

Wind Energy Text Amendment Working Group

April 9th, 2015

6:30 pm

Topics

- ▶ Questions from last meeting
- ▶ View Corridors
- ▶ Impacts to Future Development
- ▶ Impacts to Property Values on Adjacent Property
- ▶ Public Road Improvements
- ▶ Decommissioning
- ▶ Enforcement and Regulation issues

Questions from last meeting

- ▶ Staff Response to Working Group Questions

View Corridors

- ▶ Dr. Richard K. Sutton, UNL Dept. of Agronomy and Horticulture
- ▶ Mark Engler, National Parks Service, Homestead National Monument

Aesthetic Impacts of Wind Turbine Development

Dr. Richard K. Sutton, PLA, FASLA

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(As quoted in Time Magazine)

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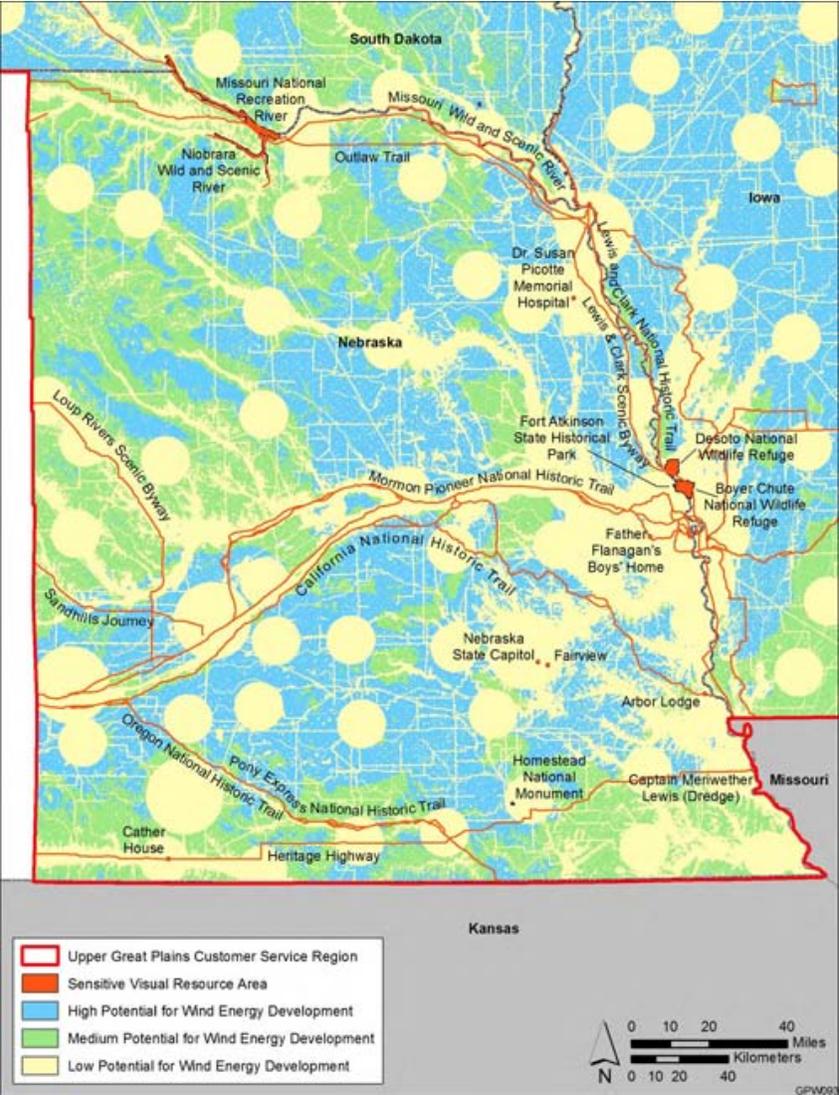
-- A civic activist in Southern California

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“The salvation of the state is the watchfulness of the citizen.”

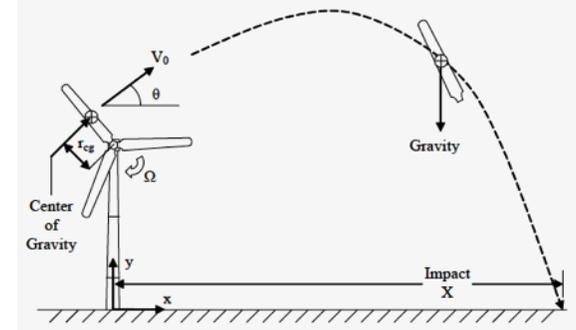
-- Inscribed on the Nebraska State Capitol

UGP PEIS



Planning, Design, Installation and Regulation in Nebraska

- ▶ **Health**
 - ▶ Sound
- ▶ **Safety**
 - ▶ *FAA night distance*
 - ▶ *Distance zones and set backs*
 - ▶ *Blade damage*
 - ▶ *Footing/tower failure*
- ▶ **Welfare**
 - ▶ *Installation/maintenance*
 - ▶ *Road traffic*
 - ▶ *Decommissioning*
 - ▶ *Future Upgrades*
 - ▶ *Aesthetics*



Planning, Design, Installation and Regulation in Nebraska

▶ Aesthetic and Visual Impacts

- ▶ Existing

- ▶ Future

 - ▶ Larger wind turbines 561 feet tall Vestas V164 8 mgW

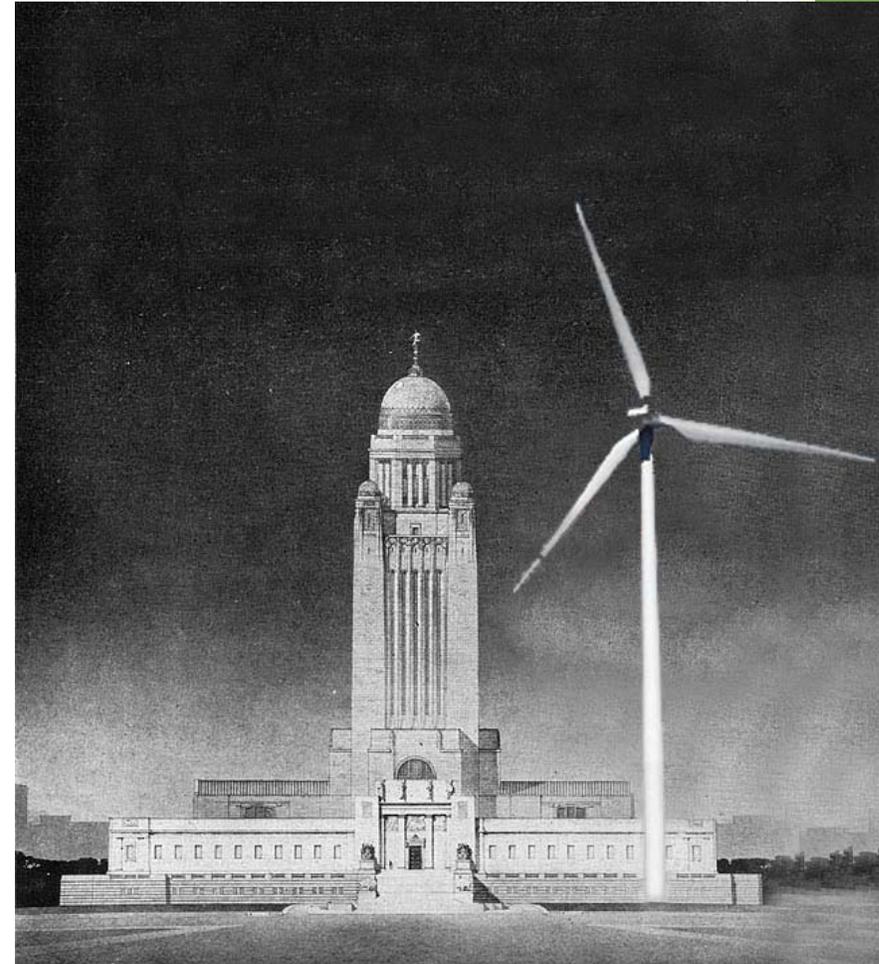
 - ▶ More wind turbines into existing grid.

Planning, Design, Installation and Regulation in Nebraska

▶ Gaging visual impacts

▶ Site Specific

- ▶ *Physical dimensions*
- ▶ *Number*
- ▶ *Arrangement*



Planning, Design, Installation and Regulation in Nebraska

▶ Gaging visual impacts

▶ Offsite

▶ *Offsite context*

▶ *Color*

▶ *Arrangement*

▶ *Size*

▶ *Movement*

Planning, Design, Installation and Regulation in Nebraska

▶ Regulations

- ▶ *Aesthetic character and its protection is a part of Comprehensive Plan*
- ▶ *Billboard Regulation*
- ▶ *No-build Zones precedent in the Capitol vista protection*
- ▶ *Right to know*

Planning, Design, Installation and Regulation in Nebraska

GREENPRINT CHALLENGE

VIEWS AND VISTAS

These are significant views to important or unique natural resources, places, structures, landmarks, etc. These views can be from afar, or nearby. Vistas refer to areas that afford significant views.



one comprehensible view

ultural features into

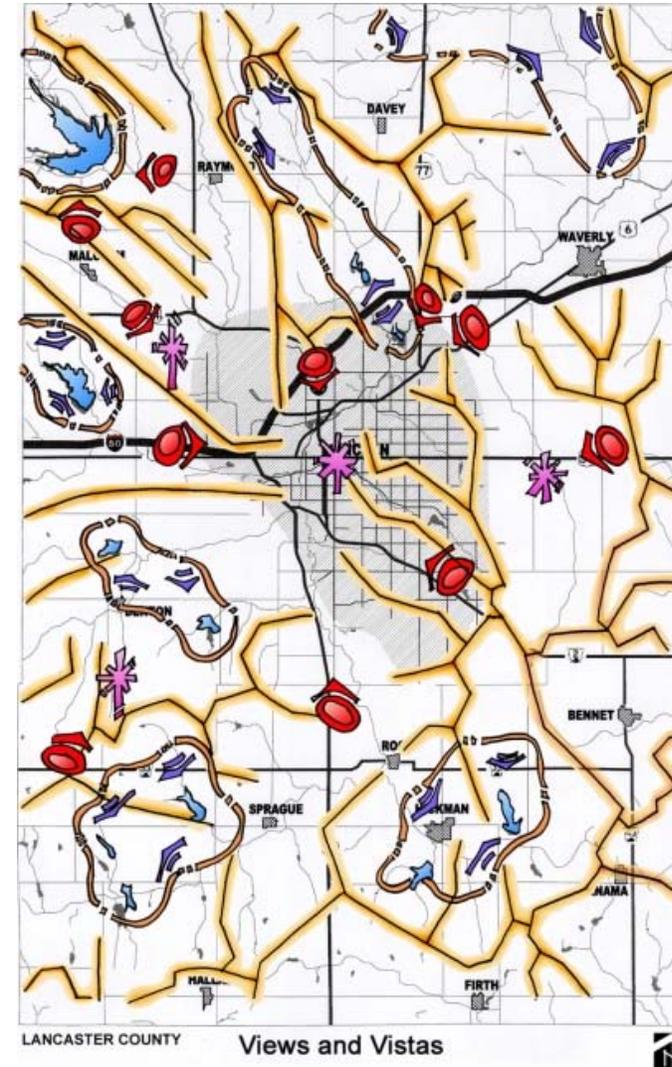
Planning, Design, Installation and Regulation in Nebraska

GREENPRINT CHALLENGE

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LEGEND



Planning, Design, Installation and Regulation in Nebraska

GREENPRINT CHALLENGE

HUMAN IMPACT/THREAT:

- Development can compromise or hide short-range and long-range views
- Development can remove vistas
- Ridgeline development obstructs views
- Cell towers and electrical transmission lines impact vistas



PLANNING IMPLICATIONS:

- All significant views and vistas should be documented
- View corridors to the State Capitol should be protected and preserved
- Public Way Corridor guidelines should be followed
- County roadway planning and design should take into account significant views
- City of Lincoln lighting standards should address the preservation of views and vistas
- Guidelines and review procedures for the placement of overhead utility lines, cellular towers and related structures should be developed, and followed
- Guidelines for billboard and sign design and placement should be developed, reviewed and followed

Planning, Design, Installation and Regulation in Nebraska

- Maps and construction detail alone is insufficient



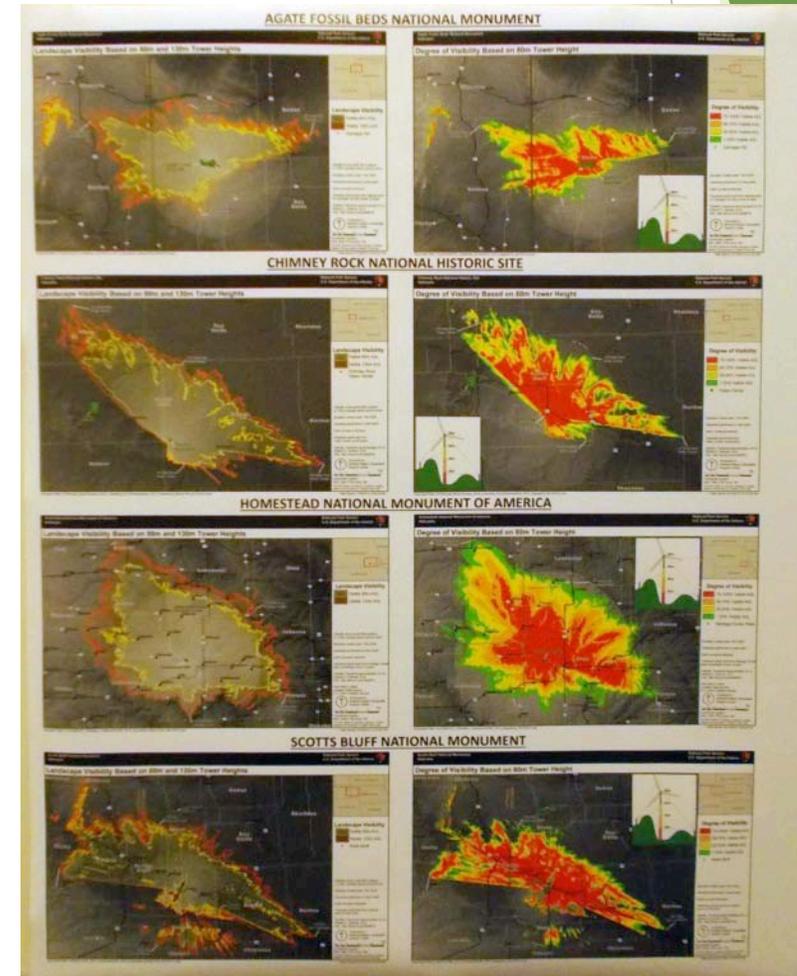
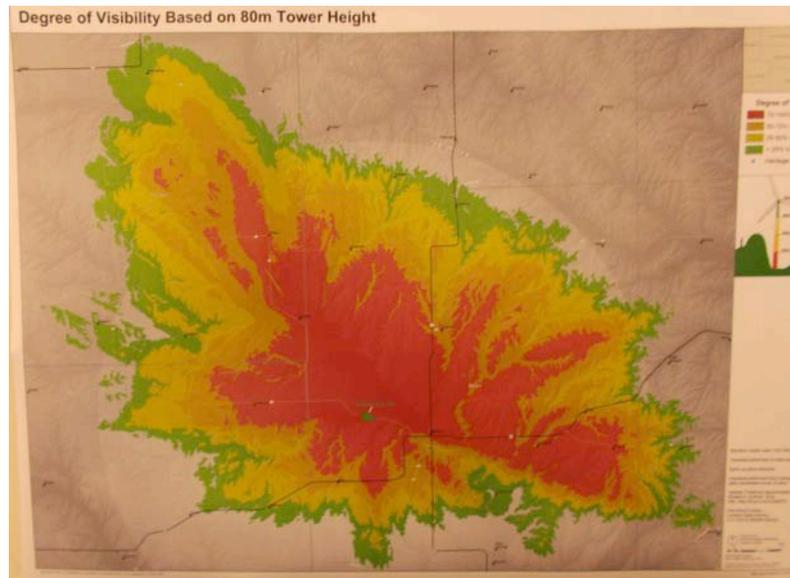
Planning, Design, Installation and Regulation in Nebraska

► These documents should

also be submitted for

public hearing:

Viewshed maps



Planning, Design, Installation and Regulation in Nebraska

- ▶ These documents should also be submitted for public hearing:
 - Viewshed maps
 - Key Observation Points



Along the main path at Spring Creek Prairie

Planning, Design, Installation and Regulation in Nebraska

- ▶ These documents should also be submitted for public hearing:
 - Viewshed maps
 - Key Observation Points
 - Visual Simulations



THE FOLLOWING THREE IMAGE PAIRS ARE SIMULATIONS OF WHAT VISUAL IMPACT MIGHT OCCUR AT HOMESTEAD NATIONAL MONUMENT OF AMERICA, SPRING CREEK PRAIRIE AND ROCK CREEK STATION STATE HISTORICAL PARK. VISUAL IMPACTS ON THE SCENIC AND HISTORICAL CONTEXTS OF NEBRASKA'S OPEN SPACES HAS RECEIVED LITTLE DISCUSSION.

Planning, Design, Installation and Regulation in Nebraska

- ▶ **These documents should also be submitted for public hearing:**

Viewshed maps

Key Observation Points

Visual Simulations



Planning, Design, Installation and Regulation in Nebraska

For controversial siting additional work maybe needed:

Public preference surveys

Mitigation

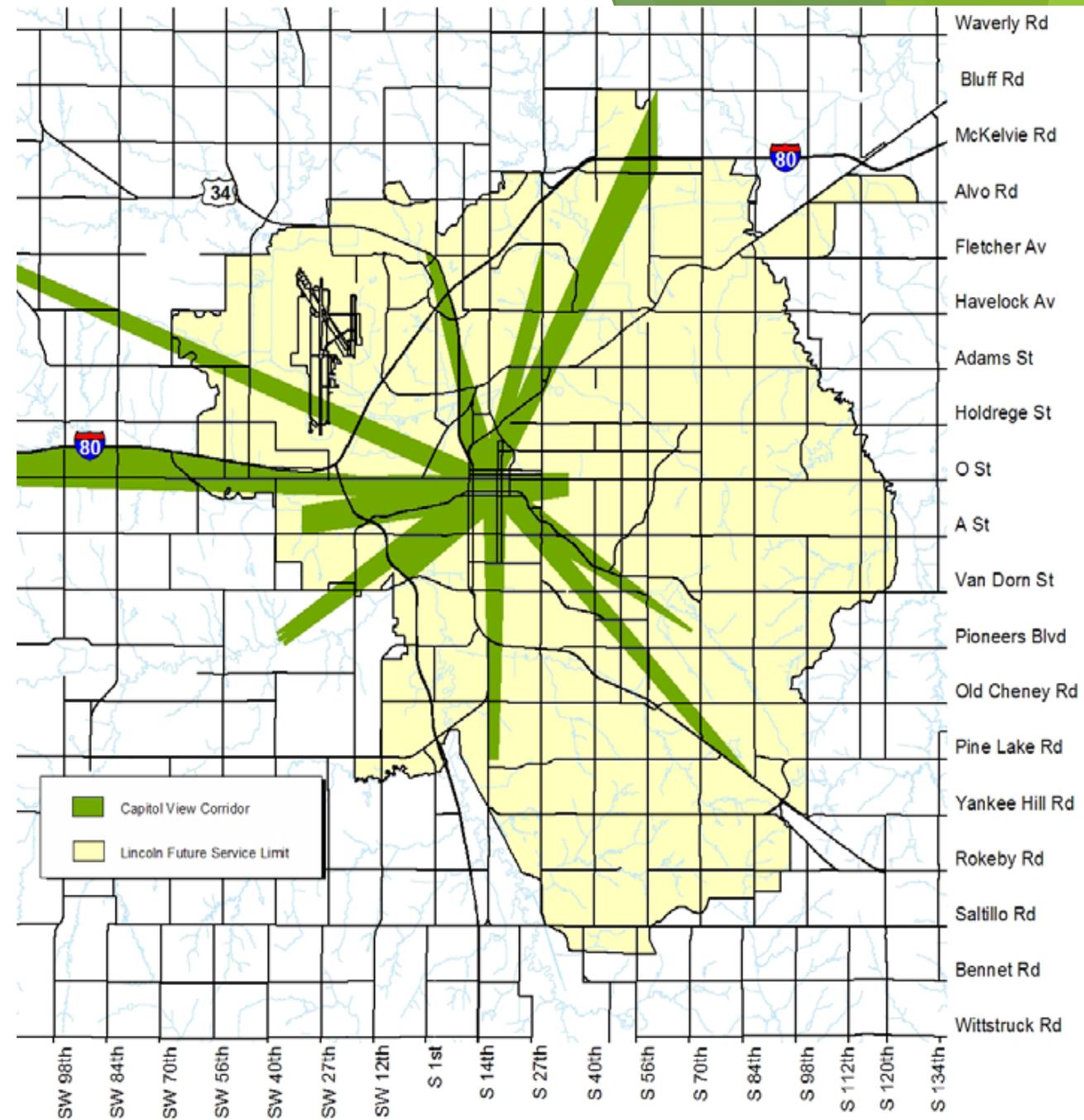
Planning Implications

- ▶ Significant views and vistas should be documented
- ▶ Corridors to State Capitol protected
- ▶ Public Way Corridor guidelines
- ▶ County roadway planning and design
- ▶ Lighting standards
- ▶ Guidelines for overhead utility, cell towers and related (CWECS)
- ▶ Guidelines for billboards and signs

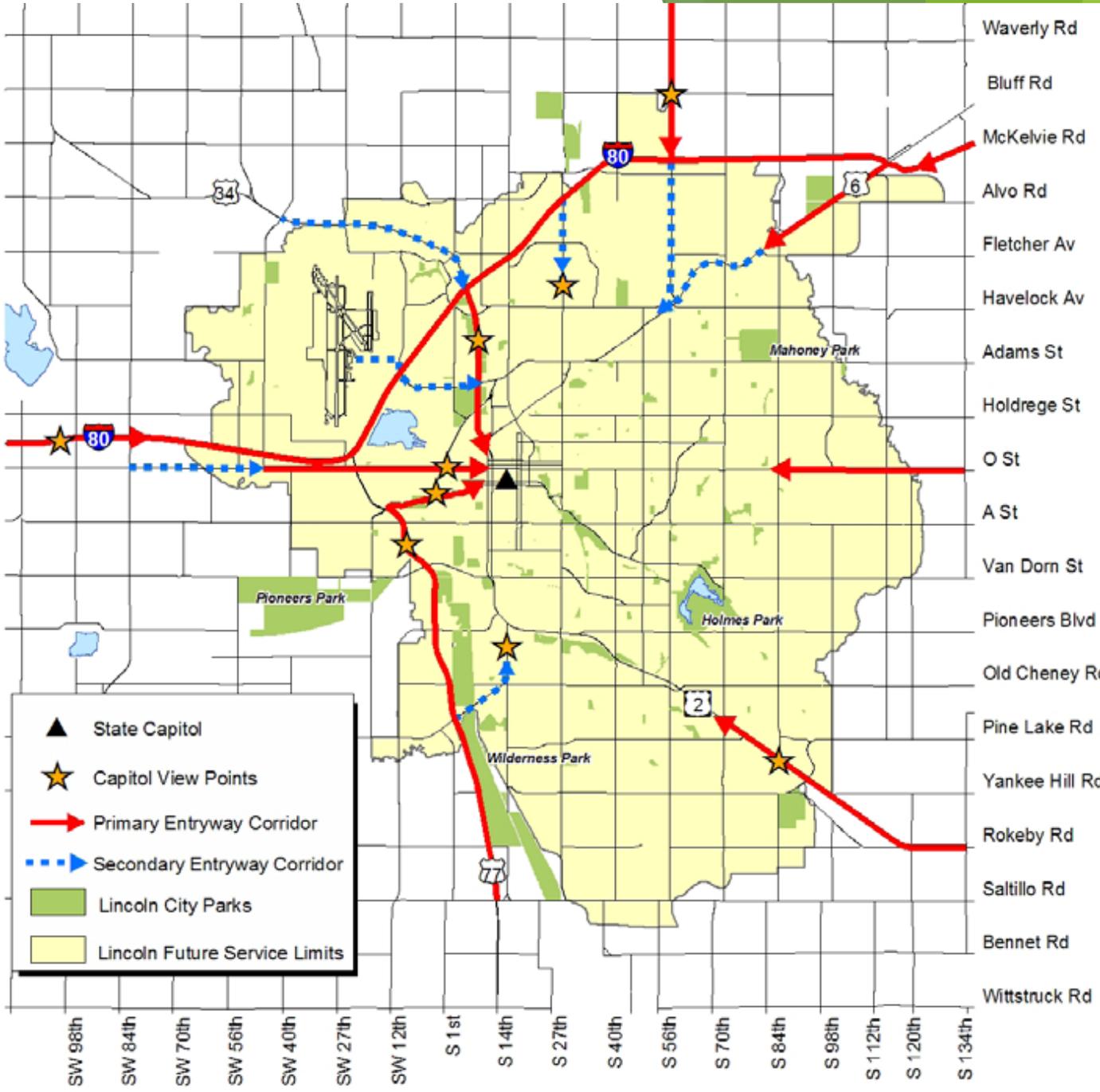
Planning Implications and regulations

- ▶ Comprehensive Plan cites Green Print Challenge and identifies view corridors as priorities
- ▶ Capitol View Corridor - defined corridor, higher level of review, height standards
- ▶ Entryway Corridors - guidelines being considered
- ▶ Special Permit application review process - Views and vistas can be part of the review process
- ▶ No current regulations requiring additional data from applicant.

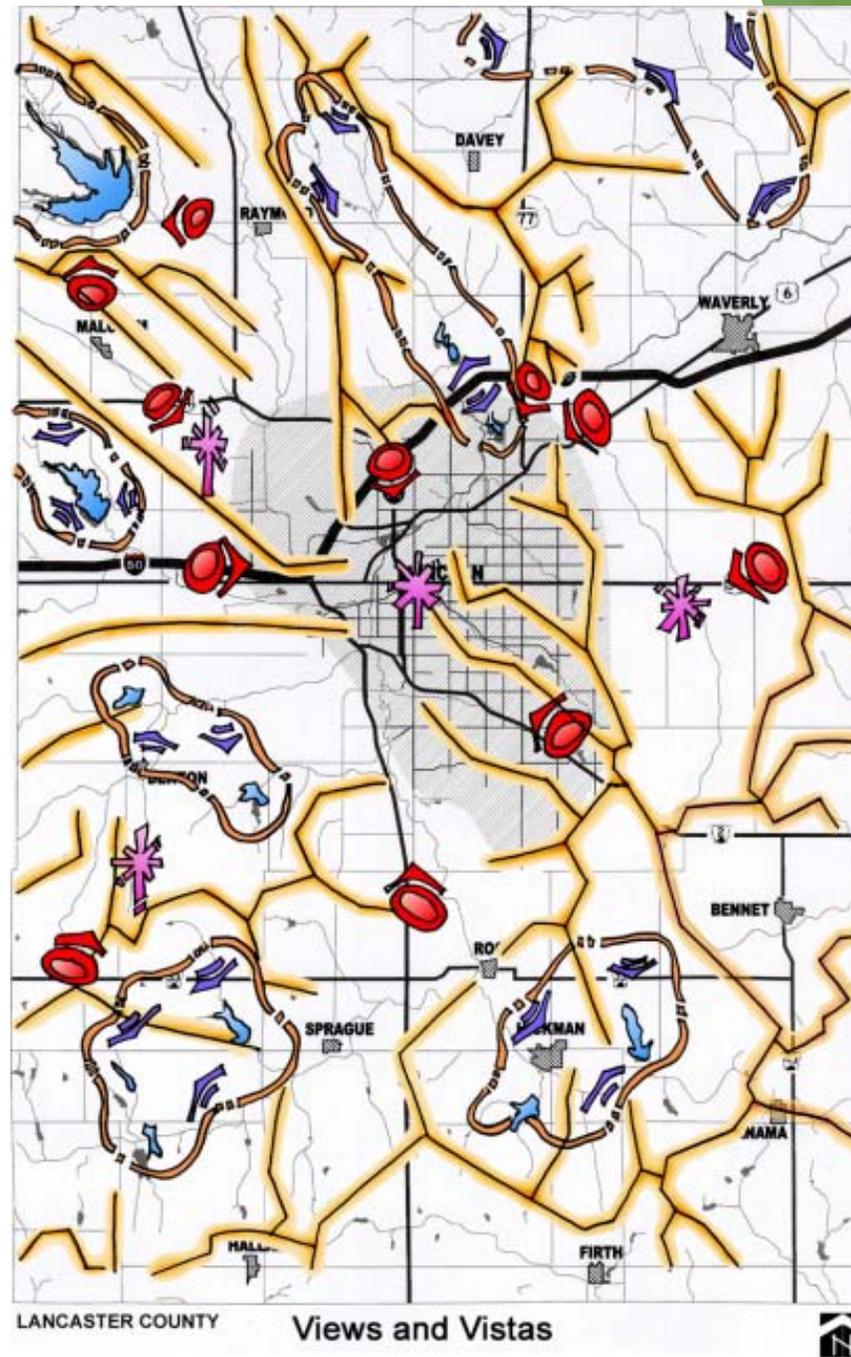
Capitol View Corridors



Entryway Corridors



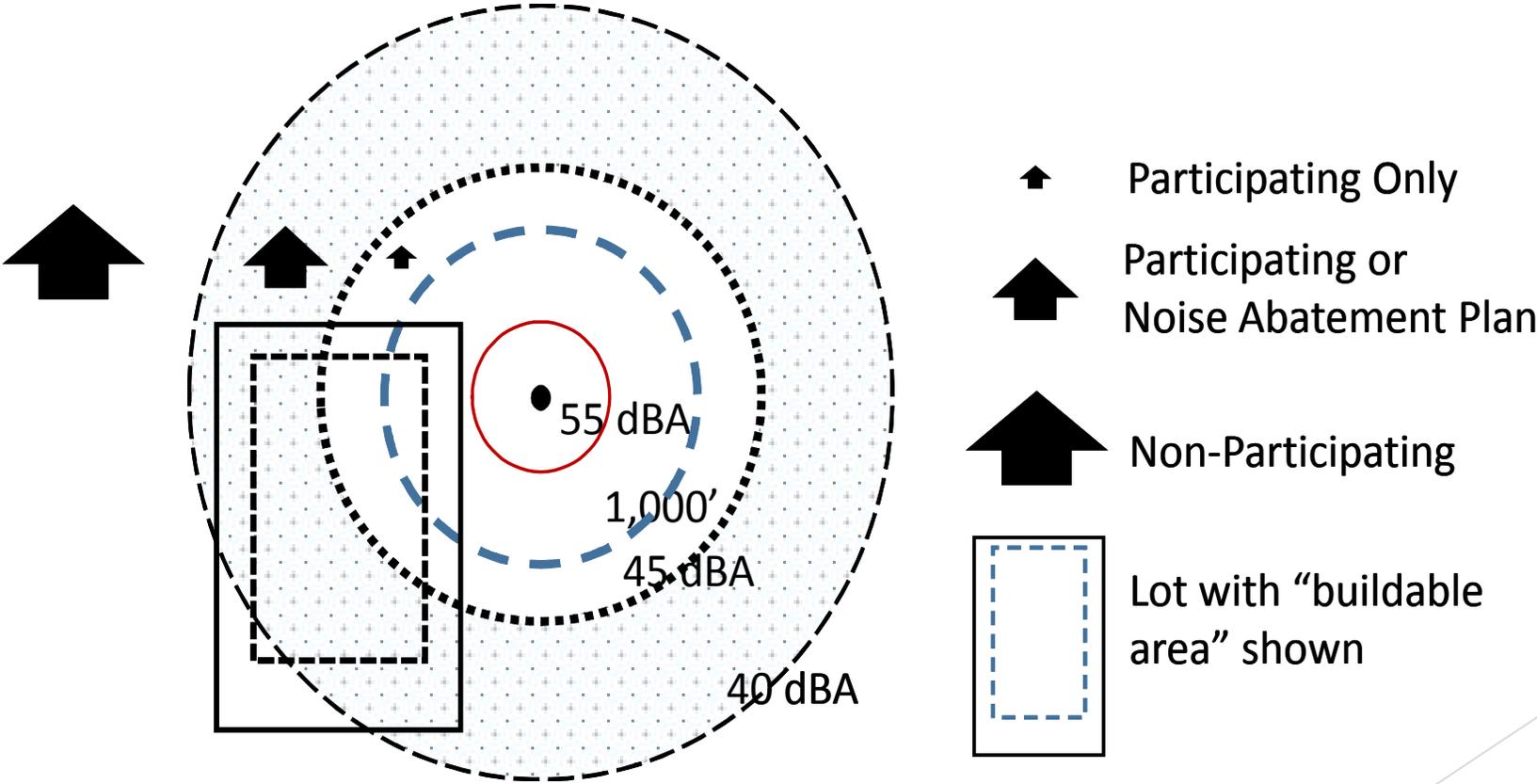
Greenprint Challenge Views and Vistas



Impact on Future Development and Subdivision Potential

- ▶ Current special permit conditions address existing dwellings, but not future dwellings
- ▶ Owners of undeveloped parcels may have future plans to develop
- ▶ Establishment of wind turbines near undeveloped property may impact that property significantly

Potential Impacts to Unbuilt Lots



Impact on Property Values of Adjacent Land

- ▶ Berkley National Laboratory
 - ▶ 2013 study of over 50,000 home sales in 27 counties in 9 states, all within 10 miles of 67 different wind facilities. 1,198 sales were within 1 mile of a wind turbine.
 - ▶ Data from well before announcement of plans for wind facilities to well after their construction
 - ▶ No statistical evidence that home values near turbines were affected

Impact on Property Values of Adjacent Land

- ▶ University of Rhode Island Study
 - ▶ 48,554 home sales within 5 miles, and 3,254 within one mile, of wind turbines
 - ▶ Periods prior to consideration through post construction
 - ▶ No statistical impact to housing prices
 - ▶ Acknowledge that further study is needed

Impact on Property Values of Adjacent Land

- ▶ Springfield and Sangamon County literature review
 - ▶ Empirical Research that has been subjected to scholarly review - 38 articles or publications
 - ▶ No compelling research indicating proximity to wind farms results in decreased property value
 - ▶ Difficult question to answer - many variables affect property value

Impact on Property Values of Adjacent Land

- ▶ National Association of Realtors - Field Guide to Wind Farms and their Effect on Property Values
 - ▶ Includes many different resources, cites six studies of property value.
 - ▶ One study found a negative effect on property values in 1 of 3 counties in northern NY
 - ▶ Four showed no connection between wind farms and property value decreases.
 - ▶ One showed those who perceived wind energy as a clean source of power required less compensation than those who retire to the area or who have a family history in the area. Aggregated per household compensation required to address the impacts was \$23 per year

Public Roads



- ▶ Lancaster County Engineer
 - ▶ Would be required to obtain permits if over rated weight on bridges
 - ▶ Not likely to require maintenance agreements
 - ▶ Possibly an anticipatory effect resulting in short term decline in values
 - ▶ Difficult to point to heavy equipment damage due to wind farm construction or maintenance equipment rather than routine use by heavy agricultural equipment
 - ▶ County Engineer would monitor public roadways during construction

Decommissioning

- ▶ Current text does require a decommissioning plan and bonding
- ▶ Removal language states machines and all related supporting structure must be removed and the area restored
- ▶ Decommissioning is often addressed in the lease agreement as well
- ▶ Some jurisdictions detail what is required at decommissioning and define when a turbine is to be considered “abandoned”

Enforcement and Regulation Issues

- ▶ Generally, zoning issues are regulated by the Building and Safety Department and health issues are regulated by the Health Department
- ▶ The Special Permit defines what may be done on the property and where structures may be located.
- ▶ Lancaster County does not have a separate noise resolution, however, some special permits do have noise regulations associated, and Health does enforce the nuisance code

Enforcement and Regulation Issues

- ▶ Generally, changes which are considered minor can be done administratively, while major changes must go back to Planning Commission with notification of neighbors.
- ▶ A special Permit may be revoked by the County Board on advisement of the Building and Safety Department if terms and conditions are not complied with, or by the Planning Commission after public hearing
 - ▶ The Planning Commission may also take other action than revocation to bring the permit into compliance or preserve the health, safety and welfare of the public