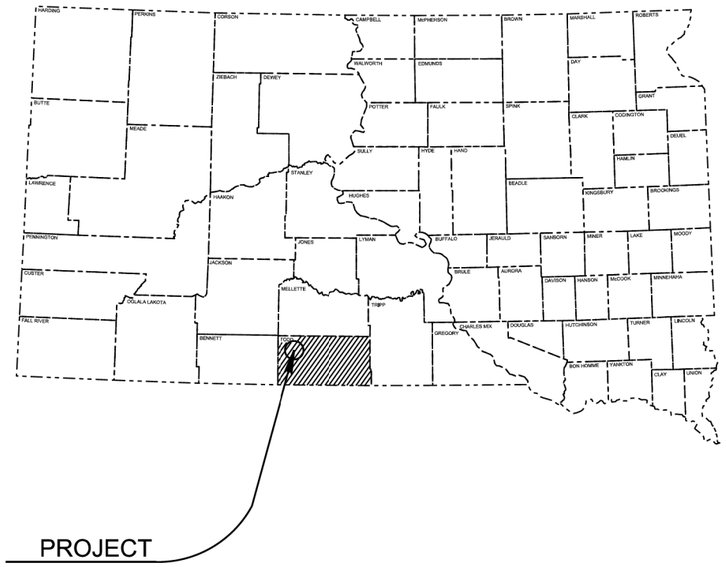
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	1	14



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

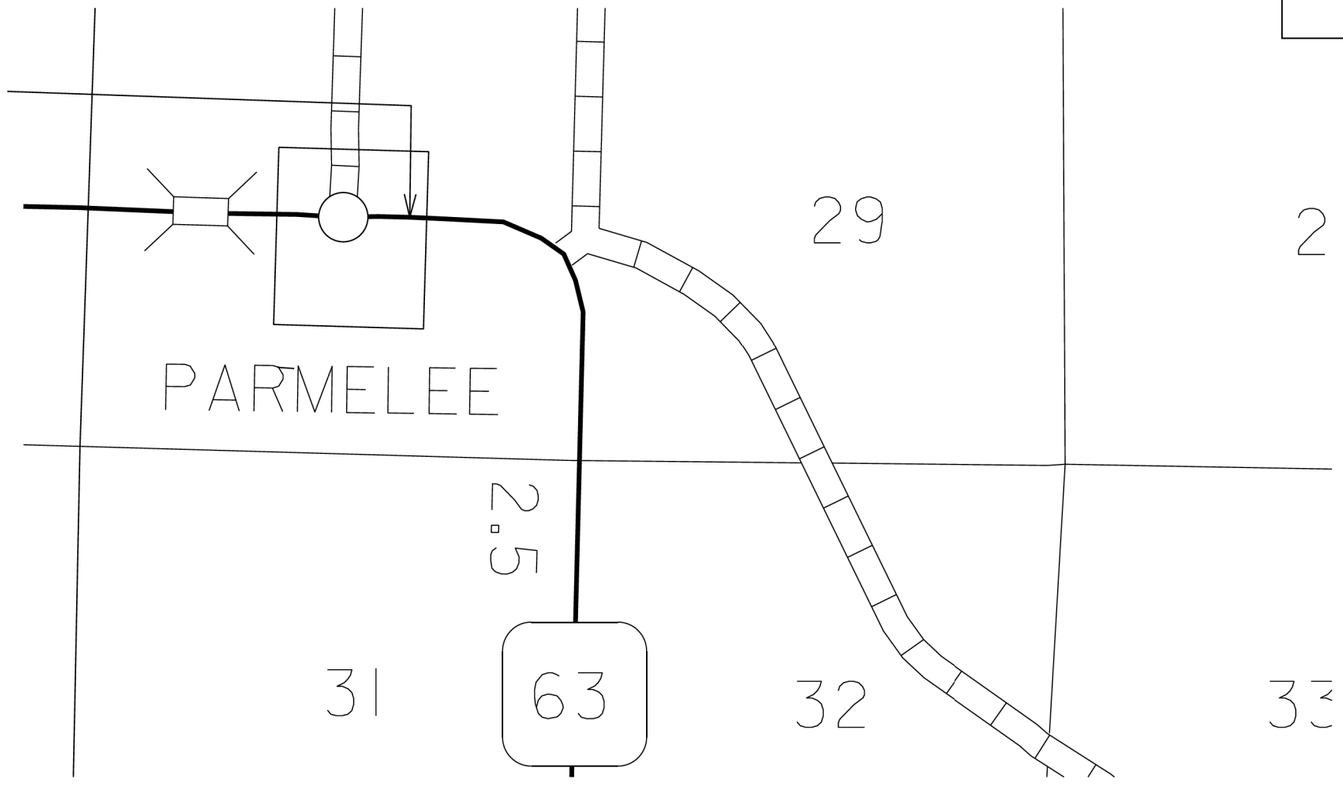
PROJECT 000N-392
SD HIGHWAY 63
TODD COUNTY

ROADWAY PEDESTRIAN CROSSING SIGNS
PCN i7Y1

INDEX OF SHEETS

Pedestrian Crossing Signs Project

Northing 361447.35
Easting 1783594.11
MRM 29.35+0.247



DESIGN DESIGNATION

AADT (2024)	594
AADT (2054)	1267
DHV	149
D	50%
DHV T%	3.4%
AADT T%	7.4%
V	55 mph

STORM WATER PERMIT
None Required

Plot Scale - 1:638.732

- Plotted From - TRWINT19

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ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
632E1330	2.25"x2.25" Perforated Tube Post	24.0	Ft
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	7.5	SqFt
632E3755	36" LED Blinker Warning Sign	2	Each
634E0010	Flagging	16.0	Hour
634E0110	Traffic Control Signs	137.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
635E5301	Type 1 Electrical Junction Box	4	Each
635E8120	2" Rigid Conduit, Schedule 40	740	Ft
635E8220	2" Rigid Conduit, Schedule 80	50	Ft
635E9020	1/C #10 AWG Copper Wire	6,725	Ft

SHOP DRAWING AND CATALOG CUTS SUBMITTALS

The Contractor will submit shop drawings and catalog cuts in accordance with Section 985 of the Specifications.

PDF submittals will be sent to the following email addresses:

Hannah.Covey@state.sd.us

EXISTING ELECTRICAL SERVICE

The existing electrical service is located on the NW corner of Second Avenue and Main Street. For access to the existing electrical service the Contractor can contact the Rosebud Sioux Tribe or the Lacreek Electric Association. Contact info:

Jesse Byerley
Line Forman
Shop # 605-685-6581
Cell # 605-454-5334

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modification that will be necessary to avoid utility impacts.

JUNCTION BOX JB2

Junction box JB2 will be placed to intercept the existing conduit. Existing wires will be disconnected at existing luminaire pole EL1 and pulled back to pole EL2, existing conduit will then be exposed and JB2 placed at the location indicated on the plans. The new conduit will then be installed from JB2 to JB1, existing wires repulled from EL2 back to EL1 and reconnected. All cost for disconnected and pulling back wires, exposing conduit, modifying existing conduit, installing new junction box, and reconnecting wires will be incidental to the contract unit price per each “Type 1 Electrical Junction Box”.

JUNCTION BOX JB3

Junction box JB3 will be placed to intercept the existing conduit. Existing wires will be disconnected at existing luminaire pole EL9 and pulled back to pole EL8, existing conduit will then be exposed and JB3 placed at the location indicated on the plans. The new conduit will then be installed from JB3 to JB4, existing wires repulled from EL8 back to EL9 and reconnected. All cost for disconnected and pulling back wires, exposing conduit, modifying existing conduit, installing new junction box, and reconnecting wires will be incidental to the contract unit price per each “Type 1 Electrical Junction Box”.

GENERAL PERMANENT SIGNING

New sign installations will be staked in the field by the Contractor and checked by the Engineer. The Contractor will give the Engineer a minimum of one week to check staked locations prior to signpost installation. Lateral offset of signs will be as shown in the plans or as directed by the Engineer.

The Contractor will be responsible for contacting South Dakota One Call to locate the utilities at the staked sign installation locations.

When signs are mounted in an assembly, they will be 1-2 inches apart vertically and horizontally.

The height of the post must not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign will be cut off. No separate payment will be made for cutting the post or for that length cut off.

Aluminum U-Channel stiffeners will be used on all signs 36 inches or greater in width and will conform to ASTM B221 Alloy 6063-T6 or 6061-T6. The U-Channel will be 2 inches in width and free of holes. The U-Channel stiffeners will also be used to connect various signs together so that an entire sign assembly can be erected on a single installation. Stiffeners may be fastened to signs by use of 1/4-inch diameter drive rivets.

The Contractor will use 3/8-inch diameter rust proof machine sign bolts, flat metal washers, neoprene washers (against the sign sheeting), lock washers, and nuts to fasten the sign to the channel aluminum and posts. A minimum of two bolts will extend through each post.

Prior to ordering signs, the Contractor will verify dimensions, background, border, and legend of the signs.

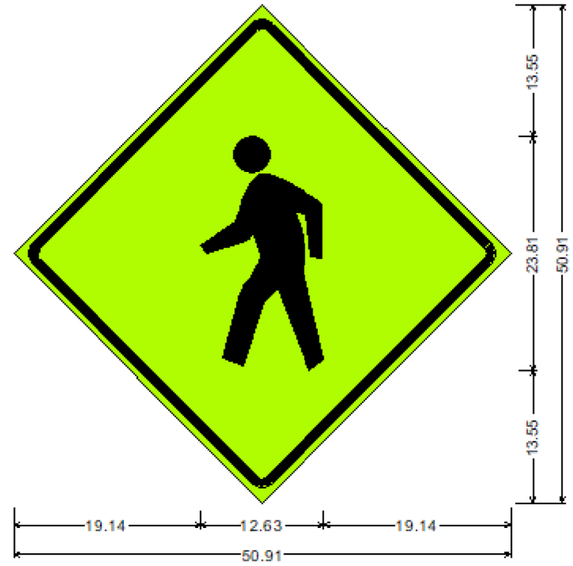
Prior to use, the Contractor will provide documentation for the sign support devices showing they meet the applicable NCHRP 350 or MASH requirements.

SQUARE TUBE ANCHOR SLEEVE

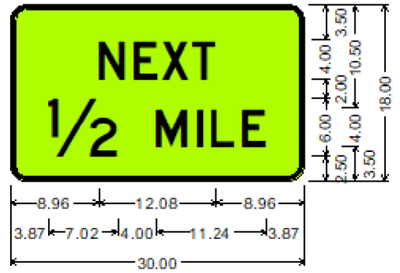
The Contractor will furnish and install new 2.25” x 2.25” x 18”, 12 Gauge square tube anchor sleeve or equivalent components as approved by the Engineer for 2.25” x 2.25” perforated tube posts. A 2.50” x 2.50” x 4’, 12 Gauge perforated tube post will be used as the anchor post for installation with the square tube anchor sleeve.

PEDESTRIAN CROSSING SIGN

The pedestrian sign will meet the color and dimension as shown in the picture below.



36.00" across sides 0.88" Border, 0.63" Indent, Black on Yellow Green; Pedestrian Symbol White;



1.50" Radius, 0.50" Border, Black on Yellow Green; "NEXT", D 2K; "½ MILE", D 2K;

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	3	14

Plotting Date: 08/08/2025

GENERAL TRAFFIC CONTROL

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.

All temporary traffic control signs may be on portable sign bases.
Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			137.0

CONDUIT AND CABLE QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	4	14

Plotting Date: 08/08/2025

		Rigid Conduit		Copper Wire	
		Schedule 40	Schedule 80		
		2"	2"	1/C #10 AWG	
Location to Location		Ft	Ft	Ft	
Conduit and Wiring for Signs					
Sign1	JB1		50	155	
JB1	JB2	430		1,330	
JB2	EL2			485	
EL2	EL3			505	
EL3	EL4			515	
EL4	EL5			525	
EL5	EJB1			105	
EJB1	Electric Service			185	
EJB1	EL6			415	
EL6	EL7			540	
EL7	EL8			495	
EL8	JB3			505	
JB3	JB4	295		915	
JB4	Sign2	15		50	
Total:		740	50	6,725	

Plot Scale - 1:200

Plotted From - TRPR17199

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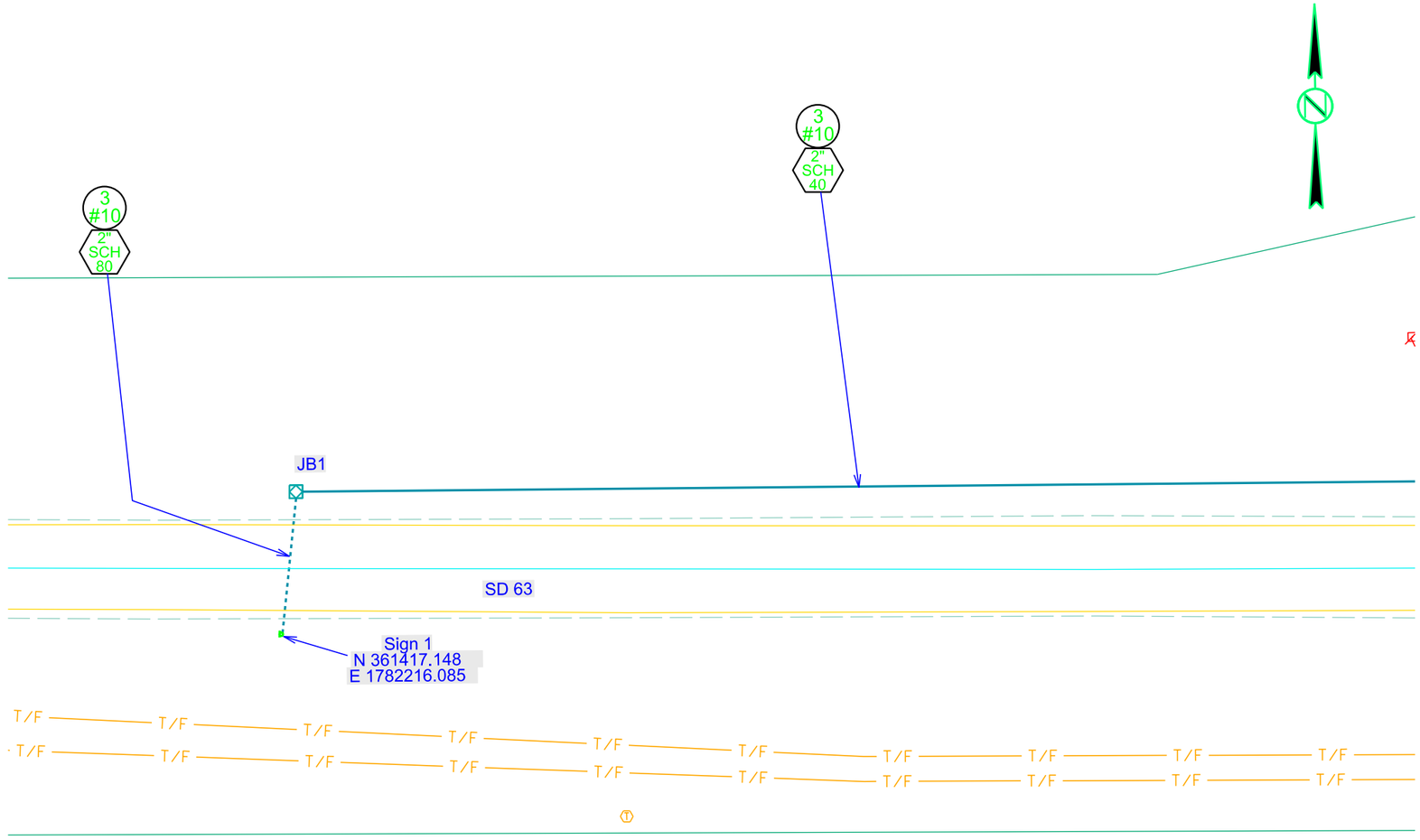
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	5	14

Plotting Date: 08/08/2025

CONDUIT LAYOUT
SD HWY 63

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
2" SCH 40	2" Rigid Conduit, Schedule 40	740	FT
2" SCH 80	2" Rigid Conduit, Schedule 80	50	FT
#10	1/C #10 AWG Copper Wire	6725	FT
	Type 1 Electrical Junction Box (JB1-JB4)	4	EACH

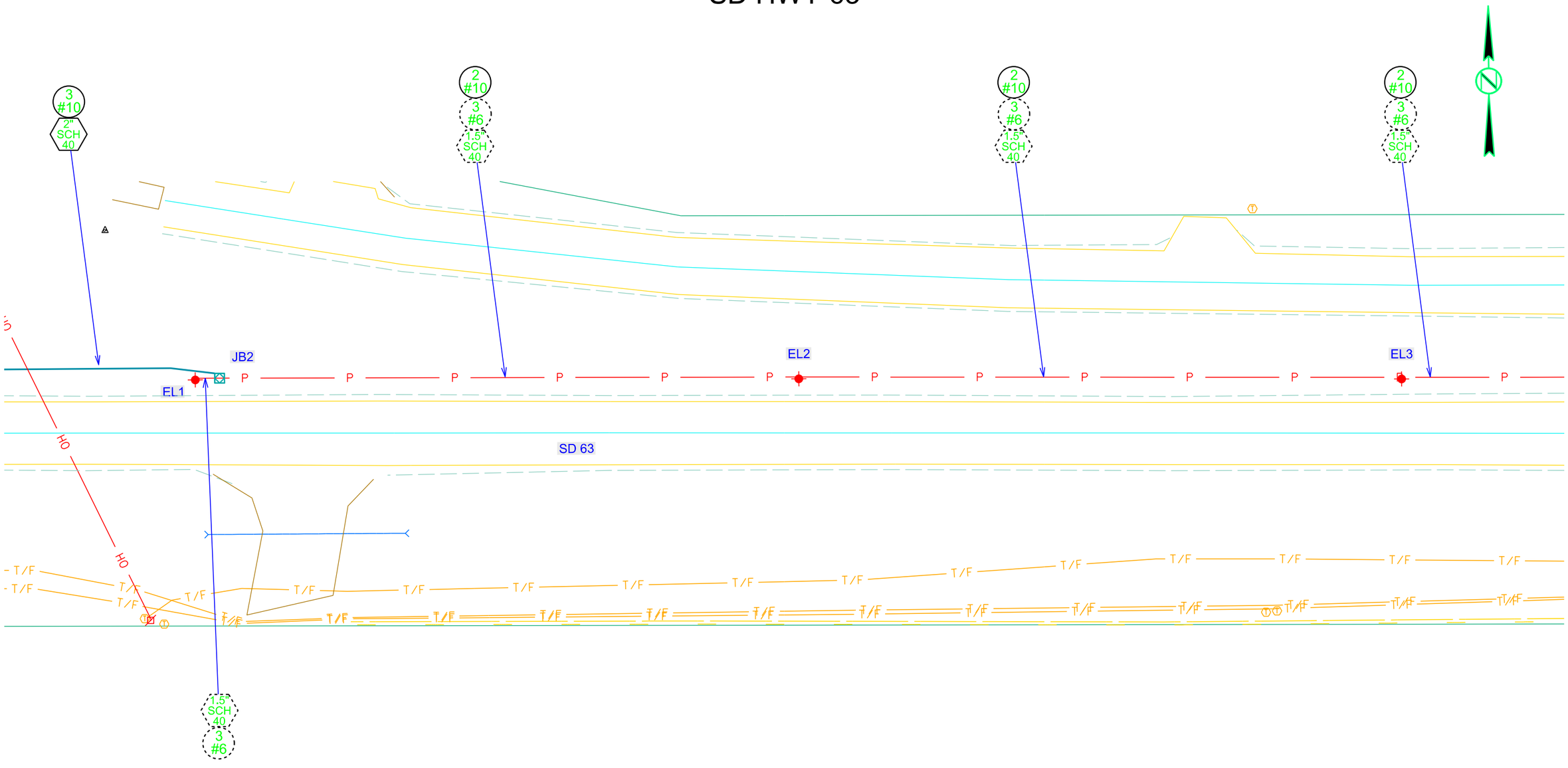
EXISTING ITEMS	
KEY	ITEM
	Luminaire Pole (EL1-EL9)
	Type 1 Electrical Junction Box (EJB1)
1.5" SCH 40	1.5" Rigid Conduit, Schedule 40
1.5" SCH 80	1.5" Rigid Conduit, Schedule 80
#6	1/C #6 AWG Copper Wire
M	Meter Socket



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	6	14

Plotting Date: 08/08/2025

CONDUIT LAYOUT
SD HWY 63



Plot Scale - 1:40

Plotted From - TRPR17199

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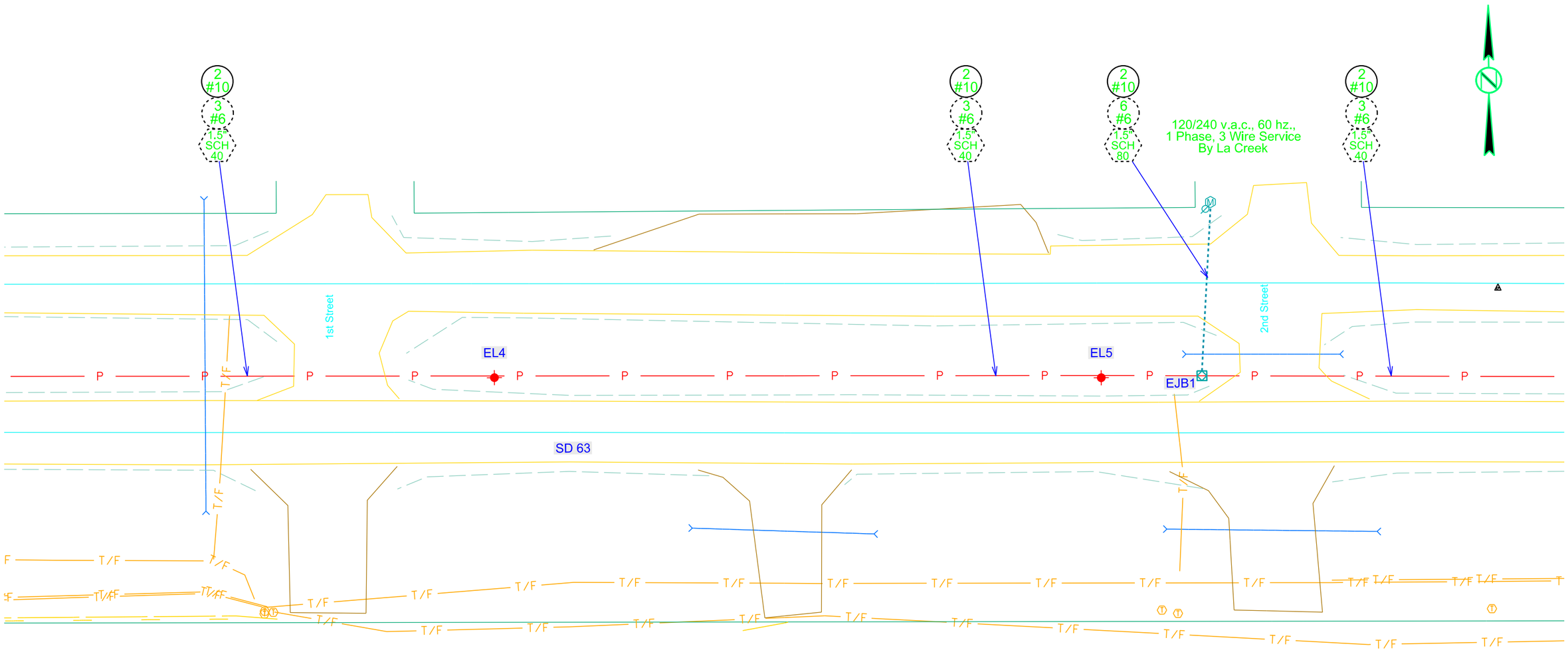
CONDUIT LAYOUT
SD HWY 63

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	7	14

Plotting Date: 08/08/2025



Plot Scale - 1:40

Plotted From - TRPR17199

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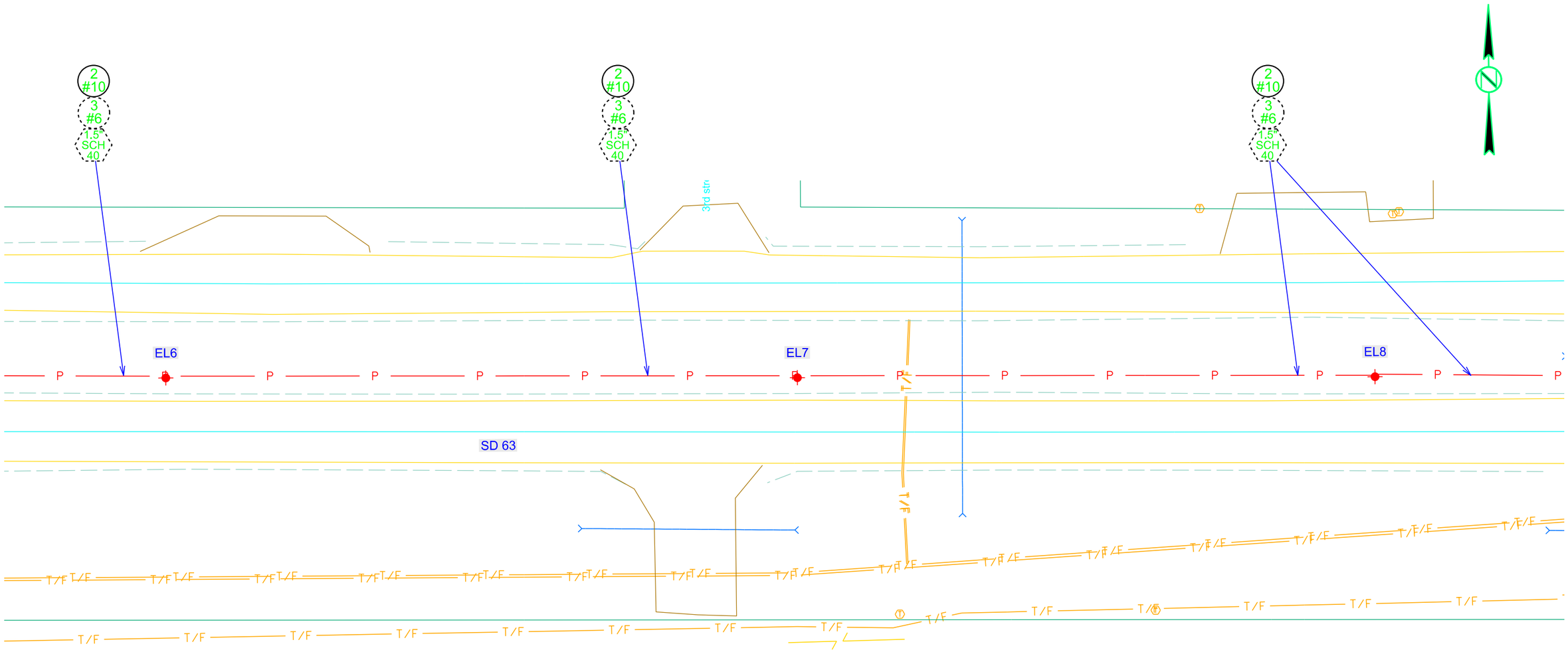
CONDUIT LAYOUT
SD HWY 63

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	8	14

Plotting Date: 08/08/2025



Plot Scale - 1:40

Plotted From - TRPR17199

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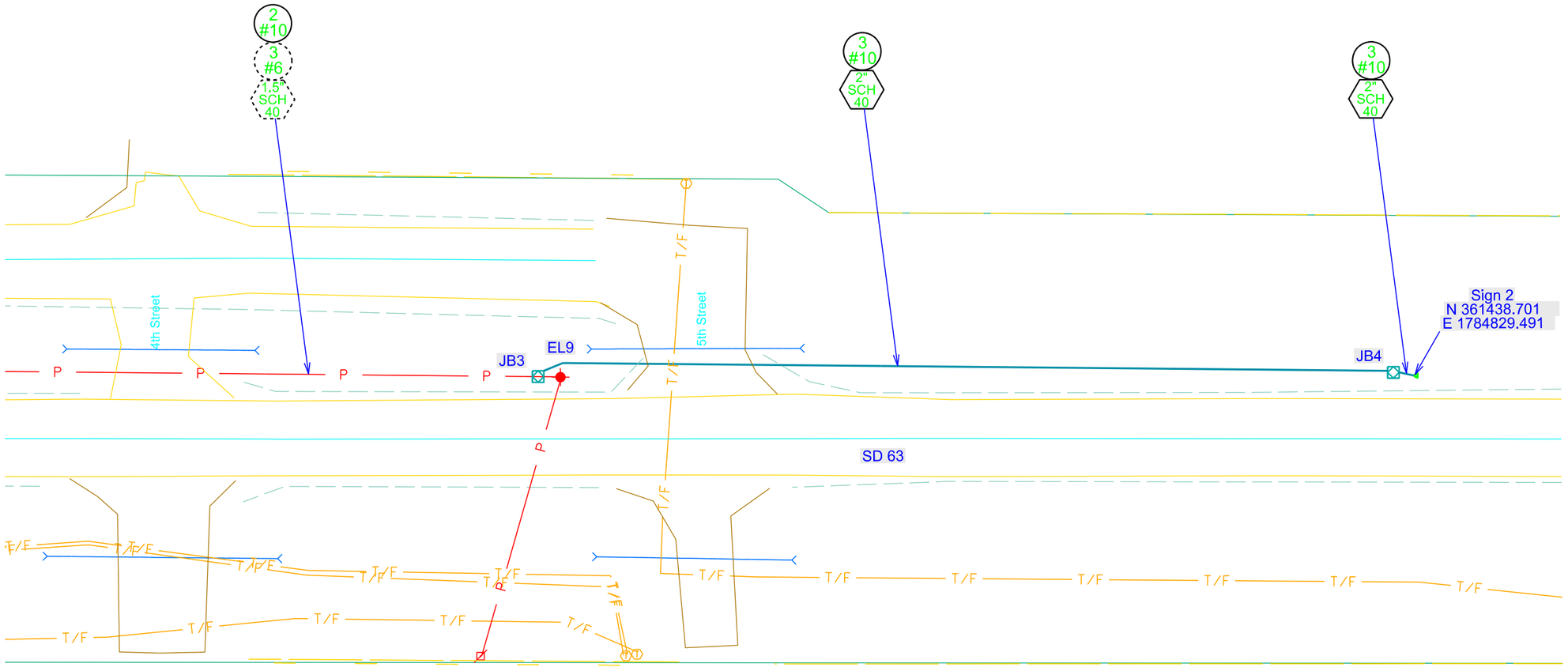
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	9	14

Plotting Date: 08/08/2025

CONDUIT LAYOUT

SD HWY 63



Plot Scale - 1:40

Plotted From - TRPR17199

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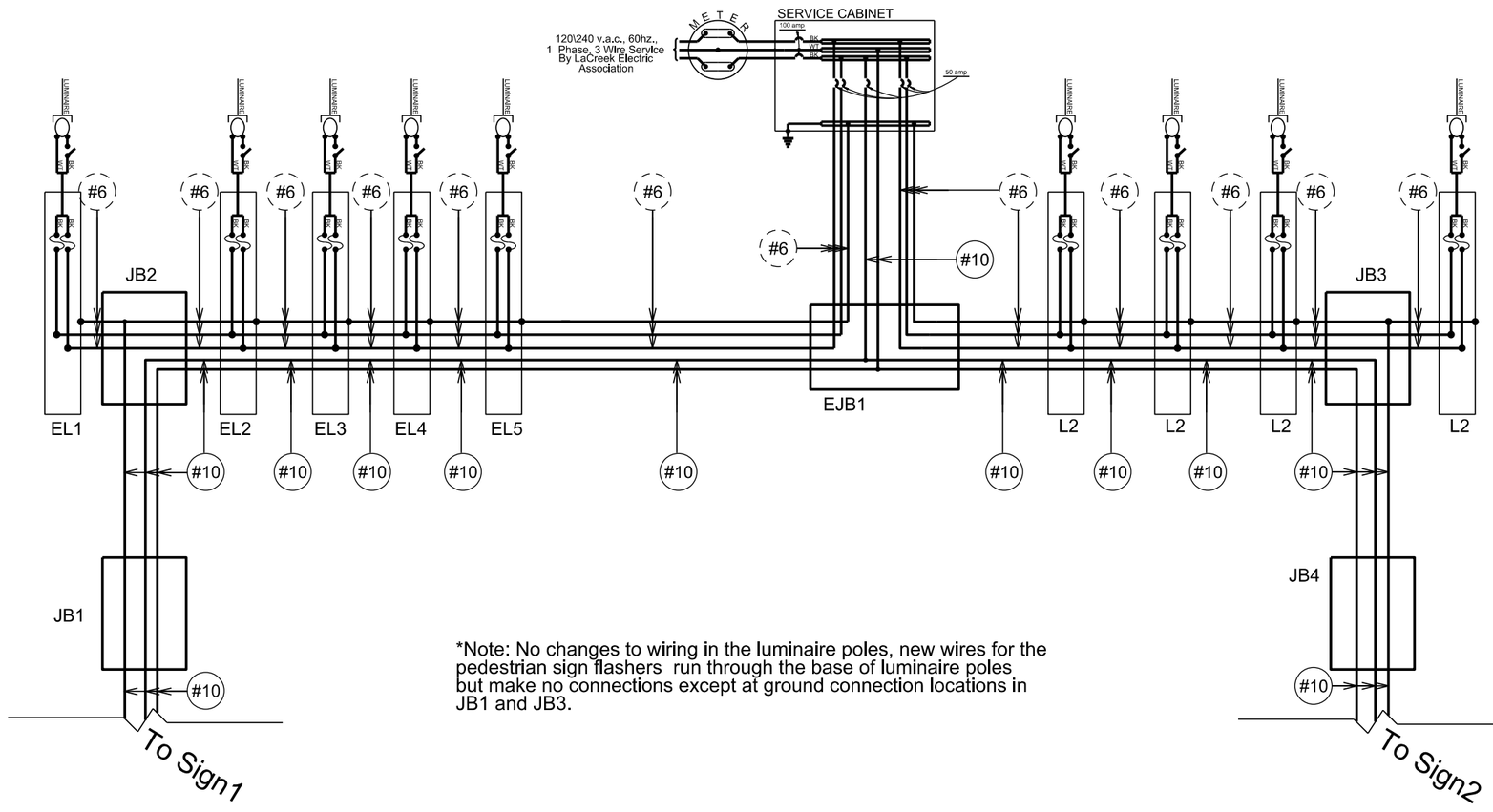
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	10	10

Plotting Date: 08/21/2025

WIRING DIAGRAM



*Note: No changes to wiring in the luminaire poles, new wires for the pedestrian sign flashers run through the base of luminaire poles but make no connections except at ground connection locations in JB1 and JB3.

NOTE:
All circuits shall be bonded in accordance with the NATIONAL ELECTRICAL CODE. Quantities for bonding conductors are not included in these plans.

LEGEND:

FUSE: 10 amp.

LUMINAIRE: LED

#6 =Existing #6 Wires

#10 New #10 wires to power ped signs

Plot Scale - 1:40

Plotted From - TRPR17199

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	11	14

Plotting Date: 08/08/2025

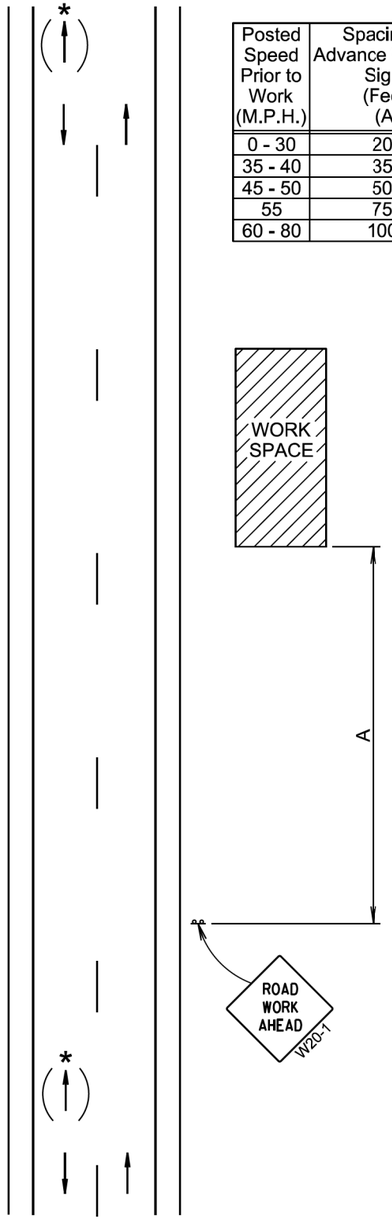
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

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

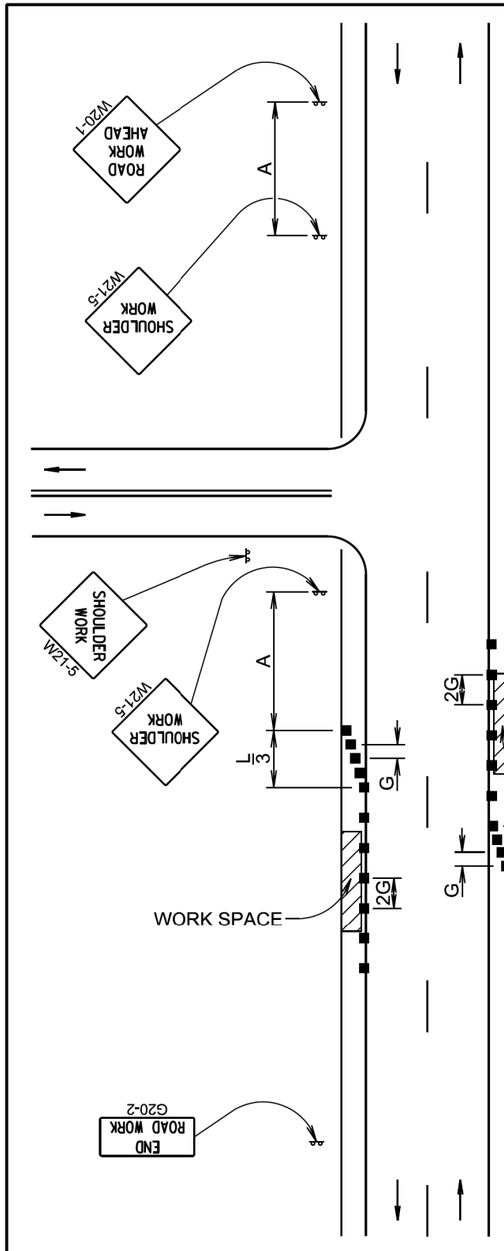
Published Date: 2026

SDDOT

WORK BEYOND THE SHOULDER

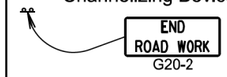
PLATE NUMBER 634.01

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: 2026

SDDOT

WORK ON SHOULDERS

PLATE NUMBER 634.03

Sheet 1 of 1

Plot Scale - 1:200

Plotted From - TRPR17199

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

Flagger

Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

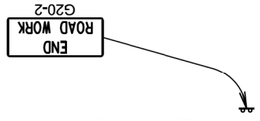
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

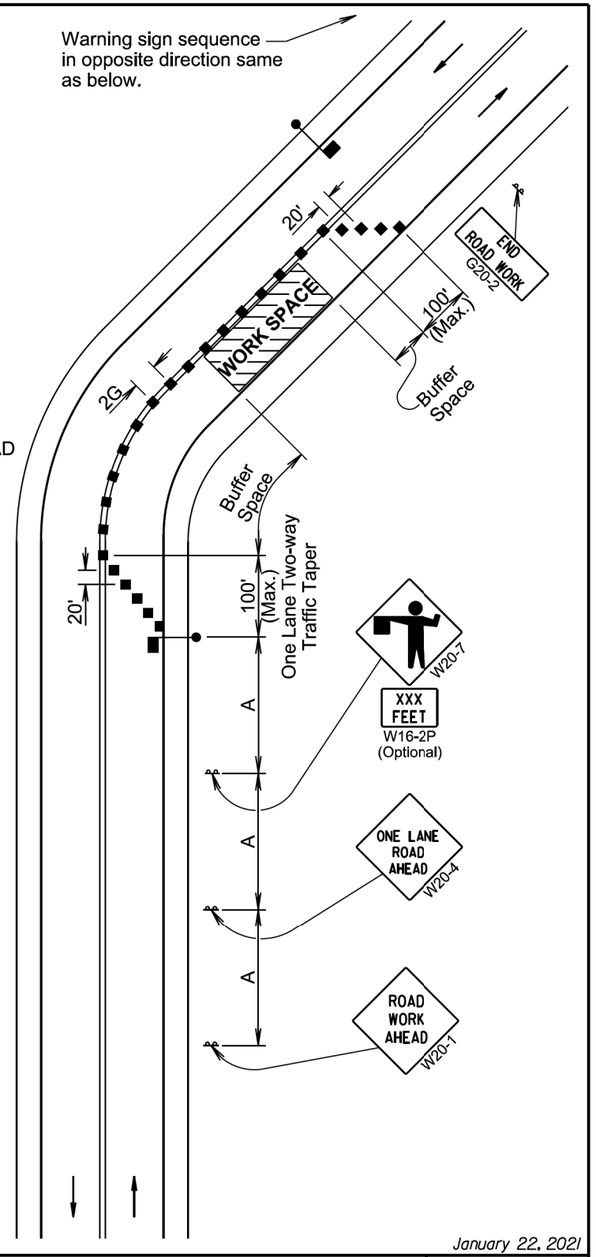
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

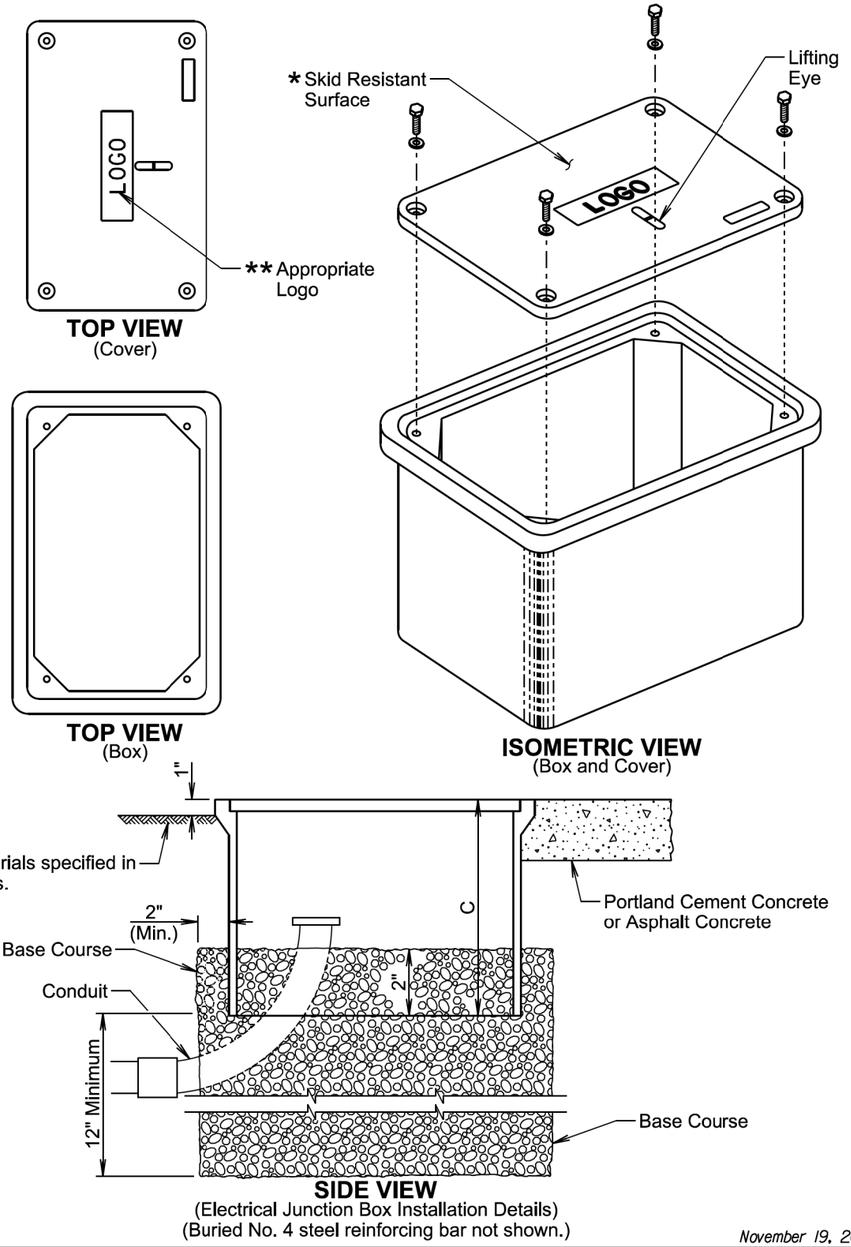
The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.



January 22, 2021

Published Date: 2026	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1



November 19, 2020

Published Date: 2026	SDDOT	ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4	PLATE NUMBER 635.65
			Sheet 1 of 2

ELECTRICAL JUNCTION BOX			
TYPE	DESCRIPTION	APPROXIMATE COVER SIZE	MINIMUM DEPTH (C)
1	Open Bottom with Gasket	11"x18"	18"
2	Open Bottom with Gasket	13"x24"	18"
3	Open Bottom with Gasket	17"x30"	18"
3A	Open Bottom with Gasket	24"x36"***	24"
4	Open Bottom with Gasket	30"x48"***	24"

GENERAL NOTES:

The cover will be gasketed with a minimum of two stainless steel bolts and washers.

The cover will have a lifting eye.

* The surface of the cover will have a minimum wet and dry coefficient of friction value of 0.5 as determined by ASTM F609.

** The cover of the junction box will have the appropriate logo in one inch size letters and will be recessed. When the junction box contains cables or wires for a traffic signal then the logo will be "Signal". When the junction box contains lighting conductors then the logo will be "Lighting".

*** Two piece covers will be used for Type 3A and Type 4 junction boxes.

The electrical junction boxes will comply with the American National Standards Institute (ANSI)/Society of Cable Telecommunications Engineers (SCTE) 77 2007 Specification for Underground Enclosure Integrity. The loading requirement for all electrical junction boxes and covers will be Tier 22 of ANSI/SCTE 77 2007.

The electrical junction boxes will be UL listed.

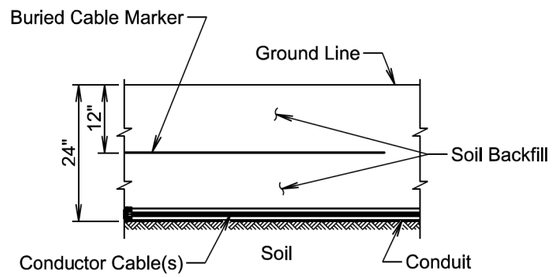
For junction boxes located outside of pavement, a No. 4 steel reinforcing bar with a minimum length of 18" will be buried adjacent to the long side of the junction box. All costs associated with furnishing and placing the steel reinforcing bar will be incidental to the contract unit price per each for "Type _ Electrical Junction Box".

November 19, 2020

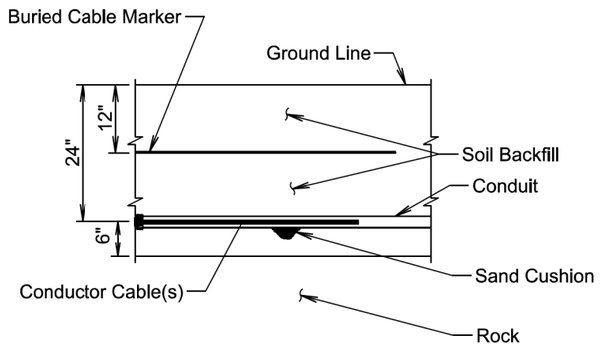
Published Date: 2026	SDDOT	ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4	PLATE NUMBER 635.65
			Sheet 2 of 2

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-392	14	14

Plotting Date: 08/08/2025



SECTION VIEW



SECTION VIEW

GENERAL NOTE:

The Buried Cable Marker will be plastic, approximately 6" wide, and will be capable of sustaining a minimum of a 350% tolerance of elongation without tearing. The Buried Cable Marker will have a life expectancy approximately equal to that of the conductor(s) beneath it. A phrase indicating the presence of a buried electric circuit below will be printed in a contrasting color on the cable marker. The Buried Cable Marker will be subject to approval by the Engineer. All costs associated with furnishing and installing the Buried Cable Marker will be incidental to the contract unit price per foot for the bid item used for the electrical conductor.

November 19, 2022

Published Date: 2026	SDDOT	***CONDUIT INSTALLATION***	***PLATE NUMBER*** 635.76
			Sheet 1 of 1