

# North Mesa Housing – Transportation and Utilities Study

Los Alamos Public Schools Board and Los Alamos  
County Council Joint Session  
Incorporated County of Los Alamos  
CDD, Housing and Special Projects

Presented by



Dan Osborn,  
Housing and Special Projects  
Manager

February 26, 2026

# Recent History

## North Mesa Housing Plan to Present

- Jul 2019 Presentation to LAPS Board
- Oct 2019 Concept plans developed
- Jan 2020 Public Meeting
- Feb 2020 LAPS/LAC Joint Session
- Feb 2020 Community Conversation
- Oct 2020 LAPS/LAC Joint Session
- Nov 2020 LAPS/LAC MOU
- Nov 2020 First Steering Committee Meeting
- Nov 2021 Steering Committee pause to allow for Feasibility Study Analysis
- Oct 2022 EPS Feasibility Analysis Completed
- Jun 2023 EPS Feasibility Analysis Addendum Completed
- Jun 2024 Wilson and Company Transpo & Utilities Study kick-off
- Aug 2025 Transpo & Utilities Study completed

# North Mesa Housing Study



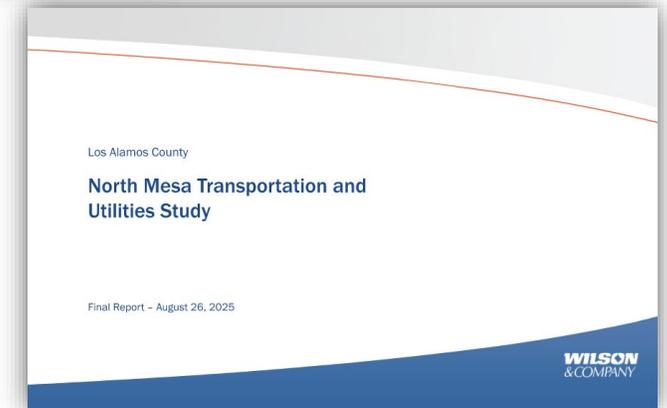
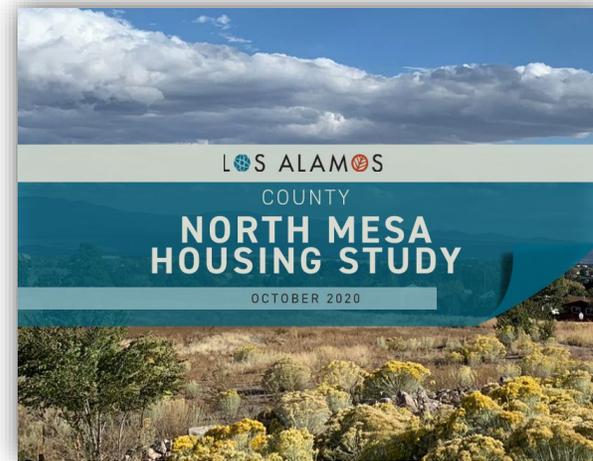
ATTACHMENT B

## Final Study Concepts include:

- 210-360 new homes, including apartments, townhomes, detached single-family.
- Accommodation of existing recreational and school program uses.
- New trails, parks, and open spaces.
- Creates access and connectivity with adjacent neighborhoods.
- Acreage for a potential new school facility not included in this analysis.

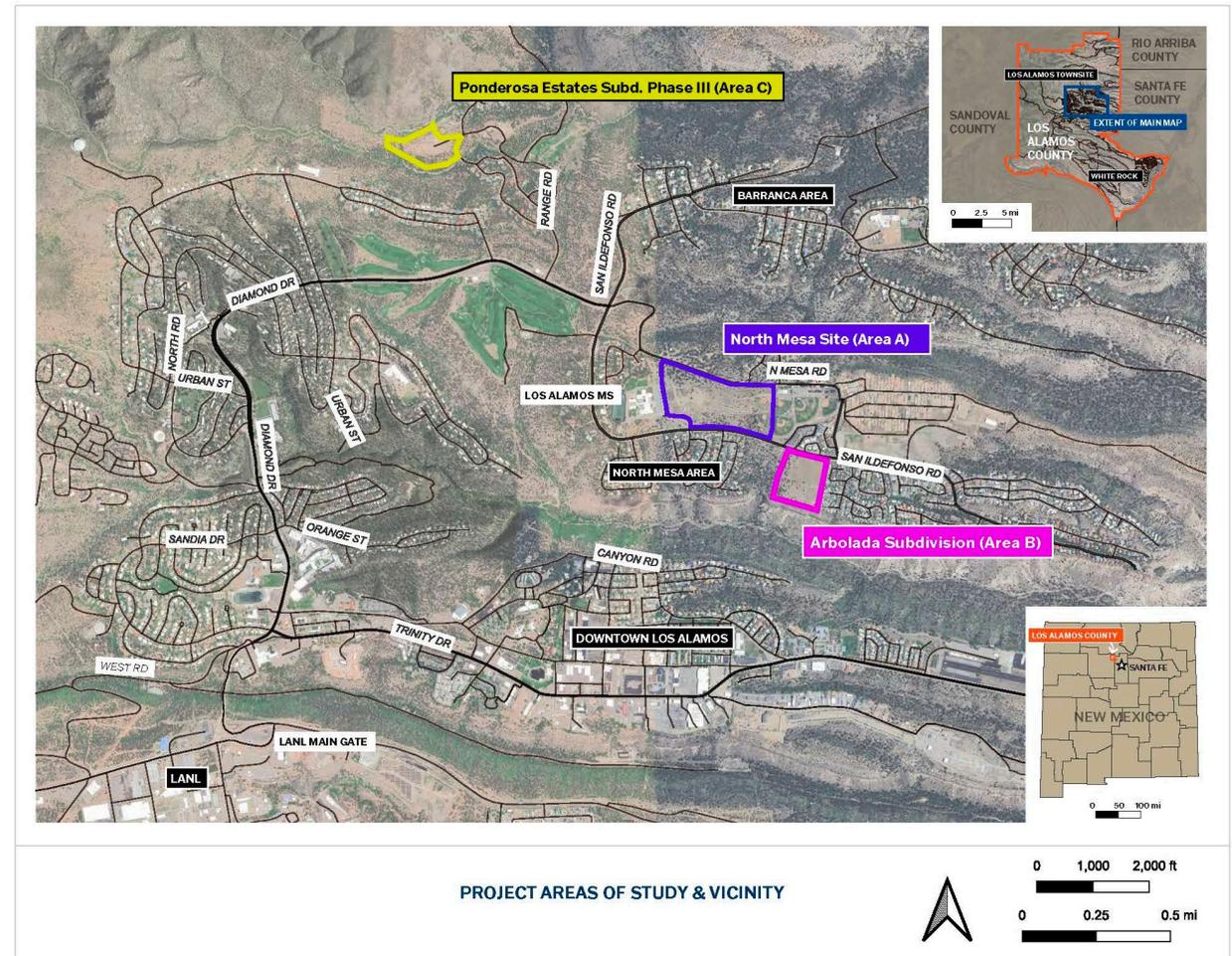
# Study Objective

- Evaluate the current Los Alamos County infrastructure capacity for proposed residential developments in North Mesa
- The study builds upon the findings and recommendations of the Los Alamos County North Mesa Housing Study that was completed in October 2020 and recent planning efforts.



# Study Area

- North Mesa Site (Area A)
  - 30-acre site adjacent to Los Alamos Middle School
  - 210 – 360 housing units
- Arbolada Subdivision
  - 17.07-acre site
  - 137 single-family and multifamily residences
- Ponderosa Estates
  - 11.62-acre site
  - 49 detached, single-family dwelling units



# Transportation Analysis

- 11 Intersections Analyzed along Diamond Drive within study area
  - 5 signalized
  - 5 unsignalized
  - 1 roundabout
- Analyzed under Existing Condition & 2035 Implementation Year No Build
- All Intersections were LOS C or better except for Diamond Drive & North Rd (D in AM Peak Hour)

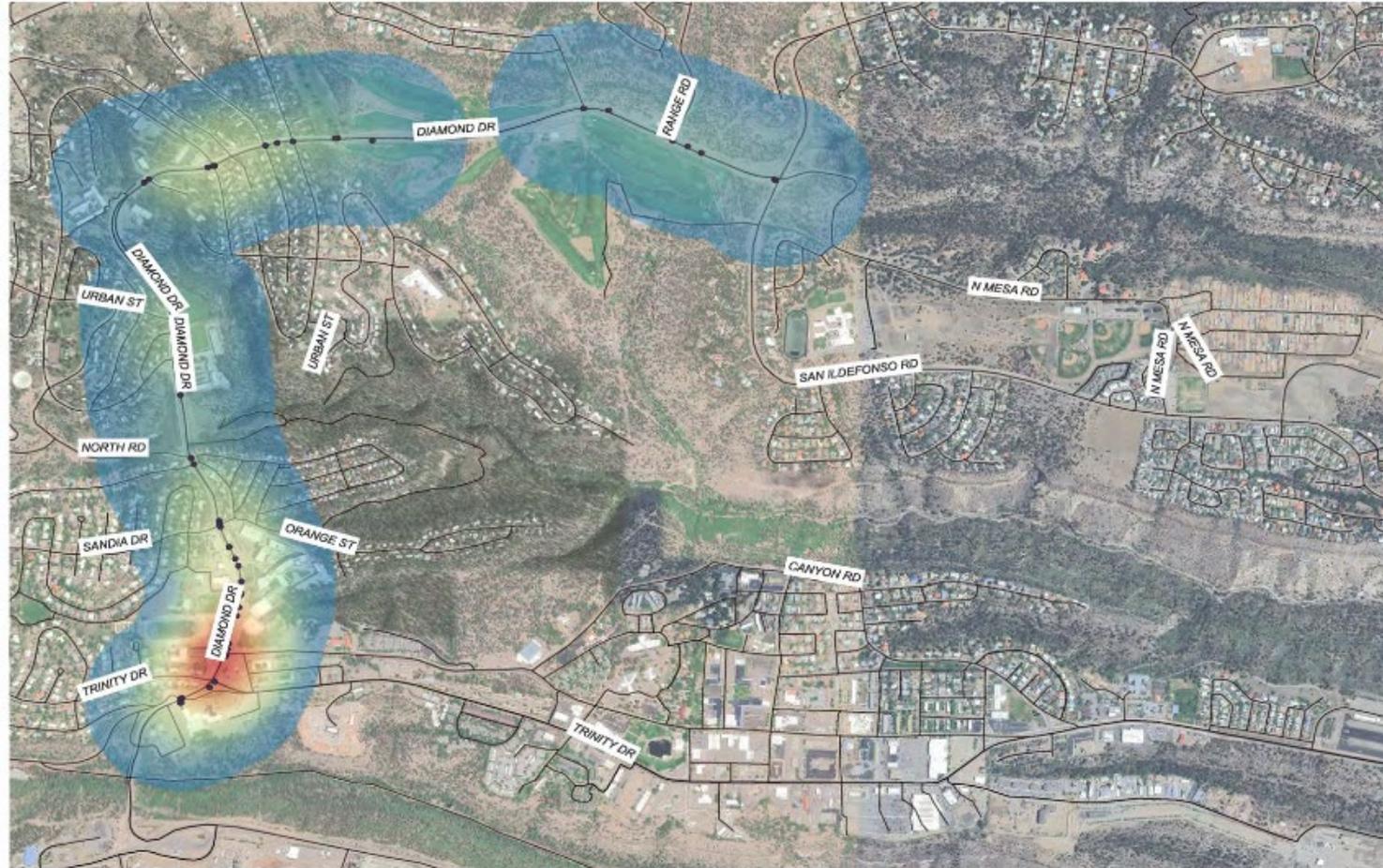
# Transportation Analysis

- Crash Data along Diamond Drive from 2019 through 2023
- Total of 94 crashes reported during this time period
- Highest Number of Crashes in 2023 (24)
- Lowest Number of Crashes in 2020 (14)
  - Likely due to strictest stage of COVID 19 Health Orders and reduction in crashes
- Most number of Crashes occurred at Diamond Drive and Canyon Rd

*Table A-12 – Crash Summary*

Crash Severity	Years					Years Total
	2019	2020	2021	2022	2023	
K	0	1	1	0	0	2
A	2	0	1	1	0	4
B	3	2	1	0	3	9
C	2	2	6	3	7	20
O	10	9	12	14	14	59
Total per Year	17	14	21	18	24	94

# Transportation Analysis



**CRASH DENSITY - CRASHES 2019-2023  
(DIAMOND DRIVE PRIMARY STREET)**

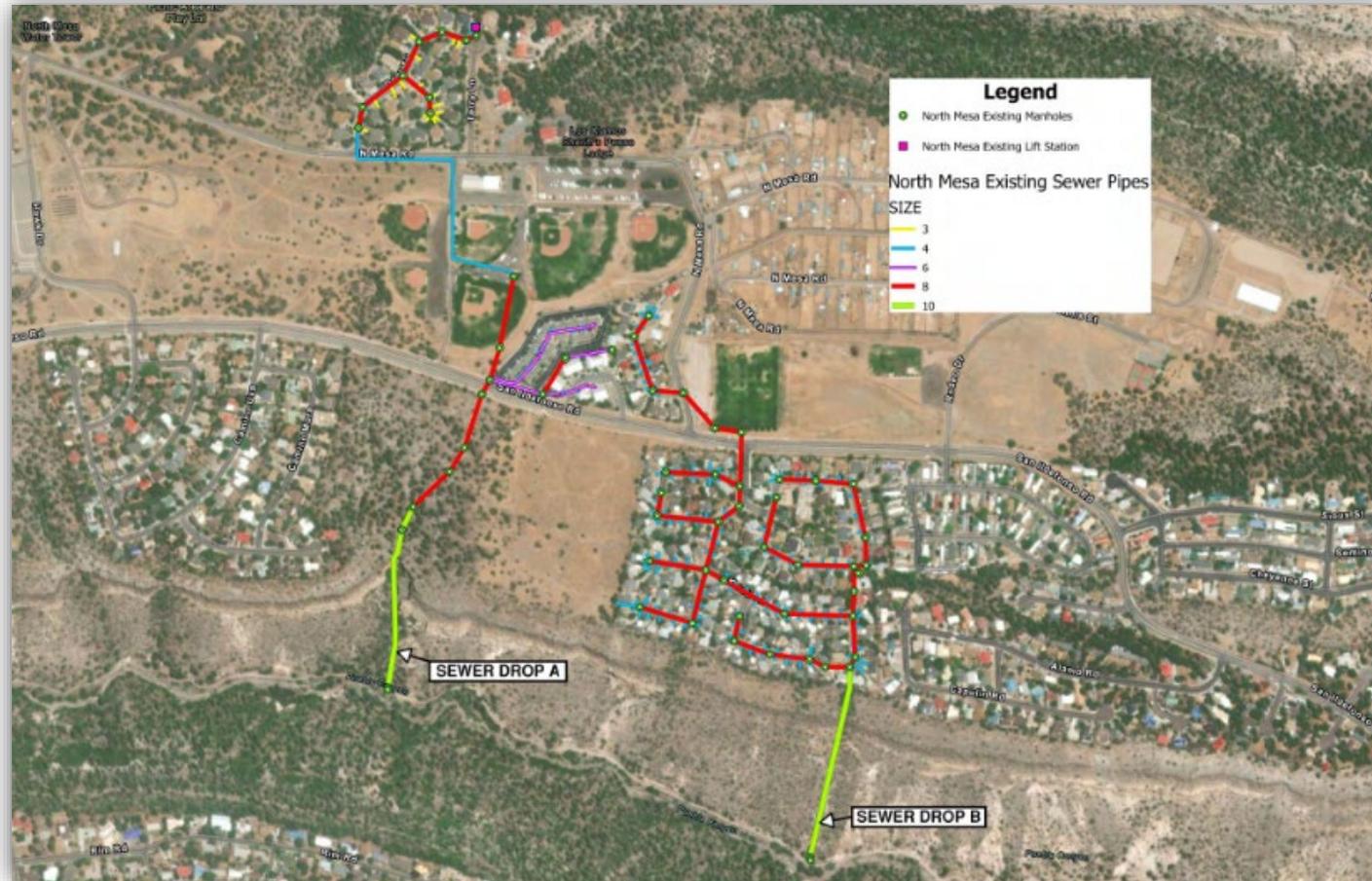
ATTACHMENT B

# Transportation Analysis

- Future Growth and Build Scenarios
- Growth Rate of 0.50% annually, with a Horizon Year of 2045
- ITE Trip Generation was utilized to estimate traffic generated from to/from each housing site location
- All Intersections maintained LOS C or better except for Diamond Drive & North Rd
- Diamond Drive & North Rd Intersection regressed from LOS D to LOS E in the AM Peak Hour

# Existing Wastewater Infrastructure

- Existing Sewer Drops A and B were analyzed and modeled



# Existing Wastewater Infrastructure

- The existing sewer pipe drops were assessed with internal camera recordings.
- It was indicated that Sewer Drop B, located at Cooper place, contains multiple holes that expose the exterior of the pipe



Figure B-4 - Sewer Drop B Interior Holes  
ATTACHMENT B

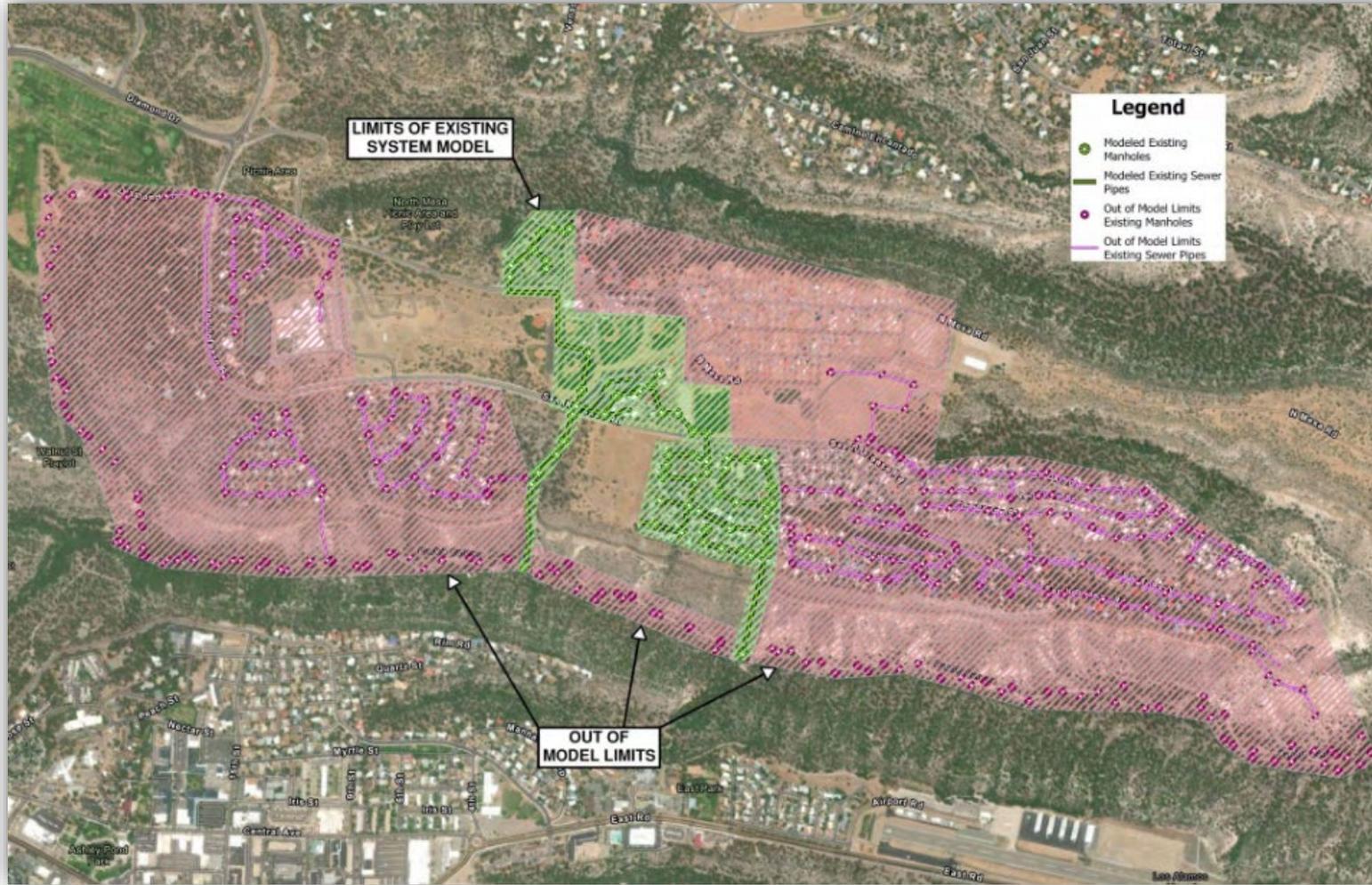
# Sewer Pipe Drop Recommendations

- Pipe Drop A appeared to be in adequate condition, no recommendations to modify/improve
- Due to Pipe Drop B's severe deterioration; rehabilitation was not recommended. Full reconstruction is necessary.
- Due to Los Alamos County's successful experience with horizontal directional drilling, this method is recommended to replace Pipe Drop B.
- New pipe would maintain similar alignment, but would be protected underground and less susceptible to damage from the elements
- Preliminary Engineer's Estimate to replace is approx. \$1.35M

# Existing Wastewater Capacity Analysis

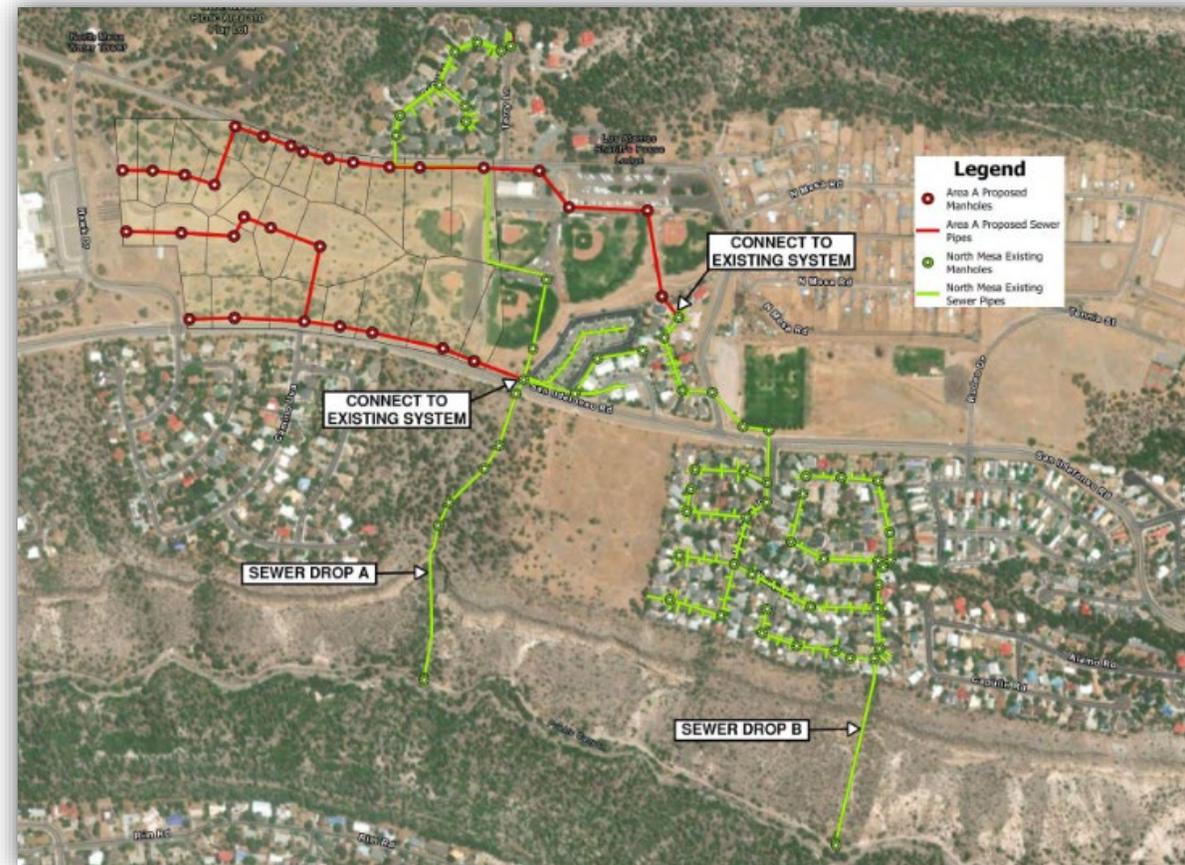
- Existing Wastewater production was estimated by applying standard gal per day per capita rates in conjunction with U.S. Census Bureau relative to Los Alamos County population
- Bentley SewerCAD was used to model existing capacities
- Existing Demand Average Wastewater Production is approx. 73k gpd
  - Equates to 17.3% of Pipe Capacity
- Existing Peak Wastewater Production is approx. 220k gpd.
  - Equates to 30.1% of Pipe Capacity
- Model focused on existing infrastructure that conveys to Pipe Drop A and B only. Areas that conveyed outside of these pipe drops were omitted.

# Wastewater Capacity Analysis



# Future Wastewater Capacity Analysis

- North Mesa Site and Arbolada Subdivision Sites were analyzed for future wastewater productions and what impacts they would contribute to Pipe Drop A and B



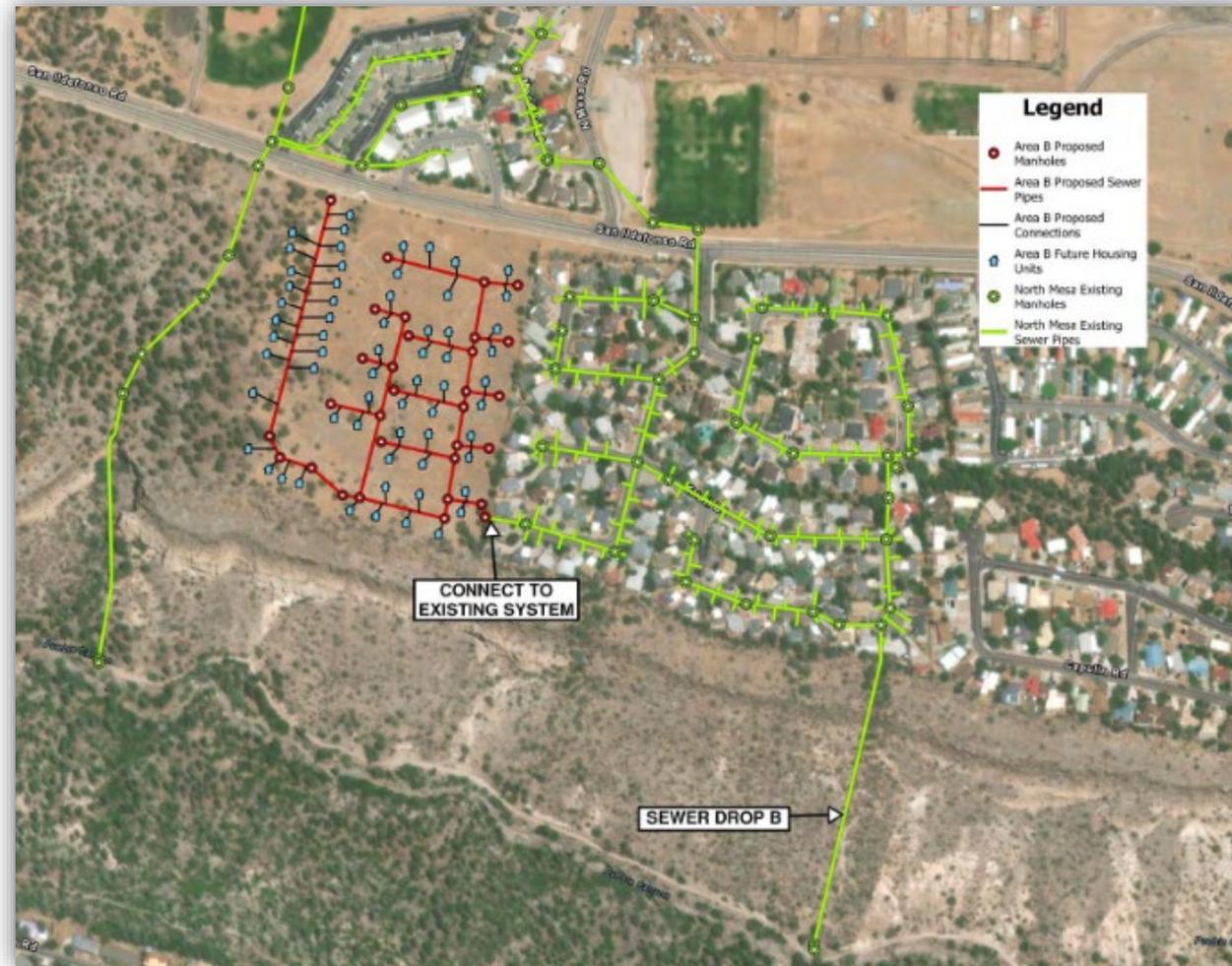
Area A Proposed Sewer System

# Future Wastewater Capacity Analysis

- North Mesa Site's full build out of 360 housing units were added to calculate the wastewater demand – increasing the daily average by over 88k gpd and the peak by 263k gpd
- This equated to 48.1% of Pipe Drop A's capacity and 42.4% of Pipe Drop B's capacity (peak demand)
- Adding Arbolada Subdivision's full build out of 137 units to North Mesa's full build out of 360, equated to analyzing a 497-unit full build out scenario
- Average demand increased by 122k gpd
- This equated to 48.1% of Pipe Drop A's capacity and 51.1% of Pipe Drop B's capacity (peak demand)
- Area A's Preliminary Construction Cost Estimate is \$4.72M

# Future Wastewater Capacity Analysis

## Area B Proposed Sewer System



# Future Wastewater Capacity Analysis

- Combination of Single-Family Homes, Duplex, and Triplex units were analyzed and proposed demands were calculated.
- Average demand increased by 34k gpd and peak demand increased by 103k gpd
- This equated to 40.1% of Pipe Drop B's capacity (peak demand)
- Area B's Preliminary Construction Cost Estimate is \$2.79M

# Wastewater Recommendations

- Build out of 360 units in Area A and 137 in Area B can be supported by existing systems, however at 50% capacity. Upgrades should be considered to keep this capacity reasonable.
- Recommend to replacement/reconstruction Pipe Drop B

# Existing/Proposed Water Infrastructure System

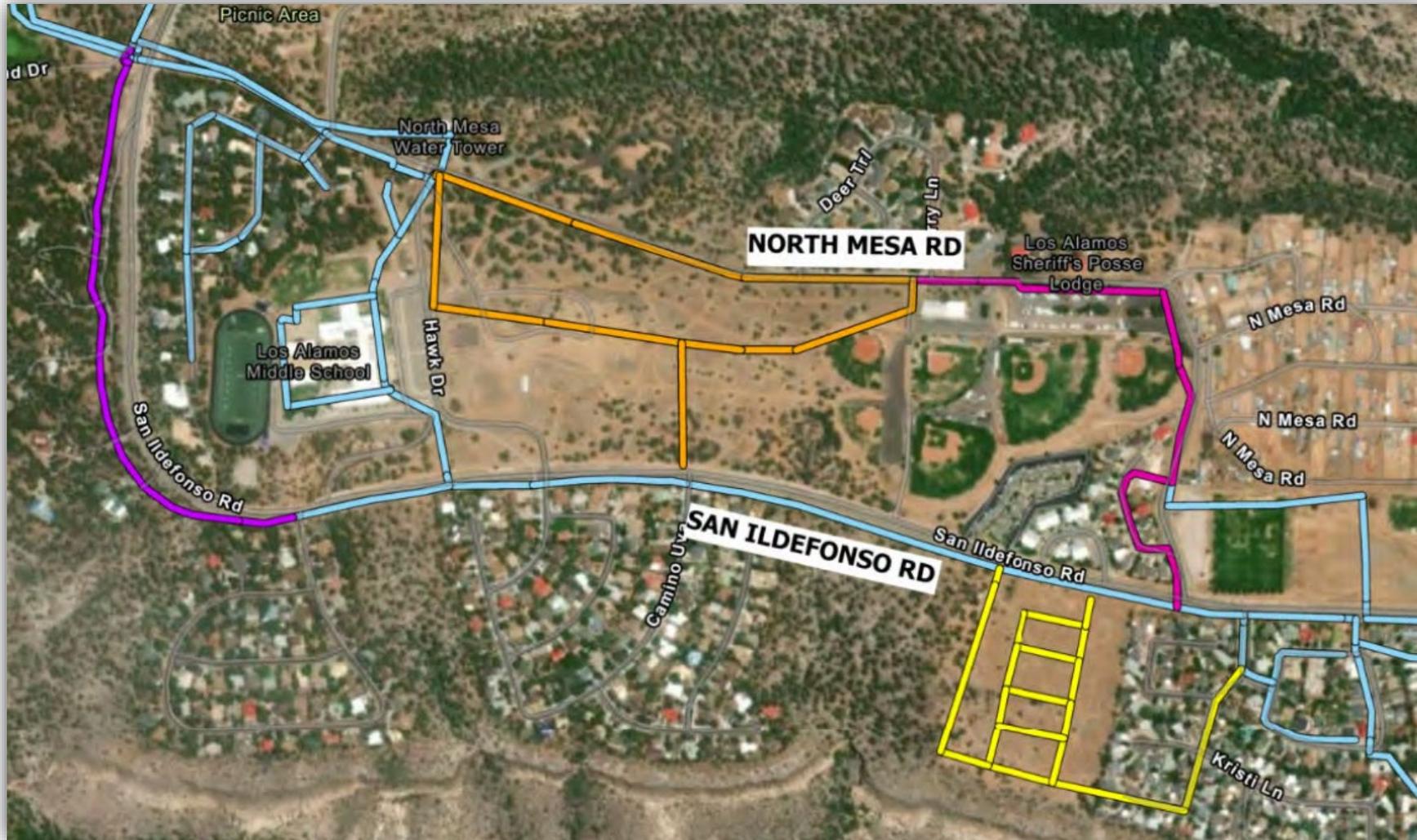
- A full evaluation of the existing water system's velocity, flows and pressure conditions was performed from 2019 through 2024 water meter data.
- Improvements were recommended to correct high velocity segments and address segments that did not meet minimum fire flow requirements
- Proposed water systems for Area A and B were developed to serve the water demand of the future housing units

# Existing/Proposed Water Infrastructure System



- Purple Line
  - Indicates Low Pressure Water Pipes
- Red Line
  - Indicates High Velocity Water Pipes

# Proposed Water Infrastructure System



- Purple Line (Left)
  - Proposed upsize to 12”
- Orange Line
  - (North Mesa Rd Only)
  - Proposed upsize to 10”
- Pink Line (Right)
  - Proposed upsize to 14”

# Proposed Water Infrastructure System



Area A Estimated Construction Cost - \$2.39M

(includes off-site improvements necessary to implement)

Area B Estimated Construction Cost - \$987K

# Phase I Environmental Sites Assessment

- Focused on North Mesa property only
- Reviewed Environmental Data Resources (EDR) databases, historical aerial photographs, topographic maps, records, etc.
- Intent is to identify recognized environmental conditions (RECs), historic RECs and controlled RECs.
- Stockpiles were present that contained paint cans, drums, and portable classrooms from previous construction projects and were removed in September 2021.
- Visual inspection did not indicate leaching or indicate any staining, however the source of the stockpiles was determined to be unknown and were unable to visually assess beneath the surface, so they were considered a REC.

# North Mesa ALTA Survey

- Focused on North Mesa property only
- Could not be certified without receipt of a Land Title Commitment
  - Land Title Commitments are usually certified to an individual/entity pursuing purchase
  - Serves as preliminary research to potential private developers
- Field Surveyed all visual/above ground features and evidence of any easements
- One known utility easement in addition to radio tower, structure, and solar farm

# Preliminary Construction Cost Estimate Summary

	Area A (LAPS Site)	Area B (Arbolada)
<b>Offsite (Potential County CIP)</b>		
Sewer	\$0.00	\$1,354,301.50
Water	\$1,000,000.00	\$0.00
20% Contingency/Future Cost Escalations	\$200,000.00	\$270,860.30
<b>Total Individual Sites w/Contingency</b>	<b>\$1,200,000.00</b>	<b>\$1,625,161.80</b>
<b>Total CIP Project Costs</b>	<b>\$2,825,161.80</b>	
<b>Onsite (Subdivision Development Cost)</b>		
Sewer	\$4,724,855.31	\$2,794,484.65
Water	\$1,393,023.49	\$987,500.96
Subtotal	\$6,117,878.80	\$3,781,985.61
20% Contingency/Future Cost Escalations	\$1,223,575.76	\$756,397.12
<b>Total w/Contingency</b>	<b>\$7,341,454.56</b>	<b>\$4,538,382.73</b>
<b>Total Onsite Subdivision Project Costs</b>	<b>\$11,879,837.29</b>	
<b>Total Project Costs</b>	<b>\$14,704,999.09</b>	

- Costs include planning level engineering design fee estimates, construction administration services estimates and estimated GRT's

# Why This Study Matters

- **Answers Key Developer Questions**  
Provides clarity and confidence for private developers considering investment.
- **Guides Future Infrastructure**  
Helps Los Alamos County and Los Alamos Public Schools plan improvements that support growth—whether public or private.
- **Lays the Groundwork for Homes**  
Identifies essential infrastructure needs to make North Mesa housing a reality.



# North Mesa Housing Market and Financial Analysis

## Analysis Conclusions

- The North Mesa development would alleviate local housing shortages by adding significant inventory for LAPS and LAC employees, as well as for the local missing middle workforce.
- A potential land sale or lease of the property would generate direct financial proceeds for LAPS.
- Professional analysis has confirmed the North Mesa site is physically and operationally viable for residential development.
- Partnership with the County and a private developer would facilitate the development, creation, and maintenance of affordable workforce housing.

# North Mesa Housing Market and Financial Analysis

## Next Steps

- The LAPS Board and County Council should discuss desired outcomes and formalize their commitment to specific board/council objects and housing targets.
- Define commitments from the board/council to provide the necessary utility infrastructure and support under the County's affordable housing plan.
- Leverage previous planning studies to draft a new agreement that defines roles, responsibilities, and commitments.
- Consider a solicitation for a private development partner for the development of the site.

# Questions?

