

MISSOURI DEPARTMENT OF TRANSPORTATION



CENTRAL DISTRICT
 PO BOX 718
 1511 MISSOURI BLVD.
 JEFFERSON CITY, MO 65102

**REQUEST FOR QUOTE
 BIDDING GUIDELINES
 AND DOCUMENTATION**

QUOTE MAY BE FAXED

TODAY'S DATE: JUNE 9, 2014	QUOTE DUE BY (DATE AND TIME): JUNE 13, 2014 1:00 PM CDST	F.O.B. REQUIREMENTS: FOB DESTINATION
TO BE DELIVERED/COMPLETED: PLEASE PROVIDE BEST COMPLETION DATE	QUOTE #: CD-14-074Q THIS QUOTATION # SHOULD BE REFERENCED ON ALL MAILING LABELS, ENVELOPES, AND ANY OTHER CORRESPONDENCE.	BUYER: DEREK VANLOO PHONE NUMBER: 573-526-6956 FAX NUMBER: 573-526-6796 EMAIL: DEREK.VANLOO@MODOT.MO.GOV
District Mailing Address: Missouri Department of Transportation Central District General Services 1511 Missouri Blvd Jefferson City, MO 65102		Delivery Locations: MISSOURI DEPARTMENT OF TRANSPORTATION St Robert Maintenance Facility 375 Old Rt 66 St Robert MO 65583

It is the vendor's responsibility to read and comply with all conditions, specifications, and instructions outlined in this document. This document and any subsequent attachments shall supersede all confirmation forms, receipts, or any other paperwork needed to secure materials, equipment, or services.

ITEM	UM	QTY	DESCRIPTION	UNIT PRICE	Completion Time
1	EA	1	Provide and install 1,316' feet of 4' foot chain link fencing with top rail to enclose the MoDOT St Robert maintenance facility	\$	
TOTAL PRICE				\$	

Fencing Specifications:

- All material and installation shall meet or exceed the attached MoDOT Specifications: Section 1043 - Fence Material and Section 607 - Installation.
- Installation of fence shall follow the MoDOT guidelines: Section 607.10, including that posts are to be no farther apart than 10 feet.
- See attached Aerial photo of the MoDOT St Robert facility.
- New fence shall begin at the existing fence, south of the pedestrian sidewalk and east of the facility driveway.
- A corner post shall be installed at the start of the project to bring the fence to within 3 - 4 inches south of the pedestrian sidewalk and shall follow the sidewalk the remaining length.
- Terminal posts shall be used where the grade of the ground makes it necessary.
- Where the sidewalk turns north the fence shall continue east to the tree line and stay on the south side of the utility pole.
- The fence shall stop (5) five feet from the tree line to allow for mower passage.
- There shall be no gates or breaks in this continuous run and there shall be no stretch of fence that is greater than 500' feet without a pull post.
- A minimum industry standard of warranty shall be included with installation.

Contract Requirements:

- Unit price shall include shipping costs, FOB destination.
- Awarded contractor will be responsible for complying with all City of St Robert ordinances pertaining to fencing.
- Awarded contractor will be responsible for contacting dig rite before beginning the project.
- Awarded contractor will be responsible for restoring turf with seed and straw in areas where needed.
- This project shall be subject to prevailing wages as fixed by the Missouri Department of Labor, see link for Pulaski county Wage Order 20 (http://apps.labor.mo.gov/DLS/PrevailingWage/AWO/20_WO085.pdf)

All responses to this Request for Quote MUST be submitted with this form and all pages MUST be returned to the Buyer listed above.

- **Award** will be based on the lowest total price meeting the listed requirements.
- ***Note***: Due to budget constraints this project may not be awarded.
- Quote(s) may be faxed or emailed.

VENDOR NOTES:

All responses to this Request for Quote MUST be submitted with this form and all pages MUST be returned to the Buyer listed above.

VENDOR INFORMATION & PREFERENCE CERTIFICATION FORM

Vendor Information

All bidders must furnish ALL applicable information requested below

Vendor Name/Mailing Address: Email Address:	Vendor Contact Information (including area codes): Phone #: Cellular #: Fax #:
Printed Name of Responsible Officer or Employee:	Signature:
For Corporations - State in which incorporated:	For Others - State of domicile:

If the address listed in the Vendor Name/Mailing Address block above is not located in the State of Missouri, list the address of Missouri offices or places of business:

*If additional space is required, please attach an additional sheet and identify it as **Addresses of Missouri Offices or Places of Business.***

M/WBE INFORMATION: List all certified Minority or Women Business Enterprises (**M/WBE**) utilized in the fulfillment of this bid. Include percentages for subcontractors and identify the M/WBE certifying agency:

<u>M/WBE Name</u>	<u>Percentage of Contract</u>	<u>M/WBE Certifying Agency</u>

*If additional space is required, please attach an additional sheet and identify it as **M/WBE Information***

Preference Certification

All bidders must furnish ALL applicable information requested below

GOODS/PRODUCTS MANUFACTURED OR PRODUCED IN USA: If any or all of the goods or products offered in the attached bid which the bidder proposes to supply to the MHTC are **not** manufactured or produced in the "United States", or imported in accordance with a qualifying treaty, law, agreement, or regulation, list below, by item or item number, the country other than the United States where each good or product is manufactured or produced.

Item (or item number)	Location Where Item is Manufactured or Produced

*If additional space is required, please attach an additional sheet and identify it as **Location Products are Manufactured or Produced.***

MISSOURI SERVICE-DISABLED VETERAN BUSINESS: Please complete the following if applicable. Additional information may be requested if preference is applicable. See below definitions for qualification criteria:

Service-Disabled Veteran is defined as any individual who is disabled as certified by the appropriate federal agency responsible for the administration of veterans' affairs.

Service-Disabled Veteran Business is defined as a business concern:

- a. Not less than fifty-one (51) percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than fifty-one (51) percent of the stock of which is owned by one or more service-disabled veterans; and
- b. The management and daily business operations of which are controlled by one or more service-disabled veterans.

Veteran Information

Business Information

Service-Disabled Veteran's Name (Please Print)

Service-Disabled Veteran Business Name

Service-Disabled Veteran's Signature

Missouri Address of Service Disabled Veteran Business

Missouri Highways and Transportation Commission
Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions

STANDARD SOLICITATION PROVISIONS

- a. The solicitation for the procurement of the supplies referenced therein, to which these "Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions" are attached, is being issued under, and governed by, the provisions of Title 7 – Missouri Department of Transportation, Division 10 – Missouri Highways and Transportation Commission, Chapter 11 – Procurement of Supplies, of the Code of State Regulations. The Missouri Highways and Transportation Commission (**MHTC**), acting by and through its operating arm, the Missouri Department of Transportation (**MoDOT**), draws the Bidder's attention to said 7 CSR 10-11 for all the provisions governing solicitation and receipt of bids/quotes and the award of the contract pursuant to this solicitation.
- b. All bids/quotes must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.

GENERAL TERMS AND CONDITIONS

Definitions

Capitalized terms as well as other terms used but not defined herein shall have the meaning assigned to them in section 7 CSR 10-11.010 Definition of Terms.

Nondiscrimination

- a. The Contractor shall comply with all state and federal statutes applicable to the Contractor relating to nondiscrimination, including, but not limited to, Chapter 213, RSMo; Title VI and Title VII of Civil Rights Act of 1964 as amended (42 U.S.C. Sections 2000d and 2000e, *et seq.*); and with any provision of the "Americans with Disabilities Act" (42 U.S.C. Section 12101, *et seq.*).
- b. **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MHTC shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
 - ii. cancellation, termination or suspension of the contract, in whole or in part.

Contract/Purchase Order

- a. By submitting a bid/quote, the Bidder agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's bid response, and (3) the MHTC's acceptance of the bid by post-award contract or purchase order.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized notice to proceed and/or purchase order.

Applicable Laws and Regulations

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri, Missouri Department of Revenue, and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MHTC a copy of their current Authority Certificate from the Secretary of State of the State of Missouri and/or a copy of their Certificate of No Tax Due from the Missouri Department of Revenue.
- c. Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MHTC a copy of their current Transient Employer Certificate from the Missouri Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.

Executive Order:

The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6th) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.

- 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
- 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
- 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Preferences

- a. In the evaluation of bids/quotes, preferences shall be applied in accordance with 7 CSR 10-11.020(7). Contractors should apply the same preferences in selecting subcontractors. The attached document entitled "**VENDOR INFORMATION AND PREFERENCE CERTIFICATION FORM**" must be completed and returned with the solicitation documents.
- b. Bidders are encouraged to obtain minority business enterprise (MBE) and women business enterprise (WBE) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBEs. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.

Missouri Highways and Transportation Commission
Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions

Cancellation of Contract

The MHTC may cancel the Contract at any time for a material breach of contractual obligations or for convenience by providing Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.

Bankruptcy or Insolvency

Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntarily, or upon the appointment of a receiver, trustee, or assignee, for the benefit of creditors, the Commission reserves the right and sole discretion to either cancel the Agreement or affirm the Agreement and hold the Contractor responsible for damages.

Warranty

The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by the MHTC, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.

Status of Independent Contractor

The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

Non-Waiver

If one of the parties agrees to waive its right to enforce any term of this Contract, that party does not waive its right to enforce such term at any other time or to enforce any or all other terms of this Contract.

Indemnification

The Contractor shall defend, indemnify and hold harmless MHTC, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Contractor's performance of its obligations under the contract awarded pursuant to this solicitation.

Missouri Highways and Transportation Commission
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

SPECIAL TERMS AND CONDITIONS

Tax Exempt Status:

MHTC is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Project Tax Exemption Certificate will be furnished to the successful Bidder upon request if applicable.

Insurance

The Contractor shall maintain or cause to be maintained at Contractor's own expense commercial general liability, automobile liability, worker's compensation insurance against negligent acts, errors or omissions of the Contractor, or its subcontractors and anyone directly or indirectly employed by any of them. Any insurance policy required as specified in this Section shall be written by a company that is licensed and authorized to issue such insurance in the state of Missouri and shall provide insurance coverage for not less than the following limits of liability:

- 1) General Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 2) Automobile Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 3) Missouri State Workmen's Compensation policy or equivalent in accordance with state law.

Upon request from the Commission, the Contractor shall provide the Commission with certificates of insurance evidencing the required coverage and that such insurance is in effect.

Subcontracting

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MHTC. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MHTC and accompanied by documentation showing that the organization which will perform the work is particularly experienced and equipped for such work.
- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.
- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

Prohibition Of Employment Of Unauthorized Aliens:

- a. **Non-employment of Unauthorized Aliens:** Pursuant to Section 285.530, RSMo., no business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the State of Missouri. As a condition for the award of any contract or grant in excess of five thousand dollars by the State or by any political subdivision of the State to a business entity, or for any business entity receiving a state-administered or subsidized tax credit, tax abatement, or loan from the state, the business entity shall:
 - 1) By sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. E-Verify is an example of a federal work authorization program. The business entity must affirm its enrollment and participation in the E-Verify federal work authorization program with respect to the employees proposed to work in connection with the services requested herein by providing acceptable enrollment and participation documentation consisting of **completed** copy of the E-Verify Memorandum of Understanding (MOU). For business entities that are not already enrolled and participating in a federal work authorization program, E-Verify is available at http://www.dhs.gov/files/programs/gc_1185221678150.shtm
 - 2) By sworn affidavit, affirm that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. A copy of the affidavit referenced herein is provided within this document.
- b. **Proof of Lawful Presence For Sole Proprietorships and Partnerships:** If the business entity is a sole proprietorship or partnership, pursuant to Section 208.009, RSMo., each sole proprietor and each general partner shall provide affirmative proof of lawful presence in the United States. Such sole proprietorship or partnership is eligible for temporary public benefits upon submission by each sole proprietor and general partner of a sworn affidavit of his/her lawful presence on the United States until such lawful presence is affirmatively determined, or as otherwise provided by Section 208.009, RSMo. A copy of the affidavit reference herein is provided within this document.

Construction Safety Program

Missouri law, 292.675 RSMo, requires the awarded Contractor and its subcontractor(s) to provide a ten-hour occupational safety and health administration (OSHA) construction safety program (or a similar program approved by the Missouri Department of Labor and Industrial Relations as a qualified substitute) for their on-site employees (laborers, workmen, drivers, equipment operators, and craftsmen) who have not previously completed such a program and are directly engaged in actual construction of the improvement (or working at a nearby or adjacent facility used for construction of the improvement). The Contractor and its subcontractor(s) shall require all such employees to complete this ten-hour program, pursuant to 292.675 RSMo, unless they hold documentation on their prior completion of said program. Penalties for non-compliance include Contractor forfeiture to the Commission in the amount of \$2,500, plus \$100 per contractor and subcontractor employee for each calendar day such employee is employed beyond the elapsed time period for required program completion under 292.675 RSMo.

Prevailing Wage

- a. The work to be performed under this solicitation is governed by the provisions of Chapter 290 RSMo, as amended, related to prevailing wages to be paid on public works.
- b. If the bid/quote is accepted, the vendor will be required to comply with the prevailing wages as fixed by the Missouri Department of Labor and Industrial Relations, in effect as of the date of the issuance of the solicitation, for each affected craft and type of workmen in the county(ies) identified in the bid document. The **Annual Wage Order #20** is attached to the bid documents.

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- c. Pursuant to the requirements of the Chapter 290 RSMo., not less than the prevailing hourly rate of wages, as set out in the wage order attached to and made part of the specification for work under the contract, must be paid to all workers performing work under the contract.
- d. The Contractor shall provide all information, reports and other documentation as required by MHTC to ensure compliance with Chapter 290 RSMo., as amended, relating to prevailing wages to be paid on public works.
- e. The Contractor shall forfeit a penalty to the contracting public body of \$100 per day (or portion of a day) for each worker that is paid less than the prevailing rate for any work done under the contract by the contractor or by any subcontractor.

Permits, Licenses and Safety Issues

The contract price shall include any necessary permits and licenses required by law incidental to the work. Local ordinances requiring building permits are not applicable to state agencies.

Delivery – Additional Requirements

- a. The Contractor shall furnish the Missouri Department of Transportation with a planned delivery schedule at least 16 hours before starting delivery.
 - 1) Notification should be during the normal workday preceding the day on which the Contractor desires to initiate delivery.
 - 2) It will be necessary for a representative of the Missouri Department of Transportation to be present when the material is delivered.
 - 3) No material will be accepted that has been dumped in the absence of the department's aggregate materials checker.
- b. Unless otherwise specified in the proposal, deliveries will be a minimum of **500 Tons Per Day**. No deliveries will be made during the period from **30 minutes before sundown to sunrise**. No deliveries will be made on **Saturdays, Sundays and holidays** unless specifically authorized by the engineer.
- c. The following days shall be construed as **official holidays** under the terms of the contract:

January 1	New Year's Day
Third Monday in January	Martin Luther King, Jr.'s Birthday
February 12	Lincoln's Birthday
Third Monday in February	Washington's Birthday
May 8	Truman's Birthday
Last Monday in May	Memorial Day
July 4	Independence Day
First Monday in September	Labor Day
Second Monday in October	Columbus Day
November 11	Veteran's Day
Fourth Thursday in November	Thanksgiving Day
December 25	Christmas Day

- d. When any of the above **holidays falls** on a **Sunday**, the holiday will be observed on the following **Monday**; when any of the above **holidays falls** on a **Saturday**, the **holiday** will be observed on the immediately preceding **Friday**.
- e. Contractor will not be required to provide dozers, loaders, motor graders, or other equipment for shaping of stockpiles, constructing ramps or runways, or leveling of the top of a completed lift, unless otherwise noted herein.

Temporary Suspension of Work

- a. The **District Engineer** shall have authority to suspend work wholly or in part for such period or periods as may be deemed necessary when weather or other conditions are such that in the opinion of the engineer, the work may be done at a later time with advantage to MoDOT or for failure on the part of the Contractor to comply with any of the provisions of the Contract.
- b. If MoDOT suspends the work for its own advantages and not because of the Contractor's failure to comply with the Contract, the Contractor will be allowed an equal number of calendar days after the completion date for the completion of the work. MoDOT may at its discretion give the Contractor an extension of time for completing the work where the Contractor incurs delays for causes beyond his control.
- c. Normal rainfall is not considered a cause qualifying for an extension of time. Claim for extension of time for all causes must be submitted by the Contractor in writing within **30 Days** after the claimed cause for the delay has ceased to exist.

Liquidated Damages

- a. In the event the successful Contractor fails to deliver the material within the time specified, the Department and the public will sustain damages because of such delay in delivery, the exact extent of which would be difficult to ascertain, and in order to liquidate such damage in advance it is agreed that the **sum of (\$100.00) per day, per item**, for each assessable calendar day on which the delivery has not been completed, is reasonable and the best estimate which the parties can arrive at as liquidated damages, and it is therefore agreed that said amount will be withheld from payments due the Contractor or otherwise collected from the Contractor as liquidated damages.
- b. **Saturdays, Sundays, holidays and days whereas the Department has suspended work** shall not be assessable days.

Effective January 1, 2009 and pursuant to Section 285.530(1) RSMo, no business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the State of Missouri.

As a condition for the award of any contract in excess of five thousand dollars by the Missouri Highways and Transportation Commission/Missouri Department of Transportation (MoDOT) to a business entity, the business entity shall, by sworn affidavit and provisions of documentation, affirm enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contract. Every such business entity shall sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contract.

For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is an example of this type of program. Acceptable enrollment and participation documentation consists of completed a copy of the E-Verify Memorandum of Understanding (MOU).

Any vendor that is not already enrolled and participating in a federal work authorization program and has the intent of doing business with MoDOT, should begin the enrollment process immediately by going to the web site below:

E-Verify is available at: http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm.

A copy of a completed E-Verify Memorandum of Understanding (from the link above) should be returned with your Request For Quotation response along with the appropriate affidavit form.

ADDITIONAL INFORMATION FOR VENDORS:

To begin participation in the federal program it takes approximately 1-2 hours on the internet (at the link above). There is a tutorial of the program and a 50-question test. Once the test is passed, the electronically signed Memorandum of Understanding verifying program participation will be given.

Copies of the Memorandum of Understanding will be requested with all future RFQ's issued by MoDOT District 5. Therefore, It is important that the vendor prints the Memorandum of Understanding and keeps a copy because additional copies must be requested from Homeland Security if needed at a later date.

Only the first and signature pages of the Memorandum Of Understanding have to be attached to the appropriate affidavit on the following pages.



SECTION 1043

FENCE MATERIAL

1043.1 Scope. This specification covers the material required in the construction of chain-link fence and woven wire fence.

1043.2 Chain Link Fence Material. Material used in the construction of fences and gates shall consist of chain-link fence fabric, posts, rails, ties, bands, bars, rods, tension wire and other fittings and hardware designed to support the fabric in a vertical, taut position.

1043.2.1 Zinc Coated Steel Fabric. Zinc coated steel fabric shall be in accordance with AASHTO M 181, Type 1, Class D, with the following exceptions. The weight of zinc coating shall be at least 2.0 ounces per square foot of uncoated wire surface, determined from the average of all specimens representing the lot and no less than 1.8 ounces per square foot on an individual specimen. Sections of fencing with excessive lumps, beads and drops of zinc will be removed before determining weight of coating.

1043.2.2 Aluminum Coated Steel Fabric. Aluminum coated steel fabric shall be in accordance with AASHTO M 181, Type 2, with the following exceptions. An individual specimen shall have at least 0.30 ounce per square foot of uncoated wire surface on 0.148 or 0.192-inch specified diameter wire and no less than 0.25 ounce per square foot on 0.120-inch specified diameter wire.

1043.2.3 Vinyl Coated Steel Fabric. Vinyl coated steel fabric shall be in accordance with AASHTO M 181, Type IV, Class A or Class B. In addition to the referenced colors, brown will also be acceptable.

1043.2.4 Aluminum Alloy Fabric. Aluminum alloy fabric shall be in accordance with AASHTO M 181, Type III.

1043.2.5 Posts, Braces, Rails and Gate Frames. These members shall be in accordance with AASHTO M 181, Grade 1 or Grade 2, and of the shape and dimension shown on the plans. These members may be used with either Type I, Type II, Type III or Type IV fabric.

1043.2.5.1 Zinc Coated Steel Members. Zinc coated steel members shall be in accordance with ASTM F 1043, heavy industrial fence Group IA, with Type A interior and exterior coating, and the plans.

1043.2.5.2 Zinc Plus Organic Coated Steel Members. Zinc plus organic coated steel members shall be in accordance with ASTM F 1043, heavy industrial fence Group IC, with Type B or D interior coating and Type B exterior coating, and the plans.

1043.2.5.3 Aluminum Alloy Members. Aluminum alloy members shall be in accordance with ASTM F 1043, heavy industrial fence Group IB, and the plans.

1043.2.6 Tension Wire. Tension wire shall be in accordance with AASHTO M 181 Type I, Class I.

1043.2.7 Fabric Fasteners. Fabric fasteners shall consist of wire ties, hog rings and C-clips. Fasteners for use with zinc or aluminum coated steel fabric shall be in accordance with [Sec 1043.2.7.1](#) or [Sec 1043.2.7.2](#); those for use with aluminum alloy fabric shall be in accordance with [Sec 1043.2.7.2](#); and those for use with vinyl coated steel fabric shall be in accordance with [Sec 1043.2.7.3](#). Fasteners shall be capable of withstanding a 180-degree bend over the fasteners own diameter without fracture of the wire or loss of adherence of coating. The wire shall have a finished or coated diameter of no less than 0.143 inch, except C-clips for attaching fabric to H section posts shall have a finished or coated diameter of no less than 0.187 inch. Aluminum alloy C-clips will not be permitted for fastening fabric to H section posts.

1043.2.7.1 Zinc or Aluminum Coated Fabric Fasteners. Wire shall be zinc coated at a rate of no less than 0.70 ounce per square foot or aluminum coated at a rate of no less than 0.30 ounce per square foot.

1043.2.7.2 Aluminum Alloy Fabric Fasteners. Wire shall be of aluminum alloy having a minimum tensile strength of 16,000 psi.

1043.2.7.3 Vinyl Coated Fabric Fasteners. Wire may be of steel or aluminum alloy and shall be uniformly coated with the same vinyl material as used to coat the fence fabric. Vinyl coating thickness shall be a minimum of 0.010 inch. Aluminum alloy wire shall have a minimum tensile strength of 16,000 psi.

1043.2.8 Miscellaneous Fittings and Hardware. Miscellaneous fittings and hardware shall be in accordance with AASHTO M 181. Aluminum alloy fittings shall not be used with zinc coated steel posts, rails or gate frames.

1043.2.9 Gates. Frames shall be fastened at the corners by clamps and braces, or by welding. If corners are to be welded, the ends of the vertical members shall be hemispherically notched to fit snugly to the horizontal members. The joint shall be uniformly and continuously fillet welded. The welded area and adjacent damaged coating shall be recoated by the hot-dip process or metallizing process; or covered with two coats of zinc-rich paint. The material for repair of welded areas and applications shall meet the approval of the engineer. Each gate frame shall be cross-braced with no less than two 3/8-inch adjustable truss rods. The filler for gates shall be chain-link fabric of the same kind used for the fence. This filler shall be attached to the frame with stretcher bars and wire ties or clamps. Gates 6 feet high or less shall be equipped with two hinges, and gates more than 6 feet high shall have three hinges. All gates, walks and drives, shall be equipped with a latch and locking attachment. Gatekeepers and center rests of an approved design shall be installed for double drive gates.

1043.2.10 Barbed Wire. Barbed wire for use with chain-link fence shall be zinc-coated steel, aluminum-coated steel or aluminum alloy, and shall be in accordance with AASHTO M 280, with the following exceptions. Zinc-coated barbed wire shall consist of two No. 12 1/2, 13 1/2 or 15 1/2 gage line wires twisted with 4-point barbs uniformly spaced approximately 4 or 5 inches apart in accordance with and the minimum weight of coating shall be 0.80 ounce per square foot of uncoated wire surface for all gages. Aluminum-coated barbed wire shall be in accordance with the requirements for zinc-coated barbed wire, except that the coating shall be aluminum alloy. The weight of coating per square foot of surface shall be no less than 0.25 ounce for both line wires and barbs. However, barbs of suitable aluminum alloy will be permitted. Aluminum alloy barbed wire shall be aluminum alloy 5052-H38, ASTM B 211. Aluminum alloy barbed wire shall consist of two 0.110-inch line wires twisted with 4-point 0.080-inch diameter wire barbs spaced 5 inches apart.

1043.3 Woven Wire Fence Material. Woven wire fence shall be composed of woven wire, barbed wire, brace wire, posts, ties, fittings and hardware.

1043.3.1 Fabric. Fabric shall be made of zinc-coated or aluminum-coated steel wire. Zinc coated fabric shall be in accordance with AASHTO M 279, for Design Number 939-6-11, Grade 60 or 939-6-12.5, Grade 125. The minimum weight of zinc coating shall be Class 3 for all gages. Line wires shall have tension curves. Aluminum-coated fabric shall be in accordance with the requirements for zinc-coated fabric, except that the coating shall be aluminum alloy applied at the rate of no less than 0.25 ounce per square foot of uncoated wire surface.

1043.3.2 Barbed Wire. Barbed wire for use with zinc-coated steel fabric or aluminum-coated steel fabric shall be in accordance with [Sec 1043.2.10](#).

1043.3.3 Wood Posts. Wood posts and braces shall be in accordance with [Sec 1050](#).

1043.3.4 Steel Posts. Steel posts and braces shall be in accordance with [Sec 1043.2.5](#). Corner, end and pull posts shall be pipe of the sizes and weights shown on the plans. Line posts shall be of the lengths and shapes shown on the plans. Posts shall have a nominal weight of 1.33 pounds per linear foot and a minimum weight of 1.28 pounds per linear foot, exclusive of anchor plate.

1043.3.5 Post Tops and Miscellaneous Hardware. Post tops and miscellaneous fittings and hardware shall be in accordance AASHTO M 181.

1043.3.6 Brace Wire. Brace wire shall be no less than 0.143 inch in diameter and shall be of material in accordance with [Sec 1043.3.1](#).

1043.3.7 Staples. Staples shall be of the screw shank-type or equivalent, a minimum of 1 1/4 inches long, galvanized, and of good commercial quality.

1043.3.8 Wire Ties. Wire used for ties shall be in accordance with [Sec 1043.2.7](#), except that the wire may have a minimum diameter of 0.115 inch.

1043.3.9 Gates. Gates for woven wire fence shall be in accordance with [Sec 1043.2.9](#), except that the filler shall be woven wire fabric meeting these specifications.

1043.4 Workmanship and Finish. Fabrication of chain-link or woven wire fencing material furnished under these specifications shall be in accordance with the sizes, shapes and dimensions shown on the plans. Excessive roughness, blisters, sal-ammoniac spots, bruises, flaking, voids in coating, frozen knuckles or other defects, if present to any considerable extent, will be considered cause for rejection. Polyvinyl chloride coating shall be without voids, tears, cracks or cuts that reveal the substrate. Welded seam pipe shall have smooth welds, without skips or gaps. Non-uniform or damaged organic topcoats will be considered cause for rejection whether caused by fabrication, shipping or handling on the job. All burrs at the ends of posts and rails shall be removed.

1043.5 Sampling and Testing.

1043.5.1 Sampling. Sampling of material shall be in accordance with the MoDOT's EPG 106.3.1.

1043.5.2 Testing. When fencing material is tested, tests shall be in accordance with the following methods.

1043.5.2.1 Weight. Weight of hot-dip zinc coatings shall be determined in accordance with AASHTO T 65 or, at the option of the engineer, material may be accepted on the basis of

magnetic gauge determinations conducted in accordance with ASTM E 376. Weight of aluminum coating shall be determined in accordance with AASHTO T 213 or, at the option of the engineer, material may be accepted on the basis of magnetic gauge determinations conducted in accordance with ASTM E 376.

1043.5.2.2 Thickness. Thickness of zinc-rich organic coating shall be determined by magnetic gauge determinations conducted in accordance with ASTM E 376. Thickness of organic topcoat shall be determined by first determining the total thickness of the organic topcoat and exterior hot-dip zinc coating by magnetic gauge determinations conducted in accordance with ASTM E 376, then chemically stripping the organic topcoat and determining the thickness of only the exterior hot-dip zinc in accordance with AASHTO T 65 or ASTM E 376. The difference between the two measurements shall be the thickness of the organic topcoat.

1043.5.2.3 Tensile Strength. Tensile strength or breaking load shall be in accordance with AASHTO T 68.

1043.6 Inspection. The engineer shall have access at all times to all parts of the manufacturer's or fabricator's works that concern the manufacture or fabrication of material furnished under this specification. Each product or article furnished under this specification will be subject to inspection at the factory, fabricating plant, in laboratories of the engineer's choosing, or at the point of delivery. The engineer reserves the right to sample and test each product or article subsequent to acceptance at the place of manufacture or fabrication to determine conformance with the requirements of this specification or to verify certification.

1043.7 Certification. Certifications will be required as follows.

1043.7.1 Vinyl Coated Material. The contractor shall submit to the engineer certification that the vinyl material and vinyl coated fabric meet the requirements of these specifications. If vinyl coated items other than chain-link fabric are furnished, certification will also be required.

1043.7.2 Aluminum Alloy Material. The contractor shall submit to the engineer certification that the material is in accordance with the requirements specified. The certificate shall include or have attached a list or description of typical physical properties representative of the material.

1043.7.3 Organic Topcoated Material. The contractor shall submit to the engineer certification that the material is in accordance with the requirements specified and that the material is the same as prequalified by the engineer.

1043.8 Packaging and Marking. Packaging and marking of the material shall provide ease of handling, storage and identification.

1043.8.1 Each length of chain-link fabric, woven wire fabric or barbed wire shall be tightly rolled and firmly tied. Each roll shall carry a tag showing, as applicable to the product, the length, kind of base metal, type of coating, specified wire size, mesh size, design (style), height or width of fabric, and the producer name, brand or trademark of the manufacturer.

1043.8.2 Each bundle or container of posts, hardware and fittings shall be marked with the name, brand or trademark of the manufacturer, type of material (steel, cast iron, aluminum alloy number, etc.), type of coating and any additional data required for proper identification or to determine apparent conformance to specified quality requirements.



SECTION 607

FENCING

SECTION 607.10 CHAIN-LINK FENCE.

607.10.1 Description. This work shall consist of furnishing and erecting chain-link fence and gates as shown on the plans or as directed by the engineer.

607.10.2 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Chain-Link Fence	1043

607.10.2.1 The contractor may select either zinc-coated steel, aluminum-coated steel, aluminum alloy or vinyl-coated steel fencing material, except that the same kind of material shall be used throughout the project.

607.10.2.2 Walk gates and drive gates, if required, shall be of the same material as that selected for the fence. If the project requires an extension of an existing fence, the new fence material for the extension shall match the existing material.

607.10.3 Construction Requirements.

607.10.3.1 The contractor shall fill, cut or trench where necessary to produce a smooth and uniform ground surface so the bottom of the fabric is no more than 3 inches above the finished ground line. All posts shall be set plumb, true to line and grade. Terminal posts, defined as end, gate, corner and pull posts, shall be set in concrete. Concrete for the footings shall be Class B concrete or a commercial mixture in accordance with [Sec 501](#). The concrete footing shall be a uniform thickness around the post and shall have a cone or dome shaped top. At the option of the contractor, line posts may be driven or placed in dug or drilled holes and set in concrete or quick-setting polyurethane foam in accordance with [Sec 903.3.1.2](#). If the contractor elects to drive line posts, the posts shall be of the length and driven to the depth shown on the plans. If posts cannot be driven to the correct depth, the posts shall be removed and placed in dug or drilled holes and set in foam or concrete footings. Posts damaged during installation shall be removed and replaced at the contractor's expense.

607.10.3.2 Fabric shall not be attached to posts until the concrete footings have cured for at least five days. Fabric shall be securely attached to end, corner, gate and pull posts in accordance with manufacturer's recommendations. The fabric shall be attached to the tension wire with hog rings, spaced as shown on the plans. The fabric shall be attached to line posts with wire ties or bands spaced in accordance with manufacturer's recommendations. All fabric shall be taut before attaching to line posts and tension wire.

607.10.3.3 Drive gates shall have an approximate full circle opening swing. Walk gates shall have positive stops to prevent the gates from swinging into the right of way.

607.10.3.4 If the chain link fence is required to be topped with barbed wire, the barbed wire support arm shall be at a 45-degree angle, ± 5 degrees, from the vertical plane of the fence line

extended above the fence, and shall be fitted with clips, slots or other device for attaching three strands of barbed wire to the arm. The top strand shall be located 12 inches horizontally from the fence line, \pm 3 inches, with the other wires spaced uniformly between the top of the fence fabric and the top outside strand of barbed wire. The barbed wire arm shall be of sufficient strength to withstand a weight of 250 pounds applied at the outer strand of barbed wire without causing any permanent deflection of the arm. Each strand of barbed wire shall be pulled taut to remove all sag before the strand is attached to the extension arm.

607.10.3.5 Post braces shall be installed for each gate, corner, pull and end post. The brace shall extend from the mid point of the gate, corner, pull and end post to the midpoint of the adjacent line post. A truss rod shall be connected to the midpoint of the line post and run back to the bottom of the gate, corner, pull and end post. The truss rod shall be equipped with a turnbuckle or other equivalent device for adjustment.

607.10.4 Method of Measurement. Measurement of chain-link fence will be made to the nearest linear foot, measured along the slope of the fabric, but shall not include gates. Measurement for gates will be made for each unit assembled, installed and complete in place. Double drive gates will be considered a single unit. Measurement for the 3-strand barbed wire extension will be made to the nearest linear foot, measured along the slope of the fence, but will not include gates.

607.10.5 Basis of Payment. The accepted quantity of chain-link fence, walk and drive gates, and barbed wire extensions, complete in place, will be paid for at the contract unit price for each of the pay items included in the contract. No direct payment will be made for concrete footings, post hole excavation or for excavation and embankment necessary to smooth the area under the fence.

SECTION 607.20 WOVEN WIRE FENCE.

607.20.1 Description. This work shall consist of furnishing and erecting woven wire fence and gates as shown on the plans or as directed by the engineer.

607.20.2 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Woven Wire Fence	1043.3
Wood Posts for Fencing	1050.2

607.20.3 Construction Requirements.

607.20.3.1 Posts shall be set plumb, true to line and grade. Wood corner, end, brace and pull posts shall be set in drilled or dug holes and backfilled with soil thoroughly tamped around the post. Steel corner, end, brace and pull posts and braces shall be set in concrete footings in accordance with [Sec 607.10.3](#). Steel and wood line posts may be driven in lieu of setting the posts in drilled or dug holes. If the contractor elects to drive the line posts, the posts shall be of the length and driven to the depth shown on the plans. If the posts cannot be driven to the correct depth, posts shall be removed and placed in dug or drilled holes and set with the appropriate backfill. Posts damaged during installation shall be removed and replaced at the contractor's expense.

607.20.3.2 Wood line posts that are to be driven shall be pointed before being treated. If surfaces of treated wood posts have been damaged, or if framing at the site is required, the damaged or resulting untreated surfaces shall be field treated with two coats of commercially

available preservative of the same type used for the original treatment. The second coat shall be applied after the first coat is absorbed. Creosote preservative shall be hot when applied.

607.20.3.3 Corner post assemblies shall be set at all horizontal angle points greater than 15 degrees in the line of fence. Pull post assemblies shall be set at all vertical angle points greater than 15 degrees but at no greater than 660-foot intervals.

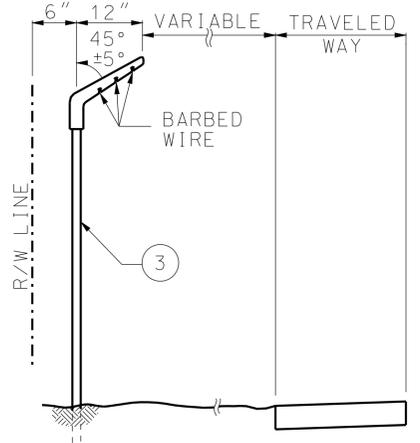
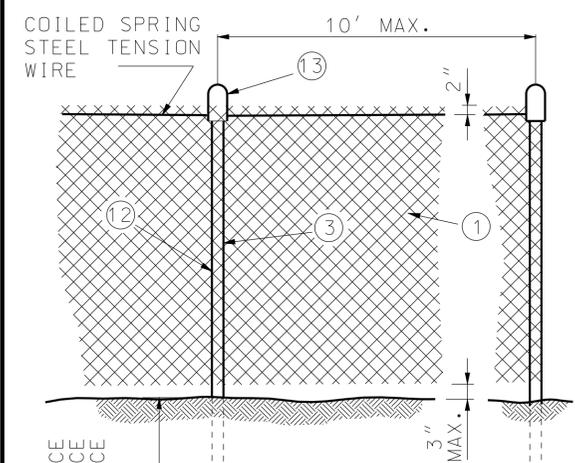
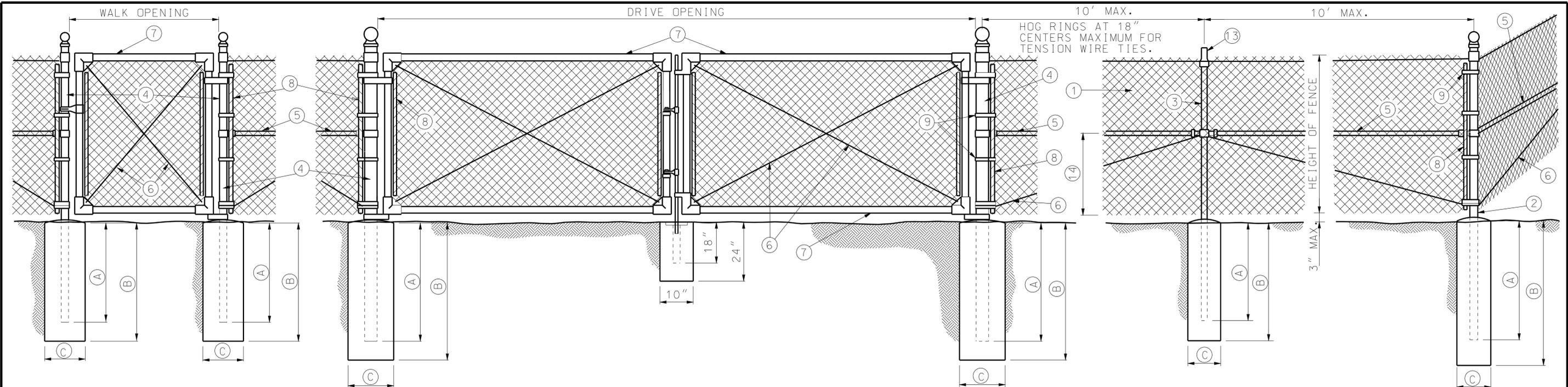
607.20.3.4 Fabric and barbed wire shall be pulled taut before attaching to any line post. The bottom of the fabric shall be no more than 3 inches above the ground at any point and necessary excavation along the fence shall be performed to obtain the specified clearance. Filling of depressions will not be permitted except where approved by the engineer. Spaces left by depressions shall be filled with strands of barbed wire as shown on the plans.

607.20.3.5 Walk and drive gates shall be constructed in accordance with the requirements of gates for chain-link fence, except the filler shall be woven wire fabric of the same material as used for the fence.

607.20.3.6 The contractor shall modify the typical installation for water gates to fit the conditions in the field and shall be approved by the engineer.

607.20.4 Method of Measurement. Measurement of woven wire fence will be made to the nearest linear foot, measured along the slope of the fabric, but will not include gates. Measurement for gates will be made for each unit assembled, installed and complete in place. Double drive gates will be considered a single unit.

607.20.5 Basis of Payment. The accepted quantity for woven wire fence and gates, complete in place, will be paid for at the contract unit price for each of the pay items included in the contract. No direct payment will be made for post hole excavation, backfilling, clearing of fence rows, trenching for fabric, placing extra strands of barbed wire for depressions, construction of water gates and all other incidental work or material.



MINIMUM DEPTH FOR SETTING POSTS

DESCRIPTION	HEIGHT OF FENCE		
	48\"/>		
② ENDCORNER & PULLPOST	(A)	30"	36"
	(B)	36"	42"
	(C)	10"	12"
③ LINE POST	(A)	24"	27"
	(B)	30"	36"
	(C)	10"	12"
④ GATE POST	(A)	30"	36"
	(B)	36"	42"
	(C)	10"	12"

WIRE SIZE AND HEIGHT OF FABRIC

SPECIFIED DIAMETER			HEIGHT OF FABRIC INCHES
INCHES	GAGE	MESH INCHES	
0.120	11	2	36, 42
0.148	9	2	48, 60
0.192	6	2	72, 84

NOTE: IF POSTS CANNOT BE DRIVEN TO DEPTHS INDICATED BECAUSE OF ROCKY SOILS OR OTHER CONDITIONS, THEY SHALL BE REMOVED AND REPLACED IN FOOTINGS. POST TOPS SHALL BE PROTECTED AGAINST DAMAGE AND ALL POSTS WHICH ARE DAMAGED DURING INSTALLATION SHALL BE REMOVED AND REPLACED.

- LEGEND
- ① FABRIC
 - ② END, CORNER OR PULL POST
 - ③ LINE POST
 - ④ GATE POST
 - ⑤ BRACE
 - ⑥ TRUSS ROD
 - ⑦ GATE FRAME
 - ⑧ STRETCHER BAR 1/4" X 3/4" PLATE
 - ⑨ STRETCHER BAR BAND
 - ⑩ END OR CORNER CLAMP
 - ⑪ POST TOPS (OTHER THAN LINE POSTS)
 - ⑫ FABRIC TIES
 - ⑬ LINE POST TOPS WITH OR WITHOUT TOP RAILS
 - ⑭ ONE-HALF FABRIC HEIGHT OR AS RECOMMENDED BY MANUFACTURER

MINIMUM SIZE FOR FENCE HARDWARE

	WIDTH	SIZE (IN.)	LBS/FT.
② END CORNER OR PULL POST	N/A	2 1/2 DIA.	5.79
③ LINE POST	N/A	2" DIA.	3.65
④ GATE POST (SINGLE GATE OR 1 LEAF OF DOUBLE)	≤ 6'	2 1/2 DIA.	5.79
	≤ 13'	3 1/2 DIA.	9.10
	≤ 18'	6 DIA.	18.97
	> 18'	8 DIA.	24.70
⑤ BRACE	N/A	1 1/4 DIA.	2.27
⑥ TRUSS ROD	N/A	3/8"	-
⑦ GATE FRAME	N/A	1 1/2 DIA.	2.72

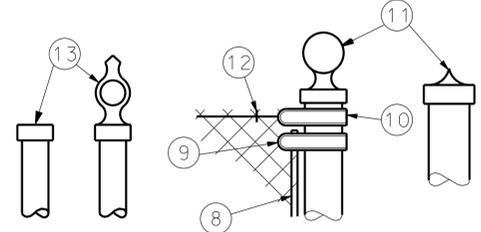
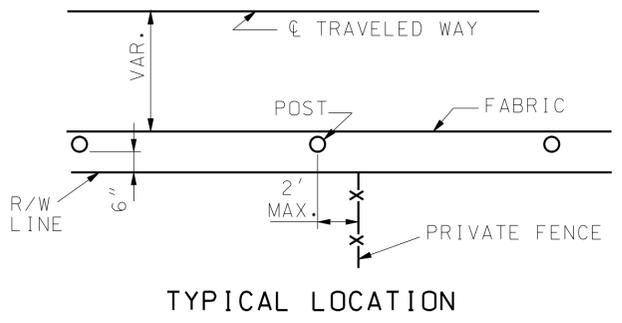
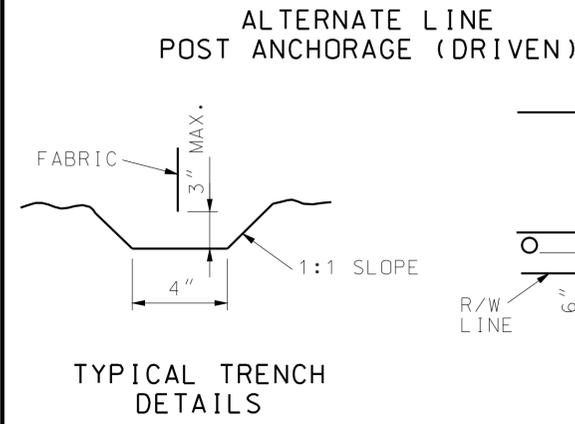
GENERAL NOTES:
 WEIGHTS OF MATERIALS SHOWN IN TABLE ARE FOR ASTM F 1043, GROUP 1A. SIZES SHOWN ARE FOR STEEL AND ALUMINUM. EQUIVALENT ASTM F 1043 ALTERNATIVES MAY BE USED.

PULL POSTS SHALL BE USED AT SHARP BREAKS IN VERTICAL GRADE OR AT APPROXIMATE 500' CENTERS ON STRAIGHT RUNS OR AS DIRECTED BY THE ENGINEER.

DRILLED HOLES (C) IN SOLID ROCK SHALL PROVIDE A DIAMETER OF NOT LESS THAN 2" GREATER THAN THE MAXIMUM TRANSVERSE DIMENSION OF THE POST SECTION.

ALL POSTS SHALL HAVE PROVISIONS TO SECURELY HOLD THE TOP TENSION WIRE IN POSITION AND ALLOW FOR REMOVAL AND REPLACEMENT OF A POST WITHOUT DAMAGING THE TOP TENSION WIRE.

THE MESH SIZE SHALL BE 2 INCHES ± 1/8 IN. MEASURED IN EITHER DIRECTION AS THE MINIMUM CLEAR DISTANCE BETWEEN THE WIRES FORMING THE PARALLEL SIDES OF THE MESH.



POST TOPS TO BE PRESSURE FITTED OR SCREWED. POST TOPS MAY BE ELIMINATED FOR ALL POSTS EXCEPT PIPE POSTS. IF POST TOPS ARE ELIMINATED, POST LENGTH SHALL BE INCREASED 3\"/>

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

CHAIN-LINK FENCE

DATE EFFECTIVE: 02/01/2007
 DATE PREPARED: 8/21/2009

607.10V

SHEET NO. 1 OF 1

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

