

## **AWS Data Center Infrastructure Team:**

1. Brent Hecker – AWS Data Center Engineering; Engineering Manager
2. Kyle Crass – AWS Data Center Engineering; Civil Engineer
3. Ian Brewe – AWS Data Center Engineering; Acoustical Engineer
4. Rob Sims - AWS Data Center Engineering; Mechanical Engineer
5. Mark Matthews – AWS Data Center Build Management
6. Becky Ford - AWS Economic Development
7. Jay Reinke - AWS Data Center Development & Supply
8. Brian Knies – AWS Data Center Development & Supply

## **Bohler (Civil Engineering):**

1. John Wright – Civil Engineer
2. Connor Hedges - Civil Engineer

## **Corgan (Architect):**

1. Mike Halls – Architect

## **Polysonics (Acoustical Consultant):**

1. Chris Karner

## **I. Site & Build**

- A. Location
- B. Landscaping
- C. Existing Non-Conforming Structures
- D. Timing/Phasing

## **II. Operations**

- A. Cooling / Water / Served by Essential Public Facilities
- B. Noise
- C. Fire Safety
- D. Fuel & Fuel Storage
- E. Days/Hours of Operation
- F. Security Provisions
- G. Refuse & Service Areas

## **III. Project Impact**

- A. Number of Employees
- B. Traffic
- C. Desirable Employment and Enlarge the Tax Base
- D. Welfare & Convenience

Questions

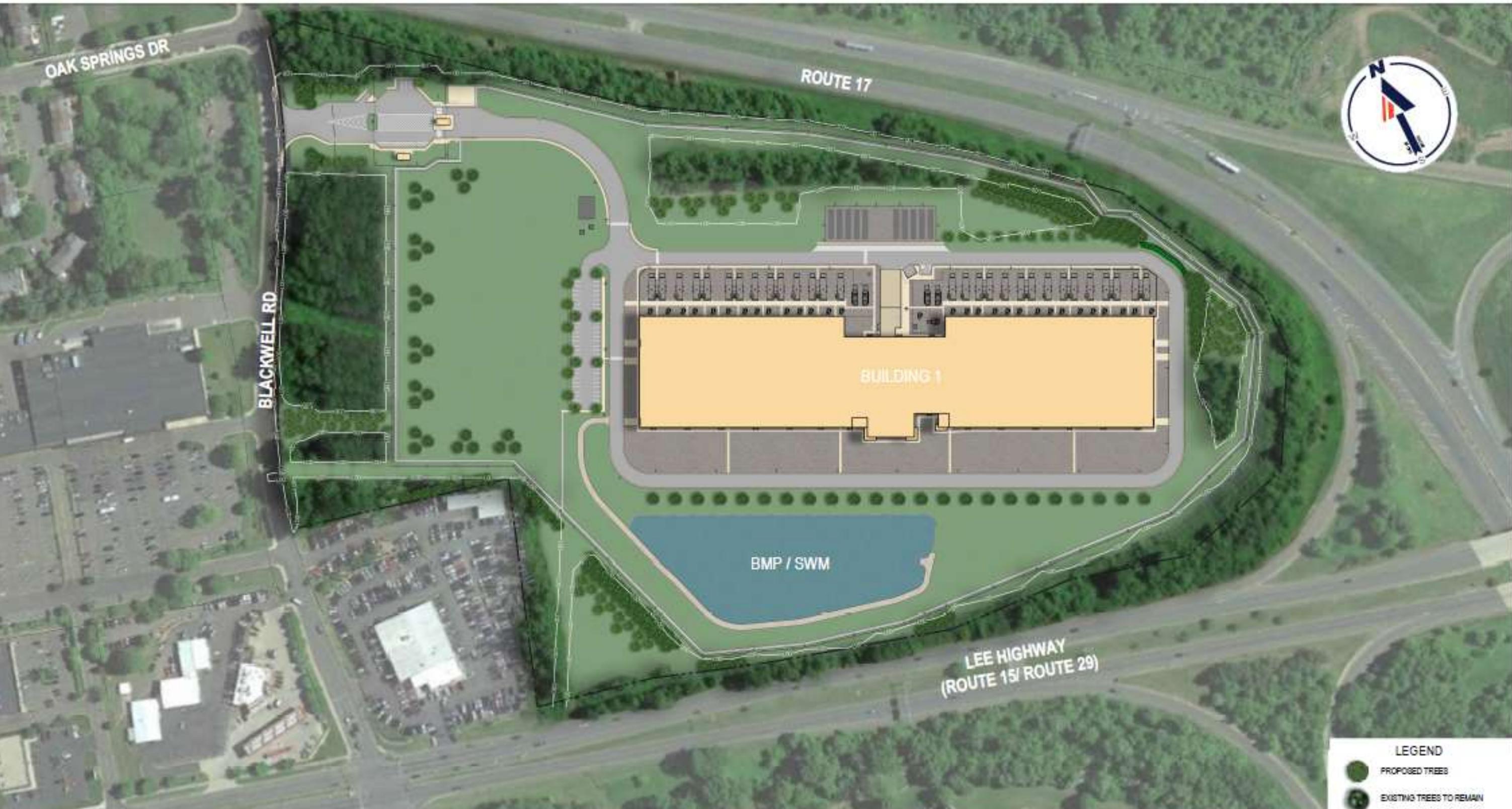
Warrenton Data Center Project

## **I. Site & Build**

- A. Location
- B. Landscaping
- C. Existing Non-Conforming Structures
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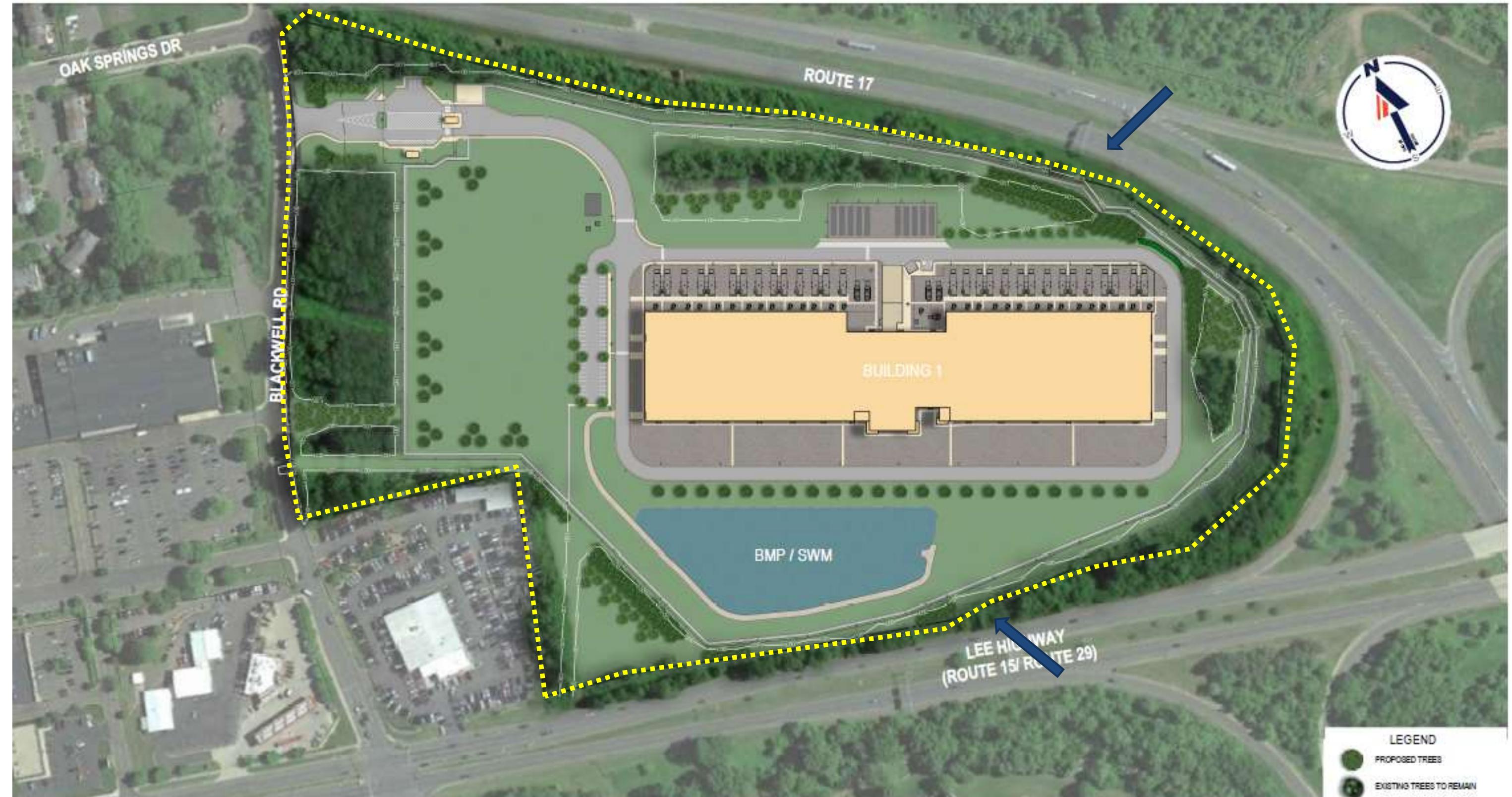
Questions

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Location

50+% undeveloped; no other structures w/o SUP modification



View / Landscaping

Architecture design; new tree plantings.



View / Landscaping

Visual From Lee Highway



View / Landscaping

Visual – Lee Hwy Comparison



View / Landscaping

Visual From Highway 17



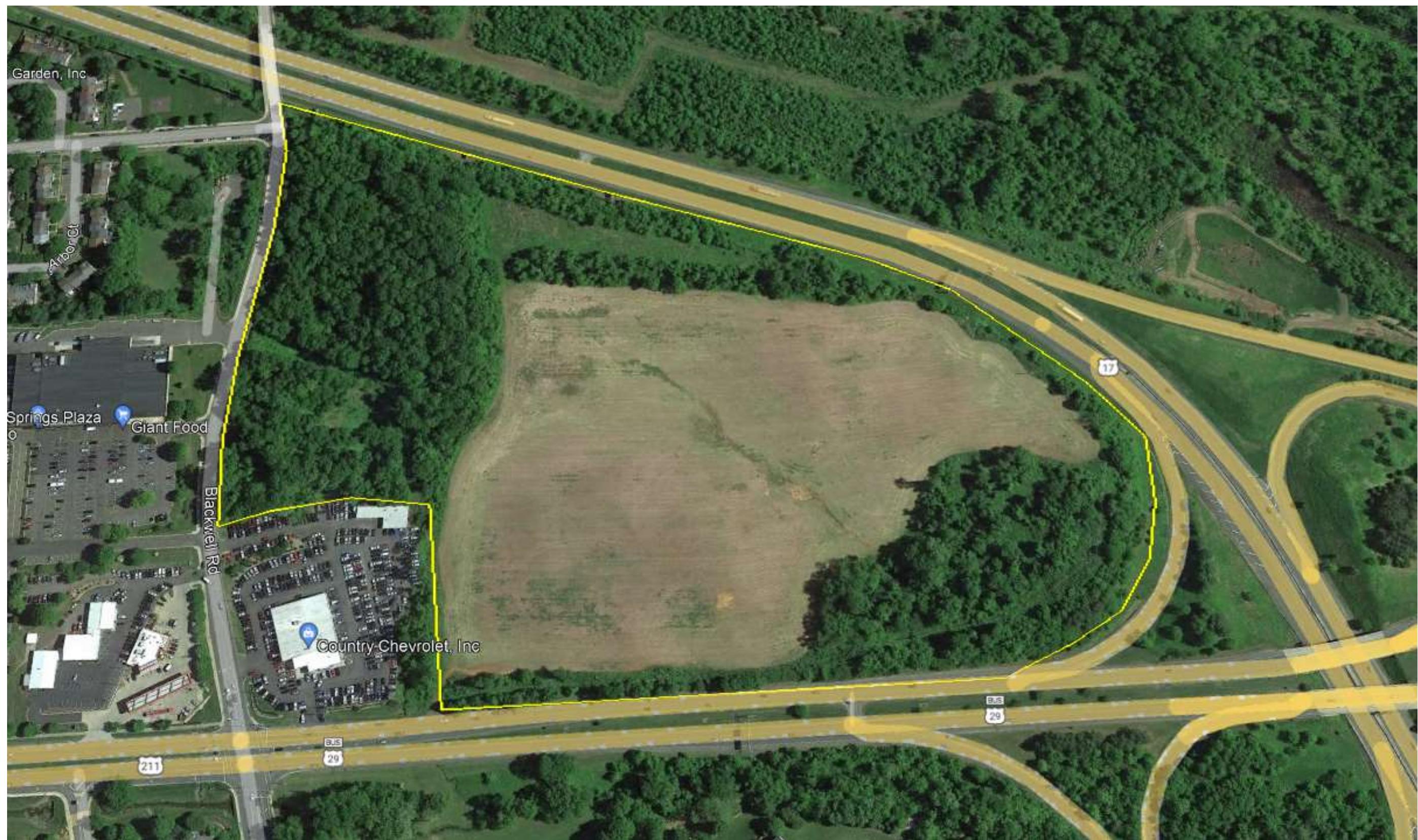
View / Landscaping

Visual - Highway 17 Comparison



Existing Non-Conforming

As part of site-preparation work, AWS will clean up the site



Timing

Approximately 12 months for shell construction

## **II. Operations**

- A. Cooling / Water / Served by Essential Public Facilities
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Questions

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# Types of Cooling

## 1. Non-Compressor Based (Non-Mechanical)

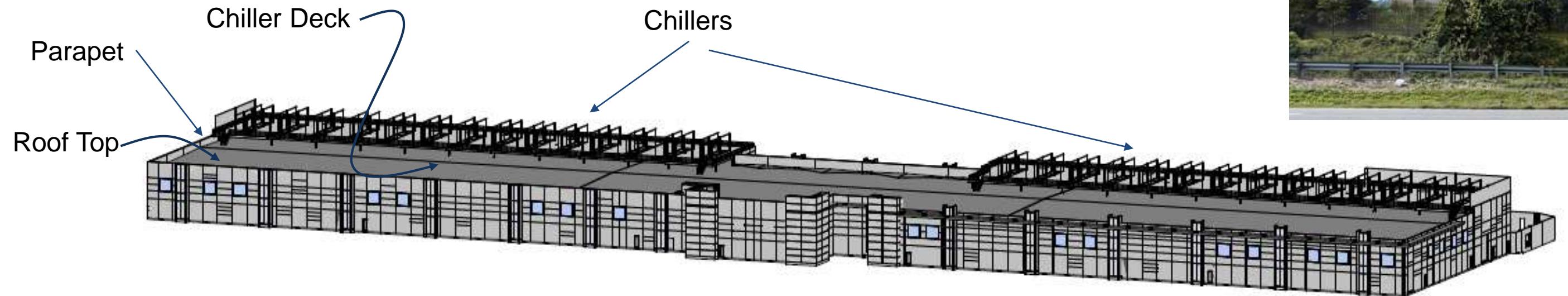
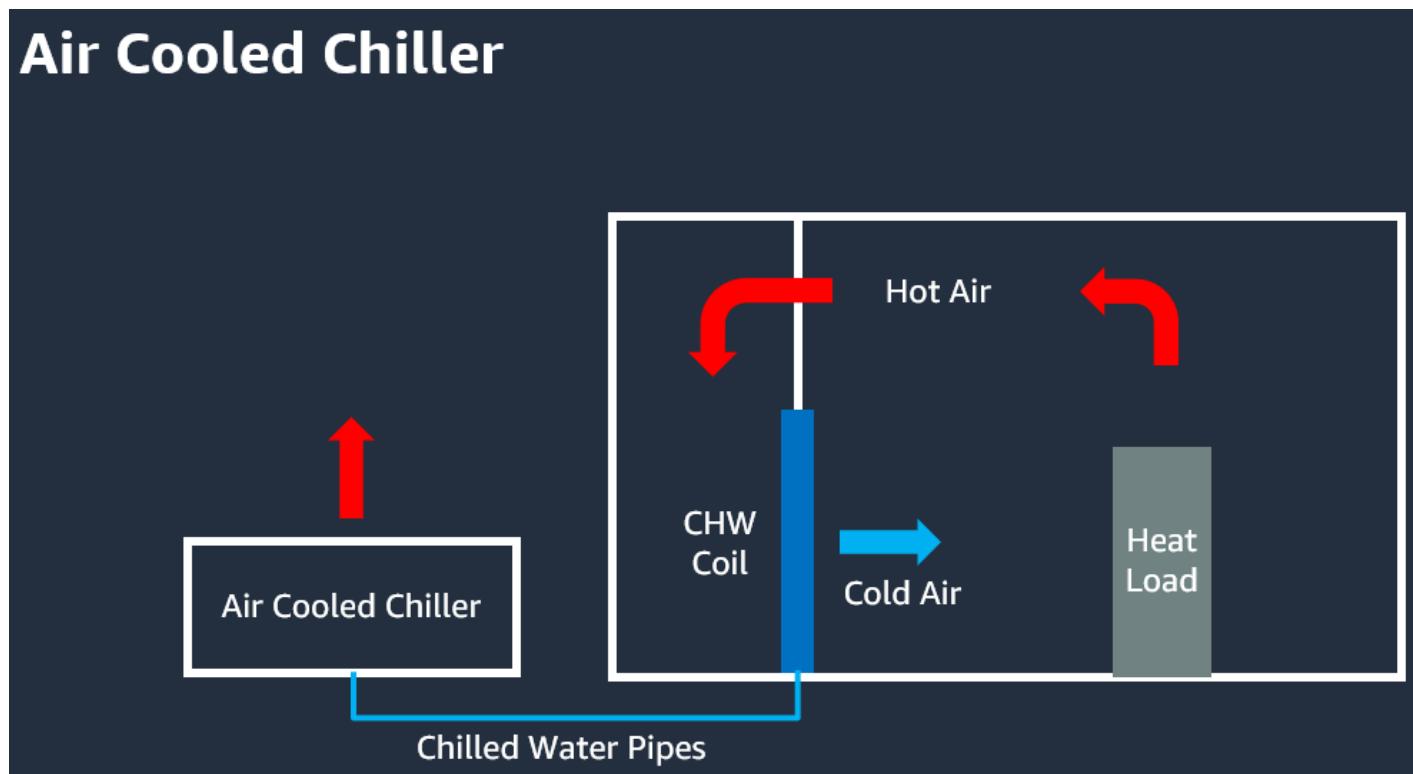
- Direct Air
- Direct Evaporative

## 2. Compressor Based (Mechanical)

- Direct Expansion
- Air Cooled Chilled Water
- Water Cooled Chilled Water



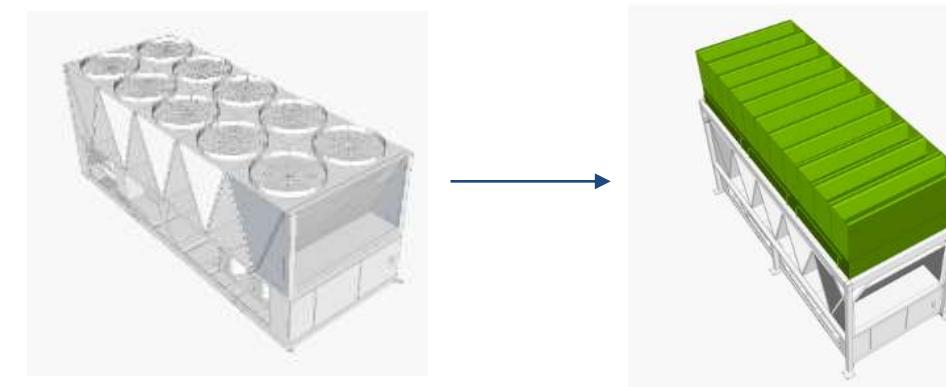
## Air Cooled Chiller



Cooling

Closed loop; 19,000 gal of water initial; 190,000 total.

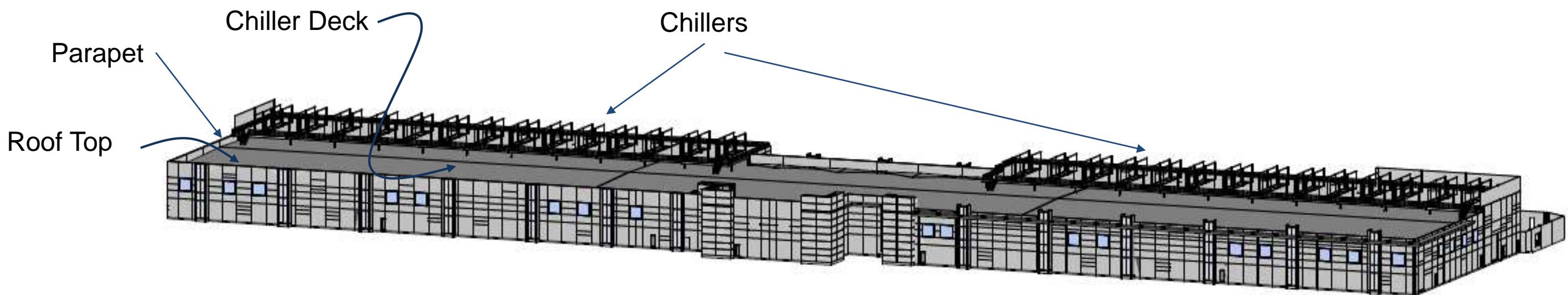
### 1. Condenser Fan Silencers



### 2. Compressor Wraps



### 3. Sound Wall



Noise

Noise Mitigation – 3 combined approaches

- Chiller modeled at speeds of hot summer day (104 degrees) and night (89 degrees).
  - Cooler days/nights would result in decreased speeds and thus decreased sound pressure.
- At all octaves, dBA less than ordinance with proposed mitigation.
- Current background noise is generally between 2 to 4 times louder than data center with mitigation.
- Polysonics measured locations show that the data center is not likely to be audible in outdoor spaces during the daytime or indoor spaces during the nighttime.

**TABLE 7: MODELED NOISE LEVELS - MITIGATED**

Scenario	Receiver	dBA	63	125	250	500	1000	2000	4000	8000
<b>Town Limits</b>	-	-	<b>62</b>	<b>60</b>	<b>55</b>	<b>49</b>	<b>45</b>	<b>41</b>	<b>37</b>	<b>34</b>
Day	North	49	58	57	52	45	41	37	34	23
	South	46	55	53	48	43	40	35	30	14
	East	47	56	55	50	43	39	35	32	24
	West	41	51	50	44	37	33	28	21	0
<hr/>										
<b>Town Limits</b>	-	-	<b>57</b>	<b>55</b>	<b>50</b>	<b>44</b>	<b>40</b>	<b>36</b>	<b>32</b>	<b>29</b>
Night	North	44	51	53	47	40	38	32	27	18
	South	42	48	49	44	38	37	29	23	9
	East	42	49	51	45	37	35	30	26	18
	West	36	43	46	40	32	30	22	14	0

# Questions to Discuss

1	Fire Safety
2	Noise
8	Served by Essential Public Facilities
11	Fuel and Fuel Storage
12	Day/Hours of Operation
13	Security Provisions
15	Refuse and Service Areas

## **III. Impact**

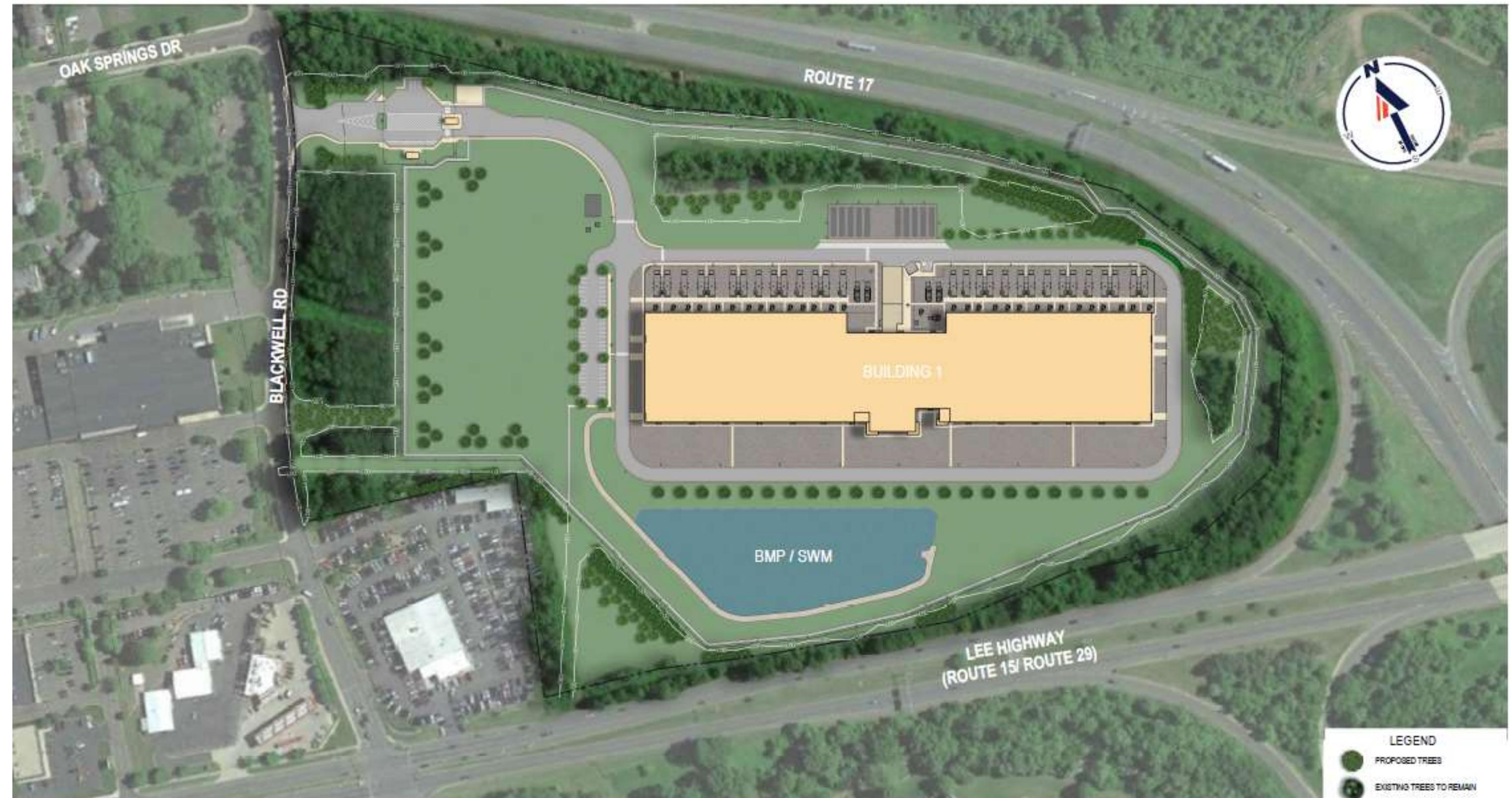
- A. Project Investment**
- B. Number of Employees**
- C. Traffic**
- D. Desirable Employment and Diversify the Tax Base**
- E. Welfare & Convenience**

# Questions to Discuss

6	Welfare and Convenience
7	Traffic
9	Desirable Employment and Enlarge the Tax Base
14	Number of Employees

Impact

\$550M investment, 25-30 direct jobs, ~300 construction jobs,



## Discussion