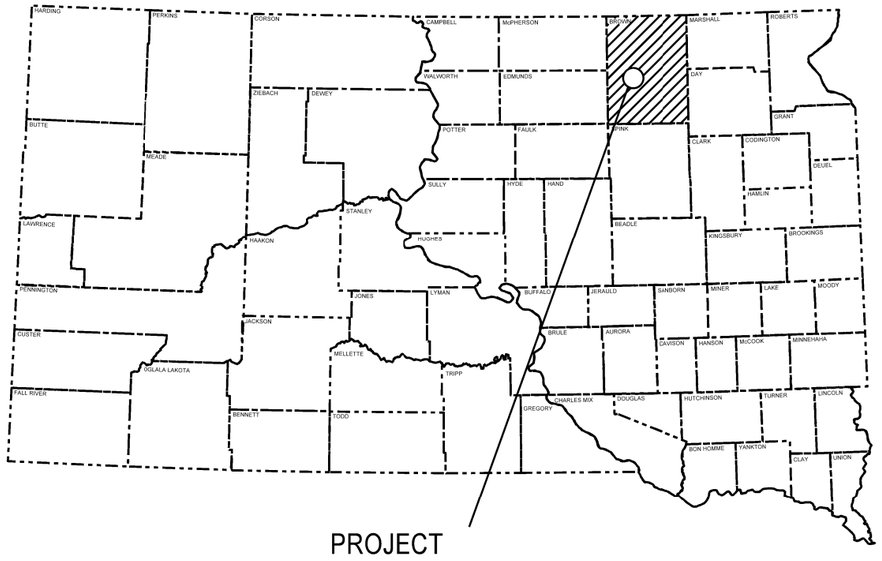


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

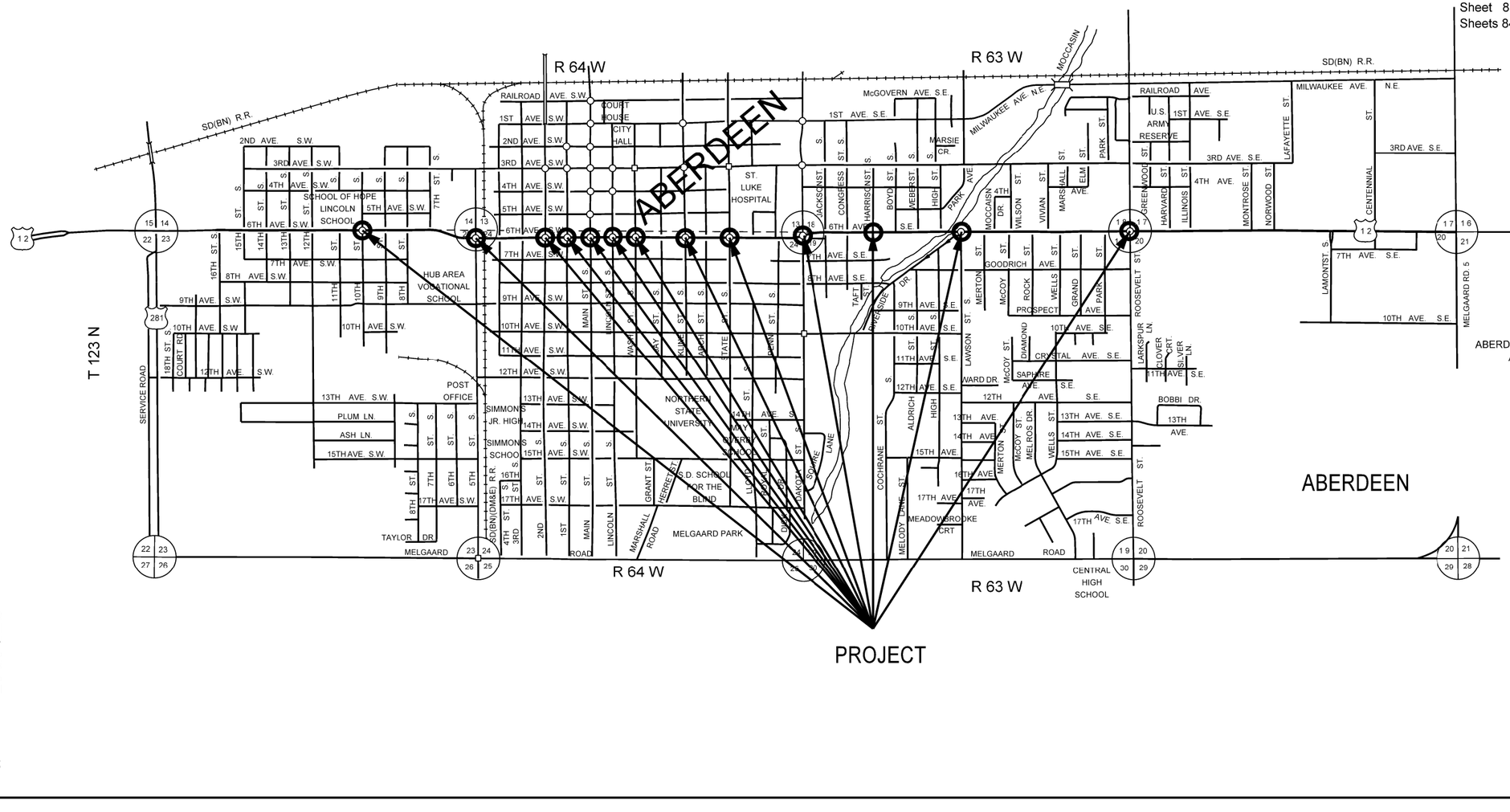
PROJECT NH 0012(323)289
US HIGHWAY 12
BROWN COUNTY

TRAFFIC SIGNALS
PCN 09V9

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	1	92
Plotting Date:	08/14/2025		

Revised 05/27/2025 DLM
08/14/2025 MD

INDEX OF SHEETS



DESIGN DESIGNATION

HWY 12

ADT (2024)	18348
ADT (2044)	28201
DHV	2844
D	50.0%
T DHV	15.5
T ADT	8.2%
V	40 MPH

STORM WATER PERMIT:
None Required

7

November 5, 2025

Plot Scale - 1:40
Plotted From - TRAB17879B
Plot Name - 1
File - ...\prj\Brwn09V9\09V9_Title.dgn

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0012(323)298	2	92

Revised 6/11/2025 DLM
10/02/2025 MD

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E1140	Remove Concrete Sidewalk	151.4	SqYd
110E1520	Remove Signal Equipment	Lump Sum	LS
110E1530	Remove Signal Pole Footing	1	Each
110E1570	Remove Pedestrian Push Button Pole	13	Each
250E0010	Incidental Work	Lump Sum	LS
634E0010	Flagging	20.0	Hour
634E0110	Traffic Control Signs	346.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0640	Temporary Pavement Marking	750	Ft
634E2000	Longitudinal Pedestrian Barricade	20	Ft
634E2015	Temporary Pedestrian Access Route	Lump Sum	LS
634E2020	Temporary Curb Ramp	12	Each
634E2025	Longitudinal Pedestrian Barrier	32	Ft
635E2000	Pedestal Signal Pole	1	Each
635E2135	Signal Pole with 35' Mast Arm and Luminaire Arm	1	Each
635E4100	5 Section Directional Vehicle Signal Head	2	Each
635E5030	3' Diameter Footing	24.0	Ft
635E5302	Type 2 Electrical Junction Box	3	Each
635E5303	Type 3 Electrical Junction Box	13	Each
635E5304	Type 4 Electrical Junction Box	6	Each
635E5313	Type 3A Electrical Junction box	2	Each
635E5880	Accessible Pedestrian Signal	104	Each
635E5910	Pedestrian Push Button Pole	13	Each
635E7018	Install Signal Pole with Mast Arm and Luminaire Arm	1	Each
635E7530	Relocate Signal Equipment	Lump Sum	LS
635E7600	Maintenance of Traffic Signal(s)	10	Hour
635E8120	2" Rigid Conduit, Schedule 40	30	Ft
635E9016	1/C #6 AWG Copper Wire	29,985	Ft
635E9502	2/C #14 AWG Copper Tray Cable, K2	13,825	Ft
635E9504	4/C #14 AWG Copper Tray Cable, K2	190	Ft
635E9507	7/C #14 AWG Copper Tray Cable, K2	4,750	Ft
635E9519	19/C #14 AWG Copper Tray Cable, K2	275	Ft
635E9524	24/C #14 AWG Copper Tray Cable, K2	7,475	Ft
635E9600	#16 AWG Copper Twisted Shielded Pair	5,530	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	130	Ft
635E9800	Preemption Cable	7,020	Ft
651E0040	4" Concrete Sidewalk	1,363	SqFt
651E7000	Type 1 Detectable Warnings	170	SqFt
998E0100	Railroad Protective Insurance	Lump Sum	LS

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

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

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

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

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

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

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

Action Taken/Required:

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

COMMITMENT C: WATER SOURCE

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

Action Taken/Required:

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

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

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

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 E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

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 or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

SUPPLYING AS BUILT PLANS

If the traffic signal systems are constructed differently than what is stated in the plans, the Contractor will supply as built plans to the Engineer and a copy will be sent to the Traffic Design Engineer. The as built plans may include conduit layouts, wiring diagrams, or other drawings depicting the changes from the original plans.

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:

Stacy.Bartlett@state.sd.us & Matt.Dorfschmidt@state.sd.us

ON-SITE INSPECTION

An on-site inspection of the traffic signals will be conducted before acceptance of the project once the traffic signals are completed and operational. The on-site inspection will be conducted by the Project Engineer, Region Engineer with the Contractor, City Traffic Control Department, and the Region Traffic Engineer present.

INCIDENTAL WORK

Incidental work includes, but is not limited to, the restoration of all disturbed areas to the satisfaction of the Engineer.

SIGNAL BACKPLATES

All new vehicle signal heads will have backplates with retroreflective border. The vehicle signal head backplates will have a factory applied 3 inch wide yellow retroreflective border. Sheeting for the border will be Type XI or Type IX in conformance with ASTM D4956. Backplates will be polycarbonate, aluminum, or aluminum-composite. Minimum material thicknesses are:

Polycarbonate, 0.10-inch
Aluminum, 0.06-inch
Aluminum-Composite, 0.08-inch

Signal backplates will extend not less than 5 inches from the edge of the signal head at the top, bottom, and sides. The bottom of the backplate on Vehicle signal faces mounted directly above pedestrian signal indications will be sized to permit the separate adjustment of the vehicle and pedestrian signal indication and may be less than 4 inches.

All costs involved with furnishing and installing backplates with retroreflective border for the new vehicle signal heads will be incidental to the contract unit price per each for “5 Section Vehicle Signal Head.

MULTICONDUCTOR CONTROL CABLE FOR SIGNAL CIRCUITS

The Conductor Jackets for the multiconductor control cables will be color coded in accordance with ICEA S-73-532 Table E2.

ELECTRICAL JUNCTION BOXES

At the locations noted on the plans, the Contractor will remove existing junction boxes and install new junction boxes. Before placing the new junction boxes, the existing base course will be excavated so that the new junction boxes sit flush with the new sidewalk and ramp grades. The new junction boxes will be the type as noted on the plan sheets and will be 36 inch deep.

The Contractor will extend the existing conduit into the new junction boxes as shown on standard plates 635.65.

The Contractor will salvage the covers from the removed junction boxes and deliver them to the city traffic shop. The Contractor will notify the city 5 days before the delivery of the salvaged signal equipment. The city contact is Mike Thomle at 605.626-7022.

All costs associated with removing the existing junction boxes, excavating the base course, extending existing conduit, and salvaging & delivery of the junction box covers will be incidental to the contract unit price per each for “Type 2 Electrical Junction Box,” “Type 3 Electrical Junction Box,” “Type 3A Electrical Junction Box,” and “Type 4 Electrical Junction Box.”

SIDEWALK QUANTITIES REMOVAL AND REPLACEMENT

The Contractor will remove sidewalk adjacent to any junction box to be replaced with the project. Removals will extend to the nearest joints in the sidewalk. Any pedestal pole located in the area of the sidewalk removed will be removed and reset in its existing location upon replacement of the sidewalk.

TRAFFIC SIGNAL WIRING

The Contractor will use Buchanan crimp connectors and insulating caps, or approved equal, on all wire terminations in the signal bases.

All costs for this work will be incidental to the electrical cable bid items.

ACCESSIBLE PEDESTRIAN SIGNAL

The work will consist of furnishing and installing accessible pedestrian signals (APS). Each APS will consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a latching light emitting diode (LED) indicator light, a solid-state electronic control board, a power supply, wiring, and all necessary mounting hardware. The operation and performance of the APS units will meet the requirements of the current edition of the MUTCD and the applicable sections of NEMA Standards Publication TS-2.

The APS units will be capable of supporting a minimum of 16 push button stations.

The traffic signal cabinet must have four dedicated load switches for the pedestrian phases. If the traffic signal cabinet does not have four dedicated load switches for the pedestrian phases, then the Contractor will furnish and install the necessary number of load switches. All costs associated with furnishing and installing any additional load switches will be incidental to the contract unit price per each for “Accessible Pedestrian Signal”.

All mounting fasteners will be stainless steel; all threads will be coated with anti-seize compound meeting the requirements of USA Dept. of Defense specification MIL-PRF-907F.

The push button component of APS will meet the requirements of Section 985.1 S of the Specifications except that all housings and external hardware will be aluminum, powder coated yellow.

The APS control unit will include capability to monitor the push buttons and pedestrian signal head displays. Conflicts will cause the channel to be powered off. No part of the APS control unit will be installed in the pedestrian signal head.

The APS control unit will include capability to monitor communications with the push buttons. Communication faults will automatically reset the control unit.

Two licensed copies of any APS programming software will be furnished. All software programming, firmware updates, and audio message programming of the APS will be through USB port or Ethernet connection.

The APS will not have any components located in the pedestrian signal head.

All costs for furnishing and installing the accessible pedestrian signal including labor, materials, and equipment, will be incidental to the contract unit price per each for “Accessible Pedestrian Signal”.

DETECTOR LOOP WIRE SPLICING

Detector loop wire splices will be made using wire nuts over soldered connections and sealed in 3M Scotchcast 3570G-N connector sealing packs or an approved equal.

The drain wire of the TSP cable will be left unattached to the ground lug in the traffic signal controller.

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the 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.

The Contractor will only work on one intersection at a time.

GENERAL TRAFFIC CONTROL

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

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.

Signs will not be located such that they block the sidewalk.

All intersection that are not controlled by a temporary traffic signal will be two-way stops when the signals at the intersection are not operational.

TEMPORARY PEDESTRIAN ACCESS ROUTE

A Temporary Pedestrian Access Route (TPAR) will be provided when crosswalks, sidewalks, or other pedestrian facilities are blocked, closed, or relocated. A TPAR may consist of a combination of existing and/or temporary pedestrian facilities. The TPAR will be kept free of any obstructions and hazards, such as holes, debris, mud, snow, construction equipment, traffic control signing, stored materials, etc.

The Contractor will notify the Engineer at least 72 hours prior to start of any construction operation that will necessitate a change in pedestrian access. Pedestrian traffic signal displays controlling a crosswalk that is closed will be covered or removed.

TEMPORARY CURB RAMP

Temporary curb ramps should be firm, stable, and have a non-slip surface. They will not warp or buckle, and should be made of materials strong enough to support a weight of 800 pounds. Temporary curb ramps will be yellow or color contrasting and contain marked edges, so they are noticeable by pedestrians who have visual impairments. Lateral joints or gaps between surfaces will be a maximum of 0.5 inches in width. Temporary curb ramps will include detectable warning panels.

Temporary curb ramps will be the same width as the temporary pedestrian access route, with a recommended width of 60 inches and a minimum width of 48 inches. Temporary curb ramps will have a maximum slope of 8.3% and have free draining surfaces with a maximum cross slope of 2%. Handrails on temporary curb ramps are not required unless the curb ramp has a rise exceeding 6 inches and a length exceeding 72 inches.

All costs will be incidental to the contract unit price per each for “Temporary Curb Ramp”.

LONGITUDINAL PEDESTRIAN BARRICADE

Longitudinal pedestrian barricades should not be used to provide positive protection for pedestrians.

To prevent any tripping hazard to pedestrians, ballast will be located behind or internal to the device.

When longitudinal pedestrian barricades are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock will be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. When used as a sidewalk closure mechanism, longitudinal pedestrian barricade must run the entire width of the sidewalk. Longitudinal pedestrian barricade should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Section 6F.68 of the MUTCD.

Longitudinal pedestrian barricade will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing. Both upper and lower surfaces will share a common vertical plane.

All costs will be incidental to the contract unit price per foot for “Longitudinal Pedestrian Barricade”.

LONGITUDINAL PEDESTRIAN BARRIER

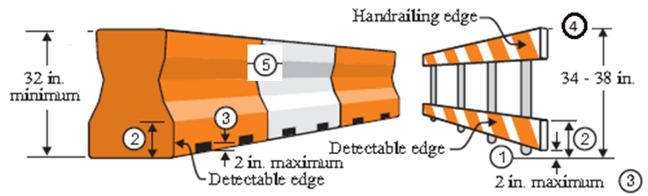
When used to separate pedestrians from vehicular traffic for TPARs in the roadway, longitudinal pedestrian barrier must meet or exceed the crashworthy requirements of NCHRP 350 or MASH Test Level 1. The bottom and top surfaces of the traffic side of devices will have retroreflective sheeting or delineation for improved nighttime visibility.

When longitudinal pedestrian barriers are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock should be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. Channelizing devices should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Chapter 6F of the MUTCD.

Longitudinal pedestrian barriers will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing.

All costs will be incidental to the contract unit price per foot for “Longitudinal Pedestrian Barrier”.

PEDESTRIAN CHANNELIZING DEVICE DETAILS



Longitudinal Pedestrian Barrier **Longitudinal Pedestrian Barricade**

1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.
2. The top edge of the bottom portion will be a minimum of 8 inches above the walkway.
3. Devices will not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.
4. The top edge of the longitudinal pedestrian barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.
5. Longitudinal pedestrian barrier used to provide positive protection from traffic to pedestrians should be crashworthy.

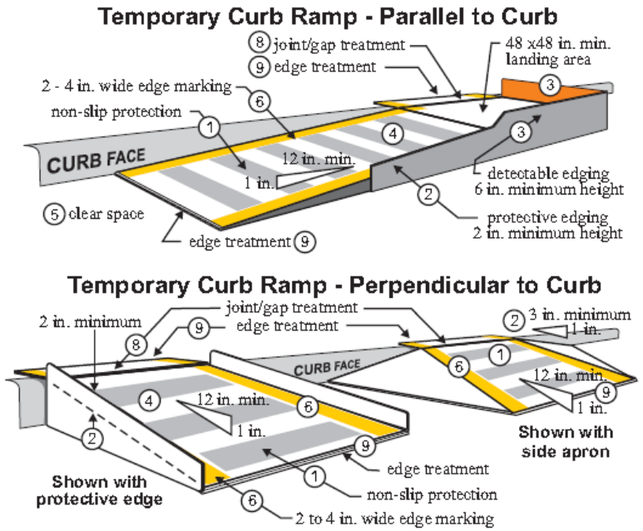
CONTROLLER PROGRAMMING

The existing controllers at US12 and Dakota St S, will be reprogrammed to use the patterns and timings specified on the Signal Timing Sheets by a qualified technician. Costs for reprogramming the controllers will be incidental to the contract lump sum price for “Miscellaneous, Electrical”.

REMOVE SIGNAL AND LUMINAIRE POLES

Signal pole EE3. EE4 and pedestal pole EL3 are to be removed on this project and will become the property of the Contractor.

TEMPORARY CURB RAMP DETAILS



1. Curb ramps will be 48-inch minimum width with a firm, stable, and non-slip surface.

2. Protective edging with a 2-inch minimum height will be installed when the curb ramp or landing platform has a vertical drop of 6 inches or greater or has a side apron slope steeper than 33:1 (33%). Protective edging should be considered when curb ramps or landing platforms have a vertical drop of 3 inches or more.

3. Detectable edging with 6 inches minimum height and contrasting color will be installed on all curb ramp landings where the walkway changes direction (turns).

4. Curb ramps and landings should have a 50:1 (2%) maximum cross slope.

5. A minimum clear space of 48 inch x 48 inch minimum will be provided above and below the curb ramp, with a 60 inch x 60 inch clear space preferred.

6. The curb ramp walkway edge will be marked with a contrasting color 2 to 4 inch wide marking. The marking is optional where color contrasting edging is used.

7. Water flow in the gutter system will have minimal restriction.

8. Lateral joints or gaps between surfaces will be less than 0.5 inches in width.

9. Changes between surface heights should not exceed 0.5 inches. Lateral edges between 0.25 inches and 0.5 inches in height, should be vertical up to 0.25 inches in height and beveled at 2:1 between 0.25 inches and 0.5 inches in height.

PORTABLE TEMPORARY TRAFFIC CONTROL SIGNAL

The State will furnish, install, operate, and maintain a portable temporary traffic control signal during construction phases as determined by the Region Traffic Engineer.

The following intersection will have portable traffic signals when not operational:

- US12 and 5th St S
- US12 and 2nd St S
- US12 and State St S
- US12 and Dakota St S
- US12 and Roosevelt St S

Portable traffic signals will only be utilized at one intersection at a time.

The portable temporary traffic control signals will be set up and programmed by Aberdeen Region Traffic.

The Contractor will contact:

Matt Dorfschmidt, Aberdeen Traffic Engineer – 1 (605) 626-7879
-or-
Alyssa Taylor, Assistant Region Traffic Engineer – 1 (605) 626-2245

A minimum of one week prior to installation and programming of the signals

TRAFFIC SIGNAL PROGRAMMING:

The Contractor will initially program the controllers with the timings from the existing traffic signal programming existing at the intersections.

As project conditions and traffic needs change, the Contractor will adjust the traffic signal splits and offsets as directed by the Engineer after consultation with the Aberdeen Region Traffic Engineer. The Aberdeen Region Traffic Engineer will be the primary contact to approve any revision of the signal phasing or timing.

Emergency pre-emption will be provided and have priority.

Hardwire traffic signal interconnect will not be required during construction. The traffic signals will be coordinated using GPS clocks for time base coordinated. Controller time clocks will be kept in synchronization and adjusted as necessary to provide proper offsets and adequate coordination.

Emergency pre-emption will be installed for each approach controlled by a portable traffic signal system.

- The EVP heads will be Opticom or approved equal.
- One confirmation lights (socket and bulb) will be installed within each EVP head.

Costs to program and make adjustments to the traffic signal controllers will be incidental to the contract unit price per Hour for Maintenance of Traffic Signal(s).

INSTALL STATE FURNISHED SIGNAL POLE:

Signal pole E3. will be furnished by the SDDOT and installed by the Contractor. The total cost of the furnished items for tax purposes is $12,956.00

The pole will be installed by the Contractor as indicated on the Signal Layout and Conduit Layout Sheets. The signal pole, mast arms, and luminaire extensions are in the SDDOT Aberdeen Region Yard. The Contractor will be responsible for transporting the signal pole, mast arms, and luminaire extensions from the SDDOT Aberdeen Region Yard to the sites indicated on the Signal Layout and Conduit Layout Sheets. The Contractor may contact the Area Engineer for signal pole, mast arms, and luminaire extensions pick up information. The Area Engineer is Lane Goldsmith, (605) 626-7879. Anchor bolts will not be supplied by the DOT and the Contractor will need to provide them for the pole below.

Any poles damaged during pick-up, or delivery will be repaired or replaced by the Contractor at no cost to the State.

The signal pole to be installed is a Millerbernd Manufacturing signal pole Shop drawing number for the signal pole is Millerbernd Manufacturing SD 13-SIGONLY-1545.

Millerbernd Manufacturing
P.O. Box 98
Winsted, MN 55395
Phone: (320) 485-2111

All work involved in furnishing anchor bolts, installing and transporting the state furnished signal poles will be incidental to the contract unit price per each for “Install Signal Pole with Mast Arm and Luminaire Arm””.

REMOVE SIGNAL POLE FOOTING

The footings of existing signal pole EE3 will be removed by the Contractor to a minimum of 2 feet below the ground surface. Restoration of the disturbed area will be to the satisfaction of the Engineer.

All costs for removing the footings of the existing signal poles will be incidental to the contract unit price per each for “Remove Signal Pole Footing”.

REMOVE LUMINAIRE POLE FOOTING

The footings of existing luminaire pole EE4 will be removed by the Contractor to a minimum of 2 feet below the ground surface. Restoration of the disturbed area will be to the satisfaction of the Engineer.

All costs for removing the footings of the existing luminaire poles will be incidental to the contract unit price per each for “Remove Luminaire Pole Footing”.

PEDESTAL SIGNAL POLES

Pedestal signal poles may be aluminum. Aluminum poles will conform to the following requirements:

Aluminum will conform to ASTM B221, Alloy 6061, and Temper T6.

Poles will be round with a minimum outside pole diameter of 4 inches, and the pole assembly will have a square, cast aluminum base with aluminum access door. The base will conform to the breakaway requirements of NCHRP 350 or MASH. A grounding lug will be provided in the base.

The pole to base connection will be a threaded connection; threads will be 8 TPI, NPT. A collar (integral or non-integral) to prevent wind-induced loosening of pole will be provided. All bolt and connection threads will be coated with a commercially available anti-seize compound intended for use in aluminum-to-aluminum and steel-to-aluminum connections.

The pole finish will either be brushed satin or spun. The top of the pole will be sealed by the traffic signal head mounting hardware or by an aluminum cap.

The existing bolt circle diameter of pedestal pole L3 is 13”.

Measurement and payment for aluminum poles will be as specified in Specifications Section 635.

TABLE OF FOOTING DATA

Site Designation	Footing Diameter	* Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
E3, L4	3’ - 0”	12’ - 0”	2’ - 8”	120’ - 9”	14-#8 x 11’ -6”

* Footing depth will be below ground level.
** The size of all spirals will be #3.

Soils at the footing location consist of approximately 5 feet of black silt clay overlying gravelly clay.

During construction of the cylindrical footings, concrete placement operations should closely follow excavation procedures. The longer the excavations are left open, the more likely caving will occur.

Concrete will not be dropped through standing water. If water is present in the excavation, it will be removed prior to concrete placement, or the concrete will be tremied.

TEMPORARY PEDESTRIAN SIDEWALK

Temporary pedestrian sidewalk will be a smooth, continuous, non-slip, hard surface. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be a barrier to wheelchair use.

Temporary pedestrian sidewalk will have a minimum width of 48 inches, with 60 inches recommended. The Contractor will try to provide boulevard sidewalk, whenever possible, for temporary pedestrian sidewalk that is 48 inches wide. Temporary pedestrian sidewalk less than 60 inches wide will provide for a 60-inch x 60-inch passing space at intervals not to exceed 200 feet. Temporary pedestrian sidewalk will have a maximum cross slope of 2%. The maximum grade will be 5% where the temporary pedestrian sidewalk does not follow the grade of the road.

All costs associated with installing and maintaining a temporary pedestrian access route, including temporary pedestrian sidewalk, will be incidental to the contract lump sum price for “Temporary Pedestrian Access Route”.

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 cast iron plates may be a natural patina (weathered steel).

Type 1 Detectable Warning Panels will be one of the following products:

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

ITEMIZED LIST FOR DETOUR SIGNING

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	2	30"	5.2	10.4
R3-7R	RIGHT LANE MUST TURN RIGHT	1	30" x 30"	6.3	6.3
R3-7L	LEFT LANE MUST TURN LEFT	1	30" x 30"	6.3	6.3
R9-9	SIDEWALK CLOSED	1	24" x 12"	2.0	2.0
R9-10	SIDEWALK CLOSED (ARROW L or R) USE OTHER SIDE	4	24" x 12"	2.0	8.0
R9-11	SIDEWALK CLOSED AHEAD (ARROW L or R) CROSS HERE	1	24" x 18"	3.0	3.0
R9-11a	SIDEWALK CLOSED (ARROW L or R) CROSS HERE	1	24" x 12"	2.0	2.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W9-2	LANE ENDS MERGE LEFT	1	48" x 48"	16.0	16.0
W11-2	PEDESTRIAN (symbol)	4	36" x 36"	9.0	36.0
W16-9P	AHEAD (plaque)	2	30" x 18"	3.8	7.6
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	1	48" x 48"	16.0	16.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	4	48" x 48"	16.0	64.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
			CONVENTIONAL ROAD DETOUR SIGNING SQFT		346.6

SIDEWALK QUANTITIES REMOVAL AND REPLACEMENT

Intersection	Quadrant	REMOVE		INSTALL		
		Concrete Sidewalk (sqyd)	Remove Pedestrian Push Button Pole (Each) (110E1570)	4" Concrete Sidewalk (sqft)	Detectable Warning (sqft) (651E700)	Pedestrian Push Button Pole (Each) (635E5910)
10th St S	SW	8.6	1	77	15	1
5th St S	NW	8	1	72		1
1st St S	NW	1.7		15		
Lincoln St S	SE	17.3	1	156	20	1
	NW	7	1	63	15	1
Washington St S	SW	3.9		35		
	NW	8.6	1	77	15	1
Kline St S	SE	11.7	1	105	10	1
	SW	11.7	1	105	15	1
	NW	2.7	1	24		1
	NE	2.7	1	24	30	1
State St S	SE	11.7	1	105	10	1
	NW	2.7		24		
Dakota St S	SE	4.7		42		
	SW	4.7		42		
	NW	9		81		
Harrison St S	SE	3.1		28		
	SW	8	1	72	15	1
	NW	8.9	1	80	15	1
Lawson St S	SE	6.7	1	60	10	1
	SW	8		72		
Total		151.4	13	1363	170	13

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & 10th St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJA1	Controller	420	280	70	140	70	70
EJA1	Pole EA1	75		25	25		120
EJA1	PA1		40				
EJA1	PA2		35				
EJA1	EJA2	240	160		80		
EJA1	EJA5					45	
EJA1	EJA4	630	420	105	210	105	
EJA2	Pole EA2	60			20		
EJA2	PA3		30				
EJA2	PA4		55				
EJA3	Pole EA3	60			20		
EJA3	EJA6					30	
EJA3	PA5		40				
EJA3	PA6		30				
EJA4	EJA3	255	130	65	65	65	
EJA4	Pole EA4	60		20	20		
EJA4	PA7		30				
EJA4	PA8		45				
EJA4	Power	1650					
Intersection Total		3450	1295	285	580	315	190

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & 5th St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJB1	Pole EB1	60		20	20		50
EJB1	EJB5					70	
EJB1	PA1		20				
EJB1	PA2		25				
EJB1	EJB2	220	220	110	110	220	110
EJB2	Pole EB2	60		20	20		50
EJB2	PB3		25				
EJB2	PB4		20				
EJB2	EJB3	460	460	230	230	230	230
EJB3	Pole EB3	60		20	20		50
EJB3	PB5		20				
EJB3	PB7		35				
EJB3	EJB7	270				90	
EJB3	Controller	270	360	180	180	225	180
EJB3	EJB6					80	
EJB3	EJB4		200	100	100	100	100
EJB4	Pole EB4	60		40	40		70
EJB4	PA7		25				
EJB4	PA8		35				
EJB4	EJB8					65	
EJB7	Power	990					
Intersection Total		2450	1445	720	720	1080	840

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & 2nd St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJC1	Pole EC1	60		20	20		50
EJC1	PC1		20				
EJC1	PC2		30				
EJC1	EJC5					40	
EJC1	EJC2	360	180				
EJC1	EJC4	360	220	110	110	220	110
EJC2	PC3		25				
EJC2	PC4		25				
EJC3	Pole EC3	60		20	20		45
EJC3	PC5		30				
EJC3	PC6		25				
EJC3	EJC6				855		60
EJC3	EJC7						30
EJC3	Pole EC2	60			105		135
EJC3	Controller	180	240	90	120	180	120
EJC4	Pole EC4	60		20	20		45
EJC4	PC7		30				
EJC4	PC8		30				
EJC4	EJC8					40	
EJC4	Power	1080					
Intersection Total		2220	855	260	1250	480	595

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & 1st St S

Bid Item Number		635E9016	635E9502	635E9507	635E9519	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	19/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJD1	Controller	180	240	30	30	90	60	90
EJD1	Pole ED1	60				30		60
EJD1	PD1		35					
EJD1	PD2		35					
EJD1	EJA2	210	140		70			
EJD1	EJD5	630	420	105		210		105
EJD1	EJD6						50	
EJD2	Pole ED2	60			20			
EJD2	PD3		25					
EJD2	PD4		25					
EJD3	Pole ED3	60		25		25		55
EJD3	PD5		30					
EJD3	PD6		20					
EJD3	EJD4		110	55		55		55
EJD3	Power	1110						
EJD4	Pole ED4	60				20		50
EJD4	PD7		20					
EJD4	PA8		25					
Intersection Total		2370	1125	215	120	430	110	415

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Main St S

Bid Item Number		635E8120	635E9016	635E9502	635E9504	635E9507	635E9524	635E9600	635E9710	635E9800
Location to Location		2" Schedule 40 Conduit (Ft)	1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	4/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	2/C #14 AWG Pole and Bracket Cable (Ft)	PREEMPTION CABLE (Ft)
EJE1	Controller		180	240		30	180	150		90
EJE1	Pole EE1		60			20	20			70
EJE1	EJE5			40						
EJE1	EJE4									
EJE5	EJE2		300	150		75	75	75		75
EJE5	PE1			20						
EJE5	PE2			25						
EJE2	Pole EE2		60			20	20			60
EJE2	PE3			20						
EJE2	PE4			20						
EJE2	EJE6							40		
EJE3	Pole E3	30	60				40			60
EJE3	PE5		30							
EJE3	PE6		60							
EJE3	EJE4		320	160			80	240		80
EJE4	Pole E4		60				30			
EJE4	PE7			20						
EJE4	PE8			25						
EJE4	EJE7							20		
EJE4	Power		1020							
Pole E3					100	70			65	
Pole E4					30	20			65	
Intersection Total		30	2150	720	130	235	445	525	130	435

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Lincon St S

Bid Item Number		635E9016	635E9502	635E9507	635E9519	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	19/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJF1	Pole EF1	60				20		50
EJF1	PF1		25					
EJJ1	PF2		20					
EJF1	EFJ5						60	
EJF1	EJF2		150			75	150	75
EFF2	Pole EF2	60			20			
EJF2	PF3		15					
EFF2	PF4		25					
EJF2	EJF3		420		105	105	210	105
EJF3	Pole EF3	60		20		20		50
EJF3	PF5		30					
EJF3	PF6		20					
EJF3	Controller	180	240	30	30	90	60	90
EJF3	EJF4	370	130			65		65
EJF4	Pole EF4	60				20		50
EJF2	PF7		25					
EJF4	PF8		30					
EJF4	Power	1080						
Intersection Total		1870	1130	50	155	395	480	485

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Washington St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJG1	Pole EG1	60		20	20		75
EJG1	PG1		35				
EJG1	PG2		20				
EJG1	EJG5					50	
EJG1	EJG2	300	150	75	75	150	75
EJG2	Pole EG2	60			20		55
EJG2	PG3		20				
EJG2	PG4		15				
EJG2	EJG3	220	220	105	110	110	110
ELG3	Controller	210	280	70	140	105	140
ELG3	Pole EG3	60		20	20		75
ELG3	PG5		20				
ELG3	PG6		35				
ELG3	EJG6		25				
ELG3	EJG4	180	120		60		60
EJG4	Pole EG4	60			20		55
EJG4	PG7		20				
EJG4	PJ8		35				
EJG4	Power	1080					
Intersection Total		2230	995	290	465	415	645

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Kline St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJH1	Pole EH1	60		20	20		55
EJH1	PH1		30				
EJH1	PH2		20				
EJH1	EJH5					100	
EJH1	EJH2		140	70	70	140	70
EJH2	Pole EH2	60			20		40
EJH2	PH3		20				
EJH2	PH4		30				
EJH2	EJH3	420	420	105	210	210	210
EJH3	Pole EH3	60		20	20		55
EJH3	PH5		30				
EJH3	PH6		20				
EJH3	Controller	180	240	60	120	120	120
EJH3	EJH6					50	
EJH3	EJH4	360	120		60		60
EJH4	Pole EH4	60			15		50
EJH4	PF7		20				
EJH4	PF8		30				
EJH4	Power	1050					
Intersection Total		2250	1120	275	535	620	660

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & State St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJI1	Pole EI1	60		30	30		80
EJI1	PI1		35				
EJI1	PI2		20				
EJI1	EJI5					60	
EJI1	EJI2	340	170	85	85	170	85
EJI2	Pole EI2	60		20	20		50
EJI2	PI3		15				
EJI2	PI4		20				
EJI2	EJI3	360	480	240	240	240	240
EJI2	Controller	75	200	100	100	150	100
ELI2	EJ16					40	
ELI3	Pole EI3	60		20	20		50
ELI3	PI5		15				
ELI3	PI6		20				
ELI3	EJG7						60
ELI3	EJG4	180	180	90	90	90	90
EJI3	Power	1000					
EJI4	Pole EI4	60		20	20		50
EJI4	PI7		25				
EJI4	PI8		20				
EJI4	EJG8					40	
Intersection Total		2195	1200	605	605	790	805

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Dakota St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	PREEMPTION CABLE (Ft)
EJJ1	Pole EJ1	60		20	20	70
EJJ1	PJ1		20			
EJJ1	PJ2		25			
EJJ1	Controller	180	240	120	120	120
EJJ1	EJJ2		230	115	115	115
EJJ1	EJJ4	660	440	220	220	220
EJJ2	Pole EJ2	60		20	20	80
EJJ2	PJ3		30			
EJJ2	PI4		15			
EJJ3	Pole EJ3	60		20	20	55
EJJ3	PJ5		20			
EJJ3	PJ6		30			
EJJ3	Power	210				
EJJ3	EJJ4					
EJH3	EJH4	510	170	85	85	85
EJJ4	Pole EJ4	60		20	20	20
EJJ4	PJ7		20			
EJJ4	PJ8		30			
Pole EJ4				75		
Pole EJ3				20		
Intersection Total		1800	1270	710	620	765

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Harrison St S

Bid Item Number		635E9016	635E9502	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJK1	Pole EK1	60		20	20		75
EJK1	PKI1		20				
EJK1	PK2		30				
EJK1	EJK5	70					
EJK1	EJK2	195	130		65		65
EJK1	EJK4	285	380	95	190	95	190
EJK2	Pole EK2	60			15		50
EJK2	PK3		20				
EJK2	PK4		30				
EJK3	Pole EK3	60			15		50
EJK3	PK5		30				
EJK3	PK6		20				
EJK3	EJK4	390	130	65	65	65	65
EJK3	Power	900					
EJK3	EJK6					25	
EJK4	Pole EK4	60		20	20		75
EJK4	PK7		30				
EJK4	PK8		20				
EJK4	Controller		320	80	160	80	160
Intersection Total		2080	1160	280	550	265	730

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Lawson St S

Bid Item Number		635E9016	635E9502	635E9504	635E9507	635E9524	635E9600	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	4/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	#16 AWG Twisted Shielded Pair (Ft)	PREEMPTION CABLE (Ft)
EJL1	Pole L3	60				20		
EJL1	PL3		15					
EJL1	PL4		30					
EJL1	Controller	210	140		70	105	105	70
EJL1	PL1		90					
EJL1	Pole EL1	255			85	85		
EJL1	EJL2	480	80		80	80	240	150
EJL2	Pole EL2	60			20	20		65
EJL2	PL2		15					
EJL2	EJL3						45	
EJL2	EJL4						60	
EJL2	Power	1500						
Pole L3				60				
Intersection Total		2565	370	60	255	310	450	285

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	16	92

Plotting Date: 08/13/2025

ESTIMATE OF CABLE QUANTITIES

US Hwy 12/6th Ave SW & Roosevelt St S

Bid Item Number		635E9014	635E9502	635E9507	635E9524	635E9800
Location to Location		1/C #6 AWG Copper Cable (Ft)	2/C #14 AWG IMSA Copper Cable (Ft)	7/C #14 AWG IMSA Copper Cable (Ft)	24/C #14 AWG IMSA Copper Cable (Ft)	PREEMPTION CABLE (Ft)
JM1	Power	540				
JM1	EJM2	1500	500	250	250	
JM1	EJM6		40	20	20	
JM1	EJM4		180	90	90	
EJM6	Pole EM1	60		20	20	
EJM6	PM1		20			
EJM6	PM2		25			
EJM2	Pole EM2	75		25	25	90
EJM2	PM3		25			
EJM2	PM4		30			
EJM2	Controller	120	240	120	120	80
EJM4	Pole EM4	60		45	45	
EJM4	PI7		35			
EJM4	PI8		45			
Intersection Total		2355	1140	570	570	170

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	17	92
Plotting Date: 08/13/2025			

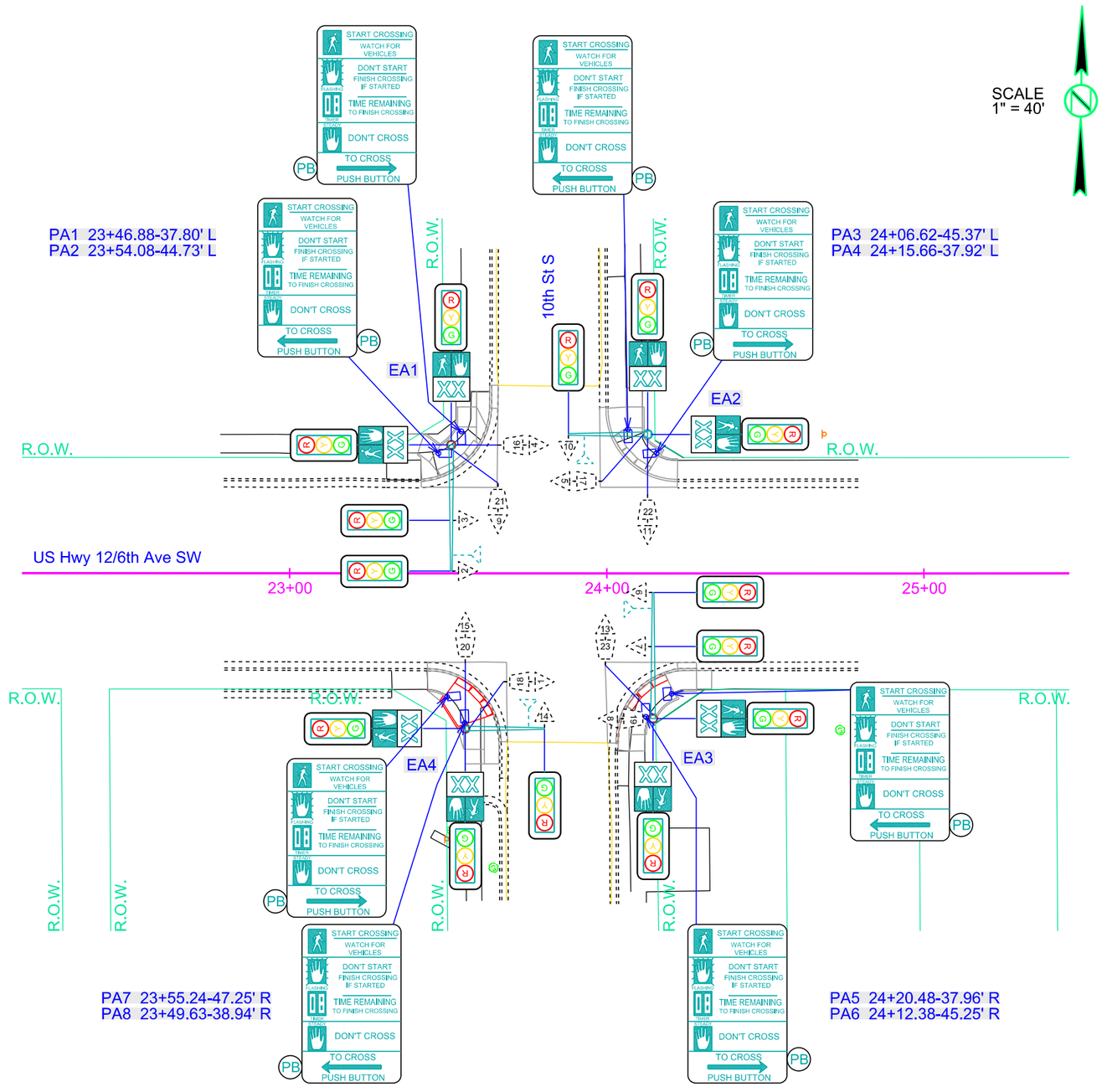
Revised 06/01/2025 DLM

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 10TH ST S

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Pedesrian Push Button Pole (PA7)	1	EACH

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal PA1 - PA8	8	EACH

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (EA2, EA4)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EA1,EA3)
	Roadway Luminaire, 400w with P.E. (EA1-EA4)
	3 Section Vehicle Signal Head (1-15)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
(PB)	Accessible Pedestrian Signal
	Pedestrian Signal Head (16-23)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	18	92
Plotting Date: 08/13/2025			

Revised 06/15/2025 DLM

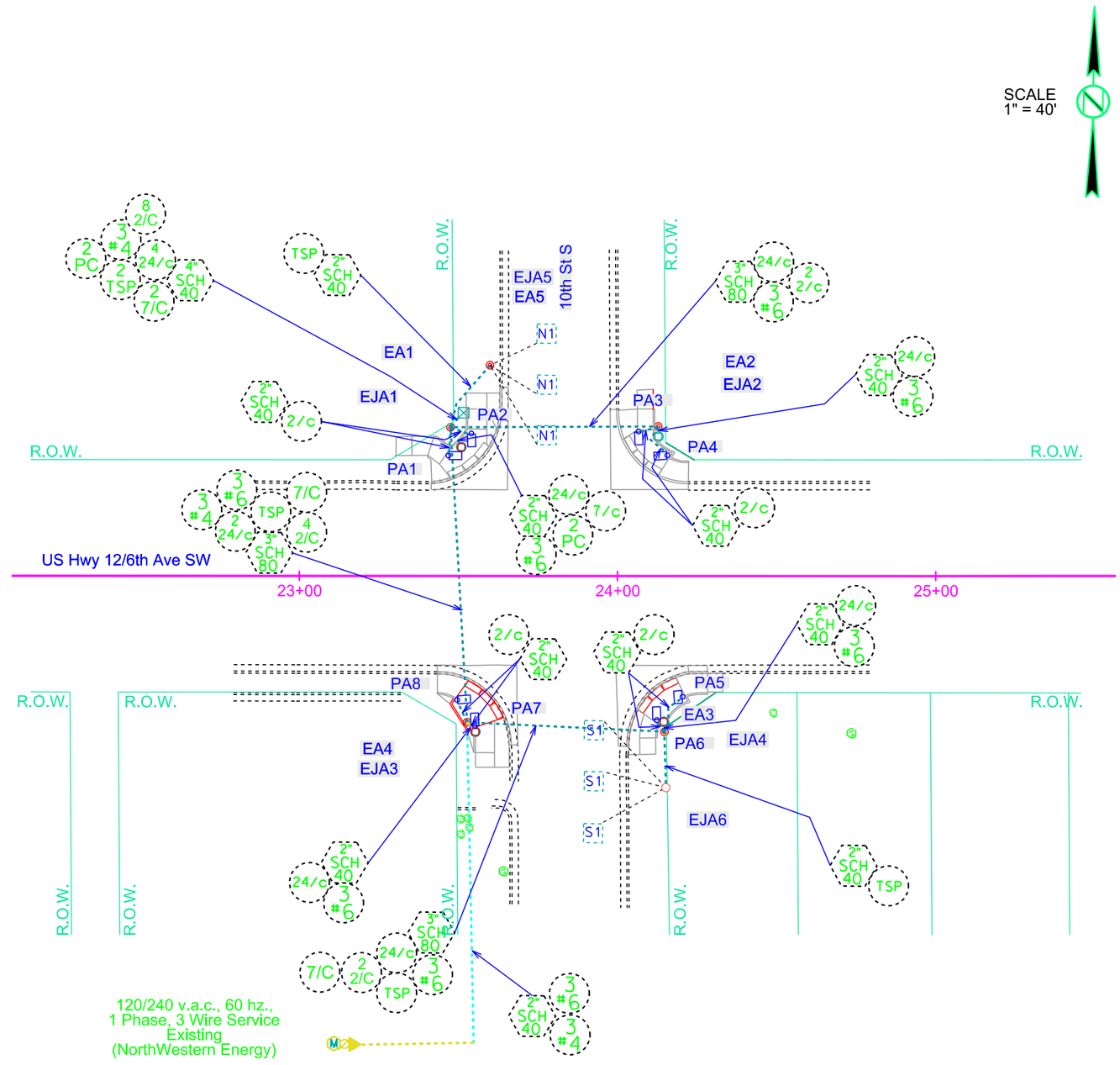
EXISTING CONDUIT LAYOUT

US HWY 12/6TH AVE SW & 10TH ST S

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
M	Meter Socket
	Wood Utility Pole
	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2" SCH 40	2" Rigid Conduit, Schedule 40
4" SCH 40	4" Rigid Conduit, Schedule 40
3" SCH 80	3" Rigid Conduit, Schedule 80
2/C	2/C #14 AWG Copper Tray Cable, K2
7/C	7/C #14 AWG Copper Tray Cable, K2
24/C	24/C #14 AWG Copper Tray Cable, K2
#4	1/C #4 AWG Copper Wire
#6	1/C #6 AWG Copper Wire
TSP	#16 AWG Copper Twisted Shielded Pair
PC	PREEMPTION CABLE

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJA3,EJA4)	2	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	1295	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	285	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	580	FT
#4	1/C #4 AWG Copper Wire	1350	FT
#6	1/C #6 AWG Copper Wire	1890	FT
TSP	#16 AWG Copper Twisted Shielded Pair	190	FT
PC	PREEMPTION CABLE	315	FT



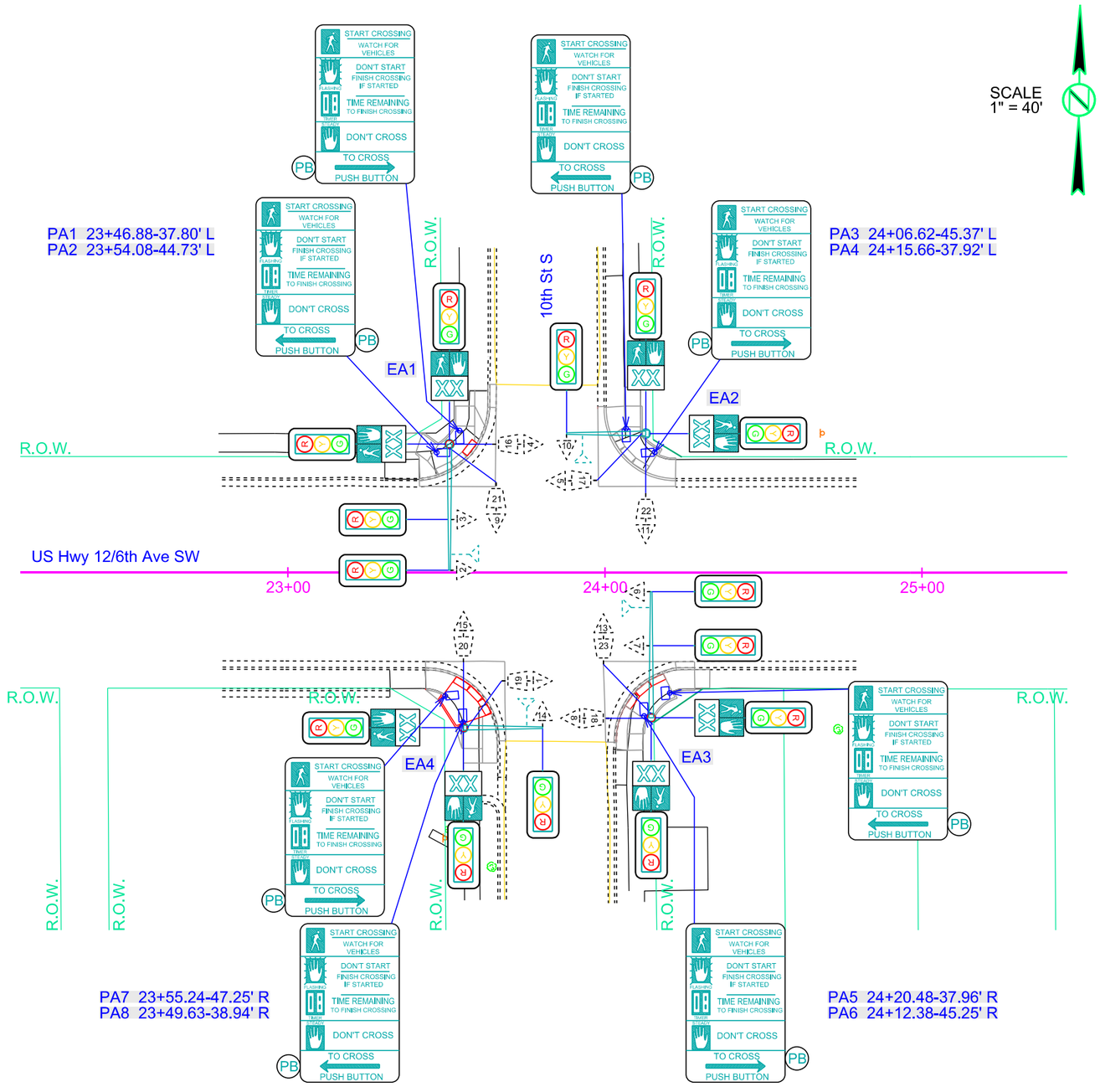
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	19	92
Plotting Date: 08/13/2025			

Revised 06/01/2025 DLM

SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 10TH ST S

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal (PA1-PA8)	8	EACH
○	Pedestrrian Push Button Pole (PA7)	1	EACH



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	20	92

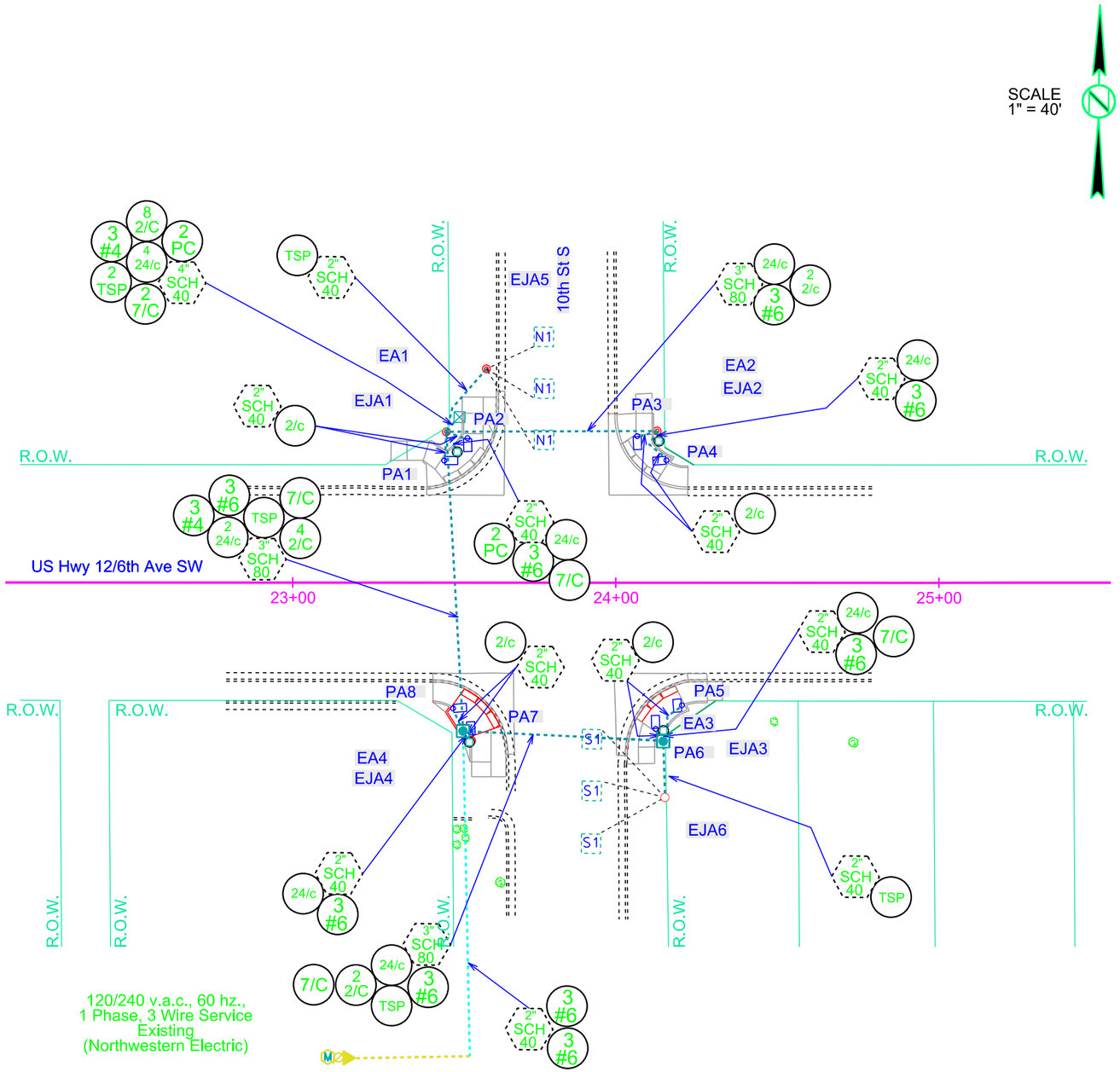
Plotting Date: 08/13/2025

Revised 06/16/2025 DLM

CONDUIT LAYOUT

US HWY 12/6TH AVE SW & 10TH ST S

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
▣	Type 2 Electrical Junction Box (EJA3,EJA4)	2	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	1295	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	285	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	580	FT
#4	1/C #4 AWG Copper Wire	1350	FT
#6	1/C #6 AWG Copper Wire	1890	FT
PC	Preemption Cable	190	FT
TSP	#16 AWG Copper Twisted Shielded Pair	315	FT



EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 5TH ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	21	92
Plotting Date: 08/13/2025			

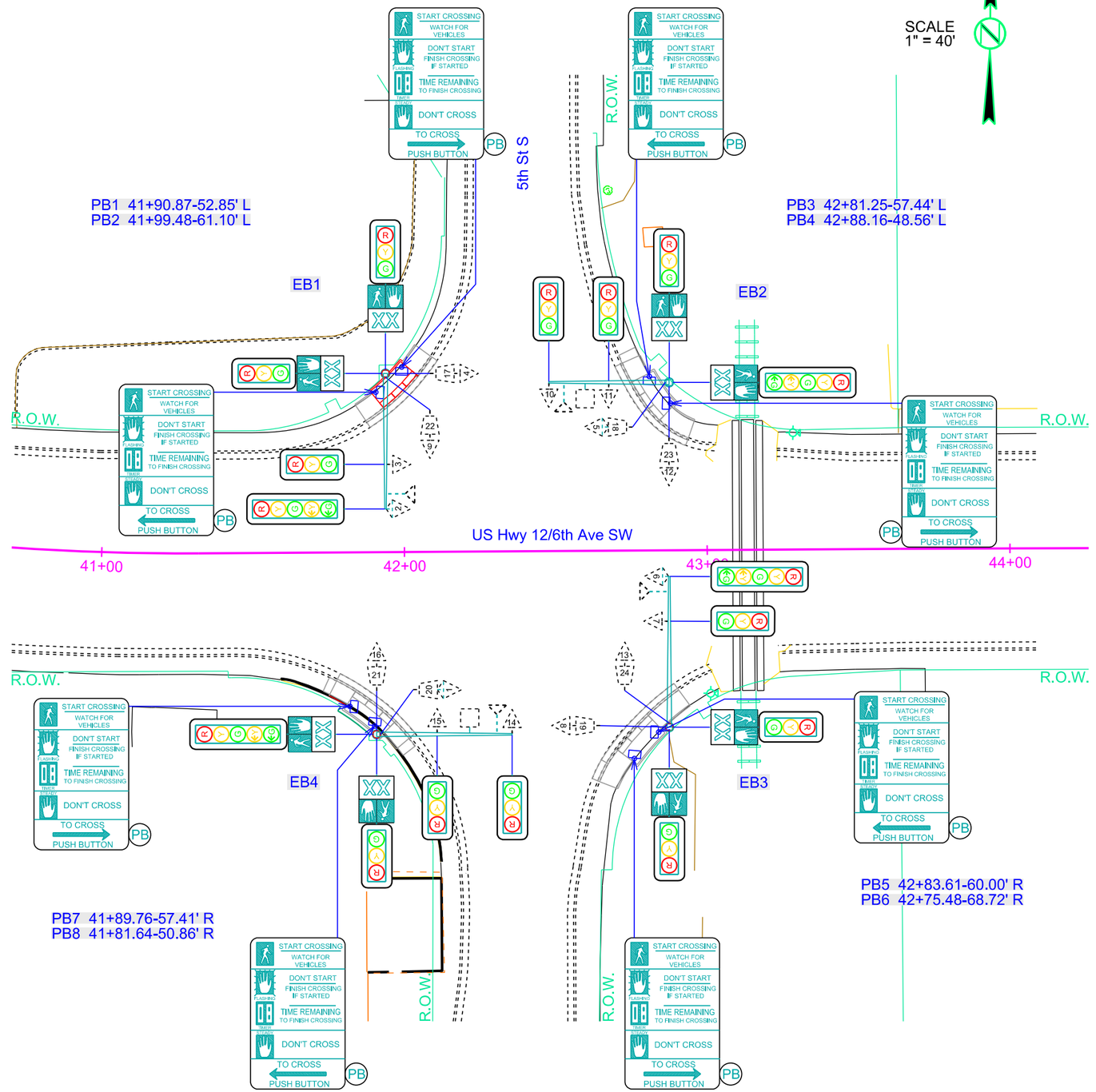
Revised 06/02/2025 DLM

SCALE
1" = 40'

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Pedesrian Push Button Pole (PB2)	1	EACH

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal (PB1 - PB8)	8	EACH

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EB2)
	Signal Pole w/45' Mast Arm & 8' Lumin Arm (EB1,EB4)
	Signal Pole w/50' Mast Arm & 8' Lumin Arm (EB3)
	Roadway Luminaire, 400w with P.E. (EB1-EB4)
	3 Section Vehicle Signal Head (3, 4, 7-16)
	5 Section Vehicle Signal Head (1, 2, 5, 6)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
PB	Accessible Pedestrian Signal
	Blankout Sign
	Pedestrian Push Button Pole (EPB1-EPB4)
	Pedestrian Signal Head (17-24)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	22	92

Plotting Date: 08/13/2025

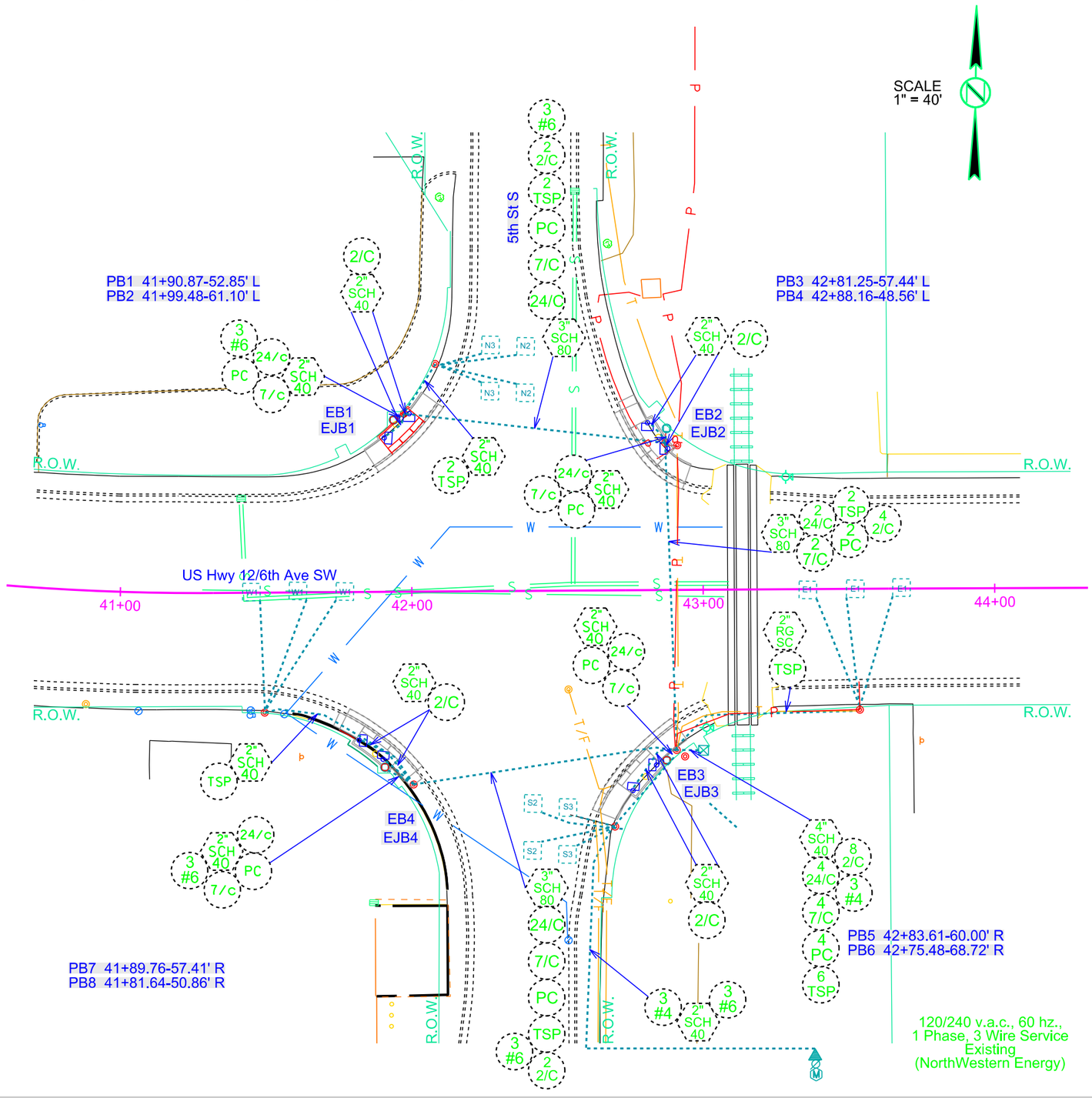
Revised 05/27/2025 DLM

EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SW & 5TH ST S

EXISTING ITEMS	
KEY	ITEM
⌀	WOOD UTILITY POLE
	Electrical Junction Box
▲	ELECTRICAL SERVICE CABINET
⊠	TRAFFIC SIGNAL CONTROLLER
M	METER SOCKET
	PREFORMED DETECTOR LOOP
2" RG SC	2" RIGID Steel CONDUIT
2" SCH 40	2" RIGID CONDUIT, SCHEDULE 40
2" SCH 80	2" RIGID CONDUIT, SCHEDULE 80
3" SCH 80	3" RIGID CONDUIT, SCHEDULE 80
#4	1/C #4 AWG COPPER WIRE
#6	1/C #6 AWG COPPER WIRE
2/c	2/C #14 AWG COPPER TRAY CABLE, K2
7/c	7/C #14 AWG COPPER TRAY CABLE, K2
24/c	24/C #14 AWG COPPER TRAY CABLE, K2
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR
PC	PREEMPTION CABLE

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	UNIT	EST QUANT
	Electrical Junction Box (EJB1,EJB3)	EACH	2
#4	1/C #4 AWG COPPER WIRE	FT	765
2/c	2/C #14 AWG COPPER TRAY CABLE, K2	FT	1445
7/c	7/C #14 AWG COPPER TRAY CABLE, K2	FT	720
24/c	24/C #14 AWG COPPER TRAY CABLE, K2	FT	720
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	FT	1080
PC	PREEMPTION CABLE	FT	840



SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 5TH ST S

Revised: 8/13/25 MD

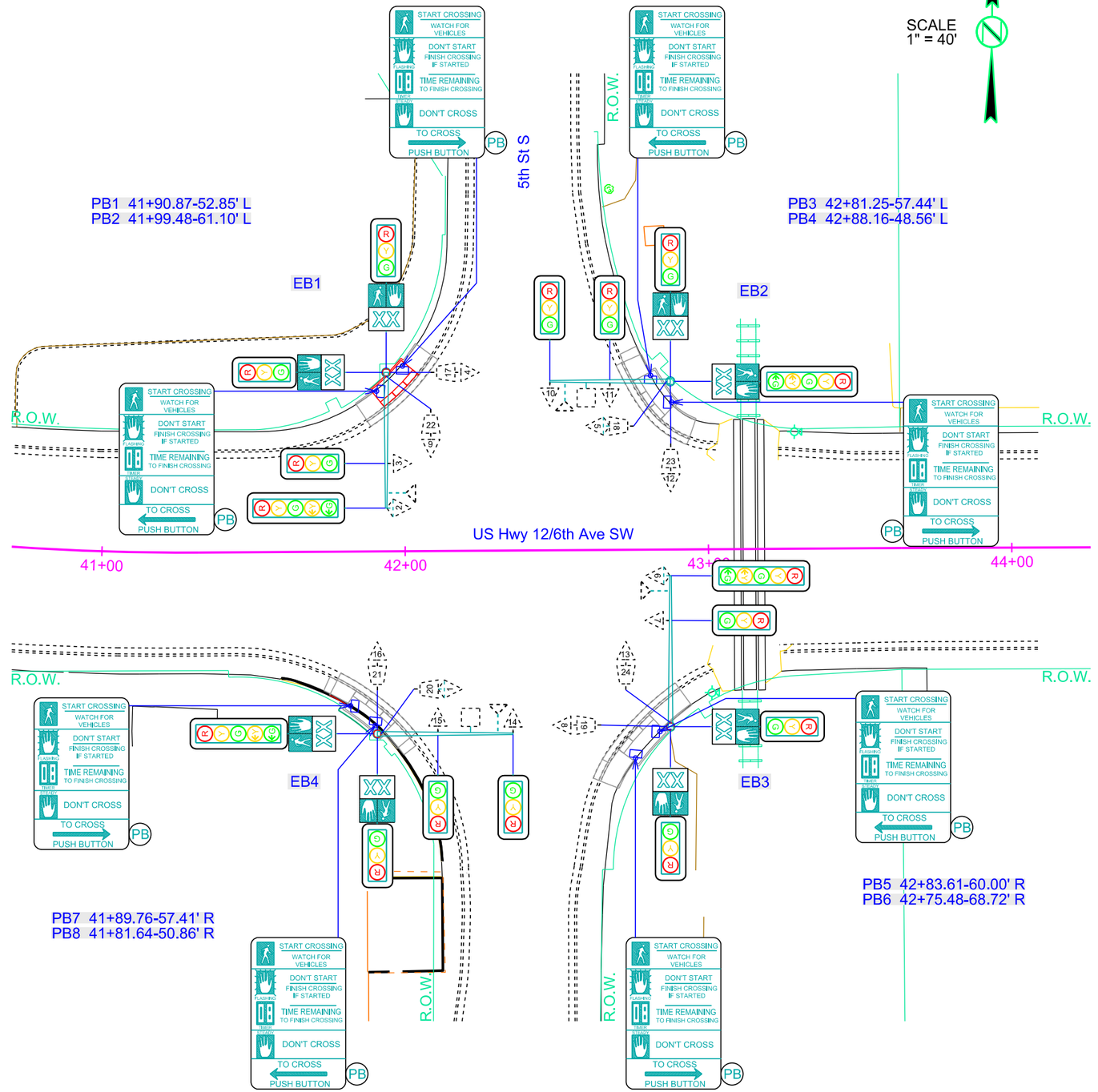
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	23	92

Plotting Date: 08/13/2025

Revised 06/01/2025 DLM

SCALE
1" = 40'

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal (PB1-PB8)	8	EACH
∘	Pedestrian Push Button Pole (PB2)	1	EACH



Revised: 8/13/25 MD

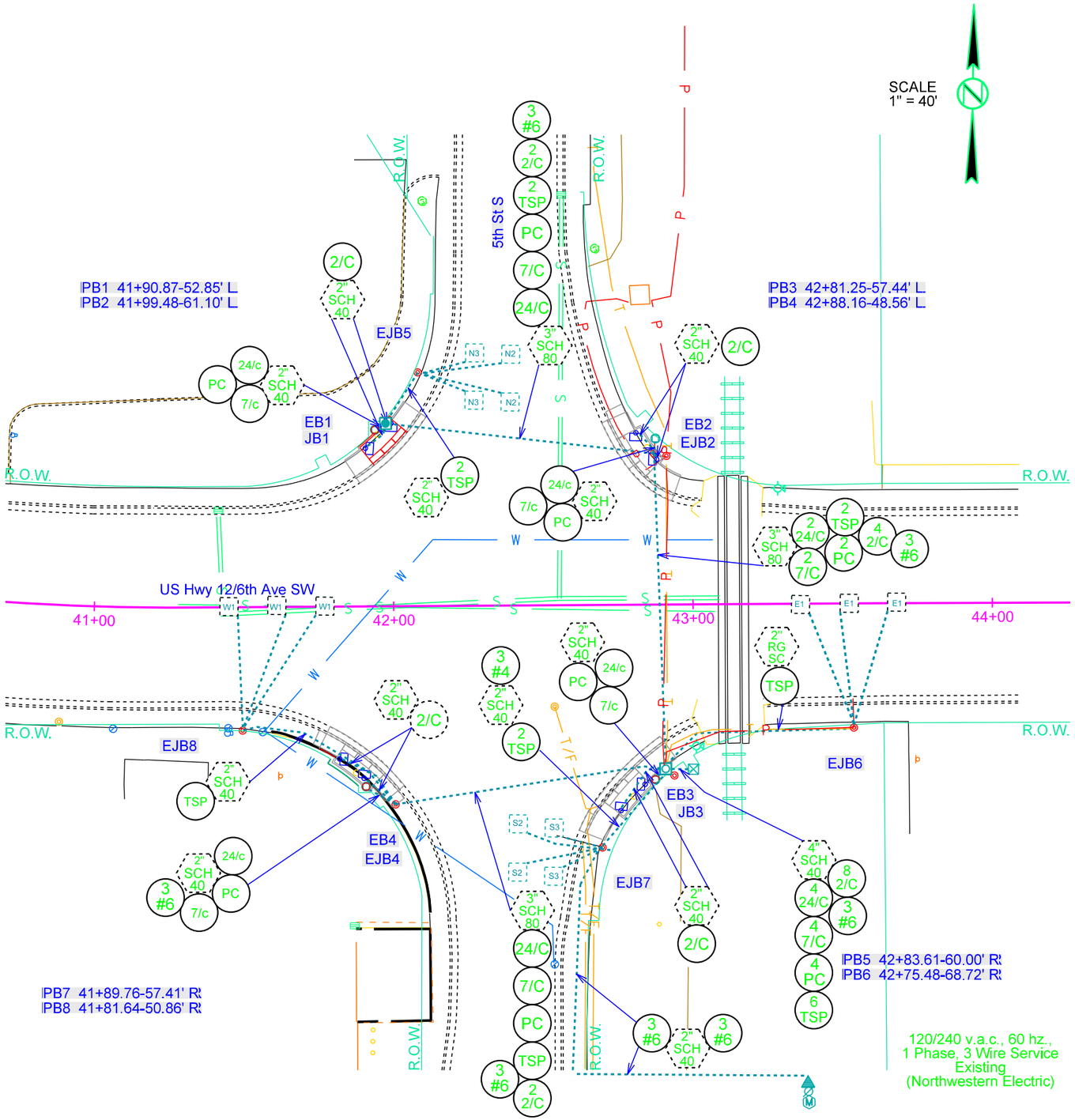
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	24	92

Plotting Date: 08/13/2025

Revised 06/16/2025 DLM

CONDUIT LAYOUT
US HWY 12/6TH AVE SW & 5TH ST S

KEY	ESTIMATE OF QUANTITIES ITEM	UNIT	EST QUANT
	Type 2 Electrical Junction Box (JB1)	EACH	1
	Type 3A Electrical Junction Box (JB3)	EACH	1
#6	1/C #6 AWG COPPER WIRE	FT	1160
2/c	2/C #14 AWG COPPER TRAY CABLE, K2	FT	1445
7/c	7/C #14 AWG COPPER TRAY CABLE, K2	FT	710
24/c	24/C #14 AWG COPPER TRAY CABLE, K2	FT	620
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	FT	1080
PC	PREEMPTION CABLE	FT	840



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	25	92

Plotting Date: 08/13/2025

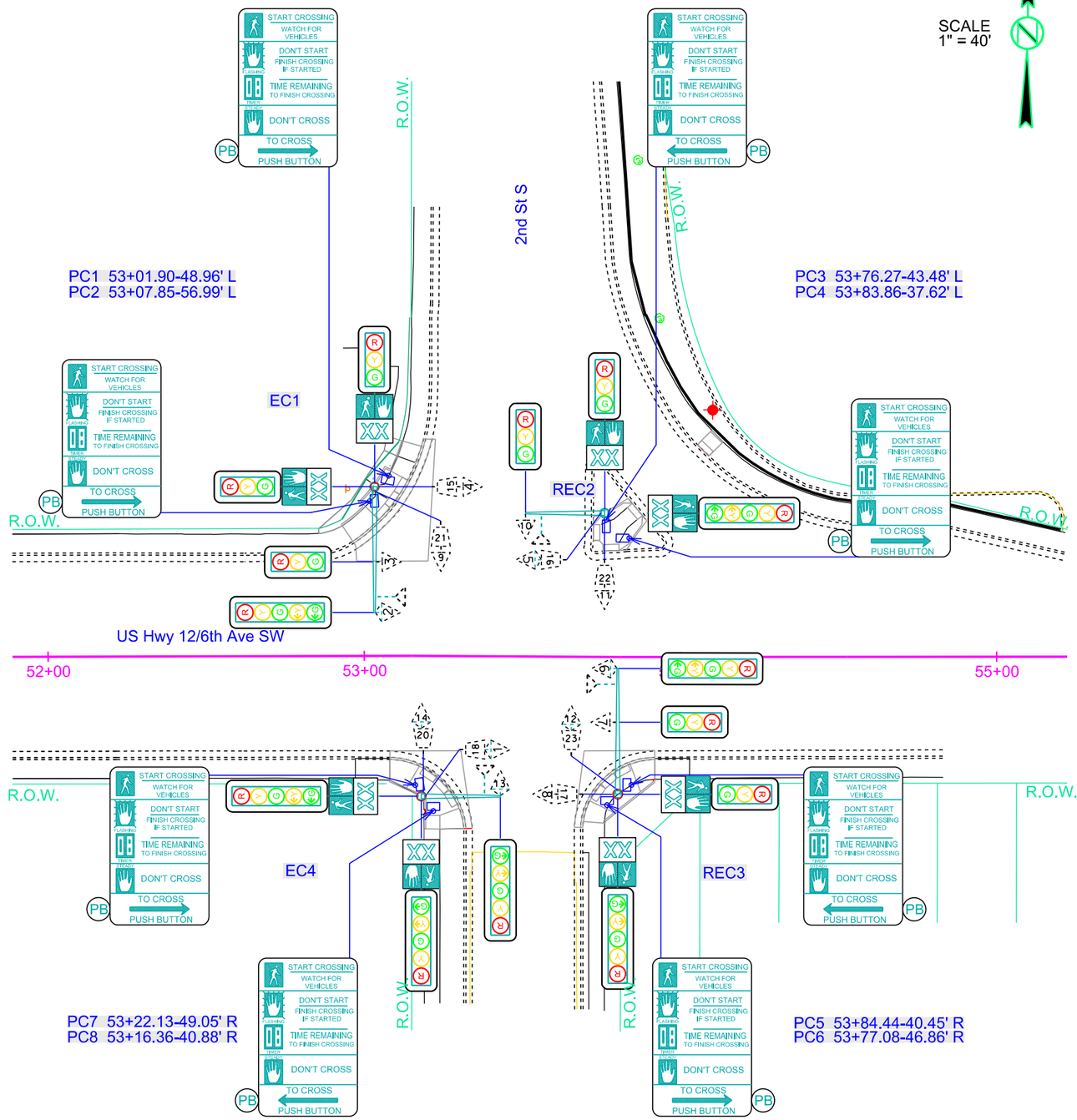
Revised 06/16/2025 DLM

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 2ND ST S

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal (PC1 - PC8)	8	EACH

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (EC2,EC4)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EC1,EC3)
	Roadway Luminaire, 400w with P.E. (EC1-EC4)
	3 Section Vehicle Signal Head(3, 4, 7-11, 13)
	5 Section Vehicle Signal Head (1, 2, 5, 6, 12, 14)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
(PB)	Accessible Pedestrian Signal
	Pedestrian Signal Head (15-23)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



PLOT SCALE - 1:40

PLOT NAME - 10

PLOTTED FROM - TRAB17879B

FILE - ...\REGIONA\PRJ\BRW\09V9\054ES.DGN

EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SW & 2ND ST S

Revised: 8/13/25 MD

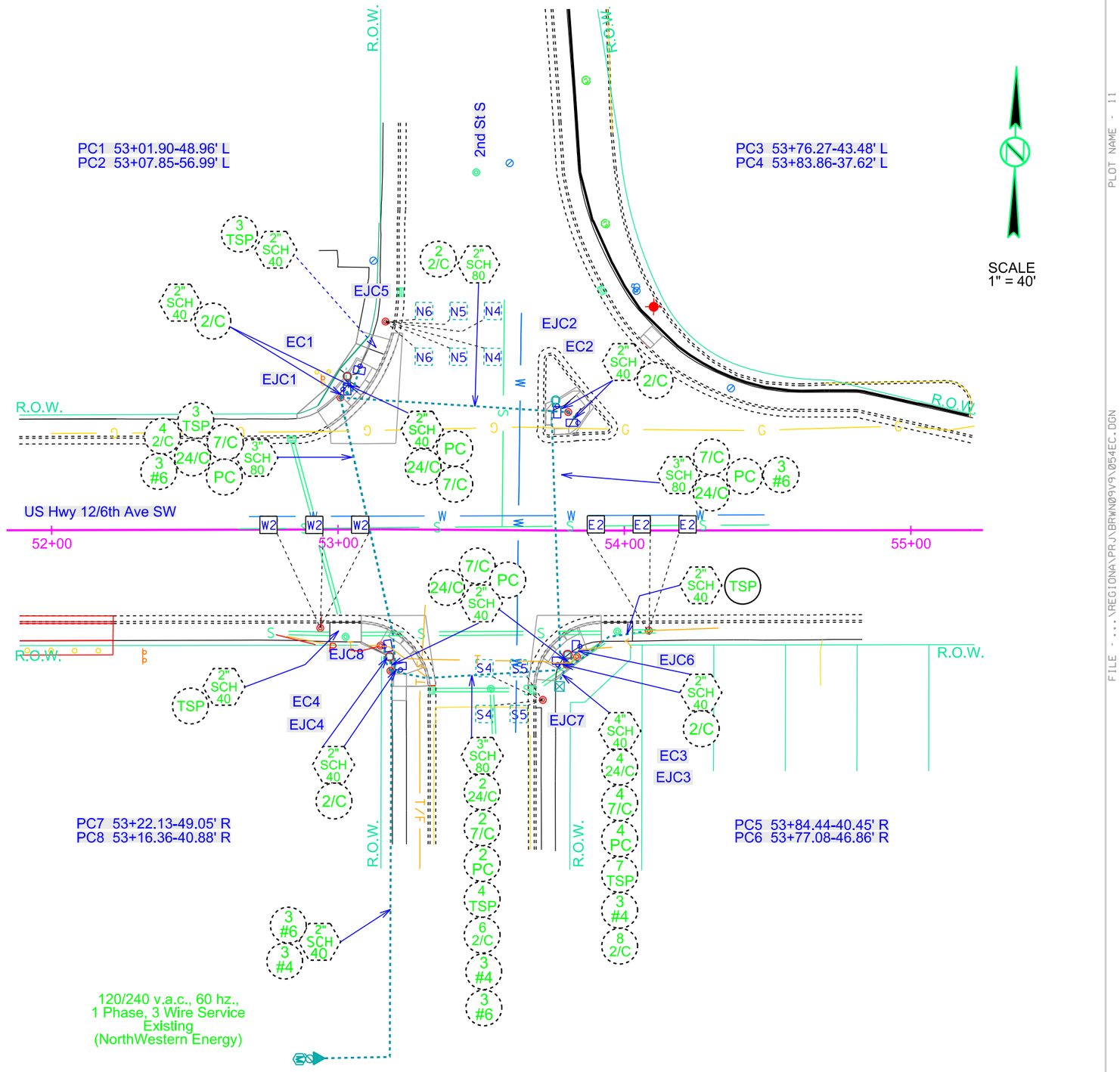
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	26	92
Plotting Date: 08/13/2025			

Revised 05/27/2025 DLM

EXISTING ITEMS	
KEY	ITEM
⌀	WOOD UTILITY POLE
	Electrical Junction Box
▲	ELECTRICAL SERVICE CABINET
⊠	TRAFFIC SIGNAL CONTROLLER
Ⓜ	METER SOCKET
	PREFORMED DETECTOR LOOP
2" SCH 40	2" RIGID CONDUIT, SCHEDULE 40
3" SCH 80	3" Rigid Conduit, Schedule 80
4" SCH 40	4" Rigid Conduit, Schedule 40
#4	1/C #4 AWG COPPER WIRE
2/c	2/C #14 AWG COPPER TRAY CABLE, K2
7/c	7/C #14 AWG COPPER TRAY CABLE, K2
24/c	24/C #14 AWG COPPER TRAY CABLE, K2
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR
PC	PREEMPTION CABLE
3 #6	LUMINAIRE EXTENSION WIRING

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	UNIT	EST QUANT
#4	1/C #4 AWG COPPER WIRE	FT	630
2/c	2/C #14 AWG COPPER TRAY CABLE, K2	FT	855
7/c	7/C #14 AWG COPPER TRAY CABLE, K2	FT	260
24/c	24/C #14 AWG COPPER TRAY CABLE, K2	FT	1250
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	FT	480
PC	PREEMPTION CABLE	FT	595



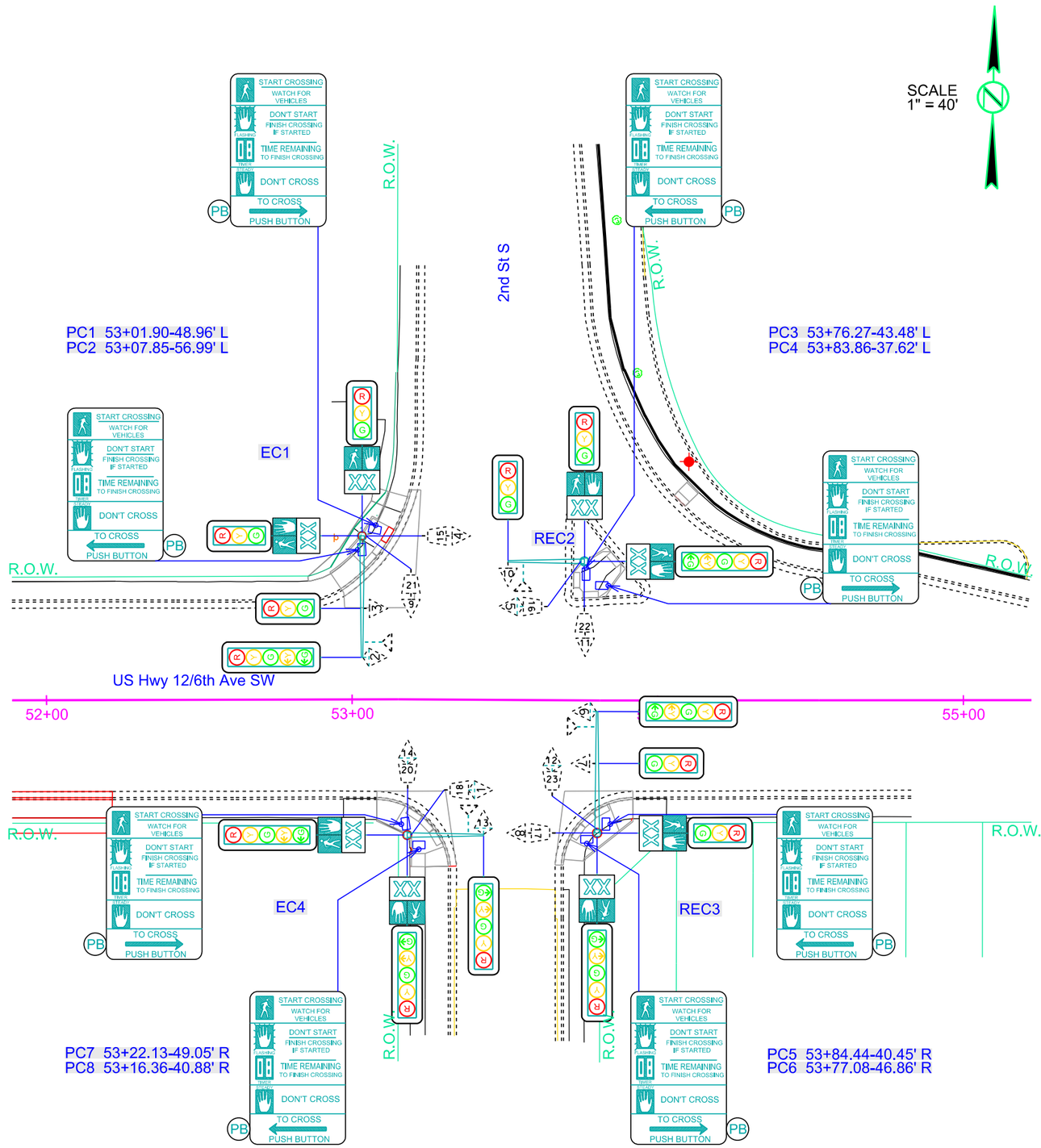
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	27	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 2ND ST S

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal (PC1-PC8)	8	EACH



CONDUIT LAYOUT
US HWY 12/6TH AVE SW & 2ND ST S

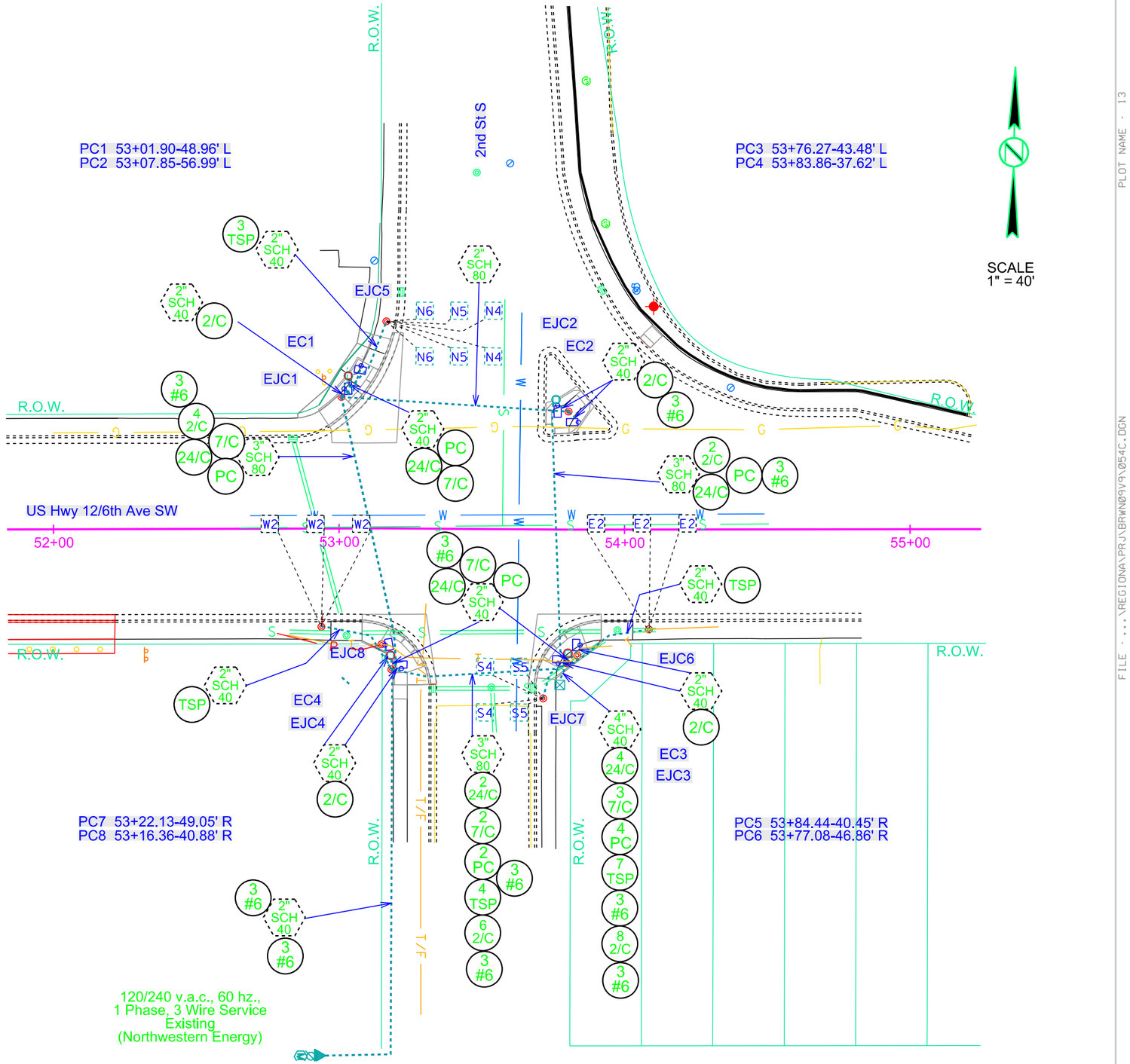
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	28	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

ESTIMATE OF QUANTITIES

KEY	ITEM	UNIT	EST QUANT
#6	1/C #6 AWG COPPER WIRE	FT	2000
2/c	2/C #14 AWG COPPER TRAY CABLE, K2	FT	855
7/c	7/C #14 AWG COPPER TRAY CABLE, K2	FT	260
24/c	24/C #14 AWG COPPER TRAY CABLE, K2	FT	1250
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	FT	480
PC	PREEMPTION CABLE	FT	595



EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 1ST ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	29	92

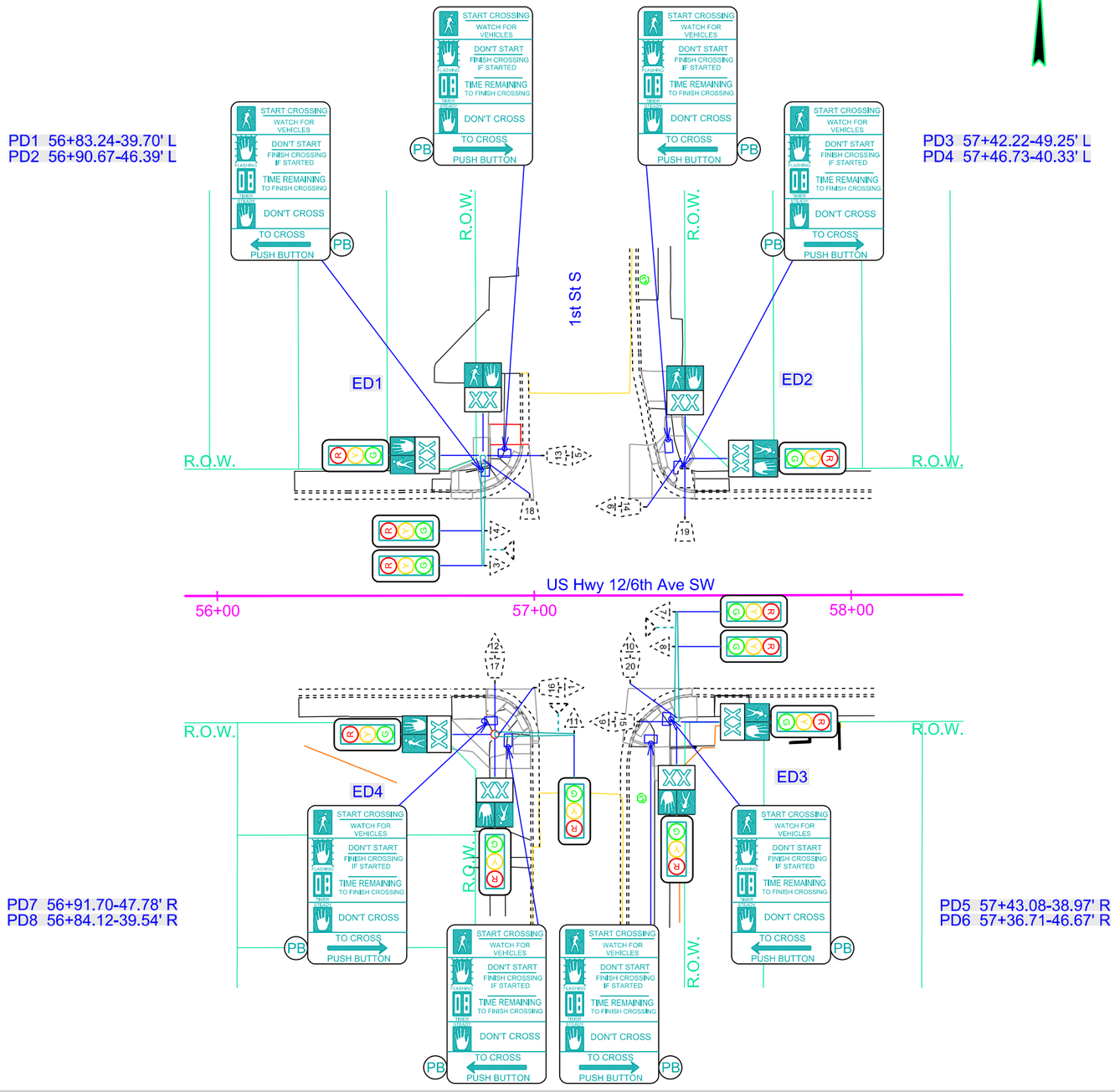
Plotting Date: 08/13/2025

SCALE
1" = 40'

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal PD1 - PD8	8	EACH

EXISTING ITEMS	
KEY	ITEM
	Luminaire Pole with Mounted Signal Heads (ED2)
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (,ED4)
	Signal Pole w/35' Mast Arm & 8' Lumin Arm (ED1,ED3)
	Roadway Luminaire, 400w with P.E. (ED1-ED4)
	3 Section Vehicle Signal Head (1, 3-12)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
PB	Accessible Pedestrian Signal
	Pedestrian Signal Head (13-20)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



PLOT SCALE - 1:40
PLOT NAME - 14
FILE - ...\REGIONA\PRJ\BRWN09V9\057ES.DGN
PLOTTED FROM - TRAB17879B

EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SW & 1ST ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	30	92

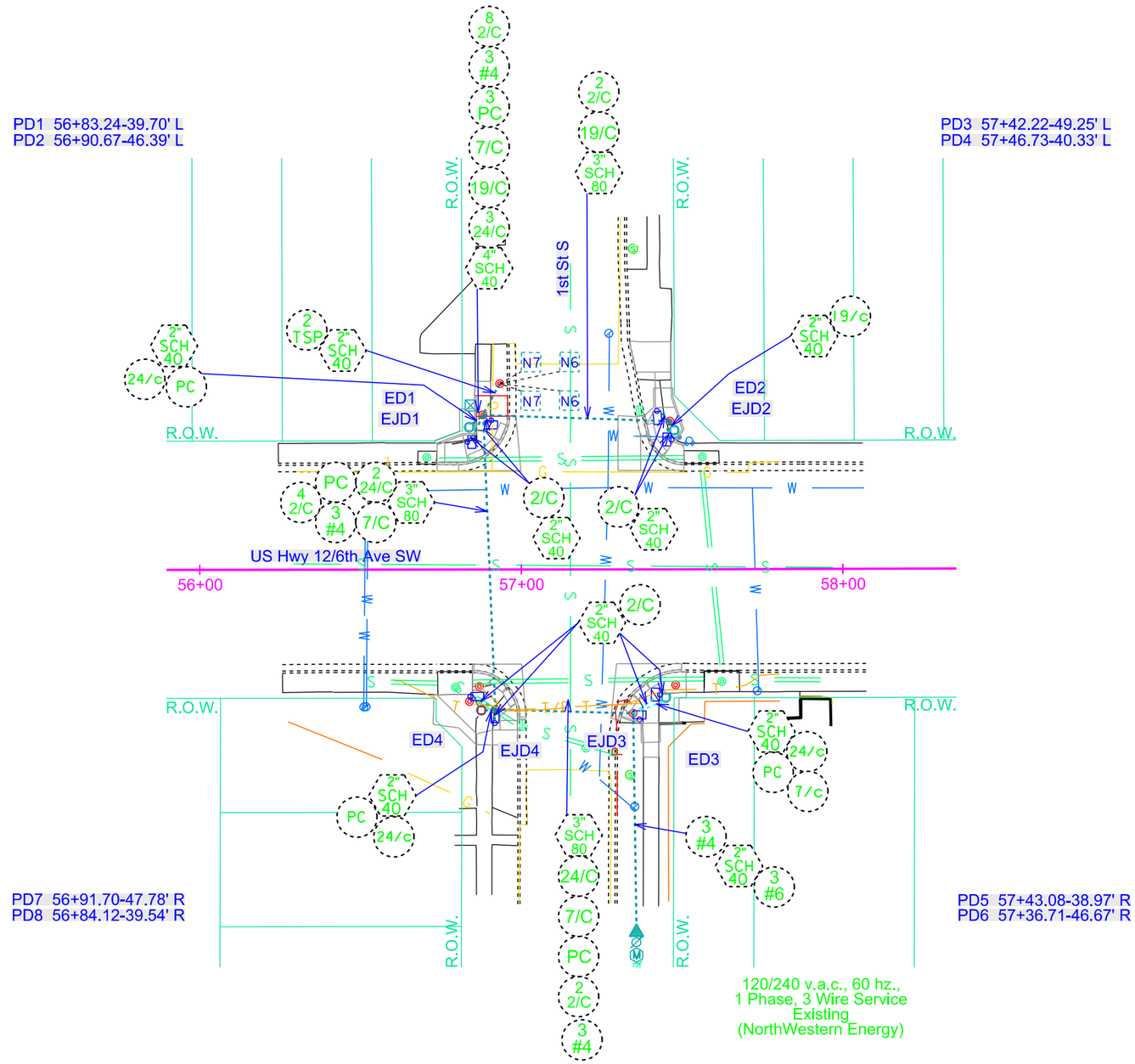
Plotting Date: 08/13/2025

Revised 05/27/2025 DLM

EXISTING ITEMS	
KEY	ITEM
⌀	WOOD UTILITY POLE
	Electrical Junction Box
▲	ELECTRICAL SERVICE CABINET
⊠	TRAFFIC SIGNAL CONTROLLER
Ⓜ	METER SOCKET
	PREFORMED DETECTOR LOOP
2" SCH 40	2" RIGID CONDUIT, SCHEDULE 40
3" SCH 80	3" Rigid Conduit, Schedule 80
4" SCH 40	4" Rigid Conduit, Schedule 40
#4	1/C #4 AWG COPPER WIRE
2/c	2/C #14 AWG COPPER TRAY CABLE, K2
7/c	7/C #14 AWG COPPER TRAY CABLE, K2
24/c	24/C #14 AWG COPPER TRAY CABLE, K2
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR
PC	PREEMPTION CABLE

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	UNIT	EST QUANT
	Electrical Junstion Box (ED1)	EACH	1
#4	1/C #4 AWG COPPER WIRE	FT	960
2/c	2/C #14 AWG COPPER TRAY CABLE, K2	FT	1125
7/c	7/C #14 AWG COPPER TRAY CABLE, K2	FT	215
19/c	19/C #14 AWG COPPER TRAY CABLE, K2	FT	120
24/c	24/C #14 AWG COPPER TRAY CABLE, K2	FT	430
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	FT	110
PC	PREEMPTION CABLE	FT	415



SIGNAL LAYOUT
US HWY 12/6TH AVE SW & 1ST ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	31	92

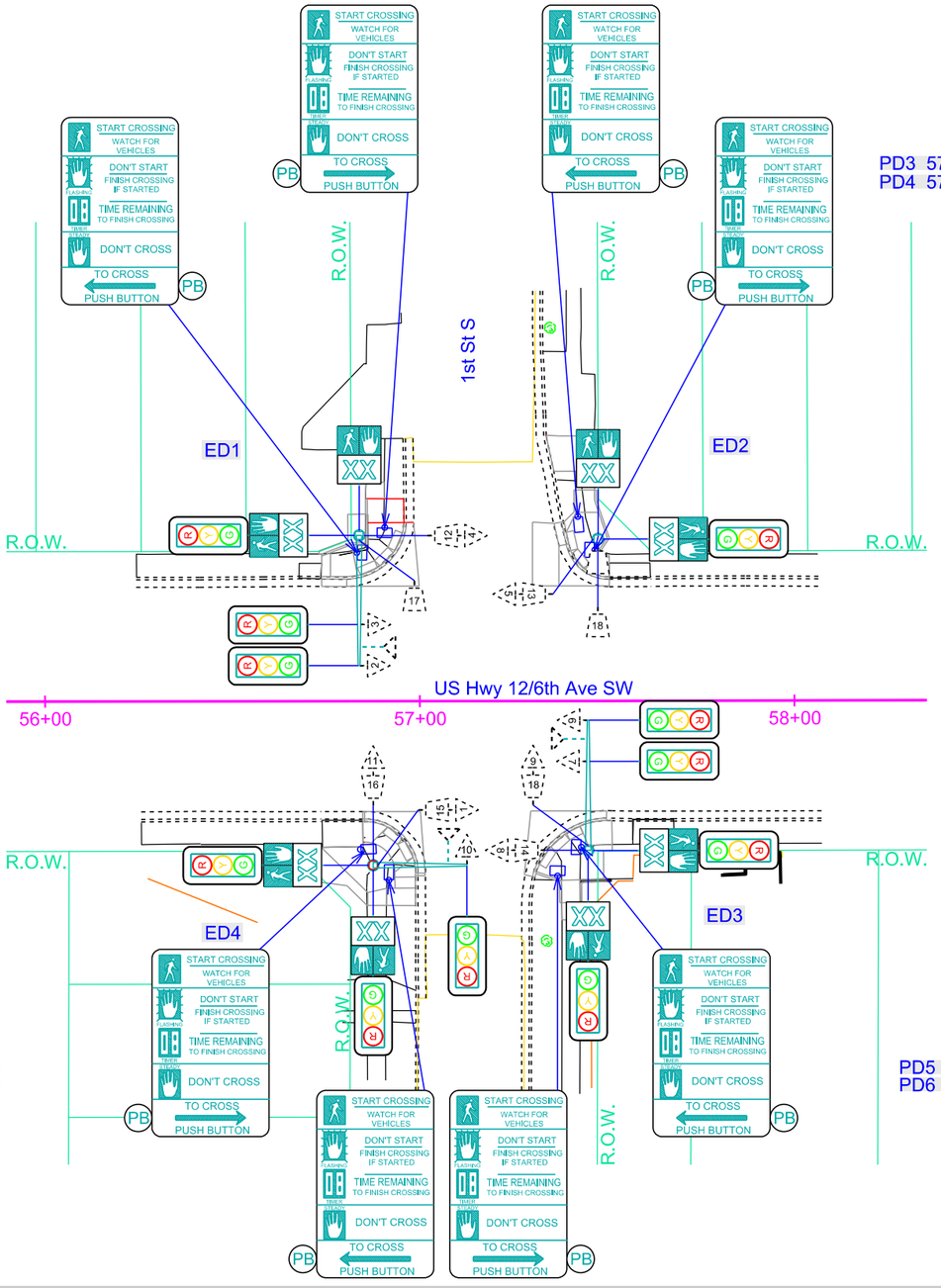
Plotting Date: 08/13/2025

SCALE
1" = 40'

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal (PD1-PD8)	8	EACH

PD1 56+83.24-39.70' L
PD2 56+90.67-46.39' L

PD3 57+42.22-49.25' L
PD4 57+46.73-40.33' L



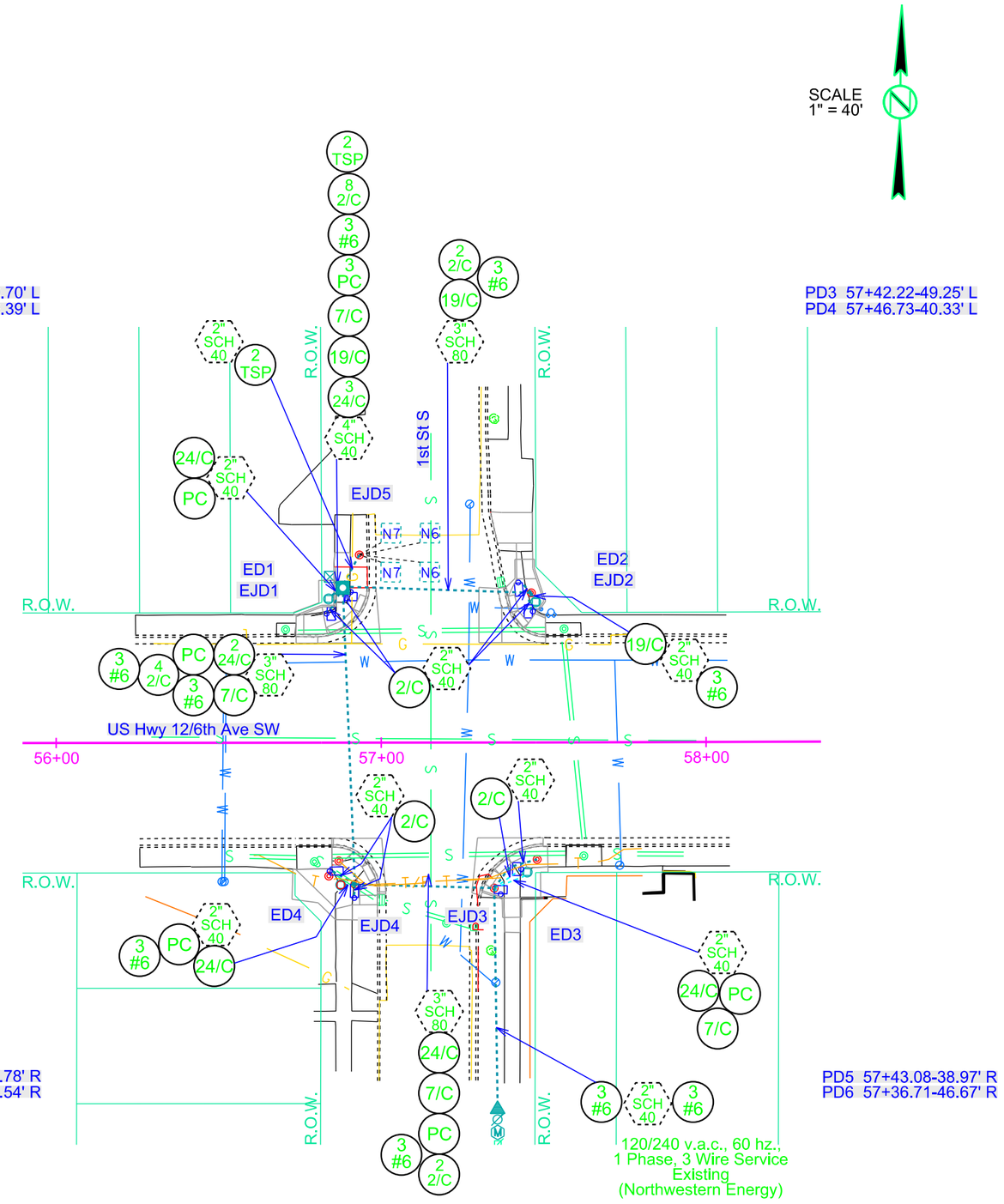
PD7 56+91.70-47.78' R
PD8 56+84.12-39.54' R

PD5 57+43.08-38.97' R
PD6 57+36.71-46.67' R

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	32	92
Plotting Date: 08/13/2025			

CONDUIT LAYOUT
US HWY 12/6TH AVE SW & 1ST ST S



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
■	Type 4 Electrical Junction Box (EJD1)	1	EACH
#6	1/C #6 AWG COPPER WIRE	1225	FT
2/c	2/C #14 AWG COPPER TRAY CABLE, K2	1125	FT
7/c	7/C #14 AWG COPPER TRAY CABLE, K2	215	FT
19/c	19/C #14 AWG COPPER TRAY CABLE, K2	120	FT
24/c	24/C #14 AWG COPPER TRAY CABLE, K2	430	FT
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	110	FT
PC	PREEMPTION CABLE	415	FT

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	33	92
Plotting Date: 08/13/2025			

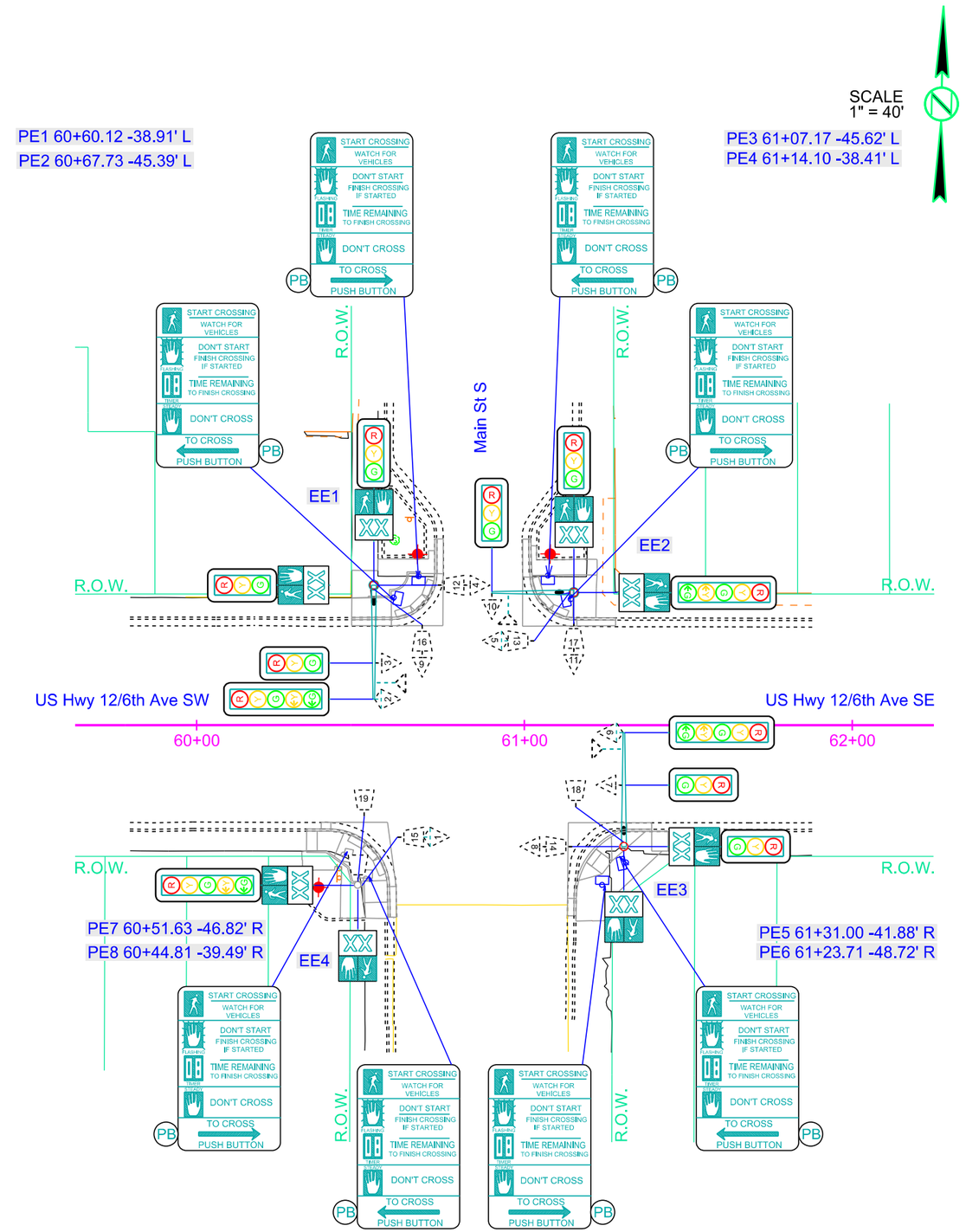
Revised 06/02/2025 DLM

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SW & MAIN ST S

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Signal Footing (EE3)	1	EACH
Remove Luminaire Pole	1	EACH
Remove luminaire pole Footing (EE4)	1	EACH

REMOVE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
PB	Accessible Pedestrian Signal PE1 - PE8	8
	Signal Pole w/35' Mast Arm (EE3)	1
	8' Luminaire Arm	1

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (EE2)
	Signal Pole w/35' Mast Arm & 8' Lumin Arm (EE1, EE3)
	Roadway Luminaire, 400w with P.E. (EE1-EE4)
	3 Section Vehicle Signal Head (3, 4, 7-11)
	5 Section Vehicle Signal Head (1, 2, 5, 6)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
PB	Accessible Pedestrian Signal
	Pedestrian Signal Head (12-19)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	34	92
Plotting Date: 08/13/2025			

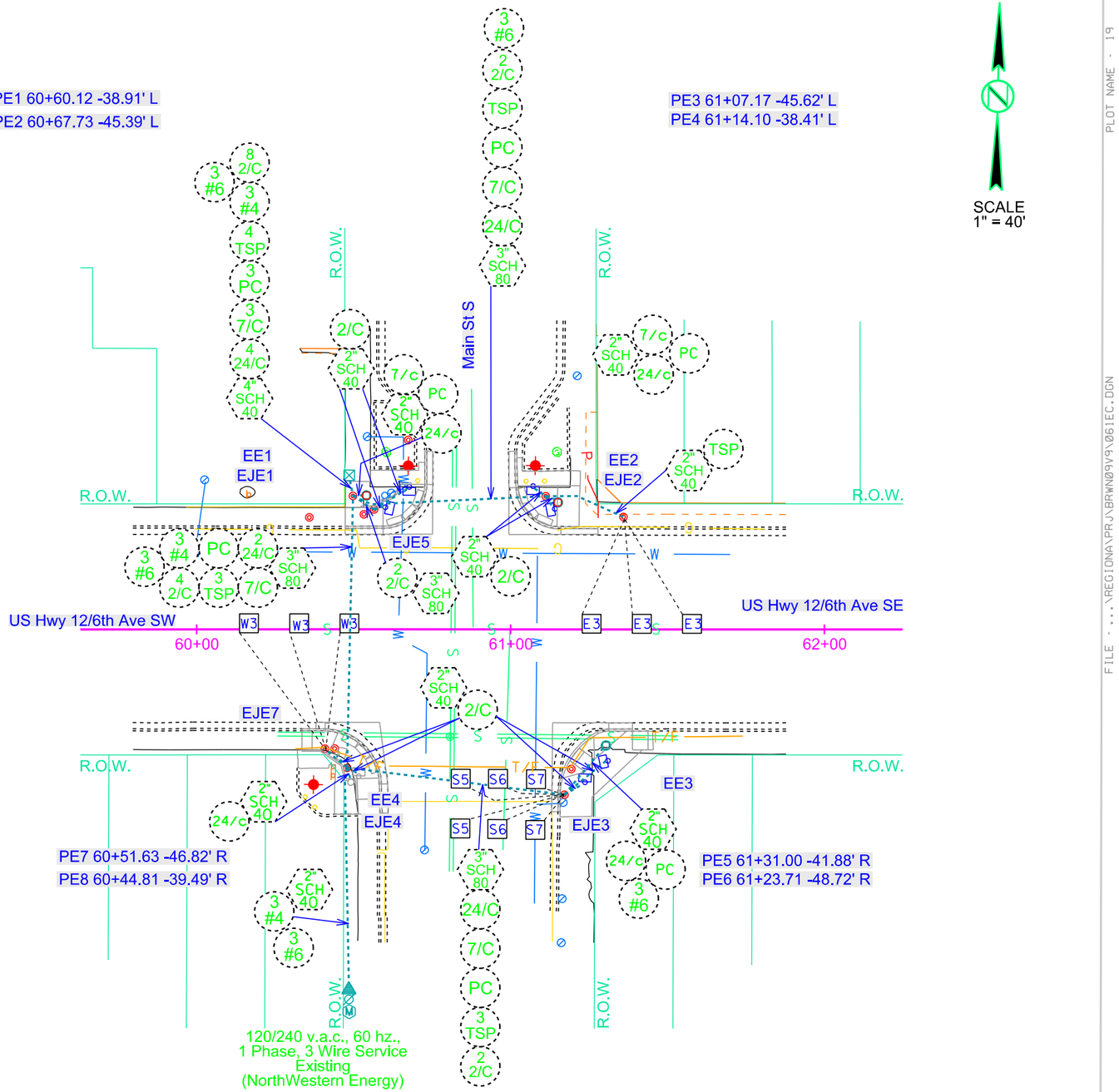
Revised 05/27/2025 DLM

EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SW & MAIN ST S

EXISTING ITEMS	
KEY	ITEM
⌀	WOOD UTILITY POLE
	Electrical Junction Box
▲	ELECTRICAL SERVICE CABINET
⊠	TRAFFIC SIGNAL CONTROLLER
Ⓜ	METER SOCKET
	PREFORMED DETECTOR LOOP
2" SCH 40	2" RIGID CONDUIT, SCHEDULE 40
3" SCH 80	3" Rigid Conduit, Schedule 80
4" SCH 40	4" Rigid Conduit, Schedule 40
2/c	2/C #14 AWG COPPER TRAY CABLE, K2
7/c	7/C #14 AWG COPPER TRAY CABLE, K2
24/c	24/C #14 AWG COPPER TRAY CABLE, K2
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR
PC	PREEMPTION CABLE
#4	1/C #4 AWG COPPER WIRE

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	UNIT	EST QUANT
#4	1/C #4 AWG COPPER WIRE	FT	650
2/c	2/C #14 AWG COPPER TRAY CABLE, K2	FT	720
7/c	7/C #14 AWG COPPER TRAY CABLE, K2	FT	145
24/c	24/C #14 AWG COPPER TRAY CABLE, K2	FT	430
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	FT	525
PC	PREEMPTION CABLE	FT	435



SIGNAL LAYOUT
US HWY 12/6TH AVE SW & MAIN ST S

Revised: 9/2/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	35	92
Plotting Date: 09/02/2025			

Revised 06/02/2025

SCALE
1" = 40'

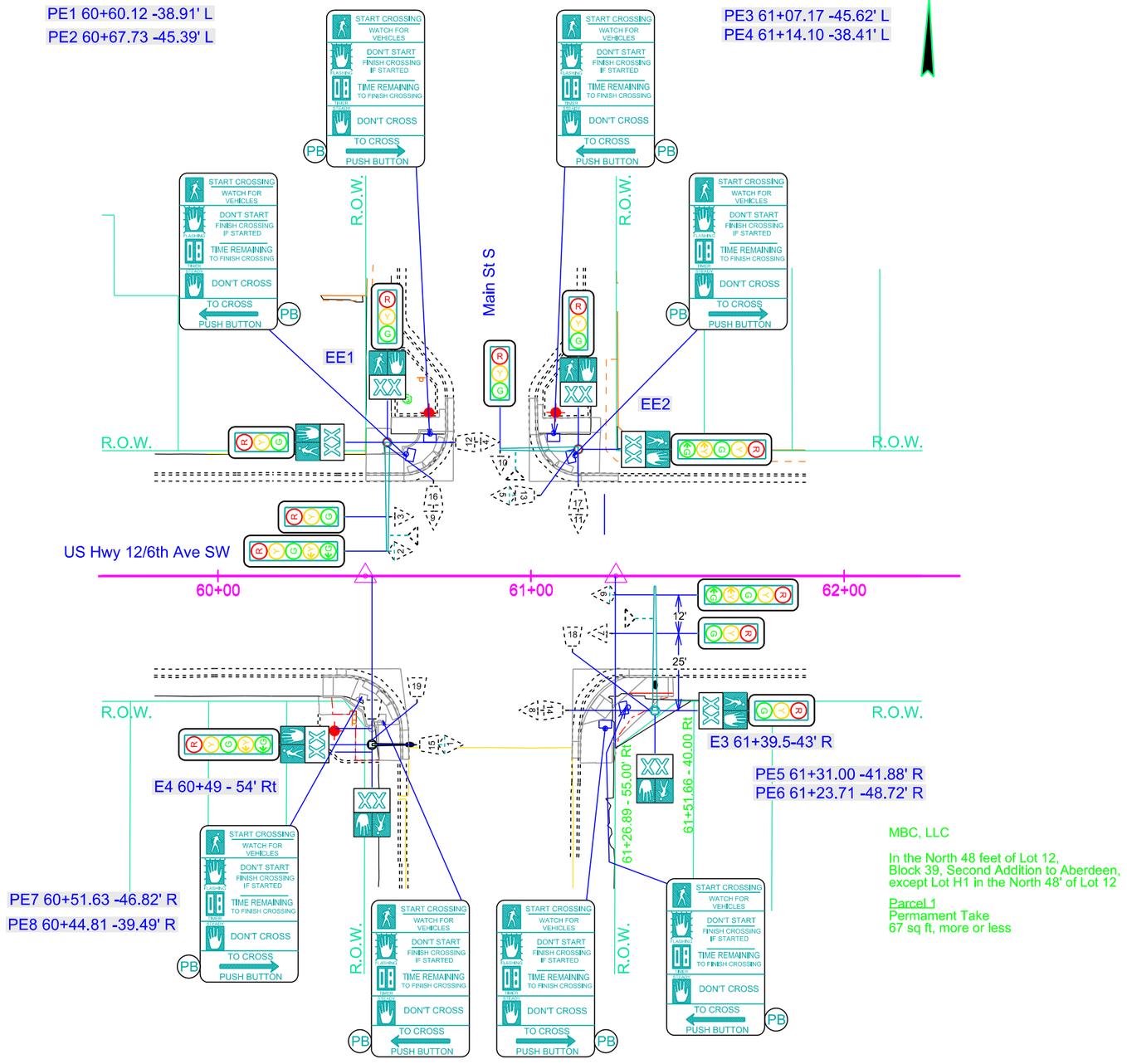
ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal (PE1-PE8)	8	EACH
o	3" Diameter Footing (E3,E4)	24	FT
	Relocate Signal Equipment	LS	Lump Sum
*	Install Signal Pole with Mast Arm and Luminaire Arm (E3)	1	EACH
*	Signal Pole with 40' Mast Arm and 8' Luminaire Arm (E4)	1	EACH

* Items are state furnished.

RELOCATE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
	3 Section Vehicle Signal Head (7,8)	2
	5 Section Vehicle Signal Head (1,6)	2
	Pedestrian Signal Head with Count Down (14,15,18,19)	4
	Roadway Luminaire (E3,E4)	2

Note:

The mast arm for signal pole E4 will not be installed at this time.
The 40' mast arm will be delivered to the Aberdee Region yard.



CONDUIT LAYOUT
US HWY 12/6TH AVE SW & MAIN ST S

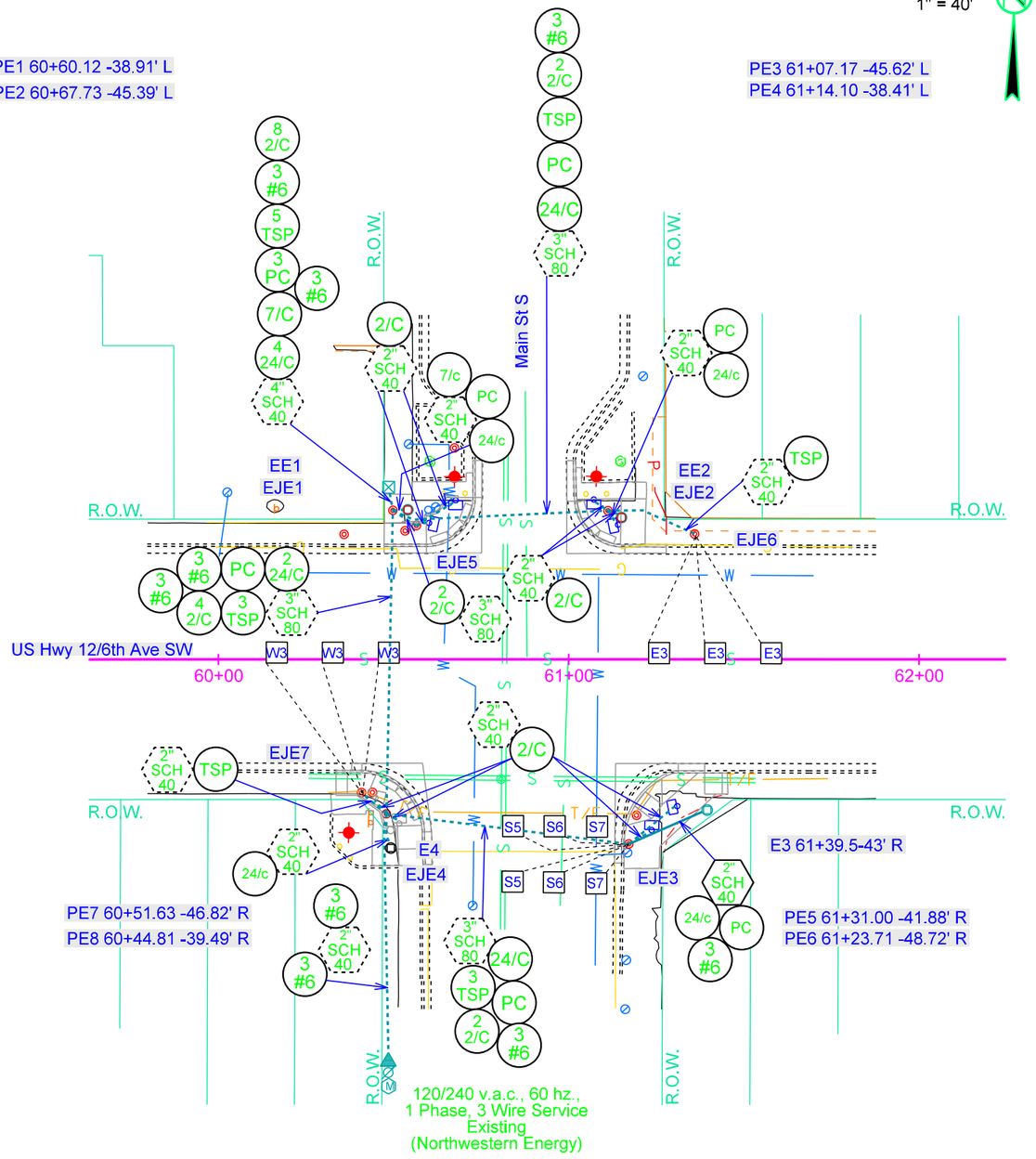
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	36	92
Plotting Date: 08/13/2025			

Revised 06/06/2025 DLM

SCALE
1" = 40'

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
2" SCH 40	2" SCHEDULE 40 CONDUIT	30	FT
#6	1/C #6 AWG COPPER WIRE	1750	FT
2/C	2/C #14 AWG COPPER TRAY CABLE, K2	720	FT
7/C	7/C #14 AWG COPPER TRAY CABLE, K2	145	FT
24/C	24/C #14 AWG COPPER TRAY CABLE, K2	445	FT
TSP	#16 AWG COPPER TWISTED SHIELDED PAIR	525	FT
PC	PREEMPTION CABLE	435	FT
	2/C #10 AWG COPPER POLE AND BRACKET CABLE	130	FT



EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & LINCOLN ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	37	92

Plotting Date: 08/13/2025

Revised 06/11/2025 DLM

PLOT SCALE - 1140

PLOT NAME - 22

FILE - ...\REGIONA\PRJ\BRW0@V9\065ES.DGN

PLOTTED FROM - TRAB17879B

ESTIMATE OF QUANTITIES

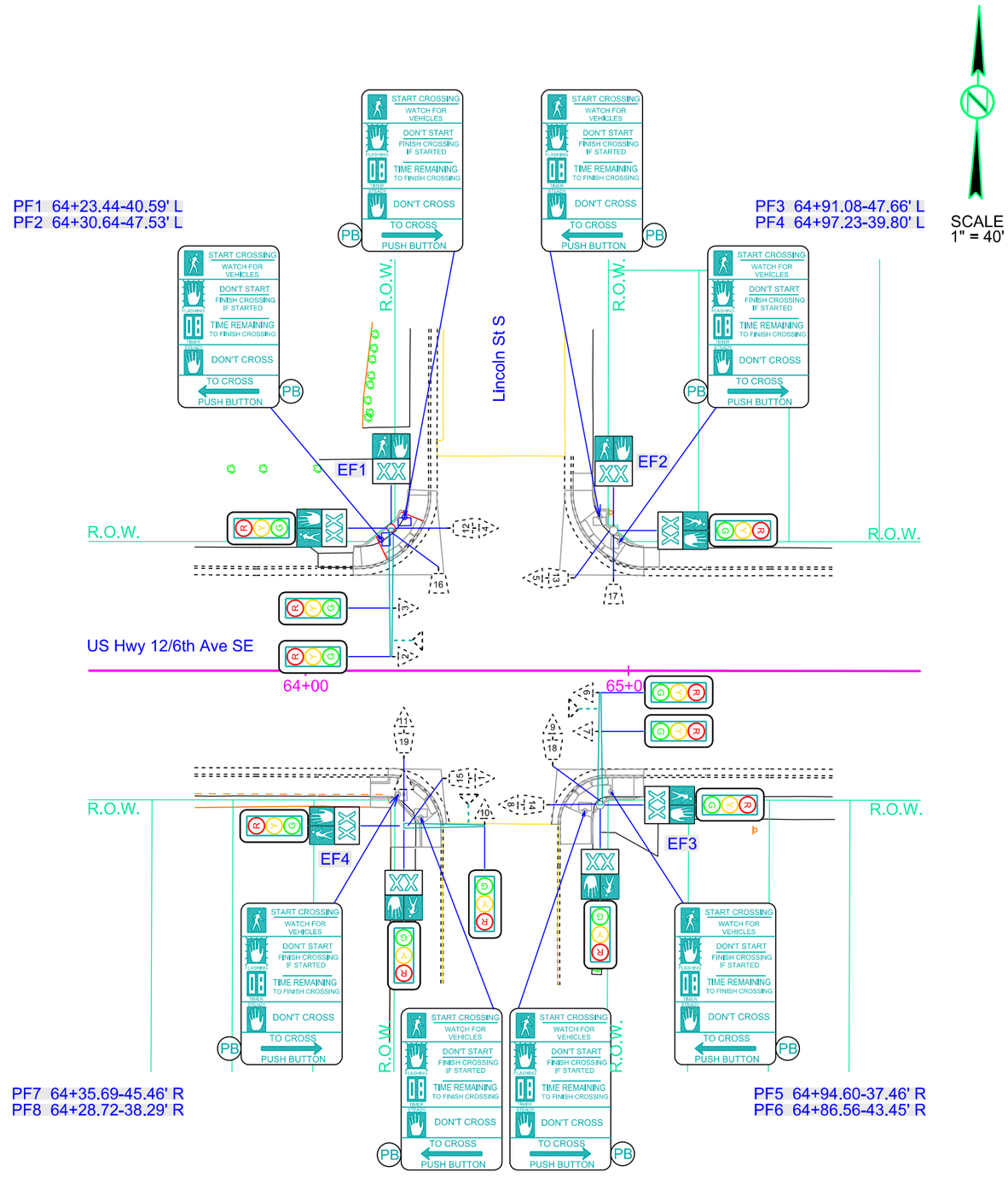
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Pedesrian Push Button Pole (PF2,PF6)	2	EACH

REMOVE SIGNAL EQUIPMENT

KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal PF1 - PF8	8	EACH

EXISTING ITEMS

KEY	ITEM
	Luminaire Pole with Mounted Signal Heads (EF2)
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (EF4)
	Signal Pole w/35' Mast Arm & 8' Lumin Arm (EF3)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EF1)
	Roadway Luminaire, 400w with P.E. (EF1-EF4)
	3 Section Vehicle Signal Head (1-11)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
PB	Accessible Pedestrian Signal
	Pedestrian Signal Head (12-19)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



Revised: 8/22/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	38	92
Plotting Date: 08/22/2025			

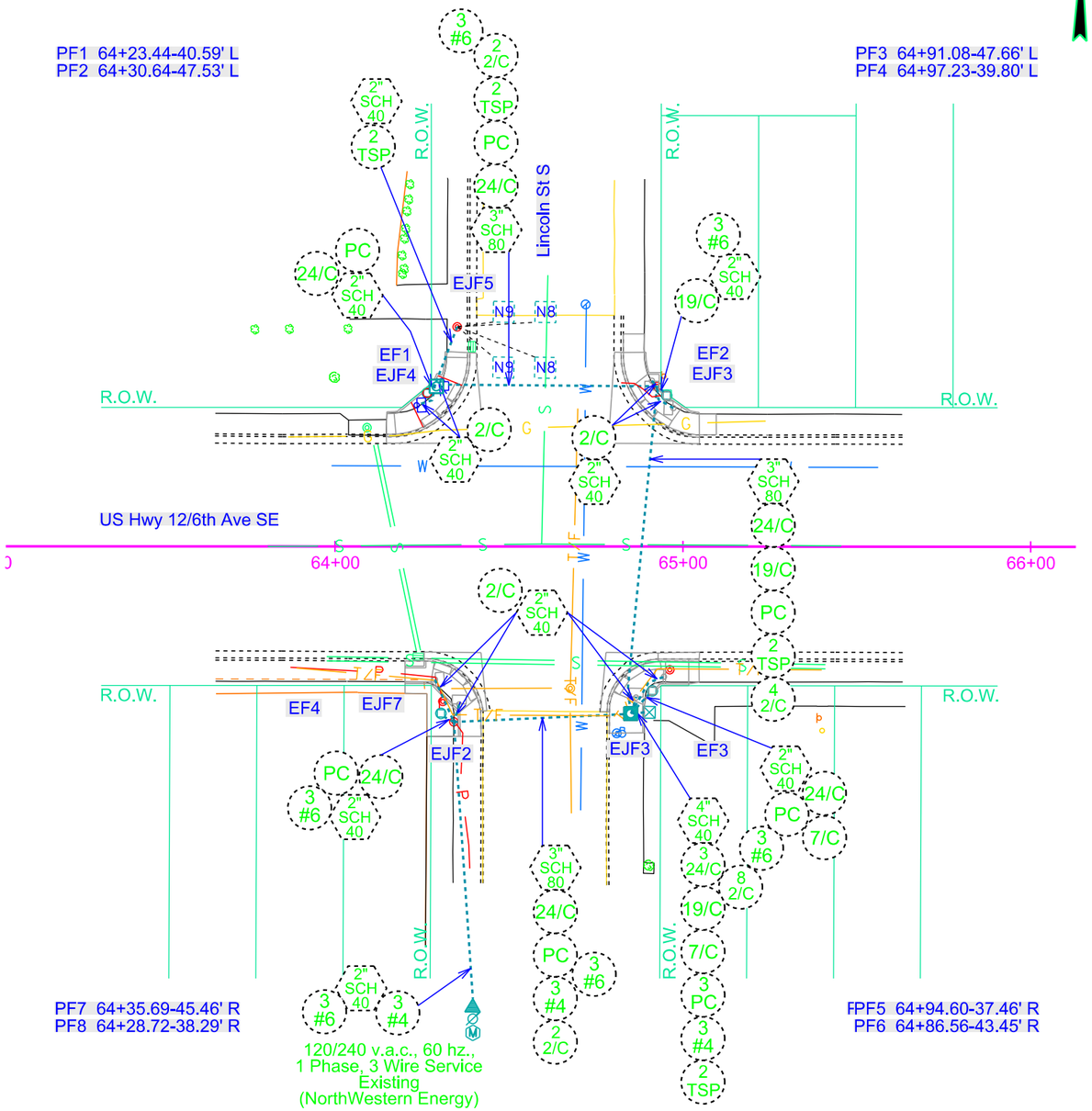
EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SE & LINCOLN ST S

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
	Meter Socket
	Wood Utility Pole
M	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2" SCH 40	2" Rigid Conduit, Schedule 40
4" SCH 40	4" Rigid Conduit, Schedule 40
3" SCH 80	3" Rigid Conduit, Schedule 80
#4	1/C #4 AWG Copper Wire
7/C	7/C #14 AWG Copper Tray Cable, K2
19/C	19/C #14 AWG Copper Tray Cable, K2
24/C	24/C #14 AWG Copper Tray Cable, K2
TSP	#16 AWG Copper Twisted Shielded Pair
PC	Preemption Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJF1,EJF3)	2	EACH
#4	1/C #4 AWG Copper Wire	815	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	1130	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	50	FT
19/C	19/C #14 AWG Copper Tray Cable, K2	155	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	395	FT
TSP	#16 AWG Copper Twisted Shielded Pair	480	FT
PC	Preemption Cable	485	FT

SCALE
1" = 40'



SIGNAL LAYOUT
US HWY 12/6TH AVE SE & LINCOLN ST S

Revised: 8/13/25 MD

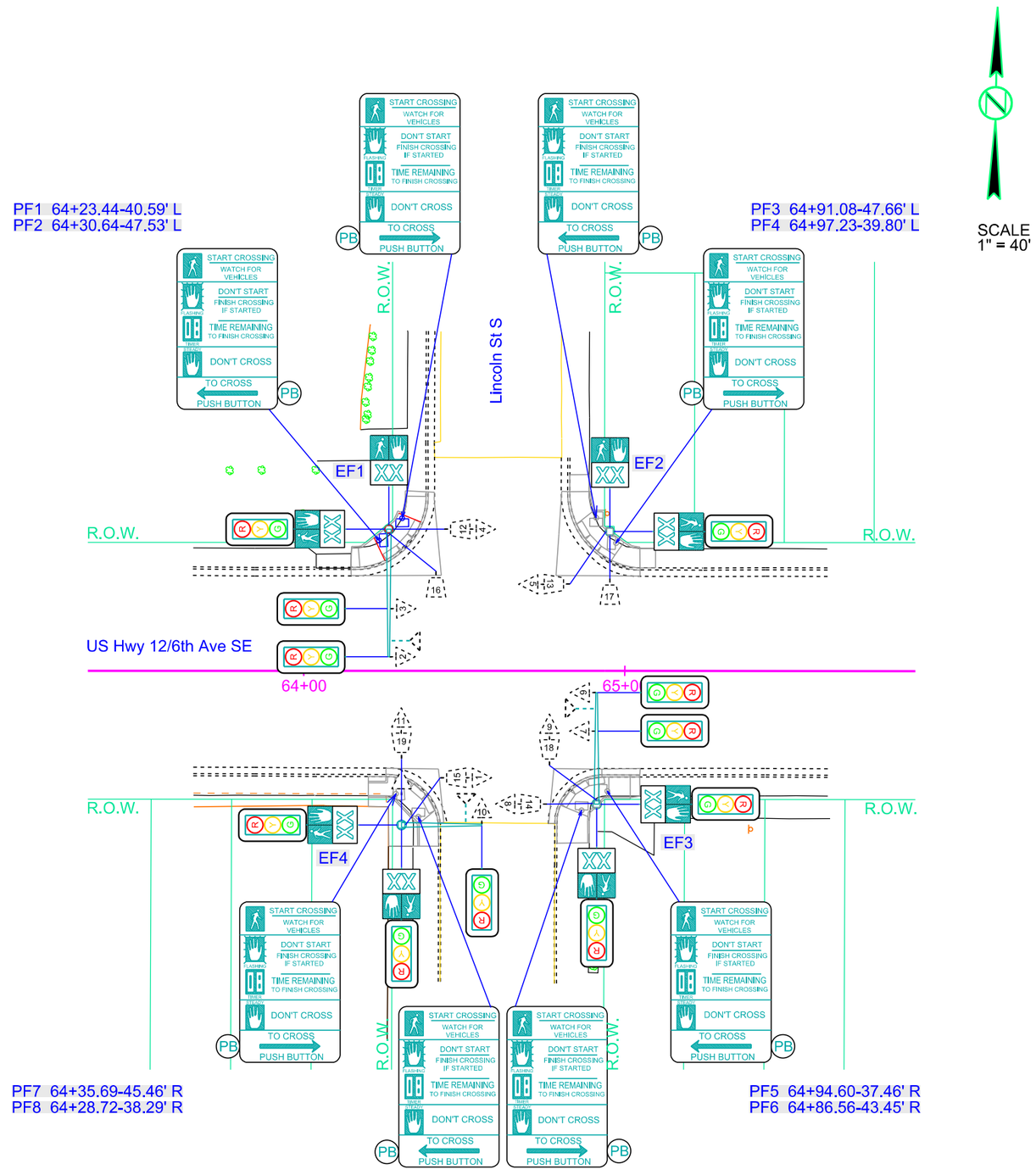
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	39	92

Plotting Date: 08/13/2025

Revised 06/11/2025 DLM

ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal (PF1-PF8)	8	EACH
○	Pedestrian Push Button Pole (PF2,PF6)	2	EACH



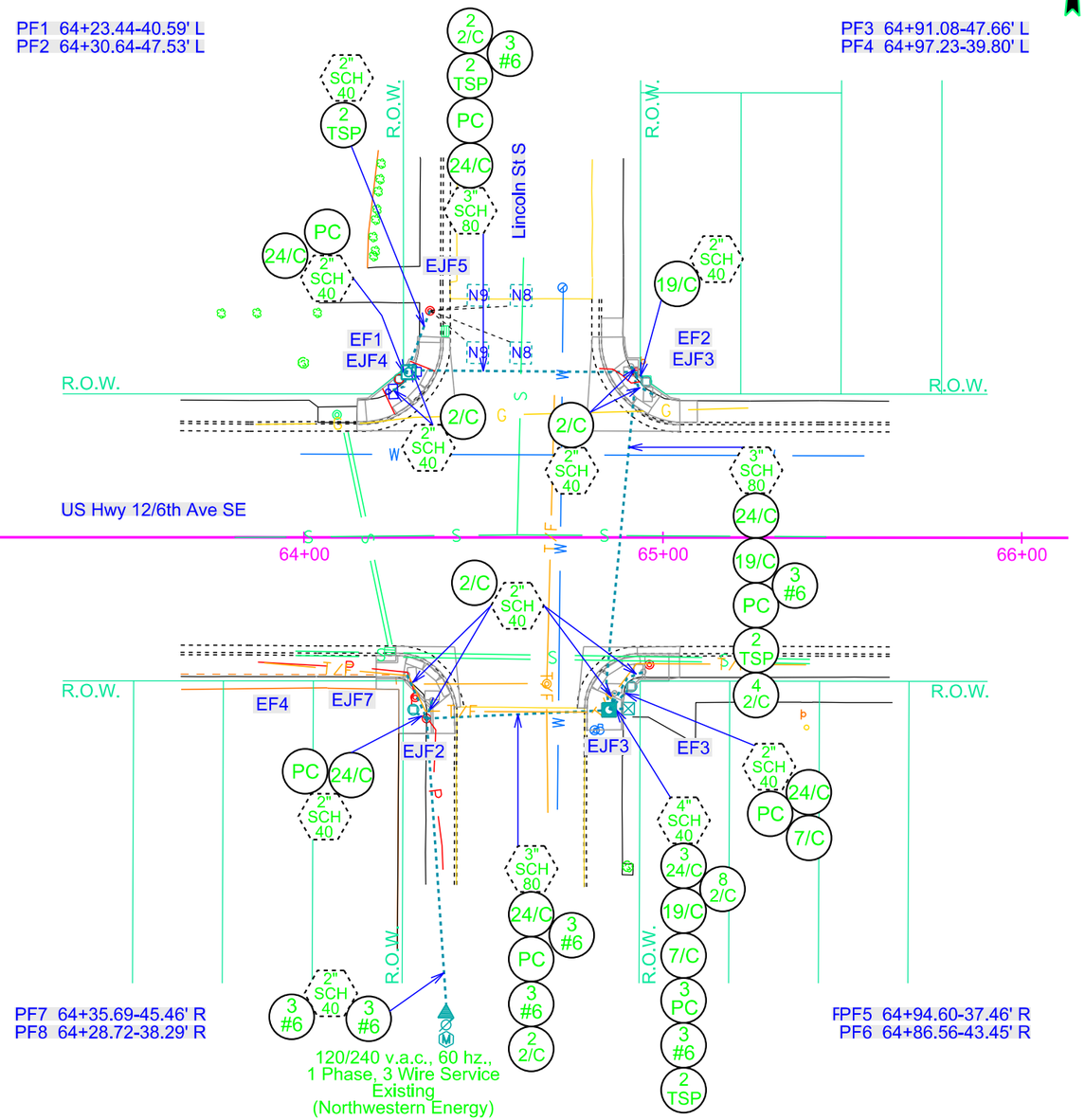
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	40	92
Plotting Date: 08/13/2025			

CONDUIT LAYOUT

US HWY 12/6TH AVE SE & LINCOLN ST S

SCALE
1" = 40'



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	Type 3 Electrical Junction Box (EJF1)	1	EACH
	Type 4 Electrical Junction Box (EJF3)	1	EACH
#6	1/C #4 AWG Copper Wire	1650	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	1130	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	50	FT
19/C	19/C #14 AWG Copper Tray Cable, K2	155	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	395	FT
TSP	#16 AWG Copper Twisted Shielded Pair	480	FT
PC	Preemption Cable	485	FT

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & WASHINGTON ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	41	92

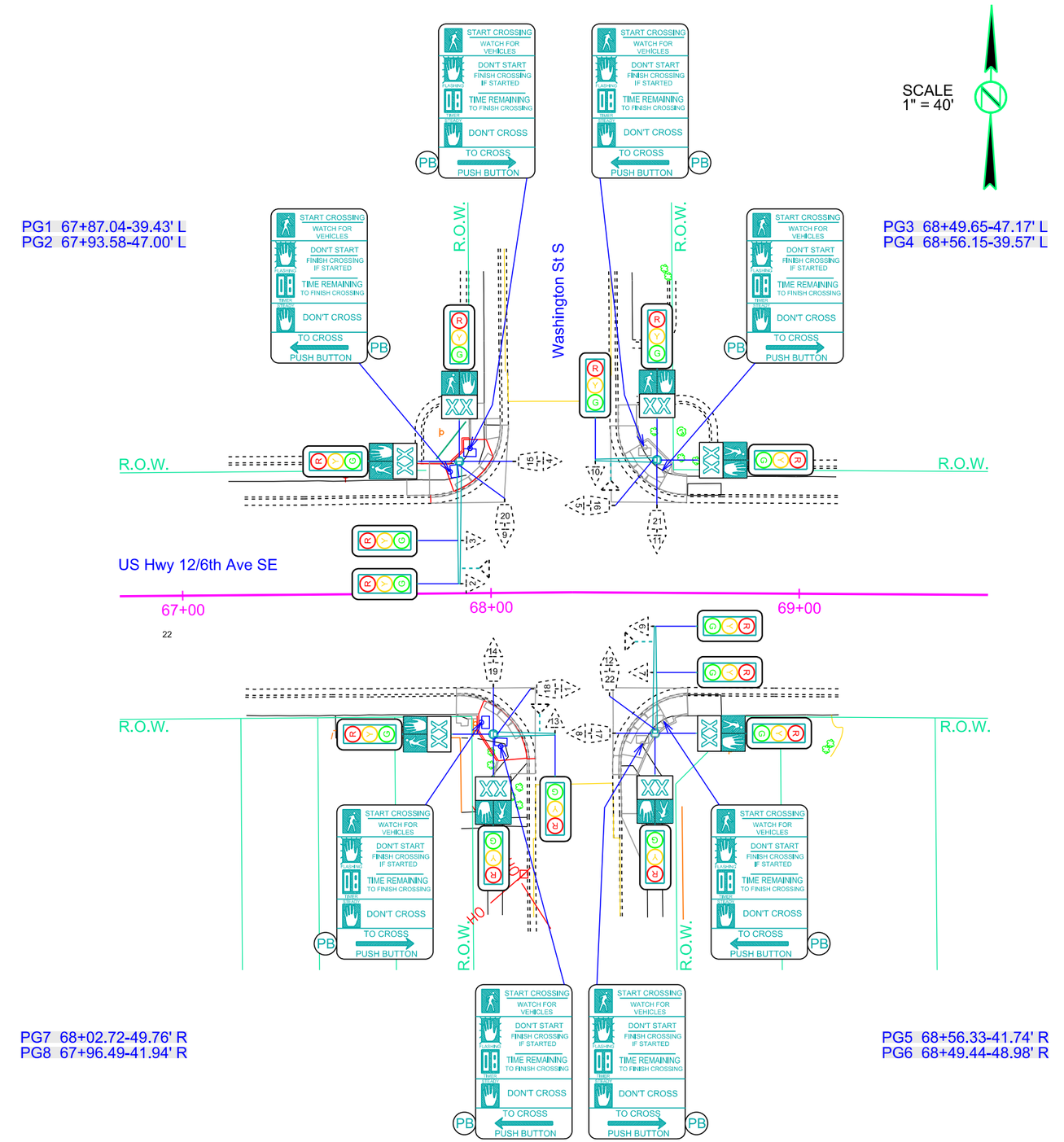
Plotting Date: 08/13/2025

Revised 06/11/2025 DLM

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Pedesrian Push Button Pole (PG2)	1	EACH

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal PG1 - PG8	8	EACH

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/20' Mast Arm & 8' Lumin Arm (EG2,EG4)
	Signal Pole w/35' Mast Arm & 8' Lumin Arm (EG3)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EG1)
	Roadway Luminaire, 400w with P.E. (EG1-EG4)
	3 Section Vehicle Signal Head (1-14)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
PB	Accessible Pedestrian Signal
	Pedestrian Signal Head (15-22)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	42	92
Plotting Date: 08/13/2025			

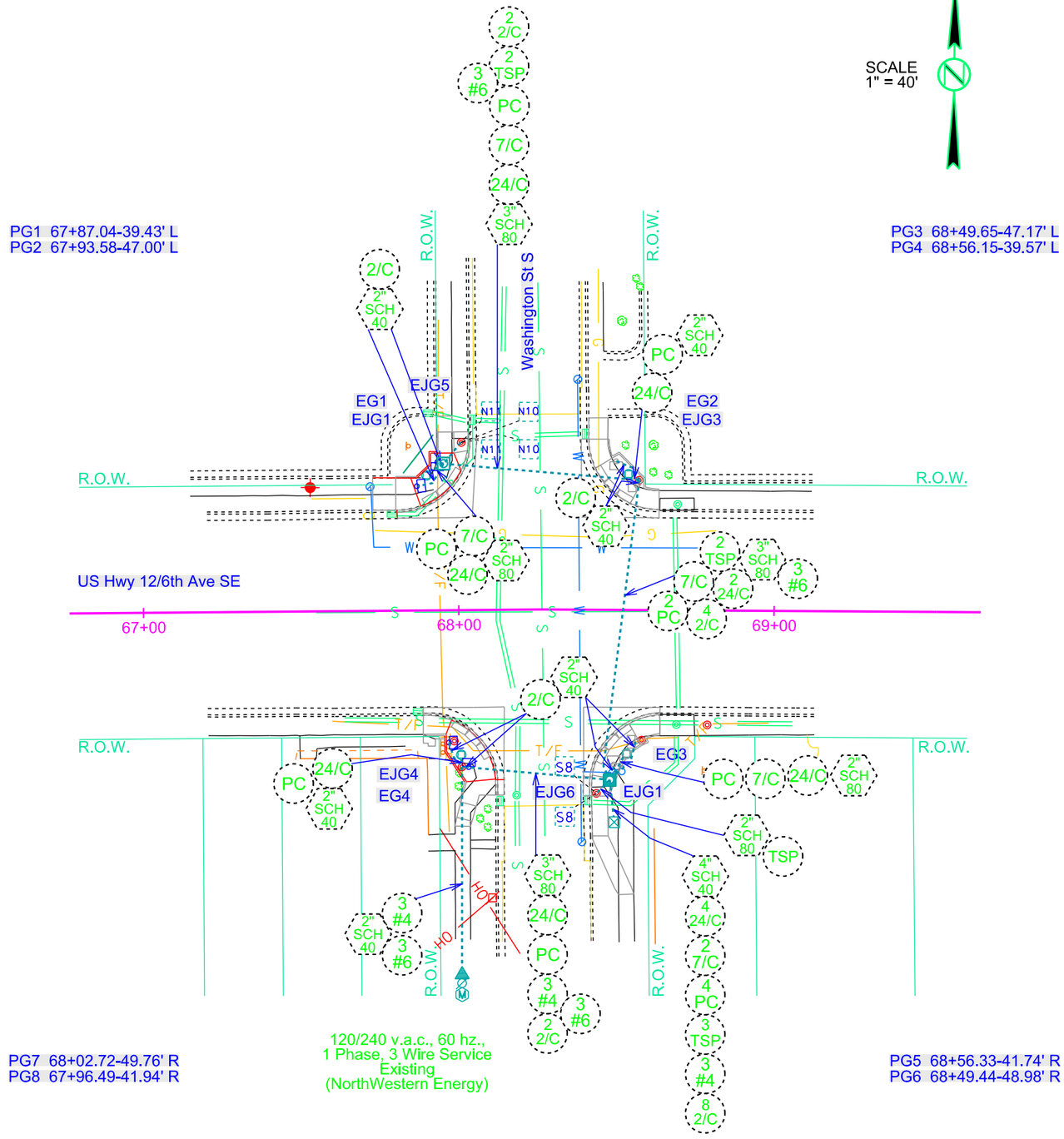
Revised 06/16/2025 DLM

EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SE & WASHINGTON ST S

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
	Meter Socket
	Wood Utility Pole
M	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2" SCH 40	2" Rigid Conduit, Schedule 40
4" SCH 40	4" Rigid Conduit, Schedule 40
3" SCH 80	3" Rigid Conduit, Schedule 80
#4	1/C #4 AWG Copper Wire
7/C	7/C #14 AWG Copper Tray Cable, K2
24/C	24/C #14 AWG Copper Tray Cable, K2
TSP	#16 AWG Copper Twisted Shielded Pair
PC	Preemption Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJG1,EJG3)	2	EACH
#4	1/C #4 AWG Copper Wire	825	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	995	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	290	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	465	FT
TSP	#16 AWG Copper Twisted Shielded Pair	415	FT
PC	Preemption Cable	645	FT



SIGNAL LAYOUT
US HWY 12 & WASHINGTON ST S

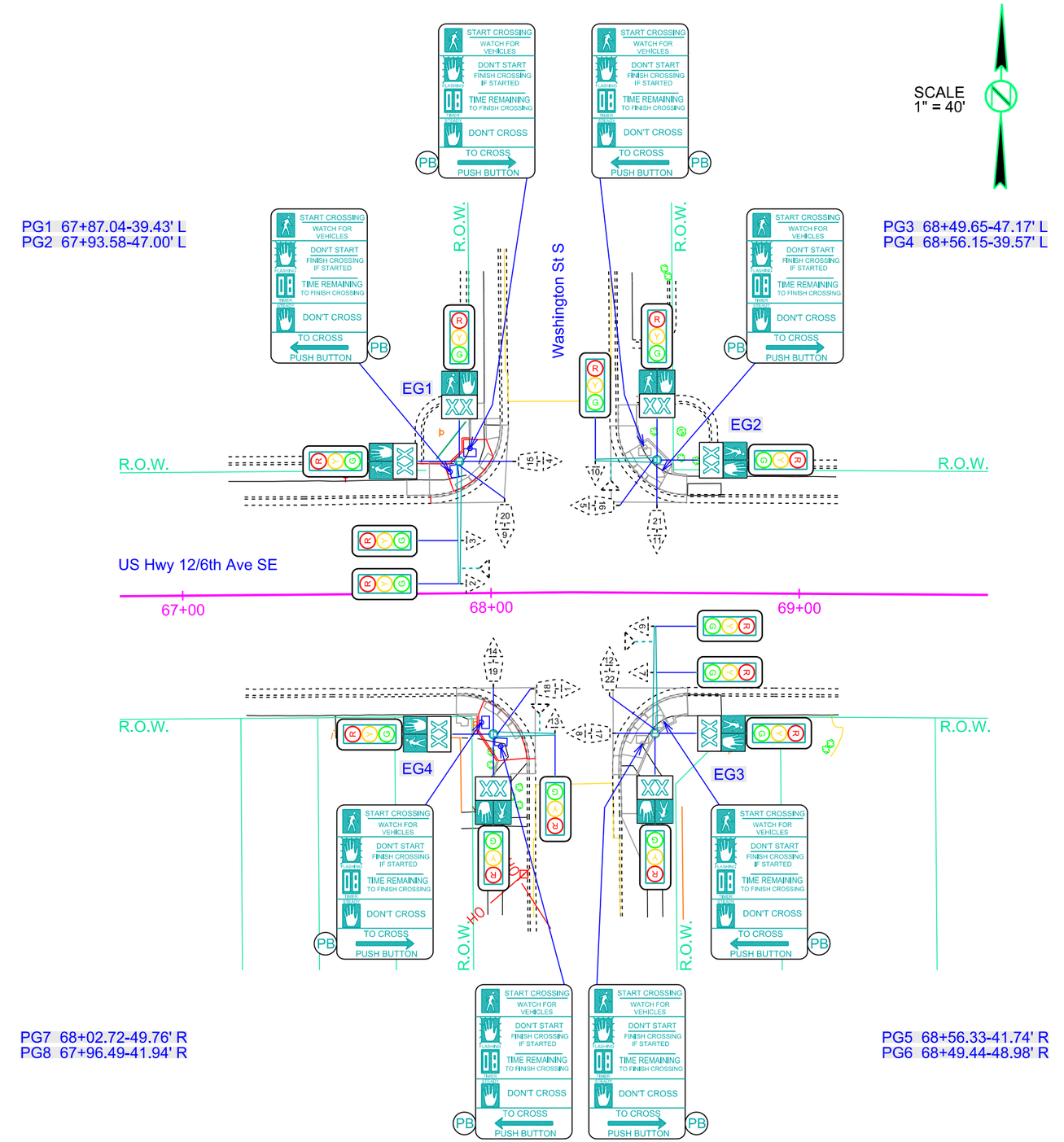
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	43	92

Plotting Date: 08/13/2025

Revised 06/11/2025 DLM

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal (PG1-PG8)	8	EACH
○	Pedestrian Push Button Pole (PG2)	1	EACH

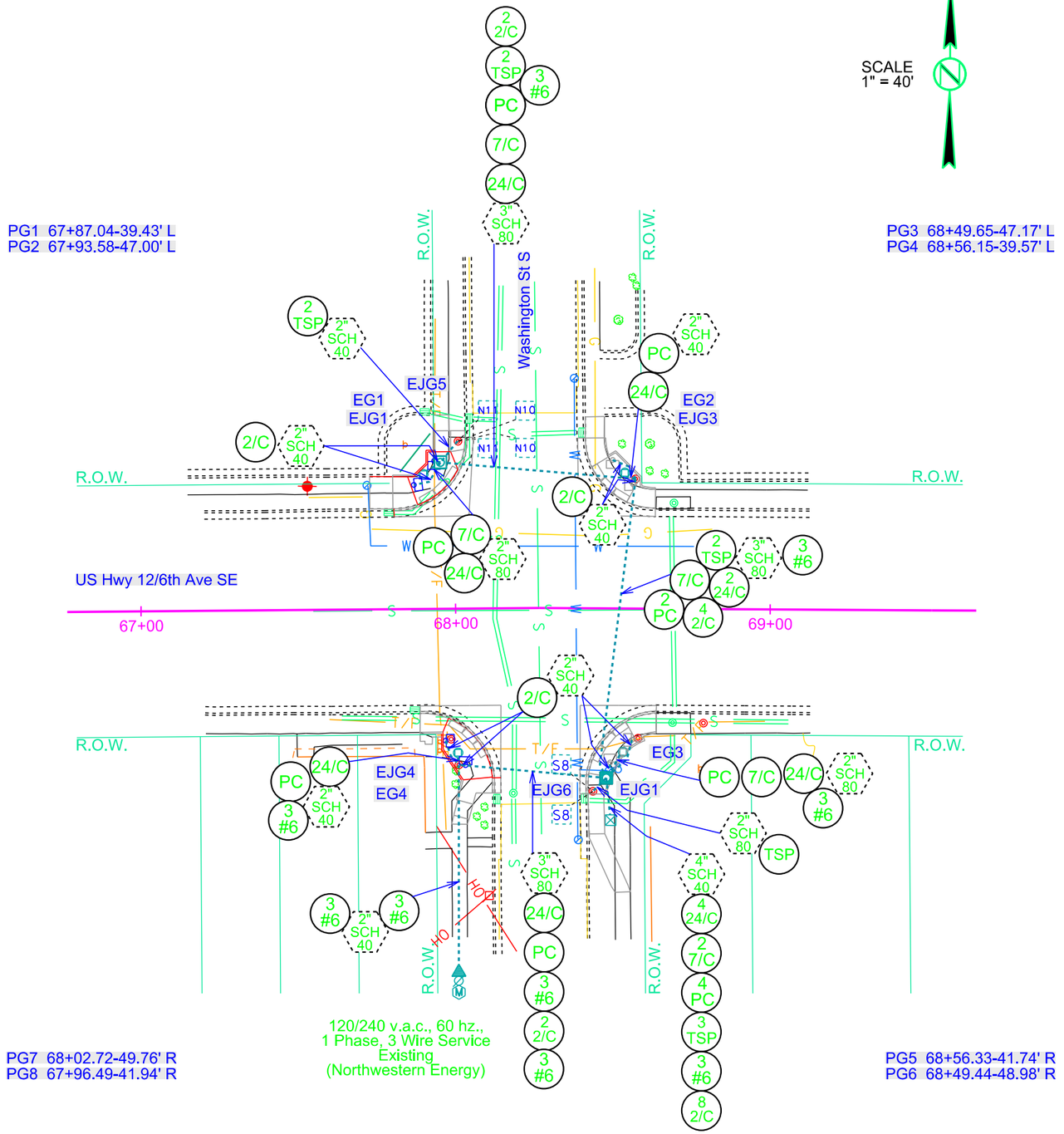


Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	44	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

CONDUIT LAYOUT
US HWY 12/6TH AVE SE & WASHINGTON ST S



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	Type 3 Electrical Junction Box (EJG1)	1	EACH
	Type 4 Electrical Junction Box (EJG3)	1	EACH
#6	1/C #6 AWG Copper Wire	1675	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	995	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	290	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	465	FT
TSP	#16 AWG Copper Twisted Shielded Pair	415	FT
PC	Preemption Cable	645	FT

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	45	92

Plotting Date: 08/13/2025

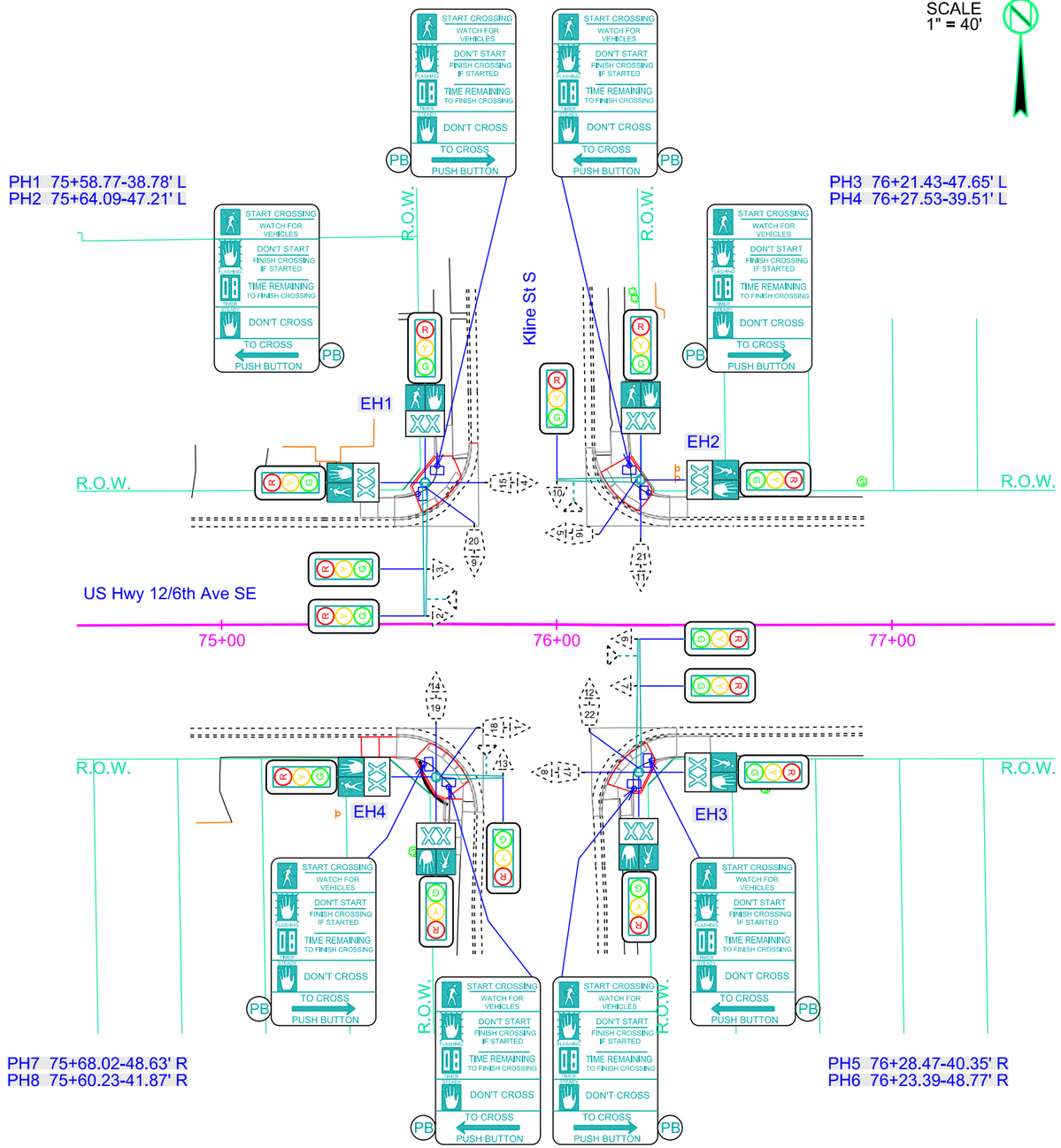
Revised 06/16/2025 DLM

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & KLINE ST S

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Pedesrian Push Button Pole (PH2,PH3,PH5,PH7)	4	EACH

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal PH1 - PH8	8	EACH

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/20' Mast Arm & 8' Lumin Arm (EH4)
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (EH2)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EH1,EH3)
	Roadway Luminaire, 400w with P.E. (EH1-EH4)
	3 Section Vehicle Signal Head (1-14)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
(PB)	Accessible Pedestrian Signal
	Pedestrian Signal Head (15-22)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	46	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

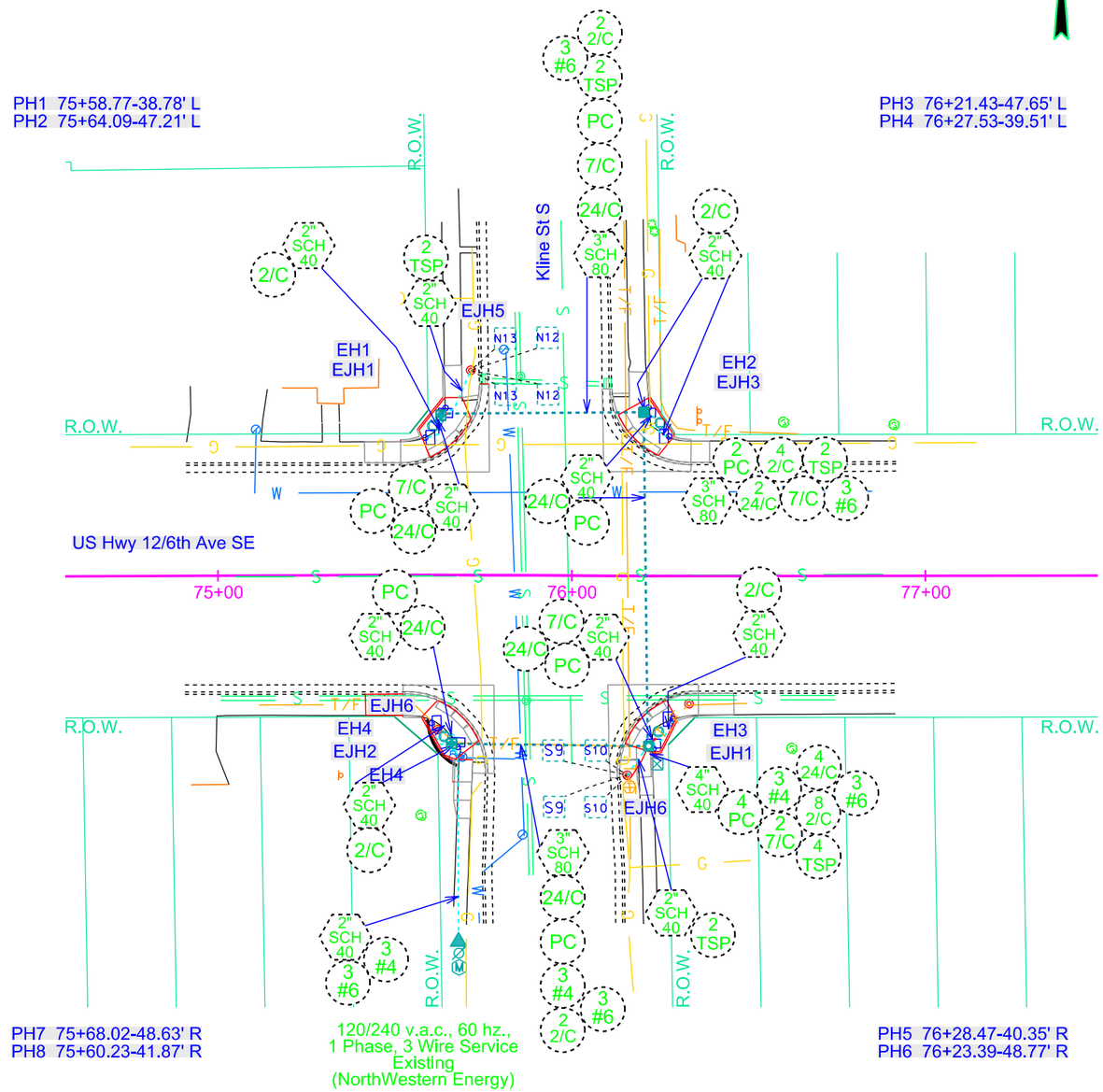
EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SE & KLINE ST S

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
M	Meter Socket
	Wood Utility Pole
	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2" SCH 40	2" Rigid Conduit, Schedule 40
4" SCH 40	4" Rigid Conduit, Schedule 40
3" SCH 80	3" Rigid Conduit, Schedule 80
#4	1/C #4 AWG Copper Wire
2/C	2/C #14 AWG Copper Tray Cable, K2
7/C	7/C #14 AWG Copper Tray Cable, K2
24/C	24/C #14 AWG Copper Tray Cable, K2
TSP	#16 AWG Copper Twisted Shielded Pair
PC	Preemption Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJH1,EJH2,EJH3,EJH4)	4	EACH
#4	1/C #4 AWG Copper Wire	795	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	1120	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	275	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	535	FT
TSP	#16 AWG Copper Twisted Shielded Pair	620	FT
PC	Preemption Cable	660	FT

SCALE
1" = 40'



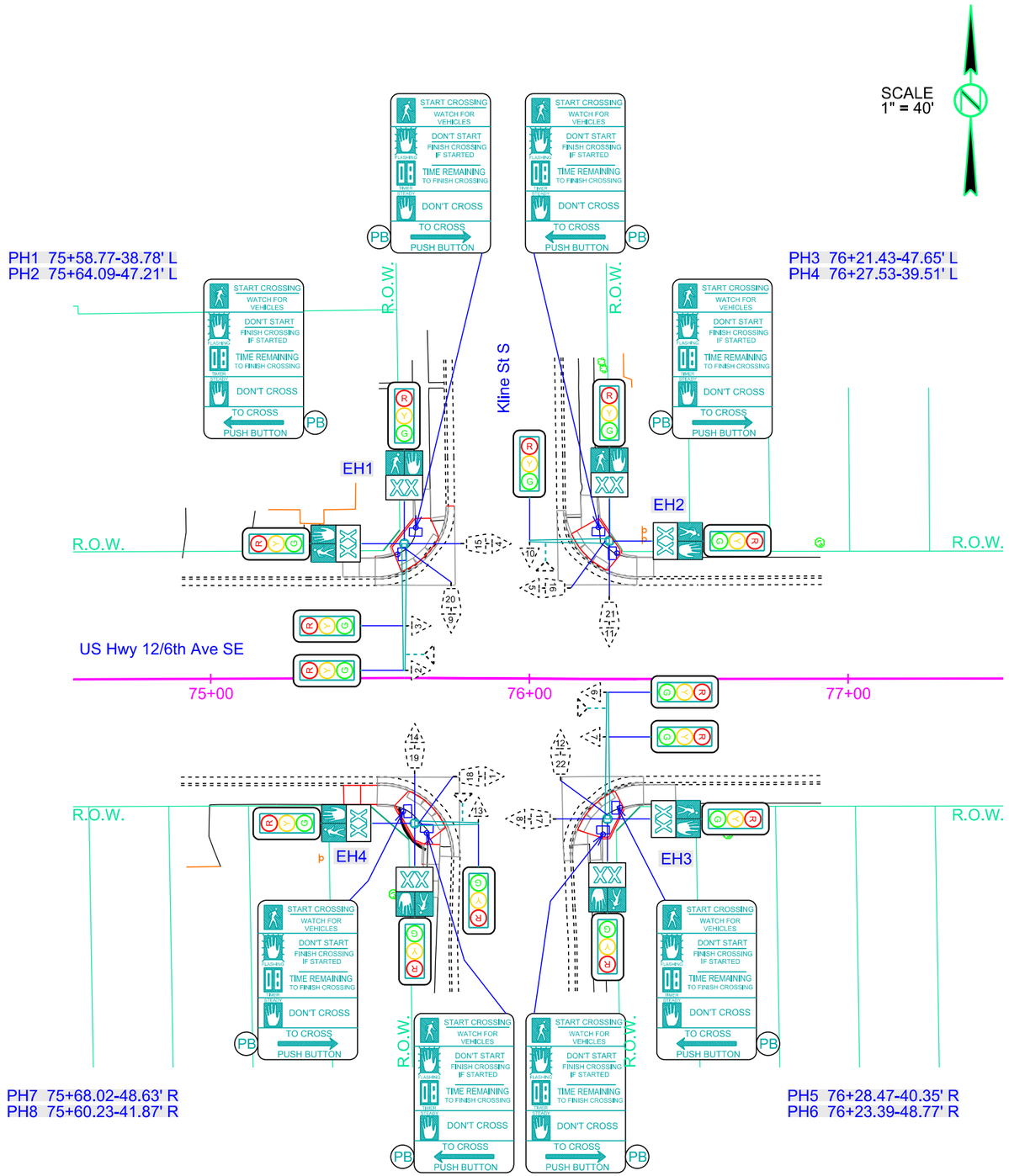
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	47	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

SIGNAL LAYOUT
US HWY 12/6TH AVE SE & KLINE ST S

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal (PH1-PH8)	8	EACH
ᵕ	Pedestrian Push Button Pole (PH2,PH3,PH5,PH7)	4	EACH



PLOT SCALE - 1:40

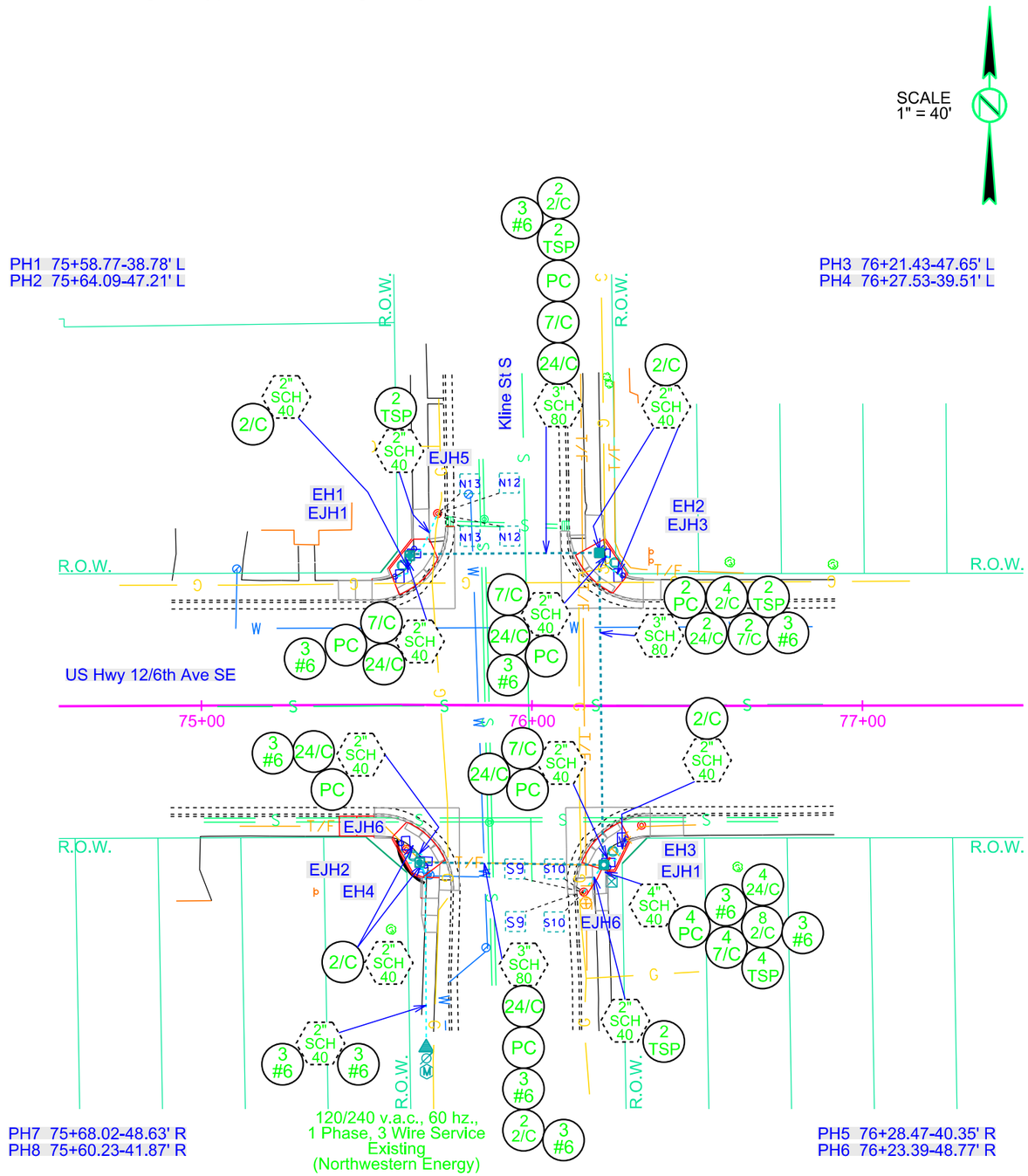
PLOTTED FROM - TRAB17879B

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	48	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

CONDUIT LAYOUT
US HWY 12/6TH AVE SE & KLINE ST S



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	Type 3 Electrical Junction Box (EJH1, EJH4)	2	EACH
	Type 3A Electrical Junction Box (EJH2)	1	EACH
	Type 4 Electrical Junction Box (EJH3)	1	EACH
#6	1/C #6 AWG Copper Wire	1830	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	1120	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	275	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	535	FT
TSP	#16 AWG Copper Twisted Shielded Pair	620	FT
PC	Preemption Cable	660	FT

PLOT NAME - 33

FILE - ...\REGIONA\PRJ\BRWN09V9\076C.DGN

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	49	92

Plotting Date: 08/13/2025

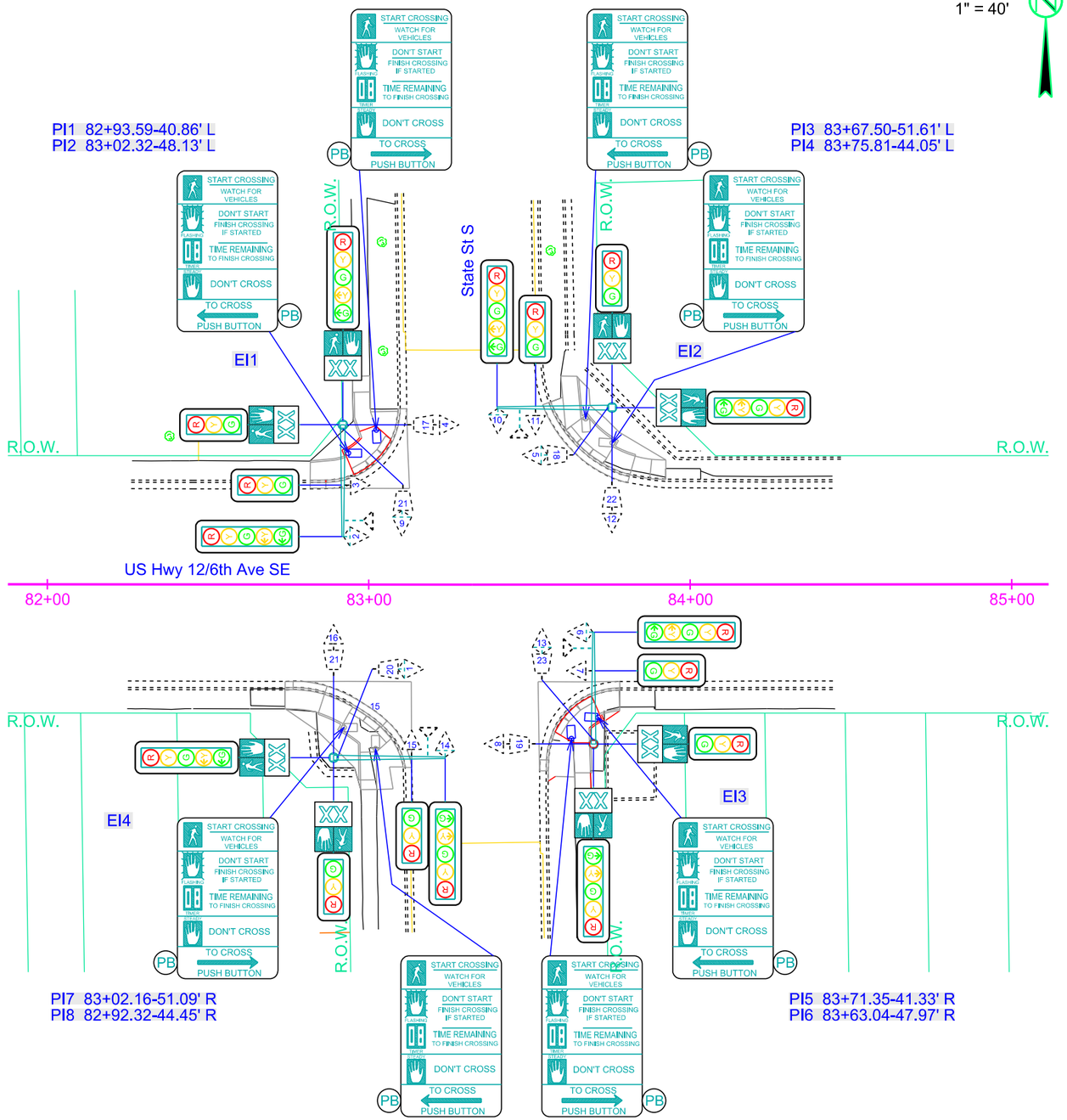
EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & STATE ST S

SCALE
1" = 40'

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
PB	Accessible Pedestrian Signal (PI1 - PI8)	8

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (EI2,EI4)
	Signal Pole w/35' Mast Arm & 8' Lumin Arm (EI1,EI3)
	Roadway Luminaire, 400w with P.E. (EI1-EI4)
	3 Section Vehicle Signal Head (3, 4, 7, 8, 11, 12, 15, 16)
	5 Section Vehicle Signal Head (1, 2, 5, 6, 9, 10, 13, 14)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
PB	Accessible Pedestrian Signal
	Pedestrian Signal Head (17-23)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SE & STATE ST S

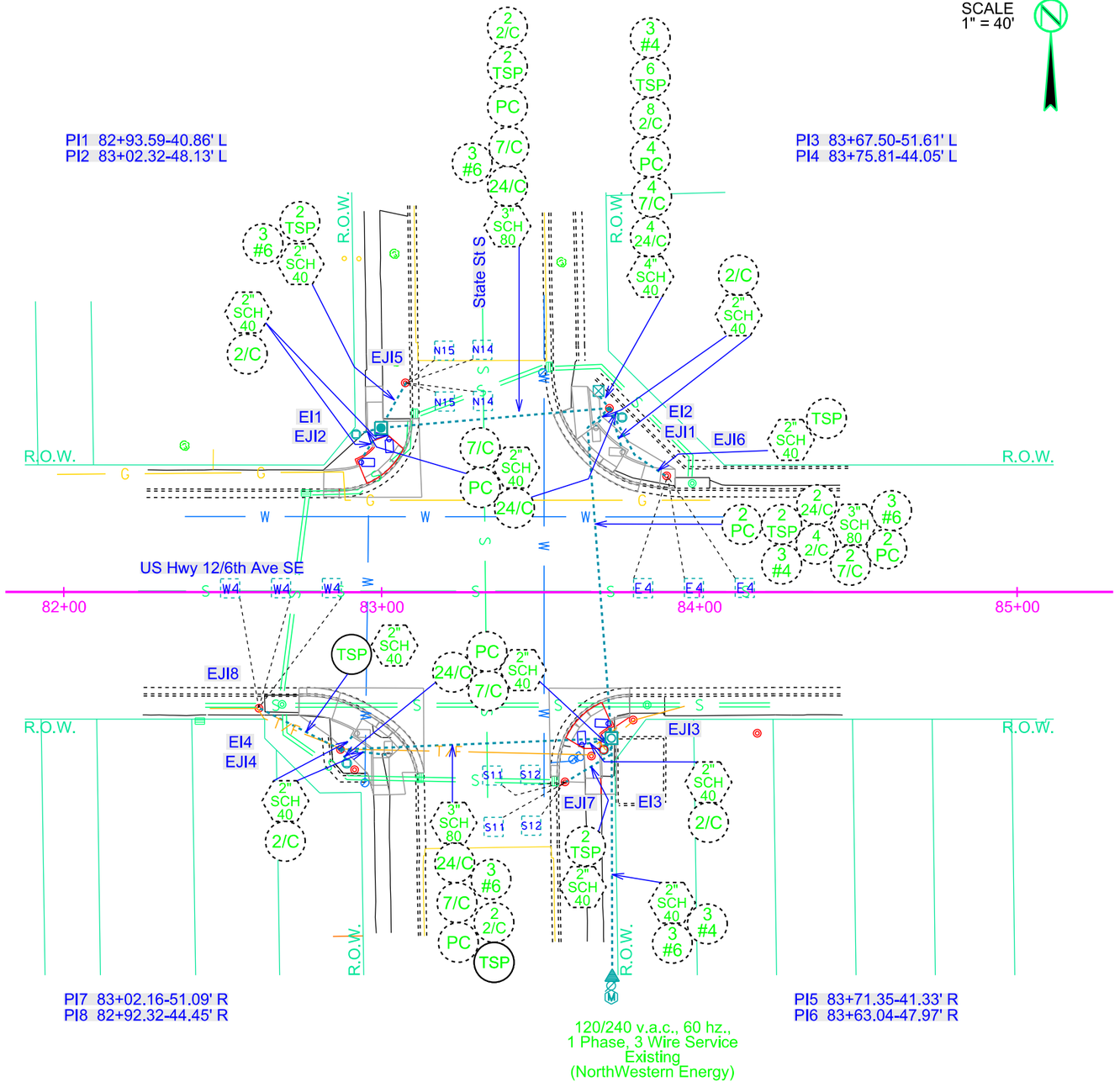
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	50	92
Plotting Date: 08/13/2025			

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
	Meter Socket
	Wood Utility Pole
	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2" SCH 40	2" Rigid Conduit, Schedule 40
4" SCH 40	4" Rigid Conduit, Schedule 40
3" SCH 80	3" Rigid Conduit, Schedule 80
#4	1/C #4 AWG Copper Wire
2/C	7/C #14 AWG Copper Tray Cable, K2
7/C	7/C #14 AWG Copper Tray Cable, K2
24/C	24/C #14 AWG Copper Tray Cable, K2
TSP	#16 AWG Copper Twisted Shielded Pair
PC	Preemption Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJI1,EJI3)	2	EACH
#4	1/C #4 AWG Copper Wire	935	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	1200	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	605	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	605	FT
TSP	#16 AWG Copper Twisted Shielded Pair	790	FT
PC	Preemption Cable	805	FT



SIGNAL LAYOUT
US HWY 12 & STATE ST S

Revised: 8/13/25 MD

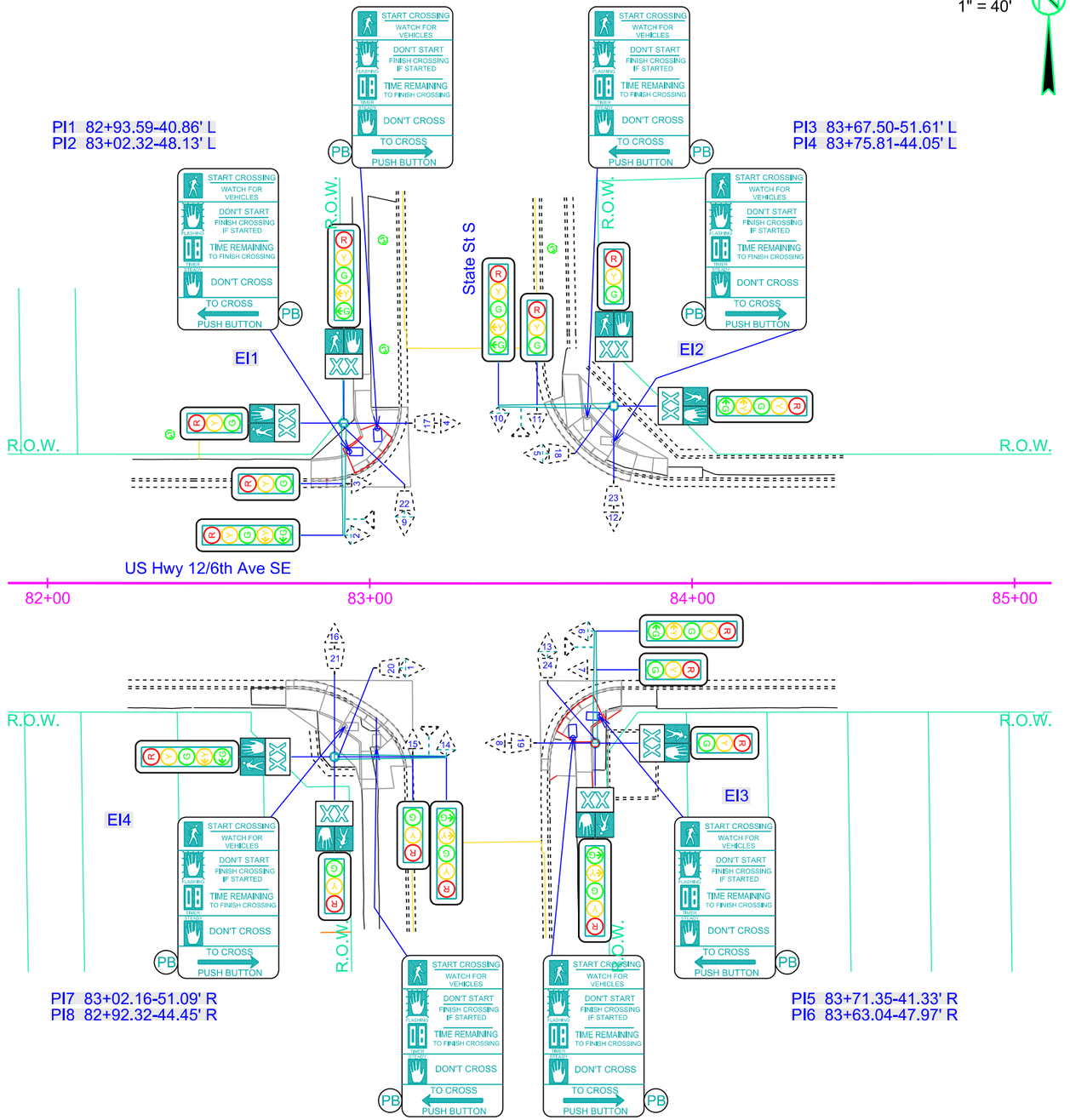
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	51	92

Plotting Date: 08/13/2025

SCALE
1" = 40'

ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal (PI1-PI8)	8	EACH



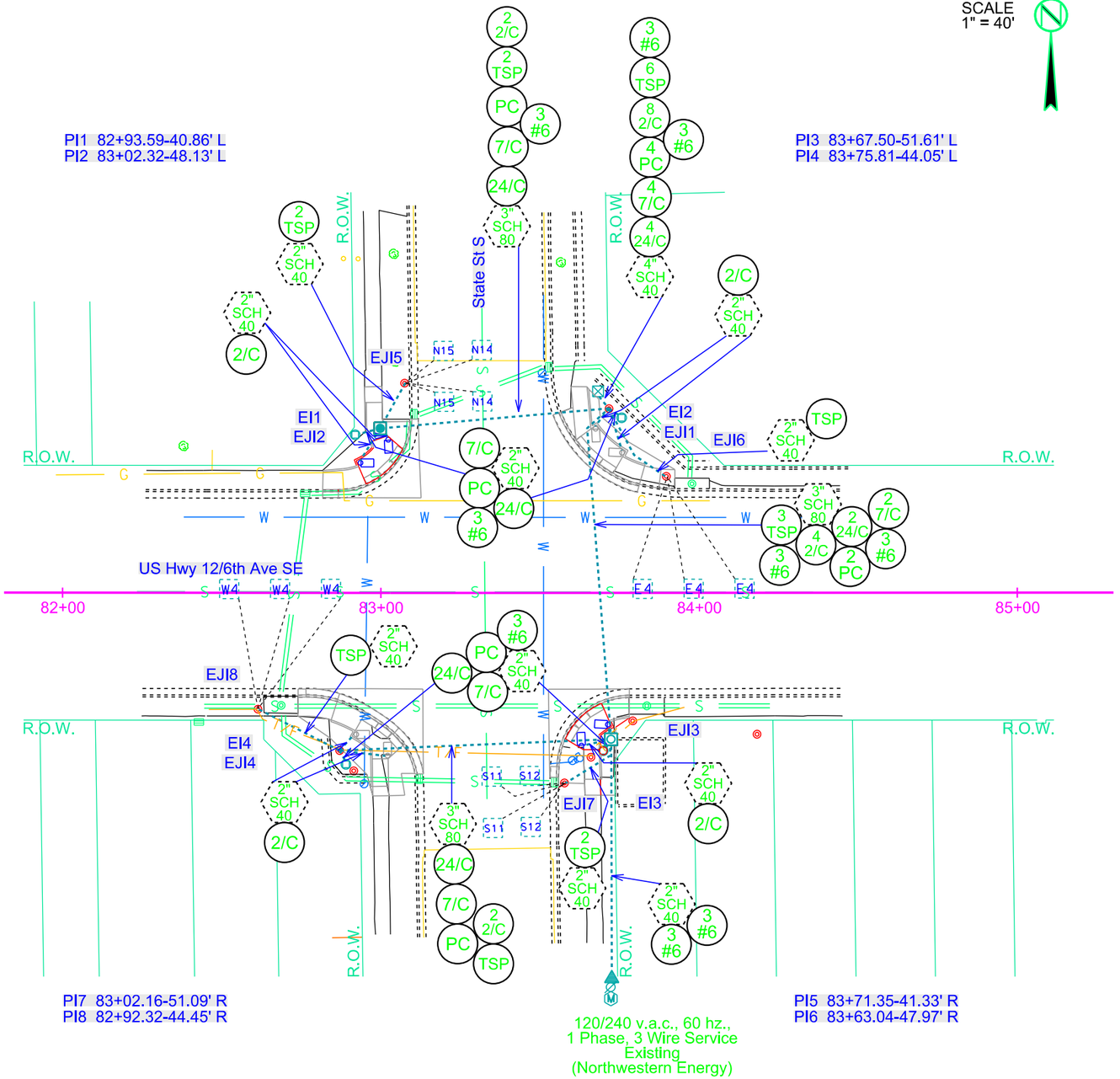
CONDUIT LAYOUT

US HWY 12/6TH AVE SE & STATE ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	52	92
Plotting Date: 08/13/2025			

SCALE
1" = 40'



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
▣	Type 3 Electrical Junction Box (EJI1, EJI3)	2	EACH
#6	1/C #6 AWG Copper Wire	2160	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	1200	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	605	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	605	FT
TSP	#16 AWG Copper Twisted Shielded Pair	790	FT
PC	Preemption Cable	805	FT

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & DAKOTA ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	53	92

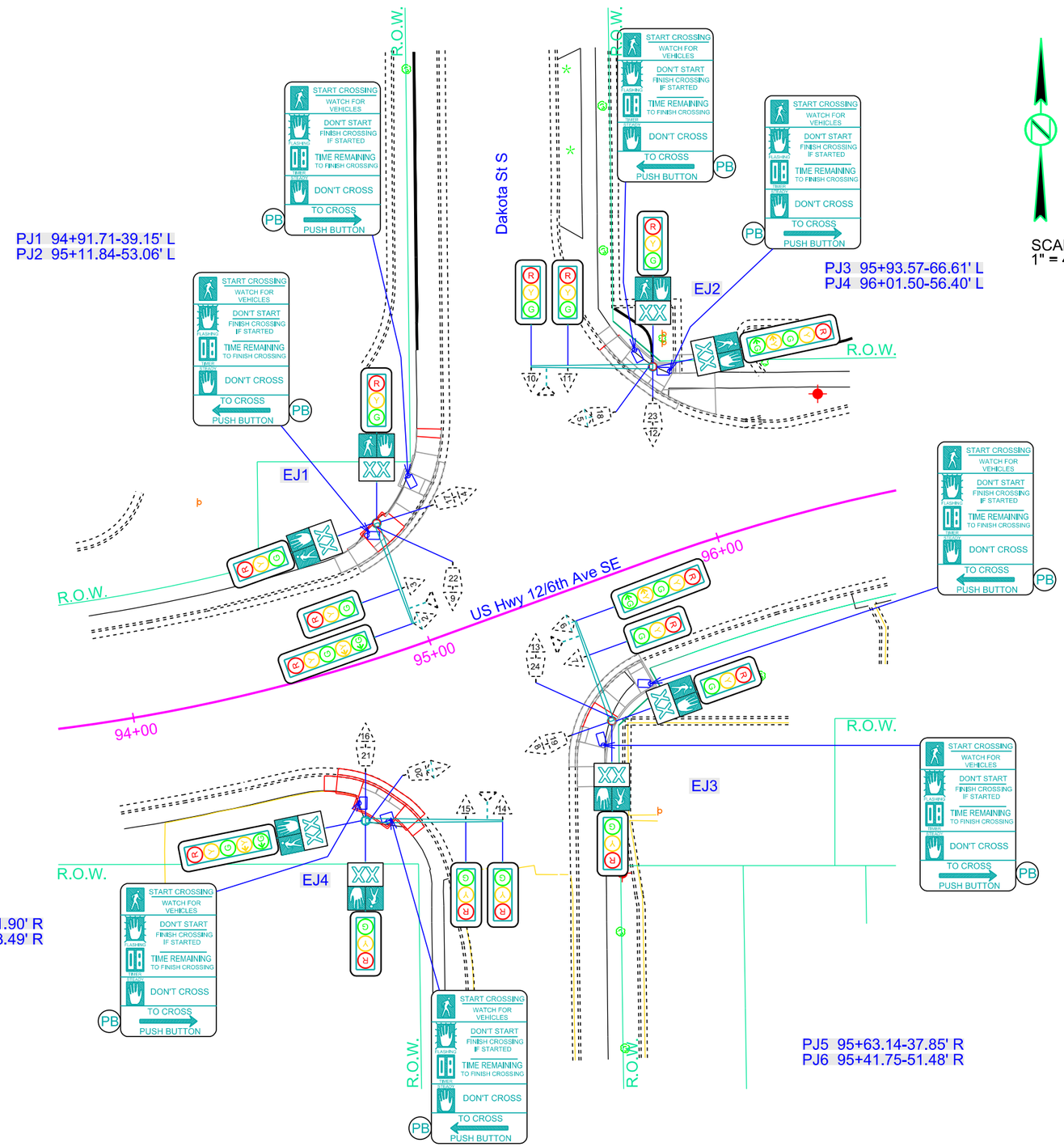
Plotting Date: 08/13/2025

Revised 06/16/2025 DLM

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
(PB)	Accessible Pedestrian Signal (PJ1 - PJ8)	8
	3 Section Vehicle Signal Head (13, 14)	2

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/35' Mast Arm & 8' Lumin Arm (EJ1,EJ3)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EJ2)
	Signal Pole w/45' Mast Arm & 8' Lumin Arm (EJ4)
	Roadway Luminaire, 400w with P.E. (EJ1-EJ4)
	3 Section Vehicle Signal Head (3, 4, 7-16)
	5 Section Vehicle Signal Head (1, 2, 5, 6)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
(PB)	Accessible Pedestrian Signal
	Pedestrian Signal Head (17-24)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	54	92
Plotting Date: 08/13/2025			

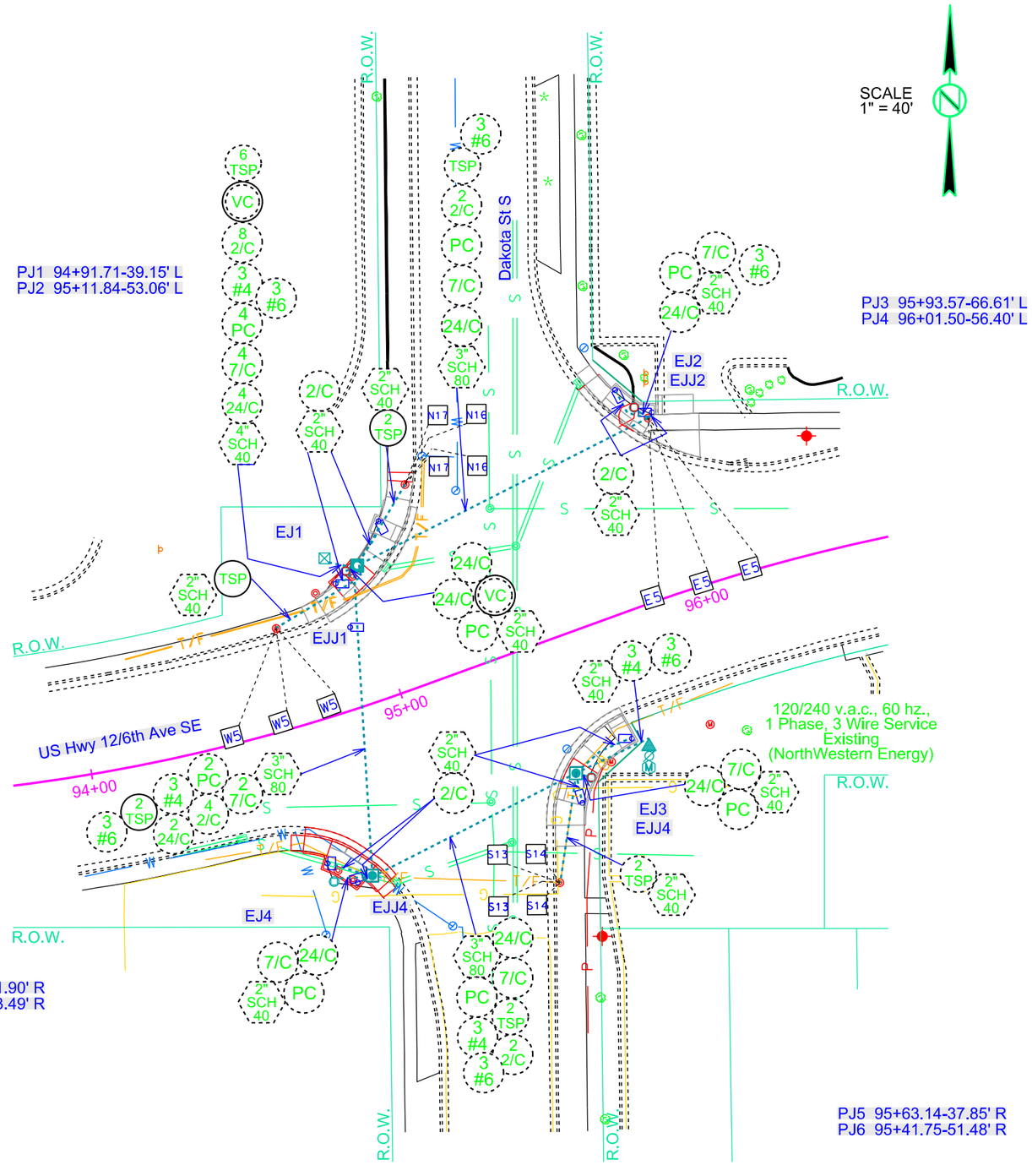
Revised 06/16/2025 DLM

EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SE & DAKOTA ST S

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
	Meter Socket
	Wood Utility Pole
M	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2 SCH 40	2" Rigid Conduit, Schedule 40
4 SCH 40	4" Rigid Conduit, Schedule 40
3 SCH 80	3" Rigid Conduit, Schedule 80
#4	1/C #4 AWG Copper Wire
2/C	7/C #14 AWG Copper Tray Cable, K2
7/C	7/C #14 AWG Copper Tray Cable, K2
24/C	24/C #14 AWG Copper Tray Cable, K2
TSP	#16 AWG Copper Twisted Shielded Pair
VC	Video Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJJ1,EJJ3,EJJ4)	3	EACH
#4	1/C #4 AWG Copper Wire	780	EACH
2/C	2/C #14 AWG Copper Tray Cable, K2	1270	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	620	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	620	FT
TSP	#16 AWG Copper Twisted Shielded Pair	820	FT
PC	Preemption Cable	765	FT



SIGNAL LAYOUT

US HWY 12/6TH AVE SE & DAKOTA ST S

Revised: 8/13/25 MD

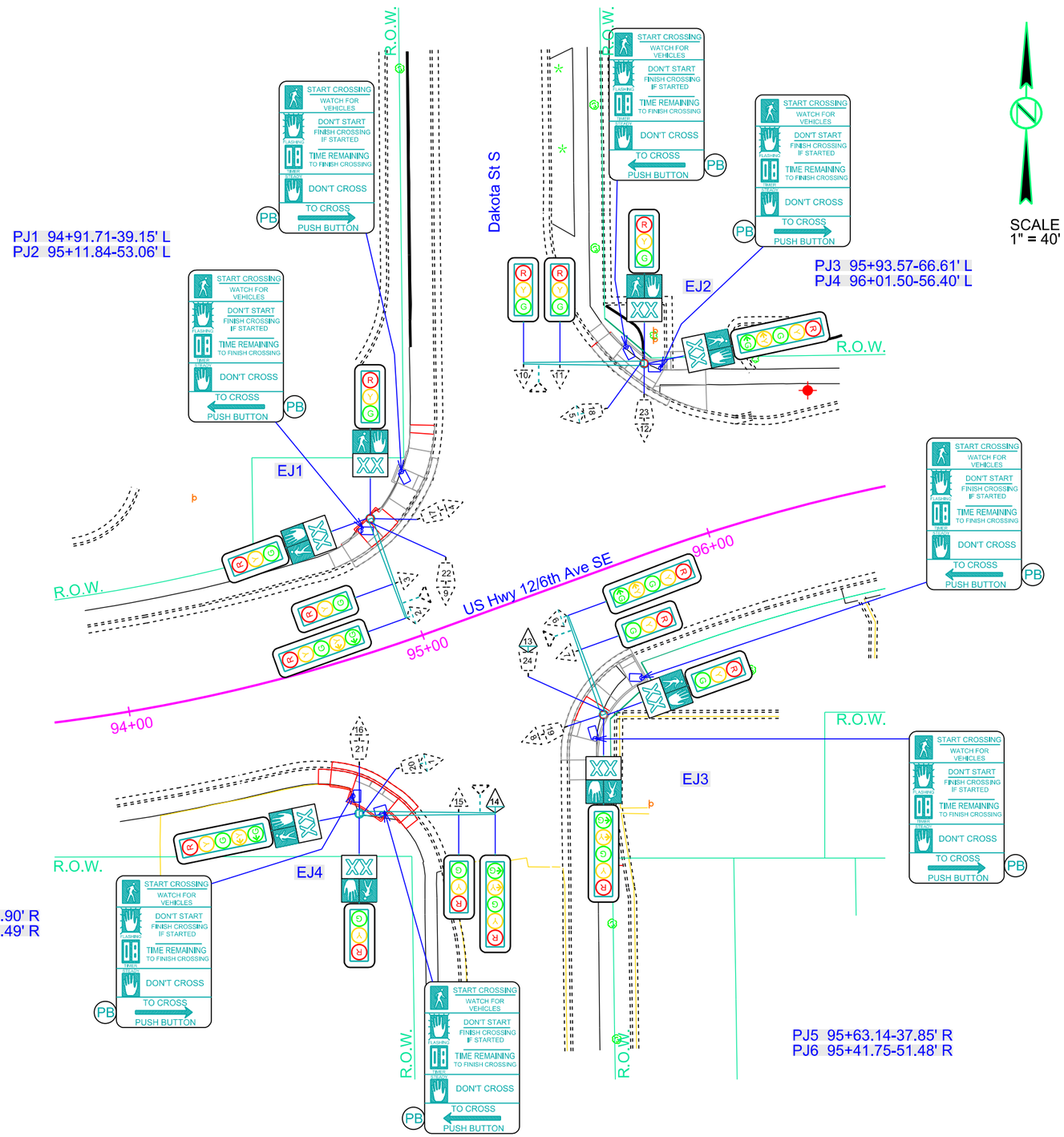
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	55	92

Plotting Date: 08/13/2025

Revised 06/16/2025 DLM

ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	5 section Vehicle Signal Head (13,14)	2	EACH
PB	Accessible Pedestrian Signal (PJ1-PJ8)	8	EACH



PLOT SCALE - 1:40

PLOT NAME - 40

PLOTTED FROM - TRAB17879B

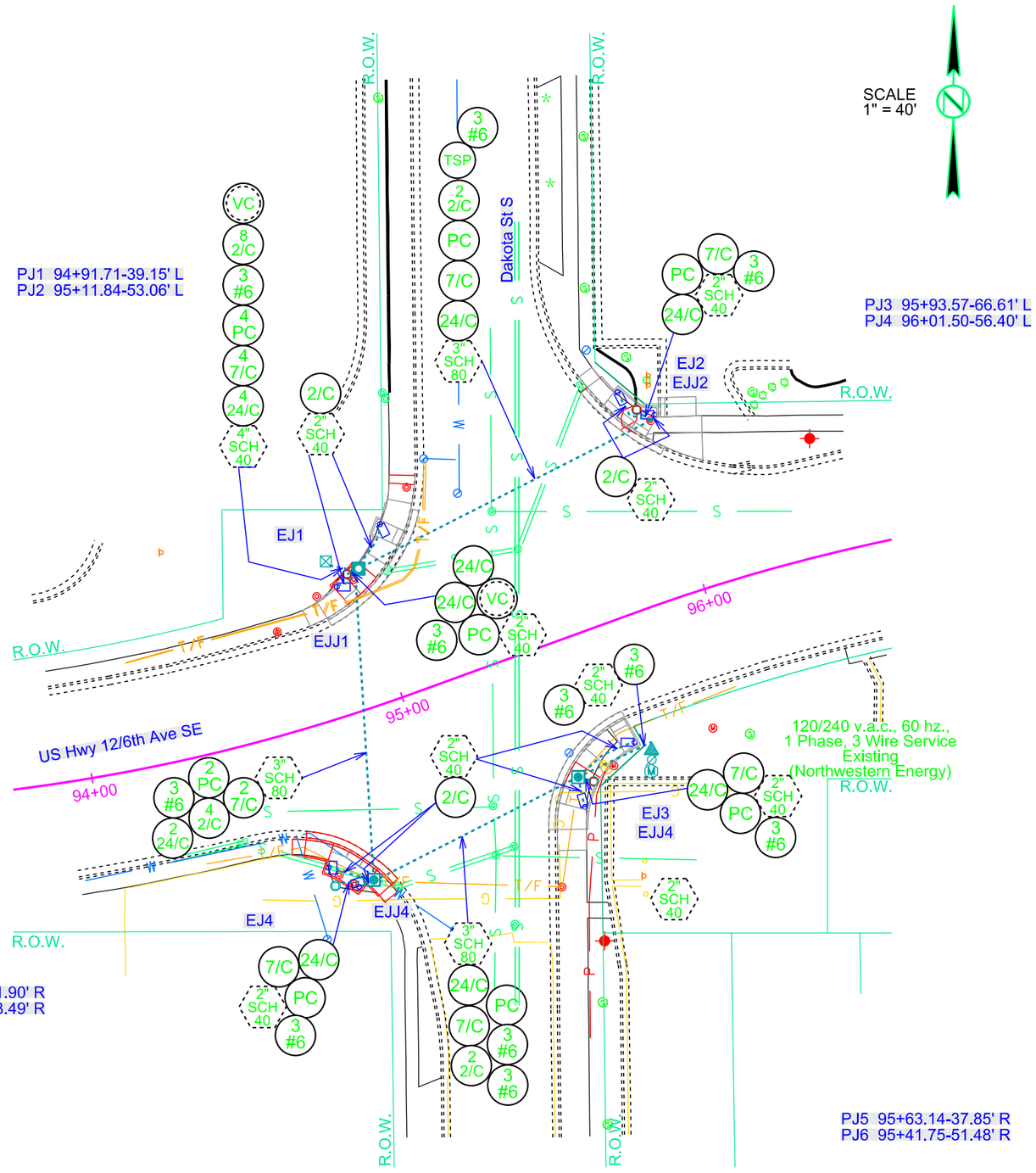
FILE - ...\REGIONA\PRJ\BRWN0909\095S.DGN

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	56	92
Plotting Date: 08/13/2025			

Revised 05/27/2025 DLM

CONDUIT LAYOUT
US HWY 12/6TH AVE SE & DAKOTA ST S



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	Type 3 Electrical Junction Box (EJJ3, EJJ4)	2	EACH
	Type 4 Electrical Junction Box (EJJ1)	1	EACH
#6	1/C #6 AWG Copper Wire	1910	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	1270	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	710	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	620	FT
PC	Preemption Cable	765	FT

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & HARRISON ST S

Revised: 8/13/25 MD

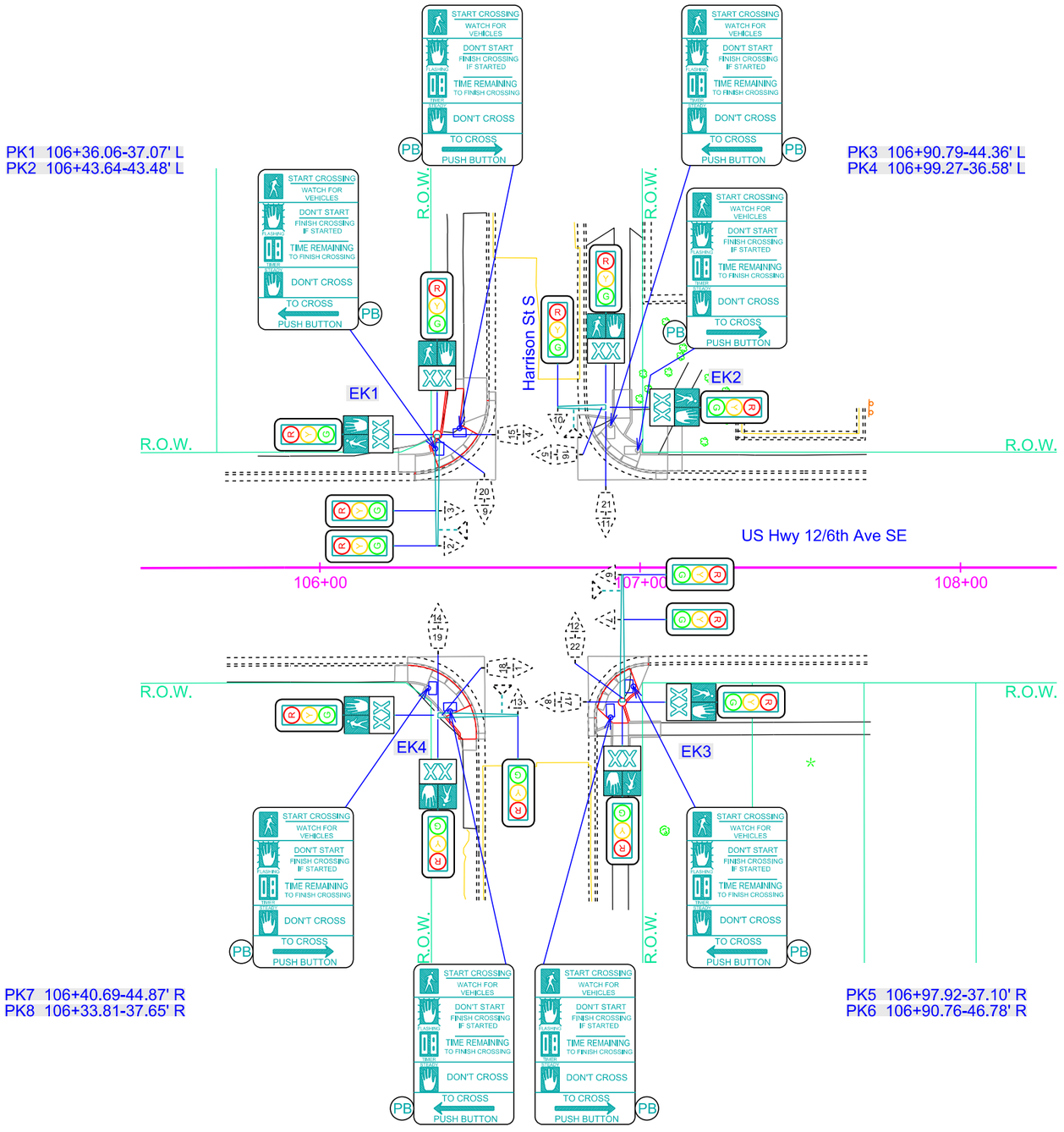
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	57	92
Plotting Date: 08/13/2025			

Rwvised 06/11/2025 DLM

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Pedesrian Push Button Pole (PK1,PK8)	2	EACH

REMOVE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
(PB)	Accessible Pedestrian Signal PK1 - PK8	8

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/15' Mast Arm & 8' Lumin Arm (EK2)
	Signal Pole w/25' Mast Arm & 8' Lumin Arm (EK4)
	Signal Pole w/35' Mast Arm & 8' Lumin Arm (EK1)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EK3)
	Roadway Luminaire, 400w with P.E. (EK1-EK4)
	3 Section Vehicle Signal Head (1-14)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
(PB)	Accessible Pedestrian Signal
	Pedestrian Signal Head (15-22)
	Pedestrian Crossing Sign R10-3b (Left - 4/Right - 4)



EXISTING CONDUIT LAYOUT

US HWY 12/6TH AVE SE & HARRISON ST S

Revised: 8/13/25 MD

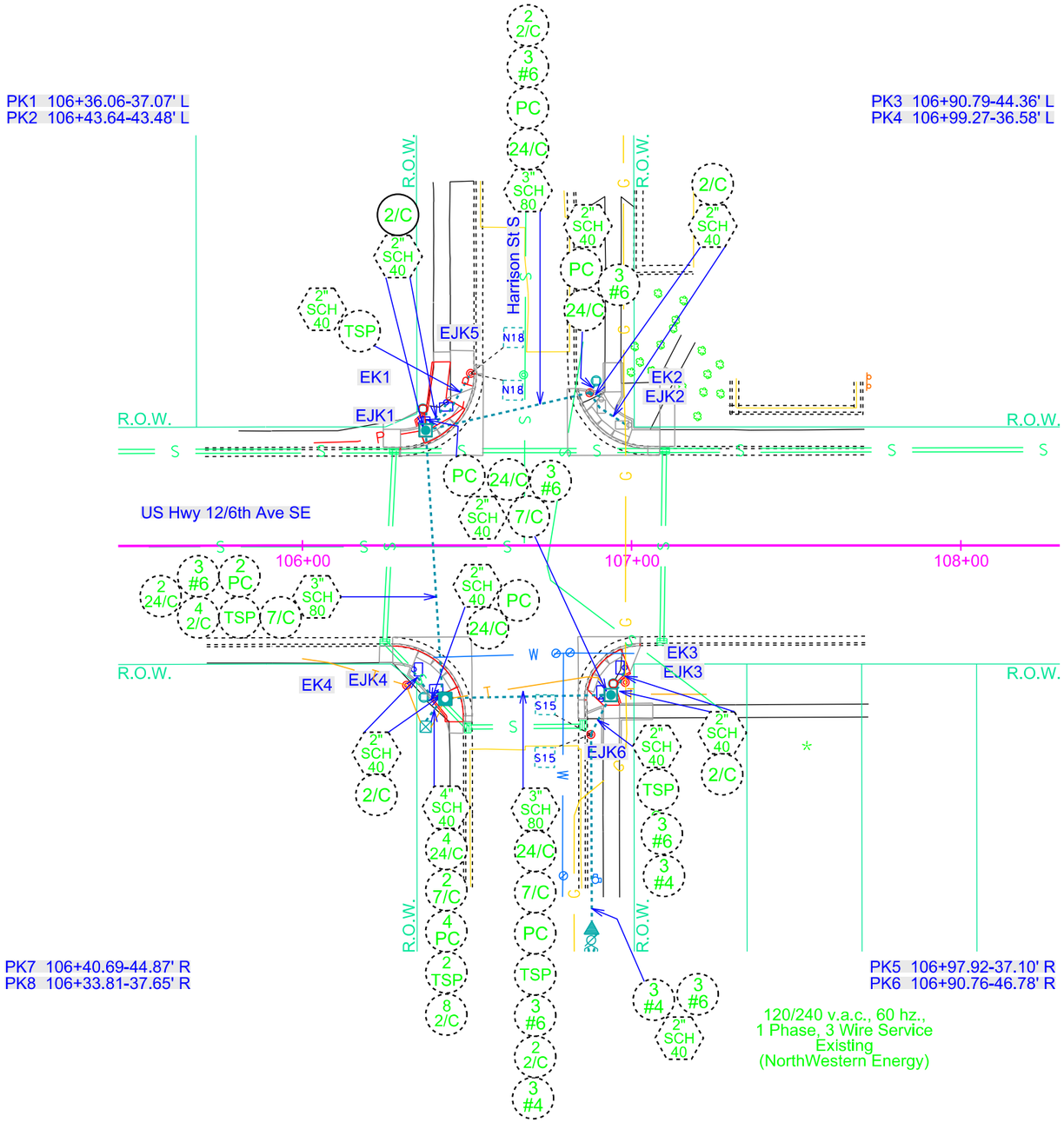
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	58	92
Plotting Date: 08/13/2025			

SCALE
1" = 40'

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
M	Meter Socket
	Wood Utility Pole
	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2 SCH 40	2" Rigid Conduit, Schedule 40
4 SCH 40	4" Rigid Conduit, Schedule 40
3 SCH 80	3" Rigid Conduit, Schedule 80
#4	1/C #4 AWG Copper Wire
2/C	2/C #14 AWG Copper Tray Cable, K2
7/C	7/C #14 AWG Copper Tray Cable, K2
24/C	24/C #14 AWG Copper Tray Cable, K2
TSP	#16 AWG Copper Twisted Shielded Pair
PC	Preemption Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJK1,EJK3, EJK4)	3	EACH
#4	1/C #4 AWG Copper Wire	800	FT
#6	1/C #6 AWG Copper Wire	885	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	1160	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	280	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	550	FT
TSP	#16 AWG Copper Twisted Shielded Pair	265	FT
PC	Preemption Cable	730	FT



SIGNAL LAYOUT
US HWY 12/6TH AVE SE & HARRISON ST S

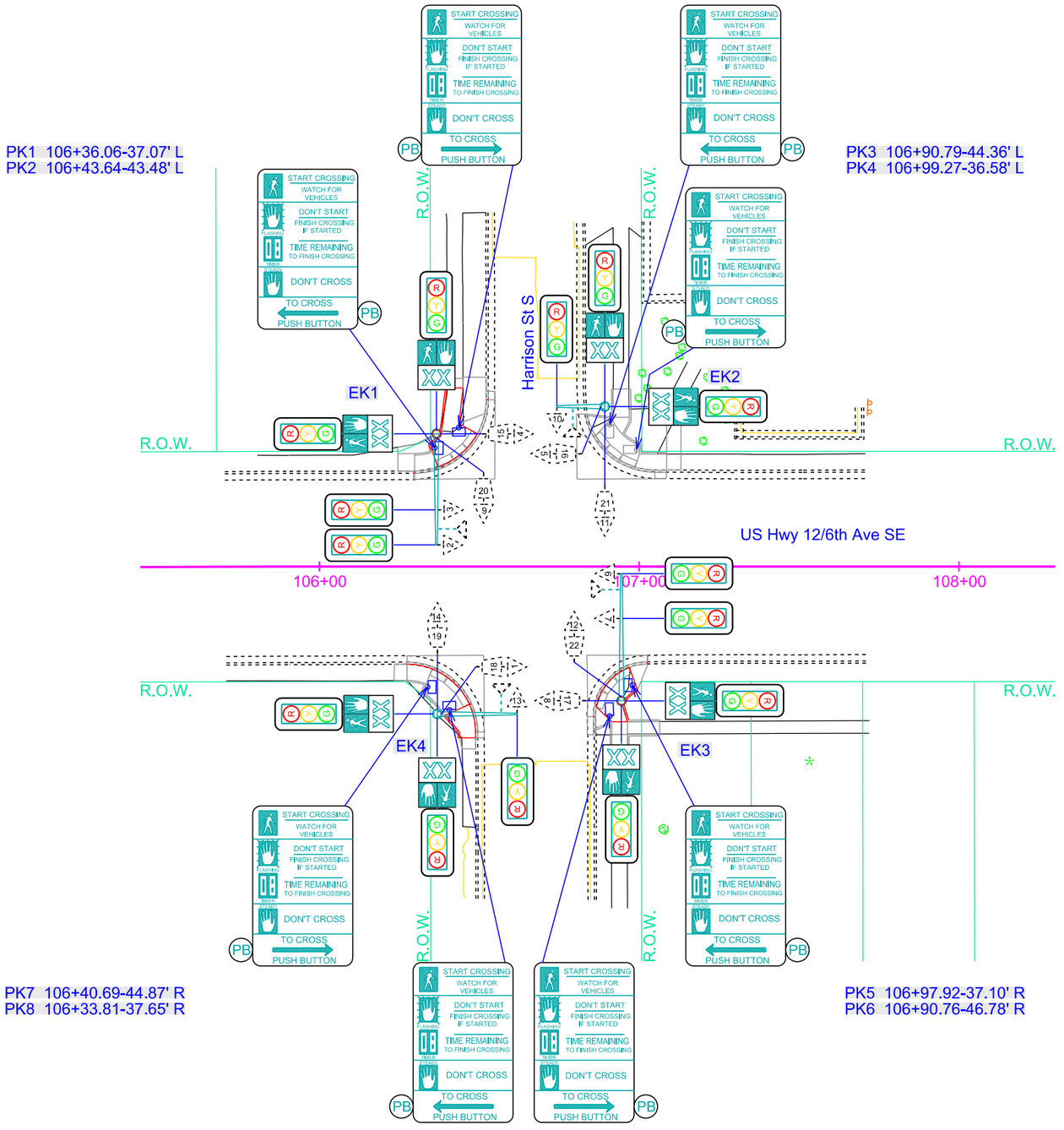
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	59	92

Plotting Date: 08/13/2025

Revised 06/11/2025 DLM

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
(PB)	Accessible Pedestrian Signal (PK1-PK8)	8	EACH
ᵕ	Pedestrian Push Button Pole (PK!,PK8)	2	EACH



PLOT SCALE - 1:40

PLOTTED FROM - TRAB17879B

PLOT NAME - 44

FILE - ...\REGIONA\PRJ\BRWN0BV9\107S.DGN

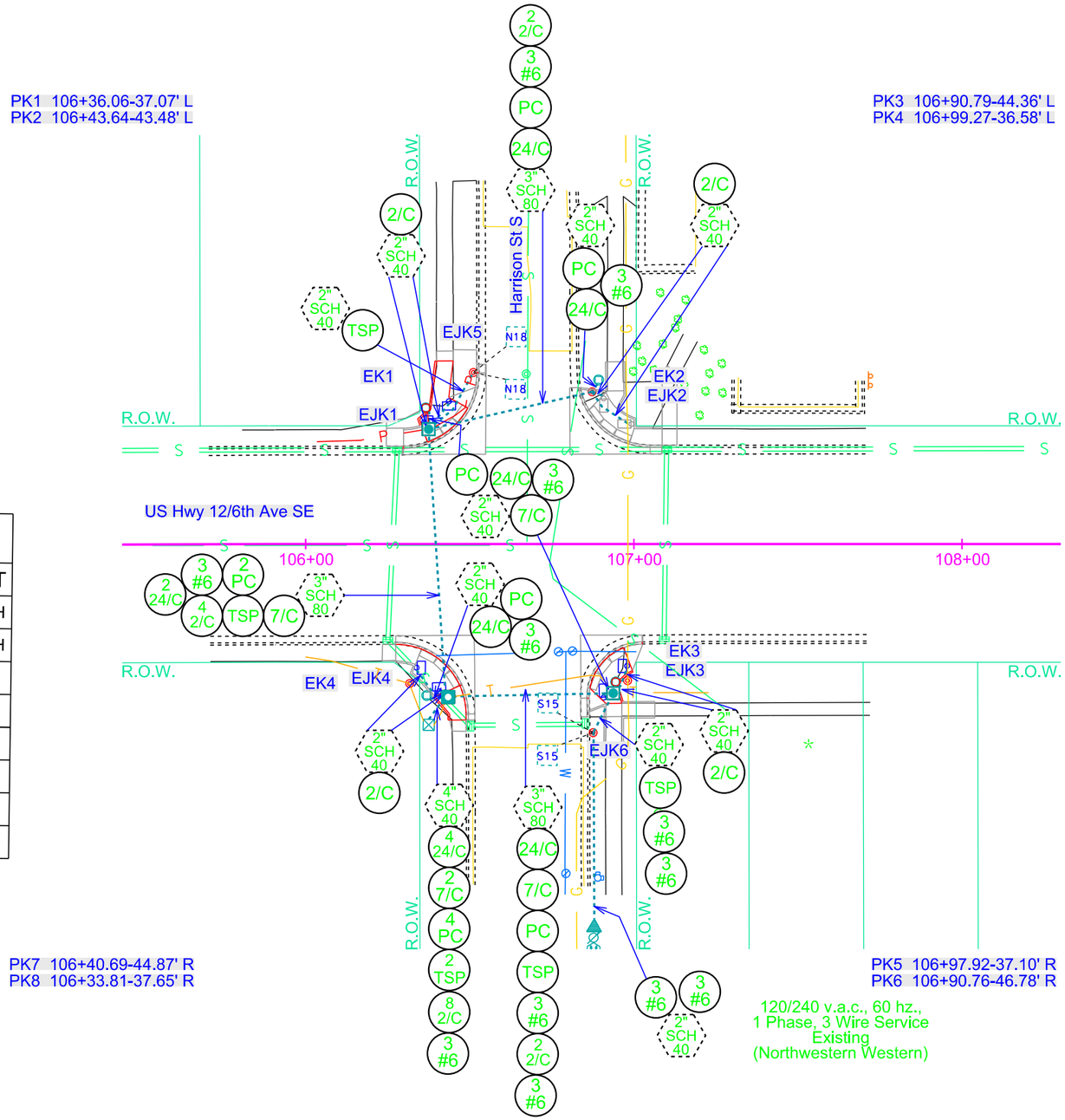
CONDUIT LAYOUT
US HWY 12/6TH AVE SE & HARRISON ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	60	92

Plotting Date: 08/13/2025

SCALE
1" = 40'



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
▣	Type 3 Electrical Junction Box (EJK1, EJK3)	2	EACH
■	Type 4 Electrical Junction Box (EJK4)	1	EACH
#4	1/C #6 AWG Copper Wire	1950	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	1160	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	280	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	550	FT
TSP	#16 AWG Copper Twisted Sheielder Pair	265	FT
PC	Preemption Cable	730	FT

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	61	92
Plotting Date: 08/13/2025			

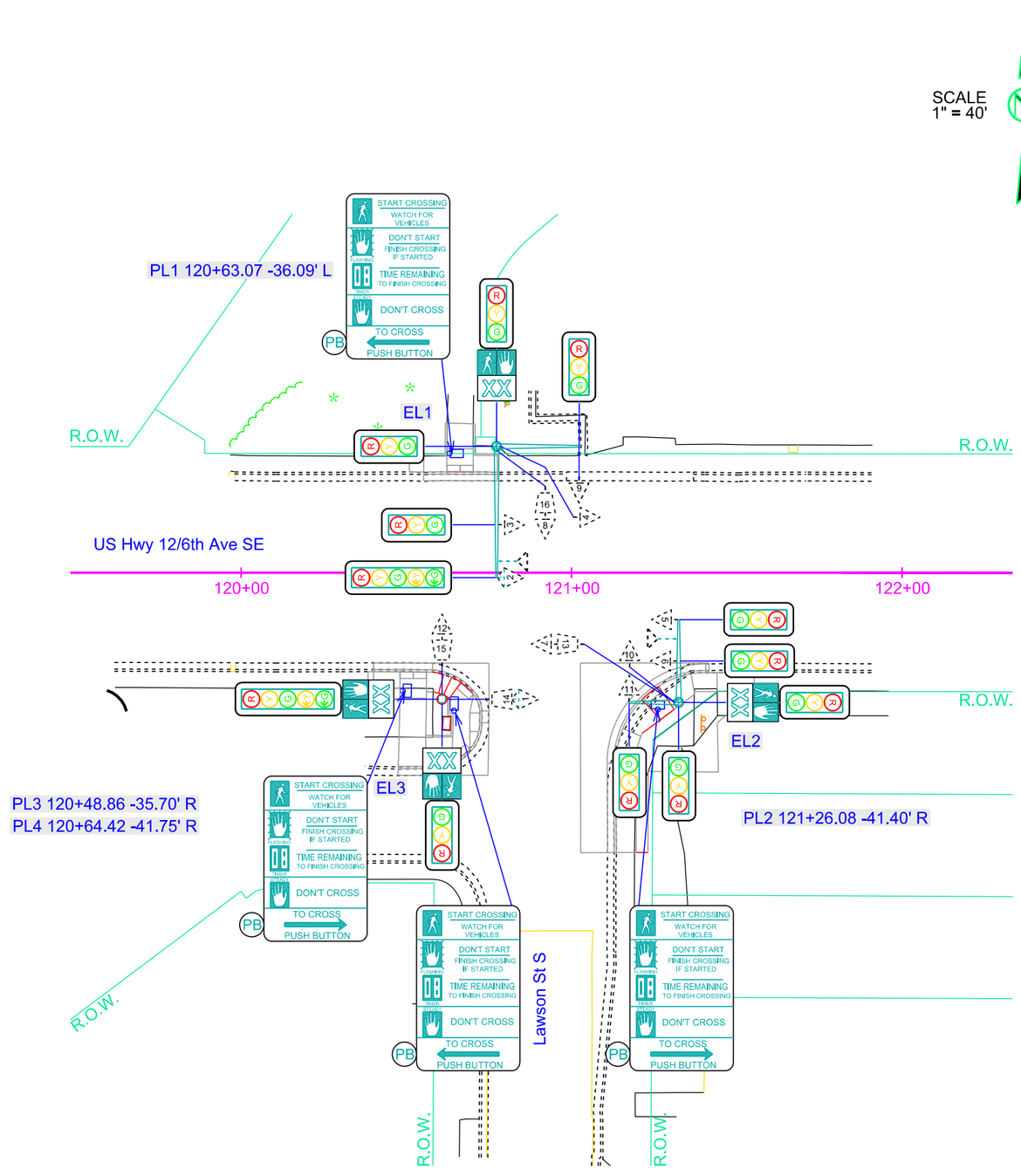
Revised 06/16/2025 DLM

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & LAWSON ST S

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS
Remove Pedesrian Push Button Pole (PL2)	1	EACH

REMOVE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
(PB)	Accessible Pedestrian Signal (PL1 - PL4)	4
o	Pedestal Signal Pole (EL3)	1

EXISTING ITEMS	
KEY	ITEM
☼	Luminaire Pole with Mounted Signal Heads (EL3)
	Signal Pole w/25' & 40' Mast Arms & 8' Lumin Arm (EL1)
	Signal Pole w/15' & 25' Mast Arms & 8' Lumin Arm (EL2)
•	Roadway Luminaire, 400w with P.E. (EL1,EL2)
	3 Section Vehicle Signal Head (3-12)
	5 Section Vehicle Signal Head (1, 2)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
(PB)	Accessible Pedestrian Signal
	Pedestrian Signal Head (13-16)
	Pedestrian Crossing Sign R10-3b (Left - 2/Right - 2)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	62	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

EXISTING CONDUIT LAYOUT

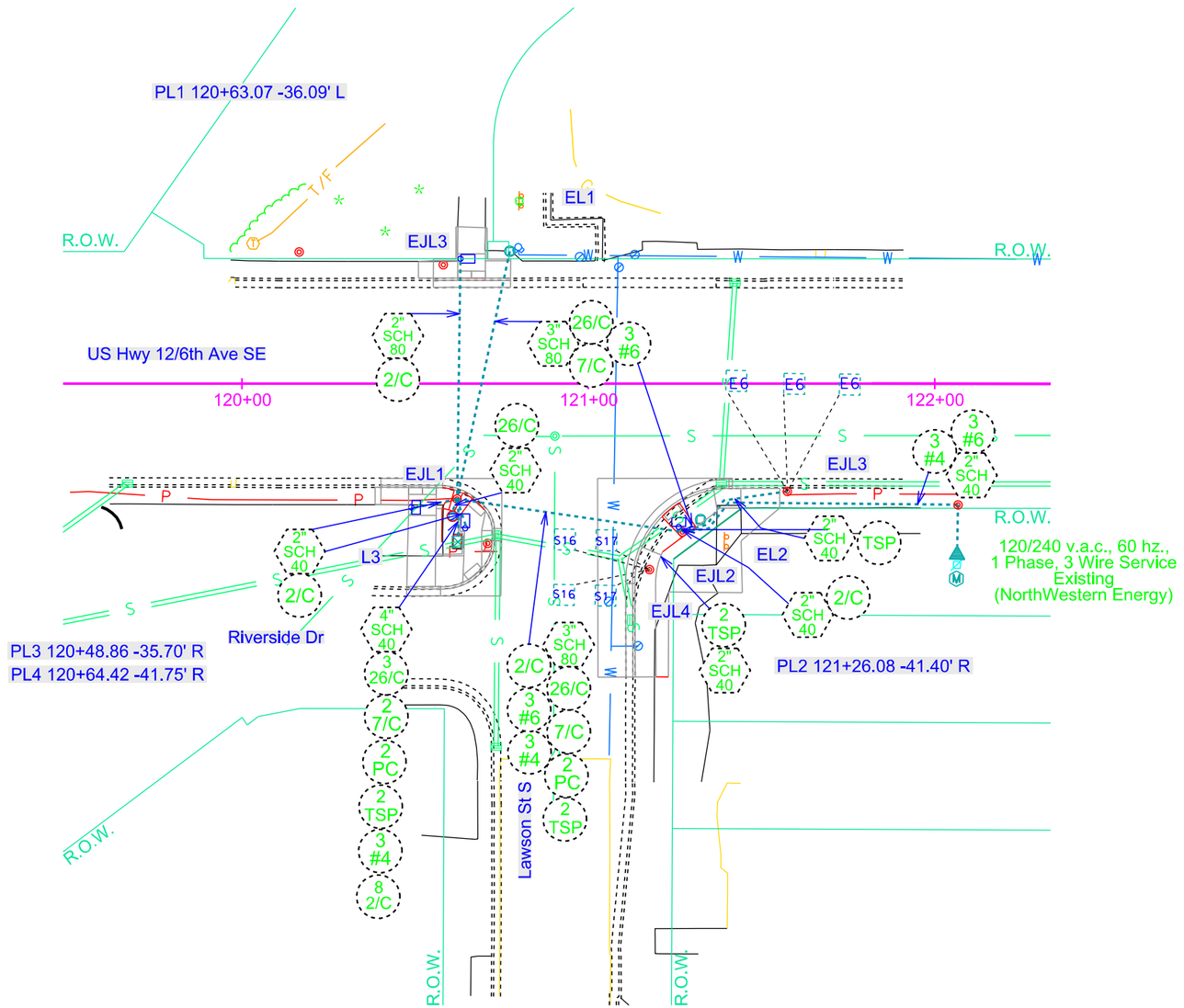
US HWY 12/6TH AVE SE & LAWSON ST S

EXISTING ITEMS	
KEY	ITEM
	Detector Loop
M	Meter Socket
	Power Pole
	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2" SCH 40	2" Rigid Conduit, Schedule 40
4" SCH 40	4" Rigid Conduit, Schedule 40
3" SCH 80	3" Rigid Conduit, Schedule 80
#4	1/C #4 AWG Copper Wire
#6	1/C #6 AWG Copper Wire
2/C	2/C #14 AWG Copper Tray Cable, K2
7/C	7/C #14 AWG Copper Tray Cable, K2
26/C	26/C #14 AWG Copper Tray Cable, K2
TSP	#16 AWG Copper Twisted Shielded Pair
PC	Preemption Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJL1,EJL2)	2	EACH
#4	1/C #4 AWG Copper Wire	1095	FT
#6	1/C #6 AWG Copper Wire	1470	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	370	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	255	FT
26/C	26/C #14 AWG Copper Tray Cable, K2	310	FT
TSP	#16 AWG Copper Twisted Shielded Pair	450	FT
PC	Preemption Cable	285	FT

SCALE
1" = 40'

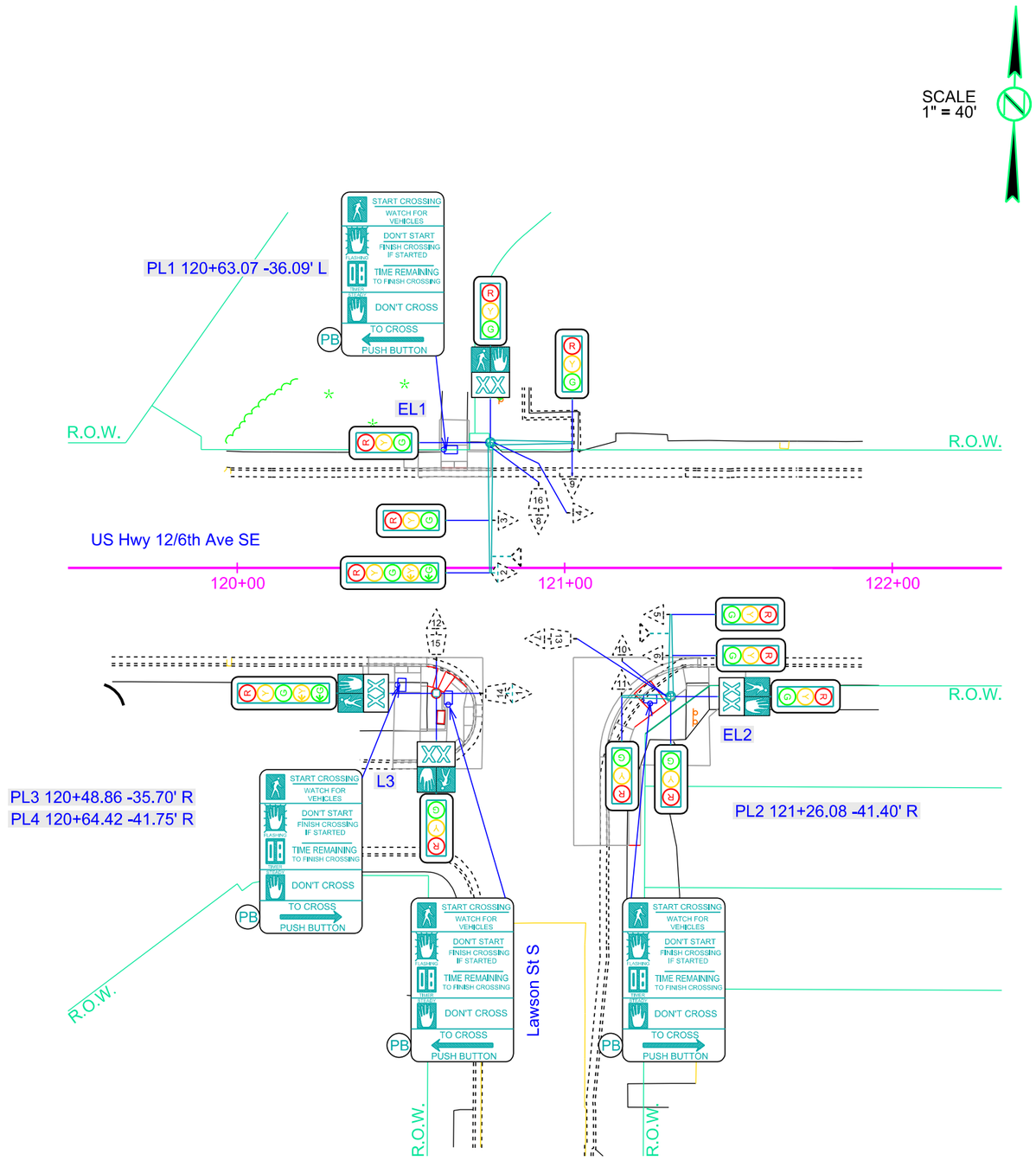


SIGNAL LAYOUT

US HWY 12/6TH AVE SE & LAWSON ST S

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
○	Pedestal Signal Pole (L3)	1	EACH
(PB)	Accessible Pedestrian Signal (PL1-PL4)	4	EACH
	RELOCATE SIGNAL EQUIPMENT	LUMP SUM	LS
⌄	Pedestrian Push Button Pole (PL2)	2	EACH

RELOCATE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
	3 SECTION VEHICLE SIGNAL HEAD (12)	1
	5 SECTION VEHICLE SIGNAL HEAD (1)	1
	PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER (14,15)	2



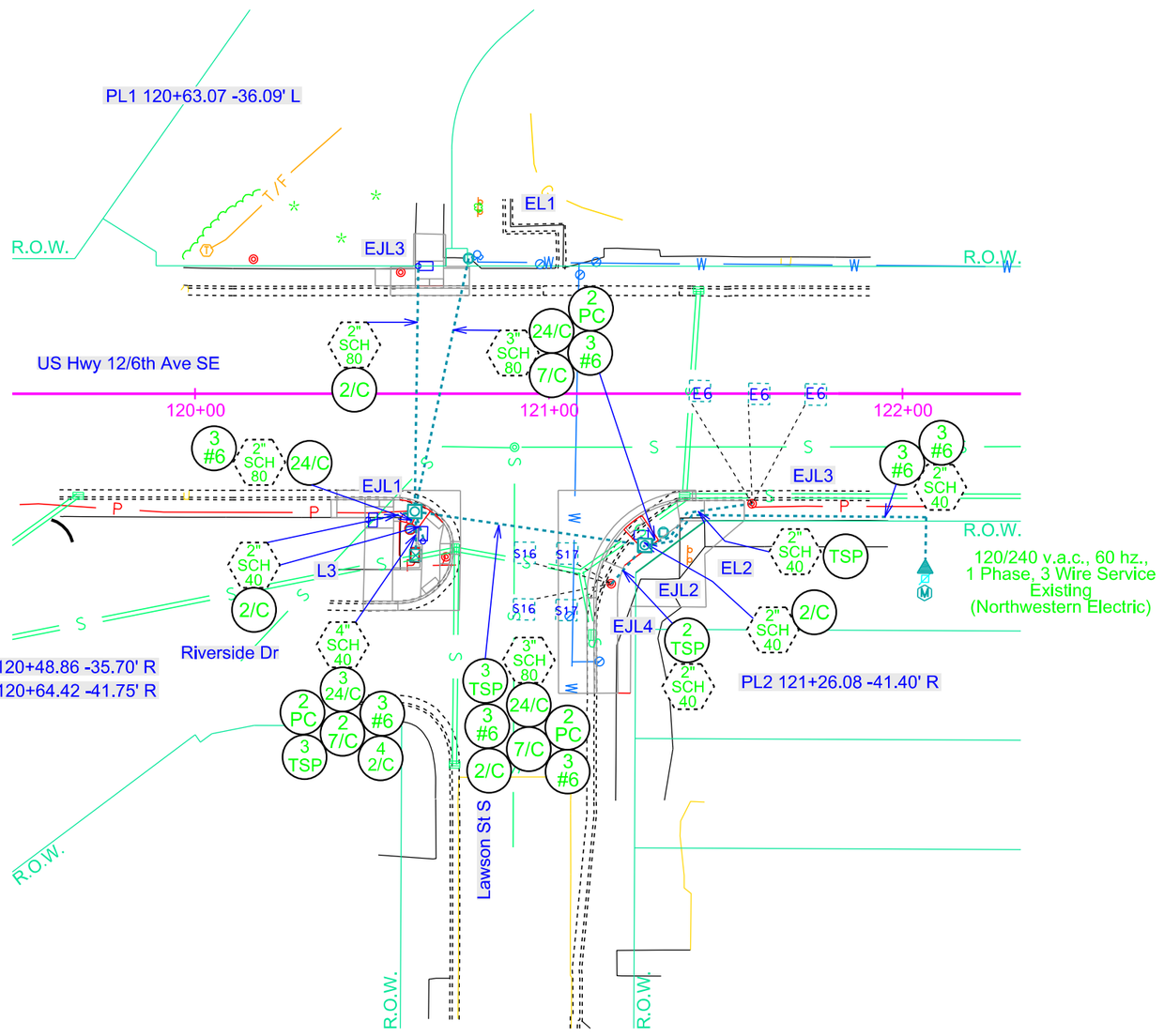
Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	64	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

CONDUIT LAYOUT
US HWY 12/6TH AVE SE & LAWSON ST S

SCALE
1" = 40'



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	Type 3 Electrical Junction Box (EJL1, EJL2)	2	EACH
#6	1/C #6 AWG Copper Wire	2230	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	370	FT
4/C	4/C #14 AWG Copper Tray Cable, K2	45	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	255	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	310	FT
TSP	Twisted Sheilded Pair	450	FT
PC	Preemption Cable	285	FT

EXISTING SIGNAL LAYOUT
US HWY 12/6TH AVE SE & ROOSEVELT ST S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	65	92
Plotting Date: 08/13/2025			

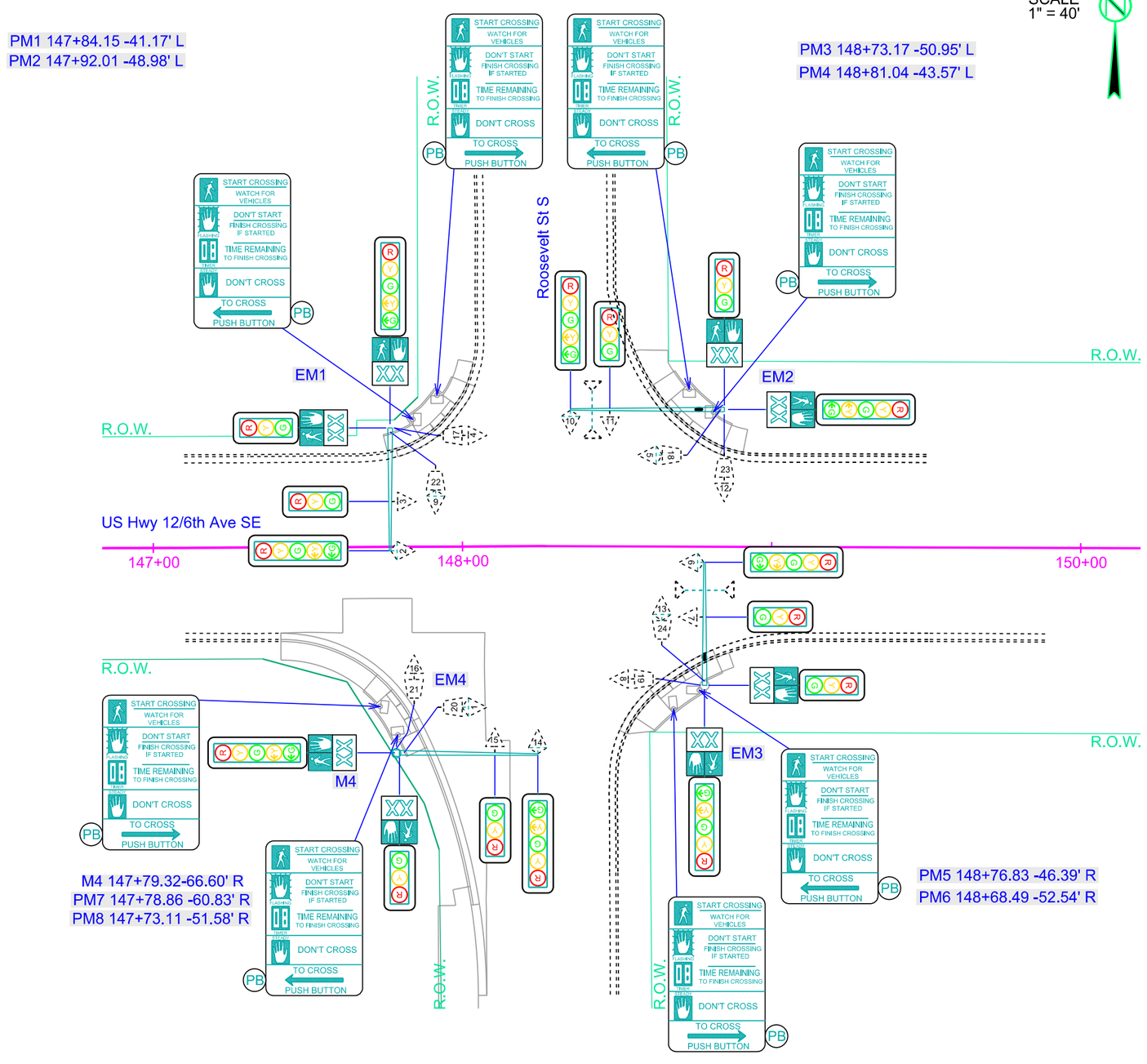
Revised 06/16/2025 DLM

SCALE
1" = 40'

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT		
KEY	ITEM	EST QUANT
PB	Accessible Pedestrian Signal (PM1 - PM8)	8

EXISTING ITEMS	
KEY	ITEM
	Signal Pole w/40' Mast Arm (EM1)
	Signal Pole w/45' Mast Arm (EM4)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EM3)
	Signal Pole w/50' Mast Arm & 8' Lumin Arm (EM2)
	Roadway Luminaire, 400w with P.E. (EM2,EM3)
	3 Section Vehicle Signal Head (3, 4, 7, 8, 11, 12, 15, 16)
	5 Section Vehicle Signal Head (1, 2, 5, 6, 9, 10, 13, 14)
	Optical Detector
PB	Accessible Pedestrian Signal
	Pedestrian Signal Head w/Countdown Timer (17-24)
	Pedestrian Crossing Sign R10-3e (Left - 4/Right - 4)



Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	66	92
Plotting Date: 08/13/2025			

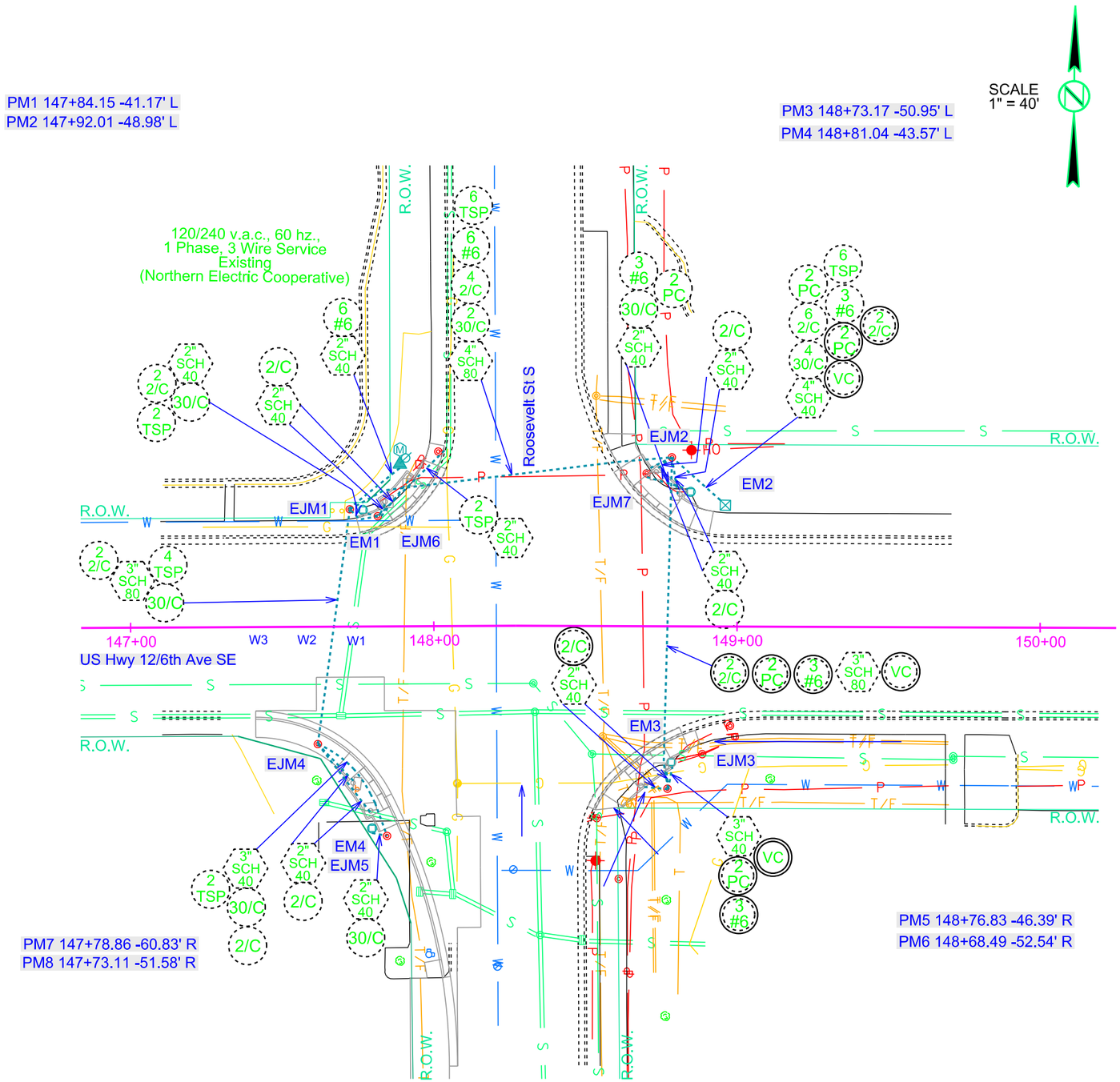
Revised 06/16/2025 DLM

EXISTING CONDUIT LAYOUT
US HWY 12/6TH AVE SE & ROOSEVELT ST S

EXISTING ITEMS	
KEY	ITEM
M	Meter Socket
	Wood Utility Pole
	Electrical Service Cabinet
	Electrical Junction Box
	Traffic Signal Controller
2" SCH 40	2" Rigid Conduit, Schedule 40
4" SCH 40	4" Rigid Conduit, Schedule 40
3" SCH 80	3" Rigid Conduit, Schedule 80
4" SCH 80	4" Rigid Conduit, Schedule 80
#6 #6	1/C #6 AWG Copper Wire
2/C 2/C	2/C #14 AWG Copper Tray Cable, K2
30/C	30/C #14 AWG Copper Tray Cable, K2
PC PC	Preemption Cable
VC	Video Cable

ESTIMATE OF QUANTITIES		
ITEM	EST QUANT	UNIT
Remove Signal Equipment	Lump Sum	LS

REMOVE SIGNAL EQUIPMENT			
KEY	ITEM	EST QUANT	UNIT
	Electrical Junction Box (EJM1)	1	EACH
#6	1/C #6 AWG Copper Wire	1215	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	1140	FT
30/C	30/C #14 AWG Copper Tray Cable, K2	570	FT
PC	Preemption Cable	170	FT



SIGNAL LAYOUT

US HWY 12/6TH AVE SE & ROOSEVELT ST S

Revised: 8/13/25 MD

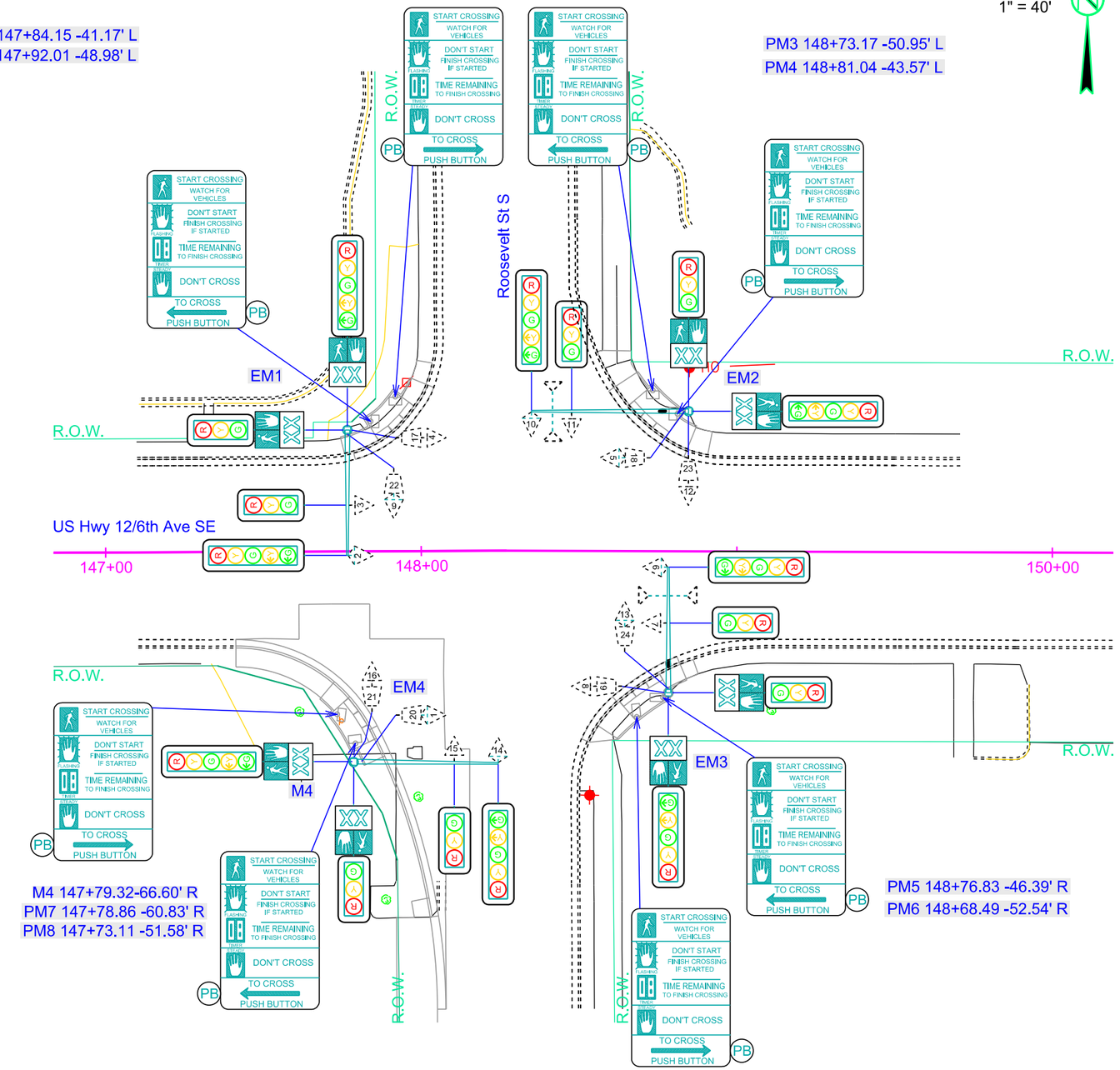
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	67	92

Plotting Date: 08/13/2025

Revised 06/16/2025 DLM

SCALE
1" = 40'

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
PB	Accessible Pedestrian Signal (PM1-PM8)	8	EACH

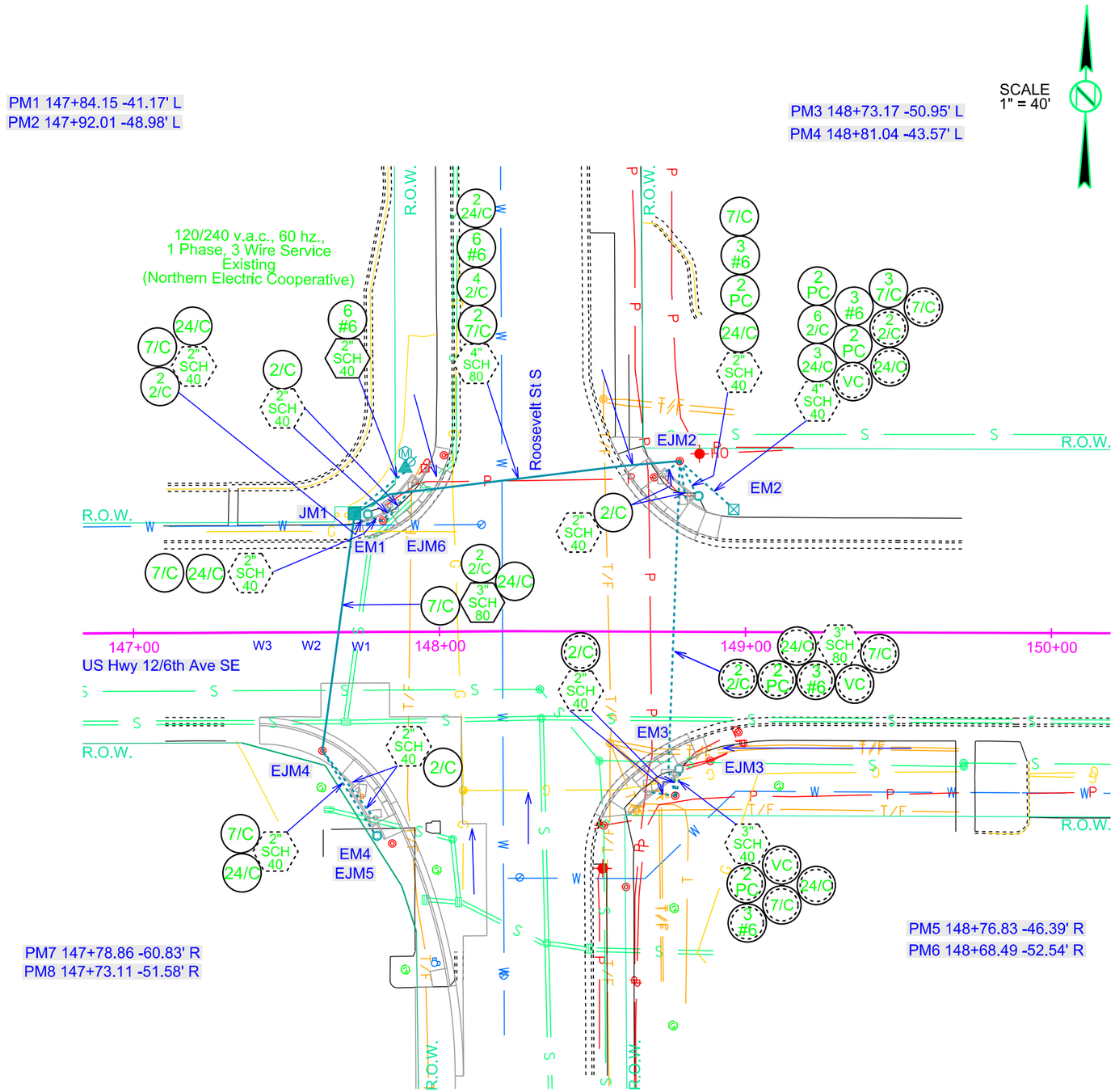


Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	68	92
Plotting Date: 08/13/2025			

Revised 06/16/2025 DLM

CONDUIT LAYOUT
US HWY 12/6TH AVE SE & ROOSEVELT ST S



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
▣	Type 3 Electrical Junction Box (JM1)	1	EACH
#6	1/C #6 AWG Copper Wire	1215	FT
2/C	2/C #14 AWG Copper Tray Cable, K2	1140	FT
7/C	7/C #14 AWG Copper Tray Cable, K2	570	FT
24/C	24/C #14 AWG Copper Tray Cable, K2	570	FT
PC	Preemption Cable	170	FT

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	69	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & 10TH ST S

POLE: EA1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
N	Black	BLACK	N	2	6
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
N	Black/Blue	BLACK	N	16	6P
11R	Yellow/Red	RED	DW	16	6P
11G	Orange/Blue	BLUE	W	16	6P
N	Black/Orange	BLACK	N	21	4P
10R	Red/Orange	RED	DW	21	4P
10G	Blue/Orange	BLUE	W	21	4P
	Yellow				
	Brown				
	Brown/Red				
	Red/Blue				
	Yellow/Blue				
	Brown/Blue				

POLE: EA2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Black/Red	RED	R	5	2
2Y	Orange/Red	ORANGE	Y	5	2
2G	Blue/Red	BLUE	G	5	2
N	Brown/Black	BLAK	N	5	2
8R	Red	RED	R	10	4
8Y	Orange	ORANGE	Y	10	4
8G	Blue	BLUE	G	10	4
N	Black	BLACK	N	10	4
8R	Red/Black	RED	R	11	4
8Y	Orange/Black	ORANGE	Y	11	4
8G	Blue/Black	BLUE	G	11	4
N	Yellow/Black	BLACK	N	11	4
N	Black/Blue	BLACK	N	17	6P
11R	Brown/Red	RED	DW	17	6P
11G	Red/Blue	BLUE	W	17	6P
N	Black/Orange	BLACK	N	22	8P
12R	Red/Orange	RED	DW	22	8P
12G	Orange/Blue	BLUE	W	22	8P
	Yellow				
	Brown				
	Yellow/Red				
	Yellow/Blue				
	Brown/Blue				
	Blue/Orange				

POLE: EA3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
N	Black	BLACK	N	6	2
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
4R	Yellow/Red	RED	R	13	4
4Y	Orange/Blue	ORANGE	Y	13	4
4G	Red/Blue	BLUE	G	13	4
N	Black/Blue	BLACK	N	13	4
N	Black/Orange	BLACK	N	18	2P
9R	Brown/Red	RED	DW	18	2P
9G	Yellow/Blue	BLUE	W	18	2P
	Yellow				
	Brown				
	Brown/Blue				
	Red/Orange				
	Blue/Orange				

POLE: EA4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Black/Red	RED	R	1	6
6Y	Orange/Red	ORANGE	Y	1	6
6G	Blue/Red	BLUE	G	1	6
N	Brown/Black	BLACK	N	1	6
6R	Red	RED	R	14	4
6Y	Orange	ORANGE	Y	14	4
6G	Blue	BLUE	G	14	4
N	Black	BLACK	N	14	4
4R	Red/Black	RED	R	15	4
4Y	Orange/Black	ORANGE	Y	15	4
4G	Blue/Black	BLUE	G	15	4
N	Yellow/Black	BLACK	N	15	4
N	Black/Blue	BLACK	N	19	2P
9R	Red/Blue	RED	DW	19	2P
9G	Orange/Blue	BLUE	W	19	2P
N	Black/Orange	BLACK	N	20	4P
10R	Red/Orange	RED	DW	20	4P
10G	Blue/Orange	BLUE	W	20	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EA1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
N	Black	BLACK	N	9	8
	Yellow				
	Brown				
	Red/Black				

POLE: EA3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
N	Black	BLACK	N	23	8P
12R	Red	RED	DW	23	8P
12G	Blue	BLUE	W	23	8P
	Orange				
	Yellow				
	Brown				
	Red/Black				

PLOT SCALE - 1:200

PLOT NAME - 1

PLOTTED FROM - TRAB17879B

FILE - ...\PRJ\BRWN09V9\BORDER.DGN

WIRING DIAGRAM

US HWY 12/6TH AVE SW & 5TH ST S

POLE: EB1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
N	Black	BLACK	N	2	6
1Y	Yellow	YELLOW	YA	2	1
1G	Brown	BROWN	GA	2	1
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
N	Black/Blue	BLACK	N	17	6P
11R	Yellow/Red	RED	DW	17	6P
11G	Red/Blue	BLUE	W	17	6P
N	Black/Orange	BLACK	N	22	6P
10R	Brown/Red	RED	DW	22	4P
10G	Orange/Blue	BLUE	W	22	4P
	Yellow/Blue				
	Brown/Blue				
	Red/Orange				
	Blue/Orange				

POLE: EB2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Black/Red	RED	R	5	2
2Y	Orange/Red	ORANGE	Y	5	2
2G	Blue/Red	BLUE	G	5	2
N	Brown/Black	BLACK	N	5	2
8R	Red	RED	R	10	8
8Y	Orange	ORANGE	Y	10	8
8G	Blue	BLUE	G	10	8
N	Black	BLACK	N	10	8
8R	Red/Black	RED	R	11	8
8Y	Orange/Black	ORANGE	Y	11	8
8G	Blue/Black	BLUE	G	11	8
N	Yellow/Black	BLACK	N	11	8
N	Black/Blue	BLACK	N	18	6P
11R	Yellow/Red	RED	DW	18	6P
11G	Red/Blue	BLUE	W	18	6P
N	Black/Orange	BLACK	N	23	8P
12R	Red/Orange	RED	DW	23	8P
12G	Blue/Orange	BLUE	W	23	8P
	Yellow				
	Brown				
	Brown/Red				
	Orange/Blue				
	Yellow/Blue				
	Brown/Blue				

POLE: EB3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	7	2
2Y	Orange	ORANGE	Y	7	2
2G	Blue	BLUE	G	7	2
N	Black	BLACK	N	7	2
2R	Red/Black	RED	R	8	2
2Y	Orange/Black	ORANGE	Y	8	2
2G	Blue/Black	BLUE	G	8	2
N	Yellow/Black	BLACK	N	8	2
4R	Black/Red	RED	R	13	4
4Y	Orange/Red	ORANGE	Y	13	4
4G	Blue/Red	BLUE	G	13	4
N	Brown/Black	BLACK	N	13	4
N	Black/Blue	BLACK	N	19	2P
9R	Yellow/Red	RED	DW	19	2P
9G	Red/Blue	BLUE	W	19	2P
N	Black/Orange	BLACK	N	24	8P
12R	Red/Orange	RED	DW	24	8P
12G	Blue/Orange	BLUE	W	24	8P
	Yellow				
	Brown				
	Brown/Red				
	Orange/Blue				
	Yellow/Blue				
	Brown/Blue				

POLE: EB4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
4R	Red	RED	R	14	4
4Y	Orange	ORANGE	Y	14	4
4G	Blue	BLUE	G	14	4
N	Black	BLACK	N	14	4
4R	Red/Black	RED	R	15	4
4Y	Orange/Black	ORANGE	Y	15	4
4G	Blue/Black	BLUE	G	15	4
N	Yellow/Black	BLACK	N	15	4
4R	Black/Red	RED	R	16	4
4Y	Orange/Red	ORANGE	Y	16	4
4G	Blue/Red	BLUE	G	16	4
N	Brown/Black	BLACK	N	16	4
N	Black/Orange	BLACK	N	20	2P
9R	Red/Orange	RED	DW	20	2P
9G	Blue/Orange	BLUE	W	20	2P
N	Black/Blue	BLACK	N	21	4P
10R	Red/Blue	RED	DW	21	4P
10G	Orange/Blue	BLUE	W	21	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EB1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	9	8
6Y	Orange	ORANGE	Y	9	8
6G	Blue	BLUE	G	9	8
N	Black	BLACK	N	9	8
	Yellow				
	Brown				
	Red/Black				

POLE: EB2 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
8R	Red	RED	R	12	8
8Y	Orange	ORANGE	Y	12	8
8G	Blue	BLUE	G	12	8
N	Black	BLACK	N	12	8
	Yellow				
	Brown				
	Red/Black				

POLE: EB3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
N	Black	N	N	6	2
5Y	Yellow	YELLOW	YA	6	5
5G	Brown	BROWN	GA	6	5
	Red/Black				

POLE: EB4 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
N	Black	BLACK	N	1	6
1Y	Yellow	YELLOW	YA	1	1
1G	Brown	BROWN	GA	1	1
	Red/Black				

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	71	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & 2ND ST S

POLE: EC1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	3	6
6Y	Orange	ORANGE	Y	3	6
6G	Blue	BLUE	G	3	6
N	Black	BLACK	N	3	6
6R	Red/Black	RED	R	4	6
6Y	Orange/Black	ORANGE	Y	4	6
6G	Blue/Black	BLUE	G	4	6
N	Yellow/Black	BLACK	N	4	6
8R	Black/Red	RED	R	9	8
8Y	Orange/Red	YELLOW	Y	9	8
8G	Blue/Red	BLUE	G	9	8
N	Brown/Black	BLACK	N	9	8
11R	Yellow/Red	RED	DW	15	6P
11G	Orange/Blue	BLUE	W	15	6P
N	Black/Blue	BLACK	N	15	6P
10R	Red/Orange	RED	DW	21	4P
10G	Blue/Orange	BLUE	W	21	4P
N	Black/Orange	BLACK	N	21	4P
	Yellow				
	Brown				
	Brown/Red				
	Red/Blue				
	Yellow/Blue				
	Brown/Blue				

POLE: EC2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
5Y	Yellow	YELLOW	YA	5	5
5G	Brown	BROWN	GA	5	5
N	Black	BLACK	N	5	2
8R	Red/Black	RED	R	10	8
8Y	Orange/Black	ORANGE	Y	10	8
8G	Blue/Black	BLUE	G	10	8
N	Yellow/Black	BLACK	N	10	8
8R	Black/Red	RED	R	11	8
8Y	Orange/Red	ORANGE	Y	11	8
8G	Blue/Red	BLUE	G	11	8
N	Brown/Black	BLACK	N	11	8
11R	Red/Orange	RED	DW	16	6P
11G	Blue/Orange	BLUE	W	16	6P
N	Black/Orange	BLACK	N	16	6P
12R	Brown/Red	RED	DW	22	8P
12G	Brown/Blue	BLUE	W	22	8P
N	Black/Blue	BLACK	N	22	8P
	Yellow/Red				
	Red/Blue				
	Orange/Blue				
	Yellow/Blue				

POLE: EC3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
5Y	Yellow	YELLOW	YA	6	5
5G	Brown	BROWN	GA	6	5
N	Black	BLACK	N	6	2
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
9R	Red/Orange	RED	DW	17	2P
9G	Blue/Orange	BLUE	W	17	2P
N	Black/Orange	BLACK	N	17	2P
12R	Brown/Red	RED	DW	23	8P
12G	Brown/Blue	BLUE	W	23	8P
N	Black/Blue	BLACK	N	23	8P
	Yellow/Red				
	Red/Blue				
	Orange/Blue				
	Yellow/Blue				

POLE: EC4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
4R	Red/Black	RED	R	13	4
4Y	Orange/Black	ORANGE	Y	13	4
4G	Blue/Black	BLUE	G	13	4
7Y	Yellow/Black	YELLOW	YA	13	7
7G	Brown/Black	BROWN	GA	13	7
N	Black/Red	BLACK	N	13	4
4R	Red	RED	R	14	4
4Y	Orange	ORANGE	Y	14	4
4G	Blue	BLUE	G	14	4
13Y	Yellow	YELLOW	YA	14	OLA
13G	Brown	BROWN	GA	14	OLA
N	Black	BLACK	N	14	4
9R	Red/Orange	RED	DW	18	2P
9G	Blue/Orange	BLUE	W	18	2P
N	Black/Orange	BLACK	N	18	2P
10R	Red/Blue	RED	DW	20	4P
10G	Orange/Blue	BLUE	W	20	4P
N	Black/Blue	BLACK	N	20	4P
	Blue/Red				
	Orange/Red				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EC1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
1Y	Yellow	YELLOW	YA	2	1
1R	Brown	BROWN	GA	2	1
N	Black	BLACK	N	2	6
	Red/Black				

POLE: EC3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
4R	Red	RED	R	12	4
4Y	Orange	ORANGE	Y	12	4
4G	Blue	BLUE	G	12	4
N	Black	BLACK	N	12	4
	Yellow				
	Brown				
	Red/Black				

POLE: EC4 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANG	Y	1	6
6G	Blue	BLUE	G	1	6
1Y	Yellow	YELLOW	YA	1	1
1G	Brown	BROWN	GA	1	1
N	Black	BLACK	N	1	6
	Red/Black				

PLOT SCALE - 1:200

PLOT NAME - 1

FILE - ...\PRJ\BRWN09V9\BORDER.DGN

PLOTTED FROM - TRAB17879B

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	72	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & 1ST ST S

POLE: ED1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
N	Black	BLACK	N	2	6
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
11R	Red/Orange	RED	DW	12	6P
11G	Blue/Orange	BLUE	W	12	6P
N	Black/Orange	BLACK	N	12	6P
10R	Red/Blue	RED	DW	17	4P
10G	Orange/Blue	BLUE	W	17	4P
N	Black/Blue	BLACK	N	17	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: ED2 CABLE SIZE: 19/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
N	Black	BLACK	N	5	2
11R	Red/Blue	RED	DW	13	6P
11G	Orange/Blue	BLUE	W	13	6P
N	Black/Blue	BLACK	N	13	6P
12R	Black/Red	RED	DW	18	8P
12G	Blue/Red	BLUE	W	18	8P
N	Brown/Black	BLACK	N	18	8P
	Yellow				
	Brown				
	Red/Black				
	Blue/Black				
	Orange/Black				
	Yellow/Black				
	Orange/Red				
	Yellow/Red				
	Brown/Red				

POLE: ED3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
N	Black	BLACK	N	6	2
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
4R	Red/Blue	RED	R	9	4
4Y	Orange/Blue	ORANGE	Y	9	4
4G	Yellow/Blue	BLUE	G	9	4
N	Black/Blue	BLACK	N	9	4
9R	Red/Orange	RED	DW	14	2P
9G	Blue/Orange	BLUE	W	14	2P
N	Black/Orange	BLACK	N	14	2P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Brown/Blue				

POLE: ED4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
N	Black	BLACK	N	1	6
4R	Red/Black	RED	R	10	4
4Y	Orange/Black	ORANGE	Y	10	4
4G	Blue/Black	BLUE	G	10	4
N	Yellow/Black	BLACK	N	10	4
4R	Black/Red	RED	R	11	4
4Y	Orange/Red	ORANGE	Y	11	4
4G	Blue/Red	BLUE	G	11	4
N	Brown/Black	BLACK	N	11	4
9R	Red/Orange	RED	DW	15	2P
9G	Blue/Orange	BLUE	W	15	2P
N	Black/Orange	BLACK	N	15	2P
10R	Red/Blue	RED	DW	16	4P
10G	Orange/Blue	BLUE	W	16	4P
N	Black/Blue	BLACK	N	16	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: ED3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
12R	Red	RED	DW	18	8P
12G	Blue	BLUE	W	18	8P
N	Black	BLACK	N	18	8P
	Orange				
	Yellow				
	Brown				
	Red/Black				

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	73	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Main ST S

POLE: EE1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	3	6
6Y	Orange	ORANGE	Y	3	6
6G	Blue	BLUE	G	3	6
N	Black	BLACK	N	3	6
6R	Red/Black	RED	R	4	6
6Y	Orange/Black	ORANGE	Y	4	6
6G	Blue/Black	BLUE	G	4	6
N	Yellow/Black	BLACK	N	4	6
8R	Black/Red	RED	R	9	8
8Y	Orange/Red	ORANGE	Y	9	8
8G	Blue/Red	BLUE	G	9	8
N	Brown/Black	BLACK	N	9	8
11R	Red/Orange	RED	DW	12	6P
11G	Blue/Orange	BLUE	W	12	6P
N	Black/Orange	BLACK	N	12	6P
10R	Red/Blue	RED	DW	16	4P
10G	Orange/Blue	BLUE	W	16	4P
N	Black/Blue	BLACK	N	16	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EE2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
5Y	Yellow	YELLOW	YA	5	5
5G	Brown	BROWN	GA	5	5
N	Black	BLACK	N	5	2
8R	Red/Black	RED	R	10	8
8Y	Orange/Black	ORANGE	Y	10	8
8G	Blue/Black	BLUE	G	10	8
N	Yellow/Black	BLACK	N	10	8
8R	Black/Red	RED	R	11	8
8Y	Orange/Red	ORANGE	Y	11	8
8G	Blue/Red	BLUE	G	11	8
N	Brown/Black	BLACK	N	11	8
11R	Red/Orange	RED	DW	13	6P
11G	Blue/Orange	BLUE	W	13	6P
N	Black/Orange	BLACK	N	13	6P
12R	Red/Blue	RED	DW	17	8P
12G	Orange/Blue	BLUE	W	17	8P
N	Black/Blue	BLACK	N	17	8P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EE3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
5Y	Yellow	YELLOW	YA	6	5
5G	Brown	BROWN	GA	6	5
N	Black	BLACK	N	6	2
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
9R	Red/Blue	RED	DW	14	2P
9G	Orange/Blue	BLUE	W	14	2P
N	Black/Blue	BLACK	N	14	2P
8R	Red/Orange	RED	DW	18	8P
8G	Blue/Orange	BLUE	W	18	8P
N	Black/Orange	BLACK	N	18	8P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EE4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
1Y	Yellow	YELLOW	YA	1	1
1G	Brown	BROWN	GA	1	1
N	Black	BLACK	N	1	6
9R	Red/Orange	RED	DW	15	2P
9G	Blue/Orange	BLUE	W	15	2P
N	Black/Orange	BLACK	N	15	2P
4R	Black/Red	RED	DW	19	4P
4G	Blue/Red	BLUE	W	19	4P
N	Brown/Black	BLACK	N	19	4P
	Red/Black				
	Blue/Black				
	Orange/Black				
	Yellow/Black				
	Orange/Red				
	Yellow/Red				
	Brown/Red				
	Black/Blue				
	Red/Blue				
	Orange/Blue				
	Yellow/Blue				
	Brown/Blue				

POLE: EE1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
1Y	Yellow	YELLOW	YA	2	1
1G	Brown	BROWN	GA	2	1
N	Black	BLACK	N	2	6
	Red/Black				

PLOT SCALE - 1:200

PLOT NAME - 1

FILE - ...\PRJ\BRWN0919\9\BORDER.DGN

PLOTTED FROM - TRAB17879B

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	74	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Lincoln ST S

POLE: EF1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
N	Black	BLACK	N	2	6
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
11R	Red/Orange	RED	DW	12	6P
11G	Blue/Orange	BLUE	W	12	6P
N	Black/Orange	BLACK	N	12	6P
10R	Red/Blue	RED	DW	16	4P
10G	Orange/Blue	BLUE	W	16	4P
N	Black/Blue	BLACK	N	16	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EF2 CABLE SIZE: 19/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
N	Black	BLACK	N	5	2
11R	Red/Blue	RED	DW	13	6P
11G	Orange/Blue	BLUE	W	13	6P
N	Black/Blue	BLACK	N	13	6P
12R	Red/Black	RED	DW	17	8P
12G	Blue/Black	BLUE	W	17	8P
N	Orange/Black	BLACK	N	17	8P
	Yellow				
	Brown				
	Yellow/Black				
	Brown/Black				
	Black/Red				
	Blue/Red				
	Orange/Red				
	Yellow/Red				
	Brown/Red				

POLE: EF3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	7	2
2Y	Orange	ORANGE	Y	7	2
2G	Blue	BLUE	G	7	2
N	Black	BLACK	N	7	2
2R	Red/Black	RED	R	8	2
2Y	Orange/Black	ORANGE	Y	8	2
2G	Blue/Black	BLUE	G	8	2
N	Yellow/Black	BLACK	N	8	2
4R	Black/Red	RED	R	9	4
4Y	Orange/Red	ORANGE	Y	9	4
4G	Blue/Red	BLUE	G	9	4
N	Brown/Black	BLACK	N	9	4
9R	Red/Orange	RED	DW	14	2P
9G	Blue/Orange	BLUE	W	14	2P
N	Black/Orange	BLACK	N	14	2P
12R	Red/Blue	RED	DW	18	8P
12G	Orange/Blue	BLUE	W	18	8P
N	Black/Blue	BLACK	N	18	8P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EF4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
N	Black	BLACK	N	1	6
4R	Red/Black	RED	R	11	4
4Y	Orange/Black	ORANGE	Y	11	4
4G	Blue/Black	BLUE	G	11	4
N	Yellow/Black	BLACK	N	11	4
4R	Black/Red	RED	R	10	4
4Y	Orange/Red	ORANGE	Y	10	4
4G	Blue/Red	BLUE	G	10	4
N	Brown/Black	BLACK	N	10	4
9R	Red/Orange	RED	DW	15	2P
9G	Blue/Orange	BLUE	W	15	2P
N	Black/Orange	BLACK	N	15	2P
10R	Red/Blue	RED	DW	19	4P
10G	Orange/Blue	BLUE	W	19	4P
N	Black/Blue	BLACK	N	19	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EF3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
N	Black	BLACK	N	6	2
	Yellow				
	Brown				
	Red/Black				

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	75	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Washington ST S

POLE: EG1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
N	Black	BLACK	N	2	6
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
11R	Red/Orange	RED	DW	15	6P
11G	Blue/Orange	BLUE	W	15	6P
N	Black/Orange	BLACK	N	15	6P
10R	Red/Blue	RED	DW	20	4P
10G	Orange/Blue	BLUE	W	20	4P
N	Black/Blue	BLACK	N	20	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EG2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
N	Black	BLACK	N	5	2
8R	Yellow/Red	RED	R	10	8
8Y	Orange/Red	ORANGLE	Y	10	8
8G	Blue/Red	BLUE	G	10	8
N	Black/Red	BLACK	N	10	8
8R	Red/Orange	RED	R	11	8
8Y	Black/Orange	ORANGE	Y	11	8
8G	Blue/Orange	BLUE	G	11	8
N	Brown/Black	BLACK	N	11	8
11R	Red/Blue	RED	DW	16	6P
11G	Orange/Blue	BLUE	W	16	6P
N	Black/Blue	BLACK	N	16	6P
12R	Red/Black	RED	DW	21	8P
12G	Blue/Black	BLUE	W	21	8P
N	Orange/Black	BLACK	N	21	8P
	Yellow/Black				
	Yellow				
	Brown				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EG3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	7	2
2Y	Orange	ORANGE	Y	7	2
2G	Blue	BLUE	G	7	2
N	Black	BLACK	N	7	2
2R	Red/Black	RED	R	8	2
2Y	Orange/Black	ORANGE	Y	8	2
2G	Blue/Black	BLUE	G	8	2
N	Yellow/Black	BLACK	N	8	2
4R	Black/Red	RED	R	12	4
4Y	Orange/Red	ORANGE	Y	12	4
4G	Blue/Red	BLUE	G	12	4
N	Brown/Black	BLACK	N	12	4
9R	Red/Orange	RED	DW	17	2P
9G	Blue/Orange	BLUE	W	17	2P
N	Black/Orange	BLACK	N	17	2P
12R	Red/Blue	RED	DW	22	8P
12G	Orange/Blue	BLUE	W	22	8P
N	Black/Blue	BLACK	N	22	8P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EG4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
N	Black	BLACK	N	1	6
4R	Red/Black	RED	R	13	4
4Y	Orange/Black	ORANGE	Y	13	4
4G	Blue/Black	BLUE	G	13	4
N	Yellow/Black	BLACK	N	13	4
4R	Black/Red	RED	R	14	4
4Y	Orange/Red	ORANGE	Y	14	4
4G	Blue/Red	BLUE	G	14	4
N	Brown/Black	BLACK	N	14	4
9R	Red/Orange	RED	DW	18	2P
9G	Blue/Orange	BLUE	W	18	2P
N	Black/Orange	BLACK	N	18	2P
10R	Red/Blue	RED	DW	19	4P
10G	Orange/Blue	BLUE	W	19	4P
N	Black/Blue	BLACK	N	19	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EG1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
N	Black	BLACK	N	9	8
	Yellow				
	Brown				
	Red/Black				

POLE: EG3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
N	Black	BLACK	N	6	2
	Yellow				
	Brown				
	Red/Black				

PLOT SCALE - 1:200

PLOTTED FROM - TRAB17879B

PLOT NAME - 1

FILE - ...\PRJ\BRWN09V9\BORDER.DGN

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	76	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Kline ST S

POLE: EH1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
N	Black	BLACK	N	2	6
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
11R	Red/Orange	RED	DW	15	6P
11G	Blue/Orange	BLUE	W	15	6P
N	Black/Orange	BLACK	N	15	6P
10R	Red/Blue	RED	DW	20	4P
10G	Orange/Blue	BLUE	W	20	4P
N	Black/Blue	BLACK	N	20	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EH2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
N	Black	BLACK	N	5	2
8R	Yellow/Red	RED	R	10	8
8Y	Orange/Red	ORANGLE	Y	10	8
8G	Blue/Red	BLUE	G	10	8
N	Black/Red	BLACK	N	10	8
8R	Red/Orange	RED	R	11	8
8Y	Black/Orange	ORANGE	Y	11	8
8G	Blue/Orange	BLUE	G	11	8
N	Brown/Black	BLACK	N	11	8
11R	Red/Blue	RED	DW	16	6P
11G	Orange/Blue	BLUE	W	16	6P
N	Black/Blue	BLACK	N	16	6P
12R	Red/Black	RED	DW	21	8P
12G	Blue/Black	BLUE	W	21	8P
N	Orange/Black	BLACK	N	21	8P
	Yellow/Black				
	Yellow				
	Brown				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: 2H3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	7	2
2Y	Orange	ORANGE	Y	7	2
2G	Blue	BLUE	G	7	2
N	Black	BLACK	N	7	2
2R	Red/Black	RED	R	8	2
2Y	Orange/Black	ORANGE	Y	8	2
2G	Blue/Black	BLUE	G	8	2
N	Yellow/Black	BLACK	N	8	2
4R	Black/Red	RED	R	12	4
4Y	Orange/Red	ORANGE	Y	12	4
4G	Blue/Red	BLUE	G	12	4
N	Brown/Black	BLACK	N	12	4
9R	Red/Orange	RED	DW	17	2P
9G	Blue/Orange	BLUE	W	17	2P
N	Black/Orange	BLACK	N	17	2P
12R	Red/Blue	RED	DW	22	8P
12G	Orange/Blue	BLUE	W	22	8P
N	Black/Blue	BLACK	N	22	8P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: 2H4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
N	Black	BLACK	N	1	6
4R	Red/Black	RED	R	13	4
4Y	Orange/Black	ORANGE	Y	13	4
4G	Blue/Black	BLUE	G	13	4
N	Yellow/Black	BLACK	N	13	4
4R	Black/Red	RED	R	14	4
4Y	Orange/Red	ORANGE	Y	14	4
4G	Blue/Red	BLUE	G	14	4
N	Brown/Black	BLACK	N	14	4
9R	Red/Orange	RED	DW	18	2P
9G	Blue/Orange	BLUE	W	18	2P
N	Black/Orange	BLACK	N	18	2P
10R	Red/Blue	RED	DW	19	4P
10G	Orange/Blue	BLUE	W	19	4P
N	Black/Blue	BLACK	N	19	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EH1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
N	Black	BLACK	N	9	8
	Yellow				
	Brown				
	Red/Black				

POLE: EH3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
N	Black	BLACK	N	6	2
	Yellow				
	Brown				
	Red/Black				

PLOT SCALE - 1:200

PLOT NAME - 1

FILE - ...\PRJ\BRWN09V9\BORDER.DGN

PLOTTED FROM - TRAB17879B

WIRING DIAGRAM

US HWY 12/6TH AVE SW & State ST S

POLE: EI1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
3Y	Yellow	YELLOW	YA	9	3
3G	Brown	BROWN	GA	9	3
N	Black	BLACK	N	9	8
11R	Red/Orange	RED	DW	17	6P
11G	Blue/Orange	BLUE	W	17	6P
N	Black/Orange	BLACK	N	17	6P
10R	Red/Blue	RED	DW	22	4P
10G	Orange/Blue	BLUE	W	22	4P
N	Black/Blue	BLACK	N	22	4P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EI2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
8R	Red/Black	RED	R	11	8
8Y	Orange/Black	ORANGE	Y	11	8
8G	Blue/Black	BLUE	G	11	8
N	Yellow/Black	BLACK	N	11	8
8R	Black/Red	RED	R	12	8
8Y	Orange/Red	ORANGE	Y	12	8
8G	Blue/Red	BLUE	G	12	8
N	Brown/Black	BLACK	N	12	8
8R	Red	RED	R	10	8
8Y	Orange	ORANGE	Y	10	8
8G	Blue	BLUE	G	10	8
3Y	Yellow	YELLOW	YA	10	3
3G	Brown	BROWN	GA	10	3
N	Black	BLACK	N	10	8
11R	Red/Orange	RED	DW	18	6P
11G	Blue/Orange	BLUE	W	18	6P
N	Black/Orange	BLACK	N	18	6P
12R	Red/Blue	RED	DW	23	8P
12G	Orange/Blue	BLUE	W	23	8P
N	Black/Blue	BLACK	N	23	8P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EI3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
4R	Red	RED	R	13	4
4Y	Orange	ORANGE	Y	13	4
4G	Blue	BLUE	G	13	4
7Y	Yellow	YELLOW	YA	13	7
7G	Brown	BROWN	GA	13	7
N	Black	BLACK	N	13	4
9R	Red/Orange	RED	DW	19	2P
9G	Blue/Orange	BLUE	W	19	2P
N	Black/Orange	BLACK	N	19	2P
12R	Red/Blue	RED	DW	24	8P
12G	Orange/Blue	BLUE	W	24	8P
N	Black/Blue	BLACK	N	24	8P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EI4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
4R	Red/Black	RED	R	15	4
4Y	Orange/Black	ORANGE	Y	15	4
4G	Blue/Black	BLUE	G	15	4
N	Yellow/Black	BLACK	N	15	4
4R	Black/Red	RED	R	16	4
4Y	Orange/Red	ORANGE	Y	16	4
4G	Blue/Red	BLUE	G	16	4
N	Brown/Black	BLACK	N	16	4
4R	Red	RED	R	14	4
4Y	Orange	ORANGE	Y	14	4
4G	Blue	BLUE	G	14	4
7Y	Yellow	YELLOW	YA	14	7
7G	Brown	BROWN	GA	14	7
N	Black	BLACK	N	14	4
9R	Red/Orange	RED	DW	20	2P
9G	Blue/Orange	BLUE	W	20	2P
N	Black/Orange	BLACK	N	20	2P
10R	Red/Blue	RED	DW	21	4P
10G	Orange/Blue	BLUE	W	21	4P
N	Black/Blue	BLACK	N	21	4P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EI1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
1Y	Yellow	YELLOW	YA	2	1
1G	Brown	BROWN	GA	2	1
N	Black	BLACK	N	2	6
	Red/Black				

POLE: EI2 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
5Y	Yellow	YELLOW	YA	5	5
5G	Brown	BROWN	GA	5	5
N	Black	BLACK	N	5	2
	Red/Black				

POLE: EI3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
5Y	Yellow	YELLOW	YA	6	5
5G	Brown	BROWN	GA	6	5
N	Black	BLACK	N	6	2
	Red/Black				

POLE: EI4 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
1Y	Yellow	YELLOW	YA	1	1
1G	Brown	BROWN	GA	1	1
N	Black	BLACK	N	1	6
	Red/Black				

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	78	92

Plotting Date: 08/13/2025

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Dakota ST S

POLE: EJ1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
N	Black	BLACK	N	9	8
11R	Red/Orange	RED	DW	17	6P
11G	Blue/Orange	BLUE	W	17	6P
N	Black/Orange	BLACK	N	17	6P
10R	Red/Blue	RED	DW	22	4P
10G	Orange/Blue	BLUE	W	22	4P
N	Black/Blue	BLACK	N	22	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EJ2 CABLE SIZE: 19/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
8R	Red	RED	R	10	8
8Y	Orange	ORANGE	Y	10	8
8G	Blue	BLUE	G	10	8
N	Black	BLACK	N	10	8
8R	Red/Black	RED	R	11	8
8Y	Orange/Black	ORANGE	Y	11	8
8G	Blue/Black	BLUE	G	11	8
N	Yellow/Black	BLACK	N	11	8
8R	Black/Red	RED	R	12	8
8Y	Orange/Red	ORANGE	Y	12	8
8G	Blue/Red	BLUE	G	12	8
N	Brown/Black	BLACK	N	12	8
11R	Red/Orange	RED	DW	18	6P
11G	Blue/Orange	BLUE	W	18	6P
N	Black/Orange	BLACK	N	18	6P
12R	Red/Blue	RED	DW	23	8P
12G	Orange/Blue	BLUE	W	23	8P
N	Black/Blue	BLACK	N	23	8P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EJ3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
4R	Red	RED	R	13	4
4Y	Orange	ORANGE	Y	13	4
4G	Blue	BLUE	G	13	4
7Y	Yellow	YELLOW	YA	13	7
7G	Brown	BROWN	GA	13	7
N	Black	BLACK	N	13	4
9R	Red/Orange	RED	DW	19	2P
9G	Blue/Orange	BLUE	W	19	2P
N	Black/Orange	BLACK	N	19	2P
12R	Red/Blue	RED	DW	24	8P
12G	Orange/Blue	BLUE	W	24	8P
N	Black/Blue	BLACK	N	24	8P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EJ4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
4R	Red	RED	R	14	4
4Y	Orange	ORANGE	Y	14	4
4G	Blue	BLUE	G	14	4
7Y	Yellow	YELLOW	YA	14	7
7G	Brown	BROWN	GA	14	7
N	Black	BLACK	N	14	4
4R	Red/Black	RED	R	15	4
4Y	Orange/Black	ORANGE	Y	15	4
4G	Blue/Black	BLUE	G	15	4
N	Yellow/Black	BLACK	N	15	4
4R	Black/Red	RED	R	16	4
4Y	Orange/Red	ORANGE	Y	16	4
4G	Blue/Red	BLUE	G	16	4
N	Brown/Black	BLACK	N	16	4
9R	Red/Orange	RED	DW	20	2P
9G	Blue/Orange	BLUE	W	20	2P
N	Black/Orange	BLACK	N	20	2P
10R	Red/Blue	RED	DW	21	4P
10G	Orange/Blue	BLUE	W	21	4P
N	Black/Blue	BLACK	N	21	4P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EJ1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
1Y	Yellow	YELLOW	YA	2	1
1G	Brown	BROWN	GA	2	1
N	Black	BLACK	N	2	6
	Red/Black				

POLE: EJ2 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
5Y	Yellow	YELLOW	YA	5	5
5G	Brown	BROWN	GA	5	5
N	Black	BLACK	N	5	2
	Red/Black				

POLE: EJ3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
5Y	Yellow	YELLOW	YA	6	5
5G	Brown	BROWN	GA	6	5
N	Black	BLACK	N	6	2
	Red/Black				

POLE: EJ4 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
1Y	Yellow	YELLOW	YA	1	1
1G	Brown	BROWN	GA	1	1
N	Black	BLACK	N	1	6
	Red/Black				

PLOT SCALE - 1:200

PLOTTED FROM - TRAB17879B

PLOT NAME - 1

FILE - ...\PRJ\BRWN09V9\BORDER.DGN

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Harrison ST S

POLE: EK1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
N	Black	BLACK	N	9	8
11R	Red/Orange	RED	DW	15	6P
11G	Blue/Orange	BLUE	W	15	6P
N	Black/Orange	BLACK	N	15	6P
10R	Red/Blue	RED	DW	20	4P
10G	Orange/Blue	BLUE	W	20	4P
N	Black/Blue	BLACK	N	20	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EK2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Black/Red	RED	R	5	6
6Y	Orange/Red	ORANGE	Y	5	6
6G	Blue/Red	BLUE	G	5	6
N	Brown/Black	BLACK	N	5	6
8R	Red	RED	R	10	8
8Y	Orange	ORANGE	Y	10	8
8G	Blue	BLUE	G	10	8
N	Black	BLACK	N	10	8
8R	Red/Black	RED	R	11	8
8Y	Orange/Black	ORANGE	Y	11	8
8G	Blue/Black	BLUE	G	11	8
N	Yellow/Black	BLACK	N	11	8
11R	Red/Orange	RED	DW	16	6P
11G	Blue/Orange	BLUE	W	16	6P
N	Black/Orange	BLACK	N	16	6P
12R	Red/Blue	RED	DW	21	8P
12G	Orange/Blue	BLUE	W	21	8P
N	Black/Blue	BLACK	N	21	8P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EK3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
4R	Red	RED	R	13	4
4Y	Orange	ORANGE	Y	13	4
4G	Blue	BLUE	G	13	4
N	Black	BLACK	N	13	4
9R	Red/Orange	RED	DW	17	2P
9G	Blue/Orange	BLUE	W	17	2P
N	Black/Orange	BLACK	N	17	2P
12R	Red/Blue	RED	DW	22	8P
12G	Orange/Blue	BLUE	W	22	8P
N	Black/Blue	BLACK	N	22	8P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EK4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Black/Red	RED	R	1	6
6Y	Orange/Red	ORANGE	Y	1	6
6G	Blue/Red	BLUE	G	1	6
N	Brown/Black	BLACK	N	1	6
4R	Red	RED	R	13	4
4Y	Orange	ORANGE	Y	13	4
4G	Blue	BLUE	G	13	4
N	Black	BLACK	N	13	4
4R	Red/Black	RED	R	14	4
4Y	Orange/Black	ORANGE	Y	14	4
4G	Blue/Black	BLUE	G	14	4
N	Yellow/Black	BLACK	N	14	4
9R	Red/Orange	RED	DW	18	2P
9G	Blue/Orange	BLUE	W	18	2P
N	Black/Orange	BLACK	N	18	2P
10R	Red/Blue	RED	DW	19	4P
10G	Orange/Blue	BLUE	W	19	4P
N	Black/Blue	BLACK	N	19	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EK1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
N	Black	BLACK	N	2	6
	Yellow				
	Brown				
	Red/Black				

POLE: EK3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
N	Black	BLACK	N	6	2
	Yellow				
	Brown				
	Red/Black				

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	80	92
Plotting Date: 08/13/2025			

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Lawson ST S

POLE: EL1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
8R	Red/Orange	RED	R	8	8
8Y	Blue/Orange	ORANGE	Y	8	8
8G	Brown/Blue	BLUE	G	8	8
N	Black/Orange	BLACK	N	8	8
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
N	Black	BLACK	N	9	8
10R	Red/Blue	RED	DW	16	4P
10G	Orange/Blue	BLUE	W	16	4P
N	Black/Blue	BLACK	N	16	4P
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				

POLE: EL2 CABLE SIZE: 19/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red/Black	RED	R	5	2
2Y	Orange/Black	ORANGE	Y	5	2
2G	Blue/Black	BLUE	G	5	2
N	Yellow/Black	BLACK	N	5	2
2R	Black/Red	RED	R	6	2
2Y	Orange/Red	ORANGE	Y	6	2
2G	Blue/Red	BLUE	G	6	2
N	Brown/Black	BLACK	N	6	2
2R	Red	RED	R	7	2
2Y	Orange	ORANGE	Y	7	2
2G	Blue	BLUE	G	7	2
N	Black	BLACK	N	7	2
4R	Red/Blue	RED	R	11	4
4Y	Orange/Blue	ORANGE	Y	11	4
4G	Yellow/Blue	BLUE	G	11	4
N	Black/Blue	BLACK	N	11	4
9R	Red/Orange	RED	DW	13	2P
9G	Blue/Orange	BLUE	W	13	2P
N	Black/Orange	BLACK	N	13	2P
	Brown/Blue				
	Yellow				
	Brown				
	Yellow/Red				
	Brown/Red				

POLE: EL3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
1Y	Yellow	YELLOW	YA	1	1
1G	Brown	BROWN	GA	1	1
N	Black	BLACK	N	1	6
4R	Red/Black	RED	R	12	4
4Y	Orange/Black	ORANGE	Y	12	4
4G	Blue/Black	BLUE	G	12	4
N	Yellow/Black	BLACK	N	12	4
9R	Red/Orange	RED	DW	14	2P
9G	Blue/Orange	BLUE	W	14	2P
N	Black/Orange	BLACK	N	14	2P
10R	Red/Blue	RED	DW	15	4P
10G	Orange/Blue	BLUE	W	15	4P
N	Black/Blue	BLACK	N	15	4P
	Black/Red				
	Orange/Red				
	Blue/Red				
	Brown/Black				
	Yellow/Blue				
	Brown/Blue				
	Yellow/Red				
	Brown/Red				

POLE: EL1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
1Y	Yellow	YELLOW	YA	2	1
1G	Brown	BROWN	GA	2	1
N	Black	BLACK	N	2	6
	Red/Black				

POLE: EL2 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
4R	Red	RED	R	10	4
4Y	Orange	ORANGE	Y	10	4
4G	Blue	BLUE	G	10	4
N	Black	BLACK	N	10	4
	Yellow				
	Brown				
	Red/Black				

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	81	92
Plotting Date: 08/13/2025			

WIRING DIAGRAM

US HWY 12/6TH AVE SW & Roosevelt ST S

POLE: EM1 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red/Black	RED	R	3	6
6Y	Orange/Black	ORANGE	Y	3	6
6G	Blue/Black	BLUE	G	3	6
N	Yellow/Black	BLACK	N	3	6
6R	Black/Red	RED	R	4	6
6Y	Orange/Red	ORANGE	Y	4	6
6G	Blue/Red	BLUE	G	4	6
N	Brown/Black	BLACK	N	4	6
8R	Red	RED	R	9	8
8Y	Orange	ORANGE	Y	9	8
8G	Blue	BLUE	G	9	8
3Y	Yellow	YELLOW	YA	9	3
3G	Brown	BROWN	GA	9	3
N	Black	BLACK	N	9	8
11R	Red/Orange	RED	DW	17	6P
11G	Blue/Orange	BLUE	W	17	6P
N	Black/Orange	BLACK	N	17	6P
10R	Red/Blue	RED	DW	22	4P
10G	Orange/Blue	BLUE	W	22	4P
N	Black/Blue	BLACK	N	22	4P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EM2 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
8R	Red	RED	R	10	8
8Y	Orange	ORANGE	Y	10	8
8G	Blue	BLUE	G	10	8
3Y	Yellow	YELLOW	YA	10	3
3G	Brown	BROWN	GA	10	3
N	Black	BLACK	N	10	8
8R	Red/Black	RED	R	11	8
8Y	Orange/Black	ORANGE	Y	11	8
8G	Blue/Black	BLUE	G	11	8
N	Yellow/Black	BLACK	N	11	8
8R	Black/Red	RED	R	12	8
8Y	Orange/Red	ORANGE	Y	12	8
8G	Blue/Red	BLUE	G	12	8
N	Brown/Black	BLACK	N	12	8
11R	Red/Orange	RED	DW	18	6P
11G	Blue/Orange	BLUE	W	18	6P
N	Black/Orange	BLACK	N	18	6P
12R	Red/Blue	RED	DW	23	8P
12G	Orange/Blue	BLUE	W	23	8P
N	Black/Blue	BLACK	N	23	8P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EM3 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red/Black	RED	R	7	2
2Y	Orange/Black	ORANGE	Y	7	2
2G	Blue/Black	BLUE	G	7	2
N	Yellow/Black	BLACK	N	7	2
2R	Black/Red	RED	R	8	2
2Y	Orange/Red	ORANGE	Y	8	2
2G	Blue/Red	BLUE	G	8	2
N	Brown/Black	BLACK	N	8	2
4R	Red	RED	R	13	4
4Y	Orange	ORANGE	Y	13	4
4G	Blue	BLUE	G	13	4
7Y	Yellow	YELLOW	YA	13	7
7G	Brown	BROWN	GA	13	7
N	Black	BLACK	N	13	4
9R	Red/Orange	RED	DW	19	2P
9G	Blue/Orange	BLUE	W	19	2P
N	Black/Orange	BLACK	N	19	2P
12R	Red/Blue	RED	DW	24	8P
12G	Orange/Blue	BLUE	W	24	8P
N	Black/Blue	BLACK	N	24	8P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EM4 CABLE SIZE: 24/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
4R	Red	RED	R	14	4
4Y	Orange	ORANGE	Y	14	4
4G	Blue	BLUE	G	14	4
7Y	Yellow	YELLOW	YA	14	7
7G	Brown	BROWN	GA	14	7
N	Black	BLACK	N	14	4
4R	Red/Black	RED	R	15	4
4Y	Orange/Black	ORANGE	Y	15	4
4G	Blue/Black	BLUE	G	15	4
N	Yellow/Black	BLACK	N	15	4
4R	Black/Red	RED	R	16	4
4Y	Orange/Red	ORANGE	Y	16	4
4G	Blue/Red	BLUE	G	16	4
N	Brown/Black	BLACK	N	16	4
9R	Red/Orange	RED	DW	20	2P
9G	Blue/Orange	BLUE	W	20	2P
N	Black/Orange	BLACK	N	20	2P
10R	Red/Blue	RED	DW	21	4P
10G	Orange/Blue	BLUE	W	21	4P
N	Black/Blue	BLACK	N	21	4P
	Yellow/Red				
	Brown/Red				
	Yellow/Blue				
	Brown/Blue				

POLE: EI1 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	2	6
6Y	Orange	ORANGE	Y	2	6
6G	Blue	BLUE	G	2	6
1Y	Yellow	YELLOW	YA	2	1
1G	Brown	BROWN	GA	2	1
N	Black	BLACK	N	2	6
	Red/Black				

POLE: EI2 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	5	2
2Y	Orange	ORANGE	Y	5	2
2G	Blue	BLUE	G	5	2
5Y	Yellow	YELLOW	YA	5	5
5G	Brown	BROWN	GA	5	5
N	Black	BLACK	N	5	2
	Red/Black				

POLE: EI3 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
2R	Red	RED	R	6	2
2Y	Orange	ORANGE	Y	6	2
2G	Blue	BLUE	G	6	2
5Y	Yellow	YELLOW	YA	6	5
5G	Brown	BROWN	GA	6	5
N	Black	BLACK	N	6	2
	Red/Black				

POLE: EB4 CABLE SIZE: 7/C

CABINET TERM.	CABLE CONDUCTOR COLOR	POLE COND. COLOR	HEAD TERM.	HEAD NO.	ø
6R	Red	RED	R	1	6
6Y	Orange	ORANGE	Y	1	6
6G	Blue	BLUE	G	1	6
1Y	Yellow	YELLOW	YA	1	1
1G	Brown	BROWN	GA	1	1
N	Black	BLACK	N	1	6
	Red/Black				

SIGNAL TIMINGS

US HWY NO 12 / 6TH AVENUE SE & DAKOTA STREET S

Revised: 8/13/25 MD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	82	92

Plotting Date: 08/13/2025

BASIC INTERVALS								
Phase	1	2	3	4	5	6	7	8
Movement	WBL	EB		SB	WBL	WB	SBL	NB
Min Green	5	12		10	5	12	5	10
Extension	3	3		4	3	3	3	4
Max 1	20	70		60	20	70	20	60
Max 2								
Time Before								
Time to Reduce								
Minimum Gap								
Yellow	3	3.5		4	3	3.5	3	4
All Red		2		2		2		2
Walk		4		4		4		4
Ped Clearance		19		18		19		18
Recall		Min				Min		
Prog Flash Display	Y	Y		R	Y	Y	R	R
Start Up Ø		X				X		

COORDINATION TIMING								
CYCLE 1 = 70 SEC						SPLIT 1		
PHASE	1	2	3	4	5	6	7	8
MOVEMENT								
TIME	9	44		27	9	44	9	18
COORDINATED PHASE		X				X		

COORDINATION TIMING								
CYCLE 2 & 3 = 76 SEC								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT								
TIME - SPLIT 1	9	40		27	9	40	9	18
COORDINATED PHASE		X				X		

COORDINATION TIMING								
CYCLE 1 = 70 SEC						SPLIT 1		
PHASE	1	2	3	4	5	6	7	8
MOVEMENT								
TIME	9	49		27	9	49	9	18
COORDINATED PHASE		X				X		

RING AND BARRIER DESIGN			
Φ1	Φ2	Φ3	Φ4
Φ5	Φ6	Φ7	Φ8

Note:
Use existing offsets

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	83	92
Plotting Date: 06/10/2025			

RIGHT LANE CLOSURE

DETAIL

PLOT SCALE - 1:40

PLOT NAME - 1

FILE - ...\2ND STREET RIGHT LANE CLOSURE.DGN

PLOTTED FROM - TRAB17879

Temporary pavement markings will be used if traffic control must remain overnight

Urban area and intersecting streets may limit spacing

The channelizing devices will be 42" cones are drums

42" cones may be used in place of the drums shown in taper if setup will not be used during night time hours.

- 42" cones channelizing device.
- Reflectorized Drum

Type 3 Barricade (Double Sided)

Arrow Board Sequential Chevron

SCALE 1" = 40'

2ND ST S

1ST ST S

MAIN ST S

+97 40' Drive

+40 40' Drive

16' Drive +10

28' Drive +10

24' Drive +32

+37 32' Drive

+43 36' Drive

40' Drive +13

30' Drive +60

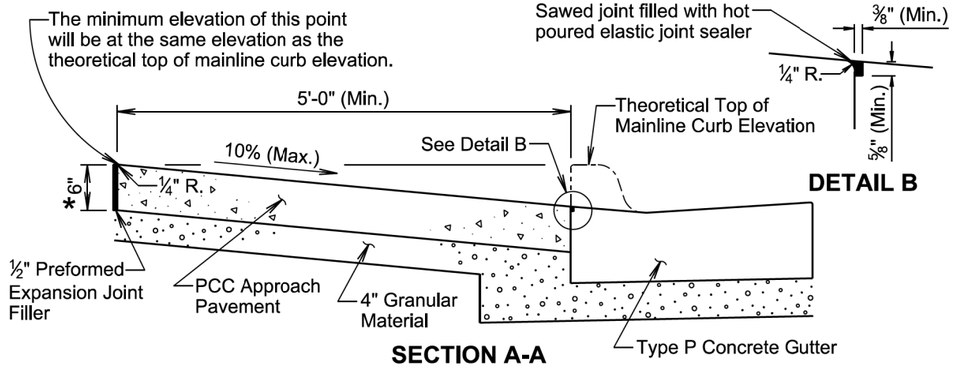
30' Drive +07

24' Drive +68

22+00 23+00 24+00 25+00 26+00 27+00

28+00 29+00 30+00 31+00 32+00 33+00

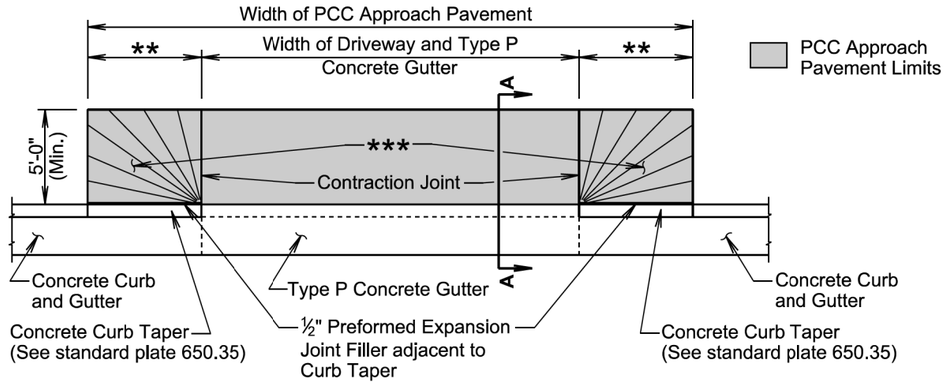
50' 25' 180' 200' 200' 200' 4'



* 8" at Commercial Approaches

** Width for 6" high curb is 6' (See standard plate 650.35)

*** Within these areas, the surface of the type A PCC approach pavement will be sloped transitionally as approved by the Engineer.



GENERAL NOTES:

The concrete for the type A PCC approach pavement and adjacent driveway will comply with the requirements of the Specifications for class M6 concrete unless otherwise stated in the plans.

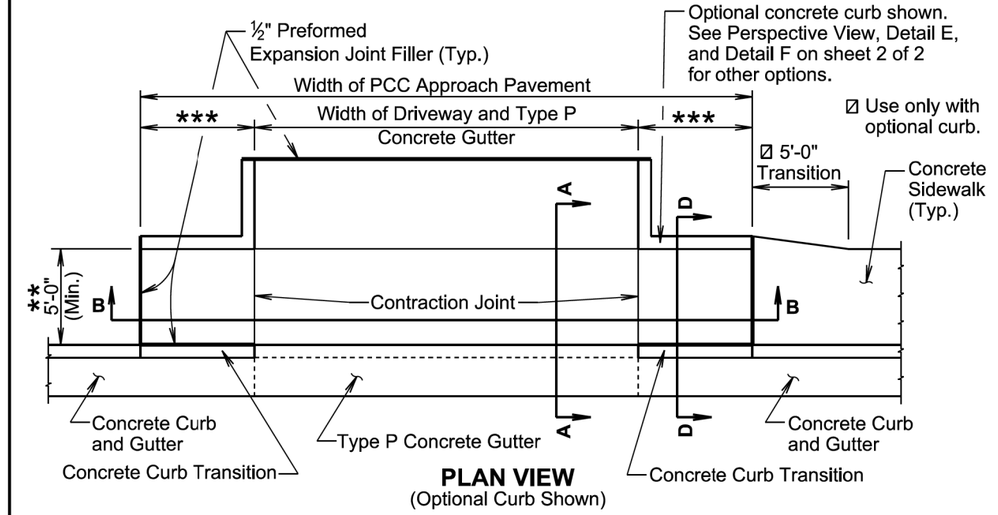
Contraction joints in the type A PCC approach pavement will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the approach pavement. Additional contraction joints not shown in the Plan View will be spaced as follows:

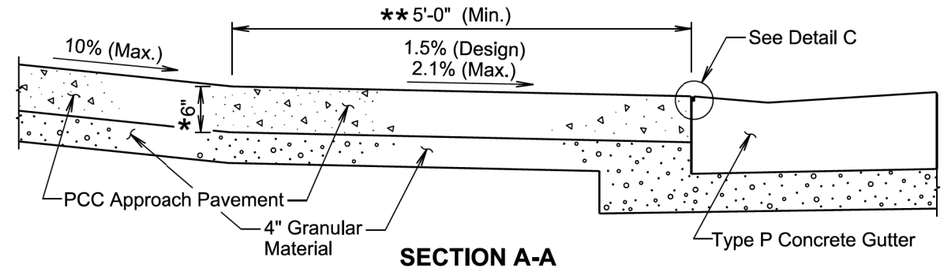
One joint at the center of the approach for driveways 16 feet to 24 feet wide.
Two joints spaced at equal intervals for driveways greater than 24 feet to 40 feet wide.

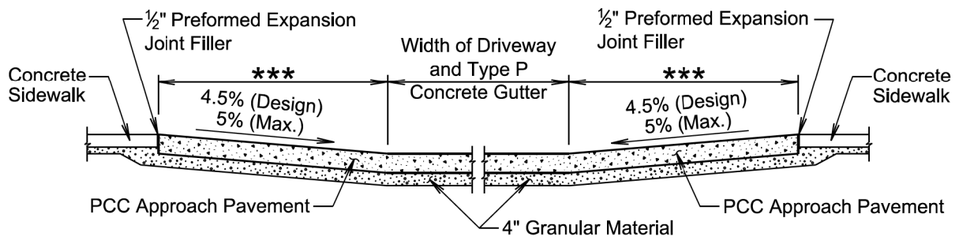
All costs for furnishing and placing the type A PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, excavation, and materials including the earthen backfill and granular material, will be incidental to the contract unit price per square yard for the corresponding PCC Approach Pavement contract item.

June 26, 2019

Published Date: 2026	SDDOT	TYPE A PCC APPROACH PAVEMENT	PLATE NUMBER 380.40
			Sheet 1 of 1







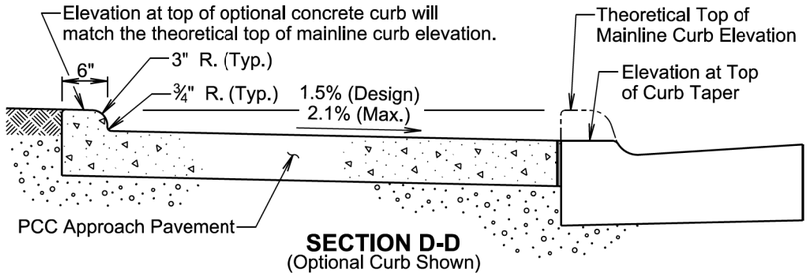
* 8 inches at Commercial Approaches

** Sidewalk width is 5 feet unless specified otherwise in the plans. The cross slope of the sidewalk is designed at 1.5% and will not be steeper than 2.1% unless specified otherwise in the plans.

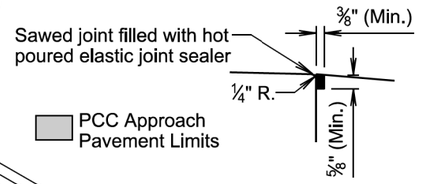
*** The slope of the type B PCC approach pavement in these areas will match the slope of the concrete curb transition. The slope is designed at 4.5% and will not be steeper than 5% unless specified otherwise in the plans.

April 8, 2025

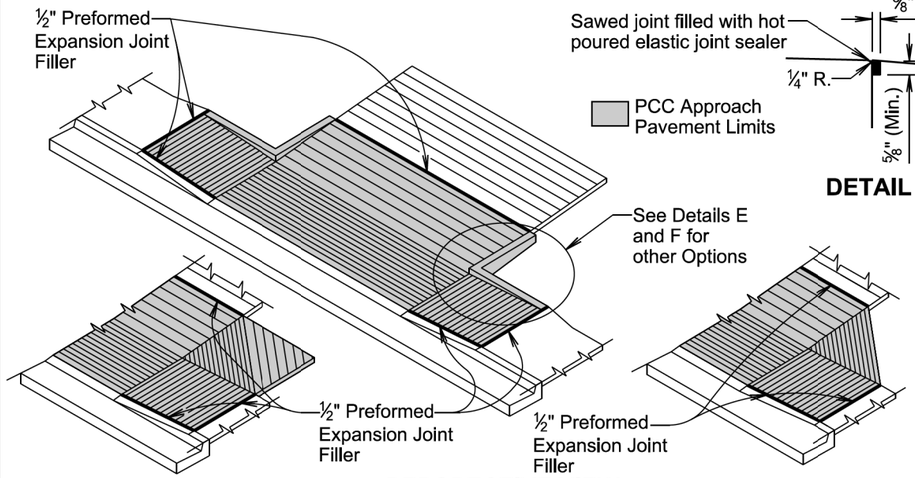
Published Date: 2026	SDDOT	TYPE B PCC APPROACH PAVEMENT	PLATE NUMBER 380.41
			Sheet 1 of 2



SECTION D-D
(Optional Curb Shown)



DETAIL C



DETAIL E
(Optional Rectangle Pavement Shown)

PERSPECTIVE VIEW
(Optional Curb Shown)

DETAIL F
(Optional Triangle Pavement Shown)

GENERAL NOTES:

Use the plan specified option for the pavement adjacent to the driveway and sidewalk. The options are shown above in the Perspective View, Detail E, and Detail F.

The concrete for the type B PCC approach pavement and adjacent driveway will comply with the requirements of the Specifications for class M6 concrete unless otherwise stated in the plans.

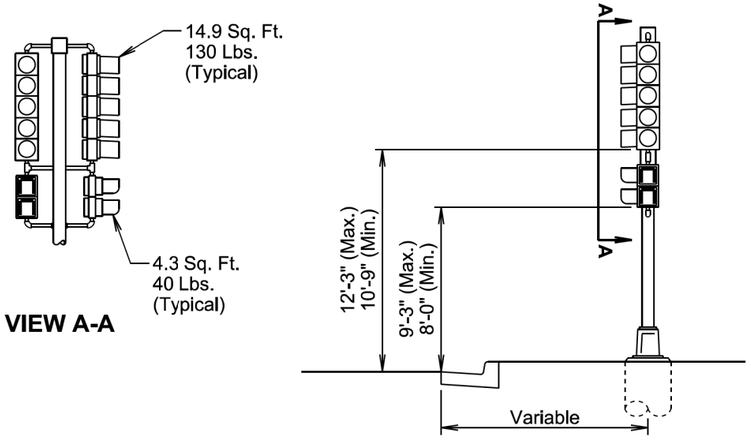
Contraction joints in the type B PCC approach pavement will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the approach pavement. Additional contraction joints not shown in the Plan View will be spaced as follows:

One joint at the center of the approach for driveways 16 feet to 24 feet wide.
Two joints spaced at equal intervals for driveways greater than 24 feet to 40 feet wide.

All costs for furnishing and placing the type B PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, excavation, and materials including the earthen backfill and granular material will be incidental to the contract unit price per square yard for the corresponding PCC Approach Pavement contract item.

April 8, 2025

Published Date: 2026	SDDOT	TYPE B PCC APPROACH PAVEMENT	PLATE NUMBER 380.41 Sheet 2 of 2

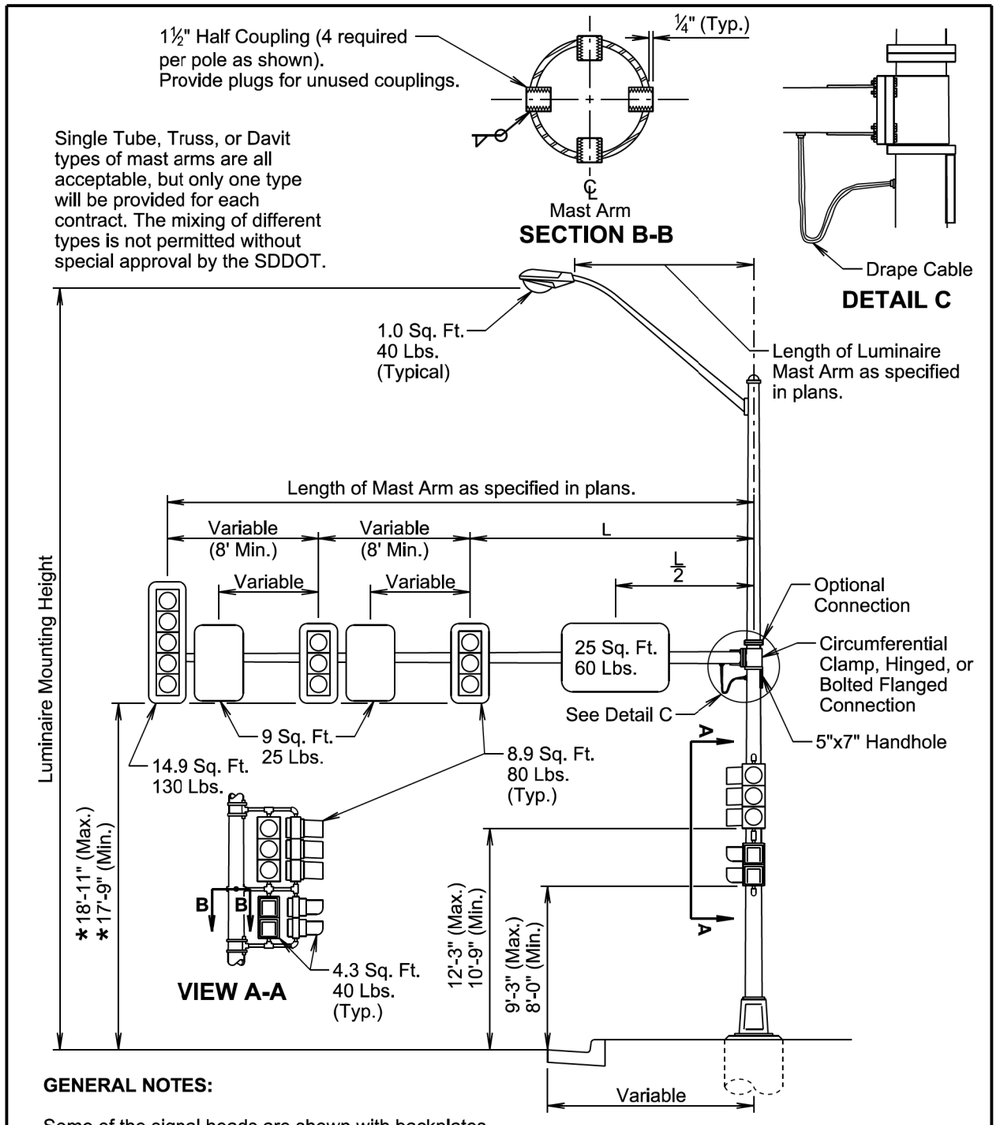


GENERAL NOTE:

The signal heads are shown with backplates removed so that the mounting hardware is visible.

November 19, 2022

Published Date: 2026	SDDOT	SIGNAL POLE (PEDESTAL)	PLATE NUMBER 635.30 Sheet 1 of 1



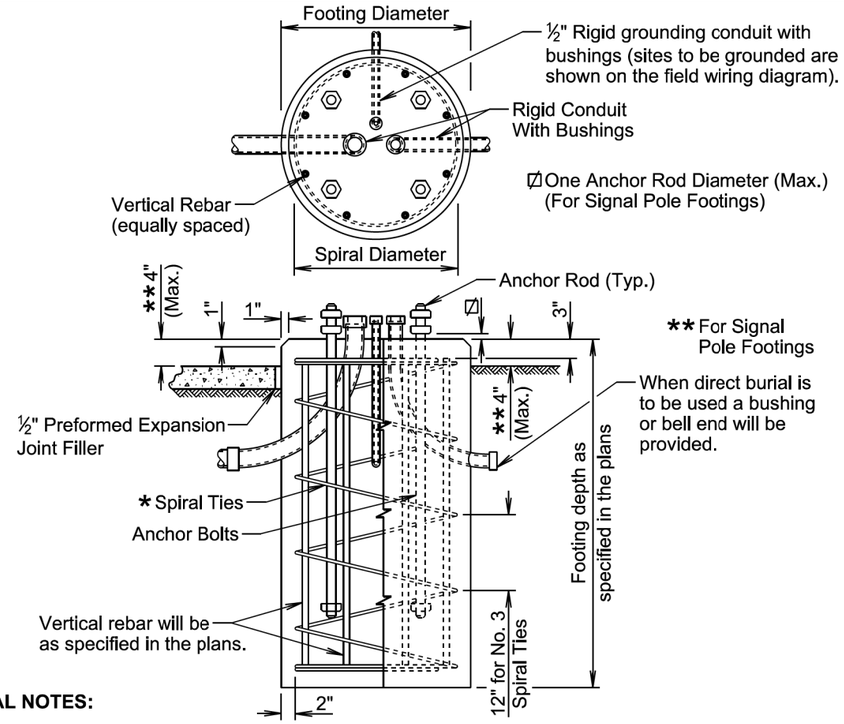
GENERAL NOTES:

Some of the signal heads are shown with backplates removed so that the mounting hardware is visible.

* The signal height allowances shown above are based on a horizontal distance greater than 53' between the signals and stop line. For horizontal distance of 53' and less between the signals and the stop line, the height allowances will be as specified in Section 4D.15 of the MUTCD.

November 19, 2022

Published Date: 2026	SDDOT	SIGNAL POLE (WITH MAST ARM AND LUMINAIRE EXTENSION)	PLATE NUMBER 635.32 Sheet 1 of 1



GENERAL NOTES:

* Circular ties may be used in lieu of the spiral ties. The No. 3 ties will be spaced 12 inches apart except for the top two which will be spaced 6 inches apart. The ties will be lapped 18 inches and the laps will be staggered around the cage.

Spiral ties will have 1-1/2 extra turns at each end.

See Section 985 of the Specifications for footing materials.

Conduits and bushings may project 2½ inches to 6 inches above footing for fixed base poles but will not project above the slip plane or fracture plane for breakaway poles.

Conduits will be sealed water-tight during all phases of construction until poles are in place.

The anchor rods will fit inside the reinforcing steel cage. If the anchor rods designed by the Pole Manufacturer do not fit, contact the Office of Bridge Design for footing redesign. No additional payment will be made for the redesigned footing.

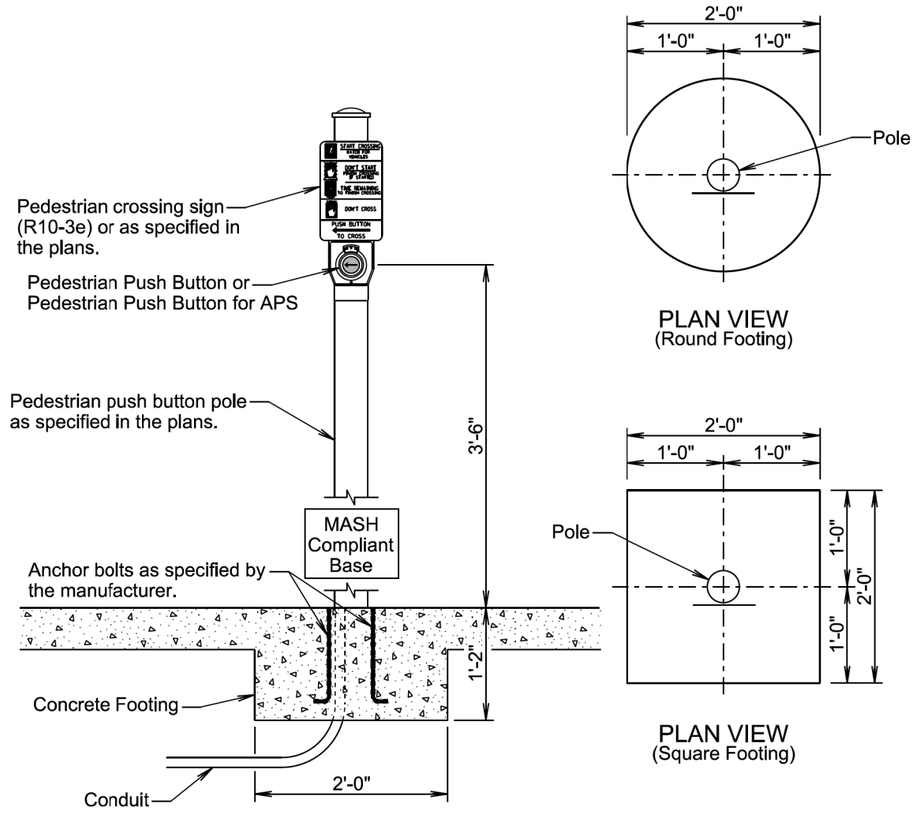
Costs of conduit and conduit bushings shown on footing detail will be incidental to the footing bid item(s).

The pole will not be installed until the concrete has attained design strength (4000 psi).

The contour of the area surrounding the breakaway pole will be flat, though not necessarily level for a distance of 5 feet in all directions. The Contractor may be required to provide finish grading at some breakaway pole locations.

November 19, 2022

Published Date: 2026	SDDOT	POLE FOOTING	PLATE NUMBER 635.55 Sheet 1 of 1



GENERAL NOTES:

The pedestrian push button pole will be as specified in the plans.

The Contractor will install either the round or the square concrete footing. For informational purpose, the quantity of concrete for one footing is 0.14 cubic yards for the round footing and 0.17 cubic yards for the square footing.

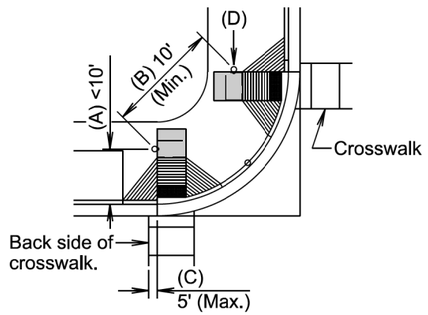
The concrete for the footing will be class M6 concrete.

All costs for furnishing and installing the concrete footing will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk bid item.

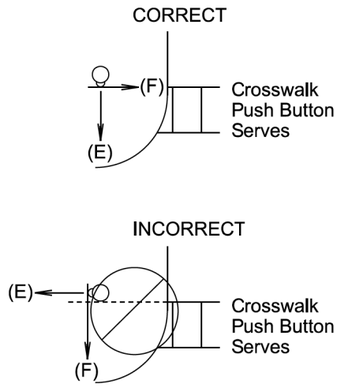
All costs for furnishing and installing the pedestrian push button pole including labor, equipment, and materials including the pole, cap, and the conduit in the footing will be incidental to the contract unit price per each for "Pedestrian Push Button Pole".

April 8, 2025

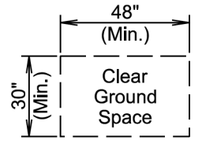
Published Date: 2026	SDDOT	PEDESTRIAN PUSH BUTTON POLE	PLATE NUMBER 635.57 Sheet 1 of 2



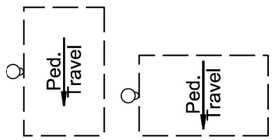
Push Button Relationship To Curb Ramp And Crosswalk



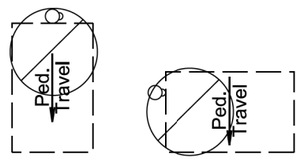
Push Button Orientation To Crosswalk



Clear Ground Space Dimensions



Correct Relationship



Incorrect Relationship

Clear space not adjacent to push button

Push button not Centered on Clear space

General Notes:

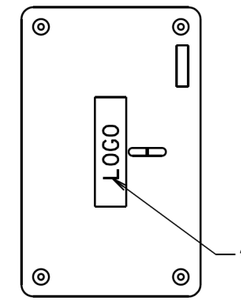
Pedestrian Push Buttons Location and Orientation Requirements:

(A) Within 10 feet from the front face of curb.
(B) Where two push buttons are provided, the push buttons should have at least 10 feet of separation from each other.
(C) If two curb ramps are used, the push button should be within 5 feet of the backside of the crosswalk.
(D) The push button should be mounted adjacent to a clear ground space (within 10 inches maximum reach). The clear ground space will be a least 30 inches x 48 inches and will slope no more than 2.1% in any direction. The push button will be centered on either side of the clear ground space (either the 30 inch or 48 inch side). The 30 inch x 48 inch clear ground space shouldn't touch the detectable warning panel.
(E) The push button should face the edge of roadway.
(F) The push button face should be parallel to the crosswalk being used.

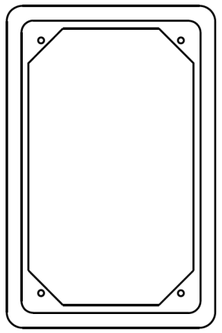
The push button poles will not interfere with the minimum clear width of the Pedestrian Access Route.

April 8, 2025

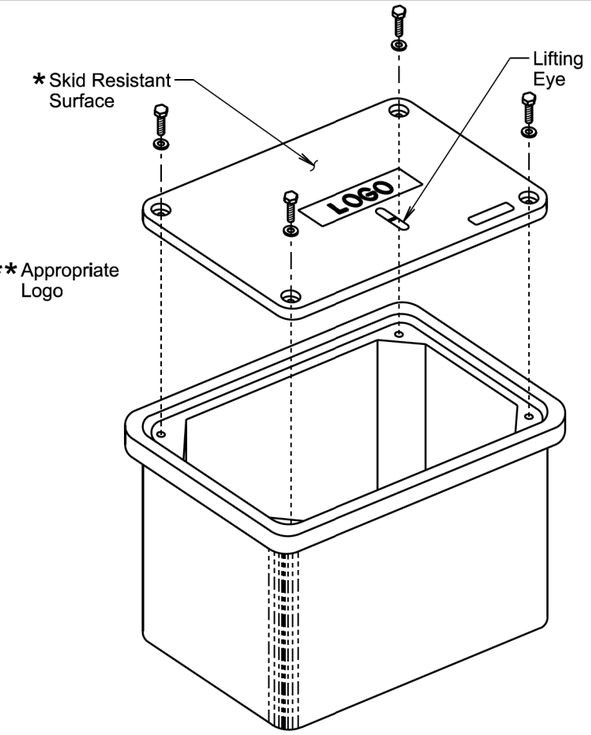
Published Date: 2026	SDDOT	PEDESTRIAN PUSH BUTTON POLE	PLATE NUMBER 635.57 Sheet 2 of 2



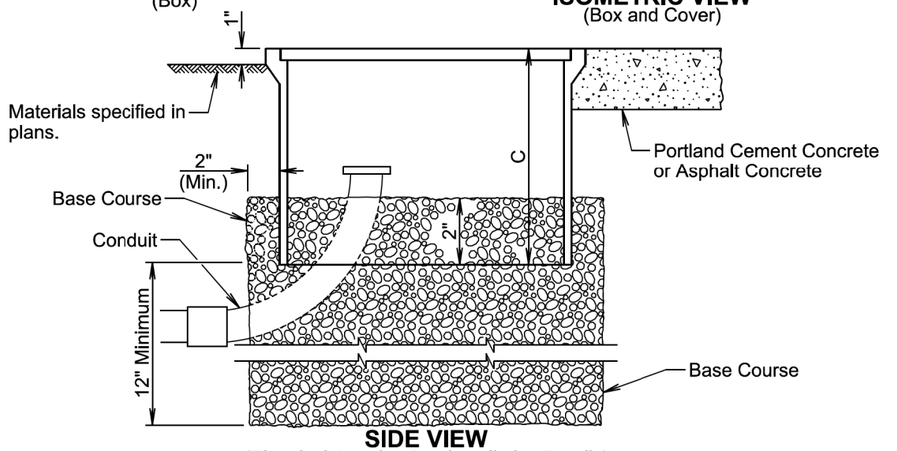
TOP VIEW
(Cover)



TOP VIEW
(Box)



ISOMETRIC VIEW
(Box and Cover)



SIDE VIEW
(Electrical Junction Box Installation Details)
(Buried No. 4 steel reinforcing bar not shown.)

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.

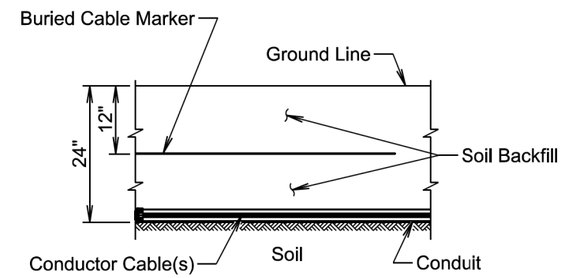
The electrical junction boxes will comply with the American National Standards Institute (ANSI)/Society of Cable Telecommunications Engineers (SCTE) 77 2007 Specification for Underground Enclosure Integrity. The loading requirement for all electrical junction boxes and covers will be Tier 22 of ANSI/SCTE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

The electrical junction boxes will be UL listed.

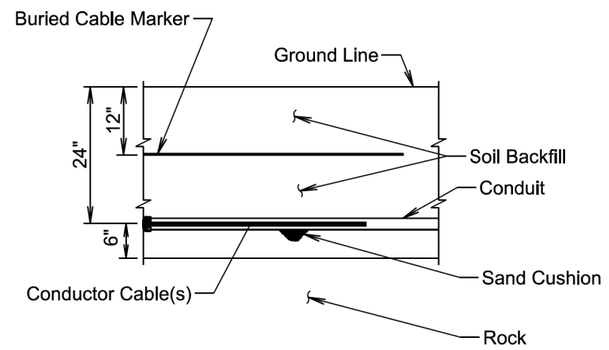
For junction boxes located outside of pavement, a No. 4 steel reinforcing bar with a minimum length of 18" will be buried adjacent to the long side of the junction box. All costs associated with furnishing and placing the steel reinforcing bar will be incidental to the contract unit price per each for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



SECTION VIEW



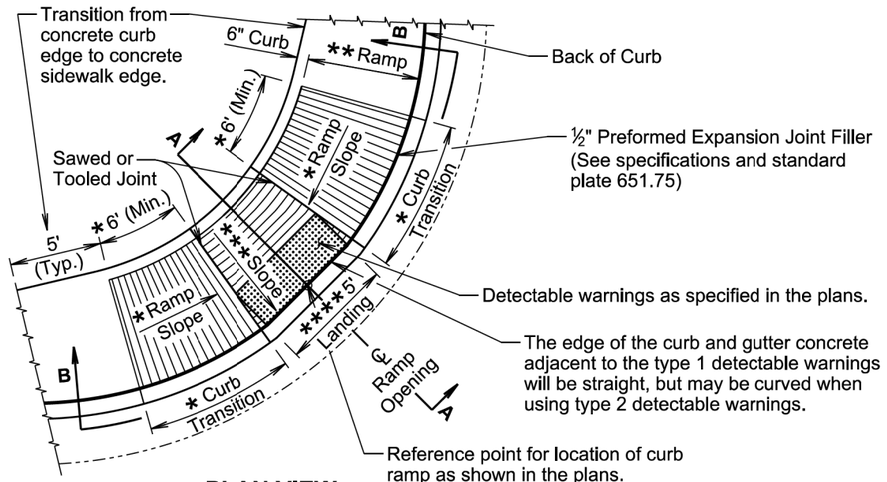
SECTION VIEW

GENERAL NOTE:

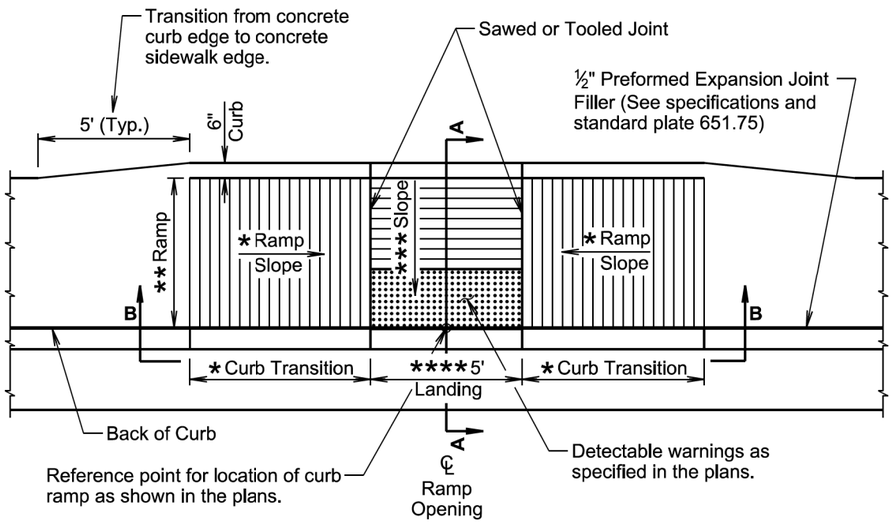
The Buried Cable Marker will be plastic, approximately 6" wide, and will be capable of sustaining a minimum of a 350% tolerance of elongation without tearing. The Buried Cable Marker will have a life expectancy approximately equal to that of the conductor(s) beneath it. A phrase indicating the presence 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



PLAN VIEW
(With Curved Curb and Gutter)



PLAN VIEW
(With Straight Curb and Gutter)

April 8, 2025

Published Date: 2026	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 1 of 3

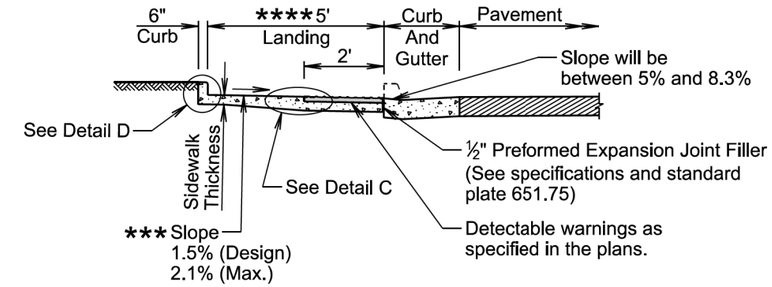
* The curb transition slope will match the curb ramp slope. Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% at any location of the curb ramp and will not exceed 15' in length unless stated otherwise in the plans. The curb transitions and curb ramp lengths 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 2.1% and the ramp width is 5' unless stated otherwise in the plans. Plans are designed using a 1.5% cross slope for the ramp unless stated otherwise in the plans.

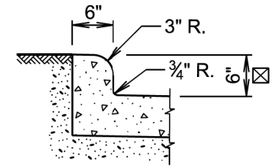
*** The slope in the landing will not be steeper than 2.1% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

**** The landing is 5'x5' unless stated otherwise in the plans.

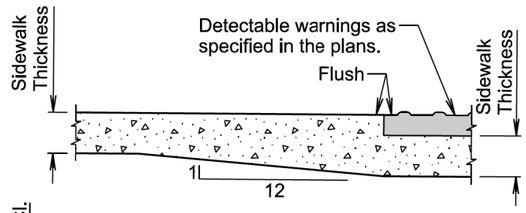
☒ The curb height will be 6" unless stated otherwise in the plans.



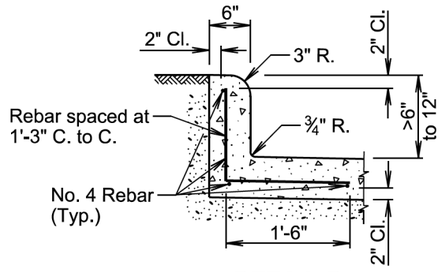
SECTION A-A



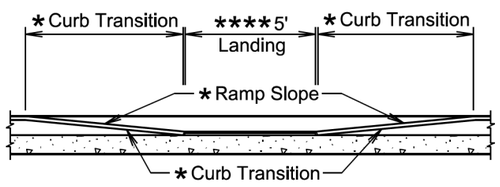
DETAIL D



DETAIL C



DETAIL D
(Use this detail when the curb height is greater than 6" and less than 12")



SECTIONAL VIEW B-B

April 8, 2025

Published Date: 2026	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 2 of 3

PLOT SCALE - 1:200
PLOT NAME - 7
FILE - ...\651.03 (1 & 2).DGN
-PLOTTED FROM - TRAB17879

PLOT SCALE - 1:200

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0012(323)298	91	92

Plotting Date: 06/16/2025

GENERAL NOTES:

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

For illustrative purpose only, a PCC fillet section is shown in one of the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section or with curb and gutter.

The curb ramp will be placed at the location stated in the plans.

Sidewalk adjacent to the curb ramp will be as shown 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 (see plan view for joint location).

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.

When curb height is greater than 6" and less than 12", reinforcing steel is required in accordance with the detail on sheet 2 of 3. The reinforcing steel will conform to ASTM A615, Grade 60. Cost for furnishing and installing the reinforcing steel will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk 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 and the curb along the short radius will be included in the measured and paid for quantity of sidewalk.

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.

Type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing 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".

Type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing 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".

April 8, 2025

Published Date: 2026

SDDOT

TYPE 3 CURB RAMP (PARALLEL CURB RAMP)

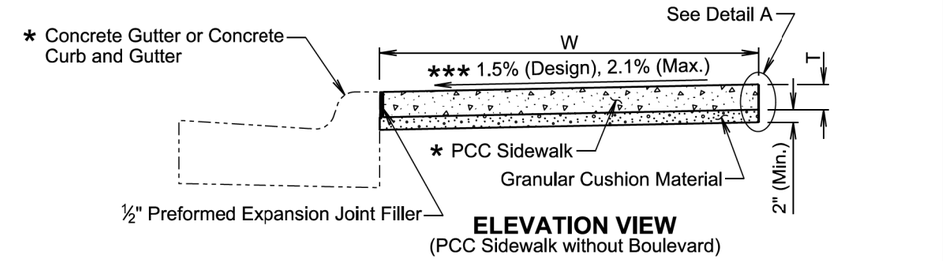
PLATE NUMBER 651.03

Sheet 3 of 3

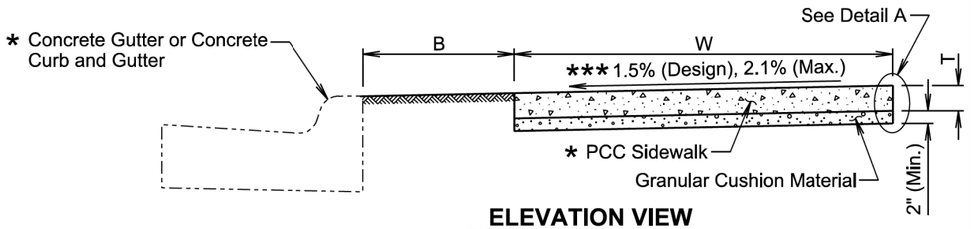
PLOT NAME - 8

FILE -...\STAMDARD PLATES\651.03 (3).DGN

-PLOTTED FROM - TRAB17879



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



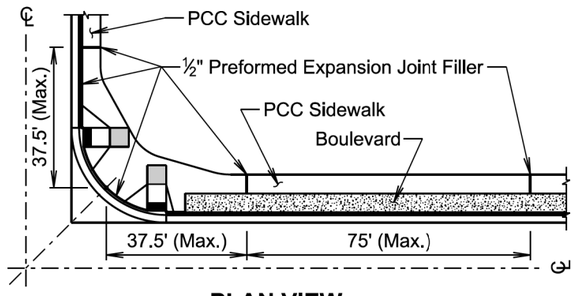
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

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 2.1% unless specified otherwise in the plans.

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

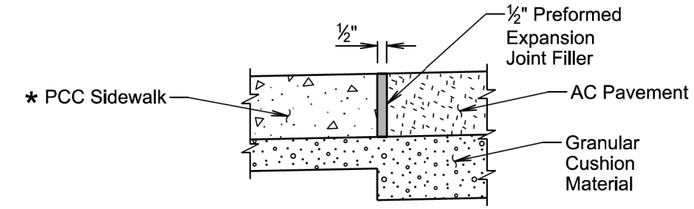
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

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.

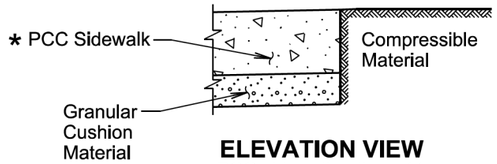
** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

April 8, 2025

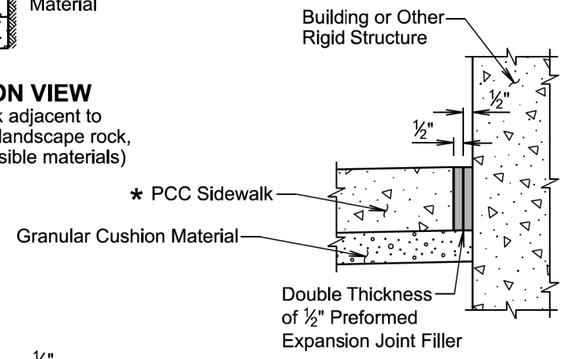
Published Date: 2026	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2



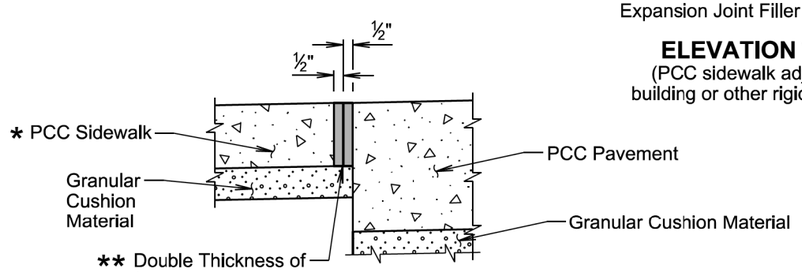
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



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))

April 8, 2025

Published Date: 2026	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2

PLOT SCALE - 1:200

PLOT NAME - 9

FILE - ...\651.75(1 & 2).DGN

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