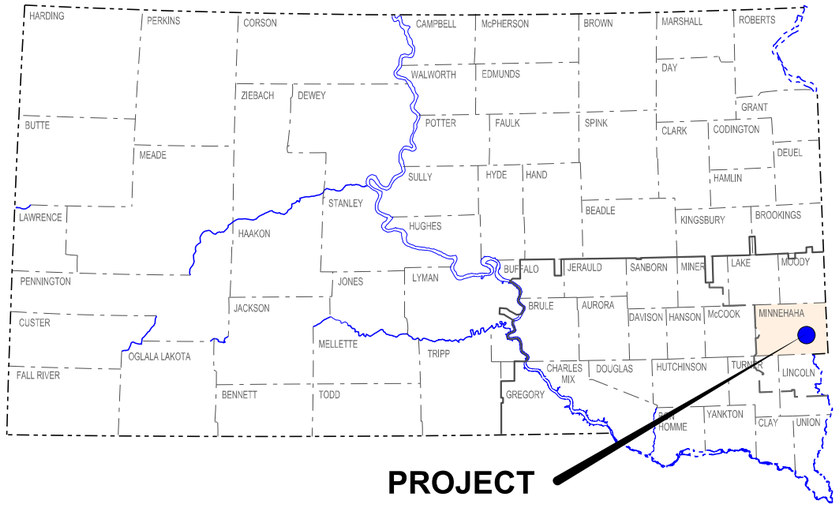


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT 000I–271
INTERSTATE 90
MINNEHAHA COUNTY

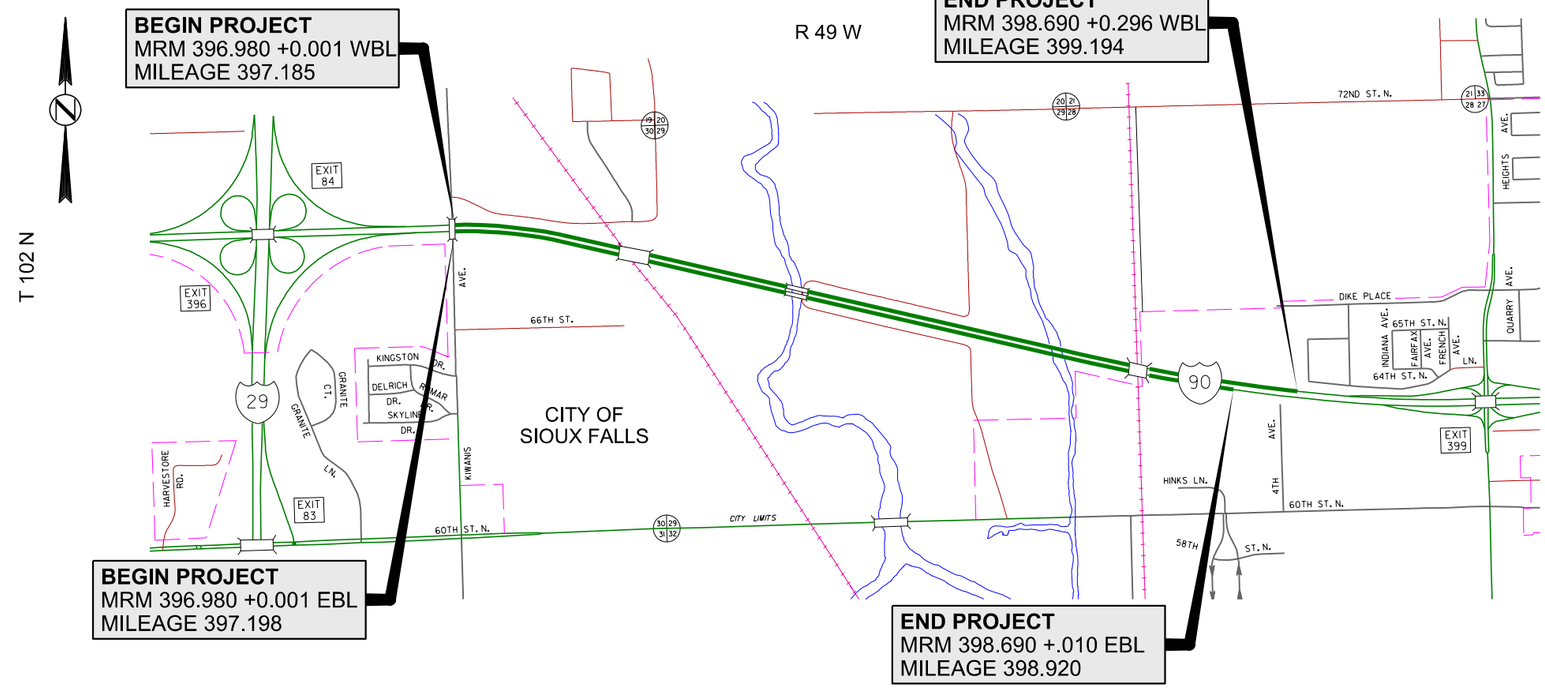
FENCE REPLACEMENT

PCN I4X4

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000I-271	1	11

Plotting Date: 09/18/2017

INDEX OF SHEETS



STORM WATER PERMIT
(None required)

DESIGN DESIGNATION

ROUTE	I90E	I90W
ADT(2016)	9,125	9,125
ADT(2036)	14,071	14,071
DHV	1,819	1819
D	50%	51%
T DHV	6.7%	6.7%
T ADT	14.8%	14.8%
V	65 MPH	65 MPH

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000I-271	2	11

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0600	Remove Fence	17,832	Ft
620E0030	Type 3 Right-of-Way Fence	12,525	Ft
620E0230	Modified Type 3 Right-of-Way Fence	47	Ft
620E0260	Modified Type 6 Right-of-Way Fence	5,260	Ft
620E1020	2 Post Panel	115	Each
620E1030	3 Post Panel	2	Each
620E1110	Wood Fence Post	4	Each
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.

TABLE OF FENCING QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000I-271	3	11

TABLE FOR FENCE REPLACEMENT FOR I90 WB PROJECT 000I-271 PCN I4X4

I90 WBL LOCATION			009E0010 MOBILIZATION LS	100E0100 CLEARING LS	110E0600 REMOVE FENCE FT	620E0030 TYPE 3 RIGHT -OF-WAY- FENCE FT	620E0230 MODIFIED TYPE 3 RIGHT-OF-WAY- FENCE FT	620E0260 MODIFIED TYPE 6 RIGHT-OF-WAY- FENCE FT	620E1020 2 POST PANEL EACH	620E1030 3 POST PANEL EACH	620E1110 WOOD FENCE POST EACH	634E0120 TRAFFIC CONTROL MISC. LS
398.986	to	398.991	-	-	28	28	-	-	1	-	-	-
398.978	to	398.986	-	-								
398.978	to	398.986	-	-	47	-	47	-	2	-	4	-
398.929	to	398.978	-	-	255	255	-	-	1	-	-	-
398.797	to	398.929	-	-	-	-	-	-	-	-	-	-
398.700	to	398.797	-	-	684	684	-	-	2	-	-	-
398.697	to	398.700	-	-	125	125	-	-	2	-	-	-
398.652	to	398.668	-	-	125	125	-	-	2	-	-	-
398.475	to	398.652	-	-	966	966	-	-	3	-	-	-
Bridge	to	398.475	-	-	75	75	-	-	2	-	-	-
398.427	to	Bridge	-	-	75	75	-	-	2	-	-	-
398.206	to	398.427	-	-								
398.206	TO	398.427	-	-	804	804	-	-	2	-	-	-
398.071	to	398.206	-	-	712	712	-	-	2	-	-	-
398.000	to	398.071	-	-	374	374	-	-	1	-	-	-
397.874	to	398.000	-	-	862	862	-	-	2	-	-	-
Bridge	to	397.874	-	-	80	80	-	-	2	-	-	-
397.800	to	397.440	-	-	2050	-	-	2050	18	-	-	-
396.981	to	397.400	-	-	2240	2240	-	-	13	-	-	-
I90 WBL TOTALS:			**LS**	**LS**	**9502**	**7405**	**47**	**2050**	**57**	**-**	**4**	**LS**

TABLE FOR FENCE REPLACEMENT FOR I90 EB PROJECT 000I-271 PCN I4X4

I90 EBL LOCATION			009E0010 MOBILIZATION LS	100E0100 CLEARING LS	110E0600 REMOVE FENCE FT	620E0030 TYPE 3 RIGHT -OF-WAY- FENCE FT	620E0230 MODIFIED TYPE 3 RIGHT-OF-WAY- FENCE FT	620E0260 MODIFIED TYPE 6 RIGHT-OF-WAY- FENCE FT	620E1020 2 POST PANEL EACH	620E1030 3 POST PANEL EACH	620E1110 WOOD FENCE POST EACH	634E0120 TRAFFIC CONTROL MISC. LS
396.980	to	397.000	-	-	180	180	-	-	4	-	-	-
397.000	to	397.120	-	-	635	-	-	635	3	-	-	-
397.120	to	397.420	-	-	1725	-	-	1725	10	-	-	-
397.450	to	397.610	-	-	850	-	-	850	9	-	-	-
397.610	to	397.800	-	-	1030	1030	-	-	8	-	-	-
397.860	to	398.120	-	-	1475	1475	-	-	6	-	-	-
398.280	to	398.460	-	-	1075	1075	-	-	6	2	-	-
398.490	to	398.670	-	-	1225	1225	-	-	10	-	-	-
398.690	to	398.700	-	-	135	135	-	-	2	-	-	-
I90 EBLTOTALS:			**LS**	**LS**	**8330**	**5120**	**-**	**3210**	**58**	**2**	**-**	**LS**
TOTALS			**LS**	**LS**	**17832**	**12525**	**47**	**5260**	**115**	**2**	**4**	**LS**

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

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 Public ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for 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 Public 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 Public 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.

Cost 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.

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 department designated sources and designated option material sources, stockpile sites, storage areas, and waste 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: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

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 Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas 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.

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.

Limited Access Security - All fence removed during any one working day is to be replaced during the same day if livestock are being restrained.

CLEARING

Prior to installing right-of-way fence, the fence alignment shall be cleared of all trees, tree branches, tree stumps, brush, vegetation, debris, bladed and leveled to the satisfaction of the Engineer. Sod cleared from the fence alignment may be disposed on the interstate ditch back slope. Lumps or clods over 3 inches in diameter shall be broken up.

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

FENCE ALIGNMENT

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

TYPE 3 RIGHT-OF-WAY FENCE

The Contractor shall furnish new posts. Install alternate wood and steel posts at 16'-6" spacing for Type 3 Right-of-Way Fence.

MODIFIED TYPE 3 RIGHT-OF-WAY FENCE

Modified Type 3 Right-of-Way Fence shall be installed at wide depressions subject to flooding.

The Contractor shall furnish new 5” x 8’ wood posts. Install wood posts at 14' spacing for Modified Type 3 Right-of-Way Fence. Cost for 5” x 8’ wood posts shall be included in the contract unit price per each for Wood Fence Post.

MODIFIED TYPE 6 RIGHT-OF-WAY FENCE

The Contractor shall furnish new posts. Install alternate wood and steel posts at 14' spacing for Modified Type 6 Right-of-Way Fence.

Note specification change for Modified Type 6 Woven Wire Fence to Design No. 832-6-11.

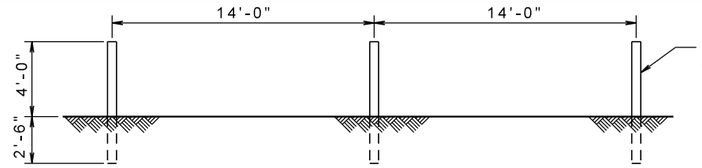
NEW POST PANELS

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.

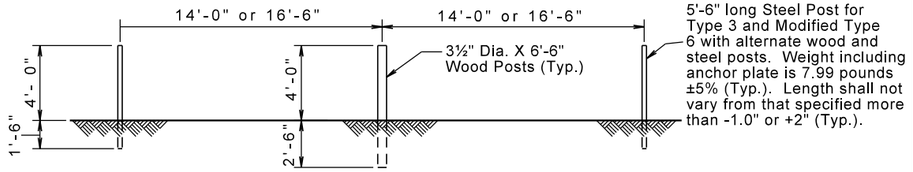
The number of 2 Post and 3 Post Panels will be the actual number installed and will be paid for at the contract unit price per each.

GENERAL MAINTENANCE OF TRAFFIC

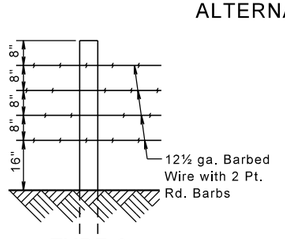
Cost for traffic control, including signs, shall be included in the contract lump sum price for Traffic Control, Miscellaneous.



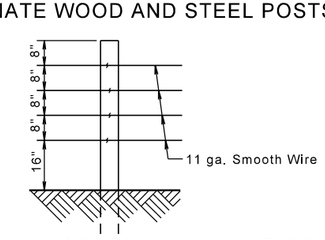
ALL WOOD POSTS



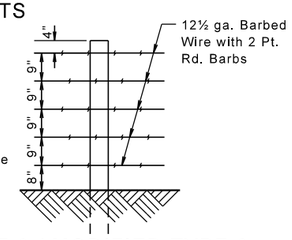
ALTERNATE WOOD AND STEEL POSTS



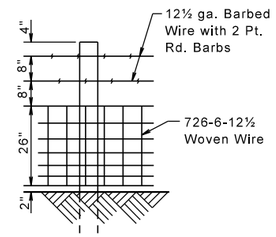
TYPE 2
4 BARBED WIRES



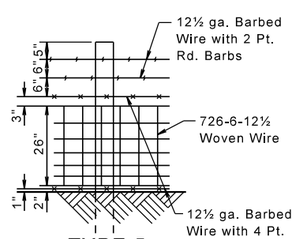
SPECIAL
4 SMOOTH WIRES



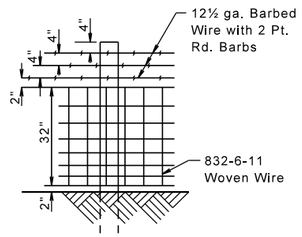
TYPE 3 / MODIFIED TYPE 3
5 BARBED WIRES



TYPE 4
26" WOVEN WIRE
WITH 2 BARBED WIRES



TYPE 5
26" WOVEN WIRE
WITH 4 BARBED WIRES



MODIFIED TYPE 6
32" WOVEN WIRE
WITH 3 BARBED WIRES

TYPE OF FENCE		LINE POST SPACING	BARBED WIRE		WOVEN WIRE
TYPE	DESCRIPTION		WIRE GAGE	NUMBER AND SHAPE OF BARBS	STYLE OR DESIGN NO.
1	3 Barbed Wires	16'-6"	12½	2 Point Round	—
2	4 Barbed Wires	16'-6"	12½	2 Point Round	—
3	5 Barbed Wires	16'-6"	12½	2 Point Round	—
MOD 3	5 Barbed Wires	14'-0"	12½	2 Point Round	—
4	26" Woven Wire with 2 Barbed Wires	14'-0"	12½	2 Point Round	726-6-12½
5	26" Woven Wire with 4 Barbed Wires	14'-0"	12½	2 wires with 2 Pt. Rd. 2 wires with 4 Pt. Rd.	726-6-12½
MOD 6	32" Woven Wire with 3 Barbed Wires	14'-0"	12½	3 wires with 2 Pt. Rd.	832-6-11

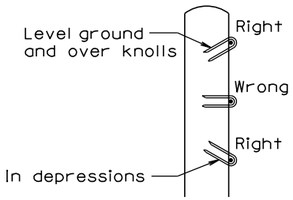
GENERAL NOTES:

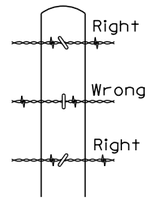
Fence types designated on the plans that are followed by the letter S shall have smooth (barbless) wires.

When type 5S is designated, the bottom wire may be barbed, smooth, or left off.

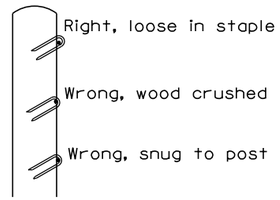
All degrees of curvature stated for fence are at centerline of roadway.

RIGHT-OF-WAY FENCE



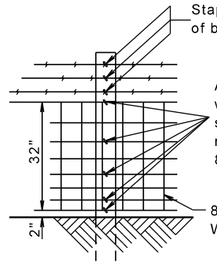


Staples shall not be driven parallel to side of post

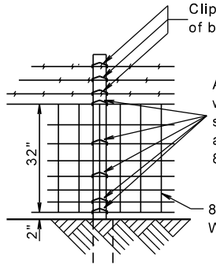


Wire shall be loose in staple

STAPLE INSTALLATION



Always staple the top and bottom wires. The remaining line wires shall be alternately stapled with a minimum of five staples for 832-6-11 woven wire.



Always clip the top and bottom wires. The remaining line wires shall be alternately clipped with a minimum of five clips for 832-6-11 woven wire.

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.

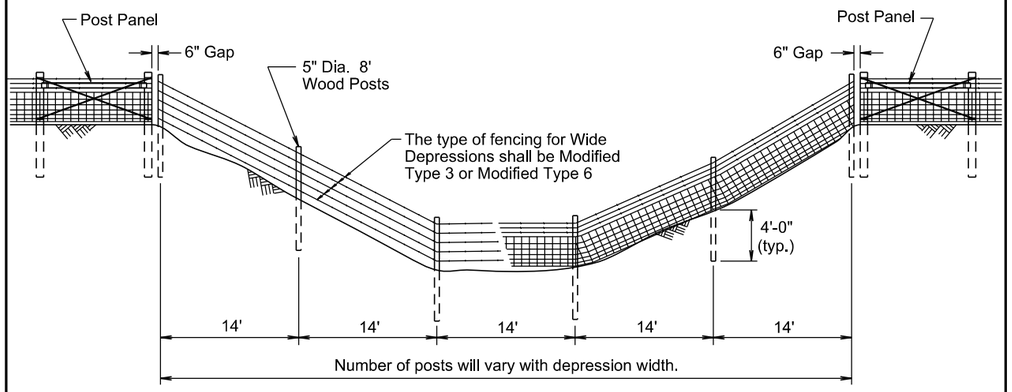
Right-of-Way fence other than on Interstate Projects shall be constructed within one foot of the Right-of-Way on the Landowner's side except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

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.

STAPLE AND CLIP INSTALLATION AND GENERAL RIGHT-OF-WAY FENCE NOTES

Fencing At Wide Depression, Stream Crossing Or Areas Subject to Flooding

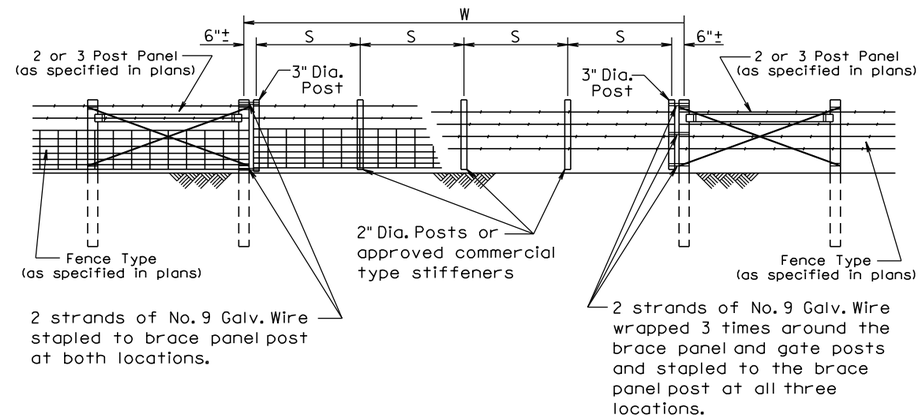


GENERAL NOTES:

Cost for fencing through stream crossing(s), wide depressions(s) or areas subject to flooding shall be included in the contract unit price per foot for Modified Type 3 Right-of-Way Fence or Modified Type 6 Right-of-Way Fence.

The Wood Fence Posts used in stream crossing(s), wide depression(s) or areas subject to flooding shall be 5" x 8' Wood Fence Posts. The designated fencing location(s) for the stream crossing(s), wide depression(s) or areas subject to flooding will be directed by the Engineer.

Cost for furnishing and installing the 5" x 8' Wood Fence Posts in stream crossing(s), wide depression(s) or areas subject to flooding shall be included in the contract unit price per each for Wood Fence Post.



W Gate Width (ft.)	S Post Spacing
16	3 @ 5'-0" ±
20	4 @ 4'-9" ±
24	4 @ 5'-9" ±
30	5 @ 5'-10" ±
32	5 @ 6'-2" ±
40	6 @ 6'-6" ±

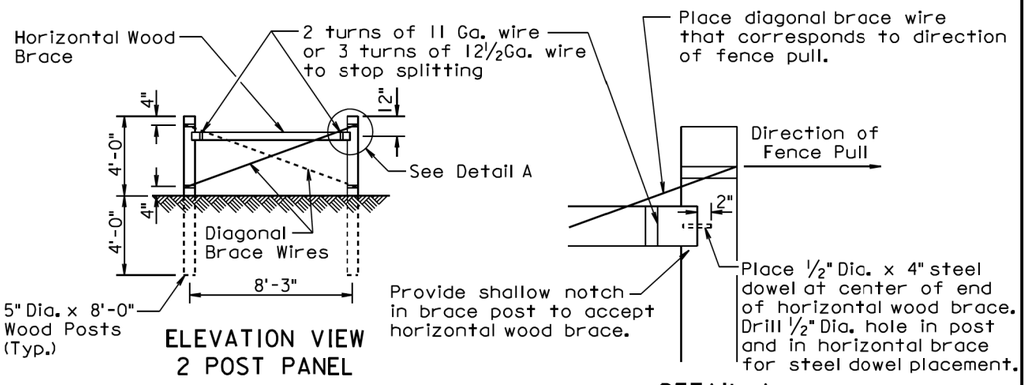
GENERAL NOTES:

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.

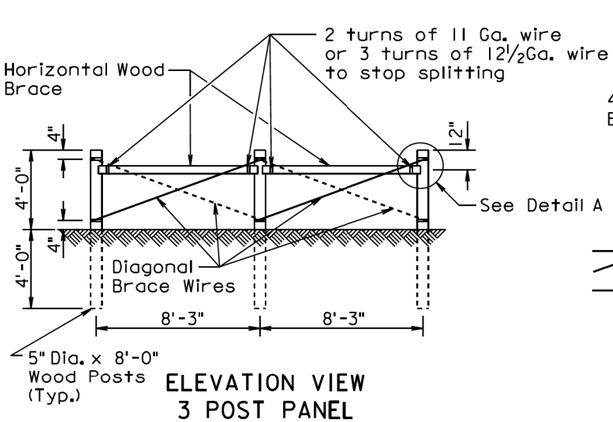
All costs for furnishing and constructing the wire gate(s) shall be incidental to the contract unit price per Ft for the respective Right-of-Way fence bid item.

WIRE GATES

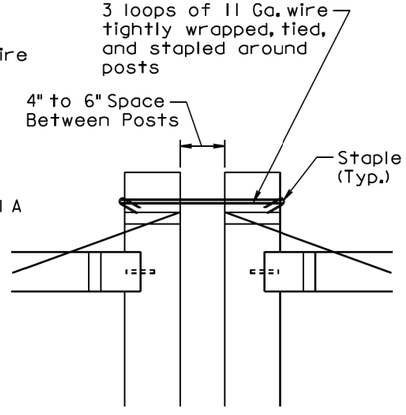


ELEVATION VIEW
2 POST PANEL

DETAIL A



ELEVATION VIEW
3 POST PANEL



DETAIL B

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

Published Date: 3rd Qtr. 2017	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 1 of 3

SPACING OF 2 POST PANELS WITHIN CURVES	
DEGREE OF CURVE	SPACING OF 2 POST PANEL
less than 3°15'	** 1320'
3°15' and greater	**At P.C., P.T., and at every 1320' between P.C. and P.T.

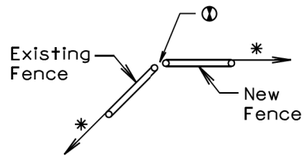
GENERAL NOTE:

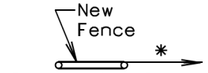
All degrees of curvature stated for fence are at centerline of roadway.

* If fence length is less than 600' to next corner use a 2 post panel.
If fence length is greater than 600' to next corner use a 3 post panel.

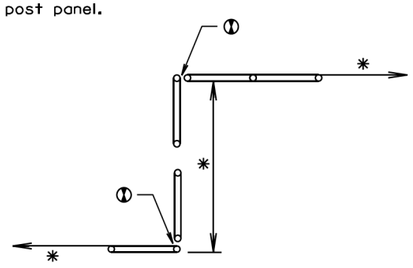
** Fence lengths greater than 1320' and less than 2640' place 2 Post Panel approximately at midpoint.

① See Detail B on Sheet 1 of 3.

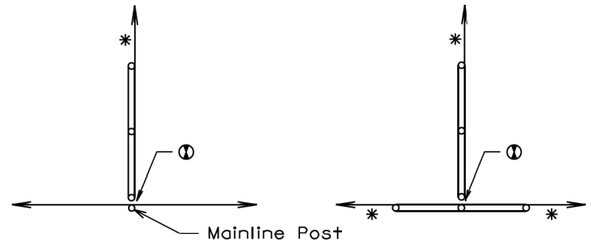




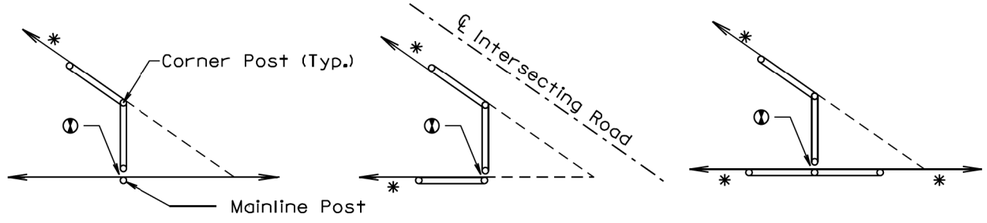
BEGIN OR END FENCE
(where new fence ties into existing fence)



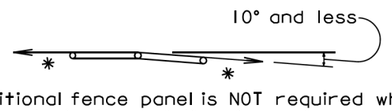
SHORT JOGS IN FENCE



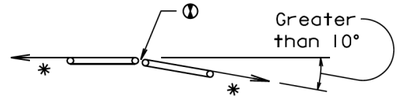
CROSS FENCE



SHARP ANGLES IN CROSS FENCE



Additional fence panel is NOT required when an angle in the mainline fence is 10° and less.



Additional fence panel is required when an angle in the mainline fence is greater than 10°.

ANGLES IN MAINLINE FENCE

December 23, 2004

Published Date: 3rd Qtr. 2017	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 2 of 3

PLOT SCALE - 1:200

PLOT NAME - 3

.PLOTTED FROM - TRSF12115

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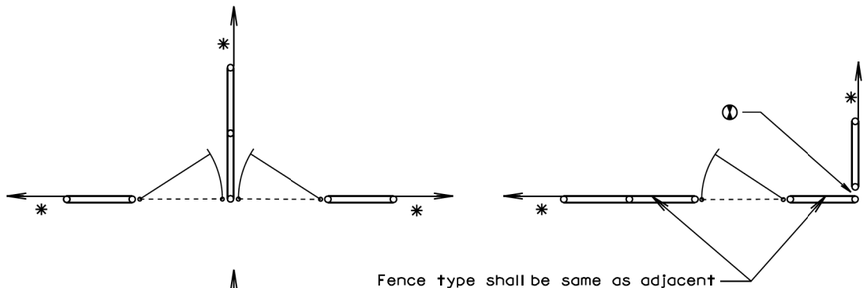
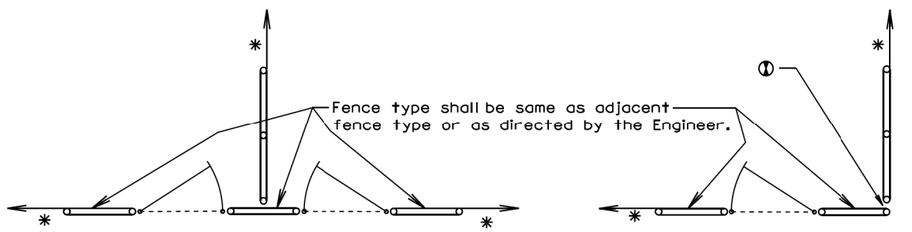
ENTRANCE
(NOT ON CORNER)





DOUBLE ENTRANCES

ENTRANCES AT CORNERS

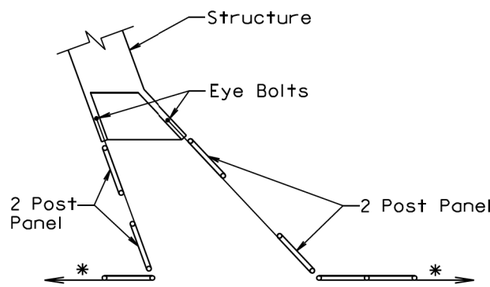
GATES

* If fence length is less than 600' to next corner use a 2 post panel.
If fence length is greater than 600' to next corner use a 3 post panel.

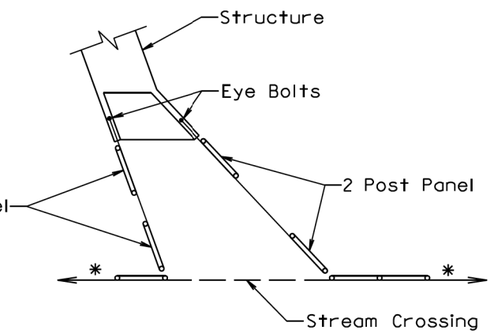
① See Detail B on Sheet 1 of 3.

December 23, 2004

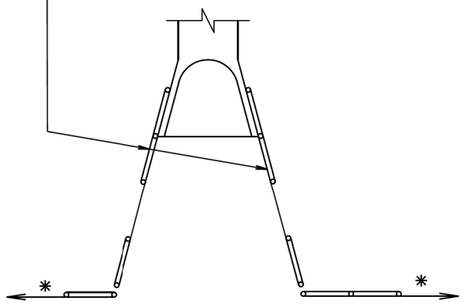
Published Date: 3rd Qtr. 2017	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 3 of 3



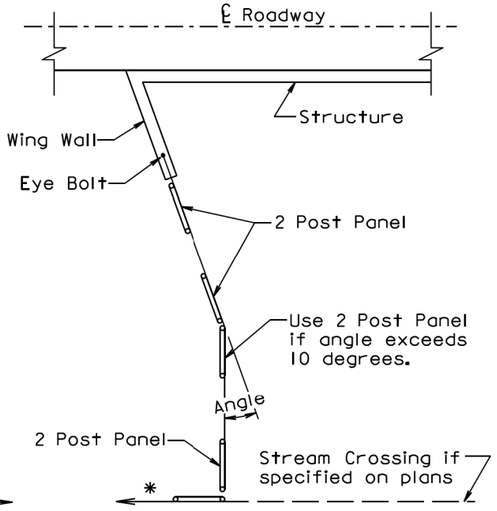
R.C. BOX CULVERT
OR CATTLE PASS



STRUCTURE WITH STREAM
CROSSING FENCE



R.C. BOX CULVERT
OR CATTLE PASS

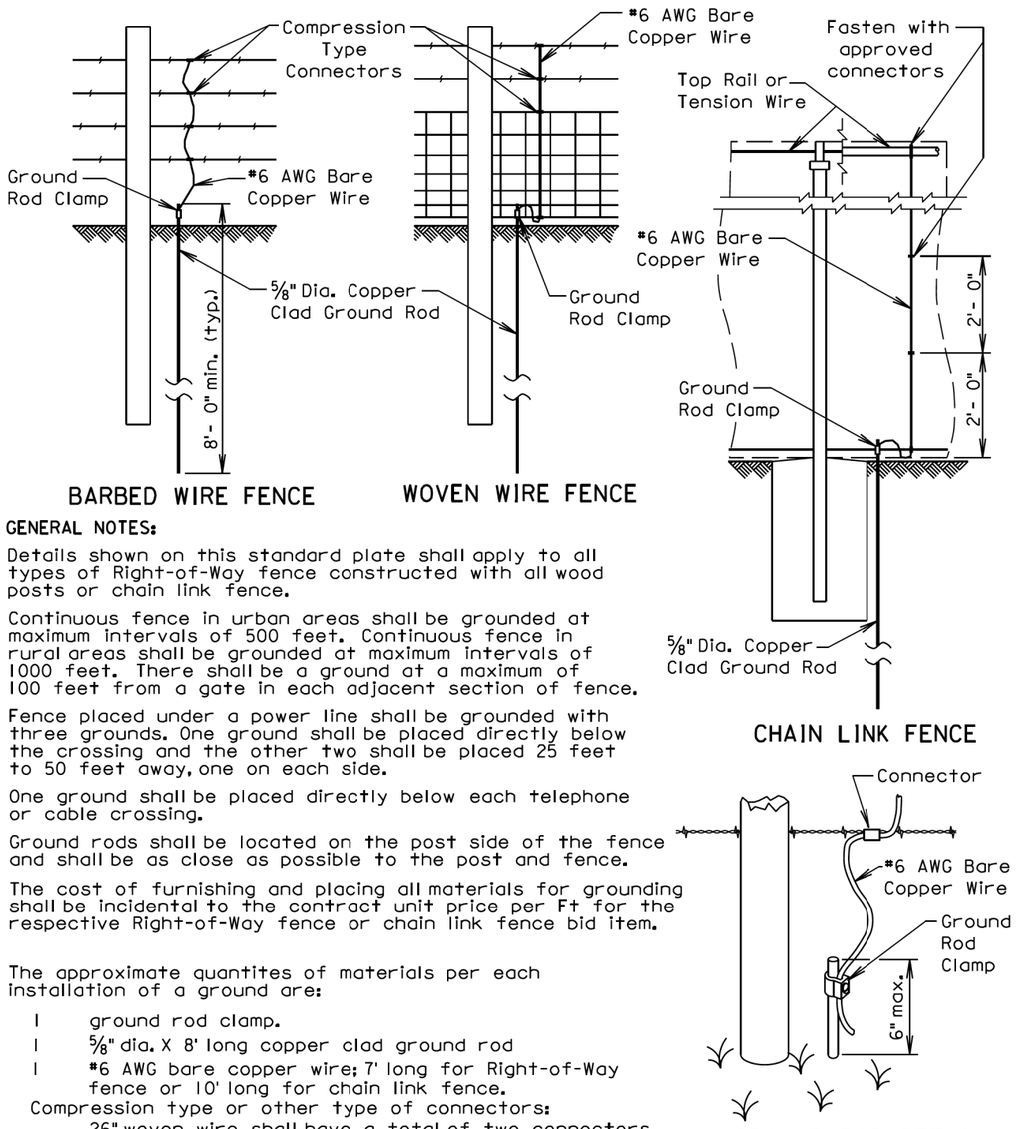


BRIDGE

* If fence length is less than 600' to next corner use a 2 post panel.
If fence length is greater than 600' use a 3 post panel.

December 23, 2010

Published Date: 3rd Qtr. 2017	SDDOT	BRACE PANEL APPLICATIONS AT STRUCTURES	PLATE NUMBER 620.04
			Sheet 1 of 1



GENERAL NOTES:

Details shown on this standard plate shall apply to all types of Right-of-Way fence constructed with all wood posts or chain link fence.

Continuous fence in urban areas shall be grounded at maximum intervals of 500 feet. Continuous fence in rural areas shall be grounded at maximum intervals of 1000 feet. There shall be a ground at a maximum of 100 feet from a gate in each adjacent section of fence.

Fence placed under a power line shall be grounded with three grounds. One ground shall be placed directly below the crossing and the other two shall be placed 25 feet to 50 feet away, one on each side.

One ground shall be placed directly below each telephone or cable crossing.

Ground rods shall be located on the post side of the fence and shall be as close as possible to the post and fence.

The cost of furnishing and placing all materials for grounding shall be incidental to the contract unit price per Ft for the respective Right-of-Way fence or chain link fence bid item.

The approximate quantites of materials per each installation of a ground are:

- 1 ground rod clamp.
- 1 5/8" dia. X 8' long copper clad ground rod
- 1 #6 AWG bare copper wire; 7' long for Right-of-Way fence or 10' long for chain link fence.

Compression type or other type of connectors:

26" woven wire shall have a total of two connectors, one secured to the top and one secured to the bottom.

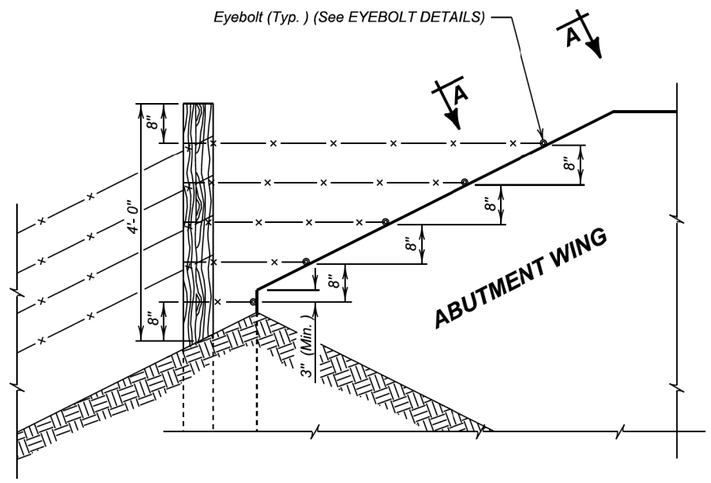
32" woven wire shall have a total of three connectors, one secured to the top, one secured to the middle, and one secured to the bottom.

One connector shall be used for each strand of barbed wire.

A minimum of 3 connectors shall be installed on chain link fence, the connectors shall be placed vertically at every two foot increment and connectors shall be placed on the top and bottom tension wires or top rail.

March 31, 2000

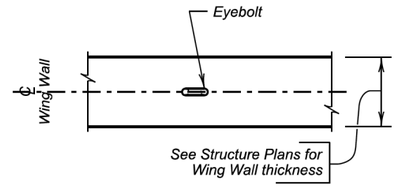
Published Date: 3rd Qtr. 2017	SDDOT	FENCE GROUNDING	PLATE NUMBER 620.11
			Sheet 1 of 1



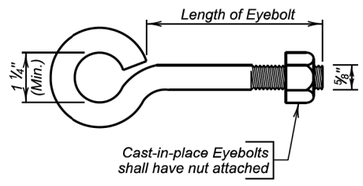
DETAIL FOR FENCE ANCHORS

GENERAL NOTES:

1. *The fence and post details shown are for illustrative purpose only. The fence shall be as specified elsewhere in the plans.*
2. *Eyebolts shall be placed on all of the bridge abutment wings.*
3. *Eyebolts shall be 5/8 inch diameter and shall conform to ASTM A307.*
4. *Eyebolts, nuts, and concrete inserts shall be galvanized in accordance with AASHTO M232 (ASTM A153). Concrete inserts of corrosion resistant material need not be galvanized.*
5. *Cast-in-place eyebolts shall have a nut attached, be 4 1/2 inches (Min.) in length and shall be embedded such that the eye of the bolt is flush with the concrete surface. (See Eyebolt Details) As an alternate, cast-in-place concrete inserts, capable of developing the full strength of the 5/8 inch diameter threaded eyebolt, may be used and shall be set in the concrete in accordance with the manufacturer's recommendations. The eyebolt shall be of sufficient length to develop its full strength. The eye of the eyebolt shall be flush with the concrete surface.*
6. *The cost for furnishing and installing eyebolts and/or concrete inserts shall be incidental to various contract items.*



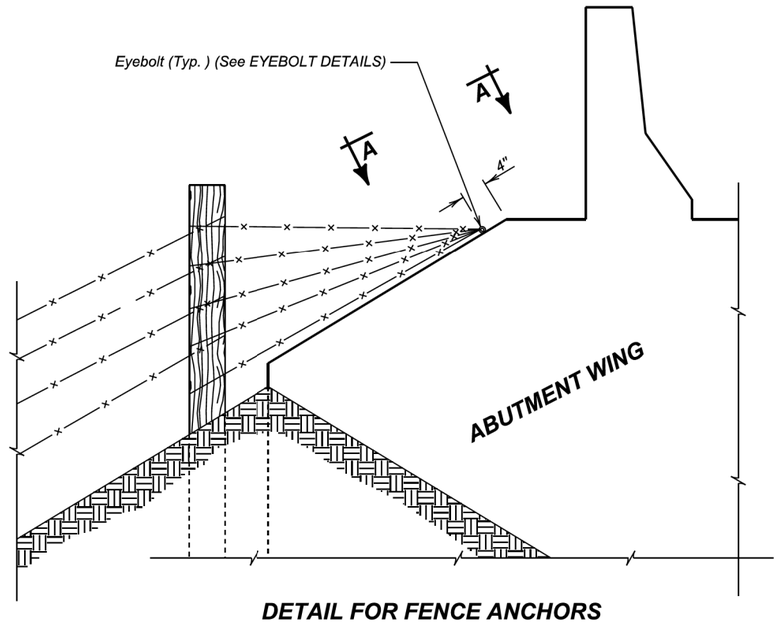
VIEW A - A



EYEBOLT DETAILS

December 23, 2012

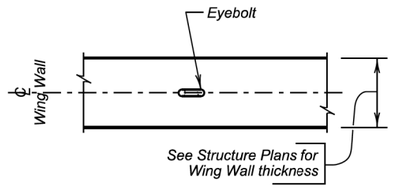
Published Date: 3rd Qtr. 2017	SDDOT	FENCE ANCHORS FOR BRIDGE ABUTMENT WINGS (WINGS LONGER THAN 6')	PLATE NUMBER 620.17
			Sheet 1 of 1



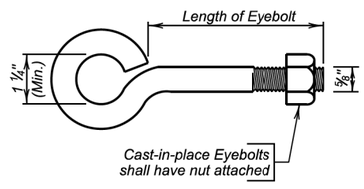
DETAIL FOR FENCE ANCHORS

GENERAL NOTES:

1. The fence and post details shown are for illustrative purpose only. The fence shall be as specified elsewhere in the plans.
2. Eyebolts shall be placed on all of the bridge abutment wings.
3. Eyebolts shall be ⅝ inch diameter and shall conform to ASTM A307.
4. Eyebolts, nuts, and concrete inserts shall be galvanized in accordance with AASHTO M232 (ASTM A153). Concrete inserts of corrosion resistant material need not be galvanized.
5. Cast-in-place eyebolts shall have a nut attached, be 4 ½ inches (Min.) in length and shall be embedded such that the eye of the bolt is flush with the concrete surface. (See Eyebolt Details) As an alternate, cast-in-place concrete inserts, capable of developing the full strength of the ⅝ inch diameter threaded eyebolt, may be used and shall be set in the concrete in accordance with the manufacturer's recommendations. The eyebolt shall be of sufficient length to develop its full strength. The eye of the eyebolt shall be flush with the concrete surface.
6. The cost for furnishing and installing eyebolts and/or concrete inserts shall be incidental to various contract items.



VIEW A - A



EYEBOLT DETAILS

December 23, 2012

Published Date: 3rd Qtr. 2017	SDDOT	FENCE ANCHORS FOR BRIDGE ABUTMENT WINGS (WINGS 6' AND SHORTER)	PLATE NUMBER 620.18
			Sheet 1 of 1

The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

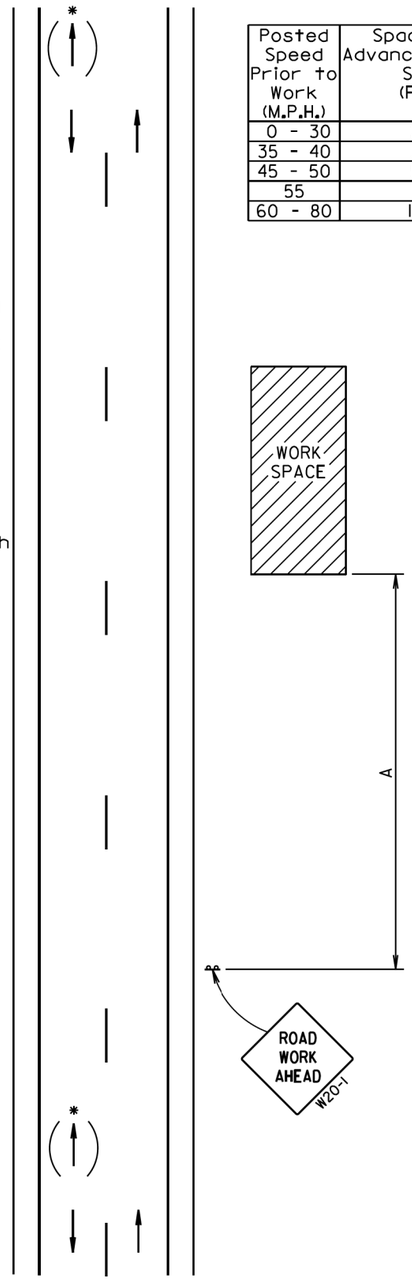
The signs illustrated shall be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000



April 15, 2015

Published Date: 3rd Qtr. 2017	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 Of 1

PLOT SCALE - 1:200

PLOT NAME - 6

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