

**SECTION 00 62 76.13
SALES TAX FORM**

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PART 1 – GENERAL

1.1. SUMMARY

- A. The City of Madison is a qualifying tax exempt entity in the State of Wisconsin.
- B. The Contractor shall refer to *Section 102.9 – Bidders Understanding of the City of Madison Standard Specifications for Public Works Construction* for more information on Tax Exempt Status.
- C. This project constructs or remodels facilities owned by the City of Madison in Madison, Wisconsin.

1.2. RELATED SPECIFICATION SECTIONS

- A. Parts of this specification will reference articles within “The City of Madison Standard Specifications for Public Works Construction”.
 - 1. Use the following link to access the Standard Specifications web page:
<http://www.cityofmadison.com/business/pw/specs.cfm>
 - a. Click on the “Part” chapter identified in the specification text. For example if the specification says “Refer to City of Madison Standard Specification 210.2” click the link for Part II, the Part II PDF will open.
 - b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you to the referenced text.

1.3. TAX EXEMPT FORM

- A. The Contractor can access Wisconsin Sales and Use Tax Exemption Certificates (form S-211, Wisconsin Department of Revenue) from the City of Madison Finance website.
 - 1. City of Madison tax exempt information and signature by Purchasing Supervisor is already completed.
 - 2. Website: <http://www.cityofmadison.com/employeenet/finance/purchasing>
 - a. Under the title *Purchasing Forms*, scroll down to the form link titled *Sales Tax Exempt Form S-211*.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 – EXECUTION – THIS SECTION NOT USED

END OF SECTION

**SECTION 01 33 23
SUBMITTALS**

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PART 1 – GENERAL

1.1. SUMMARY

- 16 A. The Contractor shall be responsible for providing submittals for review. Submittals shall include but not be
17 limited to all of the following:
- 18 1. Equipment specified and pre-approved in the specification; to ensure quality, construction, and
19 performance specifications have not changed since final design.
 - 20 2. Equipment specified by performance in the specification; to ensure that the intended quality,
21 construction, and performance specified is met by the selected material or product.
 - 22 3. Shop, piece, erection, and other such drawings as indicated in the specifications to ensure all structural,
23 dimensional, and assembly requirements are being met.
- 24 B. The submittal process shall not be used to determine alternates to specified products or equipment. All
25 considerations shall be reviewed during the bidding process and acceptable alternates shall be acknowledged by
26 addendum prior to the closing of bidding. See bidding instructions for the information on submitting alternates
27 for consideration.
28

1.2. RELATED REFERENCES

- 30 A. Section 01 29 76 Progress Payment Procedures
31 B. Section 01 31 23 Project Management Web Site
32 C. Section 01 32 19 Submittals Schedule
33 D. Section 01 32 26 Construction Progress Reporting
34 E. All Technical Specifications, contract documents, construction drawings, and any published addendums during
35 the bidding process.
36 F. All contract documents generated during the execution of the contract including but not limited to Requests for
37 Information (RFI) and Construction Bulletins (CB).
38

1.3. SUBMITTAL REQUIREMENTS

- 40 A. A completed submittal shall meet the following requirements:
- 41 1. Digital submittal shall be original PDF of manufacturer’s data sheets or high quality color scan of the
42 same.
 - 43 a. Submittals shall not include sales fliers or other similar documents that typically do not provide
44 complete manufacturers data.
 - 45 2. Documents within the PDF submittal shall be printable to a sized sheet no less than 8-1/2 by 11 inches
46 and no larger than 24 by 36 inches.
- 47 B. A complete submittal will include all information associated with the product as presented in plans, equipment
48 tables, and specifications. Information shall include but not be limited to the following:
- 49 1. Dimensional data
 - 50 2. Performance data
 - 51 3. Warranty information
- 52 C. Provide a material sample of the vinyl coated chain link fence. Sample may be a single strand of fencing
53 approximately 6” in length showing the metal wire and vinyl coating.
54

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

- 1 **3.1. CONTRACTORS PROCEDURE**
- 2 A. Provide digital PDF submittals to the City Project Manager for approval prior to ordering materials.
- 3 1. Provide all submittals to the CPM via email.
- 4 2. Compress all files. Total email attachment size shall not exceed 20 MB.
- 5
- 6 **3.2. SUBMITTAL REVIEW**
- 7 A. The CPM shall review all submittals within 10 days of receiving them and shall advise the contractor of any
- 8 conflicts or corrections where materials do not meet the plans and specifications.
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- 12 **END OF SECTION**
- 13

**SECTION 01 60 00
PRODUCT REQUIREMENTS**

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11 **PART 1 – GENERAL**

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13 **1.1. SUMMARY**

- 14 A. The purpose of this specification is to provide general guidelines and responsibilities related to the receiving,
15 handling, and storage of all materials and products from arrival on the job site through installation.
16 B. Contractor shall be directly responsible for the receiving, handling, and storage of all materials and products
17 associated with the contract.

18
19 **1.2. QUALITY ASSURANCE**

- 20 A. The Contractor shall be responsible for ensuring that these minimum storage and handling requirements are
21 met, including but not limited to the following:
22 1. Receiving deliveries of materials.
23 a. Inspect all deliveries upon arrival for damage, completeness, and compliance with the
24 construction documents.
25 b. Begin arrangements for immediate replacement of any damaged or missing materials.
26 c. Materials or equipment that have been damaged, are incomplete, or do not comply with the
27 construction documents shall not be permitted to be installed.
28 2. All materials and products shall be stored within the designated limits of the project site. Only store the
29 amount of material necessary for upcoming operations so as not to interfere with daily operations of the
30 site by the Owner.
31 3. All materials and products shall be stored according the manufacturers minimum recommended
32 requirements. All of the following shall be considered before storing any product or material:
33 a. Dust and dirt
34 b. Moisture and humidity, including rain and snow
35 c. Excessive temperatures, direct sun, etc.
36 d. Product or material weight and size
37 e. Potential for breakage
38 f. Product or material value and replacement cost
39 4. The Contractor shall be responsible for providing fully functional tarps or plastic wrap, to protect
40 materials and products from the weather. All coverings shall be free of large holes and tears, and shall be
41 tied, strapped, or weighted down to resist blowing.
42 5. The Contractor shall be responsible for securing materials and products of value.

43
44 **PART 2 – PRODUCTS – THIS SECTION NOT USED**

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46 **PART 3 - EXECUTION**

47
48 **3.1. CONTRACTOR REQUIREMENTS**

- 49 A. See the site plan for designated lay down space of materials by fence type. Contractor shall coordinate with
50 CPM and Owner if additional space is required at least ten (10) working days prior to delivering materials.
51 B. Contractor shall be responsible for the security of all stored materials.
52 C. Contractor shall be responsible for properly protecting all materials from weather and damage until materials
53 have been installed.

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57 **END OF SECTION**
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**SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

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PART 1 – GENERAL

1.1. SUMMARY

- 18 A. This specification includes administrative and procedural requirements for the recycling, re-use, salvaging, and
19 disposal of non-hazardous construction and demolition waste.
20 B. The Contractor shall be fully responsible for complying with all applicable ordinances and other such regulatory
21 requirements during the execution of this contract.
22

1.2. CITY ORDINANCES

- 23 A. There are two (2) Madison General Ordinances (MGO) that the City of Madison has regarding construction and
24 demolition waste.
25 1. MGO 10.185, Recycling and Reuse of Construction and Demolition Debris, describes the requirements
26 associated with this ordinance including definitions, documentation requirements, and penalties.
27 2. MGO 28.185, Approval of Demolition (Razing, Wrecking) and Removal, describes the requirements
28 associated with applying for and receiving a demolition permit.
29 B. All City of Madison, Board of Public Works, contracts being conducted by City Engineering, Facility Management,
30 for construction, remodeling, or demolition shall comply with the above ordinances regardless of project type or
31 size.
32
33

1.3. DEFINITIONS

- 34 A. Clean: Untreated and unpainted material, free of contamination caused by oils, solvents, caulks, and other
35 chemicals.
36 B. Construction and Demolition Debris: Materials resulting from the construction, remodeling, repair, and
37 demolition of utilities, structures, buildings, and roads.
38 C. Disposal: Off-site removal of construction and demolition debris and the subsequent sale, recycling, reuse, or
39 deposit in authorized landfill or incinerator.
40 D. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured
41 into a new product.
42 E. Recycle: Any process by which construction or demolition debris is diverted from final disposal as solid waste at
43 a permitted landfill and instead is collected, separated, and/or processed into raw materials for new, reused, or
44 reconstituted products; or for the recovery of materials for energy production processes.
45 F. Recycler: Any recycling facility, transfer station, or other waste handling facility which accepts construction and
46 demolition debris for recycling, or for other transferring to a recycling facility.
47 G. Recycling: The process of sorting, cleaning, treating, or reconstituting solid waste and other discarded materials
48 for the purpose of preparing the material to be recyclable. Recycling does not include burning, incinerating or
49 thermally destroying waste.
50 H. Return: To give back reusable items or unused products to vendors for credit.
51 I. Salvage: To remove a waste material from the project site for resale or reuse by the Owner or others.
52 J. Trash: Any product or material unable to be re-used, returned, recycled, or salvaged.
53 K. Waste: Extra materials or products that have reached the end of its useful life or its intended use. Waste
54 includes salvageable, returnable, recyclable and re-useable construction and demolition materials, and trash.
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1.4. PERFORMANCE REQUIREMENTS

- A. The Contractor shall salvage or recycle 100 percent of all uncontaminated packaging materials including but not limited to the following:
 - 1. Paper
 - 2. Cardboard
 - 3. Beverage containers
 - 4. Boxes
 - 5. Plastic Sheet and film
 - 6. Polystyrene packaging
 - 7. Wood crates and pallets
 - 8. Plastic pails and buckets
- B. Promote a resourceful use of supplies and materials through proper planning and handling. Generate the least amount of waste possible by minimizing errors, poor planning, breakage, mishandling, contamination or other similar factors.
- C. Use all reasonable means to divert construction waste from landfills and incinerators through recycling, reuse, or salvage as appropriate.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. GENERAL GUIDELINES FOR ALL WASTES

- A. Recycle all paper and beverage containers used by workers, sub-contractors, suppliers and visitors to the project site.
- B. All revenues, savings, rebates, tax credits, and other such incentives received from recycling, reusing, or salvaging waste materials shall accrue to the Contractor unless specified otherwise in the contract documents.
- C. Separate recyclable, reusable, and salvageable waste from other waste materials, trash, and debris except where Waste Management Disposal Company allows comingled waste materials.

3.2. GUIDELINES FOR RECYCLABLE, RE-USABLE, AND SALVAGEABLE WASTE

- A. The following guidelines is not a complete or all inclusive list.
- B. Clean Wood Materials: Including but not limited framing cutoffs, wood sheathing or paneling materials, structural or engineered wood products, and pallets or crates. Clean Wood shall be free of paints, stains, oils, preservatives and other such contaminants.
 - 1. Useable pieces shall be sorted by type and dimension, bundled and transported off site by the GC or returned to the supplier.
 - 2. Non-useable pieces shall be palletized or containerized, transport to an authorized recycling facility.
 - 3. Clean, uncontaminated sawdust and wood shavings shall be bagged, transport to an authorized recycling facility.
- C. Metals: Sort metals by type as follows, this does not include piping:
 - 1. Architectural metals including but not limited to siding, soffit, and roofing panels shall be sorted by material, palletize or bundle as needed and transport to an authorized recycling facility.
 - 2. Structural steel, sort by size and type; palletize and transport to an authorized recycling facility.
 - 3. Miscellaneous metals such as aluminum, brass, bronze, etc shall be sorted by type, containerized or palletized as necessary, transport to an authorized recycling facility.
- D. Packaging and shipping materials
 - 1. Cardboard boxes and containers: Breakdown all cardboard boxes and containers into flat sheets. Bundle and store in a dry location until transported for recycling.
 - 2. Pallets:
 - a. Whenever possible require deliveries using pallets to remove them from the project site.
 - b. Neatly stack pallets in preparation for reusing them or providing them to other companies for salvage or re-use.
 - c. Break down pallets into component wood pieces that comply with the requirements for recycling clean wood materials. Neatly stack or palletize pieces in preparation for transportation.
 - 3. Crates: Break down crates into component wood pieces that comply with the requirements for recycling clean wood materials. Neatly stack or palletize pieces in preparation for transportation.
 - 4. Polystyrene Packaging: Separate and bag materials.

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3.3. GUIDELINES FOR DISPOSAL OF WASTES

- A. The following guidelines shall be adjusted as needed by the methods and procedures identified in the Waste Management Plan.
- B. Any waste that is contaminated, organic, or cannot be recycled, re-used, or salvaged shall be legally disposed of in an authorized landfill or incinerator. Disposal methods shall follow all applicable regulatory requirements.
- C. No waste material of any kind shall be allowed to be buried on the project site at any time.
- D. No burning of any kind of waste material shall be permitted on this project site at any time.
- E. Treated Wood Materials: Treated wood materials including but not limited to wood that has been painted, stained, or chemically treated shall not be recycled or incinerated.

END OF SECTION

SECTION 01 76 00
PROTECTING INSTALLED CONSTRUCTION

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15

PART 1 – GENERAL

1.1. SUMMARY

- 19 A. The purpose of this specification is to provide clear responsibilities, guide lines, and requirements related to
20 providing protection to already installed construction.
21 B. Already installed construction shall include but not be limited to the following:
22 1. Any existing site feature such as pavement, curbs, drainage features, utilities, landscaping features (trees,
23 shrubbery, plantings, flagpoles, etc.) and other such exterior items not associated with the building
24 whether on or adjacent to the project site.
25 2. Any existing structure on or adjacent to the project site.
26 3. Any existing feature of any kind within the public right-of-way that may be on the project site property,
27 adjacent to the project site or across the street from the project site.
28 C. The requirements noted within this specification do not relieve any contractor of the responsibility for
29 compliance with any code, statute, ordinance, or other such regulatory requirement having jurisdictional
30 authority over these contract documents.

1.2. QUALITY ASSURANCE

- 33 A. It shall be the responsibility of every contractor and worker assigned to the project to be diligent in protecting all
34 existing work, and newly installed construction.
35 B. It shall be the Contractors' responsibility under the contract to provide all reasonable protection methods,
36 materials, or precautionary measures required to protect new or existing construction as described in within this
37 specification to the project as a whole.
38 1. The Contractor shall be responsible to ensure any damaged new or existing construction is repaired or
39 replaced at no additional cost to the Contract.
40

PART 2 – PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1. GENERAL EXECUTION REQUIREMENTS

- 46 A. The Contractor shall be responsible for ensuring all of the following procedures and requirements are
47 implemented as needed for the duration of the Work performed under this contract.
48 B. The Contractor shall also be responsible for the following:
49 1. Reporting any incident of damage to existing property, right-of-way, or utility to the CPM immediately
50 upon rendering the incident safe, and notifying emergency response teams, and emergency utility crews
51 as needed.
52 2. Conduct a site walk through prior to leaving at the end of each day to assess:
53 a. Protection measures are properly in place, provide correction actions as necessary.
54 b. Note damage to existing completed work and schedule repair/replacement as needed.
55 3. Ensure all contractors and workers are being diligent in protecting existing work, and newly installed
56 construction.

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3.2. PROTECT LANDSCAPING FEATURES

- A. Protect all existing landscaping, plants, trees, shrubs, etc. from damage during the execution of this contract.
- B. Notify the CPM of any damaged landscaping
- C. Replace any damaged landscaping as directed by the CPM at no additional cost to the contract.

3.3. PROTECT UTILITIES

- A. The contractor shall be responsible for notifying all utilities to determine emergency response procedures and protection requirements prior to installing any construction protection.
 - 1. This includes requesting utility marking through Diggers Hotline.
 - a. Call 811 or 1-800-242-8511 to request a public utility locate
 - b. For emergency locate call (262) 432-7910 or (877) 500-9592
 - 2. Contact the Owner and CPM for any available private utility information on the property that may be available prior to calling a private utility locating company.
- B. The Contractor shall take all precautions in protecting utilities including but not limited to all buried utilities and structures, power and light poles, and the backup generator (if installed prior to this contract).

3.4. PROTECT PAVED AREAS

- A. The Contractor shall protect all paved areas (asphalt and concrete) from damage cause by any equipment, skids, pallets and stored materials.
 - 1. Stored materials shall be stored on pallets or blocking at all times.
 - 2. Stored materials shall not be of excessive weight causing deformation of paved area.

3.5. PARKING ACCESS AND VEHICLES

- A. The Contractor shall maintain a minimum of one vehicle exit point at all times during the construction of the fence line through the parking lot.
- B. The Contractor shall use caution when working around any parked vehicles. Notify the onsite Owner Representative immediately if a vehicle needs to be moved before beginning work in that area.

3.6. PROTECT STORED MATERIALS

- A. All contractors shall refer to Specification 01 60 00 Product Requirements for all storage and protection requirements of building materials and products delivered to the site.

END OF SECTION

SECTION 32 31 13
CHAIN LINK FENCES AND GATES

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19

PART 1 – GENERAL

1.1. SUMMARY

- A. This section includes specifications and installation requirements for industrial/commercial chain link fence.
- B. Work under this section includes all labor, materials, equipment and services; necessary to complete new fencing and related equipment per plans.
- C. Refer to the Site Plan sheet 1 for more information on locations.

1.2. REFERENCES

- A. ASTM A121: Standard Specification for Metallic-Coated Carbon Steel Barbed Wire.
- B. ASTM A123/A 123M: Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM A153/A 153M: Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- D. ASTM A392: Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric.
- E. ASTM A491: Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric.
- F. ASTM F567: Standard Practice for Installation of Chain-Link Fence.

1.3. QUALITY ASSURANCE

- A. The Contractor shall have a minimum of 5 years experience installing similarly sized commercial perimeter security fencing and gating installations. Provide references to similar projects installed if so requested by the Owner.

1.4. PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials with manufacturer's tags and labels intact.
- B. Store all materials in a manner that keeps material clean and free of damage. See Specification Section 01 60 00 Product Requirements for more information.
- C. Damaged materials shall not be installed.

1.5. WARRANTY

- A. The Contractor shall warrant for one year the complete installation of equipment and components associated with this contract and installation. Contractors warranty shall be in the form of a written letter on company letterhead referring to the contract information, dates of installation and acceptance, signed by an authorized representative of the Contractors Company.
 - 1. The Contractor warranty shall include but not be limited to the following:
 - a. Transportation to and from the location as often as needed during the warranty period.
 - b. All labor and materials necessary to properly and thoroughly trouble shoot the system.
 - c. All fees associated with the shipping of any component that needs to be returned or supplied by the manufacturer for repair or replacement.
 - d. All labor and materials required to remove, repair, replace, or re-install any component.

- 1 B. The Contractor shall also provide, separately from his/her installation warranty, all manufacturers
2 warranties/guarantees associated with installed components of the completed installation.
3

4 **PART 2 - PRODUCTS**

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6 **2.1. NEW FENCING PRODUCTS**

- 7 A. Fence Framework, all fence frame work shall be SS-40 cold formed steel pipe.
8 1. Terminal Posts; All end, corner, and pull posts shall be 3" O.D., 5.7#/ft. with a minimum bending strength
9 of 486 pounds under a 6' cantilever load coated with 2.0 ounces of hot dipped zinc in accordance with
10 ASTM A123/A123M.
11 2. Line Posts shall be C-Section roll formed from steel conforming to ASTM A1011/ A1011M, Grade 45,
12 1.875" x 1.625" with minimum bending strength of 247 pounds under a 6' cantilever load, continuously
13 coated with 2.0 ounces of GALFAN Alloy in accordance with ASTM A875/A875M.
14 3. Top and Brace Rails shall be roll formed section of 1.5/8" O.D., 5.7#/ft. channel shaped rail with a
15 minimum vertical bending strength of 237 pounds on a 10' span continuous coated with 2.0 ounces of
16 GALFAN Alloy in accordance with ASTM A875/A875M. Top rail couplings 6" minimum in length will be
17 spaced at maximum 21' centers.
18 B. Chain link fabric shall be aluminized conforming to ASTM A491;
19 1. Woven from 9 gauge wire 2" x 2" mesh
20 2. Type I, 0.40 ounce per square foot of surface area
21 3. Knuckled at bottom selvage
22 4. Twisted at top selvage
23 5. Fabric Height = 8 feet
24 C. Tension and Brace Bands; shall comply with ASTM F626, minimum of 3/4" wide, 12 gauge steel, galvanized. With
25 galvanized bolts and nuts.
26 D. Tension Bars; shall comply with ASTM F626, galvanized steel flat bar, consisting of a single piece 7'-10" long with
27 a cross section of 3/4" wide by 3/16" thick.
28 E. Truss Rod Assembly; shall comply with ASTM F626. 3/8" steel truss rod with a pressed steel tightener, assembly
29 capable of withstanding 2,000 lbs. of tension.
30 F. Caps; shall comply with ASTM F626
31 1. Terminal Post Dome Caps; pressed steel, sized to fit Terminal Post outside diameter, galvanized after
32 fabrication.
33 2. Rail and Brace End Caps; formed steel caps, sized to fit outside diameter of pipe being capped, galvanized
34 after fabrication.
35 3. Line Post Caps; formed steel caps, sized to fit outside diameter of line post, sleeved for top rail.
36 G. Barbed Wire; shall comply with ASTM A121, double 12 gauge twisted strand wire with 4 point 14 gauge round
37 barbs spaced at 5" on center, coated the same as the chain link fabric.
38 H. Tension Wire; shall comply with ASTM A824, 7 gauge, coated the same as the chain link fabric.
39 I. Tie Wires; shall comply with ASTM F626, 9 gauge steel, preformed.
40 J. All chain link fence components to be coated in black vinyl.
41

42 **PART 3 - EXECUTION**

43
44 **3.1. PRE-INSTALLATION**

- 45 A. The Contractor shall be responsible for coordinating all pre-installation meetings with the Owner and City Project
46 Manager prior to installing components associated with the installation of perimeter fencing as indicated in the
47 plans and specifications.
48 1. Provide the CPM and Owner with a construction schedule prior to starting work.
49 B. Verify there are no changes to the location of the new fence.
50 C. Verify all materials are on site, clean, undamaged, and ready for the installation.
51

52 **3.2. PREPARATION**

- 53 A. Verify the Owner provided fence corner locations and adjust the layout as needed for post spacing.
54 B. The Contractor shall mark positions for all line posts. Line posts shall have equal distance spacing between
55 corner posts. Spacing between line posts shall not exceed 10 feet.
56 C. The Contractor is responsible for an intermediate corners needed on the east chain link fence line as it meanders
57 through the trees.
58

- 1 **3.3. INSTALL POSTS**
2 A. Pound posts into ground equally spaced between corner posts and turning points greater than 30 degrees with a
3 maximum of 10'-0" on center. Posts shall be in ground a minimum of 4'-0".
4
- 5 **3.4. INSTALL LINE POST CAPS, TOP RAILS, AND BRACE RAILS**
6 A. Install all barbed wire line post caps to line posts with 45 degree arm point outside of the perimeter.
7 B. Install all top rails through line post cap sleeves.
8 C. Install rail caps at all terminal post ends of top rail.
9 D. Install all brace rails and caps as needed at terminal posts.
10 1. Install all Truss Rod Assemblies.
11
- 12 **3.5. INSTALL FENCE FABRIC**
13 A. All fence fabric between terminal posts shall be one complete piece of fabric. Weave additional rolls together to
14 increase length or unweave partial rolls to decrease length.
15 1. Fence fabric shall be approximately 1 inch off and parallel to finished grade.
16 B. Fasten fabric at first terminal post with tension bar and tension bands.
17 C. Stretch fabric tight to first line post
18 1. Secure fabric to top rail, line post, and brace rail with wire ties, maximum of 2 feet on center.
19 2. Tighten brace rail and truss rod assembly.
20 D. Continue to stretch fabric between line posts to next terminal post securing with wire ties at top rails and each
21 line post.
22 E. Secure fabric to terminal end post with tension bar and tension bands.
23
- 24 **3.6. INSTALL MISCELLANEOUS FENCE LINE COMPONENTS**
25 A. Install all terminal post caps.
26 B. Install bottom tension wire and secure to fabric.
27 C. Verify all nuts, bolts, and tension assemblies are tight.
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END OF SECTION

**SECTION 32 31 29
WOOD FENCES AND GATES**

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PART 1 – GENERAL

1.1. SUMMARY

- 23 A. This section includes specifications and installation requirements for horizontal picket cedar board privacy fence
24 and equipment screen designated as fence types 2 and 3 in the plans and details of this contract.
25 B. Work under this section includes all labor, materials, equipment and services; necessary to complete new
26 fencing, relocated fencing, new gate, relocated gate, new automated gate opening equipment, relocated
27 automated gate opening equipment, traffic loops, and other related equipment per plans.
28 C. Refer to the Site Plan sheet 1 for more information on locations.
29

1.2. QUALITY ASSURANCE

- 31 A. The Contractor shall have a minimum of 5 years' experience installing similarly sized commercial perimeter
32 security fencing and gating installations. Provide references to similar projects installed if so requested by the
33 owner.
34

1.3. PRODUCT DELIVERY, STORAGE, AND HANDLING

- 36 A. Deliver materials with manufacturer's tags and labels intact.
37 B. Store all materials in a manner that keeps material clean and free of damage. See Specification Section 01 60 00
38 Product Requirements for more information.
39 C. Damaged materials shall not be installed.
40

1.4. WARRANTY

- 42 A. The Contractor shall warrant for one year the complete installation of equipment and components associated
43 with this contract and installation. Contractors warranty shall be in the form of a written letter on company
44 letterhead referring to the contract information, dates of installation and acceptance, signed by an authorized
45 representative of the Contractors Company.
46 1. The Contractor warranty shall include but not be limited to the following:
47 a. Transportation to and from the location as often as needed during the warranty period.
48 b. All labor and materials necessary to properly and thoroughly trouble shoot the system.
49 c. All fees associated with the shipping of any component that needs to be returned or supplied by
50 the manufacturer for repair or replacement.
51 d. All labor and materials required to remove, repair, replace, or re-install any component.
52 B. The Contractor shall also provide, separately from his/her installation warranty, all manufacturers
53 warranties/guarantees associated with installed components of the completed installation.
54

PART 2 - PRODUCTS

2.1. FENCE POSTS AND BRACKETS

- 58 A. Fence Framework

- 1 1. Posts; All posts shall be Heavy 'C' open channel posts as manufactured by Gregory Fence or approved
2 equal having the following physical properties:
3 a. 1.7" wide x 2.25" high x 0.121" thick
4 b. 2.78 pounds per foot
5 c. 50,000 pound minimum yield steel per ASTM A1011
6 d. 4 ounces of continuous zinc coating per square foot per ASTM F1043, inside and out
7 2. Post Brackets shall be Corner, Line, or End brackets manufactured by Gregory Fence or approved equal
8 having the following physical properties:
9 a. 18 gauge pressed steel, zinc coated
10 b. Adjustable, with locking fastener
11 c. Minimum of 2 per post
12

13 **2.2. CEDAR BOARDS**

- 14 A. All cedar boards shall be dimensional clear cedar boards, smooth both sides.
15 B. Boards and nailers shall be free of checks, splits, warps, bows, cups, loose knots and other deformities.
16 C. All horizontal cedar pickets shall be 6'-0" in length for the Type 2 Privacy Fence and the Type 3 Equipment
17 Screen.
18 D. Vertical trim boards shall be 6'-0" for Type 2 Privacy Fence and 8'-0" for Type 3 Equipment Screen.
19

20 **2.3. FASTENERS**

- 21 A. All wood fasteners shall be premium grade, none rusting fasteners for decks and fencing.
22 B. Lengths as required to penetrate nailer approximately half the board depth without splitting either board.
23

24 **PART 3 - EXECUTION**

25
26 **3.1. PRE-INSTALLATION**

- 27 A. The Contractor shall be responsible for coordinating all pre-installation meetings with the Owner and City Project
28 Manager prior to installing components associated with the installation of perimeter fencing as indicated in the
29 plans and specifications.
30 1. Provide the CPM and Owner with a construction schedule prior to starting work.
31 B. Verify there are no changes to the location of the new fence.
32 C. Verify all materials are on site, clean, undamaged, and ready for the installation.
33

34 **3.2. PREPARATION**

- 35 A. Verify the Owner provided fence corner locations and adjust the layout as needed for post spacing.
36 B. The Contractor shall mark positions for all line posts. Line posts shall have equal distance spacing between
37 corner posts. Spacing between line posts shall not exceed 6 feet except where noted in the plans otherwise.
38

39 **3.3. INSTALL POSTS, BRACKETS, AND NAILERS**

- 40 A. Pound metal 'C' posts into ground at 6'-0" on center.
41 1. Posts shall be in ground a minimum of 4'-0".
42 2. Posts shall be 6'-0" above grade at center of post.
43 B. Install post brackets at top and bottom of posts.
44 C. Install vertical nailer board on each side of each post. Trim as needed for angles.
45 D. Install grade nailer board at +/- 2" above grade between posts where fence line is on a slope.
46

47 **3.4. INSTALL HORIZONTAL PICKETS**

- 48 A. Install horizontal pickets from top of fence post down.
49 1. Provide 0-1/2" spacing between boards.
50 2. No fence Type 2 Privacy Fence shall exceed 6'-0" above grade at any post.
51 3. No fence Type 3 Equipment Screen shall exceed 8'-0" above grade at any post.
52 B. Fence shall step vertically as needed for slope.
53 1. All boards shall remain horizontal.
54 2. All steps shall be full 1x6 boards with 0-1/2" spacing
55 3. Trim bottom board for grade as needed.
56

57 **3.5. INSTALL VERTICAL TRIM BOARDS**

- 58 A. Install vertical trim boards on both sides of all posts per details.

- 1 1. Bevel cut edges for clean butt joint at 135-degree corner per detail
- 2 2. Cut Type 2 Privacy Fence trim boards as needed to match grade minus +/-2".
- 3 3. Cut Type 3 Equipment Screen trim boards as needed to match grade minus +/-2".

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7

END OF SECTION