

Iowa-American Water Company
Quad-Cities District
230 East 2nd Street
Davenport, Iowa 52801

15310-1

File 320

FIRE HYDRANT FLOW TEST REPORT

Fire Hydrant # 3008 on 65th St at Access Rd

was selected as the residual hydrant. Point A.

Fire Hydrant # 3395 on Access Rd North of 65th St

was selected as the flow hydrant. Point B.

Static pressure at Point A was 57 psi before the flow test.

Static pressure at Point B was 55 psi before the flow test.

After the Point B hydrant was allowed to flow for 2 minutes, the

residual pressure at Point A was 48 psi and the flowing

pressure at Point B was 55 psi. 1151 G.P.M.

The test was made with 1 2 1/2 Inch outlet(s) flowing.
(number) (size)

Static pressure at Point A was 57 psi after the flow test.

Static pressure at Point B was 55 psi after the flow test.

Flow test for Von Maur Address 6619 Brady St

Flow test conducted by Ron Dohrmann

Date 4-30-92 Time 3:30 PM

NOTE: A SKETCH FROM THE DISTRIBUTION MAP CLEARLY DESIGNATING THE
POINT A AND POINT B HYDRANTS IS TO BE ATTACHED TO THIS REPORT
FORM BEFORE IT IS ISSUED TO THE TEST TEAM.

Requested by Paul Parry

KJWW Engineering

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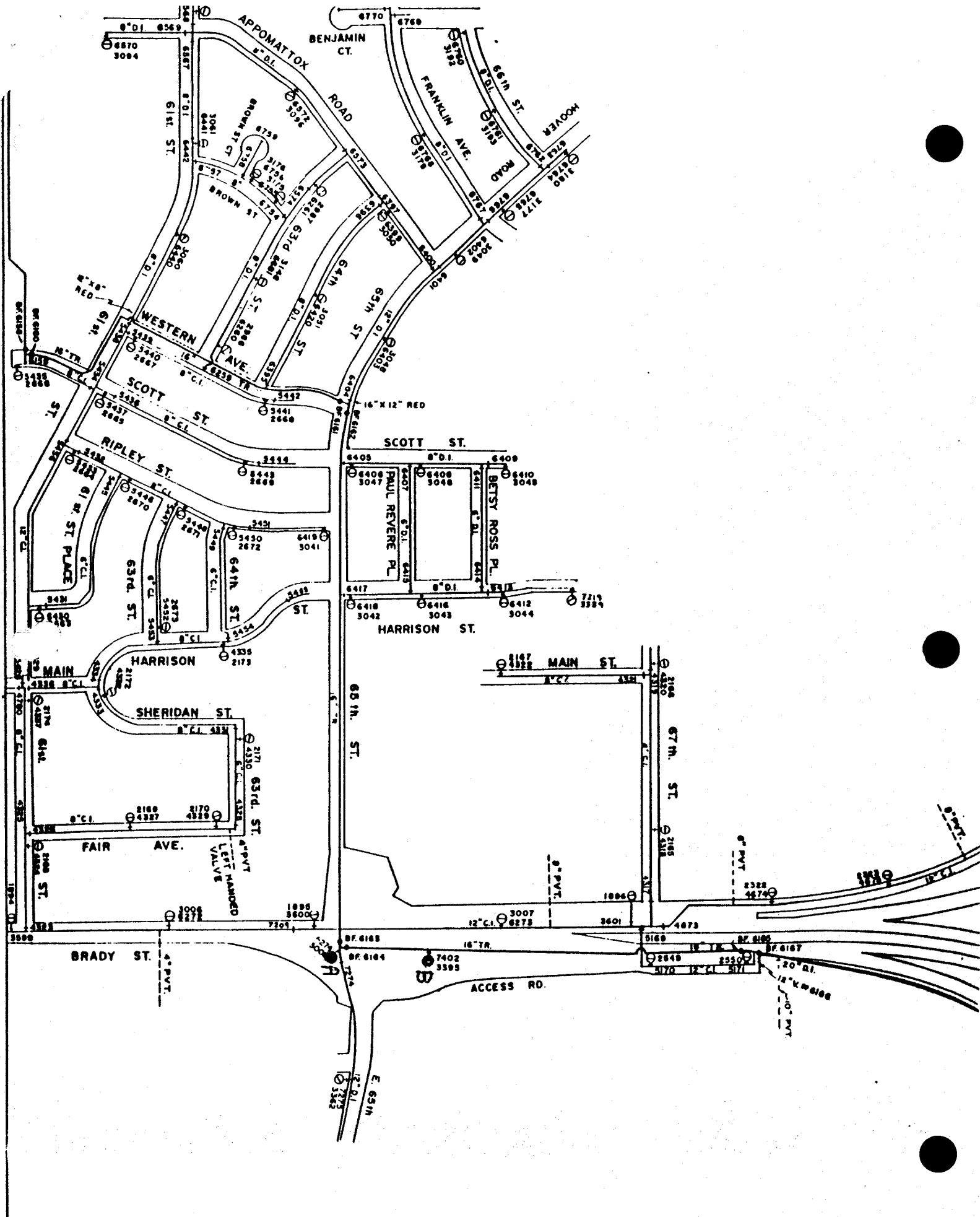
Mike Schnider

Von Maur

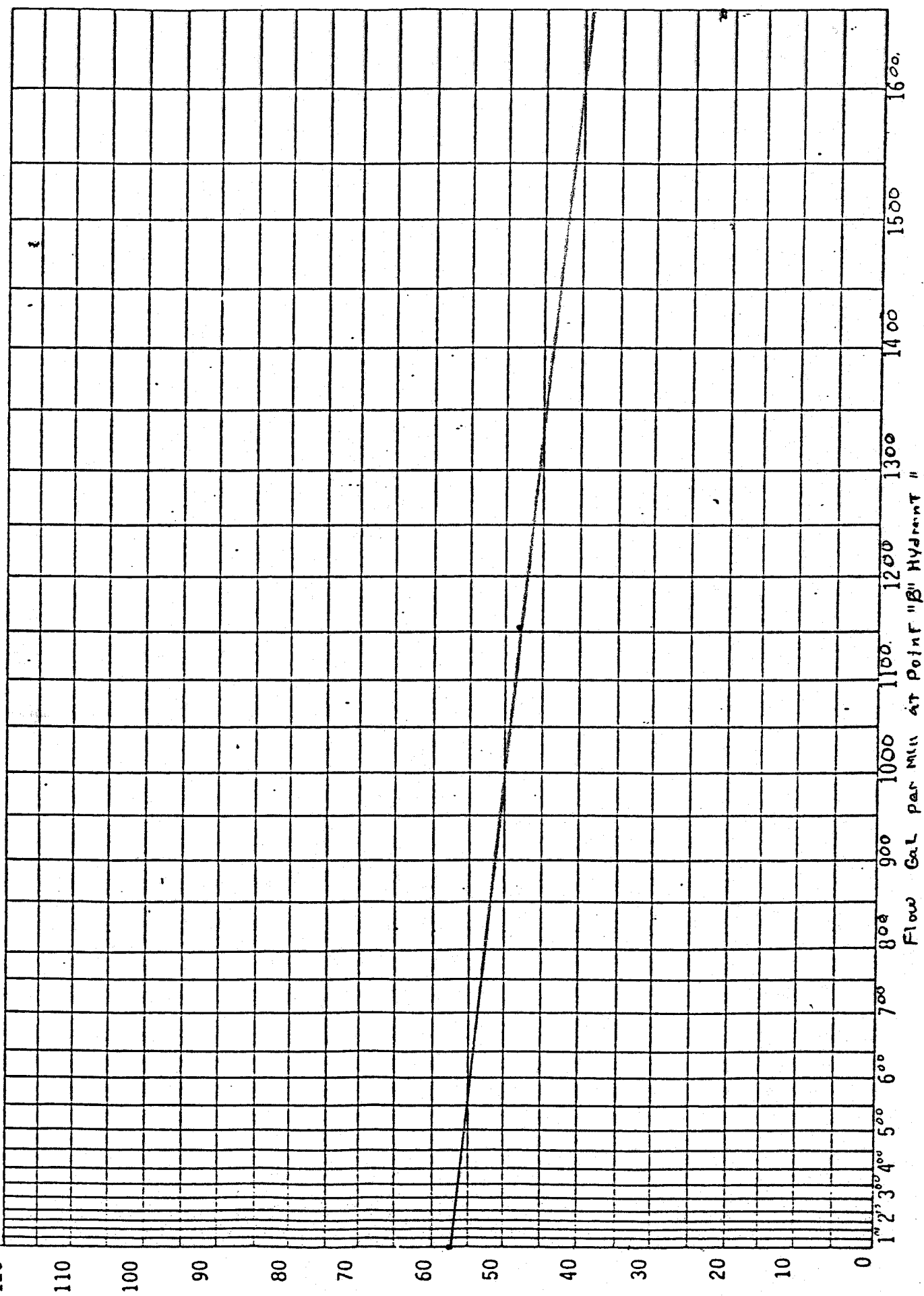
398-2214

1412 GPM

3/96

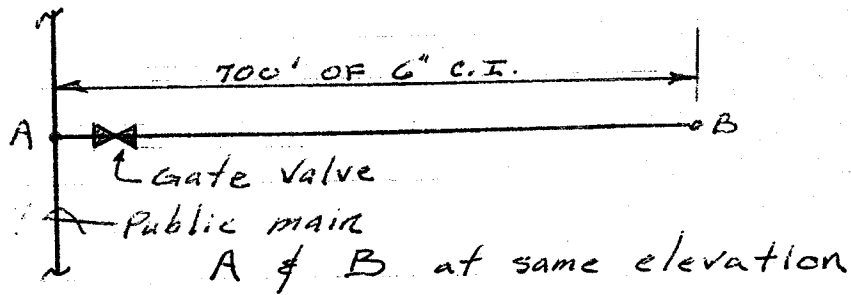


Date 4-30-92 Time 3:30 PM Municipality Davenport
 Location Hydrant "A" 65th St at Access Rd No. 3 Location Hydrant "B" Access Rd N of 65th St No. 33
 Static Pressure 57 Static Pressure 55
 Residual Pressure 48 Pitot Tube or Flow Reading 55 Nozzle Size 2 1/2
 Static Pressure 57 Flow Based on Pitot or Flow Reading 55 // 51 GPM



5008 # Hydrant "A" - PSI at Point

Example



Equivalent Pipe Length

$$\text{Pipe length - measured} = 100.$$

$$\text{Pipe length equivalent for valve} = \frac{3}{703}.$$

Static Pressure at A - measured = 100 psi
at no flow.

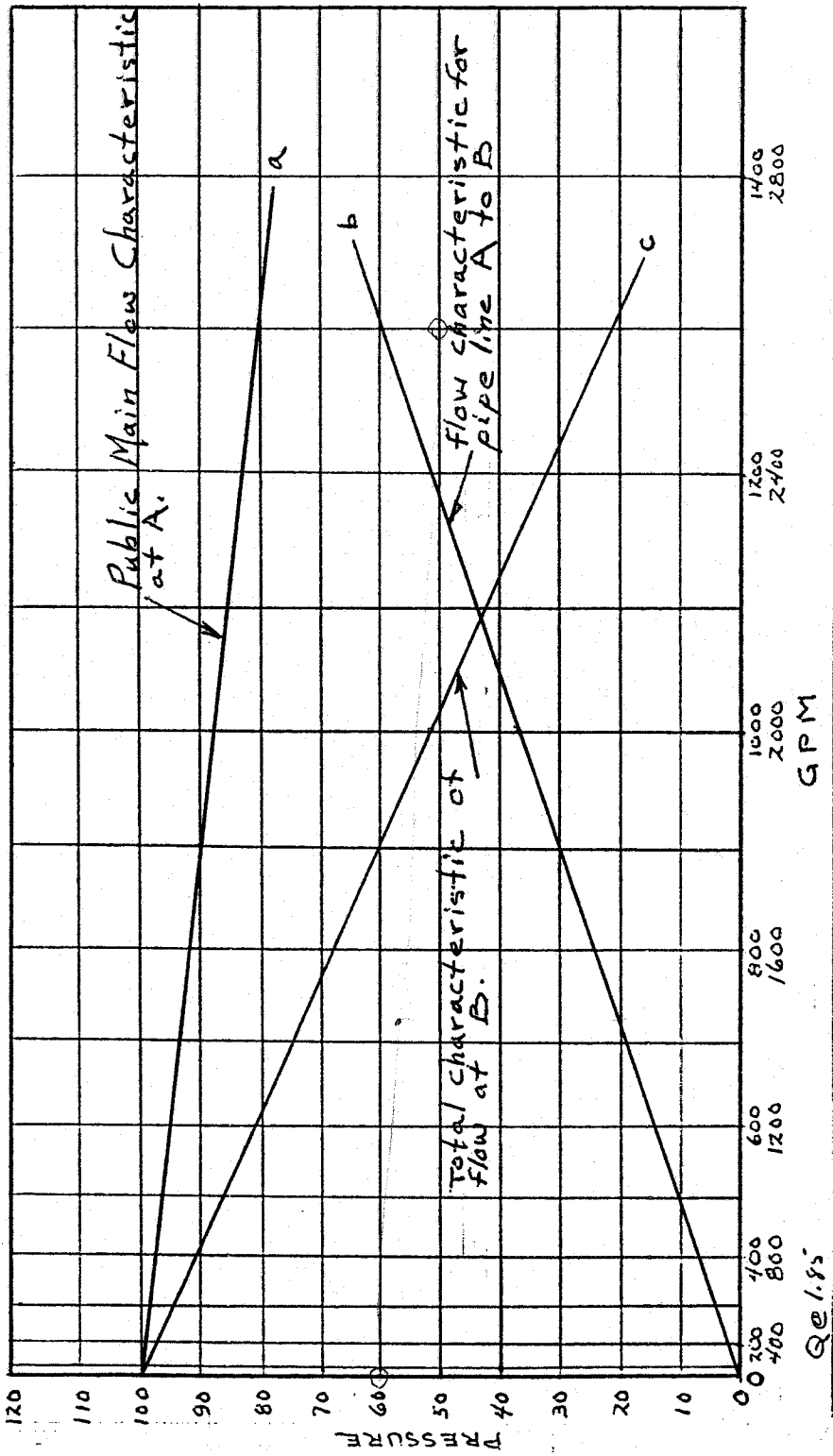
Residual Pressure at A with measured
flow of 900 GPM = 90 psi

Frictional loss for flow from A to B

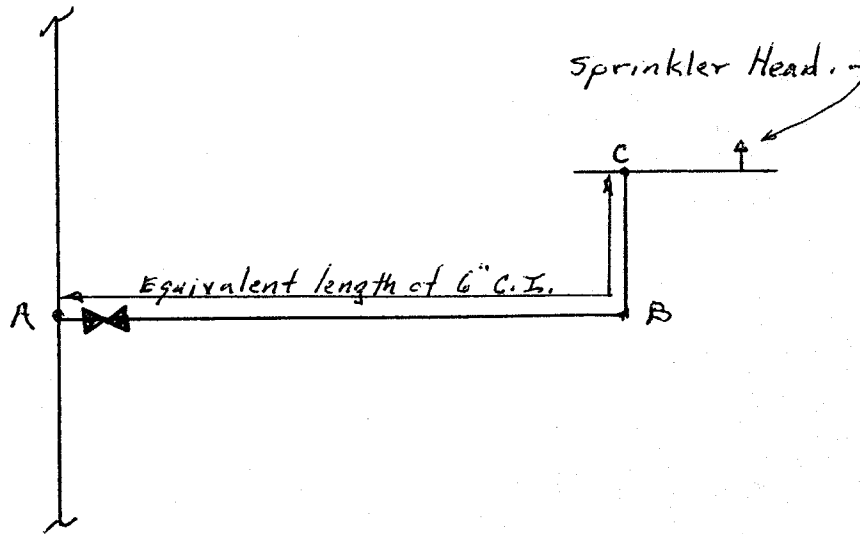
at 0 flow loss = 0 psi

at 1000 gpm - loss (take from a table
or flow chart such as Ingersoll Rand
handbook - correct for pipe "C"

factor if a "C" factor different
from table is assumed) is 12.1 = 5.24#
per 100 ft. = $5.24 \times \frac{703}{100} = 36.8 \text{ psi}$



Example



Pressure req'd @ Sprinkler head = 10 psi
Elevation at C with respect to A = +30 ft
= 13 psi

Static Pressure at A - measured 75 psi
at no flow

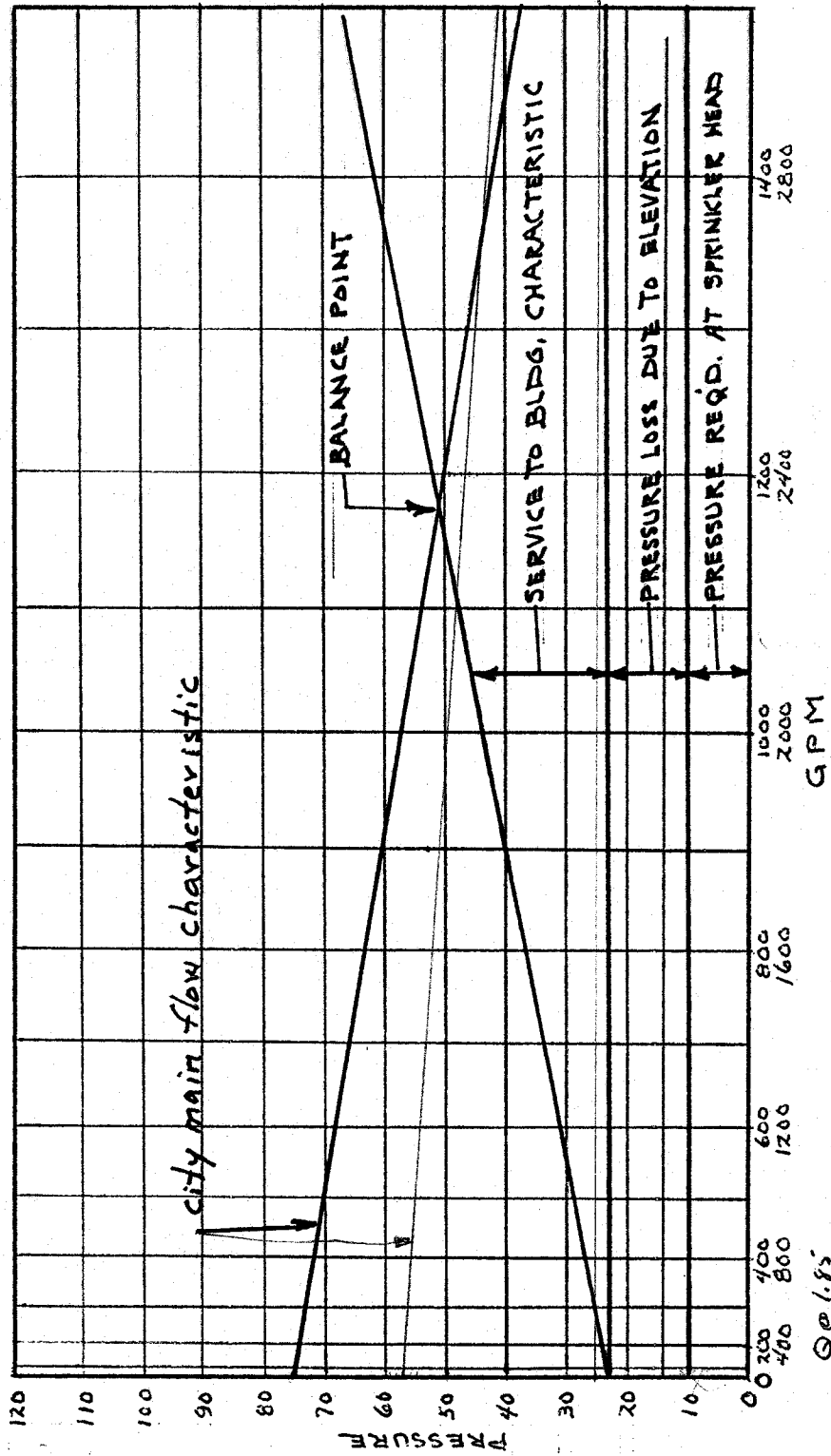
Residual Pressure at A with measured
flow of 900 gpm = 60 psi

Frictional loss for flow from A to C

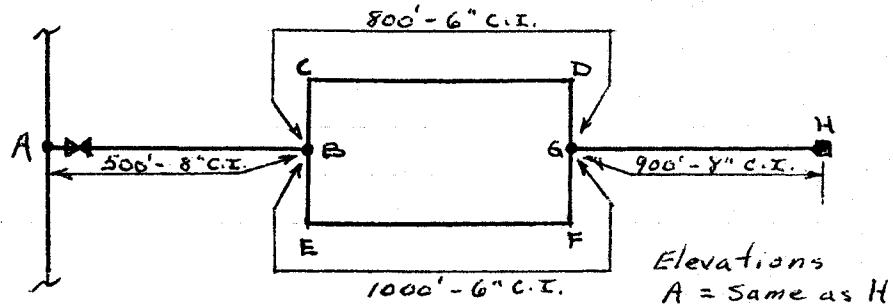
@ 0 flow - loss = 0

@ 1000 gpm flow - loss = 16 psi

Balance point = 1175 gpm @ 51 psi



EXAMPLE



Equivalent Pipe Lengths.

A to B	Pipe - 500
	Valve - 4 504'
B C D G	Pipe - 800
	2 Tees - 60
	2 Elbows - 28 888'
B E F G	Pipe - 1000
	2 Tees - 60
	2 Elbows - 28 1088'

Static Pressure measured @ A = 100 psi

Residual Pressure @ A with measured flow of 900 GPM = 90 psi

Pipe friction values taken from Cameron Hydraulic Data. - C=100

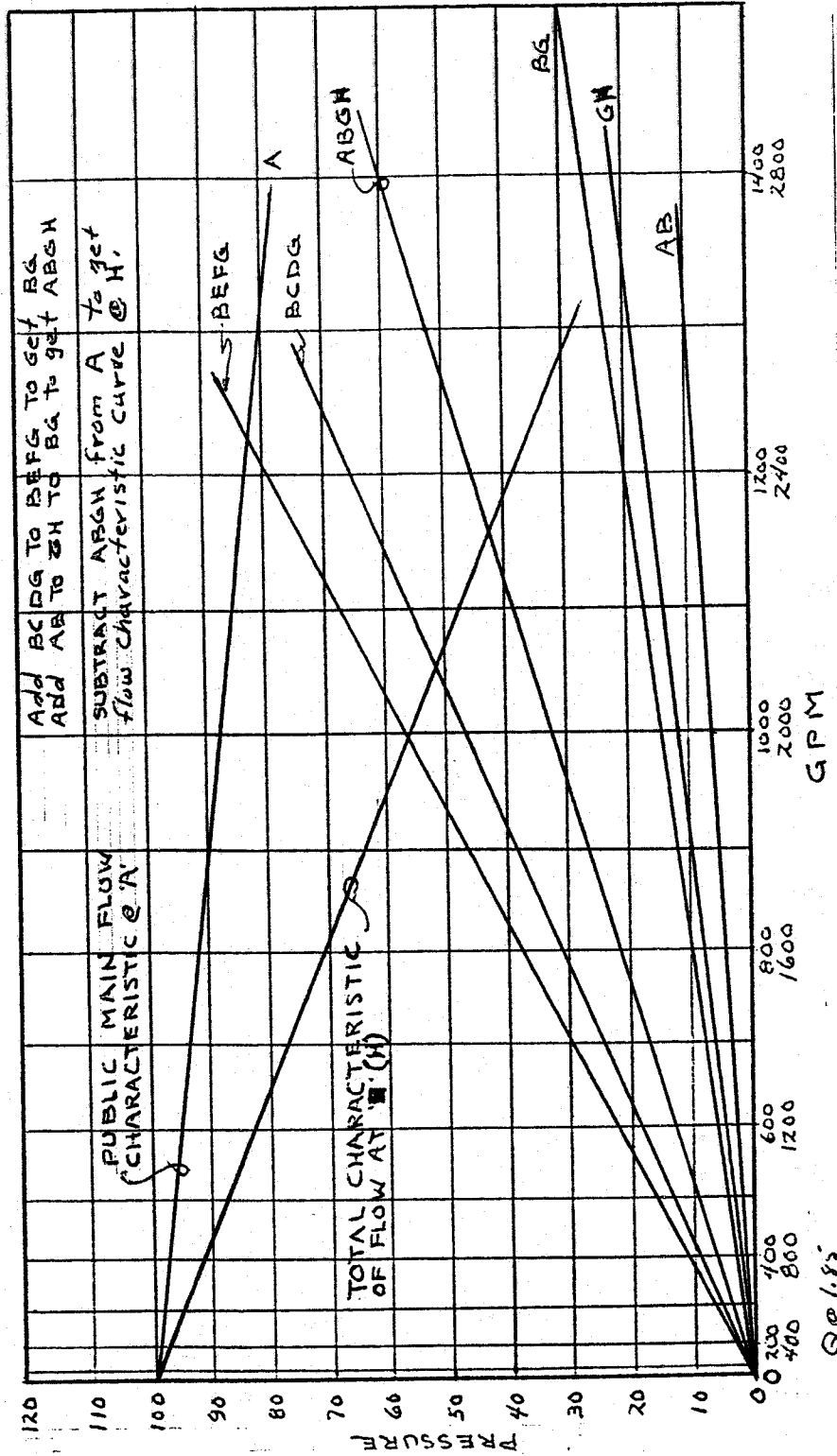
Assume 1000 GPM Flow

8" pipe friction = $2.98'/100' = 1.29 \#/100'$

6" pipe friction = $12.1'/100' = 5.24 \#/100'$

@ 0 flow friction = $0 \#/100'$

Plot flow characteristic curves for each section of pipe - Add or Subtract as shown.



Q @ 1.85