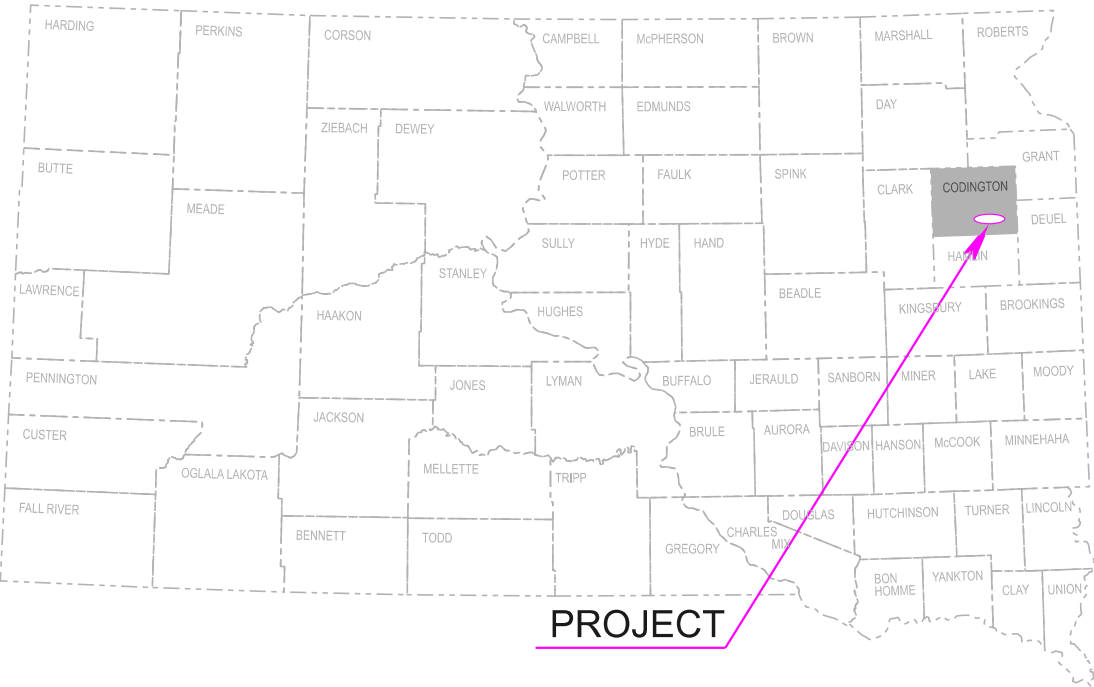




STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT NH 0212(214)370
U.S. HWY 212
CODINGTON COUNTY

Roadway Lighting
PCN 09HT

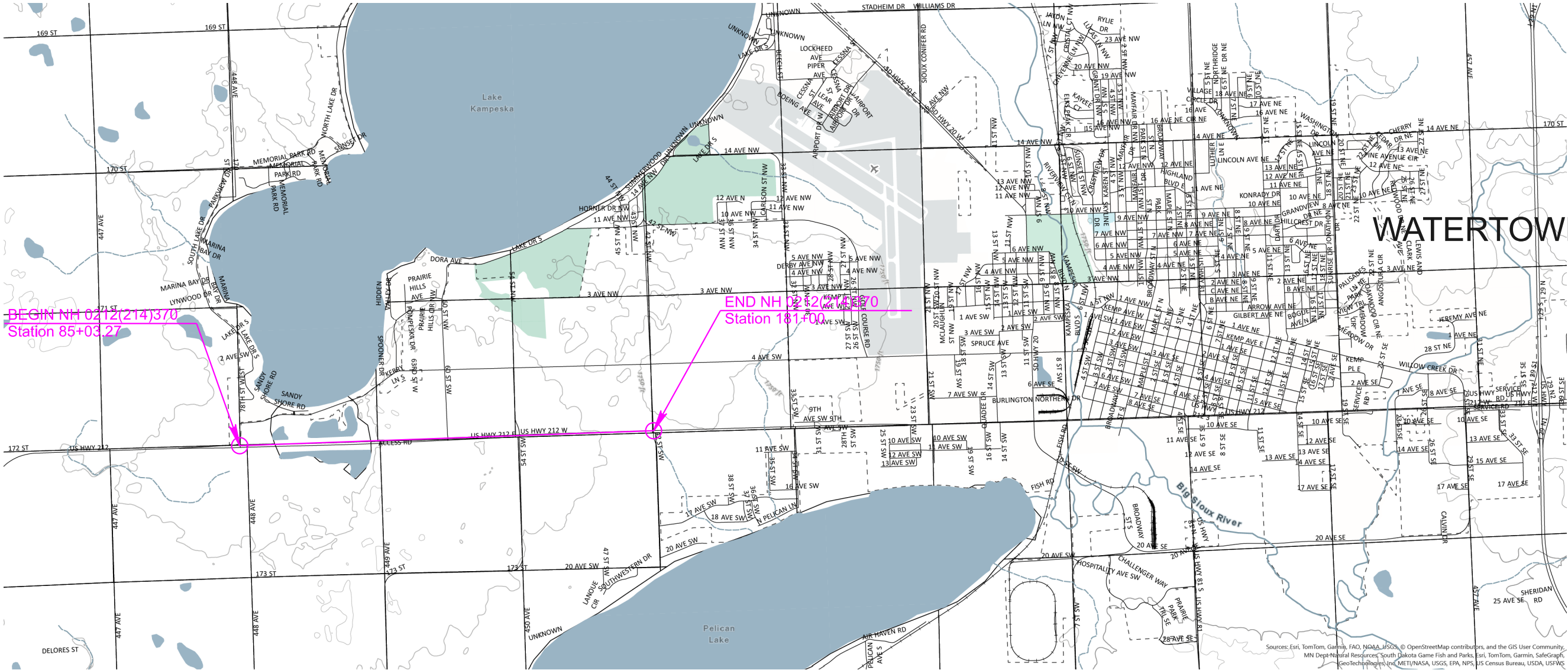


Plotting Date: 08/12/2026

PROJECT		SECTION	SHEET
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INDEX OF SHEETS

1	General Layout with Index
2-5	Estimate With General Notes & Tables
6	Legend
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8-11	Conduit Layouts
12-15	Wiring Diagrams
16-21	Standard Plates



DESIGN DESIGNATION

ADT (2025)	2210
ADT (2055)	3560
DHV	400
D	50%
T DHV	4.4%
T ADT	9.7%

STORM WATER PERMIT
(None Required)

3

September 16, 2026

NON-SECTION ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3200	Construction Staking	Lump Sum	LS
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4100	Construction Schedule, Category I	Lump Sum	LS
250E0010	Incidental Work	Lump Sum	LS
634E0010	Flagging	10.0	Hour
634E0110	Traffic Control Signs	233.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	4	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	8	Each
635E0150	Breakaway Base Luminaire Pole with Twin Arms, 50' Mounting Height	8	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	24	Each
635E5020	2' Diameter Footing	136.0	Ft
635E5301	Type 1 Electrical Junction Box	8	Each
635E5400	Electrical Service Cabinet	4	Each
635E8120	2" Rigid Conduit, Schedule 40	1,610	Ft
635E8220	2" Rigid Conduit, Schedule 80	1,165	Ft
635E9018	1/C #8 AWG Copper Wire	9,615	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	1,560	Ft

ENVIRONMENTAL COMMITMENTS

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

Additional guidance on SDDOT’s Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <<https://dot.sd.gov/media/3677d319/EnvironmentalProceduresManual.pdf>>

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

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

COMMITMENT C: WATER SOURCE

If a Contractor needs access to state waters for extraction, the Contractor must obtain a water right, through the application of a Temporary Permit to Use Public Waters before work begins.

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

Action Taken/Required:

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

Temporary permit to use public waters for highway construction purposes application can be found on the SDDANR website: <https://danr.sd.gov/OfficeOfWater/WaterRights/PermitForms/default.aspx>

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

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

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

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

Action Taken/Required:

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

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COMMITMENT D2: SURFACE WATER DISCHARGE

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

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

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

Action Taken/Required:

If construction dewatering is required and this project is not required to be covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the Contractor will obtain the General Permit for Temporary Discharge Activities from the DANR Water Quality Program, 605-773-3351. <https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_TemporaryDischargeNOI2018Fillable.pdf>

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

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

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

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

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

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

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

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

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

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

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

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

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

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

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work.

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GENERAL TRAFFIC CONTROL

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

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

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

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

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

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

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans. Additional Type 3 Barricades will be installed facing traffic within the closed lane at a spacing of ¼ mile.

Lane closures will be limited to 5 miles in length. The distance between the closest points of any two-lane closures will be at least 3 miles, excluding tapers.

PCN 09HT ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LT / RT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS			
		SQFT			
		233.0			

TYPE 3 BARRICADES

ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 8' Double Sided	4 Each

SUPPLYING AS BUILT PLANS

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

SHOP DRAWING AND CATALOG CUTS SUBMITTALS

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

PDF submittals will be sent to the following email addresses:

Stacy.Bartlett@state.sd.us
Joseph.Updike@state.sd.us

INCIDENTAL WORK

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

LUMINAIRE POLES

Luminaire poles L2, L3, L6, L7, L10, L11, L14, L15 will have a mounting height of 50' and single 8' arms.

Luminaire poles L1, L4, L5, L8, L9, L12, L13, L16 will have a mounting height of 50' and twin 8' arms.

The pole fabricator will be responsible for determining the diameter, length, and number of anchor bolts.

LUMINAIRES

The lighting design for L1 to L16 used the following parameters to provide 0.8 and greater average maintained foot-candles and uniformity ratios of 3:1 (average maintained to minimum maintained foot-candles) and 5:1 (maximum to minimum maintained foot candles):

Pole Setback: 8 Ft.
Lamp Loss Factor (LLF): 0.8
Width of Lighted Area: 36 Ft.
Mounting Height: 50 Ft.
Arm Length 8 Ft.

The following luminaire will be used for this design:

- a.) Leotek: GC2-96G-MV-NW-3R-GY-975-FFA

TABLE OF FOOTING DATA

Site Designation	Footing Diameter	* Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
L2, L3, L6, L7, L10, L11, L14, L15	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"
L1, L4, L5, L8, L9, L12, L13, L16	2' - 0"	9' - 0"	1' - 8"	60' - 0"	8-#7 x 8' - 6"

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

SUBSURFACE

Groundwater and caving soils are likely to be encountered at ditch grade elevation.

Concrete placement operations should closely follow excavation procedures. The longer the excavations are left open, the more likely caving may occur. Operations should be sequenced so that concrete placement operations closely follow excavation procedures but at a minimum placed the same working day.

If caving soils are encountered, it may be necessary to use casing or drilling fluids to maintain an open excavation. 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 placed through drilling fluids will be tremied.

ELECTRIC SERVICE CABINET

The Contractor will coordinate with Watertown Municipal Utilities and Northwestern Energy to activate the new electric services at least two weeks prior to needing the power.

Meters 2-Meter 4 are in Watertown Municipal Utilities' territory. Luminaires L3, L5, L7-L8, L9, L11-L12, L13, and L15-L16 are in Watertown Municipal Utilities' territory.

The Watertown Municipal Utilities contact is Brian Benson at (605) 882-6233 and bbenson@watertownmu.com.

Meter 1 and luminaires L1-L2, and L4 are in Northwestern Energy's territory.

The Northwestern Energy Contact is Tyler Brunsvig at (605) 412-9090 and Tyler.Brunsvig@NorthWestern.com.

All costs associated with coordinating and de-energizing of the electric service and activating the new electric services will be incidental to the contract lump sum price for "Electric Service Cabinet".

WIRE SPLICING FOR LIGHTING

All wire splices for lighting will be made using TE Connectivity GTAP connectors, NSI Industries Polaris Blue connectors, or an approved equal.



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LEGEND

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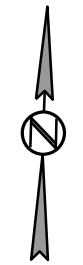
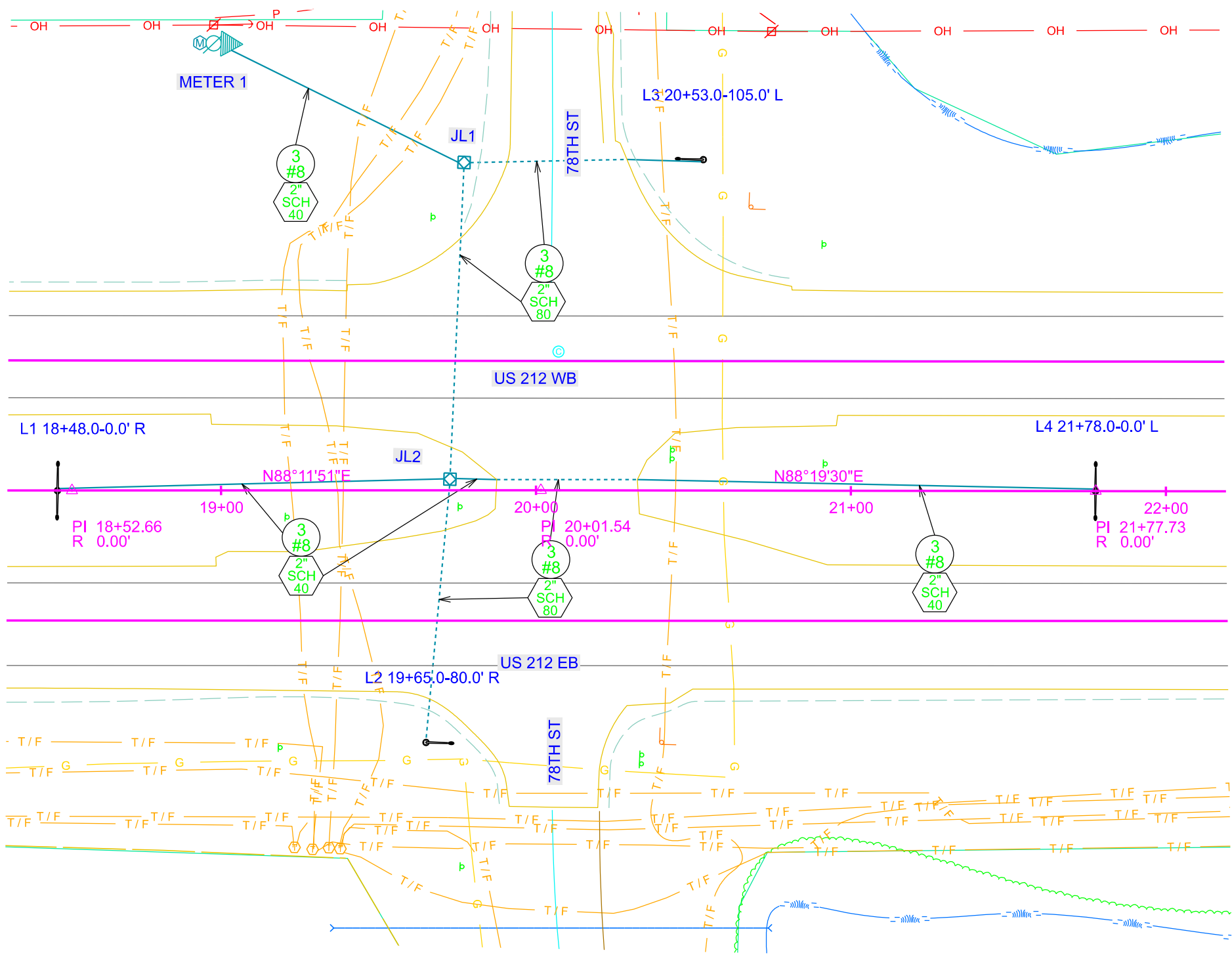
Anchor		Highway R.O.W. Marker		Sidewalk		State and National Line	
Antenna		Interstate Close Gate		Sign Face		County Line	
Approach		Iron Pin		Sign Post		Section Line	
Assumed Corner		Irrigation Ditch		Slough Or Marsh		Quarter Line	
Azimuth Marker		Lake Edge		Spring		Sixteenth Line	
BBQ Grill/ Fireplace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

CONDUIT AND CABLE QUANTITIES

Location to Location		Rigid Conduit			Rigid Conduit			Copper			
		Schedule 40			Schedule 80			Wire			
		2"			2"			1/C		2/C	
		SCH			SCH			#8		#10	
		40			80			AWG		AWG	
		Ft			Ft			Ft		Ft	
LUMINAIRES											
78TH ST											
L1	JL2		125'					420'			
JL2	L2				85'			295'			
JL2	L4		160'		45'			665'			
JL2	JL1				100'			340'			
JL1	L3		30'		50'			280'			
JL1	METER 1		85'					360'			
60TH ST											
L5	JL4		120'					405'			
JL4	L6				75'			265'			
JL4	L8		140'		65'			665'			
JL4	JL3				80'			280'			
JL3	METER 2		65'					295'			
JL3	L7				85'			295'			
54TH ST											
L9	JL6		75'					265'			
JL6	L10				75'			265'			
JL6	L12		170'		55'			730'			
JL6	JL5				75'			265'			
JL5	METER 3		270'					930'			
JL5	L11		45'		75'			405'			
42ND ST											
L13	JL8		130'					435'			
JL8	L14				75'			265'			
JL8	L16		130'		65'			635'			
JL8	JL7				90'			310'			
JL7	METER 4		50'					250'			
JL7	L15		15'		70'			295'			
LUMINAIRE POLES											
L1										130'	
L2										65'	
L3										65'	
L4										130'	
L5										130'	
L6										65'	
L7										65'	
L8										130'	
L9										130'	
L10										65'	
L11										65'	
L12										130'	
L13										130'	
L14										65'	
L15										65'	
L16										130'	
Total:											
			1,610'			1,165'		9,615'		1,560'	

CONDUIT LAYOUT
US 212 & 78TH ST

120/240 v.a.c., 60 hz.,
1 Phase, 3 Wire Service
By Northwestern Energy



ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	Breakaway Base Luminaire Pole w/8' Arm 50' Mounting Height (L2-L3, L6-L7, L10-L11, L14-L15)	8	EACH
	Breakaway Base Luminaire Pole w/8' Twin Arm 50' Mounting Height (L1, L4-L5, L8-L9, L12-L13, L16)	8	EACH
	Roadway Luminaire, LED with Photoelectric Cell (L1-L16)	24	EACH
	2' Diameter Footing (L1-L16)	136	FT
	Type 1 Electrical Junction Box (JL1-JL8)	8	EACH
	Electrical Service Cabinet (Meter 1 - Meter 4)	4	EACH
	Galvanized Steel Utility Pole Not a Bid Item	4	EACH
	Meter Socket Not a Bid Item	4	EACH
	2" Rigid Conduit, Schedule 40	1,610	FT
	2" Rigid Conduit, Schedule 80	1,165	FT
	1/C #8 AWG Copper Wire	9,615	FT
	2/C #10 AWG Copper Pole & Bracket Cable	1,560	FT

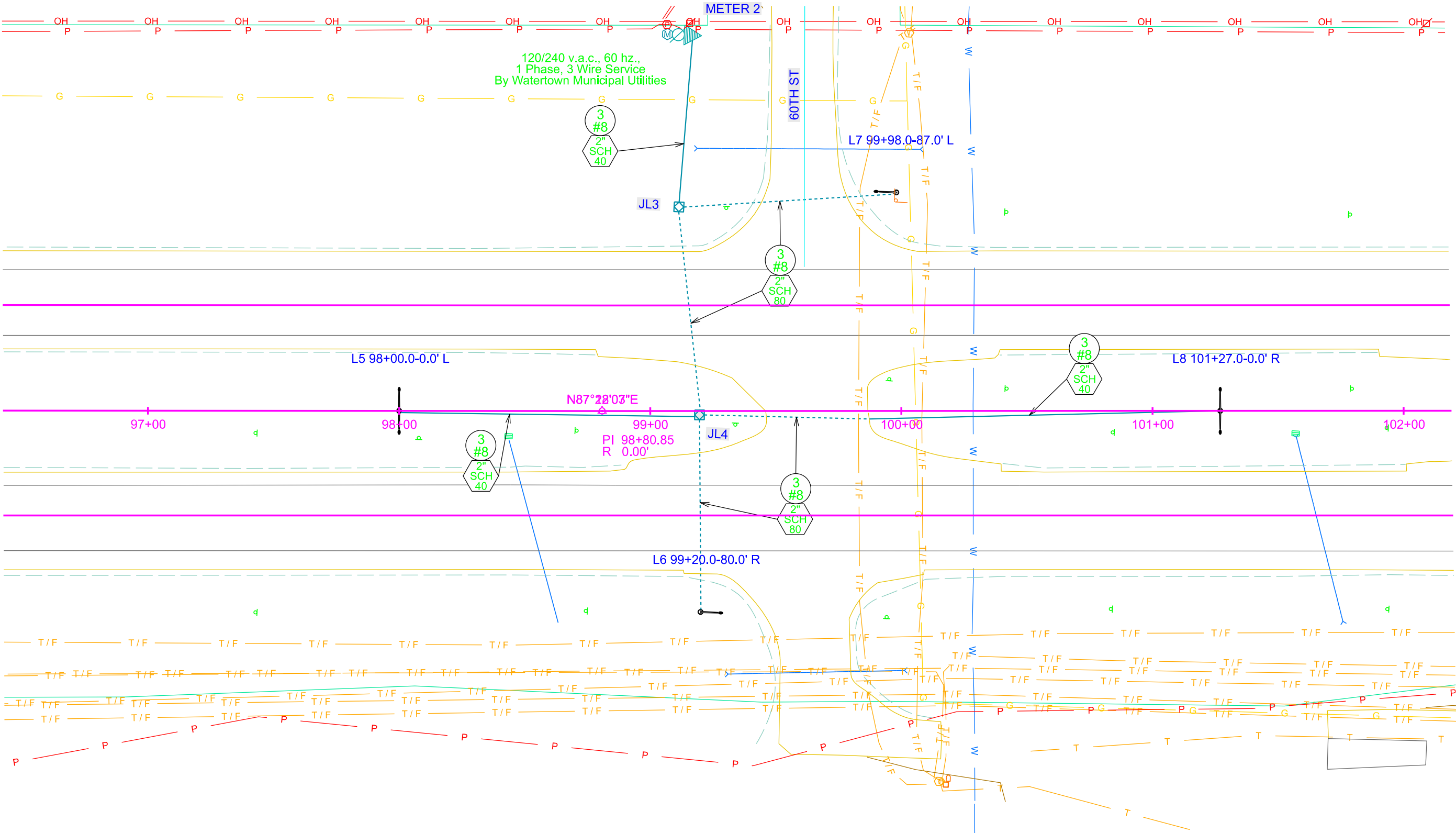
CONDUIT LAYOUT

US 212 & 60TH ST



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NH 0212(214)370		9	21

Plotting Date: 08/12/2026



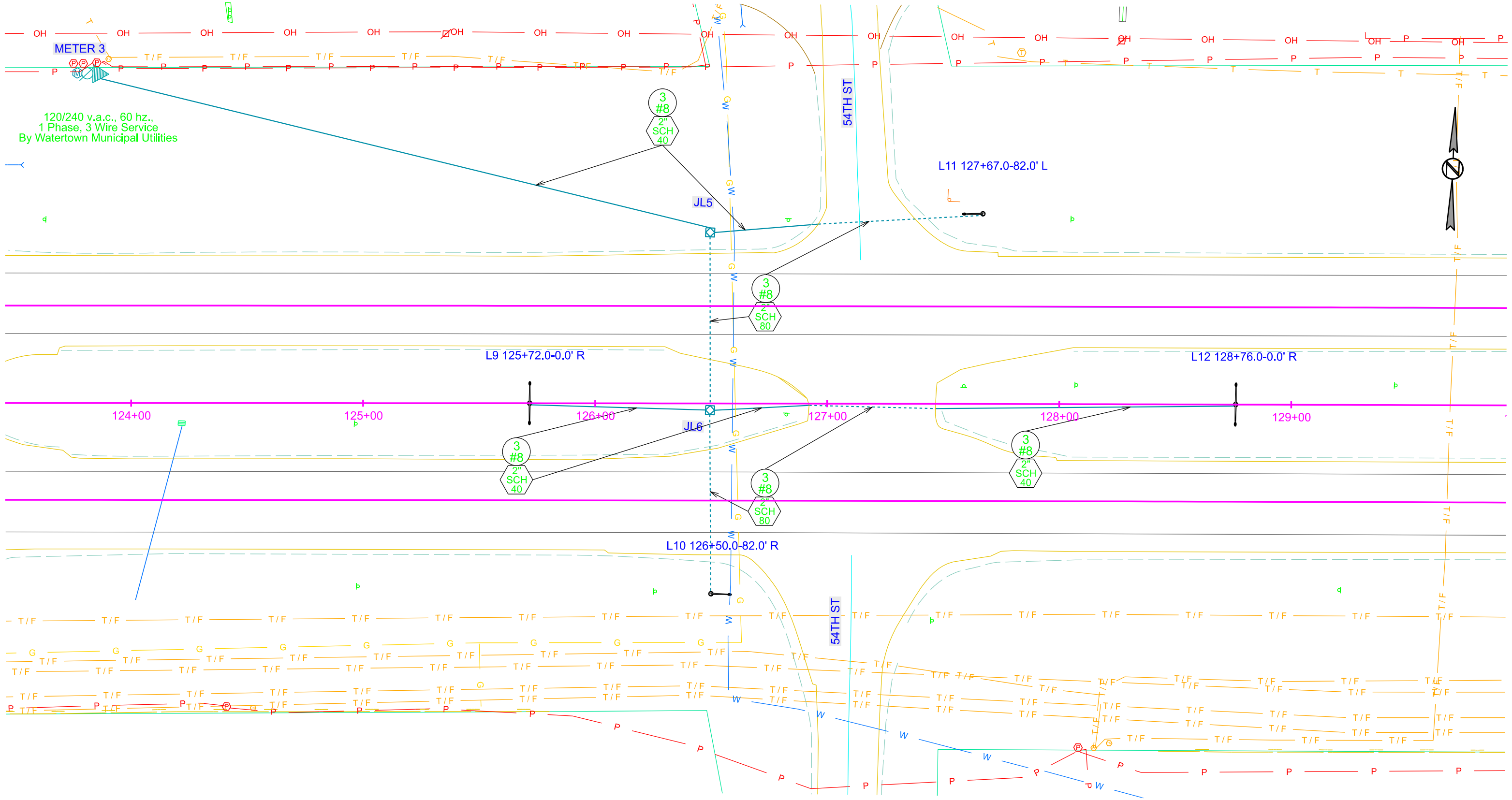
CONDUIT LAYOUT

US212 & 54TH ST



PROJECT	SECTION	SHEET
NH 0212(214)370	10	21

Plotting Date: 08/12/2026



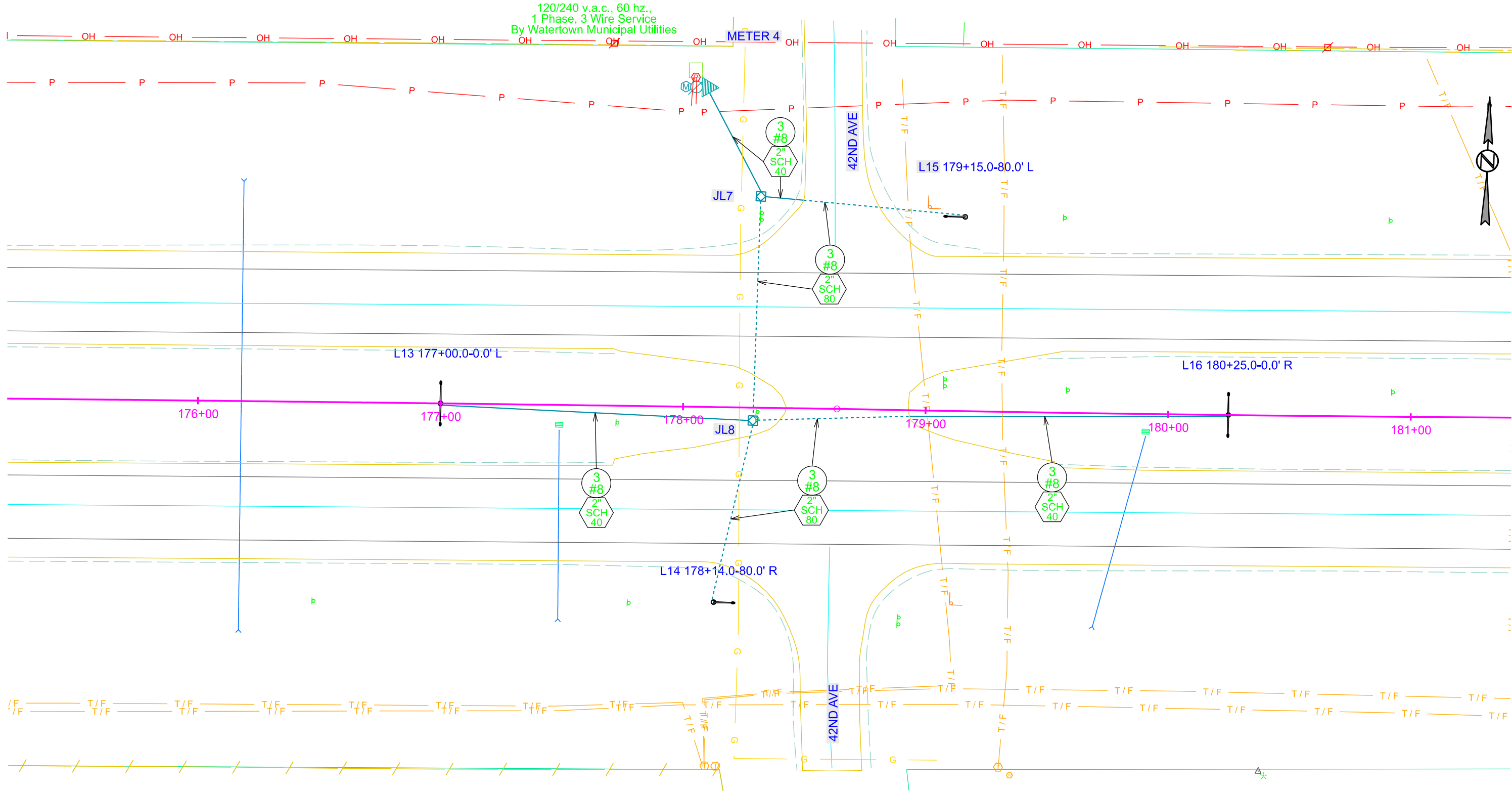
CONDUIT LAYOUT

US 212 & 42ND AVE

SD DOT	PROJECT	SECTION	SHEET
	NH 0212(214)370	11	21

Plotting Date: 08/12/2026

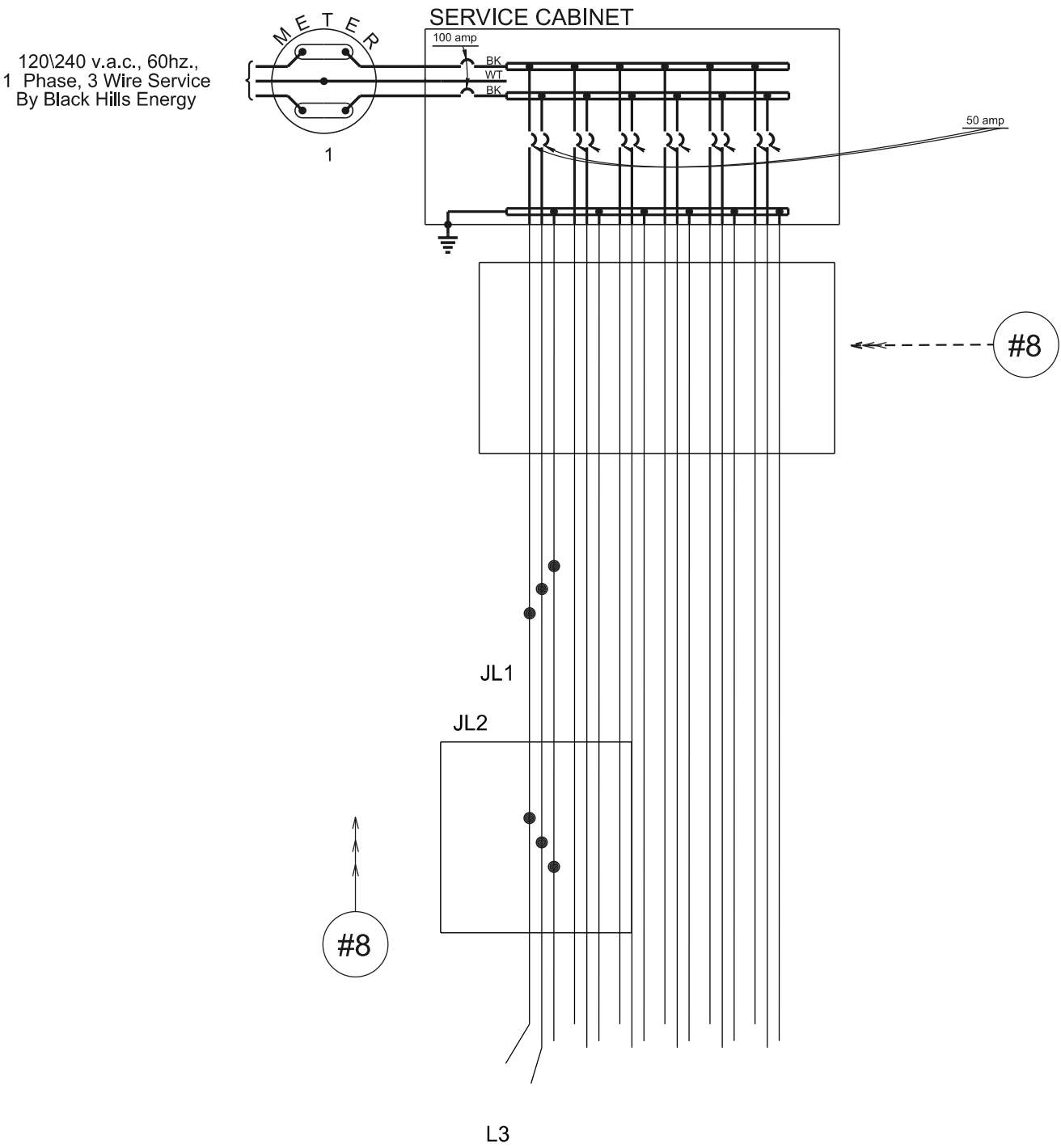
120/240 v.a.c., 60 hz.,
1 Phase, 3 Wire Service
By Watertown Municipal Utilities



WIRING DIAGRAM

US85 & COLORADO BLVD

SD DOT	PROJECT	SECTION	SHEET
	NH 0212(214)370	12	21
Plotting Date: 08/12/2026 Revised: 06/24/26-JU			



LEGEND:

-  FUSE: 10 amp.
-  LUMINAIRE: LED

LUMINAIRE  PHOTOCELL (TYPICAL OF ALL)

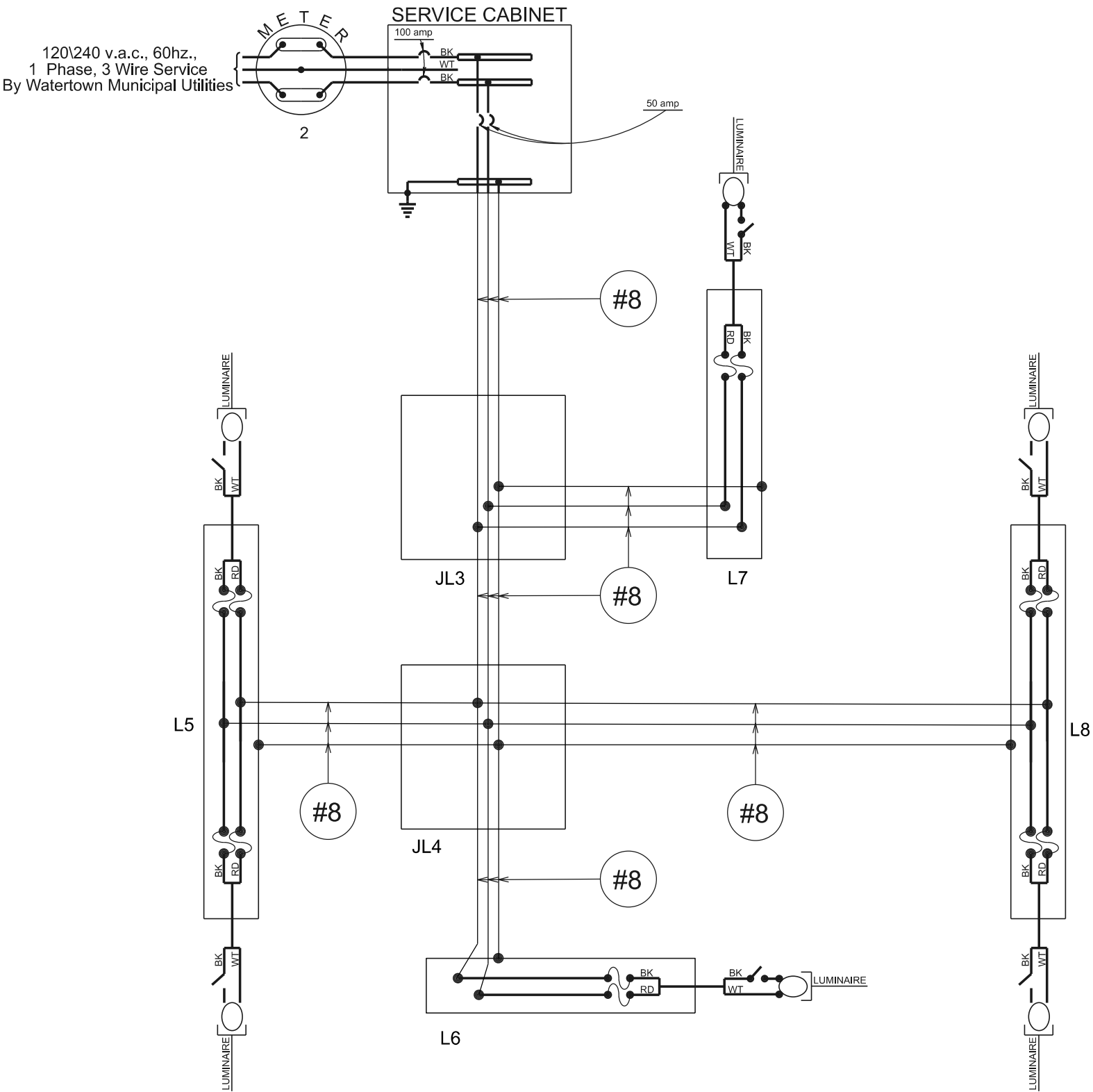
NOTE:
All circuits shall be bonded in accordance
with the NATIONAL ELECTRICAL CODE.
Quantities for bonding conductors are not
included in these plans.

WIRING DIAGRAM

US212 AND 60TH ST

PROJECT	SECTION	SHEET
NH 0212(214)370	13	21

Plotting Date: 08/12/2026
Revised: 06/24/26-JU



LEGEND:

-  FUSE: 10 amp.
-  LUMINAIRE: LED
-  PHOTOCELL (TYPICAL OF ALL)

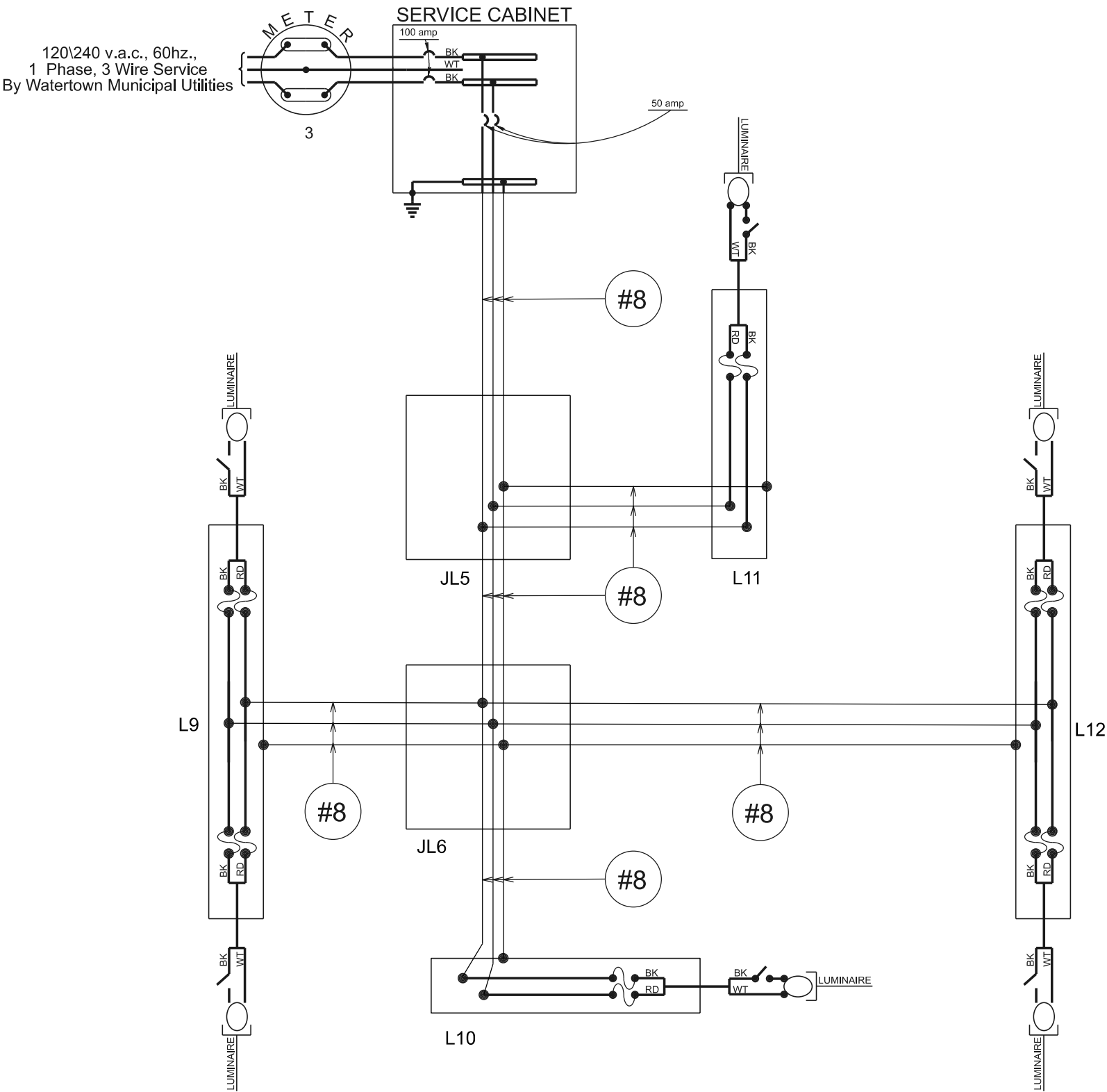
NOTE:
All circuits shall be bonded in accordance
with the NATIONAL ELECTRICAL CODE.
Quantities for bonding conductors are not
included in these plans.

WIRING DIAGRAM

US212 AND 54TH ST

PROJECT	SECTION	SHEET
NH 0212(214)370	14	21

Plotting Date: 08/12/2026
Revised: 06/24/26-JU



LEGEND:

 FUSE: 10 amp.

 LUMINAIRE: LED

 PHOTOCELL (TYPICAL OF ALL)

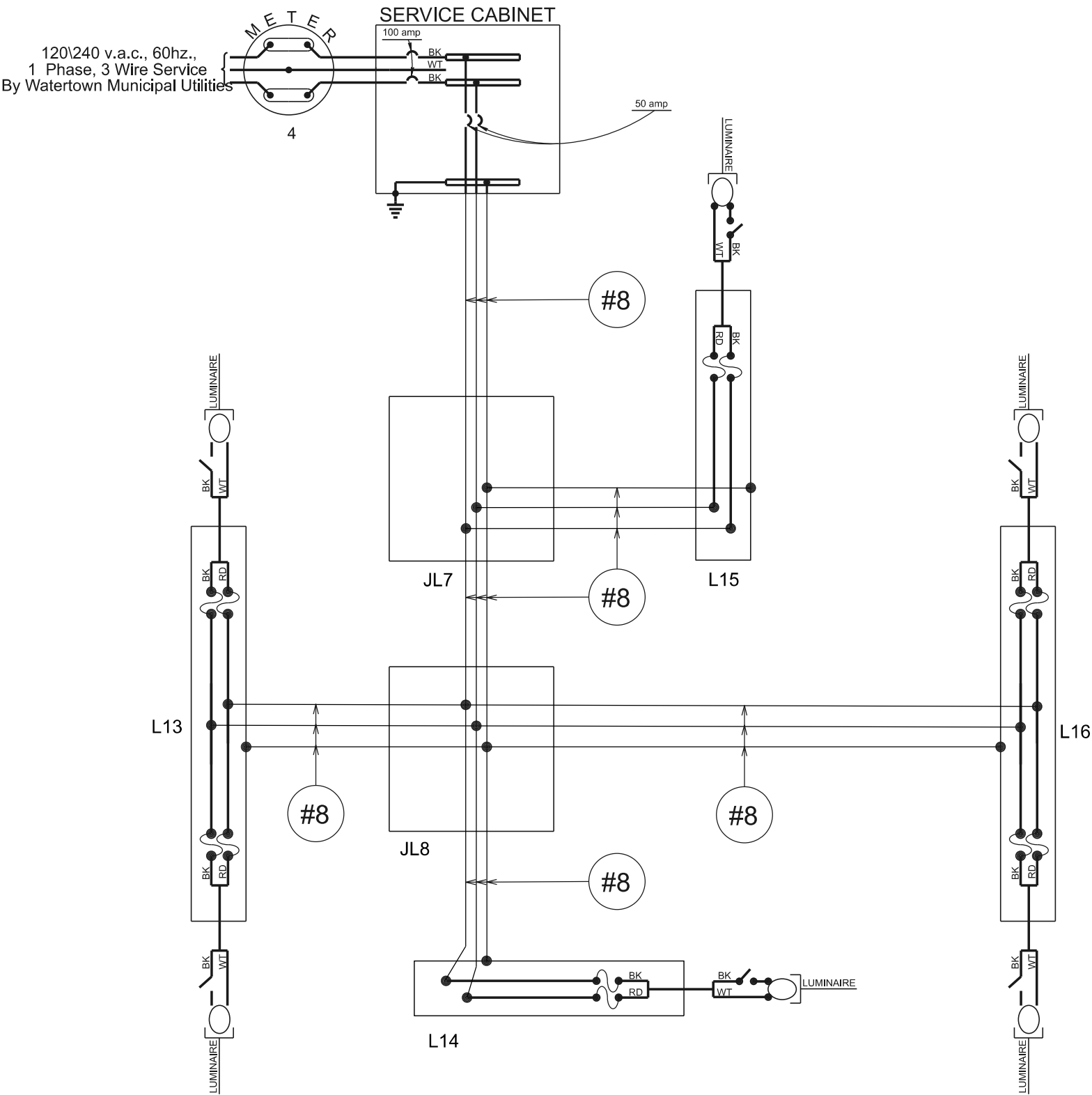
NOTE:
All circuits shall be bonded in accordance
with the NATIONAL ELECTRICAL CODE.
Quantities for bonding conductors are not
included in these plans.

WIRING DIAGRAM

US212 AND 42ND ST

PROJECT	SECTION	SHEET
NH 0212(214)370	15	21

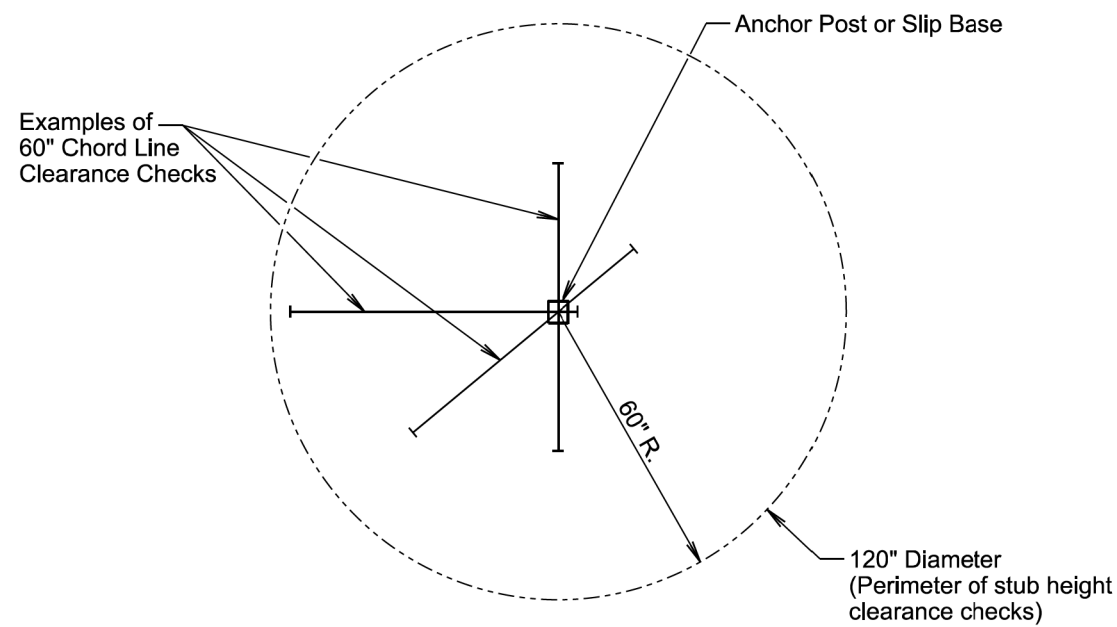
Plotting Date: 08/12/2026
Revised: 06/24/26-JU



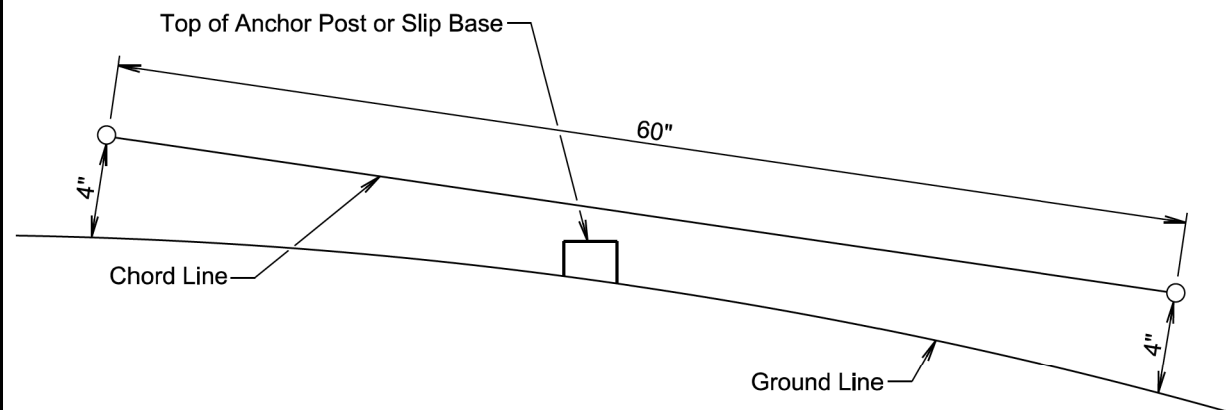
LEGEND:

- FUSE: 10 amp.
- LUMINAIRE: LED
- PHOTOCELL (TYPICAL OF ALL)

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



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

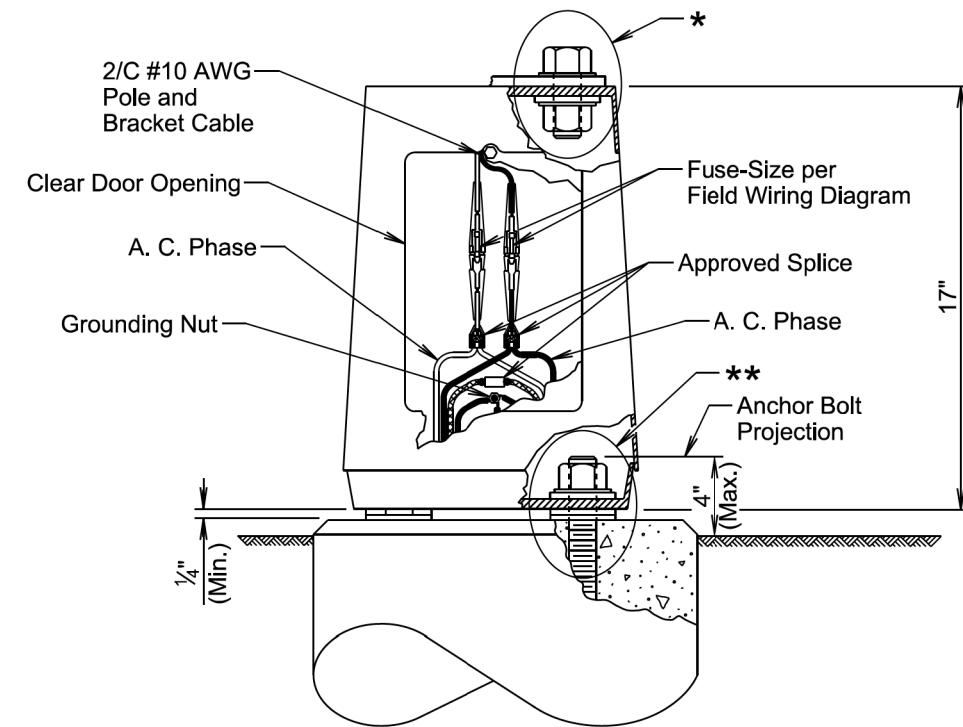
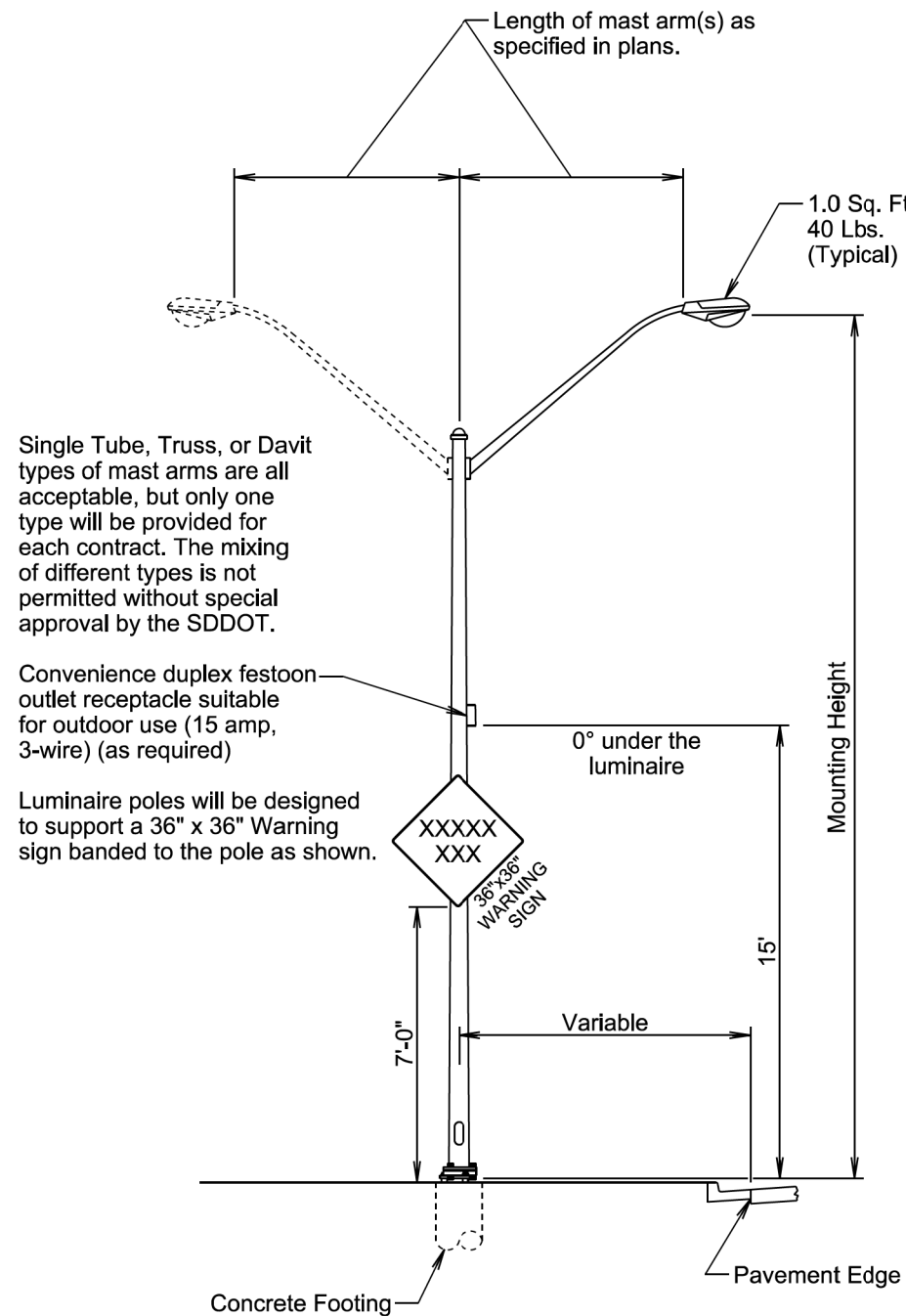
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

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

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

January 22, 2021

<i>Published Date: 2027</i>	SD DOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1



GENERAL NOTES:

Base details are provided for example only and are not intended to be a complete design.

Fused connectors will be breakaway type.

* Hardware connecting the pole to the base will be installed in accordance with the manufacturer's recommendation.

** Hardware connecting the base to the footing will be installed in accordance with the manufacturer's recommendation. The Contractor will install leveling devices in accordance with the manufacturer's recommendation if shimming is necessary to install the light poles plumb and level. The washers and shims will be installed around the anchor bolts.

Published Date: 2027

SD
DOT

STEEL ROADWAY LUMINAIRE POLE
WITH MAST ARM(S)

PLATE NUMBER
635.01

Sheet 1 of 1

Published Date: 2027

SD
DOT

ROADWAY LUMINAIRE POLE
BREAKAWAY TRANSFORMER BASE

PLATE NUMBER
635.21

Sheet 1 of 1

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

GENERAL NOTES:

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

The cover will have a lifting eye.

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

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

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

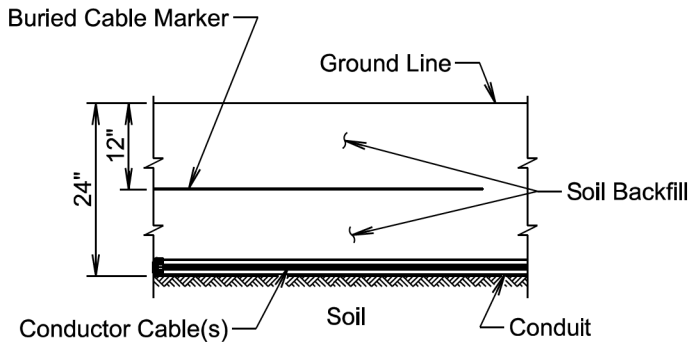
The electrical junction boxes will comply with the American National Standards Institute (ANSI)/Society of Cable Telecommunications Engineers (SCTE) 77 2007 Specification for Underground Enclosure Integrity. The loading requirement for all electrical junction boxes and covers will be Tier 22 of ANSI/SCTE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

The electrical junction boxes will be UL listed.

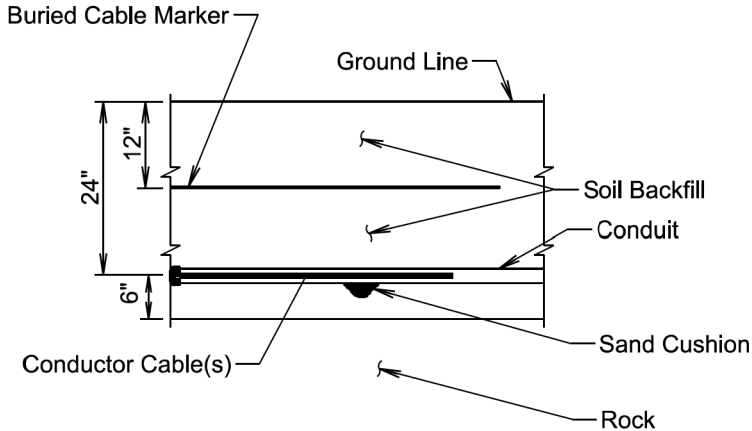
For junction boxes located outside of pavement, a No. 4 steel reinforcing bar with a minimum length of 18" will be buried adjacent to the long side of the junction box. All costs associated with furnishing and placing the steel reinforcing bar will be incidental to the contract unit price per each for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

November 19, 2020

Published Date: 2027	SD DOT	ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4	PLATE NUMBER 635.65
			Sheet 2 of 2



SECTION VIEW



SECTION VIEW

GENERAL NOTE:

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

November 19, 2022

Published Date: 2027	SD DOT	CONDUIT INSTALLATION	PLATE NUMBER 635.76
			Sheet 1 of 1