

SECTION L: LIGHTING AND SIGNAL PLANS

FOR BIDDING PURPOSES ONLY

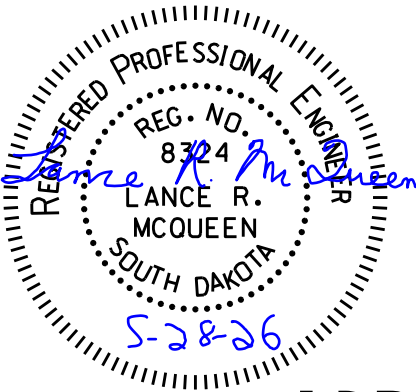
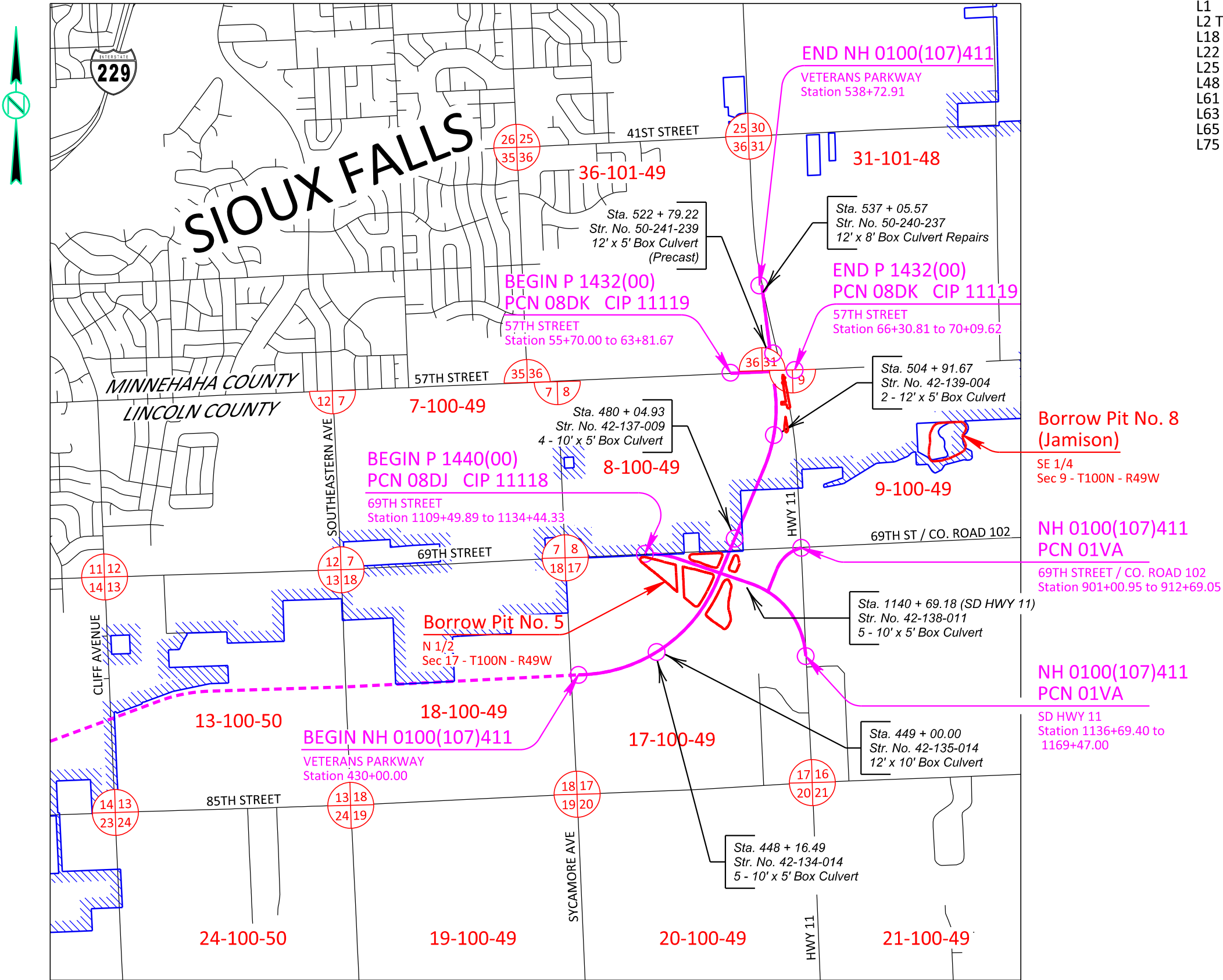
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L1	L85

FILE: ...\\Section L\\Title
PLOTING DATE: 05-28-2026

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INITIAL:

INDEX OF SHEETS

- L1
- L2 TO L17
- L18 TO L21
- L22 TO L24
- L25 TO L47
- L48 TO L60
- L61 TO L62
- L63 TO L64
- L65 TO L74
- L75 TO L85
- General Layout with Index
- Estimate with General Notes & Tables
- Overall Layouts
- Signal Layouts
- Veterans Parkway Conduit Layouts
- 69th Street / Hwy 11 Conduit Layouts
- 57th Street Conduit Layouts
- Video Detection Layouts
- Wiring Diagrams
- Standard Plates



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L2	L85

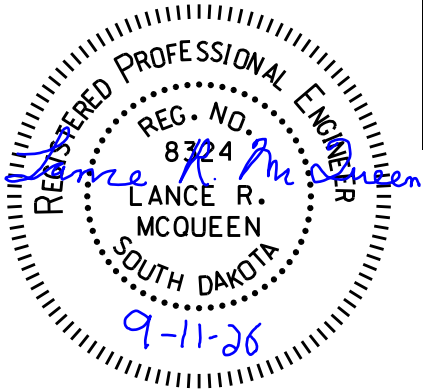
Plotting Date: 9/11/2026

REV DATE: 09/11/2026 INITIAL: LRM

SECTION L ESTIMATE OF QUANTITIES

LIGHTING						
Bid Item Number	Item	Quantity				Unit
		PCN 01VA Veterans	PCN 08DJ 69th Street	PCN 08DK 57th Street	Total	
110E1540	Remove Luminaire Pole Footing	16	-	4	20	Each
110E5100	Salvage Luminaire Pole	16	-	4	20	Each
635E0040	Breakaway Base Luminaire Pole with Arm, 40' Mounting Height	6	-	-	6	Each
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	76	-	-	76	Each
635E0140	Breakaway Base Luminaire Pole with Twin Arms, 40' Mounting Height	17	8	5	30	Each
635E0150	Breakaway Base Luminaire Pole with Twin Arms, 50' Mounting Height	3	-	-	3	Each
635E3585	Tunnel Luminaire, LED	38	-	-	38	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	130	16	10	156	Each
635E5020	2' Diameter Footing	813.0	64.0	40.0	917.0	Ft
635E5310	Special Electrical Junction Box	31	2	-	33	Each
635E5400	Electrical Service Cabinet	8	-	-	8	Each
635E5420	Circuit Control Center	2	-	-	2	Each
635E6200	Miscellaneous, Electrical	Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS
635E7899	Locator Ball	-	1	-	1	Each
635E8008	0.75" Rigid Galvanized Steel Conduit	285	-	-	285	Ft
635E8120	2" Rigid Conduit, Schedule 40	28,485	1,750	725	30,960	Ft
635E8220	2" Rigid Conduit, Schedule 80	4,600	230	-	4,830	Ft
635E8830	2/2/2/4 Aluminum Wire	34,325	1,740	925	36,990	Ft
635E8900	3/C #0000 AWG Aluminum Wire	1,605	-	-	1,605	Ft
635E9014	1/C #4 AWG Copper Wire	2,170	-	-	2,170	Ft
635E9016	1/C #6 AWG Copper Wire	-	750	-	750	Ft
635E9020	1/C #10 AWG Copper Wire	1,065	-	-	1,065	Ft
635E9024	1/C #14 AWG Copper Wire	320	125	-	445	Ft
635E9720	12/2 UF-B Copper Pole and Bracket Cable	8,190	880	550	9,620	Ft

TRAFFIC SIGNALS						
Bid Item Number	Item	Quantity				Unit
		PCN 01VA Veterans	PCN 08DJ 69th Street	PCN 08DK 57th Street	Total	
110E1530	Remove Signal Pole Footing	4	-	-	4	Each
110E5110	Salvage Signal Equipment	Lump Sum	-	-	Lump Sum	LS
635E2000	Pedestal Signal Pole	2	-	-	2	Each
635E2155	Signal Pole with 55' Mast Arm and Luminaire Arm	1	-	-	1	Each
635E2165	Signal Pole with 65' Mast Arm and Luminaire Arm	1	-	-	1	Each
635E2170	Signal Pole with 70' Mast Arm and Luminaire Arm	1	-	-	1	Each
635E2175	Signal Pole with 75' Mast Arm and Luminaire Arm	4	-	-	4	Each
635E2185	Signal Pole with 85' Mast Arm and Luminaire Arm	1	-	-	1	Each
635E4030	3 Section Vehicle Signal Head	37	-	-	37	Each
635E4040	4 Section Vehicle Signal Head	4	-	-	4	Each
635E4080	3 Section Directional Vehicle Signal Head	18	-	-	18	Each
635E5020	2' Diameter Footing	12.0	-	-	12.0	Ft
635E5035	3.5' Diameter Footing	120.0	-	-	120.0	Ft
635E5310	Special Electrical Junction Box	64	16	2	82	Each
635E5430	Traffic Signal Controller	2	-	-	2	Each
635E5450	Side Mounted Cabinet	4	-	-	4	Each
635E5515	Battery Backup System for Traffic Signal	2	-	-	2	Each
635E5520	Video Detection System	2	-	-	2	Each
635E5560	Emergency Vehicle Preemption Unit	2	-	-	2	Each
635E5570	Optical Detector	8	-	-	8	Each
635E5880	Accessible Pedestrian Signal	16	-	-	16	Each
635E5910	Pedestrian Push Button Pole	16	-	-	16	Each
635E5922	Pedestrian Signal Head with Countdown Timer	16	-	-	16	Each
635E5930	Pedestrian Crossing Sign	16	-	-	16	Each
635E6500	* Furnish Signal Pole with Mast Arm	2	-	-	2	Each
635E8110	1" Rigid Conduit, Schedule 40	490	45	-	535	Ft
635E8120	2" Rigid Conduit, Schedule 40	295	75	-	370	Ft
635E8140	4" Rigid Conduit, Schedule 40	350	-	-	350	Ft
635E8230	3" Rigid Conduit, Schedule 80	3,425	780	-	4,205	Ft
635E8410	1/2" Innerduct, SDR 13.5	3,635	-	-	3,635	Ft
635E8415	1" Innerduct, SDR 13.5	33,750	4,110	1,140	39,000	Ft
635E8420	1.5" Innerduct, SDR 13.5	290	50	-	340	Ft
635E9016	1/C #6 AWG Copper Wire	240	-	-	240	Ft
635E9022	1/C #12 AWG Copper Wire	26,515	4,750	955	32,220	Ft
635E9302	2/C #14 AWG IMSA Copper Cable, K1	500	-	-	500	Ft
635E9303	3/C #14 AWG IMSA Copper Cable, K1	240	-	-	240	Ft
635E9305	5/C #14 AWG IMSA Copper Cable, K1	3,370	-	-	3,370	Ft
635E9307	7/C #14 AWG IMSA Copper Cable, K1	210	-	-	210	Ft
635E9312	12/C #14 AWG IMSA Copper Cable, K1	590	-	-	590	Ft
635E9325	25/C #14 AWG IMSA Copper Cable, K1	2,350	-	-	2,350	Ft
635E9800	Preemption Cable	6,120	-	-	6,120	Ft
635E9924	24 Strand Fiber Optic Cable	18,550	-	-	18,550	Ft
635E9950	Install Fiber Optic Cable	-	-	1,100	1,100	Ft
* - Denotes Non-Participating						



SUPPLYING AS BUILT PLANS

If the traffic signal systems or roadway lighting 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 and City Lighting Department. 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 SUBMITTAL

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 address:
Lance.McQueen@hdrinc.com

Upon review of the submittals, they will be sent by the Engineer to the following email addresses for concurrence of approvals or remarks:
Stacy.Bartlett@state.sd.us
Troy.Miller@siouxfalls.gov

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 Contractor, Region Traffic Engineer, City Traffic Engineer and Consultant Design Engineer and City Light Department.

SPECIAL PROVISIONS

The following special provisions are attached to the project specifications and will be reviewed by the Contractor for furnishing and installing the proposed traffic equipment.

- Special Provision for Optical Activated Emergency Vehicle Preemption System
- Special Provision for ATC Traffic Signal Controller Cabinet
- Special Provision for Traffic Signal Heads (LED Modules)

MISCELLANEOUS, ELECTRICAL

The contract lump sum price for "Miscellaneous, Electrical" will include all costs for the following work items:

- NH 0100(107)411 – PCN 01VA (Veterans Parkway and SD Hwy 11)
- Installation of PVC pipe and concrete grout at the future pedestrian push button post locations FPB1 to FPB8 @ the intersection of 69th Street and SD Hwy 11
 - Salvaging of existing tunnel luminaires ETL1 thru ETL24 @ the existing pedestrian underpass north of 57th Street
 - Pulling-back and reinstalling existing wires and cables
 - Marking all wires and conduits within junction boxes and luminaire pole bases to label the line direction and description of the opposite end

- P 1440(00) - PCN 08DJ – CIP #11118 (69th Street)
- Installation of future pedestrian push button posts FPB9 and FPB10 @ the intersection of 69th Street and Huntwood Ave
 - Marking all wires and conduits within junction boxes and luminaire pole bases to label the line direction and description of the opposite end

- P 1432(00) - PCN 08DK – CIP #11119 (57th Street)
- Pulling-back and reinstalling existing wires and cables
 - Marking all wires and conduits within junction boxes and luminaire pole bases to label the line direction and description of the opposite end

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L3	L85
Plotting Date: 8/17/2026		REV DATE: 08/17/2026 INITIAL: LRM	

SALVAGE LUMINAIRE POLE

Existing luminaire poles will be salvaged and delivered to the City of Sioux Falls Light Department. The existing street light luminaires and bases are to be removed from the luminaire poles when returned, with the existing street light luminaires and bases also being returned to the City. Contact the City Light Department (#605-373-6979) for delivery information.

Luminaire poles and luminaires damaged during this work will be repaired or replaced by the Contractor at no cost to the State.

All costs for work involved for salvaging and delivering the existing luminaire poles, luminaires and bases to the City Light Department will be incidental to the contract unit price per each for "Salvage Luminaire Pole".

SALVAGE SIGNAL EQUIPMENT

Existing traffic signal equipment will be salvaged and delivered to the City of Sioux Falls Traffic Shop. Contact Heath Hoftiezer (#605-367-8634) for delivery information. The Contractor will contact the City 5 days before delivery.

Signal equipment damaged during this work will be repaired or replaced by the Contractor at no cost to the State.

All costs for work involved in the salvage and delivery of the existing signal equipment will be incidental to the contract lump sum price for "Salvage Signal Equipment".

REMOVE LUMINAIRE POLE FOOTING

The footings of salvaged and "remove and reset" luminaire poles will be removed by the Contractor to a minimum of 2' 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 salvaged luminaire poles will be incidental to the contract unit price per each for "Remove Luminaire Pole Footing".

REMOVE SIGNAL POLE FOOTING

The footings of salvaged signal poles will be removed by the Contractor to a minimum of 2' 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 JUNCTION BOX (TRAFFIC OR LIGHTING)

The Contractor will remove all junction boxes as designated in the plans. All rings and covers will be returned to the applicable department. If the junction box is labeled "Electric", deliver to City Light Shop. If the junction box is labeled "Traffic", deliver to City Traffic Shop.

Contact the City Light Shop (#605-373-6979) and City Traffic Shop (#605-367-8634) for delivery information. The Contractor will contact the City 5 days before delivery.

All costs for removal and delivery of the junction boxes will be included in the contract lump sum price for "Miscellaneous, Electrical".

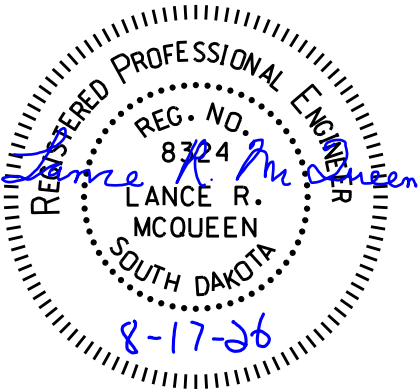


TABLE OF FOOTING DATA

NH 0100(107)411 - PCN 01VA (Veterans Parkway and SD Hwy 11)					
Site Designation	Footing Diameter	*Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
L1-L14	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"
L15	2' - 0"	9' - 0"	1' - 8"	60' - 0"	8-#7 x 8' - 6"
L16-L76	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"
L77	2' - 0"	9' - 0"	1' - 8"	60' - 0"	8-#7 x 8' - 6"
L78	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"
L79	2' - 0"	9' - 0"	1' - 8"	60' - 0"	8-#7 x 8' - 6"
SL9-SL25	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"
HL1-HL6	2' - 0"	7' - 0"	1' - 8"	49' - 6"	8-#7 x 6' - 6"
S1	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"
S2	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"
S3	2' - 0"	6'-0"	1' - 8"	44' - 3"	8-#7 x 5' - 6"
S4	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"
S5	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"
S6	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"
S7	2' - 0"	6'-0"	1' - 8"	44' - 3"	8-#7 x 5' - 6"
S8	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"
S9	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"
S10	3' - 6"	15'-0"	3' - 2"	173' - 3"	18-#8 x 14' -6"

*Footing depth will be below ground level.

**The size of all spirals will be #3.

P 1440(00) - PCN 08DJ - CIP #11118 (69 th Street)					
Site Designation	Footing Diameter	*Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
SL1-SL8	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"

*Footing depth will be below ground level.

**The size of all spirals will be #3.

P 1432(00) - PCN 08DK - CIP #11119 (57 th Street)					
Site Designation	Footing Diameter	*Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
FL1-FL5	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"

*Footing depth will be below ground level.

**The size of all spirals will be #3.

SOILS INFORMATION

Light Poles

Subsurface conditions along the lighting corridor primarily consist of brown silt clay overlying brown sandy clay at varying depths. Footings will be installed in both the in-situ soils and newly placed fill. Groundwater was encountered at varying depths from 3.0 to 14.0 feet below the original surface within the project limits during the subsurface investigation conducted in January 2022.

During the construction of the cylindrical footings, concrete placement operations should closely follow excavation procedures. The longer the excavations are left open, the more likely caving may occur. If caving soils are encountered, it may be necessary to use casing or drilling fluids to maintain an open excavation. The casing will be of sufficient strength to withstand handling and installation procedures. Casing material may consist of Sonotube, corrugated metal pipe, PVC, smooth metal pipe, or any other material as approved by the Engineer. Drilling fluids can be water or other slurries as approved by the Engineer.

Concrete will not be dropped through standing water. Concrete placed through drilling fluids must be tremied. If caving is not an issue, but water is present, it will be removed prior to concrete placement, or the concrete will be tremied.

Traffic Signal Poles

Subsurface conditions at the intersection of Veterans Parkway and 57th St. primarily consist of approximately 7 feet of brown silt clay overlying brown sandy clay. Groundwater was encountered at a depth of 6.0 feet below the original surface during the subsurface investigation conducted in November 2024.

Subsurface conditions at the intersection of Veterans Parkway and 69th St. primarily consist of brown sandy clay. Groundwater was encountered at a depth of 7.0 feet below the original surface during the subsurface investigation conducted in November 2024.

The 3'-6" x 15'-0" Traffic Signal Footings will be constructed in conformance with the Special Provision for Cylindrical Concrete Footings.

During the construction of the cylindrical footings, concrete placement operations should closely follow excavation procedures. The longer the excavations are left open, the more likely caving may occur. If caving soils are encountered, it may be necessary to use casing or drilling fluids to maintain an open excavation. The casing will be of sufficient strength to withstand handling and installation procedures. Casing material may consist of Sonotube, corrugated metal pipe, PVC, smooth metal pipe, or any other material as approved by the Engineer. Drilling fluids can be water or other slurries as approved by the Engineer.

Concrete will not be dropped through standing water. Concrete placed through drilling fluids must be tremied. If caving is not an issue, but water is present, it will be removed prior to concrete placement, or the concrete will be tremied.

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	NH 0100(107)411 P 1440(00) & P 1432(00)	L4	L85

Plotting Date: 8/28/2025

INNERDUCT

The innerduct conduit will be orange in color and longitudinally ribbed on the inside wall.

The innerduct bid items will include furnishing and installing the innerduct, as well as all work to seal the traffic interconnect conduit within the junction boxes.

Innerduct ends will be sealed using a mastic style tape wrapped around the end of the innerduct and fiber optic cable. If innerduct is empty, a heat shrinkable cap will be installed over the end of the innerduct.

All costs for the innerduct must be included in the contract unit price per foot for "1/2" Innerduct, SDR 13.5", "1" Innerduct, SDR 13.5" or "1.5" Innerduct SDR 13.5".

FIBER OPTIC CABLE

Fiber optic cable will be furnished and installed by the Contractor. Fiber optic cable will meet all requirements discussed in the City's specifications. Each fiber optic cable will have buffer tubes containing 12 fiber strands.

25 feet of fiber cable coil will be installed in the side mounted cabinet. The fiber optic cable will be installed continuous from traffic cabinet to traffic cabinet. No splices will be allowed in the fiber optic cable, except in the cabinets. All terminations and/or splicing will be completed by the City of Sioux Falls fiber optic specialist. For questions regarding the fiber optic cabling, contact Matt Rock at (605) 941-1143.

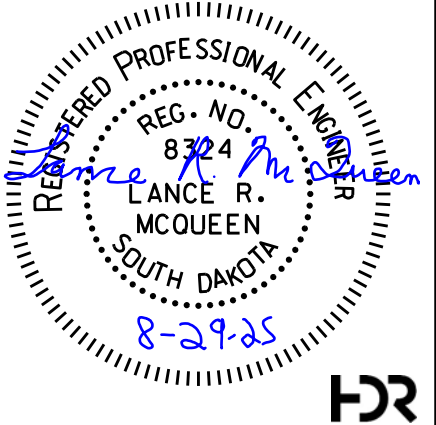
No testing will be completed on the fiber optic cable by the Contractor. All testing will be completed by the City outside of this project / contract. If repairs are needed to be completed by the Contractor due to deficiencies found by the City during their testing, the Contractor will repair the fiber optic cable as required to correct these deficiencies at no cost to the State.

All costs to furnish and install the 24SM fiber optic cable must be included in the contract unit price per foot for "24 Strand Fiber Optic Cable".

EXISTING FIBER CABLE

All costs to pull back and reinstall the existing fiber optic cable as shown on the plans must be included in the contract unit price per foot for "Install Fiber Optic Cable". Existing fiber cable damaged during this work will be repaired or replaced by the Contractor at no cost to the State.

No testing will be completed on the fiber optic cable by the Contractor. All testing will be completed by the City outside of this project / contract. If repairs are needed to be completed by the Contractor due to deficiencies found by the City during their testing, the Contractor will repair the fiber optic cable as required to correct these deficiencies at no cost to the State.



ROADWAY LIGHTING

The roadway lighting items will be installed as shown in the plans and the Standard Specifications for Roadway Lighting – Section 635B. The following notes are provided for the Contractor’s clarification.

- The Standard Specifications can be viewed online at: <https://www.siouxfalls.gov/business-permits/development-projects/construction-management-and-design/specs-policies-manuals>.
- The Contractor will refer to Section A of 635B.3 of the Construction Requirements in the Standard Specifications for the coordination and application process to follow for the electrical services.
- The Contractor will complete both the Roadway Lighting and Traffic Signal Checklists for installation of all items shown on the plans. The checklists can be found at the following website: <https://www.siouxfalls.gov/business-permits/development-projects/construction-management-and-design/cip-forms-permits>.
- The proposed luminaire poles will have breakaway transformer bases and will be installed on concrete footings.
- The Contractor will furnish and install all street light wire and will pull all wires through the conduits, junction boxes, and luminaire poles.
- The Contractor will make all line-to-line connections and will furnish and install all items listed under Section 635B.G (Connectors) in the Standard Specifications for fuses, fuse-holder kits, in-line fuse holders, splice kits, stub connection kits and multi-cable connectors to be furnished and installed within the junction boxes, light pole bases and meter locations.
- The City Light department will de-energize the lights to be removed.
- #14 AWG Tracer wire will be installed in lighting conduit not carrying wire. The tracer wire will be paid for separately under its respective bid item, unless noted otherwise.

VIBRATION DAMPENER

The proposed 50 foot tall luminaire poles will be furnished and installed with a vibration dampener that is internal to the pole.

LABELING WIRE/CONDUIT

All wires and conduits within junction boxes and luminaire pole bases will be permanently marked, clearly stating line direction and description of the opposite end. The markings will be of sufficient durability to withstand the environment involved.

ELECTRICAL SERVICE CABINET

All costs to furnish and install the Electrical Service Cabinets as shown on the plans and as discussed below will be incidental to the contract unit price per each for “Electrical Service Cabinet”.

All electrical service cabinets will be U6221-O-200-10GR as manufactured by Milbank or approved equal. The City of Sioux Falls standard plate #635.42 is shown in the plans for general guidance for these electrical service cabinets.

PHOTOCELL CONTROL BOX (CIRCUIT CONTROL CENTER)

Photocell Control Boxes will be installed on the outside edge of the pedestrian underpasses at the locations shown on the plans. See the diagram to the right.

The Photocell Control Boxes will provide controls for the tunnel luminaires mounted within/on the pedestrian underpasses, to allow the luminaires to turn on and off for night and day time.

The Photocell Control Boxes will be mounted to be in clear view of the sky. The Photocell Control Boxes will be installed per the manufacturer’s specifications. The Photocell Control Boxes will be per the City’s Standard Specifications for Roadway Lighting – Section 635B.

All costs for the Photocell Control Boxes will be included in the contract unit price per each for “Circuit Control Center”. This will include furnishing, installing, mounting to the pedestrian underpasses and wire connections to provide a fully functional light control system for the tunnel luminaires.

SPECIAL ELECTRICAL JUNCTION BOX

The proposed electrical junction boxes for traffic, innerduct and lighting will be the 12”, 24” or 30” diameter junction boxes as shown on City of Sioux Falls standard plates #635.31, 635.33 and 635.70.

All costs for the junction boxes, regardless of type or size, will be included in the contract unit price per each for “Special Electrical Junction Box”.

PEDESTRIAN PUSH BUTTON POLE

Push button poles will use a 48” schedule 40, 4” diameter, aluminum pipe screwed into a frangible pedestal base that is designed to break away at the flange and/or the mid-section around the door to preserve anchor bolts and concrete.

- The pedestal base will have a 6” bolt circle.
- 4 anchors made of stainless steel threaded rod, washers, and nuts will be drilled and epoxied into the concrete.
- A cable tether system will be used to connect the pole to one of the anchor bolts keeping the pole from becoming a projectile in the event of a knock down.
- Shop drawings for approval of the push buttons poles will be submitted.

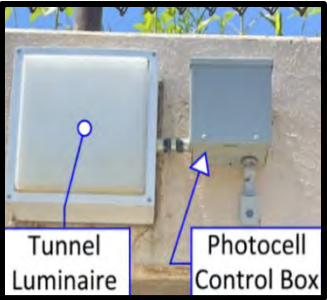
ACCESSIBLE PEDESTRIAN SIGNAL

The proposed accessible pedestrian signals will meet the following requirements:

- Accessible pedestrian signals will be in compliance with the current MUTCD.
- Shop drawings for approval of the push buttons, including materials, functionality, and color will be submitted.
- Accessible pedestrian signals will have both audible and vibrotactile walk indications and will be capable of recording speech messages.
- Pedestrian push buttons will be 2-wire Polara iNS Accessible Pedestrian Signal as manufactured by Polara or approved equal.

Pedestrian crossing signs will be required for each pedestrian push button and are allowed to be furnished with the button as a complete assembly. Shop drawings depicting the proposed pedestrian crossing sign size, design, and language will be submitted.

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”.



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L5	L85
Plotting Date: 9/11/2026		REV DATE: 09/11/2026 INITIAL: LRM	

1/C #10 AWG COPPER WIRE

The #10 AWG Copper Wire will meet the following requirements:

- Insulation will be 600 volt rated thermosetting, cross linked polyethylene meeting the requirements of ICEA S-66-524 (NEMA WC-7).
- Conductors will be annealed copper meeting the requirements of ASTM B3.
- Suitable for use in conduit or direct burial application.
- Wire will be UL Listed Type USE-2 per UL Standard 854 and Type RHH or RHW-2 per UL Standard 44.
- The wire will be as manufactured by Southwire, Prysmian Group or approved equal.

All costs for the 1/C #10 AWG Copper Wire will be included in the contract unit price per foot for “1/C #10 AWG Copper Wire”.

FUTURE PEDESTRIAN PUSH BUTTON POLE

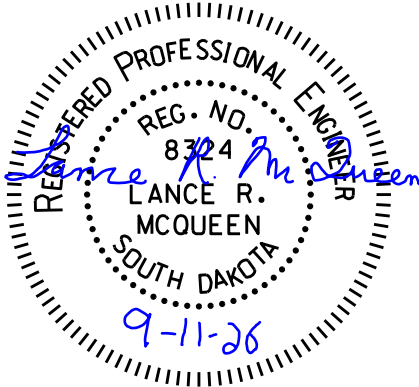
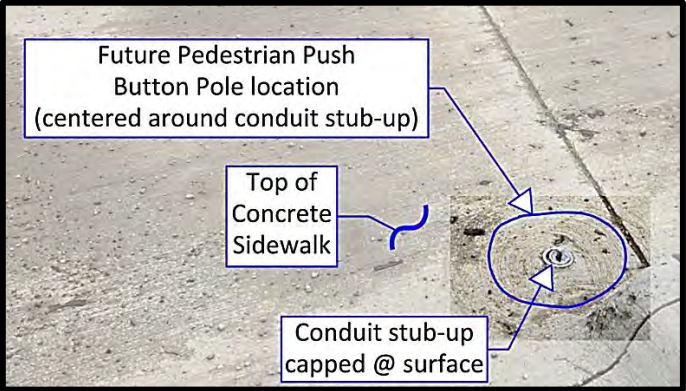
Future pedestrian push button posts are to be installed for FPB1 thru FPB8 @ the intersection of 69th Street and SD Hwy 11, and for FPB9 and FPB10 @ the intersection of 69th Street and Huntwood Ave.

No pedestrian push button posts are to be installed at these locations; however, the signal conduit will be installed to these future post locations.

At these future post locations:

- No pedestrian push button posts are to be installed; however, the signal conduit will be installed to the future post locations as shown on the plans.
- The signal conduit will be stubbed-up into the sidewalk, with the conduit stub-up being capped at the sidewalk surface.
- A diagram of the aforementioned items is shown in the diagram below.

All costs for this work will be included in the contract lump sum price for “Miscellaneous, Electrical”.



VETERANS PARKWAY LUMINAIRES AND SD HWY 11
(NH 0100(107)411 - PCN 01VA)

The accepted design for Veterans Parkway, 69th Street east, and SD Hwy 11 will provide 1.1 and greater average maintained foot-candles and a uniformity ratio (average maintained to minimum maintained foot-candles) of 3:1 and 5:1 (maximum to minimum maintained foot candles):

L1-L14, L16-L76, L78, S1, S2, S4, S5, S6, S8, S9, S10
Setback: 6.0 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 100-120 Ft.
Spacing: 270 Ft.
Configuration: Opposite
Mounting Height: 50 Ft.
Arm Extension Length: 8 Ft.
Luminaire: Type 2 – 199W LED

L15, L77, L79
Setback: 6.0 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 104 Ft.
Spacing: 270 Ft.
Configuration: Opposite
Mounting Height: 50 Ft.
Arm Extension Length: Twin 8 Ft.
Luminaire: Type 2 – 199W LED

T1-T14, ELT1-ETL24 (underpass / tunnel luminaires)
Setback: 0 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 12 Ft.
Spacing: 15 Ft.
Configuration: One sided
Mounting Height: 9.5 Ft. (See Section E)
Arm Extension Length: Mounted to wall of underpass / tunnel
Luminaire: 28W LED

SL9-SL25 (69th Street east and SD Hwy 11)
Setback: 2.0-7.5 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 70-93 Ft.
Spacing: 190 Ft.
Configuration: Median
Mounting Height: 40 Ft.
Arm Extension Length: Twin 8 Ft.
Luminaire: Type 2 – 105W LED

HL1-HL6 (69th Street)
Setback: 3.5 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 36 Ft.
Spacing: 200 Ft.
Configuration: One Sided
Mounting Height: 40 Ft.
Arm Extension Length: 8 Ft.
Luminaire: Type 2 – 105W LED

69TH STREET LUMINAIRES (P 1440(00) - PCN 08DJ - CIP #11118)

The accepted design for 69th Street west will provide 1.1 and greater average maintained foot-candles and a uniformity ratio (average maintained to minimum maintained foot-candles) of 3:1 and 5:1 (maximum to minimum maintained foot candles):

SL1-SL8 (69th Street west)
Setback: 2.0-7.5 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 70-93 Ft.
Spacing: 190 Ft.
Configuration: Median
Mounting Height: 40 Ft.
Arm Extension Length: Twin 8 Ft.
Luminaire: Type 2 – 105W LED

57TH STREET LUMINAIRES (1432(00) - PCN 08DK - CIP #11119)

The accepted design for 57th Street will provide 1.1 and greater average maintained foot-candles and a uniformity ratio (average maintained to minimum maintained foot-candles) of 3:1 and 5:1 (maximum to minimum maintained foot candles):

FL1-FL5 (57th Street)
Setback: 2.0-7.5 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 86 Ft.
Spacing: 150 Ft.
Configuration: Median
Mounting Height: 40 Ft.
Arm Extension Length: Twin 8 Ft.
Luminaire: Type 3 – 105W LED

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L6	L85
Plotting Date: 9/11/2026		REV DATE: 09/11/2026 INITIAL: LRM	

ROADWAY LUMINAIRES

- Luminaires will meet the specifications below and in the City's Standard Specifications for Roadway Lighting – Section 635B. Approved equals are allowed for these luminaires.
- Type 2 - 105W LED
 - o Autobahn ATB0-P451-MVOLT-R2-P7-PCLL or approved equal
 - o Voltage will be universal 120-277V
 - o Distribution will be Type 2
 - o Absolute Lumens will be 16,570
 - o Will have a BUG rating of B3-U0-G3
 - o CCT will be 4000K
 - o Color will be gray
 - o 20kV/10kA SPD Surge Protection will be provided
 - o A Terminal Block will be provided
 - o A 7 pin photocontrol receptacle will be provided
 - o A Long Life Photocontrol receptacle will be provided
 - o Bird guards will be provided on the mounting hole of the LED fixture
 - Type 3 - 105W LED
 - o Autobahn ATB0-P451-MVOLT-R3-P7-PCLL or approved equal
 - o Voltage will be universal 120-277V
 - o Distribution will be Type 3
 - o Absolute Lumens will be 16,640
 - o Will have a BUG rating of B3-U0-G3
 - o CCT will be 4000K
 - o Color will be gray
 - o 20kV/10kA SPD Surge Protection will be provided
 - o A Terminal Block will be provided
 - o A 7 pin photocontrol receptacle will be provided
 - o A Long Life Photocontrol receptacle will be provided
 - o Bird guards will be provided on the mounting hole of the LED fixture
 - Type 2 - 199W LED
 - o Autobahn ATB2-P901-MVOLT-R2-P7-PCLL or approved equal
 - o Voltage will be universal 120-277V
 - o Distribution will be Type 2
 - o Absolute Lumens will be 30,430
 - o Will have a BUG rating of B3-U0-G3
 - o CCT will be 4000K
 - o Color will be gray
 - o 20kV/10kA SPD Surge Protection will be provided
 - o A Terminal Block will be provided
 - o A 7 pin photocontrol receptacle will be provided
 - o A Long Life Photocontrol receptacle will be provided
 - o Bird guards will be provided on the mounting hole of the LED fixture
 - Tunnel Luminaire - 33W LED
 - o Holophane Parkpak LED PPSQL2-P20-40K-MVOLT-PY-T5E or approved equal
 - o Voltage will be universal 120-277V
 - o Distribution will be Type 5 entry
 - o Absolute Lumens will be 3,622
 - o CCT will be 4000K
 - o Color will be gray
 - o 20kV/10kA SPD Surge Protection will be provided
 - o Will have maximum dimensions of 15" tall x 15" wide x 7" depth
 - o Will have a polycarbonate lens
 - o Will be a surface wall mount fixture that is vandal resistant



TRAFFIC CONDUIT AND INNERDUCT

All nonmetallic conduit open ends will have an approved bell end or bushing installed to prevent damage to cable or conductors, per the City's specifications Section 635A.3.G.6.

#12 AWG Tracer wire will be installed in all traffic conduit and interconnect. The tracer wire will be paid for separately under its respective bid item, unless noted otherwise.

SIGNAL POLES

Signal poles will be per SDDOT Specifications.

Cantilever traffic signal supports, including anchor bolts, will be designed for fatigue in accordance with Fatigue Importance Category III without galloping and truck induced gusts.

All poles will have transformer bases.

Signal poles will have rotatable mast arms.

The Contractor will review the plans for signal pole mast arm lengths and the heights & arm lengths of the luminaire extensions on the signal poles.

FURNISH SIGNAL POLE WITH LUMINAIRE

A signal pole with 75' mast arm length and 50' luminaire extension with 8' arm (50' tall luminaire from the ground) and a signal pole with 85' mast arm length and 50' luminaire extension with 8' arm (50' tall luminaire from the ground) will be furnished with the project.

- A transformer base, anchor bolts, mounting hardware, etc. will be furnished with each signal pole.
- All items will meet the specifications discussed above under the heading SIGNAL POLES.

All items will be delivered to the City Traffic Department.

- Contact Heath Hoftiezer (#605-367-8634) for delivery information.
- The Contractor will contact the City 5 days before delivery.
- The mast arm, luminaire extension, luminaire arm and transformer base will not be attached to the signal pole upon delivery.

All costs for this will be included in the contract unit price per each "Furnish Signal Pole with Mast Arm".

TRAFFIC SIGNAL HEADS

Traffic signal heads for vehicle and pedestrian traffic signal heads will be furnished and installed by the Contractor, as specified in the special provisions. All costs for the traffic signal heads will be included in the appropriate signal head bid item.

In addition to the special provisions for the traffic signal heads, the following specifications will also apply:

- vehicle and pedestrian signals heads colors will be Black body, Black doors, Black tunnel visors and Black backplates
- all hardware associated with mounting the vehicle and pedestrian signals heads will have P33 Gloss Black color
- pedestrian signal heads will be two separate 12"x12" signal heads. The man/hand display head will be mounted above the countdown timer display head as shown to the right.



VIDEO CAMERA TRAFFIC DETECTION SYSTEM

The Video Camera, Processor Unit, and Cables will be furnished and installed by the Contractor to meet the specifications discussed below. The Video Camera Traffic Detection System will be NoTraffic or approved equal.

All costs to furnish and install the complete Video Camera Traffic Detection System will be included in the contract unit price per each for "Video Detection System". These costs will include, but not be limited to:

- traffic detection camera, mounting brackets, and hardware
- processor unit, cabling between processor and controller, Shielded CAT-5e cable, and antenna
- all equipment required in the controller cabinet to provide a fully functioning video traffic vehicle detection system

The Video Camera Traffic Detection System will also be furnished and installed with a module capable of traffic counting and enhanced pedestrian and cyclist detection, as well as functionality for generating reports for traffic counts, length-based classifications, turning movements, red and green occupancy, and cycle lengths. The module will be incidental to the contract unit price per each for "Video Detection System". The first 10 years of any subscription required to allow for the module to work on an annual basis will be included in the contract unit price per each for "Video Detection System".

The Shielded CAT-5e cable for the Traffic Detection Camera will be installed from the controller cabinet to the camera unit without splices. The Contractor will use only shielded cable approved by the camera manufacturer to protect against Electromagnetic Interference (EMI). Cable will be rated for outdoor use and installed according to the manufacturer's recommendations. All costs for the Shielded CAT-5e cable will be incidental to the contract unit price per each for "Video Detection System".

The Contractor will coordinate with the City prior to determining the final camera mounting location. Contact Heath Hoftiezer (#605-367-8634) of the City.

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L7	L85
Plotting Date: 9/11/2026		REV DATE: 09/11/2026 INITIAL: LRM	

MULTICONDUCTOR CONTROL CABLE FOR SIGNAL CIRCUITS

The Conductor Jackets for the multiconductor control cables will be color coded in accordance with IMSA 19-1 Table 5.1.

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. 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.

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

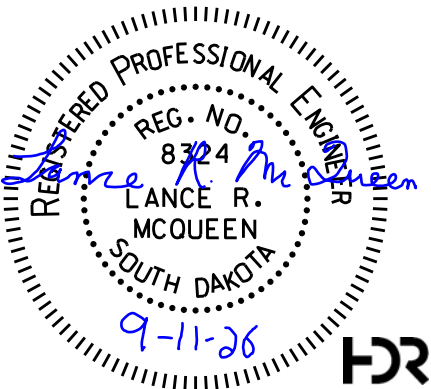
SIGNAL BACKPLATES

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 may be aluminum. 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 the appropriate type and size of signal head.



TRAFFIC SIGNAL CONTROLLER AND CONTROLLER CABINET

The traffic signal controller and controller cabinet will be furnished and installed by the Contractor to meet the specifications in the special provisions. See the diagram below for signal controller cabinet details. The traffic signal controller will be Swarco McCain ATC eX2 and the traffic signal cabinet will be Swarco McCain 350i ATC or approved equal.

A 2' width (4" depth) concrete pad will be installed all the way around the controller cabinet and its side mounted cabinets. All costs for this concrete pad will be incidental to the controller cabinet cost.

SIDE MOUNTED CABINET (FOR FIBER OPTIC CABLE)

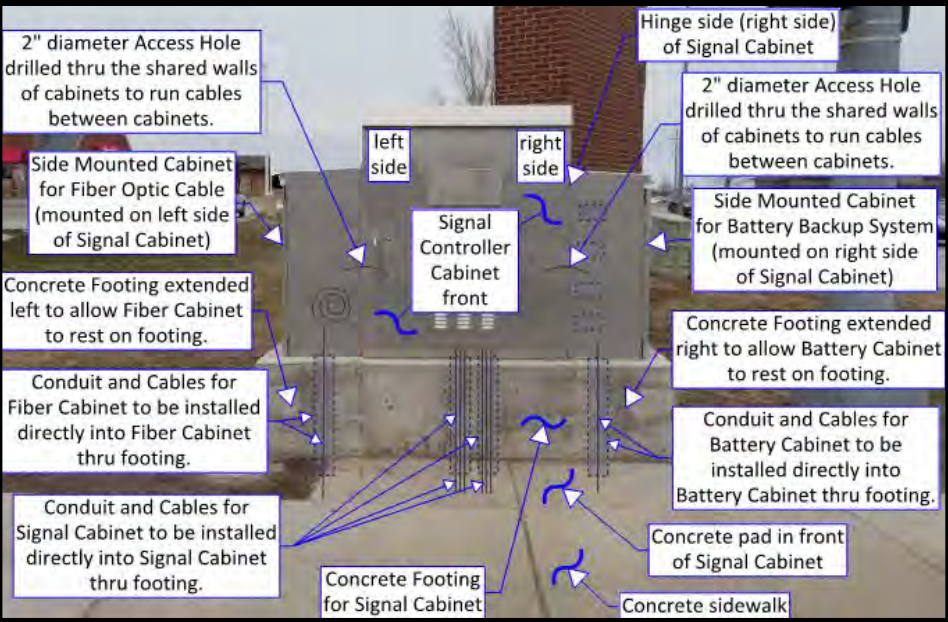
The side mounted cabinet will house the fiber optic cable and will be furnished and installed by the Contractor.

- The side mounted cabinet will be mounted on the side of the signal controller cabinet as shown on the diagram below. The side mounted cabinet will:
- meet standards for a NEMA Traffic Enclosure for fiber optic cable
 - have dimensions of 56"H, 26.25"W, 14.625"D
 - be furnished with a door that includes ventilation louvers
 - be provided with a No. 2 key for the main door with a 3-point locking mechanism which operates from a single easy turning handle
 - include at least 3 adjustable shelves
 - have lockable doors that swing open towards the rear of the main cabinet (hinges located to rear with handle located at front)
 - have a white powder-coated interior
 - be manufactured by Enclose Manufacturing or approved equal

The side mounted cabinet will be plumb and level in reference to the back side of the signal controller cabinet. The Contractor must take precautions when positioning the side mounted cabinet to avoid damaging wire or equipment within the controller cabinet while drilling the mounting holes and the access hole. The access hole will be two inch diameter and will be drilled through the side mounted cabinet into the controller cabinet. A grommet or bushing will be installed in the two inch diameter hole to prevent damage during pull through of the fiber optic cable.

The side mounted cabinet will be mounted and tightened securely to the controller cabinet using a minimum of four bolts. A bead of clear silicon caulking will be placed in all gaps between the side mounted cabinet and controller cabinet to prevent water intrusion into either cabinet.

All costs to furnish and install the side mounted cabinet, including the concrete base, must be included in the contract unit price per each for "Side Mounted Cabinet".



SIDE MOUNTED CABINET (FOR BATTERY BACKUP SYSTEM)

The side mounted cabinet will house the battery backup and flash system will be furnished and installed by the Contractor.

- The side mounted cabinet for the battery backup and flash system will be mounted on the side of the signal controller cabinet as shown on the graphic on this sheet. The side mounted cabinet will:
- meet standards for a NEMA Traffic Enclosure
 - have dimensions of 56"H, 26.25"W, 14.625"D
 - be furnished with a door that includes ventilation louvers, fan, and filter
 - be provided with a No. 2 key for the main door with a 3-point locking mechanism which operates from a single easy turning handle
 - include the optional generator compartment and port / socket
 - include shelves that are sized to accommodate the specified battery backup and that slide out to provide easy access to batteries for testing
 - include an include an operational external LED indication light that activates when the cabinet is on generator power and utility power is disconnected / off-line
 - include LED lighting and a white powder-coated interior
 - will have a thermostatically controlled exhaust fan and air filter
 - be manufactured by Enclose Manufacturing or approved equal

The side mounted cabinet will be plumb and level in reference to the back side of the controller cabinet. The Contractor must take precautions when positioning the side mounted cabinet to avoid damaging wire or equipment within the controller cabinet while drilling the mounting holes and the access hole. The access hole will be two inch diameter and will be drilled through the side mounted cabinet into the controller cabinet. A grommet or bushing will be installed in the two inch diameter hole to prevent damage during pull through of the battery / power cables.

The side mounted cabinet will be mounted and tightened securely to the controller cabinet using a minimum of four bolts. A bead of clear silicon caulking will be placed in all gaps between the side mounted cabinet and controller cabinet to prevent water intrusion into either cabinet.

All costs to furnish and install the side mounted cabinet, including the concrete base, must be included in the contract unit price per each for "Side Mounted Cabinet".

BATTERY BACKUP SYSTEM

The signal head battery backup and flash system will be furnished and installed by the Contractor.

The signal head battery backup and flash system will be FXM1100 (1100VA) as manufactured by Alpha Technologies or approved equal. The battery backup system will also be supplied with an automatic transfer switch to transfer from line power to battery backup and a generator transfer switch to allow switching from line power or battery power to generator power. The transfer switches will be capable of transferring power in under 250 milliseconds permitting the traffic signal to operate normally without interruption to the traffic signal.

A terminal strip for input and output power connections in addition to neutral and ground connections will also be incorporated in the transfer switch design. An interface connector (preferably utilizing a 30-amp, twist lock recessed male plug) allows an external generator or vehicle inverter to be plugged into the system.

Upon loss of utility power the battery backup system will switch to battery power. In cases of UPS failure, while on utility, the system will auto-bypass and remain in that mode until repaired. Should batteries deplete, while on batteries, the unit will auto-shutdown and return to normal operating mode once the utility power is restored. The By-pass switch will enable removal and replacement of the Traffic UPS without shutting down the traffic control system (i.e. "hot swap" capability). The UPS will support generator input without going to batteries.

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L8	L85
Plotting Date: 9/11/2026		REV DATE: 09/11/2026 INITIAL: LRM	

The backup battery power system will be sized to accommodate the operation of the signal as shown on the plans for a **minimum of 4 hours**.

The signal head battery backup and flash system will meet the following specifications:

- Standard Features**
- Hot-swappable Input/Output Surge Protection
 - Intelligent boost operation for brownout protection
 - Hot-swappable UPS and batteries
 - Noise suppression, FCC Class A
 - Multiple mounting configurations
 - Rugged, outdoor weather resistant construction
 - Lockable enclosure
 - NRTL/CSA approved

General Specifications

- Output:**
- Output Voltage Regulation +/-10% over input voltage range
 - Waveform sine
 - Typical Efficiency >95%
 - Typical Output Voltage THD <3%
 - Typical Transfer Time < 5 ms typical
 - Audible Noise at 1m <55 dbA

- Environment:**
- Operating Temperature -35°C to +70°C

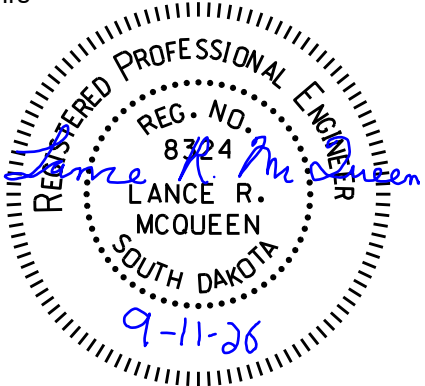
- Agency Compliance:**
- Lightning/Surge Protection: Passes ANSI/IEEE C.62.41/C.62.45 Cat A&B
 - Safety: EN50091-1
 - Low Voltage: EN50091-2

- Power Modules**
- | | |
|--------------------------------|-------------|
| 1100VA Power Module | 60Hz |
| Input/Output Voltage nominal | 120VAC |
| Input/Output Frequency nominal | 60Hz |
| Input Current | 20A |
| Input Voltage Variation | 85-152VAC |
| Output Power | 1100VA |
| Active Output Power | 1500W |
| Typical Efficiency | >95% |
| Max Charge Current | 15 Amps |
| Battery Backup Time | 2–16 hrs |

- Communications and Alarms**
- DB-9 compatible connector/RS-232 interface capable of monitoring, controlling, and calibrating the UPS, using ASCII commands with terminal emulation software.
 - External Alarm Signal with relay contacts for a) line fail, b) low battery warning, c) UPS needs service.

- Brownout Protection**
- Boost mode increases voltage by 12% of nominal line voltage if input voltage falls below 12% of nominal.

All costs for furnishing and installing the signal head battery backup and flash system must be included in the contract unit price per each for "Battery Backup System for Traffic Signal".



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L9	L85

Plotting Date: 9/11/2026 REV DATE: 09/11/2026 INITIAL: LRM

TABLE FOR CONDUIT & CABLE QUANTITIES																													
Location to Location		RGSC	PVC Conduit				Innerduct			Cable ¹																			
			Sch 40		Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring	
			0.75" (Ft)	1" (Ft)	2" (Ft)	4" (Ft)	2" (Ft)	3" (Ft)	0.5" (Ft)	1" (Ft)	1.5" (Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)
LIGHTING		NH 0100(107)411 - PCN 01VA (Veterans Pkwy)																											
Sycamore Ave & Veterans Pkwy																													
EJL2	L1			200						210																			
L1	L3			270						280																			
L3	L5			275						285																			
L5	L7			280						290																			
L7	L9			285						295																			
EJL1	L2			270						280																			
L2	L4			260						270																			
L4	L6			265						280																			
L6	L8			270						280																			
L8	L10			275						285																			
Sta. 449+70 @ Veterans Pkwy																													
L9	L11			280						290																			
L11	L13			280						295																			
L13	JL3			205						215																			
JL3	L15			80						95																			
L15	L17			280						290																			
L17	L19			280						290																			
L19	L21			280						290																			
L21	L23			275						285																			
L10	L12			270						285																			
L12	L14			265						275																			
L14	JL2			205						220																			
JL2	JL3					250				260																			
JL2	M1			20								175				15													
M1	Transformer					150					200																		
JL2	JL1			70						80																			
JL1	TL14	15												60															
TL14	TL13	25												90															
TL13	TL12	20												75															
TL12	TL11	20												75															
TL11	TL10	20												75															
TL10	TL9	20												75															
TL9	TL8	20												75															
TL8	TL7	20												75															
TL7	TL6	20												75															
TL6	TL5	20												75															
TL5	TL4	20												75															
TL4	TL3	20												75															
TL3	TL2	20												75															
TL2	TL1	25												90															
JL2	L16			75						85																			
L16	L18			270						280																			
L18	L20			270						280																			
L20	L22			270						280																			
L22	L24			265						275																			

REGISTERED PROFESSIONAL ENGINEER

REG. NO. 8324

James A. Anderson

PLANNING & DESIGN

1 - All cable quantities shown include 6' of slack/coil installed in each junction box, unless shown otherwise.
2 - Incidental to "Video Detection System" bid item.
3 - Incidental to "Miscellaneous, Electrical" bid item.



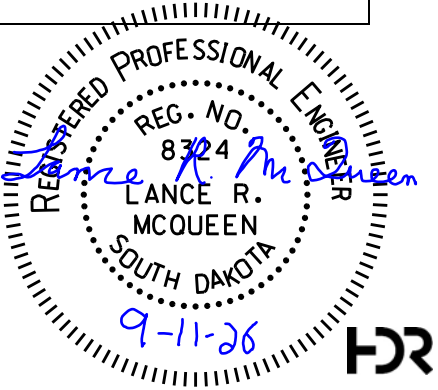
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L10	L85

Plotting Date: 9/11/2026 REV DATE: 09/11/2026 INITIAL: LRM

TABLE FOR CONDUIT & CABLE QUANTITIES																												
Location to Location		RGSC	PVC Conduit				Innerduct			Cable ¹																		
			Sch 40		Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring
			0.75" (Ft)	1" (Ft)	2" (Ft)	4" (Ft)	2" (Ft)	3" (Ft)	0.5" (Ft)																			
LIGHTING (cont'd)		NH 0100(107)411 - PCN 01VA (Veterans Pkwy)																										
69th Street & Veterans Pkwy																												
L23	L25			280						290														65				
L25	L27			275						285														65				
L27	L29			280						290														65				
L29	JL4			210						220																		
L24	L26			270						280														65				
L26	L28			265						275														65				
L28	L30			270						280														65				
L30	JL5			175						175																		
Transformer	JL10					160					210																	
JL10	M2					20					40																	
JL10	M2A					25					45																	
M2A	JL9			60								420				40												
JL9	JL8			180						240																		
JL8	S4			20						30														65				
JL8	SL9					145				155													110					
JL8	JL4					190				195																		
JL4	S5			10						20													65					
JL8	JL7					450				480																		
JL7	S2			30						40													65					
JL7	JL6					105				110																		
JL7	JL5					175				180																		
JL5	S1			15						25													65					
JL9	L31			115						130													65					
L31	L33			245						255													65					
L33	L35			250						260													65					
L35	L37			280						290													65					
L37	L39			285						295													65					
L39	L41			280						290													65					
JL7	L32			200						210													65					
L32	L34			245						255													65					
L34	L36			250						260													65					
L36	L38			280						290													65					
L38	L40			280						295													65					
L40	L42			280						290													65					

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2 - Incidental to "Video Detection System" bid item.
3 - Incidental to "Miscellaneous, Electrical" bid item.



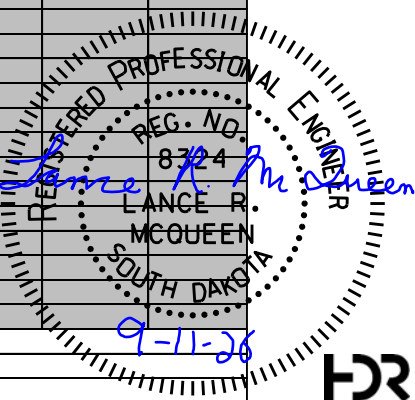
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L11	L85
Plotting Date: 9/11/2026		REV DATE: 09/11/2026 INITIAL: LRM	

Location to Location		TABLE FOR CONDUIT & CABLE QUANTITIES																												
		RGSC	PVC Conduit						Innerduct			Cable ¹																		
			Sch 40			Sch 80			SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring
			0.75"	1"	2"	4"	2"	3"	0.5"	1"	1.5"																			
		(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)
LIGHTING (cont'd)		NH 0100(107)411 - PCN 01VA (Veterans Pkwy)																												
Sta. 448+75 @ Veterans Pkwy																														
L41	L43			275							285																			
L43	L45			275							285																			
L45	L47			275							290																			
L47	L49			280							290																			
L49	JL11			60							70																			
JL11	JL12					250					270																			
JL11	M3			30									210				20													
M3	Transformer					100						150																		
JL11	L51			220							235																			
L51	L53			280							290																			
L53	L55			280							290																			
L55	L57			275							285																			
L57	L59			270							280																			
L42	L44			275							285																			
L44	L46			275							290																			
L46	L48			275							290																			
L48	L50			280							290																			
L50	JL12			60							65																			
JL12	L52			210							225																			
L52	L54			270							280																			
L54	L56			270							280																			
L56	L58			265							275																			
L58	L60			260							270																			
57th Street & Veterans Pkwy																														
L59	L61			275							285																			
L61	L63			280							290																			
L63	JL15			160							170																			
L60	L62			265							280																			
L62	L64			270							280																			
L64	JL16			180							190																			
Transformer	JL31					300						350																		50
JL31	JL14					230						240																		
JL14	M4					30						60																		
JL14	M4A					20						50																		
M4	JL13			80									490				50													
JL13	JL15			380							440																			
JL15	S10			20							30																			
JL15	JL20					100					105																			
JL15	JL19					190					195																			
JL19	S9			15							30																			
JL15	JL16					465					495																			
JL16	S6			15							25																			
JL16	JL17					135					140																			
JL16	JL18					175					180																			
JL18	S8			20							30																			
JL19	L65			250							260																			
L65	L67			270							280																			
L67	L69			260							270																			
L69	L71			265							280																			
L71	L73			265							280																			
JL18	L66			230							245																			
L66	L68			270							280																			
L68	L70			260							270																			
L70	L72			270							280																			
L72	L74			265							280																			

REGISTERED PROFESSIONAL
REG. NO. 8324
J. LANCE R
MCQUEEN
SOUTH DAKOTA

1 - All cable quantities shown include 6' of slack/coil installed in each junction box, unless shown otherwise.
2 - Incidental to "Video Detection System" bid item.
3 - Incidental to "Miscellaneous, Electrical" bid item.



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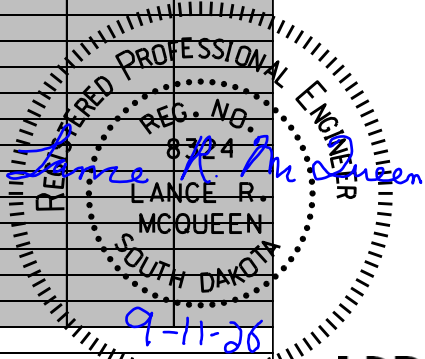
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L12	L85

Plotting Date: 9/11/2026 REV DATE: 09/11/2026 INITIAL: LRM

Location to Location		TABLE FOR CONDUIT & CABLE QUANTITIES																											
		RGSC	PVC Conduit				Innerduct			Cable ¹																			
			Sch 40		Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring	
			0.75"	1"	2"	4"	2"	3"	0.5"																				1"
(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	
LIGHTING (cont'd)		NH 0100(107)411 - PCN 01VA (Veterans Pkwy)																											
Sta. 545+40 @ Veterans Pkwy																													
L73	L75			265							280														65				
L75	L77			265							275														130				
L77	L79			215							230														130				
L79	EL19			275							285																		
EL19	EL21										280																		
EL21	JL24										20																		
JL24	JL26			275							285																		
JL26	EL23										20																		
Transformer	M5											80																	
M5	JL24												700																
JL24	JL25					270					280																	270	
JL24	JL23			265							270																		
JL23	JL22			270							280																		
JL22	JL21			295							305																		
JL21	EJL12										30																		
EJL12	EJL13										45																		
L74	L76			265							275														65				
L76	L78			265							280														65				
L78	EL18			80							230																		
EL18	EL20										280																		
EL20	JL25										275																		
JL25	EL22										20																		
JL25	JL27			280							290																		
JL27	EL24										20																		
69th Street east / SD Hwy 11																													
SL9	SL10			175							190														110				
SL10	SL11			175							185														110				
SL11	SL12			195							205														110				
SL12	SL13			195							210														110				
SL13	SL14			195							205														110				
SL14	JL28					70					75																		
JL28	JL29					125					130																		
Transformer	M6					120						180																	
M6	JL29			20									175																
JL29	JL30					155																							
JL29	SL15					115					125														110				
SL15	SL16			210							220														110				
SL16	SL17			210							225														110				
SL17	SL18			210							220														110				
SL18	SL19			210							220														110				
SL19	SL20			210							225														110				
SL20	SL21			220							230														110				
SL21	SL22			185							195														110				
SL22	SL23			195							200														110				
SL23	SL24			185							195														110				
SL24	SL25			110		80					200														110				
SL25	south			5																									
JL29	HL1			75							90														55				
HL1	HL2			210							220														55				
HL2	HL3			205							220														55				
HL3	HL4			215							225														55				
HL4	HL5			215							225														55				
HL5	HL6			195							210														55				
HL6	east			5												10													

REGISTERED PROFESSIONAL
REG. NO. 8724
LANCE R. MCQUEEN
SOUTH DAKOTA

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2 - Incidental to "Video Detection System" bid item.
3 - Incidental to "Miscellaneous, Electrical" bid item.

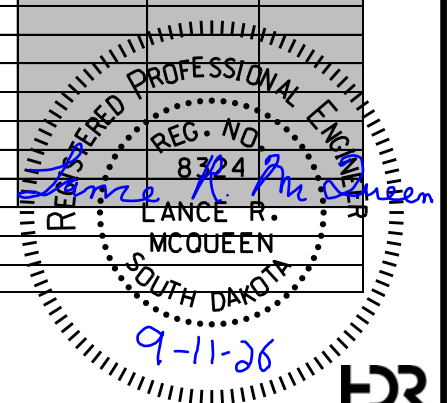


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L13	L85

REV DATE: 09/11/2026 INITIAL: LRM

Location to Location		TABLE FOR CONDUIT & CABLE QUANTITIES																												
		RGSC	PVC Conduit						Innerduct			Cable ¹																		
			Sch 40				Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring
			0.75"	1"	2"	4"	2"	3"	0.5"	1"	1.5"																			
		(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)
FIBER		NH 0100(107)411 - PCN 01VA (Veterans Pkwy)																												
Veterans Pkwy																														
ECC1	EJF2																													
EJF2	JF1							870							440														300	
JF1	JF2							1100							555														600	
JF2	JF3							1120							565														600	
JF3	JF4							1130							570														800	
JF4	JF5							1100							555														600	
JF5	JF6							1070							540														550	
JF6	JF7							1090							550														600	
JF7	JF8							990							995														550	
JF8	JF11						180		360						185														200	
JF8	JF9						180		360						370															
JF9	JF10						165		330						340															
JF10	JF11						165		330						340															
JF11	JF12									60					65														50	
JF12	CC1									40					25														450	
JF12	JF13								720						365														400	
JF13	JF14								1040						525														550	
JF14	JF15								1110						560														600	
JF15	JF16								1090						550														600	
JF16	JF17								1120						565														800	
JF17	JF18																													

3 - Incidental to "Miscellaneous, Electrical" bid item.



→

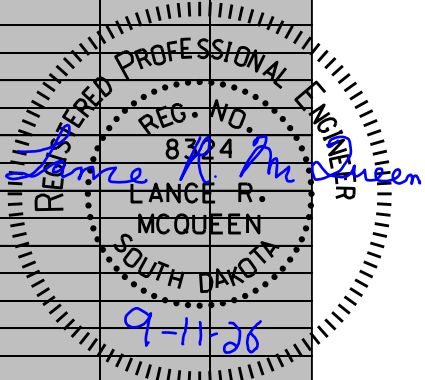
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L14	L85

Plotting Date: 9/11/2026 REV DATE: 09/11/2026 INITIAL: LRM

TABLE FOR CONDUIT & CABLE QUANTITIES																												
Location to Location		RGSC	PVC Conduit				Innerduct			Cable ¹																		
			Sch 40		Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring
			0.75"	1"	2"	4"	2"	3"	0.5"	1"	1.5"																	
(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)
FIBER (cont'd)		NH 0100(107)411 - PCN 01VA (Veterans Pkwy)																										
69th Street east / SD Hwy 11																												
JF11	JF35								710						720													
JF35	JF36								830						840													
JF36	JF37								300						310													
JF37	JF41							150	300						310													
JF37	JF38							120	240						250													
JF38	JF40							180	360						370													
JF40	JF41							95	190						200													
JF38	JF39								180						190													
JF39	JF42								590						600													
JF42	JF43								750						760													
JF43	JF44								850						860													
JF44	JF45								810						820													
JF45	JF46							120	1120						1130													
JF38	JF47								530						540													
JF47	JF48								830						840													
JF48	JF49								810						820													
SIGNALS																												
69th Street & Veterans Pkwy																												
JS1	S1			15											20													
S1	PB1		20												25		30											
S1	PB2		35												40		45											
JS1	JS2							165							170													
JS2	S2			25											30													
S2	PB3		15												20		25											
JS2	S3			35											40													
S3	PB4		10												15		20											
JS2	JS3							160							165													
JS3	S4			15											20													
S4	PB5		25												30		35											
S4	PB6		35												40		45											
JS3	JS4							60							70													
JS4	CC1							30							40													
CC1	M2			20													120											
JS3	JS5							180							185													
JS5	S5			15											20													
S5	PB7		15												20		25											
S5	PB8		20												25		30											
CC1	S1																							425		1020		
CC1	S2																							265		690		320
CC1	S3																							265				
CC1	S4																								100		370	
CC1	S5																							285		750		345
	S1																30	465	15									
	S2																15	225	85									
	S3																15	15										
	S4																30	415	15									
	S5																30	255	95									

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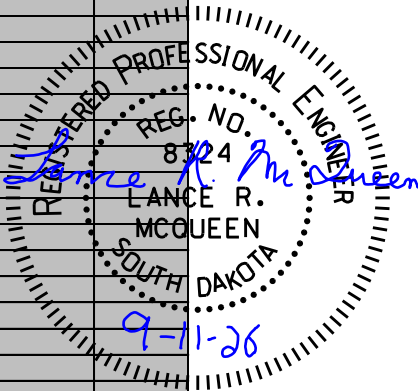


FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L15	L85

Plotting Date: 9/11/2026 REV DATE: 09/11/2026 INITIAL: LRM

Location to Location		TABLE FOR CONDUIT & CABLE QUANTITIES																													
		RGSC	PVC Conduit						Innerduct			Cable ¹																			
			Sch 40				Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring	
			0.75"	1"	2"	4"	2"	3"	0.5"	1"	1.5"																				(Ft)
SIGNALS (cont'd)		NH 0100(107)411 - PCN 01VA (Veterans Pkwy)																													
57th Street & Veterans Pkwy																															
M4	CC2			20										120																	
CC2	JS10				30											40															
JS10	JS9				140											150															
JS9	S10			15												20															
S10	PB15		25													30		35													
S10	PB16		15													20		25													
JS9	JS6						170									175															
JS6	S6			20												25															
S6	PB9		20													25		30													
JS6	S7			20												25															
S7	PB10		15													20		25													
JS6	JS7						165									170															
JS7	S8			15												20															
S8	PB11		15													20		25													
S8	PB12		20													25		30													
JS9	JS8						175									180															
JS8	S9			20												25															
S9	PB13		20													25		30													
S9	PB14		35													40		45													
CC2	S6																							320							
CC2	S7																							325							
CC2	S8																								485				545		
CC2	S9																								330						
CC2	S10																								140				200		
	S6																	15	510							820					
	S7																	15	15												
	S8																	30	455							1150					
	S9																	30	510							840					
	S10																	30	505							480					
69th Street & SD HWY 11																															
JS18	JS19			15												20															
JS18	FPB7		15													20															
JS18	FPB8		20													25															
JS18	JS17						100									105															
JS17	JS16			15												20															
JS16	FPB5		15													20															
JS16	FPB6		25													30															
JS17	JS14						145									150															
JS14	JS15			15												20															
JS15	FPB3		15													20															
JS15	FPB4		20													25															
JS14	JS13				90											100															
JS14	JS11						120									125															
JS11	JS12			15												20															
JS12	FPB1		20													25															
JS12	FPB2		20													25															
NH 0100(107)411 Lighting Total:		285	0	28485	0	4600	0	0	0	0	34325	1605	2170	0	1065	0	320	0	0	0	0	0	0	8190	0	0	0	0	320		
NH 0100(107)411 Traffic Total:		0	490	295	350	0	3425	3635	33750	290	0	0	0	240	0	26515	0	500	240	3370	210	590	2350	0	6120	18550	0	1410	0		
NH 0100(107)411 Grand Total:		285	490	28780	350	4600	3425	3635	33750	290	34325	1605	2170	240	1065	26515	320	500	240	3370	210	590	2350	8190	6120	18550	0	1410	320		
1 - All cable quantities shown include 6' of slack/coil installed in each junction box, unless shown otherwise.																															
2 - Incidental to "Video Detection System" bid item.																															
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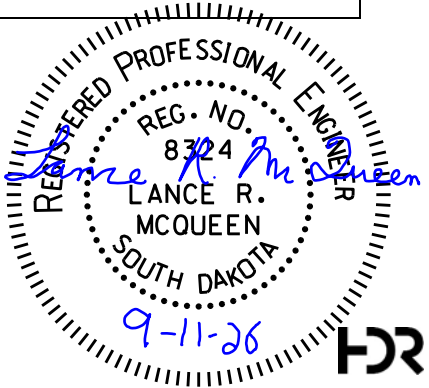
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L16	L85

Plotting Date: 9/11/2026 REV DATE: 09/11/2026 INITIAL: LRM

Location to Location		RGSC	PVC Conduit						Innerduct			Cable ¹																		
			Sch 40				Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring
			0.75"	1"	2"	4"	2"	3"	0.5"	1"	1.5"																			
			(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)																			
LIGHTING		P 1440(00) - PCN 08DJ (69th Street)																												
LB1	SL1			45												50								110						
SL1	irrigation meter			130									450																	
SL1	SL2			225						240														110						
SL2	SL3			195						205														110						
SL3	JL32					160				165																				
JL32	JL33					70										75														
JL32	irrigation meter			80									300																	
JL32	SL4			120						130														110						
SL4	SL5			250						260													110							
SL5	SL6			225						235													110							
SL6	SL7			225						235													110							
SL7	SL8			205						215													110							
SL8	JL6			50						55																				
FIBER																														
JF31	JF32							930							940															
JF32	JF53					85		170						180																
JF53	JF52					135		270						280																
JF32	JF51					135		270						280																
JF51	JF52					90		180						190																
JF51	JF50								50					60																
JF51	JF33							760						770																
JF33	JF34							1140						1150																
JF34	JF10							390						400																
SIGNALS																														
69th Street & Huntwood Ave																														
JS20	JS21			15										20																
JS21	FPB9		25											30																
JS20	JS27						105							110																
JS27	JS26			25										30																
JS20	JS23						120							125																
JS23	JS22			20										25																
JS22	FPB10		20											25																
JS23	JS24						110							115																
JS24	JS25			15										20																
P 1440(00) Lighting Total:		0	0	1750	0	230	0	0	0	0	1740	0	0	750	0	0	125	0	0	0	0	0	0	880	0	0	0	0	0	0
P 1440(00) Traffic Total:		0	45	75	0	0	780	0	4110	50	0	0	0	0	4750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P 1440(00) Grand Total:		0	45	1825	0	230	780	0	4110	50	1740	0	0	750	0	4750	125	0	0	0	0	0	0	880	0	0	0	0	0	0

1 - All cable quantities shown include 6' of slack/coil installed in each junction box, unless shown otherwise.
2 - Incidental to "Video Detection System" bid item.
3 - Incidental to "Miscellaneous, Electrical" bid item.



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L17	L85

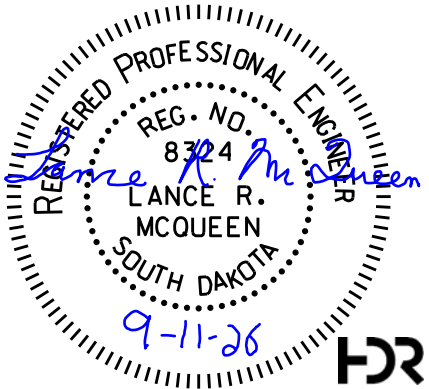
Plotting Date: 9/11/2026 REV DATE: 09/11/2026 INITIAL: LRM

TABLE FOR CONDUIT & CABLE QUANTITIES																												
Location to Location		RGSC	PVC Conduit				Innerduct			Cable ¹																		
			Sch 40		Sch 80		SDR 13.5			2/2/2/4	3C #0000	1C #4	1C #6	1C #10	1C #12	1C #14	2/C #14	3/C #14	5/C #14	7/C #14	12/C #14	25/C #14	Pole & Bracket	PC (EVP & 3c)	24SM FO	Install Fiber Optic Cable	CAT5 ² (video)	Conduit ³ Boring
			0.75"	1"	2"	4"	2"	3"	0.5"	1"	1.5"																	
(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)
LIGHTING		P 1432(00) - PCN 08DK (57th Street)																										
EFL2	FL1			150							180													110				
FL1	FL2			165							175													110				
FL2	JL17			25							30																	
JL20	FL3			40							50													110				
FL3	FL4			150							160													110				50
FL4	FL5			155							165													110				
FL5	east			40							165																	
FIBER																												
JF50	JF24								390						200												200	
JF24	JF25																									200		
JF25	JF22																									200		
JF22	CC2																									100		
JF22	JF51								750						755											400		50
P 1432(00) Lighting Total:		0	0	725	0	0	0	0	0	0	925	0	0	0	0	0	0	0	0	0	0	0	0	550	0	0	0	50
P 1432(00) Traffic Total:		0	0	0	0	0	0	0	1140	0	0	0	0	0	955	0	0	0	0	0	0	0	0	0	0	1100	0	50
P 1432(00) Grand Total:		0	0	725	0	0	0	0	1140	0	925	0	0	0	955	0	0	0	0	0	0	0	550	0	0	1100	0	100

1 - All cable quantities shown include 6' of slack/coil installed in each junction box, unless shown otherwise.

2 - Incidental to "Video Detection System" bid item.

3 - Incidental to "Miscellaneous, Electrical" bid item.



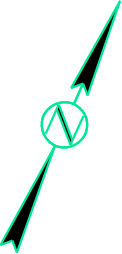
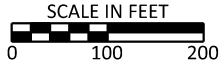
Overall Layout Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L18	L85

FILE: ...\\Section L\\L18.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:



PROPOSED TRANSFORMER
- GROUND MOUNTED
120/240 v.a.c., 15kVA, 60Hz,
Single Phase, 3 Wire Service
by Southeastern Electric
PROVIDES POWER TO LIGHTS ALONG
VETERANS PKWY, WEST TO EAST OF
THE HALF MILE.

Sycamore Avenue

EXISTING TRANSFORMER
- GROUND MOUNTED
120/240 v.a.c., 15kVA, 60Hz,
Single Phase, 3 Wire Service
by Southeastern Electric
PROVIDES POWER TO PROPOSED SIGNALS AT
INTERSECTION OF SYCAMORE AVE AND
VETERANS PKWY, AND TO LIGHTS ALONG
VETERANS PKWY, WEST TO EAST OF
SYCAMORE AVE

Veterans Parkway

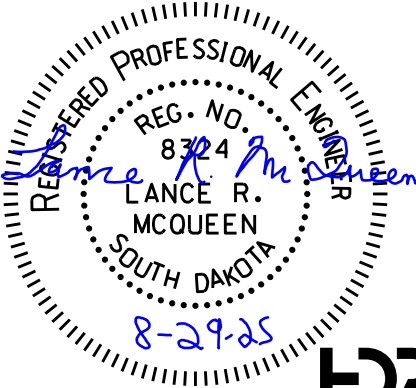
TUNNEL LUMINAIRES (T1-T14)
FOR PEDESTRIAN UNDERPASS

69th Street

Veterans Parkway

Veterans Parkway

PROPOSED TRANSFORMER
- GROUND MOUNTED
120/240 v.a.c., 15kVA, 60Hz,
Single Phase, 3 Wire Service
by Southeastern Electric
PROVIDES POWER TO PROPOSED SIGNALS
AT INTERSECTION OF 69TH STREET AND
VETERANS PKWY, AND TO LIGHTS ALONG
VETERANS PKWY, NORTH AND SOUTH OF
69TH STREET



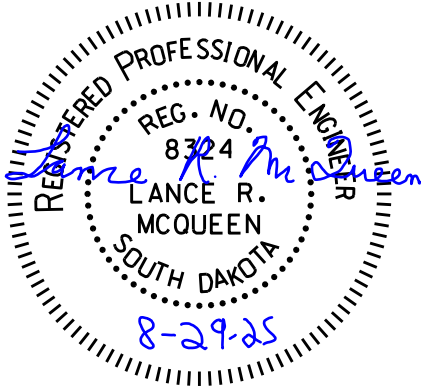
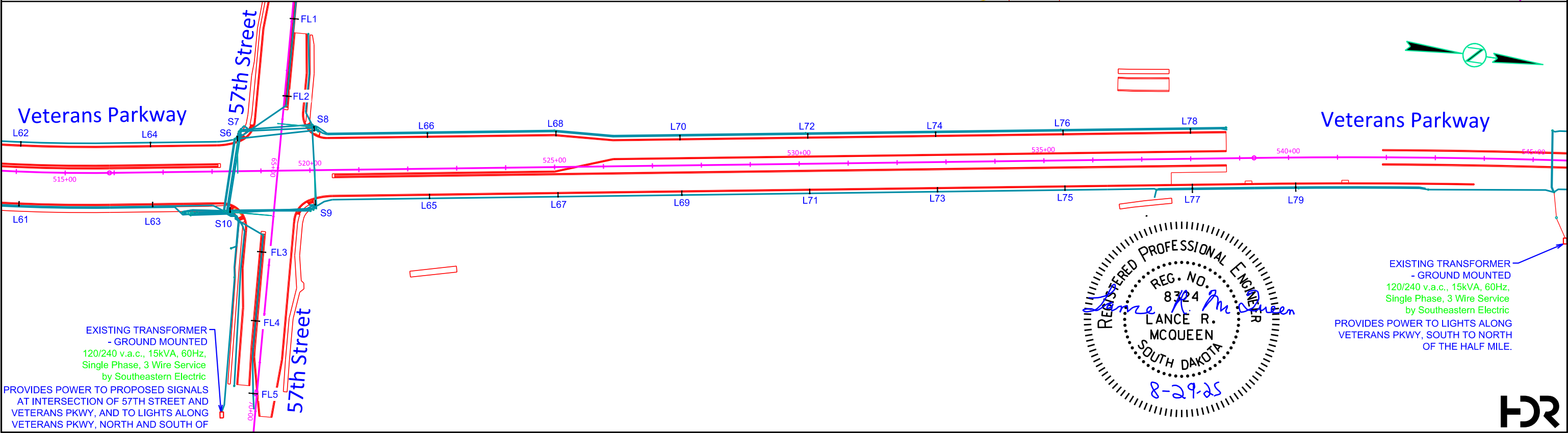
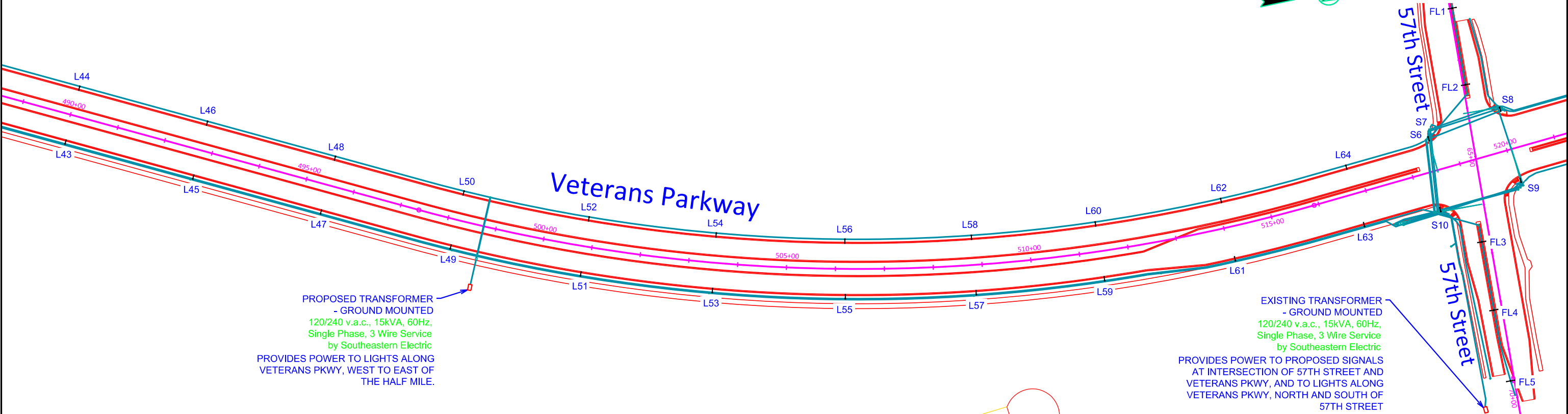
Overall Layout Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L19	L85

FILE: ...\\Section L\\L19.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:



Overall Layout

69th Street

FOR BIDDING PURPOSES ONLY

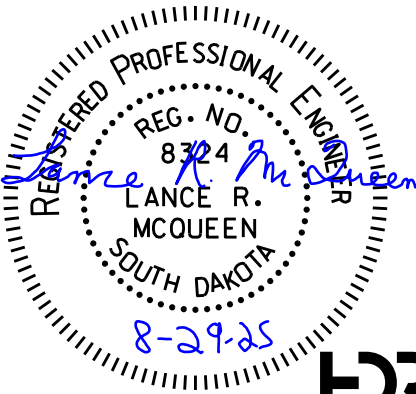
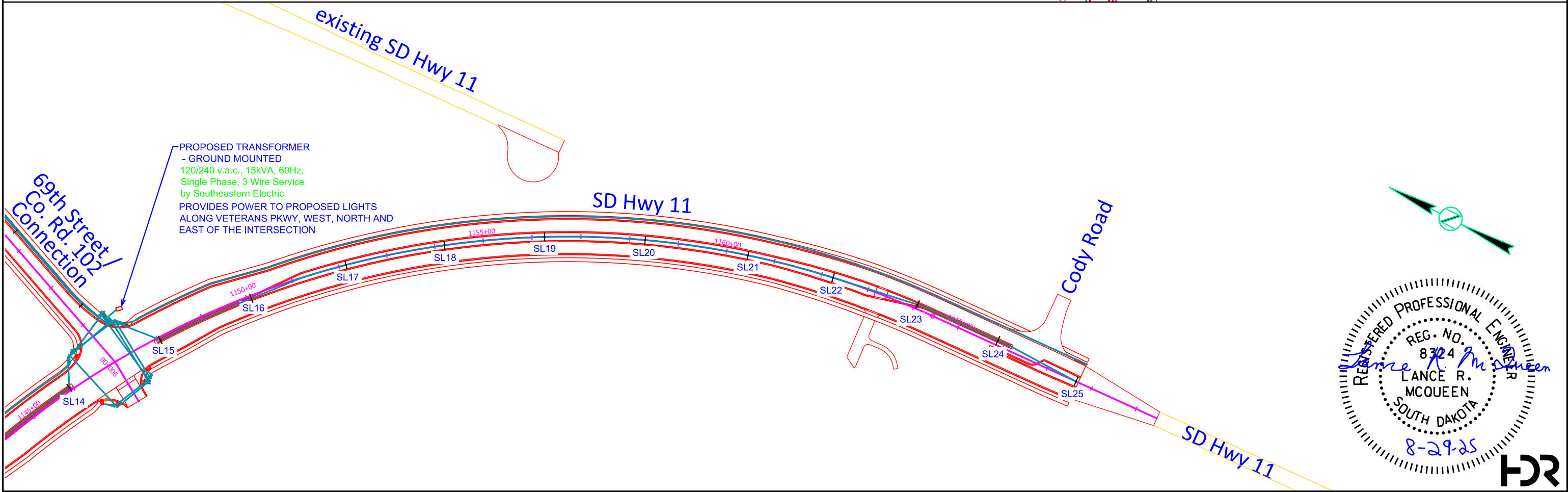
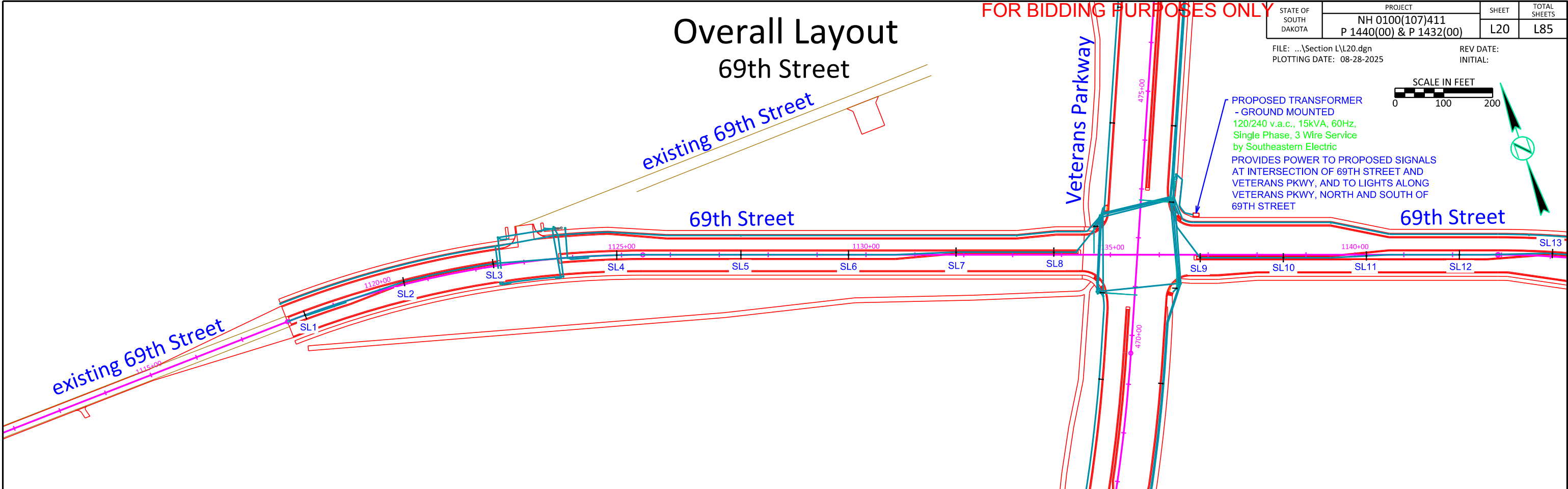
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L20	L85

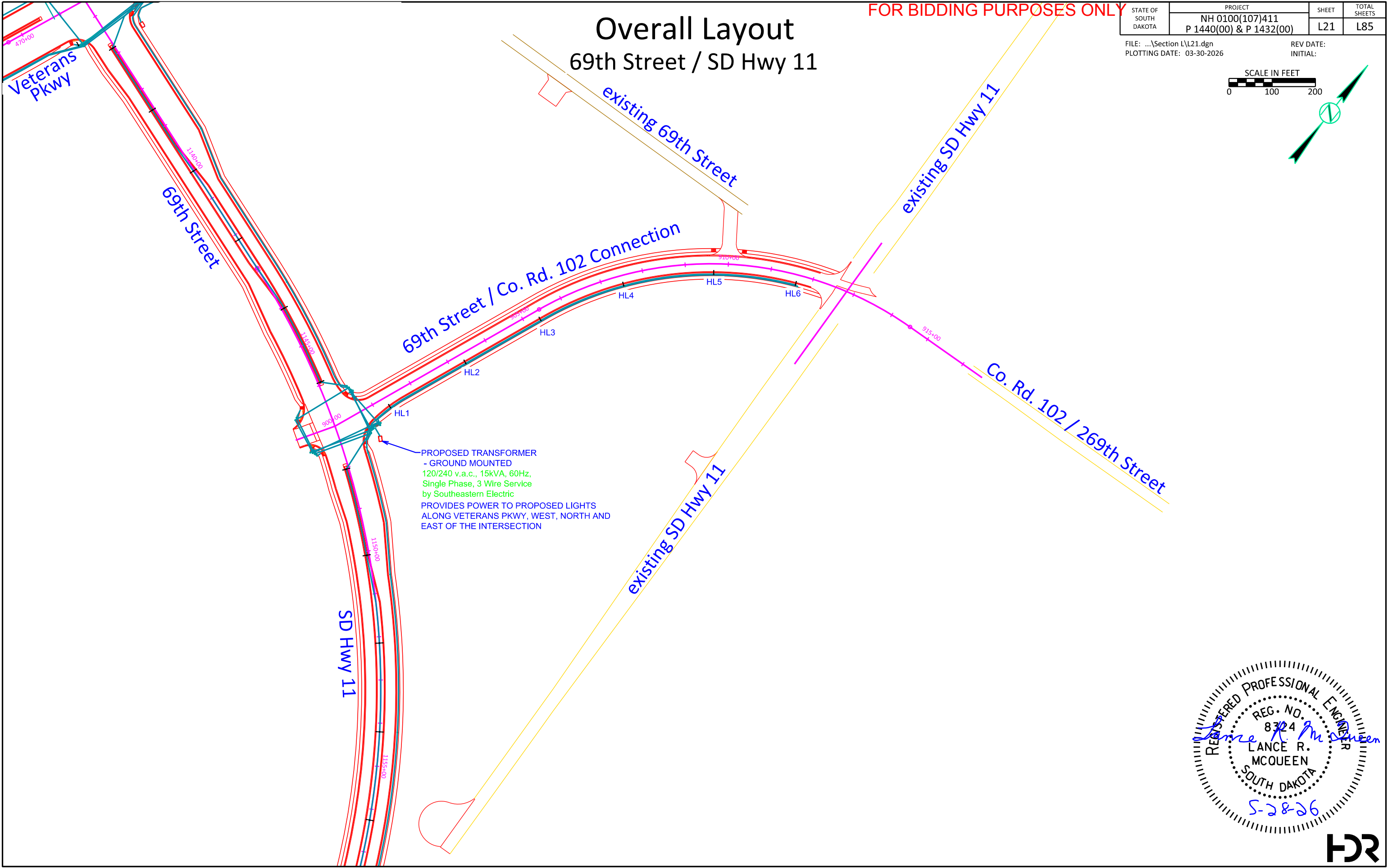
FILE: ...\\Section L\\L20.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:



PROPOSED TRANSFORMER
- GROUND MOUNTED
120/240 v.a.c., 15kVA, 60Hz,
Single Phase, 3 Wire Service
by Southeastern Electric
PROVIDES POWER TO PROPOSED SIGNALS
AT INTERSECTION OF 69TH STREET AND
VETERANS PKWY, AND TO LIGHTS ALONG
VETERANS PKWY, NORTH AND SOUTH OF
69TH STREET





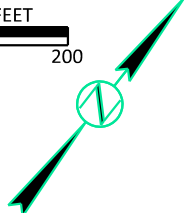
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L21	L85

FILE: ...\\Section L\\L21.dgn
PLOTING DATE: 03-30-2026

REV DATE:
INITIAL:

SCALE IN FEET
0 100 200



PROPOSED TRANSFORMER
- GROUND MOUNTED
120/240 v.a.c., 15kVA, 60Hz,
Single Phase, 3 Wire Service
by Southeastern Electric
PROVIDES POWER TO PROPOSED LIGHTS
ALONG VETERANS PKWY, WEST, NORTH AND
EAST OF THE INTERSECTION



ESTIMATE OF QUANTITIES NH 0100(107)411 - PCN 01VA			
KEY	ITEM	QUANTITY	UNIT
	PEDESTAL SIGNAL POLE (S3)	1	EACH
	SIGNAL POLE WITH 55' MAST ARM & 8' LUMIN ARM, 50' MT HT (S2)	1	EACH
	SIGNAL POLE WITH 65' MAST ARM & 8' LUMIN ARM, 50' MT HT (S5)	1	EACH
	SIGNAL POLE WITH 70' MAST ARM & 8' LUMIN ARM, 50' MT HT (S4)	1	EACH
	SIGNAL POLE WITH 75' MAST ARM & 8' LUMIN ARM, 50' MT HT (S1)	1	EACH
	3 SECTION VEHICLE SIGNAL HEAD (3,4,5,6,7,10,11,12,13,14,18,19,20,21,24,25,26,27)	18	EACH
	4 SECTION VEHICLE SIGNAL HEAD (8,9,22,23)	4	EACH
	3 SECTION DIRECTIONAL VEHICLE SIGNAL HEAD (1,2,15,16,17,28)	6	EACH
	2' DIAMETER FOOTING (S3)	6.0	FT
	3.5' DIAMETER FOOTING (S1,S2,S4,S5)	60.0	FT
	EMERGENCY VEHICLE PREEMPTION UNIT (4 CHANNEL)	1	EACH
	OPTICAL DETECTOR	4	EACH
	ACCESSIBLE PEDESTRIAN SIGNAL	8	EACH
	PEDESTRIAN PUSH BUTTON POLE (PB1-PB8)	8	EACH
	PEDESTRIAN SIGNAL HEAD W/ COUNTDOWN TIMER (29-36)	8	EACH
	PEDESTRIAN CROSSING SIGN R10-3e (LEFT-4) (RIGHT-4)	8	EACH

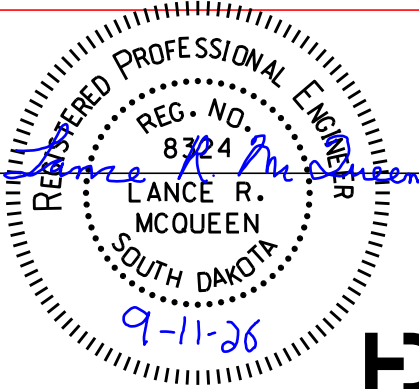
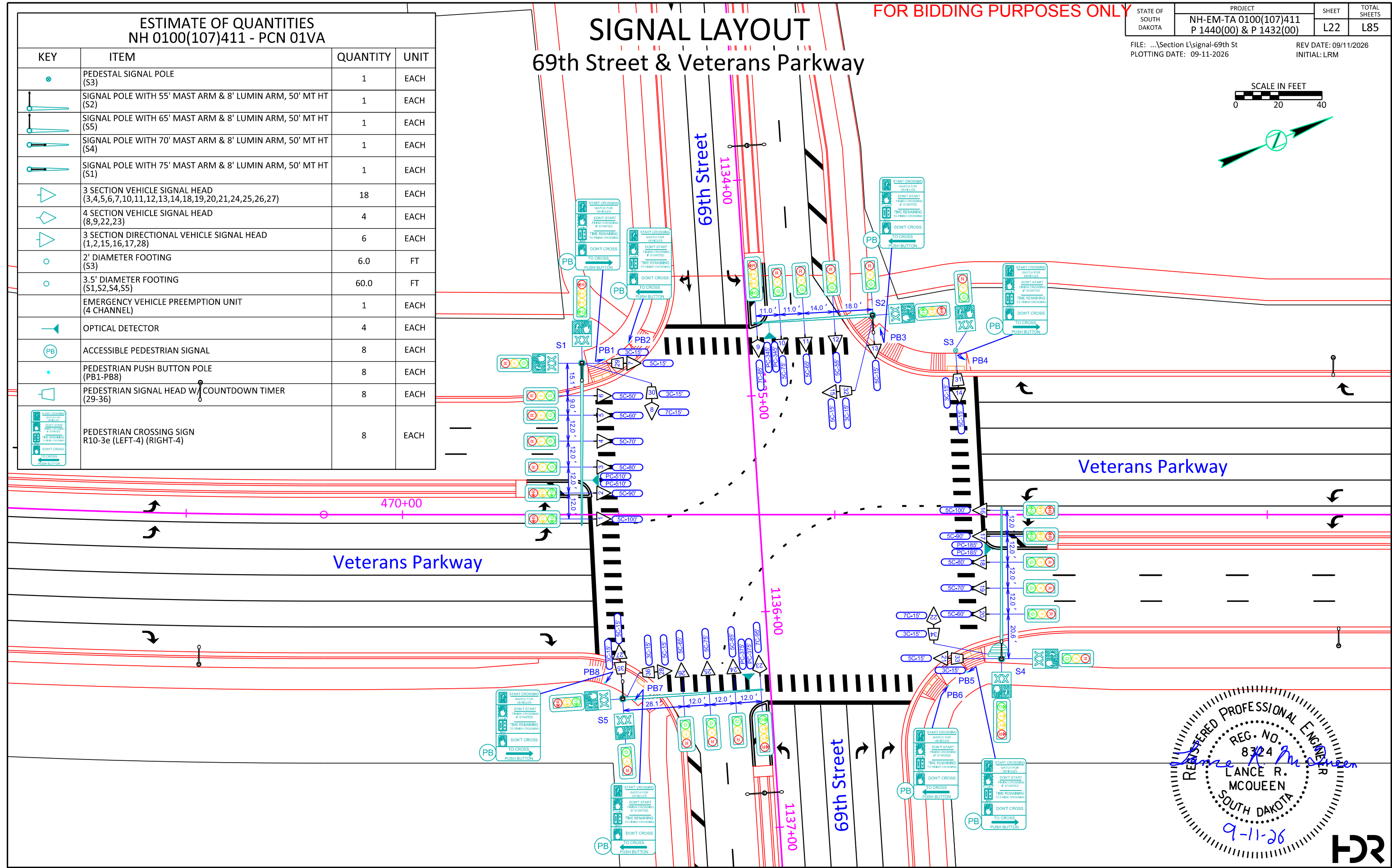
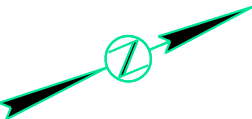
SIGNAL LAYOUT

69th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-EM-TA 0100(107)411 P 1440(00) & P 1432(00)	L22	L85
FILE: ...\\Section L\\signal-69th St		REV DATE: 09/11/2026	
PLOTING DATE: 09-11-2026		INITIAL: LRM	

SCALE IN FEET
0 20 40



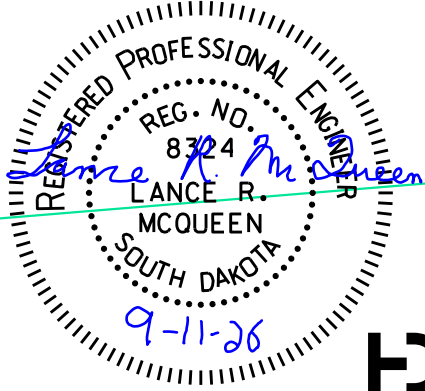
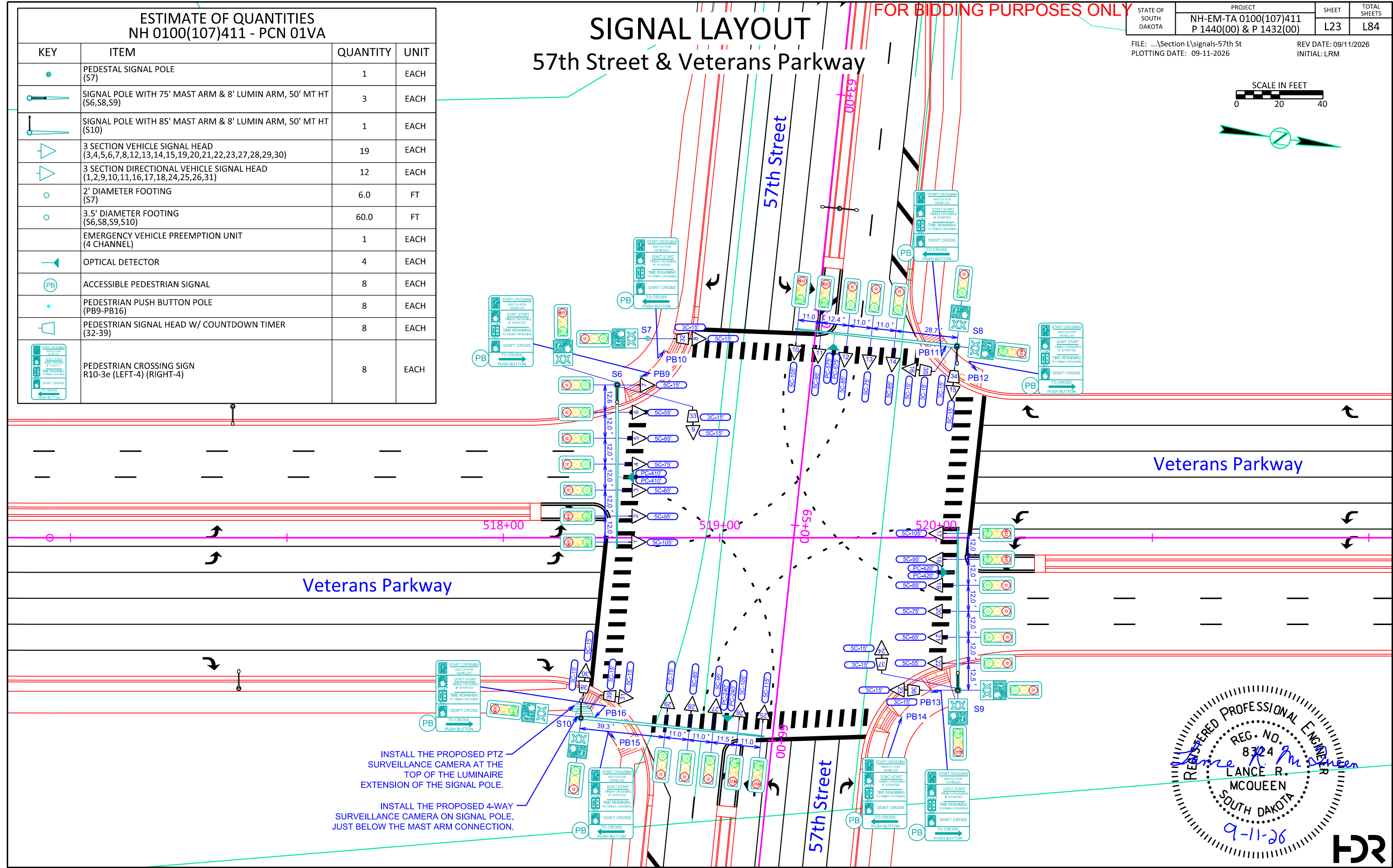
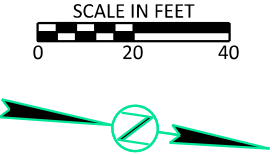
ESTIMATE OF QUANTITIES NH 0100(107)411 - PCN 01VA			
KEY	ITEM	QUANTITY	UNIT
	PEDESTAL SIGNAL POLE (S7)	1	EACH
	SIGNAL POLE WITH 75' MAST ARM & 8' LUMIN ARM, 50' MT HT (S6,S8,S9)	3	EACH
	SIGNAL POLE WITH 85' MAST ARM & 8' LUMIN ARM, 50' MT HT (S10)	1	EACH
	3 SECTION VEHICLE SIGNAL HEAD (3,4,5,6,7,8,12,13,14,15,19,20,21,22,23,27,28,29,30)	19	EACH
	3 SECTION DIRECTIONAL VEHICLE SIGNAL HEAD (1,2,9,10,11,16,17,18,24,25,26,31)	12	EACH
	2' DIAMETER FOOTING (S7)	6.0	FT
	3.5' DIAMETER FOOTING (S6,S8,S9,S10)	60.0	FT
	EMERGENCY VEHICLE PREEMPTION UNIT (4 CHANNEL)	1	EACH
	OPTICAL DETECTOR	4	EACH
	ACCESSIBLE PEDESTRIAN SIGNAL	8	EACH
	PEDESTRIAN PUSH BUTTON POLE (PB9-PB16)	8	EACH
	PEDESTRIAN SIGNAL HEAD W/ COUNTDOWN TIMER (32-39)	8	EACH
	PEDESTRIAN CROSSING SIGN R10-3e (LEFT-4) (RIGHT-4)	8	EACH

SIGNAL LAYOUT

57th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-EM-TA 0100(107)411 P 1440(00) & P 1432(00)	L23	L84
FILE: ...\\Section L\\signals-57th St		REV DATE: 09/11/2026	
PLOTING DATE: 09-11-2026		INITIAL: LRM	



ESTIMATE OF QUANTITIES NH 0100(107)411 - PCN 01VA			
KEY	ITEM	QUANTITY	UNIT
	REMOVE SIGNAL POLE FOOTING (ES5, ES6, ES7, ES8)	4	EACH
	SALVAGE SIGNAL EQUIPMENT	LUMP SUM	LS

SALVAGE SIGNAL EQUIPMENT			
KEY	ITEM	QUANTITY	UNIT
	SIGNAL POLE W/ MAST ARM & LUMINAIRE ARM (ES5, ES6, ES7, ES8)	4	EACH
	3 SECTION VEHICLE SIGNAL HEAD (2,3,7,8,9,12,13,14,17,18,19)	11	EACH
	4 SECTION VEHICLE SIGNAL HEAD (1,5,6,10,11,15,16,20)	8	EACH
	5 SECTION VEHICLE SIGNAL HEAD (4)	1	EACH
	PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER (21-24)	4	EACH
	PEDESTRIAN PUSH BUTTON / POLE (EPB9-EPB12)	4	EACH
	OPTICAL DETECTOR	4	EACH
	SURVEILLANCE CAMERA	1	EACH
	TRAFFIC DETECTION CAMERA	1	EACH
	TRAFFIC SIGNAL CONTROLLER (ECC2)	1	EACH
	PEDESTRIAN CROSSING SIGN (LEFT-2, RIGHT-2)	4	EACH

Existing Signal Layout

57th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L24	L85
FILE: ...\\Section L\\L24.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	



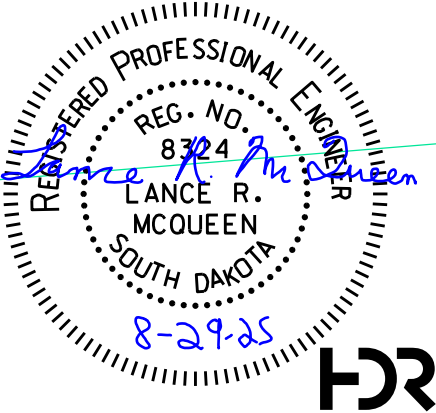
existing Veterans Parkway

existing Veterans Parkway

57th Street

67+00

57th Street



ESTIMATE OF QUANTITIES NH 0100(107)411 - PCN 01VA - VETERANS PKWY			
KEY	ITEM	QUANTITY	UNIT
	BREAKAWAY BASE LUMINAIRE POLE, 40' MOUNTING HEIGHT W/ 8' ARM (HL1-HL6)	6	EACH
	BREAKAWAY BASE LUMINAIRE POLE, 50' MOUNTING HEIGHT W/ 8' ARM (L1-L14, L16-L76, L78)	76	EACH
	BREAKAWAY BASE LUMINAIRE POLE, 40' MOUNTING HEIGHT W/ TWIN 8' ARM (SL9-SL25)	17	EACH
	BREAKAWAY BASE LUMINAIRE POLE, 50' MOUNTING HEIGHT W/ TWIN 8' ARM (L15, L77, L79)	3	EACH
	TUNNEL LUMINAIRE, LED (T1-T14, ETL1-ETL24)	38	EACH
	ROADWAY LUMINAIRE, LED WITH PHOTOELECTRIC CELL (L1-L79, S1, S2, S4, S5, S6, S8, S9, S10, HL1-HL6, SL9-SL25)	130	EACH
	2' DIAMETER FOOTING (L1-L79, HL1-HL6, SL9-SL25)	813.0	FT
	12" DIAMETER ELECTRICAL JUNCTION BOX (JS: 12,15,17,18)	4	EACH
	24" DIAMETER ELECTRICAL JUNCTION BOX (JL: 1,3-6,10,12,14,17,19-23,26-28,31) (JF: 1,2,3,5-9,13-16,18-20,23,26-30,35,36,39-49) (JS: 1,5-8,11)	58	EACH
	30" DIAMETER ELECTRICAL JUNCTION BOX (JL: 2,7-9,11,13,15,16,18,24,25,29,30) (JF: 4,10-12,17,21,22,24,25,37,38) (JS: 2-4,9,10,13,14,16,19)	33	EACH
	ELECTRICAL SERVICE CABINET (M1, M2, M2A, M3, M4, M4A, M5, M6) (ALL SINGLE METER PEDESTALS)	8	EACH
	CIRCUIT CONTROL CENTER (PHOTOCELL CONTROL BOXES @ PEDESTRIAN UNDERPASSES)	2	EACH
	0.75" RIGID GALVANIZED STEEL CONDUIT	285	FT
	1" RIGID CONDUIT, SCHEDULE 40	490	FT
	2" RIGID CONDUIT, SCHEDULE 40	28780	FT
	4" RIGID CONDUIT, SCHEDULE 40	350	FT
	2" RIGID CONDUIT, SCHEDULE 80	4600	FT
	3" RIGID CONDUIT, SCHEDULE 80	3425	FT
	0.5" INNERDUCT, SDR 13.5	3635	FT
	1" INNERDUCT, SDR 13.5	33750	FT
	1.5" INNERDUCT, SDR 13.5	290	FT
	2/2/2/4 ALUMINUM WIRE	34325	FT
	3/C #0000 ALUMINUM WIRE (TRIPLEX)	1605	FT
	1/C #4 AWG COPPER WIRE	2170	FT
	1/C #6 AWG COPPER WIRE	240	FT
	1/C #10 AWG COPPER WIRE	1065	FT
	1/C #12 AWG COPPER WIRE	26515	FT
	1/C #14 AWG COPPER WIRE	320	FT
	12/2 UF-B COPPER POLE AND BRACKET CABLE	8190	FT
	24 STRAND FIBER OPTIC CABLE	18550	FT
	CONDUIT BORING	320*	FT
* INCIDENTAL TO THE CONDUIT BID ITEMS.			

Conduit Layout - Veterans Parkway

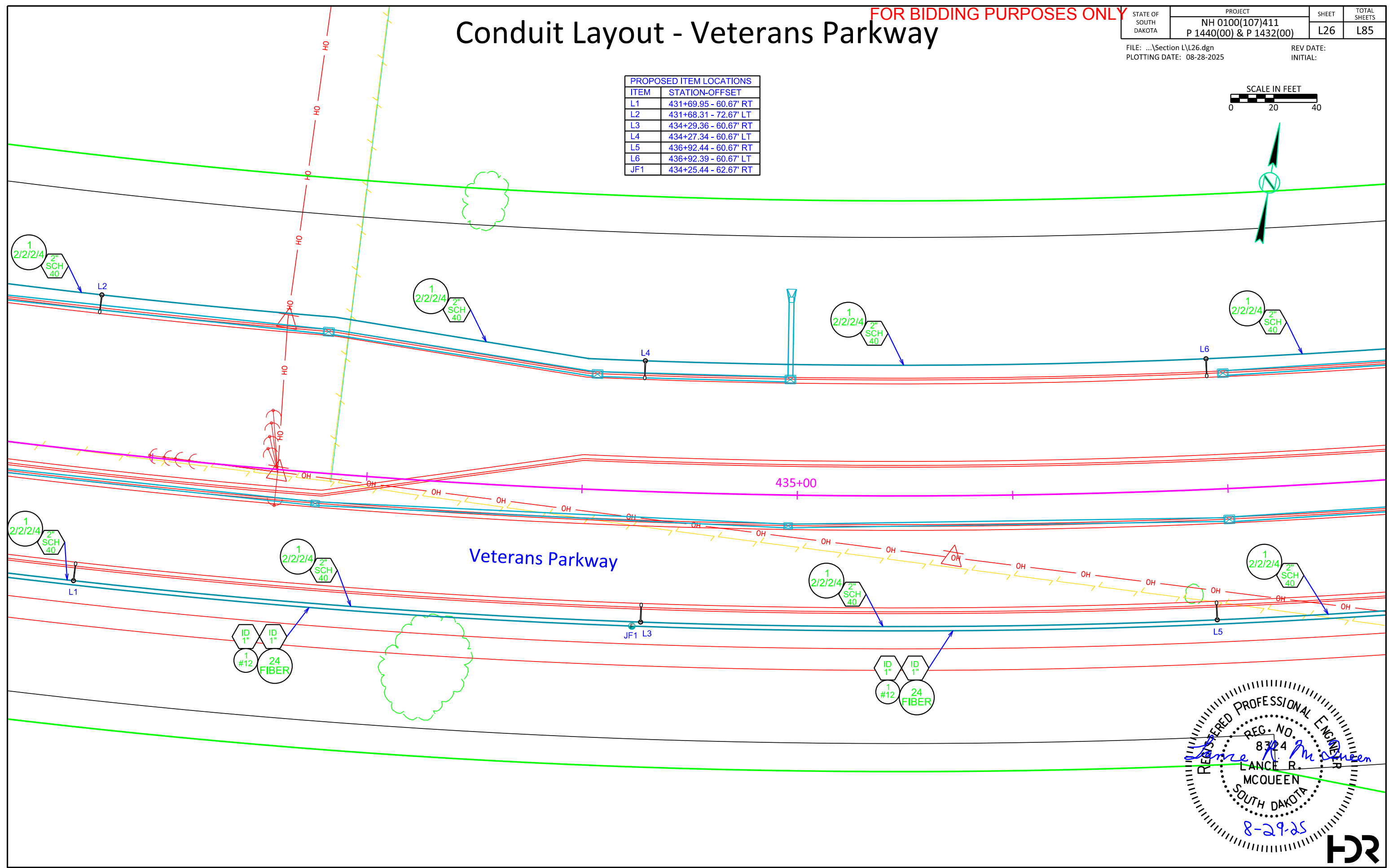
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L26	L85

FILE: ...\\Section L\\L26.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L1	431+69.95 - 60.67' RT
L2	431+68.31 - 72.67' LT
L3	434+29.36 - 60.67' RT
L4	434+27.34 - 60.67' LT
L5	436+92.44 - 60.67' RT
L6	436+92.39 - 60.67' LT
JF1	434+25.44 - 62.67' RT



REGISTERED PROFESSIONAL ENGINEER

REG. NO. 8324

LANCE R. MCQUEEN

SOUTH DAKOTA

8-29-25

Lance R. McQueen

Conduit Layout - Veterans Parkway

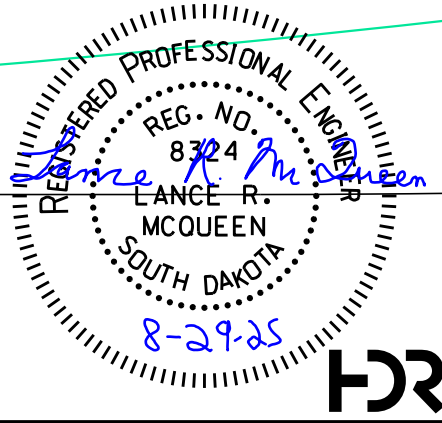
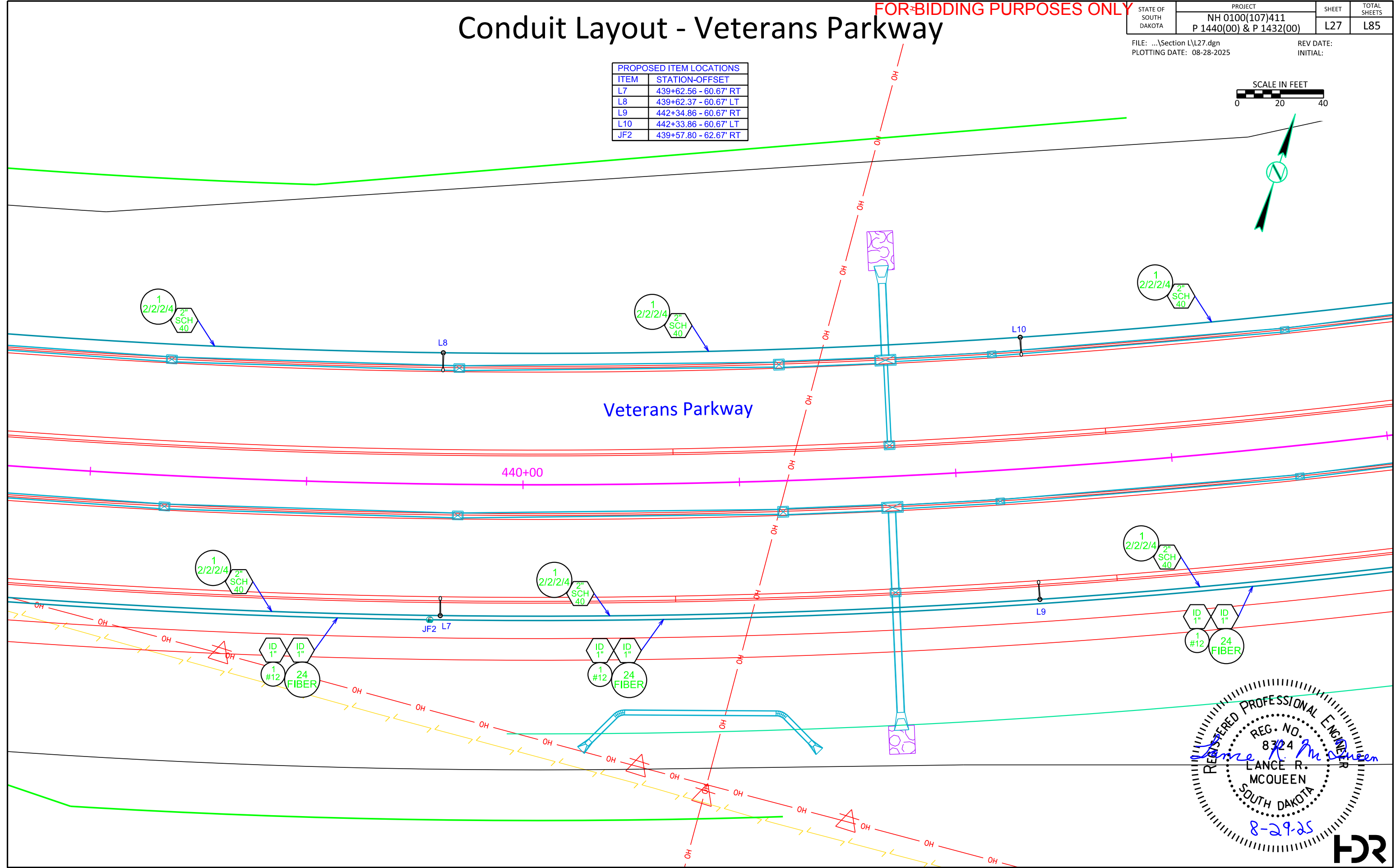
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L27	L85

FILE: ...\\Section L\\L27.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L7	439+62.56 - 60.67' RT
L8	439+62.37 - 60.67' LT
L9	442+34.86 - 60.67' RT
L10	442+33.86 - 60.67' LT
JF2	439+57.80 - 62.67' RT



Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L28	L85
FILE: ...\\Section L\\L28.dgn PLOT DATE: 08-28-2025		REV DATE: INITIAL:	



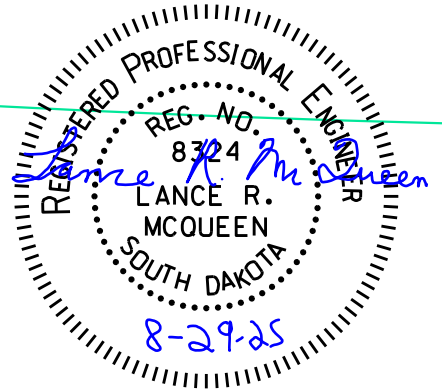
PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET	ITEM	STATION-OFFSET
L11	445+04.98 - 60.67' RT	JL1	449+10.22 - 86.98' LT
L12	445+04.64 - 60.67' LT	JL2	449+72.22 - 60.67' LT
L13	447+76.19 - 58.17' RT	JL3	449+69.41 - 58.17' RT
L14	447+67.64 - 60.68' LT	M1	449+72.67 - 65.86' LT
JF3	445+01.06 - 62.67' RT	T1-T14	SEE SECTION E

PROPOSED TRANSFORMER
- GROUND MOUNTED
120/240 v.a.c., 15kVA, 60Hz,
Single Phase, 3 Wire Service
by Southeastern Electric
PROVIDES POWER TO LIGHTS ALONG
VETERANS PKWY, WEST TO EAST OF
THE HALF MILE.

CIRCUIT CONTROL CENTER
(PHOTOCELL CONTROL BOX)
INSTALLED ON NORTH END OF
PEDESTRIAN UNDERPASS

PEDESTRIAN UNDERPASS.
SEE SECTION E FOR
TUNNEL LUMINAIRES (T1-T14)
AND CONDUIT LOCATIONS.

Veterans Parkway



Conduit Layout - Veterans Parkway

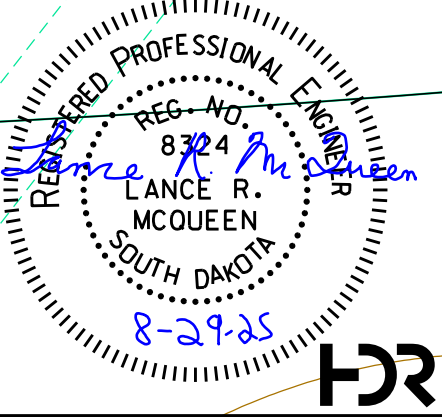
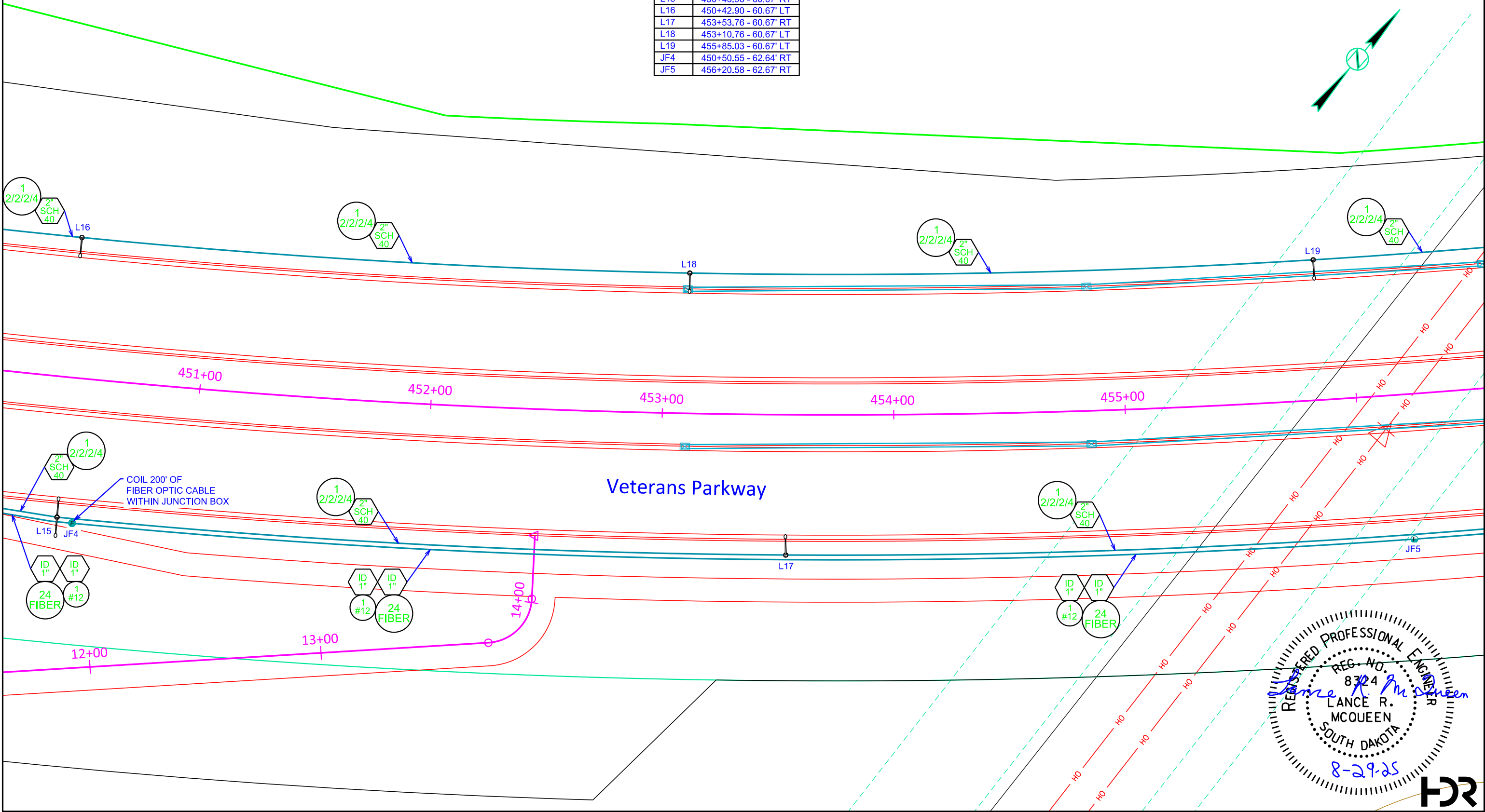
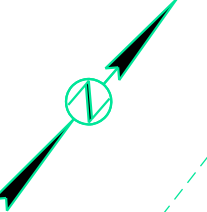
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L29	L85

FILE: ...\\Section L\\L29.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L15	450+43.96 - 60.67' RT
L16	450+42.90 - 60.67' LT
L17	453+53.76 - 60.67' RT
L18	453+10.76 - 60.67' LT
L19	455+85.03 - 60.67' LT
JF4	450+50.55 - 62.64' RT
JF5	456+20.58 - 62.67' RT



Conduit Layout - Veterans Parkway

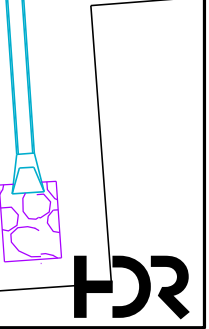
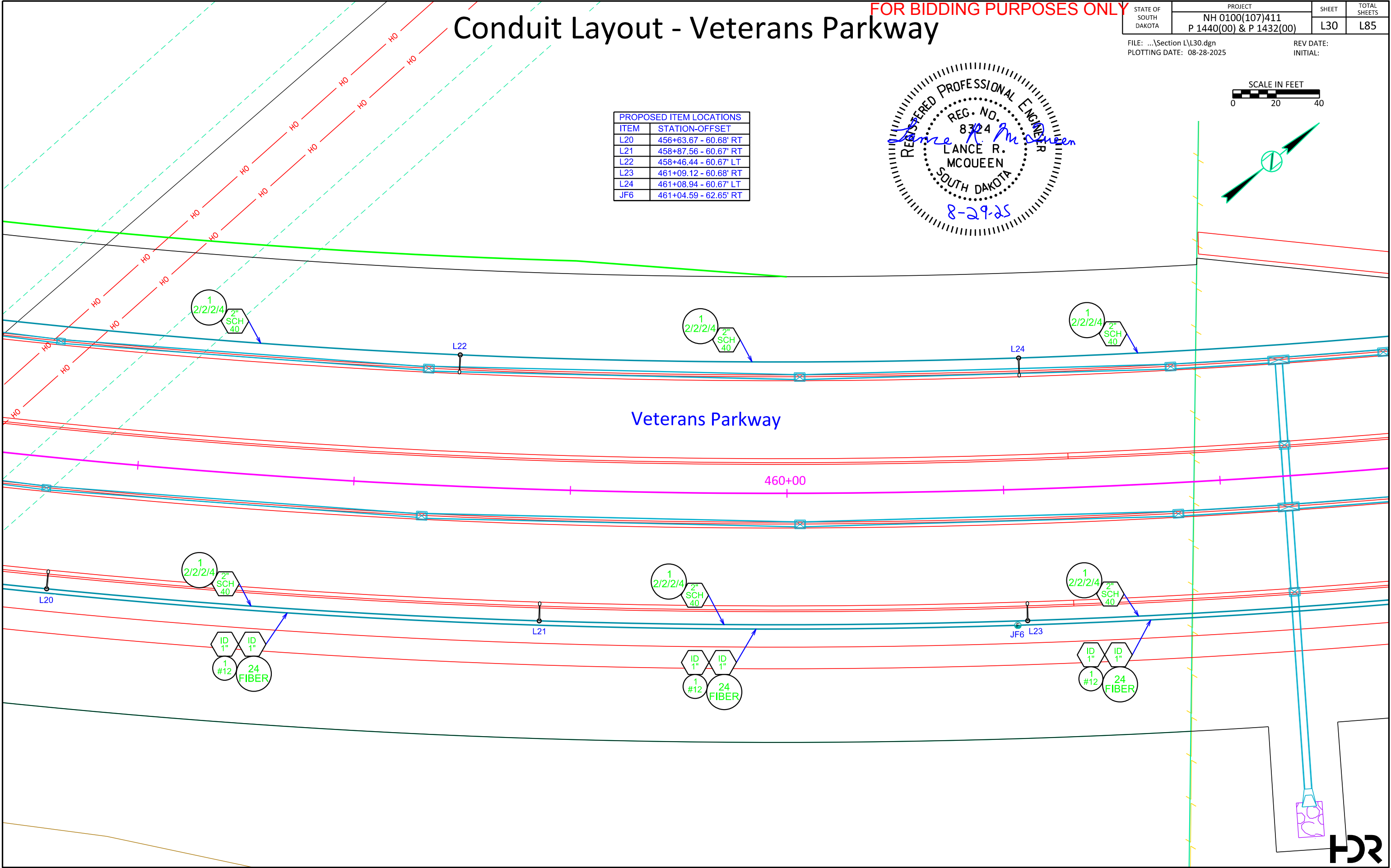
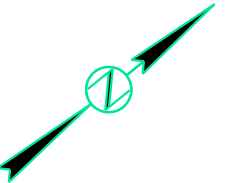
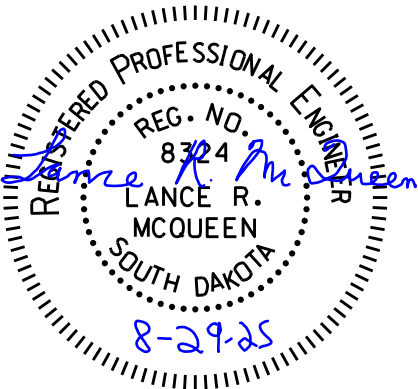
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L30	L85

FILE: ...\\Section L\\L30.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L20	456+63.67 - 60.68' RT
L21	458+87.56 - 60.67' RT
L22	458+46.44 - 60.67' LT
L23	461+09.12 - 60.68' RT
L24	461+08.94 - 60.67' LT
JF6	461+04.59 - 62.65' RT



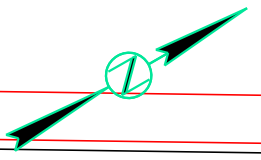
Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

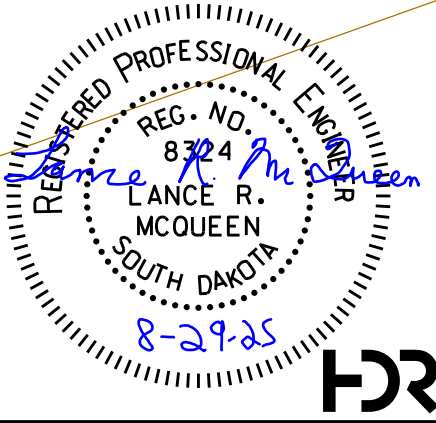
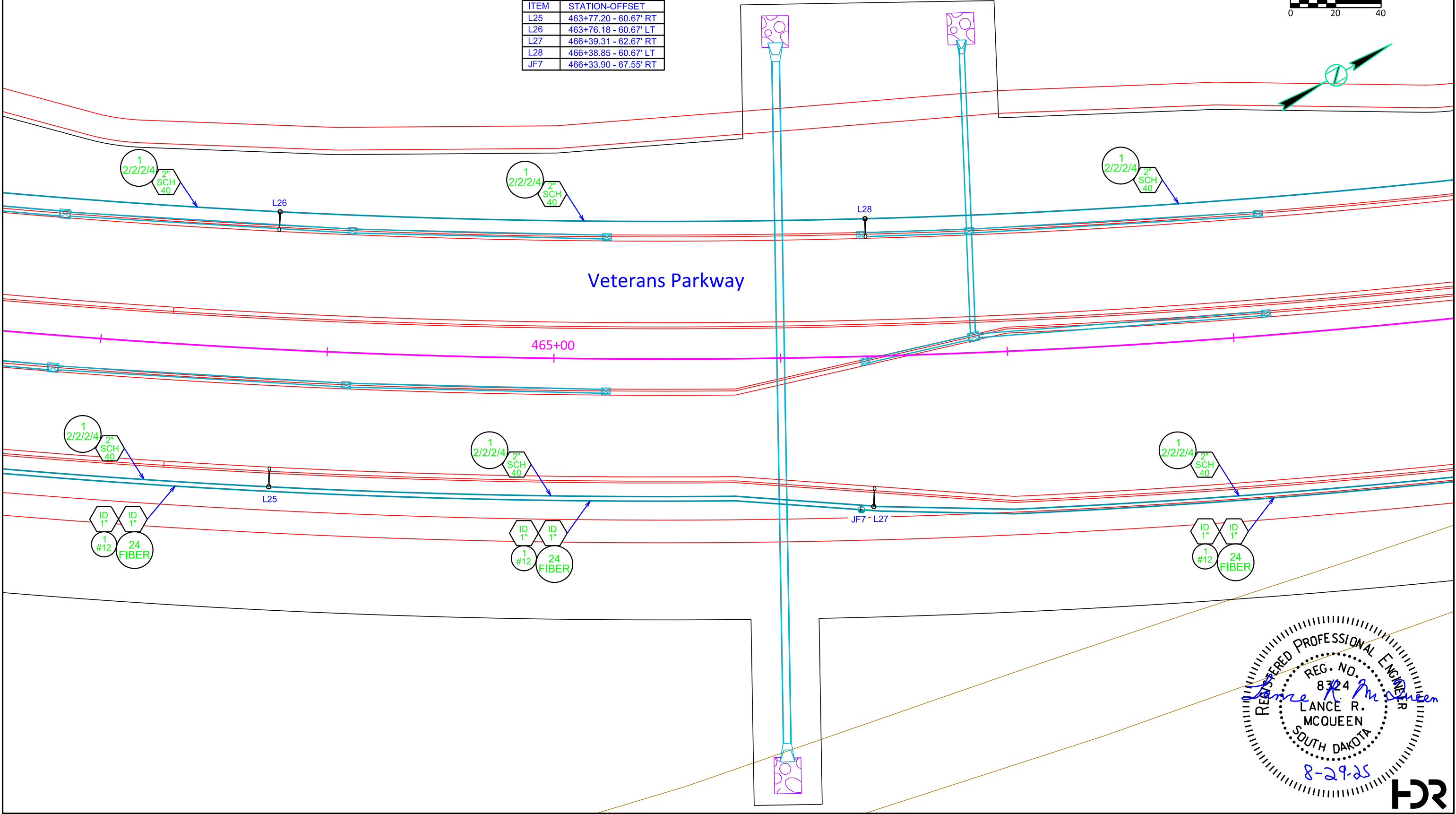
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L31	L85

FILE: ...\\Section L\\L31.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:



PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L25	463+77.20 - 60.67' RT
L26	463+76.18 - 60.67' LT
L27	466+39.31 - 62.67' RT
L28	466+38.85 - 60.67' LT
JF7	466+33.90 - 67.55' RT

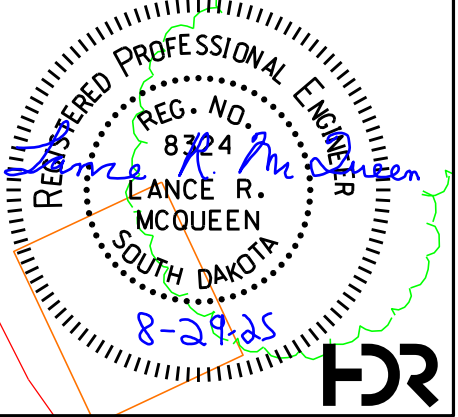
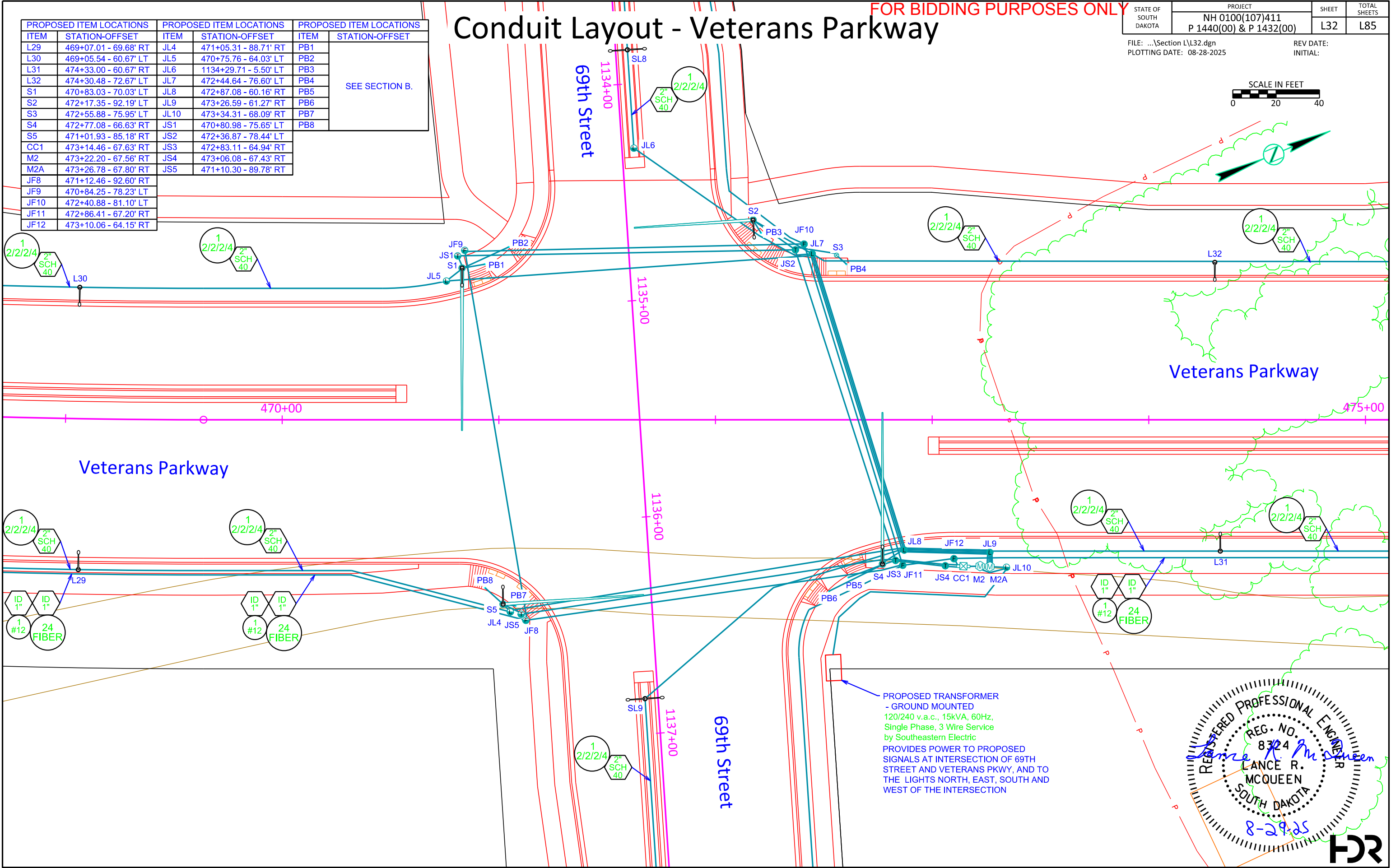
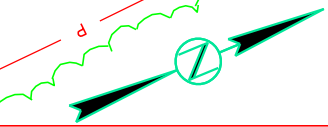


Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET	ITEM	STATION-OFFSET	ITEM	STATION-OFFSET
L29	469+07.01 - 69.68' RT	JL4	471+05.31 - 88.71' RT	PB1	SEE SECTION B.
L30	469+05.54 - 60.67' LT	JL5	470+75.76 - 64.03' LT	PB2	
L31	474+33.00 - 60.67' RT	JL6	1134+29.71 - 5.50' LT	PB3	
L32	474+30.48 - 72.67' LT	JL7	472+44.64 - 76.60' LT	PB4	
S1	470+83.03 - 70.03' LT	JL8	472+87.08 - 60.16' RT	PB5	
S2	472+17.35 - 92.19' LT	JL9	473+26.59 - 61.27' RT	PB6	
S3	472+55.88 - 75.95' LT	JL10	473+34.31 - 68.09' RT	PB7	
S4	472+77.08 - 66.63' RT	JS1	470+80.98 - 75.65' LT	PB8	
S5	471+01.93 - 85.18' RT	JS2	472+36.87 - 78.44' LT		
CC1	473+14.46 - 67.63' RT	JS3	472+83.11 - 64.94' RT		
M2	473+22.20 - 67.56' RT	JS4	473+06.08 - 67.43' RT		
M2A	473+26.78 - 67.80' RT	JS5	471+10.30 - 89.78' RT		
JF8	471+12.46 - 92.60' RT				
JF9	470+84.25 - 78.23' LT				
JF10	472+40.88 - 81.10' LT				
JF11	472+86.41 - 67.20' RT				
JF12	473+10.06 - 64.15' RT				

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L32	L85
FILE: ...\\Section L\\L32.dgn		REV DATE:	
PLOTING DATE: 08-28-2025		INITIAL:	



Conduit Layout - Veterans Parkway

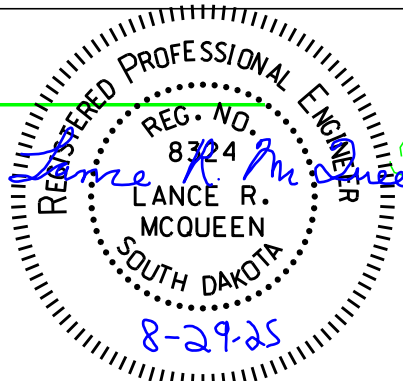
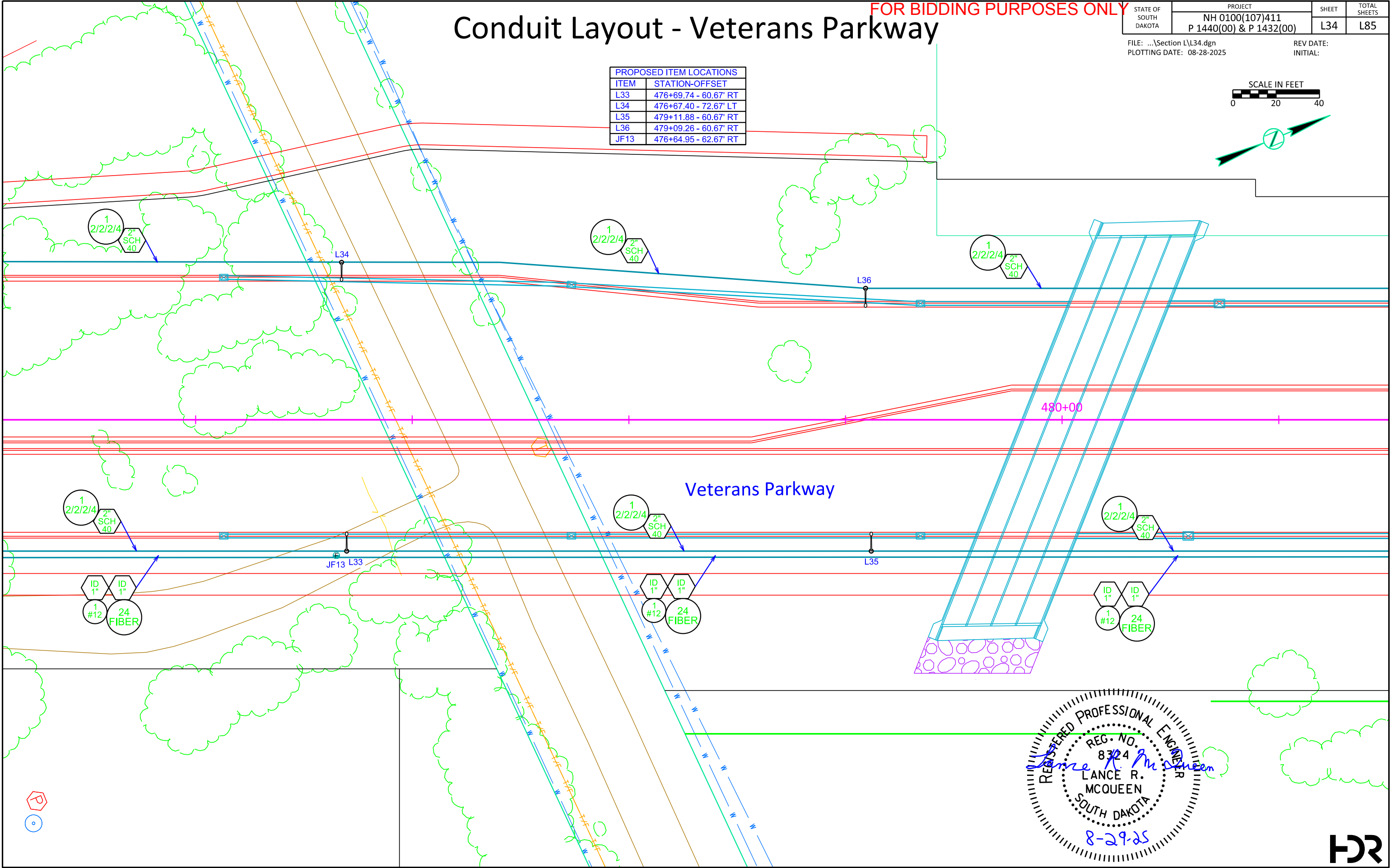
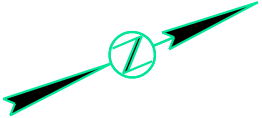
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L34	L85

FILE: ...\\Section L\\L34.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L33	476+69.74 - 60.67' RT
L34	476+67.40 - 72.67' LT
L35	479+11.88 - 60.67' RT
L36	479+09.26 - 60.67' RT
JF13	476+64.95 - 62.67' RT



Conduit Layout - Veterans Parkway

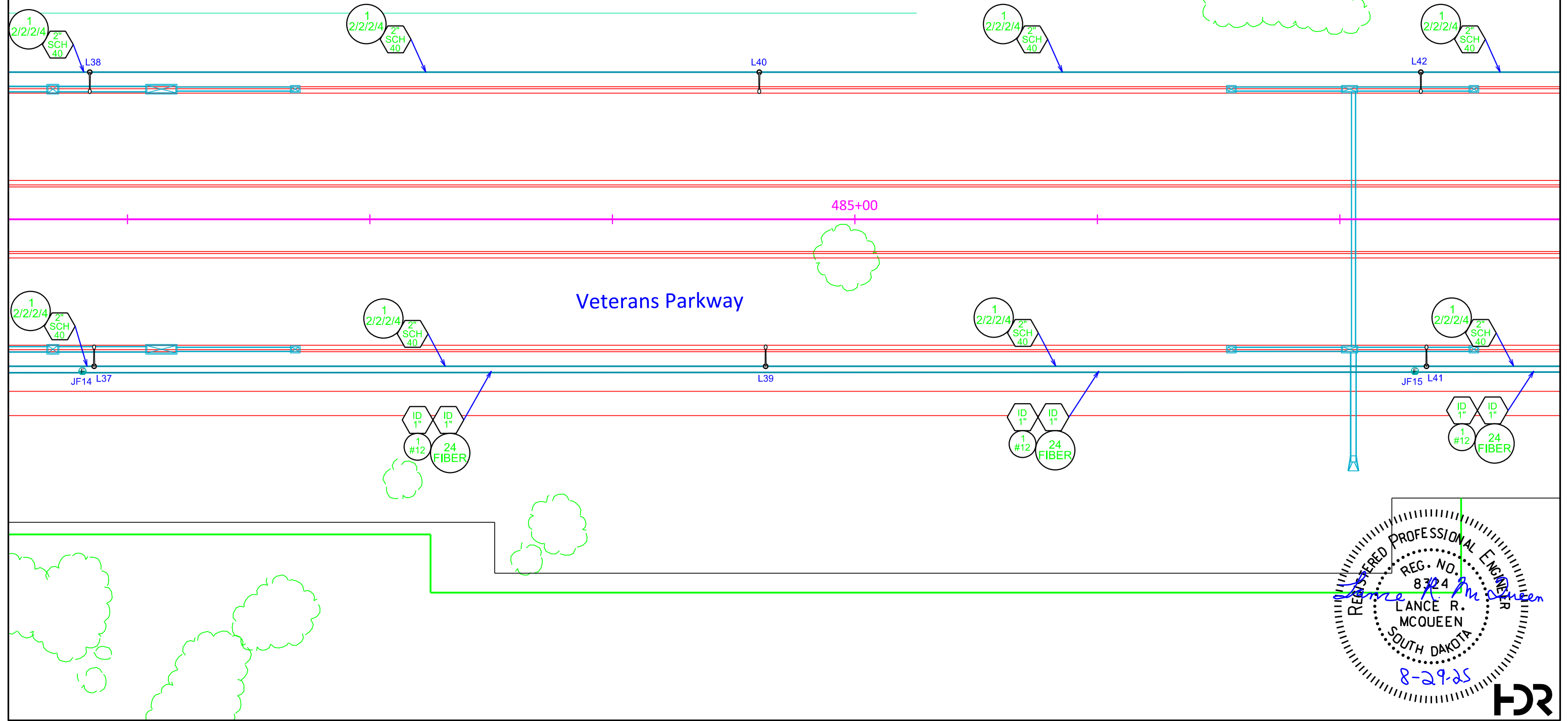
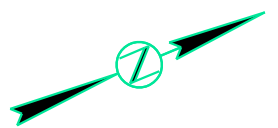
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L35	L85

FILE: ...\\Section L\\L35.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L37	481+86.25 - 60.67' RT
L38	481+84.46 - 60.67' LT
L39	484+63.20 - 60.67' RT
L40	484+60.56 - 60.67' LT
L41	487+35.73 - 60.67' RT
L42	487+33.40 - 60.67' LT
JF14	481+81.46 - 62.67' RT
JF15	487+30.94 - 62.67' RT



REGISTERED PROFESSIONAL ENGINEER

REG. NO. 8324

LANCE R. MCQUEEN

SOUTH DAKOTA

8-29-25

Conduit Layout - Veterans Parkway

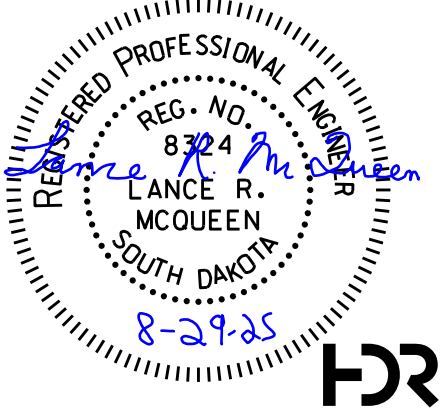
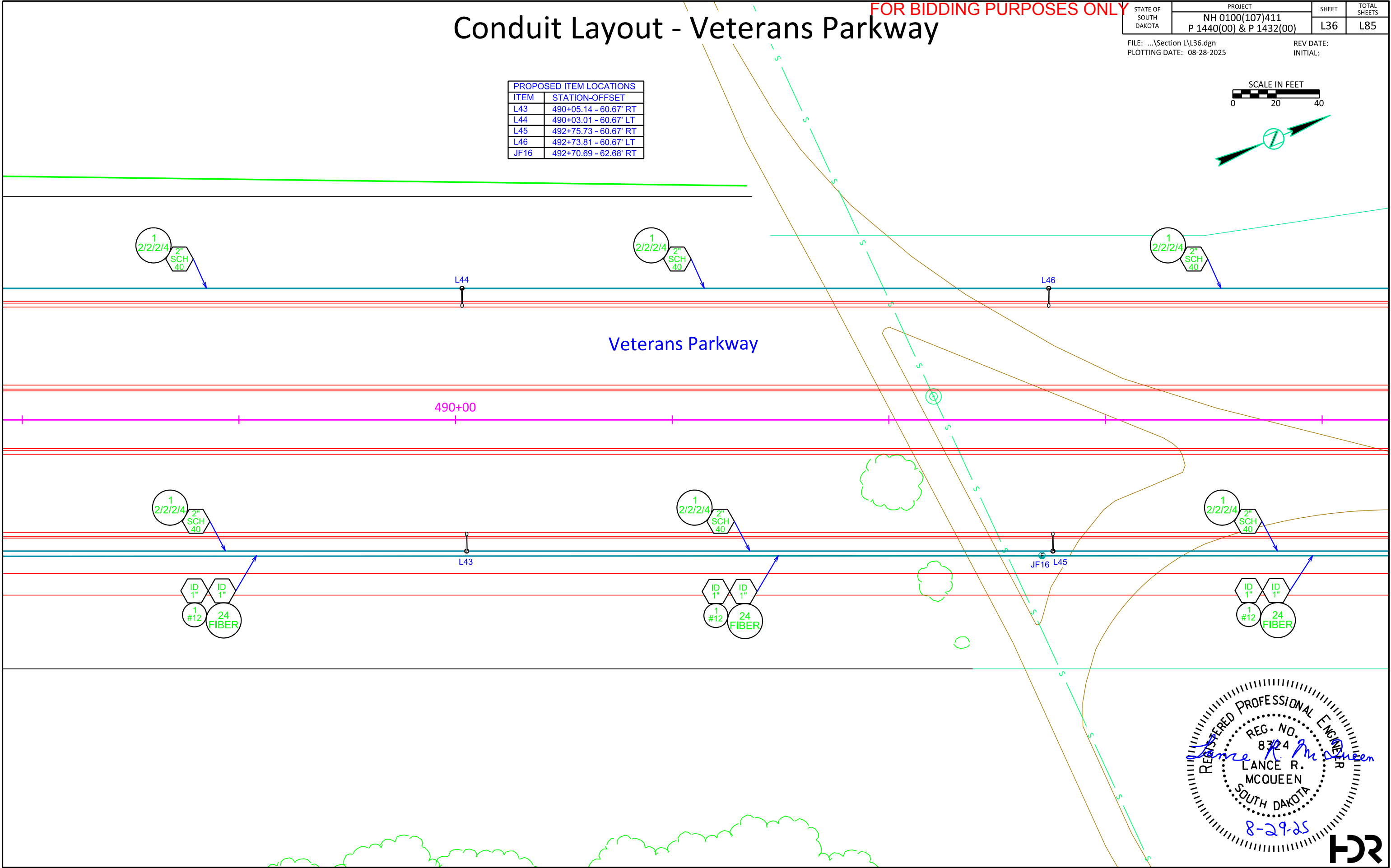
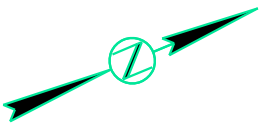
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L36	L85

FILE: ...\\Section L\\L36.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L43	490+05.14 - 60.67' RT
L44	490+03.01 - 60.67' LT
L45	492+75.73 - 60.67' RT
L46	492+73.81 - 60.67' LT
JF16	492+70.69 - 62.68' RT

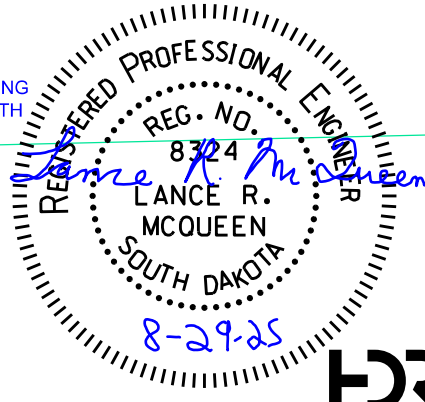
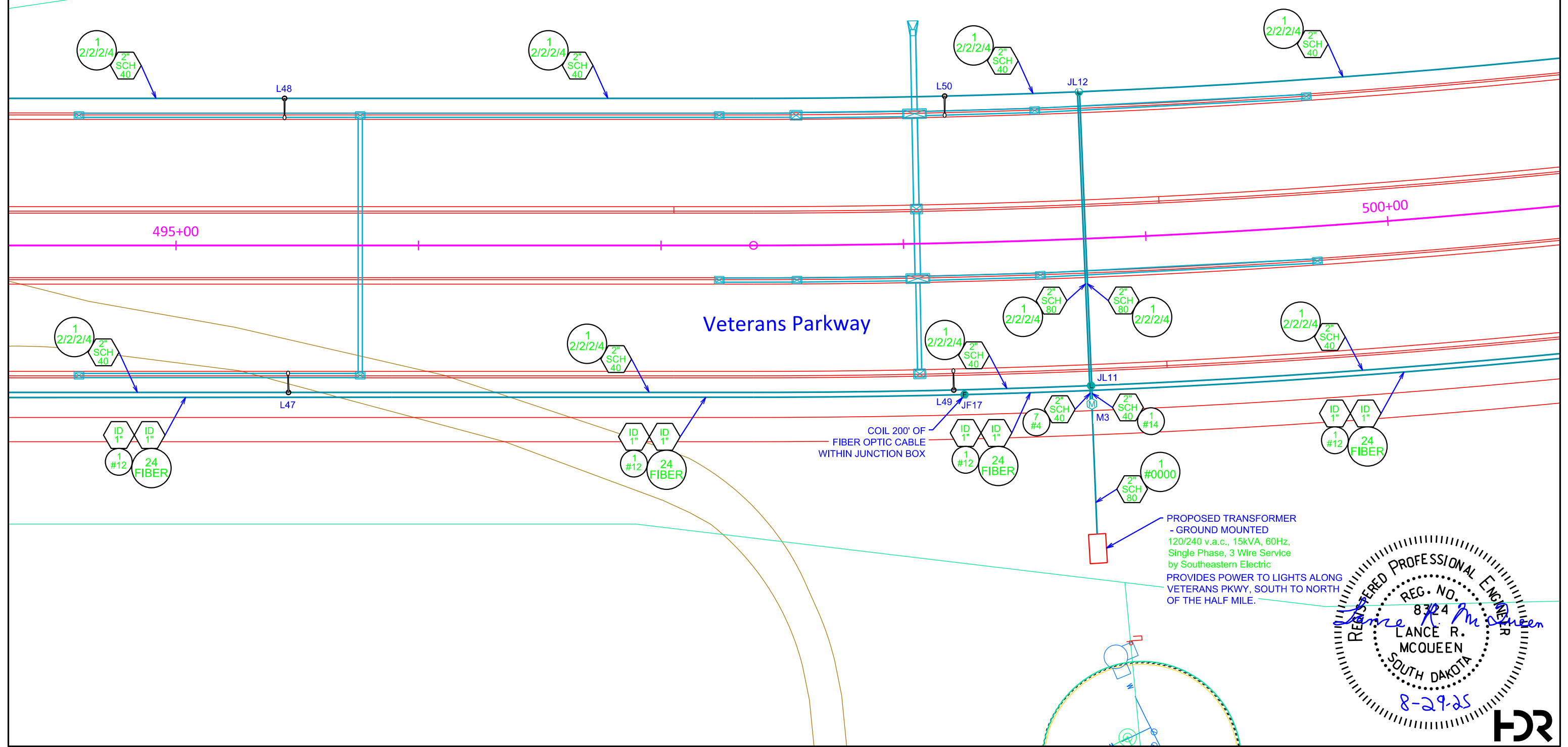
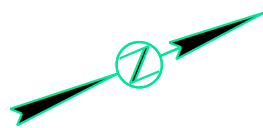


Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L37	L85
FILE: ...\\Section L\\L37.dgn PLOT DATE: 08-28-2025		REV DATE: INITIAL:	

PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET	ITEM	STATION-OFFSET
L47	495+46.41 - 60.67' RT	JF17	498+23.61 - 62.67' RT
L48	495+44.78 - 60.67' LT	JL11	498+75.01 - 60.67' RT
L49	498+19.34 - 60.67' RT	JL12	498+74.80 - 60.67' LT
L50	498+18.46 - 60.67' LT	M3	498+75.15 - 68.20' RT



Conduit Layout - Veterans Parkway

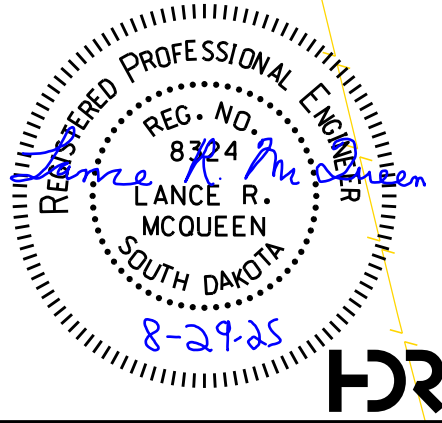
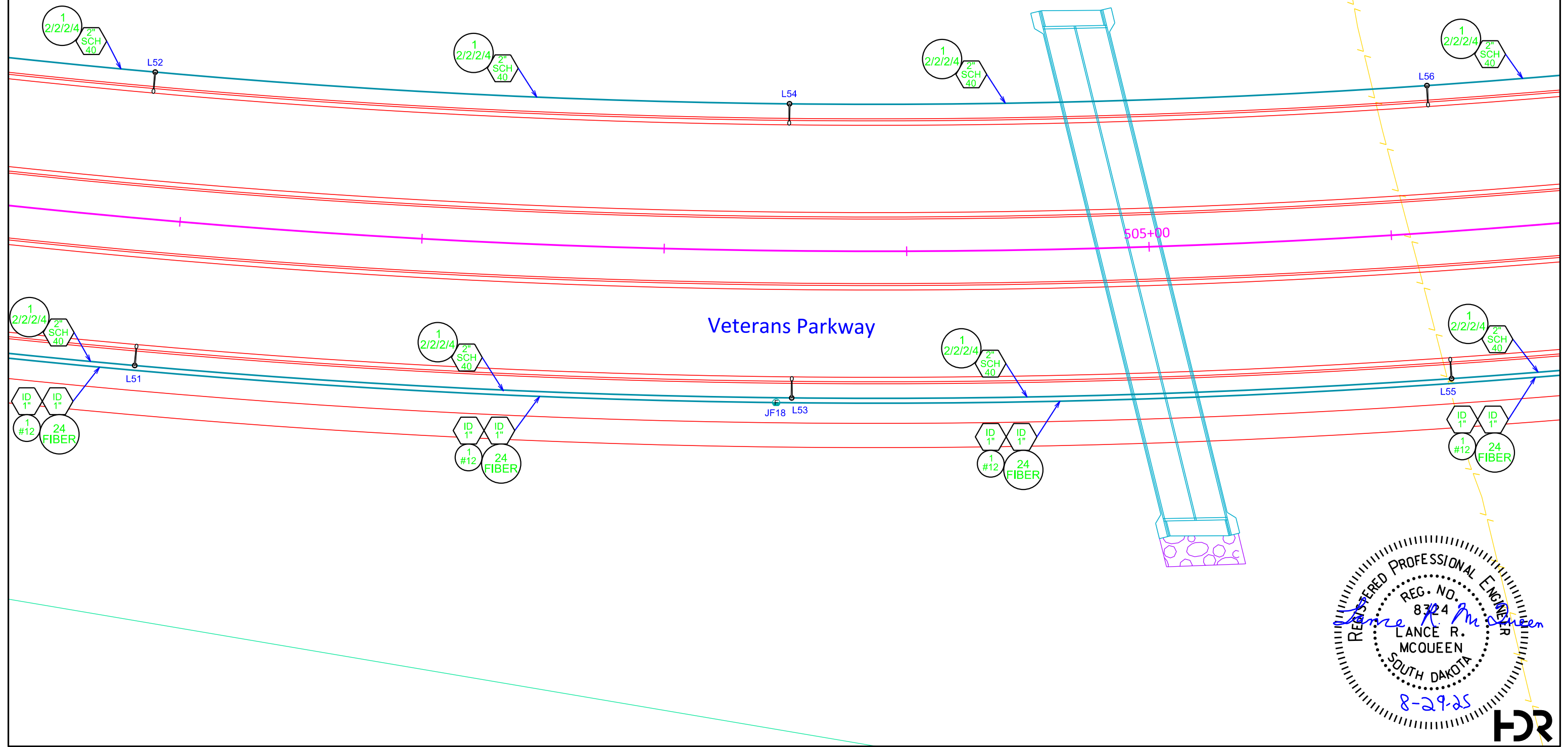
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L38	L85

FILE: ...\\Section L\\L38.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L51	500+86.61 - 60.67' RT
L52	500+84.27 - 60.67' LT
L53	503+53.20 - 60.68' RT
L54	503+51.03 - 60.68' LT
L55	506+20.74 - 60.67' RT
L56	506+18.87 - 60.67' LT
JF18	503+46.93 - 62.67' RT



Conduit Layout - Veterans Parkway

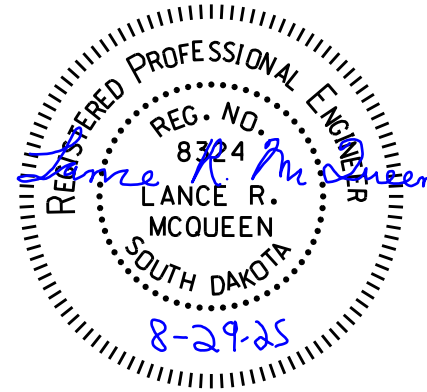
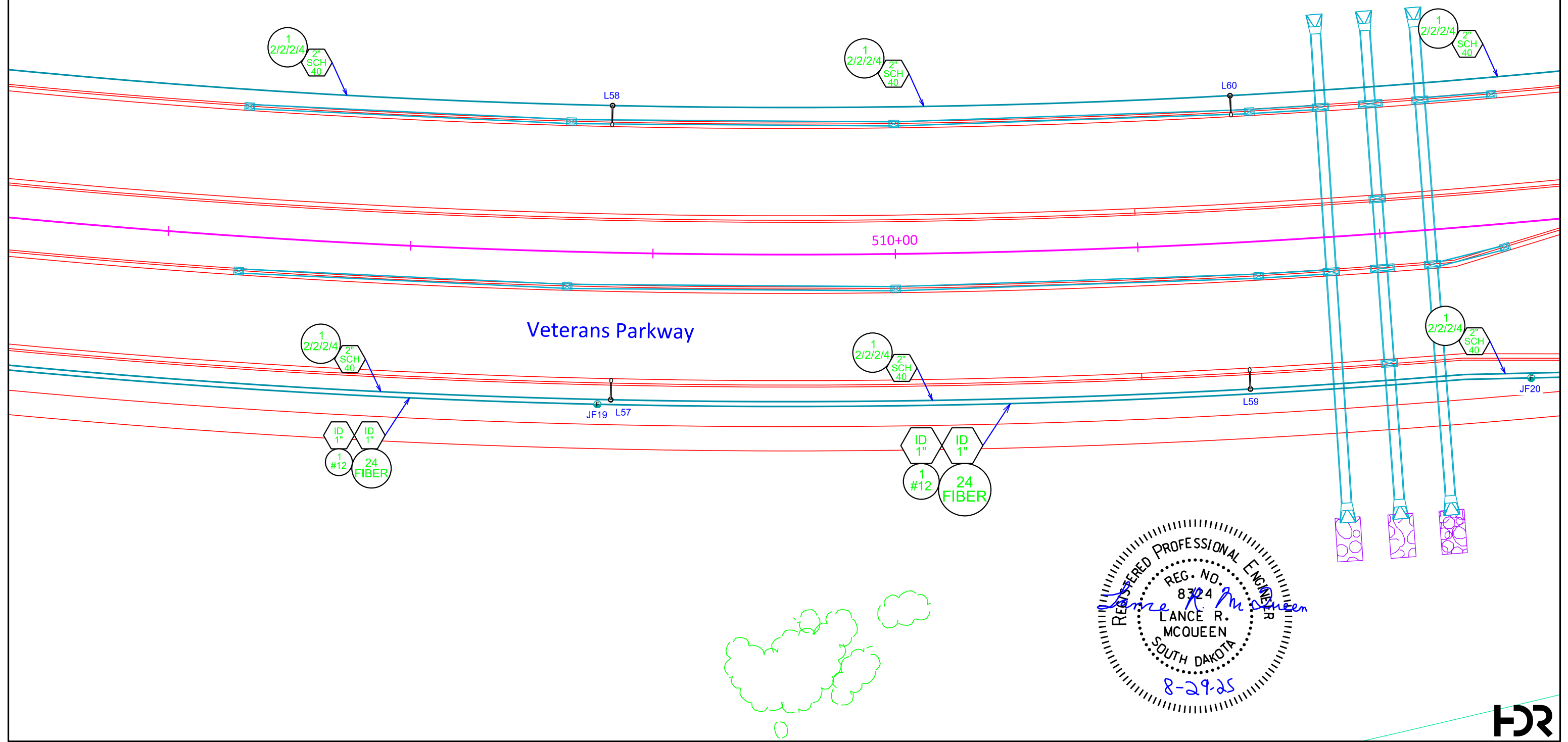
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L39	L85

FILE: ...\\Section L\\L39.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L57	508+83.92 - 60.67' RT
L58	508+82.07 - 60.67' LT
L59	511+43.23 - 60.67' RT
L60	511+41.39 - 60.67' LT
JF19	508+78.54 - 62.67' RT
JF20	512+56.94 - 64.36' RT



Conduit Layout - Veterans Parkway

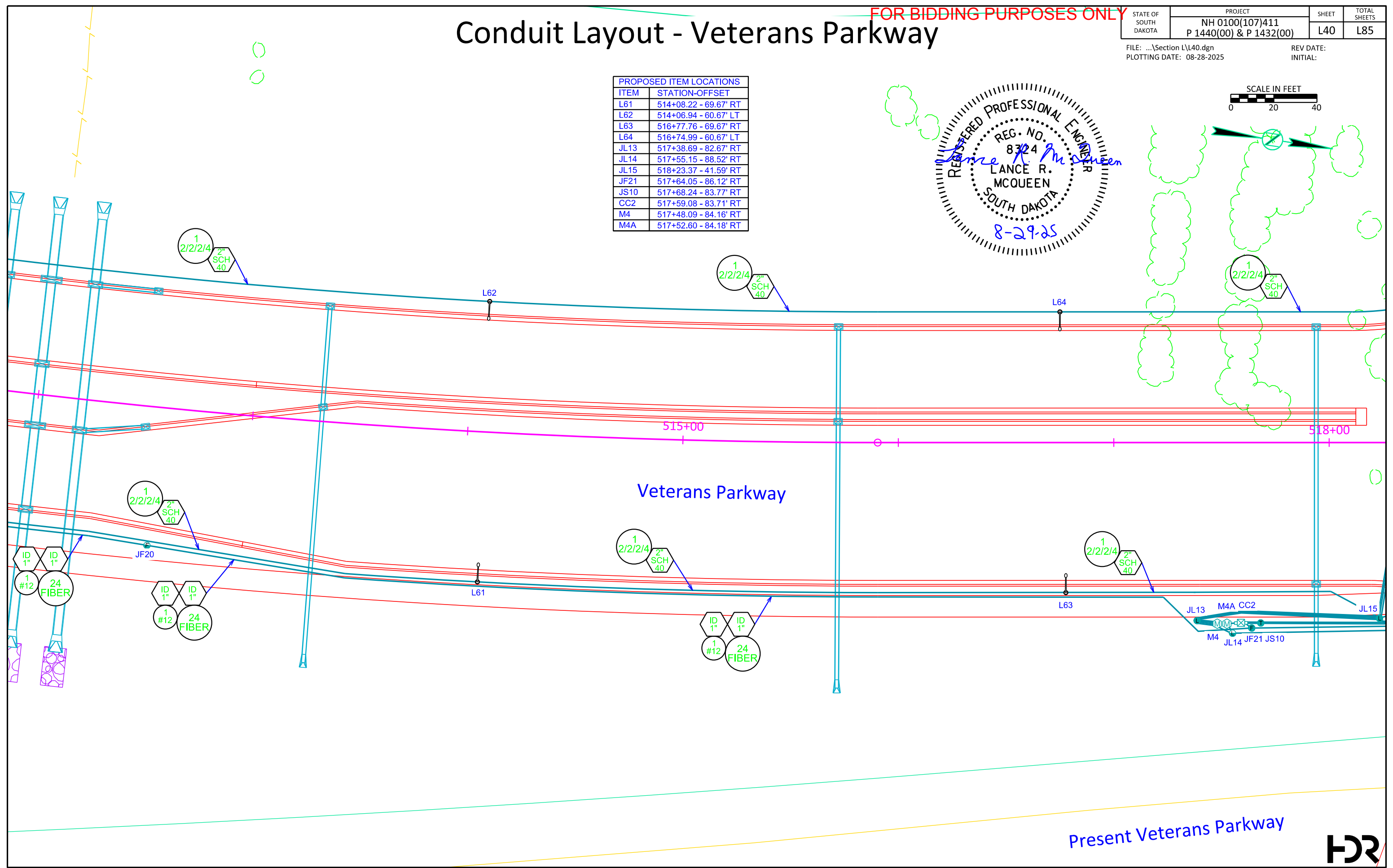
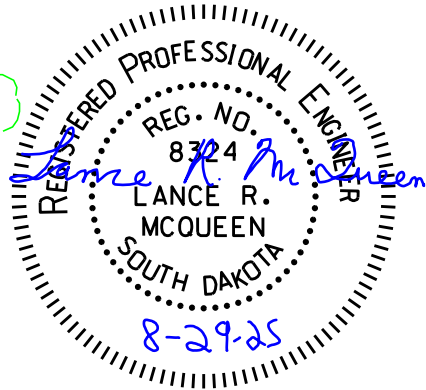
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L40	L85

FILE: ...\\Section L\\L40.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

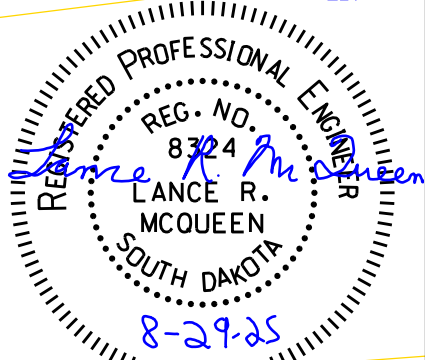
PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L61	514+08.22 - 69.67' RT
L62	514+06.94 - 60.67' LT
L63	516+77.76 - 69.67' RT
L64	516+74.99 - 60.67' LT
JL13	517+38.69 - 82.67' RT
JL14	517+55.15 - 88.52' RT
JL15	518+23.37 - 41.59' RT
JF21	517+64.05 - 86.12' RT
JS10	517+68.24 - 83.77' RT
CC2	517+59.08 - 83.71' RT
M4	517+48.09 - 84.16' RT
M4A	517+52.60 - 84.18' RT



FOR BIDDING PURPOSES ONLY

TOTAL SHEETS	L85
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REV DATE:
INITIAL:



PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET	ITEM	STATION-OFFSET	ITEM	STATION-OFFSET
L65	522+43.74 - 60.67' RT	JF22	518+31.82 - 85.26' RT	PB9	SEE SECTION B
L66	522+41.12 - 72.67' LT	JF23	518+60.98 - 84.46' LT	PB10	
S6	518+52.62 - 70.64' LT	JF24	520+05.54 - 93.06' LT	PB11	
S7	518+66.80 - 92.14' LT	JF25	520+12.40 - 77.82' RT	PB12	
S8	520+09.57 - 88.47' LT	JF26	66+72.61 - 80.28' RT	PB13	
S9	520+10.07 - 70.48' RT	JL16	518+47.29 - 65.85' LT	PB14	
S10	518+35.90 - 83.17' RT	JL17	63+71.46 - 5.01' LT	PB15	
JS6	518+56.33 - 81.35' LT	JL18	520+17.52 - 82.24' LT	PB16	
JS7	520+14.20 - 86.83' LT	JL19	520+06.07 - 80.31' RT		
JS8	520+00.18 - 83.01' RT	JL20	66+39.70 - 17.46' RT		
JS9	518+29.13 - 81.45' RT				

REMOVAL ITEMS
EL2
EL3
EL4
EJL3
EJL4
EJL5
EJL11
EJF3
EJF4
EJF5
EJS1
EJS2
EJS3
EJS4
EJS5
EJS8
EJS9

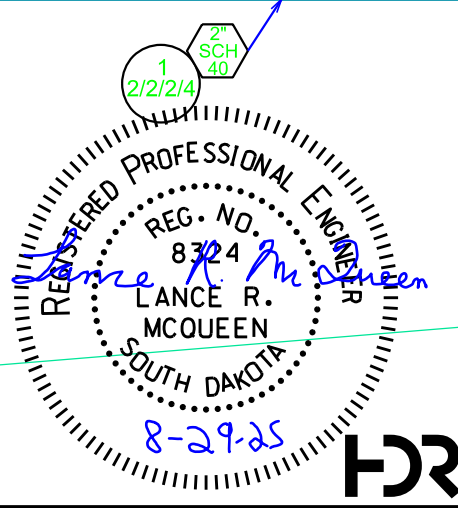
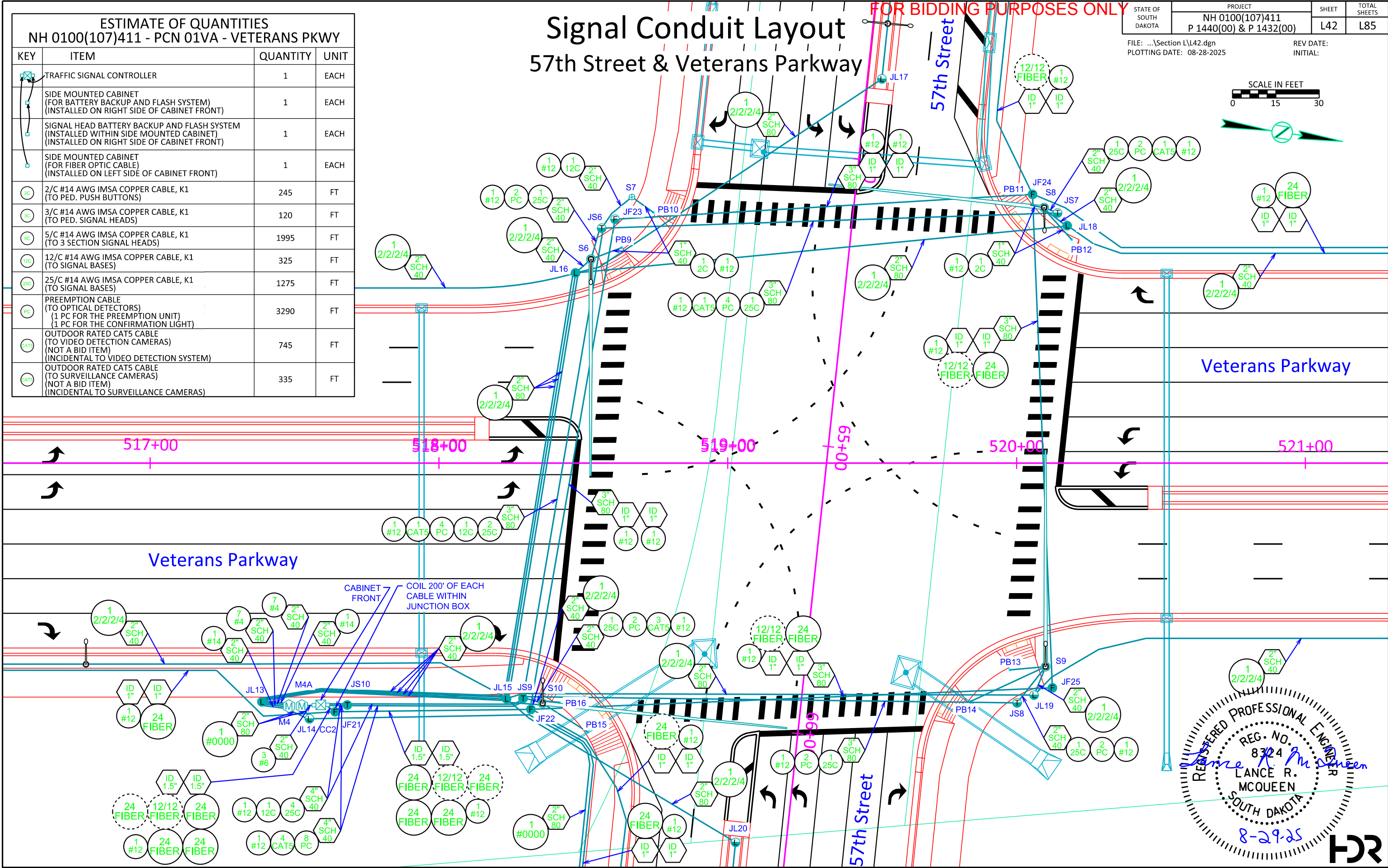
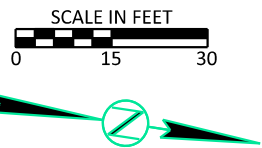
ESTIMATE OF QUANTITIES
NH 0100(107)411 - PCN 01VA - VETERANS PKWY

KEY	ITEM	QUANTITY	UNIT
	TRAFFIC SIGNAL CONTROLLER	1	EACH
	SIDE MOUNTED CABINET (FOR BATTERY BACKUP AND FLASH SYSTEM) (INSTALLED ON RIGHT SIDE OF CABINET FRONT)	1	EACH
	SIGNAL HEAD BATTERY BACKUP AND FLASH SYSTEM (INSTALLED WITHIN SIDE MOUNTED CABINET) (INSTALLED ON RIGHT SIDE OF CABINET FRONT)	1	EACH
	SIDE MOUNTED CABINET (FOR FIBER OPTIC CABLE) (INSTALLED ON LEFT SIDE OF CABINET FRONT)	1	EACH
	2/C #14 AWG IMSA COPPER CABLE, K1 (TO PED. PUSH BUTTONS)	245	FT
	3/C #14 AWG IMSA COPPER CABLE, K1 (TO PED. SIGNAL HEADS)	120	FT
	5/C #14 AWG IMSA COPPER CABLE, K1 (TO 3 SECTION SIGNAL HEADS)	1995	FT
	12/C #14 AWG IMSA COPPER CABLE, K1 (TO SIGNAL BASES)	325	FT
	25/C #14 AWG IMSA COPPER CABLE, K1 (TO SIGNAL BASES)	1275	FT
	PREEMPTION CABLE (TO OPTICAL DETECTORS) (1 PC FOR THE PREEMPTION UNIT) (1 PC FOR THE CONFIRMATION LIGHT)	3290	FT
	OUTDOOR RATED CAT5 CABLE (TO VIDEO DETECTION CAMERAS) (NOT A BID ITEM) (INCIDENTAL TO VIDEO DETECTION SYSTEM)	745	FT
	OUTDOOR RATED CAT5 CABLE (TO SURVEILLANCE CAMERAS) (NOT A BID ITEM) (INCIDENTAL TO SURVEILLANCE CAMERAS)	335	FT

Signal Conduit Layout
57th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT NH 0100(107)411 P 1440(00) & P 1432(00)	SHEET L42	TOTAL SHEETS L85
FILE: ...\\Section L\\L42.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	

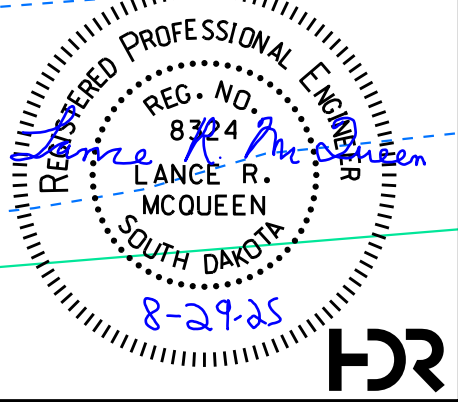
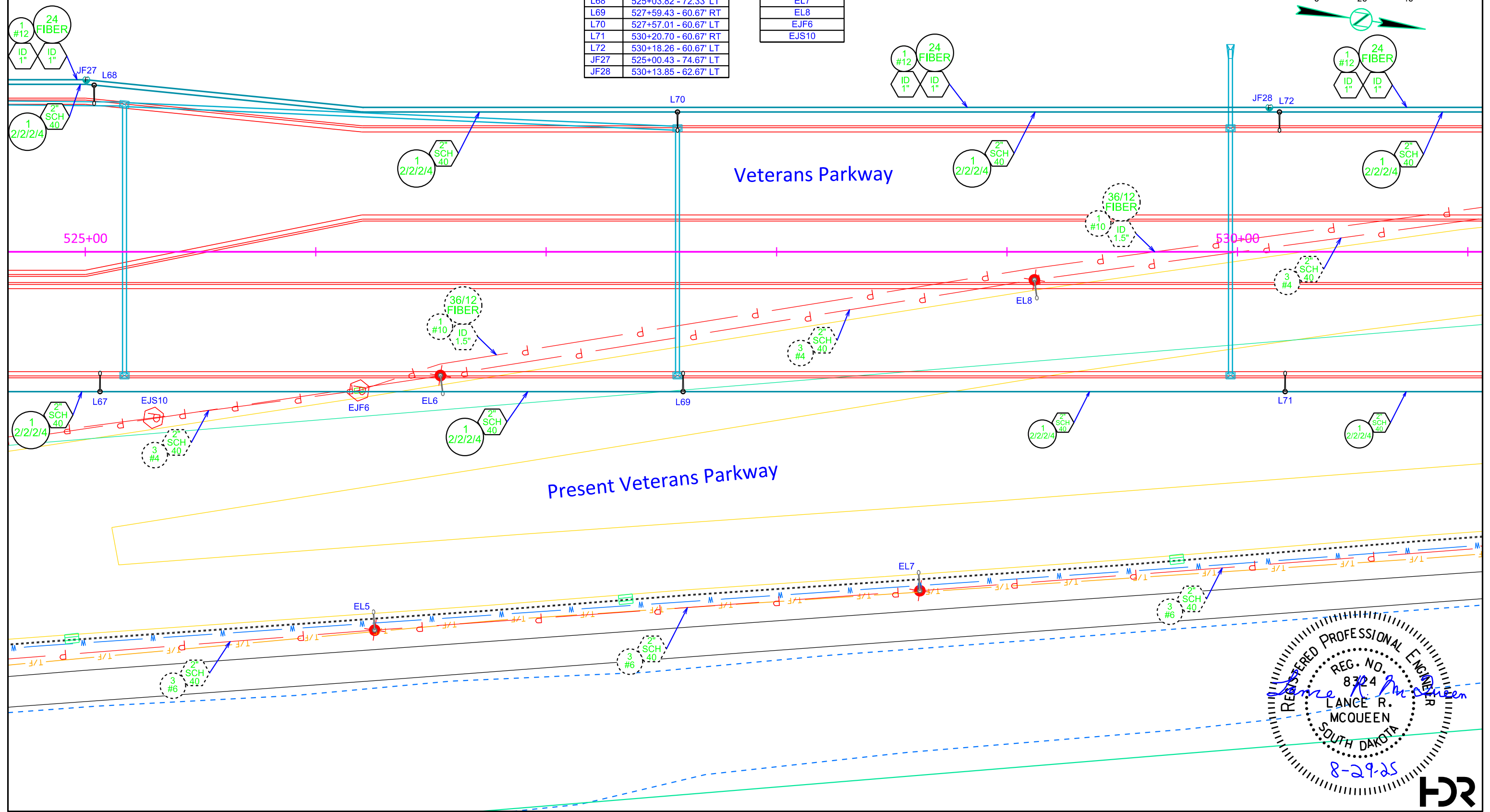


Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

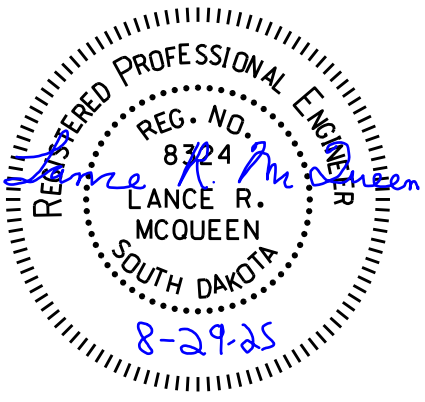
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L43	L85
FILE: ...\\Section L\\L43.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	

PROPOSED ITEM LOCATIONS		REMOVAL ITEMS
ITEM	STATION-OFFSET	
L67	525+06.37 - 60.67' RT	EL5
L68	525+03.82 - 72.33' LT	EL6
L69	527+59.43 - 60.67' RT	EL7
L70	527+57.01 - 60.67' LT	EL8
L71	530+20.70 - 60.67' RT	EJF6
L72	530+18.26 - 60.67' LT	EJS10
JF27	525+00.43 - 74.67' LT	
JF28	530+13.85 - 62.67' LT	

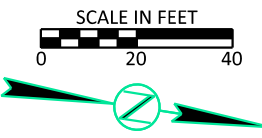


Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

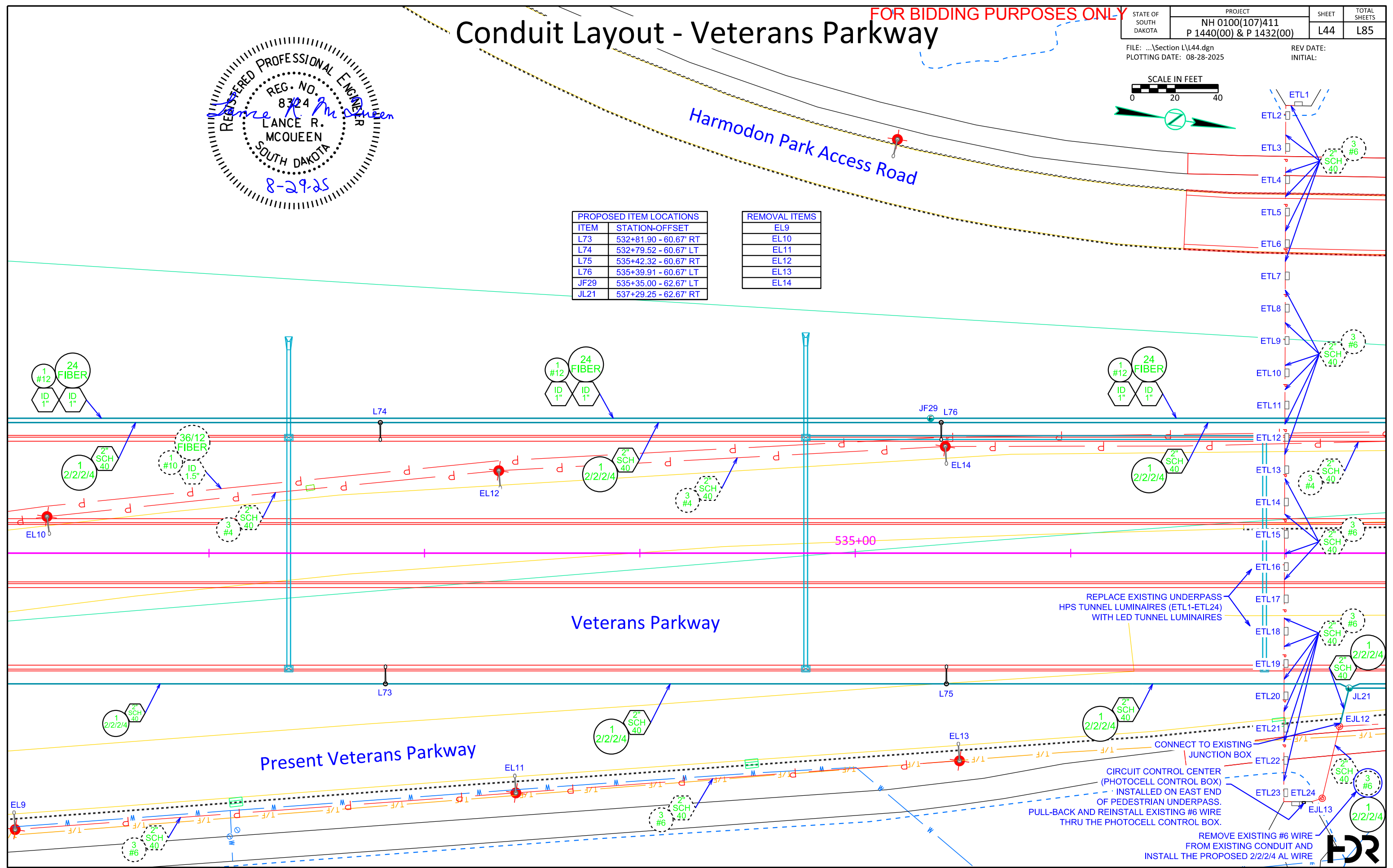


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L44	L85
FILE: ...\\Section L\\L44.dgn PLOT DATE: 08-28-2025		REV DATE: INITIAL:	



PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L73	532+81.90 - 60.67' RT
L74	532+79.52 - 60.67' LT
L75	535+42.32 - 60.67' RT
L76	535+39.91 - 60.67' LT
JF29	535+35.00 - 62.67' LT
JL21	537+29.25 - 62.67' RT

REMOVAL ITEMS	
EL9	
EL10	
EL11	
EL12	
EL13	
EL14	



REPLACE EXISTING UNDERPASS
HPS TUNNEL LUMINAIRES (ETL1-ETL24)
WITH LED TUNNEL LUMINAIRES

CONNECT TO EXISTING
JUNCTION BOX

CIRCUIT CONTROL CENTER
(PHOTOCELL CONTROL BOX)
- INSTALLED ON EAST END
OF PEDESTRIAN UNDERPASS.
PULL-BACK AND REINSTALL EXISTING #6 WIRE
THRU THE PHOTOCELL CONTROL BOX.

REMOVE EXISTING #6 WIRE
FROM EXISTING CONDUIT AND
INSTALL THE PROPOSED 2/2/2/4 AL WIRE



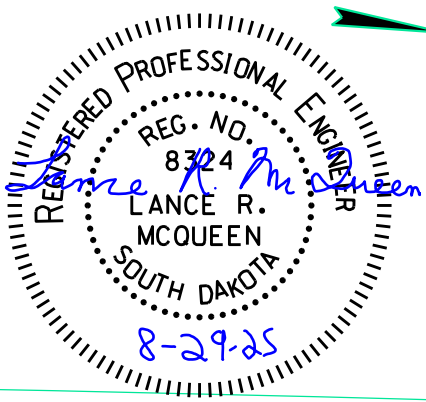
Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L45	L85

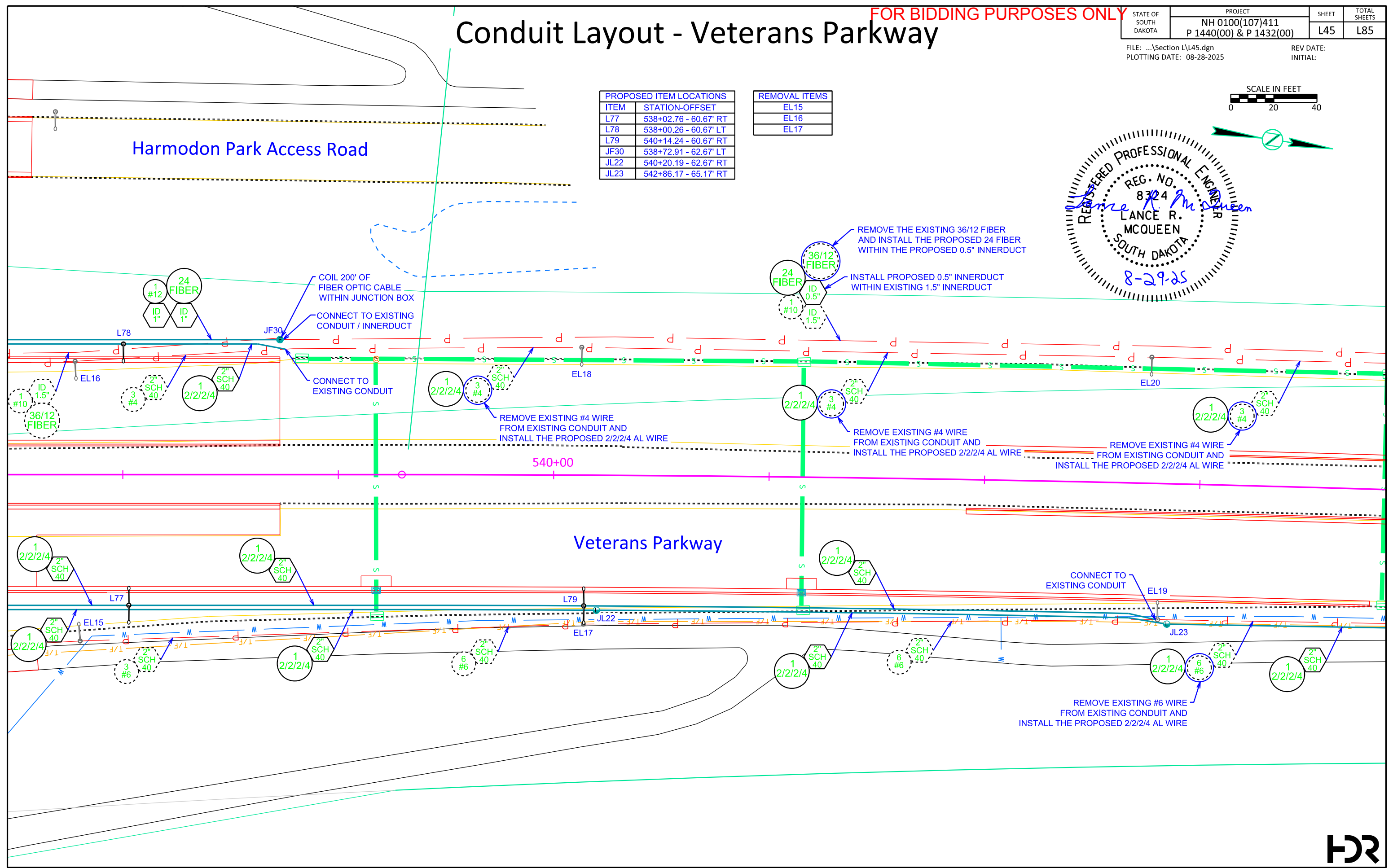
FILE: ...\\Section L\\L45.dgn
PLOT DATE: 08-28-2025

REV DATE:
INITIAL:



PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
L77	538+02.76 - 60.67' RT
L78	538+00.26 - 60.67' LT
L79	540+14.24 - 60.67' RT
JF30	538+72.91 - 62.67' LT
JL22	540+20.19 - 62.67' RT
JL23	542+86.17 - 65.17' RT

REMOVAL ITEMS	
EL15	
EL16	
EL17	



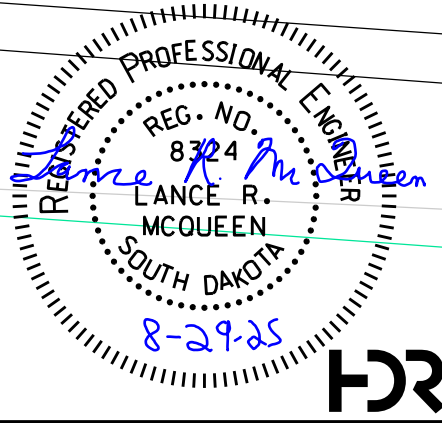
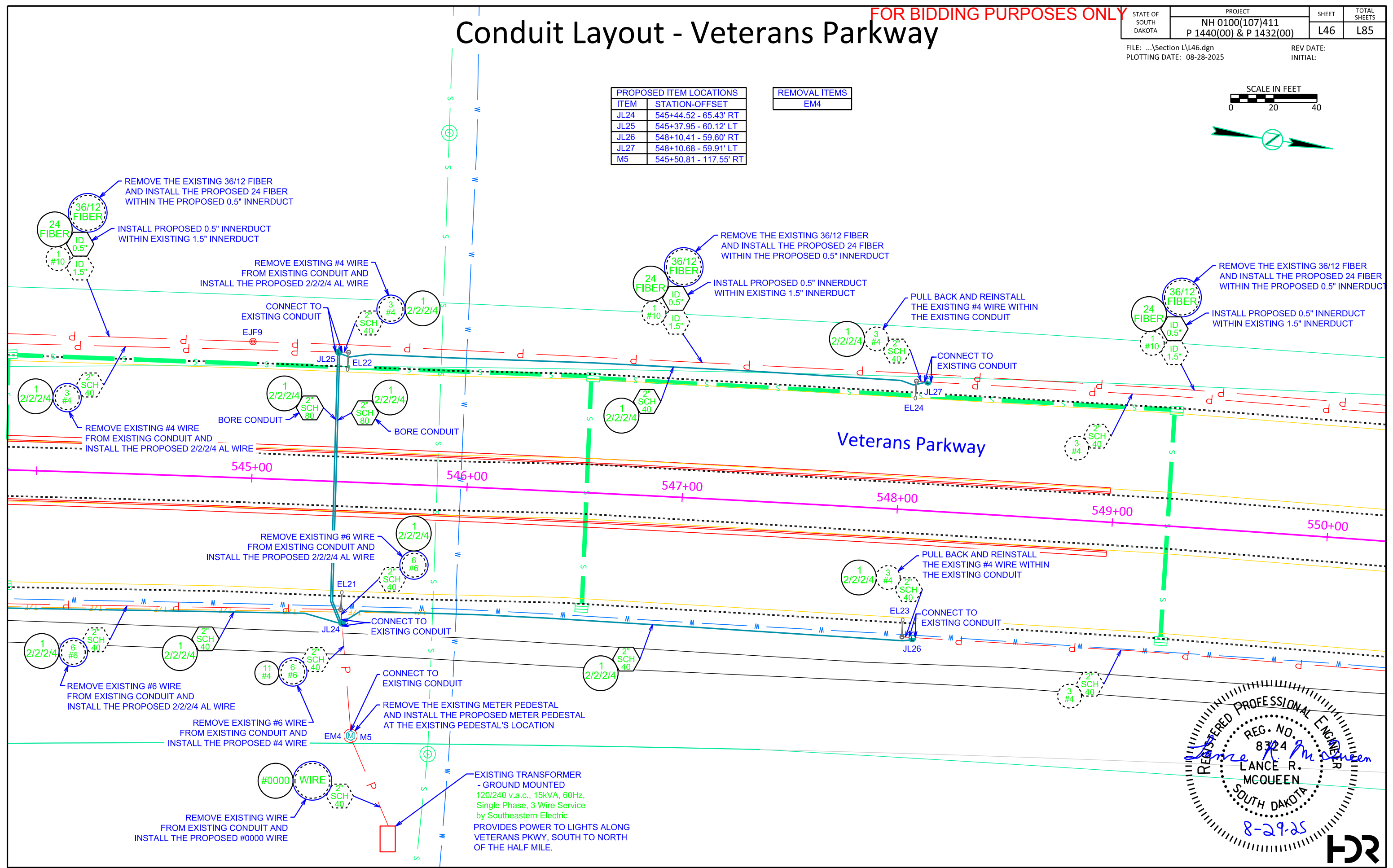
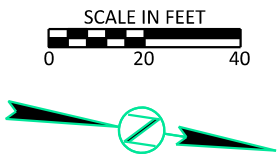
Conduit Layout - Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L46	L85
FILE: ...\\Section L\\L46.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
JL24	545+44.52 - 65.43' RT
JL25	545+37.95 - 60.12' LT
JL26	548+10.41 - 59.60' RT
JL27	548+10.68 - 59.91' LT
M5	545+50.81 - 117.55' RT

REMOVAL ITEMS
EM4



Fiber Optic Cable Layout

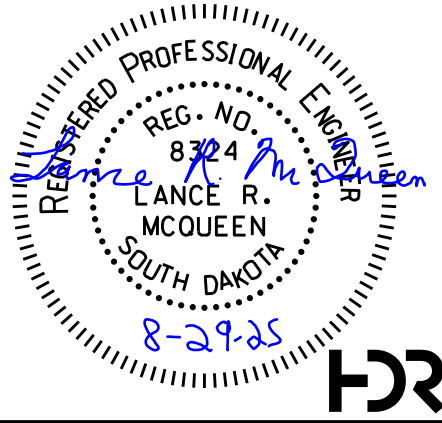
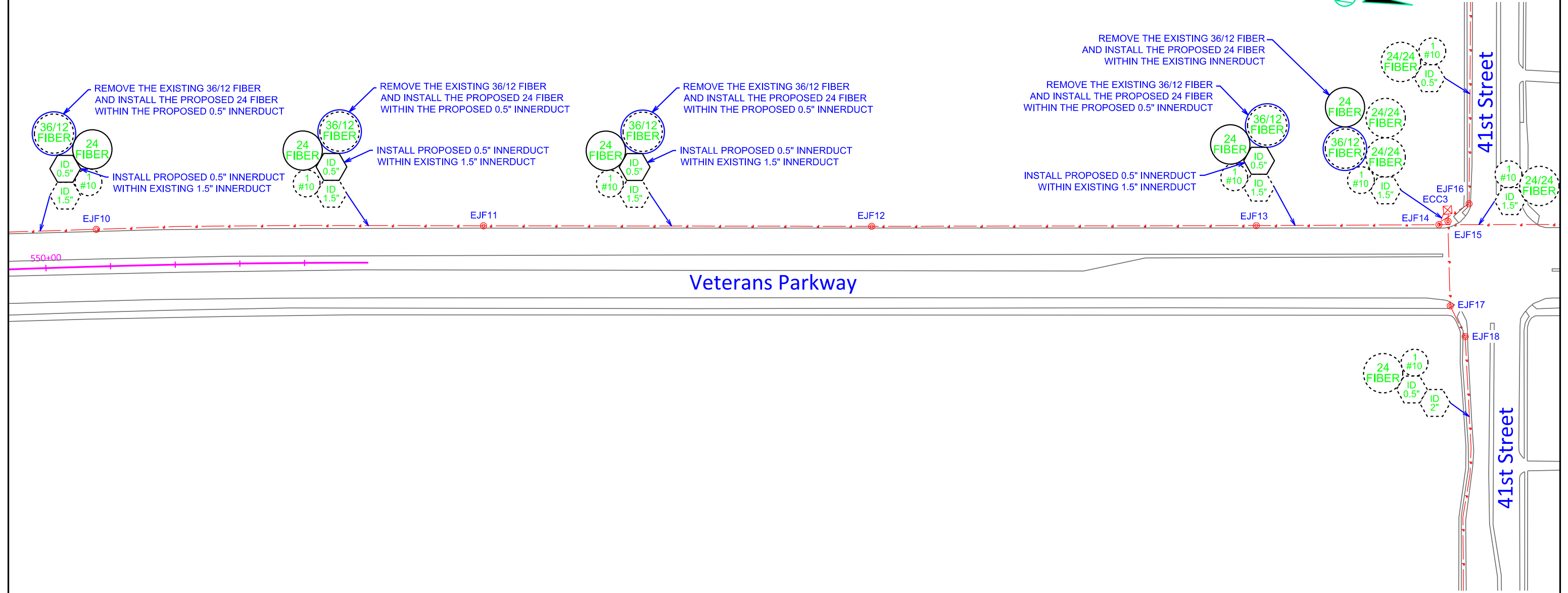
Veterans Parkway, Harmodon Park to 41st Street

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L47	L85

FILE: ...\\Section L\\L47.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:



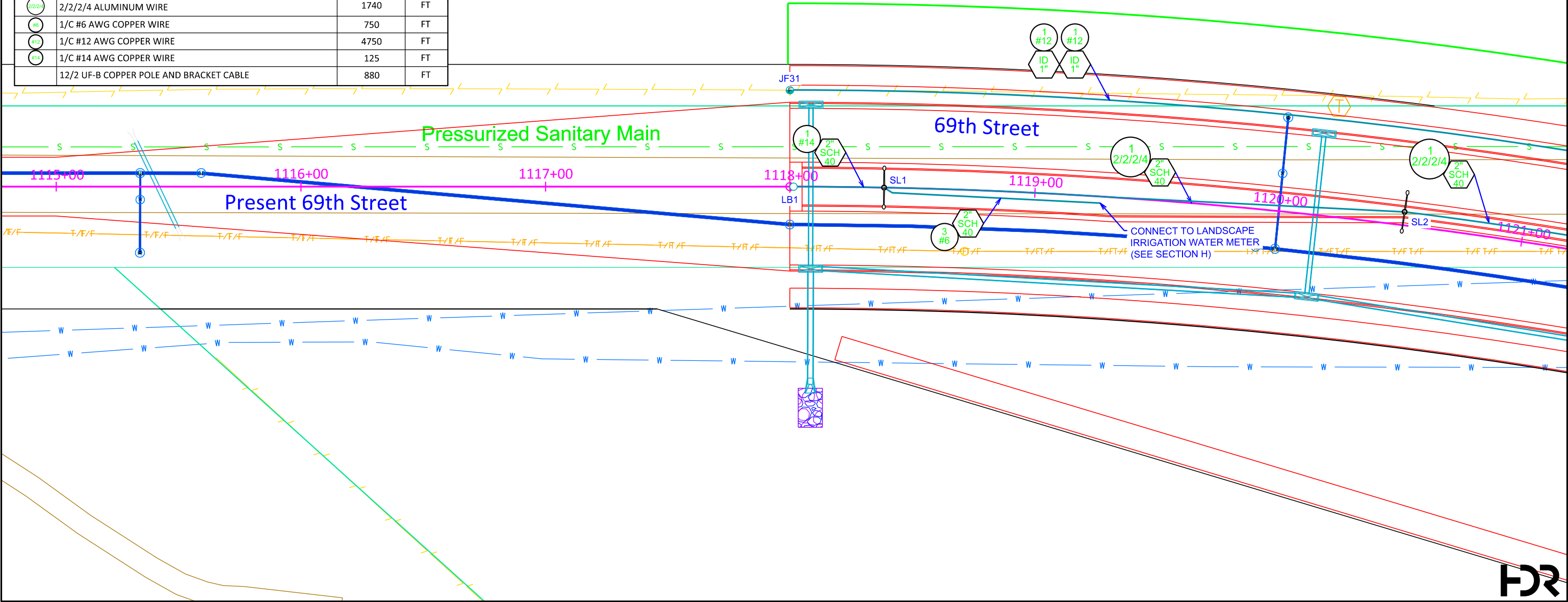
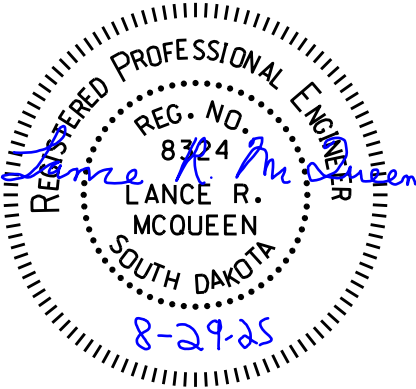
ESTIMATE OF QUANTITIES P 1440(00) - PCN 08DJ - CIP#11118 - 69TH STREET			
KEY	ITEM	QUANTITY	UNIT
	BREAKAWAY BASE LUMINAIRE POLE, 40' MOUNTING HEIGHT W/ TWIN 8' ARM (SL1-SL8)	8	EACH
	ROADWAY LUMINAIRE, LED WITH PHOTOELECTRIC CELL (SL1-SL8)	16	EACH
	2' DIAMETER FOOTING (SL1-SL8)	64.0	FT
	12" DIAMETER ELECTRICAL JUNCTION BOX (JS: 21,22,25,26)	4	EACH
	24" DIAMETER ELECTRICAL JUNCTION BOX (JL: 32) (JF: 31,32,33,34,52,53) (JS: 24,27)	9	EACH
	30" DIAMETER ELECTRICAL JUNCTION BOX (JL: 33) (JF: 50,51) (JS: 20,23)	5	EACH
	LOCATOR BALL (LB1)	1	EACH
	1" RIGID CONDUIT, SCHEDULE 40	45	FT
	2" RIGID CONDUIT, SCHEDULE 40	1825	FT
	2" RIGID CONDUIT, SCHEDULE 80	230	FT
	3" RIGID CONDUIT, SCHEDULE 80	780	FT
	1" INNERDUCT, SDR 13.5	4110	FT
	1.5" INNERDUCT, SDR 13.5	50	FT
	2/2/2/4 ALUMINUM WIRE	1740	FT
	1/C #6 AWG COPPER WIRE	750	FT
	1/C #12 AWG COPPER WIRE	4750	FT
	1/C #14 AWG COPPER WIRE	125	FT
	12/2 UF-B COPPER POLE AND BRACKET CABLE	880	FT

Conduit Layout - 69th Street

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L48	L85
FILE: ...\\Section L\\L48.dgn PLOTING DATE: 08-29-2025		REV DATE: INITIAL:	

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
SL1	1118+38.32 - 0.00' RT
SL2	1120+51.05 - 5.50' LT
JF31	1117+99.81 - 39.46' LT
LB1	1117+99.79 - 0.00' RT

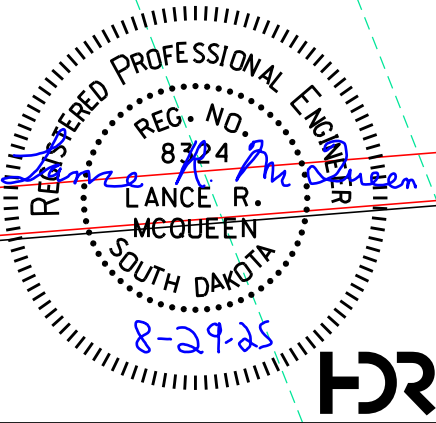
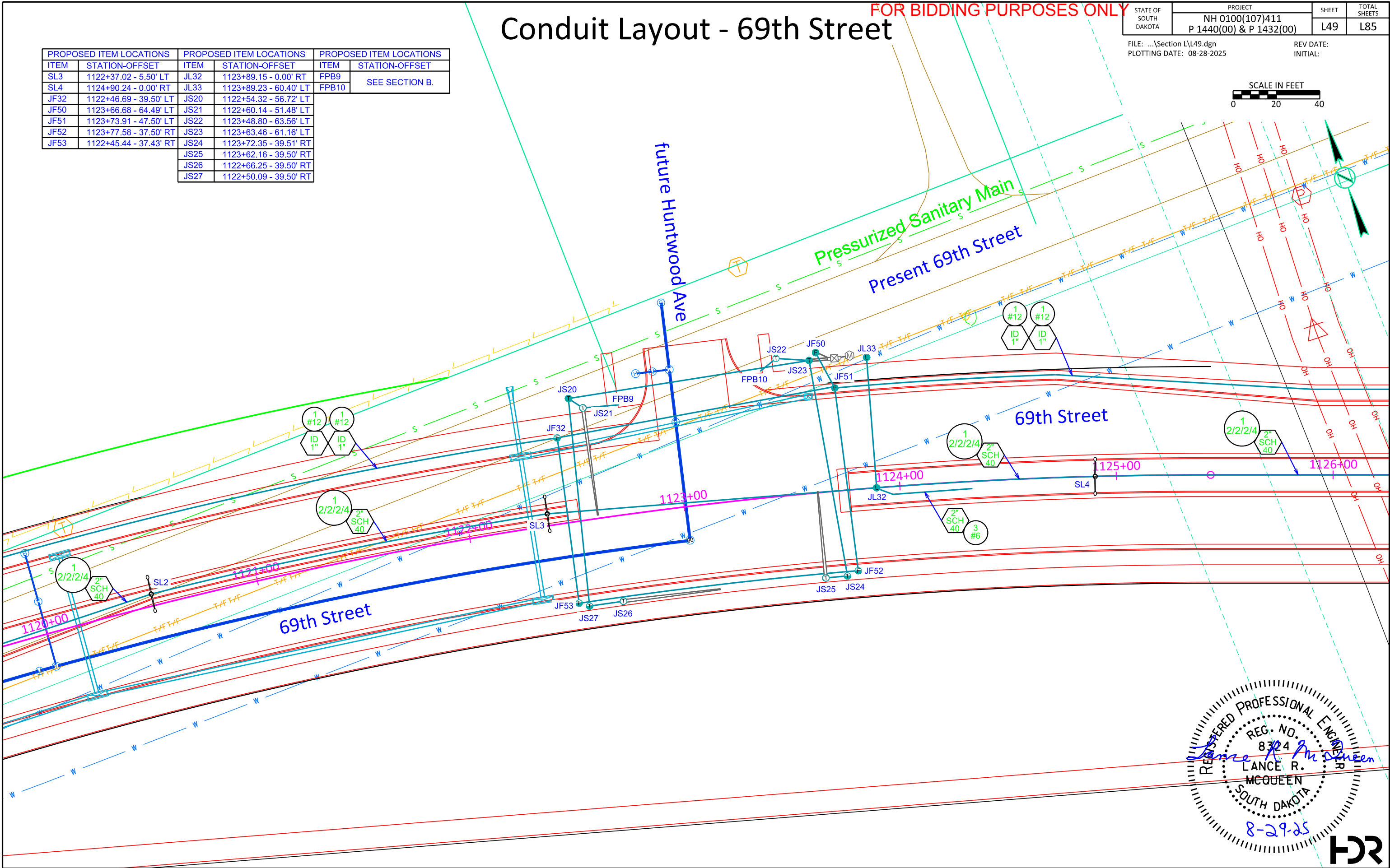


Conduit Layout - 69th Street

FOR BIDDING PURPOSES ONLY

PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET	ITEM	STATION-OFFSET	ITEM	STATION-OFFSET
SL3	1122+37.02 - 5.50' LT	JL32	1123+89.15 - 0.00' RT	FPB9	SEE SECTION B.
SL4	1124+90.24 - 0.00' RT	JL33	1123+89.23 - 60.40' LT	FPB10	
JF32	1122+46.69 - 39.50' LT	JS20	1122+54.32 - 56.72' LT		
JF50	1123+66.68 - 64.49' LT	JS21	1122+60.14 - 51.48' LT		
JF51	1123+73.91 - 47.50' LT	JS22	1123+48.80 - 63.56' LT		
JF52	1123+77.58 - 37.50' RT	JS23	1123+63.46 - 61.16' LT		
JF53	1122+45.44 - 37.43' RT	JS24	1123+72.35 - 39.51' RT		
		JS25	1123+62.16 - 39.50' RT		
		JS26	1122+66.25 - 39.50' RT		
		JS27	1122+50.09 - 39.50' RT		

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L49	L85
FILE: ...\\Section L\\L49.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	



FOR BIDDING PURPOSES ONLY

FILE: ...\\Section L\\L50.dgn
PLOT DATE: 08-28-2025



Conduit Layout - 69th Street

FOR BIDDING PURPOSES ONLY

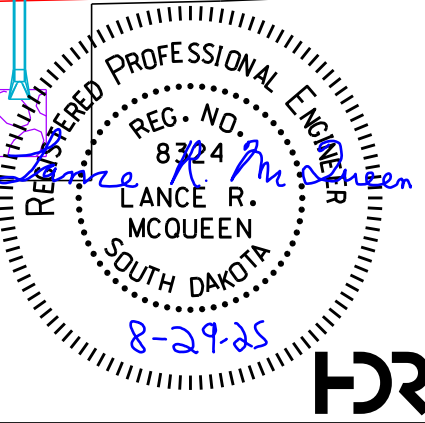
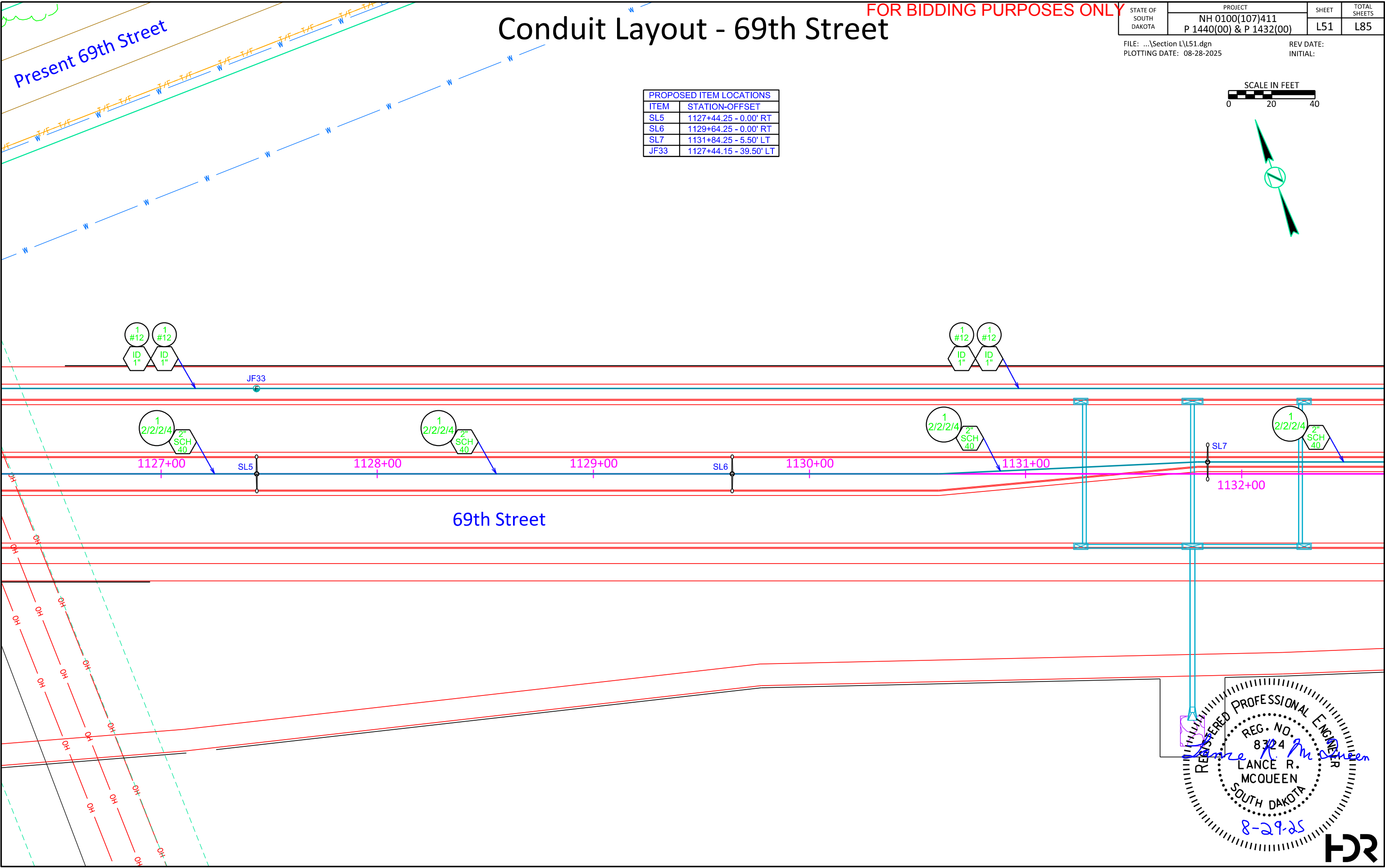
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L51	L85

FILE: ...\\Section L\\L51.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:



PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
SL5	1127+44.25 - 0.00' RT
SL6	1129+64.25 - 0.00' RT
SL7	1131+84.25 - 5.50' LT
JF33	1127+44.15 - 39.50' LT

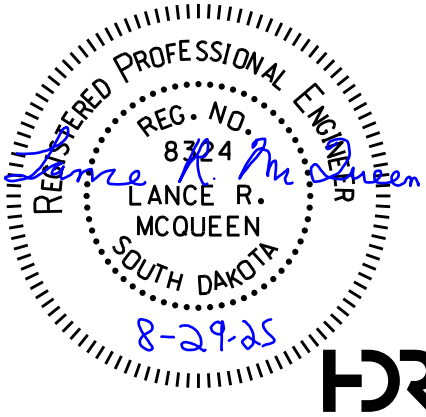
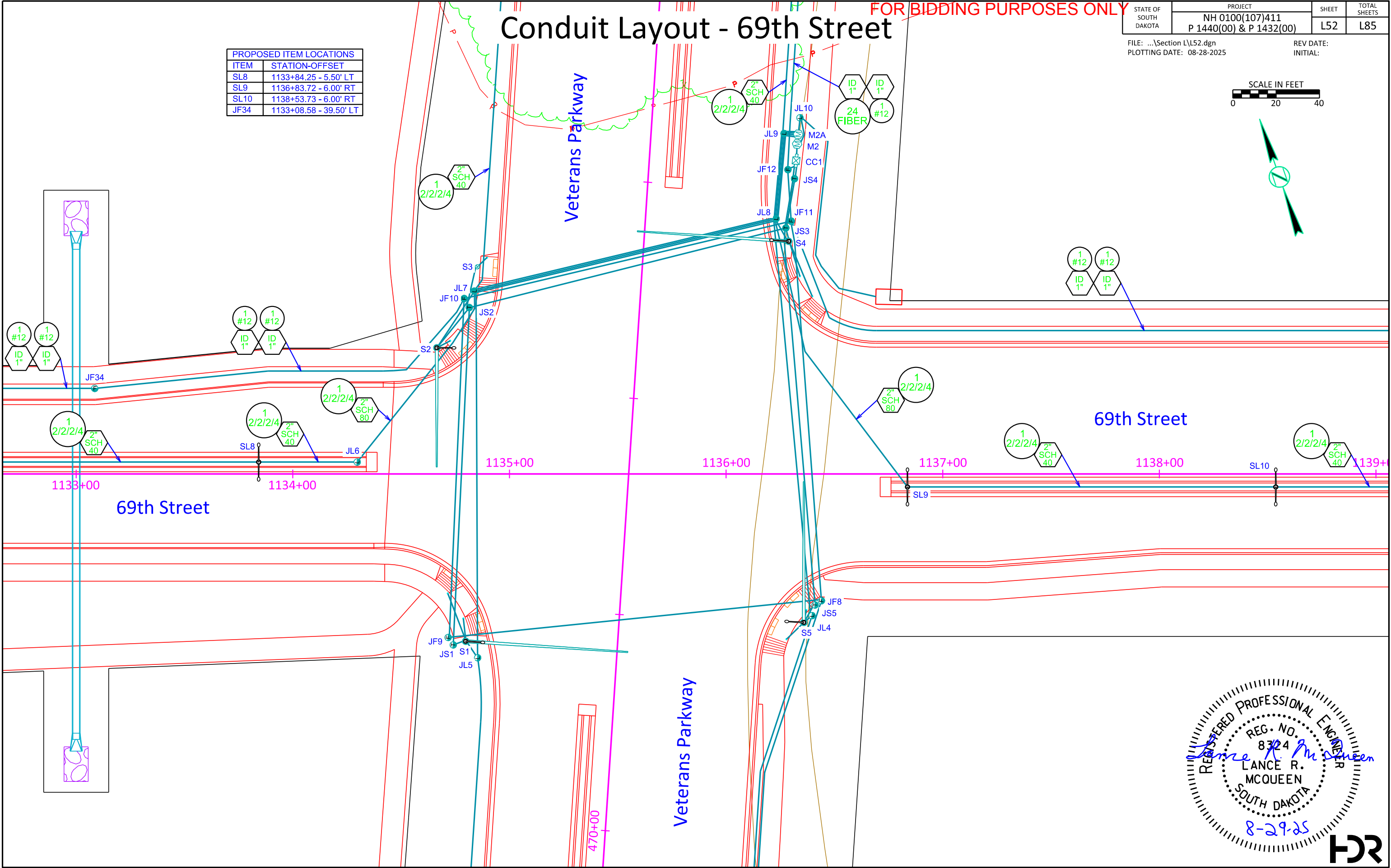


Conduit Layout - 69th Street

FOR BIDDING PURPOSES ONLY

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
SL8	1133+84.25 - 5.50' LT
SL9	1136+83.72 - 6.00' RT
SL10	1138+53.73 - 6.00' RT
JF34	1133+08.58 - 39.50' LT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L52	L85
FILE: ...\\Section L\\L52.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	



Conduit Layout - 69th Street

FOR BIDDING PURPOSES ONLY

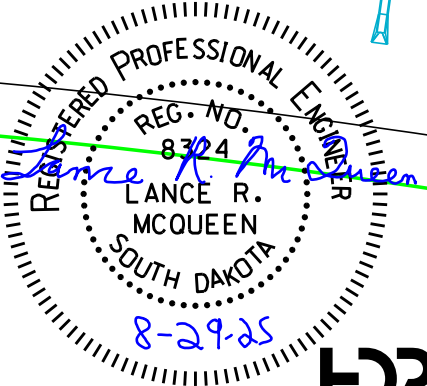
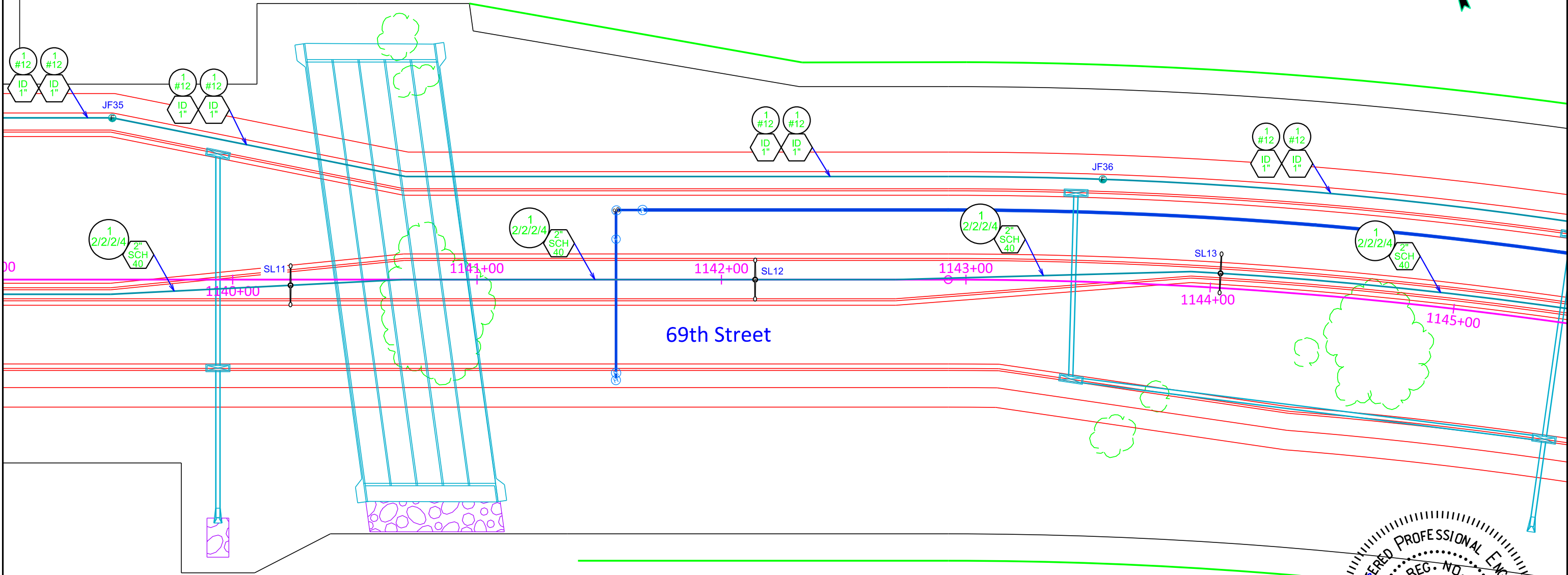
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L53	L85

FILE: ...\\Section L\\L53.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
SL11	1140+23.70 - 2.32' RT
SL12	1142+13.77 - 0.00' RT
SL13	1144+03.86 - 6.00' LT
JF35	1139+50.76 - 66.17' LT
JF36	1143+54.56 - 42.17' LT

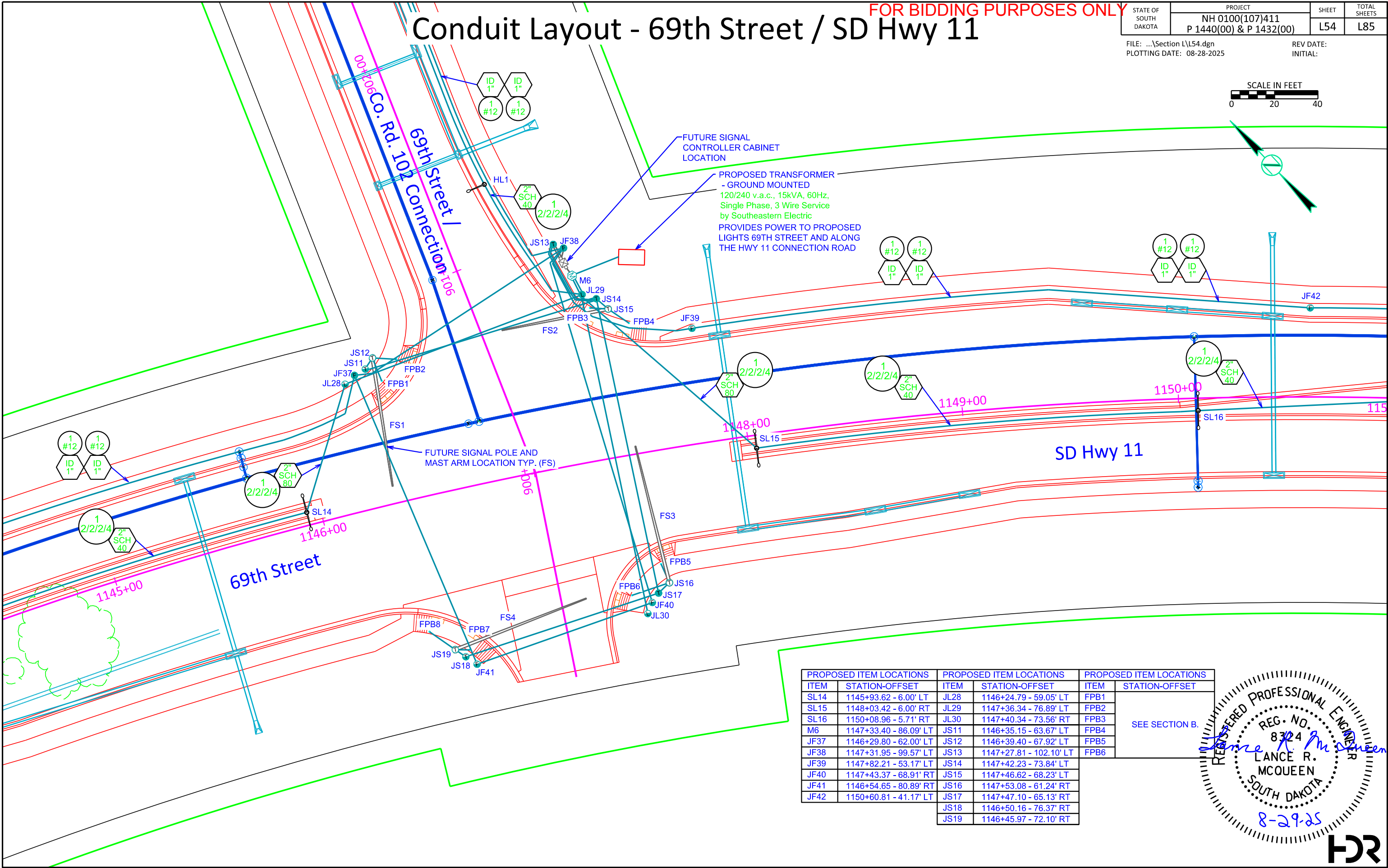
SCALE IN FEET
0 20 40



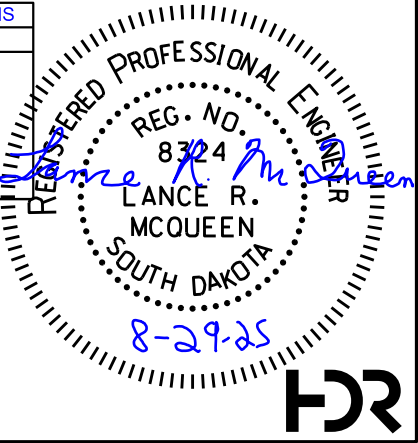
Conduit Layout - 69th Street / SD Hwy 11

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L54	L85
FILE: ...\\Section L\\L54.dgn PLOT DATE: 08-28-2025		REV DATE: INITIAL:	

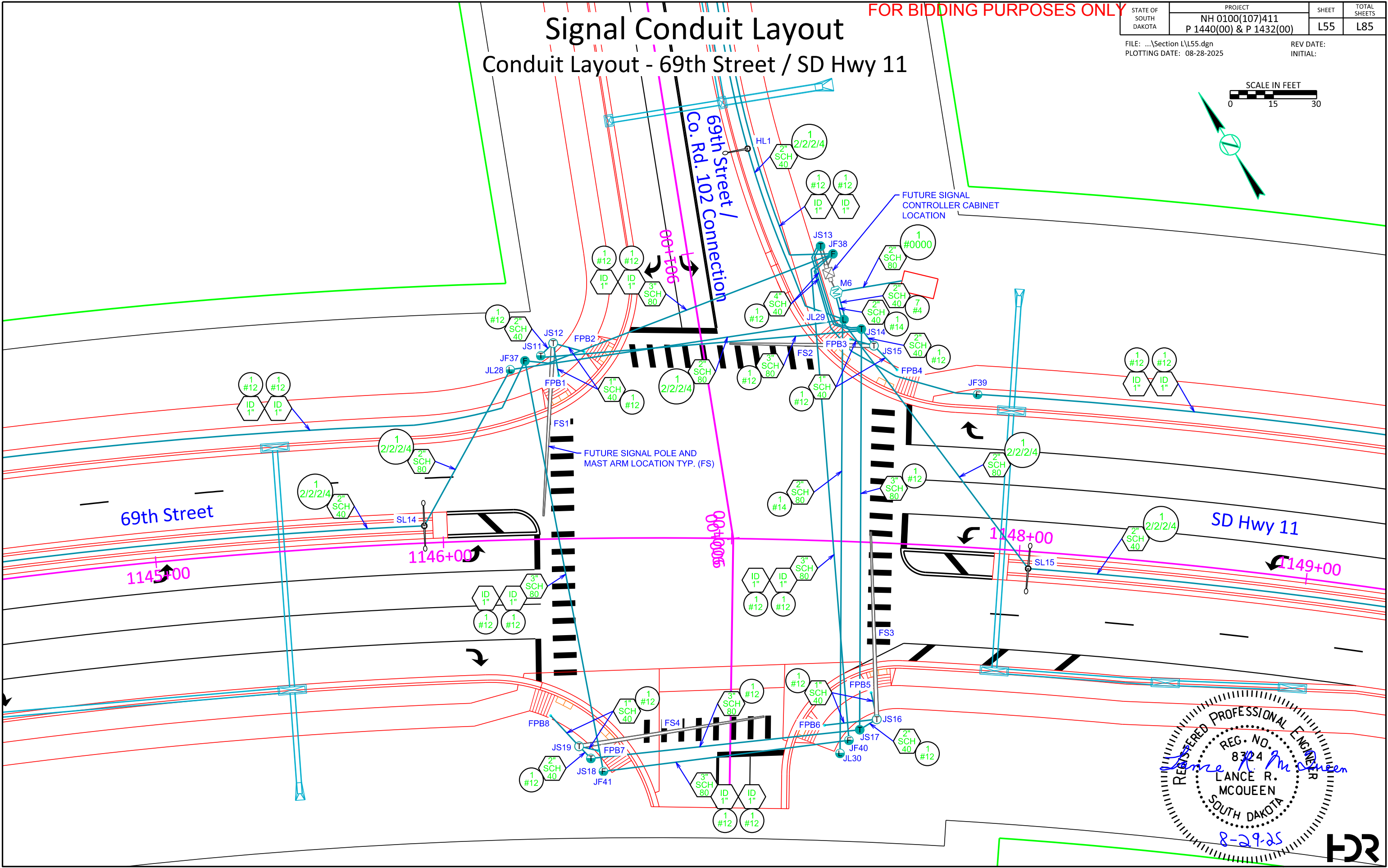


PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS		PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET	ITEM	STATION-OFFSET	ITEM	STATION-OFFSET
SL14	1145+93.62 - 6.00' LT	JL28	1146+24.79 - 59.05' LT	FPB1	SEE SECTION B.
SL15	1148+03.42 - 6.00' RT	JL29	1147+36.34 - 76.89' LT	FPB2	
SL16	1150+08.96 - 5.71' RT	JL30	1147+40.34 - 73.56' RT	FPB3	
M6	1147+33.40 - 86.09' LT	JS11	1146+35.15 - 63.67' LT	FPB4	
JF37	1146+29.80 - 62.00' LT	JS12	1146+39.40 - 67.92' LT	FPB5	
JF38	1147+31.95 - 99.57' LT	JS13	1147+27.81 - 102.10' LT	FPB6	
JF39	1147+82.21 - 53.17' LT	JS14	1147+42.23 - 73.84' LT		
JF40	1147+43.37 - 68.91' RT	JS15	1147+46.62 - 68.23' LT		
JF41	1146+54.65 - 80.89' RT	JS16	1147+53.08 - 61.24' RT		
JF42	1150+60.81 - 41.17' LT	JS17	1147+47.10 - 65.13' RT		
		JS18	1146+50.16 - 76.37' RT		
		JS19	1146+45.97 - 72.10' RT		



FOR BIDDING PURPOSES ONLY

FILE: ...\\Section L\\L55.dgn
PLOTING DATE: 08-28-2025

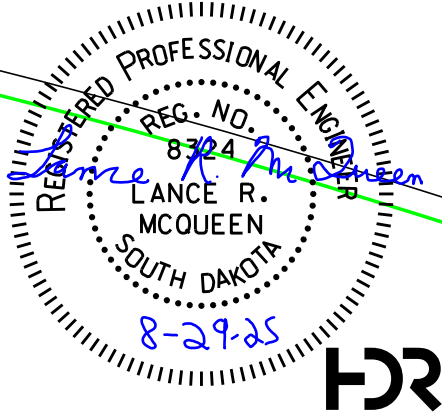
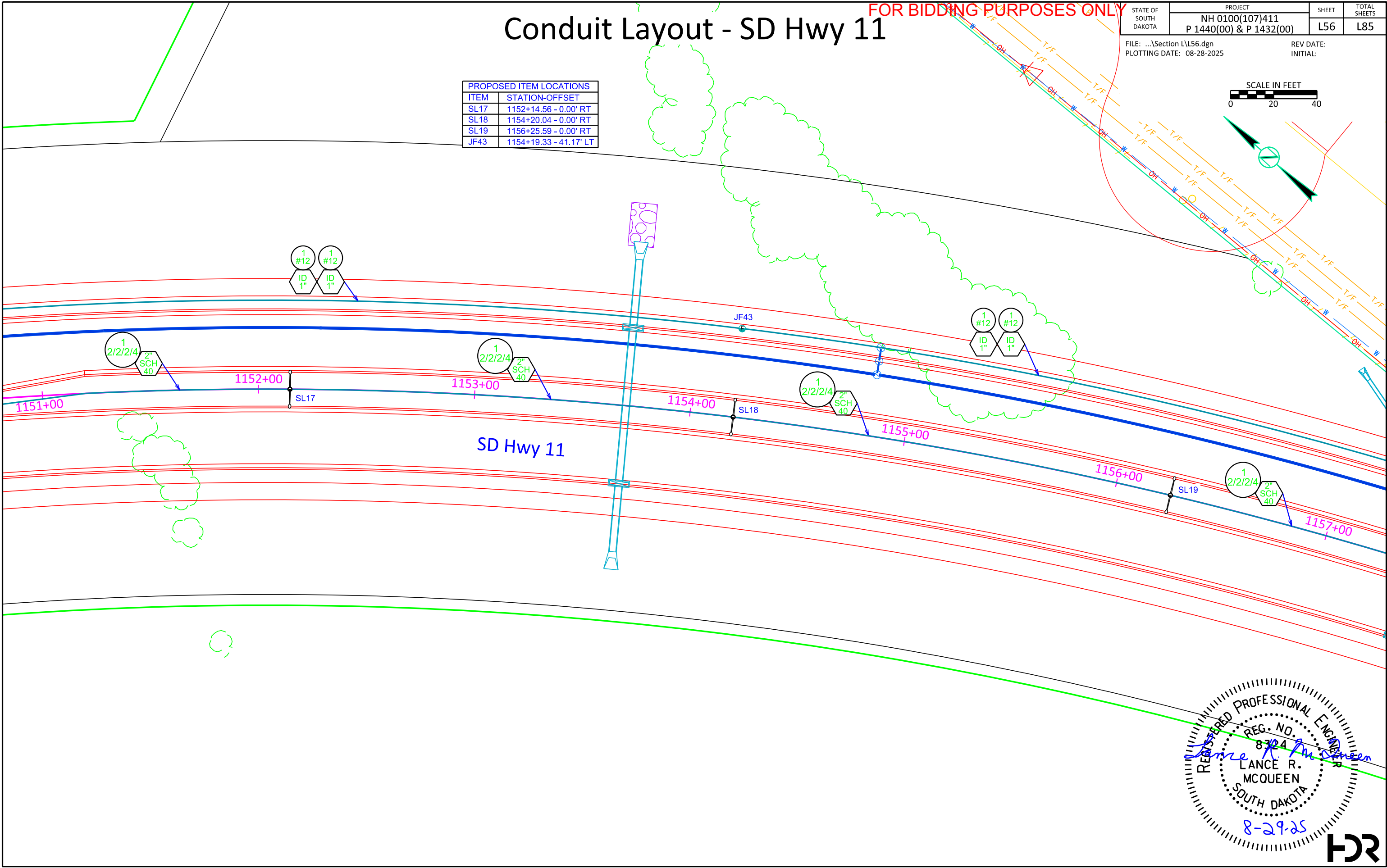


Conduit Layout - SD Hwy 11

FOR BIDDING PURPOSES ONLY

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
SL17	1152+14.56 - 0.00' RT
SL18	1154+20.04 - 0.00' RT
SL19	1156+25.59 - 0.00' RT
JF43	1154+19.33 - 41.17' LT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L56	L85
FILE: ...\\Section L\\L56.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	



Conduit Layout - SD Hwy 11

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L57	L85

FILE: ...\\Section L\\L57.dgn
PLOTING DATE: 08-28-2025

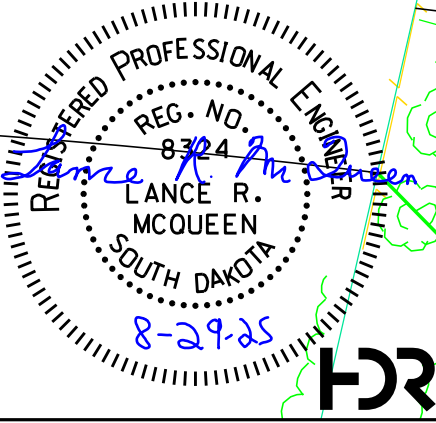
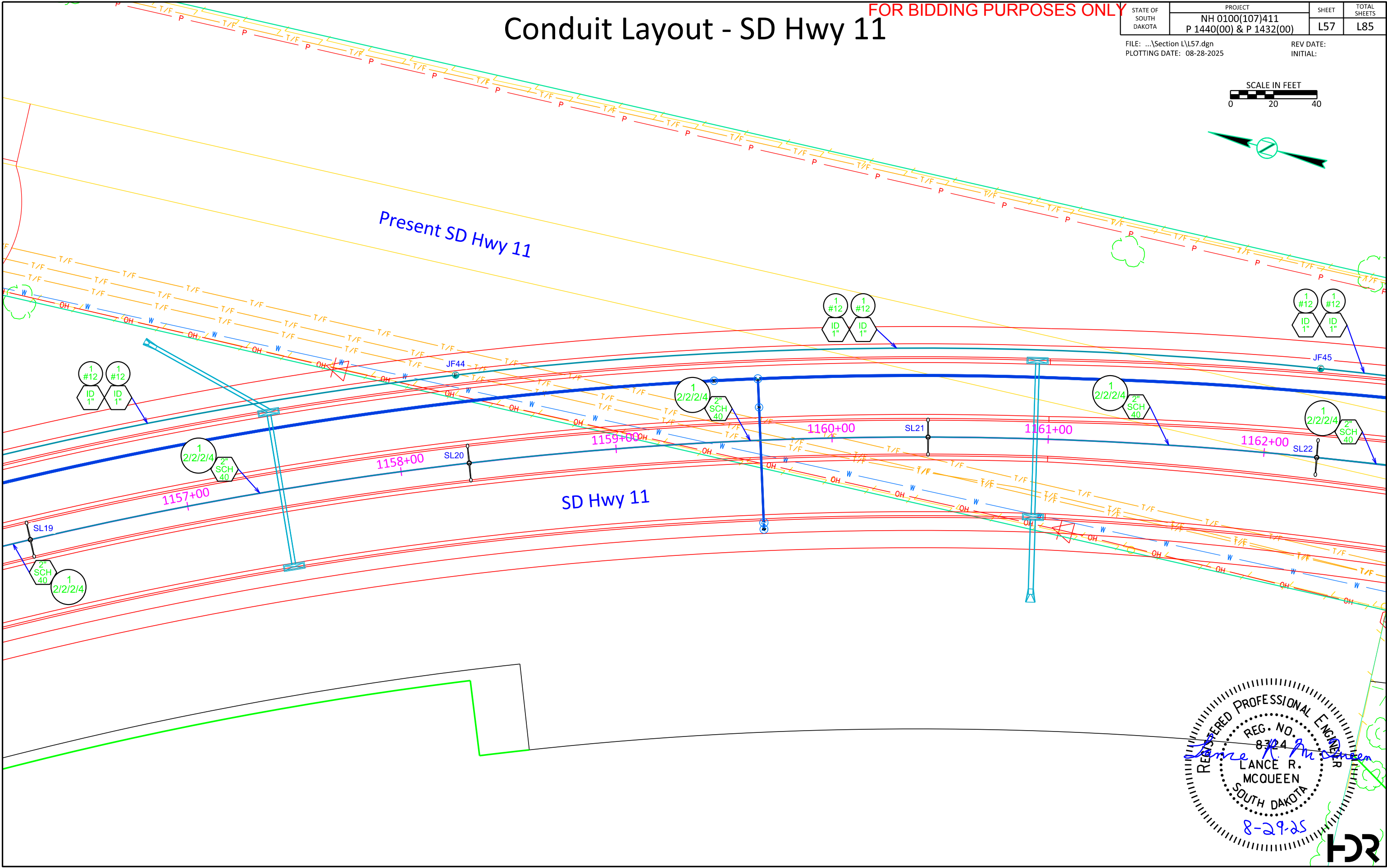
REV DATE:
INITIAL:

SCALE IN FEET
0 20 40



Present SD Hwy 11

SD Hwy 11



Conduit Layout - SD Hwy 11

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L58	L85

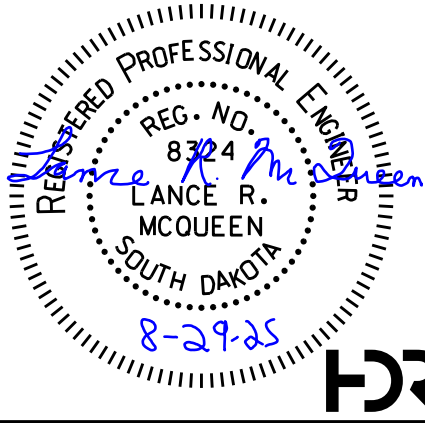
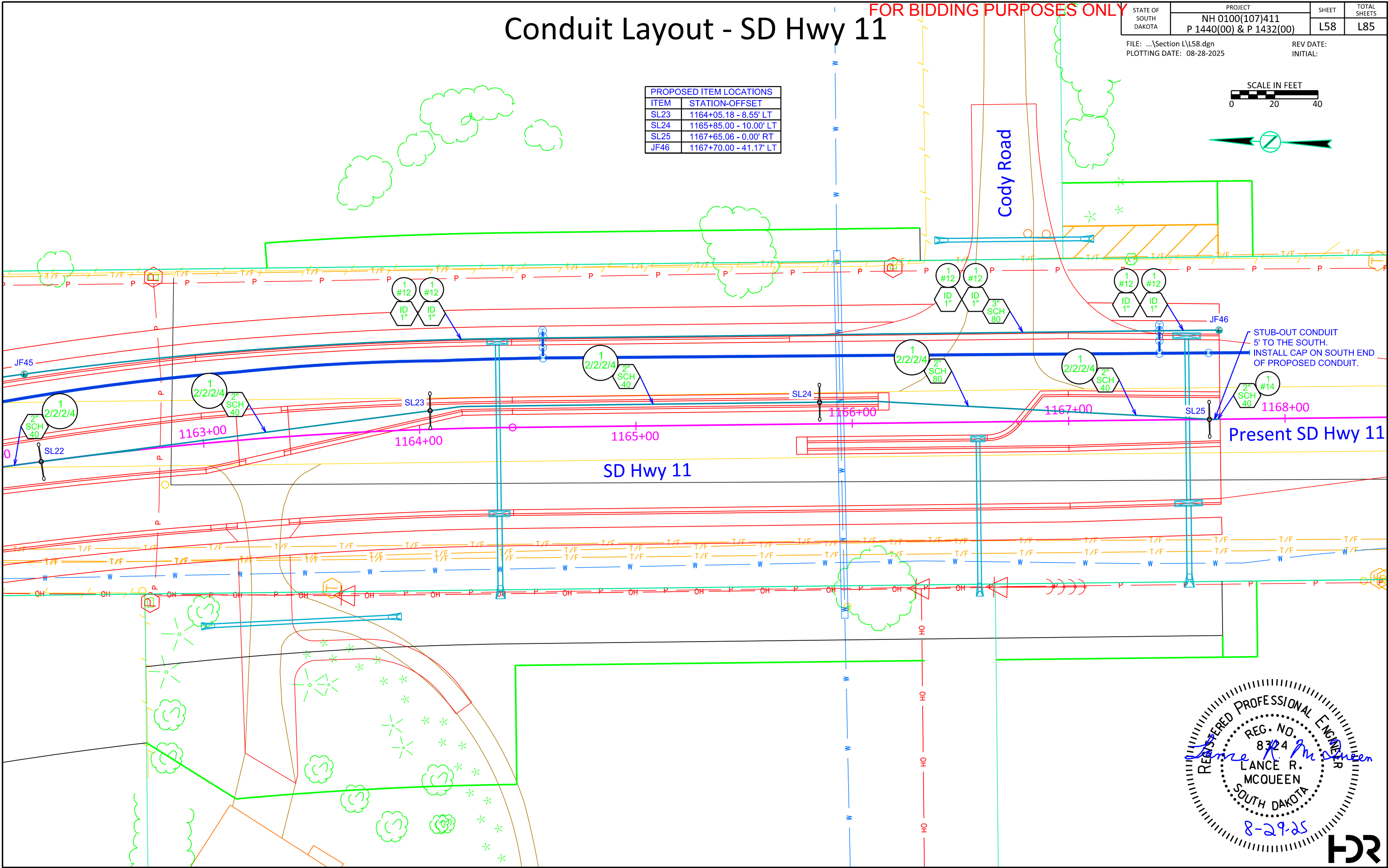
FILE: ...\\Section L\\L58.dgn
PLOT DATE: 08-28-2025

REV DATE:
INITIAL:

SCALE IN FEET
0 20 40



PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
SL23	1164+05.18 - 8.55' LT
SL24	1165+85.00 - 10.00' LT
SL25	1167+65.06 - 0.00' RT
JF46	1167+70.00 - 41.17' LT



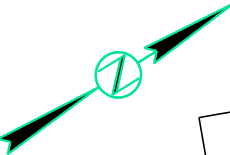
Conduit Layout - 69th Street / Co. Road 102 Connection

FOR BIDDING PURPOSES ONLY

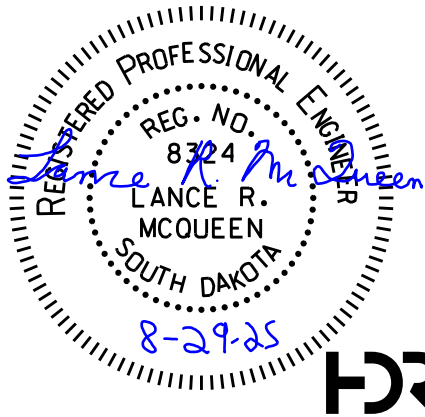
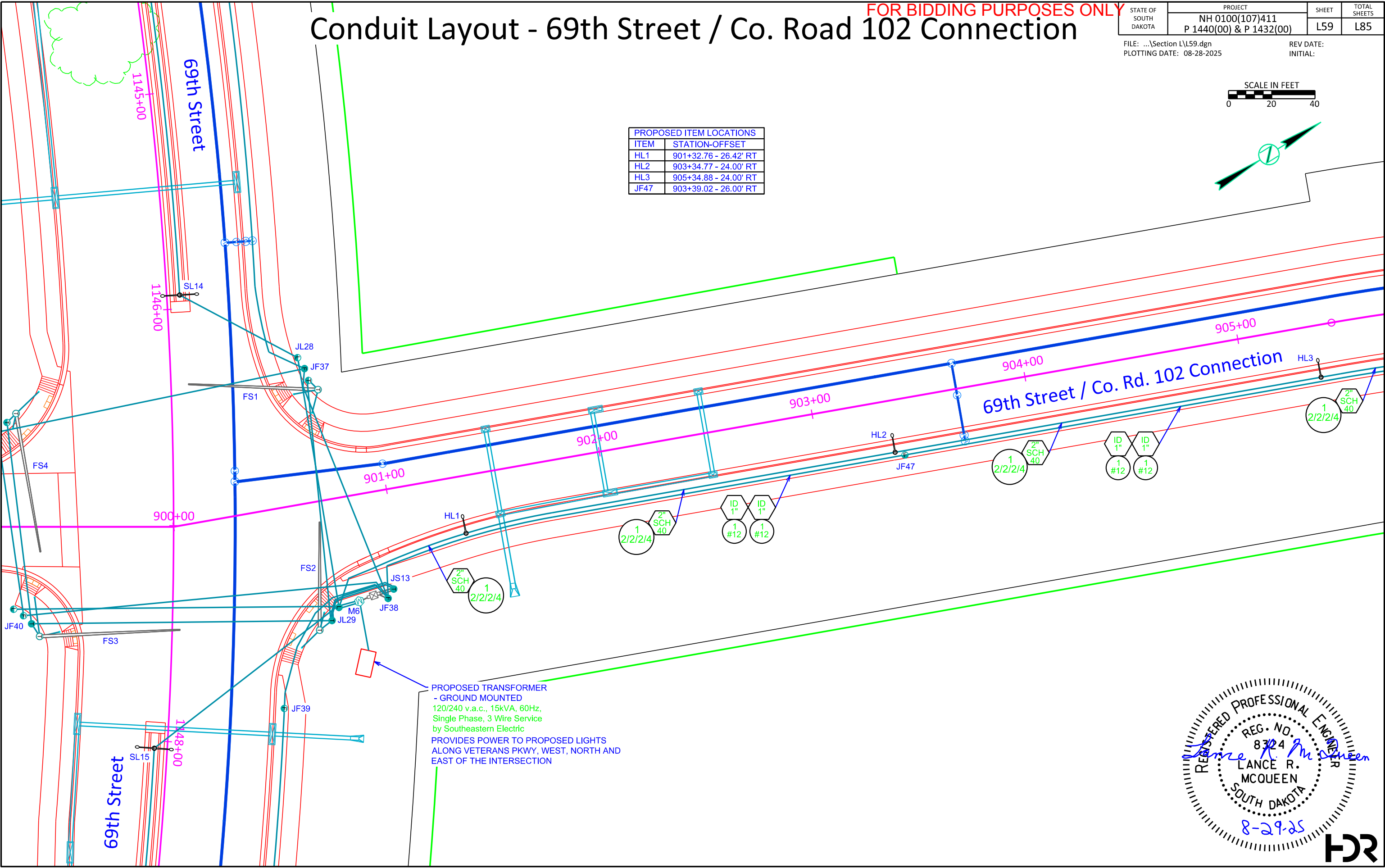
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L59	L85

FILE: ...\\Section L\\L59.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:



PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
HL1	901+32.76 - 26.42' RT
HL2	903+34.77 - 24.00' RT
HL3	905+34.88 - 24.00' RT
JF47	903+39.02 - 26.00' RT



Conduit Layout - 69th Street / Co. Road 102 Connection

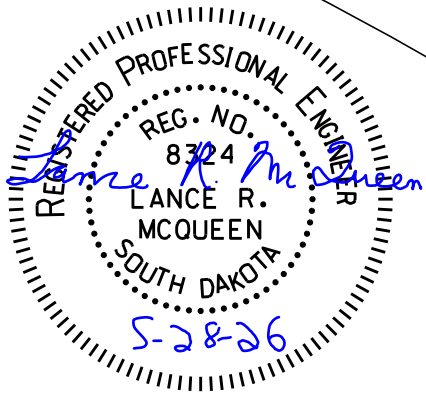
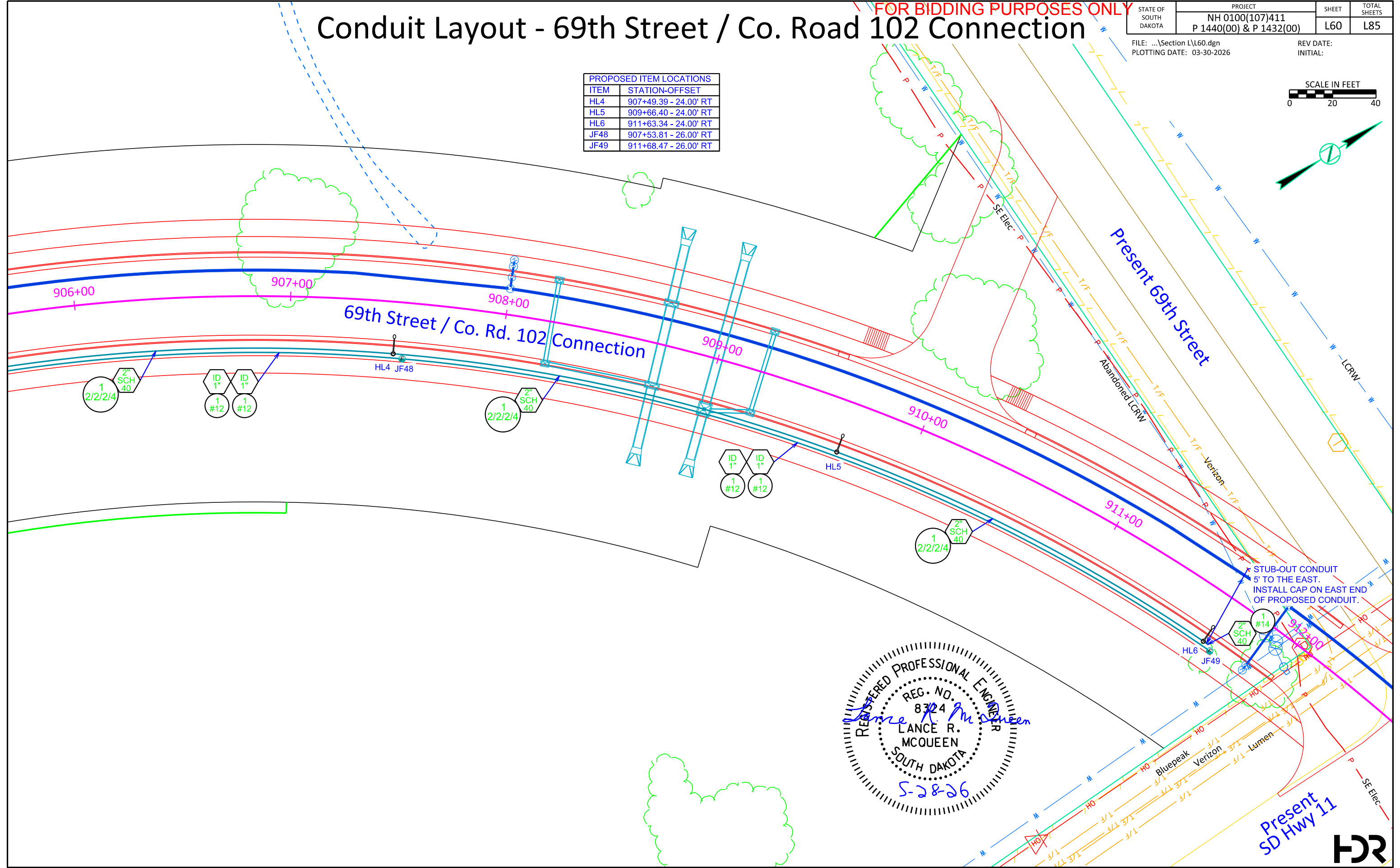
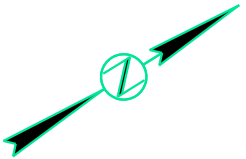
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L60	L85

FILE: ...\\Section L\\L60.dgn
PLOT DATE: 03-30-2026

REV DATE:
INITIAL:

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
HL4	907+49.39 - 24.00' RT
HL5	909+66.40 - 24.00' RT
HL6	911+63.34 - 24.00' RT
JF48	907+53.81 - 26.00' RT
JF49	911+68.47 - 26.00' RT



ESTIMATE OF QUANTITIES P 1432(00) - PCN 08DK - CIP#11119 - 57TH STREET			
KEY	ITEM	QUANTITY	UNIT
	BREAKAWAY BASE LUMINAIRE POLE, 40' MOUNTING HEIGHT W/ TWIN 8' ARM (FL1-FL5)	5	EACH
	ROADWAY LUMINAIRE, LED WITH PHOTOELECTRIC CELL (FL1-FL5)	10	EACH
	2' DIAMETER FOOTING (FL1-FL5)	40.0	FT
	24" DIAMETER ELECTRICAL JUNCTION BOX (JF50, JF51)	2	EACH
	2" RIGID CONDUIT, SCHEDULE 40	725	FT
	1" INNERDUCT, SDR 13.5	1140	FT
	2/2/2/4 ALUMINUM WIRE	925	FT
	1/C #12 AWG COPPER WIRE	955	FT
	12/2 UF-B COPPER POLE AND BRACKET CABLE	550	FT
	INSTALL FIBER OPTIC CABLE	1100	FT
	CONDUIT BORING	100*	FT
* INCIDENTAL TO THE CONDUIT BID ITEMS.			

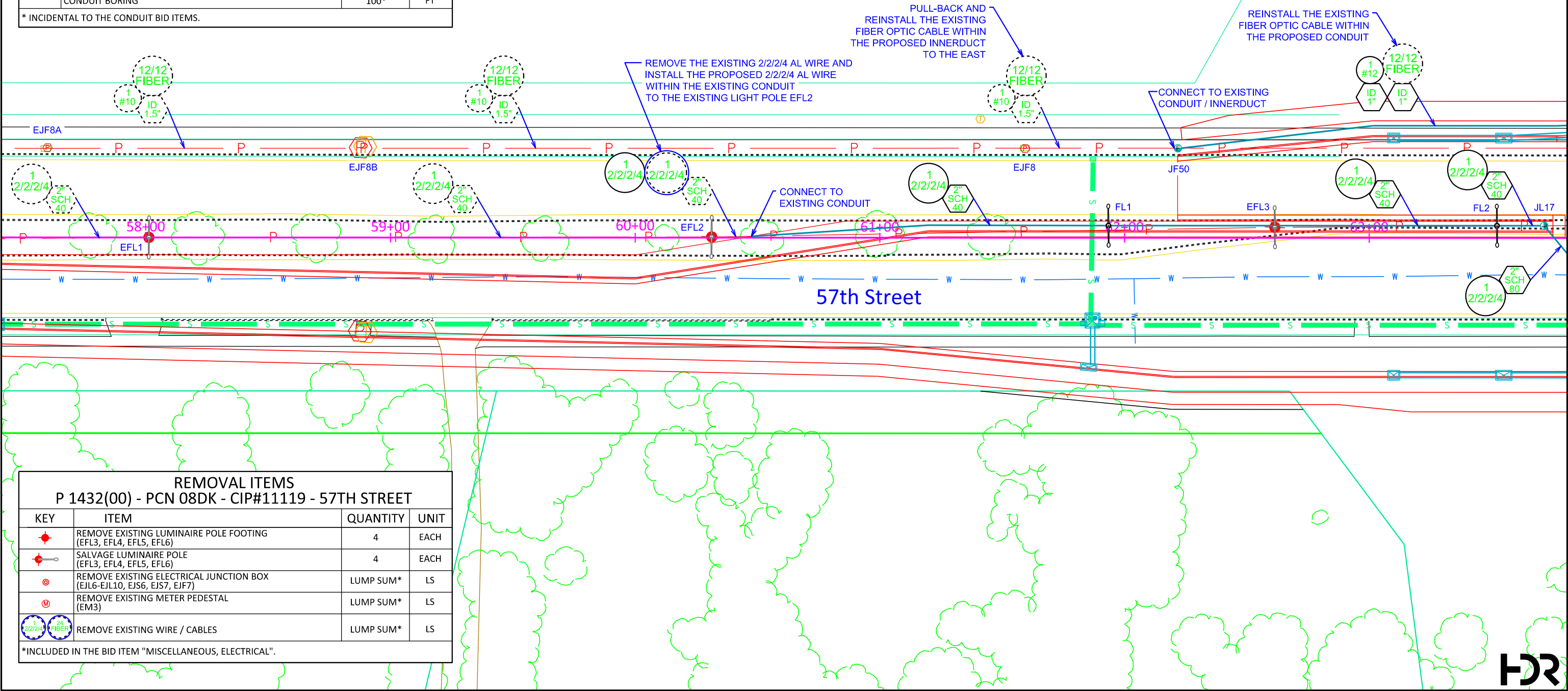
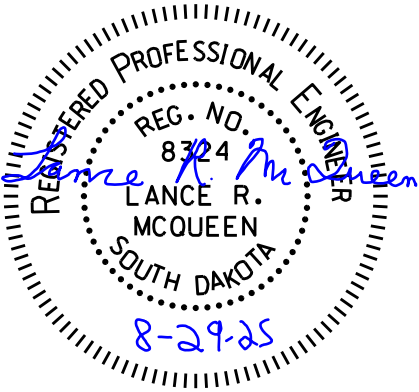
Conduit Layout - 57th Street

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L61	L85
FILE: ...\\Section L\\L61.dgn PLOTING DATE: 08-29-2025		REV DATE: INITIAL:	

PROPOSED ITEM LOCATIONS	
ITEM	STATION-OFFSET
FL1	61+93.41 - 4.99' LT
FL2	63+52.20 - 4.99' LT
JF50	62+21.78 - 36.68' LT

REMOVAL ITEMS
EFL3



REMOVAL ITEMS P 1432(00) - PCN 08DK - CIP#11119 - 57TH STREET			
KEY	ITEM	QUANTITY	UNIT
	REMOVE EXISTING LUMINAIRE POLE FOOTING (EFL3, EFL4, EFL5, EFL6)	4	EACH
	SALVAGE LUMINAIRE POLE (EFL3, EFL4, EFL5, EFL6)	4	EACH
	REMOVE EXISTING ELECTRICAL JUNCTION BOX (EJL6-EJL10, EJS6, EJS7, EJF7)	LUMP SUM*	LS
	REMOVE EXISTING METER PEDESTAL (EM3)	LUMP SUM*	LS
	REMOVE EXISTING WIRE / CABLES	LUMP SUM*	LS
*INCLUDED IN THE BID ITEM "MISCELLANEOUS, ELECTRICAL".			

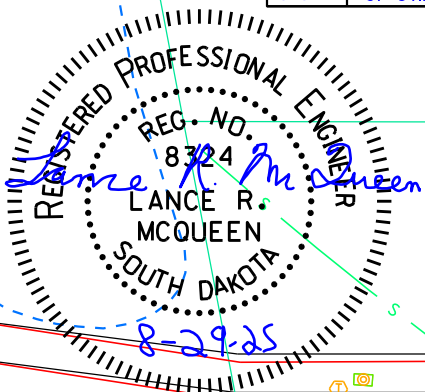


FOR BIDDING PURPOSES ONLY

SHEET	TOTAL SHEETS
L62	L85

REV DATE:
INITIAL:

REMOVAL ITEMS
EFL4
EFL5
EFL6
EM3
EJL6
EJL7
EJL8
EJL9
EJL10
EJF7
EJS6
EJS7



REMOVE THE EXISTING 2/2/2/4 AL WIRE AND -
INSTALL THE PROPOSED 2/2/2/4 AL WIRE
| WITHIN THE EXISTING CONDUIT
| TO THE EXISTING LIGHT POLE -
THAT IS 150' TO THE EAST

57th Street

REINSTALL THE EXISTING
FIBER CABLE WITHIN THE
PROPOSED INNERDUCT

PULL-BACK AND
REINSTALL THE EXISTING
FIBER OPTIC CABLE WITHIN
THE PROPOSED INNERDUCT
TO THE WEST

CONNECT TO EXISTING
CONDUIT / INNERDUCT

IF NEEDED, BORE THE
PROPOSED CONDUITS
BENEATH THE SHALLOW
EXISTING BOX CULVERT

CONNECT TO
EXISTING CONDUIT
/ INNERDUCT

EXISTING TRANSFORMER
- GROUND MOUNTED
120/240 v.a.c., 15kVA, 60Hz,
Single Phase, 3 Wire Service
by Southeastern Electric

PROVIDES POWER TO PROPOSED SIGNALS AT
INTERSECTION OF 57TH STREET AND
VETERANS PKWY, AND TO LIGHTS ALONG
VETERANS PKWY, NORTH AND SOUTH
OF 57TH STREET

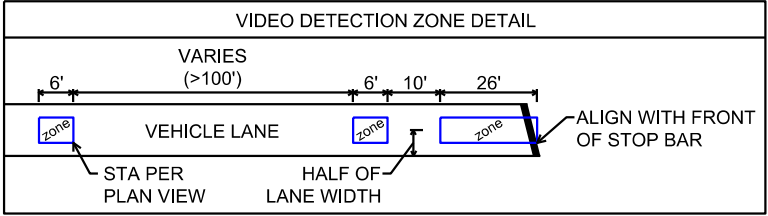
REMOVE THE EXISTING 24 FIBER
AND INSTALL THE PROPOSED 24 FIBER
WITHIN THE EXISTING INNERDUCT

- INSTALL PROPOSED 0.5" INNERDUCT WITHIN EXISTING 1.5" INNERDUCT

EXISTING CITY
SANITARY SEWER
LIFT STATION

HDR

ESTIMATE OF QUANTITIES NH 0100(107)411 - PCN 01VA			
KEY	ITEM	QUANTITY	UNIT
	VIDEO DETECTION SYSTEM (PAID PER INTERSECTION)	1	EACH
	VIDEO DETECTION CAMERA - SINGLE CAMERA OPTION (MOUNTED ON ARM OF LUMINAIRE POLE) (POSITIONED TO DETECT ZONES SHOWN)	2*	EACH
* ADDITIONAL CAMERAS MAY BE NEEDED FOR DETECTION SYSTEM SHOWN ON PLAN VIEW, WHICH WILL BE BE DETERMINED BY THE CONTRACTOR. * INCIDENTAL TO "VIDEO DETECTION SYSTEM".			



Video Detection Layout

69th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF
SOUTH
DAKOTA

PROJECT
NH 0100(107)411
P 1440(00) & P 1432(00)

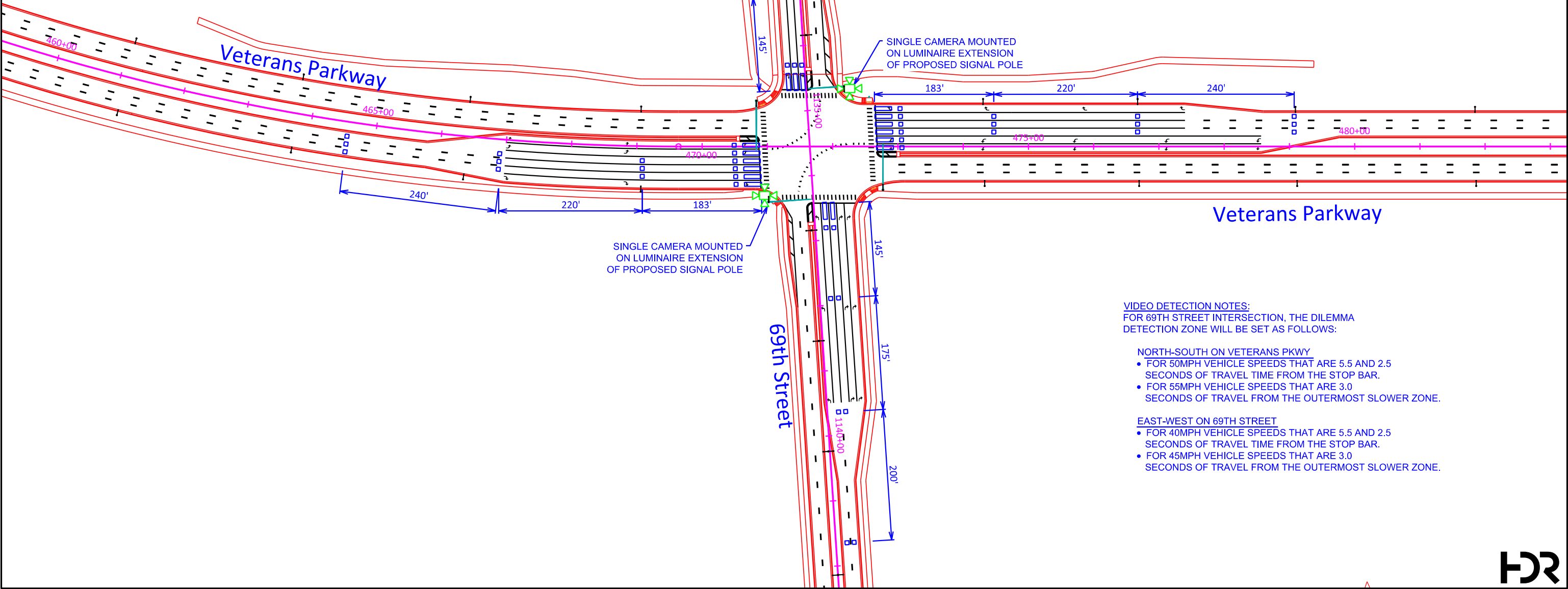
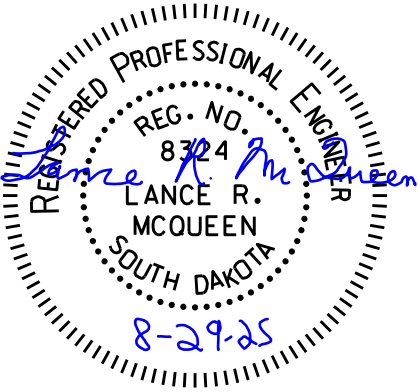
SHEET
L63

TOTAL
SHEETS
L85

FILE: ...\\Section L\\L63.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

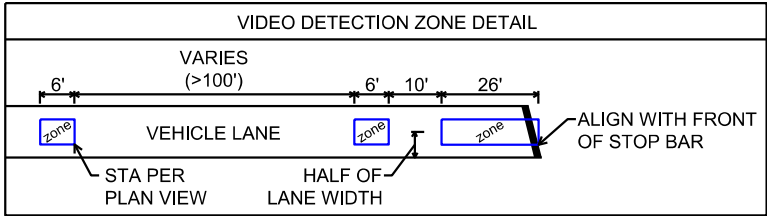
SCALE IN FEET
0 75 150



- VIDEO DETECTION NOTES:
FOR 69TH STREET INTERSECTION, THE DILEMMA
DETECTION ZONE WILL BE SET AS FOLLOWS:
- NORTH-SOUTH ON VETERANS PKWY
- FOR 50MPH VEHICLE SPEEDS THAT ARE 5.5 AND 2.5 SECONDS OF TRAVEL TIME FROM THE STOP BAR.
 - FOR 55MPH VEHICLE SPEEDS THAT ARE 3.0 SECONDS OF TRAVEL FROM THE OUTERMOST SLOWER ZONE.
- EAST-WEST ON 69TH STREET
- FOR 40MPH VEHICLE SPEEDS THAT ARE 5.5 AND 2.5 SECONDS OF TRAVEL TIME FROM THE STOP BAR.
 - FOR 45MPH VEHICLE SPEEDS THAT ARE 3.0 SECONDS OF TRAVEL FROM THE OUTERMOST SLOWER ZONE.



ESTIMATE OF QUANTITIES NH 0100(107)411 - PCN 01VA			
KEY	ITEM	QUANTITY	UNIT
	VIDEO DETECTION SYSTEM (PAID PER INTERSECTION)	1	EACH
	VIDEO DETECTION CAMERA - SINGLE CAMERA OPTION (MOUNTED ON ARM OF LUMINAIRE POLE) (POSITIONED TO DETECT ZONES SHOWN)	2*	EACH
* ADDITIONAL CAMERAS MAY BE NEEDED FOR DETECTION SYSTEM SHOWN ON PLAN VIEW, WHICH WILL BE BE DETERMINED BY THE CONTRACTOR. * INCIDENTAL TO "VIDEO DETECTION SYSTEM".			

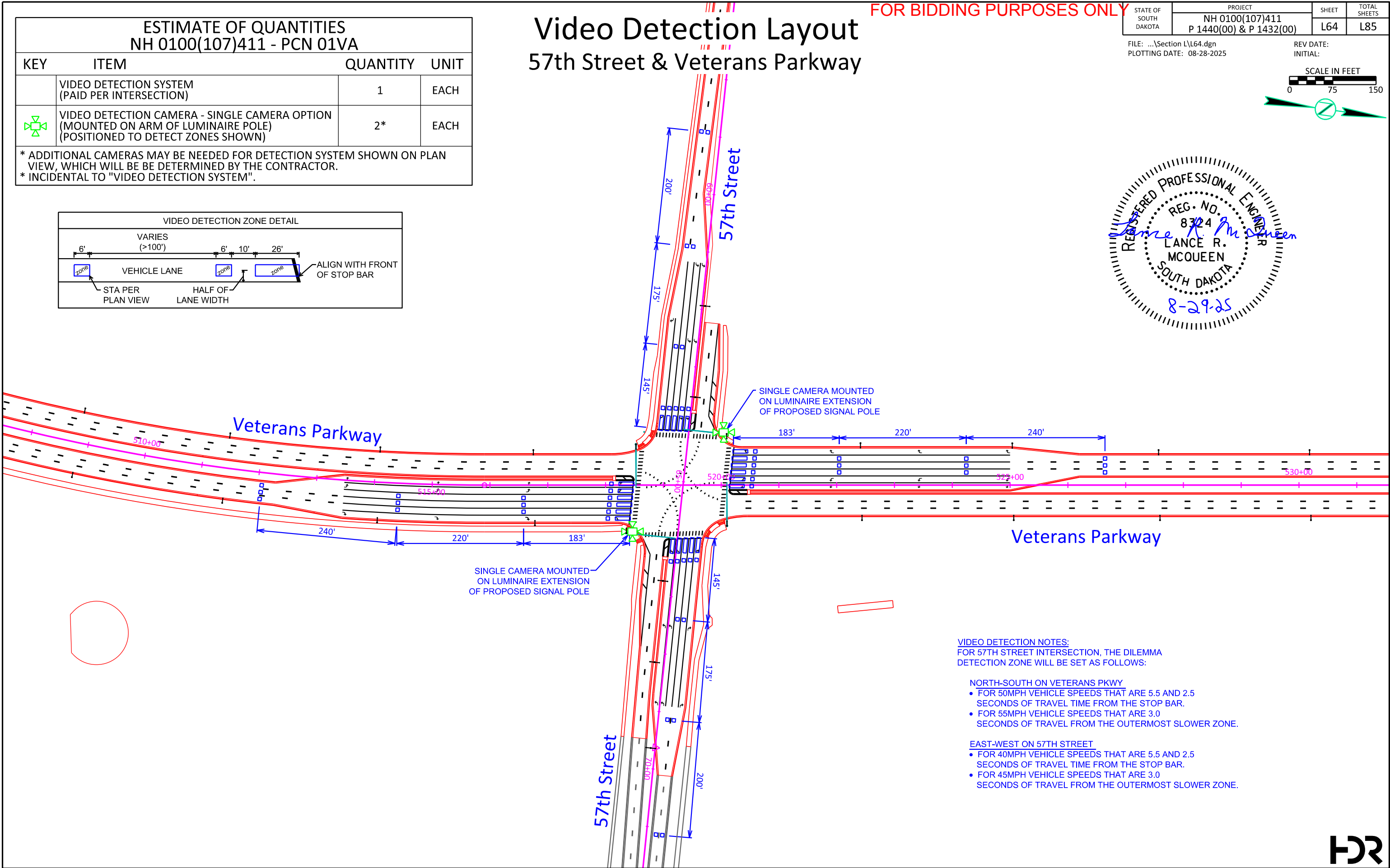
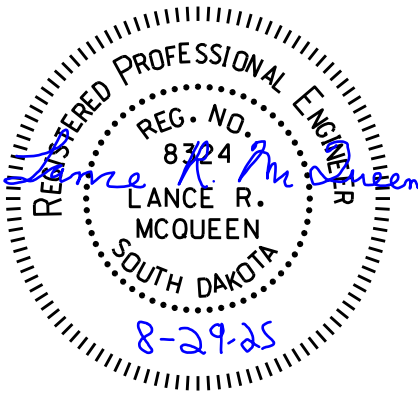
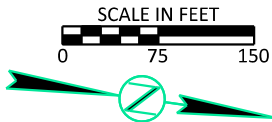


Video Detection Layout

57th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT NH 0100(107)411 P 1440(00) & P 1432(00)	SHEET L64	TOTAL SHEETS L85
FILE: ...\\Section L\\L64.dgn PLOTING DATE: 08-28-2025		REV DATE: INITIAL:	



VIDEO DETECTION NOTES:
FOR 57TH STREET INTERSECTION, THE DILEMMA
DETECTION ZONE WILL BE SET AS FOLLOWS:

- NORTH-SOUTH ON VETERANS PKWY
- FOR 50MPH VEHICLE SPEEDS THAT ARE 5.5 AND 2.5 SECONDS OF TRAVEL TIME FROM THE STOP BAR.
 - FOR 55MPH VEHICLE SPEEDS THAT ARE 3.0 SECONDS OF TRAVEL FROM THE OUTERMOST SLOWER ZONE.
- EAST-WEST ON 57TH STREET
- FOR 40MPH VEHICLE SPEEDS THAT ARE 5.5 AND 2.5 SECONDS OF TRAVEL TIME FROM THE STOP BAR.
 - FOR 45MPH VEHICLE SPEEDS THAT ARE 3.0 SECONDS OF TRAVEL FROM THE OUTERMOST SLOWER ZONE.

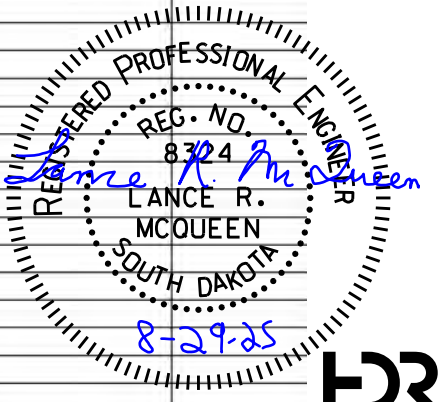
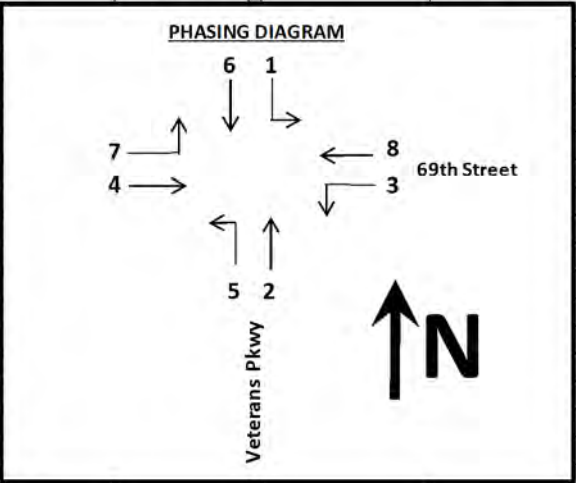


SIGNAL WIRING DIAGRAM
69th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L65	L85
FILE: ...\\Section L\\L65.dgn		REV DATE:	
PLOT DATE: 08-28-2025		INITIAL:	

CORNER				CORNER				CORNER				CORNER			
S4 - Northeast				S5 - Southeast				S1 - Southwest				S2, S3 - Northwest			
Cable # or color		Controller		Cable # or color		Controller		Cable # or color		Controller		Cable # or color		Controller	
Phase # 2		Terminal		Phase # 4		Terminal		Phase # 6		Terminal		Phase # 8		Terminal	
Head No.	Wire Color	Head Color	Designation	Head No.	Wire Color	Head Color	Designation	Head No.	Wire Color	Head Color	Designation	Head No.	Wire Color	Head Color	Designation
18,19,20,21	Red	Red	2 R	24,25,26,27	Red	Red	4 R	3,4,5,6,7	Red	Red	6 R	10,11,12,13,14	Red	Red	8 R
	Orange	Amber	2 Y		Orange	Amber	4 Y		Orange	Amber	6 Y		Orange	Amber	8 Y
	Green	Green	2 G		Green	Green	4 G		Green	Green	6 G		Green	Green	8 G
	White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB
Phase # 2 Ped				Phase # 4 Ped				Phase # 6 Ped				Phase # 8 Ped			
Head No.				Head No.				Head No.				Head No.			
33	Black	Don't Walk	9 R	35	Black	Don't Walk	10 R	29	Black	Don't Walk	11 R	31	Black	Don't Walk	12 R
	Blue	Walk	9 G		Blue	Walk	10 G		Blue	Walk	11 G		Blue	Walk	12 G
	White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB
Phase # 8 Ped				Phase # 2 Ped				Phase # 4 Ped				Phase # 6 Ped			
Head No.				Head No.				Head No.				Head No.			
34	Black/White	Don't Walk	12 R	36	Black/White	Don't Walk	9 R	30	Black/White	Don't Walk	10 R	32	Black/White	Don't Walk	11 R
	Blue/Black	Walk	12 G		Blue/Black	Walk	9 G		Blue/Black	Walk	10 G		Blue/Black	Walk	11 G
	White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB
Phase # 5				Phase # 7				Phase # 1				Phase # 3			
Head No.				Head No.				Head No.				Head No.			
16,17	Red/Black	<< Red <<	5 R	23	Red/Black	<< Red <<	7 R	1,2	Red/Black	<< Red <<	1 R	9	Red/Black	<< Red <<	3 R
	Orange/Black	<< Amber <<	5 Y		Orange/Black	<< Amber <<	7 Y		Orange/Black	<< Amber <<	1 Y		Orange/Black	<< Amber <<	3 Y
	Green/Black	<< Green <<	5 G		Black/Red	<FL Amber <-	12 Y		Green/Black	<< Green <<	1 G		Black/Red	<FL Amber <-	10 Y
	White	Ground/neutral	CB		Green/Black	<< Green <<	7 G		White	Ground/neutral	CB		Green/Black	<< Green <<	3 G
					White	Ground/neutral	CB						White	Ground/neutral	CB
Phase # 7				Phase # 1				Phase # 3				Phase # 5			
Head No.				Head No.				Head No.				Head No.			
22	Red/Green	<< Red <<	7 R	28	Red/Green	<< Red <<	1 R	8	Red/Green	<< Red <<	3 R	15	Red/Green	<< Red <<	5 R
	Orange/Red	<< Amber <<	7 Y		Orange/Red	<< Amber <<	1 Y		Orange/Red	<< Amber <<	3 Y		Orange/Red	<< Amber <<	5 Y
	Blue/White	<FL Amber <-	12 Y		Green/White	<< Green <<	1 G		Blue/White	<FL Amber <-	10 Y		Green/White	<< Green <<	5 G
	Green/White	<< Green <<	7 G			Ground/neutral	CB		Green/White	<< Green <<	3 G		White	Ground/neutral	CB
	White	Ground/neutral	CB						White	Ground/neutral	CB				
PED. P.B.'s				PED. P.B.'s				PED. P.B.'s				PED. P.B.'s			
	Blue/Red	Phase 2	L 11		Blue/Red	Phase 2	L 11		Blue/Red	Phase 2	L 11		Blue/Red	Phase 2	L 11
	Red/white	Phase 4	L 9		Red/white	Phase 4	L 9		Red/white	Phase 4	L 9		Red/white	Phase 4	L 9
	Blue/Red	Phase 6	Q 11		Blue/Red	Phase 6	Q 11		Blue/Red	Phase 6	Q 11		Blue/Red	Phase 6	Q 11
	Red/white	Phase 8	Q 9		Red/white	Phase 8	Q 9		Red/white	Phase 8	Q 9		Red/white	Phase 8	Q 9
	White/Red	P.B. common	R 9 ~12		White/Red	P.B. common	R 9 ~12		White/Red	P.B. common	R 9 ~12		White/Red	P.B. common	R 9 ~12

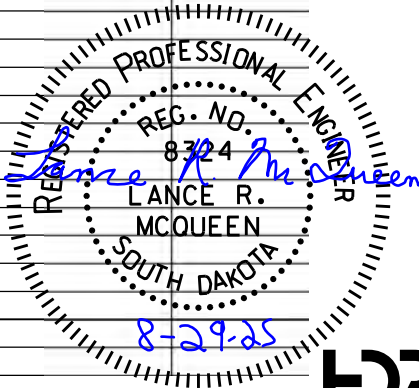
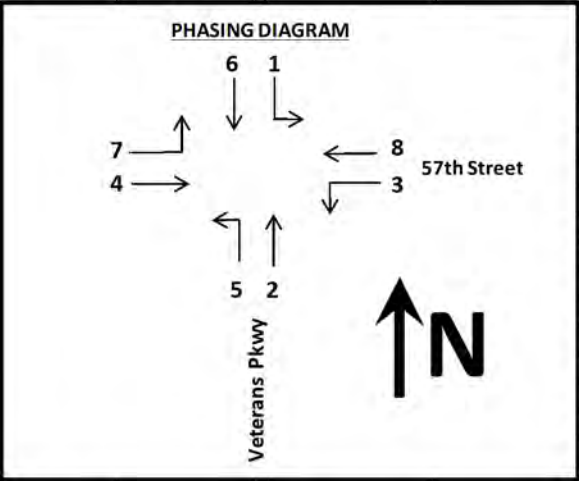


SIGNAL WIRING DIAGRAM
57th Street & Veterans Parkway

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)		
FILE: ...\\Section L\\L66.dgn PLOTING DATE: 08-28-2025		L66	L85
REV DATE: INITIAL:			

CORNER				CORNER				CORNER				CORNER			
S9 - Northeast				S5 - Southeast				S6,S7 - Southwest				S8 - Northwest			
		Cable # or color	Controller			Cable # or color	Controller			Cable # or color	Controller			Cable # or color	Controller
Phase # 2 Head No.	Wire Color	Head Color	Terminal Designation	Phase # 4 Head No.	Wire Color	Head Color	Terminal Designation	Phase # 6 Head No.	Wire Color	Head Color	Terminal Designation	Phase # 8 Head No.	Wire Color	Head Color	Terminal Designation
19,20,21,22,23	Red	Red	2 R	27,28,29,30	Red	Red	4 R	3,4,5,6,7,8	Red	Red	6 R	12,13,14,15	Red	Red	8 R
	Orange	Amber	2 Y		Orange	Amber	4 Y		Orange	Amber	6 Y		Orange	Amber	8 Y
	Green	Green	2 G		Green	Green	4 G		Green	Green	6 G		Green	Green	8 G
	White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB
Phase # 2 Ped Head No.				Phase # 4 Ped Head No.				Phase # 6 Ped Head No.				Phase # 8 Ped Head No.			
36	Black	Don't Walk	9 R	38	Black	Don't Walk	10 R	32	Black	Don't Walk	11 R	34	Black	Don't Walk	12 R
	Blue	Walk	9 G		Blue	Walk	10 G		Blue	Walk	11 G		Blue	Walk	12 G
	White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB
Phase # 8 Ped Head No.				Phase # 2 Ped Head No.				Phase # 4 Ped Head No.				Phase # 6 Ped Head No.			
37	Black/White	Don't Walk	12 R	39	Black/White	Don't Walk	9 R	33	Black/White	Don't Walk	10 R	35	Black/White	Don't Walk	11 R
	Blue/Black	Walk	12 G		Blue/Black	Walk	9 G		Blue/Black	Walk	10 G		Blue/Black	Walk	11 G
	White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB		White/Black	Ground/neutral	CB
Phase # 5 Head No.				Phase # 7 Head No.				Phase # 1 Head No.				Phase # 3 Head No.			
17,18	Red/Black	<< Red <<	5 R	25,26	Red/Black	<< Red <<	7 R	1,2	Red/Black	<< Red <<	1 R	10,11	Red/Black	<< Red <<	3 R
	Orange/Black	<< Amber <<	5 Y		Orange/Black	<< Amber <<	7 Y		Orange/Black	<< Amber <<	1 Y		Orange/Black	<< Amber <<	3 Y
	Green/Black	<< Green <<	5 G		Green/Black	<< Green <<	7 G		Green/Black	<< Green <<	1 G		Green/Black	<< Green <<	3 G
	White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB
Phase # 7 Head No.				Phase # 1 Head No.				Phase # 3 Head No.				Phase # 5 Head No.			
24	Red/Green	<< Red <<	7 R	31	Red/Green	<< Red <<	1 R	9	Red/Green	<< Red <<	3 R	16	Red/Green	<< Red <<	5 R
	Orange/Red	<< Amber <<	7 Y		Orange/Red	<< Amber <<	1 Y		Orange/Red	<< Amber <<	3 Y		Orange/Red	<< Amber <<	5 Y
	Green/White	<< Green <<	7 G		Green/White	<< Green <<	1 G		Green/White	<< Green <<	3 G		Green/White	<< Green <<	5 G
	White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB		White	Ground/neutral	CB
PED. P.B.'s				PED. P.B.'s				PED. P.B.'s				PED. P.B.'s			
	Blue/Red	Phase 2	L 11		Blue/Red	Phase 2	L 11		Blue/Red	Phase 2	L 11		Blue/Red	Phase 2	L 11
	Red/white	Phase 4	L 9		Red/white	Phase 4	L 9		Red/white	Phase 4	L 9		Red/white	Phase 4	L 9
	Blue/Red	Phase 6	Q 11		Blue/Red	Phase 6	Q 11		Blue/Red	Phase 6	Q 11		Blue/Red	Phase 6	Q 11
	Red/white	Phase 8	Q 9		Red/white	Phase 8	Q 9		Red/white	Phase 8	Q 9		Red/white	Phase 8	Q 9
	White/Red	P.B. common	R 9 ~12		White/Red	P.B. common	R 9 ~12		White/Red	P.B. common	R 9 ~12		White/Red	P.B. common	R 9 ~12



FOR BIDDING PURPOSES ONLY

FILE: ...\\Section L\\L67.dgn
PLOTting DATE: 08-28-2025

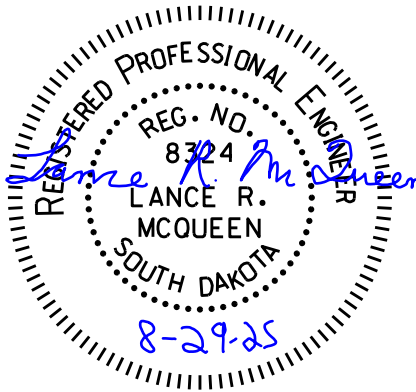
REV DATE:
INITIAL:



ALL CIRCUITS WILL BE FUSED / BONDED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS FOR ROADWAY LIGHTING - SECTION 635B.

LEGEND:

-  LUMINAIRE: 199 WATT LED LAMP
-  LUMINAIRE: 105 WATT LED LAMP
-  TERMINATE ON WIRE NUTS
-  FUSES PER CITY SPECIFICATIONS



EM1 LOAD SUMMARY					
Circuit #	No. of 199W Luminaires	No. of 105W Luminaires	Signals	ID	Load (Amps)
1	8			L1-L8	6.63
2	13			13 existing lights	11.61
3		8		8 existing lights	3.50
4		8		8 existing lights	3.50
5			1	Signal Cabinet	3.00
Total:					28.24
Miniumum Size Required for Main Circuit Breaker*:					50 Amps
Total KVA:					6.78

*Based Upon an 80% Rated Circuit Breaker

*Based Upon an 80% Rated Circuit Breaker

TRANSFORMER @ SYCAMORE AVENUE

120/240 V.A.C., 15kVA, 60 Hz
SINGLE PHASE, 3 WIRE SERVICE
BY SOUTHEASTERN ELECTRIC

LIGHTING WIRING DIAGRAM

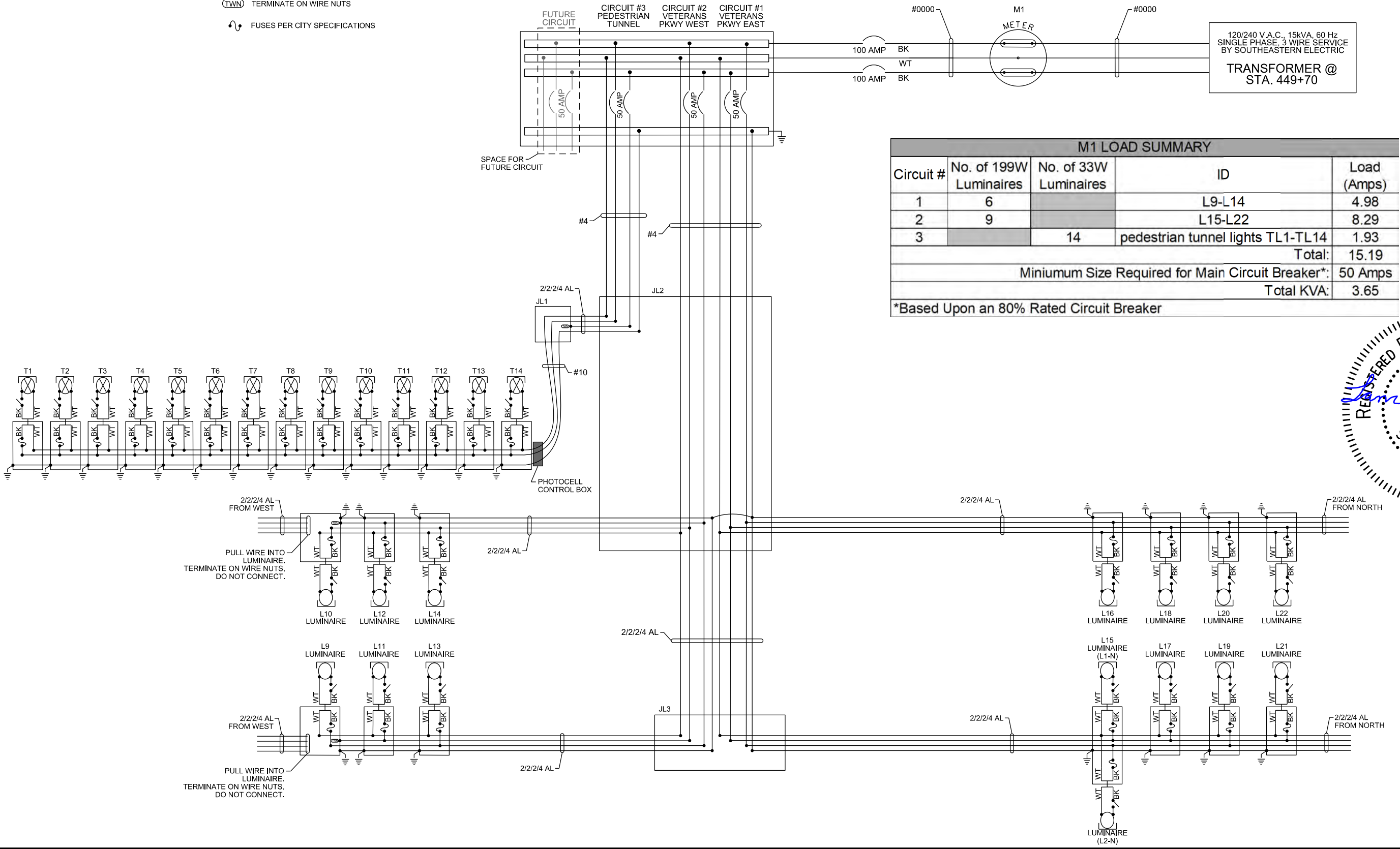
Veterans Parkway @ Sta. 449+70

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-EM-TA 0100(107)411 P 1440(00) & P 1432(00)	L68	L85

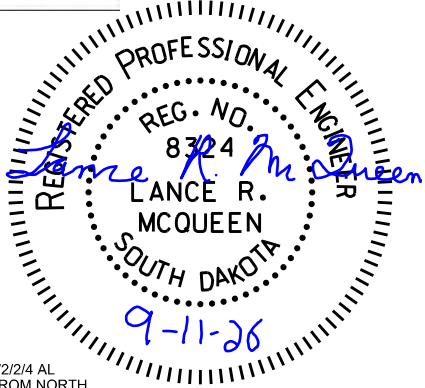
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PLOTING DATE: 09-11-2026
REV DATE: 09/11/2026
INITIAL: LRM

- NOTE:
ALL CIRCUITS WILL BE FUSED / BONDED IN
ACCORDANCE WITH THE CITY'S STANDARD
SPECIFICATIONS FOR ROADWAY LIGHTING -
SECTION 635B.
- LEGEND:
○ LUMINAIRE: 199 WATT LED LAMP
⊗ LUMINAIRE: 33 WATT LED LAMP
(TWN) TERMINATE ON WIRE NUTS
⚡ FUSES PER CITY SPECIFICATIONS



M1 LOAD SUMMARY				
Circuit #	No. of 199W Luminaires	No. of 33W Luminaires	ID	Load (Amps)
1	6		L9-L14	4.98
2	9		L15-L22	8.29
3		14	pedestrian tunnel lights TL1-TL14	1.93
Total:				15.19
Minimum Size Required for Main Circuit Breaker*:				50 Amps
Total KVA:				3.65

*Based Upon an 80% Rated Circuit Breaker



FOR BIDDING PURPOSES ONLY

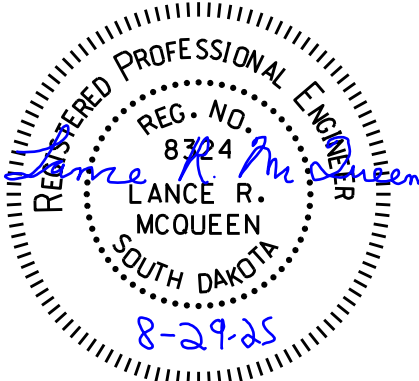
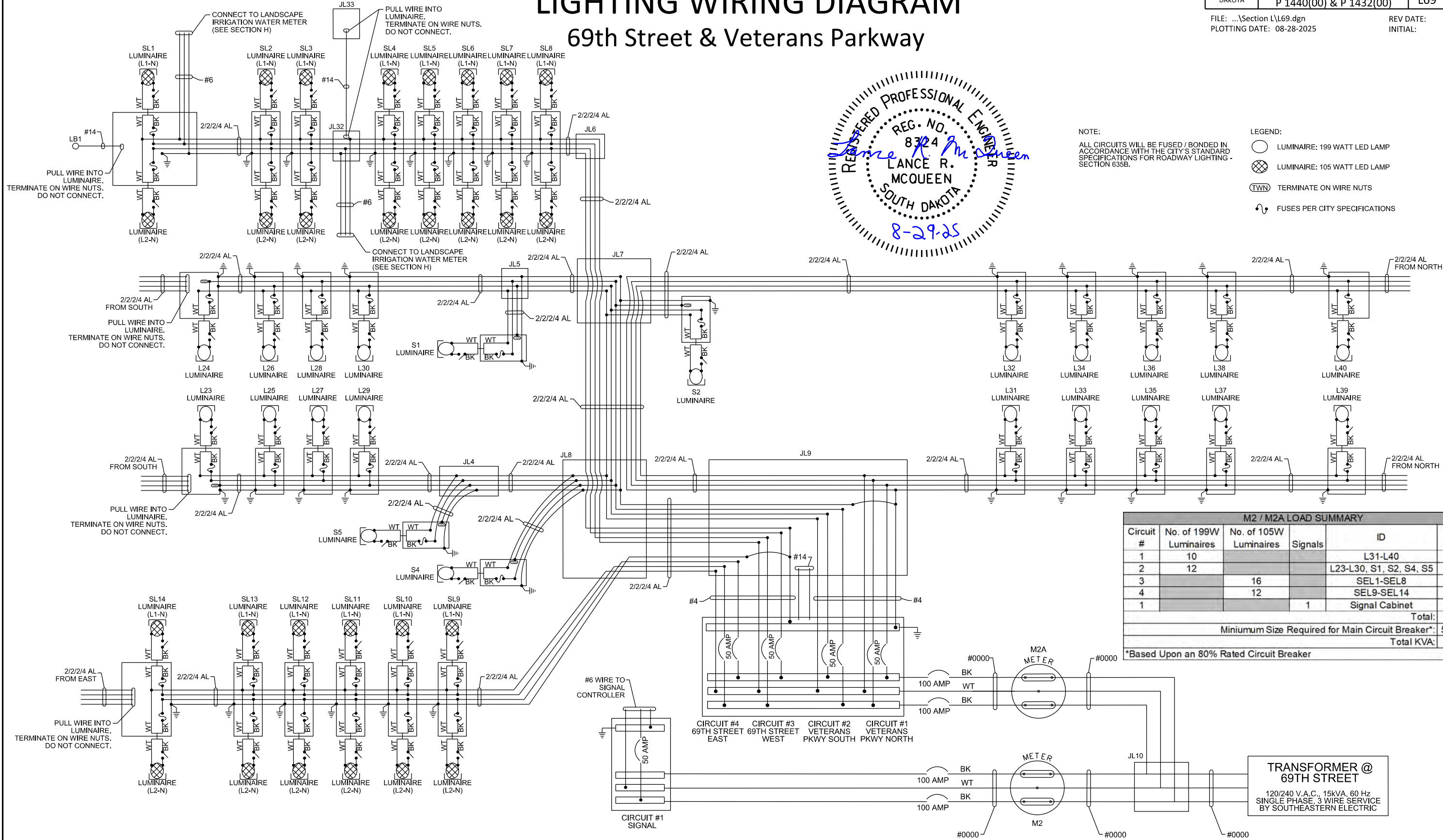
LIGHTING WIRING DIAGRAM

69th Street & Veterans Parkway

STATE OF SOUTH DAKOTA	PROJECT NH 0100(107)411 P 1440(00) & P 1432(00)	SHEET L69	TOTAL SHEETS L85
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FILE: ...\\Section L\\L69.dgn
PLOT DATE: 08-28-2025

REV DATE:
INITIAL:



- NOTE:
ALL CIRCUITS WILL BE FUSED / BONDED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS FOR ROADWAY LIGHTING - SECTION 635B.
- LEGEND:
○ LUMINAIRE: 199 WATT LED LAMP
⊗ LUMINAIRE: 105 WATT LED LAMP
TWN TERMINATE ON WIRE NUTS
⚡ FUSES PER CITY SPECIFICATIONS

M2 / M2A LOAD SUMMARY					
Circuit #	No. of 199W Luminaires	No. of 105W Luminaires	Signals	ID	Load (Amps)
1	10			L31-L40	8.29
2	12			L23-L30, S1, S2, S4, S5	9.95
3		16		SEL1-SEL8	7.00
4		12		SEL9-SEL14	5.25
1			1	Signal Cabinet	3.00
Total:					33.49
Minimum Size Required for Main Circuit Breaker*:					50 Amps
Total KVA:					8.04

*Based Upon an 80% Rated Circuit Breaker



LIGHTING WIRING DIAGRAM
Veterans Parkway @ Sta. 498+75

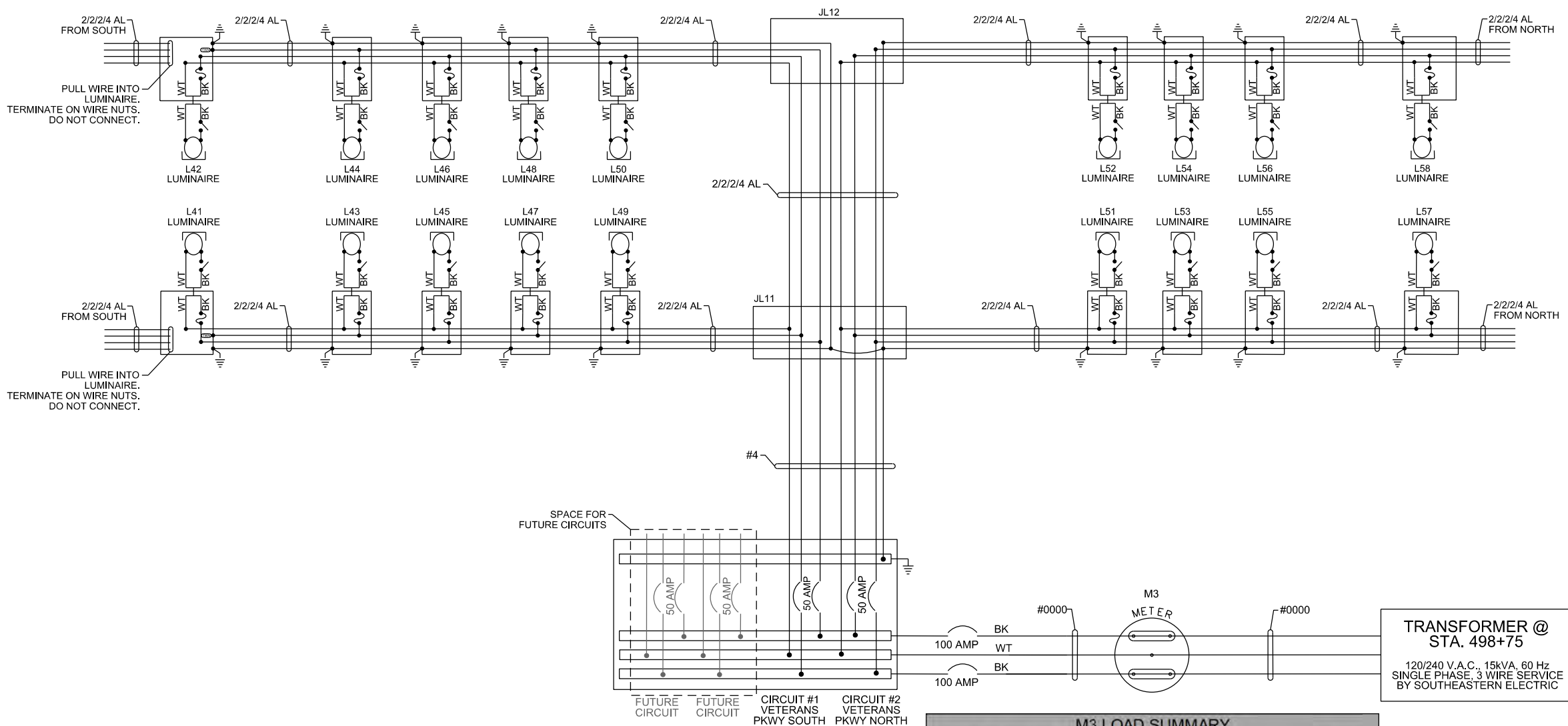
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L70	L85

FILE: ...\\Section L\\L70.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

- NOTE:
ALL CIRCUITS WILL BE FUSED / BONDED IN
ACCORDANCE WITH THE CITY'S STANDARD
SPECIFICATIONS FOR ROADWAY LIGHTING -
SECTION 635B.
- LEGEND:
○ LUMINAIRE: 199 WATT LED LAMP
(TWN) TERMINATE ON WIRE NUTS
⚡ FUSES PER CITY SPECIFICATIONS



TRANSFORMER @
STA. 498+75
120/240 V.A.C., 15kVA, 60 Hz
SINGLE PHASE, 3 WIRE SERVICE
BY SOUTHEASTERN ELECTRIC

M3 LOAD SUMMARY			
Circuit #	No. of 199W Luminaires	ID	Load (Amps)
1	10	L41-L50	8.29
2	8	L51-L58	6.63
Total:			14.93
Minimum Size Required for Main Circuit Breaker*:			50 Amps
Total KVA:			3.58
*Based Upon an 80% Rated Circuit Breaker			



FOR BIDDING PURPOSES ONLY

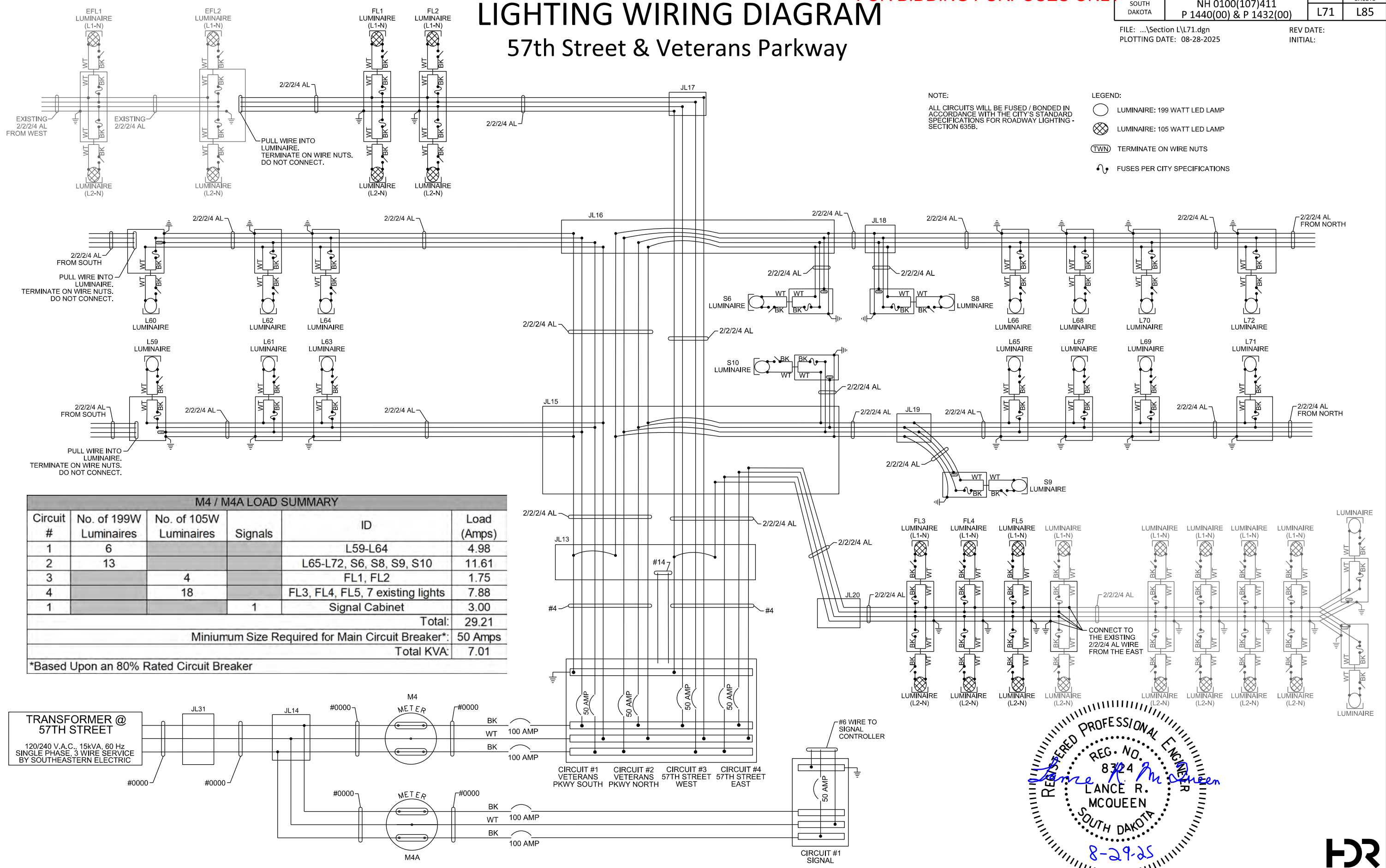
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L71	L85

FILE: ...\\Section L\\L71.dgn
PLOT DATE: 08-28-2025

REV DATE:
INITIAL:

LIGHTING WIRING DIAGRAM

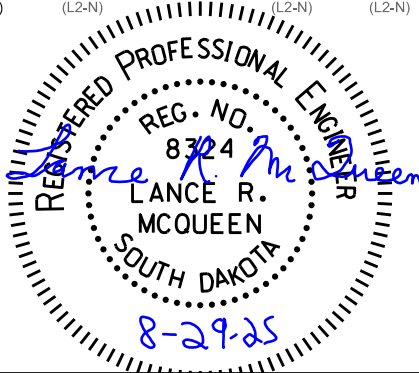
57th Street & Veterans Parkway



NOTE:
ALL CIRCUITS WILL BE FUSED / BONDED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS FOR ROADWAY LIGHTING - SECTION 635B.

- LEGEND:
- LUMINAIRE: 199 WATT LED LAMP
 - LUMINAIRE: 105 WATT LED LAMP
 - TERMINATE ON WIRE NUTS
 - FUSES PER CITY SPECIFICATIONS

M4 / M4A LOAD SUMMARY					
Circuit #	No. of 199W Luminaires	No. of 105W Luminaires	Signals	ID	Load (Amps)
1	6			L59-L64	4.98
2	13			L65-L72, S6, S8, S9, S10	11.61
3		4		FL1, FL2	1.75
4		18		FL3, FL4, FL5, 7 existing lights	7.88
1			1	Signal Cabinet	3.00
Total:					29.21
Minimum Size Required for Main Circuit Breaker*:					50 Amps
Total KVA:					7.01
*Based Upon an 80% Rated Circuit Breaker					

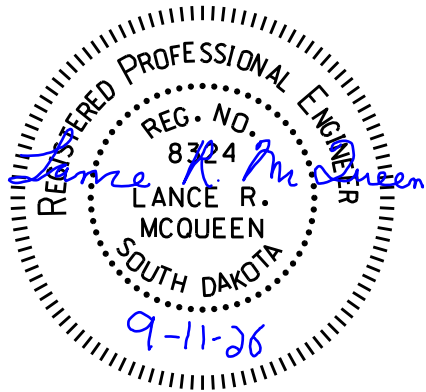


FOR BIDDING PURPOSES ONLY

ALL CIRCUITS WILL BE FUSED / BONDED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS FOR ROADWAY LIGHTING - SECTION 635B.

FUSES PER CITY SPECIFICATIONS

FILE: ...\\Section L\\wiring diagram 8
PLOTING DATE: 09-11-2026



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L73	L85

FILE: ...\\Section L\\L73.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

LIGHTING WIRING DIAGRAM

SD Hwy 11 & 69th Street / Co. Rd. 102 Connection

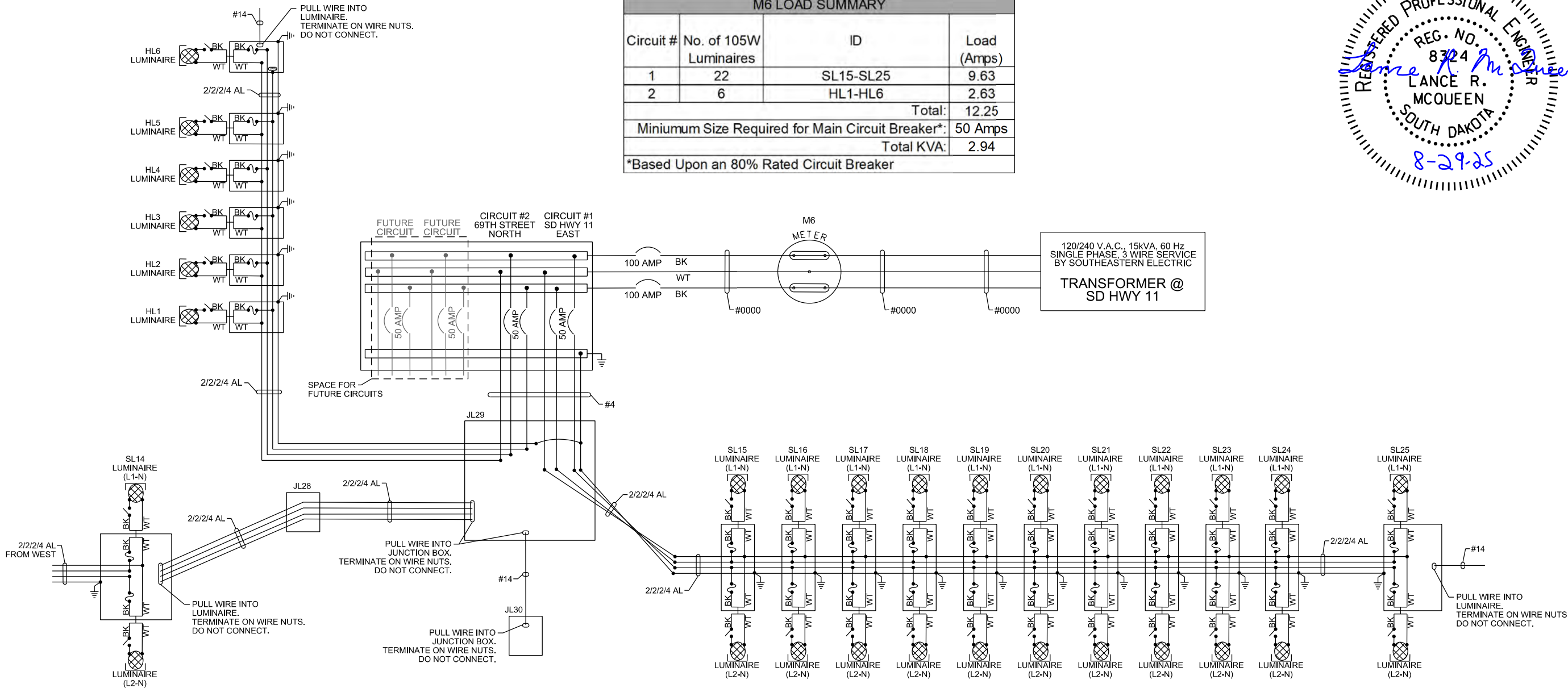
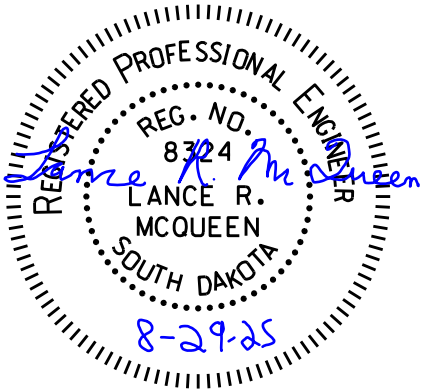
NOTE:

ALL CIRCUITS WILL BE FUSED / BONDED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS FOR ROADWAY LIGHTING - SECTION 635B.

LEGEND:

-  LUMINAIRE: 105 WATT LED LAMP
-  TERMINATE ON WIRE NUTS
-  FUSES PER CITY SPECIFICATIONS

M6 LOAD SUMMARY			
Circuit #	No. of 105W Luminaires	ID	Load (Amps)
1	22	SL15-SL25	9.63
2	6	HL1-HL6	2.63
Total:			12.25
Minimum Size Required for Main Circuit Breaker*:			50 Amps
Total KVA:			2.94
*Based Upon an 80% Rated Circuit Breaker			



FIBER OPTIC CABLE DIAGRAM

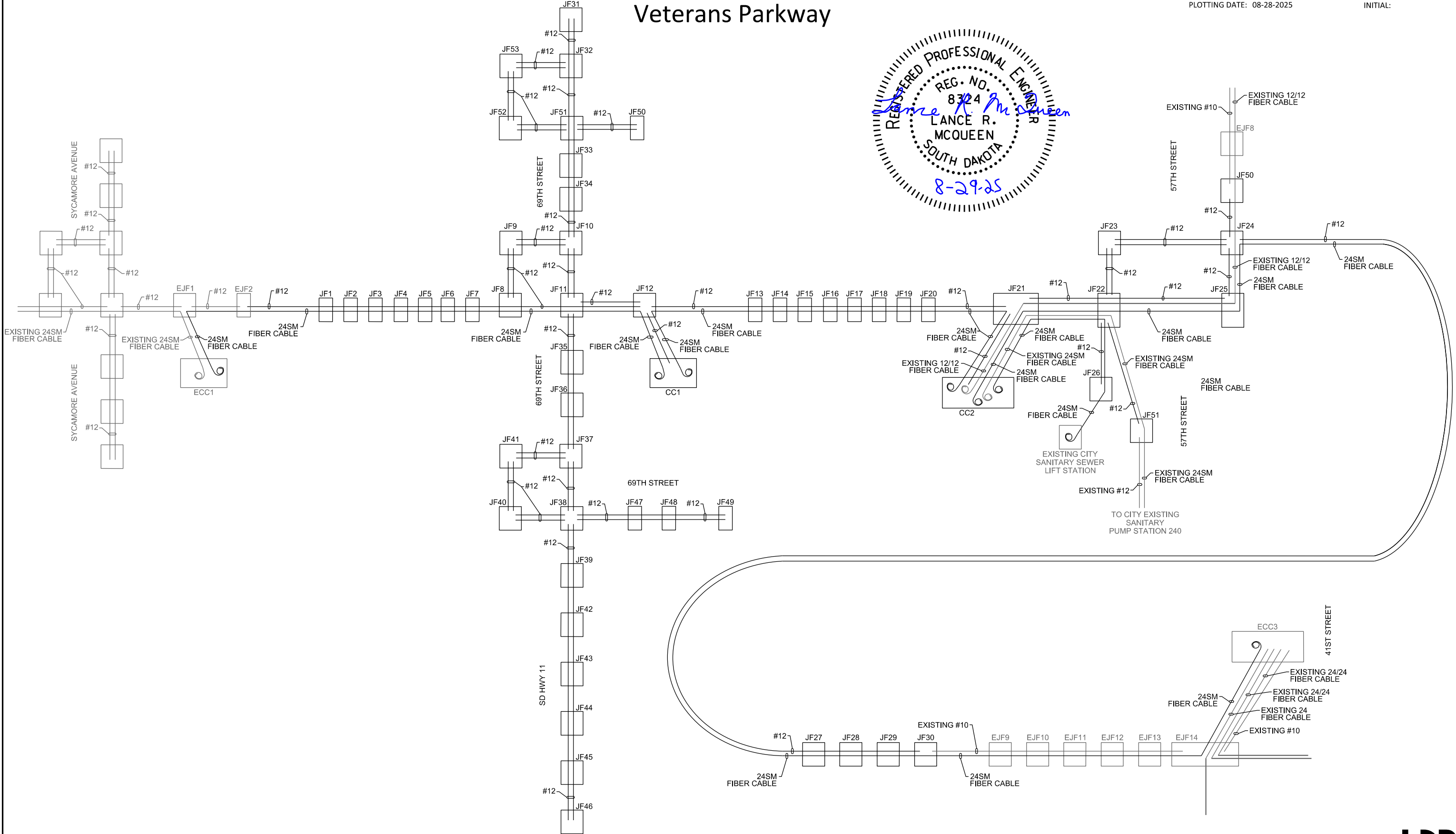
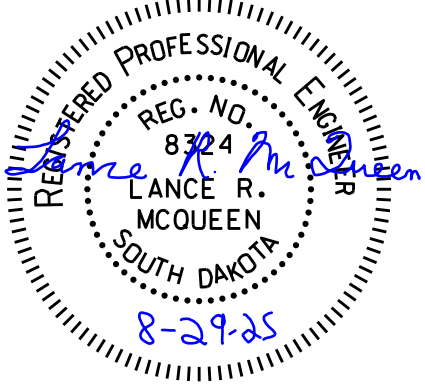
Veterans Parkway

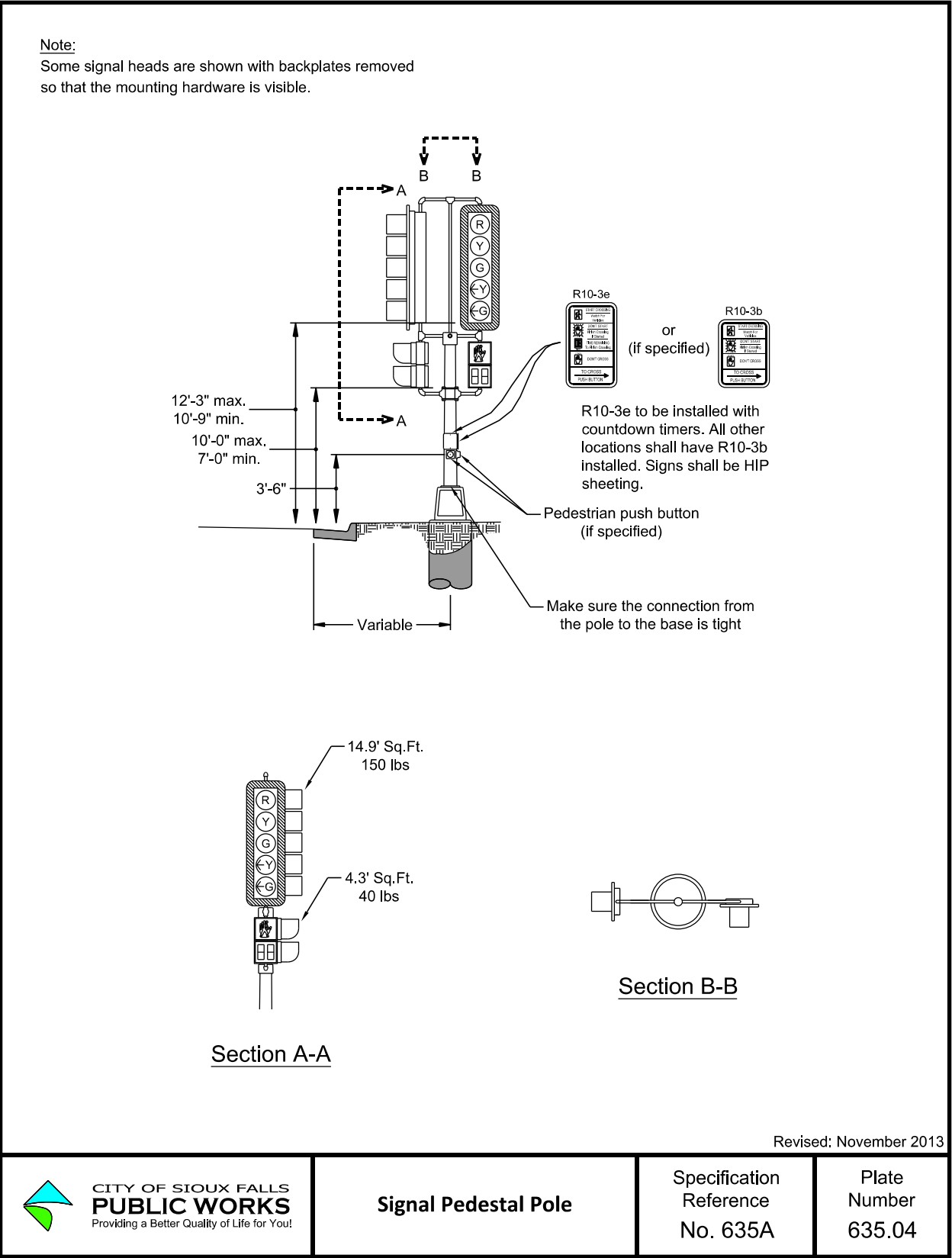
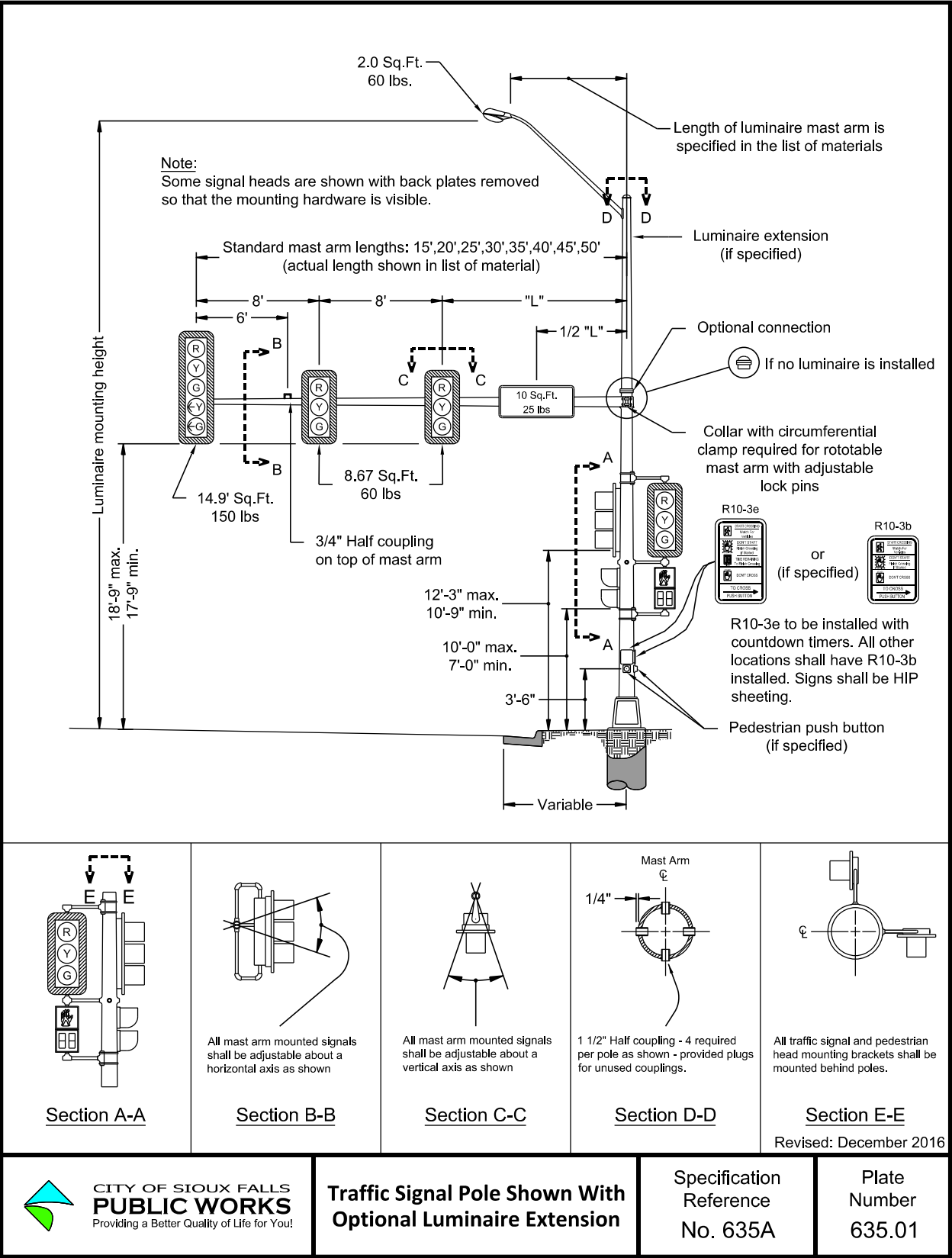
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L74	L85

FILE: ...\\Section L\\L74.dgn
PLOTING DATE: 08-28-2025

REV DATE:
INITIAL:

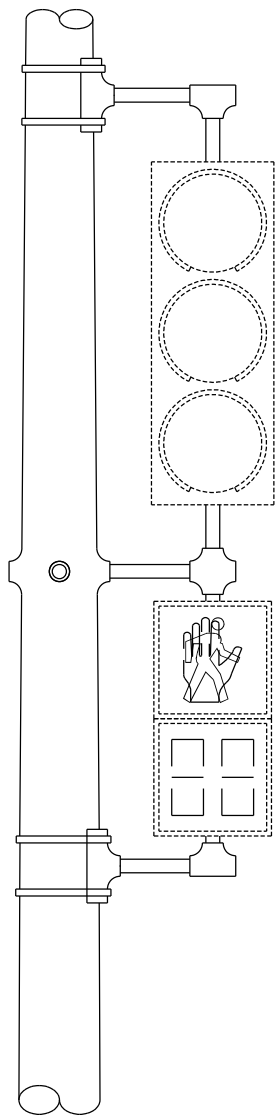




STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	L76	L85

FILE: ...\\L75-L85 standard plates.dgn
PLOTING DATE: 07-22-2026

REV DATE:
INITIAL:



Typical Section
Type 10B

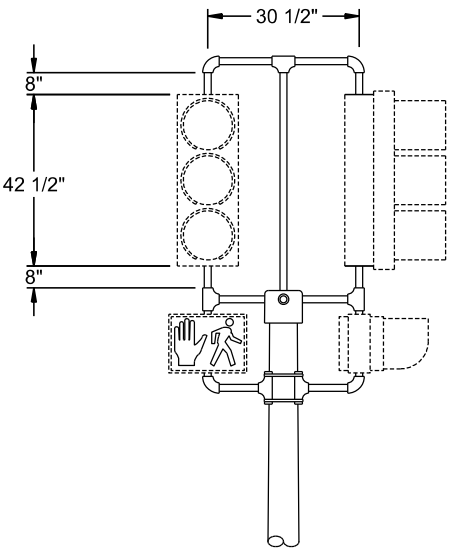
Revised: November 2013



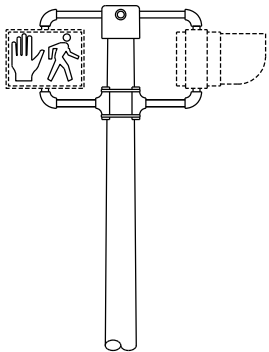
Signal and Pedestrian
Head Mounting Brackets

Specification
Reference
No. 635A

Plate
Number
635.05



Typical Section
Type 2C



Typical Section
Type 4D

Revised: December 2007



Signal and Pedestrian
Head Mounting Brackets

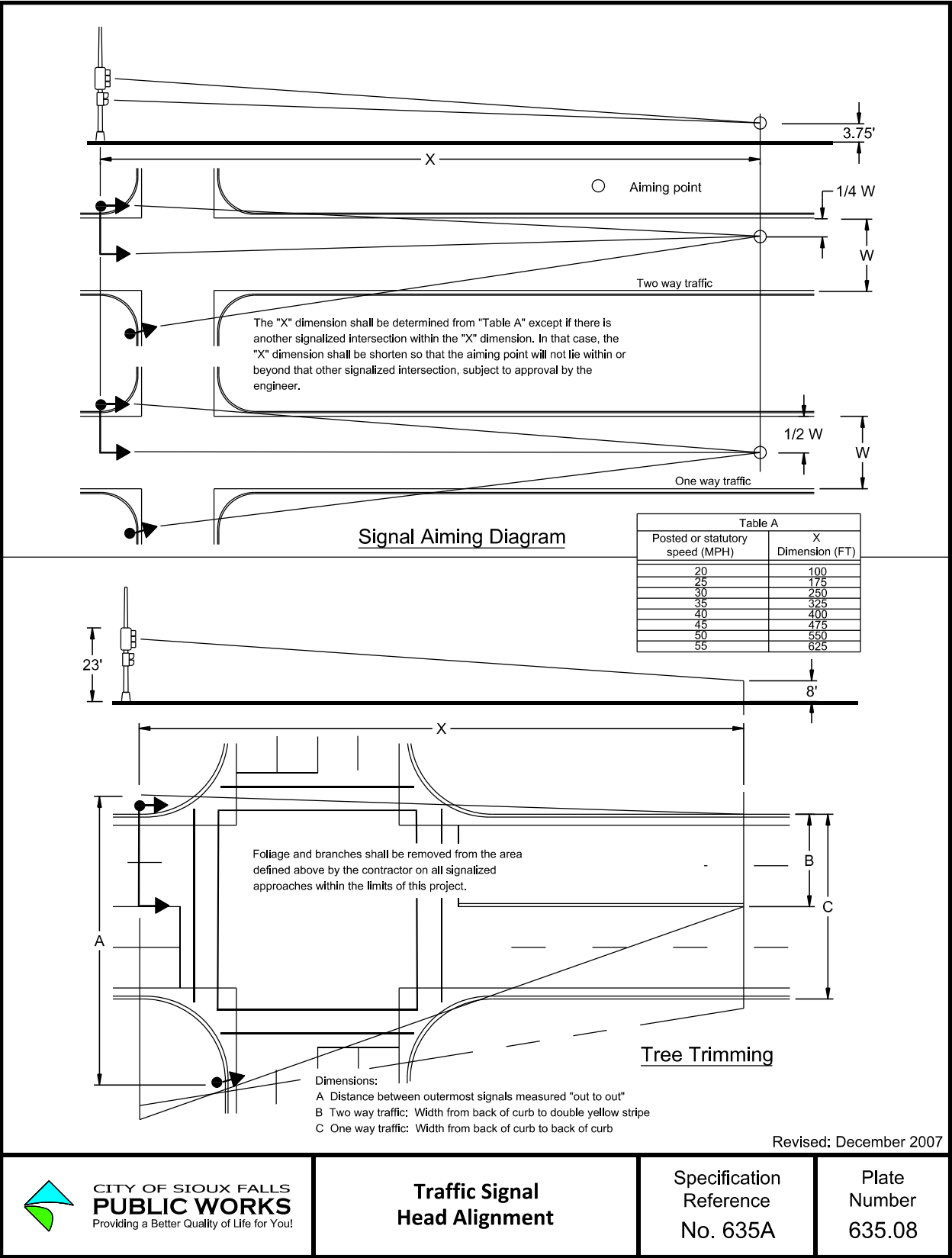
Specification
Reference
No. 635A

Plate
Number
635.06

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)		
		L77	L85

FILE: ...\\L75-L85 standard plates.dgn
PLOTING DATE: 07-22-2026

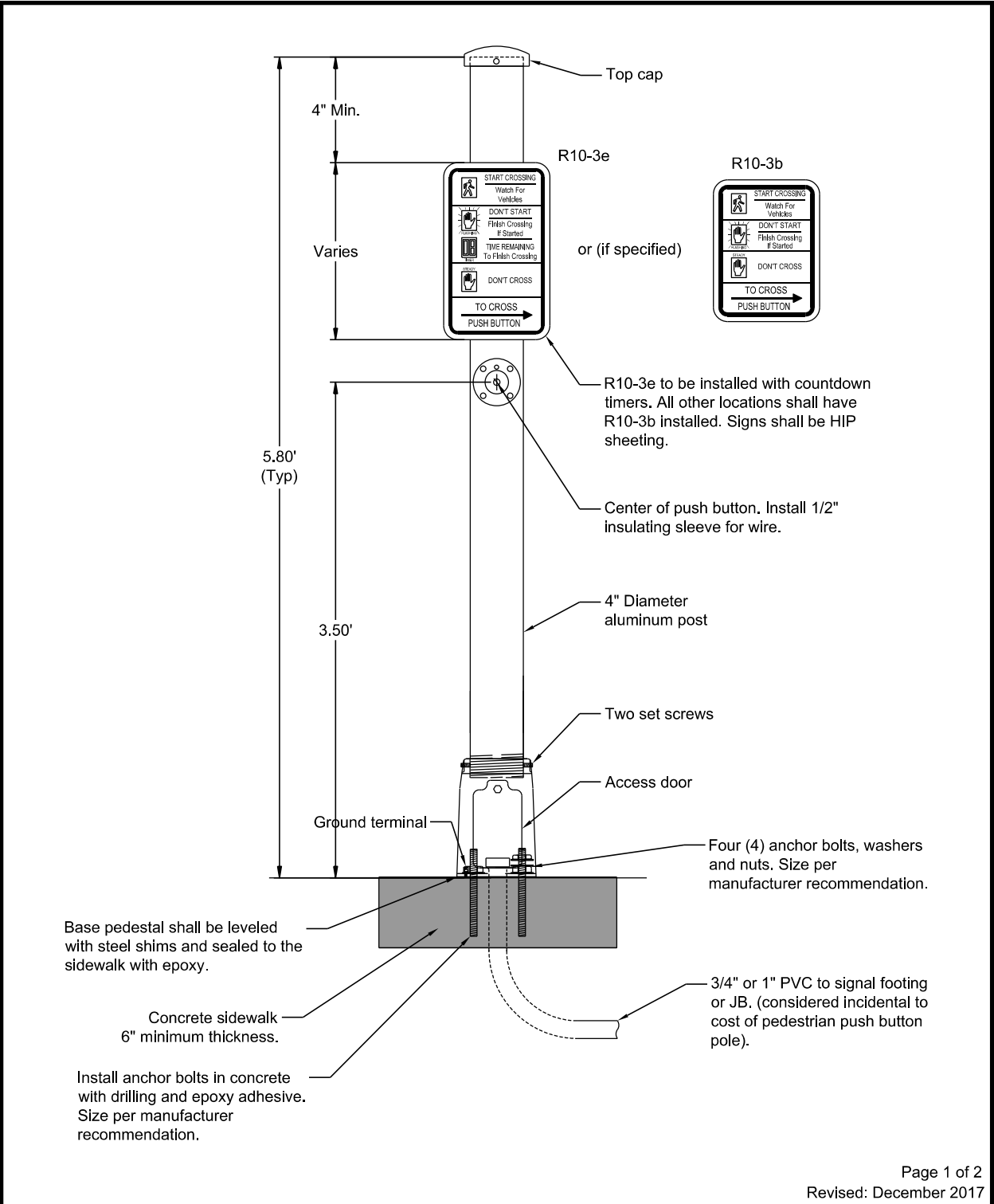
REV DATE:
INITIAL:



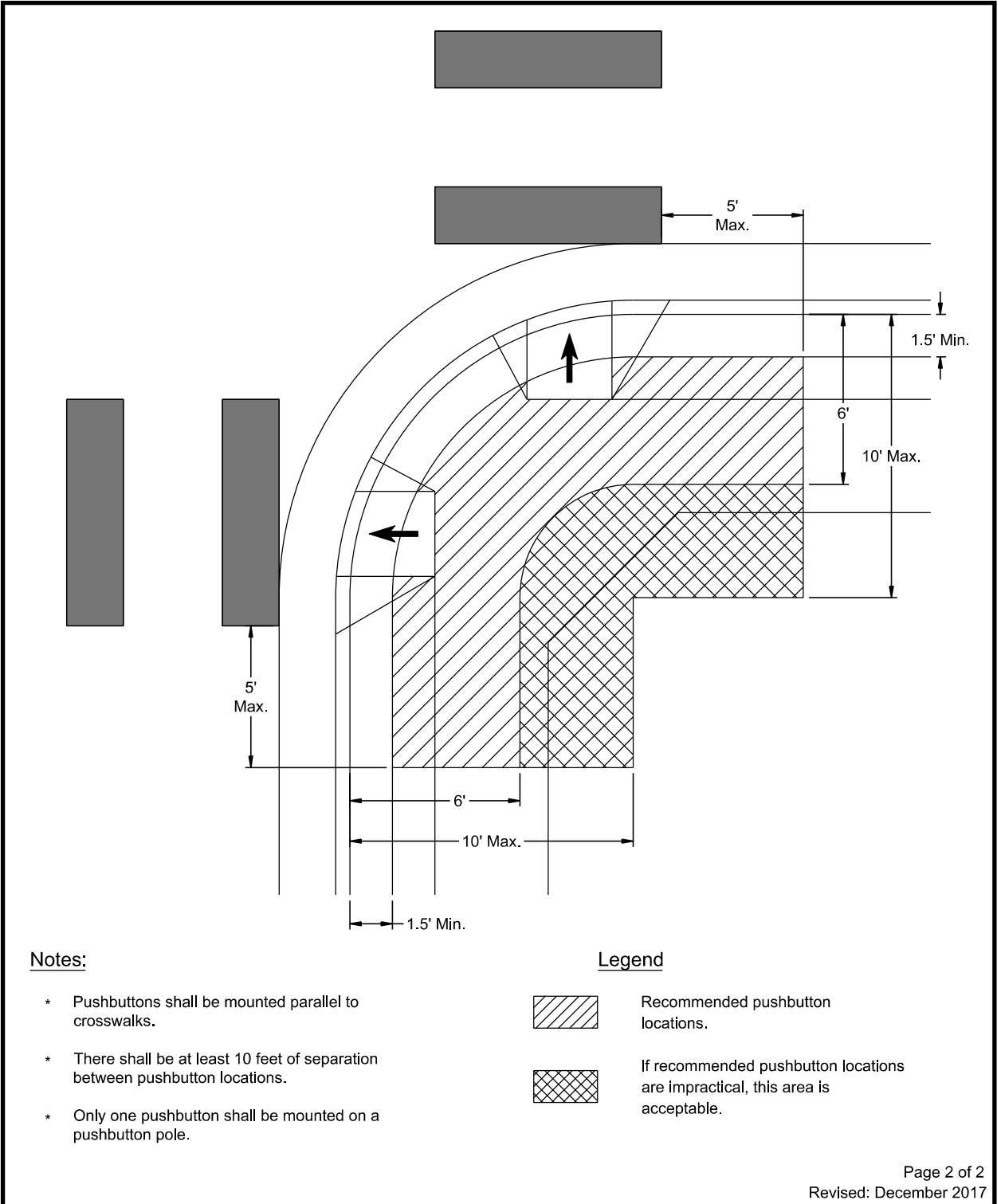
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)		
		L78	L85

FILE: ...\\L75-L85 standard plates.dgn
PLOTING DATE: 07-22-2026

REV DATE:
INITIAL:

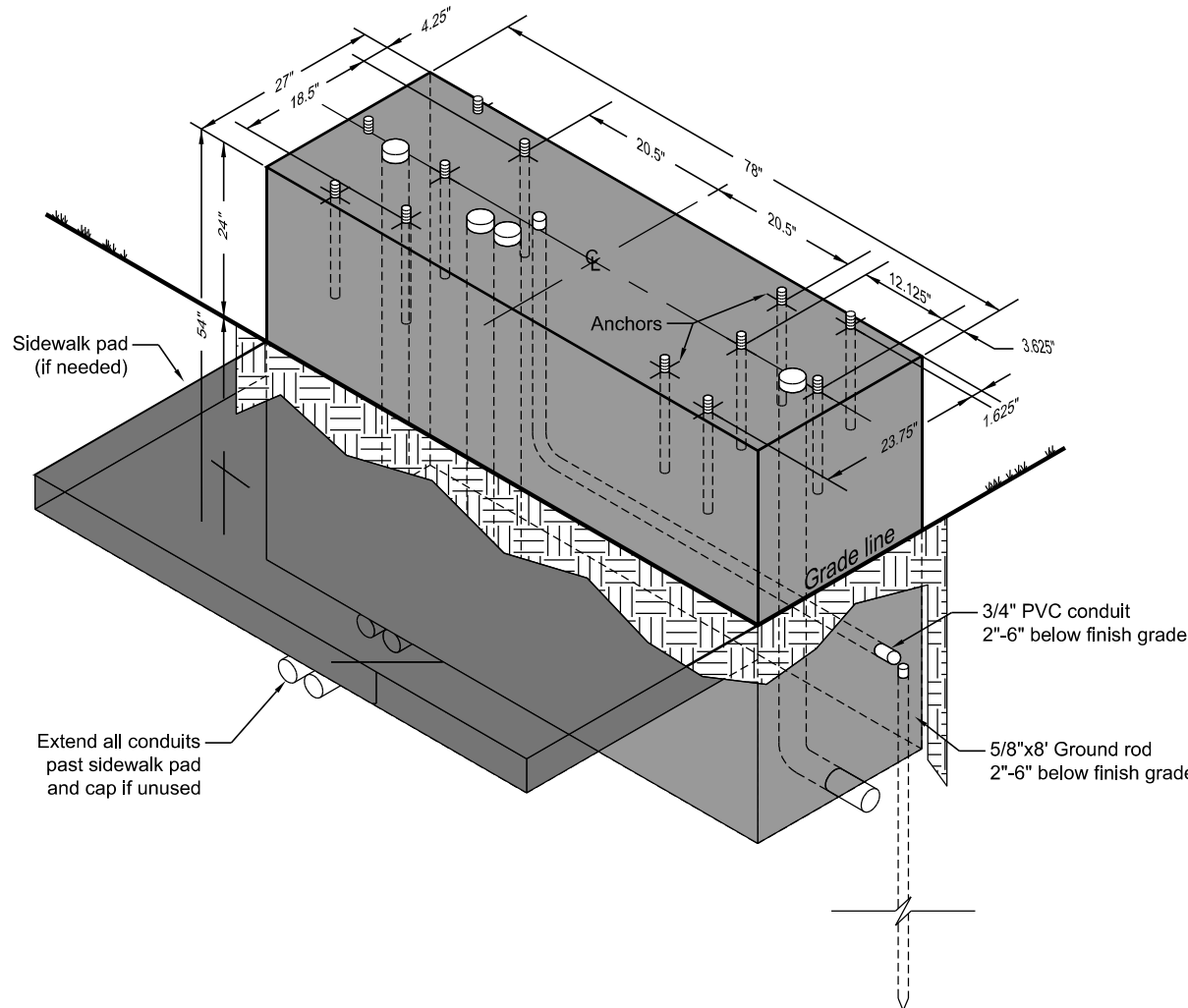


 CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Pedestrian Push Button, Sign, Post, and Location	Specification Reference No. 635A	Plate Number 635.09
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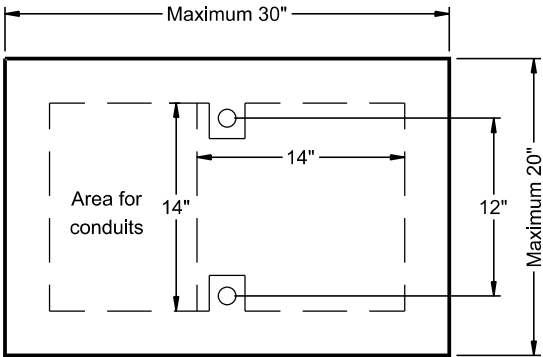


 CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Pedestrian Push Button, Sign, Post, and Location	Specification Reference No. 635A	Plate Number 635.09
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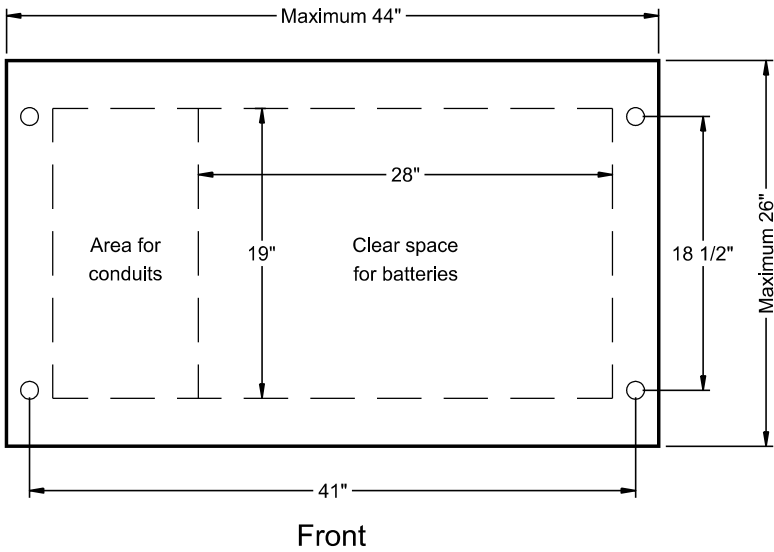
R Y G G G All lenses to be 12" in diameter One way 5-section traffic signal	R Y G All lenses to be 12" in diameter One way 3-section traffic signal	
One way 1-section pedestrian signal	Typical 5" back plate	
(V-1) Tunnel visor	(V-6) Pedestrian	
Revised: November 2013		
CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Traffic Signal Head and Pedestrian Head Plate	Specification Reference No. 635A Plate Number 635.10

			
General Notes: 1. Verify anchor bolt placement with cabinet manufacturers and shop drawings. 2. 5/8" Dia. x 18" galvanized anchors shall be 2" above finished concrete. 3. Conduits shall be 2" to 3" above finished concrete. 4. Conduit to be rigid steel and have threads so the grounding bushings can be installed. 5. Concrete shall be level and steel trowel finished. 6. 5/8"x8' Ground rod shall be installed 2"-6" below finished grade. 7. 3/4" PVC conduit shall end adjacent to the ground rod.			
Revised: December 2017			
	Controller Cabinet Footing for Eight Phase Signal	Specification Reference No. 635A	Plate Number 635.17

Top View Four-Phase Controller Cabinets:



Top View Eight-Phase Controller Cabinets:



Revised: November 2013

Cast Iron Cover

- 12" JB - Neenah Foundry Co. R-5900-A series or engineer approved.
- 18" JB - Neenah Foundry Co. R-5900-C series or engineer approved
- 24" JB - Neenah Foundry Co. R-5900-E series or engineer approved
- 30" JB - Neenah Foundry Co. R-5900-G series or engineer approved

Notes:

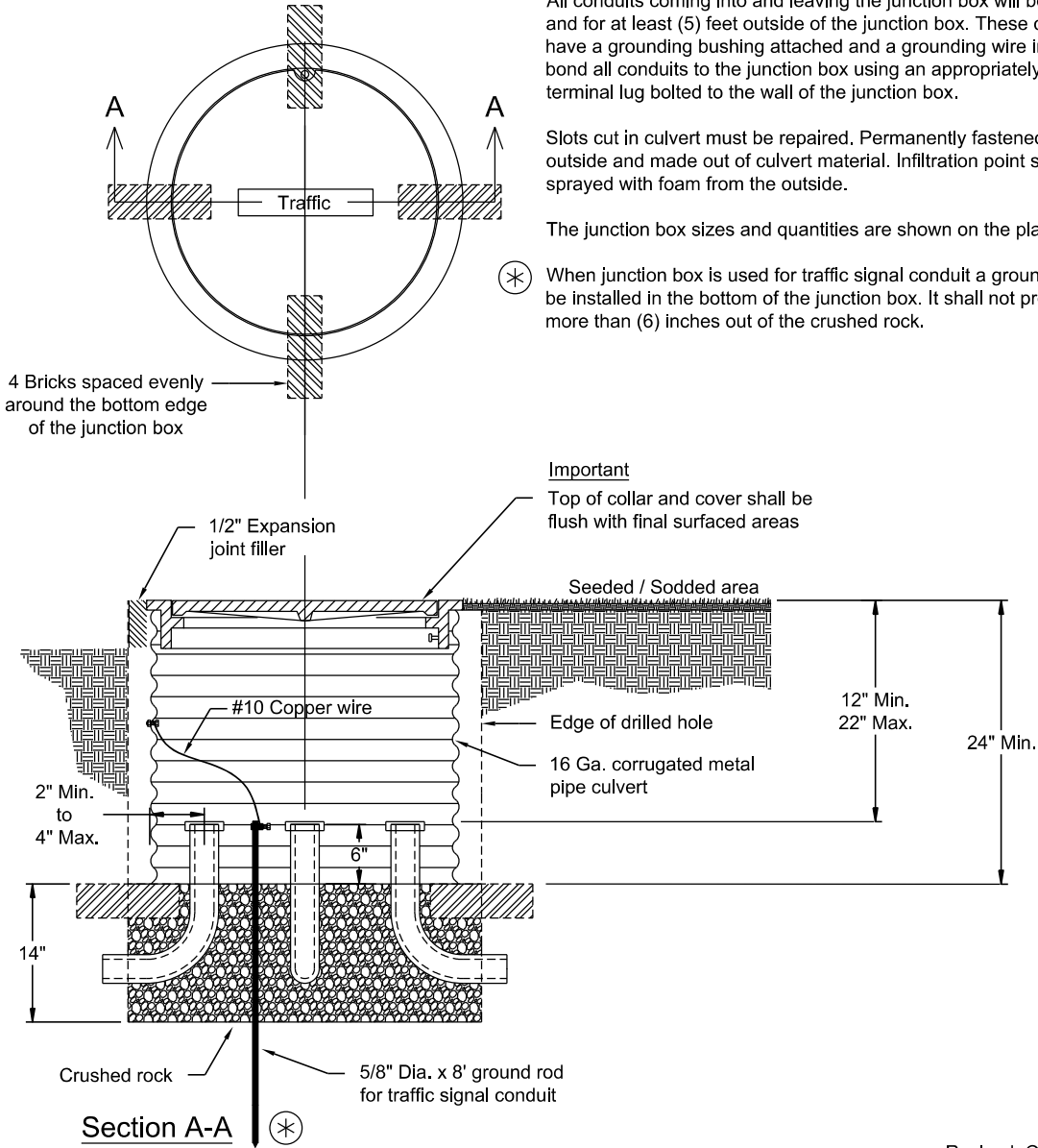
- Allow sufficient slack so that cable ends can be pulled to 30" above junction box.
- Number of conduit entrances varies with location of junction box.
- Anchor frame to pipe as approved by the engineer.
- Cover shall be stamped traffic.

All conduits coming into and leaving the junction box will be rigid steel and for at least (5) feet outside of the junction box. These conduit will have a grounding bushing attached and a grounding wire installed to bond all conduits to the junction box using an appropriately sized terminal lug bolted to the wall of the junction box.

Slots cut in culvert must be repaired. Permanently fastened from the outside and made out of culvert material. Infiltration point shall be sprayed with foam from the outside.

The junction box sizes and quantities are shown on the plan sheets.

- ⊛ When junction box is used for traffic signal conduit a ground rod will be installed in the bottom of the junction box. It shall not protrude more than (6) inches out of the crushed rock.



Important

Top of collar and cover shall be flush with final surfaced areas

Seeded / Sodded area

12" Min.
22" Max.

24" Min.

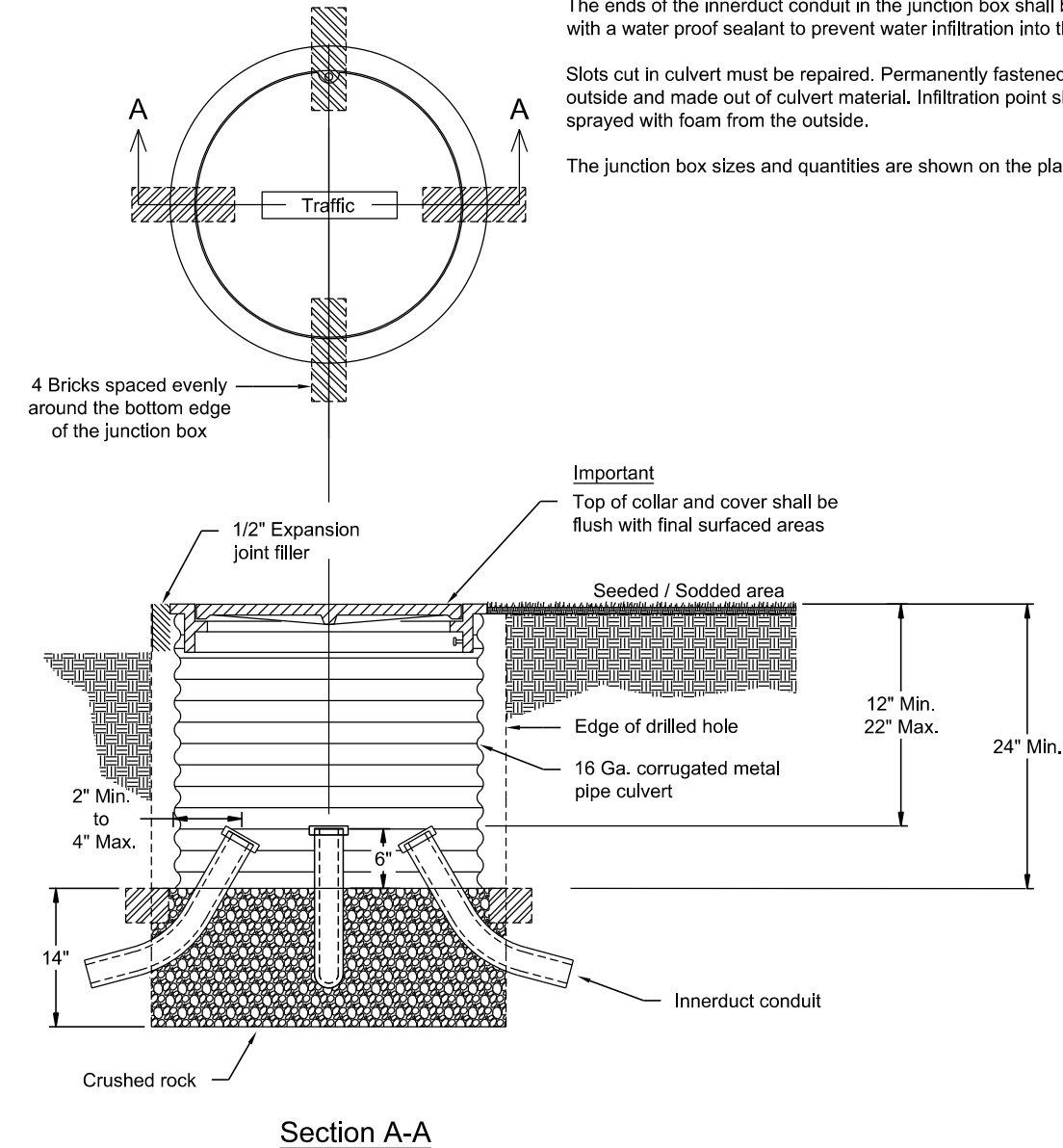
Revised: October 2020

Cast Iron Cover

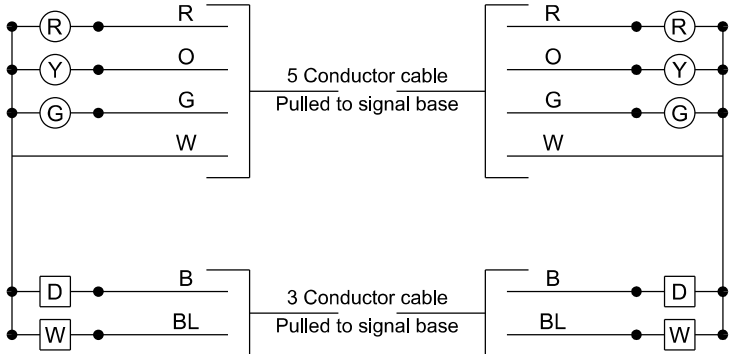
- 18" JB - Neenah Foundry Co. R-5900-C series
or engineer approved
- 24" JB - Neenah Foundry Co. R-5900-E series
or engineer approved
- 30" JB - Neenah Foundry Co. R-5900-G series
or engineer approved

Notes:

- Allow sufficient slack so that cable ends can be pulled to 30" above junction box.
- Number of conduit entrances varies with location of junction box.
- Anchor frame to pipe as approved by the engineer.
- Cover shall be stamped traffic.
- The ends of the innerduct conduit in the junction box shall be sealed with a water proof sealant to prevent water infiltration into the conduit.
- Slots cut in culvert must be repaired. Permanently fastened from the outside and made out of culvert material. Infiltration point shall be sprayed with foam from the outside.
- The junction box sizes and quantities are shown on the plan sheets.

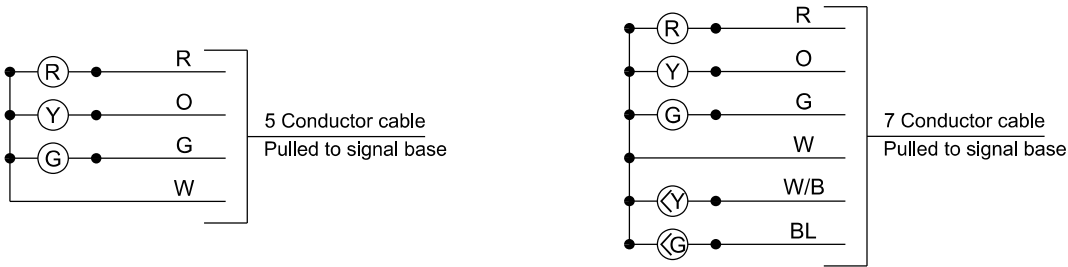


Post Top Mounted



3 Sec. traffic & 2 sec. pedestrian heads

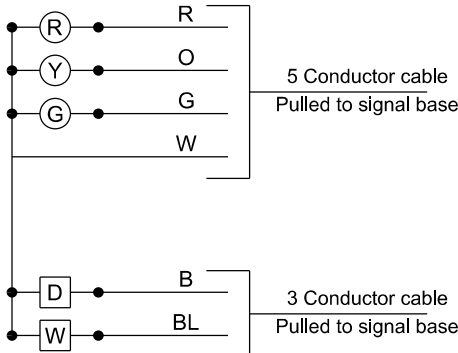
Mast Arm Mounted



3 Section traffic signal head

5 Section traffic signal head

Side of Post Mounted

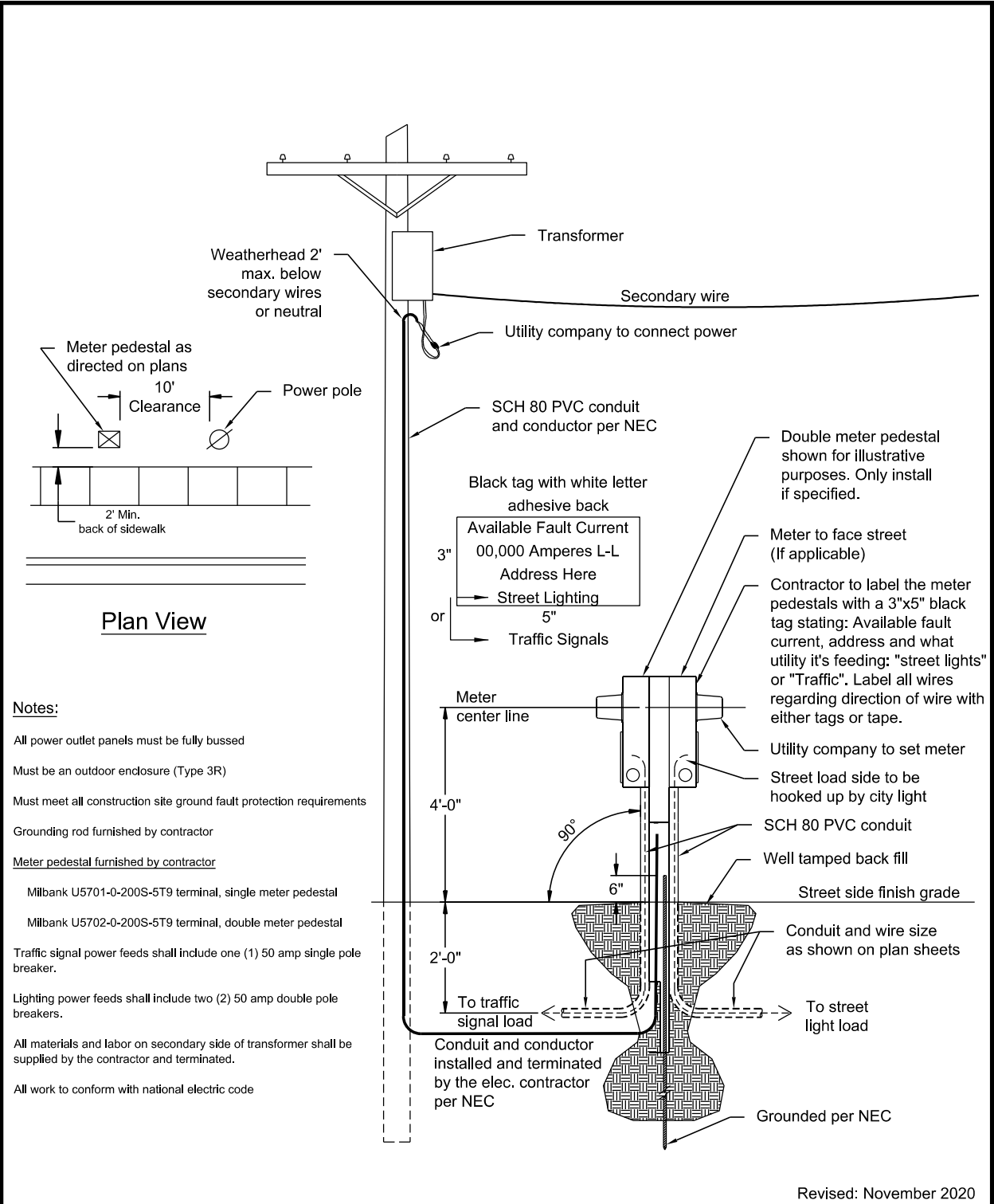


3 Sec. traffic & 2 sec. pedestrian heads

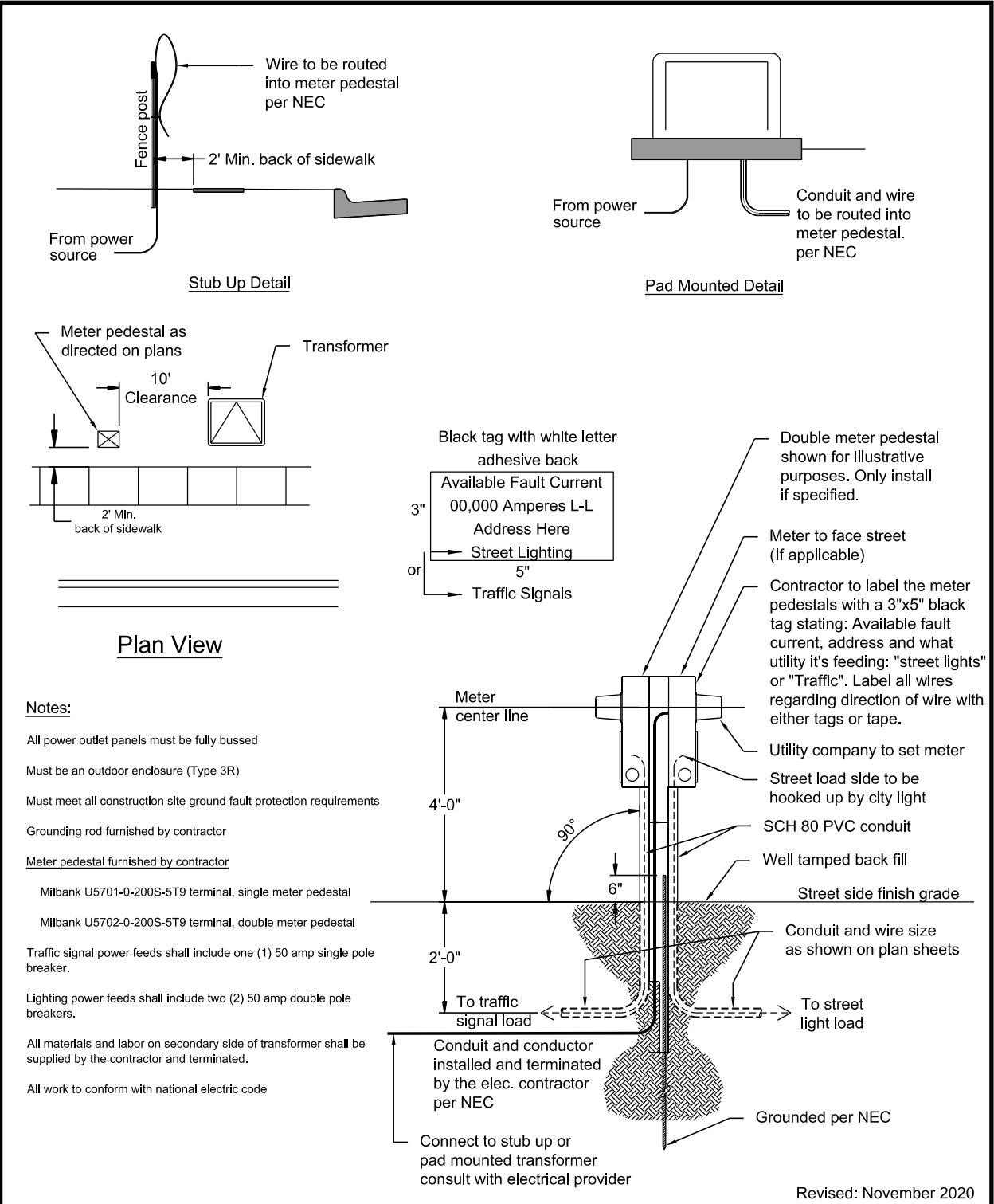
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)		
		L82	L85

FILE: ...\\L75-L85 standard plates.dgn
PLOTING DATE: 07-22-2026

REV DATE:
INITIAL:



	CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Power Feed From Elevated Transformer	Specification Reference No. 635A/B	Plate Number 635.41



	CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Power Feed From Ground Power Source	Specification Reference No. 635A/B	Plate Number 635.42

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: 2027	S D D O T	POLE FOOTING	PLATE NUMBER 635.55
			Sheet 1 of 1

Transformer Base Detail

Concrete Footing Anchor Bolt Note:
1" Diameter anchor bolts shall be used unless manufacturer's design proves a larger anchor bolt diameter is required. 1 1/4" Diameter maximum anchor bolts shall be allowed.

Light Pole Mounting Height	Light pole base dimensions	Transformer base data			Approved product**	Concrete footing anchor bolt circle diameter
		Top dimension*	Bottom dimension*	Height*		
20'	12"x12"	13.5"x13.5"	15.5"x15.5"	17"	TB1-17	15"
30'	12"x12"	13.5"x13.5"	15.5"x15.5"	17"	TB1-17	15"
40'	12"x12"	13.5"x13.5"	15.5"x15.5"	17"	TB1-17	15"
50'	15"x15"	15.1"x15.1"	17.5"x17.5"	17"	TB3-17	17"

*Dimensions are allowed to vary +/-0.5".
**Akron foundry products are listed. Approved equals are allowed.

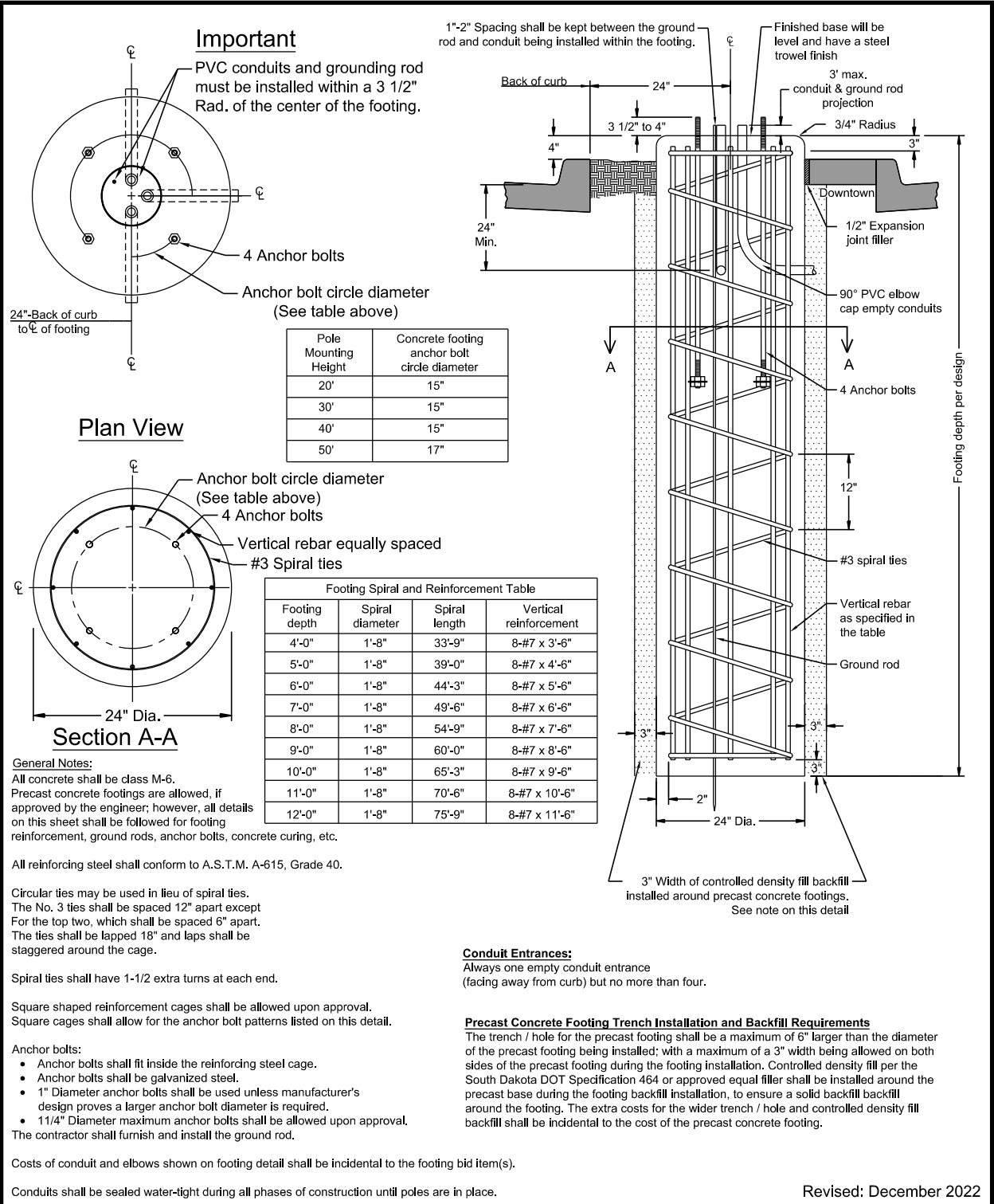
Wire Note:
Label all wires coming out of transformer base regarding direction of wire with either tags or tape.

Revised: December 2022

CITY OF SIOUX FALLS
PUBLIC WORKS
Providing a Better Quality of Life for You!

Street Light Standard T-Base	Specification Reference No. 635B	Plate Number 635.56
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 CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Street Light Footing	Specification Reference No. 635B	Plate Number 635.60
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Cast Iron Cover

18" Dia. JB - Neenah Foundry Company
R-5900-C Series or engineer approved.

24" Dia. JB - Neenah Foundry Company
R-5900-E Series or engineer approved.

Notes:

Allow sufficient slack so that cable ends can be pulled to 18" above junction box.

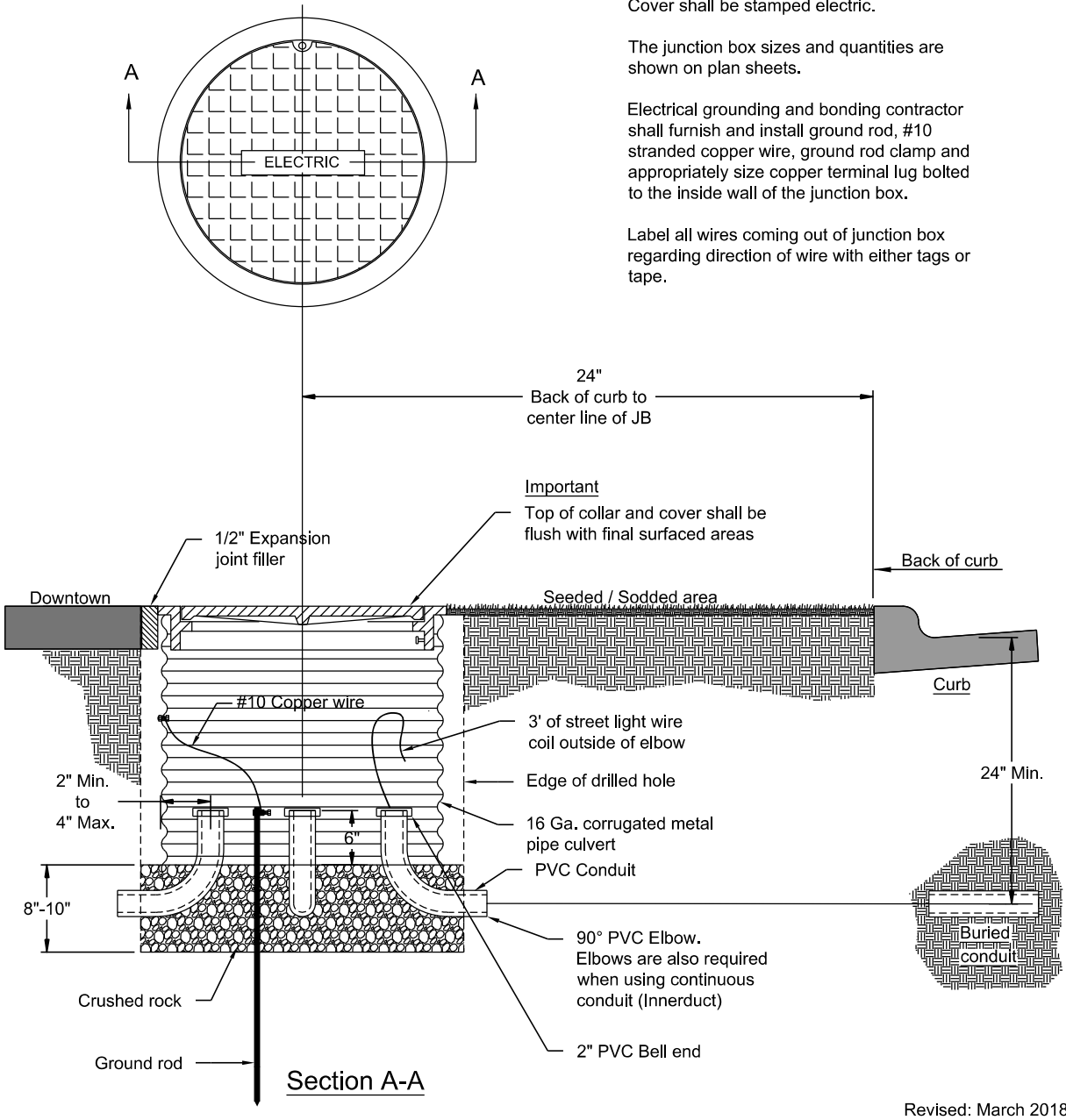
Number of conduit entrances varies with location of junction box.

Cover shall be stamped electric.

The junction box sizes and quantities are shown on plan sheets.

Electrical grounding and bonding contractor shall furnish and install ground rod, #10 stranded copper wire, ground rod clamp and appropriately size copper terminal lug bolted to the inside wall of the junction box.

Label all wires coming out of junction box regarding direction of wire with either tags or tape.

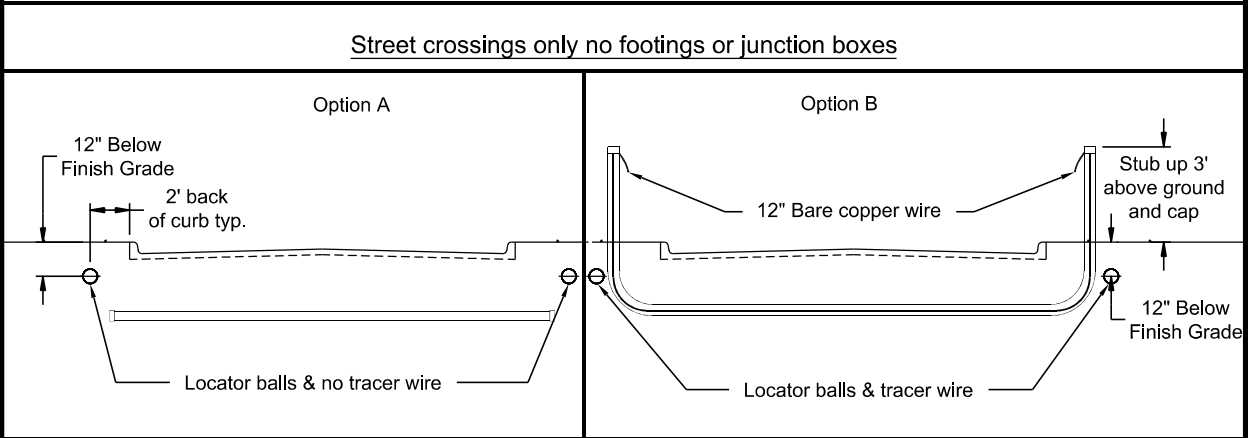
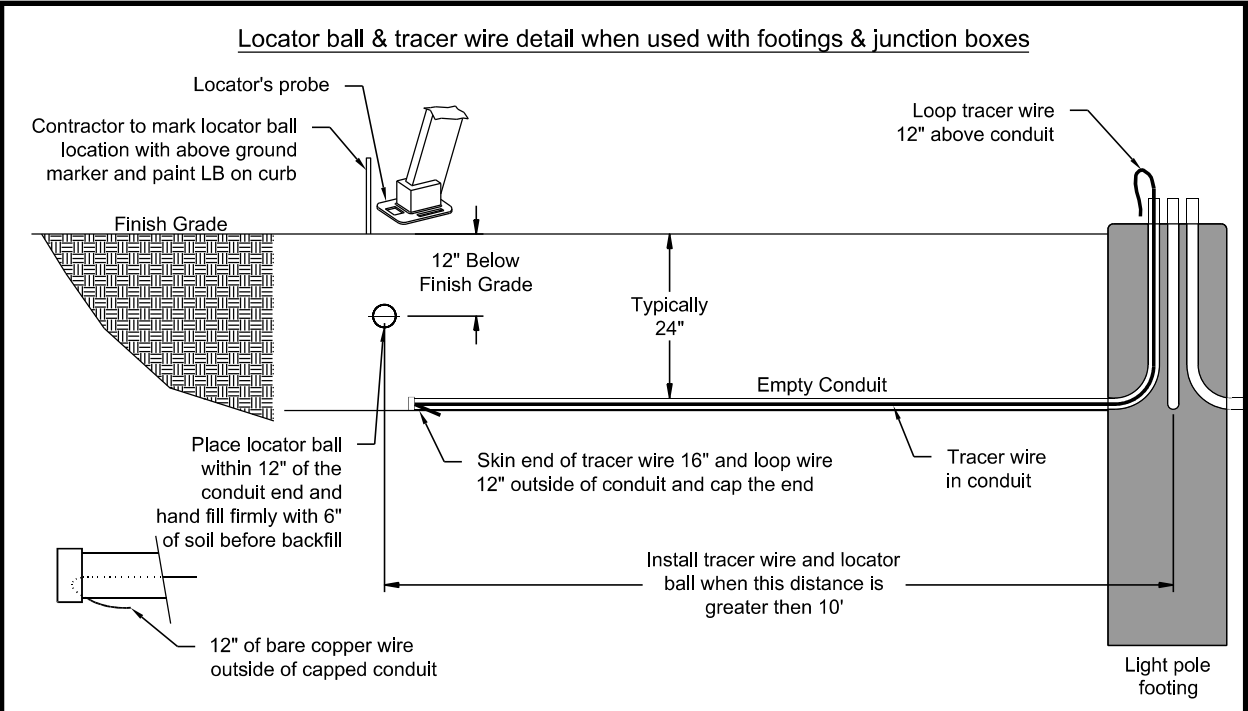


 CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	Junction Box - Lighting	Specification Reference No. 635B	Plate Number 635.70
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)		
		L85	L85

FILE: ...\\L75-L85 standard plates.dgn
PLOT DATE: 07-22-2026

REV DATE:
INITIAL:



Locator Ball Marker Notes:

- Before placing the locator ball over the key point, decide if a tie-down procedure is necessary to keep it in place. If so, secure the ball by inserting a cable tie through one or both tie-down tabs and to the key point (E.G. pipe or cable)
 - If the key point is metallic, then the locator ball should be separated from it with a minimum of 4 inches of dirt.
 - Otherwise, put the locator ball over the desired point.
- Important: The locator ball cannot reliably reradiate the locator's signal at a separation greater than 5 ft. (1.5M). This is the maximum allowable distance between the locator ball and the locator. This implies that the ball marker should be buried at a distance less than 5 ft. to allow for the distance between the locator's probe and the ground surface.
- Hand fill at least six inches of soil over the locator ball.
 - Backfill the hole.

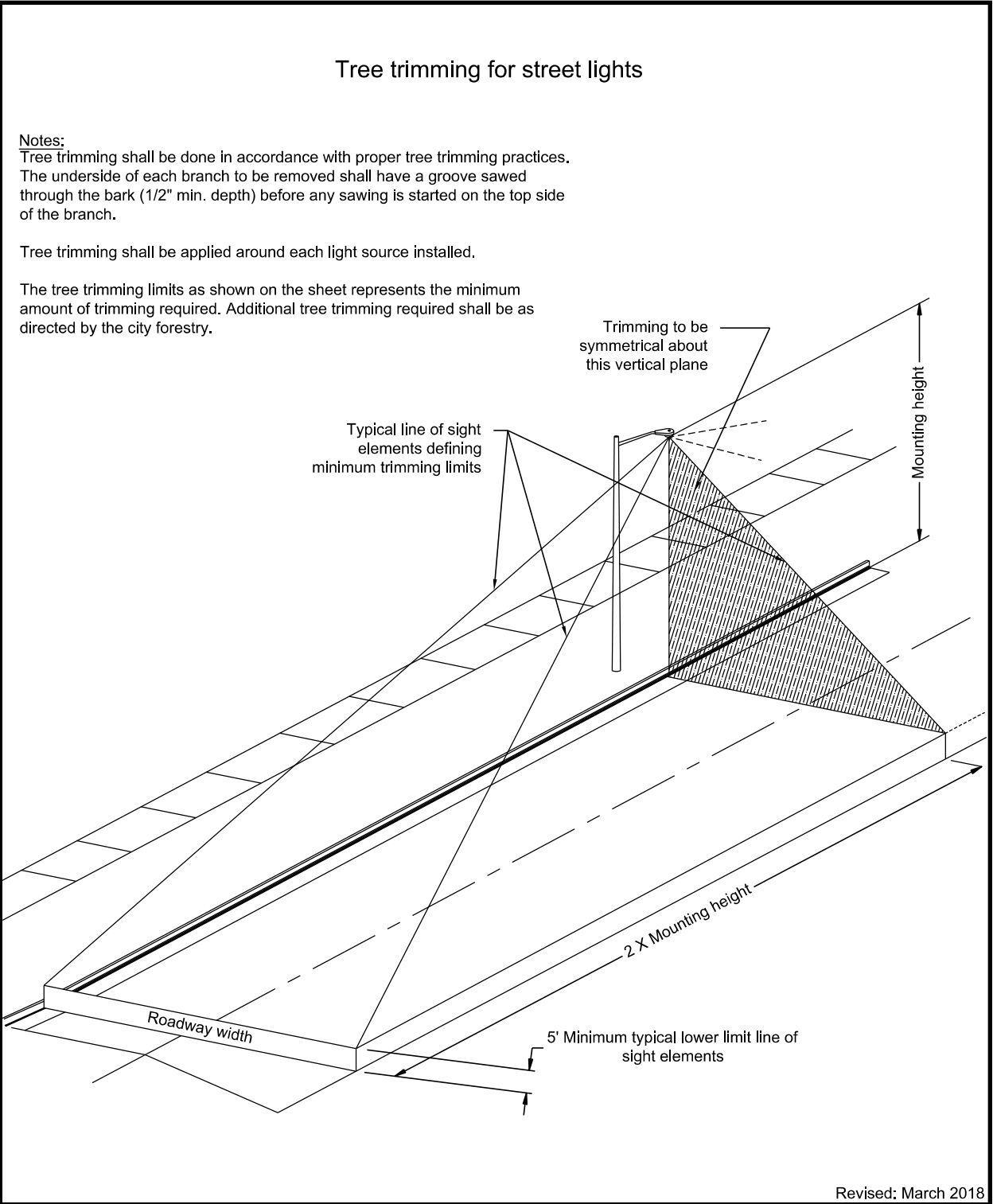
Revised: September 2020



**Locator Ball
and Tracer Wire**

Specification
Reference
No. 635B

Plate
Number
635.81



Revised: March 2018



**Tree Trimming for
Street Lights**

Specification
Reference
No. 635B

Plate
Number
635.84