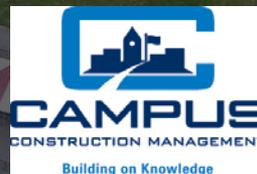


Caledonia-Mumford  **Red Raiders**

CAL-MUM CENTRAL SCHOOL DISTRICT

HUNT ENGINEERS | ARCHITECTS | SURVEYORS



MAY 22, 2018

Agenda



- Project Scope Highlights
- Cost Estimate
- Financing
- Pre-Ref Schedule
- Questions

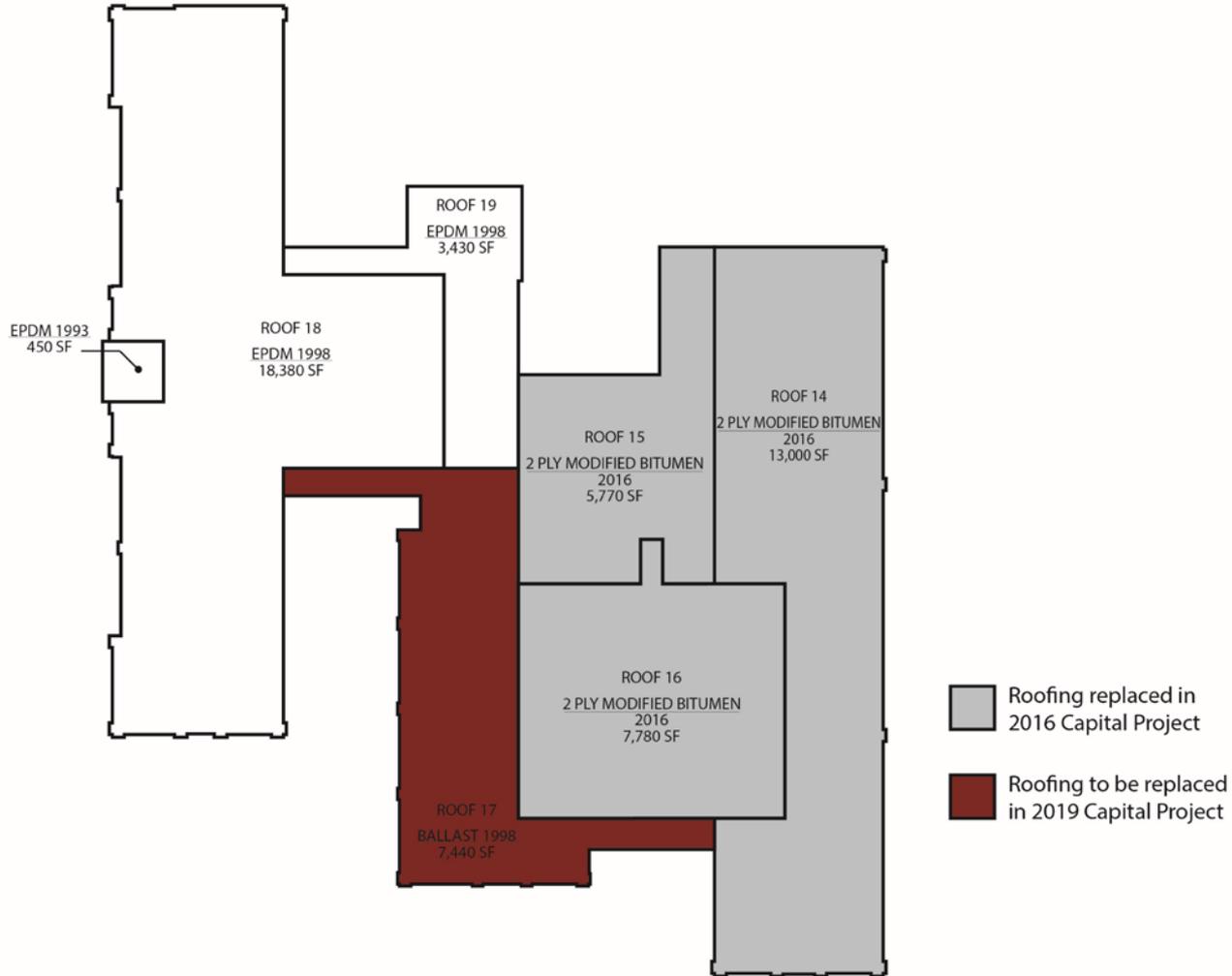
Project Scope



Elementary School

- Roof replacement of nearly 7500 SQ/Ft
- Replacement of PA system
- Renovation of the Elementary School Gymnasium including bleacher replacement, gym floor painting and refinishing.

ES Roof Replacement



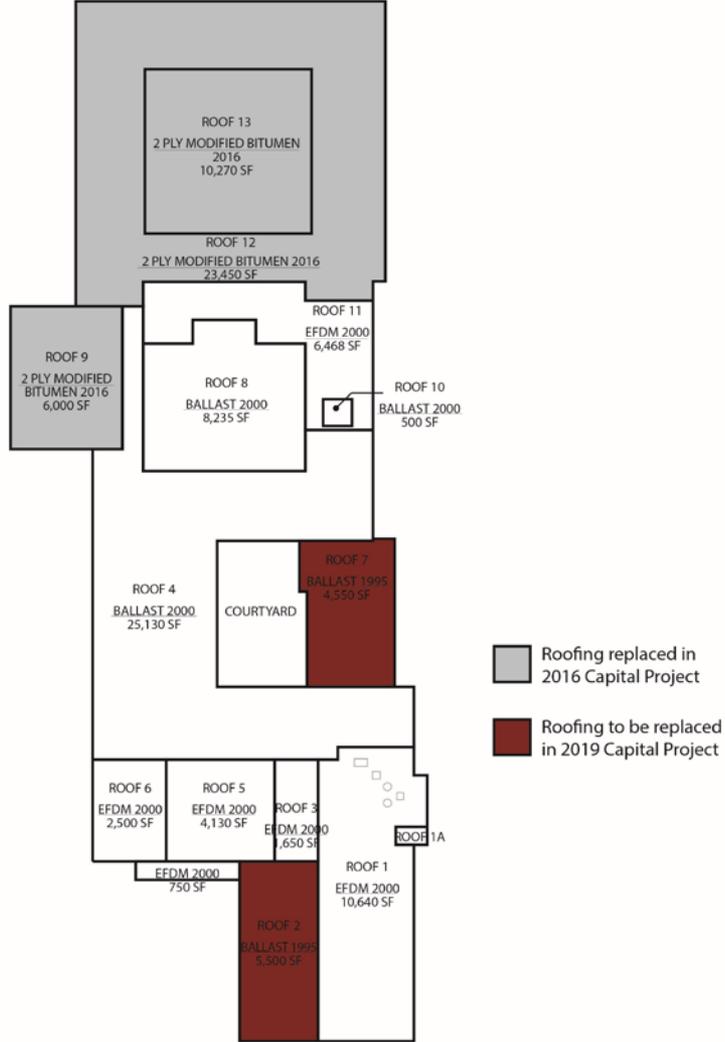
Project Scope



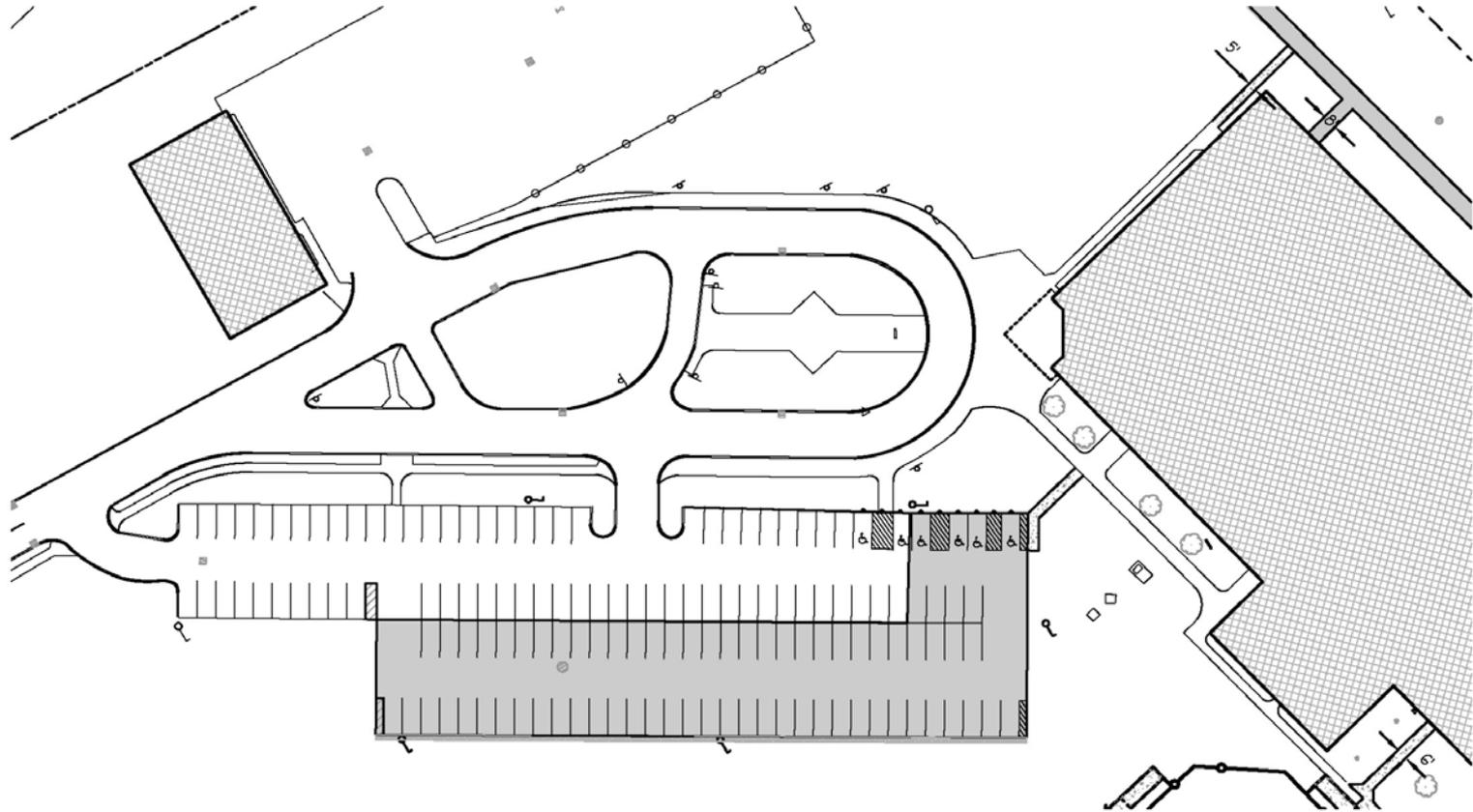
Middle/High School

- Renovation to MS/HS Auditorium—Sound, lighting and rigging systems
- Roof replacement of nearly 10,000 SQ/Ft
- Install in-wall flashing down the music corridor
- Replacement of septic system pumps, controls and wiring
- Enhance high school parking lot (72 spaces)

MS/HS Roof Replacement



HS Parking Lot



Project Scope



Hamilton Field Student/Athlete Sports Complex

- Replace track surface
- Replace turf fabric
- Install new shock pad
- Increase positive drainage
- Install new soccer safety netting
- Install pole vault concrete pads
- Replacement of windows in press box



Hamilton Field History

- 2006: Design and Installation
- 2006-2018:
 - Ongoing maintenance operations – testing & extending the life of the field
 - Utilization exceeds expectations
 - Drainage issues persist throughout the years – 8 flooding events in 2017
- 2017/18: Re-investigate drainage, Schematic Design, SED Meeting
- 2019: Re-construction with first game on new turf in September





Keep it Safe. Keep it Clean. Keep it Longer.

Gmax Data Report

Turf field

Introduction: An analysis of the synthetic playing surface, relative to Gmax, was requested by the client. The particulars of this on-site analysis are described below.

Location: Caledonia Mumford CSD

Type: A-turf

Installation Year: 0

Test Protocol: Method A - ASTM F 355, Test Methods for Synthetic Turf Systems and Materials.

ASTM F 1936-10, Standard Specification for Impact Attenuation of Turf - Playing Systems as Measured in the Field, (Gmax).

Conditions During Testing:

Date: 7/13/2016
Time: 1:30 PM
Weather: Sunny
Air Temp: 84 °F
Turf Avg Temp: 122 °F

Test Results: See attached map whose numbers correspond to the ten Gmax testing locations.

Conclusion: As referenced in ASTM F 1936-10, the field at the above described facility

Does

Meet the requirements for play with an overall Gmax rating of:

161

RECEIVED JUL 18 2016

The test results reported herein reflect the conditions of the tested field at the time and temperatures recorded above.

Nagle Athletic Surfaces, Inc. 6597 Joy Road, East Syracuse, NY 13057
P: (315) 622-1313 F: (315) 622-2900

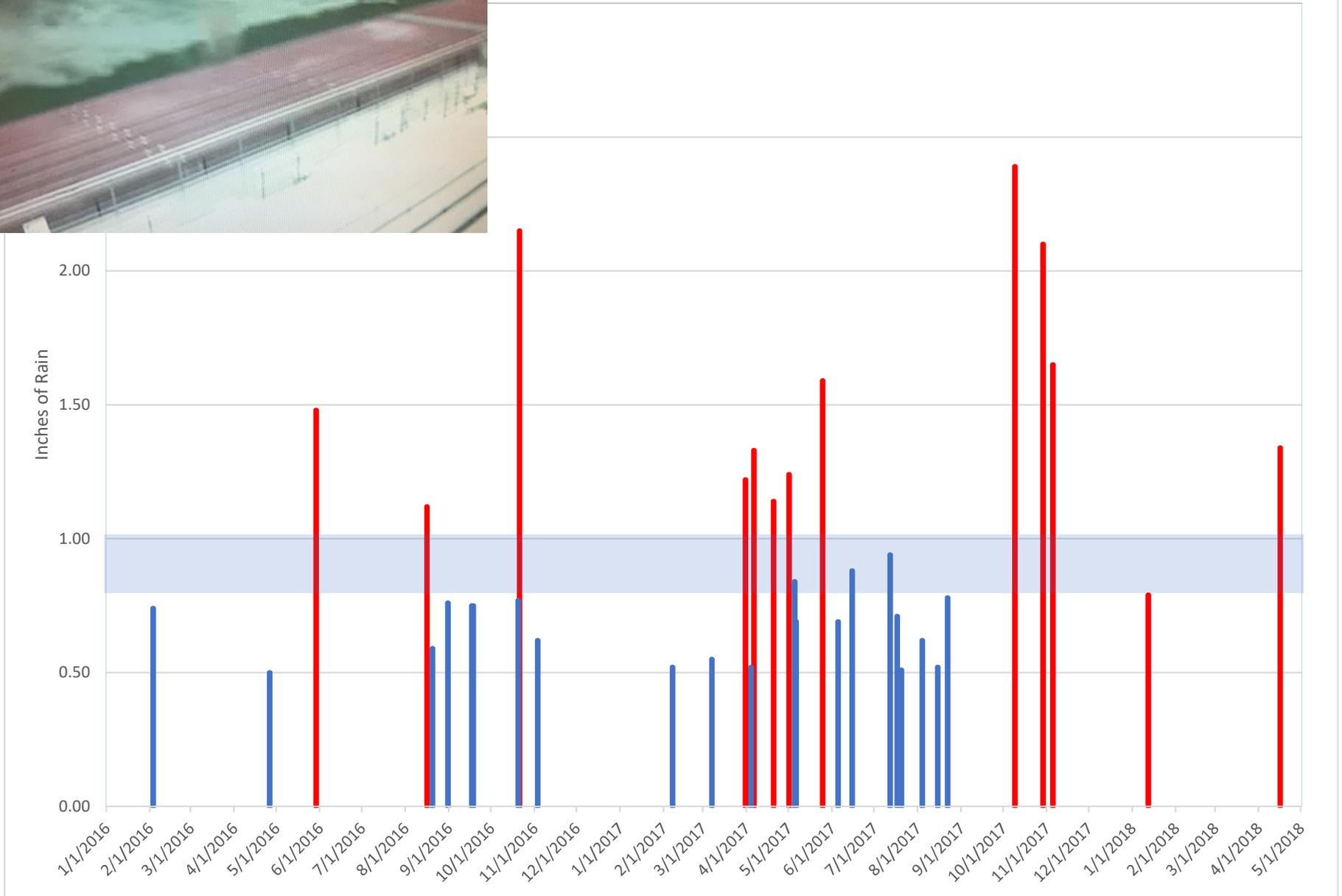
37 Press Box South

8:35:55.557 AM

10/21/2016

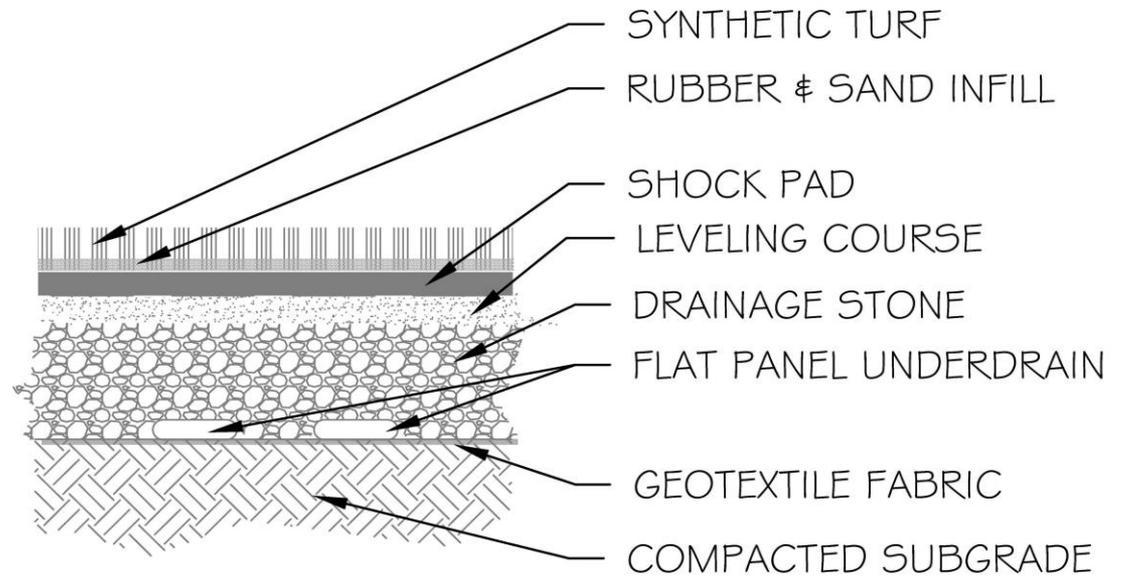


Rainfall Events 2016-2018



SYSTEM COMPONENTS

- 95% Compacted Subgrade
- Non-Woven Geosynthetic Fabric
- J-Drains
- ~ $\frac{3}{4}$ " Drainage Stone
- ~ $\frac{1}{4}$ " Leveling Stone
- Shock Pad (Optional)
- Turf Carpet
- Infill – Rubber & Sand



Existing Field Layout

Existing System

- Synthetic Turf directly on stone (1.5" finishing & 4.5" base)
- 0.5% cross slope
- Flat Panel Underdrain in Herringbone Pattern
- Perimeter Drainage discharge to Drywells

Investigation

- Reviewed Previous Appel Osborne Design
- Obtained Submittal Data
- 3 – Infiltration Tests
- Sieve Analysis

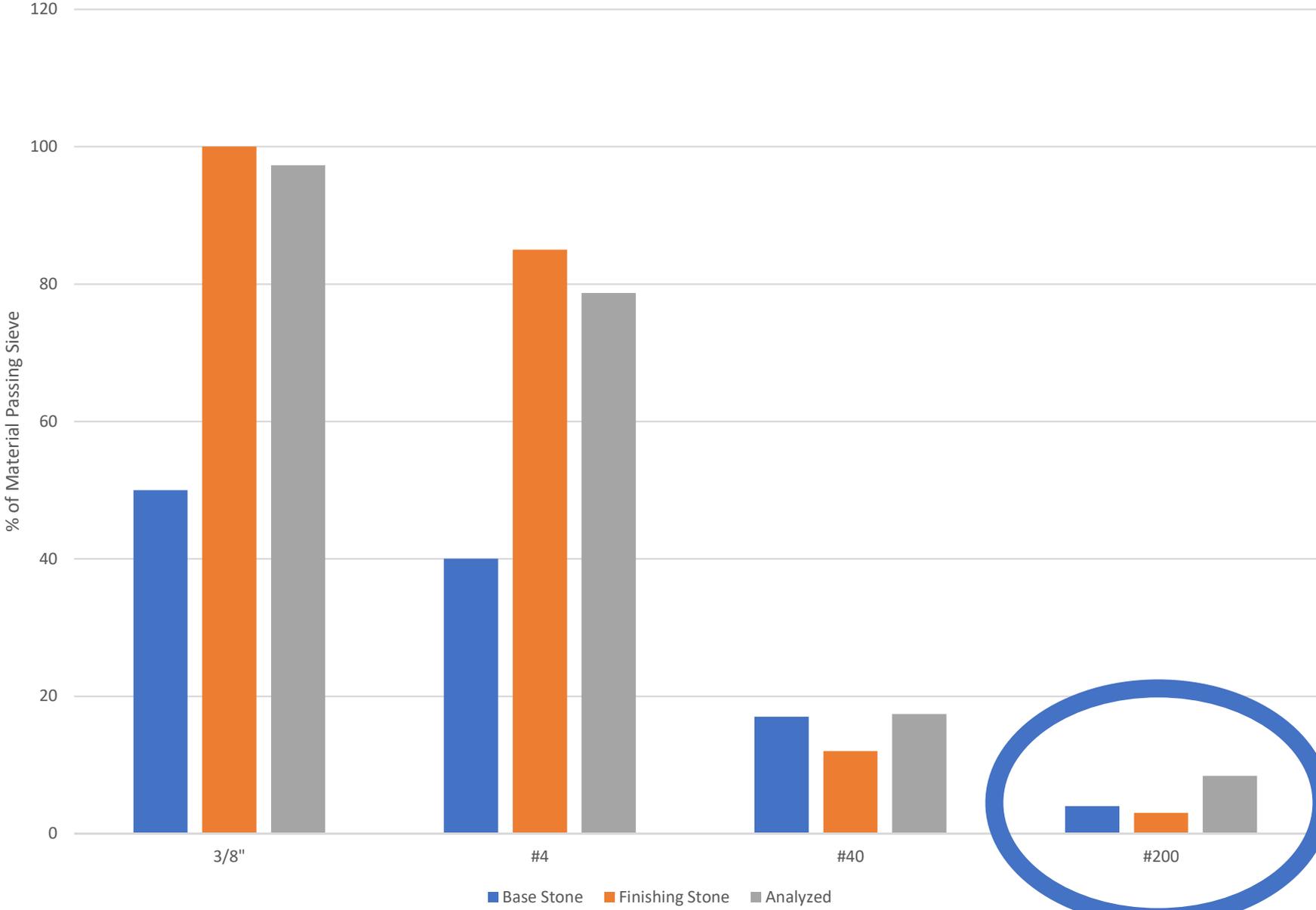


Investigation Results

- Infiltration rates tested at 27 in/hr to 36 in/hr
- As witnessed in field – results did not appear reliable due to water ponding at surface
- Visually – Material was very fine throughout section with significant migration of fines down to the flat panel drains – roughly ½” around flat panel drain.
- Sieve Analysis Results – The Culprit



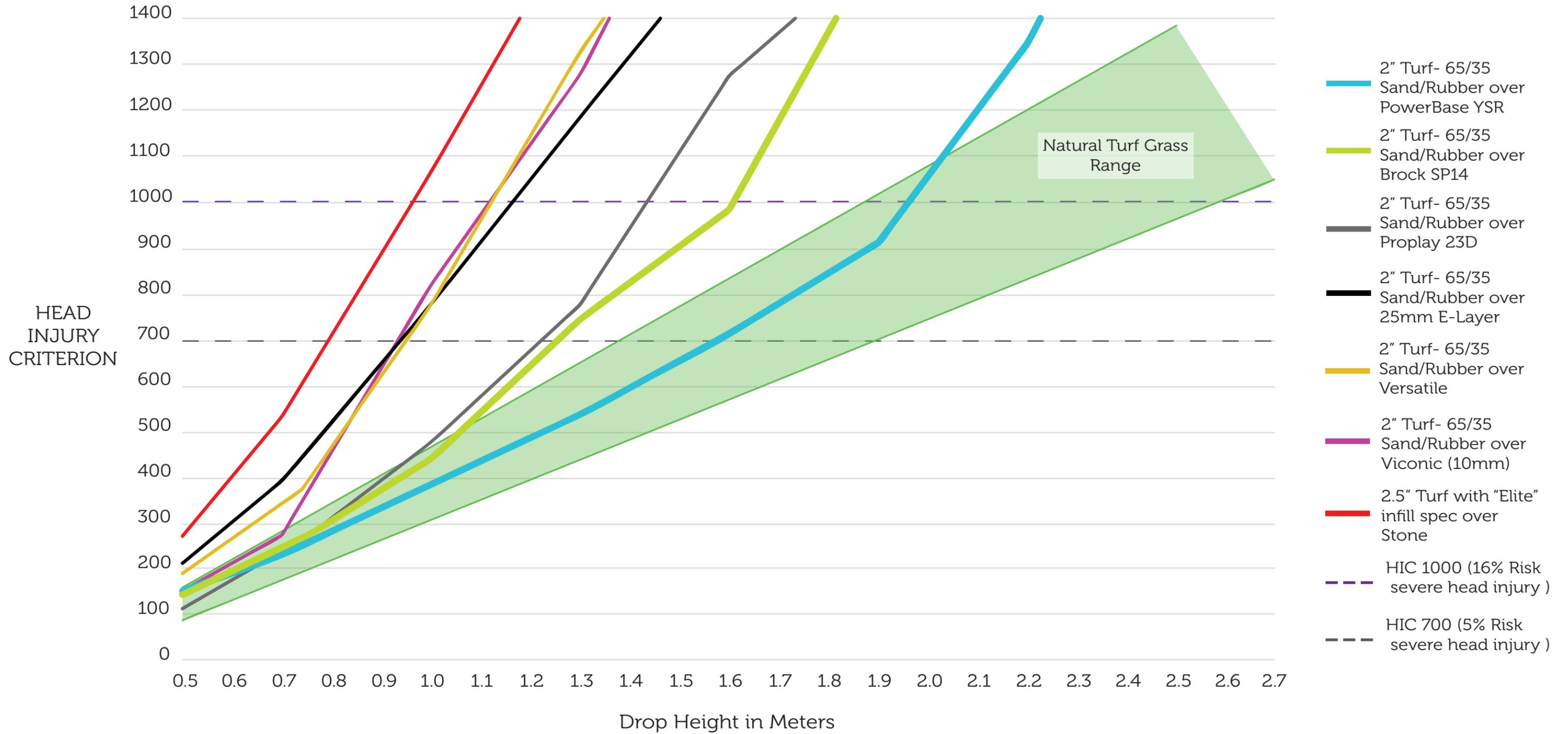
Gradation Comparisons of Stone



Field Renovation Goals

- Safety
- Stewardship
- Playability & Durability
- Drainage

University of Tennessee Center for Athletic Field Safety - Natural Turf Grass Test Results
 ASTM F 355-2016 MISSILE E
 COMPARISON TO ARTIFICIAL TURF SYSTEMS



Goal #1 - Safety

- Player Safety Considerations
- Safety Testing Options
- Crumb Rubber Recycling



Goal #2 - Stewardship

- Future Carpet Replacement
- Aidability
- Value

SED requires 15 life cycle to qualify for replacement & receive full aid.

Full Aidability = 82% State Aid

13 Years since installation, so 86% (13/15) through cycle

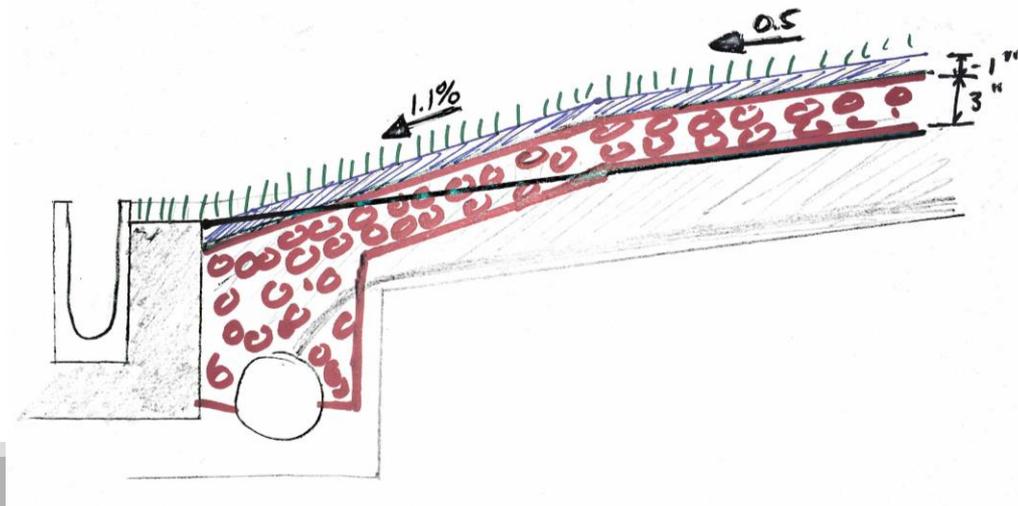
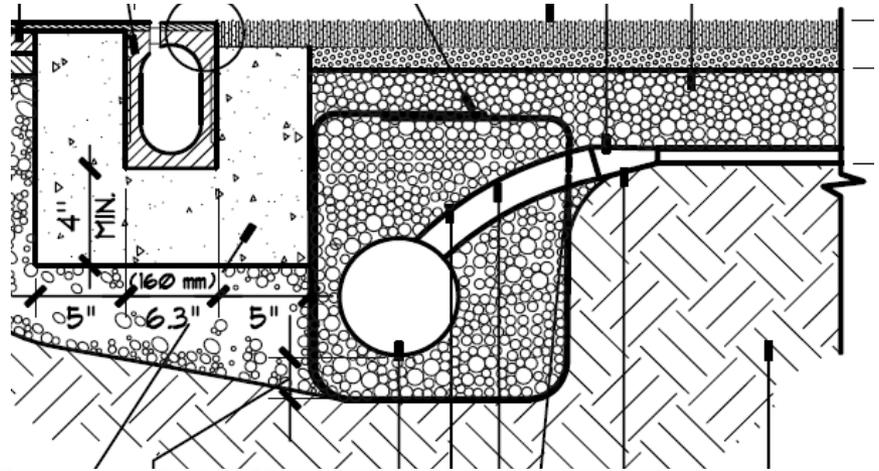
Pro-Rated = 70% State Aid

Goal #3 – Playability & Durability

- Improvements in Filament and Backing systems
- Slit-Film vs. Multi-Film Systems – Consider Frequency of Use
- Increasing the Cross-Slope
 - Improves Drainage, but...
 - Can negatively impact playability

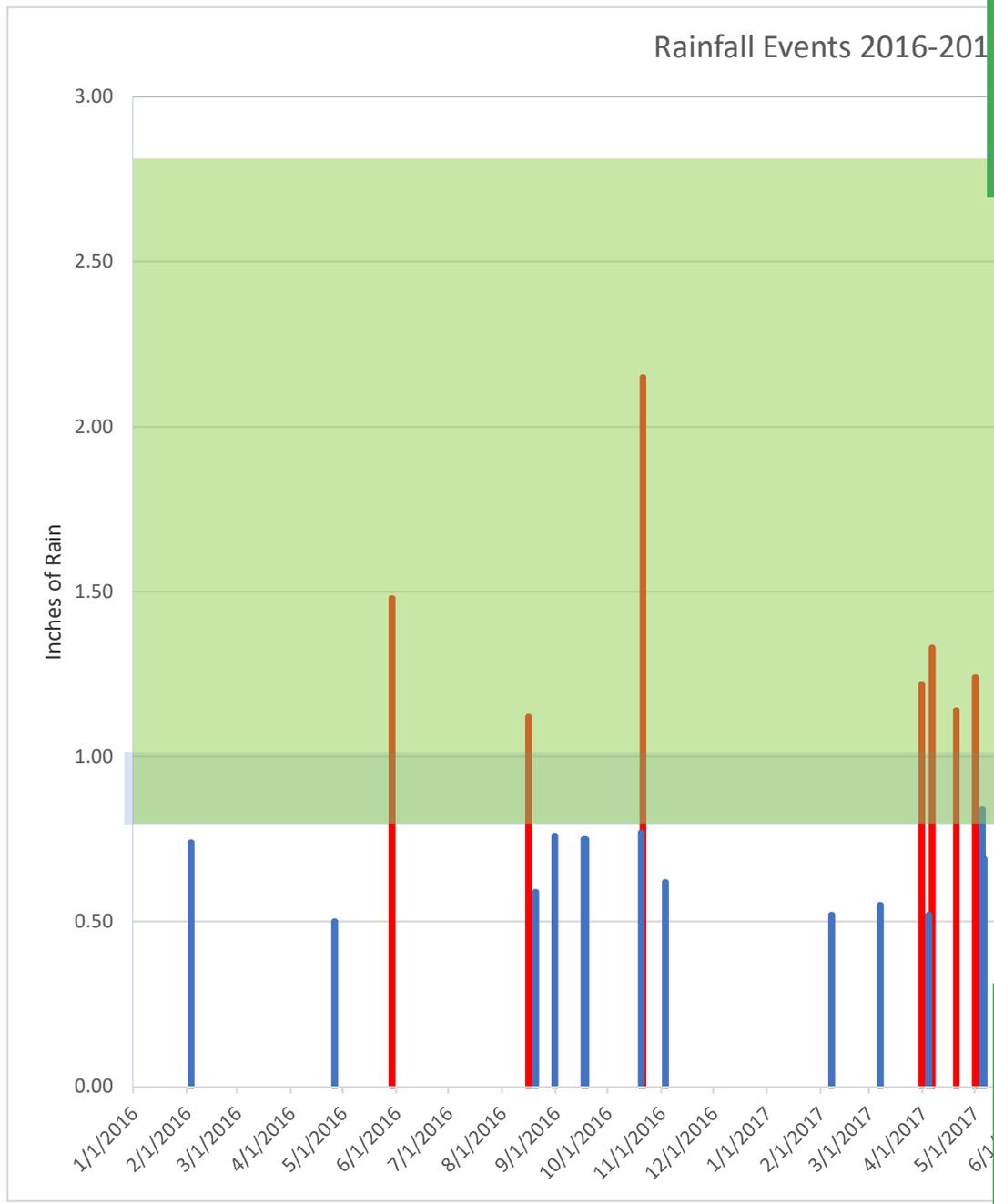
Goal #4 – Drainage

- Lateral Drainage Improvements
 - Specially Design Shockpads with Drainage Slots – similar capabilities as flat panel drains
 - Regrade Field to increase slope
 - Additional 3" of free-draining stone
- Perimeter Drainage Improvements
 - New Stone trench drain down to perimeter pipe or
 - Parallel flat drain with direct connections



Additional Capacity For Each Side of Field

- Shockpad adds 600 GPM
- Drainage Stone adds 1400 GPM
- Total Additional Capacity: 2000 GPM
- Current Capacity estimated as 770 GPM





Cost Estimate



Capital Improvement Project		Conceptual Estimate
Elementary Building		\$484,086
Middle / High School		\$2,298,183
Press Box		\$4,961
Subtotal Construction Budget		\$2,787,230
	Construction Contingency	\$139,362
	Incidental Budget	\$585,318
	Capitalized Interest/DASNY	\$153,089
	Capital Improvement Project	\$3,665,000

Financing



Caledonia-Mumford Central School District
Proposed Capital Project

Project Funding

Total Project Cost:	\$3,665,000
Less Capital Reserve:	(940,000)
Less State Building Aid:	(2,725,000)
Cost to Taxpayer:	\$0

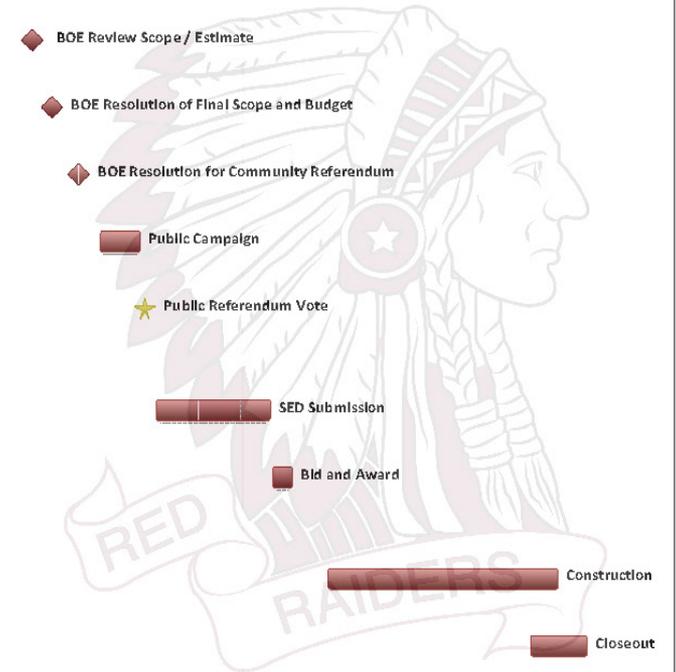
↑
No tax impact or tax increase
as result of project



Pre-Ref Schedule



ID	Task Name	Duration	Start	Finish	2019					2020		
					Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan
1	2019 CAPITAL IMPROVEMENT PROJECT	420 days	5/22/18	12/30/19								
2	PRE-REFERENDUM PHASE	86 days	5/22/18	9/18/18								
3	BOE Review Scope / Estimate	1 day	5/22/18	5/22/18								
4	BOE Resolution of Final Scope and Budget	1 day	6/12/18	6/12/18								
5	BOE Resolution for Community Referendum	1 day	7/10/18	7/10/18								
6	Public Campaign	30 days	8/3/18	9/13/18								
7	Public Referendum Vote	1 day	9/18/18	9/18/18								
8	PRE-CONSTRUCTION PHASE	104 days	10/1/18	2/21/19								
9	SED Submission	87 days	10/1/18	1/29/19								
10	Bid and Award	15 days	2/1/19	2/21/19								
11	CONSTRUCTION PHASE	196 days	4/1/19	12/30/19								
12	Construction	175 days	4/1/19	11/29/19								
13	Closeout	42 days	11/1/19	12/30/19								



Questions?

