

SECTION 32 00 00
CORRECTIVE MAINTENANCE PROJECT SPECIFICATION
Carson High School; Baseball and Softball Facilities

PART 1 – SCOPE & SUBMITTALS

1.1 SCOPE OF WORK

- A. The scope of this section includes but is not limited to corrective maintenance and sitework including demolition, grading operations, infield mix installation, sod replacement, drainage installation, irrigation adjustments, labor, materials, sports equipment, and associated work.

1.2 CODES AND STANDARDS

- A. All work shall be performed in accordance with the latest edition of the following codes and standards unless otherwise documented by the construction documents.
 - 1. American Society for Testing and Materials (ASTM)
 - 2. Occupational Safety and Health Standards (OSHA)
 - 3. Standard Specifications for Public Works Construction, Washoe County (Orange Book).
 - 4. National Federation of State High School Association (NFHS)

1.3 PROJECT CONDITIONS

- A. The Contractor shall verify existing conditions before starting work.
- B. All materials shall be installed per manufacturer recommendations. Contact Landscape Architect/Engineer where recommendations conflict with plans or specifications.
- C. The Contractor shall protect existing structures and facilities which are to remain.
- D. The Contractor shall not interfere with use of adjacent buildings or block access to facilities to remain open during grading operations.
- E. The Contractor shall maintain free and safe passage to and from adjacent buildings and maintenance areas outside the project limits.

1.4 SUBMITTALS

- A. The following information shall be submitted prior to installation of specified work or as required per this section or other specification sections.
 - 1. Manufacturer published product cut sheets indicating the product number, dimensions, materials, and finish.
 - 2. Manufacturer warranty, installation requirements and/or recommendations.
 - 3. Color samples, products samples, and or shop drawings as indicated.

1.5 CONTRACTOR QUALIFICATIONS

- A. Contractor shall have experience with installation of specified products and/or trained by the manufacturer prior to installation.

1.6 QUALITY ASSURANCE

- A. The Contractor is responsible to make all required corrections to meet the specified design grade tolerances at no cost to the Owner.

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- B. The contractor is responsible to layout and place all of the new field components per NFHS rules and requirements (base location, distances, pitching distances, pitching mound shape, etc.)
- C. The engineer, owner, and contractor will concurrent and jointly review the layout and sports specific limits of the layouts and transitions for grass to skin. This includes home plate circle, base paths, infield skin, warning track width, 95 foot arced infield radius, and bull pen areas.

PART 2 – PRODUCTS

2.1 SPORTS EQUIPMENT (In-ground)

- A. The Contractor is required to provide and install all permanent and loose equipment as specified by this section, per manufacturer recommendations and as shown on drawings.
- B. High School Baseball/Softball equipment shall be the following, or approved equal products:

Item Listed in Plan	Manufacturer	Model	Details/Finish
Baseball/Softball Pitching Rubber	Sportsfield Specialties	SHBBPB	Schutt 24"x6" four-sided professional pitching rubber, model SHBBPB.
Buried Home Plates	Sportsfield Specialties	SHSRHP	Schutt Bury-All home plate
Baseball/Softball Bases	Sportsfield Specialties	SHIBL /SHBBP-44	Schutt/Hollywood Set of (3) bases with anchor sleeves

- C. Manufacturer Phone Numbers:
 - 1. Sportsfield Specialties: (888) 975-3343
- D. Submittal not required if specified products supplied.

2.2 SPORTS EQUIPMENT FURNISHINGS

- A. The contractor shall provide and install new fixed sports equipment in both the home and visitor's dugout at softball per the schedule below.
- B. The contract shall submit materials product data, shop drawings, logo placements and color options for ALL of the dugout furnishings for owner review and approval.
- C. The contract shall confirm the exact location of the installed product with the owner prior to final layout and affixing to the interior of the exiting dugout walls, floors, etc. as needed.

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- D. The contract shall secure and affix the new furnishing with heavy duty, unsecured spaces, and vandal resistance hardware.

Item Listed in Plan	Manufacturer	Model	Details/Finish
Dugout Team Benches	Baseballracks	Rizzo Bench	Set of (3) per dugout or 22 feet in total length per dugout, color selection per School District
Dugout Helmet Shelves	Baseballracks	Gandolfini Open Player's Helmet Rack (22 feet in length +/-	Standard size measures 7'6"L x 11 1/4"D x 12 3/4"H, 3 each per dugout for a total of 22 feet per dugout with 14-1/8 wide cubbies per color selection per School District
Dugout Cubby & Bat Rack	Baseballracks	18 Cubby 15 Bat Rack Combo	Eighteen cubby Helmet rack made with premium wood, 1 each per dugout color selection per School District

- E. Manufacturer Phone Number:
 1. Baseball Racks: (708) 636-1047

2.3 BASEBALL/SOFTBALL AGGREGATE SURFACING

- A. The Contractor is required to provide and install all baseball and softball aggregate surfacing per the plans and manufacturer recommendations.
- B. Baseball and softball aggregate surfacing shall be the following, or approved equal:

Item Listed in Plan	Manufacturer	Model	Details/Finish
Baseball Infield Mix	DuraEdge	Rec Infield Mix	Infield mix of clay and fine aggregate for baseball and softball infields and warning tracks.
Mound, Pitching/Bullpen & Batter/Catching Box Box Packing Clay	DuraEdge	Black Stick Mound Clay	Specialty packing clay for baseball mounds, softball pitching and batter's boxes.

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Infield Conditioner/Top Dressing	DuraEdge, Turface or DiamondPro	Pro Slide - Play Ball Conditioner	Calcined clay infield conditioner.
Infield Conditioner/Top Dressing	DuraEdge, Turface or DiamondPro	Pro Slide – Topdressing	Professional grade expanded shale topdressing.
Warning Track Mix	DuraEdge or equal	DuraTrax – Warning Track	Professional grade warning track mix.

- C. Clay fines shall be a naturally occurring soil-clay product specifically manufactured for baseball and softball.
- D. Submit product data and MSDS information for review and approval.
- E. It shall be the Owners discretion to determine what products are equal if any.
- F. Manufacturer Phone Numbers:
 - 1. DuraEdge Products: (866) 867-0052

2.4 TURF GRASS SOD

- A. Turf grass sod shall be predominately Kentucky bluegrass, more than 80% measured by plant coverage and can include perennial rye grass as the remaining 20% of plant coverage. Plastic netting or other soil/sod reinforcing material will not be permitted. These present a hazard to players and can be caught in sports footwear.
- B. A product submittal from the growing farm including basic soils information, turfgrass planting cultivars, and certification the materials will be delivered free of weeds, disease and pests to the owner for review.
- C. The turf shall have a minimum of twelve (12) months of age at the time of harvest.
- D. The sod shall be maintained for at least eight (8) weeks prior to harvest at a mowing height of approximately 1”.
- E. The owner has the option to have the sod fertilized on the nursery site using a balanced fertilizer on a bi-monthly basis.
- F. The Owner reserves the right to monitor and adjust the fertilizer type, application rate, and application intervals.
- G. No application of fertilizer shall be made within two (2) weeks of harvest and shipping.
- H. Sod shall be mechanically cut and harvested to a depth of ½” ± ⅛” below the thatch layer. The thatch layer shall be ½” thick minimum. The Owner shall have the authority to make the final determination regarding sod thickness at time of harvest.
- I. All sod strips shall be uniformly cut and harvested in continuous strips at least 100’ long and 42” wide (“big rolls”). Sod strips not meeting these dimensions will be rejected by the Owner.

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- J. All sod strips shall be capable of maintaining shape and square when unrolled and placed. Any sod strip not maintaining this test will not be accepted.
- 2.5 STORM DRAINAGE UTILITIES
- A. Corrugated High Density Polyethylene Drain Line (Chdpe)
 - 1. CHDPE pipe, couplings and fittings shall be high density corrugated polyethylene smooth interior pipe, manufactured by Advanced Drainage Systems, Inc., Model ADS N-12; or equal.
 - a. 4-inch through 10-inch diameters shall meet the strength requirements of AASHTO M252. All fittings shall be watertight.
 - B. Frames, Covers And Grates
 - 1. Provide all covers from the same manufacturer. Where required, provide "Pedestrian Safe" covers to meet ADA requirements.
 - C. CATCH BASINS AND DRAINS
 - 1. Catch Basins and Drains shall be ADS Nyoplast drain structures or approved equal.
- 2.6 Excess Or Unsuitable Material
- A. Excess or unsuitable material, broken asphaltic concrete, broken Portland cement concrete, pipes, etc., shall be removed and disposed of by the Contractor. Materials shall be disposed of at an approved disposal site. Contractor shall, prior to commencement of work, submit a letter to Owner stating locations of disposal sites for excess materials, and certifying that they have obtained property Owner's permission for disposal of surplus materials.
- 2.7 CHAIN LINK FENCING
- A. The Contractor must provide all labor, materials, equipment, tools and taxes necessary for the complete installation of a new chain link fence to match existing systems.
 - B. The Fence Installer must review and accept all existing and improved site conditions, including existing fence connection conditions and grade prior to installation.
 - C. References
 - 1. ASTM A392 Specification for Zinc-Coated Steel Chain-Link Fence Fabric
 - 2. ASTM A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
 - 3. ASTM F552 Standard Terminology Relating to Chain Link Fencing
 - 4. ASTM F567 Standard Practice for Installation of Chain Link Fence
 - 5. ASTM F626 Specification for Fence Fittings
 - 6. ASTM F900 Specification for Industrial and Commercial Swing Gates
 - 7. ASTM F1043 Specification for Strength and Protective Coatings of Steel Industrial Chain Link Fence Framework

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8. ASTM F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
- D. Contract shall submit products intended to be used, hardware, vinyl slatting color options, and fence topper to match existing for owner review, selection and approval.

PART 3 – INSTALLATION

3.1 DELIVERY, STORAGE AND HANDLING

- A. Ship and transport all materials in a safe manner protecting from damage, corrosion, and wear.
- B. Offload all products with appropriate equipment and care preventing any damage.
- C. Store in a neat and orderly manner protected from elements to prevent damage, corrosion, or wear. Provide additional covering or conditioning as needed per manufacturer requirements.

3.2 INSTALLATION

A. Sports Equipment

1. Installation of the sports equipment shall follow the directions of the manufacturer and/or vendor. The Contractor shall report any discrepancies in construction plans or specification and manufacturer instructions or requirement prior to installation of equipment.

B. Baseball Aggregate Surfacing

1. Installation of the sports equipment shall follow the directions of the manufacturer and/or vendor. The Contractor shall report any discrepancies in construction plans or specification and manufacturer instructions or requirement prior to installation of equipment.
2. Material shall be installed per manufacturers written requirements and rolled to a firm, unyielding finish. The final grading tolerance is 1/4" in 10' measured in any direction.
3. All material transitions are to be smooth and flush with no lips, dips, gaps or elevation deferential.
4. The finished surfaces shall be fine graded, compacted, moisture conditioned and deliver to the owner in a 100% baseball/softball ready condition prior to the punch review and acceptance of project completion. This includes installation of the bases and plates and might require the placement of string lines to the foul poles for formal dimensional verification.

C. Soil Preparations and Turf Grass Sod

1. The contractor shall rip, rototill and amend the native soils to a minimum of 6 inches prior to grading operations for areas to receive new sod. Soils preparations shall follow sod producer's recommendations and include preplant fertility program.
2. All existing irrigation systems for both turf and skin areas shall be tested, and adjusted/relocated in both placement and height in preparation for sodding an new

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baseball surfacing materials. Contractor shall test and confirm proper operations for all remote control valves, quick couples, and associated controls. Contract shall provide new inground equipment access boxes for any that are damaged beyond reuse.

3. Any irrigation component replacement shall match or be 100% equivalent to the products removed in safety and performance.
 4. Engineer/Landscape Architect/Engineer shall review the prepared and finished sod grade prior to installation.
 5. Lay sod within twenty-four (24) hours after it is delivered. Protect rolls from drying out as necessary.
 6. Unroll sod carefully and place in staggered rows. Tamp each roll against the adjacent strips to eliminate joints and edges.
 7. Trim sod to conform to turf shapes designated on the planting plans.
 8. Roll all sod areas with an approved sod roller no later than twenty-four (24) hours after installation. Sod shall be flush with the finish grade of existing walk, curbs, etc.
 9. Sod shall be firm and unyielding under foot.
 10. Additional rolling may be required to meet this requirement and Landscape Architect/Engineer's approval.
 11. Hand roll sod immediately after installation and water thoroughly. Allow sod to settle, dry overnight and roll a final time in the morning and irrigate thoroughly.
 12. Irrigate all new sod with a minimum of $\frac{1}{4}$ " of precipitation twice per day for the first 30 days. Adjust watering as needed to accommodate the climate, time of year and weather.
 13. During the maintenance period, any days prior to full project acceptance by the owner, do not allow the turf to exceed 1 1/2 inches in height. Collect and remove all grass clippings from the site.
 14. Maintain turf edges adjacent to walks with a mechanical edger in a neat condition until the acceptance of the work.
 15. Take sufficient measures to ensure the turf against damage resulting from pedestrian traffic. If any type of barrier is used, it shall meet with the approval of the Landscape Architect/Engineer.
 16. Acceptance of turf areas will not be made until turf has received the second mowing and all bare spots have been re-sodded. Contractor shall be responsible for the maintenance of the turf areas until acceptance.
 17. Repairs to all damaged turf will be necessary before acceptance will be made.
- D. Storm Drainage Utilities
1. Contractor to carefully examine each pipe prior to placing. Promptly set aside defective pipe and damaged pipe. Do not install defective pipe or damaged pipe.

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Continually remove extraneous material from pipe. Do not place pipe in water, nor place when trench or weather is unsuitable for such work.

2. Make required connections to existing drains ensuring systems are connected and flowing correctly.
 3. Commence pipe installation at lowest point in system and install pipe with bell end upgrade. Clean interior and joint surfaces and test pipe for soundness before lowering pipe into trench.
 4. Lay pipe in straight lines and on uniform grades between points where changes in alignments or grades are shown. Fit pipes to form a smooth uniform invert. Keep a stopper in pipe mouths when pipe installation is not in progress.
 5. Flush closed lines with water in sufficient volume to obtain free flow through each line. Remove obstructions and correct defects discovered. Remove silt and trash from catch basins and inlets prior to inspection of work.
 6. Backfill trenches only after piping has been inspected, tested and the location of pipes and appurtenances has been recorded. Backfill material, placement and compaction shall conform to the requirements of Orange Book.
- E. Sports Equipment Furnishings
1. Contractor shall layout and install new dugout furnishing per manufactures recommendation and warranty requirements.
- F. Chain Link Fencing
1. Install framework, fabric, accessories, and gates in accordance with best trade practice for sports field / recreational installations. ALL new work shall include at a minimum a top and bottom rail regardless of the existing fence insulation features.
 2. Mid rails are required for all fences over 8 feet in height unless specifically removed from all or part of the project scope as shown on the plans.
 3. Make welds neat and secure, grind off excess exposed metal.
 4. Securely set posts plumb in alignment at proper depth and height.
 5. Install rigid bracing where required for stable, secure fence.
 6. Install fabric under tension and securely tie to posts, rails and braces.
 7. Gates must move freely without sag.
 8. Space line posts at intervals not exceeding 10 feet.
 9. All posts shall be embedded in an appropriate concrete footing; Slope top of concrete footings for water runoff.
 10. Brace each gate and corner post back to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail, one bay from end and gate posts.
 11. Install center and bottom brace rail on corner and gate leaves.

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12. All fabric shall have finished smooth ends. Position bottom of fabric ½" above finished grade.
13. Install fabric on the ballfield interior side of posts.
14. Fasten fabric to top rail, line posts, braces, and bottom tension wire with 11 AWG galvanized wire ties 24 inches (610 mm) maximum on centers.
15. Attach fabric to end, corner, and gateposts with tension bars and tension bar clips.
16. Install bottom rail supported at each line and terminal post in such a manner that a continuous brace between posts is formed.
17. Install gate fabric to match fence.
18. Install tie wires with one tight turn to hold fabric firmly to frame, bend ends of wire inward to avoid person or clothing snag points.
19. Install fasteners, nuts for tension bands and hardware bolts on the side of the fence opposite fabric side. Spoil ends of bolts to prevent removal of nuts.

3.3 MAINTENANCE

- A. Provide all necessary maintenance per manufacturer recommendations during the maintenance period.
- B. The maintenance period shall include anytime between the installation of various components, in particular the natural grass sod, and full acceptance and turn over to the owner.
- C. The contractor is responsible for maintenance of the project site and features within the work area until such time that the owner accepts the work as either substantiality complete or fully contractually complete for the full and intended use by the owner.
- D. Provide all training to owner for maintenance per manufacturer recommendations.
- E. Furnish all extra materials, keys, caps, tools, fittings, and components included with the product to the Owner.

3.4 WARRANTY

- A. The Contractor shall verify that all documents are in proper order, contain full information.

3.5 DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL

- A. Excess or unsuitable material, rubble, large rocks, broken asphaltic concrete, broken concrete, pipes, etc., shall be removed and disposed of at an approved disposal site by the Contractor at no additional cost to the Owner.

3.6 FINISHED GRADE

- A. The grading tolerances outlined below includes finished surfaces and finished grades after all materials have been placed and/or installed.
 1. Material shall be installed per manufacturer's written requirements and rolled to a firm, unyielding finish with a compaction of 95%. The final grading tolerance is 1/4" in 10' measured in any direction.

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2. All material transitions are to be smooth and flush with no lips, dips, gaps or elevation differential.
- B. Regardless of tolerances, the Contractor is responsible to provide smooth transitions where necessary to provide smooth even traffic ways and routes of travel unless otherwise specified in the construction documents.
- C. Unless otherwise indicated, provide uniform slopes with smooth, even transitions between points for which finished grades are indicated. As well as, between finished grades and existing grades at the limit of grading.
- D. At completion of grading operations, the site shall be left in a clean and finished condition conforming to the drawings.

END OF SECTION