coordinator East Central Wisconsin Regional Planning Commission 132 Main Street Menasha, WI 54952 (414) 751-4770	Menominee, Shawano, Waupaca, Outagamie, Waushara, Marquette, Green Lake, Winnebago, Calument, Fond du Lac
Dane County Regional Planning Commission 217 South Hamilton, Room 403 Madison, WI 53703 (608) 266-4417	Dane
Brown County Planning Commission Room 608, City Hall 100 North Jefferson Street Green Bay, WI 54301 (414) 448-3400	Brown
Southeastern Wisconsin Regional Planning Commission 916 North East Avenue P.O. Box 1607 Waukesha, WI 53187-1607 (414) 547-6721	Washington, Ozaukee, Waukesha, Milwaukee, Walworth, Racine, Kenosha

ILHR 82 Appendix

The following is a list of Sewer Service Area Plans approved by the Department of Natural Resources. For each Sewer Service Area Plan the approved Planning Agency and affected communities are shown.

Contacts - Sewer service area plans	Affected Communities
Eau Claire - Chippewa Falls	
West Central Wisconsin Regional Planning Commission 800 Wisconsin Street Suite D2-401 Eau Claire, WI 54703-3574 (715) 836-2918	City of Eau Claire City of Altoona City of Chippewa Falls Town of Hallie Town of Seymour Town of Union Town of Washington
Hudson	
St. Croix County Planning Office St. Croix Gov. Bldg. 1101 Carmichael Road Hudson, WI 54016 (715) 386-4673	City of Hudson Town of Hudson Town of St. Joseph Town of Troy Village of North Hudson
Green Bay	
Bay-Lake Regional Planning Commission 211 N. Broadway, Suite 211 Green Bay, WI 54303 (414) 448-2820	City of Marinette City of Kohler City of Sheboygan City of Sheboygan Falls Town of Peshtigo Town of Porterfield Town of Mosel Town of Wilson Town of Lima Town of Herman Town of Sheboygan Town of Sheboygan Falls
Janesville	
Rock County Planning Development Agency 51 South Main Street, Courthouse Janesville, WI 53545 (608) 757-5587	City of Janesville City of Beloit City of Edgerton City of Evansville City of Milton Town of Beloit Town of Harmony Town of Rock Town of Janesville Town of La Prairie Town of Turtle
La Crosse	
Office of City Engineer 400 La Crosse Street City Hall La Crosse, WI 54601 (608) 789-7505	City of La Crosse City of Onalaska Town of Onalaska Town of Shelby Town of Medary Town of Campbell
Stevens Point	
Portage County Planning and Zoning Department 1516 Church Street Stevens Point, WI 54481 (715) 346-1334	City of Stevens Point Town of Hull Town of Plover Town of Linwood Village of Whiting Village of Plover Village of Park Ridge
Wausau	
Marathon County Planning Department 500 Forest Street Wausau, WI 54403 (715) 847-5227	City of Wausau City of Schofield Town of Weston Town of Stettin Town of Rib Mountain Town of Kronenwetter Village of Rothschild
Wisconsin Rapids	
Office of County Planning & Zoning 400 Market Street Wisconsin Rapids, WI 54495 (715) 421-8466	City of Wisconsin Rapids Town of Grand Rapids Town of Rudolph Town of Sigel Town of Seneca Town of Grant Village of Biron

A-82.20 (8) FEES. The following reprint of s. ILHR 2.64 (2) may be used to determine the amount of fee required for general plumbing plan review by the department.

ILHR 2.64 Plumbing systems. (1) GENERAL. Plan examination fees for preliminary or complete plans shall accompany the plans and specifications when submitted. If the department determines, upon review of the plans, that inadequate fees were provided, the necessary additional fees shall be provided prior to departmental approval.

(2) EXAMINATION FEES. The plan examination fee shall be determined in accordance with Table 2.64-1. The minimum fee shall be $60.00 per plan.

Table 2.64-1

Type of Review	Fee
1. Sanitary drain and vent system	$35.00 per inch diameter of each bldg. sewer
2. Sanitary building sewer only, no drain and vent	$20.00 per inch diameter of each bldg. sewer
3. Building water distribution system	$35.00 per inch diameter of each water service
4. Building water service only, no water distribution system	$20.00 per inch diameter of each water service
5. Building storm and clear water drain system	$8.00 per inch diameter of each bldg. storm sewer
*6. Car wash interceptor	$60.00 per interceptor
*7. Garage catch basin	$60.00 per basin
*8. Grease interceptor	$60.00 per interceptor
*9. Oil interceptor	$60.00 per interceptor
*10. Sanitary dump station	$60.00 per station
*11. Chemical waste system	$60.00 per system
12. Controlled roof drainage system, does not include conventional building storm piping	$60.00 per system
13. Engineered plumbing system	minimum $225.00 or as determined in sub. (3)
14. Mobile home parks and campground/recreational vehicle parks:	
1-25 sites	$250.00
26-50 sites	$300.00
51-125 sites	$350.00
Over 125 sites	$400.00
15. Private water main	$20.00 per inch diameter
16. Cross connection control devices:	
Reduced pressure principle backflow preventer	$110.00 per device
Reduced pressure detector assembly backflow preventer	$110.00 per device
Vacuum Breaker - anti-siphon, pressure type	$110.00 per device
17. Sanitary private interceptor main sewers, determined on the largest diameter of each interceptor main sewer	$20.00 per inch diameter
18. Storm private interceptor main sewers, determined on the largest diameter of each interceptor main sewer	$8.00 per inch diameter

*Note: For table entries 6 to 11, no additional fee would be required if submitted with the sanitary drain and vent system.

(3) EXAMINATION FEES FOR ADDITIONS AND REMODELING. When new or relocated fixtures or both are connected to the existing piping inside a building, the fee shall be determined in accordance with the following procedures:

(a) *Sanitary building sewer, drain and vent.* 1. Total all of the drainage fixture units which are being added or relocated.

2. Refer to s. ILHR 82.30, Table 82.30-2, and determine the horizontal drain size which would be required if all new or relocated fixtures discharged through one pipe.

ILHR 82 Appendix

Note: Disregard the asterisk limitation regarding water closets. This pipe size is used for determining the fee only and does not necessarily mean this pipe size is used in actual design or installation.

3. Determine fee based on Table 2.64-1, entry 1.

(b) *Building water distribution system.* 1. Total all of the water supply fixture units which are being added or relocated, using s. ILHR 82.40, Tables 82.40-1 and 2, and convert to gallons per minute (GPM) in accordance with s. ILHR 82.40, Table 82.40-3.

2. The fees shall be determined in accordance with GPM demand of the new or relocated fixtures as specified in Table 2.64-2.

Table 2.64-2

GPM	FEE
1-6	$ 17.00
7-12	$ 26.00
13-21	$ 35.00
22-31	$ 43.00
32-46	$ 52.00
47-77	$ 70.00
78-119	$ 87.00
120-170	$105.00
171-298	$122.00

(c) *Building storm sewer and drainage system.* 1. Total each different type of area which the new or relocated drains serve and convert to GPM using ch. ILHR 82, Tables 82.36-1, 2 and 3. To this, add the GPM discharge from any added or relocated clear water drains located inside the building.

2. Refer to ch. ILHR 82, Table 82.36-4, using the column for 1/4 inch per foot pitch, to determine the horizontal drain size which would be required if all new or relocated fixtures discharged through one pipe. Use this pipe size for determining the fee.

3. Determine the fee based on Table 2.64-1, entry 5.

ILHR 2.02 Handling, copying and miscellaneous fees.

(2) PHOTOCOPYING FEES. A photocopying fee of $0.25 per page may be charged.

(3) PLAN REPRODUCTION FEES. A fee of $5.00 per plan sheet shall be charged to the submitting party for plan reproduction on plan sheets larger than legal size. Plan sheets at or smaller than legal size may be charged the normal photocopying fee.

(4) PLAN APPROVAL - ADDITIONAL COPIES. (a) *Plumbing.* Upon request, additional copies of approved plumbing plans, with code violations cited and bearing the approval stamp, beyond the minimum amount required by administrative code or the department, shall be provided upon receipt of a $10.00 fee, plus $5.00 per plan sheet.

ILHR 2.61 Miscellaneous inspections, reviews and services.

(2) REVISIONS. The fee for revisions to previously approved plumbing and private sewage plans shall be $60.00 per plan. This fee shall apply when plans are revised for reasons other than those which were requested by the department.

(3) PRIORITY PLAN REVIEW. An appointment may be made with the department to facilitate the examination of plans. The plans shall comply with the provisions of s. ILHR 82.20, for plumbing, and s. ILHR 83.08, for private sewage. Scheduling of the plans for priority plan review shall be determined in accordance with s. ILHR 82.20, for plumbing, and by appointment for private sewage. The fee for this type of plan examination shall be determined at twice the normal rate.

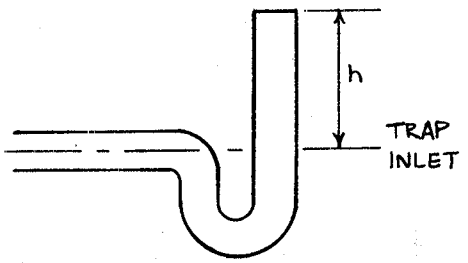
(4) PROJECTS WITHOUT APPROVALS. The fees specified in this subchapter shall be doubled for those projects for which the installation of plumbing has started without departmental approval.

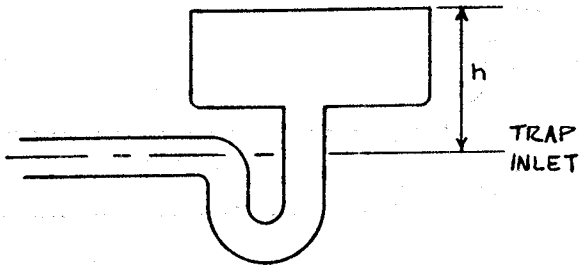
(5) MISCELLANEOUS SERVICES. When the department provides goods or services not specifically covered in this section, fees may be charged to organizations requesting such goods and services.

A-82.30 (4) The following tables lists the maximum GPM which can be expected to readily flow through a given size trap where the receptor has a height as indicated.

Also listed is a maximum drainage fixture unit load which a given size receptor trap may be expected to adequately receive.

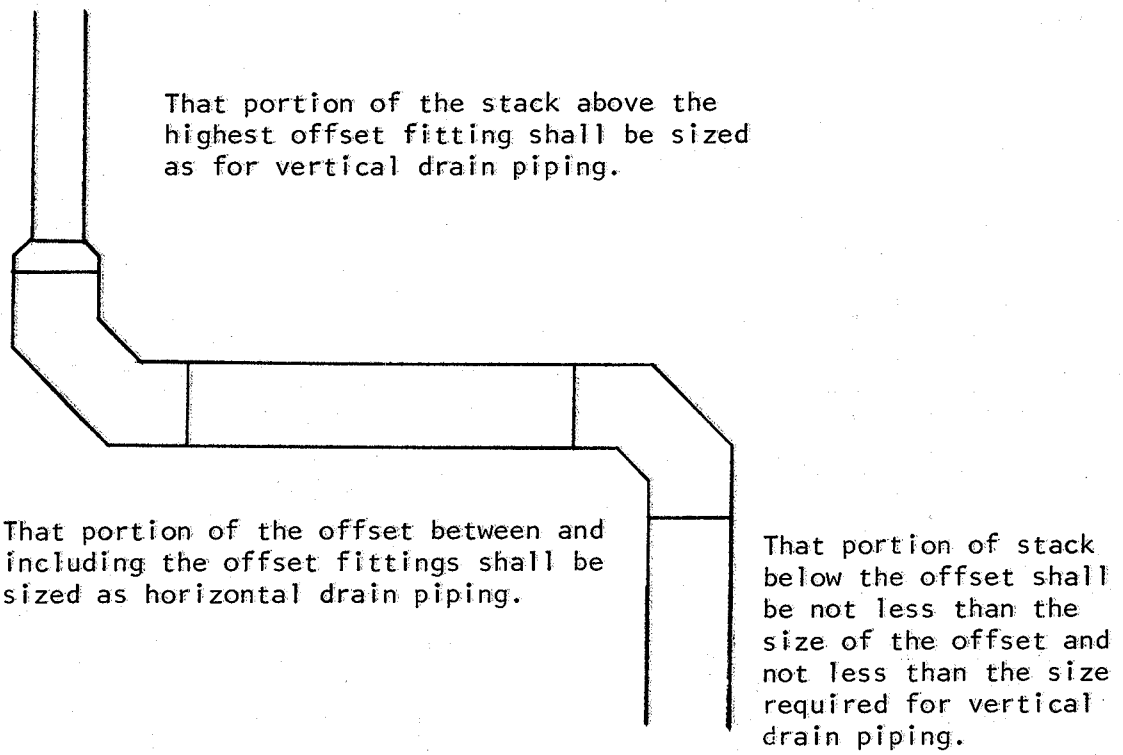
Note: The department recommends an individual 4-inch diameter minimum trap and drain pipe for a commercial type dishwasher.

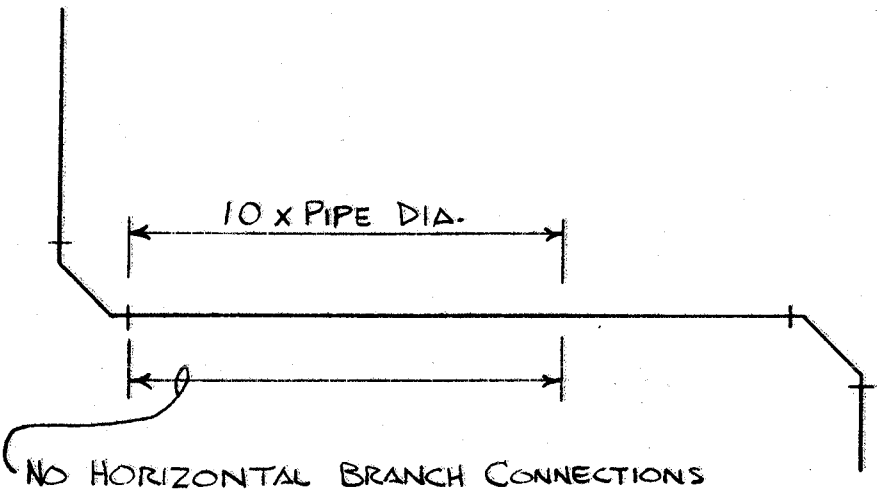




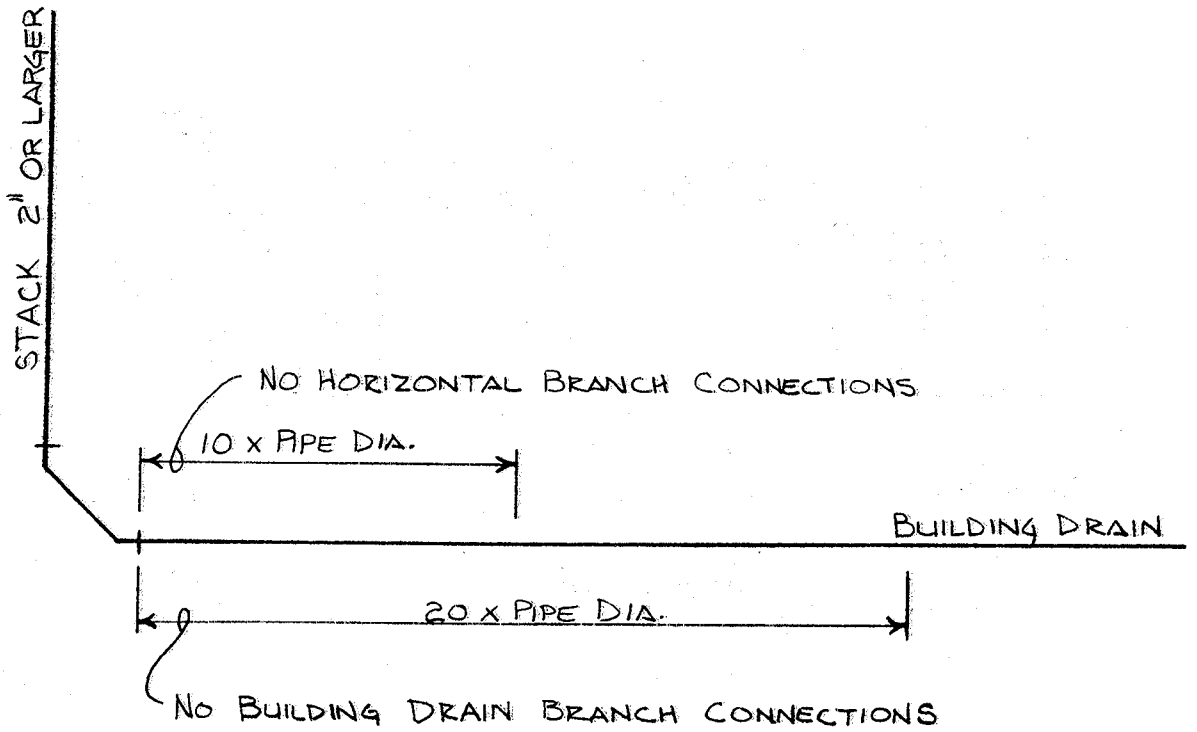
Receptor Trap size	H Height	GPM	d.f.u.
1-1/2"	12"	4	2
2"	14"	8	4
3"	15"	12	6
4"	17"	40	20
5"	20"	70	35
6"	22"	120	60
8"	25"	250	125

A-82.30 (6) (b) OFFSETS IN VERTICAL DRAINS.

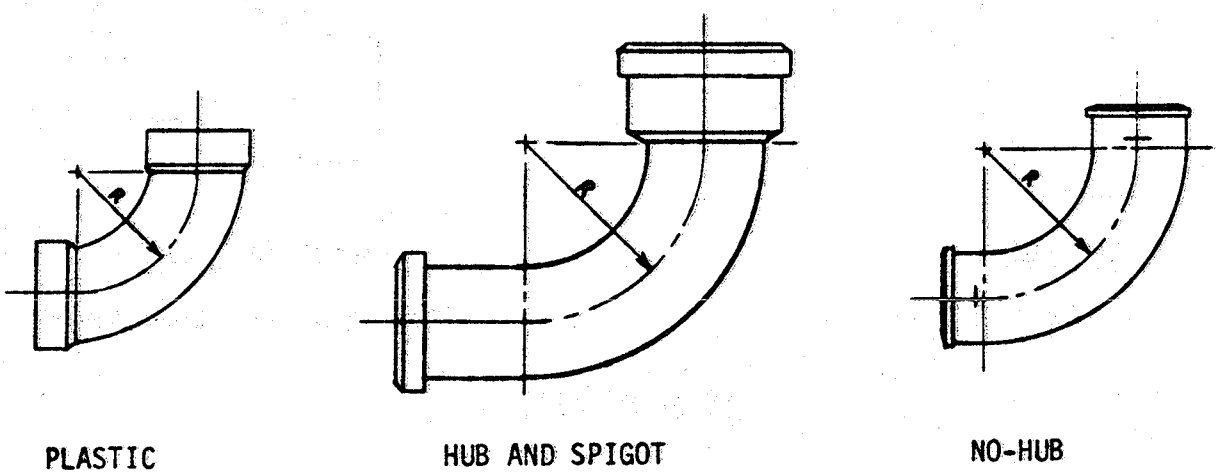




A-82.30 (7) HORIZONTAL BRANCH DRAIN CONNECTION AT BASE OF A STACK.

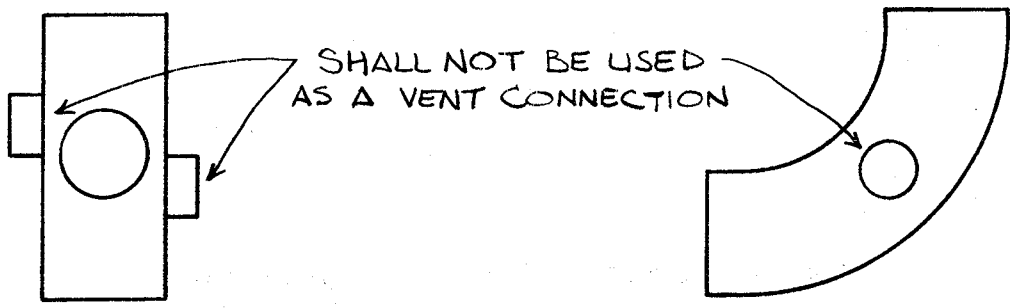


A-82.30 (8) MEASURING RADIUS OF A FITTING.



ILHR 82 Appendix

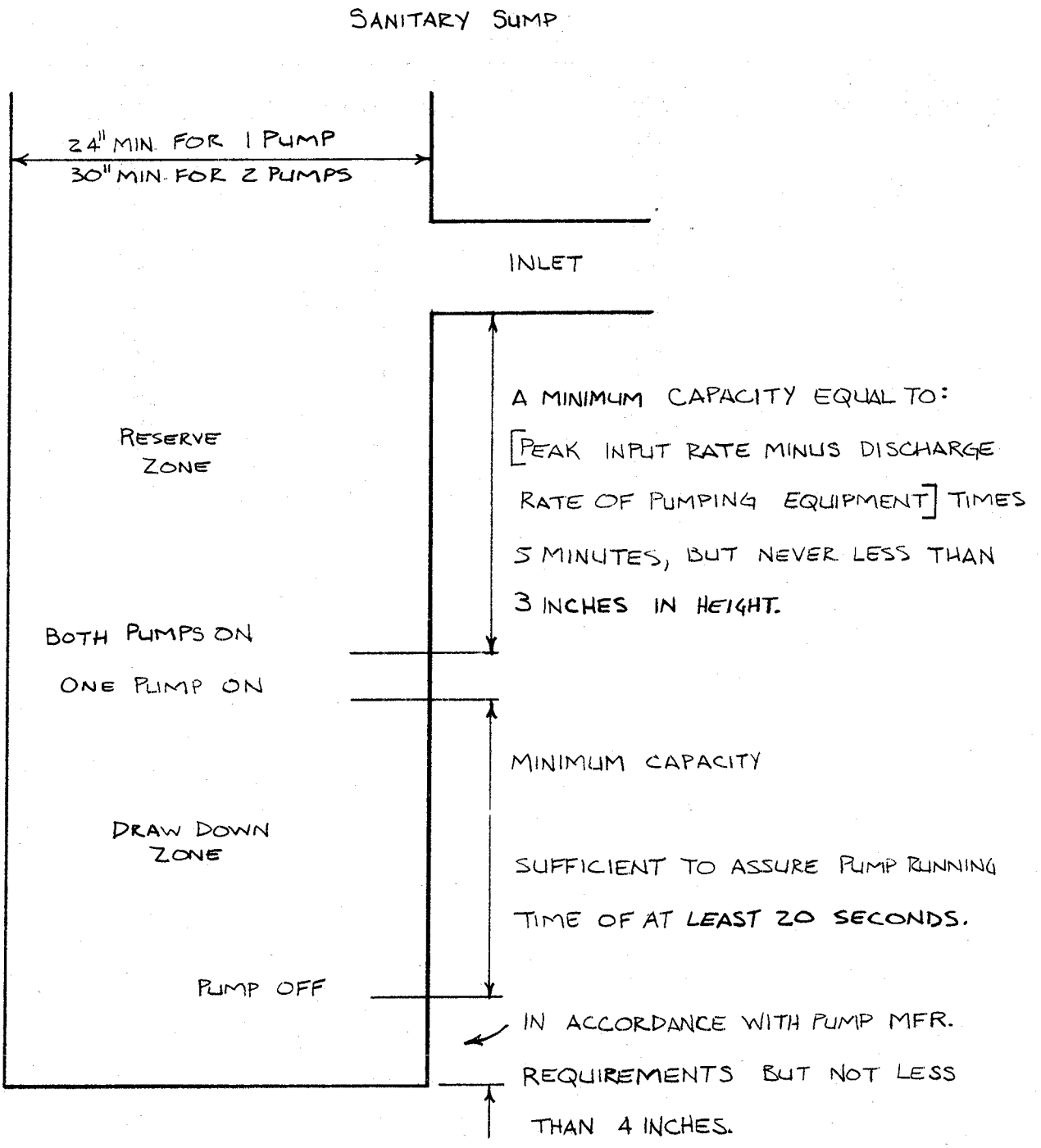
A-82.30 (9) DRAIN FITTINGS AND CONNECTIONS.



SIDE INLETS

HEEL INLETS

A-82.30 (10) (a) DETERMINING REQUIRED CAPACITY OF SANITARY SUMP.



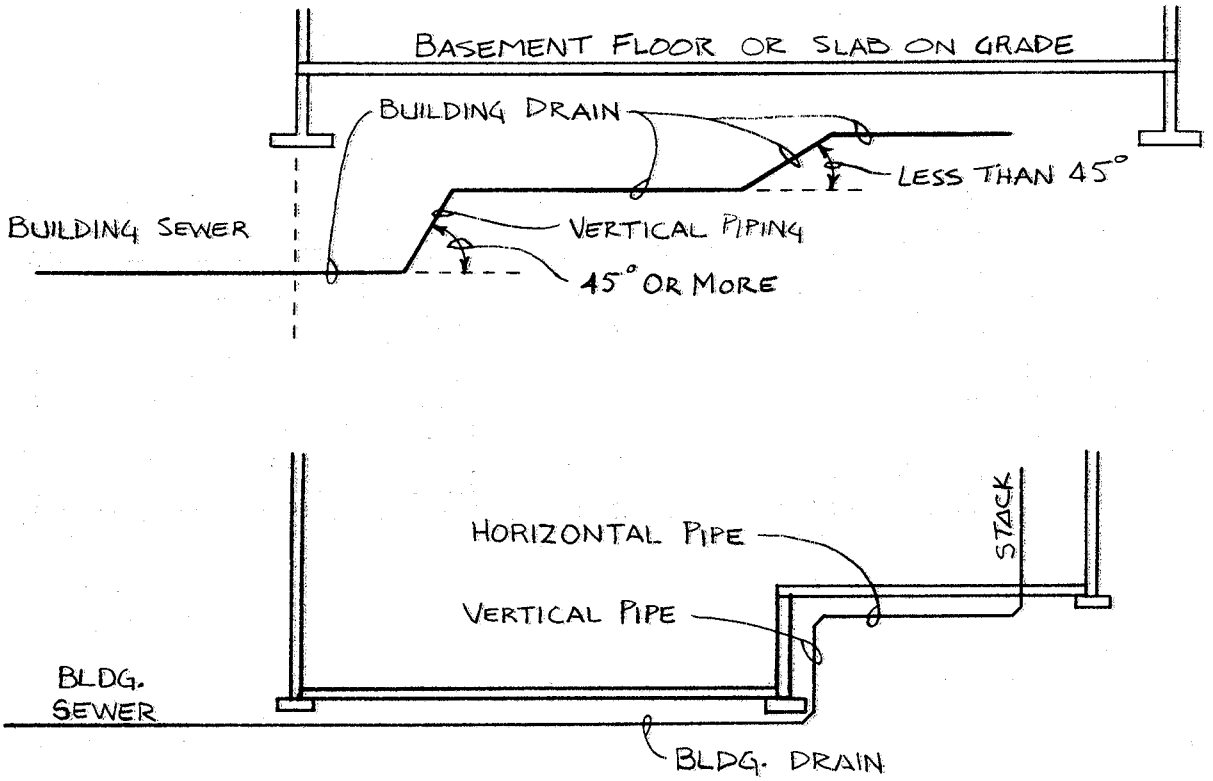
ILHR 82 Appendix

A-82.30 (10) (a)

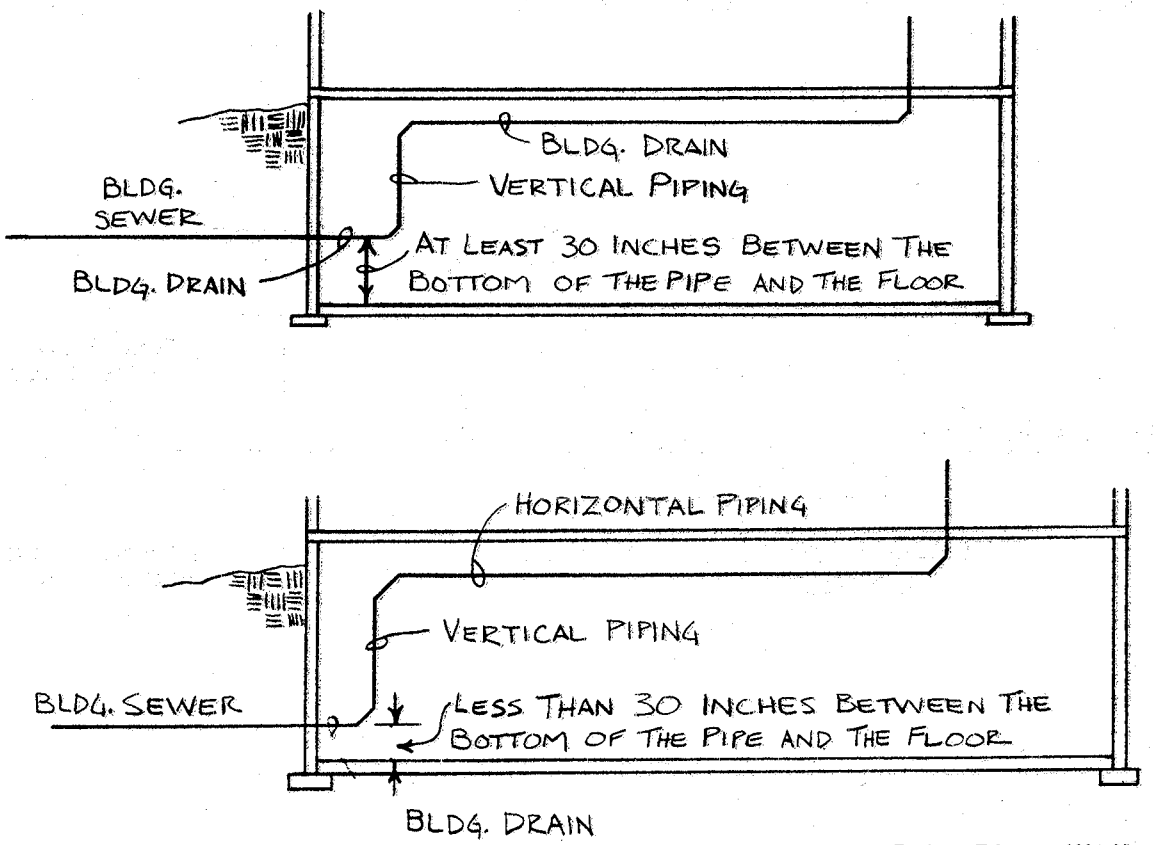
Capacity of Sumps
(in gallons)

Diameter of sump in inches	Volume in gal/ft	Diameter of sump in inches	Volume in gal/ft
24	23.5	41	68.6
25	25.5	42	72.1
26	27.6	43	75.5
27	29.7	44	79.1
28	32.0	45	82.7
29	34.3	46	86.5
30	36.8	47	90.2
31	39.2	48	94.0
32	41.8	54	119.0
33	44.5	60	147.0
34	47.2	66	178.0
35	50.0	72	211.5
36	52.8	78	248.4
37	55.9	84	288.1
38	59.0	90	330.8
39	62.1	96	376.3
40	65.3	108	477.3

A-82.30 (11) (b) BUILDING DRAINS SERVING ANY BUILDING.

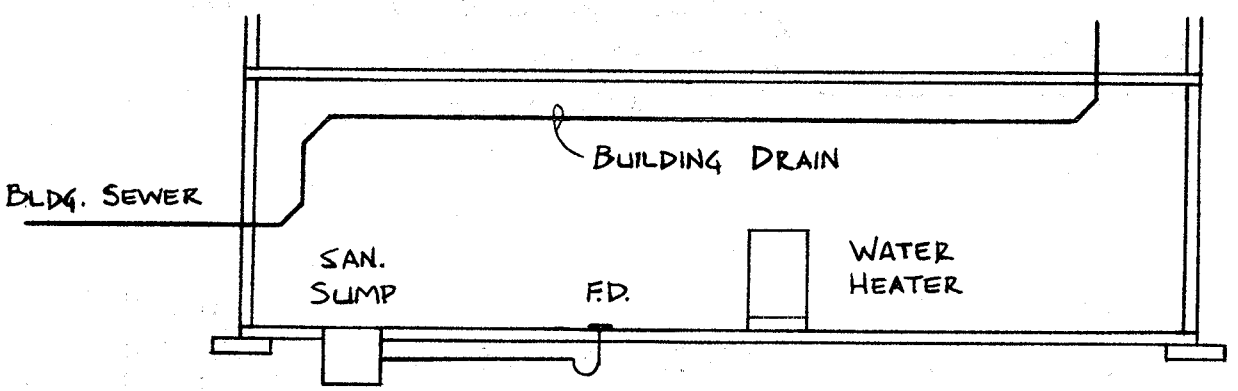


A-82.30 (11) (b) BUILDING DRAINS SERVING DWELLING UNITS.

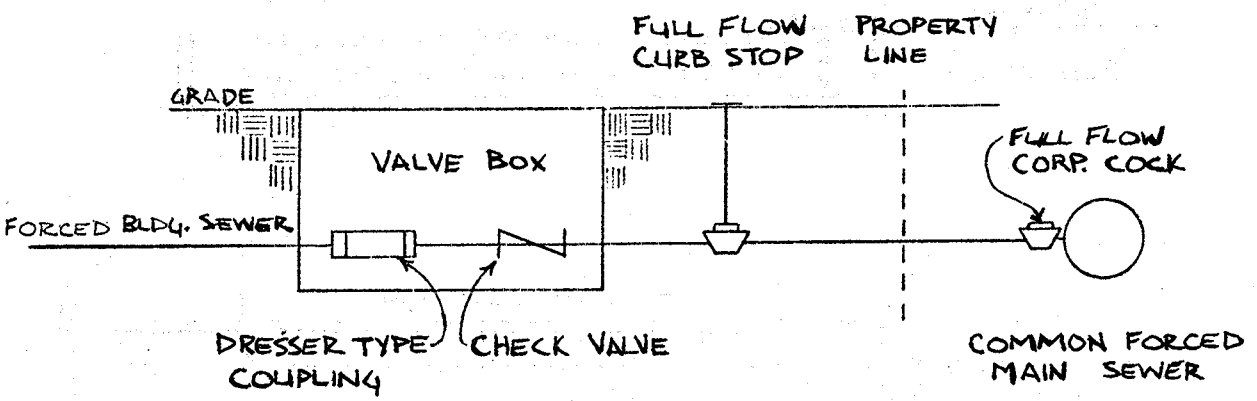


ILHR 82 Appendix

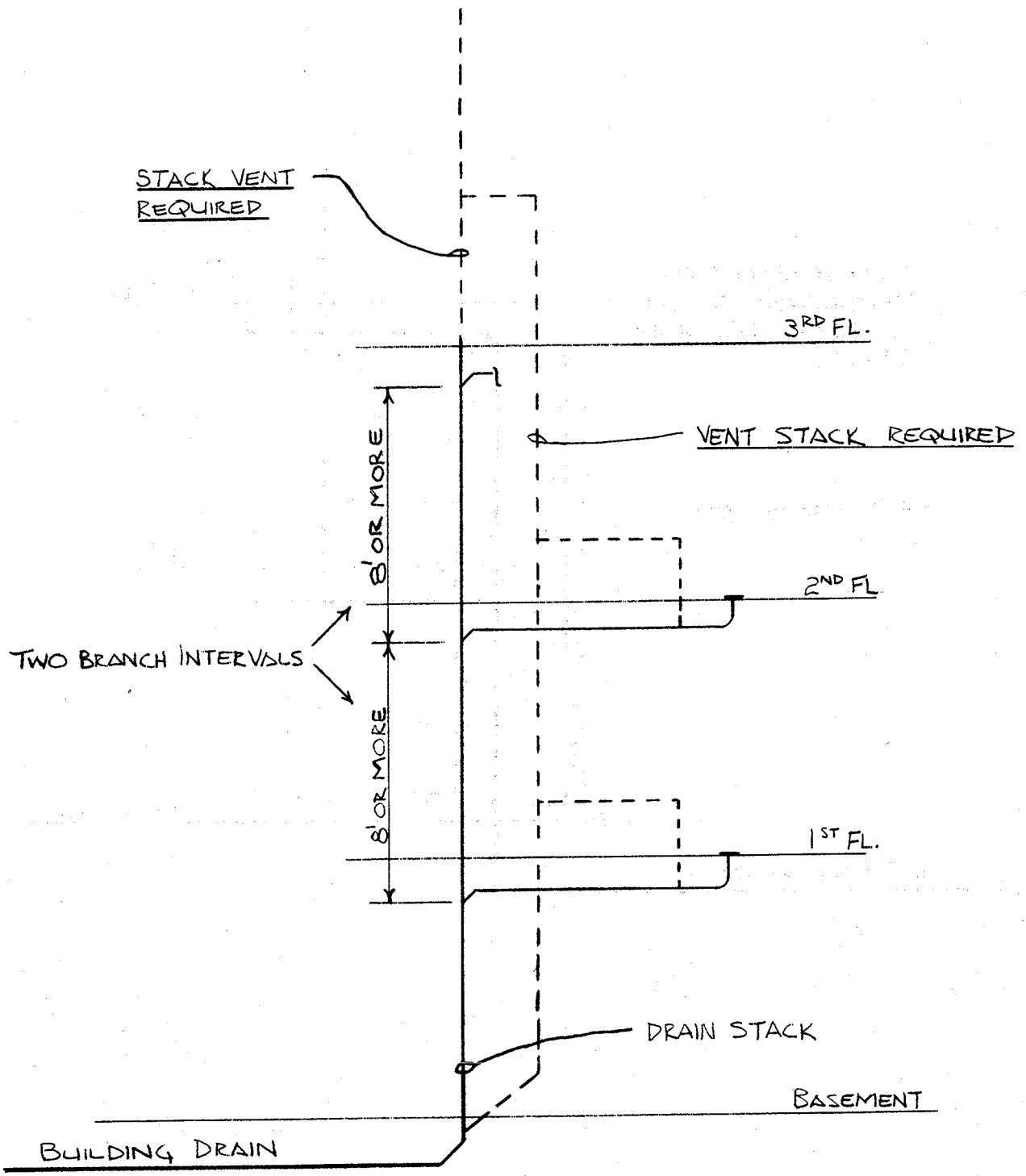
A-82.30 (11) (b) FLOOR DRAIN REQUIRED.



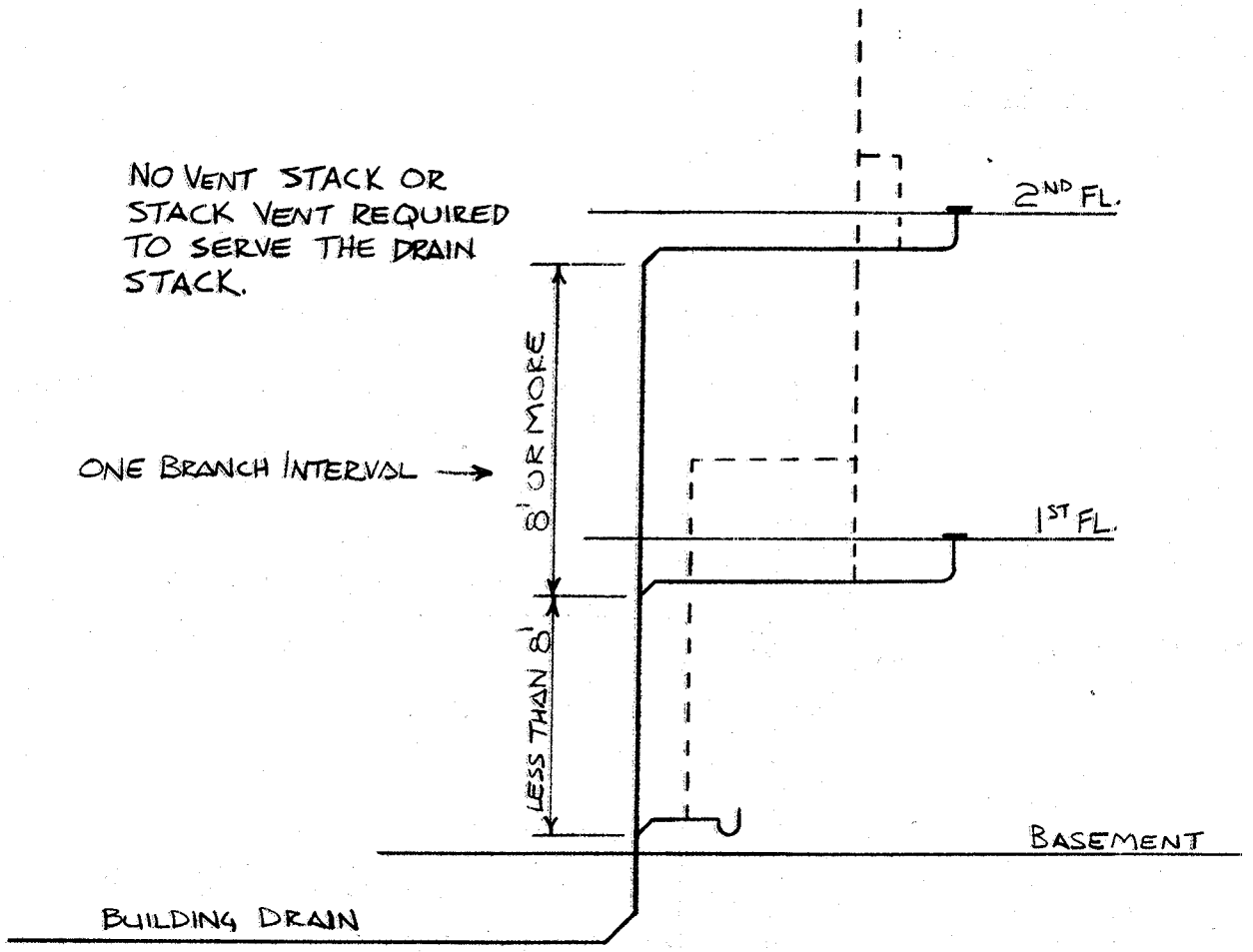
A-82.30 (11) (f) CONNECTION TO PRESSURIZED PUBLIC SEWER.



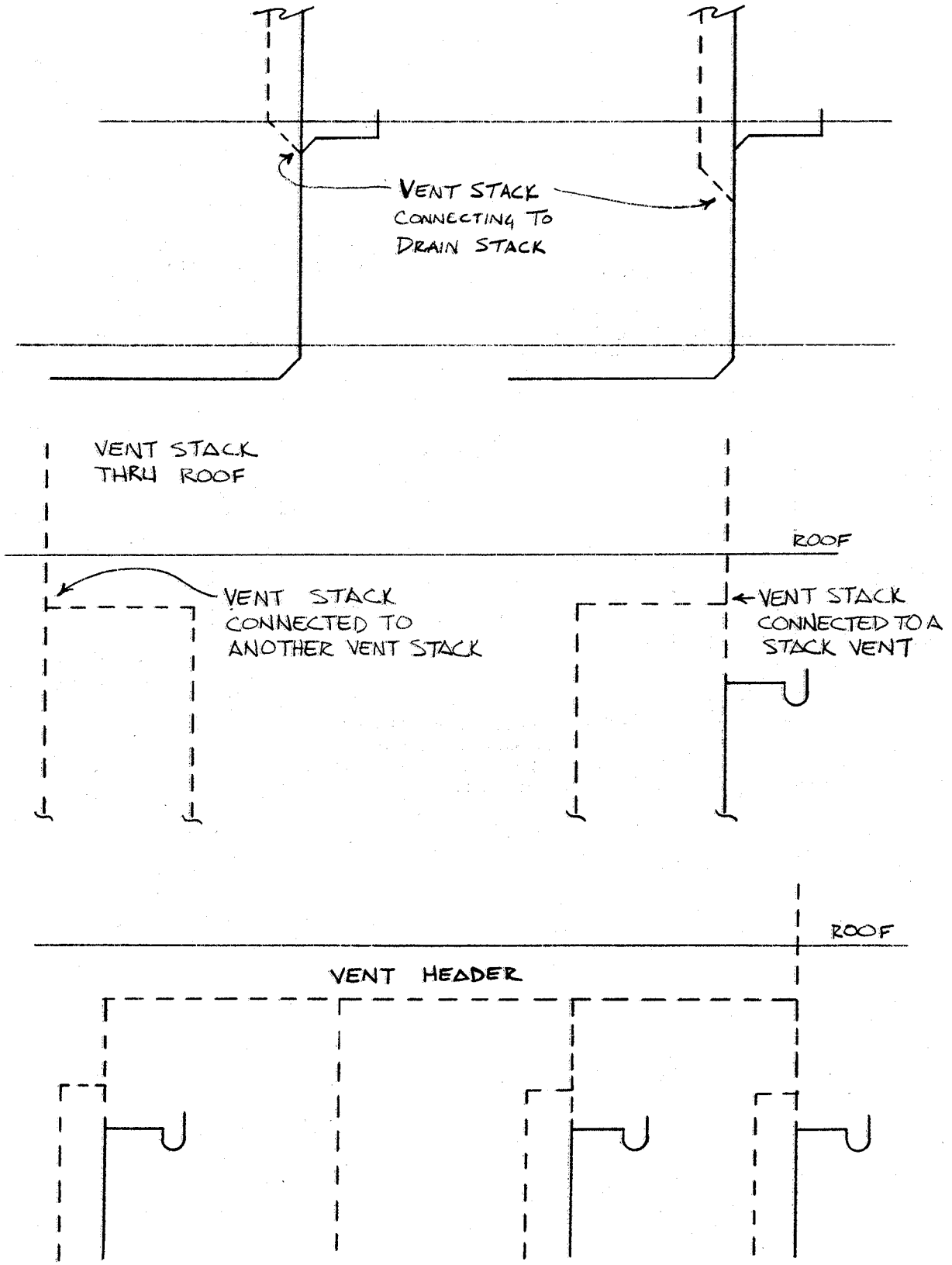
A-82.31 (4) (a) WHERE A VENT STACK AND STACK VENT ARE REQUIRED.



A-82.31 (4) (a) WHERE A VENT STACK AND STACK VENT ARE NOT REQUIRED.

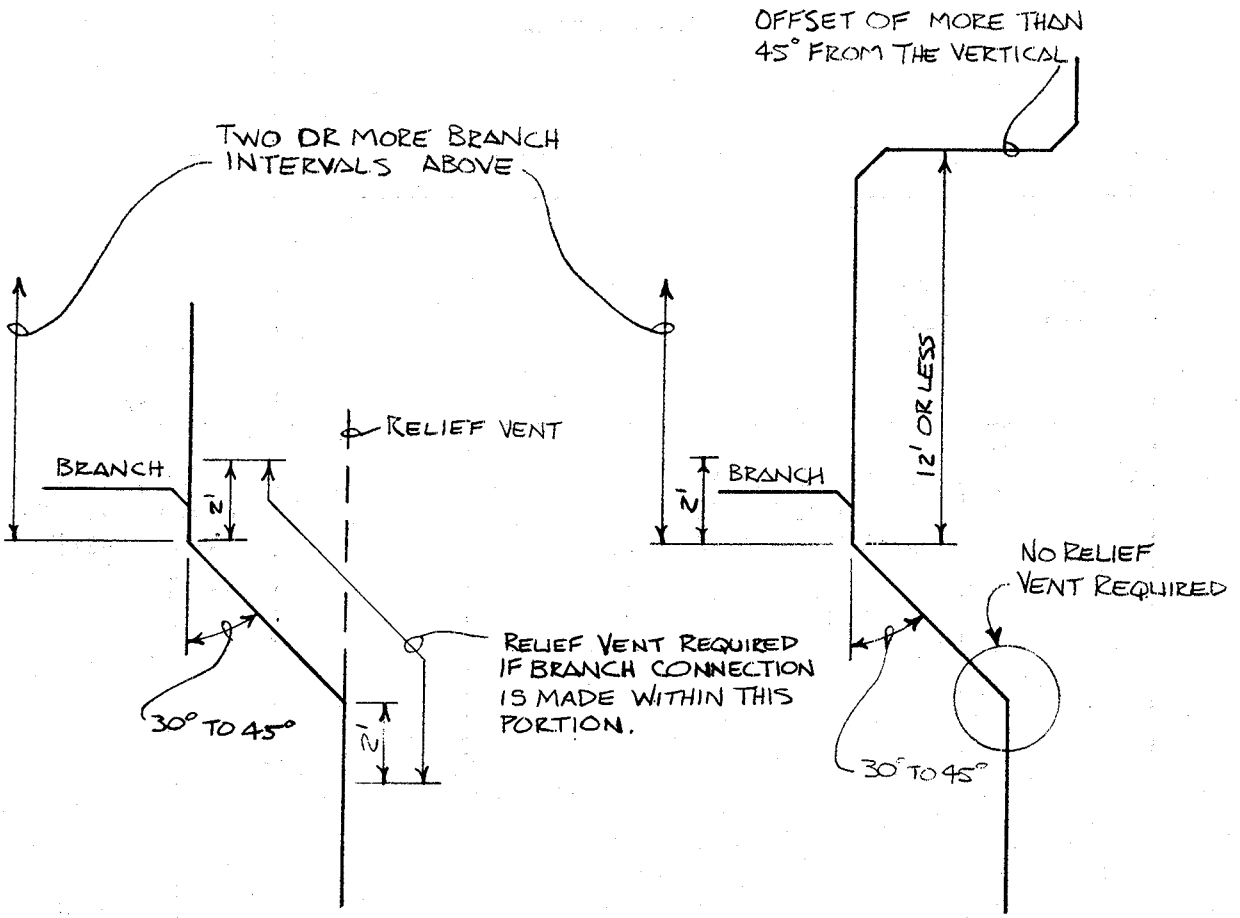


A-82.31 (4) (b) INSTALLATION OF VENT STACK AND STACK VENT.

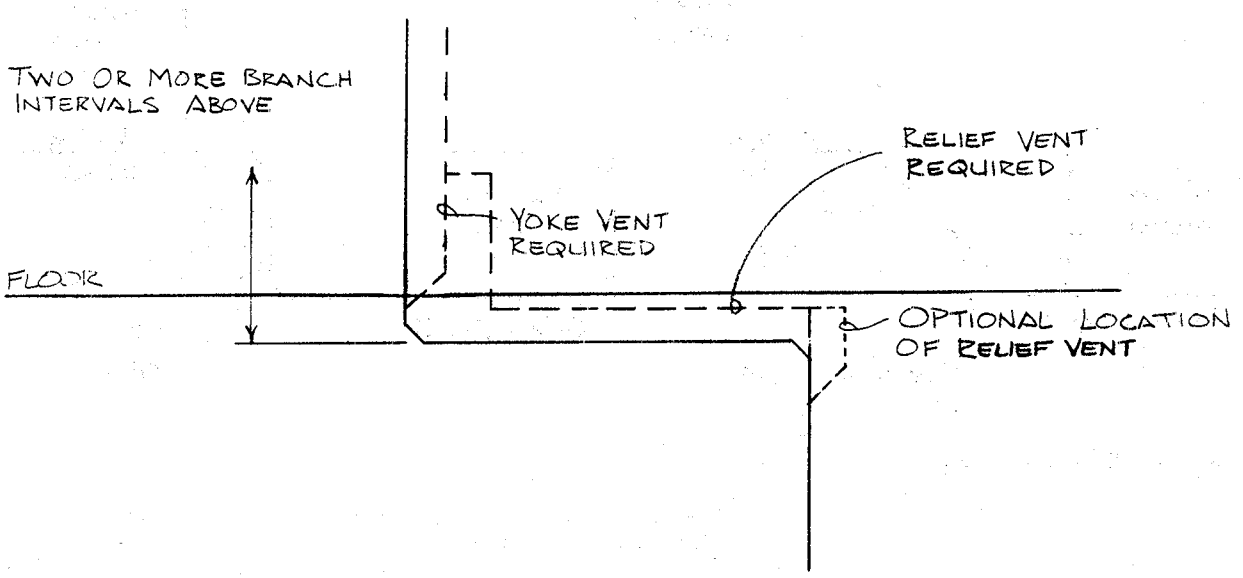


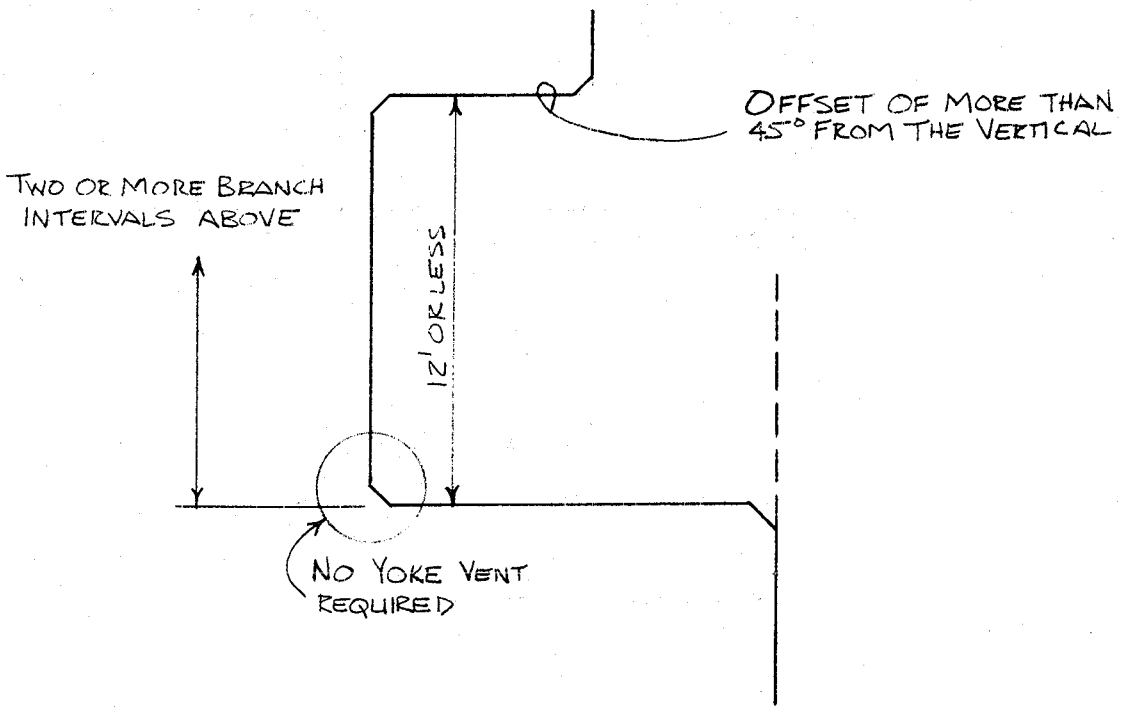
ILHR 82 Appendix

A-82.31 (5) (a) RELIEF VENT FOR OFFSETS OF 30 TO 45 DEGREES.

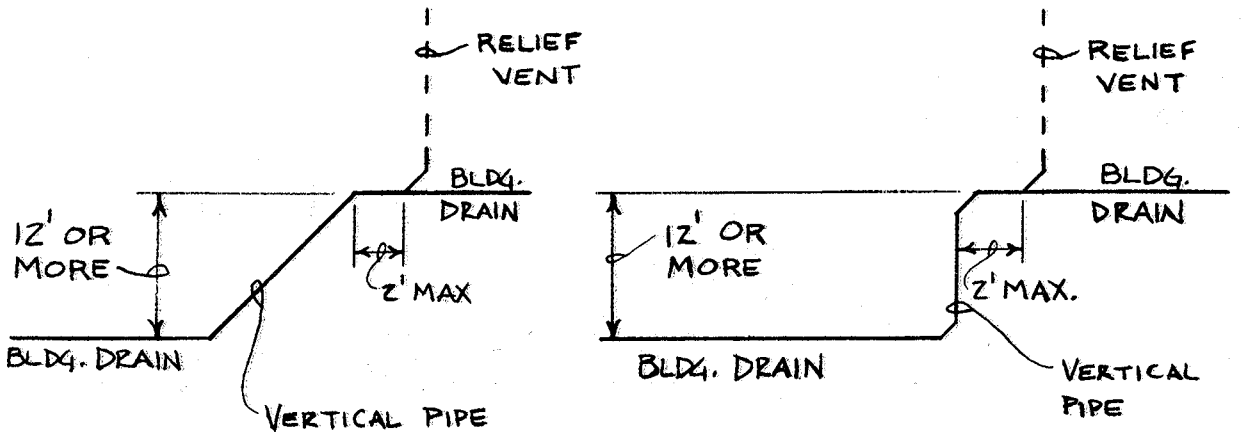


A-82.31 (5) (b) RELIEF AND YOKE VENTS FOR OFFSETS OF MORE THAN 45 DEGREES.

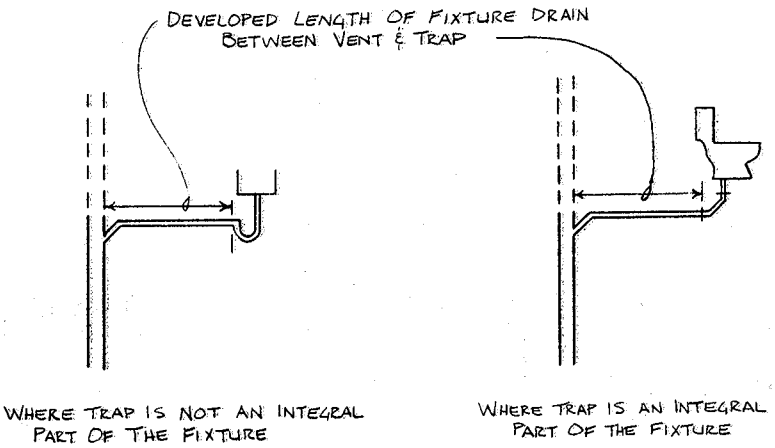


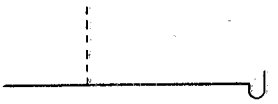


A-82.31 (7) RELIEF VENTS FOR BUILDING DRAINS.



A-82.31 (9) FIXTURE VENTS.

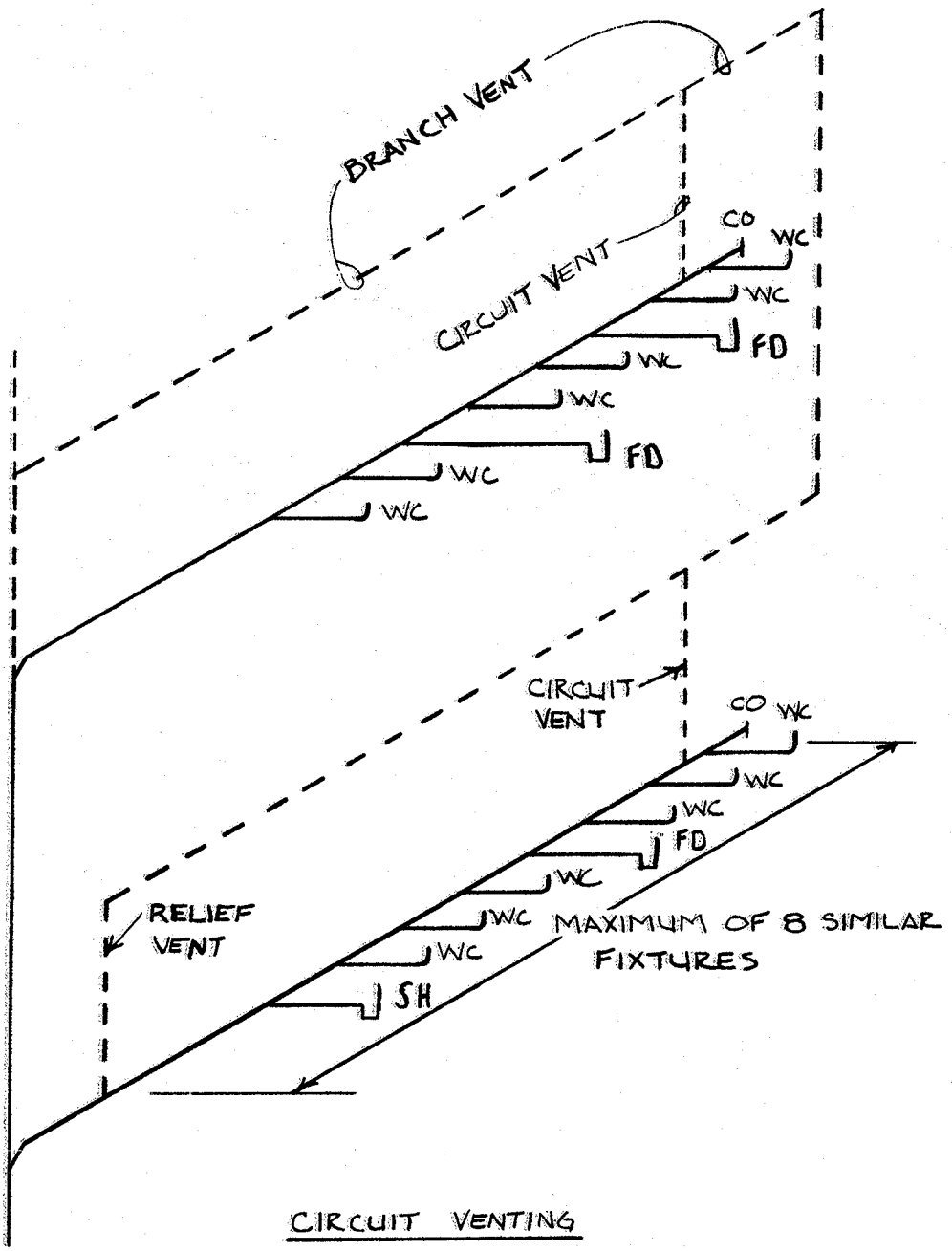




VENT CONNECTING TO HORIZONTAL DRAIN PIPING

VENT CONNECTING TO VERTICAL DRAIN PIPING

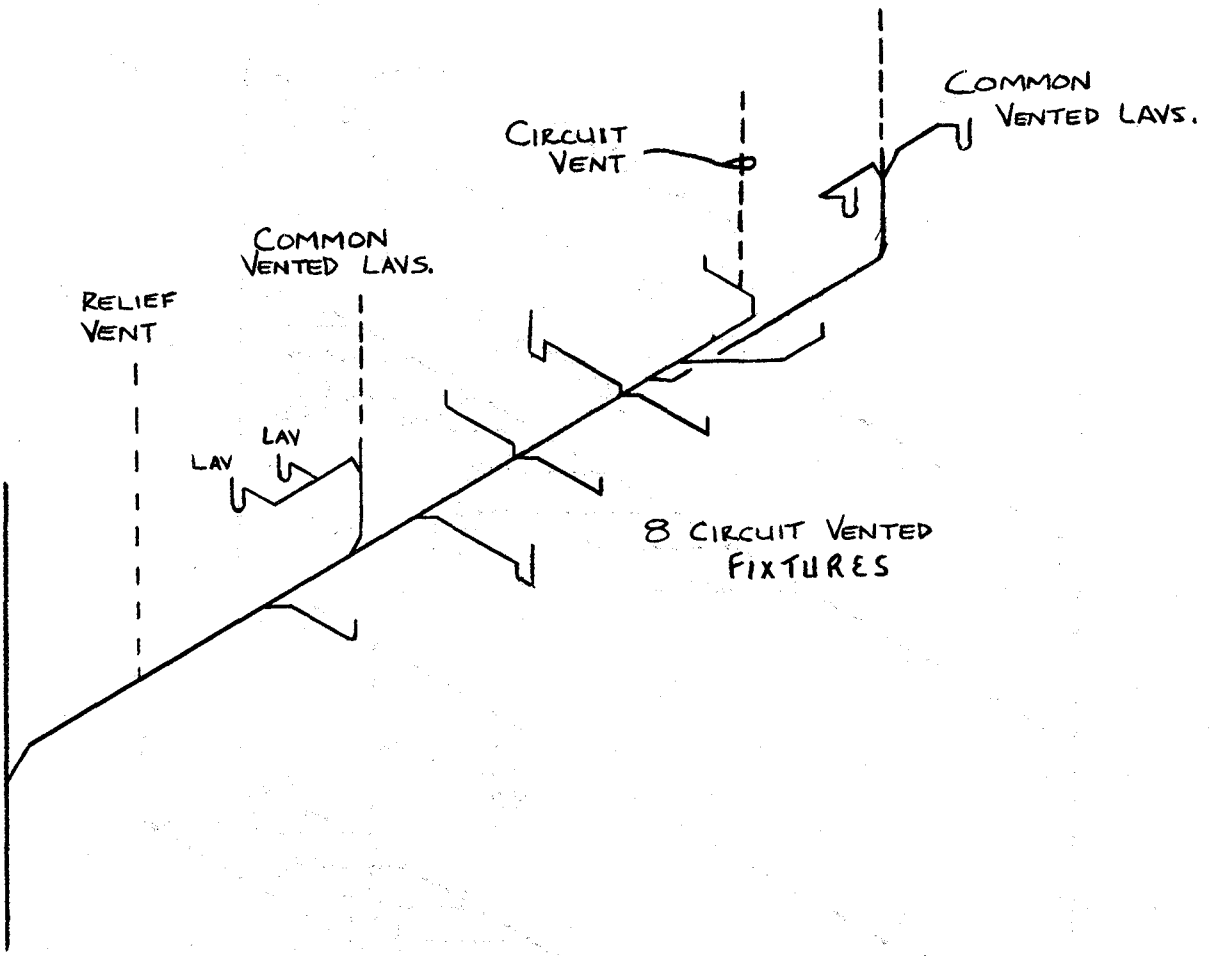
A-82.31 (10) CIRCUIT VENTING.



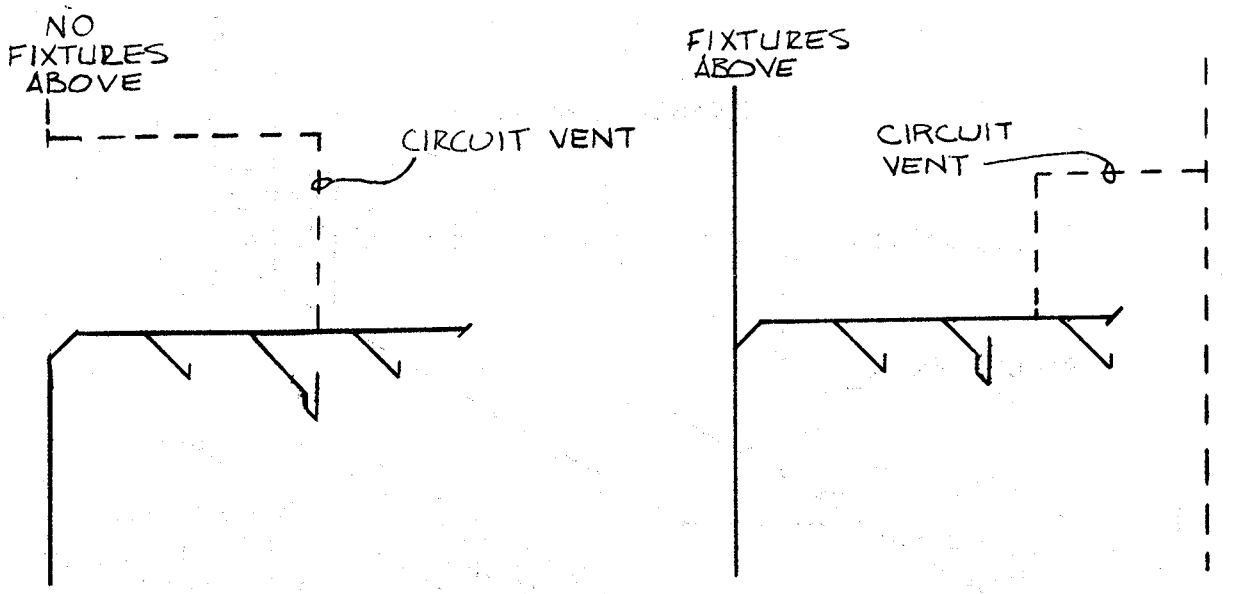
CIRCUIT VENTING

ILHR 82 Appendix

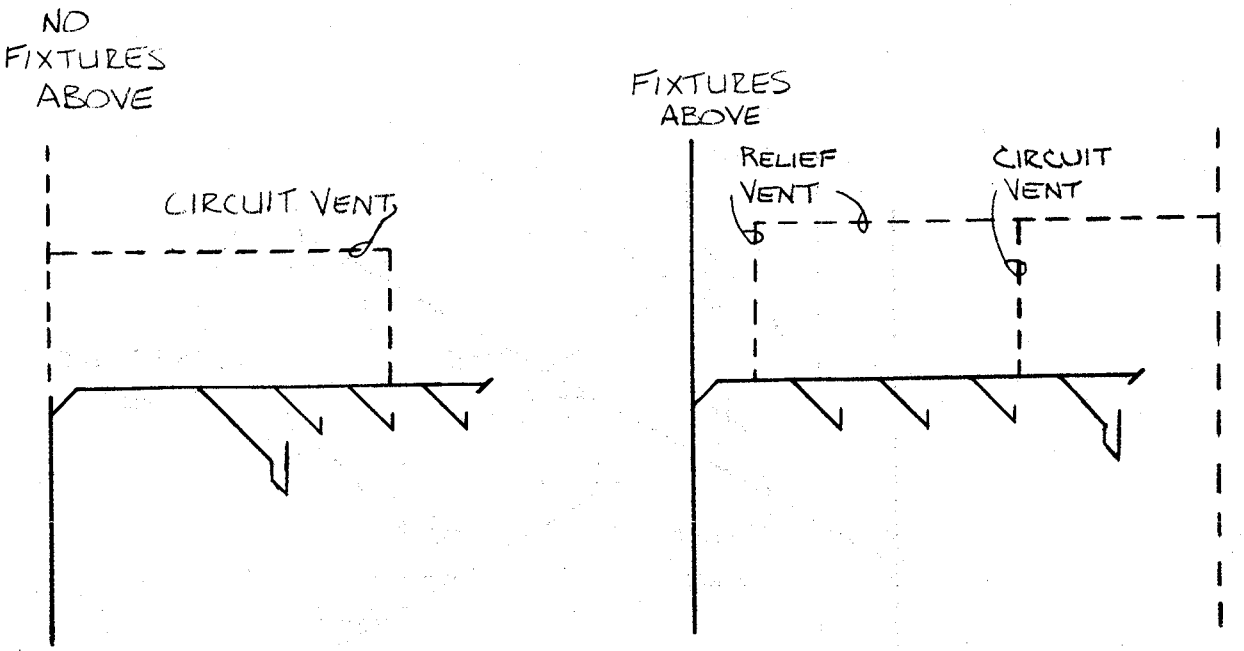
A-82.31 (10) CIRCUIT VENTING.



A-82.31 (10) CIRCUIT VENTING.



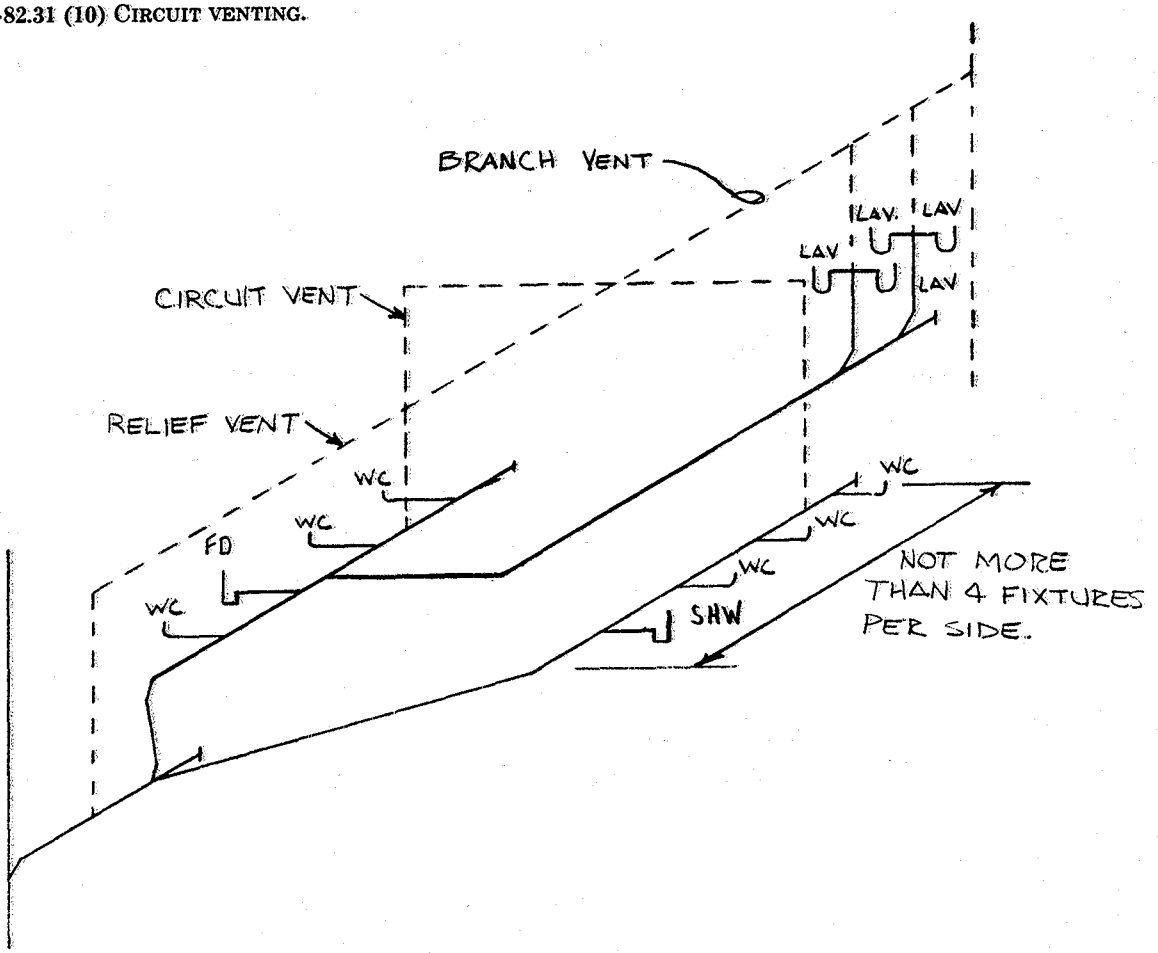
CIRCUIT VENTING 3 FIXTURES

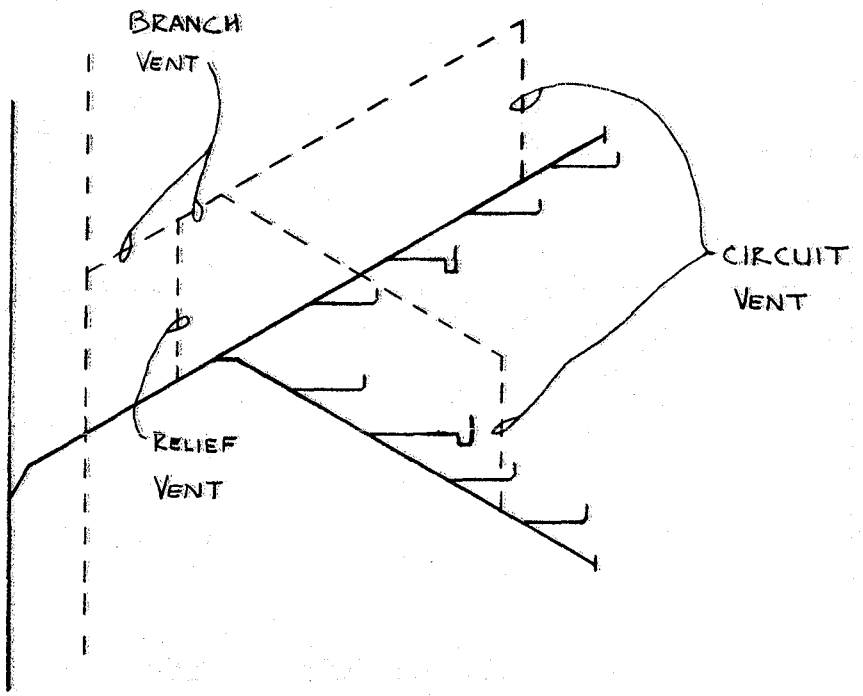


CIRCUIT VENTING 4 OR MORE FIXTURES

ILHR 82 Appendix

A-82.31 (10) CIRCUIT VENTING.

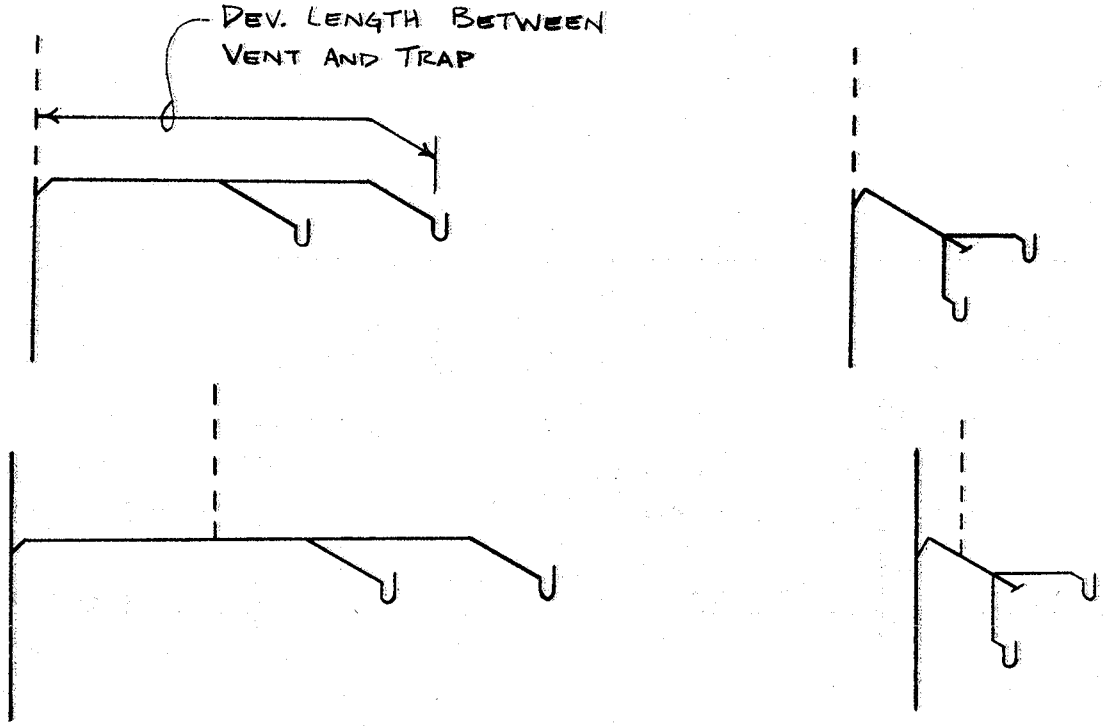




A-82.31 (11) (a) COMMON VENTS, VERTICAL DRAINS.

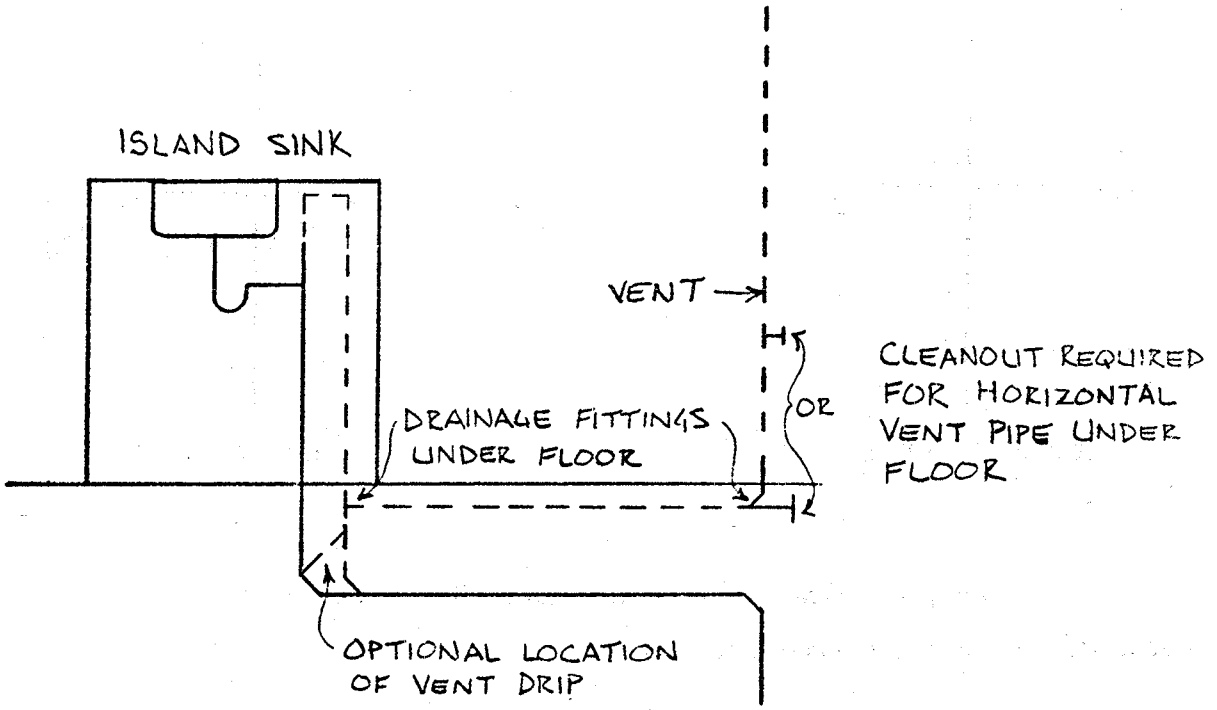
COMMON VENT SERVING ANY TWO FIXTURES

A-82.31 (11) (b) COMMON VENTS, HORIZONTAL DRAINS.

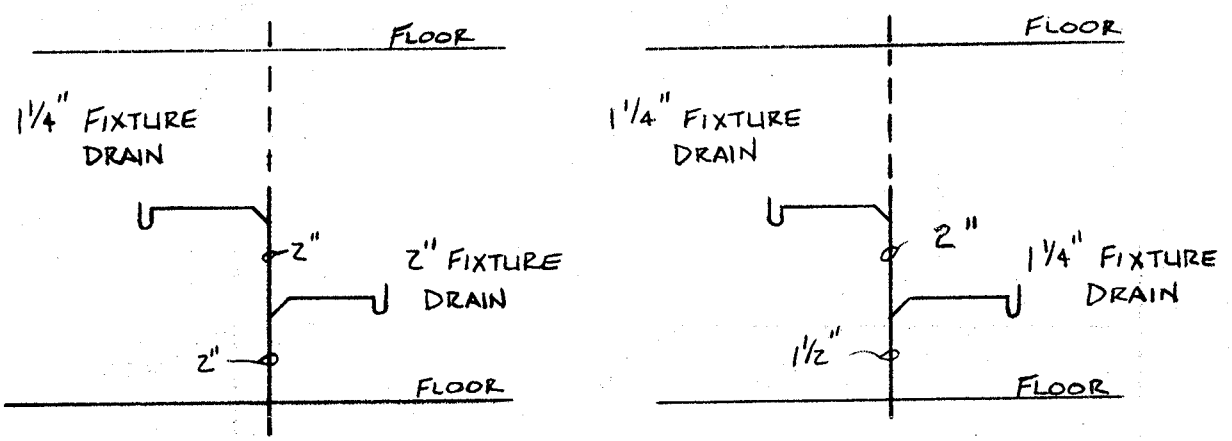


COMMON VENTS SERVING TWO LAVATORIES OR TWO COMPARTMENTS OF ONE KITCHEN SINK

A-82.31 (12) ISLAND FIXTURE VENTING.

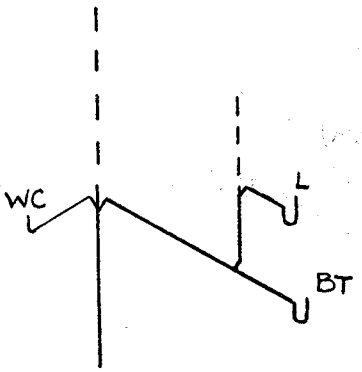


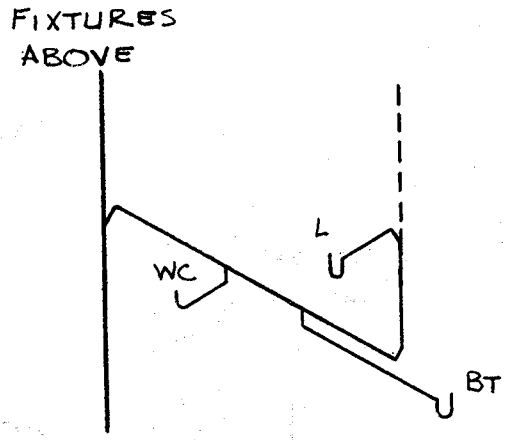
A-82.31 (13) (a) VERTICAL WET VENTS.

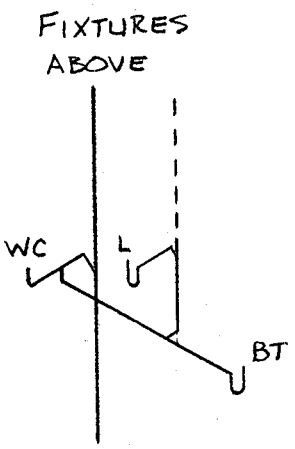


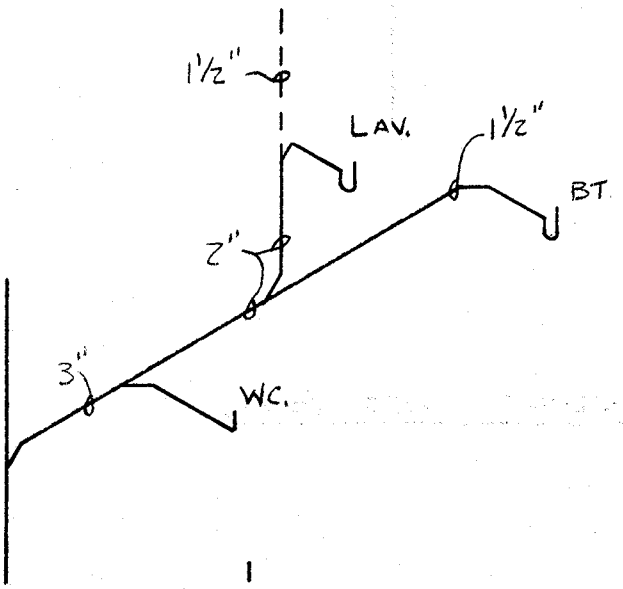
VERTICAL WET VENT

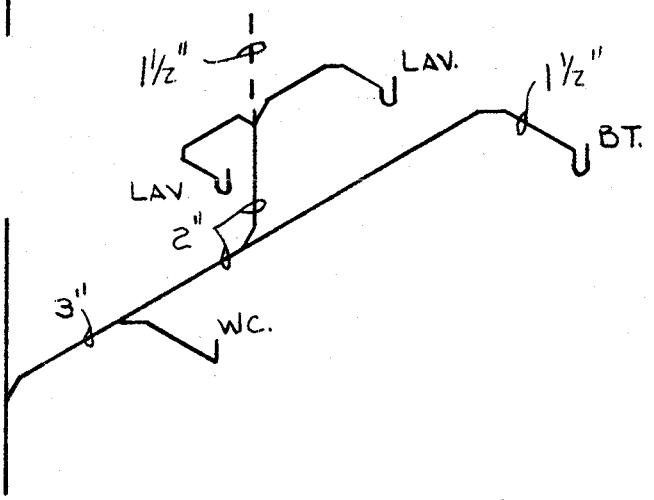
A-82.31 (13) (b) HORIZONTAL WET VENTS.





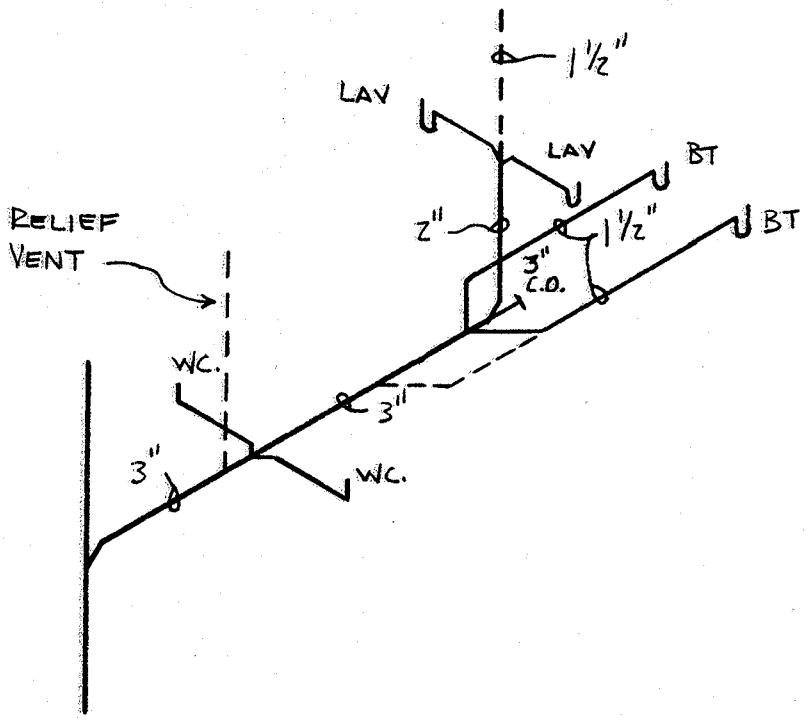




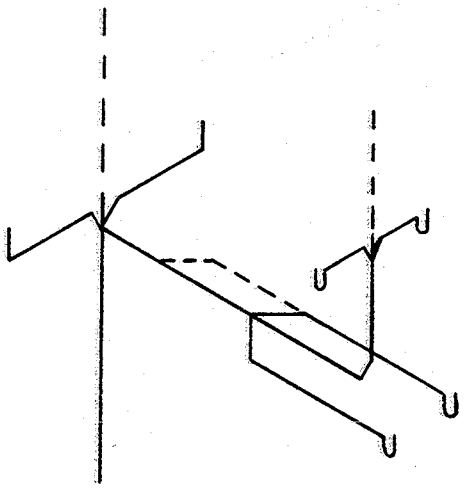


ILHR 82 Appendix

A-82.31 (13) (b) HORIZONTAL WET VENTS.

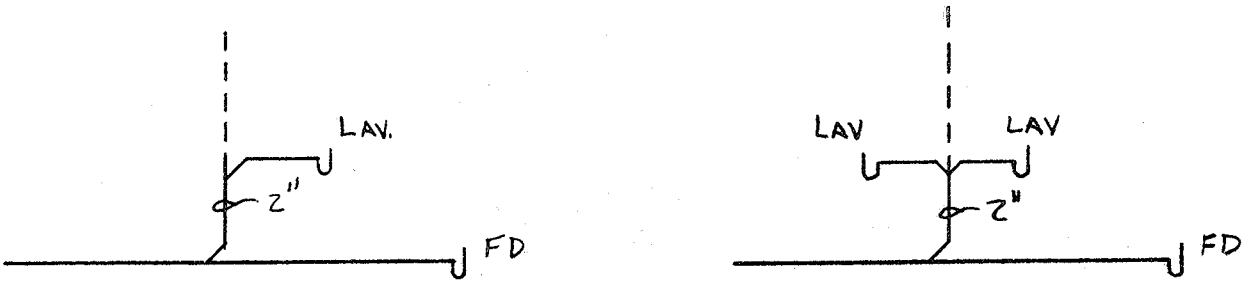


HORIZONTAL WET VENTS

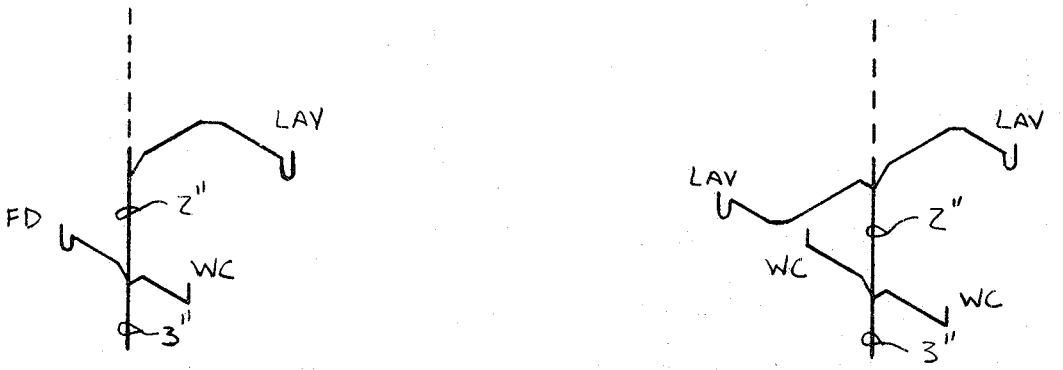


BACK-TO-BACK TOP FLOOR

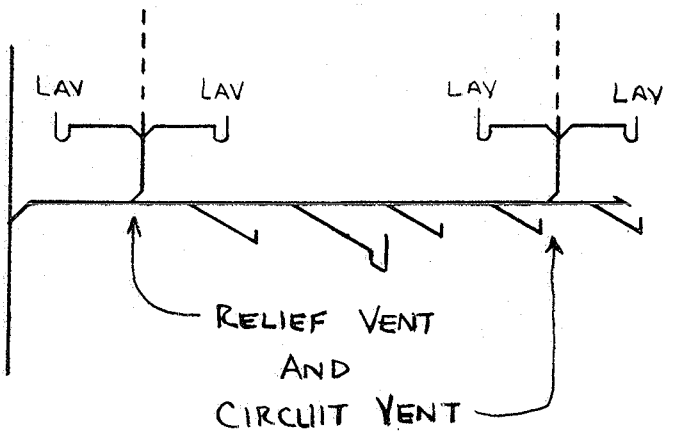
A-82.31 (13) (c) WET VENTING - FLOOR OUTLET FIXTURES.



INDIVIDUAL VENT FOR FLOOR OUTLET FIXTURE SERVING AS A WET VENT



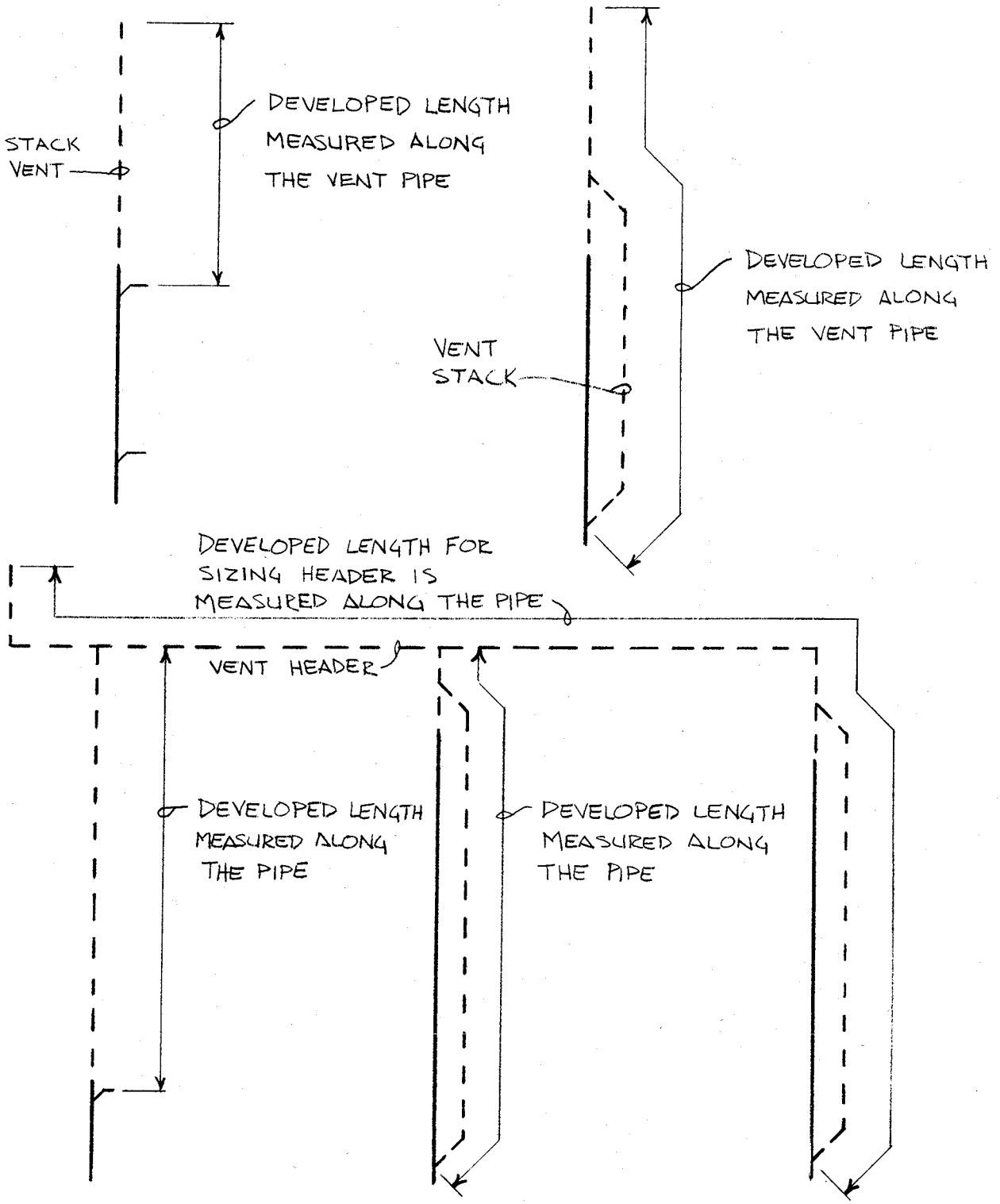
COMMON VENT FOR FLOOR OUTLET FIXTURES SERVING AS A WET VENT



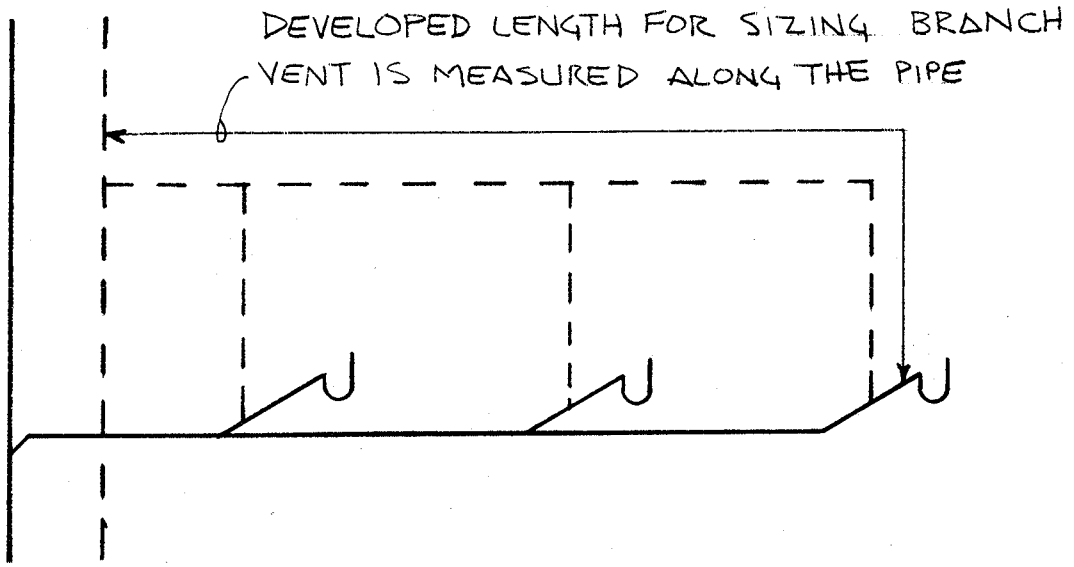
SERVING AS A WET VENT

ILHR 82 Appendix

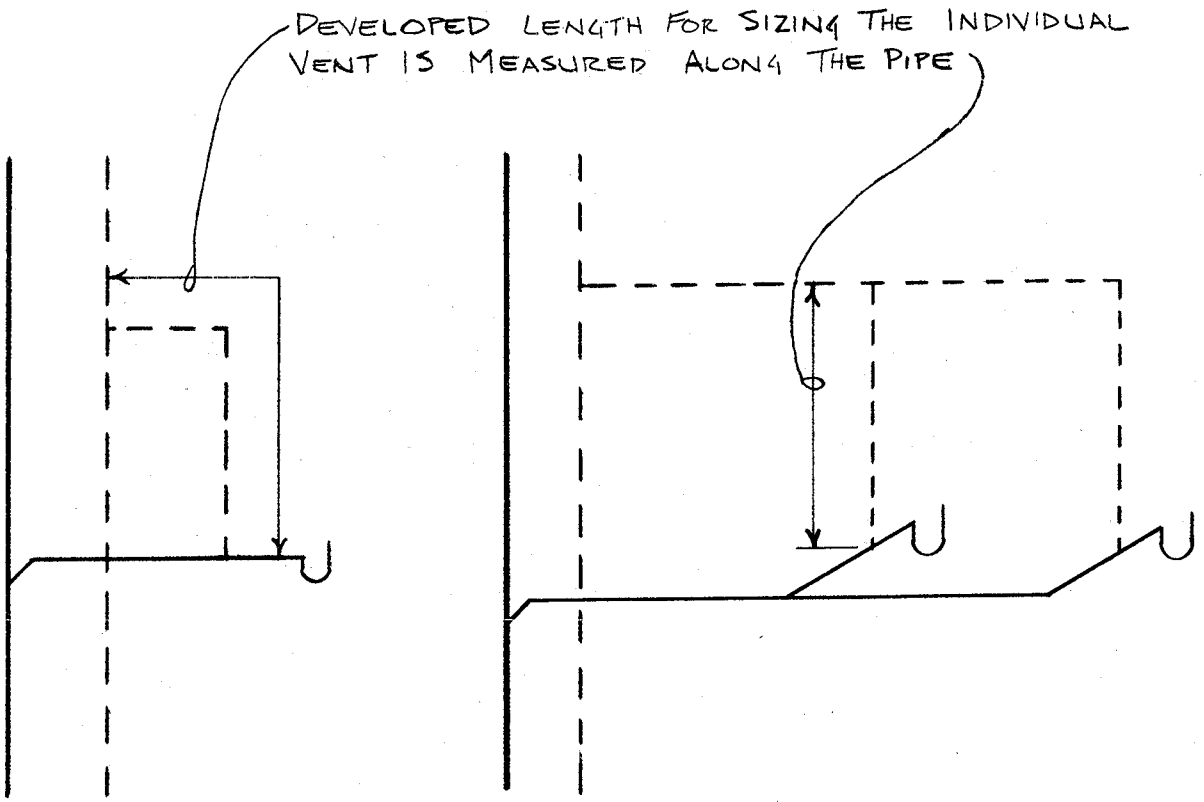
A-82.31 (14) (a) and (b) SIZING VENT STACKS AND STACK VENTS.



A-82.31 (14) (c) SIZING BRANCH VENTS.

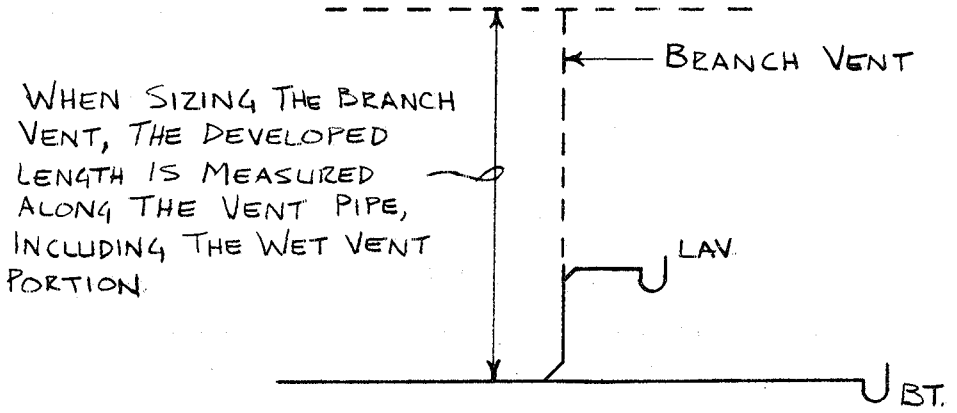


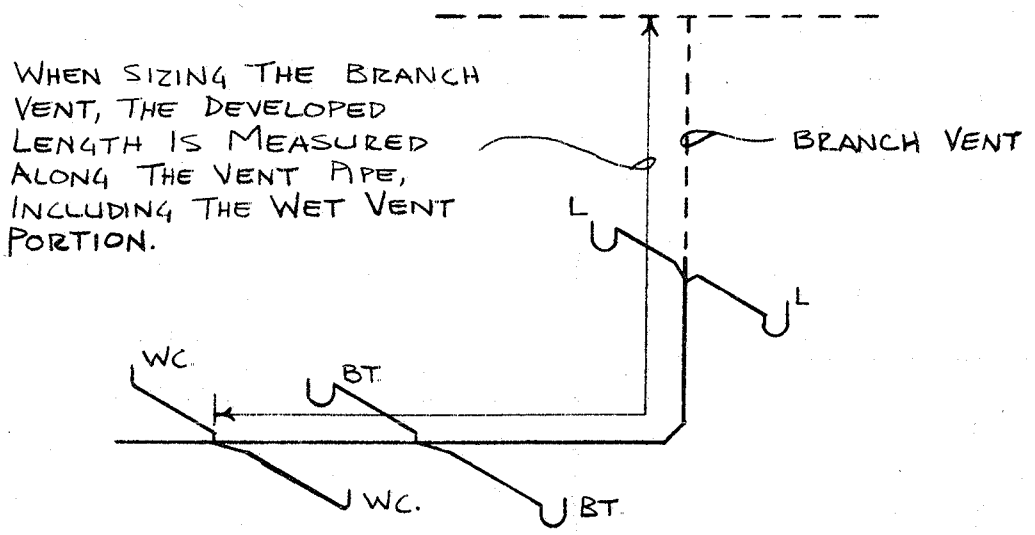
A-82.31 (14) (d) SIZING INDIVIDUAL VENTS.



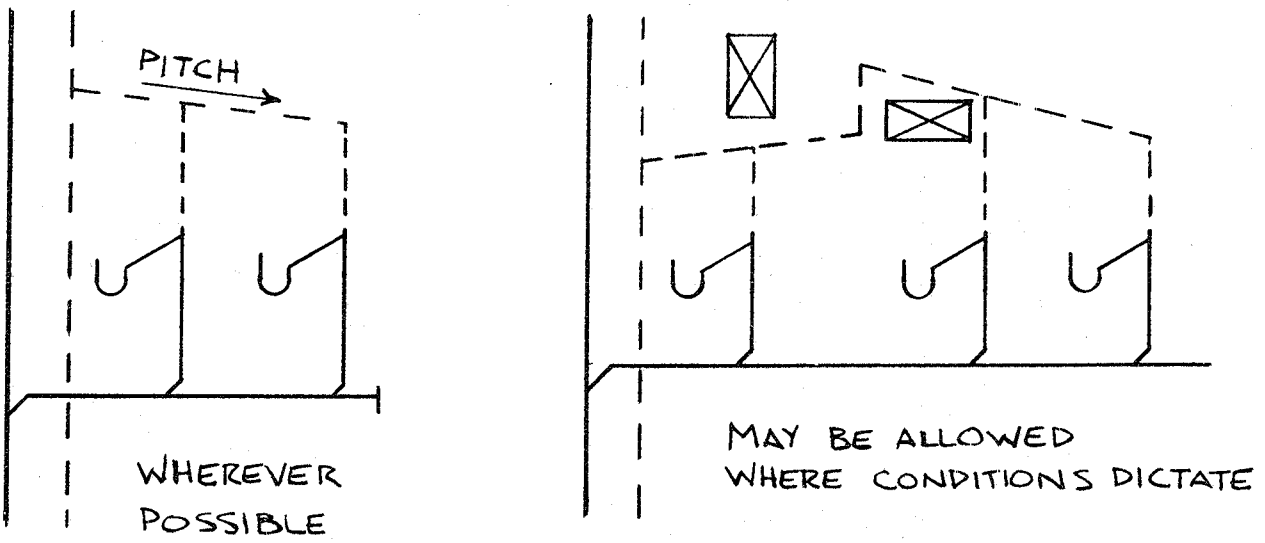
ILHR 82 Appendix

A-82.31 (14) (c) SIZING BRANCH VENTS SERVING A WET VENT.

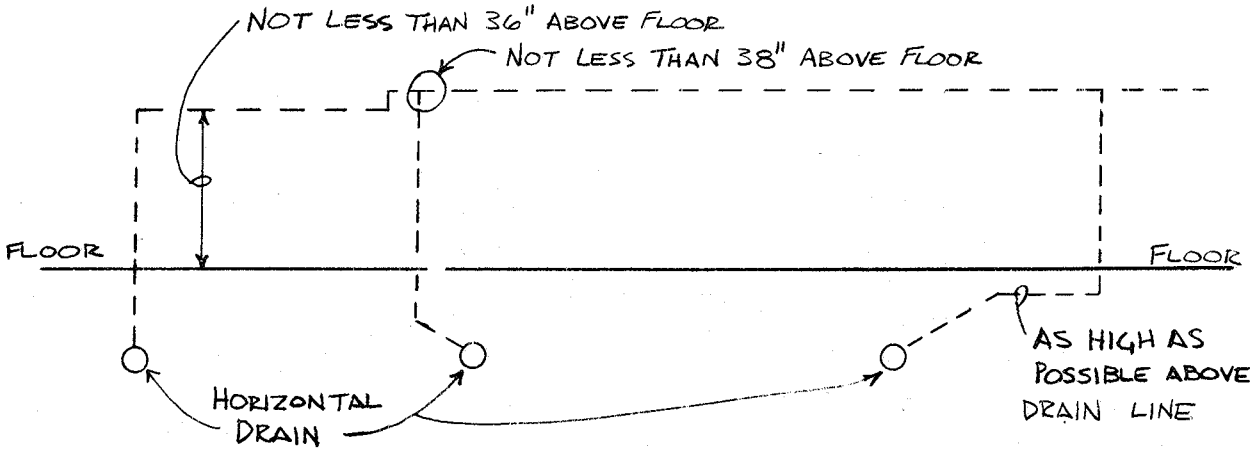




A-82.31 (15) (a) VENT GRADES AND CONNECTIONS.

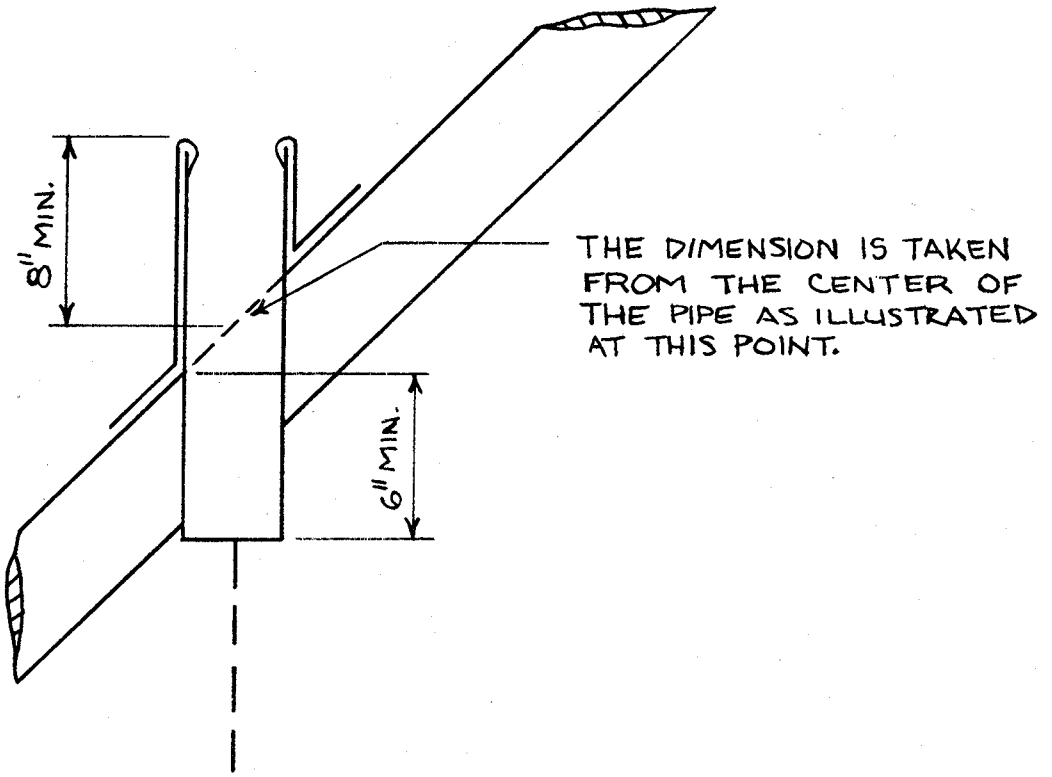


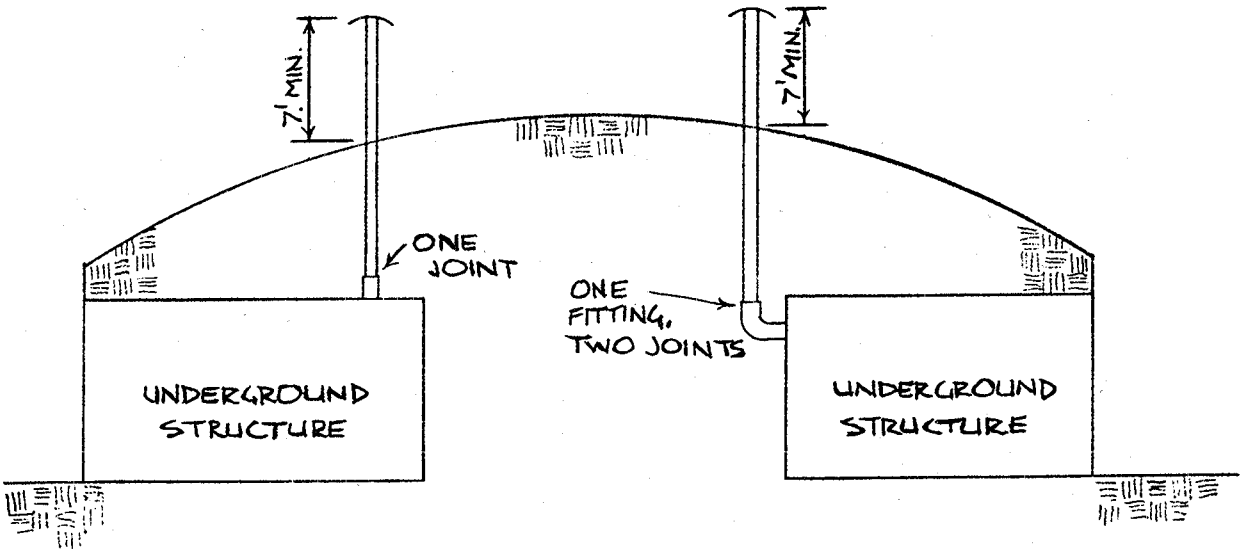
A-82.31 (15) (b) VENT GRADES AND CONNECTIONS.



ILHR 82 Appendix

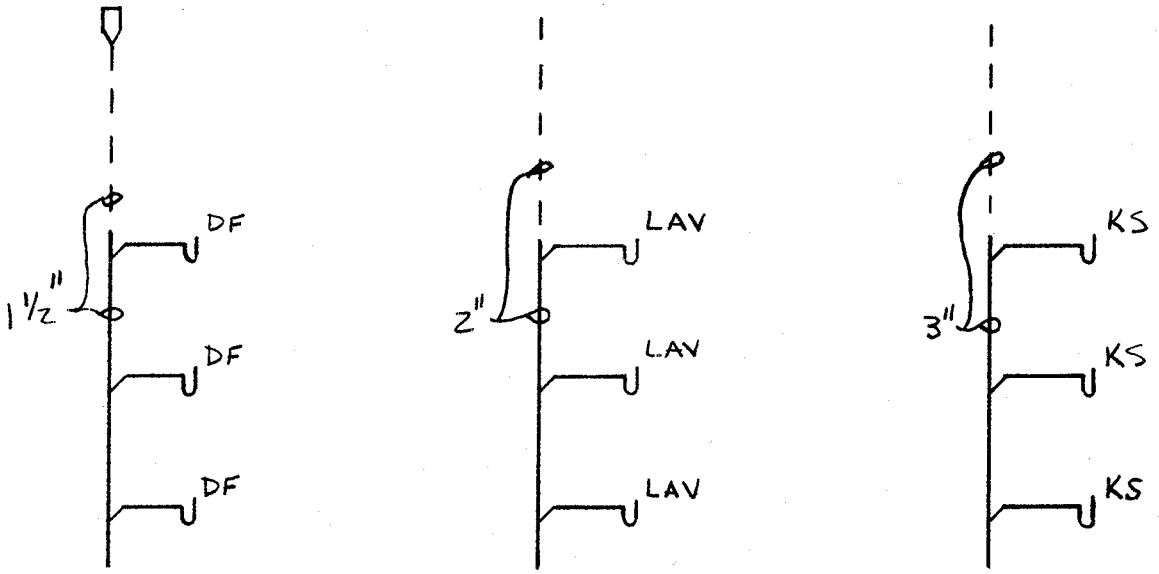
A-82.31 (16) VENT TERMINALS.

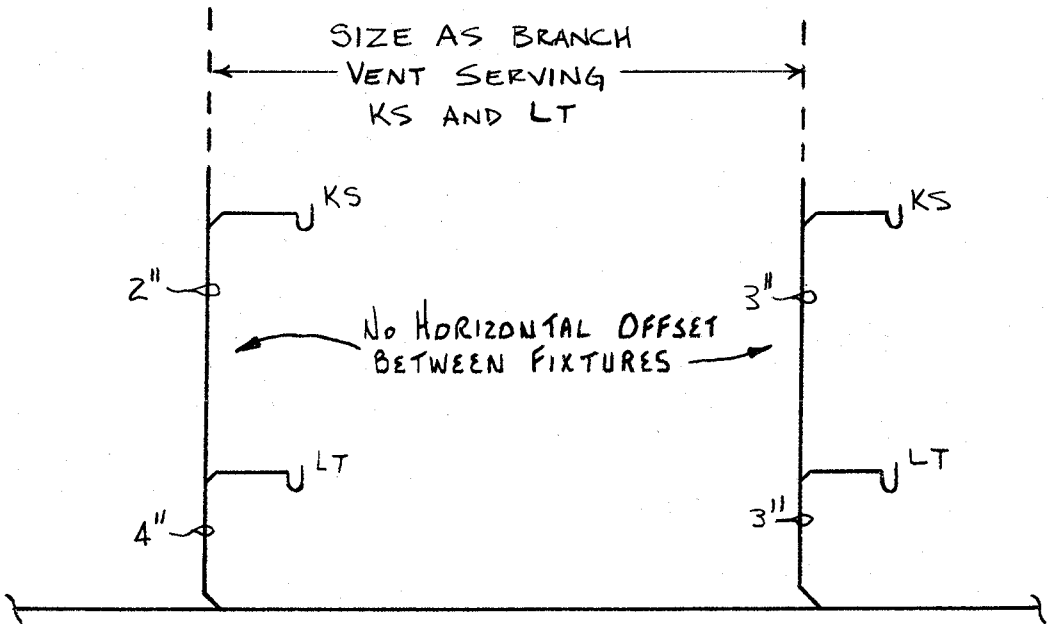




VENT TERMINALS FOR UNDERGROUND STRUCTURES

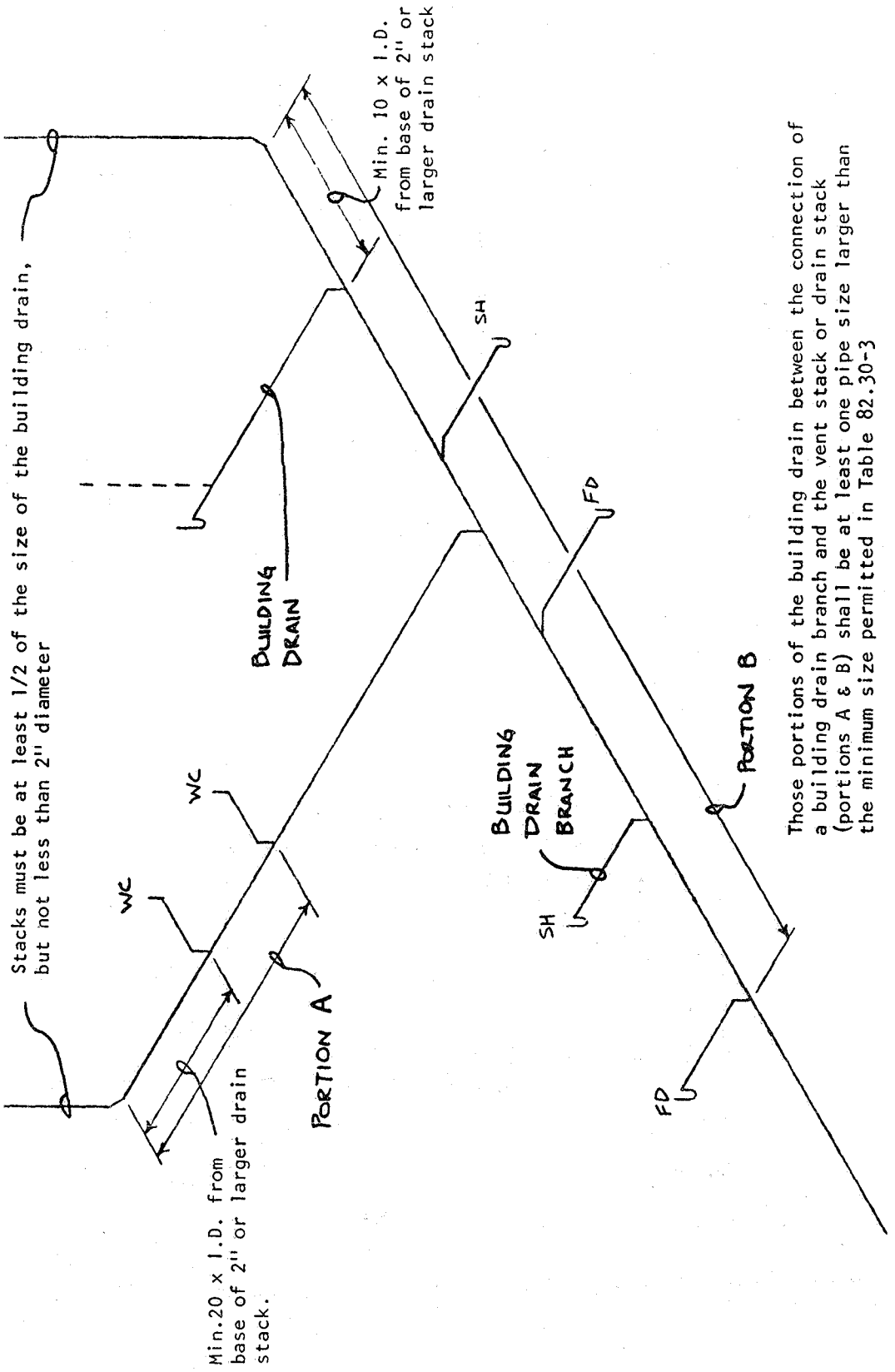
A-82.31 (17) (a) COMBINATION DRAIN AND VENT STACKS.



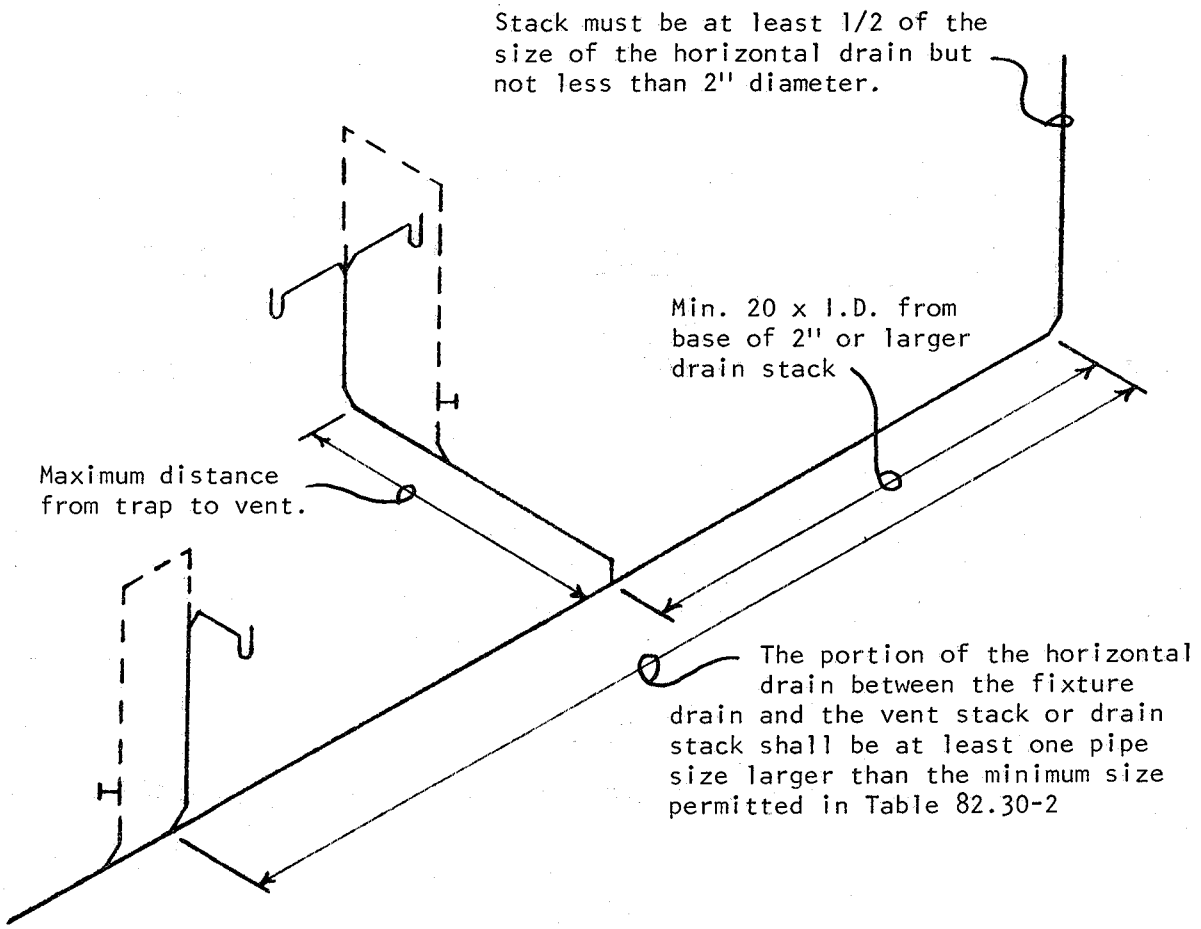


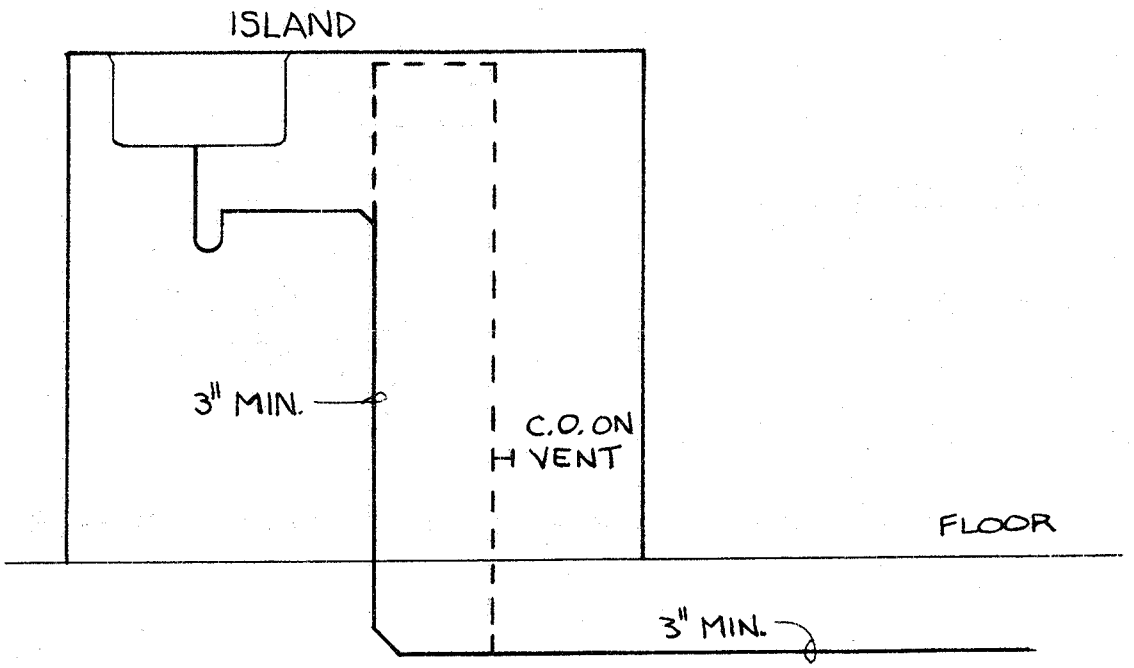
ILHR 82 Appendix

A-82.31 (17) (b) COMBINATION DRAIN AND VENT BUILDING DRAIN.



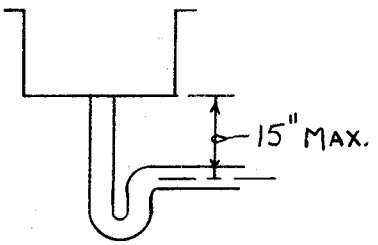
A-82.31 (17) (c) COMBINATION DRAIN AND VENT LABORATORY SINK VENTING.



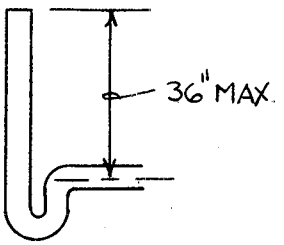


ILHR 82 Appendix

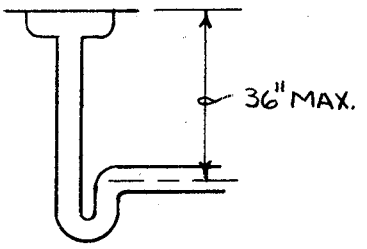
A-82.32 (4) (b) INSTALLATION OF TRAPS.



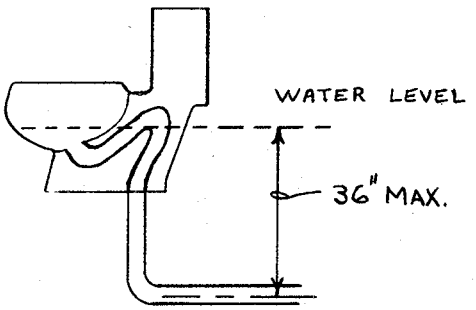
MOST FIXTURES



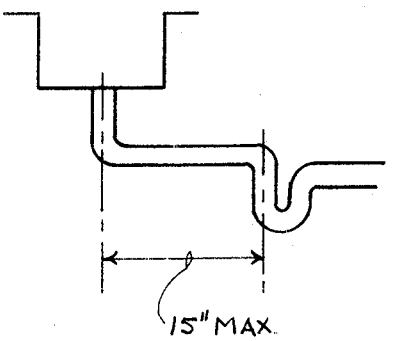
STANDPIPE

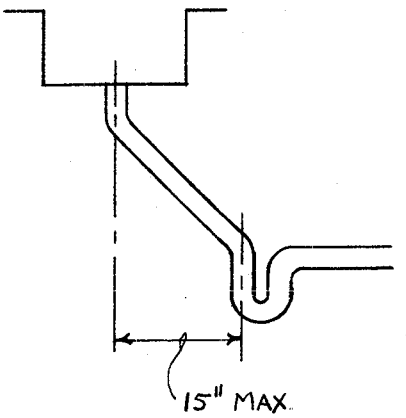


FLOOR DRAIN



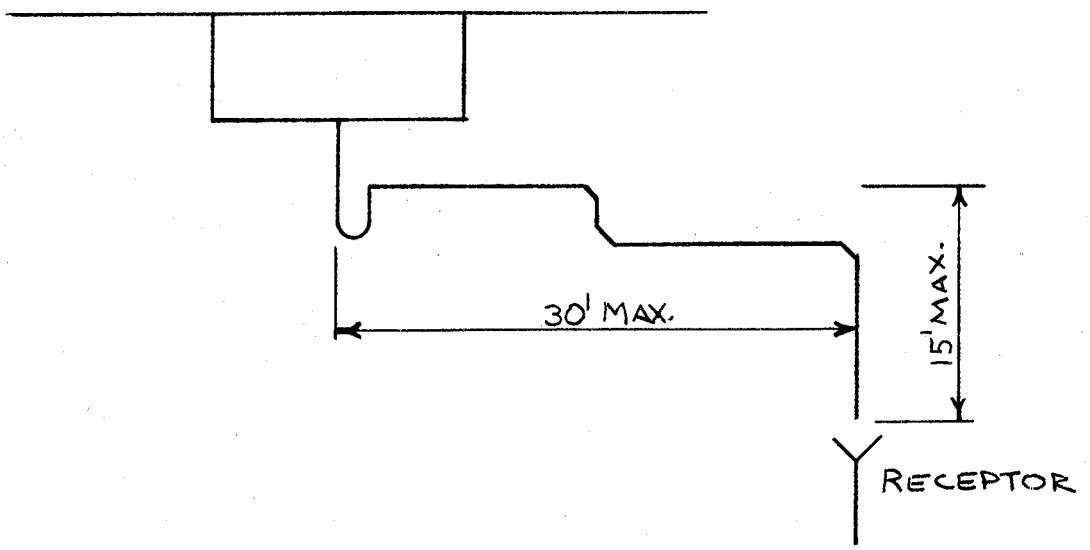
VERTICAL DISTANCE BETWEEN FIXTURE DRAIN OUTLET AND TRAP



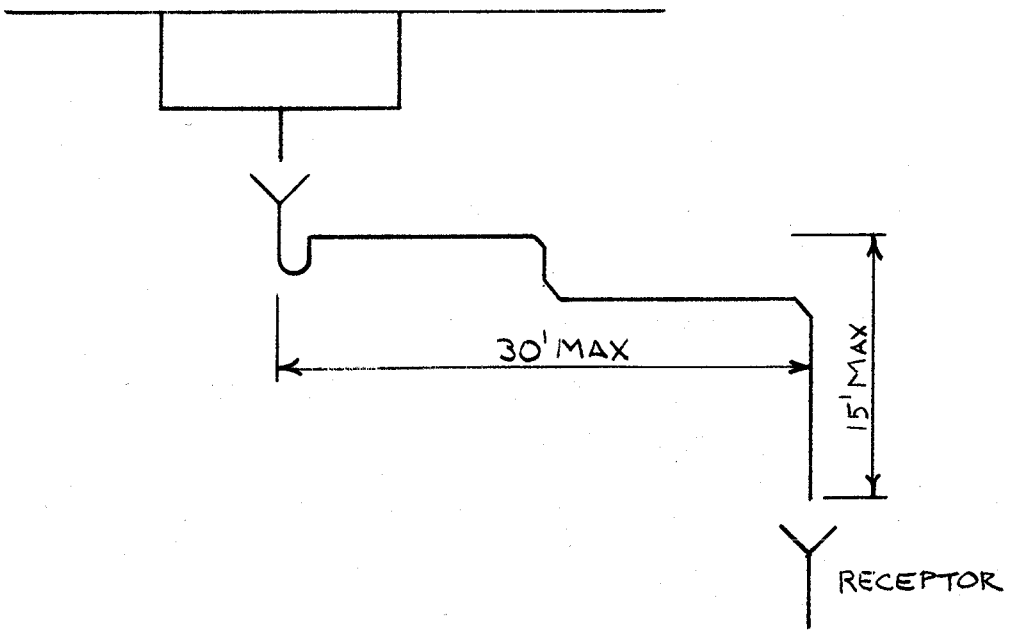


HORIZONTAL DISTANCE BETWEEN FIXTURE DRAIN OUTLET AND TRAP

A-82.33 (6) INDIRECT AND LOCAL WASTE PIPING.



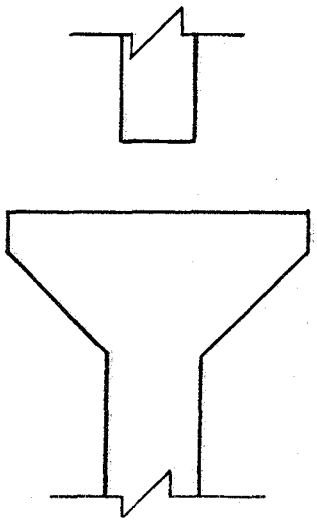
MAXIMUM LENGTH OF INDIRECT WASTE PIPE



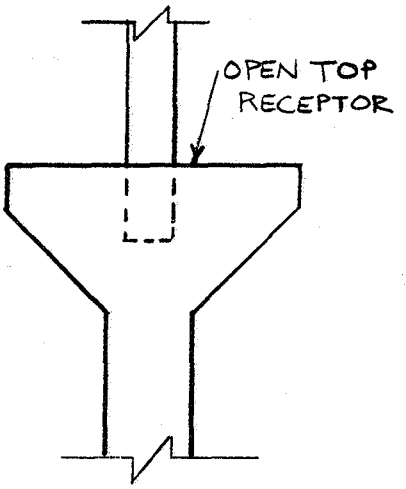
MAXIMUM LENGTH OF LOCAL WASTE PIPE

ILHR 82 Appendix

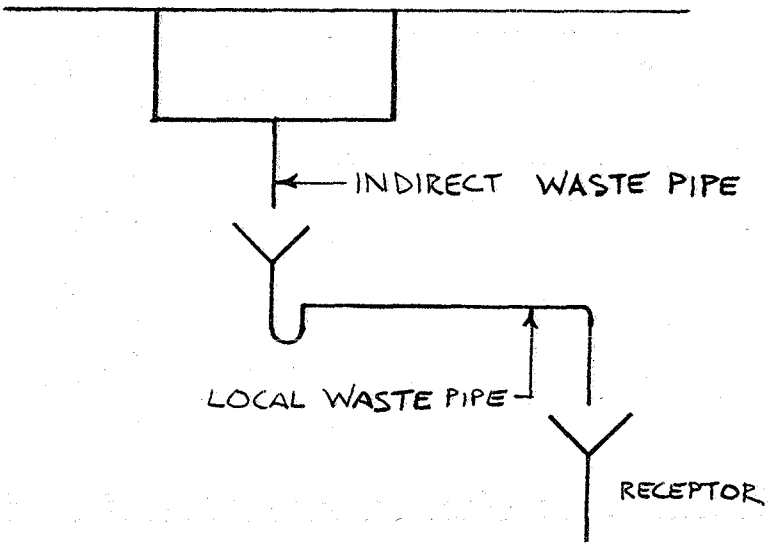
A-82.33 (7) AIR-GAPS AND AIR-BREAKS.



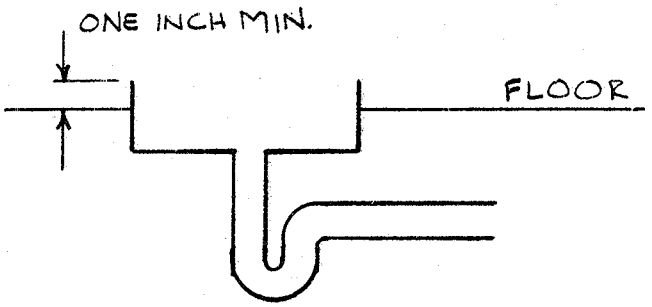
AIR GAP



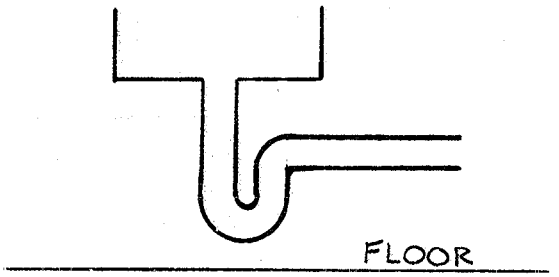
AIR BREAK



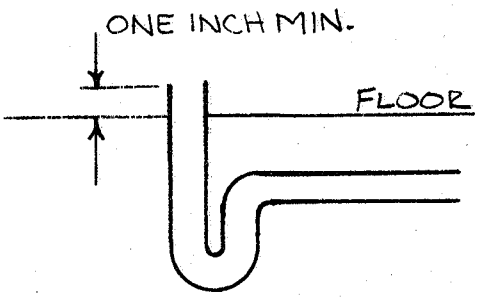
A-82.33 (8) (a) WASTE SINKS AND STANDPIPES.



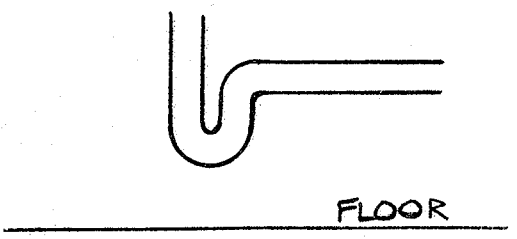
WASTE SINK IN FLOOR



WASTE SINK ABOVE FLOOR



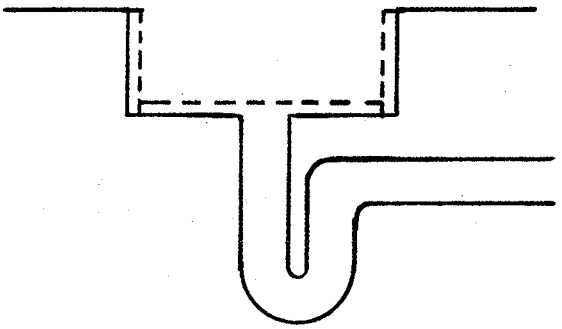
STANDPIPE IN FLOOR



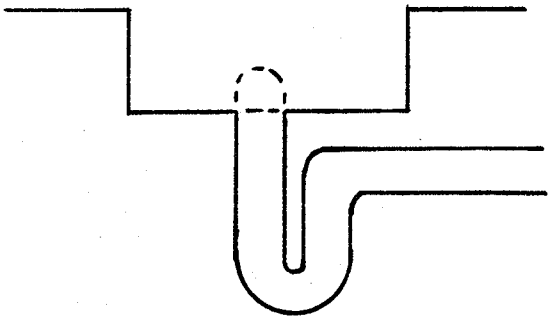
STANDPIPE ABOVE FLOOR

ILHR 82 Appendix

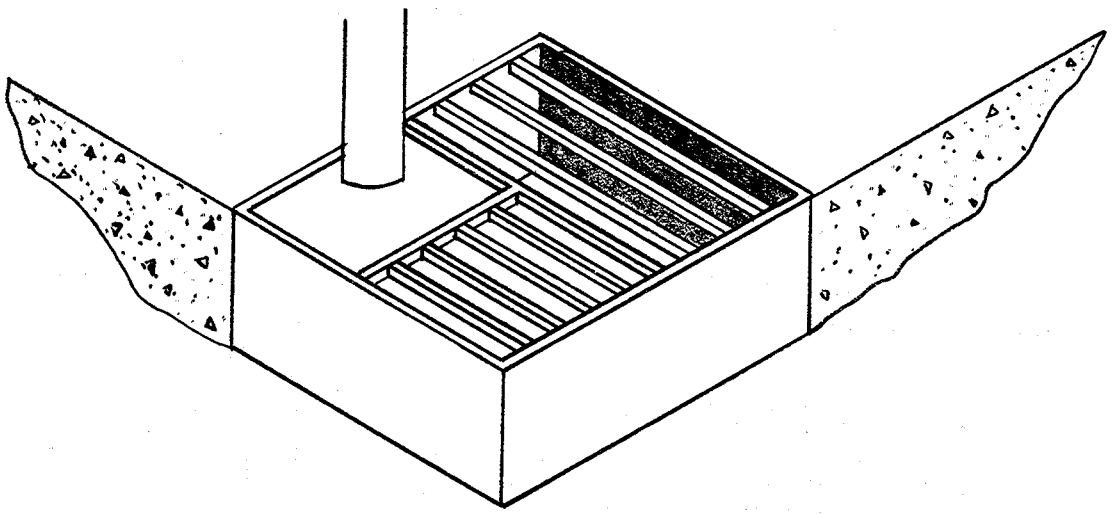
A-82.33 (8) (b) FLOOR SINKS.



FLOOR SINK WITH BASKET

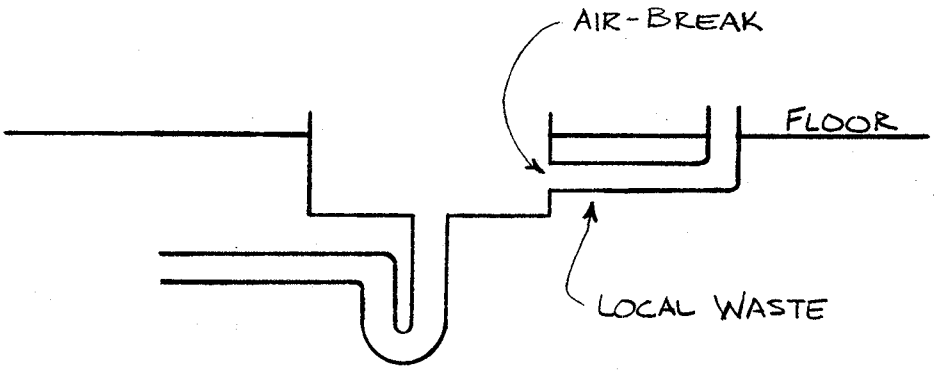


FLOOR SINK WITH DOME STRAINER

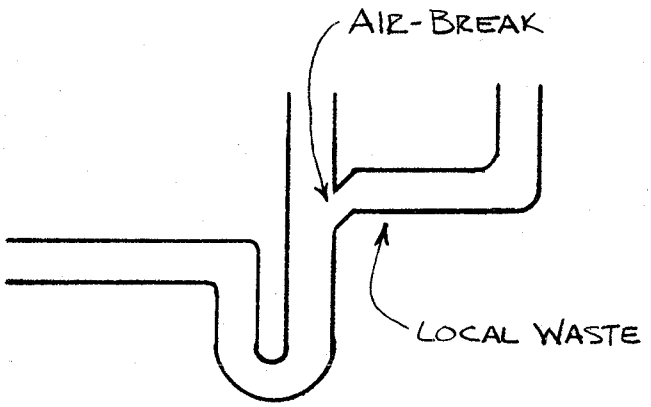


FLOOR SINK WITH GRATE OPENING FOR AIR GAP

A-82.33 (8) (c) LOCAL WASTE PIPING.



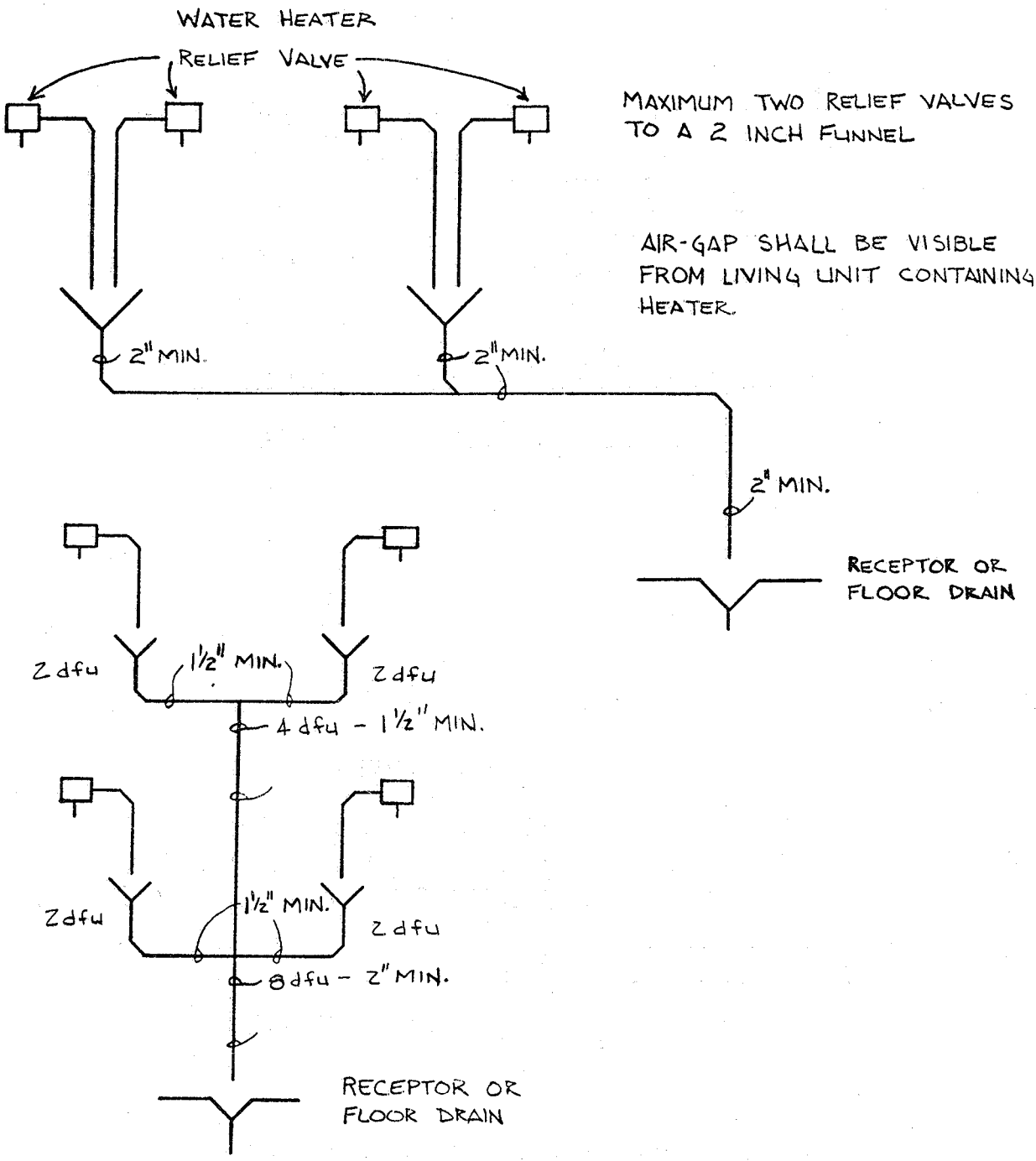
LOCAL WASTE LEADING TO A WASTE SINK, FLOOR SINK OR FLOOR DRAIN



LOCAL WASTE LEADING TO A STANDPIPE

ILHR 82 Appendix

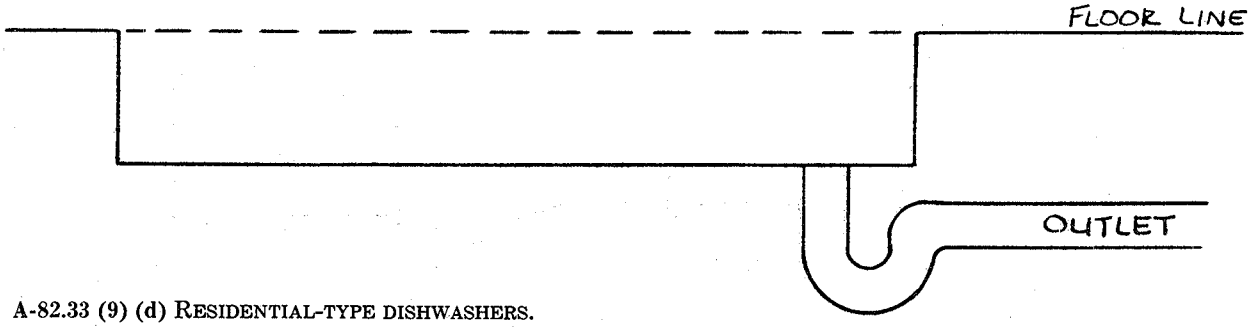
A-82.33 (8) (c) LOCAL WASTE PIPING SERVING WATER HEATER RELIEF VALVES.



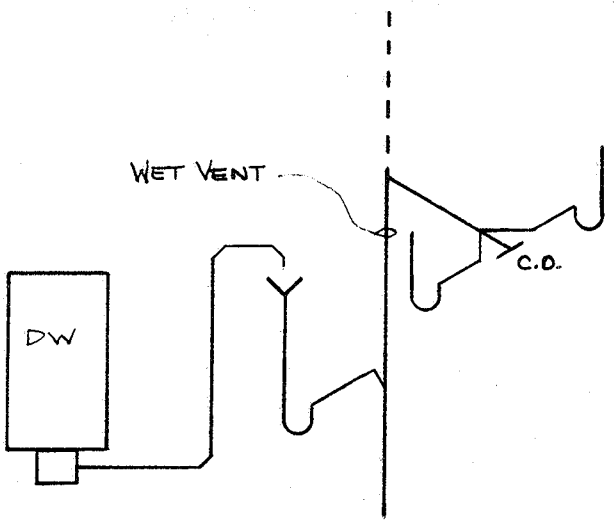
LOCAL WASTE PIPES SERVING WATER HEATER RELIEF VALVES.

A-82.33 (9) (c) COMMERCIAL GRAVITY DISCHARGE-TYPE CLOTHES WASHERS.

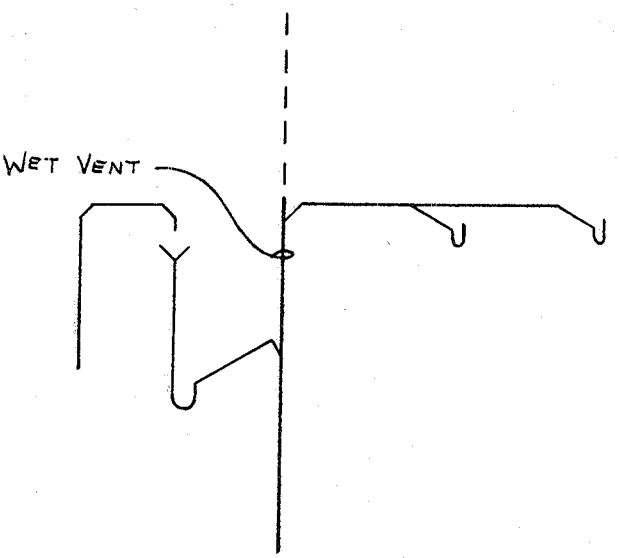
TRENCH TYPE LAUNDRY RECEPTOR



A-82.33 (9) (d) RESIDENTIAL-TYPE DISHWASHERS.



K.S. WITH OR WITHOUT
FOOD WASTE GRINDER

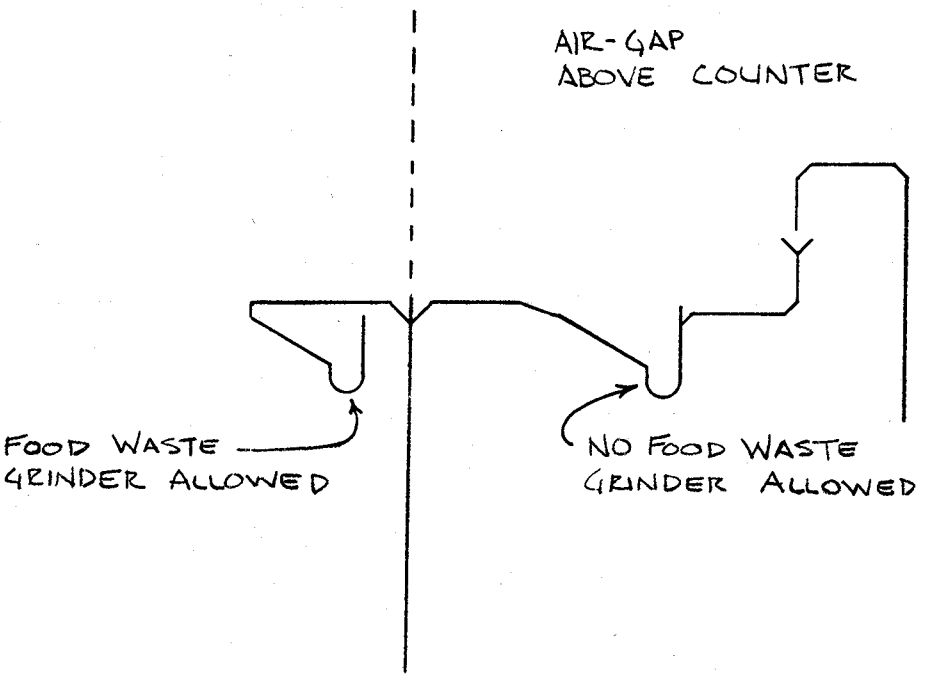


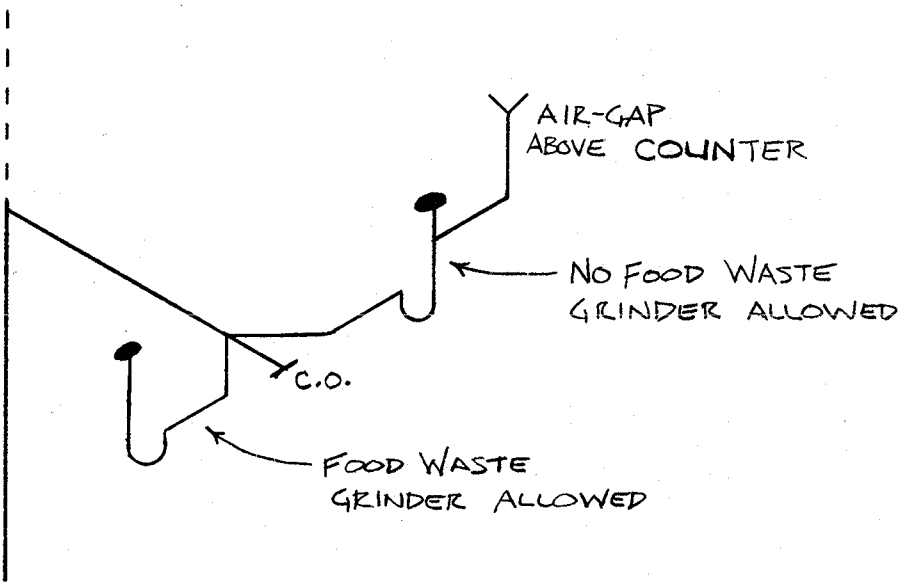
K.S. WITH OR WITHOUT
FOOD WASTE GRINDER

DISWASHER DISCHARGING TO A STANDPIPE
BELOW THE COUNTER TOP.

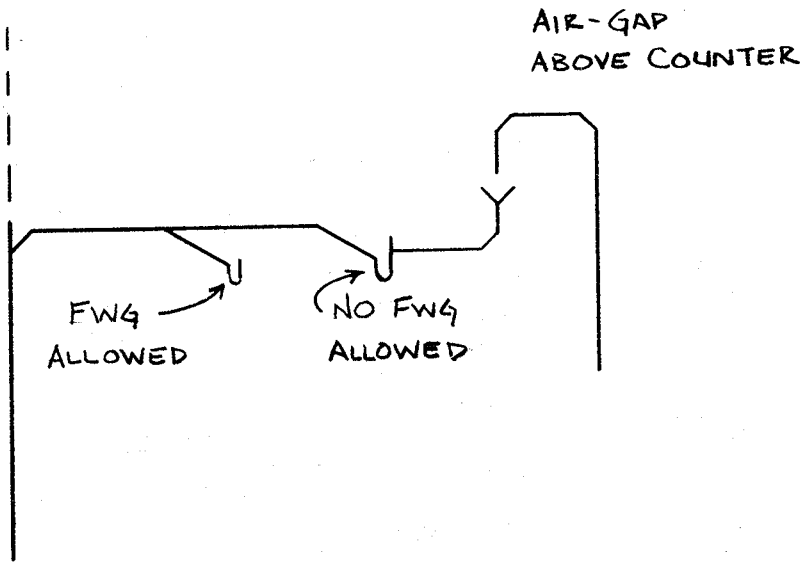
ILHR 82 Appendix

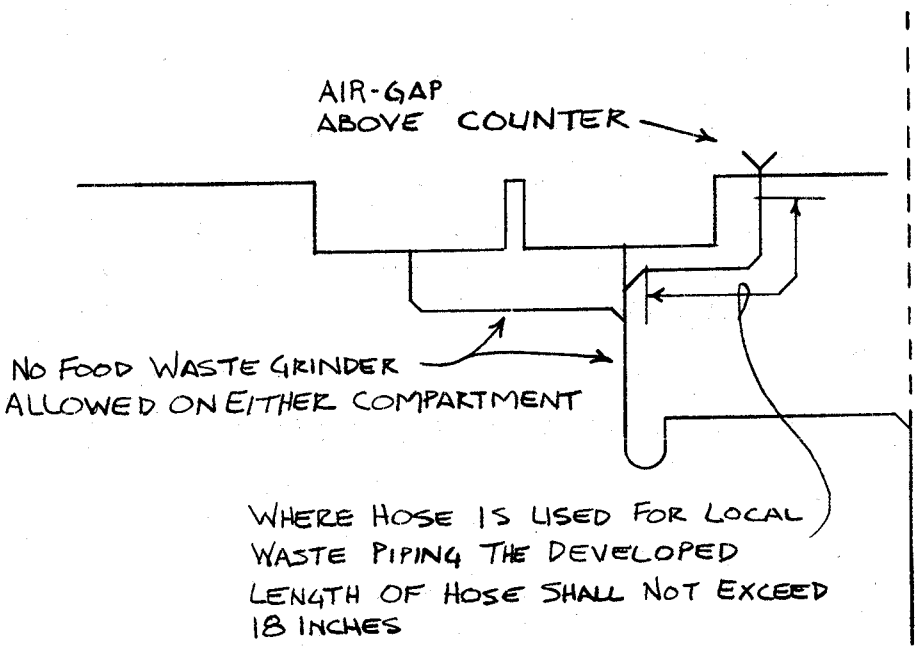
A-82.33 (9) (d) RESIDENTIAL-TYPE DISHWASHERS.



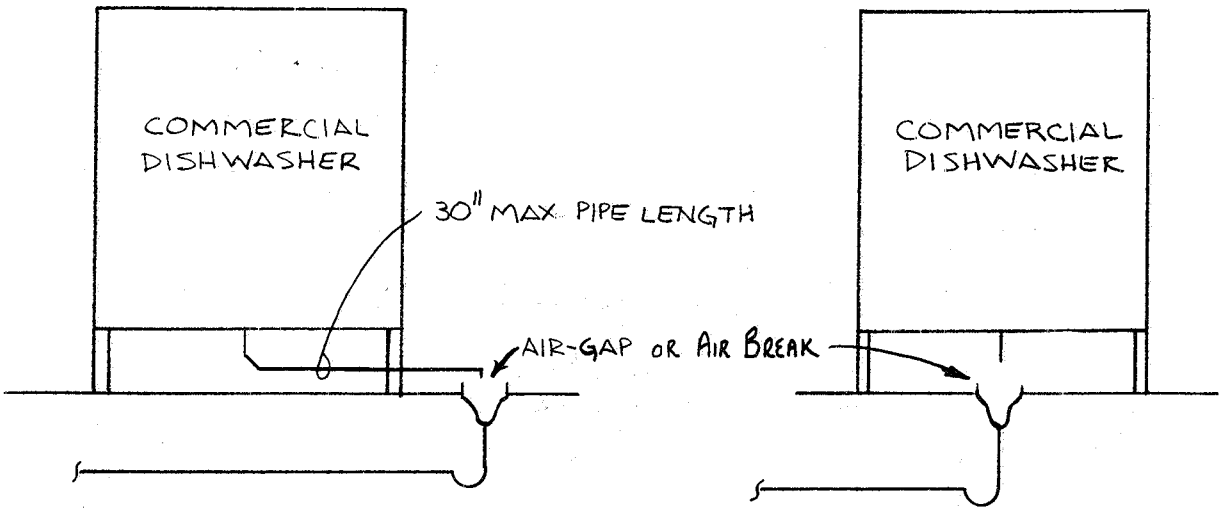


A-82.33 (9) (d) RESIDENTIAL-TYPE DISHWASHERS.

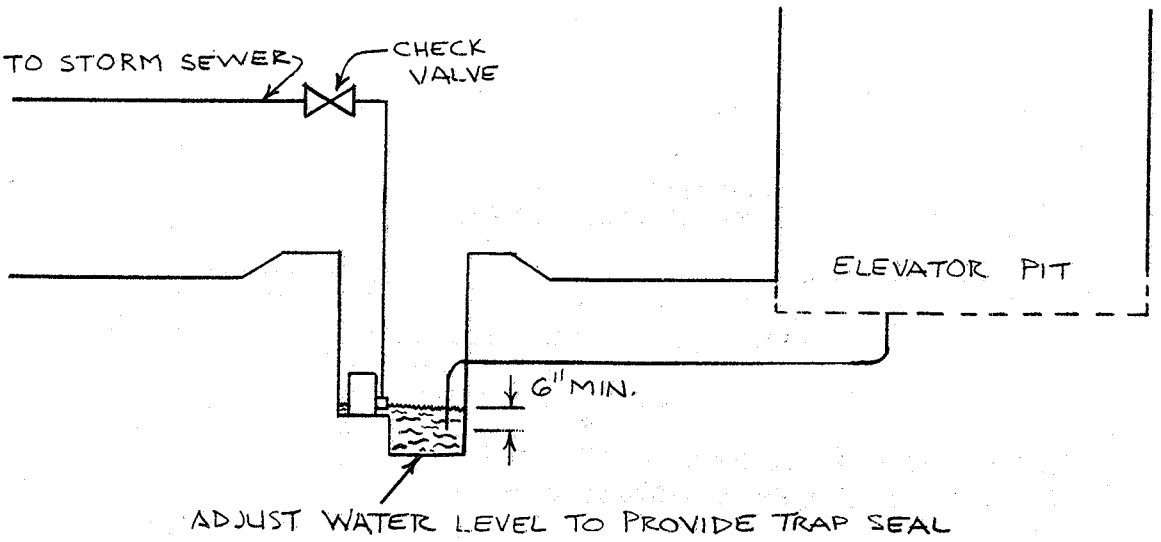




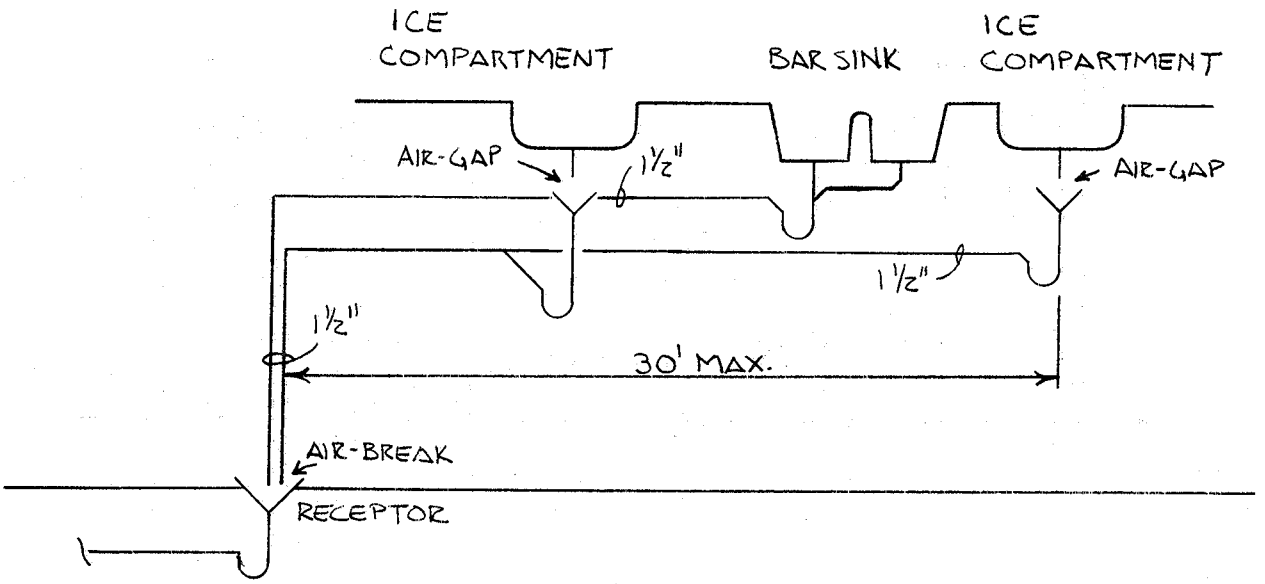
A-82.33 (9) (d) COMMERCIAL DISHWASHERS.



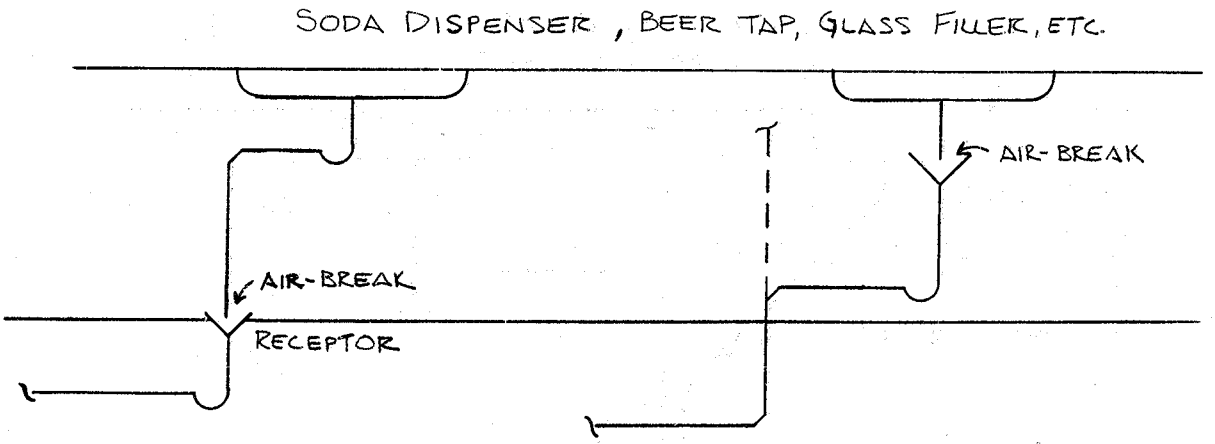
A-82.33 (9) (f) ELEVATOR PIT SUBSOIL AND FLOOR DRAINS.



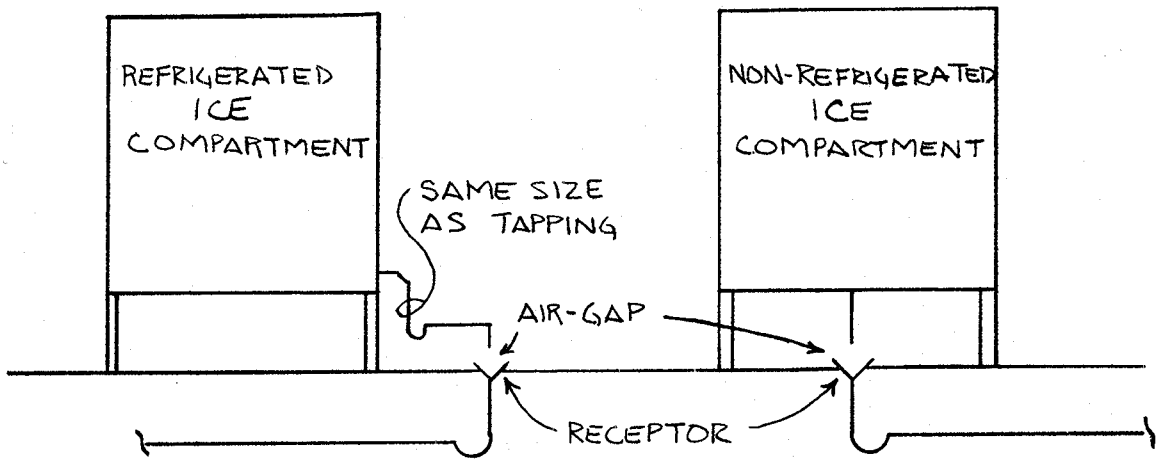
A-82.33 (9) (g) 1. BAR AND SODA FOUNTAIN SINKS.

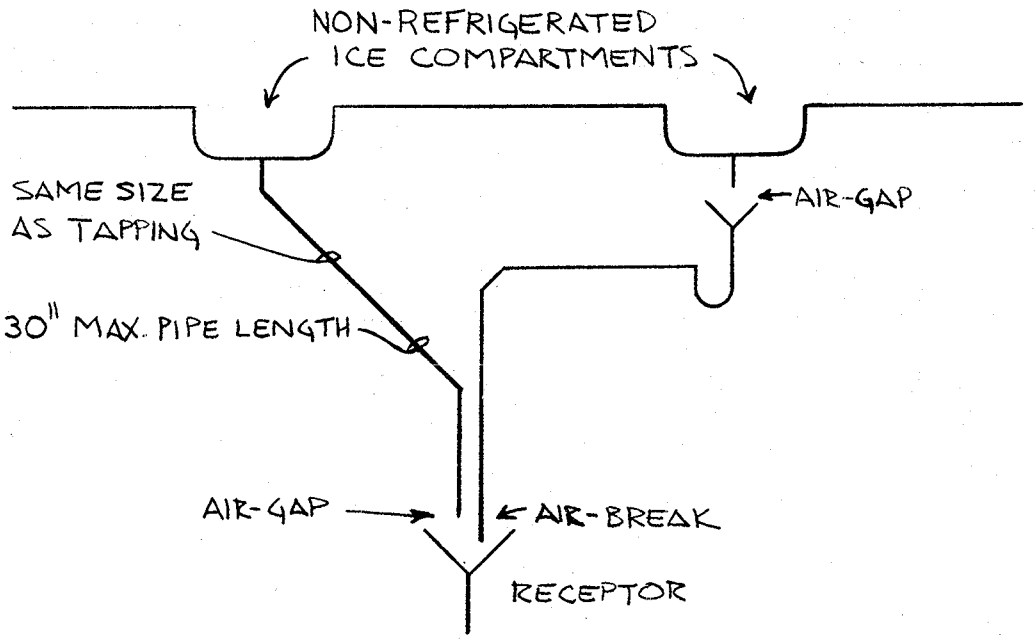


A-82.33 (9) (g) 2.

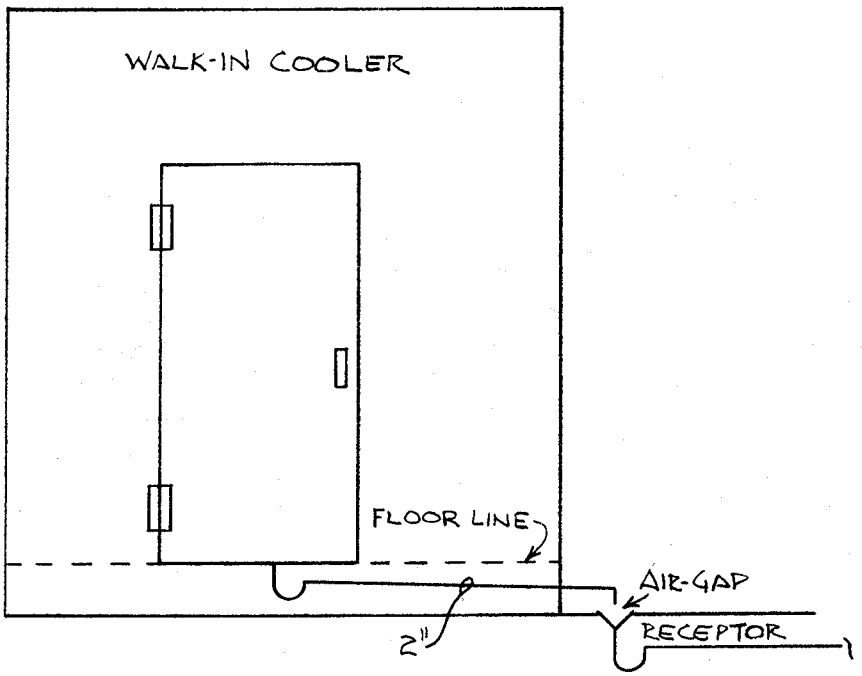


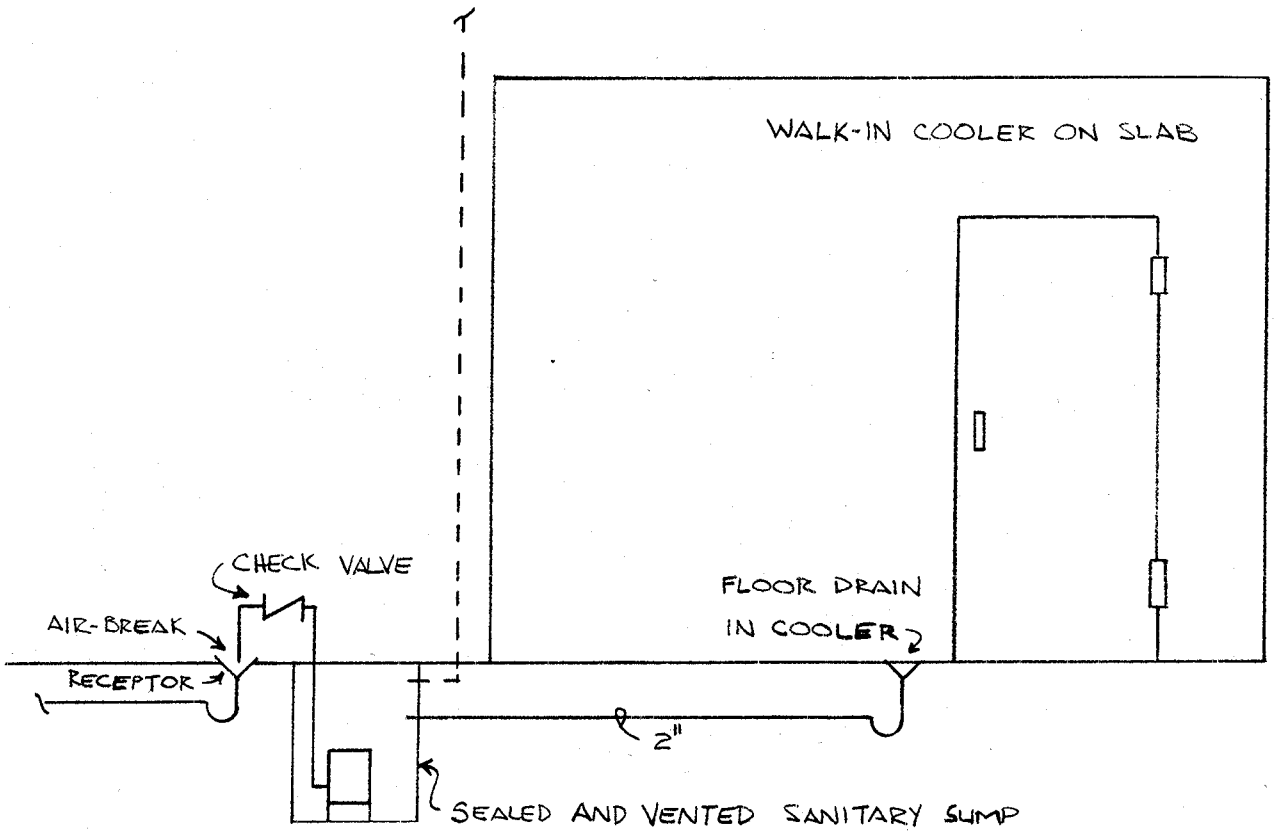
A-82.33 (9) (g) 3. NOVELTY BOXES, AND ICE COMPARTMENTS AND ICE CREAM DIPPER WELLS.





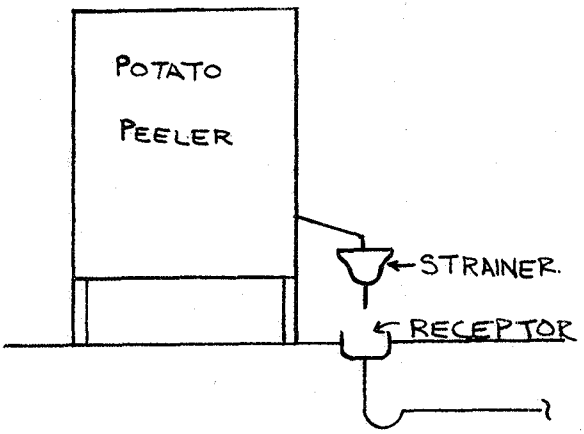
A-82.33 (9) (g) 4. REFRIGERATED FOOD STORAGE ROOMS, COMPARTMENTS, AND DISPLAY CASES.

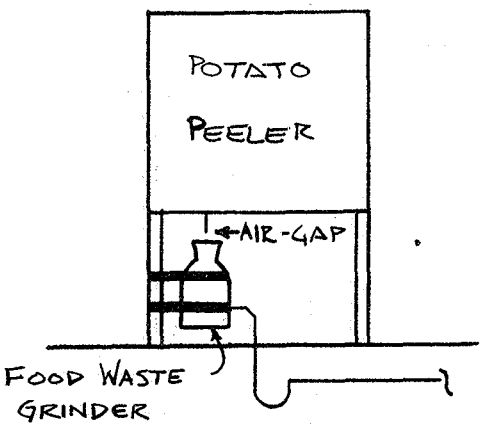


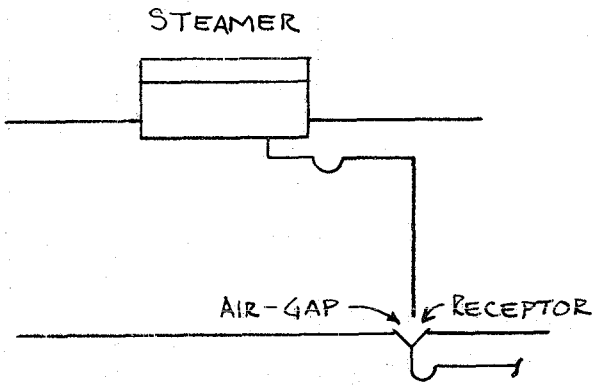


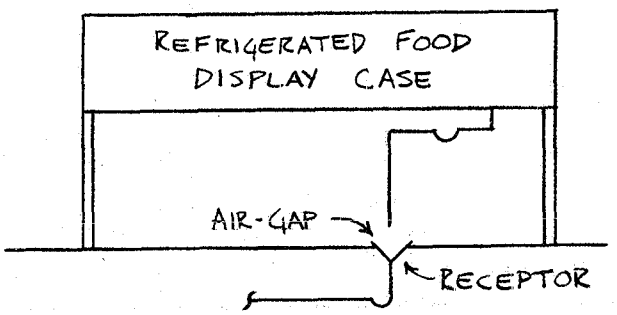
ILHR 82 Appendix

A-82.33 (9) (g) 5. MISCELLANEOUS FOOD HANDLING EQUIPMENT.

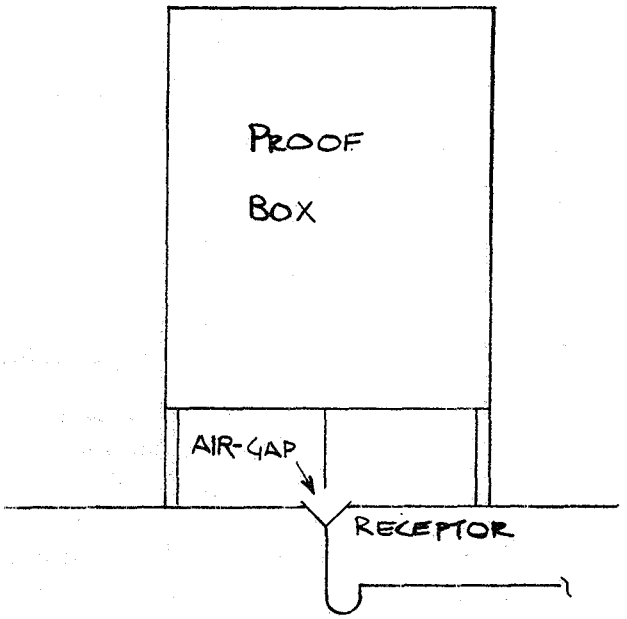


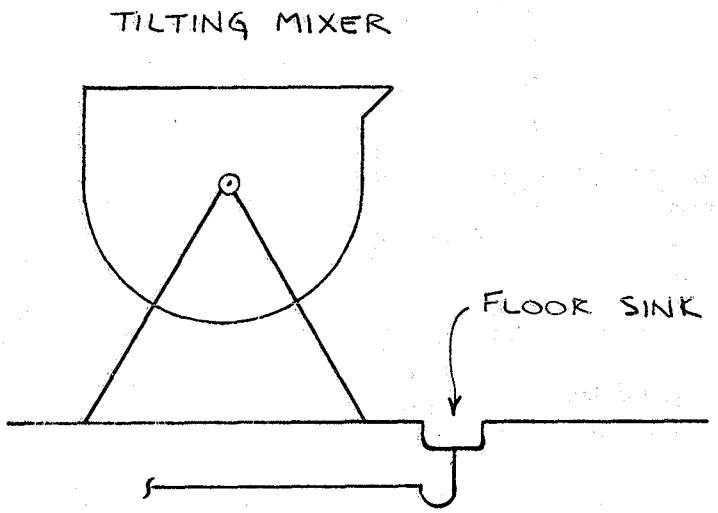






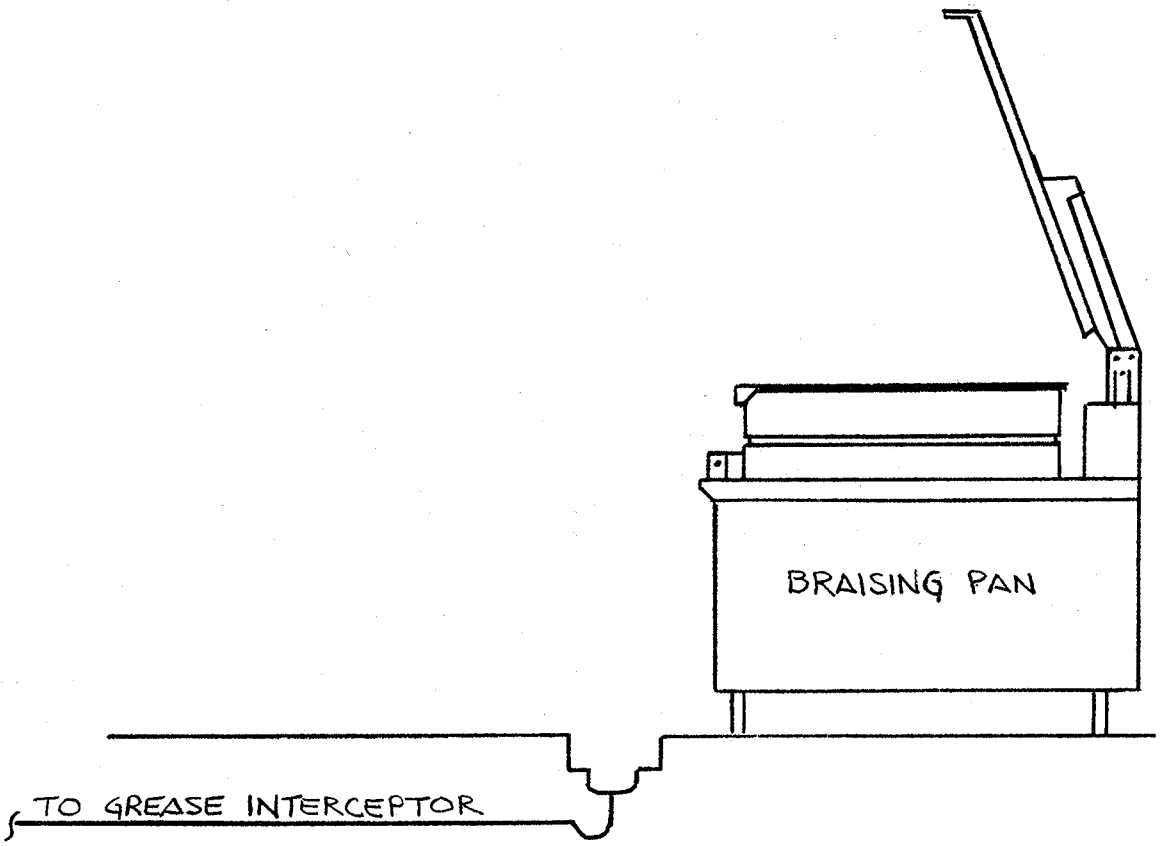
A-82.33 (9) (g) 5. MISCELLANEOUS FOOD HANDLING EQUIPMENT.

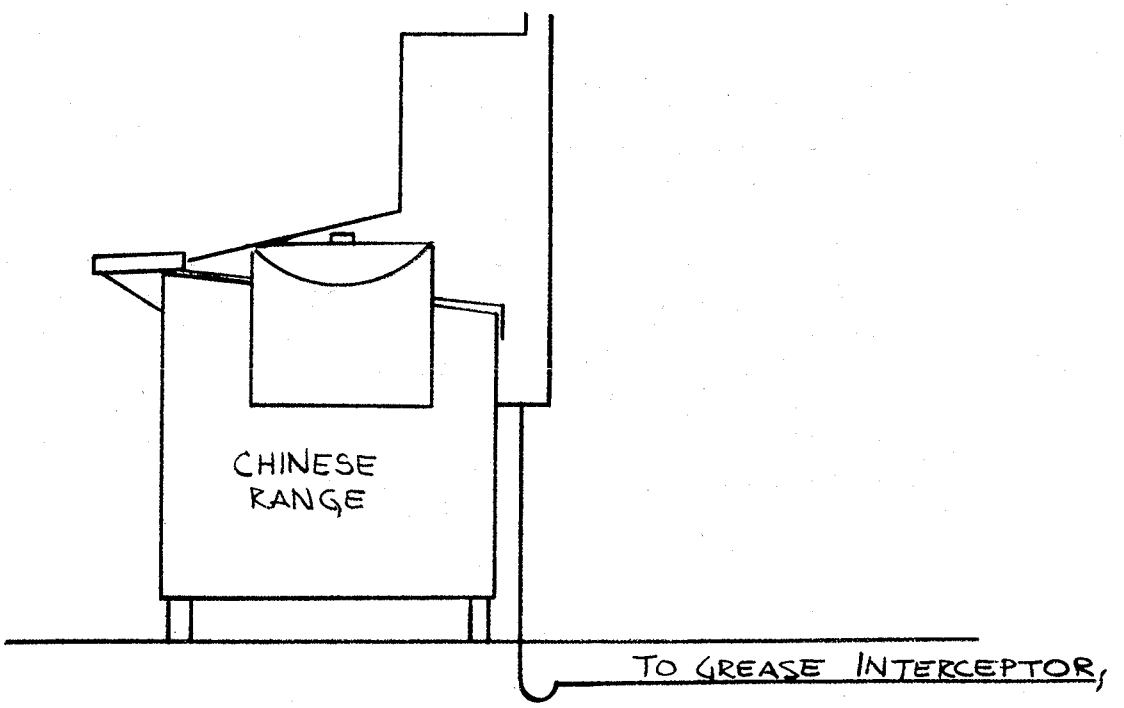




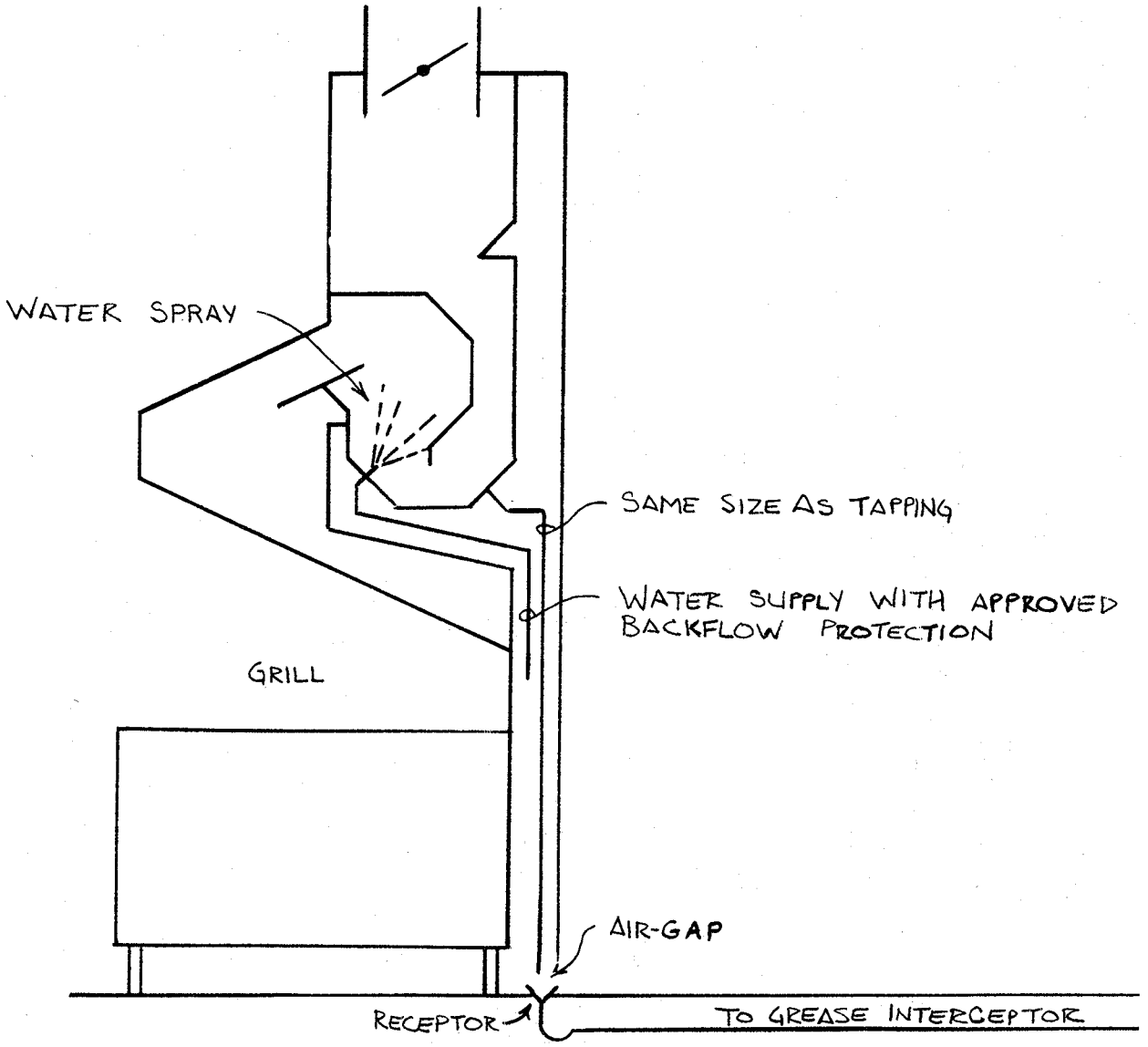
ILHR 82 Appendix

A-82.33 (9) (g) 5. MISCELLANEOUS FOOD HANDLING EQUIPMENT.





A-82.33 (9) (g) 5. MISCELLANEOUS FOOD HANDLING EQUIPMENT.

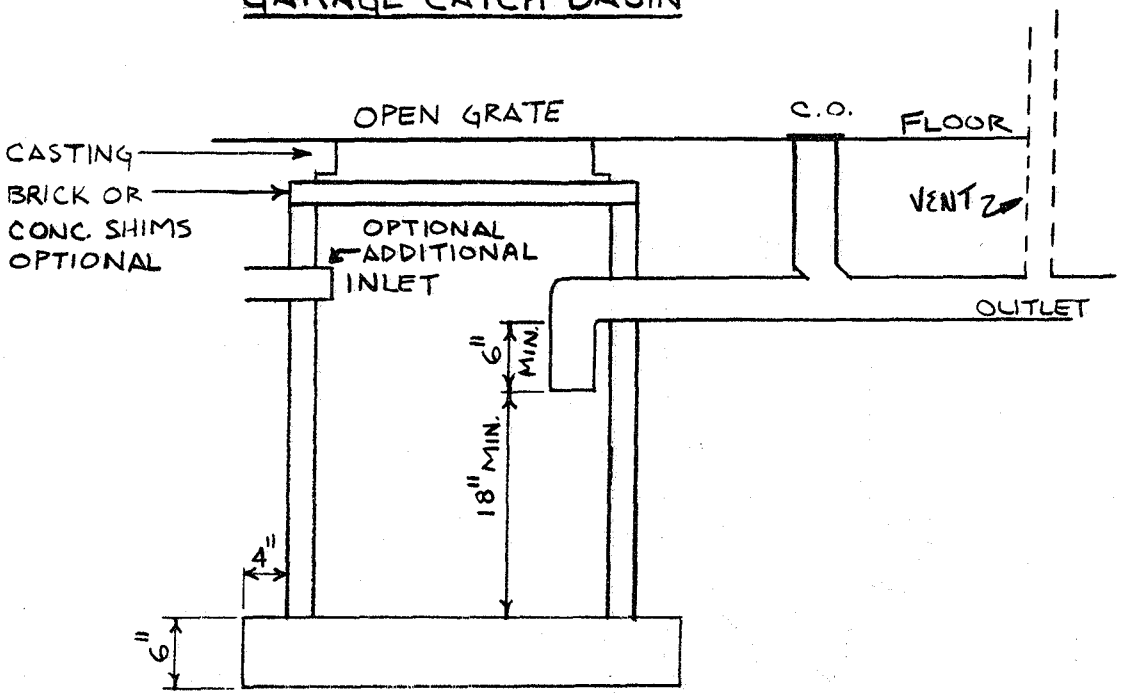


EXHAUST HOOD WASHER

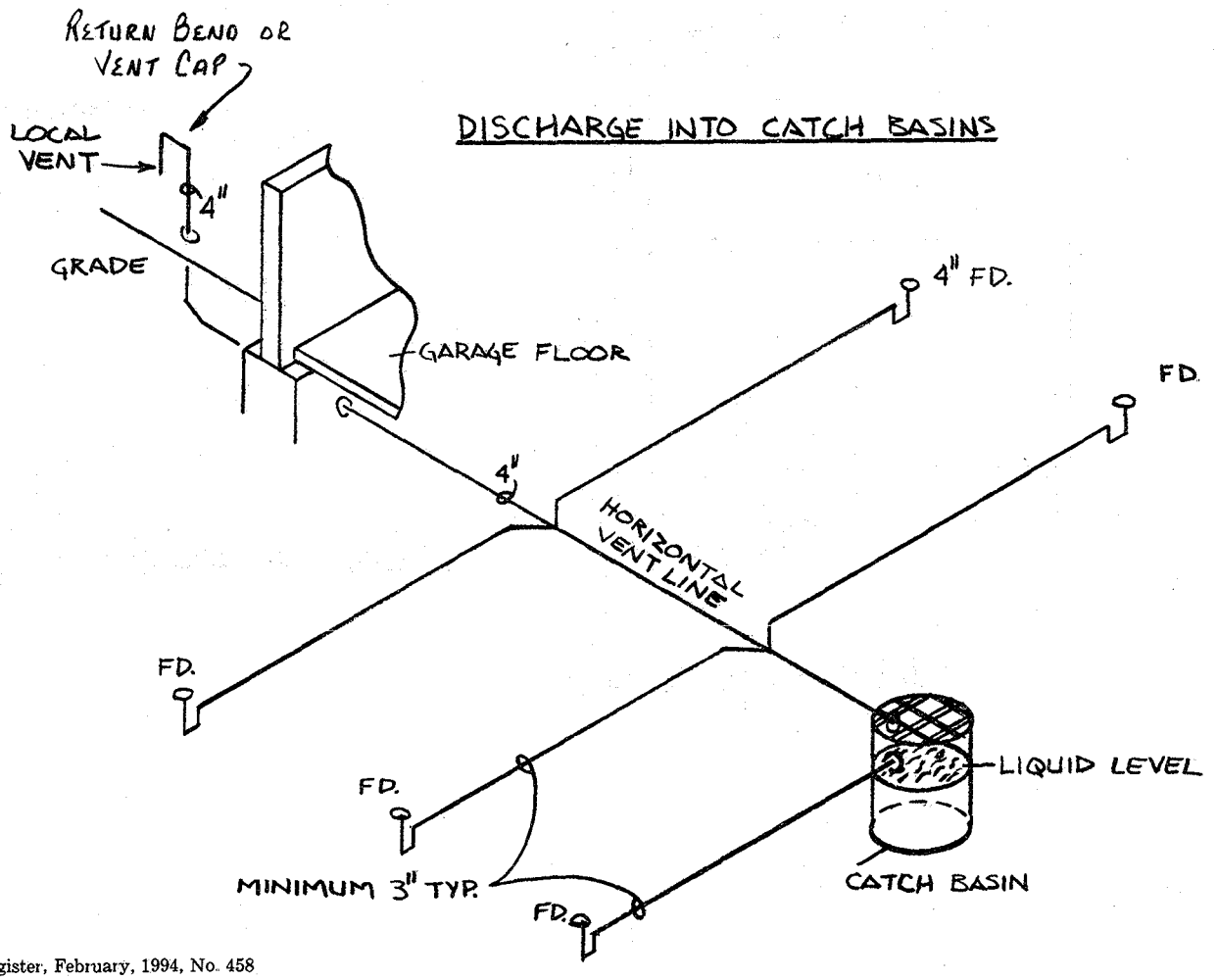
ILHR 82 Appendix

A-82.34 (4) (a).

GARAGE CATCH BASIN



DISCHARGE INTO CATCH BASINS



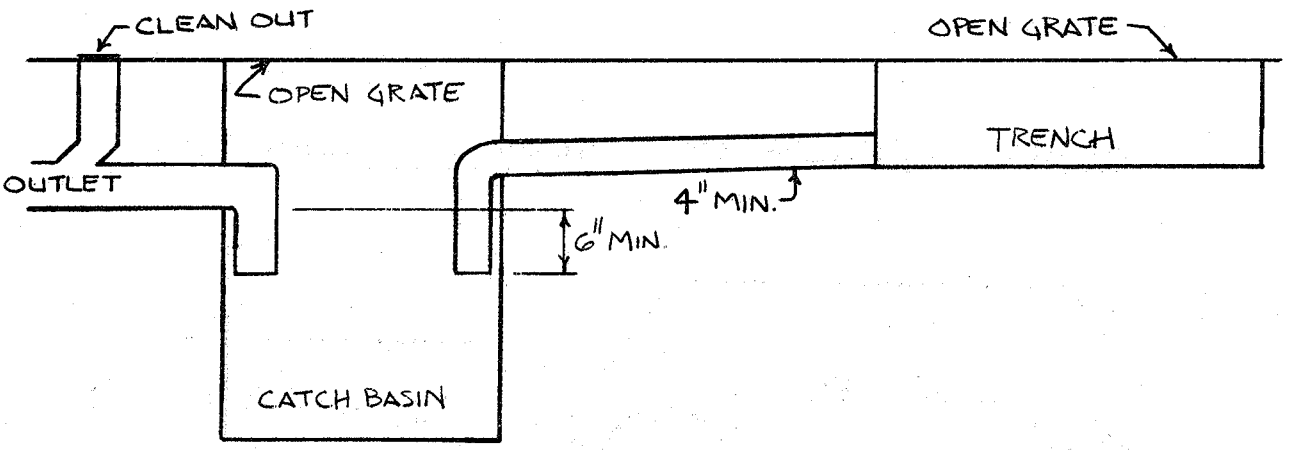
A-82.34 (4) (a)

Capacity of Catch Basins
(in cubic feet)

Diameter of Catch Basin	Volume in cubic feet per foot of depth	Diameter of Catch Basin	Volume in cubic feet per foot of depth
36	7.1	45	11.1
37	7.5	46	11.6
38	7.9	47	12.1
39	8.3	48	12.6
40	8.7	54	15.9
41	9.2	60	19.7
42	9.7	66	23.8
43	10.1	72	28.3
44	10.6	84	38.6

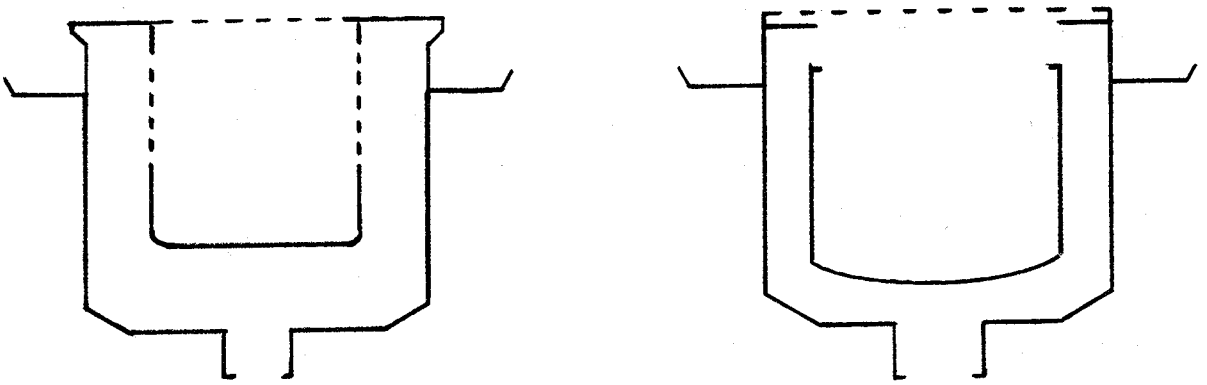
A-82.34 (4) (a)

TRENCH DRAINS



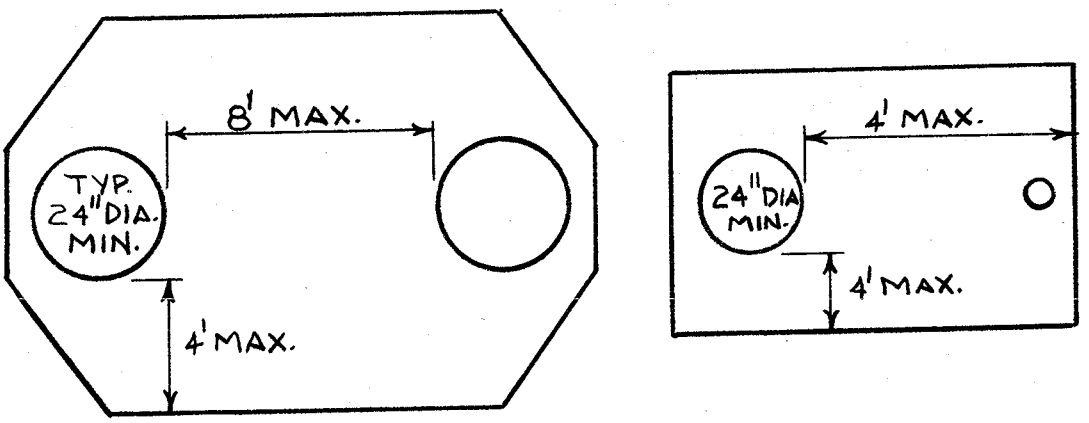
A-82.34 (4) (b)

TYPICAL FLOOR DRAIN WITH SOLID BOTTOM SEDIMENT BASKET

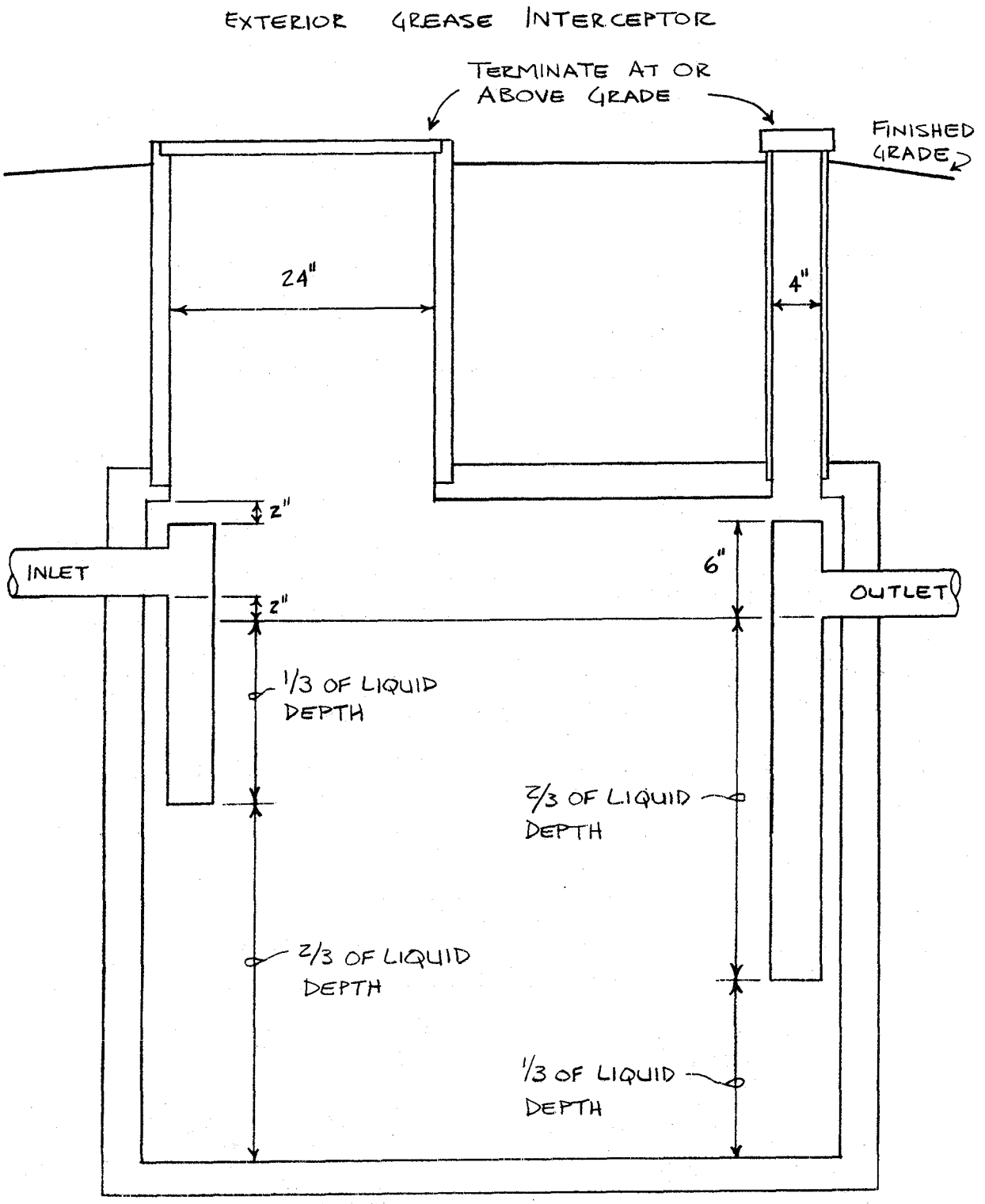


A-82.34 (5) (b)

GREASE INTERCEPTOR MANHOLE LOCATION



A-82.34 (5) (b)


EXTERIOR GREASE INTERCEPTOR
TERMINATE AT OR ABOVE GRADE
FINISHED GRADE
24"
4"
2"
INLET
2"
6"
OUTLET
1/3 OF LIQUID DEPTH
2/3 OF LIQUID DEPTH
2/3 OF LIQUID DEPTH
1/3 OF LIQUID DEPTH

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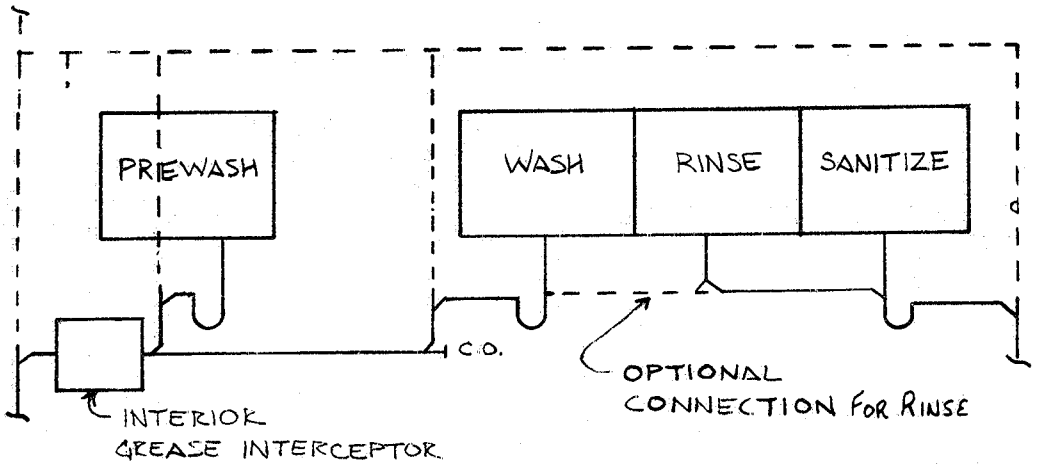
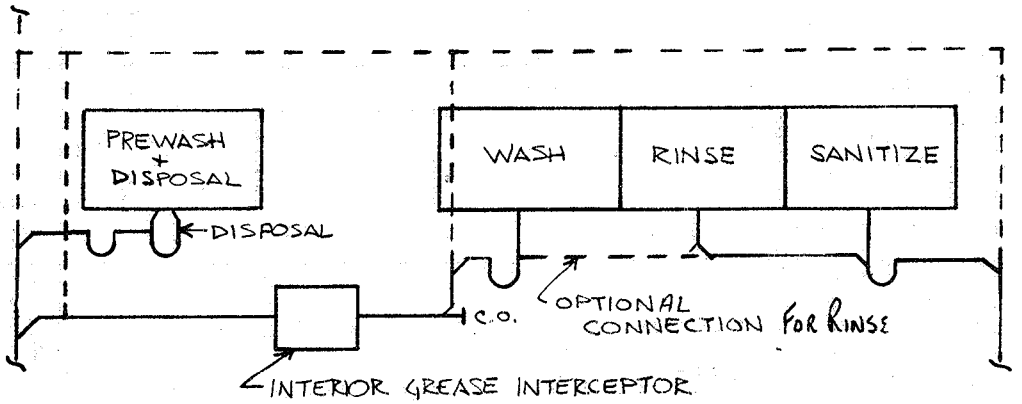
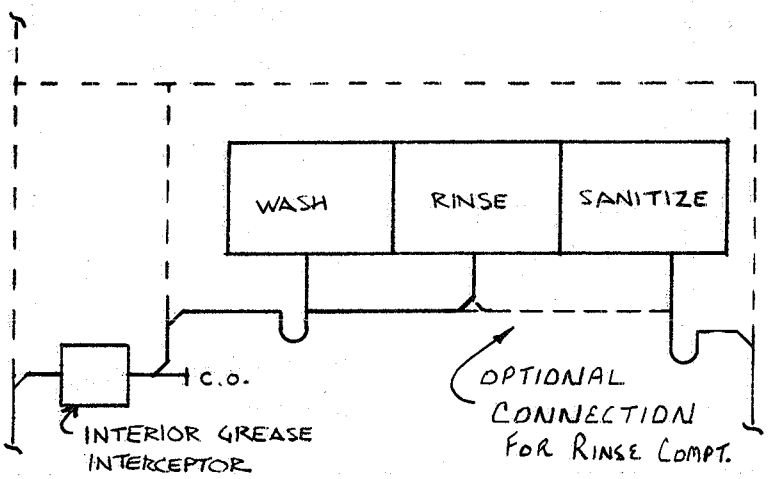
A-82.34 (5) (c) INTERIOR GREASE INTERCEPTORS.



PREWASH AND 3 COMPARTMENT SCULLERY SINK



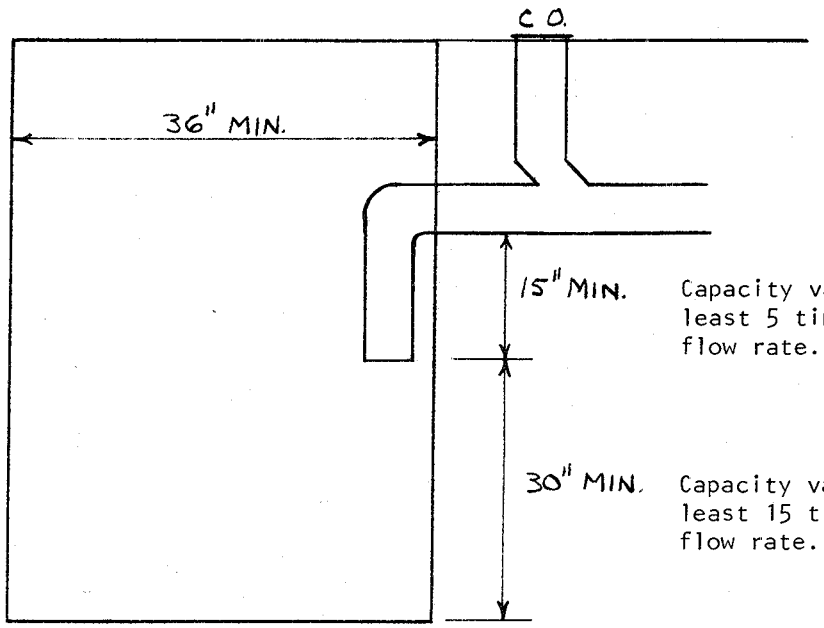
PREWASH + DISPOSAL + 3 COMPARTMENT SCULLERY SINK



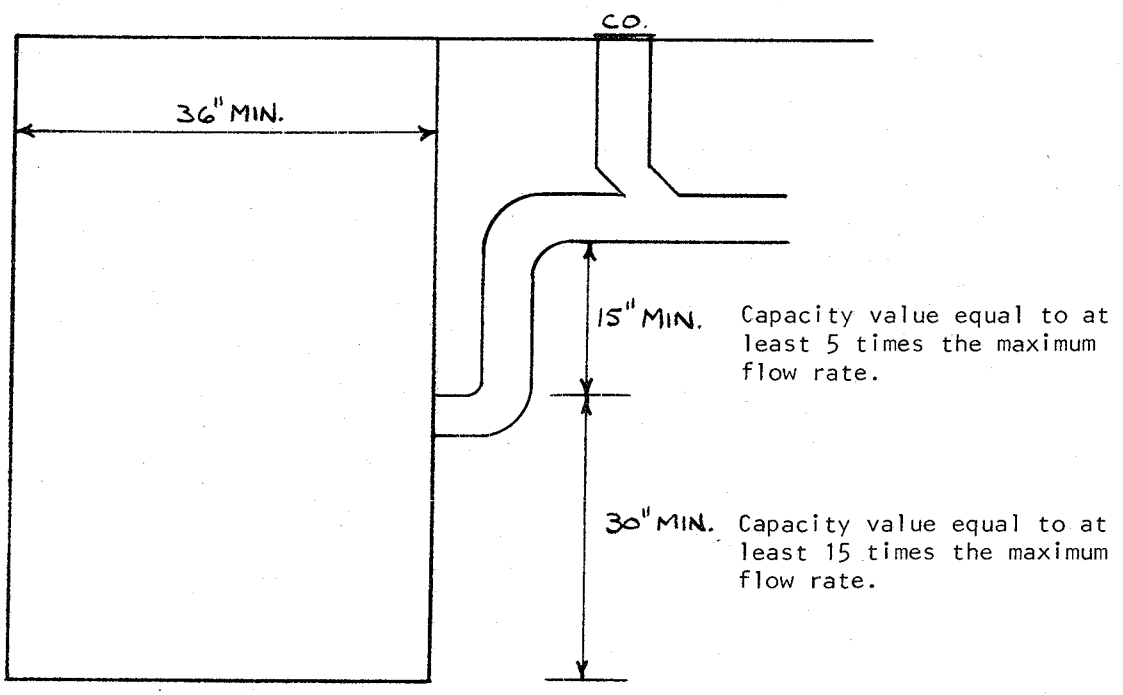
3 COMPARTMENT SCULLERY SINK

Note: Rinse and sanitize compartments and garbage disposals may discharge through interior grease interceptors.

A-82.34 (6) AUTOMATIC CAR WASHES.



CAR WASH INTERCEPTOR WITH INVERT INSIDE OF BASIN

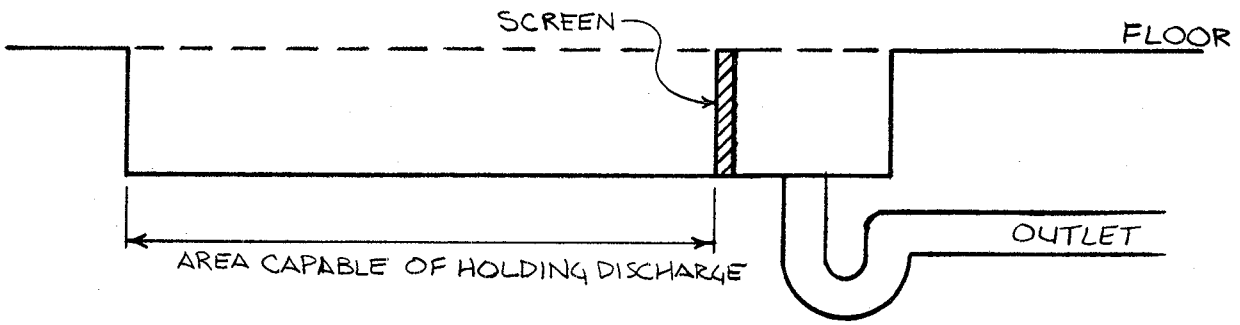


CAR WASH INTERCEPTOR WITH INVERT OUTSIDE OF BASIN

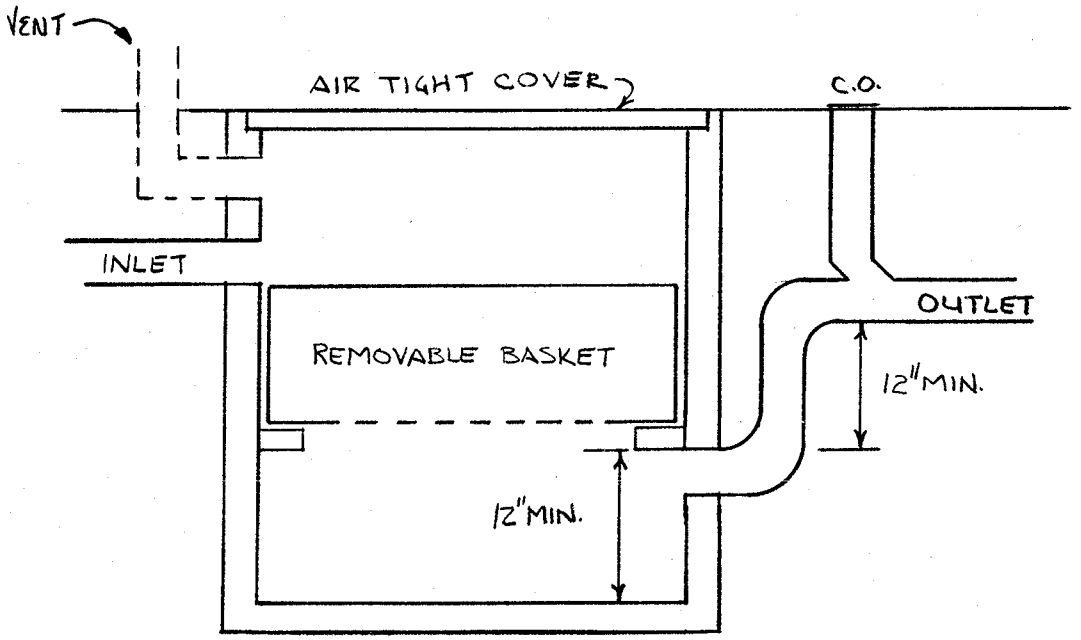
ILHR 82 Appendix

A-82.34 (7) COMMERCIAL LAUNDRIES.

TRENCH TYPE LAUNDRY INTERCEPTOR

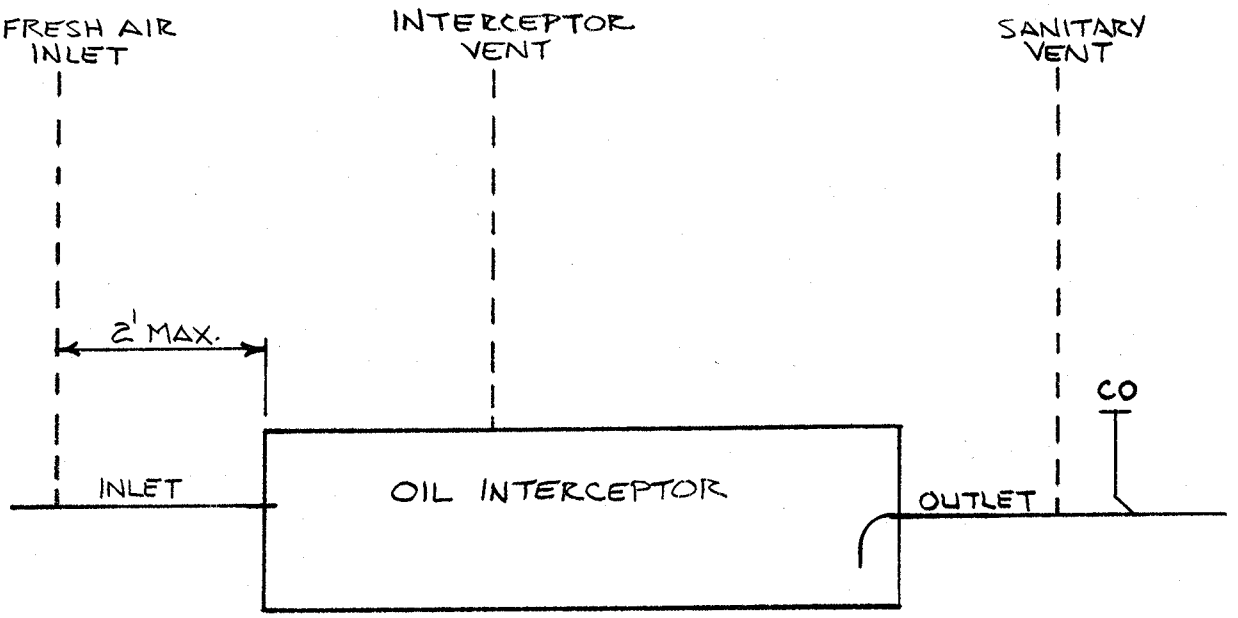


IN-LINE LAUNDRY INTERCEPTOR



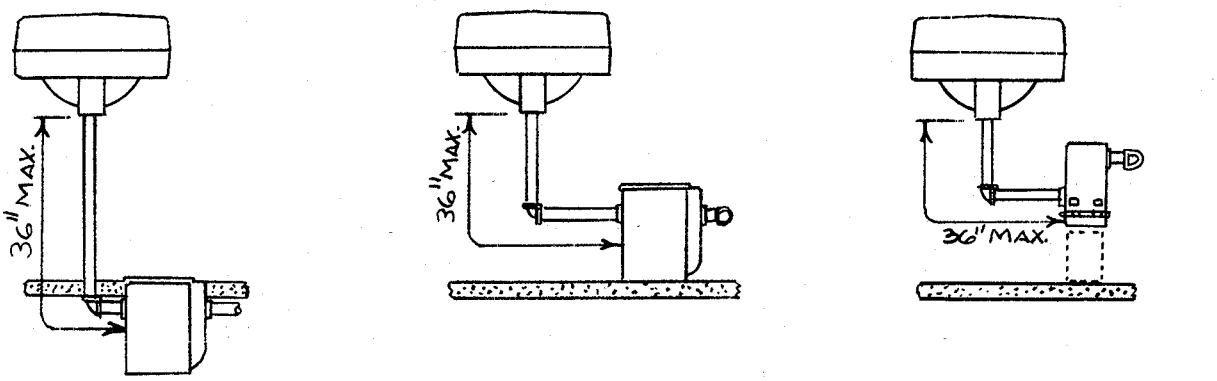
A-82.34 (8)

OIL INTERCEPTOR



A-82.34 (13)

PLASTER AND HEAVY SOLIDS TRAP

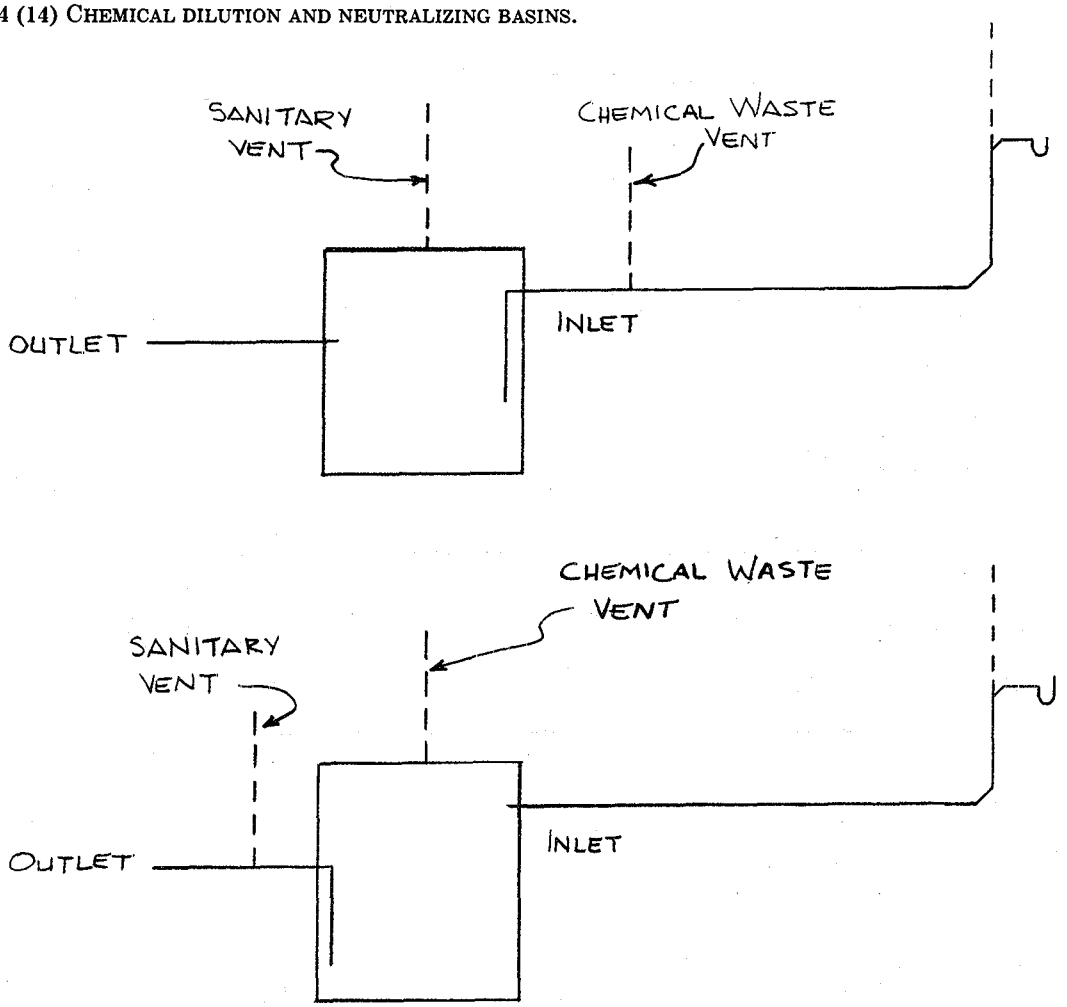


FLUSH WITH FLOOR INSTALLATION

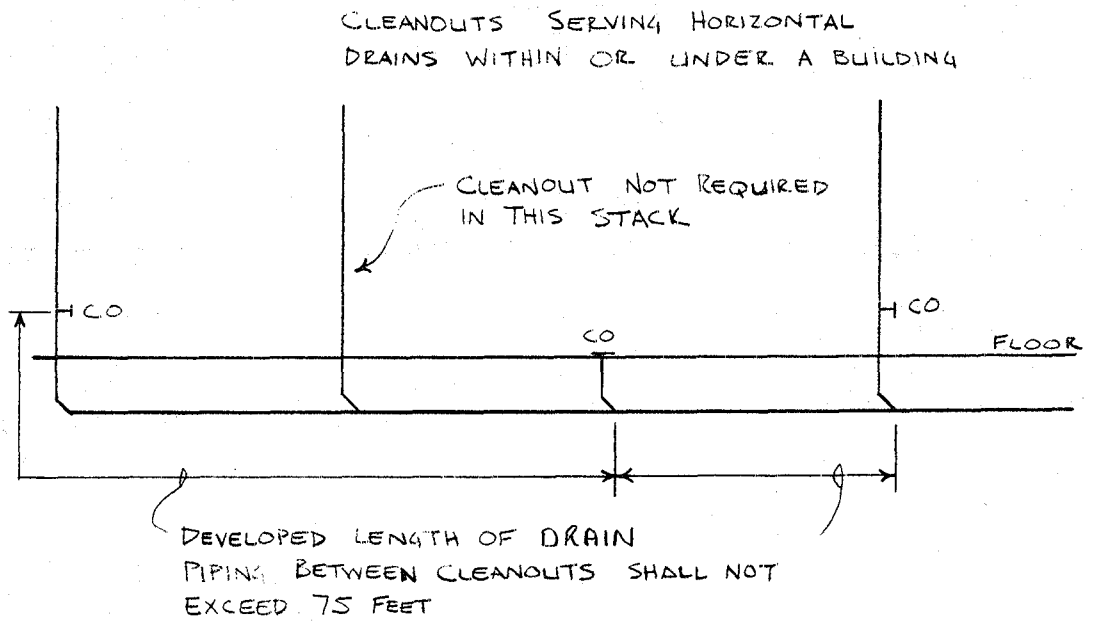
ON THE FLOOR INSTALLATION

SUSPENDED TYPE INSTALLATION

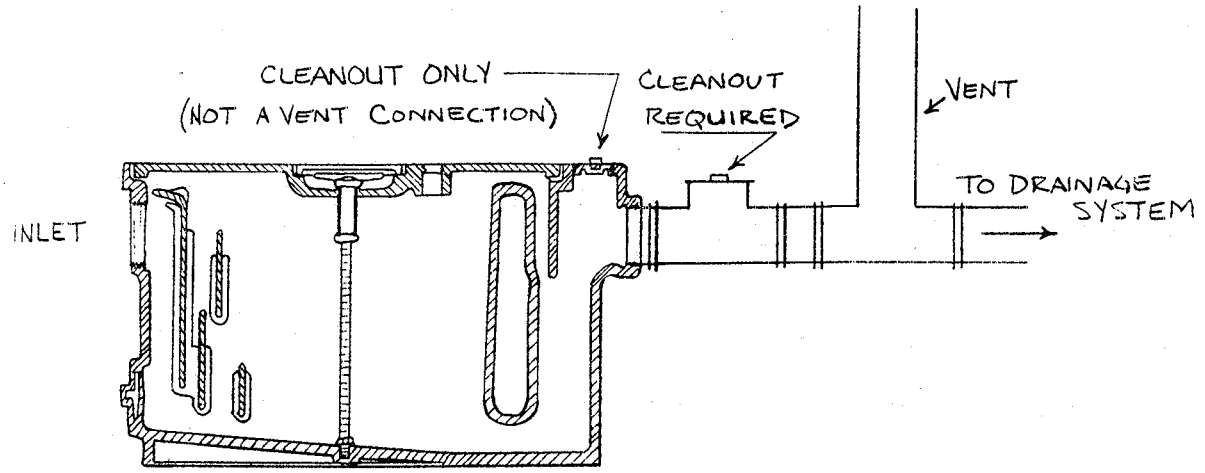
A-82.34 (14) CHEMICAL DILUTION AND NEUTRALIZING BASINS.



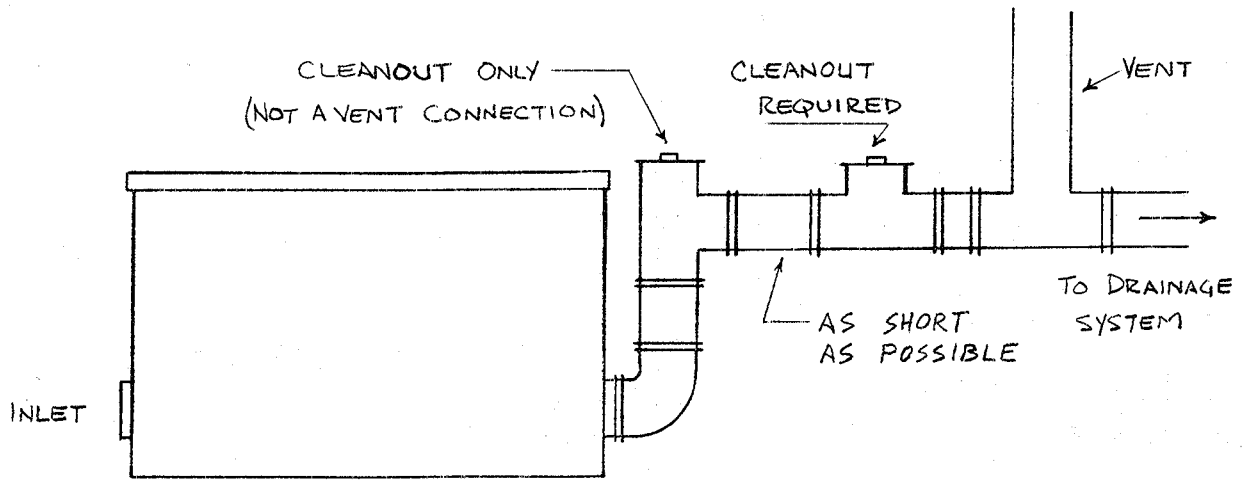
A-82.35 (3)



A-82.35 (3) CLEANOUTS SERVING HORIZONTAL DRAINS.



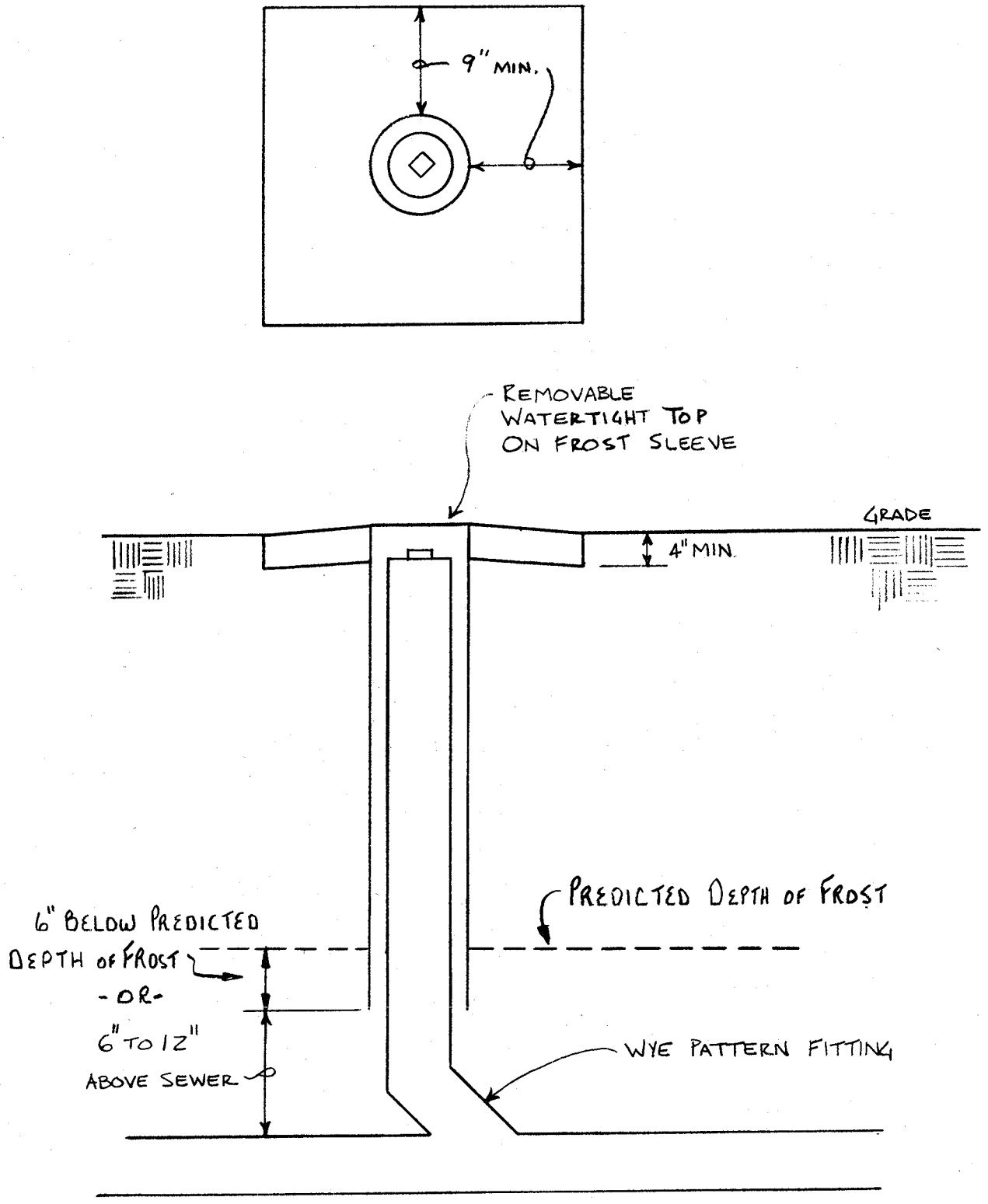
GREASE INTERCEPTOR



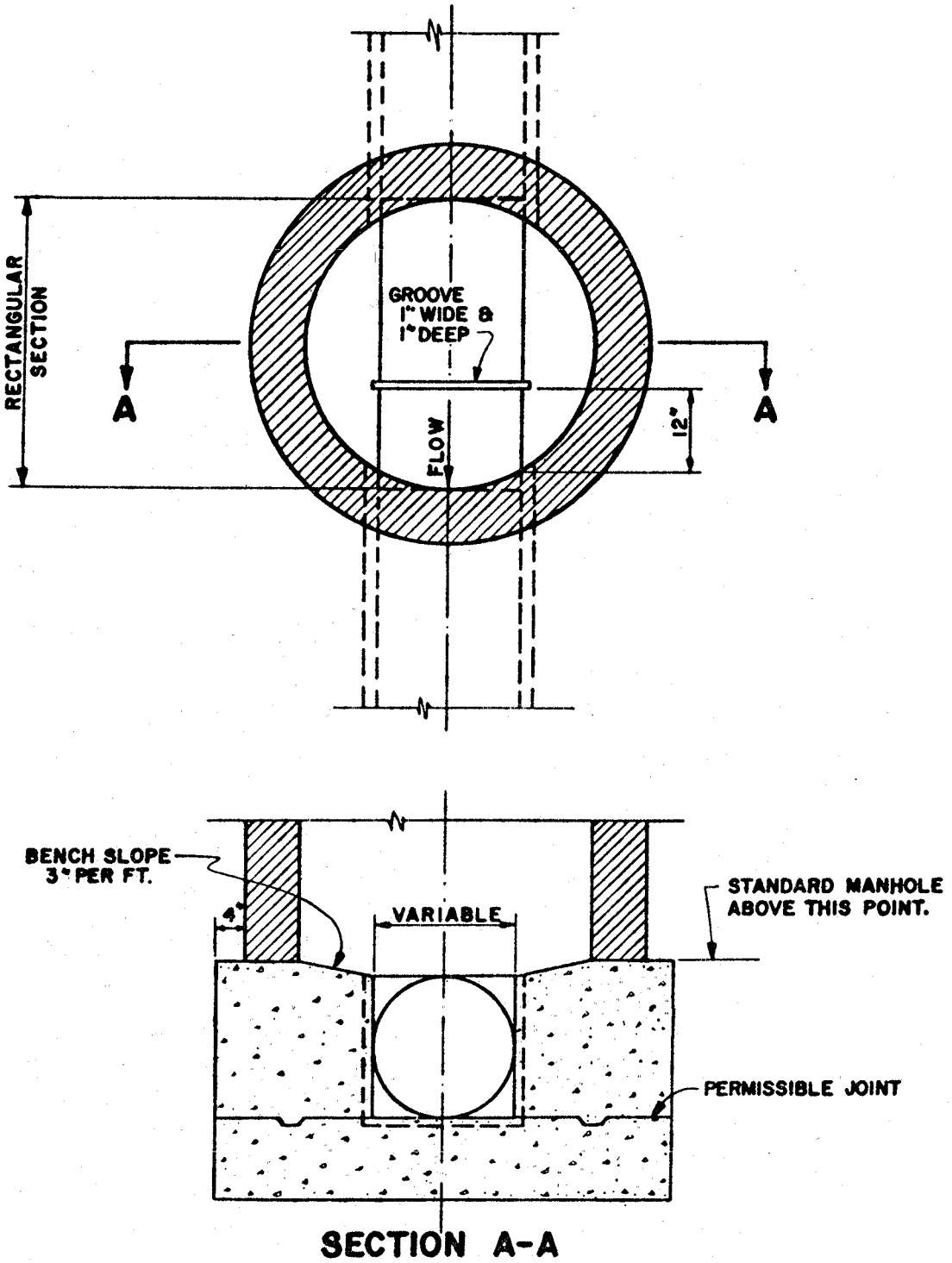
GREASE INTERCEPTOR

ILHR 82 Appendix

A-82.35 (5) (a) CLEANOUT EXTENSION TO GRADE.



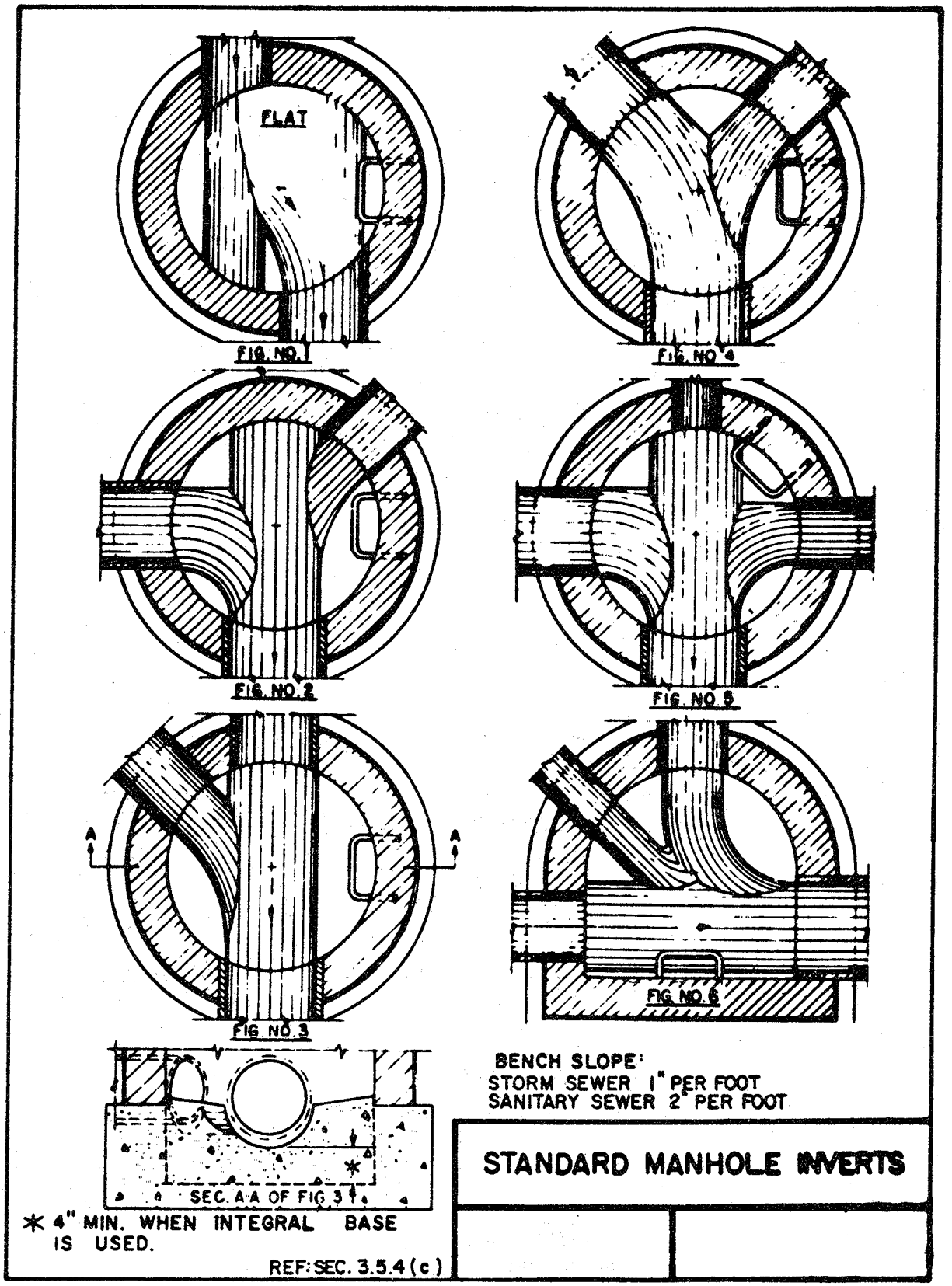
A-82.35 (8)



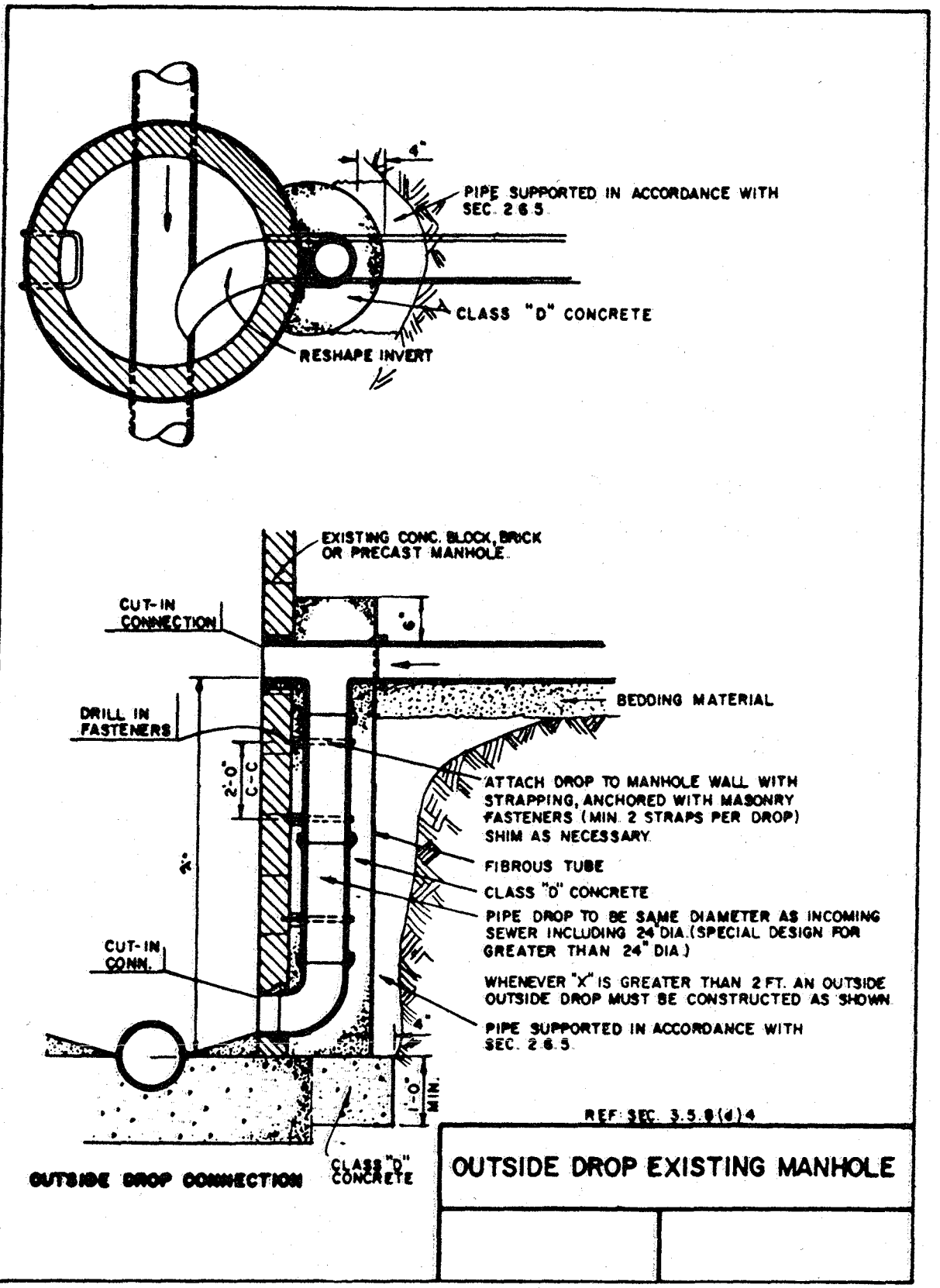
DETAIL OF SAMPLING MANHOLE

ILHR 82 Appendix

A-82.35 (8) (b)

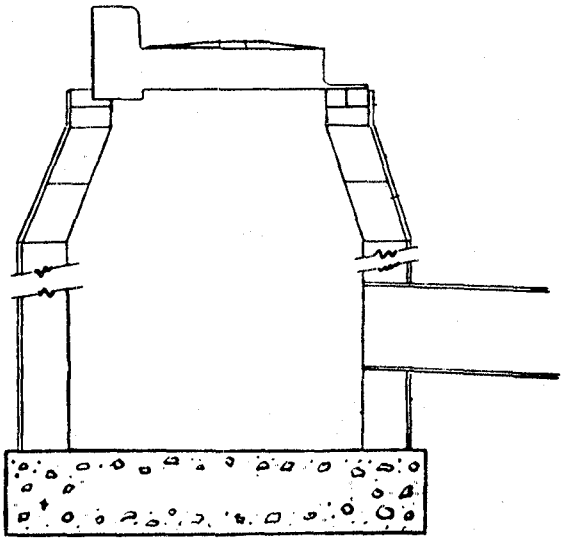


A-82.35 (8) (b)

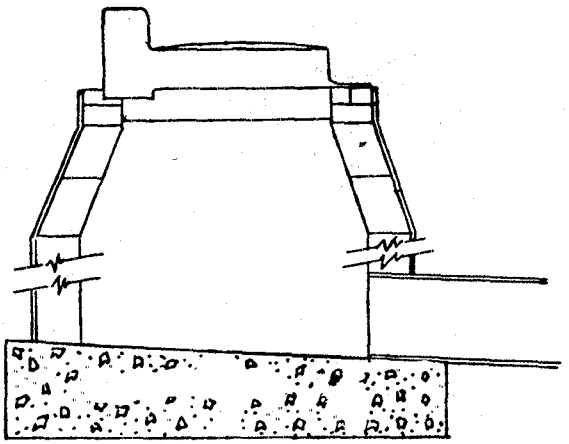

4"
PIPE SUPPORTED IN ACCORDANCE WITH SEC. 2.6.5
CLASS "D" CONCRETE
RESHAPE INVERT
EXISTING CONC. BLOCK, BRICK OR PRECAST MANHOLE
CUT-IN CONNECTION
BEDDING MATERIAL
DRILL IN FASTENERS
2'-0" C-C
ATTACH DROP TO MANHOLE WALL WITH STRAPPING, ANCHORED WITH MASONRY FASTENERS (MIN. 2 STRAPS PER DROP) SHIM AS NECESSARY
FIBROUS TUBE
CLASS "D" CONCRETE
PIPE DROP TO BE SAME DIAMETER AS INCOMING SEWER INCLUDING 24" DIA. (SPECIAL DESIGN FOR GREATER THAN 24" DIA.)
WHENEVER "X" IS GREATER THAN 2 FT. AN OUTSIDE OUTSIDE DROP MUST BE CONSTRUCTED AS SHOWN
CUT-IN CONN.
PIPE SUPPORTED IN ACCORDANCE WITH SEC. 2.6.5
4"
1'-0" MIN.
CLASS "D" CONCRETE
OUTSIDE DROP CONNECTION
REF. SEC. 3.5.8(d)4
OUTSIDE DROP EXISTING MANHOLE

ILHR 82 Appendix

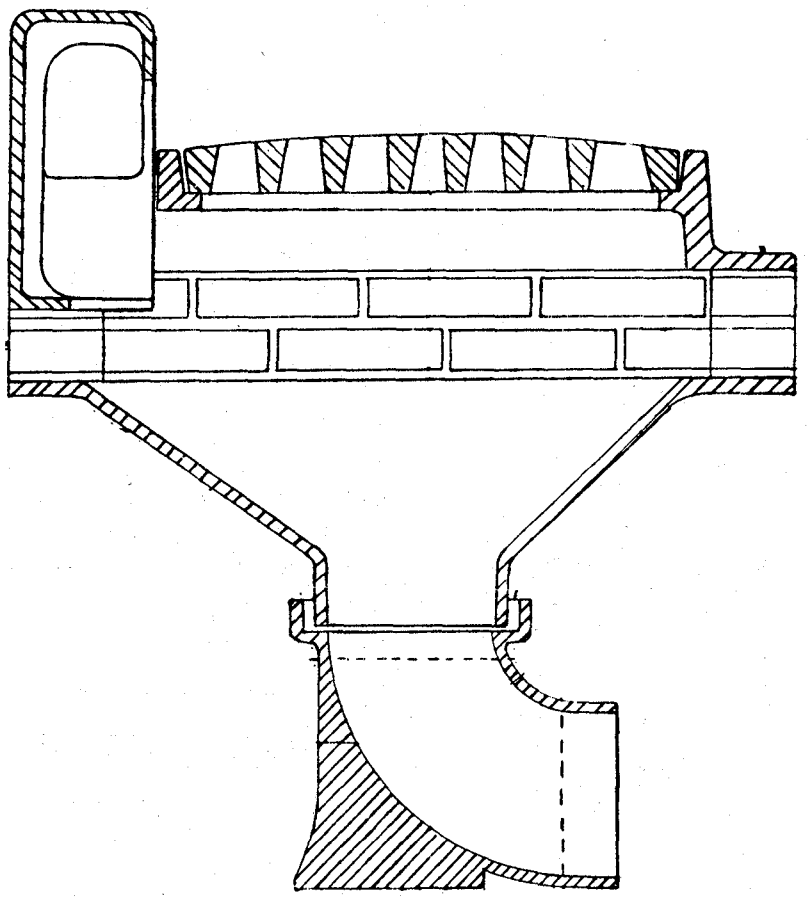
A-82.36 (17) AREA DRAIN INLETS.



STANDARD STORM WATER CATCH BASIN (MASONRY)

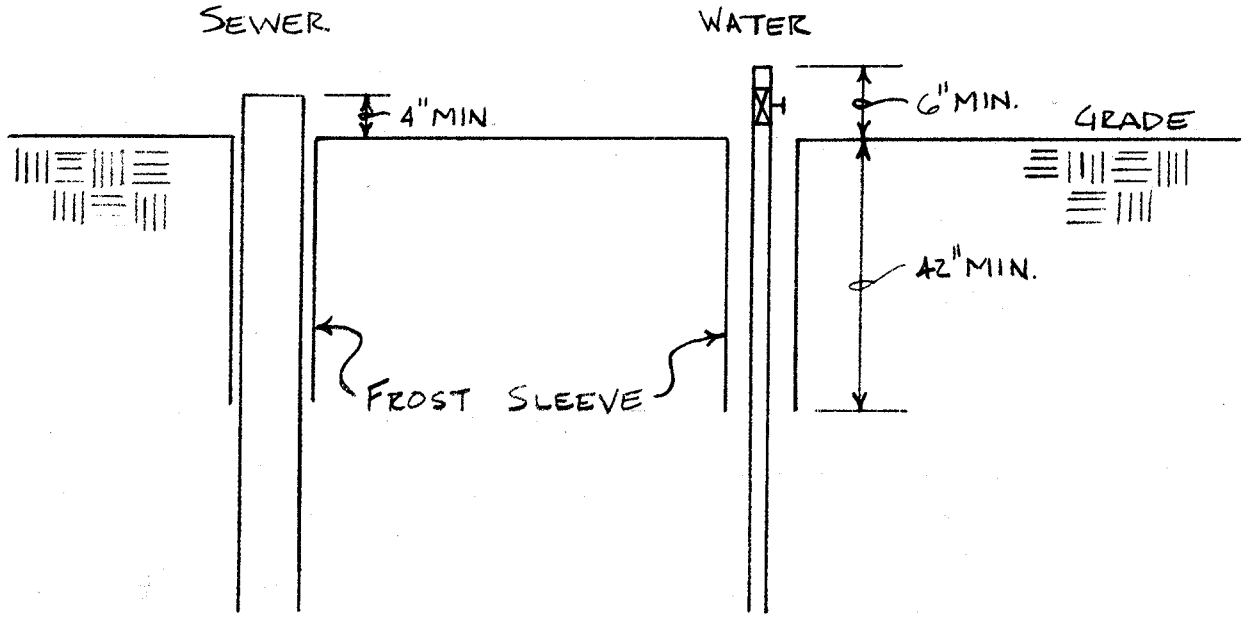


STANDARD STORM WATER INLET (MASONRY)



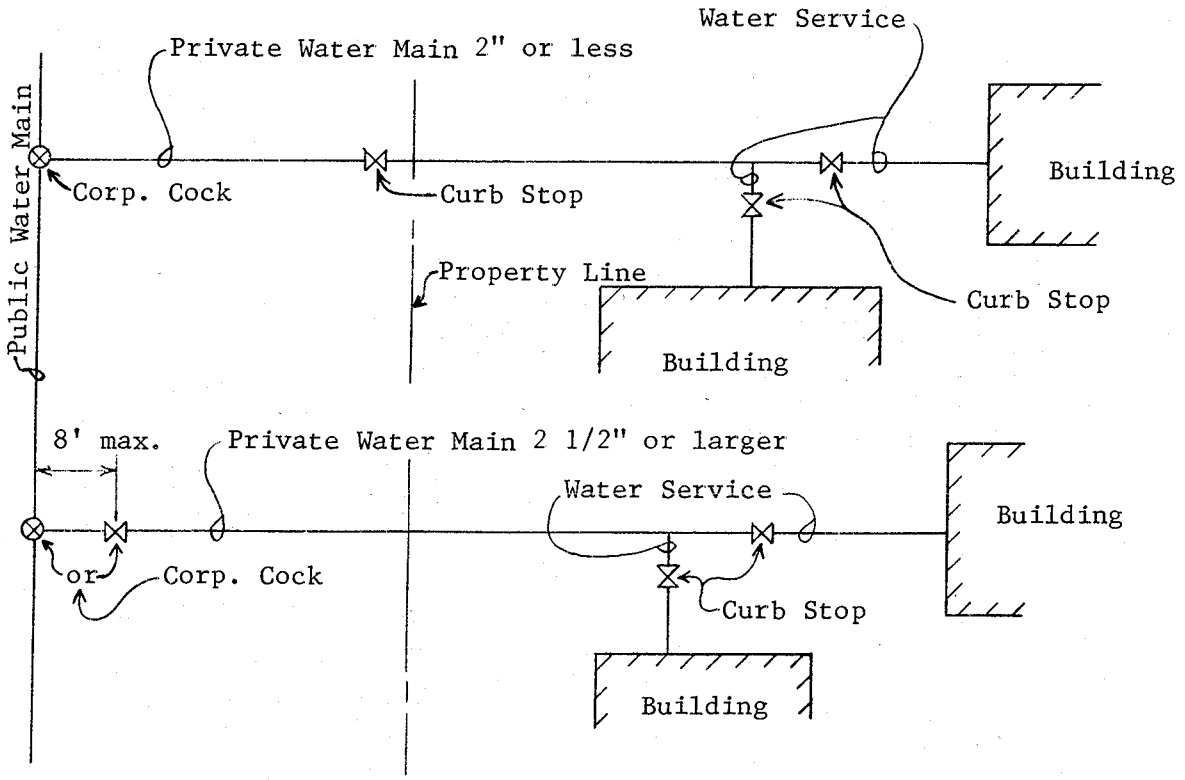
CAST IRON STORM WATER INLET

A-82.51 (3) MOBILE HOME SITES AND PARKS.



MOBILE HOME BUILDING SEWER AND WATER SERVICE TERMINATIONS

A-82.40 (4)



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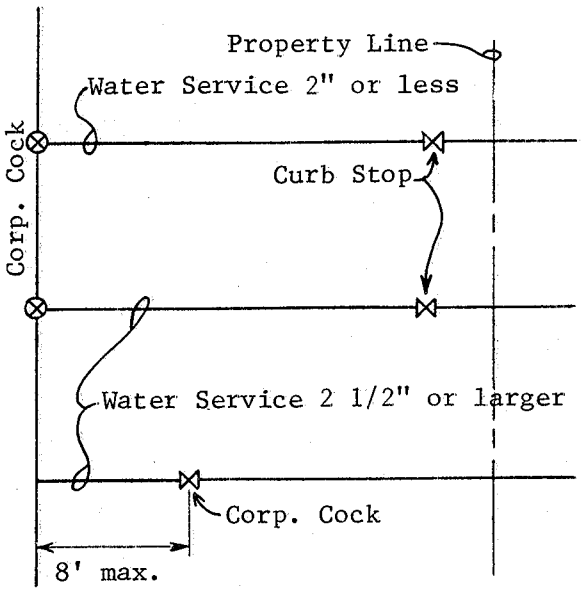
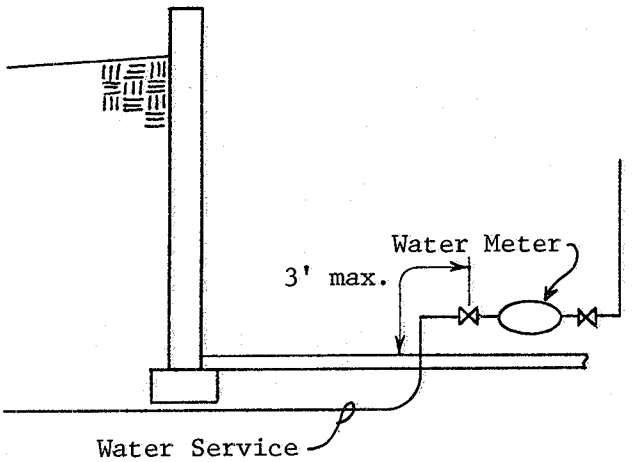
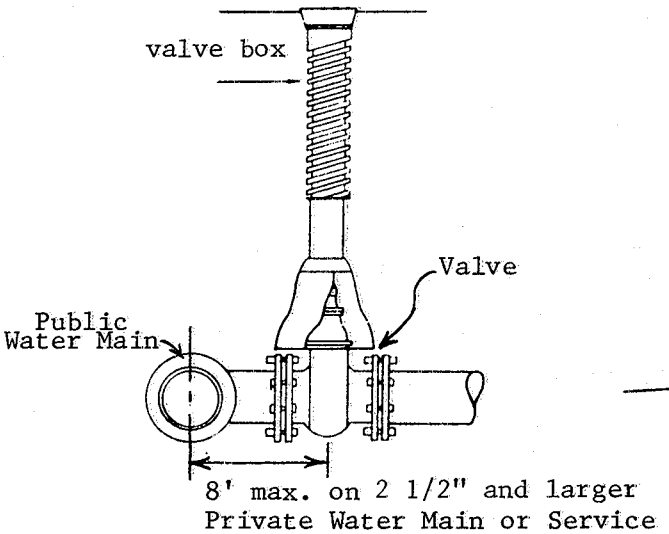
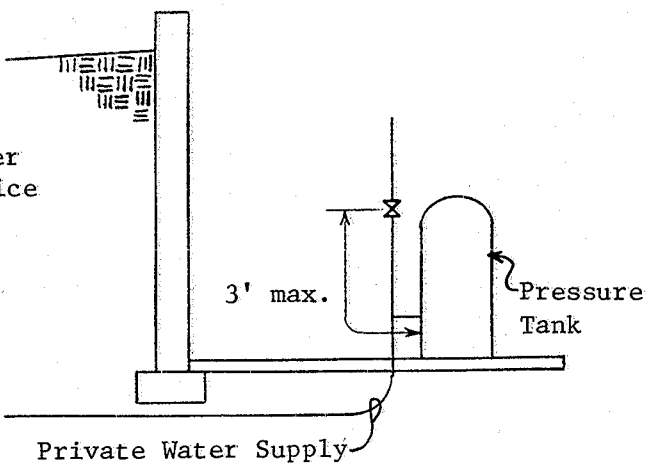
A-82.40 (4) (b)









A-82.40 (5) STORAGE TANK AND PIPING INSULATION. The following is a reprint of section ILHR 63.63.

ILHR 63.33 Insulation. (1) STORAGE TANKS. Heat loss from unfired hot water storage tanks shall be limited to 15 Btu per hour per square foot of external tank surface area. The design ambient temperature shall be no higher than 65° F.

(2) PIPING. (a) Except as provided in par. (b), piping heat loss for recirculation systems shall be limited to a maximum of 25 Btu per hour square foot of external pipe insulation surface for aboveground piping and a maximum of 35 Btu per hour per square foot of external pipe insulation for underground piping. Maximum heat loss shall be determined at a $\triangle T$ equal to the maximum water temperature minus a design ambient temperature no higher than 65° F.

(b) Conformance to the minimum pipe insulation requirements specified in Table 63.22 shall be deemed as complying with the requirements of this subsection.

A-82.40 (7) (a)

Where equipment such as an instantaneous or tankless water heater, water treatment device, water meter, and backflow preventer is provided in the design, the friction loss in such equipment, corresponding to the GPM demand, should be determined from the manufacturer or other reliable source.

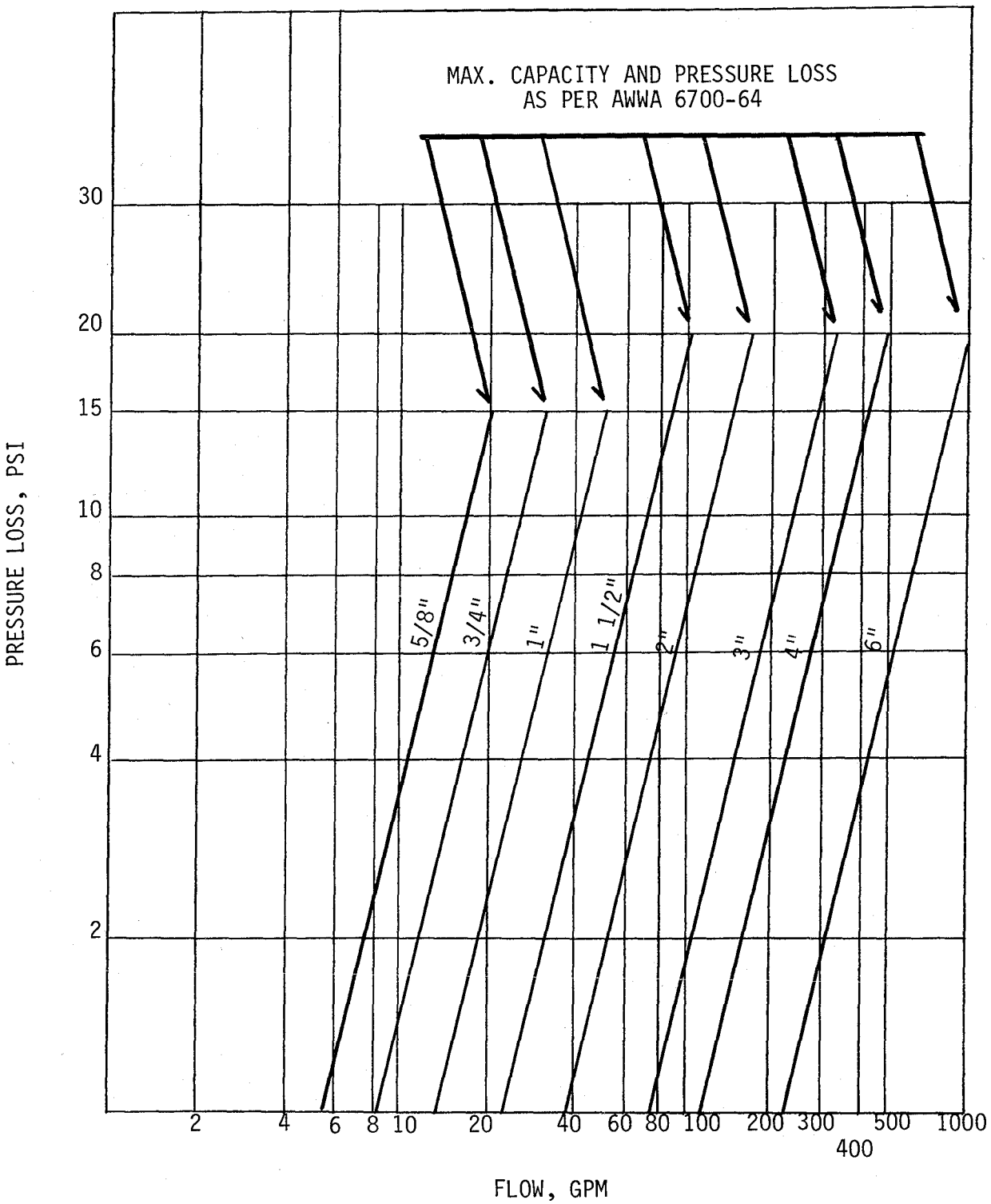
Where a direct fired pressurized tank type water heater is provided in the design, the friction loss for such equipment can be assumed as part of the pressure losses due to flow through piping, fittings, valves and other plumbing appurtenances when the developed length of piping is multiplied by 1.5.

The pressure losses due to flow friction through displacement type cold-water meters may be calculated from Graph A-82.40 (7)-1.

ILHR 82 Appendix

Graph A-82.40 (7)-1

PRESSURE LOSS IN COLD-WATER METERS, DISPLACEMENT TYPE

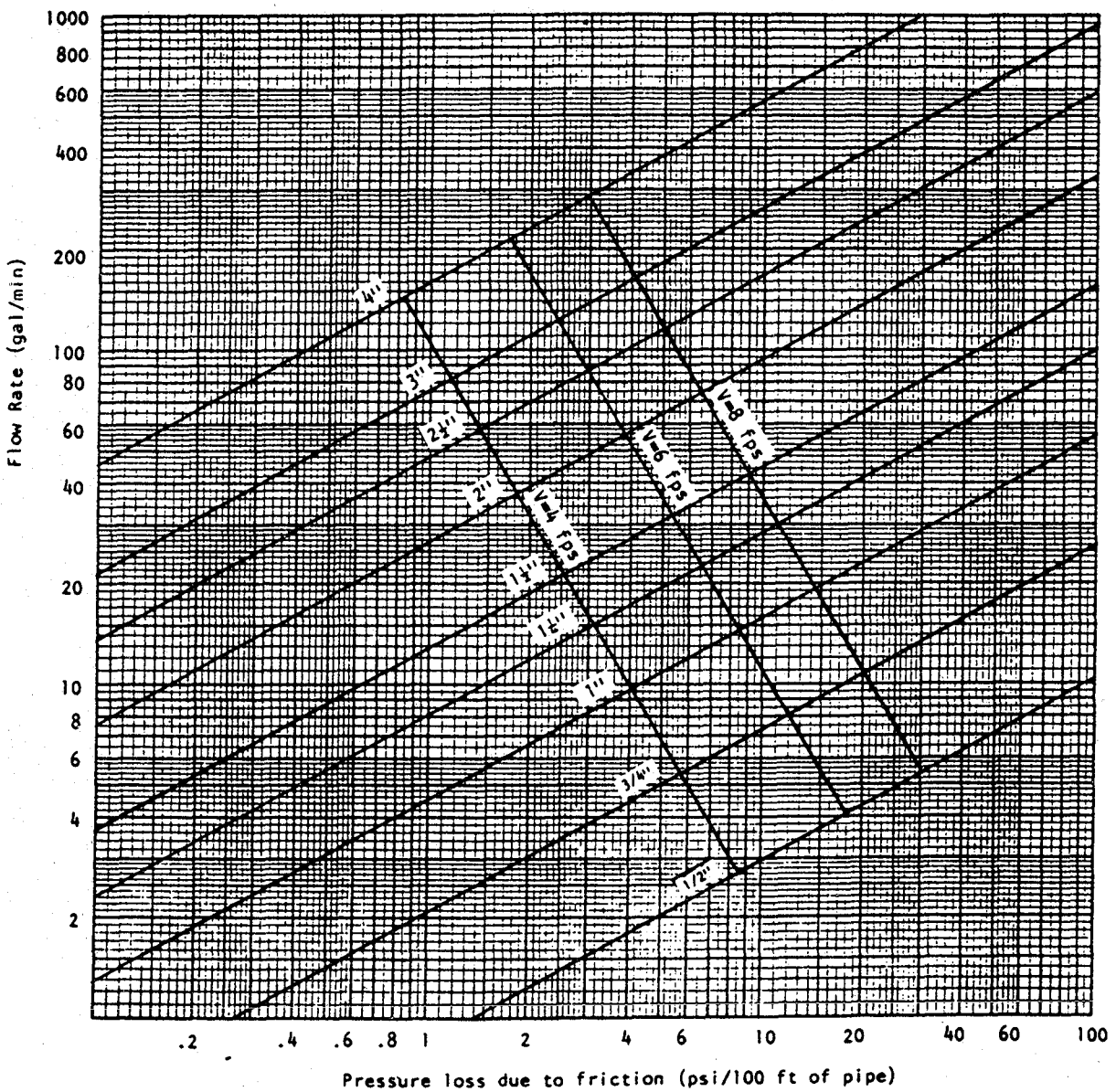


A-82.40 (7) (b)

Graphs A-82.40 (7)-2 to A-82.40 (7)-5 may be used to size private water mains and water services.

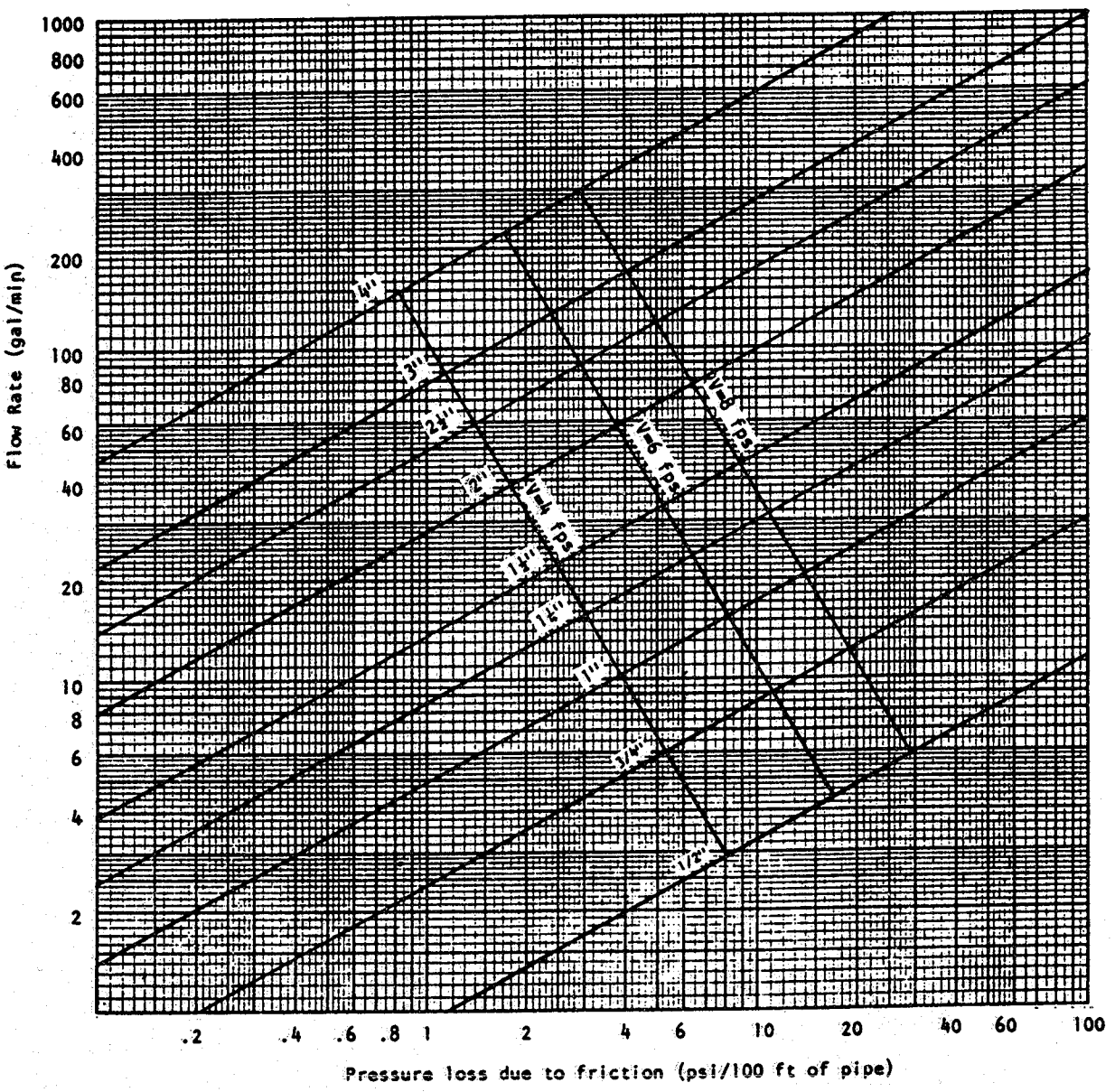
Graph A-82.40 (7)-2

Pressure losses due to flow friction
Material: Copper Tube-Type K, ASTM B88



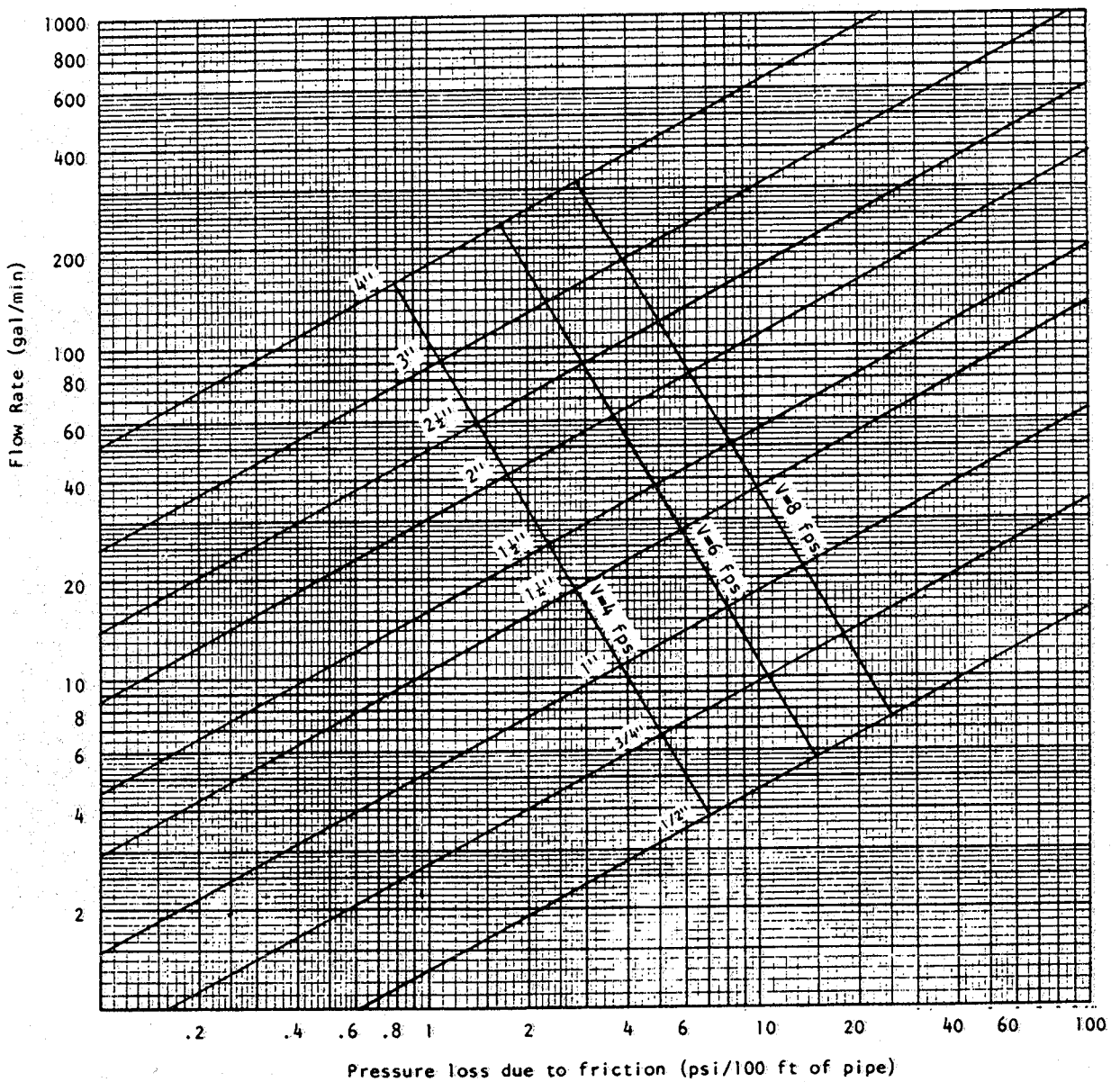
Graph A-82.40 (7)-3

Pressure losses due to flow friction
Material: Copper Tube-Type L, ASTM B88



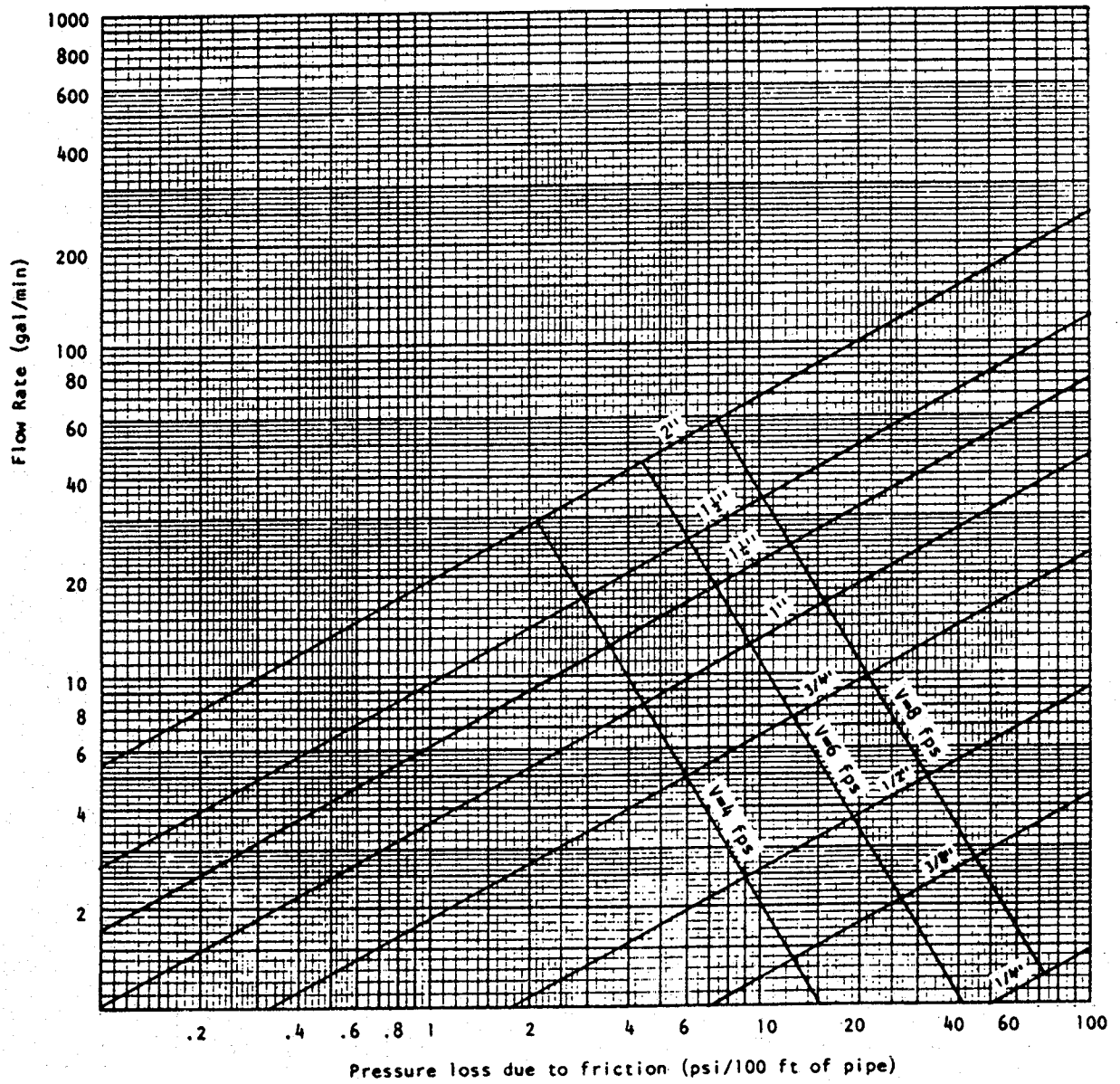
Graph A-82.40 (7)-4

Pressure losses due to flow friction
Material: Galvanized Steel Pipe-Schedule 40, ASTM A53, ASTM A120;
ABS Pipe-Schedule 40; ASTM D1527; or
CPVC Pipe-Schedule 40; ASTM F441; or
PE Pipe-Schedule 40; ASTM D2104; ASTM D2447; or
PVC Pipe-Schedule 40; ASTM D1785;ASTM D2672



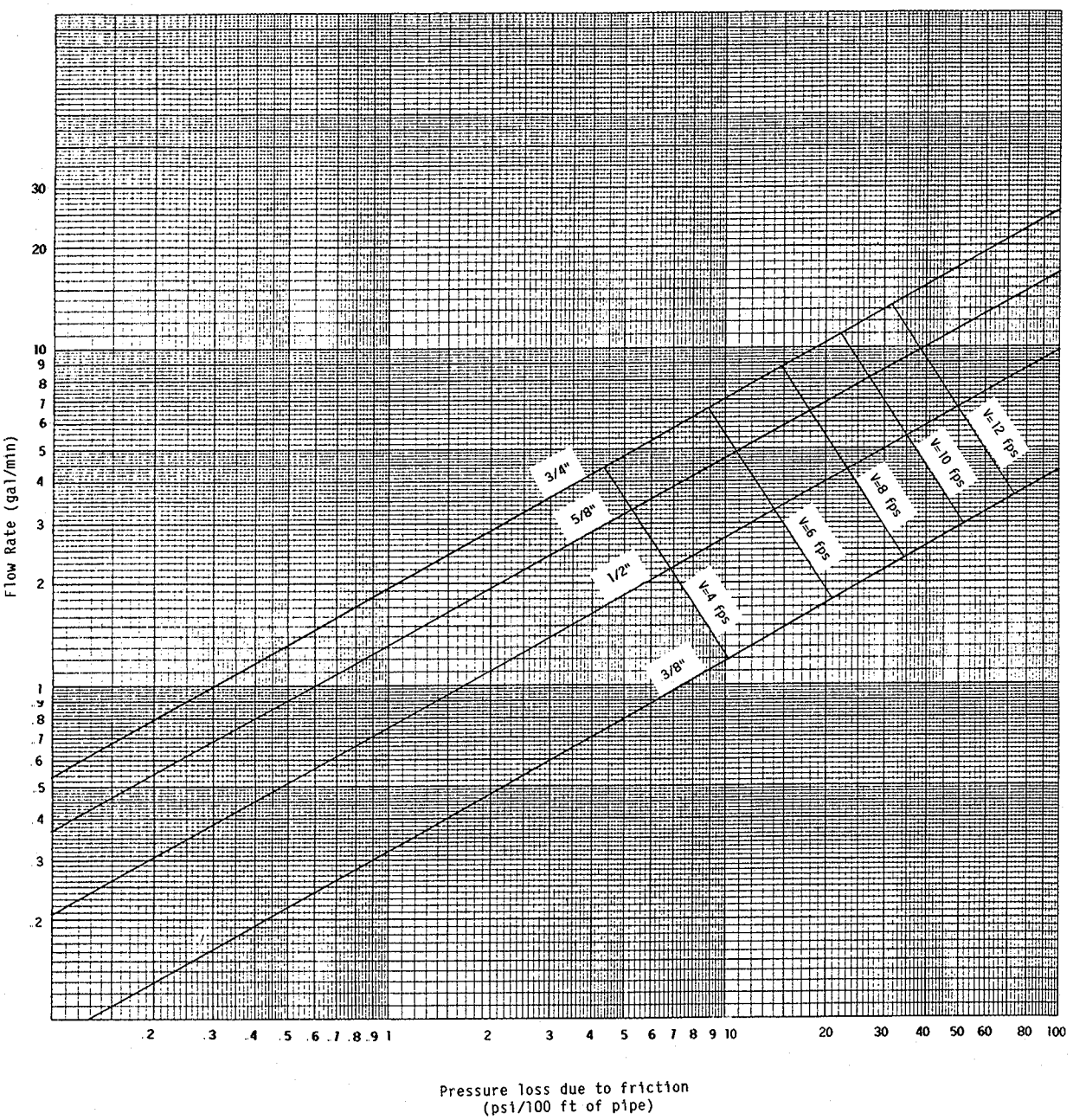
Graph A-82.40 (7)-5

Pressure losses due to flow friction
Material: Polybutylene Tubing, ASTM D3309; or
CPVC Tubing; ASTM D2846



Graph A-82.40 (7)-6

Pressure losses due to flow friction
Material: Crosslinked Polyethylene (PEX) Tubing, ASTM F876



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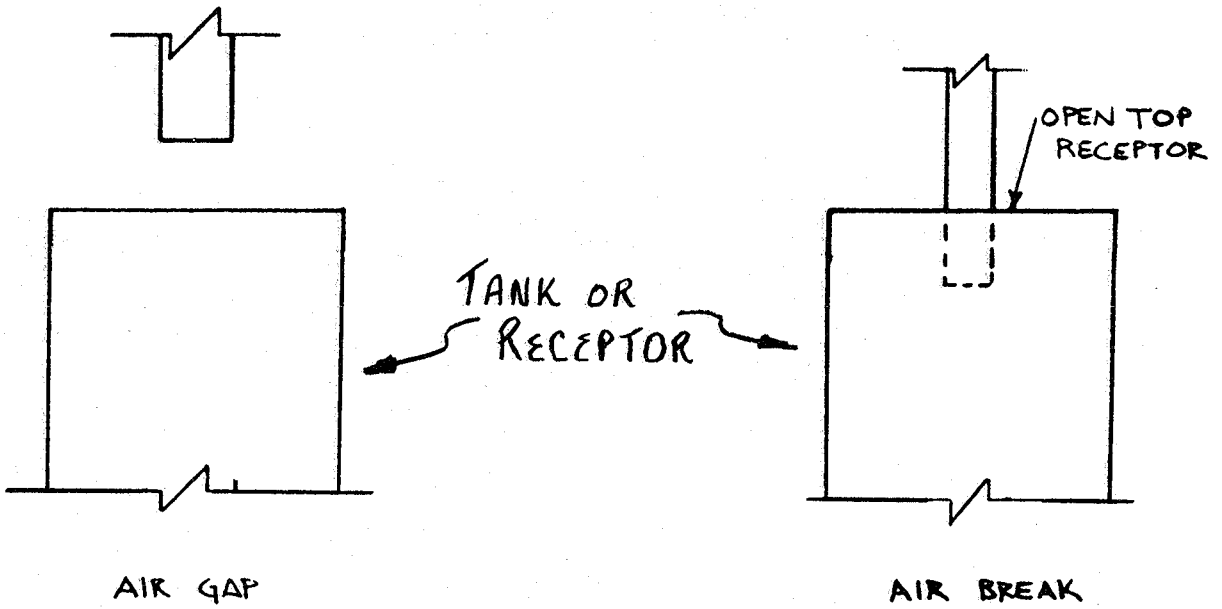
A-82.41 (5) (a) AIR GAP.



ANSI STANDARD A112.1.2 DESCRIBES OTHER ACCEPTABLE TYPES OF AIR GAPS.