



COLORADO

Department of Transportation

Cottonwood Pass Concept Design
Natural Resources
Issue Task Force (ITF) Meeting #2
November 17, 2022



Welcome!

Presenters: Kara Swanson and Michael Gloden, David Evans and Associates, Inc.

AGENDA

- Project overview
- Design options and existing conditions considerations
- Next steps
- Group discussion/Q&A

WHAT TO EXPECT

- A mix of presentation and GIS review
- ITF input used to inform evaluation and refinement of concept designs at each site



Project Overview





Project purpose

FOCUS

- Cottonwood Pass between Gypsum in Eagle County and CO 82 in Garfield County

PURPOSE

- Safety improvements to make the county roads safer and more functional as a vital travel connection between the local communities

IMPETUS

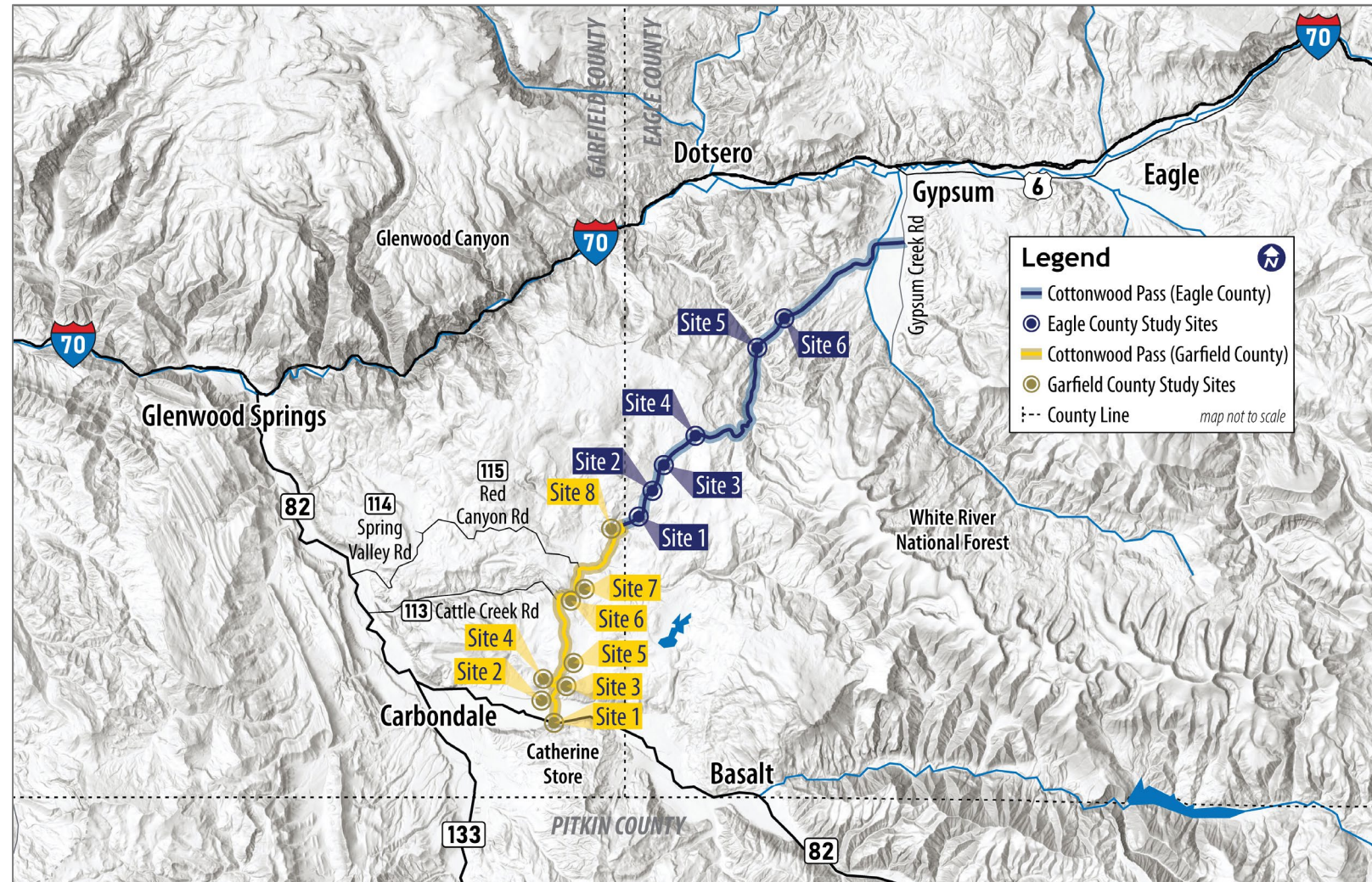
- Eagle and Garfield counties recognized the need for safety improvements
- This need became more apparent during Glenwood Canyon closures

This project IS NOT preparing Cottonwood Pass to be a detour route for I-70 traffic! The detour will remain north of I-70. Cottonwood Pass improvements are needed for the safety of local travelers.



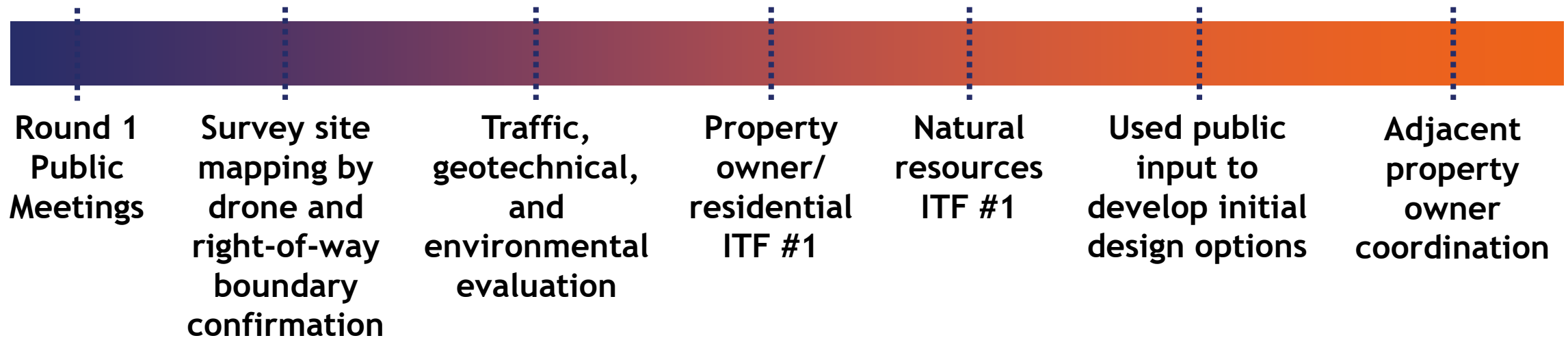
Project site key map

- Focus on 14 specific sites:
 - 6 in Eagle County
 - 8 in Garfield County
- Potential improvements account for 14% of total length of Cottonwood Pass
 - Corridor-wide improvements are not being considered with this project





Progress to date





Improvement concepts

- Concepts focus on balance of improved safety without increasing traffic volume or speeds
- Safety
 - Curves and narrow areas with known concerns
 - Lane and shoulder widths
 - Sight distance
- Traffic
 - Hot spot improvements only
 - Overall corridor mountainous with curves, steep grades, and narrow areas
 - Current vehicle length and size restrictions remain

Project team considering other ways to address speeding concerns that could be implemented with projects as they move forward at individual sites



Increased Signage

- Pros:
- Reduced speeds, especially unfamiliar drivers
- Cons:
- Maintenance



Enhanced Signs

- Pros:
- Interactive
 - Reduced speeds
- Cons:
- Cost
 - Maintenance
 - Visual impacts



Speed Feedback Signs

- Pros:
- Interactive
 - Reduced speeds
- Cons:
- Cost
 - Maintenance
 - Visual impacts



Rumble Strips

- Pros:
- Promotes drivers to stay in lane/slow down
- Cons:
- Cost
 - Noise impacts



Context Sensitive Solutions (CSS) process

- ✓ Establishing project goals
- ✓ Establishing participant roles and responsibilities
- ✓ Establishing criteria for evaluating alternatives
- ✓ Developing options for improvements
- Evaluating design options based on established criteria
- Documenting the process and final recommendations



Evaluation criteria

Core Value	Criteria/Measure
Safety	Assessment of changes to safety concerns at site (speed, off-road vehicles, two-way traffic conflicts)
Respecting Corridor Character	Ability to maintain rural feel of road
	Potential right-of-way impacts to private property
	Potential visual impacts
Natural Resource Preservation	Potential impacts to wildlife habitat and waterways
Collaborative Improvements	Concerns and support from adjacent property owners
	Concerns and support from corridor travelers and general public



Design Options and Existing Conditions Considerations by Site





Corridor-wide existing conditions

Environmental

- High-level overview with available information, windshield survey, and input from regulatory agencies
 - Field survey verification needed with future design
- Since last meeting, we obtained additional data:
 - FWS and CDOT input regarding federal and state T&E species. Updated species lists will be provided in the Final Report.
 - CDOT requested consideration for big game species. Range and migration patterns for elk and mule deer will be summarized in the Final Report.
 - CDOT Roadside Fen Inventory (2018) was reviewed, and the inventory area did not include Cottonwood Pass.
- Federal, state, and BLM listed species with potential to occur require further evaluation to determine potential impacts with future design



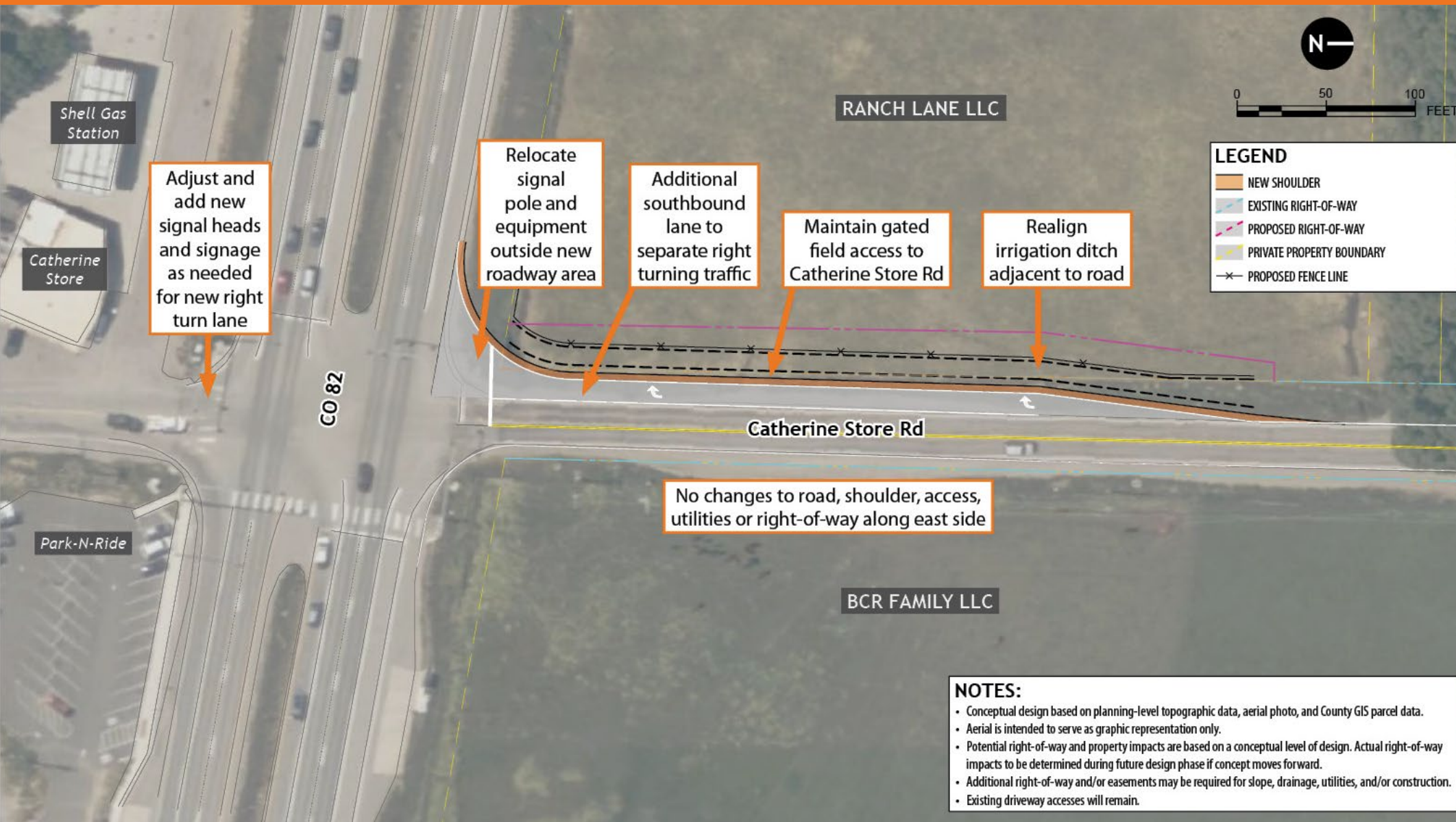
Environmental

GIS layers available to review for each site:

- National Wetland Inventory
- Federal T&E
- State T&E
- CPW Priority Habitats
- Water Quality Classifications
- Aerial Photo



Garfield County Site 1



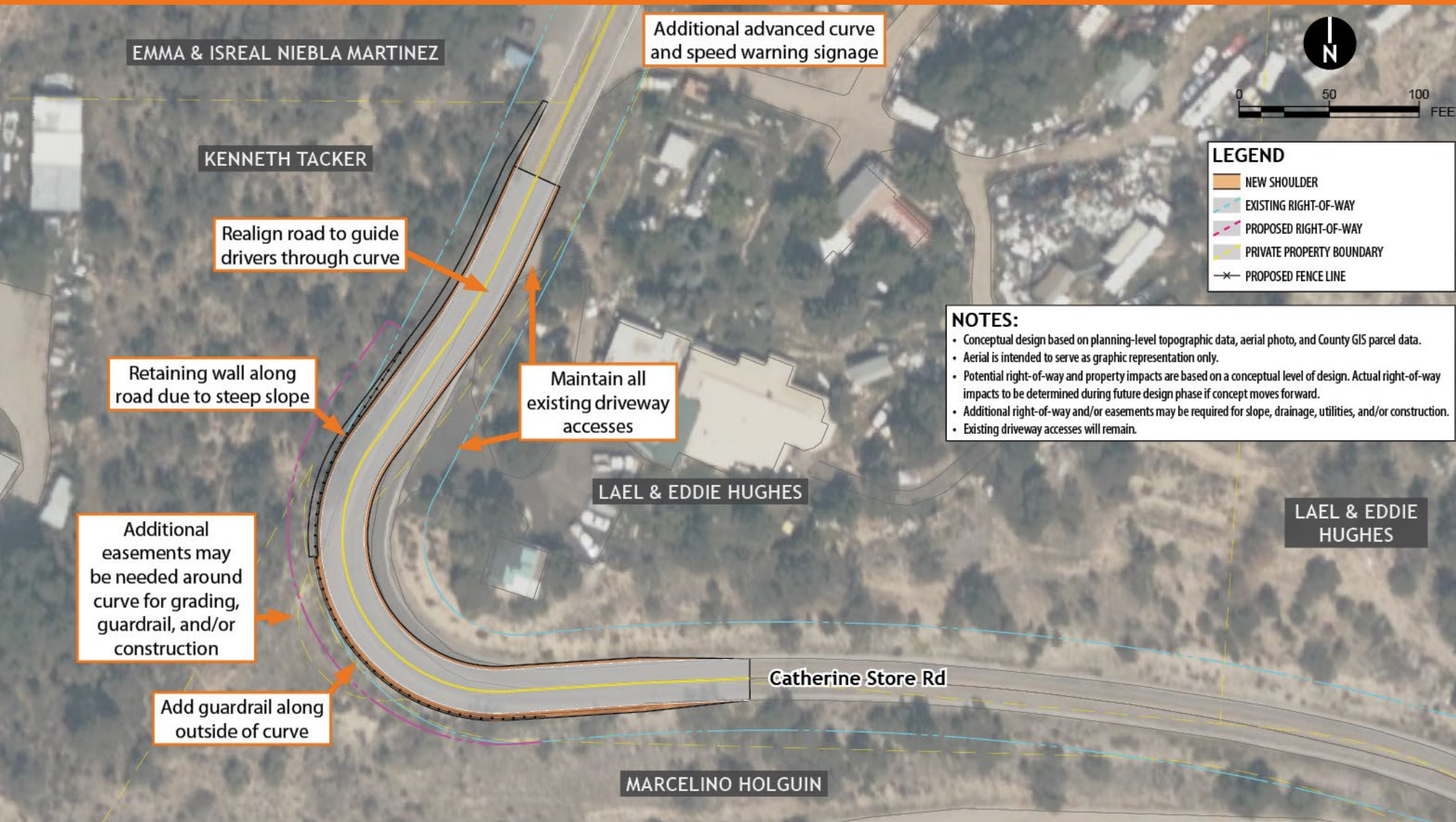
- CONSIDERATIONS**
- **Environmental**
 - Irrigation ditch presumed to be a non-jurisdictional water
 - No federal or state-listed threatened & endangered species habitat
 - Cultural resources - Patterson Ditch, CO 82, Catherine Building, 1972 residential building
 - **Geotechnical**
 - Collapsible and evaporite soils

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



Garfield County Site 2 - Option 1

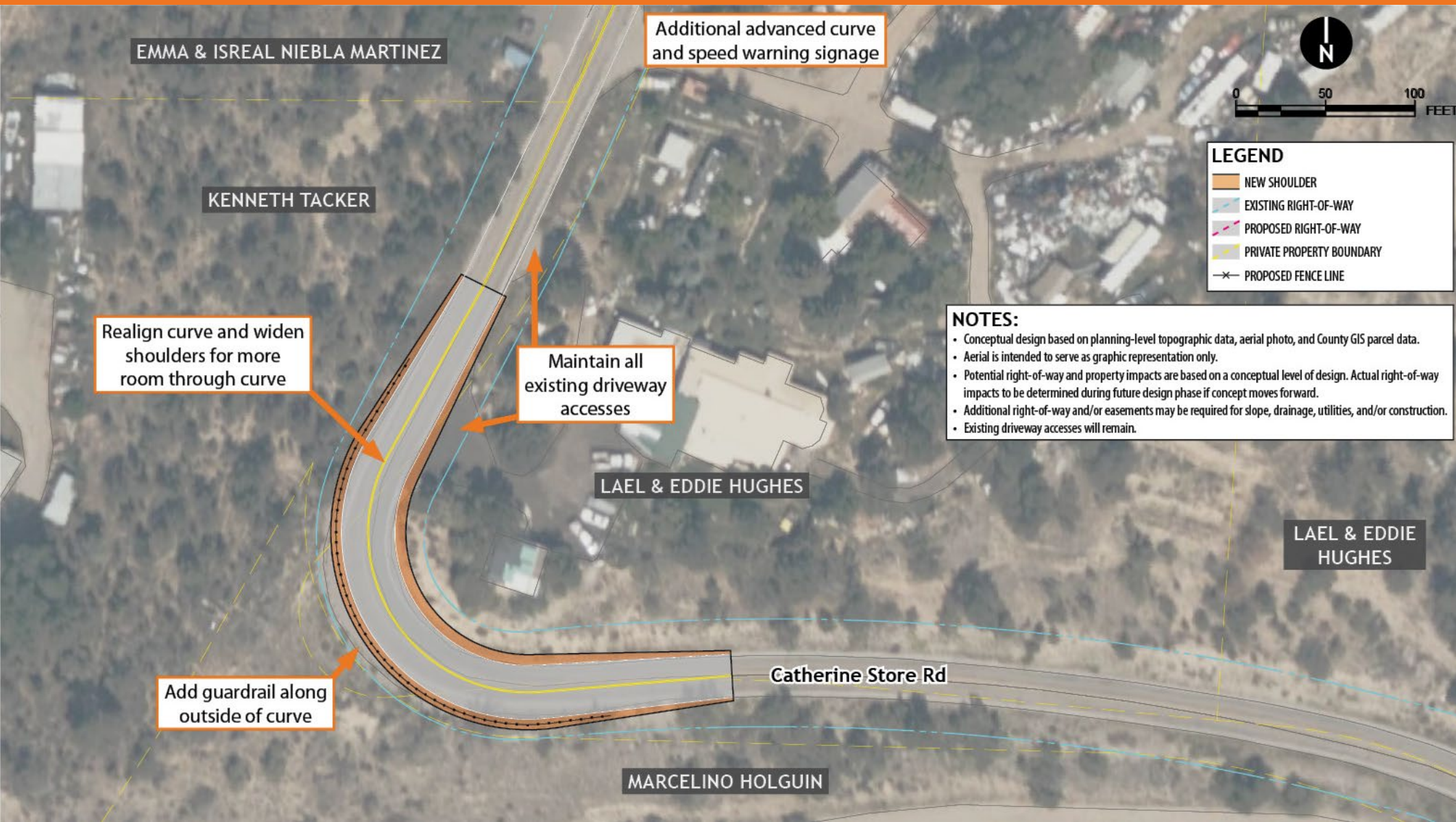


CONSIDERATIONS

- **Environmental**
 - No mapped streams or wetlands
 - No federal or state-listed threatened & endangered species habitat
 - Cultural resource - 1960 residential building
- **Geotechnical**
 - Collapsible and evaporite soils



Garfield County Site 2 - Option 2



CONSIDERATIONS

- **Environmental**
 - No mapped streams or wetlands
 - No federal or state-listed threatened & endangered species habitat
 - Cultural resource - 1960 residential building
- **Geotechnical**
 - Collapsible and evaporite soils



Garfield County Site 3

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
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- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.

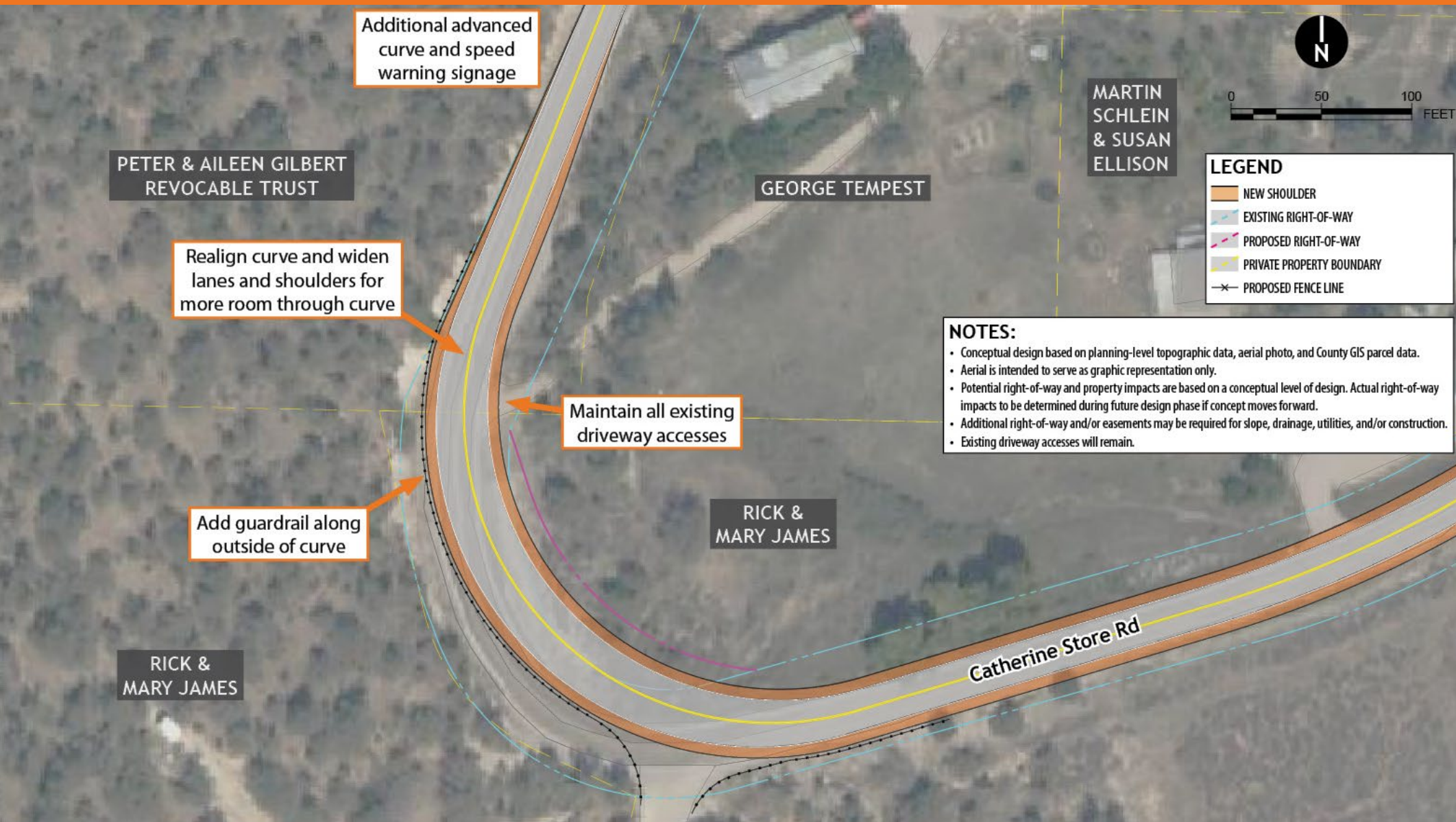


CONSIDERATIONS

- **Environmental**
 - Potential jurisdictional mapped stream (unnamed)
 - No federal or state-listed threatened & endangered species habitat
 - No cultural resources near site
- **Geotechnical**
 - Collapsible and evaporite soils
 - Site within mapped landslide, but no evidence of slope failure or movement



Garfield County Site 4



CONSIDERATIONS

- **Environmental**
 - No mapped streams or wetlands
 - No federal or state-listed threatened & endangered species habitat
 - No cultural resources near site
- **Geotechnical**
 - Collapsible and evaporite soils
 - Site within mapped landslide, but no evidence of slope failure or movement



Garfield County Site 5



CONSIDERATIONS

- **Environmental**
 - No mapped streams or wetlands
 - No federal or state-listed threatened & endangered species habitat
 - No cultural resources near site
- **Geotechnical**
 - Collapsible and evaporite soils
 - Site within mapped landslide, but no evidence of slope failure or movement
 - Rockfall analysis and protection may be required with excavation into rock outcrops



Garfield County Site 6



CONSIDERATIONS

- **Environmental**
 - Potential jurisdictional mapped stream (unnamed)
 - Potentially suitable habitat for federal threatened & endangered species (yellow-billed cuckoo and Ute ladies'-tresses orchid)
 - Cultural resource - Panorama Dr
 - Cultural resources (Hopkins-Basalt Section 15kv Transmission Line and Needham Ditch) to be avoided
- **Geotechnical**
 - Collapsible and evaporite soils
 - Site within mapped landslide, but no evidence of slope failure or movement

NOTES:

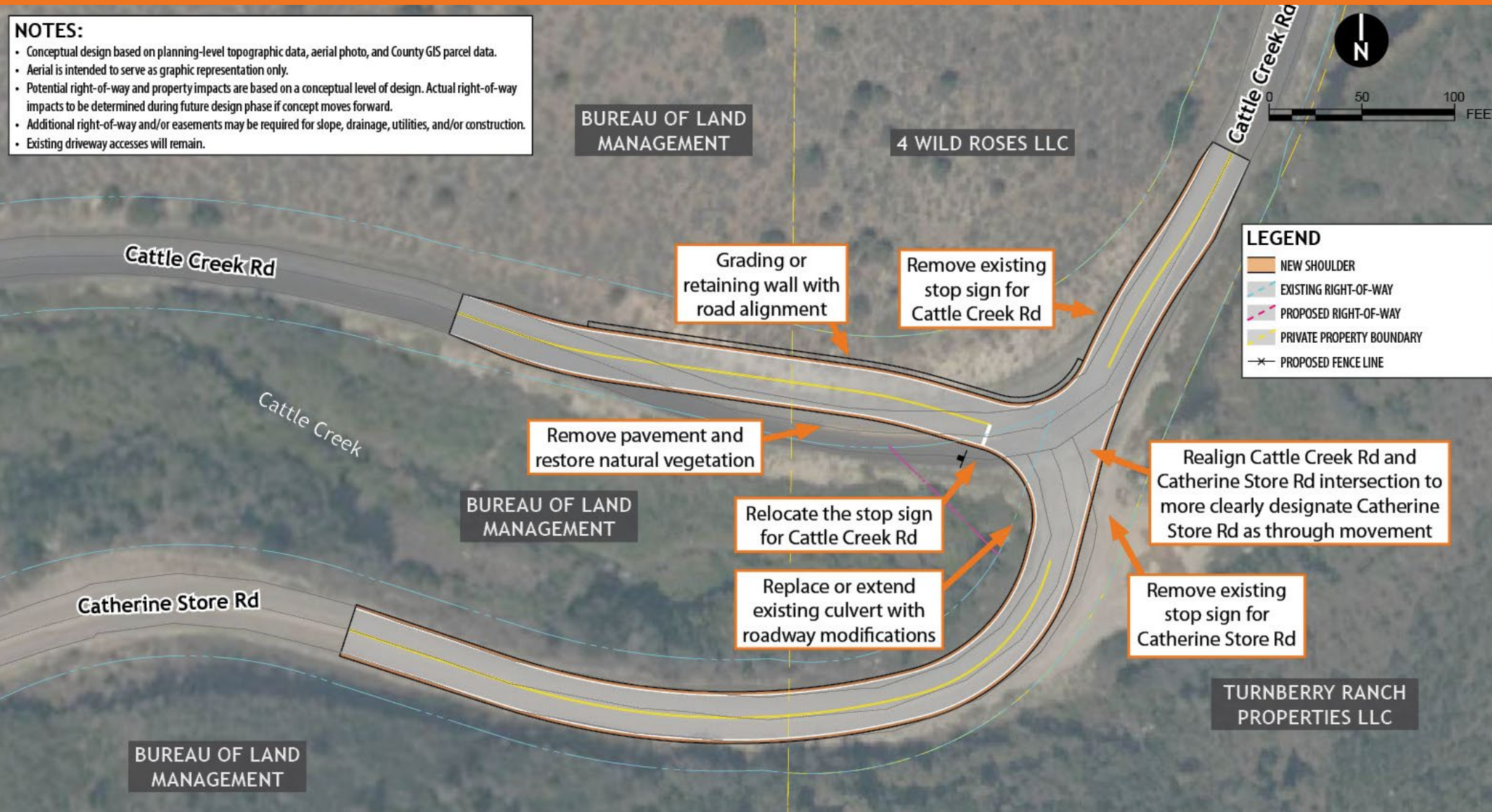
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- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



Garfield County Site 7 - Option 1

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
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- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



CONSIDERATIONS

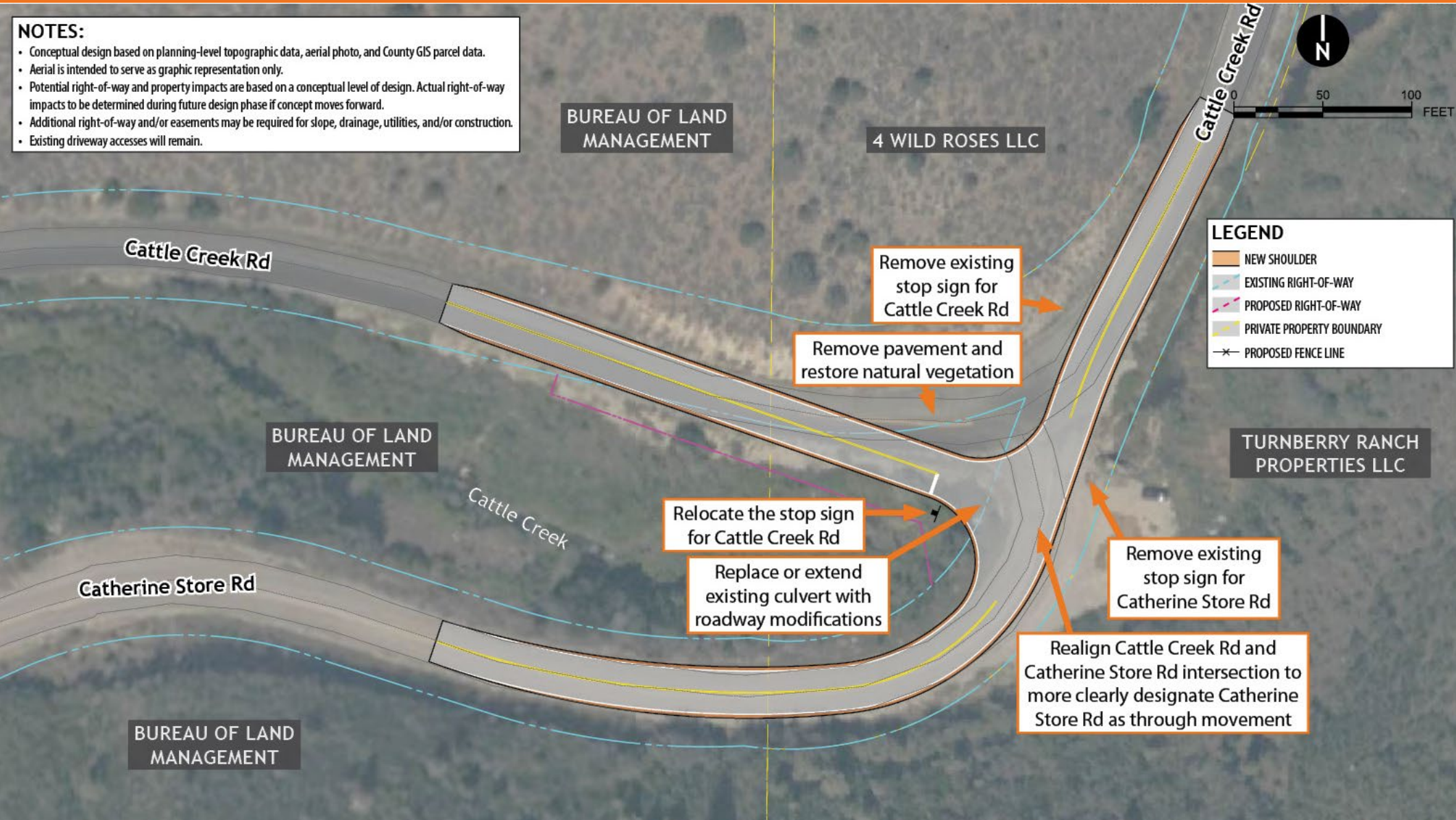
- **Environmental**
 - Cattle Creek and associated wetlands presumed to be jurisdictional waters
 - Potentially suitable habitat for federal threatened & endangered species (yellow-billed cuckoo and Ute ladies'-tresses orchid)
 - Cultural resource - Cattle Creek Rd
- **Geotechnical**
 - Collapsible and evaporite soils
 - Site within mapped landslide, but no evidence of slope failure or movement



Garfield County Site 7 - Option 2

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
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- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



- CONSIDERATIONS**
- **Environmental**
 - Cattle Creek and associated wetlands presumed to be jurisdictional waters
 - Potentially suitable habitat for federal threatened & endangered species (yellow-billed cuckoo and Ute ladies'-tresses orchid)
 - Cultural resource - Cattle Creek Rd
 - **Geotechnical**
 - Collapsible and evaporite soils
 - Site within mapped landslide, but no evidence of slope failure or movement



Garfield County Site 8



- CONSIDERATIONS**
- **Environmental**
 - No mapped streams or wetlands
 - Potentially suitable habitat for federal threatened & endangered species (yellow-billed cuckoo and Ute ladies'-tresses orchid)
 - No cultural resources near site
 - **Geotechnical**
 - Collapsible and evaporite soils
 - Rock outcrops were observed and bedrock appears workable for cut slopes

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.

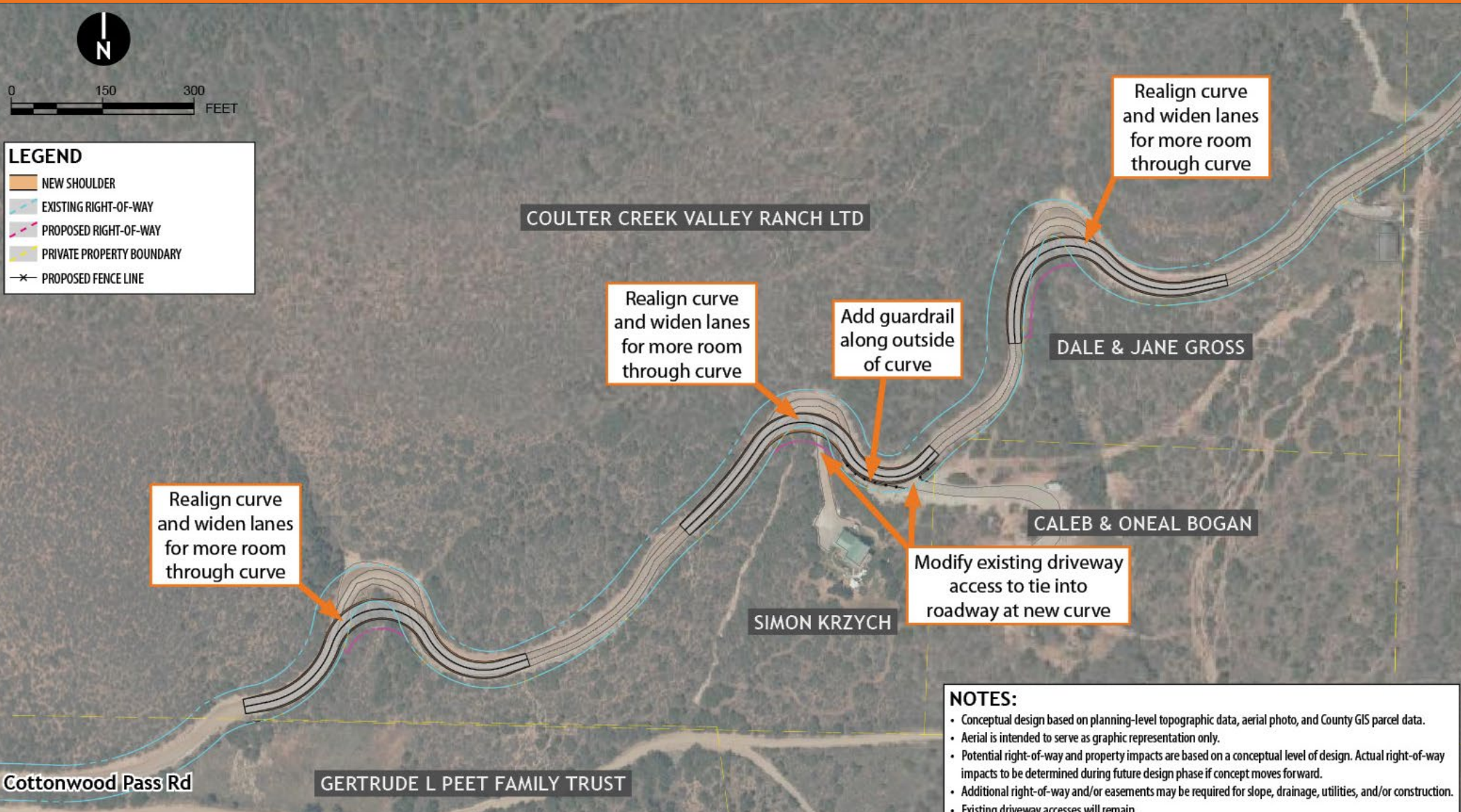


Eagle County Site 1 - Option 1



LEGEND

- NEW SHOULDER
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- PRIVATE PROPERTY BOUNDARY
- PROPOSED FENCE LINE



CONSIDERATIONS

- **Environmental**
 - No mapped streams or wetlands
 - No federal or state-listed threatened & endangered species habitat
 - No cultural resources near site
- **Geotechnical**
 - Collapsible soils to be mitigated with design and construction
 - Rock outcrops were observed and bedrock appears workable for cut slopes

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.

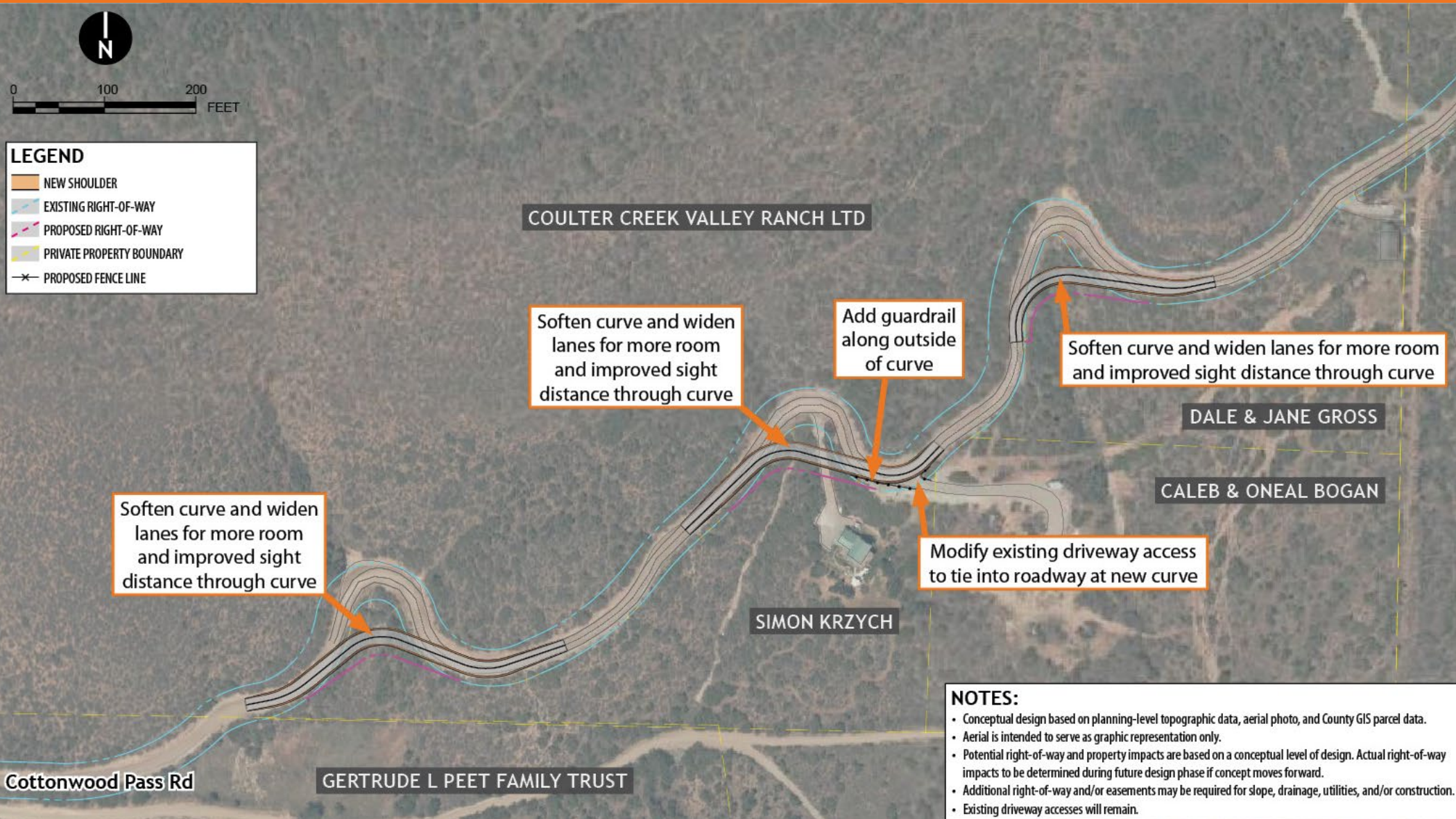


Eagle County Site 1 - Option 2



LEGEND

- NEW SHOULDER
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- PRIVATE PROPERTY BOUNDARY
- PROPOSED FENCE LINE



CONSIDERATIONS

- **Environmental**
 - No mapped streams or wetlands
 - No federal or state-listed threatened & endangered species habitat
 - No cultural resources near site
- **Geotechnical**
 - Collapsible soils to be mitigated with design and construction
 - Rock outcrops were observed and bedrock appears workable for cut slopes

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



Eagle County Site 2



LEGEND

- NEW SHOULDER
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- PRIVATE PROPERTY BOUNDARY
- PROPOSED FENCE LINE



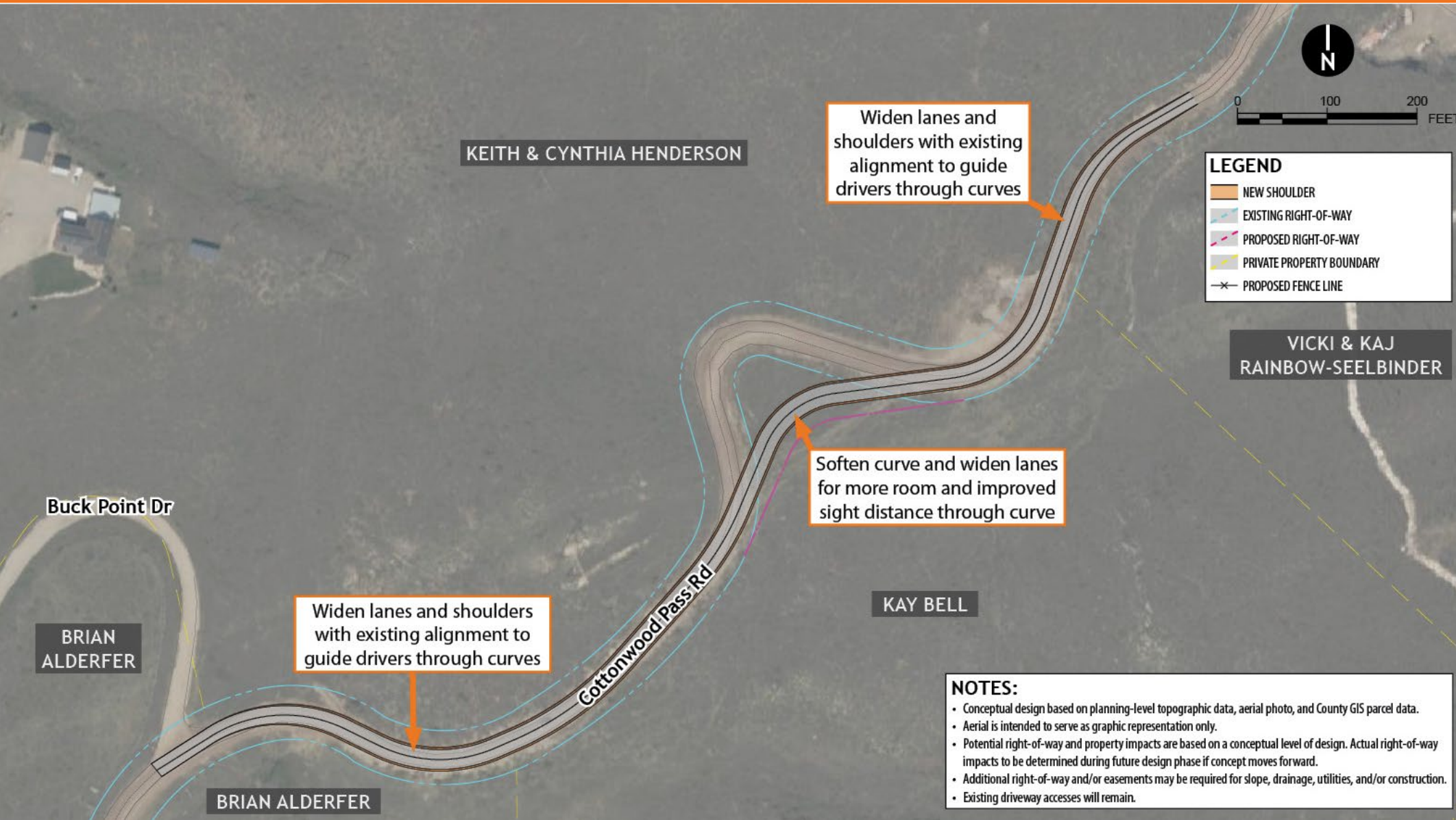
- CONSIDERATIONS**
- **Environmental**
 - East Coulter Creek and associated wetlands presumed to be jurisdictional waters
 - No federal or state-listed threatened & endangered species habitat
 - Cultural resource - unnamed 1908 Trail
 - **Geotechnical**
 - Site within mapped landslide, but no evidence of slope failure or movement
 - Rock outcrops were observed and bedrock appears workable for cut slopes

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



Eagle County Site 3 - Option 1



CONSIDERATIONS

- **Environmental**
 - Potentially jurisdictional mapped stream (unnamed) and wetlands associated with Von Springs Reservoir 1
 - No federal or state-listed threatened & endangered species habitat
 - Cultural resource - the Lower Von Springs Reservoir and dam

Geotechnical

- Potential for evaporite soils
- Site within mapped landslide, but no evidence of slope failure or movement

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



Eagle County Site 3 - Option 2



- CONSIDERATIONS**
- **Environmental**
 - Potentially jurisdictional mapped stream (unnamed) and wetlands associated with Von Springs Reservoir 1
 - No federal or state-listed threatened & endangered species habitat
 - Cultural resource - the Lower Von Springs Reservoir and dam
 - **Geotechnical**
 - Potential for evaporite soils
 - Site within mapped landslide, but no evidence of slope failure or movement

NOTES:

- Conceptual design based on planning-level topographic data, aerial photo, and County GIS parcel data.
- Aerial is intended to serve as graphic representation only.
- Potential right-of-way and property impacts are based on a conceptual level of design. Actual right-of-way impacts to be determined during future design phase if concept moves forward.
- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



Eagle County Site 4

NOTES:

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- Additional right-of-way and/or easements may be required for slope, drainage, utilities, and/or construction.
- Existing driveway accesses will remain.



CONSIDERATIONS

- **Environmental**
 - No mapped streams or wetlands
 - No federal or state-listed threatened & endangered species habitat
 - No cultural resources near site
- **Geotechnical**
 - No evidence of geologic hazards or geotechnical features that would adversely impact design or construction



Eagle County Sites 5 & 6 (Blue Hill)



NOT TO SCALE



**CONCEPT IN
PROCESS**



Next Steps

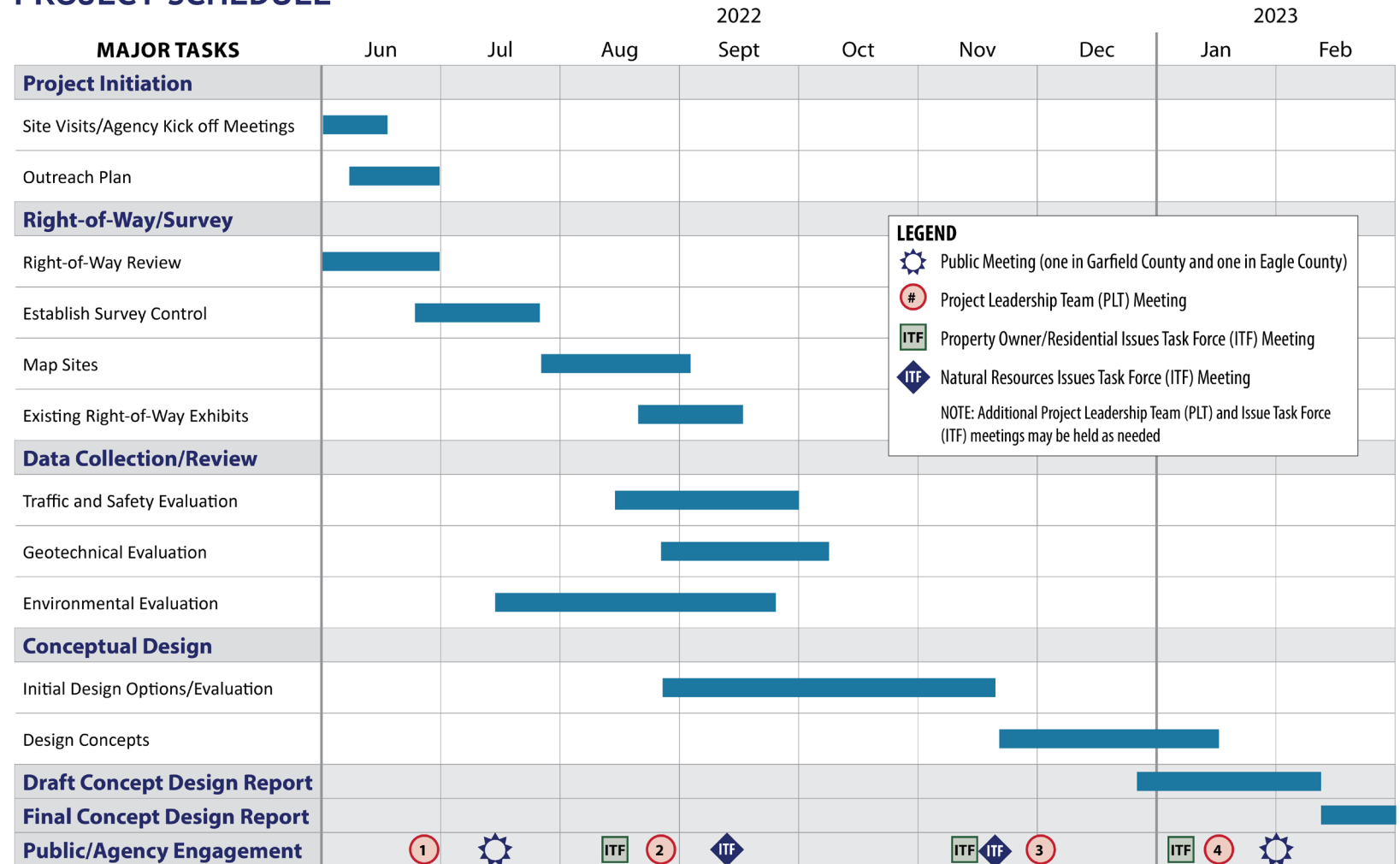




Next steps

- Next meeting of this group in January to discuss site assessments and refined designs

PROJECT SCHEDULE





Group Discussion/Q & A





Thank you!

www.codot.gov/projects/cottonwood-pass-concept-design