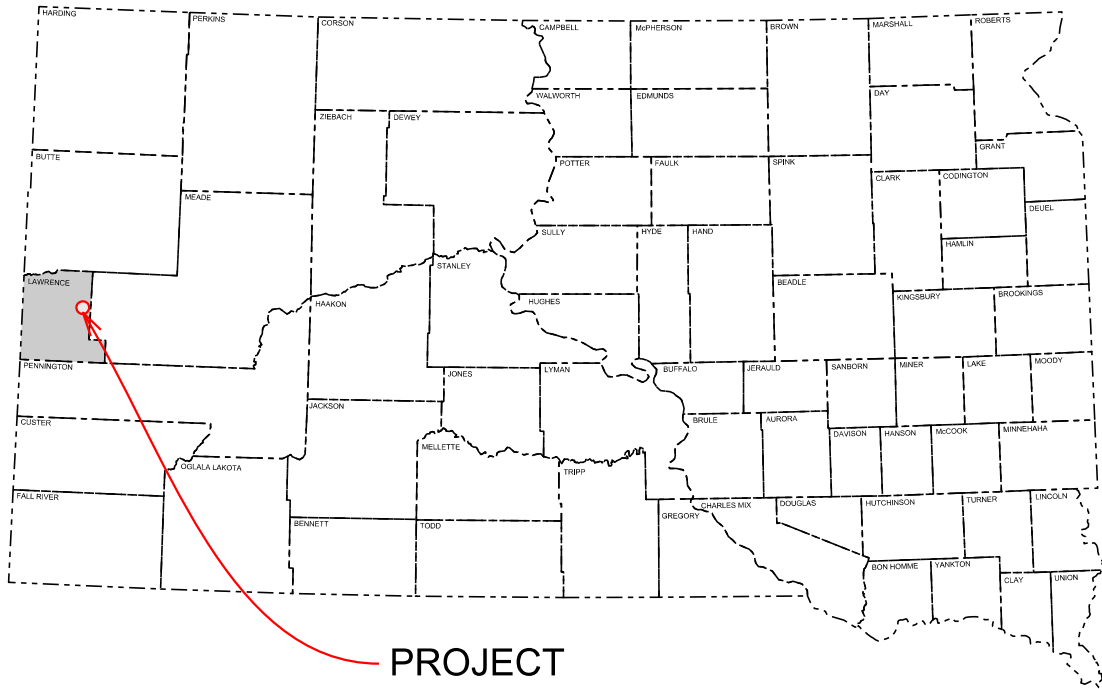


Plot Scale - 1:200

TRR011626

Plotted From -



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT PT 014A(32)46
US HIGHWAY 14A
LAWRENCE COUNTY

BACKSLOPE REPAIR
PCN 08LU

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	1	54

Plotting Date: 10/30/2024

INDEX OF SHEETS

1	General Layout with Index
2-13	Estimate with General Notes & Tables
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15	Horizontal Alignment & Control Data
16	Legend
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19	Waste Site Plan Sheet
20	Waste Site Profile Sheet
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22-30	Standard Plates
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47-54	Waste Site Cross Sections

PROJECT

BEGIN PT 014A(32)46
Station a 281+00.00
MRM 46.0 + 0.475

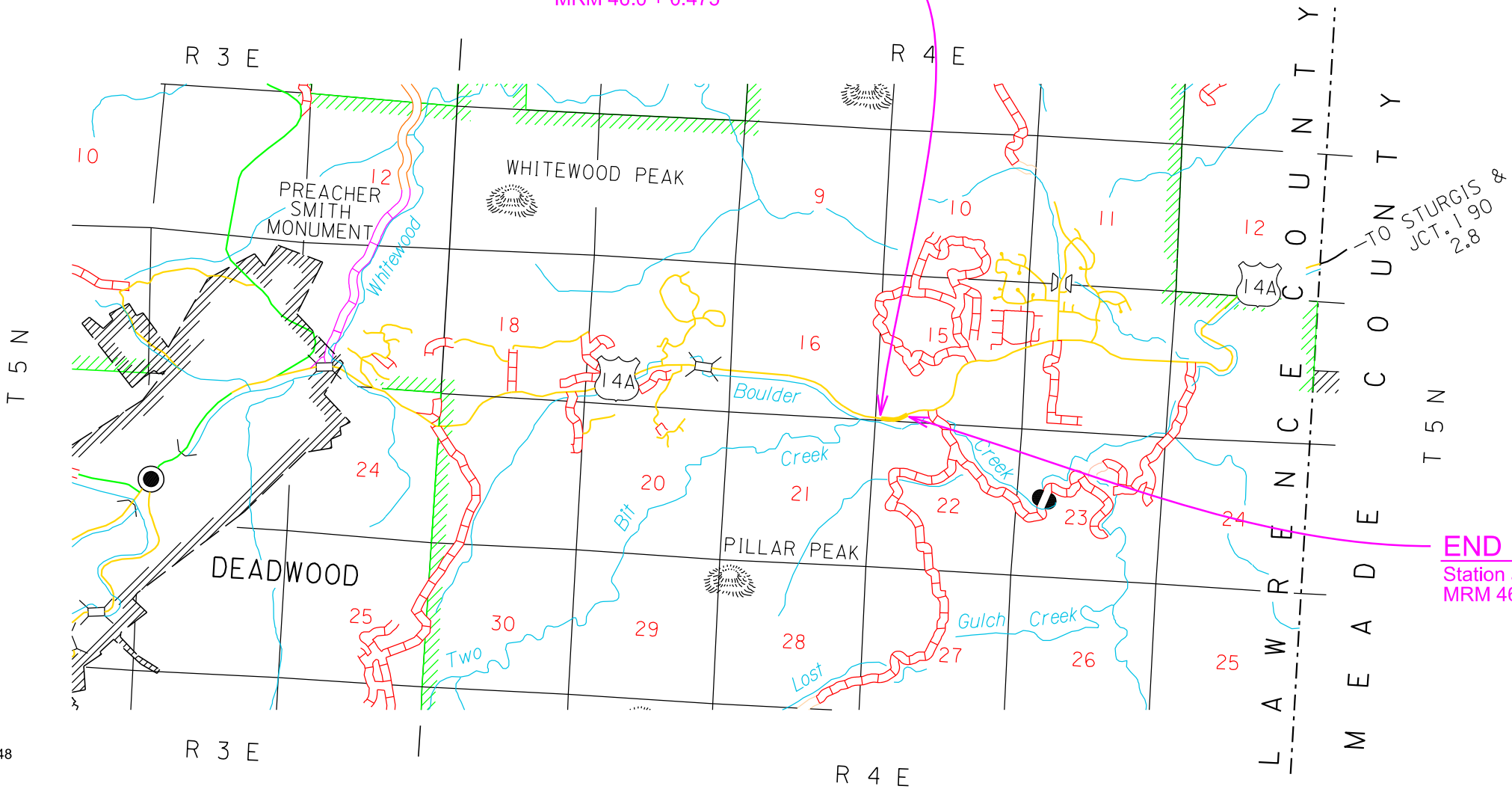
END PT 014A(32)46
Station a 289+00.00
MRM 46.0 + 0.605

DESIGN DESIGNATION

AADT (2020)	5126
AADT (2040)	6935
DHV	1136
D	51 %
DHV T%	4.5 %
AADT T%	9.8 %
V	55 mph

STORM WATER PERMIT

Major Receiving
Body of Water: Boulder Creek
Area Disturbed: 10.7 acres
Total Project Area: 13.6 acres
Approx. Begin Lat,Long: 44.387725, -103.626648



Gross Length 800.00 Feet 0.152Miles

9

October 1, 2025

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3200	Construction Staking	Lump Sum	LS
009E3301	Engineer Directed Surveying/Staking	20.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E1700	Remove Silt Fence	405	Ft
110E7150	Remove Sign for Reset	1	Each
110E7152	Remove Delineator for Reset	2	Each
110E7510	Remove Pipe End Section for Reset	1	Each
120E1100	Unclassified/Rock Excavation	132,202	CuYd
230E0010	Placing Topsoil	3,318	CuYd
450E9001	Reset Pipe End Section	1	Each
632E2100	Reset Delineator	2	Each
632E3500	Reset Sign	1	Each
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	2,500	Ft
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	4,000	Ft
634E0010	Flagging	500.0	Hour
634E0110	Traffic Control Signs	375.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0310	Temporary Flexible Vertical Markers (Tabs)	5,210	Ft
634E0330	Temporary Raised Pavement Markers	5,980	Ft
634E0380	Tubular Marker	137	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	22	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	2,000	Ft
634E0700	Traffic Control Movable Concrete Barrier	84	Each
634E0750	Temporary Concrete Barrier End Protection	2	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each
730E0100	Cover Crop Seeding	7.3	Bu
730E0200	Type A Permanent Seed Mixture	132	Lb
731E0100	Fertilizing	731	Lb
732E0200	Fiber Mulching	7.3	Ton
734E0154	12" Diameter Erosion Control Wattle	160	Ft
734E0604	High Flow Silt Fence	1,620	Ft
734E0610	Mucking Silt Fence	112	CuYd
734E0620	Repair Silt Fence	405	Ft
900E1320	Construction Entrance	1	Each

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 10-1-25 Version, Required Provisions, and Special Provisions as included in the Proposal. The Standard Specifications for Roads and Bridges is available for download and viewing at <https://dot.sd.gov/doing-business/contractors/standard-specifications>.

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified 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. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <<https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf>>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

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Revised 8/29/2025 jpr

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at: < <https://sdleastwanted.sd.gov/maps/default.aspx> >

< [South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04](https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04) >

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

The Contractor must adhere to the “Special Provision Regarding Storm Water Discharges to Waters of the State.”

The Contractor will complete the DANR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

The form can be found at:
<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPAppendixCCA2018Fillable.pdf >

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

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

The DOT 298 Form will be used for site inspections and to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents and retained for a minimum of three years.

The inspection will include disturbed areas of the construction site that have not been finally stabilized, areas used for storage materials, structural control measures, and locations where vehicles enter or exit the site. These areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP will be observed to ensure that they are operating correctly, and sediment is not tracked off the site.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT: < <https://dot.sd.gov/doing-business/environmental/stormwater> >

DANR:<<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/default.aspx>>

EPA: < <https://www.epa.gov/npdes> >

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will 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) will 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 Agriculture and Natural Resources.

The waste disposal site(s) will 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 Environmental Office and the Project Engineer.

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

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with 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 not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06. Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

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

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COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic 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 a cultural resource review prior to scheduling the pre-construction meeting. 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 will arrange and pay for a record search and when necessary, a cultural resource survey. 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 if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in 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 will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. 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.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery 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 will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COMMITMENT S: FIRE PREVENTION IN THE BLACK HILLS AREA

This project is located within the Black Hills Forest Fire Protection Boundary.

Action Taken/Required:

The Contractor will adhere to the “Special Provision for Fire Plan”.

GRADING OPERATIONS

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

Any damage to the existing roadway surfacing will be repaired by the Contractor at no cost to the State.

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

UTILITIES

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

CLEARING AND DISPOSAL OF TIMBER

A. U.S. Forest Service Land

The Contractor will dispose of the brush and timber. The brush and timber designated by the USFS for removal will become the property of the Contractor and removed from Forest Service land.

Temporary decking locations outside the construction limits will be approved by the Forest Service before its use.

All stumps, slash, root wads, and residual waste material generated from the harvest must be removed from Forest Service Lands.

Slash and non-merchantable timber will be disposed of by chipping or hauling off of USFS lands and US Highway 14A ROW. If chipping is used, all residue from chipping must be distributed evenly and no chip depth will exceed 3”. Burying or burning of slash, non-merchantable timber or stumps will not be allowed.

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TABLE OF PIPE QUANTITIES

Station	Remove Pipe End Section for Reset	Reset Pipe End Section
a 281+30	1	1
Total:	1	1

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station to	Station	Excavation (CuYd)	*Waste (CuYd)
281+00	289+00	128,884	128,884
	Totals:	128,884	128,884

* The quantities for these items are for information only and will be hauled to the Waste Site.

TABLE OF UNCLASSIFIED/ROCK EXCAVATION

Excavation	(CuYd)
Topsoil	128,884
	3,318
Total	132,202

PROCEDURES FOR DETERMINING UNCLASSIFIED/ROCK EXCAVATION QUANTITY

When plan quantities are used for payment, the Unclassified Excavation quantity will be used for final payment and the plans quantity of listed in the Table of Unclassified Excavation will not be adjusted according to field measurements.

The following paragraphs are general earthwork information and information in regard to computing the Unclassified Excavation quantity when final cross sections are taken in the field:

The Topsoil quantity in the Table of Unclassified Excavation is an estimate. When finaling a project, the total quantity of field measured Topsoil will be used in place of the estimated Topsoil quantity. The quantity of Topsoil from the cuts will be paid for twice as Unclassified Excavation, as it will be in both the Excavation and Topsoil quantities. This will be full compensation for Excavation, which includes necessary undercutting to provide space for placement of topsoil.

GENERAL GEOLOGY

The backslope excavation consists of the Minnelusa Formation overlying Pahasapa Limestone at depth. Each is described by the South Dakota Geological Survey as:

The *Minnelusa Formation* consists of variegated, yellow to red, gray to brown, pink to purple, and black, interbedded sandstone, siltstone, shale, limestone, dolomite, calcarenite, chert, and brecciated beds.

The *Pahasapa Limestone* consists of white, light gray to tan, fine- to medium-grained limestone and dolomite containing brown to gray chert. Solution features include collapse breccia, sinkholes, and caves.

CLASSIFICATION OF EXCAVATION

The proposed excavation consists of horizontally bedded sandstone, dolomite, and limestone over interbedded sandstone and shale displaced as part of a collapse feature in the lower 2/3 of the slope. Layers of folded and steeply dipping sandstone and limestone separate the collapsed sediments from the overlying horizontal beds. Due to differential weathering, folding, and collapse features at this site, the excavation within the Minnelusa Formation is extremely hard to typify. Blasting and other techniques associated with Unclassified/Rock Excavation may be necessary to complete the required grading.

SEQUENCE OF OPERATIONS

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department’s intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

1. Set up lane closure using Standard Plate 634.46. Refer to the Barrier Layout in the plans for two-way traffic locations.
2. Set up temporary traffic control barriers according to the Barrier Layout in the plans.
3. If blasting work is required,
 - a. For a period of 48 hours, use the Portable Changeable Message Signs to notify traffic of the blasting operation and traffic delay period.
 - b. Set up temporary traffic control using Standard Plate 634.30 in advance of the lane closure set up in Standard Plate 634.46.
 - c. Position a flagger with radios at the end of the taper, in each direction of travel to stop traffic for blasting operations.
 - d. Upon receiving the “All Clear” from the Contractor and after the debris has been removed from traveled lanes, traffic will be released.
 - e. Modify the Portable Changeable Message Signs to an appropriate message.
 - f. Remove temporary traffic control devices for Standard Plate 634.30.
4. Construct a construction entrance at the approach at Sta. 312+00 Rt.
5. Set up Truck Hauling signs for the approach at Sta. 312+00 Rt. in both directions on Hwy 14A.
6. Prior to hauling waste, set up traffic control devices for Standard Plate 634.30 in the eastbound direction.
7. Position a flagger in the eastbound lane to control traffic and allow trucks to enter Hwy 14A from the waste site.
8. Set up traffic control devices for Standard Plate 634.30 beginning at Camp 5 Road for westbound traffic.
9. Position a flagger in the westbound lane to control traffic for truck slowing to enter the waste site at Sta. 312+00 Rt.
10. Complete all work.
11. Remove traffic control devices.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor’s equipment will be repaired at no expense to the Department.

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Revised 11/5/2024 NJT

TEMPORARY PAVEMENT MARKING

Temporary flexible vertical markers (tabs) may be used as detailed in the specifications.

<u>White Tabs</u>	
Lane Closure Tapers:	1690 Ft
Lane Closure Lane Lines:	1830 Ft

<u>Yellow Tabs</u>	
Lane Closure Tapers:	990 Ft
Lane Closure Lane Lines:	700 Ft

TEMPORARY RAISED PAVEMENT MARKERS

Temporary raised pavement markers will be used for marking centerlines. Temporary raised pavement markers will be used on all new permanent surfacing sections of roadway and on existing surfacing where temporary marking locations are different than existing marking locations, unless noted or as directed by the Engineer.

Temporary raised pavement markers will be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface or with an adhesive approved by the Engineer.

All costs to furnish, install, replace if necessary, and remove the markers will be incidental to the contract unit price per foot for “Temporary Raised Pavement Markers”.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMS) will be installed at Sta. 250+00 and ~ 200 ft. east of Louis Road to notify drivers of the upcoming construction. The Contractor will program the portable changeable message signs with the following message:

ROAD WORK
STARTS (Date)

When work begins that will affect traffic patterns, the Contractor will re-program the PCMS with the messages related to the potential blasting operation that will be provided by the Engineer.

PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

TUBULAR MARKERS

The color of the tubular markers on centerline will be predominately orange.

All tubular markers will be a minimum of 28 inches in height. The base of the tubular marker should be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface after use. The pin used to connect the marker to the base will be of a type that will not puncture a vehicle tire if it should become dislodged from the base.

All costs for furnishing, installing, maintaining, and removing the tubular markers will be incidental to the contract unit price per each for “Tubular Marker”.

TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

Concrete barriers will be provided by the State and are available for pickup from the SDDOT Rapid City Maintenance Yard located on South Hwy 79 in Rapid City. The barriers will be hauled back to the SDDOT Rapid City Maintenance Yard when they are no longer needed on the project.

Barriers to be adjusted or moved will be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor will be replaced at no cost to the Department.

Concrete barrier sections will be placed as depicted in the plans to comply with clear zone requirements and as required by the Engineer. The barriers will be pinned and bolted together as directed by the Engineer.

All costs associated with picking the barriers up from the SDDOT Maintenance Yard, transporting, setting, connecting, and hauling them back to the SDDOT Maintenance Yard will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier.

After the initial placement, the concrete barriers may need to be adjusted. Adjustment of the barriers, where they do not need to be loaded on a truck for transport, will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier. All costs associated with removing, loading, unloading, and resetting of the barriers at a new site, will be incidental to the contract unit price per each for Remove and Reset Traffic Control Movable Concrete Barrier. No additional payment will be made for barriers that are not immediately reset at a new location on the project and stored on-site until they are either reset on the project or returned to the SDDOT as indicated in these plans.

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TEMPORARY CONCRETE BARRIER END PROTECTION

Crash attenuators meeting the requirements of NCHRP 350 or MASH TL-3 will be furnished and installed by the Contractor. Attachment of the attenuators to the concrete barriers will be by approved methods.

All costs associated with furnishing, transporting, initial setup, connecting, maintaining, and removing the crash attenuators will be incidental to the contract unit price per each for Temporary Concrete Barrier End Protection.

All costs associated with moving and resetting crash attenuators to accommodate traffic flows after initial set-up will be paid for at the contract unit price per each for Remove & Reset Temporary Concrete Barrier End Protection. No additional payment will be made for crash attenuators that are not immediately reset at a new location on the project and stored on-site until they are either reset or removed from the project as determined by the Engineer. No additional payment will be made for minor adjustments.

The Contractor will have replacement hardware available so that in the event the crash attenuator is hit and made unusable, the crash attenuator can be made functional within 24 hours. The cost of replacement will be incidental to the contract unit price per each for Temporary Concrete Barrier Module Set or Repair Kit. No payment will be made for the Temporary Concrete Barrier Module Set or Repair Kit if no repairs are necessary. Upon completion of the project, crash attenuators will remain the property of the Contractor.

BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS

A linear delineation system (LDS) panel will be attached to each barrier section. The color will be the same as the nearest pavement marking, white along outside edgelines or yellow for the left side on one way traffic sections. The LDS will be 34 inches long and 6 inches in height and be constructed of aluminum formed into a shape to provide retroreflective properties across a wide range of angles. It will be sheeted with sheeting meeting the requirements of ASTM D4956 Type XI. The panels will be evenly spaced, with the top of the panel 4 inches below the top of the barrier. Installation will be as per the manufacturer’s recommendations. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color. The Contractor will furnish and install one panel along each side of the barrier if any panels are missing from the barriers. Replacement of damaged linear delineation system panels will be furnished and replaced by the Contractor. All costs associated with furnishing, installing, and replacing, if needed, will be incidental to the contract unit price per each for Linear Delineation System Panel, Barrier Mounted.

All LDS panels will remain attached to the barrier sections and will become the property of the State of South Dakota upon completion of the project.

The Contractor will verify the number of LDS panels that will need to be installed or replaced on the Traffic Control Movable Concrete Barriers. The contract amount of LDS panels is an estimate and the full contract amount may not be needed.

Maintaining the linear delineation system, including moving LDS panels from one side of the barrier to the other side of the barrier to match the applicable color of the nearest pavement marking will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

CONSTRUCTION ENTRANCE

The Contractor will install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

If the Contractor elects to use one of the products listed in the table, then the Contractor will install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance will be routinely inspected, and the Contractor will repair or replace material as deemed necessary by the Engineer.

All costs for furnishing, installing, maintaining, and removal of the construction entrance including equipment, labor, materials, and incidentals will be included in the contract unit price per each for "Construction Entrance".

The following table is a list of known construction entrance products available for use:

Product	Manufacturer
Grizzly Rumble Grate (10' width and 24' length required)	Trackout Control, LLC Tempe, AZ Phone: 1-800-761-0056 www.trackoutcontrol.com
Pro Grid (12' width and 24' length including combination of grids and ramps required)	Pro-Tec Equipment, Inc. Charlotte, MI Phone: 1-800-292-1225 www.pro-tecequipment.com
Tracking Pad (12' width and 24' length (2 – 12'x12' pads) and 2 – 4'x4' turning flares)	Tracking Pads LLC Commerce City, CO Phone: 1-303-501-5640 www.trackingpads.com
FODS Trackout Control Mat (12' width and 5 mats to get a 35' length)	FODS, LLC Denver, CO Phone: 1-844-200-3637 http://www.getfods.com
DuraDeck and MegaDeck HD An adequate quantity is needed to prevent tires from becoming muddy (does not remove mud)	Signature Systems Group, LLC Flower Mound, TX Phone: 1-800-931-7301 https://www.signature-systems.com/
Track-Out Control Mat (10' width and 24' length required)	RubberForm Recycled Products, LLC Lockport, NY Phone: 1-716-478-0408 www.rubberform.com

SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor will install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material will be obtained from a granular source and will conform to the following gradation:

Sieve Size	Percent Passing
6"	100%
#4	0-60%
#200	0-20%

The pit run material will be compacted to the satisfaction of the Engineer.

The aggregate for the granular material will conform to the following gradation requirements:

Sieve Size	Percent Passing
3"	100%
2 ½"	90-100%
1 ½"	25-60%
¾"	0-10%
½"	0-5%

The granular material will be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The Reinforcement Fabric (MSE) will be in conformance with Section 831 of the Specifications. The Reinforcement Fabric (MSE) will be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The Reinforcement Fabric (MSE) should be kept as taut as possible prior to placing.

Equipment will not be allowed on the Reinforcement Fabric (MSE) until the first lift of granular material is in place.

All seams in the Reinforcement Fabric (MSE) will be overlapped at least 2' and shingled.

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INVENTORY OF TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W1-4	REVERSE CURVE (L or R)	2	48" x 48"	16.0	32.0
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W6-3	TWO WAY TRAFFIC (symbol)	2	48" x 48"	16.0	32.0
W7-3aP	NEXT _1_ MILES (plaque)	2	36" x 30"	7.5	15.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6
W16-2P	___ FEET (supplemental distance plaque)	2	30" x 24"	5.0	10.0
W20-1	ROAD WORK AHEAD	6	48" x 48"	16.0	96.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			375.6

PLACING TOPSOIL

The thickness will be approximately 4 inches within the right-of-way and 6 inches on temporary easements.

The estimated amount of topsoil to be placed is as follows:

Station	to	Station	Topsoil (CuYd)
a 281+00		a 289+00	36
a 303+35		a 311+53	3,282
Total:			3,318

TABLE OF SEEDING, FIBER MULCHING, & FERTIZILING

Location		Area	Type A Permanent Seed Mixture	Cover Crop Seeding	Fiber Mulching	Fertilizing
Station to	Station	(Acre)	(Lb)	(Bu)	(Ton)	(Lb)
Highway Ditch		0.5	9	0.5	0.5	51
a 281+00	a 289+00					
Waste Site		6.8	122	6.8	6.8	680
a 303+35	a 311+53					
TOTALS:			132	7.3	7.3	731

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The mycorrhizal inoculum will be as shown below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 www.reforest.com

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

Type A Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Green Needlegrass	Lodorm, AC Mallard Ecovar	4
Sideoats Grama	Butte, Pierre	3
Blue Grama	Bad River	2
Canada Wildrye	Mandan	2
Total:		18

FIBER MULCHING

Fiber mulch will be applied in a separate operation following permanent seeding.

An additional 2% by weight of tackifier will be added to the fiber mulch product selected from the approved product list. If the product selected has guar gum tackifier included, then the additional 2% of tackifier will be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier will be synthetic.

Fiber mulch will be applied at the rate of 2,000 pounds per acre.

The Contractor will allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials will be incidental to the contract unit price per ton for “Fiber Mulching”.

The fiber mulch provided will be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:

<http://apps.sd.gov/HC60ApprovedProducts/main.aspx>

FERTILIZING

A commercial fertilizer with a minimum guaranteed analysis of 13-13-13, 18-46-0, 11-52-0, or an approved alternate fertilizer sold for use as a lawn starter fertilizer will be applied to all areas designated for permanent seeding. The application rate of fertilizer will be 100 pounds per acre.

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor will provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles will remain on the project until vegetation has been established and then they will be removed in accordance with the Engineer.

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

<http://apps.sd.gov/HC60ApprovedProducts/main.aspx>

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TABLE OF EROSION CONTROL WATTLE

Station	Location	Diameter (Inch)	Quantity (Ft)
A 281+25 L	Highway Ditch Channel	12	30
A 291+90 L	Highway Ditch Channel	12	30
Additional Quantity:		12	100
Total:			160

HIGH FLOW SILT FENCE

The high flow silt fence fabric provided will be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

<http://apps.sd.gov/HC60ApprovedProducts/main.aspx>

High flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

TABLE OF HIGH FLOW SILT FENCE

Station	Location	Quantity (Ft)
a 281+30 L	Inlet End of Pipe	60
a 291+85 L	Inlet End of Pipe	60
a 303+35 to a 311+53 R	Perimeter Control – Waste Site	1,500
Total:		1,620

REPAIR SILT FENCE

Silt fence will be repaired as needed in accordance with Standard Plate 734.05 at the locations listed in the Table of High Flow Silt Fence.

MUCKING SILT FENCE

Mucking silt fence will consist of removing muck trapped by the silt fence and spreading the material evenly over the adjacent area to conform to the existing grade.

REMOVE SILT FENCE

Silt fence will be removed when vegetation is established. Some or all of the silt fence may be left on the project until vegetation is established.

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST
*(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION
To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

- 5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES**
- **5.3 (3a): Project Limits** (See Title Sheet)
 - **5.3 (3a): Project Description** (See Title Sheet)
 - **5.3 (4): Site Map(s)** (See Title Sheet and Plans)
 - **Major Soil Disturbing Activities** (check all that apply)
 - ☒ Clearing and grubbing
 - ☒ Excavation/borrow
 - ☒ Grading and shaping
 - ☒ Filling
 - ☐ Other (describe):
 - **5.3 (3b): Total Project Area** 13.6 acres
 - **5.3 (3b): Total Area to be Disturbed** 10.7 acres
 - **5.3 (3c): Maximum Area Disturbed at One Time** 10.7 acres
 - **5.3 (3d): Existing Vegetative Cover (%)**
 - **5.3 (3d): Description of Vegetative Cover**
 - **5.3 (3e): Soil Properties:**
 - **5.3 (3f): Name of Receiving Water Body/Bodies** Boulder Creek
 - **5.3 (3g): Location of Construction Support Activity Areas**

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install stabilized construction entrance(s).	
Install perimeter protection where runoff may exit site.	
Install perimeter protection around stockpiles.	
Install channel and ditch bottom protection.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Stabilize disturbed areas.	
Final grading.	
Removal of protection devices.	
Reseed areas disturbed by project activities.	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES
All controls will be maintained in good working order. Necessary repairs will

be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)	
Description	Estimated Start Date
☐ Natural Buffers (within 50 ft of Waters of State)	
☒ Silt Fence	
☒ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls	
Description	Estimated Start Date
☒ Silt Fence	
☐ Temporary Berm/Windrow	
☒ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☐ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☐ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

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Dust Controls	
Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☐ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs	
Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
☐ Other:	

Stabilization Practices (See Detail Plan Sheets)
(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (3.18))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
☒ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☐ Mulching (Grass Hay or Straw)	
☐ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☐ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
☐ 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.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- 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 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 1/2 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 Erosion Control Supervisor are responsible for inspections. Maintenance and 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.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

- **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/or 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.
 - Hazardous Materials
 - Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
 - 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 stormwater system or stormwater treatment system.
- Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

➤ **Spill Control Practices**

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 cleanup 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 cleanup 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.

➤ **Spill Response**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater 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 SDDANR.
- Personnel with primary responsibility for spill response and cleanup 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.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

➤ **Waste Disposal**

- All liquid waste materials will be collected and stored in approved sealed containers. 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. The Contractor is responsible for ensuring 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 Contractor 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 which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

5.3 (9): CONSTRUCTION SITE POLLUTANTS

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 heading “POLLUTION PREVENTION PROCEDURES” (check all that apply).

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

Product Specific Practices

- **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 stormwater. 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 facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater 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.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: 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 release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
 - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
 - The release or spill causes an immediate danger to human health or safety
 - The release or spill exceeds 25 gallons
 - The release or spill causes a sheen on surface water
 - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
 - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
 - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
 - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.
- To report a release or spill, call SDDANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge will be sent to SDDANR within 14 days of the discharge.

5.4: SWPPP 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.

Authorized Signature (See the General Permit, Section 7.4 (1))

➤ 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

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➤ Contractor Information:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____ State: _____ Zip: _____
- Office Phone: _____ Field: _____
- Cell Phone: _____ Fax: _____

➤ Erosion Control Supervisor

- Name: _____
- Address: _____
- _____
- City: _____ State: _____ Zip: _____
- Office Phone: _____ Field: _____
- Cell Phone: _____ Fax: _____

➤ SDDOT Project Engineer

- Name: _____
- Business Address: _____
- Job Office Location: _____
- City: _____ State: _____ Zip: _____
- Office Phone: _____ Field: _____
- Cell Phone: _____ Fax: _____

➤ SDDANR Contact Spill Reporting

- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➤ SDDANR Contact for Hazardous Materials.

- (605) 773-3153

➤ National Response Center Hotline

- (800) 424-8802.

➤ SDDANR Stormwater Contact Information

- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➤ 5.5 (1): Conditions Requiring SWPPP Modification

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➤ 5.5 (2): Deadlines for SWPPP Modification

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➤ 5.5 (3): Documentation of Modifications to the Plan

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

➤ 5.5 (4): Certification Requirements

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➤ 5.5 (5): Required Notice to Other Operators

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

PAVEMENT MARKING PAINT

The Contractor will be required to repaint all disturbed existing pavement markings including centerline, edge line, and lane lines. This list is approximate. The Contractor will be required to document and be able to relocate for replacement of the existing before the markings are obliterated. The cost to duplicate the existing marking locations will be incidental to the contract unit prices for the various contract items.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer’s recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4” line = 22.5 Gals/Mile
Dashed 4” line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor, and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

REMOVE PAVEMENT MARKING, 4” OR EQUIVALENT

Markings that fall outside of the new groove will be obliterated using additional methods approved by the Engineer. Removal of the existing markings will be accomplished without causing damage to the pavement, pavement joints, or joint sealant. The Contractor will repair any damage to the pavement, pavement joints, or joint sealant for no additional payment and at no cost to the State. All costs for materials, labor, and equipment necessary to remove the existing markings will be incidental to the contract unit price per foot for “Remove Pavement Marking, 4” or Equivalent”.

TABLE OF PAVEMENT MARKING QUANTITIES

Location		High Build Waterborne Pavement Marking Paint, 4" White (Ft)	High Build Waterborne Pavement Marking Paint, 4" Yellow (Ft)	Remove Pavement Marking, 4" or Equivalent (Ft)
Station to	Station			
a 281+00	a 289+00	2,500	4,000	2,000
Totals:		2,500	4,000	2,000

REMOVE SIGN FOR RESET AND RESET SIGN

Signs that are scheduled for reset will be dismantled and reassembled to the extent needed by the Contractor to properly reset the sign. Signs will be handled with care so that the existing signs, posts, and bases are not damaged during the relocation process. The Contractor will replace and pay for any reset signs damaged in their care.

All costs for removing, dismantling, and disposing of any existing posts will be incidental to the contract unit price per each for “Remove Sign for Reset”. All costs for resetting the existing signs will be incidental to the contract unit price per each for “Reset Sign”. All quantities for Remove Sign for Reset and Reset Sign will be per assembly at the contract unit price per each.

TABLE FOR PERMANENT SIGNING

Station	L/R	Remove Sign for Reset (Each)	Reset Sign (Each)	Description
a 288+72	L	1	1	Think Why Die
Totals:		1	1	

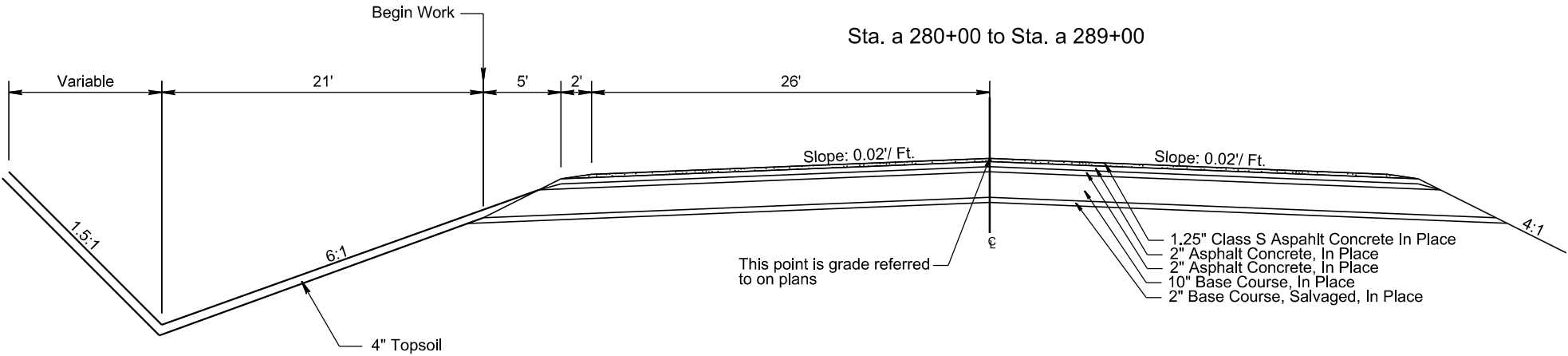
TABLE OF DELINEATORS

Location	L/R	Remove Delineator for Reset (Each)	Reset Delineator (Each)
a 281+33	L	1	1
a 287+80	L	1	1
Totals:		2	2

TYPICAL GRADING SECTION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	14	54

Plotting Date: 10/15/2024



Plot Scale - 1:10

Plotted From - TRRC11626

CONTROL DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	15	54

HORIZONTAL AND VERTICAL CONTROL POINTS						
POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
14A 43.65			REFMRK ALUM CAP	223747.217	1006230.060	4713.102
14A 46.80			REFMRK ALUM CAP	223619.366	1022190.730	4189.595
14A 47.75			REFMRK ALUM CAP	226090.946	1025823.523	4065.826
FLY50			5/8"x30" REBAR	224951.831	1014465.216	4367.731
FLY51			5/8"x30" REBAR	224884.136	1015486.151	4345.634
FLY52			5/8"x30" REBAR	224844.005	1016562.920	4323.558
FLY53			5/8"x30" REBAR	224645.799	1017475.067	4298.999
FLY54			5/8"x30" REBAR	224294.741	1018339.407	4272.419
FLY55			5/8"x30" REBAR	223619.325	1019050.327	4244.453
FLY56			5/8"x30" REBAR	223349.245	1020037.833	4208.425
FLY57			5/8"x30" REBAR	223342.128	1021081.695	4213.170
FLY58			5/8"x30" REBAR	223644.754	1021778.254	4186.294
FLY59			5/8"x30" REBAR	223969.085	1022916.510	4218.373

HORIZONTAL ALIGNMENT DATA

US 14A

Type	Station			Northing	Easting
PT	a 274+30.61			223419.808	1019645.446
		TL= 1052.26	S 84°49'39" E		
PC	a 284+82.87			223324.943	1020693.421
PI	a 287+48.00	R = 840.20	Delta = 35°01'35" L	223301.041	1020957.468
PT	a 289+96.51			223433.018	1021187.412
		TL= 278.39	N 60°08'46" E		
PC	a 292+74.90			223571.596	1021428.856

WASTE SITE

Type	Station			Northing	Easting
POB	0+00.00			224193.664	1023095.812
		TL= 179.24	175°39'26"		
PC	1+79.24			224014.937	1023109.384
PI	2+20.46	R = 600.00	Delta = 7°51'35" R	223973.838	1023112.505
PT	2+61.55			223932.698	1023109.977
		TL= 738.88	183°31'01"		
POE	10+00.43			223195.205	1023064.652

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone (NAD 83/2011); epoch 2010.00
Geoid 12A; SF = 0.99982996
The elevations shown on this sheet are based on NAVD 88.

Plot Scale - 1:200

Plotted From - TRR011626

LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	16	54

Plotting Date: 10/15/2024

Anchor		Mailbox		Subsurface Utility Exploration Test Hole		State and National Line	
Antenna		Manhole Electric		Telephone Fiber Optics		County Line	
Approach		Manhole Gas		Telephone Junction Box		Section Line	
Assumed Corner		Manhole Miscellaneous		Telephone Pole		Quarter Line	
Azimuth Marker		Manhole Sanitary Sewer		Television Cable Jct Box		Sixteenth Line	
BBQ Grill/ Fireplace		Manhole Storm Sewer		Television Tower		Property Line	
Bearing Tree		Manhole Telephone		Test Wells/Bore Holes		Construction Line	
Bench Mark		Manhole Water		Traffic Sign Double Face		ROW Line	
Box Culvert		Merry-Go-Round		Traffic Sign One Post		New ROW Line	
Bridge		Microwave Radio Tower		Traffic Sign Two Post		Cut and Fill Limits	
Brush/Hedge		Miscellaneous Line		Traffic Signal		Control of Access	
Buildings		Miscellaneous Property Corner		Trash Barrel		New Control of Access	
Bulk Tank		Miscellaneous Post		Tree Belt		Proposed ROW	
Cattle Guard		Overhang Or Encroachment		Tree Coniferous		(After Property Disposal)	
Cemetery		Overhead Utility Line		Tree Deciduous			
Centerline		Parking Meter		Tree Stumps		Drainage Arrow	
Cistern		Pedestrian Push Button Pole		Triangulation Station			
Clothes Line		Pipe With End Section		Underground Electric Line		Remove Concrete Pavement	
Concrete Symbol		Pipe With Headwall		Underground Gas Line		Remove Concrete Driveway Pavement	
Control Point		Pipe Without End Section		Underground High Pressure Gas Line		Remove Asphalt Concrete Pavement	
Creek Edge		Playground Slide		Underground Sanitary Sewer		Remove Concrete Sidewalk	
Curb/Gutter		Playground Swing		Underground Storm Sewer		Remove Concrete Median Pavement	
Curb		Power And Light Pole		Underground Tank		Remove Concrete Curb and/or Gutter	
Dam Grade/Dike/Levee		Power And Telephone Pole		Underground Telephone Line			
Deck Edge		Power Meter		Underground Television Cable		Detectable Warning	
Ditch Block		Power Pole		Underground Water Line		Pedestrian Push Button Pole	
Doorway Threshold		Power Pole And Transformer		Water Fountain		and 30" x 48" Clear Space	
Drainage Profile		Power Tower Structure		Water Hydrant		with 1.5% slope	
Drop Inlet		Propane Tank		Water Meter			
Edge Of Asphalt		Property Pipe		Water Tower			
Edge Of Concrete		Property Pipe With Cap		Water Valve			
Edge Of Gravel		Property Stone		Water Well			
Edge Of Other		Public Telephone		Weir Rock			
Edge Of Shoulder		Railroad Crossing Signal		Windmill			
Electric Transformer/Power Junction Box		Railroad Milepost Marker		Wingwall			
Fence Barbwire		Railroad Profile		Witness Corner			
Fence Chainlink		Railroad ROW Marker					
Fence Electric		Railroad Signs					
Fence Miscellaneous		Railroad Switch					
Fence Rock		Railroad Track					
Fence Snow		Railroad Trestle					
Fence Wood		Rebar					
Fence Woven		Rebar With Cap					
Fire Hydrant		Reference Mark					
Flag Pole		Retaining Wall					
Flower Bed		Riprap					
Gas Valve Or Meter		River Edge					
Gas Pump Island		Rock And Wire Baskets					
Grain Bin		Rockpiles					
Guardrail		Satellite Dish					
Gutter		Septic Tank					
Guy Pole		Shrub Tree					
Haystack		Sidewalk					
Highway ROW Marker		Sign Face					
Interstate Close Gate		Sign Post					
Iron Pin		Slough Or Marsh					
Irrigation Ditch		Spring					
Lake Edge		Stream Gauge					
Lawn Sprinkler		Street Marker					

Retain Pipe at the following locations:
a 275+75
a 279+78
a 281+31

a 281+30 L
Remove and Reset 24" RCP Sloped End

Remove and Reset Delineators at the following locations:
a 281+33 L
a 287+80 L

a 288+72
Remove and Reset Sign
(Think Why Die)

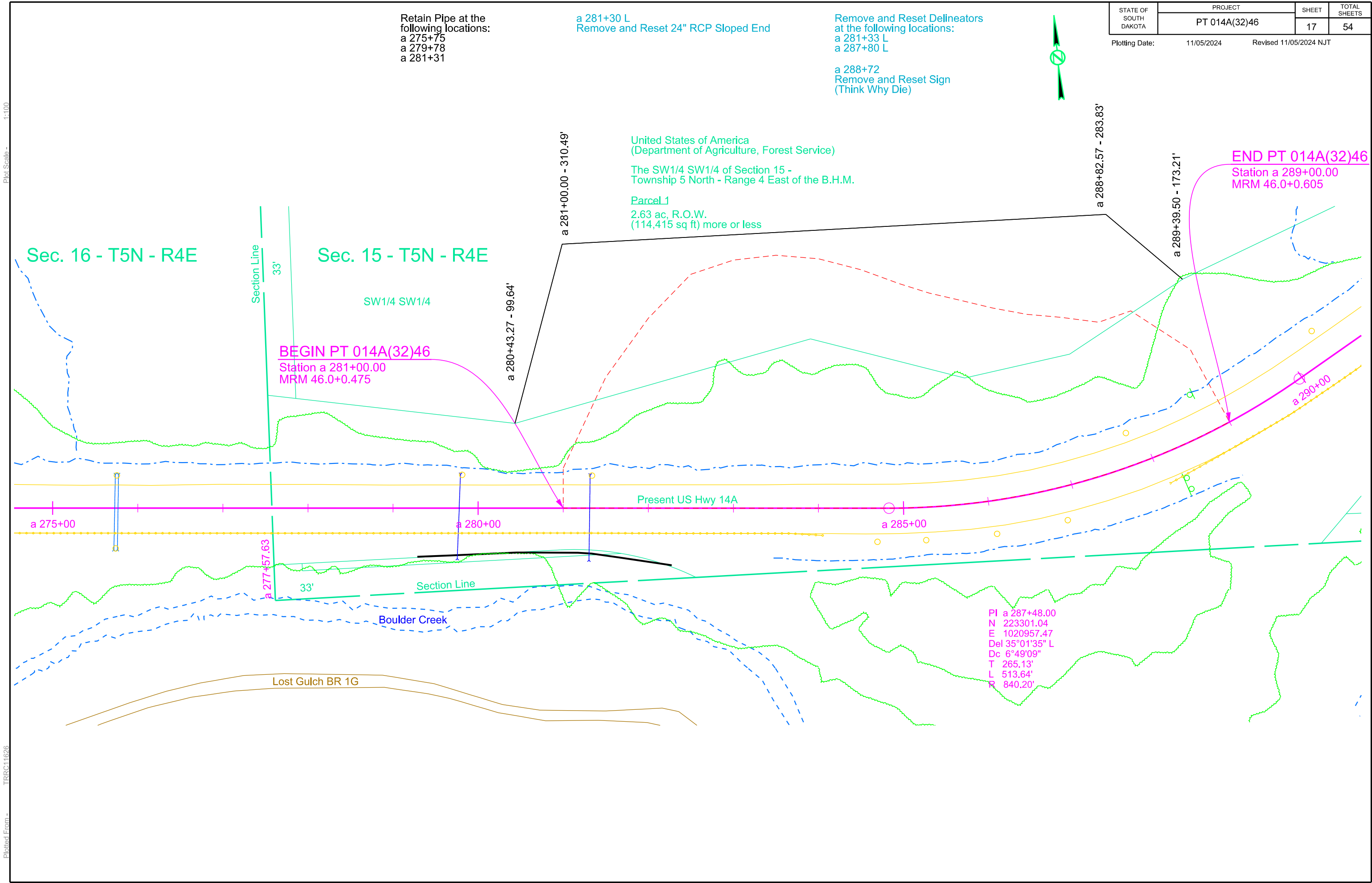
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	17	54

Plotting Date: 11/05/2024 Revised 11/05/2024 NJT



Plot Scale - 1:100

Plotted From - TRR011626



File - ...lpj\Lawr08\LU\Design\280.dgn

WASTE SITE

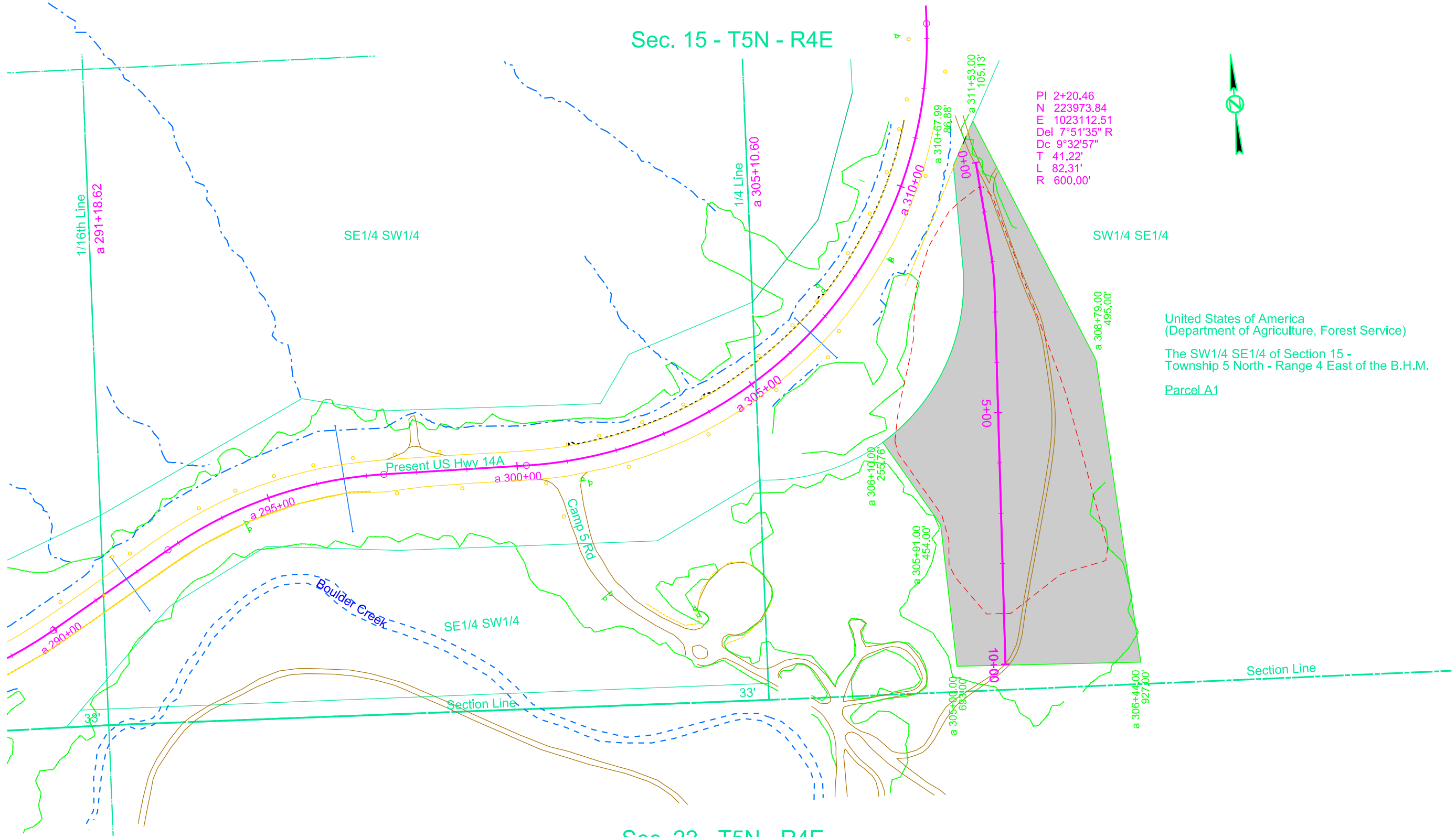
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	18	54

Plotting Date: 10/30/2024 Revised 10/24/2024 NJT

Plot Scale - 1:200

TRR011626

Plotted From -



PI 2+20.46
N 223973.84
E 1023112.51
Del 7°51'35" R
Dc 9°32'57"
T 41.22'
L 82.31'
R 600.00'

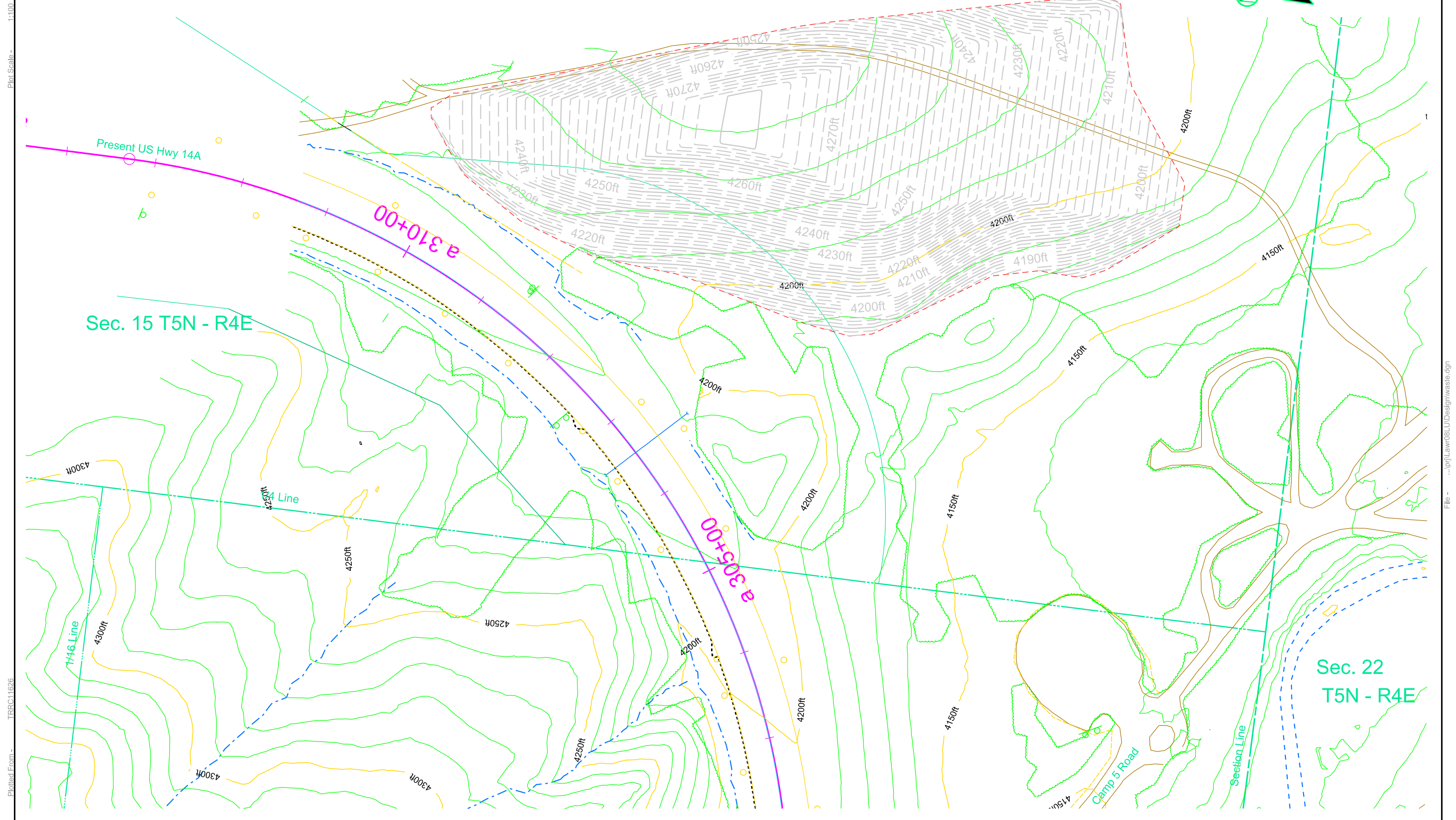
United States of America
(Department of Agriculture, Forest Service)

The SW1/4 SE1/4 of Section 15 -
Township 5 North - Range 4 East of the B.H.M.

Parcel A1

Parcel A1
a 306+10.00 to a 311+53.00 R
Temporary Easement containing
6.8 ac, more or less

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	19	54





PROJECT	SECTION	SHEET
PT 014A(32)46	20	54

Plotting Date: 10/23/2024

WASTE SITE

PVI 3+98.02
Elev 4290.51
L 200.00
G1 +20.00%
G2 -20.00%
K 5

PVI 0+00.00
Elev 4224.66

PVI 0+69.40
Elev 4224.78
L 80.00
G1 +0.1735%
G2 +20.00%
K 4

+0.1735%

+20.00%

-20.00%

4224.66
0+00

4231.01

4250.90

4270.90

4280.50

4270.11

4250.11

5+00

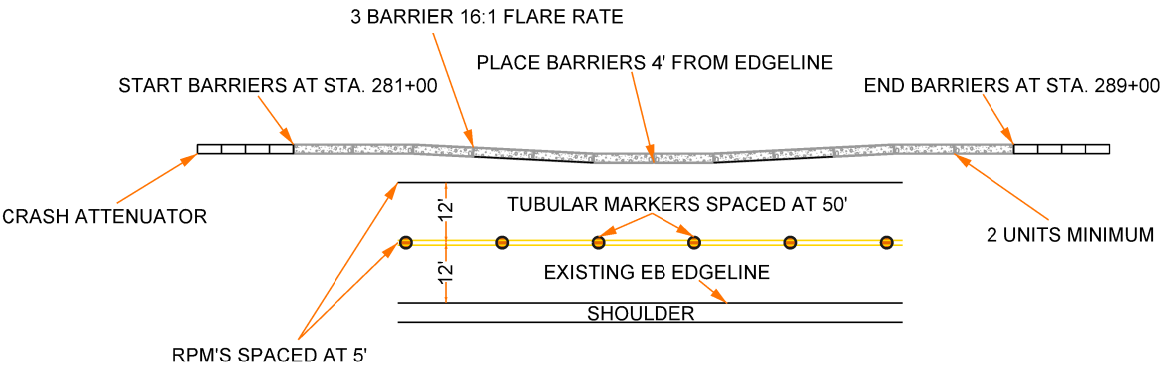
TRAFFIC CONTROL & MOVABLE CONCRETE BARRIER LAYOUT

START RIGHT LANE CLOSURE TAPER HERE USING STANDARD PLATE 634.46

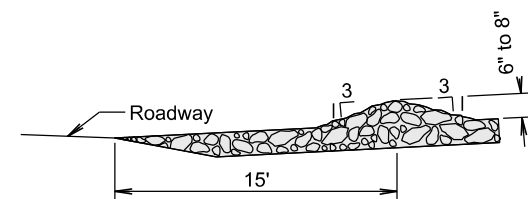


START LEFT LANE CLOSURE TAPER HERE USING STANDARD PLATE 634.46

NOTE: GRABBER CONES TO BE PLACED AT A 100' SPACING ALONG THE WB EDGELINE



Plot Scale - 1:200



15' (Min.)

12" of Granular Material

12" Pit Run Material

Reinforcement Fabric (MSE)

SECTION B-B

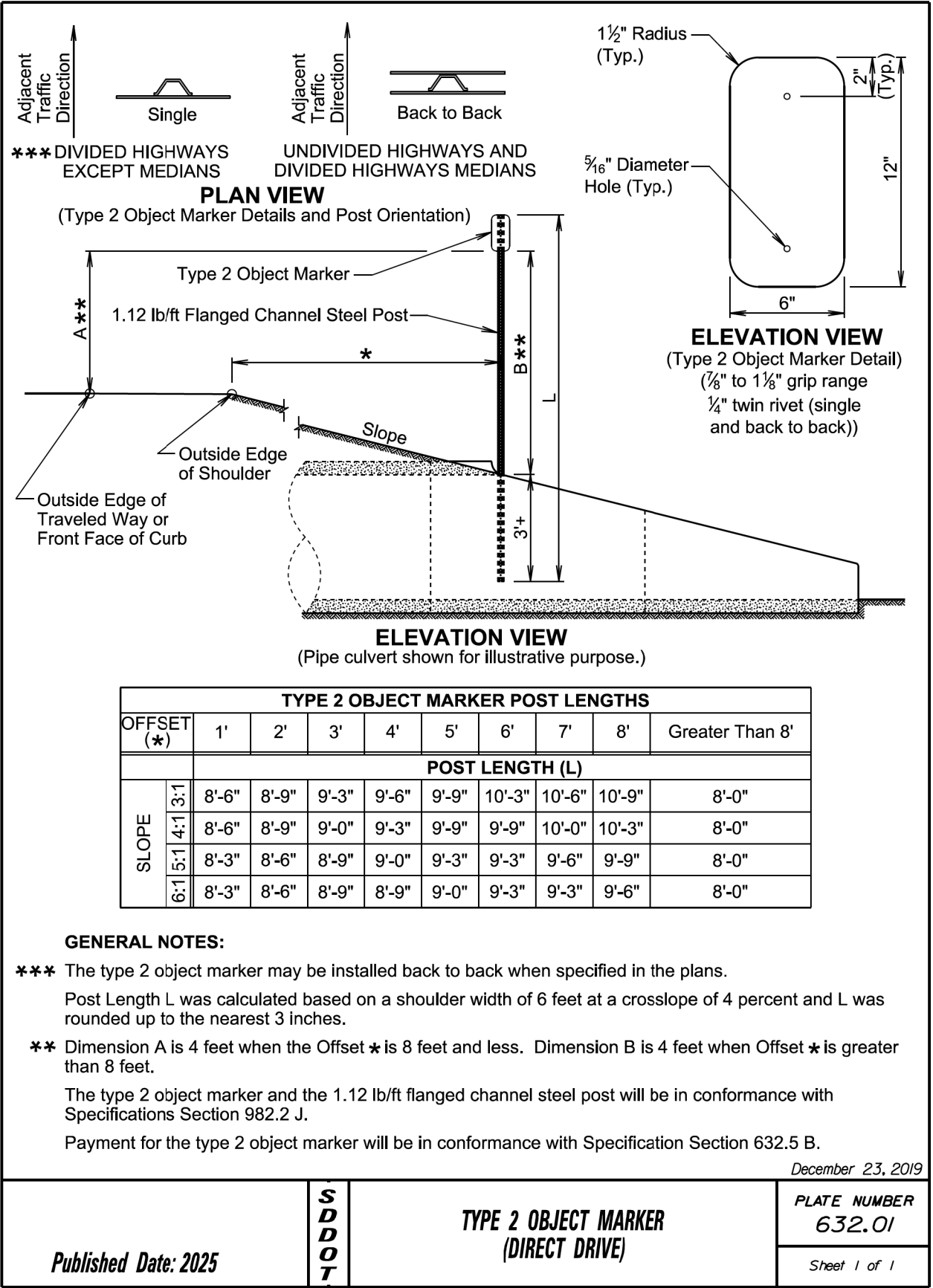
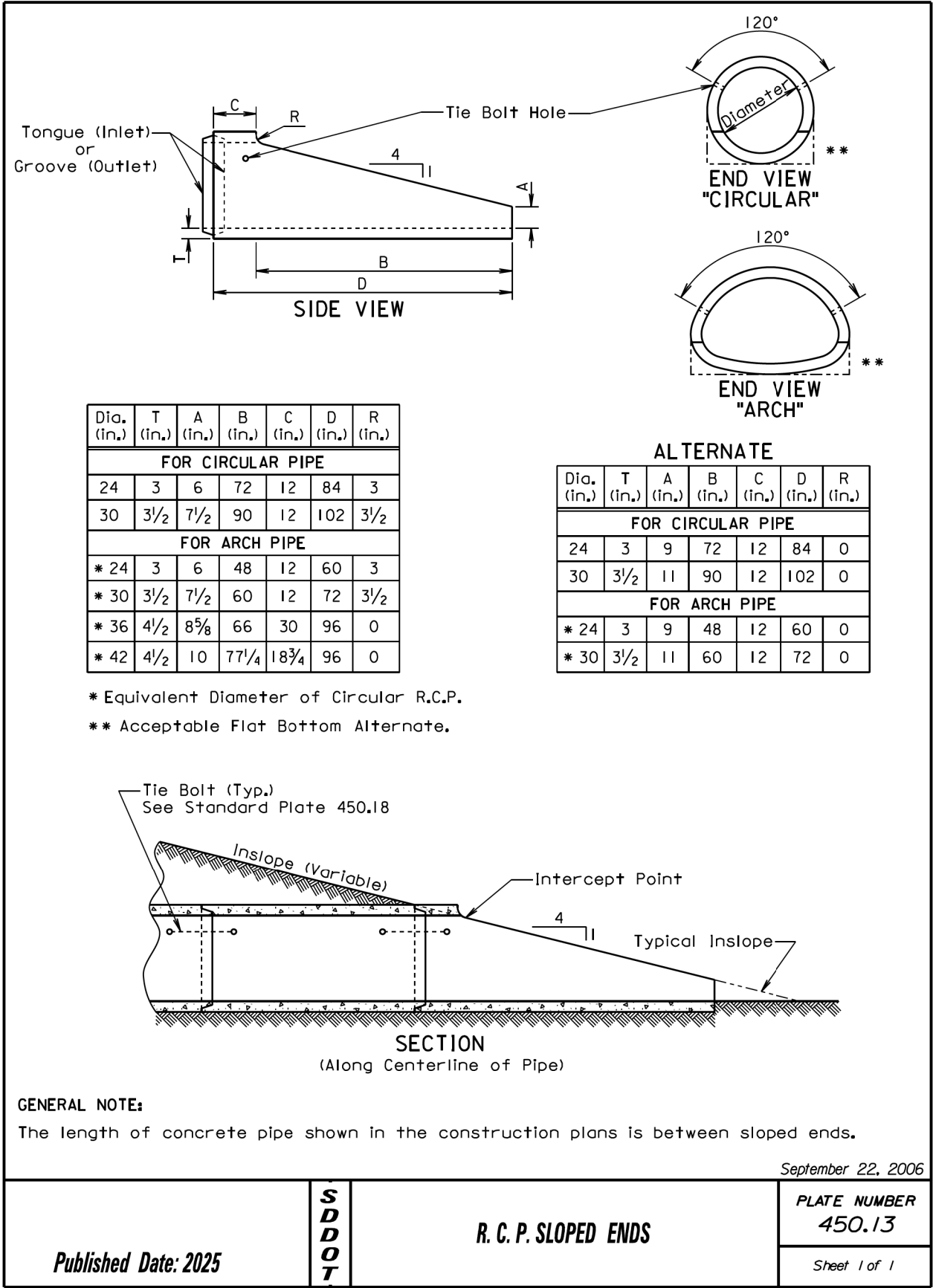
Plotted From - TRRC11626

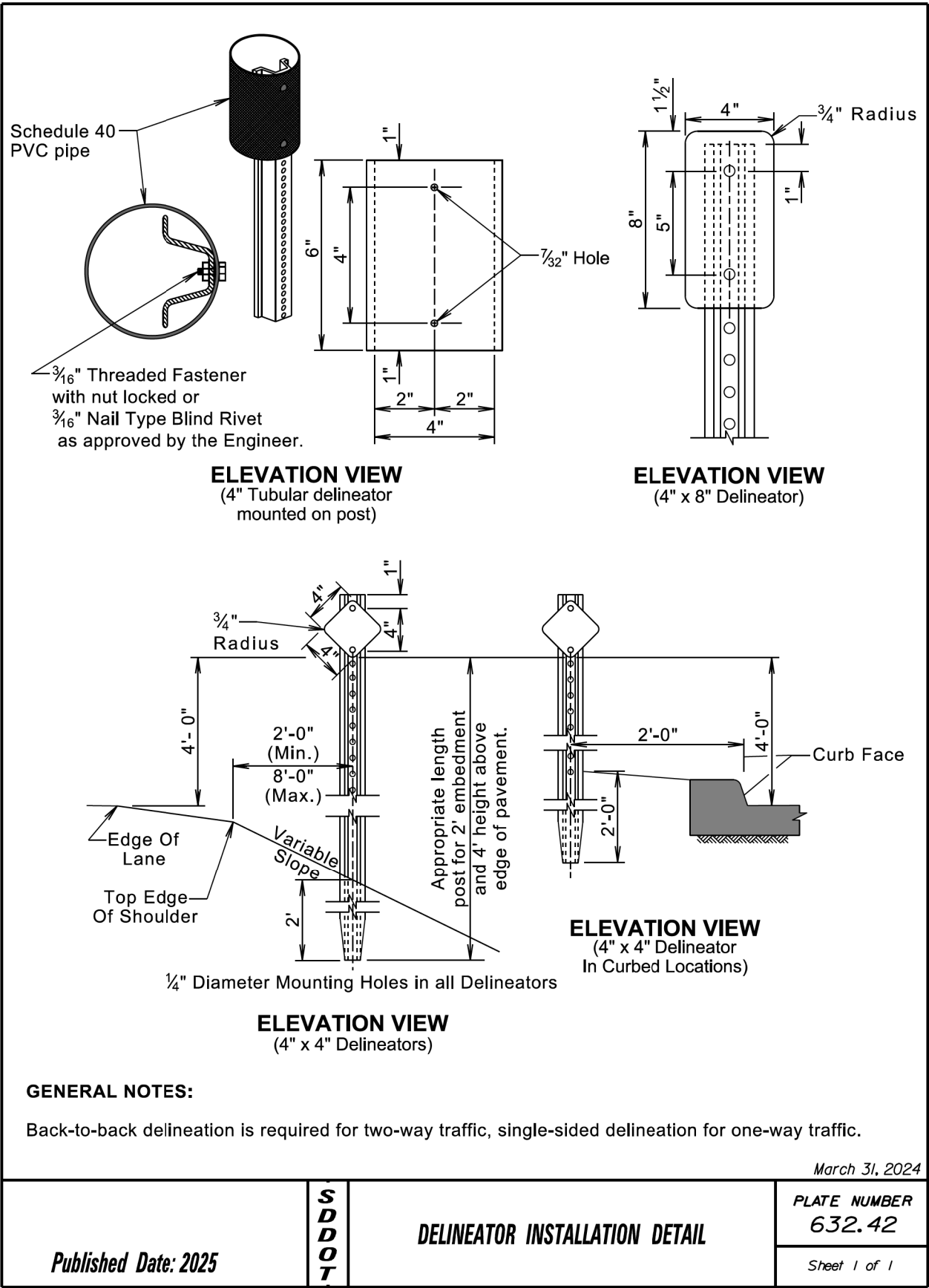
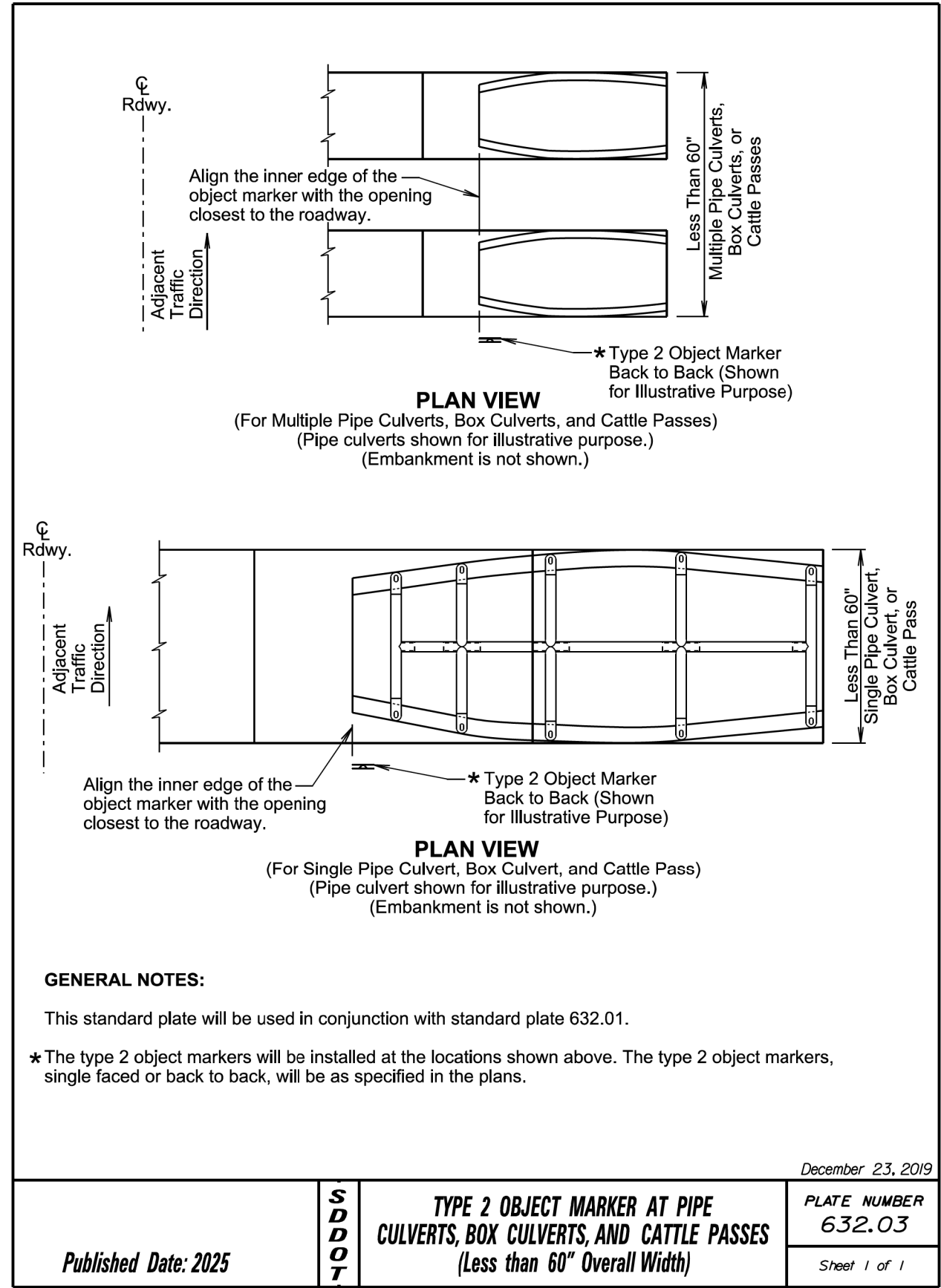
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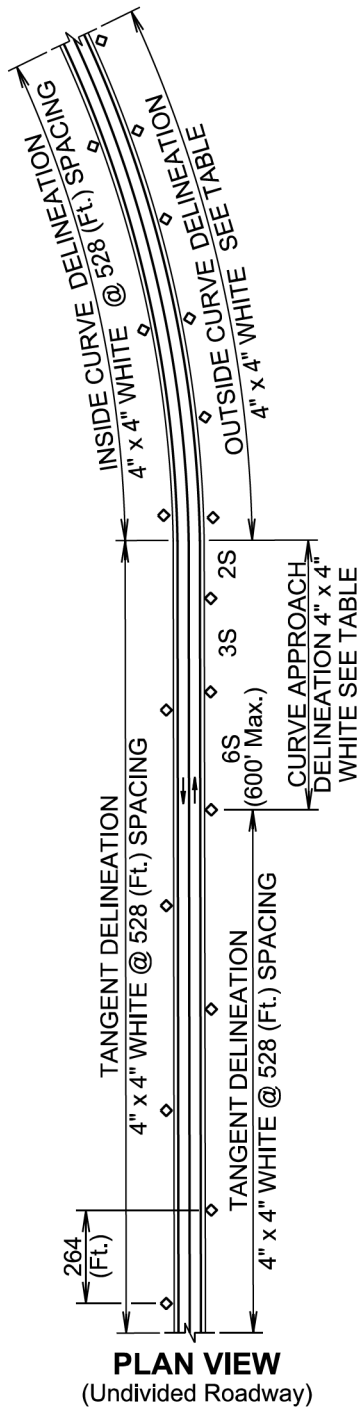
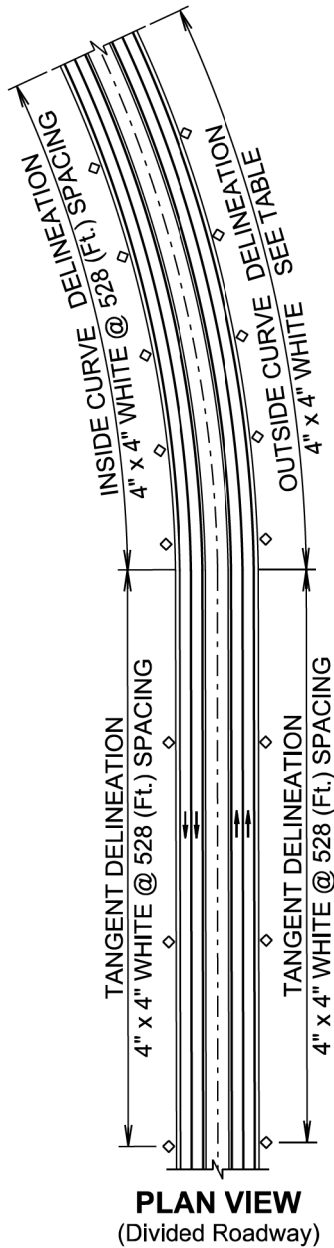
SECTION A-A

The diagram illustrates a cross-section of a road improvement project. On the left, an 'Existing Surface' is shown. A '15' (Min.)' dimension line indicates the length of the proposed structure. The structure consists of a top layer of '12" of Granular Material' and a bottom layer of '12" Pit Run Material'. A 'Reinforcement Fabric (MSE)' is shown between the two layers. The diagram also shows a dashed line representing the original ground surface and a solid line representing the proposed road profile.

PARALLEL TO ROADWAY







March 31, 2024

<i>Published Date: 2025</i>	S D D O T	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 1 of 2

GENERAL NOTES:

Delineators will be located from 2 to 8 feet outside of the outer edge of shoulder. When a roadside barrier or other obstruction intrudes into the space between the pavement edge and the extension of the line of delineators, the delineators should be in line with the barrier or in line with the innermost edge of the obstruction.

When normal spacing is interrupted by driveways, crossroads, or approaches, delineators falling within such areas may be moved in either direction a distance not exceeding one-quarter of the standard spacing. Delineators still falling within such areas should be eliminated.

The spacing for specific radii may be interpolated from the table. The minimum spacing should be 20 feet. The spacing on curves should not exceed 300 feet. In advance of or beyond a curve, and proceeding away from the end of the curve, the spacing of the first delineator is 2S, the second 3S, and the third 6S, but not to exceed 300 feet. S refers to the delineator spacing for specific radii computed from the formula $S = 3\sqrt{R - 50}$. The distances for S shown in the table were rounded to the nearest 5 feet.

Curve approach delineation is not required if curve delineation spacing exceeds 100 ft.

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

DELINEATOR SPACING OUTSIDE CURVE				
Radius of Curve (Ft.)	Curve Delineator Spacing (Ft.)	Curve Approach Spacing (Ft.)		
		A	B	C
50	20	40	65	125
115	25	50	75	150
150	30	60	90	180
180	35	70	110	215
250	40	85	125	250
300	45	95	140	285
400	55	110	170	300
500	65	125	190	300
600	70	140	210	300
700	75	150	230	300
800	80	165	245	300
900	85	175	260	300
1000	90	185	275	300

March 31, 2024

<i>Published Date: 2025</i>	S D D O T	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 2 of 2

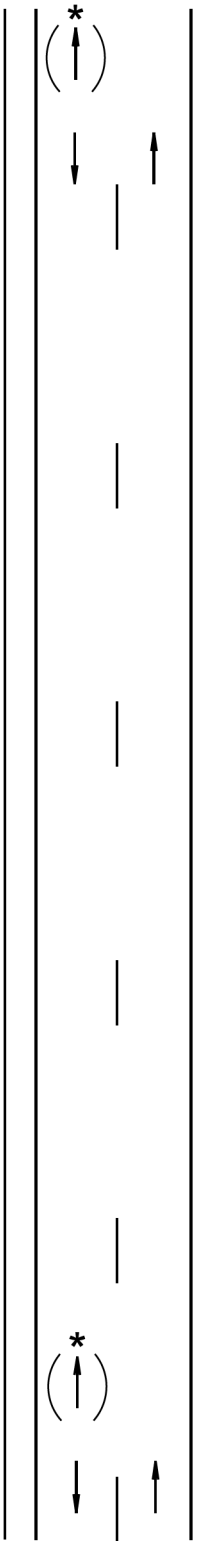
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will 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.

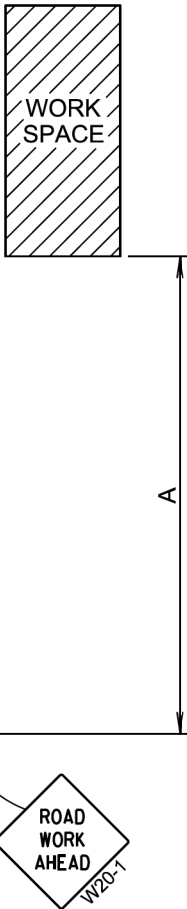
The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* 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.

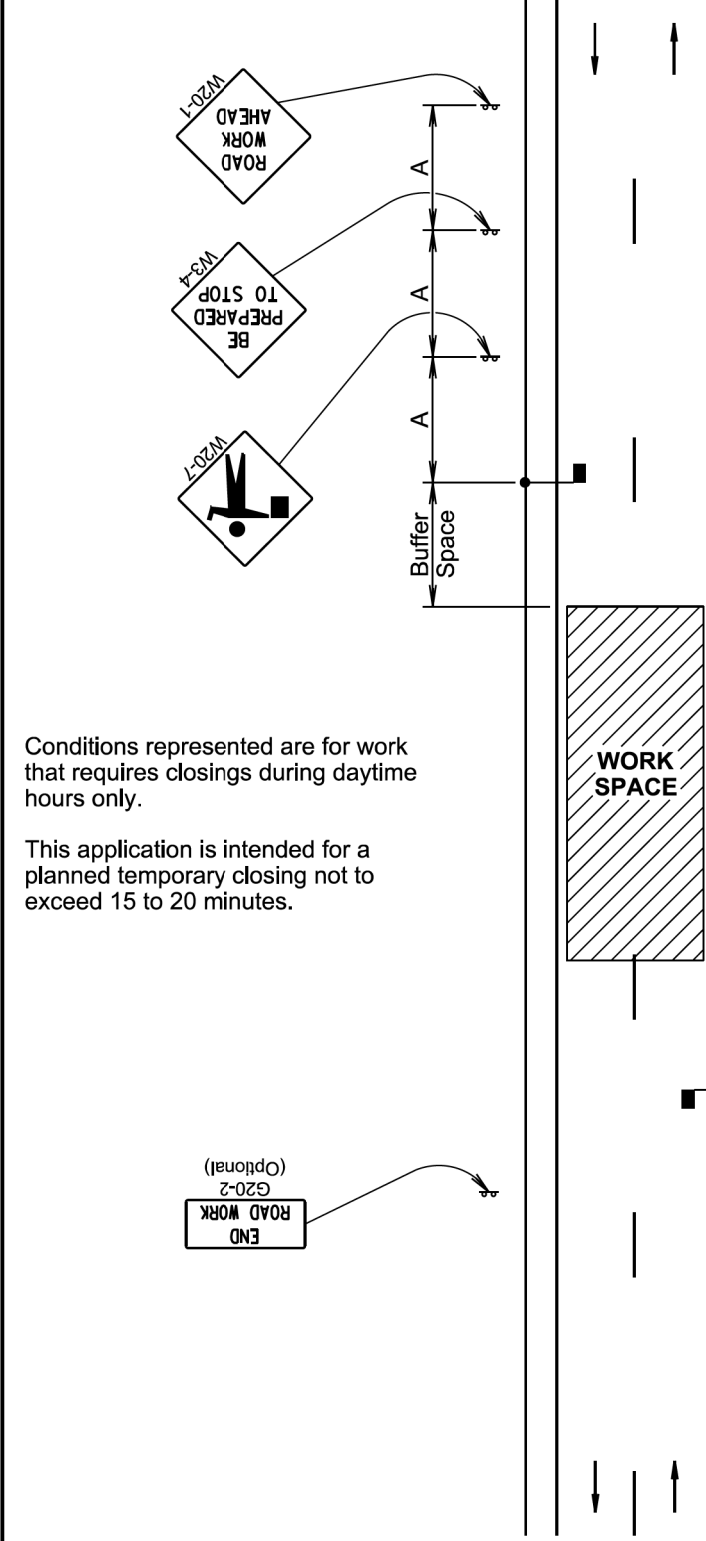


Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000



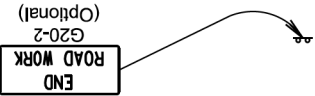
January 22, 2021

Published Date: 2025	S D D O T	WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 of 1



Conditions represented are for work that requires closings during daytime hours only.

This application is intended for a planned temporary closing not to exceed 15 to 20 minutes.



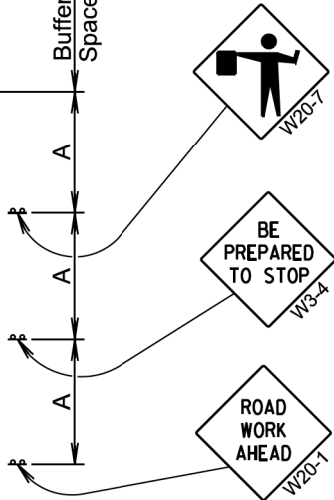
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000

Flagger

END
ROAD WORK
G20-2
(Optional)

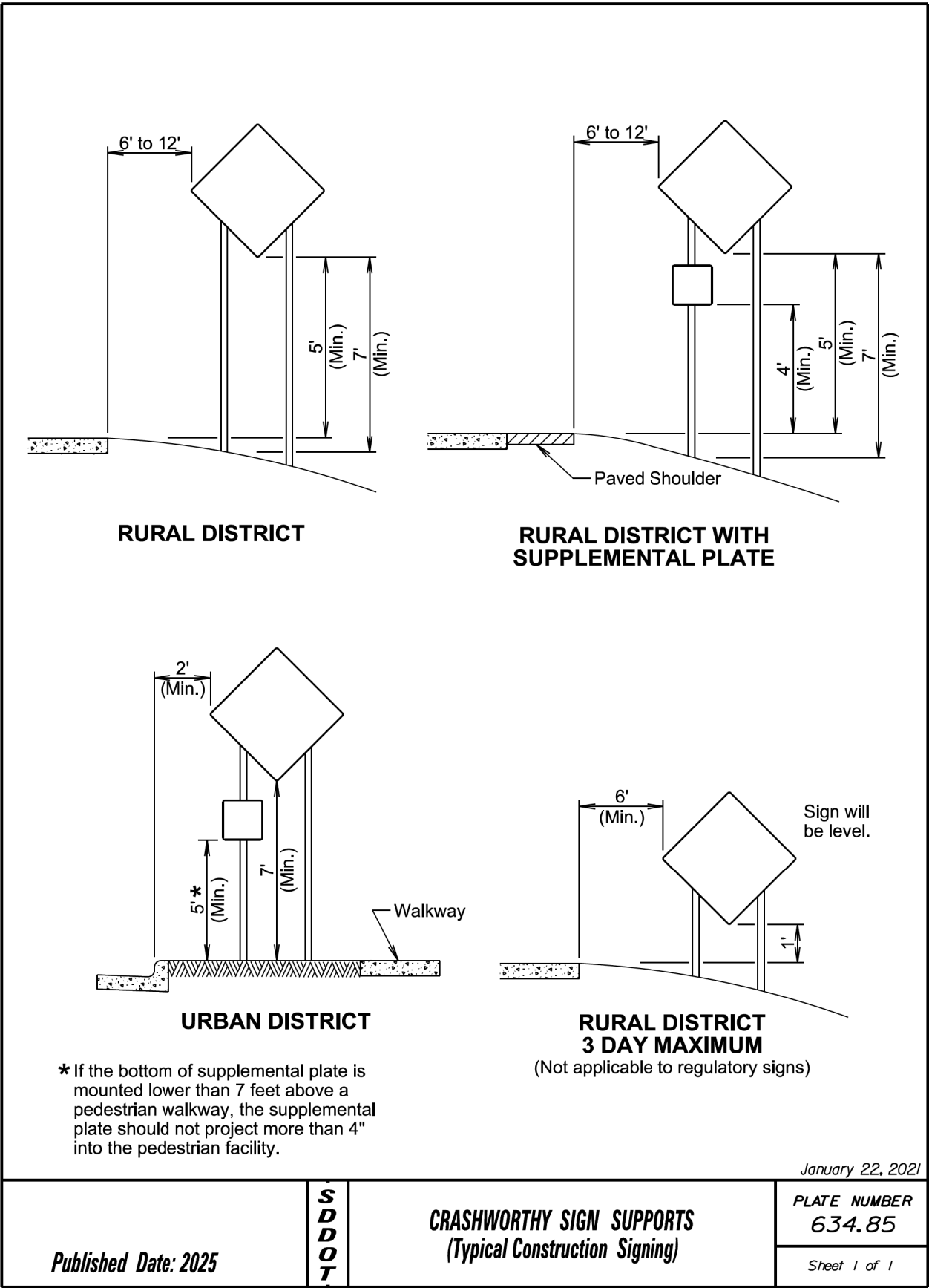
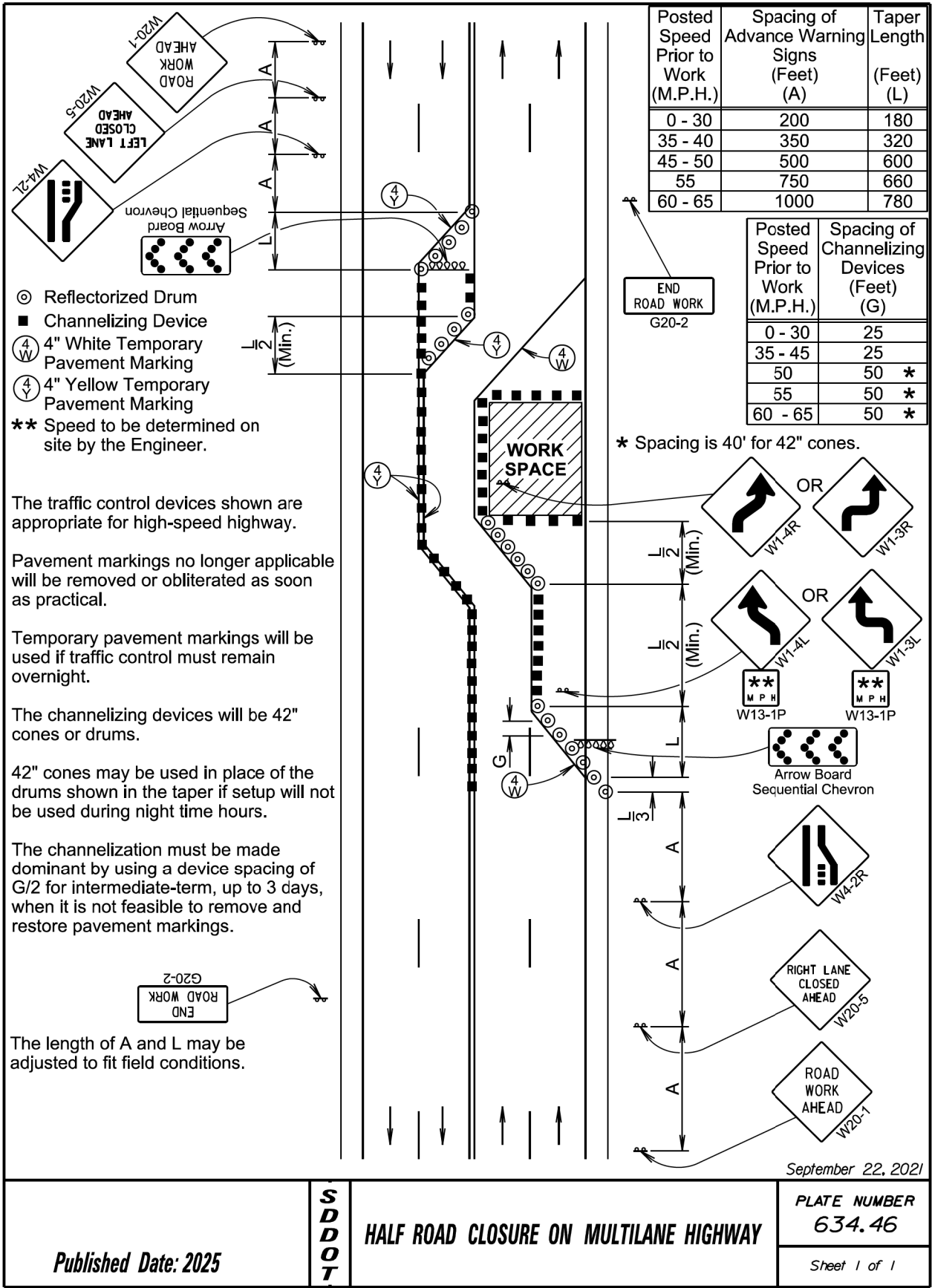
Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

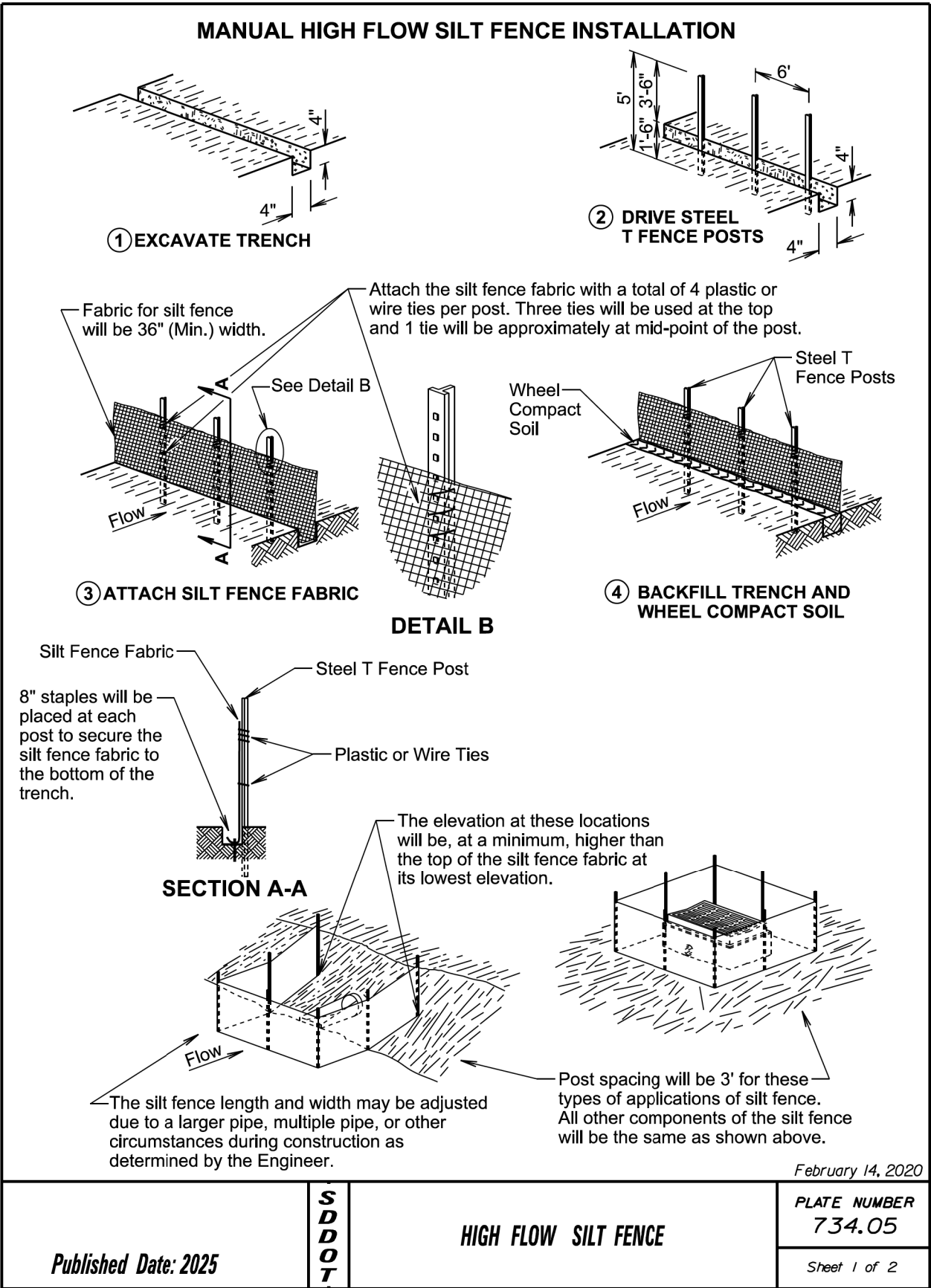
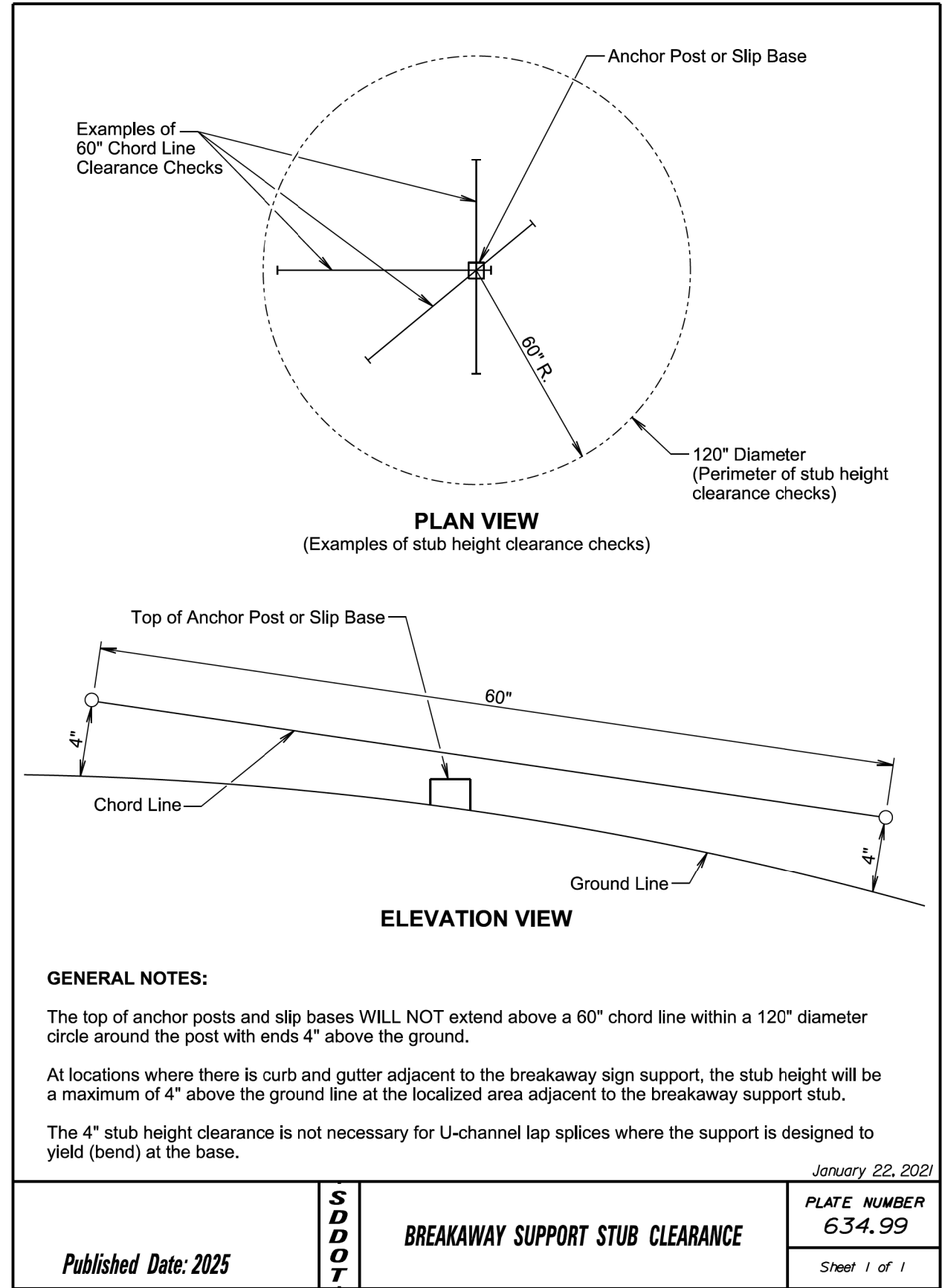
Buffer space dependent on work site limitations.



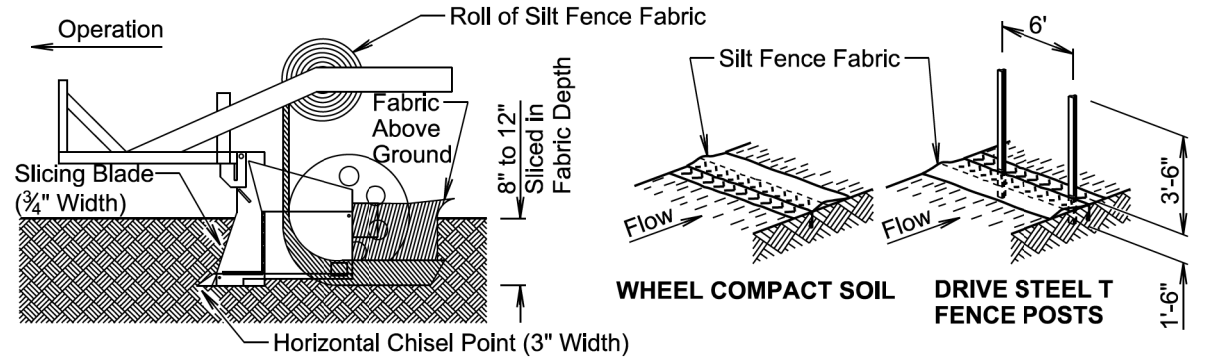
January 22, 2021

Published Date: 2025	S D D O T	TEMPORARY ROAD WORK	PLATE NUMBER 634.30
			Sheet 1 of 1

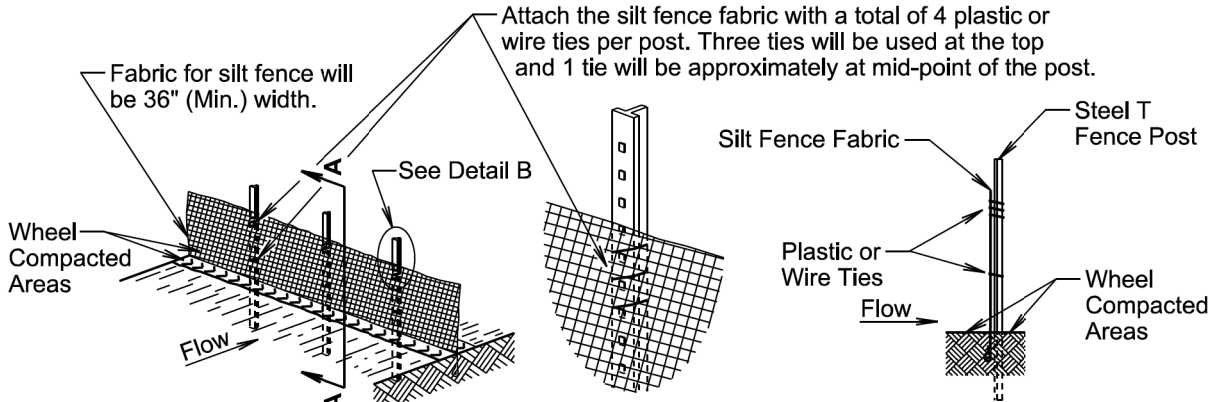




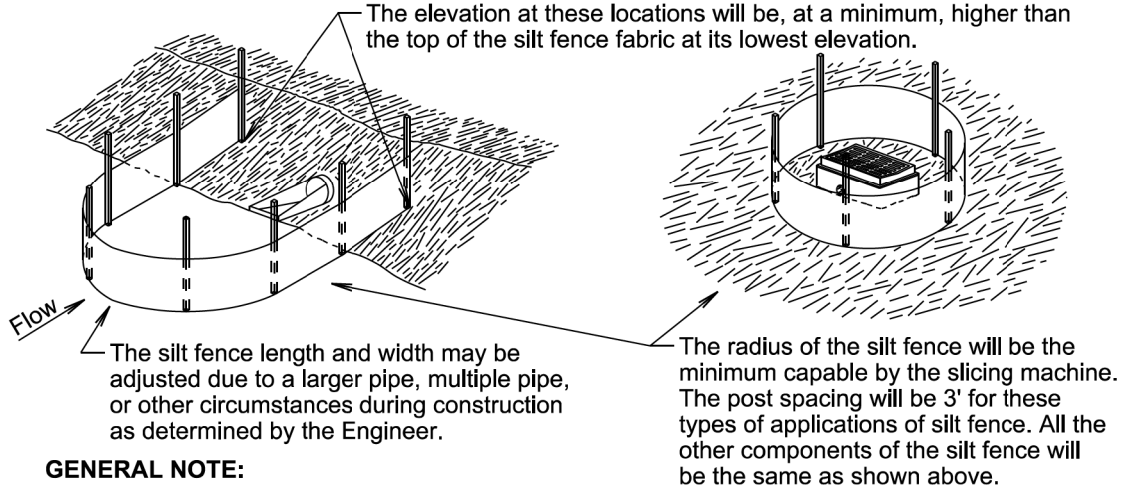
MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



- 1 INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.
- 2 WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.



- 3 ATTACH SILT FENCE FABRIC
- DETAIL B
- SECTION A-A

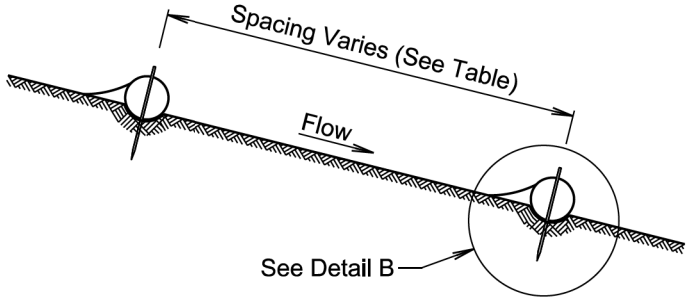


GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

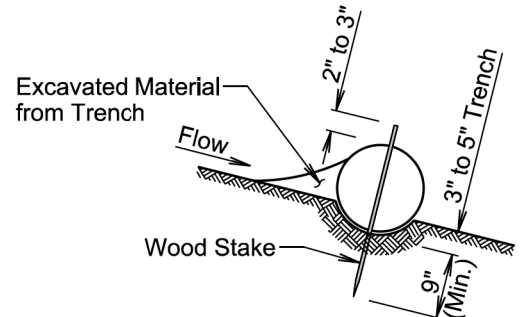
February 14, 2020

Published Date: 2025	S D D O T	HIGH FLOW SILT FENCE	PLATE NUMBER
			734.05
			Sheet 2 of 2

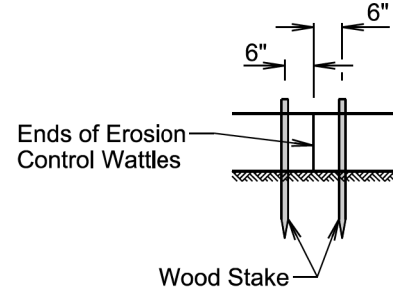


ELEVATION VIEW
(Cut or Fill Slope Installation)

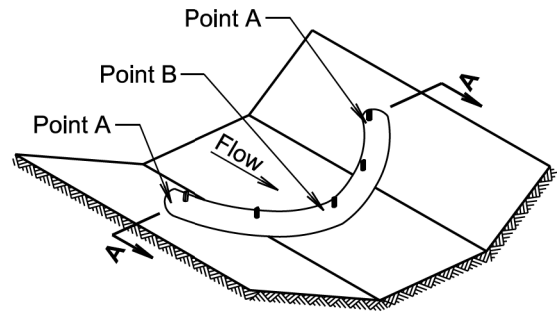
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



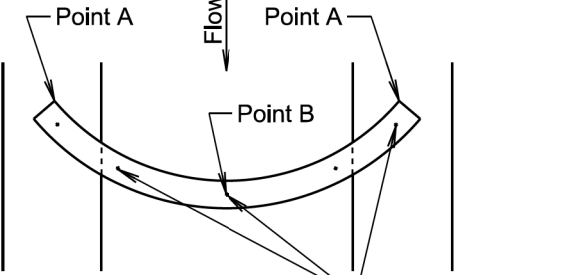
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

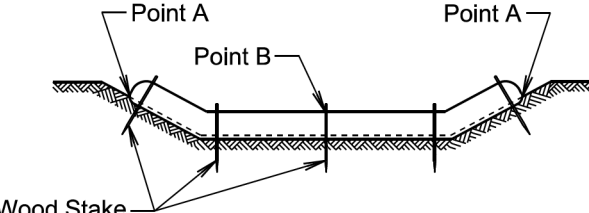


ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)

DITCH INSTALLATION	
Grade	Spacing (Ft.)
2%	150
3%	100
4%	75
5%	50



SECTION A-A

February 14, 2020

Published Date: 2025	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER
			734.06
			Sheet 1 of 2

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 014A(32)46	30	54

Plotting Date: 10/15/2024

GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

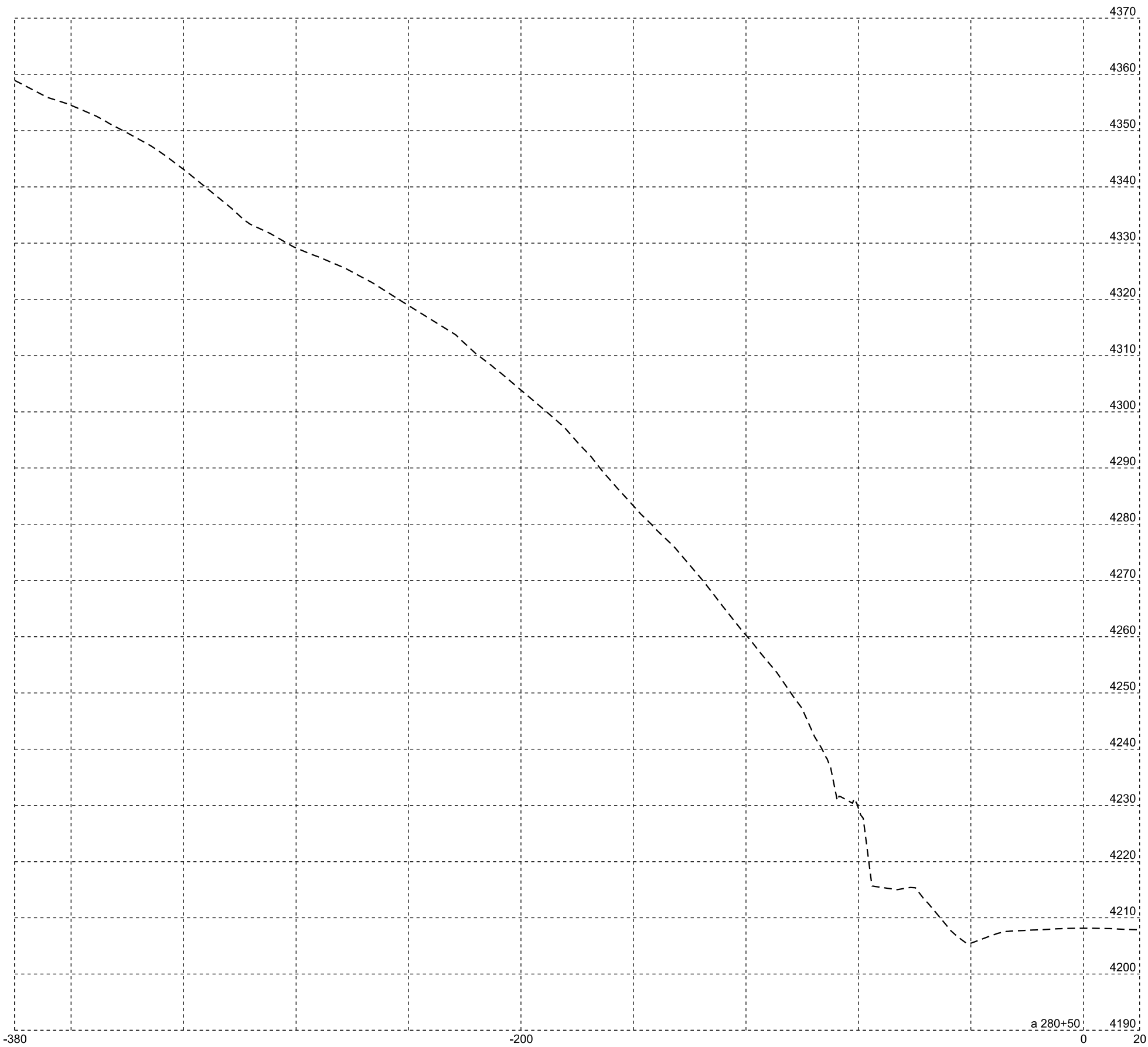
Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

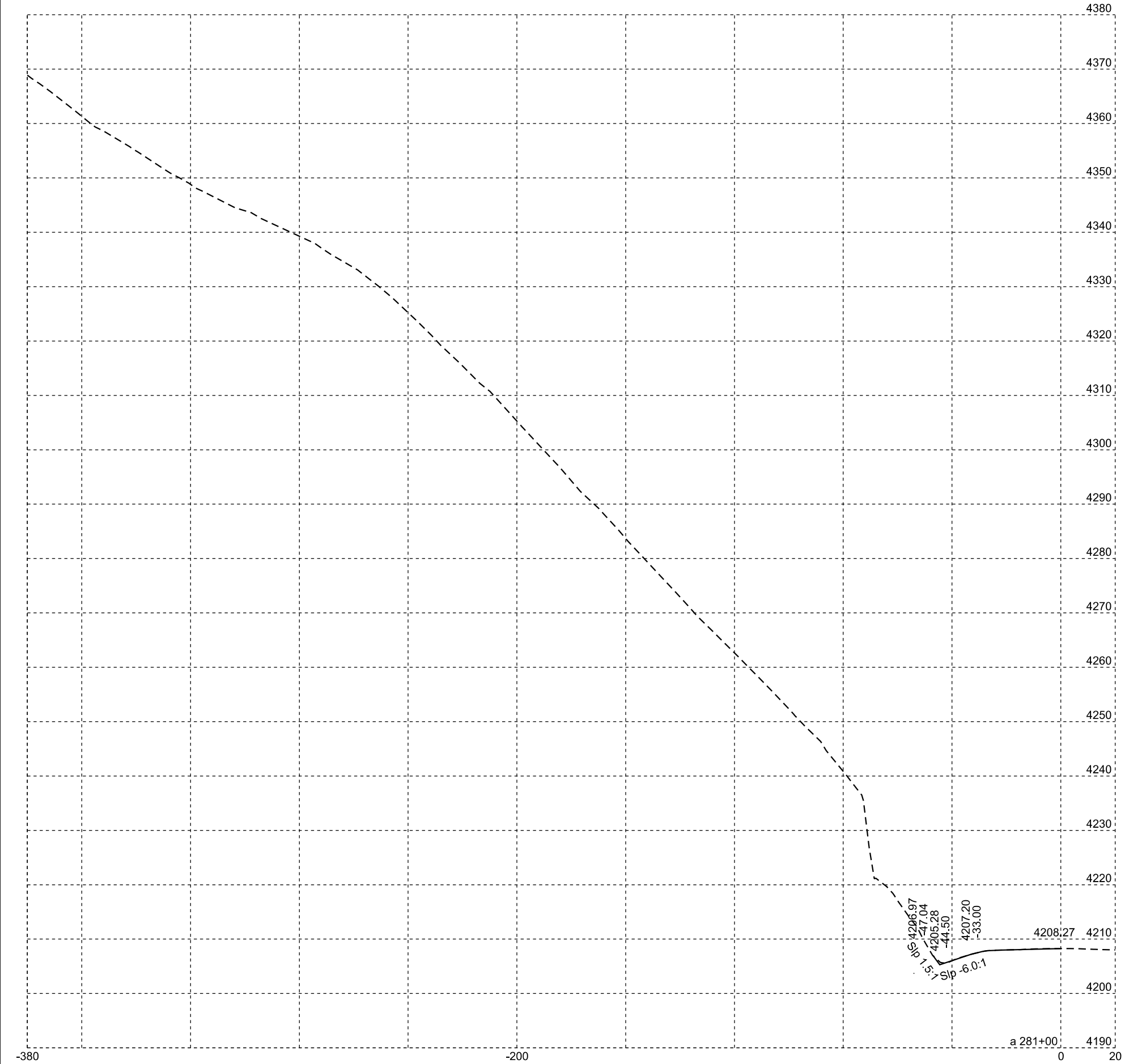
February 14, 2020

<i>Published Date: 2025</i>	S D D O T	EROSION CONTROL WATTLE	<i>PLATE NUMBER</i> 734.06
			<i>Sheet 2 of 2</i>



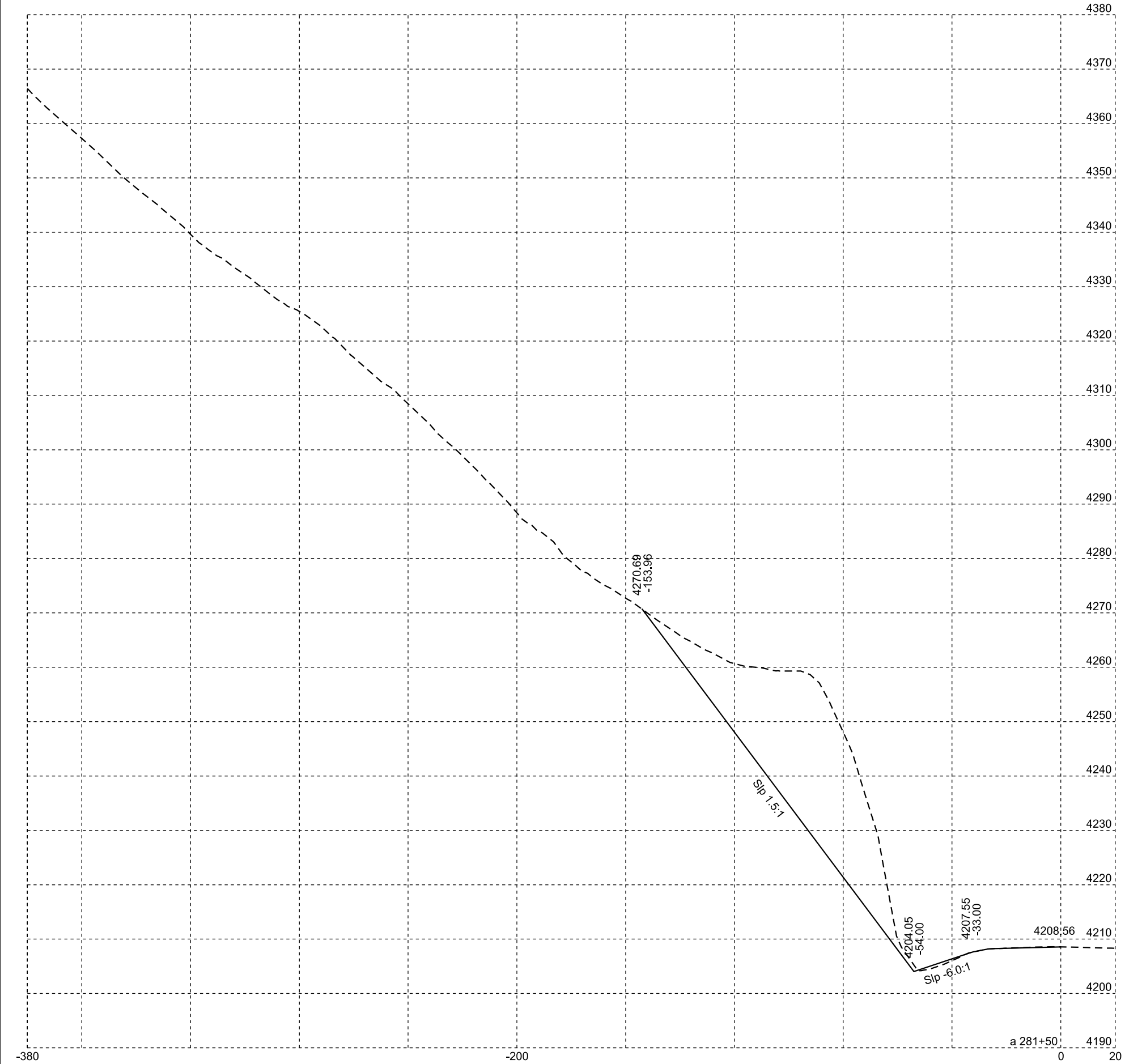
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	31	54



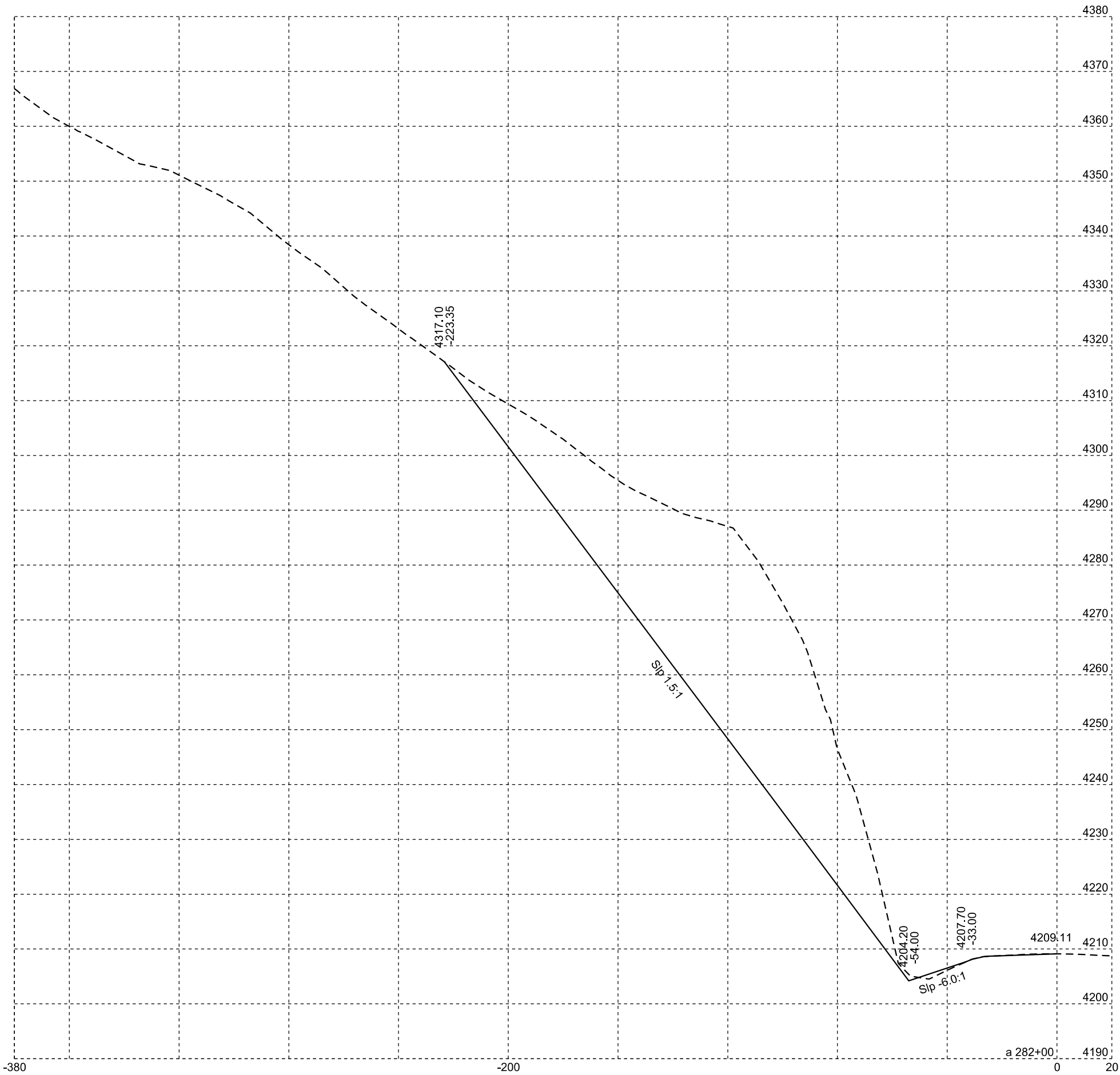
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	32	54



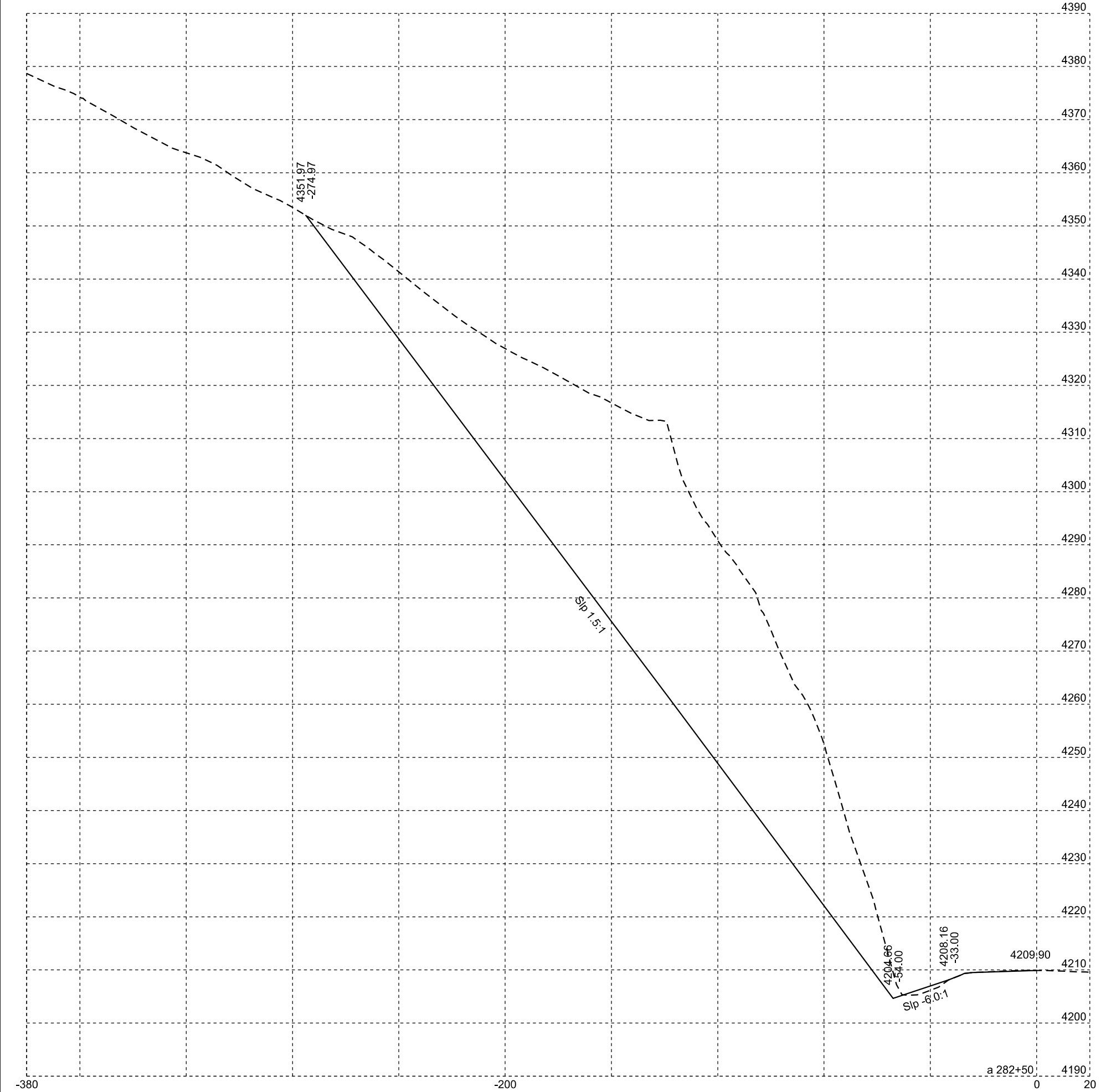
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	33	54



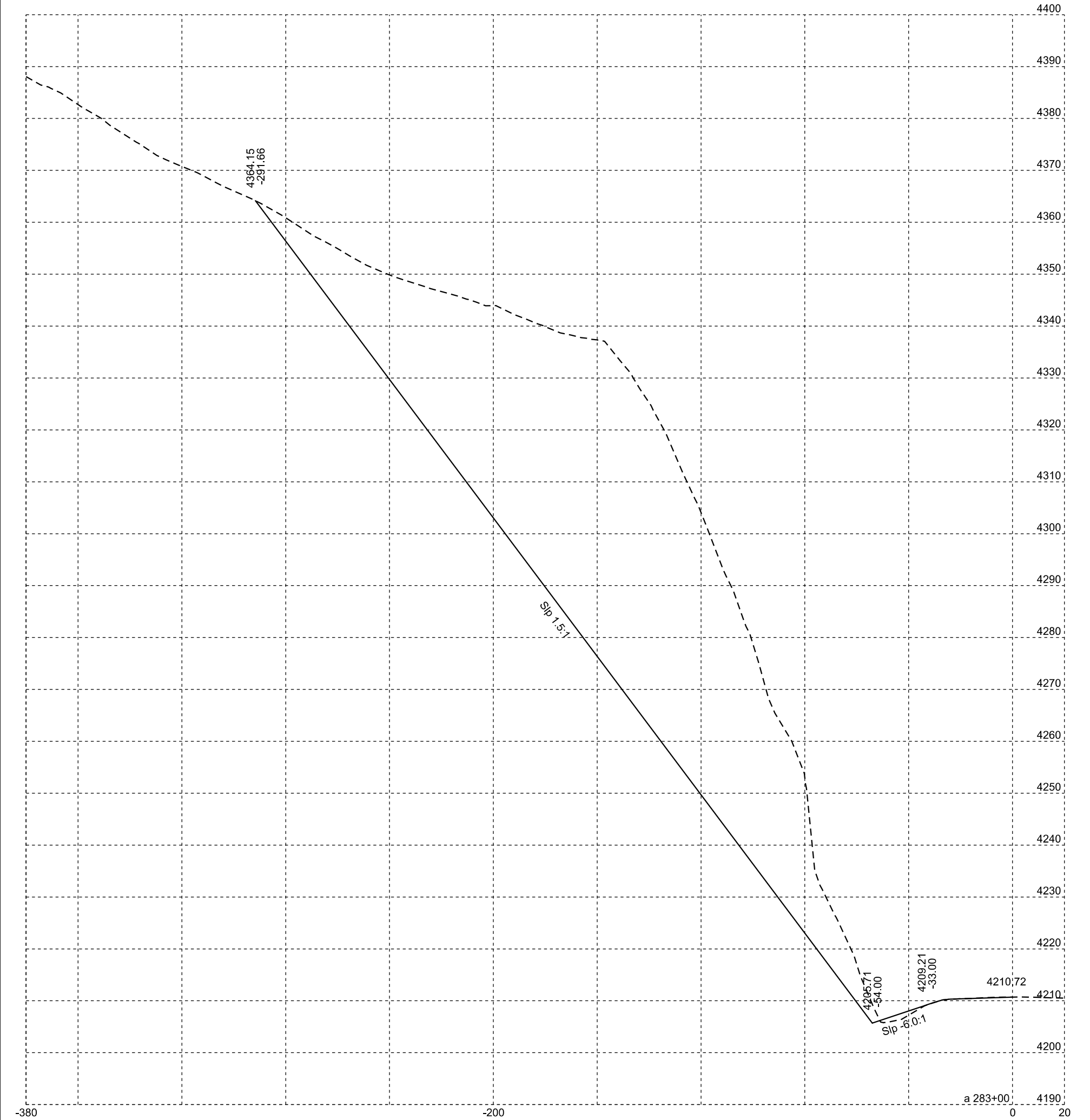
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	34	54



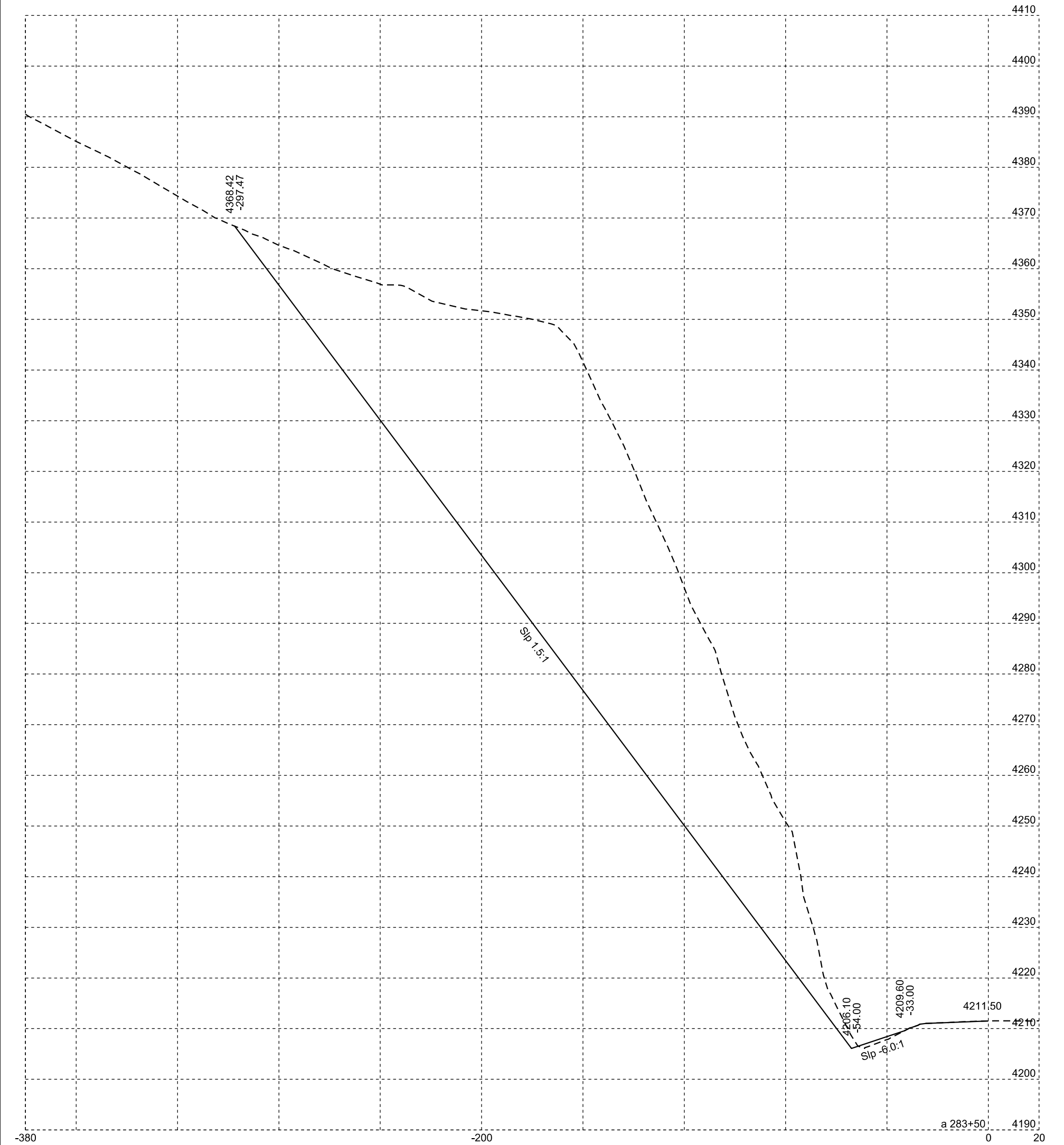
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	35	54



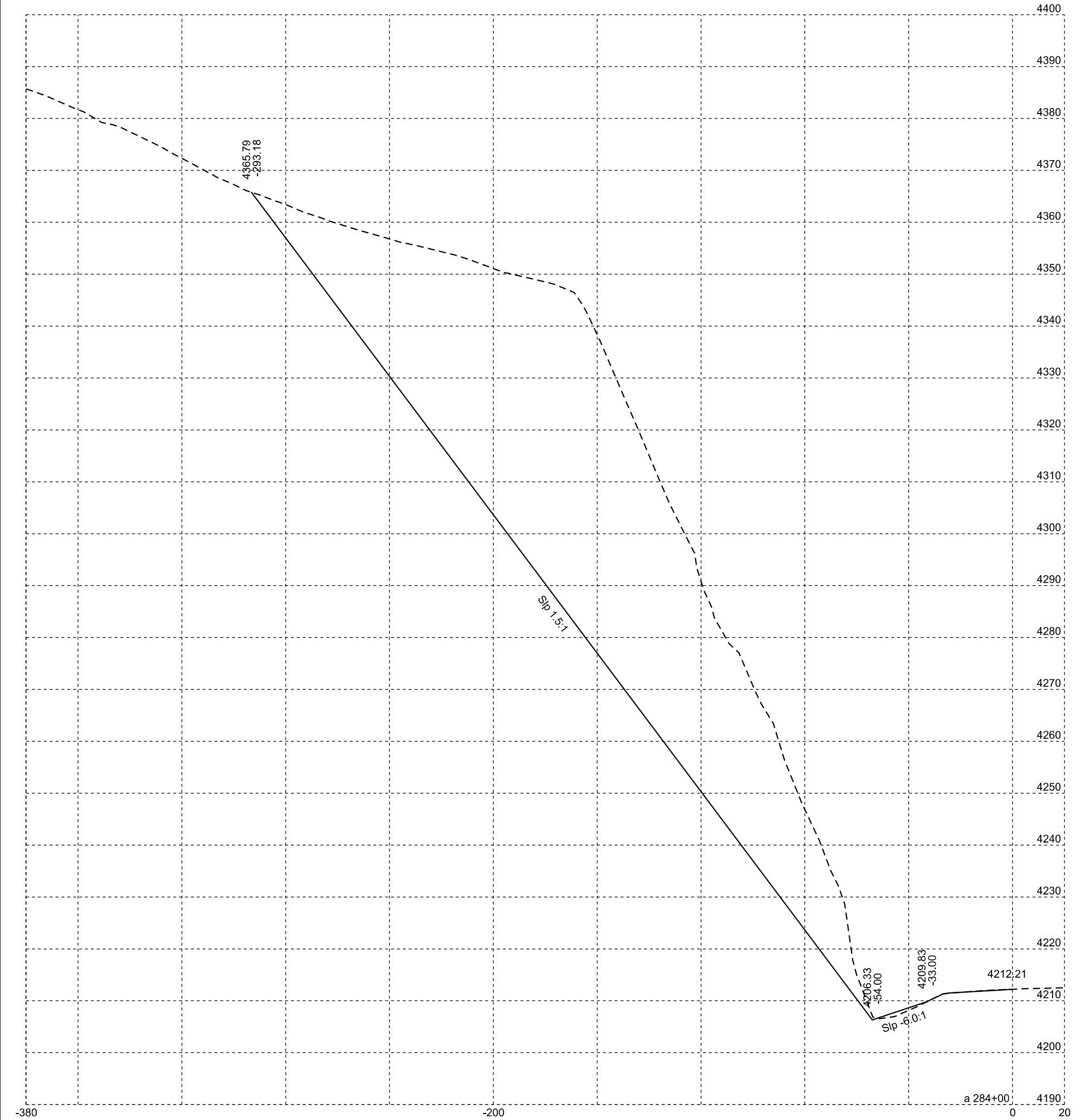
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	36	54



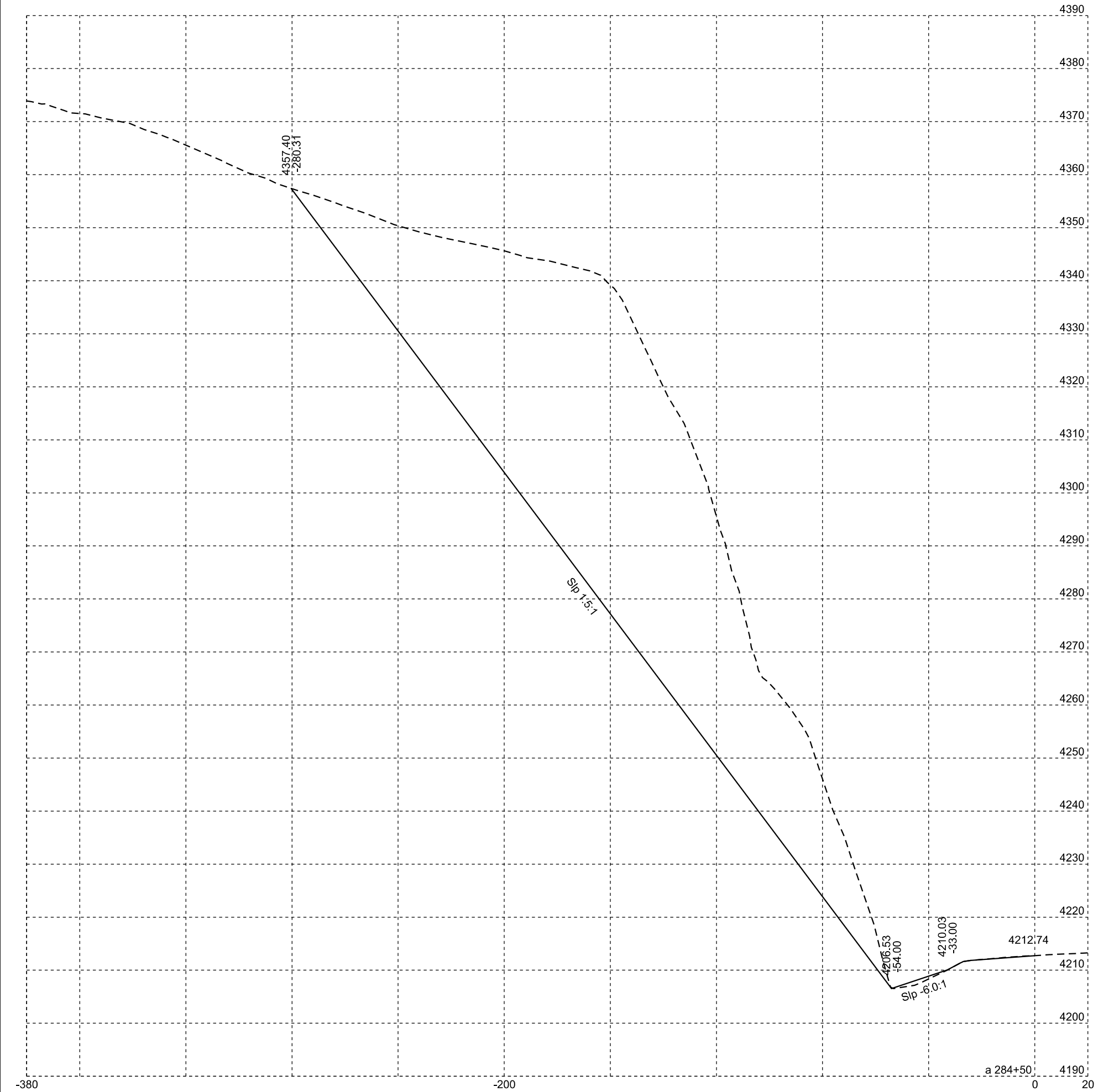
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	37	54



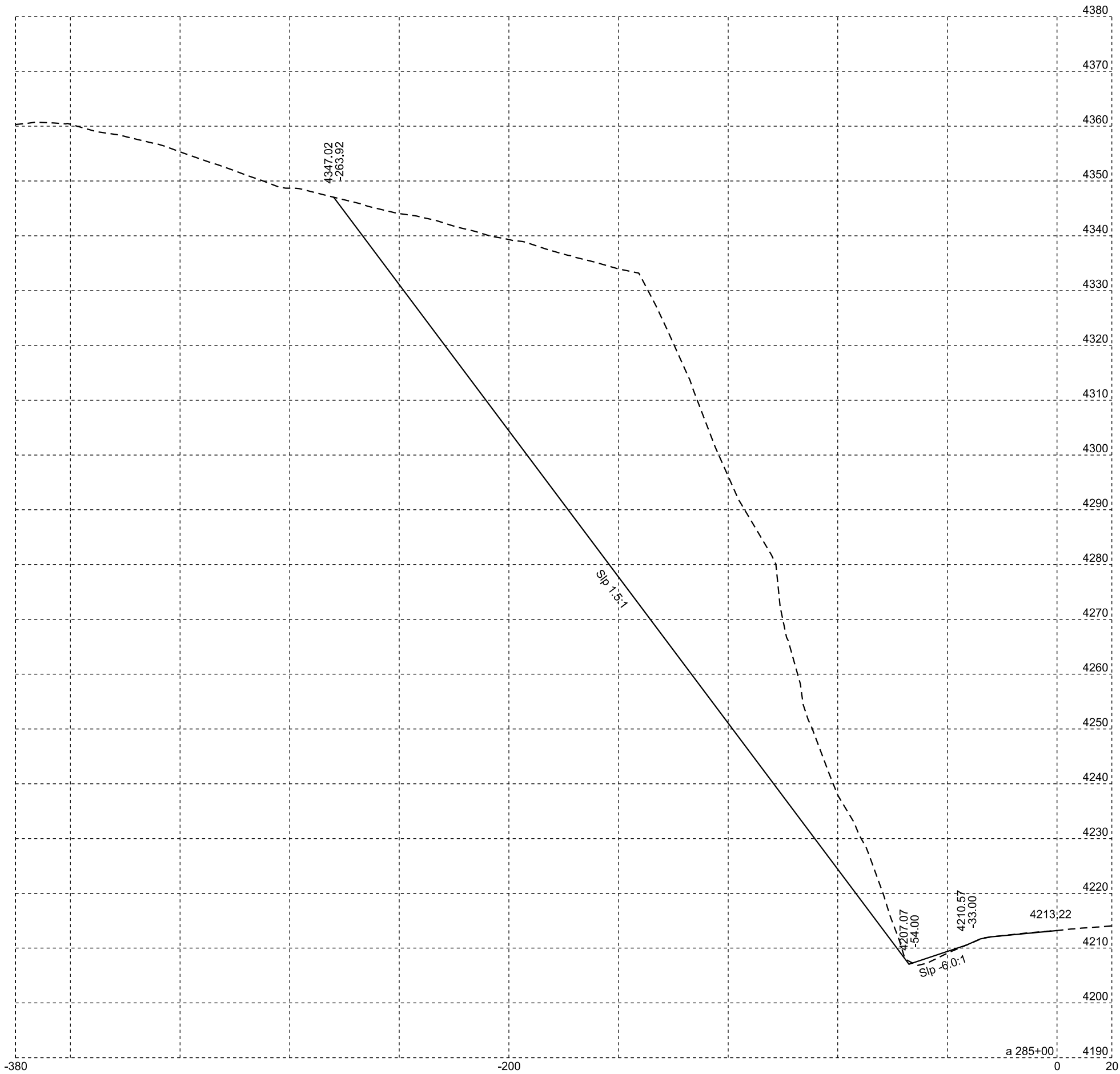
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	38	54



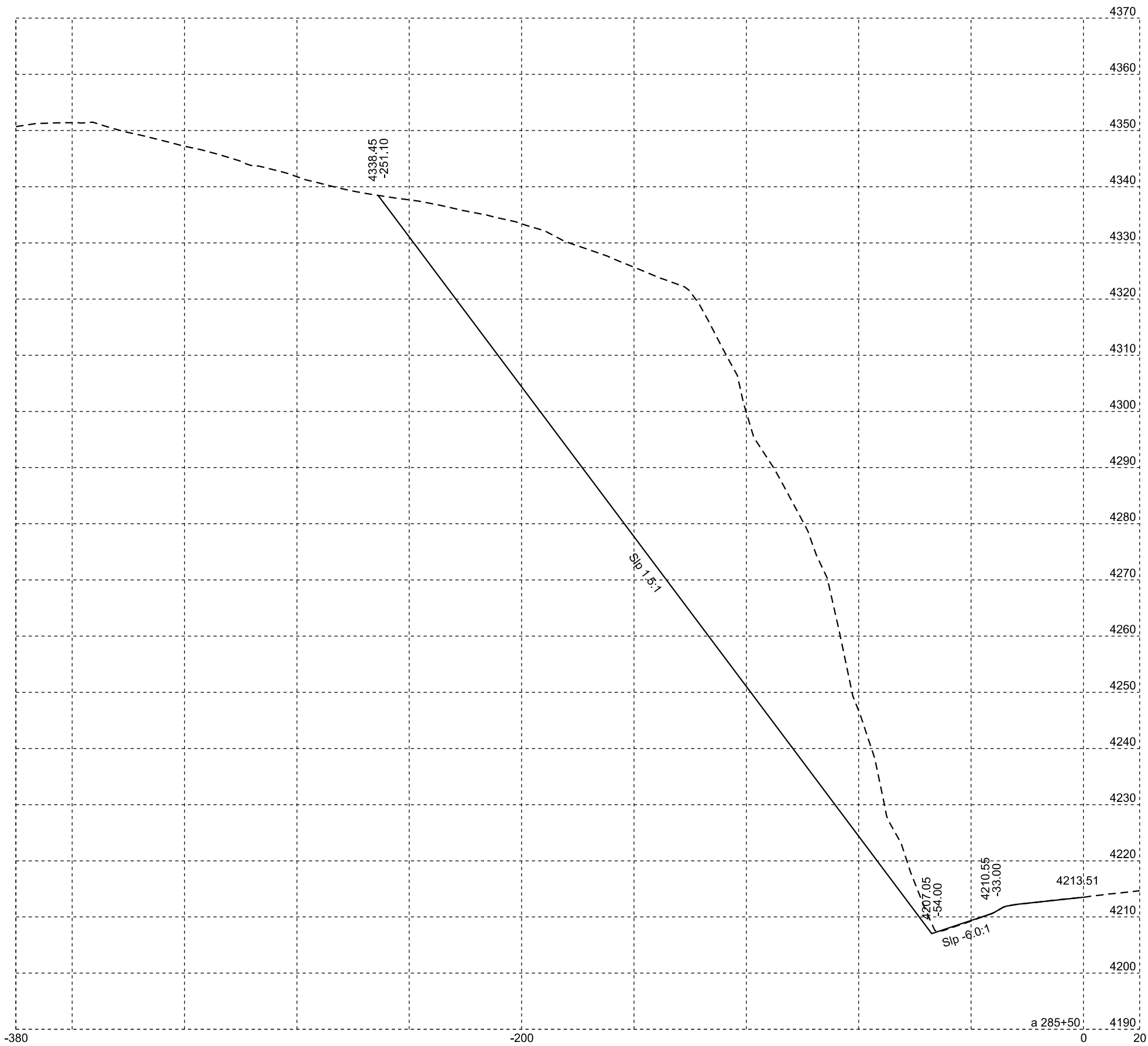
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	39	54



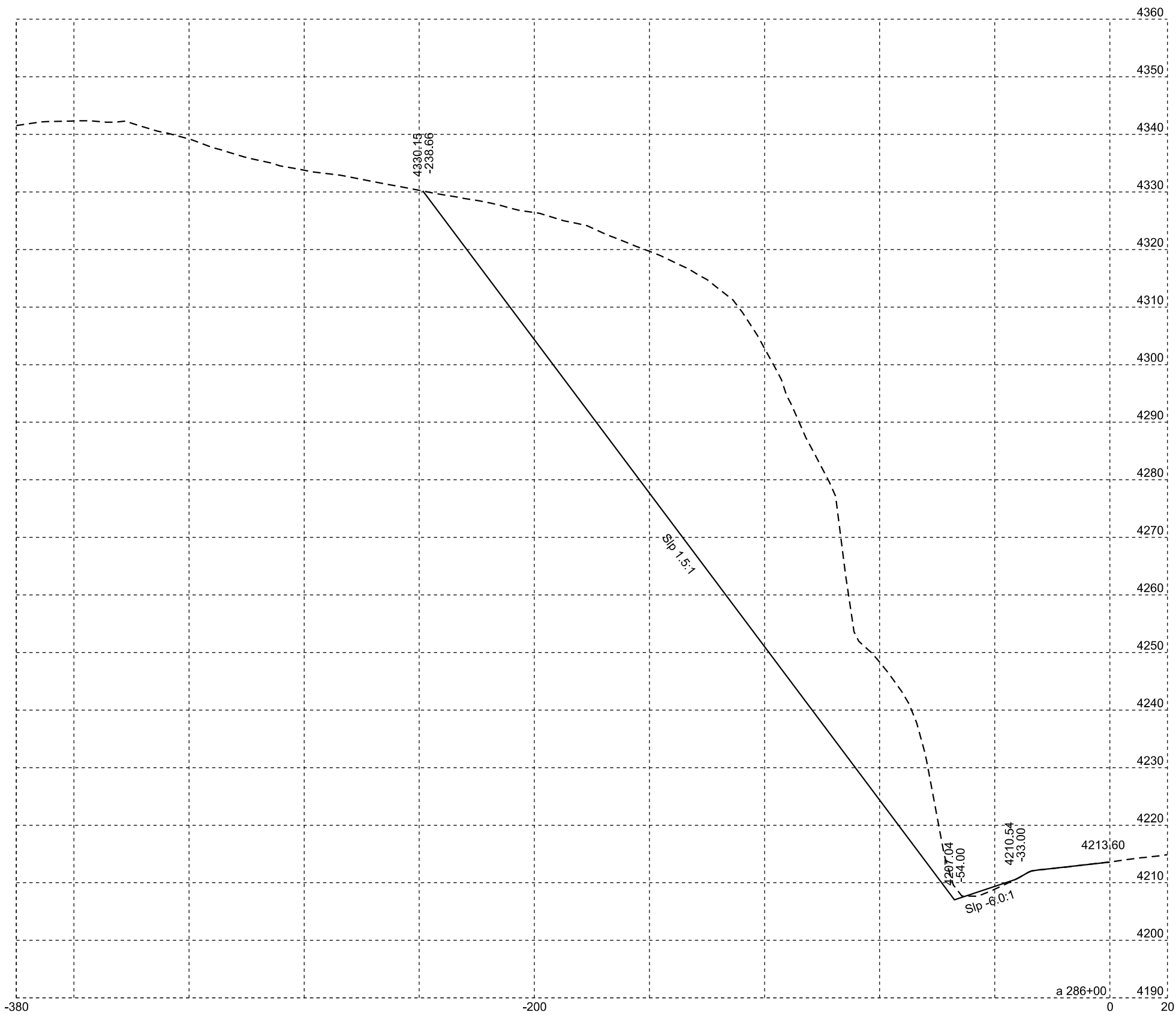
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	40	54



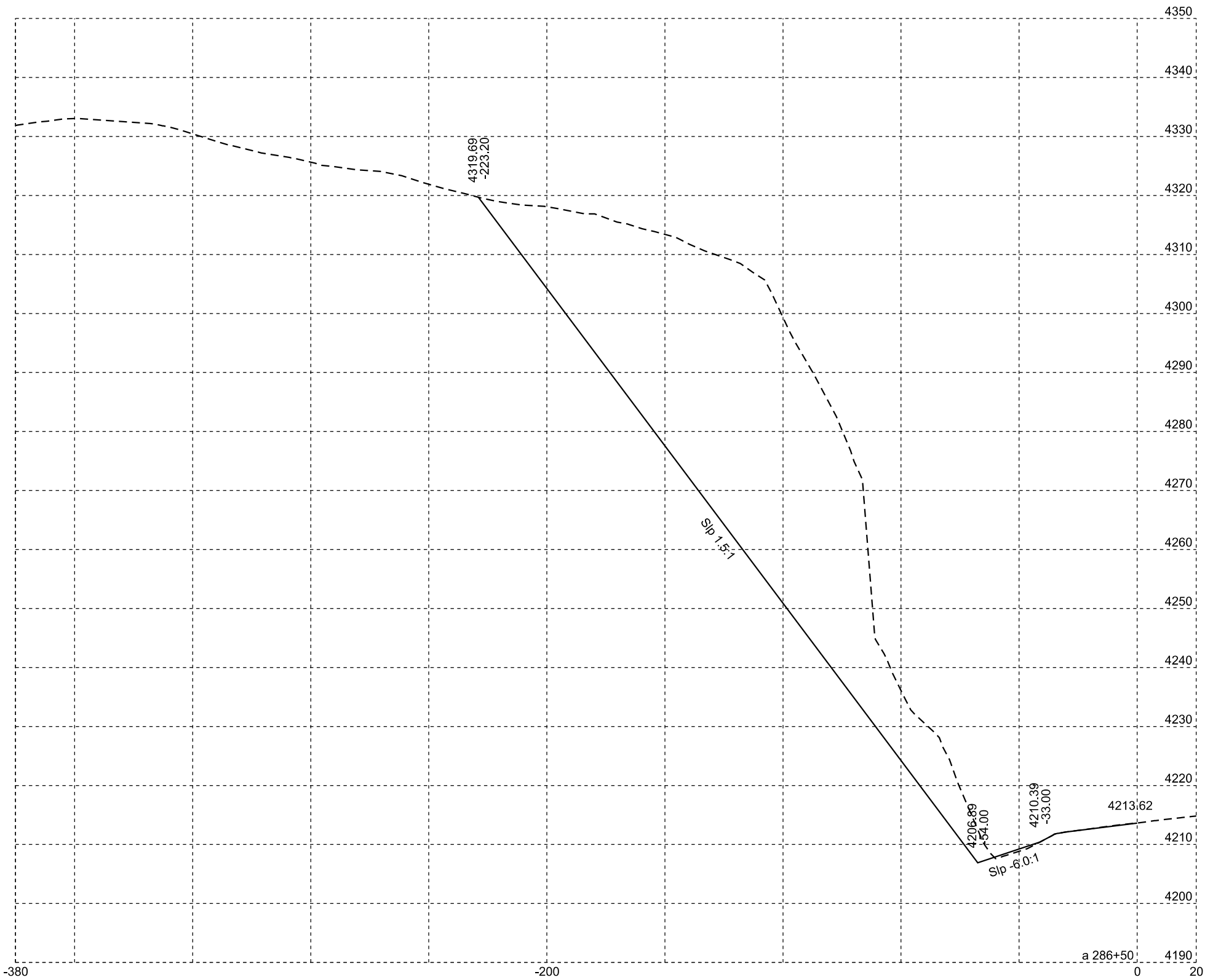
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	41	54



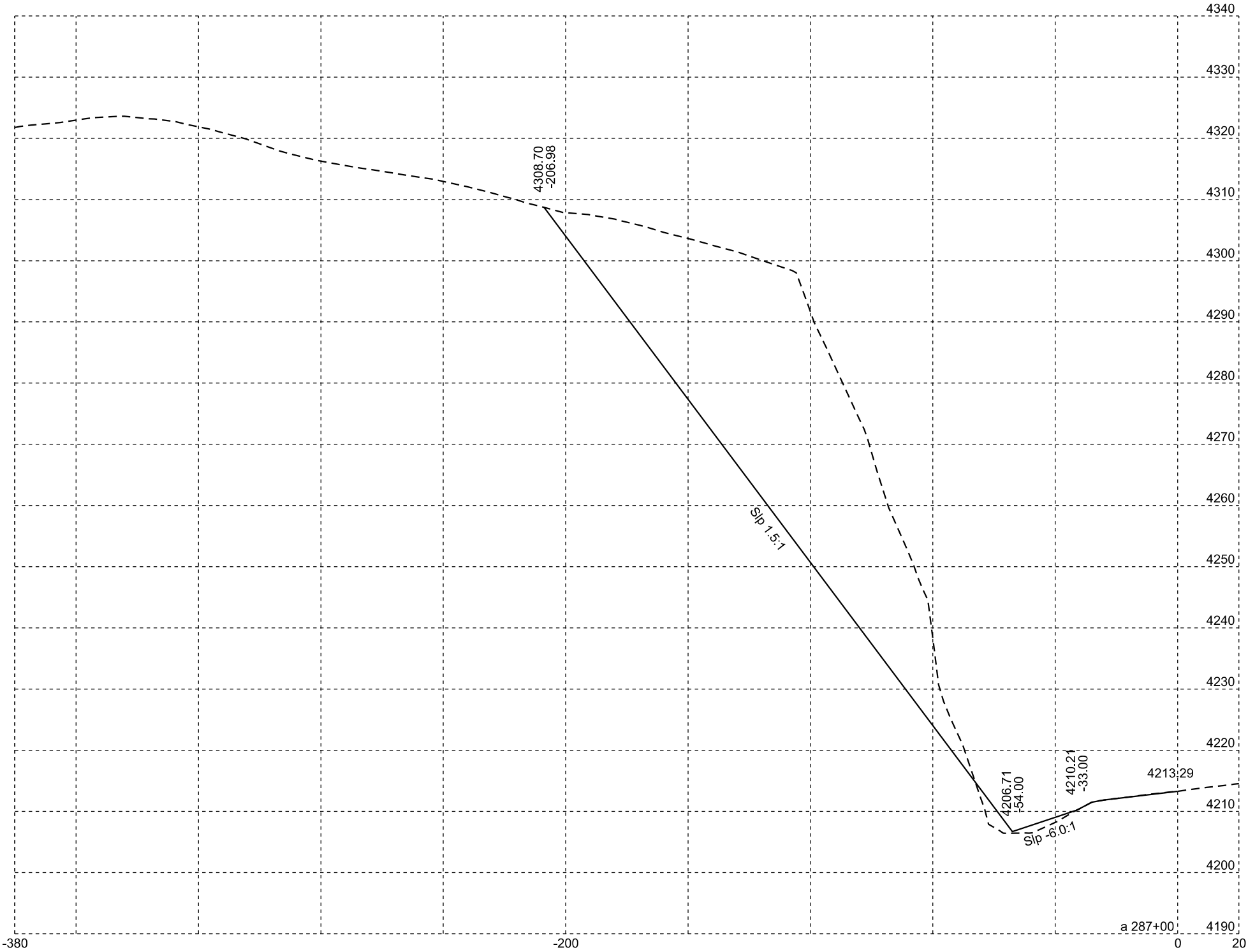
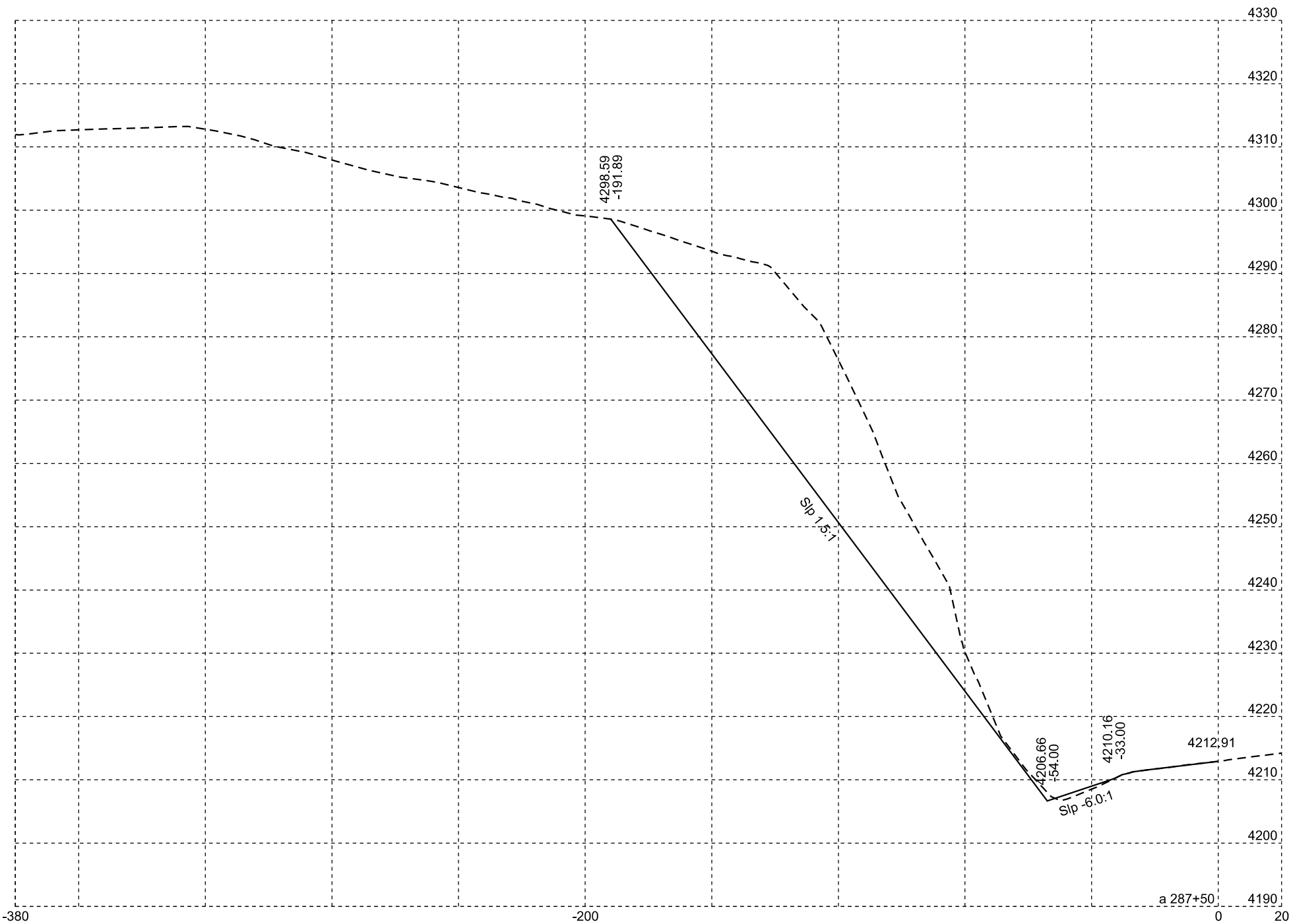
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	42	54



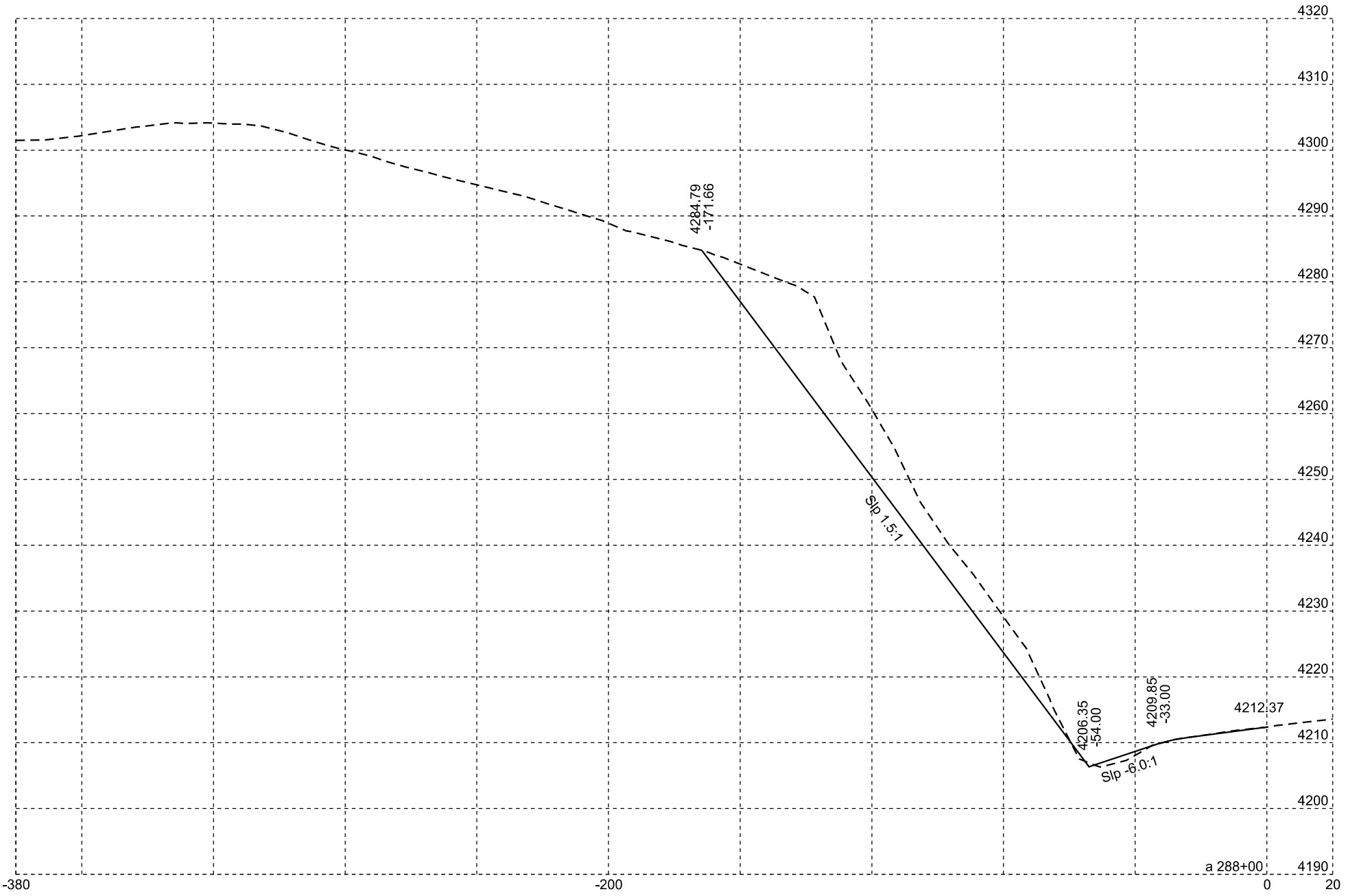
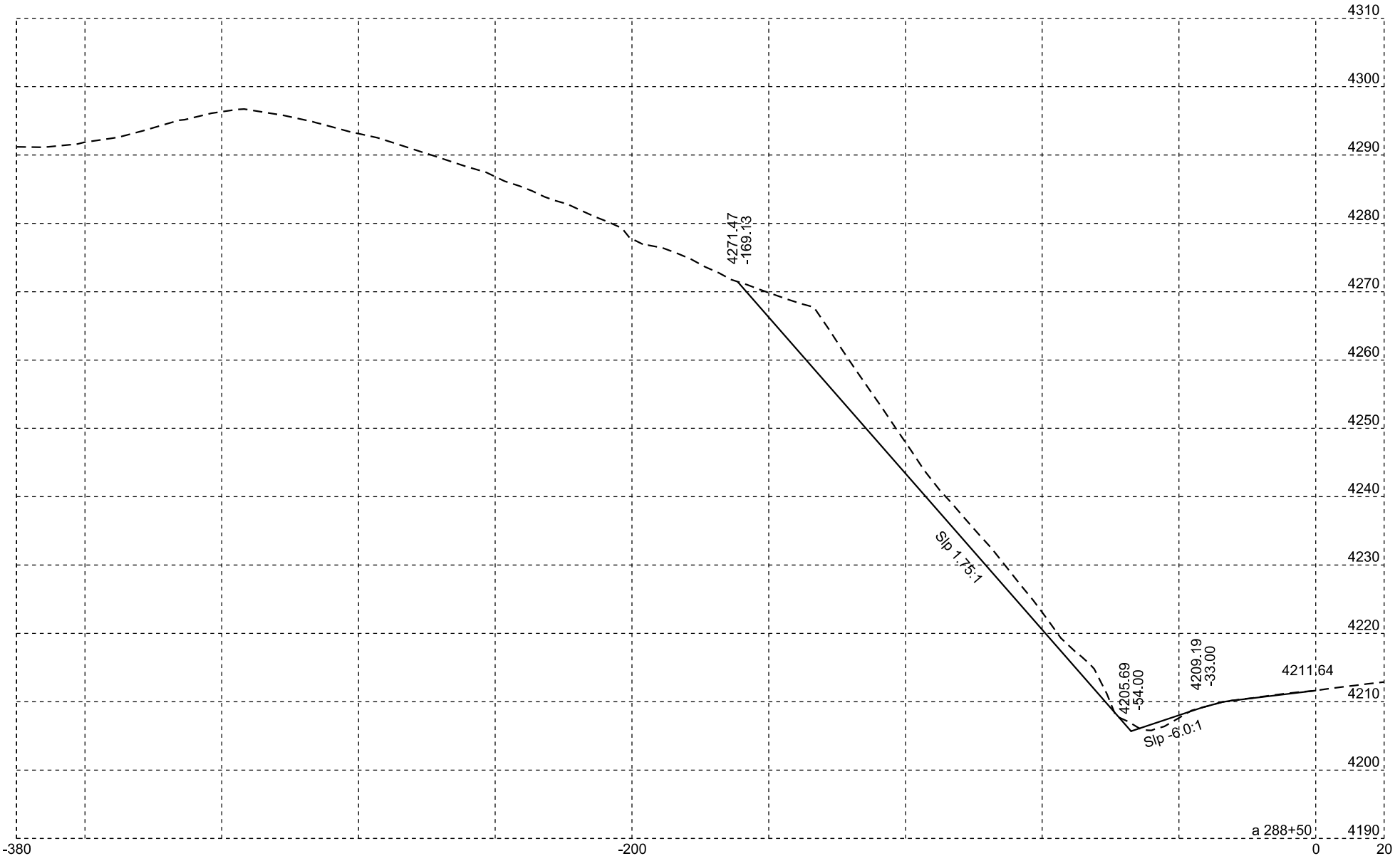
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	43	54



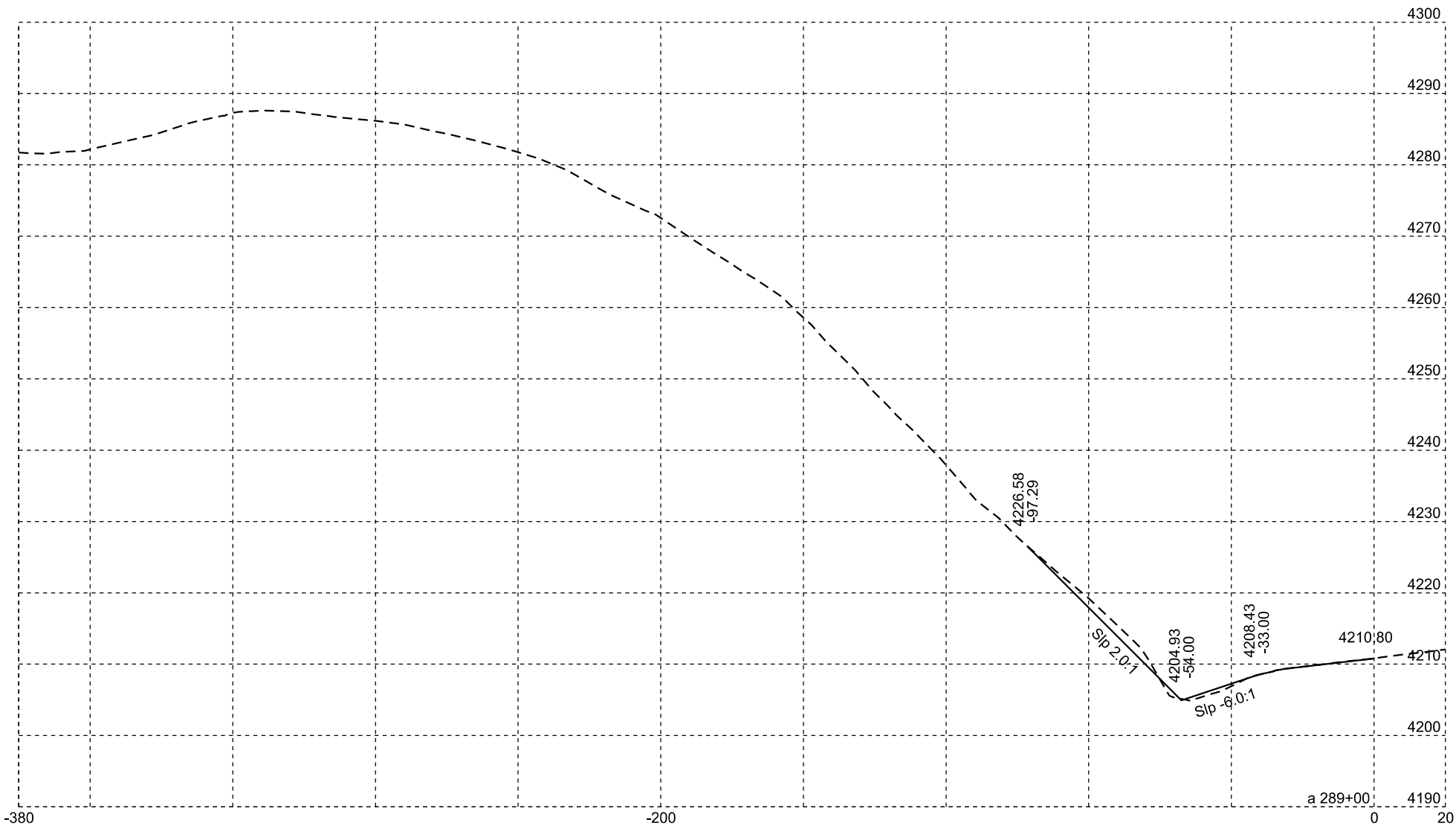
Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO. 44	TOTAL SHEETS 54
	PT 014A(32)46		



Plotting Date: 10/15/2024

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	45	54



Plotting Date: 10/15/2024

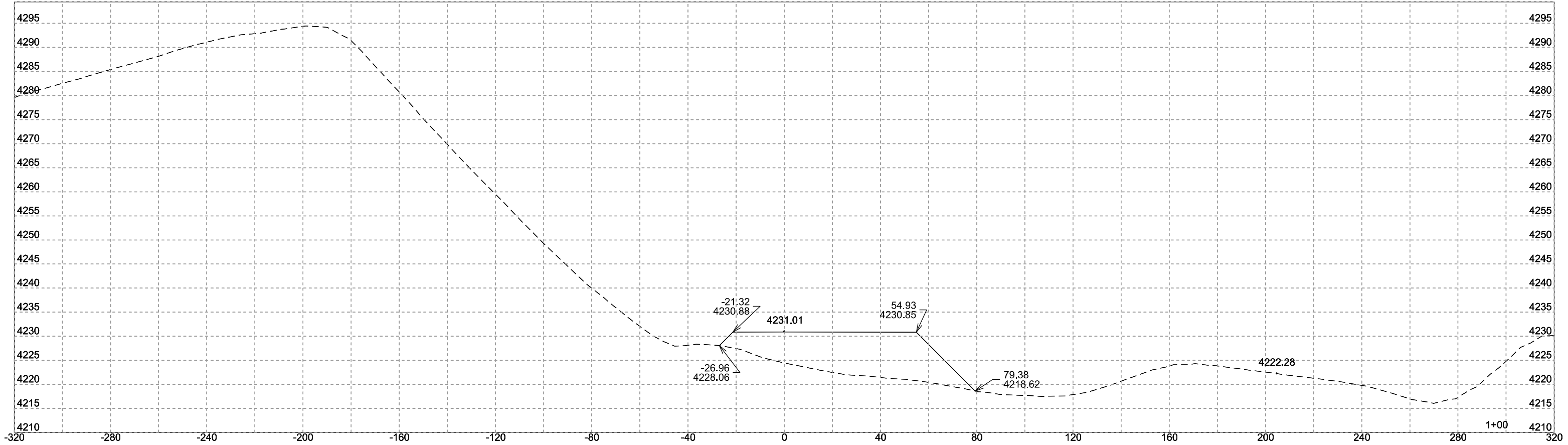
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PT 014A(32)46	46	54

WASTE SITE



Plotting Date: 10/23/2024

PROJECT	SECTION	SHEET
PT 014A(32)46	47	54

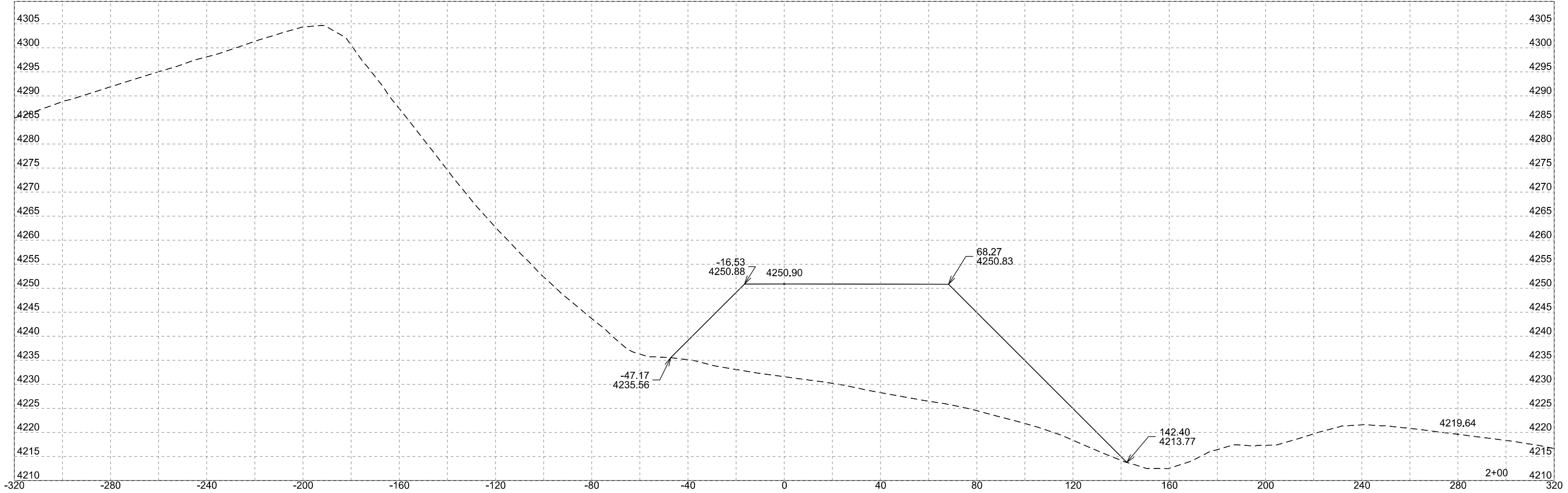


WASTE SITE



Plotting Date: 10/23/2024

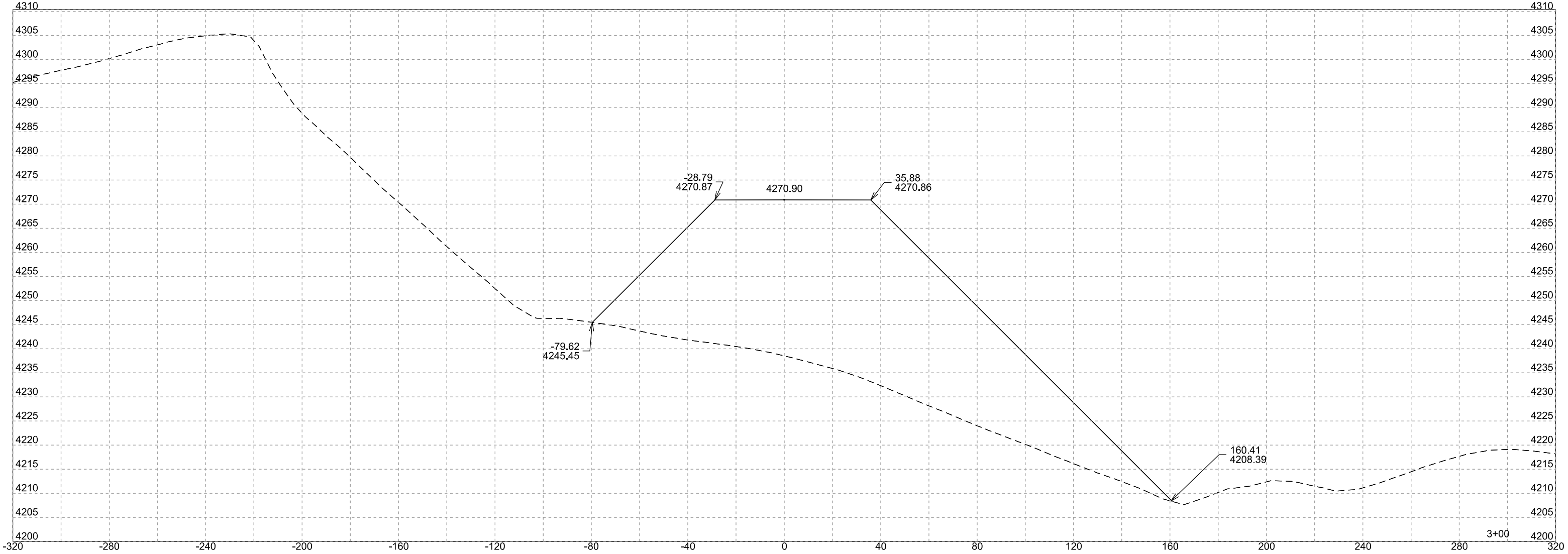
PROJECT	SECTION	SHEET
PT 014A(32)46	48	54



WASTE SITE

	PROJECT	SECTION	SHEET
	PT 014A(32)46	49	54

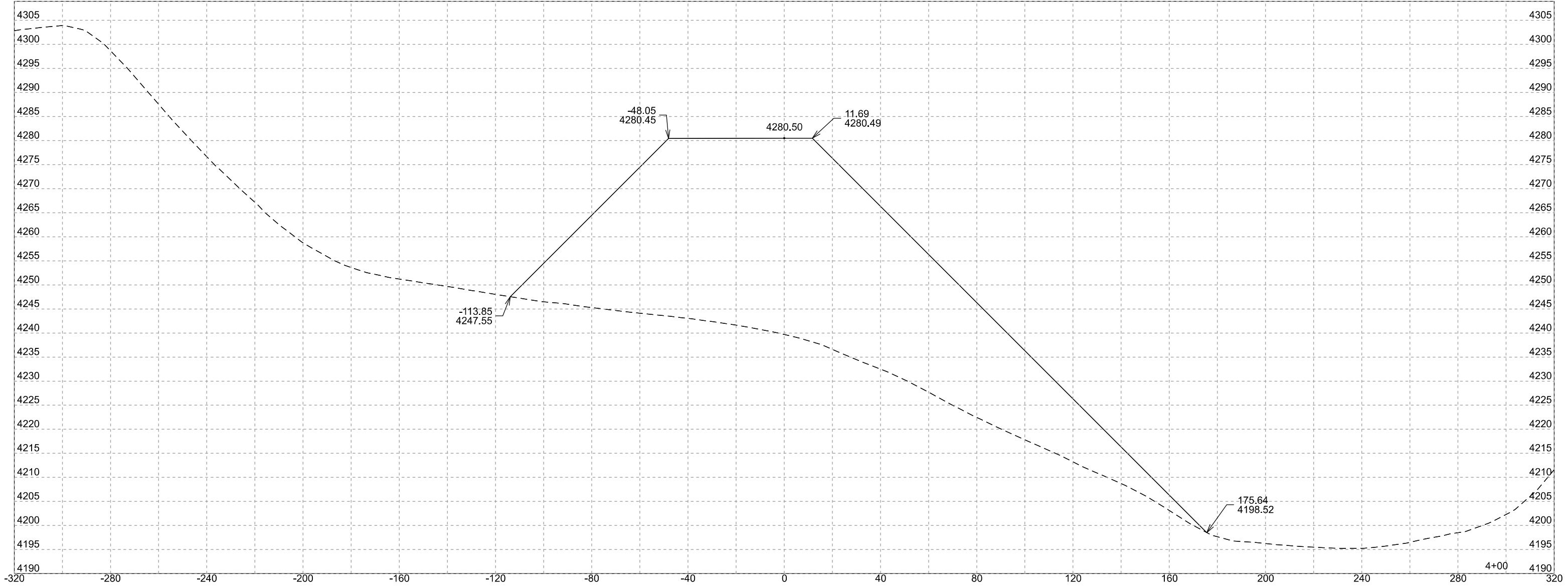
Plotting Date: 10/23/2024



WASTE SITE

	PROJECT	SECTION	SHEET
	PT 014A(32)46	50	54

Plotting Date: 10/23/2024

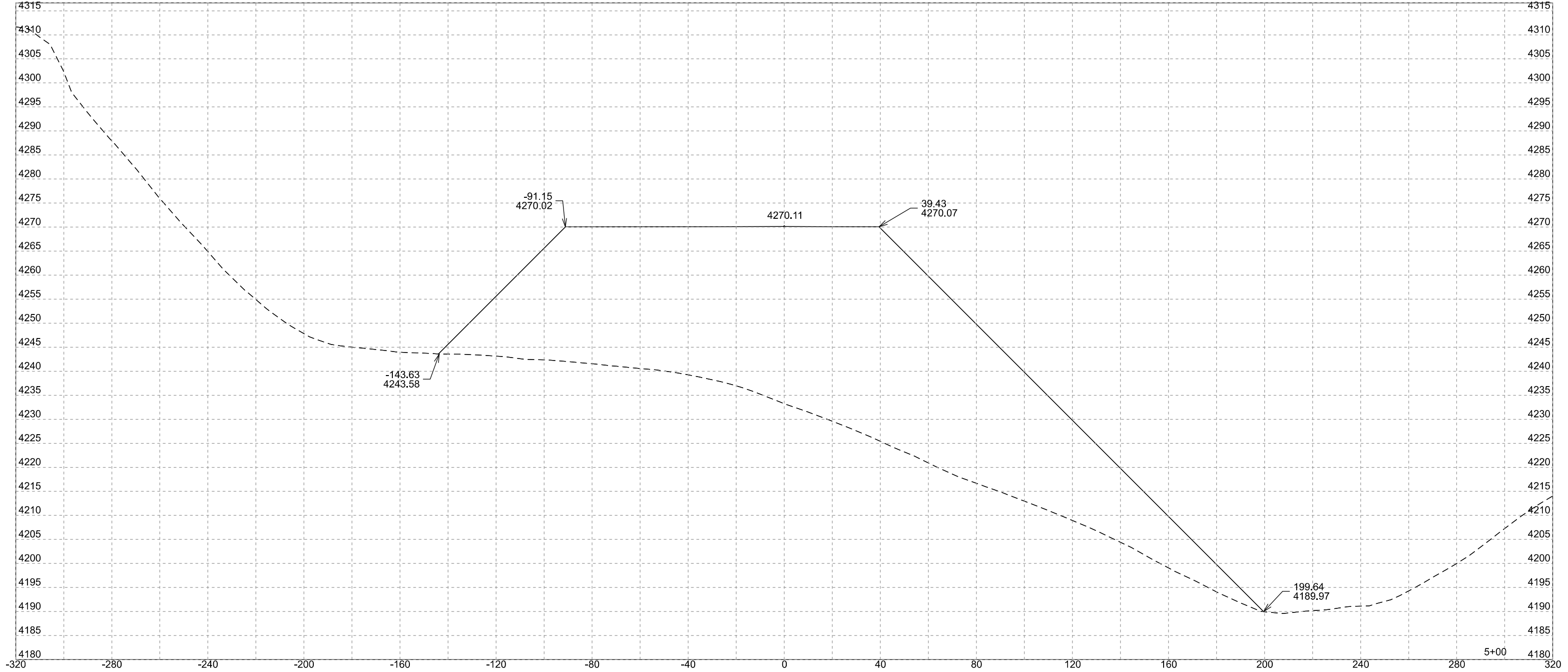


WASTE SITE



Plotting Date: 10/23/2024

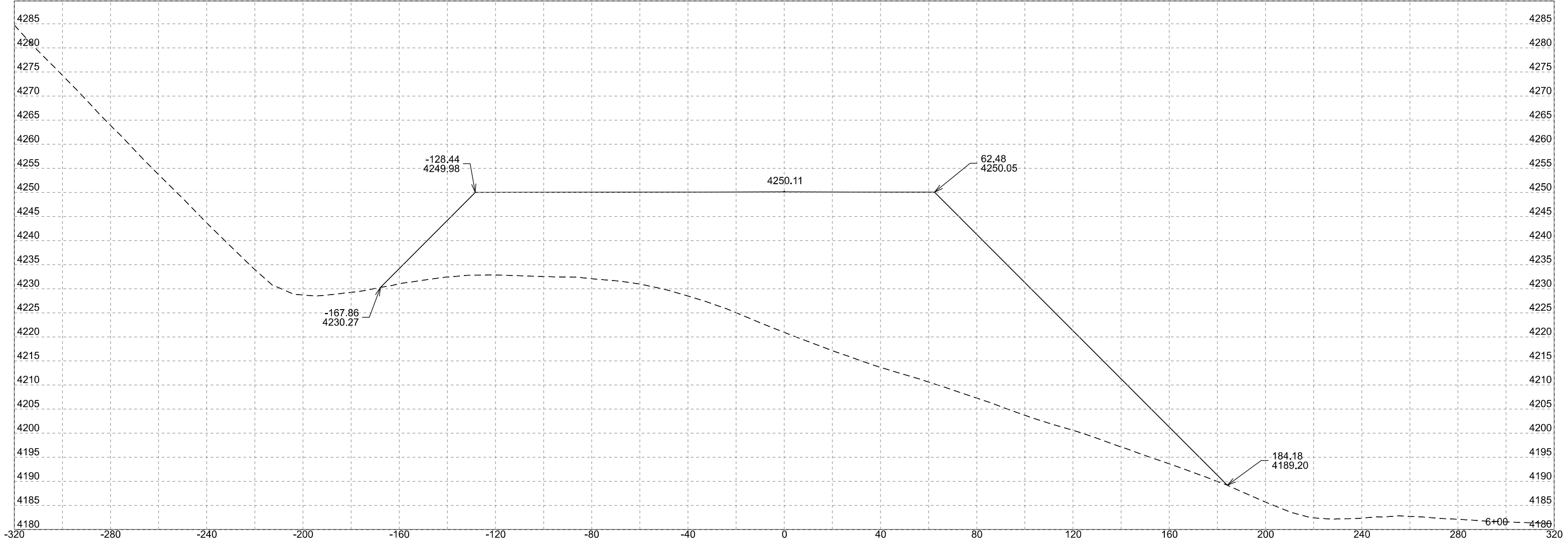
PROJECT	SECTION	SHEET
PT 014A(32)46	51	54



WASTE SITE

	PROJECT	SECTION	SHEET
	PT 014A(32)46	52	54

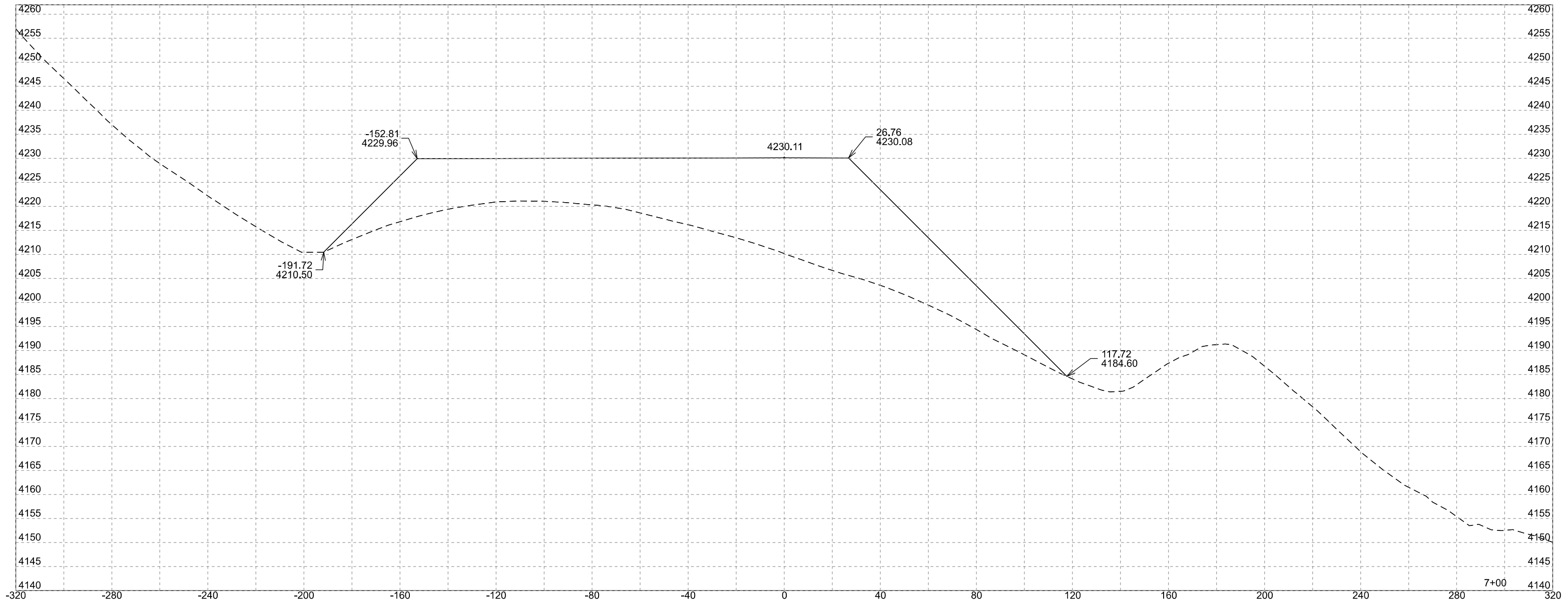
Plotting Date: 10/23/2024



WASTE SITE

	PROJECT	SECTION	SHEET
	PT 014A(32)46	53	54

Plotting Date: 10/23/2024



WASTE SITE

	PROJECT	SECTION	SHEET
	PT 014A(32)46	54	54

Plotting Date: 10/23/2024

