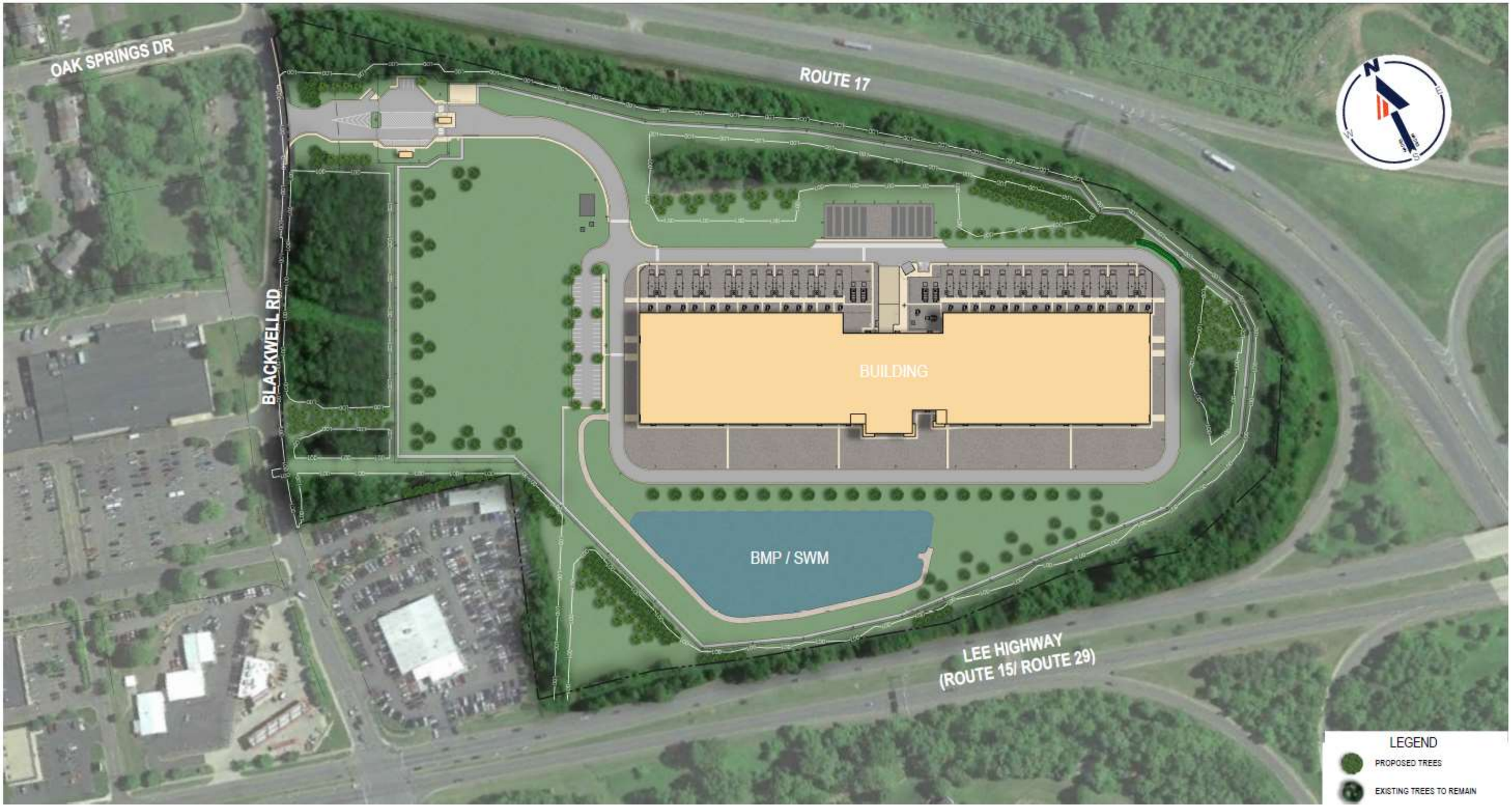
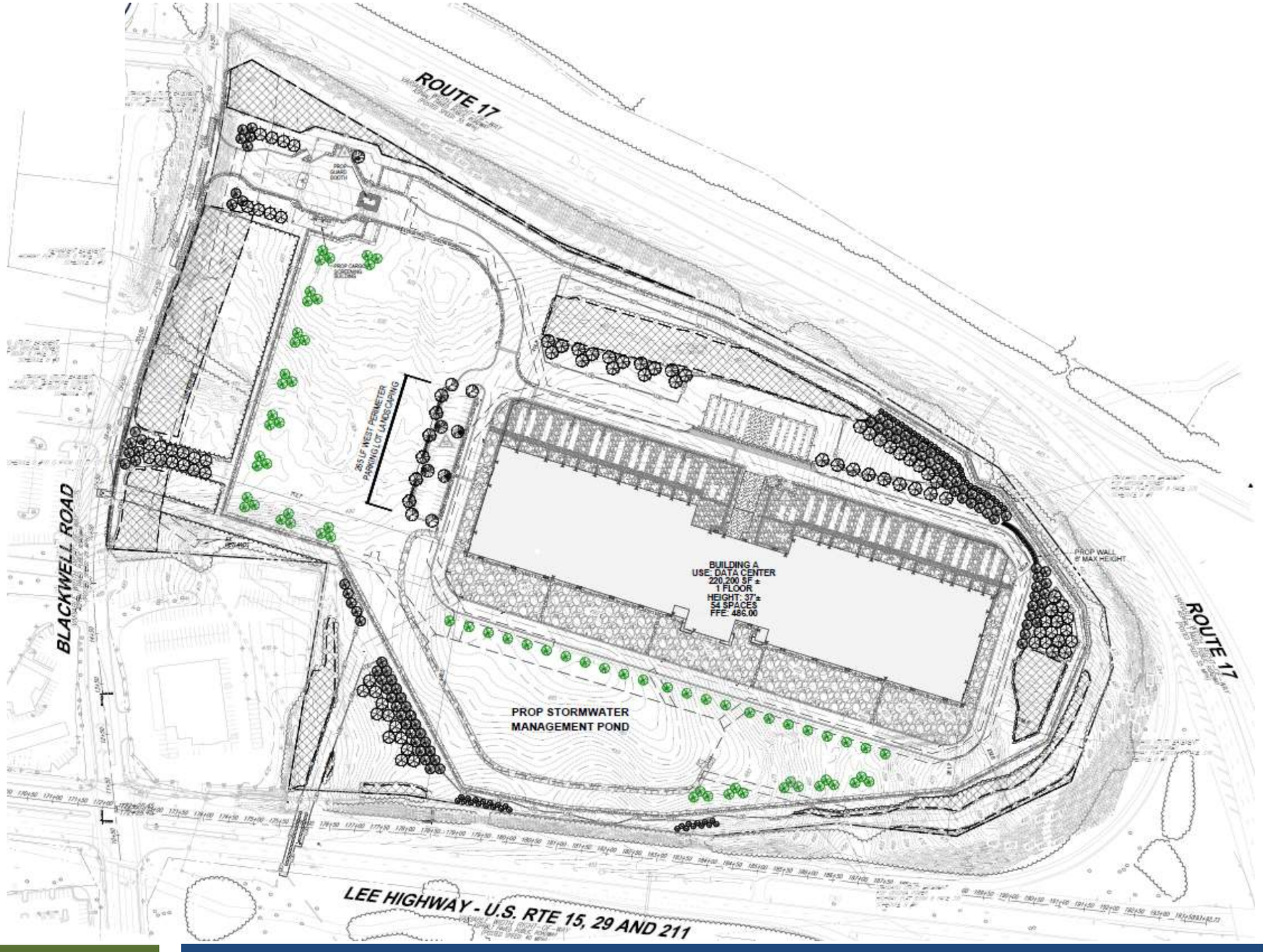
Special Use Permit #SUP2022-00003, Warrenton Data Center

January 10, 2023

TOWN COUNCIL HEARING



CONCEPT PLAN



REVISED SPECIAL USE PERMIT PLAN

ILLUSTRATIVE BUILDING ELEVATIONS

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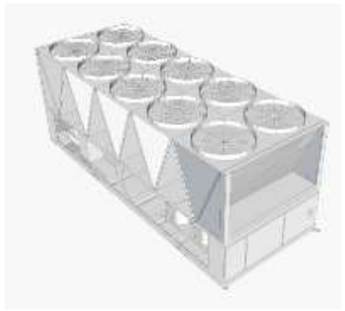
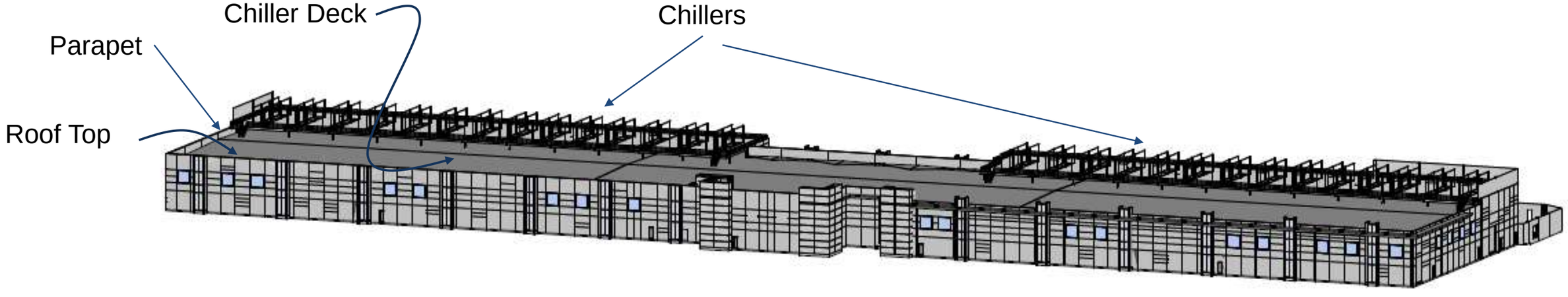
1. Condenser Fan Silencers

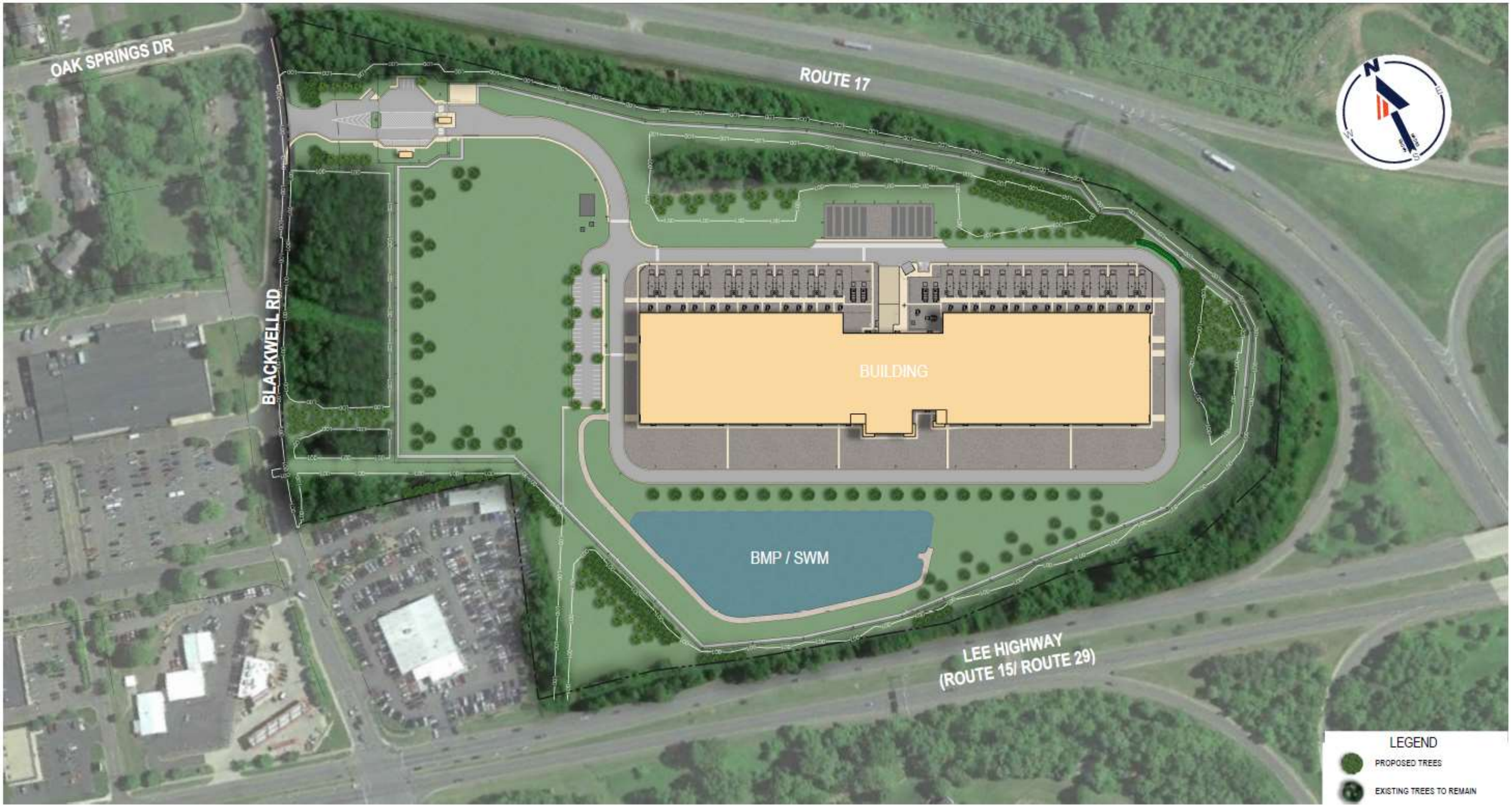


2. Compressor Wraps

3. Sound Wall



NOISE MITIGATION



CONCEPT PLAN

THANK YOU

- Special Use Permit Pre-Application Meeting - November 21, 2021
- Special Use Permit Pre-Application Follow-up Meeting - December 17, 2021
- Special Use Permit Submission - April 8, 2022
- Notice of Completeness - May 6, 2022
- Special Use Permit Agency Comments Received by Applicant - June 7, 2022
- Post Submission Meeting - July 11, 2022
- Resubmission - July 18, 2022
- Planning Commission Work Session - July 26, 2022
- Post Work Session Submission - September 9, 2022
- Balloon Test - September 15, 2022
- Meeting regarding Noise Ordinance - October 3, 2022
- Zoning Determination Letter Submitted - October 18, 2022
- Planning Commission Work Session - October 25, 2022
- Final Submission for Planning Commission Hearing - October 28, 2022
- Planning Commission Hearing - November 15, 2022
- Planning Commission Hearing - November 22, 2022
- Zoning Determination Letter Issued - December 16, 2022
- Planning Commission Hearing - December 20, 2022
- Town Council Hearing - January 10, 2023

PUBLIC PROCESS TIMELINE – 12+ MONTHS

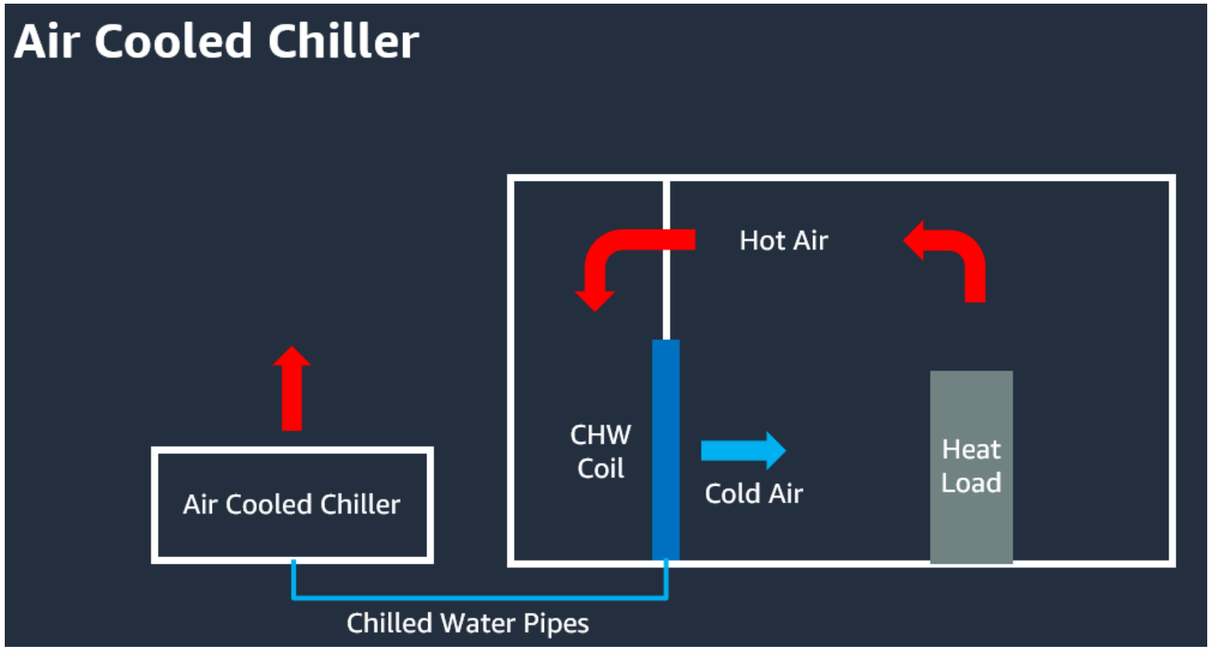
Types of Cooling

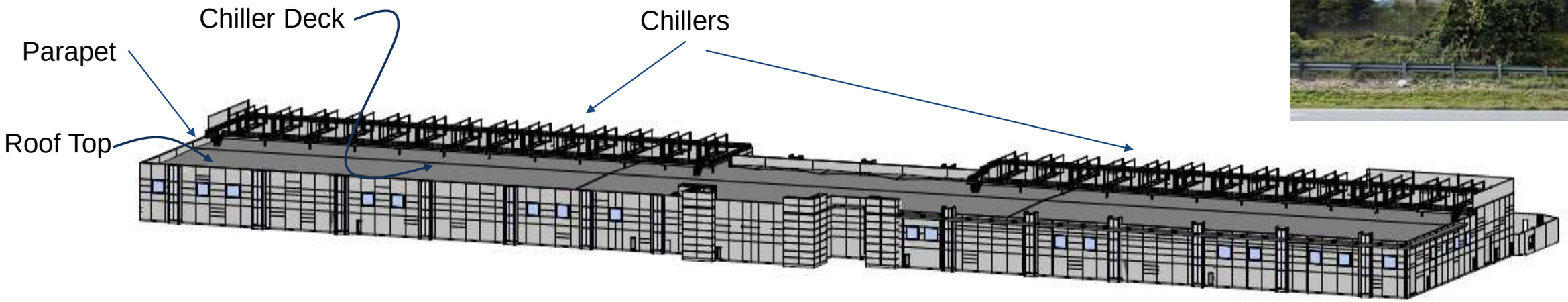
1. Non-Compressor Based (Non-Mechanical)

- Direct Air
- Direct Evaporative

2. Compressor Based (Mechanical)

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


Air Cooled Chiller
Hot Air
CHW Coil
Cold Air
Heat Load
Air Cooled Chiller
Chilled Water Pipes


Chiller Deck
Parapet
Chillers
Roof Top

- 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
Town Limits	-	-	**62**	**60**	**55**	**49**	**45**	**41**	**37**	**34**
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
Town Limits	-	-	**57**	**55**	**50**	**44**	**40**	**36**	**32**	**29**
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

NOISE ANALYSIS

	Balloon Color	Balloon Height
NW Corner	Red	47.4
SW Corner	Red/Purple	42.0
SE Corner	Blue	46.5
NE Corner	Red	61.4

BALLOON TEST