

East Pine Substation Expansion of North Wall

1501 23rd Avenue

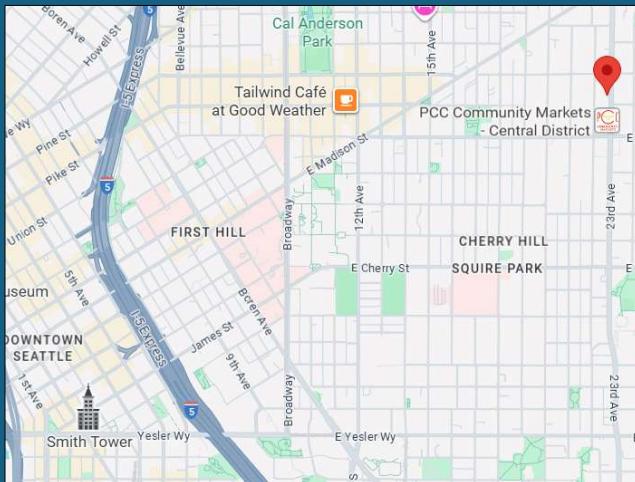


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Location



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Aerial View – Yellow Outline is Project Location



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Street View - From SW Corner of the Substation, Facing NE



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Street View – Near NW Corner, Facing SE



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Street View - From NW Corner, Facing SE



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Street View – Left of NW Corner, Facing SE

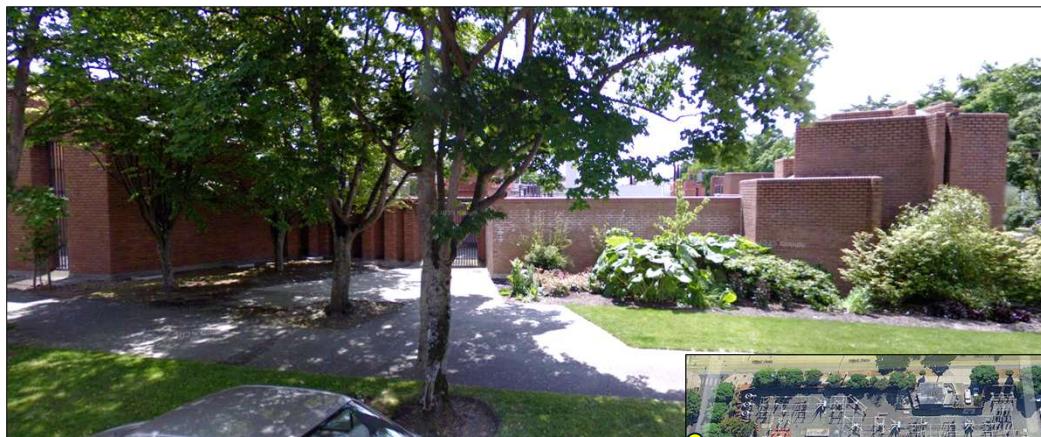


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Street View - From East Pine St., Facing South, Substation's N Elevation



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Electrical Terminology 101

Substation – A defined network of switching, control, and routing equipment, with transformers to carry **load** (also known as electricity or power). They receive, distribute, and transmit power. Typically includes:



Control Building - Serves as the substation control center, can be automated or manned, and manages the flow of electricity in and out of the substation.



Circuit Breakers – A protective device that interrupts electrical current during abnormal conditions such as a short circuit or overload. Protects the transformers and related equipment from damage and prevents widespread outages.

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Electrical Terminology 101

Key Terms (continued):



Feeders – A component that carries electrical power from a substation or a distribution point to the consumer (e.g., residences, businesses, hospitals, etc.)



Transformers – Serves to step up or down voltage levels to ensure that electricity can be transmitted efficiently over long distances and safely distributed to consumers. Also called a “Bank.”



Switchgear – Electrical disconnect switches, fuses or circuit breakers used to control, protect, and isolate electrical equipment. Also used to de-energize equipment to allow work and clear short circuits.

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East Pine Substation within SCL's Electrical System

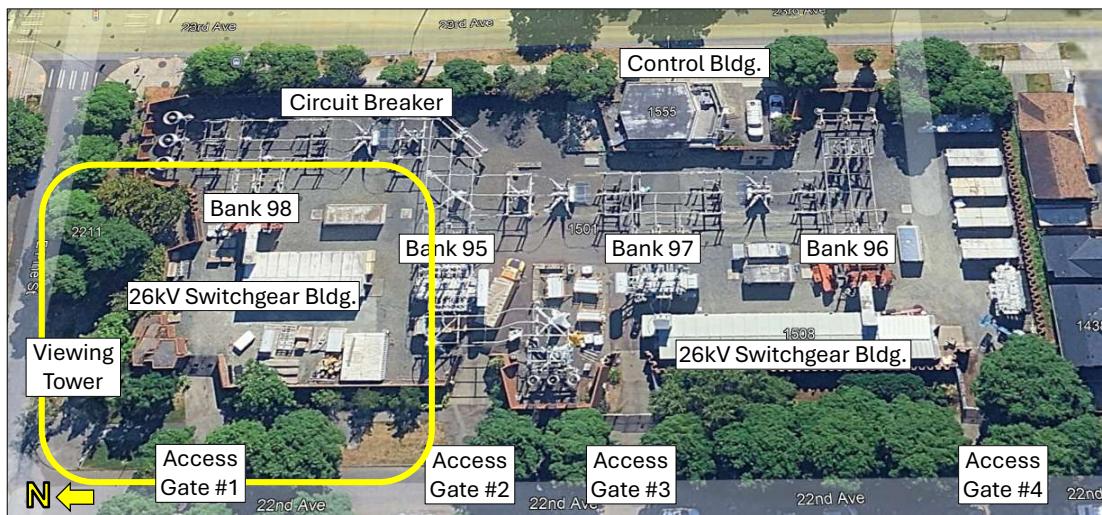
- First carried load in February 1967
- Handles 230 kV, 115 kV, and 26 kV levels
- Distribution and Transmission Substation
 - Distribution – Transformers step down the voltage for distribution at a local level (e.g., 230 kV to 26 kV).
 - Transmission – Interconnects with the Northwest power grid allowing for management of power flow and system stability throughout the region.
- Connects to:
 - Broad Street Substation and Denny Substation
 - South Substation
 - Maple Valley (BPA)

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East Pine Substation Components

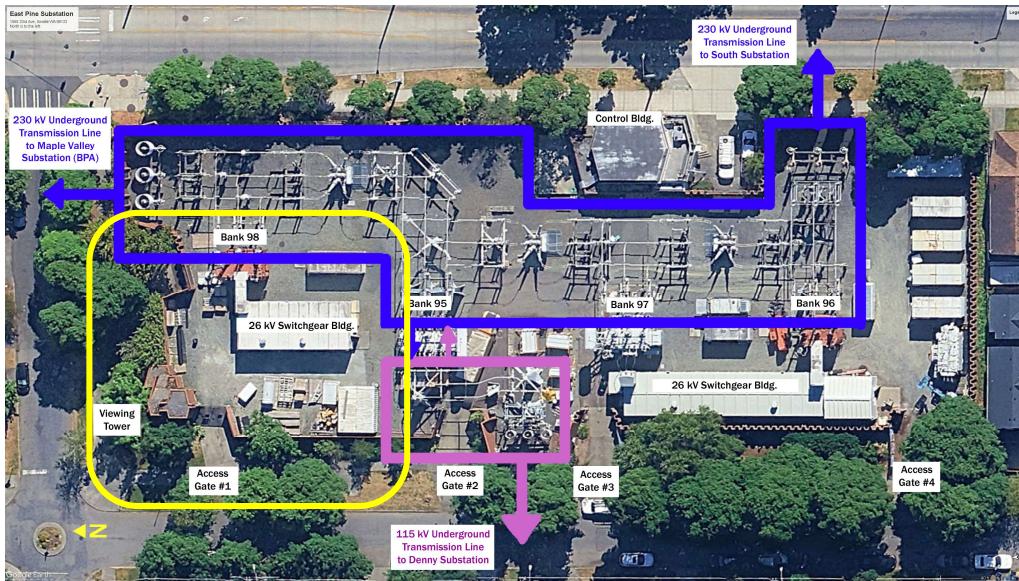


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Aerial View – 230kV and 115kV Electrical Connections

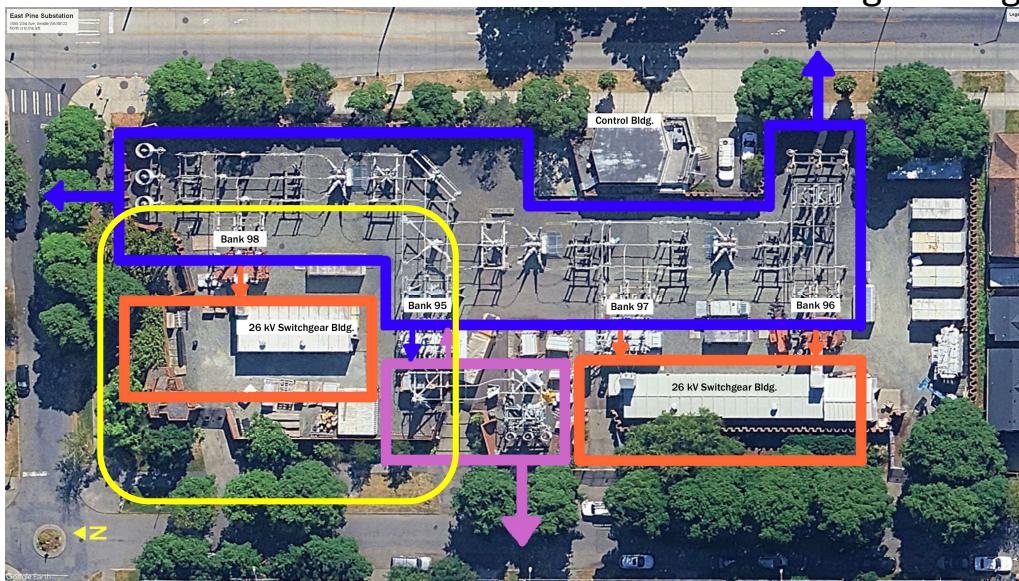


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Aerial View – 26kV Electrical Connections & Switchgear Bldgs.

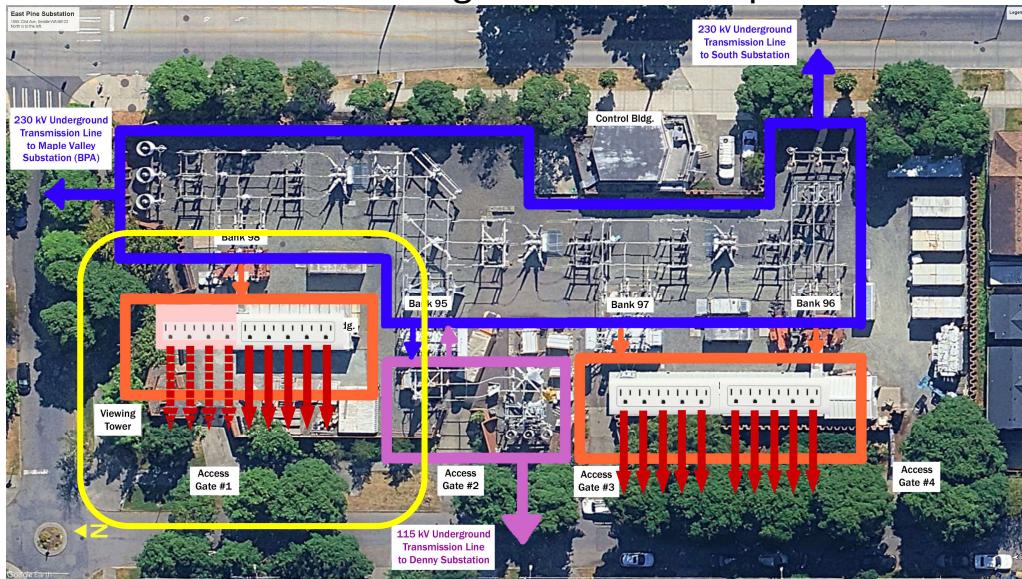


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Aerial View – 26kV Switchgear / “Power Strip” Connections



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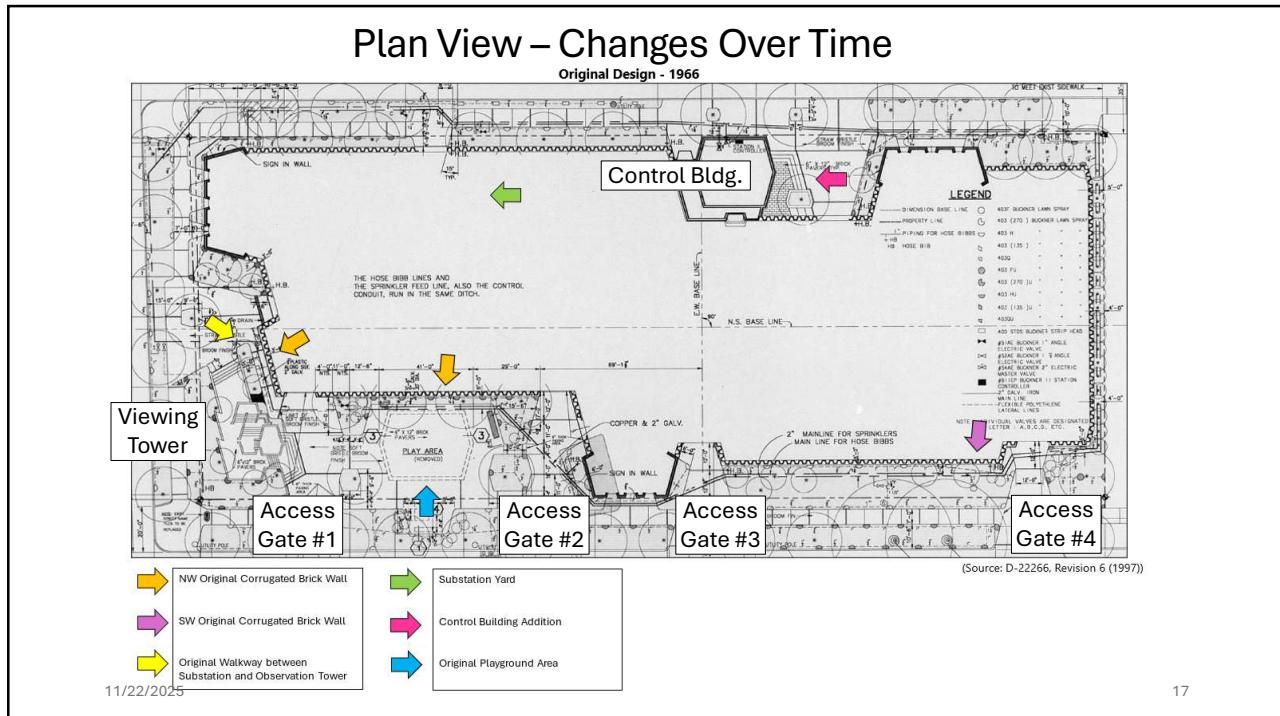
Changes Over Time

- 1967-68 Substation completed to original design
- 1975 Electrical equipment added within the yard. Playground filled in.
- 1994 SW wall expanded out due to 26kV Switchgear Building Addition
- 1998 Control Building receives an addition on the south elevation
- 2002 West Wall and Access Gates #1 and #2 expanded out

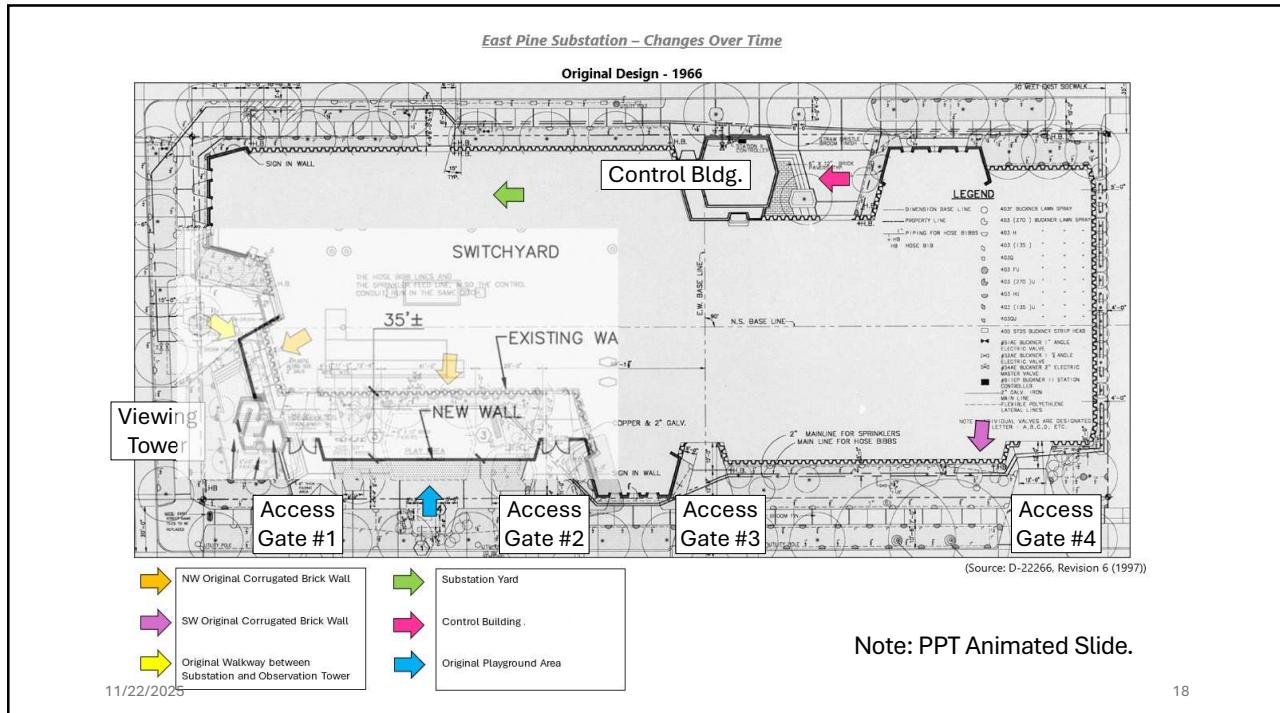
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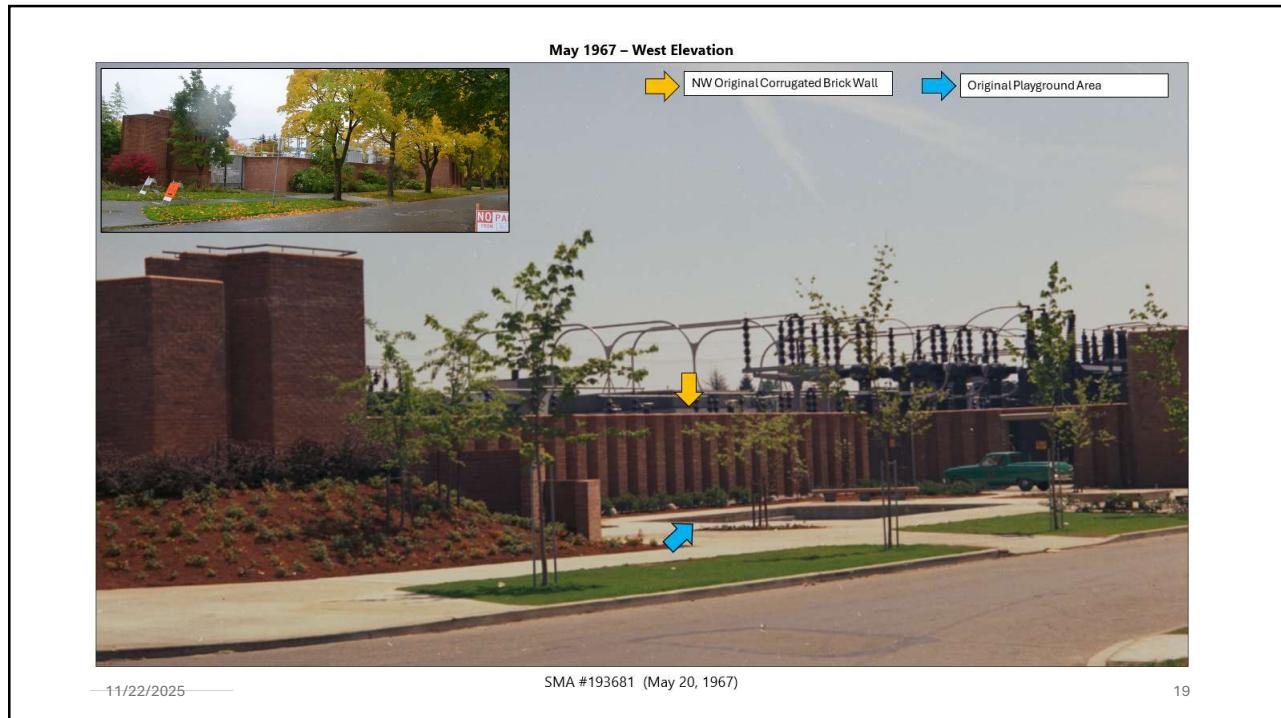
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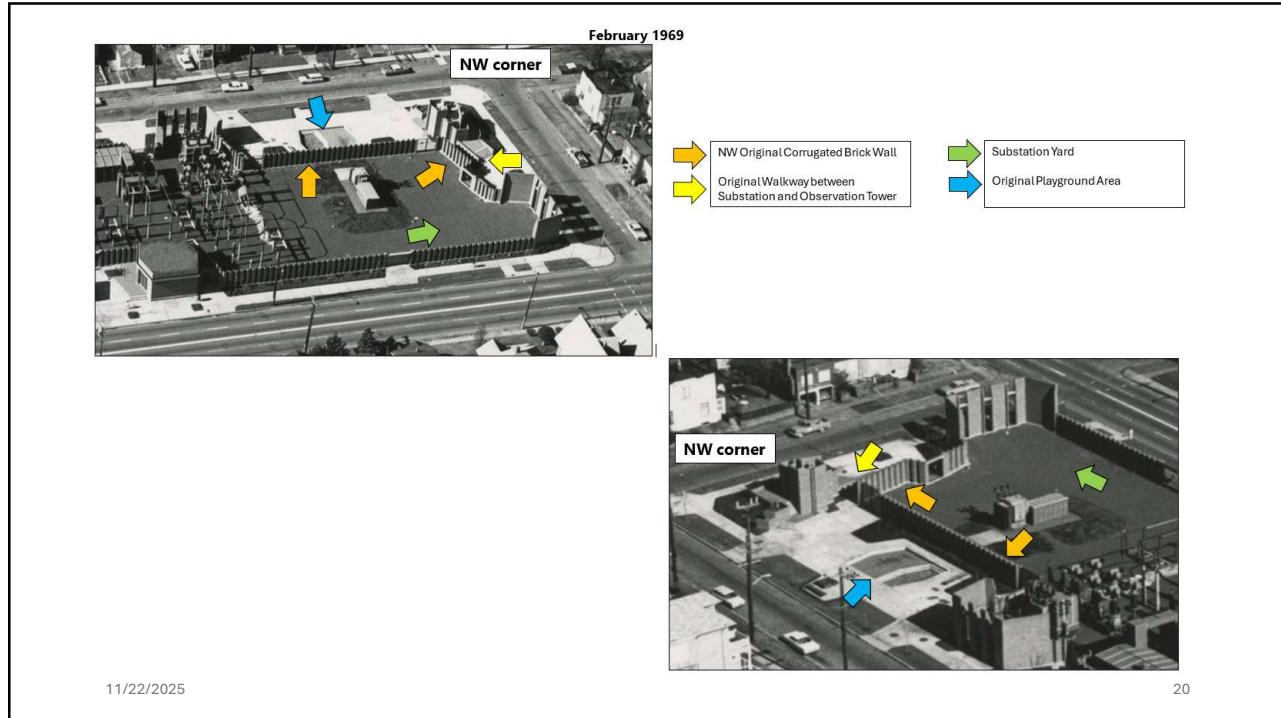
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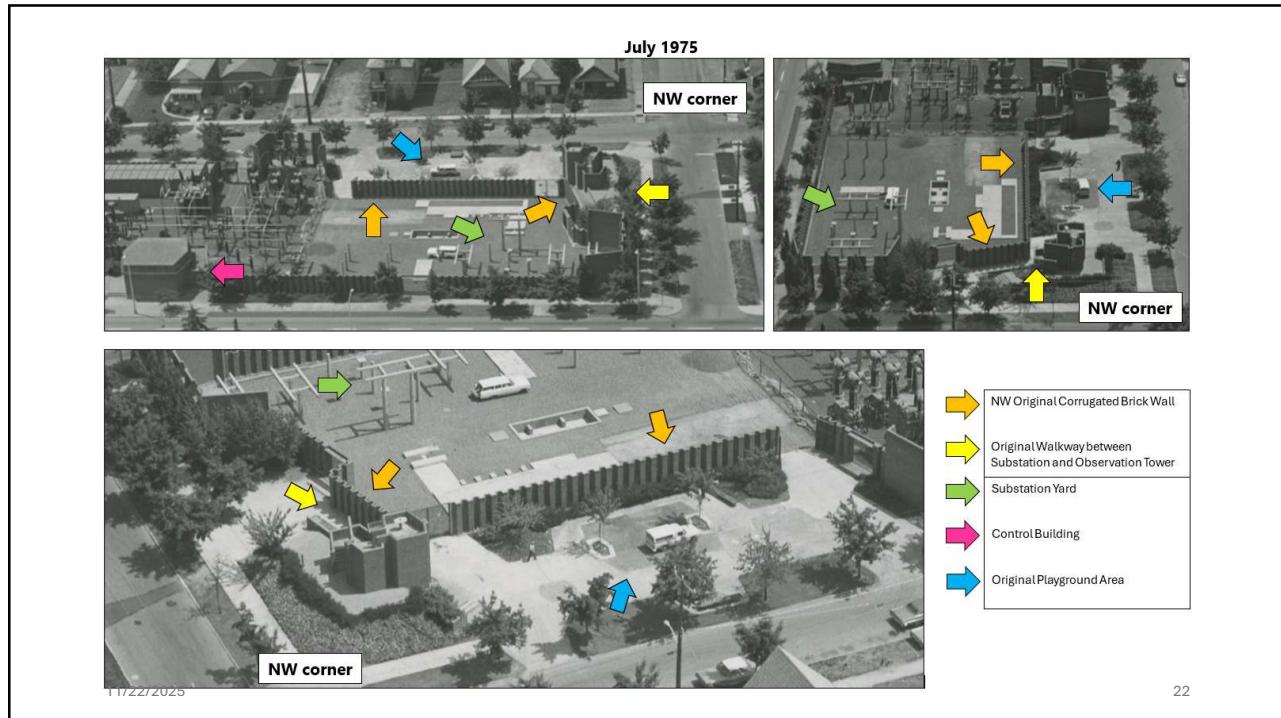
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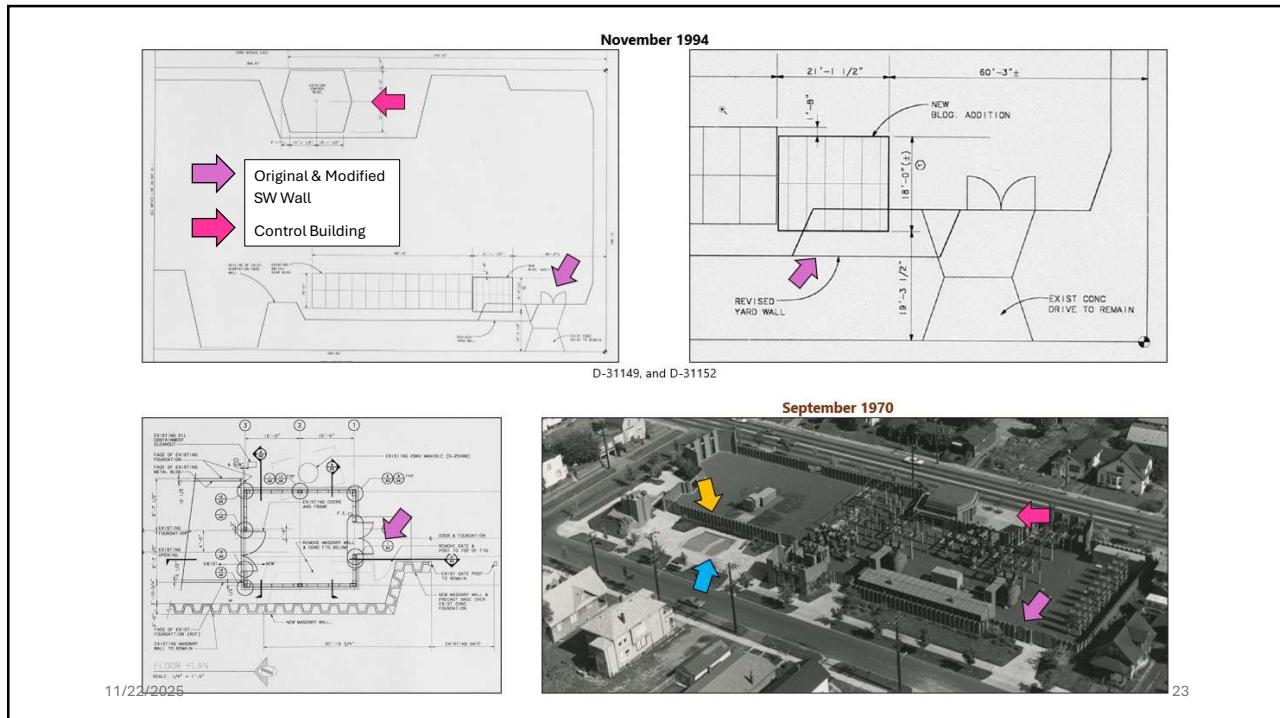
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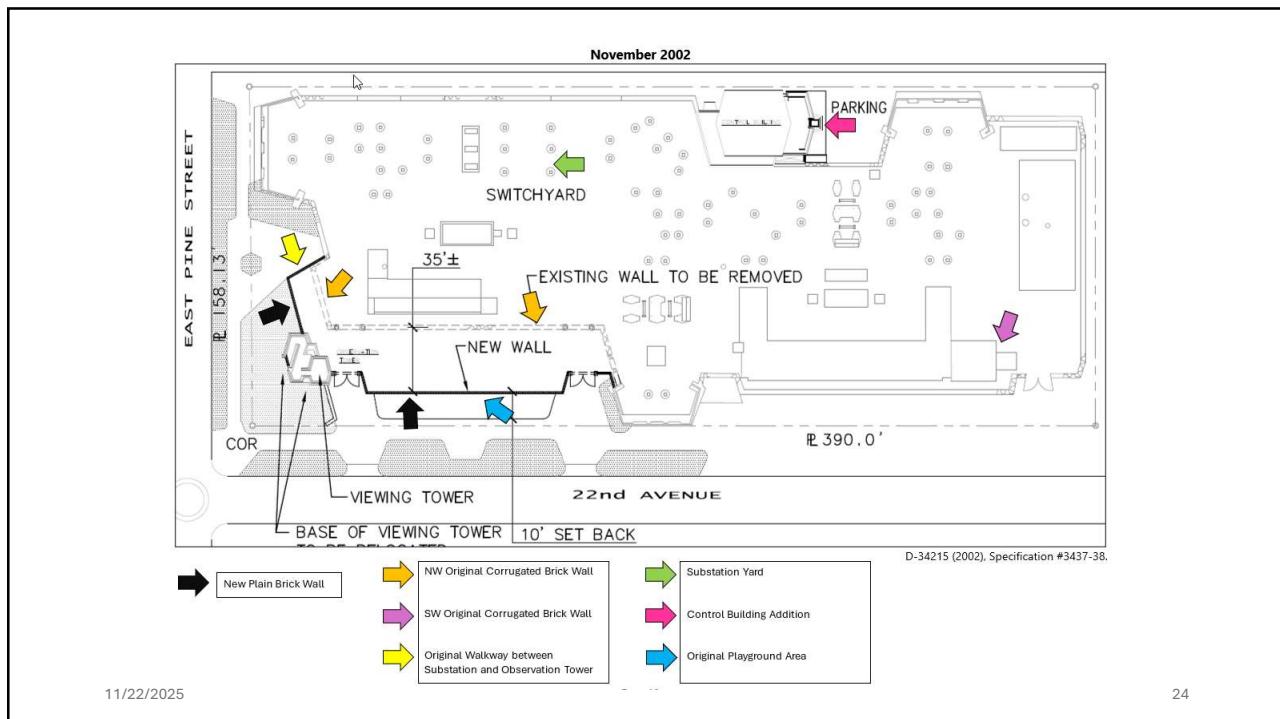
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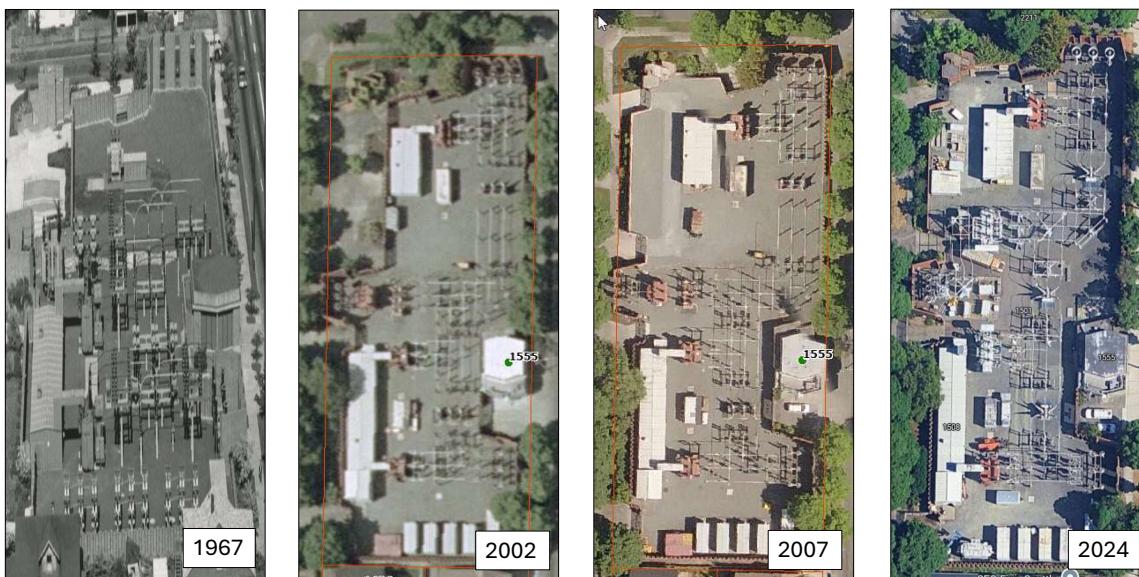


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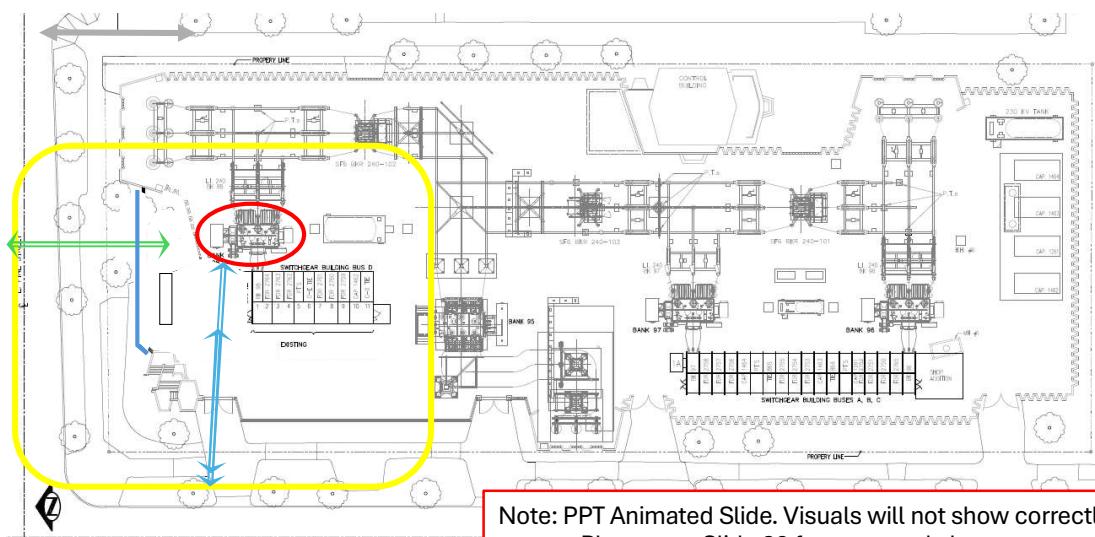
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Aerial Views – 1967, 2002, 2007, and 2024



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Plan View – Showing Need for & Proposed New North Wall



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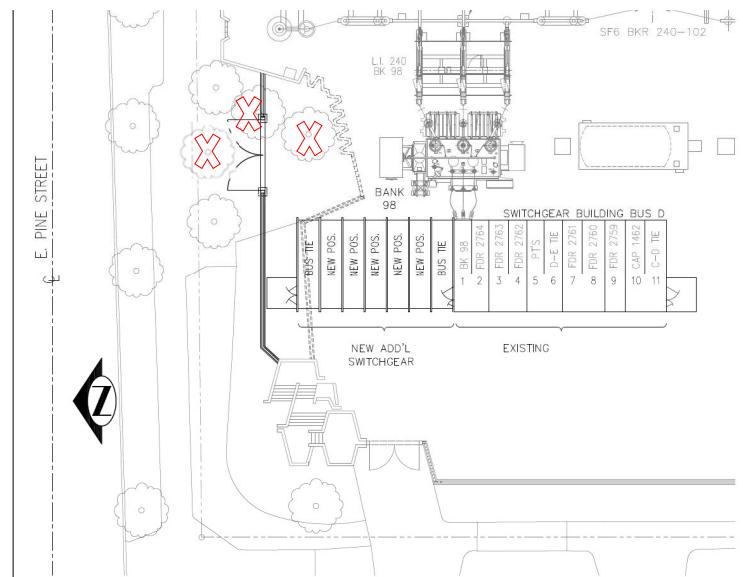


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Plan View – Proposed New North Wall

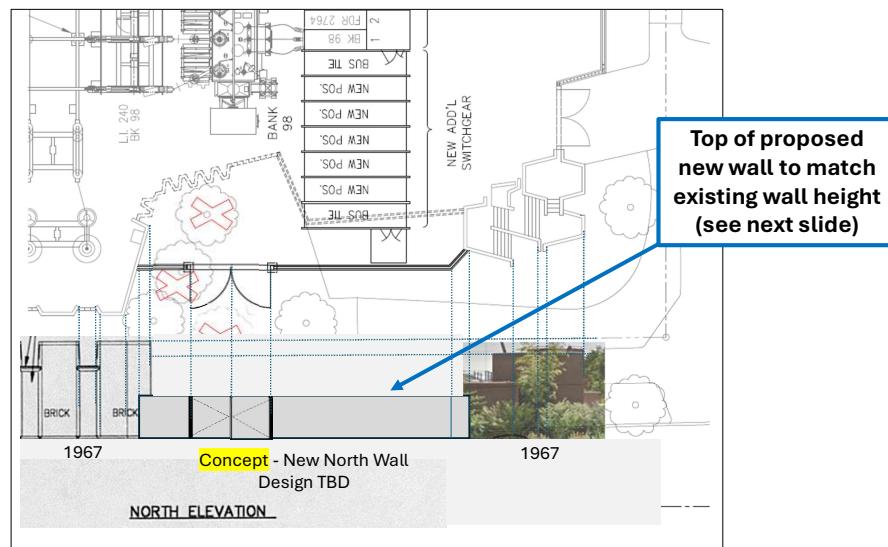


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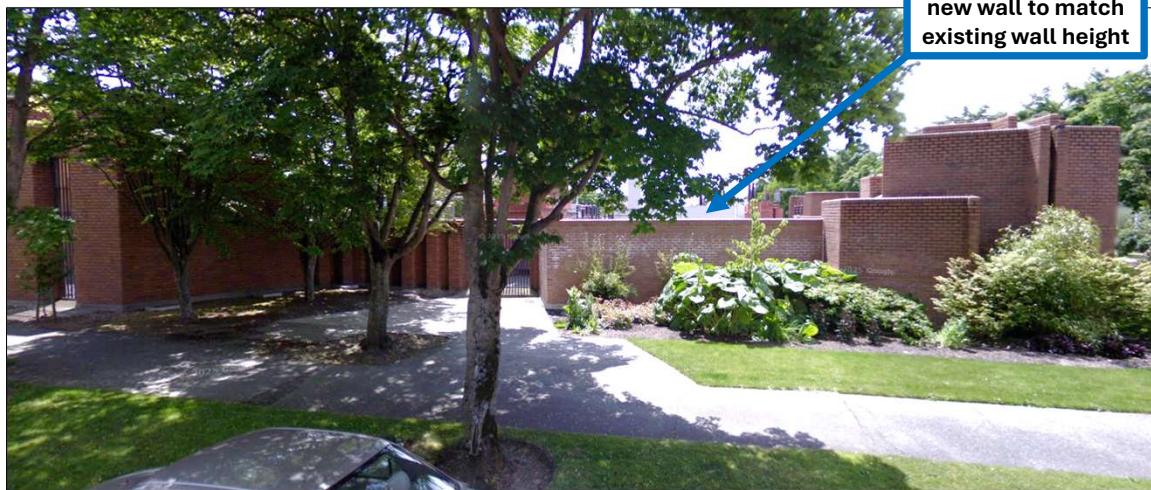
Plan View with Conceptual Elevation for Proposed New North Wall



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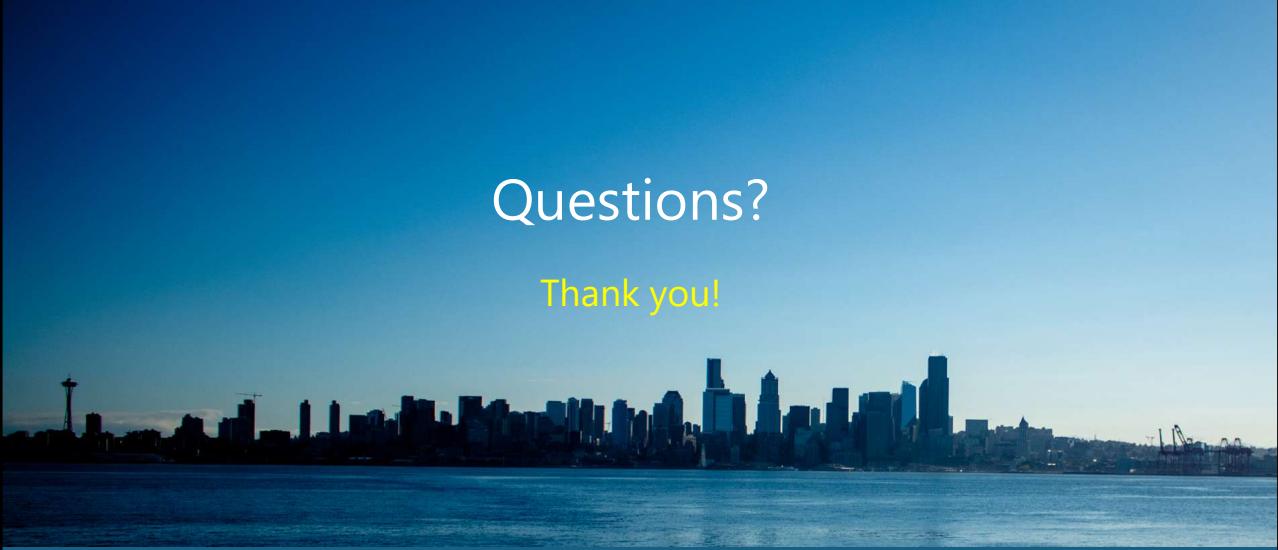
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Questions?

Thank you!



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