Item 8—Agenda of July 15, 2010 **July 9, 2010**

LES Central Lincoln Reliability Project

DISCUSSION:

LES is seeking input in selecting routes and construction methods for a major improvement of transmission lines in central Lincoln. The Nebraska Capitol Environs Commission, Urban Design Committee, and Historic Preservation Commission are all being asked for comments.

The attached report to the Urban Design Committee provides basic background on the project and indicates where proposed routes approach or cross designated historic sites.

LES is commencing to narrow options for the routes with a goal of proposing a preferred option by September 2010.

Urban Design Committee recommended unanimously on July 7, 2010 that underground transmission lines be used throughout the project, with an emphasis on selecting routes through parks and other public open space.

In the Committee's discussion, the greater cost of the underground option was recognized, along with the need to replace the cables themselves (at a 2010 cost of approximately $1 milliion per mile) on a 35-40 year basis. Most of the underground investment (80-90% for concrete conduits and underground splicing vaults) would be much more durable, with a service life estimated at 80-100 years or more.

The Committee also discussed overhead lines and suggested that alley routes should be considered as having less impact on residential properties and tree canopies than routes on residential streets. The members also suggested that opportunities to pair any new overhead lines with existing transmission routes should be part of the decision matrix.

Nebraska Capitol Environs Commission reviewed the project concept in May, prior to the announcement of the proposed route alternatives. Commission members answered in the negative to queries about whether overhead transmission lines crossing the Environs District would be allowed. The proposals reflect this in offering only underground crossings of the Environs District.

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Urban Design Committee Agenda of July 7, 2010
Central Lincoln Reliability Study (LES)

Urban Design Committee is familiar with the review of LES substations and especially their landscape plans. This responsibility derives from the Committee's duty and power for:

> *review of projects by any utility company, public or private, ...limited to (i) construction of buildings, distribution substations, and ground-level switching stations;*

The second part of that section of Lincoln Municipal code empowers UDC to review

> *(ii) construction located within an historic district designated by the federal government or the City of Lincoln or within 300 feet of an historic landmark as designated by the federal government or the City of Lincoln. However, no project which is to be reviewed by the Historic Preservation Commission shall be reviewed by the Urban Design Committee.*

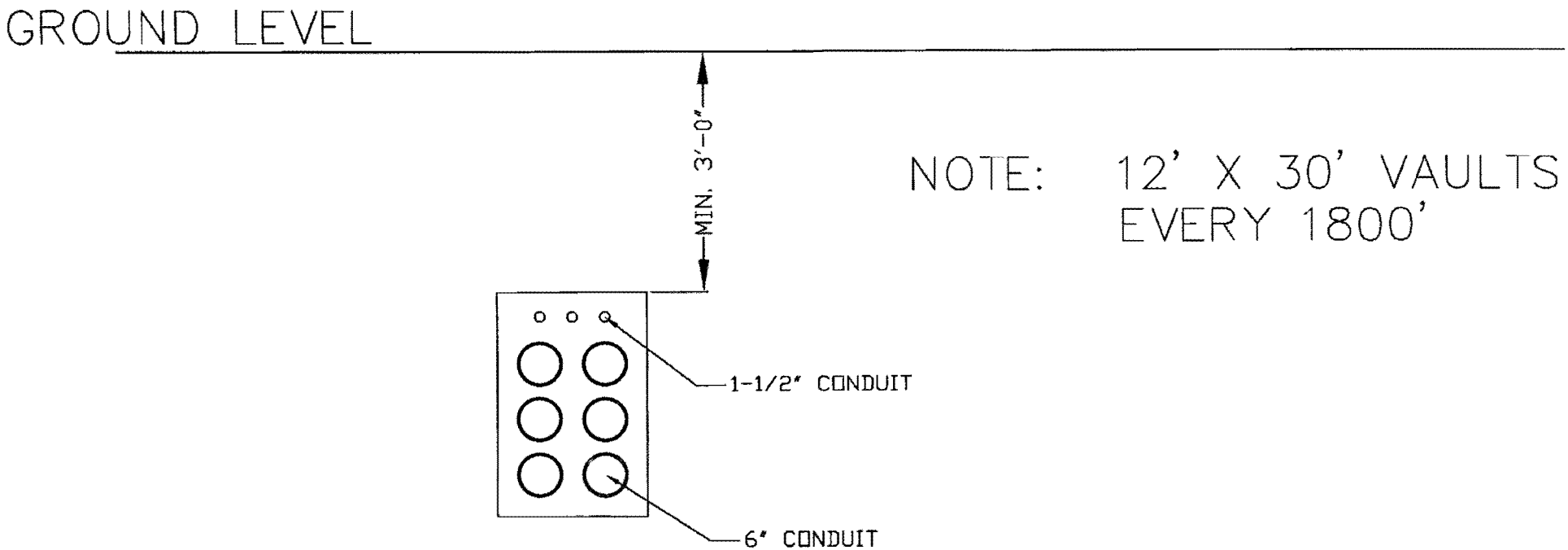
The Central Lincoln Reliability Project is a major effort by LES involving four substations (including a new one at 21st and N Streets) and approximately five miles of 115kV transmission lines. An LES representative will visit with the Committee to share details of the purpose, timeline, and process for this project. Details are also available on www.les.com (Central Reliability Study) including high-resolution maps.

This summer LES is collecting responses to an array of possible routes. Dashed black and white lines are possible underground (only) routes. Red lines are possible above ground or below ground transmission lines. Provided in your packet are small color maps and black and white maps on which I've circled landmarks with an approximate 300' radius and sketched a similar offset from the historic districts, to suggest the possible routes that "trigger" the Committee's authority to comment.

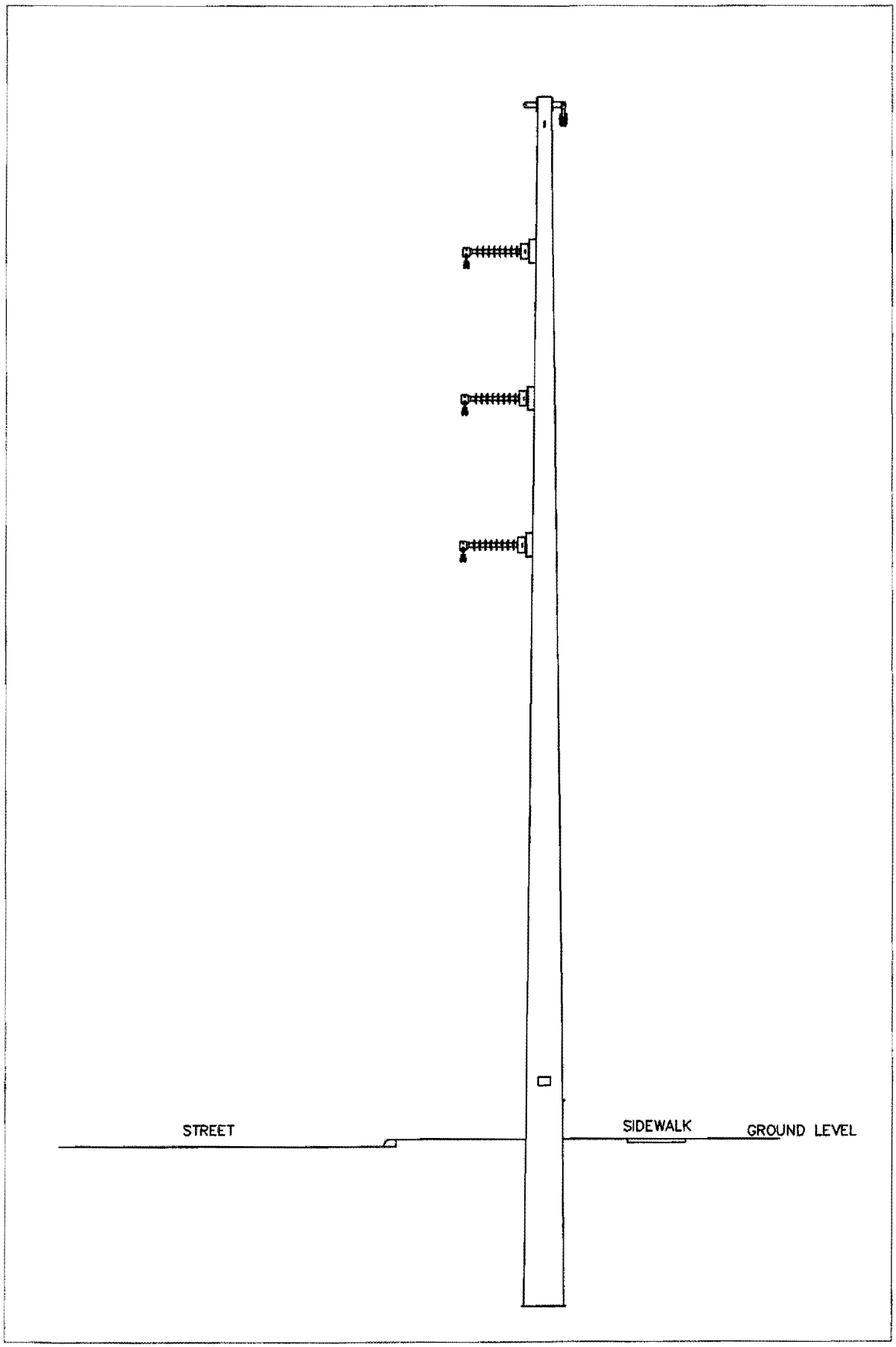
Capitol Environs Commission has also provided general comments and will address the current proposals as well. Historic Preservation Commission will be consulted on the proposed routes most directly effecting historic properties. The scope of UDC's comments will be among the broadest of the three design boards, due to the "300-foot-rule" in the enabling ordinance and the density of historic resources in central Lincoln.

LES describes the below-ground lines are running in concrete duct banks with six 6" diameter conduits for transmission lines and three 1/5" ducts for fiber. The overall measurements of the duct banks would be about 3'x2' and they would be a minimum of three feet below grade. Every 1800 feet, a 12' x 30' vault would be required. The overhead lines would be supported by metal monopoles, typically 70' to 90' tall. If there were distribution wires below the transmission lines, the taller height would be necessary. To accommodate tree canopies below, an even greater height (100' to 125') might be utilized.

Additional helpful information from LES staff:
"We would keep a minimum ground clearance from the lowest wire at maximum sag at 25'."
"For the overhead, we have similar structures existing that run along 8th St. In the Haymarket area."



NOTE: 12' X 30' VAULTS EVERY 1800'


STREET
SIDEWALK
GROUND LEVEL

Central Lincoln Reliability Project

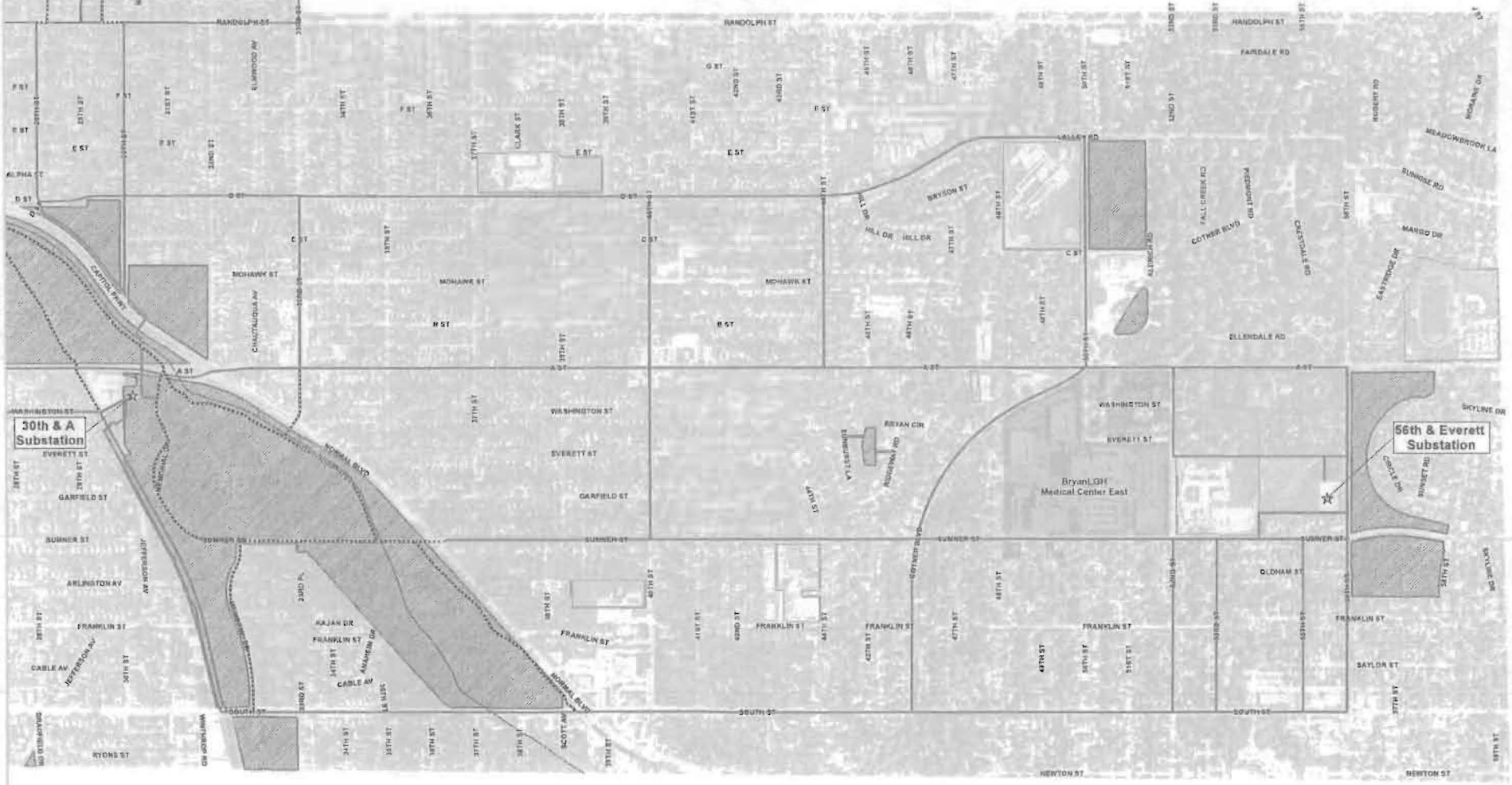
Legend

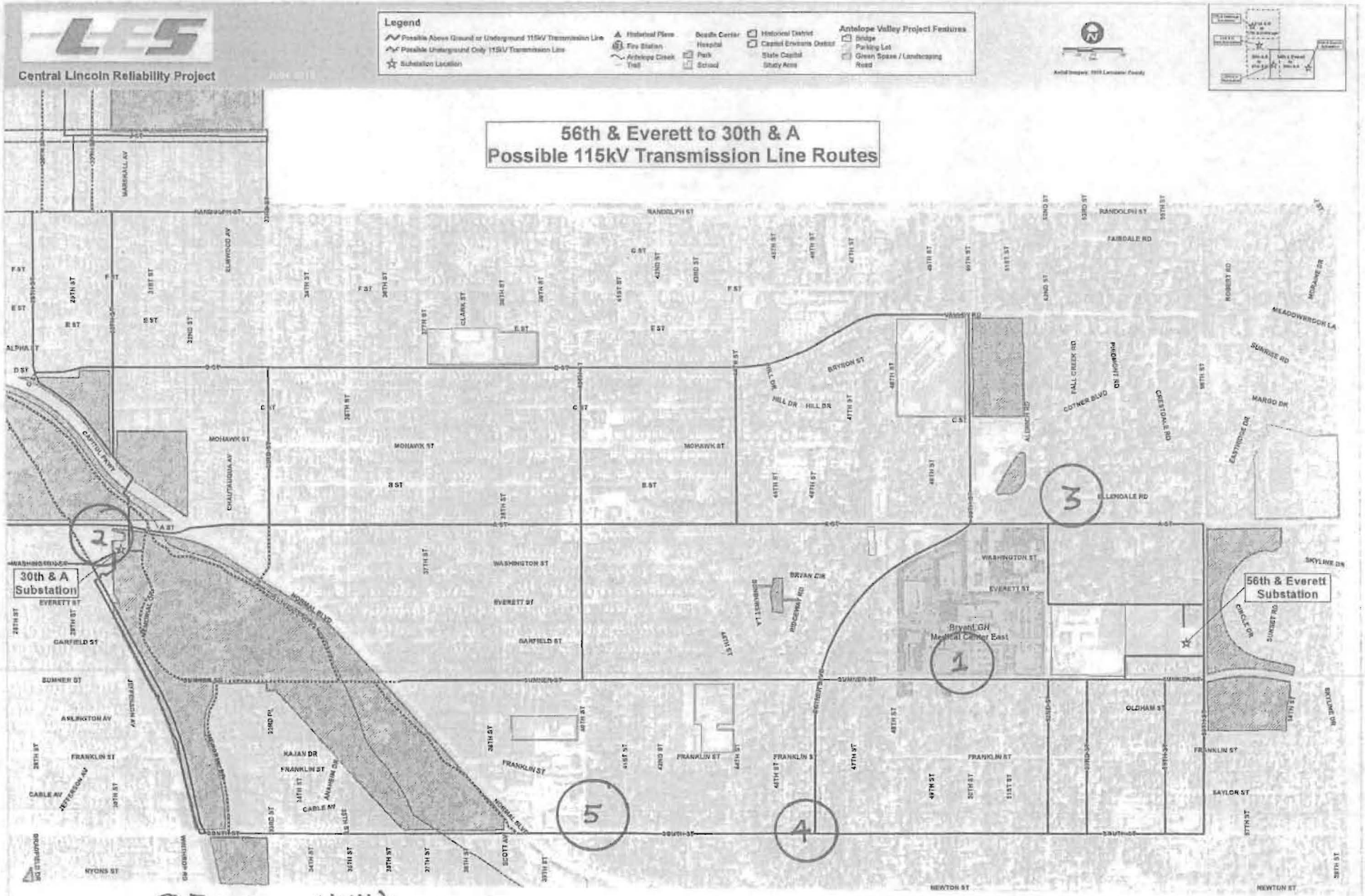
Possible Above Ground or Underground 115kV Transmission Line
Possible Underground Only 115kV Transmission Line
Substation Location

Historical Place
Fire Station
Antelope Creek Trail
Beadle Center
Hospital
Park
School
Historical District
Capitol Environs District
State Capitol Study Area

Antelope Valley Project Features
Bridge
Parking Lot
Open Space / Landscaping
Road

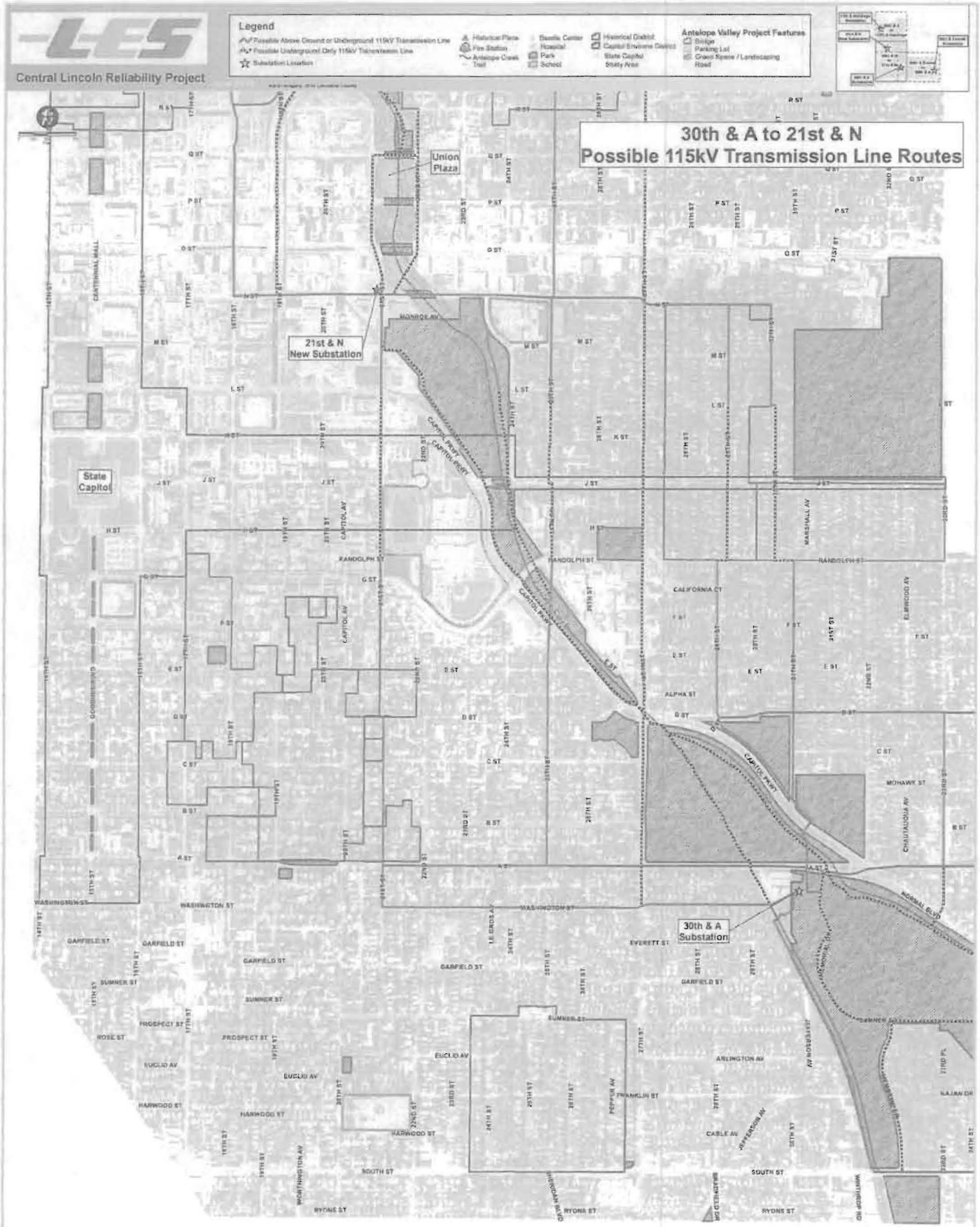
56th & Everett to 30th & A Possible 115kV Transmission Line Routes

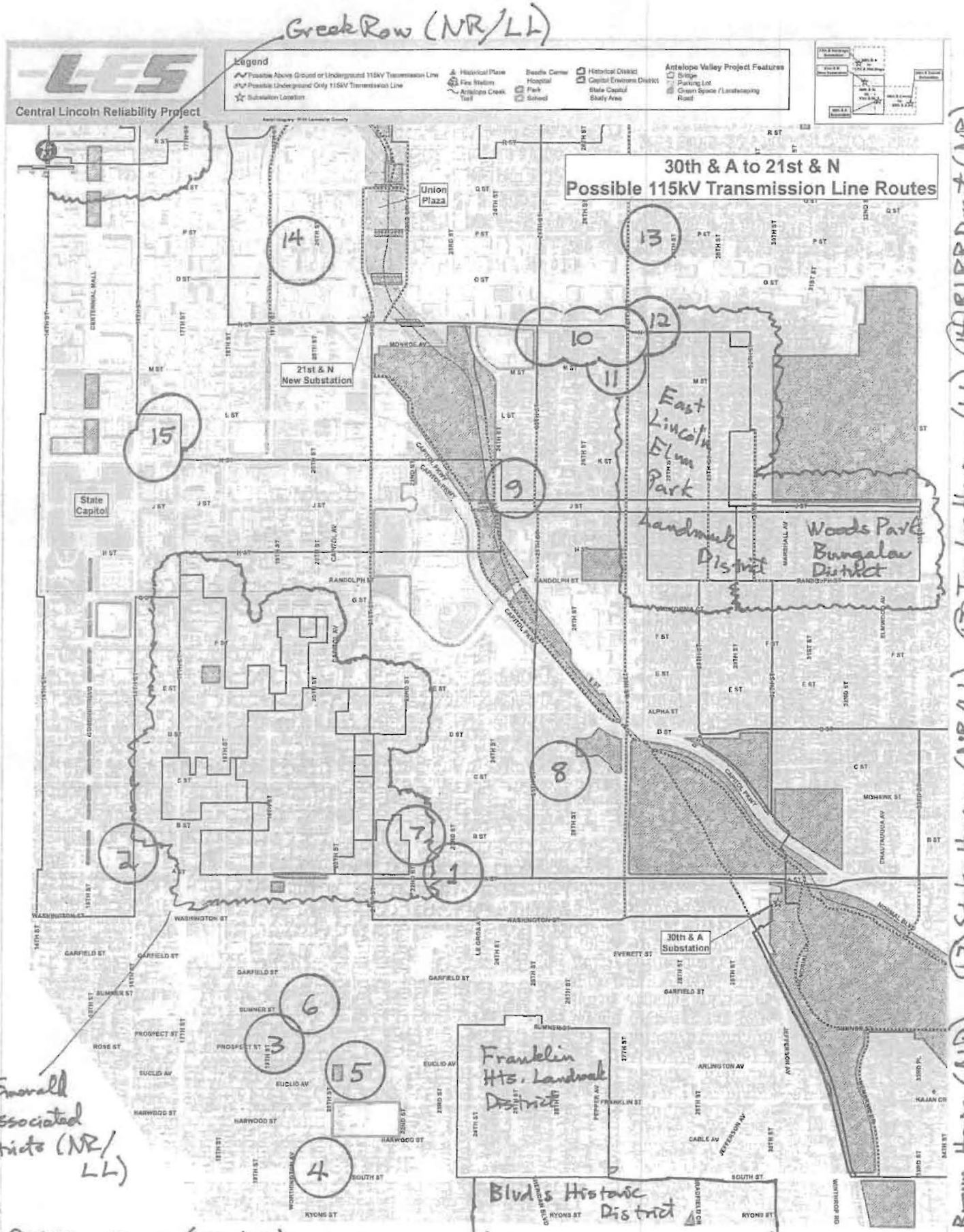




① Fairview (NHL)
② A St. Water & Power (Water Park) (LL, NR)
③ Griswold House (LL)
④ South Telephone Exchange (LL)
⑤ Park Hill (NR-pending)

NHL (Nat'l Historic Landmark)
NR (National Register)
LL (Lincoln Landmark)


LES
Central Lincoln Reliability Project
Legend
Possible Above Ground or Underground 115kV Transmission Line
Possible Underground Only 115kV Transmission Line
Substation Location
Historical Place
Fire Station
Antelope Creek Trail
Seattle Center
Hospital
Park
School
Historical District
Capitol Environs District
State Capitol Study Area
Antelope Valley Project Features
Bridge
Parking Lot
Green Space / Landscaping
Road
30th & A to 21st & N
Possible 115kV Transmission Line Routes
Union Plaza
21st & N
New Substation
State Capitol
30th & A
Substation
CENTENNIAL MALL
MONROE AV
CAPITOL PARK
CAPITOL AV
RANDOLPH ST
CALIFORNIA CT
MARSHALL AV
ELMWOOD AV
ALPHA ST
MOHAWK ST
CHAUTAUQUA AV
NORMAL BLVD
WASHINGTON ST
GARFIELD ST
EVERETT ST
SUMNER ST
PROSPECT ST
ROSE ST
EUCLID AV
HARWOOD ST
ARLINGTON AV
FRANKLIN ST
CABLE AV
SOUTH ST
RYONS ST
WORTHINGTON AV
WORTHINGTON RD
BASKERVILLE DR


Greek Row (NR/LL)
LES
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30th & A to 21st & N
Possible 115kV Transmission Line Routes
Union Plaza
21st & N New Substation
30th & A Substation
State Capitol
East Lincoln Elms Park Landmark District
Woods Park Bungalow District
Franklin Hts. Landmark District
Bluds Historic District
Mt Emerald & Associated Districts (NR/LL)
(15) Masonic Temple (NR) & Harris House (NR/LL)
(14) RIRR Depot (NR)
(13) Taylor House (LL)
(12) Stake House (NR/LL)
(11) Gay Brown House (NR)
(1) Gillen House (NR/LL)
(2) Trinity Methodist (AL)
(3) Thayer House (NR)
(4) South St Temple (NR)
(5) Maple Lodge (NR)
(6) LT&T Exchange (LL)
(7) Reimers Bungalow (LL)
(8) Ray Pauley House (LL)
(9) Antelope Grocery (LL/NR)
(10) Murphy Sheldon, Lally, Pace Hses (NR/LL, LL, LL)

Central Lincoln Reliability Project

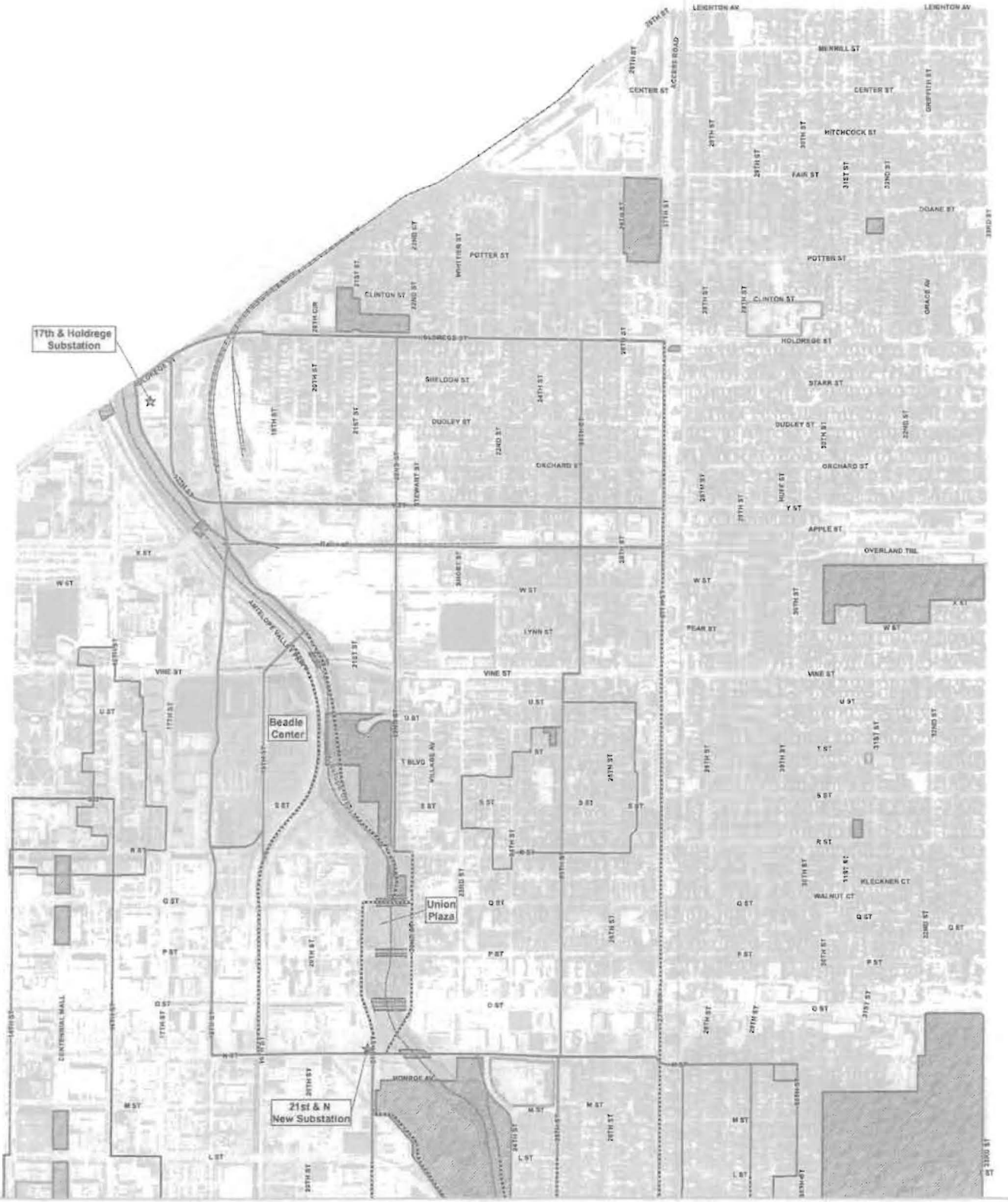
Legend

- Possible Above Ground or Underground 115kV Transmission Line
- Possible Underground Only 115kV Transmission Line
- Substation Location
- Historical Place
- Fire Station
- Antelope Creek Trail
- Beadle Center
- Hospital
- Park
- School
- Historical District
- Capitol Environs District
- State Capitol Study Area

Antelope Valley Project Features

- Bridge
- Parking Lot
- Green Space / Landscaping
- Road

21st & N to 17th & Holdrege Possible 115kV Transmission Line Routes



Central Lincoln Reliability Project

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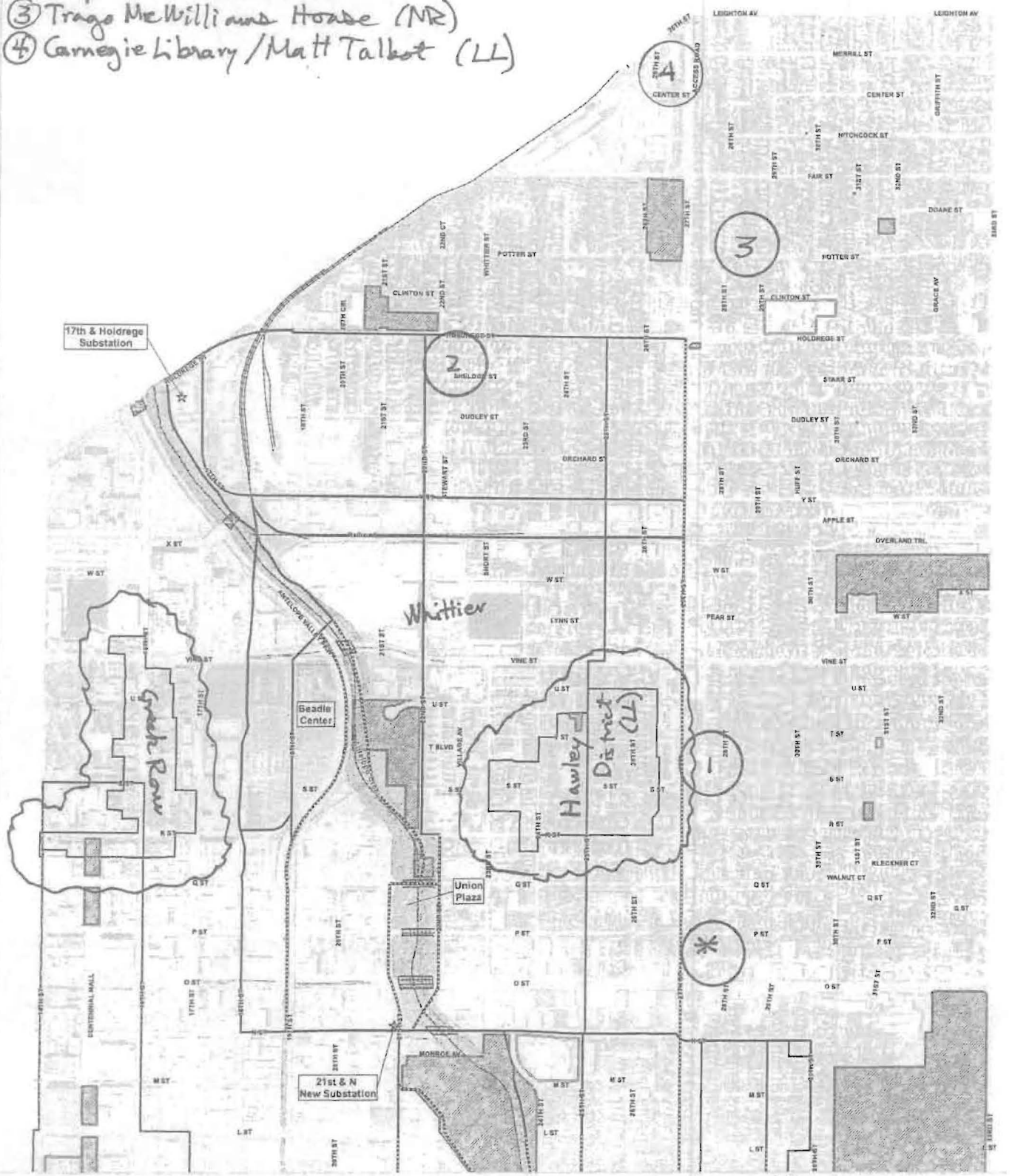
21st & N to 17th & Holdrege
Possible 115kV Transmission Line Routes

① East Lincoln Baptist (LL)
② Jasper Newton Bell House (NR)
③ Trago McWilliams House (NR)
④ Carnegie Library / Matt Talbot (LL)



* See middle map.