

CEV 451E WATER SUPPLY & ENVIRONMENTAL SANITATION

Week 3: Water Transmission Lines
Definitions and **Design Principles**

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WE SAID:

- $Q = P \times q$
- $\text{mean}q_{day}$: Mean of the daily consumption
- $\text{max}q_{day}$: Maximum of the daily consumption
- $\text{max}q_{hour}$: Maximum of the hourly consumption

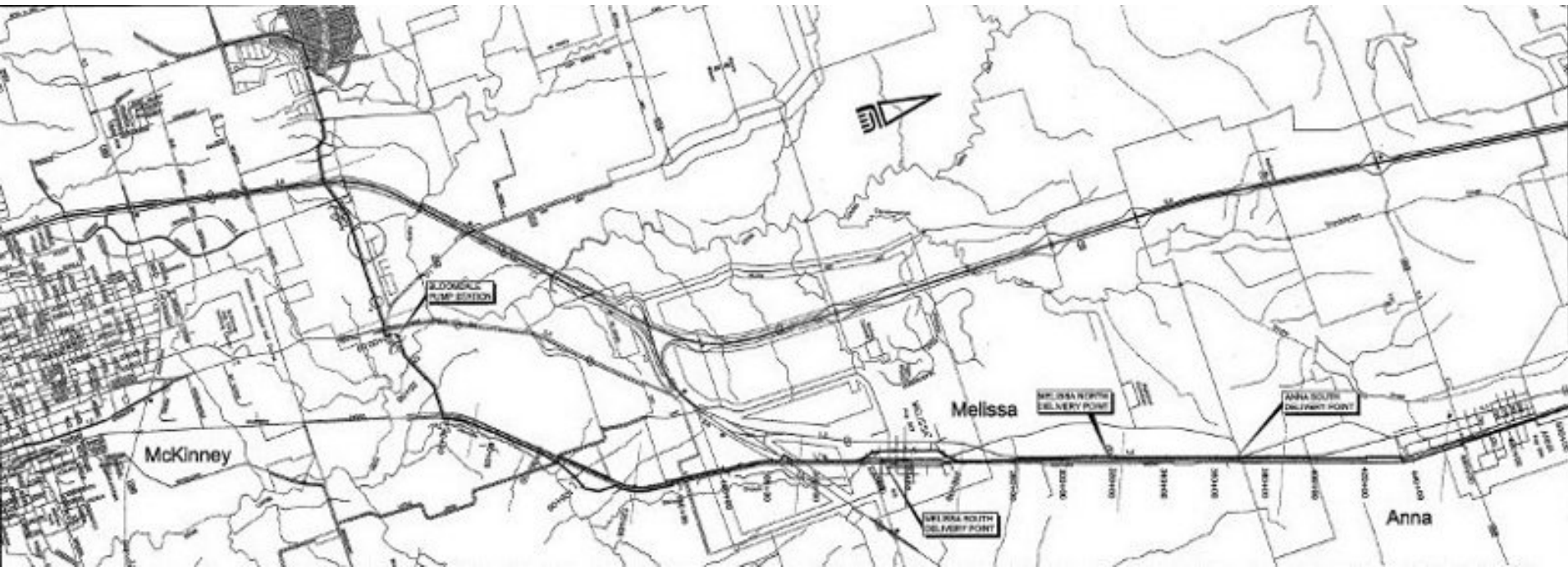
WE SAID:

- $\max q_{day} = \alpha \times \text{mean} q_{day}$
- $\max q_{hour} = \beta \times \max q_{day}$

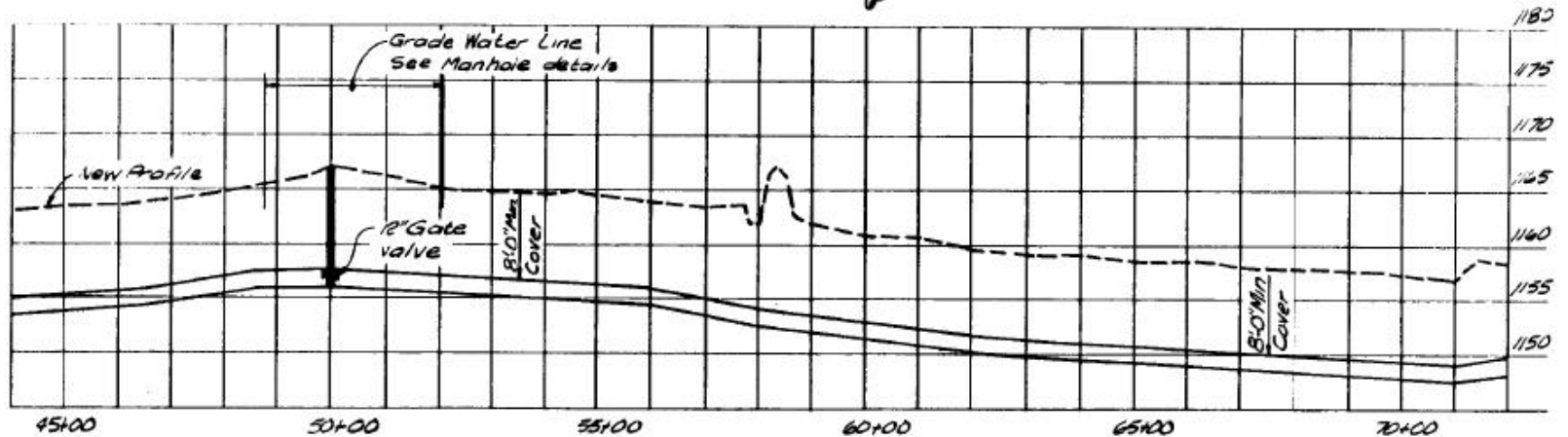
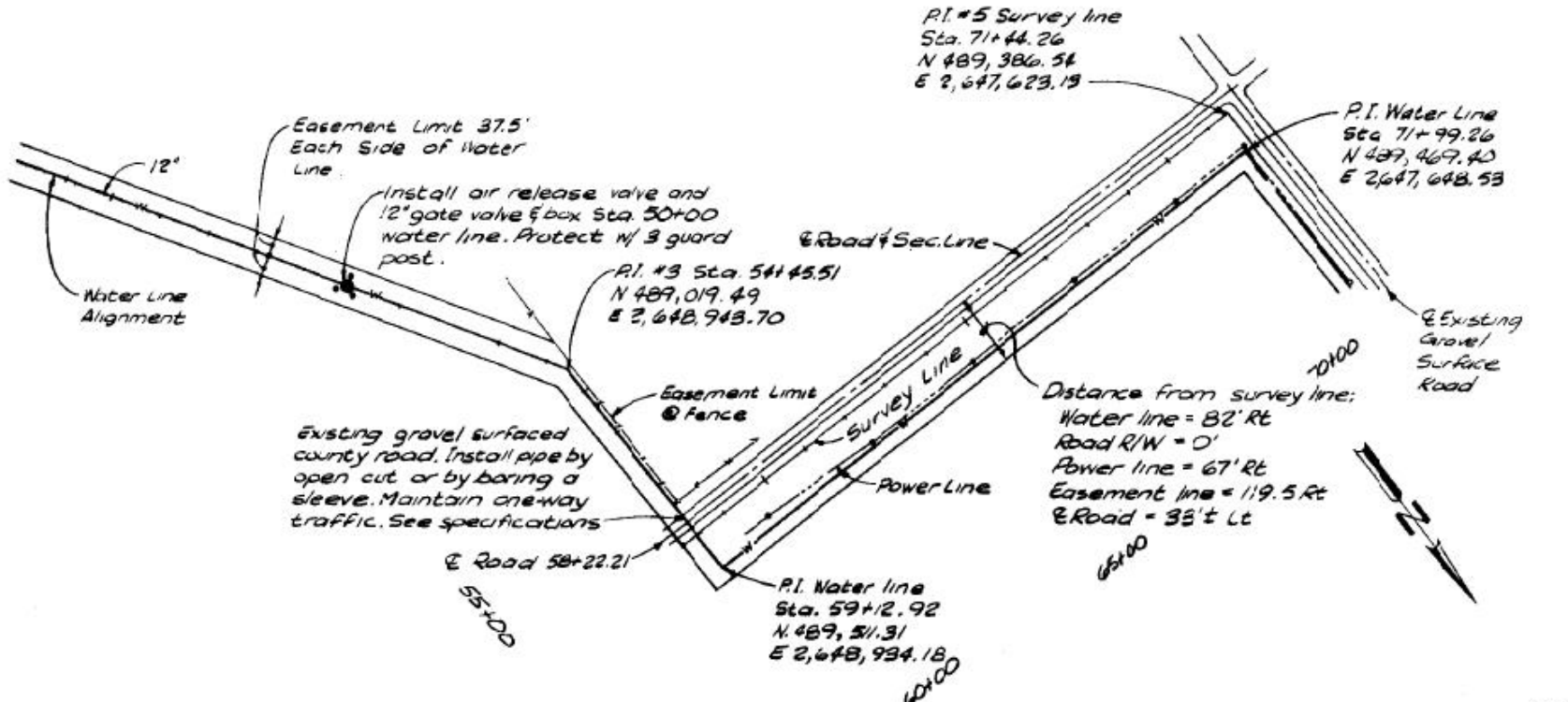
WE SAID:

- Which Q value should be taken for design?
- $Q_{design} = \text{mean}Q_{day}$ Supply Reservoirs (dam, lake, groundwater, etc.)
- $Q_{design} = \max Q_{day}$ Water Transmission Lines
- $Q_{design} = \max Q_{hour}$ Water Distribution Networks

Water Transmission Line



Water Transmission Line

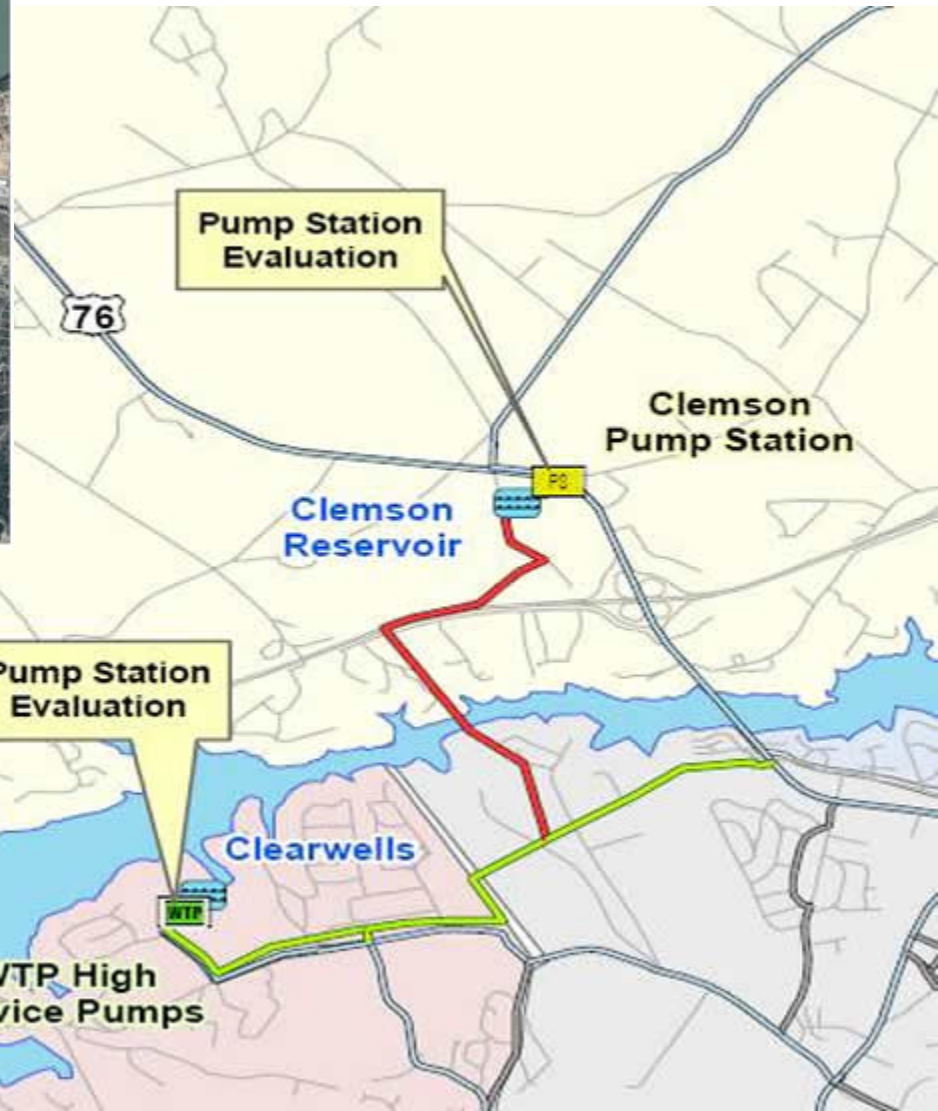
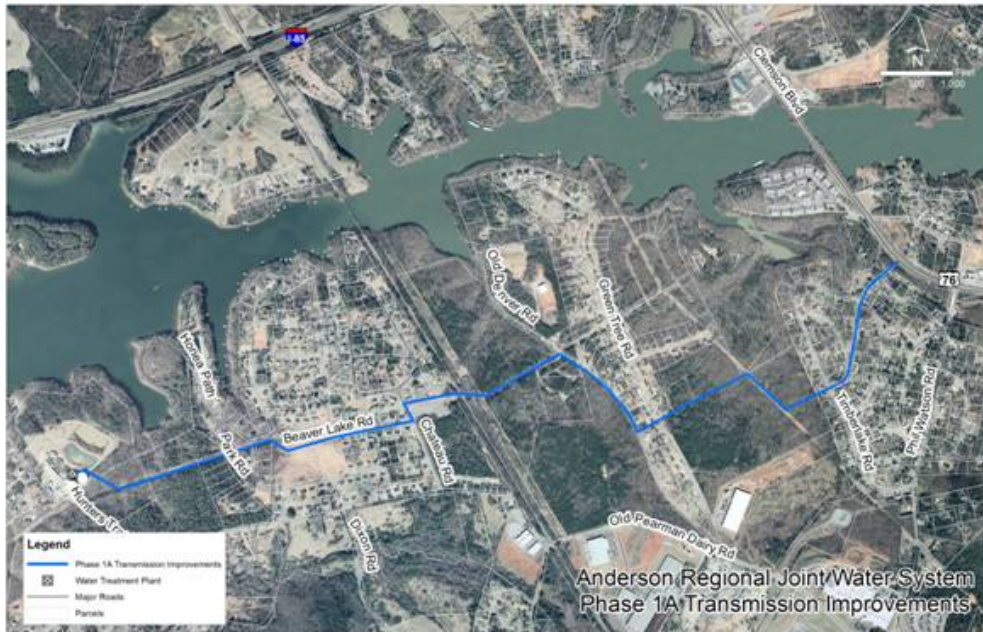


Water Transmission Line



Borrowed from:
[http://www.erwinconsult.com/projects/water treat dist store.htm](http://www.erwinconsult.com/projects/water_treat_dist_store.htm)

Water Transmission Line



Borrowed from:

<http://www.arjwater.com/projects.html>

Air Relief Valve



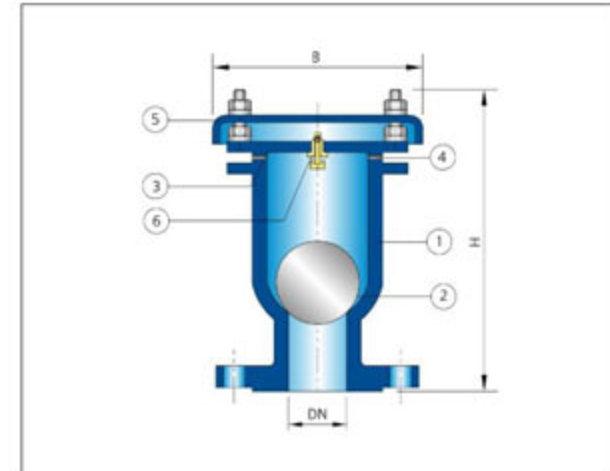
DN	B	H	AĞIRLIK WEIGHT(KG)
50	155	215	8,6
65	155	215	9
80	190	255	14,1
100	190	255	14,65

Anma Çapı
Nominal Diameter : DN 50-DN 100

Anma Basıncı
Nominal Pressure : PN 10, 16, 25

Bağlantılar
Flange Dimensions : DIN 2501 (Flange)TS ISO 7005-2

No	Parça Adı Part Name	Malzeme Material
1	Gövde/Body	GG25/GGG40
2	Küre/ Ball	St 37+EPDM
3	Kapak/Cover	GG25/GGG40
4	Conta/Gasket	EPDM
5	Üst Kapak/Top Cover	GG25
6	Çek Valf/Check Valve	Ms58/CuZn40Pb2



Borrowed from:

http://www.arms.com.tr/TR/urunler/mekanik/html/tek_kureli_vantuz.htm

Air Relief Valve (double-chambered)

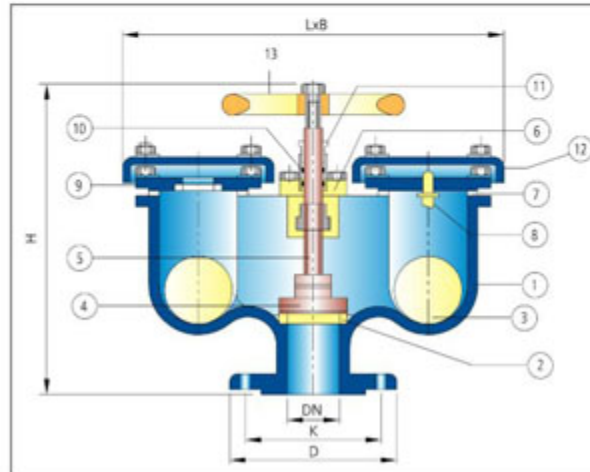


Anma Çapı
Nominal Diameter : DN 50-DN 100

Anma Basıncı
Nominal Pressure : PN 10, 16, 25

Bağlantılar
Flange Dimensions : DIN 2501 (Flange)TS ISO 7005-2

DN	D	K	H	L	B	AĞIRLIK WEIGHT(KG)
50	165	125	290	490	165	30
80	200	160	340	575	225	53,6
100	220	180	340	570	225	54,8



No	Parça Adı Part Name	Malzeme Material
1	Gövde/Body	GG25/GGG40
2	Gövde Burcu/ Body Seat	Ms58/CuZn40Pb2
3	Küre/Ball	St 37+EPDM
4	Klape/Disc	GG25+EPDM
5	Mil/Stem	AISI 304
6	Orta Kapak/Mid Cover	GG25/GGG40
7	Conta/Gasket	EPDM
8	Çek Valf/Check Valve	Ms58/CuZn40Pb2
9	Kapak/Cover	GG25/GGG40
10	O-Ring/O-Ring	NBR
11	Baskı/Packing Nut	Ms58/CuZn40Pb2
12	Üst Kapak/Top Cover	GG25
13	Volan/Handwheel	GG20

Borrowed from:

http://www.arms.com.tr/TR/urunler/mekanik/html/cift_kureli_vantuz.htm

Water Transmission Line



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http://www.erwinconsult.com/projects/water_treat_dist_store.htm