July 5, 2011

Dear Marion Residents,

As most of you know, Tabor Academy is currently in the midst of installing three artificial turf athletic fields. This project includes the re-construction of the three fields familiar to all and will, as in the past, host Tabor football, soccer, field hockey, lacrosse and baseball. The project also entails in a new location on Front Street, a baseball backstop, two team dugouts and seasonal safety netting. Each new field will have a score board and there will be four lights for the football field and seating built into the Spring Street hillside where spectators used to sit on the ground or in camp chairs. Most of the old "sledding hill" will be retained. A hundred percent of the field area will be used for student athletic practices and games, exactly as it has been for several decades.

A number of questions and concerns have recently been expressed about this project. Questions of the safety and aesthetics of the fields, of the effect of hurricane or other floods on adjacent properties, of the safety and mobility of the "crumb rubber" substrata of the playing surface, of the height, time of operation and effect of the lights, of the potential for a "heat island" raising the ambient temperature of surrounding space, of parking and of the adequacy of the review and approval processes have all been brought to our attention.

With bulldozers, trucks and piles of earth spread around the space, these fields, while under construction, unquestionably present a dramatic effect. However, when the "normally green grass" surface is laid down and the project is completed – with the one move of the baseball diamond from Spring Street to Front Street – we believe the visual changes will be minimal.

However normal the finished version will be, the issues raised are deeper than surface impression. As I, myself, had many questions about the purposes, safety, health risks and benefits or drawbacks of such fields before we began serious consideration of building these fields, I can, I think, empathize with the quality and sincerity of the reservations some have expressed.

As the Headmaster at Tabor Academy, it would be more than fair to note that I am not a neutral party in this discussion. I would also observe that my own commitment to this project stems from a very long period of investigation and reflection, recognizing that the safety of our students, visiting athletes, faculty, faculty children and the residents of the Town in which we live are all at stake.

Our purpose is to create an exceptional outdoor athletic facility for our kids. As with all the many projects Tabor has completed over the last forty years, from the demolition of the old academic buildings and the construction of the Academic Center in the early 70s to the recent completion of the waterfront Marine Science Center and the new Math and Science Center, our intention is to build the finest fields possible. When completed, these fields fulfill the same decades-old athletic purpose: safe and healthy playing surfaces for Tabor Academy students and their competitors.

I recognize, sadly, I'd have to say, that not everyone will be as enthusiastic about these changes as we are. I know that I look through the lens of the benefit to our students, programs and our school. I do acknowledge it is also fair to regard these same changes, as I know some do, from a different perspective.

Before we undertook this project, we completed as much research as is possible, reading and questioning the many studies that have been undertaken over a number of years, talking with experts and with folks in the field, trying to understand the sometimes complex and, frankly, more than occasionally contradictory information one can discover on the topic of artificial turf fields.

As "the school by the sea," possessing what we believe to be the only secondary school marine science laboratory in the country, having recently completed a LEED CERTIFIED GOLD science facility and living, as we are in Marion, in a delicate zone of land subject to hurricane flooding, Tabor can not afford to jeopardize all that we have worked to accomplish on issues of environmental safety. Our mission is education; our facilities must live out that mission. "Risk" and "danger" in real physical terms are antithetical to what we stand for and what we aim to accomplish.

In this letter, I will set forth the reasons for our project, the research enabling us to feel confident about moving forward, the process of approval we have completed with the Town of Marion and the scope and current status of our work. While I know I cannot resolve aesthetic reservations about school athletic fields and recognize that my life in school likely conditions me to see baseball backstops and lighted fields as great places for kids to play while others might see them as intrusive, I hope I can at least articulate the scope, process and safety of the project.

Reasons for the Project

1. ATHLETICS:

As an integral component of our school's college preparatory mission, Tabor strives to strengthen our students in mind and body. An essential part of our mission is the physical health and development of our students. Key to that mission is a carefully managed, highly varied and quite competitive athletic program for our 500 students. We currently offer a variety of sports requiring regulation playing fields. In the fall, we typically offer between ten and twelve different field teams and, in the spring, a total of eight or nine teams. [We also offer a number of other sports in various seasons such as tennis, crew, sailing, track and golf that do not require athletic fields.]

2. ATHLETIC FIELDS:

Tabor currently owns and maintains eight regulation fields. As the math of our field usage and field sports works out, we are never in a position to give any of our athletic fields a "rest" to regenerate grass and, whatever weather we encounter, we must continue to play. The result is fields needing constant attention and, while in reasonable shape, they are almost never in the ideal condition we would hope for them.

The fields at the north end of the campus - football and soccer in the fall and lacrosse and baseball in the spring - are subject to flooding from rain and, in the summer require a fair amount of water from Tabor's irrigation pond as well as maintenance work. Without going into more detail, Tabor has sought additional playing fields for more than three decades but has been unable to find property suitable for such an endeavor.

We began contemplating artificial fields several years ago because we could improve the safety, surface quality, field use during inclement weather and flexibility of our competitive surfaces, providing the ability, for instance, with artificial turf, to play both field hockey and soccer on the same surface in the fall.

However, at the time we first began investigating these surfaces, it was clear there were a number of potential issues with such facilities that had not been resolved. Early fields were often very hard [little more than indoor/outdoor carpeting], resulting in additional rather than reduced injury, early fields may have contained increased lead levels and some may have had other heath effects thought, perhaps, to result from the sometimes unsanitary condition of the rather crude early forms of crushed tire products used in them. Candidly, they also tended to look strangely artificial.

We decided not to pursue this option while, at many of our sister independent schools, such fields were being built.

Questions about the fields, themselves:

3. ARE ARTIFICIAL TURF FIELDS SAFE?

Over the last decade, artificial turf manufacturers have transformed the technology. A modern artificial turf field is a combination of monofilament fibers supported by a mixture of sand and "crumb rubber." The modern ones - as opposed to the older models - look, visually, like real green grass. Ours will be a green as close to normal healthy grass as possible. They stand up to years of usage with minimal maintenance and are environmentally responsible at a number of levels. Studies of sports injuries with these fields indicate a reduction in what are called "lost time" injuries – that is, those serious enough to prevent an athlete from playing.

Specifically, one of the significant improvements has been in the "crumb rubber," a cryogenically frozen recycled clean tire product that gives the fields their bounce and safety in the rough-and-tumble of play. It is now used with demonstrable safety in children's play areas, as mulch for gardens as well as the substrata of the playing surface. It is now a chemically inert, clean, non-toxic product of responsible recycling. In our particular location, it is a key component of the field precisely because it does NOT float nor can it be blown away and is regarded as an environmentally "friendly" product in place.

More than 10,000 turf fields have been installed in every conceivable location around the country. They have been flooded by rivers and frozen by blizzard. Without this long and varied list of successful installation, we would not have been satisfied that this kind of field is environmentally safe and would genuinely enhance Tabor's student and faculty athletic experience while improving our students' athletic safety.

Candidly, given my own initial level of skepticism about this product, waiting while 10,000 other institutions could report their experiences was the level of assurance we required. This product has been the subject of innumerable studies by environmental, athletic, student, institutional and health professionals. For an athletic field in constant and multiple use in every weather, it is superior to other surfaces.

4. BETTER THAN GRASS?

Well, no and yes. We certainly do not advocate artificial turf for most uses. We all like the smell of new-mown grass. Fortunately for us in Marion, our kids can roll on the lawn, pick dandelions, mow lawns for pocket money. We have fertilized, limed, trimmed our lawns and worried over crab grass. As we get older, mowing the lawn is a

little less romantic, but it is still the badge of home ownership. I would not want an artificial turf lawn. At least not yet.

But many acres of institutional playing fields are a different endeavor. The artificial turf takes no watering yet returns the water that falls on it – or floods it - safely back into the ecosystem. Tabor's fields will have, in fact, draining qualities far superior to natural fields because the drainage has been engineered. The artificial turf field does not require mowing, preserving the environment from hundreds of gallons of spent carbon fuel. The artificial turf field does not need fertilizer, saving, over the year, tons of nitrogen application. The artificial turf field plays safely and does not deteriorate in foul weather. It is an investment in safety with an environmental foundation. It is not "better" than grass in most home applications or for most golf courses and so forth; it is superior to grass in a multi-season, multi-use, heavily trafficked athletic field. I should note that the current location, because of constructed-size requirements, is the only viable one on our campus.

5. WILL THE RUBBER SUB-STRATA GET INTO THE HARBOR IN A FLOOD?

No. We believe this is not possible. The "crumb rubber" product [along with a mixture of sand] that supports the artificial grass blades does not float. It will not come to the surface in a flood. The under-surface of the artificial turf prevents any of the rubber substance from the fields percolating downward; it is fully water permeable, however. Many studies have concluded that flooding does not cause the rubber to migrate off the fields.

6. WHAT ABOUT DOGS AND OTHER ANIMAL WASTE ON THESE FIELDS?

Dogs are not allowed on this type of field. We will definitely ask for cooperation in this prohibition. In practice, these fields are not normally cleaned by chemicals; water and rain wash animal waste away if it is deposited. All other animals, particularly, in our area, Canada Geese and seagulls, have no interest in it and do not land on it as it harbors no food and does not "puddle up."

7. IS THERE A "HEAT ISLAND" EFFECT?

Independent and careful study of field temperature in New England settings such as ours - where hundreds of such facilities currently exist – indicate no additional heat effect above a few inches and, at five feet above the surface, none. Careful measurement demonstrates that the synthetic blades of grass can heat above the atmosphere temperature in prolonged sun but that the air above them does not

conduct more than two or three degrees of additional heat at two feet above the surface and none at five feet. Measurements were taken on 100 degree days. These studies indicate that, in general, artificial fields will not change ambient air temperatures.

8. WHY IS THERE CONTRADICTORY INFORMATION ABOUT THESE FIELDS ON THE INTERNET?

Many of the early and more problematic fields are still in existence; some states – notably New Jersey – closed some older fields for a time and then reopened them. While they continue to wear reasonably well, they seem to be responsible for the sometimes differing information. Numerous studies find virtually no differences in the "parts per million" realm of chemical analysis between grass and artificial turf. There are a number of responsible studies and recent work by the EPA, New York State and the CDC distinguish between the safety of newer fields and concerns for older ones. But, even with the older fields where lead content had been questioned, statistically demonstrable health effects for children could not be shown.

Other Questions

9. LIGHTS

Our proposed project calls for four light poles 90' in height. This is tall. The purpose of the lights is to allow us to play a few contests that begin late in the afternoon and extend till about seven or so, or to play a limited number of evening games a year. As an independent school, Tabor plays only other independent schools; our nearest competition [Thayer and St. George's] are both an hour away and the rest of our competitive schools are further away than that. Regular night games are not - nor will ever be - part of our athletic routine.

The lengthening of the SAT test [it now releases kids after 1:00 PM] and the distance of our competition dictates that a few Saturdays a year will bring us a late afternoon/early evening game. The lights give us much needed flexibility; they are NOT intended to change the outline of our athletic programs. We do not intend to rent the fields, to stage other kinds of venues [i.e. rock concerts] on these fields or to add additional athletic contests to the 750 or so that we currently play each year.

The lights are tall so that they can illuminate ONLY the field. Lighting engineers report that the "ambient light" - that is, the light that radiates beyond the actual field surface - will actually be LESS in the neighborhood of the football field than the current street

lighting. They are tall so that the light can be focused directly on the field. Most of us remember much shorter light poles at night games, and light, therefore, that spilled far beyond the boundary of the field. One way to think about this is to imagine the cone of light from a flashlight shining directly at the ground as opposed to one shining at a steep angle. If you hold the flashlight over your head, you light a larger area – but it is still a focused "cone" of light.

The taller poles are the result of significant advances in lighting technology that prevent light "spill." They are tall and, when first installed, will be noticeable. Because of the limited time frame of the light use, however, and the minuscule amount that spreads beyond them, their night-time impact will be, in our view, minimal. They would be a physical feature of the field project and I know that they will concern some; I hope their importance to the over-all utility of the fields will balance their aesthetic impact. I also know this is one area where some will object to tall poles.

10. PARKING

We have no plans to change our athletic schedules and do not anticipate any changes in the parking around our fields. We do not plan to rent the fields, to create new "night programs" or other alternations in our patterns of use. On game days, there are now a number of cars along Spring Street. That won't change. Parking is very limited on Front Street and will continue that way. Beyond that, the school's parking lots at the Academic Center, the Fish Center, the Hoyt/Fireman building will continue absorbing most parking as they do now.

The Approval Process

11. HAS THIS PROJECT BEEN PROPERLY APPROVED BY THE TOWN OF MARION?

We have been working directly with various Town agencies for many months. We did understand from the outset that this project would raise concerns and that legal requirements need adherence. On January 13th of this year, a Notice of Intent was sent to the Marion Conservation Commission and the Massachusetts Department of Environmental Protection. Letters of notification were also sent to abutters. Subsequent to that mailing, we learned that, due to an error in an address of record, one of the abutters did not receive this or subsequent letters.

The DEP assigned the project a file number ten days after this initial submission and, on January 26th the Conservation Commission held a hearing on the Notice of Intent and voted to issue an Order of Conditions.

Following this, an invitation was issued to all abutters who might have questions about the project to come to the project architect at their convenience to discuss any concerns.

Since the Order of Conditions was issued in January, the project evolved to include artificial turf field on the third field. At each stage, the Conservation Commission was notified and, on April 13, after an open meeting, an Amended Order of Conditions was approved.

As this is written, we are discussing building code issues with the Town.

12. WHAT ABOUT THE ZONING ISSUES? WHAT IS "THE DOVER AMENDMENT?"

Zoning is an essential foundation of a planned community. Zoning is also complex. I do not have the expertise to comment extensively about the challenges to Towns, Zoning Boards, Zoning Boards of Appeal and citizens in establishing the parameters for zoning. In our Town, a good deal of thoughtful attention has been paid to zoning and to the processes of review.

In Marion, there are both educational and religious institutions, e.g. our several churches, Sippican School and Tabor Academy among them. Zoning laws exempt educational and religious organization – those, in essence, serving the public good - from many zoning ordinances. This is done through the so-called "Dover Amendment," a term for Massachusetts General Law Chapter 40A, Section 3.

Over the years, a number of legal actions have both challenged the particulars of this law and affirmed its essential principles.

MGL 40A [Zoning] Sec. 3 strikes a balance between the clear needs of communities to regulate land use and the desirable goal of educational and religious organization to develop unique facilities as their missions require. This law is a recognition that non-profit religious and educational organizations are likely to build facilities [playgrounds, sports facilities, religious meeting places] that are different in intent from those of a private or for-profit organization and whose particulars, in the construction of regulations, are difficult or impossible to anticipate.

Under the law, structures, themselves, must be built to proper safety and access codes, should meet a test of "reasonableness" and their location, size, and, most importantly, their purpose must further the mission of the organization. With these fields, Tabor will

follow applicable safety codes. Clearly, from our perspective, athletic fields are reasonable and definitely further the educational mission of the school as required.

13. CONCLUSION

Tabor's aim is the creation of a "state of the art" athletic playing field area for our students. Unquestionably, the area will look somewhat different than it has for several years. That being said, 100% of the area will be used for exactly the same purposes - student football, lacrosse, soccer, field hockey and baseball - as has been the case for decades. Marion residents driving by this September will see our kids at play, in games and in practice. They will see a surface that looks like very good grass. They will, on most Wednesdays and Saturday afternoons in the fall and spring, see our kids competing against other schools. We truly hope folks will regard our fields as a healthy and positive use of space.

On the basis of an approval process that, in our view, was fair and open, the school commenced construction and, as all the work results from individual gifts to the school, committed several million dollars in donated funds to the completion of this work.

We believe, when the work is completed, that we will have constructed exceptional athletic fields for our school, surely one of the finest in New England, which will serve our students and enhance our Town.

Sincerely,

Jay S. Stroud
Headmaster
Tabor Academy