The City *of* Worcester

Department of Parks, Recreation & Cemetery

Robert C. Antonelli, Jr., Commissioner

REQUESTS FOR BIDS

ELM PARK SITE FURNISHINGS RENOVATIONS

PROJECT SPECIAL CONDITIONS AND SPECIFICATIONS

SEPTEMBER 2026

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PROJECT SPECIAL CONDITIONS

ARTICLE 1 PROJECT SITE

a. All work of this contract is located within the confines and adjacent Right- of-Way of 121 Russell Street, owned and maintained by the City of Worcester Department of Parks, Recreation & Cemetery (DPRC).

ARTICLE 2 SUMMARY OF WORK

a. The work to be completed under this contract involves the furnishing of all labor, materials and equipment for the following items of work and all incidentals thereto. All work shall be performed in full accordance with the specifications, other contract documents, obviously implied and necessary or under the direction of the Owner.

b. The plans and specifications are intended to be cooperative, and any item called for in one and not the other shall be as binding as if called for in both. During the bidding period discrepancies should be immediately brought to the attention of the Owner for clarification. If a discrepancy is discovered within the plans and the specifications after the Bid period, the Owner will determine which shall apply.

c. Refer to Sheet L-1 for supplementary limits and description of work. Stockpiling, staging and entrance shall be determined in the field. As applicable, site furnishing (picnic table and bench) shall be anchored to new concrete PAD with ½" x 5-1/8" 304 SS threaded rod, double nuts with Locktite 266 and Hilti HE- RE 500 epoxy adhesive, or approved equal.

d. Protect existing City/Park property encountered, existing base material, playground equipment and appurtenances.

e. Furnish, install, and maintain six-foot height panelized/mobile temporary constructions metal fence and hardware as required to protect and secure the limits of work, stockpiling and staging area.

f. Restore any lawn and hard-scape areas utilized, disturbed or damaged by the work.

g. **The Work shall be completed for occupancy within 28 days of Notice to Proceed.**

h. When Applicable, The City of Worcester DPRC, will specify Project Standard appurtenances/amenities such as, but not limited to, park benches, trash receptacles, irrigation controllers, pedestrian, parking and sports field lighting, etc. in the facilities within their jurisdiction that are currently installed at this or other facilities. By standardizing, it provides the Division with a consistent product which through familiarity reduces operator training and maintenance time. Standardization also provides opportunities for maintenance cost saving through interchangeable parts such as but not inclusive to luminaries, ballast, poles, compatibility with current Division maintenance equipment etc.

    i. No substitution or equal will be accepted for the following item(s);
        1. N/A

i. Quality Control: To ensure the highest level of quality with respect to the playing surface of this greatly utilized public athletic facility, the General Contractor / Awardee shall have a minimum of five (5) years of successful experience.

1. as the Prime Contractor constructing (provide verifiable references upon request)
2. ability to demonstrate constructing (provide verifiable references upon request)
3. coordinating and supervising (provide verifiable references upon request)

Park and Playground Improvements of similar size and quality of this Project as per the standards of the Project specifications and construction drawings.

ARTICLE 3 WORK WITHIN A PUBLIC PROPERTY

a. As a source of information, all the work to be undertaken is located within the confines of an unsecured public property, and as such is subject to acts of vandalism. The City of Worcester is not liable for any damage to the Contractor's equipment or materials. The Contractor shall take all means and measures necessary to protect the public, work in progress, work completed, and all furnishings, materials and equipment stored at the site through the completion of the Project. The repair or replacement of work in place or in progress shall be the sole responsibility of the Contractor and shall be accomplished at no cost to the Owner.

ARTICLE 4 SITE INSPECTION

a. It shall be contingent upon the Contractor to inspect the site as an aid to determining the extent and quantities of the work under the various project items before submission of the Bid.

ARTICLE 5 PRE-CONSTRUCTION MEETINGS

a. A mandatory pre-construction meeting will be arranged by the Owner's representative after the award of the Contract. Sub-consultants may be asked to attend the pre-construction meeting if determined by the Owner's Representative to be warranted.

ARTICLE 6 SITE ACCESS

a. Prospective bidders are advised that access to the Project sites shall be in accordance with the governing traffic patterns with specific locations into the site, to be verified in the field after the award of the contract.

b. Regardless of the eventual location of the construction access and limits of work, the Contractor shall make every provision to ensure the access and safety of the public using the balance of any of the existing amenities on the property.

ARTICLE 7 OWNER'S TAX EXEMPTION

a. The Awarding Authority, as a department of a corporate municipality in the Commonwealth, is exempt from the taxes listed below. The contractor shall notify all suppliers of the following current certificates.

1. Federal Excise Taxes as applied to articles taxable under Chapter 32 of the Internal Revenue Code of 1954, as amended, City Excise Tax Exemption Certificate is not required.

2. From Sales and Use Tax imposed by the Commonwealth of Massachusetts under Chapter 14, Acts of 1966, the City has been assigned and exemption certificate with respect to leases, rentals, or purchases of "Tangible Personal Property". The Owner at the Contractor's request will furnish the tax-exempt certification number.

ARTICLE 8 TIME FOR COMPLETION & SEQUENCE OF WORK

a. Except as the work may be interrupted by weather conditions as hereinafter specified, the Contractor shall prosecute the Work with the diligence necessary to ensure its completion within the required time. The Contractor shall provide sufficient labor, materials, and equipment, and shall promptly take such appropriate action to keep the Work on schedule or as directed by the Owner. No additional time shall be provided for Change Orders.

b. The Parks, Recreation and Cemetery Division shall be solely responsible for determining when the work will be interrupted due to unsatisfactory weather conditions. Determination of the period to be included in the Time for Completion shall cease when the City directs that the work stops due to weather and shall commence again on the first working day thereafter that the City may designate the work to be resumed.

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c. The Contractor must completely understand that once the Contractor mobilizes and begins work, the Contractor shall be on-site, every day during the normal work week, and must work continuously until substantial completion of the Project. The Parks, Recreation, and Cemetery Division will not allow any time gaps of any length of time during the construction due to the Contractor's scheduling of other work not related to this specific Contract.

d. It should be further understood that this Project will not be a "fill-in" for the Contractor and that the Contractor does not have the ability to start and stop construction at the Contractor's option. Any unauthorized time gaps will be subject to a flat fee of $500.00 per day. The Owner reserves the right to deduct the said fee from the Contractor's periodic application for payment and the Contract Sum.

e. The Contractor shall carry on the Work and adhere to the schedule during all disputes and disagreements with the Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements. The Contractor shall exercise reasonable precautions, efforts and measures to avoid or mitigate situations that would cause delays.

f. The punch list shall be completed within 28 days from the date of issue.

g. The Contractor advised that the **required calendar days** regarding Time for Completion and Punchlist, shall be consecutive.

ARTICLE 9 LIQUIDATED DAMAGES

a. Prospective Bidders are advised that liquidated damages shall be in effect for this Project. The Contractor shall be liable for and compensate the Owner.

1. the sum of Five Hundred and Dollars ($500.00) as fixed and agreed, as liquidated damages for each calendar day of delay from the date stipulated for completion, or as modified in accordance with the provisions of the Contract
2. If Applicable, State and Federal Grant Funding losses.
3. and/or actual costs incurred by the Owner for additional Construction Administration/Management (City Staff, Consultants, etc.) salaries/compensation from the date stipulated for completion, or as modified in accordance with the provisions of the Contract and notification to The Sureties.

ARTICLE 10 CONSTRUCTION SCHEDULES & PAYMENT ESTIMATES

a. The Contractor must submit a construction schedule to the Owner indicating the general sequence of all work under this Contract. This schedule must be submitted within 7 calendar days of the date of the Notice-to-Proceed and shall be revised if required to the satisfaction of the Owner.

b. The Contractor shall submit a breakdown and monthly cost estimate (schedule of values) for all items of work, including separate categories, phases, grant funded or reasonable requests by the Owner.

c. The established breakdown of items, categories and values shall be utilized to prepare the monthly pay requisition forms. It is recommended that the Contractor submit a draft Payment Applications to the Owner for approval, no later than the second week of every month. The Owner shall review and edit this copy to indicate the amount of payment to be approved and return this to the Contractor after field review.

d. Revised/updated; monthly payment estimates, construction schedule, As Built and proof of up-to-date daily construction reports shall be submitted with monthly Payment Applications. The Contractor shall then formally submit three (3) originals of the Payment Applications, conforming to the Owner's approval, for payment.

ARTICLE 11 CONSTRUCTION REPORTS & WEEKLY PROGRESS MEETINGS

a. The Contractor and Sub-Contractors shall attend a regular weekly meeting with the Owner at the Parks, Recreation and Cemetery Division Headquarters, 50 Officer Manny Familia Way, Worcester, MA, at a pre-determined time set by the Owner. The Contractor must be present for these meetings during the Contract and reserves no right to cancel the meeting.

b. The Contractor will be required to take minutes for the weekly scheduled meetings. The Contractor will have three (3) business days from the date of the meeting to submit to the Owner the minutes of the meeting on the

c. Parks, Recreation and Cemetery Division form. The form will be supplied to the respective Contractor when the Notice to Proceed has been issued.

d. The Contactor will be required to maintain daily construction reports (DCRs) (format and information required to be provided and/or approved by Owner). PDF of the DCRs shall be submitted weekly for Owner review and files.

e. The Owner may desire other meetings from time to time, and the Contractor shall attend these, and such Sub-Contractors as are directed to attend. All the above-mentioned conditions should apply.

ARTICLE 12 HOURS OF OPERATION

a. Unless otherwise approved by the Owner, hours of operation shall be 7:00 a.m. to 3:30 p.m., Monday through Friday, excluding City observed holiday(s).

ARTICLE 13 CONTRACT DOCUMENTS

a. The Owner will furnish the Contractor, without charge, TWO (2) complete hard copies of the Bid Documents.

ARTICLE 14 STORAGE, USE OF MATERIALS & EQUIPMENT/MACHINERY

a. Bidders are advised that the storage of equipment within the confines of the Project limit shall be at the Contractors own risk. No material or equipment shall be stored outside the limits of work as defined in the contract documents, designated and agreed to by the Owner.

b. The Contractor shall not use as any part of his operation any skid steered, track driven, or heavy machinery/equipment on adjacent roadways.

ARTICLE 15 DELIVERY, INSPECTION & ACCEPTANCE OF NEW AMENITIES

a. General Contractor shall provide product manufacturer and Owner, 72 hours advance notice of any onsite scheduled deliveries of Amenities for Inspection and Acceptance.

b. Any damage noted by any of the parties present at the time of inspection shall be corrected in one of the three options below, as determined by the Owner, with no delays or extensions to the Project Schedule.
   1. Repair to the **FIT & FINISH** of the manufacturer's/factory Specification prior to installation.
   2. Replace with new product from manufacturer/factory.
   3. Install damaged products and field repair to the Owner's satisfaction and provide new identical replacement part as spare.
   4. This Article shall also apply to amenities stored offsite and damage discovered while under the Responsibilities of the General Contractor, until the Acceptance of Work.

ARTICLE 16 CARE AND RESPONSIBILITIES OF CONTRACTOR

a. Except as otherwise specifically stated in the Contract Documents and Technical Specifications, the Contractor shall provide and pay for all materials, tools, labor, equipment, water, light, heat, power, transportation, superintendence, protection, temporary construction of every nature, charges, levies, fees or other expenses, permits and back charges and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in this Contract completed in every respect within the specified time.

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b. Unless otherwise specified herein all materials, workmanship, methods, and practices shall conform to the current Standards and Ordinances of the appropriate Departments and/or Commissions of the City. The following documents are available online at http://www.ci.worcester.ma.us/dpw/.

   i. The City of Worcester DPW and Parks, Engineering Division, Construction Management Section, Standard Specifications and Details - March 2007 or current edition.

   ii. Permit Manual – Revised 2004 or current edition.

c. The Contractor shall be responsible for detailed layout. All stakeout and grade control shall be performed by a third-party MA registered Land Surveyor, approved by the Owner, for this purpose. The Owner has the option to verify and approve the layout and locations of improvements prior to excavation or installation.

d. Grade control shall be verified by the Contractor for compliance with federal, state and or local accessibility requirements. During the construction sequence (such as: installation of subbase, bituminous binder and/or top, concrete flatwork etc.), the Contractor shall be required to verify grades, by approved methods, with the Owner present and prior to placement of finished grade for sidewalks, pathways, plazas, ramps, parking spaces, associated appurtenances, etc., that are required to meet accessibility and the Project Documents.

e. The Contractor shall verify the dimensions and utility locations shown on the plans and if any inconsistencies or discrepancies should be noted on the Drawings, or between the Drawings and actual field conditions, or between the Drawings and the specifications he/she shall immediately notify the Owner. The Contractor will be held responsible for any errors resulting from his/her failure to exercise the precaution. Such information shall be marked on copies of the “As Built” drawings and the original “As Built” drawings are to be reviewed at weekly job meetings.

f. The Contractor shall provide final As Built Survey Drawings to the Owner. See “Record Drawings – As Built” of this Section. Punch list items shall be completed within twenty-eight (28) consecutive calendar days from date of issue, unless agreed upon otherwise by both parties. Owner has the right to complete punch list items not completed in within this timeline and deduct cost from the Contract.

g. The Contractor shall maintain a full-time onsite superintendent, whether the construction forces are employed by his construction company or employed by a Sub-Contractor.

h. As soon as the Contract is executed, the Contractor shall order materials, submit construction schedules as herein after specified and otherwise anticipate the Notice to Proceed. When the Owner gives the Notice to Proceed, the work of construction shall begin at the time stipulated therein and shall be completed within the Time for Completion specified.

i. It is the Contractor's responsibility to make his own investigation and related assumptions, to satisfy her/him as to subsurface conditions and to ensure that these are reflected in the bid.

j. To verify locations of utilities and varying field conditions, exploratory excavations may be necessary, the cost of which is to be included in the contract bid price.

k. The Contractor's attention is called to the necessity of obtaining permits and coordination with, especially those required by various departments of the city and all external utility companies. These permit fees will **not be waived** by the city and must be paid in full by the Contractor.

l. The Contractor shall furnish and maintain all temporary fences, barriers, enclosures, lights and warning devices necessary to protect his/her work area and to protect the public and his work forces throughout the life of this Contract.

ARTICLE 17 EMERGENCY CONTACT INFORMATION

a. The Contractor will be required to submit within seven (7) business days after the Notice to Proceed a list of all people that will be involved with the completion of this Project including all principal(s), president(s), superintendent, and Project manager of the company. The list shall contain the following information, including but not limited to name, title, address, voice mail number, cell/contact phone number, fax number and email address.

ARTICLE 18 ON SITE SUPERINTENDENT & PROJECT MANAGER

a. The Contractor must, always, maintain an on-site Superintendent during the construction and administration of this Contract. The superintendent must be completely familiar with all aspects of the Project and capable of following the construction through from start to finish. The Contractor does not have the right to switch, replace, change or otherwise remove the superintendent assigned to this Project unless specifically authorized in writing by the Owner. The on-site superintendent must be present a minimum of seven (7) hours per day during construction. If the on-site superintendent fails to meet the above-mentioned requirements, the Contractor will be subject to a flat fee of $500.00 per day. The Owner reserves the right to deduct the said fee from the Contractor's periodic application for payment and the Contract Sum.

The Contractor must assign a Project Manager to this Contract that is completely familiar with all aspects of the work, available and capable of completing the Project. The Contractor does not have the right to switch, replace, change or otherwise remove the on-site Superintendent and/or Project Manager assigned to this Project unless specifically authorized in writing by the Owner. The Owner will discuss all matters regarding the administration of this Contract with only one (1) Project Manager, regardless of how many the Contractor assigns to the Project.

All correspondence, emails, voice mail, faxes, etc. will be handled through the designated Project Manager only. The Parks, Recreation and Cemetery Division reserves the right, in conjunction with the Contractor, to remove the Contractor's assigned on-site Superintendent and/or Project Manager if the City feels it is the best interest to do. Upon written notification, the Contractor must assign a new Project Manager within three (3) business days.

ARTICLE 19 PROVISIONS FOR TRAFFIC/POLICE DETAIL (As Applicable)

a. The Contractor shall not close or obstruct any portion of the **RIGHT-OF-WAY** without obtaining the necessary permission from the proper municipal authorities. If any street or private way shall be rendered unsafe by the Contractor's work, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the Owner including the provision of police details required to complete the work.

b. The Contractor at his/her expense shall maintain public roads and sidewalks passable and accessible, and the Contractor shall assume full responsibility for the adequacy and safety of provisions made. He shall conduct his construction operations such that interference with the activities of park users will be held to a minimum.

c. The Contractor shall cooperate in every way possible with the municipal authorities in accommodating park activities and events.

ARTICLE 20 COMMUNICATIONS

a. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing and must be presented in person or by mail to the Owner, or alternate methods (s) agreed upon by both parties.

b. Any notice to or demand upon the Contractor shall be considered sufficiently given if delivered at the office or field office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may from time to time designate in writing to the Owner), or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.

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c. All papers required to be delivered to the **Owner** shall, unless otherwise specified in writing to the Contractor, be delivered to:

Robert C. Antonelli, Jr., Assistant Commissioner
Department of Parks, Recreation & Cemetery
50 Officer Manny Familia Way, Worcester, MA 01605

and any notice to or demand upon the Owner shall be sufficiently given is so delivered, or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said Owner at such address, or to such other representatives of the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purpose.

d. Any such notice shall be deemed to have been given as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt.

ARTICLE 21 PARTIAL USE OF SITE IMPROVEMENTS

a. The Owner, at its election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the Technical Specifications and if, in its opinion, each such section is reasonably safe, fit and convenient for the use and accommodation for which it was intended, provided:

1. The use of such sections of the improvements shall in no way impede the completion of the remainder of the work by the Contractor.
2. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
3. The use of such sections shall in no way relieve the Contractor of his liability due to having used defective materials or due to poor workmanship.
4. The period of guarantee stipulated in the specifications shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

ARTICLE 22 SAMPLING, TESTING, INSPECTION OF WORK & MATERIALS

a. Sampling, testing and inspections ordered or required by the Owner to ensure that work and materials are as specified, and that compaction of all materials conforms to the necessary requirements shall be taken and completed by the Owner or representatives of a Massachusetts certified testing laboratory satisfactory to the Owner and shall be paid for by the Owner unless described/required in the Technical Specifications. Contractor shall provide the Owner at least 72 hours advance notice of work to coordinate the intent of this Article and shall apply automatically with all work below finished grade unless directed otherwise by the Owner.

ARTICLE 23 TEMPORARY FACILITIES

a. Furnish all labor, materials, and services to fulfill the requirements for temporary facilities, at no additional cost to the Owner, and comply with all requirements set forth herein, except where noted requirements conflict with Federal, State, or Local laws, rules, and regulations, in which case(s) the applicable Federal, State, or Local requirements shall govern.

ARTICLE 24 SANITARY FACILITIES

a. Provide, place, and maintain in good order from commencement to final completion of the work, suitable temporary toilet facilities for use by all people employed under this contract. Toilets shall be rented from and serviced by an approved company and shall be kept sanitary and always secure. The type of toilets proposed for use shall have the approval of the appropriate City Agency, and the number of units shall be as recommended by the Department of Labor. Toilets shall be locked during non-working hours and placed in a secure (fenced) location, where possible.

ARTICLE 25 TEMPORARY LIGHT AND POWER

a. Make all necessary arrangements with the local utility company and pay all costs, including labor, in operating and maintaining all temporary services for electricity used during the construction, unless specifically noted otherwise.

b. Ensure that temporary wiring, outlets, and lighting are provided in accordance with the current requirements of Bulletin No. 12, Division of Industrial Safety, Department of Public Safety, Commonwealth of Massachusetts.

ARTICLE 26 TEMPORARY WATER

a. The contractor shall be responsible for furnishing, installing and coordinating temporary water needs and temporary connections.

ARTICLE 27 RESERVED

ARTICLE 28 RESERVED

ARTICLE 29 CONTRACTOR'S SHOP & WORKING DRAWINGS

a. Contractor to coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

b. All Contractors are directed to the timeliness and critical importance of expediting the submittal process. Any lead times that may impact sequencing should be prioritized to meet the Project schedule. The Owner must be notified if any delays arise that impact lead times.

c. The Contractor shall coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that requires sequential activity.

d. The Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.

e. To avoid the need to delay installation because of the time required to process submittals and to allow sufficient time for submittal review, all initial product submittals, shop drawings shall be submitted for processing and within **twenty-eight calendar days** (28) days from the date of Notice to Proceed.

f. The Contractor must allow the Owner **10 calendar days** (10) per initial and subsequent shop drawing review to achieve efficient construction sequencing. Allow additional time if the Owner must delay processing to permit coordination with subsequent submittals. If an intermediate submittal is necessary, process the same as the initial submittal. Allow ample time for reprocessing each submittal to achieve efficient construction sequence.

g. No extension of Contract Time will be authorized because of the Contractor's failure to transmit submittals to the Owner for processing sufficiently in advance of the scheduled Work.

h. Shop drawings, product data and samples submitted for each item will be reviewed no more than two (2) times at the Owner's expense. Submittals failing to comply with the Contract requirements will be reviewed at times convenient to the Owner and the Owner's consultants and at the Contractor's expense, based upon the hourly rate of the Engineer/Consultant for each subsequent re-submittal. The Owner reserves the right to deduct said reimbursement from the Contractor's periodic application for payment and the Contract Sum.

i. The Owner's review and approval of submittals shall be held to limitations stated in the conditions of the Contract. In no case shall approval or acceptance by the Owner be interpreted as release of Contractor of responsibility to fulfill requirements of Contract Documents. No acceptance or approval of submittals, nor any indication or note marked by the Owner on submittals, shall constitute authorization for increase in Contract Sum. The Owner will stamp each submittal with an action stamp.

j. As the timely submittal of samples, shop drawings, catalogue cuts and other related submittals is of paramount importance to the completion of the Project within the stipulated time, a contract value of 1% will be assigned

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to this effort. Upon receipt of the complete submittal package the General Contractor will be permitted to submit payment of this item with a value equal to 1% of the base bid contract amount.

k. Show on a large scale any unique fabrication and setting requirements or any other specified areas seen as necessary or as directed by the Owner's Representative.

l. Prior to review by Owner's representative, shop drawings shall indicate specification section or drawing reference and proof of review and approval by Contractor for Project compliance, otherwise the submittal will be rejected immediately and count as one (1) official review as per item "h" above.

m. The Contractor shall provide two sets of 3-ring binder hard copies of all final approved shop documents and or drawings and warranties as part of the closeout of the Project.

n. The contractor shall submit to the Owner's Representative a notarized certificate of compliance from the galvanizer with all galvanizing requirements including ASTM number and weight of coatings in ounces per square foot. The certificate of compliance shall also contain the following:

o.

1. Sole Source Responsibility: include statement that galvanizers accept sole responsibility for coatings under this Article. Galvanizer who does not accept this responsibility is not acceptable and will be rejected.

2. Quality Assurance: include evidence that Galvanizer meets the requirements of ANSI Q90.

3. Certificate of Compliance with Current Environmental Regulations: Galvanizer shall certify that coatings proposed for use comply with applicable environmental regulations. Contractor and Galvanizer shall be responsible for penalties assessed by governmental or environmental authorities for coatings that do not comply with current environmental regulations. All coatings shall be Lead-free.

ARTICLE 30 HISTORICAL, ARCHAEOLOGICAL OR ANTIQUE ITEMS

a. The Contractor during his excavation, site clearance and other operations may come upon, uncover or otherwise discover items of historical, archaeological or antique nature. The Contractor shall immediately stop operations at the site of the discovery and notify the Owner so that a proper evaluation may be made of its importance. The Owner shall arrange for the evaluation in a manner that shall not unduly interfere with the Contractor's operation.

b. All such items, if designated by competent authority to be of historical, archaeological or antique nature, shall not become the property of the Contractor but shall be placed in the custody of the Owner for disposition.

c. The Contractor shall be required to remove with care or to assist in the removal of any such item or items and to transport the same to a place of safe keeping within the City. The costs for so assisting shall be reimbursed to the Contractor if approved by the Owner.

ARTICLE 31 PROVISIONS FOR PUBLIC SAFETY & CONVENIENCE

a. Care shall be taken to establish and maintain such methods and procedures as will not create hazards. Access to all park facilities should be maintained in a reasonable and safe manner for the duration of the construction period.

b. Every reasonable effort shall be made to reduce to a minimum any interference with or inconveniences to park operations and park patrons due to the construction work. Excavated material shall be trucked away and returned if the Owner deems it necessary and practical as a means for avoiding serious interference with and inconvenience to business concerns and abutters.

c. The Contractor's attention is directed to the fact that the work on this Project is to be performed within a recreation area and adjacent to park drives and walkways which are utilized by pedestrians, bikers, joggers and vehicles. The Contractor shall be responsible for the installation of adequate precautions and other safety measures and controls deemed necessary by the Owner to protect all park users.

d. Any automotive equipment not protected by traffic cones that is operating on a public way under this Project shall have one amber flashing warning light mounted on the cab roof or on the highest practical point of the machinery. This light will be in operation while the equipment is working.

e. Trenches shall not be opened in park areas until all material and equipment required for the work are on the site and available for immediate use. The work at each trench shall be practically continuous, with the placing of utilities, backfill and patching (where applicable) of the surface closely following each preceding operation. When work is not in progress, trenches in areas subject to use by park patrons shall be covered with steel plates capable of safely sustaining all anticipated loads.

f. The Contractor shall provide traffic signs, warning markers and other construction safety measures as necessary to maintain public safety and optimum traffic flow. Parking of personal vehicles will be prohibited in construction areas as directed.

g. With suspension of construction activities during holidays, weekends and nights, the Contractor shall remove temporary traffic and/or safety control devices, as requested, and return them to their positions when work begins again. Payment for the installation and maintenance of appropriate safety provisions shall be included under the base bid price and no separate payment shall be considered.

h. The Contractor shall without additional compensation be required to always maintain access to the Project area and property for fire apparatus and other emergency vehicles.

ARTICLE 32 PROTECTION OF EXISTING FACILITIES

a. All existing walks, pipes, conduits, poles, fences, stairways, curbing, walls, buildings, trees and other structures which are to remain in place shall be carefully supported and protected from injury by the Contractor without additional compensation and in case of injury they shall be restored by him without compensation therefore to as good condition as that in which they were found. The value of any trees damaged shall be determined in accordance with established practices of the American Association of Nurserymen or a Registered or Certified Arborist selected by the Project Manager. Limits of liability shall not be limited to the replacement with new and immature trees.

b. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings, where required, for accommodation of travel and to provide access to the building/property during construction, and shall remove said structures thereafter.

c. The location of all/priorly existing utility systems is not known and therefore may not be shown on the drawings prepared for this Project. The existence of utilities shall not be considered an unusual obstacle, and the Contractor shall not be entitled to extra compensation for maintaining, protecting, or repairing these utilities. The Contractor shall use the exploratory excavation included in his contract price, whenever he/she or the Owner's representatives deem it necessary to verify, or prevent interruption of, existing services.

ARTICLE 33 RESERVED

ARTICLE 34 RUBBISH REMOVAL

a. The Contractor shall remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in the execution of the work; but this shall in no way be construed to relieve the Contractor of his primary responsibility for maintaining the site clean and free of debris, leaving all work in a clean condition. The Contractor shall always keep the site free of rubbish and construction debris.

b. The Contractor shall provide sufficient metal barrels or dumpsters into which all refuse and garbage shall be deposited. All containers shall have tight fitting covers. These shall be secured overnight or removed daily.

c. At the end of each work week, the Contractor shall thoroughly clean premises of rubbish and debris of any nature and remove such from the premises.

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ARTICLE 35 PROJECT CONSTRUCTION SIGN

a. Contractor will provide and temporarily install one monolithic 48" high X 96" wide X ¾" thick Project sign and 2- 4"x 4" posts to identify the Project at a location to be determined in the field by the Owner.

b. The Project sign shall conform exactly to the City of Worcester's DPRC prototype Projects sign including but not limited to size, backer material, font style, size and relief, capitalization, color, weather proofing, fasteners and fastener locations.

c. **Final Graphic and language will be provided by the Owner** (Background color is forest green, text is white). **The sample below is for reference only.**

d. The Contractor shall be responsible installation and removal of sign and posts.

End of DPRC Special Conditions

PROJECT SPECIAL SPECIFICATIONS

General

The following special standard specifications are to be used on contract work awarded by the City of Worcester DPRC. They are intended to supplement, support and suit this specific Project.

ARTICLE 36 DEMOLITION, SITE EXCAVATION & PREPARATION

a. The work shall consist of excavating, removing and legal disposal of surplus if any, vegetation, earth, boulders, masonry, existing pavements, building materials, footings, appurtenances and other materials encountered of whatever nature that is unsuitable for the construction and improvements of finished conditions. Excavated to the depth necessary to install according to the specifications, plans and details plans provided in the construction bidding documents.

b. Location of existing utilities shall be verified before excavation commences. The Drawings are based on available utility record drawings and site observation.

c. The excavation shall be carried out to such depths that sufficient materials will be left above the designated grade to allow for compaction to this grade. Should the Contractor, through negligence or other fault, excavate below the designated lines, he shall replace such excavation at his own expense. The Owner shall have complete control over excavation, moving, placing, and disposition of all material. Existing materials/objects determined to be unsuitable or not required or used, as determined by the Owner, for finished conditions shall be disposed offsite at no additional cost.

d. The Contractor shall inform and satisfy himself as to the character, quantity, and distribution of all material to be excavated. No payment shall be made for any excavated material which is used for purposes other than those designated or implied.

e. If it is necessary in the process of the work to interrupt existing surface drainage, sewers, or to pass under drainage, conduits, utilities, or similar underground structures, or parts thereof, the Contractor shall protect it or provide temporary services. The Contractor shall, at his own expense, satisfactorily repair all damage to such facilities or structures that may result from any of his operations or from negligence during the period of the Contract.

f. No excavation shall be started until the Owner has approved the proposed area of construction.

g. Excavation shall be performed at such places as are indicated on the Drawings, to the lines, grades and elevations shown or as directed by the Project Manager and shall be made in such manner that requirements for the formation of the sub-grade can be followed. Unless directed otherwise any disturbed existing rimmed structures shall be adjusted flush to final adjacent grade.

h. Existing pavements and base courses shall be carefully saw cut or core drilled and removed to the lines indicated and, in a manner, to obtain sound edges or connections, and so as not to disturb or damage existing buildings, utilities, pavements, and base coats which are to remain.

i. Unit pavers, such as granite brick and concrete, shall be carefully removed and stockpiled for reuse, if required.

j. All excavations shall be opened using minimum, straight, parallel cuts through pavement and base materials, and other excavations opened using square or rectangular cuts or as directed to minimize removal while permitting regular, straight-line repair and patching.

k. No excavation shall commence in any until the pavement covering the proposed excavation has been marked for cutting.

l. Examples of the excavated areas shall be made safe for the residents at the end of each workday.

m. Transport excavated materials, waste materials, trash, and debris and legally dispose of it off City property.

n. Prevent, minimize and control groundwater and/or surface water to accumulate in excavations. Remove water to prevent the undercutting of footings and soil changes detrimental to the stability of sub-grades, foundations and granite, brick or concrete paving.

o. Payment for site excavation and preparation work shall be considered incidental to the individual items installed. No separate payment shall be made for site excavation and preparation work. No separate payment shall be made for all labor, equipment, tools and incidentals necessary to complete the work to the satisfaction of the City, including transportation and disposal of excavated materials.

p. It is the responsibility of the Contractor to verify the accuracy of all survey information provided by the Owner prior to commencing excavations or filling operations. Commencement of these operations constitutes acceptance of the survey information as appropriate to meet the intent of the Contract.

q. Soil testing, if required, for all materials to be reused on-site or removed and disposed of off-site, shall be the responsibility of the Contractor. The City reserves the right to obtain its own test results from the same sample as the Contractor without penalties to the Owner. The Contractor is required to obtain a large enough sample to divide with the Owner for this proposes.

r. Transport excavated materials, waste materials, trash, and debris and legally dispose of it off City property.

s. Surplus excavated material not needed as specified above shall be hauled away and disposed of by the Contractor at no additional cost to the Owner, at appropriate locations, and in accordance with arrangements

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made by him. Disposal of all rubble shall be in accordance with all applicable local, state and federal regulations.

t. The Contractor shall comply with Massachusetts regulations (310 CMR 40.0032) that govern the removal and disposal of surplus excavated materials. Materials, including contaminated soils, having concentrations of oil or hazardous materials less than an otherwise Reportable Concentration and that are not a hazardous waste, may not be disposed of at locations where concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and /or hazardous materials present in the soil being disposed or reused.

u. If required: In response to the State/ Federal imposed quarantine regarding the Asian long-horned beetle infestation, the protocol for handling and disposal of wood-based materials within the Project area by the Contractor shall be to:

i. At a minimum, process all onsite vegetative, wood and cellulose based materials (trees, shrubs, root, stumps, branches, leaves, etc. **twelve inches and under in diameter** and designated for disposal) to a size of less than one inch as measured in two directions by approved mechanical means (woodchipper) prior to disposal/removal offsite. All other existing vegetative, wood and cellulose based products; tree trunks, stumps, branches etc., **greater than twelve inches, in diameter** and designated for removal/disposal shall be delivered to the current transfer station.

ii. Contractor shall be responsible to comply with changes or current quarantine protocols for the duration of the Project.

ARTICLE 37 CAST IN PLACE CEMENT CONCRETE

a. The scope of work under this article shall consist of furnishing all labor, materials, equipment, transportation, reinforcing, forming, finishing and curing of cast in place concrete for the construction of concrete pads, footings and walls for the structures and site improvements as specified herein and according to the plans and details shown in the construction drawings and the balance of any concrete construction necessary to completion of the Project.

b. Unless otherwise specified, all materials shall conform to the relevant provisions of Section 901, **Cement Concrete Masonry,** and Section M4, **Cement and Concrete Materials** of latest edition of The Massachusetts Department of Public Works Standard Specifications for Highways, Bridges and Waterways.

c. At a minimum, concrete to be used shall be Class 4,000 PSI - minimum 28-day compressive strength, and cement content of 610 lbs. per cubic yard for ¾" coarse aggregate. Concrete shall be discharged at site within 90 minutes after batching.

d. All horizontal (pad) concrete construction shall be air entrained which shall be 4.5% to 7%, as determined by ASTM C231.

e. Formwork shall be sufficient to resist pressure of the concrete without springing and tight enough to prevent leakage of mortar. Forms shall be staked, braced, or tied together to maintain their position and shape when concrete is compacted in place. Forms shall be clean and shall produce an even finish for exposed surfaces. Forms shall not be removed for at least twenty-four (24) hours after concrete has been placed, or longer if directed by Owner.

f. Preformed expansion joint filler shall be non-extruding and resilient non-bituminous type conforming to AASHTO-M135.

g. Reinforcing as required or pads shall be welded wire fabric, 6" X 6", W1.4 X W1.4 gauge cold-drawn steel wires formed into a mesh and welded together at points of intersection in conformance with ASTM A-185-70. Welded wire fabric shall be furnished in mats and not in rolls.

h. All references to 'processed gravel', gravel borrow', or 'gravel' shall conform to Article 38 Gravel Borrow.

i. Curing and protection shall be accomplished by applicable optimum method specified in Section 901, **Cement Concrete Masonry,** and Section M4, **Cement and Concrete Materials** of latest edition of The Massachusetts Department of Public Works Standard Specifications for Highways, Bridges and Waterways.

j. The Contractor is responsible for the quality and strength of the concrete. Inferior concrete, including that damaged by frost action shall be removed and replaced at no additional cost to the Owner.

k. The Contractor shall be responsible to repair or replace any concrete exhibiting deficient materials or workmanship with in one (1) year of final acceptance.

l. Payment for concrete and concrete work shall be considered incidental to the individual item in which the concrete is used. No separate payment shall be made for concrete work.

ARTICLE 38 GRAVEL BORROW

a. The scope of work under this article shall consist of furnishing all labor, materials, equipment and transportation required for placement and compaction of approved processed gravel according to the plans and details plans and details shown in the construction drawings and the balance of any subbase construction necessary to the completion of the Project.

b. All references to 'processed gravel', 'gravel borrow', or 'gravel base' shall conform to this Article.

c. Gravel borrow shall consist of inert material that is hard durable stone and coarse sand, free from loam and clay, surface coatings and deleterious material. Gravel borrow containing recycled bituminous and concrete material shall not be used in areas of pervious finish grade (i.e., ball fields, skinned, and lawns areas, etc.).

d. Gradation requirements for gravel borrow shall be determined by AASHO-T11 and T27 and shall conform to the following:

Sieve	Percent Passing
2"	100
½"	50-85
No. 4	40-75
No. 50	8-28
No. 200	0-10

e. Maximum size of stone in gravel shall be two (2) inches, largest dimension.

f. Gravel shall be spread and compacted in layers not exceeding six (6) inches in depth compacted measurement and all layers shall be compacted to not less than ninety-five percent (95%) of the maximum dry density of the material as determined by the Standard AASHO Test Designation T99 compaction test Method C at optimum moisture content.

ARTICLE 39 BITUMINOUS CONCRETE PAVING (FOR REFERENCE)

PART 1 - GENERAL

1.01 WORK INCLUDED:

The Contractor shall furnish all labor, materials and equipment and shall place the pavements as indicated on the drawings and as herein specified.

1.02 RELATED WORK:

A. N/A

1.03 SYSTEM DESCRIPTION:

A. GENERAL

The types of pavement systems to be utilized on this Project are as follows:

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1.04 REFERENCES

The following standards form a part of these specifications and indicate the minimum standards required:

American Society for Testing and Materials (ASTM)

ASTM D1557 Test for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 Pound Rammer and 18-Inch Drop

Commonwealth of Massachusetts Highway Department Standard Specification for Highway and Bridges (MHD)

MHD 405	Gravel Base Course
MHD 420	Class I Bituminous Concrete Base Course, Type I-1
MHD 460	Class I Bituminous Concrete Pavement
MHD 476	Cement Concrete Pavements
MHD 860	Reflectorized Pavement Markings

Federal Specifications

SS-S-164	Sealing Compound, Hot Poured Type, for Joints in Concrete
SS-S-1401C	Sealants, Joint, Non-Jet-Fuel-Resistant, Hot Applied, for Portland Cement and Asphalt Concrete Pavement

1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SPECIAL CONDITIONS, SUBMIT THE FOLLOWING:

Six sets of complete job mix formula shall be submitted to the Engineer at least two weeks before any of the work of this section is to begin.

PART 2 - PRODUCTS

2.01 GRAVEL SUBBASE:

A. Gravel subbase shall consist of inert material that is hard durable stone and coarse sand, free from loam and clay, surface coatings and deleterious materials.

B. Gradation requirements for gravel subbase shall be as specified in the Gravel Borrow Article.

2.02 BITUMINOUS CONCRETE PAVEMENT:

A. Bituminous concrete pavements shall consist of Class I Bituminous Concrete, Type I-1.

A. Bituminous concrete mixtures shall be within the composition limits of base courses, binder courses, top courses and surface treatment, in accordance with MHD M3.11.03, with constituents that conform to Table A, below.

TABLE A

PERCENT BY WEIGHT PASSING SIEVE DESIGNATION

Standard Sieves (in.)	Base Course	Binder Course	Top Course	Surface Treat.
2 in	100			
1 in	55-80	100		
¾ in		80-100		
5/8 in			100	
½ in	40-65	55-75	95-100	
3/8 in			80-100	100
No.4	20-45	28-50	50-76	80-100
No.8	15-33	20-38	37-54	64-85
No.16			26-40	46-68
No.30	8-17	8-22	17-29	26-50
No.50	4-12	5-15	10-21	13-31
No.100*			5-16	7-17
No.200	0-4	0-5	2-7	3-8
Bitumen	4-5	4.5-5.5	5.5-7.0	7-8

* Percentages shown for aggregate sizes are stated as proportional percentages of total aggregate for the mix.

Unless authorized by the Engineer, no Job-Mix Formula will be approved which specifies:

Less than 4% passing No. 200 for Top Course.
Less than 6% bitumen for Top Course.

C. The joint sealant shall be a hot poured rubberized emulsified asphalt sealant meeting the requirements of Federal Specifications SS-S-1401 or SS-S-164.

D. The tack coat shall be an asphalt emulsion, RS-1 if required, conforming to MHD Section M3.03.0.

2.03 SEAL COAT:

A. Seal coats shall be within the composition limits for protective seal coat emulsion in accordance with MHD M3.03.3.

B. Silica sand when blended with seal coat emulsion shall be No. 30 silica sand.

PART 3 - EXECUTION

3.01 GENERAL:

Paving courses required for the Project shall be as shown on the drawings and as specified herein. Pavement thicknesses specified are measured in compacted inches. If a pavement course thickness exceeds 2-1/2 compacted inches, the course shall be installed in multiple lifts with each lift not exceeding 2-1/2 compacted inches in thickness.

3.02 GRAVEL SUBBASE:

A. The gravel subbase to be placed under pavement shall consist of 12-inches of gravel evenly spread and thoroughly compacted.

B. The gravel shall be spread in layers not more than 4-inches thick, compacted measure. All layers shall be compacted to not less than 95 percent of the maximum dry density of the material as determined by ASTM D1557 Method C at optimum moisture content.

3.03 TEMPORARY BITUMINOUS PAVEMENT:

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A. Where specified and directed by the Engineer and after placement of the gravel subbase, the Contractor shall place temporary bituminous pavement above the trench, between the edges of the existing pavement. It shall consist of Class I Bituminous Concrete Pavement, Type I-1, 2-inches thick, in accordance with MHD 460.

B. The temporary pavement shall be repaired as necessary to maintain the surface of the pavement until replaced by permanent pavement. When so directed by the Engineer, the Contractor shall remove the temporary pavement and install or regrade the subbase for installation of permanent pavement.

3.04 PERMANENT BITUMINOUS PAVEMENT:

A. The bituminous paving mixture, equipment, methods of mixing and placing, and the precautions to be observed as to weather, condition of base, etc., shall be in accordance with MHD 460.

B. BASE COURSE AND BINDER COURSE PAVEMENT:

1. Immediately prior to installing the base binder course, the trimmed edges shall be made stable and unyielding, free of loose or broken pieces and all edges shall be thoroughly broomed clean. Contact surfaces of trench sides, curbings, manholes, catch basins, or other appurtenant structures in the pavement shall be painted thoroughly with a uniform coating of asphalt emulsion (tack coat), just before any mixture is placed against them.

2. The binder course shall be repaired as necessary to maintain the surface of the pavement until placement of the permanent overlay. If required, the Contractor shall place a leveling course before placing the permanent overlay.

3.05 PAVEMENT PLACEMENT:

A. Unless otherwise permitted by the Engineer for particular conditions, only machine methods of placing the pavement shall be used. The equipment for spreading and finishing shall be mechanical, self-powered pavers, capable of spreading and finishing the mixture true to line, grade, width and crown. The mixtures shall be placed and compacted only at such times as to permit proper inspection and checking by the Engineer.

B. After the paving mixtures have been properly spread, initial and intermediate compaction shall be obtained using steel wheel rollers having a weight of not less than 240 pounds per inch width of tread.

C. Final rolling of the top course or surface treatment pavement shall be performed by a steel wheel roller weighing not less than 285 pounds per inch width of tread at a mix temperature and time sufficient to allow for final smoothing of the surface and thorough compaction.

D. Immediately after placement of top course or surface treatment pavement, all joints between the existing and new top course or surface treatment pavements shall be sealed with hot poured rubberized asphalt sealant meeting the requirements of Federal Specification SS-S-1401 or SS-S-164.

E. Where there is no backing for the edges of the curb-to-curb pavement, the Contractor shall provide a gravel transition. The gravel transition shall be installed immediately after the pavement is placed, shall be feathered and extended to a minimum of 18 inches, and shall be compacted using the same equipment as for pavement compaction. The gravel shall be uniformly graded material with a maximum size of 3/8 to 1/2 inch.

F. When directed by the Engineer, the Contractor shall furnish and install additional paving to provide satisfactory transition for driveways and walkways impacted by a new curb-to-curb pavement installation. The transition installation will be considered incidental to the curb-to-curb pavement installation.

3.06 ADDITIONAL PAVING:

A. If the Engineer determines that the existing bituminous concrete pavement on local streets is thicker than the permanent pavement specified herein, the Contractor may be required to install additional Type I-1 bituminous concrete to obtain the depth of the existing pavement.

B. If for the installation of full width paving, the Engineer determines that the existing road surface requires additional leveling pavement, then the Contractor shall install additional Type I-1 bituminous concrete to bring the section to proper line and cross section. Additional paving required to restore the proper line and cross section of binder course installed by the Contractor which has become rough and uneven shall be furnished and installed at the expense of the Contractor.

3.07 PARKING LOTS, DRIVEWAYS and SIDEWALKS:

A. Pavement shall consist of a 2-1/2-inch binder course and a 1-1/2-inch top course on a minimum 8-inch gravel sub-base. All thicknesses are compacted thicknesses.

B. Adjacent concrete work, slate work, sidewalks, structures, etc., shall be protected from stain and damage during the entire operation. Damaged or stained areas shall be replaced or repaired to equal their original condition.

C. All joints between binder and top course shall be staggered a minimum of 6-inches.

D. After final rolling, no vehicular traffic of any kind shall be permitted on the pavement until it has cooled and hardened sufficiently to prevent distortion and loss of fines, and in no case in less than 6 hours.

E. Smoothness of all areas of the finished surface shall not vary more than 1/4-inch when tested with a 16 foot straight-edge, applied both parallel to and at right angles to the centerline of the paved area. At building entrances, curbs, and other locations where an essentially flush transition is required, pavement elevation tolerance shall not exceed plus or minus 1/8-inch. Irregularities exceeding these amounts, or which retain water on the surface, shall be corrected by removing the defective work and replacing or repairing it to the satisfaction of the Engineer.

E. The surface area to be seal coated, as shown on the drawings, shall be swept and air cleaned. The first coat shall be applied with eight (8) pounds of #30 silica sand blended with each gallon of emulsion applied at a rate of 0.15 gallons per square yard. The second coat shall be a straight sealer applied at the rate of 0.1 gallons per square yard.

3.08 PAVEMENT MARKINGS:

A. The Contractor shall replace all pavement markings removed or covered-over in carrying out the work, and as directed by the Engineer, no sooner than 48 hours after completion of permanent pavement. The markings shall be 4-inches wide, white or yellow, single or double lines as required.

B. When directed by the Engineer, the Contractor shall provide temporary markings at no additional cost to the Owner.

3.09 PAVEMENT REPAIR:

A. If required in the contract or if permanent pavement becomes rough or uneven, permanent pavement patches and trenches shall be repaired and brought to grade utilizing "infrared" paving methods following completion of the construction.

B. The Contractor performing the work shall use care to avoid overheating the pavement being repaired.

C. Pavement repair shall extend a minimum of 6-inches beyond all edges of the pavement patch to assure adequate bonding at the pavement joints.

ARTICLE 40 RESERVED

PART 1 - GENERAL

1.01 SECTION INCLUDES

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A. The work under this section shall require the Contractor to provide all labor, materials, equipment and transportation involved in the installation and establishment of playfield turf or lawn. The work shall include, but not limited to the re-use, screening, re-spreading of existing topsoil and the furnishing of additional loam borrow-if required, incorporating soil additives, fine grading, seeding and the protection and maintenance of the established lawn until final acceptance of the Project, or a minimum of sixty (60) days, whichever is longer.

1.02 Not Used.

1.03 QUALITY ASSURANCE

A. Qualifications of Work

Provide at least one person who shall be always present during execution of this portion of the Work, be thoroughly familiar with the type of materials being installed and the best methods for their installation, and direct all work performed under this Section.

B. Standards

1. All planting materials shall meet or exceed the specifications of Federal and State laws requiring inspection for plant disease and insect control.

1. Quality shall conform to the current edition of "Horticultural Standards" for number one grade nursery stock, as adopted by the American Association of Nurserymen. ANSI 2260.1 - Nursery Stock.

D. It is the responsibility of the Contractor to verify the accuracy of all survey information provided by the Owner prior to commencing excavations or filling operations. Commencement of these operations constitutes acceptance of the survey information as appropriate to meet the intent of the Contract.

1.04 SUBMITTALS

A. Materials List

Within 30 days after award of Contract and before any seeding materials are delivered to the job site, submit to the Owner a complete list of all seeding and other items proposed to be installed. At least 10 days prior to shipment/delivery of materials, the Contractor shall submit to the Owner one (1) cubic foot representative sample, certifications, certified test results for materials as specified below. The Contractor shall provide a listing of the addresses (locations) identifying the origin of the soil to be delivered. If the origin is from multiple locations, all locations shall be provided at the time of submission to the required information specified above. No material shall be ordered or delivered until the required submittals have been submitted and approved by the Owner. Delivered materials shall closely match the approved samples. Approval shall not constitute final acceptance. The Owner reserves the right to reject, on or after delivery, any material that does not meet these specifications.

1. Include complete data on source, size, and quality.

2. Demonstrate complete conformance with the requirements of this Section.
3.

3. This shall in no way be construed as permitting substitution for specific items described in the Drawings or these Specifications unless the substitution has been approved in advance by the Owner.

B. Certificates

1. All certificates required by law shall accompany shipments.

3. Prior to installation, deliver all certificates to the Owner.

4.

1.05 PRODUCT HANDLING

A. Delivery and Storage

1. Deliver all items to the site in their original containers with all labels intact and legible at time of the Owner's inspection.

2. Immediately remove all seeding materials, which are not true to name, and all materials which do not comply with the provisions of this Section of these Specifications.

3. Use all means necessary to protect seeding materials before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements

In the event of damage or rejection, immediately make all repairs and replacements necessary to the approval of the Owner, at no additional cost to the Owner.

1.06 PLANTING SEASON

A. Seeding

Seeding shall be done between August 15th to September 30 and/or April 1st to June 15th.

B. Variance

If special conditions exist which may warrant a variance in the above planting dates, a written request shall be submitted to the Owner stating the special conditions for the proposed variance. Permission for the variance will be given if warranted in the opinion of the Owner. Regardless of the time of seeding, the Contractor shall be responsible for a full growth of grass.

PART 2.00 - PRODUCTS

2.01 TOPSOIL

A. General

Screened loam shall be "fine sandy loam", or "sandy loam" determined by mechanical analysis (ASTM d-422) and based on the USDA Classification System. Screened loam shall have the following mechanical analysis:

Textural Class	Percentage of Total Weight	Average Percentage
Sand (0.05-2.0mm dia.)	45-75	60
Silt (0.002-0.05mm dia.)	15-35	25
Clay (<0.002mm dia.)	5-20	15

Screened loam shall not contain less than 5 percent nor more than 10 percent organic matter as determined by the loss on ignition of oven-dried samples, at 100 degrees C, +/- 5 degrees C.

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Screened loam shall consist of fertile, friable natural loam capable of sustaining vigorous plant growth. Loam shall be without admixture of subsoil and refuse, resulting in a homogenous material free of stones greater than ½" in the greatest dimension, be free of lumps, plants, glass, roots, sticks, excessive stone content, debris and extraneous matter as determined by the Owner. Screened loam shall fall within the pH range of 6.0-6.5 except as noted on plans and details. It shall be uncontaminated by salt water, foreign matter and substances harmful to plant growth. The maximum soluble salt index shall be 100. Screened loam shall not have levels of aluminum greater than 200 parts per million.

If limestone is required to amend the screened loam to bring it within the pH range of 6.0-6.5, no more than 200 pounds of limestone per 1000 square feet of loam, incorporated into the soil, or 50 pounds of limestone per 1000 square feet of loam, surface application, per season.

The Owner will reject any material delivered to the site which, after post-delivery testing does not meet these specifications. If the delivered screened loam does not meet the specifications in this document, the delivered screened loam will be removed by the Contractor at the Contractor's expense and at the time of rejection.

B. Testing

The Contractor shall take representative samples of topsoil from the site and from topsoil to be hauled in and shall submit samples to a Soil Testing Laboratory for chemical analysis, and physical analysis. The Contractor shall indicate to the testing agencies that turf is to be planted and who the Owner is. The Contractor shall forward to the Owner two copies of analysis and recommendations of the testing agencies.

2.02 FERTILIZER

A. General

All fertilizers shall be commercially balanced, 10-6-4 fertilizers delivered to the site in bags labeled with the manufacturer's guaranteed analysis.

B. Commercial Fertilizer

Commercial fertilizer shall be a complete fertilizer in which 50-70 percent of the nitrogenous elements shall be derived from organic sources; phosphate shall be derived from superphosphate containing 16-20 percent phosphoric acid or bonemeal containing 25-30 percent phosphoric acid and 2-3 percent nitrogen; and potash shall be derived from muriate of potash containing 55-60 percent potash. It shall contain the following percentages by weight.

18% Nitrogen - 26% Phosphoric Acid - 12% Potash

Fertilizer shall be mixed, as specified, and delivered to the site in standard, unopened containers showing weight, guaranteed analysis, and name of manufacturer.

C. Special Protection

If stored at the site, always protect fertilizer from the elements.

2.03 SOIL AMENDMENTS

A. Peat

Peat shall be moist. It shall be finely shredded, consist of 90 percent organic moss peat, be brown in color, and suitable for horticultural purposes. Shredded particles shall not exceed one (1) inch in diameter. Peat shall be measured in air-dry condition, containing not more than 35 percent moisture by weight. Ash content shall not exceed 10 percent.

B. Limestone

Ground dolomitic limestone shall be an approved agricultural limestone and shall contain not less than 85 percent of total carbonates. Limestone shall be ground to such fineness that 50 percent will pass a 100-mesh sieve, and 90 percent will pass a 20-mesh sieve.

2.04 GRASS SEED

A. General

All grass seeds shall be:

1. Free from noxious weed seeds and cleaned.
2. Grade A Current Crop Seed.
3. Treated with appropriate fungicide at time of mixing.
4. Delivered to the site in sealed containers with dealer's guaranteed analysis.

B. Seed Mix Proportions by Weight

Percent by Weight	Seed	Min. % of Purity	Min. % of Germination
10%	Shamrock Kentucky Bluegrass	98%	90%
10%	Perennial Creeping Red Fescue	98%	90%
20%	Annual Ryegrass	98%	90%
30%	Intermediate Ryegrass	98%	90%
30%	Perennial Ryegrass	98%	90%

SECTION 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Inspection

1. Prior to all work in this Section, carefully inspect the installed work of all other trades, and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that seeding may be completed in accordance with the original design and the referenced standards.

B. Discrepancies

1. In the event of discrepancy, immediately notify the Owner.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

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3.02 SUBGRADE PREPARATION

A. The Contractor shall do whatever grading is necessary to bring the subgrade to a true, smooth slope, parallel and 6" below finished grade, for all seed bed areas. Remove all existing lawns and grasses, including roots.

B. There must be sufficient grades staked, as determined by the Owner, to ensure correct line and grade of subgrade and of finished grade.

C. Immediately prior to being covered with topsoil, the top 3" of the subgrades shall be raked or otherwise loosened and shall be free of stones, rock, and other foreign material 3" or greater in dimensions.

3.03 FINISH GRADE PREPARATION

A. Topsoil shall not be delivered or worked in a wet, frozen or muddy condition.

B. Topsoil shall be placed and spread over approved areas to a depth sufficiently no less than 4" in "loam and seed" lawn areas and 15" in plant bed areas so that after natural settlement and light rolling, the completed work will conform to the lines, grades, and elevations indicated. If excess topsoil exists, topsoil shall be spread a maximum of 8" deep on lawn areas.

C. After topsoil has been spread in approved areas, it shall be carefully prepared by scarifying or harrowing, and stones over one inch in diameter shall be removed from the topsoil. It shall be free of smaller stones in excessive quantities, as determined by the Owner.

D. The whole surface shall then be rolled with a roller, which weighs not more than 100 pounds per foot of width. During the rolling, all depressions caused by settlement of rolling shall be filled with additional topsoil, and the surface shall be regraded and rolled until presenting a smooth and even finish to the required grade.

3.04 SEED BED PREPARATION

A. After the areas to be seeded have been brought to the specified grades, spread limestone at a rate of 100 pounds per 1,000 square feet.

B. Apply the 18-26-12 fertilizers at a rate of 5 pounds per 1,000 square feet within 10 days prior to seeding. Thoroughly and evenly incorporate fertilizer and lime with the soil to a depth of 3" by discing or other approved method. In areas inaccessible to power equipment, use hand tools. Adjacent to trees and shrubs, use hand tools to avoid disturbances of the roots.

C. The Seeding Contractor shall reconstitute the soil, as may be recommended by a soil testing agency, prior to use as planting soil. Any deficiencies in the topsoil shall be corrected by the Contractor, as recommended, at no expense to the Owner.

D. After incorporation of fertilizer and lime into the soil, the seedbed shall be fine graded to remove all ridges and depressions, and the surface cleared of all debris and of all stones one inch or more in diameter.

3.05 SEEDING

A. Immediately before seeding, the ground shall be restored, as necessary, to a loose friable condition by dicing or other approved method to a depth of not less than 2". The surface shall be cleared of all debris and of all stones 1" or more in diameter.

B. Seed all areas to be seeded with specified grass seed, sowing evenly with an approved mechanical seeder at the rate of 6 pounds per 1,000 square feet. Sow 3 pounds per 1,000 square feet in one direction and 3 pounds per 1,000 square feet at right angles to the first seeding. Spread seed when soil is moist. Cultipacker, or approved similar equipment, may be used to cover the seed and to firm the seedbed in one operation. In areas inaccessible to cultipacker, the seeded ground shall be lightly raked and rolled in two directions with a water ballast roller. Extreme care shall be taken during seeding and raking to ensure that no change shall occur in

the finished grades and that the seed is not raked from one spot to another. Hydro-seeding is an acceptable manner of seeding, providing the Contractor certifies in writing that the hydro-seed fertilizer mix is as herein specified and applied at the equivalent rate of 6 pounds per 1,000 square feet.

C. Promptly after seeding, wet the seedbed thoroughly, keeping all areas moist throughout the germination period.

D. Mulch shall be placed immediately after seeding. Straw or salt marsh hay that has been thoroughly fluffed shall be spread evenly and uniformly at the rate of two to three tons per acre. Lumps and thick mulch materials shall be thinned. All mulch anchor stakes: strings and matting shall be removed before final acceptance of lawns. In addition, following mulching, all slopes of 5:1 or greater shall be covered with jute, biodegradable tobacco netting or approved equal for additional stabilization. Securely stapled in place. Overlap all joints in netting a minimum of 6".

E. Take whatever measures are necessary to protect the seeded area while it is germinating. These measures include furnishing warnings signs, barriers, and other needed measures of protection.

3.06 MAINTENANCE

A. Maintenance shall begin immediately after seeding operations and shall continue until Acceptance or for a minimum of 60 days or after two pre-approved cuttings, whichever is longer.

B. Maintenance of seed areas shall consist of watering, weeding, curing, repairing all erosion, and reseeding as necessary to establish a uniform stand of grass. Lawns shall be watered in a satisfactory manner during and immediately after planting, and not less than twice per week until final acceptance. All areas, which fail to show a uniform stand of grass for any reason, shall be reseeded repeatedly until a uniform stand is attained. Scattered bare spots and not exceeding 6" square of any lawn area, will be allowed at the discretion of the Owner.

C. At the time of the first cutting, there shall be a uniform stand between 3 and 3-1/2" high, and mechanical mower blades shall be set between 2-1/2" and 3" high.

E. Catch shall be representative of seed specified.

3.07 SPRING RE-SEEDING

If the original seeding of the areas affected by work takes place in the fall, the Contractor shall be responsible for additional spring maintenance, including reseeding by slice seeding, application of fertilizer and removal of weeds.

3.08 ACCEPTANCE

The Owner shall inspect all work for Acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date of inspection. ***Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the Owner***, he shall certify in writing to the Contractor as to the Acceptance of the work.

3.09 ACCEPTANCE IN PART

The work may be accepted in parts when it is deemed to be in the Owner's best interest to do so and when approval is given to the Contractor in writing to complete the work in parts. Acceptance and use of such areas by the Owner shall not waive any other provisions of this Contract.

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3.10 CLEANUP

A. When any of this work is done while buildings are occupied, pavements shall be always kept clear, broom cleaned to prevent tracking dirt into buildings.
B. After completion of all planting operations, dispose of all debris and excess material to the satisfaction of the Owner. All pavements shall be swept and hosed clean.

3.11 FINAL INSPECTION AND ACCEPTANCE

At the end of the guarantee period, the Owner will inspect all guaranteed work for the Final Acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date for final inspection.

Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the Owner at that time, he shall certify in writing to the Contractor as to the Final Acceptance of the Project.

ARTICLE 41 RESERVED

ARTICLE 42 ATTACHMENTS

Section 32 13 13.13 Exposed Aggregate Concrete Pavement Specifications (10 pages)

Sheet L-1: General Conditions and Site Improvement Plan (11x17)
Ex-1: Existing Cobble and Concrete Pad. (one page)
D-1 Concrete Flatwork Detail (one page)
D-11 Bike Rack Detail (one page)
Dumor Picnic Table 100-68-1-PL Detail (two Pages)

End of DPRC Special Conditions and Specifications.

SECTION 32 13 13.13

EXPOSED AGGREGATE CONCRETE PAVEMENT

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. This Section includes exterior cement concrete pavement for the following:

1. Seating area outside splash pad

B. Related Requirements

1. Cast-In-Place Concrete for Site

2. Portland Cement Concrete Pavement

1.02 DEFINITIONS:

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

1.03 SUBMITTALS – SUBMIT THE FOLLOWING:

A. Product Data: For each type of product indicated.

B. Samples for Initial Selection: For each type of product, ingredient/material, requiring selection.

C. Samples for Verification: For each type of product or exposed finish, prepared as Samples of size indicated below:

1. Exposed Aggregate: 10-lb Sample of each mix

D. .Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Submit documentation from ready mix supplier showing shrinkage within specified limits of ASTM C 157, with results for minimum of 3 specimens.

1.04 QUALITY ASSURANCE:

A. Installer Qualifications

Experienced installer who has completed pavement work similar in material, design, and extent to that indicated for Project and whose work has resulted in construction with a record of successful in-service performance.

B. Manufacturer Qualifications

Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.

Manufacturer certified according to the National Ready-Mix Concrete Association's Plant and Truck Certification Program.

C. Testing Agency Qualifications

An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated as documented according to ADTM E 548.

D. Source Limitations

Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from one source.

E. ACI Publications

Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.

F. Mockups

Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.

G. Build a 5' x 10' mockup on site. If location not indicated, as directed by Owner.

H. Notify Engineer seven days in advance of dates and times when mockups will be constructed.

I. Obtain approval from Owner before starting mockup construction.

J. Maintain approved mockups during construction in an undisturbed condition as a standard for judging the completed pavement.

K. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Engineer specifically approves such deviations in writing.

L. Demolish and remove approved mockups from the site when directed by Owner.

M. Pre-installation Conference: Conduct conference to:

1. Review methods and procedures related to concrete paving, including but not limited to, the following:

   a. Concrete mixture design.

   b. Quality control of concrete materials and concrete paving construction practices

2. Require representatives of each entity directly concerned with concrete paving to attend, including the following:

   a. Contractor's superintendent.

   b. Concrete paving Subcontractor.

1.05 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on concrete paving mixtures.

1.06 PROJECT CONDITIONS:

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

PART 2 - PRODUCTS

2.01 FORMS:

A. Form Materials: Plywood, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth, exposed surfaces.

B. Use flexible or curved forms for curves of a radius of 100 feet or less.

C. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.02 CONCRETE AND AGGREGATE:

A. Use the following materials, of the same type, brand, and source throughout the Project:

1. Concrete for exposed aggregate paving shall be Portland Cement ASTM C150, Type I, Gray as required to match color of concrete used on standard sidewalks.

2. Exposed Aggregate: Exposed hard, sound, durable, and free of all deleterious materials and staining qualities. Provide aggregates from a single source.

B. Store selected seeding aggregates off the ground and protected from moisture.

C. Water: Potable.

2.04 CURING MATERIALS:

A. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

B. Water: Potable.

2.05 RELATED MATERIALS:

A. Board Filler: #1 treated #1 Southern Yellow Pine**.**

B. Board filler shall be free of defects which will impair their usefulness as expansion joint fillers.

C. Joint Sealing Material: Pavement joint sealing material shall meet the requirements and specifications of MassDOT.

D. Air-Entraining Admixture: ASTM C 260

E. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

a. Basis-of-Design Product: Subject to compliance with requirements, provide Euclid Chemical Company (The); an RPM company; EUCON RETARDER 75 or an approved equivalent.

2.06 CONCRETE MIXTURES:

A. Prepare design mixtures, proportioned according to ACI 301, with the following properties:

1. Exposed Aggregate Surface: Concrete to receive an exposed aggregate surface shall contain a minimum of 560 lb. of ASTM C 150 Type II Portland cement per cubic yard of concrete.

2. Compressive Strength (28 Days): 4000 psi.

3. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.53.

4. Slump Limit: 4-inches, plus or minus 1-inch.

5. Air Content: 6 percent plus or minus 1 percent.

6. Aggregates used in base mix shall not be limestone.

7. Aggregate size shall be a minimum of 3/8-inch and a maximum of ¾-inch.

8. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions.

2.07 CONCRETE MIXING:

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M and ASTM C 1116. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.01 EXAMINATION:

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

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

3.02 EDGE FORMS AND SCREED CONSTRUCTION:

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.03 JOINTS:

A. General: Form construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.

C. When joining existing pavement, place transverse joints to align with previously placed joints unless otherwise indicated.

D. Install dowel bars and support assemblies at joints where indicated.

E. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness as follows:

1. Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool. Repeat grooving of contraction joints after applying surface finishes to a 1/4-inch (6 mm) radius. Eliminate grooving marks on concrete surfaces.

F. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

3.04 CONCRETE PLACEMENT:

A. Inspection: Before placing concrete, inspect and complete form-work installation, reinforcement steel, and items to be embedded or cast in. Notify other trades to permit installation of their work.

B. Remove snow, ice, or frost from sub-base surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.

C. Moisten sub-base to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are at the required finish elevation and alignment.

D. Comply with requirements and with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.

E. Do not add water to concrete during delivery, at Project site, or during placement.

F. Deposit and spread concrete in a continuous manner between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

G. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures to consolidate concrete according to recommendations in ACI 309R.

H. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away form joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.

I. Screed pavement surfaces with a straightedge and strike off. Commence initial floating using bull floats or darbies to form an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading dry-shake surface treatments.

3.05 FINISHES:

A. Seeded Exposed Aggregate Finish: Immediately after floating, broadcast a single layer of aggregate uniformly onto the pavement surface. Tamp seeded aggregate into plastic concrete and float to entirely embed aggregate with mortar cover of 1/16-inch.

B. Prior to the concrete placing operation, all select seeding aggregate shall be thoroughly washed so that it is free of all dust, dirt, and clay particles. The aggregate shall be in a damp condition but without free surface water at the time of seeding application. There shall be enough select aggregate on hand to complete the seeding once it has commenced.

C. The seeding operation shall start immediately after the placement of concrete as described above. The select aggregate shall be carefully and uniformly seeded by suitable means so that the entire surface is completely covered with one layer of stone. Stacked stones and flat and slivery particles shall be removed at this time.

The aggregate shall be embedded by suitable means. Care shall be taken to not over-embed and deform the surface. Under no circumstances shall areas lacking enough mortar be filled with small quantities of the base concrete mix.

D. Fine spray surface with Water-Reducing and Retarding Admixture.

E. After appropriate curing time as determined through the approved mockup construction, remove excess mortar by spraying surface with water so as to expose the aggregate without dislodging any aggregate.

G. Work shall be planned so that the concrete placing and aggregate seeding procedures are coordinated with the capabilities of the washing and brushing crew.

3.07 CONCRETE PROTECTION AND CURING:

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Comply with ACI 306.1 for cold-weather protection and ACI 305 R for hot-weather protection during curing.

C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb./sq. ft. per hour before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these methods.

3.08 PAVEMENT TOLERANCES:

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

1. Elevation: ¼-inch.

2. Thickness: Plus 3/8-inch, minus ¼-inch.

3. Surface: Gap below 10-foot- long, unleveled straightedge not to exceed ¼-inch.

4. Lateral Alignment and spacing of Tie Bars and Dowels: 1-inch.

5. Vertical Alignment of Tie Bars and Dowels: ¼-inch (6 mm).

6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: ½-inch.

7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: length of dowel ¼-inch per 12-inches.

8. Joint Spacing: 3-inches.

9. Contraction Joint Depth: Plus ¼-inch, no minus.

10. Joint Width: Plus 1/8-inch, no minus.

3.09 FIELD QUALITY CONTROL:

A. Testing Agency: The Contractor shall engage a qualified independent testing and inspection agency to sample materials, perform tests, and submit test reports during concrete placement.

B. Compressive-strength Tests: ASTM C 39; one set for each day's pour of each concrete class exceeding 5 cubic yards, but less than 25 cubic yards plus one set for each additional 50 cubic yards.

C. One specimen shall be tested at 7 days and two specimens at 28 days. One specimen shall be retained in reserve for later testing if required.

D. Test results shall be reported in writing to Owner, concrete manufacturer, and Contractor within 24 hours of testing. Reports of compressive-strength tests shall contain:

1. Project identification name and number.

2. Date of concrete batch in pavement.

3. Design compressive strength at 28 days.

4. Concrete mix proportions and materials.

5. Compressive breaking strength.

6. Type of break for both 7- and 28-day tests.

3.10 REPAIRS AND PROTECTION:

A. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.

B. Drill test cores where directed by Engineer when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with epoxy adhesive.

C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION

SUMMARY OF WORK

1. Remove, salvage, stockpile and protect for complete reinstallation existing picnic tables. Typical for locations 1 through 20.

2. Remove and dispose in kind existing 10'x12' cobble and concrete pads for picnic table. Existing gravel base to remain.Typical for locations 1 through 20.

3. Furnish and install new exposed aggregate 6" thick concrete pads, include additional gravel base as needed for finished work.Typical for locations 1 through 20.

4. Furnish disposable concrete washout basin(s). Typical for locations 1 through 21. Include disposal in bid.

5. Install existing picnic tables on new exposed aggregate concrete pads. Missing tables are stored inside adjacent " boathouse". Furnish and install with 0.5" by 5.125 " threaded anchor rod with epoxy adhesive as specified for reinstallation - typical for locations 1 through 21 as applicable.

6. Remove , salvage, stockpile and protect existing bike racks and adjacent bench at location 21. Remove and dispose of existing 8' x 25' cobble with concrete base and 4'x8' concrete pad for bench. Furnish and install new exposed aggregate 6" thick concrete pads, match existing size. Include additional gravel base as needed for finished work. Reinstall existing bike racks and bench.

7. Match exiting orientation of picnic tables, bike racks and bench. Inspect and Re-tighten as needed hardware for picnic tables and benches.

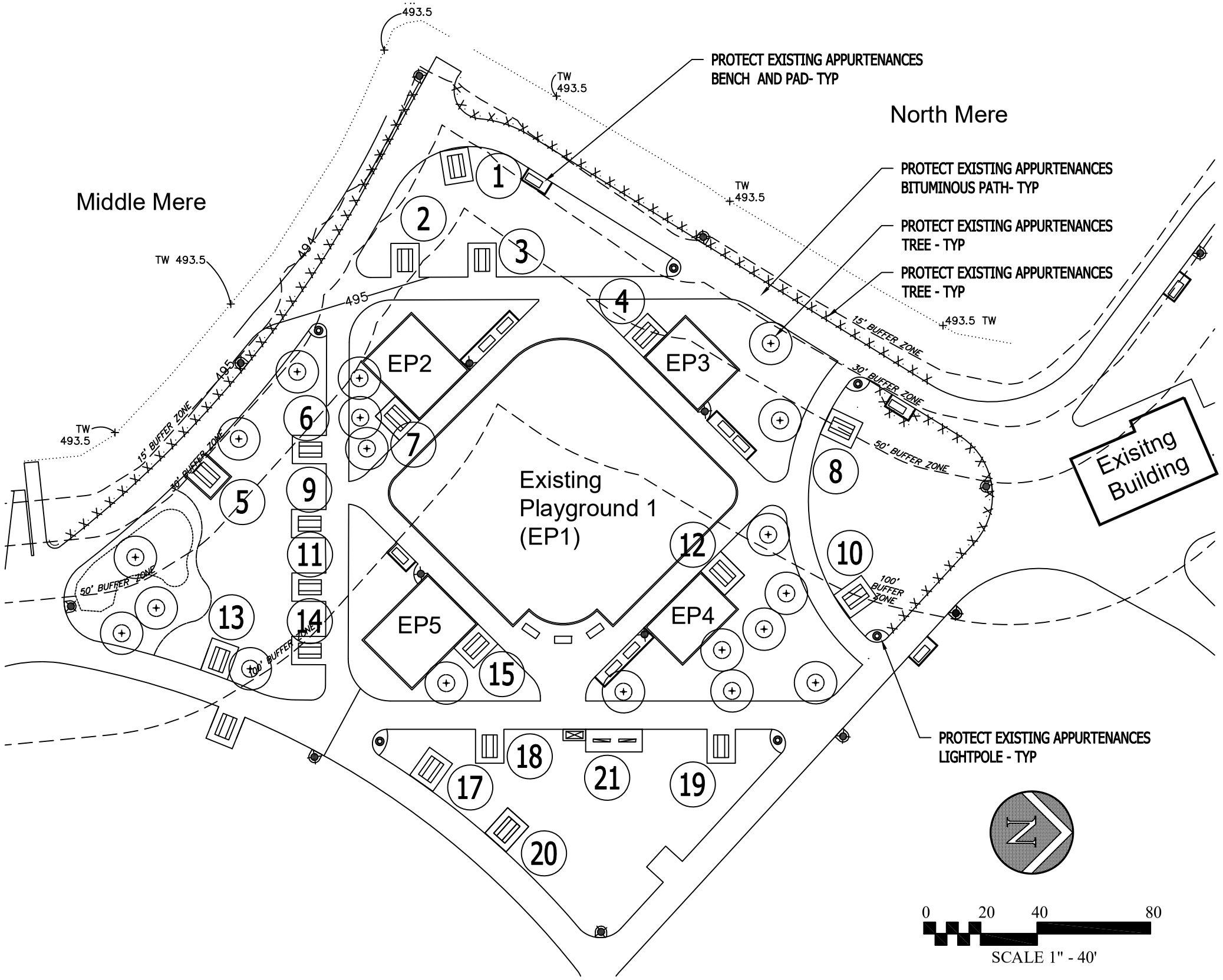
8. Protect all five playground/PIP footprints, benches, light poles, pathway and all appurtenances to remain. No traffic or equipment allowed on poured-in-place (PIP) rubber safety surfacing.

9. Maintain Park access, especially to the five area of playground during construction.

10. Renovations shall be in phases, and as approved by Owner. At a minimum, five picnic tables shall be available for public use at all times.

Legend

- Existing Picnic Table
- Existing Bike Racks and Bench
- 16 — Location
- Staked Straw Wattle (approx. 600LF total)



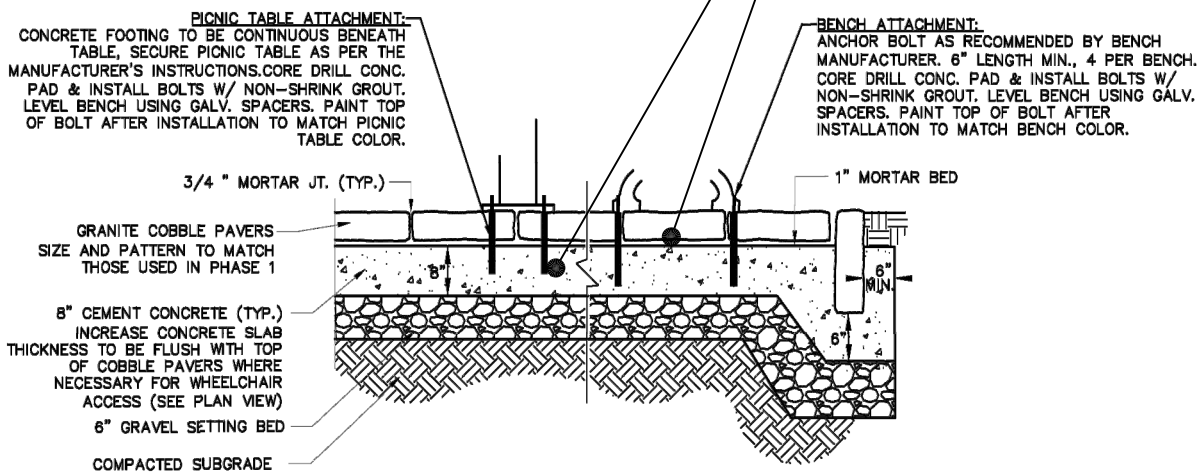
Department of Parks, Recreation & Cemetery
Capital Projects Division
Robert C. Antonelli, Jr., Commissioner

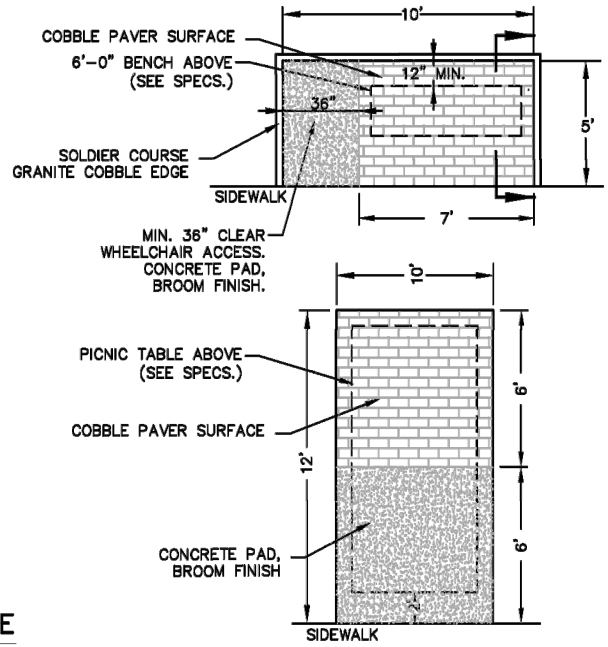
Bid 08-28-26

ELM PARK - SITE FURNISHINGS RENOVATIONS
GENERAL CONDITIONS AND SITE IMPROVEMENT PLAN
AUGUST 2026

L-1

REMOVE AND DISPOSE OF EXISTING COBBLE & 8" THICK CONCRETE BASE OR REMNANTS
VERTICAL COBBLE BORDER AT PICNIC TABLE LOCATION NO. FIVE(5) TO REMAIN.



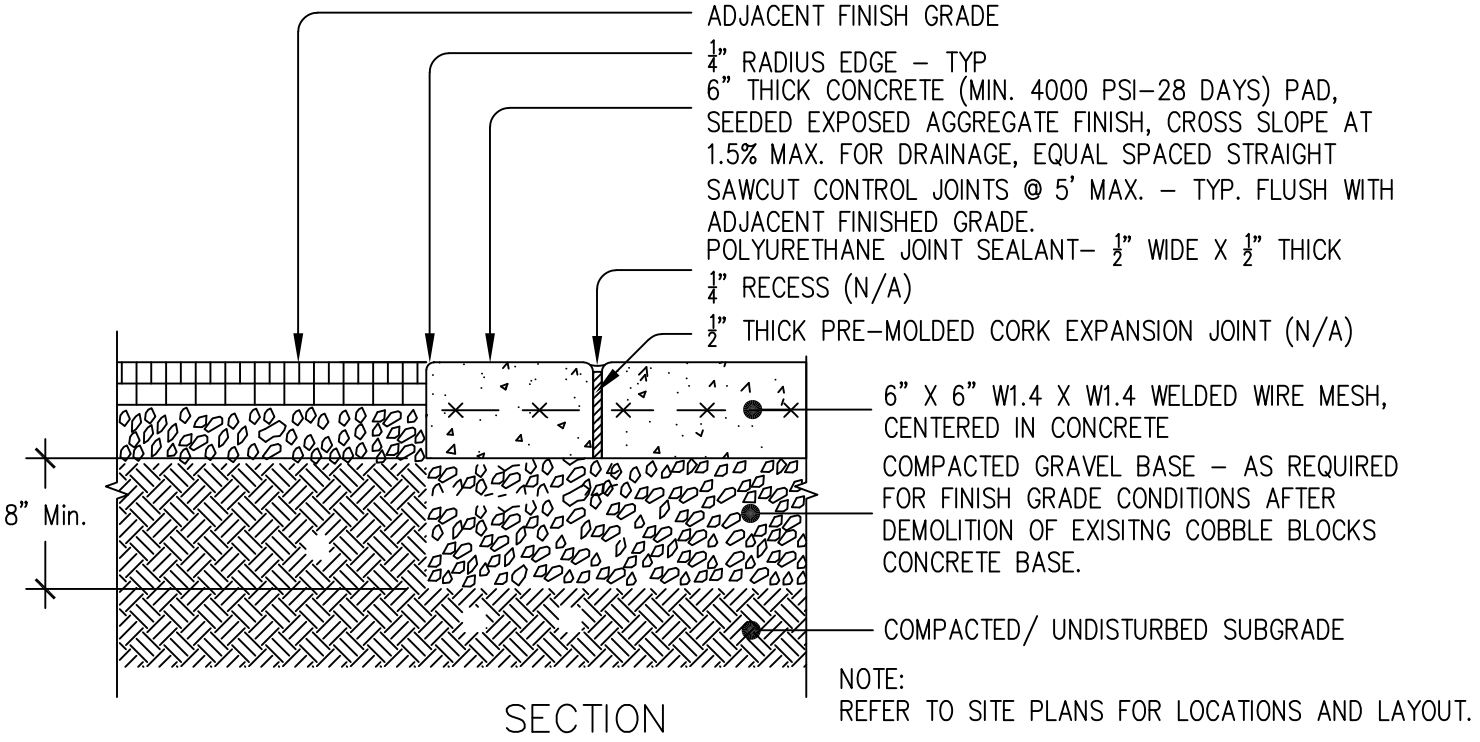


BENCH AND PICNIC TABLE FOOTING
GRANITE COBBLE PAVERS ON CONCRETE BASE
NOT TO SCALE

Department of
Parks, Recreation & Cemetery
Robert C. Antonelli, Jr.
Commissioner

Elm Park Picnic Table Renovations 2026
Typical Existing Cobble and Concrete Pad for Benches and Picnic Tables
Not to Scale

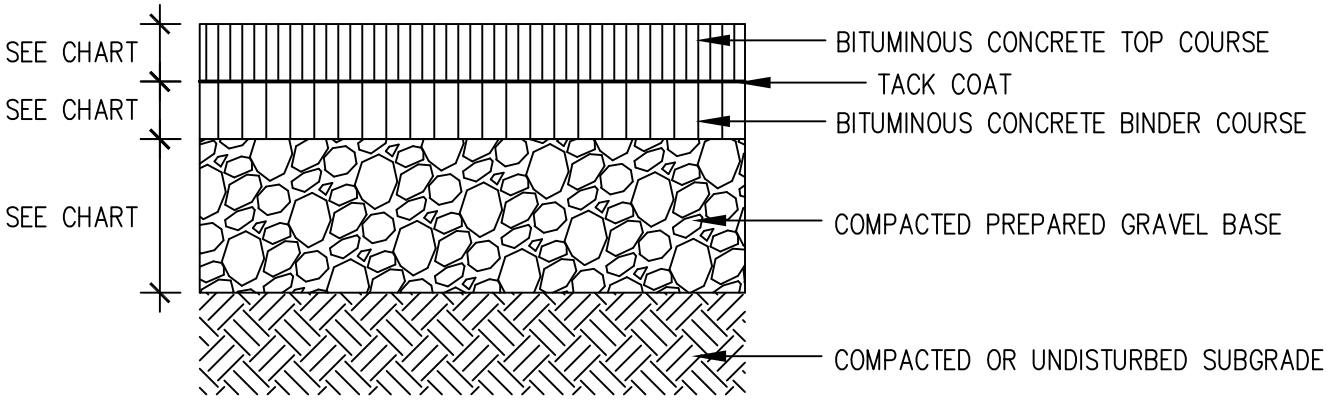
Ex-1



Concrete Flatwork

BITUMINOUS CONCRETE PAVEMENT COURSE THICKNESS CHART

	BINDER COURSE	TOP COURSE	DENSE MIX	GRAVEL BASE
Roadway up to 12% grade	2–½"	1–½"		12"
Driveway and Public Sidewalk	1–½"		1"	12"
Parking Lot and Park Sidewalk	1–½"	1–½"		12"
Basketball and Tennis Courts	1–½"	1–½"		12"



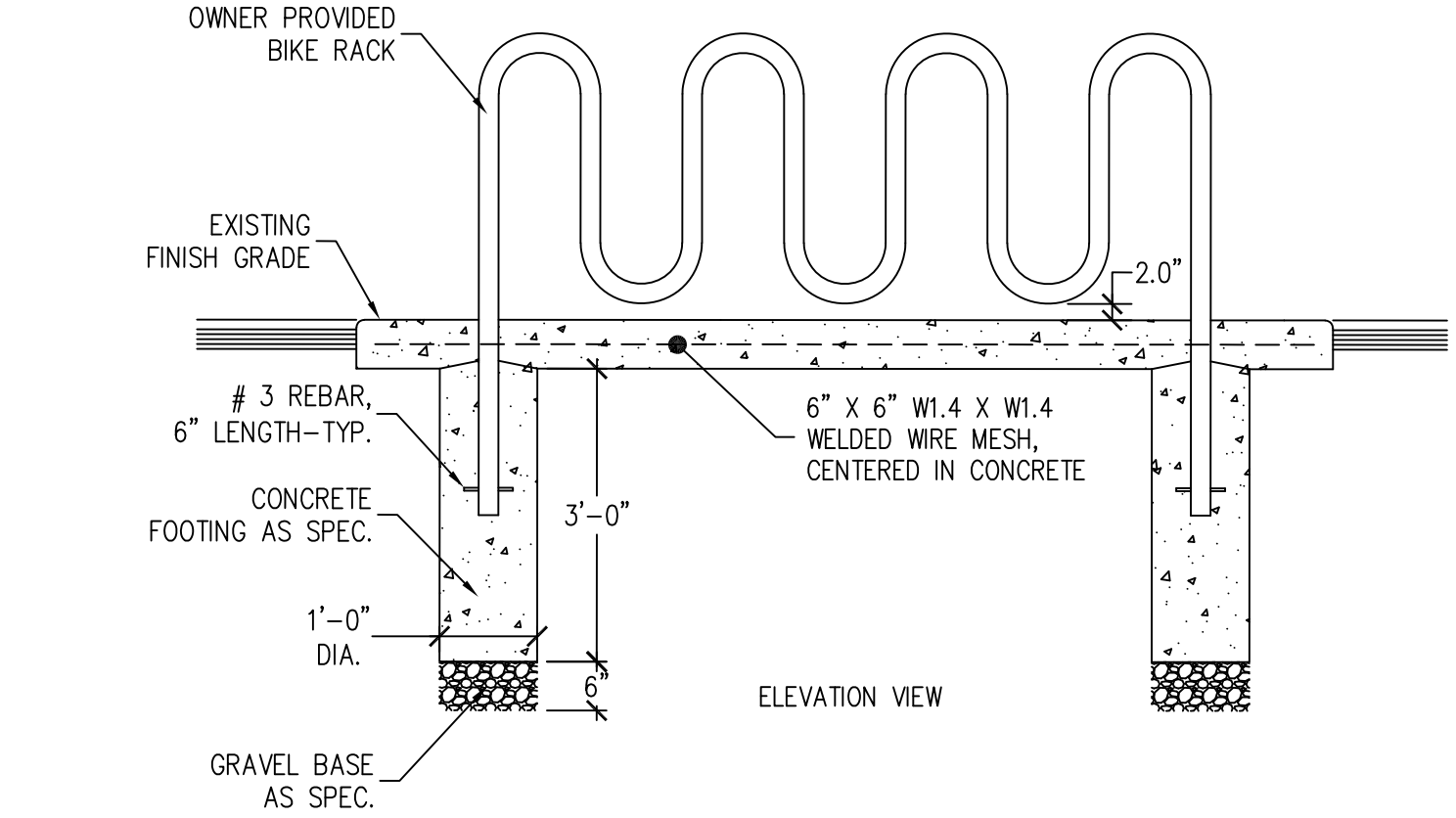
NOTE: TACK COAT REQUIRED IF BINDER COURSE IS OVER 48 HOURS OLD

Bituminous Concrete Flatwork - for reference only

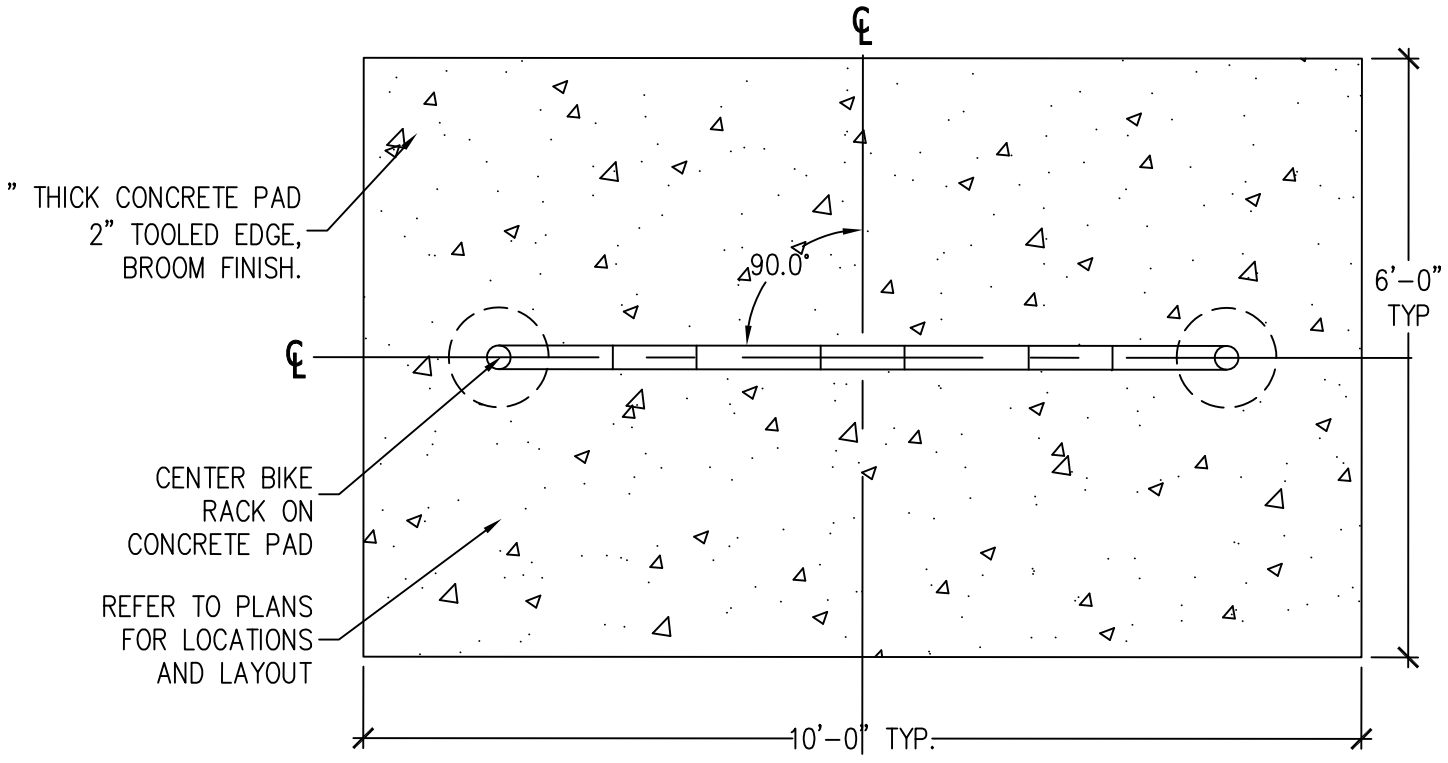
Department of
Parks, Recreation & Cemetery
Robert C. Antonelli, Jr.
Commissioner

Elm Park Picnic Table Renovations 2026
DPRC Standard Detail
Concrete & Bituminous Concrete Flatwork
Not to Scale

D-1



ELEVATION VIEW

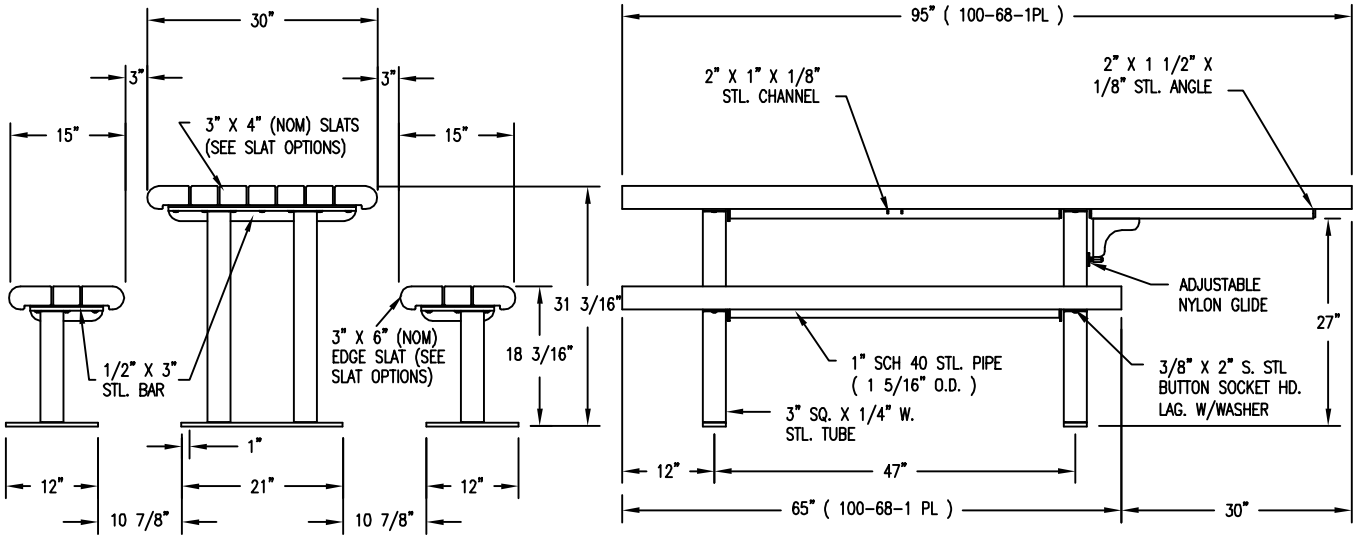


PLAN VIEW

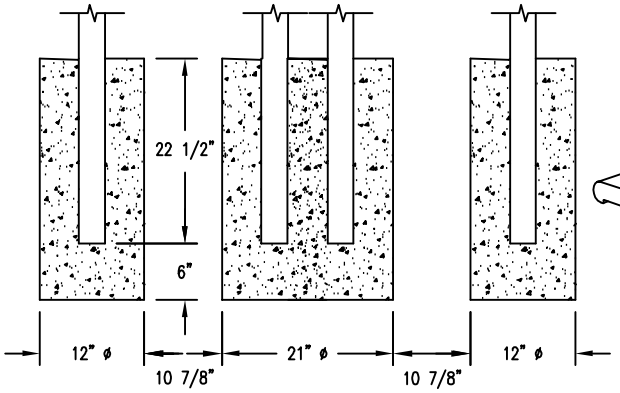
Department of
Parks, Recreation & Cemetery
Robert C. Antonelli, Jr.
Commissioner

DPRC Standard Detail
Bike Rack with Concrete Pad
Not To Scale

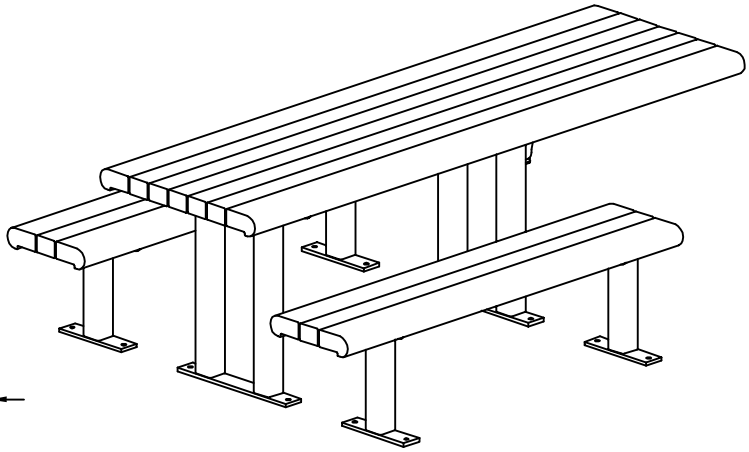
D-11

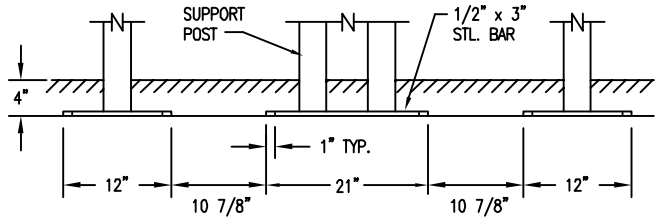


☐ S-2 SURFACE MOUNT



☐ S-1 EMBEDMENT





☐ S-4 SUB FLOOR

NOTES:

1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR OPTIONS S-2 & S-4.

SLAT OPTIONS

- ☐ "CEDAR" RECYCLED PLASTIC
- ☐ "GREY" RECYCLED PLASTIC
- ☐ "REDWOOD" RECYCLED PLASTIC
- ☐ "WALNUT" RECYCLED PLASTIC
- ☐ OTHER _____

DuMor, inc.	TABLE	DATE DRAWN : 04/01/96 DRAWN BY : AWH DATE REV. : 01/14/14 REV. BY : ESS	REV. F	DRAWING NUMBER 100-68-1 PL	SHEET 1 OF 2

NOTE:

1.) DURING ASSEMBLY PROCEDURE; DO NOT COMPLETELY TIGHTEN HARDWARE.
2.) THE ACTUAL PARTS WILL NOT BE NUMBERED. NUMBERS ONLY APPLY TO DRAWING.
3.) UPON COMPLETION OF ASSEMBLY SQUARE ALL COMPONENTS THEN TIGHTEN ALL HARDWARE.
4.) MOUNT AND ANCHOR AS SPECIFIED.

TOOLS REQ'D

3/4" WRENCH
9/16" WRENCH
1/4" ALLEN WRENCH
1/2" MASONRY DRILL BIT
DRILL

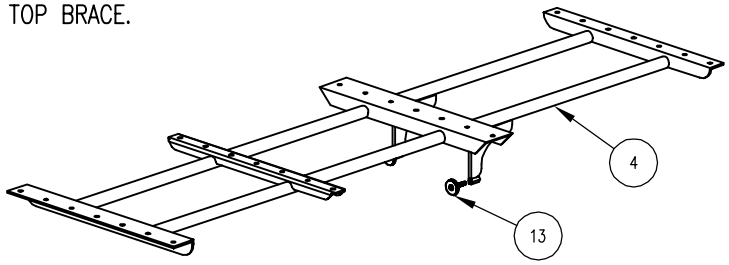
PARTS LIST FOR S-2

ITEM	QTY	PART NO	DESCRIPTION
1	2	0-100-00-01/S-2	TABLE TOP SUPPORT FOR SURFACE
2	4	0-100-00-02/S-2	SEAT SUPPORT FOR SURFACE MT
3	2	0-100-60-06	6' SEAT BRACE
4	1	0-100-68-1-05	TABLE TOP BRACE, HANDICAPPED
5	5	0-100-681PL-1	3" X 4" X 95" INT'R TABLE SLAT, PLASTIC
6	1	0-100-681PL-2	95" RIGHT EDGE TABLE SLAT, PLASTIC
7	2	0-100-681PL-3	3" X 4" X 65" INT'R SEAT SLAT, PLASTIC
8	2	0-100-681PL-4	65" RIGHT EDGE SEAT SLAT, PLASTIC
9	1	0-100-681PL-8	95" LEFT EDGE TABLE SLAT, PLASTIC
10	2	0-100-681PL-9	65" LEFT EDGE SEAT SLAT, PLASTIC
11	46	1-13-016	3/8" X 2" SS BTN SKT HD LAG SCR
12	46	1-22-024	3/8" SS FLAT WASHER
13	2	5-48-076	3/8" X 1 1/2" SWIVEL GLIDE

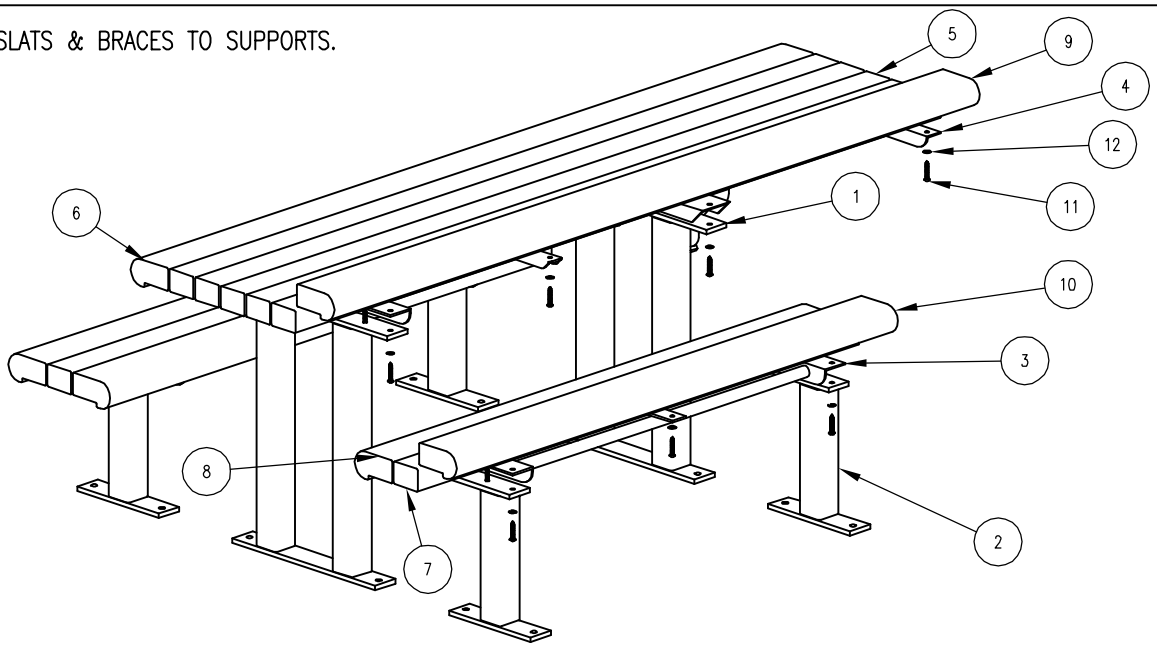
KITS PROVIDED FOR S-2

ITEM	QTY	PART NO	DESCRIPTION
14	3	K-ANC0860-4	1/2" X 3 3/4" SS ANCHOR KIT (4PC)
15	1	K-BL0632-48	3/8" LAG HARDWARE KIT (48PC)
16	1	K-GL0624-2	3/8" X 1 1/2" GLIDE KIT (2PCS)

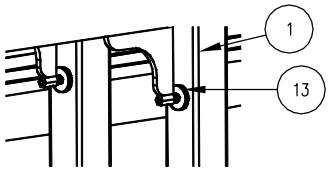
(1) ATTACH GLIDES TO TABLE TOP BRACE.



(2) ATTACH SLATS & BRACES TO SUPPORTS.



(3) UNSCREW SWIVEL GLIDE SO IT FITS TIGHT AGAINST SUPPORT POST TUBE AND TIGHTEN.



DuMor, inc.	ASSEMBLY INSTRUCTIONS	DATE DRAWN : 04/01/96 DRAWN BY : AWH DATE REV. : 01/14/14 REV. BY : ESS	REV. F	DRAWING NUMBER 100-68-1 PL	SHEET 2 OF 2