

Estimate of Quantities

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0600	Remove Fence	119,064	Ft
620E0020	Type 2 Right-of-Way Fence	83,503	Ft
620E0040	Type 4 Right-of-Way Fence	35,561	Ft
620E1020	2 Post Panel	165	Each
620E1030	3 Post Panel	260	Each
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the State ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0904(58)208	3	10

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

UTILITIES

The Contractor shall contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It shall be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25; the Contractor shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

GENERAL MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer. No driving on private property is allowed without permission from the adjacent landowner.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP Report 350 or MASH crash-worthy requirements. The contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies. Cost for traffic control, including placement and movement of signs, shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

All workers within the right of way shall wear a minimum of Class 2 approved safety apparel at all times.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0904(58)208	4	10

CLEARING

Prior to installing right-of-way fence, the fence alignment shall be cleared of all trees, tree branches, tree stumps, brush, vegetation and debris. After clearing, the area shall be mowed, bladed and leveled to the satisfaction of the Engineer prior to the installation of the new right-of-way fence.

Clearing will be paid for at the contract lump sum price for "Clearing". Payment shall be full compensation for labor and equipment necessary to clear the entire line for the fence, mow and level ground irregularities.

RESTORATION OF INSLOPES AND DITCHES

Any slope area or ditch that is rutted or otherwise unduly disturbed during fencing operations shall be restored and seeded by the Contractor, at no expense to the State. Cost for this work shall be incidental to the contract unit prices for the various items.

REMOVE FENCE

The Contractor shall remove the existing right-of-way fence that is to be replaced as designated in the plans and/or as ordered by the Engineer. Fence removed shall become the property of the Contractor. Salvaged material may be temporarily stored near the right of way line provided it is out of the clear zone of I90 and SD248. Stockpiled material shall be removed from the project on a weekly basis.

The Contractor shall be responsible to contact all landowners along the project route prior to removing fence.

CONTROL OF ACCESS

This highway is a "Control of Access" highway as adopted by the South Dakota Transportation Commission. Access points to be limited to those shown on the construction plans except any additional that are required as a result of Right of Way acquisition.

The Contractor is responsible to control access throughout the project. All fence removed during any one working day is to be replaced during the same day. If the contractor elects to use temporary fence to control access or to accommodate livestock, the cost of the temporary fence shall be incidental to the contract unit prices for the various items.

FENCE ALIGNMENT

Where fence is being removed and replaced, fence shall be installed on the same alignment as the existing. It shall be the Contractor's responsibility to preserve the fence alignment.

TYPE 2 FENCE

It is anticipated that low areas susceptible to flooding may be encountered. The Engineer will determine which areas will be fenced in accordance with Standard Plate 620.10 for Fencing at Wide Depressions. Concrete footings will not be required. Payment for fencing these areas shall be incidental to the contract unit price per foot for "Type 2 Right-Of-Way Fence".

POST PANELS

All existing post panels shall be replaced. Existing 5 Post and 4 Post Panels shall be replaced with a combination of 2 Post and 3 Post Panels as determined by the Engineer.

The number of 2 Post and 3 Post Panels will be the actual number installed and will be paid for at the contract unit price per each. Payment shall be full compensation for furnishing material, (including posts, brace post, diagonal brace wire, and dowels), labor, equipment and incidentals necessary to construct the post panels.

The E-Z Brace or an approved equal may be utilized as an alternate horizontal brace in the brace panels if approved by the Engineer. The E-Z Brace shall be attached to each wood post utilizing two 5/16" x 3" lag screws. Holes of appropriate diameter, based on wood post condition, shall be drilled before placement of lag screws. The following are contacts regarding the E-Z Brace:

Roger Papka
E-Z Brace
1160 Karen St.
Watertown, SD 57201
605-881-6142

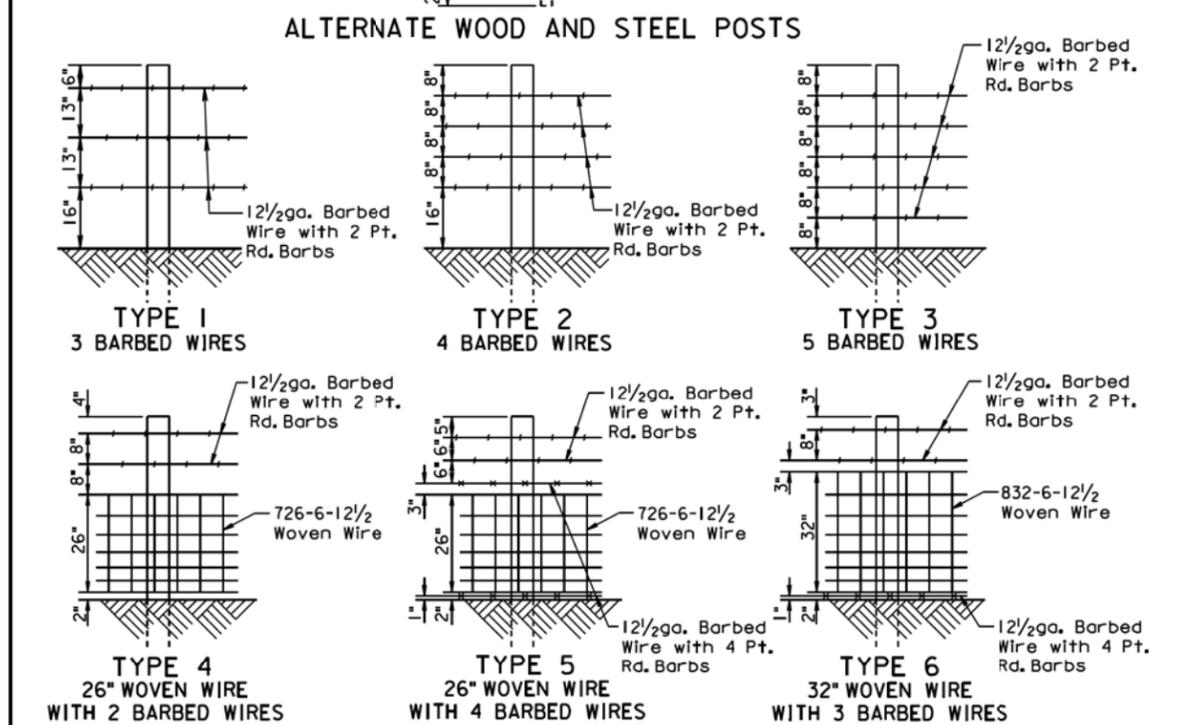
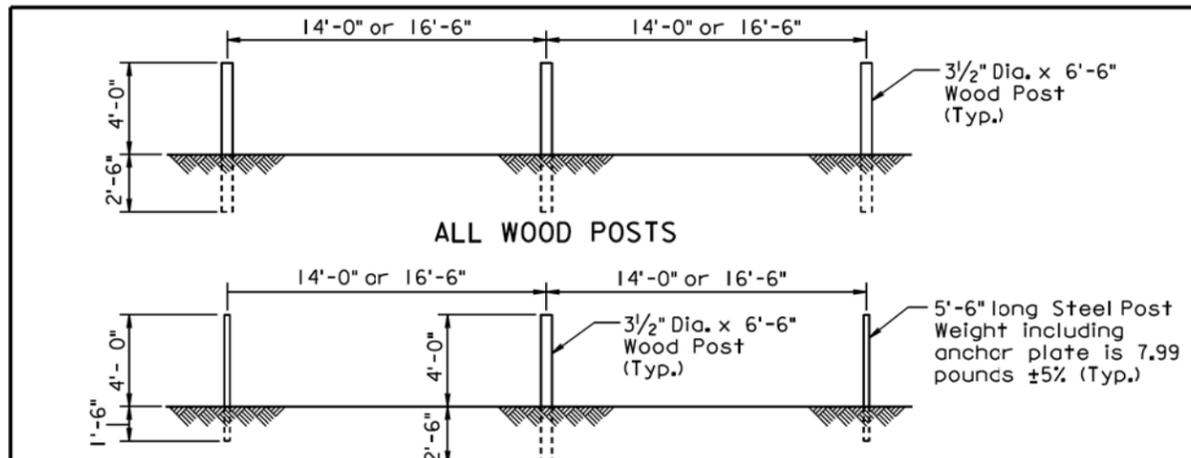
Dennis Mack
E-Z Brace
108 18th St. NE
Watertown, SD 57201
605-881-4990

TABLE OF FENCE QUANTITIES

		Remove	Type 2	Type 4			
	Interstate 90	Fence	Type 2 ROW	Type 4 ROW	2 Post	3 Post	Gate
LANE	MRM TO MRM	Ft	Fence	Fence	Panel	Panel	Each
EB	208.5 to 209	2640	2640	0	5	5	0
EB	209 to 210	5280	3168	2112	15	15	4
EB	210 to 211	5280	0	5280	9	19	1
EB	211 to 212	5280	0	5280	10	12	1
EB	212 to 213	5280	1742	3538	12	18	2
EB	213 to 214	5280	792	4488	5	15	0
EB	214 to 215	5280	3031	2249	4	11	0
EB	215 to 216	5280	5280	0	7	5	1
EB	216 to 217	5280	5280	0	13	6	1
EB	217 to 218	5280	5280	0	8	3	1
EB	*218 to 219	8765	7365	1400	9	16	3
EB	219 to 220	5280	5280	0	6	9	2
EB	220 to 221	5280	5280	0	3	10	0
EB	221 to 222	5280	2096	3184	3	16	2
EB	222 to 223	5280	5280	0	5	10	1
EB	223 to 224	5280	5280	0	7	18	2
EB	224 to 225	5280	5280	0	4	12	1
EB	225 to 226	5280	4726	554	4	11	0
EB	226 to 227	5280	444	4836	2	21	1
EB	227 to 228	5280	5280	0	7	10	1
EB	228 to 229	5280	5280	0	9	9	2
EB	229 to 230	5280	4699	581	8	4	1
EB	230 to 230.39	2059	0	2059	10	5	3
	TOTALS:	119,064	83,503	35,561	165	260	30

***Includes Right of Way Fence around EB Rest Area**

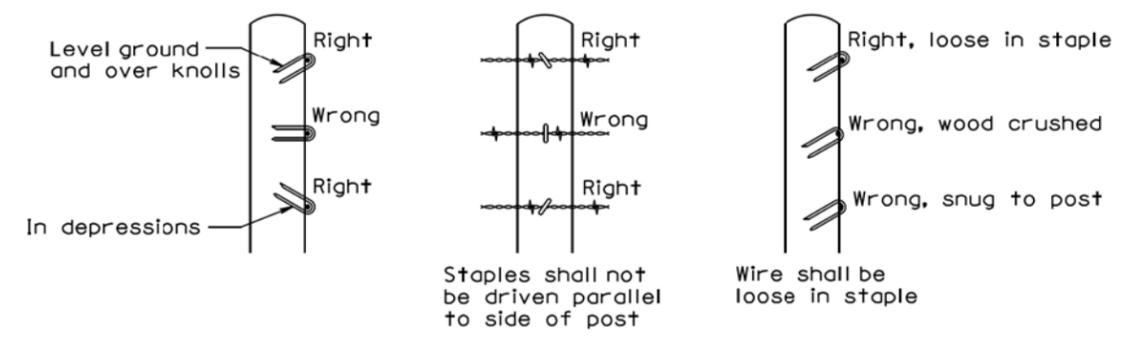
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TYPE	DESCRIPTION	LINE POST SPACING	BARBED WIRE		WOVEN WIRE
			WIRE GAGE	NUMBER AND SHAPE OF BARBS	STYLE OR DESIGN NO.
1	3 Barbed Wires	16'-6"	12/2	2 Point Round	---
2	4 Barbed Wires	16'-6"	12/2	2 Point Round	---
3	5 Barbed Wires	16'-6"	12/2	2 Point Round	---
4	26" Woven Wire with 2 Barbed Wires	14'-0"	12/2	2 Point Round	726-6-12/2
5	26" Woven Wire with 4 Barbed Wires	14'-0"	12/2	2 wires with 2 Pt. Rd., 2 wires with 4 Pt. Rd.	726-6-12/2
6	32" Woven Wire with 3 Barbed Wires	14'-0"	12/2	2 wires with 2 Pt. Rd., 1 wire with 4 Pt. Rd.	832-6-12/2

GENERAL NOTES:
 Fence types designated on the plans that are followed by the letter S shall have smooth (barbless) wires.
 When type 5S or 6S is designated the bottom wire may be barbed, smooth, or left off.
 All degrees of curvature stated for fence are at centerline of roadway.
 September 14, 2009

S D D O T	RIGHT-OF-WAY FENCE	PLATE NUMBER 620.01
	Published Date: 1st Qtr. 2014	Sheet 1 of 1



STAPLE INSTALLATION

GENERAL NOTES:

The Right-of-Way fence shall consist of barbed wire or a combination of woven wire and barbed wire. The barbed wire and/or woven wire shall be fastened to all wood posts or fastened to alternating wood and steel posts. Only wood posts shall be used for brace panels. Gates shall be of the type designated in the plans or as otherwise directed by the Engineer. Fence shall be constructed conforming to the details on the standard plates and in the plans unless otherwise directed by the Engineer.

Right-of-Way fence on Interstate Projects shall be constructed one foot within the Interstate Right-of-Way lines except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

Right-of-Way fence other than on Interstate Projects shall be constructed within one foot of the Right-of-Way on the Landowner's side except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

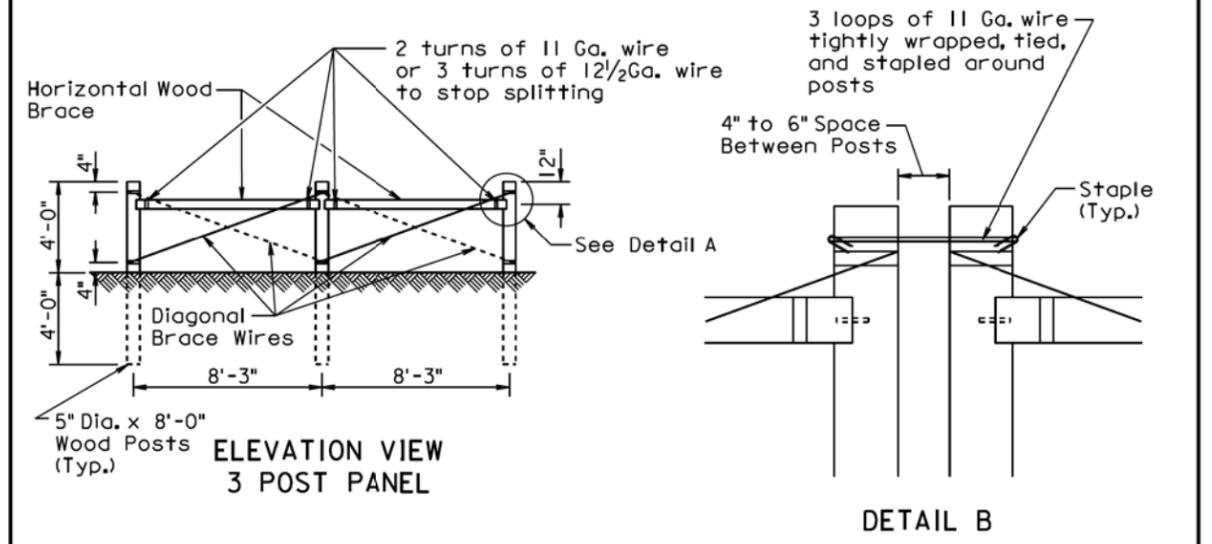
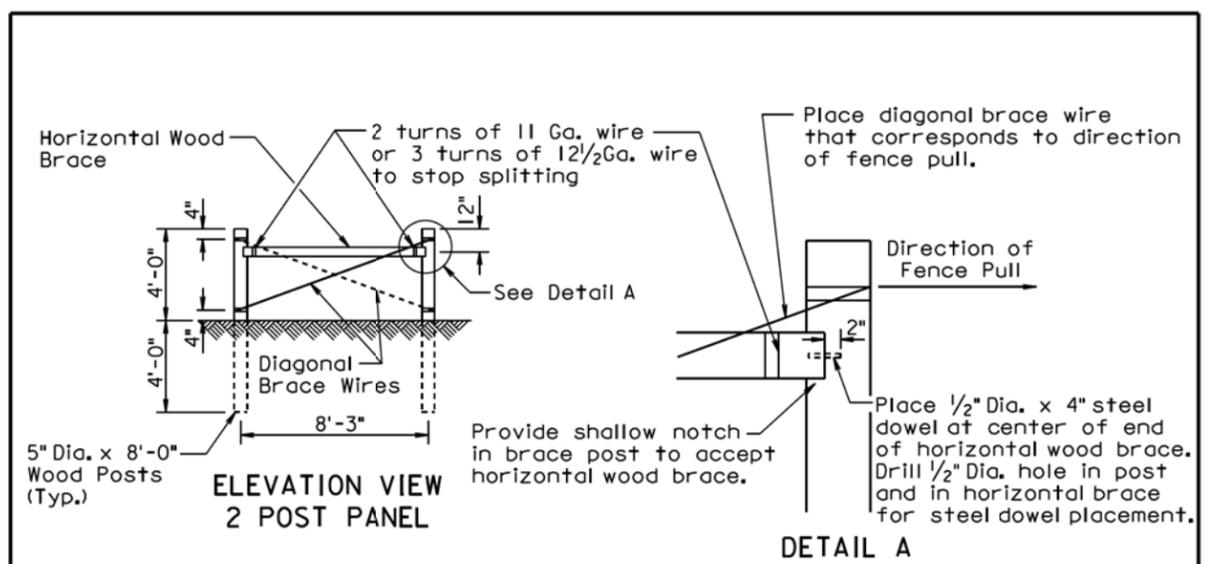
Barbs shall be fabricated from zinc coated 14 ga. wire. Two point barbs shall be wrapped twice around one main strand at 4" spacings and the four point barbs shall be interlocked and wrapped around both main strands at 5" spacings.

The gages of wire and wood post lengths and sizes are the minimum acceptable unless otherwise specified in the plans. The tolerances for steel posts shall be as stated in AASHTO M281. Woven wire shall conform to design and specifications of ASTM A116 and barbed wire shall conform to ASTM A121.

S D D O T	STAPLE INSTALLATION AND GENERAL RIGHT-OF-WAY FENCE NOTES	PLATE NUMBER 620.02
	Published Date: 1st Qtr. 2014	Sheet 1 of 1

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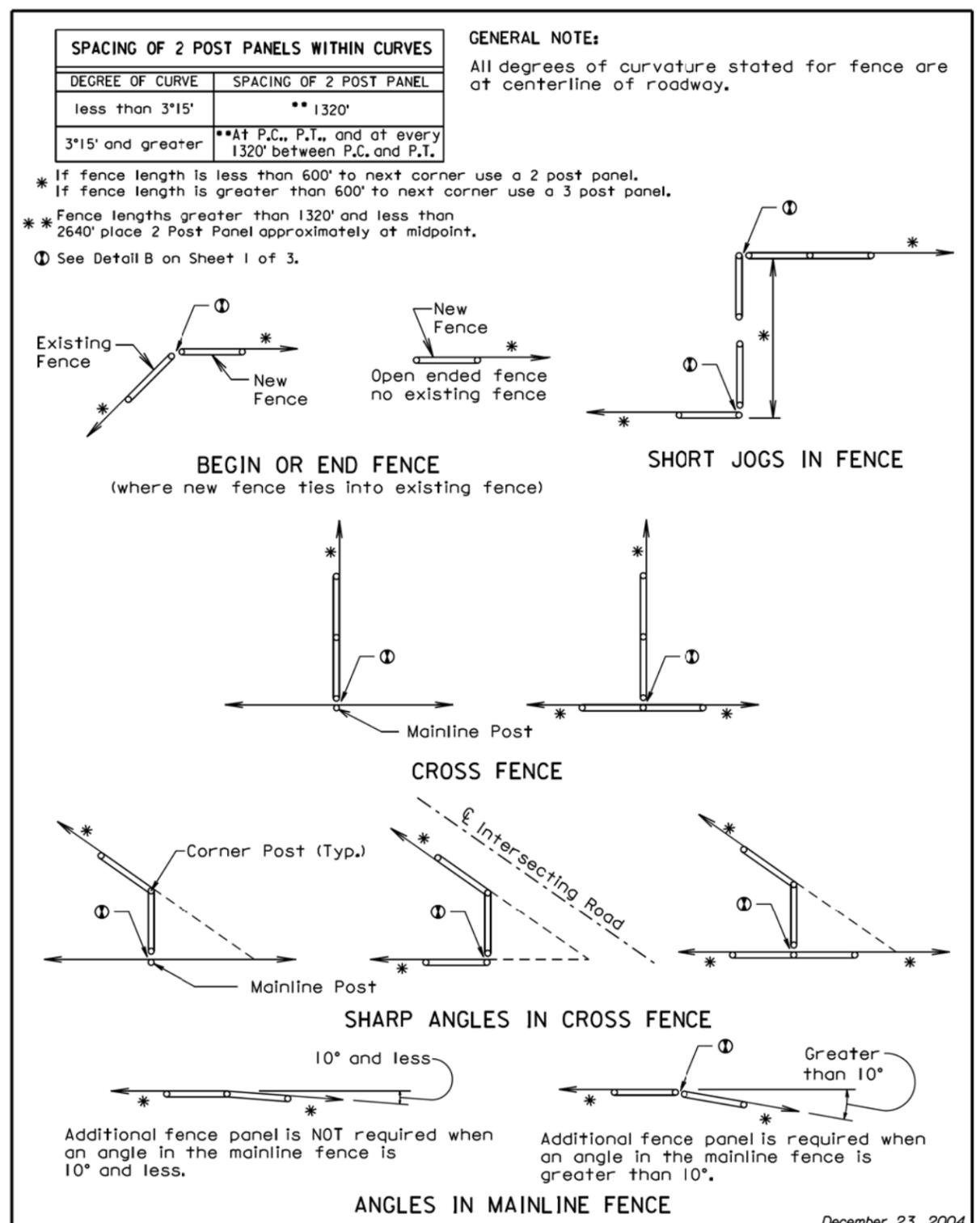
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GENERAL NOTES:
 Two Post Panels shall be installed at least every 1320' between corners.
 Two Post Panels shall be installed at any sharp vertical angle crest points and as directed by the Engineer.
 Horizontal wood braces shall consist of 4" dia. x 8' wood posts or rough 4" x 4" x 8' timbers.
 Diagonal brace wires shall be fabricated with 4 strands of 9 Ga. galvanized wire twisted tight. The diagonal brace wires shall be installed in accordance with the direction of the fence pull. Two diagonal brace wires are required if fence pull is in both directions.

December 23, 2004

S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
	Published Date: 1st Qtr. 2014	Sheet 1 of 3



December 23, 2004

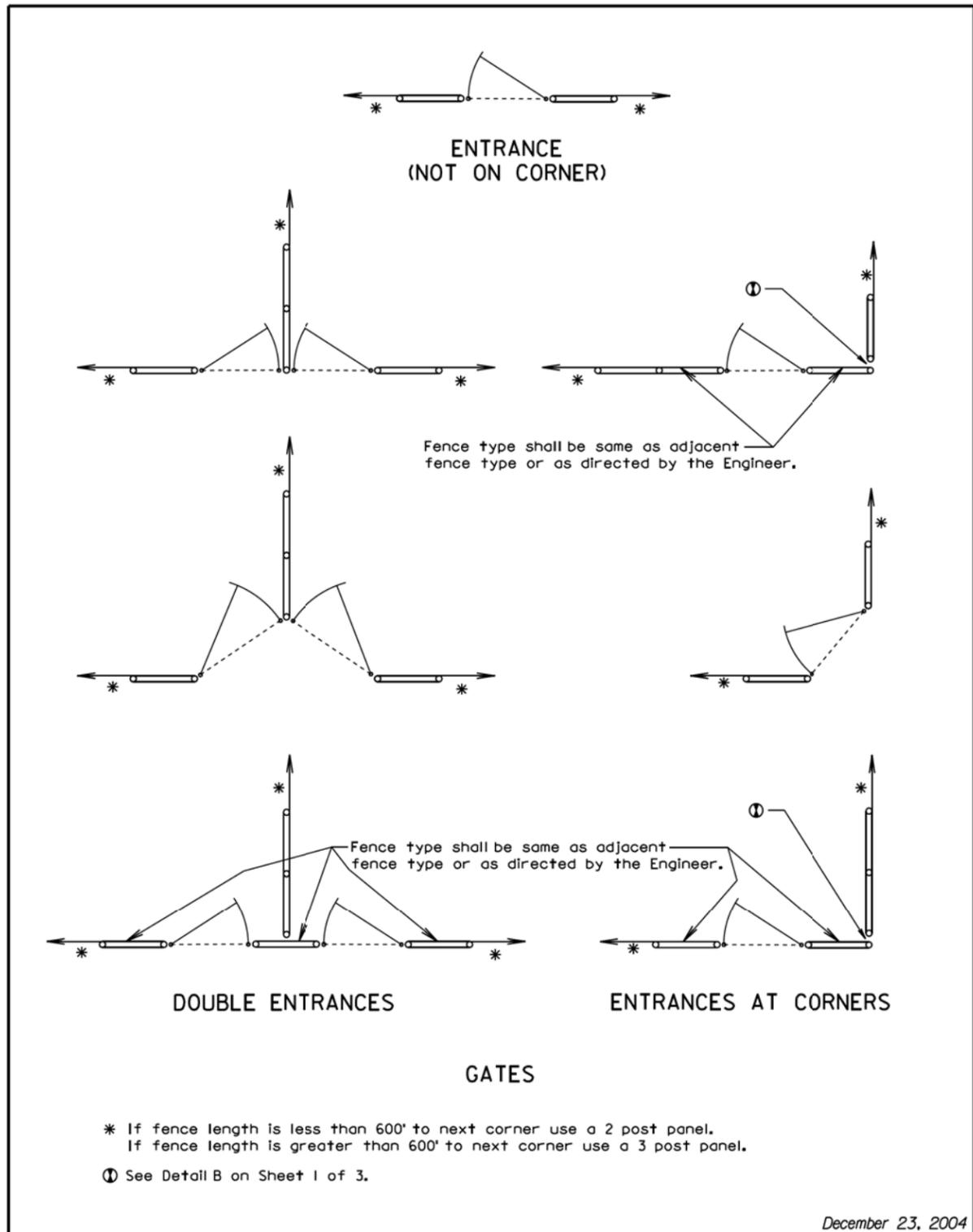
S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
	Published Date: 1st Qtr. 2014	Sheet 2 of 3

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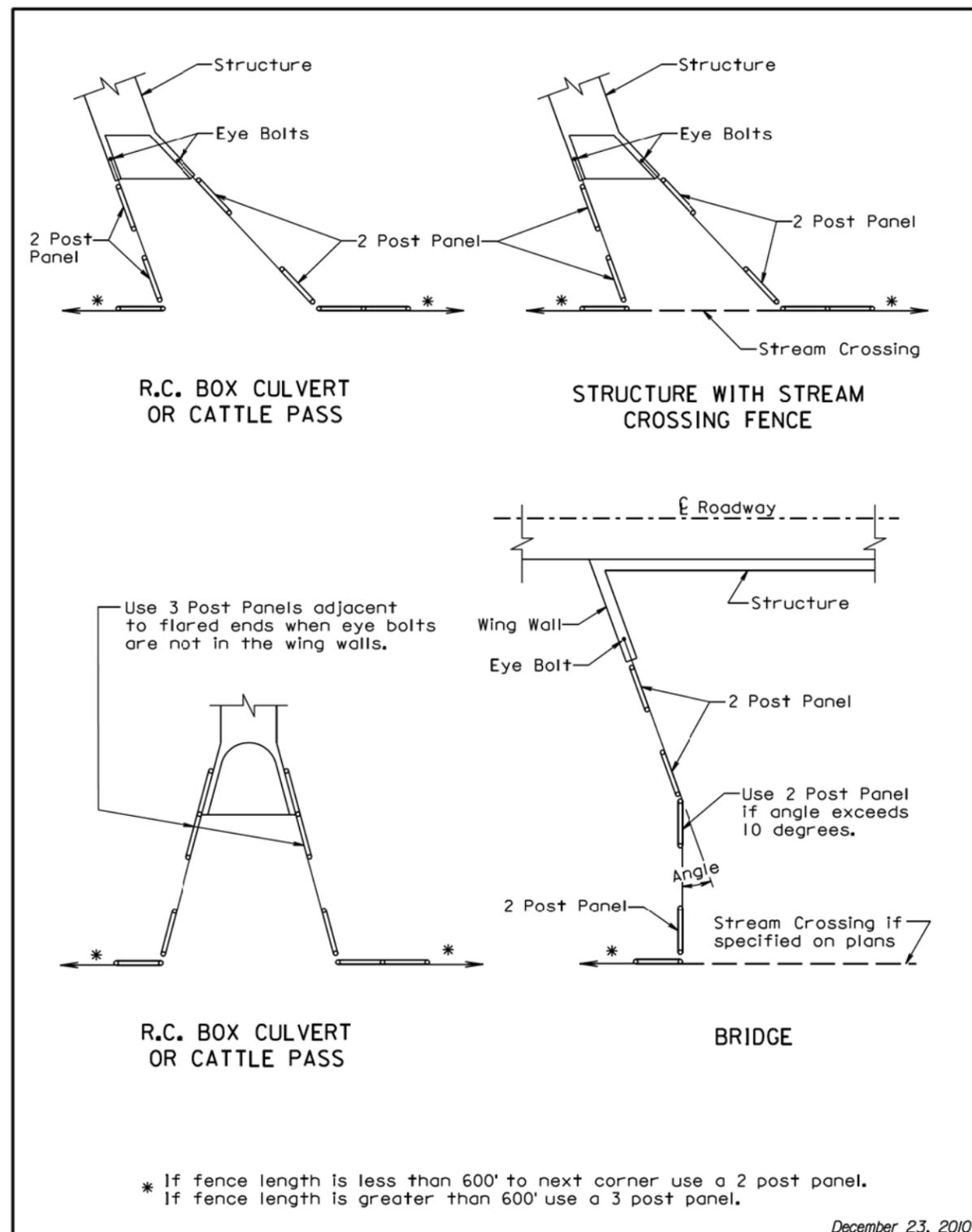
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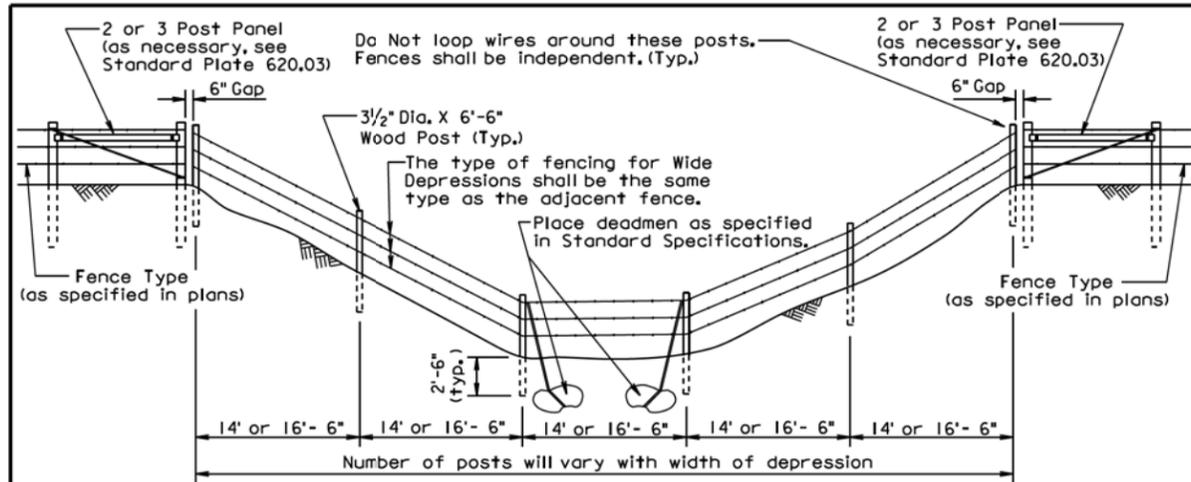
S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
	Published Date: 1st Qtr. 2014	Sheet 3 of 3



S D D O T	BRACE PANEL APPLICATIONS AT STRUCTURES	PLATE NUMBER 620.04
	Published Date: 1st Qtr. 2014	Sheet 1 of 1

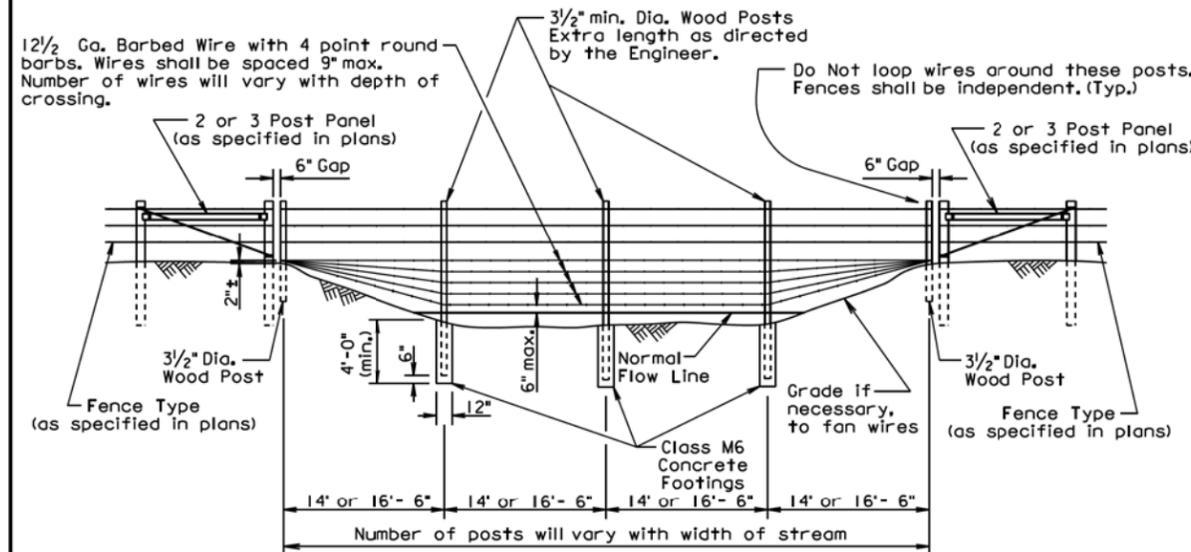
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This installation shall be made when requested by the Engineer.

FENCING AT WIDE DEPRESSION (SUBJECT TO FLOODING)



This installation shall be made only when stated in the plans.

FENCING AT STREAM CROSSING

GENERAL NOTES:

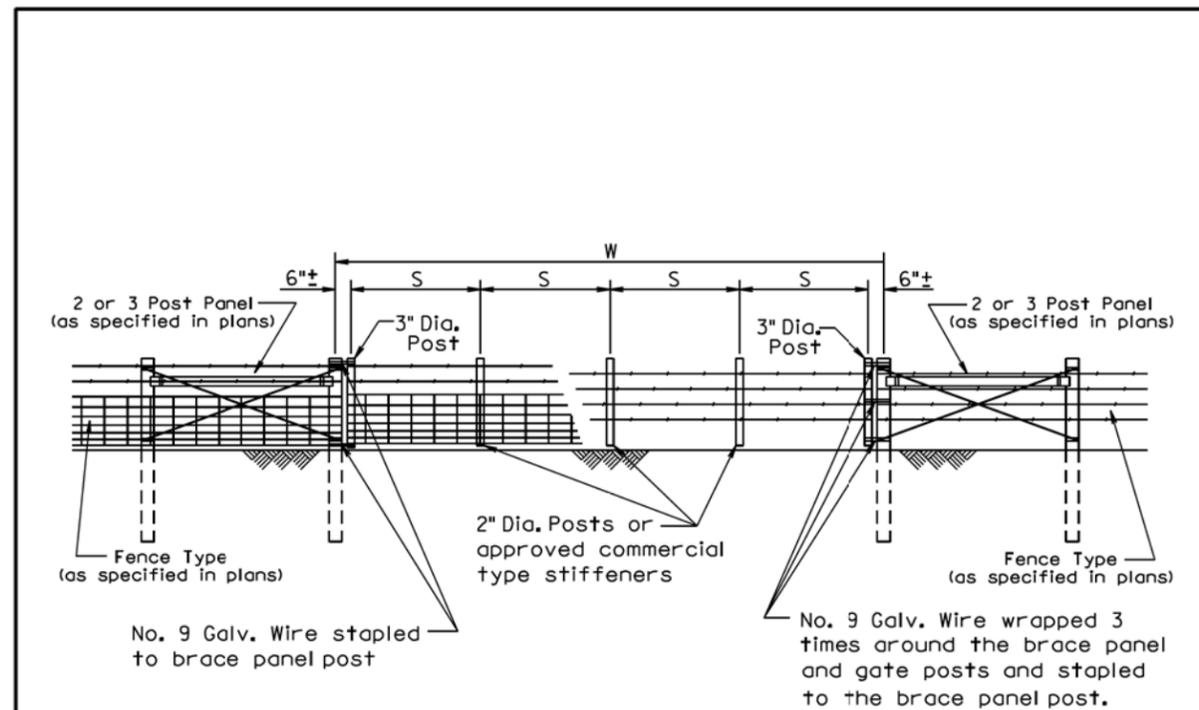
There will be no extra payment for the additional work and materials required to construct the fencing at the wide depression(s) and/or the fencing at the stream crossing(s).

Measurement and payment for the fencing at the wide depression(s) and/or the fencing at the stream crossing(s) shall be at the contract unit price per foot for the corresponding Right-of-Way fence bid item.

August 31, 2013

S D D O T	FENCING AT WIDE DEPRESSION(S) AND STREAM CROSSING(S)	PLATE NUMBER 620.10
		Sheet 1 of 1

Published Date: 1st Qtr. 2014



W Gate Width (ft.)	S Post Spacing
16	3 @ 5'-0" ±
20	4 @ 4'-9" ±
24	4 @ 5'-9" ±
30	5 @ 5'-10" ±
40	6 @ 6'-6" ±

GENERAL NOTES:

Creosote treatment of the gate posts will not be accepted.

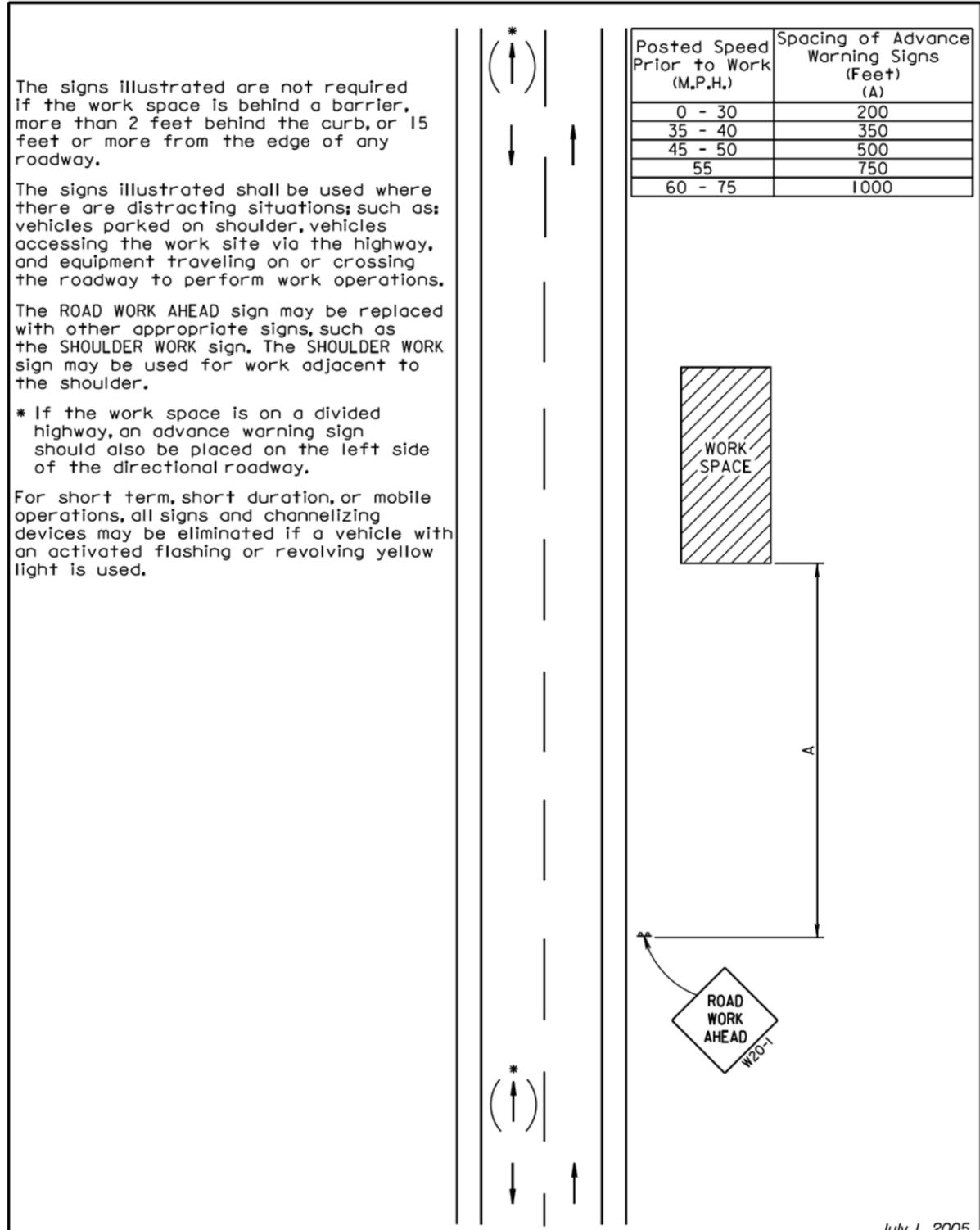
The type of fencing in the gate shall be of the same type as specified for the adjacent Right-of-Way fence.

All costs for furnishing and constructing the wire gate(s) shall be incidental to the contract unit price per Ft for the respective Right-of-Way fence bid item.

March 31, 2000

S D D O T	WIRE GATES	PLATE NUMBER 620.20
		Sheet 1 of 1

Published Date: 1st Qtr. 2014



July 1, 2005

S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
		Sheet 1 of 1

Published Date: 1st Qtr. 2014

Plot Scale - 1:200

- Plotted From - tw1m29

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