

Madison, Wisconsin

CITY OF MADISON

CITY ENGINEERING DIVISION

DEPARTMENT OF PUBLIC WORKS

PLAN OF PROPOSED IMPROVEMENT

NORTHPORT DRIVE & SCHOOL ROAD

TRAFFIC SIGNAL

CITY PROJECT NO. 14439
CONTRACT NO. 9304

INDEX OF SHEETS

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SHEET NO.	E1-E7	ELECTRICAL PLANS
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SHEET NO.	MQ1-MQ3	MISC. QUANTITIES

PUBLIC IMPROVEMENT PROJECT APPROVED

APPROVED DATE: 2/28/2023

BY THE COMMON COUNCIL OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN APPROVED BY:

J. Hill Oct 25, 2023

City Engineer Date

SIGNING & MARKING DESIGNED BY:



ELECTRICAL DESIGNED BY:

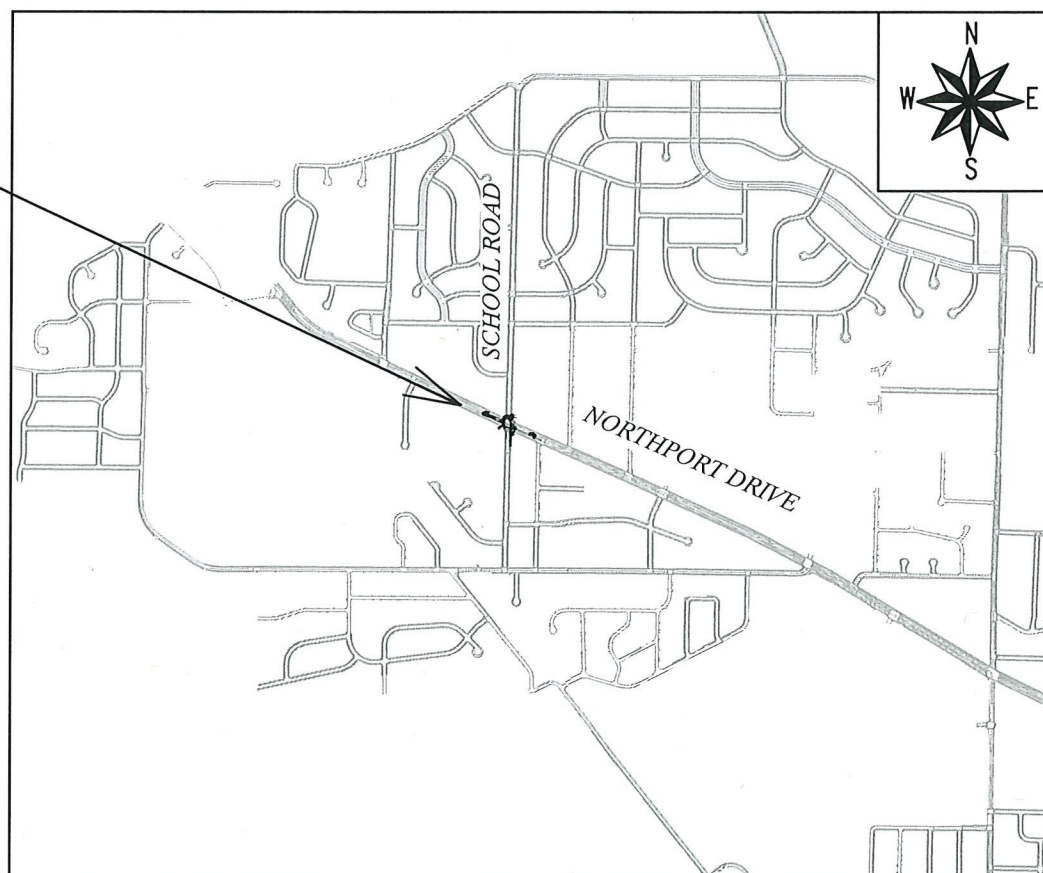


CONVENTIONAL SIGNS	
FIELD VERIFY ALL UTILITY LOCATIONS	
GAS	— G —
STORM SEWER	— ST —
SANITARY SEWER	— SN —
WATER	— W —
BURIED ELECTRIC	— E —
OVERHEAD ELECTRIC	— OH —
POWER POLE	
ADA COMPLIANT RAMP W/ DETECTABLE WARNING FIELD	
COMBUSTIBLE FLUIDS	

NOTES:

ALL GUTTERS SHALL DRAIN WITH A MINIMUM GRADE OF 0.50% TOWARD STORM SEWER INLETS.

SIDEWALK RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1" PER 12". SIDEWALK AND CURB RAMPS SHALL BE CONSTRUCTED WITH A SIDE SLOPE OF 2.00%. SIDEWALK SHALL HAVE A MINIMUM LONGITUDINAL SLOPE OF 0.50% AND A MAXIMUM LONGITUDINAL SLOPE OF 5.00% EXCEPT WHERE STREET GRADES EXCEED 5.00%.



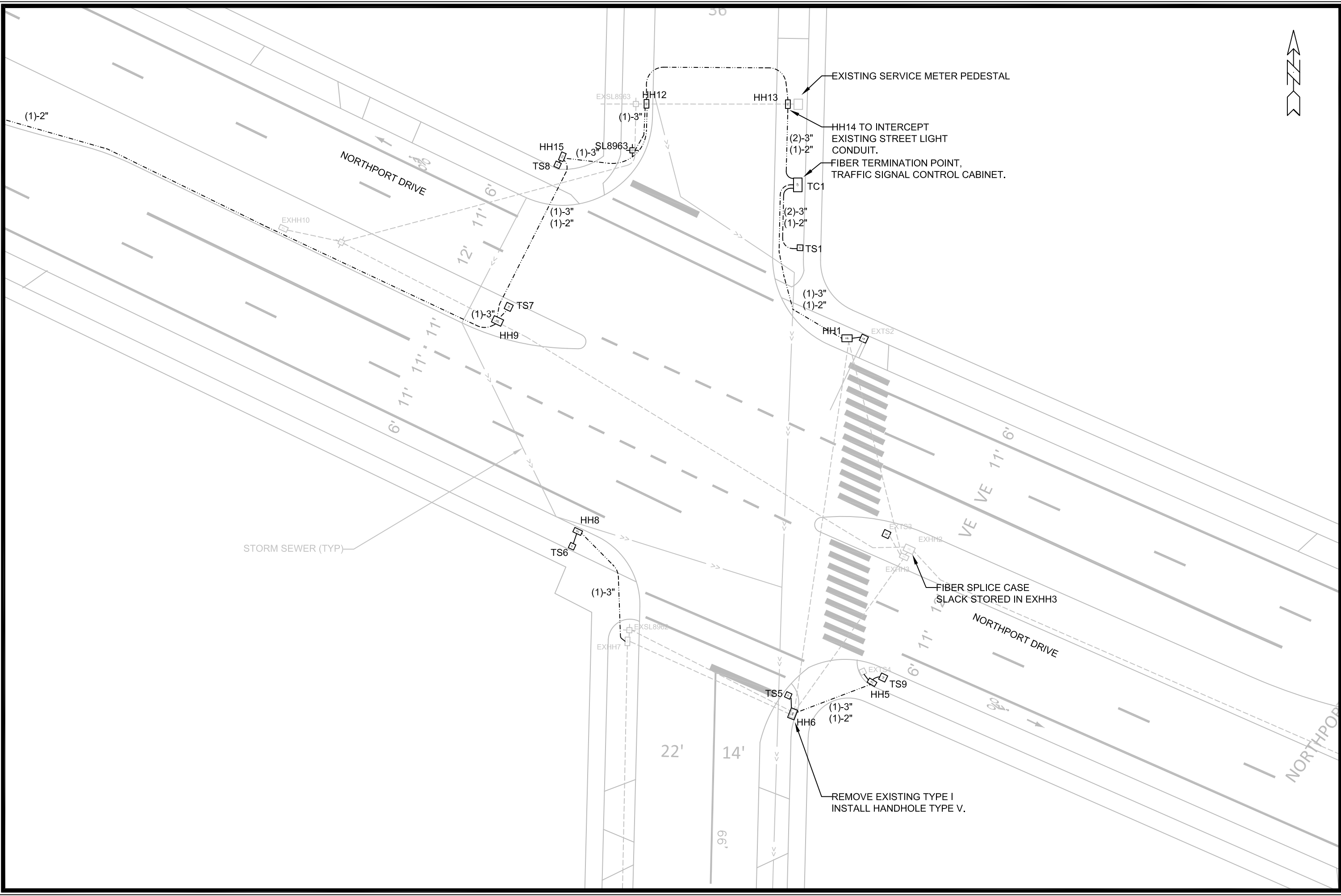
PROJECT LOCATION


PLOT SCALE: 1" = 1'

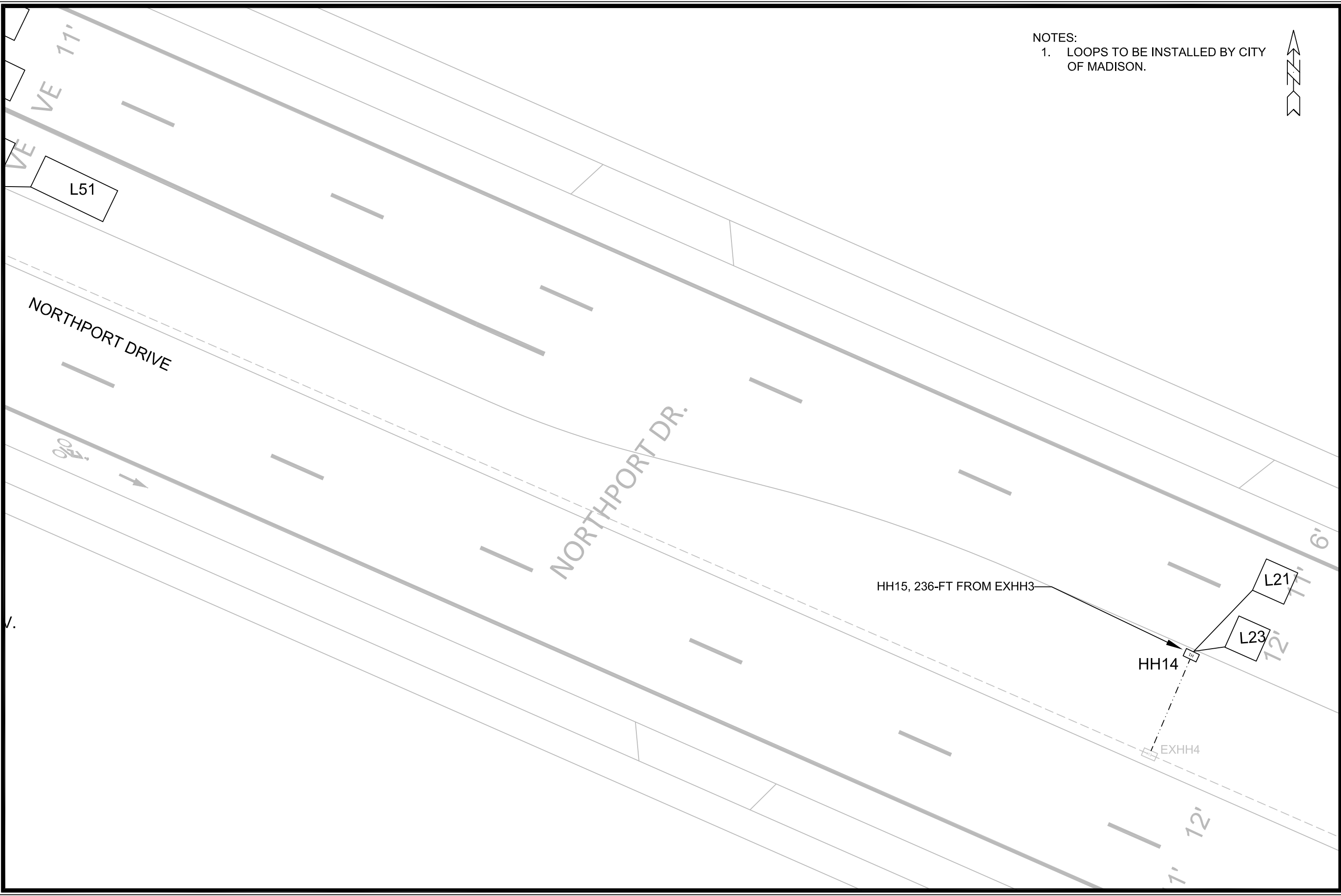
PLOT NAME: —

REV. DATE: 2/17/2023 2:18 PM

ORIGINATOR: CITY_OF_MADISON



ELECTRICAL PLANS	14439	MADISON, WI	9304	E-1
NORTHPORT DRIVE & SCHOOL ROAD TRAFFIC SIGNAL				
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NOTES:
 1. LOOPS TO BE INSTALLED BY CITY OF MADISON.



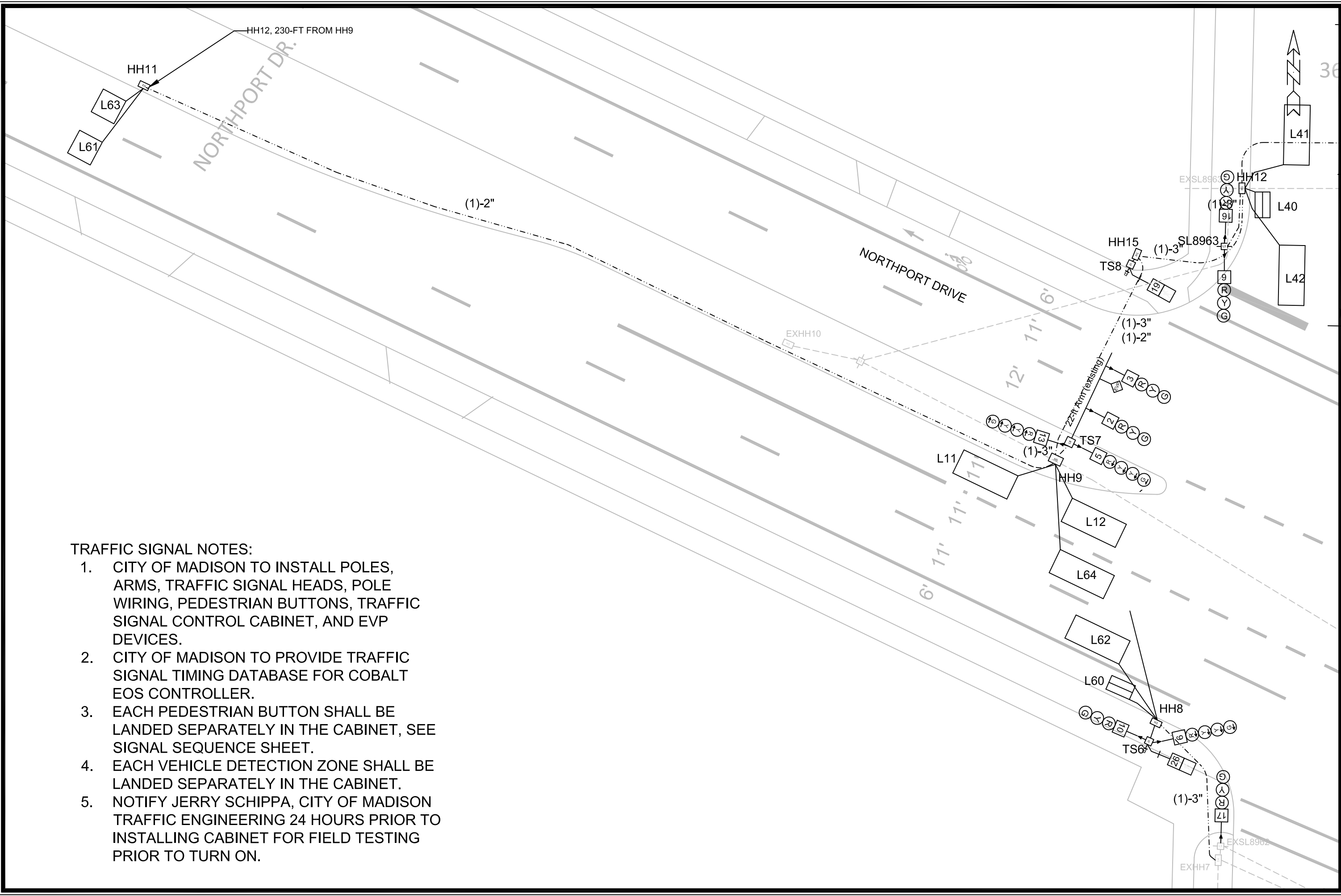
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ELECTRICAL PLANS
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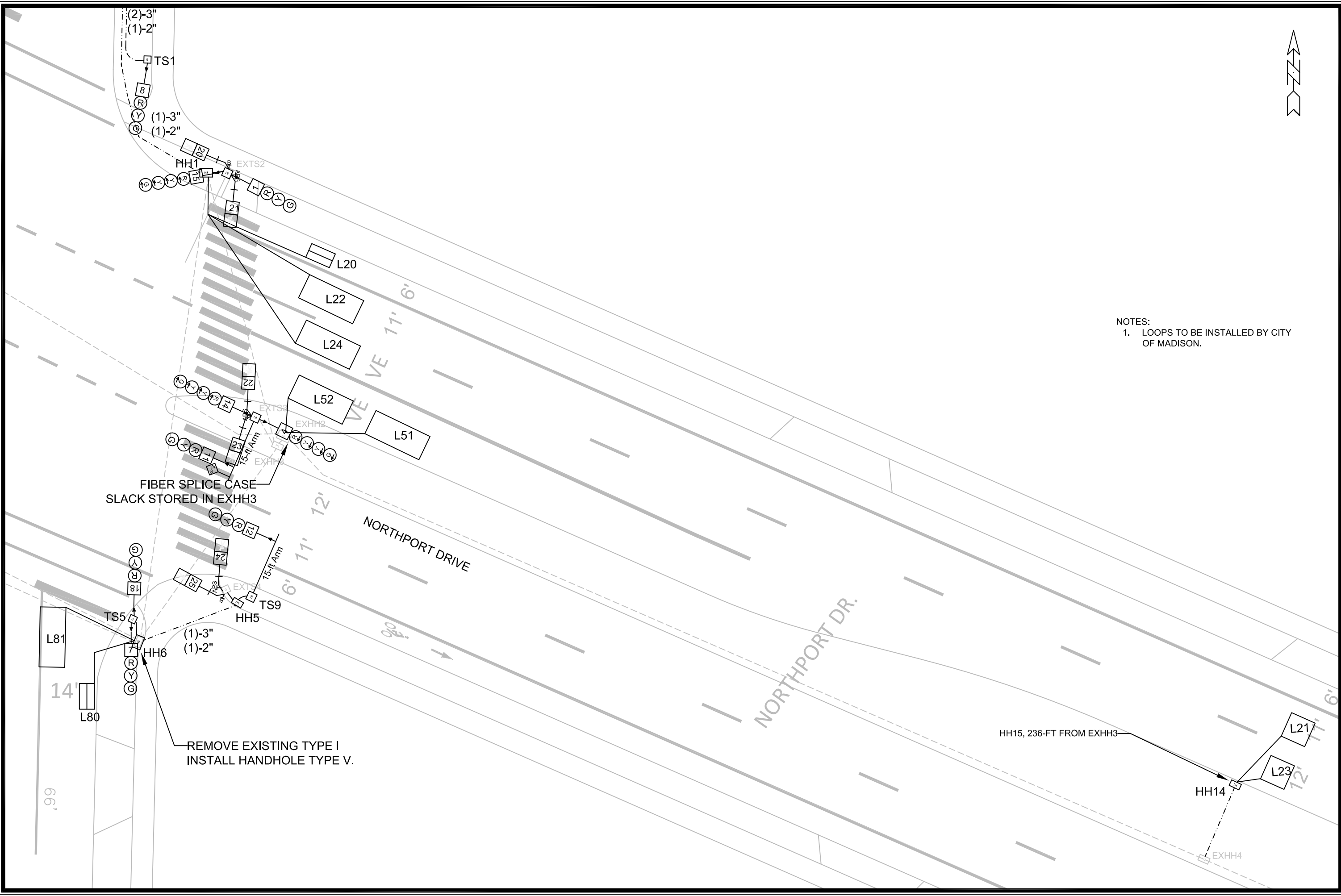
14439
 E-3



TRAFFIC SIGNAL NOTES:

1. CITY OF MADISON TO INSTALL POLES, ARMS, TRAFFIC SIGNAL HEADS, POLE WIRING, PEDESTRIAN BUTTONS, TRAFFIC SIGNAL CONTROL CABINET, AND EVP DEVICES.
2. CITY OF MADISON TO PROVIDE TRAFFIC SIGNAL TIMING DATABASE FOR COBALT EOS CONTROLLER.
3. EACH PEDESTRIAN BUTTON SHALL BE LANDED SEPARATELY IN THE CABINET, SEE SIGNAL SEQUENCE SHEET.
4. EACH VEHICLE DETECTION ZONE SHALL BE LANDED SEPARATELY IN THE CABINET.
5. NOTIFY JERRY SCHIPPA, CITY OF MADISON TRAFFIC ENGINEERING 24 HOURS PRIOR TO INSTALLING CABINET FOR FIELD TESTING PRIOR TO TURN ON.

	14439 E-4	ELECTRICAL PLANS NORTHPORT DRIVE & SCHOOL ROAD TRAFFIC SIGNAL <small>M:\DESIGN\Projects\14439\Plans\14439 SIGNAL PLANS.dwg</small>	14439 9304 CONTRACT NO:																																			
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NOTES:
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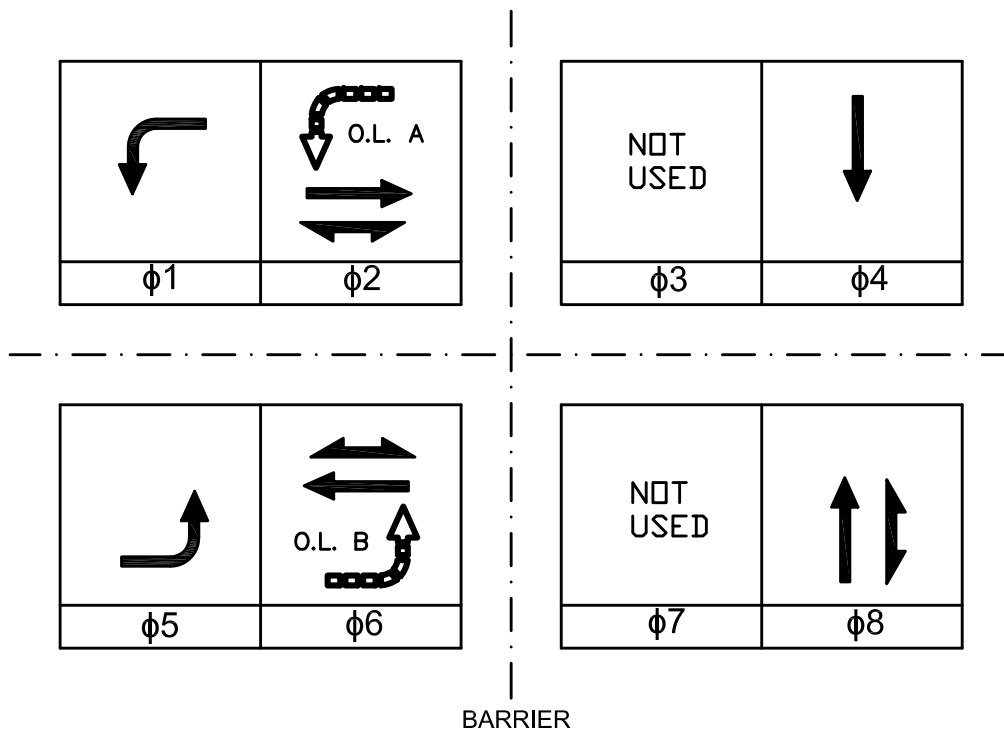
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14439
 E-5

	HEAD NUMBERS	FLASH
φ1	---	R
φ2	4,5,6	R
φ3	---	
φ4	16,17,18	R
φ5	---	R
φ6	1,2,3	
φ7	---	
φ8	13,14,15	R
φ2 PED	25,26	
φ4 PED	---	
φ6 PED	19,20	
φ8 PED	21,22,23,24	

O.L. ASSIGNMENTS		
OLA	7,8,9	φ1 PROT + φ2 FYA
OLB	10,11,12	φ5 PROT + φ6 FYA



PREEMPTION ASSIGNMENTS			
PREEMPTION DESIGNATION	PREEMPTION TYPE	EVP CHANNEL	PHASE(S) CALLED
1	RESERVED		
2	RESERVED		
3	EB/WB EVP	C	2, 5
4	NB/SB EVP	D	1, 6
5	WB EVP		
6	NOT USED		
7	NOT USED		
8	NOT USED		
9	NOT USED		
10	NOT USED		

PED BUTTON INPUT:
 PB1: BUTTONS CROSSING N LEG
 PB2: BUTTONS CROSSING S LEG
 PB3: NE CORNER
 PB4: MEDIAN BUTTON
 PB5: SE CORNER

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / φ	PHASE RECALL	PHASE ACTIVE
1				X
2	X	X	PED	X
3				
4	X	X	NONE	X
5				X
6	X	X	PED	X
7				
8	X	X	NONE	X

TYPE OF INTERCONNECT	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	X
RADIO	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE LIGHTING CABINET	X

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF REMOTE COMMUNICATION	
NONE	
FIBER	X
CELL MODEM	
PHONE	

DETECTOR LOGIC

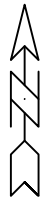
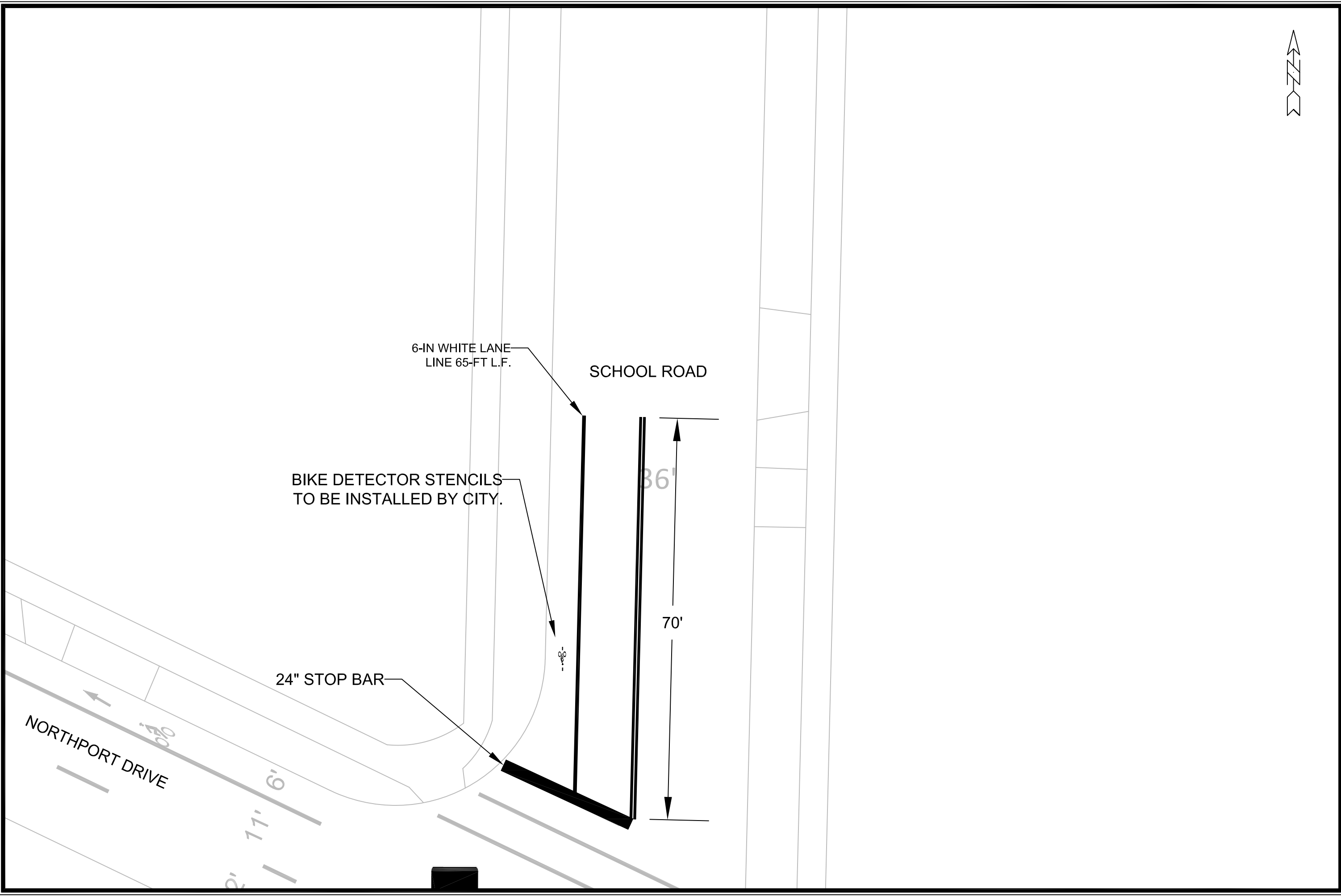
DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	52	12	64	62	24	22	26	
PHASE CALLED	5	1	6	6	2	2	2	
PHASE EXTENDED	5,6	1,2	6	6	2	2	2	
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH			4.0	4.0	4.0	4.0	13.0	
LOOP FUNCTION			ADD IN.	ADD IN.	ADD IN.	ADD IN.	BIKE	

DETECTOR INPUT	19	17	23	21	27	25	31	29
DETECTOR #(S)		81		42				
PHASE CALLED		8		4				
PHASE EXTENDED		8		4				
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)	51	11	63	61	23	21	25	64
PHASE CALLED	5	1	6	6	2	2	2	6
PHASE EXTENDED	5,6	1,2	6	6	2	2	2	6
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION							BIKE	BIKE

DETECTOR INPUT	20	18	24	22	28	26	32	30
DETECTOR #(S)		82	43	41				
PHASE CALLED		8	4	4				
PHASE EXTENDED		8	4	4				
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION		BIKE	BIKE					

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 CITY OF MADISON, WI
 NORTHPORT DRIVE & SCHOOL ROAD TRAFFIC SIGNAL
 CONTRACT NO: 14439
 DESIGNER: [Logo]
 DATE: [] BY: []
 REVISION: []
 SCALE: NO SCALE
 14439



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14439	14439	2/21/2023	JLS	Scale: 1" = 15'	
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14215 - TRAFFIC SIGNAL CONDUCTORS

FROM	TO	5-14 AWG (LF)	7-14 AWG (LF)	9-14 AWG (LF)	12-14 AWG (LF)	10 AWG (LF)	LOOP DETECTOR	24-CT FIBER	COMMENTS
							LEAD-IN CABLE		
							SPECIAL		
TC1	TS1	35	-	-	-	25	-	-	
TC1	EXTS2	-	170	-	-	65	-	-	
TC1	EXTS3	-	-	360	-	180	-	-	
TC1	EXTS4	-	185	-	-	160	-	-	
TC1	TS9	195	-	-	-	45	-	-	
TC1	TS5	-	200	-	-	185	-	-	
TC1	EXSL8962	205	-	-	-	20	-	-	
TC1	TS6	-	-	-	225	210	-	-	
TC1	TS7	-	205	185	-	185	-	-	
TC1	TS8	130	-	-	-	115	-	-	
TC1	SL8963	-	-	115	-	115	-	-	
TC1	HH1	-	-	-	-	-	192	-	(3) LOOPS
TC1	EXHH2	-	-	-	-	-	230	-	(2) LOOPS
TC1	HH14	-	-	-	-	-	670	-	(2) LOOPS
TC1	HH6	-	-	-	-	-	360	-	(2) LOOPS
TC1	HH8	-	-	-	-	-	450	-	(2) LOOPS
TC1	HH9	-	-	-	-	-	495	-	(3) LOOPS
TC1	HH11	-	-	-	-	-	464	-	(2) LOOPS
TC1	HH12	-	-	-	-	-	160	-	(2) LOOPS
TC1	EXHH3	-	-	-	-	-	-	150	
TOTAL		565	760	660	225	1305	3021	150	

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