ADDENDUM NO. 01

December 04, 2024

ZCS Athletic Field Renovations and Multiple Building FA & PA Improvements

900 Mulberry St.
Zionsville, IN, 46077

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated November 13, 2024, by Fanning/Howey Associates, Inc. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 1-1 through ADD 1-2 and attached Fanning/Howey Associates, Inc. Addendum No. 01, dated December 04, 2024, consisting of 1 page and 2 drawings.

A. 00 00 20 – Table of Contents

1. Revised Table of Contents is issued as part of this Addendum 01 for reference by all parties.

B. 00 10 00 – Instructions to Bidders

1. All references to "Electronic Bid Submission" are to be deleted. All bid submission for this project is to be submitted in sealed envelope at the address listed for Bid Opening. There is no electronic version of bid submission for this project.

C. 00 20 00 – Information Available to Bidders

1. Zionsville Community High School Visual Identity Standards are being issued as reference for all parties. Any products that require "custom" font, color, logos, branding, etc. shall use this standard as reference to include all costs in the base bid.

D. 01 32 00 – Schedules and Reports

1. Guideline Schedule is issued as part of this Addendum 01 for reference by all parties.

E. 01 55 00 – Access Roads and Parking Areas and Groundskeeping

1. Exterior Site Logistics Plans are provided for reference by all Bidders.

TABLE OF CONTENTS

INTRODUCTORY INFORMATION

DIVISION 0 - BIDDING REQUIREMENTS, CONTRACTOR FORMS AND CONDITIONS OF THE CONTRACT

DIVISION 1 - GENERAL REQUIREMENTS

END OF SECTION 00 00 20

ZIONSVILLE COMMUNITY HIGH SCHOOL
VISUAL IDENTITY STANDARDS

Updated June 2009

A Note from the Principal

Zionsville Community High School is proud to be an integral part of the wonderful and unique town of Zionsville, Indiana. This community connection and our recognition as a National Blue Ribbon School, an Indiana 4-Star School, and a leader in the state and region in academic programming and achievement makes us unique. We all know ourselves as "Eagles" and identify strongly with the image of our school and town. As we begin the 21st Century, we look to strengthen that identity for the future with the creation and implementation of this logo and visual identity for ZCHS.

The logo provides a consistent, clean, sharp look for everyone to easily identify with across all areas of internal campus life. From an external perspective, the logo gives us a professional, classy, and modern appearance that sets the tone for who we are and what we do. In short, this graphics package outwardly displays what we have always known abut Zionsville – we are a class act that sets high standards for ourselves. A failure to be consistent with our use of this logo causes others to question our identity, our purpose, and our commitment to excellence.

To that end, it is important that this logo be used universally and consistently at ZCHS and within our community. These Visual Identity Standards ensure that the excellence of Zionsville Community High School is outwardly projected by all of those who call themselves "Eagles".

Sincerely,

Chris Willis
Principal

The Tradition Continues...

About ZCHS visual identity

Zionsville Community High School has a strong tradition of excellence and success in academics, the arts, athletics, and all facets of student life.

In keeping with this tradition, we have strived to develop a versatile new logo or "brand" for Zionsville Community High School (ZCHS). We developed a strong, graphic design with muscular lines, bold colors, simple imagery and an energetic presence all to easily identify ZCHS.

It reads powerfully, yet it will be simple to reproduce across a broad range of applications from uniforms, programs, athletic facilities and more.

This *Visual Identity Standards* guidebook will provide a framework for ZCHS to present one unified style to our community.

Protecting our identity

In order to maintain the integrity of ZCHS designs as well as protect our visual identity they should not be altered without approval of the Assistant Principal of Student Development. In addition, graphic filters should not be applied to any ZCHS logo designs; such as drop shadows, bevels, 3-D effects, etc.

Any other questions or clarification of design standards or usage should be directed to the ZCHS Assistant Principal of Student Development at 317.873.3355 extension 12992.

Official ZCHS Colors

Official ZCHS colors

Listed here are the approved colors for the ZCHS Eagle Logo as well as all logo alternative designs.

Precise color matching across all media can be challenging. The color set chosen should be used for consistency.

GREEN - Pantone 343

This color should be used for full color, two color as well as one color applications.

GREY - Pantone 421 or

METALLIC SILVER - Pantone 877

When a metallic accent is necessary this color may be used as a substitute.

BLACK & WHITE

When using the black & white logo a 30% screen of black (grey) may be substituted for Pantone 421.

Green
Pantone 343

Grey
Pantone 421

Metallic Silver
Pantone 877

Black

Official ZCHS Colors

Figure 1

Figure 2

Full color usage

Shown here are examples of the Eagle Logo using full color. Figure 1 is the ZCHS primary logo. Figure 2 is an approved version utilizing a surrounding black box. CD-ROM files are also available for simply the eagle and also the "Zionsville Eagles" text. See page 15 for details.

Files on CD-ROM

FULL COLOR
- PRIMARY LOGO
- PRIMARY with BLACK BOX
- EAGLE only
- TEXT only

Formats available: EPS, JPG, PNG and TIF

Official ZCHS Colors

Black & White usage

Shown in Figure 1 is the accepted configuration of the primary logo in black & white.

The black & white version uses a 30% screen of black rather than the official Pantone 421 for grey. This would lower production costs as it is a one color design.

Figure 2 is an accepted black & white configuration utilizing a black box surround. Note the "Zionsville" text has been turned to grey as well as the "Eagles" text outline and eagle outline.

Figure 3 is an accepted black & white configuration for use on a black background.

CD-ROM files are also available for simply the black & white eagle and also the "Zionsville Eagles" text.

Figure 1

Figure 2

Figure 3

Files on CD-ROM

BLACK & WHITE

- B&W PRIMARY LOGO
- B&W PRIMARY with BLACK BOX
- B&W LOGO for BLACK BACKGROUND
- B&W EAGLE only
- B&W TEXT only

Formats available: EPS, JPG, PNG and TIF

Official ZCHS Colors

Figure 1

Figure 2

Figure 3

One color usage

Figure 1 is the accepted configuration of the ZCHS one color primary logo. This design only uses Pantone 343 for green.

Please be aware there is a white outline surrounding the text "Eagles" that will show if used on a dark background.

Figure 2 is an accepted one color configuration utilizing a green box surround. Note the "Zionsville" text has been changed to white.

A one color Eagle is also available on the CD-ROM.

Two color usage

Figure 3 illustrates the approved version using only two colors of Pantone 343 for green and Pantone 421 for grey. There is also a two color Eagle design and two color text available.

Files on CD-ROM

ONE COLOR
- ONE COLOR PRIMARY LOGO
- ONE COLOR with GREEN BOX
- ONE COLOR EAGLE only

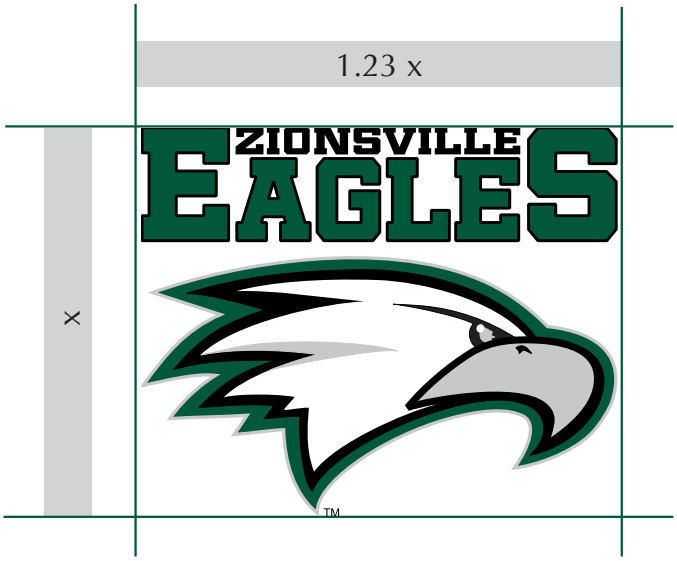
TWO COLOR
- TWO COLOR PRIMARY LOGO
- TWO COLOR EAGLE only
- TWO COLOR TEXT only

Formats available: EPS, JPG, PNG and TIF

Proportional Relationship

Proportions for primary logo

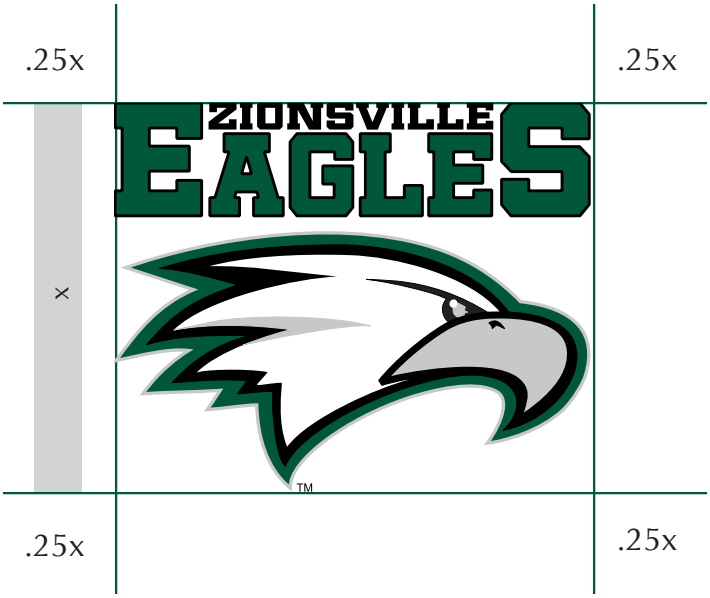
At right is the primary logo. It was constructed with the aspect ratio shown. It is necessary to maintain the proper proportions with all applications of the logo design.



Area of Isolation

Surrounding space

The logo designs are most effective with a large amount of white space surrounding the design itself. At a minimum the ratio shown at left should be used.



Typography

Full Color Text

Official ZCHS typeface

The approved typeface for all ZCHS logo designs is "Player Pro Black". It is an all capitals font.

Please note you must use the following character map to utilize the proper form of the letters listed below:

~ = S

{ = E

} = F

If you type "S" on the keyboard you will get an "S" which you will note has an angle to the midsection. This is not the official form of this letter.

If you do not use the brackets for E and F each letter will have an added serif in the middle. These are also not approved letter forms.

Outside vendors can contact the Assistant Principal's Office to obtain a copy of the official typeface.

Alternative 2 Color Text

Black & White Text

Secondary Designs

Three other design options

The designs illustrated here are three different approved designs for ZCHS. They are available as full color designs. The "Eagle with Z" and the "Green Z" are also available in slightly altered color schemes as shown on page 11 of this guide.

Files on CD-ROM

FULL COLOR
- EAGLE with ZCHS
- EAGLE with Z
- Green Z

Formats available: EPS, JPG, PNG and TIF

Secondary Designs
Alternative Color Schemes

Designs to use on green

The designs shown at right have been approved as alternative color schemes. These are useful if utilizing a green background and you would like white or grey (PMS 421) to be the dominate color rather than green (PMS 343).

Files on CD-ROM

FULL COLOR
- ALT COLORS Z or EAGLE combination
  - Z and EAGLE combination
    - Silver with Green Trim plus Eagle
    - Silver with White Trim plus Eagle
    - White with Green Trim plus Eagle
    - White with Silver Trim plus Eagle
  - Z only
    - Z Silver with Green Trim
    - Z Silver with White Trim
    - Z White with Green Trim
    - Z White with Silver Trim

Formats available: EPS, JPG, PNG and TIF

Official Team and Group Designs

BASEBALL

BASKETBALL

BOWLING

CHEERLEADING

CHORALAIRES

CROSS COUNTRY

FOOTBALL

GOLF

LACROSSE

MARCHING BAND

ROYALAIRES

SOCCER

SOFTBALL

STUDENT COUNCIL

SWIMMING & DIVING

TENNIS

TRACK & FIELD

VOLLEYBALL

WRESTLING

PLEASE NOTE: These designs serve as an example for any ZCHS organization not appearing here. All school clubs and organizations can create a similar design by using the "Player" typeface to include their specific name along with the ZCHS primary logo.

Files on CD-ROM

FULL COLOR
PRIMARY includes SPORT or GROUP

Formats available: EPS, JPG, PNG and TIF

Use and Placement

1 

2 

3 

4 

5 

6 

7 

Common mistakes

Listed below are common mistakes made when utilizing logo designs:

1) Do not alter the font
2) Do not change colors
3) Do not combine with other unauthorized marks
4) Do not group in an unauthorized fashion
5) Do not stretch or alter proportions
6) Do not alter or emphasize specific elements
7) Do not overlap with other graphics

To maintain the integrity of the designs please follow all guidelines. Any questions on proper use and placement should be asked of the ZCHS Assistant Principal of Student Development.

Trademarks and Licensing

Zionsville Community Schools owns and controls the use of its logos, designs, and other marks associated with the school corporation or any of its schools, whether registered or not. These include but are not limited to the names Zionsville Eagles, ZCHS, ZHS, Zionsville Community High School, Zionsville High School, as well as the Eagle Logo.

Use of these trademarks and copyrights without license or permission is prohibited. Zionsville Community Schools reserves the right to protect its trademarks from infringement.

These technical guidelines are established to describe how the ZCHS logos and marks should be presented and displayed. It is imperative that the quality and integrity of the marks are maintained, and that the marks are used only for tasteful and reputable activity. ZCHS recognizes that creative use of the of the trademarks by licensees may not always fall within the exact guidelines. ZCHS administration will be the judge of acceptable use and reserves the right to grant or deny deviations from the guidelines.

ZCHS LOGO FILES

Directory of CD-ROM Files

All designs available in EPS, JPG, PNG and TIF

1) FULL COLOR
   1) PRIMARY LOGO

   2) PRIMARY with BLACK BOX

   3) EAGLE only

   4) TEXT only

   5) PRIMARY includes SPORT or GROUP

   6) EAGLE with ZCHS

   7) EAGLE with Z

   8) Green Z

   9) ALT COLORS Z or EAGLE combination
      1) Z and EAGLE combination

         1) Silver with Green Trim plus Eagle
         2) Silver with White Trim plus Eagle
         3) White with Green Trim plus Eagle
         4) White with Silver Trim plus Eagle

      2) Z only

         1) Z Silver with Green Trim
         2) Z Silver with White Trim
         3) Z White with Green Trim
         4) Z White with Silver Trim

2) TWO COLOR
   1) TWO COLOR PRIMARY LOGO

   2) TWO COLOR EAGLE only

   3) TWO COLOR TEXT only

3) ONE COLOR
   1) ONE COLOR PRIMARY LOGO

   2) ONE COLOR with GREEN BOX

   3) ONE COLOR EAGLE only

4) BLACK & WHITE
   1) B&W PRIMARY LOGO

   2) B&W PRIMARY with BLACK BOX

   3) B&W LOGO for BLACK BACKGROUND

   4) B&W EAGLE only

   5) B&W TEXT only

Zionsville Community High School
1000 Mulberry Street
Zionsville, Indiana 46077

Phone: 317.873.3355 extension 12992

Matthew Doublestein

From: Jeff Zurawski
Sent: Thursday, September 08, 2016 7:26 AM
To: Matthew Doublestein
Cc: Diane Aurand
Subject: RE: ZW colors
Attachments: ZWMS Logo - Eagle and ZW - Final.jpg; ZWMS Logo - Eagle and ZW - Final.png

Categories: Zionsville

Sure thing!
Here you go:

Vegas Gold
Pantone 458
RGB: 206, 185, 100
CMYK: 6, 11, 90, 10

Emerald Green
Pantone 3425
RGB: 0, 99, 65
CMYK: 93, 13, 85, 44

\\|||||//
(O) (O)
_o00o(_)o00o_

|_____|
Jeff Zurawski
Zionsville West
Middle School
Art Teacher
ext. 10403

-----Original Message-----
From: Matthew Doublestein
Sent: Wednesday, September 07, 2016 3:02 PM
To: Jeff Zurawski <jzurawski@zcs.k12.in.us>
Cc: Diane Aurand <daurand@zcs.k12.in.us>
Subject: ZW colors

Do you have the CMYK numbers for our school colors? Diane can use them for our yearbook. Thanks!

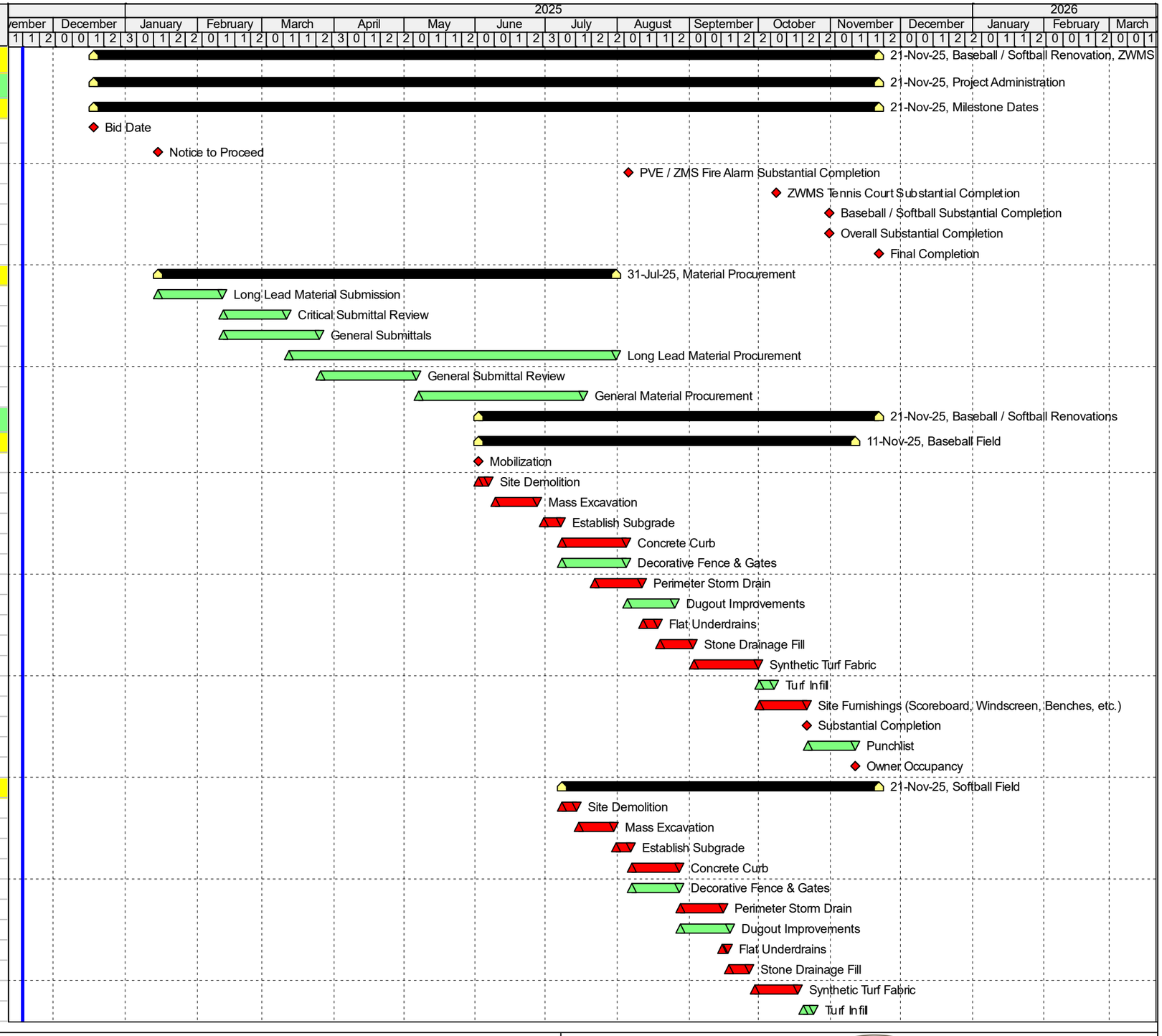
Matt Doublestein
Principal, ZWMS

Sent from my iPhone

Vegas Gold 458

Emerald Green 3425

Activity Name	Original Duration	Start	Finish
Baseball / Softball Renovation, ZWMS Tennis C	238	18-Dec-24	21-Nov-25
Project Administration	238	18-Dec-24	21-Nov-25
Milestone Dates	238	18-Dec-24	21-Nov-25
Bid Date	0	18-Dec-24*	
Notice to Proceed	0	15-Jan-25*	
PVE / ZMS Fire Alarm Substantial Completion	0		05-Aug-25
ZWMS Tennis Court Substantial Completion	0		08-Oct-25
Baseball / Softball Substantial Completion	0		31-Oct-25
Overall Substantial Completion	0		31-Oct-25
Final Completion	0		21-Nov-25
Material Procurement	140	15-Jan-25	31-Jul-25
Long Lead Material Submission	20	15-Jan-25	11-Feb-25
Critical Submittal Review	20	12-Feb-25	11-Mar-25
General Submittals	30	12-Feb-25	25-Mar-25
Long Lead Material Procurement	100	12-Mar-25	31-Jul-25
General Submittal Review	30	26-Mar-25	06-May-25
General Material Procurement	50	07-May-25	17-Jul-25
Baseball / Softball Renovations	123	02-Jun-25	21-Nov-25
Baseball Field	115	02-Jun-25	11-Nov-25
Mobilization	0	02-Jun-25*	
Site Demolition	5	02-Jun-25	06-Jun-25
Mass Excavation	15	09-Jun-25	27-Jun-25
Establish Subgrade	5	30-Jun-25	07-Jul-25
Concrete Curb	20	08-Jul-25	04-Aug-25
Decorative Fence & Gates	20	08-Jul-25	04-Aug-25
Perimeter Storm Drain	15	22-Jul-25	11-Aug-25
Dugout Improvements	15	05-Aug-25	25-Aug-25
Flat Underdrains	5	12-Aug-25	18-Aug-25
Stone Drainage Fill	10	19-Aug-25	02-Sep-25
Synthetic Turf Fabric	20	03-Sep-25	30-Sep-25
Turf Infil	5	01-Oct-25	07-Oct-25
Site Furnishings (Scoreboard, Windscreen, Benches, etc.)	15	01-Oct-25	21-Oct-25
Substantial Completion	0		21-Oct-25*
Punchlist	15	22-Oct-25	11-Nov-25
Owner Occupancy	0		11-Nov-25
Softball Field	98	08-Jul-25	21-Nov-25
Site Demolition	5	08-Jul-25	14-Jul-25
Mass Excavation	12	15-Jul-25	30-Jul-25
Establish Subgrade	5	31-Jul-25	06-Aug-25
Concrete Curb	15	07-Aug-25	27-Aug-25
Decorative Fence & Gates	15	07-Aug-25	27-Aug-25
Perimeter Storm Drain	12	28-Aug-25	15-Sep-25
Dugout Improvements	15	28-Aug-25	18-Sep-25
Flat Underdrains	3	15-Sep-25	17-Sep-25
Stone Drainage Fill	7	18-Sep-25	26-Sep-25
Synthetic Turf Fabric	15	29-Sep-25	17-Oct-25
Turf Infil	5	20-Oct-25	24-Oct-25



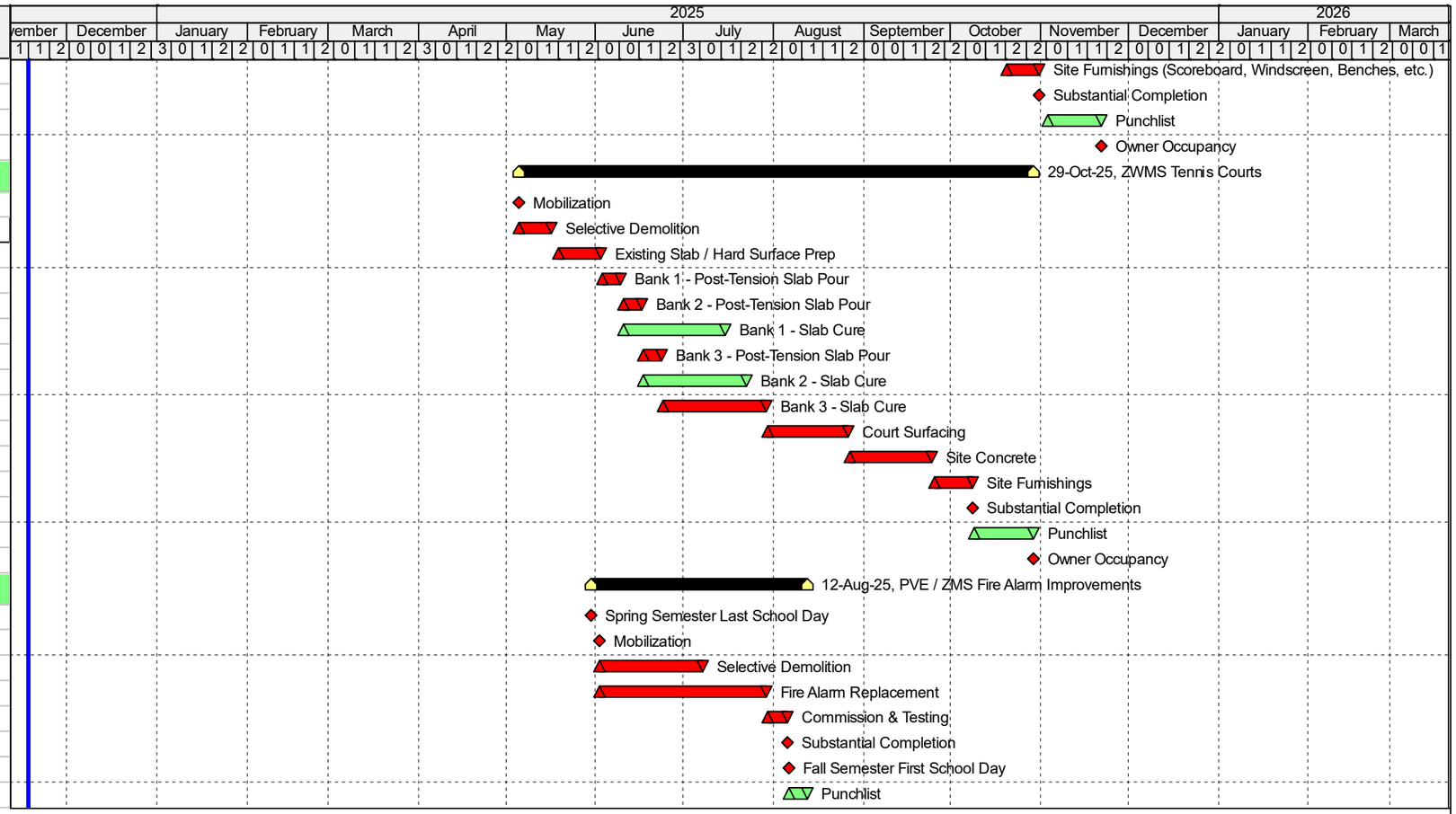
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

Baseball / Softball Renovation, ZWMS Tennis Court ZMS / PVE Fire Alarm

Guideline Schedule

SKILLMAN

Activity Name	Original Duration	Start	Finish
Site Furnishings (Scoreboard, Windscreen, Benches, etc.)	10	20-Oct-25	31-Oct-25
Substantial Completion	0		31-Oct-25*
Punchlist	15	03-Nov-25	21-Nov-25
Owner Occupancy	0		21-Nov-25
ZWMS Tennis Courts	125	05-May-25	29-Oct-25
Mobilization		05-May-25*	
Selective Demolition	10	05-May-25	16-May-25
Existing Slab / Hard Surface Prep	10	19-May-25	02-Jun-25
Bank 1 - Post-Tension Slab Pour	5	03-Jun-25	09-Jun-25
Bank 2 - Post-Tension Slab Pour	5	10-Jun-25	16-Jun-25
Bank 1 - Slab Cure	25	10-Jun-25	15-Jul-25
Bank 3 - Post-Tension Slab Pour	5	17-Jun-25	23-Jun-25
Bank 2 - Slab Cure	25	17-Jun-25	22-Jul-25
Bank 3 - Slab Cure	25	24-Jun-25	29-Jul-25
Court Surfacing	20	30-Jul-25	26-Aug-25
Site Concrete	20	27-Aug-25	24-Sep-25
Site Furnishings	10	25-Sep-25	08-Oct-25
Substantial Completion	0		08-Oct-25*
Punchlist	15	09-Oct-25	29-Oct-25
Owner Occupancy	0		29-Oct-25
PVE / ZMS Fire Alarm Improvements	52	30-May-25	12-Aug-25
Spring Semester Last School Day	0	30-May-25*	
Mobilization	0	02-Jun-25*	
Selective Demolition	25	02-Jun-25	07-Jul-25
Fire Alarm Replacement	41	02-Jun-25	29-Jul-25
Commission & Testing	5	30-Jul-25	05-Aug-25
Substantial Completion	0		05-Aug-25*
Fall Semester First School Day	0	06-Aug-25*	
Punchlist	5	06-Aug-25	12-Aug-25

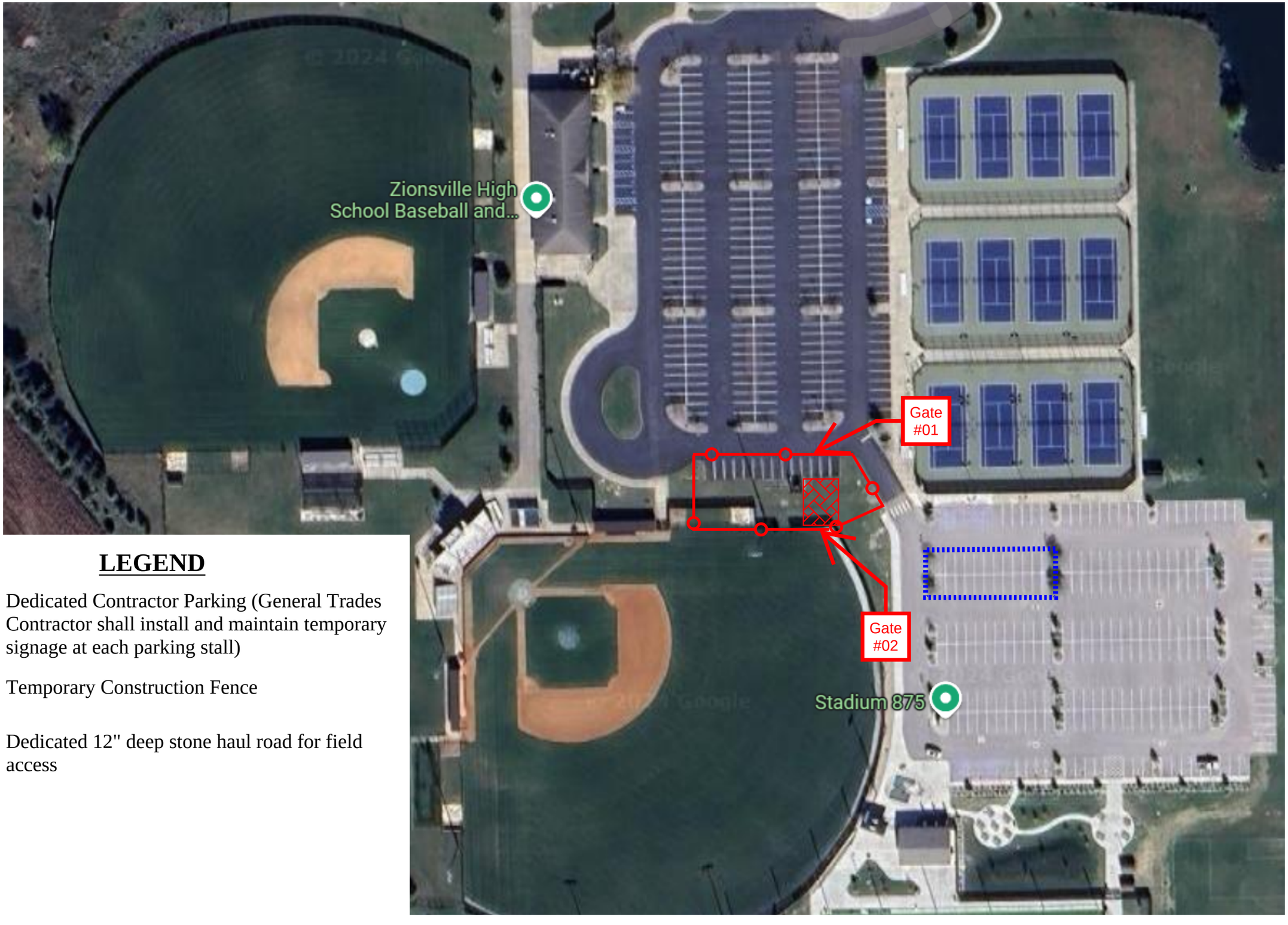


Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

Baseball / Softball Renovation, ZWMS Tennis Court ZMS / PVE Fire Alarm

Guideline Schedule

SKILLMAN



LEGEND

Dedicated Contractor Parking (General Trades Contractor shall install and maintain temporary signage at each parking stall)

Temporary Construction Fence

Dedicated 12" deep stone haul road for field access

BASEBALL FIELD LOGISTICS PLAN

LEGEND

Dedicated 12" deep stone haul road for field access

Concrete walk and curb to be protected from damage by equipment

SOFTBALL FIELD LOGISTICS PLAN

LEGEND

Dedicated 12" deep stone haul road for field access

ZWMS TENNIS COURTS LOGISTICS PLAN

A D D E N D U M N O. 1

Zionsville High School – Baseball/Softball Synthetic Turf

Zionsville Community Schools
Zionsville, Indiana

Project No. 223142.00

Index of Contents

Addendum No. 1, 2 items, 1 page
Revised Project Manual Sections: 11 68 33 – Athletic Field Equipment, 32 18 13 – Synthetic Grass Surfacing, and 32 31 13 – Fences and Gates
Revised Drawing Sheets: G1.1 and G1.2

Date: December 4, 2024

FANNING/HOWEY ASSOCIATES, INC.
ARCHITECTS/ENGINEERS/CONSULTANTS

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 1 to Drawings and Project Manual, dated November 13, 2024, for Zionsville Community Schools, 900 Mulberry Street, Zionsville, Indiana; as prepared by Fanning/Howey Associates, Inc., Indianapolis, Indiana.
This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Each bidder shall acknowledge receipt of this Addendum in his proposal or bid.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum. (This includes miscellaneous items at the very end of this Addendum.)

RE: ALL BIDDERS

ITEM NO. 1. REVISED PROJECT MANUAL SECTIONS

A. Sections 11 68 33 – Athletic Field Equipment, 32 18 13 – Synthetic Grass Surfacing, and 32 31 13 – Fences and Gates have been revised, dated 12/4/24, and are included with and hereby made a part of this Addendum.

ITEM NO. 2. REVISED DRAWING SHEETS

A. Drawing Sheets: G1.1 and G1.2 have been revised, dated 12/4/24, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

END OF ADDENDUM

SECTION 116833 - ATHLETIC FIELD EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes: Playfields and equipment, including the following:
   1. Concrete slabs and encasements as required.
   2. Baseball- Softball bases, pitching rubber, accessories and misc. Equipment.
   3. Batting cages and components as specified.
   4. Softball netting system.
   5. Dugout equipment including Benches, storage units and other misc. Equipment

B. Related Sections include the following:
   1. Division 03 Section “Cast-In-Place Concrete”: For concrete footings.
   2. Division 31 Section “Earth Moving”: For excavation for installation of concrete footings as required.

1.3 SUBMITTALS

A. Shop Drawings: For items included in this Section. Include types of materials, construction details, sizes and layout, foundations and complete information on hardware and accessories.

B. Quality Assurance/Control Submittals
   1. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, finishes, field-assembly requirements, and installation details.
   2. Qualification Data: For installer.

1.4 QUALITY ASSURANCE

A. Standards: Provide athletic equipment complying with or exceeding requirements of the National Federation of State High School Associations.

B. Pre-Installation Conference: Meet with Installer, and installers of substrate construction, and other related work Architect and Owner.
   1. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials, and installation facilities and establish preliminary installation schedule. Review requirements for inspections, tests, certifications, forecasted weather conditions, governing regulations, and proposed installation procedures.

C. Installer Qualifications An installer shall have a minimum of 5 years experience installing athletic equipment and be able to demonstrate successful completion of similar projects.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Where a model number is used on the Drawings, it refers to the manufacturer and product listed which is specified as the type, size, function, and quality required for this Project.

B. The Architect will consider for acceptance products of other manufacturers provided they equal or exceed the material requirements and functional qualities of the specified product. Requests for Architect/Engineer's approval must be accompanied by the "Substitution Request Form" and complete technical data for evaluation. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

2.2 MATERIALS

A. Concrete Encasements
1. Provide concrete encasement of posts.
2. Provide concrete consisting of portland cement, complying with ASTM C150, aggregates complying with ASTM C33, and with a minimum of 28-day compressive strength of 2500 psi, using at least 4 sacks of cement per cu.yd., 1 inch maximum size aggregate, maximum 3 inch slump, and 2 percent to 4 percent entrained air. Prepare to conform to ASTM C94.

B. Batting Cage Components:

Basis of Design: 75' long, double, Tension batting cages BTTBD as manufactured by Sportsfield specialties, Inc., P.O. Box 231, 41155 State Highway 10, Deli, N.Y. 13753 , (888) 975-3343. 75' long batting cages shall be used for both baseball and softball.

C. Custom pole to pole backstop netting system:

Basis of Design: 36' tall custom pole to pole tension backstop netting system with wall pad backstop including powder coated black steel support poles as as manufactured by Sportsfield specialties, Inc., P.O. Box 231, 41155 State Highway 10, Deli, N.Y. 13753 , (888) 975-3343.

D. Dugout equipment:

Basis of Design: 36' long poly bench units with back seat, Cubbie storage units, Helmet and bat racks, 36' rack/ hook strip per dugout as manufactured by Sportsfield specialties, Inc., P.O. Box 231, 41155 State Highway 10, Deli, N.Y. 13753 , (888) 975-3343.

E. SHP-RBA-Schutt Bury-All Home Plate:
1. Basis of Design: SHP-RBA-Schutt Bury-All Home Plate and Accessories as Manufactured and/or Supplied by:
a. Sportsfield Specialties, Inc.; P.O. Box 231, 41155 State Highway 10 Delhi, NY 13753, P. (888) 975-3343
b. Beacon Athletics
c. BSN Sports
d. Gill Athletics
2. System to Include:
a. Official size Bury-All Home Plate, 12807100
b. 3" thick, maximum strength all-rubber construction, non-skid surface
c. No corners or edges to catch spikes
d. Waterproof and designed not to deteriorate under adverse weather conditions
e. Removable installation
f. 24lb. shipping weight

F. SHBBPL-Schutt Jack Corbett MLB Hollywood Bases:
1. Basis of Design: SHBBPL-Schutt Jack Corbett MLB Hollywood Bases and Accessories as Manufactured and/or Supplied by:
a. Sportsfield Specialties, Inc.; P.O. Box 231, 41155 State Highway 10 Delhi, NY 13753, P. (888) 975-3343
b. Beacon Athletics

c. BSN Sports
d. Gill Athletics

2. System to Include:
   a. Set of three (3) bases
   b. Ground anchors and anchor plugs sold separately
   c. Official size, pro style Jack Corbett MLB Hollywood Base for advanced level of play
   d. 15” x 15” x 3” with 6” stanchions
   e. 34 lb. shipping weight
   f. Extended tapered lip reduces edge “turn-up”
   g. Weather resistant with special ultraviolet inhibitors
   h. 1200 lb. tensile strength to prevent cuts and tears

G. SHBBP-44-Shutt Ground Anchor Mounts:
   1. Basis of Design: SHBBP-44-Schutt Ground Anchor Mounts and Accessories as Manufactured and/or Supplied by:
      a. Sportsfield Specialties, Inc.; P.O. Box 231, 41155 State Highway 10 Delhi, NY 13753, P. (888) 975-3343
      b. Beacon Athletics
      c. BSN Sports
      d. Gill Athletics
   2. System to Include:
      a. 8” female ground anchors
      b. Set of three (3)
      c. 1-3/4” square
      d. 5 lb. shipping weight

H. PPBPBIT – Porta-Pitch Portable Baseball Dual Bullpen Mound: Official 10” height, includes an synthetic turf in color to match proposed infield and skinned area of main field thatch layer factory pre-covered center section with rubber infill material, replaceable SHBBPB four (4) sided professional pitching rubbers, remaining sections arrive factory pre-covered with Tan yarn synthetic turf with red clay thatch layer (no rubber and/or sand infill material necessary) – turf system color is to match proposed infield and/or skinned areas as indicated on drawings.
   1. Basis of Design: PPBPBIT – Porta-Pitch Portable Baseball Dual Bullpen Mound and Accessories as Manufactured and/or Supplied by:
      a. Sportsfield Specialties, Inc.; P.O. Box 231, 41155 State Highway 10 Delhi, NY 13753, P. (888) 975-3343

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install baseball, softball bases as detailed and in strict accordance with manufacturer's recommendations and as located on the plans.

B. Install batting cage portable pitching mounds in locations and as per manufacturers recommendations.

C. Install new batting cages in locations as noted on plans and per manufacturers guidelines. Work shall include sawcutting existing concrete batting cage slab as required for support post and foundation installation and repouring disturbed concrete areas of slab prior to turf installation.

D. Install custom pole to pole tension backstop netting system in location as noted and per manufacturers recommendations.

E. Install Dugout benches and other misc. specified equipment in dugouts per manufacturers recommendations.

F. Concrete Slabs or encasements: Shall be installed at the required locations and elevations, and in conformance with requirements of Division 03 Section "Cast-in-Place Concrete" and the "Concrete Schedule".

END OF SECTION 116833

SECTION 321813 - SYNTHETIC GRASS SURFACING

PART 1 - GENERAL

A. Section Includes:
   1. Synthetic grass infill system and accessories.
      a. New synthetic grass infill system and flat pipe underdrain system on new base and subgrade for athletic fields.
      b. A heat reducing or cool turf infill material for athletic fields shall also be submitted as an alternate for consideration by the owner.
      c. New synthetic turf without infill adhered to on existing prepared concrete slab of batting cages and dugouts.
      d. New synthetic turf without infill adhered to existing concrete floor slabs in dugouts.
   2. FieldSpec 7’ Drag Brush
   3. FTMAG 7’ tow behind magnet
   4. Drainage testing of new infill turf field.

B. Related Work:
   1. Division 31 Section “Site Clearing”: For removal of existing natural turf and existing improvements.
   2. Division 31 Section “Earth Moving”: For preparation of subgrade and field base materials.
   3. Division 33 Section “Subdrainage”: For storm drainage structures and field drainage system.

1.2 DEFINITIONS

A. Terminology Definitions:
   1. Base Materials: Materials that provide porosity and stability such as crushed aggregate or porous pavement.
   2. Denier: The weight in grams of 9000 meters of fiber.
   3. Drainage System: A method of removing surface and subsurface moisture/water.
   4. Fiber: A specific form of fibrous textile material from which yarn is manufactured.
   5. Fiber Thickness: A measurement in microns (metric) or mils. (U.S.) of the thinnest cross section of a fiber.
   6. G-Max: A measurement of impact (shock absorption) in terms of gravity units as a ratio of deceleration.
   7. Infill: Loosely dispersed materials that are added to the synthetic turf system, typically sand, rubber, other suitable material, or a combination thereof.
   8. Knitted: A process in which the yard fibers of the pile are tied to the backing which was simultaneously constructed in the same over and under, crisscross process.
   9. Water Permeability: The rate at which water flows through a surface or system cross-section or components of the cross-section.
   10. Planarity: Uniformity of the surface as compared to certain fixed predetermined points or prescribed slopes.
   11. Primary Backing System: A single or multiple layers of woven or non-woven materials, into which the fiber is either tufted or knitted, to provide the initial construction of the synthetic turf.
   12. Secondary Backing System: A coating and/or woven or non-woven fabric layer(s) applied to the primary backing after the fiber pile has been locked into place which serves to provide tuft bind and additional structural integrity.
   13. Shock Absorbing System: Component(s) that add resiliency to the system.
   14. Subgrade: A stabilized foundation onto which the base materials and field systems are installed.
   15. Synthetic Pile Fiber: Grass-like blades made of synthetic materials.
   16. Tufted: A process by which the fiber yarns that form the pile are inserted into a previously prepared blanket-like primary backing.

1.3 PERFORMANCE REQUIREMENTS

A. General: Design of synthetic turf system is based on products and systems by manufacturers as specified in Part 2. Systems shall be engineered by manufacturer to provide a complete turf system.

B. Standard Test Methods: Systems shall comply with all applicable test standards as follows:
   1. ASTM F 1551; "Standard Test Methods for Characterization of Synthetic Turf Playing Surfaces and Materials."
      a. Suffix-DIN 18-035, Part 6 – Water Permeability of Synthetic Turf Systems and Permeable Bases.
      b. Suffix ASTM – Turf System Ball Bounce and Ball Rebound.
   2. ASTM D-1682; Grab Strength Test
   3. ASTM D-1335; Tuft bind
   4. ASTM D-4158; Uniform Abrasion Method
   5. ASTM F-1015; Relative Abrasiveness
   6. ASTM F-355; Procedure A; Shock Absorbency
   7. ASTM D-1876; Peel Resistance

C. Field Markings: Conform to requirements of the National Federation of State High School Association's High School Track and Field Rules and Records.

D. Turf Colors: Turf colors shall be as noted on plans. Owners logos and lettering shall match the owners technical branding guidelines in both layout and colors. Field colors shall be selected from manufacturers standard turf colors.

E. Shock Absorbency: Field shall achieve a minimum of 130 Gmax Shock Absorbency at all tested locations and a maximum of 175.

F. Player-Surface Interface, ASTM F1936: The field surface should provide consistent footing across the entire field area in all directions. Footing includes traction, slip resistance, and rotational resistance. It should also allow for movement between the shoe and the field surface so that contact can be made between athletes without the foot locking into place.
   1. Traction: The surface should provide good traction in all types of weather with the use of conventional athletic type shoes applicable to the sports and/or activity specified.
   2. Rotational Resistance: The surface should allow for twisting movements as is common in athletic activities. Rotational resistance measures the ability of the user to perform twisting motions when in contact with the surface.
   3. Slip Resistance Component: The system should enable a predictable range of movement between the user and the surface uniformly throughout. The surface should balance traction and slippage by way of the sliding coefficient.
   4. Surface Abrasiveness: The field surface should have fibers that minimize skin abrasions.
   5. Impact Absorption (force reduction): The field surface should have the ability to adequately absorb player impact with the surface.
   6. Surface Stability (vertical deformation): The surface should provide adequate stability so that the athlete can maintain body control to help prevent or properly control contact between athletes. This is an important consideration that should be balanced with the surfaces' ability to absorb impact. If the surface is too soft, the stability provided by the field may not be optimal for player movement and body control.

G. Ball-Surface Interface, ASTM F1936: The field surface should provide consistent and predictable ball performance reaction characteristics.
   1. Surface Uniformity: The synthetic turf playing field should be slightly sloping as noted on plans. The synthetic surface shall provide a true and uniform playing surface throughout.
   2. Ball Bounce: The synthetic turf field should provide a ball bounce as close to the optimal playing characteristics of the sport or sports (baseball or softball). The published standards for the regulatory organizations as applicable for each sport should be referenced.

3. Ball Roll: The synthetic turf field should provide a ball roll as close to optimal playing characteristics of the intended sport or sports (baseball or softball). The published standards for the regulatory organizations as may be applicable for each sport should be referenced.

H. Appearance: Unless otherwise dictated by design, the synthetic turf should have a consistent color and shade without significantly noticeable streaks or other irregularities when observed in any direction.

1.4 ACTION SUBMITTALS

A. Shop Drawings: Prepare at scale of the construction documents and contain all pertinent information regarding layout and installation. Drawings shall include the following:
1. Seaming plan; seams of pad are not to coincide with seams of synthetic turf or interfere with subsurface drainage system.
2. Installation details; edge detail, goal post detail, other inserts, etc.
3. Striping plan: layouts for baseball, softball and reference marks for other sports as noted on plans showing any field lines, markings and boundaries, and field logos as indicated.

B. Samples for Verification: Synthetic Turf, 30 inches by 30 inches with two 4 inches by 12 inch lines, (1 white and 1 yellow), installed per manufacturers recommended method.
1. Color samples of A/E selected field colors from vendors standard colors and owner custom logo and lettering to match owners technical branding and color guidelines.
2. Provide at project site for review by A/E representative and owner.

C. Product Submittals:
1. Product Data: For each type of product indicated.
2. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency for turf system performance.
a. Compliance with Pile Height, Face Weight and Total Fabric Weight per ASTM D418.
b. Primary and Secondary Backing Weights per ASTM Dd418.
c. Tuft Bind per ASTM D1335.
d. Grab Tear Strength per ASTM D1682.
3. Certification of Subbase, drainage system and aggregate base installation: Manufacturer/installer shall certify acceptance of subbase, storm drainage system and aggregate base for the purpose of obtaining manufacturer's warranty for the finished synthetic playing surface.
4. Certification of Installer: Proof of compliance with "Quality Assurance" provisions.
5. Warranty: Manufacturer's warranty with provisions specified herein that will be utilized for the Project. Generic warranties are not acceptable.

1.5 CLOSEOUT DOCUMENTS

A. General: Closeout Submittals are to be submitted with O and M Manuals only. Do not submit with other ACTION and INFORMATIONAL Submittals:
1. Maintenance Data: For the proper care and preventative maintenance of the synthetic turf system, including painting and striping.
2. Warranties: Special Warranties specified in this Section.

1.6 QUALITY ASSURANCE

A. Manufacturer/Installer's
1. The synthetic turf installer/manufacturer shall demonstrate experience with at least 3 similar projects with contract amounts over $1,500,000.00. Submit information with the bid.

2. The installer/manufacturer shall employ only qualified, experienced supervisors and technicians skilled in the installation of this system. All turf technicians shall be full time statutory employees of the turf manufacturer/installer. Submit resumes of the top 5 technicians and 2 supervisors with the bid.
3. The turf installer/manufacturer must provide competent workmen skilled in this specific type of synthetic grass installation. The designated supervisory personnel on the project must be certified in writing by the turf manufacturer as competent in the installation of this material, including seaming and proper installation of the infill mixture. The manufacturer shall have a representative on site to certify the installation and warranty compliance.
4. The manufacturer's representative and installation project manager shall observe establishment of subgrade, drainage system, and perimeter drain at periodic intervals during construction and notify the Architect of any items observed that may be detrimental to final installation of the synthetic turf.
5. The Manufacturer must be a certified member of the Synthetic Turf Council (STC).

B. Prospective bidders must meet the following criteria:
1. Have proper license, in good standing, and have never had a license revoked.
2. Have not been disqualified or barred from performing work for any public Owner or other contracting entity.
3. Shall have demonstrable financial strength to fully service and warrant the systems through the provision of audited financial statement for the past 3 years.

1.7 WARRANTY

A. Manufacturer's Warranty: Manufacturer shall provide a 3rd party warranty on all synthetic turf against defects in the material provided, including ultraviolet degradation, excessive fading, wrinkling, panel movement, shock absorbency, etc.

1. The warranty submitted must have the following provisions even if not part of Manufacturer's standard Warranty form.
   a. Warranty Period: Ten (10) years from date of Substantial Completion.
   b. Warranty shall include materials and workmanship.
   c. Must repair or replace such portions of the installed materials that are no longer serviceable to maintain a serviceable and playable surface.
   d. Must be a warranty from a single source covering workmanship and all self-manufactured or procured materials for the field surface and installation.
   e. Warrant that the yarn used to make the grass-like tufts will maintain its UV stability and tensile strength such that the strength of the fiber when measured in accordance with ASTM D-2256 will not decrease by more than 50% during the warranty period due to breakdown of UV stability.

1.8 MAINTENANCE SERVICE

A. Maintenance Proposal: Provide a maintenance proposal from Manufacturer/Installer to the Owner in a form of a standard one-year maintenance agreement. State the services to be provided, obligations, conditions, and terms for agreement period and for future renewal options.

1.9 EXTRA MATERIALS

A. Furnish one additional standard infill container with rubber infill and one standard container with alternate cool infill if accepted for the owners use. Containers shall contain a min of 45 c.f. of rubber and alternate cool infill material.

B. Furnish roll of additional synthetic turf fabric for owners use. Roll shall contain a min. of 1500 s.f of turf fabric.
1. All salvageable pieces of colored turf used during the installation should be left with the Owner.

C. Provide 3 sets of Velcro slide/wear zone patches for all noted areas on plans-provide specified sizes and turf colors matching areas noted on plans.
   1. 1st base slide zone, second base 1st-2nd slide zone, second base 2nd -3rd slide zone return zone, third base 2nd-3rd slide zone, home plate batter box wear zones and pitcher landing zone in front of fixed pitching mound. Provide wear zone pads for both bullpens-home plate batter box wear zones and pitching rubbers.

PART 2 - PRODUCTS

2.1 MANUFACTURERS/PRODUCTS

A. Varsity Baseball / Softball Stadium athletic field turf – Basis of Design: Subject to compliance with requirements.
   1. Sprinturf ; Atlanta, Georgia
      a. Infield and Warning Track: Ultrablade 50 Sharktooth
      b. Outfield: DFE Skarktooth – non thatch version

B. Varsity Baseball or Softball Stadium athletic field turf- Approved Manufacturers: Subject to compliance with Basis of Design requirements, provide products by one of the manufacturers specified.
   1. Fieldturf / Tarkett, Calhoun, Georgia.
   2. Motz Group; Cincinnati, Ohio.
   3. Astroturf, Harmony, Pennsylvania.
   4. Mondo, Conshohocken, PA

C. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. Requests for Architect's approval must be accompanied by the "Substitution Request Form" and complete technical data for evaluation. All materials for evaluation must be received by the Project Manager and Specification Department at least 15 days prior to bid due date. Only the listed approved manufacturers will be issued by Addendum.
   1. With any substitution request, the manufacturer must submit all information and specifications of the equal material to the architect.

2.2 SYSTEM COMPONENTS

A. Drainage System, by Division 33, Section "Subdrainage".

B. Base Materials by Division 31, Section "Earthwork"

C. Materials: All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified, should be able to withstand full climatic exposure in the area of the Project, be resistant to insect infestation, rot, fungus, and mildew; to ultra-violet light and heat degradation, and shall have the basic characteristic of flow-through drainage allowing free movement of surface run-off through turf where such water may flow to the subbase and into the field drainage system.

D. Synthetic Turf: The synthetic turf surface should provide the performance characteristics, components and construction that meet the needs of the declared use for the playing field. (Baseball-Softball).
   1. Synthetic turf construction should provide a system that is resistant to weather, rot, mildew and fungus growth. The system components should be non-toxic, not cause commonly known allergic reactions, and conform to environmental requirements. Each synthetic turf system should be constructed to provide dimensional stability and resist damage from wear and tear during athletic and recreational usage. Each system should be resistant in its entirely to excessive ultraviolet degradation.

2. Fibers for Tufted Systems: The polypropylene or polyethylene fiber should be of flat film, extruded or texturized slit film for football field.
3. Primary Backing Systems: The primary backing materials should be either polyester tire cord, utilized in the knitting process, or a woven, non-woven, or other suitable materials in one or more layers, utilized in the tufting process.
4. Secondary Backing Systems: The secondary backing materials should be applied through a coating process that can be single or multiple applications of one or several different materials. A knitted turf fabric should receive an initial acrylic coating followed by different options of polyurethane or suitable latex coatings in various weights and thickness configurations, depending on individual system design. A tufted turf fabric should receive a polyurethane or suitable latex precoat or a performance-based acceptable equal which than can be followed by an attached cushion or a laminated secondary backing utilizing polyurethane, suitable latex, or an acceptable performance-based equal. The purpose of the secondary backing is to provide the desired level of tuft bind and structural integrity of the turf components. In cases where an increased level of system resilience is desired, multiple layers of secondary backing materials of different physical characteristics can be applied.
5. Water Permeability Rate: Permeable system by design with adequate drainage, perforations should be put through all of the backing coatings to provide for adequate drainage through the system as specified.
6. Seams: New synthetic turf materials are manufactured in panels or rolls that are usually 15 feet wide. Each panel or roll should be attached to the next with a seam to form the fabric of the field. Seams should be glued with a supplemental backing material or sewn with high strength sewing thread.
7. Adhesive: All adhesives used in bonding the system together should be resistant to moisture, bacterial and fungus attacks, meet local/regional environmental requirements and be resistant to ultraviolet rays at all locations within the installed system. The bonding or fastening of all system material components should provide a permanent, tight, secure, and hazard-free, athletic playing surface.
8. Seaming Tape: Seaming tape is commonly used for seams and/or inlaid lines and markings. The tape is comprised of a fabric that should be installed below the backing material on both sides of a seam or inlay. Adhesive is then applied to the seaming tape to provide a bond between adjacent turf panels to sections. The fabric used for seaming tape should provide dimensional strength and enough surface texture to bond well with the adhesive.
9. Turf Characteristics: For playing field and bull pen areas
    a. Fiber type: slit film and monofilament.
    b. Yarn: UV-Resistant polyethylene.
    c. Tuft Bind Strength: 8-10 lbs/force
    d. Face/Pile Yarn Weight: Minimum of 52 oz/sqyd.
    e. Total Weight: Minimum of 72 oz.
    f. GMax Range: 130 – 165.
    g. Infill Materials: ***Sand 70% (3 pounds) and Rubber 30% (2 pounds****)*
    h. Infill Material Density: Minimum of 6 lbs/sf.
    i. Pile Height: 1-3/4 inch and 2 inch as indicated on Drawings.
    j. Colors: Four minimum, manufacturer's standard colors for green field, white lines, and tan dirt areas. Custom colors as required to match school colors for logos and text.
10. Turf Characteristics: For dugouts
    a. Permeable synthetic turf with heavy thatch layer and no infill SYN Augustine X47 as manufactured by SYN Lawn 866-796-5296 or approved equal in colors to match playing field turf.
11. Turf Characteristics: For batting cages
    a. Foam backed turf PGPN style and no infill with T5 backing as manufactured by Synthetic Turf Resources Corp.706-272-4200 or approved equal in colors to match playing field turf.

E. Infill Material: Infill materials on playing field turf only are comprised of rubber and sand, thereof which are placed on top of the synthetic turf backing and between the synthetic surface fibers.
   1. Sand: The sand material utilized as infill should be silt free, similarly sized, and rounded to sub-angular. The sand should be delivered to the site graded, washed and dried.
   2. Rubber: The rubber infill utilizes material that is either styrene butadiene rubber (SBR) or ethylene propylene dien polimerisat (EPDM) rubber granules. Both ambient and/or cryogenic rubber can be used.
      a. Rubber granules must be clean and metal free.
   3. Hybrid: Constitutes the use of sand and rubber or other suitable materials in various combinations.
   4. Heat reducing or Cool infill: Each contractor shall submit as an alternate price for a heat reducing or cool infill material option for consideration by the owner. The contractor shall submit with the alternate price information and specifications on the heat reducing or cool infill material. Cool infill material should be priced to be added as a ¼" top dressing to the base bid infill requested.

F. Lines, Markings, Logos or text: Construction and materials used should be harmonious with the synthetic surface.
   1. Installation: Lines, markings, logos or text shall be inlaid in the synthetic turf surface. Paint shall not be used unless otherwise approved by A/E.
   2. Color of inlaid lines, markings logos or text fabric shall be in custom colors as selected by the Owner / Architect from custom color selections, to match school colors.
   3. selected from custom colors shall be supplied at no additional cost to the owner.
      a. Refer to Drawings for field markings, lines, graphics, text and colors.
   4. Consistency: Synthetic turf and fibers utilized for the tufted or inlaid lines, markings, logos or text should be similar to that used in all other areas of the field and installed to the same tolerances.

G. Inserts: Covers for goal or base sleeves and anchors below synthetic turf.
   1. Consistency: The synthetic turf used for the inserts should be like that used in the area adjacent to the insert.
   2. Installation: The inserts should be anchored securely in the surrounding areas so that they cannot be displaced by the activities occurring on the field and installed to the same tolerances.

H. Nailer Strip: The nailer strip shall be 2 inches by 4 inch composite PVC.+

I. The entire synthetic turf system shall be "lead-free".

J. In Ground utility boxes (if required): In ground utility boxes #3500 with infill retainer system for synthetic turf as supplied by Sportsfield Specialties, 888-975-3343 to be installed at each of the locations of existing boxes if required or as adjusted on site.

K. FieldSpec 7' Drag Brush:
   1. Basis of Design: FieldSpec 7' Drag Brush and Accessories as Manufactured and/or supplied by:
      a. Sportsfield Specialties, Inc.; P.O. Box 231, 41155 State Highway 10 Delhi, NY 13753, P. (888) 975-3343
   2. System to Include:
      a. Powder coated steel construction
      b. Towable with small tractor or utility vehicle
      c. Reversible & replaceable grooming brushes
      d. Replaceable dethatching tines
      e. Simplified height adjustment
      f. Easily upgradable to 15' brush
      g. Fully portable for off-field storage
      h. Approx. Unit weight: 240 lbs.

L. FTMAG - 7' Tow Behind Magnet:
   1. Basis of Design: FTMAG - 7' Tow Behind Magnet and Accessories as Manufactured and/or supplied by:
      a. Sportsfield Specialties, Inc.; P.O. Box 231, 41155 State Highway 10 Delhi, NY 13753, P. (888) 975-3343
   2. System to Include:
      a. Tow behind magnet system for synthetic infill turf
      b. Pull handles allow debris to be released from magnet
      c. Powder coated steel and aluminum construction
      d. Compatible with SweepRight Pro and GroomRight
      e. Approximate unit weight: 150 lbs.
      f. Store inside when not in use

PART 3 - EXECUTION

3.1 EXAMINATION

A. Inspection: Synthetic materials should be inspected prior to installation for:
   1. Damaged or defective goods.
   2. Missing goods or quantities.
   3. Correct turf pile height.
   4. Correct backing perforation diameter and spacing if applicable.
   5. Materials out of tolerance with the specification.

3.2 GENERAL, INSTALLATION

A. The installation shall be performed in full compliance with shop drawings and manufacturer's printed instructions.

B. All installation operations shall be performed by personnel directly employed by the manufacturer, fully familiar with the materials and their application, under the full-time direction and supervision of a qualified technical supervisor employed by the manufacturer of the synthetic turf.

3.3 TURF INSTALLATION FOR PLAYING FIELDS

A. Subgrade Preparation, refer to Division 31, Section "Earthwork": The subgrade should provide a stabilized foundation upon which base materials and subsequent components of playing field systems will be installed.
   1. Subgrade (Rough) Planarity: The tolerances for the finished subgrade should not exceed one inch as measured by a 10-foot straight edge. Grading of the subgrade shall minimize ponding to the extent practical.

B. Aggregate refer to Division 31, "Earthwork": Installation of the aggregate base should provide a close, evenly textured surface meeting the required tolerances.

C. ***Nailer: Attach the composite nailer for the turf attachment to curbs or concrete slabs by means*** of a galvanized 3/8-inch minimum bolt at 4 feet on center, minimum. The elevation of the nailer shall be determined by the turf manufacturers specifications.

D. Synthetic Turf Installation: All synthetic turf systems should be installed to provide stability that will prevent panels from shifting or bunching.
   1. Seaming Method: The synthetic turf panels should be securely fastened together for the warranted life of the system. These seams are typically glued or sewn, the method for which varies from system to system. Seam gaps should be uniform. For tufted infill systems the gap between the fibers should not exceed the gauge of the tufting. For other synthetic turf systems, the seam gaps should not exceed 1/16 inch.
      a. Major panel seaming: Seams must be sewn. Seams shall be flat, tight and permanent with no separation or fraying.

b. Inlays shall be glued and warranted for workmanship per the Warranty Article.

2. Edge Anchoring: Tie anchor to trench drain. Provide a secure anchor.

E. Infill Material Installation: Correct installation is critical to performance of these systems and should follow the manufacturer's recommendations.

1. Environmental Conditions: It is recommended infill materials should be installed under dry field conditions.
2. Method of Application: The infill material should be installed uniformly. The equipment used for the application of the infill materials should erect the fiber, place the infill materials, and should incorporate a metering method to provide consistent distribution. The equipment utilized should not distort or displace any base materials or damage to system in any way.
    a. Apply infill in numerous thin lifts using specialized broadcasting equipment.
    b. Infill material shall be installed to a depth of approximately 1.75 inches. A maximum of 0.75 inches of fiber can be exposed.
    c. Infill mixture can only be applied when dry.

F. Fiber Conditioning: It is essential to maintain the integrity and uniformity of the fiber throughout the manufacturing, shipping and handling, installation and maintenance processes in order to prevent damage which could alter the specified performance and void the warranty.

3.4 TURF INSTALLATION IN DUGOUTS AND BATTING CAGES

A. Installer shall use an adhesive as approved by turf manufacturer for the specific turf product to adhere turf to prepared concrete substrate. In dugouts installer shall not adhere turf to existing drain cover and shall insert white tuft in turf to identify drain cover location.

3.5 SYNTHETIC TURF FIELD TESTING

G. Porosity is the measure of how much ground water a soil can hold, permeability is the measure of how quickly water passes through a soil, while retention is the measure of how much water stays behind. To calculate the exact area of land required for effective drainage an 'assessment' is required, usually by performing a percolation/water table test as described below.

1. Stage one: Work out the groundwater level – a Trial hole should be dug to determine the position of the standing groundwater table a minimum of 1m squared in area and 2m deep, or a minimum of 1.65m below the invert of the proposed drainage field pipework. The groundwater table should not rise to within 1m of the invert level of the proposed distribution pipes. If the test is carried out in summer, the likely winter groundwater levels should be considered.
2. Stand two: the percolation test – a percolation test should then be carried out to assess the further suitability of the proposed area. A hole 300mm square should be excavated to a depth of 300mm below the proposed invert level of the distribution pipe. Where deep drains are necessary the hole should conform to this shape at the bottom but may be enlarged above the 3oomm level to enable safe excavation to be carried out. Fill the 300mm square section of the hole to a depth of at least 300mmm with water and allow it to seep away overnight. Next day, refill the test section with water to a depth of at least 300mm and observe the time, in seconds, for the water to seep away from 75% full to 25% full level (ie: a depth of 150mm). Divide this time by 150. The answer gives the average time in seconds (Vp) required for the water to drop 1mm. the test should be carried out at least three times with at least two trial holes and the average figure from the test should be taken. The test should not be carried out during abnormal weather conditions such as heavy rain, sever frost or drought. This minimum value ensures that unwanted duff and litter cannot percolate too rapidly into groundwater. Where Vp is outside these limits effective treatment is unlikely to take place in a drainage of the field.
3. Stage Three: The Drainage Calculation
    a. To calculate the floor area of the drainage field (A in m squared) use the following formulas:
        1) For athletic fields: First, determine the time for water to drop (T) in minutes
        2) Next, measure the drop distance (D) in inches

3) Use the formula from above: RT=T/D
4) Finally, calculate the percolation rate (PR) in minutes per inch
5) After inserting the variables and calculating the result, check your answer with the use of an online calculator to make sure values are correct.

3.6 FIELD MARKINGS

A. Installer shall install striping, logos, and additional markings as indicated in accordance with process indicated on shop drawings.

3.7 CLEANUP

A. Contractor shall provide the labor, supplies and equipment as necessary for final cleaning of surfaces and installed items.

B. All useable remnants of new material shall become the property of the Owner.

C. The Contractor shall keep the area clean throughout the project and clear of debris.

D. Surfaces, recesses, enclosures, etc. shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

3.8 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing agency to perform field quality-control testing.

B. G-Max Testing, ASTM F1936:
1. Temperature: Ambient shaded air temperature of 40 – 100 degrees Fahrenheit.
2. Number: 10 tests shall be conducts throughout each field area at completion of work. Test locations shall conform as closely as possible to the test sites specified in ASTM F1936 (Football) or FIFA Handbook 3-06 (Soccer).
   a. Provide complete report of testing values and diagram of locations.
   b. Acceptable industry manufacturer tolerance of +/- 2 percent.
   c. Test results shall be between 130 and 175. If test results in values above 175, adjustments should be made to the installation and materials until test results are within the acceptable range.

3.9 DEMONSTRATION

A. The synthetic turf installer shall provide detailed written maintenance instructions, suggested guidelines for the system, and training of maintenance personnel. Maintenance of the systems typically consists of cleaning, stain removal, minor seam repair, dragging or redistribution of any infill material, and management of infill compaction. Specialized equipment is typically required for the maintenance of the surface and should be included with the field contract. Utilizing this equipment as recommended by the installation builder will generate the proper maintenance in relation to any future warranty claims.

3.10 DISPOSAL

B. Disposal: Remove surplus soil material, unsuitable infill, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
1. Burning of combustible cleared and grubbed materials is not permitted on Owner’s property.

3.11 MANUFACTURER / PRODUCT INFORMATION REQUIREMENTS

A. Manufacturer product characteristics and specifications shall be submitted for consideration by each contractor following bidding for consideration.

END OF SECTION 321813

SECTION 32 31 13 - FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
1. 5 feet high Chain-Link Fencing with gates
2. 8 feet high Chain-Link Fencing with gates
3. Corrugated fence cap
4. *Baseball* ***Softball foul post***
5. ***Wind screens where noted on plans***

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide chain-link fences and gates capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
1. Minimum Post Size and Maximum Spacing for Wind Velocity Pressure: Determine based on mesh size and pattern specified, and on the following minimum design wind pressures and according to CLFMI WLG 2445:
   a. ***Wind Speed: 115 mph minimum.***
2. Determine minimum post size, group, and section according to ASTM F 1043 for framework up to 12 feet high and post spacing not to exceed 10 feet.

B. Lightning Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

1.4 SUBMITTALS

A. Shop Drawings: Show locations of fences, gates, posts, rails, tension wires, details of extended posts, extension arms, gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, gate elevations, sections, details of post anchorage, attachment, bracing, wind screen locations and artwork and other required installation and operational clearances.

B. Quality Assurance/Control Submittals:
1. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fences and gates.
   a. Fence and gate posts, rails, and fittings.
   b. Chain-link fabric, reinforcements, and attachments.
   c. Gates and hardware.
   d. ***Accessories: Wind screens***
2. Product Certificates: For each type of chain-link fence and gate, signed by product manufacturer.
   a. Strength test results for framing according to ASTM F 1043.
3. Qualification Data: For Installer.

C. Closeout Submittals:
1. Maintenance Data: For the following to include in maintenance manuals:
   a. Polymer finishes.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed chain-link fences and gates similar in material, design, and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

B. Interruption of Existing Utility Service: Do not interrupt utility services to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Architect no fewer than two days in advance of proposed interruption of utility services.
   2. Do not proceed with interruption of utility services without Architect's written permission.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 Articles where titles below introduce lists, the following requirements apply to product selection:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

B. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. Requests for Architect’s approval must be accompanied by the “Substitution Request Form” and complete technical data for evaluation. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

2.2 CHAIN-LINK FENCE FABRIC

A. General: Height indicated on Drawings. Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with ASTM A 392, CLFMI CLF 2445, and requirements indicated below:
   1. Steel Wire Fabric and Mesh Size: 2 inch mesh, metallic-coated wire with a diameter of 0.148 inch
      a. Provide 1-3/4 inch mesh, 0.120 inch diameter at tennis courts.
      b. Provide 2 inch, 0.192 inch diameter at lower 10 feet of softball backstops and lower 6 feet of baseball backstops.
      c. Weight of Aluminum Coating: ASTM A 491, Type I, 0.4 oz./sq. ft..
      d. Polymer Coating: Where called for, ASTM D 668, Class 2b thermally fused polymer coating over metallic-coated steel wire.
         1) Color: Black, As selected by Architect from manufacturer's full range, complying with ASTM F 934.
      e. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.

   2. Selvage: Knuckled at both selvages, unless otherwise noted.
      a. Twisted top and knuckled bottom, at mechanical yard enclosures.

3. Wind screens: Custom wind screens shall be vinyl coated polyester mesh in color as selected by owner. Custom artwork as approved by owner and in custom colors per owners branding guidelines shall be installed on outfield fencing only. Windscreens shall be designed to withstand min. 115 M.P.H..winds. Windscreen basis of design shall be as manufactured by Sportsfield Specialties, Inc. , P.O. box 231, 41155 State Highway 10, Delhi, NY, 13753, (888)-975-3343

2.3 INDUSTRIAL FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, ASTM F 1083 for Group IC round pipe and the following:
1. Group: Provide either IA, round steel pipe, Schedule 40 or IC, round steel pipe, yield strength 50,000 psi.
2. Fence Height: As indicated.
3. Post Size and Thickness: According to ASTM F 1043.
   a. Intermediate Posts
      1) Fabric 10 feet and under:
         a) IA: 2.375 inch o.d. with .154-inch wall thickness, 3.65 lbs. per foot.
         b) IC: 2.375 inch o.d. with .130-inch wall thickness, 3.12 lbs. per foot.
      2) Fabric over 10 feet high:
         a) IA: 2.875 inch o.d. with .203-inch wall thickness, 5.79 lbs. per foot.
         b) IC: 2.875 inch o.d. with .160-inch wall thickness, 4.64 lbs. per foot.
   b. End, Corner, and Pull Posts
      1) General
         a) End post will be used to refer to terminal posts.
         b) Corner post will be installed where all changes in direction occur in the fence line of 30 degrees or more.
         c) Pull post shall be installed at all abrupt changes in grade or at locations directed by the Architect with a maximum spacing between pull posts not to exceed 500 feet.
      2) Fabric 10 feet and under
         a) IA: 2.875 inch o.d., with .203-inch wall thickness, 5.79 lbs. per foot.
         b) IC: 2.875 inch o.d., with .160-inch wall thickness, 4.64 lbs. per foot.
      3) Fabric over 10 feet high
         a) IA: 4.0 inch o.d. with .226-inch wall thickness, 9.12 lbs. per foot.
         b) IC: 4.0 inch o.d. with .160-inch wall thickness, 6.56 lbs. per foot.
      4) Tennis Court Fencing
         a) IA: 5.0 inch o.d. with .226-inch wall thickness, 9.12 lbs. per foot.
         b) IC: 5.0 inch o.d. with .160-inch wall thickness, 6.56 lbs. per foot.
      5) Baseball backstop
         a) IA: 5.0 inch o.d. with .226-inch wall thickness, 9.12 lbs. per foot.
      6) Softball backstop netting
         a) See specification section 116833 Per manufacturers specifications.
4. Coating for Steel Framing:
   a. Metallic Coating, unless otherwise noted.
      1) IA: Type B, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq.ft. of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film.
      2) IC: Type C, Zn-5-A1-MM alloy, consisting of not less than 1.8 oz./sq.ft. coating.
   b. Class 2b thermally fused Polymer coating over metallic coating, black.
5. Posts shall have sufficient length to meet the following embedment requirements:
   a. Intermediate Posts: 36 inches (into concrete).
   b. End, Corner, and Pull Posts:
      1) Fabric 10 feet and under: 36 inches.
      2) Fabric over 10 feet: 44 inches.
   c. Gate Posts: 48 inches.
   d. Tennis Court Fencing, baseball and softball backstops: 60 inches.

B. Post Brace Rails: Match top rail for coating and strength and stiffness requirements. Provide brace rail with truss rod assembly for each gate, end, and pull post. Provide two brace rails extending in opposing directions, each with truss rod assembly, for each corner post and for pull posts. Provide rail ends and clamps for attaching rails to posts.
   1. Provide for fences with fabric 6 feet or more in height.

C. Top Rails: Fabricate top rail from lengths 21 feet or longer, with swedged-end or fabricated for expansion-type coupling, forming a continuous rail along top of chain-link fabric.
   1. The top rail shall be 1.660 inches o.d. pipe, provided in lengths not less than 18 feet unless otherwise noted, and fitted with couplings for connecting the lengths into a continuous run.
      a. IA: .140-inch wall thickness, 2.27 lbs. per lineal foot.
      b. IC: .111-inch wall thickness, 1.836 lbs. per lineal foot.
   2. Couplings: Top rail couplings shall be a minimum of 6 inches long and at 21 feet maximum intervals, providing a substantial connection and allowing for expansion and connection of the rail.
   3. The top rail shall pass through the line post tops and form a continuous brace from end to end of each stretch of fence.
   4. The top rail shall securely fasten to the terminal posts by heavy pressed steel brace bands and malleable rail end connections.

D. Intermediate Rails: Match top rail for coating and strength and stiffness requirements.
   1. Provide for fences with fabric 8 feet and over, unless otherwise noted.

E. Bottom Rails: Match top rail for coating and strength and stiffness requirements.
   1. Provide only if indicated.

2.4 TENSION WIRE

A. General: Provide horizontal tension wire at the following locations:
   1. Location: Extended along bottom of fence fabric, unless otherwise noted.

B. Metallic-Coated Steel Wire: 0.177 inch diameter, marcelled tension wire complying with ASTM A 817/A 824 and the following:
   1. Coating: Type I, aluminum coated (aluminized)
      a. Class 2: Not less than 1.2 oz./sq.ft. of uncoated wire surface.

2.5 SWING GATES (CHAIN-LINK)

A. General: Comply with ASTM F 900 for the following swing-gate types:
   1. Single gate.
   2. Double gate.

B. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.

C. Frames and Bracing: Fabricate members from round tubing with outside dimension and weight according to ASTM F 900.

D. Frame Corner Construction: As follows:
   1. Welded. Welds shall be ground smooth, galvanized and have class 2b thermally fused polymer coating.

E. Gate Posts: Fabricate members from round galvanized steel pipe with outside dimension and weight according to ASTM F 900 for the following gate fabric heights and leaf widths:
   1. Gate leaf up to 6 feet wide.
      a. IA: 2.875 inch o.d. with 0.203-inch wall, 5.79 lbs. per lineal foot.
      b. IC: 2.875 inch o.d. with 0.160-inch wall, 4.64 lbs. per lineal foot.

2. Gate leaf over 6 to 13 feet wide
   a. IA: 4 inch o.d. with 0.226-inch wall, 9.10 lbs. per foot.
   b. IC: 4 inch o.d. with 0.160-inch wall, 6.56 lbs. per foot.
3. Gate leaf over 13 to 18 feet wide.
   a. IA: 6.625 inch o.d. with 0.280-inch wall, 18.97 lbs. per foot.
4. Gate leaf over 18 feet wide.
   a. IA: 8.625 inch o.d. with 0.322-inch wall, 28.55 lbs. per foot.
5. Gateposts shall be equipped with tops so designed to exclude moisture from the post.

F. Hardware: Latches permitting operation from both sides of gate, hinges, center gate stops and, for each gate leaf more than 5 feet wide, keepers. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.
1. Hinges: Shall be adequate strength for gate, and with large bearing surfaces for clamping in position. The hinges shall not turn or twist under that action of the gate. The gates shall be capable of being opened and closed easily by one person. Hinges will be designed with offset arms to permit a 180-degree swing. Provide one pair hinges for each gate leaf.
2. Latch: Shall have a padlock eye or provision for padlocking (one padlock for locking both gate leaves), and shall permit single gate to swing only in one direction. Latches shall be forked-type for single gates and forked-type plunger bar for double gates to permit operation from both sides of gate. The plunger rod shall be a minimum 1-3/8 inch o.d. The center of the latch is to be 3 feet above grade.
3. Stops: Center stops for double gates shall consist of a device arranged to be set in concrete and to engage the plunger bar of the latch. Stop is to be a mushroom type or flush plate with anchors.
4. Keeper: Provide keepers for each gate leaf over 5 feet wide, which shall consist of a mechanical device for securing the free end of the gate when in a full open position. All vehicle or drive gates shall be equipped with "semi-automatic" outer catches to secure gate in open position (automatically holds gate in the open position until manually released).

2.6 CORRUGATED FENCE CAP

A. Yellow Corrugated Fence Cap: Color (Bright Yellow), Pre-slit poly tubing 4-1/2” DIA, fully UV – protected. System should include a fence cap zipper easy-installation tool and zip ties - Zip ties are to be UV – resistant.
1. Basis of Design: Economy Fence Cap and accessories as manufactured or distributed by Beacon Athletics, 8233 Forsythia St STE 120, Middleton, Wisconsin 53562, 800-747-5985, fax 608-836-0724. Beaconathletics.com
   a. “Poly-Cap” - Hoover Fence Co.
   b. “PolyCap” Fence Cap – Baughman Tile Co.

2.7 BASEBALL SOFTBALL FOUL POLE

A. Refer to details and drawing sheets

2.8 FITTINGS

A. General: Provide fittings for a complete fence installation, including special fittings for corners. Comply with ASTM F 626.

B. Post and Line Caps: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide weathertight closure cap for each post.
1. Provide line post caps with loop to receive top rail.

C. Rail and Brace Ends: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide rail ends or other means for attaching rails securely to each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:
   1. Top Rail Sleeves: Hot-dip galvanized pressed steel or round steel tubing. Not less than 6 inches long.
   2. Rail Clamps: Hot-dip galvanized pressed steel. Provide line and corner boulevard clamps for connecting intermediate rails in the fence line to line posts.

E. Tension and Brace Bands: Hot-dip galvanized pressed steel.

F. Tension Bars: Hot-dip galvanized steel, length not less than 2 inches shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.

G. Truss Rod Assemblies: Hot-dip galvanized steel rod and turnbuckle or other means of adjustment.

H. Tie Wires, Clips, and Fasteners: Provide the following types according to ASTM F 626:
   1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:
      a. Hot-Dip Galvanized Steel: 0.148-inch diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.
   2. Round Wire Hog Rings: Hot-dip galvanized steel for attaching chain-link fabric to horizontal tension wires.

2.9 CAST-IN-PLACE CONCRETE

A. General: Comply with ACI 301 for cast-in-place concrete.

B. Materials: Portland cement complying with ASTM C 150 Type I or III, aggregates complying with ASTM C 33, and potable water for ready-mixed concrete complying with ASTM C 94. Measure, batch, and mix Project-site-mixed concrete according to ASTM C 94.
   1. Concrete Mixes: Normal-weight concrete air entrained with not less than 3000-psi compressive strength (28 days), 3-inch slump, and 1-inch maximum size aggregate.

2.10 FENCE GROUNDING

A. Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
   1. Material Above Finished Grade: Copper or aluminum.
   2. Material On or Below Finished Grade: Copper.
   3. Bonding Jumpers: Braided copper tape, 1 inch wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.

2.11 POLYMER FINISHES

A. Supplemental Color Coating: In addition to specified metallic coatings for steel where called for, provide fence components with polymer coating (black).

B. Metallic-Coated Steel Tension Wire: PVC-coated wire complying with ASTM F 1664, Class 2b.

C. Fittings, Post and Line Caps, Rail and Brace Ends, Top Rail Sleeves, Tension and Brace Bands, Tension Bars, Truss Rod Assemblies, Barbed Wire Arms, Clips, and Fasteners: Comply with ASTM F 626 for polymer coating applied to exterior surfaces and, except inside cap shapes, to exposed interior surfaces.
   1. Polymer Coating: Not less than 10 mil thick PVC.

D. Color: To match chain-link fabric complying with ASTM F 934, unless otherwise noted.

2.12 GROUT AND ANCHORING CEMENT

A. Non-shrink, Nonmetallic Grout: Premixed, factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.

B. Erosion-Resistant Anchoring Cement: Factory-packaged, non-shrink, non-staining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance.
   1. Do not begin installation before final grading is completed, unless otherwise permitted by Architect.
   2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL

A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.

3.4 CHAIN-LINK FENCE INSTALLATION

A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacing indicated, in firm, undisturbed soil.

B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
   1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
   2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
      a. Exposed Concrete: Extend 2 inches above grade; shape and smooth to shed water, unless otherwise noted.
      b. Concealed Concrete, where indicated: Top ***2 inches*** below grade as indicated on Drawings to allow covering with surface material.
      c. Posts Set into Concrete in Sleeves, where indicated only: Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with non-shrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.
      d. Posts Set into Voids in Concrete, Contractor’s option: Form or core drill holes not less than 5 inches deep and 3/4 inch larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with non-shrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.

3. Dimensions and Profile: As indicated hereinafter, unless otherwise noted on Drawings.
   a. Size of Footings: Concrete is to extend a minimum of 6 inches below bottom of post. Typical footings shall be as follows (see note under Installation for deeper excavations as required in loose soils and for posts with heavy lateral loads).
      1) Intermediate posts up to 10 feet high: minimum 12 inch diameter by 3'-6" below grade.
      2) Intermediate posts 10 feet high and above: minimum 14 inch diameter by 3'-6" below grade.
      3) End, corner, pull posts under 6 feet: minimum 14 inch diameter by 3'-6" below grade.
      4) End, corner, pull posts 6 feet to 10 feet: minimum 18 inch diameter by 3'-6" below grade.
      5) End, corner, pull posts above 10 feet: minimum 18 inch diameter by 4'-2" below grade.
      6) Gate posts under 6 feet wide leaf: minimum 14 inch diameter by 4'-6" below grade.
      7) Gate posts 6 feet to 13 feet wide leaf: minimum 18 inch diameter by 4'-6" below grade.
      8) Gate posts 13 feet to 18 feet wide leaf: minimum 24 inch diameter by 4'-6" below grade.
      9) Baseball backstop (30 feet high) posts: minimum 24 inch diameter by 5' below grade. (Note: 5 feet below 4 inches thick concrete).
      10) Softball backstop, netting (36' tall) post size per manufacturers design specifications.
      11) Baseball foul pole posts: minimum 24-inch diameter by 6 feet below grade.

C. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more, unless otherwise indicated.

D. Line Posts: Space line posts uniformly at 10 feet max. o.c., unless otherwise noted.

E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts.
   1. Locate horizontal braces at mid height of fabric 6 feet or higher, on fences with top rail and at 2/3 fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

F. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch- diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c. Install tension wire in locations indicated before stretching fabric.
   1. Bottom Tension Wire: Install tension wire within 6 inches of bottom of fabric and tie to each post with not less than same diameter and type of wire.

G. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.

H. Intermediate and Bottom Rails: Install, spanning between posts, where indicated or required for performance.

I. Chain-Link Fabric: Apply fabric to outside of enclosing framework, unless otherwise indicated. Leave 1 ½ inches between finish grade or surface and bottom selvage, unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
   1. At tennis courts, apply fabric inside of enclosing framework and leave 1 inch gap between top of playing surface and bottom of selvage.

J. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.

K. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at 1 end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.
   1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.

L. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

M. Windscreens: Install windscreens in locations noted on the plans and on the interior side of the field fencing. Windscreens with custom artwork shall be installed on the outfield fencing only. Install windscreens per the manufacturers recommendations and guidelines.

3.5 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.6 CORRUGATED FENCE CAP INSTALLATION

A. Install fence cap according to manufacturer’s written instructions making sure that the product is level and secure to top of fencing.

3.7 FOUL POLE INSTALLATION

A. Install foul pole according to manufacturer’s written instructions, level, plumb, and secure to proposed fencing, Install ground anchoring and footing per manufacturer’s recommendations and as specified within drawing sheets.

3.8 GROUNDING AND BONDING

A. Fence Grounding: Install at fences 10 feet and over, at maximum intervals of 1500 feet except as follows:
   1. Fences within 100 Feet of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 feet.
      a. Gates and Other Fence Openings: Ground fence on each side of opening.
         1) Bond metal gates to gate posts.
         2) Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches below finished grade.

B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet on each side of crossing.

C. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location.

D. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.

E. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
   1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
   2. Make connections with clean, bare metal at points of contact.
   3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
   4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
   5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

F. Bonding to Lightning Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor complying with NFPA 780.

3.9 ADJUSTING

A. Gate: Adjust gate to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

3.10 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain fencing and gates. Refer to Division 01 Section "Closeout Procedures."

END OF SECTION 32 31 13

ENLARGED BASEBALL LAYOUT

SCALE 1"= 20'-0"

LAYOUT PLAN NOTES

1. SYNTHETIC TURF ATHLETIC FIELD WITH INFILL MATERIAL IN ALTERNATING FIELD GREEN AND LIME GREEN PANELS AND SOLID FIELD GREEN IN OUT OF PLAY AREAS OVER UNDERDRAIN SYSTEM. SEE PLAN FOR AREAS AND DETAILS 1,4,13 G4.0. TURF IN THESE AREAS TO BE ¼" HIGHER THAN IN TAN OR INFIELD AREAS.
2. SYNTHETIC TURF INFIELD WITH INFILL MATERIAL IN BRICK DUST COLOR TURF (COLOR TO MATCH EXISTING) OVER UNDERDRAIN SYSTEM. SEE DETAIL 1,4,13 G4.0
3. SYNTHETIC TURF WARNINNG TRACK WITH INFILL MATERIAL IN COLOR AS SELECTED BY OWNER (TAN) OVER UNDERDRAIN SYSTEM. SEE DETAILS 8,13 G4.0
4. BATTING CAGE SYNTHETIC TURF AS NOTED IN HATCHED AREA WITH THATCH LAYER BUT NO INFILL IN COLOR TO MATCH ATHLETIC FIELD COLOR OR INFIELD AS GRAPHICALLY NOTED ADHERED TO EXISTING PREPARED CONCRETE SLAB.
5. SYNTHETIC TURF AS NOTED BY HATCHED AREA WITH THATCH LAYER BUT NO INFILL AND PERMEABLE BACKING IN COLOR TO MATCH INFIELD COLOR. TURF TO BE ADHERED TO PREPARED CONCRETE SURFACE OF EXISTING DUGOUT AND ASSOCIATED SLAB WITH ACCEPTABLE ADHESIVE. ADHERE TURF IN MANNER TO NOT IMPEDE DRAINAGE FLOW TO DRAINS AND DO NOT ADHERE TO EXISTING DRAIN LID. INSERT WHITE TUFT IN TURF IN LOCATION OF EXISTING DRAIN LIDS.
6. PVC COATED CHAIN LINK FENCING. SEE PLAN FOR HEIGHT. SEE DETAILS 8,9,10,11,12,13 G4.0
7. PVC COATED CHAIN LINK GATES. SEE PLAN FOR WIDTH. SEE DETAILS 9,10,11 G4.0
8. IN LOCATIONS NOTED INSTALL FENCE POSTS AND THEN POUR 12"WIDE X 18"DEEP CONCRETE CURB CENTERED ON THE FENCE FOR MAINTENANCE EDGE AND INSTALLATION OF COMPOSITE LUMBER SYNTHETIC TURF ATTACHMENT BOARD. SEE DETAILS 7,12,13 G4.0
9. ZIONSVILLE SCHOOL BRANDING LETTERING INLAY IN SYNTHETIC TURF IN LOCATIONS AND SIZE NOTED. LETTERING TO MATCH SCHOOL COLORS.
10. ZIONSVILLE SCHOOL BRANDING LOGO INLAY IN SYNTHETIC TURF IN LOCATIONS AND SIZE NOTED. LETTERING TO MATCH SCHOOL COLORS.
11. RAISED PITCHERS MOUND. SEE DETAILS 1,2,3,5 G4.0
12. PORTABLE BULLPEN PITCHING MOUNDS #PPBPBIT AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, DELHI,NY. 888-975-3343
13. PITCHING RUBBER, INSTALL PER MANUFACTURERS SPECIFICATIONS.
14. BASES AND HOME PLATE, SEE DETAIL 4 G4.0
15. BASELINES AND FIELD MARKINGS PER NFHS OR OFFICIAL GOVERNING ATHLETIC AGENCIES AND OWNER.
16. REMOVE EXISTING FENCE FABRIC, RAILS AND HARDWARE AND DISPOSE OF OFF SITE. CUT OFF EXISTING POSTS AT ACCEPTABLE HEIGHT, SLEEVE AND SECURE NEW 8' HEIGHT AT SOFTBALL, 4' AT BASEBALL PVC COATED POSTS OVER EXISTING. INSTALL NEW PVC COATED RAILS, FABRIC AND HARDWARE.
17. INSTALL PVC FENCE CAP TO MATCH EXISTING ALONG TOP RAIL OF FENCE AS NOTED.
18. INSTALL CUSTOM WIND SCREENS (TO RECEIVE DISTRICT APPROVED ARTWORK) FULL FENCE HEIGHT IN LOCATIONS NOTED ON PLAN. PROVIDE WINDSCREENS WITH OPENINGS WITHIN THE SCREENING – IN ORDER TO ALLOW SOME WIND TO PASS – WINDSCREEN DESIGN AND FOOTING DESIGN NEED TO WITHSTAND MIN 115 MPH WIND LOAD AND FOLLOW LOCAL AND STATE ORDINANCES
19. INSTALL 36' TALL CUSTOM POLE TO POLE TENSION BACKSTOP NETTING SYSTEM WITH WALL PAD BACKSTOP INCLUDING POWDER COATED BLACK STEEL SUPPORT POLES AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, 607-746-8911. SEE DETAIL 15 G4.0.
20. REMOVE EXISTING BENCHES AND CUBBIE STORAGE UNITS IN DUGOUTS AND INSTALL NEW 36' LONG POLY BENCH UNITS WITH BACK SEAT AND 2 CUBBIE STORAGE UNITS WITH 2 HELMET AND BAT RACKS AND 36 FEET RACK/HOOK STRIP PER DUGOUT AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, 607-746-8911.
21. INSTALL 4" REINFORCED CONCRETE PAVEMENT IN HATCHED AREA AS NOTED. PAVEMENT TO FOLLOW EXISTING GRADES AND SHALL HAVE 1½% CROSS SLOPE. SEE DETAIL 16,17,18 G4.0.
22. CONCRETE EXPANSION JOINT. SEE DETAIL 17 G4.0.
23. CONCRETE CONTROL JOINT. SEE DETAILS 17 G4.0
24. NEW TO EXISTING CONCRETE PAVING JUNCTION. SEE DETAIL 19 G4.0
25. CLEAN "EXPOSED-TO-VIEW" MASONRY BLOCK SURFACES (8' APPROX. HT.) AND ALL CONCRETE PAVING WITHIN 35' OF DUGOUTS. REFER TO MASONRY CLEANING SPECIFICATIONS FOR ADDITIONAL INFORMATION. PROVIDE MASONRY WATER REPELLANT ON "EXPOSED-TO-VIEW"MASONRY BLOCK SURFACES FULL EXTENTS.
26. PROVIDE SMOOTH CONCRETE SURFACE BELOW GRADE AND BOLT 2X4" COMPOSITE NAILER STRIP TO CONCRETE CURB SIMILAR TO DETAIL 13/G4.0.
27. INSTALL NEW GALVANIZED SCREEN ON OUTSIDE AND INSIDE OF VENT HOLES. TYPICAL 7 PER DUGOUT . SEE DETAIL2/G1.2.
28. REMOVE EXISTING DEBRIS FROM AND CLEAN ALL DRAIN HOLES AT LOW-SIDE ROOF EDGE METAL TRIM PIECES. ADD DRAIN HOLES OF SIMILAR DIAMETER AT BOTTOM OF METAL TRIM PIECE IN LINE WITH EVERY FOURTH FLOW FLUTE OF ROOF DECK. TYPICAL FOR BOTH COMPETITION BASEBALL AND SOFTBALL DUGOUT ROOFS. SEE DETAIL 1 G1.2. FOLLOWING DRILLING OF ADDITIONAL DRAIN HOLES REMOVE ALL FLAKING PAINT AND RUST WITH COMMERCIAL BLASTING CLEANING FROM ROOF TOP SURFACES AND TRIM. FOLLOWING PREP WORK, PRIME AND THEN FINISH PAINT PREPARED SURFACES WITH HIGH PERFORMING COATINGS PER SPECIFICATIONS.
29. ALIGN NEW POST WITH EXISTING PERPENDICULAR FENCE SO NO MORE THAN 4" GAP BETWEEN NEW POST AND EXISTING FENCE..
30. PROVIDE REMOVABLE TURF INSERTS IN HIGH TRAFFIC AREAS AS NOTED – SEE DETAIL #5 SHT G4.0 FOR BASEBALL AND SOFTBALL BATTERS BOX DETAIL FOR INSERT SIZES NEEDED
31. NEW LED / WIFI CAPABLE BASEBALL AND SOFTBALL SCOREBOARDS (2 TOTAL) : PROVIDE (1) ADVERTISEMENT BOARD BELOW SCOREBOARD – PROVIDE (1) SCHOOL BRANDING BOARD – SIZE / STYLE / LOOK / COLOR / BRANDING TO MATCH EX. FOUND ON SITE – SITE VERIFY PRIOR TO BIDDING AND START OF CONSTRICTION. SEE GD1.1 AND GD1.2 FOR FURTHER INFORMATION – SEE DETAIL #20 SHT G4.0

ELECTRICAL PLAN NOTE: DISCONNECT / INSTALL
DISCONNECT POWER FEEDS FROM THE EXISTING SCOREBOARD, THEN CONNECTED NEW SCOREBOARD TO THE EXISTING POWER FEED. REMOVE ANY EXISTING CONTROL WIRING FROM THE OLD SCOREBOARD AND ABANDON EXISTING CONDUIT IN PLACE. REPLACE THE EXISTING DISCONNECT SWITCH WITH A NEW 20AMP, NO-FUSSED WEATHERPROOF DISCONNECT AT THE SAME LOCATION FOR BOTH BASEBALL AND SOFTBALL SCOREBOARDS TYP – SITE VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION

32. PROVIDE NEW 75' LONG TENSION BATTING CAGE BTTBD AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, DELHI, N.Y.888-975-3343. CUT EXISTING SLAB AS REQUIRED TO INSTALL TENSION POST FOUNDATIONS. FOLLOWING TENSION POST INSTALLATION REPOUR SLAB TO MATCH EXISTING DIMENSIONS. (△1)

GENERAL LAYOUT NOTES

1. ALL CONTRACTORS BUT NOT LIMITED TO THE EXCAVATING CONTRACTOR OR CONTRACTORS MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. ACTUAL FIELD LOCATIONS OF ALL THE EXISTING UTILITIES ARE THE CONTRACTORS RESPONSIBILITY AND MUST BE LOCATED EITHER BY THE REPRESENTIVE OF THE UTILITY COMPANY OR BY A PRIVATE UNDERGROUND UTILITY LOCATING COMPANY PRIOR TO THE START OF EXCAVATING. VERIFY MINIMUM COVER REQUIREMENTS BY THE UTILITY CONTRACTOR OR CONTRACTORS OR AGENCIES WHOMEVER UTILITY COMPANIES OR AGENCIES WHOMEVER HAS JURISDICATION SO NOT TO CAUSE DAMAGE.
2. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
3. EXISTING PAVEMENT, SIDEWALKS CURBS DRIVEWAYS, ELECTRICAL TRANSFORMER, DITCHES, DRAINAGE PIPES AND STRUCTURES, FENCES, LAWNS, TREES, BUSHES, MAILBOXES, SIGNS, POWER POLES ETC., TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGE DURING CONSTRUCTION SHALL BE RESTORED, RECONSTRUCTED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL DAMAGES SHALL BE RESTORED OR REPLACED TO AT LEAST THEIR ORIGINAL CONDITION OR AS REQUIRED OR DICTATED BY FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
4. ALL AREAS WHERE THE EXISTING PAVEMENT OR PAVEMENTS ARE DAMAGED DURING CONSTRUCTION FROM HEAVY TRAFFIC OR EQUIPMENT, FUEL OIL, OIL, GASOLINE, ETC., BY THE GENERAL CONTRACTOR, SUBCONTRACTOR, OR SUPPLIERS, SHALL BE RECONSTRUCTED TO IT'S ORIGINAL CONDITION OR AS REQUIRED OR DICTATED BY FEDERAL, STATE, COUNTY, CITY OR LOCAL AGENCIES. THIS RECONSTRUCTION AND REPAIR SHALL TAKE PLACE AT THE END OF THE PROJECT CONSTRUCTION OR DURING THE SCHEDULED GRADING AND PAVING OF THOSE AREA.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BARE ALL EXPENSES TO REMOVE, RELOCATE AND OR MODIFY ALL UTILITIES, PRIVATE, PUBLIC, UNLESS NOTED OTHERWISE ON PLANS. IT FURTHER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WITH EACH UTILITY COMPANY AND OR AGENT TO WHO IS RESPONSIBLE TO REMOVE, RELOCATE AND OR MODIFY SUCH UTILITIES EXISTING OR PROPOSED. IT FURTHER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IF ANY FUTURE UTILITIES ARE PLANNED AND HOW IT MAY EFFECT THIS PROJECT AND ITS OWNER AS TO THEIR RESPONSIBILITIES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AT HIS EXPENSE ALL AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY FEDERAL, STATE, COUNTY, CITY OR LOCAL AGENCIES.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR CONTRACTORS TO OBTAIN ALL FEDERAL, STATE, COUNTY, CITY OR LOCAL PERMITS FOR ANY AND ALL WORK REQUIRED UNLESS OTHERWISE NOTED. THIS INCLUDES THE SUBMITTAL FOR LAND DISTURBANCE AND THE SUBMITTAL FOR SOIL EROSION AND SEDIMENT CONTROL IF REQUIRED. THE CONTRACTOR OR CONTRACTORS ARE RESPONSIBLE TO PAY FOR ALL REQUIRED PERMITS BY ANY OR ALL AGENCIES UNLESS OTHERWISE NOTED BY THE CONTRACT OR SPECIFICATIONS.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL THE UTILITY COMPANIES AND DEPARTMENTS 72 HOURS BEFORE CONSTRUCTION IS TO START TO VERIFY ANY UTILITIES THAT MAY BE PRESENT ON SITE. ALL VERIFICATIONS, LOCATIONS, SIZE AND DEPTHS SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES OR DEPARTMENTS. WHEN EXCAVATING AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THE UTILITY CAN BE PRESENT DURING THE EXCAVATION TO INSTRUCT AND OBSERVE DURING THE EXCAVATION. CONTRACTOR TO CALL 811 OR 800-382-5544 BEFORE DIGGING.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT EACH DAY AND REMOVE ALL MUD, DIRT, GRAVEL AND LOOSE MATERIALS TRACKED, DUMPED, SPILLED OR WIND BLOWN FROM THIS SITE ONTO OTHER SITES, RIGHT OF WAYS, PUBLIC OR PRIVATE STREETS OR ROADS, DRIVEWAYS, YARDS OR SIDEWALKS. THE CONTRACTOR MUST CLEAN OR PICK UP DAILY IF NECESSARY. THE CONTRACTOR SHALL REDUCE THE AIRBORNE DUST DURING THE ENTIRE CONSTRUCTION SCHEDULE. WATER MAY NE USED AS A REDUCER.
10. THE UTILITIES INDICATED ON THESE PLANS MAY NOT BE A COMPLETE INVENTORY OF ALL THE EXISTING UTILITIES PRESENT ON AND AROUND THIS SITE. THE LOCATIONS AND SIZE OF THESE UTILITIES ARE APPROXIMATE. THIS INFORMATION WAS GATHERED OR SUPPLIED FROM OTHERS AND USED BY THE ARCHITECT AND OR ENGINEER AND MAY NOT BE ACTUAL. THE ARCHITECT AND OR ENGINEER AND MAY NOT BE HELD LIABLE FOR ANY INCORRECT OR MISLEADING UTILITY INFORMATION INDICATED, IMPLIED OR NOT INDICATED ON THESE PLANS.

PROPOSED SITE LEGEND

- ALTERNATING "FIELD GREEN" AND "LIME GREEN" PANELS IN FAIR PLAY BALL FIELD SYNTHETIC TURF. "FIELD GREEN" ONLY IN ALL OUT OF PLAY AREAS.
- INFIELD COLOR "BRICK DUST" OR WARNING TRACK "TAN" BALL FIELD SYNTHETIC TURF.
- ADHERED BATTING CAGE SYNTHETIC TURF IN COLORS TO MATCH INFIELD OR PLAYING FIELD OVER EXISTING PREPARED CONCRETE SURFACE.
- ADHERED DUGOUT SYNTHETIC TURF IN COLORS TO MATCH INFIELD OVER EXISTING PREPARED CONCRETE SURFACE.

811 Know what's below. Call before you dig.
Call 811 or 1-800-382-5544 Before You Begin Any Digging Project. Call 48 hours or 2 working days before you dig. It's Fast, It's Easy and It's the Law in the state of Indiana!

CAUTION !!
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (INCLUDING, BUT NOT LIMITED TO, MANHOLES, INLETS, VALVES, AND MARKS MADE UPON THE GROUND BY OTHERS) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

LOCATIONS GIVEN ARE APPROXIMATE AND ARE TO BE SITE VERIFIED PRIOR TO THE START OF CONSTRUCTION. ALL BASE CONSTRUCTION WORK, SYNTHETIC TURF SURFACING AND SAFETY POURED IN PLACE SURFACING INSTALL IS TO BE PERFORMED BY (1) SINGULAR (SYNTHETIC TURF/POURED IN PLACE SURFACING MANUFACTURE APPROVED/CERTIFIED) CONTRACTOR

ZIONSVILLE COMMUNITY SCHOOLS
HIGH SCHOOL BASEBALL & SOFTBALL TURF

ZIONSVILLE ATHLETIC COMPLEX
4400 S. 875 E.
ZIONSVILLE, IN. 46077

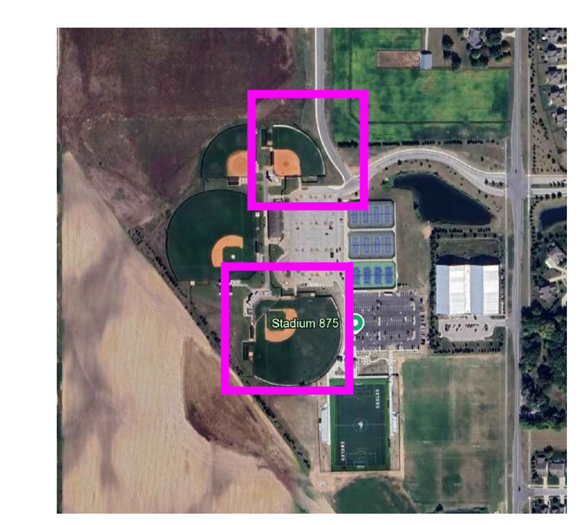
ZIONSVILLE COMMUNITY SCHOOLS ZIONSVILLE, INDIANA

ZIONSVILLE COMMUNITY SCHOOLS

ARCHITECT

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 E NEW YORK ST # 300, INDIANAPOLIS, IN 46204

PROJECT LIMITS



Issued for Bid

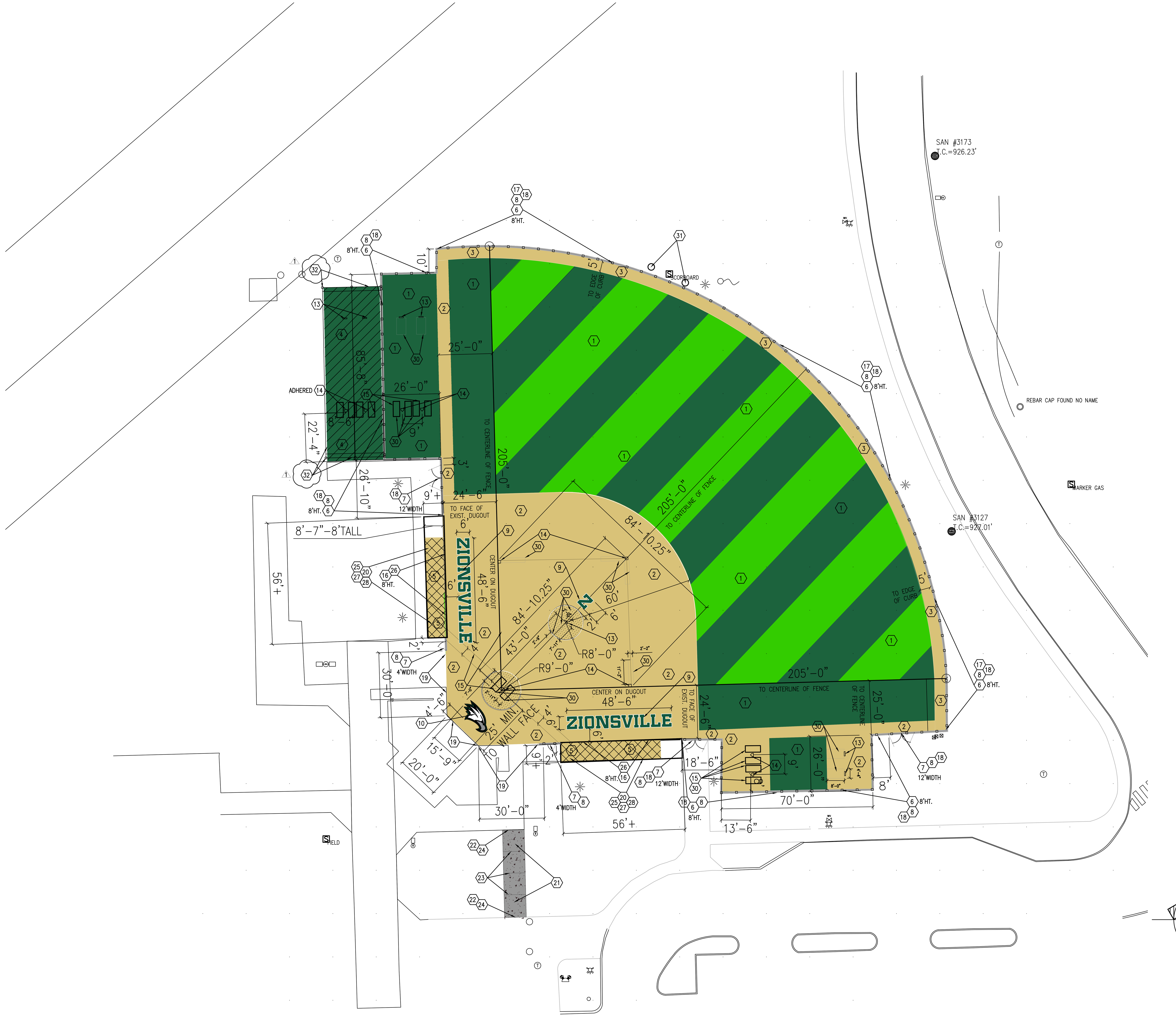
PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: JB
PROJECT NUMBER: 223142.00
PROJECT ISSUE DATE: 11-13-2024

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	12-04-2024

ENLARGED BASEBALL LAYOUT

G1.1



LAYOUT PLAN NOTES

1. SYNTHETIC TURF ATHLETIC FIELD WITH INFILL MATERIAL IN ALTERNATING FIELD GREEN AND LIME GREEN PANELS AND SOLID FIELD GREEN IN OUT OF PLAY AREAS OVER UNDERDRAIN SYSTEM. SEE PLAN FOR AREAS AND DETAILS 1,4,13 G4.0. TURF IN THESE AREAS TO BE ¼" HIGHER THAN IN TAN OR INFIELD AREAS.
2. SYNTHETIC TURF INFIELD WITH INFILL MATERIAL IN BRICK DUST COLOR TURF (COLOR TO MATCH EXISTING) OVER UNDERDRAIN SYSTEM. SEE DETAIL 1,4,13 G4.0
3. SYNTHETIC TURF WARNINNG TRACK WITH INFILL MATERIAL IN COLOR AS SELECTED BY OWNER (TAN) OVER UNDERDRAIN SYSTEM. SEE DETAILS 8,13 G4.0
4. BATTING CAGE SYNTHETIC TURF AS NOTED IN HATCHED AREA WITH THATCH LAYER BUT NO INFILL IN COLOR TO MATCH ATHLETIC FIELD COLOR OR INFIELD AS GRAPHICALLY NOTED ADHERED TO EXISTING PREPARED CONCRETE SLAB.
5. SYNTHETIC TURF AS NOTED BY HATCHED AREA WITH THATCH LAYER BUT NO INFILL AND PERMEABLE BACKING IN COLOR TO MATCH INFIELD COLOR. TURF TO BE ADHERED TO PREPARED CONCRETE SURFACE OF EXISTING DUGOUT AND ASSOCIATED SLAB WITH ACCEPTABLE ADHESIVE. ADHERE TURF IN MANNER TO NOT IMPEDE DRAINAGE FLOW TO DRAINS AND DO NOT ADHERE TO EXISTING DRAIN LID. INSERT WHITE TUFT IN TURF IN LOCATION OF EXISTING DRAIN LIDS.
6. PVC COATED CHAIN LINK FENCING. SEE PLAN FOR HEIGHT. SEE DETAILS 8,9,10,11,12,13 G4.0
7. PVC COATED CHAIN LINK GATES. SEE PLAN FOR WIDTH. SEE DETAILS 9,10,11 G4.0
8. IN LOCATIONS NOTED INSTALL FENCE POSTS AND THEN POUR 12"WIDE X 18"DEEP CONCRETE CURB CENTERED ON THE FENCE FOR MAINTENANCE EDGE AND INSTALLATION OF COMPOSITE LUMBER SYNTHETIC TURF ATTACHMENT BOARD. SEE DETAILS 7,12,13 G4.0
9. ZIONSVILLE SCHOOL BRANDING LETTERING INLAY IN SYNTHETIC TURF IN LOCATIONS AND SIZE NOTED. LETTERING TO MATCH SCHOOL COLORS.
10. ZIONSVILLE SCHOOL BRANDING LOGO INLAY IN SYNTHETIC TURF IN LOCATIONS AND SIZE NOTED. LETTERING TO MATCH SCHOOL COLORS.
11. RAISED PITCHERS MOUND. SEE DETAILS 1,2,3,5 G4.0
12. PORTABLE BULLPEN PITCHING MOUNDS #PPBPBIT AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, DELHI,NY. 888–975–3343
13. PITCHING RUBBER, INSTALL PER MANUFACTURERS SPECIFICATIONS.
14. BASES AND HOME PLATE, SEE DETAIL 4 G4.0
15. BASELINES AND FIELD MARKINGS PER NFHS OR OFFICIAL GOVERNING ATHLETIC AGENCIES AND OWNER.
16. REMOVE EXISTING FENCE FABRIC, RAILS AND HARDWARE AND DISPOSE OF OFF SITE. CUT OFF EXISTING POSTS AT ACCEPTABLE HEIGHT, SLEEVE AND SECURE NEW 8' HEIGHT AT SOFTBALL, 4' AT BASEBALL PVC COATED POSTS OVER EXISTING. INSTALL NEW PVC COATED RAILS, FABRIC AND HARDWARE.
17. INSTALL PVC FENCE CAP TO MATCH EXISTING ALONG TOP RAIL OF FENCE AS NOTED.
18. INSTALL CUSTOM WIND SCREENS (TO RECEIVE DISTRICT APPROVED ARTWORK) FULL FENCE HEIGHT IN LOCATIONS NOTED ON PLAN. PROVIDE WINDSCREENS WITH OPENINGS WITHIN THE SCREENING – IN ORDER TO ALLOW SOME WIND TO PASS – WINDSCREEN DESIGN AND FOOTING DESIGN NEED TO WITHSTAND MIN 115 MPH WIND LOAD AND FOLLOW LOCAL AND STATE ORDINANCES
19. INSTALL 36' TALL CUSTOM POLE TO POLE TENSION BACKSTOP NETTING SYSTEM WITH WALL PAD BACKSTOP INCLUDING POWDER COATED BLACK STEEL SUPPORT POLES AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, 607–746–8911. SEE DETAIL 15 G4.0.
20. REMOVE EXISTING BENCHES AND CUBBIE STORAGE UNITS IN DUGOUTS AND INSTALL NEW 36' LONG POLY BENCH UNITS WITH BACK SEAT AND 2 CUBBIE STORAGE UNITS WITH 2 HELMET AND BAT RACKS AND 36 FEET RACK/HOOK STRIP PER DUGOUT AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, 607–746–8911.
21. INSTALL 4" REINFORCED CONCRETE PAVEMENT IN HATCHED AREA AS NOTED. PAVEMENT TO FOLLOW EXISTING GRADES AND SHALL HAVE 1½% CROSS SLOPE. SEE DETAIL 16,17,18 G4.0.
22. CONCRETE EXPANSION JOINT. SEE DETAIL 17 G4.0.
23. CONCRETE CONTROL JOINT. SEE DETAILS 17 G4.0
24. NEW TO EXISTING CONCRETE PAVING JUNCTION. SEE DETAIL 19 G4.0
25. CLEAN "EXPOSED–TO–VIEW" MASONRY BLOCK SURFACES (8' APPROX. HT.) AND ALL CONCRETE PAVING WITHIN 35' OF DUGOUTS. REFER TO MASONRY CLEANING SPECIFICATIONS FOR ADDITIONAL INFORMATION. PROVIDE MASONRY WATER REPELLANT ON "EXPOSED–TO–VIEW"MASONRY BLOCK SURFACES FULL EXTENTS.
26. PROVIDE SMOOTH CONCRETE SURFACE BELOW GRADE AND BOLT 2X4" COMPOSITE NAILER STRIP TO CONCRETE CURB SIMILAR TO DETAIL 13/G4.0.
27. AT SOFTBALL DUGOUTS, REMOVE CONTINUOUS WOOD TOP PLATE AND ALL INSULATION EVERY PLACE IT MEETS TOP OF CMU WALL AND STEEL STRUCTURE. INSTALL "BIRD SPIKES" CONTINUOUS EVERY PLACE TOP OF CMU WALL MEETS UNDERSIDE OF METAL ROOF AND STEEL STRUCTURE. AT BASEBALL AND SOFTBALL DUGOUTS, INSTALL NEW GALVANIZED SCREEN ON OUTSIDE AND INSIDE OF VENT HOLES. TYPICAL 7 PER DUGOUT. SEE DETAIL 2/G1.2.
28. REMOVE EXISTING DEBRIS FROM AND CLEAN ALL DRAIN HOLES AT LOW–SIDE ROOF EDGE METAL TRIM PIECES. ADD DRAIN HOLES OF SIMILAR DIAMETER AT BOTTOM OF METAL TRIM PIECE IN LINE WITH EVERY FOURTH FLOW FLUTE OF ROOF DECK. TYPICAL FOR BOTH COMPETITION BASEBALL AND SOFTBALL DUGOUT ROOFS. SEE DETAIL 1 G1.2. FOLLOWING DRILLING OF ADDITIONAL DRAIN HOLES REMOVE ALL FLAKING PAINT AND RUST WITH COMMERCIAL BLASTING CLEANING FROM ROOF TOP SURFACES AND TRIM. FOLLOWING PREP WORK, PRIME AND THEN FINISH PAINT PREPARED SURFACES WITH HIGH PERFORMING COATINGS PER SPECIFICATIONS.
29. ALIGN NEW POST WITH EXISTING PERPENDICULAR FENCE SO NO MORE THAN 4" GAP BETWEEN NEW POST AND EXISTING FENCE..
30. PROVIDE REMOVABLE TURF INSERTS IN HIGH TRAFFIC AREAS AS NOTED – SEE DETAIL #5 SHT G4.0 FOR BASEBALL AND SOFTBALL BATTERS BOX DETAIL FOR INSERT SIZES NEEDED
31. NEW LED / WIFI CAPABLE BASEBALL AND SOFTBALL SCOREBOARDS (2 TOTAL) : PROVIDE (1) ADVERTISEMENT BOARD BELOW SCOREBOARD – PROVIDE (1) SCHOOL BRANDING BOARD – SIZE / STYLE / LOOK / COLOR / BRANDING TO MATCH EX. FOUND ON SITE – SITE VERIFY PRIOR TO BIDDING AND START OF CONSTRICTION. SEE GD1.1 AND GD1.2 FOR FURTHER INFORMATION – SEE DETAIL #20 SHT G4.0

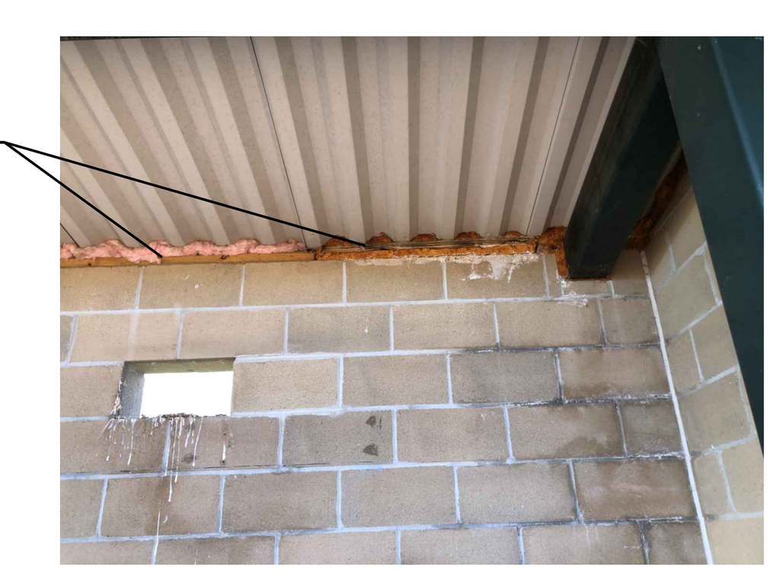
ELECTRICAL PLAN NOTE: DISCONNECT / INSTALL
DISCONNECT POWER FEEDS FROM THE EXISTING SCOREBOARD, THEN CONNECTED NEW SCOREBOARD TO THE EXISTING POWER FEED. REMOVE ANY EXISTING CONTROL WIRING FROM THE OLD SCOREBOARD AND ABANDON EXISTING CONDUIT IN PLACE. REPLACE THE EXISTING DISCONNECT SWITCH WITH A NEW 20AMP, NO–FUSSED WEATHERPROOF DISCONNECT AT THE SAME LOCATION FOR BOTH BASEBALL AND SOFTBALL SCOREBOARDS TYP – SITE VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION

32. PROVIDE NEW 75' LONG TENSION BATTING CAGE BTTBD AS MANUFACTURED BY SPORTSFIELD SPECIALTIES, DELHI, N.Y.888–975–3343. CUT EXISTING SLAB AS REQUIRED TO INSTALL TENSION POST FOUNDATIONS. FOLLOWING TENSION POST INSTALLATION REPOUR SLAB TO MATCH EXISTING DIMENSIONS. (1)

PROPOSED SITE LEGEND

- ALTERNATING "FIELD GREEN" AND "LIME GREEN" PANELS IN FAIR PLAY BALL FIELD SYNTHETIC TURF. "FIELD GREEN" ONLY IN ALL OUT OF PLAY AREAS.
- INFIELD COLOR "BRICK DUST" OR WARNING TRACK "TAN" BALL FIELD SYNTHETIC TURF.
- ADHERED BATTING CAGE SYNTHETIC TURF IN COLORS TO MATCH INFIELD OR PLAYING FIELD OVER EXISTING PREPARED CONCRETE SURFACE.
- ADHERED DUGOUT SYNTHETIC TURF IN COLORS TO MATCH INFIELD OVER EXISTING PREPARED CONCRETE SURFACE.

AT SOFTBALL DUGOUTS, REMOVE CONTINUOUS WOOD TOP PLATE AND ALL INSULATION EVERY PLACE IT MEETS TOP OF CMU WALL AND STEEL STRUCTURE. INSTALL "BIRD SPIKES" CONTINUOUS EVERY PLACE TOP OF CMU WALL MEETS UNDERSIDE OF METAL ROOF AND STEEL STRUCTURE. AT BASEBALL AND SOFTBALL DUGOUTS, INSTALL NEW GALVANIZED SCREEN ON OUTSIDE AND INSIDE OF VENT HOLES. TYPICAL 7 PER DUGOUT. SEE DETAIL 2/G1.2.



2 DUGOUT RENOVATIONS
NTS

REMOVE EXISTING DEBRIS FROM AND CLEAN ALL DRAIN HOLES AT LOW–SIDE ROOF EDGE METAL TRIM PIECES. ADD DRAIN HOLES OF SIMILAR DIAMETER AT BOTTOM OF METAL TRIM PIECE IN LINE WITH EVERY FOURTH FLOW FLUTE OF ROOF DECK. TYPICAL FOR BOTH COMPETITION BASEBALL AND SOFTBALL DUGOUT ROOFS. SEE DETAIL 1 G1.2. FOLLOWING DRILLING OF ADDITIONAL DRAIN HOLES REMOVE ALL FLAKING PAINT AND RUST WITH COMMERCIAL BLASTING CLEANING FROM ROOF TOP SURFACES AND TRIM. FOLLOWING PREP WORK, PRIME AND THEN FINISH PAINT PREPARED SURFACES WITH HIGH PERFORMING COATINGS PER SPECIFICATIONS.

1 DUGOUT RENOVATIONS
NTS

ENLARGED SOFTBALL LAYOUT

SCALE 1"= 20'-0"

811
Know what's below.
Call before you dig.
Call 811 or 1-800-382-5544 Before You Begin Any Digging Project.
Call 48 hours or 2 working days before you dig.
It's Fast, It's Easy and It's the Law in the state of Indiana!

CAUTION !!
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (INCLUDING, BUT NOT LIMITED TO, MANHOLES, INLETS, VALVES, AND MARKS MADE UPON THE GROUND BY OTHERS) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

LOCATIONS GIVEN ARE APPROXIMATE AND ARE TO BE SITE VERIFIED PRIOR TO THE START OF CONSTRUCTION. ALL BASE CONSTRUCTION WORK, SYNTHETIC TURF SURFACING AND SAFETY POURED IN PLACE SURFACING INSTALL IS TO BE PERFORMED BY (1) SINGULAR (SYNTHETIC TURF/POURED IN PLACE SURFACING MANUFACTURE APPROVED/CERTIFIED) CONTRACTOR

ZIONSVILLE COMMUNITY SCHOOLS HIGH SCHOOL BASEBALL & SOFTBALL TURF

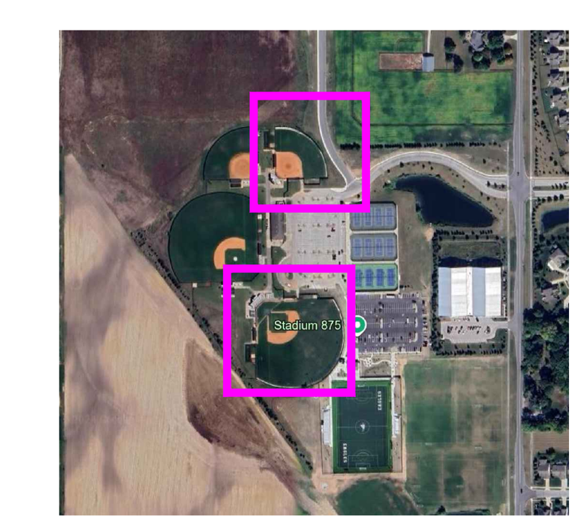
ZIONSVILLE ATHLETIC COMPLEX
4400 S. 875 E.
ZIONSVILLE, IN. 46077

ZIONSVILLE COMMUNITY SCHOOLS ZIONSVILLE, INDIANA

ZIONSVILLE
COMMUNITY SCHOOLS

ARCHITECT
FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 E NEW YORK ST # 300, INDIANAPOLIS, IN 46204

PROJECT LIMITS



Issued for Bid

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: JM
DRAWN BY: JB
PROJECT NUMBER: 223142.00
PROJECT ISSUE DATE: 11-13-2024

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	12-04-2024

ENLARGED SOFTBALL LAYOUT

G1.2