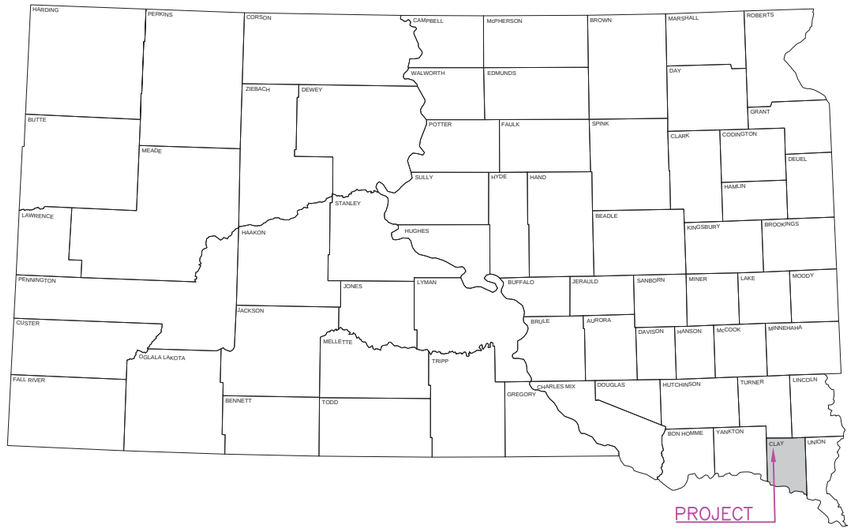


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT P TAPR(48)
TOWN OF WAKONDA
CLAY COUNTY

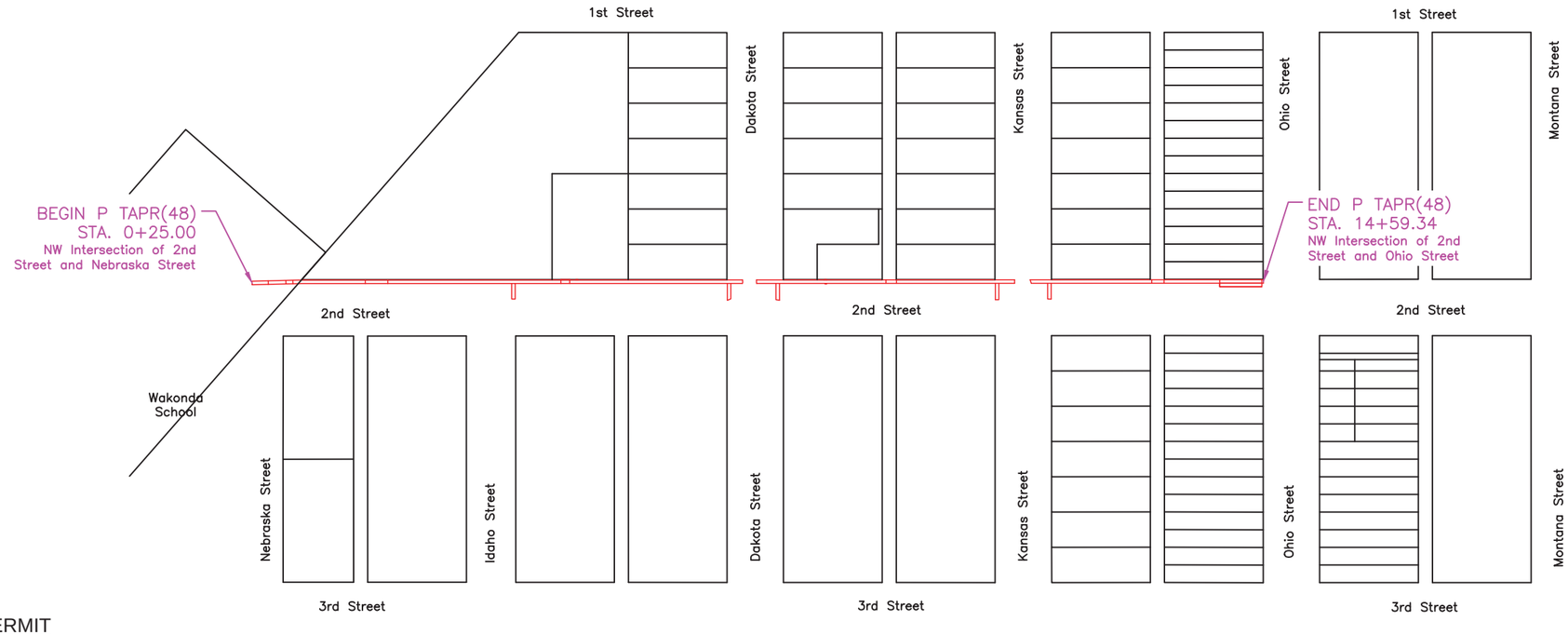
GRADING, SIDEWALK AND PEDESTRIAN RAMPS
PCN 08WA

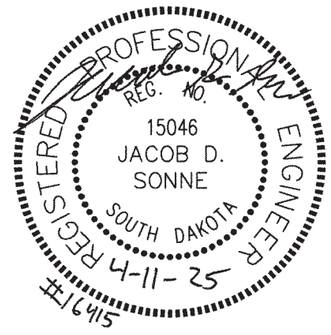
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	1	35

REV 04/11/2025 NAP

INDEX OF SECTIONS





STORM WATER PERMIT

Less Than 1 Acre Disturbed
Permit Not Required

Gross Length	1434 Feet	0.272 Miles
Length of Exceptions	42 Feet	0.008 Miles
Net Length	1392 Feet	0.264 Miles

3

May 21, 2025

ESTIMATE OF QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	2	35

REV 04/11/2025 NAP

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	0.272	Mile
009E3250	Miscellaneous Staking	0.272	Mile
009E3301	Engineer Directed Surveying/Staking	8.0	Hour
100E0100	Clearing	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	69.9	SqYd
110E1130	Remove Concrete Driveway Pavement	1.4	SqYd
110E1140	Remove Concrete Sidewalk	576.0	SqYd
120E0010	Unclassified Excavation	193	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
380E3525	6" Reinforced PCC Approach Pavement	0.7	SqYd
451E6075	Adjust Curb Stop Box	1	Each
634E0110	Traffic Control Signs	238.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	8	Each
651E0150	5" Reinforced Concrete Sidewalk	6,307	SqFt
651E0160	6" Reinforced Concrete Sidewalk	1,523	SqFt
651E7000	Type 1 Detectable Warnings	90	SqFt
730E0206	Type D Permanent Seed Mixture	188	Lb
731E0100	Fertilizing	81	Lb
732E0250	Fiber Mulching	1,235	Lb
734E0845	Sediment Control at Inlet with Frame and Grate	3	Each
740E0300	Gravel Surfacing	2.8	Ton
900E6837	Remove Existing Plant and Landscape Materials	Lump Sum	LS

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

SPECIFICATIONS

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

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 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.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

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 >

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

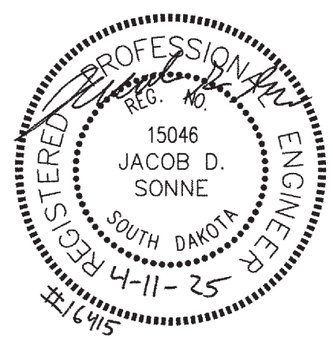
Action Taken/Required:

If construction dewatering is required and this project is currently covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the contractor will need to submit the dewatering information to the SDDANR using the following form:

< https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_AddTempInfoFillable.pdf >

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:
<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/swdpermitting/Ereporting.aspx >



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.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO) 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 150 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 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.

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 listed below.

Clay-Union Electric 31321 SD-19 Vermillion, SD 57069	Contact (605) 624-2673
Bluepeak 2810 Fox Run Parkway Yankton, SD 57078	Contact (605) 260-7400
Town of Wakonda 111 Ohio Street Wakonda, SD 57073	Contact Tim Steffen (605) 267-3118

TABLE OF UNCLASSIFIED EXCAVATION

Unclassified Excavation	193.0
Total	193.0

PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

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

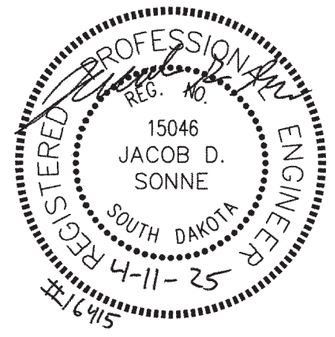


TABLE OF REMOVE ASPHALT CONCRETE

Station	to	Station	L/R	Quantity (SqYd)
0+25		0+70	R	2.6
13+97		14+59	R	67.3
			Total:	69.9

TABLE OF REMOVE CONCRETE DRIVEWAY PAVEMENT

Station	to	Station	L/R	Quantity (SqYd)
4+63		4+76	L	1.4
			Total:	1.4

TABLE OF REMOVE CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqYd)
0+25		6+00	CL	289
6+00		7+17	CL	61
7+49		9+19	CL	72
9+45		10+98	CL	73
11+43		12+99	CL	81
			Total:	576

TABLE OF 5" REINFORCED CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqFt)
0+25.00		0+48.00	CL	115.0
0+73.00		1+85.50	CL	562.5
2+17.50		4+63.00	CL	1,227.5
3+93.30		3+98.30	R	109.9
4+75.50		6+00.00	CL	622.5
4+84.55		4+86.94	L	1.2
6+00.00		7+20.78	CL	603.9
6+99.10		7+04.10	R	114.7
7+40.41		9+24.00	CL	918.0
7+68.12		7+73.12	R	117.6
9+39.00		11+06.65	CL	838.3
10+79.29		10+84.29	R	115.8
11+28.55		12+99.00	CL	848.3
11+53.37		11+58.37	R	111.4
			Total:	6,306.6

TABLE OF 6" REINFORCED CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqFt)
0+48.00		0+73.00	CL	125.0
1+85.50		2+17.5	CL	160.0
4+63.00		4+75.50	CL	62.5
9+24.00		9+39.00	CL	75.0
12+99.00		14+59.36	CL	801.8
13+97.50		14+57.20	R	298.3
			Total:	1,522.6

6" PCC REINFORCED APPROACH PAVEMENT

Base course material for 6" reinforced approach pavement will be considered incidental to the bid item for 6" approach pavement.

TABLE OF 6" PCC REINFORCED APPROACH PAVEMENT

Station	to	Station	L/R	Quantity (SqYd)
4+63.00		4+47.5	L	0.7
			Total:	0.7

TABLE OF REMOVE EXISTING PLANT AND LANDSCAPE MATERIALS

Description	Stationing	L/R	Quantity (varies)
Landscaping Block	4+45.00 - 4+63.50	L	18 LF
		Total:	18 LF

TABLE OF SEDIMENT CONTROL AT INLET WITH FRAME AND GATE

Station	L/R	Quantity (Each)
14+58	5' R	1
14+68	2' L	1
14+68	70'R	1
	Total:	3

TYPE 1 DETECTABLE WARNINGS

Detectable warnings will be in compliance with the Americans with Disabilities Act regulations.

The detectable warnings will be installed according to the manufacturer's installation instructions.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material will be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness will be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

The detectable warnings will be a brick red color for application in concrete curb ramps. Cast iron plates may be a natural patina (weathered steel).

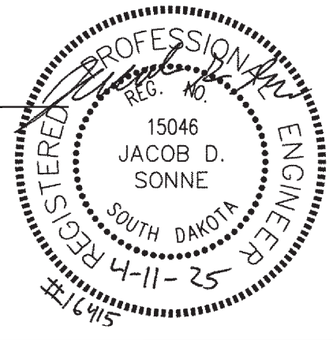
When Type 1 Detectable Warnings are specified, the Contractor will furnish and install only one of the products listed in the Type 1 Detectable Warnings table.

Type 1 Detectable Warnings

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 http://www.deeter.com/
Detectable Warning Plate Cast Iron Plate(No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com
Iron Dome Cast Iron Detectable Warning Tile	ADA Solutions, Inc. 323 Andover Street Suite 3 Wilmington, MA 01887 800-372-0519 https://adatile.com
Advantage Tactile Detectable Warning Cast Iron Plate	Advantage Tactile Systems, Inc. 241 Main Street, Suite 100 Buffalo, NY 14203 800-679-4022 https://advantagetactile.com/

TABLE OF TYPE 1 DETECTABLE WARNINGS

Station	L/R	Quantity (SqFt)
3+95.79	R	10
7+01.60	R	10
7+19.54	CL	10
7+41.53	CL	10
7+70.62	R	10
10+81.79	R	10
11+05.65	CL	10
11+31.16	CL	10
11+55.87	R	10
	Total:	90



REV 04/11/2025 NAP

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. 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.

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.

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.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

REMOVE AND REPLACE TOPSOIL

Topsoil to be removed and replaced will not be wasted unless otherwise approved by the Engineer. Topsoil to be removed, salvaged, and replaced will be removed to its full depth in locations where new sidewalk will be installed, but is not currently existing. Locations where the boulevard is to be regraded will have the topsoil removed and replaced to a minimum of 4" depth in the ROW and a minimum depth of 6 inches in temporary easement locations.

The estimated amount of topsoil to be removed and replaced is 37 CuYd.

All costs associated with removing, salvaging, and replacing the topsoil will be incidental to the contract lump sum price for "Remove and Replace Topsoil".

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 the following fungal species:

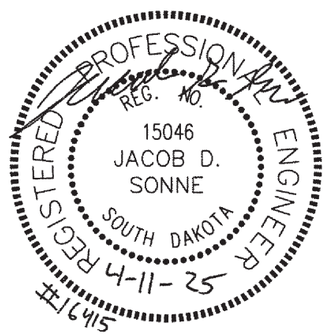
25% *Glomus intraradices*
25% *Glomus aggregatum or deserticola*
25% *Glomus mosseae*
25% *Glomus etunicatum*

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.

All seed will be inoculated by the seed supplier with a minimum of 20,000 live propagules of mycorrhizal fungi per 1,000 square feet. 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



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 3 pounds per 1,000 square feet.

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.

Lawn and turf seed, such as the Type D Permanent Seed Mixture, will be tested within 12 months prior to planting, exclusive of the calendar month in which the test was completed.

Type D Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Avalanche, Appalachian, Wildhorse, Blue Bonnet, Action	1.4
Perennial Ryegrass	Turf Type Varieties	1.4
Creeping Red Fescue	Epic, Boreal, Chantilly	1.4
Chewings Fescue	Ambrose, K2, Zodiac, Shadow III	1.4
Alkali Grass	Fults, Fults II, Quill, Salty	1.4
	Total:	7

FIBER MULCHING

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

Fiber mulch will be applied at the rate of 3,000 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 pound 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

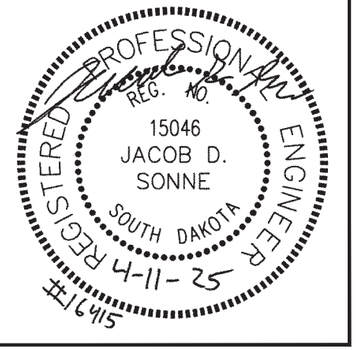
TABLE OF FIBER MULCHING

Station	to	Station	L/R	Quantity (Lb)
0+25		0+48	L	2.69
0+60		1+89	L	15.79
0+83		1+86	R	77.60
2+14		3+75	R	150.41
2+18		4+63	L	28.22
3+80		4+63	R	84.50
4+75		6+00	R	129.09
4+75		4+85	L	0.99
4+87		6+00	L	12.93
6+00		7+21	L	13.72
6+00		6+99	R	109.63
7+04		7+20	R	10.95
7+40		8+37	L	11.03
7+40		7+68	R	22.27
7+73		9+25	R	162.73
8+40		9+25	L	9.59
9+38		11+07	L	18.60
9+38		10+79	R	145.29
10+84		11+07	R	20.95
11+28		13+02	L	20.12
11+30		11+53	R	17.48
11+58		13+01	R	137.27
13+18		13+97	L	9.34
13+24		13+97	R	23.64
			Total:	1234.83

CONSTRUCTION STAKING

(See Special Provision for Contractor Staking)

					Grade Staking				
Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)	Miscellaneous Staking Quantity (Mile)
2nd Street	0+25	14+59	1	1,434	0.272	1	1	0.272	0.272
							Totals:	0.272	0.272



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	8	35

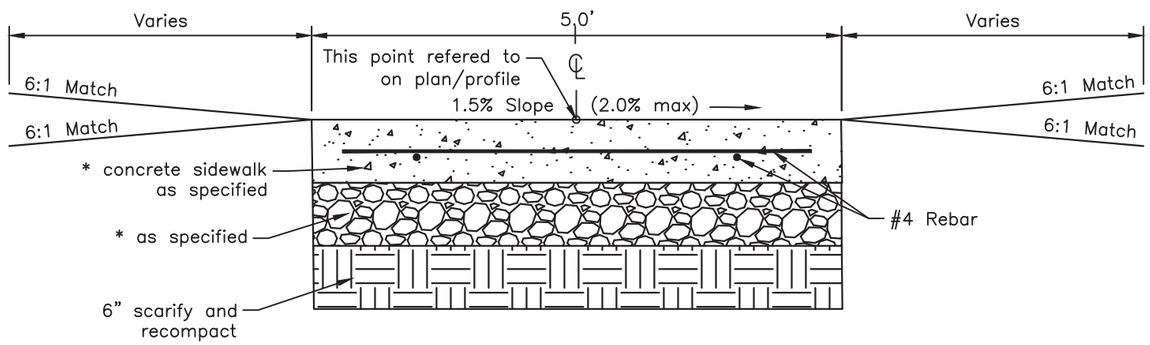
REV 04/11/2025 NAP

TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

5' Wide Reinforced Sidewalk - 5" or 6"

0+83.00 to 14+59.34



* 5" concrete sidewalk w/ 2" cushion material
* 6" concrete sidewalk w/ 2" cushion material

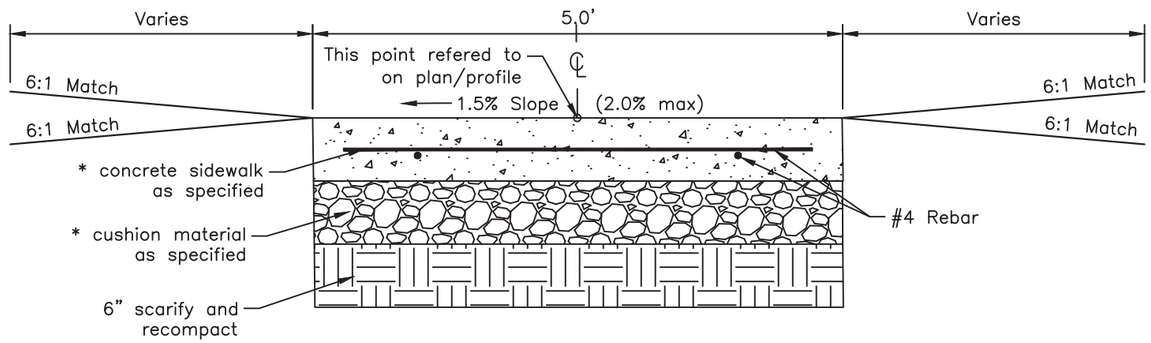
Transverse reinforcing steel will be placed 2.5' o.c. Bar will have minimum 3" clear cover from edges of concrete, i.e., the transverse bar will be 4.5' wide for 5' wide sidewalk and approach pavement. Transverse reinforcing steel will be a minimum of 6 inches from contraction joints. Reinforcement will be centered vertically in the sidewalk. Lap splices will be a minimum of 18 inches in length.

Chairs and bolsters will be used as specified to support the reinforcing steel

Cross Slope Transition
0+75.00 to 0+83.00

5' Wide Reinforced Sidewalk - 5" or 6"

0+25.00 to 0+75.00



* 5" concrete sidewalk w/ 2" cushion material
* 6" concrete sidewalk w/ 2" cushion material

Transverse reinforcing steel will be placed 2.5' o.c. Bar will have minimum 3" clear cover from edges of concrete, i.e., the transverse bar will be 4.5' wide for 5' wide sidewalk and approach pavement. Transverse reinforcing steel will be a minimum of 6 inches from contraction joints. Reinforcement will be centered vertically in the sidewalk. Lap splices will be a minimum of 18 inches in length.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

HORIZONTAL ALIGNMENT DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	9	35

REV 04/11/2025 NAP

2ND STREET SIDEWALK ALIGNMENT

Type	Station			Northing	Easting
POB	0+00.00			261806.8820	2830165.7824
		TL=95.46	N 47°08'16" E		
PI	0+95.46			261871.8171	2830235.7536
		TL=1404.54	N 48°21'29" E		
POE	15+00.00			262805.1013	2831285.3846

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/2011); Geoid 18; SF = 0.9998512126

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

CONTROL DATA

FOR BIDDING PURPOSES ONLY

HORIZONTAL AND VERTICAL CONTROL POINTS					
POINT	**STATION & OFFSET**	**DESRICPTION**	**NORTHING**	**EASTING**	**ELEVATION**
CP 700	1+72.41-42.55' R	Capped Rebar	262721.0180	2831300.1390	1390.147
CP 701	5+19.21-25.29' R	Capped Rebar	262516.8280	2831067.4770	1391.659
CP 702	9+38.60-17.82' R	Capped Rebar	262273.7540	2830787.0080	1389.921
CP 703	12+50.57-24.62' R	Capped Rebar	262034.1150	2830504.8430	1390.292
CP 704	17+15.53-19.35' R	Capped Rebar	261782.8790	2830179.5950	1389.887
BM 1	0+88.79 - 5.37' R	Fire Hydrant - Top Turning Nut - At the NE intersection of 2nd Street and Nebraska Street	-	-	1392.677
BM 2	7+74.28 - 7.99' R	Fire Hydrant - Top Turning Nut - At the NE intersection of 2nd Street and Dakota Street	-	-	1393.636
BM 3	11+62.92 - 8.31' R	Fire Hydrant - Top Turning Nut - At the NE intersection of 2nd Street and Kansas Street	-	-	1395.419

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/2011); Geoid 18; SF = 0.9998512126

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

LEGEND

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	11	35

REV 04/11/2025 NAP

Anchor
Antenna
Approach
Assumed Corner
Azimuth Marker
BBQ Grill/ Fireplace
Bearing Tree
Bench Mark
Box Culvert
Bridge
Brush/Hedge
Buildings
Bulk Tank
Cattle Guard
Cemetery
Centerline
Cistern
Clothes Line
Concrete Symbol
Control Point
Creek Edge
Curb/Gutter
Curb
Dam Grade/Dike/Levee
Deck Edge
Ditch Block
Doorway Threshold
Drainage Profile
Drop Inlet
Edge Of Asphalt
Edge Of Concrete
Edge Of Gravel
Edge Of Other
Edge Of Shoulder
Electric Transformer/Power Junction Box
Fence Barbwire
Fence Chainlink
Fence Electric
Fence Miscellaneous
Fence Rock
Fence Snow
Fence Wood
Fence Woven
Fire Hydrant
Flag Pole
Flower Bed
Gas Valve Or Meter
Gas Pump Island
Grain Bin
Guardrail
Gutter
Guy Pole
Haystack
Highway ROW Marker
Interstate Close Gate
Iron Pin
Irrigation Ditch
Lake Edge
Lawn Sprinkler

Mailbox
Manhole Electric
Manhole Gas
Manhole Miscellaneous
Manhole Sanitary Sewer
Manhole Storm Sewer
Manhole Telephone
Manhole Water
Merry-Go-Round
Microwave Radio Tower
Miscellaneous Line
Miscellaneous Property Corner
Miscellaneous Post
Overhang Or Encroachment
Overhead Utility Line — OH —
Parking Meter
Pedestrian Push Button Pole
Pipe With End Section
Pipe With Headwall
Pipe Without End Section
Playground Slide
Playground Swing
Power And Light Pole
Power And Telephone Pole
Power Meter
Power Pole
Power Pole And Transformer
Power Tower Structure
Propane Tank
Property Pipe
Property Pipe With Cap
Property Stone
Public Telephone
Railroad Crossing Signal
Railroad Milepost Marker
Railroad Profile
Railroad ROW Marker
Railroad Signs
Railroad Switch
Railroad Track
Railroad Trestle
Rebar
Rebar With Cap
Reference Mark
Retaining Wall
Riprap
River Edge
Rock And Wire Baskets
Rockpiles
Satellite Dish
Septic Tank
Shrub Tree
Sidewalk
Sign Face
Sign Post
Slough Or Marsh
Spring
Stream Gauge
Street Marker

Subsurface Utility Exploration Test Hole
Telephone Fiber Optics — T/F —
Telephone Junction Box
Telephone Pole
Television Cable Jct Box
Television Tower
Test Wells/Bore Holes
Traffic Sign Double Face
Traffic Sign One Post
Traffic Sign Two Post
Traffic Signal
Trash Barrel
Tree Belt
Tree Coniferous
Tree Deciduous
Tree Stumps
Triangulation Station
Underground Electric Line — P —
Underground Gas Line — G —
Underground High Pressure Gas Line — HG —
Underground Sanitary Sewer — S —
Underground Storm Sewer — S —
Underground Tank
Underground Telephone Line — T —
Underground Television Cable — TV —
Underground Water Line — W —
Water Fountain
Water Hydrant
Water Meter
Water Tower
Water Valve
Water Well
Weir Rock
Windmill
Wingwall
Witness Corner

State and National Line
County Line
Section Line
Quarter Line
Sixteenth Line
Property Line
Construction Line
ROW Line
New ROW Line
Cut and Fill Limits
Control of Access
New Control of Access
Proposed ROW (After Property Disposal)

Drainage Arrow

Remove Concrete Pavement
Remove Concrete Driveway Pavement
Remove Asphalt Concrete Pavement
Remove Concrete Sidewalk
Remove Concrete Median Pavement
Remove Concrete Curb and/or Gutter

Detectable Warning
Pedestrian Push Button Pole
and 30" x 48" Clear Space
with 1.5% slope

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

RIGHT OF WAY AND EASEMENT OWNERSHIP TABLE

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	12	35

REV 04/11/2025 NAP

RIGHT OF WAY AND EASEMENT OWNERSHIP TABLE

Parcel No.	Station (Begin)		Station (End)	Side	Type	Purpose	Area		Property Owner	Property Description
A1	0+95.46	to	4+50.60	LT	TEMP	Cut, Fill, Sidewalk	708.53	Sq.Ft.	Wakonda School District 13-2	Southeasterly 150' of Outlot F except Lot 1 of Outlot F to the City of Wakonda, Clay County, South Dakota.
A2	4+50.60	to	5+58.60	LT	TEMP	Cut, Fill, Sidewalk	216.00	Sq.Ft.	Leah M. Bunkers	Lot 1 of Outlot F to the City of Wakonda, Clay County, South Dakota.
A3	5+58.60	to	6+98.60	LT	TEMP	Cut, Fill, Sidewalk	280.00	Sq.Ft.	Susan Orr	Lot 7, Block 9, City of Wakonda, Clay County, South Dakota.
A4	7+78.62	to	8+26.62	LT	TEMP	Cut, Fill, Sidewalk	96.00	Sq.Ft.	Michelle M. Crawford	Lots 5 and 6, except the Northeast 5 Feet of said Lot 6; and the South 48 Feet of Lot 7, Block 7, Town of Wakonda, Clay County, South Dakota.
A5	8+26.62	to	9+18.72	LT	TEMP	Cut, Fill, Sidewalk	184.20	Sq.Ft.	Brenden Sullivan	The NE 5 Feet of Lot 6, Except the SE 50 Feet thereof, and Lot 7, except the SE 48 Feet thereof, all in Block 7, Town of Wakonda, Clay County, South Dakota.
A6	9+38.72	to	10+78.79	LT	TEMP	Cut, Fill, Sidewalk	280.15	Sq.Ft.	Tracy L. Taggart	Lot 8, Block 7, Town of Wakonda, Clay County, South Dakota; and Auditor's Tract 1 of Outlot A, Town of Wakonda, Clay County, South Dakota.
A7	11+58.87	to	12+98.99	LT	TEMP	Cut, Fill, Sidewalk	280.24	Sq.Ft.	Judith G. Swenson	Lot 7, Block 1, Town of Wakonda, Clay County, South Dakota.
A8	13+18.32	to	13+97.37	LT	TEMP	Cut, Fill, Sidewalk	156.65	Sq.Ft.	Terri Clark	Lots 8, 9, and 10, Block 1, Town of Wakonda, Clay County, South Dakota.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

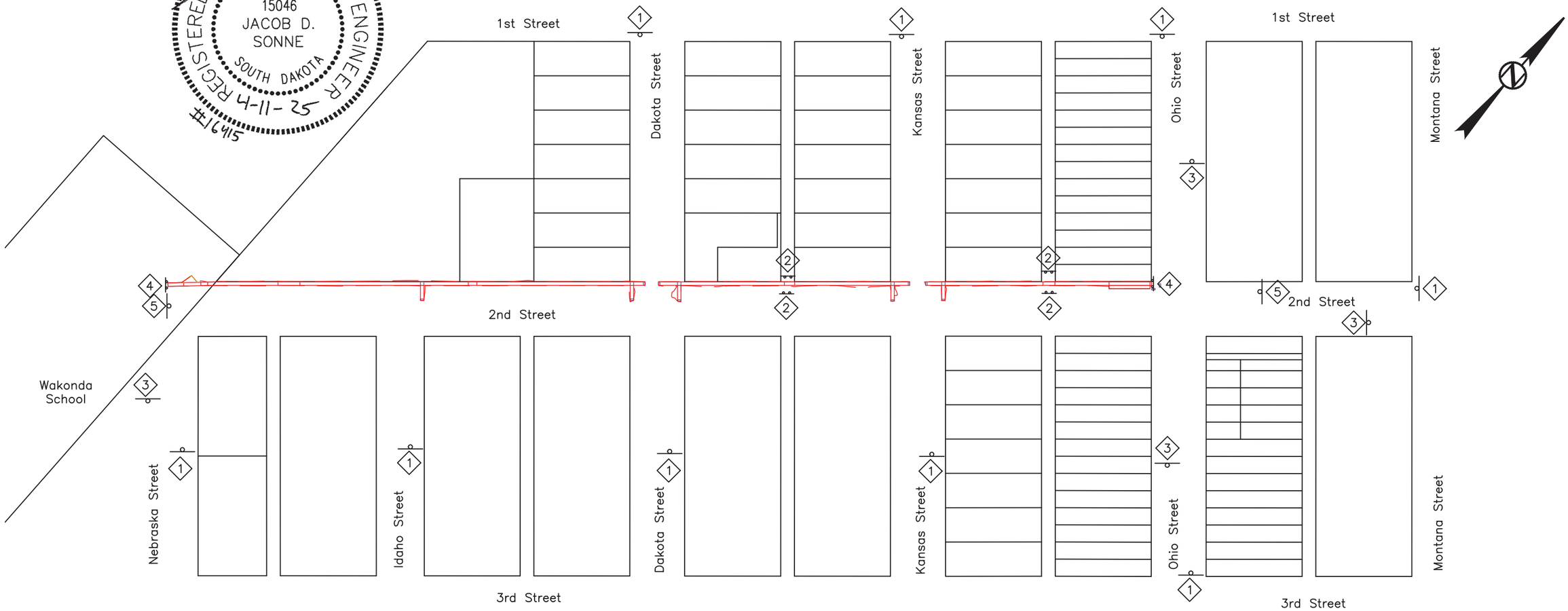
TRAFFIC CONTROL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	13	35

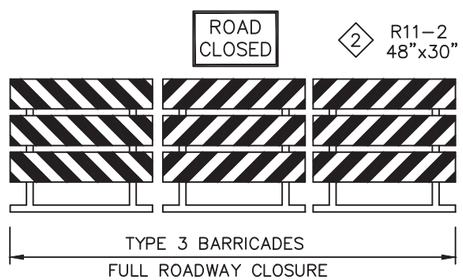
REV 04/11/2025 NAP

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415



1 W20–1 48”x48”

5 W21–5 48”x48”

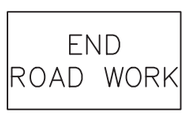


2 R11–2 48”x30”

TYPE 3 BARRICADES
FULL ROADWAY CLOSURE

NOTE: The direction of stripes on type 3 barricades for each road closure will be oriented to meet the requirements of the MUTCD latest edition.

* Use 3 Type III barricades for closure of streets
* Use 2 Type III barricades for closure of alleys



3 G20–2 36”x18”

4 R9–9 24”x12”

ITEMIZED LIST FOR TRAFFIC CONTROL

	SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	SQFT PER SIGN	TOTAL SqFt
1	W20–1	48”x48”	Road Work Ahead	9	16	144
2	R11–2	48”x30”	Road Closed	4	10	40
3	G20–2	36”x18”	End Road Work	4	4.5	18
4	R9–9	24”x12”	Sidewalk Closed	2	2	4
5	W21–5	48”x48”	Shoulder Work	2	16	32
–	–	–	Type 3 Barricade	8	–	–
					TOTAL	238

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	14	35

FOR BIDDING PURPOSES ONLY

REV 04/11/2025 NAP

0+24 - 11' L
0+69 - 13' L
Do Not Disturb
Tree

0+25 - 1.5' R to 0+70 -2.5' R
Remove 2.6 SY
Asphalt Concrete Pavement

0+25 - 6+00
Remove 289 SY
Concrete Sidewalk

4+45 - 4+63 3' L
Remove 18 LF
Landscape Block
(Incidental to Remove Existing
Plant and Landscape Materials)

4+63 - 2' L to 4+76 - 3' L
Remove 1.4 SY
Concrete Driveway Pavement

0+25.00 - 0+48.00
Install 115.0 SF of 5"
Reinforced Sidewalk

0+46.93 - 2.5' L to 0+67.94- 12.5' L
Install 2.8 Tn Gravel Surfacing

0+48.00 - 0+73.00
Install 125.0 SF of 6"
Reinforced Sidewalk

0+73.00 - 1+85.50
Install 562.5 SF of 5"
Reinforced Sidewalk

1+85.50 - 2+17.50
Install 160.0 SF of 6"
Reinforced Sidewalk

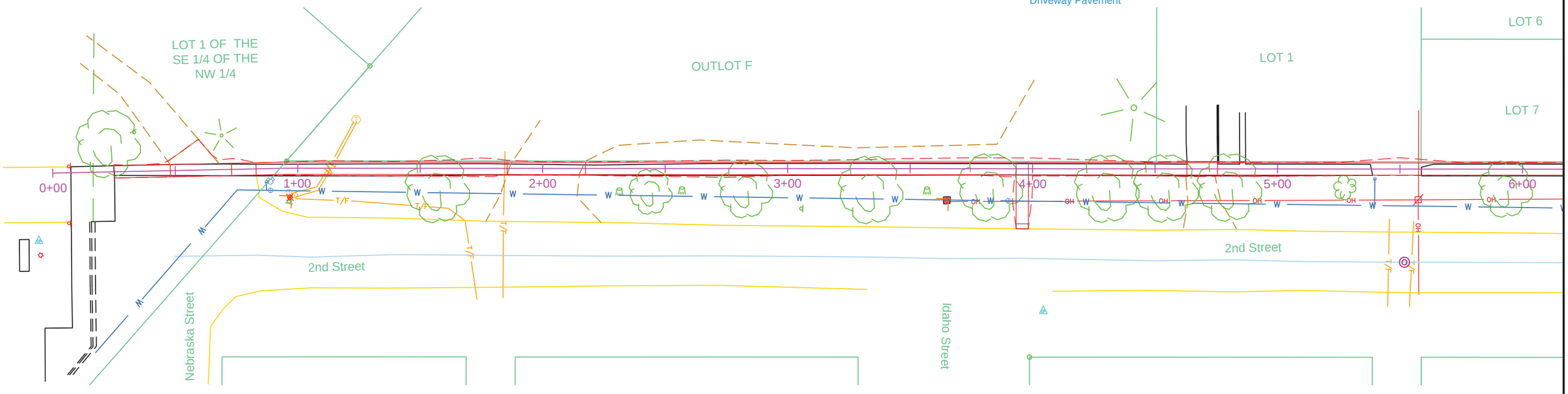
2+17.50 - 4+63.00
Install 1,227.5 SF of 5"
Reinforced Sidewalk

4+63.00 - 4+75.50
Install 62.5 SF of 6"
Reinforced Sidewalk

4+63.00 - 2.5' L to 4+47.50 - 3.0' L
Install 0.7 SY 6" Reinforced PCC
Driveway Pavement

4+75.50 - 6+00.00
Install 622.5 SF of 5"
Reinforced Sidewalk

4+84.55 - 4+86.94 2.5' L - 3.0' L
Install 1.2 SF of 5"
Reinforced Sidewalk



0+89 - 5' R
Do Not Disturb
Fire Hydrant

1+58 - 9' R
2+45 - 10' R
2+84 - 9' R
3+35 - 9' R
3+84 - 9' R
4+31 - 9' R
4+56 - 9' R
4+82 - 8' R
5+94 - 9' R
Do Not Disturb
Tree

3+93.30 - 2.5' R to 3+98.30 - 24.5' R
Install 109.9 SF of 5"
Reinforced Sidewalk

3+95.79 - 23.45' R
Install 10 SF Type 1
Detectable Warning Panel

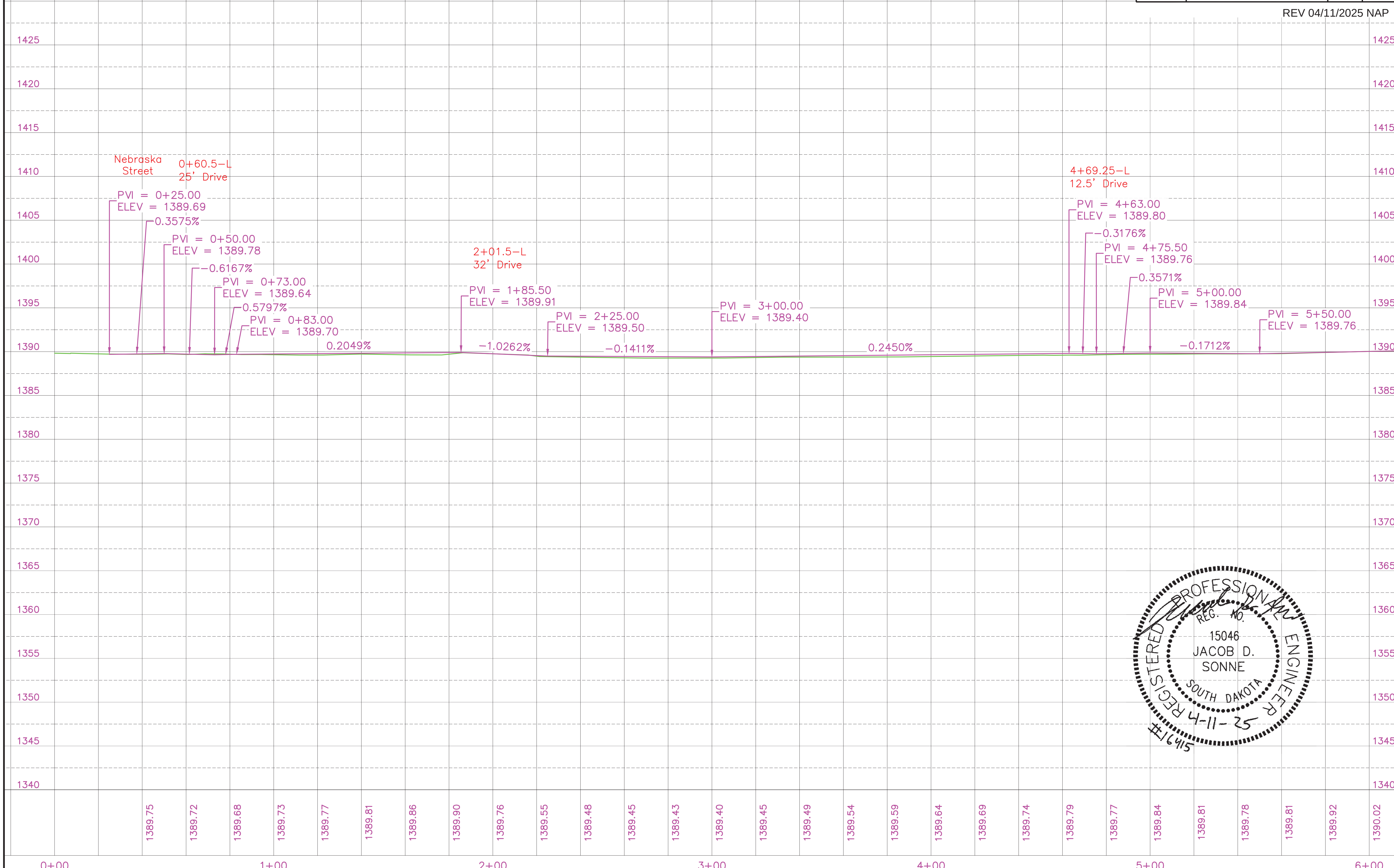
5+30 - 10' R
Do Not Disturb
Bush

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15046
JACOB D.
SONNE
SOUTH DAKOTA
4-11-25
#16115

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	15	35

REV 04/11/2025 NAP



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	16	35

REV 04/11/2025 NAP

6+00 - 7+17
Remove 61 SY
Concrete Sidewalk

7+60 - 23' L
10+89 - 10' L
Do Not Disturb
Tree

7+49 - 9+19
Remove 72 SY
Concrete Sidewalk

9+45 - 10+98
Remove 73 SY
Concrete Sidewalk

10+38.28 - 3.6' R
Adjust Curb Stop Box

6+00.00 - 7+20.78
Install 603.9 SF of 5"
Reinforced Sidewalk

7+19.54
Install 10.0 SF Type 1
Detectable Warning Panel

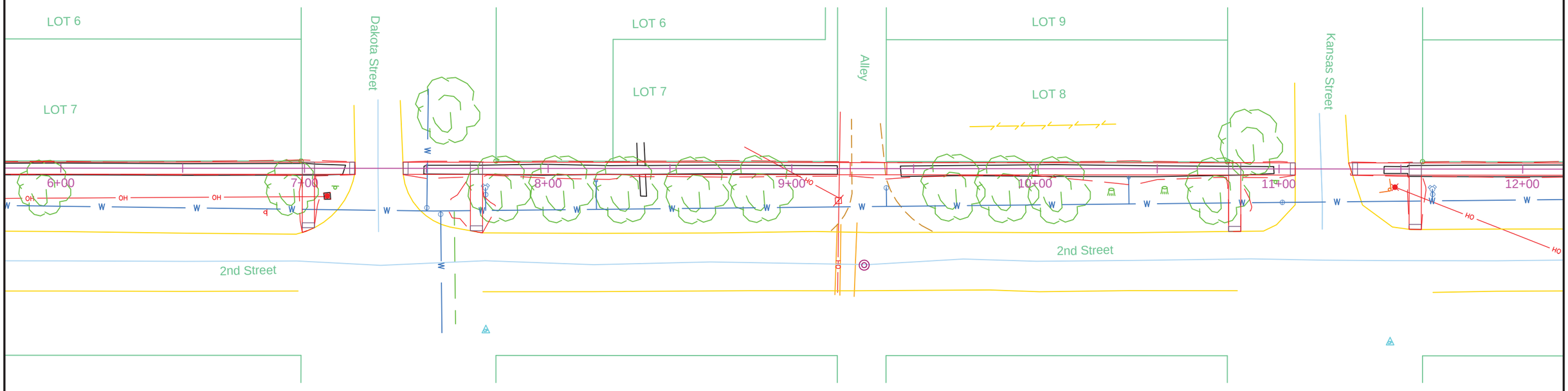
7+41.53
Install 10.0 SF Type 1
Detectable Warning Panel

7+40.41 - 9+24.00
Install 918.0 SF of 5"
Reinforced Sidewalk

9+24.00 - 9+39.00
Install 75.0 SF of 6"
Reinforced Sidewalk

9+39.00 - 11+06.65
Install 838.3 SF of 5"
Reinforced Sidewalk

11+05.65
Install 10.0 SF Type 1
Detectable Warning Panel



6+99.10 - 2.5' R to 7+04.10 - 26.3' R
Install 114.7 SF of 5"
Reinforced Sidewalk

7+01.60 - 23.37' R
Install 10 SF Type 1
Detectable Warning Panel

7+68.12 - 2.5' R to 7+73.12 - 26.5' R
Install 117.6 SF of 5"
Reinforced Sidewalk

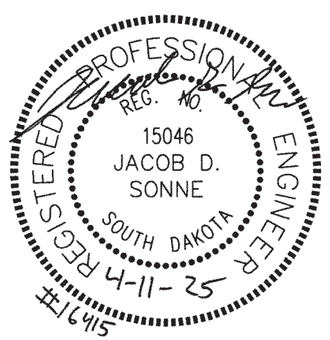
7+70.62 - 24.57' R
Install 10 SF Type 1
Detectable Warning Panel

7+74 - 8' R
Do Not Disturb
Fire Hydrant

6+96 - 9' R
7+81 - 9' R
8+06 - 9' R
8+33 - 9' R
8+62 - 9' R
8+89 - 9' R
9+67 - 9' R
9+89 - 9' R
10+10 - 9' R
10+76 - 10' R
Do Not Disturb
Tree

10+79.29 - 2.5' R to 10+84.29 - 25.7' R
Install 115.8 SF of 5"
Reinforced Sidewalk

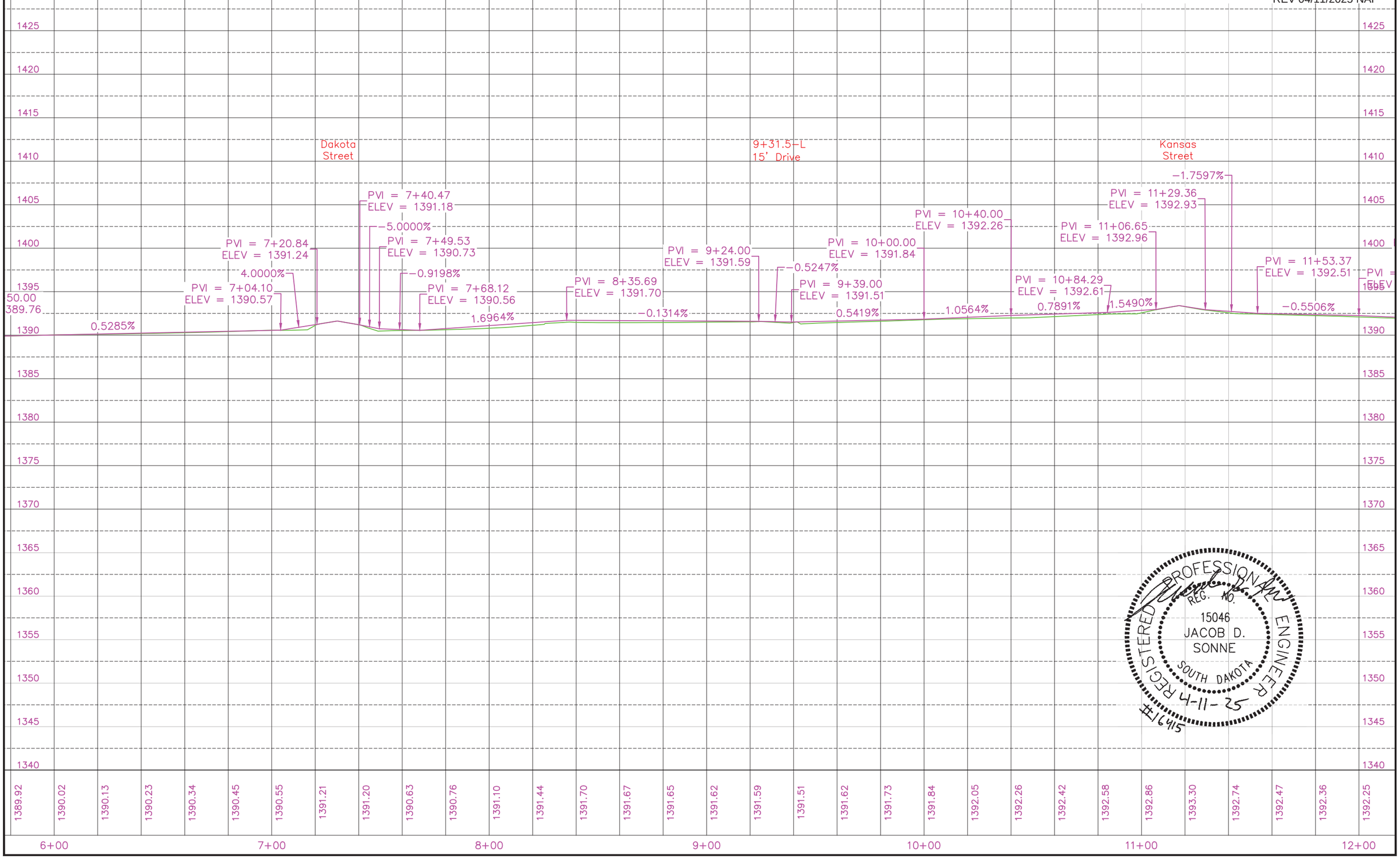
10+81.79 - 24.63' R
Install 10 SF Type 1
Detectable Warning Panel



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	17	35

REV 04/11/2025 NAP



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	18	35

FOR BIDDING PURPOSES ONLY

REV 04/11/2025 NAP

11+43 - 12+99
Remove 81 SY
Concrete Sidewalk

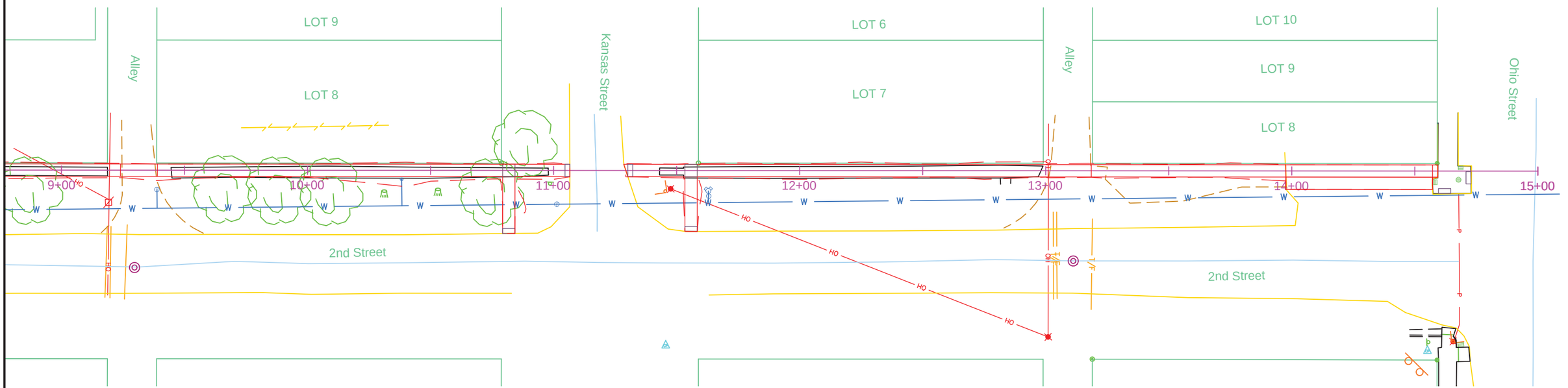
13+97 - 2.5' L to 14+59 - 7.5' R
Remove 67.3 SY
Asphalt Driveway Pavement

11+28.55 - 12+99.00
Install 848.3 SF of 5"
Reinforced Sidewalk

11+31.16
Install 10 SF Type 1
Detectable Warning Panel

12+99.00 - 14+59.36
Install 801.8 SF of 6"
Reinforced Sidewalk

13+97.50 - 2.50' R to 14+57.20 - 7.50' R
Install 298.3 SF of 6"
Reinforced Sidewalk



11+53.37 - 2.5' R to 11+58.37 - 24.8' R
Install 111.4 SF of 5"
Reinforced Sidewalk

11+55.87 - 23.7' R
Install 10 SF Type 1
Detectable Warning Panel

11+63 - 8' R
Do Not Disturb
Fire Hydrant

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15046
JACOB D.
SONNE
SOUTH DAKOTA
4-11-25
#16415

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	19	35

FOR BIDDING PURPOSES ONLY

REV 04/11/2025 NAP

PVI = 9+24.00
ELEV = 1391.59
−0.5247%
PVI = 9+39.00
ELEV = 1391.51
0.5419%
PVI = 10+00.00
ELEV = 1391.84
1.0564%
PVI = 10+40.00
ELEV = 1392.26
0.7891%
PVI = 10+84.29
ELEV = 1392.61
1.5490%
PVI = 11+06.65
ELEV = 1392.96
−1.7597%
PVI = 11+29.36
ELEV = 1392.93
−0.5506%
PVI = 11+53.37
ELEV = 1392.51
−1.0889%
PVI = 12+00.00
ELEV = 1392.25
0.2011%
PVI = 12+60.00
ELEV = 1391.60
−0.6667%
PVI = 13+01.00
ELEV = 1391.68
−1.0948%
PVI = 13+18.50
ELEV = 1391.56
−1.3227%
PVI = 13+50.00
ELEV = 1391.22
L 40.00ft
G1 −1.3227%
G2 3.5848%
K 8
PVI 13+80
Elev 1390.82
−0.2634%
PVI = 14+35.00
ELEV = 1391.45
−1.9307%
PVI = 14+57.19
ELEV = 1391.02
−2.5127%
PVI = 14+67.43
ELEV = 1390.76

Kansas Street

13+09.75−L
17.5' Drive

14+27.5−L
60' Drive

Ohio Street

1314%

1430 1425 1420 1415 1410 1405 1400 1395 1390 1385 1380 1375 1370 1365 1360 1355 1350 1345 1340

1391.65 1391.62 1391.59 1391.51 1391.62 1391.73 1391.84 1392.05 1392.26 1392.42 1392.58 1392.86 1393.30 1392.74 1392.47 1392.36 1392.25 1392.03 1391.81 1391.60 1391.64 1391.68 1391.55 1391.33 1391.09 1391.07 1391.54 1391.48 1391.35 1390.95

9+00 10+00 11+00 12+00 13+00 14+00 15+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15046
JACOB D.
SONNE
SOUTH DAKOTA
4-11-25
#16415

CURB RAMP DETAILS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	20	35

REV 04/11/2025 NAP

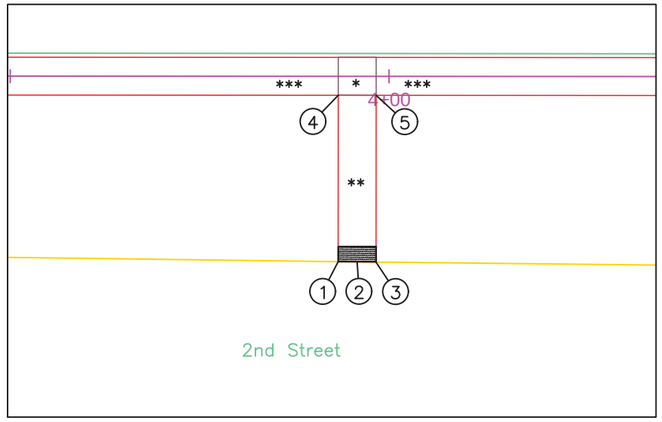
① 3+93.30 – 24.46' R
Begin Ramp Slope
Elev: 1390.37

② 3+95.80 – 24.45' R
Center Type 1 Ramp

③ 3+98.30 – 24.50' R
Begin Ramp Slope
Elev: 1390.38

④ 3+93.30 – 2.50' R
End Ramp Slope
Elev: 1389.59

⑤ 3+98.30 – 2.50' R
End Ramp Slope
Elev: 1389.60



⑥ 6+99.10 – 26.33' R
Begin Ramp Slope
Elev: 1391.08

⑦ 7+01.60 – 24.37' R
Center Type 1 Ramp

⑧ 7+04.10 – 24.37' R
Begin Ramp Slope
Elev: 1391.07

⑨ 6+99.10 – 2.50' R
End Ramp Slope
Elev: 1390.51

⑩ 7+04.10 – 2.50' R
End Ramp Slope
Elev: 1390.54

⑪ 7+04.10 – 2.50' L
End Ramp Slope
Elev: 1390.61

⑫ 7+20.78 – 2.50' L
Begin Ramp Slope
Elev: 1391.28

⑬ 7+20.54 – 0.00' R
Center Type 1 Ramp

⑭ 7+20.54 – 2.50' R
Begin Ramp Slope
Elev: 1391.19

⑮ 7+40.53 – 2.50' R
Begin Ramp Slope
Elev: 1391.14

⑯ 7+40.53 – 0.00' R
Center Type 1 Ramp

⑰ 7+04.53 – 2.50' L
Begin Ramp Slope
Elev: 1391.22

⑱ 7+68.12 – 2.50' L
End Ramp Slope
Elev: 1390.60

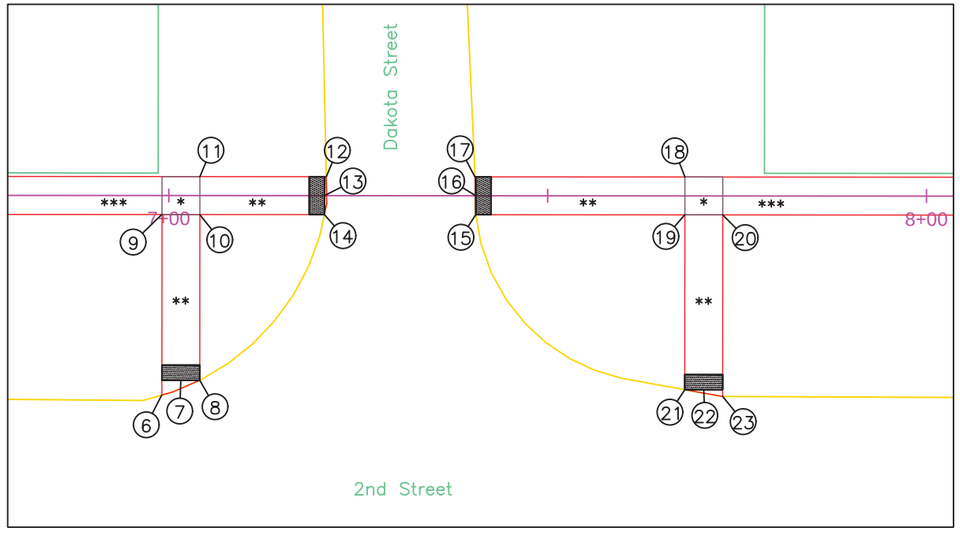
⑲ 7+68.12 – 2.50' R
End Ramp Slope
Elev: 1390.52

⑳ 7+73.12 – 2.50' R
End Ramp Slope
Elev: 1390.61

㉑ 7+68.12 – 25.57' R
Begin Ramp Slope
Elev: 1391.16

㉒ 7+70.62 – 25.57' R
Center Type 1 Ramp

㉓ 7+13.12 – 26.46' R
Begin Ramp Slope
Elev: 1391.23



LEGEND:

* Turning Space with 2% max. longitudinal and transverse slope
** Ramp slopes with 8.3% max. longitudinal slope and 2% max. transverse slope
*** Sidewalk with 5% max. longitudinal slope and 2% max. transverse slope
▒ Detectable Warning Surface

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15046
JACOB D.
SONNE
SOUTH DAKOTA
4-11-25
#16415

CURB RAMP DETAILS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	21	35

REV 04/11/2025 NAP

① 10+79.29 – 25.69' R
Begin Ramp Slope
Elev: 1392.69

② 10+81.79 – 25.63' R
Center Type 1 Ramp

③ 10+84.29 – 25.63' R
Begin Ramp Slope
Elev: 1392.77

④ 10+79.29 – 2.50' R
End Ramp Slope
Elev: 1392.54

⑤ 10+84.29 – 2.50' R
End Ramp Slope
Elev: 1392.57

⑥ 10+84.29 – 2.50' L
End Ramp Slope
Elev: 1392.65

⑦ 11+06.64 – 2.50' L
Begin Ramp Slope
Elev: 1393.00

⑧ 11+06.64 – 0.00' R
Center Type 1 Ramp

⑨ 11+06.64 – 2.50' R
Begin Ramp Slope
Elev: 1392.92

⑩ 11+30.16 – 2.50' R
Begin Ramp Slope
Elev: 1392.89

⑪ 11+30.16 – 0.00' R
Center Type 1 Ramp

⑫ 11+28.55 – 2.50' L
Begin Ramp Slope
Elev: 1392.97

⑬ 11+53.37 – 2.50' L
End Ramp Slope
Elev: 1392.54

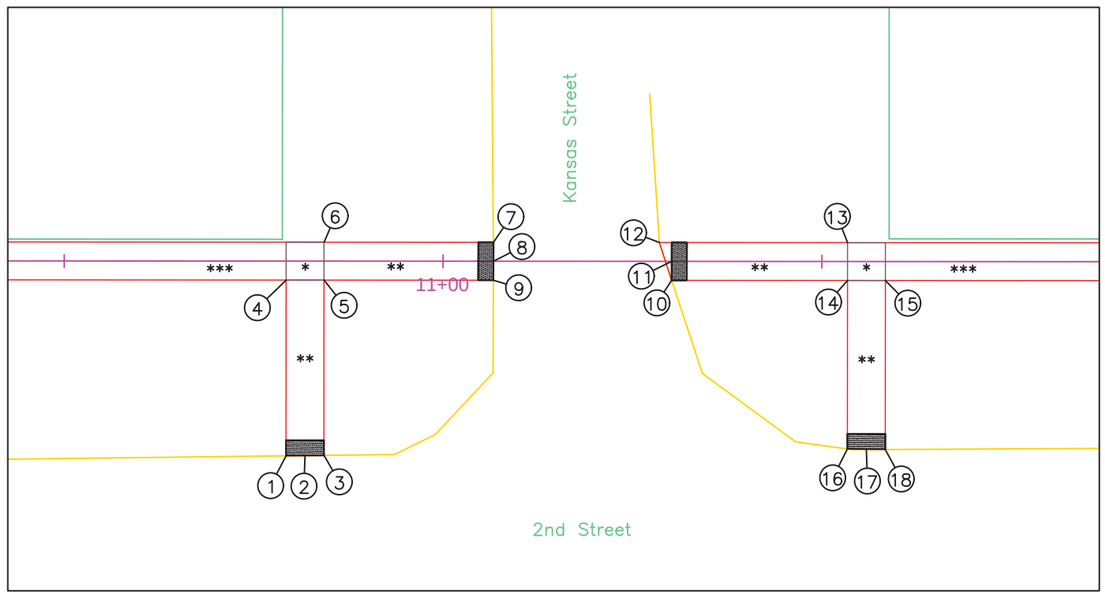
⑭ 11+53.37 – 2.50' R
End Ramp Slope
Elev: 1392.47

⑮ 11+58.37 – 2.50' R
End Ramp Slope
Elev: 1392.44

⑯ 11+53.37 – 24.73' R
Begin Ramp Slope
Elev: 1392.74

⑰ 11+5.87 – 24.73' R
Center Type 1 Ramp

⑱ 11+58.37 – 24.81' L
Begin Ramp Slope
Elev: 1392.70



LEGEND:

* Turning Space with 2% max. longitudinal and transverse slope
** Ramp slopes with 8.3% max. longitudinal slope and 2% max. transverse slope
*** Sidewalk with 5% max. longitudinal slope and 2% max. transverse slope
Detectable Warning Surface

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15046
JACOB D.
SONNE
SOUTH DAKOTA
4-11-25
#16115

EROSION AND SEDIMENT CONTROL PLAN

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	22	35

REV 04/11/2025 NAP

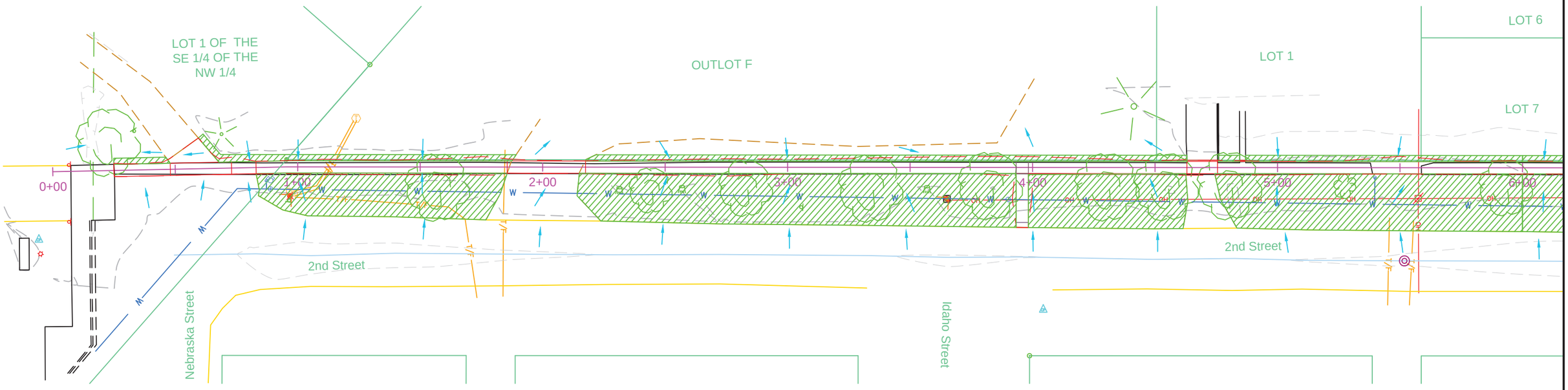
FINAL STABILIZATION

Install Fiber Mulching
at the following locations:

0+25 to 0+48	L	6.2 SY
0+60 to 1+89	L	38.2 SY
0+83 to 1+86	R	187.8 SY
2+14 to 3+93	R	408.8 SY
2+18 to 4+63	L	68.3 SY
3+98 to 4+63	R	158.0 SY
4+75 to 6+00	R	312.4 SY
4+75 to 4+85	L	2.4 SY
4+87 to 6+00	L	31.3 SY

Legend

- Fiber Mulching
- Silt Fence
- Drainage Arrow
- Sediment Control
- Erosion Control Wattles



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

EROSION AND SEDIMENT CONTROL PLAN

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	23	35

REV 04/11/2025 NAP

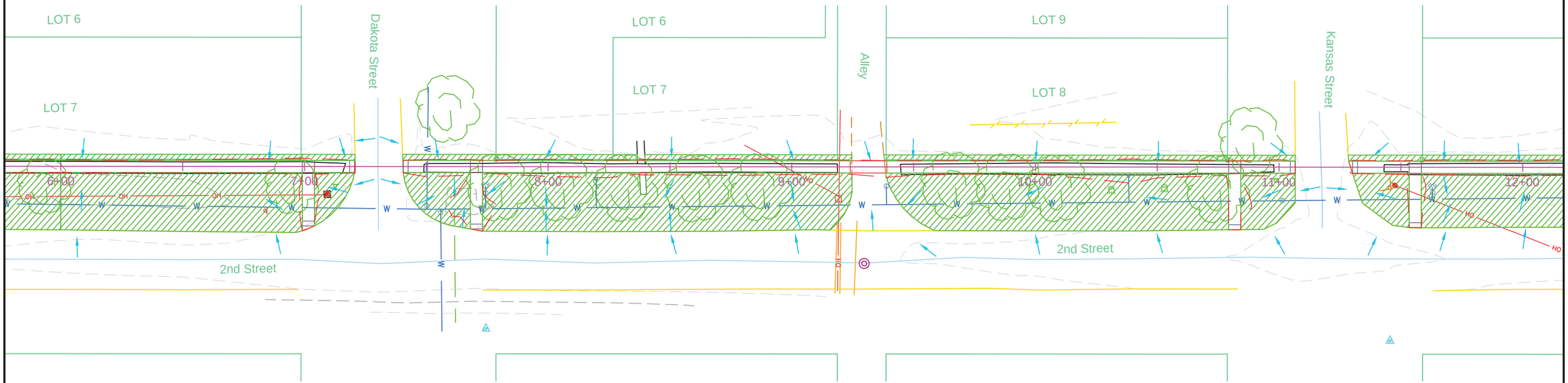
FINAL STABILIZATION

Install Fiber Mulching
at the following locations:

6+00 to 7+21	L	33.2 SY
6+00 to 6+99	R	265.3 SY
7+04 to 7+20	R	26.5 SY
7+40 to 8+37	L	26.7 SY
7+40 to 7+68	R	53.9 SY
7+73 to 9+25	R	393.8 SY
8+40 to 9+25	L	23.2 SY
9+38 to 11+07	L	45.0 SY
9+38 to 10+79	R	351.6 SY
10+84 to 11+07	R	50.7 SY

Legend

- Fiber Mulching
- Silt Fence
- Drainage Arrow
- Sediment Control
- Erosion Control Wattles



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15046
JACOB D.
SONNE
SOUTH DAKOTA
4-11-25
#16415

EROSION AND SEDIMENT CONTROL PLAN

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	24	35

REV 04/11/2025 NAP

FINAL STABILIZATION

Install Fiber Mulching
at the following locations:

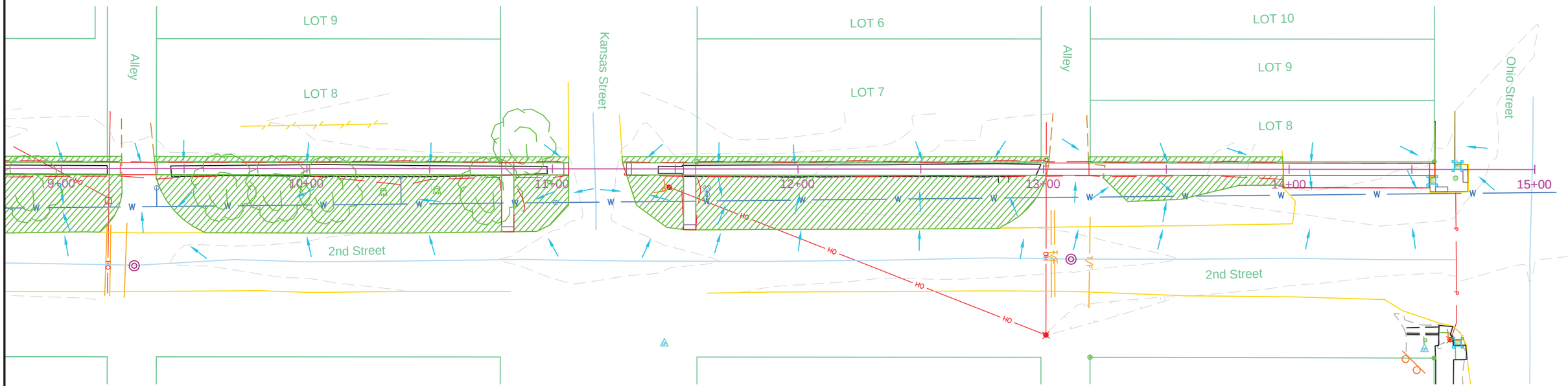
11+28 to 13+02	L	48.7 SY
11+30 to 11+53	R	42.3 SY
11+58 to 13+01	R	332.2 SY
13+18 to 13+97	L	22.6 SY
13+24 to 13+97	R	57.2 SY

TEMPORARY STABILIZATION

Install Sediment Control at Inlet
with Frame and Grate
at the following locations:
14+58 - 5' R
14+68 - 2' L
14+68 - 70' R

Legend

- Fiber Mulching
- Silt Fence
- Drainage Arrow
- Sediment Control
- Erosion Control Wattles



PROFESSIONAL ENGINEER
REGISTERED
REG. NO.
15046
JACOB D.
SONNE
SOUTH DAKOTA
4-11-25
#16415

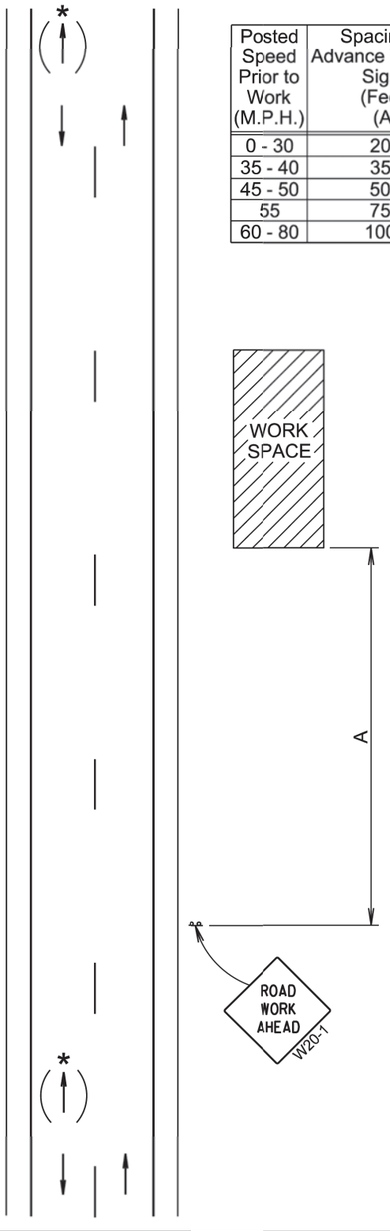
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

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.

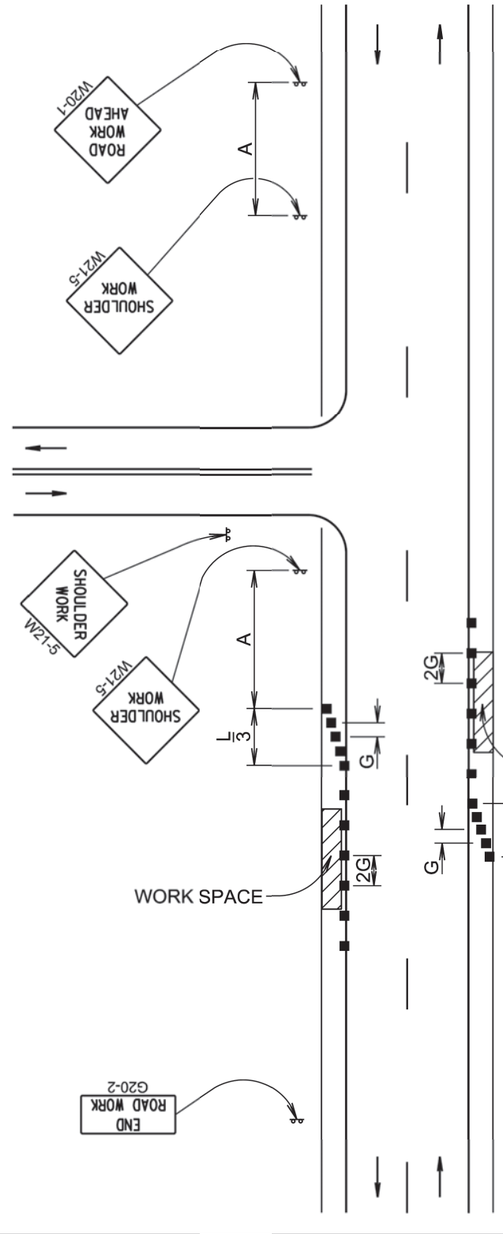
For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



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

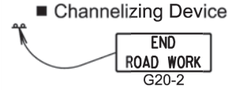
January 22, 2021

Published Date: 2025 | SDDOT | WORK BEYOND THE SHOULDER | PLATE NUMBER 634.01 | Sheet 1 of 1



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

■ Channelizing Device



The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

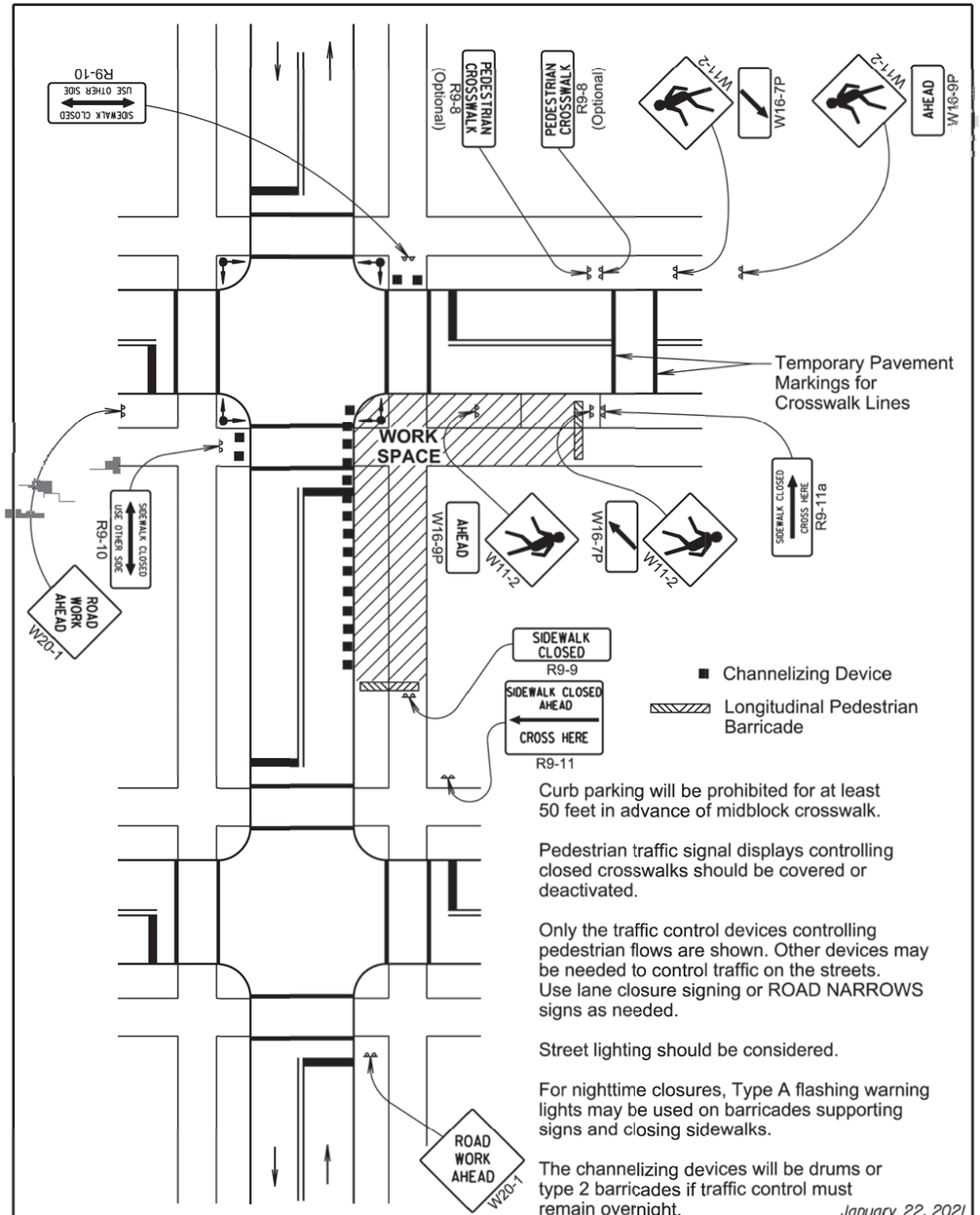
The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

January 22, 2021

Published Date: 2025 | SDDOT | WORK ON SHOULDERS | PLATE NUMBER 634.03 | Sheet 1 of 1

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	26	35

REV 04/11/2025 NAP



■ Channelizing Device

▨ Longitudinal Pedestrian Barricade

Curb parking will be prohibited for at least 50 feet in advance of midblock crosswalk.

Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs as needed.

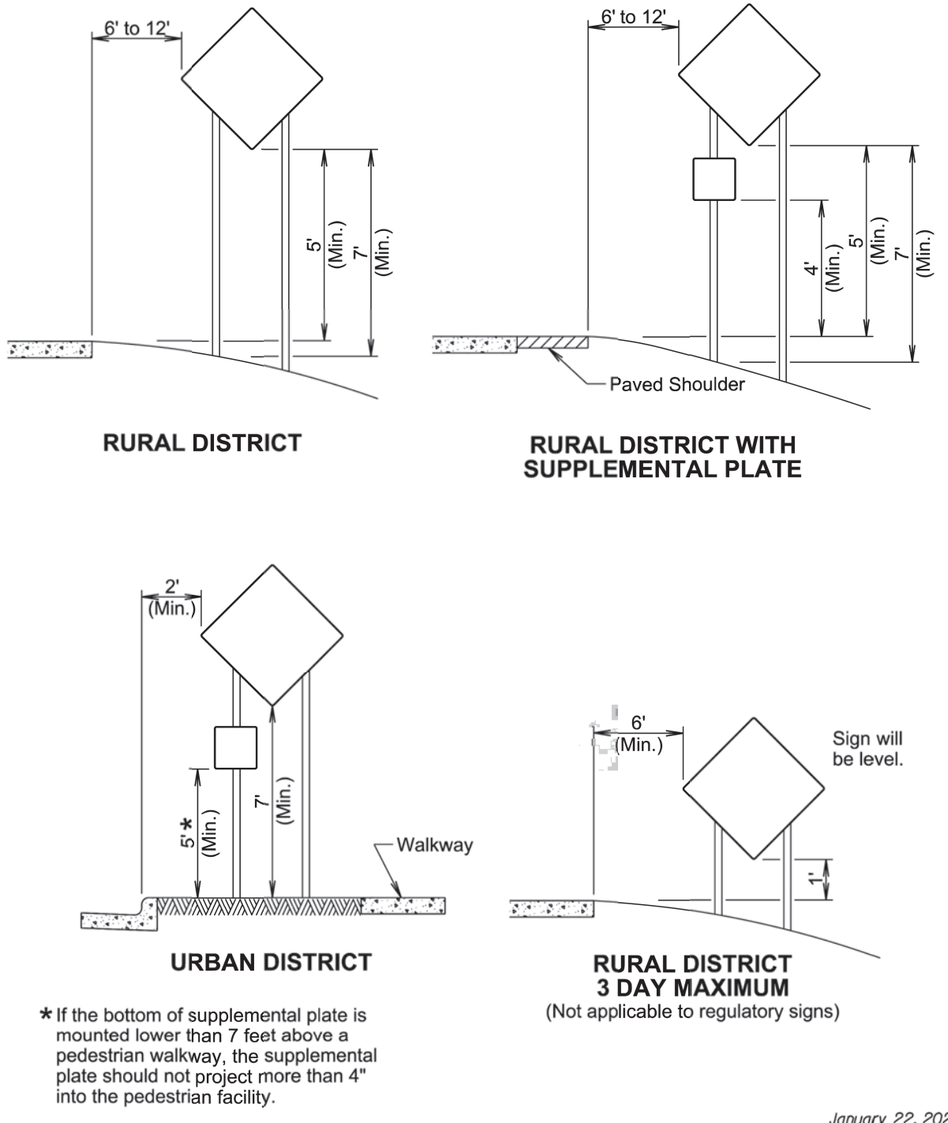
Street lighting should be considered.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks.

The channelizing devices will be drums or type 2 barricades if traffic control must remain overnight.

January 22, 2021

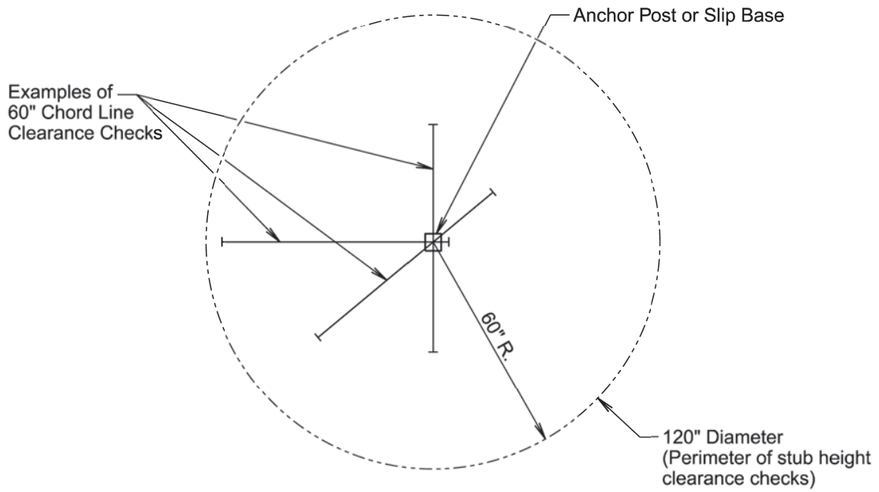
Published Date: 2025	SDDOT	SIDEWALK CLOSURES AND PEDESTRIAN DETOURS	PLATE NUMBER 634.33
			Sheet 1 of 1



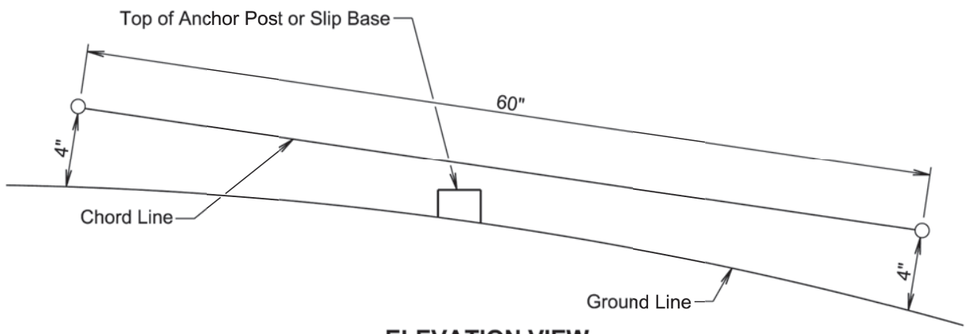
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2025	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

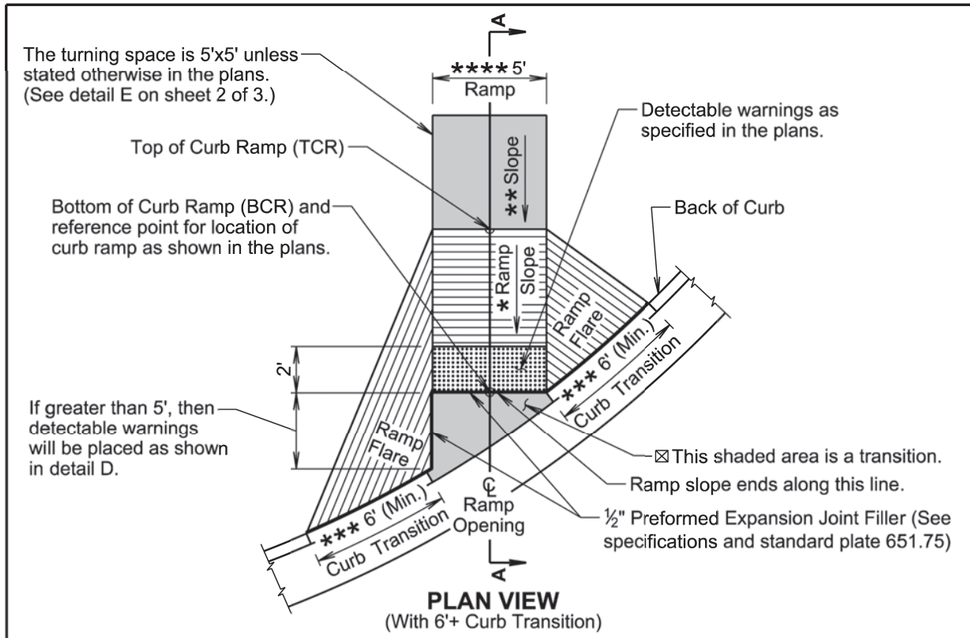
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

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

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

January 22, 2021

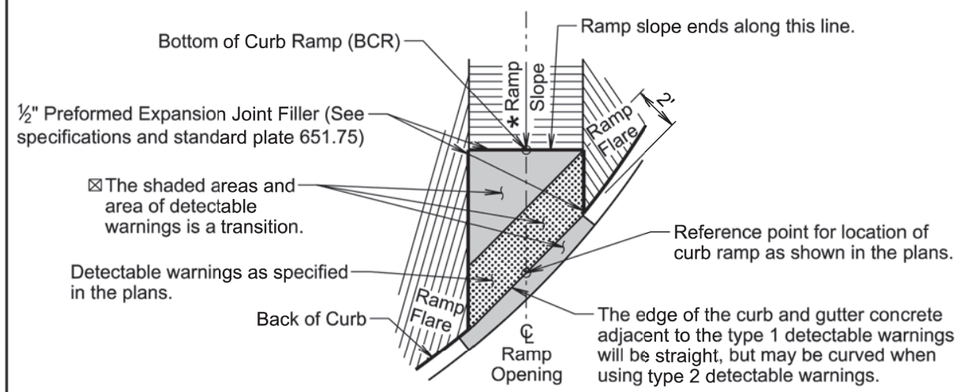
Published Date: 2025	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99 Sheet 1 of 1



PLAN VIEW
(With 6'+ Curb Transition)

☒The slope within the transition area will not be steeper than 5%. The concrete within the transition will be placed monolithic with the curb and gutter or fillet section concrete. The concrete thickness within the transition will be the same as the curb and gutter or fillet section concrete thickness.

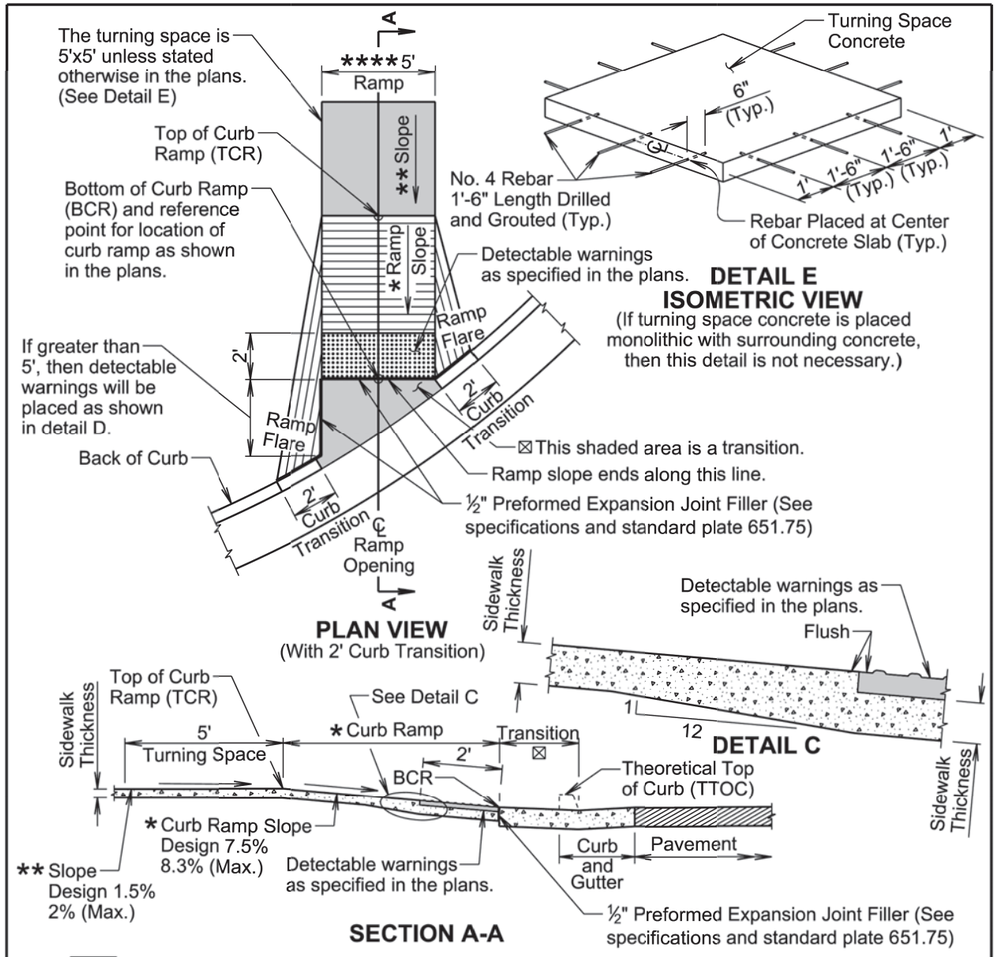
*** The curb transition will be a minimum of 6' long, a maximum of 10' long, and the curb transition slope will not be steeper than 10% unless stated otherwise in the plans. The curb transition length will be adjusted as necessary to meet slope and length requirements based on field geometrics.



DETAIL D

February 14, 2020

Published Date: 2025	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02 Sheet 1 of 3



Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% and will not exceed 15' in length unless stated otherwise in the plans.

* The elevation of point TCR will always be higher than the elevation of point TTOC unless specified otherwise in the plans. The curb ramp length dimension as shown in the plans will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

The cross slope of the ramp will not be steeper than 2%. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

**** The ramp width is 5' unless stated otherwise in the plans.

February 14, 2020

Published Date: 2025	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 2 of 3

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

The curb ramp depicted on this standard plate may be used with a PCC fillet section or curb and gutter. The curb ramp will be placed at the location stated in the plans.

Sidewalk will not be placed adjacent to the curb ramp flares when a 2-foot curb transition is used unless shown otherwise in the plans.

* Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings will be included in the measured and paid for quantity of sidewalk.

If rebar is placed in the Turning Space as depicted in DETAIL E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

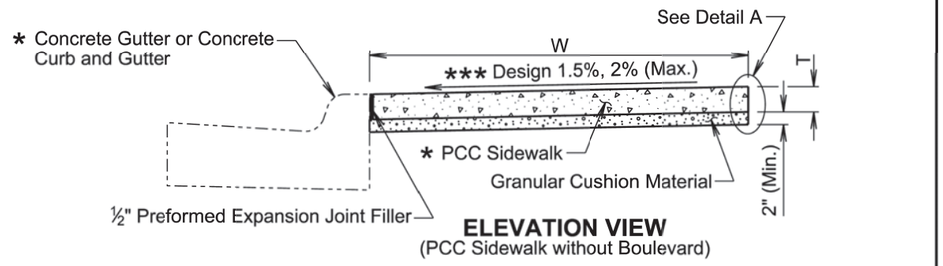
All costs for furnishing and installing the transition area at the base of the curb ramp will be incidental to the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used and will be incidental to the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

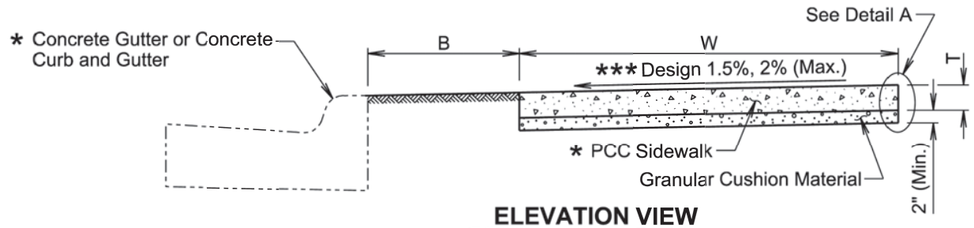
The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

February 14, 2020

Published Date: 2025	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 3 of 3



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



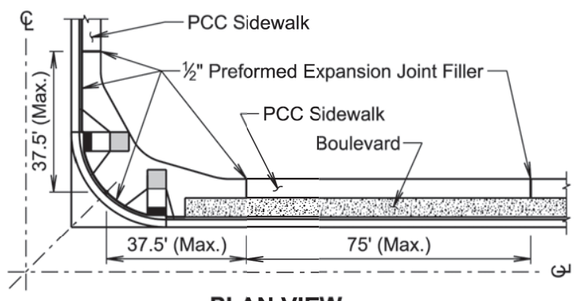
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.

T Thickness of PCC sidewalk as specified in the plans.

W Width of PCC sidewalk as specified in the plans.

* Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.

*** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in the PCC sidewalk is 75 feet.

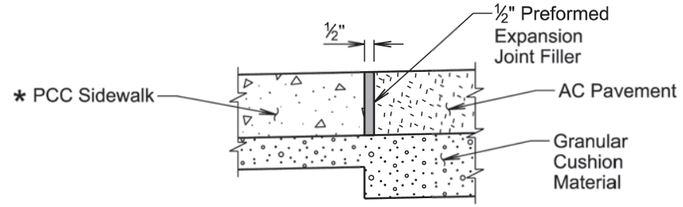
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

An expansion joint in the PCC sidewalk will consist of a ½ -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

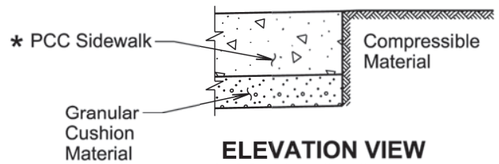
** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

February 14, 2020

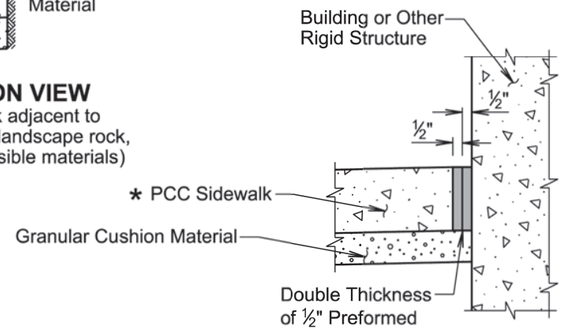
Published Date: 2025	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2



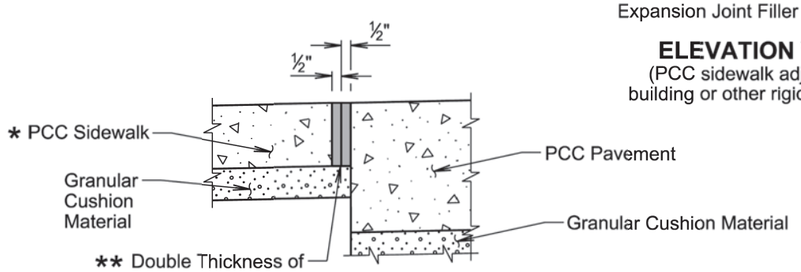
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)



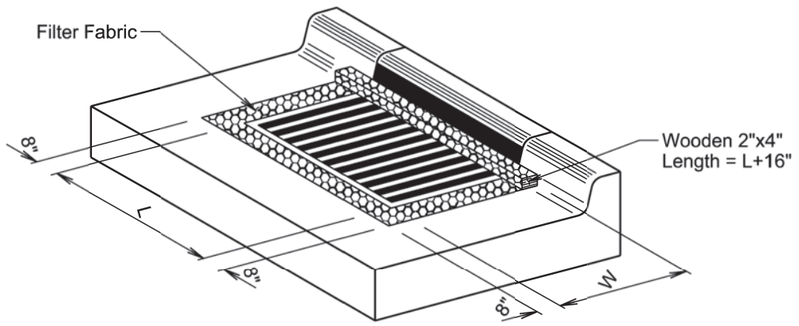
ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

DETAIL A
(Use Appropriate Detail(s))

February 14, 2020

Published Date: 2025	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2

L = Length of Grate
W = Width of Grate



ISOMETRIC VIEW

GENERAL NOTES:

The grate and curb and gutter shown are for illustrative purposes only.

The sediment control at inlet with frame and grate will be placed at locations stated in the plans or at locations determined by the Engineer.

The filter fabric will be the type specified in the plans.

The filter fabric will be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric will be wrapped around the 2"x4" and stapled securely to the 2"x4" after the grate has been placed.

The Contractor and Engineer will inspect the sediment control device in accordance with the storm water permit. The Contractor will maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

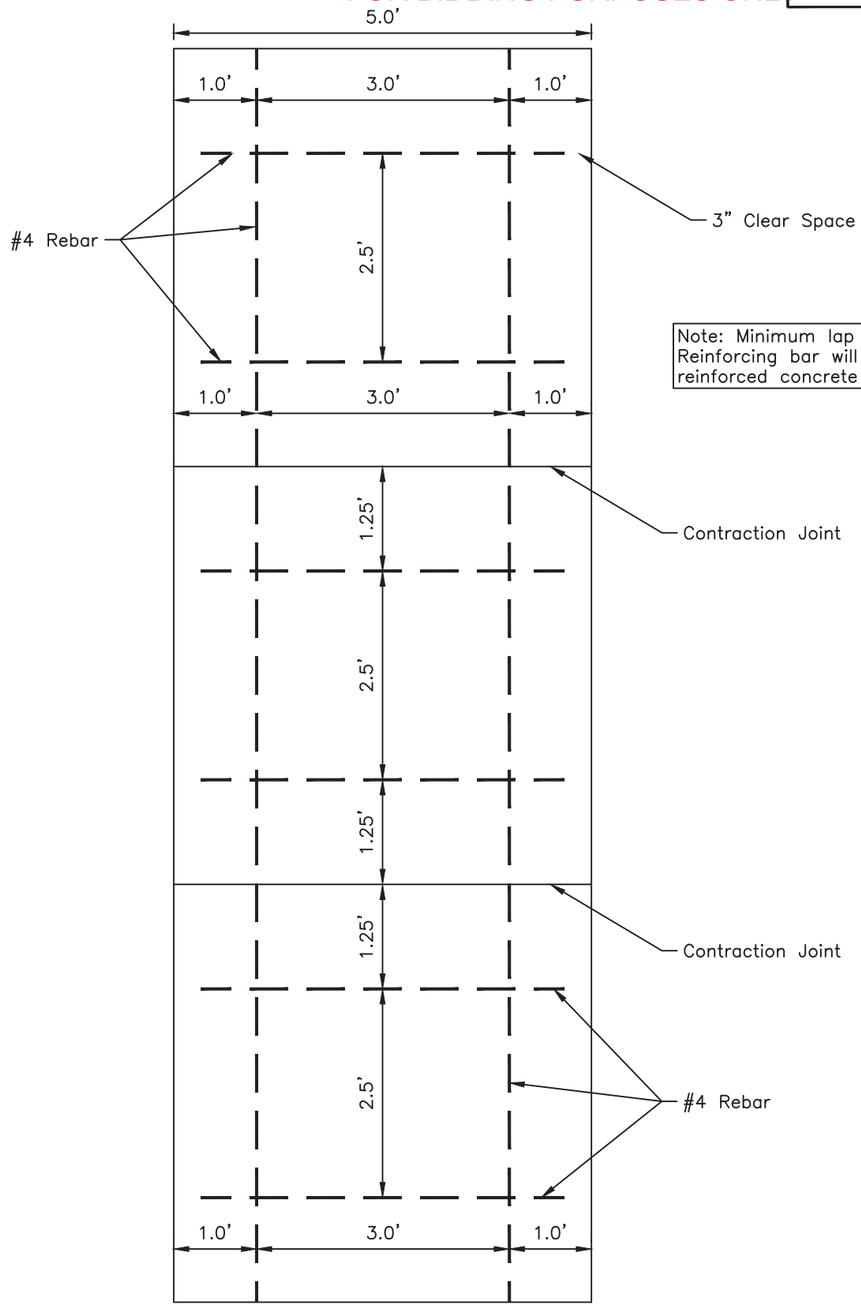
The removed sediment will be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and replacing the sediment control device at the inlet including labor, equipment, and materials will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

February 14, 2020

Published Date: 2025	SDDOT	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10
			Sheet 1 of 1

REV 04/11/2025 NAP



PLAN VIEW

TYPICAL REINFORCED CONCRETE SIDEWALK AND APPROACH PAVEMENT

(SCALE: NONE)

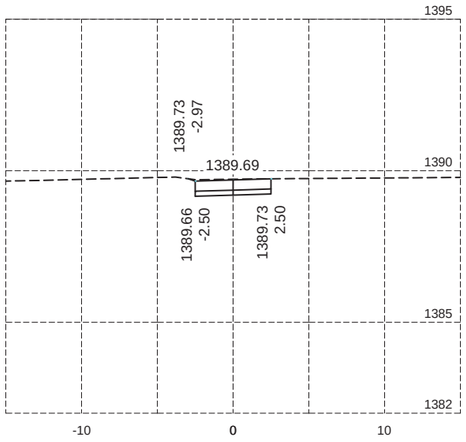
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
4-11-25
#16415

CROSS SECTIONS

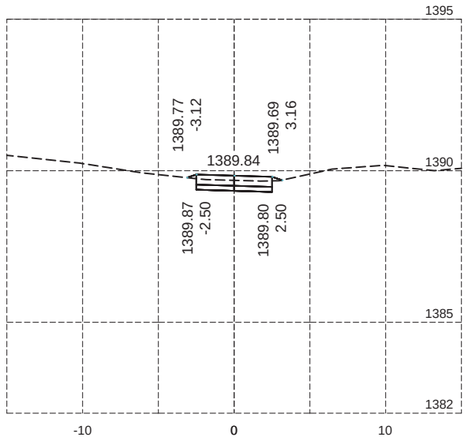
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	32	35

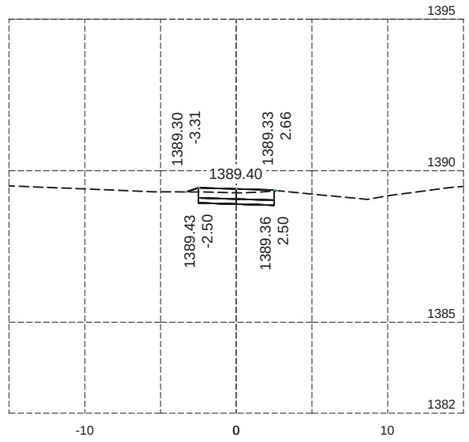
REV 04/11/2025 NAP



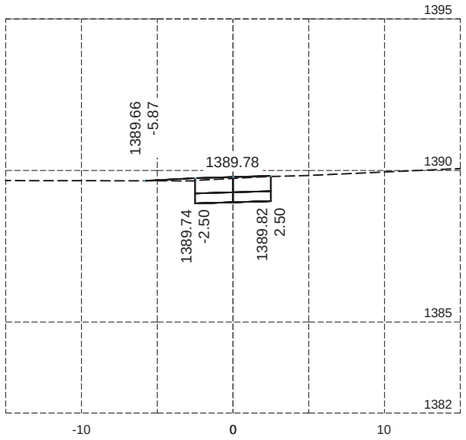
0+25



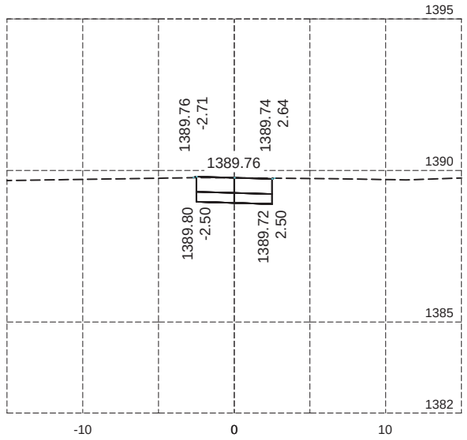
1+50



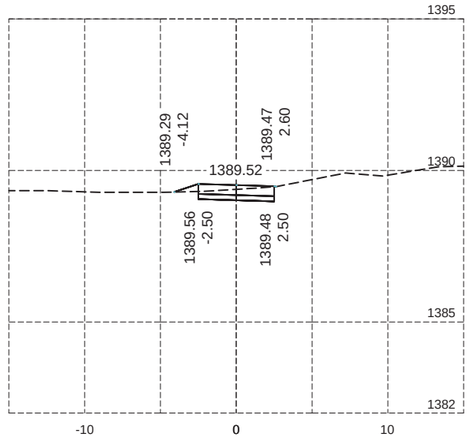
3+00



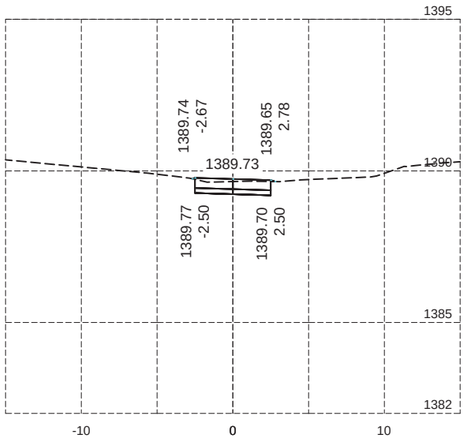
0+50



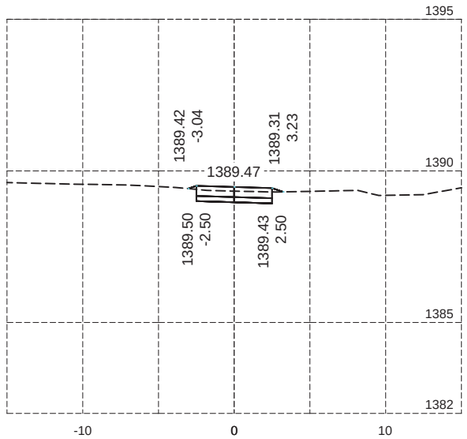
2+00



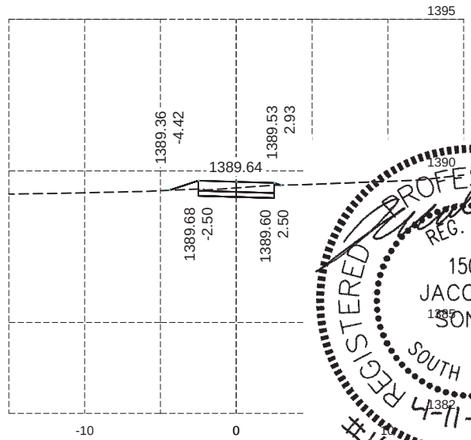
3+50



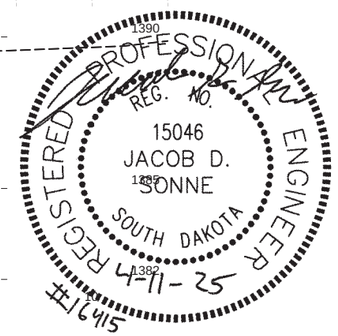
1+00



2+50



4+00

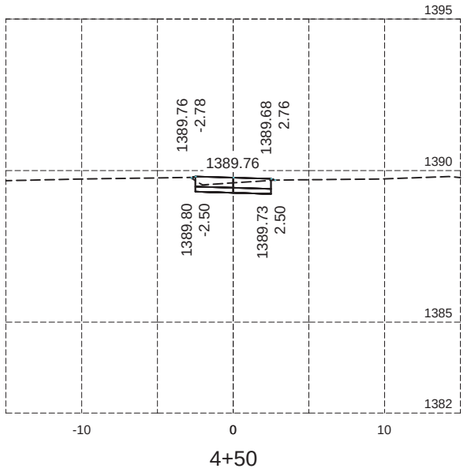


CROSS SECTIONS

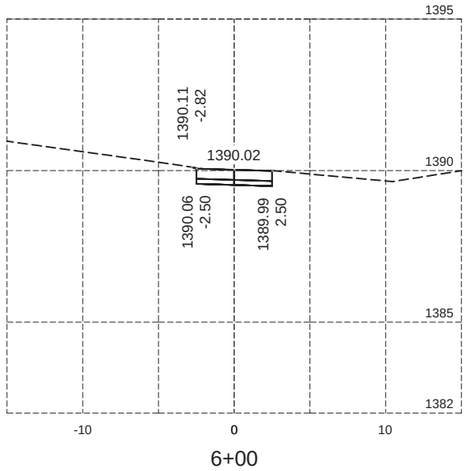
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	33	35

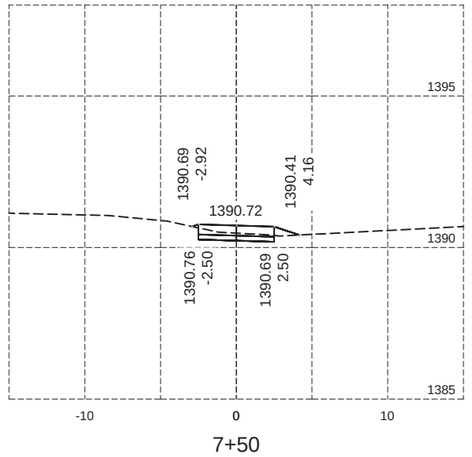
REV 04/11/2025 NAP



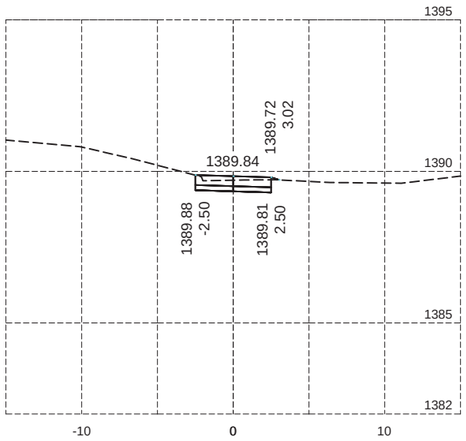
4+50



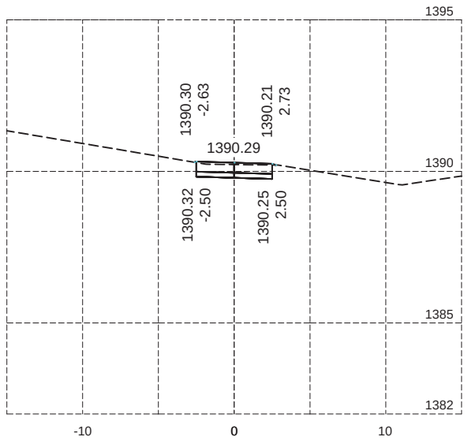
6+00



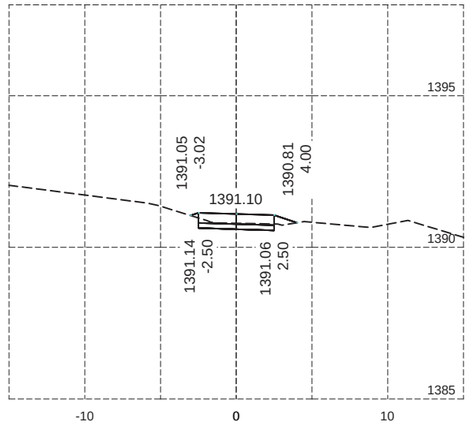
7+50



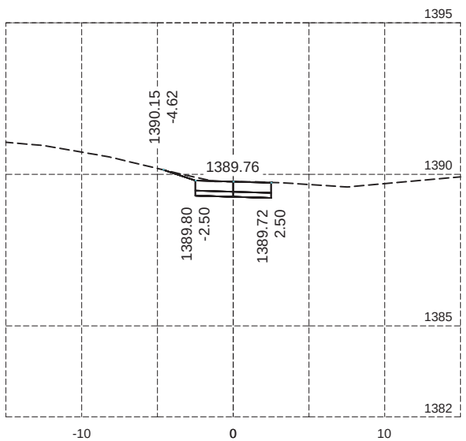
5+00



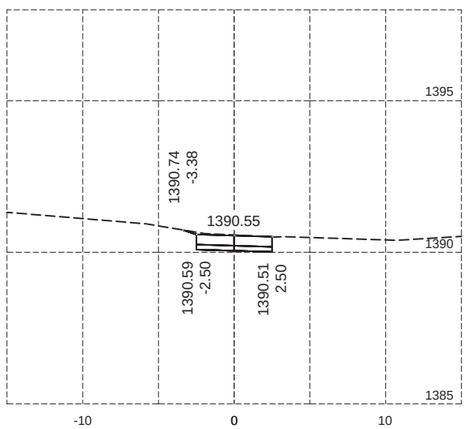
6+50



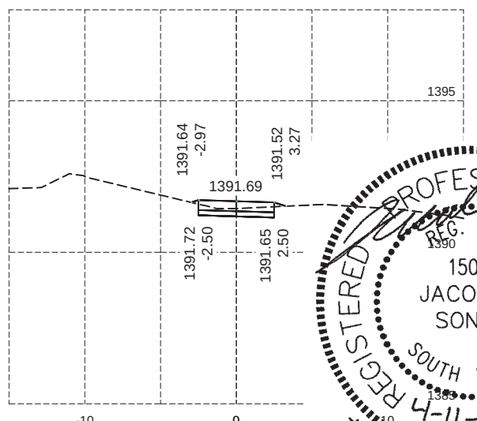
8+00



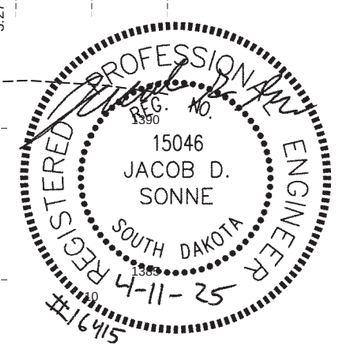
5+50



7+00



8+50

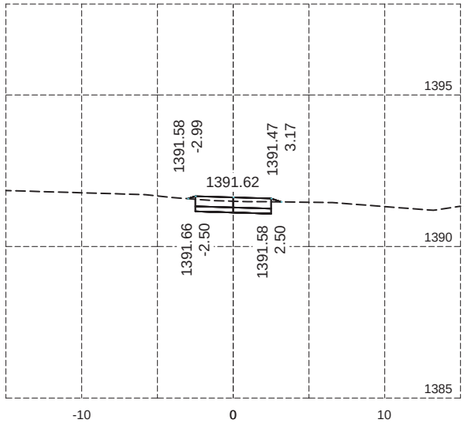


CROSS SECTIONS

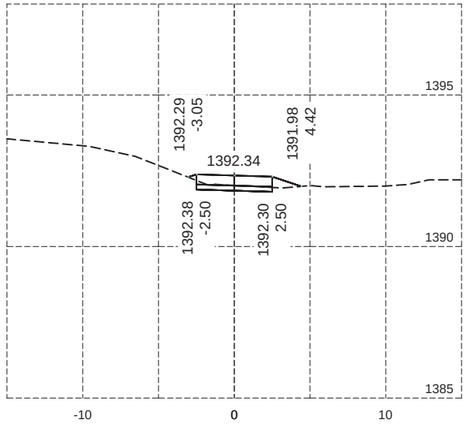
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	34	35

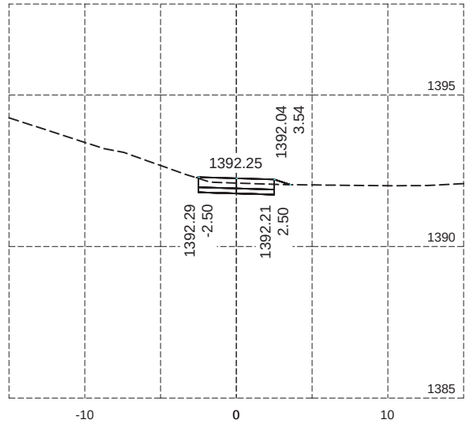
REV 04/11/2025 NAP



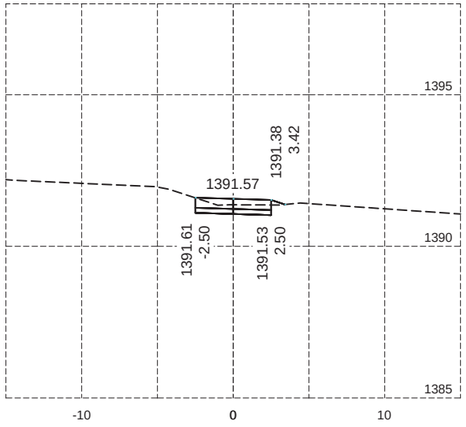
9+00



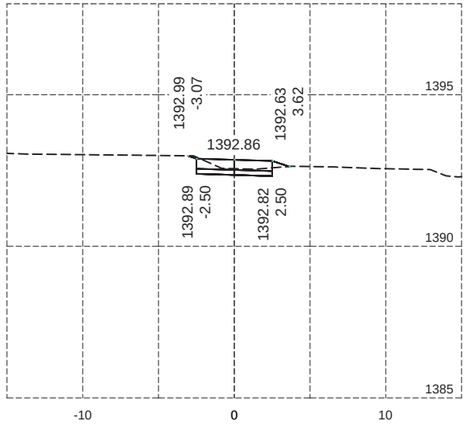
10+50



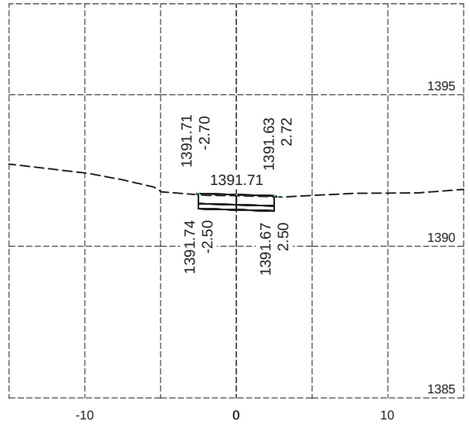
12+00



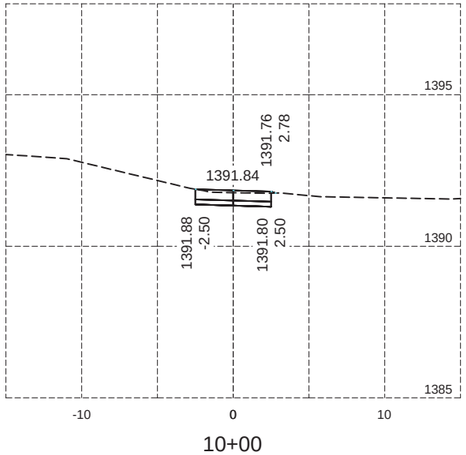
9+50



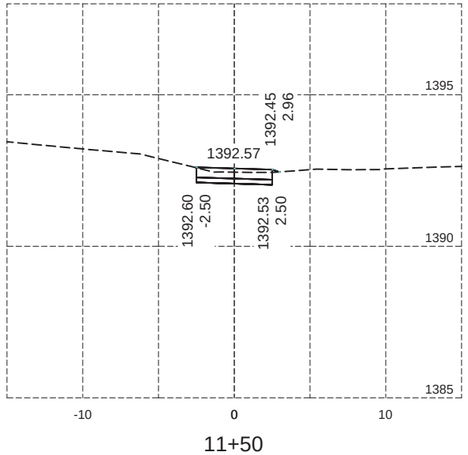
11+00



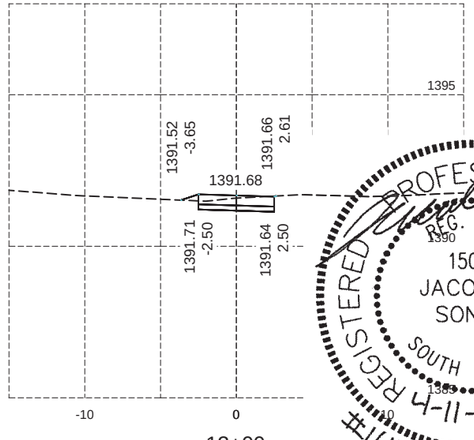
12+50



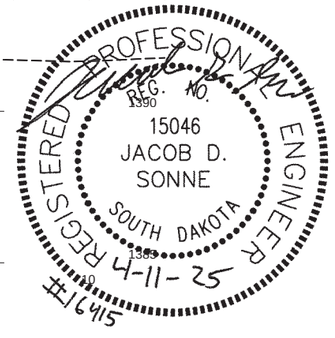
10+00



11+50



13+00

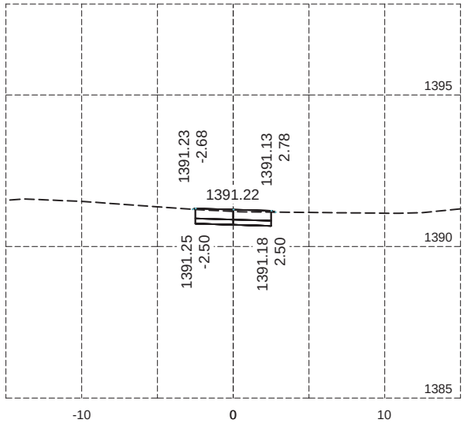


CROSS SECTIONS

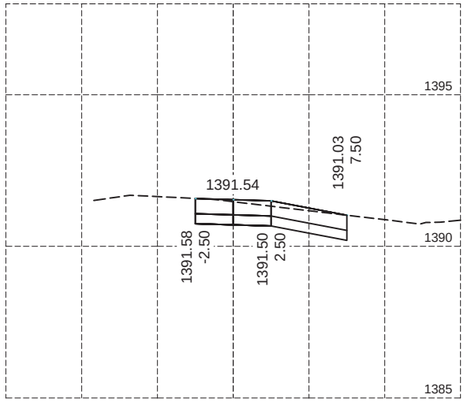
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPR(48)	35	35

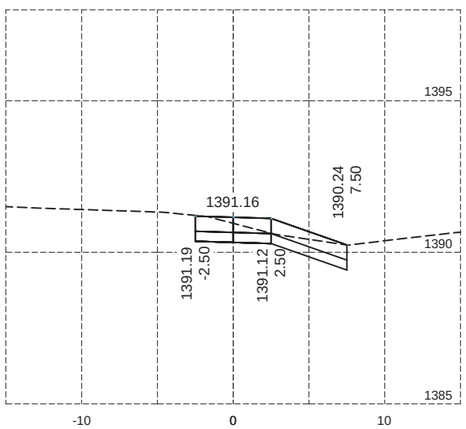
REV 04/11/2025 NAP



13+50



14+00



14+50