



Scope: This specification is intended for use as a guideline for the resurfacing of existing asphalt or concrete surfaces using the unique, patented Nova'ProClay System.

SECTION 02542 **Nova'ProClay™** YEAR ROUND CLAY

NOVA=PROCLAY TENNIS SURFACE RESURFACING – ASPHALT OR CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes and is not limited to:

1. Installation of the patented Nova'ProClay monolithic pavement clay tennis court consisting of a base sheet of synthetic fibers and fabric interlocked with select aggregates, synthetic polymers and fast dry / clay court surfacing materials.
2. Preparation of existing asphalt or concrete base to receive new surfacing.
3. Tennis net posts, foundations and anchor straps.

1.02 QUALITY ASSURANCE

- A. Nova=ProClay tennis surface shall be constructed by an approved licensee certified by NGI Sports (NGI). The Nova'ProClay system shall meet manufacturing specifications set up for same.
- B. All material shall be clearly marked.
- C. Material shall not be installed when rain is imminent or the temperature is below 50° F.
1. The installation of the Nova=ProClay system shall be completed in dry weather.
 2. Neither surface nor aggregates may be moist or wet.
 3. Fabrication should be done in dry weather with the temperature above 50° F and rising.

1.03 WARRANTY

- A. Materials shall have a minimum limited warranty supplied by the manufacturer.
- B. Contractor to provide {Owner} {Architect} {Landscape Architect} {Engineer}, upon completion of warranty application, written warranty at completion of project in accordance with section {01700} {01740} of the Project Manual.

PLEASE NOTE: THIS SPECIFICATION IS TO BE USED AS A GUIDELINE. INFORMATION MAY NOT BE PROPER UNDER ALL CONDITIONS.

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PART 2 - PRODUCTS

2.01 SURFACING SYSTEM FOR TENNIS

A. The Nova=ProClay base sheet, Nova=PC-Stratum, shall consist of artificial fibers that shall meet the following minimum specifications.

1. Tufting Construction	ASTM D418
2. Breaking Elongation	124%, ASTM D1682
3. Breaking Load	181 lbs, ASTM D1682
4. Grab Tear Strength	100 lbs, ASTM D 1682
5. Seam Tensile Strength	55 lbs/inch, minimum
6. Melting Point	334.4° F, ASTM D789
7. Flammability Test	Pass, ASTM E108

B. Granular Fill Material: Nova=PC-TexFill, shall consist of approved 30-70 mesh granules applied at a rate of approximately two point two (2.2) lbs per square foot. All aggregate shall be kept dry.

C. Seams: Nova=PC-Bond, weather resistant polyester tape and one-component, moisture cured urethane adhesive as recommended by system designer, NGI.

C. Resin Binder: Nova=PC-PolySeal (acrylic resin) materials shall be of the quality approved by system designer, NGI

E. Surface: Nova'PC-Finish (fast dry/clay) surfacing materials shall be of the quality approved by system designer, NGI.

2.02 TENNIS COURT ACCESSORY MATERIALS

A. Net Posts and Sleeves Equipment: Tennis posts shall be made out of steel, metal or wood of sufficient strength to properly support the net at a height of 42". Posts and sleeves shall be set where indicated on drawings. Posts shall be set plumb and true so as to support the net at a height of 42" above the court surface at the net posts.

B. Center Strap Anchor: A center strap anchor shall be positioned as shown on the drawings and set in concrete footings measuring 12" X 12" X 12".

C. Tennis Nets: Shall be polyethylene 3 mm braided body, 42' long and 3.25' wide, polyester top binding attached with four lock stitched rows. Sides shall be braced with dowels for a neat, taut appearance. Nets shall be installed, upon completion, to posts and cables.

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PART 3 - EXECUTION

BASE PREPARATION

3.01 EXISTING ASPHALT OR CONCRETE

- A. Existing asphalt or concrete with a slope over .25% will need to be corrected with a stone dust overlay or wedge and curb inside the fence.
1. Inspect and shoot grades of existing asphalt or concrete to determine planarity and slope. This will be required to estimate amount and depth of stone dust screenings which are to be installed on surface to achieve a tolerance of 1/8" in 10' when measured in any direction and a minimum overall slope of .14-.24%
 2. Cracks shall be cleaned, primed and filled with dry silica sand up to 1/2" of top surface profile and then filled to 1/8" to top of crack with a flexible joint compound. A rigid thin film tape, Nova=PC-Bond II shall be laid into wet caulk on cracks 3/4" and larger to prevent shadowing after surfacing.
 3. As required, add crushed aggregate base stone and compact by mechanical laser grading, rolling and lightly scarifying a sound surface to within a finished tolerance. It is a preferred method of application to laser grade the surface to insure proper surface tolerance. The materials shall be spread and thoroughly compacted and finished to a tight, smooth compacted finish.
 4. Finished surface of the leveled and prepared screening course shall not vary from the specified grade more than 1/8" in 10' when measured in any direction and shall slope in one direction at a rate of .14 to .24%.

3.02 PERIMETER EDGING FOR CRUSHED ROCK OVERLAY

A. A free floating type curb of standard brick or concrete block set in cement mortar as detailed in the drawings shall be installed around the perimeter of the court area as necessary to secure the stone overlay. Existing barrier may be used and modified as necessary. Optional for curb design is the use of pressure treated lumber (2" X 8") attached to the fence posts with U Bolts. Sections may be left open to allow trucks and other equipment to enter and leave the court area until other work specified herein has been completed.

B. The finished curb elevation shall be exactly 1/2" below the finished grade level and the court surface course shall be tapered from six inches (6") out to meet it. Provision shall be made for water to drain under or over the curb on the low side of the court.

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3.02 CRUSHED AGGREGATE

- A. Crushed stone materials for leveling the asphalt or concrete base may be a combination of crushed stone, crushed or uncrushed gravel, sand gravel, limestone gravel, fast dry or other locally qualified binder materials approved by the [Owner] [Architect] [Landscape Architect] [Engineer].
- B. These materials shall be thoroughly mixed to insure the final product will have a uniform grading and plasticity.
- C. If the required compacted depth of the base layer of stone exceeds 5” the base layer shall be constructed in two or more lifts of approximately equal thickness.
- D. The crushed stone or gravel shall conform to local specifications for rock base construction and the following:

A.	Retained on the 1-1/2” sieve	-0%-
B.	Retained n the ¾” sieve	0-5%
C.	Retained on the ¼” sieve	5-30%
D.	Retained in the No. 4 sieve	35-60%
E.	Retained on the No. 8 sieve	45-70%
F.	Retaind on the No. 40 sieve	60-84%
G.	Retained on the No. 200 sieve	80-92%

- E. A layer of stone dust screenings shall be applied by laser grading over the crushed rock. The thickness of the screenings shall not exceed 2”. The gradation shall conform to the following specifications:

A.	Retained on the ¼” sieve	-0-%
B.	Retained on the No. 4 sieve	5-30%
C.	Retained on the No. 8 sieve	35-60%
D.	Retained on the No. 20 sieve	45-70%
E.	Retained on the No. 40 sieve	60-84%
F.	Retained on the No. 200 sieve	80-92%

3.03 SPRINKLER SYSTEM

- A. A sprinkler system shall be provided to water the court(s) in dry conditions. System will deliver a minimum of three (3) gallons per minute evenly over the entire court area. Contractor is responsible to provide a fully operational system to include a minimum of the following conditions.
- B. Evaluation of existing water supply to determine if an auxiliary pump or pressure reduction is required and detailed requirements and pricing shall be provided as part of bid.

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- C. Provide and install a valve control box and timer to zone sprinkler system for court(s) and

provide all electrical wiring as may be required for operation of sprinkler system.

D. Sprinkler system will consist of eight heads for coverage of each court. Sprinkler heads to be of the quality to ensure full court coverage, evenly, at a delivery rate of up to five (5) and no less than three (3) gallons per minute. Each head to deliver a minimum radius of 35'. Each delivery line to each sprinkler head to have a shut off valve.

E. A drain shall be provided to purge the system during freeze periods of the year.

F. All pipes will be high pressure one inch (1") PVC to tie sprinkler head to feed line on court, with a two inch (2") pipe from the water supply to the feed line. All lines to be buried approximately six inches (6") to eight inches (8") beneath the finished surface. Line PSI at 60 PSI.

3.03 INSTALLATION OF TENNIS COURT ACCESSORIES

A. Post foundations shall be not less than 24" in diameter at the top, not less than 30" in diameter at the bottom, and not less than 36" in depth.

B. Foundations shall be situated so as to provide a clear distance between posts of 33' on single courts and 42' on double courts.

C. The metal anchor strap, located at the center of the net, shall be set in a concrete footing measuring 12" in diameter and 12" deep.

D. Square footings and foundations are not acceptable.

E. Tennis nets shall be installed, upon completion, to posts and cables for a neat, taut appearance.

3.04 NOVA'PROCLAY TENNIS SURFACING SYSTEM

A. Confirm that all center strap anchors and net post sleeves are in place prior to surface installation.

B. The surface course shall be installed according to manufacturer's specifications.

C. All surface course materials are to be installed after the surface has been inspected and approved by the {Owner} {Architect} {Landscape Architect} {Engineer}.

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D. Specially engineered base sheet layer, Nova=PC-Stratum shall be placed over

subbase in accordance with manufacturer's instructions.

- E. All sections of the base sheet layer are to be laid out in the same direction.
- F. All joints shall be attached with Nova=PC-Bond, a combination of a one-component, moisture cured urethane adhesive and a weather resistant polyester tape as recommended by system manufacturer. Heat seaming methods are not allowed. All seams to be cut shall be cut without damaging the tops of the fibers.
- G. Base Sheet In-Fill: Using a special mechanical mix device to filter the material into the fabric, the Nova=PC-TexFill material in fill shall be filtered into the surface mat in several light layers and shall be brushed in to allow for compaction and a level finish.
- H. Prime Coat: Entire area to receive a coat of Nova=PC-PolySeal binder blended with a pre-measured quantity of Nova'PC-Colorant and allowed to cure for a minimum of 24 hours. All material to be spray applied using the Nova=PB-AppSYS.
- I. Inspect entire surface for imperfections; grind and scrape surface to remove any imperfections which may exist.
- J. Apply a layer of Nova'PC-Finish, approximately .55 lbs psft, evenly over entire surface. Brush to level and lightly water.
- K. Line Tape: Apply PC-Line Tape using line nails.
- L. Finish: Apply balance of Nova=PC-Finish, approved fast dry/clay surfacing materials, at a rate of .55 lbs psft. Lightly water and groom.
- M. CAUTION: Do not allow petroleum products to be spilled on the Nova=ProClay surface.

4.01 CLEAN UP

- A. Upon completion of the work, the contractor shall remove all containers, surplus materials and debris and have the site in a clean and orderly condition acceptable to the {Owner} {Architect} {Landscape Architect} {Engineer}.
- B. Provide {Owner} {Architect} {Landscape Architect} {Engineer} with Nova'ProClay Maintenance Manual at completion of project in accordance with Section {01700} {01730} of the Project Manual.

END OF SECTION

(revised 02/22/07)

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