



Regional School District #4
Chester – Deep River – Essex – Region 4

Via Google Meet
Please see information to join the
remote meeting for each date below

R4 Long Range Athletic Facilities Planning Task Force Meetings

To: **Members of the R4 Long Range Athletic Facilities Planning Task Force**

REVISED
04/07/21

Subject: **Task Force Meetings on the following dates:**

First Meeting: **Mon., March 22, 2021** – Dial (617) 675-4444 / PIN: 605 268 008 2136#

~~Second Meeting: **Wed., April 21, 2021** – Dial (617) 675 4444 / PIN: 656 234 578 4825#~~ **this date cancelled**

Third Meeting: **Wed., May 12, 2021** – Dial (617) 675-4444 / PIN: 879 859 861 9200 #

Time: **7:00 p.m. – 8:00 p.m. for all dates**

Place: **Via Google Meet – Please see Specific Dial-in Information for Each Date Above:**

(We kindly ask that you **please mute your phone immediately** upon connecting to the meeting as this will improve the audio quality for all participants. Google Meet may do this automatically, depending on the number of people already connected to the call. If so, pressing *6 will unmute your phone when it's time to speak)

Please contact Jennifer Bryan at Central Office email jbryan@reg4.k12.ct.us if you are unable to attend.

Mission Statement

We, the communities of Chester, Deep River, Essex and Region 4, engage all students in a rigorous and collaborative educational program. We prepare our learners to be respectful citizens who are empowered to contribute in a globalized society.

AGENDA

1. **Call to order** - *meeting facilitator*
2. **Verbal roll call**
3. **Agenda Items for March 22nd and April 21st:** Evaluate recommendations shared by the BSC Group and the Region 4 Fields and Grounds Study Committee in order to develop a recommended proposal for a Long Range Athletic Facilities Plan for Region 4 (*enclosure*)
4. **Agenda Items for May 12th:** Review and Finalize Presentation to be made to Region 4 BOE at their September meeting
5. **Comment.** (*In the interest of creating the best remote meeting experience for all participating parties, we would ask that you please keep your phone on mute until such time when the Chair calls for Public Comment. Please continue to keep your phone on mute unless you are requesting to be recognized by the Chair to make a comment. Once you have been recognized by the Chair to make your comment, the following standard public comment guidelines will still apply*): **PLEASE NOTE: Upon dialing in, Google Meet may have shared a message that your phone has been automatically muted due to the number of callers on the line and instructed you to press *6 if you would like to unmute your phone.** When you are done speaking, please remember to press *6 (or your phone's mute button) again to reduce background noise.

The public is reminded to state name for the record. Comments should be kept to a maximum of three minutes. Public comment is not intended to be a question and answer period; rather it is an opportunity for the Board to hear citizen comment related to educational matters

6. Adjournment

Cc: Town Clerks: Chester, Deep River, Essex



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Athletic Facilities Master Plan

Regional School District No.4

March 2021

Prepared For:



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Acknowledgements

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 Rick Daniels, Member

Valley Regional High School
 Mike Barile, Principal
 Carolyn Gbunlee, Associate Principal
 Jeff Swan, Athletic Coordinator
 Mick Fearon, Boys Soccer Coach
 Brian Drinkard, Boys Cross Country and Baseball Coach
 Beth Powers, Field Hockey Coach

John Winthrop Middle School
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Introduction

At the beginning of 2020, Regional School District No. 4 (the District) engaged BSC Group, Inc. to complete a general assessment of the existing exterior athletic facilities and develop a strategic master plan for at John Winthrop Middle and Valley Regional High Schools. The District includes the towns of Chester, Deep River, and Essex, Connecticut. The strategic master plan is intended to allow the prioritizing of capital improvements in relation to use needs, maintenance, athletic facilities life cycles, renovation projects of new facilities.



A master planning process for athletic facilities within the District will create a process for gathering community input, a plan for future development, and a list of action items that the District can use for implementing improvements in a deliberate manner. This “action plan” is not intended to be implemented all at once, but is intended to provide the District with a firm action plan for improvements over the next five to ten years.

As part of the assessment process, BSC Group conducted assessments of each field’s physical conditions. Visual inspections documented the existing conditions of the facilities and shaped the direction for the recommendations for improvements.



Source: Google Earth, 2020

Project Location Map

Existing Facilities & Use Analysis

The strategic master planning process included a visual physical assessment of the athletic facilities to document the existing features and conditions. The existing facilities analysis included meetings with the Director of Facilities to identify ongoing issues, management practices, as well as the roles and responsibilities impacting use. The existing facility analysis that follows is intended to provide an overview of each facility, including the general overall condition of the athletic fields and various amenities. This combined with the use analysis information will be used to develop an overall understanding of the District's needs related to the athletic facilities. This information will allow us to outline needs to prioritize projects within existing facilities and to identify needs for new facilities. This section, which focuses on the physical assessment of existing fields, includes general recommendations and considerations for action, including planning, maintenance, and future improvements. Reference the Appendices for a detailed breakdown of each facilities analysis.

Valley Regional High School

Valley Regional High School is located at 256 Kelsey Hill Road in the town of Deep River, CT. The athletic facilities are located to the south, west, and north sides of the campus which is perched on a hill. The facilities are primarily used by the high school athletics programs. Parking area located south of the school provides ample parking for events.

Facilities include: Stadium Field (6 lane running track with multi-sport field), Upper Field (field hockey/boys lacrosse), Tennis Courts (6), Baseball Field (90' with multi-use outfield), Softball Field (60' with multi-use outfield), Practice Field (160' x 360' football/multi-use field).



Valley Regional High School

Assessment Summary

Stadium Field

The existing track was constructed in 1995. It is in poor condition and appears to not have much resiliency left and should be resurfaced or replaced in the next couple of years. It is used by the track and field teams and the public. There is a steep slope down to the track on the east and a moderate wooded slope to the west.

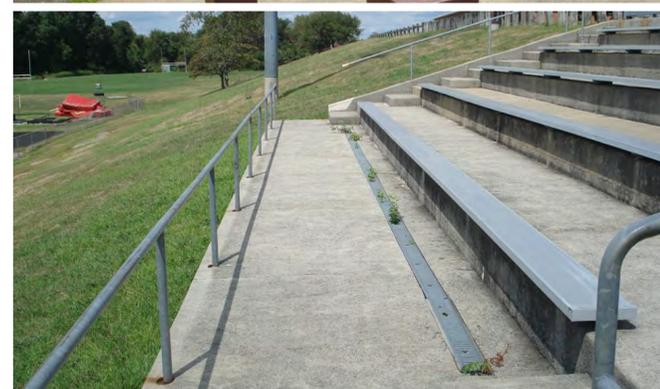


Stadium Field



Existing Track

Spectator seating is accommodated at the top of the slope to the east of the stadium field. Our observations noted many code and accessibility deficiencies, Hand rails and rail attachments show signs of deterioration and missing posts. The press box/concession building was not part of the assessment. We recommend that the District hire an architectural consultant to perform an assessment of the building.



Spectator Seating



Existing Track Surface

The interior field is in fair to good condition with evidence of turf grass deterioration in the high use areas in the center and end zones of the field. Due to the pandemic, spring, summer and fall use has been limited giving the field much needed rest to reestablish turf cover. There doesn't appear that the field has the proper crown which impedes drainage off the field to the edges. This has led to reserving this field for game football and varsity soccer games use. Additionally, it has required the District cancel or reschedule games because of poor field conditions. The field events (long/triple jump, pole vault, discus, shot put and javelin) are located to the north and outside the running track. The runways are in poor condition and should be replaced in conjunction with the track.



Existing Field Events

Upper Field

The upper field is utilized for a multitude of uses including field hockey practice and games, boy's lacrosse practice and games as well as non-athletic events such as graduation. The current field configuration is confined by a 4-foot perimeter fence which prohibits the ability to shift the field from one side or the other, reducing wear in the high use areas. There is 10-foot high ball netting along the north end of field. The turf condition is poor. Spectator seating is provided on the west side of the field but lacks an accessible route to and from the parking lot.



Existing Conditions at Upper Field

Practice Field

The practice field is located to the north of the stadium field and is utilized for football and lacrosse practice, occasional JV soccer in the fall and track and field events in the spring and conditioning in the summer. Track and field events such as shot put, discus and javelin are located at the south end of the field with their throwing sectors in to the field. The putting circle is missing a 2-inch painted circle. Fencing around the discus circle is in good condition but does not meet today's standards for height, setback from the circle or opening. The circle lacks a 2-inch wide painted circle and projecting lines.

The current field configuration allows for a 60-yard field. There is potential for expansion to the west. The field's playing surface is uneven with bare spots in the turf coverage. It appears that the field lacks the proper crown for a field with natural grass surface leading to poor drainage condition. The goal posts are an "H" frame style, football/soccer goal combination. The goals are in fair to good condition. The field is irrigated by a self-propelled sprinkler. There is no spectator seating and a lack of accessible walkways. Concrete stairs descend the slope to the east, providing access from the school down to the field. The handrail does not meet code for extension at the top and bottom, and only provided on one side. Spalling of concrete along the nosing of the stairs treads with exposed reinforcing bar was noted.



Stairs to Practice Field



Existing Conditions at Practice Field

Tennis Courts

There are currently 6 courts utilized by the District and the public located in the southeast corner of the high school campus. They are lined for single and doubles play. No pickleball markings were noted. The overall condition of the courts is poor. The court surfacing is faded with numerous cracks, some over 1-inch in width, representing a safety hazard. The courts are accessed through “baffles” in the fence at a couple locations which are not accessible. There is an overall lack of spectator seating and access to and within the facility. Additionally, players accessing the two center courts must walk behind other players creating a distraction and potential safety hazard. There are a few wooden player benches that are in poor condition and newer mental benches that are in good condition.



Tennis Courts

Baseball Field

The high school’s JV and Varsity teams use the diamond field. The high school’s JV boys soccer team uses the baseball outfield for both practice and games. The interface between the infield and raised outfield creates a trip hazard and affects the planarity of the playing surface. The field lacks a proper pitching mound. The outfield dimensions appear to be adequate for high school play. There is no foul ball protection for the spectators. Currently the baseball team shares the batting tunnel with softball however, the tunnel is designed for softball. A solitary pitcher’s mound is located behind the backstop with no catcher’s box or home plate to mark the proper pitching distance. There is also no fence which represents a spectator and player safety hazard. The field irrigated by use of manual hose and reel setup.



Conditions at Baseball Field

A stone french drain runs behind the third base dugout parallel to the foul line. The surface of the stone was covered in grass clippings with vegetation encroaching from the edges. This can reduce the functionality of the french drain.

There are no accessible walkways to the dugouts and there are portable bleachers for spectator seating also without access. The dugouts lack electrical service and are not ADA accessible. The stairs and railing leading into the dugouts are made of wood and are unstable. There is a lip at grade that could be a tripping hazard as athletes enter and exit the dugouts. The structure itself is overall in good condition. The outfield fence appears to be in good condition.

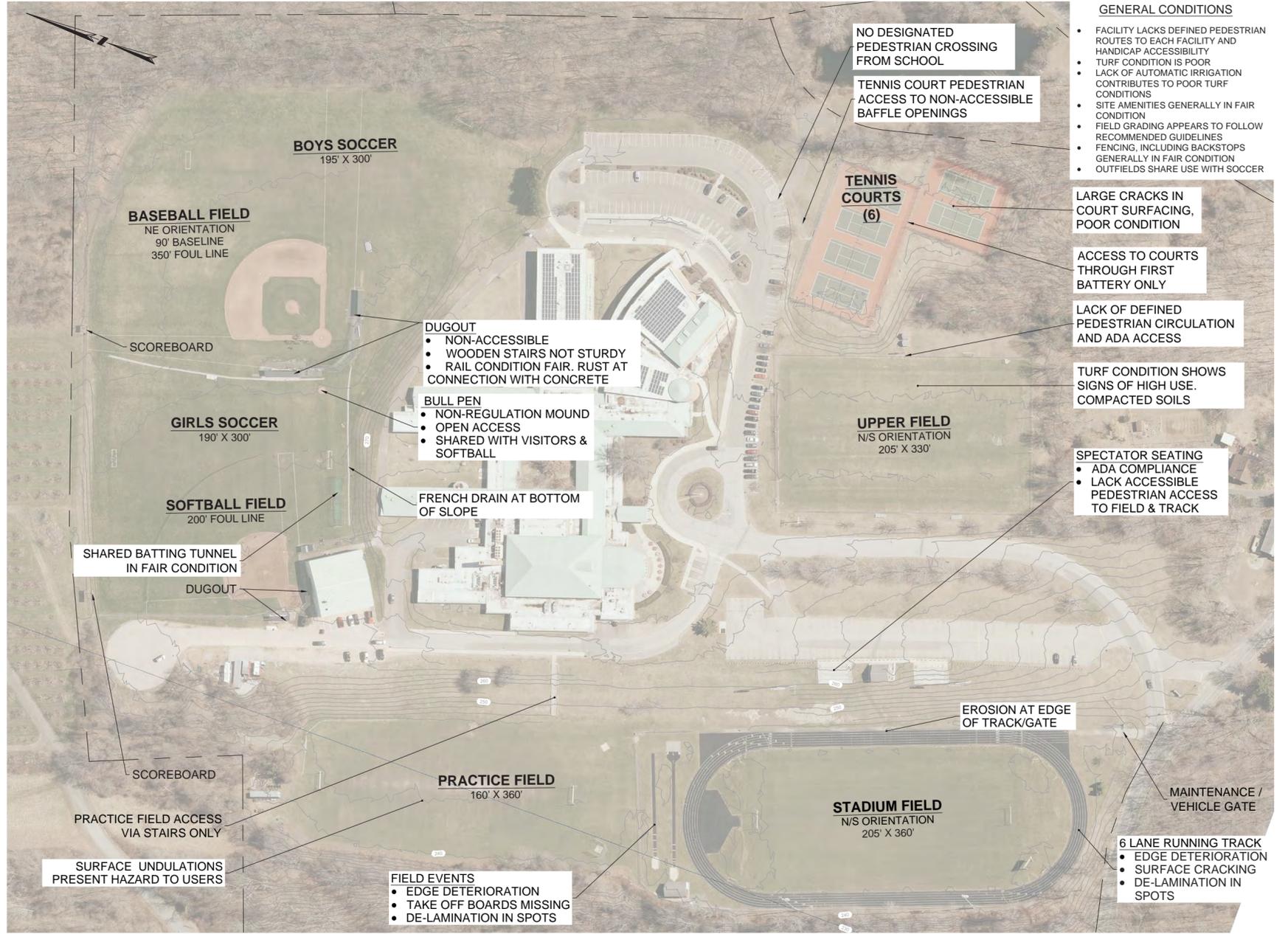
Softball Field

The field, located to the north of the school and adjacent to the maintenance outbuilding is used by the varsity and JV softball teams. The outfield is primarily used by the girl’s JV soccer team for both practice and games. The infield requires maintenance to eliminate weeds and the baselines are worn and compacted. There is no spectator seating or accessible routes to the dugouts. The backstop is in good condition; however, foul balls are a consideration given the proximity to parking. The dugouts appear to be in good condition. The first base dugout is not accessible due to it being placed between the backstop and building. The distance from the backstop to home plate should be increased.

Drainage appears to be a concern in left and center field. Fencing is in good condition, however, access from the dugouts to the field is via narrow openings in the field. A four-foot fence with fence topper runs the length of third base foul line.



Existing Softball Field



Overall VRHS Facilities Map

John Winthrop Middle School

John Winthrop Middle School is located at 1 Winthrop Road in the town of Deep River, CT. The athletic facilities are located to the south side of the campus, perched on a hill. The facilities are utilized by both the middle school and recreation leagues. Parking is located adjacent to the school building. Facilities include: Soccer Field 1 (200' x 360), Soccer Field 2 (200' x 360'), Soccer Field 3 (195' x 360') Soccer Field 4 (youth fields), Baseball Field (90' with multi-use outfield), Softball Field (3-60' with multi-use outfield, 2 not currently used).



John Winthrop Middle School

Assessment Summary

The athletic fields at John Winthrop Middle School are one contiguous open space with four diamond fields, the two southern fields are discontinued. There are bleachers located in the field area and around the wood line as well as numerous player benches and soccer and lacrosse goals. These items and are in fair condition however, most of the nets are in poor condition and should be replaced. The fields are accessed via openings in a 4-foot fence at the edge of the parking with a vehicle gate and access road adjacent to the school building. The entire facility lacks irrigation infrastructure and is further constrained by allocation of staffing to deploy sprinklers. There is a grove of tree to the north of soccer field 1 with a few picnic tables and small concession shed.



Concessions and Seating Area

Soccer Field 1

This field is in the eastern most side of the facility. It is primarily used for middle school soccer practice and games. It appears the field lacks the proper crown and the turf is in poor condition with a lot of broad leaf weeds and crabgrass. There are no permanent accommodations for players or spectators and an overall lack of accessibility. This field also shares the outfield of one of two discontinued softball fields. A french drain is located between soccer field 1 & 2. However, the stone surface is silted in and covered with crabgrass, severely impacting its function.

Soccer Field 2

Soccer field 2 shares the outfield of two softball fields. This creates a scheduling conflict with spring sports. The fields primary use is soccer and lacrosse and has the appropriate north/south orientation. The turf grass is in poor condition and suffers from lack of irrigation. There are no permanent accommodations for players or spectators and an overall lack of accessibility.

Soccer Field 3

Soccer field 3 shares the outfield of the baseball field and is primarily used for soccer and field hockey. This creates a scheduling conflict with spring sports. The turf grass is in poor condition and suffers from lack of irrigation. There are no permanent accommodations for players or spectators and an overall lack of accessibility.



Condition of Existing Fields

Baseball Field

The baseball field is in the southwest corner of the facility and has proper northeast orientation. The outfield is shared with soccer field 3. The turf grass has a high percentage of weeds, bare spots from overuse with shared soccer field 3, compaction and is not irrigated. The backstop is in fair condition but short and the distance to home plate should be increased. There is no defined players area and no fencing. The infield is full of weeds, compacted and the material is course. Foul poles are present but need to be repainted and there is no foul ball protection for spectators.



Condition of Baseball Field

Field surface drainage is collected by a couple french and areas drains located between soccer field 2 and along right field foul line. The stone surface is silted in and covered with crabgrass, severely impacting its function. The field's location is far from parking with no accessible route.

Softball Field

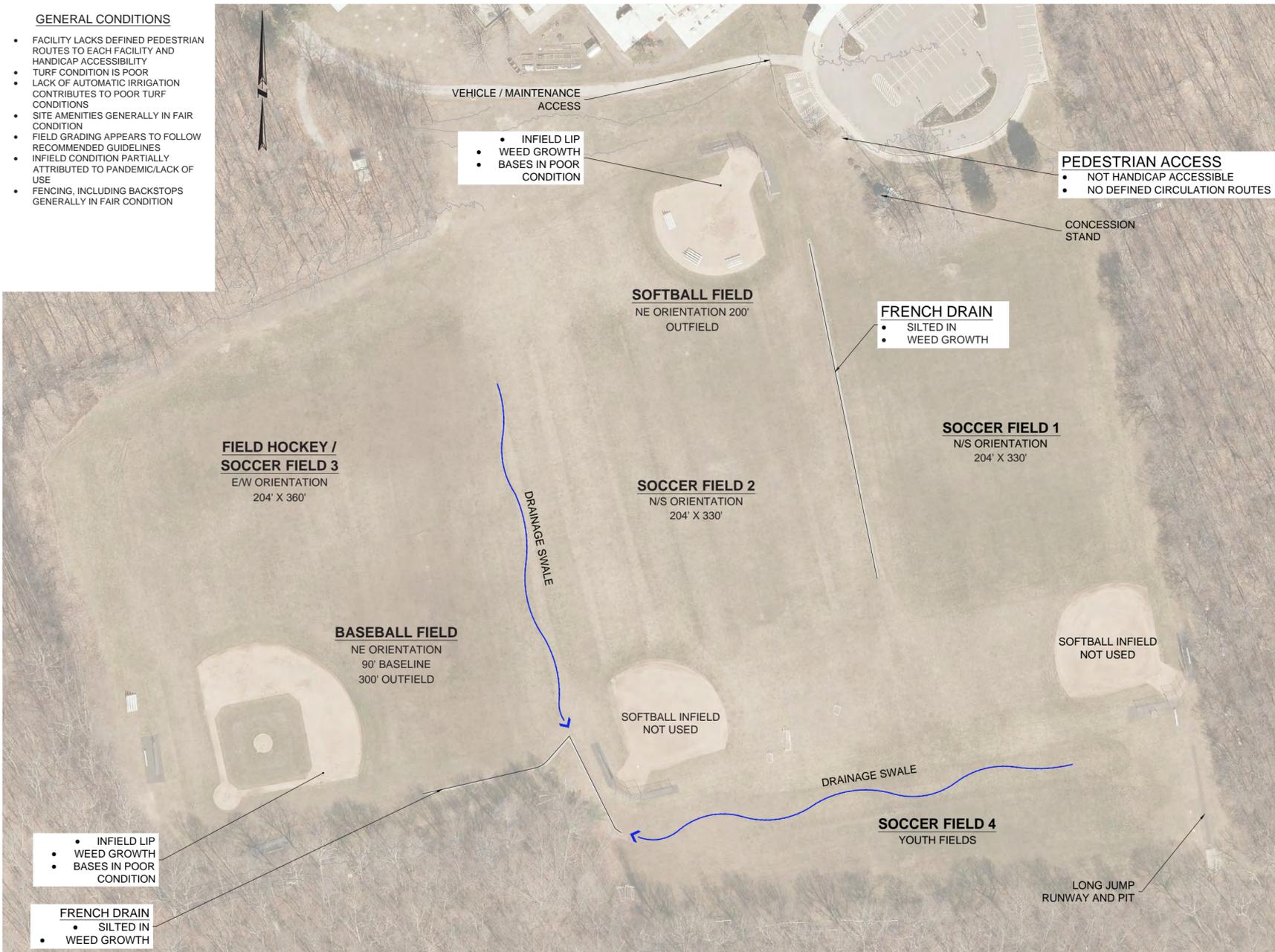
The field, located in the center of the facility is not irrigated and in poor condition. The turf grass has a high percentage of weeds, bare spots from overuse with shared soccer field 2 and compaction. The backstop is in fair condition but short and the distance to home plate should be increased. There is 6-foot fence in front of the players areas which is in fair condition. The infield is full of weeds, compacted and the material is course. The field lacks foul poles and foul ball protection of spectators. There is no accessible route form the parking lot to the field.



Condition of Softball Field

GENERAL CONDITIONS

- FACILITY LACKS DEFINED PEDESTRIAN ROUTES TO EACH FACILITY AND HANDICAP ACCESSIBILITY
- TURF CONDITION IS POOR
- LACK OF AUTOMATIC IRRIGATION CONTRIBUTES TO POOR TURF CONDITIONS
- SITE AMENITIES GENERALLY IN FAIR CONDITION
- FIELD GRADING APPEARS TO FOLLOW RECOMMENDED GUIDELINES
- INFIELD CONDITION PARTIALLY ATTRIBUTED TO PANDEMIC/LACK OF USE
- FENCING, INCLUDING BACKSTOPS GENERALLY IN FAIR CONDITION



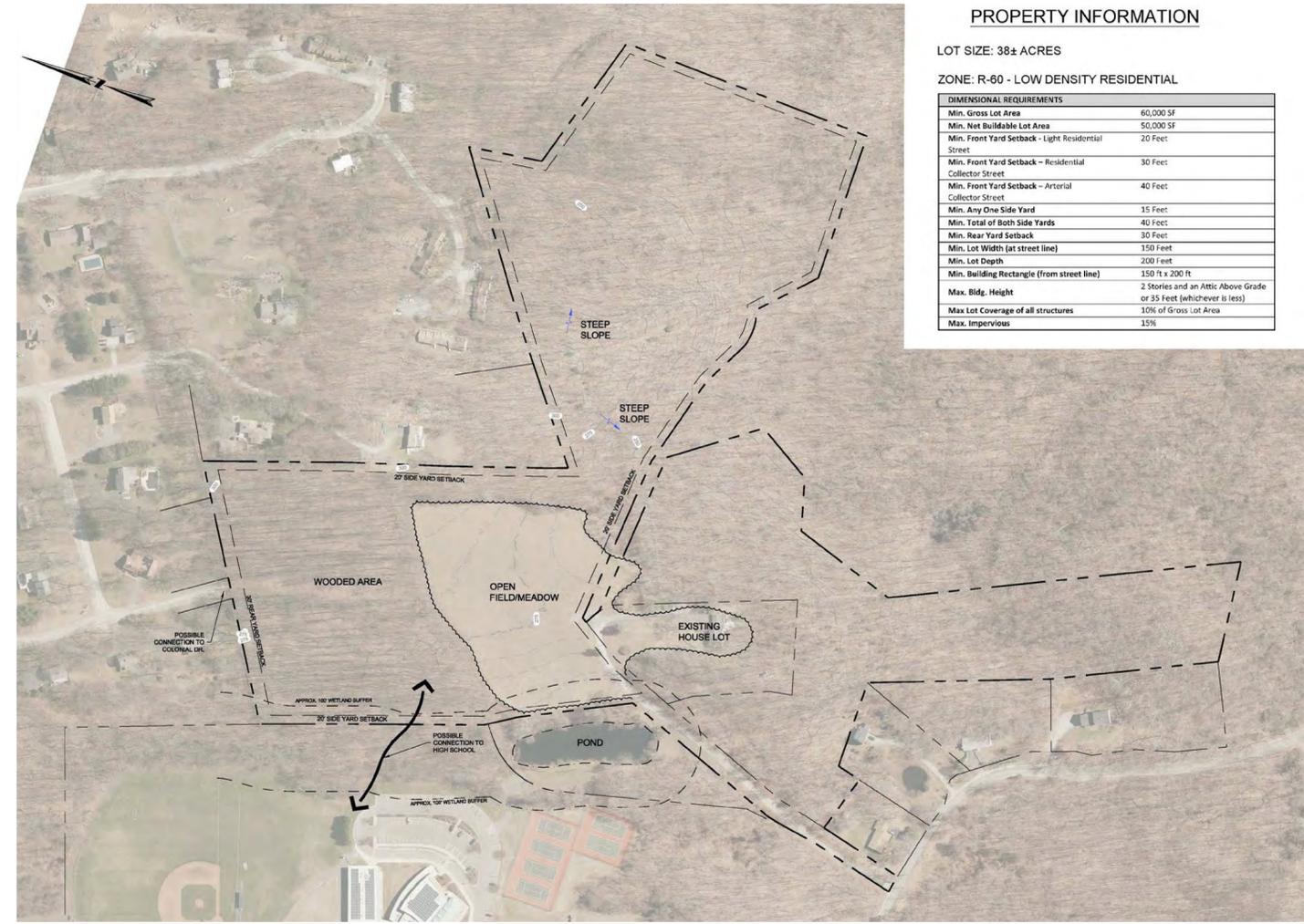
Overall JWMS Facilities Map

Mislick Property

Existing Conditions Analysis

The Mislick property is approximately 38.0 acres in size, adjacent to and east of Valley Regional High School. Access is provided off Kelsey Hill Road. Per available maps, the lot configuration is made up of three tracts of land. The topography is sloped, heavily wooded throughout with open space in the central tract. BSC performed a site visit and through review of Deep River's zoning regulations to understand the opportunities and constraints to possible athletic field development. Due to the configuration of the eastern and southern most tracts, these portions of the property are not suitable for athletic field development.

However, our analysis shows that athletic field development is possible within the central tract of land which includes the meadow and is partially wooded. There is an established access road leading from Kelsey Hill Road with electrical utilities available.



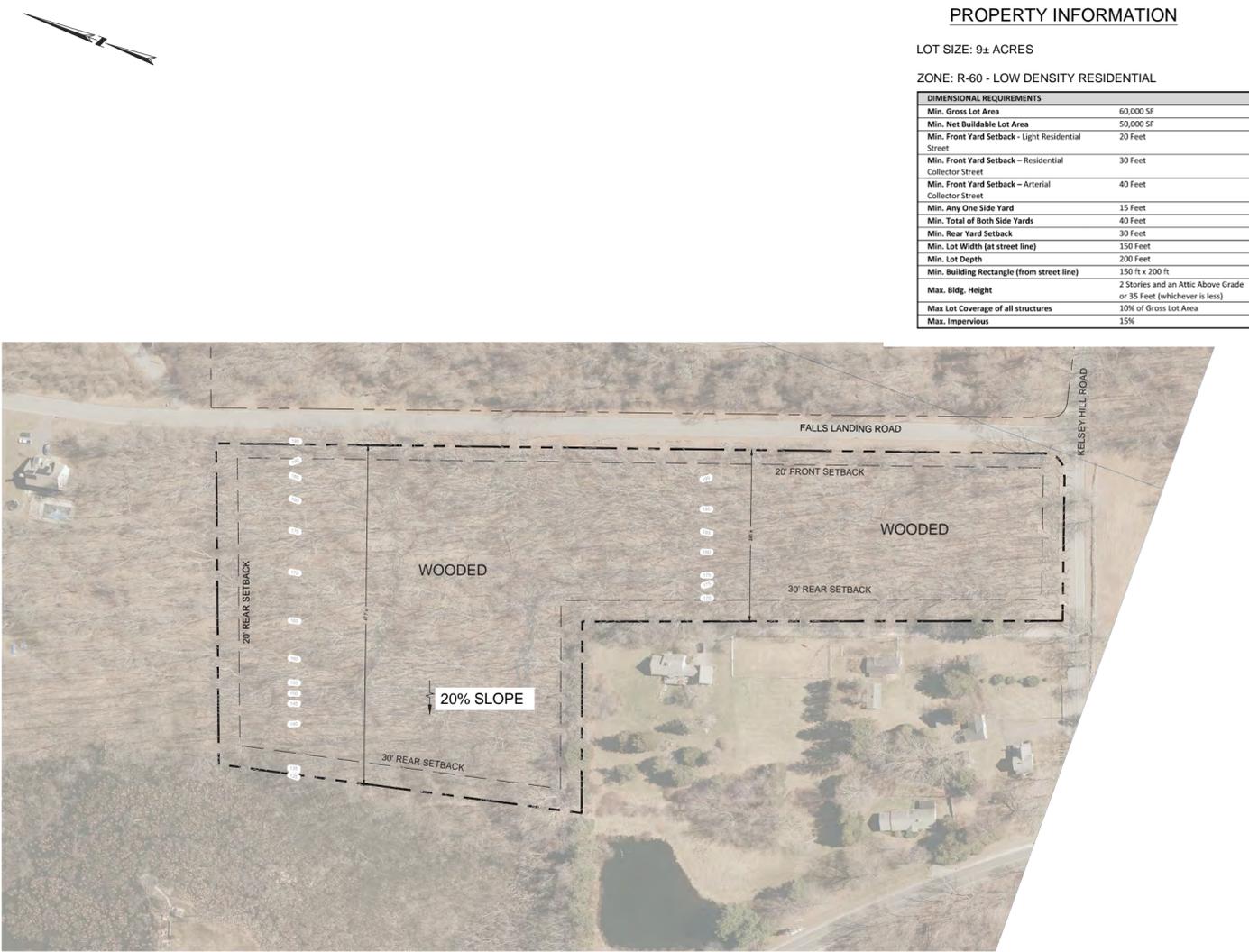
Mislick Property Map

PROPERTY INFORMATION	
LOT SIZE: 38± ACRES	
ZONE: R-60 - LOW DENSITY RESIDENTIAL	
DIMENSIONAL REQUIREMENTS	
Min. Gross Lot Area	60,000 SF
Min. Net Buildable Lot Area	50,000 SF
Min. Front Yard Setback - Light Residential Street	20 Feet
Min. Front Yard Setback - Residential Collector Street	30 Feet
Min. Front Yard Setback - Arterial Collector Street	40 Feet
Min. Any One Side Yard	15 Feet
Min. Total of Both Side Yards	40 Feet
Min. Rear Yard Setback	30 Feet
Min. Lot Width (at street line)	150 Feet
Min. Lot Depth	200 Feet
Min. Building Rectangle (from street line)	150 ft x 200 ft
Max. Bldg. Height	2 Stories and an Attic Above Grade or 35 Feet (whichever is less)
Max Lot Coverage of all structures	10% of Gross Lot Area
Max. Impervious	15%

Falls Landing Road Property

Existing Conditions Analysis

The Falls Landing Road property is approximately 9.0 acres in size located along the northwest corner of Kelsey Hill Road and Falls Landing Road. Per available maps, the lot configuration is L-shaped and the rear boundary line abuts inland wetlands. The topography is sloped and heavily wooded throughout. Due to the properties configuration and topographic challenges, BSC's opinion is that this property would not be suitable for athletic field development and therefore agree with the conclusion of the Real Estate Appraisal, Dated May 17, 2018, prepared by Steven L. Frey & Associates, Inc., that the highest and best use would be for single family residential development.



Falls Landing Property Map

PROPERTY INFORMATION	
LOT SIZE: 9± ACRES	
ZONE: R-60 - LOW DENSITY RESIDENTIAL	
DIMENSIONAL REQUIREMENTS	
Min. Gross Lot Area	60,000 SF
Min. Net Buildable Lot Area	50,000 SF
Min. Front Yard Setback - Light Residential Street	20 Feet
Min. Front Yard Setback - Residential Collector Street	30 Feet
Min. Front Yard Setback - Arterial Collector Street	40 Feet
Min. Any One Side Yard	15 Feet
Min. Total of Both Side Yards	40 Feet
Min. Rear Yard Setback	30 Feet
Min. Lot Width (at street line)	150 Feet
Min. Lot Depth	200 Feet
Min. Building Rectangle (from street line)	150 ft x 200 ft
Max. Bldg. Height	2 Stories and an Attic Above Grade or 35 Feet (whichever is less)
Max Lot Coverage of all structures	10% of Gross Lot Area
Max. Impervious	15%

Needs Assessment

A critical component of any athletics master plan is to identify who is using each field, and how often are they using them. For planning purposes, there are two major goals of the demand determination calculations. The first goal is to determine raw field usage and document which athletic programs are using which fields, and how much. This data will affect how priorities are rated, and how fields scheduling is accommodated. The second goal is to determine how that usage of the fields affects maintenance requirements. Each sport wears a field differently. Football wears a field more than baseball, and Lacrosse wears a field differently than field hockey.

No study can hope to document every field use, or every specific type of usage, or the exact degree of wear on that field associated with a specific use. Youth sports use fields differently than adult sports, soccer wears a field differently than football, practice wears a field differently than a game. To attempt to measure that difference in wear between sports planners apply usage multipliers to the raw scheduling data in order to estimate the amount of wear on a field caused by those uses. The goal of this exercise is to confirm which fields are being overused, specifically fields that are being over used to a point of not being able to sustain a viable growth of turf.

The industry standard for the limits of being able to maintain a viable stand of grass, on a municipal maintenance budget, is between 200 and 250 uses per year. A ‘use’ being defined as a game, 2 hours long, with 11 players per team. Between 200 and 250 uses per year is considered borderline sustainable. The viability of the turf on that field is highly dependent on the quality of maintenance provided. Over 250 uses per year is considered unsustainable for growing turf for municipal fields maintained with typical municipal budgets.

It’s important to discuss the field maintenance capabilities of the District. Currently the District allocates 10 hours a week between Valley Regional High School and John Winthrop Middle School field maintenance. Additionally, the District contracts outside services for turf grass management. There is more discussion on field management later in this report.

The following sections consists of a narrative, methodology, recommendations, and a Field Usage Summary Table with Multipliers. The Field Usage Summary Table documents the field uses per field per year in a graphical manner, both with usage multipliers.

Fields and Amenities Demand Methodology

For the purposes of evaluating field demand, turf wear, degradation and needed maintenance the amount of use a field receives provides a measure of its condition. A field ‘USE’ is considered 2-hour game or practice involving two teams or approximately 22 athletes using a field for 2 hours. It is worth noting that a synthetic turf field can withstand any amount of use that can be effectively scheduled. For synthetic turf, the annual total use quantity is between 500 and 750 uses per synthetic turf field, depending on if athletic lighting is provided for the field.

Athletic Field Terminology

Baseball Field: Has grass on the infield surrounding the pitcher’s mound. The Pitcher’s mound is an elevated mound in the center of the infield. Typical baseball field dimensions include:

Baseball field (High School level and higher) have a 90-foot baseline and a preferred distance from home plate of 310 feet at left and right field and 350 feet to center field.

Softball Field: Has an infield that is fully ‘skinned’, which means the pitcher’s circle is surrounded by infield material (no grass on the infield). Softball fields do not have a pitcher’s mound, the pitching rubber is at the same elevation as the infield. Softball fields are smaller than baseball and typically have a 60’ baseline and a minimum 200’ outfield for most levels of play.

Multipurpose Rectangular Field (MPRF): MPRF sizes can vary greatly depending of level of use (e.g. youth soccer or High School Soccer) or sports played (lacrosse, football). In the United States a MPRF typically is used for some combination of soccer, football, lacrosse and field hockey. For High School level sports (or better) the preferred dimensions of the field is 385’x230’. This dimension can fit all the common athletic field sizes for adult play, with safety runouts around the perimeter of the field.

Dedicated Rectangular Field (by sport): Dedicated fields are fields that are only used by one sport (e.g. Football). Similar to MPR Fields, sizes can vary greatly depending of level of use (e.g. youth soccer or High School Soccer) or the sport played (lacrosse, football). Where indicated the sport and level of this type of field is indicated. This is important as smaller fields (e.g. American Football) cannot be used by other sports that require larger field area, or an athletic program may prohibit use of the field by other programs in order to prevent wear.

Combination fields: Combination fields include a Softball or Baseball field which shares its outfield with a multipurpose rectangular field. For usage calculations, these fields are counted as a single field, however different multipliers are used depending on the sports played.

BSC developed a field use matrix for all the athletic programs in the District that use the facilities reviewed as part of this report. The quantities listed in the Summary Matrix were obtained from school sports schedules and staff. All data reflects field use between the Spring, Summer and Fall 2019 seasons. The totals from this matrix provide a quantification of the documented field uses for each field, at each school for a year. Though detailed and thorough, the use data provided should not be considered as 100% of the uses. There are additional uses (spontaneously scheduled practices, rescheduled games and informal ‘pickup’ uses) that are not able to be documented or included in these use/demand estimates.

There are approximately 1162 annually scheduled uses on the District’s athletic fields. These are distributed over a population of thirteen (13) fields throughout the two schools. The field usage numbers identify one field that receives more than 200 uses per year. The High School Upper Field, which is heavily used by both High School field hockey and boy’s lacrosse. It should be noted that there is a sizable lacrosse use at the middle soccer, but the number of uses per year were not available at the time of this report.

Field usage numbers are an indicator of field condition, and should not be confused with the actual condition of the fields. An example of this is the stadium field is in fair condition but has restricted use well below 200 events per year. Conditions can be a factor of many things, field construction, play during wet conditions, maintenance or other factors that degrade field conditions.

Field Usage Conclusion

The Field Usage Summary Table identifies several facilities that are considered to have moderate use, and one field at the high school that is considered overused. The fields with more than 125 and fewer than 200 events per year are the practice and JV boys soccer fields at Valley Regional and soccer fields 1 & 2 at John Winthrop. The softball field at Valley Regional could also be considered to have moderate use with 122 uses per year. These fields appear to be in playable condition due to the maintenance resources that are used on them.

The field with more than 200 events per year is considered overused, as maintenance staff struggle to keep grass growing, even with the resources provided. This field is the upper field at Valley Regional. There are several reasons why this field is considered overused, but one of the most important reasons is because this field is conveniently located adjacent to parking and the school in relation to other facilities. The school uses this field for boy’s lacrosse and field hockey, PE and graduation. It would be beneficial to build at least one more full-size soccer field, since it could be used more by other sports, and would take pressure off these overused fields.

Practices for all sports must be held on the same fields as games are held, because there is a lack of dedicated practice fields or field conditions don’t allow practice to be held elsewhere. This puts additional stress on each field. In addition, the needs assessment does not address any games or practices that were displaced (e.g. played on another Town’s field) or cancelled due to rain. It would be beneficial to improve the practice field that would help take certain stresses from the official game fields.

The athletic facilities inventory and evaluation, is intended to provide the District with understandable information on the usage of each field, so that staff can evaluate and prioritize what additional fields should be considered for construction or improvement at either the middle of high schools.

The usage data is a tool to document both under-used facilities, as well as to highlight facilities that are in high demand or overused. The ultimate decision on which types of fields to include will rely on field types that are overused, and types of fields that are not frequent enough to support the current demand.

It should be noted that the District offers a lacrosse program, but currently does not have a dedicated lacrosse game field or suitable practice area. The lacrosse games are held at soccer field 1 & 2 at John Winthrop school. A space for lacrosse should be constructed in the District, as the sport is growing popularity. The impact of future trends should be considered as the District moves forward with its athletic facilities investments. Current participation

trends indicate that flag football, track and field, and lacrosse are quickly growing with an 8-10% increase in participation over previous years.

Continued monitoring and close coordination between the District, town and other organizations will be required to better manage levels of use. Short term strategies to even out field time can reduce overuse of certain facilities, but in the long run, the city will want to consider expanding its athletic facilities to better accommodate existing and future activities. In the short run, limiting practice times or sharing field space for non-game activities is likely the best solution where capacity is not currently a critical issue.

FIELD USAGE SUMMARY TABLE (With Multipliers)																					
Region 4 Athletic Field Assessment and Master Plan																					
Date Updated: 11/23/2020																					
School Teams													Rec	Other							
Baseball - V/JV/F	Softball - V/JV	Boys Soccer V/JV	Girls Soccer V/JV	Football - V/JV/F	Boys LAX V/JV/F	Girls LAX V/JV/F	Field Hockey V/JV	MS Field Hockey	MS Baseball	MS Soccer	MS Softball	Rec Soccer	Graduation	Physical Education	Tournament Games	Practice					
Multipliers	1.00	1.00	1.00	1.00	2.00	1.50	1.50	1.00	1.00	0.75	1.00	0.75	1.00	1.00	1.00	1.50	1.50				
SCHOOLS																					
Field Name	Field Description	Approx. Field Size (feet)	TOTALS																	TOTALS	
Regional School District 4 / Valley Regional High School																					
Stadium Field	Football & Varsity Soccer	190 x 360	49	0	0	12	10	10	0	0	0	0	0	0	0	0	0	0	5	12	0
Upper Field	Field Hockey & Lacrosse	221 x 365	205	0	0	0	0	0	24	24	17	0	0	0	0	0	0	2	5	11	225
Boys Soccer	Baseball Outfield	180 x 330	131	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	5	0	120
Girls Soccer	Softball Outfield		86	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	5	0	75
Practice Field	Multi-Use	180 x 360	130	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	0	120
Baseball Field	90'-diamond / shared with soccer	310	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	90
Softball Field	60'-diamond/40' pitcher	225	122	18	19	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	75
John Winthrop Middle School																					
Soccer 1	Soccer	195 x 360	136	0	0	0	0	0	0	0	0	0	0	0	44	0	92	0	0	0	0
Soccer 2	Soccer	195 x 360	170	0	0	0	0	0	0	0	0	0	0	0	32	0	138	0	0	0	0
Field Hockey	Multi-Use	180 x 330	68	0	0	0	0	0	0	0	0	8	0	0	0	60	0	0	0	0	0
Youth Soccer	Soccer	100 x 450	12	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0
Baseball Field	90'-diamond / shared with soccer	350	89	0	0	0	0	0	0	0	0	0	29	0	0	60	0	0	0	0	0
Softball Field	60'-diamond/40' pitcher	250	29	0	0	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	0
TOTAL			1,428	18	19	18	16	15	24	24	17	8	29	78	29	362	2	35	32	705	1,428
NOTES													LEGEND								
1. Each use event is defined as (2) teams on a field for 2 hour period													Green SUSTAINABLE USE - < 125 events per year, maintenance is feasible and typical management practices apply.								
2. This table does not reflect existing conditions of the fields													Yellow MODERATE USE - 125 - 200 events per year, more frequent maintenance is required, additional management practices may be necessary.								
													Red OVERUSE - > 200 events per year, maintenance is less proactive / more reactive, field performance is low.								
													Blue INAPPROPRIATE USE - Non-intended field use (e.g. baseball on a softball diamond)								

Management Recommendations

Consideration of the resources needed to properly maintain athletic facilities, such as the available staff and the equipment used is a vital component of planning for the athletic facilities. District owned facilities do not have the budget resources of a National Football League stadium, and cannot be maintained in the same way. District maintenance budgets are typically limited, and athletic facilities are typically designed to accommodate these constraints.

This section of the Master Planning Report contains two parts: The first section outlines recommended maintenance practices and provides budgeting information based on those recommended practices. The intent of this first section is to provide a benchmark for comparison to the following section. The second section documents the current maintenance practices and budget in the District. In order to document current maintenance practices, maintenance staff was interviewed and basic equipment inventoried in order to compare current practices with those recommended to keep a District level playing field in playable condition.

Every type of sport or use impacts wear of natural turf differently. Soccer, football, softball and baseball each dictate a different set of conditions, requiring unique management approaches, (e.g., soccer goal mouths versus football midfield and side line areas). Maintenance requirements also can vary within individual fields, based on environmental conditions, soil conditions and changes in the micro climates (sun, shade, drainage, exposure to salt, traffic, etc.). Dedicated turf managers are aware of these variations and apply maintenance accordingly. The following outlines the tasks and scheduling required to properly maintain natural turf fields, and to assist in the formulation of maintenance budgets proposed later in this section. These are general recommendations and the costs used have been obtained from various owners throughout the northeast, and generalized for the purposes of this report. Actual budget needed may vary based on specific site conditions, quality of field construction and the turf manager's actual budget and time allocations. A general description of typical athletic turfgrass maintenance tasks are outlined below.

Managing turfgrass by using knowledge of turf biology, soil science, pest management practices, varieties of turf and cultural practices together in a scheduled and deliberate way to optimize the conditions for grass growth is known as Integrated Turf Management. This type of turf management requires thorough field monitoring of conditions, good record keeping and consideration of different turf management techniques with the goal to provide consistent proactive decision making on when to react to turf conditions and how maintenance is applied. A healthy stand of grass requires less maintenance, less herbicides and less water, the goal is to react early to turf conditions to catch deteriorating conditions and minimize having to make wide-spread repairs.

Recommended Turf Maintenance Tasks

Testing

As an integral part of a Integrated Turf Management Program for natural turf, each field should have its topsoil tested regularly for nutrient levels. Samples can normally be taken by on-site staff and sent to the UCONN or UMASS Agricultural Extension Service for testing and results (www.umass.edu/soiltest/). These tests will determine the amounts of fertilizer, lime and sand topdressing that need to be applied as part of regular maintenance. Knowing these results prevents unnecessary fertilizer and lime applications, and can provide significant savings on maintenance costs and materials.

Mowing

Turf grass in areas of play should be mowed at least weekly during the growing season to provide a suitable playing surface. Regular mowing practices enhance turf density, color, texture, root development, wear tolerance and other key aspects of turf quality. Mowers need to be maintained regularly, should not have any fluid leaks and must have sharp blades. Mowers dedicated only for use on athletic fields are highly recommended, so that blades are maintained sharp and weed seed and potential disease is not transferred to the fields. In New England most Athletic fields are a stand of Bluegrass or Bluegrass and Perennial Rye. Mowing heights are adjusted from one and a half to two and half inches (1.5"-2.5") during the growing season (until mid-July), to two and half to three and a half inches (2.5"-3.5") from mid-July to mid-September, and then gradually brought back down to one and half to two and a half inches (1.5"-2.5") over 4-6 weeks prior to the first game. Clippings should be either mulched and left behind, or collected and disposed of, depending on the height of the cut and the thatch density targeted.

Infield Maintenance - Baseball/Softball

During the spring (April-June) season, baseball/softball infields are typically dragged with a machine/drag-mat (intended for infield work) and amended to smooth and dry the infield material, as well as to adjust grades at wear areas near the bases and home plate. The batter box and foul lines are also typically painted. For baseball, the pitcher's mound is adjusted and divots repaired. This work is typically performed weekly during the regular season, and sometimes prior to every game for stadium fields or during play-offs. The infield maintenance budget should account for spring clean-up and preparation of the infields to remove leaves, weeds and replace bases.

Irrigation

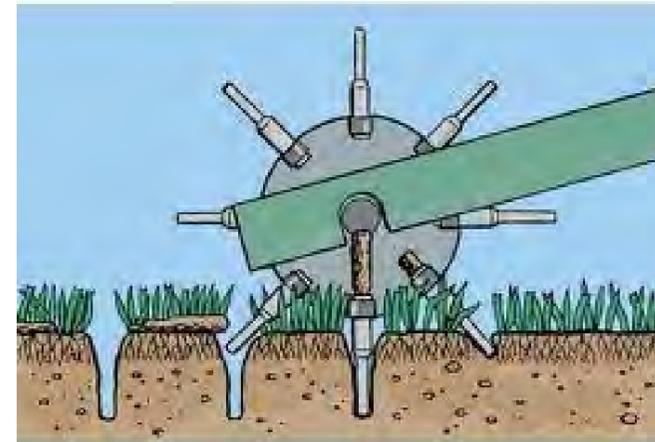
Irrigation is absolutely essential for maintaining acceptable playing surface quality on natural turfgrass athletic fields. In New England, the irrigation season typically runs from June through August. During that period, each field footprint should receive one inch (1") of water per week, which should be adjusted in accordance with precipitation. For a typical 90,000 SF soccer field, this equates to 54,000 gallons per week. The District is at an extreme disadvantage in that all fields lack an automatic irrigation system except for the stadium field. As the District upgrades their fields to include automatic irrigation systems, automatic irrigation systems should not be 'set and forget' systems. The Districts staff needs to actively monitor irrigation to confirm proper timing, coverage and operation, and monitor irrigation with the goal of using water sparingly. Fields that are watered too much are susceptible to disease, early wear and over compaction. We recommend the use of intelligent controllers with moisture sensors. Maintenance budgets need to account for spring start-up and repair of irrigation systems, as well as fall winterization.

Fertilizing

Fields are fertilized to provide micronutrients to the soil and "food" for the turf grass plant. Fertilization should generally be performed in the early spring and summer, and later supplemented on selected fields in the early fall, as needed. This will ensure that sufficient nutrients are available to develop healthy root zones during the peak growth period, which includes May and June. Fertilization should be directly related to soil tests performed on an individual field and as part of an overall integrated turf management program. This is particularly important for facilities that border on wetland receptors, which may be unnecessarily contaminated by over-fertilization. Once soil sample data has been obtained, fertilize with the proper nitrogen/phosphorus/potassium (N-P-K) ratio should be applied at the recommended rates. Low solubility fertilizers, applied only at rates which ensure uptake, should be used to minimize groundwater or surface water impacts.

Lime Application

Maintain soil pH 5.9-6.5 to maximize nutrient availability. Lime application is generally performed in late November, as it typically takes up to six (6) months to breakdown. Lime should only be applied to soil based on the results of the annual soil testing recommendations. Lime is caustic and should not be applied if field use is scheduled.



Aeration

Aeration alleviates compaction and develops deep-rooted turf. It is accomplished by creating spaces in the turf, thus allowing moisture, nutrients and oxygen to penetrate to the root zone. Aeration also breaks up thatch, which helps contribute to the organic content of the soil and breaks the mat on the soil surface. High-use fields should be aerated two to three (2-3) times per year. We recommend that six to seven inch (6"-7") hollow core aeration equipment be used for aeration. The timing of the first aeration in If the intent is a long-term modification of the root zone, we recommend removing the plugs and top dressing the field with coarse sand or compost depending on the desired target (drainage or organic content). Depth and location of irrigation should be considered with any aeration activities. Additionally, the District should consider contracting every two years to have fields cored with a vertidrain to get deep penetration

Topdressing

Topdressing (sand, compost or topsoil) is applied periodically, as a soil amendment, to maintain a smooth playing surface and to adjust the root zone particle size distribution, which can affect drainage and compaction of the topsoil. Top dressing adds soil, sand or other beneficial organic material, and soil amendments (as determined by turf needs and based on agronomic testing) to the surface of the turf. It should always follow core aerating, with the intent of working topdressing materials into the core holes.

Over-Seeding

Aggressive overseeding is one of the most important cultural practices required to maintain acceptable turf grass quality and playing conditions on a high traffic/pesticide free athletic field. Aggressive overseeding can be defined as applying seed (at rates exceeding the typical recommended ranges for seedling establishment) onto well-established turf grass areas, regardless of turf grass density.

Over-seeding is recommended for all high use athletic fields. Selection of turf grass species and timing of application depends on when he most intense use occurs. Given budgetary restrictions, overseeding efforts scan be focused on high traffic areas. Perennial ryegrass is the preferred species for aggressive overseeding due to its quick germination, speed of establishment and its ability to develop under high use conditions. A mixture (70:30) by weight of Kentucky bluegrass and Perennial ryegrass should be considered for spring re-establishment to help maintain Kentucky bluegrass population on fall use athletic fields. Seed should be broadcast prior to a cleated practice or game allowing players to work seed into the soil for optimum seed to soil contact.

If the field is used May-August, apply 3-5 lbs. of perennial rye per 1,000 sq. ft. per month. After September 1, apply up to 20 lbs. of seed per 1,000 sq. ft. Target a rate of 35-45 lbs. of seed per 1,000 sq. f.t per growing season. For perennial ryegrasses, select 3-4 cultivars to create a seed blend. Select 1-2 cultivars that have medium to high wear tolerance and 1-2 cultivars that have grey leaf spot resistance. Consider other cultivar qualities such as spring green-up and drought tolerance. Refer to www.ntep.org for cultivars that have been evaluated in Connecticut. Uconn Extension Specialists are a valuable resource for more information.

Pesticide and Herbicide Applications

In the State of Connecticut, the use of EPA registered pesticides is prohibited on public school (K-8) grounds. If the District follows the recommendations above, the need to use pesticides should be limits. However, if pesticides are needed, pesticides and herbicides should be used sparingly and only be applied by licensed applicators. Pesticides should not be applied as a prophylactic, but rather in response to an observed pest or disease, and then tailored accordingly. Instructions and timing for application of pesticides and herbicides is critical and should be strictly followed, as they are typically targeted at particular stages of growth of weeds or pests. Any chemicals used must be of recent manufacture and have effective results. Chemicals that may present health hazards should not be used. Approved pesticides can be found on Connecticut's Department of Energy and Environmental Protection's website and are known to change periodically. Again, pesticides should be applied only as part of an overall Integrated Turf Management Program and consistent with jurisdictional policy. This is particularly true for facilities that border on water courses or wetland areas.

Anticipated Maintenance Budgets for Existing Fields

The following are the costs for maintenance that would be anticipated if all the tasks listed above were performed correctly for a District level field. These costs were originally gathered from Massachusetts municipalities over a ten-year period and represent average estimated costs, based on prevailing wage and materials rates. BSC has maintained a data base of these costs from previous municipal projects. This calculation includes an estimate of the resources, manpower, equipment and materials to perform each activity on a typical natural turf playing field. In addition to material costs, this calculation accounts for labor and overhead costs, as well as equipment utilization rates and capitalization/depreciation.

Management Recommendations Conclusion

Though the District budget data was not made available, the above anticipated maintenance budget can be used to compare against the current allocation of funds. Additionally, the District recently renewed a contract with an outside vendor for grounds maintenance, including athletic fields for the next five years, at an average cost of \$123,170 per year. This equals almost half of the anticipated budget provided in the table.

Decision Matrix

Using the data and demand matrix developed as part of this report, BSC facilitated a programming process to define priorities for improvements to existing fields and/or development of new fields. This will also directly informed the recommendations discussed later in this report. The programming process used the demand matrix as the data management tool, and then added the athletic facility “needs” and “wants” to update prioritization of updates/renovations/new improvements at each facility. This information formed the core of the programming process, and will document the projected future needs (“demand”) for the athletic facilities and identify in specific terms what modifications (renovations, re-allocation, new facilities, etc.) will be required to align with future needs. BSC will develop recommendations based upon the demand matrix and programming process that will guide the District in determining priorities for improvements to existing fields or development of new fields. The matrix rankings will consider the recommendation against cost, revenue capacity, user group needs, site-specific conditions, environment, character and neighborhood concerns and include considerations such as synthetic turf and facility lighting. Recommendations will be calibrated to include “immediate” (2-5 years), “near-future” (5-10 years), and “future” (10-20 years) rankings. The needs assessment and resulting recommendations will include items such as recommendations for system-wide improvements, including acquiring developing/ improving athletic fields, assessment of current and future athletic field lighting, field irrigation, eliminating redundancies, adopting new policies, and partnership opportunities to support local needs, funding and interests.

General Considerations

In addition to the specific recommendations for each facility, the District should consider more global policies relating to the development of its athletic fields. The following are for the Districts’ consideration:

Americans with Disabilities Act (ADA): Federal and local regulations require all facilities to be accessible to the handicapped and less able. Where accessibility is not possible, accessibility to similar facilities needs to be provided. Removing barriers to accessibility should be a priority for renovations. Some barriers noted in this report include elements such as changes in grade, lack of accessible parking and signage, lack of accessible walkways, and accessible features such as gate latches, seating areas, or water fountains. Other accessible considerations include gate widths, dugouts, and concessions areas.

Title IX Requirements: Title IX of the United States Education Amendments Act of 1972 generally requires any education program receiving federal funds to provide equal access to programs for both girls and boys. Though Title IX requirements are typically associated with schools, Westerly schools use parks athletic facilities for both games and practice. Title IX should be considered when updating these facilities to provide equivalent facilities for both girls and boys.

Athletic Facilities and Trends: Youth sports continues to be very popular. Lacrosse, formerly a fringe sport, is now the fastest growing sport in the country. As youth sports programs grow, so does the demand for quality fields. A successful youth facility requires multiple fields, good parking, and concessions. Parks with multiple fields allow a minimum of supervision staff, and parks with multiple facilities provide parents and siblings with alternative activities while children are playing. While the diverse multi-field facilities such as these thrive, nearby single fields will be empty because they are less usable for a large sports program. Lighted facilities are also very popular as they allow play in off-hours and off-season and allow working parents to participate. Lighting technology is now very efficient and has a minimum of “spill” that can affect neighbors. The town should consider these when planning for new facilities.

Green Initiatives: Westerly recognizes the efficiency that can be realized in current construction techniques, sustainable products, and methods that preserve the environment and character of the town. Green initiatives, products, and techniques should be considered as part of any improvement proposed for Westerly Parks.

Developing Recreational Trends: New amenities are becoming popular with changes in population, demographics, and technology. Some new trends the town should be aware of and consider for addition to the parks include pickleball, a form of paddle ball that can be overlaid on a tennis court, which is popular with snow-birds returning from down south; futsal, a form of soccer played on a court-sized facility; and splash-pads, which offer a summer cool-off opportunity without the need for a lifeguard or full-time supervision.

VALLEY REGIONAL HIGH SCHOOL

Facility	Needs/Wants	Primary Objectives Met	Project	Project Details
Stadium Complex	Synthetic turf field, improved drainage, new track and jump pits, better quality/level fields	Safety	Replacement of running track surface.	Strip existing all-weather track surface, install new surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.
		Safety, Accessibility, Maintenance	Reconstruct running track. The project includes development of a new, 6-lane track to support regional meets.	Strip existing all-weather track surface, mill and pave asphalt base, install new polyurethane base mat with structural spray surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.
		Safety, Maintenance, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, replace goal posts, relocate scoreboard, new irrigation system, sod
Upper Field	Synthetic turf field, lights, more seating, additional safety netting, better quality/level fields	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new scoreboard, new irrigation system, sod, ball safety netting, improve accessibility and spectator seating.
		Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Remove natural grass surface and replace with synthetic turf, new scoreboard, ball safety netting, improve accessibility and spectator seating.
Tennis Courts	Resurfaced courts, lights, access	Safety	Repair cracks	Prepare cracks, fill cracks with polyurethane filler or use Riteway repair system, resurface
		Safety, Accessibility, Maintenance	Reconstruct tennis courts	Demolish existing facility, new asphalt base, new equipment, new fencing, improve accessibility and spectator seating
		Safety, Accessibility, Maintenance	Construct post-tension concrete courts	Demolish existing facility, new post-tension concrete base, new equipment, new fencing, improve accessibility and spectator seating
Baseball Field	New outfield fence, electrical in dugouts, new infield surface, new bullpens & batting tunnel, bleachers	Safety	Reconstruct infield	Remove infield lip, new clay surface, reconstruct mound, upgrade utilities, new warning track, new irrigation system
		Safety, Maintenance, Management of Assets	Reconstruct outfield	Re-grade outfield, extend irrigation, new warning track, new scoreboard, new fencing, bull pens
		Equity, Safety, Management of Assets	Facility Amenities	Install batting tunnels, LED sports field lighting
		Equity, Safety, Accessibility	New Accessible Dugouts	Reconstruct dugouts to be accessible, improve accessibility and spectator seating, new fencing
Softball Field	New outfield fence, electrical in dugouts, new infield surface, new bullpens, bleachers	Safety	Reconstruct infield	Remove infield lip, new clay surface, improve accessibility and spectator seating
		Safety, Equity, Accessibility	Renovate and adjust location of softball field to address safety and accessibility issues	Upgrade facility to address accessibility issues, replace dugouts, backstop and fencing, improvements to drainage and utilities, new scoreboard
Practice Field	Better quality/level field, bleachers, size to accommodate full size soccer, synthetic turf field	Safety, Equity, Accessibility, Management of Assets	Replacement and expansion of facility	Renovate and expand facility to include 65 yard wide soccer field, new goal posts, improve accessibility, new irrigation system
		Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Convert playing surface to synthetic multi-sport turf, new sports field lighting, upgrade utilities, new amenities, spectator seating, improve accessibility

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets
Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)

JOHN WINTHROP MIDDLE SCHOOL

Facility	Needs/Wants	Primary Objectives Met	Project	Project Details
Soccer 1	Improved Drainage, Access, Spectator Seating, Synthetic Turf Field	Safety, Equity, Accessibility, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating
		Safety, Equity, Accessibility	Construct 4-Lane runway	Construct paved 4-Lane runway adjacent to walkway, new long/triple jump runway and pit, relocate throwing events
Soccer 2	Improved Drainage, Access, Spectator Seating	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.
Soccer 3	Improved Drainage, Access, Spectator Seating	Safety, Management of Assets	Reconstruct natural grass field	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.
Soccer 4	Improved Drainage, Access, Spectator Seating	Safety, Equity, Management of Assets	Reconstruct natural grass field, U10-U12	Reconstruct field, improve drainage, new irrigation system, improve accessibility and spectator seating
Softball Field	Improved Drainage, Access, Spectator Seating	Safety, Equity, Accessibility, Management of Assets	Reconstruct infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating
Baseball Field	Improved Drainage, Access, Spectator Seating	Safety	Reconstruct infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating
		Safety, Accessibility, Equity	Renovate and adjust location	Relocate field, new fencing & backstop, new dugouts, irrigation, utilities, improved accessibility and spectator seating

Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)

Mislick Property

Facility	Needs/Wants	Project	Project Details
Mislick	Relieve Demand on existing facilities	Construct new field	Construct new 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining wall, gravel parking area
Mislick	Relieve Demand on existing facilities	Provide Utilities	Upgrade electrical service, irrigation well, irrigation system
Mislick	Relieve Demand on existing facilities	Construction Cross Country Trail	Delineate route, minor clearing of trees and vegetation
Mislick	Relieve Demand on existing facilities	Construct (2) two new fields	Construct new (2) two 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining walls, gravel parking area

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets
Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)

Recommendations

This section of the report illustrates potential changes to athletic facilities with budget cost estimates, should the District decide to pursue improvements and renovations under a General Contractor bid arrangement. The study has noted that the District has limited open space available for additional athletic field development. The Mislick property offers the greatest opportunity for field expansion. The high school and middle schools are currently built out to their limits, or are restricted by topography or regulated resource areas. This report also looked briefly at other potential sites, specifically the Falls Landing Road property.

For the Falls Landing property, it was concluded that the site was only suitable for a single family home; the topography of the site would be prohibitively expensive, or unfeasible to develop as fields due to the amount of earthmoving needed to create a field.

The assessment conducted in conjunction with this report showed that all existing facilities need general improvements to address safety and accessibility for players and spectators. The assessment found that all facilities lack provisions for universal access including circulation routes and spectator areas. The projects were then assigned a priority level to be a relative ranking of importance. The highest priority projects resolve the existing conditions and address immediate safety concerns and meet overall goals and objectives. The planning process included a detailed assessment of the current field demand and patterns of use according to actual program scheduling based on practice and game hours. To relieve the current capacity issues, the plan incorporated both short, mid and long-term improvement strategies that are described in the table.

The following pages illustrate potential site improvement plans and budget cost estimates for each of the facilities at both the middle and high schools and the Mislick property. These are early, conceptual plans for budgeting and planning purposes only. The project scope, budget and goals for each will need to be refined further should the project become a priority for construction.

Valley Regional High School

The recommendations for the high school are based on the goals and objectives formed during the decision matrix task as well as feedback from the sub-committee. The following table identifies each project, provides corresponding detail as well as estimated cost range. A cost range is provided as there are many "options" when it comes to athletic field surfacing, amenities and the extent of the final renovation project. It should be noted that the cost range includes budgetary consultant costs for design, engineering, permitting (as applicable), and construction administration services.

Synthetic Turf Field

Results from the user survey as well as feedback from the committee indicates an overwhelming desire to have at least one of the athletic fields at the high school converted to a synthetic turf playing surface. In the recommendations listed above, we have identified the upper and practice fields as good candidates for possible turf field. If the District is successful in raising funds and there was strong community support for a turf field,

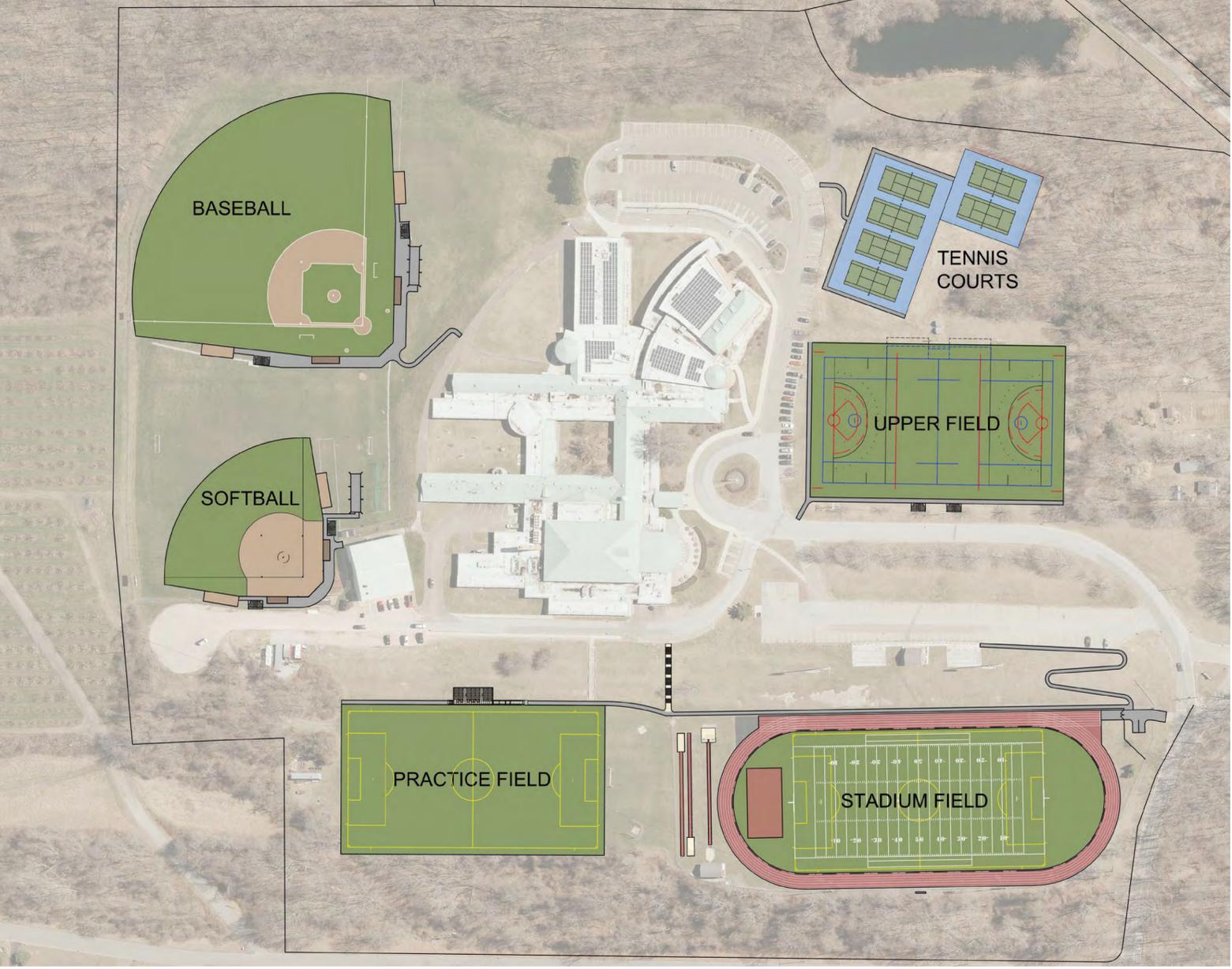
we would recommend the following turf system for consideration; Woven synthetic turf carpet with wood particle (BrockFill) infill. These products represent the latest in synthetic turf systems, are durable and simplifies the recycling effort at the end of the fields useful life. They offer a good balance of safety and performance for multi-sport fields.

VALLEY REGIONAL HIGH SCHOOL

Facility	Priority Level	Primary Objectives Met	Project	Project Details	Estimated Project Cost
Stadium Complex	1	Safety	Replacement of running track surface.	Strip existing all-weather track surface, install new surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.	\$400,000 - \$500,000
	1	Safety, Accessibility, Maintenance	Reconstruct running track. The project includes development of a new, 6-lane track to support regional meets.	Strip existing all-weather track surface, mill and pave asphalt base, install new polyurethane base mat with structural spray surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.	\$600,000 - \$700,000
	2	Safety, Maintenance, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, replace goal posts, relocate scoreboard, new irrigation system, sod	\$500,000 - \$600,000
Upper Field	1	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new scoreboard, new irrigation system, sod, ball safety netting, improve accessibility and spectator seating.	\$800,000 - \$900,000
	3	Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Remove natural grass surface and replace with synthetic turf, new scoreboard, ball safety netting, improve accessibility and spectator seating.	\$1,400,000 - \$1,800,000
Tennis Courts	1	Safety	Repair cracks	Prepare cracks, fill cracks with polyurethane filler or use Riteway repair system, resurface	\$2,500 - \$6,000
	2	Safety, Accessibility, Maintenance	Reconstruct tennis courts	Demolish existing facility, new asphalt base, new equipment, new fencing, improve accessibility and spectator seating	\$310,000 - \$375,000
	2	Safety, Accessibility, Maintenance	Construct post-tension concrete courts	Demolish existing facility, new post-tension concrete base, new equipment, new fencing, improve accessibility and spectator seating	\$425,000 - \$525,000

Facility	Priority Level	Primary Objectives Met	Project	Project Details	Project Cost
Baseball Field	1	Safety	Reconstruct infield	Remove infield lip, new clay surface, reconstruct mound, upgrade utilities, new warning track, new irrigation system	\$150,000 - \$250,000
	3	Safety, Maintenance, Management of Assets	Reconstruct outfield	Re-grade outfield, extend irrigation, new warning track, new scoreboard, new fencing, bull pens	\$600,000 - \$700,000
	2	Equity, Safety, Management of Assets	Facility Amenities	Install batting tunnels, LED sports field lighting	\$650,000 - \$750,000
	3	Equity, Safety, Accessibility	New Accessible Dugouts	Reconstruct dugouts to be accessible, improve accessibility and spectator seating, new fencing	\$250,000 - \$350,000
Softball Field	2	Safety	Reconstruct infield	Remove infield lip, new clay surface, improve accessibility and spectator seating	\$220,000 - \$275,000
	3	Safety, Equity, Accessibility	Renovate and adjust location of softball field to address safety and accessibility issues	Upgrade facility to address accessibility issues, replace dugouts, backstop and fencing, improvements to drainage and utilities, new scoreboard	\$470,000 - \$625,000
Practice Field	2	Safety, Equity, Accessibility, Management of Assets	Replacement and expansion of facility	Renovate and expand facility to include 65 yard wide soccer field, new goal posts, improve accessibility, new irrigation system	\$850,000 - \$950,000
	3	Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Convert playing surface to synthetic multi-sport turf, new sports field lighting, upgrade utilities, new amenities, spectator seating, improve accessibility	\$1,400,000 - \$1,750,000

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets
 Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)



VRHS Master Plan

Recommendations

John Winthrop Middle School

The following table identifies each project, provides corresponding detail as well as estimated cost range. A cost range is provided to account for variability in the extent of the final project. Similar to the high school, although having less options, the projects identified are based on the goals and objectives formed during the decision matrix task and feedback form the from the sub-committee. It should be noted that the cost range includes budgetary consultant costs for design, engineering, permitting (as applicable), and construction administration services.

JOHN WINTHROP MIDDLE SCHOOL

Facility	Priority Level	Primary Objectives Met	Project	Project Details	Project Cost
Soccer 1	1	Safety, Equity, Accessibility, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating	\$430,000 - \$475,000
	3	Safety, Equity, Accessibility	Construct 4-Lane runway	Construct paved 4-Lane runway adjacent to walkway, new long/triple jump runway and pit, relocate throwing events	\$350,000 - \$375,000
Soccer 2	2	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.	\$378,000 - \$390,000
Soccer 3	1	Safety, Management of Assets	Reconstruct natural grass field	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.	\$365,000 - \$375,000
Soccer 4	2	Safety, Equity, Management of Assets	Reconstruct natural grass field, U10-U12	Reconstruct field, improve drainage, new irrigation system, improve accessibility and spectator seating	\$195,000 - \$215,000
Softball Field	2	Safety, Equity, Accessibility, Management of Assets	Reconstruct infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating	\$220,000 - \$275,000
Baseball Field	2	Safety	Reconstruct Infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating	\$235,000 - \$280,000
	3	Safety, Accessibility, Equity	Renovate and adjust location	Relocate field, new fencing & backstop, new dugouts, irrigation, utilities, improved accessibility and spectator seating	\$465,000 - \$520,000

Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)



JWMS Master Plan

Recommendations

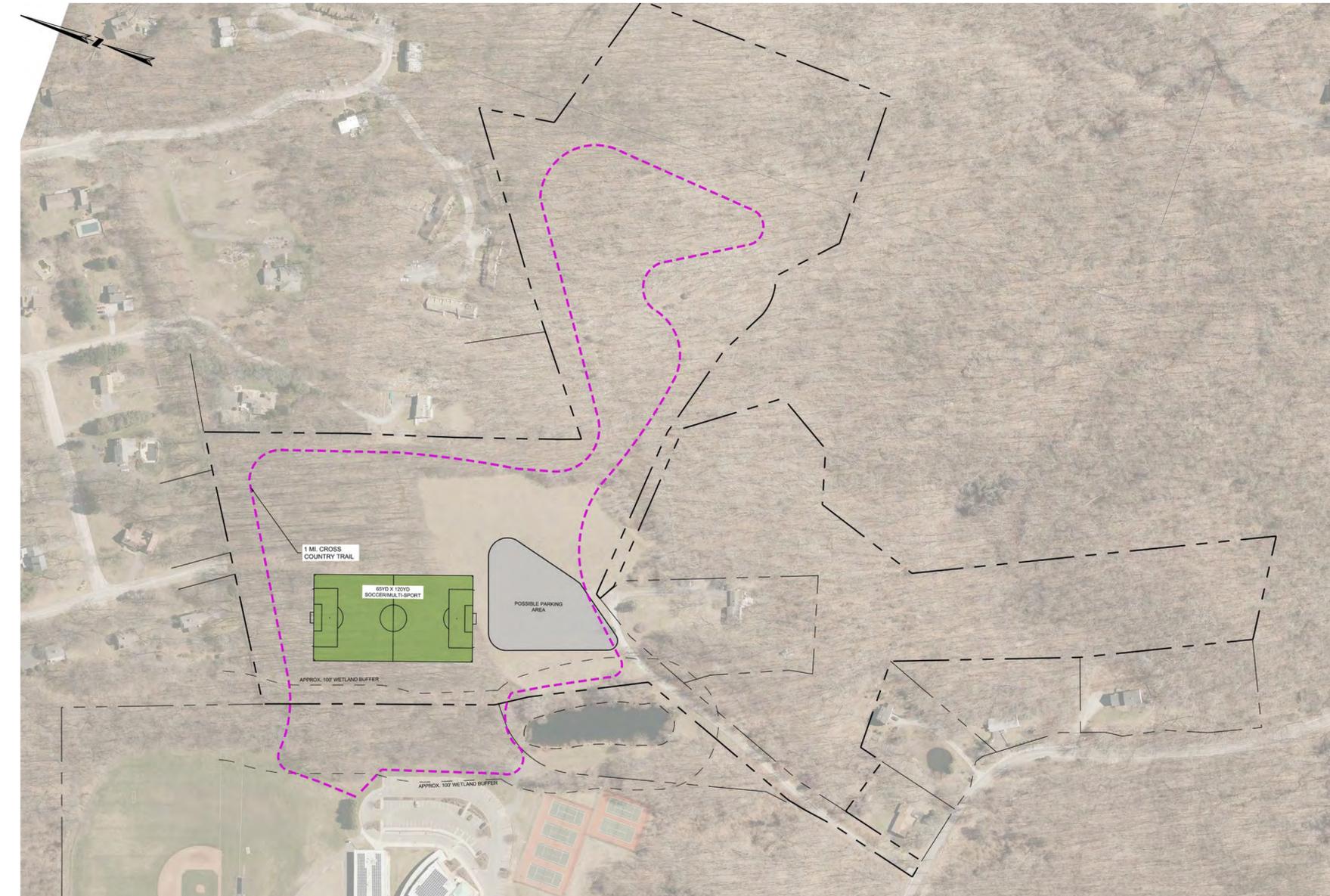
Mislick Property

The assessment section of this report identified the opportunities and constraints of the Mislick property. The central tract of land was noted as having the greatest opportunity for athletic field development. Based on this assessment, the recommendations focus on the development of a new athletic facility potentially alleviate the demand on certain fields at the middle and high schools. Additionally, the properties proximity to the high school presents an opportunity, if developed, with scheduling and field rotation at the high school. One of the greatest benefits would be to remove the JV soccer use out of the baseball and softball out fields. As depicted in the graphics, there is the potential to fit up to two full size soccer fields with associated parking.

Mislick Property

Facility	Priority Level	Objectives Met	Project	Project Details	Project Cost
Mislick	2	Equity, Accessibility, Safety	Construct new field	Construct new 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining wall, gravel parking area	\$500,000 - \$700,000
Mislick	3	Equity, Accessibility, Safety, Maintenance	Provide Utilities	Upgrade electrical service, irrigation well, irrigation system	\$20,000 - \$50,000
Mislick	1	Equity, Safety	Construction Cross Country Trail	Delinate route, minor clearing of trees and vegetation	\$10,000 - \$20,000
Mislick	3	Equity, Safety, Management of Assets	Construct (2) two new fields	Construct new (2) two 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining walls, gravel parking area	\$1,000,000 - 1,500,000

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets
Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)



Mislick Property Option 1



Mislick Property Option 2

End of Report