# BORA



Community Design Workshop #3 February 3, 2024



# WALKER MACY 100

### DESIGN TEAM HERE TODAY



Donna Bezio PPS



Stefee Knudsen Bora



Amy Donohue Bora



Amelie Reynaud Bora



Aisha Marcos Bora



Erik Gerding PPS



Hector Lopez PPS



Corey Squire Bora



Mireaya Medina After Bruce

## who is in the room?

CPC: Comprehensive Planning Committee

- parent
- student
- staff
- neighbor
- friend
- CPC member
- innocent bystander?

**Overview + Introduction** 00:05 **Objectives + Look Ahead** 00:05 What We've Heard: CPC 3 + CDW 2 00:25 **Carbon: Embodied + Operational** 00:10 **Refined Site Design Options** 00:20 **Refined Site Design Options: Feedback Exercise** 00:40 **Public Comments** 00:10 Close + Next Steps 00:05

meeting notes from CDW #2 are posted on the PPS Bond website!

## Vision Statement & Guiding Principles: <u>review</u> updated Vision Statement and Guiding Principles.

**Site Approach:** <u>input</u> towards a single option (not choosing) "Work toward ONE preferred option to take to the School Board."

- **Experience:** what it feels like? Does it reflect the values of IBWHS?
- **Function:** how does it work?
  - Arrival and connection to/from Capital Hwy?
  - Arrival and access to the pool?
  - Vehicular and Pedestrian access to building to/from site?

COMMITTEE INPUT + ROLE IN THIS PROCESS

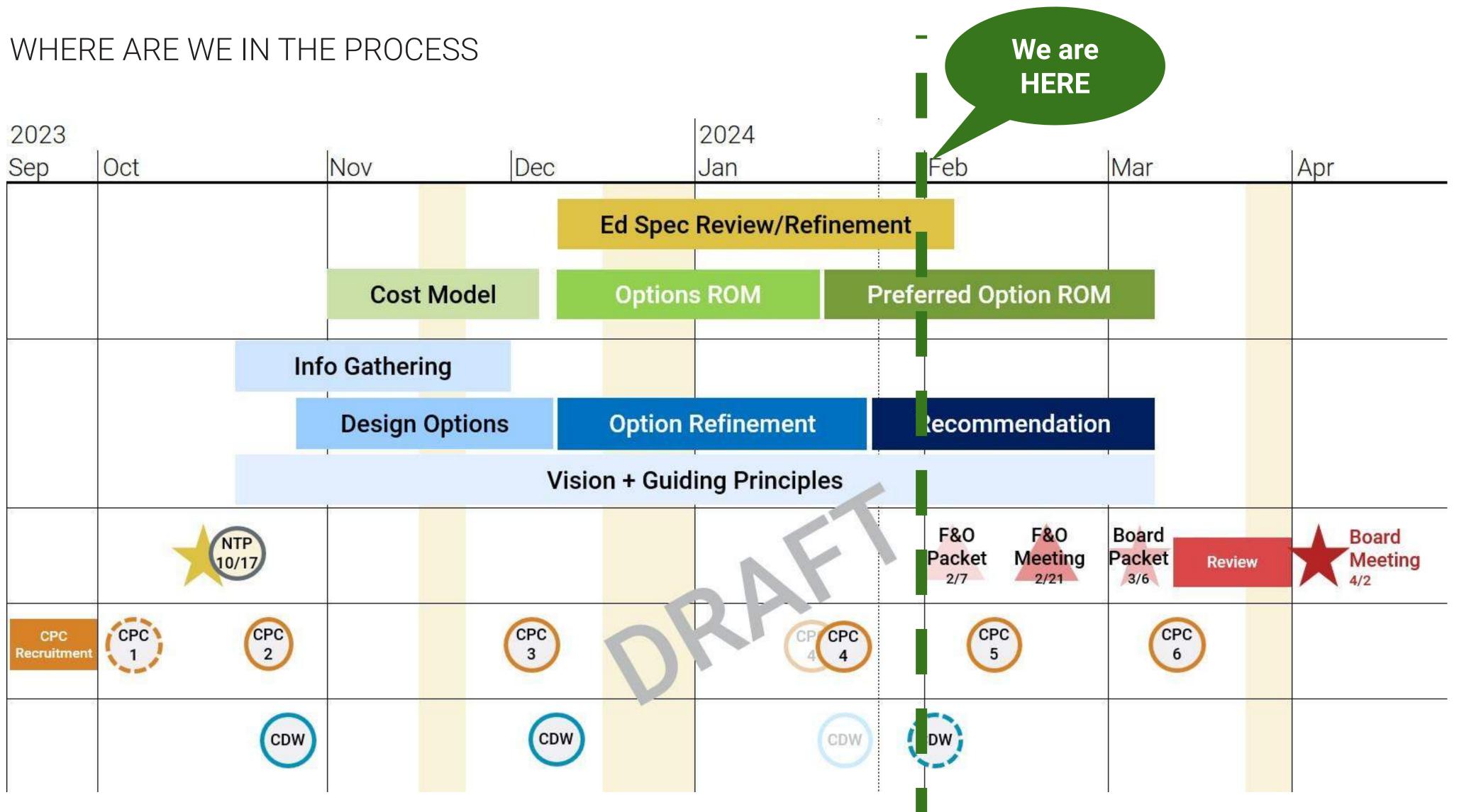
## modernizations are about the physical space

- how it looks and feels
- how the infrastructure supports teaching & learning

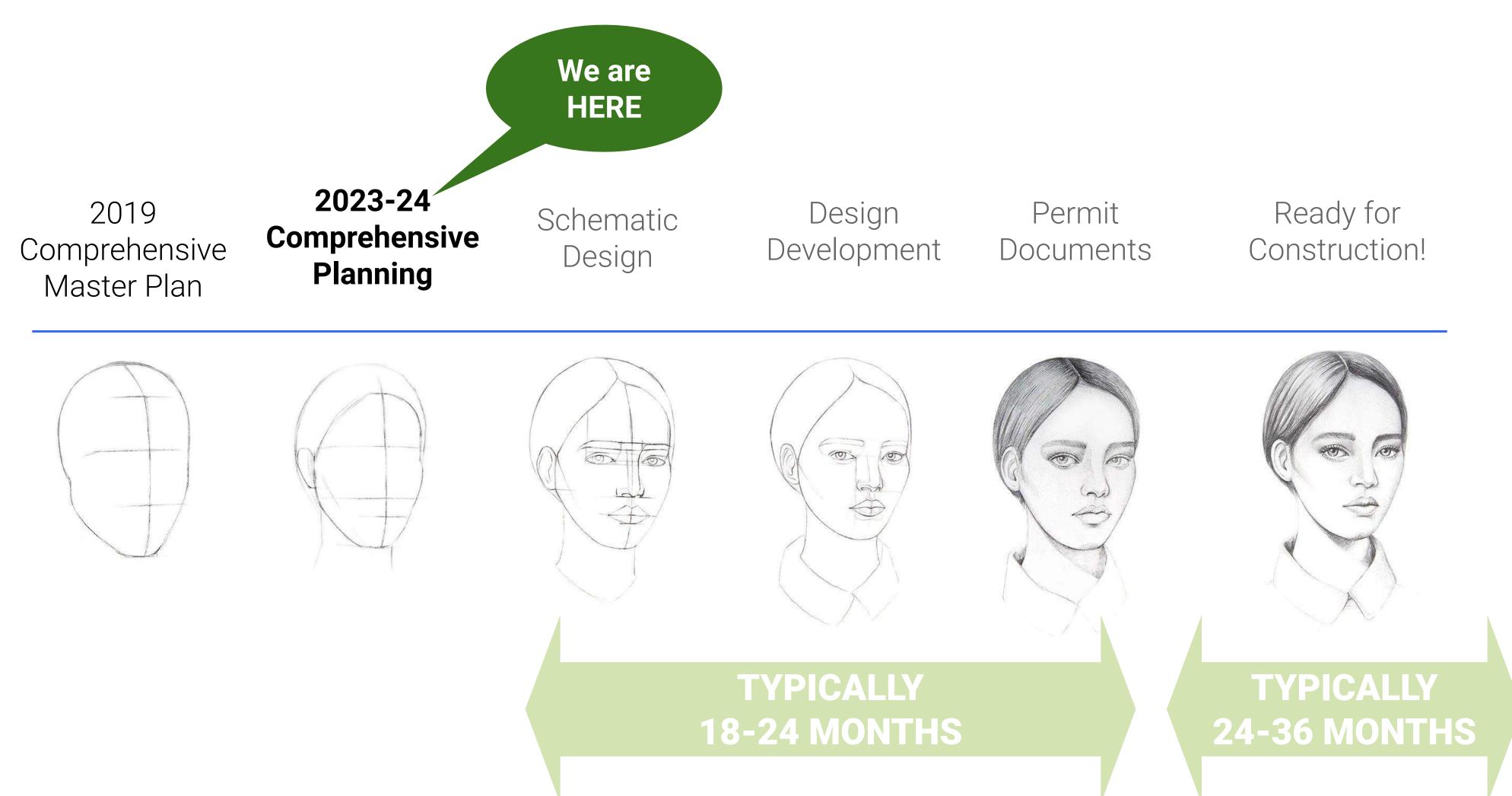
## this work is **not about operations**

- how it is managed
- what types of classes or functions are inside

Your input helps us understand qualitative questions: experience, uniqueness, and the culture of this school.



## WHERE ARE WE IN THE BIG PICTURE



# What We've Heard



### WHAT WE'VE HEARD





### Scheme 02: LIFT

keeps existing track & field with • courts new baseball field and improvements eeps existing pool, adds new • improved softball field pool support building

ion with moderate site work • new tennis and pickleball multi-use field

 building form "steps up" with topography of site; 3.5 stories





### WHAT WE'VE HEARD

1 - GATHER



### **SUCCESSES**

- Smaller footprint = more open site space
- Maintains major site elements in same place; less disruption
- 4-story building = better views!  $\bullet$

### **CHALLENGES**

- Weak connection to Capitol Hwy
- Difficult loading access
- Fully enclosed courtyard is uninviting &  $\bullet$ disconnected
- Not enough parking near Capitol Hwy •
- 4-stories feels too tall and cramped

## 2 - LIFT



### **SUCCESSES**

- Minimizes western sun exposure
- Ideal baseball field orientation
- Variety of courtyards that are connected to site
- 2 or 3 stories is better for neighborhood scale
- Massing integrates with natural landscape  $\bullet$

### **CHALLENGES**

- Weak connection to Capitol Hwy
- Too close to Rieke Elementary
- Not enough parking near Capitol Hwy
- Difficult access to west side of building

### 3 - CONNECT



### **SUCCESSES**

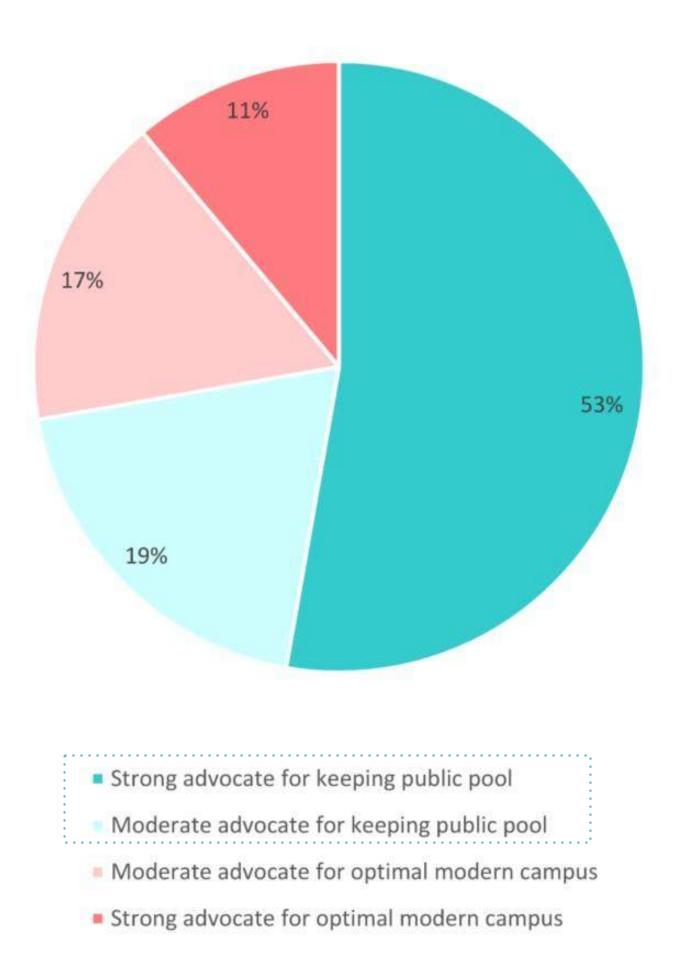
- Strong connection to Capitol Hwy
- Ideal baseball field and track & field orientation
- Parking convenient at both sides of building
- Centers building on campus
- Courtyard connects to site and views
- 2 or 3 stories is better for neighborhood scale

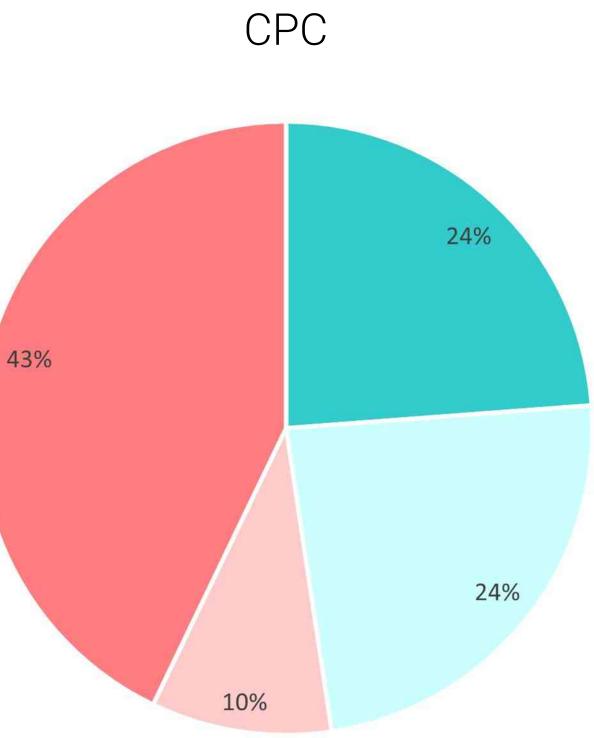
### **CHALLENGES**

- Pool relocation is likely costly
- Pool is further away from Hillsdale businesses
- Moves more site elements; more disruption
- Harder to minimize western sun exposure
- Grandstand facing west

### WHAT WE'VE HEARD - POOL

### Community

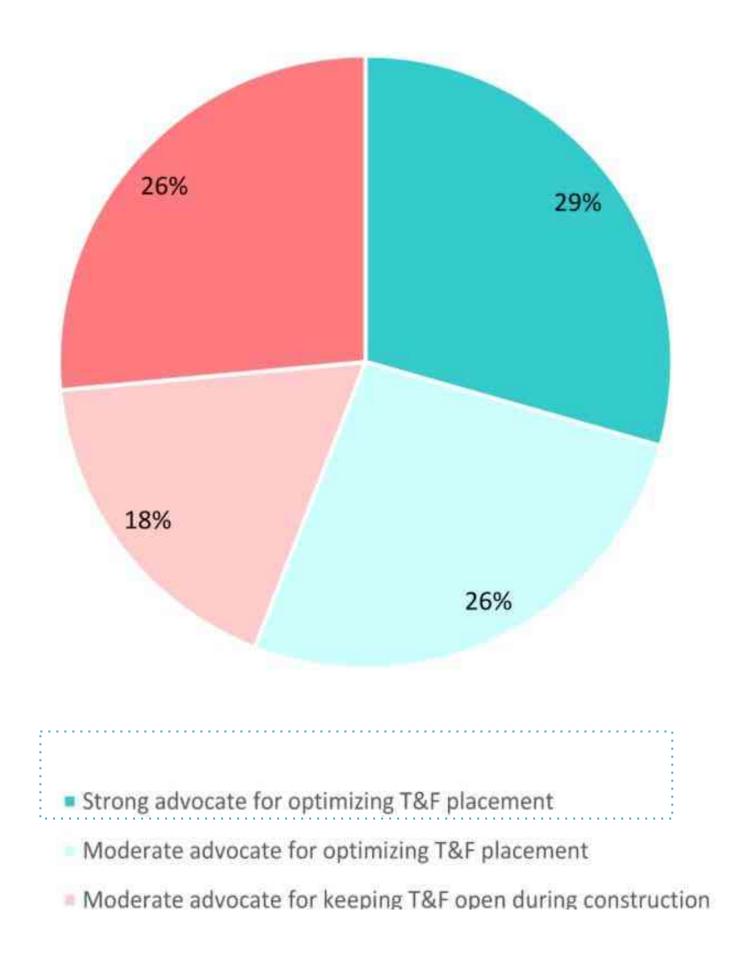


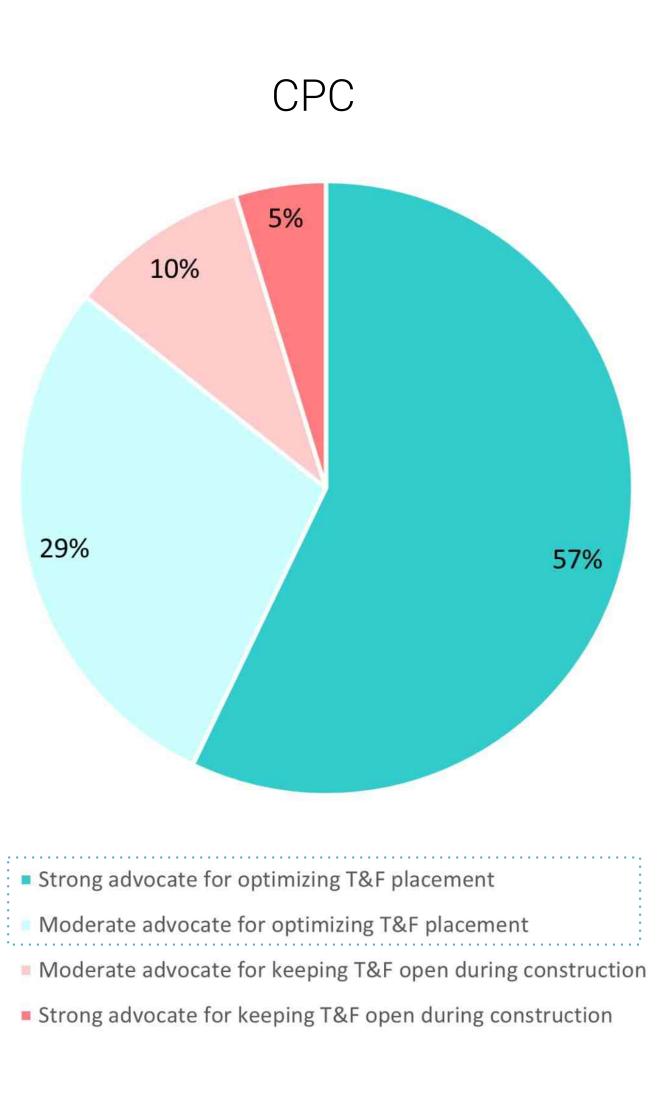


Strong advocate for keeping public pool Moderate advocate for keeping public pool Moderate advocate for optimal modern campus

### WHAT WE'VE HEARD - TRACK AND FIELD DISRUPTION

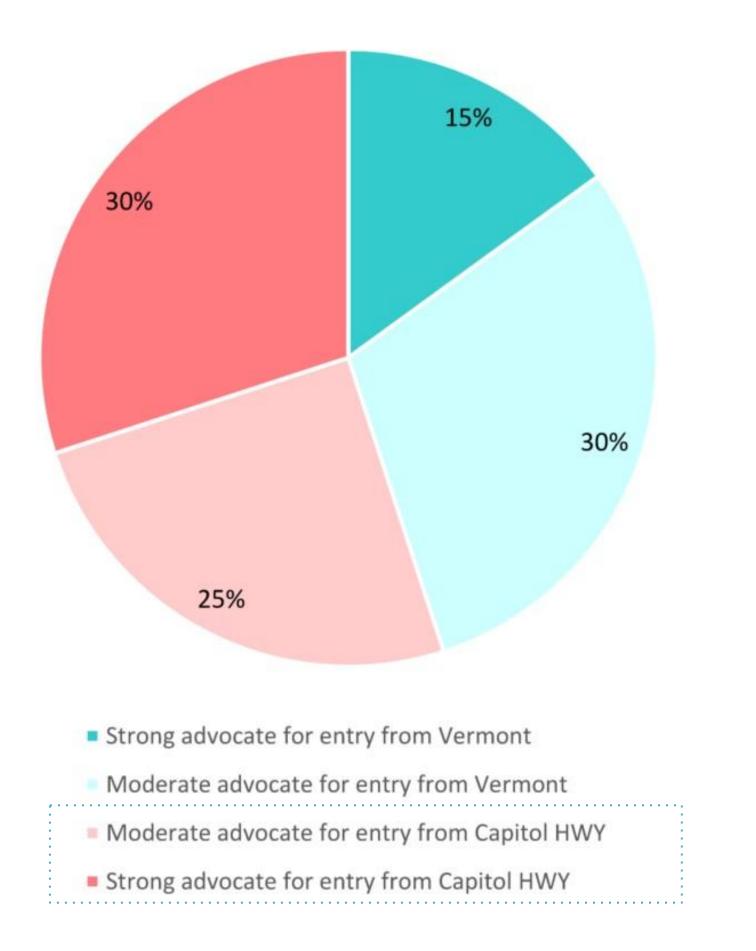
### Community

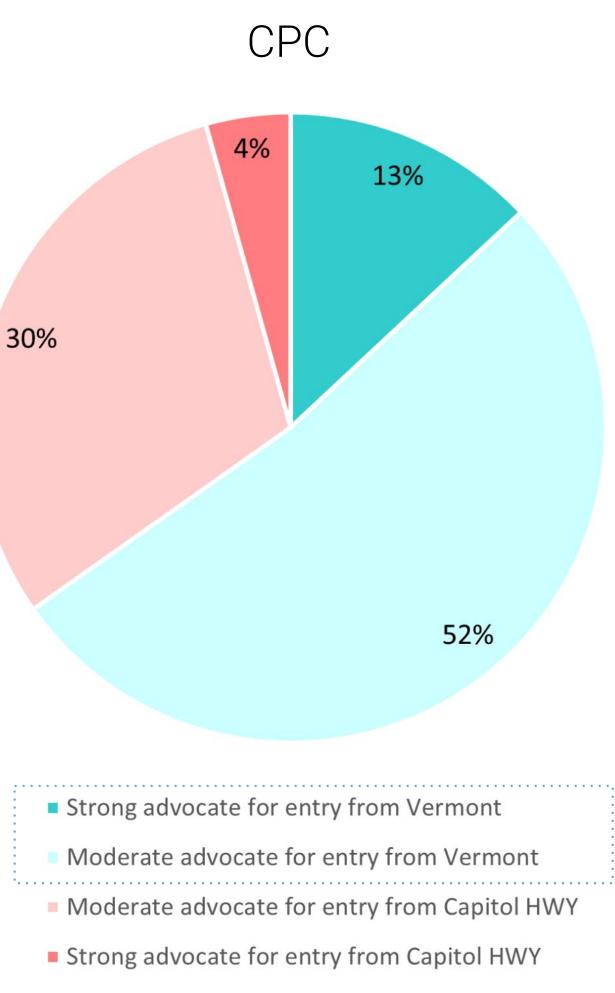




### WHAT WE'VE HEARD - ENTRY

## Community





# **Carbon: Embodied and Operational**

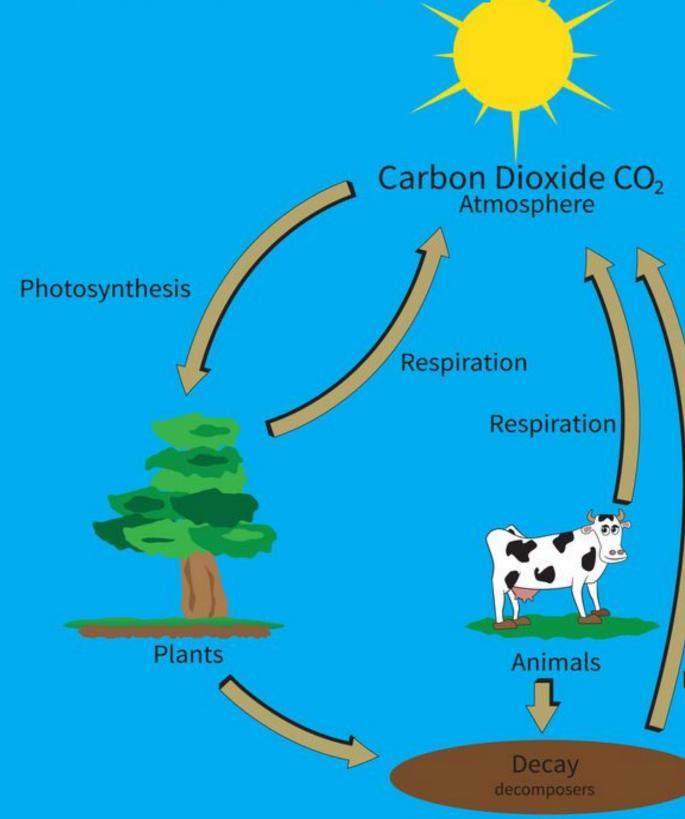
# Carbon and Design







# The Carbon Cycle

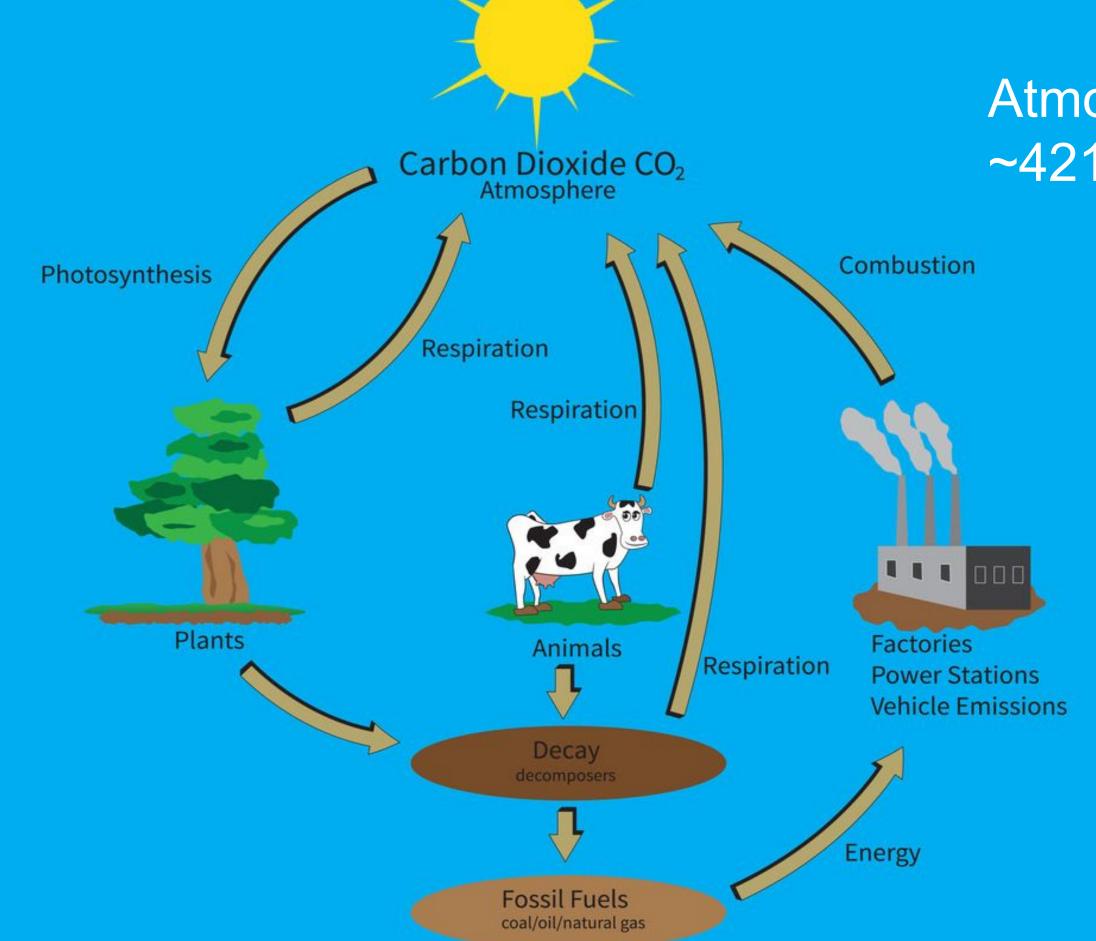




## Atmospheric carbon ~350 ppm

Respiration

# The Carbon Cycle



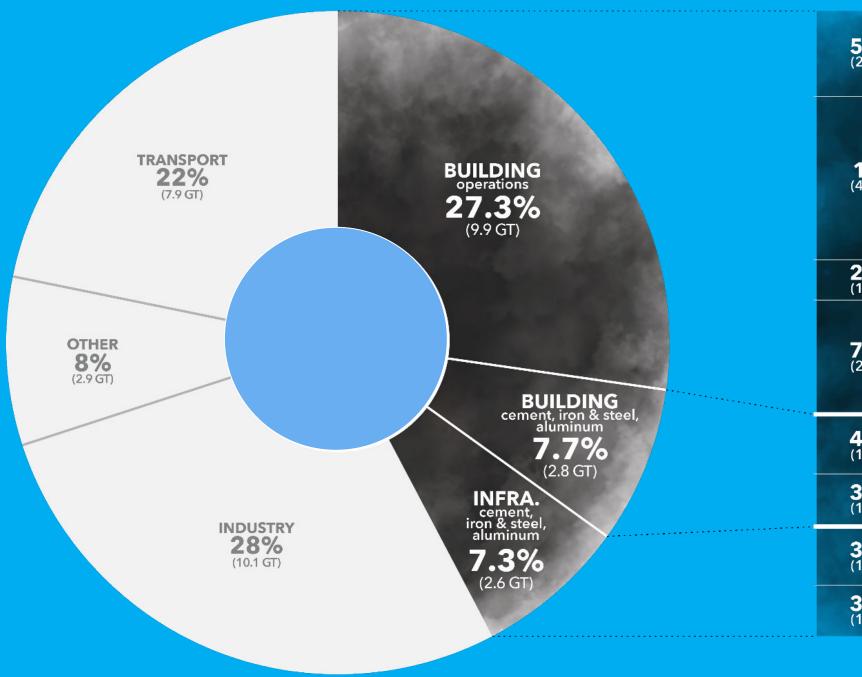


## Atmospheric carbon ~421 ppm





### **TOTAL ANNUAL GLOBAL CO**<sub>2</sub> **EMISSIONS Direct & Indirect Energy & Process Emissions (36.3 GT)**



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<b>5.8%</b>	RESIDENTIAL
(2.1 GT)	DIRECT
<b>11%</b> (4.0 GT)	
<b>2.8%</b> (1.0 GT)	NON-RESIDENTIAL DIRECT BUILT ENVIRONMENT
<b>7.7%</b> (2.8 GT)	
<b>4.1%</b>	BUILDING DIRECT & INDIRECT
(1.5 GT)	CEMENT
<b>3.6%</b>	BUILDING DIRECT & INDIRECT
(1.3 GT)	IRON, STEEL, & ALUMINUM
<b>3.9%</b>	INFRASTRUCTURE DIRECT &
(1.4 GT)	INDIRECT CEMENT
<b>3.4%</b>	INFRASTRUCTURE DIRECT &
(1.2 GT)	INDIRECT IRON, STEEL, & ALUMINUM

# We Know Carbon is Bad

# But How Bad??

# The Social Cost of Carbon

# \$190 / Ton



## Each ton of carbon released into the atmosphere costs society \$190

This cost is paid in: **Increased Medical Expenses Climate Adaptation Extreme Weather Scarcity of Resources Crop Failures Control of Invasive Species** Loss of Ecosystem services Life and Limb **General Human Suffering** 



# And carbon emission from buildings are dependent on design decisions

Specifically: Window Systems Comfort Systems Structural Systems Land Use Transportation

## **Operational Carbon**

Carbon Released to Generate Energy that power buildings

## **Embodied Carbon**

Carbon Released to Create Materials Used to construct Buildings

LL



## **Embodied Carbon**

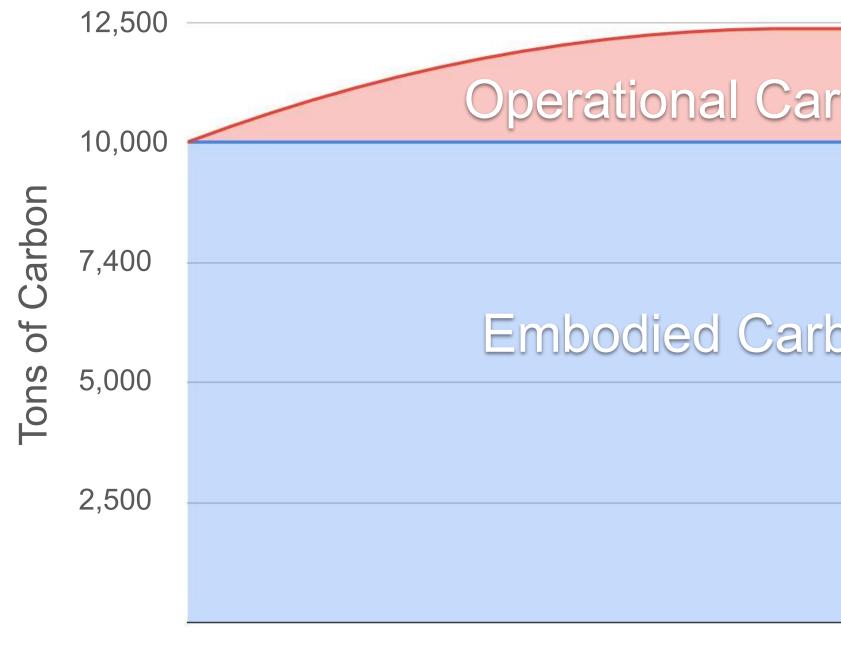
# Energy Efficiency and Solar PV

# More wood, Less concrete and steel



## Ida B. Wells Cumulative Carbon Emissions

(If build as a typical school)



2030

2040

		10
bon		
on		

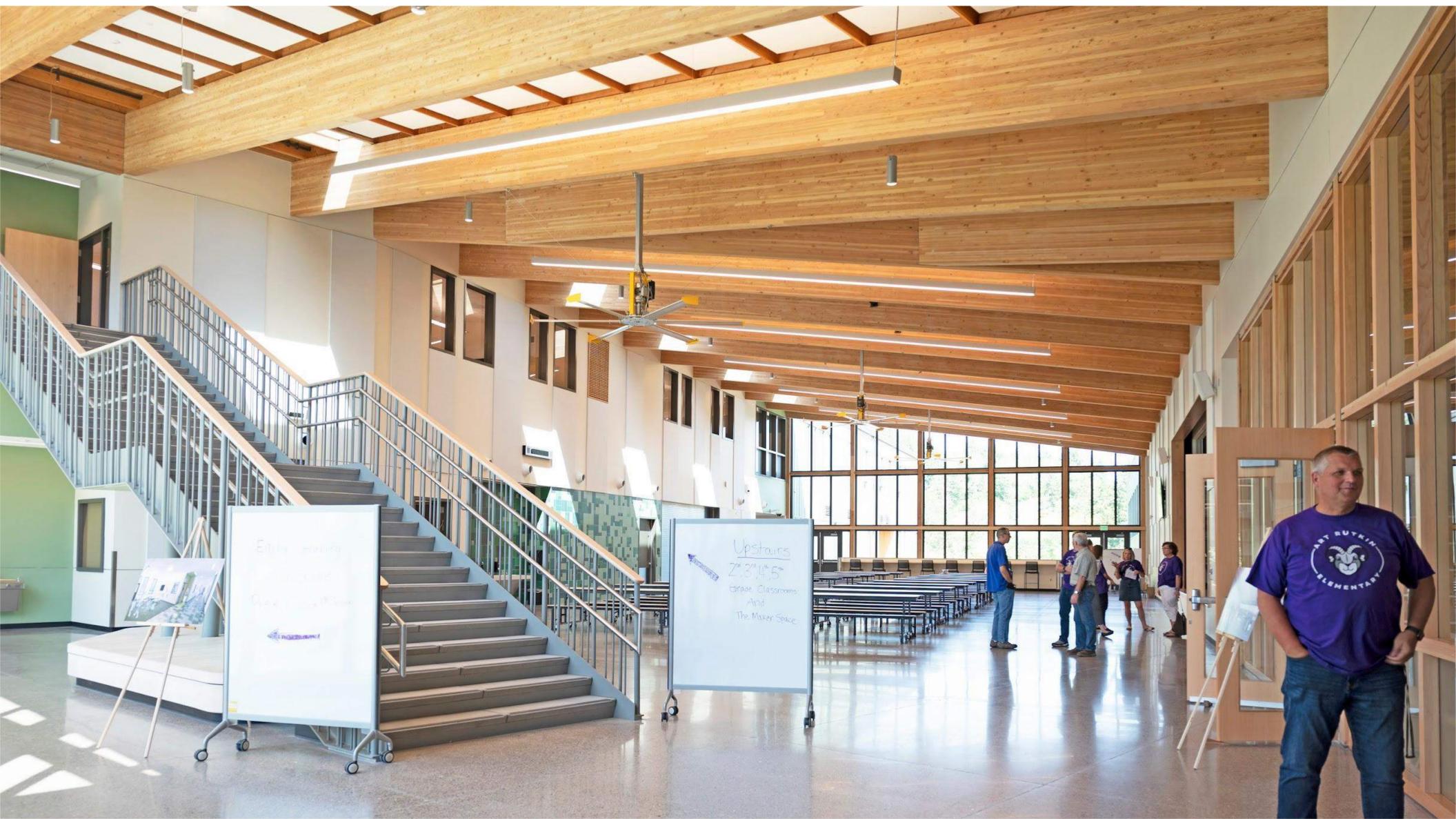
12,500 tonnes \* \$190 = \$2.4M in climate caused harm

2050



## **Embodied Carbon**

# More wood, Less concrete and steel



Emissions Reduction: PPS will reduce its greenhouse gas emissions by 50 percent by 2030, using the 2018-2019 school year baseline, and reach net zero emissions by 2040

## Pillar 1 Reduce Environmental Impact and Costs

## Goal 1.1 PPS will design and construct new low-carbon schools and renovations that are energy-efficient, resilient, and adaptable.

# Questions?



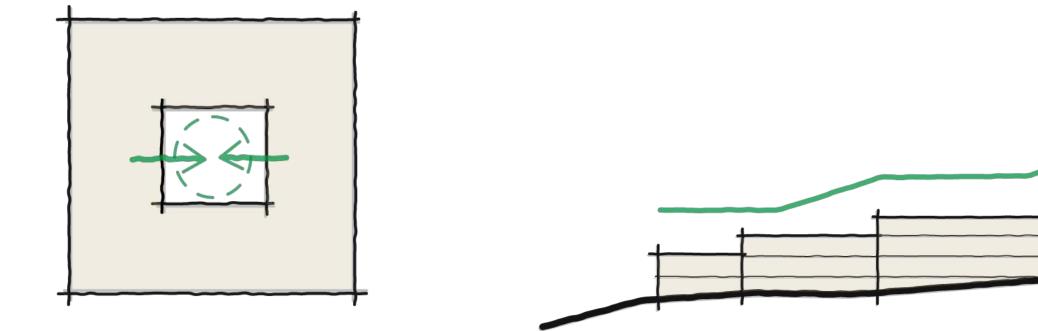
# Next month: Indoor Air Quality primer post



# Site Design Options

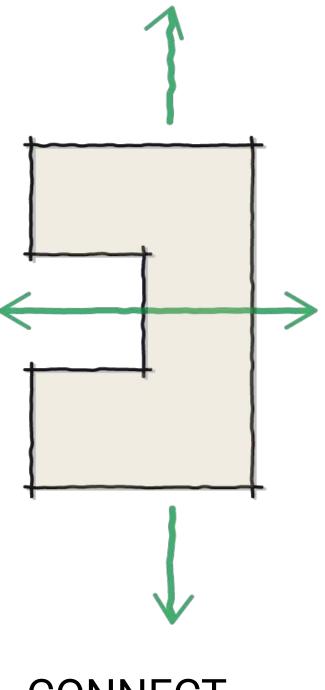


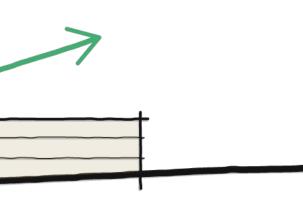
## DESIGN CONCEPTS



### GATHER

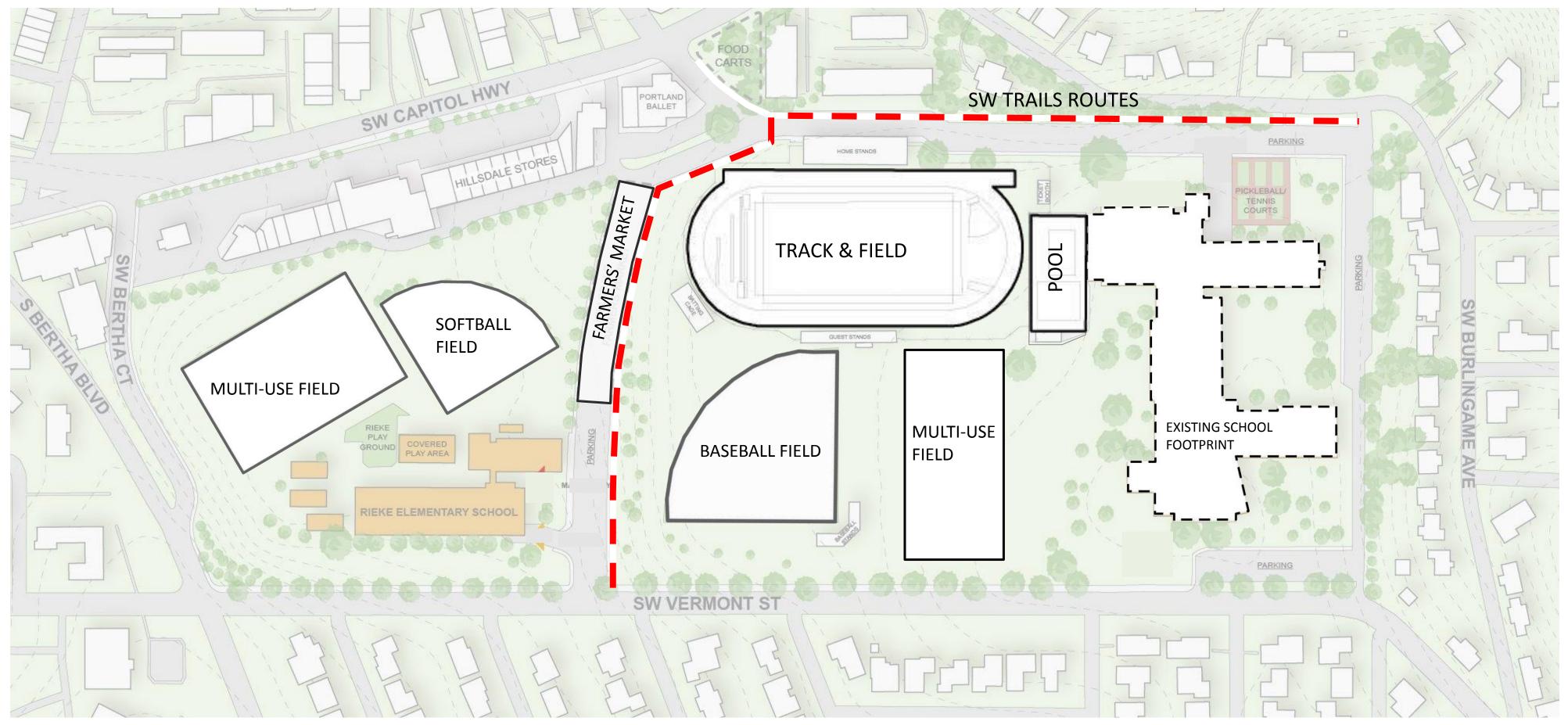
LIFT



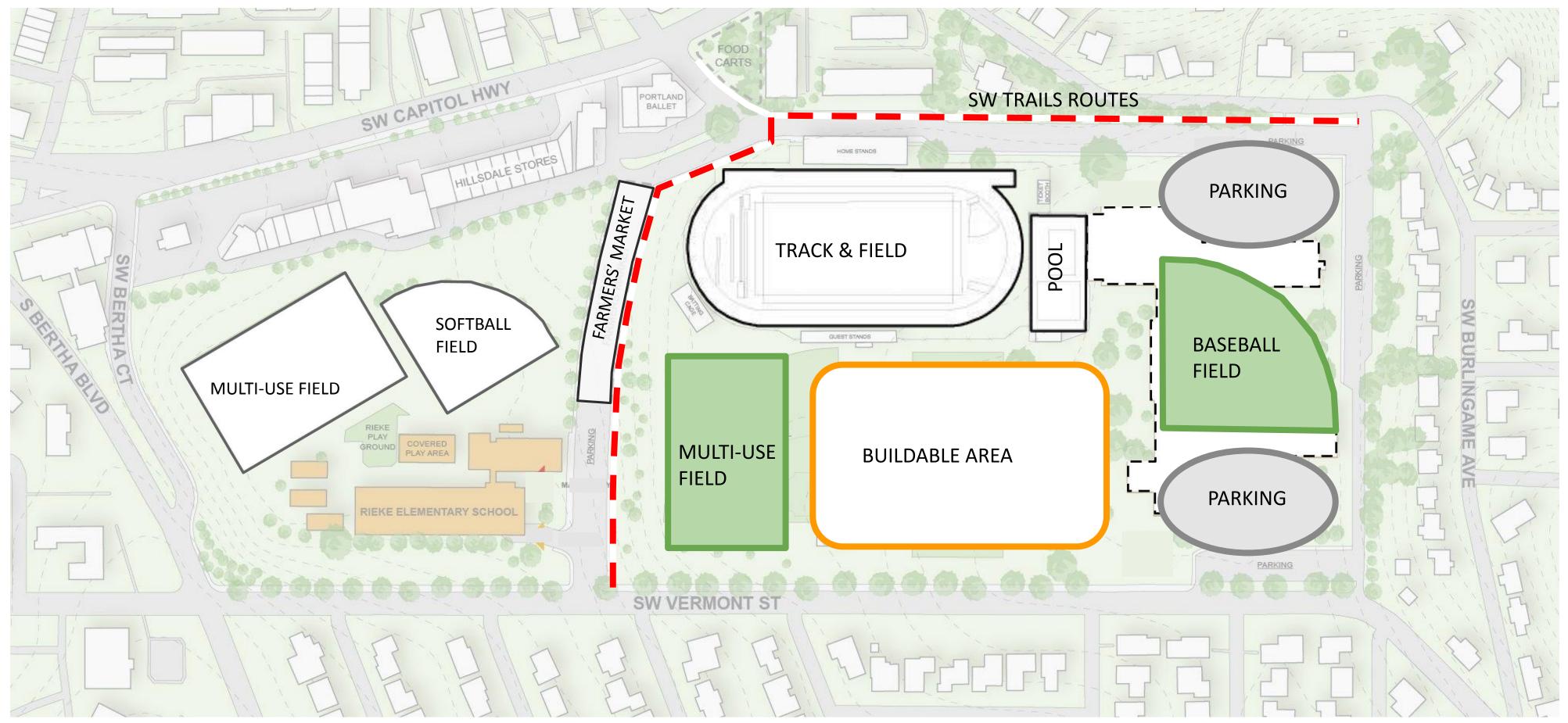




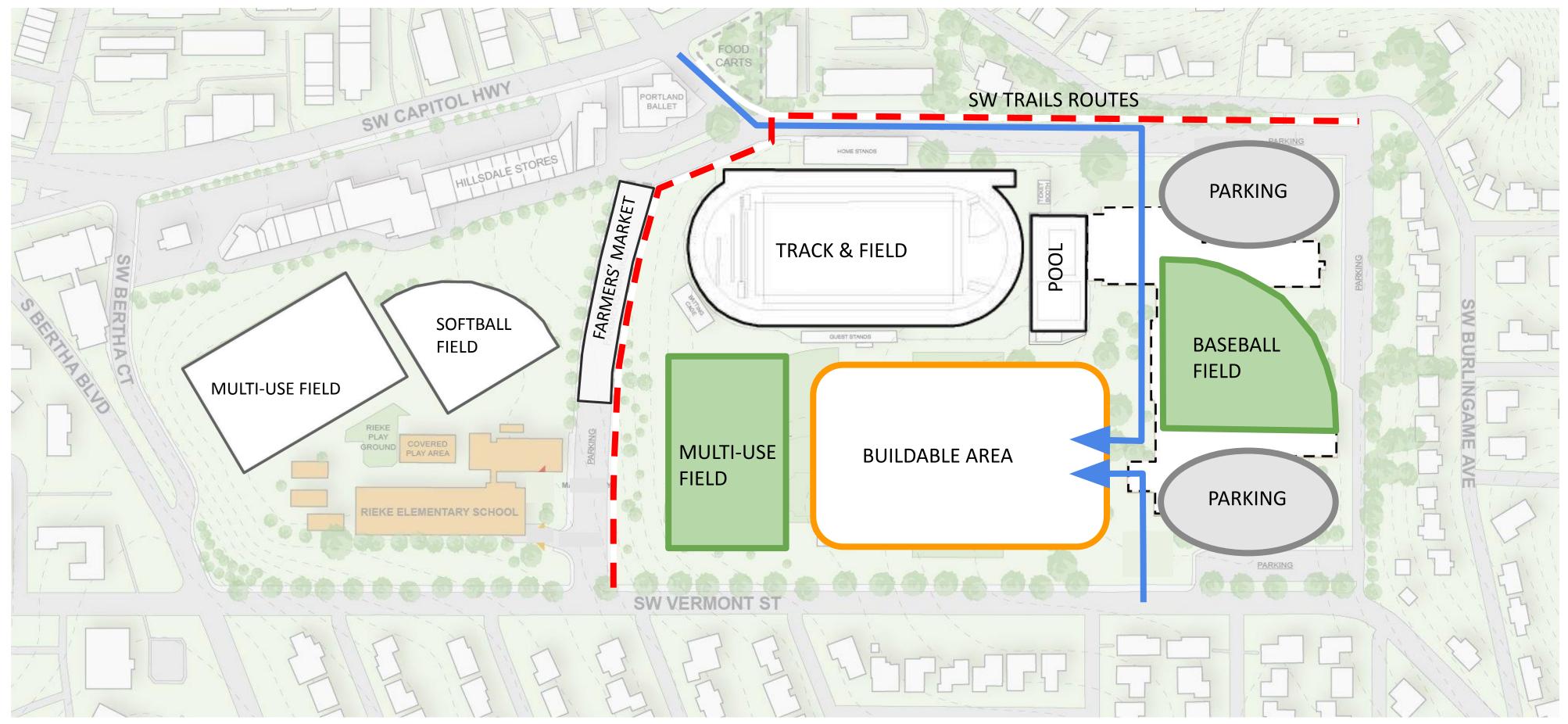
#### EXISTING SITE - MAJOR ELEMENTS



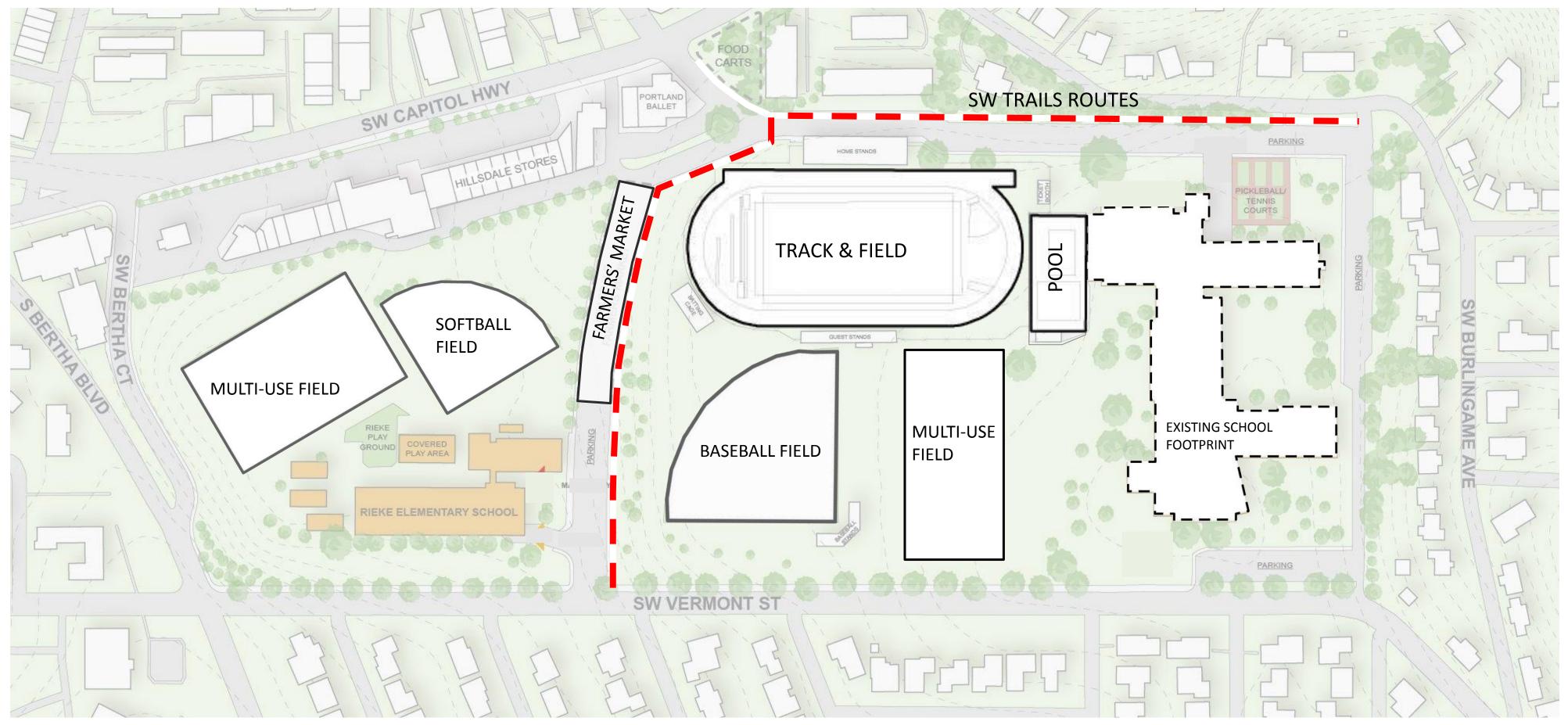
#### SCHEME 1 - BUILDABLE AREA



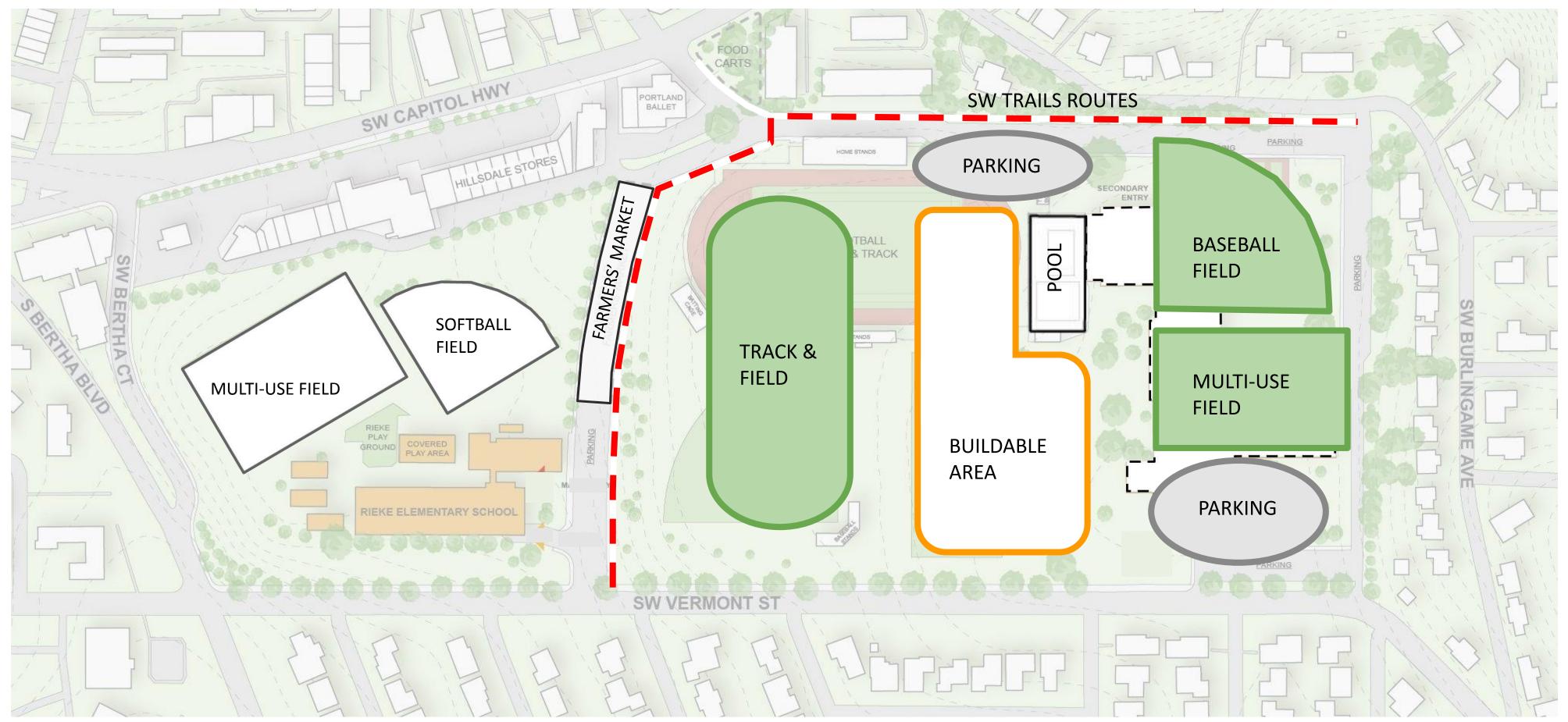
#### SCHEME 1 - PEDESTRIAN APPROACH



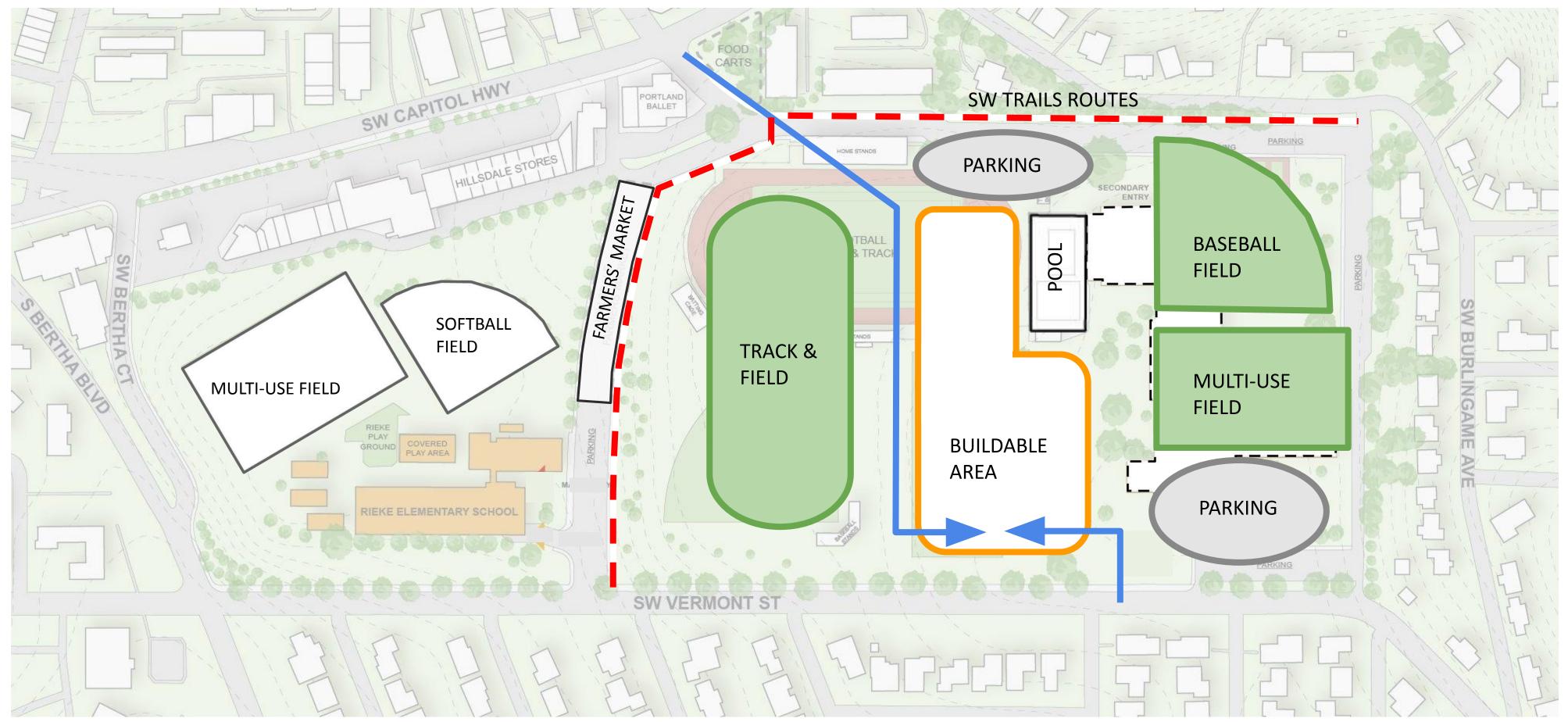
#### EXISTING SITE - MAJOR ELEMENTS

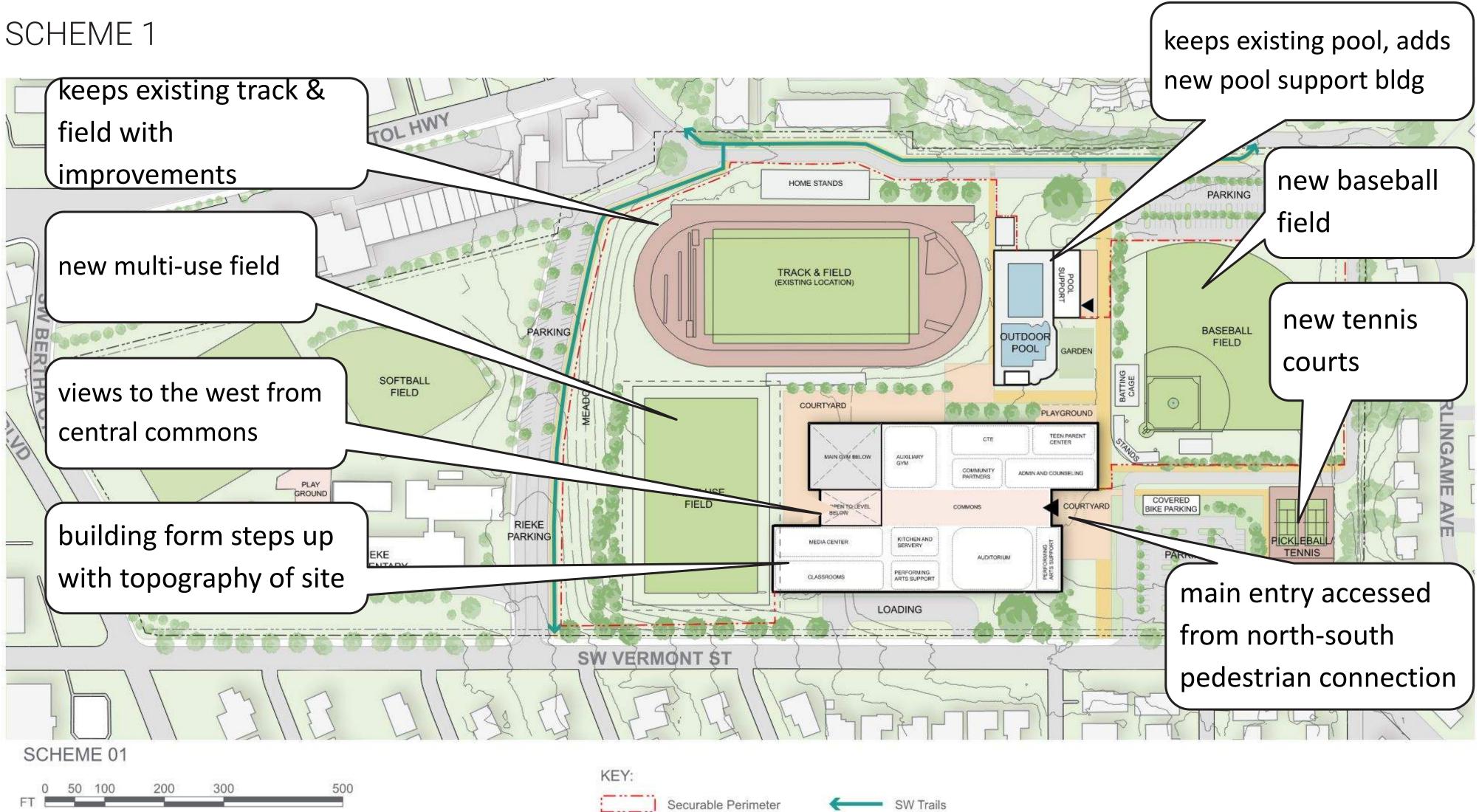


#### SCHEME 2 - BUILDABLE AREA

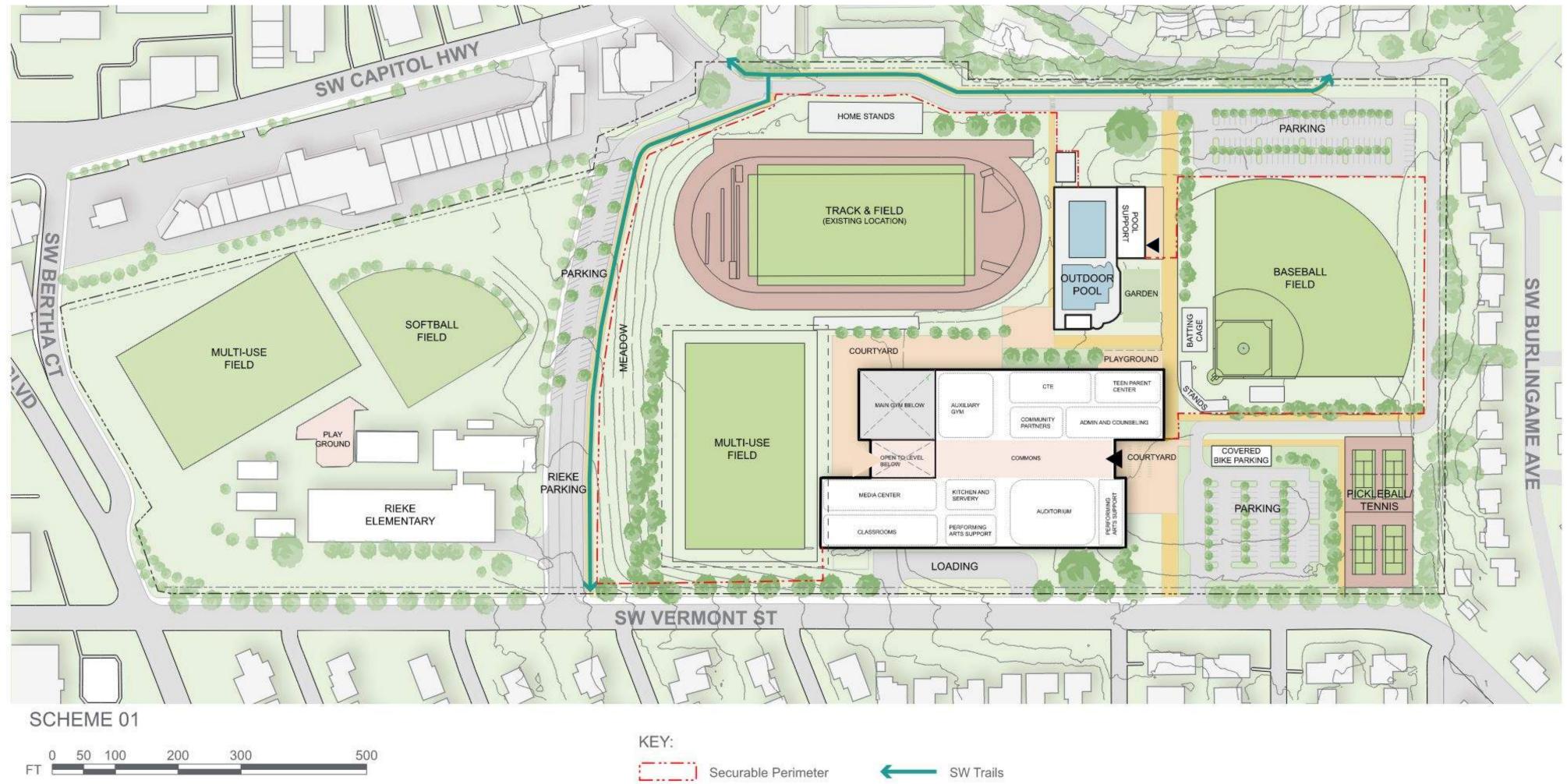


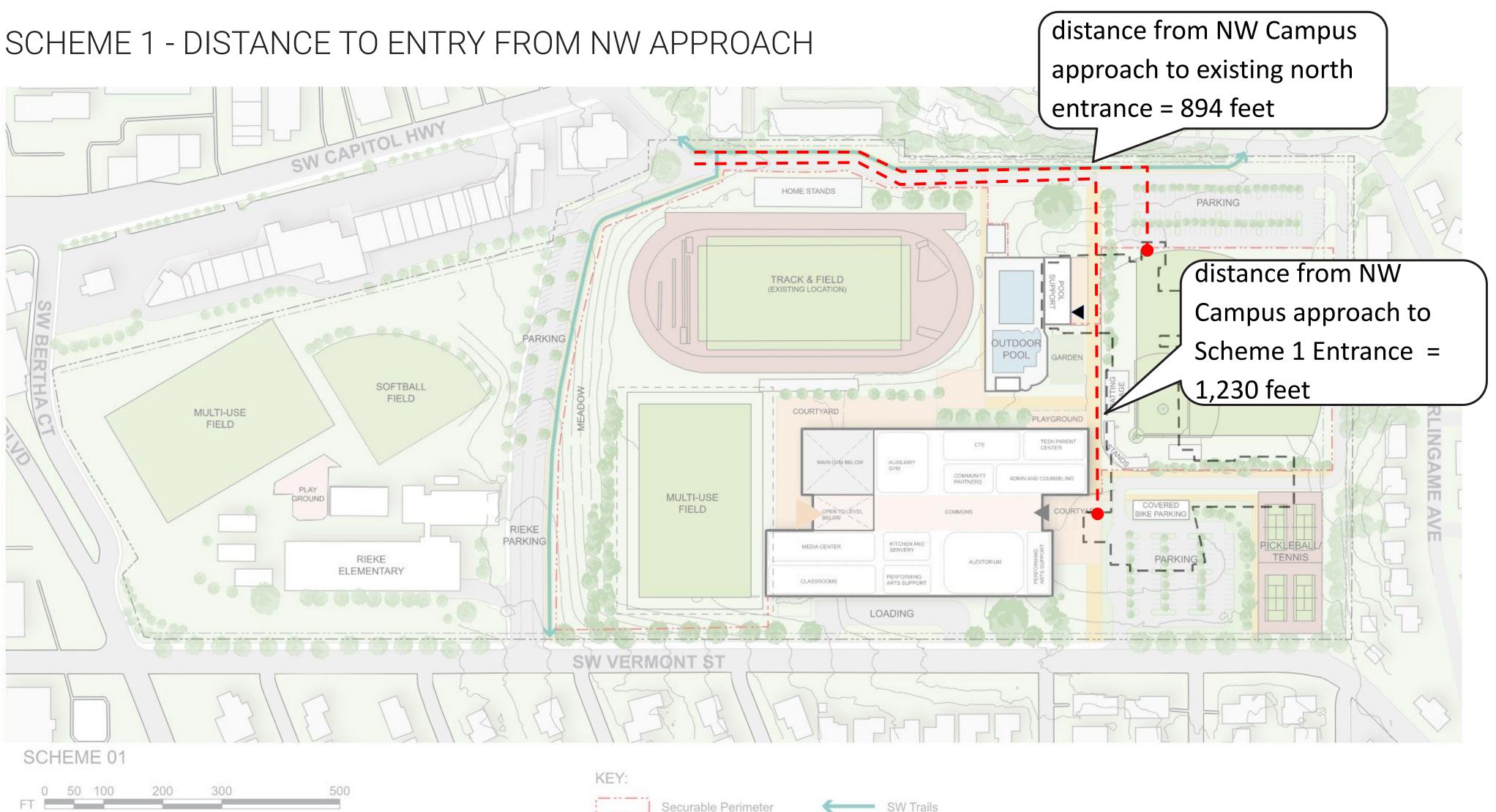
#### SCHEME 2 - PEDESTRIAN APPROACH

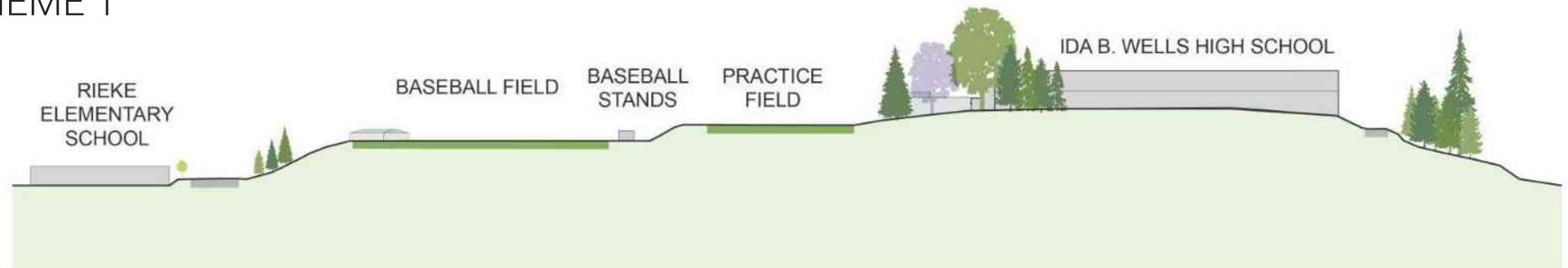




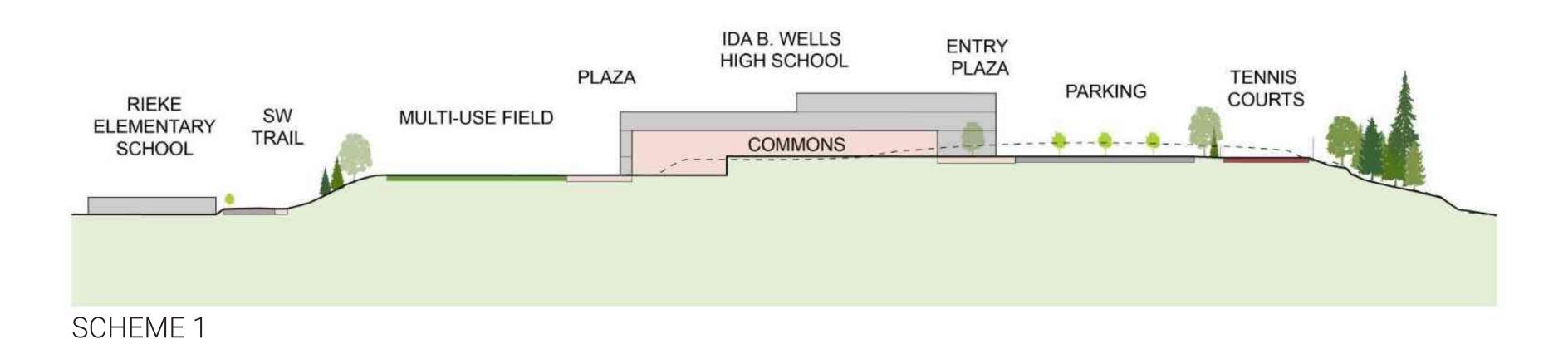


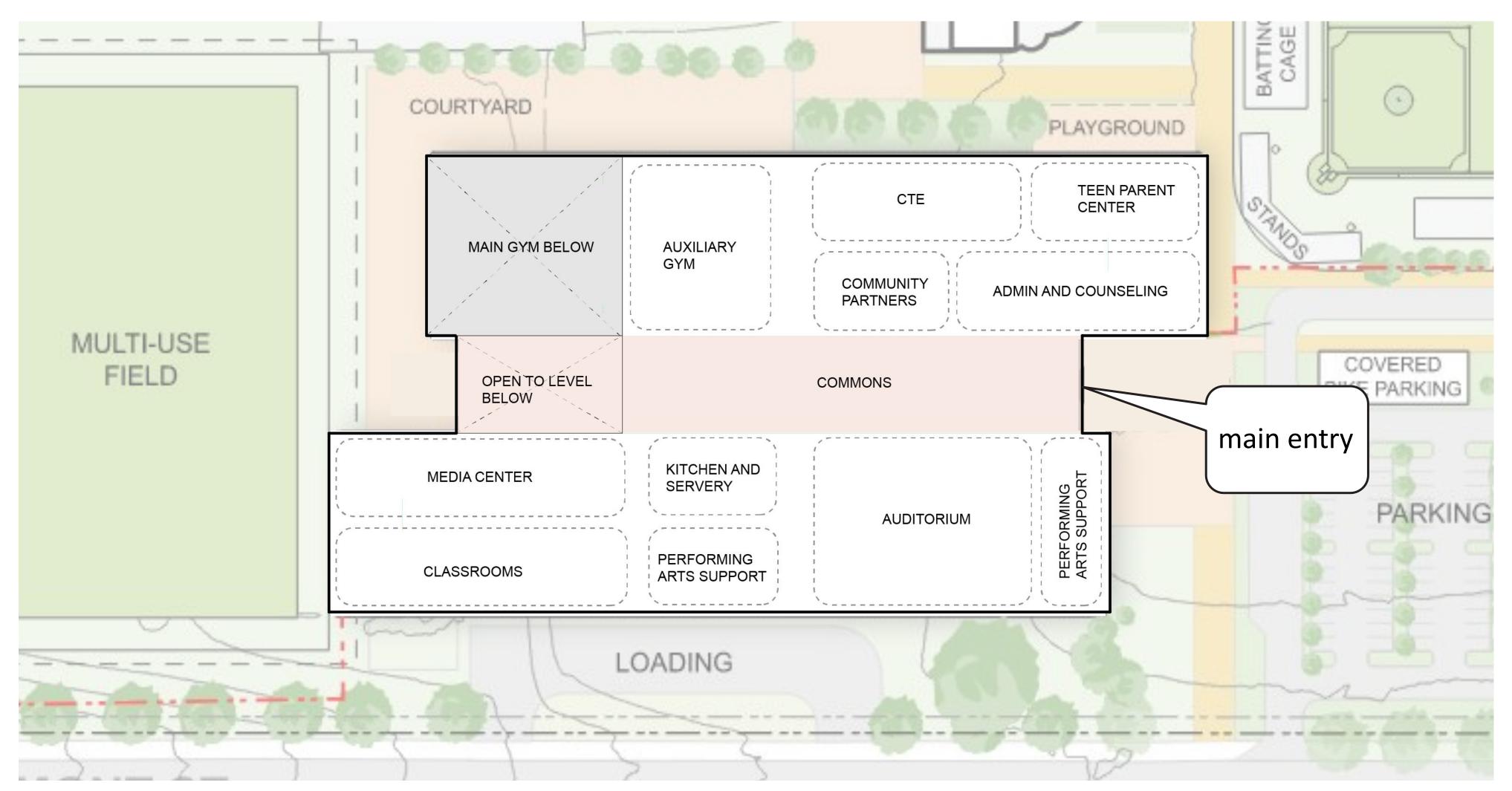




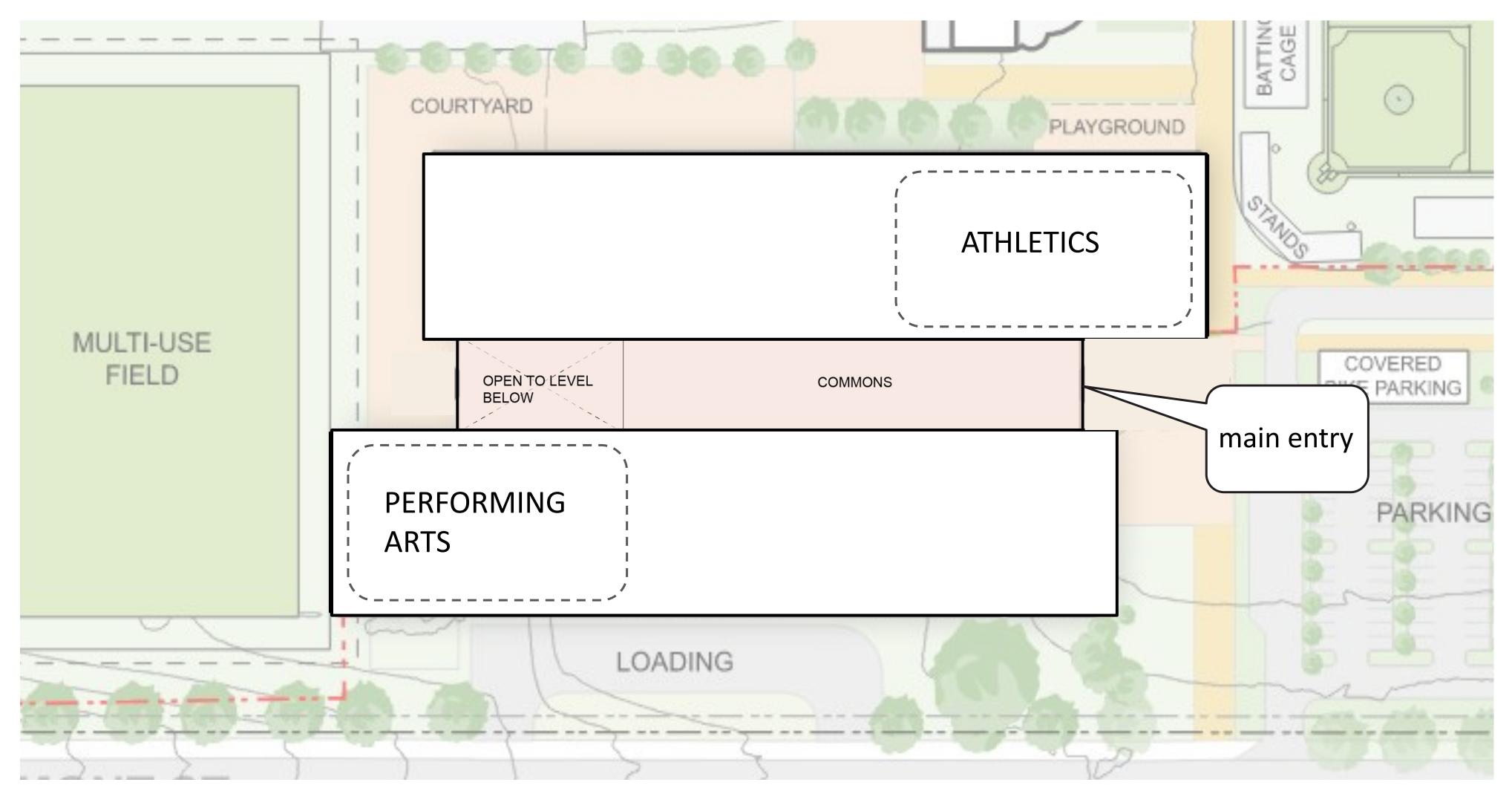


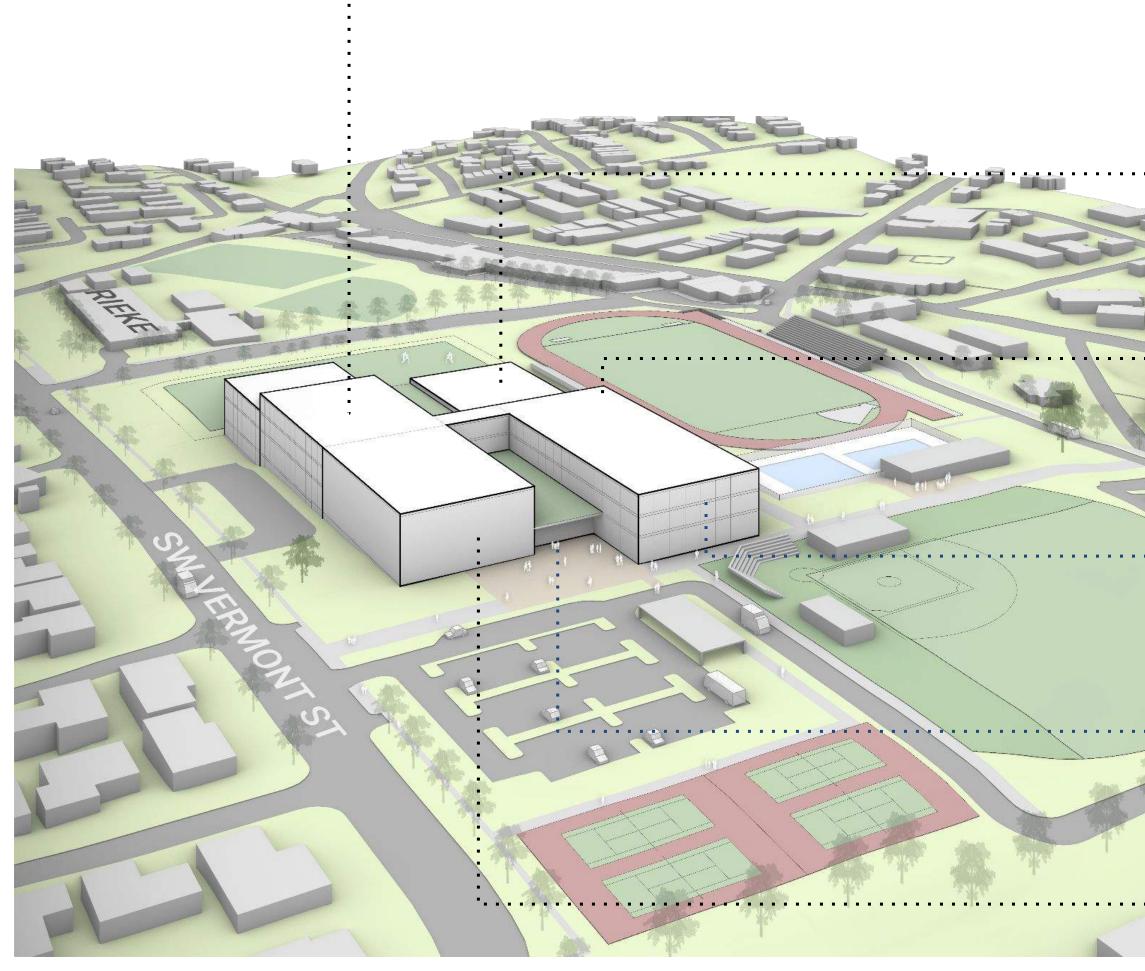
#### EXISTING CONDITIONS





#### SCHEME 1 - ALTERNATE PLAN





Massing - Aerial View

Building form steps up with natural topography of site

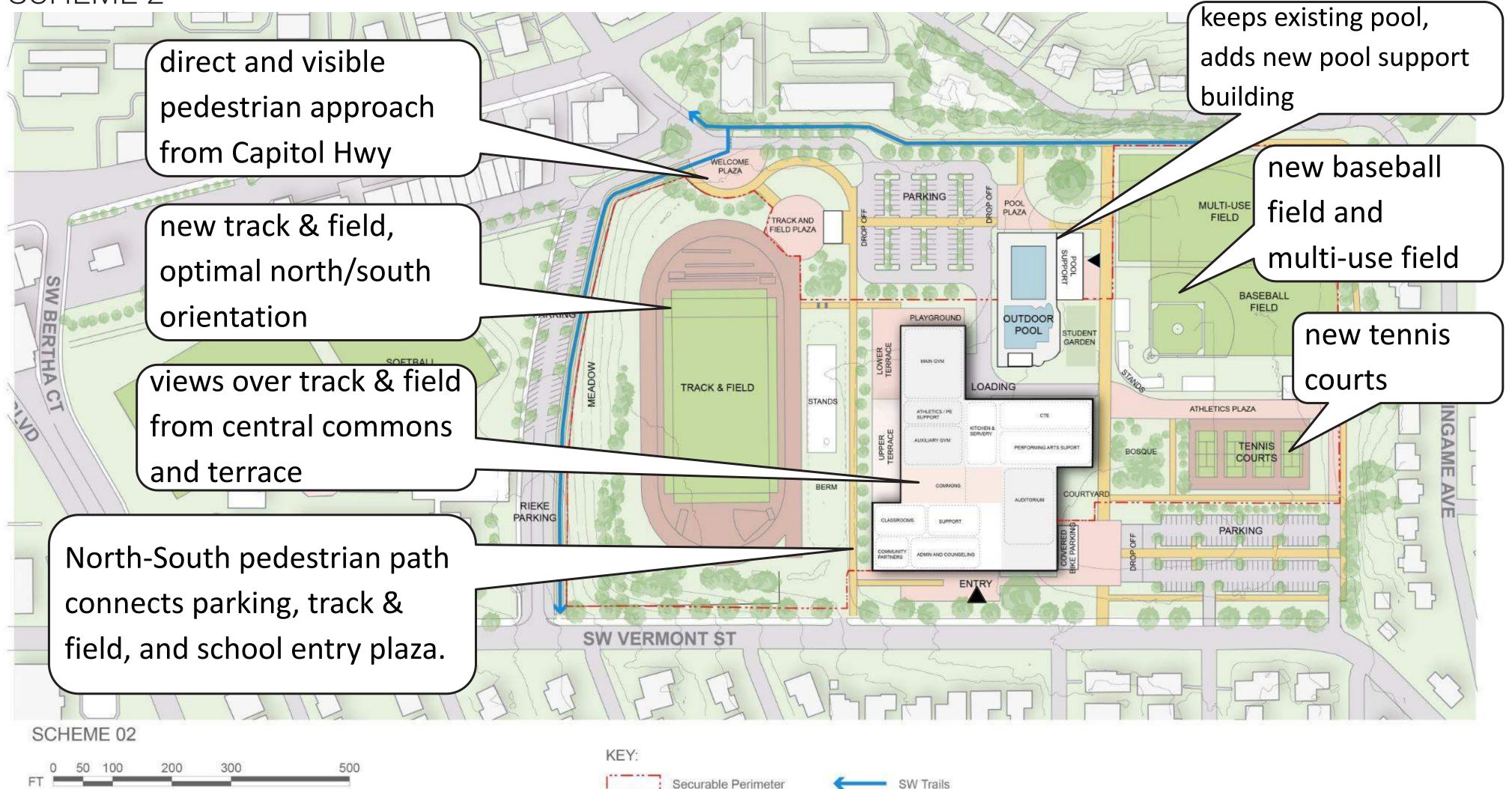
Gyms and athletics close to track & field and multi-use field

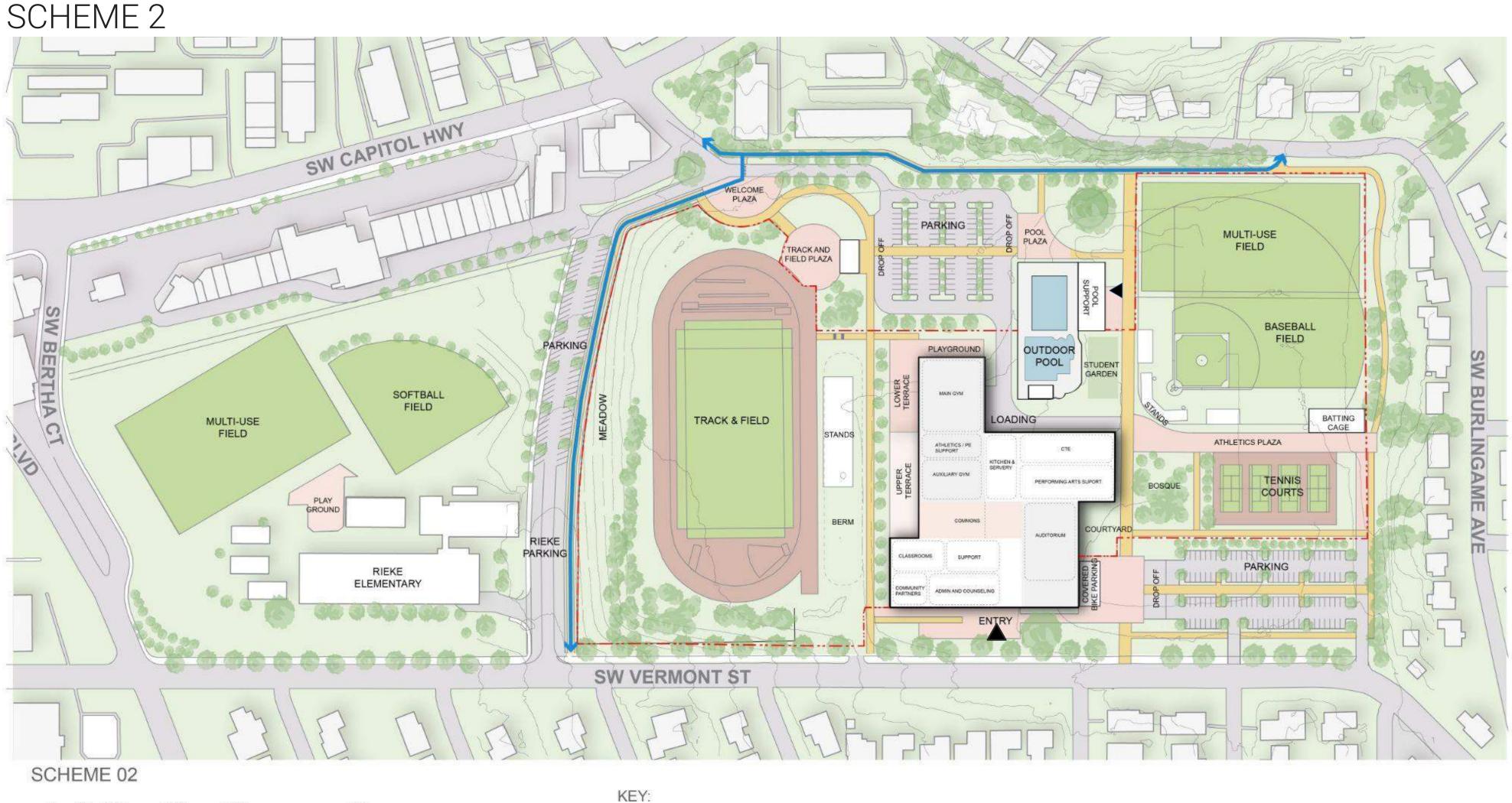
Primary "bars" running east-west to minimize western sun exposure

Classrooms primarily on upper levels

Main entry connects to central commons

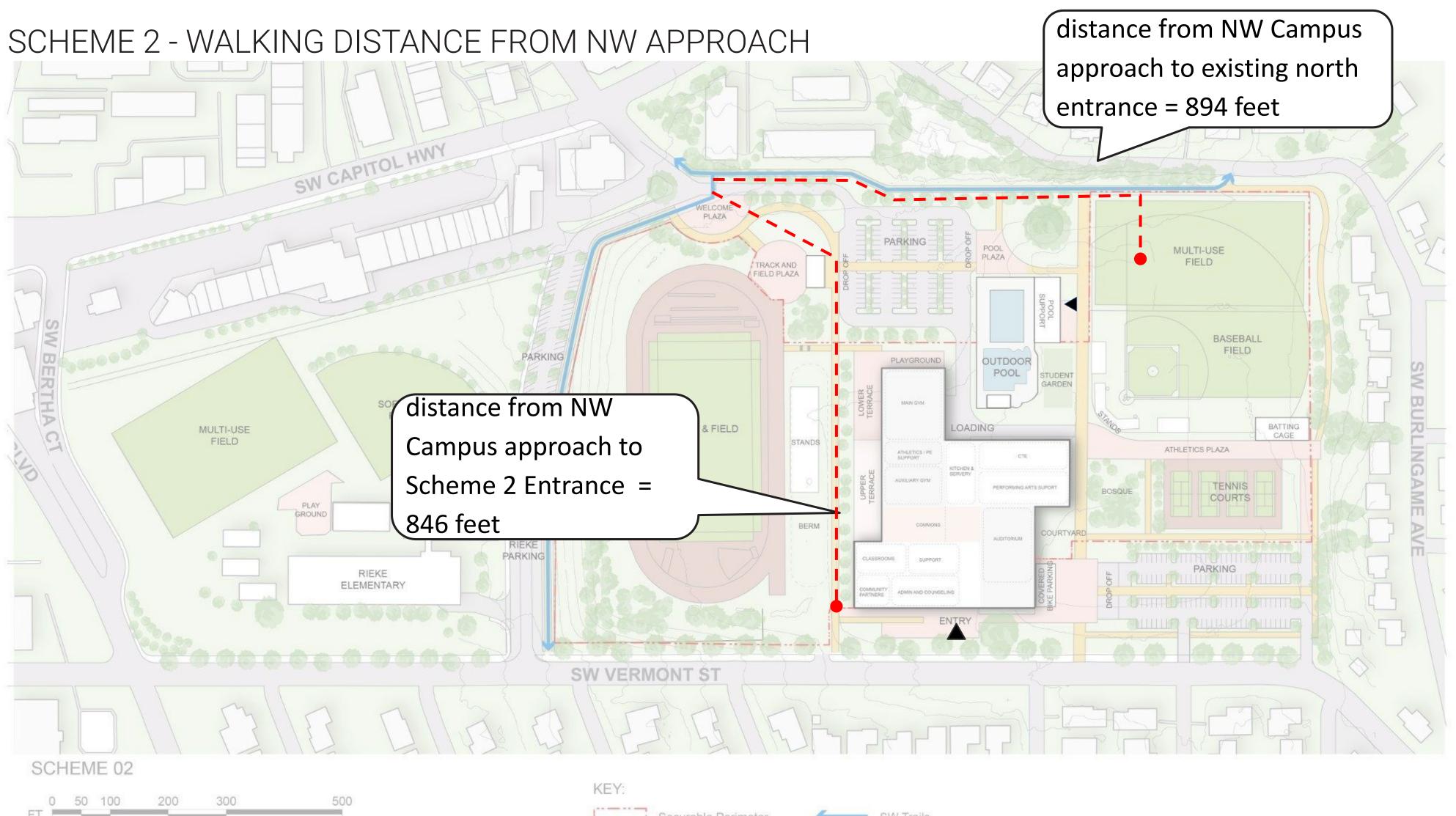
Auditorium close to main entry



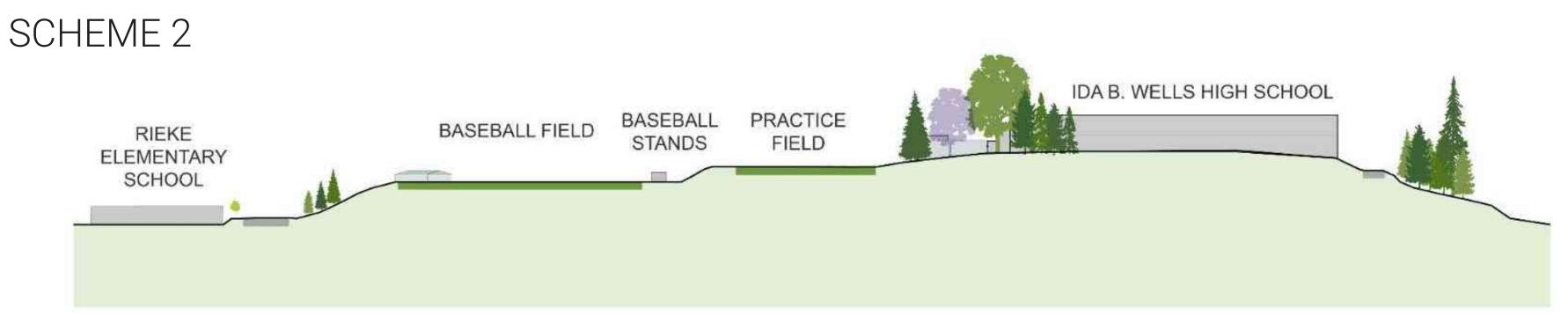




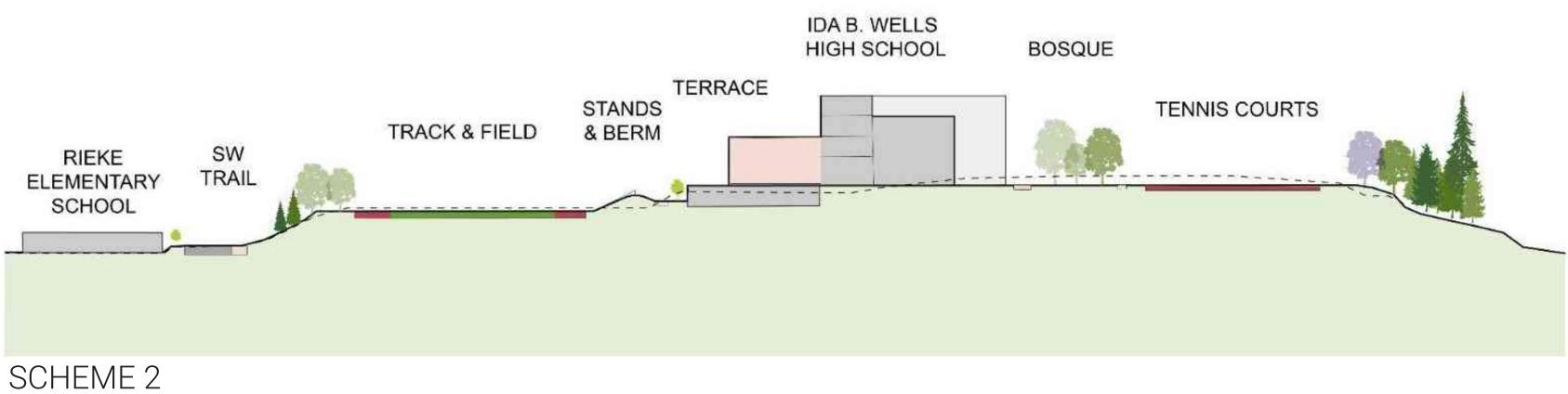


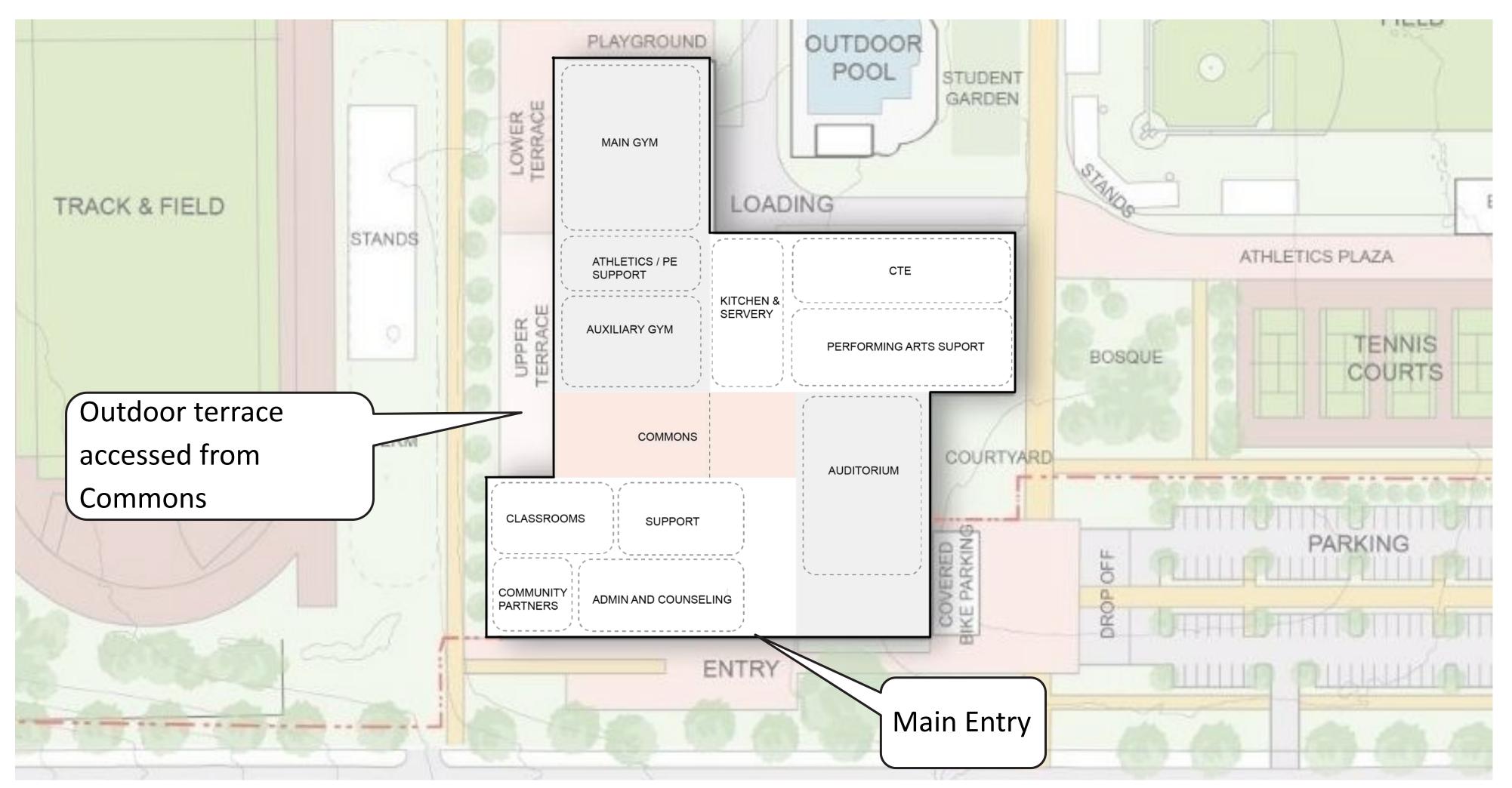


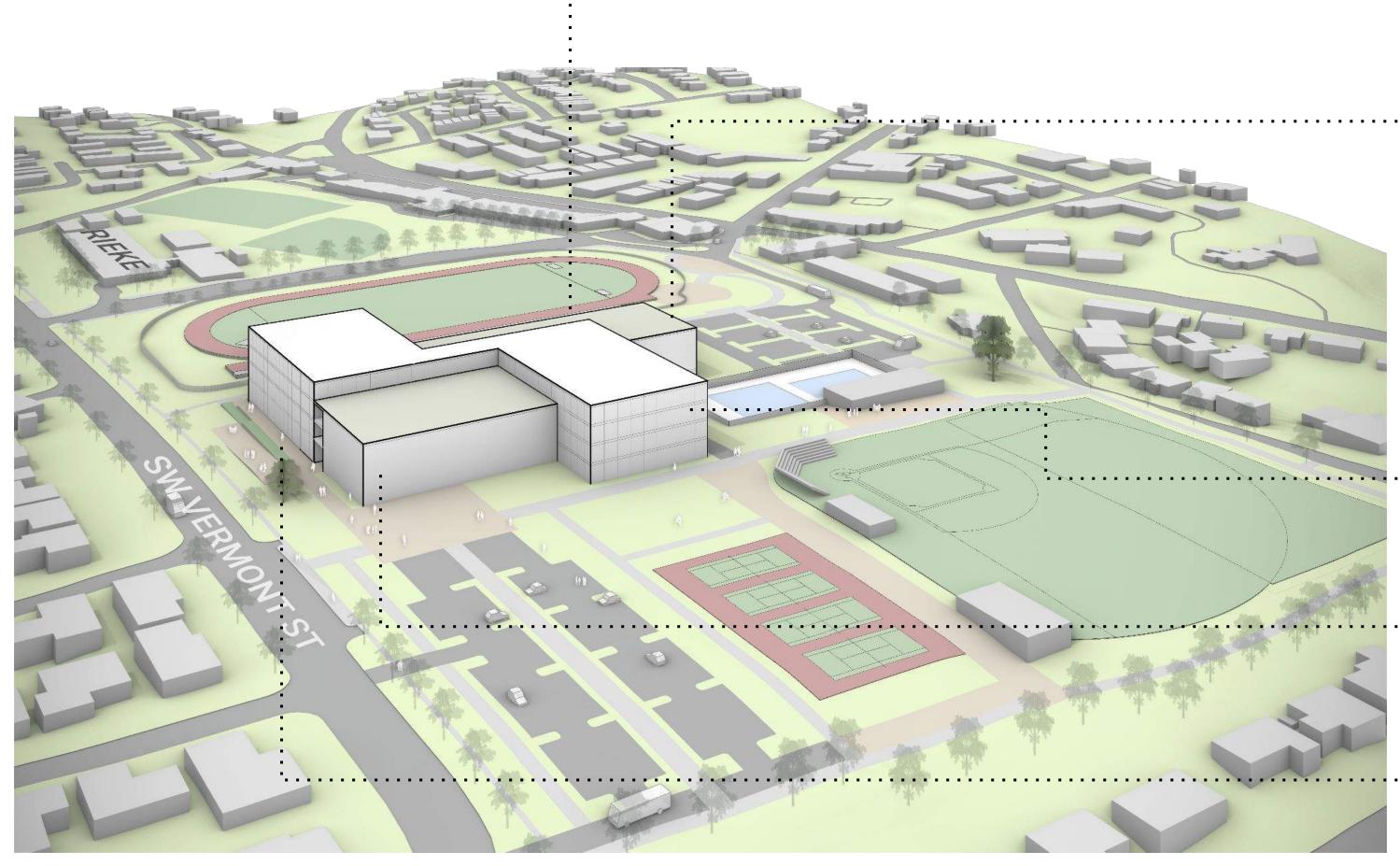




#### **EXISTING CONDITIONS**







Massing - Aerial View

Building form connects to both Capitol Hwy and Vermont St. approaches

Gyms and athletics close to track & field and Capitol Hwy. approach

Primary "bars" running east-west to minimize western sun exposure

Classrooms on upper levels

Auditorium close to main entry

Main entry visible and easy to approach from Capitol Hwy and Vermont St.



Massing - View from Vermont St. (Southeast)



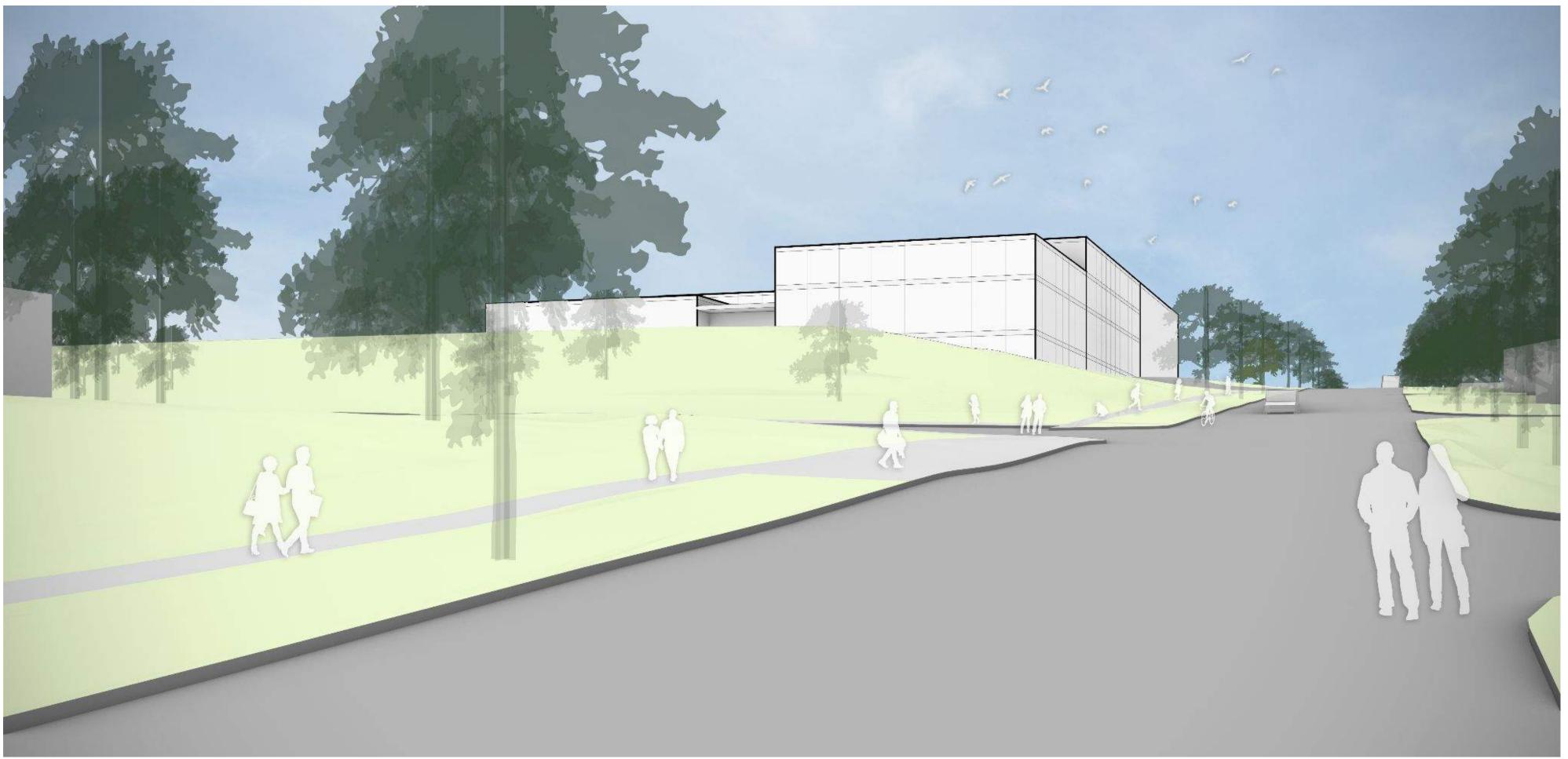
Massing - View from Vermont St. (Southeast)



Massing - View from Capitol Hwy Approach



Massing - View from Capitol Hwy Approach



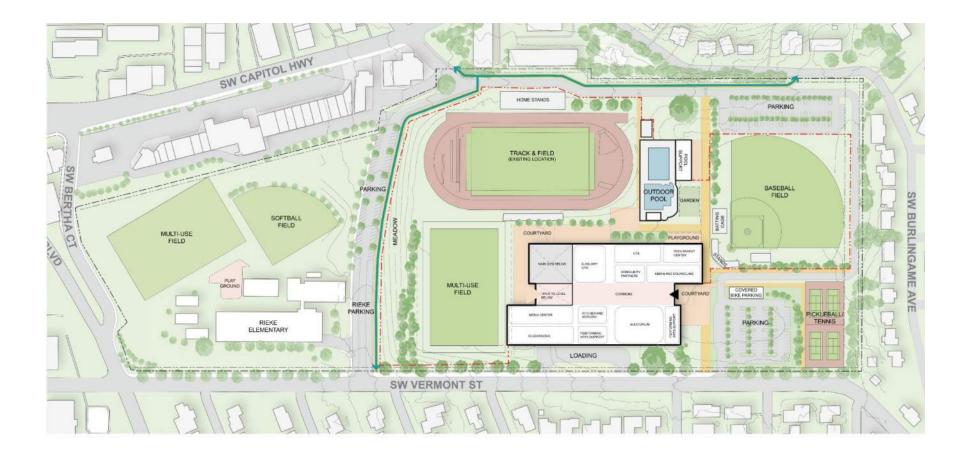
Massing - View from Vermont St. (Southwest)



Massing - View from Vermont St. (Southwest)

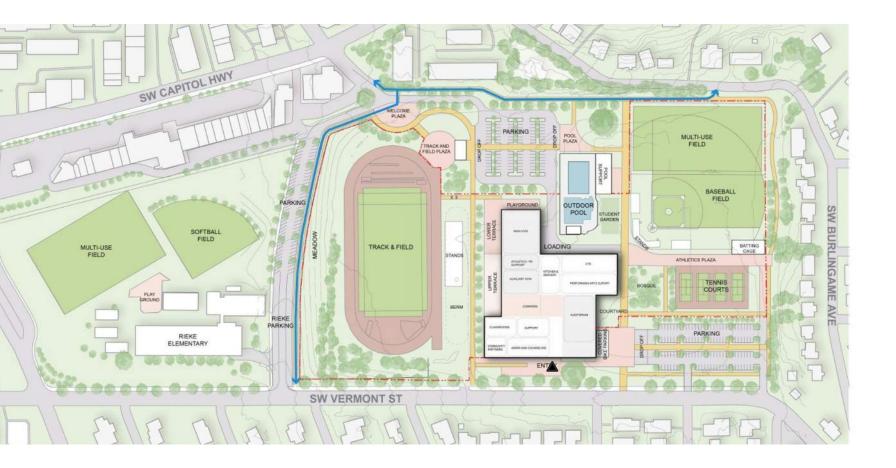
### SITE CONCEPTS - SUMMARY

### SCHEME 1



- keeps existing track & field with improvements
- building form "steps up" with topography of site, with upper and lower courtyards
- keeps existing pool, adds new pool support building
- new tennis courts
- new baseball field and multi-use field
- improved softball field

### SCHEME 2



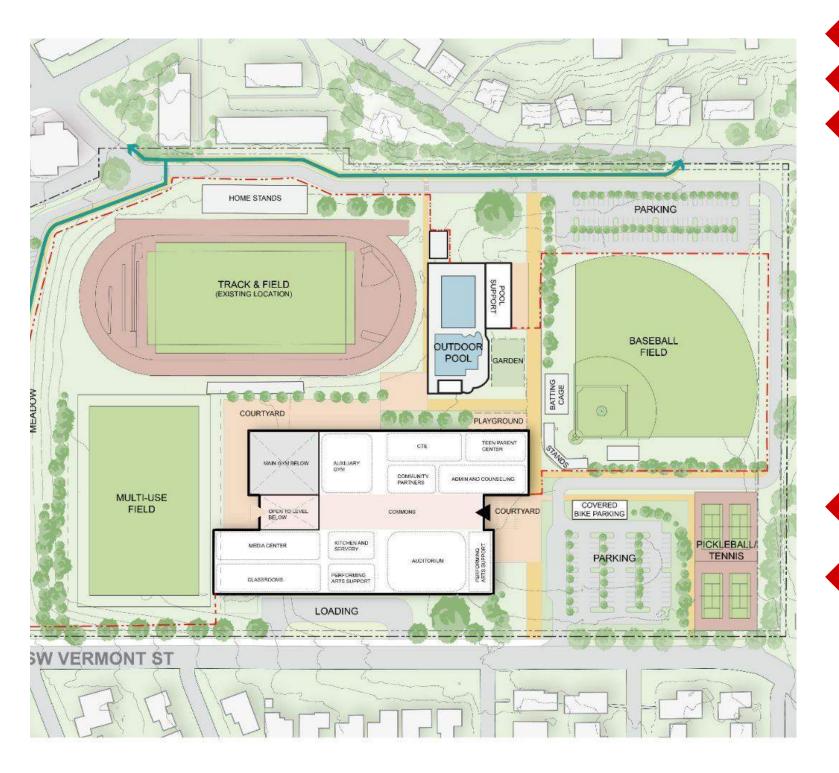
new track & field moved to N-S position building form connects to both Capitol Hwy and Vermont Street with central, connected entry

- keeps existing pool, adds new pool support building new tennis courts
- new terms courts

- new baseball field and multi-use field
- improved softball field

### SITE CONCEPTS - EVALUATION / TRADE-OFFS

#### SCHEME 1



#### PROJECT COSTS

LOWER BUILDING COST

LOWER SITE COST

SHORTER CONSTR. DURATION

# EXPERIENCE & FUNCTIONALITY

BETTER CONNECTION TO CAPITOL HWY

IMPROVED FUTURE TRACK & FIELD OPERATION

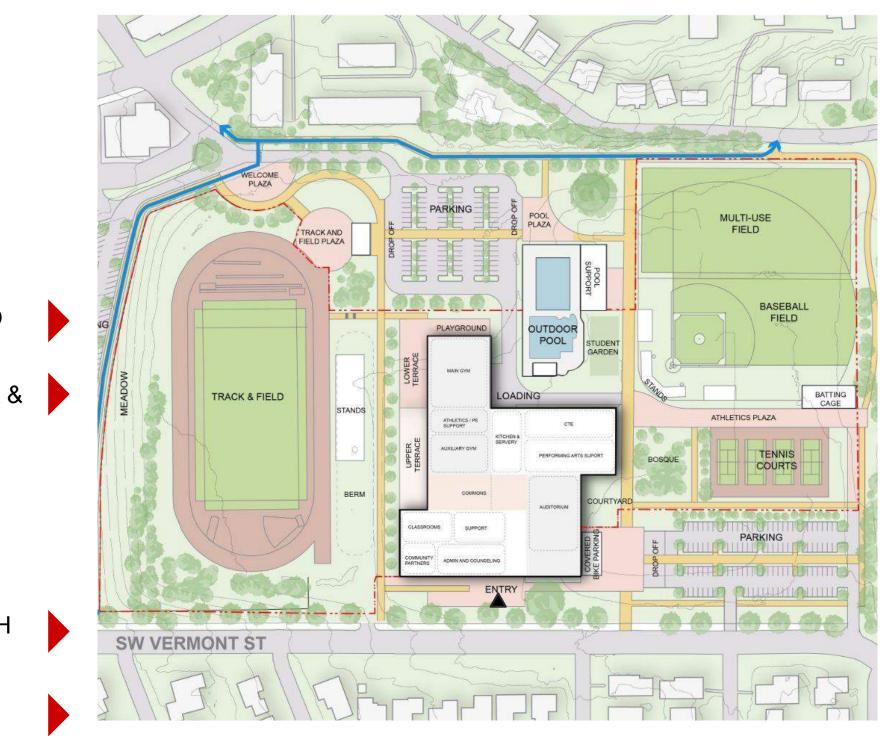
NO TRACK & FIELD DISRUPTION (3 YR)

PROVIDES CROSS-SITE VEHICLE DRIVE

VEHICLE ACCESS TO BOTH ENDS OF BUILDING

> FLEXIBLE LOADING FUNCTIONALITY

#### SCHEME 2



# Feedback Exercise



# **Self Reflection** 00:10

For each site option, please write on post-it notes: What are the trade-off / priorities? What is successful? What are some challenges?

## **Walk About:** 00:45

Post Answers on Boards + Discuss Review comments posted on each option Discuss common themes and trade-offs

# **Additional Feedback?** WellsBond@pps.net

# Public Comment



# Next Steps



#### NEXT STEPS

## CPC #5: Thursday 2/22, 6-8pm

- we will bring a preview of the **Board of Education Packet**
- we will bring draft "final" Vision Statement and Guiding Principles

## Board Packet: 3/5/24

• **final information** for the Board of Education Meeting on 4/2

# Final open house: TBD (March)

• **overview** of the Board of Education Packet

Additional Feedback? Website: pps.net/IdaBWellsBond Email: WellsBond@pps.net

# Questions? THANK YOU

