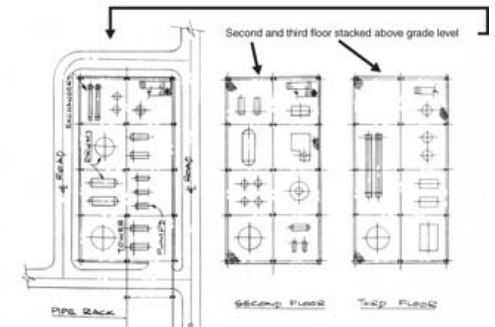
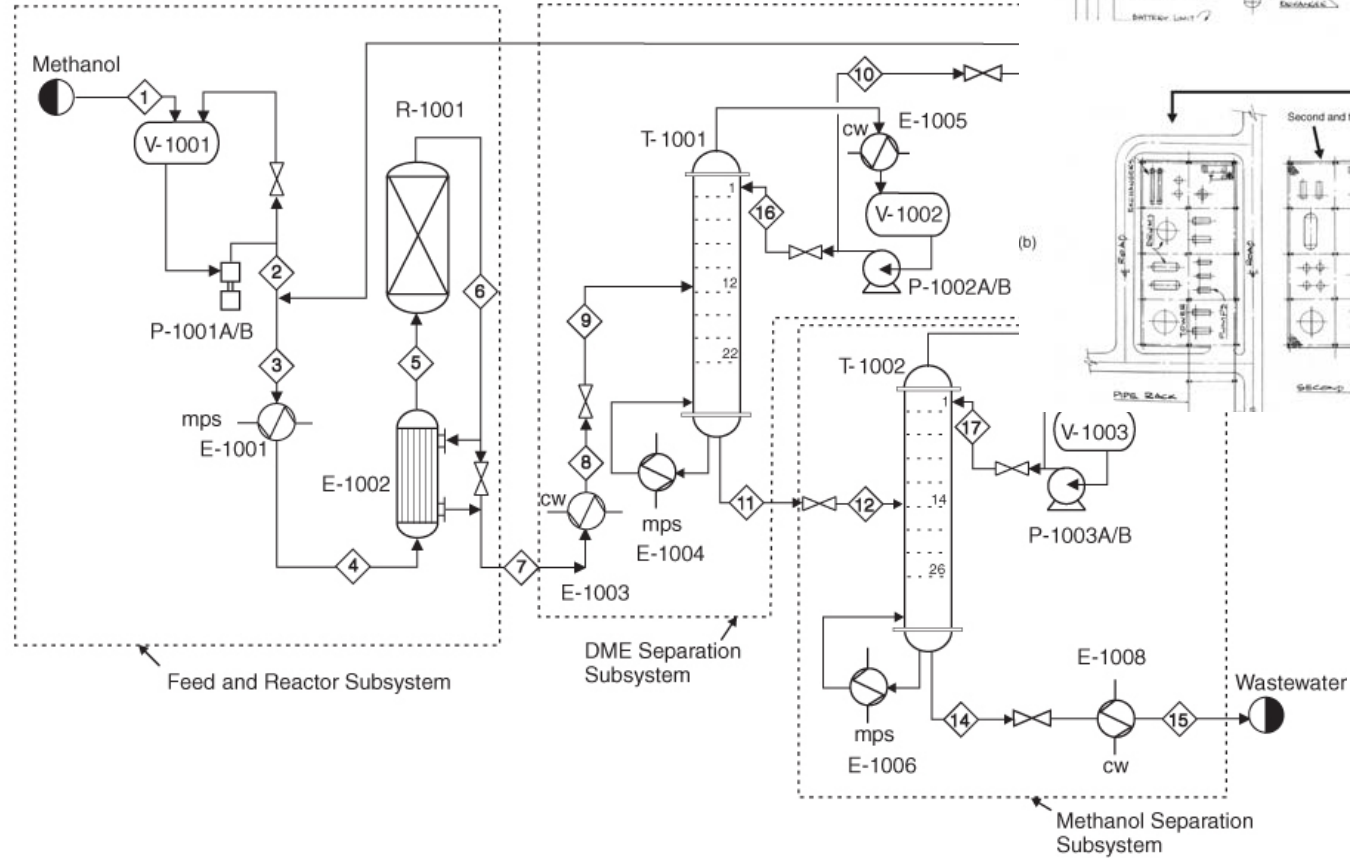
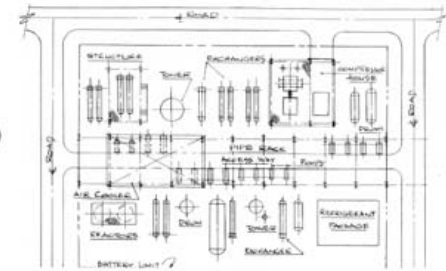


PLANT LAYOUT



PLANT LAYOUT

P-1001A/B V-1001 E-1001 R-1001 E-1002 E-1003 T-1001 E-1004 E-1005 V-1002 P-1002A/B E-1006 T-1002 E-1007
 Feed Pump Feed Methanol Reactor Reactor DME DME DME DME DME DME DME Reflux Methanol Methanol Met
 Vessel Preheater Cooler Cooler Tower Reboiler Condenser Reflux Pumps Reboiler Tower Con



PLANT LAYOUT

Plant layout :

1. Site Layout

Relevant to neighborhood (sewage, nearby roads, populated areas etc.)

2. Plot Layout

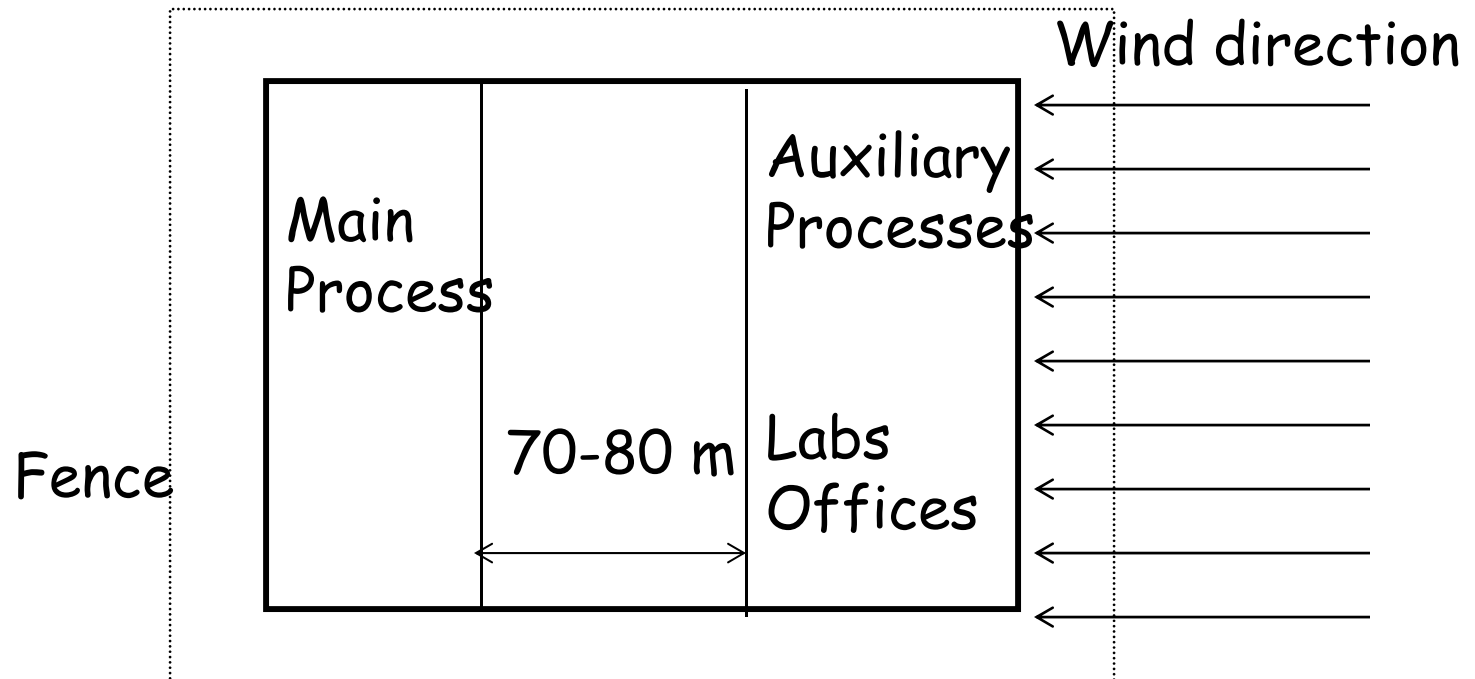
Actual layout of the plot, fences, general area allocation.

3. Equipment Layout



PLANT LAYOUT

Plot layout :



Regulations for fences and distance to equipment.

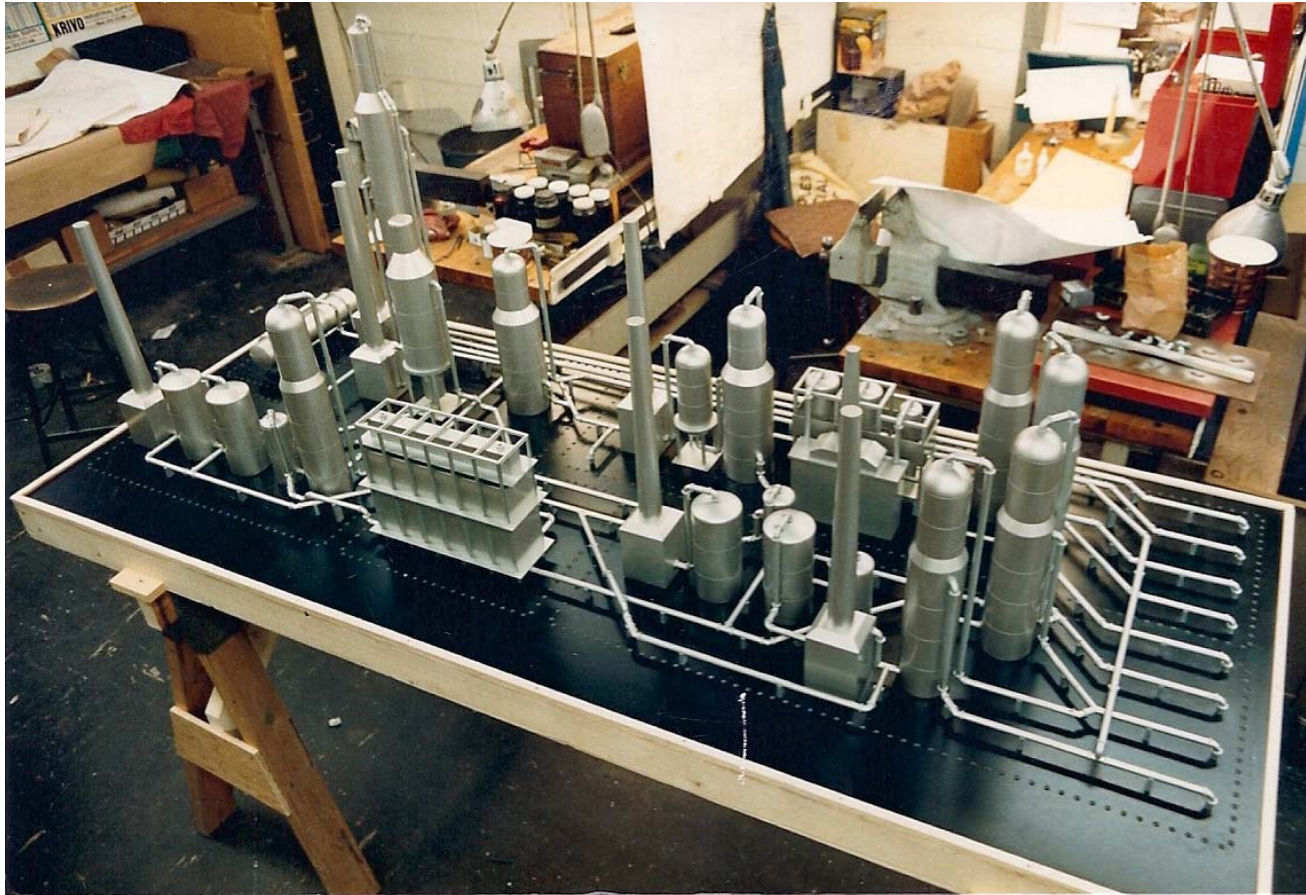
Auxiliary processes: Power generation, cooling water, pumps, cooling towers, compressors, boilers, control equipment air.

Personnel space should be upwind. Wind conditions should aid removal and dispersion of pollutants.

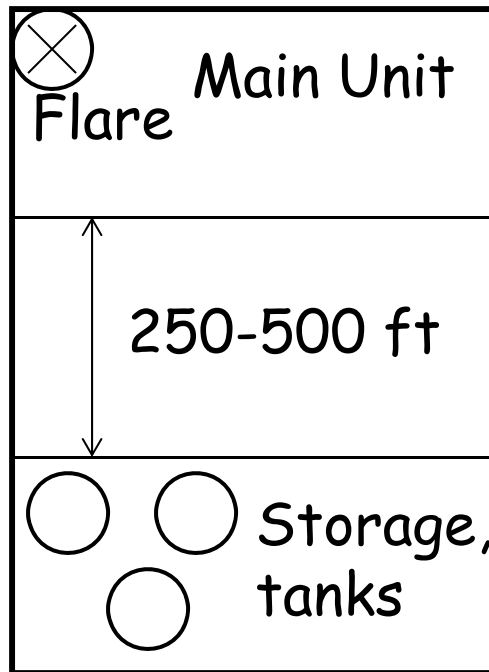


PLANT LAYOUT

Plot layout Models



PLANT LAYOUT



- Storage tanks: Need to be far when they contain gases under pressure, liquids with high vapor pressure or explosive fluids. Acids do not require long distances.
- Flare: Safety and control systems might vent some compounds to avoid explosions. Should be away from other flammable materials.

Two types of layout:

Grouped layout
Flow-time layout



PLANT LAYOUT

Main Process :

Grouped layout.

Similar type of equipment at the same place. Usually pumps, compressors, exchangers (not the auxiliary equipment). They are together for easier maintenance, supervision.

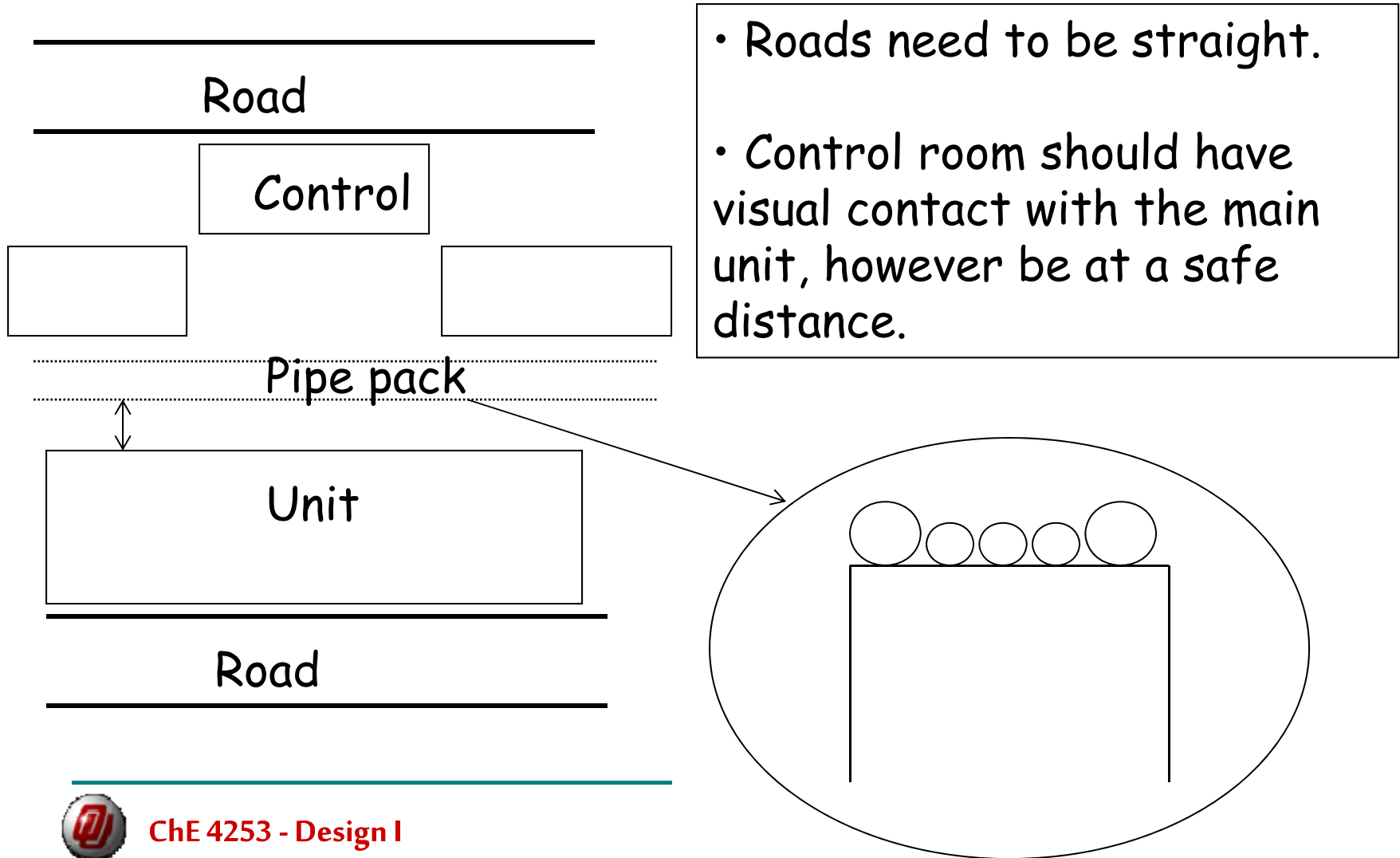
Flow-time layout.

The layout follows the PFD.



PLANT LAYOUT

Main Process :



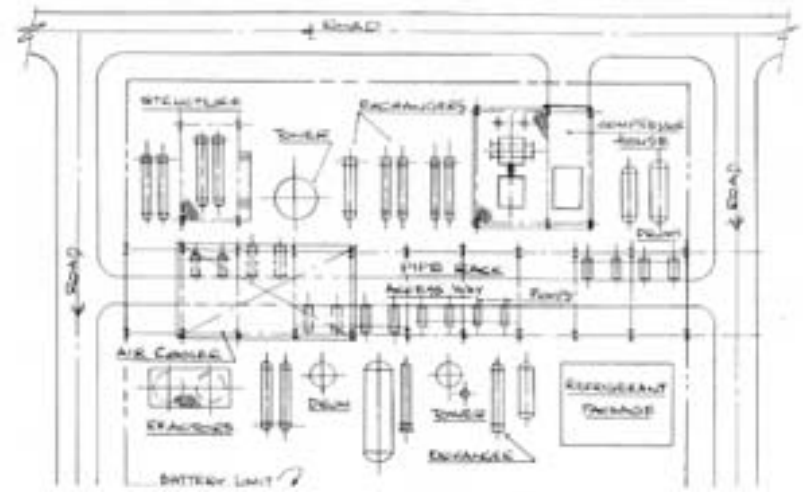
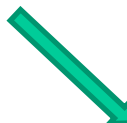
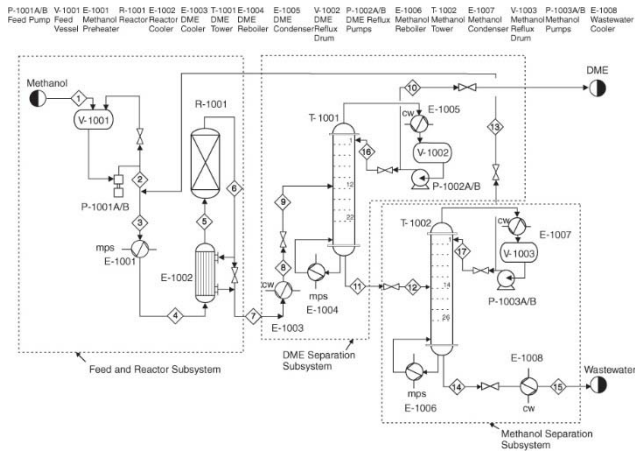
PLANT LAYOUT

Typical distances (ft)

	Side	Height	
Main roads (width)	30	18	
Secondary roads (width)	25	16	
Pipe support	15	16	
Pipe support, secondary	10	12	
Pump base <25 hp	2 1/2	12	
Pump base >25 hp	3	14	
Compressors	10	free	
Vertical vessels	10	free	
Horizontal vessels, D<10ft	4	4	} Heat exchangers
Horizontal vessels, D>10ft	8	free	
Main equipment	} 30	free	
Reactors			



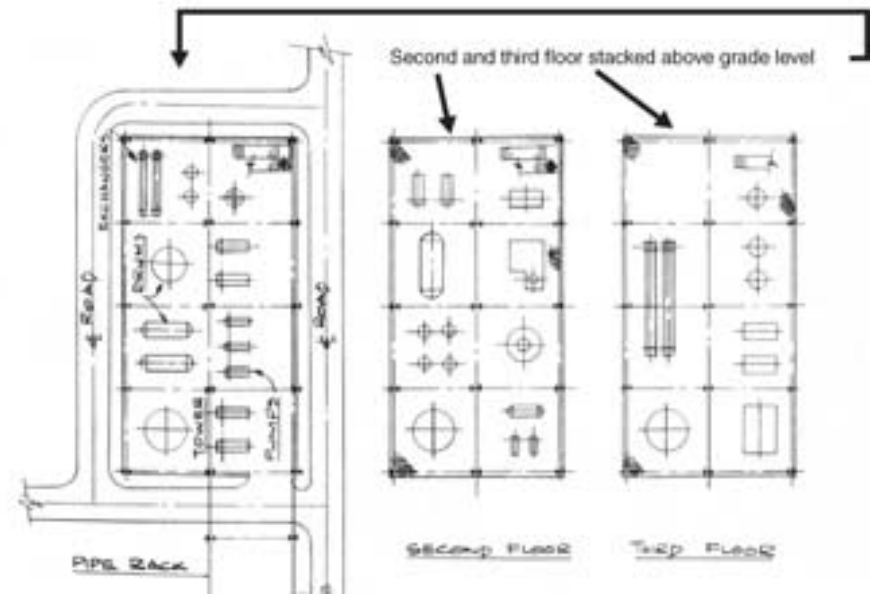
PLANT LAYOUT



(a)

Different Types of Plant Layout:

- (a) Grade-Mounted, Horizontal, In-line Arrangement, and
- (b) Structure-Mounted Vertical Arrangement



(b)

