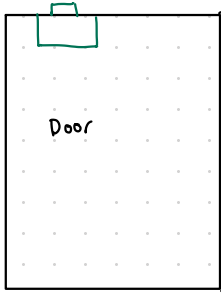


Concept 1

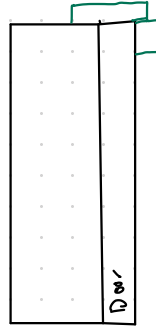
Laser/optical sensor + Digital Notification

green represent
concept Design

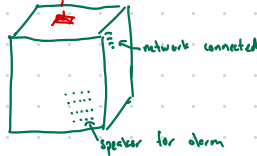
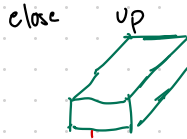
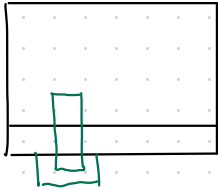
front view



Side view
opening side



Top View



colored LED shines
into sensor. If obstructed or
line breaks, door status is "open"

network connected

speaker for alarm

Concept Notes:

Security: Manager check in and out; Manager out sends immediate auto alarm and notification if door status is open

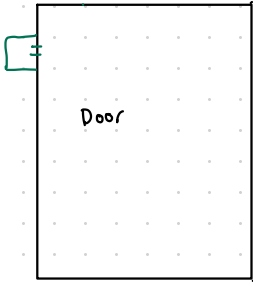
Timing: User selects time allowed for door to be open before alarm

Concept 2

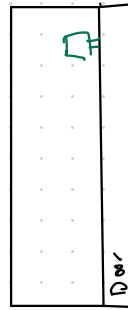
Temperature Sensor + Audio Alarm

green represent
concept Design

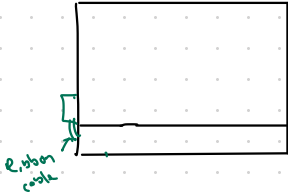
front view



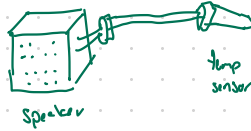
Side view



Top View



close up



Concept Notes:

Very small!

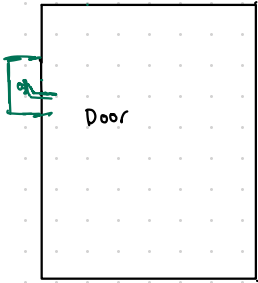
Will have to have a way to
get controlled temp

Concept 3

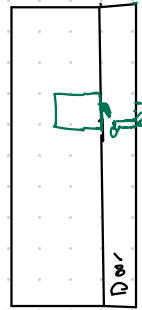
"Gate Latch + Digital Notification"

green represent
concept design

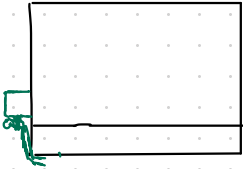
front view



Side view



Top View



close up



Door attachment

Concept Notes:

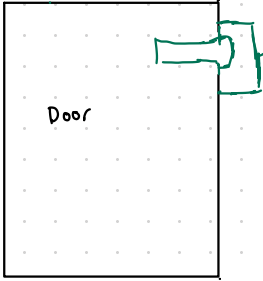
- door status is hard to monitor. Proximity sensor or optical sensor might fix
- restrictions will be if latch is moved.
- Security involved via digital integration: timing; manager unlock etc.

Concept 4

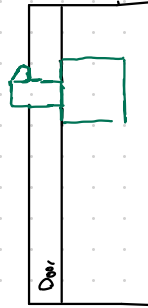
"Weighted Door Concept"

green represent
concept design

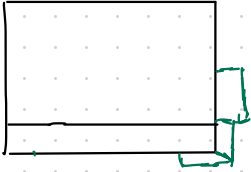
front view



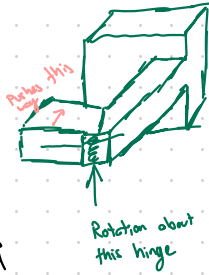
Side view
Hinge side



Top View



close up



Concept Notes:
allows door automatically;
sensors/alerts not needed

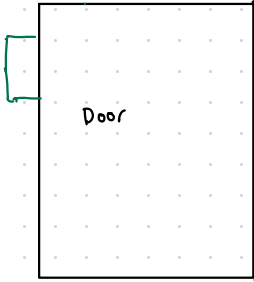
Very simple, maybe issues
with longevity

Concept 5

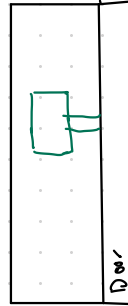
"Temperature Sensor + Digital Notification"

green represent
concept Design

front view



Side view
opening side

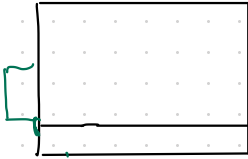


Temperature sensor goes inside,
must be thin enough to
not interfere with temp.
seal

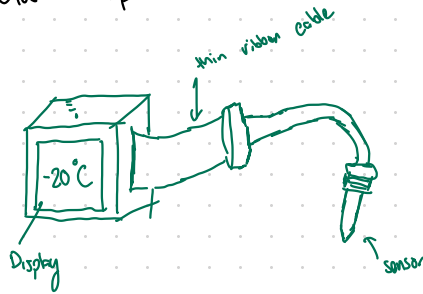
Ribbon-like cable

Thermocouple (Multiple for
redundancy?)

Top View



close up



Concept Notes:

- Changes in temperature will alert user through app
- Temp Display physically and in app for ease of monitoring