

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

TABLE OF CONTENTS

SEPTEMBER 2011

<u>TABLE OF CONTENTS</u>	<u>SECTION</u>
Table of Contents	TC 1
BIDDING AND CONTRACT REQUIREMENTS	
Invitation to Bid	
Information for Bidders	IB 1-4
General Construction Specifications	GCS 1-6
Special Conditions	SC 1-4
State Prevailing Wages	PW 1
Bid Bond	1-2
Performance Bond	1-4
Payment Bond	1-4
Bid Proposal	BP 1-3
DIVISION 1 – GENERAL REQUIREMENTS	
Section 01290 Payment Procedures	1-4
DIVISION 2 – SITE WORK	
Section 02000 Sitework	1-2
Section 02300 Earthwork	1-7
Section 02332 Gravel	1-2
Section 02751 Cement Concrete Pavement	1-9
Section 02791 Playground Safety Surfacing	1-6
Section 02821 Chain-Link Fences and Gates	1-6
Section 02870 Site Furnishings	1-2
Section 02881 Playground Equipment and Structures	1-8
Section 02882 Equipment Schedule	1-25
List of Drawings	1

TC - 1

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

TABLE OF CONTENTS

SEPTEMBER 2011

TOWN OF GLASTONBURY

INVITATION TO BID

<u>BID #</u>	<u>ITEM</u>	<u>DATE & TIME REQUIRED</u>
GL-2011-04-BP-120	Playgrounds for the Glastonbury East Hartford Elementary Magnet School Phase 4	May 31, 2012 @ 11:00 a.m.

The Town of Glastonbury will receive sealed bids (in triplicate) for work required to provide and install playgrounds at the Glastonbury East Hartford Elementary Magnet School located at 95 Oak Street, Glastonbury, CT. Bids will be received only at the Office of the Purchasing Agent, Glastonbury, Connecticut, Town Hall, 2155 Main Street, Glastonbury, CT 06033, (second level) ATTN: Mary Visone, Purchasing Agent, until 11:00AM (local time) on the date shown above, at which time they will be publicly opened and read aloud.

For bids valued at \$500,000 or greater, the Contractor shall hold a current "DAS Contractor Prequalification Certificate" for the classification of Sitework (not a predetermination letter) from the Department of Administrative Services of the State of Connecticut according to C.G.S.§4a-100, C.G.S.§4b-101 and C.G.S.§4b-91. Bidders shall submit with their bids a "DAS Contractor current "Update (Bid) Statement". Any bid submitted without a copy of the DAS current Update (Bid) Statement will be invalid. If you have any questions regarding these requirements contact the State of CT DAS at telephone number 860-713-5280 or visit their website at www.das.state.ct.us.

Bidders may obtain complete sets of plans and specifications (contract documents) on the Town's website at www.glastonbury-ct.gov at no cost or at the Office of the Purchasing Agent, 2155 Main Street, Glastonbury, CT 06033 for a non-refundable payment of Fifty dollars (\$50.00) per set. Checks are to be made payable to the Town of Glastonbury. Bid documents will be available on or after May 7, 2012.

For general information of prospective Bidders, the Bids are for Phase 4, Playgrounds for the Glastonbury East Hartford Elementary Magnet School. The Town of Glastonbury reserves the right to accept or reject any or all Bids in whole or in part, or to waive any informalities, irregularities, omissions or technical defects in the bids if it is deemed by the Town to be in its best interest. All Bids shall stand for acceptance for a period of ninety (90) days from the actual time of the bid opening. Should there be any reason why the bid cannot be awarded within the specified period of time, the time may be extended by mutual agreement between the Town and the Bidder.

A MANDATORY PRE-BID CONFERENCE will be held on: **May 17, 2012 @ 2:00 p.m.**, at the Glastonbury East Hartford Elementary Magnet School, 95 Oak Street, Glastonbury, Connecticut 06033, **all BIDDERS are REQUIRED to attend in order for their Bid to be considered.**

All requests for information shall be submitted in writing to **ONLY** to the office of the architect, TO Design, Attention Mark W. Fisher, Senior Project Manager, Old Post Office Plaza, 114 West Main Street, Suite 201, New Britain, CT 06051. Requests may also be sent via email at mfisher@todesignllc.com or via fax at (860) 612-1757.

Sealed proposals must be accompanied with Bid Security and Surety Letter of Intent. Bid Security shall be made payable to the "Town of Glastonbury" in the form of a certified check or Bid Bond in the Amount of 10% of the Base Bid Amount. The Bid Bond must be issued by a surety company licensed in the State of Connecticut. Construction Performance Bond and Labor and Material Payment Bonds for 100% on the contract price, with a surety company satisfactory to the Owner, shall be furnished by the Bidder awarded the contract. The Town of Glastonbury will not be liable for the accrual of any interest on any certified checks submitted. Cashier's checks will not be accepted.

Proj. No. 054-0095 MAG/N/PS
054-0096 MAG/N/PS
Bid No. GL-2011-04-BP-120

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

TABLE OF CONTENTS

SEPTEMBER 2011

The successful Bidder is required to comply with all the provisions of the Civil Rights Act of 1964, the Equal Opportunity Act of 1972, Executive Orders #3, No. 17, 11246, 11375 and 11478. The requirements for Bidders under this contract are explained in the Project Manual including the insurance requirements of the Town of Glastonbury. Contractors shall comply with State Statutes concerning Employment and Labor Practices, where applicable, and Section 31-53 of the Connecticut General Statutes as amended (Prevailing Wage Rates), including annual adjustments in Prevailing Wages. Certified payrolls will be required bi-weekly.

Bidders are reminded that Public Schools are exempt from Federal Excise Taxes as well as State of Connecticut Sales, Use and Service Taxes, to the extent provided by law, which should not be included in the Bidder's proposal.

The Town of Glastonbury is an Affirmative Action / Equal Opportunity Employer. Minority / Women Business Enterprises are encouraged to quote.

Mary F. Visone
Purchasing Agent

Proj. No. 054-0095 MAG/N/PS
054-0096 MAG/N/PS
Bid No. GL-2011-04-BP-120

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

INFORMATION FOR BIDDERS

SEPTEMBER 2011

1. Sealed bids (**one original and one copy**) on the attached Bid Forms will be received at the Office of the Purchasing Agent, Town Hall, 2155 Main Street, Glastonbury, Connecticut, 06033 (second level). At the designated time of opening, they will be publicly opened, read, recorded and placed on file.
2. Whenever it is deemed to be in the best interest of the Town, the Town Manager, Purchasing Agent or designated representative shall waive informalities in any and all bids. The right is reserved to reject any bid, or any part of any bid, when such action is deemed to be in the best interest of the Town of Glastonbury.
3. Bidders shall submit a Bid on a lump sum basis for the Base Bid described in the Bidding Documents as provided for in the Bid Proposal. The basis of award will be based upon the sum of the Base Bid.
4. Bids will be carefully evaluated as to conformance with stated specifications.
5. The envelope enclosing your bid should be clearly marked by bid number, time of bid opening, and date.
6. Specifications must be submitted complete in every detail and, when requested, samples shall be provided. If a bid involves any exception from stated specifications, they must be clearly noted as exceptions, underlined, and attached to the bid.
7. The Bid Documents contain the provisions required for the requested item. Information obtained from an officer, agent, or employee of the Town or any other person shall not affect the risks or obligations assumed by the Bidder or relieve him/her from fulfilling any of the conditions of the bid.
8. Each Bidder is held responsible for the examination and/or to have acquainted themselves with any conditions at the job site which would affect their work before submitting a bid. Failure to meet these criteria shall not relieve the Bidder of the responsibility of completing the bid without extra cost to the Town of Glastonbury.
9. Any bid may be withdrawn prior to the above-scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and the date specified shall not be considered. No Bidder may withdraw a bid within sixty (90) days after the actual date of the opening thereof. Should there be reasons why a bid cannot be awarded within the specified period, the time may be extended by mutual agreement between the Town and the Bidder.
10. Each bid must be accompanied by a bid bond payable to the Town for ten percent (10%) of the total amount of the bid. The bid bond of the successful Bidder will be retained until the payment bond and performance bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of a bid bond. The Town of Glastonbury will not be liable for the accrual of any interest on any certified check submitted. Cashier's checks will not be accepted.
11. A 100% Performance and Payment bond is required of the successful bidder. This bond shall cover all aspects of the specification and shall be delivered to the Purchasing Agent prior to the issuance of a purchase order. The Performance and Payment Bond will be returned upon the delivery and acceptance of the bid items.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

INFORMATION FOR BIDDERS

SEPTEMBER 2011

12. The Bidder agrees and warrants that in the submission of this sealed Bid, they will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religion, national origin, sex, or physical disability including, but not limited to blindness, unless it is shown by such Bidder that such disability prevents performance of that which must be done to successfully fulfill the terms of this sealed Bid or in any manner which is prohibited by the laws of the United States or the State of Connecticut: and further agrees to provide the Human Relations Commission with such information requested by the Commission concerning the employment practices and procedures of the Bidder. An Affirmative Action Statement will be required by the successful Bidder.
13. Bidder agrees to comply with all of the latest Federal and State Safety Standards and Regulations and certifies that all work required in this bid will conform to and comply with said standards and regulations. Bidder further agrees to indemnify and hold harmless the Town for all damages assessed against the Town as a result of Bidder's failure to comply with said standards and/or regulations.
14. All correspondence regarding any purchase made by the Town of Glastonbury shall reference the Town's purchase order number. Each shipping container shall clearly indicate both Town purchase order number and item number.
15. Bidder is required to review the Town of Glastonbury Code of Ethics adopted July 8, 2003 and effective August 1, 2003. Bidder shall acknowledge that they have reviewed the document in the area provided on the bid/proposal response page (BP). The selected Bidder will also be required to complete and sign an Acknowledgement Form prior to award. The Code of Ethics and the Acknowledgement Form can be accessed at the Town of Glastonbury website at www.glastonbury-ct.gov. Upon entering the website click on **Bids and RFP's** which will bring you to the links for the **Code of Ethics** and the **Acknowledgement Form**. If the Bidder does not have access to the internet, a copy of these documents can be obtained through the Purchasing Department at the address listed within this bid/proposal.
16. Any bidder, in order to be considered, shall be engaged primarily in the business of playground construction with a minimum of five (5) years experience and have a valid contractor's license in the State of Connecticut.
17. **Non-Resident Contractors:**

The Town is required to report names of non-resident (out-of-State) contractors to the State of Connecticut, Department of Revenue Services (DRS) to ensure that Employment Taxes and other applicable taxes are being paid by Contractors. **Upon award, all non-resident contractors must furnish a five percent (5%) sales tax guarantee bond (State Form AU-766) or a cash bond for five percent (5%) of the total contract price (State Form AU-72) to DRS even though this project is exempt from most sales and use taxes.**

See State Notice to Non-Resident Contractors SN 2005 (12). If the above bond is not provided, the Town is required to withhold five percent (5%) from the contractor's payments and forward it to the State DRS.

The Contractor must promptly furnish to the Town a copy of the Certificate of Compliance issued by the State DRS.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

INFORMATION FOR BIDDERS

SEPTEMBER 2011

18. Bidder shall include on a sheet(s) attached to its proposal a complete disclosure of all past and pending mediation, arbitration and litigation cases that the bidder or its principals (regardless of their place of employment) have been involved in for the most recent five years. Please include a statement of the issues in dispute and their resolution. Acceptability of Bidder based upon this disclosure shall lie solely with the Town.
19. Bidder or its principals, regardless of their place of employment, shall not have been convicted of, nor entered any plea of guilty, or nolo contendere, or otherwise have been found civilly liable or criminally responsible for any criminal offense or civil action. Bidder shall not be in violation of any State or local ethics standards or other offenses arising out of the submission of bids or proposals, or performance of work on public works projects or contracts.
20. Municipal construction projects are exempt from Federal Excise Taxes, as well as, State of Connecticut Sales, Use and Service Taxes and should not be include in the Bidder's proposal.
21. After award of Contract, Owner will require the Contractor's schedule of Values, which shall be submitted at the preconstruction meeting. The Schedule of Values must accurately reflect job costs and include a complete breakdown of material and labor costs.
22. All provisions of all applicable State Labor Standards must be complied with under this Contract. The execution of the Contract by the Bidder binds it to all applicable State Labor Laws and Regulations. Note that these rates change annually on July 1st and all provisions for such changes in Prevailing Wage Rates are to be included in the Bidder's Lump Sum Proposal.

All other statutory laws, to the extent they are required to be incorporated into a contract by statute, are hereby deemed fully incorporated herein and in the Contract. Violation of Prevailing Wage Law requirements may cause Contract to be terminated and the Owner reserves its rights if such termination is required.

Wage Rate Determination for this Project from the State of Connecticut is included in the Project Manual. Certified payrolls for site labor shall be submitted bi-weekly to Owner **on the correct State form**. The Owner reserves the right to, without prior notice, audit payroll checks given to workers on site in order to ascertain that wages and fringe benefits are being paid as required by the State of Connecticut. Contractor to comply with Connecticut General Statutes Section 31-53, as amended.

NOTE that bidder is to include in its bid proposal all costs required by such annual increases in the PREVAILING RATES. No Escalation Clauses are to be included in the bidder's proposal and No Escalation Clauses will be in the Contract Agreement. Bidder is to anticipate any future increases and include these costs in its quotation. Contractor's invoices will not be paid if certified payrolls are incomplete, incorrect or not received in a timely manner.

OSHA SAFETY AND HEALTH CERTIFICATION:

Effective July 1, 2009: Any Mechanic, Laborer, or Worker, who performs work in a classification listed on the prevailing wage rate schedule on any public works project covered under C.G.S. Section 31-53, both on site and on or in the public building, must have completed a federal OSHA Safety and Health course within the last 5 years.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

INFORMATION FOR BIDDERS

SEPTEMBER 2011

All Apprentices must be registered with the State of Connecticut and their number shall not exceed the number allowed by law. Otherwise, all workers must be paid at least the Journeyman rate listed including benefits.

23. Each Bidder shall submit a list of similar projects completed within the last three years. In order to be eligible for consideration, the Bidder must have successfully completed a minimum of five (5) similar projects within the last three (3) years. Please provide project name and contact information for project coordinator (name, title, address, phone number). Please also provide contract value.

IMPORTANT:

Failure to comply with general rules may result in disqualification of the Bidder.

For technical questions regarding this Bid, please contact TO Design, Attention Mark W. Fisher, Senior Project Manager, Old Post Office Plaza, 114 West Main Street, Suite 201, New Britain, CT 06051. Requests may also be sent via email at mfisher@todesignllc.com or via fax at (860) 612-1757.

For administrative questions regarding this Bid, please contact Mary F. Visone, Purchasing Agent at (860) 652-7588 or email purchasing at purchasing@glastonbury-ct.gov .

All questions, answers, and/or addenda, as applicable, will be posted to the Town's website at www.glastonbury-ct.gov. (Upon entering the website click on Bids & RFPs). The request must be received at least five (5) business days prior to the advertised response deadline.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT GENERAL CONSTRUCTION SPECIFICATIONS SEPTEMBER 2011

01.00 WORKMANSHIP, MATERIALS AND EMPLOYEES

- 01.01 Wherever in this contract the word "Engineer" is used, it shall be understood as referring to the Director of Facilities of the Town of Glastonbury acting personally or through any assistants duly authorized.
- 01.02 The entire work described herein shall be completed in accordance with the plans and specifications to the full intent and meaning of the same. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and material shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.
- 01.03 The wording "furnish", "install", "construct", "furnish and install", or any similar terms, unless specifically noted to the contrary, shall include all labor, materials, water, tools, equipment, light, power, transportation, and any other services required for the completion of the work.
- 01.04 The Contractor shall at all times enforce strict discipline and good order among his employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned to him.

02.00 SUPERINTENDENT

- 02.01 The Contractor shall keep on the work during its progress, in the absence of the Contractor, a competent Superintendent. The Superintendent shall be acceptable to the Engineer and shall fully represent the Contractor. All directions given to the Superintendent shall be binding as if given to the Contractor.

03.00 PRECONSTRUCTION MEETING

- 03.01 A Preconstruction Meeting will be held with the Engineer, Contractor, and any other interested parties prior to commencing any work. The Engineer shall arrange the meeting based on a mutually convenient time.

04.00 PERMITS

- 04.01 All permits, licenses, and fees required for the performance of the Contract work shall be secured and paid for by the Contractor. The local building permit fees will be waived.

05.00 PROPERTY ACCESS

- 05.01 The Contractor shall take all proper precautions to protect from injury or unnecessary interference, and provide proper means of access to abutting property where the existing access is cut off by the Contractor.
- 05.02 The Contractor shall take all proper precautions to protect persons from injury or unnecessary inconvenience and leave an unobstructed way along the public and private places for travelers, vehicles, and access to hydrants.
- 05.03 The Contractor shall make arrangements with the adjacent property owners for such trespass as he may reasonably anticipate in the performance of the work. All such arrangements shall be reported, in writing, to the Engineer.

06.00 PROTECTION OF THE PUBLIC AND OF WORK AND PROPERTY

- 06.01 The Contractor shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the Town from injury or loss arising in connection with the Contract.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT GENERAL CONSTRUCTION SPECIFICATIONS SEPTEMBER 2011

- 06.02 The Contractor shall adequately protect adjacent private and public property as provided by law and the Contract Documents.
- 06.03 The Contractor shall make good any damage, injury, or loss of work and to the property of the Town resulting from lack of reasonable protective precautions.
- 06.04 The Town buildings involved will be occupied and fully operational. The Contractor may be required to adjust his work schedule should the work have an adverse impact on operations. There will be no modification of the bid price should a schedule adjustment be required.*

07.00 EXISTING IMPROVEMENTS

- 07.01 The Contractor shall conduct his work so as to minimize damage to existing improvements designated to remain. Except where specifically stated otherwise in the specifications, drawings, or as directed by the Engineer, it will be the responsibility of the Contractor to restore to their original condition, as near as practical, all improvements on public or private property. This shall include:
- a. Property within and adjacent to the work area such as shrubs, walks, driveways, fences, etc.
 - b. Utility mains, ducts, poles, and services. The Contractor is hereby notified that utilities, if/where shown on the plans, are at approximate locations. These locations are subject to possible errors in the source of information and errors in transcription. The Contractor shall make certain of the exact location of all mains, ducts, poles, and services prior to excavation.

08.00 SEPARATE CONTRACTS

- 08.01 The Engineer reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. Wherever work being done by the Town of Glastonbury forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Engineer to secure the completion of the various portions of the work.

09.00 INSPECTION OF WORK

- 09.01 The Town shall provide sufficient personnel for the inspection of the work.
- 09.02 The Engineer shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and for inspection.
- 09.03 If the specifications or the Engineer's instructions require any work to be specially tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection and, if the inspection is by another authority other than the Engineer, of the date fixed for such inspection. Inspections by the Engineer shall be made promptly. If any work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination and properly restored at the Contractor's expense.
- 09.04 Re-inspection of any work may be ordered by the Engineer. If such work is found to be in accordance with the Contract Documents, the Town shall pay the cost of re-inspection and replacement. If such work is not in accordance with the Contract Documents, the Contractor shall pay such cost.

10.00 RIGHT TO INCREASE OR DECREASE WORK

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT GENERAL CONSTRUCTION SPECIFICATIONS SEPTEMBER 2011

10.01 The Town shall have the right to increase or decrease the amount of work herein specified as may be required.

11.00 RIGHT OF ENGINEER TO STOP WORK FOR WEATHER CONDITIONS

11.01 Should the work, in the opinion of the Engineer, be in danger by reason of inclemency of weather, or could not be finished in time to prevent such danger, the Contractor shall cease operations upon order of the Engineer, and shall not resume them until ordered to do so by the Engineer when the weather conditions are favorable. The Contractor shall, upon such orders, discontinue work, remove all materials or appliances for or in use upon the work, and place the premises in proper condition for use by the public during the time the work is suspended as herein provided, without cost to the Town.

12.00 CONTRACTOR TO BE RESPONSIBLE FOR IMPERFECT WORK OR MATERIALS

12.01 Any faithful work or imperfect material that may be discovered before the acceptance and the payment of the work shall be corrected upon the order of the Engineer. The acceptance and payment of the work does not in any manner relieve the Contractor of his obligation to construct work in the proper manner and the use of materials herein specified.

13.00 TOWN MAY NOTIFY CONTRACTOR IF WORK IS NOT CARRIED ON SATISFACTORILY

13.01 If, in the opinion of the Engineer, the Contractor is not proceeding with the work at a sufficient rate of progress so as to finish in the time specified, or has abandoned said work, or is not complying with the terms and stipulations or the Contract and specifications, the Engineer may serve notice on the Contractor to adopt such methods as will ensure the completion of the work in the time specified.

13.02 If, within five days after the Engineer has notified the Contractor that his work is not being carried on satisfactorily as before mentioned, the Engineer shall have the right to annul the Contract and manage the work under the direction of the Engineer, or re-let, for the very best interest of the Town as a new contract, the work under said new Contract shall be considered the responsibility of the defaulting Contractor.

13.03 Additional costs incurred over and above the original Contract shall be borne by the Performance Bond.

14.00 DEDUCTIONS FOR UNCORRECTED WORK

14.01 If the Engineer deems it inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made there for.

14.02 The Contractor shall promptly remove from the premises all materials condemned by the Engineer as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Town, and shall bear the expense of making good all work by other contractors destroyed or damaged by such removal or replacement.

14.03 If the Contractor does not remove such condemned work and materials as promptly as possible after written notice, the Engineer may remove them and store the materials at the expense of the Contractor.

15.00 CLEANING UP

15.01 The Contractor must remove all debris of every description as the work progresses and leave the surroundings in a neat and orderly condition to the satisfaction of the Engineer.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT GENERAL CONSTRUCTION SPECIFICATIONS SEPTEMBER 2011

15.02 Upon completion, and before acceptance and final payment, the Contractor shall remove from the site all equipment, forms, surplus material, rubbish and miscellaneous debris and leave the site in a neat and presentable condition.

16.00 ROYALTIES AND PATENTS

16.01 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Town of Glastonbury harmless from loss on account hereof, except that the Town of Glastonbury shall be responsible for all such loss when a particular manufacturer, product, or process is specified by the Town of Glastonbury.

17.00 ERRORS OR CONFLICT IN DRAWINGS AND SPECIFICATIONS

17.01 The Contractor shall immediately notify the Owner/Engineer should he find any errors or conflicts in the contract documents. The Owner/Engineer shall render his interpretation or instruction in writing on the items as soon as possible.

17.02 Any work undertaken by the Contractor containing possible errors or conflicts will be done at his own risk unless he has received prior written approval from the Owner/Engineer.

17.03 The Contractor shall be responsible for estimating and supplying all quantities, and where clarification or additional information is required, a request in writing to the Owner/Engineer shall be made. No extra charge or compensation will be allowed the Contractor unless there is a change in scope or dimension of the project resulting in need for extra material, equipment and/or labor. Said differences are to be handled under Article 18.

18.00 EXTRA WORK AND EXTRA COST

18.01 The Owner, without invalidating the contract documents, may order extra work or make changes by altering, adding to or deducting from the work, the contract price being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim of extension of time caused thereby shall be adjusted at the time of ordering the change.

18.02 No extra work or change shall be performed unless in pursuance of a written order from the Owner/Engineer, with the agreed price prior to the commencement of the work, and no claim for an addition to the contract price shall be valid unless so ordered.

18.03 The value of any such work or change shall be determined, in one or more of the following ways:

- a) By estimate and acceptance on a lump sum.
- b) By unit prices named in the contract or subsequently agreed upon.
- c) By cost and percentage or by cost and a final fee.

18.04 When required by the Engineer, the Contractor shall provide a detailed scope of work breaking down the added work and credit for eliminated work. The total cost of the change will be the delta cost between the added cost less the credit, plus markup on the total.

- a) Cost shall include all labor, materials, supervision, applicable taxes, delivery charges, equipment rental, material handling, and amounts of trade discounts for large quantities. Provide only the costs of labor and supervision directly attributable to the change.
- b) Contractor shall provide a detailed breakdown as requested by the Engineer

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT GENERAL CONSTRUCTION SPECIFICATIONS SEPTEMBER 2011

- c) Prime Contractors or Subcontractors shall be permitted a 15% markup (overhead and profit) on all "Self-Performed Work". Prime Contractor or Subcontractors shall be permitted only 10% markup (overhead and profit) on Subcontracted work.
- d) Contractor shall include a Revised Construction Schedule showing the impact of the change; including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting a Time Extension to the Contract completion date.

19.00 SUBSTITUTIONS

- 19.01 The Contractor shall use materials as specified unless material list is of an open nature. Material other than specified will be permitted only after written application, including four (4) copies of specifications, is made by the Contractor and written approval received from the Engineer or Owner.

The material installed in the job site shall be new and of the quality specified.

The manufacturer's recommendation shall be followed for the installation of all equipment.

20.00 PRODUCT SUBMITTALS

- 20.01 Prior to ordering materials, the Contractor shall submit submittals as specified in the detailed specification sections. Three (3) copies of the submittals shall be forwarded to the Engineer for review and approval.
- 20.02 Submittals shall indicate specification Section for each product. Submittals not containing all the required information shall be returned to the contractor for re-submittal.

21.00 OWNER'S ACCEPTANCE

- 21.01 Within seven (7) days of the Contractor's notification that the installation is substantially complete, the Owner's authorized representative shall inspect the installation. The Owner, with the Contractor, shall take necessary steps to inspect the installation. Upon completion of the inspection, the Owner or the Owner's authorized representative may either accept the work outright or prepare a "Punch List" that upon completion by the Contractor and acceptance by the Owner will signify final acceptance provided that all other applicable terms and provisions of the Contract have been completed to the Owner's satisfaction.

22.00 RESPONSIBILITY FOR MAINTENANCE

- 22.01 It will be the Contractor's responsibility to maintain the work as specified in the detailed specifications during the warranty period.

23.00 SERVICE BY THE CONTRACTOR

- 23.01 The Contractor shall maintain the work as specified during the warranty period.

24.00 WARRANTY

- 24.01 The guarantee shall be as specified in the respective sections of the specification.
- 24.02 The Contractor shall be responsible for the repair and/or replacement of all defective work and materials. All repair work shall be completed in a timely fashion.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT GENERAL CONSTRUCTION SPECIFICATIONS SEPTEMBER 2011

- 24.04 Should the Contractor not respond promptly, the Owner may take any action he deems necessary to repair the defect and prevent further damage to his property, including the hiring of another contractor, or the repairing of such a defect with material supplied by the Contractor. In this event, the Contractor shall be liable for expenses incurred and property damages suffered by the Owner.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

SPECIAL CONDITIONS

SEPTEMBER 2011

01.00 NOTICE TO CONTRACTOR

01.01 Intent of Contract: The intent of the Contract is to prescribe a complete work or improvement which the Contractor undertakes to do, in full compliance with the specifications, plans, special provisions, proposal and Contract. The Contractor shall perform all work in close conformity with the plans or as modified by written orders, including the furnishing of all materials, supplies, transportation, labor, and all other things necessary to the satisfactory prosecution and completion of the project.

The scope of the work shall include all labor, materials and equipment needed to provide and install the emergency power system and the associated equipment improvements described in the plans and specifications at the Glastonbury East Hartford Elementary Magnet School at 95 Oak Street, Glastonbury, CT 06033.

02.00 COMMUNICATIONS

- 02.01 All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.
- 02.02 Any notice to, or demand upon, the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may, from time to time, designate) in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- 02.03 All papers required to be delivered to the Town shall, unless otherwise specified in writing to the Contractor, be delivered to the Director of Facilities, 2143 Main Street, Glastonbury, CT 06033, and any notice to, or demand upon, the Town shall be delivered at the above address in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office or to such other representatives of the Town, or to such other address as the Town may subsequently specify in writing to the Contractor for such purpose.
- 02.04 Any such notice shall be deemed to have been given as of the time of actual delivery or, in case of mailing, when the same should have been received in due course of post or, in the case of telegrams, at the time of actual receipt, as the case may be.

03.00 INSURANCE

Contractor shall agree to maintain in force at all times during which services are to be performed the following coverages placed with company(ies) licensed by the State of Connecticut which have at least an "A-" VIII policyholders rating according to Best Publication's latest edition Key Rating Guide.

General Liability*	Each Occurrence	(Minimum Limits) \$1,000,000
	General Aggregate	\$2,000,000
	Products/Completed Operations Aggregate	\$2,000,000
Auto Liability*	Combined Single Limit	
	Each Accident	\$1,000,000

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

SPECIAL CONDITIONS

SEPTEMBER 2011

Umbrella* (Excess Liability)	Each Occurrence Aggregate	\$5,000,000 \$5,000,000
---------------------------------	------------------------------	----------------------------

*The insurance shall cover the Bidder and all of its agents, employees and sub-contractors and other providers of services and shall name the **Town and the Board of Education their employees and agents and the Capital Region Education Council (CREC)**. Coverage is to be provided on a primary, noncontributory basis. Waiver of subrogation is to be included. **These requirements shall be clearly stated in the remarks section on the Bidders Certificate of Insurance.**

If any policy is written on a "Claims Made" basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.

Workers' Compensation and Employers' Liability	WC Statutory Limits	
	EL Each Accident	\$100,000
	EL Disease Each Employee	\$100,000
	EL Disease Policy Limit	\$500,000

Original, completed Certificates of Insurance must be presented to the Town of Glastonbury prior to purchase order/contract issuance. Vendor agrees to provide replacement/renewal certificates at least 60 days prior to the expiration of the policy. Should any of the above described policies be cancelled before the expiration date, written notice must be made to the Town of Glastonbury 30 days prior to cancellation.

INDEMNIFICATION

To the fullest extent permitted by law, the Bidder shall indemnify and hold harmless the Town and the Board of Education and its consultants, agents, and employees and CREC from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, attorneys and other professionals and court and arbitration costs) to the extent arising out of or resulting from the performance of the Bidder's work, provided that such claim, damage, loss or expense is caused in whole or in part by any negligent act or omission by the Bidder, or breach of its obligations herein or by any person or organization directly or indirectly employed or engaged by the Bidder to perform or furnish either of the services, or anyone for whose acts the Bidder may be liable.

04.00 WORK BY OTHERS

04.01 Private utilities, contractors, developers or other parties may be expected to be working within the Contract area during this Contract. It shall be the responsibility of the contractor to coordinate his work with the work being done by others in order that the construction shall proceed in an efficient and logical manner. The Contractor shall have no claim or claims whatever against the Town, the Engineer, or other parties due to delays or other reasons caused by the work by others or his failure to coordinate such work.

05.00 CONTRACTOR'S WORK AND STORAGE AREA

05.01 The Contractor shall contact the Town to determine if any specific locations will be designated, or gain its approval prior to using any area for storage of equipment, materials and trailers during the period of this Contract. The Contractor shall confine his work/storage area to the limits as designated or approved and shall be responsible for the security of the work/storage area. Upon completion of the Contract, the

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

SPECIAL CONDITIONS

SEPTEMBER 2011

Contractor shall remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Engineer and at no cost to the Town.

06.00 DISPOSAL AREA

06.01 The Tryon Street Bulky Waste Facility will be available to the Contractor, at no charge, for disposal of materials that are accepted at that facility. No materials containing lead-based paint of any level shall be dumped at the Tryon Street facility. The Contractor is required to obtain a disposal area for all other unsuitable or surplus materials at no cost to the Town.

07.00 DUST CONTROL

07.01 During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use water or calcium chloride for more effective dust control, the Contractor shall furnish and spread the material, as directed, without additional compensation.

08.00 PROTECTION OF EXISTING UTILITIES

08.01 Before starting any excavation, the Contractor shall submit to the Engineer plans or details showing the proposed method the Contractor will use to support and protect all existing utilities during construction. The furnishing of such plans and details shall not serve to relieve the Contractor of any responsibility for the proper conduct of the work.

08.02 There will be no extra payment for submitting plans or details for supporting and protecting all existing utilities during construction.

09.00 TIME FOR COMPLETION/NOTICE TO PROCEED

09.01 Within ten (10) calendar days after the date of the Notice of Award, the Contractor must provide the appropriate insurance certificates to the Town Purchasing Agent and shall be issued a Notice to Proceed and a Purchase Order prior to initiating any work on the project.

09.02 Work shall commence within thirty (30) days of the date of the Notice to Proceed/Purchase Order.

09.03 After the work has begun, it will continue in an orderly fashion and shall be fully completed within 60 consecutive calendar days from the date of commencement. The Engineer reserves the right to extend the contract an additional thirty (30) days by mutual written agreement.

09.04 Weather permitting, it is the intention of the Town to have all work required under this Contract completed no later than May 1, 2012. In no case, however, shall the work be completed any later than June 1, 2012.

09.05 *Because the facilities shall remain open during the installation period, the Contractor shall make every reasonable effort to complete the installation as expeditiously as possible.*

10.00 MEASUREMENT AND PAYMENT

10.01 All direct, indirect, or incidental costs of work and/or services required by these specifications shall be included in the Lump Sum price.

10.02 Monthly progress payments will be made, based on the approved Schedule of Values, for work that has progressed in accordance with the contract documents, subject to a deduction of five percent (5%) of the amount of the application for payment to be retained by the Owner until completion of the entire contract in an acceptable manner and two and one half percent (2.5%) until the applicable warranty period has expired

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

SPECIAL CONDITIONS

SEPTEMBER 2011

and all required inspections have been completed and results have been submitted and approved by the Engineer.

11.00 COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS

- 11.01 This award of bid is subject to the conformance of the Contractor to all Federal, State, and Local laws, statutes, regulations, ordinances or other requirements that are applicable to the type of work contained in these specifications.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PREVAILING WAGES

SEPTEMBER 2011

INSERT PREVAILING WAGES HERE

Project: East Hartford Magnet School, Phase IV Playscape

**Minimum Rates and Classifications
for Heavy/Highway Construction**

**Connecticut Department of Labor
Wage and Workplace Standards Division**

ID#: H 16439

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number:

Project Town Glastonbury

FAP Number:

State Number:

Project: East Hartford Magnet School, Phase IV Playscape

CLASSIFICATION	Hourly Rate	Benefits
01) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. **See Laborers Group 5 and 7**		
1) Boilermaker	33.79	34% + 8.96
1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons	32.50	24.55
2) Carpenters, Piledrivermen	29.11	20.29
2a) Diver Tenders	29.11	20.29

As of:

Tuesday, May 01, 2012

Project: East Hartford Magnet School, Phase IV Playscape

3) Divers	37.57	20.29
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	41.35	16.35
4a) Painters: Brush and Roller	29.17	16.35
4b) Painters: Spray Only	31.47	15.40
4c) Painters: Steel Only	30.47	15.40
4d) Painters: Blast and Spray	32.17	16.35
4e) Painters: Tanks, Tower and Swing	31.17	16.35
5) Electrician (Trade License required: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	36.40	21.31

As of:

Tuesday, May 01, 2012

Project: East Hartford Magnet School, Phase IV Playscape

6) Ironworkers: (Ornamental, Reinforcing, Structural, and Precast Concrete Erection)	33.50	27.03 + a
---	--------------	------------------

7) Plumbers (Trade License required: (P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2) and Pipefitters (Including HVAC Work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4 G-1, G-2, G-8, G-9)	38.67	24.46
---	--------------	--------------

----LABORERS---- - Last updated 4/11/12

8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist	25.80	16.45
--	--------------	--------------

9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen, air tool operator	26.05	16.45
---	--------------	--------------

10) Group 3: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license)	26.30	16.45
---	--------------	--------------

11) Group 4: Jackhammer/Pavement breaker (handheld); mason tenders (cement/concrete), catch basin builders, asphalt rakers, air track operators, block pavers and curb setters	26.30	16.45
---	--------------	--------------

12) Group 5: Toxic waste removal (non-mechanical systems)	27.80	16.45
--	--------------	--------------

Project: East Hartford Magnet School, Phase IV Playscape

13) Group 6: Blasters 27.55 16.45

Group 7: Asbestos Removal, non-mechanical systems (does not include leaded joint pipe) 26.80 16.45

Group 8: Traffic control signalmen 16.00 16.45

----LABORERS (TUNNEL CONSTRUCTION, FREE AIR). Shield Drive and Liner Plate Tunnels in Free Air.---- Last updated 4/11/12----

13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men, Shaft & Tunnel Steel & Rodmen, Shield & Erector, Arm Operator, Cable Tenders 31.28 16.45 + a

13b) Brakemen, Trackmen 30.37 16.45 + a

----CLEANING, CONCRETE AND CAULKING TUNNEL----Last updated 4/11/12----

14) Concrete Workers, Form Movers, and Strippers 30.37 16.45 + a

Project: East Hartford Magnet School, Phase IV Playscape

15) Form Erectors	30.68	16.45 + a
--------------------------	--------------	------------------

----ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND
TUNNEL IN FREE AIR:----Last updated 4/11/12----

16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers	30.37	16.45 + a
--	--------------	------------------

17) Laborers Topside, Cage Tenders, Bellman	30.26	16.45 + a
--	--------------	------------------

18) Miners	31.28	16.45 + a
-------------------	--------------	------------------

----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED
AIR: ----Last updated 4/11/12----

18a) Blaster	37.41	16.45 + a
---------------------	--------------	------------------

19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	37.22	16.45 + a
---	--------------	------------------

As of:

Tuesday, May 01, 2012

Project: East Hartford Magnet School, Phase IV Playscape

20) Change House Attendants, Powder Watchmen, Top on Iron Bolts 35.35 16.45 + a

21) Mucking Machine Operator 37.97 16.45 + a

----TRUCK DRIVERS----(*see note below)

Two axle trucks 27.88 17.22 + a

Three axle trucks; two axle ready mix 27.98 17.22 + a

Three axle ready mix 28.03 17.22 + a

Four axle trucks, heavy duty trailer (up to 40 tons) 28.08 17.22 + a

Four axle ready-mix 28.13 17.22 + a

As of: Tuesday, May 01, 2012

Project: East Hartford Magnet School, Phase IV Playscape

Heavy duty trailer (40 tons and over)	28.33	17.22 + a
Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	28.13	17.22 + a

----POWER EQUIPMENT OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), Work Boat 26 ft. & Over. (Trade License Required)	35.50	20.50 + a
Group 2: Cranes (100 ton rate capacity and over); Backhoe/Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer). (Trade License Required)	35.18	20.50 + a
Group 3: Excavator/Backhoe under 2 cubic yards; Cranes (under 100 ton rated capacity), Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.). (Trade License Required)	34.44	20.50 + a
Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper)	34.05	20.50 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	33.46	20.50 + a

Project: East Hartford Magnet School, Phase IV Playscape

Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	33.46	20.50 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	33.15	20.50 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and Under Mandrel).	32.81	20.50 + a
Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	32.41	20.50 + a
Group 9: Front End Loader (under 3 cubic yards), Skid Steer Loader regardless of attachments (Bobcat or Similar); Fork Lift, Power Chipper; Landscape Equipment (including hydroseeder).	31.98	20.50 + a
Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	29.94	20.50 + a
Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	29.94	20.50 + a
Group 12: Wellpoint Operator.	29.88	20.50 + a

Project: East Hartford Magnet School, Phase IV Playscape

Group 13: Compressor Battery Operator.	29.30	20.50 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	28.16	20.50 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	27.75	20.50 + a
Group 16: Maintenance Engineer/Oiler	27.10	20.50 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	31.41	20.50 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	28.99	20.50 + a

****NOTE: SEE BELOW**

----LINE CONSTRUCTION----(Railroad Construction and Maintenance)----Last updated 9/3/2010----

As of: Tuesday, May 01, 2012

Project: East Hartford Magnet School, Phase IV Playscape

20) Lineman, Cable Splicer, Dynamite Man	44.36	3% + 13.70
21) Heavy Equipment Operator	39.92	3% + 13.70
22) Equipment Operator, Tractor Trailer Driver, Material Men	37.71	3% + 13.70
23) Driver Groundmen	33.27	3% + 13.70
----LINE CONSTRUCTION----Last updated 4/17/09----		
24) Driver Groundmen	30.92	6.5% + 9.70
25) Groundmen	22.67	6.5% + 6.20
26) Heavy Equipment Operators	37.10	6.5% + 10.70

Project: East Hartford Magnet School, Phase IV Playscape

27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20
28) Material Men, Tractor Trailer Drivers, Equipment Operators	35.04	6.5% + 10.45

As of:

Tuesday, May 01, 2012

Project: East Hartford Magnet School, Phase IV Playscape

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

~Connecticut General Statute Section 31-55a: Annual Adjustments to wage rates by contractors doing state work ~

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

As of:

Tuesday, May 01, 2012

Project: East Hartford Magnet School, Phase IV Playscape

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of:

Tuesday, May 01, 2012

AIA[®] Document A310[™] – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

Town of Glastonbury
2155 Main Street
Glastonbury, CT

BOND AMOUNT: \$**PROJECT:**

Glastonbury, East Hartford Elementary Magnet School
95 Oak Street
Glastonbury, CT
State Project #: 054-0095 MAG/N/PS
054-0096 MAG/N/PS

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init.

AIA Document A310[™] – 2010. Copyright © 1963, 1970 and 2010 by The American Institute of Architects. All rights reserved. WARNING: This AIA[®] Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA[®] Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. This document was produced by AIA software at 08:28:51 on 03/26/2012 under Order No.0817397088_1 which expires on 08/27/2012, and is not for resale.
User Notes:

(1464166215)

Signed and sealed this _____ day of _____, 2012

(Contractor as Principal) (Seal)

(Witness)

(Title)

(Surety) (Seal)

(Witness)

(Title)

Init.

User Notes:

 **AIA** Document A312™ – 2010

Performance Bond

CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, legal status and address)

Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

The Playgrounds for the Glastonbury East Hartford Elementary Magnet School
95 Oak Street, Glastonbury, CT
Project No. 054-0095 MAG N PS and 054-0096 MAG N PS
Bid No. GL-2011-04-BP-120

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond. None See Section 16

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

SURETY

Company: *(Corporate Seal)*

Signature: _____
Name and Title:

Signature: _____
Name and Title:

(Any additional signatures appear on the last page of this Performance Bond.)

(FOR INFORMATION ONLY - Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

Mark W. Fisher
Senior Project Manager
TO Design, LLC
114 West Main Street, Suite 201
New Britain, CT 06051

(Row deleted)

860-612-1700 x20
mfisher@todesignllc.com

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

Init.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

SURETY

Company:

(Corporate Seal)

Company:

(Corporate Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

Address: _____

Address: _____

Init.



AIA[®]

Document A312™ – 2010

Payment Bond

CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, legal status and address)

Town of Glastonbury
2155 Main Street
Glastonbury, CT 06033

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

The Playgrounds for the Glastonbury East Hartford Elementary Magnet School
95 Oak Street, Glastonbury, CT
Project No. 054-0095 MAG N PS and 054-0096 MAG N PS
Bid No. GI-2011-04-BP-120

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: None See Section 18

CONTRACTOR AS PRINCIPAL

Company *(Corporate Seal)*

SURETY

Company *(Corporate Seal)*

Signature: _____
Name and
Title:

Signature: _____
Name and
Title:

(Any additional signatures appear on the last page of this Payment Bond)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

Mark W. Fisher
Senior Project Manager
TO Design, LLC
114 West Main Street, Suite 201
New Britain, CT 06051

(Row deleted)

860-612-1700 x20
mfisher@todesignllc.com

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

init

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

Init.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

SURETY

Company:

(Corporate Seal)

Company:

(Corporate Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

Address: _____

Address: _____

Init.

AIA Document A312™ – 2010 Payment Bond. The American Institute of Architects. All rights reserved. WARNING: This AIA® Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA® Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. This document was produced by AIA software at 23 58 56 on 06/07/2011 under Order No 5469105428_1 which expires on 08/27/2011, and is not for resale

User Notes:

(1782863441)

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

BID PROPOSAL

SEPTEMBER 2011

Proposal of _____
(hereinafter called "Bidder"), organized and existing under the laws of the State of _____
_____, doing business as _____
_____.

To the Town of Glastonbury (hereinafter called "Town").

In compliance with your Invitation to Bid, the Bidder hereby proposes to furnish and/or services as per Bid Number GL-2011-04- (BP-120) in strict accordance with the Bid Documents, within the time set forth therein, and at the prices stated below.

By submission of this bid, the Bidder certifies, and in the case of a joint bid each party thereto certifies as to their own organization that this bid has been arrived at independently without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor.

The Bidder acknowledges receipt of the following Addendum:

Addendum #1 _____

Addendum #2 _____

Addendum #3 _____

It is the responsibility of the bidder to check the Town's website for any Addendum before submitting the bid.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

BID PROPOSAL

SEPTEMBER 2011

TOTAL BID AMOUNT:

BASE BID:

Furnish and install Playgrounds for the Glastonbury East Hartford Elementary Magnet School as specified in the Plans and Specifications for Bid GL-2011-04-BP-120.

NUMERIC AMOUNT: \$ _____

WRITTEN AMOUNT: \$ _____

Other Items Required with Submission of Bid Proposal

The following bid checklist describes items required for inclusion with the above-referenced bid proposal package. It is provided for the convenience of the bidders and, therefore, should not be assumed to be a complete list.

- _____ Bid Bond (10% of total bid amount).
- _____ List of similar projects completed within last three (3) years. A minimum of five (5) are required.
- _____ Acknowledgement of Addendums in Bid Proposal (as applicable).
- _____ Acknowledgement of Code of Ethics in Bid Proposal.
- _____ Sealed bids, one original and one copy.
- _____ Disclosure of past and pending mediation, arbitration and litigation cases that the Bidder or its principals have been involved in for the most recent five years (if applicable).
- _____ Copy of Bidder's Contractor's License (State of Connecticut).

It is the responsibility of the Respondent to clearly mark the outside of the bid envelope with the Bid Number, Date and Time of Bid Opening, and it also THE RESPONSIBILITY OF THE BIDDER TO CHECK THE TOWN'S WEBSITE BEFORE SUBMITTING BID FOR ADDENDUMS POSTED PRIOR TO BID OPENING.

Name of Bidder: _____

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

BID PROPOSAL

SEPTEMBER 2011

CODE OF ETHICS

I/We have reviewed a copy of the Town of Glastonbury's Code of Ethics and agree to submit a Consultant Acknowledgement Form if I/We are selected. Yes _____ No _____*

*Bidder is advised that effective August 1, 2003, the Town of Glastonbury cannot consider any bid or proposal where the Bidder has not agreed to the above statement.

Respectfully submitted:

Type or Print Name of Individual

Doing Business as (Trade Name)

Signature of Individual

Street Address

Title

City, State, Zip Code

Date

Telephone Number/Fax Number

E-Mail Address

SS# or TIN#

(Seal – If bid is by a Corporation)

Attest

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

BID PROPOSAL

SEPTEMBER 2011

INSERT LANDSCAPE STRUCTURES 2011 PLAY EQUIPMENT WARRANTY NEXT PAGE



• **100-Year Limited Warranty** On all PlayBooster®, PlayShaper® and PlaySense® aluminum posts, stainless steel fasteners, clamps, beams and caps against structural failure due to corrosion/natural deterioration or manufacturing defects, and on PlayBooster, Evos™ and Weevos™ steel posts and arches against structural failure due to material or manufacturing defects.

• **15-Year Limited Warranty** On all plastic components (including TuffTimbers™ edging), all steel components (except 100 year steel posts), Mobius® climbers, decks and TenderTuff™ coatings (except Wiggle Ladders, Chain Ladders and Swing Chain) against structural failure due to material or manufacturing defects. TuffTurf® tiles against material or manufacturing defects.

• **10-Year Limited Warranty** On concrete products against structural failure due to natural deterioration or manufacturing defects. Does not cover minor chips, hairline cracks or efflorescence.

• **8-Year Limited Warranty** On Aeronet™ climbers and climbing cables against defects in materials or manufacturing defects. On CoolToppers® fabric against failure from significant fading, deterioration, breakdown, mildew, outdoor heat, cold or discoloration. This warranty is limited to the design loads as stated in the specifications found in the technical information.

• **3-Year Limited Warranty** On all other parts, i.e.: CableCore® products, swing seats and hangers, grills, Mobius climber handholds, Wiggle Ladders, Chain Ladders and Swing Chain, Track Ride trolleys and bumpers, all rocking equipment including Sway Fun® gliders, PVC bellows material, HealthBeat™ hydraulic cylinders, Seesaws, Wiggle Ring Bridge, etc., against failure due to corrosion/natural deterioration or manufacturing defects.

This warranty does not include any cosmetic issues or wear and tear from normal use. It is valid only if the playstructures and/or equipment are erected to conform with Landscape Structures' installation instructions and maintained according to the maintenance procedures furnished by Landscape Structures Inc. For a full text of the warranty, contact your playground consultant.



2011 Play Equipment Warranty

You have our word.

Landscape Structures Inc. warrants that all playstructures and/or equipment sold will conform in kind and in quality to the specifications manual for the products identified in the Acknowledgment of Order and will be free of defects in manufacturing and material. Seller further warrants:

All the warranties commence on date of Seller's invoice. Should any failure to conform to the above express warranties appear within the applicable warranty period, Seller shall, upon being notified in writing promptly after discovery of the defect and within the applicable warranty period, correct such nonconformity either by repairing any defective part or parts, or by making available a replacement part within 60 days of written notification. Seller shall deliver the repaired or replacement part or parts to the site free of charge, but will not be responsible for providing labor or the cost of labor for the removal of the defective part or parts and the installation of any replacement part or parts. Replacement parts will be warranted for the balance of the original warranty.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

The remedies hereby provided shall be the exclusive and sole remedies of the purchaser. Seller shall not be liable for any direct, indirect, special, incidental or consequential damages.

Seller neither assumes nor authorizes any employee, representative or any other person to assume for Seller any other liability in connection with the sale or use of the structures sold, and there are no oral agreements or warranties collateral to or affecting this agreement. The warranty stated above is valid only if the structures and or equipment are erected in conformance with Landscape Structures' installation instructions and maintained according to the maintenance procedures furnished by Landscape Structures Inc.; have been subjected to normal use for the purpose for which the goods were designed, have not been subject to misuse, negligence, vandalism, or accident; have not been subjected to addition or substitution of parts; and have not been modified, altered, or repaired by persons other than Seller or Seller's designees in any respect which, in the judgement of Seller, affects the condition or operation of the structures. To make a claim, send your written statement of claim, along with the original job number or invoice number to: Landscape Structures Inc. 601 7th Street South, Delano, Minnesota, 55328-8605.

Signed:

Chairman

Date: 01/01/2011

SECTION 01290 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Submit the schedule of values to the Landscape Architect at earliest possible date, but no later than seven days before the submittal of initial Applications for Payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values.
 - 1. Arrange schedule of values consistent with format of AIA Document G703
 - 1. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents.
 - 2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.

4. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Landscape Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

PAYMENT PROCEDURES

SEPTEMBER 2011

- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Landscape Architect
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Submittal schedule (preliminary if not final).
 5. List of Contractor's staff assignments.
 6. List of Contractor's principal consultants.
 7. Copies of building permits.
 8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 9. Initial progress report.
 10. Report of preconstruction conference.
 11. Certificates of insurance and insurance policies.
 12. Performance and payment bonds.
 13. Data needed to acquire Owner's insurance.
- H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final liquidated damages settlement statement.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL
GLASTONBURY, CT **PAYMENT PROCEDURES** **SEPTEMBER 2011**

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01290

**PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET
SCHOOL**

GLASTONBURY, CT

SITWORK

SEPTEMBER 2011

SECTION 02000 – SITEWORK (GENERAL)

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION

- A. This project involves the installation of play equipment, fencing and child safe surfacing.

1.3 QUALITY ASSURANCE

- A. Obtain and pay for all required inspections, permits and fees. Provide notices required by governmental authorities.
- B. Comply with all applicable local, state and federal requirements regarding materials, methods of work and disposal of excess and waste materials.

1.4 GENERAL JOB CONDITIONS

- A. Locate and identify existing underground and overhead services and utilities within contract limit work areas. Provide adequate means of protection of utilities and services designated to remain. Repair utilities damage during sitework operations at Contractor's expense.
- B. Protect and maintain all existing utility appurtenances and improvements except items designated for removal.
- C. When uncharted or incorrectly charted underground piping or other utilities and services are encountered during sitework operations, notify the applicable utility company immediately to obtain procedure directions. Cooperate with the applicable utility company in maintaining active service operation.
- D. Locate, protect and maintain bench marks, monuments, control points and project engineering reference points. Re-establish disturbed or destroyed items at Contractor's expense.
- E. Perform sitework operations to assure minimum interference with streets, walks and other adjacent facilities.
- F. Obtain written permission when required to close or obstruct driveways, walks or adjacent facilities. Provide alternative routes around closed or obstructed traffic ways when required.
- G. Control dust caused by the work with calcium chloride conforming to ASTM D-98, or water. Special care shall be taken by the Contractor to control dust and debris due to construction. Dampen surfaces prior to significant earthwork or other grading operations and clean the site on a regular basis to minimize unsightly or dangerous debris.

**PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET
SCHOOL**

GLASTONBURY, CT

SITWORK

SEPTEMBER 2011

- H. Protect existing building, paving and other services or facilities on site and adjacent to the site from damage caused by sitework operation. Cost of repair and restoration of damaged items shall be at the Contractor's expense.
 - I. All required submittals shall be in accordance with Division 1 submittal requirements.
 - J. Coordinate all work of each section with related work of other sections. Failure to coordinate properly will not reduce the obligation to meet the standards of acceptance of the various elements of work contained herein.
 - K. Examine all work that the work of each section is contingent upon and report any deficiencies to the Owner's Representative. Commencement of work will be construed to mean complete acceptance of the preparatory work of others. No adjustment will be made for discrepancies brought to the Owner's Representative attention after work has begun.
- 1.5 TRAFFIC MAINTENANCE, SAFETY AND PROTECTION

- A. The contractor shall provide for maintenance and protection of traffic, including permits and plans as required per the City of Glastonbury.
- B. Provide, place, move, maintain and dismantle such barricades, warning signs and lights as necessary to adequately protect the work and provide for public safety.
- C. Furnish flagmen or police as required for the proper direction and control of traffic during the construction period.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. As selected by Contractor, except as indicated

PART 3 – EXECUTION

3.1 PREPARATION

- A. Examine the areas and conditions under which sitework is performed. Do not proceed with the work until unsatisfactory conditions are corrected.

END OF SECTION 02000

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

EARTHWORK

SEPTEMBER 2011

following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:

1. Excavation of Trenches, and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- (1065-mm-) wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp (103-kW) flywheel power with bucket-curling force of not less than 28,090 lbf (125 kN) and stick-crowd force of not less than 18,650 lbf (83 kN); measured according to SAE J-1179.
 2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 210-hp (157-kW) flywheel power and developing a minimum of 48,510-lbf (216-kN) breakout force with a general-purpose bare bucket; measured according to SAE J-732.
- F. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- G. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

- A. Product Data: For the following:
1. Each type of plastic warning tape.
 2. Geotextile.
- B. Samples: 12-by-12-inch (300-by-300-mm) sample of separation geotextile.
- C. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earthwork operations. Submit before earthwork begins.

1.5 QUALITY ASSURANCE

- A. Preexcavation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Landscape Architect and then only after arranging to provide temporary utility services according to requirements indicated.
1. Notify Landscape Architect not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Landscape Architect's written permission.
 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Preparing subgrades.
 - 2. Excavating and backfilling
- B. Related Sections include the following:
 - 1. Division 2 Section "Exterior Plants" for planting bed establishment and tree and shrub pit excavation and planting.
 - 2. Division 2 Section "Processed Aggregate" for base course.
 - 3. Division 2 Section "Gravel" for subbase course.

1.3 DEFINITIONS

- A. Backfill: Soil material used to fill an excavation.
- B. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- C. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Landscape Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Bulk excavation: excavation more than 10 feet (3 m) in width and more than 30 feet (9 m) in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Landscape Architect. Unauthorized excavation, as well as remedial work directed by Landscape Architect, shall be without additional compensation.
- D. Fill: Soil materials used to raise existing grades.
- E. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. (0.76 cu. m) for bulk excavation or 3/4 cu. yd. (0.57 cu. m) for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

EARTHWORK

SEPTEMBER 2011

PART 2 - PRODUCTS

2.1 GENERAL FILL

- A. Excavated material is acceptable if the following criteria are met:
 - 1. Material contains no organic or perishable matter;
 - 2. Material contain no stone larger than three (3") inches; and
 - 3. Material has less than ten (10%) percent by weight passing a No. 200 sieve.

- B. If the material does not meet the above requirements, it shall conform to the following:

General Fill: Bank-run sand, gravel, or mixture graded within following limits:

<u>Sieve Size</u>	<u>% Passing (by weight)</u>
6"	100
#4	30-95
#200	0-10

- C. Borrow shall be obtained from approved gravel banks or other approved deposits.

- D. All material whether from the excavation or from borrow, shall be of such nature that after it has been placed and properly compacted, it will make a dense, stable fill.

- E. It shall not contain vegetation, masses of roots, individual roots more than 18 inches long, or more than ½ inch in diameter, stones over 6 inches in diameter, porous matter, or organic matter.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 2 Section "Site Clearing."

- C. Protect and maintain erosion and sedimentation controls.

- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

EARTHWORK

SEPTEMBER 2011

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXCAVATION, GENERAL

- A. Classified Excavation: Excavate to subgrade elevations. The Contract Sum will be adjusted for rock excavation according to unit prices included in the Contract Documents. Changes in the Contract time may be authorized for rock excavation.

1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches (600 mm) outside of concrete forms other than at footings.
 - b. 12 inches (300 mm) outside of concrete forms at footings.
 - c. 6 inches (150 mm) outside of minimum required dimensions of concrete cast against grade.
 - d. 6 inches (150 mm) beneath bottom of concrete slabs on grade.
 - e. 6 inches (150 mm) beneath pipe in trenches, and the greater of 24 inches (600 mm) wider than pipe or 42 inches (1065 mm) wide.

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicate lines, cross sections, elevations, and subgrades.

3.5 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
 1. Clearance: 12 inches (300 mm) each side of pipe or conduit or As indicated on drawings.
- C. Trench Bottoms: Excavate trenches 4 inches (100 mm) deeper than bottom of pipe elevation to allow for bedding course. Hand excavate for bell of pipe.
 1. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

EARTHWORK

SEPTEMBER 2011

3.6 SUBGRADE INSPECTION

- A. Notify Landscape Architect when excavations have reached required subgrade.
- B. If Landscape Architect determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
- D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Landscape Architect, without additional compensation.

3.7 STORAGE OF SOIL MATERIALS

- A. Remove excavated material from the site.

3.8 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Surveying locations of underground utilities for Record Documents.
 - 2. Testing and inspecting underground utilities.
 - 3. Removing concrete formwork.
 - 4. Removing trash and debris.
 - 5. Removing temporary shoring and bracing, and sheeting.
 - 6. Installing permanent or temporary horizontal bracing on horizontally supported walls.

- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.9 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Place and compact initial backfill of subbase material, free of particles larger than 1 inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the utility pipe or conduit.
 - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- D. Backfill voids with satisfactory soil while installing and removing shoring and bracing.
- E. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- F. Install warning tape directly above utilities, 12 inches (300 mm) below finished grade.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

EARTHWORK

SEPTEMBER 2011

3.10 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.11 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SUBGRADE

- A. All soft and yielding material and other portions of the subgrade which will not compact readily when rolled, vibrated or tamped shall be removed and replaced with suitable material. The surface shall be compacted uniformly by rolling with a power roller having a minimum compression of 300 pounds per inch of width of tread on the rear wheel of wheels, and weighing not less than 10 tons, or with an equivalent vibratory roller or compactor.
- B. When more than one compacting unit is used, the unit exerting the greatest compactive effort shall be used to make the initial compaction. Any portion of the subgrade which is not accessible to a roller or other compacting unit shall be compacted thoroughly with hand tampers or with approved mechanical vibrators.

3.13 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches (200 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
 - 1. Under pavements, compact each layer of backfill or fill soil material at 95 percent.
 - 2. Under walkways compact each layer of backfill or fill soil material at 92 percent.
 - 3. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.14 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

EARTHWORK

SEPTEMBER 2011

- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus 1 inch (25 mm).
 - 2. Pavements: Plus or minus 1/2 inch (13 mm).

3.15 FIELD QUALITY CONTROL

- A. Testing Agency: Owner may engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

3.16 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Landscape Architect; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.17 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 02300

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

GRAVEL

SEPTEMBER 2011

SECTION 02332 – GRAVEL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section includes the following:

- 1. Gravel for trenches.
- 2. Sub -base courses for paving.

- B. Related sections:

- 1. Division 2 Section "Site Concrete" for sidewalks.
- 2. Division 2 Section "Earthwork" for grading, compaction and trenching requirements.
- 3. Division 2 Section "Asphalt Paving" for surface treatment.

1.3 SUBMITTALS

- A. Provide written certification of compliance to the Specification for:
 - 1. Gravel.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Gravel/Aggregate: Gravel should conform to the following Gradation requirement:

<u>Square Mesh Sieves</u>	<u>Percent passing by weight</u>
Pass 5 inch	100
Pass 3 ½ inch	55-100
Pass ¼ inch	25-60
Pass #10 (2.0mm)	15-45
Pass #40	5-25
Pass #100	0-10
Pass #200	0-5

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

GRAVEL

SEPTEMBER 2011

PART 3 - EXECUTION

3.1 PRE-INSTALLATION REQUIREMENTS

- A. Secure approval of compacted subgrade by Owner's Representative prior to commencing installation of rolled base.

3.2 INSTALLATION

A. As pavement base

1. Gravel shall be spread upon the prepared, compacted sub-grade to such depth that this course will be to the specified depth after compaction.
2. If after the material has been spread and shaped, it is found that additional binder is required, it shall be furnished and applied as necessary.
3. The material shall then be shaped, wetted and compacted with a power roller weighing not less than ten tons or an equivalent vibratory roller until thoroughly compacted.
4. The compacting and wetting shall continue until all voids are filled after which this course may be left to dry. Compacting shall continue until this course is thoroughly compacted.
5. Compact each lift to 95 percent of modified AASHTO laboratory density (ASTMD-1557, Method C).

B. As trench backfill

1. See earthwork section 02300.

END OF SECTION 02332

SECTION 02751 – SITE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes exterior cement concrete:
- B. Related Sections include the following:
 - 1. Division 2 Section "Earthwork" for subgrade preparation, grading, and subbase course.
 - 2. Division 2 Section "Gravel Base" for subbase material.

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, expansive hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

1.4 SUBMITTALS

- A. Product Data: For each type of manufactured material and product indicated.
- B. Design Mixes: For each concrete pavement mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed pavement work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.
 - 1. Manufacturer must be certified according to the National Ready Mix Concrete Association's Plant Certification Program.
- C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from one source.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

SITE CONCRETE

SEPTEMBER 2011

- D. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by the requirements of the Contract Documents.
- E. Mockups: Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.
 - 1. The first section of poured concrete may serve as a mockup. All joints and finishes shall be included
 - 2. Notify Landscape Architect seven days in advance of dates and times when mockups will be constructed.
 - 3. Obtain Landscape Architect's approval of mockups before continuing construction.
 - 4. Maintain approved mockups during construction in an undisturbed condition as a standard for judging the completed pavement.
 - 5. Demolish and remove non-approved mockups from the site when directed by Landscape Architect.
 - 6. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 PROJECT CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 - PRODUCTS

2.1 FORMS

- A. General: Forms shall be of sufficient strength to maintain alignment without bowing.
- B. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.
 - 1. Use flexible or curved forms for curves of a radius 100 feet (30.5 m) or less.
- C. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.
- C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete:

2.3 CONCRETE MATERIALS

- A. General: Use the same brand and type of cementitious material from the same manufacturer throughout the Project.
- B. Portland Cement: ASTM C 150 gray Portland cement, Type I.
- C. Water: ASTM C 94.
- D. Normal-Weight Aggregates: ASTM C 33, Class 4S, uniformly graded. Provide aggregates from a single source [with documented service-record data of at least 10 years' satisfactory service in similar paving applications and service conditions using similar aggregates and cementitious materials. Conform to:
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch (25 mm) nominal.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

2.4 ADMIXTURES

- A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures.
- B. Air-Entraining Admixture: AASHTO M 154.
- C. Water-Reducing Admixture: ASTM C 494, Type A.
- D. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
- E. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.
- F. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

2.5 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- D. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating type.
 - 1. AASHTO M 148 type 2 class b.

2.6 RELATED MATERIALS

- A. Expansion Joint-Filler Strips: ASTM D 1751, AASHTO M 213 asphalt-saturated cellulosic fiber.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

SITE CONCRETE

SEPTEMBER 2011

- B. Dowels – 5/8" diameter, 12" length smooth steel

2.7 CONCRETE MIXES

- A. Prepare design mixes, proportioned according to ACI 211.1 and ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.

- B. Proportion mixes to provide concrete with the following properties:

1. Compressive Strength (28 Days): 4000 psi
2. Slump Limit: 4 inches.
3. Water-cementitious materials ratio: .45
4. Air entrainment: 6%.
5. Cementitious materials 564 lb/cy.

- C. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 15 percent.
2. Combined Fly Ash and Pozzolan: 25 percent.
3. Ground Granulated Blast-Furnace Slag: 50 percent.
4. Combined Fly Ash or Pozzolan, and Ground Granulated Blast-Furnace Slag: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.

- D. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content as follows within a tolerance of plus or minus 1.0 percent:

1. Air Content: 6.0 percent for 3/4-inch (19-mm) maximum aggregate.

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Comply with requirements and with ASTM C 94 and ASTM C 1116.

1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Proof-roll prepared subbase surface to check for unstable areas and verify need for additional compaction. Proceed with pavement only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

- B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

SITE CONCRETE

SEPTEMBER 2011

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating reinforcement and with recommendations in CRSI's "Placing Reinforcing Bars" for placing and supporting reinforcement.
 - 1. Apply epoxy repair coating to uncoated or damaged surfaces of epoxy-coated reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

3.4 JOINTS

- A. General: Construct construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct joints at right angles to centerline, unless otherwise indicated. Joints to form a "picture frame" pattern.
 - 1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.
- B. Expansion Joints: Form expansion joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 - 1. Locate expansion joints as noted on plans
 - 2. Extend joint fillers full width and depth of joint.
 - 3. Terminate joint filler 1/2 inch (12 mm) below finished surface if joint sealant is indicated.
 - 4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
 - 5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 - 6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
 - 7. Doweled Joints: Install dowel bars and support assemblies at expansion joints. 12" O.C. Lubricate one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, and as follows:
 - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4-inch radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate grooving-tool marks on concrete surfaces.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

SITE CONCRETE

SEPTEMBER 2011

2. Sawn Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
 - D. Edging: After initial floating, tool edges of paving, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.
- 3.5 CONCRETE PLACEMENT
- A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcement steel, and items to be embedded or cast in. Notify other trades to permit installation of their work.
 - B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.
 - C. Moisten subbase to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are at the required finish elevation and alignment.
 - D. Comply with requirements and with recommendations in Form 816, Section 4.01.03 for measuring, mixing, transporting, and placing concrete.
 - E. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
 - F. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures to consolidate concrete according to recommendations in ACI 309R.
 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
 - G. Place concrete in two operations: strike off initial pour for entire width of placement and to the required depth below finish surface. Lay welded wire fabric or fabricated bar mats immediately in final position. Place top layer of concrete, strike off, and screed.
 1. Remove and replace portions of bottom layer of concrete that have been placed more than 15 minutes without being covered by top layer, or use bonding agent if approved by Landscape Architect.
 - H. Screed pavement surfaces with a straightedge and strike off. Commence initial floating using bull floats or darbies to form an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading dry-shake surface treatments.
 - I. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 1. When air temperature has fallen to or is expected to fall below 40 deg F (4.4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.

2. Do not use frozen materials or materials containing ice or snow.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.
- J. Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows when hot-weather conditions exist:
1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 deg F (32 deg C). Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Cover reinforcement steel with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 3. Fog-spray forms, reinforcement steel, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.6 CONCRETE FINISHING

- A. General: Wetting of concrete surfaces during screeding, initial floating, or finishing operations is prohibited. Conform to Form 816 4.01.03-F-5 regarding finishing off of concrete surface.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
1. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch (1.6 to 3 mm) deep with a stiff-bristled broom, perpendicular to line of traffic.

3.7 CONCRETE CURING

- A. AIR CURING IS NOT ACCEPTABLE
- B. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and follow recommendations in ACI 305R for hot-weather protection during curing. Conform to Form 816 4.01.03--(7) regarding curing of concrete. Cure for 7 days minimum. Begin curing within 2 hours of placing concrete
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- D. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

- a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Apply in two coats, the second application at right angles to the first. Recoat areas that have been subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.
 4. Seal all concrete with "Salt Guard" as manufactured by A.H. Harris or equal

3.8 PAVEMENT TOLERANCES

A. Comply with tolerances of ACI 117 and as follows:

1. Elevation: 1/4 inch (6 mm).
2. Thickness: Plus 3/8 inch (9 mm), minus 1/4 inch (6 mm).
3. Surface: Gap below 10-foot- (3-m-) long, unlevelled straightedge not to exceed 1/4 inch (6 mm).
4. Joint Spacing: 3 inches (75 mm).
5. Contraction Joint Depth: Plus 1/4 inch (6 mm), no minus.
6. Joint Width: Plus 1/8 inch (3 mm), no minus.

3.9 FIELD QUALITY CONTROL

A. Testing Agency: Owner may engage a qualified testing and inspection agency to sample materials, perform tests, and submit test reports during concrete placement. Sampling and testing for quality control may include those specified in this Article.

1. Testing Frequency: Obtain at least one composite sample for each 3000 sq. ft. fraction thereof of each concrete mixture placed each day.

B. Testing Services: Testing shall be performed according to the following requirements:

1. Sampling Fresh Concrete: Representative samples of fresh concrete shall be obtained according to ASTM C 172, except modified for slump to comply with ASTM C 94.
2. Slump: ASTM C 143; one test at point of placement for each compressive-strength test, but not less than one test for each day's pour of each type of concrete. Additional tests will be required when concrete consistency changes.
3. Air Content: ASTM C 231, pressure method; one test for each compressive-strength test, but not less than one test for each day's pour of each type of air-entrained concrete.
4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each set of compressive-strength specimens.

5. Compression Test Specimens: ASTM C 31/C 31M: one set of four standard cylinders for each compressive-strength test, unless otherwise indicated. Cylinders shall be molded and stored for laboratory-cured test specimens unless field-cured test specimens are required.
 6. Compressive-Strength Tests: ASTM C 39; one set for each day's pour of each concrete class exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m). One specimen shall be tested at 7 days and two specimens at 28 days; one specimen shall be retained in reserve for later testing if required.
 7. When frequency of testing will provide fewer than five compressive-strength tests for a given class of concrete, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 8. When total quantity of a given class of concrete is less than 50 cu. yd. (38 cu. m), Landscape Architect may waive compressive-strength testing if adequate evidence of satisfactory strength is provided.
 9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, current operations shall be evaluated and corrective procedures shall be provided for protecting and curing in-place concrete.
 10. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive compressive-strength test results equal or exceed specified compressive strength and no individual compressive-strength test result falls below specified compressive strength by more than 500 psi (3.4 MPa).
- C. Test results shall be reported in writing to Landscape Architect, concrete manufacturer, and Contractor within 24 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing agency, concrete type and class, location of concrete batch in pavement, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- D. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Landscape Architect but will not be used as the sole basis for approval or rejection.
- E. Additional Tests: Testing agency shall make additional tests of the concrete when test results indicate slump, air entrainment, concrete strengths, or other requirements have not been met, as directed by Landscape Architect. Testing agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed.
- 3.10 REPAIRS AND PROTECTION
- A. Remove and replace concrete pavement that is broken, damaged, or defective, or does not meet requirements in this Section.
 - B. Drill test cores where directed by Landscape Architect when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy adhesive.
 - C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.
 - D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 02751

SECTION 02791 - PLAYGROUND SAFETY SURFACING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following types of playground surface systems and accessories:
 - 1. Poured in place (PIP) fill systems.
- B. Related Sections include the following:
 - 1. Division 2 Section "Earthwork" for excavation, filling, and grading work, including compacted subgrades and subbase courses, and dewatering.
 - 2. Division 2 Section "Playground Equipment and Structures" for play structures installed only over protective use zones, at appropriate fall heights.

1.3 DEFINITIONS

- A. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means "the fall height below which a life-threatening head injury would not be expected to occur."
- B. Fall Height: According to ASTM F 1487, this means "the vertical distance between a designated play surface and the protective surfacing beneath it." The fall height of playground equipment should not exceed the Critical Height of the protective surfacing beneath it.
- C. SBR: Styrene butadiene rubber.
- D. Use Zone: According to ASTM F 1487, this means "the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment."

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include material descriptions and construction details for each component of playground surface system.
- B. Shop Drawings: For the playground surface system, include materials, cross sections, drainage, installation, penetration details, and edge termination. Include patterns made by varying colors of surfacing. Include details of graphics.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND SAFETY SURFACING

SEPTEMBER 2011

- C. Coordination Drawings: Layout plans and elevations drawn to scale and coordinating installation of playground surface systems with playground equipment. Show playground equipment locations, use zones, fall heights, extent of protective surfacing, and Critical Heights.
- D. Product Samples: For the following:
 - 1. 12-by-12-inch (300-by-300-mm) minimum sample of geosynthetic fabric.
- E. Color Samples for Verification: For the following products, for each type of exposed finish required, prepared on Samples of size indicated below and of same thickness and material indicated for the Work. If finishes involve normal color and texture variations, include sample sets showing the full range of variations expected.
 - 1. Minimum 6-by-6-inch- (150-by-150-mm-) square sample of PIP surfacing.
- F. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.
- G. Product Certificates: Signed by manufacturers of playground surface systems certifying that protective surfacings furnished comply with requirements.
- H. Product Test Reports: From a qualified testing agency indicating playground surface system complies with requirements, based on comprehensive testing of current products.
- I. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:
 - 1. Poured in place (PIP) fill systems.
- J. Material Test Reports: From a qualified testing agency indicating material complies with requirements.
- K. Maintenance Data: For playground surface system to include in maintenance manuals specified in Division 1.

I.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and whose work has resulted in installations with a record of successful in-service performance.
 - 1. Engage an installer who is certified in writing by playground surface system manufacturer to install playground surface system specified.
- B. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- C. Source Limitations: Obtain primary seamless playground surface system materials, including primers, binders, and rubber particles for cushion-base and wearing-surface layers, through one source from a single playground surface system manufacturer. Provide secondary materials including adhesives.

primers, and repair materials of type and from source recommended by manufacturer of primary playground surface system materials.

- D. Standards and Guidelines: Provide playground surface systems complying with applicable provisions of the following, unless more stringent provisions are indicated:
 - 1. CPSC No. 325, "Handbook for Public Playground Safety"; ASTM F 1292; ASTM F 1951; and ASTM F 1487.
 - 2. "The Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Play Areas."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver manufactured materials in original packages with seals unbroken and bearing manufacturer's labels indicating brand name and directions for storing.
- B. Store manufactured materials in a clean, dry location, protected from the weather and deterioration, and complying with manufacturer's written instructions for minimum and maximum temperature requirements for storage.
- C. Protect UV-light-sensitive materials from exposure to sunlight.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply playground surface system materials or components over wet, frozen, or excessively damp substrates if prohibited by manufacturer's written instructions or warranty requirements.
- B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit playground surface system to be performed according to manufacturer's written instructions or warranty requirements.
- C. Field Measurements: Where playground surface system is indicated to fit to other construction, verify dimensions of other construction by field measurements.

1.8 COORDINATION

- A. Coordinate construction of playground surface systems with installation of playground equipment, including accurate use zones and fall heights, specified in Division 2 Section "Playground Equipment and Structures."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:

Proj. No. 054-0095 MAG/N/PS

054-0096 MAG/N/PS

Bid No. GL-2011-04-BP-120

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND SAFETY SURFACING

SEPTEMBER 2011

1. Poured in Place System:
 - a. SurfaceAmerica, Inc., 800.999.0555

2.2 PLAYGROUND SURFACE SYSTEMS, GENERAL

- A. Accessibility: Provide playground surface systems determined to be accessible when tested according to ASTM F1292, "Standard Specification for Impact Attenuation of Surfacing Materials within the Use Zone of Playground Equipment" and ASTM F1951, "Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment" and designed to comply with requirements for an accessible route as recommended by ANSI A117.1 U.S. Architectural & Transportation Barriers Compliance Board's "ADA Accessibility Guidelines for Buildings and Facilities (ADAAG)".

2.3 POURED IN PLACE FILL PLAYGROUND SURFACE SYSTEMS

- A. General: Provide protective surfacing designed to drain water freely when installed according to manufacturer's written instructions.
- B. Seamless Surface: Surfacing formulated for site mixing and application from rubber particles in a polyurethane binder, forming a water-permeable, UV-light-stable, impact-attenuating, seamless playground surface system with layered construction consisting of a lower-density formulation of SBR particles and polyurethane forming a cushion-base layer bonded to higher-density formulation of EPDM rubber particles and polyurethane forming a top-layer wearing surface. Provide manufacturer's standard thickness for each layer as required for overall thickness indicated.
 1. Binder: Weather resistant, UV stabilized, flexible, nonhardening, 100 percent solids polyurethane complying with requirements of authorities having jurisdiction for nontoxic and low VOC content.
 2. Cushion Base: Site mixed and applied.
 3. Color: standard color.

2.4 GEOSYNTHETICS

- A. Drainage/Separation Fabric: Nonwoven needle-punched geotextile, specifically manufactured as a drainage geotextile; made from polyolefins or polyesters; complying with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:
 1. Weight: 4 oz./sq. yd. (136 g/sq. m) according to ASTM D 5261.
 2. Water Flow Rate: 100 gpm per sq. ft. (68 L/s per sq. m) according to ASTM D 4491.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for subgrade and substrate conditions, for compliance with playground surface system manufacturer's requirements, and for other conditions affecting performance.

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

3.2 PREPARATION

- A. Stake locations of playground perimeter, playground equipment, use zones, and pathways. Clearly indicate locations of utilities, lawn sprinkler system, subgrade drainage systems, and underground structures.
- B. General: Prepare clean remove incompatible coatings from substrates to receive surfacing products according to playground surface system manufacturer's written instructions. Verify that substrates are sound without high spots, ridges, holes, and depressions.

3.3 INSTALLATION, GENERAL

- A. General: Comply with playground surface system manufacturer's written installation instructions. Install playground surface system over area and in thickness indicated and as required to comply with specified requirements for impact-attenuation performance and, where indicated, for accessibility.
- B. At the time of Application ambient air temperature shall be 40° F or higher.

3.4 GEOSYNTHETIC INSTALLATION

- A. General: Install geosynthetics according to playground surface system manufacturer's and geosynthetic manufacturer's most stringent written instructions, and as follows:
 - 1. Geotextiles: Completely cover area indicated. overlapping lapping edges a minimum of 8 inches (200 mm) with manufacturer's standard treatment for seams.
 - 2. Layer under PIP fill playground surface system.
 - a. Geotextile Edges: Adhere edges on all sides to top of perimeter curb or footing.

3.5 INSTALLATION OF POURED IN PLACE FILL PLAYGROUND SURFACE SYSTEMS

- A. Seamless Surface: Mix and apply components of playground surface system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface and impact-attenuating system of total thickness indicated. Proportion each blend of resilient particulate material with binder, in ratio complying with manufacturer's written instructions. Mix components thoroughly to form a uniform dispersion. Coordinate application of components to provide optimum adhesion of playground surface system. Cure successive applications of components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
 - 1. Substrate Primer: Apply according to manufacturer's written instructions over prepared substrate at manufacturer's standard spreading rate for type of substrate.
 - 2. Cushion-Base Course: Spread evenly over primed substrate to form a level layer of uniform density and consistency, applied at manufacturer's standard spreading rate in one continuous operation. with a minimum of cold joints.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND SAFETY SURFACING

SEPTEMBER 2011

3. Intercoat Primer: Over cured base course, apply primer at manufacturer's standard spreading rate for maximum adherence of base course to surface course.
4. Surface Course: Spread evenly over primed base course to form a level layer of uniform density and consistency, applied at manufacturer's standard spreading rate in one continuous operation, and, except where color changes, with no cold joints. Finish surface to produce manufacturer's standard wearing-surface texture and allow to cure.
 - a. Where colored pattern is indicated, place adjacent colored material as soon as placed colored material is sufficiently cured using primer or adhesive if required by manufacturer's written instructions.
5. Edge Treatment: As indicated on Drawings. Fully adhere edges to substrate with full coverage of substrate. Maintain fully cushioned thickness required to comply with safety performance requirements within playground equipment use zones.

3.6 CLEANING AND PROTECTION

- A. Poured in Place Systems: Prevent traffic over system for not less than 48 hours after installation. Protect playground surface system from damage and wear during the remainder of construction period. Clean playground surface system after time period recommended in writing by playground surface system manufacturer but not more than four days before dates scheduled for inspections intended to establish date of Substantial Completion. Use cleaning materials and procedures recommended in writing by playground surface system manufacturer.
 1. During installation of adhesively applied products, immediately remove visible adhesive from surfaces. Use cleaner recommended by playground surface system manufacturer.

END OF SECTION 02791

SECTION 02821 - CHAIN-LINK FENCES AND GATES

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:
 - 1. Chain-link fences.
 - 2. Gates: swing

1.3 SUBMITTALS

- A. 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. Gates and hardware.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show accessories, hardware, gate operation.
- C. Samples for Initial Selection: For components with factory-applied color finishes.
- D. Polymer-Coated Components: In 6-inch (150-mm) lengths for components and on full-sized units for accessories. Paragraph below is defined in Section 01330 "Submittal Procedures" as a "Delegated-Design Submittal."
- E. Product Test Reports: For framing strength according to ASTM F 1043.

1.4 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.

1.5 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 .
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 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: 9 gauge core
 - a. Mesh Size: 2 inches (50 mm)& 1-3/4 inches (44 mm).
 - b. Zinc-Coated Fabric: ASTM A 392, Type II, Class 2, 2.0 oz./sq. ft. (610 g/sq. m)] with zinc coating applied after weaving.
 - c. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.

2.2 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 or ASTM F 1083 based on the following:

1. Fence Height: As indicated on Drawings
2. Heavy Industrial Strength: Material Group IA, round steel pipe, Schedule 40
3. Horizontal Framework Members: Rails complying with ASTM F 1043.
4. Brace Rails: Comply with ASTM F 1043.
5. Metallic Coating for Steel Framing:
 - a. Type A, consisting of not less than minimum 2.0-oz./sq. ft. (0.61-kg/sq. m) average zinc coating per ASTM A 123/A 123M

2.3 TENSION WIRE

- A. Metallic-Coated Steel Wire: 0.177-inch- (4.5-mm-) diameter, marcelled tension wire complying with ASTM A 817 and ASTM A 824, with the following metallic coating:

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

CHAIN-LINK FENCES AND GATES

SEPTEMBER 2011

1. Type II, zinc coated (galvanized) by hot-dip process, with the following minimum coating weight:

a. Class 4: Not less than 1.2 oz./sq. ft. (366 g/sq. m) of uncoated wire surface.

B. Polymer-Coated Steel Wire: 0.177-inch- (4.5-mm-) diameter, tension wire complying with ASTM F 1664, Class 2b over zinc-coated steel wire.

1. Color: Match chain-link fabric, complying with ASTM F 934.

2.4 SWING GATES

A. General: Comply with ASTM F 900 for gate posts and swing gate types.

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
2. Gate Posts: Round tubular steel
3. Gate Frames and Bracing: Rectangular tubular steel Retain one option in first paragraph below, or retain both for Contractor's option.

C. Frame Corner Construction: Welded

D. Hardware:

1. Hinges: 360-degree inward and outward swing.
2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate].

2.5 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 (152 mm) long.
2. Rail Clamps: Line and corner boulevard clamps for connecting intermediaterails 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.

Proj. No. 054-0095 MAG/N/PS

02821 - 3

054-0096 MAG/N/PS

Bid No. GL-2011-04-BP-120

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

CHAIN-LINK FENCES AND GATES

SEPTEMBER 2011

- G. Truss Rod Assemblies: Steel, hot-dip galvanized after threading rod and turnbuckle or other means of adjustment.
- H. Tie Wires, Clips, and Fasteners: 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: 9 gauge wire;
- 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. Barb Spacing: [4 inches (102 mm)] <Insert dimension> o.c.
 - 3. Barb Set: [Straight] [Offset] [Manufacturer's standard].

2.6 LATCHES

- A. Gates shall have self-closing and self-latching hardware. The release mechanism of the self-latching device shall not be less than 48" above grade. The gate and fence shall have no opening greater than ½ inch within 18" of the release mechanism when the gate is in the fully closed position. Latches, locks, and other operating devices shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. The latch shall be Magnalatch.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for 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.

3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet (152.5 m) 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 indicated.
 - 1. Install fencing on established boundary lines inside property line.

3.4 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 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 (50 mm) above grade; shape and smooth to shed water.
- 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 at 10 feet (3 m) o.c.
- 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. Locate horizontal braces at midheight of fabric 72 inches (1830 mm) 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 F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch- (3.05-mm-) diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches (610 mm) o.c. Install tension wire in locations indicated before stretching fabric. Provide horizontal tension wire at the following locations:
 - 1. Extended along 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 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 and secure to posts with fittings.
- I. Chain-Link Fabric: Apply fabric to [outside] [inside] of enclosing framework. Leave 2 inches (50 mm) 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 (380 mm) o.c.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

CHAIN-LINK FENCES AND GATES

SEPTEMBER 2011

- 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 F 626. Bend ends of wire to minimize hazard to individuals and clothing.
 - 1. Maximum Spacing: Tie fabric to line posts at 12 inches (300 mm) o.c. and to braces at 24 inches (610 mm) 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.

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 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 moving parts.

END OF SECTION 02821

SECTION 02870 – SITE FURNISHINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Benches.
- B. Related Sections include the following:
 - 1. Division 2 Section “Cement Concrete Pavement” for poured-in-place concrete.

1.3 SUBMITTALS

- A. Product Data for all manufactured products.
- B. Shop drawings for all products.

PART 2 – PRODUCTS AND MATERIALS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide product by the following.
 - 1. Benches – Model 93-60 by Dumor, Inc.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces indicated to receive site improvements for compliance with requirements for installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Attach benches to concrete pads as noted on the Drawings and with manufacturer’s written installation instructions.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT

SITE FURNISHINGS

SEPTEMBER 2011

3.3 CLEANING

- A. After completing site furnishing installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

END OF SECTION 02870

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL
GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

SECTION 02881 - PLAYGROUND EQUIPMENT AND STRUCTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes playground equipment consisting of the following types of play structures:
1. Freestanding.
 2. Composite.
- B. Related Sections include the following:
1. Division 2 Section "Earthwork" for filling and grading work.
 2. Division 2 Section "Playground Surface Systems" for protective surfacing under and around playground equipment.
 3. Division 2 Section "Playground Equipment Schedule".

1.3 DEFINITIONS

- A. Composite Play Structures: According to ASTM F 1487, this means "two or more play structures, attached or functionally linked," creating one integral unit with more than one play activity.
- B. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means "the fall height below which a life-threatening head injury would not be expected to occur."
- C. Fall Height: According to ASTM F 1487, this means "the vertical distance between a designated play surface and the protective surfacing beneath it." The fall height of playground equipment should not exceed the Critical Height of the protective surfacing beneath it.
- D. HDPE: High-density polyethylene.
- E. IPEMA: International Play Equipment Manufacturers Association.
- F. Play Structure: According to ASTM F 1487, this is "a free-standing structure with one or more components and their supporting members."
- G. Protective Surfacing: According to ASTM F 1487, this means impact-attenuating "materials to be used within the use zone of any playground equipment" for playground surface systems.
- H. PVC: Polyvinyl chloride.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

- I. Transfer Point: According to ASTM F 1487, this is "a platform or deck along an accessible route of travel or an accessible platform provided to allow a child in a wheelchair to transfer from the chair onto the equipment."
- J. Use Zone: According to ASTM F 1487, this is "the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment."

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For each type of playground equipment, include materials, plans, elevations, sections, details, method of field assembly, connections, and installation details. Indicate capacity and number of play activities.
- C. Coordination Drawings: Layout plans and elevations drawn to scale and coordinating playground equipment with playground surface systems. Show playground equipment locations, use zones, fall heights, extent of protective surfacing, and Critical Heights.
- D. Samples for Initial Selection: Manufacturer's color charts or 6-inch (150-mm) lengths of actual units showing the full range of colors and textures available for components with factory-applied color finishes.
- E. Product Certificates: Signed by manufacturers of playground equipment certifying that products furnished comply with requirements.
- F. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer of playground equipment.
- B. Manufacturer Qualifications: A firm whose playground equipment components have been certified by IPEMA's "3rd Party Certification" service.
 - 1. Provide only playground equipment and play structure components bearing the IPEMA Certification Seal.
- C. Standards and Guidelines: Provide playground equipment complying with or exceeding requirements in the following:
 - 1. ASTM F 1487.
 - 2. CPSC No. 325, "Handbook for Public Playground Safety."
 - 3. "Handbook for Public Playground Safety (Pub. No. 325)" – U.S. Consumer Product Safety Commission, as referenced by the Connecticut Department of Consumer Protection
 - 4. "The American with Disabilities Act Accessibility Guidelines: Play Areas" (ADAAGPL) – Federal Register, April 30, 1998 / Proposed Rules

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

5. "The American Society for Testing and Materials (ASTM) F 1487-98 – Standard Consumer Safety Performance Specification for Playground Equipment for Public Use"
6. The Americans with Disabilities Act Accessibility Guidelines (ADAAG)
7. Uniform Federal Accessibility Standards (UFAS)
8. Project specific approval by the State of CT, D.O.E., School Facilities Unit.
9. Label play structures with warning label and manufacturer's identification per ASTM F 1487.

1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving 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 at least two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Architect's written permission.
 3. Before excavating, contact utility-locator service for area where Project is located.

1.7 COORDINATION

- A. Coordinate construction of equipment use zones and fall heights during installation of playground equipment with installation of protective surfacing specified in Division 2 Section "Playground Surface Systems." Sequence work so protective surfacing can be installed immediately after concrete footings have set.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Landscape Structures, Inc.

2.2 PLAYGROUND EQUIPMENT, GENERAL

- A. Colors: As indicated in color schedule on Drawings Match Architect's samples As selected by Architect from manufacturer's full range.
- B. Hazards: There should be no sharp points, corners, or edges on any components of playground equipment that could cut or puncture children's skin. Wood parts should be smooth and free from splinters. All corners, metal and wood, should be rounded. All metal edges should be rolled or have rounded capping. Protrusions or projections should not be capable of entangling children's clothing. There should be no accessible pinch, crush, or shearing points that could injure children or catch their clothing.

2.3 MATERIALS

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

- A. **Material:** All materials shall be structurally sound and suitable for safe play. Durability shall be ensured on all steel parts by the use of time-tested coatings such as zinc plating, zinc-nickel plating, powdercoating, TenderTuff coating, etc. Colors shall be specified.
- B. **Fasteners:** Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications). All primary fasteners shall include a locking patch type material that will meet the minimum torque requirements of IFI-125. Manufacturer to provide special tools for pinned tamperproof fasteners.
- C. **TenderTuff Coating:** All metal components to be TenderTuff-coated shall be thoroughly cleaned in a hot phosphatizing pressure washer, then primed with a water-based thermosetting solution. Primed parts shall be preheated prior to dipping in U.V. stabilized, liquid polyvinyl chloride (PVC), then salt cured at approximately 400 degrees. The finished coating shall be approximately .080" thick at an 85 durometer hardness and have a matte finish. Four standard colors are available.
- D. **Polyester Powdercoating:** All metal components to be powdercoated shall be free of excess weld and spatter. Parts shall be thoroughly cleaned in a 5-Stage Pretreatment process. Parts are then thoroughly dried and proceed through a set of automatic sprayers that apply electrostatic powdercoat. Parts are oven cured at 400 degrees F. The average powdercoat thickness is .004".
- E. **Super Durable TGIC polyester powder** shall be specially formulated for optimum Ultra Violet (UV) stability and gloss retention. It shall meet or exceed ASTM Standards for:
- Hardness (D-3363)
 - Impact (D-2794)
 - Salt Spray resistance (B-117 and D-1654)
 - U.V. Exposure (G-154)
 - Adhesion (D-3359, Method B)
- The Paint Line shall employ a "checkered" adhesion test daily.
- Eighteen standard colors are available.
- F. **Decks:** All Tenderdecks shall be of modular design and have 5/16" diameter holes on the standing surface. There shall be a minimum of (4) slots in each face to accommodate face mounting of components. Tenderdecks shall be manufactured from a single piece of low carbon 12 GA (.105") sheet steel conforming to ASTM specification A-569. The sheet shall be perforated then flanged formed and reinforced as necessary to ensure structural integrity. The unit shall then be TenderTuff-coated brown only. Tenderdecks shall be designed so that all sides are flush with the outside edge of the supporting posts.
- G. **Rotationally Molded Poly Parts:** These parts shall be molded using prime compounded linear low-density polyethylene with a tensile strength of 2500 psi per ASTM D638 and with color and UV-stabilizing additives. Wall thickness varies by product from .187" (3/16") to .312" (5/16"). Five standard colors are available.
- H. **Permalene Parts:** These parts shall be manufactured from 3/4" thick high-density polyethylene that has been specially formulated for optimum U.V. stability and color retention. Products shall meet or exceed density of .960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Five standard solid colors are available. Some Permalene parts are available in a two-color product with (2) .070" thick exterior layers over a .610" interior core of a contrasting color. Eight standard two-color options are available.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

I. Footings: Unless otherwise specified, the bury on all footings shall be 34" below Finished Grade (FG) on all in-ground play events/posts. Other types of anchoring are available upon request.

J. (PB) Posts: Post length shall vary depending upon the intended use and shall be a minimum of 42" above the deck height. All posts shall be powdercoated to specified color. All posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line required for correct installation and the top of the loose fill protective surfacing. Top caps for posts shall be aluminum die cast from 369.1 alloy and powdercoated to match the post color. All caps shall be factory installed and secured in place with (3) self sealing rivets. A molded low-density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.

1. Steel Posts: All steel PlayBooster posts are manufactured from 5" O.D. tubing with a wall thickness of .120" and shall be galvanized after rolling and shall have both the I.D. and the cut ends sprayed with a corrosion resistant coating.

Steel Post Mechanical Properties:

Yield Strength (min): 50,000 PSI

Tensile Strength (min): 55,000 PSI

% Elongation in 2 inches: 25

Modulus of Elasticity: 29.5 x 106 PSI

2. Aluminum Posts: All aluminum PlayBooster posts are manufactured from 6005-T5 extruded tubing conforming to ASTM B-221. Posts shall have a 5" outside diameter with a .125" wall thickness.

Aluminum Post Mechanical Properties:

Yield Strength (min): 35,000 PSI

Tensile Strength (min): 38,000 PSI

% Elongation in 2 inches: 10

Modulus of Elasticity: 10 x 106 PSI

K. Arch Posts: Aluminum arch posts shall be manufactured from 6005-T5 alloy. The arch shall be formed to a 21" center line radius to complement the 42" center to center module. The arch shall be of one continuous piece construction. There shall be no welds or additional pieces mechanically fastened to manufacture the arch. Each arch shall be designed to provide a minimum of 90 1/2" clear span from the deck to the inside of the arch at the radius peak. Arches shall be powdercoated to a specified color.

L. Clamps: All clamps, unless otherwise noted, shall be die cast using a 369.1 aluminum alloy and have the following mechanical properties:

Ultimate Tensile: 47,000 PSI

Yield Strength: 28,000 PSI

Elongation: 7% in 2 inches

Shear Strength: 29,000 PSI

Endurance Limit: 20,000 PSI

M. Each functional clamp assembly shall have an appropriate number of half clamps and shall be fastened to mating parts with (2) 3/8" x 1 1/8" pinned button head cap screws (SST) and (2) stainless steel (SST) recessed "T" nuts. A 1/4" aluminum drive rivet w/stainless steel pin is used to ensure a secure fit to the post.

PlayBooster clamps have three functional applications and shall be named as follows:

1.) Offset hanger clamp assembly.

2.) Deck hanger clamp assembly.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

3.) Hanger clamp assembly.

2.4 FABRICATION

A. General: Provide sizes, strengths, thicknesses, wall thickness, and weights of components as indicated but not less than required to comply with structural performance and other requirements in ASTM F 1487. Factory drill components for field assembly. Unnecessary holes in components, not required for field assembly, are not permitted. Provide complete play structure, including supporting members and connections, means of access and egress, designated play surfaces, barriers, guardrails, handrails, handholds, and other components indicated or required to comply with referenced standards for equipment indicated.

1. Composite Play Structure: Provide complete play structure, designed to be modular, linked, and expandable, forming one integral unit for more than one play activity.

B. Metal Frame: Fabricate main-frame upright support posts from metal pipe or tubing with cross-section profile and dimensions as indicated in the Playground Equipment Schedule at the end of Part 3. Fabricate secondary frame members, bracing, and connections from either steel or aluminum. Unless otherwise indicated, provide each pipe or tubing main-frame member with manufacturer's standard drainable bottom plate or support flange.

C. Composite Frame: Fabricate main-frame upright support posts from metal and plastic with profile and dimensions as indicated on the Playground Equipment Schedule at the end of Part 3. Fabricate secondary frame members, bracing, and connections from either steel or aluminum.

D. Rung Ladders, Stepladders, Stairways, Ramps, Step Platforms, and Transfer Points: Provide complete means of access and egress, with evenly spaced treads and rungs, easily grasped handholds, and slip-resistant foot surfaces; fabricated from manufacturer's standard materials complying with requirements indicated and compatible with frame and play surfaces. Provide closed risers and protective barriers if indicated or required by referenced standards. Comply with the following:

1. Maximum Stairway Slope: Less than 35-degree incline.
2. Maximum Stairway Slope: Less than 50-degree incline.

E. Play Surfaces: Provide elevated decks, platforms, landings, walkways, ramps, and similar transitional play surfaces, designed and framed to withstand loads and allowing for drainage. Fabricate units in manufacturer's standard modular sizes and shapes, to form assembled play surfaces of dimensions indicated on Drawings.

F. Elevated Play Surfaces: Provide protective devices, completely surrounding play surface except for access openings.

2.5 CAST-IN-PLACE CONCRETE

A. Concrete Materials and Properties: Comply with requirements in Division 3 Section "Cast-in-Place Concrete" ACI 301 to produce normal-weight, air-entrained concrete with a minimum 28-day compressive strength of 3000 psi (20.7 MPa), 3-inch (75-mm) slump, and 1-inch- (25-mm-) maximum size aggregate.

2.6 METAL FINISHES, GENERAL

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating metal finishes.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.7 ALUMINUM FINISHES

- A. Baked-Enamel Powder-Coat Finish: Manufacturer's standard, baked, polyester-TGIC, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness of 3 to 5 mils (0.075 to 0.127 mm).

2.8 STEEL AND GALVANIZED STEEL FINISHES

- A. Baked-Enamel Powder-Coat Finish: Manufacturer's standard, baked, polyester-TGIC, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness of 3 to 5 mils (0.075 to 0.127 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, site surface and subgrade drainage, and other conditions affecting performance.
 - 1. Do not begin installation before final grading required for placing protective surfacing is completed, unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Verify locations of playground perimeter and pathways. Verify that playground layout and equipment locations comply with requirements for each type and component of equipment.

3.3 INSTALLATION, GENERAL

- A. General: Comply with manufacturer's written installation instructions, unless more stringent requirements are indicated. Anchor playground equipment securely, positioned at locations and elevations indicated on Shop Drawings.
 - 1. Maximum Equipment Height: Coordinate installed heights of equipment and components with installation of protective surfacing. Set equipment so fall heights and elevation requirements for age group use and accessibility are within required limits. Verify that playground equipment elevations comply with requirements for each type and component of equipment.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD ELEMENTARY MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT AND STRUCTURES SEPTEMBER 2011

- B. Post and Footing Excavation: Hand-excavate holes for posts and footings to dimensions, profile, spacings, and in locations indicated on Drawings, in firm, undisturbed or compacted subgrade soil. Level bearing surfaces with drainage fill to required elevation.
- C. Post Setting: Set main-frame equipment posts in concrete footing. Protect portion of posts above footing from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Verify that posts are set plumb or at the correct angle and are aligned and at the correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.
 - 1. Concrete Footings: Smooth top, and shape to shed water.

3.4 FIELD QUALITY CONTROL

- A. Arrange for playground equipment manufacturer's technical personnel to inspect playground as well as an inspection by an owner's representative, if desired, and playground equipment and components during installation and at final completion and to certify compliance with the following:
 - 1. ASTM F 1487.
 - 2. CPSC No. 325.
 - 3. ASTM F 1951.
- B. Notify Architect 48 hours in advance of date and time of final inspection.

3.5 INSPECTIONS

- A. The equipment will be thoroughly inspected by a person qualified to inspect playgrounds for safety after assembly and prior to the use of the equipment.

3.6 ADJUSTING

- A. Adjust movable playground equipment components to operate smoothly, easily, and quietly, free from binding, warp, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range.

3.7 CLEANING

- A. After completing playground equipment installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

3.8 PLAYGROUND EQUIPMENT SCHEDULE

- A. Comply with ASTM F 1487 and CPSC No. 325 requirements and ADA for Play Areas.

See Specification 02882: Equipment Schedule

END OF SECTION 02881

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

SECTION 02882 – PLAYGROUND EQUIPMENT SCHEDULE

144414A

Cloudburst Triple Slide 64"Dk DB

Clamps: Cast aluminum. O.D.;
Finish: ProShield, color specified.

Exit Support: Weldment comprised of 2.375" (60,33 mm) O.D. RS-20 (.095" - .105") (2,41 mm-2,66 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Mid-Support: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

Rail: Extruded from 1.125" ((28,58 mm) O.D. x .312" (7,92 mm) wall. 6005-T5 aluminum. Finish: ProShield, color specified.

Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Rail Spacer: Fabricated from 1.312" (33,32 mm) O.D. x 16 GA (.065") (1,65 mm) steel tubing. Finish: ProShield, color specified.

Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

130390A

Double Swoosh Slide 72"Dk DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Rail: Extruded from 1.125" ((28,58 mm) O.D. x .312" (7,92 mm) wall. 6005-T5 aluminum. Finish: ProShield, color specified.

Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Rail Spacer: Fabricated from 1.312" (33,32 mm) O.D. x 16 GA (.065") (1,65 mm) steel tubing. Finish: ProShield, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Support: Weldment comprised of 2.375" (60,33 mm) O.D. RS-20 (.095" - .105") (2,41 mm-2,66 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

122570B

Cliff Climber 56"Dk DB

CABLE: Made of tightly woven, polyester-wrapped, six stranded galvanized-steel cable with a polypropylene core. Connector fabricated from 1.250" (31,75 mm) O.D. 6061-T6 aluminum.

Climber Bracket: Fabricated from formed 3/16" x 2" (4,75 mm x 51 mm) HR flat steel. Finish: ProShield, brown in color.

Climber Plank: Flange formed from 11 GA (.120") (3,04 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Finish: TenderTuff, brown in color.

Footer: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing and 3/16" x 2" (4,75 mm x 51 mm) HR flat steel. Finish: ProShield, brown in color.

Upper Bracket: Weldment comprised of formed 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing and 1/4" x 1 3/4" (6,35 mm x 44,45 mm) wide steel half clamps. Finish: ProShield, color specified.

Climber Steps/Panels: Solid color Permalene, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

176077B

Croquet Climber 64"Dk DB

Clamps: Cast aluminum. Finish: ProShield, color specified.

Croquet Climber: Weldment comprised of 2.375" (60,33 mm) O.D. RS20 (.095"-.105") (2,41 mm-2,66 mm) wall galvanized steel tube, 1.029" (26,13 mm) O.D. RS20 (.070"-.080") (1,78 mm-2,03 mm) wall galvanized steel tube, and 1/4" (6,35 mm) HRPO steel sheet. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 1/16" (42,85 mm). Finish: ProShield, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

152907A

Deck Link w/Barriers I Step

Clamps: Cast aluminum.
Finish: ProShield, color specified.

Barrier: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 Ga. (.120") (3,04 mm) wall steel tubing, 5/8" (15,88 mm) O.D. steel bar with 203 or 303 stainless steel 3/8" (9,53 mm) threaded inserts. Finish: TenderTuff, color specified.

Step Section: Formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is 24 1/4" (615,95 mm) wide x 14" (356 mm) deep and is perforated with 5/16" (7,94 mm) diameter holes. Finish: TenderTuff, brown in color.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

SteelX Panels: Zinc plated 7 GA (.179") (4,55 mm) HR flat steel. Finish: ProShield, color specified.

152907B

Deck Link w/Barriers 2 Steps

Clamps: Cast aluminum.
Finish: ProShield, color specified.

Barrier: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 Ga. (.120") (3,04 mm) wall steel tubing, 5/8" (15,88 mm) O.D. steel bar with 203 or 303 stainless steel 3/8" (9,53 mm) threaded inserts. Finish: TenderTuff, color specified.

Step Section: Formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is 24 1/4" (615,95 mm) wide x 14" (356 mm) deep and is perforated with 5/16" (7,94 mm) diameter holes. Finish: TenderTuff, brown in color.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

SteelX Panels: Zinc plated 7 GA (.179") (4,55 mm) HR flat steel. Finish: ProShield, color specified.

Proj. No. 054-0095 MAG/N/PS
054-0096 MAG/N/PS
Bid No. GL-2011-04-BP-120

02882 - 3

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

176080A

Logo Climber 64"Dk DB

Clamps: Cast aluminum. O.D.;
Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Logo Climber: Weldment comprised of 2.375" (60.33 mm) O.D. RS40 (.130"-.140") (3.30 mm-3.56 mm) wall galvanized steel tube, 1.029" (26.13 mm) O.D. RS20 (.070"-.080") (1.78 mm-2.03 mm) wall galvanized steel tube, and 1/4" (6.35 mm) HRPO steel sheet. Finish: ProShield, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22.23 mm) O.D. x 1 11/16" (42.85 mm). Finish: ProShield, color specified.

129453A

Summit Climber Odyssey 1 Sided

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Handhold Panel: Permalene, color specified.

Summit Climber: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Support: Weldment comprised of 2.375" (60.32 mm) O.D. RS-20 (.095" - .105") (2.41 mm-2.66 mm) galvanized steel tubing and 1/4" (6.35 mm) HR flat steel. Finish: ProShield, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22.23 mm) O.D. x 1 11/16" (42.85 mm). Finish: ProShield, color specified.

176079A

Sunbeam Climber

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Handloop: Weldment comprised of 1.125" (28.58 mm) O.D. x 1 1 GA (.120") (3.04 mm) steel tubing with 203 or 303 stainless steel inserts, with 3/8" (9.53 mm) internal thread. Finish: TenderTuff, color specified.

Panels: Permalene, color specified.

Proj. No. 054-0095 MAG/N/PS
054-0096 MAG/N/PS
Bid No. GL-2011-04-BP-120

02882 - 4

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Barrier: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 GA (.120") (3,04 mm) steel tube per ASTM A513 with 203 or 303 stainless steel welded inserts with 5/8" (15,88 mm) internal threads and 1/4" (6,35 mm) tabs. Finish: TenderTuff, color specified.

Sunbeam Climber: Weldment comprised of 1.315" (33,40 mm) O.D. RS20 (.080"-.090") (2,03 mm-2,28 mm) wall galvanized steel tube. 2.375" (60,33 mm) O.D. RS40 (.130"-.140") (3,30 mm-3,56 mm) wall galvanized steel tube, and 1/4" (6,35 mm) HRPO steel sheet. Finish: ProShield, color specified.

145624D

Vertical Ascent 72"Dk

Clamps: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Made from Polyester Resin. Handholds measure approx. 5 3/4" (146,05 mm) long x 2 1/4" (57,15 mm) wide x 1 3/4" (44,45 mm) high.

Panels: Permalene, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. Finish: ProShield, color specified.

143677B

Arch Bridge w/Barrier

Arch Bridge Deck: Weldment comprised of 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011 and 3/16" (4,74 mm) HR flat steel. Standing surface is perforated with 1/4" (6,35 mm) diameter holes. Finish: TenderTuff, brown in color.

Barrier: Weldment comprised of 1.029" (26,13 mm) O.D. RS-20 (.070" - .080") (1,77 mm-2,03 mm) galvanized steel vertical rungs and 1.900" (48,26 mm) O.D. RS-20 (.090" - .100") (2,28 mm-2,54 mm) galvanized steel rails. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

111240A

Balcony Deck

Proj. No. 054-0095 MAG/N/PS
054-0096 MAG/N/PS
Bid No. GL-2011-04-BP-120

02882 - 5

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Barrier: Weldment comprised of 5/8" (15,87 mm) solid steel vertical rails, 1 1/8" (28,57 mm) O.D. steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" (15,87 mm) internal threads. Finish: TenderTuff, color specified.

Deck: Fabricated from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,93 mm) diameter holes perforated. The finished size measures 2 5/8" x 34" (66,67 mm x 863 mm) (straight edge) x 17" (431 mm) radius (curved edge). Finish: TenderTuff, brown in color.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

119514A

Pilot Panel Above Deck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Angled Panel Bracket: Weldment comprised of .190" (4,83 mm) thick 5052 aluminum formed angle with (2) 6005-T5 aluminum threaded tubes 1 1/8" (28,58 mm) O.D. x 1 1/2" (38,1 mm) long. Finish: ProShield, color specified.

Permalene Panel: Two color panel measures 35 5/8" (904,88 mm) wide x 41" (1041 mm) high, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

Wheel: 12" (305 mm) diameter cast A319.1 aluminum alloy. Shaft-303 stainless steel. Finish: TenderTuff, color specified.

Wheel Bracket: Weldment comprised of formed 3/16" (4,75 mm) plate and 5/8" (15,88 mm) O.D. stainless steel shaft. Finish: ProShield, color specified.

116244A

Pipe Barrier Above Deck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Pipe Barrier: Weldment comprised of 5/8" (15,88 mm) solid steel vertical rails, 1 1/8" (28,58 mm) O.D. x 11 GA (.120") (3,04 mm) steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" (15,88 mm)

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

internal threads, 1 1/2" x 1 1/2" x 29 1/2" (38,1 mm x 38,1 mm x 749,3 mm) angle iron. Barrier measures 33 7/8" (860,43 mm) wide x 39 13/16" (1011,22 mm) high. Finish: TenderTuff, color specified.

90o Bracket: Formed from 1/4" x 1 1/4" (6,35 mm x 31,75 mm) HRPO flat steel. Finish: ProShield, color specified.

116244D

Pipe Barrier w/Wheel Ground Level

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Pipe Barrier: Weldment comprised of 5/8" (15,88 mm) solid steel vertical rails, 1 1/8" (28,58 mm) O.D. x 11 GA (.120") (3,04 mm) steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" (15,88 mm) internal threads, 1 1/2" x 1 1/2" x 29 1/2" (38,1 mm x 38,1 mm x 749,3 mm) angle iron. Barrier measures 33 7/8" (860,43 mm) wide x 39 13/16" (1011,22 mm) high. Finish: TenderTuff, color specified.

Angled Panel Bracket: Weldment comprised of .190" (4,83 mm) thick 5052 aluminum formed angle with (2) 6005-T5 aluminum threaded tubes 1 1/8" (28,58 mm) O.D. x 1 1/2" (38,1 mm) long. Finish: ProShield, color specified.

90o Bracket: Formed from 1/4" x 1 1/4" (6,35 mm x 31,75 mm) HRPO flat steel. Finish: ProShield, color specified.

Wheel: 12" (305 mm) diameter cast A319.1 aluminum alloy. Shaft-303 stainless steel. Finish: TenderTuff, color specified.

Wheel Clamp: Formed from 3/16" x 2" (4,75 mm x 52 mm) HRPO zinc-plated. Finish: ProShield, color specified.

120901A

Grab Bar

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Grab Bar: Weldment comprised of formed 7/8" (22,23 mm) O.D. x 11 GA (.120") (3,04 mm) and 1/4" x 1 3/4" (6,35 mm x (44,45 mm) stainless steel half clamps. Finish: TenderTuff, brown in color.

111275A

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Handloop Assembly

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Handloop: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 GA (.120") (3,05 mm) steel tubing with 203 or 303 stainless steel inserts, with 5/8" (15,88 mm) internal thread. Finish: TenderTuff, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

118110A

Square Poly Roof Standard

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Poly Roof: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Roof Logo: Two color roof logo measures 41" (1041 mm) wide x 5 1/8" (130,18 mm) high, color specified.

Roof Sleeve: Cast from A356 aluminum alloy.

122197A

90* Triangular Tenderdeck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Triangular Deck: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures 2 5/8" x 37 3/4" (66,68 mm x 958,85 mm). Finish: TenderTuff, brown in color.

121948A

Kick Plate 8" Rise

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Kick Plate: Fabricated from 11 GA (.120") (3,04 mm) HR flat steel. Finish: TenderTuff, brown in color.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

111228A

Square Tenderdeck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Square Deck: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures 2 5/8" x 47" x 47" (66,68 mm x 1194 mm x 1194 mm). Finish: TenderTuff, brown in color.

112471A

Transfer Step DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Step: Formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Finish: TenderTuff, brown in color.

111231A

Triangular Tenderdeck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Triangular Deck: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures 2 5/8" x 37 3/4" (66,68 mm x 958,85 mm). Finish: TenderTuff, brown in color.

121949A

Tri-Deck Kick Plate 8" Rise

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT SCHEDULE SEPTEMBER 2011

Kick Plate: Fabricated from 11 GA (.120") (3.04 mm) HR flat steel. Finish: TenderTuff, brown in color.

111404H

92" Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404G

100" Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404E

116" Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404D

124" Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404C

132" Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111404B

140" Alum Post DB

Post: See PlayBooster (PB) General Specifications.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

111404A

148" Alum Post DB

Post: See PlayBooster (PB) General Specifications.

111403B

174" Alum Post For Roof DB

Post: See PlayBooster (PB) General Specifications.

111403A

182" Alum Post For Roof DB

Post: See PlayBooster (PB) General Specifications.

156067A

The Pointe

The Pointe Assy.: (Base) Weldment comprised of 1/4" (6,35 mm) HRPO sheet steel, C8 x 13.75 steel channel, 3" x 1 1/2" x .120" (76 mm x 38,1 mm x 3,04 mm) wall galvanized steel tube and 1 1/8" (28,58 mm) square bar. Finish: ProShield. (Pointe-fully assembled) Castings are made from Glass Fiber Reinforced Concrete (GFRC). Glass fiber is Alkali Resistant (AR) type glass formulated for concrete. Nominal wall thickness of 1" (25 mm) and weighs about 11 1/2 lbs. (5,22 kilograms) per square foot. Castings have a strength of 1,500 lbs. (680,39 kilograms) per square inch in tension and 5,000 lbs. (2267,96 kilograms) per square inch in compression. Finish: Acid stain and latex paint made for concrete, Natural in color.

Rock Pocket Cover: Fabricated from 13 Ga. (.090") (2,29 mm) HRPO flat steel conforming to ASTM A1011. Finish: Zinc plate with yellow chromate finish.

172568A

Ind. Blender Spinner Double Alum Post DB

Blender Assy.: Weldment comprised of 1.900" (48,26 mm) O.D. RS20 (.090"- .100") (2,28 mm-2,54 mm) wall galvanized steel tube, 10 Ga. (.135") (3,42 mm) HRPO steel, 2.750" (69,85 mm) O.D. 1018 steel and 1 7/8" (47,62 mm) steel ball. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Proj. No. 054-0095 MAG/N/PS

054-0096 MAG/N/PS

Bid No. GL-2011-04-BP-120

02882 - 11

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Bushing: Oil-filled UHMW PE.

Footer: Weldment comprised of 2.375" (60,32 mm) O.D. RS40 (.130"-.140") (3,30 mm-3,56 mm) wall galvanized steel tube, 12 GA. (.105") (2,66 mm) HR flat steel and 1 7/8" (47,62 mm) steel ball. Finish: ProShield, color specified.

Upper Spinner Mount: Weldment comprised of 2.375" (60,33 mm) O.D. RS40 (.130"-.140") (3,30 mm-3,56 mm) wall galvanized steel tube, 2.750" (69,85 mm) O.D. 1018 steel, and 1/4" (6,35 mm) HRPO flat steel. Finish: ProShield, color specified.

154358A

Orbiter-2 Independent DB Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Rubber Gasket: Made from 50 durometer neoprene.

Spinner Assembled Top: (Upper Assembly) Weldment comprised of 1/4" x 3" (6,35 mm x 76 mm) HRPO flat steel, 1.900" (48,26 mm) O.D. RS40 (.120"-.130") (3,04 mm-3,30 mm) wall galvanized steel tube, 3.500" (88,9 mm) O.D. RS20 (.125") (3,17 mm) wall galvanized steel tube, and 1.125" (28,58 mm) O.D. steel shaft. Finish: ProShield, color specified. (Sleeve/Plate) Weldment comprised of 1/4" (6,35 mm) sheet HRPO steel and 2.875" (73,03 mm) O.D. schedule 80 steel tubing. Finish: ProShield, color specified.

Standing Post Assy:(Spinner Post) Weldment comprised of 2.875" (73,03 mm) O.D. RS40 (.160"-.170") (4,06 mm-4,32 mm) wall galvanized steel tubing, 1.125" (28,58 mm) O.D. steel shaft, 12 Ga. (.105") (2,66 mm) HR flat steel and 1141 or 1144 steel collar. Finish: ProShield, color specified. (Sleeve/Plate) Weldment comprised of 1/4" (6,35 mm) sheet HRPO steel and 2.875" (73,03 mm) O.D. schedule 80 steel tubing. Finish: ProShield, color specified.

Spinner Platform: Comprised of 7 GA. (.179") (4,55 mm) HRPO flat steel and 3/8" (9,53 mm)-16 x 1" (25 mm) weld studs. Standing surface is perforated with 3/8" (9,53 mm) diameter holes. Finish: TenderTuff, color specified.

Spinner Wheel: Weldment comprised of 1.029" (26,13 mm) O.D. RS20 (.070"-.080") (1,78 mm-2,03 mm) wall galvanized steel tube, 1/4" (6,35 mm) HRPO flat steel and 3/8" (9,53 mm) flange weld nuts. Finish: TenderTuff, color specified.

177330A

5" Arch Swing Frame 8' Beam Height Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT SCHEDULE SEPTEMBER 2011

Swing Beam: Weldment comprised of tee clamps and 5" (127 mm) O.D. extruded 6005-T5 aluminum alloy tube with a .125" (3,17 mm) W. Finish: ProShield, color specified.

Arch Posts: See PlayBooster (PB) General Specifications.

177331A

5" Arch Swing Frame Additional Bay 8' Beam Height Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Swing Beam: Weldment comprised of tee clamps and 5" (127 mm) O.D. extruded 6005-T5 aluminum alloy tube with a .125" (3,17 mm) W. Finish: ProShield, color specified.

Arch Posts: See PlayBooster (PB) General Specifications.

174018A

Belt Seat ProGuard Chains for 8' Beam Height

Bolt Link: Stainless Steel

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Belt Seat: Molded from UV stabilized black EPDM rubber encapsulating a weldment comprised of a 22 GA (.029") (0,74 mm) spring stainless steel sheet and (4) .105" (2,67 mm) thick stainless steel washers. The belt seat elliptical shape measures 7" (178 mm) wide x 26" (660 mm) long x .700" (17,78 mm) thick.

Chain/ProGuard: Steel 3/16" (4,75 mm) straight link chain, 800 lb. (362,87 kilograms) working load limit. Finish: ProGuard.

100106A

Age Sign 5-12 Years Single Side DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Post: See PlayShaper (PS) General Specifications.

Sign Panel: Two color panel measures 19 1/2" (495,3 mm) wide x 27 3/4" (704,85 mm) high, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

132155B

Double Poly Slide 40"Dk DB

Exit Support: Weldment comprised of 2.375" (60,33 mm) O.D. RS-20 (.095" - .105") (2,41 mm x 2,66 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Rail: Extruded from 1.125" ((28,58 mm) O.D. x .312" (7,92 mm) wall. 6005-T5 aluminum. Finish: ProShield, color specified.

Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Offset Bolt Bracket: Cast aluminum. Finish: ProShield, color specified.

Rail Spacer: Fabricated from 1.312" (33,32 mm) O.D. x 16 GA (.065") (1,65 mm) steel tubing. Finish: ProShield, color specified.

Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Spacer: Solid color Permalene, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

130798A

Double Swirl Poly Slide 48"Dk DB

Mid-Support: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Rail: Extruded from 1.125" ((28,58 mm) O.D. x .312" (7,92 mm) wall. 6005-T5 aluminum. Finish: ProShield, color specified.

Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Offset Bolt Bracket: Cast aluminum. Finish: ProShield, color specified.

Rail Spacer: Fabricated from 1.312" (33,32 mm) O.D. x 16 GA (.065") (1,65 mm) steel tubing. Finish: ProShield, color specified.

Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Support: Weldment comprised of 2.375" (60.33 mm) O.D. RS-20 (.095" - .105") (2,41 mm-2,66 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

152432A

ABC Climber 48"Dk DB

Climber Bracket: Fabricated from formed 3/16" x 2" (4,75 mm x 51 mm) HR flat steel. Finish: ProShield, brown in color.

Climber Plank: Flange formed from 11 GA (.120") (3,04 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Finish: TenderTuff, brown in color.

Footer: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing and 3/16" x 2" (4,75 mm x 51 mm) HR flat steel. Finish: ProShield, brown in color.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Panels: Permalene, color specified.

139262A

Loop Arch 48"Dk DB

Loop Arch: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing, 1.315" (33,40 mm) O.D. RS-20 (.080" - .090") (2,03 mm-2,28 mm) galvanized steel tubing and 1/4" (6,35 mm) flat steel. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Handhold Panel: Solid color Permalene, color specified.

153077A

Mini Summit Climber 40"Dk DB Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Handhold Panel: Permalene, color specified.

Summit Climber: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT PLAYGROUND EQUIPMENT SCHEDULE SEPTEMBER 2011

Support: Weldment comprised of 2.375" (60,33 mm) O.D. RS-20 (.095" - .105") (2,41 mm-2,66 mm) galvanized steel tubing and 1/4" x 3" (6,35 mm x 76 mm) mounting plate. Finish: ProShield, color specified.

119981A

Step Deck DB

Step Deck: Flange formed from 11 GA (.120") (3,04 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Finish: TenderTuff, brown in color.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Handloop: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 GA (.120") (3,05 mm) steel tubing with 203 or 303 stainless steel inserts, with 5/8" (15,88 mm) internal thread. Finish: TenderTuff, color specified.

Offset Bolt Bracket: Cast aluminum. Finish: ProShield, color specified.

Support: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing and 1 3/4" x 1 3/4" x 1/8" (44,45 mm x 44,45 mm x 3,17 mm) zinc plated angle. Finish: ProShield, brown in color.

123284A

Wiggle Ladder 32"Dk DB

Chain: 4/0 Chain zinc plated. Finish: TenderTuff, color specified.

Rail: Fabricated from 13/16" (20,64 mm) diameter x 27 15/16" (709,60 mm) long CRS solid bar stock with both ends tapped 3/8" (9,53 mm). Finish: TenderTuff, color specified.

Support: Fabricated from 1.315" (33,40 mm) O.D. RS-20 (.080" - .090") (2,03 mm-2,28 mm) galvanized steel tubing.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Handhold Panel: Permalene, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" (22,23 mm) O.D. x 1 11/16" (42,85 mm). Finish: ProShield, color specified.

129967A

Horizontal Ladder

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Horizontal Ladder: Weldment comprised of 1.660" (42,16 mm) O.D. RS-20 (.085" - .095") (2,16 mm-2,41 mm) galvanized steel tubing, 1.029" (26,14 mm) O.D. RS-20 (.070" - .080") (1,78 mm-2,03 mm) galvanized steel tubing and 3/16" x 1 7/8" x 5" (4,75 mm x 47,63 mm x (127 mm) HRS zinc-plated plate. Finish: ProShield, color specified.

111348A

Arch Bridge

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Attachment Bracket: Fabricated from 1/8" x 1 1/4" x 2" (3,17 mm x 31,75 mm x 51 mm) 6061-T6 aluminum angle. Finish: ProShield, color specified.

Panels: Permalene panel measures 41" (1041 mm) wide x 34 15/16" (887,40 mm) high, color specified.

Bridge Deck: Fabricated from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Finish: TenderTuff, brown in color.

131956A

Belt Bridge

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Belt: Made from .315" (8,00 mm) thick mini rough top 3-ply rubber belting with polyester fabric plys. 40" (1016 mm) wide x 39 3/8" (1000,13 mm) long, black in color.

Mounting Angle: Weldment comprised of 2 1/2" (63,5 mm) wide x 2 1/2" (63,5 mm) high x 36 1/2" (927,1 mm) long formed 10 GA (.135") (3,43 mm) carbon steel with 3/8" x 1 1/8" (9,53 mm x 28,58 mm) stainless steel studs. Finish: TenderTuff, brown in color.

Mounting Plate: Fabricated from 2" (51 mm) wide x 36 1/2" (927,1 mm) long 3/16" (4,75 mm) HR flat steel. Finish: ProShield, brown in color.

Panel Solid color panel measures 39 1/2" (1003,3 mm) wide x 33 5/8" (854,08 mm) high, color specified.

111288A

Driver Panel Above Deck

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Hub: Solid color Permalene, color specified.

Permalene Panel: Two color panel measures 39 1/2" (1003,3 mm) wide x 30" (762 mm) high, color specified.

Wheel: 12" (305 mm) diameter cast A319.1 aluminum alloy. Shaft-303 stainless steel. Finish: TenderTuff, color specified.

Wheel Bracket: Weldment comprised of formed 3/16" (4,75 mm) plate and 5/8" (15,88 mm) O.D. stainless steel shaft. Finish: ProShield, color specified.

111299A

House Panel Above Deck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Permalene Panel: Two color panel measures 39 1/2" (1003,3 mm) wide x 30" (762 mm) high, color specified.

111281A

Slant Window Panel Above Deck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Permalene Panel: Solid color panel measures 39 1/2" (1003,3 mm) wide x 30" (762 mm) high, color specified.

Braces: Solid color, yellow, tan or red in color.

Slant Window Section: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Window: .177" (4,50 mm) thick clear polycarbonate.

111290A

Tracing Panel Above Deck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Permalene Panel: Two color panel measures 39 1/2" (1003,3 mm) wide x 30" (762 mm) high, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Permalene Panel: Two color panel measures 39 1/2" (1003.3 mm) wide x 30" (762 mm) high, color specified.

117946A

Wire Barrier

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Barrier: Weldment comprised of 1 1/8" (28.58 mm) O.D. steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" (15,88 mm) internal threads, 1/4" x 1 1/4" (6,35 mm x 31,75 mm) HR flat steel and 1/4" (6,35 mm) diameter wire. Barrier measures 39 1/4" (996,95 mm) wide x 30 13/16" (782,62 mm) high. Finish: TenderTuff, color specified.

119977A

Handbar

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Handloop: Weldment comprised of 1.125" (28,58 mm) O.D. x 11 GA (.120") (3,04 mm) steel tubing with 203 or 303 stainless steel inserts, with 5/8" (15,88 mm) internal thread. Finish: TenderTuff-coated, color specified.

Offset Bolt Bracket: Cast aluminum. Finish: ProShield, color specified.

121948A

Kick Plate 8" Rise

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Kick Plate: Fabricated from 11 GA (.120") (3,04 mm) HR flat steel. Finish: TenderTuff, brown in color.

111237A

Square Tenderdeck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Square Deck: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (4) slotted holes for face mounting

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

components. The finished size measures 2 5/8" x 44 3/8" x 44 3/8" (66,68 mm x 1127,13 mm x 1127,13 mm).
Finish: TenderTuff, brown in color.

117495A

Triangular Tenderdeck

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Triangular Deck: Flange formed from 12 GA (.105") (2,66 mm) sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" (7,92 mm) diameter holes. Deck face has (6) slotted holes for face mounting components. The finished size of two of the three sides measures 2 5/8" x 39 1/4" (66,68 mm x 996,95 mm) on the face of the deck and the other side measures 2 5/8" x 55 1/2" (66,68 mm x 1409,7 mm). Finish: TenderTuff, brown in color.

121949A

Tri-Deck Kick Plate 8"Rise

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Kick Plate: Fabricated from 11 GA (.120") (3,04 mm) HR flat steel. Finish: TenderTuff, brown in color.

111397F

82"Post DB

Post: See PlayShaper (PS) General Specifications.

111397E

90"Post DB

Post: See PlayShaper (PS) General Specifications.

111397D

98"Post DB

Post: See PlayShaper (PS) General Specifications.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

111397C

106" Post DB

Post: See PlayShaper (PS) General Specifications.

111397B

114" Post DB

Post: See PlayShaper (PS) General Specifications.

111397A

128" Post DB

Post: See PlayShaper (PS) General Specifications.

120710A

Pod Climber 8" DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Disc: Rotationally molded from U.V. stabilized linear low density polyethylene, disc measures 14" (356 mm) in diameter x 7" (178 mm) high, color specified.

Support: Weldment comprised of 1.900" (48,26 mm) O.D. RS-20 (.090" - .100") (2,28 mm-2,54 mm) 1.315" (33,40 mm) O.D. RS-20 (.080" - .090") (2,03 mm-2,28 mm) and 3/16" x 5" (4,75 mm x 127 mm) diameter plate. Finish: ProShield, color specified.

164074B

Single Bobble Rider DB

Leg: Weldment comprised of 3.500" (88,9 mm) O.D. RS20 (.120"-.130") (3,04 mm-3,30 mm) wall galvanized steel tubing and 1/4" x 10" (6,35 mm x 254 mm) diameter HRPO zinc plated steel. Finish: ProShield, black in color.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Spring: Weldment comprised of 5 5/8" (142,87 mm) diameter 13/16" (20,63 mm) tempered alloy steel coil. Finish: ProShield, black in color.

Bobble Rider: Weldment comprised of 1.315" (33,40 mm) O.D. RS20 (.080"-.090") (2,03 mm-2,28 mm) wall galvanized steel tubing, 2.375" (60,32 mm) O.D. RS20 (.095"-.105") (2,41 mm-2,66 mm) wall galvanized steel tubing, 3/8" (9,52 mm) HRPO steel plate, 1/4" (6,35 mm) HRPO steel plate, and 4" (101 mm) diameter 10 GA. (.135") (3,42 mm) low carbon steel ball. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Seat: Rotationally molded from U.V. stabilized linear low density polyethylene, black in color.

174018A

Belt Seat ProGuard Chains for 8' Beam Height

Bolt Link: Stainless Steel

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Belt Seat: Molded from UV stabilized black EPDM rubber encapsulating a weldment comprised of a 22 GA (.029") (0,74 mm) spring stainless steel sheet and (4) .105" (2,67 mm) thick stainless steel washers. The belt seat elliptical shape measures 7" (178 mm) wide x 26" (660 mm) long x .700" (17,78 mm) thick.

Chain/ProGuard: Steel 3/16" (4,75 mm) straight link chain, 800 lb. (362,87 kilograms) working load limit. Finish: ProGuard.

176038A

Full Bucket Seat ProGuard Chains for 8' Beam Height

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Full Bucket Seat: Made of U.V. stabilized high-quality black rubber encapsulating a 24 GA (.024") (0,61 mm) stainless steel reinforcement plate. Handles cast from 356-T6 aluminum alloy with a 60 durometer black neoprene grip placed over handles. Handles attach to seat with (3) 1/4" (6,35 mm) x 1 5/16" (33,32 mm) long stainless steel rivets. The full bucket measures 9" (229 mm) deep x 10 1/2" (266,7 mm) wide.

Chain/ProGuard: Steel 3/16" (4,75 mm) straight link chain, 800 lb. (362,87 kilograms) working load limit. Finish: ProGuard.

177332A

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Single Post Swing Frame 8' Beam Height Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Beam: Weldment comprised of 2.375" (60,33 mm) O.D. RS-40 (.130" - .140") (3,30 mm-3,56 mm) galvanized steel tubing, 3" (76 mm) wide zinc-plated steel clamps and 1 1/4" (31,75 mm) housings w/bronze bushings. Finish: ProShield, color specified.

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Post: See PlayBooster (PB) General Specifications.

177333A

Single Post Swing Frame Additional Bay 8' Beam Height Only

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Beam: Weldment comprised of 2.375" (60,33 mm) O.D. RS-40 (.130" - .140") (3,30 mm-3,56 mm) galvanized steel tubing, 3" (76 mm) wide zinc-plated steel clamps and 1 1/4" (31,75 mm) housings w/bronze bushings. Finish: ProShield, color specified.

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Post: See PlayBooster (PB) General Specifications.

100041A

Curved Balance Beam DB

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Balance Beam: Weldment comprised of 1 1/2" (38,1 mm) x 3" (76 mm) x 11 GA (.120") (3,04 mm) rectangular steel tubing. Finish: TenderTuff, color specified.

Support Leg: Weldment comprised of 2 3/8" (60,33 mm) O.D. RS20 (.095"-.105") (2,41 mm-2,66 mm) galvanized steel tubing and 3/8" x 4" (60,33 mm x 102 mm) mounting plate. Finish: ProShield, color specified.

100105A

Age Sign 2-5 Years Single Side DB

Proj. No. 054-0095 MAG/N/PS

054-0096 MAG/N/PS

Bid No. GL-2011-04-BP-120

02882 - 23

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Post: See PlayShaper (PS) General Specifications.

Sign Panel: Two color panel measures 19 1/2" (495,3 mm) wide x 27 3/4" (704,85 mm) high, color specified.

164093A

Bongo Panel

Bongo: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Permalene Panel: Two color panel measures 39 1/2" (1003,3 mm) wide x 30" (762 mm) high, color specified.

Screen Plate: Fabricated from 12 GA. (.105") (2,66 mm) HRPO flat steel. Finish: Black in color.

111284A

Hole Panel

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Permalene Panel: Solid color panel measures 39 1/2" (1003,3 mm) wide x 30" (762 mm) high, color specified.

Permalene Panel: Solid color panel measures 39 1/2" (1003,3 mm) wide x 30" (762 mm) high, color specified.

144984A

Storefront Panel

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Store Panel: Solid color Permalene, color specified.

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

PLAYGROUND EQUIPMENT SCHEDULE

SEPTEMBER 2011

115201B

LW Post 1"Panel DB

Post: See PlayShaper (PS) General Specifications.

END OF SECTION 02882

PLAYGROUNDS FOR THE GLASTONBURY EAST HARTFORD MAGNET SCHOOL

GLASTONBURY, CT

LIST OF DRAWINGS

SEPTEMBER 2011

LIST OF DRAWINGS

- COVER SHEET
- L-1.0 PLAYGROUND LOCATOR MAP
- L-2.0 PLAYGROUND LAYOUT – AGE 2-5
- L-2.1 PLAYGROUND LAYOUT – AGE 5-12
- L-3.0 PLAYGROUND GRADING AND DRAINAGE PLAN – AGE 2-5
- L-3.1 PLAYGROUND GRADING AND DRAINAGE PLAN – AGE 5-12
- L-4.0 FOOTING PLAN – AGE 2-5
- L-4.1 FOOTING PLAN – AGE 5-12
- L-5.0 SURFACING PLANS
- L-6.0 PLAYGROUND DETAILS
- L-6.1 PLAYGROUND DETAILS
- L-6.2 PLAYGROUND DETAILS
- L-7.0 ELEVATIONS – AGE 2-5
- L-7.1 ELEVATIONS – AGE 5-12
- L-8.0 ISOMETRIC – AGE 2-5
- L-8.1 ISOMETRIC – AGE 5-12
- L-9.0 RENDERING – AGE 2-5
- L-9.1 RENDERING – AGE 5-12

Proj. No. 054-0095 MAG/N/PS

054-0096 MAG/N/PS

Bid No. GL-2011-04-BP-120

LIST OF
DRAWINGS - 1