

BHI TEAM MEMBER, KEDLIN "JIMMY" BERNARD, LAYS PATHS AT A NEW COVID-19 TREATMENT CENTER IN SOUTHERN HAITI



INFRASTRUCTURE RESPONSE TO COVID-19

Treatment Center Prototype for Sites with Testing

UPDATED ON 14 MAY 2020

To download the full construction documents for this treatment center prototype visit:

www.buildhealthinternational.org/covid-infrastructure-resources



Introduction

Healthcare infrastructure plays a fundamental role in a successful response to the COVID-19 pandemic. Gaps in critical infrastructure such as isolation areas for confirmed and presumptive COVID-19 patients, and intensive care units (ICUs) for patients with severe symptoms have created major challenges for health systems, even in the most resource-wealthy areas of the world. In low-resource settings, this infrastructure gap is infinitely greater. As COVID-19 continues to spread, particularly in settings with already-fragile health systems, we should anticipate that these health systems will surpass surge capacity. While health systems are not built overnight, it is imperative to strategically and appropriately fill this infrastructure gap to mitigate the spread of the virus and protect healthcare workers and patients alike.

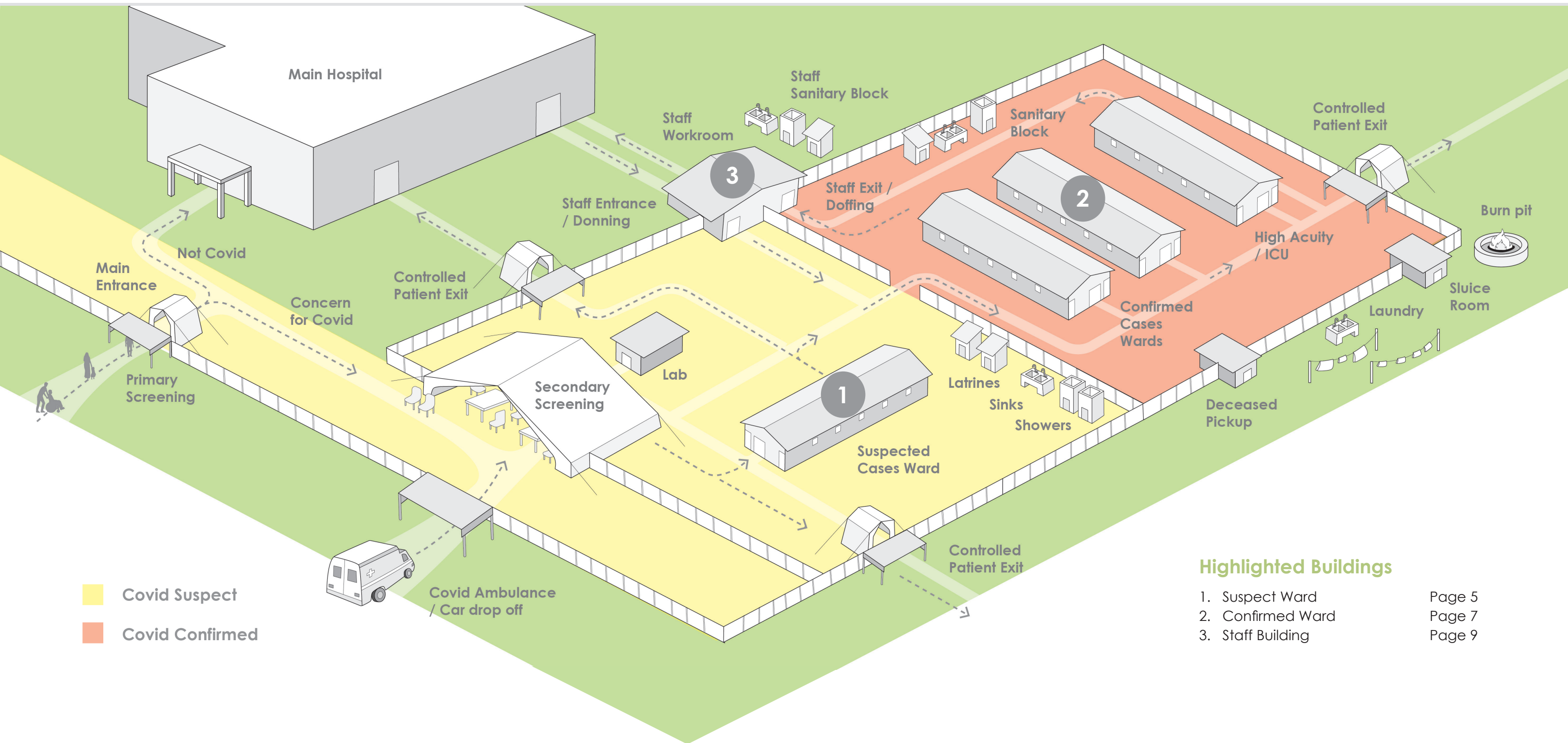
With more than 10 years' experience in planning, designing, and building sustainable health infrastructure in emerging and low-resource settings, our COVID-19 Infrastructure resources harness lessons learned from past Ebola and cholera pandemics.

This prototype is intended to be used by frontline healthcare organizations and Ministries of Health in low-resource settings. It provides an overview of a Coronavirus Treatment Center for sites **where testing is available**, and is intended to provide decision makers with the details they need in determining the best means to scale-up their infrastructure capacity. This design assumes that test results will have a turnaround time greater than two hours, requiring a 'suspect ward' for sick patients to receive care while awaiting their results.

For ease and speed of construction, ideally this prototype would be constructed adjacent to an existing facility, in order to capitalize on power and water supply. However, this prototype can also be adapted to be a standalone facility. To access additional resources to aid in building this treatment center, including full construction documents, please visit

www.buildhealthinternational.org/covid-infrastructure-resources.

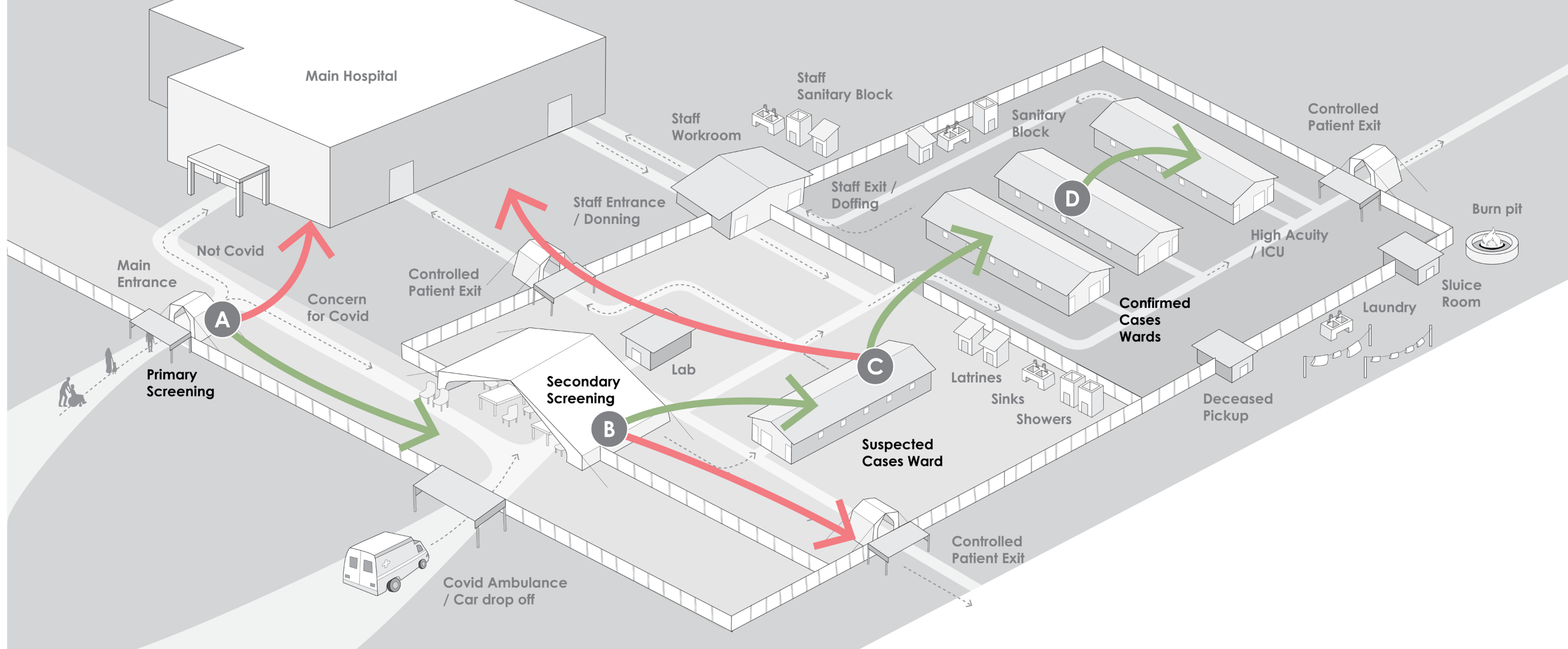
Treatment Center Prototype Campus Plan for Sites with Testing



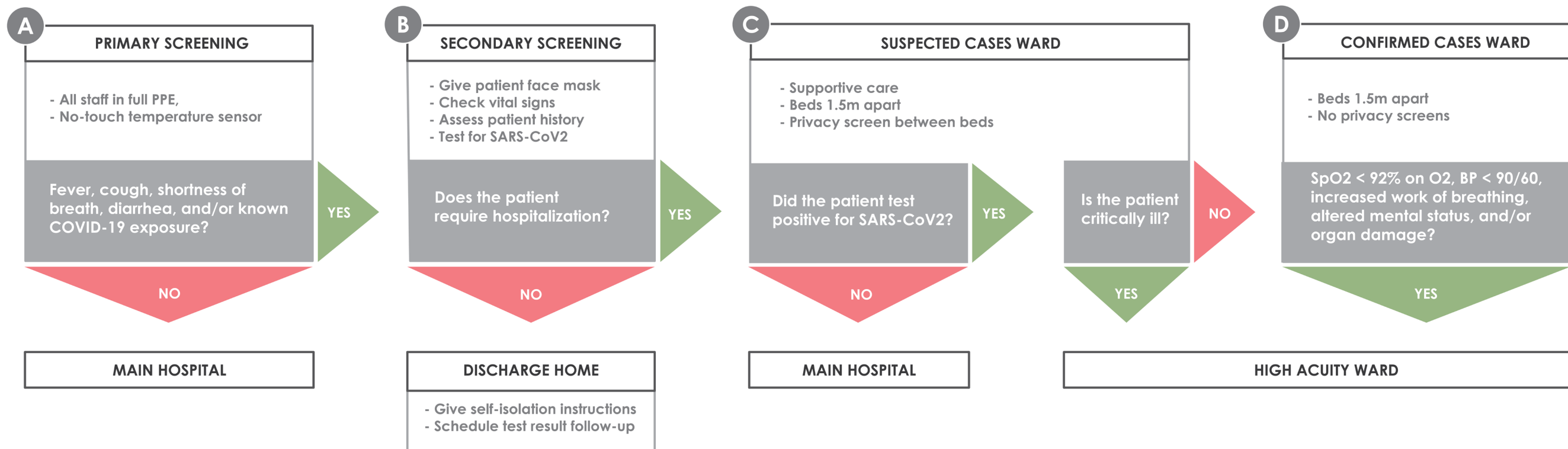
- Covid Suspect
- Covid Confirmed

Highlighted Buildings

- | | |
|-------------------|--------|
| 1. Suspect Ward | Page 5 |
| 2. Confirmed Ward | Page 7 |
| 3. Staff Building | Page 9 |



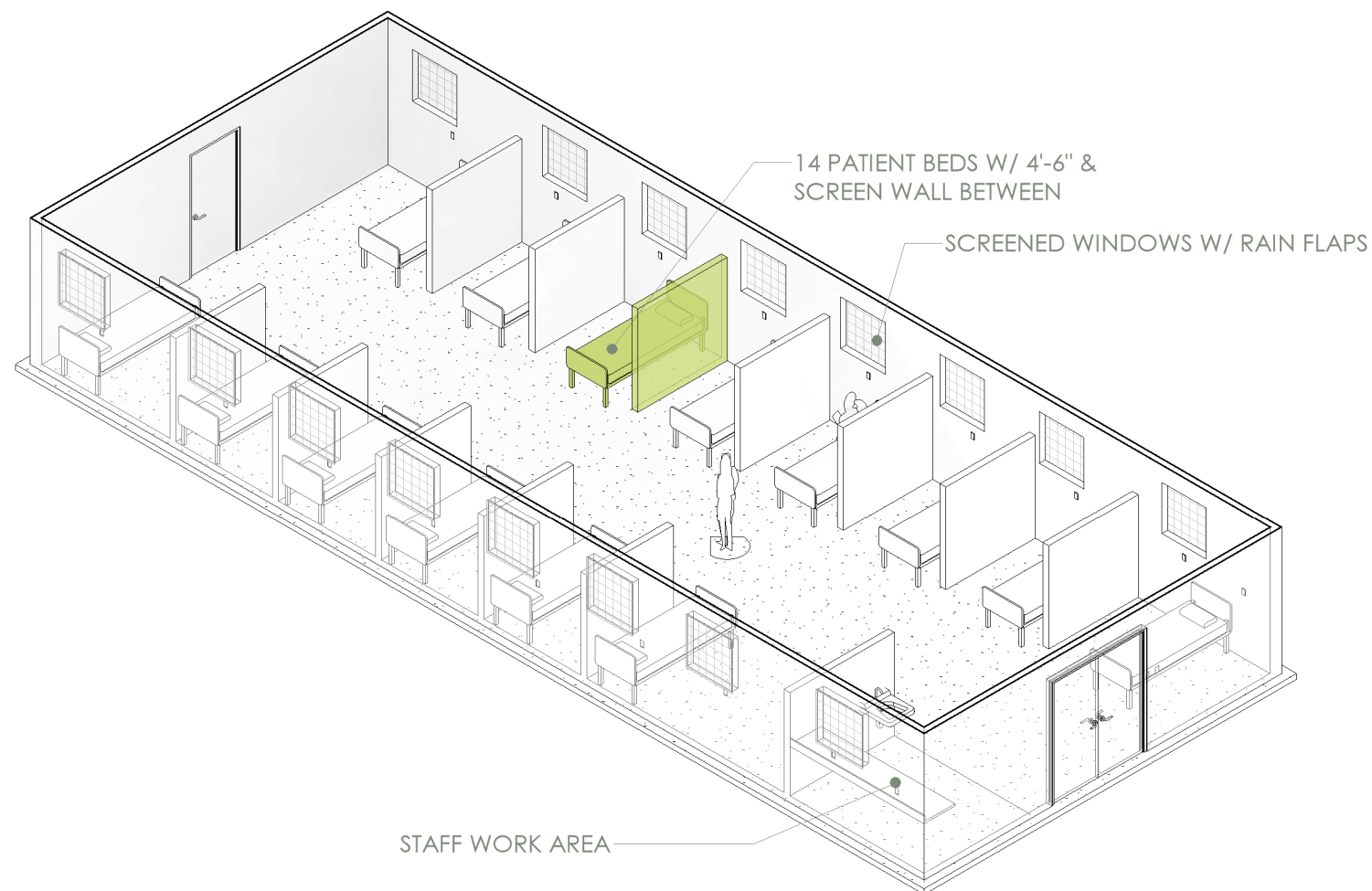
Clinical Flow Diagram



Suspect Ward

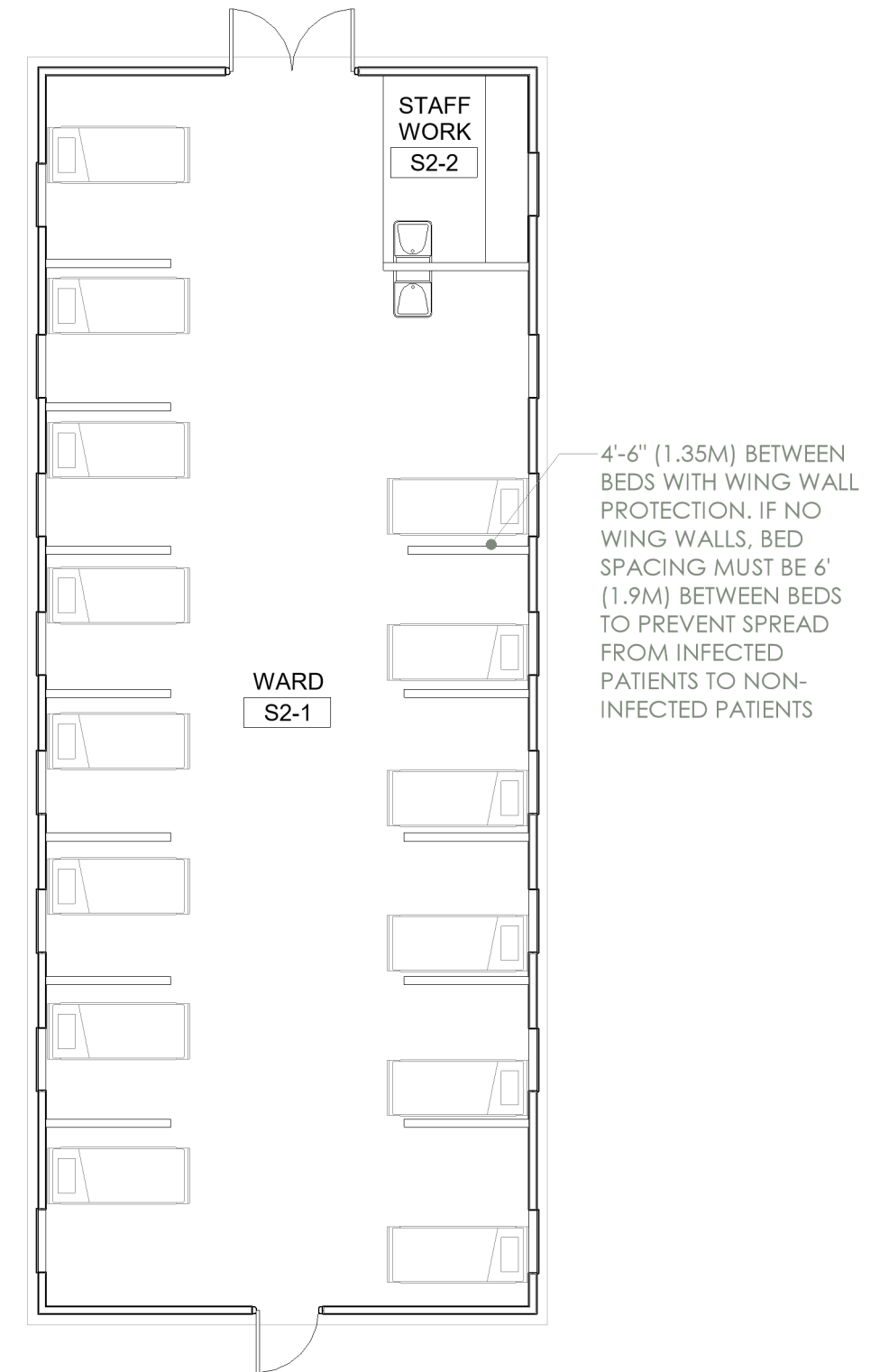
This ward is designed to isolate and treat patients presenting with COVID-19 symptoms while they wait for test results to confirm their diagnosis. For this reason, the ward design features wider bed spacing and wing walls or screens to protect patients who may test negative for COVID-19 from nosocomial spread. For a guide on how to construct simple, durable screens please visit our website.

This treatment ward design does not include staff don and doff areas; it should be used at sites where a central don and doff space (see page 9) supports multiple wards. For an alternative ward design, with in-ward donning and doffing areas, please refer to the full construction document set available on our website.



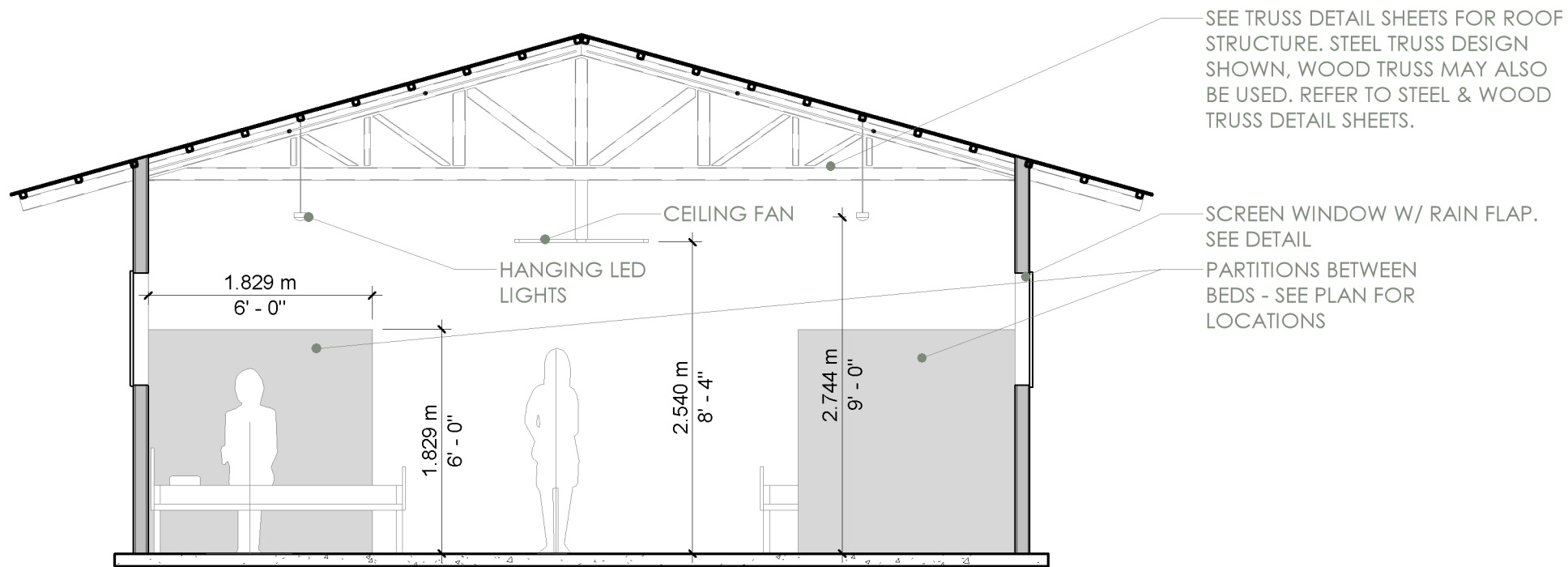
S2 WARD AXON

SCALE



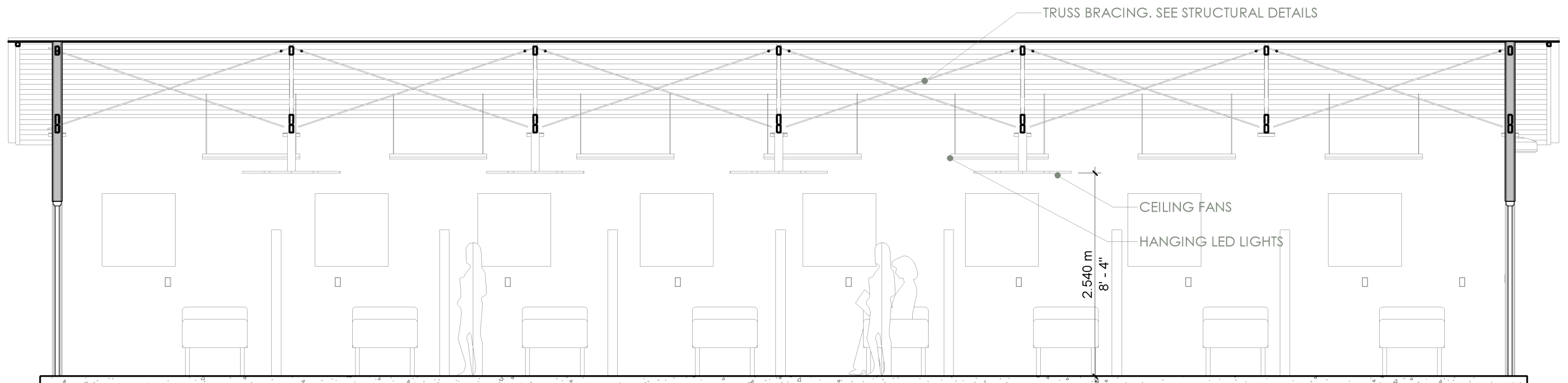
S2 - LAYOUT

SCALE 1:100



S2 SHORT SECTION

SCALE 1:50



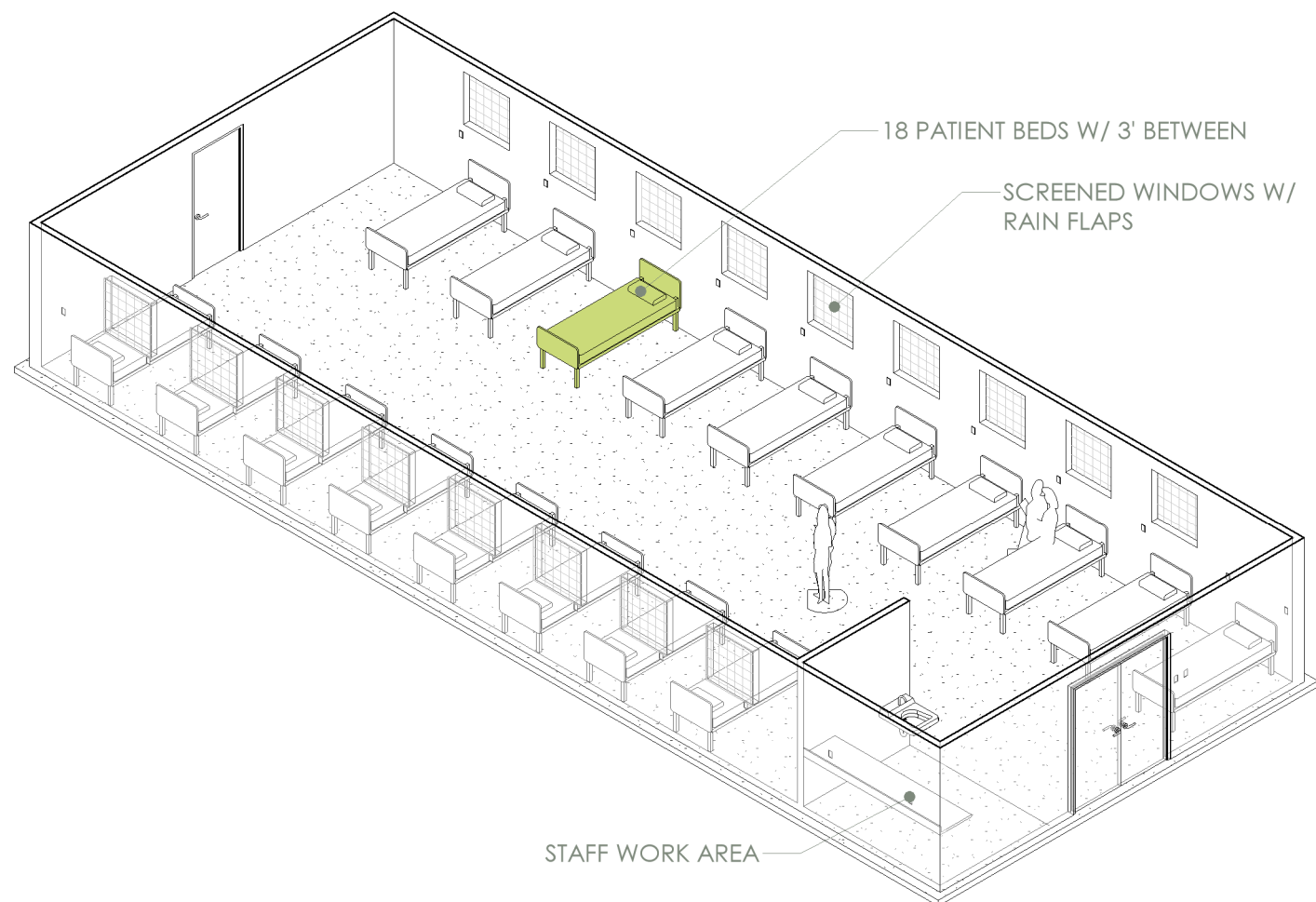
S2 LONG SECTION

SCALE 1:50

Confirmed Ward

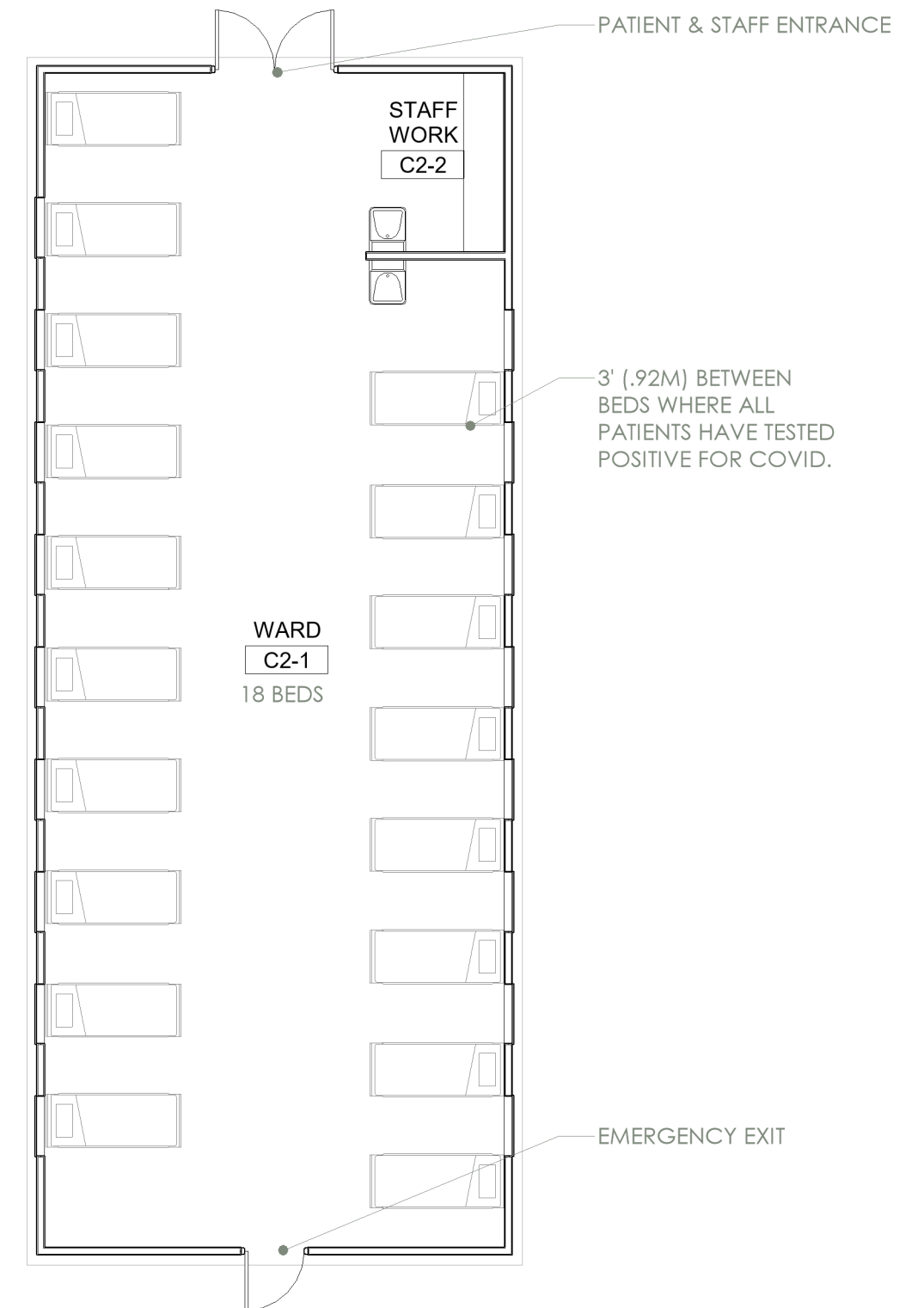
This ward is designed to treat patients once they have tested positive for COVID-19. who have tested positive for COVID-19. at sites without testing ability, where a clinical definition will be used to diagnose COVID-19 patients. For this reason, the ward design features narrower bed spacing and no wing walls or screens. With no risk of nosocomial spread, these changes allow for greater patient volume and easier monitoring by clinicians.

This treatment ward design does not include staff don and doff areas. It should be used at sites where a central don and doff space (see page 9) supports multiple wards. For an alternative ward design, with in-ward donning and doffing areas, please refer to the full construction document set available on our website.



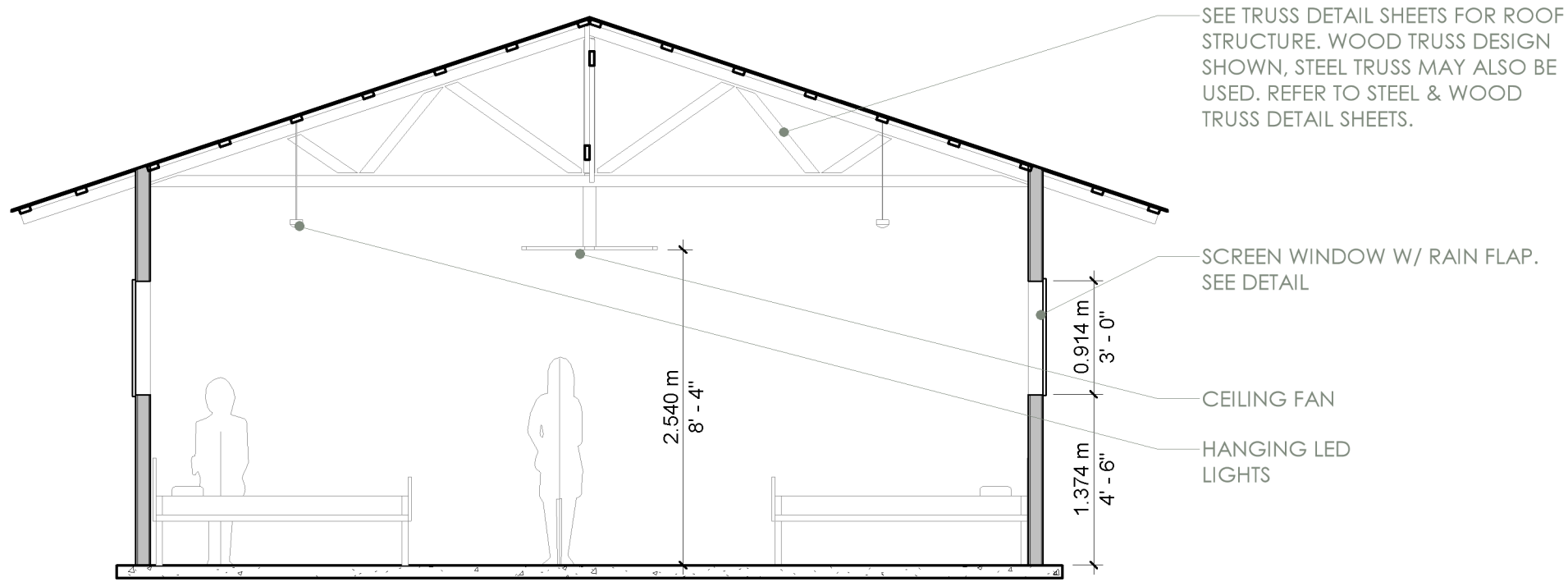
C2 WARD AXON

SCALE



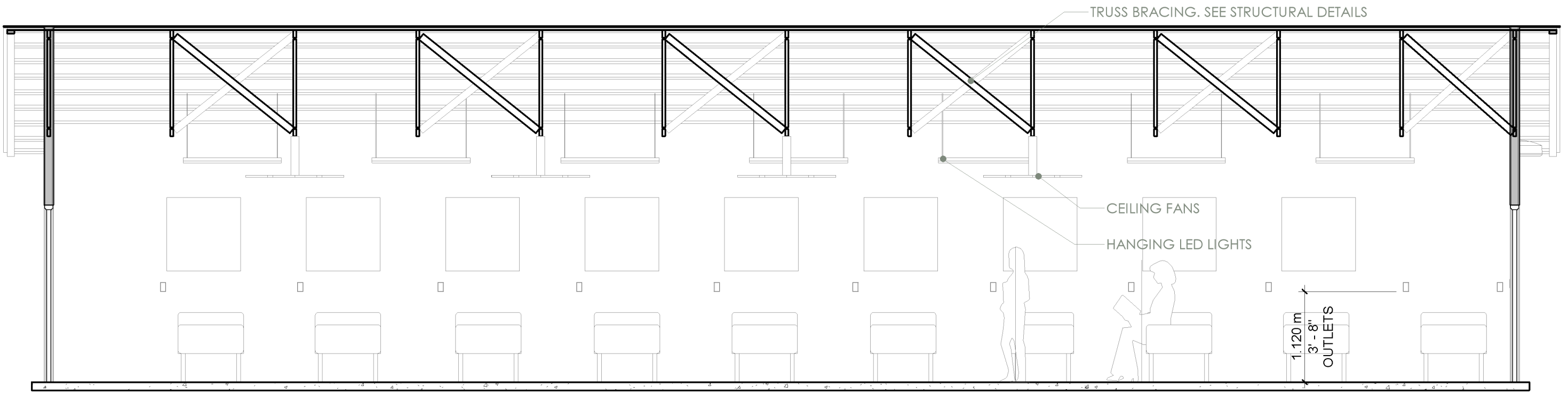
C2 - LAYOUT

SCALE 1:100



C2 SHORT SECTION

SCALE 1:50



C2 LONG SECTION

SCALE 1:50

Staff Building

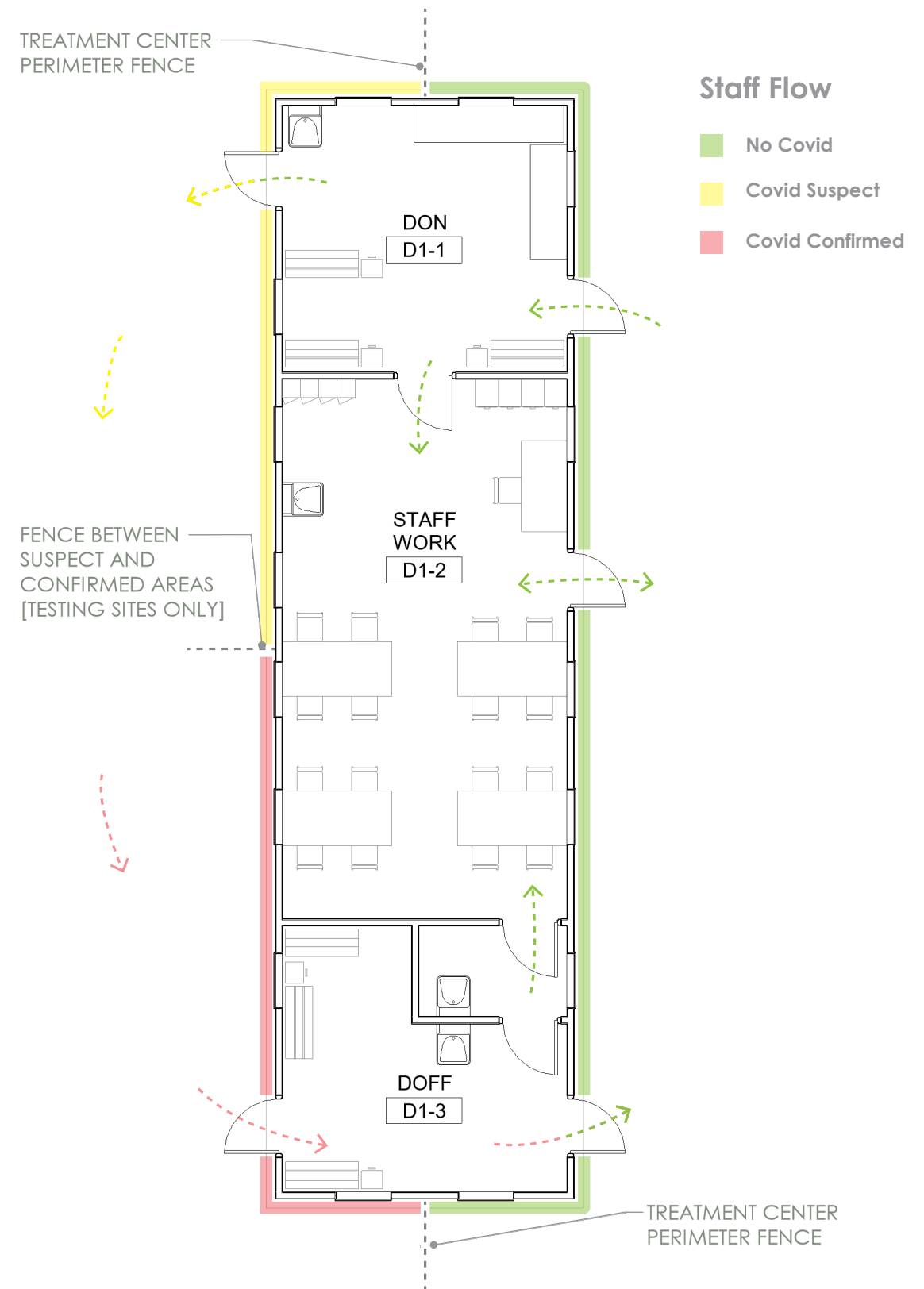
The staff building is designed as an integrated workroom, with don and doff spaces. This model should be used for sites with multiple COVID-19 wards within a Coronavirus Treatment Center. See full construction drawings an alternative ward design with in-ward donning and doffing areas.

In order to facilitate unidirectional flow of staff and materials, the staff building should be constructed on the outer fence line, such that the donning entrance and the doffing exit should face the outside of the treatment center site.

A staff sanitary block (including shower, toilet, and sink) should be constructed or made available near the staff building, but outside the treatment center.



D1 AXON
SCALE



D1 - LAYOUT
SCALE 1:100