PROJECT MANUAL

FOR

2025 BASKETBALL COURT REHABILITATION
TAYLOR & McKINLEY PARKS
FOND DU LAC, WI

PROJECT #2025-045

PREPARED FOR:

CITY OF FOND DU LAC
PARKS AND RECREATION DEPARTMENT
530 DOTY STREET
FOND DU LAC, WI 54936-0150

BID DATE: THURSDAY, June 19th, 2025
BID TIME: 2:00 PM

PRE-BID MEETING: WEDNESDAY, MAY 14TH , 2025
AT 9:30 AM STARTING AT TAYLOR PARK

CERTIFICATION PAGE

PROJECT:

2025 BASKETBALL COURT REHABILITATION
TAYLOR & McKINLEY PARKS
FOND DU LAC, WI

PROJECT 2025-045

PROJECT CONSULTANT

FRED KOLKMANN TENNIS & SPORT SURFACES, LLC
1921 MAYFAIR ROAD
GRAFTON, WI 53024

I hereby certify that his plan, specification, or report was prepared by me or under my direct supervision.

Fred Kolkmann 4.6.2025

Fred Kolkmann, CTCB **Date**

SECTION 000110

TABLE OF CONTENTS

DIVISION 02

DIVISION 31 EXTERIOR IMPROVEMENTS

LIST OF DRAWINGS **Sheet #**

Taylor Park

McKinley Park

END OF SECTION

DOCUMENT 001115

ADVERTISEMENT FOR BIDS
202 BASKETBALL COURT REHABILITATION
TAYLOR & McKINLEY PARKS-FILE NO. 2025-045
CITY OF FOND DU LAC, WISCONSIN

NOTICE IS HEREBY GIVEN that sealed bids will be received in the City Administrative office located on the fourth floor of the City-County Government Center, 160 South Macy Street, Fond du Lac, Wisconsin 54936-0150 on or before 2:00 PM, June 19, 2025 at which time bids will be publicly opened and read aloud in the City Manager's conference room for the contract identified as "2025 BASKETBALL COURT REHABILITATION". Telephone and Fax bids will not be accepted.

The work includes pulverizing and paving basketball courts at Taylor & McKinley Parks.

There will be a pre-bid meeting May 14, 2025 at 9:30 am. The meeting will be held at: Taylor Park Basketball Court, 115 South Hickory Street, Fond du Lac, WI 54935. The meeting is non-mandatory; however, the contractor is responsible for reviewing the site and familiarizing himself with the conditions.

Specifications and Proposal Forms may be obtained on the City's website: http://www.fdl.wi.gov/bids.iml.

All bids shall be prepared on the proposal forms provided in the specifications and shall be addressed to City of Fond du Lac, P.O. Box 150, Fond du Lac, Wisconsin. Each bid envelope shall be properly identified on the face thereof **"SEALED BID – 2025 BASKETBALL COURT REHABILITATION FILE NO. 2025-045."** No bid shall be withdrawn for a period of (30) thirty days after the opening of said bids, without consent of the Director of Public Works. The City of Fond du Lac may reject any or all bids on any basis and without disclosure of any reason. The failure to make a disclosure shall not result in accrual of any right, claim or cause of action against the City. The City also reserves the right to waive any formalities or informalities in bidding, and to select the bid that, in its opinion, will best serve the interests of the City.

Late proposals will not be accepted under any circumstances. Any proposal(s) received after the scheduled time for closing will be returned to the proposing firm unopened. Sole responsibility rests with the proposing firm to see that their proposal is received on time.

No bid will be opened unless the **"Bidder's Proof of Responsibility"** for 2025 is filed at least five (5) days before the scheduled time for opening of bids. Reference is made to Section 66.0901(2) and (3) Wisconsin Statutes. The Director of Public Works decision as to qualifications shall be final.

Each proposal shall be accompanied by a certified check, or bank draft, payable to the City of Fond du Lac, or satisfactory bid bond, in the amount of 5% of the gross bid as a guarantee that if the bid is accepted as the successful bid, such successful bidder will execute and file the proposed contract and performance bond within ten (10) days after notice of award of contract.

Published by authority of the City of Fond du Lac,Wisconsin on May 8th and May 14, 2025.

DOCUMENT 002100

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS

A. Terms used in these "Instructions to Bidders" which are defined in the "Standard General Conditions of the Construction Contract" EJCDC Document C-700, 2002 Edition, have the meanings assigned to them in the General Conditions.

2. QUALIFICATIONS OF BIDDERS

A. To demonstrate qualification for the project, each bidder shall be prepared to submit, within 5 days of Owner's request, written evidence that bidder involved (1) maintains a permanent place of business; (2) has adequate equipment to do work properly and expeditiously within established schedules; (3) has suitable financial status to meet obligations incident to the work including a financial statement and credit references; (4) has a satisfactory experience record with work of this type and scope; and, if requested by the Owner, can provide five references for projects of a size exceeding 75 percent of the area included in this project that are at least five years old. These references shall include project schedules, including bid date, start and completion dates, Owner and/or engineer contacts including names, addresses and telephone numbers, and the specific components existing and installed on each referenced project; (5) submit an anticipated construction schedule and staffing plan; (6) submit "Contractor's Qualification Statement", AIA Document A305; and (7) can show evidence of authority to conduct business in the jurisdiction where the project is located.

3. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

A. Before submitting this bid, each bidder shall (1) examine the Contract Documents thoroughly; (2) visit the site to familiarize themselves with local conditions that may in any manner affect performance of the work; (3) familiarize themselves with federal, state, and local laws, ordinances, rules, and regulations affecting performance of the work; and (4) carefully correlate their observations with the requirements of the Contract Documents.

B. Before submitting a bid, each bidder shall at their own expense, make such surveys and investigations as they may deem necessary to determine a bid price for performance of the work within the terms of the Contract Documents.

C. Bidders visiting the building for estimating purposes while the building is occupied shall abide by the Owner's or Tenant's rules and regulations.

D. The submission of a bid will constitute an incontrovertible representation by the bidder that they have complied with every requirement of this Article.

4. INTERPRETATIONS

A. Questions about the meaning or intent of the Contract Documents shall be submitted to the consultant in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by the Consultant as having received the Bidding Documents. Questions received less than five days prior to the date of bid opening will not be answered. Only questions answered by a formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

B. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intent of the documents is to include all labor and materials, equipment, and transportation necessary for the proper execution of the work. Materials or work described in words, which so applied, have a well-known technical or trade meaning shall be held to refer to such recognized standards.

5. PROPOSAL FORM

A. The proposal form is included in the Contract Documents; additional copies may be obtained from the Consultant.

B. The Form must be completed in ink or by typewriter. The bid price of each item on the form must be stated in words and numerals; in case of a conflict, words will take precedence.

C. Proposals by corporations must be executed in the corporate name by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown adjacent to the signature.

D. Proposals by partnerships must be executed in the partnership name and signed by a partner, their title must appear under their signature and the official address of the partnership must be shown adjacent to the signature.

E. All names must be typed or printed below the signature.

F. The proposals shall contain an acknowledgment of receipt of Addenda (the numbers of which shall be filled in on the Form).

6. BID SECURITY

A. Each bid shall be accompanied by bid security for the sum of not less than five (5) percent of the total amount of the bid. The required security must be in the form of a certified or bank cashier's check made payable to Owner or a bid bond issued by a surety licensed to conduct business in the state where the project is located and named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department. The bid security of the successful bidder will be retained until they have executed the Agreement and furnished the required contract security, whereupon it will be returned; if they fail to execute and deliver the Agreement and furnish the required contract security within 15 days of Notice of Award, the Owner

may annul the Notice of Award and the bid security of that bidder will be forfeited as liquidated damages. The bid security of any bidder whom the Owner believes to have a reasonable chance of receiving the award may be retained by the Owner until the seventh day after the executed Agreement is delivered by the Owner to the Contractor and the required contract security is furnished, but no longer than the sixty-first day after the bid opening. The bid security of other bidders will be returned within 10 days of the bid opening.

7. PERFORMANCE AND PAYMENT BONDS

A. Provide and pay for bonds covering faithful performance of the contract and the payment of all obligations arising there under, by a corporate surety acceptable to the Owner and authorized to do business in the state where the project is located; as approved by the Owner; in accordance with statutory requirements. Provide on forms known as Bond of Public Contractor; in the amount of 100 percent of the contract cost. The bidder shall deliver said bond to the Owner no later than the date of execution of the contract.

B. Bonds shall guarantee the Contractor will satisfactorily perform each and every part of the contract, including completion time and warranties required; guarantee payment to suppliers; allow for any additions or deductions to the contract and completion time shall not be extended by reason of said changes, unless approved by the Owner at time of said change, provided that no notice of aforesaid alterations, additions, or omissions need be given to surety company.

C. The Performance and Payment Bonds are only required to apply to the construction period and the first year of the warranty period. Said bonds shall not apply to any extended warranty period beyond the first year. Such extended warranties are limited to the applicable Contractor and Manufacturer.

8. CONTRACT TIME

A. Time of completion is important to the Owner and date for final completion is shown in Section 012000, along with provisions for liquidated damages.

9. SUBCONTRACTORS, ETC.

A. The Contractor, as soon as practicable, but before the Award of the Contract, shall furnish to the Consultant in writing a list of the names of Subcontractors proposed for the principal portions of the work. The Contractor shall not employ any Subcontractor to whom the Consultant or the Owner may have a reasonable objection. Contracts between the Subcontractors shall be in accordance with the terms of this Agreement and shall include the General Conditions of this Agreement insofar as applicable. Subcontractors shall meet qualification requirements listed herein.

10. SUBMISSION OF PROPOSALS

A. Proposals shall be submitted at the time and place indicated in Document 001115, and shall be included in an opaque sealed envelope, marked with the project title and name and address of the bidder along with other required information.

11. MODIFICATION AND WITHDRAWAL OF PROPOSALS

A. Proposals may be modified or withdrawn by an appropriate document duly executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids.

12. OPENING OF PROPOSALS

A. Bids will be opened as indicated in Document 001115.

13. PROPOSALS TO REMAIN OPEN

A. All proposals shall remain open for 60 days after the day of the bid opening; but the Owner may in their sole discretion, release any bid and return the bid security prior to that date.

14. AWARD OF CONTRACT

A. The Owner reserves the right to reject any and all proposals; to waive any and all informalities; and to disregard all nonconforming or conditional bids or counter-proposals.

B. In evaluating the proposals, the Owner will consider the qualifications of the bidders; whether or not the bids comply with the prescribed requirements; and any alternates and unit prices if requested on the Bid Form. The Owner may conduct such investigations as deemed necessary to establish the responsibility, qualifications, and financial ability of the bidders, proposed Subcontractors, and other persons and organizations to do the work in accordance with the Contract Documents to the Owner's satisfaction within the prescribed time. The Owner reserves the right to reject the bid of any bidder who does not pass any such evaluation to the Owner's satisfaction.

C. If a contract is to be awarded, it will be awarded to the lowest responsible bidder whose evaluation by the Consultant indicates to the Owner that the award will be in the best interests of the District.

D. If a contract is to be awarded, the Owner will give the apparent successful bidder a Notice of Award within 60 days after the day of the bid opening.

E. Simultaneously, with delivery of the executed counterparts of the Agreement to Owner, the Contractor shall deliver to the Owner the required contract security.

15. SUBSTITUTIONS

A. The materials, products, and equipment described in the Contract Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

B. A Contractor only (not distributor, representative, or other person in like capacity) may request of the consultant a statement, a minimum of 10 days prior to bid opening, concerning acceptability of any material or device which the Contractor is uncertain of as to compliance with the Contract Documents. It shall be the sole responsibility of the Contractor to transmit such requests in writing only, in a full and complete manner, accompanying the request with all data necessary for qualification of the article and at such a date as to allow reasonable time for the examination thereof. Such data may include structural analysis, drawings, including specific details pertaining to the Project, Project Manual and modifications, and any other information deemed necessary by the Consultant. All cost incidental to the submission of this data are to be borne by the submitting Contractor.

C. The Consultant will examine such requests to the extent possible, but there shall be no guarantee that all requests can be examined, nor will the consultant examine requests accompanied by inadequate data, that are received too late to be qualified, or are received after the last Addendum to the Project Manual has been issued.

D. If the Consultant approves any proposed substitutions, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner. Approved substitutions may include modifications to submitted material deemed necessary by the consultant to conform to the established standard of required function, dimension, appearance and quality set forth in the Contract Documents and shall be binding with regard to the performance of the work, if accepted.

E. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intent of the documents is to include all labor and materials, equipment, and transportation necessary for the proper execution of the work. Materials or work described in words, which so applied, have a well-known technical or trade meaning shall be held to refer to such recognized standards.

16. CITY REQUIRED INFORMATION

A. Contents of Bid Forms. The City will furnish bidders with bid forms which will state materials to be furnished, for which unit bid prices are asked. All papers bound with or attached to the bid form are considered a part thereof and must not be detached or altered when the bid is submitted. The plans, specifications and other documents designated in the bid form will be considered a part of the bid whether attached or not.

B. Preparation of Bid. The bidder must submit their bid on the forms furnished by the City. All blank spaces in the bid forms must be correctly filled in where indicated for each and every item for which a quantity is given, and the bidder must state the prices, written in ink, for which they propose to do each item of the work contemplated or furnish each item of the material required. In case of conflict between the unit price stated and the extension for that item, the unit price will govern. All bids submitted by an individual shall be signed by the bidder or by a duly authorized agent. A bid submitted by a partnership shall be signed by a partner or by a duly authorized agent thereof. A bid submitted by a corporation shall be signed by an authorized officer or duly authorized agent of such corporation. The required signatures shall in all cases appear in the space provided therefore on the bid.

C. Customer References. The bidder must submit a minimum of two non-bidder owned customer references presently using the proposed items, equipment, and/or software of comparable size to the City of Fond du Lac's volume requirements. All hardware and software proposed and referenced must be installed at a customer site for 90 days prior to the bid due date. Include the following for each reference:

Company Name
Business Address
Name of Contact
Title of Contact
Email Address of Contact
Description of Installation
Date Installed

The City of Fond du Lac may, at its option, contact other known bidder customers for references.

D. Permits and Licenses. The awardee shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work. City Building Permits will be issued at no charge for projects occurring on, or in, City property.

E. Laws to be Observed. The awardee shall at all times observe and comply with all Federal and State laws, local laws, ordinance and regulations which in any manner affect the conduct of the work, and all such orders or decree as exist at the present or which may be enacted later, of bodies or tribunals having jurisdiction or authority

over the work, and no please of misunderstanding or ignorance thereof will be considered. The awardee shall indemnify and save harmless the City and all of its officers, agents, employees, and servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself, his employees, or his agents.

F. No Waiver of Legal Rights. The City shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after, the completion and acceptance of the work and payment therefore, from showing the true amount and character of the work performed and materials, furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or that the work or materials do not conform in fact to the contract. The City shall not be precluded or estopped, notwithstanding any such measurements, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor and his Sureties such damages as it may sustain by reason of his failure to comply with the terms of the contract. Neither the acceptance by the City nor any representative of the City, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the City, shall operate as a waiver of any portion of the contract, or of any power herein reserved, or any right to damages herein provided. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

G. Equal Opportunity. In connection with the performance of work under this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disabilities as defined in Section 51.01 (5), Wis. Stats., sexual orientation, or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available for employees and applicant's employment notices to be provided by the contracting officer setting forth the provision of the non-discrimination clause.

H. <RESERVED>

I. **Responsibility for Damage Claims.** The awardee shall indemnify and save harmless the City, its officers and employees, from all suits, actions or claims of any character brought because of any injuries or damages on account of the operations of said awardee; or on account of, or in consequences of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect or misconduct of said Awardee; or because of any claims or amounts recovered for any infringement of patent, trademark or copyright; or from any claims or amounts arising or recovered for any infringement of patent, trademark or copyright; or from any claims or amounts arising or recovered under the Workmen's Compensation Law; or any other law, ordinance, order or decree; and so much of the money due the said Awardee under and by the City for such purposes, may be retained for the use of the City; or, in case no money is retained, his Surety shall be held. The City shall not be liable to the Awardee for damages or delays resulting from work by third parties or by injunctions or other restraining orders obtained by third parties. The awardee (Contractor) shall provide and maintain during the effective life of his contract public liability and property damage liability insurance to protect him and all of his construction subcontractors, together with the City, from claims for damages for personal injury, accidental death, and damage to property, which may arise from operations under his contract, whether such operations be by himself or by any such subcontractor or by anyone directly or indirectly employed by either of them.

J. **Statutory Limitation of Liability.** The City of Fond du Lac is a governmental entity entitled to governmental immunity under law, including Section 893.80, Wis. Stats. Nothing contained herein shall waive the rights and immunities to which each party may be entitled to under law, including all of the immunities, limitations, and defenses under Section 893.80, Wis. Stats., or any subsequent amendments thereof, any federal law, common law, or other applicable laws.

K. **Personal Liability of Public Officials and Employees.** In carrying out any of the above provisions, or in exercising any power or authority granted to them by this contract, there shall be no liability upon public officials or employees, either personally or as an official of the City, it being understood that in such matters he acts as an agent and representative of the City.

L. **CONTRACT AWARD AND EXECUTION.** The City of Fond du Lac reserves the right to make an award without further discussion of the bid submitted; there will be no best and final offer procedure. Therefore, the bid should be initially submitted on the most favorable terms the bidder can offer. The award of contract, if any, will be to the lowest responsible bidder whose bid complies with all the requirements necessary to render said bid as being acceptable. The award will be made within thirty (30) days after the opening of the bid. The work outlined in the bid may be awarded as whole, or in parts, according to the best interests of the City. The awarded bidder (awardee) shall properly execute, on the forms provided, and shall within ten (10) days after the contract is mailed, return them to the Deputy Procurement Officer of the City. No contract is binding upon the City of Fond du Lac until it has been fully executed and delivered to the awardee. Failure of the awardee to comply with any of the requirements of these specifications shall be just cause for the annulment of the award. In the event of such annulment of the award, the amount of the bid guaranty, if any, shall become the property of the City of Fond du Lac, not as a penalty but as liquidated damages.

M. **Invoicing.** The awarded contractor, upon completion of work or agreed upon milestones, will email all invoices to accountspayable@fdl.wi.gov.

END OF DOCUMENT

DOCUMENT 005000

BID FORM

SUBMITTED BY:

Company: _____

Address: _____

Estimator: _____

Phone Number: _____

SUBMITTED TO: City of Fond du Lac
Administrative Offices
160 South Macy Street
Fond du Lac, WI 54935

FOR: 2025 Basketball Court Rehabilitation
Taylor & McKinley Parks
Fond du Lac, WI

PROJECT NO.: File No. 2025-045

OWNER: City of Fond du Lac
Parks & Recreation Department
530 Doty Street
Fond du Lac, WI 54936-0150

The undersigned, being familiar with the local conditions affecting the cost of the work and with the Contract Documents, including the Advertisement for Bids, Instructions to Bidders, General and Supplementary Conditions, Divisions 01, 31 and 32: and Plans on file in the office of FKT&SS, LLC in accordance with the provisions thereof, hereby proposes to furnish all labor, materials, and equipment necessary for:

Acknowledgement of Addenda:

Addendum # _____ Date Received: _____
Addendum # _____ Date Received: _____

BASE BID: Remove asphalt, re-grade, pour new 6" PT slab, new basketball goals, landscape for the sum of:

_____

_____ $ _____

ALTERNATE BID #1 - McKINLEY PARK: Remove asphalt, re-grade, pour new 6" PT slab, new basketball goals, landscape for the sum of:

(Quote as add to base bid)

$

ALTERNATE BID #2 - COLOR FOR TAYLOR PARK: Shot blast surface, bond kote, 2 coats acrylic and 2 coats of color for the sum of:

(Quote as add to base bid)

$

ALTERNATE BID #3 - COLOR FOR McKINLEY PARK: Shot blast surface, bond kote, 2 coats acrylic and 2 coats of color for the sum of:

(Quote as add to base bid)

$

UNIT PRICES

A. All unit prices, where applicable, shall include the removal and disposal of existing materials.

1. Unit Price One: Provide a unit price for the excavation and replacement of any soft areas. Price includes removal of soft soils, fabric, placement and compaction of new base in 6" lifts. Price will be determined by surface area in square yards times depth in yards.

$_____
per cubic yard

In submitting this bid, it is understood that the right is reserved by the Owner to reject any and all bids and it is agreed that this bid may not be withdrawn for a period of 60 days after the date of the bid opening. The Owner reserves the right to accept any or all Bid Items regardless of the order listed. It is the Owner's intent to award the contract to one contractor.
All Addenda shall become part of the bid and the work, and shall be acknowledged above in the spaces provided.
A bid shall be rejected if it contains any alteration or erasure unless the alteration or erasure is corrected as herein provided. An alteration or erasure may be crossed out and the correction thereof printed in ink or typewritten adjacent thereto and initialed in ink by the person signing the bid. The person signing the bid shall also file a certificate with the bid explaining the correction of the alteration or erasure.

Each bid must be accompanied by bid security as described in the Instructions to Bidders.

If a Corporation, what is the State of Incorporation: _____

If a Partnership, state full name of all co-partners: _____

OFFICIAL ADDRESS

_____

_____

_____

_____

_____

FIRM NAME

_____

By_____

Title_____

By_____

Title_____

DOCUMENT 007200

GENERAL CONDITIONS

1. GENERAL CONDITIONS

A. The "Standard General Conditions of the Construction Contract" EJCDC Document C-700, 2002 Edition, Articles 1-17 inclusive, is hereby made a part of this Contract. A copy is included herein as part of the Contract Documents.

2. PRECEDENCE

A. The Articles contained in the Document 007300 - Supplementary Conditions, and Sections of Division 01, General Requirements, may delete, modify or add to the provisions of the General Conditions and shall take precedence over the General Conditions.

END OF DOCUMENT

DOCUMENT 007300

SUPPLEMENTARY CONDITIONS

1. GENERAL CONDITIONS

A. The following supplements modify, change, delete from, or add to the "Standard General Conditions of the Construction Contract", EJCDC Document C-700, 2002 Edition. Where any Article of the General Conditions is modified, or any Paragraph, Sub-paragraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article, Paragraph or Clause shall remain in effect.

2. ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS.

A. Replace 4.02A with the following:

4.02A Reports and Drawings: Sections of Division 01 – General Requirements will identify:

B. Change Paragraph 4.02B to read:

4.02B Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "Technical Data" is identified in Division 01 – General Requirements. Contractor may not rely upon or make any Claim against Owner, Engineer, or any of Engineer's Consultants with respect to:

4.02B.1, 2, and 3 are included as stated in the General Conditions.

C. Add 4.04C to read:

4.04C Cooperate with owner and utility companies in keeping respective services and facilities in operation. Do not interrupt utility service to facilities occupied or used by Owner or others except when permitted in writing by Consultant.

D. Add 4,04D to read:

4.04D Prior to project start up, Contact Diggers Hotline (811) to locate underground utilities. On private property, where Diggers Hotline does not locate utilities, the Contractor shall retain the services of a private utility locator to determine the location of the underground utilities. The Owner's representative shall be contacted as to the location of any private utilities. The Contractor will be responsible to repair or replace any utilities damaged as part of the work.

3. ARTICLE 5 –BONDS AND INSURANCE

A. Performance and Payment Bonds:

Add 5.01.D to read:
5.01.D The bonds shall be in the amount of 100 percent of the full contract sum. The bonds are only required to apply to the construction period and the first year of the warranty period. Said bonds shall not apply to any extended warranty period beyond the first year. Such extended warranties are limited to the applicable Contractor and Manufacturer.

B. Contractors Liability Insurance:

Insurance required by Article 5 shall be written for not less than any limits of liability stated herein or required by law, whichever is greater and shall include contractual liability insurance as applicable to the Contractor's obligations under Paragraph 5.04. The Contractor shall maintain the following insurance coverage and minimum limits of liability, with amount of all coverage indicated on the certificates. Certificates are to be delivered to the Owner for acceptance with a copy to the Consultant for his information.

1. Worker's Compensation under Paragraphs 5.04.A.1 and 5.04.A.2 - Statutory

2. Employer's Liability - $ 1,000,000 per accident.

3. Commercial General Liability under Paragraphs 5.04.A.3 through 5.04.A.5 (including Premises Operation; Independent Contractors' Protection; Products Liability and Completed Operation; Broad Form Property Damage):

$2,000,000 General Aggregate
$1,000,000 Products and Completed Operation Aggregate
$1,000,000 Personal Injury and Advertising Injury Limit
$1,000,000 Each Occurrence
$100,000 Fire Damage Limit
$10,000 Medical Expenses

Property Damage liability insurance will provide Explosion, Collapse and Underground Coverage.

Personal Injury, with employment exclusion deleted: $1,000,000 Annual Aggregate.

4. Business Automobile Liability under Paragraph 5.04.A.6:

Bodily Injury:

$1,000,000 Each Person
$1,000,000 Each Occurrence

Property Damage:

$ 1,000,000 Each Occurrence

Or a combined single limit of $1,000,000

5. Contractual Liability under Paragraph 5.04.A.4

Bodily Injury: $1,000,000 Each Occurrence

Property Damage:

$ 1,000,000 Each Occurrence
$ 1,000,000 Annual Aggregate

6. Additional Liability coverage for Owner and Consultant will be Provided:

a. By endorsement as additional insured's on Contractor's General Liability Policy.

b. Contractor's general liability carrier shall issue a separate Protective Liability policy covering Owner and Consultant.

7. The insurance must be written by a company licensed for business in the state in which the work is located and only by a company acceptable to the Owner. Evidence of the coverage must be furnished prior to commencement of any work. Certificates shall state that the Owner will be notified in writing thirty (30) days prior to cancellation, material change or renewal.

C. Property Insurance:

1. Property insurance will be provided by the Owner to the full insurable value of the property in accordance with Paragraph 5.06 of the General Conditions. Such insurance will be subject to a $5,000 deductible in accordance with Paragraph 5.06.D of the General Conditions. The Contractor shall acquire additional insurance to cover the deductible amount.

4. ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

A. Add Paragraph 6.01.C and 6.01.D

6.01.C The Superintendent must be responsive to communications from the Consultant on a daily basis.

6.01.D Inspection at the site by the Consultant shall in no way relieve the Contractor from his responsibilities for supervision and compliance with the contract. The Contractor's materials, tools, supplies, or debris shall not be stored or allowed to accumulate. The Owner assumes no liability or responsibility whatsoever for any damage, destruction, theft, or other acts, which may occur to the Contractor's materials or equipment as a result of his negligence

B. Add Paragraph 6.02.C

6.02.C Regular working hours are defined as 7 AM to 5 PM Monday through Friday of each week. Work on other than those hours or days specified, including legal holidays, school holidays, Saturdays and Sundays may be granted provided the request for same is made at least 48 hours in advance and that contractor assumes all responsibility for safeguard of Owner's property.

C. Add Paragraph 6.08:

6.08 All necessary permits required by local government agencies must be obtained and paid for by the Contractor prior to initial construction.

5. ARTICLE 9 – CONSULTANT'S STATUS DURING CONSTRUCTION

A. Add Paragraph 9.02.C:

9.02.C Consultant has no duty to halt contractor's operations for breach of such safety laws, codes or procedures, including contractor's maintenance of unsafe working conditions or areas.

6. ARTICLE 10 – CHANGES IN THE WORK

A. Add paragraph 10.01.C, 10.01.D, and 10.01.E:

10.01.C For changes in the work the Contractor shall submit an itemized list of quantities with the applicable unit costs and extended price for each, in such form and detail as required by the Consultant.

10.01.D The maximum that will be allowed for overhead and profit, or commission, shall be as follows, expressed as a percentage of the basic cost of the change. The allowable percentages for profit, overhead or commission may be less, depending on the nature, extent or complexity of the change, where the percentage is not commensurate with the responsibility and administration involved (such as the Contractor merely processing a Change Order to a Subcontractor) but in no event shall they exceed the following:

	Overhead and Profit	Commission
(a) To the Contractor and/or its Subcontractor for work performed with their own forces	10%	0%
(b) To the Contractor for work performed by other than its own forces	0%	5%

10.01.E Not more than above specified percentages for overhead, profit and commission will be allowed to be added to the basic cost regardless of the number of tiers of Contractors, Subcontractors, or Sub-Subcontractors.

B. Add paragraph 10.03.4:

10.03.4 In the event the Contractor ignores the Consultants direction to correct defective or non-complying work or if previously undetected defective work causes the Owner expense, the Consultant, Construction Manager and Owner, if in agreement and notwithstanding the Contractor's disagreement, may execute a Change Order to compensate the Owner for the cost of such corrective work or repair deducted from the amount owed the contractor.

7. ARTICLE 13 – CORRECTION PERIOD

A. Add Paragraph 13.07.B.1

13.07.B.1 The Contractor shall have 14 days after Substantial Completion to fully complete the items listed on the Substantial Completion Report. Time and expenses associated with completion of the work by the Owner and Consultant after 14 days will be assessed to the Contract. The additional costs will be reimbursed to the Owner and Consultant through a Change Order to the Contract.

8. ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

A. Add Paragraph 14.02.A.4:

14.02.A.4 Unless otherwise stated in the Agreement, the Owner will retain, until final payment 5 percent of the amount due the Contractor on account of progress payments. Reduction in the retainage will not be allowed unless the Contractor is properly and continuously expediting the remaining work to completion. Application for payment shall be made using the form located at the end of this document.

B. Add Paragraph 14.04.F:

14.04.F The Consultant shall make one Substantial Completion Inspection and one final Completion Inspection for each part of the work. If additional inspections are required due to the Contractor's failure to complete previously listed corrective or uncompleted work, the Consultants expense for conducting such re-inspections and related time in processing and reviewing of requirements shall be charged to the Contractor and such payment shall be accomplished by a deductive Change Order to the Contract.

C. Add Paragraph 14.07.A.2.e:

14.07.A.2.e Prior to acceptance of the work, the Contractor shall furnish a written warranty covering all work specified herein, using the form at the end of the document.

D. Add Paragraph 14.10

14.10 The final inspection and acceptance of the work shown by the Drawings and Specifications forming a part of the Contract shall not be binding or conclusive upon the Owner if it shall subsequently appear that the Contractor has willfully, fraudulently, or through collusion with any representative of the Owner, supplied inferior materials or workmanship or has departed from the terms of this Contract. In any case, the Owner will have the right notwithstanding such final acceptance and payment, to cause the work to be properly performed and satisfactory materials supplied to such extent as in the opinion of the consultant may be necessary to finish the work, in accordance with the Drawings and Specifications. Therefore, at the cost and expense of the Contractor or the sureties on the bond, and shall have the right to recover against the Contractor and its sureties the cost of the work together with such other damages as the Owner may suffer because of the default of the Contractor in the premises the same as though such acceptance and final payment has not been made.

9. ARTICLE 17 - MISCELLANEOUS

A. Add Paragraph 17.07 Fair Employment Practice.

17.07.A The Contractor and every Subcontractor shall comply with all applicable provisions, terms and conditions of applicable ordinance pertaining to fair employment practice. The Contractor, in relation to the subject Contract, shall not discriminate against any employee of, or applicant for employment with, the Contractor in the locality of the work, and shall include a similar provision against discrimination in every subcontract germane thereto, requiring employment at the project. The words “discriminate” and “discrimination” as used herein herby are defined and declared to mean and include discrimination or segregation on the ground or because of race, sex, religion, creed, age, color, national origin, or ancestry.

B. Add Paragraph 17.09 Minimum Wage Rate and Wage Ordinances:

17.09. Pursuant to Wisconsin Labor Laws (1) no laborer or mechanic employed directly on the project work site by the Contractor or any Subontractor, agent, or other person doing or contracting to do all or a part of the work of the project is permitted or required to work more hours than the prevailing hours of labor unless paid for all hours in excess of the prevailing hours at a rate of at least 1-½ times the hourly basic rate of pay.

It is in the public interest that public buildings and other public works be constructed and maintained by the best means and highest quality of labor reasonably available and that persons working on public works be compensated according to the real value of the services they perform. It is therefore the policy of this State that wages of laborers, workers, and mechanics on projects financed in whole or part by State funds should be comparable to wages paid for similar work in the community as a whole.”

END OF SECTION

ONE YEAR MATERIALS AND WORKMANSHIP WARRANTY

Owner: _____

Address: _____

Project: _____

Project Location: _____

Project No.: _____

Date of Final Inspection: _____

Prime Contractor: _____

Address: _____

Phone Number: _____

This warranty stipulates that the above-named Contractor shall, during a period of one (1) year from the date of final acceptance of the work, promptly repair any defective work without cost to the Owner. If Contractor does not promptly repair defective work, Owner may have defective work corrected or the rejected work removed and replaced, and all direct, indirect, and consequential costs of such removal and replacement (including but not limited to fees and charges of Consultants, attorneys, and other professionals) will be paid by the Contractor.

Before expiration of the above warranty period, the prime Contractor shall inspect the work in the presence of the Owner's Representative and make necessary correction of all deficiencies not considered normal. The warranty will remain in force until the necessary repair work has been done.

Signed: _____

Title: _____

Date: _____

SECTION 011100

SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY

A. Supply all labor, transportation, materials, apparatus, and tools necessary for the entire proper completion of this work. Install, maintain, and remove all equipment for the proper execution of this Contract. Be responsible for the safe, proper, and lawful performance of equipment, maintenance and use of the same and perform in the best manner and everything properly incidental thereto, as stated on the Contract Documents or reasonably implied therein.

1.02 EXISTING CONSTRUCTION - VERIFICATION

A. The existing construction may not be as shown on the plans and some modifications of the details may be required to accomplish the intent of the documents. The details shown and the information provided may have been taken from the original plans for the site, but are not represented or guaranteed by the Owner and Consultant as being accurate as to the actual "as built" and present conditions. Verify all conditions at the site and perform all work to complete the project under this Contract, regardless of variations that may be found, without additional cost to the Owner. All modifications or adjustments are to be approved in advance by the Consultant.

1.03 DEFINITIONS

A. The words install, provide, furnish, include, supply, apply, place, or any combination thereof, are intended to be synonymous and to indicate that the material and/or work specifically mentioned is to be furnished and installed by this Contractor and/or this Contractor's Subcontractors.

1.04 PREVAILING WAGE RATES

A. Per City of Fond du Lac requirements

1.05 PERMITS

A. Prior to beginning any construction or demolition, provide the Consultant with copies of all required permits from the Governing Agencies where work is taking place.

1.06 SEDIMENT CONTROL

A. Install silt fence and catch basin inlet protection, as required to prevent runoff sediment from the construction area from washing into the adjacent catch basins, streets and properties.

1.07 SITE RESTORATION

A. The Contractor is responsible for any damage due to the Contractor's construction activity to existing lawn areas, bituminous drives and parking lots, concrete curb and gutter, concrete sidewalks, valley gutter, etc., and underground utilities, including irrigation systems, adjacent to and within the project site. The Contractor shall repair all damaged items and areas to their original condition or better, at the Contractor's expense.

1.08 DESCRIPTION OF WORK

A. BASE BID:

TAYLOR PARK:

Remove existing asphalt surface. Pull basketball goals and dispose of. Excavate and widen for thickened edge. Add additional stone base to new elevations, laser grade, install new basketball goals, install 2 – 10 mil vapor barriers, install cables, pour 6" thick PT slab with thickened edges. Broom finish surface (unless alternate for color is accepted), mask, line prime and stripe for basketball with black. Landscape around perimeter and access road.

ALTERNATE BID #1: McKINLEY PARK:

Remove existing asphalt surface. Pull basketball goals and dispose of. Excavate and widen for thickened edge. Add additional stone base to new elevations, laser grade, install new basketball goals, install 2 – 10 mil vapor barriers, install cables, pour 6" thick PT slab with thickened edges. Broom finish surface (unless alternate for color is accepted), mask, line prime and stripe for basketball with black. Landscape around perimeter and access road.

ALTERNATE BID #2: COLOR ON TAYLOR PARK BB COURT

Shot blast surface to CPR-3. Apply primer and two coats of non-flexible black resurfacer and two coats of non-flexible paint. Mask, line prime, and stripe basketball court in white.

ALTERNATE BID #3: COLOR ON McKINLEY PARK BB COURT

Shot blast surface to CPR-3. Apply primer and two coats of non-flexible black resurfacer and two coats of non-flexible paint. Mask, line prime, and stripe basketball court and 4-square in white.

1.09 UNIT PRICE

All unit prices, where applicable, shall include the removal and disposal of existing materials.

1. Unit Price One: Provide a cubic yard unit price for the excavation and replacement of any soft areas. Price includes removal of soft soils, geotextile fabric, placement and compaction of new base in 6" lifts. Price will be determined by surface area in square yards times depth in yards.

1.10 CONSTRUCTION SCHEDULE

A. A pre-construction conference will be held the week of June 22, 2025 starting at Taylor Park.

B. The site is available to the contractor from June 22,, 2025 to September 15, 2025, exclusive of Saturdays and Sundays.

B. By fully completed, it is intended all work included as part of this contract be fully completed, including items such as clean-up, repairs to existing property, and punch-list items.

D. A pre-final inspection will be conducted two working days before the scheduled completion date.

PART 2 – PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 012000

COORDINATION AND SCHEDULING

PART 1 GENERAL

1.01 PRE-CONSTRUCTION CONFERENCE

A. Prior to starting any work on the Contract, the Owner, the Consultant and the Contractor will meet at the site to discuss procedures, schedules, review submittals, etc., for the work. The Contractor's Superintendent and Foreman, who will be on the project full-time directing the work, must attend this pre-construction conference.

B. The pre-construction conference will be held prior to starting the project. A mutually agreed upon time will be chosen once the construction schedule is determined.

1.02 SITE ACCESS AND AVAILABILITY

A. The site will be available to the Contractor upon receipt of the Owner's written notice to proceed, unless otherwise indicated in these specifications. Care, custody, and control of the site work area, equipment area, and material storage area are vested to the Contractor during the term of operations under the Contract.

B. Failure to examine the project site and to become familiar with the existing conditions shall not constitute cause for complaint or claim for extra payment. The Contractor shall accept the project site, as it exists.

C. Means of ingress or egress to sites shall not be blocked for any reason or hamper the normal operation of the site in any way unless permission is first obtained from the Owner. Fire protection and immediate access for fire-fighting equipment must be maintained at all times.

D. Equipment and material storage areas are limited to those designated.

E. All access roads, parking lots, grass areas or any other path necessary to be traveled across to gain access to the site shall be repaired to their existing conditions or better.

1.03 SITE PROTECTION

A. The construction site must be protected from unauthorized personnel at all times. The installation of a semi-permanent construction fence may be required on projects that will be prolonged over a period of time. The installation of temporary fences barricades, cones and signs may also be required. No additional compensation will be made to the Contractor for construction site protection.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Verify and coordinate storage of materials or equipment, and access to the building with the Owner prior to material delivery and start of construction. Where this provision is neglected, and material is delivered to the project site when the latter is not available to receive it, such materials shall be properly stored elsewhere at the expense of the Contractor and adequate insurance coverage provided for the off-site storage.

B. Damage to any existing properties or new construction must be immediately reported to the Consultant.

1.05 USE OF TOBACCO PRODUCTS

A. No person may smoke or use a tobacco product in any building or upon any grounds that is owned (or leased) and occupied by the Owner.

B. The term “smoke” shall include smoking a cigarette, cigar, or pipe; or carrying a lighted cigarette, cigar, or pipe. The term “use of a tobacco product” shall include the chewing of tobacco or snuff, or the consumption of any other tobacco product. The utilization of any smoke or tobacco cessation product, as long as it does not generate smoke, is not prohibited under this policy.

1.06 COORDINATION WITH OWNER

A. It is the Owner’s intent that the site will be utilized in the usual manner in accordance with the normal schedule, therefore, the Contractor executing this Contract shall schedule the work so as to interfere least with normal activities and shall coordinate the work with the Owner.

B. Work that might interfere with the use of the facilities by the Owner shall be accomplished at a time approved beforehand by the Owner.

1.07 CONSTRUCTION SCHEDULE

A. It is the intent to start work and to fully complete all work by the dates indicated in Division 01, Section 011100.

B. The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such a rate of progress as will ensure full completion thereof within the time stipulated. It is expressly understood and agreed, by and between the Contractor and the Owner that the time for completion of the work described herein is a reasonable time for climatic range and usual industrial conditions prevailing in this locality. It is further understood and mutually agreed that the date of beginning, rate of progress, and the time for completion of the work to be done hereunder are essential conditions for this Contract.

C. If adverse weather conditions are the basis of a request for additional time, such a request shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction.

D. Liquidated Damages - The Contractor and the Contractor's surety, if any, shall be liable for and shall pay the Owner the sums hereinafter stipulated as liquidated damages for each calendar day of delay once a mutually agreed upon schedule is determined. The liquidated damages per day are $500.00.

1.08 COORDINATION OF WORK

A. The Contractor submitting the bid to the Owner has the responsibility for coordinating the work of Subcontractors and for scheduling all work so that all work required by the Contract Documents, is completed as scheduled.

B. The Contractor shall coordinate work of various trades employed by this firm so the stated completion date is met.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 013000

SUBMITTALS

PART 1 GENERAL

1.01 WITHIN TEN (10) DAYS OF NOTICE OF AWARD

A. Provide the Consultant with evidence of qualifications required by the Instructions to Bidders.

B. Provide the Owner with certificates of insurance required by the Supplementary Conditions. Submit a copy to the Consultant for its information.

C. List of Subcontractors, if any, for review and acceptance by the Consultant, prior to executing subcontracts in accordance with the General Conditions and Instructions to Bidders.

1.02 WITHIN TEN (10) DAYS OF CONTRACT AWARD

A. Provide the Owner with Performance and Payment Bonds required by the Supplementary Conditions.

B. Submit two copies of a complete list of all materials, products, and equipment, proposed to be used in this work to the Consultant for acceptance. The list shall clearly identify the materials, products, or equipment by the manufacturer and brand, and show the names for all items and their description. All items listed shall fully conform to the project requirements and applicable reference specifications shall be shown on the list of materials. Submittals shall include methods of handling, storage and maintenance and cleaning recommendations.

C. Submit samples of materials to the Consultant, as requested, with complete identifying information such as brand names, brief descriptions, source of materials, date sampled, location sampled, etc.

D. Submit a construction schedule to the Consultant indicating anticipated work progress, starting and completion dates, crew size, and estimated average daily progress.

E. Submit a schedule of values to the Consultant covering labor and materials for rough grading, base aggregate, bituminous paving, and any other components, to serve as a basis for progress payments during construction.

F. Provide copies of all permits and licenses necessary for the proper execution and completion of this work, which are applicable at the time the bids are received.

G. Refer to subsequent specification sections for specific submittals required by each section.

1.03 DURING PROGRESS OF THE WORK

A. Provide the Consultant with certificates of conformance to the specifications for each shipment of materials to the site.

B. Provide the Consultant with certificates for progress payments showing a tabulation of the completed work, labor completed, materials used, and materials in approved storage at the site.

1.04 PRIOR TO OR ON THE COMPLETION DATE

A. Provide a written notice to the Consultant and the Owner that the work required by the Contract has been completed.

B. The signed warranty form required in the specifications shall be submitted to the Owner, through the Consultant.

C. Submit a waiver to the Owner that all work, materials, and equipment are free and clear of all liens, claims, security interests, and encumbrances.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 014000

QUALITY CONTROL

PART 1 GENERAL

1.01 GENERAL

A. All materials, systems, or assemblies shall be installed or applied in accordance with these specifications and, where not specifically designated otherwise, in accordance with the State Department of Transportation "Standard Specifications for Construction", current edition. If, in the opinion of the Contractor, any work is indicated on the plans or specified in such manner as to make it impossible to produce work of the highest quality, or should discrepancies appear between plans, or plans and specifications, the Contractor shall advise the Consultant before proceeding.

B. References: Without limiting the generality of other requirements of the specifications, all work specified shall conform to, or exceed the applicable requirements of the documents referenced in each section of the specifications to the extent that the provisions of such documents are not in conflict with the requirements of that section.

1.02 SURVEYING, STAKING AND SITE LAYOUT

A. The Contractor is responsible for performing all construction staking and site layout. If a topographic survey is required to construct the project in accordance with the specifications, the Contractor shall provide the survey from an Independent licensed, bonded and insured Land Surveyor. The Consultant will verify the construction staking, site layout and topographic survey only for quality assurance purposes.

1.03 INSPECTIONS AND TESTS

A. The Owner will retain and pay for the services of an Independent Engineering Firm for inspections.

B. The Contractor shall retain and pay an Independent Testing Agency for all construction materials testing. The testing laboratory shall submit test reports to the Consultant and Contractor within 48 hours after test has been performed.

C. The Consultant may request tests of any materials in addition to the tests specified. The Contractor shall pay for the additional tests if the test results show the material not in conformance with the specifications.

D. Repeat tests required because test results show materials not in conformance with the specifications, shall be paid for by the Contractor.

E. Notify the Consultant not less than 24 hours in advance whenever work is to be performed. Failure to notify the Consultant at least 24 hours in advance shall be reasonable cause for the Consultant to order a sufficient delay in the Contractor's schedule to allow time for inspections and any remedial or corrective work required. All costs of such delays, including its effects upon other portions of the work, shall be borne by the Contractor and no time extension will be permitted.

F. When notification has been given to the Consultant by the Contractor to be present on the job site to perform inspections and the Contractor fails to show up or arrives more than two hours later than the scheduled time, all costs incurred by the Consultant shall be charged to the Contractor. The costs shall be deducted from the Contract in the form of a change order.

G. During the construction of a project, if it is determined the work does not conform to the requirements of the plans and specifications; the Contractor shall repair, replace or correct the work to meet the intent of the plans and specifications. All costs incurred by the corrective work shall be borne by the Contractor. Engineering fees for inspections and tests shall also be the responsibility of the Contractor. Such fees shall be paid directly by the Contractor or be deducted from the Contract in the form of a change order.

H. Provide documentation for all unit price items. Contractor's Foreman and Consultant will confirm daily.

I. Test samples of materials and completed work at the project site will be taken in the presence of the Consultant.

J. Cooperate by furnishing materials required for testing, access to the work, and space for necessary storage.

K. Properly repair sample/test location openings made in the work required for testing and inspections to the satisfaction of the Consultant.

L. The manufacturer of all products used must have source quality control capabilities to show conformance of the products to the specification requirements prior to shipment to the Owner.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 USE OF EXISTING FACILITIES

A. The Contractor may use utilities, i.e. water, electricity, etc. owned by the Owner only if approved in advance. Coordinate the use of utilities with the Owner. At no time shall utilities be wasted.

B. The Contractor shall not interrupt the utility service for the site in any way unless agreed upon by the Owner.

C. The Contractor shall make arrangements for portable sanitary facilities, as necessary. The Contractor shall be responsible for maintaining the cleanliness of any facility used.

D. The Owner's telephone will not be available for Contractor use.

1.02 CONTROLS OF PUBLIC AGENCIES

A. All Federal, State, County, City, or any other governing agency permits, licenses and fees associated with the work shall be obtained and paid for by the Contractor. Copies of all required permits must be submitted to the consultant prior to the start of construction. If the permits have not been obtained in advance of the start construction and such non-conformance to the regulations requires a change in the scope of work, all such costs associated with the change in scope of work shall be borne by the Contractor. The Contractor shall repair, replace or correct the work to meet the requirements of the regulating/governing body. Engineering fees for inspections and tests shall also be the responsibility of the Contractor. Such fees shall be paid directly by the Contractor or be deducted from the Contract in the form of a change order.

B. The work shall meet the requirements of all governing codes, ordinances, laws, regulations, safety orders, and directives relating to the Work, including any specific requirements of the city and state of jurisdiction.

C. The work on, adjacent to, or over public land, streets, alleys, or other public facilities, shall be approved by the proper authorities. Make arrangements with such authorities regarding all details, timing, materials, methods, protection, and similar items in connection with the work, including street use, work on streets, or blocking of streets. Make repairs, file bonds, conform to directions, and such other requirements that may be necessary.

1.03 REFERENCE STANDARDS

A. Publications in effect on the date of issue of these Contract Documents shall apply to the work performed under this Contract, except when a specific date is specified.

1.04 SPECIAL CONTROLS

A. Disturbing or disruptive noise that interferes with the normal site occupancy will not be permitted. Operations creating noise of this type must be scheduled in advance with the Owner.

B. The Contractor shall discharge any worker creating a nuisance on the premises.

C. Protect the building, site and adjoining property from objectionable dust and wind-blown debris.

D. Provide necessary controls to prevent pollution of the air by odors or particulate matter.

E. Exercise reasonable precautions to prevent vandalism and to safeguard the public at the existing building and site.

F. Disposal of Materials:

1. Load disposal materials directly into trucks by means that will prevent damage to the existing or new surfaces and to control pollution.
2. No accumulation of disposal materials will be permitted at any time, except as otherwise specified. The Contractor is responsible for prompt removal from the site and disposal in a manner approved by the local authorities.
3. Transport and legally dispose of materials off-site.

G. When earth materials are exposed, the Contractor shall install adequate erosion control measures, such as silt fences, hay bales, riprap, erosion control blankets, etc., to prevent soils from exiting the site.

H. Utilities within the project site shall be protected from receiving soils or other types of debris when extensive or copious amounts of rainfall or wind occur.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

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END OF SECTION

SECTION 016000

PROTECTION, REPAIR AND CLEANING

PART 1 GENERAL

1.01 PROTECTION OF EXISTING PROPERTY

A. The construction site must be protected from unauthorized personnel at all times. The installation of a semi-permanent construction fence may be required on projects that will be prolonged over a period of time. The installation of temporary fences, barricades, cones and signs may also be required. No additional compensation will be made to the Contractor for construction site protection.

B. Provide protective materials and methods, as required, to protect existing buildings and adjacent surfaces, features, and property. The Contractor is responsible for any damage resulting from work under this Contract.

C. Take precautions to protect the building grounds from damage due to necessary construction traffic.

D. Existing materials that are to be salvaged for reuse, or given to the Owner, shall be removed carefully and stored in a manner and location to prevent damage until utilized.

E. Prevent access by the public to materials, tools, or equipment.

1.02 REPAIRS OF EXISTING PROPERTY

A. Access to the construction site will be the responsibility of the Contractor. Property that is traveled over to gain access to the construction site will be properly repaired to the existing conditions or better, at the Contractor's expense, to the satisfaction of the owner. This includes all bituminous, concrete, grass or other types of surfacing materials.

B. When it is required to remove or alter the existing property, all affected areas shall be properly repaired to the existing conditions or better, at the Contractor's expense, to the satisfaction of the Owner.

C. Existing materials designated to remain, which are damaged or defaced as a result of the work and are unsuitable for the use intended, shall be replaced at the Contractor's expense to the satisfaction of the Owner.

D. Use approved procedures and materials to repair defective or incomplete surfaces caused or exposed by work at the project.

E. Repairs required by the Contract, or necessary because of damage from this work, shall use products equivalent to, and compatible with, the existing materials.

1.03 CLEANING

A. Refer to the General Conditions for requirements pertaining to the removal of waste materials or rubbish caused by the work, and the restoration of existing areas affected by the work. In case of undue delay or dispute, the Owner may remove rubbish, materials, and equipment and charge the costs to Contractor. These actions are permissible by the owner 48 hours after a written notice has been transmitted to the Contractor.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 021000

SELECTIVE DEMOLITION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Removal and disposal of vegetation and topsoil.
   2. Removal and disposal of existing concrete construction.
   3. Removal and disposal of existing bituminous pavement.
   4. Removal of existing fence construction.

1.02 PROTECTION OF EXISTING CONDITIONS

A. Provide protection necessary to prevent damage to existing conditions indicated to remain in place. In particular, protect the existing tennis court color coating, striping and bituminous pavement surfaces.

B. Restore all damaged areas to their original condition, as acceptable to the Owner.

1.03 SUBMITTALS REGARDING EXISTING CONDITIONS

A. Provide pre-demolition photographs of the existing bituminous pavement and landscaped areas prior to beginning any work at the site.

B. Bring to the attention of the Consultant in writing within 48 hours any items damaged during the demolition process that are to be salvaged for re-use. If it is determined that the damage to the item(s) could have been prevented by the Contractor taking reasonable measures or precautions, the damaged item(s) will be replaced or repaired at the Contractor's expense.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 SITE ACCESS

A. Demolition and removal operations shall be performed to ensure minimum interference with roads, parking lots, sidewalks and pathways.

B. Erect temporary fencing as necessary to keep people out of the work area.

3.02 DEMOLITION

A. Remove vegetation, improvements, or obstructions interfering with installation of new construction. Remove such items elsewhere on site or premises as specifically indicated.

B. Store salvaged materials on-site in a location where they will not be damaged or interfere with the use of the other facilities.

C. Promptly dispose of demolished materials off-site. Do not allow demolition materials and debris to accumulate on-site.

D. Restore all damaged underground piping and utilities.

END OF SECTION

SECTION 312500

EROSION CONTROL

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
   1. Erosion and Sediment Control.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 INSTALLATION AND MAINTENANCE

A. Installation techniques shall be in accordance with the Wisconsin Construction Site Erosion and Sediment Control Procedures and the Wisconsin Pollution Control Agency Best Management Practices. Prior to commencing any site or demolition work, the Contractor shall install all erosion control systems as shown on the plans. As the work progresses, the Contractor shall install and maintain the erosion control measures as indicated in the following implementation schedule.

Item	Installation	Removal
Silt Fence	Prior to any Construction	By Contractor after turf is established and construction is completed
Existing Catch Basin Inlet Protection	Prior to any Construction	By Contractor after turf is established and construction completed
Revegetation	As Areas are Completed	Permanent

The Contractor shall inspect and make repairs to all erosion control systems after each rainfall event and/or every 7 days. The Contractor shall remove all accumulated silt and repair washout areas.

B. Inspection:

1. The Contractor shall inspect silt fences immediately after each rainfall and at least daily during prolonged rainfall, and/or every 7 days. Immediately repair failed or failing silt fence.

C. Replacement:

1. Fabric shall be replaced promptly by the Contractor when it decomposes or becomes ineffective before the barrier is no longer necessary.

D. Sediment Removal:

1. Sediment deposits shall be removed after each storm event by the Contractor. The sediment must be removed when deposits reach approximately one-half the height of the barrier or 1/3 the volume of the device.

2. Any sediment remaining in place after the silt fence is no longer required shall be regraded to conform to the existing grade. All affected areas shall be prepared, topsoil placed and seeded or sodded as directed by the Consultant.

3.02 CLEANUP

A. Silt fences shall be removed when they have served their useful purpose, but not before the upward sloping area has been permanently satisfied. If the upward sloping area is to be exposed longer than six (6) months, that area shall be covered with temporary vegetation when first exposed.

END OF SECTION

SECTION 312000

EXCAVATION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
  1. Excavation.

1.02 REFERENCES

A. ASTM D698, Standard Test Method for Moisture Density Relations of Soils and Soil- Aggregate Mixtures, using a 5.5 pound Rammer and 12-inch Drop.

B. ASTM D2487, Standard Test Method for Classification of Soils for Engineering Purposes.

C. ASTM D2922, Standard Test Method for Density of Soils and Soil-Aggregate In- Place by Nuclear Method (Shallow Depth).

1.03 QUALITY ASSURANCE

A. In-place field density tests will be performed in accordance with ASTM D2922.

B. The testing laboratory shall submit test reports to the Consultant and Contractor within 48 hours after the test has been performed.

PART 2 EXECUTION

2.01 UTILITIES

A. Locate existing underground utilities in areas of work. The utilities shown on the Plans are approximate locations only. Provide adequate means of protection during excavation operations. Properly cap, raise, or lower to grade existing valve covers, cleanouts, manholes, drop inlets, or other utilities as shown on the Plans.

B. Consult utility owner immediately for directions if uncharted or incorrectly charted piping or other utilities are encountered during the excavation. Cooperate with the owner and utility companies in keeping respective services and facilities in operation. The Contractor shall repair damaged utilities to the satisfaction of the utility owner at no expense to the Owner.

C. Do not interrupt existing utilities serving facilities occupied and used by the Owner or others, except when permitted in writing by the Consultant.

2.02 USE OF EXPLOSIVES

A. The use of explosives is not permitted.

2.03 EXCAVATION

A. Remove topsoil, sod, grass, organic materials, or other unsuitable soil from areas to receive new materials.

B. Sawcut the existing bituminous pavement to be removed to form a smooth vertical edge. Chiseling, jackhammering or blade ripping of the existing bituminous will not be permitted except if approved in advance by the Consultant. Remove the bituminous where indicated on the Plans or as marked in the field by the Consultant.

C. Excavate the repair areas to the depth shown on the Plans. After the required excavation has been completed, thoroughly clean the exposed vertical and bottom surfaces of all loose materials. The excavation bottom shall be firm and dry.

D. Do not allow water to accumulate in the excavations. Remove water to prevent softening of subgrade or foundation soils or to eliminate other changes detrimental to the stability of the subgrade. Provide and maintain surface drainage and other dewatering system components necessary to convey water away from the excavations.

E. For the excavation of the subgrade, conform to the elevations and dimensions shown within a tolerance of plus or minus 0.10 feet.

F. For the placement of the base aggregate, the tolerance is plus or minus 0.05 feet.

G. Notify the Consultant at least 3 days in advance of any excavation so the Consultant can examine and evaluate the subsoils before placement of the new materials.

H. All work specified in this Section shall be performed by the Contractor at his own expense in accordance with the Bid Items and the Contract. If additional excavations are required, the Contractor shall not proceed until given notice by the Consultant. Additional payment will be made under separate unit prices for additional excavation if such unit prices have been established; otherwise payment will be made in accordance with a negotiated price.

I. Use all means necessary to prevent operations from producing dust. The Contractor shall be responsible for damage resulting from dust originating from their operations.

2.04 OVER-EXCAVATION NOT ORDERED, SPECIFIED OR SHOWN

A. Excavations carried below the elevations or depths specified shall be backfilled to the required grade with the specified materials and compaction percentages. The Contractor shall perform such work at his own expense.

2.05 DISPOSAL OF EXCESS EXCAVATED MATERIAL

A. The Contractor shall remove and dispose of excess excavated material at his own expense.

2.06 FIELD QUALITY CONTROL

A. Quality assurance testing is the responsibility of the Contractor. The Contractor shall employ the services of an independent materials testing firm to provide the final test information. The Contractor may use their own personnel to provide tests of the materials during the placement and compaction operations; however, an independent testing firm must take the final tests. The testing firm shall test the materials as construction work is performed.

1. The Contractor shall arrange for the laboratory to perform field density tests in accordance with ASTM D2922 (nuclear densometer method).

2. Laboratory shall make at least one random field density test of new materials for every 250 square yards of area for each 6 inch depth of material, but in no case less than one test per 12 inch depth.

B. Provide additional density testing if the test results are below the specified density until passing test results are achieved. The additional tests shall be performed at the Contractor's expense.

C. Inspections will be performed during the excavation for the following.

1. Verification of the excavation cross-section.

2. Acceptability of natural subgrade materials.

END OF SECTION

SECTION 320500

AGGREGATE BASE

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Aggregate base, granular backfill, backfill, recreational rock (aglime), and coarse filter aggregate.

1.02 SUBMITTALS

A. Submit laboratory density test reports per 3.03 indicating the proposed aggregate grading meets the requirements specified herein.

B. Submit laboratory test results indicating the proposed aggregate base material meets the Los Angeles Abrasion requirements, and minimum percent crushed as specified herein.

C. The information must be current and represent the material to be supplied to the project site. If test information is not available from the supplier, the Contractor shall make arrangements and pay for required tests.

1.03 REFERENCES

A. Standard Specifications for Highway and Structure Construction 2019 edition.

1. Part 3 – Bases and Subbases.
2. Section 209 - Granular Backfill.
3. Section 606 - Riprap .

B. ASTM C131, Standard Test Method for Resistance to Degradation of Small-Sized Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

C. ASTM D2487, Standard Test Method for Classification of Soils for Engineering Purposes.

D. ASTM D2922, Standard Test Method for Density of Soils and Soil-Aggregate In-Place by Nuclear Method (Shallow Depth).

1.04 QUALITY ASSURANCE

A. In-place field density tests will be performed in accordance with ASTM D2922.

B. The testing laboratory shall submit test reports to the Consultant and Contractor within 48 hours after the test has been performed.

PART 2 PRODUCTS

2.01 AGGREGATE BASE

A. Crushed rock graded according to WISDOT Gradation as follows:

(1) Except for reclaimed asphaltic pavement, conform to the following gradation requirements:

	Percent Passing by Weight		
SIEVE SIZE	3-INCH (75MM)	1 ¼-INCH (31.5MM)	3/4 –INCH (19.0MM)
3-inch (75 mm)	90-100	-	-
1 ½-inch (37.5 mm)	60-85	-	-
1 1/4-inch (31.5 mm)	-	95-100	-
1-inch (25.0 mm)	-	-	100
¾-inch (19.0 mm)	40-65	70-93	95-100
3/8-inch (9.5 mm)	-	42-80	50-90
No. 4 (4.75 mm)	15-40	25-63	35-70
No. 10 (2.00 mm)	10-30	16-48	15-55
No. 40 (425µm)	5-20	8-28	10-35
No. 200 (75µm)	2.0-12.0	2.0-12.0[1][3]	5.0-15.0[2]

[1] Limited to a maximum of 8.0 percent for base placed between old and new pavement.

[2] 8.0 – 15.0 percent if base is ≥ 50 percent crushed gravel.

[3] 4.0 – 10.0 percent if base is ≥ 50 percent crushed gravel.

(2) Unless the plans or special provisions specify otherwise, do the following:

1. Use ¾ -inch (19.0 mm) base in top 4 or more inches (75 mm) of base. Use 3 – inch (75 mm) base or 1 ¼ - inch (31.5 mm) base in the lower base layers.

2. Use ¾ - inch (19.0 mm) base in the top 3 inches (75 mm) of the unpaved portion of the shoulder. Also, if using 3 –inch (75 mm) base in the lower base layers, use ¾ - inch (19.0 mm) base in the top 3 inches (75 mm) of the shoulder foreslopes. Use ¾ - inch (19.0 mm) base of 1 ¼ - inch (31.5 mm) base elsewhere in shoulders.

B. The coarse aggregate (that portion retained on the No. 4 sieve) shall have a percent of wear of not more than 40 at 500 revolutions as determined by ASTM C131.

C. For reclaimed asphaltic pavement, furnish material conforming to the following:
- 100 percent passing a 1 1/4 – inch (31.5 mm) sieve.
- 75 percent or less of the aggregate passing a No. 4 (4.75 mm) sieve.
- Asphalt content between 3 percent and 6.5 percent inclusive.

D. Aggregate shall contain not more than 10 percent shale in the total sample except that when the part passing a No. 200 sieve exceeds 7 percent, the percentage of shale in the sample shall not exceed 7 percent.

E. Aggregate shall not include crushed concrete, reprocessed bitumen, or any other foreign material mixed with native aggregate.

2.02 GRANULAR BACKFILL (Fill under pavement sections)

A. Granular material graded according to WISDOT 209 as follows:

(1) Furnish natural sand or a mixture of sand with gravel, crushed gravel, crushed stone, or other broken or fragmented material.

(2) For backfill for trench excavation, use a maximum size of any gravel, stone or other broken or fragmented material so that 100 percent passes a 6 inch (150 mm) sieve, not less than 85 percent by weight passes a 3 inch (75 mm) sieve, and not less than 25 percent by weight passes a No. 4 (4.75 mm) sieve. For bedding under a culvert pipe, use granular backfill that consist substantially of sand with all particles retained on a one-inch (25.0 mm) sieve removed.

(3) Conform to the definitions under 301.2.1

(4) Use either grade 1 or grade 2 material, unless the contract specifies otherwise

(5) Do not use materials with a liquid limit greater than 25 and a plasticity index greater than

(6) For material passing the No. 4 (4.75 mm) sieve, conform to the following

	MAXIMUM PERCENT PASSING BY WEIGHT	
SIEVE SIZE	GRADE 1	GRADE 2
No. 4 (4.75 mm)	100	100
No. 40 (425 µm)	75	-
No. 100 (150 µm)	15	30
No. 200 (75 µm)	8.0	15.0

2.03 BACKFILL (Fill under landscaped areas)

A. Clean, fine earth, sand, or organic material, free from, rocks, roots, brush, stumps or other large objects.

B. The largest particle size shall be less than 2 inches in diameter.

C. The backfill shall be brought up to within the specified elevation less the depth of topsoil required for the project.

2.04 UNSUITABLE MATERIALS

A. Unsuitable soils include soils classified under ASTM D2487, which fall in the classification of PT, OH, CH, MH, OL, CL, or ML.

2.06 COARSE FILTER AGGREGATE

A. Clean, free draining aggregate excluding crushed carbonate quarry rock, crushed concrete and salvaged bituminous mixtures, meeting the following gradation requirements.

Sieve Size	Percent Passing by Weight
1 inch	100
3/4 inch	85 - 100
3/8 inch	30 - 60
No. 4	0 - 10

PART 3 EXECUTION

3.01 AGGREGATE BASE COURSE, AND GRANULAR BACKFILL PLACEMENT

A. Deposit and spread in uniform 6-inch maximum thickness layers (after compaction) without segregation of size.

B. Compact each layer of material to at least 98% of maximum dry density as determined in accordance with ASTM D1557, The Modified Proctor Method). Use equipment that is consistently capable of achieving the required degree of compaction. Compact each layer over its entire area while the material is at the required moisture content.

C. Apply water to the material if the moisture content is below optimum during the mixing, spreading and compacting operations, when and in the amounts directed by the Consultant, as considered necessary for proper compaction.

D. Flooding, ponding, or jetting shall not be used for compaction.

3.02 BACKFILL AND COARSE FILTER AGGREGATE PLACEMENT

A. Deposit and spread in uniform 8-inch minimum thick layers as shown on the Plans.

B. Compact each layer until there is no further evidence of consolidation using hand or machine operated compaction equipment.

3.03 FIELD QUALITY CONTROL

A. Quality assurance testing is the responsibility of the Contractor. The Contractor shall employ the services of an independent materials testing firm to provide the final test information. The Contractor may use their own personnel to provide tests of the materials during the placement and compaction operations; however, an independent testing firm must take the final tests. The testing firm shall test the materials as construction work is performed.

1. The Contractor shall arrange for the laboratory to perform field density tests in accordance with ASTM D2922 (nuclear densometer method).

2. Laboratory shall make at least one random field density test of new materials for every 250 square yards of area for each 6 inch depth of material, but in no case less than one test per 12 inch depth.

B. Provide additional density testing if the test results are below the specified density until passing test results are achieved. The additional tests shall be performed at the Contractor's expense.

C. Inspections will be performed during the excavation for the following.

1. Verification of the excavation cross-section.
2. Acceptability of natural subgrade materials.
3. Approval of fill soil, including the thickness and compaction of fill layers.

END OF SECTION

SECTION 321750

UNDER SLAB VAPOR RETARDER

PART 1 – GENERAL

1.1 SUMMARY

Products supplied under this section:

1. **Vapor retarder and installation accessories for installation under concrete slabs.**

Related sections:

1. **Section 03 30 00 Cast-in-Place Concrete**
2. **Section 07 26 00 Vapor Retarders**

1.2 REFERENCES

A. ASTM International:

1. **ASTM E1745-17 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.**
2. **ASTM E1643-18a Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.**

B. Technical Reference - American Concrete Institute (ACI):

1. **ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.**
2. **ACI 302.1R-15 Guide to Concrete Floor and Slab Construction.**

1.3 SUBMITTALS

A. Quality control/assurance:

1. **Summary of test results per paragraph 9.3 of ASTM E1745.**
2. **Manufacturer's samples and literature.**
3. **Manufacturer's installation instructions for placement, seaming, penetration prevention and repair, and perimeter seal per ASTM E1643.**
4. **All mandatory ASTM E1745 testing must be performed on a single production roll per ASTM E1745 Section 8.1.**

PART 2 – PRODUCTS

2.1 MATERIALS

A. Vapor retarder shall have all of the following qualities:

1. Maintain permeance of less than 0.03 Perms [grains/(ft^2 · hr · inHg)] as tested in accordance with mandatory conditioning tests per ASTM E1745 Section 7.1 (7.1.1-7.1.5).
2. Other performance criteria:
   a. Strength: ASTM E1745 Class A.
   b. Thickness: 10 mils minimum
3. Provide third party documentation that all testing was performed on a single production roll per ASTM E1745 Section 8.1

B. Vapor retarder products:
1. Basis of Design: Stego Wrap Class A Vapor Retarder by Stego Industries LLC., (877) 464-7834 www.stegoindustries.com.
2. No substitutions.

2.2 ACCESSORIES

A. Seams:
1. Stego Tape by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

B. Sealing Penetrations of Vapor Retarder:
1. Stego Mastic by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
2. Stego Tape by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

C. Perimeter/edge seal:
1. Stego Crete Claw by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
2. Stego Term Bar by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
3. StegoTack Tape (double-sided sealant tape) by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

D. Penetration Prevention:
1. Beast Foot by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.
2. Beast Form Stake by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com

E. Vapor Barrier-Safe Screed System
1. Beast Screed by Stego Industries, LLC, (877) 464-7834 www.stegoindustries.com.
2. Beast Hook by Stego Industries, LLC, (877) 464-7834 www.stegoindustries.com.

PART 3 – EXECUTION

3.1 PREPARATION

A. Ensure that subsoil is approved by Architect or Geotechnical Engineer.
   1. Level and compact base material.

3.2 INSTALLATION

A. Install vapor retarder in accordance ASTM E1643.
   1. Unroll vapor retarder with the longest dimension parallel with the direction of the concrete placement and face laps away from the expected direction of the placement whenever possible.
   2. Extend vapor retarder to the perimeter of the slab. If practicable, terminate it at the top of the slab, otherwise (a) at a point acceptable to the structural engineer or (b) where obstructed by impediments, such as dowels, waterstops, or any other site condition requiring early termination of the vapor retarder. At the point of termination, seal vapor retarder to the foundation wall, grade beam or slab itself.
   3. Overlap joints 6 inches and seal with manufacturer's seam tape.
   4. Apply seam tape/Crete Claw to a clean and dry vapor retarder.
   5. Seal all penetrations (including posts) per manufacturer's instructions.
   6. For slabs where a hand screed will be used for leveling, use a Beast Form Stake and Beast Foot as a vapor barrier-safe forming system. Ensure Beast Foot's peel-and-stick adhesive base is fully adhered to the vapor barrier. Remove Beast Form Stake after screed is finished and fill area with concrete. Driving stakes through vapor barriers will not be permitted.
   7. If non-permanent stakes must be driven through vapor retarder, repair as recommended by vapor retarder manufacturer.
   8. Use reinforcing bar supports with base sections that eliminate or minimize the potential for puncture of the vapor retarder.
   9. Repair damaged areas with vapor retarder material of similar (or better) permeance, puncture and tensile.
   10. For vapor barrier-safe concrete screeding applications, install Beast Screed (vapor barrier-safe screed system) per manufacturer's instructions prior to placing concrete.

END OF SECTION

SECTION 322500

PT CONCRETE PAVEMENT (WI)

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
  1. Portland cement concrete.

1.02 SUBMITTALS

A. Submit at least 7 days in advance of placement, a Portland cement concrete mix design meeting the requirements of the Wisconsin Department of Transportation (WI DOT) specifications. The mix design shall show the source and type of aggregate and cement; scale weight of each aggregate, cement, and water; and volume and type of admixtures per cubic yard.

B. Coarse and fine aggregate reports indicating the source, grading, specific gravity, absorption, and fineness modulus shall be submitted along with the concrete mix design at least 7 days prior to placement.

1.03 REFERENCES

A. Standard Specifications for Highway and Structure Construction, 2003 Edition and latest supplements (WI DOT)

  1. Section 415, General, Concrete Pavement.
  2. Section 501, Concrete.

B. ACI 214, Recommended Practice for Evaluation of Strength Test Results of Concrete.

C. ACI 318, Building Code Requirements for Reinforced Concrete.

D. ACI 347, Recommended Practice for Concrete Formwork.

E. ASTM C31, Test Methods for Making and Curing Concrete Test Specimens in the Field.

F. ASTM C33, Specification for Concrete Aggregates.

G. ASTM C39, Test Method for Compressive Strength of Cylindrical concrete Specimens.

H. ASTM C40, Test Method for Organic Impurities in Sand for Concrete.

I. ASTM C42, Methods of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.

J. ASTM C88, Test Method for Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate.

K. ASTM C131, Test Method for Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine.

L. ASTM C143, Test Method for Slump of Portland Cement Concrete.

M. ASTM C150, Specification for Portland Cement.

N. ASTM C231, Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.

O. ASTM C260, Specification for Air-Entraining Admixtures for Concrete.

P. ASTM C309, Specification for Liquid Membrane-Forming Compounds for curing Concrete.

Q. ASTM C494, Specification for Chemical Admixtures for Concrete.

1.04 QUALITY ASSURANCE

A. Quality assurance personnel shall perform a complete set of tests (Slump, Air Content and Cast 6" by 12" Test Cylinders) each day concrete is placed.

PART 2 PRODUCTS

2.01 PORTLAND CEMENT

A. ASTM C150, for Type I, II, III.

2.02 FINE AGGREGATE

A. Fine aggregate consists of a combination of sand with fine gravel, crushed gravel, or crushed stone consisting of hard, durable particles.

B. Fine aggregate shall be well graded and, when tested by means of laboratory sieves, shall conform to WI DOT 501.2.5.3.4 as listed below:

Sieve Size	Percent Passing by Weight
3/8 inch (9.5 mm)	100
No. 4 (4.75 mm)	90 - 100
No. 16 (1.18 mm)	45 - 85
No. 50 (300 μm)	5 - 30
No. 100 (150 μm)	0 - 10
No. 200 (75 μm)	3.5 Max.

C. Fine aggregate deleterious substances shall not exceed the following criteria as shown below

Deleterious Substances	Percent by Weight
1. CoaL	0.0
2. Clay lumps	0.0
3. Shale	0.0
4. Other deleterious substances like alkali, mica, coated grains, soft and flaky particles	0.0

When tested in accordance with ASTM C40, the fine aggregate shall produce a color in the supernatant liquid no darker than the reference standard color solution.

2.03 COARSE AGGREGATE

A. Clean, hard, durable gravel, crushed gravel, crushed stone or crushed concrete free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.

B. Coarse aggregate shall conform to WI/DOT 501.2.5.4.4 gradation as listed below:

	Percent Passing by Weight	
Sieve Size	**Size #1**	**Size #2**
2 inch (50 mm)	-	100
1 ½ inch (37.5 mm)	-	90 - 100
1 inch (25.0 mm)	100	20 - 55
¾ inch (19.0 mm)	90 - 100	0 - 15
3/8 inch (9.5 mm)	20 - 55	0 - 5
No. 4 (4.75 mm)	0 - 10	-
No. 8 (2.36 mm)	0 - 5	-

C. Coarse aggregate deleterious substances shall not exceed the criteria as shown below

Deleterious Substances	Percent by Weight
1. Shale	0.0
2. Coal	0.0
3. Clay lumps	0.0
4. Soft fragments	0.0
5. Any combination of the above	0.0
6. Thin and elongated pieces based on a 3:1 ratio	0.0
7. Chert	0.0

D. Coarse aggregate physical properties shall not exceed the criteria as listed in WI/DOT 501.2.5.4.3 and as shown below

1. When tested in accordance with ASTM C131, the coarse aggregate shall show a loss not exceeding 50% after 500 revolutions.
2. When tested in accordance with ASTM C88, the loss resulting after five cycles shall not exceed 12% for coarse aggregate when using sodium sulfate.

2.04 WATER - TO - CEMENT RATIO

A. The water - to - cement ratio shall not exceed 0.40 max. Use mid-range water reducer if necessary to avoid using water.

2.05 AIR-ENTRAINING AGENT

A. ASTM C260. Use sufficient air-entraining agent to provide a total air content of 5% to 7%, add to the batch in a portion of the mixing water. Batch by means of a mechanical batcher capable of accurate measurement.

2.06 ADMIXTURES

A. Admixtures will be required at the Consultant's discretion or, if not required, may be added at the Contractor's option to control the set, effect water reduction, and increase workability. In either case, the addition of an admixture shall be at the Contractor's expense. The use of an admixture shall be subject to acceptance by the Consultant. Concrete containing an admixture shall be first placed at a location determined by the Consultant. If the use of an admixture is producing an inferior end result, the Contractor shall discontinue use of the admixture. Admixtures specified herein shall conform to the requirement of ASTM C494. The required quantity of cement shall be used in the mix regardless of whether or not an admixture is used.

B. Neither accelerators nor retarders are to be used in the Portland cement concrete mix unless approved by the Consultant.

2.07 CONCRETE MIX DESIGN

A. The mix design shall be composed of Portland cement, coarse and fine aggregate, water, and an air-entraining admixture, and shall be proportioned to meet the WI/DOT, Grade A design.

B. Design mix shall be normal weight air-entrained concrete meeting the following criteria:

Ingredient	**Range of Acceptable Values**
Portland Cement	Type I, II
Minimum Cement Content	565 lbs. per cubic yard
Minimum 28 Compressive Strength	4000 psi
Entrained Air Content	6.0% +/- 1.0%
Slump	2 to 3 inches maximum

For the Post-Tensioned slab, the limestone content shall not exceed 8%. The concrete supplier is to perform a chemical test and supply the results to the consultant during the submittal stage.

2.08 READY-MIXED CONCRETE

A. Deliver to the site and completely discharge within one hour after the addition of the cement to the aggregates or before the drum has been revolved 250 revolutions, whichever is first. In hot weather, or under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85 degrees F. or above, the time between the introduction of the cement to the aggregate and discharge shall not exceed 45 minutes.

2.09 EXPANSION JOINT MATERIAL

A. The expansion joint material shall consist of 3/8" fiberboard or foam. The material shall go the full depth of the slab or curb and gutter.

PART 3 EXECUTION

3.01 PREPARATION OF SURFACES

A. The surface shall be free from standing water, mud and debris at the time of concrete placement.

B. Forms:

1. Forms shall be of wood or other suitable material and shall extend for the full depth of the concrete. Forms shall be straight, free from warp, and of sufficient strength to resist the pressure of the concrete without displacement. Bracing and staking of forms shall be such that the forms do not move when the plastic concrete is placed. Forms shall be covered with an approved form release agent before concrete placement.

3.02 PLACING CONCRETE

A. The proportioning, mixing, and placing of the concrete shall be in accordance with the requirements for the concrete specified herein. Deposit concrete in one course to prevent segregation. Use a laser controlled screed to level surface.

B. Consolidate placed concrete by mechanical vibrating equipment supplemented by handspading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 302.1R recommended practices.

C. Finish surface with a wooden float and light brooming. No plastering of the surface will be permitted.

D. Outside edges of the slab and all joints shall be edged with a 1/4 inch radius-edging tool.

3.03 CONTRACTION JOINTS – Not applicable

3.04 EXPANSION JOINTS – Not applicable

3.05 CURING

A. No curing compounds are allowed. Use wet burlap or cover with plastic.

B. Prohibit traffic, both pedestrian and vehicular, from freshly placed concrete for a period of not less than 72 hours. Vehicular traffic shall be excluded for such additional time as the Consultant may direct.

3.06 TENSIONING

A. Pre-tension cables per Tech-Con instructions. Pre-tension to take place within 24 hours of pouring concrete.

B. Final tension to be applied after reaching 80% of concrete strength.

3.07 DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Contractor shall remove and dispose of excess materials at its own expense.

3.08 FIELD QUALITY CONTROL

A. Sampling and testing for quality control during placement of concrete shall be arranged and paid for by the Contractor and shall include the following, as directed by the Consultant.

1. Slump: ASTM C143; one test for each set of compressive strength test specimens.
2. Entrained Air: ASTM C231; one test for each set of compressive strength specimens.
3. Casting and Curing Concrete Test Specimens: ASTM C31; cast one set of four 6” x 12” standard test cylinders for each 100 cubic yards or fraction thereof, of concrete placed in any one day or for each 5,000 square feet of surface area placed.
4. Compression Strength Test Specimens: ASTM C39; per set of four standard cylinders, test one specimen at 7 days, two specimens at 28 days, and one specimen held in reserve for later testing, if required.
5. When total quantity of a given class of concrete is less than 50 cubic yards, the Consultant may waive strength test if, in his judgment, adequate evidence of satisfactory strength is provided.

B. Test results will be reported in writing to the Consultant and Contractor on the same day that tests are made. Reports of compressive strength tests shall contain the project identification and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportion and materials; compressive breaking strength, and type of break for both 7-day and 28-day tests.

C. Additional Tests: The testing service will make additional tests of in-place concrete when compressive strength test results indicate specified concrete strengths have not been attained. The hardened concrete will be cored as specified with ASTM C42, or by other methods as directed. Contractor shall pay for such tests conducted,

and any other additional testing as may be required when unacceptable concrete is verified.

END OF SECTION

SECTION 322200

CONCRETE REINFORCEMENT

PART I GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Reinforcing steel
   2. Dowel bars
   3. Mesh reinforcing
   4. Chairs
   5. Stirrups
   6. Wire

1.02 SUBMITTALS

A. Submit shop drawings that include diagrammatic elevations of all walls or slabs showing clearly the position and erection marks of reinforcing bars, dowels, mesh and splices. Indicate the type of chairs, bolster bars, and supports to be used to support the reinforcing, and size and placement of stirrups and ties.

1.03 REFERENCES

A. ASTM A615, Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement.

B. ASTM A775/A 775M, Specification for Epoxy-Coated Reinforcing Steel Bars.

C. State of Wisconsin Standard Specifications for Highway and Structure Construction, 2003 edition and latest Supplements(WISDOT)

   1.Section 505- Steel Reinforcement.

PART 2 PRODUCTS

2.01 REINFORCING STEEL

A. Reinforcing steel stock, free from mill scale and delivered without rust other than what may have occurred in prompt transportation to the job site.

B. Reinforcing bars: Billet intermediate grade deformed bars, ASTM A615 grade 60 having a minimum yield point of 60,000 psi, bent and cut as required by the Plans. The bars shall be epoxy coated, unless noted otherwise.

C. All reinforcing steel, whether it is mesh or bars, shall be tied and placed upon chairs to and positioned at the height specified in the drawings.

D. Tie Wire: No 16 American Wire Gauge or heavier, black annealed.

2.02 DOWEL BARS

A. Dowel bars shall be fabricated from Grade 60 Steel and shall have an epoxy coating.

B. Shearing will be permitted provided the coating is not damaged and subject to permissible deformation. Any deformation larger than true shape shall not exceed 0.04 inch increase in diameter or thickness and shall not extend more than 0.04 inch from the dowel end.

2.03 MESH REINFORCING

A. The mesh reinforcing shall be Welded Wire Fabric (WWF) and shall be fabricated from Grade 60 Steel and shall have an epoxy coating.

B. The Welded Wire Fabric shall be 6.0 by 6.0, W2.0 by W2.0, unless stated differently in SECTION 011100 or as shown on the Plans. The WWF shall be sheet goods only. No rolled goods will be permitted unless approved in advance by the Consultant.

PART 3 EXECUTION

3.01 GENERAL

A. Store the reinforcement on pallets or timbers above the ground. Avoid excessive rusting or coating with grease, oil, dirt, or other materials that may reduce the bond with the concrete.

B. Splices in the reinforcing steel shall have a minimum overlap of 20 bar diameters unless otherwise indicated. Stagger the splices in adjoining horizontal bars at least 6 feet, wherever possible. Hook the horizontal bars around corners not less than 24 bar diameters, with a minimum of 12 inches.

C. Concrete protection of the reinforcing steel shall be not less than the following.

1. 3 inches where concrete is poured against the ground.
2. 2 inches where concrete is poured against forms but may be in contact with the ground.
3. 1.5 inches minimum in exterior walls (exposed to weather but not in contact with the ground).

D. The clear distance between the bars shall be not less than 1.5 inches, 1.5 inch bar diameters, nor less than 1.5 times the maximum size of the concrete mixes coarse aggregate. Wherever conduits, piping, inserts, sleeves, etc., interfere with the placing of the reinforcing steel as shown or called for, the Contractor must consult with the Consultant and secure from him the method or procedure before placing the concrete. Bending or field cutting of bars around openings or sleeves will not be permitted.

E. Dowel bars shall be greased on one end, to provide horizontal movement.

END OF SECTION

Transporting asphaltic concrete mixtures from the mixing plant should be done in trucks having tight, clean compartments. Covers should be provided over hot asphalt concrete mixtures when transporting to protect from weather and to minimize loss of heat. During periods of cold weather or for long-distance deliveries, insulation should be provided around the entire truck bed surfaces.

Asphalt paving mixture equipment, methods of mixing and placing, and precautions to be observed as to weather, condition of base, etc. should conform to standard local DOT practice by paving contractors who are familiar with asphalt placement on sports-related pavements. Work should not be performed during rainy weather or when temperatures are less than 50 degrees F., or when temperatures have been less than 40 degrees for 12 hours immediately prior to the application.

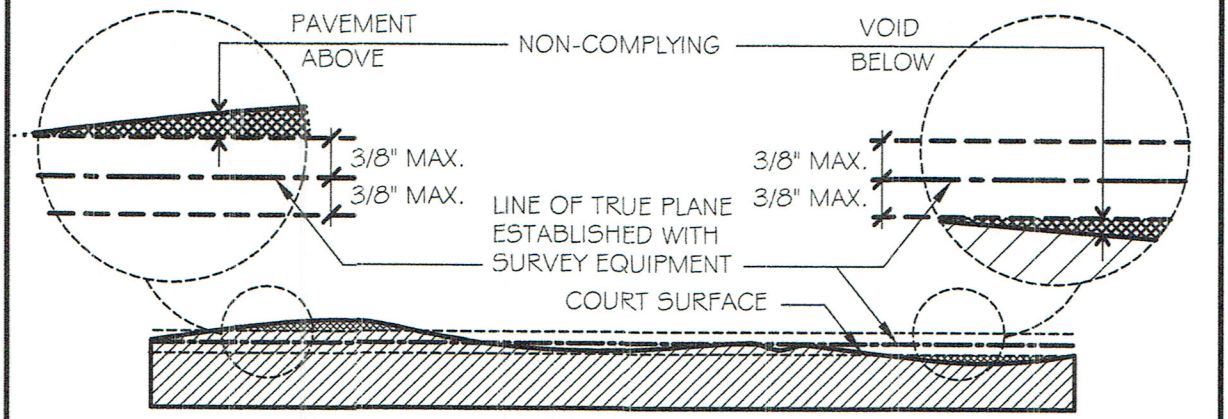
Asphalt materials should not be placed when the base aggregate is wet or contains excessive moisture.

Asphalt deliveries should be timed to permit spreading and compacting of the asphalt material to properly achieve the maximum theoretical density. Materials should be between 270 and 300 degrees F. at the time of placement. The intermediate course and final surface course should not exceed 320 degrees maximum at time of placement. Asphalt compaction must be completed and asphalt densities achieved prior to cessation temperature of 185 degrees F. for the mat and not less than 220 degrees F. for the longitudinal joints.

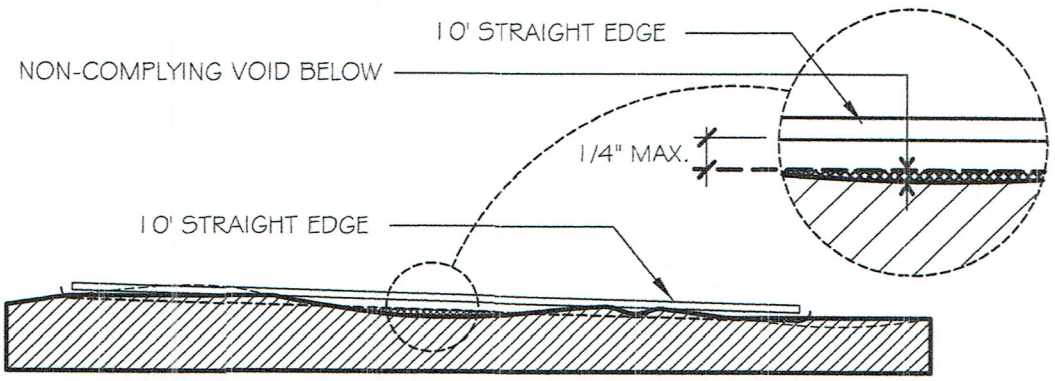
In order to minimize the potential for pavement cracking, longitudinal joints shall have the same texture, density and smoothness as other areas of the asphalt pavement. Extreme care should be exercised when placing successive passes of new asphalt to ensure the new asphalt at the longitudinal joints is sufficiently thick to allow for compaction when rolling. Limit the extension of augers and tunnels beyond the end gate to ensure a continuous supply of fresh material is carried (not pushed) to the longitudinal joint. The use of a joint matcher, set immediately adjacent to the end gate, can help ensure that a sufficient depth of material is provided at the longitudinal joints. Maintaining a sufficient confined edge on each side of the paving pass will improve the compaction of the paving mat, particularly along longitudinal joints.

The paving industry as a general rule prefers to use a "set down pass" that is paved perpendicular to the main paving to allow the paver screed to sit on a mat before starting each pass. This paving procedure causes issues with the joint temperatures being too cold and also with joint compaction issues along the inside edge of the set down pass. In most cases, this causes a crack to run along the entire length of the pass. For this reason, this type of paving procedure should be eliminated and a short pad placed for the paver screed just before starting each pass.

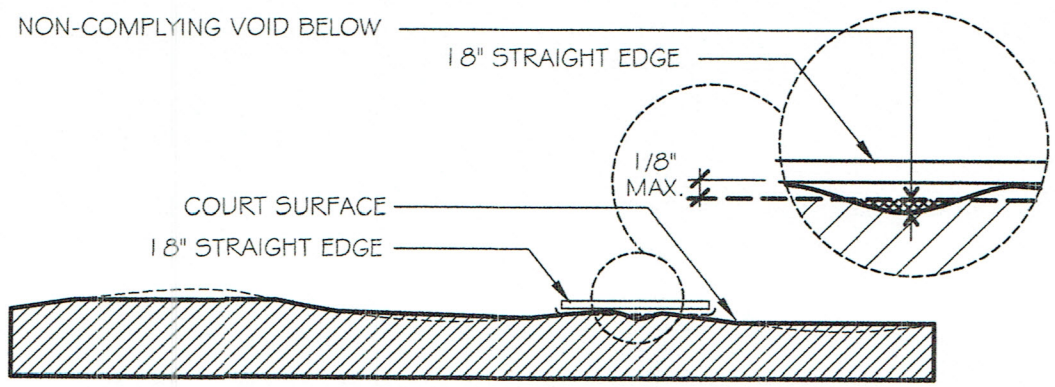
On the other end of the paving, a closure pass is usually paved perpendicular to the main paving to be able to exit the courts. This presents the same challenges, with the possibility of joint issues, and should be avoided if possible. If, however, it's impossible to avoid this due to site conditions, fencing, etc., paving a staggered closing pass can reduce or eliminate joint issues. This is done by completing three or four main line paving passes and then paving the closure passes to that point before continuing with the main line paving. This is done in a staggered fashion until court paving is finished. It also helps if a small mound of asphalt is left



PLANARITY - ELIMINATING HIGH AND LOW AREAS



EVENNESS - ELIMINATING LOW AREAS FOUND WITH 10' STRAIGHT EDGE



SMALL IRREGULARITIES - ELIMINATING VOIDS FOUND WITH 18" STRAIGHT EDGE

MAX. = MAXIMUM DEVIATION ALLOWED.

PLANARITY, EVENNESS & IRREGULARITIES
PAVEMENT MODIFICATIONS FOR MINIMUM COMPLIANCE

NOT TO SCALE

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at the end of each main line pass to keep the joint warm. This mound is then picked up by the paver as it paves the closure pass.

Please refer to sportsbuilders.org/page/TennisConstructionGuidelines for the current ASBA guidelines on asphalt paving.

Control Joints

Since the 1980s, the industry has been using control joints between courts and along the net line to reduce the chance of random structural cracking in the playing area and to allow a place for the asphalt to move and not affect play. Control joints should be dry cut with a 1/8" wide blade through the top layer of asphalt and to a depth of 1" into the binder course. The cut should be made as soon as the cutting machine wheels do not leave any marks in the new pavement, but no longer than 21 days after paving is completed. The joint should be centered between net posts, and centered between side lines of adjacent courts. Over time, these joints will widen and become a yearly maintenance item. To reduce the amount of maintenance, some contractors have been installing, with great effectiveness, the crack membrane systems over the joints before the initial color system is put down. This helps to substantially reduce maintenance and prevent water intrusion into the base under the joints

In the last decade or so, due to asphalt issues, contractors have been installing full coverage fiberglass over new courts before color coating. This has helped in reducing the chances of surface cracks associated with those asphalt issues. Due to the cost of this added process, it would be up to the owners to decide if they want to incorporate this extra step.

Finished Asphalt Pavement Guidelines

Traditionally, guidelines have suggested simply that the finished surface of a tennis court should not vary more than x inches and y feet from a true plane. In actuality, there are at least four separate measures that can be made for the accuracy of the installation of a hard surface court:

Slope—Asphalt courts are sloped in a true plane a minimum of .83% (1:120) to a maximum of 1.00% (1:100). Side to side is the preferred direction of slope; however, it can also be end to end or corner to corner if side to side cannot be achieved. Consideration should be given to sloping indoor courts slightly to aid in removal of water when washing the courts.

Planarity—Planarity is the degree to which a surface is constructed as designed in one true plane. The surface also must be located at the designed elevation and slope because the elevation and grade of the surface tie it into the drainage system. According to the ITF, the finished court should not vary more than +/- 3/8" (9.5mm) from the designed elevation within the Primary Playing Area. Planarity and slope are commonly measured with a transit or laser level.

Evenness—In order to drain properly and to be acceptable for play, a surface must be smooth and regular, lacking humps and dips. An even surface will not cause ball deflection or create a player tripping hazard. As a measure of evenness, the surface should not vary more than 1/4" in 10' (6.3mm in 3m) when measured in any direction using a straightedge.

SECTION 322300

CONCRETE PAVEMENT JOINT SEALER

PART 1 GENERAL

1.01 SUMMARY

A. This Section includes:

1. Expansion and contraction joints within Portland cement concrete pavement.

B. Related Sections include the following:

1. Section 322000 “Concrete Pavement” for constructing joints in concrete pavement.

1.02 SUBMITTALS

A. Submit at least 7 days in advance of placement, product data for each joint-sealant product to be used.

B. Samples for Verification: For each type and color of joint sealant required. Sample shall be a minimum of 3/8” wide by 3” long.

1.03 REFERENCES

A. ASTM C920, Standard Specification for Elastomeric Joint Sealants.

B. ASTM C1193, Standard Guide for Use of Joint Sealants.

C. ASTM D3406, Standard Specification for Joint Sealant, Hot-Applied, Elastomeric-Type, for Portland Cement Concrete Pavements.

D. ASTM D3569, Standard Specification for Joint Sealant, Hot-Applied, Elastomeric, Jet-FuelResistant Type for Portland Cement Concrete Pavements.

E. ASTM D5249, Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland Cement Concrete and Asphalt Joints.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.

B. Source Limitations: Obtain each type of joint sealant through one single manufacturer.2

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multi-component materials.

B. Store and handle materials to comply with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.06 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions: 1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer. 2. When joint substrates are wet.

B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are more or less than that allowed by joint sealant manufacturer for application indicated.

C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

PART 2 PRODUCTS

2.01 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint sealant manufacturer based on testing and field experience.

B. Colors of Exposed Joint Sealants:

1. Walks: Grey.
2. Pavements: Grey.

2.02 COLD-APPLIED JOINT SEALANTS

A. Single-Component Urethane Sealant for Concrete: Single-component, pourable, coal-tarmodified, urethane formulation complying with ASTM C920 for

Type S; Grade P; Class 25; Uses T, M, and, as applicable to joint substrates indicated, O.

B. Available Products: Subject to compliance with requirements, cold-applied joint sealants that may be incorporated into the Work include, but are not limited to, the following:3

1. Single-Component Urethane Sealant for Concrete:
    a. Sikaflex 1CSL; Sika Corp.
    b. Sonolastic NP1 BASF Company
    c. Approved equal.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine joints indicated to receive joint sealants, with installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

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

3.02 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions.

3.03 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's written installation instructions applicable to products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealants by proven techniques to comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses provided for each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

D. Provide joint configuration to comply with joint sealant manufacturer's written instructions, unless otherwise indicated.

3.04 CLEANING

A. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.05 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

END OF SECTION

Section 323100

MASTERS BOND KOTE SPECIFICATIONS

PART 1 – GENERAL

1.1 DESCRIPTION

Laykold Masters Bond-Kote is specially designed latex emulsion primer. Basic Use: Laykold Masters Bond-Kote is designed for bonding fiberglass mesh scrim to a sealed SBR mat. Laykold Masters Bond-Kote is also designed to bond polyurethanes systems to water based systems.

2.0 SAFETY GUIDELINES

A. Always wear the recommended personal protective equipment.
B. Avoid contact with eyes, skin, and clothing.
C. Adequate ventilationis required during application process.

3.0 STORAGE AND PACKAGING

Laykold Masters Bond-Kote should be kept dry and cool. Storage temperature should be between 4°CC (40°F) and 32°C (90°F).

Packaging: 5 gallon pail at 1893 kg.

4.0 COVERAGE

Interface between PU and Acrylics

A. Laykold Masters Bond-Kote coverage is approximately 0.20 kg/m^2 (0.05 gal/yd^2 or 200 ft^2/gal) for rough surfaces (i.e. fiberglass scrim or textured surfaces) and 0.09 kg/m^2 (0.02 gal/yd^2 or 450 ft^2/gal) for smooth surfaces (i.e. Qualipur172 or LM Wearcoat).

Concrete Adhesion Promoter

A. Laykold Masters Bond-Kote coverage is 0.09 kg/m2 (0.02 gal/yd2 or 450 ft2/gal) of undiluted material.

5.0 INSTALLATION GUIDELINES

Before application the surface must be clean, dy, and free of oil, grease, dirt, and foreign residue.

A. Minimum surface and application temperature: 10°C (50°F)

B. Maximum surface and application temperature: 54°C (130°F)
C. Do not allow to freeze
D. Do not over dilute with water
E. Dry time of 2-4 hours, dependent upon weather conditions

Interface between PU and Acrylics

Laykold Masters Bond-Kote is ready to use; therefore diluting is not recommended. In order to obtain uniform coverage, Laykold Masters Bond-Kote should be applied with a high quality roller (profiled) or rubber squeegee (smooth surface).

Concrete Adhesion Promoter

Laykold Masters Bond-Kote as a concrete adhesion promoter needs to be diluted 1 part LM Bond-Kote to 5 parts water. Diluted material should be applied with a high quality roller. When using Laykold Masters Bond-Kote as a concrete adhesion promoter, the concrete surface should be abraded to a CSP3 profile to ensure proper adhesion.

END OF SECTION

SECTION 323625

ACRYLIC RESURFACER

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Filler material.
2. Color finish system not applicable to this project

1.02 SUBMITTALS

A. Submit filler material product data and specification information provided by the manufacturer.

B. Furnish the manufacturer's material product data and specification information stating the color finish system is especially made for use on tennis courts.

1.03 QUALITY ASSURANCE

A. Quality assurance personnel will perform intermittent inspections during the filling and color finish system operations.

B. The Contractor is to supply the barrel or tote product and manufacturing production numbers for each barrel or tote of acrylic resurfacer or color product used on this project.

PART 2 PRODUCTS

2.01 ACRYLIC FILLER OVER BITUMINOUS PAVEMENT

A. A cold-applied sealer manufactured with mineral fillers, suitable for mixing with graded mineral aggregate, meeting the following requirements.

Color	Black
Acrylic	44%
Pigment	40%

B. The mineral aggregate shall be a uniformly graded, durable, clean, hard material, or manufactured sand, free of clay lumps and organic matter, meeting the following requirements.

Sieve Size	Percent Passing by Weight
No. 16	100
No. 20	85 - 100
No. 30	15 - 85
No. 40	2 - 15
No. 100	0 – 2

C. The first coat of acrylic resurfacer shall have a minimum of 600 – 700 lbs of sand per 50 liquid gallons of acrylic resurfacer.

No asphalt emulsion based products will be allowed.

PART 3 EXECUTION

3.01 ACRYLIC EMULSION FILLER OVER BITUMINOUS PAVEMENT

A. Surface Preparation:

1. For cracks that are 1/4" wide or wider, rout, sterilize and fill cracks with a mixture of silica sand and Portland cement, “crack patch binder”, specifically designed for applications on tennis courts. The filler material shall be level with the adjacent surfaces. The filling of the cracks or low areas and sanding is to be approved by the consultant before any coatings or Armor Crack Repair System is installed. Any Armor installed before approval of the Consultant will be removed for inspection and replaced by the Contractor at the Contractor’s expense.
2. For cracks that are less than 1/4" wide, seal the cracks with a color pigmented, cold applied elastomeric sealant, specifically designed for applications on tennis courts. The sealer material shall be level with the adjacent surfaces.
3. The pavement surface must be completely cleaned of dust, dirt, debris, and all loose materials by power washing. The power washing shall be performed with a high-pressure power washer capable of providing 6,000 psi for general dirt and debris removal.

B. Application:

1. Depressions holding water over 1/8 inch deep shall be leveled with either a mixture of silica sand and Portland cement, “crack patch binder”, or an acrylic emulsion filler.

2. Provide two applications of the acrylic filler material at the consistency and thickness recommended by the manufacturer.
3. Apply the acrylic filler materials during good weather conditions when the air temperature is between 55 degrees F and 90 degrees F and rain is not forecast or imminent.

Plexipave by California Products
Laykold by Advanced Polymer

END OF SECTION

SECTION 323655

TENNIS COURT COLOR FINISH SYSTEM

PART 1 – GENERAL 1.1 DESCRIPTION

1.01 SCOPE:

A. This guideline specification covers the application of the Laykold ColorCoat system. The Laykold ColorCoat system is comprised of Laykold Acrylic Deep Patch, Laykold Acrylic Resurfacer, Laykold ColorCoat Concentrate, Laykold Line Prime and Laykold Textured White Line Paint. When applying the Laykold ColorCoat system to a concrete substrate, Laykold Epoxy VTB Primer (≥ 75% RH), or LM Bond-Kote (adhesion promoter), is required.

B. COURT CONSTRUCTION:

Refer to the American Sports Builders Association (ASBA) manual Tennis Courts: A Construction & Maintenance Manual for court construction details. This publication may be obtained by calling the ASBA at 443-640-1042 or visiting www.sportsbuilders.org.

C. QUALITY ASSURANCE

A. All tennis court surfacing materials shall be Laykold as manufactured by Advanced Polymer Technology (APT) of Harmony, PA, an ISO 9001 certified manufacturer. APT may be contacted via telephone 888-266-4221, fax 724-452-1703, or web site www.laykold.com
B. All work shall be done in accordance with American Sports Builders Association (ASBA) guidelines.
C. The contractor shall record the batch number of each product used on the site and maintain it through the warranty period.
D. The contractor shall provide the inspector, upon request, an estimate of the volume of each product to be used on the site.

D. SUBMITTALS

A. Submit one set of Advanced Polymer Technology's "Laykold ColorCoat System Specification".
B. Submit system components Technical Data Sheets (TDS) and one Laykold Color Chart.
C. Submit current Safety Data Sheets.
D. Submit current ISO Quality Management System Certification certificate.
E. Submit current ITF surface classification. Laykold ColorCoat System Specification Rev 8 WB 02.03.21 Page 2 of 8

E. WORKING CONDITIONS & LIMITATIONS

A. Asphalt substrates shall be allowed to cure a minimum of 28 days and concrete substrates shall be allowed to cure a minimum of 30 days before application of any coatings. If time sensitive and/or high RH level is present, Laykold Epoxy VTB Primer can be applied to 5-day old (minimum) concrete substrates according to coatings manufacturer guidelines.
B. If Laykold Epoxy VTB is required. Concrete substrate must be shot blasted, hydro blasted, and or bush mill hammered to a CSP3 profile. Refer to Laykold Guideline Installation for Concrete Surface Preparation.
C. If using LM Bond-Kote, concrete substrate should be shot blasted, hydro blasted, and/or bush mill hammered to a CSP3 profile. Minimum requirements are medium broom finish and acid etching, if using LM Bond-Kote as an adhesion promoter.
D. The substrate shall be CLEAN and DRY before coatings are applied. The surface of the substrate shall be inspected and made sure to be free of grease, oil, dust, dirt and other foreign matter before any coatings are applied.
E. Water used in all mixtures shall be fresh and potable.
F. No part of the surfacing system shall be applied during a rainfall, or when rainfall is imminent.
G. Do not apply coatings to a cold surface. Surface and air temperatures must be a minimum of 50ºF (10ºC) and rising. A minimum temperature of 50ºF must be maintained during the entire installation process to include 24-hours before and after the installation.
H. Shaded areas will be cooler with slower curing times. Special precautions should be taken to ensure all coatings cure sufficiently prior to application of additional coatings.
I. Do not apply coatings if extremely high humidity prevents drying.
J. No coatings are to be applied if surface temperature exceeds 130°F (54°C).
K. All materials shall be delivered to the job site in sealed containers with the manufacturer's label affixed.
L. Color(s) of acrylic color coating system are to be selected by owner from manufacturer's product color card(s).
M. If all the above conditions are met, surfacing materials shall have a one-year limited warranty as supplied by the manufacturer.

F. WARRANTY

Advanced Polymer Technology Corp. (APT) warrants, subject to limitations, exclusions, terms and conditions contained herein, that the material supplied by APT, and which is covered by this Warranty, will not fail due to defects for one (1) year. APT's maximum responsibility under this Limited Warranty shall be limited to the replacement of material in a quantity not in excess of the quantity of material furnished by APT in connection with the project. No salesman or other employee or agent of APT is authorized to bind APT by any agreement, warranty, promise, or understanding not herein expressed.

Laykold ColorCoat System Specification Rev 8 WB 02.03.21 Page 3 of 8 This Limited Warranty is made and given in lieu of all other warranties and conditions, expressed or implied, statutory or otherwise, including but not limited to any warranties or conditions of merchantability, durability and of fitness for a particular purpose. Under no circumstances shall APT be liable or otherwise obligated for indirect, incidental or consequential damages of any nature or kind whatsoever, including damages arising in contract, tort, product liability or otherwise.

PART 2 – PRODUCTS

2.1 LAYKOLD COLORCOAT SYSTEM MATERIALS

A. All components of Laykold ColorCoat system shall be supplied by Advanced Polymer Technology, an ISO 9001 certified manufacturer. ColorCoat system components shall not contain any lead, mercury, nor any heavy metals, PCB, or formaldehyde.
B. Laykold Epoxy VTB Primer (concrete substrates only). A two-component, 100% solids, solventfree epoxy moisture mitigation primer. LM Bond-Kote (adhesion promoter) may be substituted where concrete's relative humidity, hydrostatic pressure, efflorescence, and staining are not a concern. 1. Percent Solids by Weight 98% (minimum) 2. Weight 9.01 lbs./gallon
C. LM Bond-Kote (concrete substrates only). A one-component, PU/Acrylic hybrid emulsion used as a permeable concrete adhesion promoter. LM Bond-Kote is diluted 1 part LM Bond-Kote to 5 parts portable water and mixed until uniform. 1. Percent Solids by weight: 48% (minimum) 2. Weight: 8.9 lbs/gallon
D. Laykold Acrylic Resurfacer. Acrylic-based emulsion used for smoothing rough pavements. 1 to 2-coats as needed. Laykold NuSurf is recommended for use on new asphalt pavements and is an acceptable substitute for Acrylic Resurfacer. Laykold NuSurf is not recommended on concrete substrates.

1. Percent Solids by Weight 52% (minimum)
2. Weight 10.68 lbs/gallon

E. Laykold ColorCoat Concentrate textured batch mixture. Pigmented wear-resistant acrylic emulsion. 2-coats required. Advantage Laykold factory textured color or Laykold Colorflex textured batch mixture are acceptable substitutes. Laykold Colorflex is not recommended on concrete substrates.
1. Percent Solids by Weight 49 % (minimum)
2. Weight: 12.9 (+/- 3) lbs/gallon

F. Optional Laykold ColorCoat Concentrate finish batch mixture. Pigmented wear-resistant acrylic emulsion. 1-coat. Laykold Colorflex finish batch mixture is an acceptable substitute. A finish coat will speed up the surface pace of the court. Laykold Colorflex is not recommened on concrete substrates. Laykold ColorCoat System Specification Rev 8 WB 02.03.21 Page 4 of 8

1. Percent Solids by Weight 49 % (minimum)
2. Weight: 9.47-9.52 lbs/gallon

G. Laykold Line Prime. Clear drying acrylic emulsion line primer. 1-coat required.

1. Percent Solids by Weight 29% 2. Weight: 8.9 lbs/gallon

H. Laykold Textured White Line Paint. Factory textured, wear-resistant acrylic emulsion line marking paint. 1-2 coats as required.

1. Percent Solids by Weight 67% (minimum)
2. Weight: 11.4 lbs/gallon

PART 3 – EXECUTION 3.1 INSPECTION

A. Inspect concrete or asphalt substrates for dryness. Report any discrepancies to general contractor.

B. Surface of substrate shall be cleaned by general contractor as required.

C. Surfacing contractor to approve site and surface conditions prior to proceeding with application any coatings.

3.2 PREPARATION

A. New Concrete or Existing Concrete Substrates

1. Concrete must be shot blasted, hydro blasted, and/or bush mill hammered to a CSP3 profile if Laykold Epoxy VTB is required. When using LM Bond-Kote as an adhesion promoter, concrete must have a minimum of a medium broom finish and acid etched.

2. The workmanship of other contractors including the sub-base shall be level and compacted. The field dry density shall be a minimum of 95%. The concrete base must have a maximum deviation of ¼" below a 10-foot straight edge when measured in any random path.

1. New concrete shall be cured for a minimum of 30 days before proceeding.

2. All surfaces shall be checked to ensure a level surface. The surface shall be flooded with water, any area that retains 1/8" of water in depth after 20 minutes should be marked and leveled after the Laykold VTB Primer application. All cracking and construction joints should be filled with the correct sealant. This sealant should be designed for waterproofing or moisture mitigation. If using LM Bond-Kote, depression should be leveled before LM Bond-Kote application.

3. Surface cleaning - All surfaces must be clean, dry, and free from any bond inhibiting contaminants and foreign residue. Pressure wash the surface to remove any residues. Laykold ColorCoat System Specification Rev 8 WB 02.03.21 Page 5 of 8

4. The polyethylene vapor barrier application shall be applied by additional contractors. The application of the barrier shall be installed preceding any cables or steel. The vapor barrier shall be applied at a minimum of two (2)

6-mil layers. Once the installation is completed do not allow any traffic (including vehicular) onto the surface.

B. New Asphalt Substrates

1. The workmanship of other contractors including the sub-base shall be level and compacted. The field dry density shall be a minimum of 95%. The asphalt base must have a maximum deviation of ¼" below a 10-foot straight edge when measured by any random path.

2. New asphalt shall be allowed to cure for a minimum of 28 days before proceeding.

3. All surfaces shall be checked to ensure a level surface. The surface shall be flooded with water, any area that retains 1/8" of water in depth after 30 minutes should be leveled with the approved product. All cracking should be filled with the correct sealant.

4. Surface cleaning - All surfaces must be clean, dry, and free from any bond inhibiting contaminants and foreign residue. Pressure wash the surface to remove any residues.

C. Previously Coated Asphalt Substrates

1. All surfaces shall be checked to ensure a level surface. The surface shall be flooded with water, any area that retains 1/8" of water in depth after 30 minutes should be leveled with the approved product. All cracking should be filled with the correct sealant.

2. Surface cleaning - All surfaces must be clean, dry, and free from any bond inhibiting contaminants and foreign residue. Pressure wash the surface to remove any residues

3.3 INSTALLATION

A. Primer (for concrete substrates only):

1. When installing the Laykold ColorCoat system over concrete, LM Bond-Kote must be applied as the first layer of the system. If applying a breathable system or RH tests less than 75%, LM Bond-Kote can be applied. LM Bond-Kote is mixed by diluting 1 Part LM Bond-Kote with 5 Parts portable water and mixing using a low speed jiffy mixer (400 to 600 rpm) until uniform (3-5 minutes). Spread the mixed primer on the substrate using a 36" 55 durometer squeegee to achieve a total coverage of approximately 0.02 gal/yd2 (0.09 kg/m2 - 450 ft2 /gal). Allow to fully dry before proceeding. If the concrete substrate tests with RH of 75% or

greater or a MVER (Anhydrous Calcium Chloride) of greater than 3 lbs/1000 sqf/24 hours, more cure time is required or Laykold Epoxy VTB

Primer can be used. Laykold Epoxy VTB is mixed by premixing the “A” for 1 minute, then pourng the “B” component into the “A” component and mixing using a low speed jiffy mixer (400 to 600 rpm) for 2 minutes. Do not incorporate air when mixing. Spread Laykold Epoxy VTB on the substrate using a 36” 55 durometer squeegee and high-quality, 18” medium nap roller to achieve a total coverage of 0.12 gal/yd2 or 75 ft2 /gal. The working time for Laykold Epoxy VTB is approximately 40-50 minutes once on the ground and is reduced in high temperatures. Allow 8 to 10 hours drying time before proceeding. Note: Only use material that naturally flows out of the pail. Do not scrape, bang, or place pail upside down to force additional materials out of the pail.

B. Patching:

Once the surface has been thoroughly cleaned and is free of all loose material, dirt, or dust, the court shall be flooded and allowed to drain a minimum of 30 minutes and a maximum of 1 hour. Any area that holds water (birdbaths) in a depth greater than 1/16 inch (1.6 mm or the thickness of a nickel) shall be outlined and patched.

1. Surface Leveling: Birdbaths shall be leveled using a Laykold Acrylic Deep Patch court patch binder slurry. Prime area to be patched with a 50/50 mixture of Laykold Acrylic Deep Patch and water. Primer shall be brushed into place and allowed to dry prior to patching. Patch mix shall consist of Laykold Acrylic Deep Patch, 50-mesh sand and Type 1 Portland Cement. Mix as per manufacturer directions. Note: Laykold Poly Primer (Patch Mix) is an acceptable substitute for leveling materials.

2. Crack Filling: Cracks shall be cleaned, primed, and filled using Laykold Acrylic Resurfacer if cracks are 1/16 inch or less. If greater than 1/16 inch, Laykold Acrylic Deep Patch court patch binder slurry should be used to fill cracks. Mix as per manufacturer’s directions. Note: Laykold Crack Filler and Qualicaulk are acceptable substitutes for crack filling materials.

3. All areas that are repaired/leveled/corrected using a court patch binder mixture shall be allowed to fully cure and then ground smooth and level with the substrate by stone or an acceptable mechanical method.

C. Filler Coat(s):

Apply one coat of Laykold Acrylic Resurfacer using a 24”, 30” or 36” wide 70 Durometer flexible rubber squeegee. Batch mix shall consist of 55

gallons (260 kg) of Laykold Acrylic Resurfacer, 30 to 40 gallons (115-130 kg) of potable water, and 600 to 900 pounds (270- 400 kg) of clean, bagged silica sand (60 to 80 mesh). The application rate shall be 0.05- 0.07 gal/yd2 (0.29-0.40 kg/m2 - 129-180 ft2 /gal) of undiluted Laykold Acrylic Resurfacer per coat. Note: If the asphalt is very porous, an optional 2nd application of Laykold Acrylic Resurfacer may be applied. Each coat should be completely dry before applying subsequent coats. Laykold Nusurf is an acceptable substitute for Laykold Acrylic Resurfacer and is highly recommended for use on new asphalt pavements, older asphalt pavements with hairline surface cracking, slipsheet/free-floating surfaces and/or repair methods over cushioned courts.

D. Textured Color Coats:

Laykold MS2 – ITF Classification 2

Apply two coats of Laykold ColorCoat Concentrate textured batch mixture using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of Laykold ColorCoat Concentrate, 25 to 35 gallons (95-115 kg) of potable water and 300 to 450 pounds (135-203 kg) of clean, bagged silica sand (60 to 80 mesh). The application rate shall be 0.05-0.07 gal/yd2 (0.29-0.40 kg/m2 - 129-180 ft2 /gal) of undiluted Laykold ColorCoat Concentrate per coat. Each coat should be completely dry before applying subsequent coats. Laykold ColorFlex is a highly recommended substitute for ColorCoat Concentrate on cushioned courts.

Laykold M3 – ITF Classification 3

Apply two coats of Laykold ColorCoat Concentrate textured batch mixture using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of Laykold ColorCoat System Specification Rev 8 WB 02.03.21 Page 7 of 8 Laykold ColorCoat Concentrate, 25 to 35 gallons (95-115 kg) of potable water and 300 to 450 pounds (135-203 kg) of clean, bagged silica sand (80 to 100 mesh). The application rate shall be 0.04-0.05 gal/yd2 (0.23-0.29 kg/m2 - 180-225 ft2 /gal) of undiluted Laykold ColorCoat Concentrate per coat. Each coat should be completely dry before applying subsequent coats. Laykold ColorFlex is a highly recommended substitute for ColorCoat Concentrate on cushioned courts.

Laykold MF4 – ITF Classification 4

Apply two coats of Laykold ColorCoat Concentrate textured batch mixture using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of Laykold ColorCoat Concentrate, 25

to 35 gallons (95-115 kg) of potable water and 300 to 450 pounds (135-203 kg) of clean, bagged silica sand (80 to 100 mesh). The application rate shall be 0.04-0.05 gal/yd2 (0.23-0.29 kg/m2 - 180-225 ft2 /gal) of undiluted Laykold ColorCoat Concentrate per coat. Apply one coat of Laykold ColorCoat Concentrate finish batch mixture using a 24”, 30” or 36” 50 Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of Laykold ColorCoat Concentrate and 55 gallons (210 kg) of potable water. The application rate shall be 0.03-0.04 gal/yd2 (0.17-0.23 kg/m2 - 225-300 ft2 /gal) of undiluted Laykold ColorCoat Concentrate per coat. Each coat should be completely dry before applying subsequent coats. Allow topcoat to cure a minimum of 24 hours before applying game lines.

E. Optional Finish Color Coat:

Apply one coat of Laykold ColorCoat Concentrate finish batch mixture using a 24”, 30” or 36” 50 Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of ColorCoat Concentrate and 55 gallons (210 kg) of potable water. The application rate shall be 0.03-0.04 gal/yd2 (0.17-0.23 kg/m2 - 225-300 ft2 /gal) of undiluted ColorCoat Concentrate per coat. Each coat should be completely dry before applying subsequent coats. Allow topcoat to cure a minimum of 24 hours before applying game lines. Laykold ColorFlex is a highly recommended substitute for ColorCoat Concentrate on cushioned courts. A finish coat WILL produce a faster surface pace.

F. Game Lines:

1. Wait a minimum of 24 hours after final color coat before applying line paint.

2. All lines are to be applied by painting between masking tape with a paintbrush or roller according to U.S.T.A. and A.S.B.A. specifications.

3. Prime masked lines with Laykold Line Prime and allow a minimum drying time of 1-hour.

4. Apply 1 to 2 coats as needed of Laykold Textured White Line Paint with a brush or roller.

5. Remove masking tape immediately after lines are dry.

6. Allow lines to dry a minimum of 24 hours before allowing play on court.

G. Remove all excess and waste materials from the area of work. Dispose of empty containers in accordance with federal and local statutes.

3.4 PROTECTION

A. Cure Time. No traffic or other trades shall be allowed on the surface for a period of one week following completion to allow for complete and proper cure of the finish. Laykold ColorCoat System Specification Rev 8 WB 02.03.21 Page 8 of 8

B. Other Trades. It is the responsibility of the general contractor to protect the surface from damage by other trades before acceptance by the owner or the owner's authorized agent.

C. Do not allow surrounding sprinkler systems to spray water on the newly applied court surface for a period of one week after completion.

D. Do not place any benches, chairs, ball baskets, or any other type of court equipment on the newly applied court surface for a period of one week after completion.

E. Do not allow black soled shoes, bicycles, rollerblades, etc. on the court surface. Black scuff marks cannot be removed!

END OF SECTION

SECTION 323675

LINE PRIMER

PART 1 GENERAL

1.01

A. General Description; Laykold Line Prime is a 100% acrylic clear drying emulsion primer that is applied prior to Laykold White Line Paint. The use of Laykold Line Prime assures crisp, sharp lines and a professional quality finish to the court surface. Laykold Line Prime does not contain any asbestos, Lead, or Mercury. Basic Uses: Designed to fill the minor voids between the tape and the court surface.

B. Safety Guidelines Always wear the recommended personal protective equipment. Avoid contact with eyes, skin, and clothing.

C. Storage and Packaging Line Prime should be kept dry and cool. Storage temperature should be between 10°C (50°F) and 38°C (100°F). Do not store in direct sunlight. Packaging: 2 gallon unit (2 gallon units are packaged in jugs at 1 gallon each).

D. Coverage Depending on the surface porosity and texture the consumption rate is 500 - 600 feet of 2” line per gallon. One set of tennis court lines typically requires 1-gallon of Laykold Line Prime

E. Installation Guidelines Apply Laykold Line Prime undiluted with a paintbrush or roller after masking tape is put down. Laykold Line Prime dries within 10 to 15 minutes in good weather conditions. Do not apply masking tape and Laykold Line Prime if rain is imminent. Once Laykold Line Prime is dry, Laykold White Line Paint may be applied. Remove masking tape immediately after playing lines are dry.

F. Limitations Rev 1 WB 12.16.15 Line Prime

- Minimum surface and application temperature: 10°C (50°F)
- Maximum surface and application temperature : 54°C (130°F)
- Do not allow product to freeze.
- Do not dilute with water.
- Do not apply when rain is imminent.
- Completed projects should be allowed a minimum for 48 hours drying time before releasing for play.

1.02 SUBMITTALS

A. Submit line primer material product data and specification information provided by the manufacturer.

B. Furnish the manufacturer's material product data and specification information stating the color finish system is especially made for use on tennis courts.

1.03 QUALITY ASSURANCE

A. Quality assurance personnel will perform intermittent inspections during the filling and color finish system operations.

B. The Contractor is to supply the barrel or tote product and manufacturing production numbers for each barrel or tote of acrylic resurfacer or color product used on this project before any application of products.

PART 2 PRODUCTS

A. Application:

1. Apply the line striping paint according to the U. S. Tennis Association and ITF Specifications. Do not apply the line striping paint in windy conditions. Lines that are found to be crooked, wavy or out of line shall be colored out and restriped at no additional cost to the Owner. Lines shall be masked. Line dimensions shall meet or exceed the following ITF tolerances.

Description	Dimension	Tolerance	Approximate Conversion
Middle of net to singles sideline #	13 ' 6"	+/- 5 mm	3/16"
Middle of net to singles sticks *#	16' 6"	+/- 5 mm	3/16"
Middle of net to doubles sidelines #	18'	+/- 5 mm	3/16"
Middle of net to net posts * #	21'	+/- 6 mm	1/4"
Half court diagonal (doubles)	53' 7/8"	+/- 16 mm	5/8"
Net to baseline	39'	+/- 12 mm	1/2"
Distance between doubles sidelines	36'	+/- 11 mm	7/16"
Doubles sidelines to singles sidelines	4' 6"	+/- 5 mm	3/16"

Single sidelines to center mark	13' 6"	+/- 5 mm	3/16"
Net to service line	21'	+/- 6 mm	1/4"
Center service line to singles sideline	13' 6"	+/- 5 mm	3/16"
Half court diagonal (singles)	47' 5 1/4"	+/- 14 mm	9/16"

* = Measured to the center of the net posts/singles sticks

\# = Where the position of X cannot be located precisely, use a reference point midway across the center service line.

If line corrections need to be made, it is at the sole discretion of the Consultant if the playing surface needs to be repainted. Any cost for such work shall be paid for by the Contractor.

B. Acceptable products:

1. The following manufacturers are approved for this project, any other manufacturers need written approval by the Consultant before bidding.

Line Primer by Laykold

END OF SECTION

SECTION 325526

FIRST TEAM – LEGEND DYNASTY SYSTEM

PART 1 – GENERAL

1.01 System Description

A. Design, fabrication and installation of a Basketball post and goal.

1.02 Quality Assurance

A. Engineering: Structural analysis performed by a Professional Engineer registered in the State of Minnesota. An engineering certification will be provided by the Manufacturer.
B. Manufacturer Qualifications: Manufacturer must have a minimum of five years of experience in the design and fabrication of basketball systems.
C. Installer Qualifications: Trained and experienced in the installation of basketball systems.

1.03 Submittals

A. Manufacturer's Product Data: Submit manufacturer's product information applicable to project.
B. Drawings: Manufacturer to submit project drawings sealed by a registered engineer and shall indicate the location, nature and extent of the work proposed and show in detail that it will conform to the applicable code.
C. Product Sample: Submit if applicable
D. Color Sample: Submit if applicable

1.04 Warranty

Pole, backboard, and standard rim shall carry a Lifetime Unconditional Warranty.

PART 2 – PRODUCTS

2.01 Acceptable Manufacturer

A. Design Basis: First Team Sports, Inc. Legend Dynasty Basketball System
902 Corey Road
Hutchinson, KS 67501
888-884-6677

B. Voluntary Alternate: The system specified has been determined to have characteristics appropriate for the purposes of this project. An alternate system and/or manufacturer can be submitted as a voluntary alternate by the general contractor if approved by the architect/engineer 10 days prior to the bid date.

2.02 Product Description

A. Configuration
1. Manufacturer to provide Basketball goal and backboard.
2. Manufacturer to provide all support posts and mounting hardware required.
3. Installer to provide concrete footings for support posts, footings to be designed by manufacturer per existing soil parameters.

B. Components

1. **VERTICAL POLE** - Vertical pole shall be 6" square 3/16" wall steel tubing and allow for burying 48" in concrete. Pole shall have a welded watertight steel cap to seal out moisture.

2. **EXTENSION ARM** - Main 45 degree extension arm tube shall be 6" square 3/16" wall steel tubing and provide for a 66" extension from front of pole to face of backboard. Arm shall be designed to allow backboard to be mounted at four places top and bottom to eliminate rust streaks from forming on face of board. Structures designed to bolt through face of backboard are not considered equal.

3. **EXTENSION ARM FACEPLATE** - The backboard mounting plate on the pole shall be ¼" thick and extend the full height of the backboard. A 4" square, 1/8" wall secondary arm tube shall further support the backboard mounting plate.

4. **MOUNTING** - Arm shall be attached to the pole by means of two ½" thick steel plates sandwiched around the 6" pole. One plate shall be welded to the arm, the other used as a crimp plate on the backside of the pole. Six 5/8" high strength bolts shall pass through the two plates and when tightened shall bolt the arm at the desired height. Rim height shall be fixed at 10'.

5. **CONSTRUCTION** - All steel pole components shall be welded using maximum penetration, continuous weld, MIG procedure.

6. **FINISH** - Pole components shall have a polyester powder-coated black finish.

7. **BACKBOARD** - Backboard shall be 42"x 72" (1 5/8" thick) rectangular fiberglass. Backboard shall be constructed with front and back fiberglass composite laminates and a solid inner core of high density pressed wood. A gel-coated 2" orange boarder, and an official orange shooters square shall mark the front of the board.

8. **RIM** - Standard rim shall be fabricated from 3/16" backplates and sideplates fully welded. Rim shall be double 5/8" diameter, high strength steel welded together at a minimum of six places. Nets shall be attached by means of a net locking system that facilitates the use of either nylon or chain nets (nylon net included). The entire rim shall be powder coated orange. Other rims including outdoor breakaway rims shall be available.

9. **DIRECT RIM MOUNT** - Rim and backboard shall be attached to the pole by passing four high strength steel bolts through the rim, backboard, and pole so that weight suspended from the rim is transferred directly to the pole structure. The backboard shall also be mounted to the pole at four places along the top and bottom, eliminating common rust streaks found on units where backboard is bolted through face.

Entire system weight shall be approximately 515#.

PART 3 – EXECUTION

3.01 Installation

A. All work performed by personnel experienced in basketball post installation.
B. Concrete footings must be supplied for each support post location, the footing design must be supplied by the manufacturer and be stamped by a State of Minnesota registered Professional Engineer.

C. Per manufacturer's assembly drawings.

3.02 Clean-Up

A. Clean up of all debris caused by the work of this section

END OF SECTION