

Los Alamos County

Artificial Turf Feasibility Study

County Council
October 28, 2025



Introductions

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Principal Civil Engineer



Photo courtesy Los Alamos Daily Post

Purpose & Scope

- Study was commissioned due to increasing demand for high-quality, multi-use athletic fields capable of supporting a growing number of teams, leagues, and year-round programming at **North Mesa Sports Complex** and **Overlook Park**.
- **Key goals included:**
 - ✓ Identifying opportunities to improve field safety and playability
 - ✓ Addressing maintenance challenges
 - ✓ Exploring options for optimizing site layouts and extending field usability through artificial turf installation where appropriate.
- Recommendations were requested for field realignment, synthetic turf products and installation options, maintenance/management, and site improvements, including accessibility, amenities, alternative energy use, and lighting.
- Study is intended to **guide future decision-making** regarding the use of artificial turf and other facility improvements at North Mesa and Overlook.





Photo courtesy Los Alamos Daily Post

Approval Process to Date

- **September 11th:** Parks & Recreation Board presentation (completed).
- **September 18th:** Environmental Sustainability Board presentation (completed).
- **October 9th:** Parks & Recreation Board – respond to PRB and ESB questions/comments/concerns.

Study Process and Deliverables

- Assessment of Existing Conditions
- Community and Staff Engagement
 - ✓ Field User Experience
 - ✓ Desired Improvements
 - ✓ Benefits and Drawbacks of Artificial Turf
 - ✓ Questions and Concerns
- Conceptual Site Plans and Recommendations
- Cost Estimates and Phasing Plans
- Comprehensive Artificial Turf Feasibility Report



Community Engagement

- **Public Engagement Meetings** (Five meetings between Oct 30-May 15)
- **Focused Group Interviews:**
 - Los Alamos Public Schools (LAPS)
 - Los Alamos Youth Soccer League (LAYSL)
- **Community Survey:** 216 responses (Closed February 7th)
- **Follow up Feedback Survey:** 141 responses (Closed March 31st)
- **Insights shared by the following groups:**
 - Los Alamos Little League
 - Los Alamos Youth Lacrosse
 - Los Alamos Softball Association
 - Los Alamos Extreme (youth football)
 - Athletes, parents, and supporters of youth, LAPS, and adult sports
 - Dog park users
 - Residents of surrounding neighborhoods and LA County generally
 - Residents of Espanola, Pojoaque, Santa Fe, Nambe, and surrounding areas
- **Project Webpage hosted by LAC to post relevant information/notices**
- **Dedicated Project Email for direct communication with public**



What We Heard

Field User Experiences:

- Concern about the number of injuries attributable to the current condition of natural turf at North Mesa and Overlook.
- Due to conditions on all fields, overuse on particular fields, and scheduling conflicts, the number of existing fields cannot accommodate the demand for games and practices.
- Grass at soccer fields is often too high for effective play.
- Gopher holes are particularly an issue at Bomber and Senior fields but are present at all fields.
- Fields are used seven days / week, but much more frequently Monday through Friday.
- Not enough options for youth football and lacrosse (sharing facilities with soccer).

Desired Improvements:

- Options for flex / multiuse fields should be considered when evaluating field realignment, consolidation, and artificial turf renovations.
- Consider dugout improvements, more batting cages, athlete changing rooms, better storage for teams, more bathrooms, safety netting, shade structures for spectators and players, and scoring booths.
- Co-locating baseball and softball game fields would be more convenient for families, would increase attendance, and create more opportunities for new programs, concessions / fundraising.
- Parking and circulation needs improvement at both North Mesa and Overlook.
- Install or upgrade lighting at more fields –this will increase playing time.
- Consider improved/expanded transportation options to/from facilities.
- Expand/improve access to drinking water.
- Higher (15-ft) fencing behind goals at soccer fields, extending 30 ft on both sides of goal.
- Retain as many trees as possible at the facilities (provide much needed shade).
- Accessible pathways, parking, restrooms, seating all need improvement.

What We Heard

Artificial Turf – Potential Benefits:

Extending playing seasons is a high priority, and artificial turf would accomplish this.

Safety of players is of utmost importance, and artificial turf would reduce injuries.

Artificial turf fields are appealing and inspiring to players and supporters.

Artificial turf fields have been very well received and popular at LAPS facilities.

Artificial turf fields create an opportunity for tournaments.

Games are more competitive on artificial turf fields.

Younger kids are less afraid of sliding on artificial turf than on natural turf.

Easier to maintain, less water use, reduced need for pest management.

Reduced travel for players in the colder months when there are more away games where other teams have artificial turf fields.

Artificial turf fields would allow LA and WR players to have facilities of comparable quality to competitor teams.

There are advantages of artificial turf at both North Mesa and Overlook Park (no clear location preference).

Artificial Turf – Potential Drawbacks:

Artificial turf is not the complete answer to issues with the fields.

Artificial turf will make fields more desirable but will also lead to more competition for use.

Artificial turf fields are hot in the summer months.

Baseball/softball players will need two sets of equipment (this is likely already true).

Players can't eat sunflower seeds on artificial turf due to difficulty of cleaning the shells.

Concern that there will be more abrasions and skin infections with artificial turf fields.

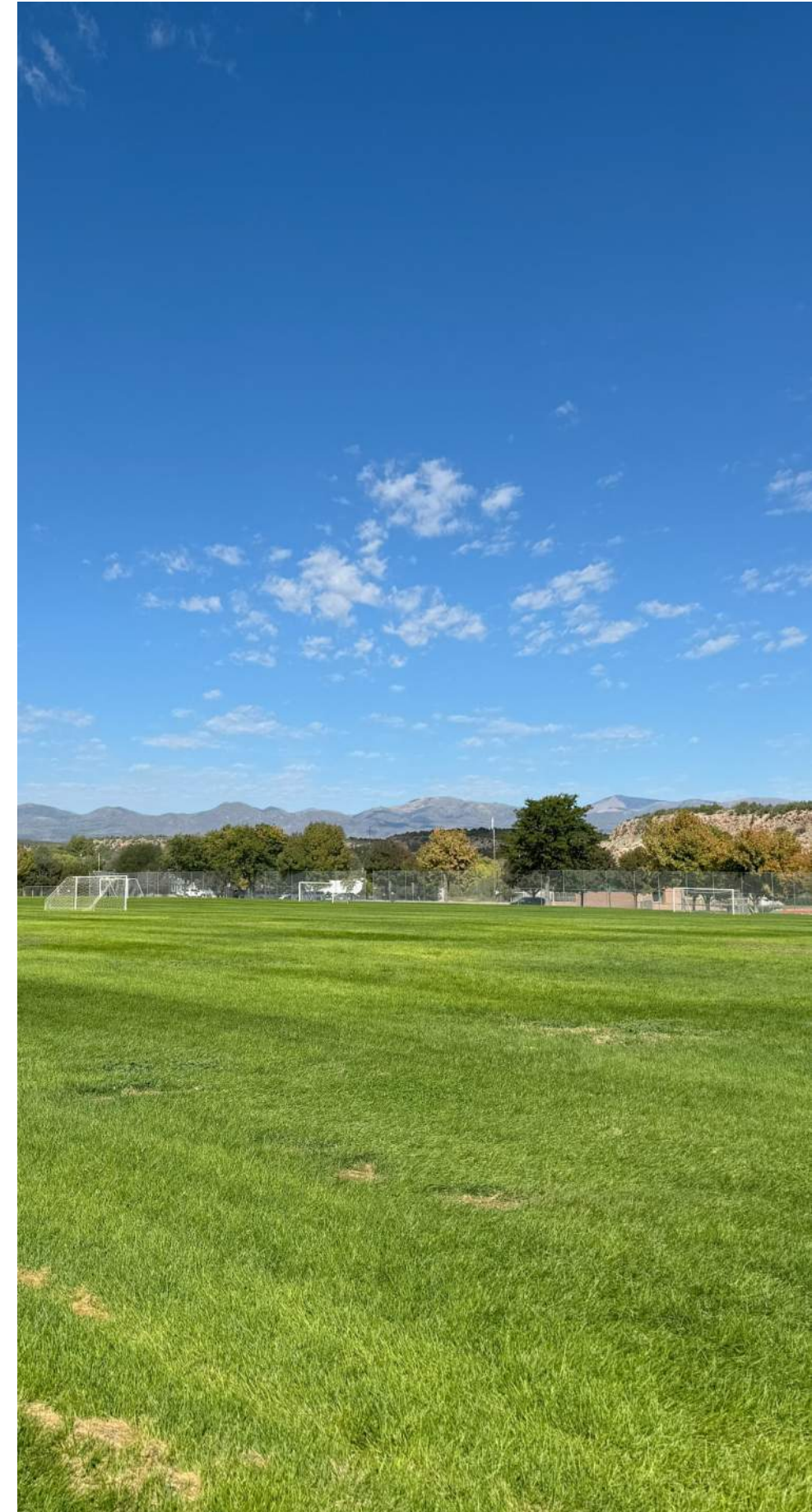
Desire to retain some natural turf fields.

Concerns about environmental and human impacts due to fears about toxicity of materials.

Artificial vs Natural Turf – Context-Based Comparison

Factors To Consider:

- Sport Type
- Intensity of Use
- Public Perception and Safety
- Climate Conditions
- Cost to Install and Maintain
- Blended / Hybrid Approaches
- Facility Management



Turf System Comparison

Table 3.2 Turf System Comparison – Maintenance and Management Considerations		
Criteria	Synthetic Turf	Natural Grass
Use Frequency	High – no rest needed between games	Moderate – requires rest to recover (20 hours per summer week, and 10-15 hours per week in spring and fall)
Weather Tolerance	All-weather, year-round, night use	Limited in wet or freezing conditions, night use
Surface Temperature	Can exceed 160°F; may require advisories	Stays much cooler
Injury Risk	Potentially higher risk of abrasions, joint strain and turf toe, but material selection is critical in minimizing this risk.	Lower (softer, natural shock absorption); but dependent upon conditions (gophers, etc)
Maintenance Tasks	Grooming, disinfection, infill top-up, pest control	Mowing, watering, fertilization, aeration, top dressing, pest control
Health/Environmental Concerns	Concerns over PFAS, microplastics, heat, runoff pollutants; however, newer products are far less hazardous than in the past.	Minimal; no synthetic chemicals, biodegradable; but fertilization and pest control pose potential hazards.
Capital Cost (Install)	~\$1 million per field	~\$500K per field
Replacement Cycle	Minimum of 8–10 years, up to 15 years, depending on conditions and use intensity.	Every 10- 20 years; depending upon local conditions and use intensity.
Disposal/Recycling	Modern synthetic turf components are increasingly recyclable.	Compostable/biodegradable
Community Perception	Generally positive, but concerns over potential human and environmental impacts.	Generally positive, but concerns over field conditions, gopher damage, water usage.
Sustainability Fit	High embodied carbon, increase in stormwater runoff	Supports green goals, stormwater absorption
Insurance & Liability	May be higher	Generally lower
Water Use	Little except for cooling turf as needed	Higher water use

Human & Environmental Impact Concerns

Artificial Turf:

- Presence of PFAS / “forever chemicals” in materials
- Potential for “microplastics” in the environment
- Life-cycle / recyclability of the materials
- Increased temperatures during warmer months
- Water-use to cool down artificial turf
- Perceived risk of abrasions and skin infections

Natural Turf:

- High water use to maintain grass
- Pesticide & fertilizer use
- Gophers creating both safety hazards for athletes and pest management challenges for County staff
- Maintenance demands that exceed staff capacity
- Grass fields need more resting time than they currently get, leading to overuse



How Concerns Were Addressed

- **Consulted and compiled research by Subject Matter Experts**
 - ✓ Posted on Project Webpage
 - ✓ Included and elaborated upon in final report
- **Third-party research informed analysis and recommendations**
 - ✓ Cradle-to-cradle certified products
 - ✓ Recognized standards for health and environmental stewardship

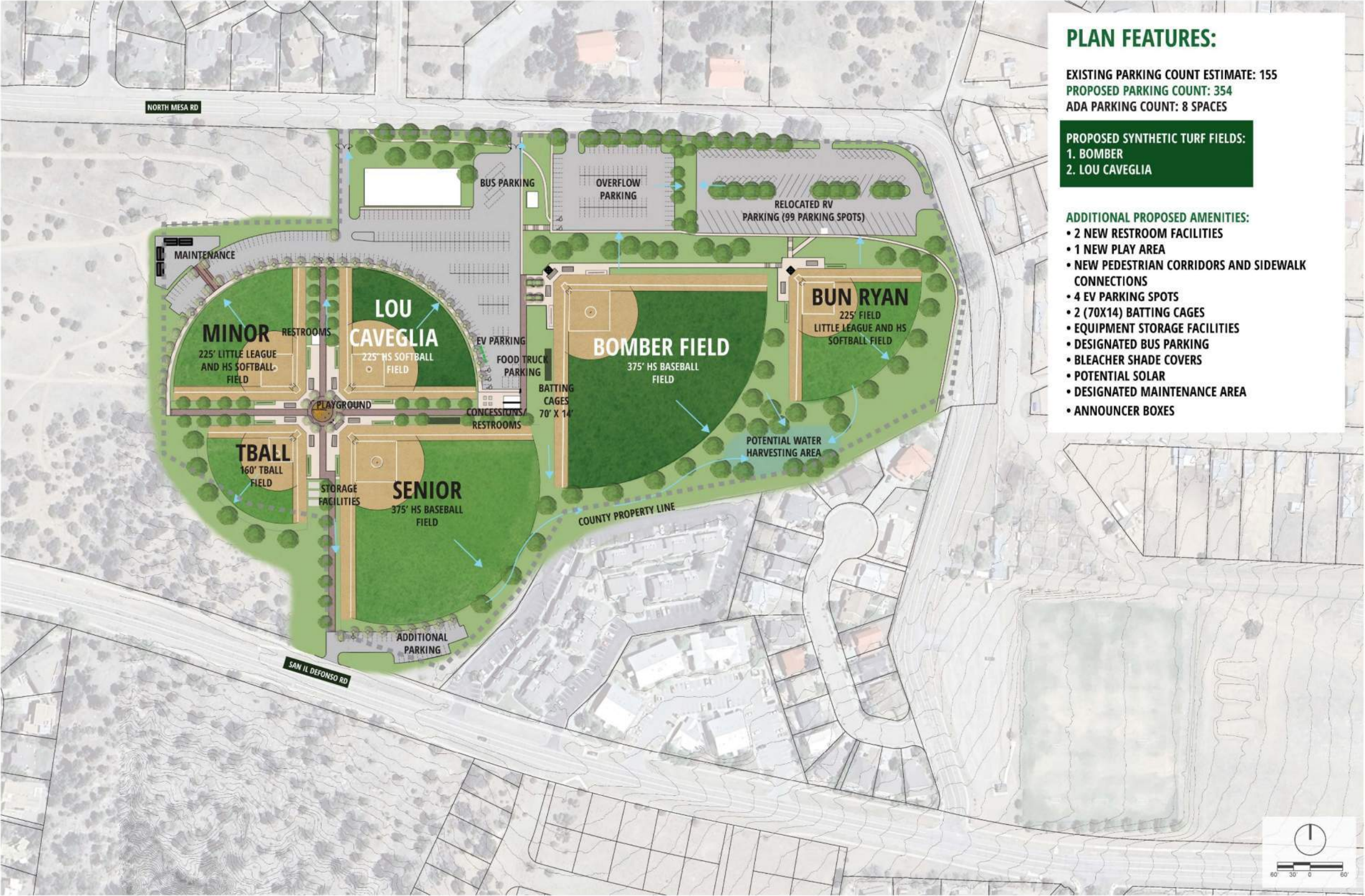
Table 4.1: Environmental Standards Commonly Applied in Synthetic Turf Projects		
Standard / Practice	Focus	Applies To
ASTM F3188 / F1936 / F2765	Safety, drainage, performance	Turf system specification
EPA Guidance on Crumb Rubber	Chemical exposure, PFAS	Infill selection
Local MS4 Stormwater Requirements	Runoff, filtration, erosion control	Drainage and base system
LEED v4 / Cradle to Cradle	Sustainability, low impact materials	Optional, project-specific
NMED Water / Air Quality Rules	Environmental protection during construction	Site prep, infill, adhesives
EPD / HPD / REACH Compliance	Product health transparency	Turf fibers, infill, backing



Table 5.4: Summary of Study Recommendations		
Recommendations	North Mesa Sports Complex	Overlook Park
Artificial Turf	Synthetic turf for high-use fields. Recommended installation for Bomber field and Lou Caveglia field.	Synthetic turf for high-use fields. Recommended installation for Hope Field, X Lovato, and Dara Jones field.
	Synthetic turf product: Recycled tufted turf with a resilient recycled infill (cooling effect optional), permeable cradle to cradle pad, with a gopher resistant wire mesh installed at the turf foundation.	Synthetic turf product: Recycled turf with a resilient recycled infill (cooling effect optional), permeable cradle to cradle pad, with a gopher resistant wire mesh installed at the turf foundation.
Accessibility Improvements	Implement phased upgrades.	Implement phased upgrades.
	Short-term Goals: Improved parking surfaces, ADA-compliant ramps, pedestrian connectivity, accessible site furnishings and updated lighting systems. Long-term Goals: field realignments, centralized accessible walkways, grade adjustments for accessibility, accessible site furnishings and Improved lighting systems.	Short-term Goals: Improved parking surfaces, ADA-compliant ramps, pedestrian connectivity, accessible site furnishings and updated lighting systems. Long-term Goals: field realignments, centralized accessible walkways, grade adjustments for accessibility, accessible site furnishings and Improved lighting systems.
Circulation and Vehicular Access	Concentrate parking near the highest-use fields, add a secondary access from San Ildefonso Rd., and relocate overflow parking to a central, larger footprint to improve access, navigation, and event capacity.	Enhance vehicle and pedestrian connectivity between the north and south areas with more defined entrances, reorganized and expanded parking layouts, and improved signage to optimize usability and navigation.
Lighting Systems	Short-term goals: Update existing lighting systems	Short-term goals: Update existing lighting systems
	Long-term goals: Install new Light-Structure System with Total Light Control for Lou Caveglia, Senior, Bun Ryan, and Bomber fields, using shared poles to illuminate adjacent fields.	Long-term goals: Install new Light-Structure System with Total Light Control for Hope, Byers, X Lovato, Virchow, Fields 1-3, and Dara Jones, using shared poles to illuminate adjacent fields.
Field Maintenance	Natural Turf: Maintain natural fields through regular mowing, aeration, fertilization, seeding, and infield care for baseball/ softball, with more intensive mid-season top dressing to reduce compaction and promote healthy turf.	Natural Turf: Maintain natural fields through regular mowing, aeration, fertilization, seeding, and infield care for baseball/ softball, with more intensive mid-season top dressing to reduce compaction and promote healthy turf.
	Artificial Turf: Redistribute infill every 2–3 hours of play, weekly grooming, and routine debris removal to ensure consistent performance and longevity.	Artificial Turf: Redistribute infill every 2–3 hours of play, weekly grooming, and routine debris removal to ensure consistent performance and longevity.

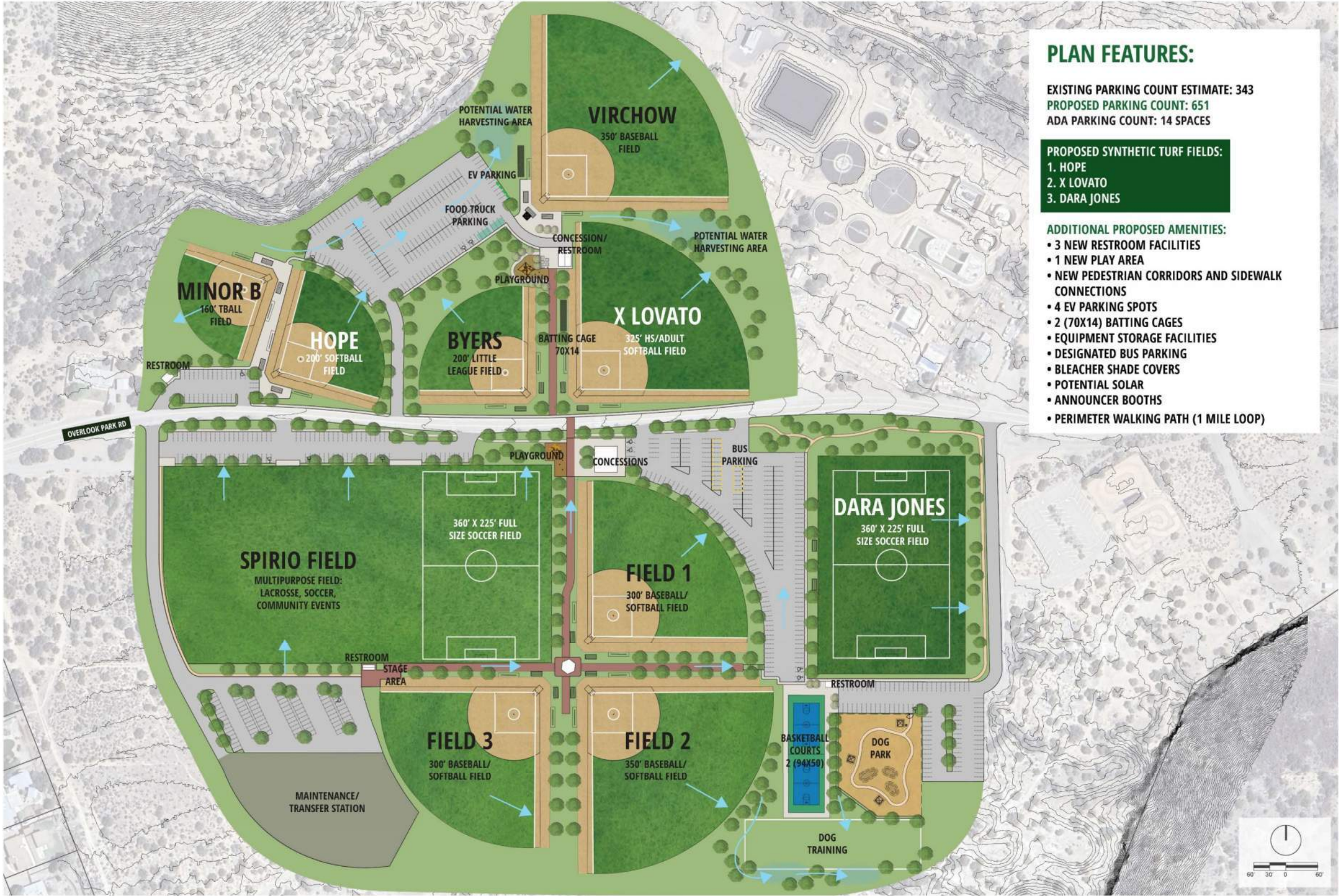
Table 5.4: Summary of Study Recommendations		
Recommendations	North Mesa Sports Complex	Overlook Park
Renewable Energy Technology	Provide 4 EV parking spaces in the primary lot, incorporate solar panels on all new shade structures and buildings, and equip irrigation systems with solar controllers to enhance sustainability and future adaptability.	Provide 4 EV parking spaces in the primary lot, incorporate solar panels on all new shade structures and buildings, and equip irrigation systems with solar controllers to enhance sustainability and future adaptability.
Amenities and Enhancements	Provide new restrooms, a concessions/ equipment facility, playground with shade, pedestrian seating, EV and ADA parking, food truck and bus zones, batting cages, dugouts, player benches, bleachers with shade, announcer booths, and maintenance/equipment sheds	Provide new restrooms, a concessions facility, playground with shade, pedestrian seating, perimeter walking trail, EV and ADA parking, food truck and bus zones, batting cages, dugouts, player benches, bleachers with shade, announcer booths, equipment sheds, and basketball courts
Realignment of Fields	Reorient Minor, T-ball, Lou Caveglia, and Senior fields into a clover-leaf layout with enlarged field sizes, and provide centralized pedestrian areas between fields.	Reorient Byers and X Lovato fields with expanded field sizes, create a larger central parking area, centralized pedestrian corridors, and relocate the dog park and training areas to reduce user conflicts.
Artificial Field Player Equipment	Athletes must use artificial-turf-appropriate shoes with rubber or soft plastic cleats instead of metal cleats.	Athletes must use artificial-turf-appropriate shoes with rubber or soft plastic cleats instead of metal cleats.
Artificial Field Equipment	Maintain artificial turf using sweepers and groomers every 1–2 weeks, with targeted infill redistribution in high-use areas, supported by an appropriate utility vehicle.	Maintain artificial turf using sweepers and groomers every 1–2 weeks, with targeted infill redistribution in high-use areas, supported by an appropriate utility vehicle.

North Mesa Sports Complex

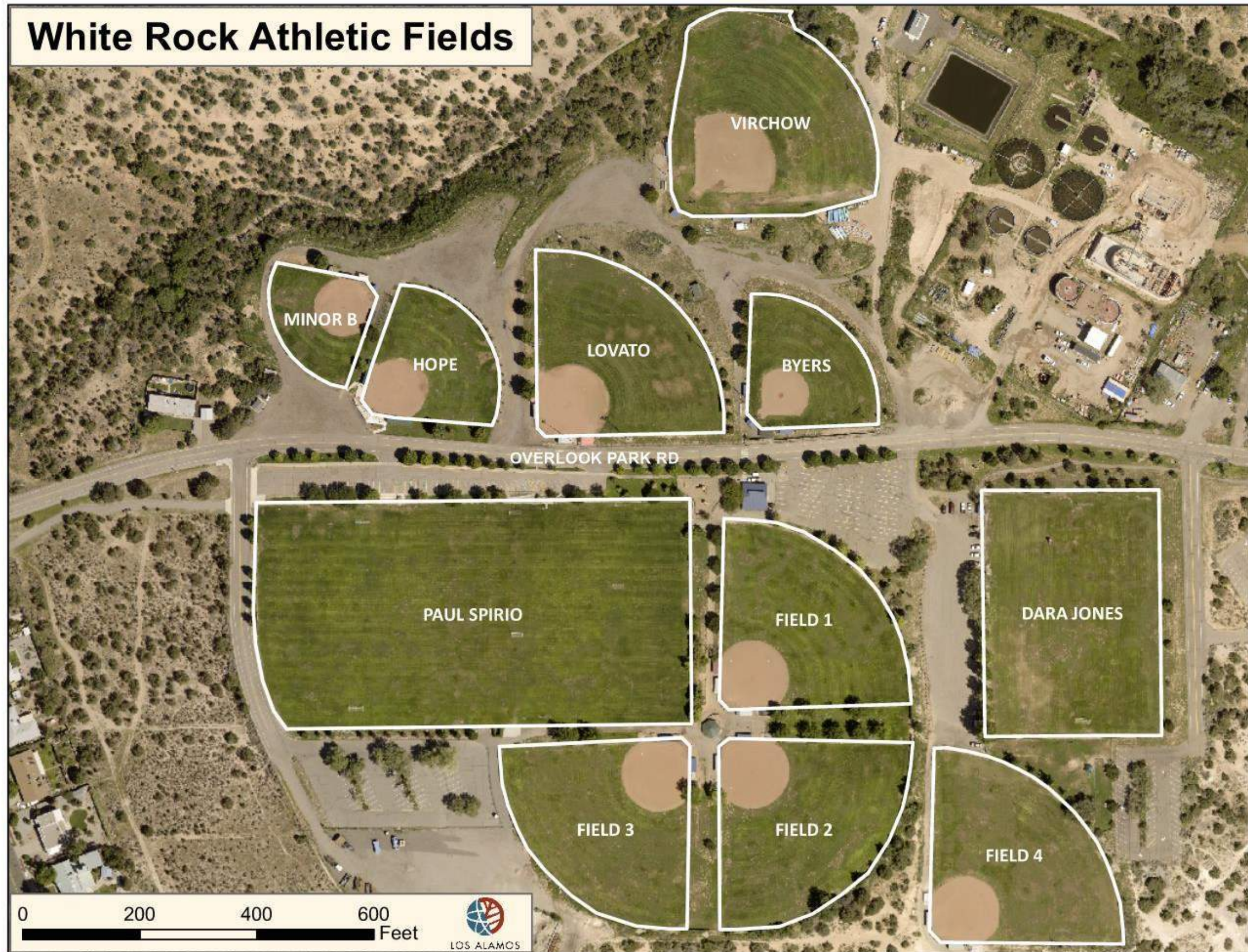




Overlook Park



White Rock Athletic Fields



Cost Estimating

- Estimated cost was escalated to year 2028 start time
- Costs were escalated subsequently for following years at 4% CPI
- Intended to inform future budget and to guide design perimeters
- Base Costs to address immediate concerns such as access and accessibility
- Phased Costs for complete reconstruction at any level desired



North Mesa Sports Complex: Base Costs

Table 6.1: North Mesa Complex – Base Costs				
OPINION OF PROBABLE COSTS FOR CURRENT FIELD CONFIGURATION				
Item Description	Quantity	Unit	Unit Price	Total
CONSTRUCTION MOBILIZATION, STAKING				\$400,000.00
PARKING LOTS - REGRADING AND ACCESSIBLE PARKING				\$800,000.00
GRADING, DRAINAGE, HARDSCAPING, ELECTRICAL				\$1,850,000.00
GEOTECH				\$50,000.00
DESIGN/CA FEES				\$1,063,900.00
SYNTHETIC TURF FIELD 1 (no irrigation)				\$1,520,000.00
Lou Caveglia (Softball/Little league Field) w/ lighting updates	1	LS	\$1,520,000.00	\$1,520,000.00
SYNTHETIC TURF FIELD 2 (no irrigation)				\$1,570,000.00
Bomber (Softball/Little league Field) w/ lighting updates	1	LS	\$1,570,000.00	\$1,570,000.00
NATURAL TURF FIELD 1				\$951,720.00
Senior (high school field) w/ lighting updates	1	LS	\$951,718.00	\$951,720.00
NATURAL TURF FIELD 2				\$745,040.00
Bun Ryan(Softball/little league field) w/ lighting updates	1	LS	\$745,035.00	\$745,040.00
NATURAL TURF FIELD 3				\$625,000.00
Minor field (little league)	1	LS	\$625,000.00	\$625,000.00
NATURAL TURF FIELD 4				\$398,651.00
Tball field (tball)	1	LS	\$398,651.00	\$398,651.00
STRUCTURES - ACCESSIBLE BATHROOM				\$75,000.00
	1	LS	\$75,000.00	\$75,000.00
SITE FURNITURE - ADA PICNIC TABLES				\$25,000.00
	1	LS	\$25,000.00	\$25,000.00
SUBTOTAL				\$10,074,311.00
35% Contingency				\$3,526,009.00
GRT 7.07%				\$961,543.00
TOTAL COST AT 2028 START DATE				\$16,380,115.46
5 YEAR COST AT 4% CPI INCREASE				\$19,928,914.98
10 YEAR COST AT 4% CPI INCREASE				\$29,499,577.11

North Mesa Sports Complex: Phased Costs

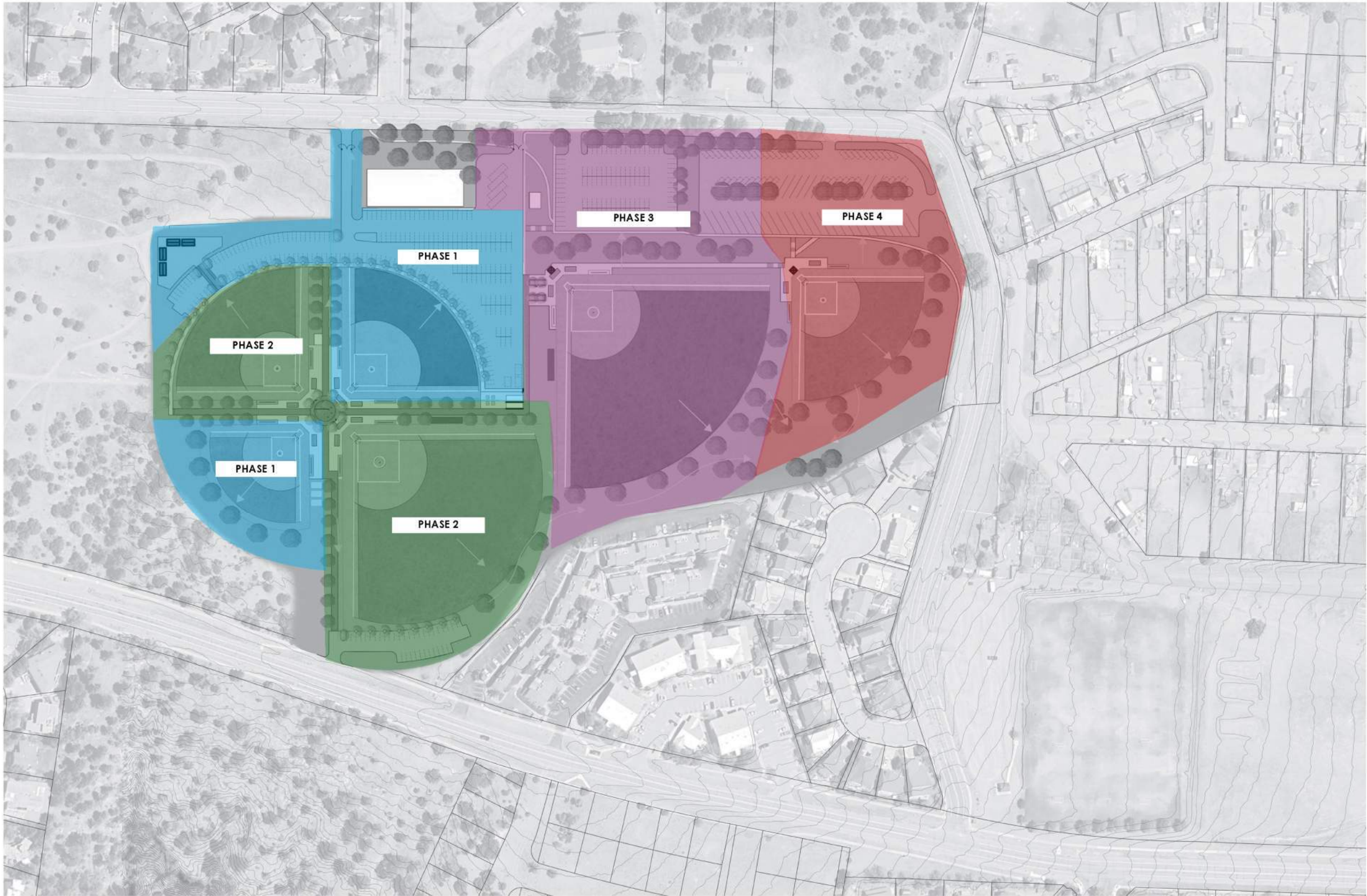
Table 6.3: North Mesa Recreation Area – Phased Reconfiguration Costs

OPINION OF PROBABLE COSTS FOR PHASED FRAMEWORK RECONFIGURATION PLAN

PHASE 1 - INITIALIZATION, BASEBALL INFRASTRUCTURE AND SOME PARKING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$100,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$500,000.00
PARKING AND HARDSCAPE				\$600,000.00
SYNTHETIC TURF FIELD				\$1,420,000.00
Lou Caveglia re-aligned w/ lighting updates	1	LS	\$1,420,000.00	\$1,420,000.00
NATURAL TURF FIELD				\$500,000.00
Tball field (tball)	1	LS	\$500,000.00	\$500,000.00
SUBTOTAL				\$3,120,000.00
35% Contingency				\$1,092,000.00
GRT 7.07%				\$220,584.00
TOTAL COST AT 2028 START DATE				\$4,986,054.17
5 YEAR COST AT 4% CPI INCREASE				\$6,066,297.26
10 YEAR COST AT 4% CPI INCREASE				\$8,979,575.86
PHASE 2 - BASEBALL INFRASTRUCTURE AND HARDSCAPING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$50,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$450,000.00
PARKING AND HARDSCAPE				\$200,000.00
NATURAL TURF FIELD				\$1,700,000.00
Senior (high school field) re-aligned w/ lighting updates	1	LS	\$1,700,000.00	\$1,700,000.00
NATURAL TURF FIELD				\$920,000.00
Minor (Softball/Little league Field) re-aligned w/ lighting updates	1	LS	\$920,000.00	\$920,000.00
SUBTOTAL				\$3,320,000.00
35% Contingency				\$1,162,000.00
GRT 7.07%				\$234,724.00
TOTAL COST AT 2028 START DATE				\$5,305,673.03
5 YEAR COST AT 4% CPI INCREASE				\$6,455,162.47
10 YEAR COST AT 4% CPI INCREASE				\$9,555,189.70

PHASE 3 - BASEBALL INFRASTRUCTURE AND HARDSCAPING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$100,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$725,000.00
PARKING AND HARDSCAPE				\$800,000.00
SYNTHETIC TURF FIELD 2 (no irrigation)				\$1,550,000.00
Bomber (Softball/Little league Field) re-aligned w/ lighting updates and accessible site furniture/dugouts	1	LS	\$1,550,000.00	\$1,550,000.00
SUBTOTAL				\$3,175,000.00
35% Contingency				\$1,111,250.00
GRT 7.07%				\$224,473.00
TOTAL COST AT 2028 START DATE				\$5,073,949.92
5 YEAR COST AT 4% CPI INCREASE				\$6,173,235.88
10 YEAR COST AT 4% CPI INCREASE				\$9,137,870.68
PHASE 4 - SOFTBALL FIELD, EXTRA ENHANCEMENTS AND OVERFLOW PARKING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$100,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$400,000.00
HARDSCAPE				\$300,000.00
SITE FURNITURE - EXTRA ENHANCEMENTS				\$1,000,000.00
LANDSCAPE ENHANCEMENTS				\$150,000.00
NATURAL TURF FIELD				\$720,040.00
Bun Ryan (Softball/Little league Field) re-aligned w/ lighting updates	1	LS	\$720,035.00	\$720,040.00
SUBTOTAL				\$2,670,040.00
35% Contingency				\$934,514.00
GRT 7.07%				\$254,842.00
TOTAL COST AT 2028 START DATE				\$4,341,295.62
5 YEAR COST AT 4% CPI INCREASE				\$5,281,849.91
10 YEAR COST AT 4% CPI INCREASE				\$7,818,405.51

North Mesa Sports Complex – Phasing Plan



Overlook Park: Base Costs

Table 6.2: Overlook Complex – Base Costs				
OPINION OF PROBABLE COSTS FOR CURRENT FIELD CONFIGURATION				
Item Description	Quantity	Unit	Unit Price	Total
CONSTRUCTION MOBILIZATION, STAKING				\$800,000.00
PARKING LOTS - REGRADING AND ACCESSIBLE PARKING AREAS				\$1,040,000.00
GRADING, DRAINAGE, HARDSCAPING, ELECTRICAL				\$2,150,000.00
GEOTECH				\$80,000.00
DESIGN/CA				\$2,124,045.00
SYNTHETIC TURF FIELD 1 (no irrigation)				\$1,495,000.00
Hope (Softball/Little league Field) w/ lighting	1	LS	\$1,495,000.00	\$1,495,000.00
SYNTHETIC TURF FIELD 2 (no irrigation)				\$1,545,000.00
X-Lovato (Softball/Little league Field) w/ ada furnishings and lighting	1	LS	\$1,545,000.00	\$1,545,000.00
SYNTHETIC TURF FIELD 3 (no irrigation)				\$1,500,000.00
Dara Jones (Soccer Field) w/ ada furnishings	1	LS	\$1,500,000.00	\$1,500,000.00
NATURAL TURF FIELD 1				\$592,180.00
Virchow (high school baseball field) re-aligned w/ ada furnishings/lighting (assumes existing field improvements)	1	LS	\$592,180.00	\$592,180.00
NATURAL TURF FIELD 2				\$640,340.00
Byers (Softball/little league field) re-aligned w/ ada furnishings/lighting (assumes existing field improvements)	1	LS	\$640,339.00	\$640,340.00
NATURAL TURF FIELD 3				\$388,660.00
Minor B (little league) w/ ada furnishings (assumes existing field improvements)	1	LS	\$388,651.00	\$388,660.00
NATURAL TURF FIELD 4				\$318,670.00
Field 1 (baseball/softball) w/ada furnishings (assumes existing field improvements)	1	LS	\$318,666.00	\$318,670.00
NATURAL TURF FIELD 5				\$325,750.00
Field 2 (baseball/softball) w/ada furnishings (assumes existing field improvements)	1	LS	\$325,742.00	\$325,750.00
NATURAL TURF FIELD 6				\$304,200.00
Field 3 (baseball/softball) w/ada furnishings (assumes existing field improvements)	1	LS	\$304,191.00	\$304,200.00
NATURAL TURF FIELD 7				\$301,800.00
Spirio Field (soccer field/events) w/ ada furnishings (assumes existing field improvements)	1	LS	\$301,798.00	\$301,800.00
STRUCTURES - 2 ACCESSIBLE BATHROOMS				\$150,000.00
SITE FURNITURE - ADA PICNIC TABLES				\$24,650.00
SUBTOTAL				\$13,780,295.00
35% Contingency				\$4,823,103.25
GRT 7.07%				\$1,315,261.00
TOTAL COST AT 2028 START DATE				\$22,804,136.38
5 YEAR COST AT 4% CPI INCREASE				\$27,744,718.73
10 YEAR COST AT 4% CPI INCREASE				\$33,754,610.97

Overlook Park: Phased Costs

Table 6.4: Overlook Park Recreation Area – Phased Reconfiguration Costs

OPINION OF PROBABLE COSTS FOR PHASED FRAMEWORK RECONFIGURATION PLAN

PHASE 1 - INITIALIZATION, BASEBALL INFRASTRUCTURE AND SOME PARKING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$1,200,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$300,000.00
SYNTHETIC TURF FIELD 1 (no irrigation)				\$1,545,000.00
X Lovato (Adult Softball) w/ lighting updates	1	LS	\$1,545,000.00	\$1,545,000.00
SUBTOTAL				\$3,045,000.00
35% Contingency				\$1,065,750.00
GRT 7.07%				\$290,631.00
TOTAL COST AT 2028 START DATE				\$4,950,955.04
5 YEAR COST AT 4% CPI INCREASE				\$6,023,593.80
10 YEAR COST AT 4% CPI INCREASE				\$8,916,364.49
PHASE 2 - BASEBALL INFRASTRUCTURE AND SOME PARKING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$500,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$900,000.00
PARKING AND HARDSCAPE				\$300,000.00
Natural Turf Field				\$795,000.00
Byers (Softball/little league field) re-aligned w/ lighting updates and accessible site furniture/dugouts and irrigation	1	LS	\$795,000.00	\$795,000.00
Natural Turf Field				\$388,660.00
Minor B (Little League field) accessible site furniture/dugouts w/ irrigation	1	LS	\$388,651.00	\$388,660.00
SUBTOTAL				\$2,883,660.00
35% Contingency				\$1,009,281.00
GRT 7.07%				\$275,231.00
TOTAL COST AT 2028 START DATE				\$4,688,626.63
5 YEAR COST AT 4% CPI INCREASE				\$5,704,431.18
10 YEAR COST AT 4% CPI INCREASE				\$8,443,927.22

PHASE 3 - BASEBALL INFRASTRUCTURE AND SOME PARKING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$500,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$500,000.00
PARKING AND HARDSCAPE				\$600,000.00
Synthetic Turf Field (no irrigation)				\$1,200,000.00
Hope (Softball/Little league Field) w/ lighting updates	1	LS	\$1,200,000.00	\$1,200,000.00
NATURAL TURF FIELD				\$318,670.00
Field 1 (high school softball field) re-aligned w/ lighting updates and accessible site furniture/dugouts w/ irrigation	1	LS	\$318,666.00	\$318,670.00
SUBTOTAL				\$3,118,670.00
35% Contingency				\$1,091,534.50
GRT 7.07%				\$297,662.00
TOTAL COST AT 2028 START DATE				\$5,070,736.74
5 YEAR COST AT 4% CPI INCREASE				\$6,169,326.56
10 YEAR COST AT 4% CPI INCREASE				\$9,132,083.95

Overlook Park: Phased Costs

PHASE 4- BASEBALL INFRASTRUCTURE AND SOME PARKING				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$500,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$400,000.00
PARKING AND HARDSCAPE				\$400,000.00
Dog Park and Basketball Courts				\$200,000.00
NATURAL TURF FIELD				\$1,500,000.00
Field 2 (high school softball field) re-aligned w/ lighting updates and accessible site furniture/dugouts	1	LS	\$1,500,000.00	\$1,500,000.00
SUBTOTAL				\$3,000,000.00
35% Contingency				\$1,050,000.00
GRT 7.07%				\$286,335.00
TOTAL COST AT 2028 START DATE				\$4,877,787.13
5 YEAR COST AT 4% CPI INCREASE				\$5,934,573.86
10 YEAR COST AT 4% CPI INCREASE				\$8,784,593.61
PHASE 5- BASEBALL INFRASTRUCTURE AND HARDSCAPE				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$700,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$400,000.00
PARKING AND HARDSCAPE				\$250,000.00
Synthetic Turf Field				\$1,695,000.00
Dara Jones (Soccer Field)	1	LS	\$1,695,000.00	\$1,695,000.00
SUBTOTAL				\$3,045,000.00
35% Contingency				\$1,065,750.00
GRT 7.07%				\$290,631.00
TOTAL COST AT 2028 START DATE				\$4,950,955.04
5 YEAR COST AT 4% CPI INCREASE				\$6,023,593.80
10 YEAR COST AT 4% CPI INCREASE				\$8,916,364.49

PHASE 6- BASEBALL INFRASTRUCTURE AND HARDSCAPE				
Item Description	Quantity	Unit	Unit Price	Total
SITE UTILITY INFRASTRUCTURE				\$300,000.00
SITE DEMO, DRAINAGE, AND GRADING				\$800,000.00
PARKING AND HARDSCAPE				\$600,000.00
Natural Turf Field				\$800,000.00
Spirio Field (soccer field/events)	1	LS	\$800,000.00	\$800,000.00
Natural Turf Field				\$600,000.00
Field 3 (baseball/softball)	1	LS	\$600,000.00	\$600,000.00
SUBTOTAL				\$3,100,000.00
35% Contingency				\$1,085,000.00
GRT 7.07%				\$295,880.00
TOTAL COST AT 2028 START DATE				\$5,040,380.60
5 YEAR COST AT 4% CPI INCREASE				\$6,132,393.67
10 YEAR COST AT 4% CPI INCREASE				\$9,077,414.41
PHASE 7- BASEBALL INFRASTRUCTURE AND HARDSCAPE				
Item Description	Quantity	Unit	Unit Price	Total
SITE DEMO, DRAINAGE, AND GRADING				\$1,000,000.00
PARKING AND HARDSCAPE				\$600,000.00
Natural Turf Field				\$842,180.00
Virchow (high school baseball field) re-aligned w/ lighting updates	1	LS	\$842,180.00	\$842,180.00
SUBTOTAL				\$2,442,180.00
35% Contingency				\$854,763.00
GRT 7.07%				\$233,094.00
TOTAL COST AT 2028 START DATE				\$3,970,811.54
5 YEAR COST AT 4% CPI INCREASE				\$4,831,099.38
10 YEAR COST AT 4% CPI INCREASE				\$7,151,186.54

Overlook Park – Phasing Plan

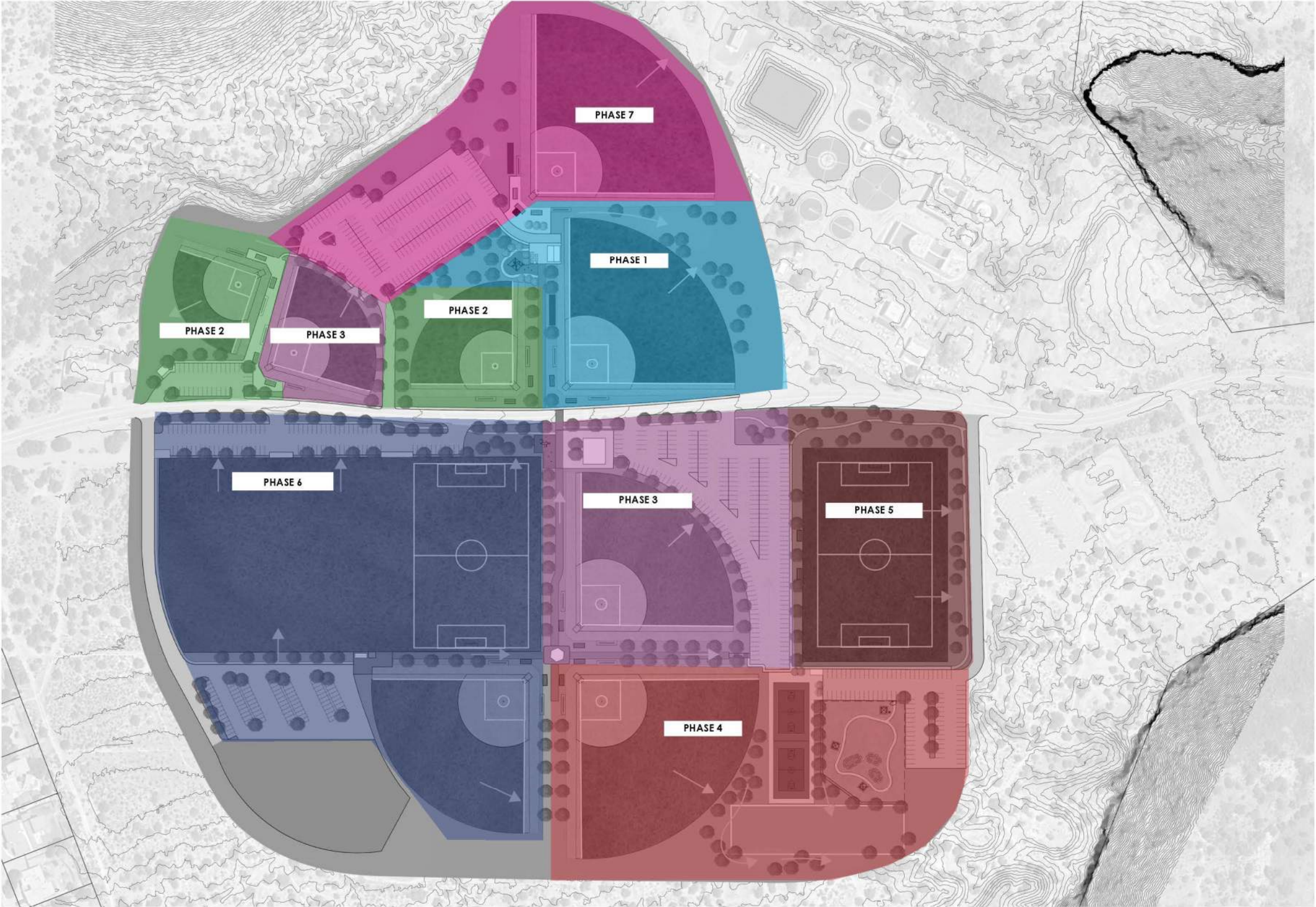
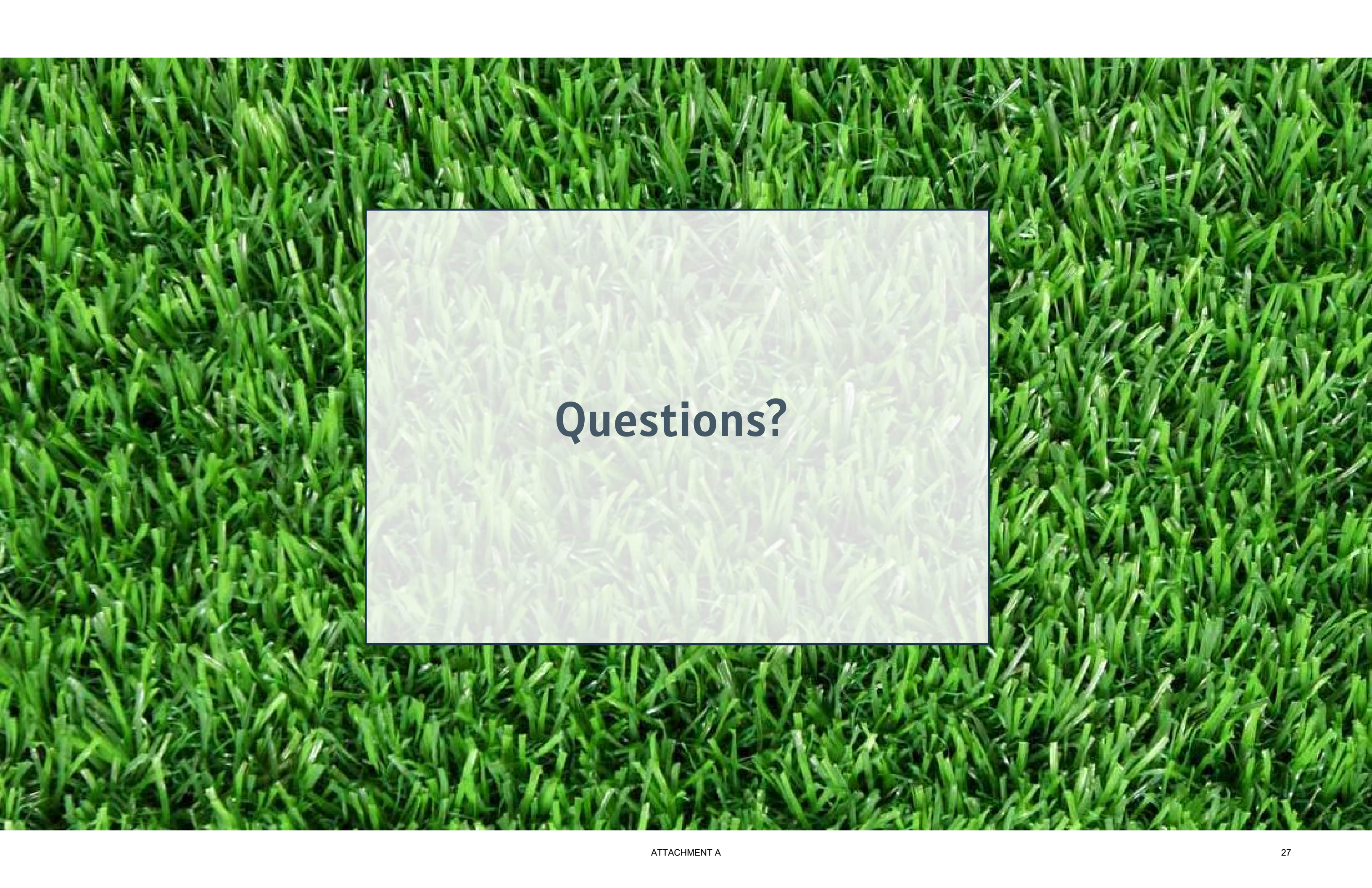




Photo courtesy Los Alamos Daily Post

Next Steps

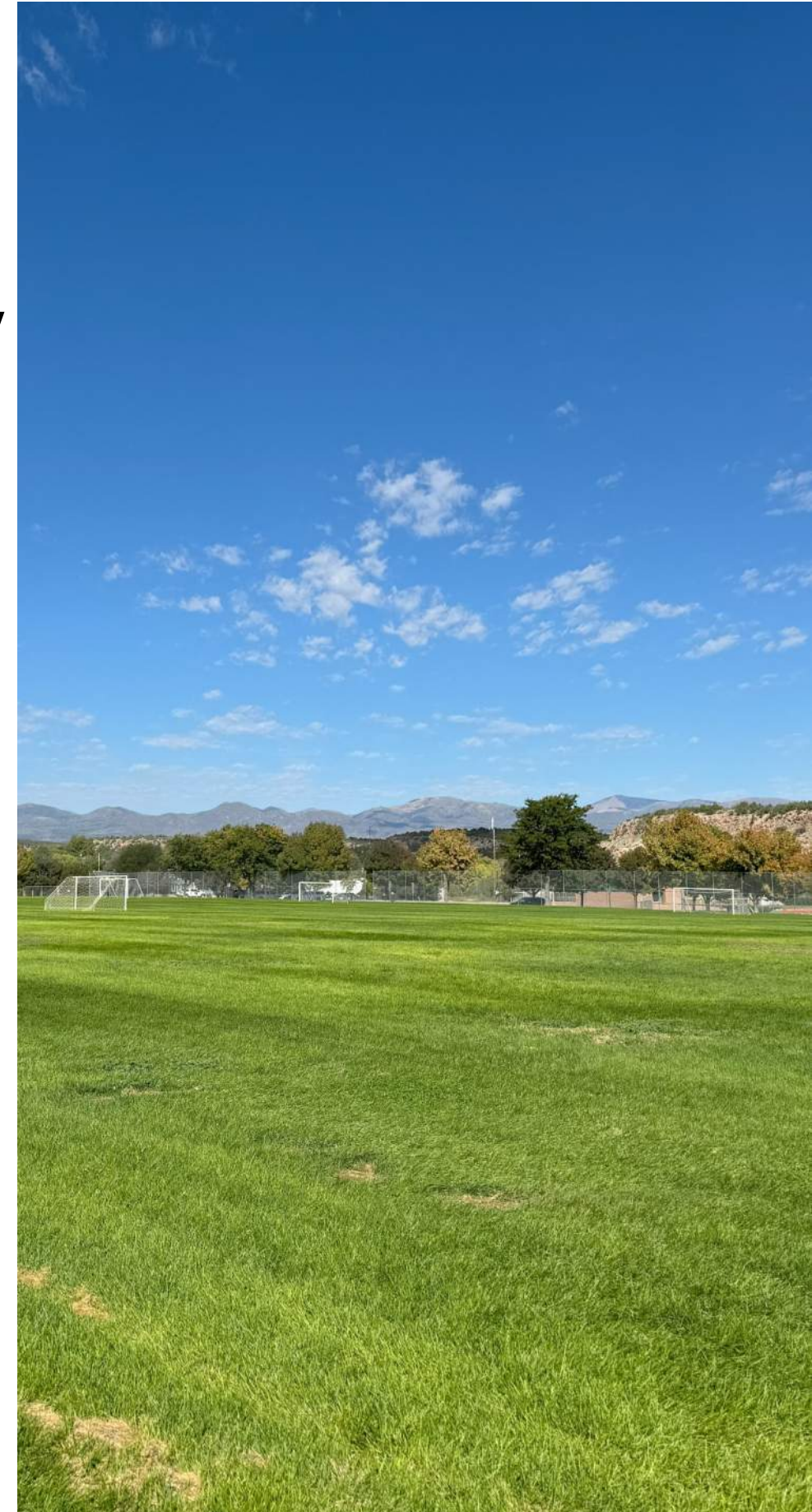
- **October 28th:** Final report presented for consideration and approval by County Council
- **November 18th:** Adoption of the final report.

The background of the slide is a close-up, high-resolution image of green grass. The blades are vibrant green and densely packed. In the center of the slide, there is a rectangular area with a semi-transparent, light gray background. This area contains the word "Questions?" in a bold, dark blue, sans-serif font.

Questions?

Back pocket slides

- **Responses to PRB and ESB Comments including proposed revisions summary**
- **Selected illustrations from the report**
 - **Existing Site Conditions**
 - **Lighting illustrations**
 - **Table 2.1 Summary of (Community) Meetings Dates and Focus**
 - **Table 3.3 Artificial Turf: Myths vs. Facts**



PRB Comment	Response	Proposed Revision	Page/Paragraph
Did not see cost estimates in the agenda packet.	Cost estimates were included in the report.	N/A	Page 68 of Attachment B
Why aren't more multi-use fields being added, despite apparent public demand?	Feedback from the community indicated opposition to multi-use fields. Many teams feel they are already competing for limited field space, and adding multi-use fields could worsen the issue. The idea was dropped after reviewing survey results. Several fields were expanded to accommodate multiple sports as a compromise.	N/A	Appendix D - Survey Results
Why are mostly baseball and softball fields being considered for artificial turf, when they're only used 4-5 months a year?	Softball players gave extensive feedback requesting more late-night games and extended use during shoulder seasons. Artificial turf would allow for back-to-back games and longer seasons. Additionally, several users have stated that they have seasons that begin in February/March. Dara Jones (Soccer field) was evaluated and recommended for potential artificial turf installation.	N/A	Summary of Recommendations Table (Pg 5), Framework Plans (Pg 51, Pg 53)
Fields 1-3 don't need new lighting or extended play hours, especially since fewer teams are currently active in Los Alamos.	Community feedback indicated a desire for more time and access to fields. The proposed layout allows for more user group access which would influence the amount of teams active in Los Alamos. Further none of the lighting on LAC fields is newer than 30 years old and upgrades are desired to update and upgrade facilities to current standards. Additionally, the newer lighting would eliminate the lighting spillover to neighboring properties.	N/A	Lighting Plans (Pg 55, Pg 57)
Does the cost estimate include irrigation costs for natural fields?	Yes, irrigation costs are included.	N/A	Cost Estimates, Pages 69-76
Why is Spirio Field included in the cost estimates, even though it's currently under renovation?	It was included in case artificial turf is considered for Spirio Field 5-10 years from now.	N/A	Attachment G (Framework Plans) Pg 53
Field maintenance needing to be redistributed every 2-3 hours of play. Where exactly does this apply?	Applies to high-wear areas like first base, batter's box (baseball/softball), and goal mouths (soccer).	N/A	

PRB Comment	Response	Proposed Revision	Page/Paragraph
Why are there no lights at the far end of Spirio Field?	West end of Spirio is a multi-use field serving multiple purposes such as community events and doesn't require additional lighting like sports fields. This can be reevaluated at Master Plan level.	N/A	
Are there comparative cost estimates between turf and natural fields?	Costs estimates for natural and artificial turf are included in the cost estimates, and the maintenance requirements were evaluated for both. This information can be used to compare the costs for each field type. The upfront costs of natural turf tend to be approximately half of the synthetic, however the life time maintenance demands are significantly higher for the natural turf as compared to synthetic.	N/A	Cost Estimates, Pages 69-76, Table 3.2 Page 36
The plan was not presented to the Environmental Sustainability Board (ESB).	The Artificial Turf Feasibility Study report was presented to ESB on 9/18/25.	N/A	Appendix G, Artificial Turf Testing and Data Resources
Feels "low-input" user groups have disproportionate influence.	Over 350 responses were gathered across two digital surveys, in addition to five public meetings, interviews with field user groups, and ongoing collaboration with County staff.	N/A	Appendix A, C, D, E
Alarmed by the high costs and environmental impacts of artificial turf.	Costs are escalated to 2028 and every 5 years for 10 years. Review of environmental impacts of artificial turf is outside of the scope of this feasibility study, however, the report includes data resources and links to relevant independent research on current environmental impacts of artificial turf.	N/A	Appendix G: Artificial Turf Testing and Data Resources
Supports developing a comparison of turf vs. natural field costs.	Costs estimates for natural and artificial turf are included in the cost estimates, and the maintenance requirements were evaluated for both. This information can be used to compare the costs for each field type. The upfront costs of natural turf tend to be approximately half of the synthetic, however the life time maintenance demands are significantly higher for the natural turf as compared to synthetic.	N/A	Cost Estimates, Pages 69-76, Table 3.2 Page 36
The title of the study is misleading; believes it is actually a redevelopment and master plan.	This is not a master plan, the report is meant as a tool for guiding future decisions about North Mesa Recreation Area and Overlook Park.	(1) Proposing to replace the word "Conceptual" and replace with "Feasibility" (2) Add purpose statement: "Consideration of opportunities for artificial turf use, field realignment, and facility improvements at North Mesa Sports Complex and Overlook Park."	(1) In the Title of and throughout the report when referring to the study. (2) Add sub title/purpose statement below title.

PRB Comment	Response	Proposed Revision	Page/Paragraph
Requests: A horse trail along North Mesa Road. Bike racks at the fields.	A horse trail and bike racks are outside of the scope of the study. This is not a master plan, the report is meant as a tool for guiding future decisions about North Mesa Recreation Area and Overlook Park. These amenities could be considered at the time of future Master Plan efforts.	N/A	
Unclear what recommendations are being made to the Council.	Recommendations are included in the report. They are being provided to guide future decision-making regarding potential improvements to the North Mesa Recreation Area and Overlook Park.	N/A	Summary of Recommendations Table (Pg 5), Framework Plans (Pg 51, Pg 53)
The ESB should be given the opportunity to receive and review the presentation.	The Artificial Turf Feasibility Study report was presented to ESB on 9/18/25.	N/A	
ESB Comment	Response	Proposed Revision	Page/Paragraph
Study Scope and Use			
Seen as a conceptual planning tool covering more than just turf; some support advancing it while deferring turf-specific decisions.	Correct, this feasibility study is meant as a planning tool. This report does not specify turf-specific decisions. It provides an overview and factors to consider as well as recommended placement for the synthetic turf within the geography of the complexes and as desired by the community. The report offers recommendations for the use of synthetic turf and primary locations for its deployment.	Proposing to replace the word "Conceptual" and replace with "Feasibility"	In the Title of and throughout the report when referring to the study.
Environmental Impacts			
Concerns over heat island effect	Review of heat island effect of artificial turf is outside of the scope of this feasibility study, however, the report includes data resources and links to relevant independent research on environmental impacts of artificial turf. Furthermore, heat island effect is a function of the turf and infill chosen. Specific materials are not part of this scope and should be studied at the time of implementation. Green spaces, trees and landscaping may be used to offset the heat island effect if artificial turf.	N/A	Appendix G: Artificial Turf Testing and Data Resources

ESB Comment	Response	Proposed Revision	Page/Paragraph
Environmental Impacts			
Stormwater runoff and infiltration	See pg. 41 'Because Los Alamos County is governed by Municipal Separate Storm Sewer System (MS4) permits, synthetic turf fields must be designed with proper drainage systems to prevent runoff carrying infill or contaminants into stormwater infrastructure.' Specific subsurface material for drainage is not part of this scope. Additionally, we illustrated how grading and stormwater runoff could work on a very conceptual level so that we could consider the grading issues. Further attention should be given to this issue as design commences.	N/A	Page 41 of the report.
Microplastics	The study of microplastics in artificial turf is outside of the scope of this feasibility study, however, the report includes data resources and links to relevant independent research on environmental impacts of artificial turf.	N/A	Appendix G: Artificial Turf Testing and Data Resources
Gray water management	Only some of the fields are being recommended for artificial turf. The remaining natural turf can continue to be watered with reclaimed (gray) water.	N/A	Summary of Recommendations Table (Pg 5), Framework Plans (Pg 51, Pg 53)
Durability and UV resistance of turf materials.	The study of durability and UV resistance of artificial turf is outside of the scope of this feasibility study.	N/A	Appendix G: Artificial Turf Testing and Data Resources
Health and Safety			
Mixed views—study claims reduced injuries, but comments raised risks of ACL/joint injuries	The study of injury risk on artificial turf is outside of the scope of this feasibility study, however, the report includes data resources and links to relevant independent research on the impacts of artificial turf.	N/A	Appendix G: Artificial Turf Testing and Data Resources
Heat-related safety issues if fields reach unsafe temperatures.	This is a function of turf and infill selection which are not part of this scope. However, the concern for heat retention was considered throughout the report, specifically on pg. 32 and pg 36. This issue needs further consideration as design commences.	N/A	Pages 32, 36 (Table 3.2 Turf System Comparison – Maintenance and Management Considerations)
Lifecycle and Cost			
Need for greater detail on warranties, usable lifespan, replacement and disposal costs, and maintenance burdens.	Report includes factors to consider when specifying artificial turf products and the recommendations include specifying artificial turf materials that meet recognized environmental standards and the Cradle-to-Cradle certification. Warranties and recyclability along with life cycle costs should be updated with current data as design commences and products are being specified.	N/A	Table 5.4: Summary of Study Recommendations (Page 66), Table 4.1: Environmental Standards Commonly Applied in Synthetic Turf Projects (Pg 42), Section 4.4 Context-Based Comparison: Synthetic Turf vs. Natural Grass (Pages 45-47), Table 3.2 (Page 36)

ESB Comment	Response	Proposed Revision	Page/Paragraph
Alternatives			
Requests to evaluate non-turf solutions such as improved natural grass management, gopher control, or transport to other playable fields.	The report summarizes the best practices in natural turf maintenance. In addition to maintenance, natural turf requires rest between use to up-take nutrients and recover. Our team has tried natural turfs for sports projects and found that Buffalograss and blue grama grass simply don't stand up to the use demands that turf grass receives in these activities. Report includes a maintenance and management comparison for both natural and synthetic systems.	N/A	Section 4.4 Context-Based Comparison: Synthetic Turf vs. Natural Grass (Pages 45-47), Table 3.2 (Page 36)
Community Impacts			
Importance of transparency and ongoing engagement, keeping ESB and the community informed	Future engagement is outside of the study scope. Staff to ensure community engagement as master planning and design commences.	N/A	
Local concerns included traffic safety near Overlook.	Traffic study is outside of the scope of this feasibility study.	N/A	
Local concerns included potential for pollinator gardens.	Pollinator gardens is outside of the scope of this feasibility study. This is not a master plan, the report is meant as a tool for guiding future decisions about North Mesa Recreation Area and Overlook Park. This and other amenities could be considered at the time of future Master Plan efforts.	N/A	
Additional Report Revisions			
N/A	N/A	1.Remove "Environmental" from the Climate Conditions subtitle. 2.Replace "Type of Use" with "Intensity of Use"	Page 45 of report

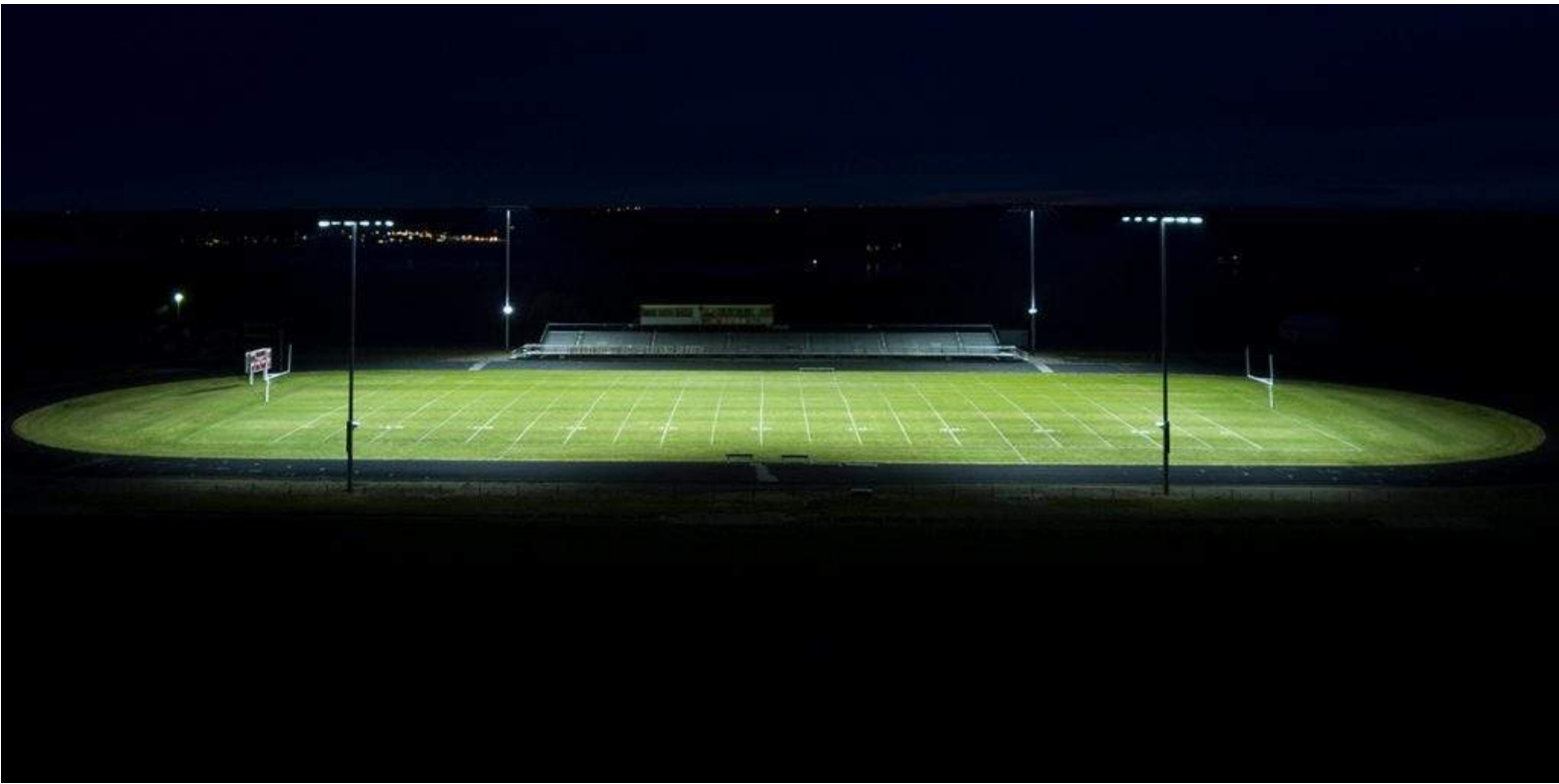
North Mesa Site Conditions Photo Map



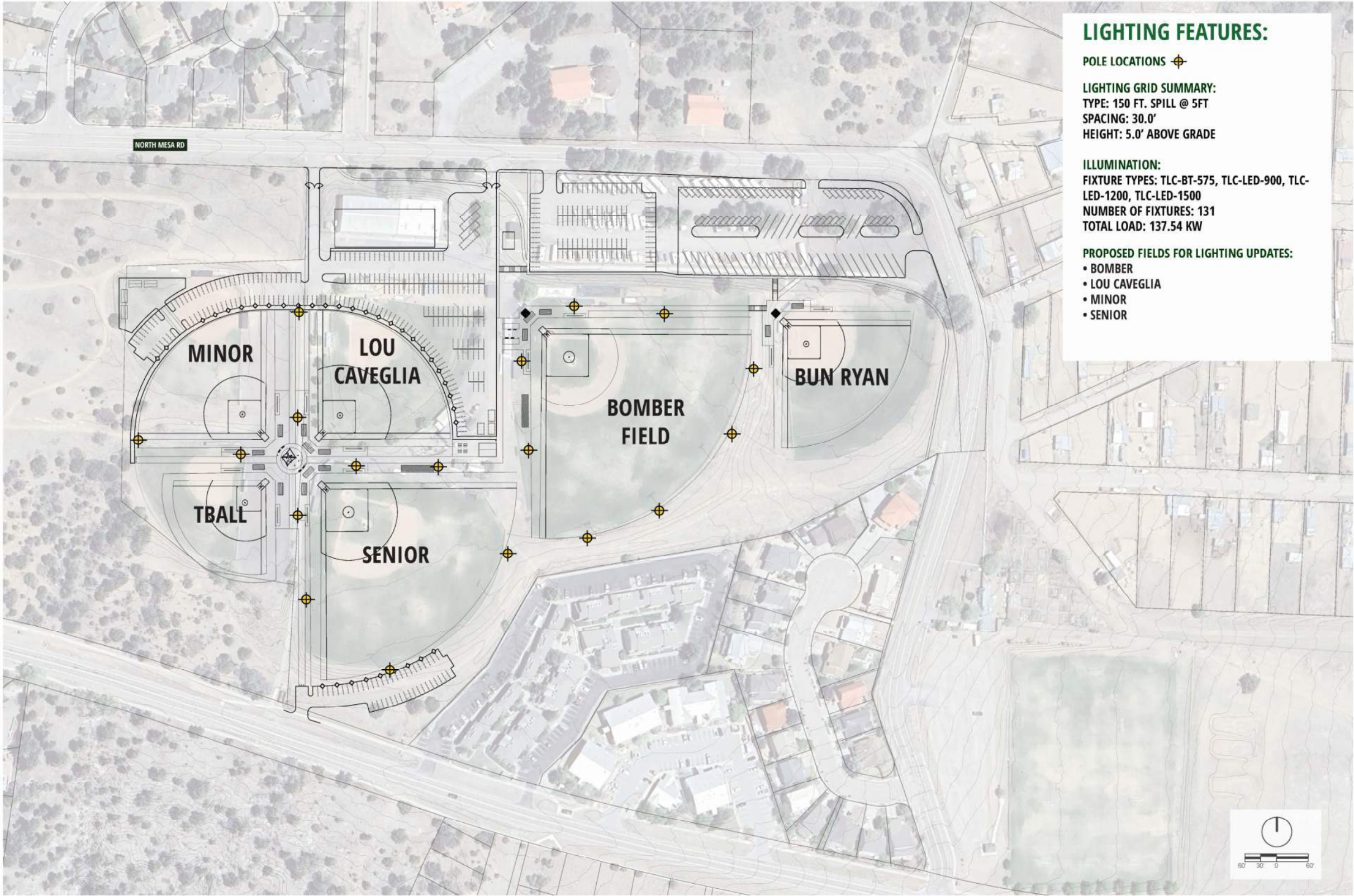
Overlook Park Site Conditions Photo Map



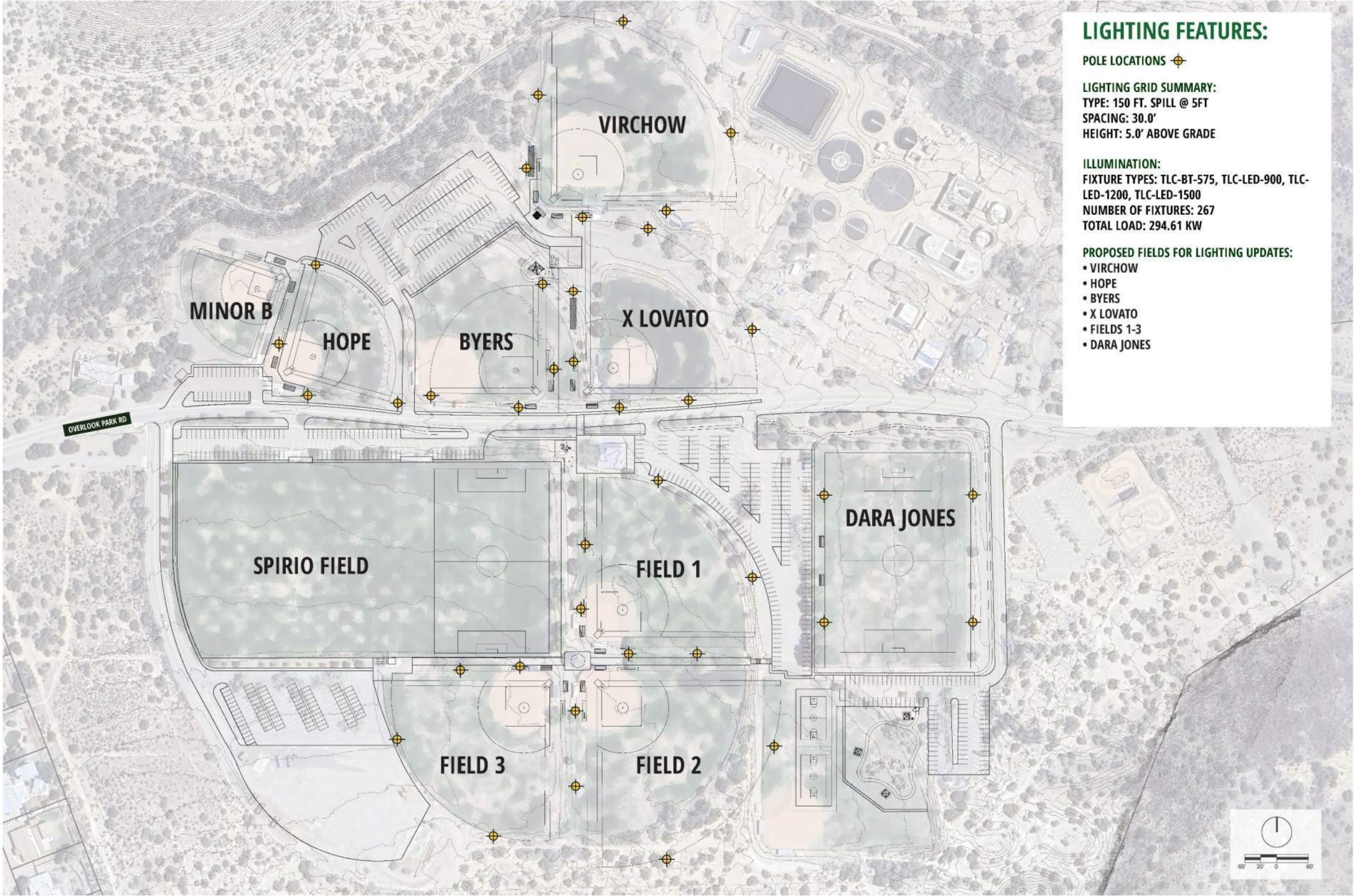
Proposed Lighting Improvements



North Mesa Sports Complex – Lighting Improvements



Overlook Park – Lighting Improvements



Community Meetings

Table 2.1 Summary of Meeting Dates and Focus

Meeting	Date	Focus/Format	Key Topics
Meeting 1	October 30, 2024	Listening Session 1	Initial community values, experiences, needs and priorities
Meeting 2	January 30, 2025	Listening Session 2	Field usage patterns, concerns, desires, and preferences
Meeting 3	February 27, 2025	Concept Presentation	Field layout options, co-location of facilities, field re-orientation, parking and circulation, flex fields
Meeting 4	April 23, 2025	Concept Refinement	Refinement of field layout options, amenity concepts
Meeting 5	May 15, 2025	Final Framework Review	Full plan review, prioritization, and lighting concepts

Artificial Turf: Myths vs Facts

Table 3.3 Artificial Turf: Myths vs. Facts	
Myth	Fact
Myth: Artificial turf contains dangerous chemicals at harmful levels.	Fact: While synthetic turf can contain trace amounts of substances like PFAS or heavy metals, levels are far below regulatory limits and often lower than everyday items such as cosmetics, food packaging, or cookware.
Myth: PFAS in turf are the same as the most harmful PFAS compounds.	Fact: Of ~10,000 PFAS types, only ~30 pose health concerns. Turf typically contains far fewer and at much lower levels than many common household products.
Myth: Lead in turf is the same as lead in old paint.	Fact: Turf uses encapsulated lead chromate, which is insoluble and not absorbed by the body, unlike lead carbonate in old paints.
Myth: Artificial turf sheds large amounts of harmful microplastics.	Fact: Most microplastic release is preventable through proper maintenance and field design. Levels are comparable to textiles, tires, and packaging materials.
Myth: Natural grass is always better for the environment.	Fact: Natural grass requires significant water, fertilizers, pesticides, and fuel for maintenance. Turf needs minimal irrigation, no chemical treatments, and supports more hours of use year-round.
Myth: Artificial turf increases infection risk.	Fact: Studies show bacteria like staph can survive longer on natural grass than on turf. Turf's higher surface temperatures can also reduce microbial survival.
Myth: Turf cannot be recycled.	Fact: 100% recycling options now exist, saving oil and energy. Some products meet Cradle-to-Cradle standards with no end-of-life waste.

** Artificial Turf Testing and Data Resources included in Appendix G.*

