WELCOME

CSU Physical Development Committee (PDC) Meeting

February 21, 2020

Colorado State University

Today's Agenda

1. **Solar on Campus - Standards and Opportunities: *Request to Approve –*** *Carol Dollard, University Energy Engineer, Facilities Management*

2. ***Starship Delivery Service Robots*** *– Lucas Miller, Senior Associate Director, Residential Dining Services*

3. ***Transportation & Mobility Safety Task Force Updates & Recommendations*** *– Fred Haberecht, Campus Planner, Facilities Management*

4. ***Campus Arboretum*** *– Fred Haberecht, Campus Planner, Facilities Management*

Solar on Campus – Standards and Opportunities

Solar 2020 - More Solar on Campus

- Why?
  - Students love them!
  - Aligns with the University's sustainability goals
  - Reduces carbon emissions & can save the University money
- What?
  - Photovoltaic solar systems
- Where?
  - Rooftops
  - Parking Structures & Lots (canopies)
  - Bike Shelters
  - Ground Mount (on remote campuses in conjunction with Ag uses)
- How?
  - Power Purchase Agreement (PPA) so capital cost can be paid off over time

Criteria & Exclusions

- Installations generally limited to available rooftops, parking structures, parking canopies and bike shelter canopies.
- Ground mount installations are allowed only where they are compatible with existing research & agricultural programs on rural campuses.
- Installations only allowed on assets that have a projected life of 20 or more years.
- Solar installations will not be allowed on designated CSU open spaces.
- Where it can be done aesthetically, visible rooftop solar is desired.
- On historic structures, rooftop solar should generally not be visible from the ground.

Precedents

Rooftops

We already have rooftop solar on these buildings:

- Braiden – 100 kW
- Student Rec – 540 kW
- Parmalee – 135 kW
- Edwards – 110 kW
- VTH – 220 kW
- UCA – 100 kW

We have the capacity to do more than three times this much solar on Main, South and Foothills campus roofs.

Visibility

On certain buildings we want solar to be invisible like this array at UCA. Other sites, like Braiden, visibility is a plus.

Parking Garages

Co-benefits of shading

Parking Canopies

Need to identify lots with a 20+ year lifetime

Bike Shelters

Model on campus
at Libbie Coy & Pitkin

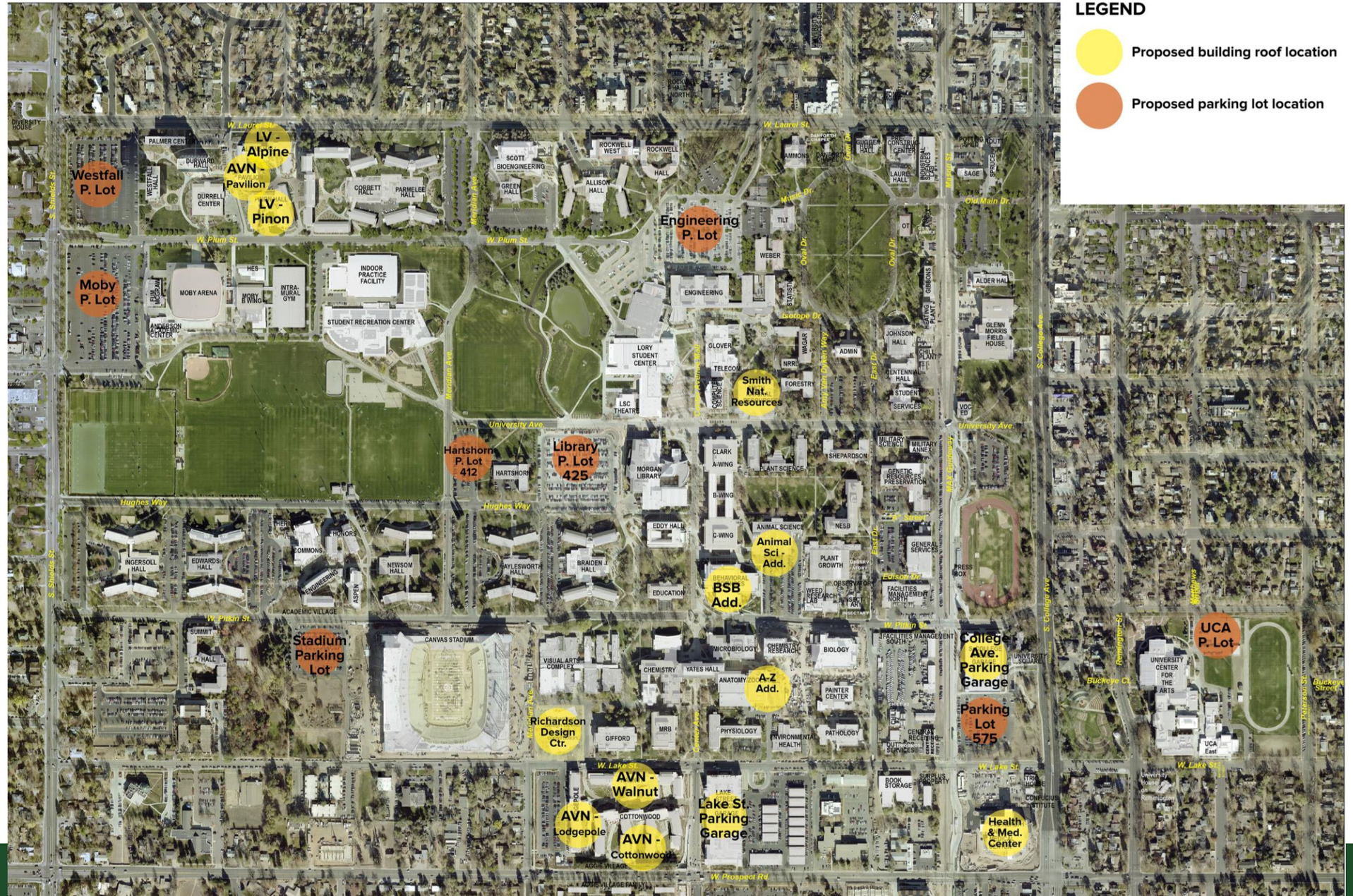
Ground Mount

Projects that can have Ag co-benefits

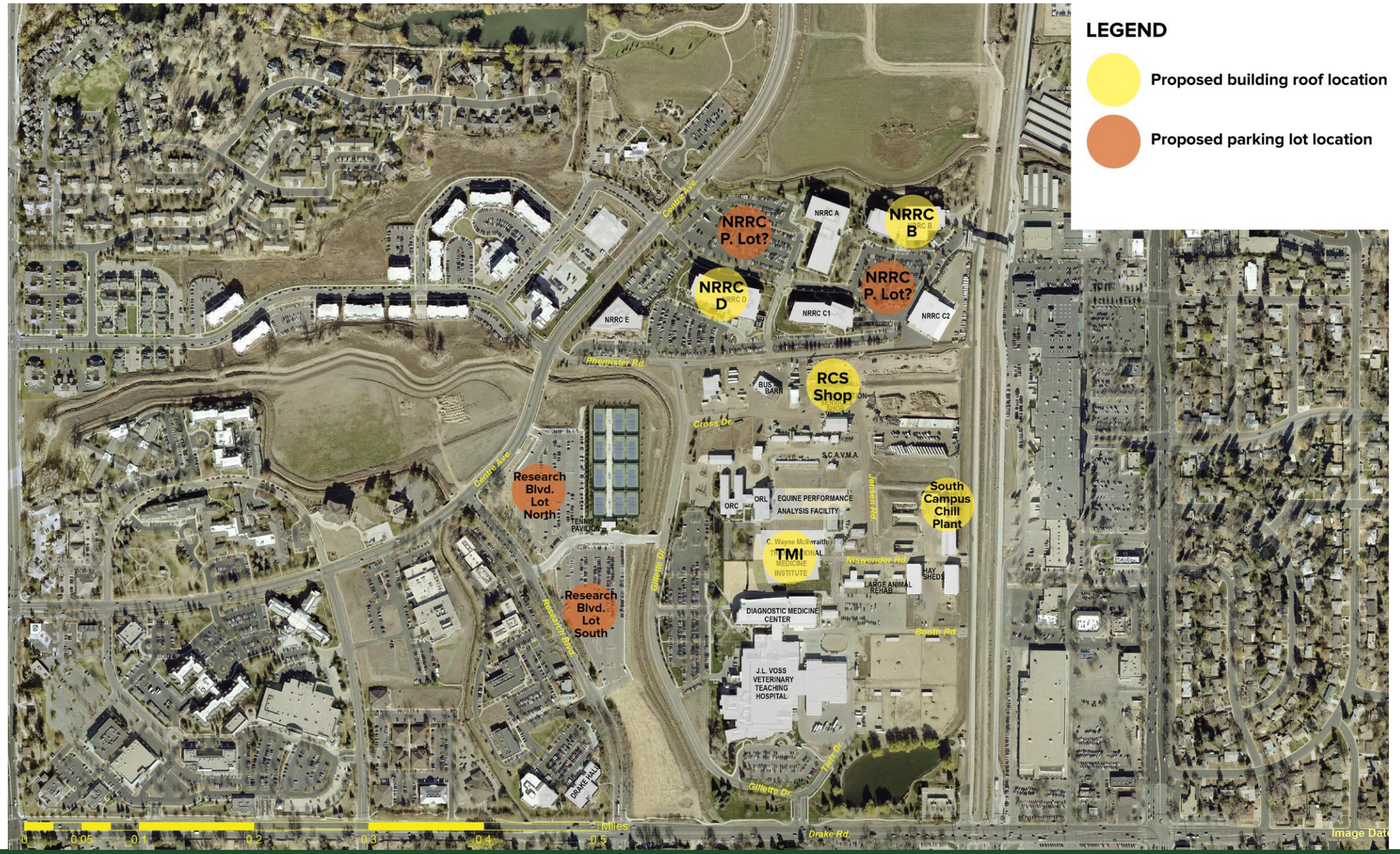
Proposed Timeline

- Committee Presentations (Q1 2020)
  - Design Review Committee
  - Master Plan Committee
  - Physical Development Committee
- Develop & Issue RFP (Q2 2020)
- Selection Process (Summer 2020)
- Project Development/Contracting (Q3 2020)
- Construction (Fall 2020 – Spring 2021)

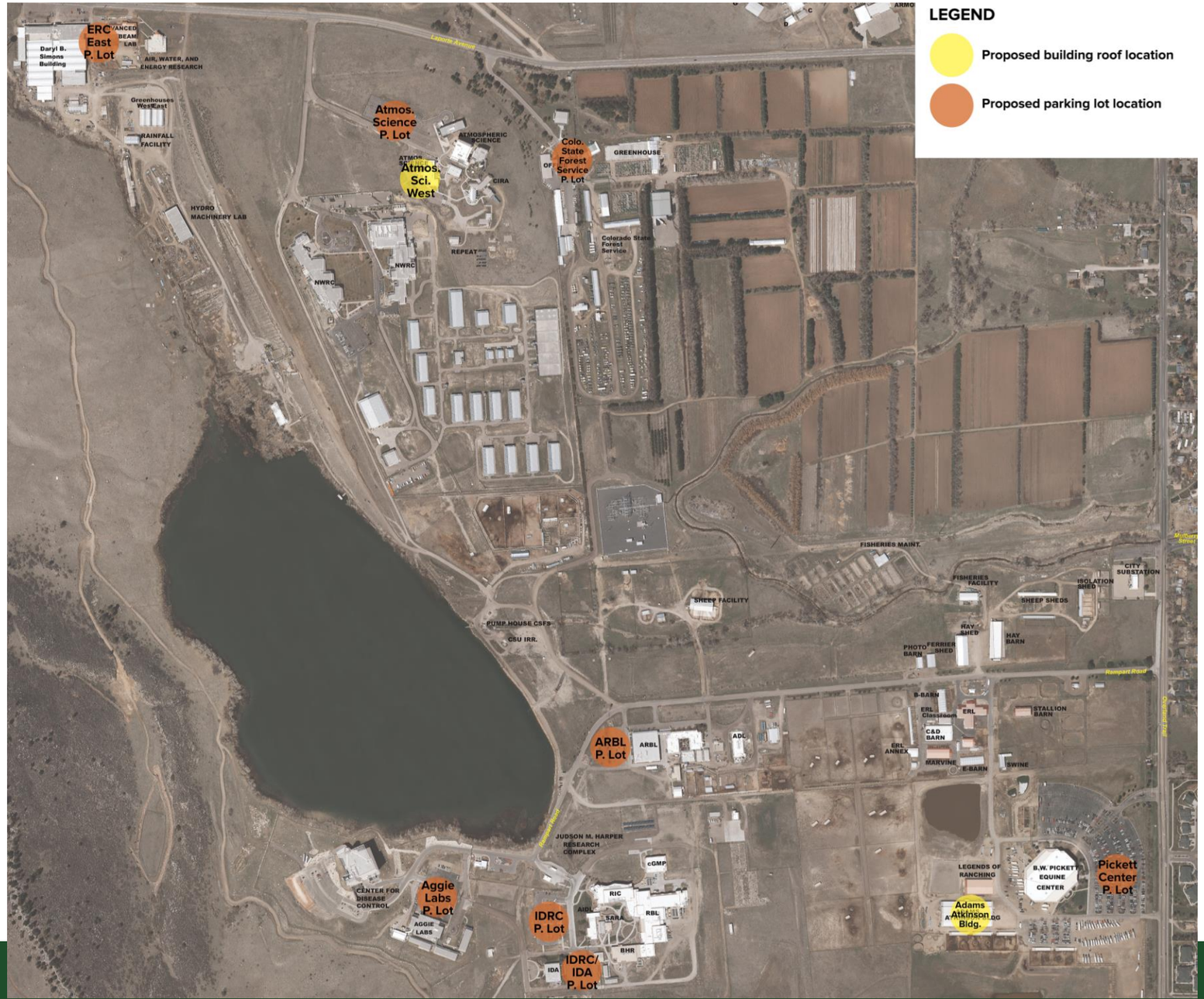
Opportunities for Solar on Main Campus



Opportunities for Solar on South Campus



Opportunities for Solar on Foothills Campus



Opportunities for Solar on ARDEC

Proposed motion: Update the CSU Development Standards to allow solar installations in parking lots, bike shelters, on buildings, and ground mounted with prior approval of the specific location by the Physical Development Committee.

Questions?

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Thank you

Colorado State University