



Worcester Redevelopment Authority (WRA)

Harding Street Improvements

Union Station Priority Capital Project

2 Washington Square
Worcester, Massachusetts

BIRD NETTING
(Re-Bid)

SPECIFICATIONS

Date: 08/24/2016

OWNER
Worcester Redevelopment Authority
City of Worcester
Executive Office of Economic Development
455 Main Street, 4th Floor
Worcester, MA 01608

SUMMARY OF WORK

PART 1 - GENERAL

1.1 CONTRACT DOCUMENTS

- A. The Contract Documents include the Drawings as enumerated on the Title Drawing, the general provisions of Contract, including General and Supplemental Conditions, and the provisions of this Project Manual and Addenda as a whole represent and describe the work and requirements of the Project.

1.2 GENERAL REQUIREMENTS

- A. Attention is directed to the General and Supplemental Conditions and the other Division 1 Sections, which are hereby made a part of this Section.

1.3 SUBSTANTIAL COMPLETION

- A. The Date of Substantial Completion shall be ninety (90) days after execution of the General Contract in accordance with the project schedule set fourth in the contract documents.

1.4 PROJECT DESCRIPTION

The project scope generally consists of exterior improvements to there-installation, repairing and replacing the existing bird netting within the general area of the Harding Street Entrance and service areas at Union Station., and the pedestrian and taxi routes at this location. Work is phased into various contracts, This contracts work is briefly summarized as follows:

BASE BID WORK

- a. Temporary facilities, temporary barricades and signage around the exterior work areas to facilitate pedestrian and vehicle traffic within the work areas..
- b. Maintain traffic through Harding street at all times for busses and service vehicles.
- c. Replacing and installing new bird netting in areas noted and re-installation, repairing, existing Re-installation of bird netting at area in areas noted. Installation of new bird netting, shall utilize new cable supports and attachments at areas noted. Re-installation and repairing existing bird netting to utilize existing cable supports and attachments at areas noted
- d. Tensioning all new netting and re-tensioning existing netting to manufacturer's recommendations.
- e. Repairs including patched areas per manufactures minimum recommendations.
- f. Cut and remove existing netting at areas indicated and re-secure to existing steel structure.

ALTERNATES

NONE.

UNIT PRICES

NONE.

- B. The Work of this project also includes the requirements in the Contract, the Sub-Contract(s), Sections 0 and Division 1 Sections, in their entirety.

- C. The Existing Building drawings are available for review at the City of Worcester- Room 201 during business hours between 8:30 AM- 5:00 PM.
- D. The site is public facility, and the exterior of the buildings are available for review at any normal business hours, refer to the invitation for pre-bid conference time.

1.5 RELATED WORK UNDER OTHER CONTRACTS

- A. Work by other contractors, which will be under separate contract, may take place during the work of this contract adjacent to and within work areas of this site.
- B. Cooperate fully with other contractors so that work under those contracts may be carried out smoothly, without interfering with or delaying work under this contract.

1.6 WORK SEQUENCE SCHEDULING AND COORDINATION

- A. The Work shall be sequenced, scheduled, and coordinated to achieve the Date of Substantial Completion.
 - 1. All deliveries must be scheduled at a minimum of 48 hours in advance with the WRA's representative.
 - 2. All connections to existing utilities must be scheduled and coordinated at a minimum of 72 hours in advance with the Owner.
 - 3. Harding Street must be maintained open at all times for bus, Union Station deliveries and emergency traffic.
- B. The General Contractor and each Subcontractor shall establish and increase or decrease as appropriate the workforce, days of work, number of shifts, work hours, materials, tools and equipment needed to maintain and achieve the Date of Substantial Completion.
- C. The General Contractor and each Sub-Contractor shall increase the workforce, days of work, number of shifts, work hours, materials, tools, and equipment needed to maintain the Date of Substantial Completion as necessary to accommodate any additional work authorized by Construction Change Directives and Change Orders modifications.
- D. General Contractor will be responsible for the proper conduct of the work to ensure that all trades work together, and in harmony, to achieve substantial and final completion as specified.

1.7 WORK HOURS

- A. Normal working hours are to be Monday thru Friday from 7:00 AM to 4:30 PM, except Legal Holidays. Any working hours outside of these times shall be considered “Extended Hours” and treated as described below.
- B. Extended work hours shall require prior scheduling and coordination with the Owner at a minimum of 48-hours in advance. Extended work hours on Sundays and Legal Holidays may also require a permit from the Police Department.
 - 1. Upon permission from the Owner, and prior to the start of any extended work, pay for all fees and obtain through the City of Worcester Police Department a work permit for all Sundays and Legal Holidays.
- C. No work shall take place outside of normal working hours without prior approval and the WRA’s representative on site.

1.8 CONTRACTOR USE OF THE PREMISES

- A. General Contractor shall have use of only the site area as designated for storage or staging of work, from date of contract to the Date of Substantial Completion and as described above in the Work Hours paragraph.
- B. Harding Street must remain open and be maintained for the duration of the project. General Contractor to install and maintain barricades and protective devices for the full duration of the work.
- C. Access to upper track area for supplies is limited and access gained from the old AMTRAC station across the bridge off Shrewsbury Street. Vehicular access is not permitted. Work shall be coordinated in advance with City Representatives, who will coordinate with the CSX, P&W RR, and the MBTA. Contractor shall carry the cost for 36 hours for a flagman to be paid though the City. Additional time required will be paid by the contractor at a half day rate, adjusted by change order. Laborers access can be obtained through the building.
- D. This work will be done in conjunction with other work at Harding Street being bid separately by the City. This contractor to attend scheduling meetings with the City Representative, and coordinate work under this contract scope with the other ongoing work.
- E. Construction deliveries to the project shall be made, subject to working hours, as described above. No other construction vehicles are allowed on the site except for the required for the work underway. All deliveries must be coordinated with the Owner a minimum of 48-hours in advance. Deliveries shall be scheduled for normal working hours, but may be scheduled for later or non-working hours with prior approval of the Owner. Delivery trucks and vehicles shall not idle with their motors running for more than five (5) minutes in accordance with applicable City Ordinances. Any person violating this provision shall be subject to fines prescribed by the Ordinances.
- F. All contractor personnel must park in Cell Lot and/or as directed by the owner’s representative. Each morning the General Contractor’s Superintendent shall report the number of contractor personnel that will be working that day to the WRA’s Representative. Upon entrance all contractor personnel shall have a valid identification badge that is to be worn at all times while working on the project.

- G. The Contractor is responsible for providing an identification badge for his personnel and sub-contractor personnel for security purposes. These identification badges shall be worn at all times. All contractor personnel are restricted to selected work areas on any given day at all times unless the Owner grants prior approval. Any employee violating any of these provisions shall be discharged after one (1) written warning by the General Contractor's Superintendent or Owner's representative, with a copy of said warning submitted to the .
- H. Any work to be performed in or requiring access through the building outside of the construction area shall be coordinated with the WRA's representative at least one day in advance of such work.
- I. The General Contractor shall also be responsible for returning the areas adjacent to construction to their original state upon completion of work in that area.
- J. The use of internal combustion engine driven power equipment is prohibited within the building. Alternate power sources, i.e. generators and compressors, may be placed outside the building to provide power to equipment. Placement of any alternate power sources shall be subject to prior WRA representative's approval.
- K. There will be no washing or washing out of any vehicles at the project site. The contractor shall make necessary provisions to accommodate this work off site.
- L. All cleaning and wash-down of tools and/or equipment shall be performed in areas designated only by the WRA's representative. This will be strictly enforced.

1.9 CONTRACTOR USE OF CITY STREETS

- A. The General Contractor's personnel, and all other personnel employed on the project, shall limit their parking on the site to within the areas designated for construction parking and as permitted by the General Contractor. Additionally, Contractor personnel may park as legally allowed within City Limits. Parking on street sidewalks is prohibited.
- B. Driveway entrances, walks, and yards to abutting properties shall be kept unobstructed at all times.

1.10 WORK CONDITIONS

- A. Neither the General Contractor, nor Sub-Contractors at any level, nor their employees shall bring illegal substances or alcoholic beverages on the premises.
- B. Vulgar, abusive, obscene language or behavior will not be tolerated.
- C. Radios, CD players, or any similar new devices are not permitted to be used on the site.
- D. Contractor's personnel engaging in the above shall be removed from the job-site.
- E. The Site and buildings are smoke-free; therefore smoking is prohibited, and ban must be enforced by the Contractor.

1.11 PROJECT MANAGER, SUPERINTENDENTS, FIELD ENGINEER AND FOREMAN

- A. The General Contractor shall provide a qualified General Superintendent, who shall be present, full time, on site daily during all work in progress until the Date of Substantial Completion, and for such additional time thereafter as the Owner's representative may determine. Only under extenuating circumstances,

with the approval of the Owner's representative , will the Contractor be allowed to substitute for the General Superintendent prior to the date of Final Completion.

1. The General Superintendent shall supervise and direct the activities of other superintendents and foremen on site. He shall not perform the work of foremen, tradesmen, or home office staff.
- B. Each filed sub-bidder and each subcontractor shall provide a Lead Foreman, responsible to be on site full time during the workday.
 1. Each foreman, in addition to his regular duties shall be responsible for establishing, maintaining, and providing record drawings, which are required to be updated prior to submitting the current period's draft Application for Payment.
- C. The General Superintendent and Lead Foreman shall not be discharged or changed without prior written consent of the , which will not be unreasonably withheld. The Owner's representative will require that all as-built information be updated and current prior to granting consent.

1.12 WEEKLY REPORTS

- A. The General Superintendent shall submit to the WRA's representative on the first workday of the week, a written "Weekly Progress Report". Include the following information about the previous week:
 1. Construction progress.
 2. Manpower of each contractor and subcontractor.
 3. Equipment used.
 4. Product deliveries
 5. Weather conditions.
 6. Problems, hazards or accidental injury.
- B. The General Superintendent shall submit to the WRA's representative, on the first workday of the week, a written "Weekly Outline Schedule" listing the work activities planned for that week. The "Weekly Outline Schedule" may be a simple listing of each trade's activities delineating areas where work is to be scheduled. Note any significant milestones.

1.13 CERTIFICATE OF SUBSTANTIAL COMPLETION

- A. The City Representative shall issue a Certificate of Substantial Completion for the work when and if all of the following conditions have been met:
 1. The work is sufficiently complete to allow the Owner beneficial use of the premises. The work remaining to be done is not a danger to the proposed occupants and is of a minor nature.
 2. The work is sufficiently complete that the City Representative may make affidavits to the Building Official as required by Controlled Construction provisions of the Building Code.
 3. The mechanical and electrical systems are fully operational. Required inspections and tests have been successfully completed, and the Owner has been provided instructions regarding operation and maintenance of mechanical and electrical systems in the building.
 4. The Contractor has made notifications required to pay cost of final billing for utilities and termination of property insurance.
 5. The Owner has made notifications required to assume the future cost of utilities, and provide property insurance.
 6. The Building Official has issued a Certificate of Occupancy without restrictions or conditions relating to the contractor's work.

1.14 CITY OF WORCESTER ORDINANCES, LICENSES, PERMITS, AND FEES

A. All Contractors shall comply with City Ordinances which may affect the work of this contract and which have not been previously covered in the Contract Documents. Requirements and fees listed are those in effect as of this writing and each Contractor shall be responsible for verifying the requirements and fee cost as currently in effect and throughout the duration of this project. This includes, but is not limited to, the following:

1. Worcester Police Department:
 - a. Police Details
 - 1) Hourly rate for one-half day or full day.
 - b. Permits for Sunday and Holiday work
 - 1) Fee Required.
2. Department of Public Works, Permits Division
 - a. Street Opening Permit Bond
 - 1) \$ 5,000.00
 - b. Barricade Placement by DPW
 - 1) 1st \$85 per day
 - 2) Each additional \$ 40 per day
 - c. Drainlayers License
 - 1) New \$ 140.00
 - 2) Annual Renewal \$ 60.00
 - d. Drain Permit
 - 1) \$ 168.00
 - e. Sanitary Connection (Gallonage Fee)
 - 1) \$ 9.00 per GPD (In-Town)
 - 2) \$ 12.00 per GPD (Out of Town)
 - f. Main Inspection
 - 1) \$ 2.61 per Foot
 - g. Assessment
 - 1) To be Determined
 - h. Permit Manuals
 - 1) \$ 7.00
 - i. Plan Review
 - 1) \$ 60.00
 - j. Street Obstruction
 - 1) \$ 87.00 each
 - k. Street Obstruction (Blanket Permit)
 - 1) \$ 1,000.00 per year
 - l. Street Opening
 - 1) Pavement older than 5 years \$ 87.00
 - 2) Pavement 5 years old or less \$ 174.00
 - m. Driveway Opening
 - 1) Permit \$ 87.00
 - n. Standards Specifications & Details
 - 1) \$ 15.00 Each
 - o. Wastewater Discharge
 - 1) Permit \$ 250.00
 - 2) Inspection \$ 400.00

- 3) Sewer use \$ 3.52/CCF
- p. Water meter, etc. Contact Water Department at 508-799-1492.
- q. Traffic and Parking. Contact Department at 508-799-1468.

- 3. Worcester Fire Department
 - a. Fire and Smoke Alarm
 - b. Automatic Sprinkler and Standpipes
 - c. Contact Worcester Fire Department at 508-799-1826.

- 4. Department of Code Enforcement
 - a. Building Permit
 - 1) Based on total contract price
 - a) \$10/\$1,000 up to first million dollars.
 - b) \$7.00 per each \$1,000.00 over \$1,000,000.
 - 2) Document Microfilm
 - a) Flat fee of \$5; then \$2/sheet for one (1) set of complete building plans.
 - 3) Orders of Building Official under Chapter 1, 780 CMR.
 - 4) Ticket violation under Chapter 33, 780 CMR.
 - b. Trash Control
 - 1) Ticket for Violations
 - c. Environmental Control
 - 1) Air, Water, Noise Pollution - Ticket for Violations
 - 2) Conservation Commission Enforcement Officer

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 010100

SECTION 108113

BIRD CONTROL DEVICES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.
- B. Carefully examine all of the Contract Documents for requirements which affect the work of this section. The exact scope of work of this section cannot be determined without a thorough review of all specification sections and other Contract Documents.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. All labor, materials, and equipment for bird netting, hardware, and accessories.
 - 2. Reinstall existing bird netting at area indicated from owners stock in storage, provide all new fasteners.
 - 3. Provide, operate and maintain all temporary hoisting equipment and provide, maintain and remove all staging, scaffolding and rigging required for work under this section.
 - 4. Refer to unit cost section in the specifications.
 - 5. Install galvanized steel mesh over existing grating over opening as shown and specified on the drawings

1.3 SYSTEM DESCRIPTION:

- A. K-Net HT Bird Netting is constructed of black & stone (tan) high density polyethylene (HDPE) that is abrasion, flame, rot and UV resistant. K-Net HT has a 3/4" (1.9cm) square mesh to keep out all but the smallest of pest birds.
- B. Bird Netting Hardware fastens the bird netting to all types of surface shapes and materials. A variety of netting installation tools and accessories are available to make the netting installation an efficient process.
- C. Surface Cleaning System: surface disinfectants and deodorizers to neutralize potentially hazardous bird and/or animal wastes and properly prepare the surface for installation.

1.4 QUALITY ASSURANCE

- A. Installer must obtain, review and understand all K-Net HT and Bird Netting Hardware installation guidelines.

- B. Installer must be completely familiar with the proper installation procedures for the K- Net HT and Bird Netting Hardware.
- C. Installer should contact manufacturer for any updated or newly developed planning or procedural information that may be pertinent to the K-Net HT installation.
- D. Installer to ensure that bird netting meets or exceeds ISO 9001 2000 Quality Management Standards.

1.5 SUBMITTALS

- A. Manufacturer's literature including K-Net HT specifications and installation guidelines for the K-Net HT , Bird Netting Hardware and specified Surface Cleaning System.
- B. Sample of the K-Net HT Bird Netting, in black or stone - not less than 6" square (15.2cm square).
- C. Contractor to complete estimate worksheet detailing the scope of the netting enclosure, and the mounting hardware type, location and spacing.

1.6 STORAGE & HANDLING

- A. Provide storage to keep all netting and netting hardware shipping boxes dry, clean and undamaged. Do not stack or place other packaging or objects on the bird netting shipping boxes.
- B. Keep K-Net HT bird netting, installation hardware and surface cleaning systems in original packaging until needed for installation.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER or approved equal.

- A. Nixalite of America Inc, or approved equal.

1025 16th Avenue, PO Box 727, Dept. NI, East Moline, Illinois 61244; U.S.A. Ph: 800.624.1189 or 309.755.8771 - Fax: 800.624.1196 or 309.755.0077
E-mail: birdcontrol@nixalite.com or planning@nixalite.com
Web: www.nixalite.com.

- B. ABC Advanced Bird Control – A division of Nixalite of America Inc., approved equal
PO Box 727, Dept. NI, East Moline, Illinois 61244, U.S.A. Ph: or 888.212.8682 or 309.755.4708 – Fax: 309.755.1865
E-mail: info@abcbirdcontrol.com
Web: www.abcbirdcontrol.com.

2.2 K-NET HT BIRD NETTING

- A. Material: High density polyethylene (HDPE) that is abrasion, UV, flame and rot resistant. Netting to be water proof.

- B. Color: Black
- C. Construction: Knotted 3/4" mesh netting. Netting comprised of 12 ply (4x3) strands with 75lb. (33.9kg) knotted breaking strength (KBS). Seamless full size mesh runs.
- D. Standards: Must meet ISO 9001 2000 Quality Management Standards. E.
Mesh size: 3/4" (1.9cm) square, steam set knots.
- E. Netting Sizes:
Widths: 25' (7.6m), 50' (15.2m).
Lengths: 25' (7.6m), 50' (15.2m) and 100' (30.4m).
- F. Warranties:
Black K-Net HT has a 10 year limited warranty. Stone
(tan) K-Net HT has a 3 year limited warranty.
- G. Thermal & Physical Properties:
Softening point: 250 F^o (122^oC).
Melting point: 293 F^o (145^oC).
Flash point: 660 F^o (349^oC).
Remains flexible at very low temperatures.
Specific gravity: 0.96 (it floats) – will not absorb water.
Chemically inert. Resistant to acids and alkalis at room temperature.

2.3 BIRD NETTING HARDWARE

- A. Installer to contact manufacturer for up-to-date information and recommendations for bird netting hardware applications, item combinations and new items and procedures.
- B. Available in Tensioned Cable Hardware system, the Poly Hardware system or a hybrid system that combines methods from different fastening procedures. Choose the hardware system that best suits the netting installation and conditions.
- C. Tensioned Cable Hardware: Choose the Connection, Anchoring, Cable Guide and Finishing hardware that best suits the installation surface and conditions. Hardware combinations can be mixed to suit changing surface materials and conditions. Note: cable hardware is NOT for load lifting.

Connection hardware:

Net Cable: Aircraft grade, 302/304 stainless steel, 7x7, 49 strand, 3/32" (2.2mm) diameter cable with 900 lb. (407kg) breaking strength. In 250' (76.2m) and 500' (152.4m) spool lengths. Hardware spacing determines max cable run lengths.

Turnbuckles: Stainless steel, hook & eye turnbuckles - three sizes.

Small: Max cable run: 25 feet (7.6m). Safe working load 360 lbs. (163kg). Medium:
Max cable run: 50 feet (15.2m). Safe working load 500 lbs. (226kg).

Ferrules: Zinc plated copper ferrules for 3/32" (2.2mm) cable. Acceptable connection for cable runs up to 25' (7.6m) max. Always use 2 ferrules per connection. Always use in conjunction with Cable Thimble.

Wire Rope Clamps: Galvanized or stainless steel for 3/32" (2.2mm) diameter cable. Recommended connection for all cable runs. Mandatory connection for cable runs over 25' (7.6m). Always use 2 clamps per connection. Always use in conjunction with Cable Thimble.

Cable Thimble: Stainless steel cable thimble for 3/32" (2.2mm) diameter cable. Cable Thimble prevents cable fraying and creasing when tensioning cable system.

Cable Anchoring Hardware:

Eyebolts: for steel, iron, and heavy gauge sheet metal. Extreme duty stainless steel eyebolt, 2" (5.1cm) long, 9/16" I.D. (14.2mm) with 1/4-20 stainless steel hex nut. Maximum spacing between eyebolts: 50' (15.2m).

Screw Eyes: for wood beams, heavy to medium gauge sheet metal and wood core surfaces. Extreme duty stainless steel screw eyes 2" (5.1cm) long, 17/32" I.D.

(13.5mm). Pilot holes recommended for all surfaces. Maximum spacing between screw eyes: 50' (15.2m).

Eyebolts and Machine Screw Anchors: for concrete, stone, masonry block, brick and pre-cast surfaces. Eyebolt specs are same as above.

Machine Screw Anchor: Zinc plated anchor – 1/2" (12.7mm) diameter x 1" (25.4mm) deep with 1/4-20 threads inside. Setting tool included with anchors.

Cable Guide Hardware:

Small Screw Eyes: for wood, medium/light gauge sheet metal and wood core surfaces. Heavy duty, stainless steel, 1-3/16" long x 7/32" I.D. (31mm long x 5.3mm I.D.). Maximum spacing: 24" (61cm) O.C.

Small Eyebolts: for steel, iron, and heavy gauge sheet metal. Heavy duty, stainless steel, 1 3/8" long x 9/32" I.D. (35mm long x 7.1mm I.D.). Maximum spacing: 24" (61cm) O.C.

Sidewinders: for heavy gauge sheet metal, structural steel up to 1/2" thick and solid concrete surfaces. Sidewinders for steel are self-drill, self-tap items, no pilot required. Sidewinder for concrete requires pilot hole. Maximum spacing: 24" (61cm) O.C. Sidewinders require the Driver Socket.

Finishing Hardware:

Net Rings: attaches the netting mesh to the cables, closes seams, and fastens the Net Zippers to the K-Net HT mesh.

Net ring quantity requirements per attachment:

Netting to cable: Use 16 net rings per foot (each netting mesh).

Lapped seams: Use 32 net rings per foot (1 per mesh each side of seam).

Zipper Installation: Use 32 net rings per foot (1 per mesh each side of zipper).

Net Zipper: Allows for access to areas behind the bird netting installation. Available in 2 ft. (61cm), 4 ft. (122cm) and 8 ft. (244cm) lengths. Heavy duty, marine-grade, black zipper with 3/4" (1.9cm) fabric tape, open top and auto lock slider.

- D. Poly Hardware: All poly hardware is made from UV stabilized black polypropylene.

Hardware combinations can be mixed to suit changing surface materials and conditions.

Poly Clip: Perimeter fastening. Secure to perimeter with hardware recommended by manufacturer. Maximum spacing: 12” (30.5cm) O.C.

Net Ties: Multi-purpose fastener. Quickly fastens the netting fabric to all types of objects. Use to prevent netting sag or loose fitting nets by securing the netting to objects above or behind netting installation. Three sizes to choose from.

Poly Cord: Multi-purpose fastener. Reinforce seams, patch tears, close circular openings, use for overhead support, etc.

2.4 SURFACE DISINFECTANTS

- A. Steri-Fab: surface disinfectant and bactericide to neutralize bird waste. Do not use with Microcide-SQ on the same surface.
- B. Microcide-SQ: surface cleaner and deodorizer to sanitize surface and remove any residual odor from bird inhabitation. Do not use with Steri-Fab on the same surface.
- C. Microsan: anti-bacterial soap and lotion to prevent disease transmittal after working around surfaces contaminated with bird & animal wastes. Use to compliment personal protection equipment standards (PPE).

PART 3 - EXECUTION

3.1 INSPECTION

- A. Visually inspect the surfaces that will receive the netting hardware and all areas that will end up behind or inside the netting installation. Note damaged surfaces or incomplete construction that could compromise the bird netting installation.
- B. Note all areas, surfaces or objects that may require maintenance or periodic replacement after the bird netting is installed (i.e. lights, electrical equipment, etc.). Use the appropriate netting accessories to allow access behind the installed netting system.
- C. Note any objects or conditions that could damage the installed bird netting. Install the K-Net HT in such a manner as to avoid these conditions.

3.2 PREPARATION

- A. Field Measurements: Verify dimensions of the areas to be enclosed. Make sure you have sufficient quantity of bird netting, netting hardware and surface cleaning products to properly install the K-Net HT Bird Netting System.

3.3 SURFACE CLEANING

- A. All surfaces to be clean, dry and free of obstructions before bird control is installed.

- B. If bird waste is present, treat, neutralize and safely remove all bird waste from installation surfaces. Installer must follow all cities, state and federal regulations regarding the proper removal and disposal of bird droppings.
- C. Use Nixalite's surface cleaning products to neutralize any bird droppings, nests and related waste materials that may be present. Allow all surfaces to air dry completely, and then reapply to sanitize and deodorize the surface before proceeding. Strictly follow treatment instructions provided with Nixalite's surface cleaning products.
- D. Use Nixalite anti-bacterial personal protection products to help prevent disease transmittal when working around surfaces contaminated with bird droppings.

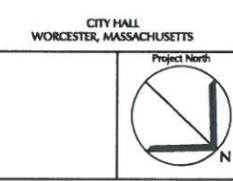
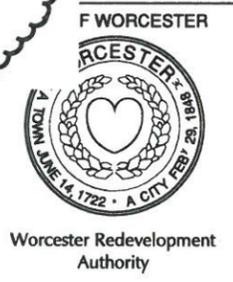
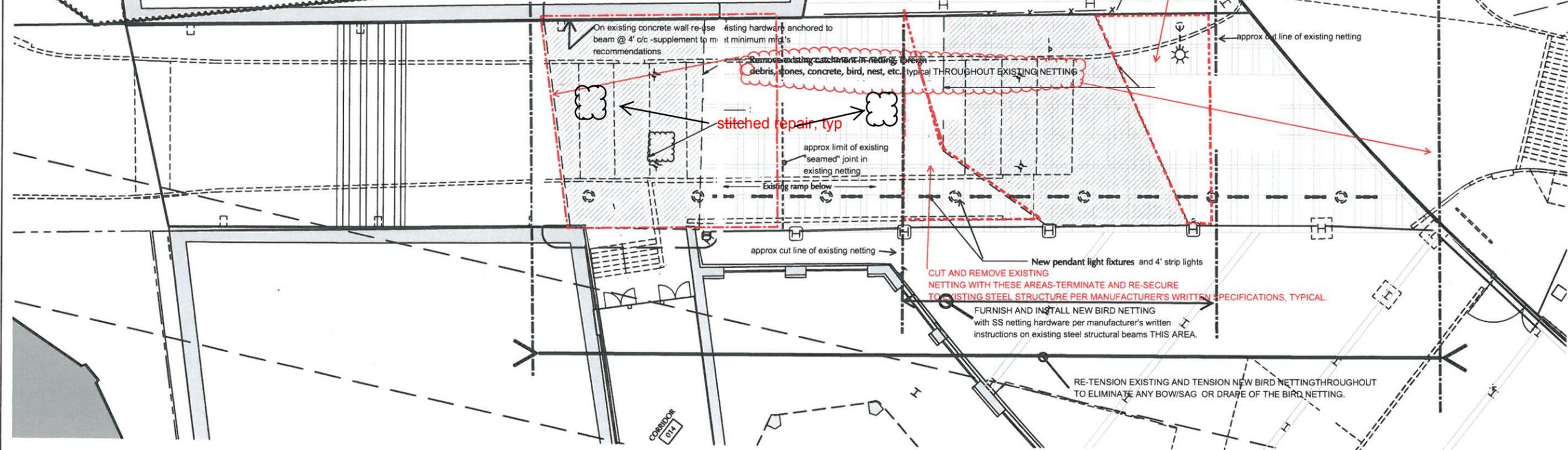
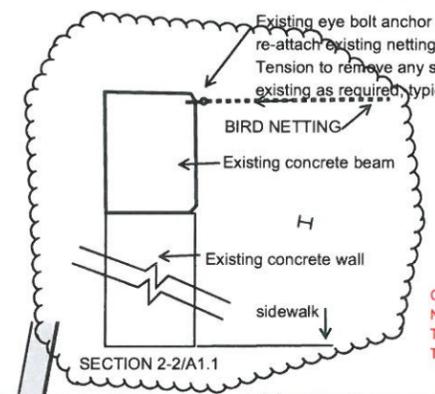
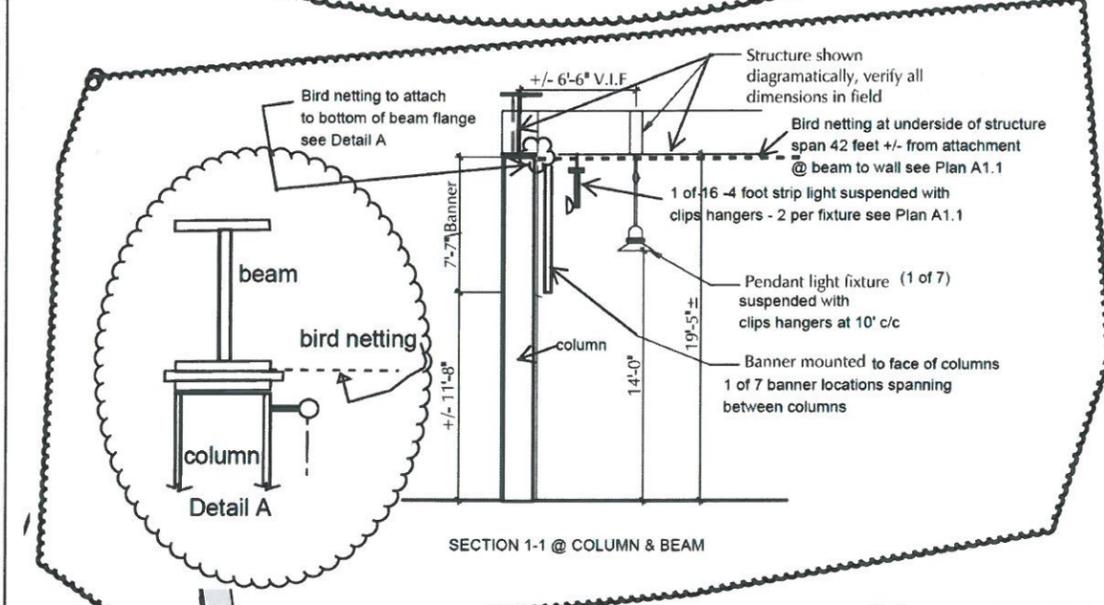
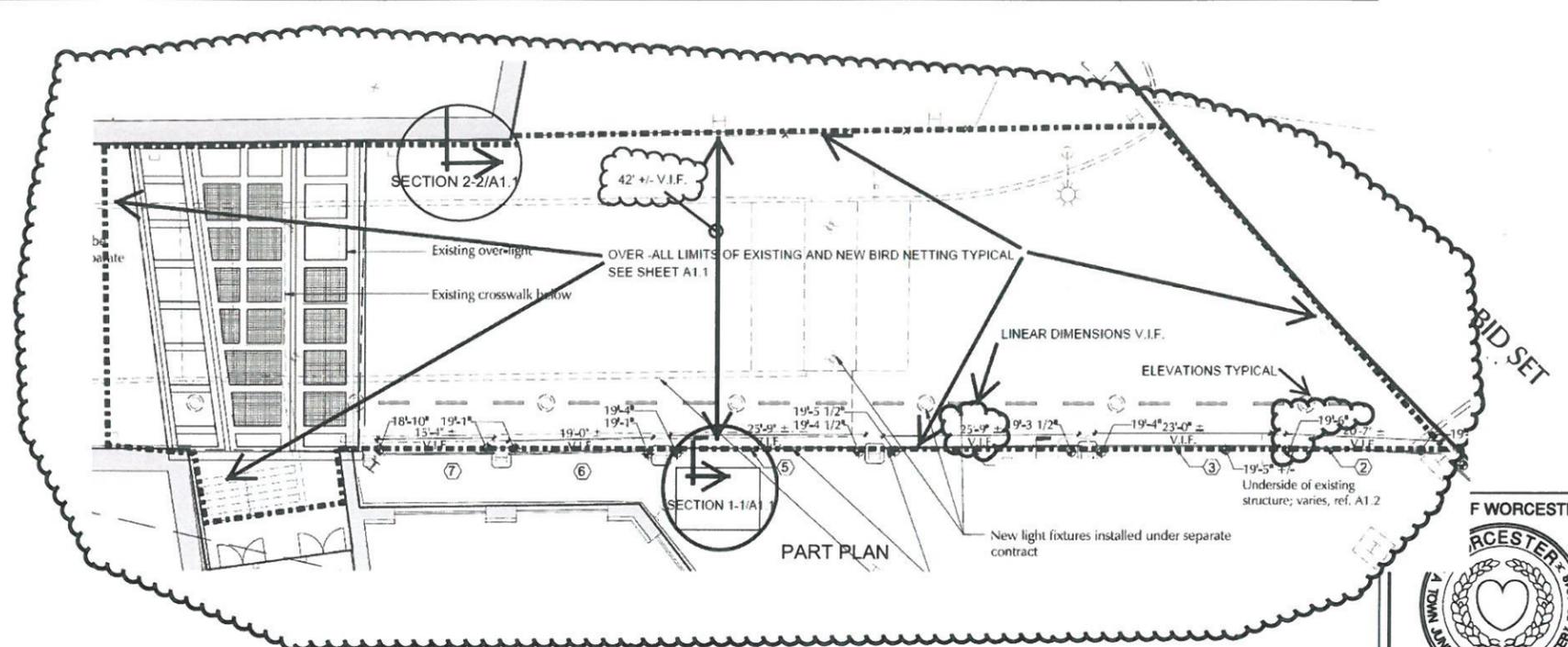
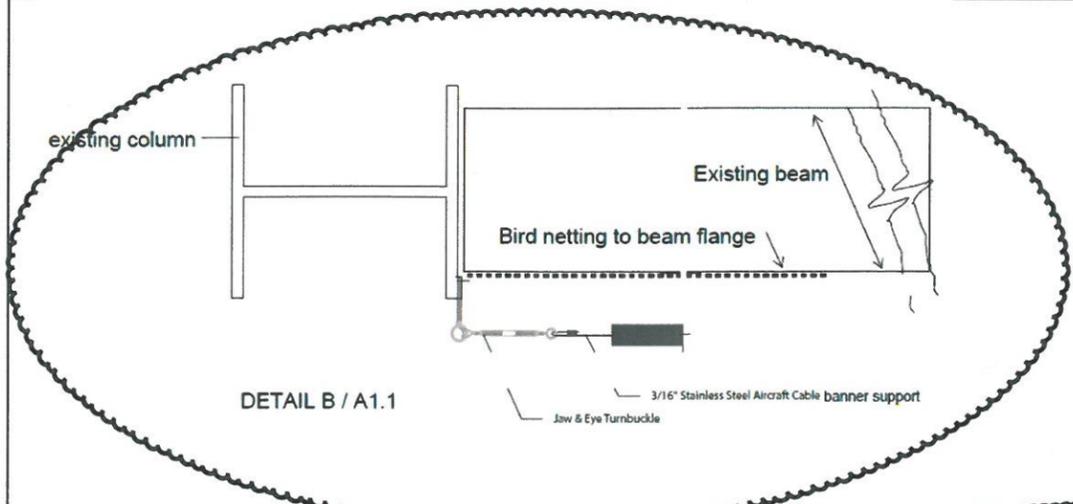
3.4 INSTALLATION

- A. Install the bird netting hardware as recommended by manufacturer. General order of installation: install perimeter and support hardware; attach bird netting to installed hardware; install access or additional support hardware as specified.
- B. Install K-Net HT as recommended by the manufacturer. If necessary cut the K-Net HT to fit the area. If multiple pieces are needed, join the pieces together with the recommended seam fastening hardware.
- C. Install K-Net HT to avoid contact with machinery, vehicles, extreme heat, tree branches, etc. Make necessary adjustments to keep netting a sufficient distance from these objects or conditions.
- D. Finished K-Net HT installation to be taught, free of wrinkles, gaps and openings.

3.5 ADJUSTMENTS / CLEANING

- A. Remove debris and waste materials from project site.
- B. Inspect finished installation. Make any adjustments needed to conform to manufacturer's K-Net HT installation guidelines.

SECTION 10 81 13



PROJECT

UNION STATION
CAPITAL
IMPROVEMENTS

BIRD NETTING

2 Washington Square
Worcester, MA 01604

TITLE

Reflected Ceiling Plan