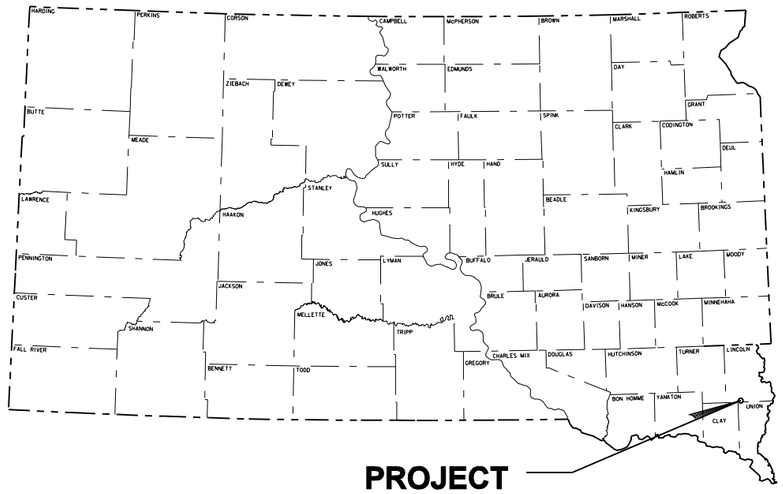
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	1	48

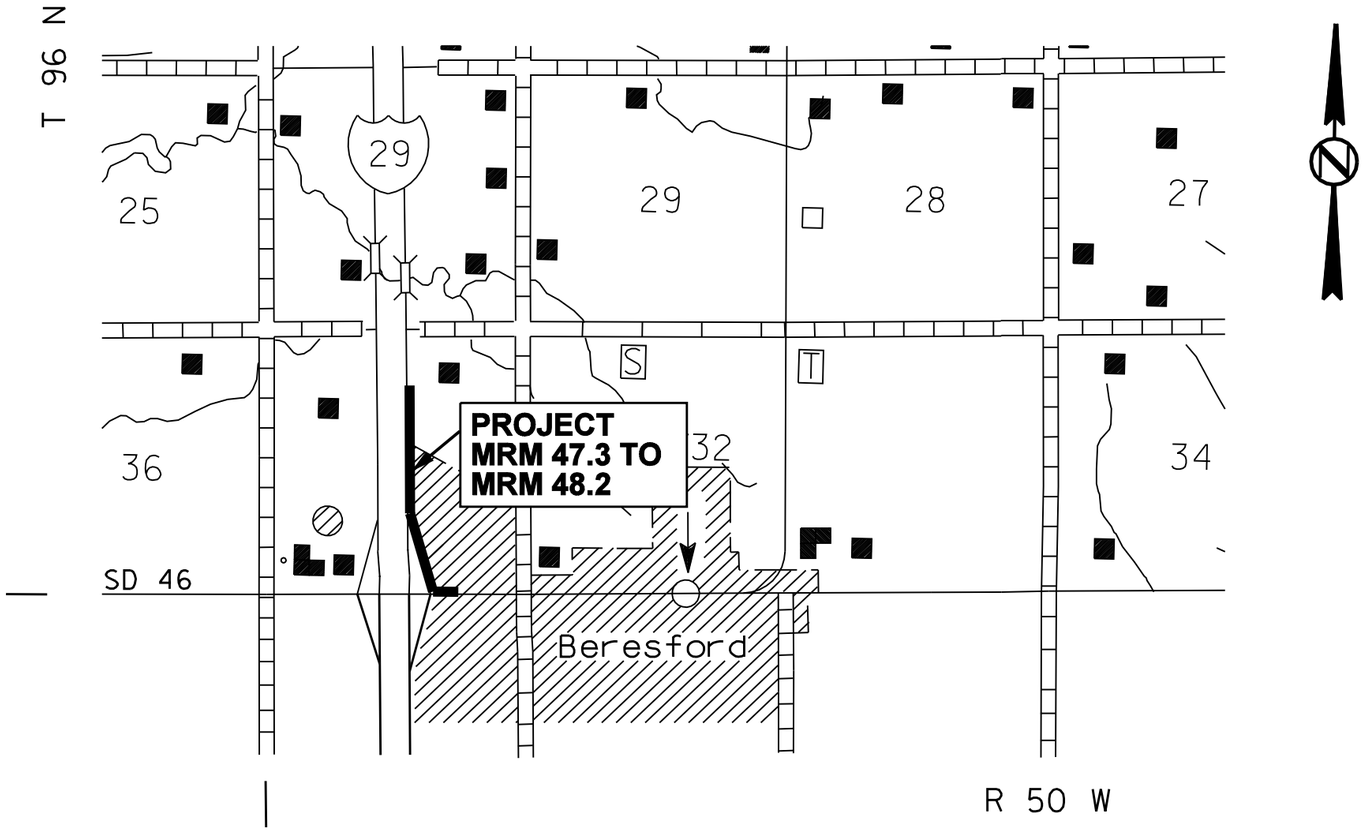


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT 029 N–291
LINCOLN COUNTY

DITCH RESHAPING AND EROSION CONTROL
PCN I0NR

INDEX OF SHEETS



DESIGN DESIGNATION

ADT (2004)	11200
ADT (2024)	22110
DHV	3140
D	50%
T DHV	12.1%
T ADT	26.7%
V	70 mph

STORM WATER PERMIT

Major Stream: Blind Creek
Area Disturbed: 2.4 Acres

SECTION B ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
120E0010	Unclassified Excavation	2840	CuYd
230E0010	Placing Topsoil	1403	CuYd
250E0020	Incidental Work, Grading	Lump Sum	LS
634E0100	Traffic Control	499	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
730E0251	Special Permanent Seed Mixture 1	63	Lb
731E0100	Fertilizing	240	Lb
732E0100	Mulching	2	Ton
734E0103	Type 3 Erosion Control Blanket	4310	SqYd
734E0132	Type 2 Turf Reinforcement Mat	1900	SqYd
734E0133	Type 3 Turf Reinforcement Mat	1331	SqYd
734E0510	Shaping for Erosion Control Blanket	4928	Ft

SPECIFICATIONS

Standard Specifications for Roads & Bridges, 1998 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

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.

The following utility companies have been contacted and the existing utilities will require adjustment during the regrading of the Interstate R.O.W. ditch.

1. Underground Power Line: Beresford Electric Department – (605)763-5501.

2. Underground Fiber Optic Line: PrairieWave Communications – Steve Mohr – (605)263-7206.

SEQUENCE OF OPERATIONS

The following Sequence of Operations shall be followed by the Contractor unless an alternate Sequence of Operations is submitted in writing and approved by the Engineer prior to the preconstruction meeting.

The Contractor shall install the appropriate traffic control for work being performed.

1. Install the traffic control devices.

2. Regrade ditch and install erosion control devices.

COMPLETION DATE

All work shall be completed by October 1, 2007.

MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of existing 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.

The outside lane of the Interstate shall be closed only during the daytime when work is being done on the project. Overnight the barrels can be placed along the outside edge of the shoulder of the roadway.

WASTE DISPOSAL SITE

The Contractor will be required to furnish a site(s) for disposal of construction/demolition debris generated by this project.

Construction/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 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/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/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 recommendation 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".

WASTE DISPOSAL SITE (CONTINUED)

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 waste disposal site(s) shall be incidental to the various contract items.

WATER SOURCE

The Contractor shall not withdraw water directly from streams in watersheds of the James, Vermillion, and Big Sioux Rivers without prior approval form the SDDOT Environmental Office, contact Dave Graves at (605) 773-5727. Water may be obtained from other sources not directly connected to these streams as stock dams, wetlands, or wells. This note does not relieve the Contractor of his/her responsibility to obtain the necessary permits from other agencies such as DENR (South Dakota Department of Environment and Natural Resources) and COE (Corps of Engineers).

WATER QUALITY

Surface Water Quality Standards

The Contractor is advised the South Dakota Surface Water Quality Standards, administered by the Department of Environment and Natural Resources (DENR), apply to this project.

Surface Water Discharge Permit

If construction dewatering is required, the Contractor is required to obtain a Surface Water Discharge Permit from DENR. Contact DENR (Surface Water Program) at (605) 773-3351 to apply for a permit.

Storm Water Construction Permit

The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the DENR General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to DENR a minimum of 15 days prior to project starting by the DOT Environment Office. A letter must be received from DENR that acknowledges project coverage under this general permit before project start.

WATER QUALITY (CONTINUED)

The Contractor is advised that permit coverage may also be required by off-site activities, such as borrow and staging areas, and are the responsibility of the Contractor.

GRADING OPERATIONS

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste. Cost shall be incidental to the contract unit price per cubic yard for Unclassified Excavation.

Special ditch grades and other sections of the roadway different than the typical section(s) shall be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer shall contact the Designer for the proposed change.

Temporary fence and/or permanent fence shall be placed ahead of the grading operation unless otherwise directed by the Engineer.

Excavation and construction of embankments for grading shall be performed in accordance with Section 120 of the Standard Specifications. Compaction of embankments shall be governed by the Ordinary Compaction Method. Scarifying and recompacting exposed subgrade surfaces shall be waived.

The roadway shall be constructed to the typical sections shown in the plans. Additional grading may be required as directed by the Engineer to provide a smooth profile free from abrupt changes in grade. The grade shall conform to the guidelines as stated in the current AASHTO publication of "A Policy on Geometric Design of Highways and Streets".

SHRINKAGE FACTOR: Embankment +35%

TABLE OF EXCAVATION QUANTITIES

Station to	Station	Excavation (cu. yds.)	*Borrow (cu. yds.)	Waste (cu. yds.)	Total Exc. (cu. yds.)
0+00	42+30	406	0	819	1225
101+00	106+39	212	20	0	212
		618	20	819	1437

*Borrow material shall be material that is wasted from Sta. 0+00 to Sta. 42+30.

Excavation	1437
Topsoil	1403
Unclassified Excavation	2840

A small dirt berm shall be constructed using waste material adjacent to the Interstate ROW Fence along the Beresford SDDOT Maintenance Shop as directed by the Engineer to direct drainage to one location. The cost to construct the dirt berm shall be incidental to other contract bid items.

Payment for Unclassified Excavation will be made on a plans quantity basis in accordance with Section 120.4 of the Standard Specifications. No separate measurement or payment will be made.

SALVAGING, STOCKPILING, AND PLACING TOPSOIL

Existing vegetation shall be salvaged, incorporated and placed with the topsoil as far as practicable.

The areas to be covered with topsoil to a depth of 4 inches comprise all newly graded areas.

The plan shown quantity for Placing Topsoil will be the basis of payment without further field measurement. If changes are ordered on construction, the quantities will be measured for payment.

The estimated amount of salvage topsoil required to cover the designated areas to the specified depth is 1403 cu. yds.

INCIDENTAL WORK, GRADING

Location	Remarks
Sta. 2+08	Remove and Reset 30' of R.O.W. Fence
Sta. 3+67	Remove and Reset 30' of R.O.W. Fence
Sta. 27+19 to Sta. 28+19	Remove and Reset 100' of R.O.W. Fence

PERMANENT SEEDING, FERTILIZING AND MULCHING

The areas to be seeded, fertilized and mulched include all disturbed areas within the right-of-way resulting from the work required by this contract.

All permanent seed shall be planted in the topsoil at a depth of ¼" to ½".

All seed broadcast must be raked or dragged in (incorporated) within the top ¼" to ½" of topsoil when possible. This requirement may be waived by the Engineer during construction when raking or dragging is deemed not feasible by conventional methods.

South Dakota native grown seed is an acceptable alternative to any of the seed varieties listed below. South Dakota native grown seeds used as an alternative shall conform to the same specification and requirements for that individual seed type.

Special Permanent Seed Mixture 1 shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Intermediate Wheatgrass	Oahe	10
Western Wheatgrass	Flintlock, Rodan, Rosana	6
Oats or Spring Wheat: April through July; Winter Wheat: August through November		10
	Total:	26

A commercial fertilizer with a minimum guaranteed analysis of 18-46-0, 11-52-0, or an approved alternate fertilizer, shall be applied to all areas designated for permanent seeding. The application rate of fertilizer shall be 100 pounds per acre.

PERMANENT SEEDING, FERTILIZING AND MULCHING(CONTINUED)

Mulch consisting of grass hay or straw shall be blown on and punched into permanently seeded areas. Rate of application is two tons per acre. Bales with noxious weed contamination will be rejected and the Contractor will be required to remove the contaminated bales from the project. Mulching will only be done on those areas where turf reinforcement mats or erosion control blankets are not installed.

TURF REINFORCEMENT MAT

Turf Reinforcement Mat shall be installed at locations shown in the table at the widths specified, and at locations determined by the Engineer during construction. The Contractor shall use a turf reinforcement mat from the approved products list at the following internet site.

http://www.state.sd.us/Applications/HC54ApprovedProducts/main.asp

Installation of the Turf Reinforcement Mat shall be according to the manufacturer's installation instructions.

TABLE OF TURF REINFORCEMENT MAT

Station	to	Station	Location	L/R	Width (Ft)	Type	Quantity (SqYd)
4+50		7+50	0'	L	12'	3	400
6+29			6' – 47'	R	12'	3	55
7+23			6' – 55'	R	12'	3	65
7+81			6' – 75'	R	12'	3	92
13+75		28+00	0'	L	12'	2	1900
101+00		106+39	0'	L	12'	3	719
			Total Type 2 Turf Reinforcement Mat				1900
			Total Type 3 Turf Reinforcement Mat				1331

SHAPING FOR TURF REINFORCEMENT MAT

The ditches shall be shaped for the turf reinforcement mat as specified on Standard Plate 734.01.

All costs for shaping the ditches for turf reinforcement mat, including labor and equipment shall be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

EROSION CONTROL BLANKET

Erosion control blanket shall be installed at the locations noted in the table and at locations determined by the Engineer during construction.

The erosion control blanket provided shall be from the approved product list. The approved product list for erosion control blanket may be viewed at the following internet site:

http://www.state.sd.us/Applications/HC54ApprovedProducts/main.asp

The Contractor shall install erosion control blanket according to the manufacturer's installation instructions.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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TABLE OF EROSION CONTROL BLANKET

Station	to	Station	Location	L/R	Width (Ft)	Type	Quantity (SqYd)
0+00		1+50	0’	L	12’	3	200
1+50		4+50	0’	L	22’	3	734
7+50		13+75	0’	L	12’	3	834
28+00		42+30	0	L	16’	3	2542
			Total Type 3 Erosion Control Blanket				4310

SHAPING FOR EROSION CONTROL BLANKET

The ditches shall be shaped for the erosion control blanket as specified on Standard Plate 734.01.

All costs for shaping the ditches for erosion control blanket including labor and equipment shall be incidental to the contract unit price per foot for “Shaping for Erosion Control Blanket”.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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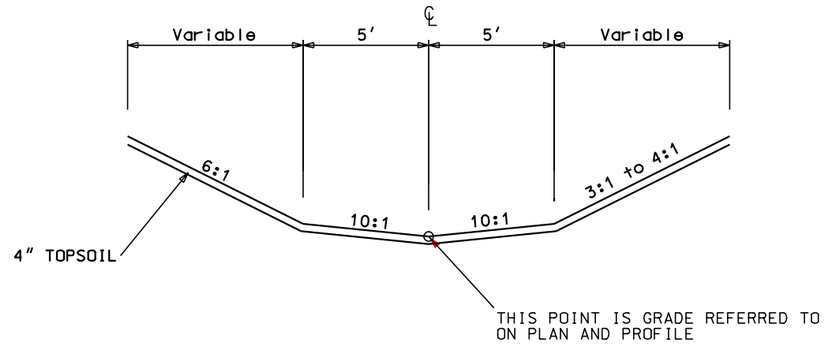
Plotting Date: 04-APR-2007

TYPICAL SECTIONS

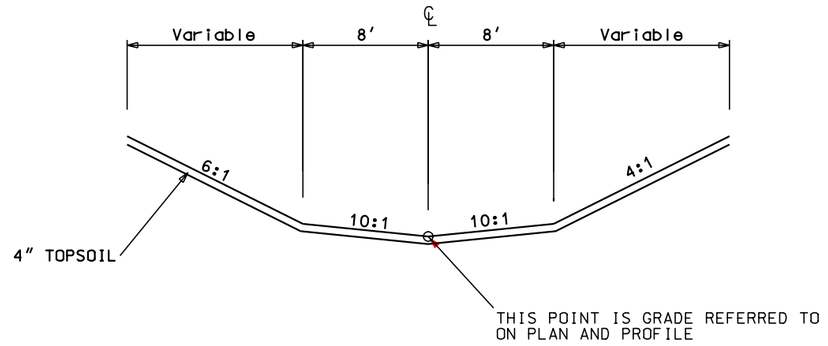
I-29 Ditch

Sta. 0+00 to Sta. 1+50
Sta. 4+50 to Sta. 28+00



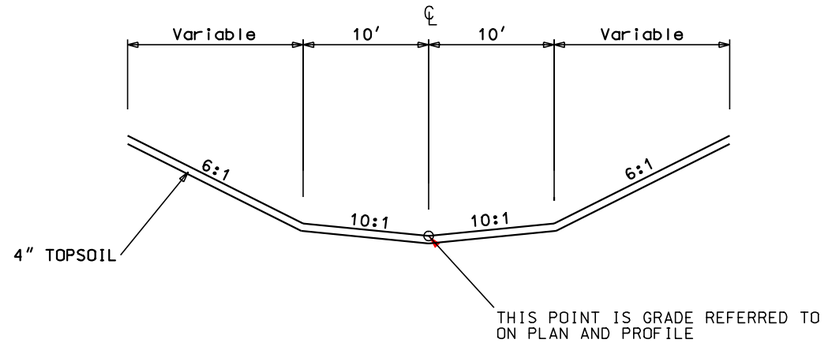
I-29 Ditch

Sta. 28+00 to Sta. 42+30



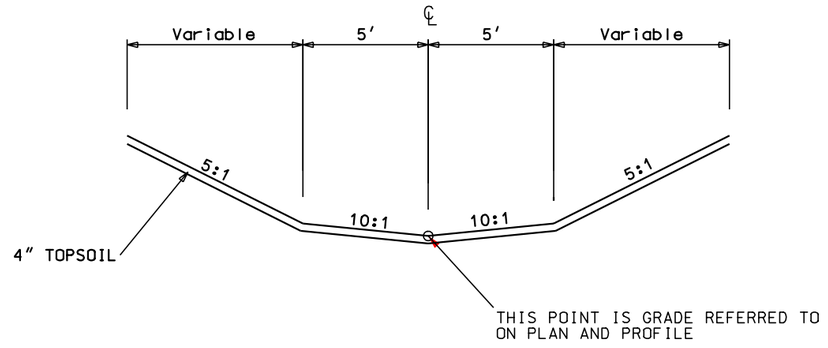
I-29 Ditch

Sta. 1+50 to Sta. 4+50



Drainage Ditch

Sta. 101+00 to Sta. 106+39



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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HORIZONTAL ALIGNMENT DATA

MAIN DITCH

Type	Station			Northing	Easting
POB	0+00			293704.996	2913819.744
		TL = 135.08	N 86°06'25" W		
PC	1+35.08			293714.166	2913684.977
PI	1+77.90	R = 125.0	Delta = 37°49'23" R	293717.074	2913642.251
PT	2+17.60			293745.572	2913610.284
		TL = 193.71	N 48°17'02" W		
PC	4+11.31			293874.477	2913465.685
PI	4+36.81	R = 150.0	Delta = 19°17'49" R	293891.447	2913446.650
PT	4+61.83			293913.753	2913434.292
		TL = 57.72	N 28°59'13" W		
PC	5+19.55			293964.245	2913406.319
PI	5+99.78	R = 1000.00	Delta = 9°10'24" R	294034.420	2913367.441
PT	6+79.66			294109.895	2913340.248
		TL = 60.02	N 19°48'49" W		
PI	7+39.68			294166.364	2913319.903
		TL = 35.39	N 26°45'17" W		
PI	7+75.07			294197.963	2913303.973
		TL = 25.08	N 28°05'19" W		
PI	8+00.15			294220.089	2913292.164
		TL = 25.02	N 21°13'27" W		
PI	8+25.17			294243.412	2913283.106
		TL = 50.25	N 17°48'15" W		
PI	8+75.42			294291.255	2913267.742
		TL = 49.33	N 17°22'16" W		
PI	9+24.74			294338.333	2913253.015
		TL = 126.25	N 08°33'19" W		
PI	10+50.99			294463.178	2913234.233
		TL = 350.40	N 02°48'44" W		
PI	14+01.40			294813.160	2913217.042
		TL = 499.80	N 04°06'51" W		
PI	19+01.20			295311.671	2913181.185
		TL = 600.78	N 03°02'09" W		
PI	25+01.98			295911.608	2913149.367
		TL = 296.39	N 04°28'26" W		
PI	27+98.37			296207.093	2913126.248
		TL = 238.95	N 01°38'08" W		
PI	30+37.31			296445.943	2913119.427
		TL = 945.03	N 01°54'57" W		
PI	39+82.35			297390.449	2913087.831
		TL = 247.31	N 00°58'27" W		
POE	42+29.66			297637.725	2913083.627

Drainage Ditch at Sta. 100+00

Type	Station			Northing	Easting
POB	100+00			296127.366	2913259.728
		TL = 113.56	N 12°54'27" W		
PC	101+13.56			296238.055	2913234.362
PI	101+32.83	R = 500.00	Delta = 04°24'54" R	296256.842	2913230.056
PT	101+52.09			296275.904	2913227.210
		TL = 315.25	N 08°29'32" W		
PC	104+67.33			296587.693	2913180.656
PI	105+50.81	R = 300.00	Delta = 31°05'54" L	296670.252	2913168.328
PT	106+30.16			296734.579	2913115.130
		TL = 8.76	N 39°35'26" W		
POE	106+38.93			296741.332	2913109.546

HORIZONTAL AND VERTICAL CONTROL POINTS

POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	Elevation
CP 1	-69.84	24.85' Rt.	Rebar	293725.0441	2913891.1128	1453.86
CP 3	7+52.69	68.40' Rt.	Rebar	294208.7716	2913375.1182	1449.89
CP 4	13+29.37	100.07' Rt.	Rebar	294746.1214	2913320.5206	1443.69
CP 5	20+39.74	84.90' Rt.	Rebar	295454.5094	2913258.6239	1434.79
CP 6	36+81.18	89.48' Lt.	Nail	297086.4555	2913008.4734	1400.84

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System.

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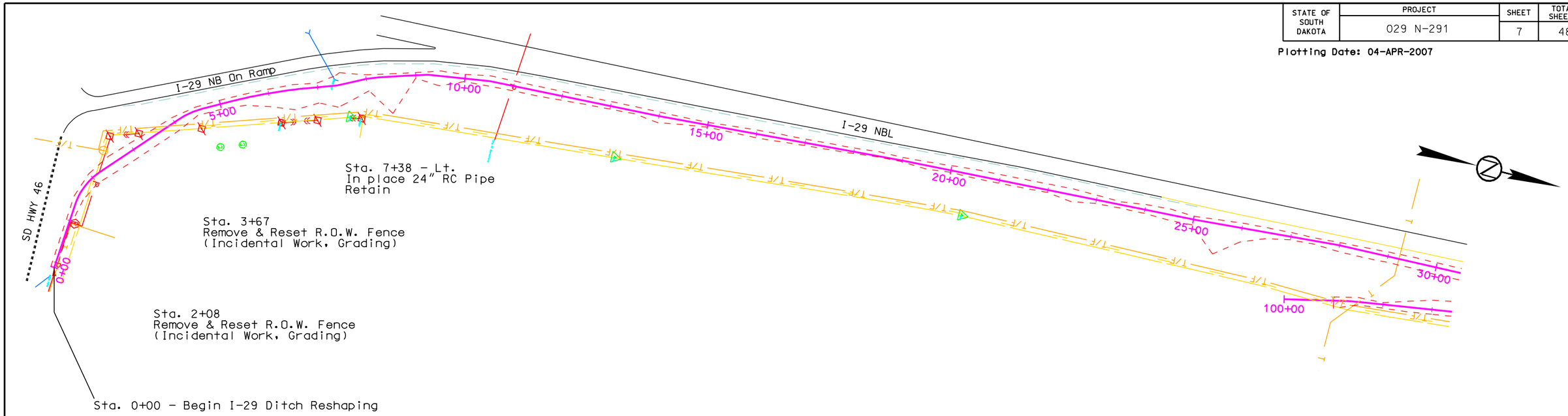
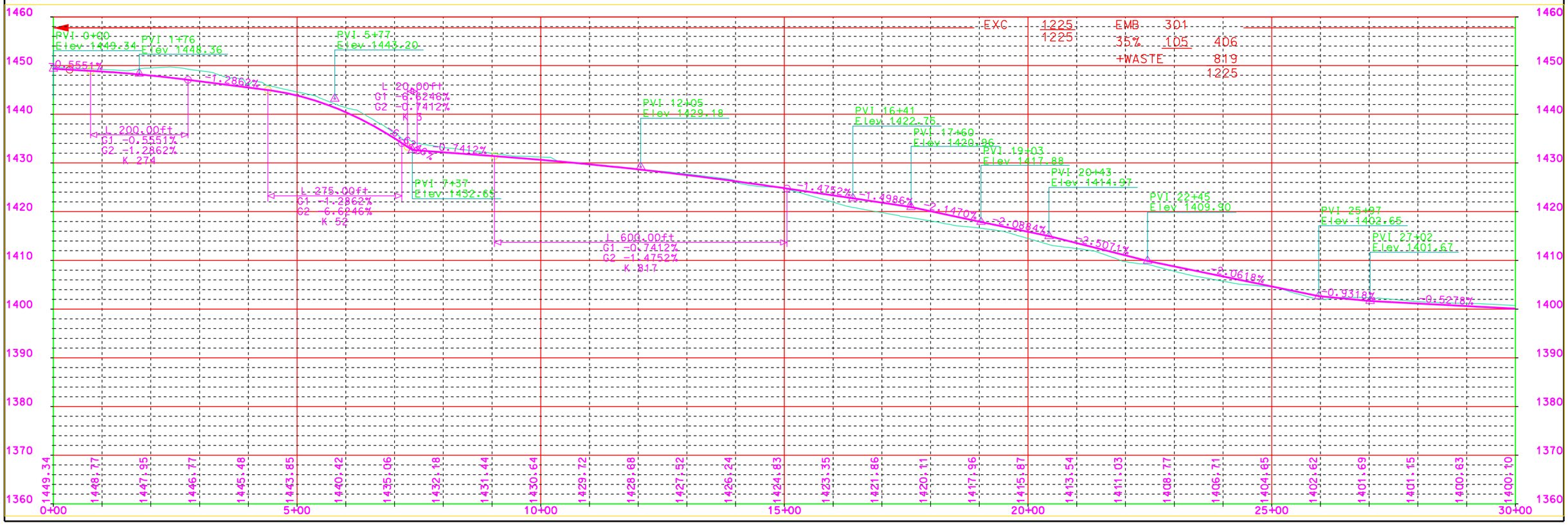
Plotting Date: 04-APR-2007





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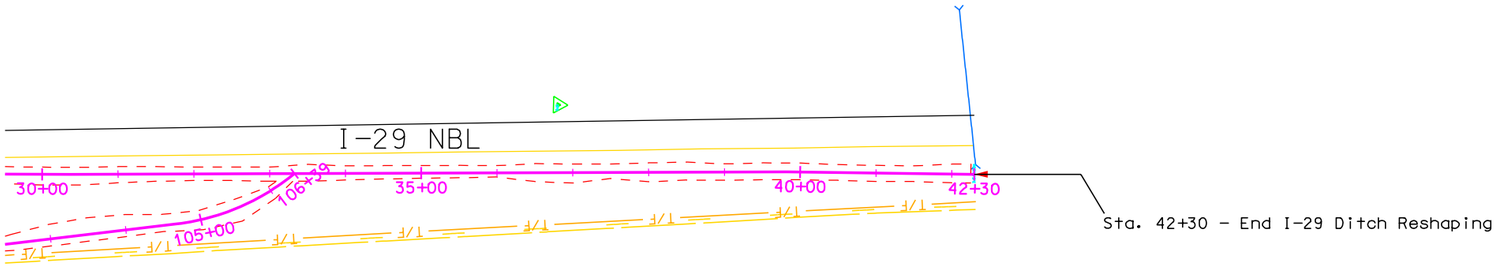
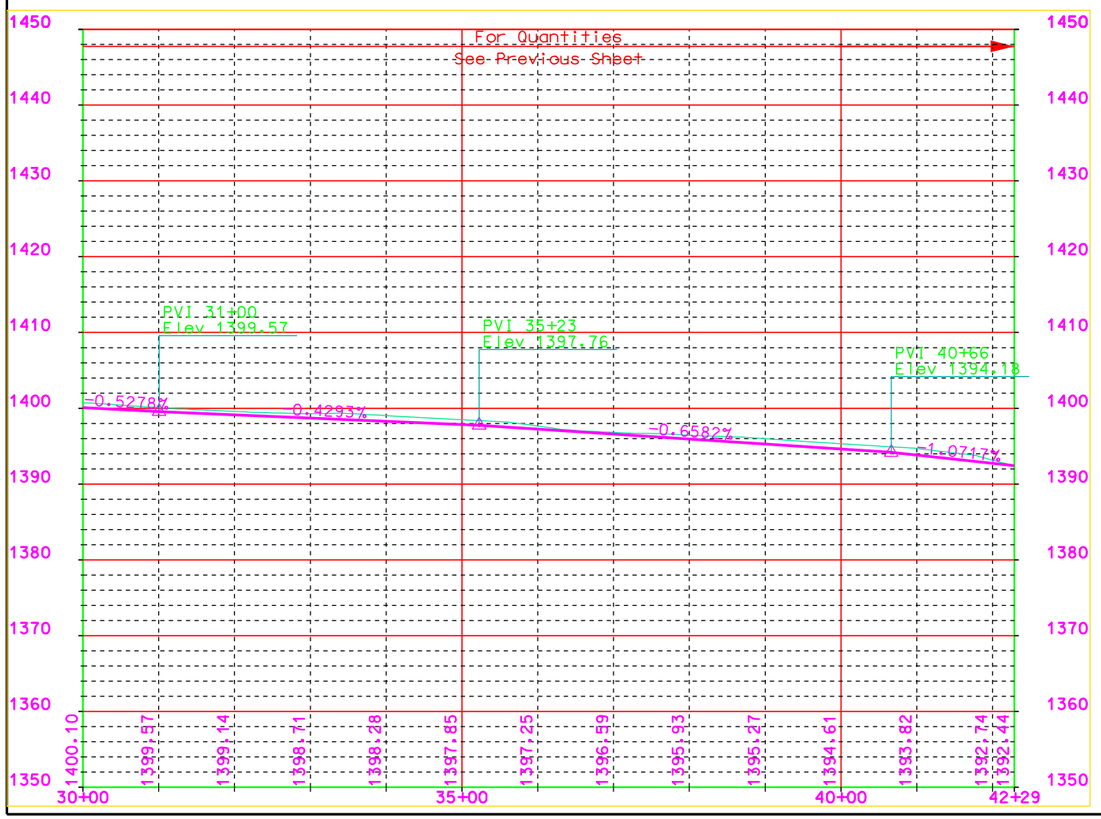


Sta. 42+30 – End I-29 Ditch Reshaping

Sta. 42+30 – Lt.
42" RC Arch Pipe
Retain



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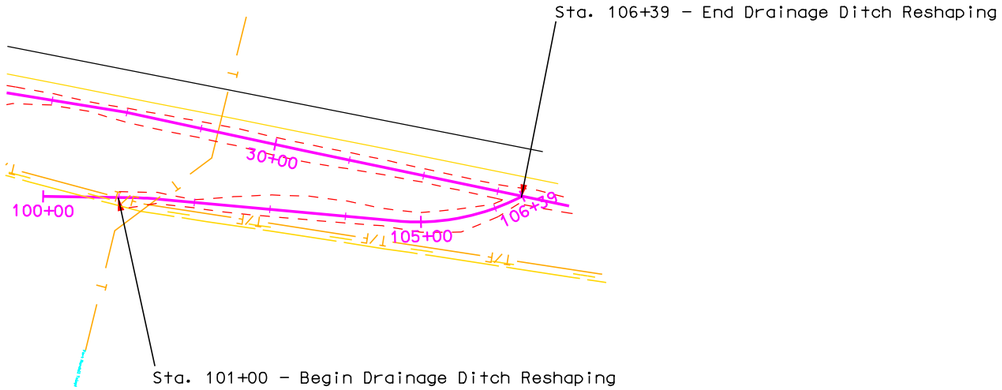

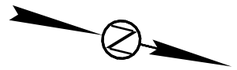

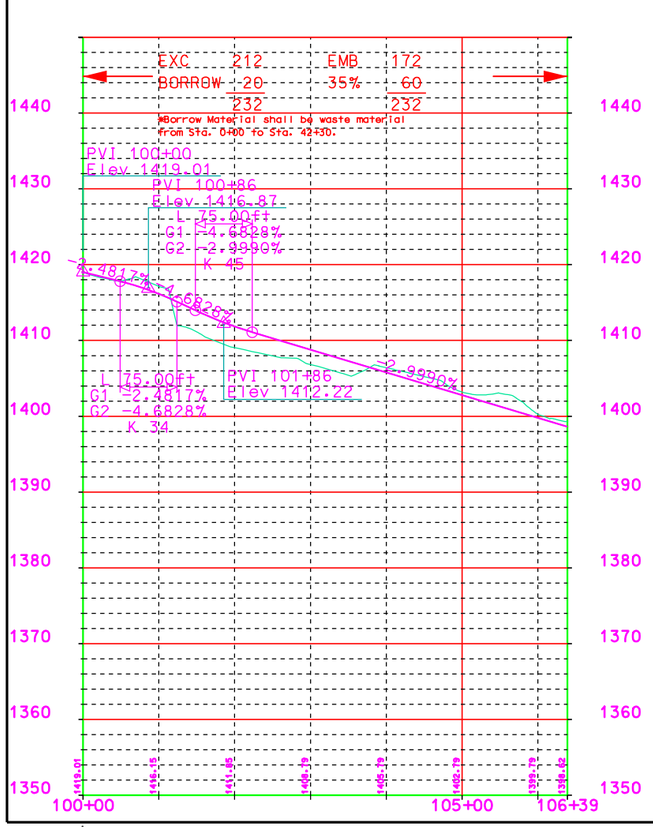

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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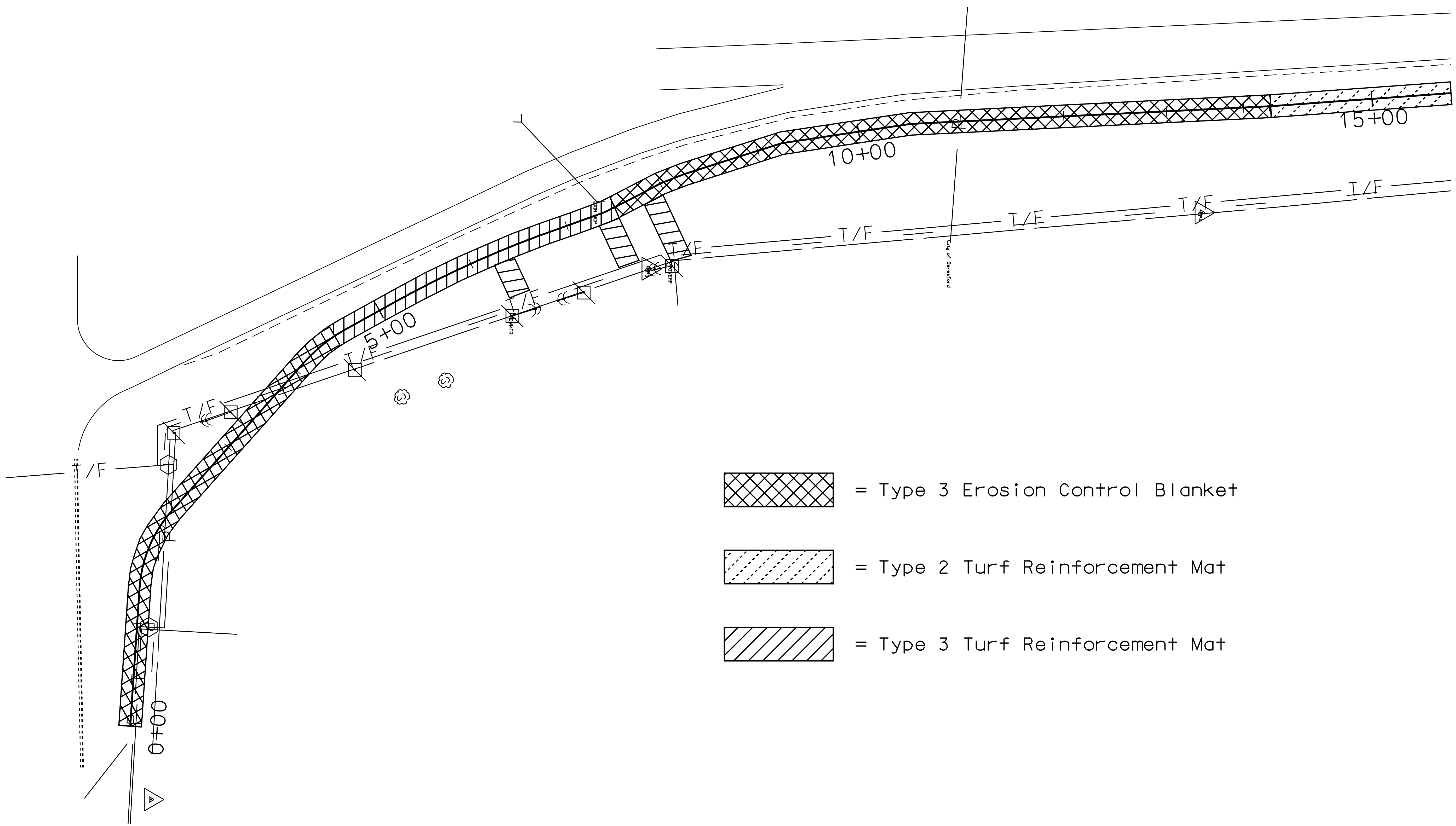
EROSION CONTROL



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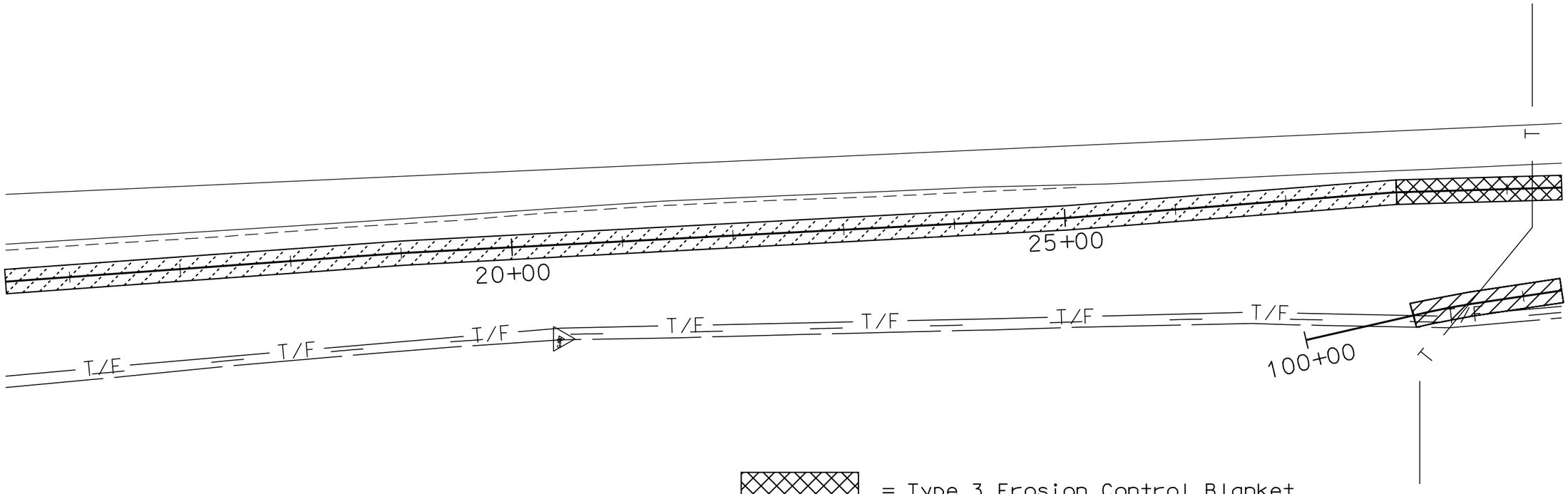
EROSION CONTROL



= Type 3 Erosion Control Blanket

= Type 2 Turf Reinforcement Mat

= Type 3 Turf Reinforcement Mat

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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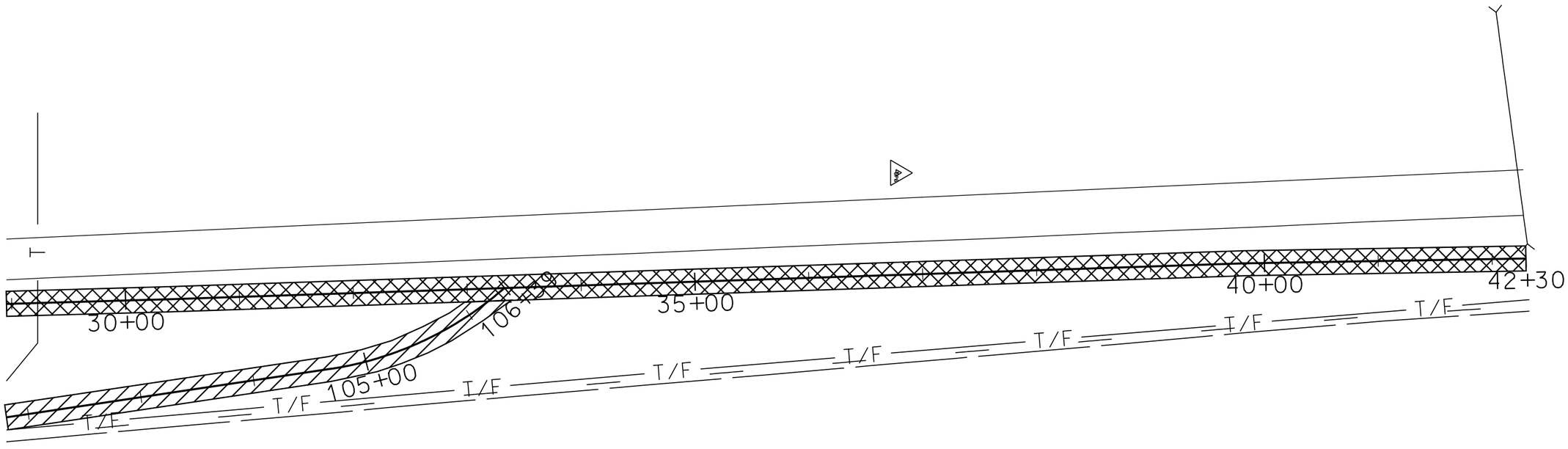
EROSION CONTROL



= Type 3 Erosion Control Blanket

= Type 2 Turf Reinforcement Mat

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STORM WATER POLLUTION PREVENTION PLAN

*(The numbers right of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES)*

❖ SITE DESCRIPTION (4.2 1)

- **Project Limits: See Title Sheet (4.2 1.b)**
- **Project Description: See Title Sheet (4.2 1.a.)**
- **Site Map(s): See Title Sheet and Plans (4.2 1.f. (1)-(6))**
- **Major Soil Disturbing Activities** (check all that apply)
  - ☐ Clearing and grubbing
  - ☒ Excavation/borrow
  - ☒ Grading and shaping
  - ☒ Filling
  - ☒ Cutting and filling
  - ☐ Other (describe):
- **Total Project Area** 2.4 acres **(4.2 1.b.)**
- **Total Area To Be Disturbed** 2.4 acres **(4.2 1.b.)**
- **Existing Vegetative Cover (%)** 60
- **Soil Properties:** AASHTO Soil Classification A6 & A7 **(4.2 1. d.)**
- **Name of Receiving Water Body/Bodies (4.2 1.e.)**

❖ ORDER OF CONSTRUCTION ACTIVITIES (4.2 1.c.)

(Stabilization measures shall be initiated as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Initiation of final or temporary stabilization may exceed the 14-day limit if earth disturbing activities will be resumed within 21 days.)

- **Install perimeter protection where runoff sheets from the site.**
- **Install channel and ditch bottom protection.**
- **Remove and store topsoil.**
- **Stabilize disturbed areas.**
- **Install inlet and culvert protection after completing storm drainage and other utility installations.**
- **Complete final grading.**
- **Reseed areas disturbed by removal activities**.

❖ EROSION AND SEDIMENT CONTROLS (4.2 2.a.(1)(a)-(f))

(Check all that apply)

- **Stabilization Practices (See Detail Plan Sheets)**
  - ☒ Temporary or Permanent Seeding
  - ☐ Sodding
  - ☐ Planting
  - ☒ Mulching (Straw or Cellulose Fiber)
  - ☒ Erosion Control Blankets or Mats
  - ☐ Vegetation Buffer Strips
  - ☐ Roughened Surface (e.g. tracking)
  - ☐ Gabions-Gabion Mattress
  - ☐ Other
- **Structural Temporary Erosion and Sediment Controls**
  - ☐ Silt Fence
  - ☐ Straw Bale Check
  - ☐ Temporary Berm
  - ☐ Temporary Slope Drain
  - ☐ Straw Wattles or Rolls
  - ☐ Diversion Channels/Swales
  - ☒ Channel Liners (TRM)
  - ☐ Stone Rip Rap Sheet
  - ☐ Rock Check Dams
  - ☐ Sediment Traps/Basins
  - ☐ Inlet Protection
  - ☐ Outlet Protection
  - ☐ Surface Inlet Protection
  - ☐ Curb Inlet Protection
  - ☐ Stabilized Construction Entrances
  - ☐ Other
- **Wetland Avoidance**

  Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☐ No ☒ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.
- **Storm Water Management (4.2 2.b., (1) and (2))**

  Storm water management will be handled by temporary controls outlined in Section 3 above, and any permanent controls needed to meet permanent storm water management needs in the post construction period. Permanent controls will be shown on the plans and noted as permanent.
- **Other Storm Water Controls (4.2 2.c., (1) and (2))**
  - **Waste Disposal**

    All liquid waste materials will be collected and stored in sealed metal containers approved by the project engineer. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal, and notices stating proper practices will be posted in the field office. The general contractor's representative responsible for the conduct of work on the site will be responsible for seeing waste disposal procedures are followed.
  - **Hazardous Waste**

    All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the individual designated as the contractor's on-site representative will be responsible for seeing that these practices are followed.
  - **Sanitary Waste**

    Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units in a timely manner by a licensed waste management contractor or as required by any local regulations.

❖ Maintenance and Inspection (4.2 3. and 4.2 4.)

- **Maintenance and Inspection Practices**
  - Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.
  - All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
  - Silt fence will be inspected for depth of sediment and for tears in order to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches $^1/_3$ of the height of the silt fence.
  - Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
  - Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
  - All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
  - Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
  - The SDDOT Project Engineer and contractor's site superintendent are responsible for inspections. Maintenance, repair activities are the responsibility of the contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

❖ Non-Storm Water Discharges (3.0)

The following non-storm water discharges are anticipated during the course of this project (check all that apply).

- ☐ Discharges from water line flushing.
- ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- ☐ Uncontaminated ground water associated with dewatering activities.

❖ Materials Inventory (4.2. 2.c.(2))

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the headings "EROSION AND SEDIMENT CONTROLS" and "SPILL PREVENTION" (check all that apply).

- ☐ Concrete and Portland Cement
- ☒ Detergents
- ☐ Paints
- ☐ Metals
- ☐ Bituminous Materials
- ☐ Petroleum Based Products
- ☐ Cleaning Solvents
- ☒ Wood
- ☐ Cure
- ☐ Texture
- ☒ Chemical Fertilizers
- ☐ Other

❖ **Spill Prevention (4.2 2.c.(2))**

➢ **Material Management**

- Housekeeping
  - Only needed products will be stored on-site by the contractor.
  - Except for bulk materials the contractor will store all materials under cover and in appropriate containers.
  - Products must be stored in original containers and labeled.
  - Material mixing will be conducted in accordance with the manufacturer's recommendations.
  - When possible, all products will be completely used before properly disposing of the container off site.
  - The manufacturer's directions for disposal of materials and containers will be followed.
  - The contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
  - Dust generated will be controlled in an environmentally safe manner.
  - Vegetation areas not essential to the construction project will be preserved and maintained as noted on the plans.

- Hazardous Materials
  - Products will be kept in original containers unless the container is not resealable.
  - Original labels and material safety data sheets will be retained in a safe place to relay important product information.
  - If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
  - Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any storm water system or storm water treatment system.
  - Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, and mixer washout waters will be collected on site and managed to prevent contamination of storm water runoff.

➢ **Product Specific Practices (6.8)**

- Petroleum Products
  All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.
- Fertilizers
  Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to storm water. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.
- Paints
  All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer's instructions and any applicable state and local regulations.
- Concrete Trucks
  Contractors will provide designated truck washout areas on the site. These areas must be self contained and not connected to any storm water outlet of the site. Upon completion of construction washout areas will be properly stabilized.

➢ **Spill Control Practices (4.2 2 c.(2))**

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill clean up will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for clean up purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.

➢ **Spill Response (4.2 2 c.(2))**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens storm water or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SD DENR.
- Personnel with primary responsibility for spill response and clean up will receive training by the contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

❖ **Spill Notification**

In the event of a spill, the contractor's site superintendent will make the appropriate notification(s), consistent with the following procedures:

➢ A reportable spill is a quantity of 25 gallons or more or any spill of oil which: 1) violates water quality standards, 2) produces a "sheen" on a surface water, or 3) causes a sludge or emulsion must be reported immediately to the National Response Center .

➢ Any spill of oil or hazardous substance to waters of the state must be reported immediately by telephone to the SD DENR.

❖ **Construction Changes (4.4)**

When changes are made to the construction project that will require alterations in the temporary erosion controls of the site, the Storm Water Pollution Prevention Plan (SWPPP) will be amended to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP plan (DOT 298) and drawings to reflect the needed changes. Copies of changes will be routed per DOT 298. Copies of forms and the SWPPP will be retained in a designated place for review over the course of the project.

❖ CERTIFICATIONS

➢ **Certification of Compliance with Federal, State, and Local Regulations**

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ **South Dakota Department of Transportation**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Dave Graves

Authorized Signature (See the General Permit, Section 6.7.1.C.)

➢ **Prime Contractor**

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

Authorized Signature

❖ CONTACT INFORMATION

➢ **Contractor Information**:
- Prime Contractor Name:
- Contractor Contact Name:
- Address:
- Address:
- City: State: Zip:
- Office Phone: Field: Cell: Fax:

➢ **SDDOT Project Engineer**
- Name:
- Business Address:
- Job Office Location
- City: State: Zip:
- Office Phone: Field: Cell: Fax:

➢ **SD DENR Contact Spill Reporting**
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

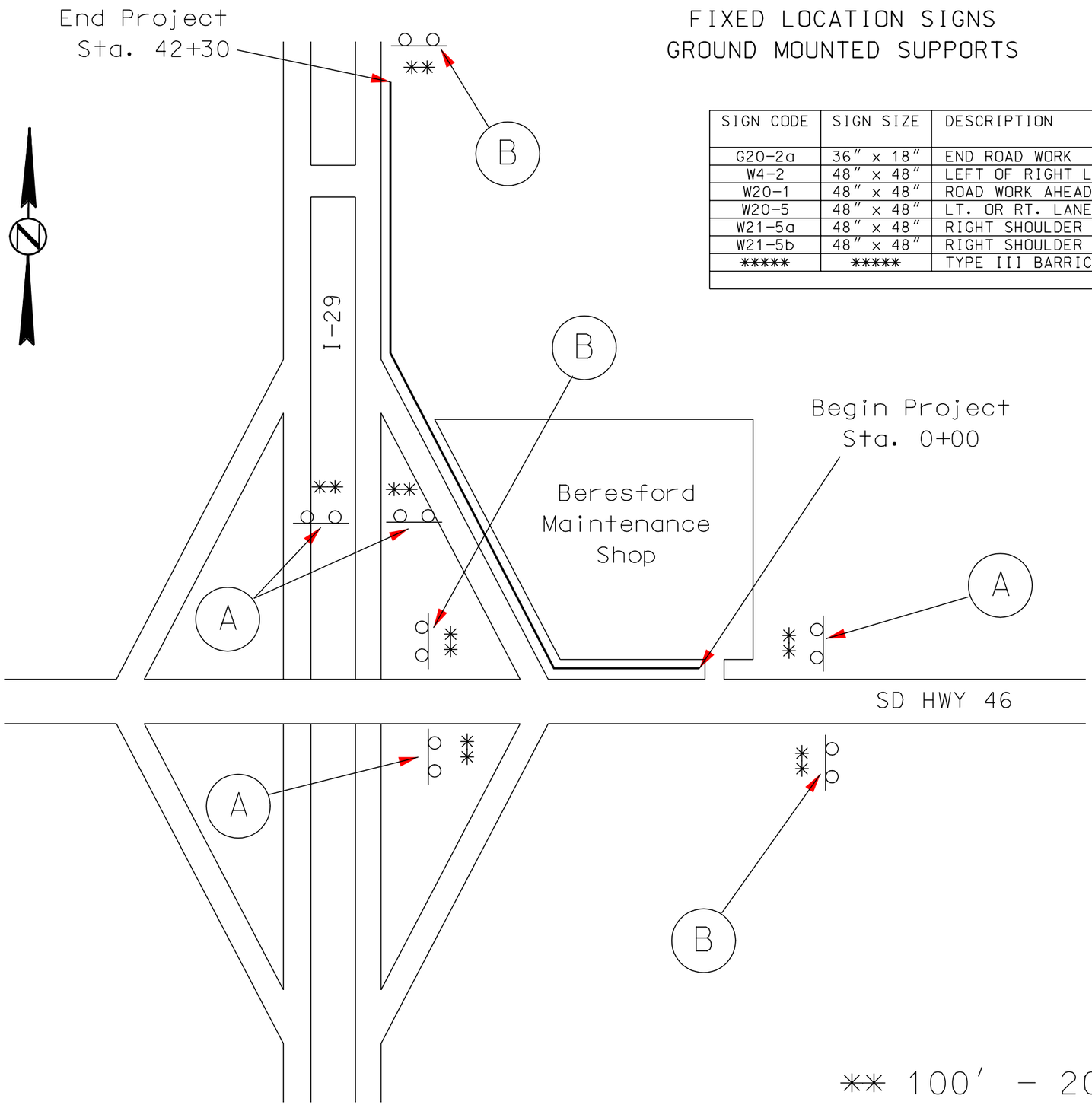
➢ **SD DENR Contact for Hazardous Materials.**
- (605) 773-3153

➢ **National Response Center Hotline**
- (800) 424-8802.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	16	48

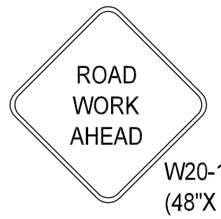
TRAFFIC CONTROL

FIXED LOCATION SIGNS
GROUND MOUNTED SUPPORTS



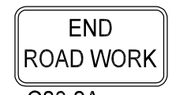
SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
G20-2a	36" x 18"	END ROAD WORK	3	17	51
W4-2	48" x 48"	LEFT OF RIGHT LANE ENDS (SYMBOL)	2	34	68
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	2	34	68
W21-5a	48" x 48"	RIGHT SHOULDER CLOSED	2	34	68
W21-5b	48" x 48"	RIGHT SHOULDER CLOSED AHEAD	2	34	68
*****	*****	TYPE III BARRICADE - 8 FT. SINGLE SIDED	1	40	40
				TOTAL UNITS	499

A



W20-1
(48"X 48")

B



G20-2A
(48"X 24")

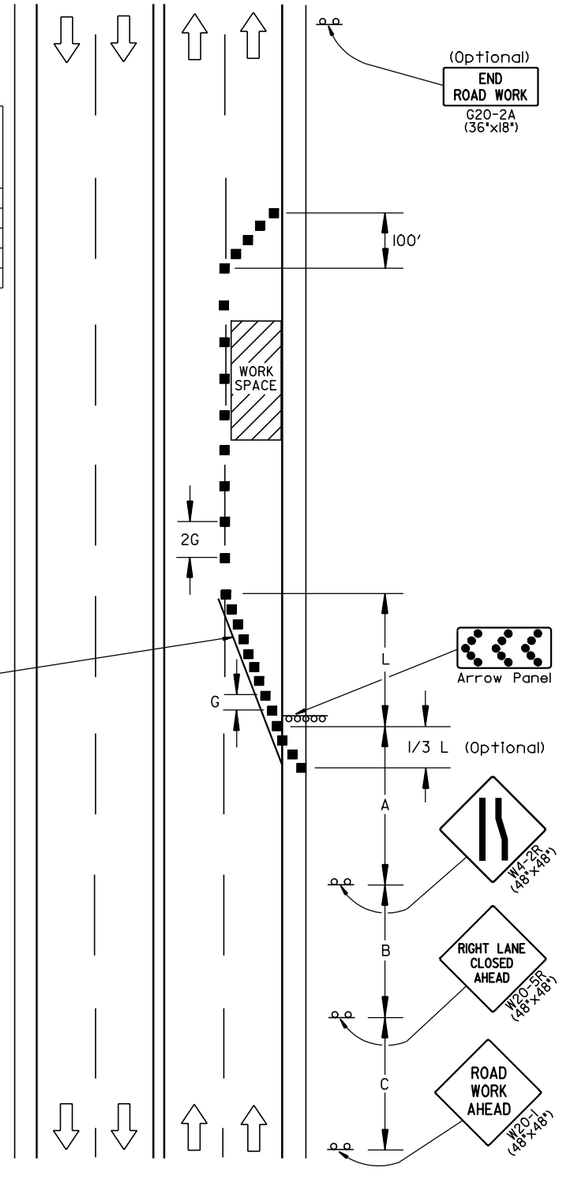
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)(B)(C)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45 - 50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device

The Channelizing Devices shall be drums or type II barricades if traffic control must remain overnight or longer, however, 42" cones may be used in lieu of drums or type II barricades only along the centerline.

Longitudinal dimensions may be adjusted to fit project conditions such as horizontal curves, vertical curves, and other site restrictions.

Four inch white temporary pavement marking shall be used if traffic control must remain overnight or longer.



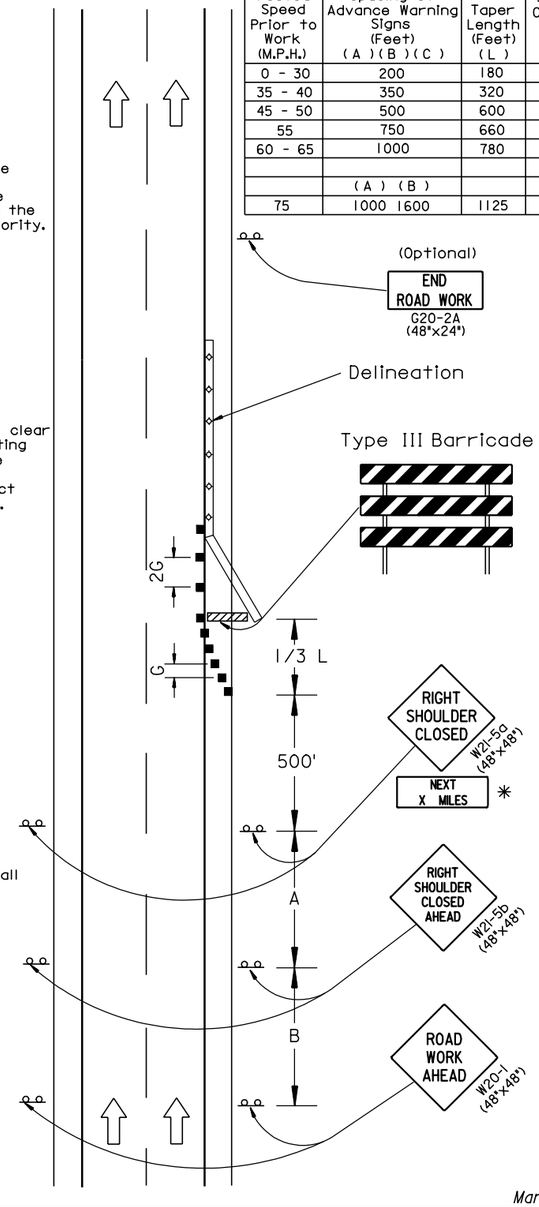
December 23, 2003

Published Date: 2nd Qtr. 2007	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES 4-LANE UNDIVIDED, RIGHT LANE CLOSED	PLATE NUMBER 634.47 Sheet 1 of 1

1. The barrier in this diagram shows one method that may be used to close a shoulder of a long term project. The use of a barrier should be based on the need determined by the Highway Authority.

2. Barriers should be flared beyond the clear zone to prevent vehicles from impacting their leading ends. Flare rate shall be 11:1. An alternative procedure is to place an impact attenuator to protect traffic from the end of the barrier.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)(B)(C)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45 - 50	500	600	50
55	750	660	50
60 - 65	1000	780	50
	(A) (B)		
75	1000 1600	1125	50



■ - Channelizing Devices
Drums or Type II Barricades shall be used.

▭ - Concrete Barrier

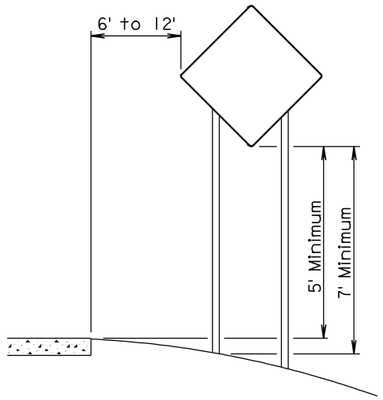
✳ - For distances ½ mile or greater.

March 31, 2000

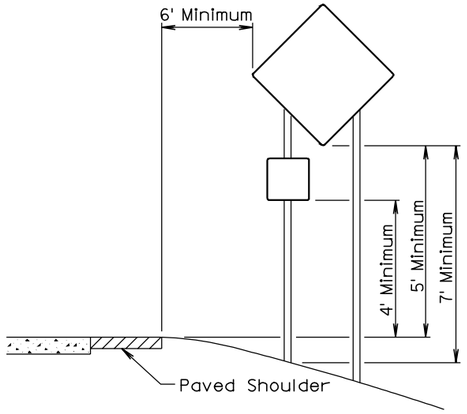
Published Date: 2nd Qtr. 2007	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES SHOULDER CLOSED	PLATE NUMBER 634.61 Sheet 1 of 1

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029 N-291	18	48

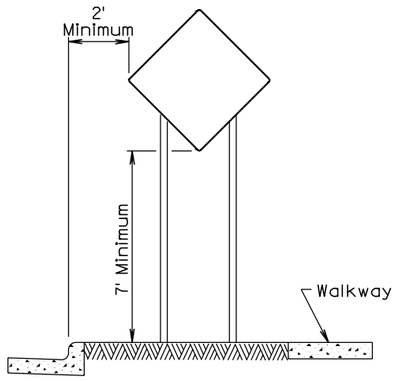
Plotting Date: 04-APR-2007



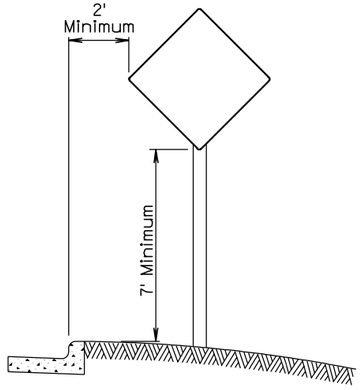
RURAL DISTRICT



RURAL DISTRICT WITH SUPPLEMENTAL PLATE



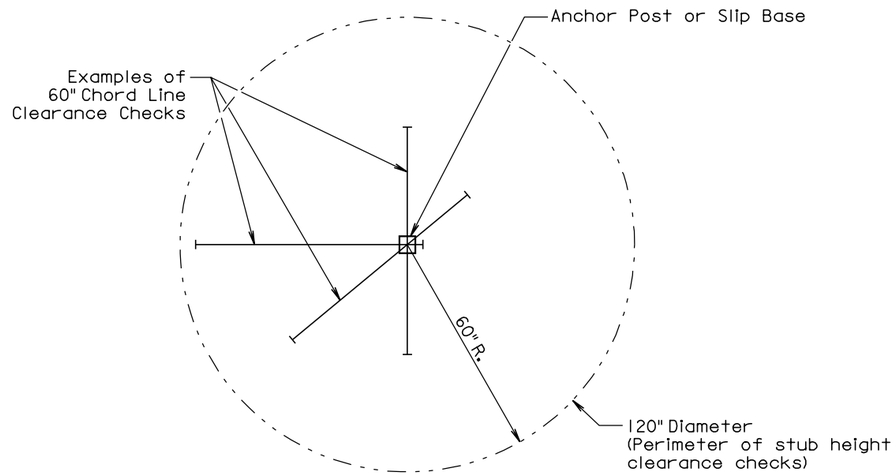
URBAN DISTRICT



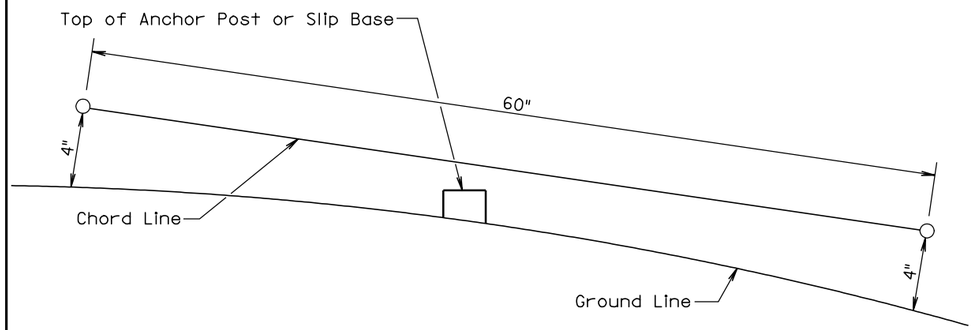
URBAN DISTRICT

December 23, 2003

Published Date: 2nd Qtr. 2007	SDDOT	BREAKAWAY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

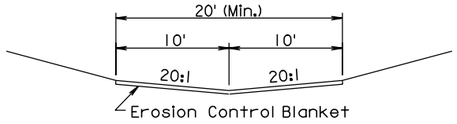
July 1, 2005

Published Date: 2nd Qtr. 2007	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

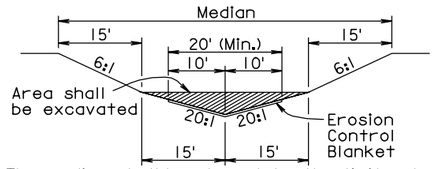
Username - tryaint42

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	029 N-291	19	48

Plotting Date: 04-APR-2007

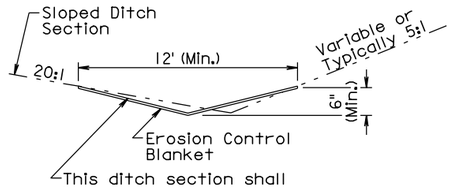


STANDARD DITCH SECTION

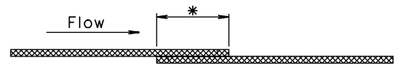


The median shall be shaped to the limits shown in this detail where the erosion control blanket will be placed.

MEDIAN SECTION



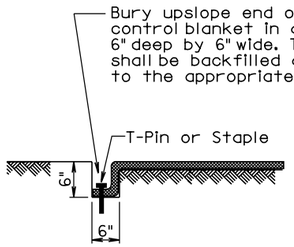
SLOPED DITCH SECTION



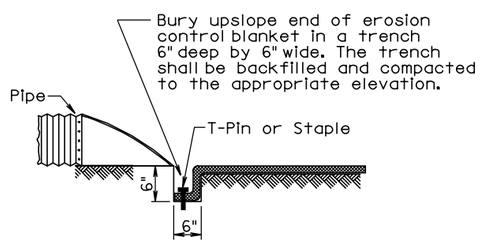
* Use a 4" (Min.) overlap wherever two widths of erosion control blanket are applied side by side.

* Use a 6" (Min.) overlap wherever one roll of erosion control blanket ends and another begins.

OVERLAP DETAIL



TRENCH DETAIL



PIPE END DETAIL

GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas shall be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket shall be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket shall be buried in a trench 6" wide by 6" deep. There shall be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket shall be pinned to the ground according to the manufacturer's installation recommendations.

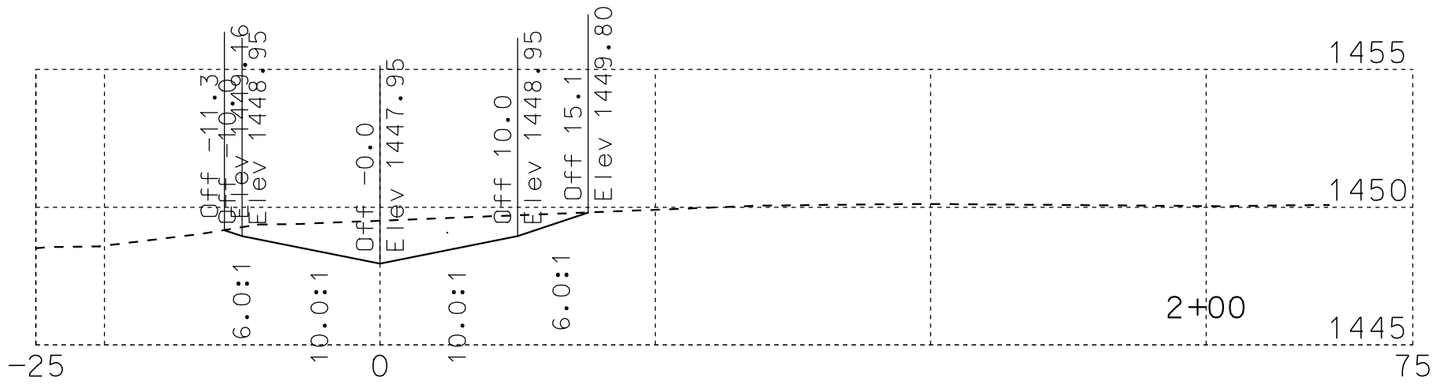
After the placement of the erosion control blanket, the Contractor shall fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

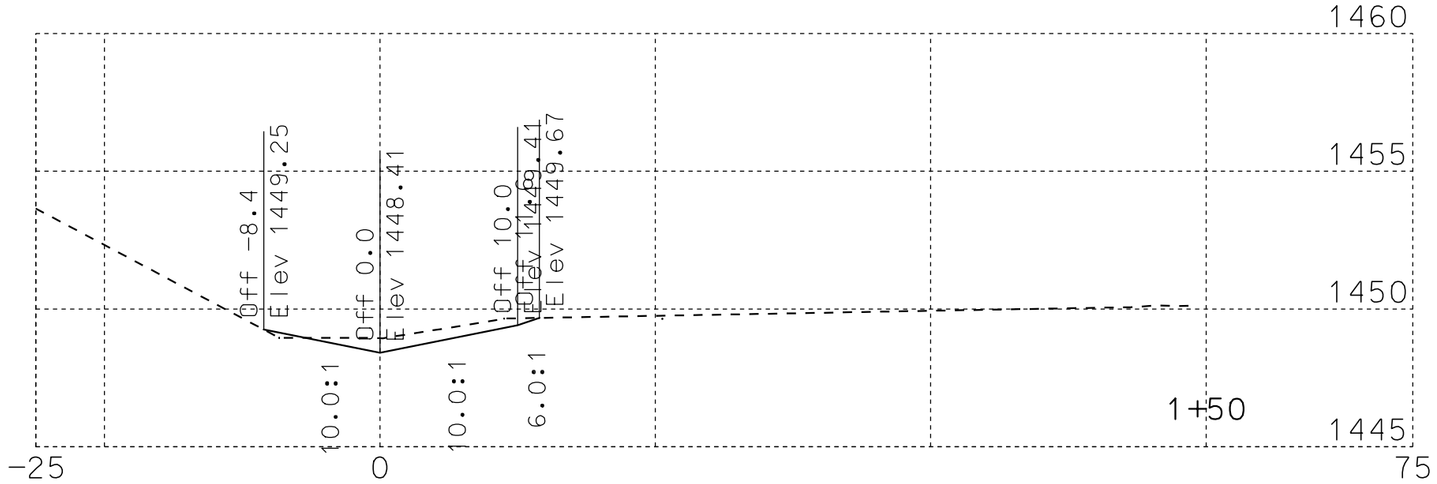
All ditch sections shall be shaped when installing the erosion control blanket. All costs for shaping the ditches shall be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

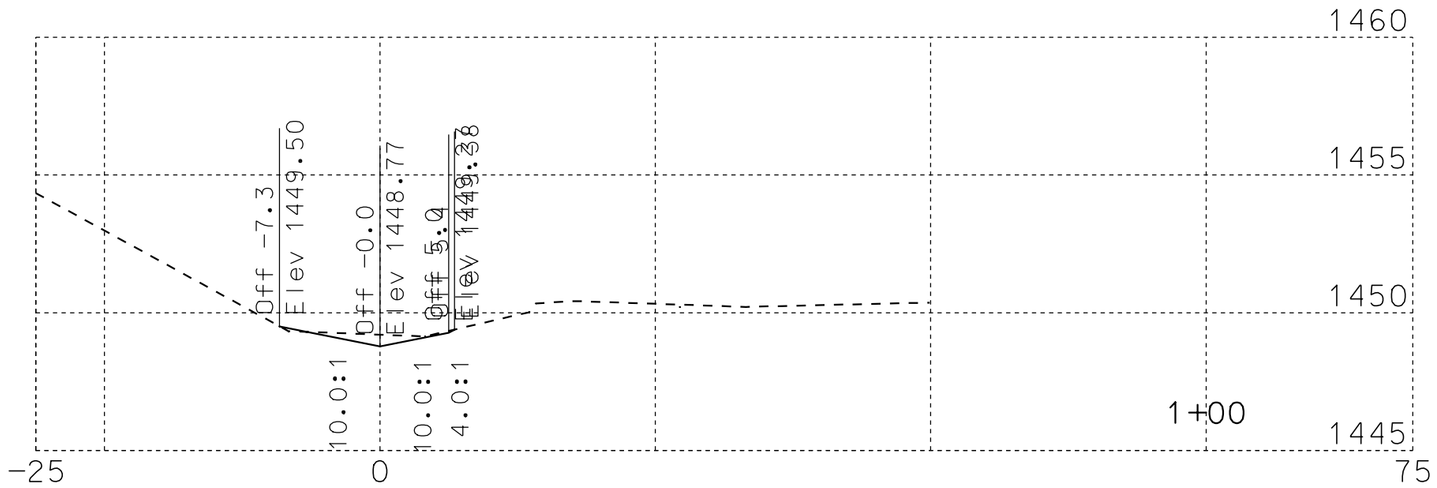
December 23, 2004

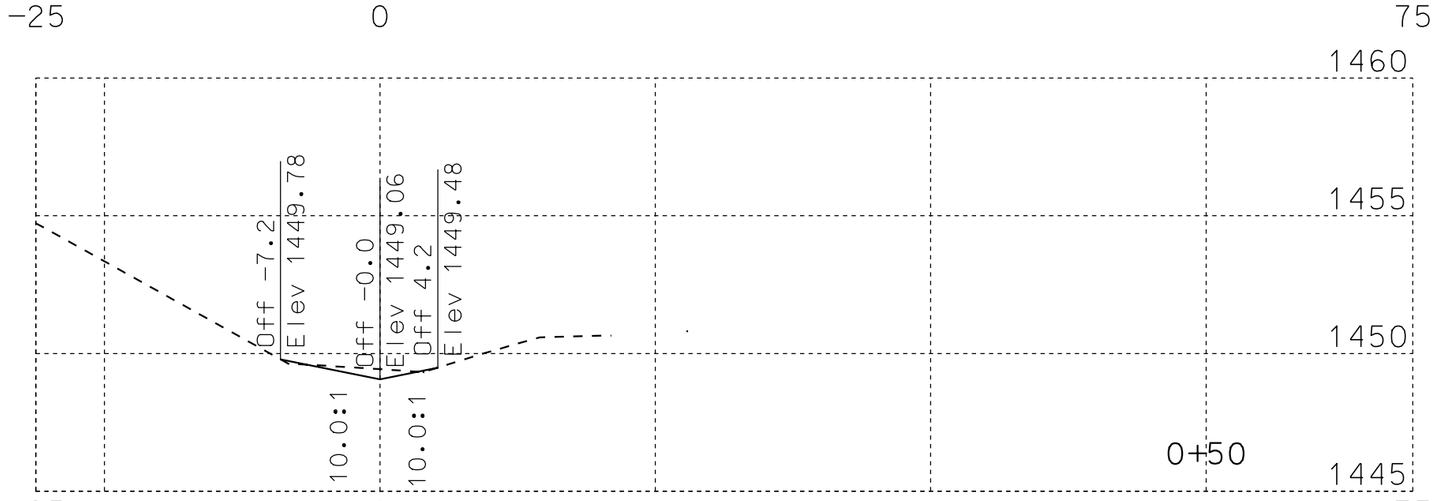
Published Date: 2nd Qtr. 2007	SDDOT	**EROSION CONTROL BLANKET**	PLATE NUMBER 734.01
			Sheet 1 of 1

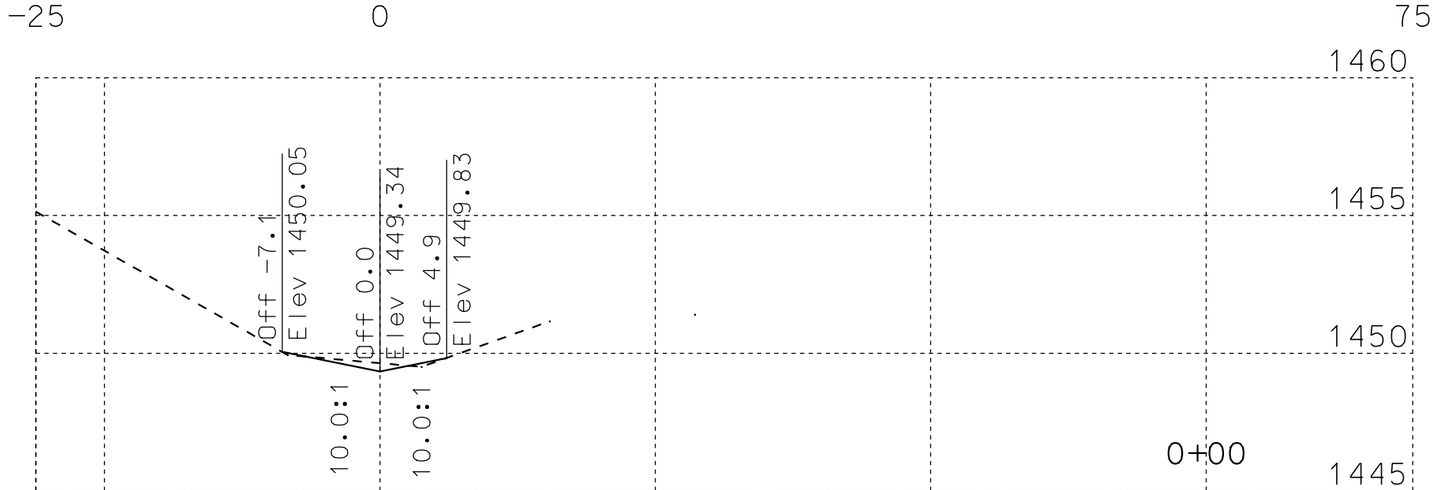
Username - tryalnt42











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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	20	48

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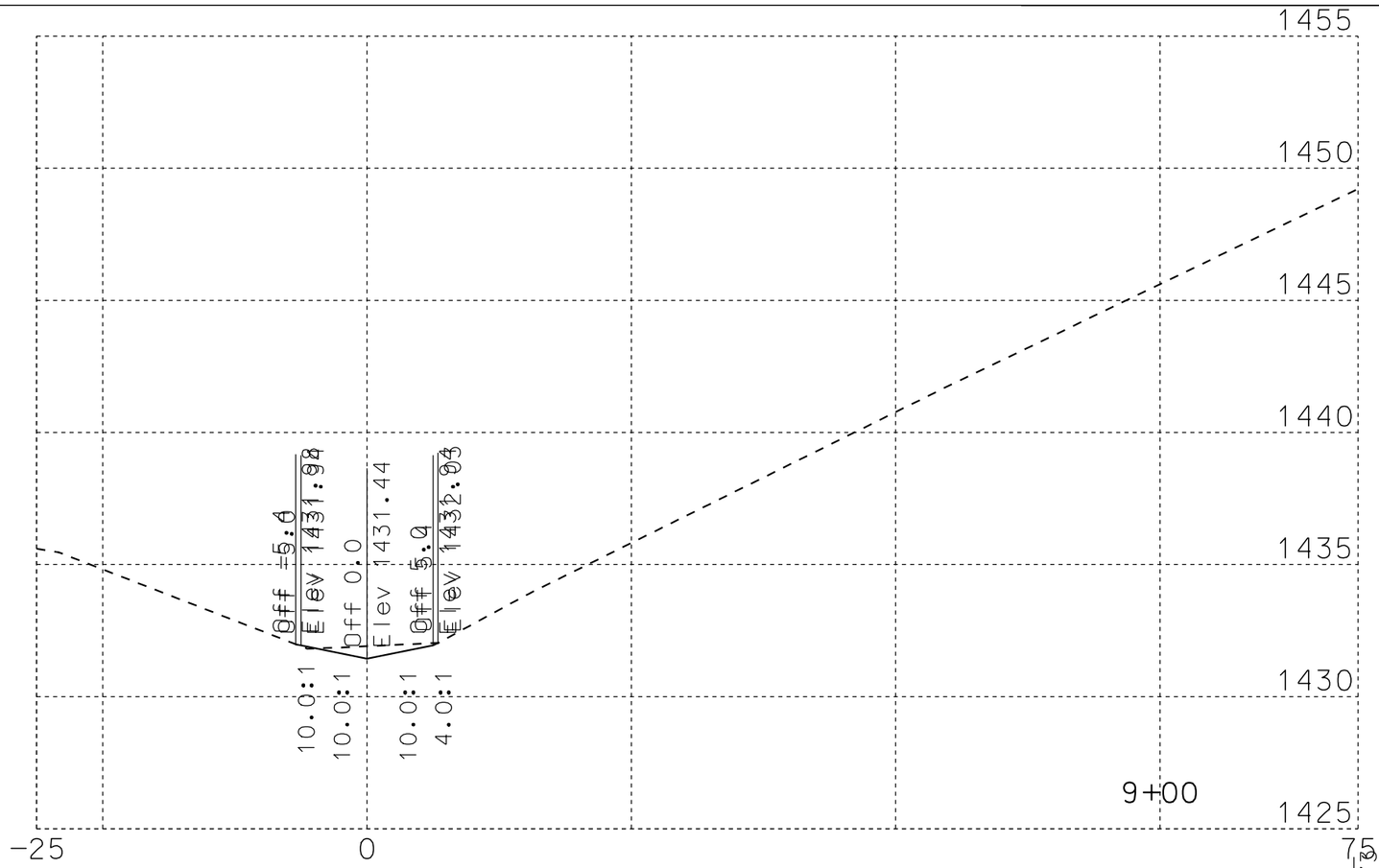
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	21	48

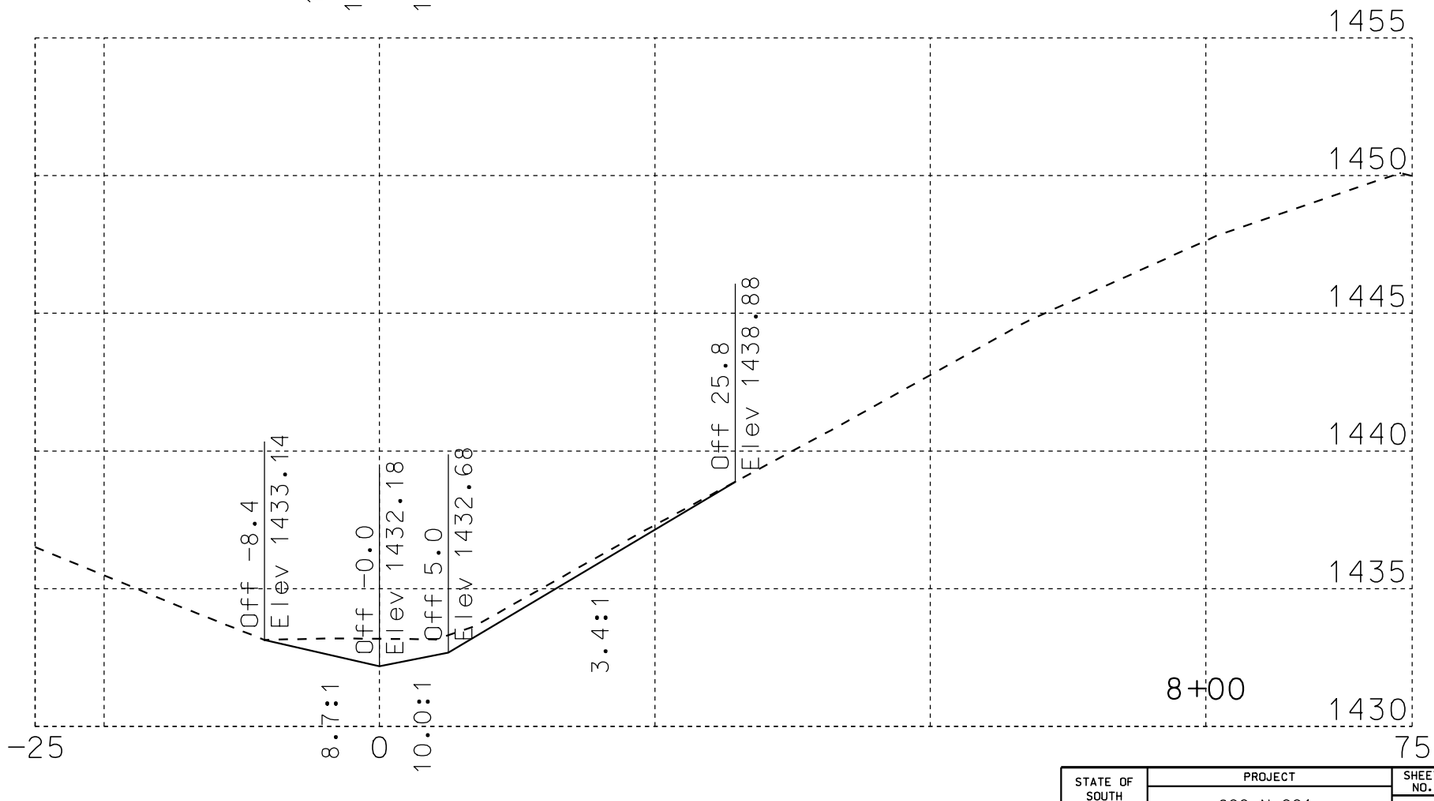
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	22	48

Plotting Date: 04-APR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	23	48

Plotting Date: 04-APR-2007





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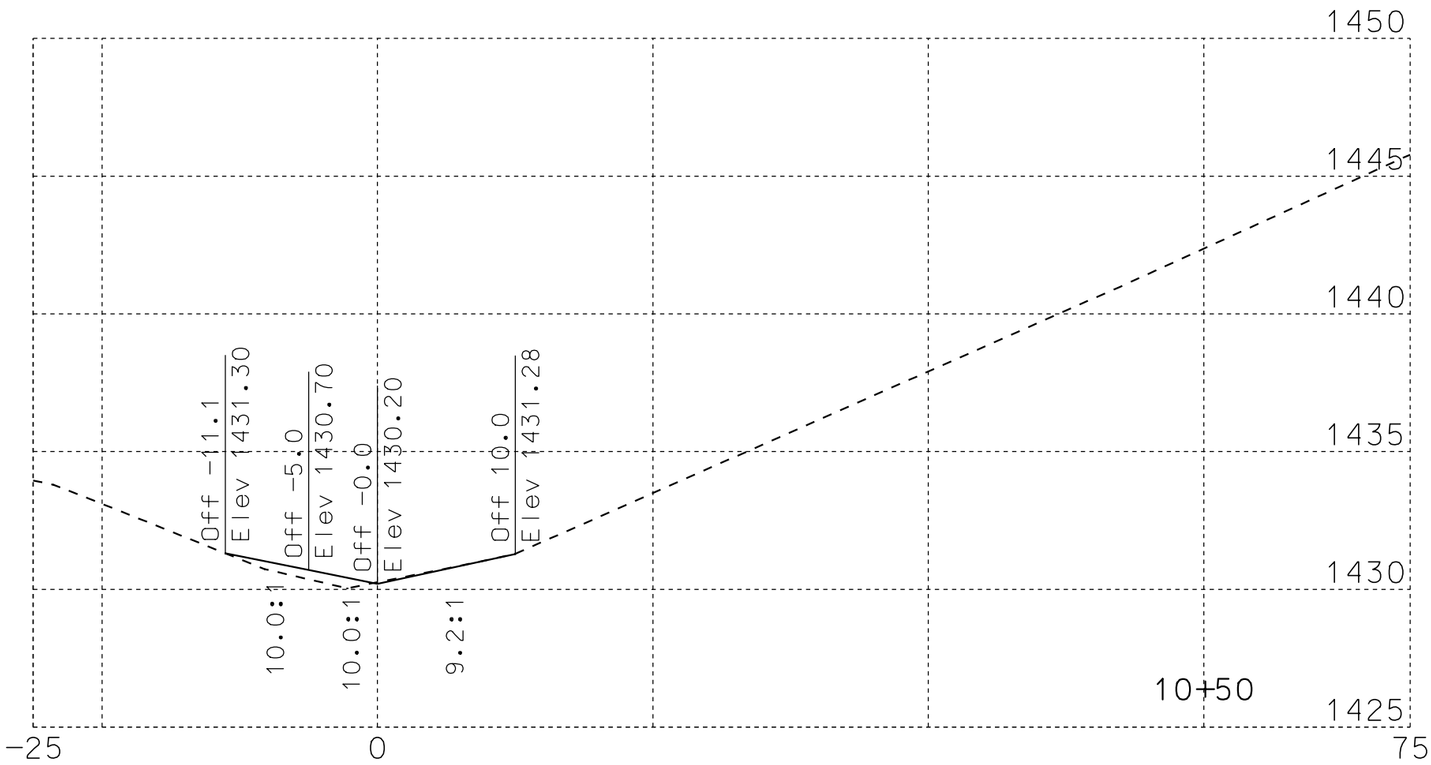
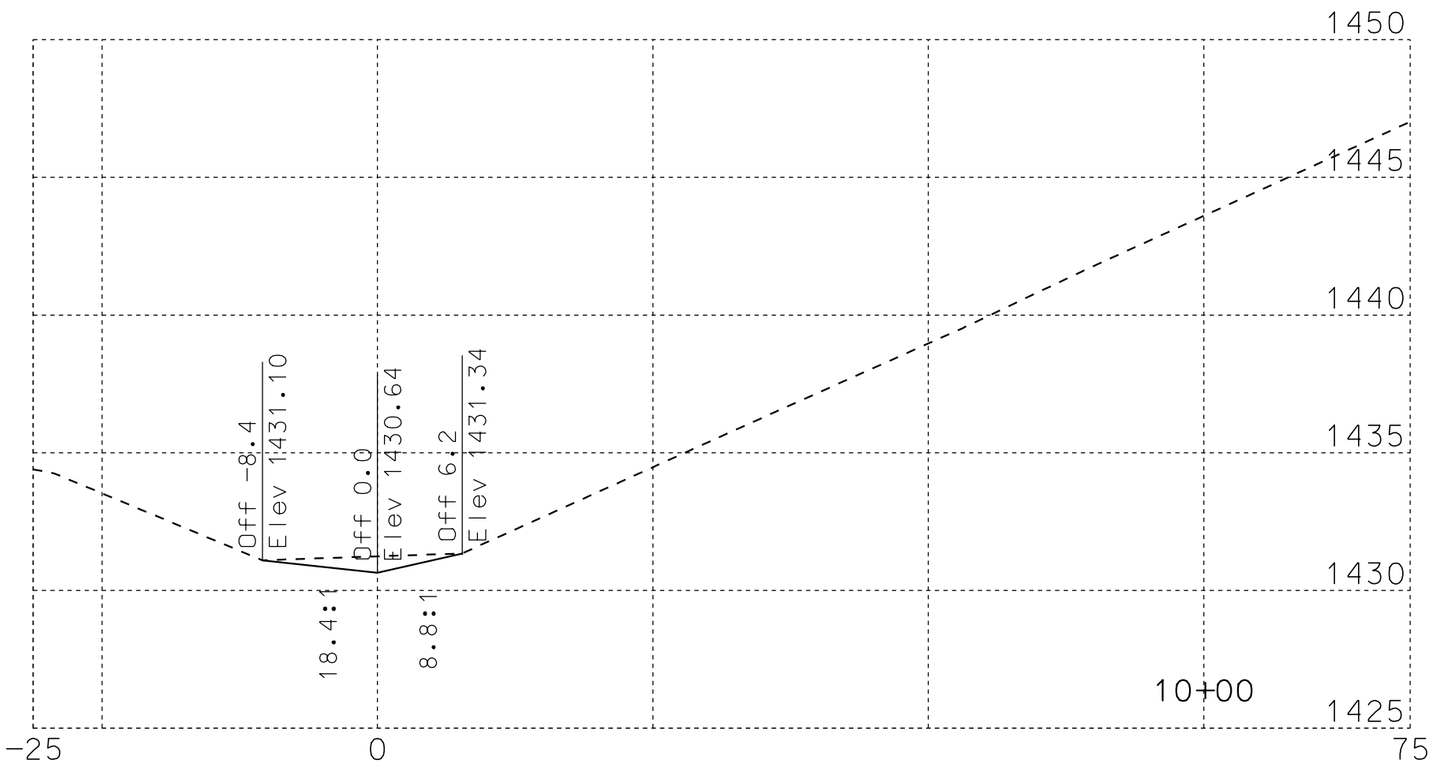
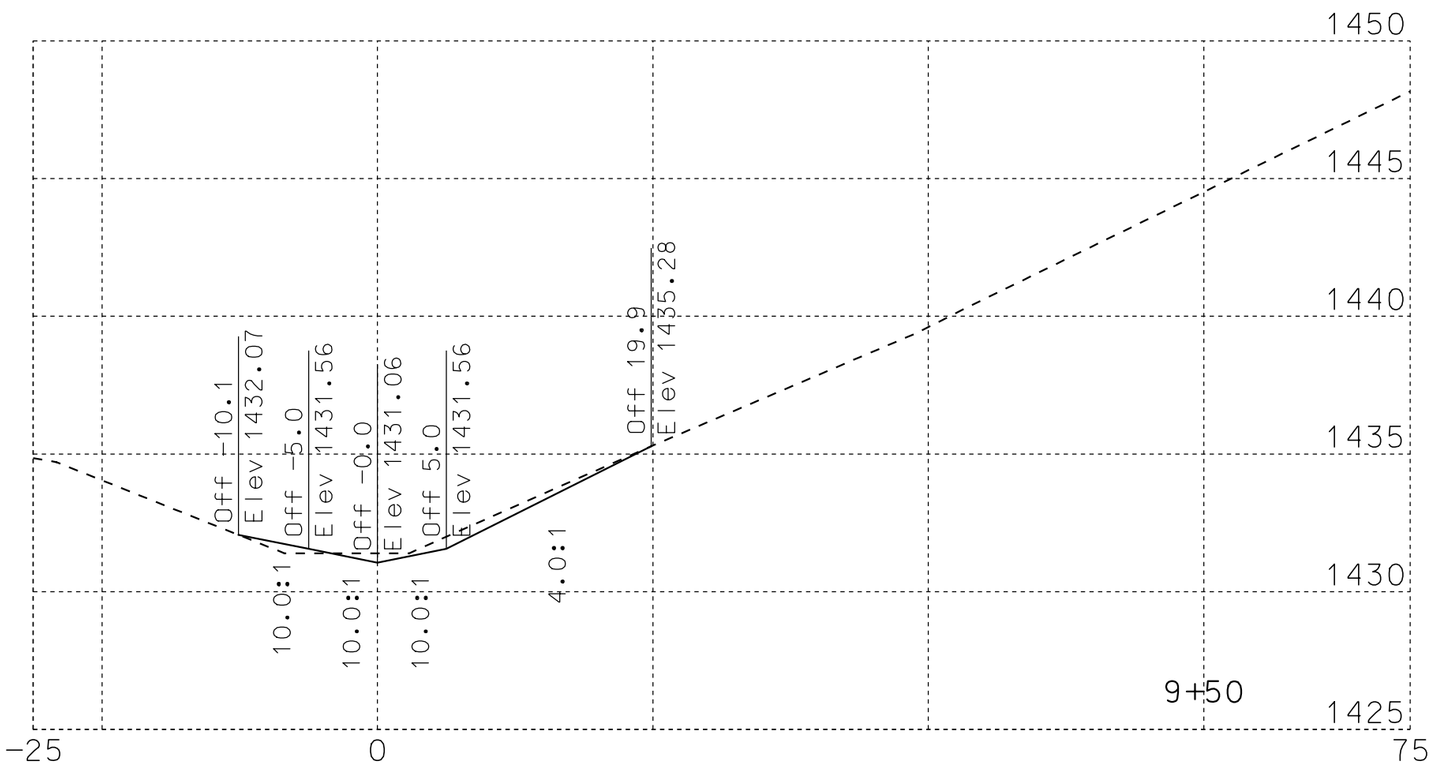
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	24	48







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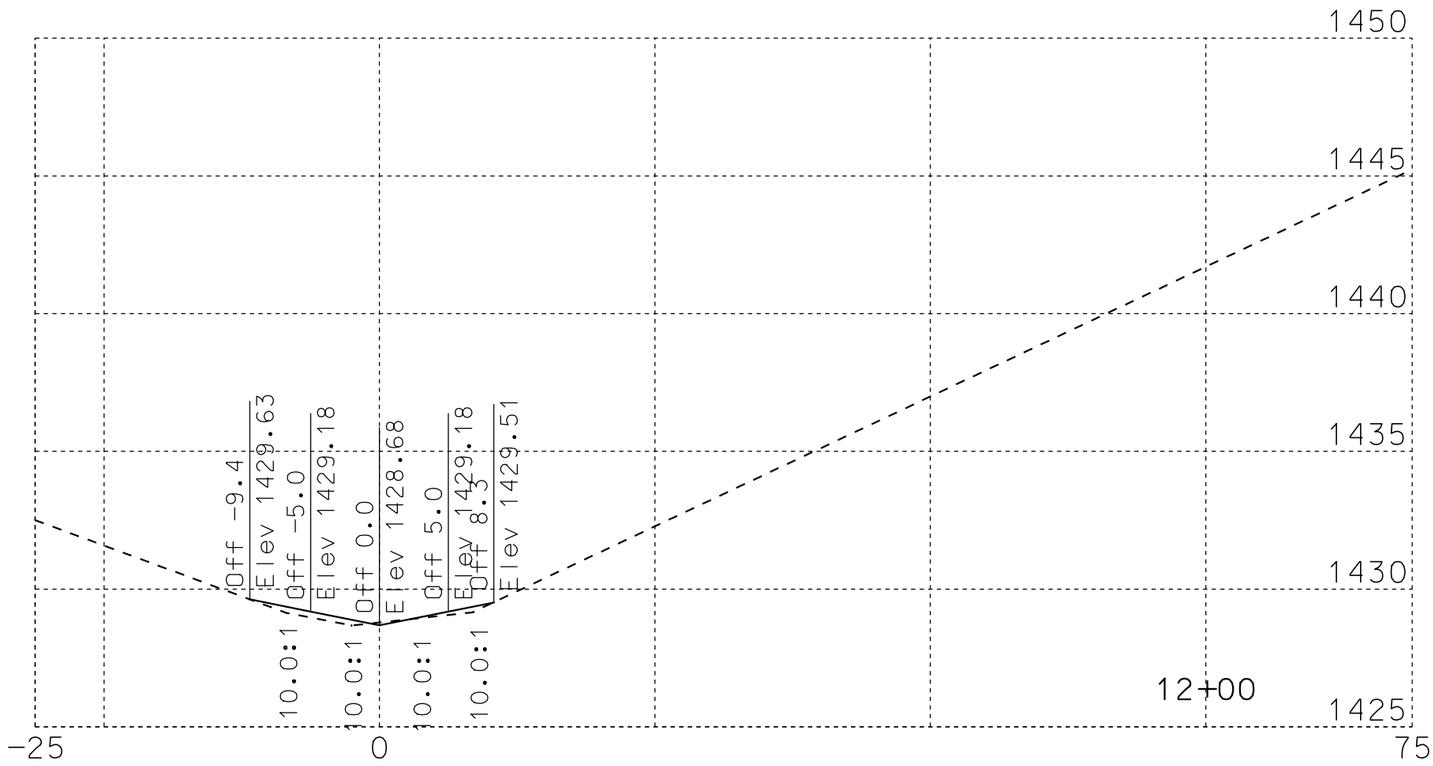
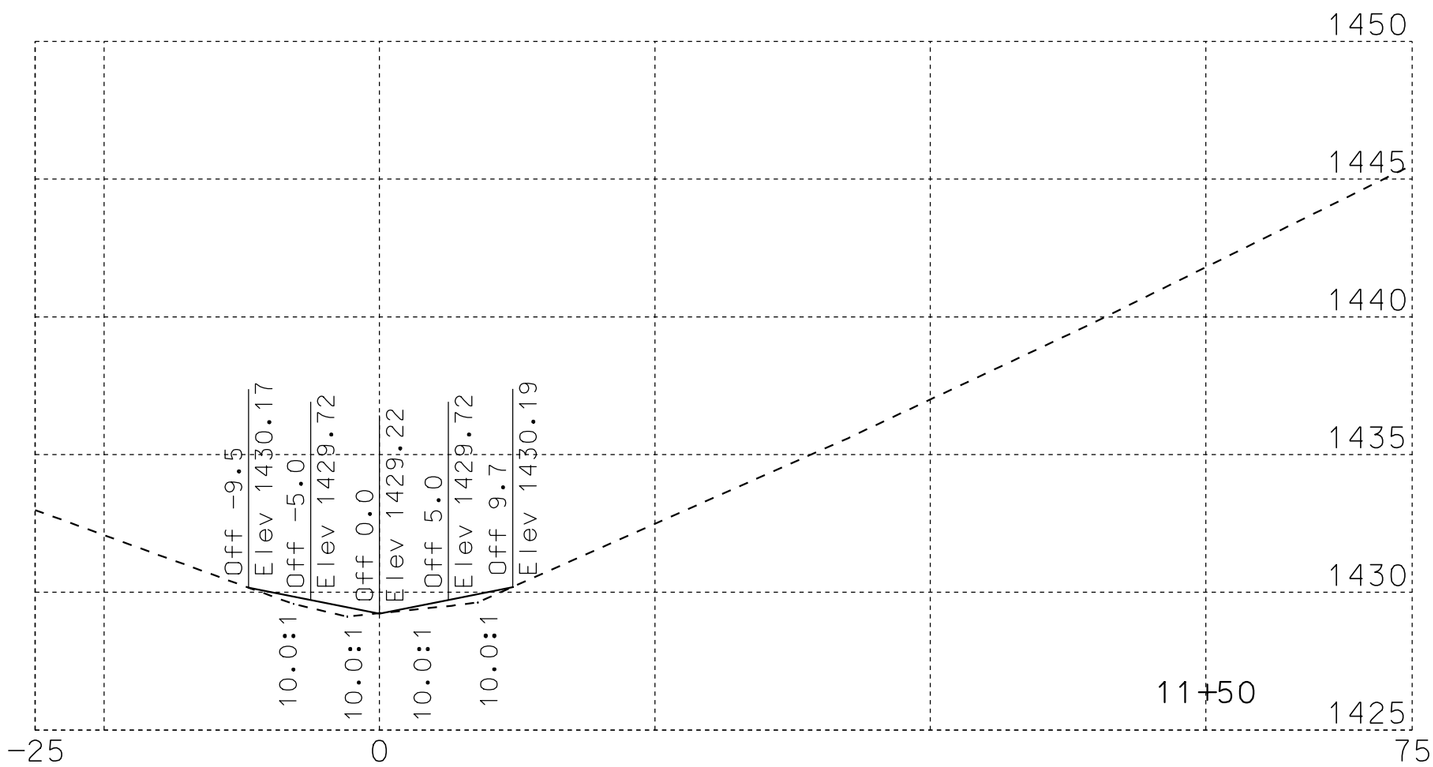
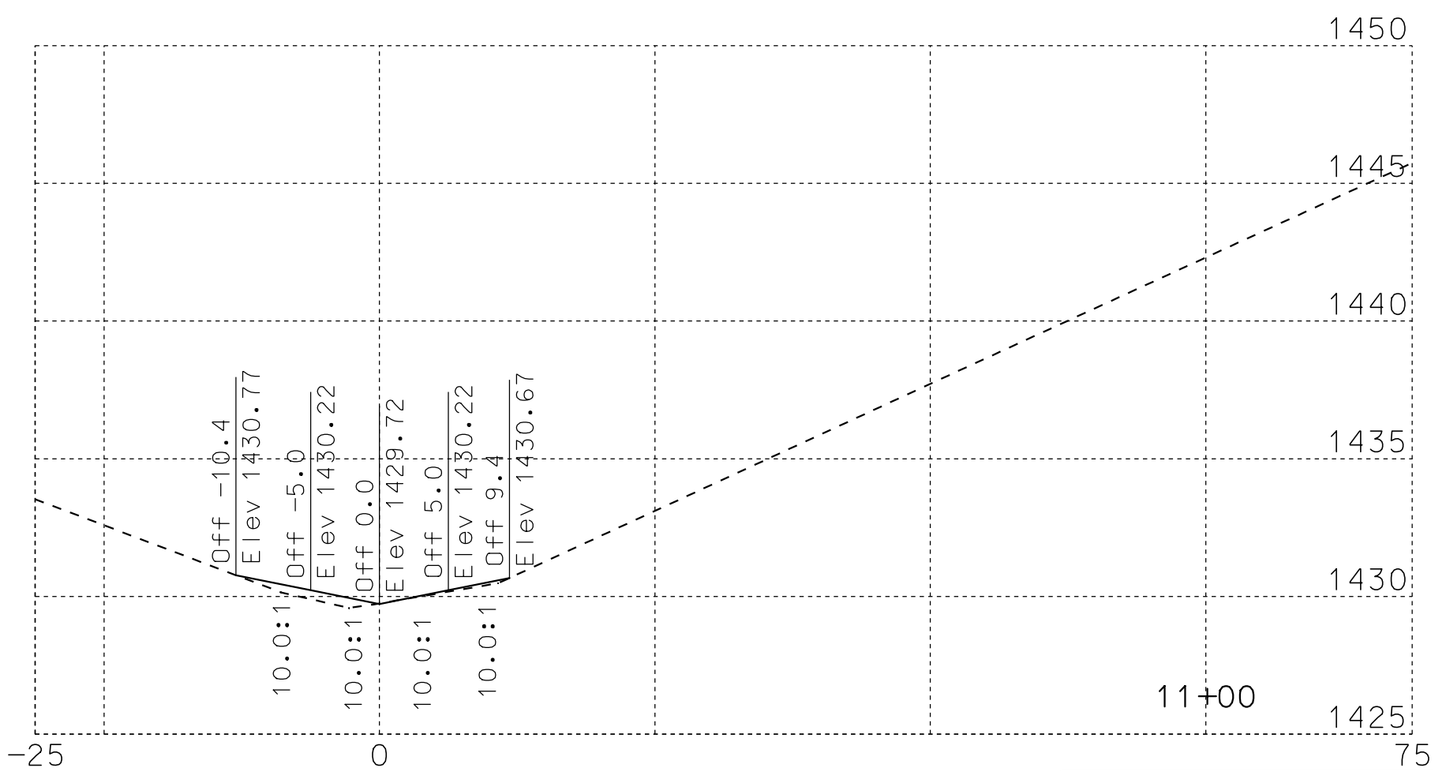
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	25	48







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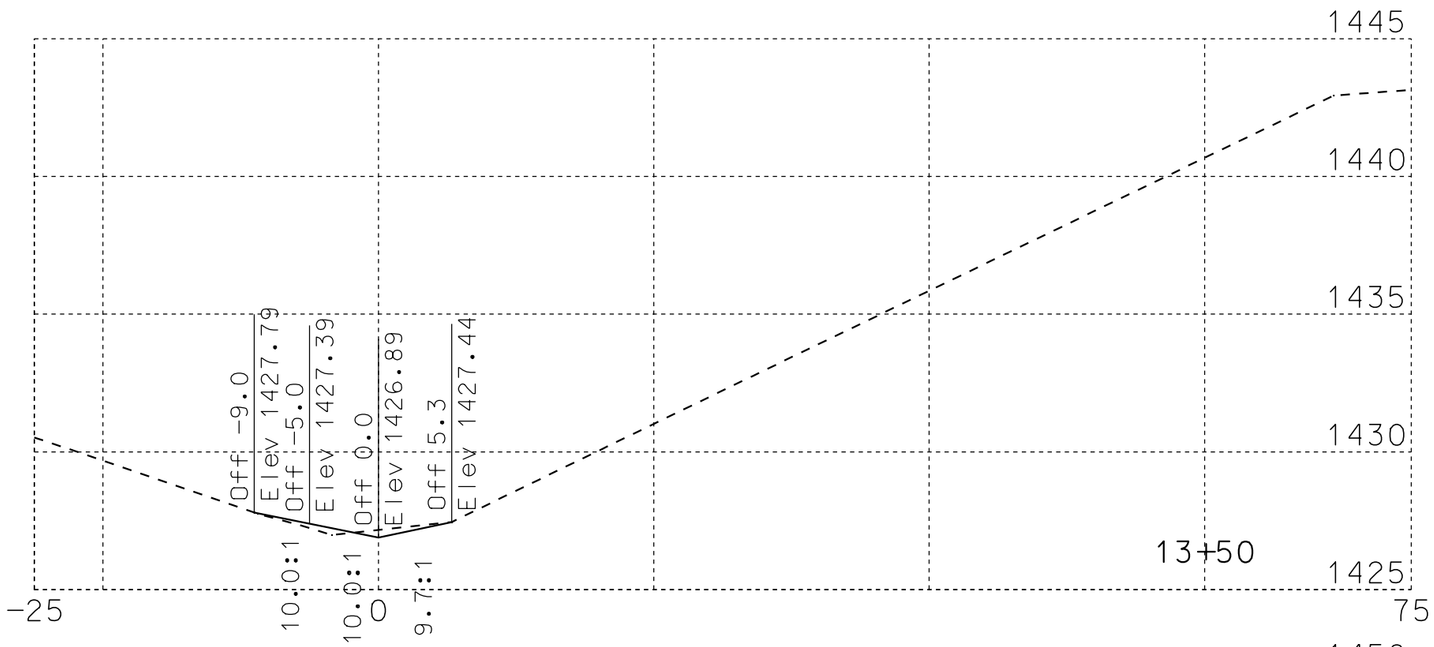
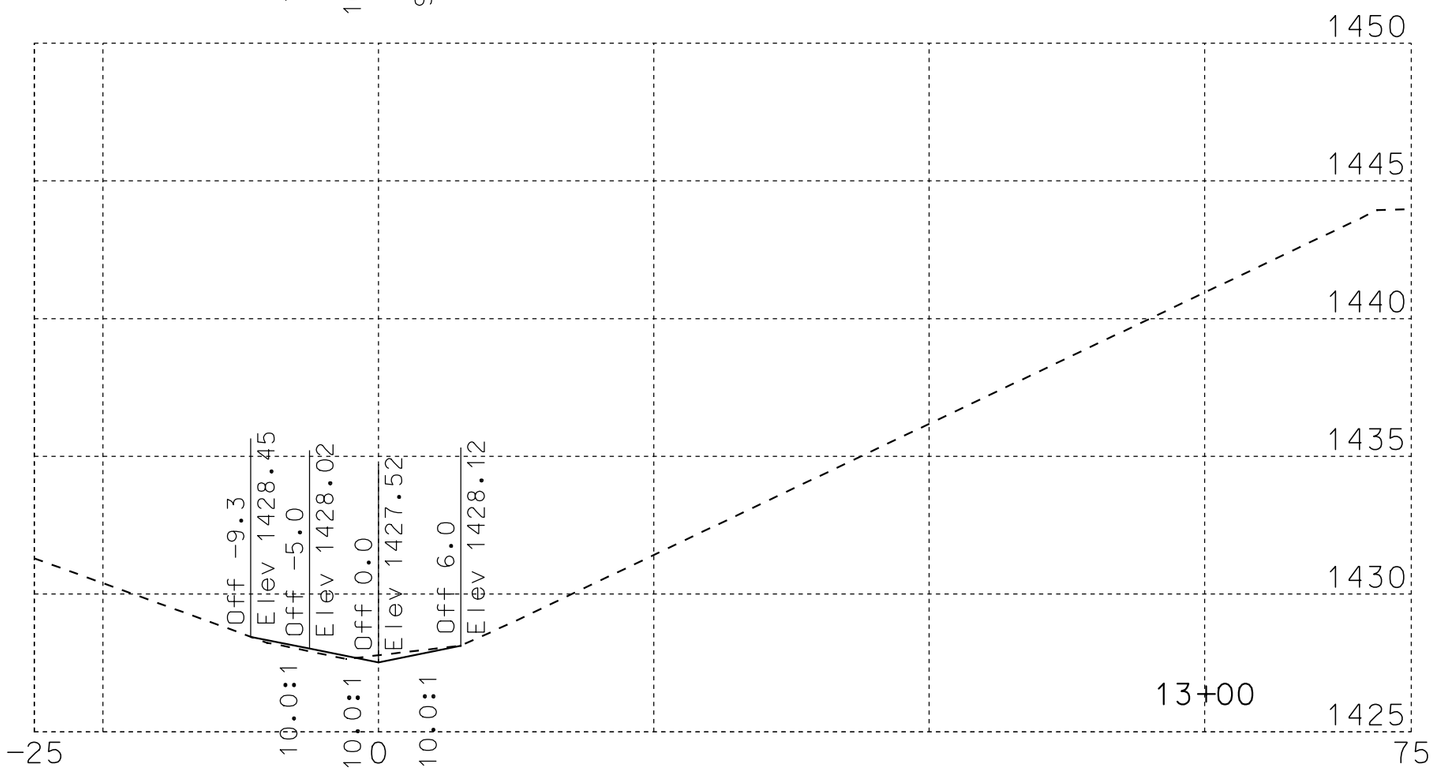
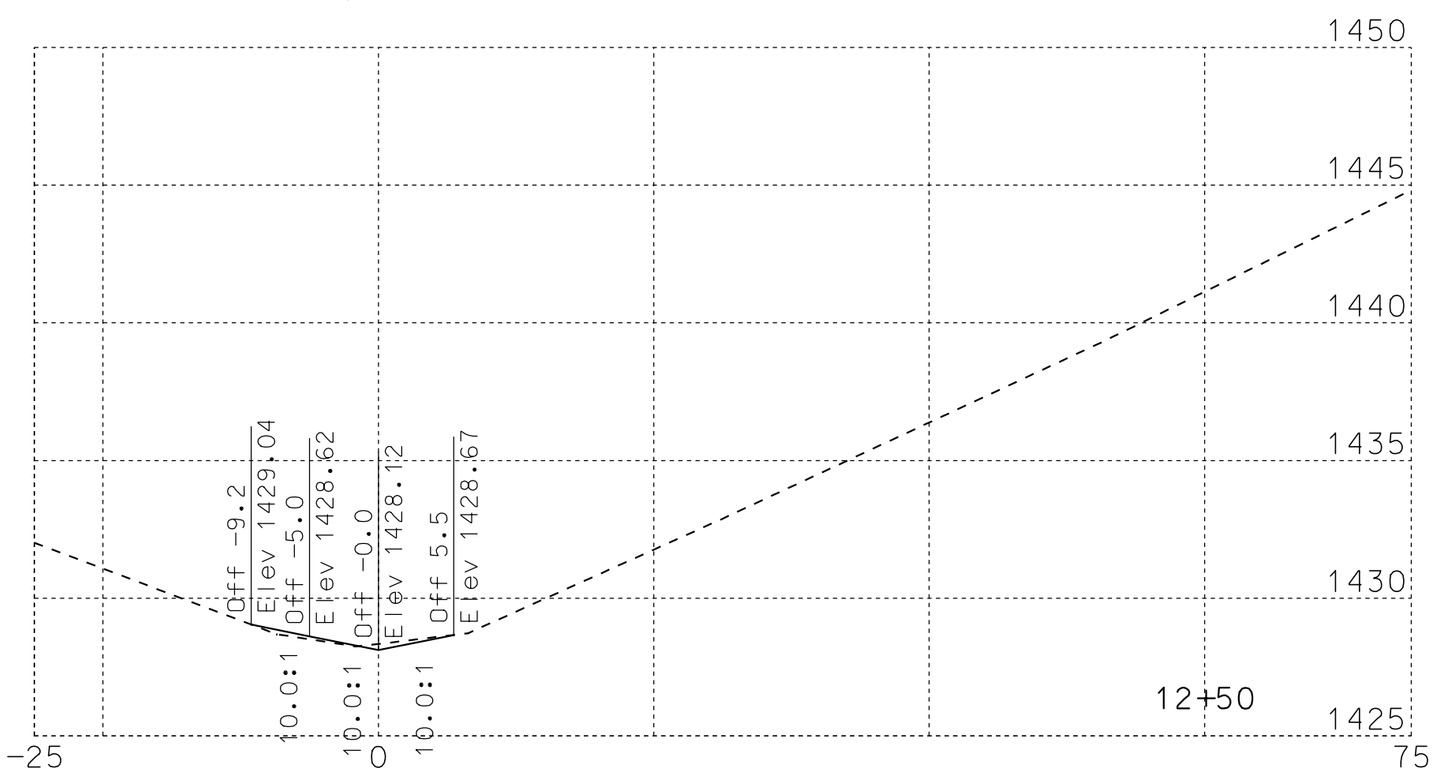
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	26	48







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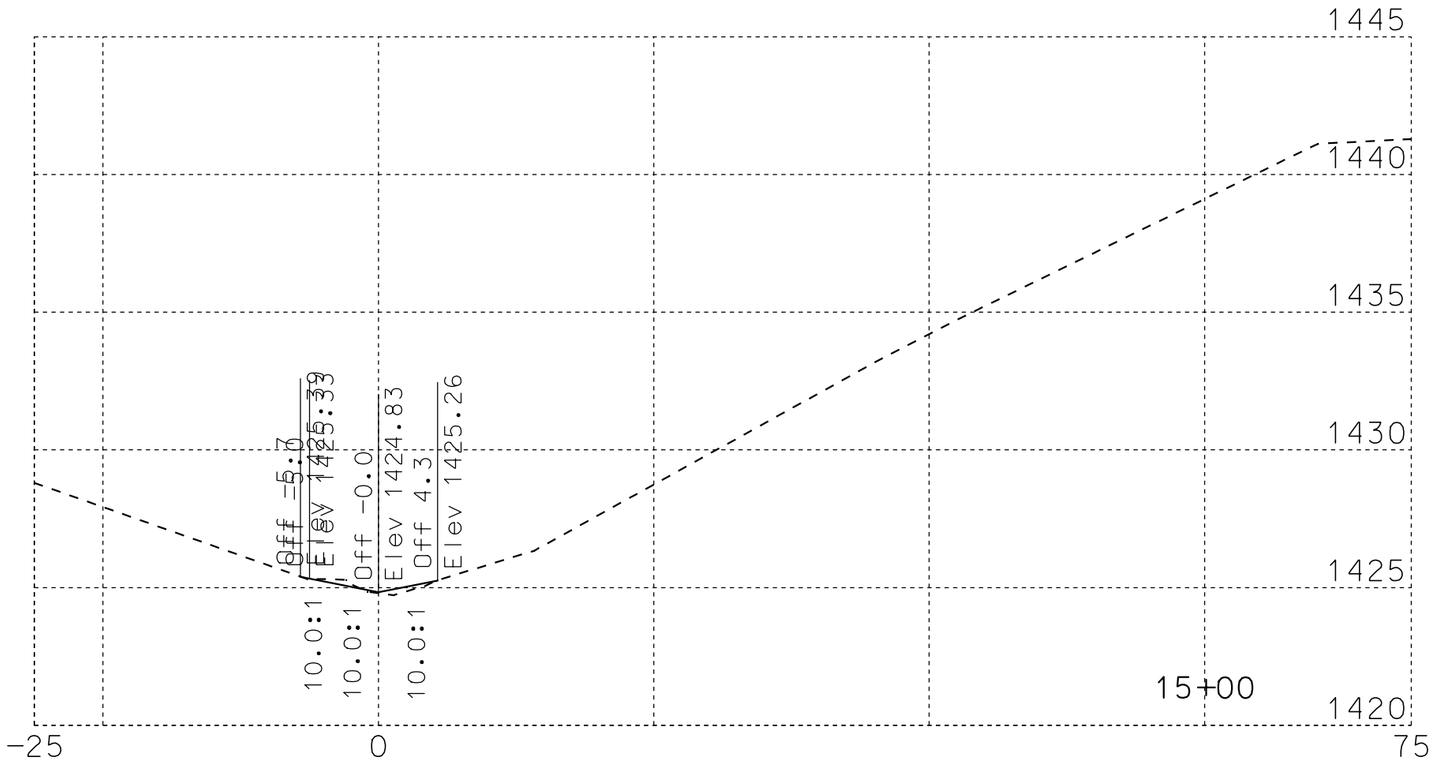
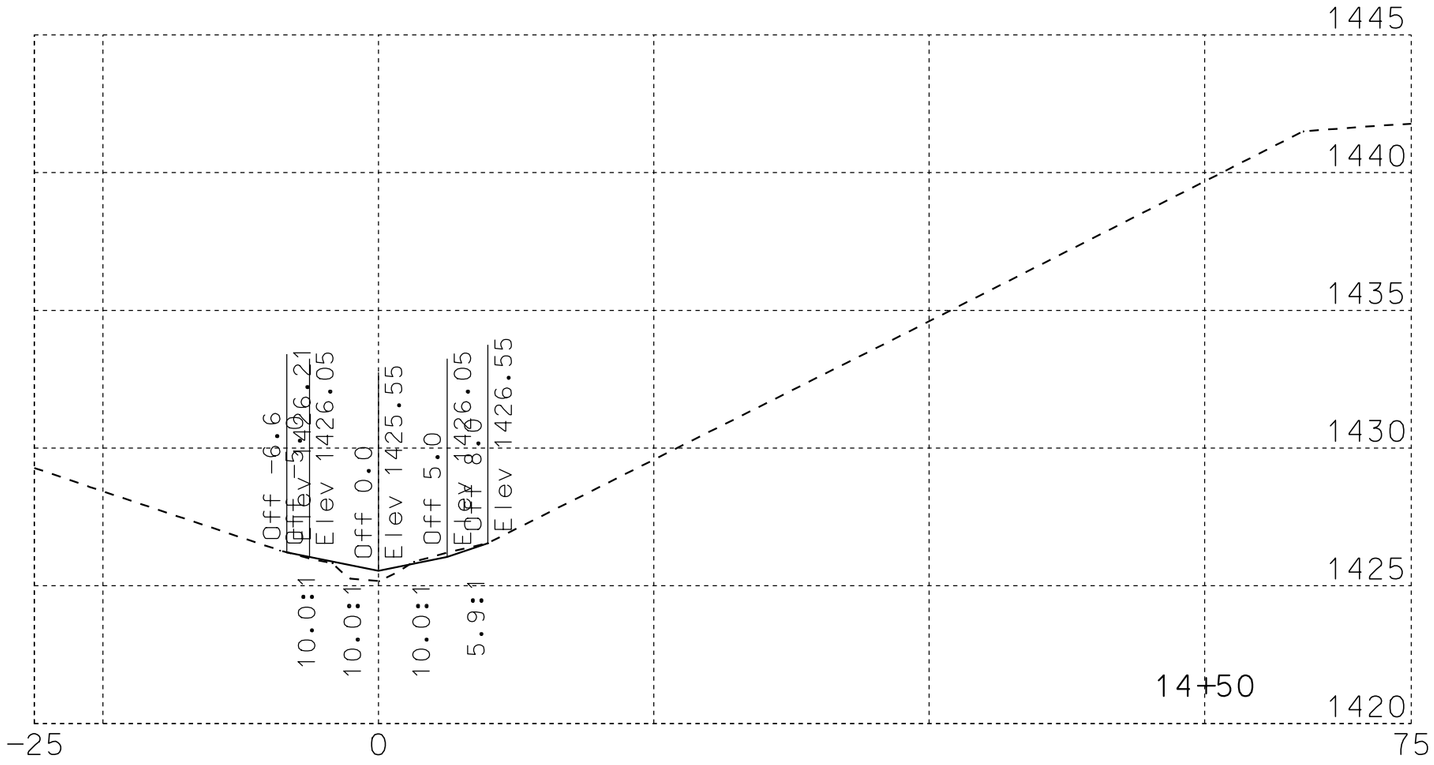
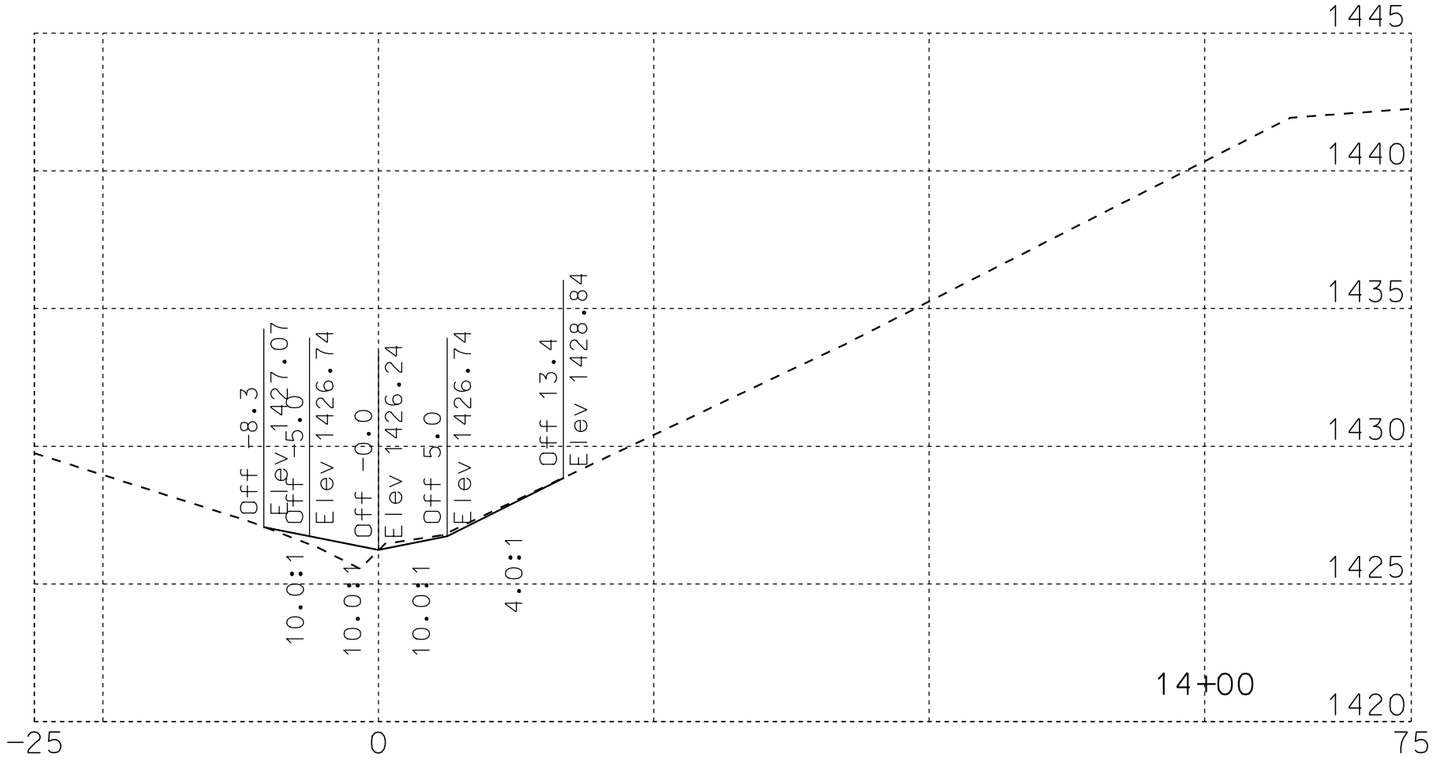
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	27	48







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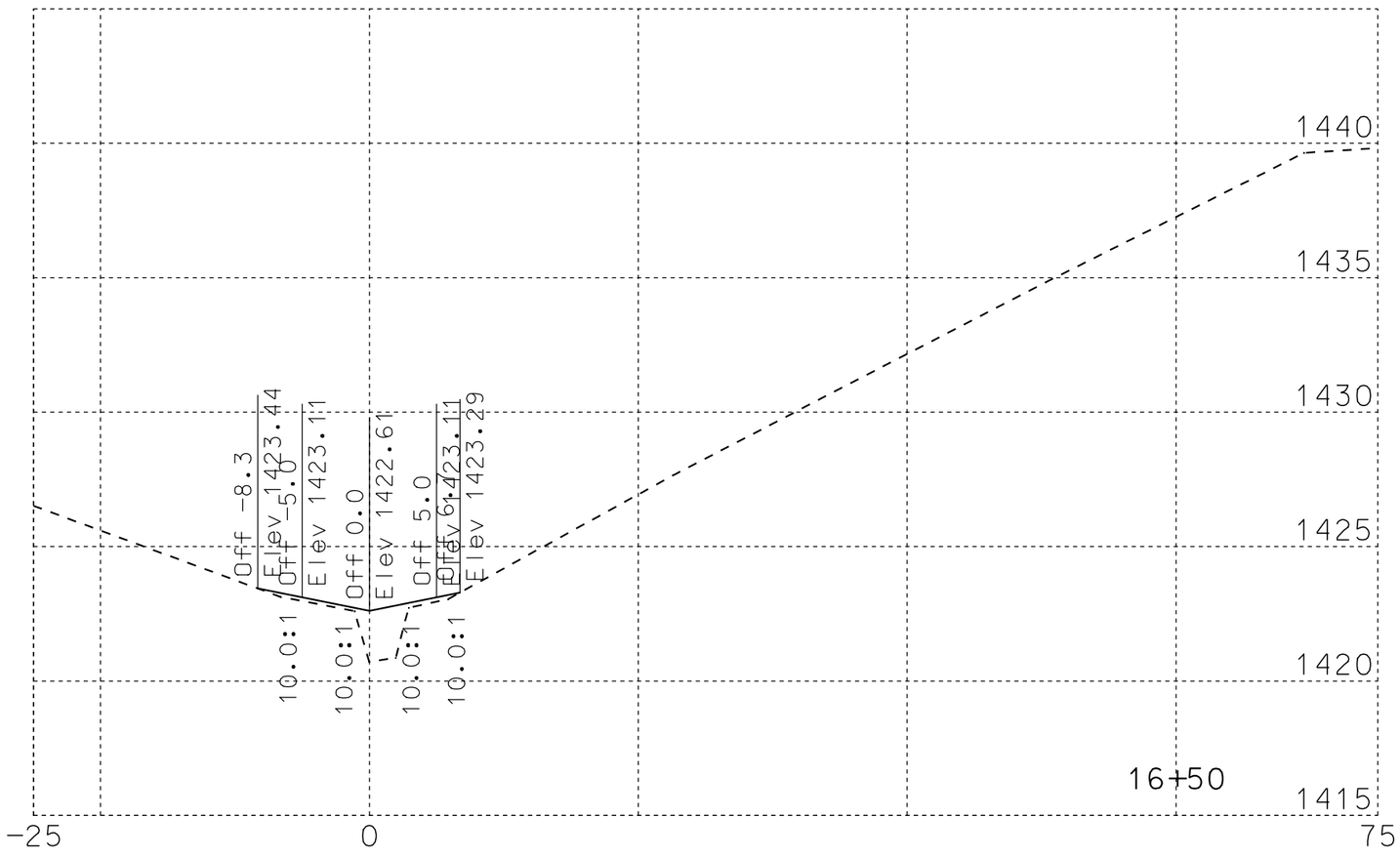
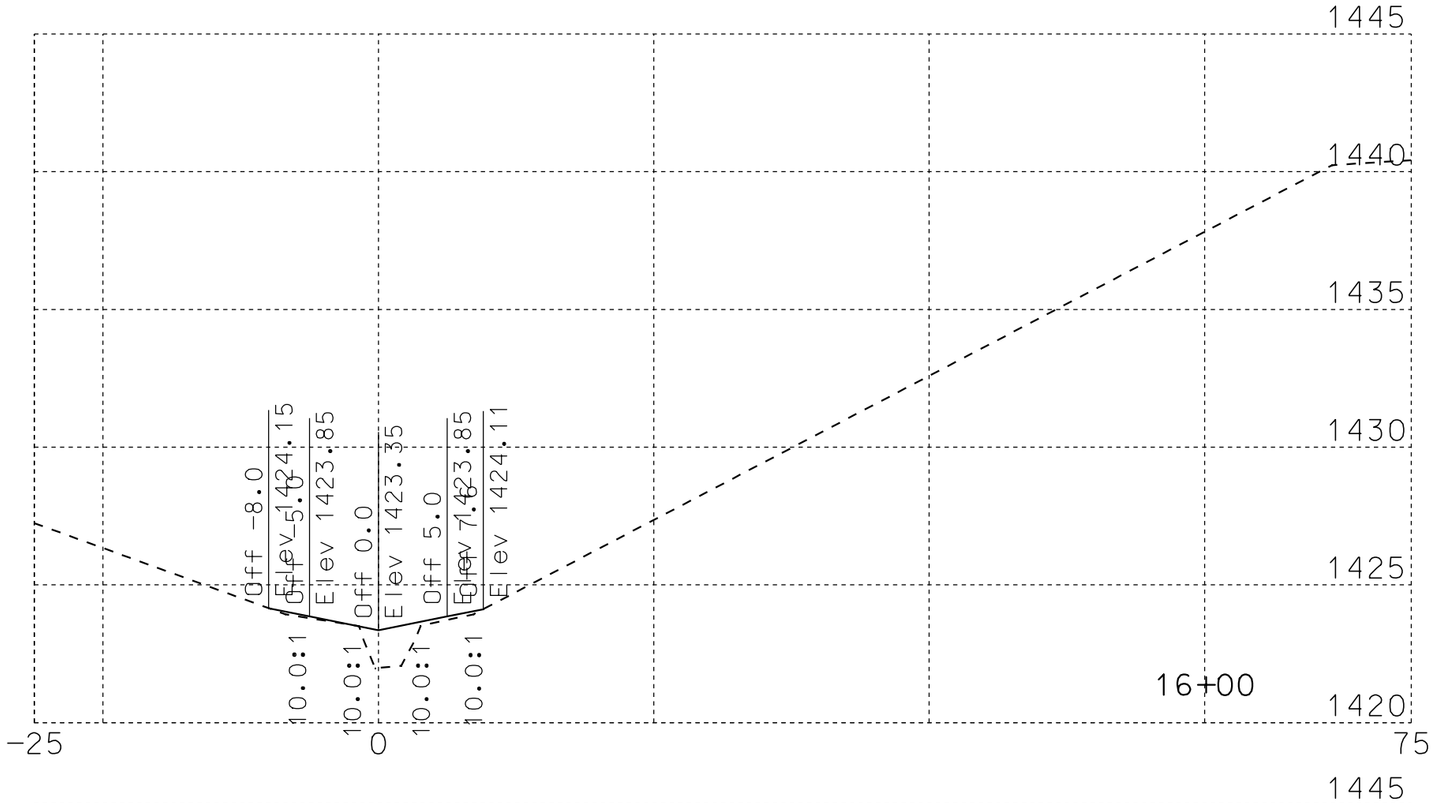
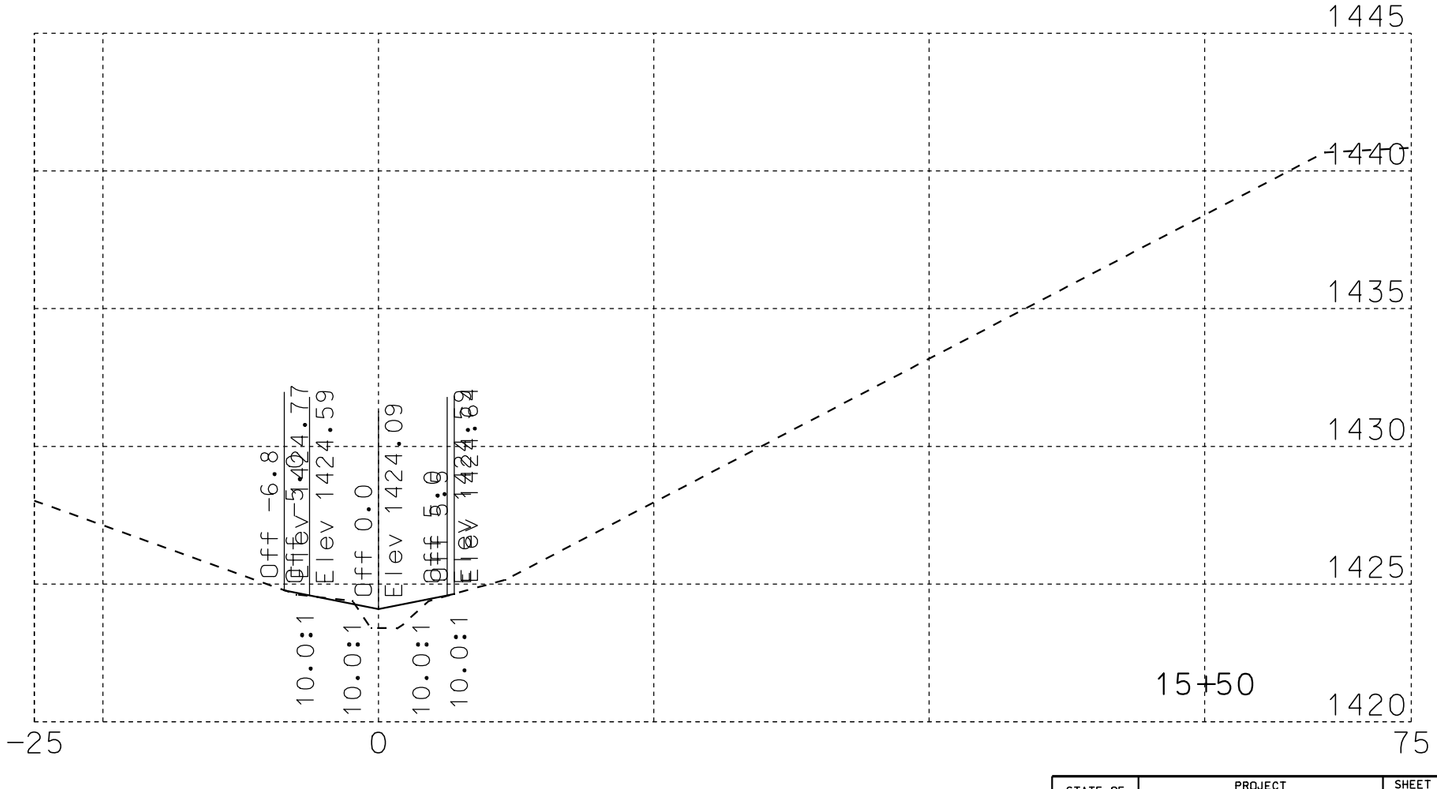
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	28	48







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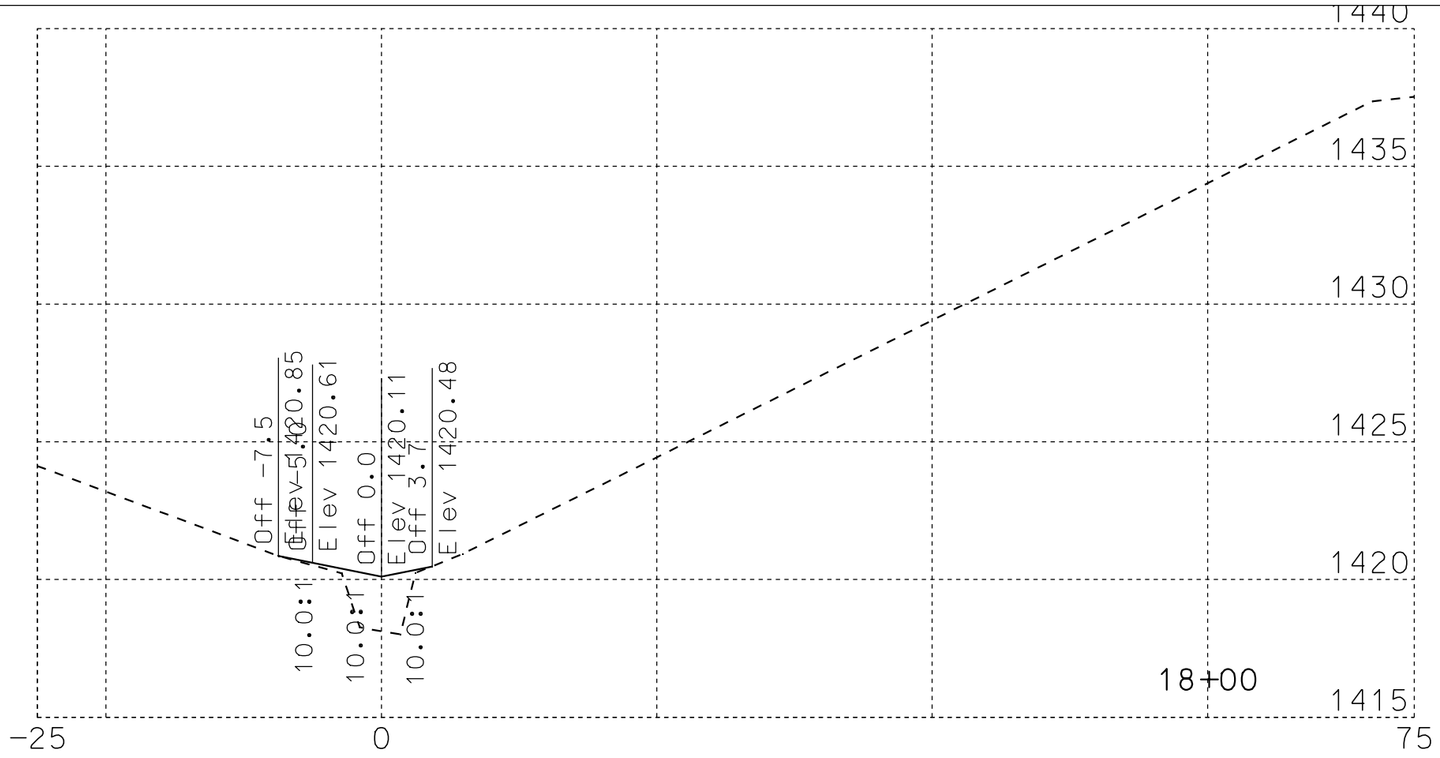
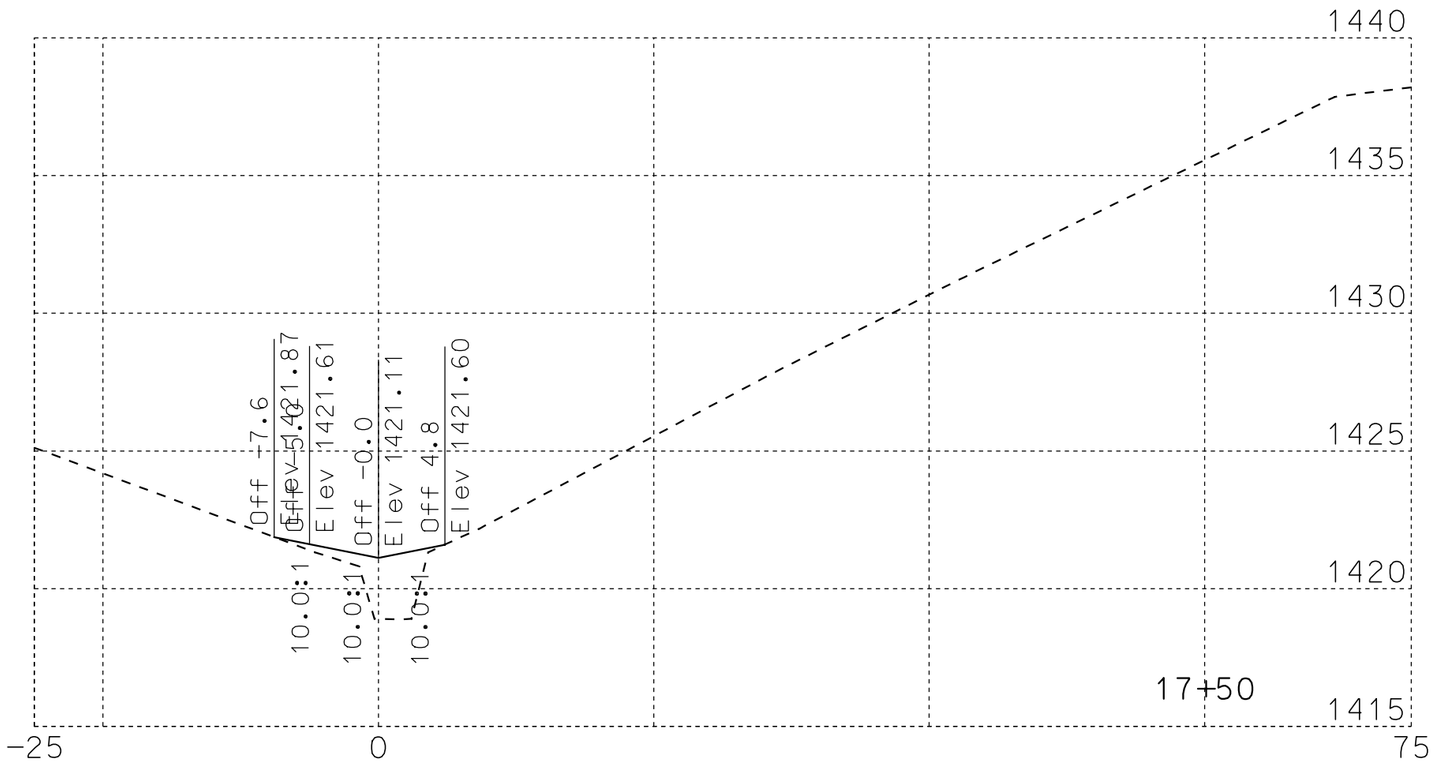
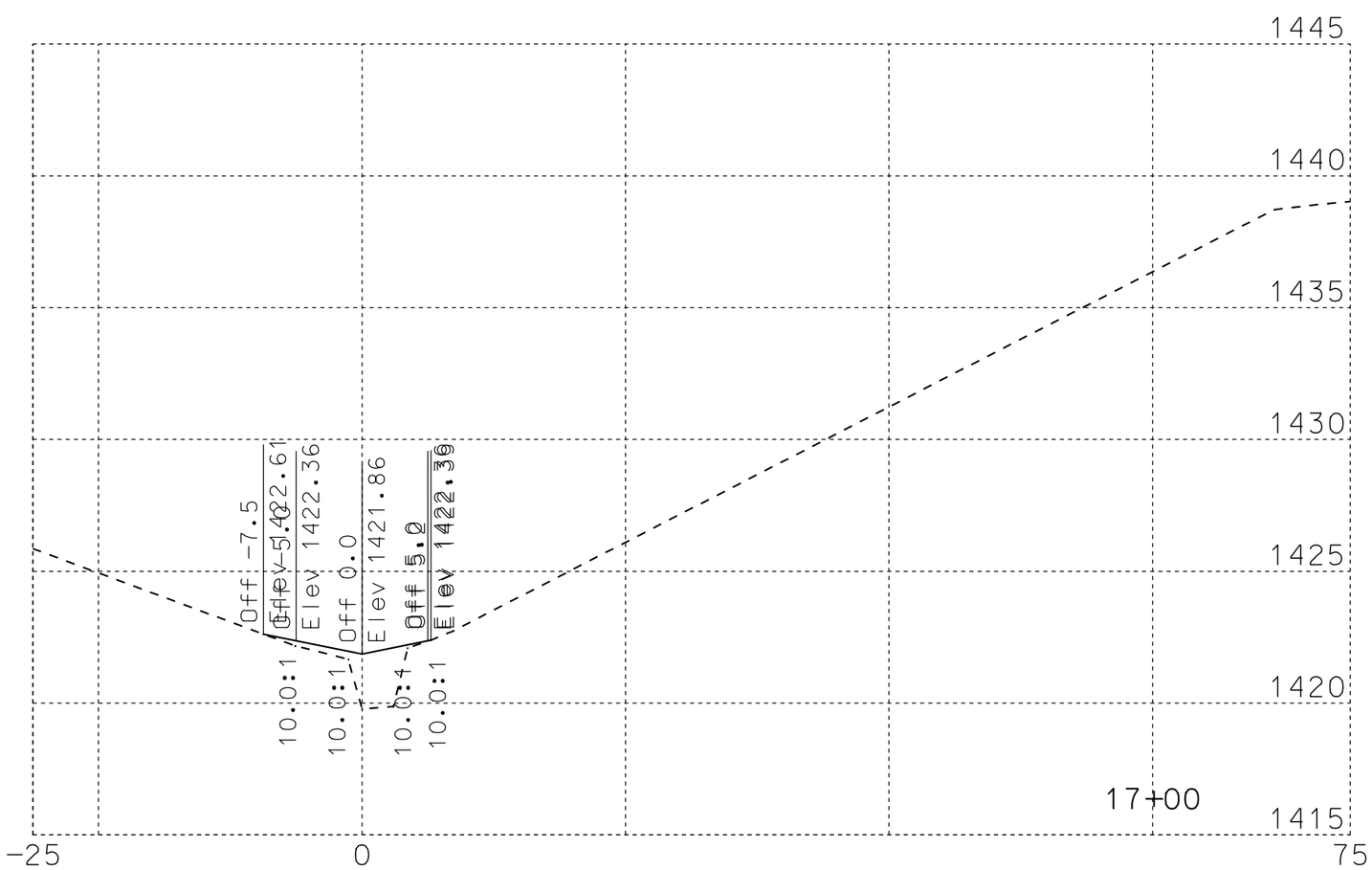
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	29	48







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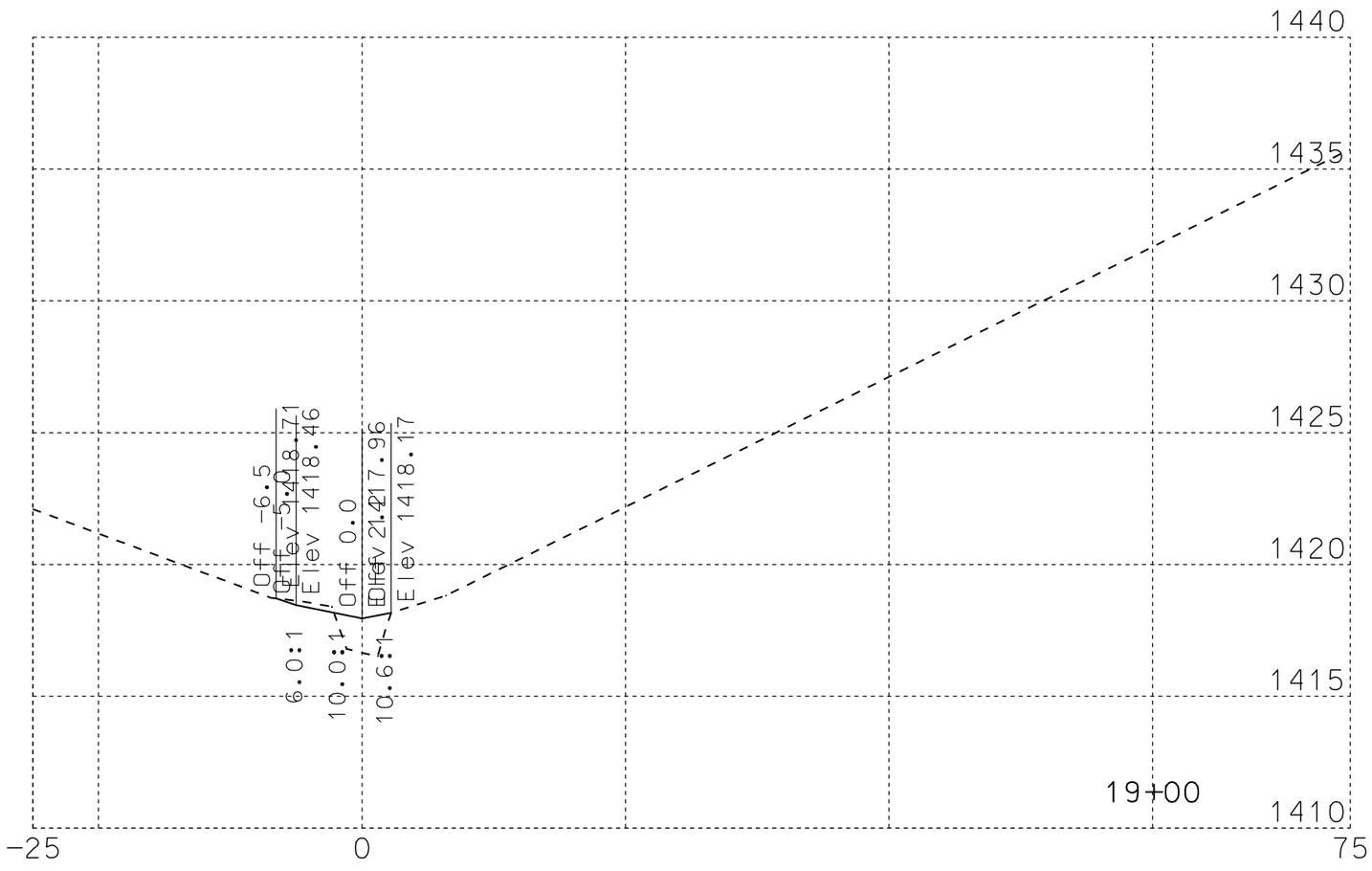
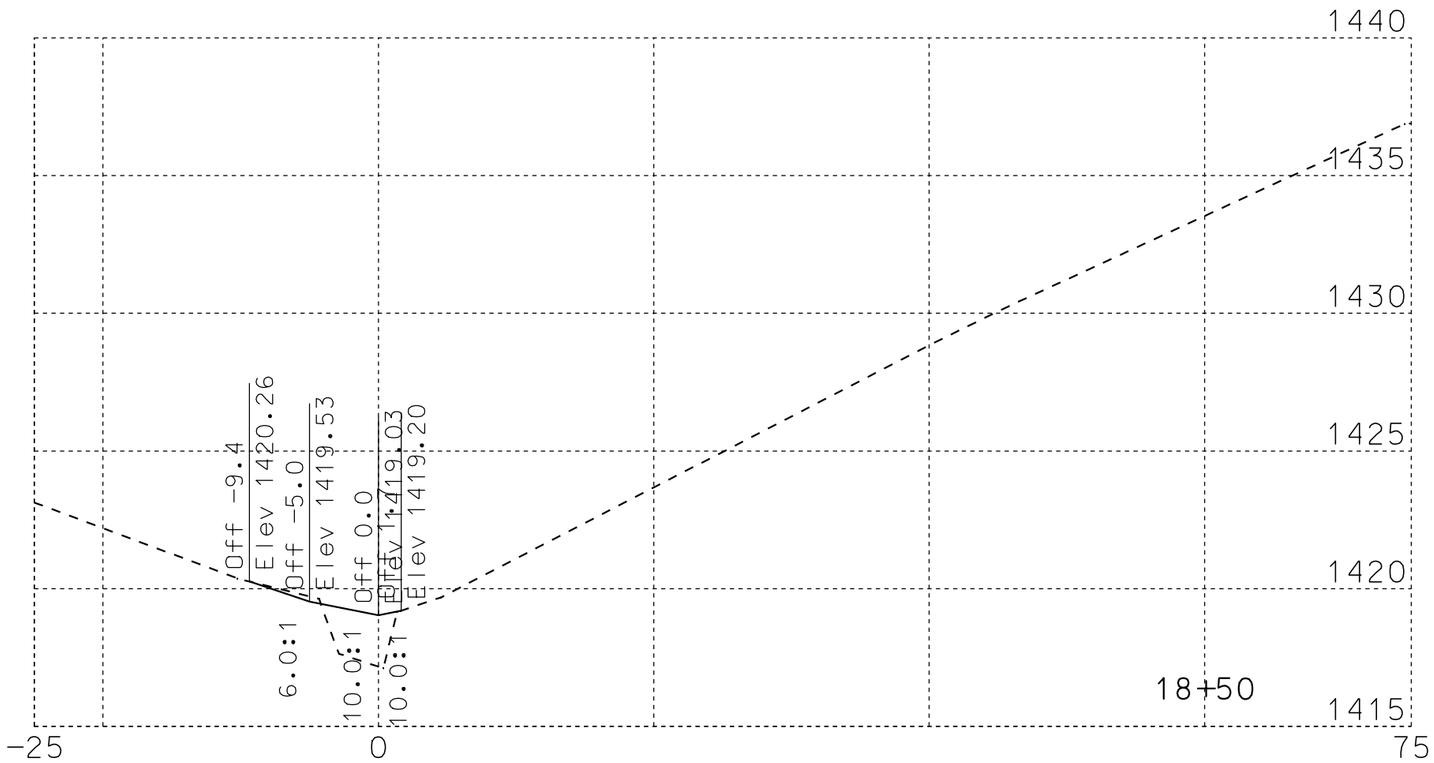
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	30	48





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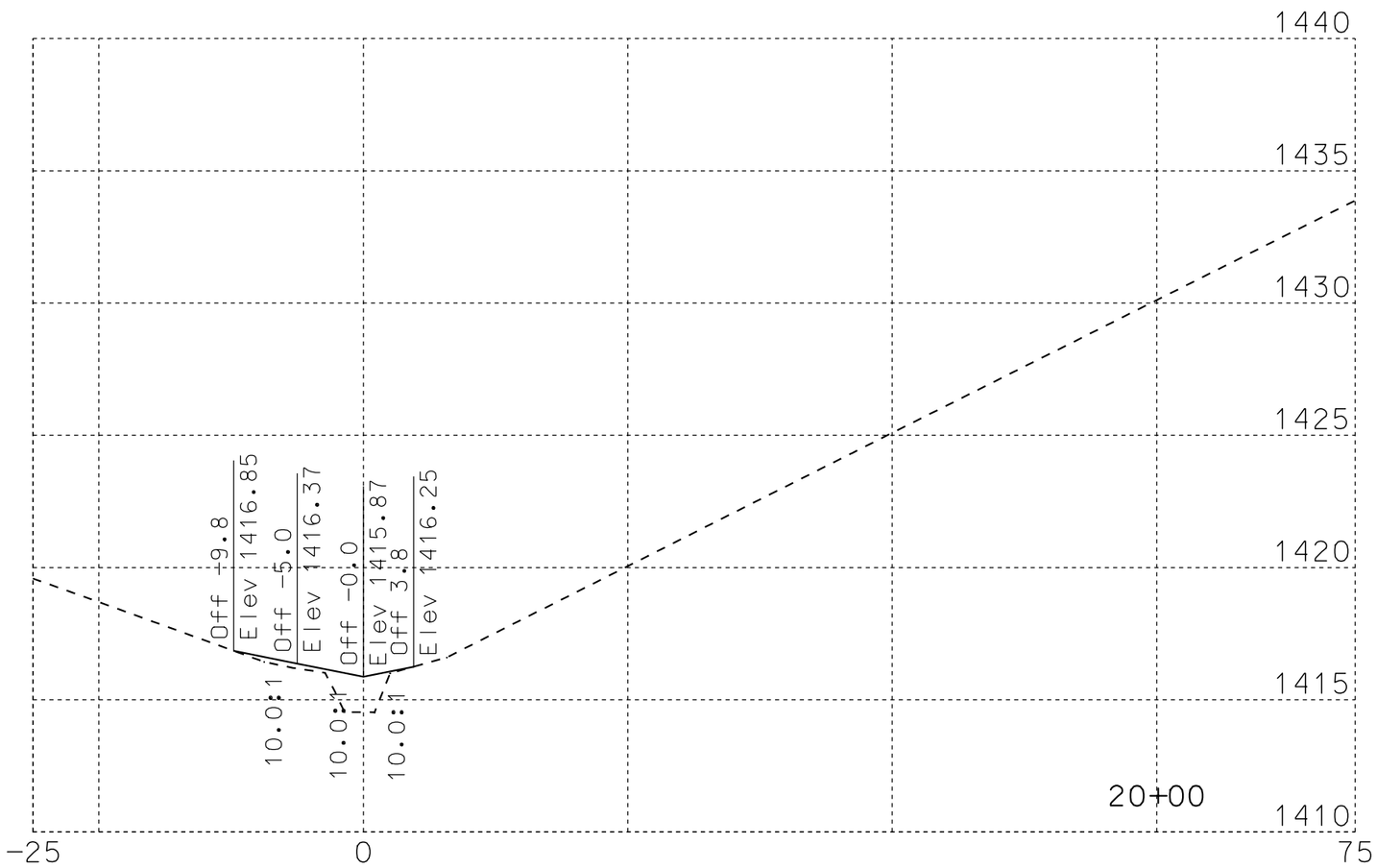
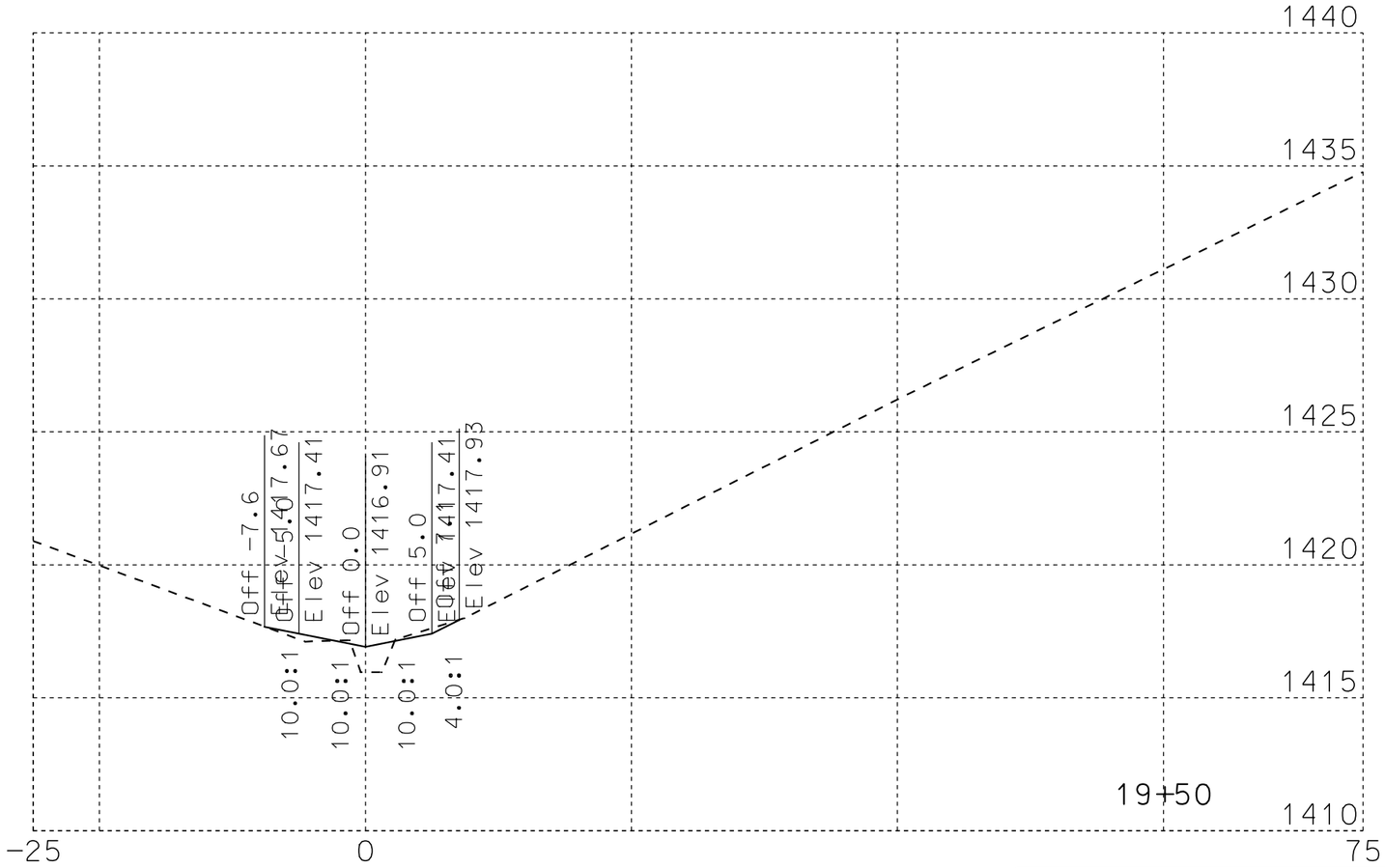
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	31	48





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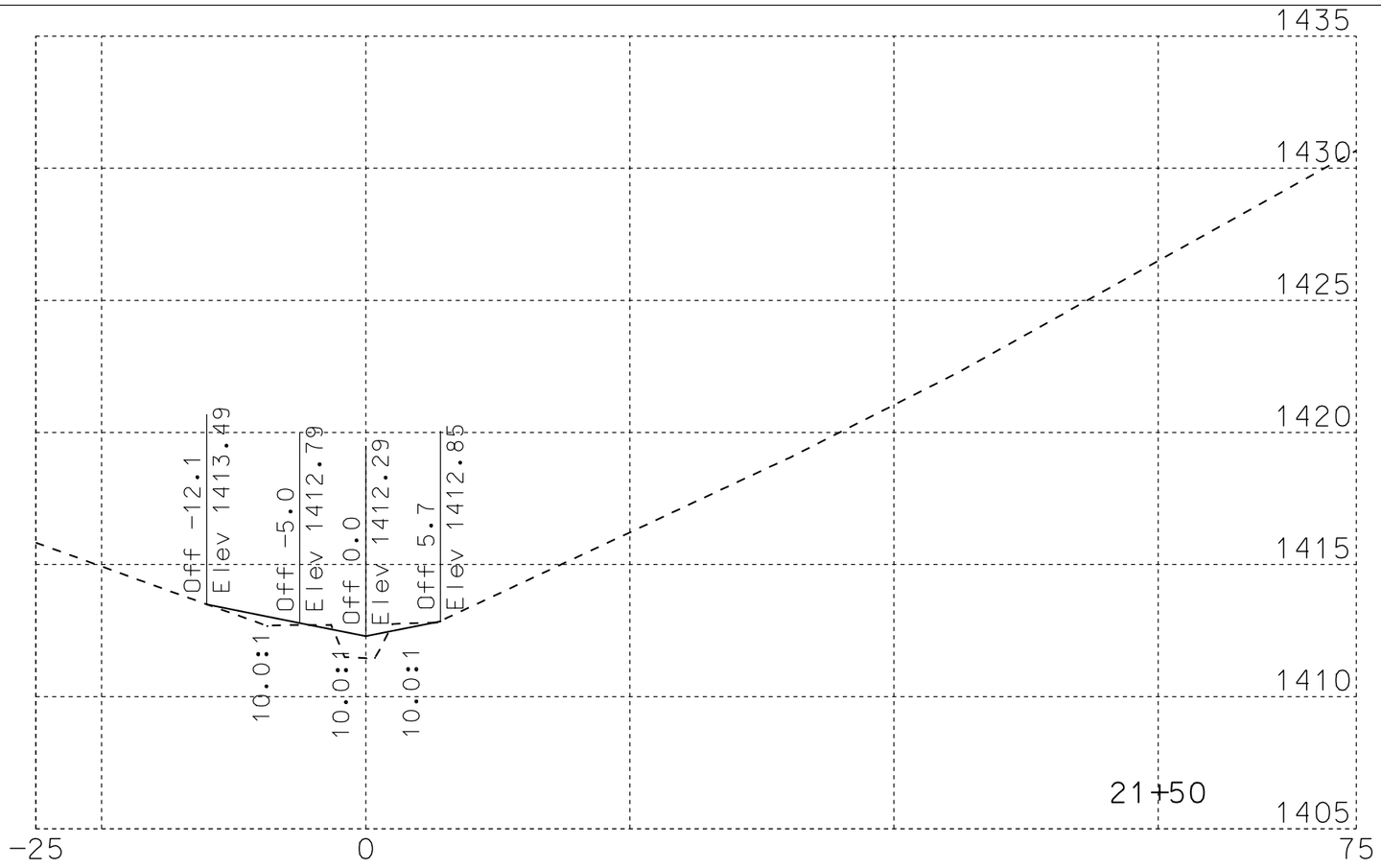
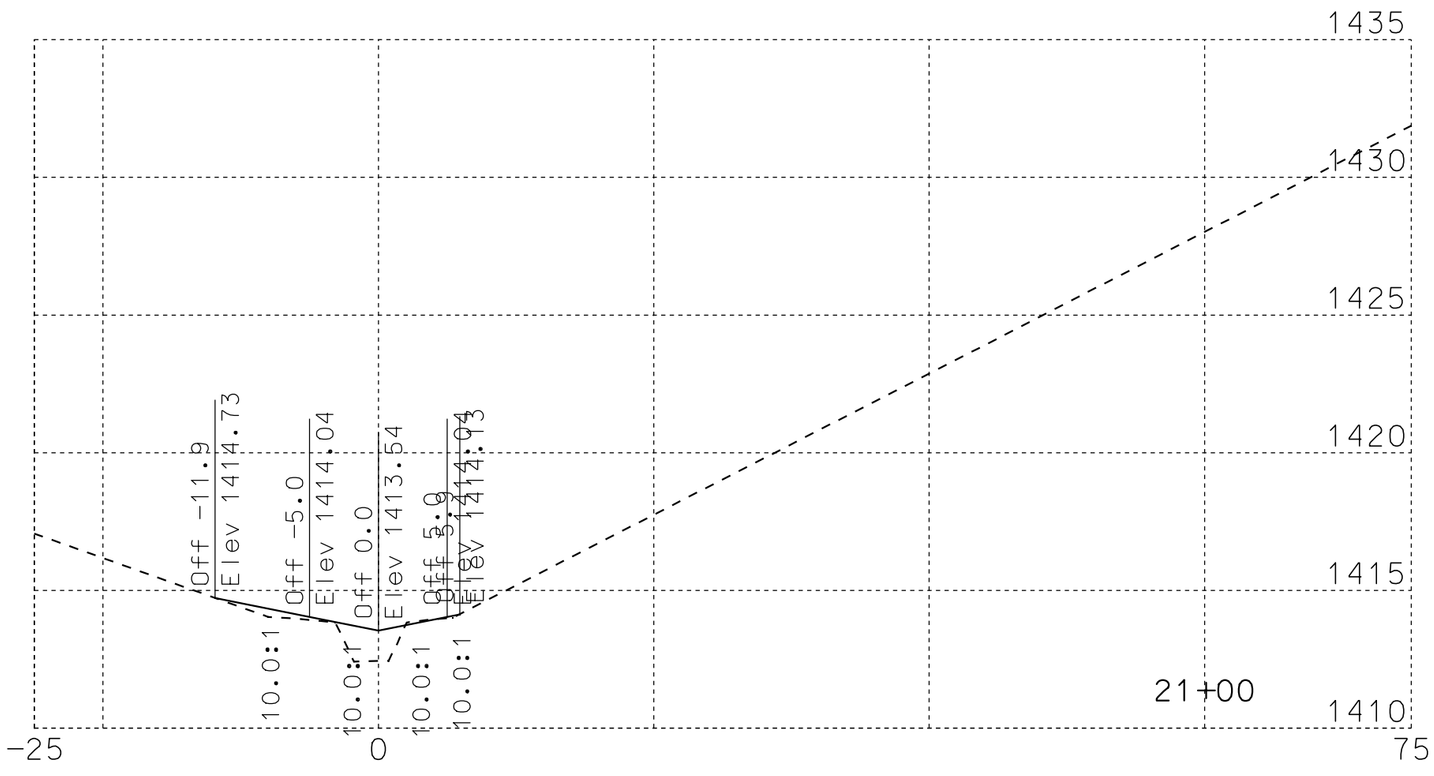
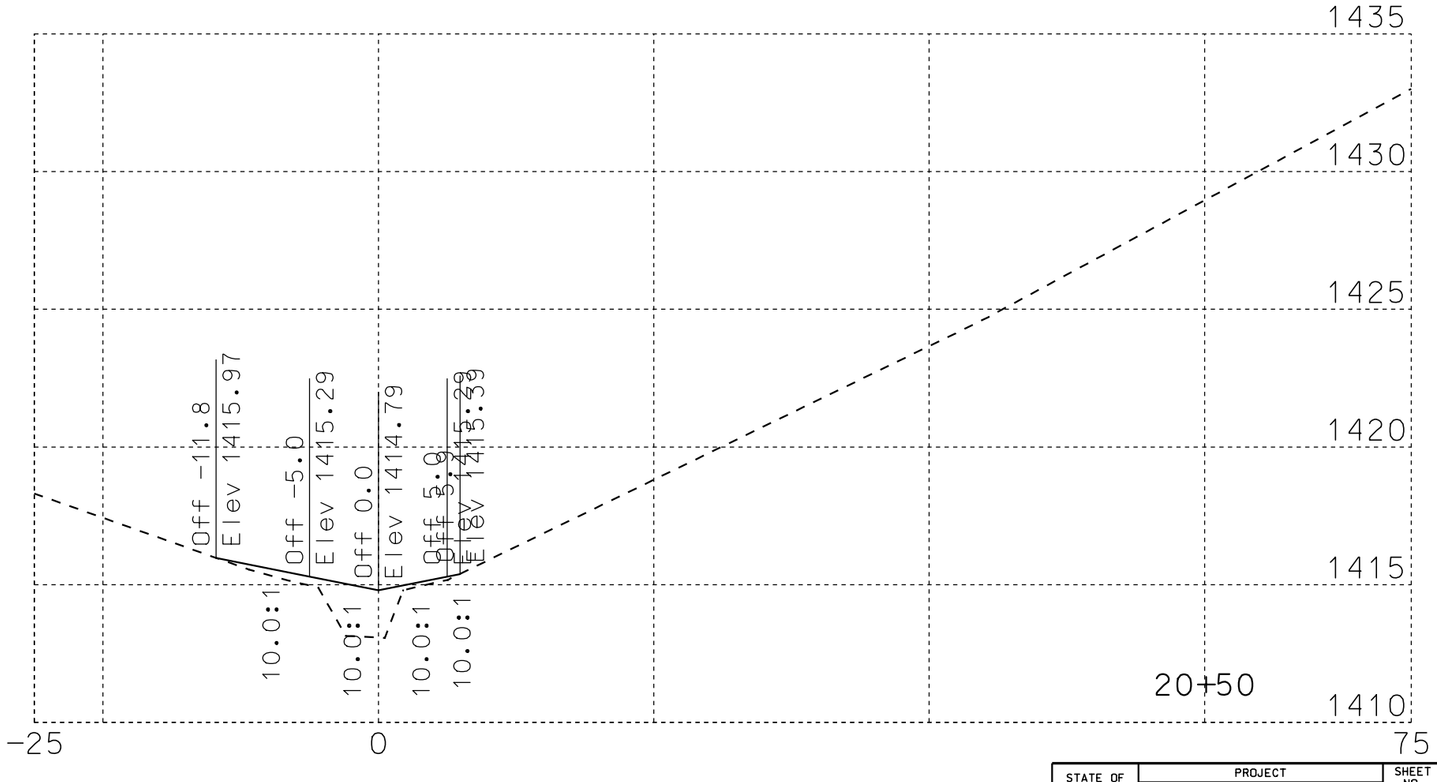
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	32	48







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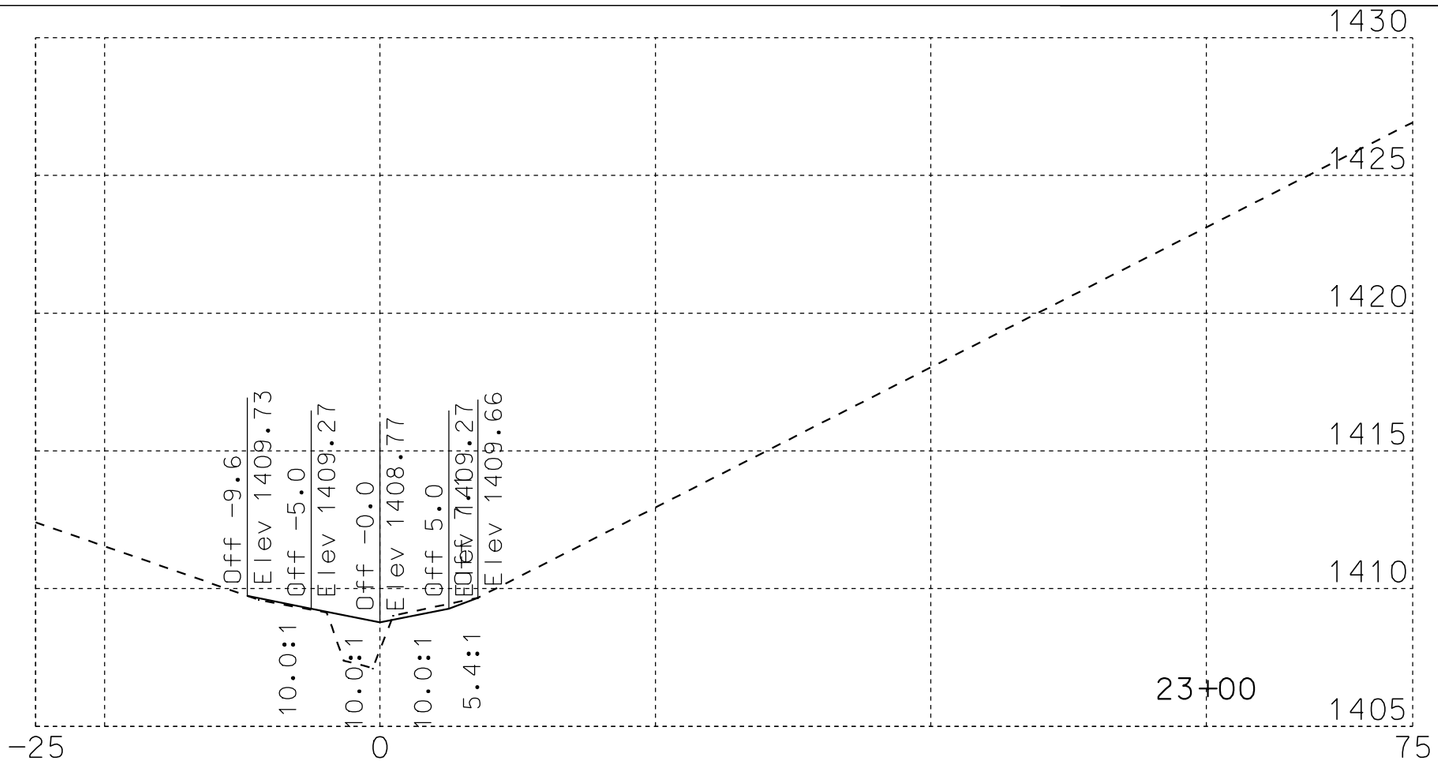
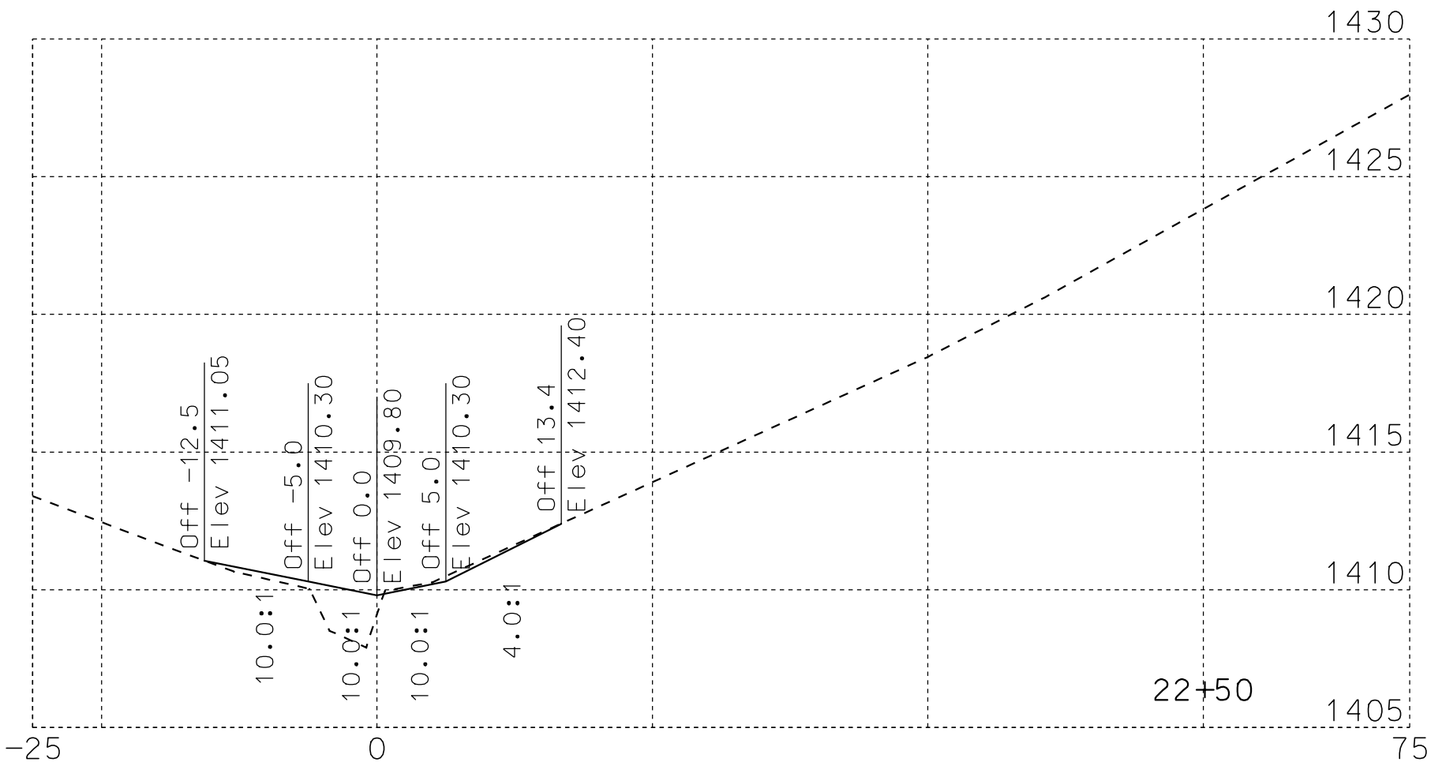
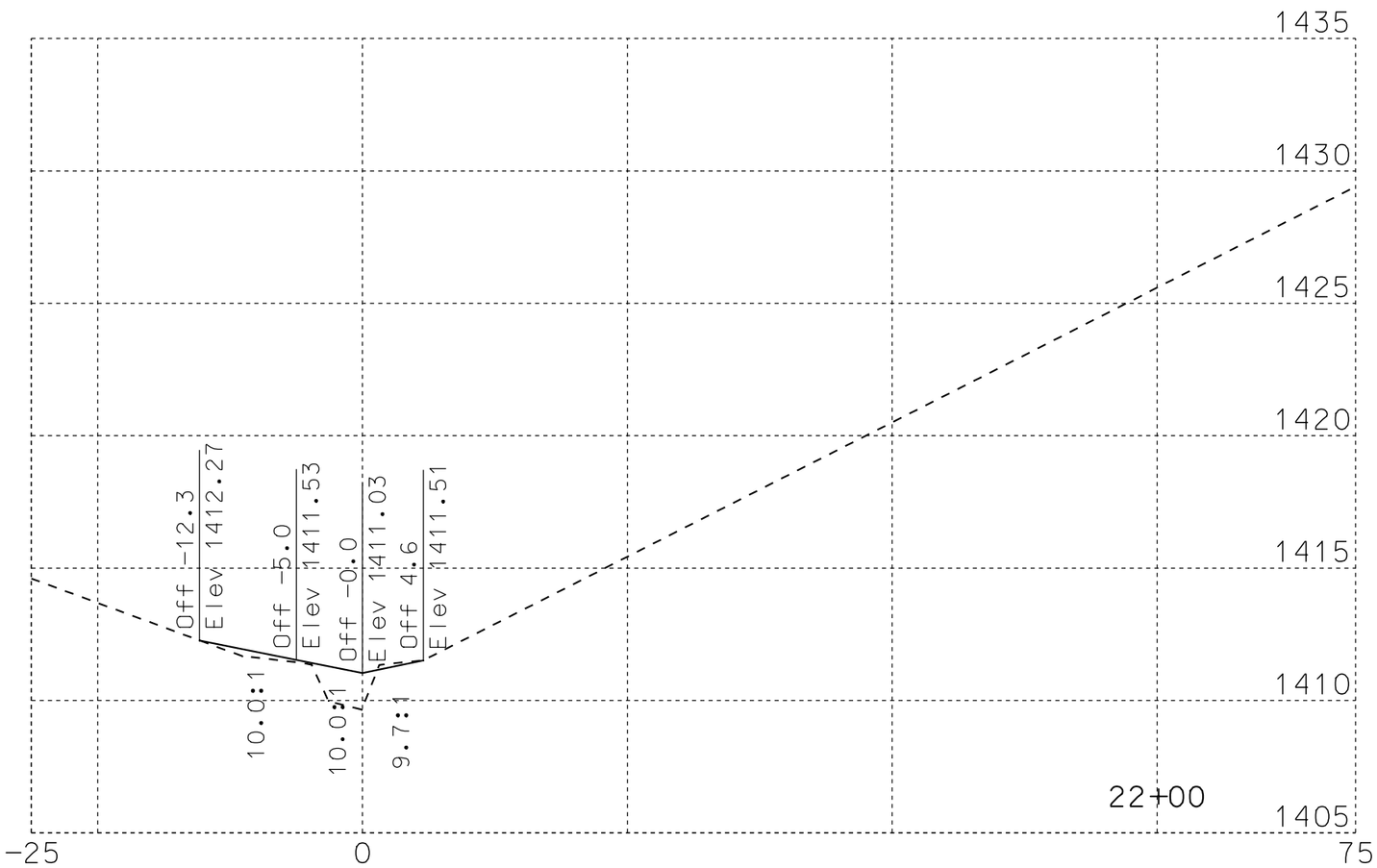
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	33	48







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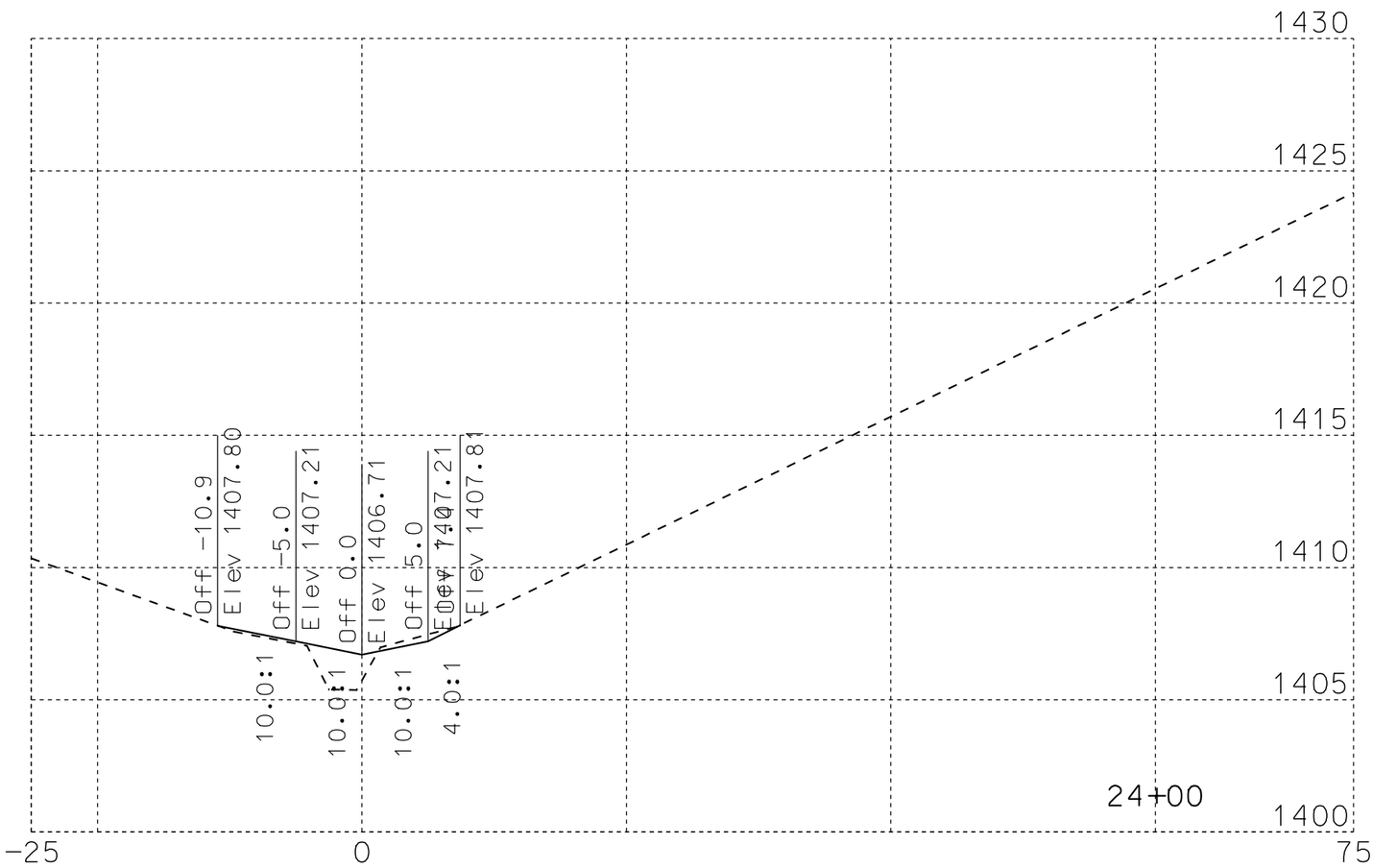
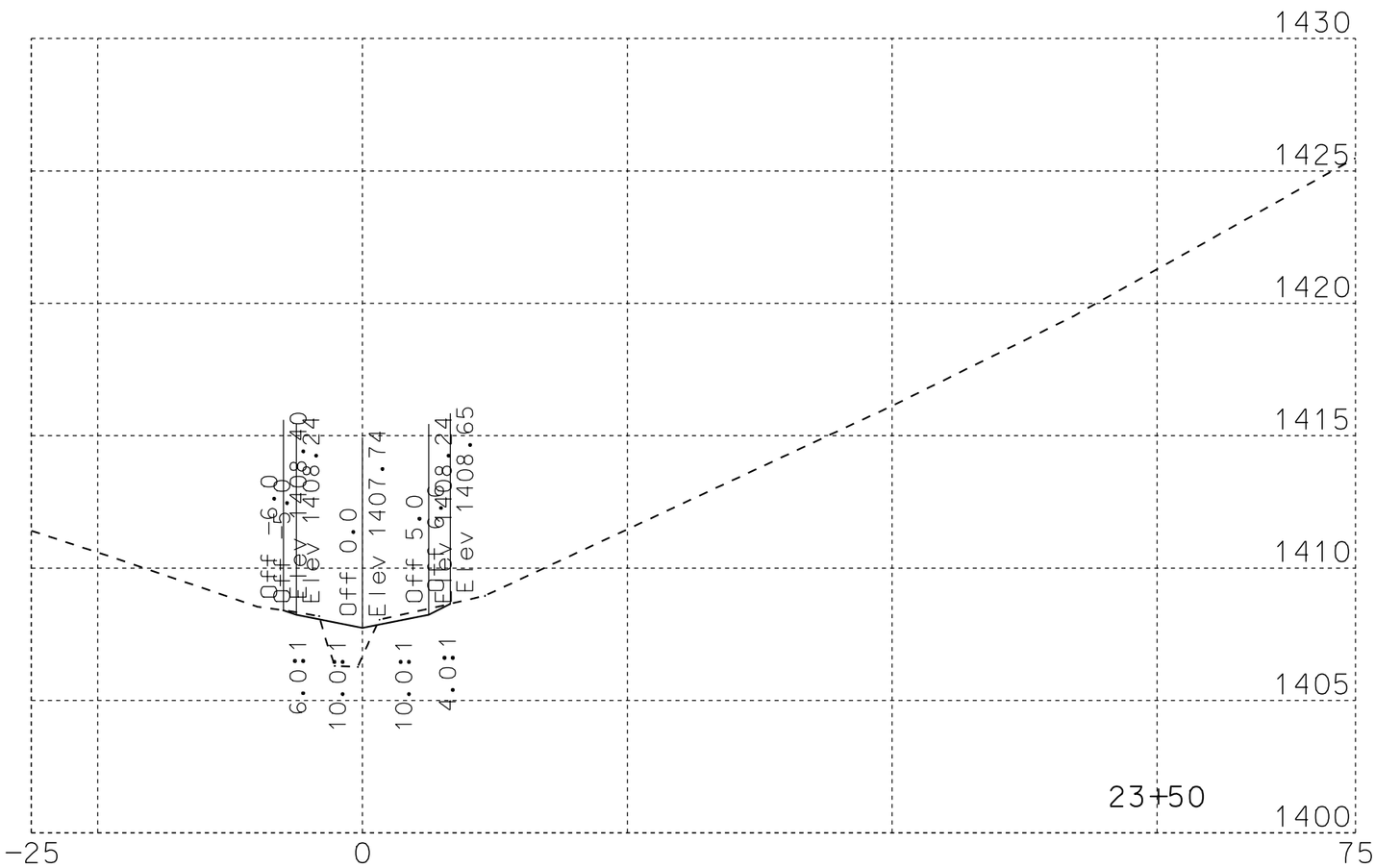
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	34	48





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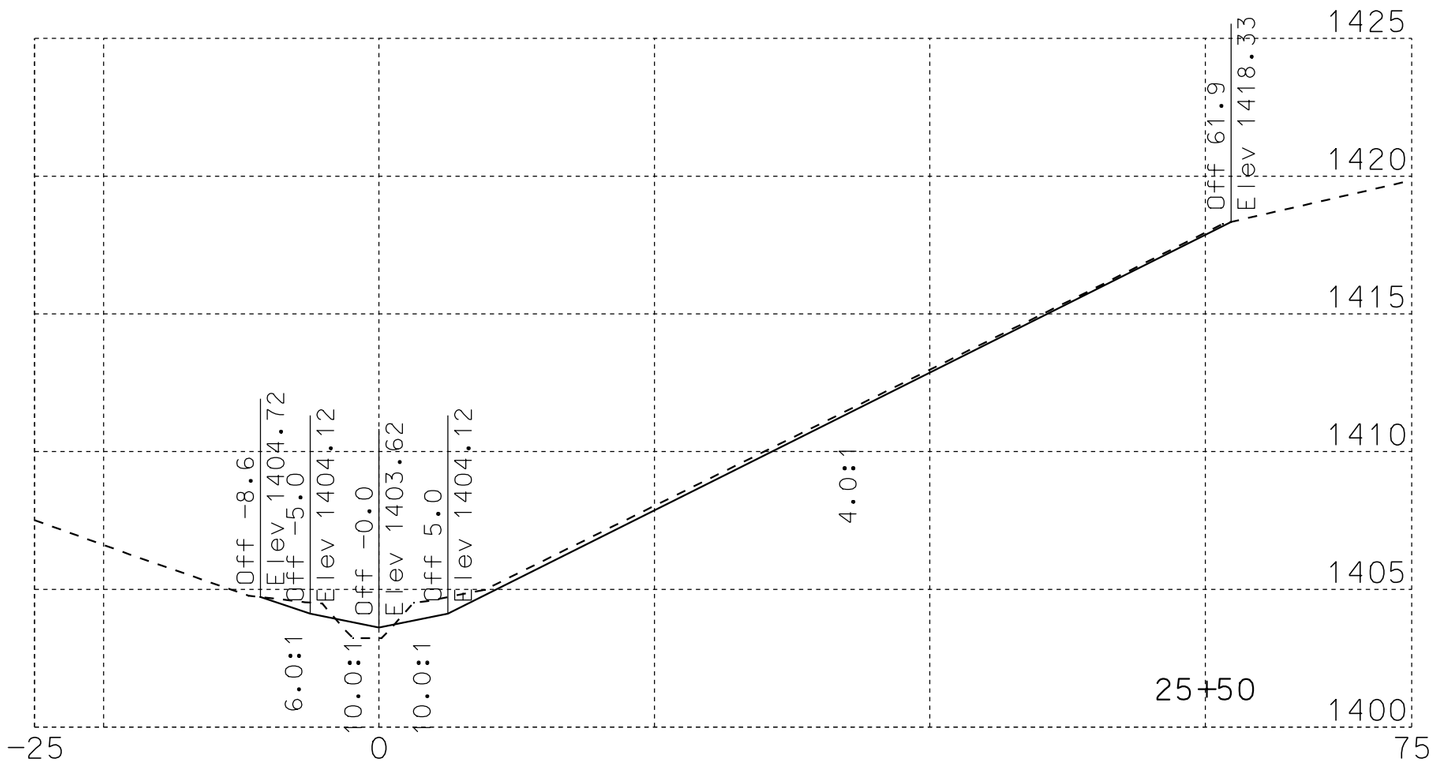
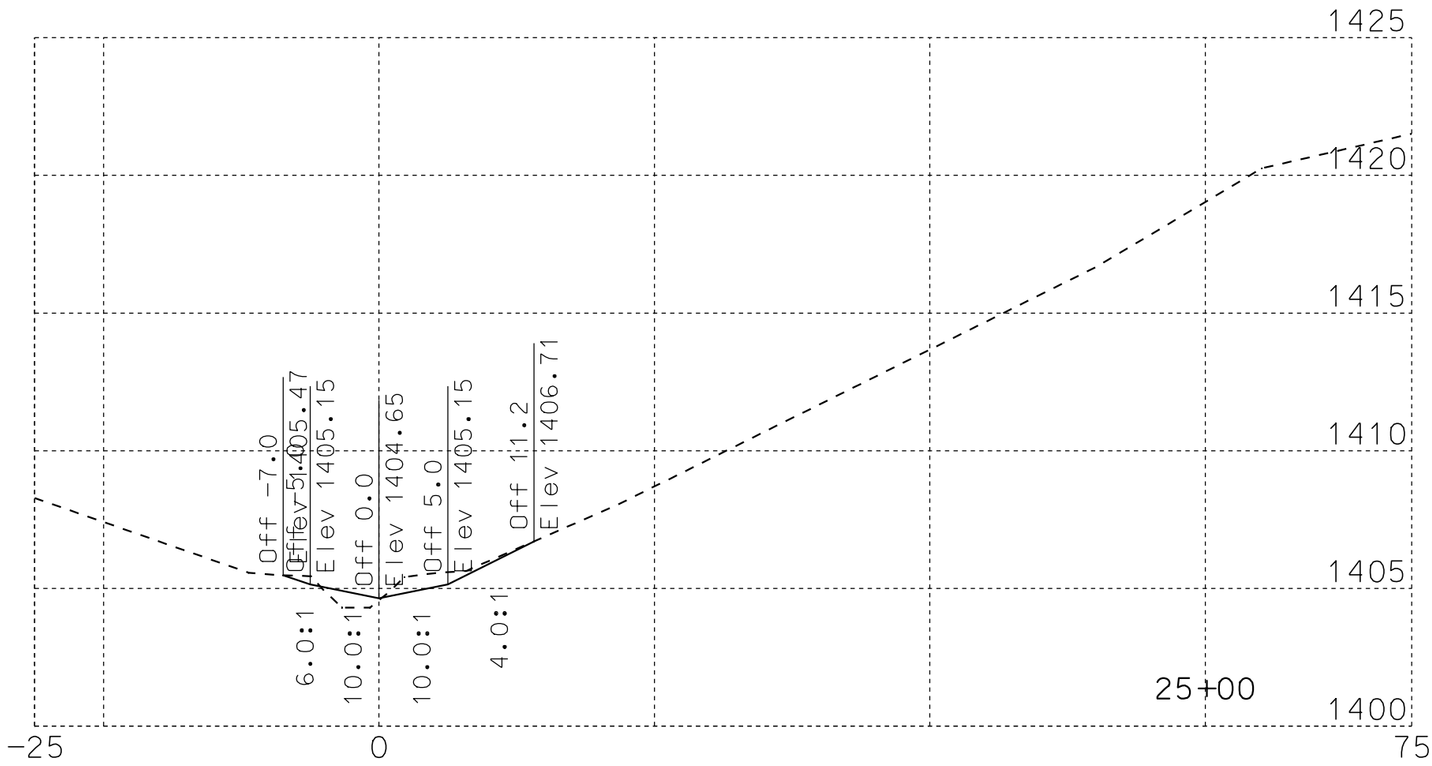
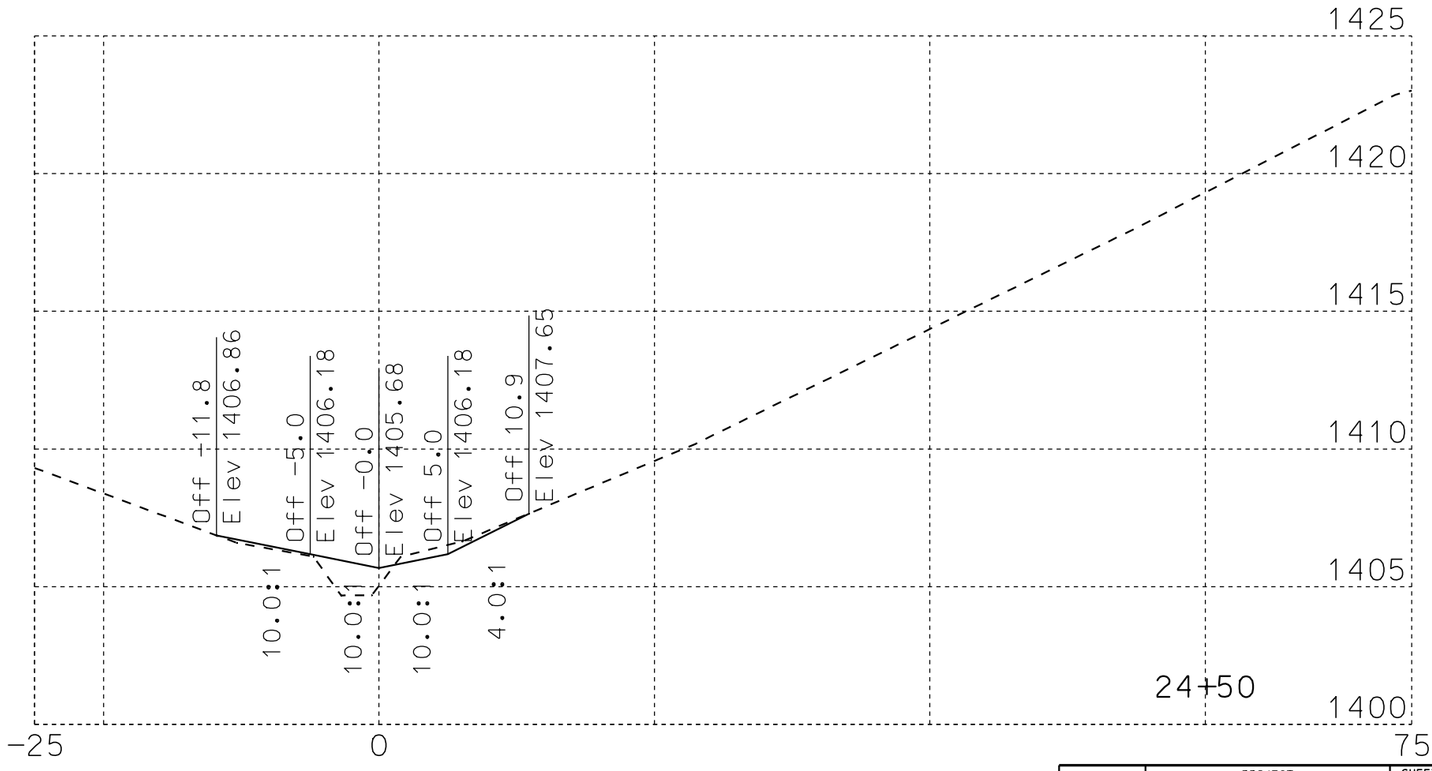
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	35	48







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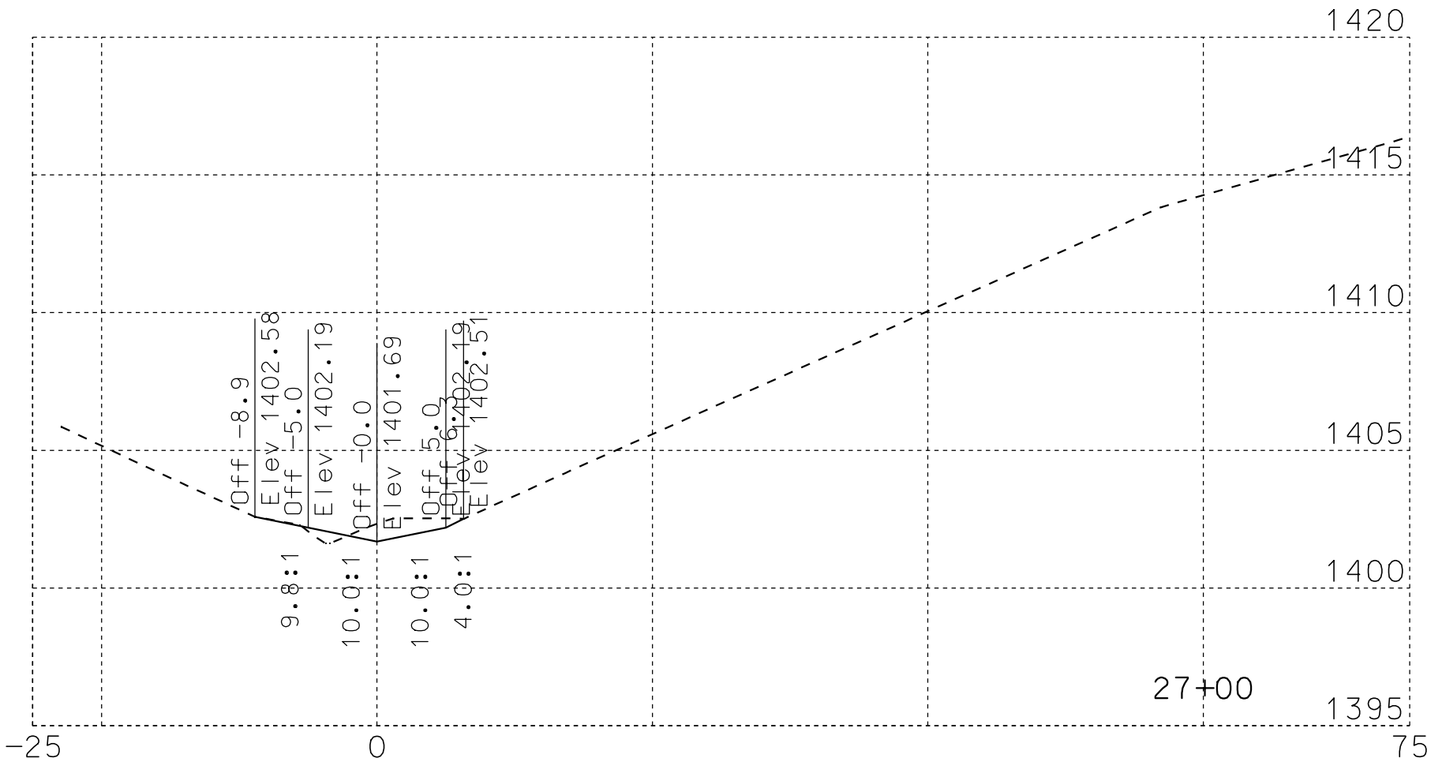
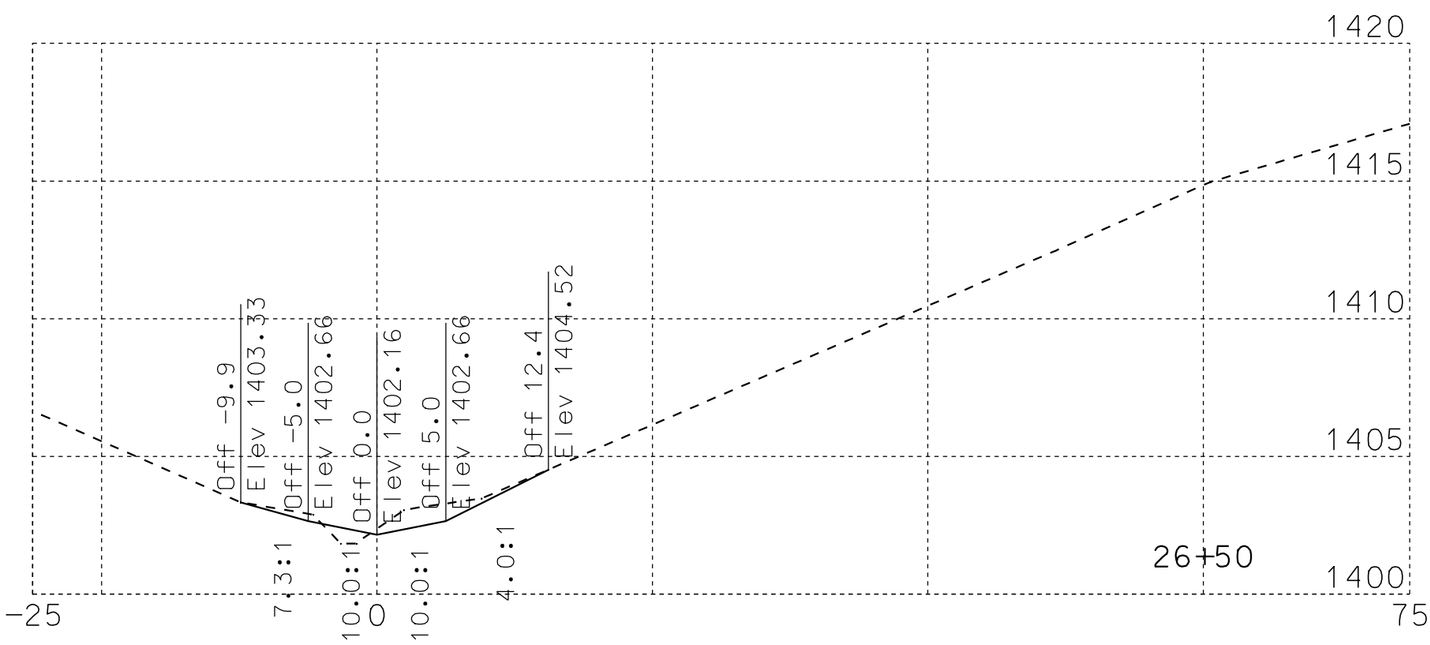
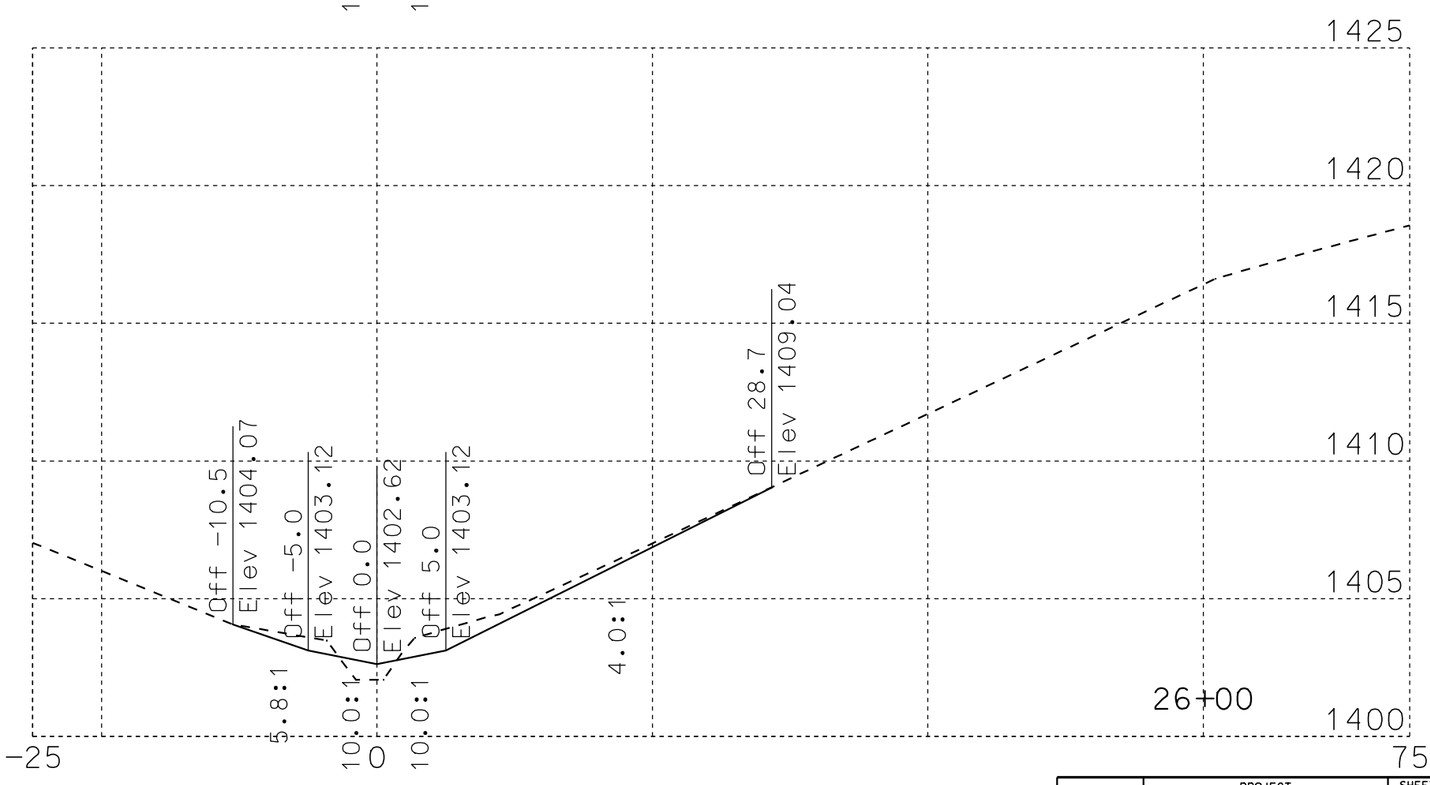
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	36	48







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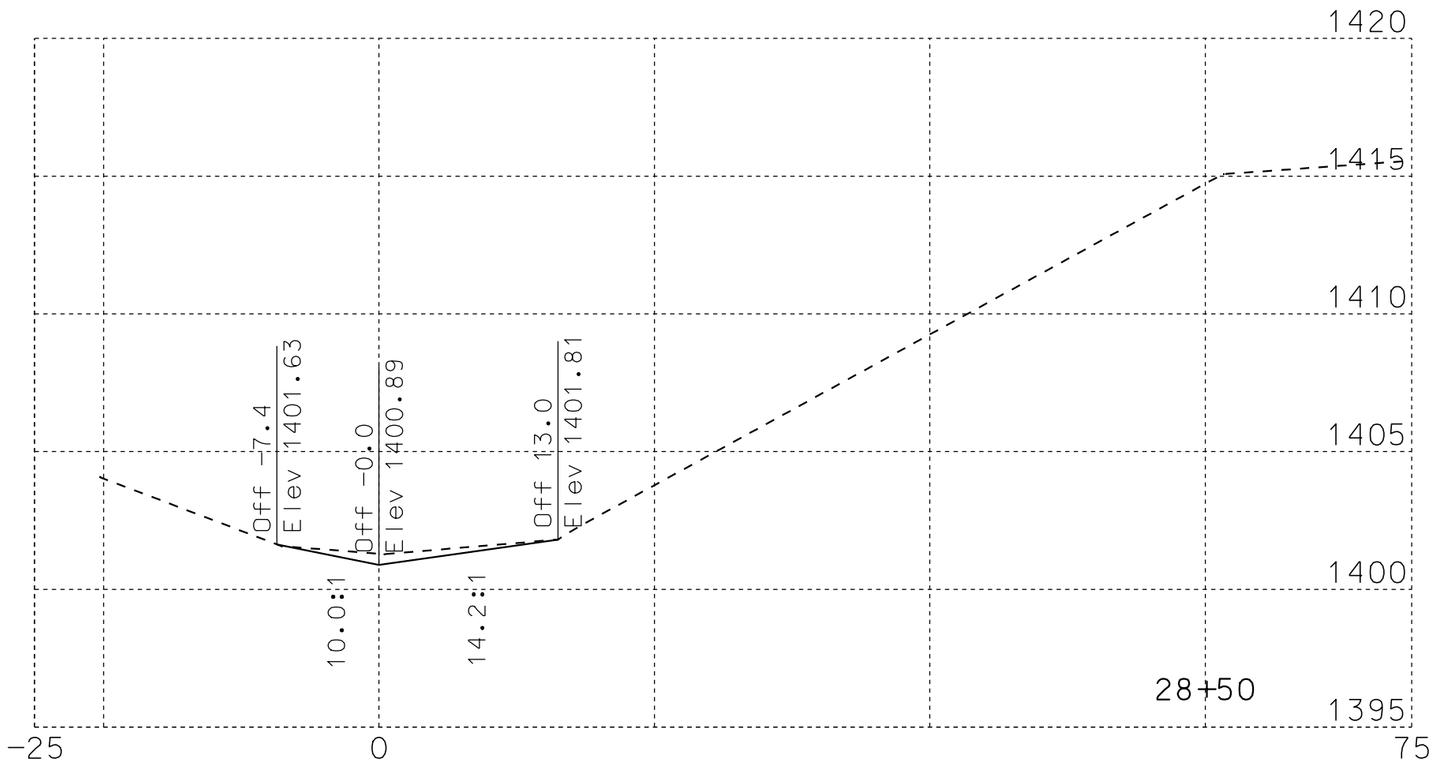
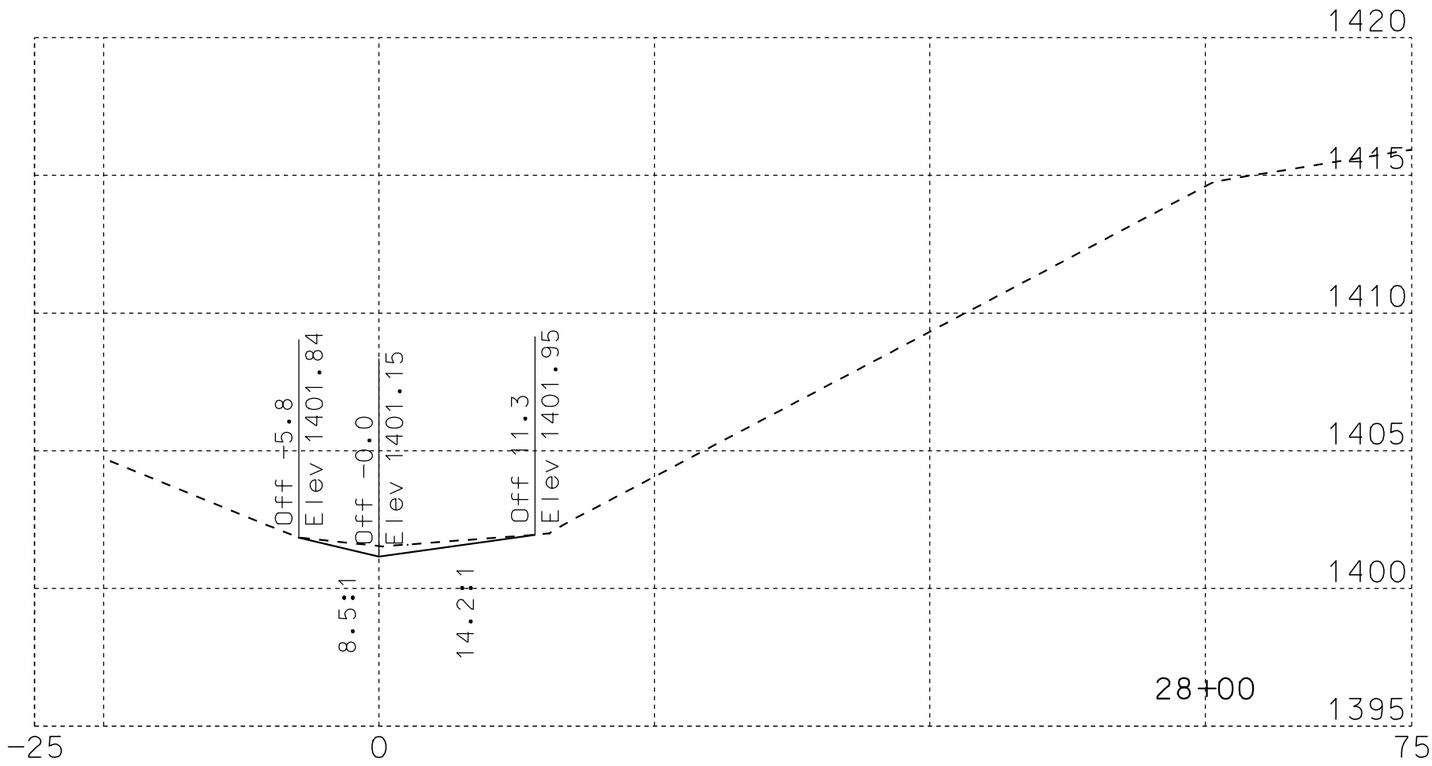
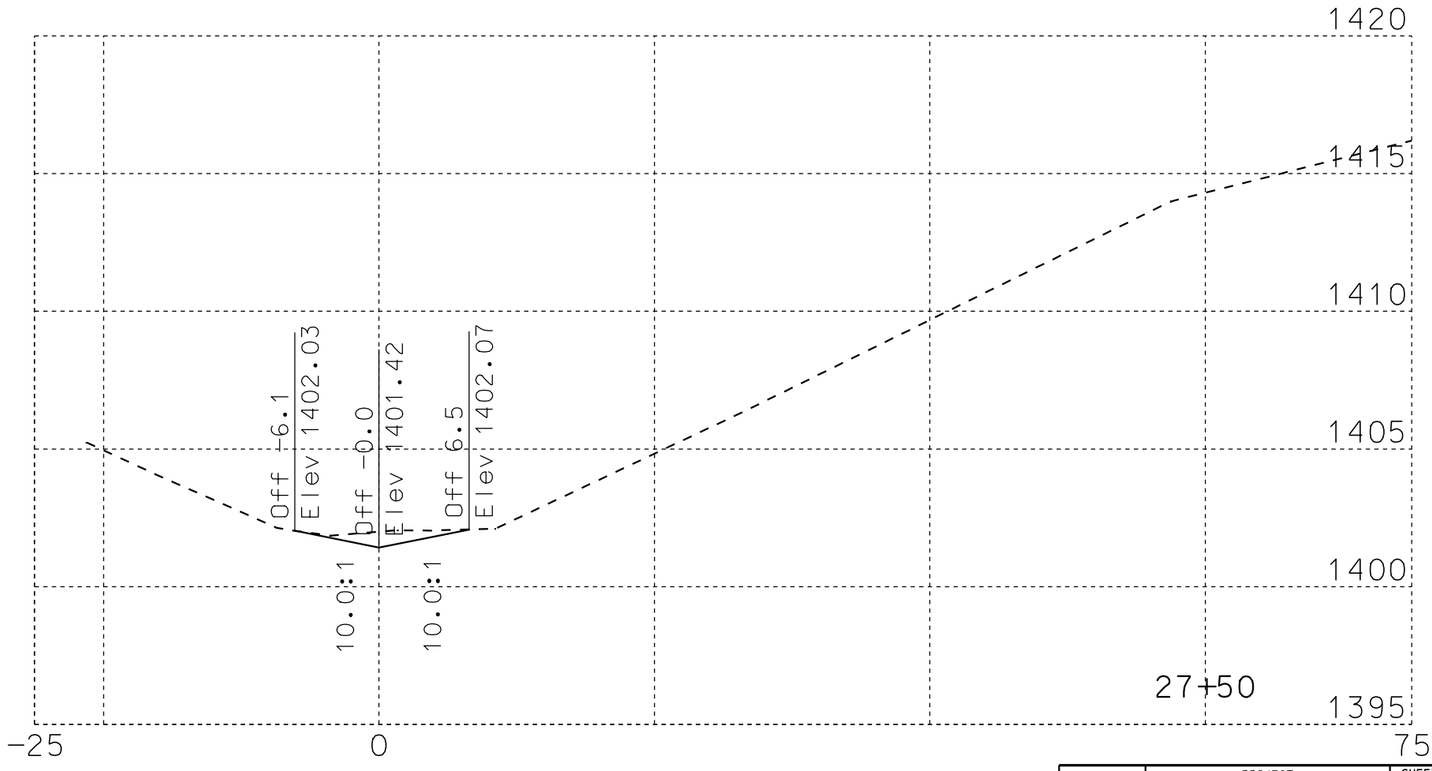
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	37	48







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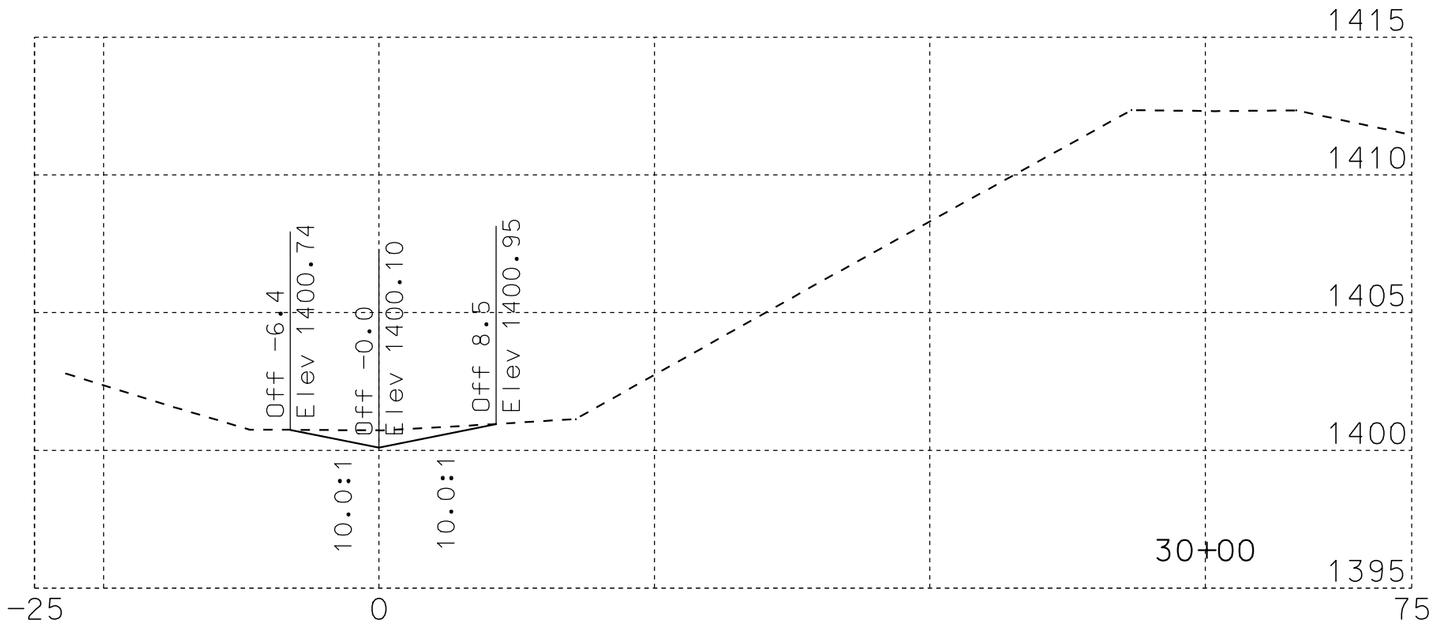
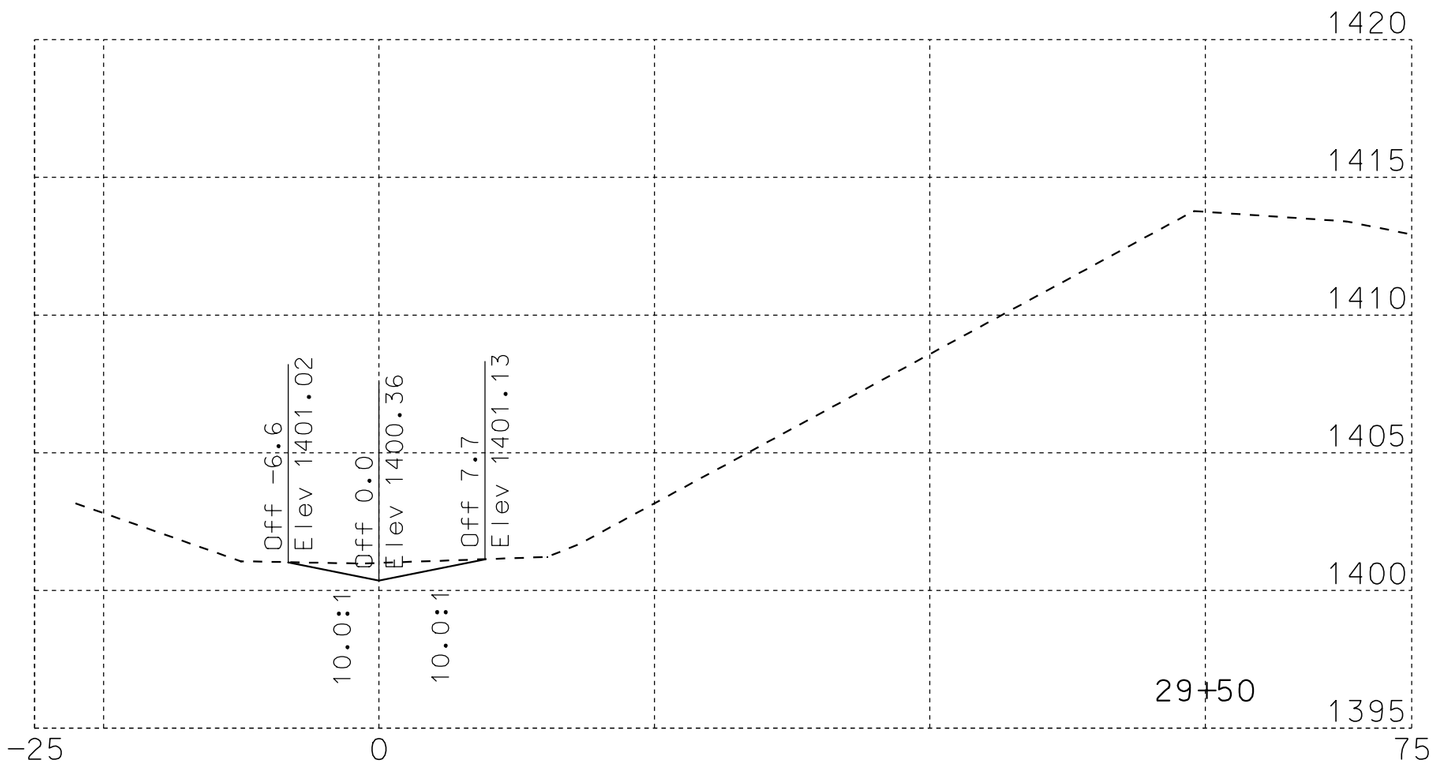
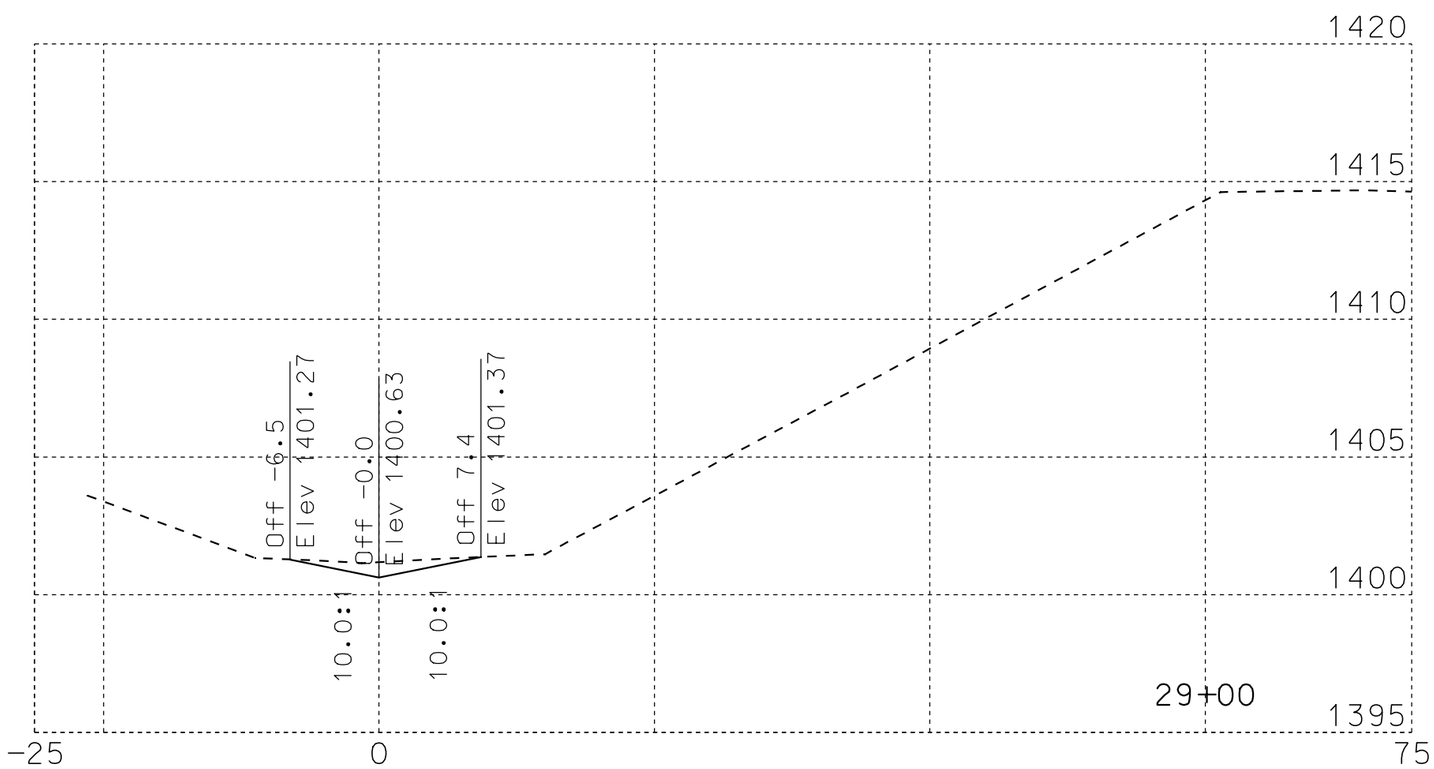
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	38	48

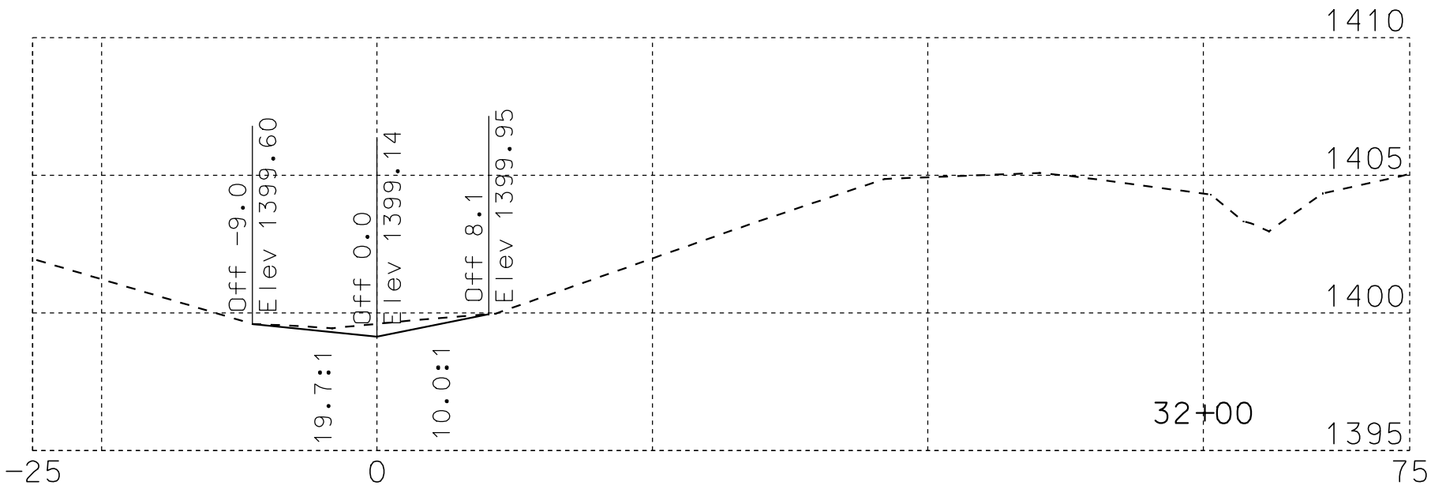


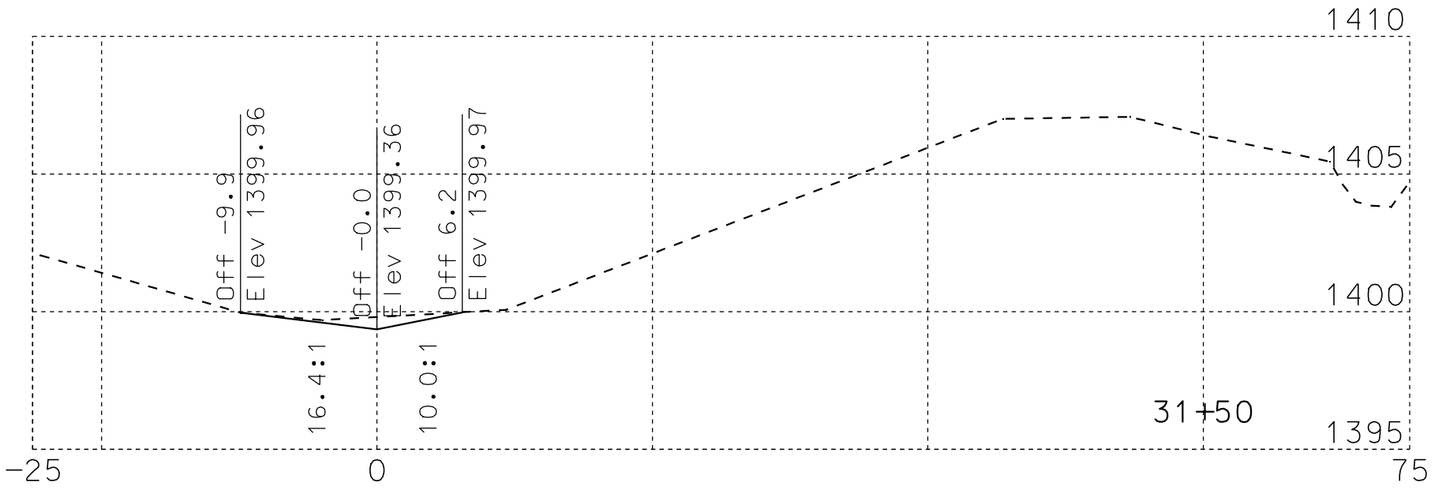


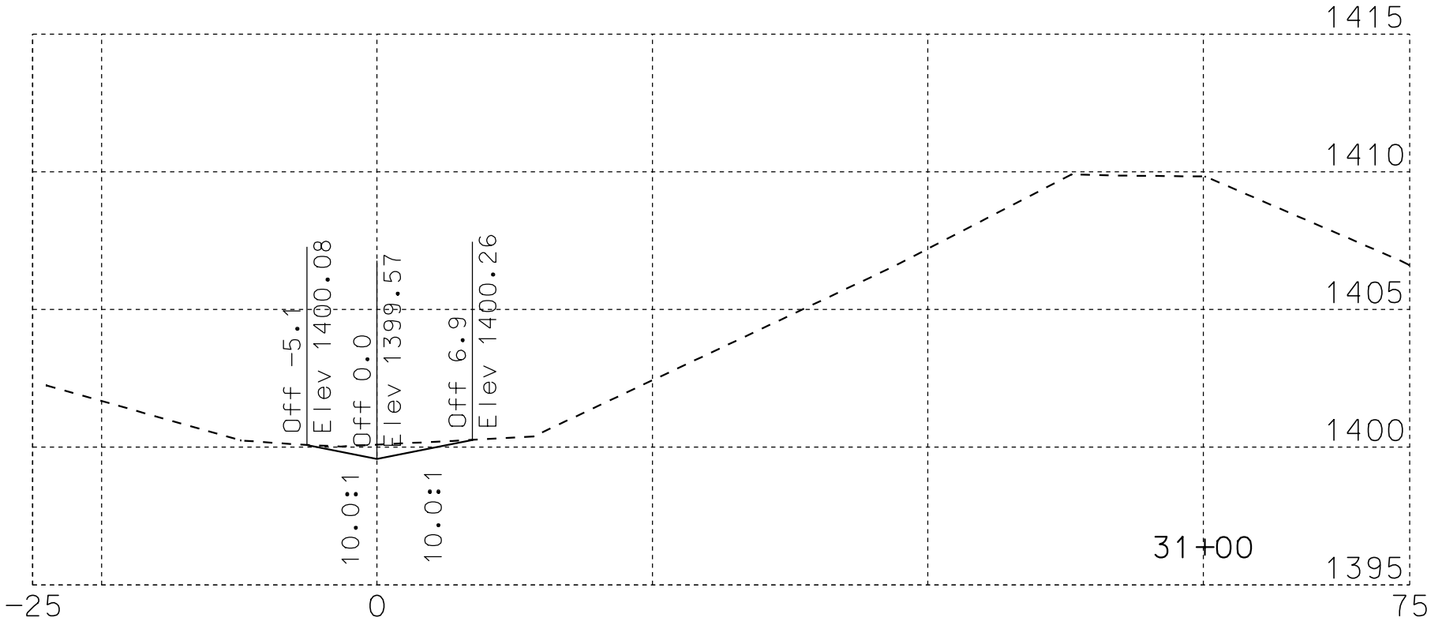


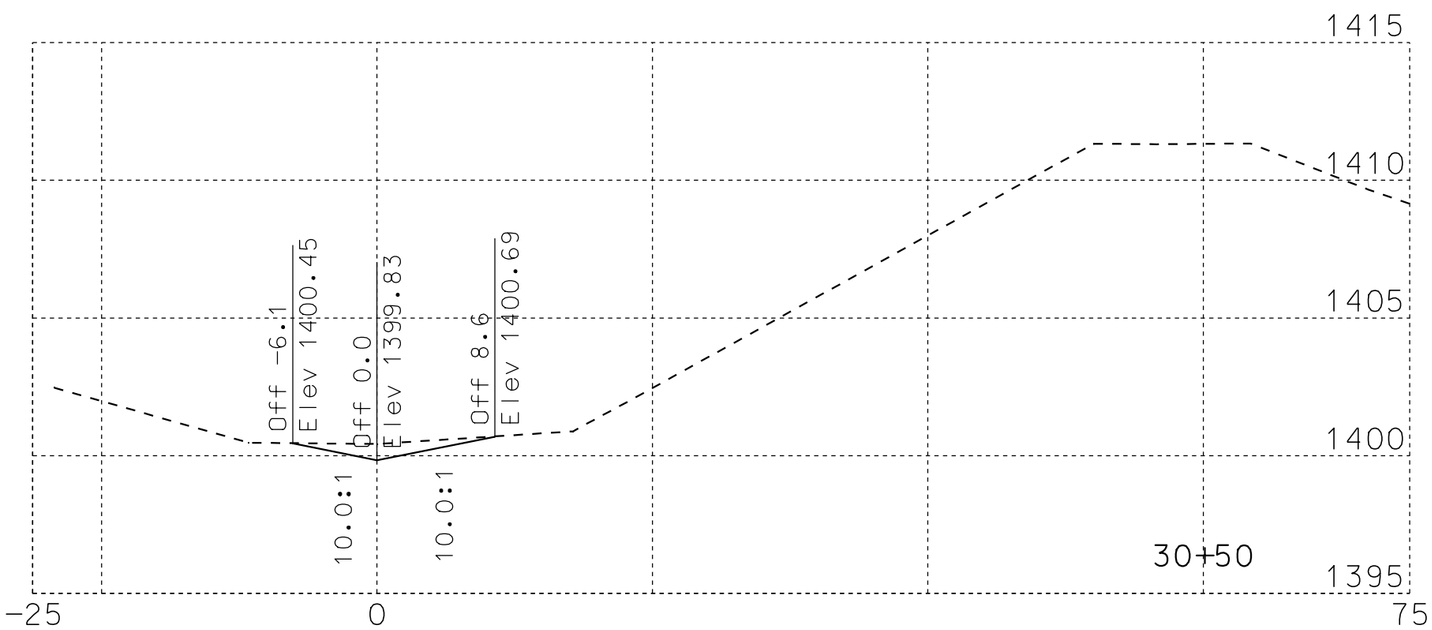
Plotting Date: 04-APR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	39	48









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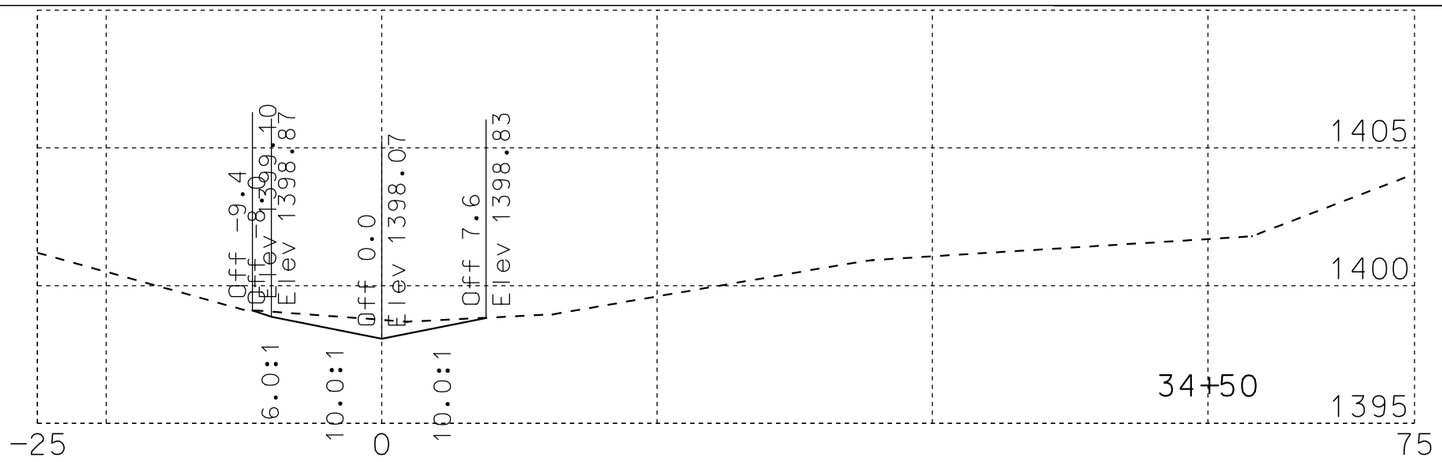
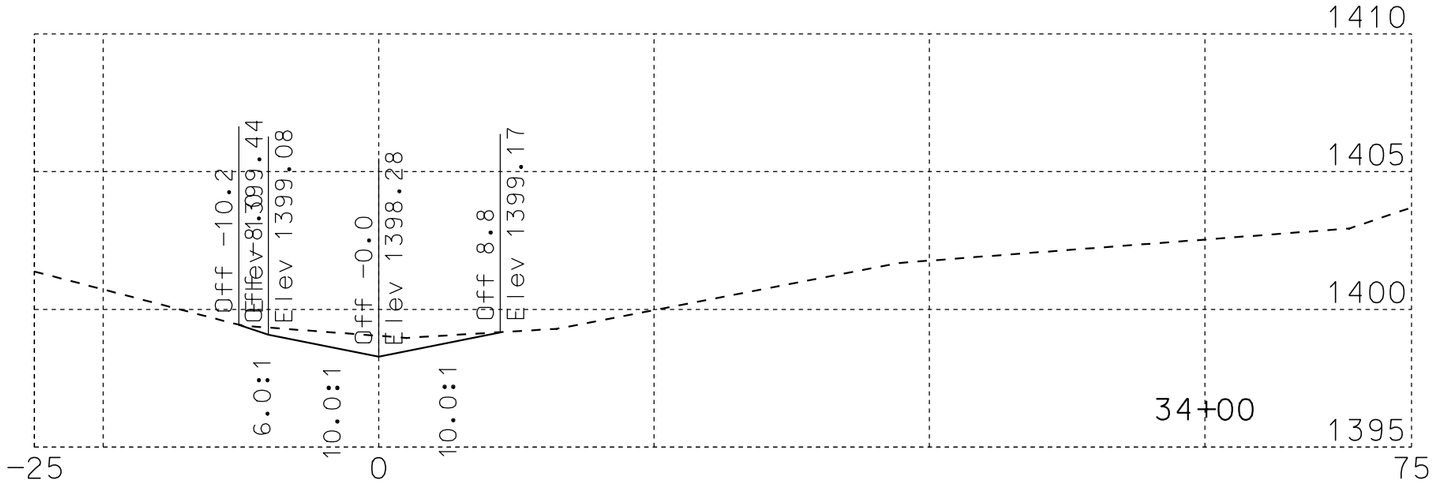
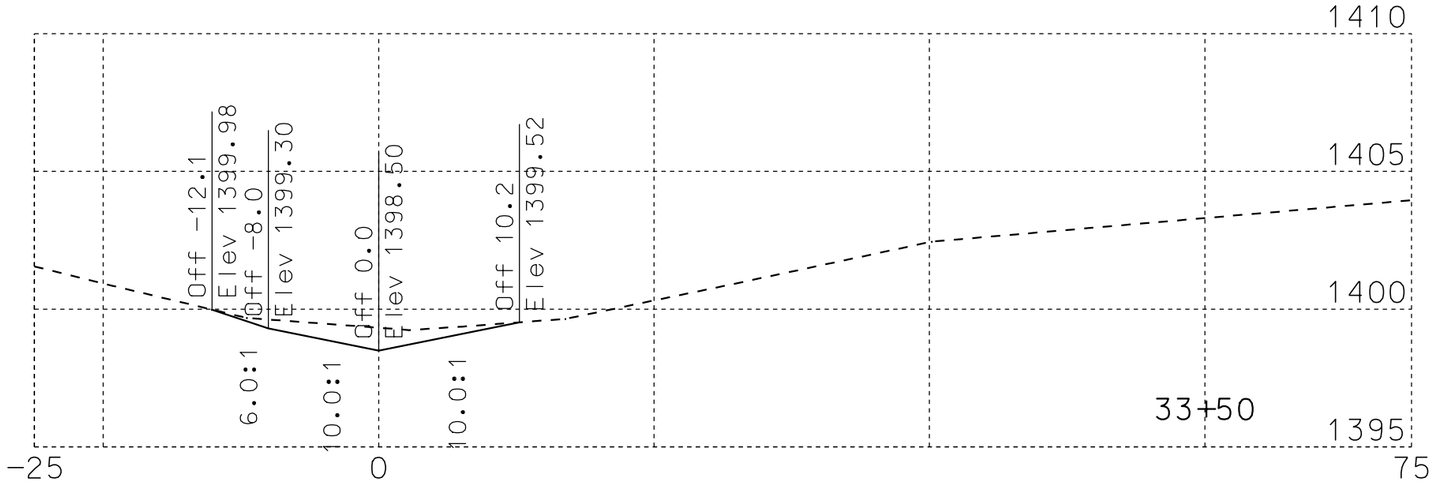
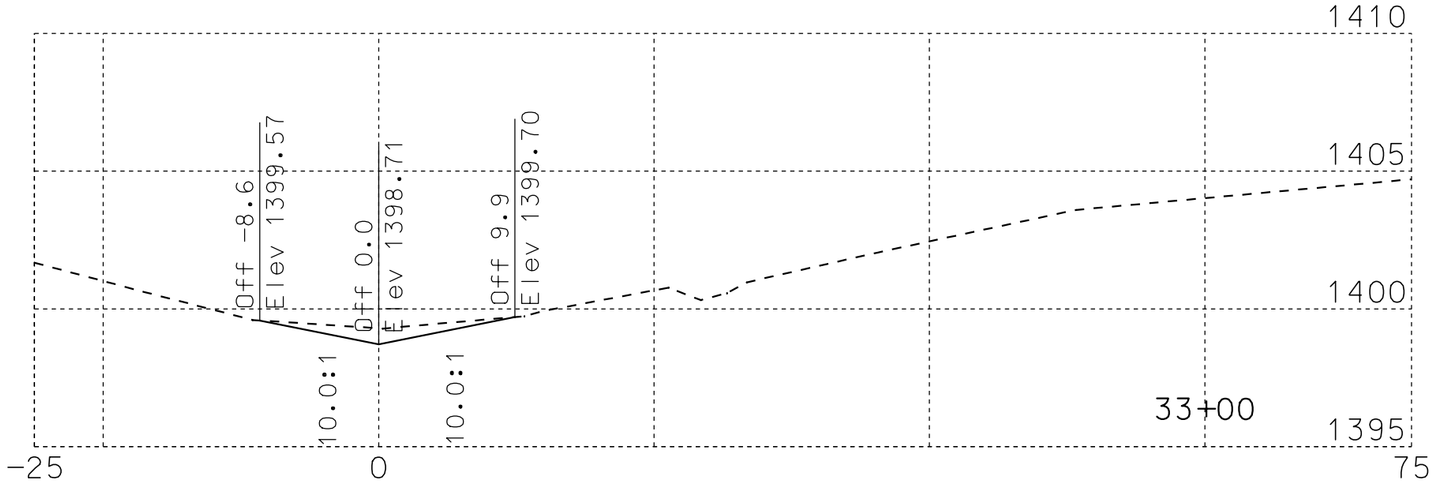
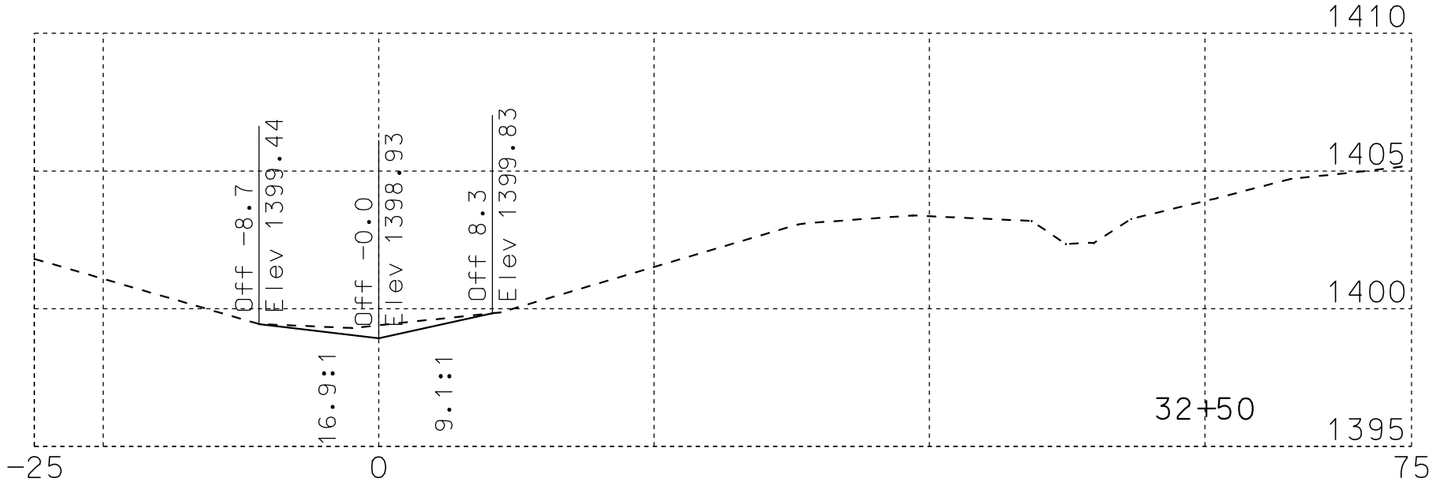
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	40	48











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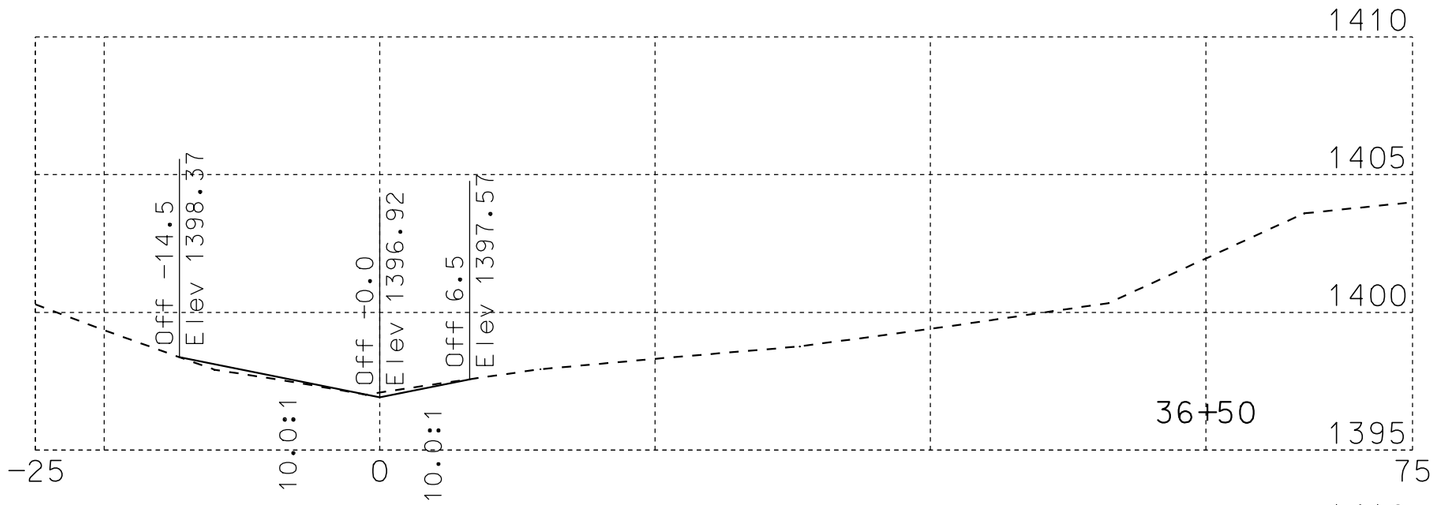
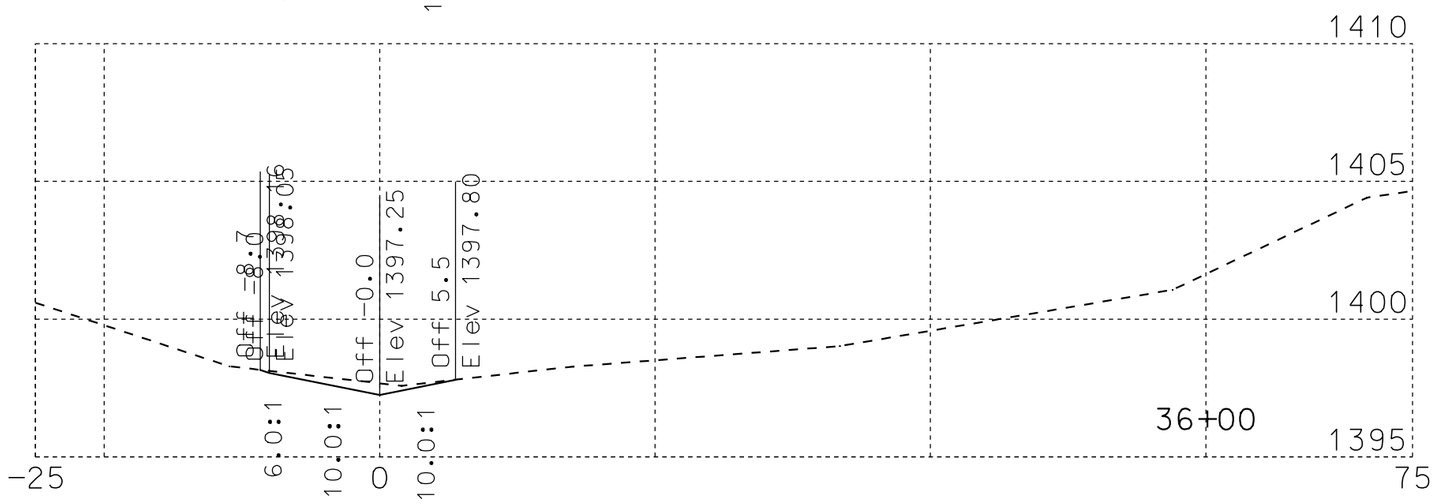
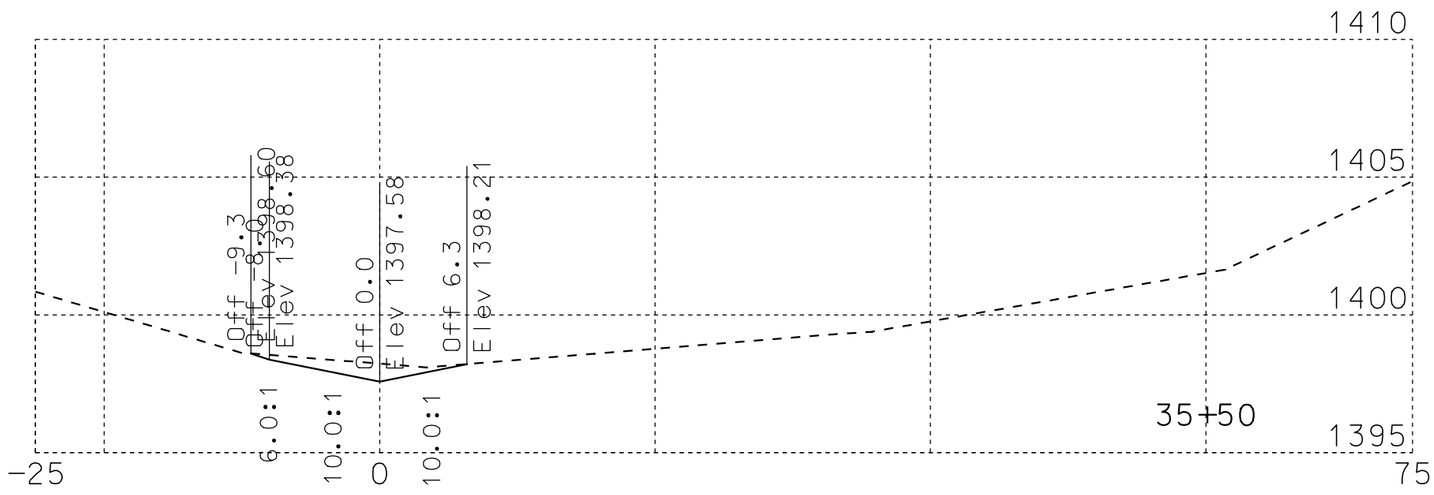
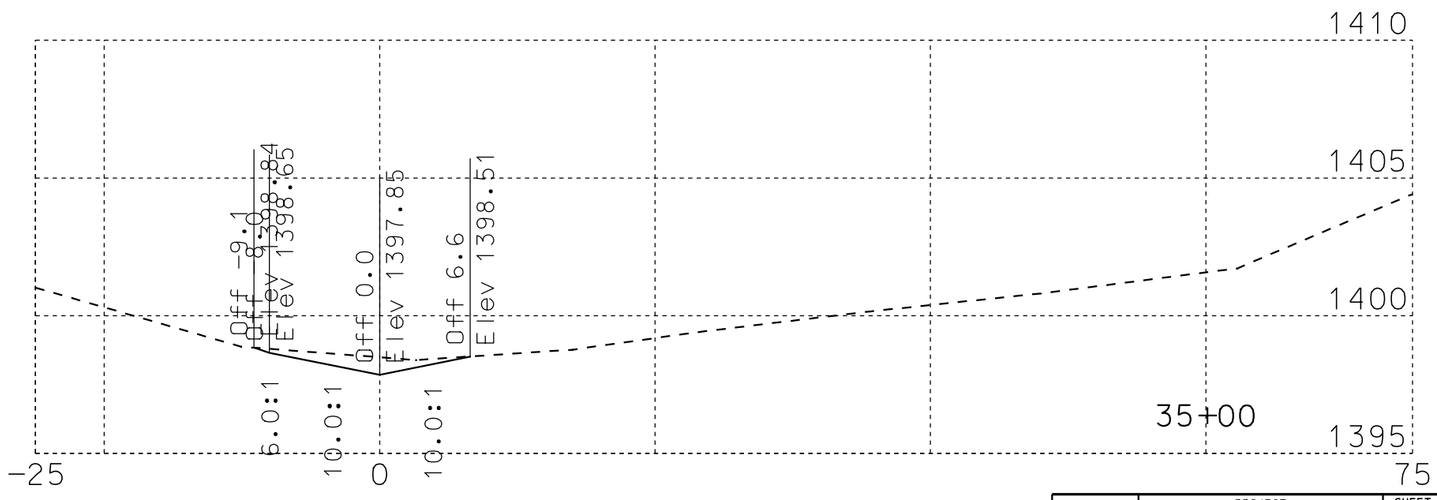
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	41	48









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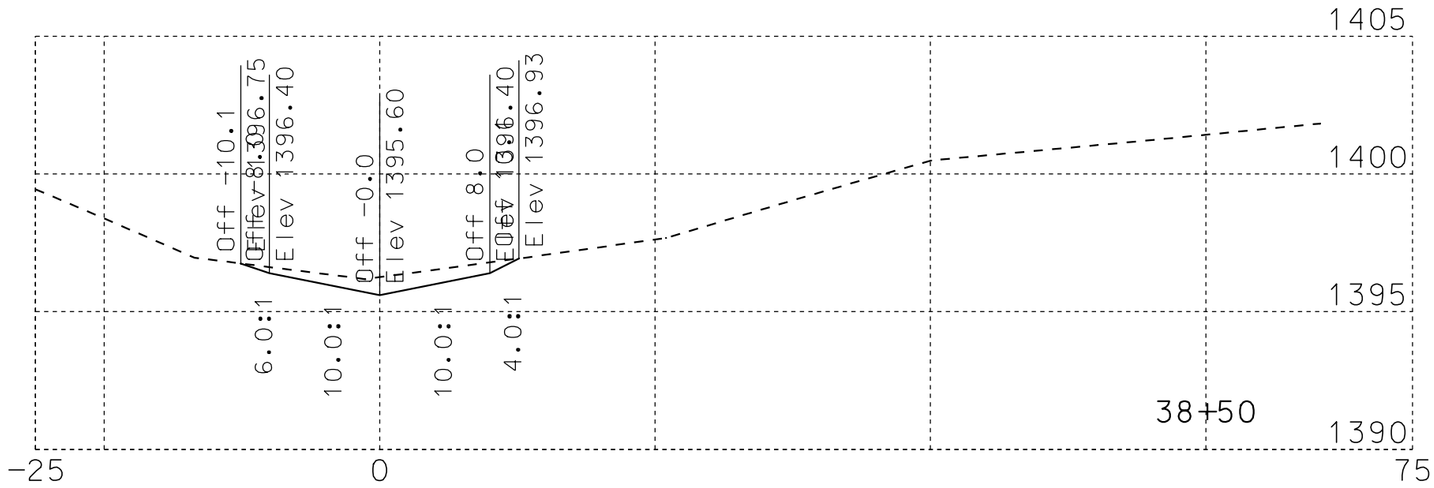
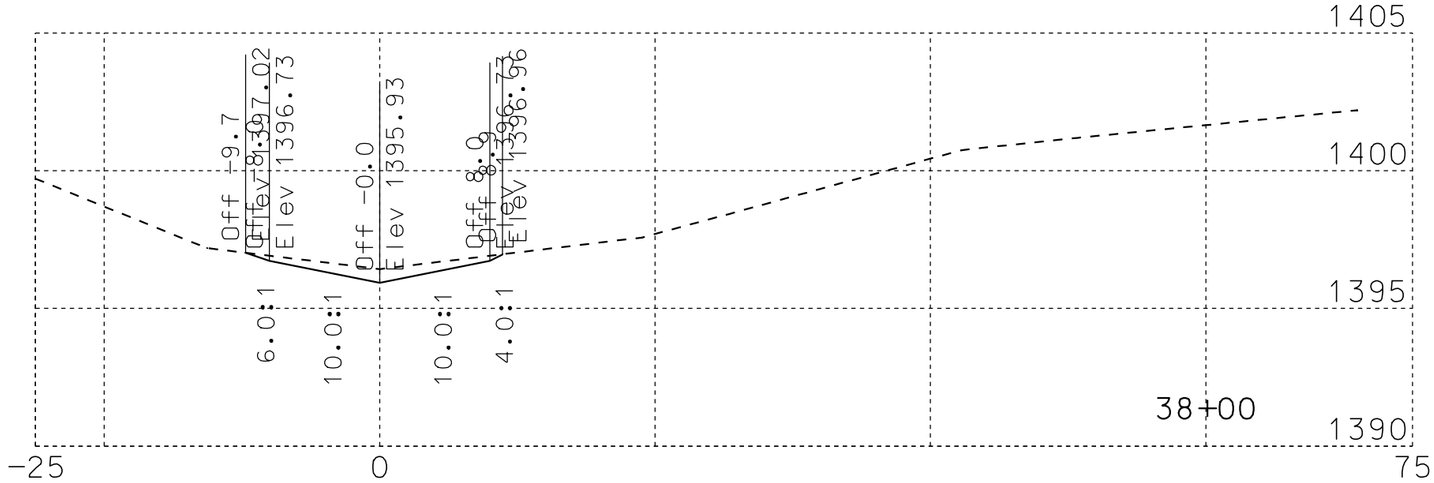
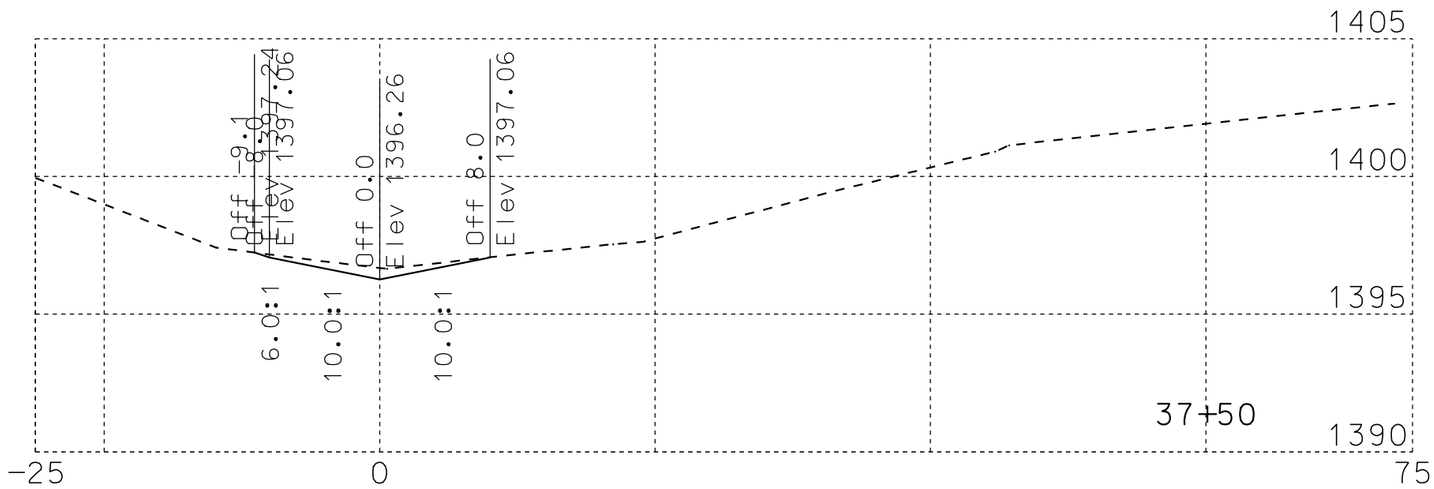
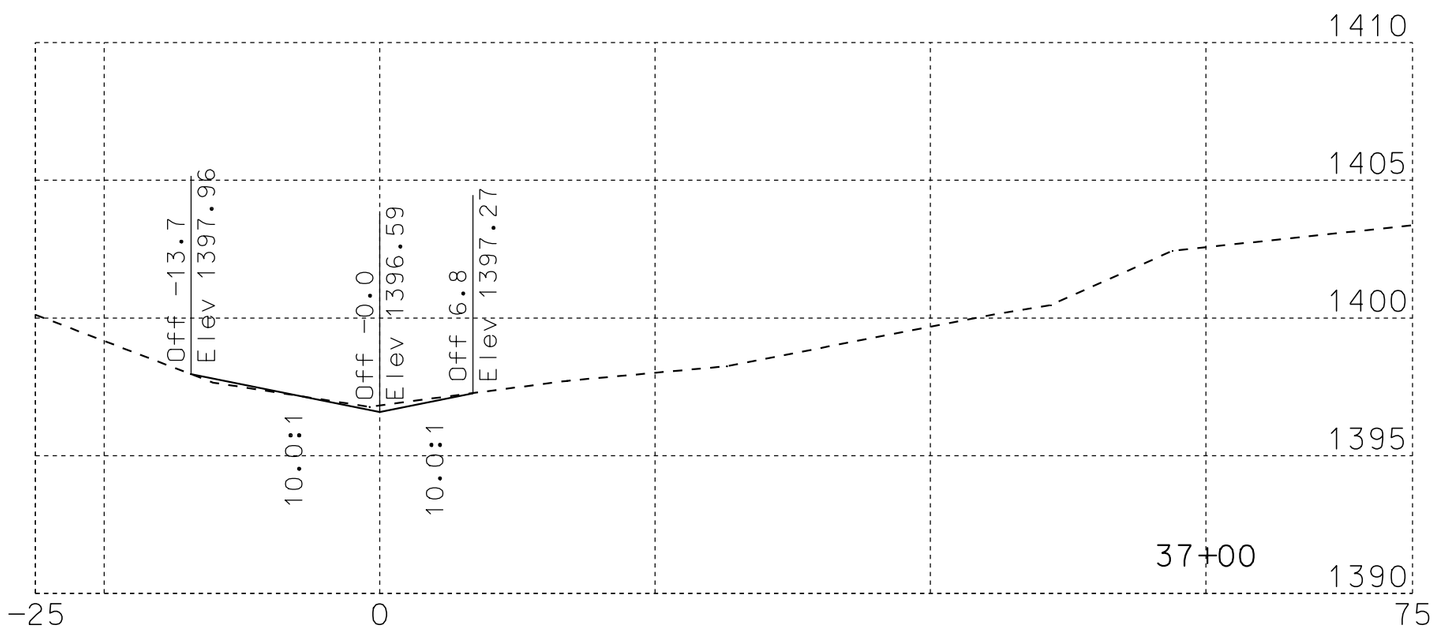
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	42	48









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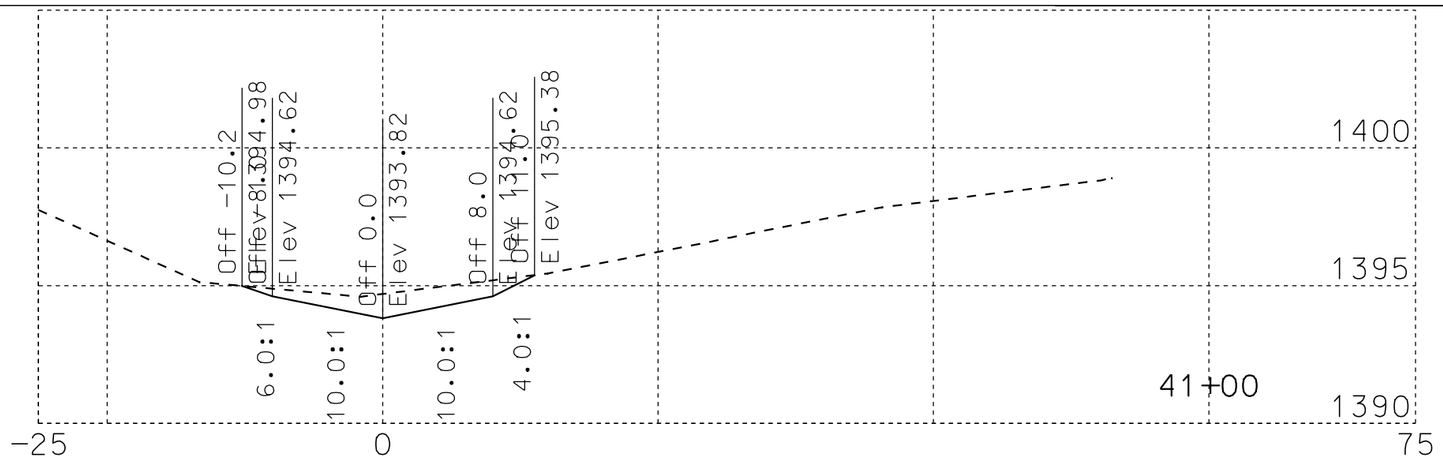
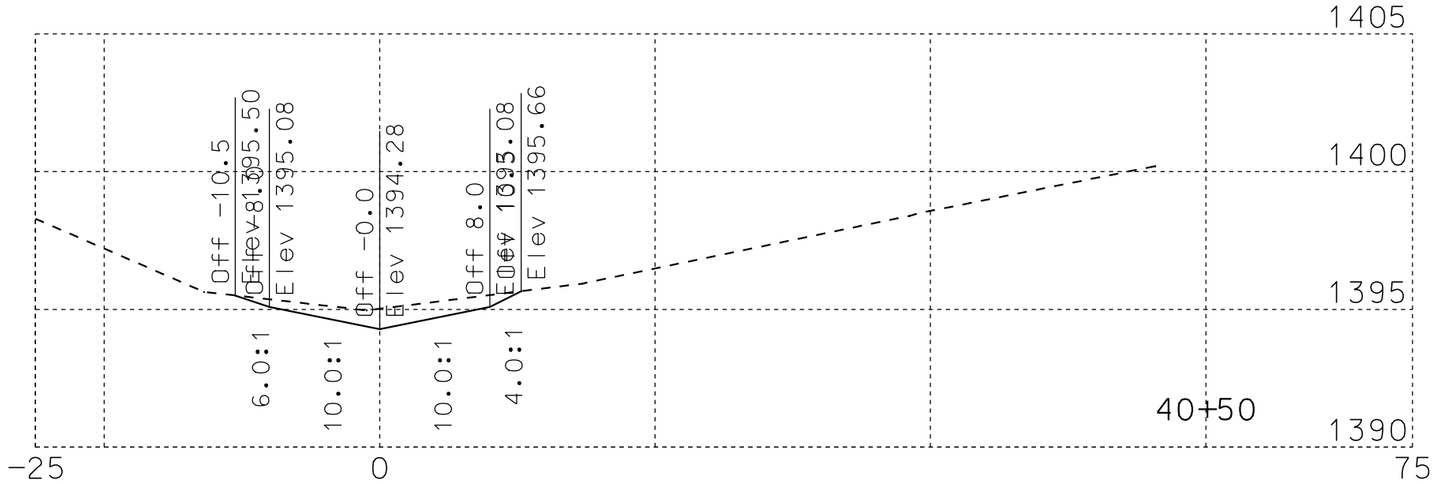
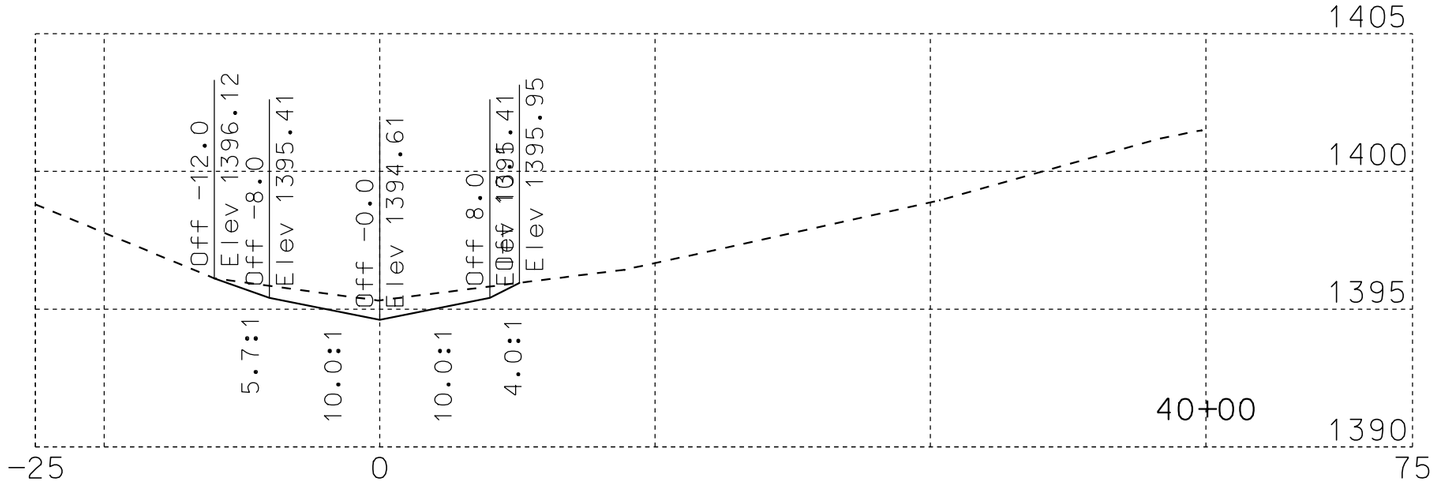
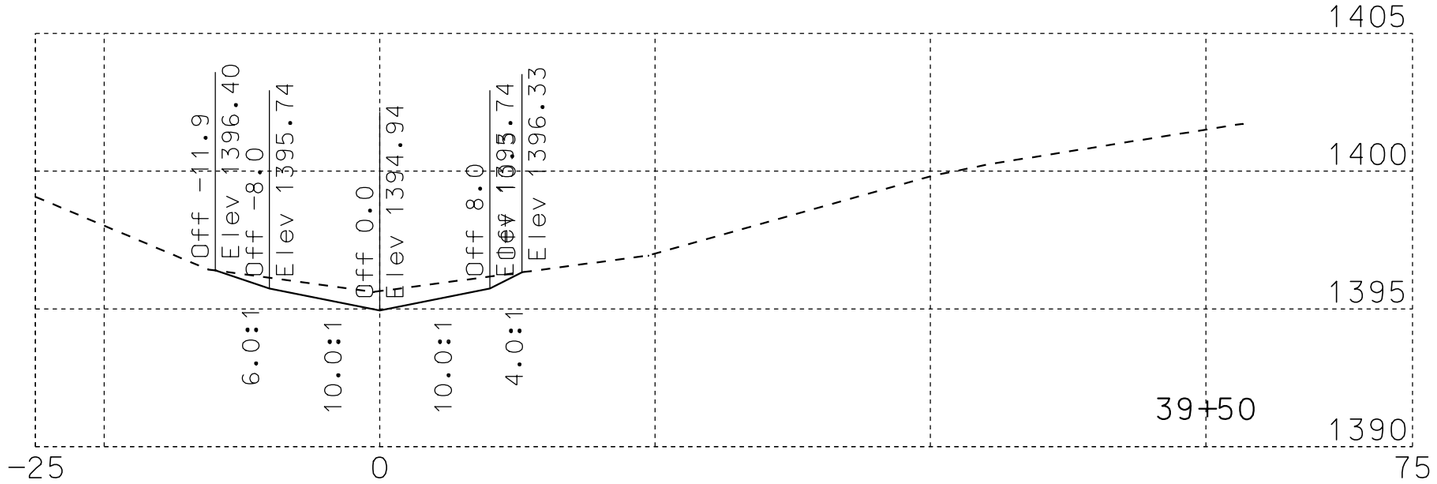
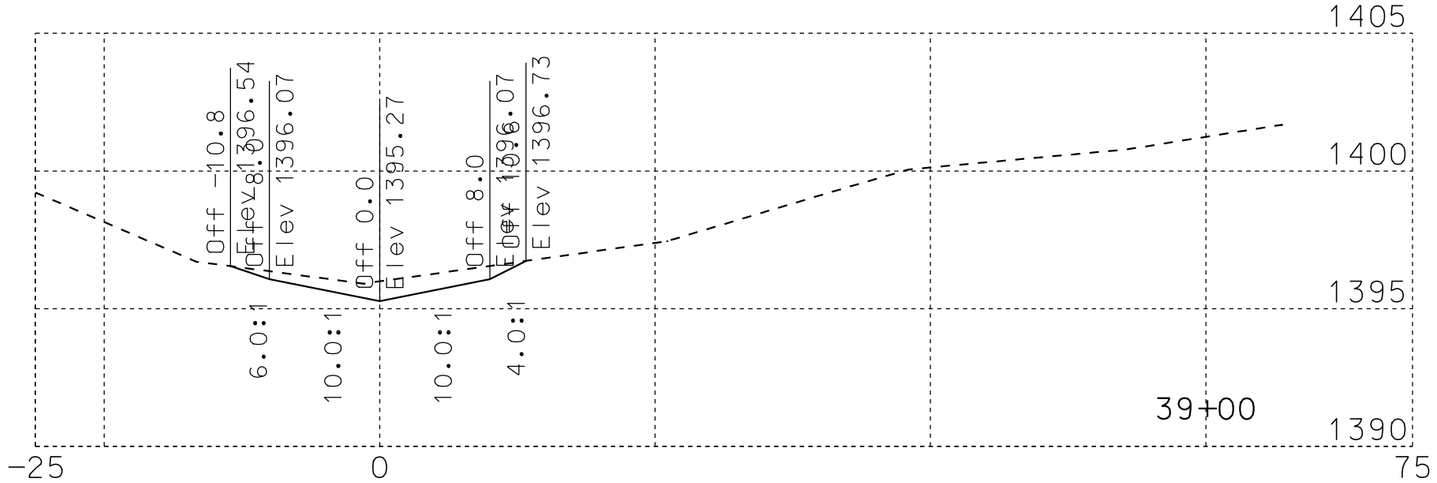
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	43	48











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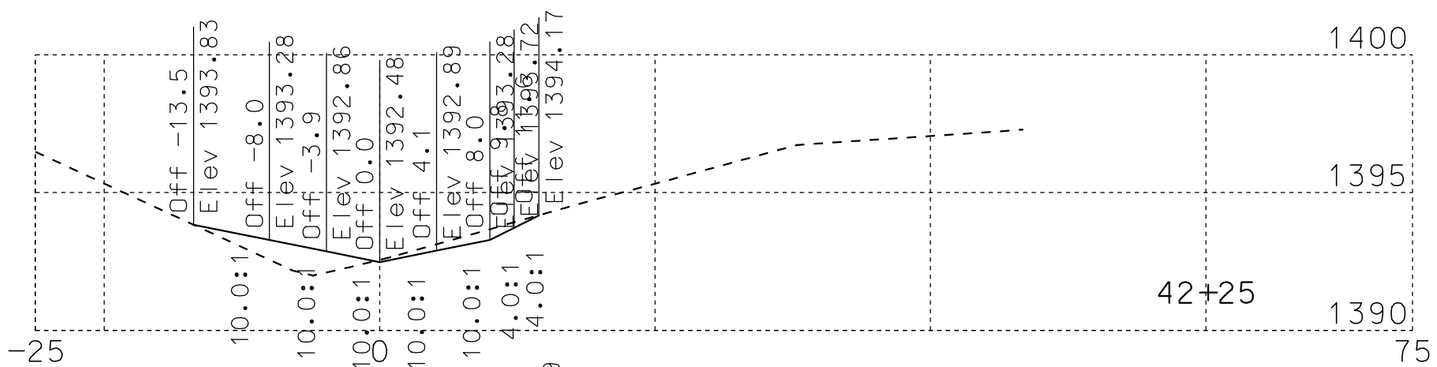
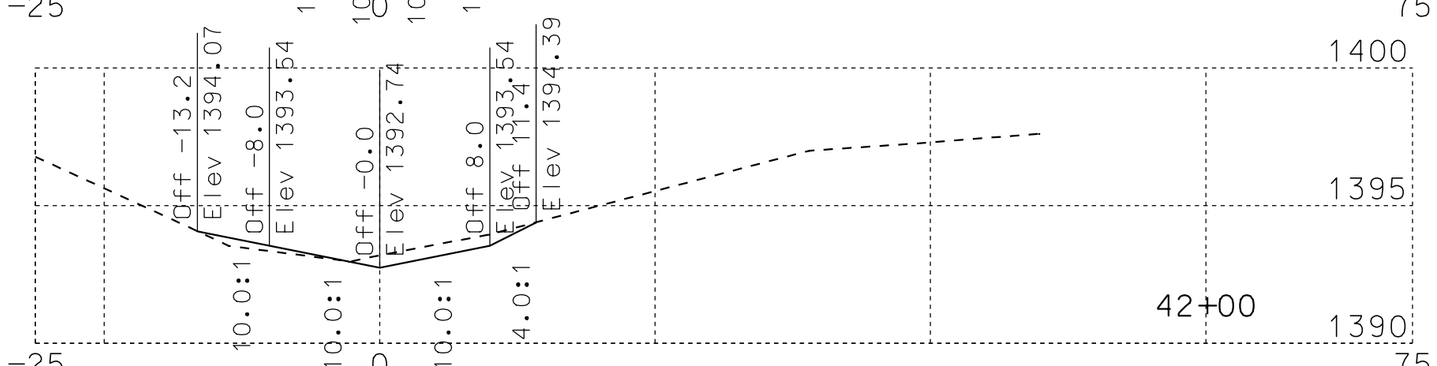
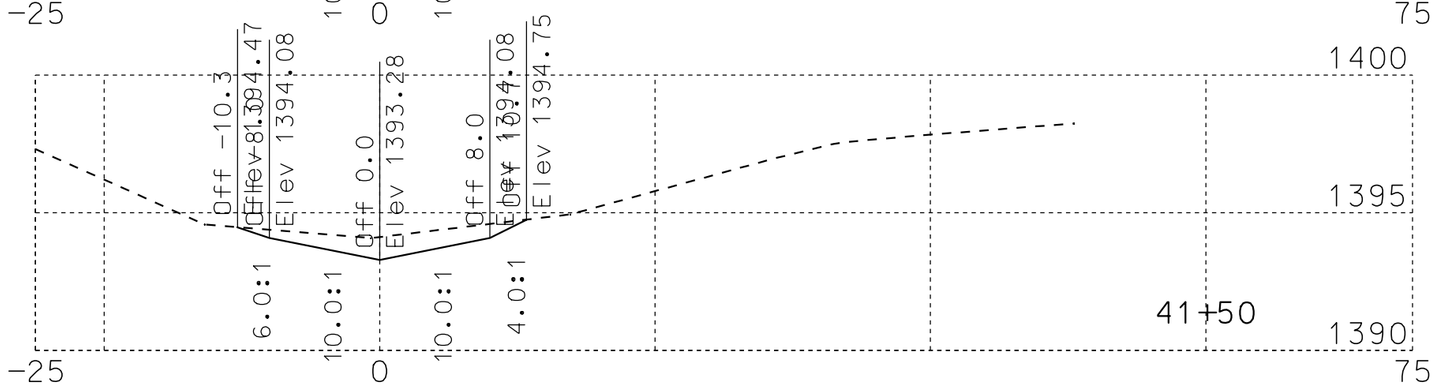
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	44	48







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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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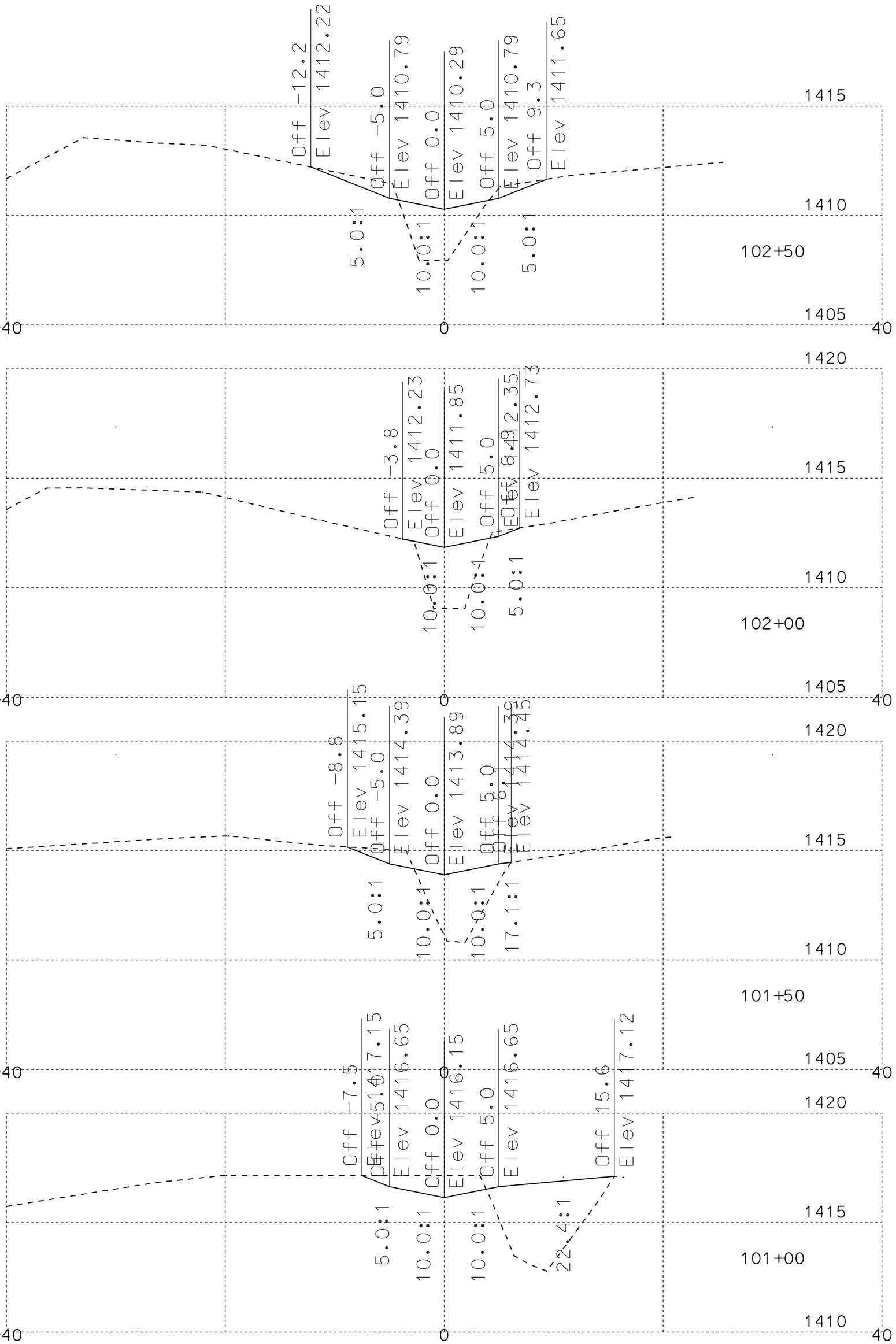

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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	46	48

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	47	48

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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	029 N-291	48	48

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