

CELEBRATING 50 YEARS

GALE



**Hamilton Wenham
Regional High School
Athletic Campus Improvements
Project**

Town of Hamilton Planning Board

January 9, 2024

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JN 718601

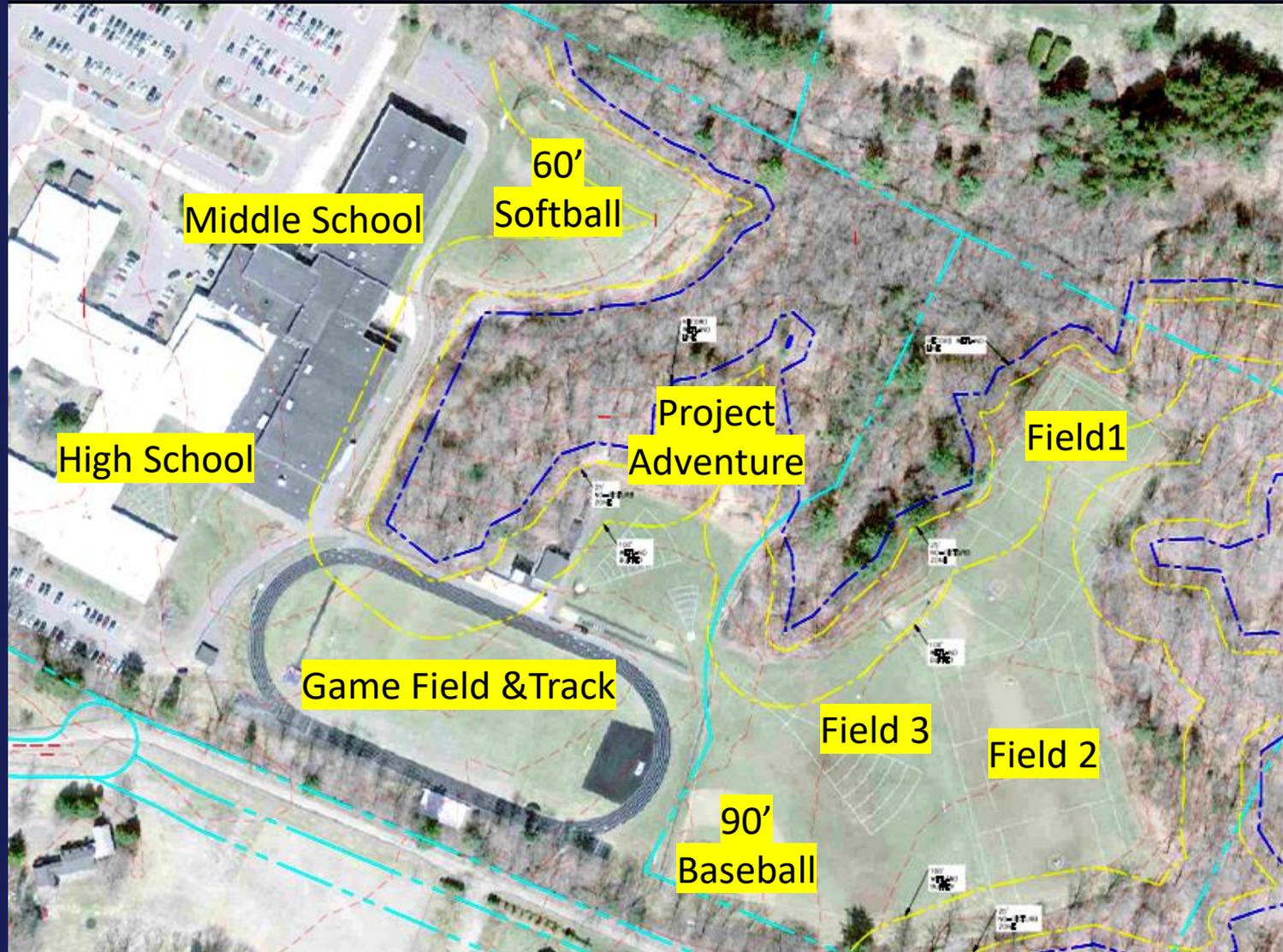


Agenda

- Project History
- Town Wide Master Plan
 - Deficit 4-6 Fields
 - 11 of 22 Fields Overused
- HS Master Plan 2015
- HS Existing Conditions
- Project Design
- Synthetic Turf
- Athletic Lighting
- Next Steps
- Questions



Existing Conditions Plan



2015 – HS Master Plan Conclusions

Demand Analysis & Conclusion

Field	Annual Uses
Game Field (MPR)	106
Field 1	277
Field 2	324
Field 3	205
Project Adventure	65
90' Baseball	124
60' Softball	356
Total	1,481

- Deficit of 2 MPR Fields
- 3 of 6 fields overused
- Game field uses constrained

Existing Conditions – Constraints

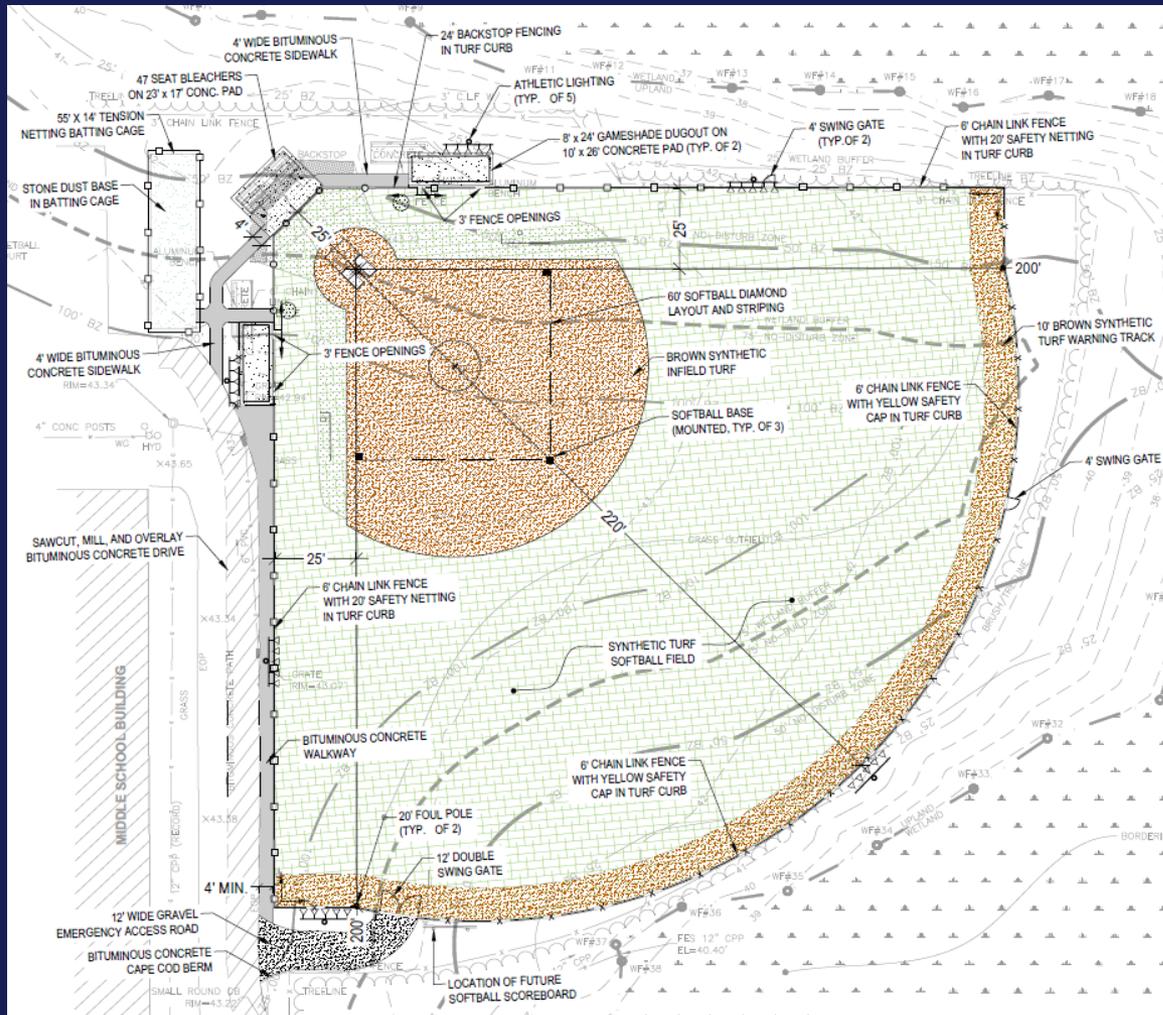
SPORT	DIMENSIONS	IDEAL?
Football	160' x 360'	Yes
Soccer	180' x 330'	No (195' W)
Field Hockey	180' x 300'	Yes
Men's Lacrosse	180' x 330'	Yes
Women's Lacrosse	180' x 330'	No (195' W)



Overall Project Design

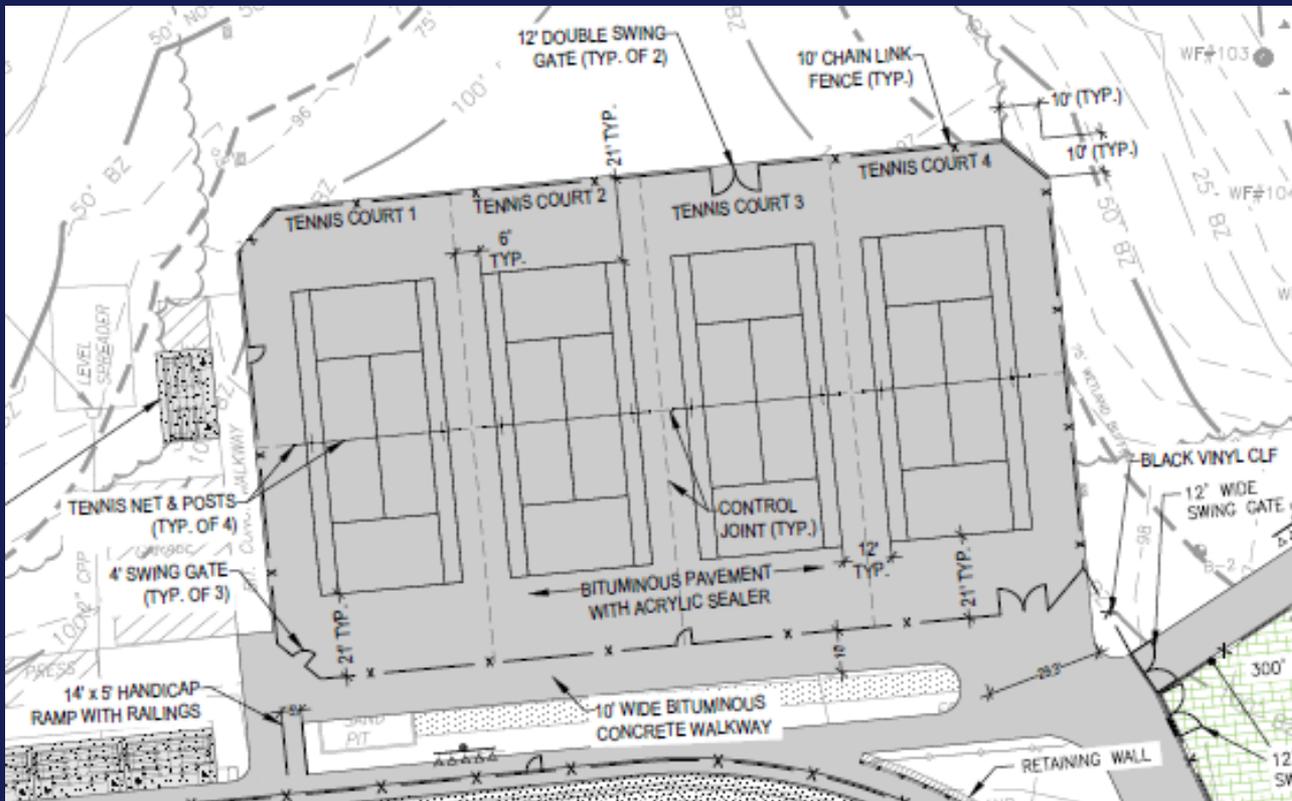


Softball Field



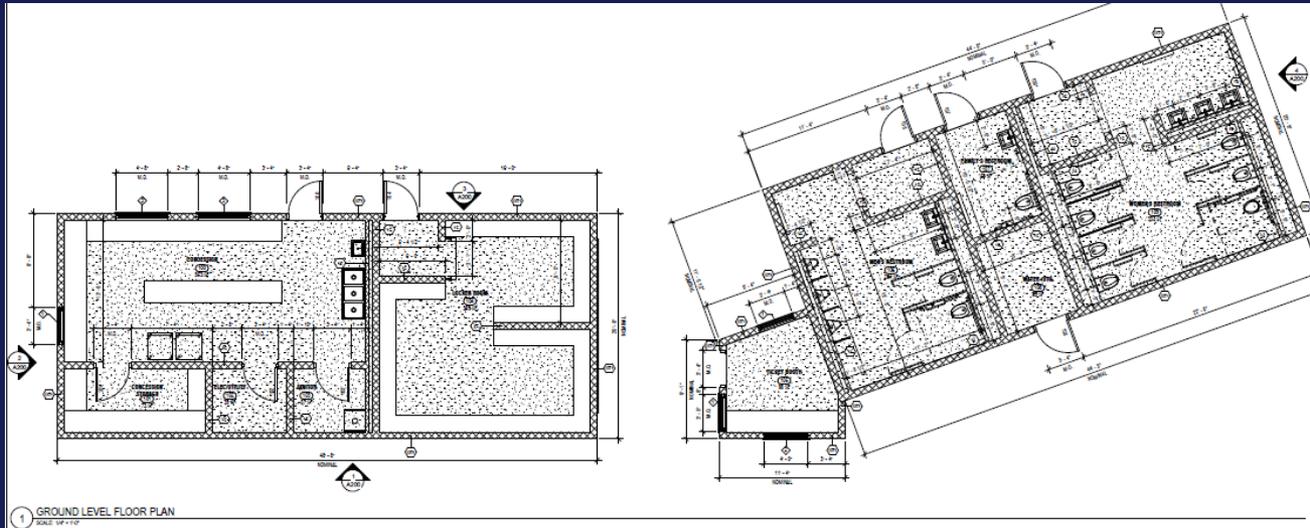
- Synthetic turf field
- Improved drainage system
- ADA access
- Athletic light
- Portable bleachers
- Softball dugouts
- Pitching and batting tunnel
- Site fencing

Tennis Courts



- Combination tennis and pickleball courts
- Improved drainage system
- ADA access
- Portable bleachers
- Site fencing

Amenities Building



Why Install Synthetic Turf Multi-Purpose Game Field?

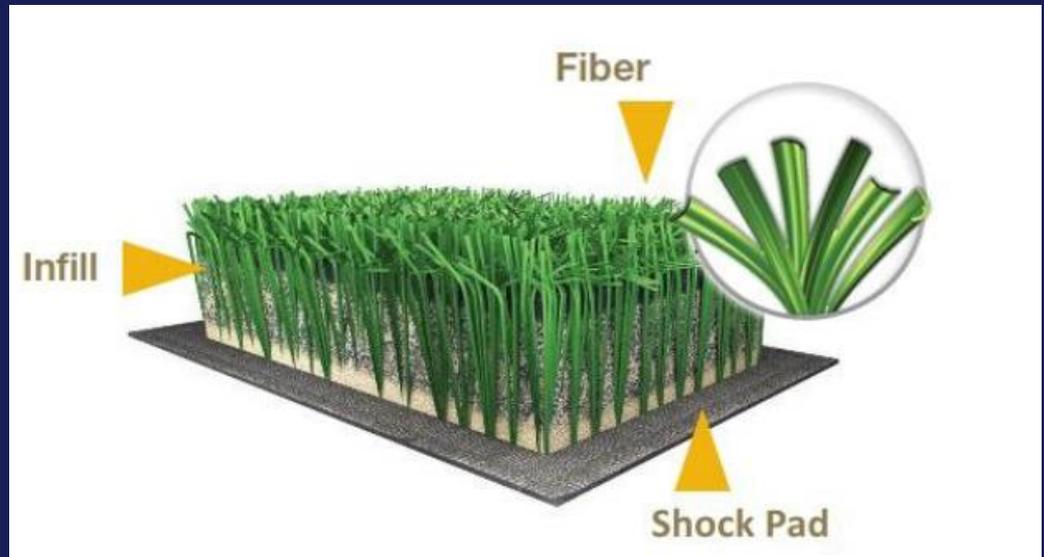
“Filled” Synthetic Turf Advantages:

- Allows resting and maintenance of natural turf fields
- Dramatically increased use (2-3 X)
- Allows full use of athletic lighting
- Very low maintenance
- Grass-like look and performance
- All-weather availability
- Permanent lines and markings
- Enhanced player safety
- Pay-to-play opportunities
- Immediate availability



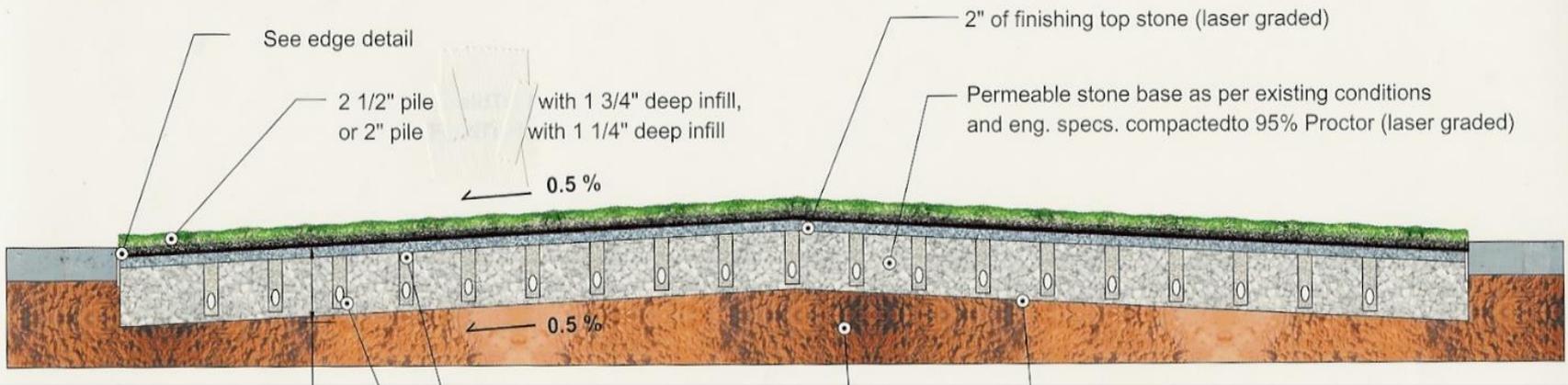
Turf System

- Turf Fibers (Polyethylene)
- Infill (Alternative)
- Turf backing (Polypropylene)
- Shock pad (Polypropylene)
- Stone leveling course
- Stone base
- Underdrainage



Typical Cross Section

Typical Base Cross-Section

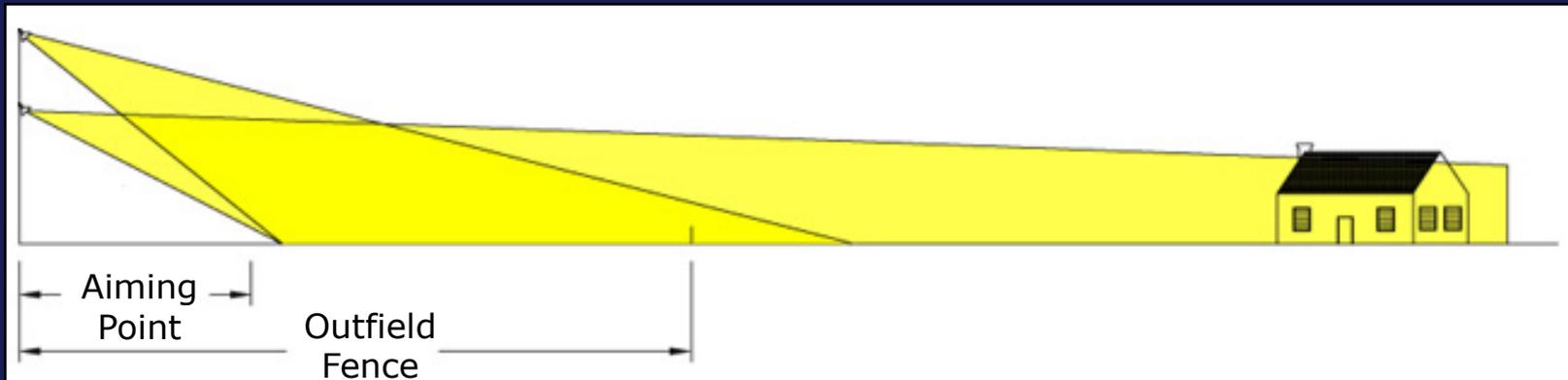


Athletic Lighting Structure, LED, Cut - Off



Spill & Glare

Taller poles ensure proper aiming angles, decrease glare for players, and decrease off-site spill light.



Athletic Field Lighting



©2010 Musco Lighting - 119786 - BP-2015-1 - Coral Springs High School — Coral Springs, Florida



Green Generation Lighting.

Athletic Field Lighting



Illumination Plan



Next Steps

- **PERMITTING** Present – January/February 2024
 - Planning Board
 - Conservation Commission (2 approvals)
- **ANTICIPATED CONSTRUCTION TIMELINE**
 - Bid Project– February 2024
 - Spring 2024 – December 2024

Thank You Questions



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Life Cycle Cost Benefits

Are there maintenance savings associated with the new field?

YES: Maintenance costs decrease by \$23,500/year and the number of uses increases by 300%



Natural Turf Field Maintenance Cost (labor, material, depreciation):

- Mowing, 30 cuttings \$4,500
 - Watering – ½-1 in./week @ 20 weeks \$4,000
 - Irrigation Winterize/De-winterize \$3,000
 - Fertilizer x 3, lime, pesticides \$5,000
 - Aeration, topdressing, overseeding \$5,000
 - Line markings (weekly @ 24 weeks) \$3,500
- \$25,000/year

The Infilled Synthetic Turf Field is groomed with a towed groomer provided with the field, approximately 2-4 Times/Year: \$1,500 / Year

Course of Action 1:

Construction of a New Natural Turf Field

Assume: Insitu-Material

Topsoil Supplementation

(Sand; Micro-Nutrients)

New Irrigation

Formal Under-drainage

Premium

Seed Mix/Sod

Cost: \$500,000

Loss of Use First year (min.) \$20,000

Yearly Maintenance: \$25,000

Renovation: Every 4 years at additional \$20,000

Course of Action 2:

Construct a Synthetic “Filled-Turf”

Assume: Standard Installation by Industry Leader

Formal Under-drainage

Standard curb

No track repairs

Cost: \$850,000

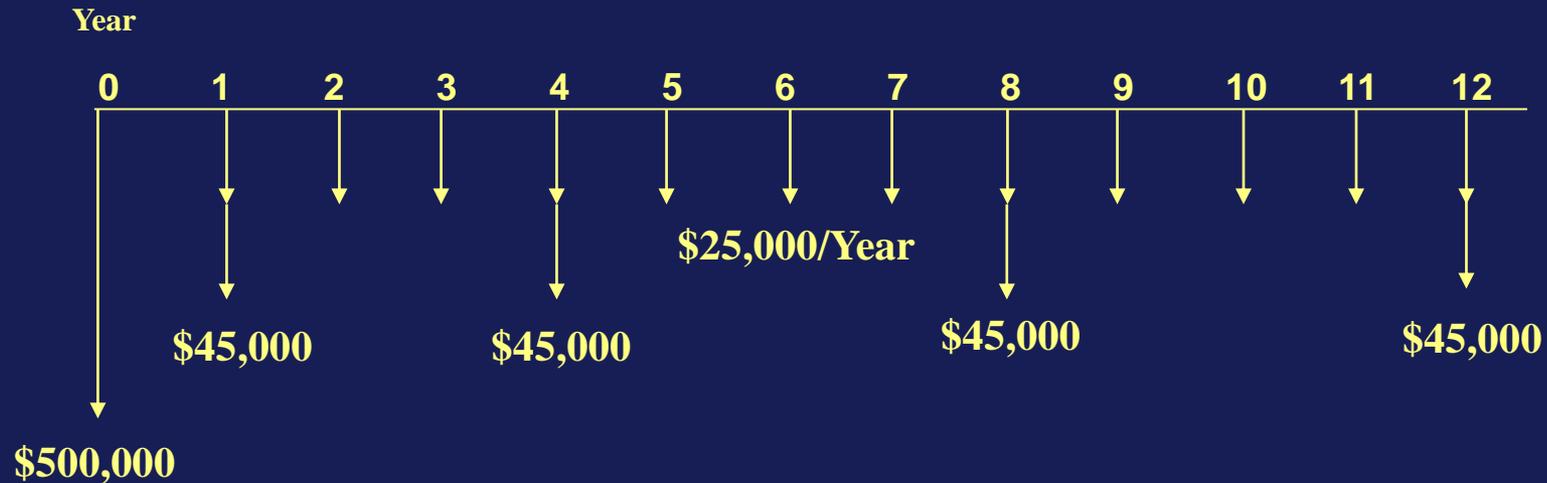
Alternative Infill: \$300,000

No loss of use

Yearly Maintenance: \$1,500

Renovation: Assume replace carpet at year 13

Course of Action 1 – Natural Grass Field



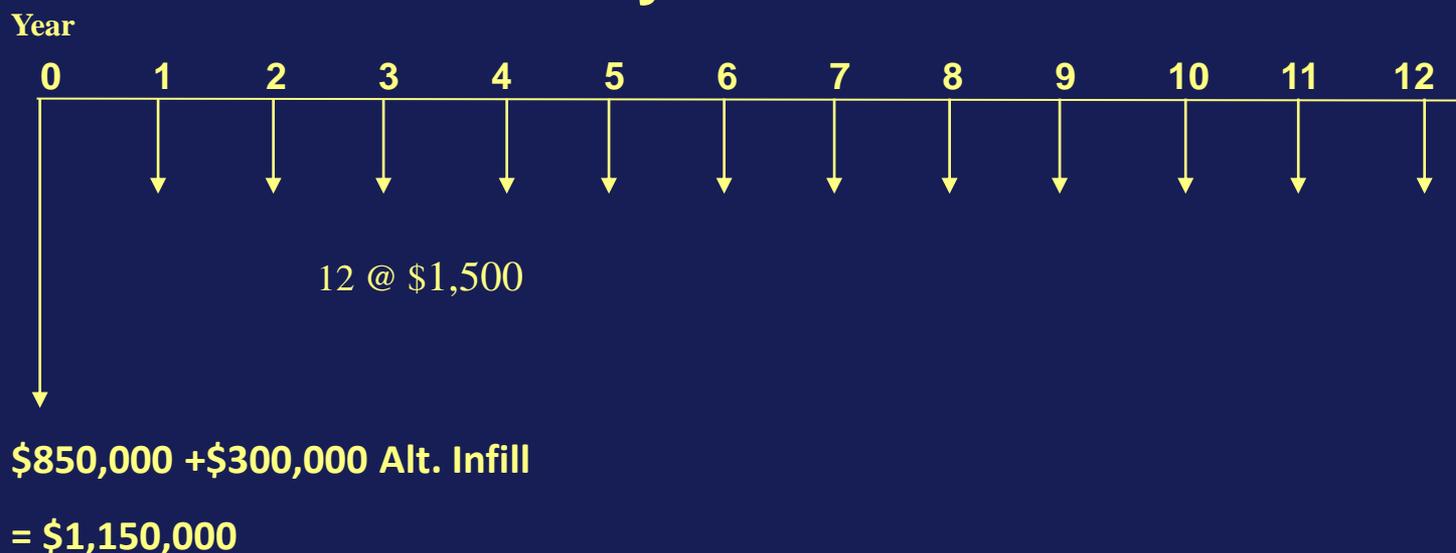
$NPV_{(I=3\%)} = \$841,435$

Uses per year: 250

Cost per use: \$280 (12 year period)

No feasibly potential rental income

Course of Action 2 – Synthetic Turf Field



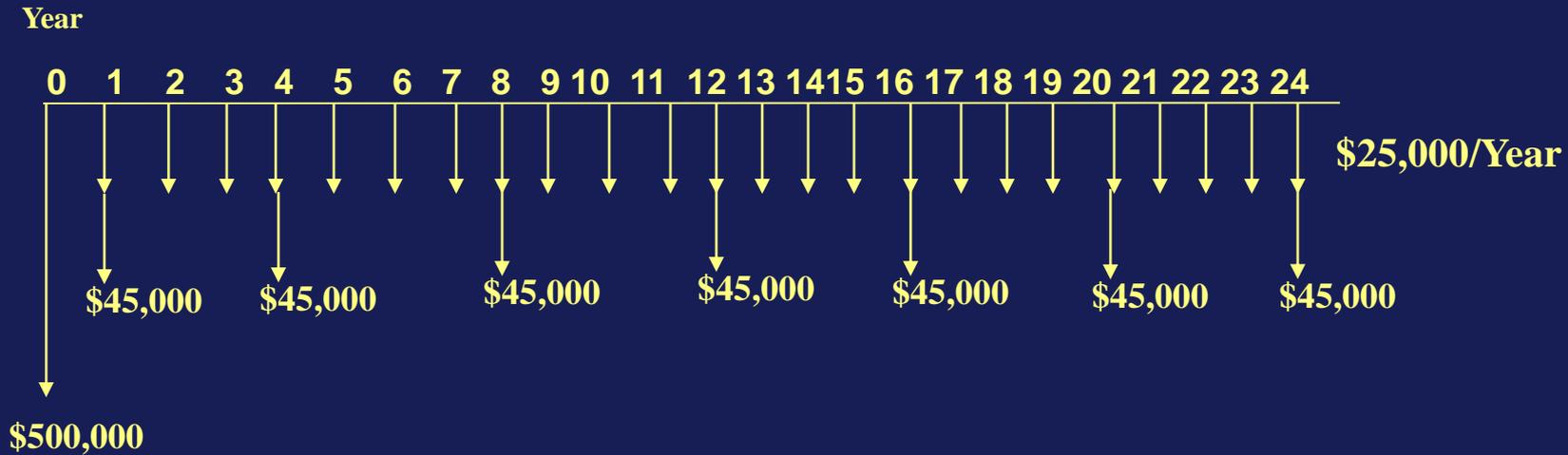
NPV_(I=3%) = \$1,164,931

Uses per year: 700

Cost per use: \$138 (12 year period)

Does not include any rental income

Course of Action 1 – Natural Grass Field



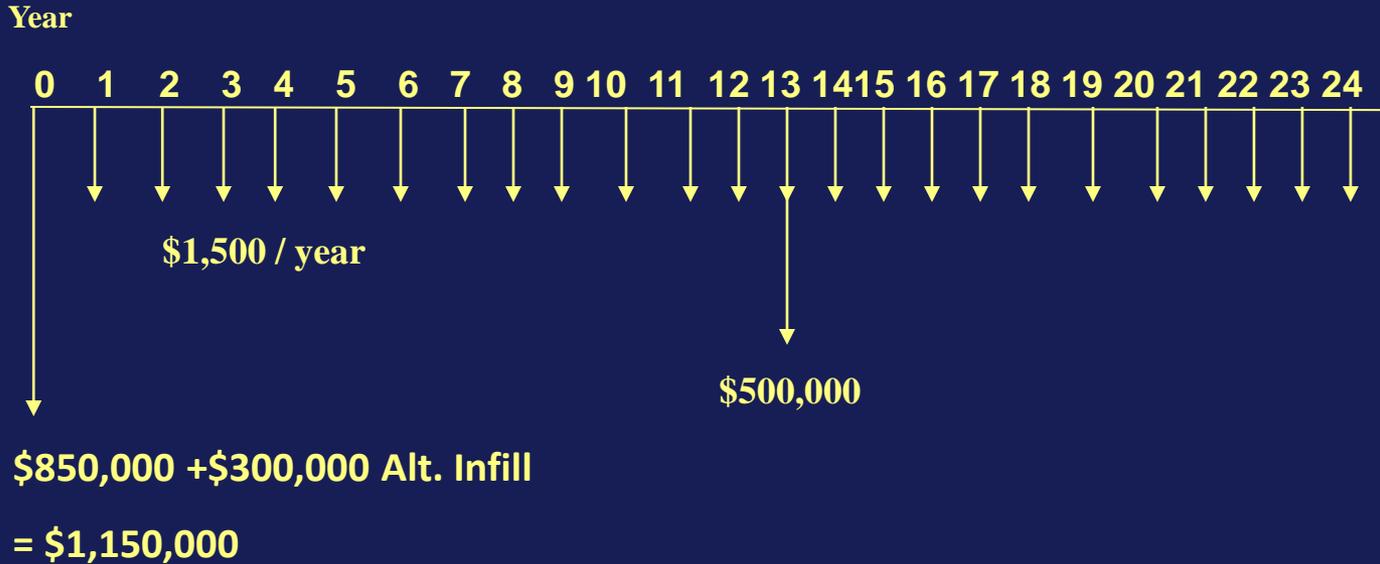
$NPV_{(I=3\%)} = \$1,049,349$

Uses per year: 250

Cost per use: \$174 (24 year period)

No feasibly potential rental income

Course of Action 2 – Synthetic Turf Field



$$\text{NPV}_{(I=3\%)} = \$1,515,878$$

Uses per year: 700

Cost per use: \$90 (24 year period)

Does not include any rental income