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UniSourceEnergy SERVICES

Santa Cruz Reliability Project South

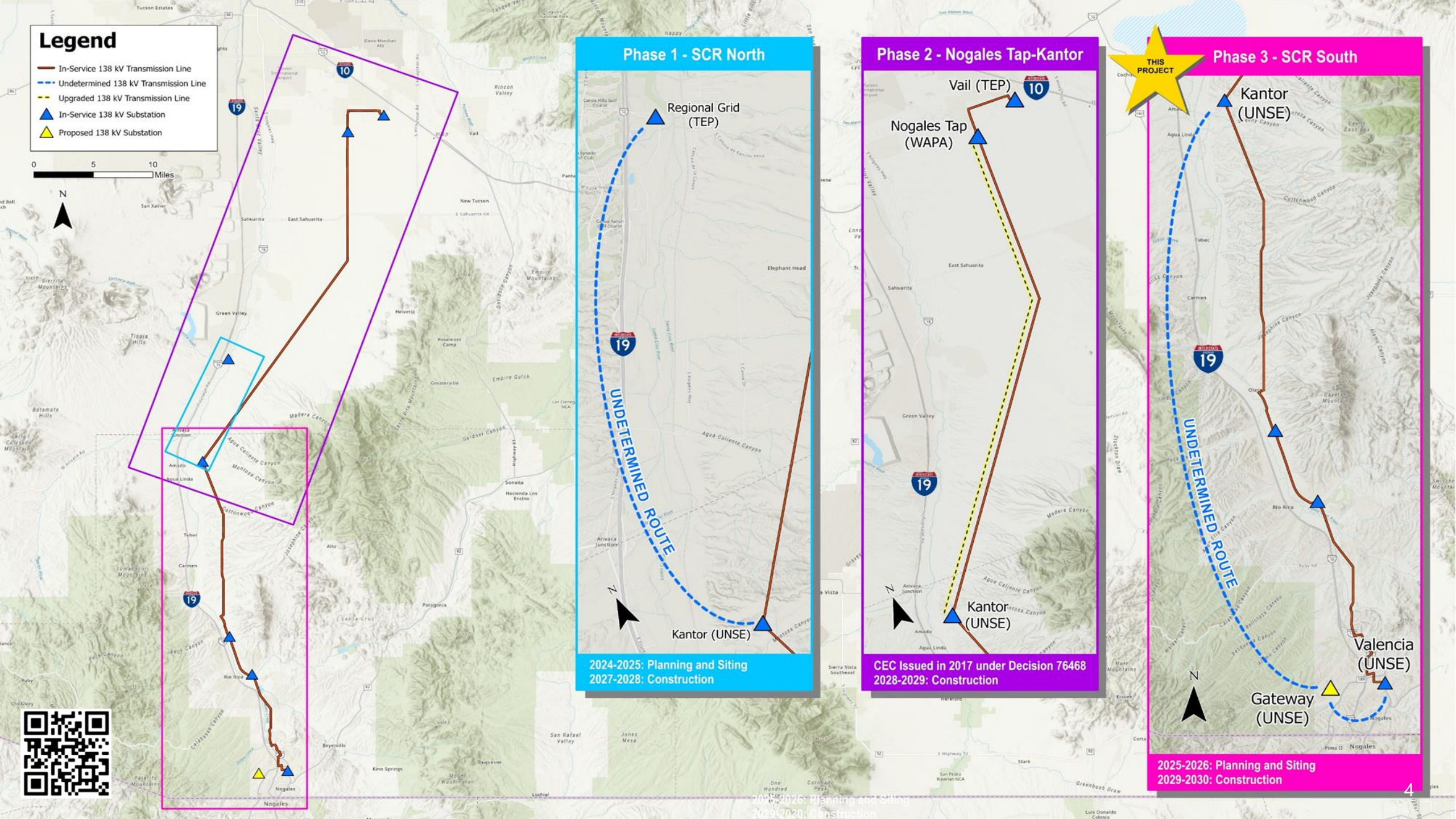
AGENCY BRIEFING

CHRIS ORTIZ Y PINO – PROJECT MANAGER, SITING, OUTREACH, & ENGAGEMENT

SEPTEMBER 2025

Agenda

1. Santa Cruz Reliability Project – Needs and Benefits
2. Santa Cruz Reliability Project South - Project Description
3. UniSource's Siting and Planning Process
4. Suitability Assessment – Refined Segments
5. Approvals, Schedule, & Public Participation


Legend
In-Service 138 kV Transmission Line
Undetermined 138 kV Transmission Line
Upgraded 138 kV Transmission Line
In-Service 138 kV Substation
Proposed 138 kV Substation
0 5 10 Miles
N
Phase 1 - SCR North
Regional Grid (TEP)
UNDETERMINED ROUTE
Kantor (UNSE)
2024-2025: Planning and Siting
2027-2028: Construction
Phase 2 - Nogales Tap-Kantor
Vail (TEP)
Nogales Tap (WAPA)
Kantor (UNSE)
CEC Issued in 2017 under Decision 76468
2028-2029: Construction
THIS PROJECT
Phase 3 - SCR South
Kantor (UNSE)
UNDETERMINED ROUTE
Valencia (UNSE)
Gateway (UNSE)
2025-2026: Planning and Siting
2029-2030: Construction

Project Need & Benefits

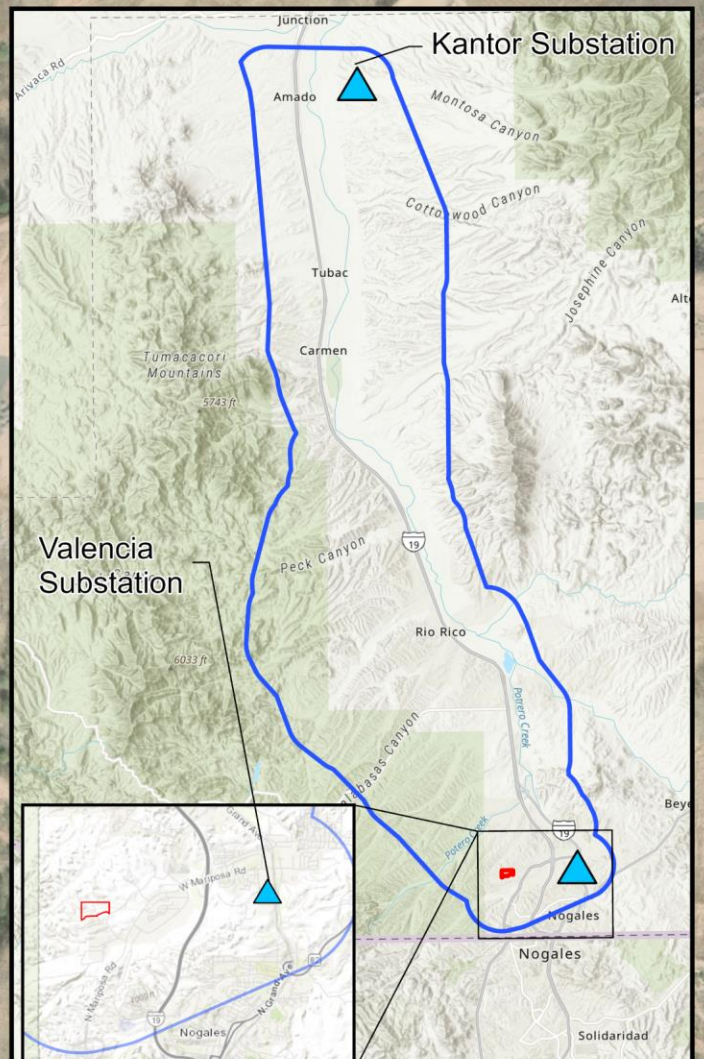
- Improve the reliability and resiliency of the electrical transmission system serving Santa Cruz County.
- Maintain and strengthen reliability for Santa Cruz County and its residents, businesses and industries, including hospitals, schools, ports of entry and federal facilities.
- Meet current and future energy needs without impacting service to existing customer.
- Reduce and eliminate the potential for a major and sustained outage in Santa Cruz County.
- Support maintenance and other upgrades, allowing work to be performed without interrupting system operations.

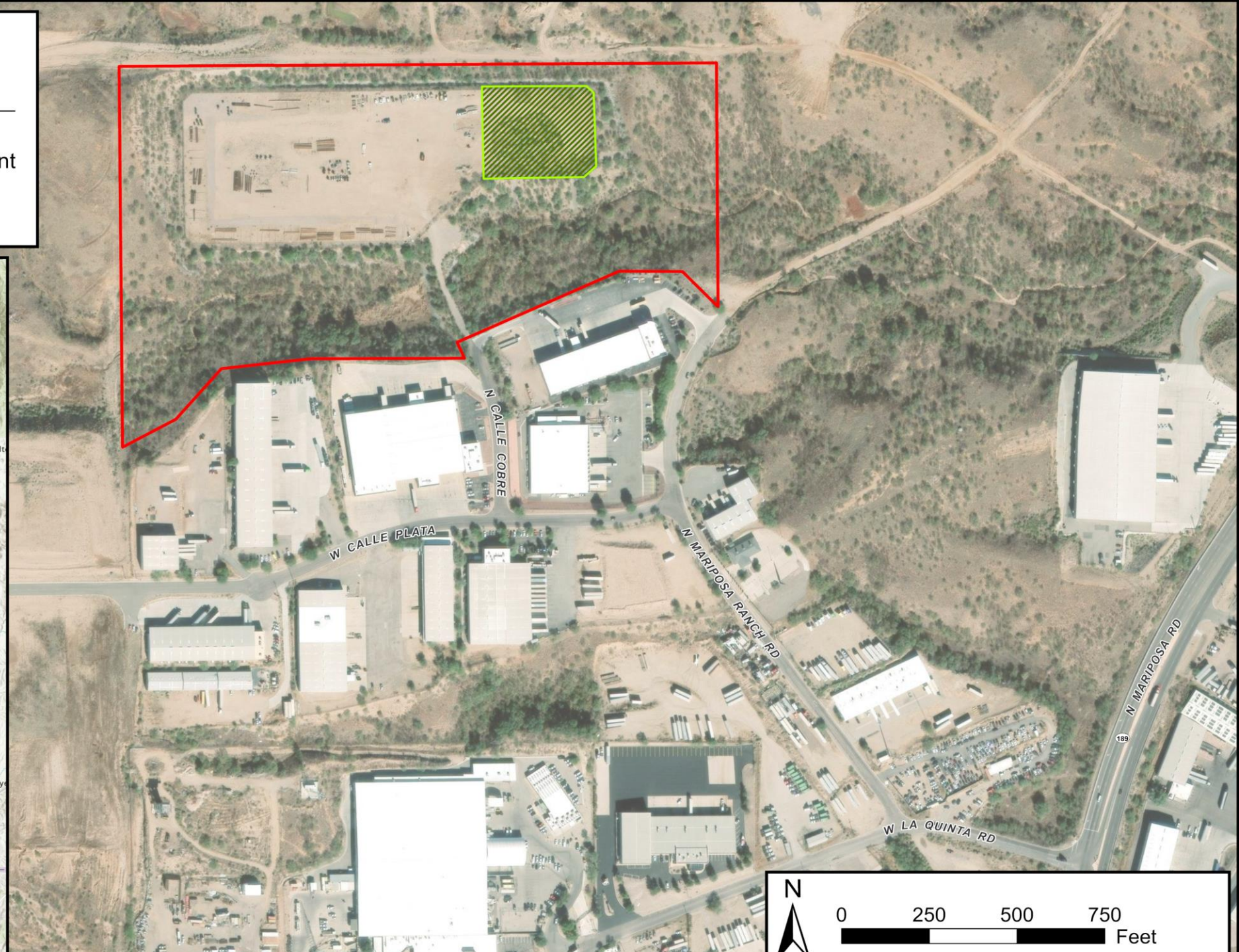
Santa Cruz Reliability Project South (Phase 3)

- Final phase of a three-phase project.
- Construct a second 138 kilovolt (kV) transmission line to interconnect the Kantor Substation in Amado to the Valencia Substation in Nogales through the planned Gateway Substation west of Interstate 19 and West Mariposa Road.
- Construct the Gateway substation and relocate distribution circuits from the Valencia Substation.

Preliminary Gateway Substation Design

- Existing Substation
- Preliminary Gateway Substation Footprint
- Substation Parcel
- Study Area

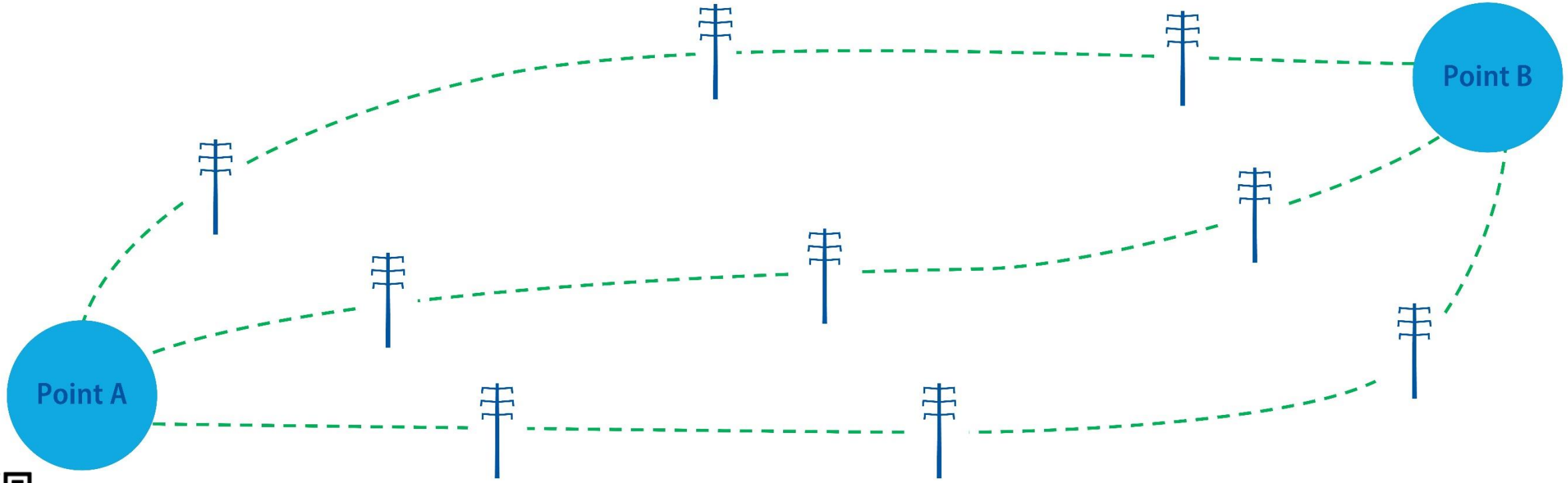




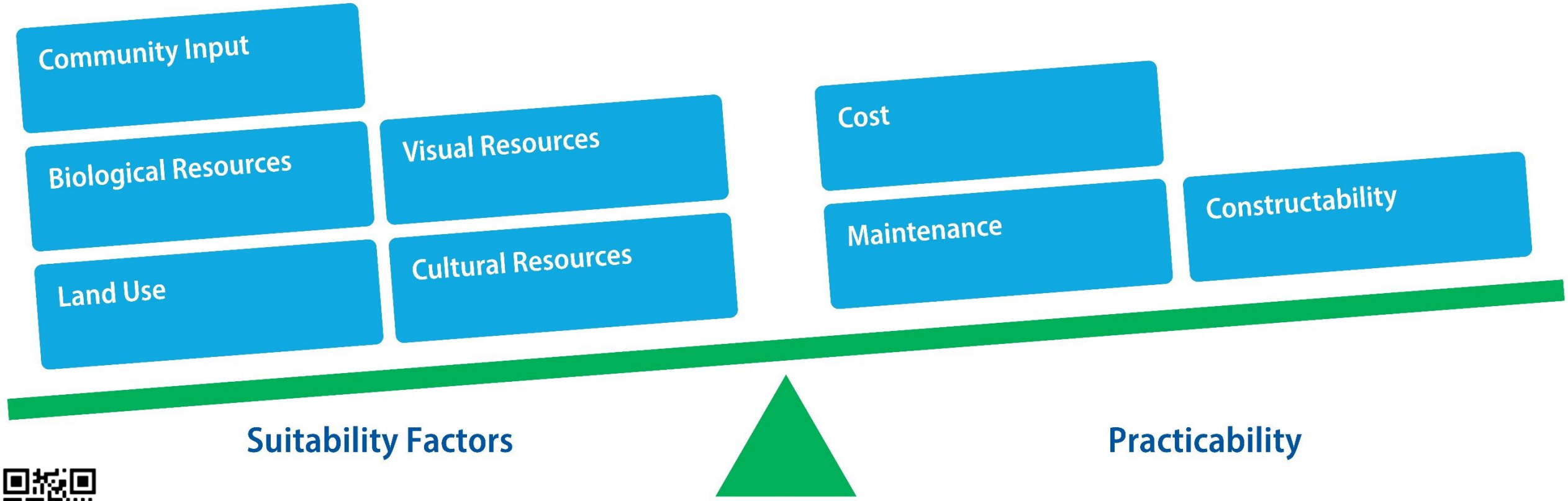
Example Pole Structure

- Tubular
- Weathering Steel
- Monopoles

What is Siting?



Project Route Development & Evaluation



Planning & Siting Process Flowchart

Phase 1: Pre-Analysis

- Conduct Field Visits
- Develop Study Area
- Identify Opportunities and Constraints
- Conduct Public and Stakeholder Outreach
- Develop Preliminary Segments

Phase 2: Data Inventory

- Conduct Research and Collect Data

Phase 3: Suitability Assessment

- Develop Suitability Models
- Conduct Suitability Assessment
- Field Review
- Conduct Public and Stakeholder Outreach
- Refine Segments

We Are Here

Phase 4: Compatibility Analysis

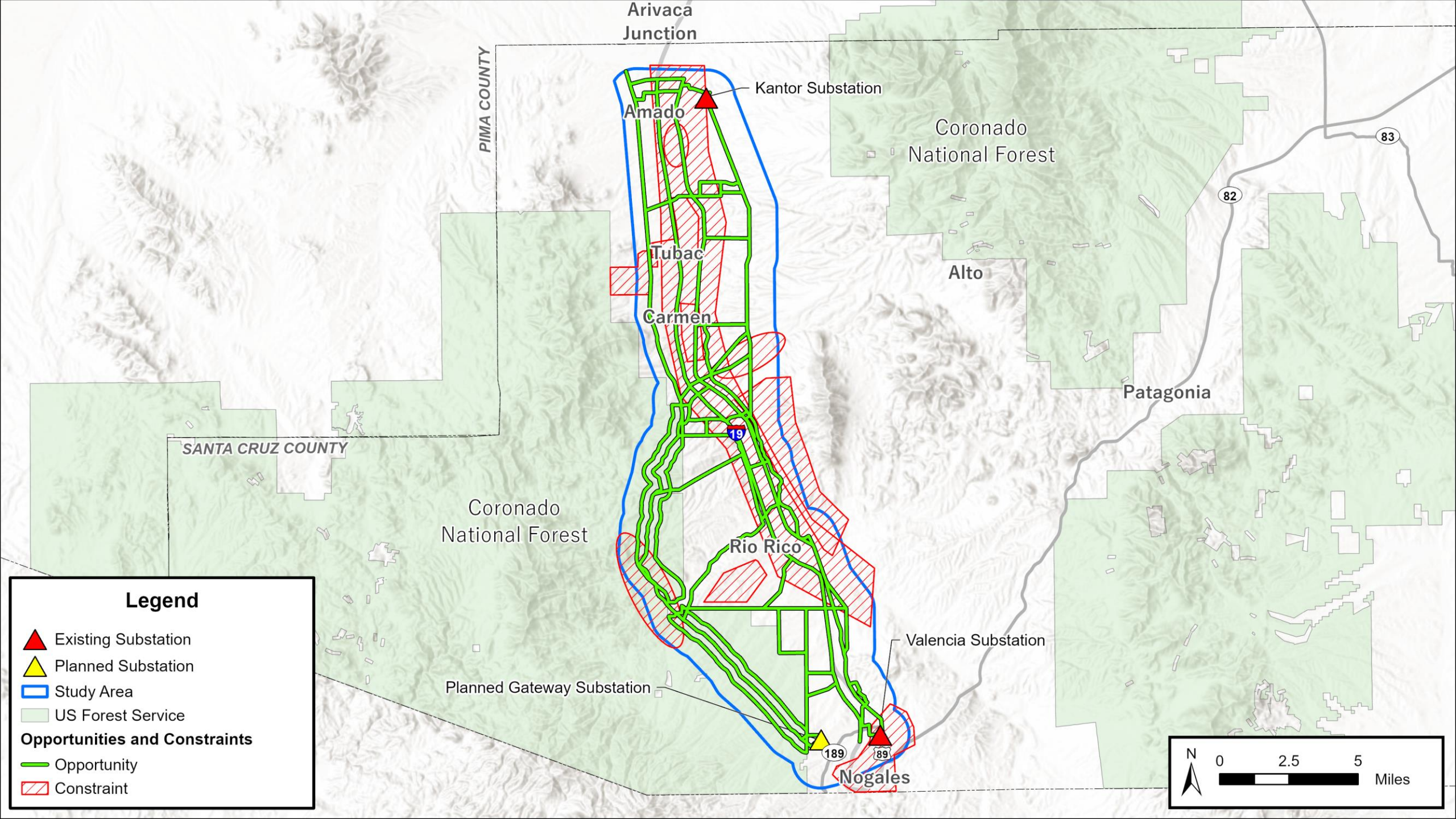
- Conduct Compatibility Analysis
- Develop Route Alternatives
- Field Review

Phase 5: Concept Evaluation

- Conduct Public and Stakeholder Outreach
- Identify Preferred Route
- Submit CEC Application
- Public Notification and Hearing

Study Area


Arivaca Junction
PIMA COUNTY
Kantor Substation
Amado
Coronado National Forest
83
82
Tubac
Alto
Carmen
Patagonia
19
SANTA CRUZ COUNTY
Coronado National Forest
Rio Rico
Valencia Substation
Planned Gateway Substation
189
89
Nogales
Legend
Existing Substation
Planned Substation
Existing 138kV Transmission Line
Study Area
US Forest Service


Arivaca Junction
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83
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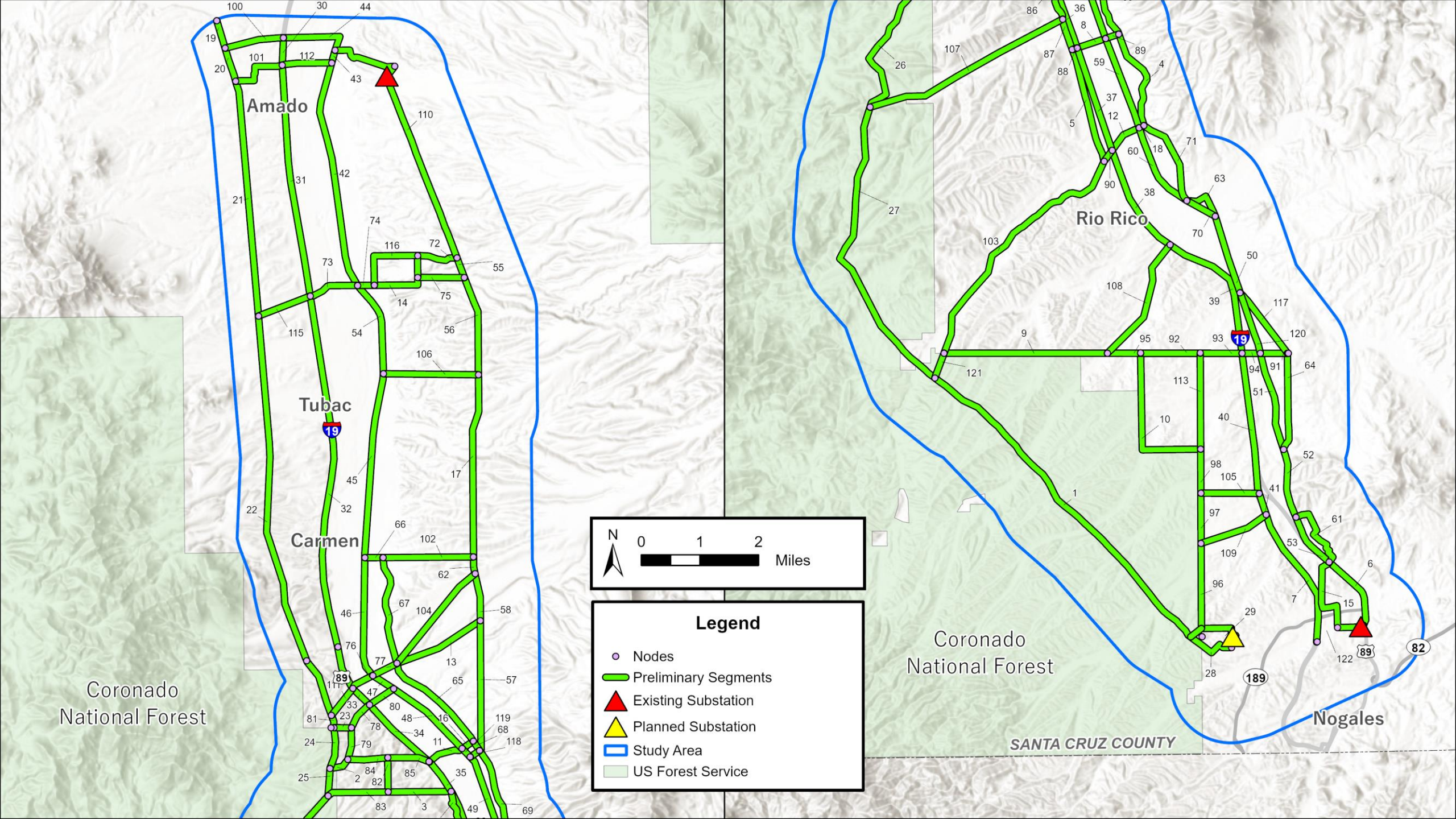
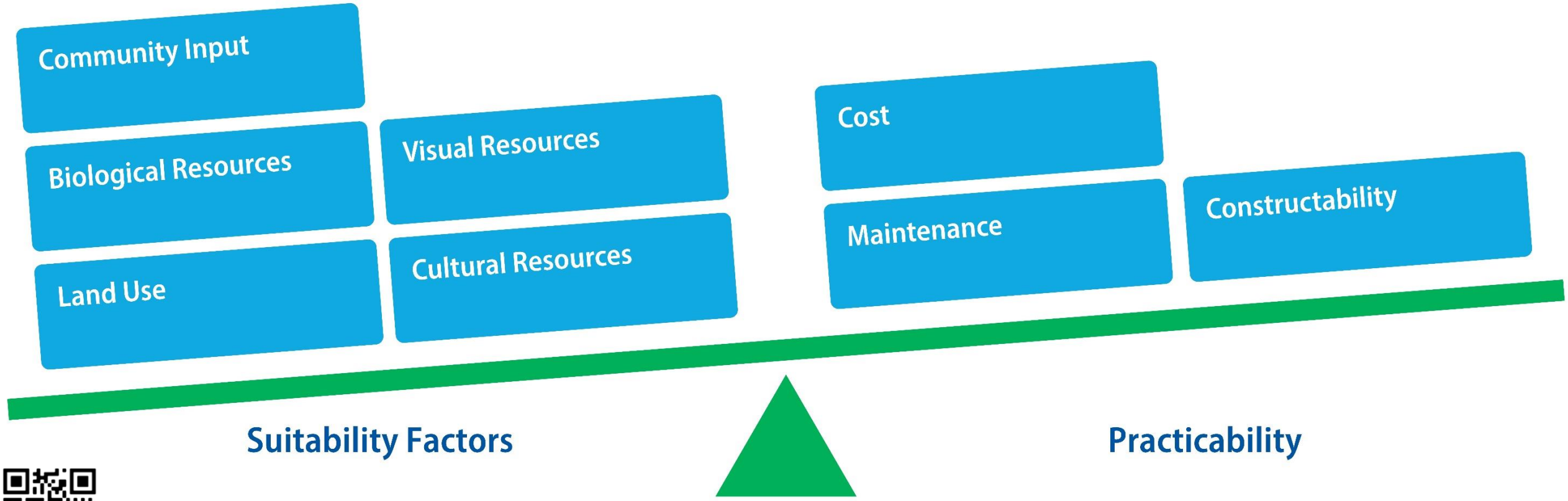
Coronado National Forest
Rio Rico
Valencia Substation
Planned Gateway Substation
189
89
Nogales
Legend
Existing Substation
Planned Substation
Study Area
US Forest Service
Opportunities and Constraints
Opportunity
Constraint
N
0
2.5
5
Miles


Amado
Tubac
Carmen
Rio Rico
Nogales
Coronado
National Forest
Coronado
National Forest
SANTA CRUZ COUNTY
N
0
1
2
Miles
Legend
Nodes
Preliminary Segments
Existing Substation
Planned Substation
Study Area
US Forest Service
19
89
189
82

Project Route Development & Evaluation



Suitability Assessment Methodology

Criteria Models

- Existing Plans
- Biological Resources
- Noise and Communication
- Cultural and Historic Resources
- Visual Resources
- Total Environment
- Existing and Future Residential
- Wildfire Risk
- Engineer, Construction and Maintenance

Composite Models

- Balanced Compatability Model
- Environmentally Preferred Model
- Construction & Maintenance Preferred Model
- Public Stakeholder & Agency Preferred Model

Suitability Assessment

- Highest Suitability Path
- Apply Constraints
- Visual Comparison

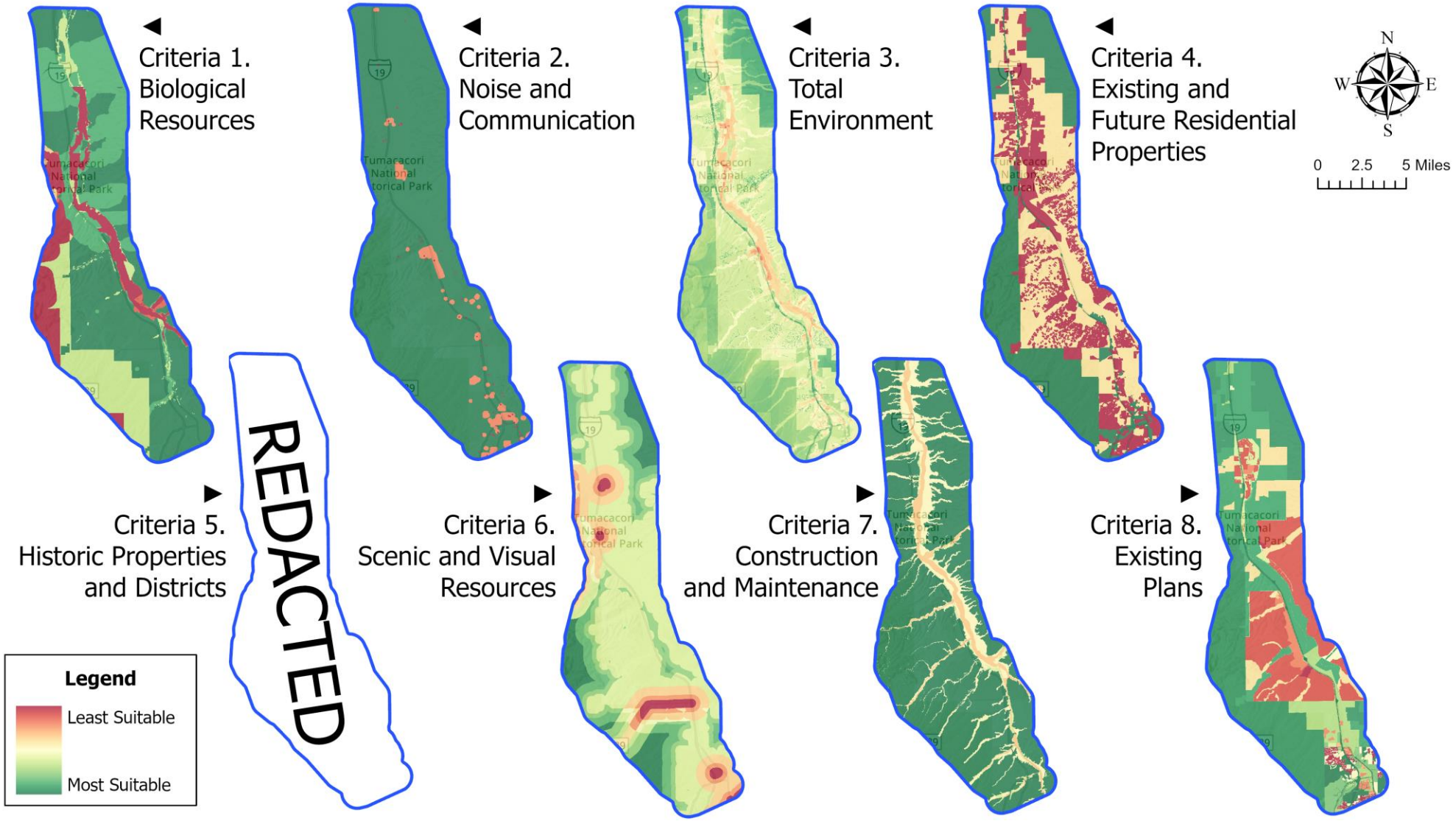
Field Verification

- Ground Truthing

Refined Segments

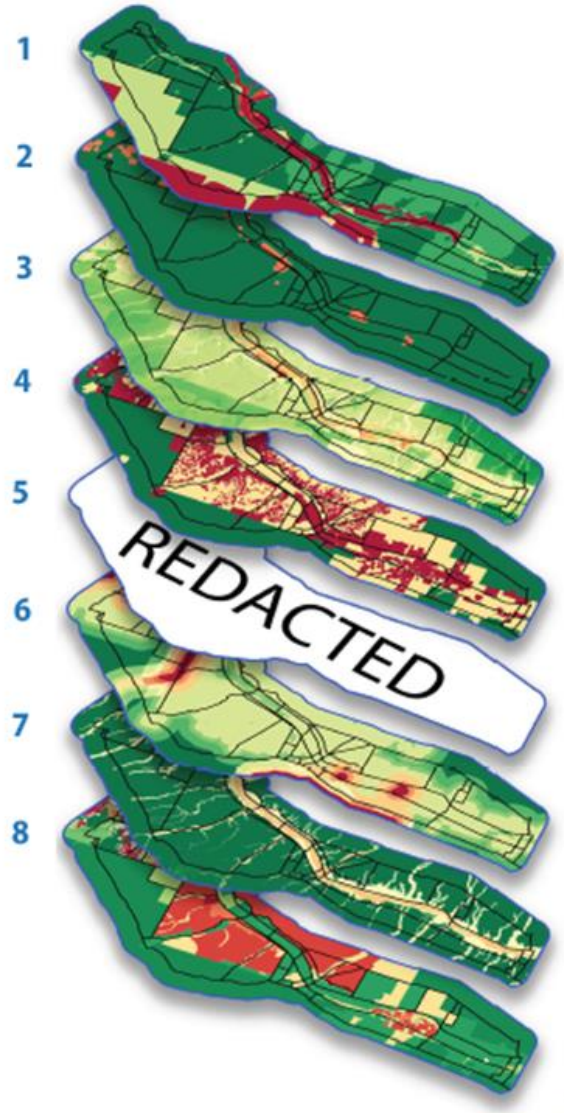
- Eliminate Less Suitable Segments
- Carried Forward for Further Evaluation

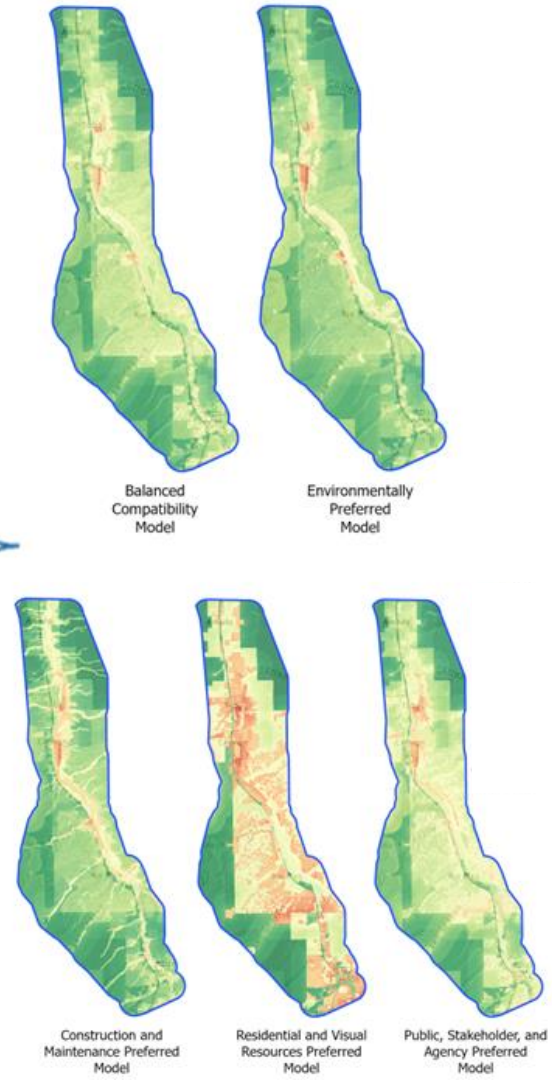
Suitability Criteria



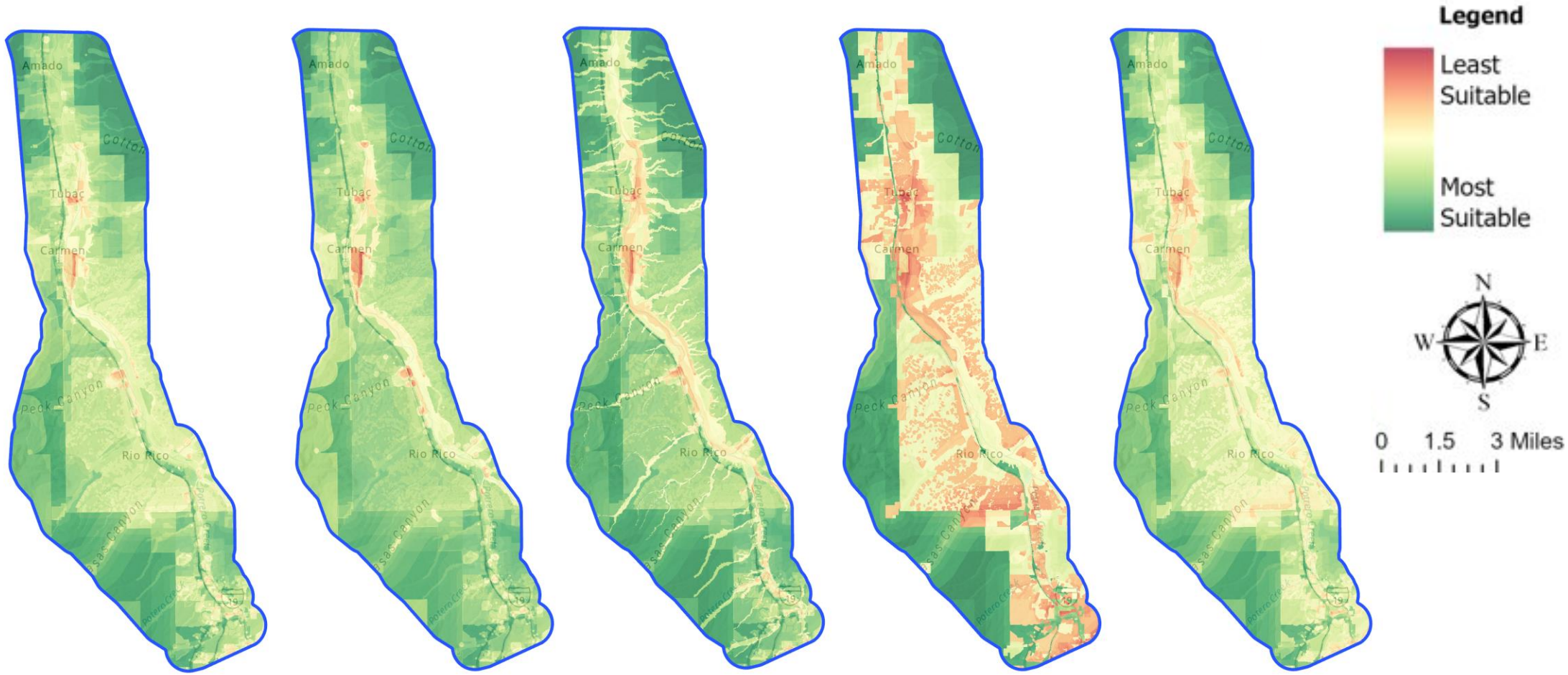
Composite Suitability Methodology

Criteria 1: Biological Resources
Criteria 2: Noise & Communications
Criteria 3: Total Environment
Criteria 4: Existing & Future Residential Properties Adjacent to Transmission Lines
Criteria 5: Historic Properties & Districts
Criteria 6: Scenic & Visual Resources
Criteria 7: Construction & Maintenance
Criteria 8: Existing Plans





Composite Suitability Models



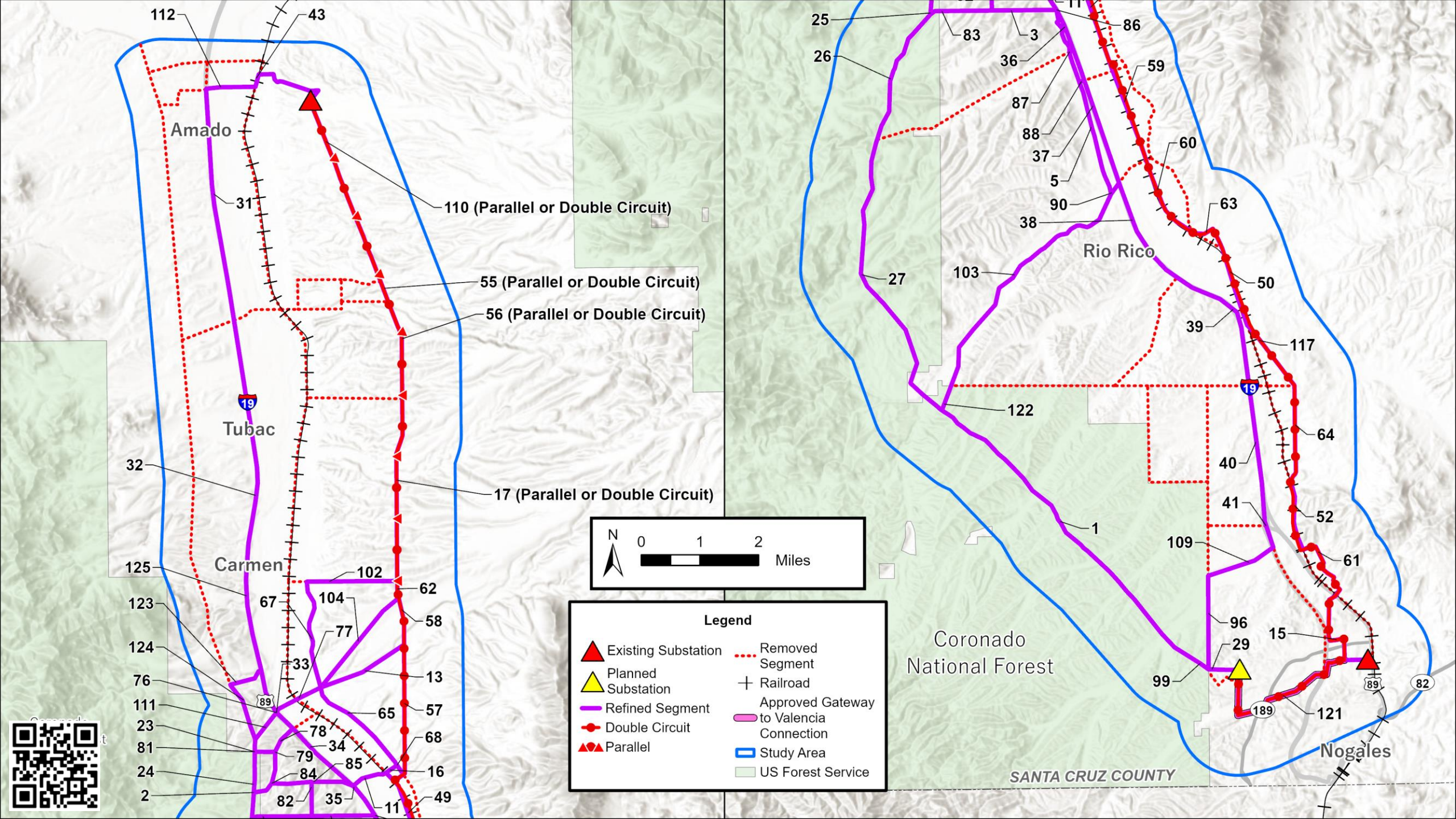
Balanced Compatibility Model

Environmentally Preferred Model

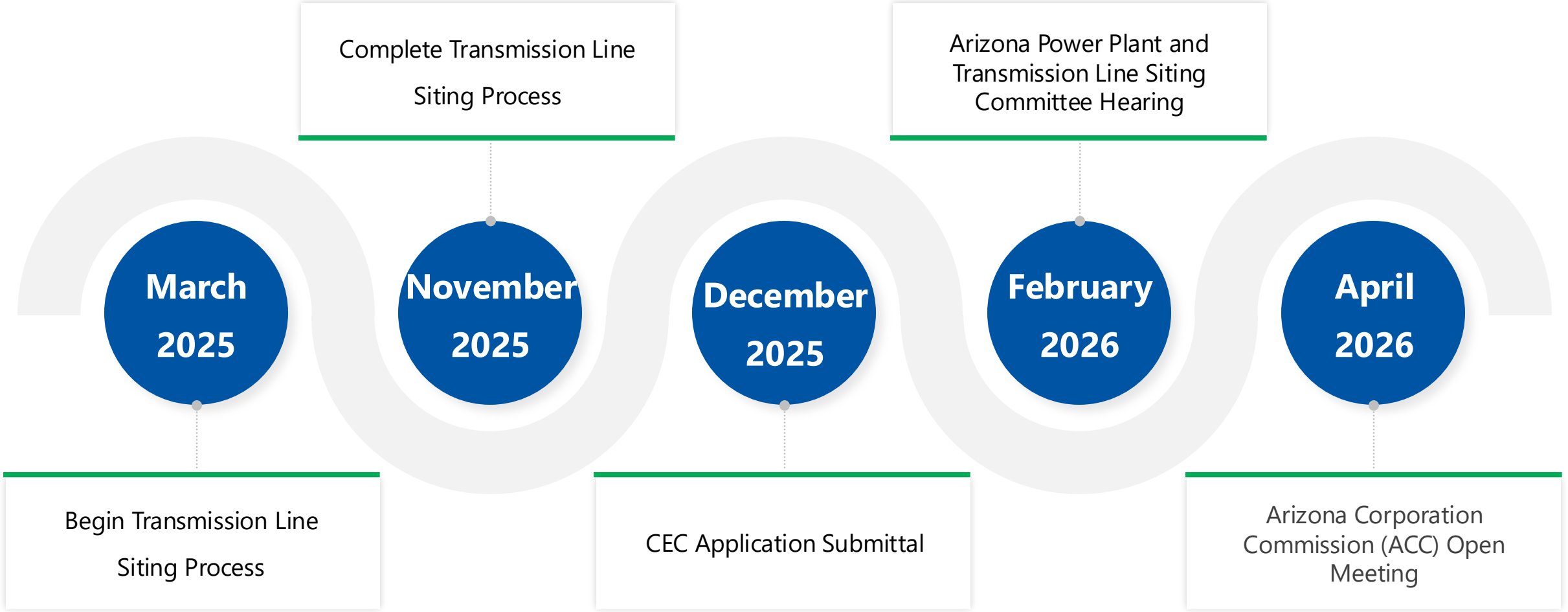
Construction and Maintenance Preferred Model

Residential and Visual Resources Preferred Model

Public, Stakeholder, and Agency Preferred Model


Amado
Tubac
Carmen
Rio Rico
Coronado National Forest
Nogales
SANTA CRUZ COUNTY
110 (Parallel or Double Circuit)
55 (Parallel or Double Circuit)
56 (Parallel or Double Circuit)
17 (Parallel or Double Circuit)
N
0 1 2
Miles
Legend
Existing Substation
Planned Substation
Refined Segment
Double Circuit
Parallel
Removed Segment
Railroad
Approved Gateway to Valencia Connection
Study Area
US Forest Service

Project Schedule



Santa Cruz Reliability Project South (Phase 3) projected in service date 2030
(In service date subject to change)

Public Participation

- Fill out an online comment form at:
  - uesaz.com/santa-cruz-reliability-project-south
- Send comments via email to: scrnorth@uesaz.com
- Call (520) 917-6635 and leave a voicemail message
- Mail a letter with comments to:
  - ATTN: Santa Cruz Reliability South
    P.O. Box 711
    Mail Stop CB200
    Tucson, AZ 85701-0711

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