KAESTLE BOOS
associates, inc

A D D E N D U M N O . 3

ATHLETIC FACILITIES RENOVATION
PROJECT
DERBY HIGH SCHOOL
Derby, CT
KBA #17015.00 |CITY PROJECT NO. COD-02

Date: March 26, 2018

The following changes to the Project Manual shall become a part of the Drawings, Specifications, Bidding Requirements and Contract Documents; superseding previously issued Drawings, Specifications, Bidding Requirements, Contract Documents and Addenda, to the extent modified by this Addendum.

PREVIOUS BID CLARIFICATIONS
BID DATE REMAINS (PER ADDENDA #1): MONDAY, APRIL 2, 2018, ***time has been extended to 2p.m.***

CLARIFICATIONS

Specification Section 32 3113 – Chain Link Fences and gates (16 pages) is attached for your reference. This section is the same as the bid version and is included for use. (some bidders had noted that pages were missing from this section)

BIDDER QUESTIONS:

Q: On C1.02 there's a symbol HB for haybales at Nutmeg Ave. What are the limits of haybale at this location?
A: Disregard that symbol. There is no need for haybales at Nutmeg Avenue the silt fence will suffice.

Q: What scale is C1.02?
A: Scale is for both C1.02 & C5.01 1"=40'

Q: Under which classification should the general contractor be CT DAS prequalified? Is an Update Bid Statement required to be submitted with the bid forms?
A: Contractors can be qualified under General Building Construction or Sitework

Q: On detail 2/C6.01 can you please clarify the thickness of the subbase material?
A: Subbase material is 16"

A: On detail 5/L4.03 it notes granular fill above the collector drain pipe. Should this be the field base bottom stone?
A: Disregard the granular fill note on that detail. Refer to synthetic sports surfacing section/detail. (yes, field base bottom stone)

Q: On detail 2/L4.03, can you please confirm the depth of field base bottom and top stone? What is the 1" depth that's shown?
A: Total depth of field base bottom stone and topstone shall be 8" minimum. That 8" minimum includes up to a maximum of ½" depth of topstone. The Contractor has the discretion to install a depth of topstone (1/2" or less in depth) in order to achieve planarity and compaction. Disregard the 1" dimension at the lower left part of the detail.

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Q: Addendum #2 provided a unit price for "rock removal (assume 10cy, hydraulic hammer)". If this is only for rock removal by hydraulic hammer, how are we to be paid for rock removal by blasting? The earthwork spec 312000 references a blasting plan. Section 3.4 says that the contractor is not entitled to additional time or compensation when rock removal is encountered. Can the spec be revised, and a unit item be provided for ALL rock removal?
A: Omit the sentence in 31 20 00 Earthmoving (addenda 2) Section 3.4 A That reads "No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions". Also omit Paragraph 3.4 A. 2.. Contractor shall make reasonable assumptions as to quantity of rock removal to be included based on provided geotechnical information and provided plans and include those costs with the bid. IF additional rock that requires ripping or blasting is encountered, additional contract cost and scope will be negotiated at that time based on known, measured, quantities.

Q: Regarding Section 013200, is CPM software for displaying critical path required for the development project schedules for this project?
A: Critical Path Method (CPM) software is not required.

Q: Does the Athletic Facilities Renovation Project have to be submitted online through the DAS portal Website?
A: No. Online bids will not be accepted.
Bids will be delivered to the address as noted in the instructions to bidders.

Q: Regarding Alternate 8: The existing elevation for proposed pole locations F1 and F2 is 169. The proposed grade for both locations is 166.52 if the walls are installed. Is the elevation change described in the alternate referring to this 2.5' difference? And if yes is the deduct amount just for installing the light bases to a 2.5' shallower elevation??
A: Yes. Per Zoning Regulations pole height cannot change from existing. Intent of walls is to keep base of light poles at existing elevations. Deduct would eliminate walls and allow poles to be placed on the proposed slope without keeping elevation low artificially (Alternate 8 assumes a zoning variance is obtained for pole height - by others). Deduct would be for drilling posts at a higher elevation and omitting the wall 'wells' around the posts.

Q: Porous Concrete (no fines) is called for behind the retaining walls. Can you please provide a spec for porous concrete (no fines)?
A: Porous/permeable or No fines concrete shall be considered as the same material. Contractor shall provide a submittal for a commonly available 3,500 psi mix for architect review (e.g. Tilcon EccoCon-P). Submitted wall manufacturer/designer will modify this requirement based on their materials requirements.

Q: Can Porous Concrete (no fines) be paid for by a unit price item since we cannot determine the actual amount of ledge present?
A: Assume quantities based on detail/section provided.
IF rock is encountered, additional quantities will be negotiated at that time based on known quantities.
See revised bid form (attached) for additional unit price item for porous (no fines) concrete.

Q: Most of the revised plans show no scale. Are they 1:20 scale?
A: Where noted plans are NOT TO SCALE. Sheet C1.01 is 1"=20', Sheet C1.02 is 1"=40', Sheet C2.01 is 1"=20', Sheet C2.02 is 1"=20', Sheet C3.01 is 1"=20', Sheet C3.02 is 1"=20', Sheet C3.03 is as shown. Sheet C5.01 is 1"=40'.

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Q: Section 311000, Page 6 of 7 says "No topsoil stripping is required where proposed fills are greater than 12" in height". This is also noted on L1.03. What does this mean??
A: Disregard/omit Section 31 10 00 3.5 item 2 or any plan notes to that effect.
Topsoil shall be stripped from all areas to be re-graded or filled unless otherwise noted.

Q: Section 311000, Page 6 of 7 says "Stockpile surplus topsoil and allow for respreading entire amount of approved-stripped topsoil or haul excess topsoil to locations designated by Owner. All excess approved topsoil remains property of owner." Where is the location to bring the surplus topsoil?
A: Disregard/Omit Section 31 10 00 3.5 C.2.
Excess topsoil shall become property of the contractor, and shall be disposed of off site in a legal manner.

Q: Can bid due date be moved to 1 or 2 o'clock on Monday April 2? Fedex a.m. delivery can be difficult after a holiday.
A: Yes.
Bids will be accepted up to 2 o'clock p.m. on Monday April 2. Bids received after that time will not be accepted.
Please note that bids will NOT be publicly opened at that time.

END OF QUESTIONS

CHANGES TO SPECIFICATIONS

Section 13 12 51 PREFABRICATED STRUCTURES
Revise paragraph 1.4D to read as follows: "*Products shall be guaranteed for a period of 10 years against defects in materials and workmanship. Product shall be covered unconditionally for one year and prorated after that. Damage resulting from neglect, abuse, or lack of maintenance is not applicable. The warranty is exclusive of doors and windows."*

CHANGES TO DRAWINGS

Attached are revised drawings C1.02, C3.04 and C5.01dated March 23, 2018. Substitute these drawings for previous versions of the same drawings. Grading has been added to the field events area (sheet C3.04).

ATTACHMENTS

Specification Section 32 3113 – Chain Link Fences and gates (16 pages)

Sheet C1.02 – Demolition Erosion and Sedimentation Control Plan 24x36
Sheet C3.04 – Site Grading (Field Events) 24 x36
Sheet C5.01 – Construction Erosion & Sedimentation Control Plan 24 x36

FORM OF PROPOSAL

ATHLETIC FACILITIES RENOVATION PROJECT
DERBY HIGH SCHOOL
DERBY, CT
CITY PROJECT NO. COD 2018-02

TO: Salvatore Coppola, Finance Director
Finance Office
Derby City Hall
1 Elizabeth Street
Derby, CT 06418

Pursuant to and in compliance with your "Invitation to Bid" relating thereto, the undersigned,

_____
(Name of Firm)

having visited the site and carefully examined the Drawings, Bidding Documents and complete Specifications **dated February 28, 2018** together with all Addenda issued and received prior to scheduled closing time for recipient of Bids as prepared by the Architects, KAESTLE BOOS ASSOCIATES, INC., 416 Slater Road, New Britain, Connecticut, hereby offers and agrees as follows:

To provide all labor, materials, and all else whatsoever necessary to erect and properly finish all work in connection with the

ATHLETIC FACILITIES RENOVATION PROJECT
DERBY HIGH SCHOOL
DERBY, CT

to the satisfaction of the Architect and Owner for the sum of:

_____**($)**

to provide all labor, materials, and all else whatsoever necessary to construct all improvements described in the specifications. ***Total noted above shall include selected Turf & Track Materials bid numbers included as part of Addenda 2.***

If awarded this Contract, we will execute a Contract with the **City of Derby,** Owner of the property.

UNIT PRICES

Should the amount of improvements required be increased or decreased due to special considerations found at the site or because of a request of the **Derby Public Schools,** the undersigned agrees that the following supplemental UNIT PRICES will be the basic price in place for computing the EXTRA or CREDIT.

Each UNIT PRICE shall include all equipment, tools, labor, permits, fees, etc., incidental to the installation and completion of the work involved.

The amounts shown are net changes to the Contract for additional work and include the Contractor's and any Subcontractor's amounts for overhead and profit. For deleted work, the net credit to the Contract shall be 10% less.

All work is to be accomplished in accordance with applicable Sections of the Specifications.

C.Y. = cubic yard	S.F. = square foot
S.Y. = square yard	V.F. = vertical foot
L.F. = linear foot	EA = Each

ITEMS

1.	Mass Earth Work	$ _____
2.	Granular Base Fill	$ _____
3.	Crushed Stone	$ _____
4.	Processed Aggregate	$ _____
5.	Concrete Anchor Curbing	$ _____
6.	**Rock Removal (assume 10 CY, hydraulic Hammer)**	**$ _____ per CY**
7.	**Pervious Concrete at wall (assume 10 CY)**	**$ _____ per CY**
8.	Slot Drain in Concrete Anchor Curb	$ _____
9.	Flat Panel Drain	$ _____
10.	Collector Pipe Stone	$ _____
11.	Field Base, Bottom Stone	$ _____
12.	Field Base, Top Stone	$ _____
13.	Geotextile Filter Fabric	$ _____
14.	Natural Turf Field	$ _____
15.	Natural Turf Infield	$ _____
16.	Softball Field Mix	$ _____
17.	4' High Black Vinyl Coated Chain-Link Fencing	$ _____
18.	6' High Black Vinyl Coated Chain-Link Fencing	$ _____
19.	8' High Black Vinyl Coated Chain-Link Fencing	$ _____
20.	Track Pavement Asphalt Base	$ _____

ALTERNATES

The undersigned Bidder further proposed and agrees that should the following Alternates be accepted and included in the Contract, the amount of the Lump Sum Bid, as heretofore stated, shall be adjusted by the amount of said Alternates. All materials and workmanship shall be in strict accordance with the Drawings and specification and shall be in place prices.

Alternate No. 1: ADD: Sanitary Line Replacement

Add $_____

Alternate No. 2 ADD: Non-Fixed Athletic Accessories

Add $_____

Alternate No. 3 ADD: Non-Fixed Track and Field Equipment

Add $_____

Alternate No. 4 ADD: Storage Containers

Add $_____

Alternate No. 5 ADD: Prefabricated Storage Sheds

Add $_____

Alternate No. 6 ADD: Press Box Accessible Access Ramp

Add $_____

Alternate No. 7 ADD: Multi-Sport Field Lighting Upgrade

Add $_____

Alternate No. 8 DEDUCT: Multi-Sport Lighting Elevation Change

Deduct $_____

CONTRACT TIME

The undersigned Bidder hereby certifies that Substantial Completion and Final Completion will be achieved in accordance with the time designated in the General Conditions of the Contract for Construction.

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work. The Bid includes Addenda listed below and they are hereby acknowledged:

Addendum No. # _____ Dated _____

Addendum No. # _____ Dated _____

Addendum No. # _____ Dated _____

ATTACHMENTS
Enclosed herewith, is the Bid Security which is in the form of:

Bid Bond ( ) Certified Check ( )

In the Amount of

$_____Dollars

SIGNATURE

_____
Contractor Firm

_____
Authorized Signature

_____
Printed Name and Title

_____
Business Address

_____
City and State

_____
Telephone Number

_____
Telephone Fax Number

SECTION 32 31 13 – CHAIN LINK FENCES AND GATES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes

1. Furnishing and installing woven wire fencing systems of the type and height specified and supported by metal posts erected where indicated on the Drawings and as specified herein, including fence and gates.

B. Contractor shall coordinate work between all Subcontractors, sections, and trades required for the proper completion of the work.

C. Contractor is responsible for all health and safety.

1.2 REFERENCES

A. Reference herein to any technical society, organization, group or regulation are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable.

B. Code of Federal Regulations (CFR).

1. 29 CFR 1926, Safety and Health Regulations for Construction.

C. American Society for Testing and Materials (ASTM).

1. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

2. ASTM A90- Standard Test Method for Weight (Mass) of Coating on Iron or Steel Articles with Zinc or Zinc Alloy.

3. ASTM A123- Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.

4. ASTM A153- Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware.

5. ASTM A392- Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric.

6. ASTM A428- Standard Test Method for Weight (Mass) of Coating on Aluminum-Coated Iron or Steel Articles.

7. ASTM A491- Standard Specification for Aluminum Coated Steel Chain Link Fence Fabric.

8. ASTM A780 – Standard Specification for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

9. ASTM A817- Standard Specification for Metallic-Coated Steel Wire for Chain Link Fence Fabric and Marcelled Tension Wire.

10. ASTM A824 - Standard Specification Metallic-Coated Steel Marcelled Tension Wire for Use with Chain Link Fence.

11. ASTM B211- Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod and Wire.

12. ASTM C94 - Standard Specification for Ready-Mixed Concrete.

13. ASTM F552 - Standard Terminology Relating to Chain Link Fencing.

14. ASTM F567- Standard Practice for Installation of Chain Link Fence.

15. ASTM F626 - Standard Specification for Fence Fittings.

16. ASTM F668 - Specification for Polymer Coated Chain Link Fence Fabric.

17. ASTM F900 - Standard Specification for Industrial and Commercial Swing Gates.

18. ASTM F934 - Specification for Standard Colors for Polymer-Coated Chain Link.

19. ASTM F1043 - Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework.

20. ASTM F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.

21. ASTM F1183 - Standard Specification for Aluminum Alloy Chain Link Fence Fabric.

D. Chain Link Fence Manufacturer's Institute

1. Chain Link Fence Manufacturer's Institute Product Manual, latest revision.

1.3 SYSTEM DESCRIPTION

A. Temporary Construction Fence shall meet the following basic parameters:

1. Fence Height: 8 feet.

2. Mesh Size: 2 inches.

3. Mesh Gage: 12

4. Gates: Height of gates shall match that of fence. Width of gates shall be as shown on the Drawings.

5. Anchored post or driven posts where indicated. No top or bottom rails required.

6. Panelized/modular units where indicated. Two stabilizers per panel.

B. Permanent Fence shall meet the following basic parameters:

1. Fence Height: Varies, refer to the Drawings.

2. Mesh Size:

a. Field fencing: 2"

b. Backstop: 1-3/4”

3. Mesh Gage:

a. Field Fencing: Wire with a diameter of 9 gauge galvanized core fused. Measured prior to application of coating.

b. Backstop: Wire with a diameter of 6 gauge galvanized core fused. Measured prior to application of coating.

4. Gates: Height of gates shall match that of fence. Type and size of gates shall be as shown on the Drawings.

5. Anchored post where indicated; top and bottom rails between posts unless otherwise indicated.

1.4 SUBMITTALS

A. Shop drawings showing the plan layout, spacing of components, post foundation dimensions, hardware anchorage, gates and a schedule of components.

B. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.

1. Fence and gate posts, rails, and fittings.

2. Chain-link fabric, reinforcements, and attachments.

3. Accessories: Privacy slats.

4. Gates, locking mechanisms and hardware.

5. Gate operators, including operating instructions.

6. Motors (if applicable): Show nameplate data, ratings, characteristics, and mounting arrangements.

C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show accessories, hardware, gate operation, and operational clearances.

1. Gate Operator (if applicable): Show locations and details for installing operator components, switches, and controls. Indicate motor size, electrical characteristics, drive arrangement, mounting, and grounding provisions.

2. Wiring Diagrams (if applicable): For power, signal, and control wiring.

D. Samples for Initial Selection: For components with factory-applied color finishes.

E. Samples for Verification: Prepared on Samples of size indicated below:

1. Polymer-Coated Components: In 6-inch lengths for components and on full-sized units for accessories.

F. Delegated-Design Submittal: For chain-link fences and gate framework indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified factory-authorized service representative.

B. Product Certificates: For each type of chain-link fence, and gate, from manufacturer.

C. Product Test Reports: For framing strength according to ASTM F 1043.

D. Field quality-control reports.

E. Warranty: Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For the following to include in emergency, operation, and maintenance manuals:

1. Polymer finishes.

2. Gate hardware.

3. Gate operator.

1.7 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Supply material in accordance with Chain Link Fence Manufacturer’s Institute Product Manual and this Specification.

C. Perform installation in accordance with ASTM F567.

D. Maintain all facilities installed under this Section in proper and safe condition throughout the progress of the work.

E. Testing Agency Qualifications: For testing fence grounding. Member company of NETA or an NRTL.

1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.

F. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

G. Emergency Access Requirements: Comply with requirements of authorities having jurisdiction for gates with automatic gate operators serving as a required means of access.

H. Mockups: Build mockups to set quality standards for fabrication and installation.

1. Include 10-foot length of fence and gate.

I. Preinstallation Conference: Conduct conference at Project site.

1. Inspect and discuss electrical roughing-in, equipment bases, and other preparatory work specified elsewhere.

2. Review sequence of operation for each type of gate operator.

3. Review coordination of interlocked equipment specified in this Section and elsewhere.

4. Review required testing, inspecting, and certifying procedures.

1.8 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.

1.9 DELIVERY, STORAGE AND HANDLING

A. Deliver fence fabric and accessories in packed cartons or firmly tied rolls.

B. Packages shall be labeled with the manufacturer’s name.

C. Store fence fabric and accessories in a secure and dry place.

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which Installer agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Faulty operation of gate operators and controls.

b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

B. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 GENERAL

A. Material furnished shall be in good condition and shall not have been painted.

B. All posts and rails shall be straight, true to section and of sufficient length for proper installation.

C. Unless otherwise specified, hardware and accessories shall conform to the requirements of ASTM F626 and ASTM A123 or ASTM A153 as applicable for zinc-coating.

2.2 LINE POSTS

A. See Drawings for size depending on height of fence.

1. Vinyl Coated

2. Color: Black

2.3 CORNER, END, AND PULL POSTS

A. See Drawings for size depending on height of fence.

1. Vinyl Coated

2. Color: Black

2.4 BRACE ASSEMBLY

A. Rails

1. 1.25-inch nominal (1.660 O.D.) steel pipe, steel pipe, vinyl coated.

a. Vinyl Coated

b. Color: Black

B. Truss rod shall be 3/8-inch vinyl coated steel with adjustable turnbuckles or truss tightener.

2.5 CHAIN-LINK FENCE FABRIC

A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:

1. Fabric Height: As indicated on Drawings.

2. Steel Wire Fabric:

a. Field Fencing: Wire with a diameter of 9 gauge galvanized core fused. Measured prior to application of coating.

b. Backstop: Wire with a diameter of 6 gauge galvanized core fused. Measured prior to application of coating.

c. Mesh Size:

1) Field Fencing: 2 inches. Measured prior to application of coating.

2) Backstop:1-3/4” inches. Measured prior to application of coating.

d. Polymer-Coated Fabric: ASTM F 668, Class 2b.

1) Color: Black, ASTM F 934.

e. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.

3. Selvage: Knuckled at both selvages.

2.6 FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043 based on the following:

1. Fence Height: As indicated on Drawings.

2. Light Industrial Strength: Material Group IC-L, round steel pipe, electric-resistance-welded pipe.

a. Line Post: Refer to Drawings for prost sizes based on fence height.

b. End, Corner and Pull Post: Refer to Drawings for prost sizes based on fence height.

3. Horizontal Framework Members: Intermediate top and bottom rails complying with ASTM F 1043.

a. Top, Bottom and Mid Rail for all fencing systems and all heights: Refer to Drawings for prost sizes based on fence height.

b. Brace Rails: Comply with ASTM F 1043.

B. Polymer coating over metallic coating.

1. Color: Black, ASTM F 934.

2.7 STRETCHER BARS

A. Bars shall be one piece lengths of zinc-coated steel, not less than 2-inches shorter than the full height of the fencing fabric with a minimum cross section of 3/16-inch by 3/4-inch, ASTM F626.

B. Polymer coating over metallic coating.

C. Color: Black, ASTM F 934.

2.8 TENSION WIRE

A. Polymer-Coated Steel Wire: Marcelled (spiraled or crimped) No. 7 gage, (0.177-inches) diameter, ASTM A824, ASTM F 1664, Class 2b over-coated steel wire.

B. Polymer coating over metallic coating.

C. Color: Black, ASTM F 934.

2.9 HARDWARE AND TIES

A. Miscellaneous hardware, including but not limited to nuts, bolts, washers, clips, bands, rail ends, brackets, and straps shall be provided as required, hot-dip galvanized steel or aluminum alloy, ASTM F626.

B. Tension bands shall be formed from flat or beveled steel and shall have a minimum thickness after galvanizing of 0.078-inches and a minimum width of 3/4-inch.

C. Brace bands shall be formed from flat or beveled steel and shall have a minimum thickness after galvanizing of 0.108-inches and a minimum width of 3/4-inch.

D. Wire ties shall be minimum 16-gage galvanized steel wire or minimum 9-gage aluminum alloy wire.

E. All fasteners shall be hot-dip galvanized, ASTM F2329.

F. Bolts: Steel, ASTM A307.

G. Washers: Steel, round, ASTM F844.

H. Bolts: Steel, ASTM A563 Grade A, hex head.

2.10 FITTINGS

A. General: Comply with ASTM F 626.

B. Post Caps: Provide for each post.

1. Provide line post caps with loop to receive tension wire or top rail.

C. Rail and Brace Ends: For each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:

1. Top Rail Sleeves: Pressed-steel or round-steel tubing not less than 6 inches long.

2. Rail Clamps: Line and corner boulevard clamps for connecting intermediate and bottom rails in the fence line-to-line posts.

E. Tension and Brace Bands: Pressed steel.

F. Tension Bars: Steel, length not less than 2 inches (50 mm) 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: Steel, hot-dip galvanized after threading rod and turnbuckle or other means of adjustment.

H. Tie Wires, Clips, and Fasteners: 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- (3.76-mm-) diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.

I. Finish:

1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz. /sq. ft. (366 g /sq. m) zinc.

a. Polymer coating over metallic coating.

2.11 MODULAR OR PANELIZED FENCE

A. Free-standing fence panels, minimum ten (10) foot panels of the height specified.

B. Fabric as specified.

C. Welded tubular steel frame.

D. Stands: Four sided welded tubular steel frame with center bar and tubular sleeves.

2.12 GATES

A. Gate Construction: ASTM F900. Corners welded or assembled with special malleable or pressed-steel fittings and rivets or bolts to provide rigid connections.

B. Pipe and Tubing:

1. Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; protective coating and finish to match fence framing.

C. Posts: Round tubular steel.

1. Size: Refer to Drawings for prost sizes based on fence height.

D. Gate Frames and Bracing: Round tubular steel.

1. Framing:

a. Size: Refer to Drawings for prost sizes based on fence height.

b. Assemble gate frames by welded connections. When width of gate leaf exceeds 10 feet, install mid-distance vertical tubing of the same size and weight as frame members. When either horizontal or vertical bracing is not required, provide truss rods as cross bracing to prevent sag or twist.

c. Horizontal bid bracing shall be used on all gates.

E. Wire Fencing Fabric: Fabric shall match that of fence, attached securely to frame at intervals not exceeding 15-inches.

F. Hardware:

1. Hinges: 360-degree inward and outward swing.

a. Hindges shall be welded into place and coated.

2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.

3. All gates shall be equipped with hot-dipped galvanized steel hinges and latch with provisions for padlocking.

4. Double gates and single gates with leaf width 4 feet and greater shall be equipped with a minimum ½'' drop bar and gate hold backs.

5. Hinges shall be cast steel hinges capable of 360 degree opening. Set screw shall be installed drilled into the steel post to lock each hinge to the gate post and prevent rotation. No-lift-off type. Box type hinges are not acceptable.

6. Gate Leaves: Configured with intermediate members and diagonal truss rods or tubular members as necessary to provide rigid construction, free from sag or twist.

7. Latches, hinges, stops, keepers and other hardware items shall be furnished as required for proper operation.

2.13 CONCRETE

A. Concrete shall conform to ASTM C94; or pre-packaged concrete mix, ASTM C387. Minimum 28-day compressive strength of 3,000 psi. No air entrainment.

2.14 GROUT AND ANCHORING CEMENT

A. Nonshrink, 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 GENERAL

A. Install fence with properly trained crew as shown on the drawings in accordance with ASTM F567.

B. Install all nuts for tension bands and hardware bolts on the side of the fence opposite the fabric.

C. The temporary chain link fence shall be removed at the conclusion of the work.

3.2 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 of the Work.

1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 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.

3.4 INSTALLATION, GENERAL

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

1. Install fencing on established boundary lines inside property line.

3.5 CHAIN-LINK FENCE INSTALLATION

A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings 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 post footings shall have a plan diameter 12-inches greater than the post diameter. Holes shall be clean and free of loose soil and debris. Concrete shall be placed continuously in one operation and tamped or vibrated for consolidation. Tops of the concrete footings shall be crowned to shed water.

3. Gate post/footings shall be installed a minimum of 42-inches below grade.

4. All corner, end posts, and gate posts shall be braced.

a. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail one bay from end and gate posts.

b. Corner and terminal posts are to be braced horizontally and diagonally. The braces are to extend over one adjacent panel. Changes in line of 30 degrees or more shall be considered as corners.

c. Braces and truss rods shall be securely fastened to posts with appropriate hardware.

d. Pull posts with two braces shall be provided for all heights where changes in horizontal or vertical alignment of ten (10) degrees or more occur.

5. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.

a. Concealed Concrete: Top 3 inches below grade as indicated on Drawings to allow covering with surface material.

b. Posts Set into Concrete in Sleeves: 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.

c. Posts Set into Voids in Concrete: 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.

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.

D. Line Posts: Space line posts uniformly as indicated on the Drawings. Unless indicated otherwise, spacing shall be 8 feet on-center.

E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.

1. horizontal braces at midheight of fabric 72 inches or higher, on fences with top rail and at two-third 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 F567, 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 on-center. Install tension wire in locations indicated before stretching fabric. Provide horizontal tension wire at the following locations:

1. Extended along top and bottom of fence fabric. Install top tension wire through post cap loops. Install bottom tension wire within 6 inches (152 mm) 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 F567, 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 and secure to posts with fittings.

I. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 1 inch 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.

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 on-center.

K. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F626. Bend ends of wire to minimize hazard to individuals and clothing.

1. Maximum Spacing: Tie fabric to line posts at 12 inches on-center and to braces at 24 inches on-center.

L. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side.

M. Privacy Slats: Install slats in direction indicated, securely locked in place.

1. Diagonally, for privacy factor of 80 to 85.

N. Fabric:

1. Do not install fabric until concrete post footings have cured seven (7) days. Provide fabric of the height specified. Install fabric on the public side of the fence, with bottom no greater than 2-inches above the ground surface. Fabric shall be pulled taut to prevent sagging and

provide a uniform smooth appearance. Fasten fabric to line posts at intervals not exceeding 15-inches with ties as specified.

2. Install tension wire in one continuous length between pull posts, weaved through fence fabric at top. Tension wire shall be applied to provide a wire without visible sag between posts. Fasten fabric to tension wire at intervals not exceeding 24-inches with ties or hog rings as specified.

3. Where it is not practicable to conform the fence to general contour of the ground, as at ditches, channels, etc., the opening beneath the fence shall be enclosed with chain link fabric and sufficiently braced to preclude access, but not to restrict the flow of water.

3.6 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.

B. Provide swing gates at the locations and dimensions shown on the Drawings. Do not install gates until concrete post footings have cured seven (7) days.

C. Gates shall be installed plumb, level, and secure, with full opening without interference. Hardware shall be installed and adjusted for smooth operation and lubricated where necessary.

D. Provide concrete center drop to footing depth and suitable drop rod sleeve at center of double gate openings.

3.7 GATE OPERATOR INSTALLATION (IF APPLICABLE)

A. General: Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.

B. Excavation for Support Posts Pedestals Equipment Bases/Pads: Hand-excavate holes for bases/pads, in firm, undisturbed soil to dimensions and depths and at locations as required by gate-operator component manufacturer's written instructions and as indicated.

3.8 GROUNDING AND BONDING

A. Fence Grounding: Install at maximum intervals of 1,500 feet except as follows:

B. Fences within 100 feet of buildings, structures, walkways, and roadways: Ground at maximum intervals of 750 feet.

1. Gates and Other Fence Openings: Ground fence on each side of opening.

2. Bond metal gates to gate posts.

3. Coordinate subparagraph below with Drawings in projects where intentional discontinuities are provided in metal fencing conductivity to localize lightning effects to the vicinity of strikes. See Evaluations.

4. 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.

C. 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.

D. Plans and details on Electrical Drawings and requirements in Division 26 Sections may revise or illustrate application of requirement below or may require grounding that exceeds minimum requirements in IEEE C2. Fences enclosing electrical substations are often bonded to a station grounding mat.

E. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2 unless otherwise indicated.

F. 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, including the following:

1. Make grounding connections to each barbed wire strand with wire-to-wire connectors designed for this purpose.

2. Make grounding connections to each barbed tape coil with connectors designed for this purpose.

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

H. Connections: Make connections to minimize possibility of galvanic action or electrolysis. 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.

I. 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 FIELD QUALITY CONTROL

A. Grounding-Resistance Testing: Engage a qualified testing agency to perform tests and inspections.

1. Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance no fewer than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to IEEE 81.

2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.

3. Report: Prepare test reports certified by a testing agency of grounding resistance at each test location. Include observations of weather and other phenomena that may affect test results.

3.10 ADJUSTING

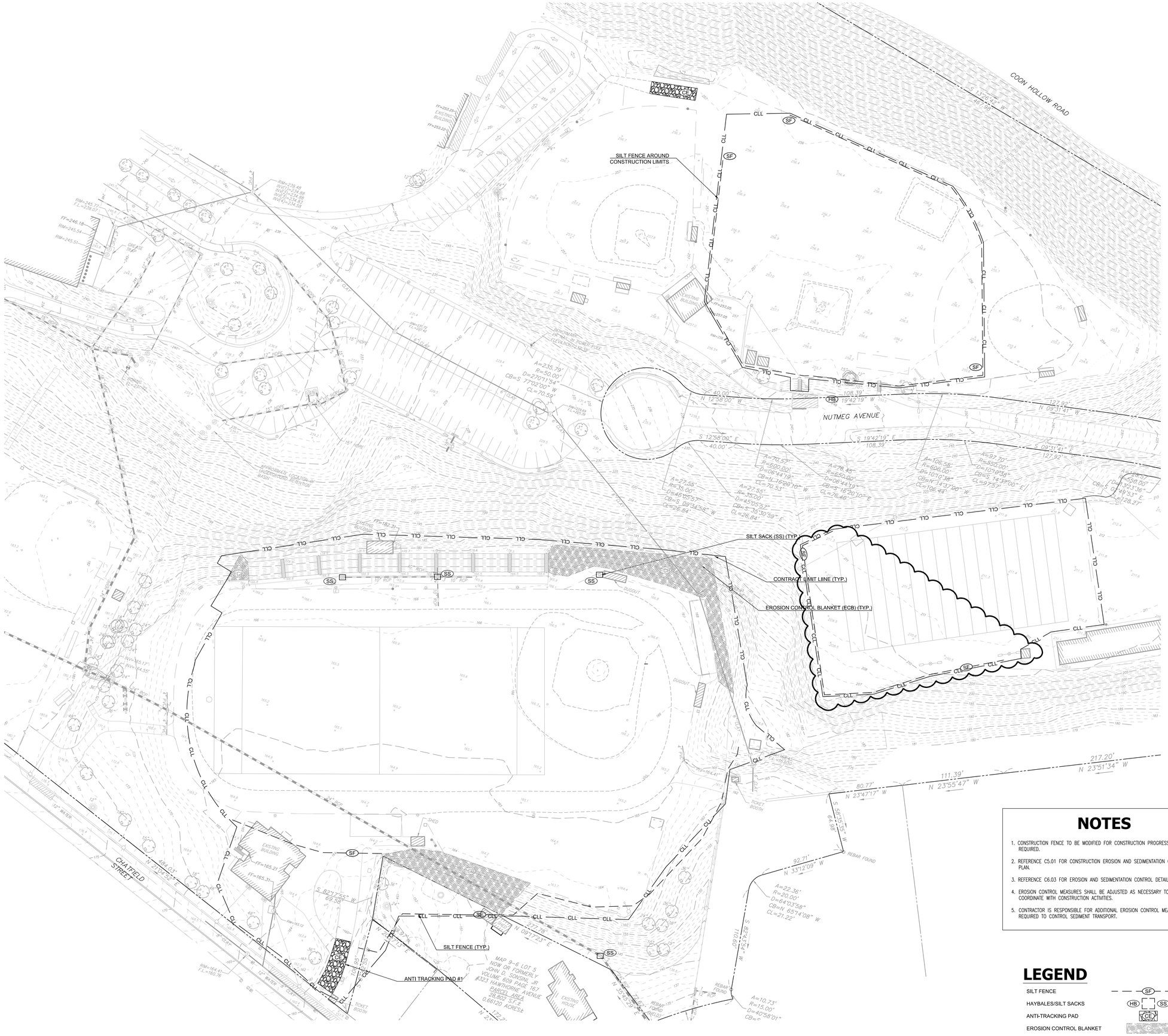
A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

3.11 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain chain-link fences and gates.

END OF SECTION



NOTES

1. CONSTRUCTION FENCE TO BE MODIFIED FOR CONSTRUCTION PROGRESSION AS REQUIRED.
2. REFERENCE C5.01 FOR CONSTRUCTION EROSION AND SEDIMENTATION CONTROL PLAN.
3. REFERENCE C6.03 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
4. EROSION CONTROL MEASURES SHALL BE ADJUSTED AS NECESSARY TO COORDINATE WITH CONSTRUCTION ACTIVITIES.
5. CONTRACTOR IS RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

LEGEND

- SILT FENCE
- HAYBALES/SILT SACKS
- ANTI-TRACKING PAD
- EROSION CONTROL BLANKET

OCTOBER 27, 2017 SITE PLAN APPROVAL-REVISIONS

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ISSUE DATE

DATE	DESCRIPTION
FEB 28, 2018	BID DOCUMENTS

REVISIONS

DATE	REFERENCE
March 12, 2018	ADDENDA 1
March 23, 2018	ADDENDA 3

KEY PLAN

0' 20' 40' 80'
SCALE: 1" = 40'-0"
PROJECT TRUE

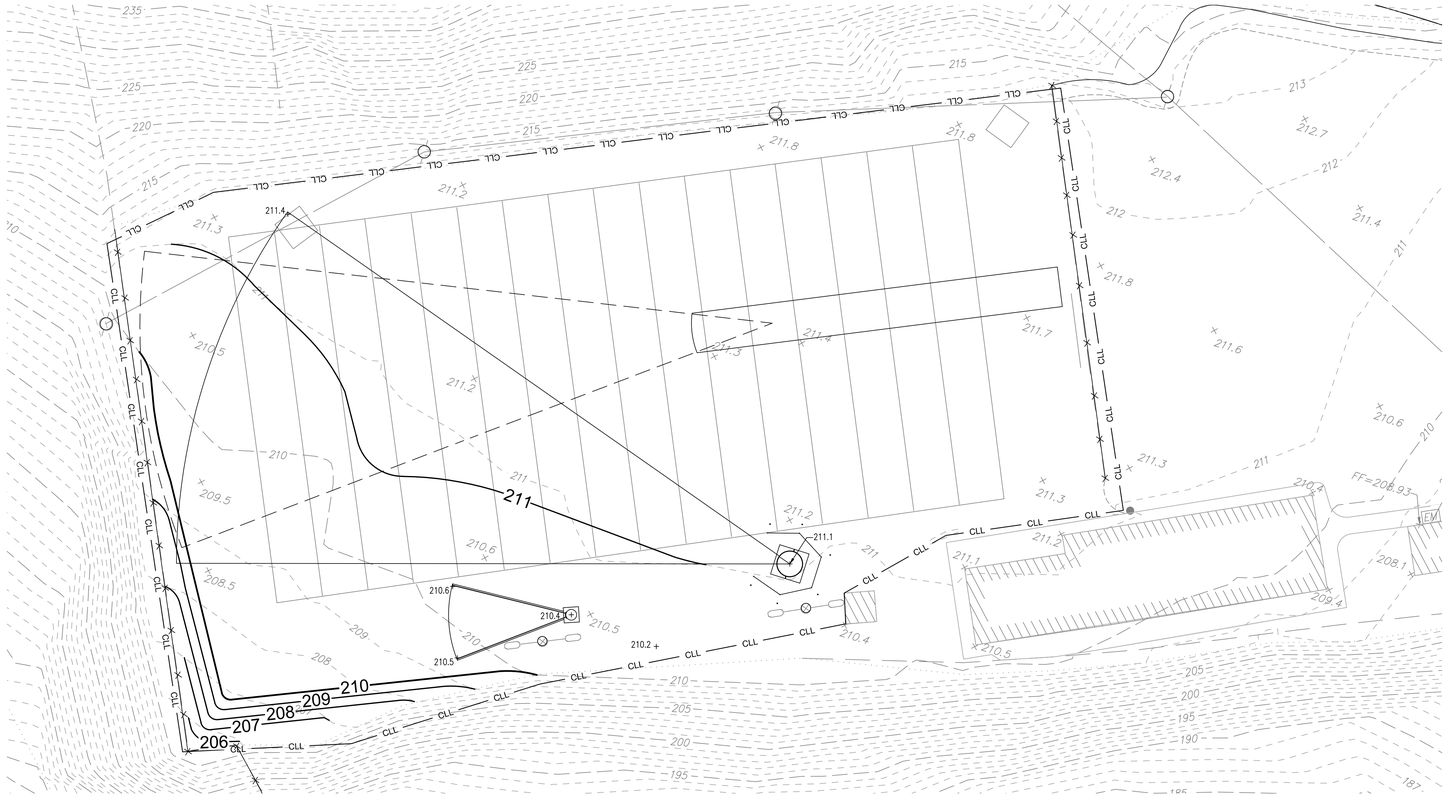
DERBY HIGH SCHOOL ATHLETIC FACILITES RENOVATION PROJECT

75 CHATFIELD ST
DERBY, CT 06418

PROJECT NO.: 17015.00 DRAWN BY: JD, EGR

DEMOLITION EROSION AND SEDIMENTATION CONTROL PLAN

DRAWING NO.:
C1.02



OCTOBER 27, 2017 SITE PLAN APPROVAL-REVISIONS

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DERBY HIGH SCHOOL ATHLETIC FACILITES RENOVATION PROJECT

75 CHATFIELD ST
DERBY, CT 06418

PROJECT NO.: 17015.00 DRAWN BY: JD, EQR

SITE GRADING (FIELD EVENTS)

DRAWING NO.:
C3.04

OCTOBER 27, 2017 SITE PLAN APPROVAL-REVISIONS

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KEY PLAN

SCALE: 1" = 40'-0" (0' 20' 40' 80')

PROJECT TRUE

DERBY HIGH SCHOOL ATHLETIC FACILITES RENOVATION PROJECT

75 CHATFIELD ST
DERBY, CT 06418

PROJECT NO.: 17015.00 DRAWN BY: JD, EGR

CONSTRUCTION EROSION AND SEDIMENTATION CONTROL PLAN

DRAWING NO.:
C5.01

NOTES

1. CONSTRUCTION FENCE TO BE MODIFIED FOR CONSTRUCTION PROGRESSION AS REQUIRED.
2. REFERENCE C1.02 FOR DEMOLITION EROSION AND SEDIMENTATION CONTROL PLAN.
3. REFERENCE C6.03 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
4. EROSION CONTROL MEASURES SHALL BE ADJUSTED AS NECESSARY TO COORDINATE WITH CONSTRUCTION ACTIVITIES.
5. CONTRACTOR IS RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

LEGEND

- SILT FENCE — SF
- HAYBALES/SILT SACKS — HB, SS
- ANTI-TRACKING PAD — CE
- EROSION CONTROL BLANKET — ECB