Project Subnetting

$$\frac{1220006}{X\ Y} \Rightarrow 100.6.8.0/23$$

Table 1: Number of hosts for each network.

Network	Subnetwork	Hosts	#bits
Core	NET0-A	2	2
	NET0-B	2	2
	NET0-C	2	2
Uninversity	NET1-A	60	6
	NET1-B	60	6
Street	NET2	30	5
Home	NET3	20	5
Datacenter	NET4	15	5 $(15+2 > 2^4)$

NET1A ⩾ NET1B ⩾ NET2 ⩾ NET3 ⩾ NET4 ⩾ NET0A ⩾ NET0B ⩾ NET0C

#̶ 100.6.8.0/23

01100100.0000110.00001000.00000000

23

① NET1A:-

100 . 6 . 00001000 . 00/000000

26

⇒ 100.6.8.0/26   broadcast = 100.6.8.63
                  usable : 100.6.8.1 ⇒ 100.6.8.62

② NET1B:-

⇒ 100.6.8.64/26   broad: 100.6.8.127
                  usable: 8.65 ⇒ 8.126

③ NET2 :- 100.6.00001000.00 0/00000

27

$\Rightarrow$ 100.6.8.12**8** /27 broad: 100.6.8.159 *(1000 0000)*

usable: 8.129 → 8.158

④ NET3:~ 100.6.8.160/ broad: 100.6.8.191 *(1010 000)*

27 usable: 8.161 → 8.190

⑤ NET4:~ 100.6.8.192/27 *(1100 000)*

Broad: 100.6.8.223

usable: 8.193 → 8.222

⑥ NET0-A:

100.6.0000 1000.000000/00 /30

$\Rightarrow$ 100.6.8.224/ Broad: 100-8-6.227

30 usable: 8.225 → 8.226

⑦ NET0~B:~

$\Rightarrow$ 100.6.8.228/30

Broad: 100.6.8.231

usable: 8.229 → 8.230

⑧ NET0-C:~

$\Rightarrow$ 100.6.8.232/30

Broad: 100.6.8.235

usable: 8.233 → 8.234