FENCE REPAIRS + INSTALLATION / CITY - SPECIFICATIONS

BID #: CR-8354-J5

The City is seeking a contractor to provide fencing repair and installation services on an as-needed basis. Vendor shall have the capability to perform, repair, assemble, install and fabricate all types of fencing including, but not limited to the following types: chain link, iron security, wooden fences and guardrails in accordance with City of Worcester Parks, Recreation, and Cemetery standards and requirements.

General

- No One (1) single job may exceed $10,000.00.
- All materials, supplies, parts, etc. not specifically listed in the pricing sheets, required to be procured by the contractor for the faithful performance of this contract may be charged to the City of Worcester at a rate not to exceed 15% over the contractor's net cost.
- The Contractor shall respond by telephone to the designated City representative within two (2) business days from the time of initial notification of a request for quotes and/or service. Project work shall begin as scheduled with the City representative and shall process with satisfactory progress as determined by the City Representative, until completion.
- The Vendor must be capable to respond to any emergency service calls within a four (4) hour period from notification by the City.
- Regular Work Hours are 7:00 A.M. to 4:00 P.M. Monday through Friday, unless deemed an emergency by the city representative.
- The Contractor will be required to provide cost estimates to the City when requested. All estimates shall be provided at no cost to the City.
- Any work performed by the contractor without a valid City of Worcester Purchase Order in place is subject to non-payment.

Performance Requirements

- Periodic evaluations will be conducted by the City to assist in determining contractor performance and adequacy.
- Should the contractor fail to maintain an effective level of performance, the City reserves the right to terminate the contract upon thirty (30) days written notice to the contractor. Such termination shall be without penalty to the City of Worcester.

Contractor Qualifications

The contractor must provide with bid evidence of expertise of not less than five (5) years as a fence installer. This evidence should include proof of a permanent facility including the address, the number of employees with the ability to perform this function (if applicable).

The contractor must have the proven capability to provide for the repair, assembly, installation or fabrication of chain link, iron, security or wooden fences and guardrails. The contractor must possess the skill and ability to install or repair fencing using mechanical or hand tools. A statement specifying the vendor's ability to provide such service requirements must accompany proposal.

Bidder shall provide below evidence of their experience and ability to provide proper service under the requirements of this contract. Please list current and completed relevant work experience below (bidders may include attachments if desired).

Regular Service Calls

Primary Contact:	
Person for requesting service:	
Person's title:	
Person's telephone #(s):	
Secondary Contact	
Person for requesting service:	
Person's title:	
Person's telephone #(s):	

Mileage

The City of Worcester cannot be charged for any time, mileage fees or other costs while a tradesman is traveling to and from a site. The vendor shall take into account this cost within their unit pricing.

Materials / Equipment

It will be the requirement of the contractor to provide all the tools and equipment needed to do the job. The worker must bring the proper and basic tools and supplies as is applicable with him when he first visits the site. The City of Worcester shall not be charged for the use of the equipment that the contractor may need to complete a job. The City of Worcester shall not be responsible for any of the worker's equipment that is lost, stolen, or damaged.

The worker shall obtain any supplies he will need to complete the job at the most expeditious and cost- effective location to the site. Another factor in determining where the supply shall be obtained will be the availability of the supply. The City of Worcester cannot be charged in excess of the net cost of the material to the contractor plus an allowance for overhead and profit-cost plus. The net cost of the material is defined as the price that the contractor was charged. The City of Worcester pays no sales tax

therefore the net cost must reflect this. The contractor's mark-up may not exceed the stated amount in this bid.

The contractor may use the site's existing services if they are available in order to complete a job. This would include water and electricity. This may be withdrawn if it is determined by the City of Worcester that the contractor is abusing the privilege. The contractor may be charged for the use of the services if it is determined that the contractor is abusing the privilege.

Overcharging (Materials)

If the City of Worcester has any questions as to the validity of an invoice, the City of Worcester will notify the vendor of this in writing. The vendor will have 5 business days to answer any and all questions and to provide proof of such items as:

- Materials/outside services
- Copy of invoice stating the amount that the vendor was charged for supplies/services etc. Invoice must be a legitimate copy to be forwarded to the City of Worcester.
- The invoice must be dated.
- The invoice must have the company's name and address and telephone number along with a contact person's name.
- Proof that the invoice was paid by the contracting company.

Technical Specifications & Drawings
Fence Repair and Installation – Parks, Recreation & Cemetery

Chain Link Fence

See attached detail

- When removing fence posts the Contractor shall completely fill and compact post holes with dirt so they are level with the adjacent area. The Contractor shall not fill the post holes with the concrete removed from the old fence posts.

- Contractor will be responsible for removing and disposing any existing fencing. Upon removal of existing fencing, the City reserves the option to retain fencing removed by Contractor

Wooden Guard Rail

Materials:

The contractor will be required to submit a sample of each material to the owner for approval before ordering materials. The sample shall demonstrate the final surface color, finish and shape that will be provided throughout the project. All samples shall be full size.

Wooden posts, wooden rails shall be made of southern yellow pine, CCA treated to retention level of .40. Fasteners shall be hot dipped galvanized in accordance with ASTM A153.

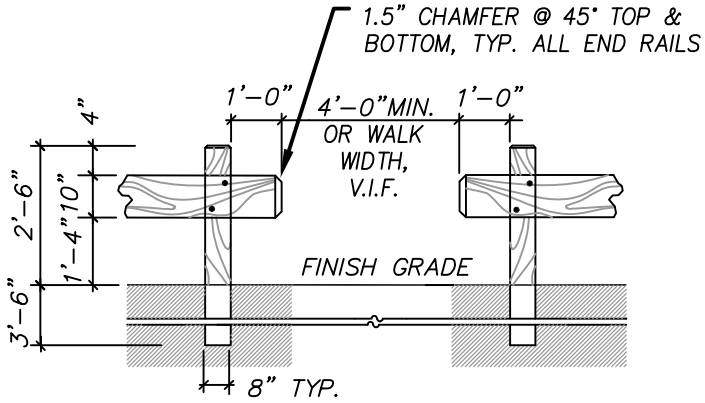
See Attached "Parks, Recreation, & Cemetery Division Standard – Wood Guardrail and Pipe Bollard Detail" (D-1)

Fence Removal

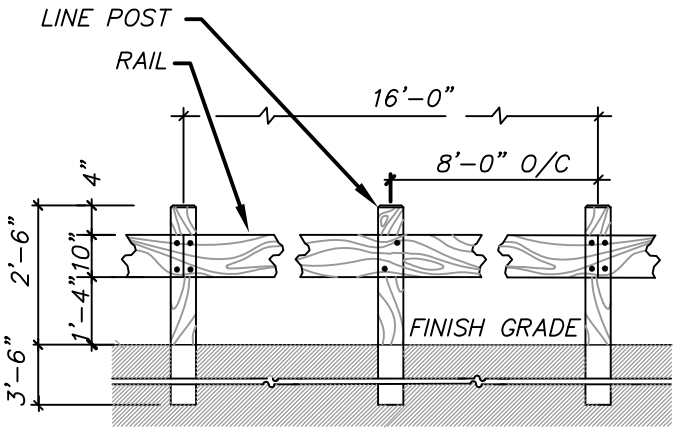
When removing fence posts the Contractor shall completely fill and compact post holes with dirt so they are level with the adjacent area. The Contractor shall not fill the post holes with the concrete removed from the old fence posts.

Contractor will be responsible for removing and disposing any existing fencing. Upon removal of existing fencing, the City reserves the option to retain fencing removed by Contractor.

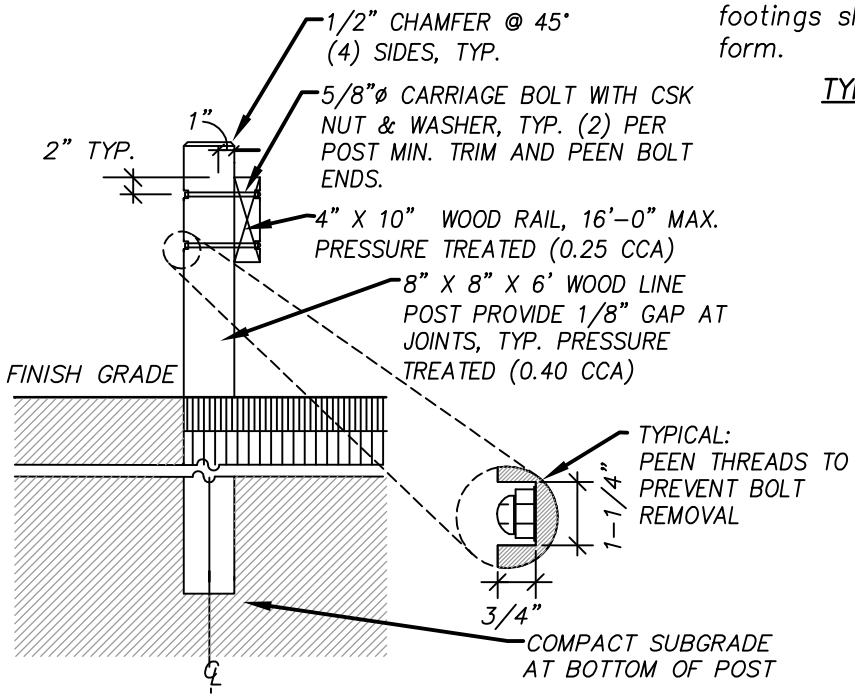
See Attached "Parks, Recreation, & Cemetery Division Standard Details - Chain Link Fence Framework and Fabric" (D-2)



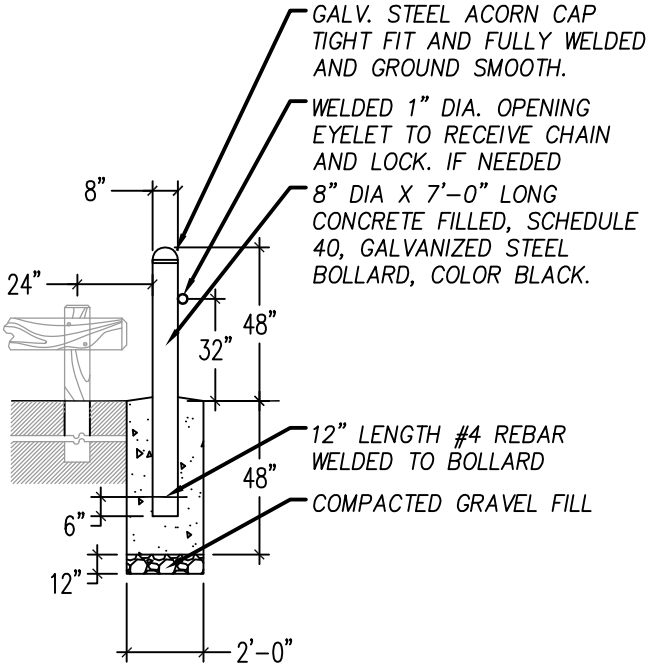
TYPICAL RAILING OPENING / END POST



TYPICAL RAILING ELEVATION



TYPICAL RAILING SECTION



1. Steel pipe for bollards shall be seamless steel pipe in accordance with ASTM 53 Type F.
2. All Hardware shall conform to ASTM A307 requirements and shall be galvanized Per ASTM A153.
3. Welding shall be in conformance with AWS codes. All connections shall be formed with fish-mouthed joints full seam welds, grounded smooth and sanded.
4. All bollards shall be set plumb and level. Concrete footings shall be installed using a sonatube for the form.

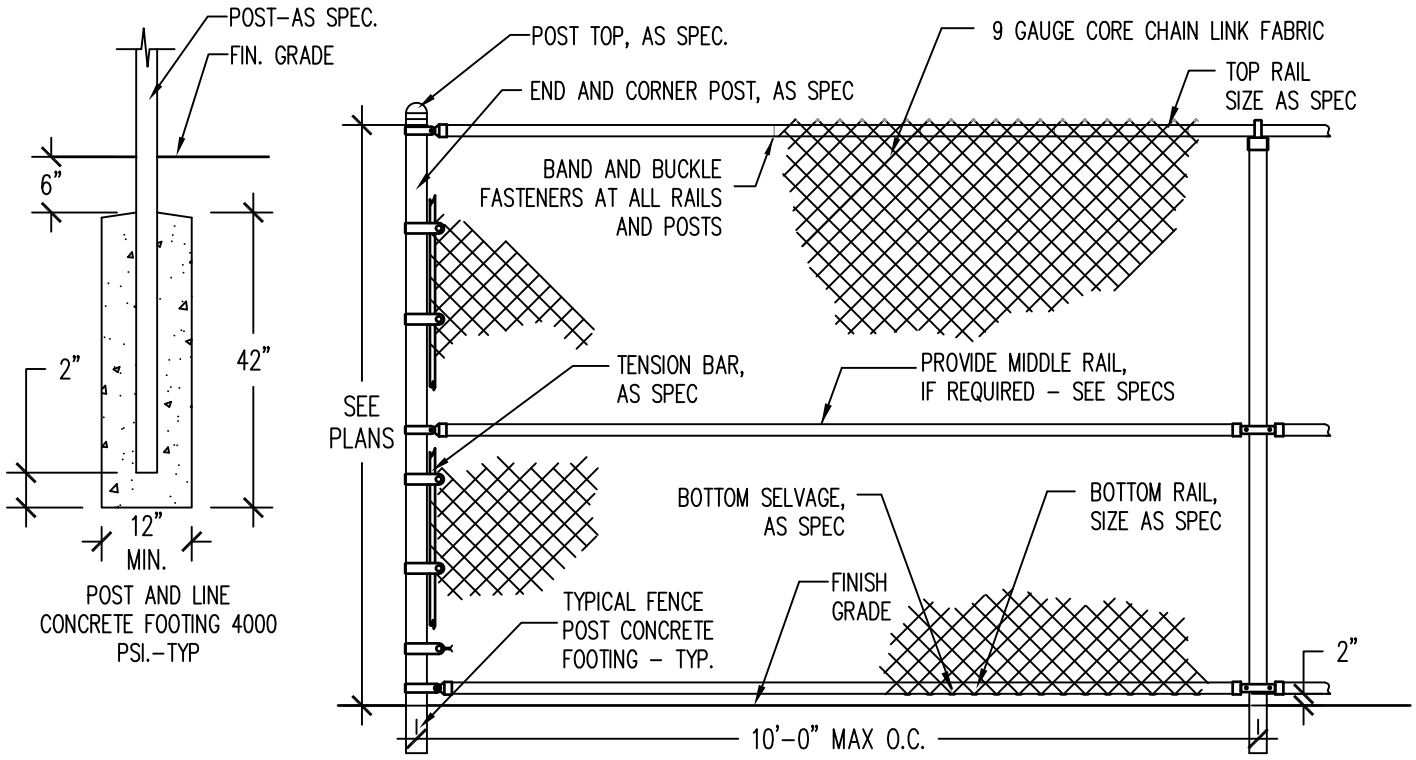
TYPICAL PIPE BOLLARD ELEVATION

Dept. Of Public Works & Parks
Capital Projects Division
ROBERT C. ANTONELLI, JR.
Assistant Commissioner

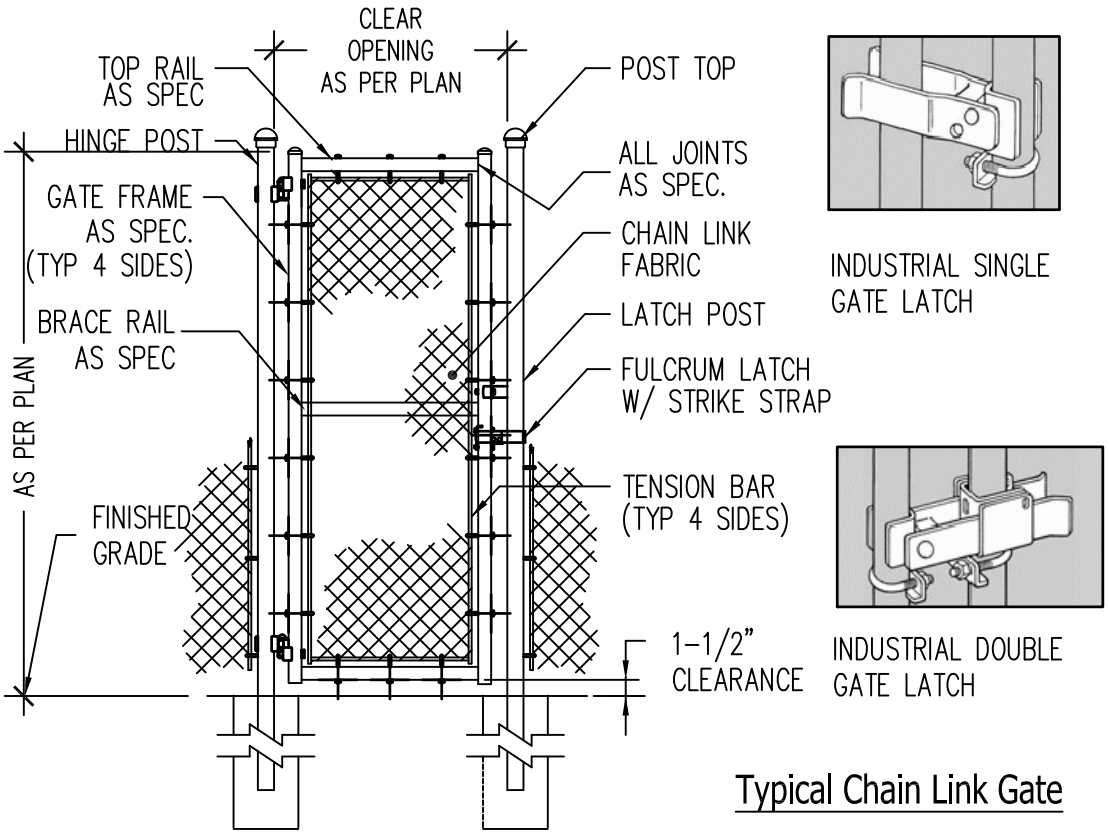
Parks, Recreation & Cemetery Division Standard Wood Guardrail and Pipe Bollard Detail

Not To Scale

D-1



Typical Chain Link Fence And Footing



INDUSTRIAL SINGLE
GATE LATCH

INDUSTRIAL DOUBLE
GATE LATCH

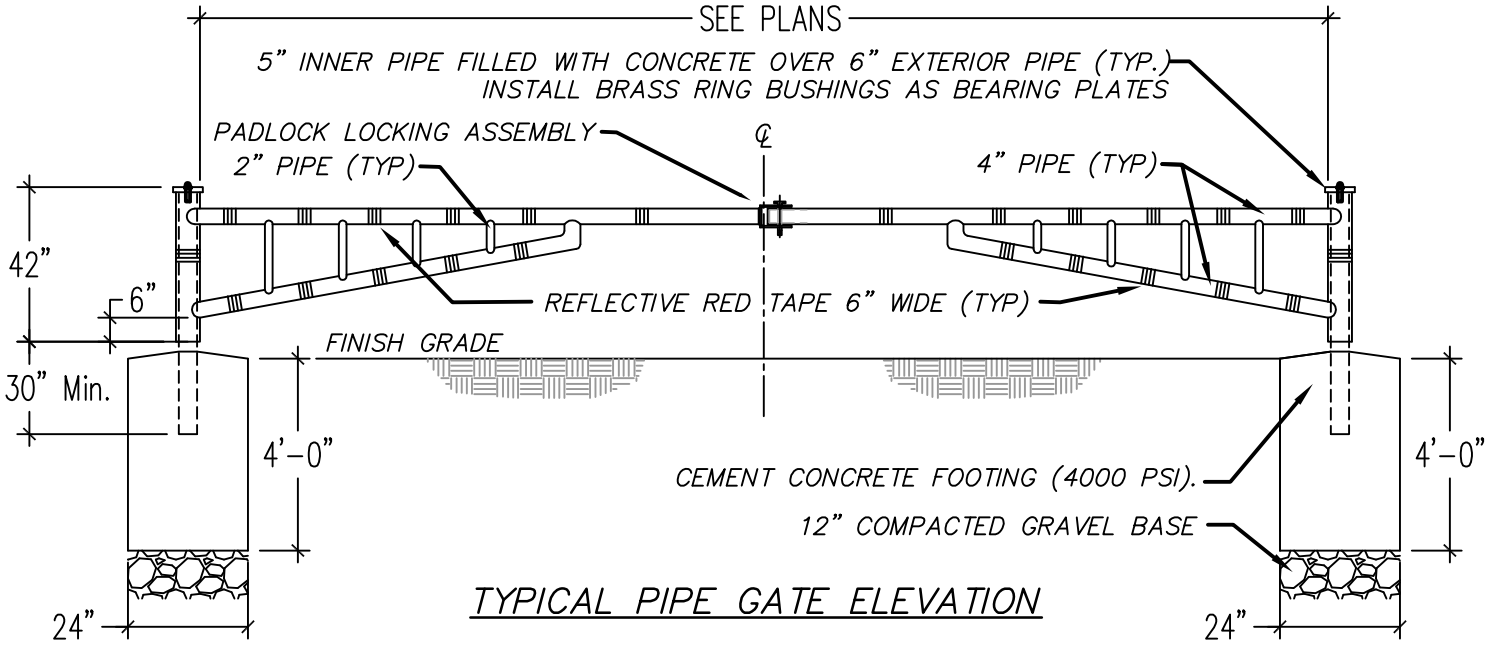
Typical Chain Link Gate

Dept. Of Public Works & Parks
Capital Projects Division
ROBERT C. ANTONELLI, JR.
Assistant Commissioner

Parks, Recreation & Cemetery Division Standard Details - Chain Link Fence Framework and Fabric

Not To Scale

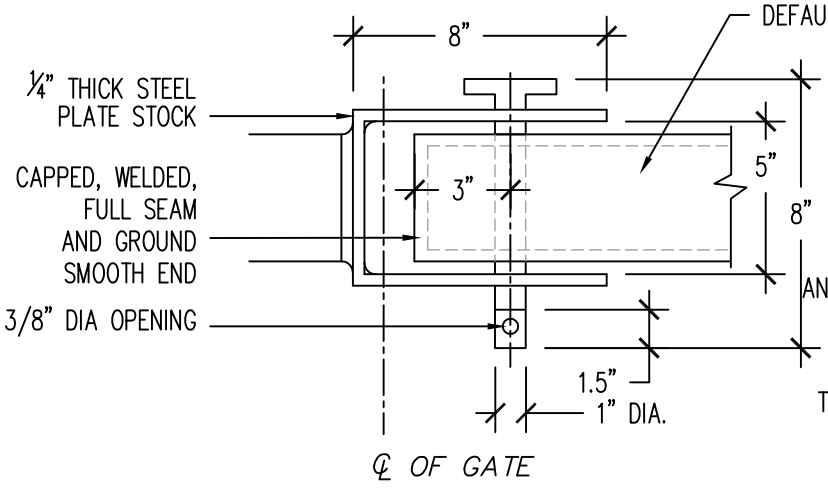
D-2



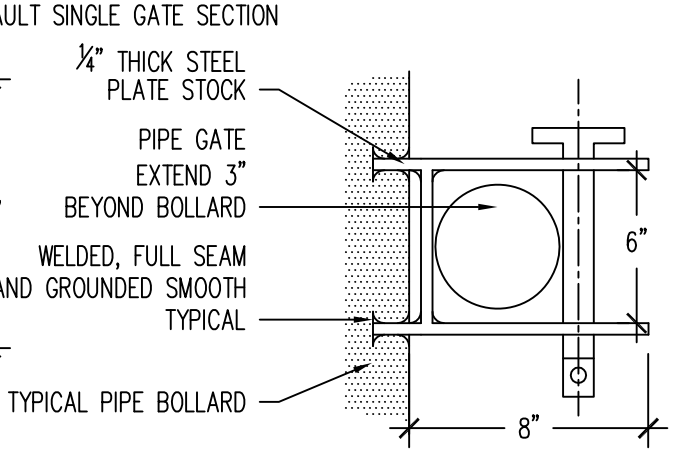
TYPICAL PIPE GATE ELEVATION

GENERAL NOTES:

1. Steel pipe for gates shall be seamless steel pipe in accordance with ASTM 53 type F.
2. All hardware shall conform to ASTM A307 requirements and shall be galvanized per ASTM A153.
3. Welding shall be in conformance with AWS codes. All connections shall be formed with fish-mouthed joints full seam welds, grounded smooth and sanded.
4. All gates shall be set plumb and level. Concrete footings shall be installed using approved formwork and rebar spacing (if required). Submit shop drawing for approval/review.
5. Gate must be free to open a min. of 95° from closed position.
6. Gate to be primed, enameled and painted. Paint type to be approved by owner. Color is Black.



DOUBLE GATE LOCKING ASSEMBLY DETAIL



STANCHION / SINGLE GATE LOCKING ASSEMBLY DETAIL

Dept. Of Public Works & Parks
Capital Projects Division
ROBERT C. ANTONELLI, JR.
Assistant Commissioner

Parks Division Standard
Single or Double Pipe Gate Detail
Not To Scale

D-3

THE CITY OF WORCESTER

WPRC DIVISION

CHAIN LINK FENCE FRAMEWORK AND FABRIC
WOOD POST AND GUARDRAILS

SPECIFICATIONS

Rev. 05-17-2021

DEPARTMENT OF PUBLIC WORKS AND PARKS
Parks, Recreation and Cemetery Division

John Westerling, Commissioner
Robert C. Antonelli, Jr., Assistant Commissioner

CHAIN LINK FENCE FRAMEWORK AND FABRIC

General

1. This work includes the installation of galvanized, aluminized and polymer coated fence framework and fabric of various heights in accordance with these specifications and in conformity with the details, lines and grades shown on the plans or established.

Construction Requirements

1. Locate and install all posts in concrete (4000 psi at 28 days), with minimum depth of 48 inches below finish grade and minimum diameter of twelve inches or four times the diameter of post, whichever is greater. Typical spacing of post shall be 120 inches max on center. Core spacing/location of post on the precast concrete wall shall be coordinated with shop drawings and adjusted to be located in the middle of top "anchor" block. If applicable, refer to plans for post concrete footing depth and size for batting cage, bullpen, backstop and netting framework. Install plumb and true to line and grade and to the height as indicated within the drawings. All posts shall have continuous horizontal rails at the top, middle (for fence design height 72 inches and greater), and bottom. In addition, all end and corner posts shall be braced to the nearest line post with center brace rails. Outside sleeve type top rail couplings shall be placed a maximum of twelve (12) inches from posts.

2. Chain link fence shall have continuous top and bottom rails. Refer to plans for rail layout for batting cage, bullpen and backstop and netting framework. Top and bottom edge of fence fabric shall have knuckled edges. Fabric shall be stretched uniformly taut and as tight as possible, true to line and grade and complete in all details. Install tension bars at corners.

3. All chain link fence fabric shall be fastened on the outside of the posts unless directed otherwise by the Owner. The fabric shall be properly stretched and securely fastened to the posts and between posts the top and bottom of the fabric shall be fastened to the horizontal braces as specified, herein. The fabric shall be fastened to end and corner posts with tension bars and stretcher bar bands spaced at one (1) foot intervals.

4. Fabric shall be aligned so that top and bottom shall extend one half the height of the "diamond" beyond outer edge of top and bottom of the horizontal rail. The fabric shall also be one (1) inch maximum above finish grade. The fabric shall be tied (as per item 5 below) to all line posts, top, middle and bottom rails every six (6) "diamonds" as measured horizontally or vertically. Overlapping fence fabric sections shall overlap one full height of the "diamond" and be centered on the horizontal rail.

5. All fabric, shall be fastened to all line posts and horizontal rails with 0.020" thickness, 200/300 series stainless steel ½" wide bands, with a minimum breaking strength of 850 lbs., 1/2" band capacity ear-lokt design buckles to be manufactured with 0.050" thick material, 201/301 series stainless steel. Fabric for bleachers shall be attached at each vertical post only, three bands per post. All bands shall be pulled tight and raw ends of steel bands shall be secured in buckle by folding ear tabs around steel bands as per manufacturer's recommended installation procedure. No sharp edges shall protrude from band-it buckles.

Materials

Fabric, posts, gate frames, gate hinges, gate stops, braces, rails, stretcher bars, truss rods, post caps, stretcher bar bands, tension wire shall and other parts shall be of steel, pressed steel or approved equal except that post tops and rail ends may be of aluminum. **No malleable iron, ductile iron materials will be accepted**. The Contractor shall supply a notarized mill certification from manufacturer that all materials used have been tested and fully comply with the specifications specified herein.

1. Fabric: The fabric shall consist of No. 9 gauge (0.148 inch core) wire, 2-inch diamond mesh typical and 1.75-inch diamond mesh for fabric adjacent to tennis courts. All fabric shall be knuckled at both selvages.

Public side of fabric shall be installed in accordance with the Owner's direction. The height of the fabric as shown on plans and details shall be typically one piece unless directed otherwise by Owner. Fabric for bleachers will be as per manufacturer's standard.

(a) *Galvanized /Aluminized Coated Fabric:* All materials used shall conform to the requirements of ASTM A392 Class-2, or ASTM A491. Except aluminum alloy items, shall conform to ASTM-B211, B221 and B429.

(b) *Polyvinyl Chloride (PVC) Coated Fabric:* Fence fabric shall be zinc coated in accordance ASTM A392 Class-1 or aluminum-coated in accordance with ASTM A 491(TABLE 3). PVC coating shall be applied in accordance with ASTM F668 Class-2a. The color of the fabric shall be black and in accordance with ASTM F934.

2. Framework: Type II, Group IC round steel pipe (electric resistance welded), cold-formed as per ASTM F1043-00 Standard, with minimum yield strength of 50,000 psi. The external zinc coating shall be Type B, zinc with polymer film, 0.90 oz / sq. ft, minimum zinc coating with a chromate conversion and a verifiable polymer film. The internal coating shall be Type B, zinc 0.90 oz./sq.ft. Minimum or type D, zinc pigmented, 81% nominal coating with 0.30 mils minimum thickness. Gate framework joints shall be welded and coated in accordance with Practice A780, employing zinc-rich paint. Refer to plans for framework sizes for batting cage, bullpen, backstop and netting framework.

(a) End, Corner and Pull Post. Galvanized steel, physical pipe dimension and weights as follows:

(1) Up to 12-foot fabric height: 2.875-inch OD pipe, 4.64-lbs. /lin. ft.
(2) For basketball and tennis courts: 4.000-inch OD pipe, 6.56-lbs. /lin. ft.
(3) For combo batting cage/bullpen and backstop: 4.000-inch OD pipe, 6.56-lbs. /lin. ft.
(4) Maximum Spacing between all posts is 10'- 0" On Center.

(b) Line Posts. Galvanized steel, physical pipe dimension and weights as follows:

(1) Up to 12-foot fabric height: 2.375-inch OD steel pipe, 3.12-lbs. /lin. ft.
(2) For basketball and tennis courts: 2.875-inch OD pipe, 4.64-lbs. /lin. ft.
(3) For combo batting cage/bullpen and backstop: 4.000-inch OD pipe, 6.56-lbs. /lin. ft.
(4) Maximum Spacing between all posts is 10'- 0" On Center.

(c) Gate Posts. Galvanized steel, single gate widths, physical pipe dimension and weights as follows:

(1) Up to 6-feet: 2.875-inch OD pipe, 4.64-lbs./linear ft.
(2) Over 6-feet to 13 feet: 4.0 inch OD pipe, 6.56-lbs./ linear ft.
(3) Gate frames as per ASTM F 900-94.

(d) Rails (Top, middle and bottom rails): Galvanized steel, manufacturer's longest lengths joined by six-inch (6") long sleeves, rail shall run continuously along top of fence. Bottom rail shall be joined at line posts with boulevard clamps. Minimum pipe sizes and weights as follows:

(1) 1.660-inch OD pipe, 1.82-lbs. /lin. ft. minimum.
(2) Top, Bottom and MIDDLE rails are required for fencing top of wall OR any fence designated to be six (6) feet and taller.

(e) Couplings: Expansion types, approximately 6-inch long, install one sleeve for each 500 foot run. Standard couplings are installed at each rail end to form one continuous top rail.

(f) Attaching Devices: Provide fittings for attaching top rail securely to each gate corner pull and end post.

(g) Sleeves: Galvanized steel pipe not less than 6 inches long and with inside diameter not less than 1/2-inch greater than outside diameter of the post pipe. Provide steel plate closure welded to bottom of sleeve of width and length not less than 1-inch greater than outside diameter of sleeve.

(h) Post Brace Assembly: Manufacturer's standard adjustable braces at end of gateposts and at both sides of corner and pull posts. Provide horizontal brace located at mid-height of fabric. Use same material as top rail for brace, and truss to line posts with 3/8-inch diameter galvanized steel truss rods and adjustable tightener.

(i) Post Tops: Galvanized steel, weather-tight closure cap for each tubular post. Furnish caps with openings to permit passage of top rail.

(j) Tension Bars: Galvanized steel, one piece lengths equal to full height of fabric, with minimum cross-section of 3/16 inch x 3/4 inch. Provide tension bar for each gate and end post, and two for each corner and pull post. Stretcher Bar Bands will be manufacturer's standard.

(k) Gate Cross-Bracing: 3/8-inch diameter galvanized steel truss rods and adjustable tightener.

(l) Non-Shrink, Non-Metallic Grout: Premixed, factory-packaged, non-corrosive, non-staining, non-gaseous, exterior grout approved by the Engineer.

(m) Single and Double Swinging Gate and Hardware: Swing gates and hardware shall be manufactured to meet the requirements of ASTM F900. Unless indicate otherwise, and to meet ADA requirements, the minimum clear opening for all single gates (as measure with gate perpendicular to framework) shall be 36 inches.

(1) Hinges. Industrial butt hinges, size and material as required for the gate size. Non-lift-off type, offset to permit 180 degree gate opening. Provide one pair of hinges for each leaf, gates eight feet and taller in nominal height shall have three hinges per leaf. Spot-weld to post and paint (non polymer coated), to prevent rotational movement.

(2) Latch (for both single and double gates). Pressed steel, industrial series gate latch, straight fork type, provide latch catch for double gates, designed to permit operation from either side of gate, with padlock eye as integral part of latch catch. Provide two latch and catch for double gates. All gates shall be equipped with one gate stop.

(n) Sleeves if required for fence shall be galvanized steel pipe conforming to ASTM F1043 sizing as required to accommodate posts.

Polymer Coated Framework

Shall meet the above-mentioned specification for materials. The framework shall be subjected to a complete thermal stratification coating process (multi-stage, high-temperature, multi-layer) including, as a minimum, a six-stage pretreatment/wash (with zinc phosphate), an electrostatic spray application of an epoxy base, and a separate electrostatic spray application of a polyester finish. The material used for the base coat shall be a zinc-rich (gray color) thermosetting epoxy; the minimum thickness of the base coat shall be two (2) mils. The material used for the finish coat shall be a thermosetting "no-mar" TGIC polyester powder; the minimum thickness of the finish coat shall be two (2) mils. The stratification-coated pipe shall demonstrate the ability to endure a salt-spray resistance test in accordance with ASTM B117 without loss of adhesion for a minimum exposure time of 3,500 hours. Additionally, the coated pipe shall demonstrate the ability to withstand exposure in a weather-ometer apparatus for 1,000 hours without failure in accordance with ASTM D1499 and to show satisfactory adhesion when subjected to the crosshatch test, Method B, in ASTM D3359. The polyester finish coat shall not crack, blister or split under normal use. Painted framework and accessories are not acceptable, welded joints shall be top-coated to match frame color. Color of the polymer coated framework and accessories shall be black and in accordance with ASTM F934.

WOOD POST AND GUARD RAILS

PART I - GENERAL

1.01 SCOPE OF WORK

a. Under this Section the Contractor shall furnish all labor, materials, equipment and transportation required to furnish and install wood guardrails as located and detailed in the Contract Drawings and as specified herein.

b. All wood guardrail locations shall be marked out in the field for review and approval by the City Representative prior to installations.

1.02 REFERENCE STANDARDS AND SPECIFICATIONS

a. Reference to the standards, specifications and test of technical societies, organizations, and governmental bodies as made in the contract documents.

1. "Standard Grading Rules for West Coast Lumber".
2. AASHTO M 133: Preservatives and Pressure Treatment Processes for Timber
3. AASHTO M 168: Wood Products
4. AASHTO Standard Specifications for Highways and Bridges
5. American Wood-Preservers' Association (AWPA) Book of Standards
6. Western Wood Products Association (WWPA) Standard Grading Rules

1.03 SHOP DRAWINGS

a. Shop drawings or manufacturer's specifications shall be submitted in accordance with the provisions of the SPECIAL CONDITIONS.

b. Submittals shall be made for all work furnished in this Section.

1.04 SAMPLES

a. Submit the following samples in accordance with the provisions of the SPECIAL CONDITIONS.

1. Submit samples and descriptive literature of all items specified by the Engineer.

PART II - MATERIALS

2.01 WOOD GUARDRAILS

a. All timber shall be Southern Yellow Pine, and shall be of the finest structural appearance. No planer chips are allowed in dressing. To minimize slivering, timbers of this grade must be free of wave, and edges must be eased with 1" bevel 45° radius (square edges are not allowed). Except as otherwise noted, characteristics and limiting provisions are in accordance with paragraph 131-A, Standard Grading Rules for West Coast Lumber. Timbers shall be of the sizes indicated on the drawings.

b. After all fabrication processes are complete; each wood member will be treated with an ACQ pressure preservative treatment in compliance with industry standards for structural wood specified for exterior use. Only preservatives deemed suitable by USEPA for skin contact may be used in the wood members.

c. All hardware shall be hot-dipped galvanized in accordance with ASTM-A153.

d. An "ASSOCIATION INSPECTION CERTIFICATE" shall be furnished by the Contractor, at his own expense, certifying that the grade and quality is fully in accordance with the requirements of the specifications. This certificate shall be issued by the association whose grading rules govern this particular class of wood. Wood that is "GRADE MARKED" by an accredited association will be accepted in lieu of the "ASSOCIATION INSPECTION CERTIFICATE".

PART III - EXECUTION

3.01 WOOD GUARDRAILS

a. The installation of the wood guardrails shall be in accordance with the dimensions and details indicated on the Contract Drawings and with these Specifications. If allowed by Owner, all cuts made in the field shall be painted with two (2) brush coats of approved wood preservative.

b. Prior to installation, the contractor shall field locate limits of the wood guardrail. Once the Owner has approved the location, the contractor shall install the wood guardrail.

c. Posts shall be set plumb, in hand or mechanically dug holes. Post holes shall be backfilled with approved materials placed in layers no greater than 12 inches and compacted to 95% density.

d. Rails shall be installed as shown in details.

e. All hardware shall conform to ASTM A307 requirements and shall be galvanized per ASTM 153.

PART IV - GUARANTEE AND ACCEPTANCE

a. Any defective elements shall be replaced in part or whole by the Contractor at no cost to the Owner.

End of Specifications

Fence Repairs + Installation / City - Pricing Sheet

Bid #: CR-8354-J5

Item #	Estimated Quantity	Unit of Measurement (LF = Linear Feet)	Item Description	Unit Price	Total Price
			MATERIALS ONLY - NO LABOR COST		
1	100	LF	Galvanized Metal Chain With 2" Openings – 4 Foot, 6 Guage	$ _____.____	$ _____.____
2	100	LF	Galvanized Metal Chain With 2" Openings – 4 Foot, 9 Guage	$ _____.____	$ _____.____
3	100	LF	Galvanized Metal Chain With 2" Openings – 6 Foot, 6 Guage	$ _____.____	$ _____.____
4	100	LF	Galvanized Metal Chain With 2" Openings – 6 Foot, 9 Guage	$ _____.____	$ _____.____
5	100	LF	Galvanized Metal Chain With 2" Openings – 10 Foot, 6 Guage	$ _____.____	$ _____.____
6	100	LF	Galvanized Metal Chain With 2" Openings – 10 Foot, 9 Guage	$ _____.____	$ _____.____
7	100	LF	Wood Guard Rails and Pipe Bollard Detail (Per Spec Drawing D-1)	$ _____.____	$ _____.____
			LABOR RATES	Per Hour Rate	Total Price
8	50	LF	Removal & Disposal of Old Fencing	$ _____.____	$ _____.____
9	150	LF	Installation of New Fencing and/or Guardrail	$ _____.____	$ _____.____
*Award to be based on this amount >>>>>				Grand Total*	$ _____.____

- Product shall be FOB point delivered without additional freight charges.
- The awarding authority reserves the right to cancel a purchase order if it appears that any job is not being performed as expeditiously as possible.
- All materials, supplies, parts, etc. not specifically listed in the pricing sheets, required to be procured by the contractor for the faithful performance of this contract may be charged to the City of Worcester at a rate not to exceed 15% over the contractor's net cost.