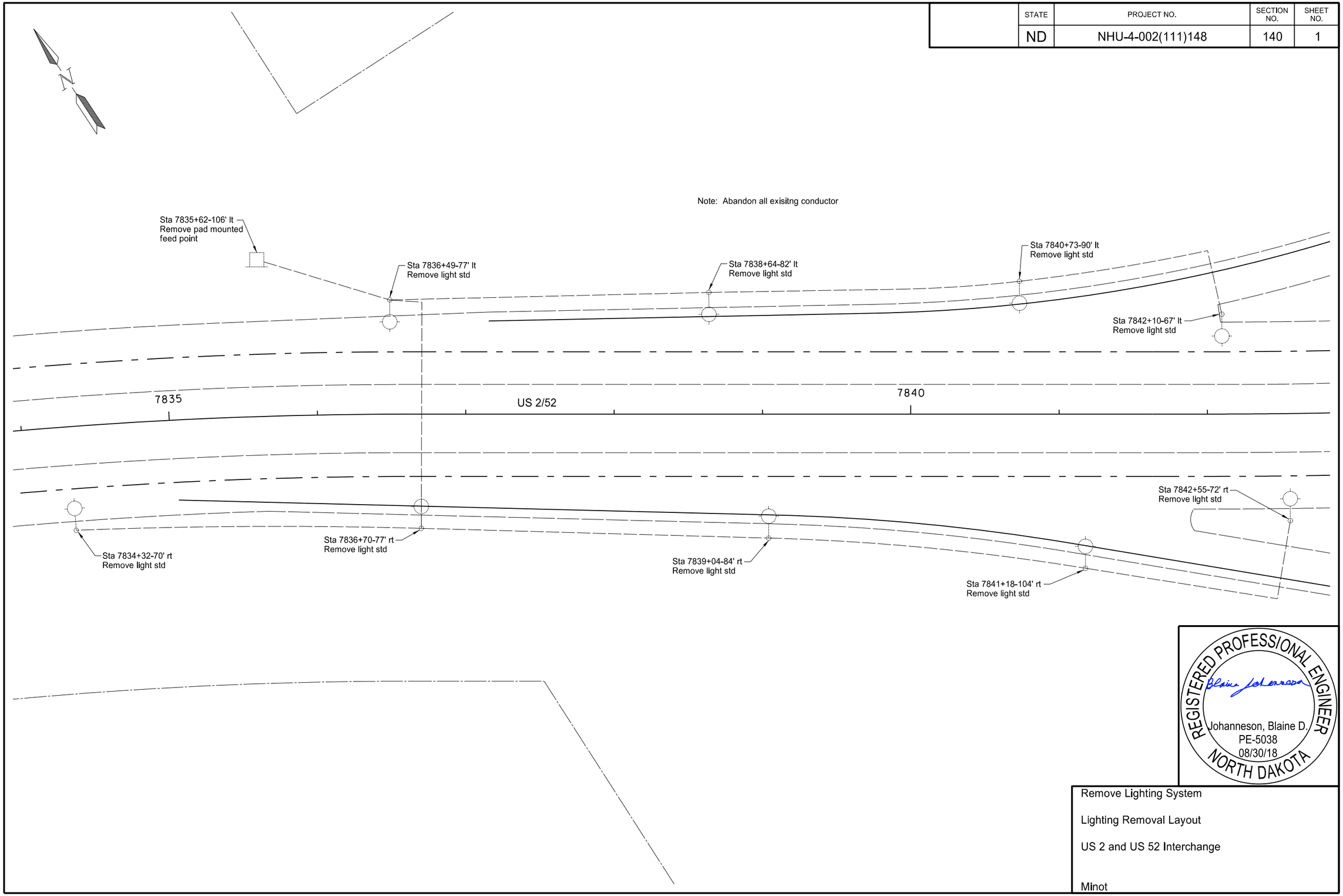
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	1



REGISTERED PROFESSIONAL ENGINEER
Johanneson, Blaine D.
PE-5038
08/30/18
NORTH DAKOTA

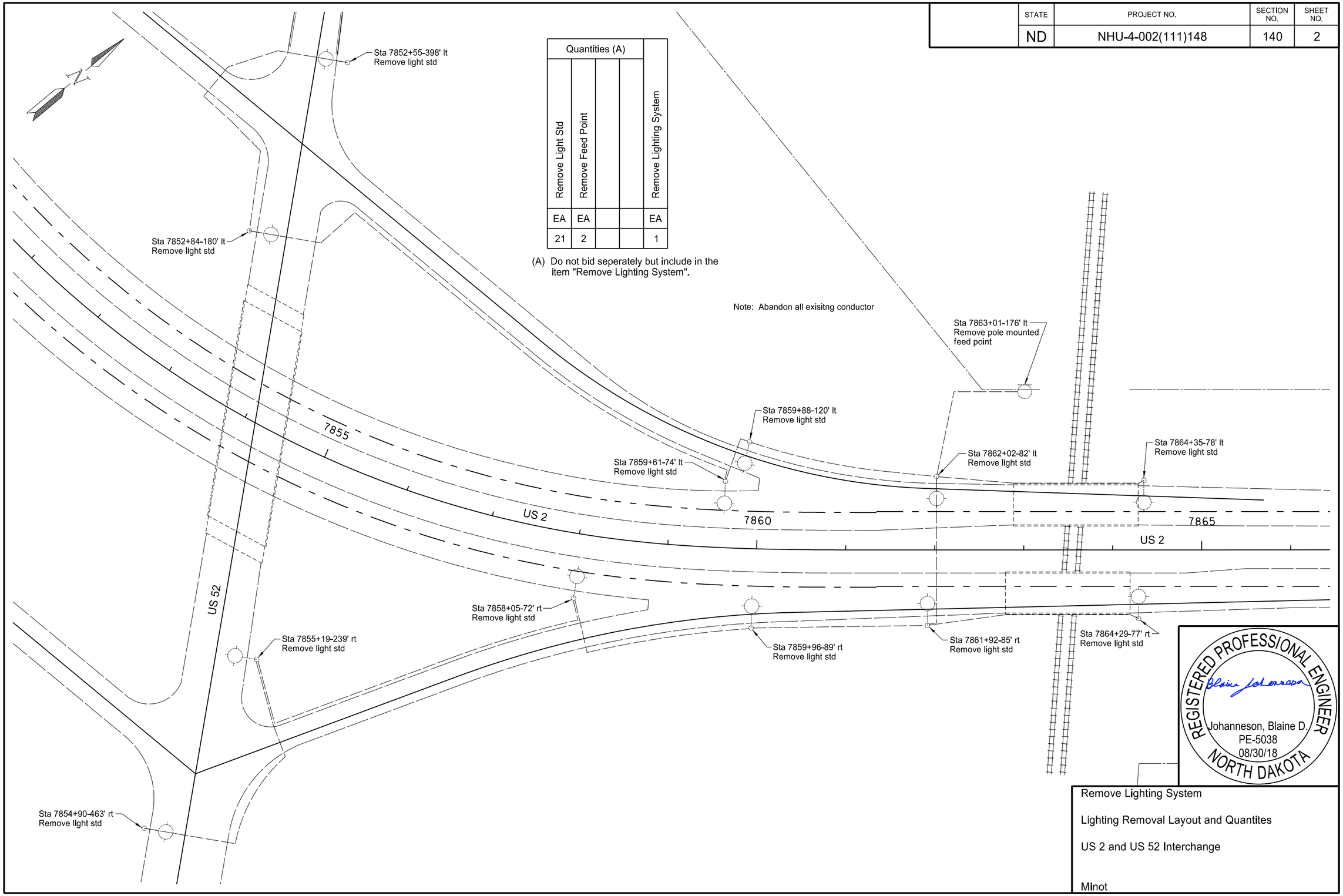
Remove Lighting System

Lighting Removal Layout

US 2 and US 52 Interchange

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	2



Quantities (A)				
Remove Light Std	Remove Feed Point			Remove Lighting System
EA	EA			EA
21	2			1

(A) Do not bid seperately but include in the item "Remove Lighting System".

Note: Abandon all exisitng conductor

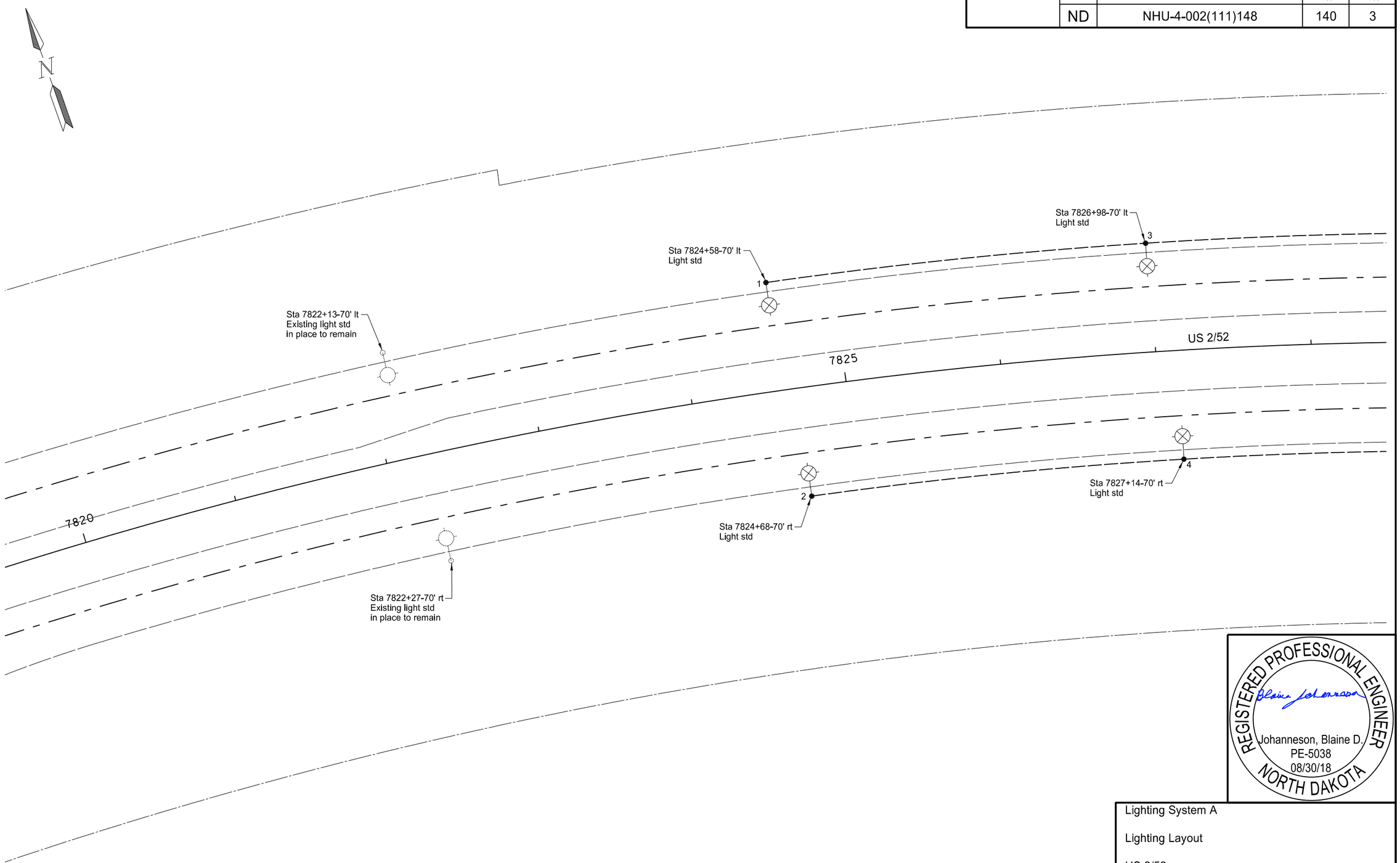
Remove Lighting System

Lighting Removal Layout and Quantites

US 2 and US 52 Interchange

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	3



REGISTERED PROFESSIONAL ENGINEER
Johanneson, Blaine D.
PE-5038
08/30/18
NORTH DAKOTA

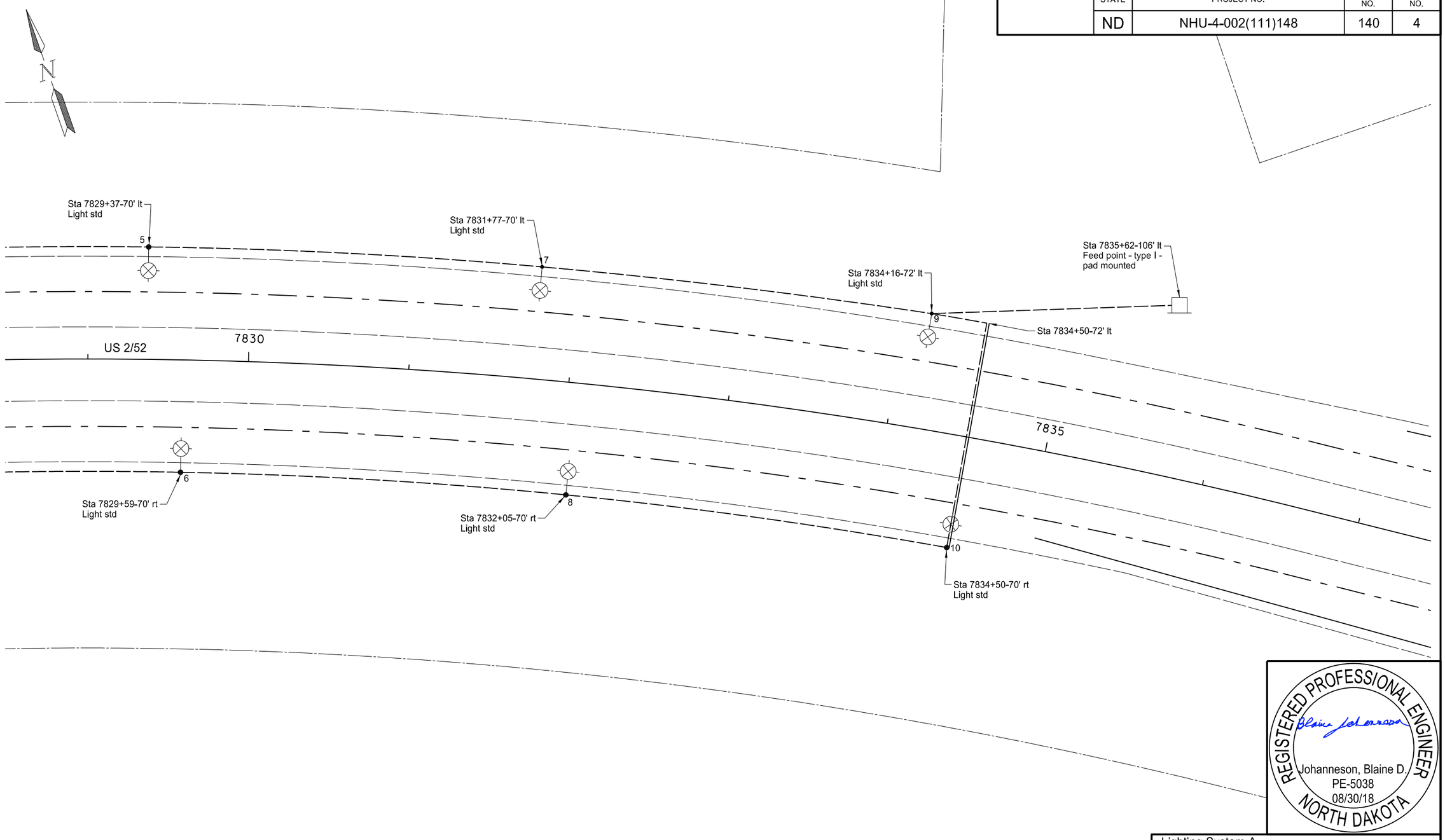
Lighting System A

Lighting Layout

US 2/52

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	4



REGISTERED PROFESSIONAL ENGINEER
Johanneson, Blaine D.
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08/30/18
NORTH DAKOTA

Lighting System A

Lighting Layout

US 2/52

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	5

Light Std Number	Station	Cable Trench	Conduit Runs		Cable Runs	
		LF	LF	Dia	LF	Type
2 4	7824+68-70' rt to 7827+14-70' rt	239			249	3 No. 6 USE
4 6	7827+14-70' rt to 7829+59-70' rt	238			248	3 No. 6 USE
6 8	7829+59-70' rt to 7832+05-70' rt	239			249	3 No. 6 USE
8 10	7832+05-70' rt to 7834+50-70' rt	238			248	3 No. 6 USE
10 9	7834+50-70' rt to 7834+50-72' lt to 7834+16-72' lt	33	141	2"	184	3 No. 6 USE
1 3	7824+58-70' lt to 7826+98-70' lt	244			254	3 No. 6 USE
3 5	7826+98-70' lt to 7829+37-70' lt	243			253	3 No. 6 USE
5 7	7829+37-70' lt to 7831+77-70' lt	244			254	3 No. 6 USE
7 9	7831+77-70' lt to 7834+16-72' lt	243			253	3 No. 6 USE
9 FP	7834+16-72' lt to 7835+62-106' lt	148			164	3 No. 6 USE

Lighting Quantities (A)										
Concrete Foundation - Highway Lighting	Concrete Foundation - Feed Point - Type B	Cable Trench - Type II	2" Dia Rigid Conduit	Multiple Underground Cable 3 No. 6 Style USE	Feed Point - Type I - Pad Mounted	Light Std 10' MA 42' Pole Breakaway	LED Luminaire			Lighting System A
EA	EA	LF	LF	LF	EA	EA	EA			EA
10	1	2109	141	2356	1	10	10			1

(A) Do not bid seperately but include in the item "Lighting System A".

Light Standards - Feed Point A					
No.	Station	Wattage	Circuit	Pole Ht.	Mast Arm
1	7824+58-70' lt	200 - 210	1	42' (B)	10'
2	7824+68-70' rt	200 - 210	1	42' (B)	10'
3	7826+98-70' lt	200 - 210	1	42' (B)	10'
4	7827+14-70' rt	200 - 210	1	42' (B)	10'
5	7829+37-70' lt	200 - 210	1	42' (B)	10'
6	7829+59-70' rt	200 - 210	1	42' (B)	10'
7	7831+77-70' lt	200 - 210	1	42' (B)	10'
8	7832+05-70' rt	200 - 210	1	42' (B)	10'
9	7834+16-72' lt	200 - 210	1	42' (B)	10'
10	7834+50-70' rt	200 - 210	1	42' (B)	10'

(B) Breakaway

LIGHTING FOUNDATION TABLE		
Description	Footing Depth "D" 24" and 30" Dia	Footing Depth "D" 36" and 42" Dia
Light Standard 42' Pole	6'	5'

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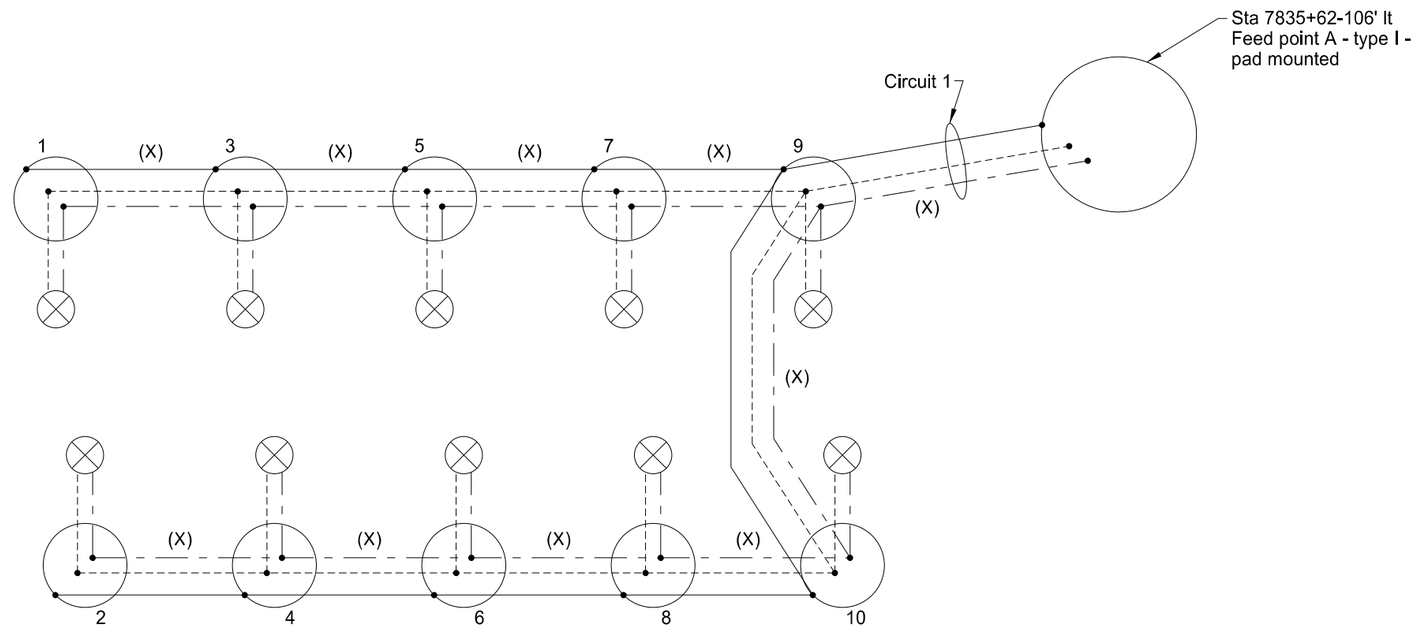
Lighting System A

Cable Runs, Light Standards, and Quantities

US 2/52

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	6



LEGEND

— - — - —	Phase conductor
- - - - - - - -	Phase conductor
————	Ground conductor
(X)	Multiple underground cable 3 No. 6 USE
⊗	LED luminaire 120v x 240v operated on 240v
○	Light standard
8	Light standard number

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PE-5038
08/30/18
NORTH DAKOTA

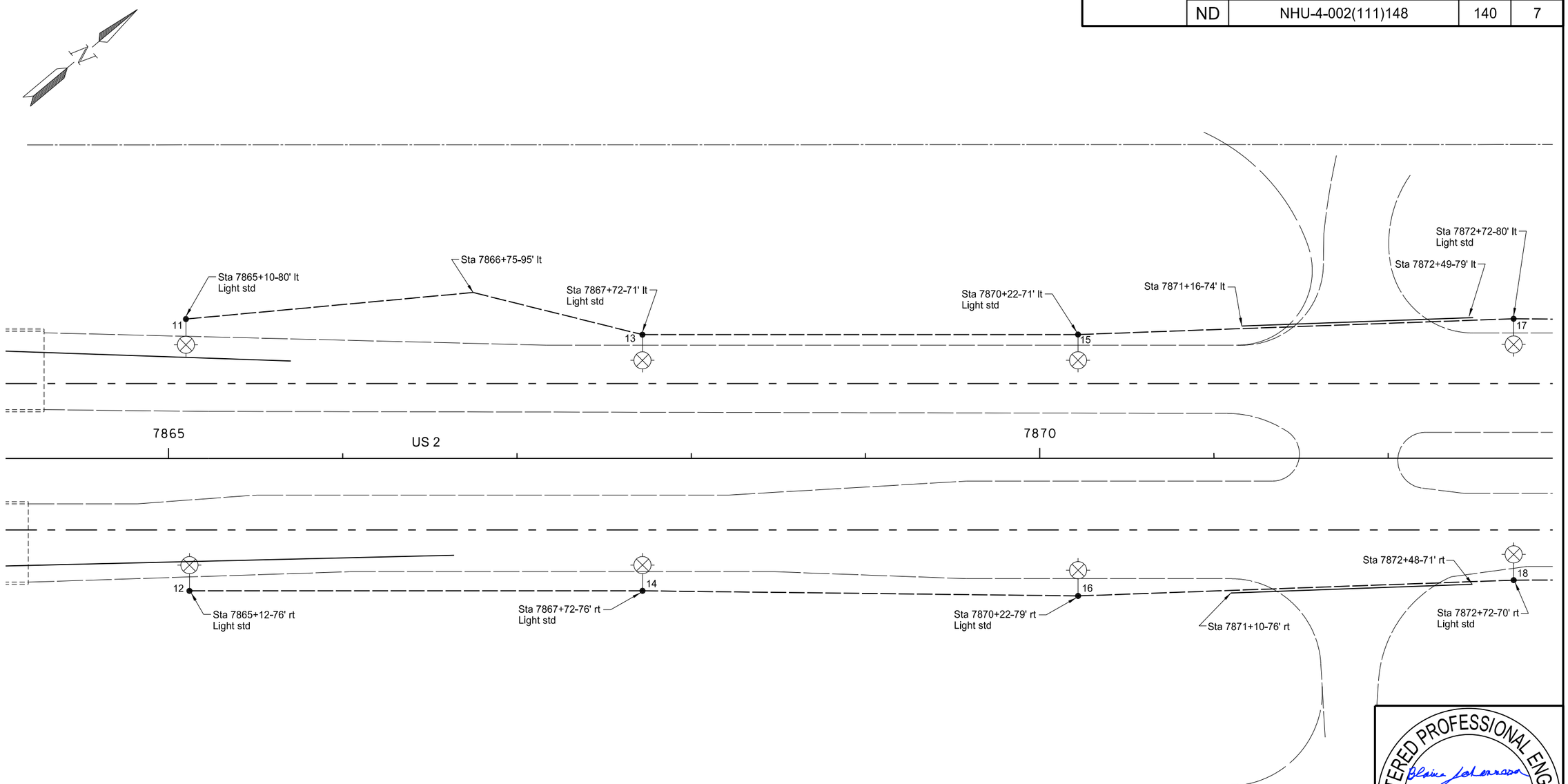
Lighting System A

Lighting Schematic - Feed Point A

US2/52

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	7



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Johanneson, Blaine D.
PE-5038
08/30/18
NORTH DAKOTA

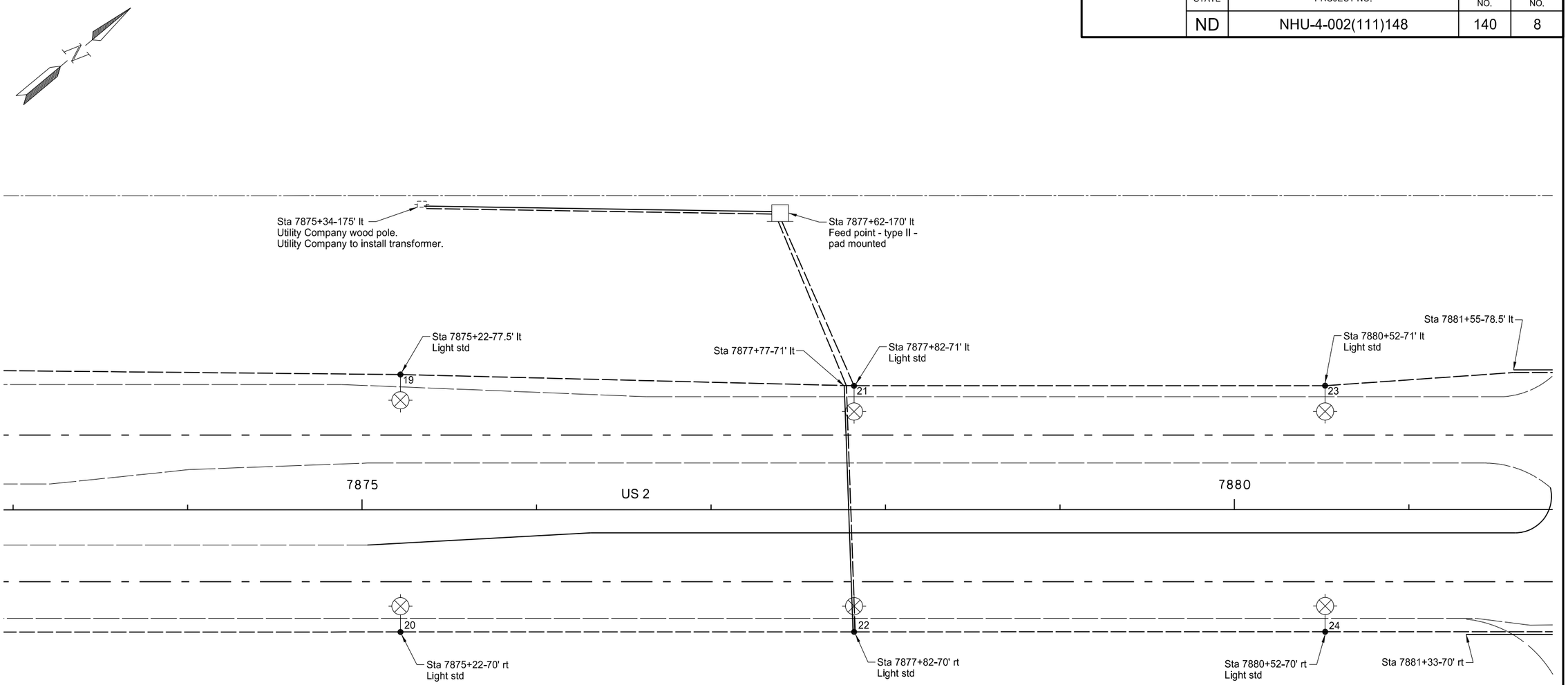
Lighting System B

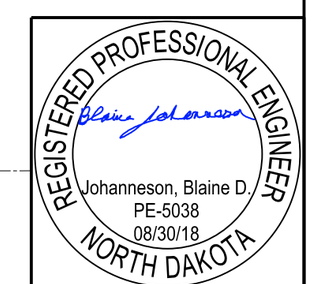
Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	8





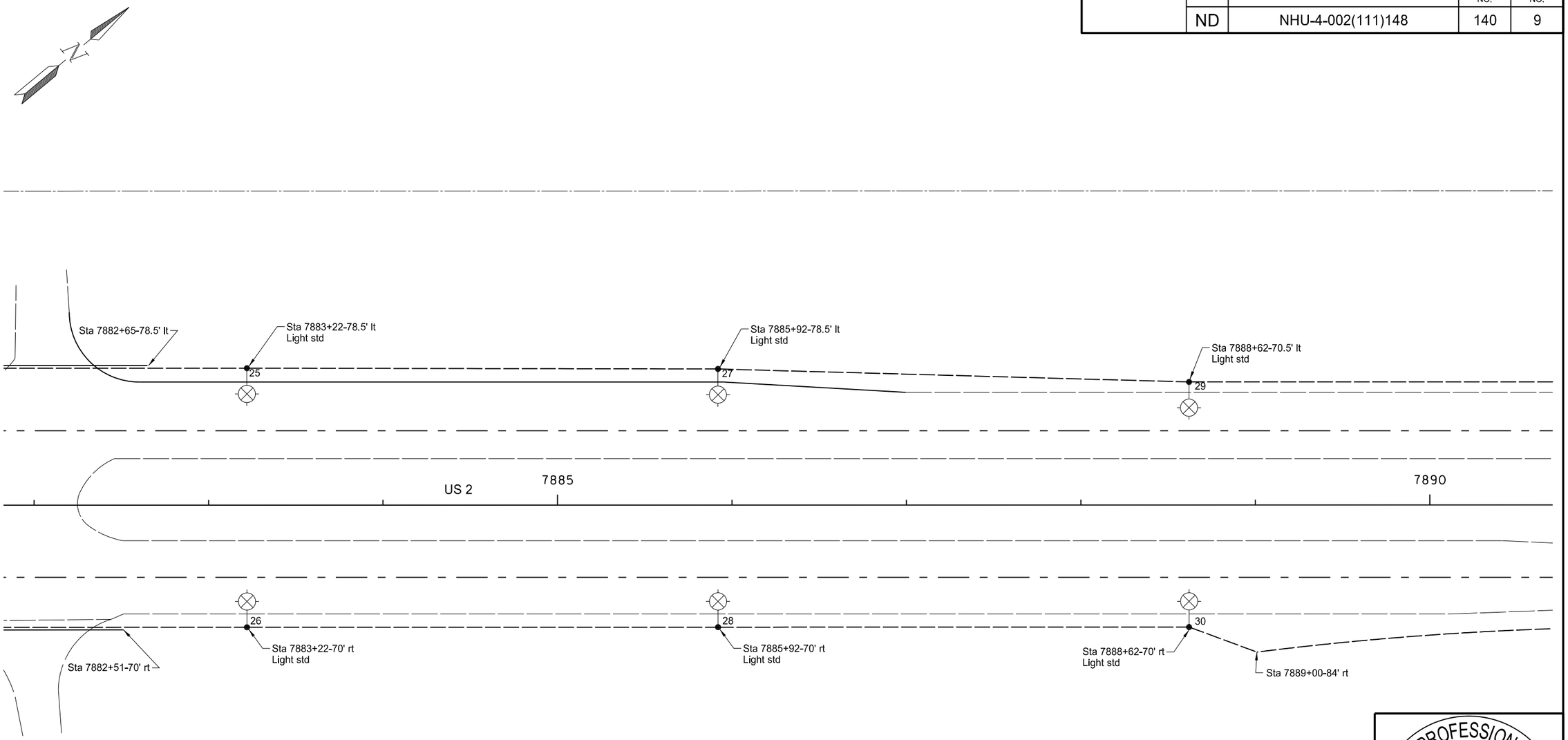
Lighting System B

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	9



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Johanneson, Blaine D.
PE-5038
08/30/18
NORTH DAKOTA

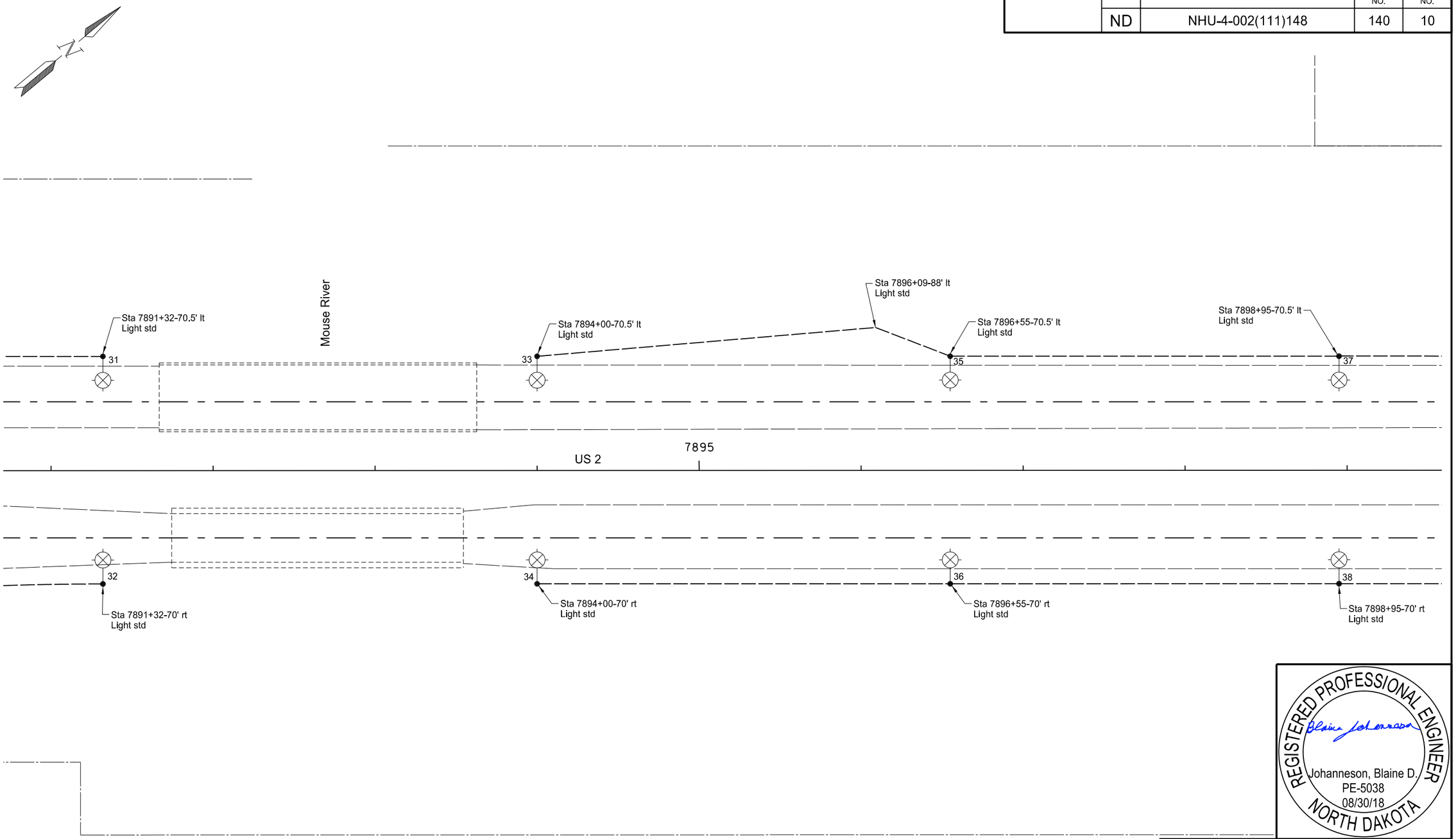
Lighting System B

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	10



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PE-5038
08/30/18
NORTH DAKOTA

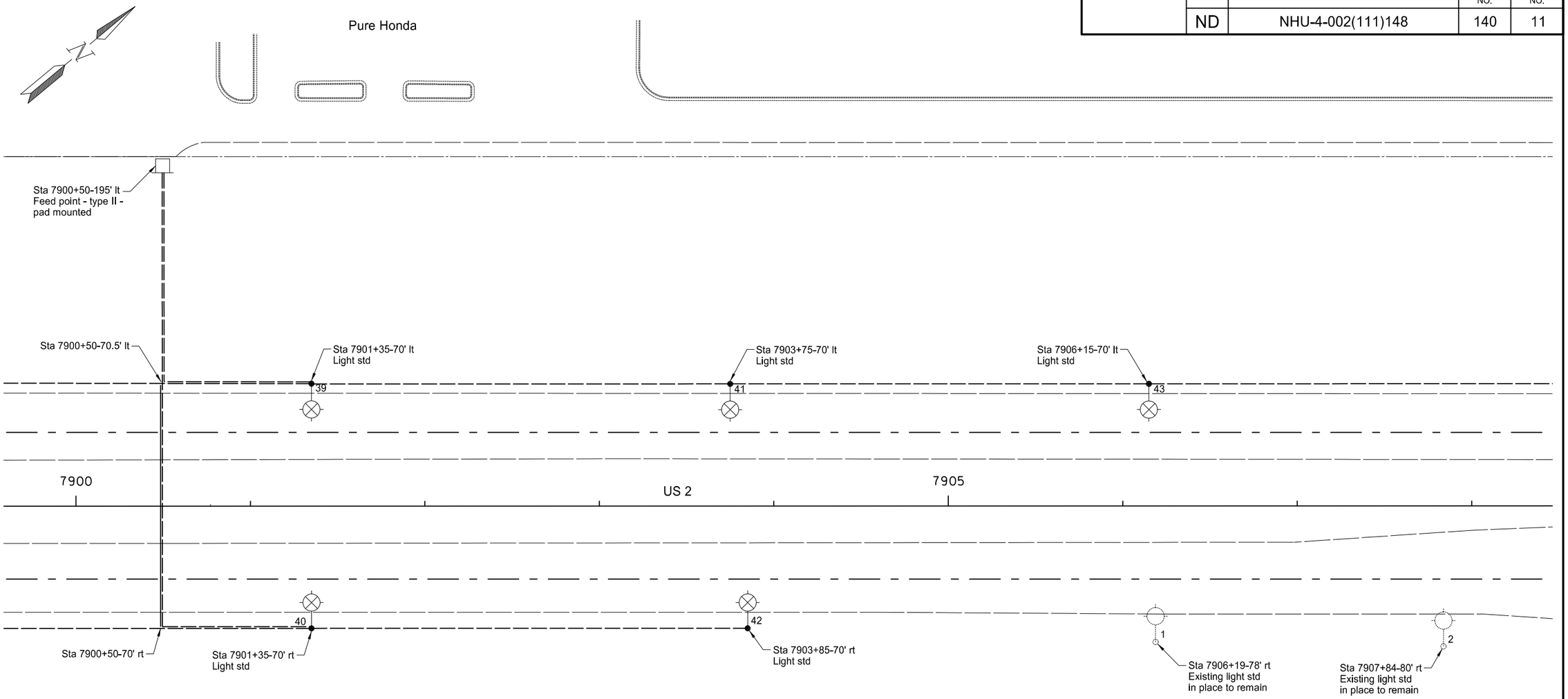
Lighting System B

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	11



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PE-5038
08/30/18
NORTH DAKOTA

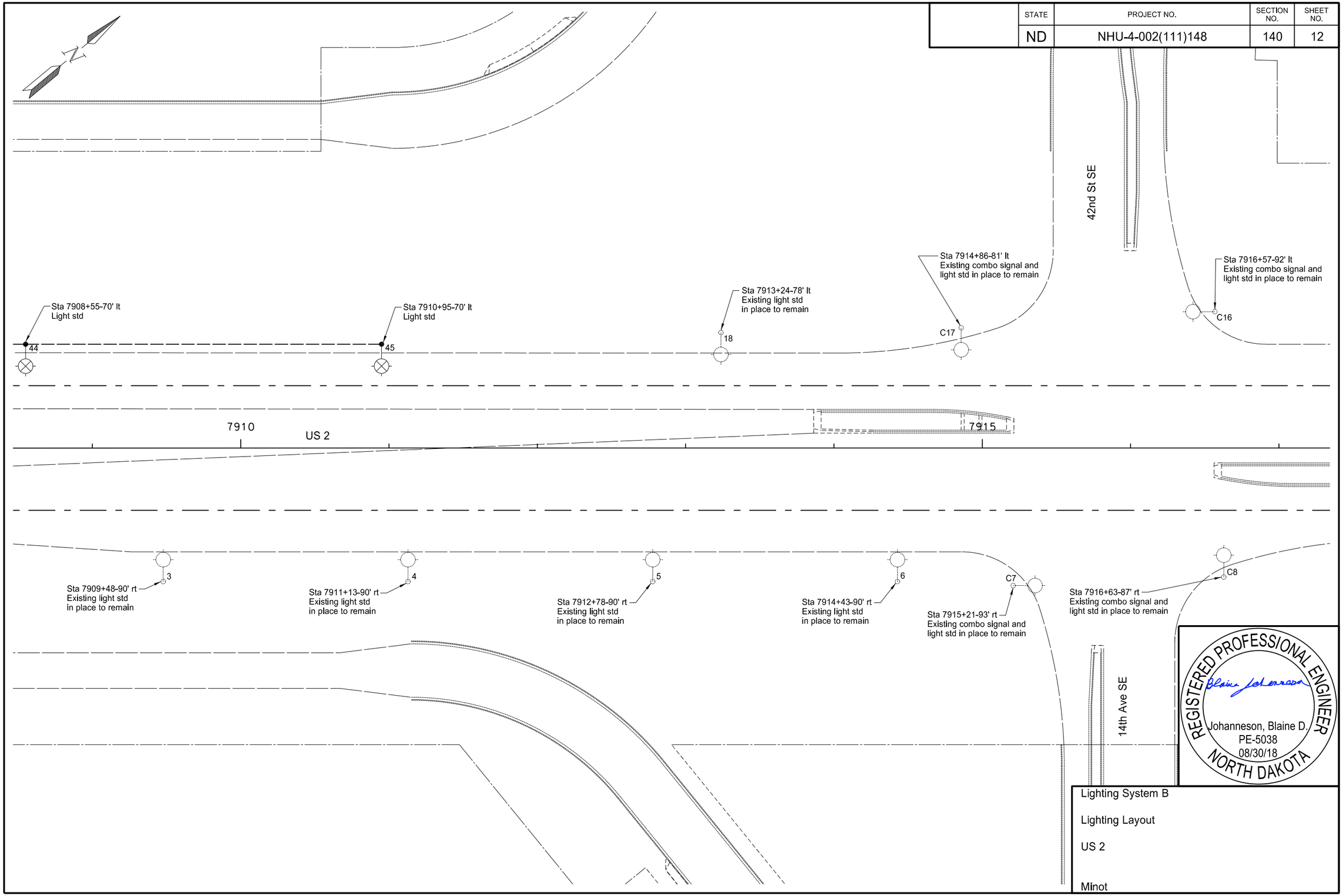
Lighting System B

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	12



Lighting System B

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	13

Light Std Number	Station	Cable Trench	Conduit Runs		Cable Runs	
		LF	LF	Dia	LF	Type
12 14	7865+12-76' rt to 7867+72-76' rt	258			268	3 No. 6 USE
14 16	7867+72-76' rt to 7870+22-79' rt	248			258	3 No. 6 USE
16 18	7870+22-79' rt to 7871+10-76' rt to 7872+48-71' rt to 7872+72-70' rt	87 23	138	2"	258	3 No. 6 USE
18 20	7872+72-70' rt to 7875+22-70' rt	248			258	3 No. 6 USE
20 22	7875+22-70' rt to 7877+82-70' rt	258			268	3 No. 6 USE
22 24	7877+82-70' rt to 7880+52-70' rt	268			278	3 No. 6 USE
24 26	7880+52-70' rt to 7881+33-70' rt to 7882+51-70' rt to 7883+22-70' rt	80 70	118	2"	278	3 No. 6 USE
26 28	7883+22-70' rt to 7885+92-70' rt	268			278	3 No. 6 USE
28 30	7885+92-70' rt to 7888+62-70' rt	268			278	3 No. 6 USE
30 32	7888+62-70' rt to 7889+00-84' rt to 7891+32-70' rt	40 232			282	3 No. 6 USE
22 FP	7877+82-70' rt to 7877+77-71' lt to 7877+62-170' lt	100	140	2"	256	3 No. 6 USE
11 13	7865+10-80' lt to 7866+75-95' lt to 7867+72-71' lt	165 99			274	3 No. 6 USE
13 15	7867+72-71' lt to 7870+22-71' lt	248			258	3 No. 6 USE
15 17	7870+22-71' lt to 7871+16-74' lt to 7872+49-79' lt to 7872+72-80' lt	93 22	133	2"	258	3 No. 6 USE
17 19	7872+72-80' lt to 7875+22-77.5' lt	248			258	3 No. 6 USE
19 21	7875+22-77.5' lt to 7877+82-71' lt	258			268	3 No. 6 USE
21 23	7877+82-71' lt to 7880+52-71' lt	268			278	3 No. 6 USE
23 25	7880+52-71' lt to 7881+55-78.5' lt to 7882+65-78.5' lt to 7883+22-78.5' lt	102 56	110	2"	278	3 No. 6 USE
25 27	7883+22-78.5' lt to 7885+92-78.5' lt	268			278	3 No. 6 USE
27 29	7885+92-78.5' lt to 7888+62-70.5' lt	268			278	3 No. 6 USE
29 31	7888+62-70.5' lt to 7891+32-70.5' lt	268			278	3 No. 6 USE
21 FP	7877+82-71' lt to 7877+62-170' lt	99			115	3 No. 6 USE

	Station	Cable Trench	Conduit Runs		Cable Runs	
		LF	LF	Dia	LF	Type
Feed Point Utility Company Pole Utility Company Pole	7877+62-170' lt to 7875+34-175' lt 7875+34-175' lt	227	 40 (A)	 2" (A)	288	3 No. 4 USE

(A) Wood pole mounted conduit

Light Std Number	Station	Cable Trench	Conduit Runs		Cable Runs	
		LF	LF	Dia	LF	Type
34 36	7894+00-70' rt to 7896+55-70' rt	253			263	3 No. 6 USE
36 38	7896+55-70' rt to 7898+95-70' rt	238			248	3 No. 6 USE
38 40	7898+95-70' rt to 7901+35-70' rt	238			248	3 No. 6 USE
40 42	7901+35-70' rt to 7903+85-70' rt	248			258	3 No. 6 USE
40 FP	7901+35-70' rt to 7900+50-70' rt to 7900+50-70.5' lt to 7900+50-195' lt	84 124	140	2"	364	3 No. 6 USE
33 35	7894+00-70.5' lt to 7896+09-88' lt to 7896+55-70.5' lt	209 49			268	3 No. 6 USE
35 37	7896+55-70.5' lt to 7898+95-70.5' lt	238			248	3 No. 6 USE
37 39	7898+95-70.5' lt to 7901+35-70' lt	238			248	3 No. 6 USE
39 41	7901+35-70' lt to 7903+75-70' lt	238			248	3 No. 6 USE
41 43	7903+75-70' lt to 7906+15-70' lt	238			248	3 No. 6 USE
43 44	7906+15-70' lt to 7908+55-70' lt	238			248	3 No. 6 USE
44 45	7908+55-70' lt to 7910+95-70' lt	238			248	3 No. 6 USE
39 FP	7901+35-70' lt to 7900+50-70.5' lt to 7900+50-195' lt	84 124			224	3 No. 6 USE

REGISTERED PROFESSIONAL ENGINEER
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PE-5038
08/30/18
NORTH DAKOTA

Lighting System B

Cable Runs

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	14

Light Standards - Feed Point B					
No.	Station	Wattage	Circuit	Pole Ht.	Mast Arm
11	7865+10-80' lt	200 - 210	2	42' (B)	10'
12	7865+12-76' rt	200 - 210	1	42' (B)	10'
13	7867+72-71' lt	200 - 210	2	42' (B)	10'
14	7867+72-76' rt	200 - 210	1	42' (B)	10'
15	7870+22-71' lt	200 - 210	2	42' (B)	10'
16	7870+22-79' rt	200 - 210	1	42' (B)	10'
17	7872+72-80' lt	200 - 210	2	42' (B)	10'
18	7872+72-70' rt	200 - 210	1	42' (B)	10'
19	7875+22-77.5' lt	200 - 210	2	42' (B)	10'
20	7875+22-70' rt	200 - 210	1	42' (B)	10'
21	7877+82-71' lt	200 - 210	2	42' (B)	10'
22	7877+82-70' rt	200 - 210	1	42' (B)	10'
23	7880+52-71' lt	200 - 210	2	42' (B)	10'
24	7880+52-70' rt	200 - 210	1	42' (B)	10'
25	7883+22-78.5' lt	200 - 210	2	42' (B)	10'
26	7883+22-70' rt	200 - 210	1	42' (B)	10'
27	7885+92-78.5' lt	200 - 210	2	42' (B)	10'
28	7885+92-70' rt	200 - 210	1	42' (B)	10'
29	7888+62-70.5' lt	200 - 210	2	42' (B)	10'
30	7888+62-70' rt	200 - 210	1	42' (B)	10'
31	7891+32-70.5' lt	200 - 210	2	42' (B)	10'
32	7891+32-70' rt	200 - 210	1	42' (B)	10'
Light Standards - Feed Point C					
33	7894+00-70.5' lt	200 - 210	2	42' (B)	10'
34	7894+00-70' rt	200 - 210	1	42' (B)	10'
35	7896+55-70.5' lt	200 - 210	2	42' (B)	10'
36	7896+55-70' rt	200 - 210	1	42' (B)	10'
37	7898+95-70.5' lt	200 - 210	2	42' (B)	10'
38	7898+95-70' rt	200 - 210	1	42' (B)	10'
39	7901+35-70' lt	200 - 210	2	42' (B)	10'
40	7901+35-70' rt	200 - 210	1	42' (B)	10'
41	7903+75-70' lt	200 - 210	2	42' (B)	10'
42	7903+85-70' rt	200 - 210	1	42' (B)	10'
43	7906+15-70' lt	200 - 210	2	42' (B)	10'
44	7908+55-70' lt	200 - 210	2	42' (B)	10'
45	7910+95-70' lt	200 - 210	2	42' (B)	10'

(B) Breakaway

Lighting Quantities (A)											
Concrete Foundation - Highway Lighting	Concrete Foundation - Feed Point - Type B	Cable Trench - Type II	2" Dia Rigid Conduit	Multiple Underground Cable 3 No. 4 Style USE	Multiple Underground Cable 3 No. 6 Style USE	Feed Point - Type II - Pad Mounted	Service Entrence Head	Light Std 10' MA 42' Pole Breakaway	LED Luminaire		Lighting System B
EA	EA	LF	LF	LF	LF	EA	EA	EA	EA		EA
35	2	8216	819	288	9142	2	1	35	35		1

(A) Do not bid seperately but include in the item "Lighting System B".

LIGHTING FOUNDATION TABLE		
Description	Footing Depth "D" 24" and 30" Dia	Footing Depth "D" 36" and 42" Dia
Light Standard 42' Pole	6'	5'

REGISTERED PROFESSIONAL ENGINEER
Johanneson, Blaine D.
PE-5038
08/30/18
NORTH DAKOTA

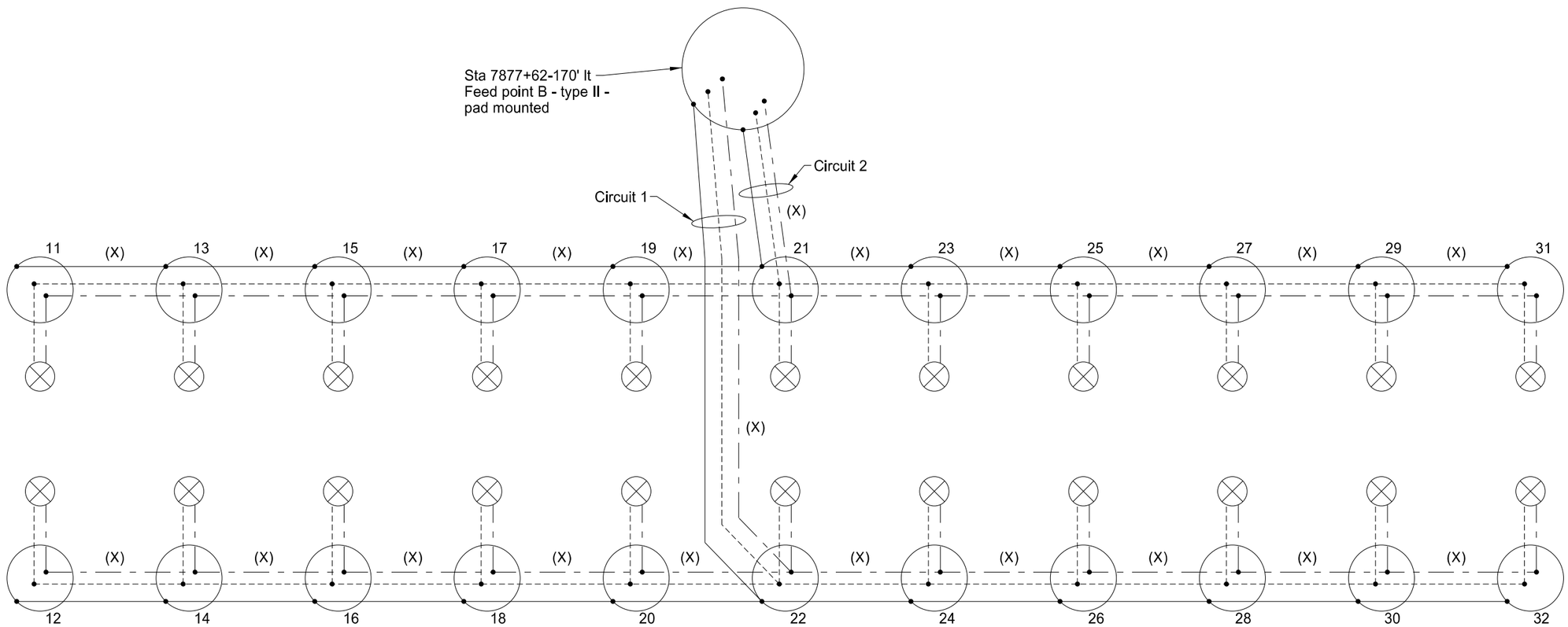
Lighting System B

Light Standards and Quantities

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	15



LEGEND

— - — - —	Phase conductor
- - - - - - - - - - - - - -	Phase conductor
————————	Ground conductor
(X)	Multiple underground cable 3 No. 6 USE
⊗	LED luminaire 120v x 240v operated on 240v
○	Light standard
20	Light standard number

REGISTERED PROFESSIONAL ENGINEER
Johanneson, Blaine D.
PE-5038
08/30/18
NORTH DAKOTA

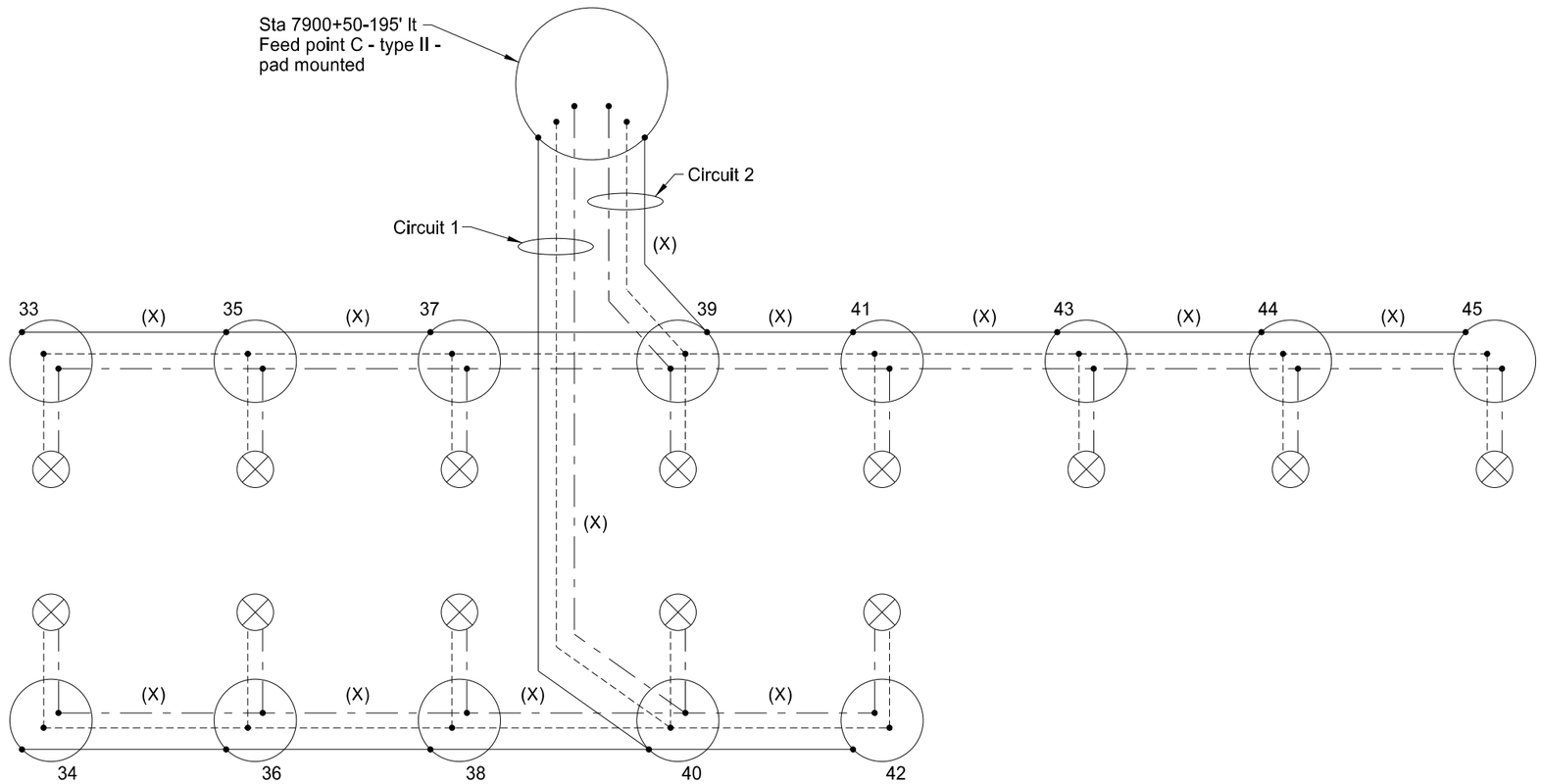
Lighting System B

Lighting Schematic - Feed Point B

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	16



LEGEND

— — — —	Phase conductor
- - - - - - - -	Phase conductor
————	Ground conductor
(X)	Multiple underground cable 3 No. 6 USE
⊗	LED luminaire 120v x 240v operated on 240v
○	Light standard
37	Light standard number

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PE-5038
08/30/18
NORTH DAKOTA

Lighting System B

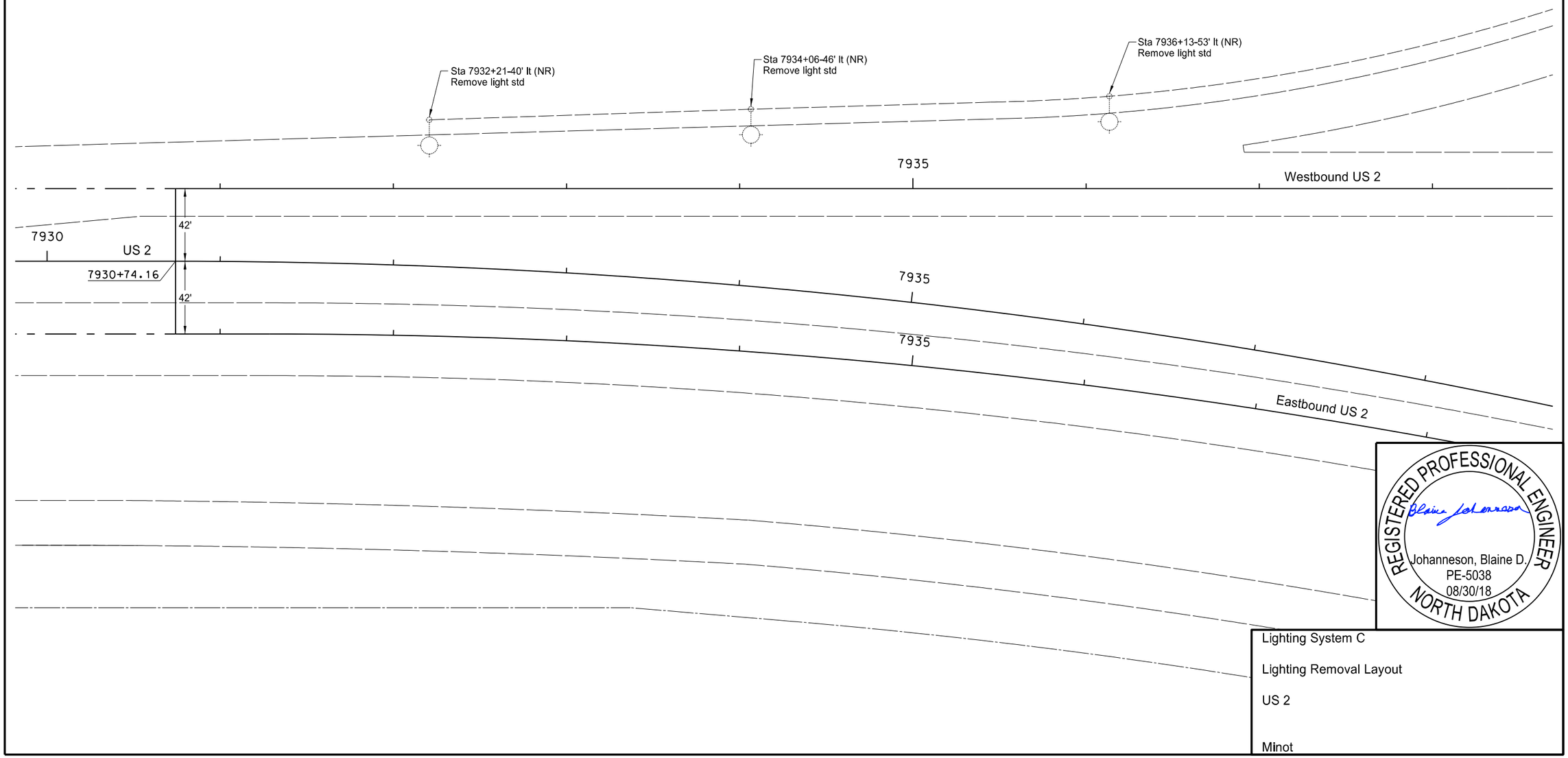
Lighting Schematic - Feed Point C

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	17

Note: Abandon existing conductor.



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PE-5038
08/30/18
NORTH DAKOTA

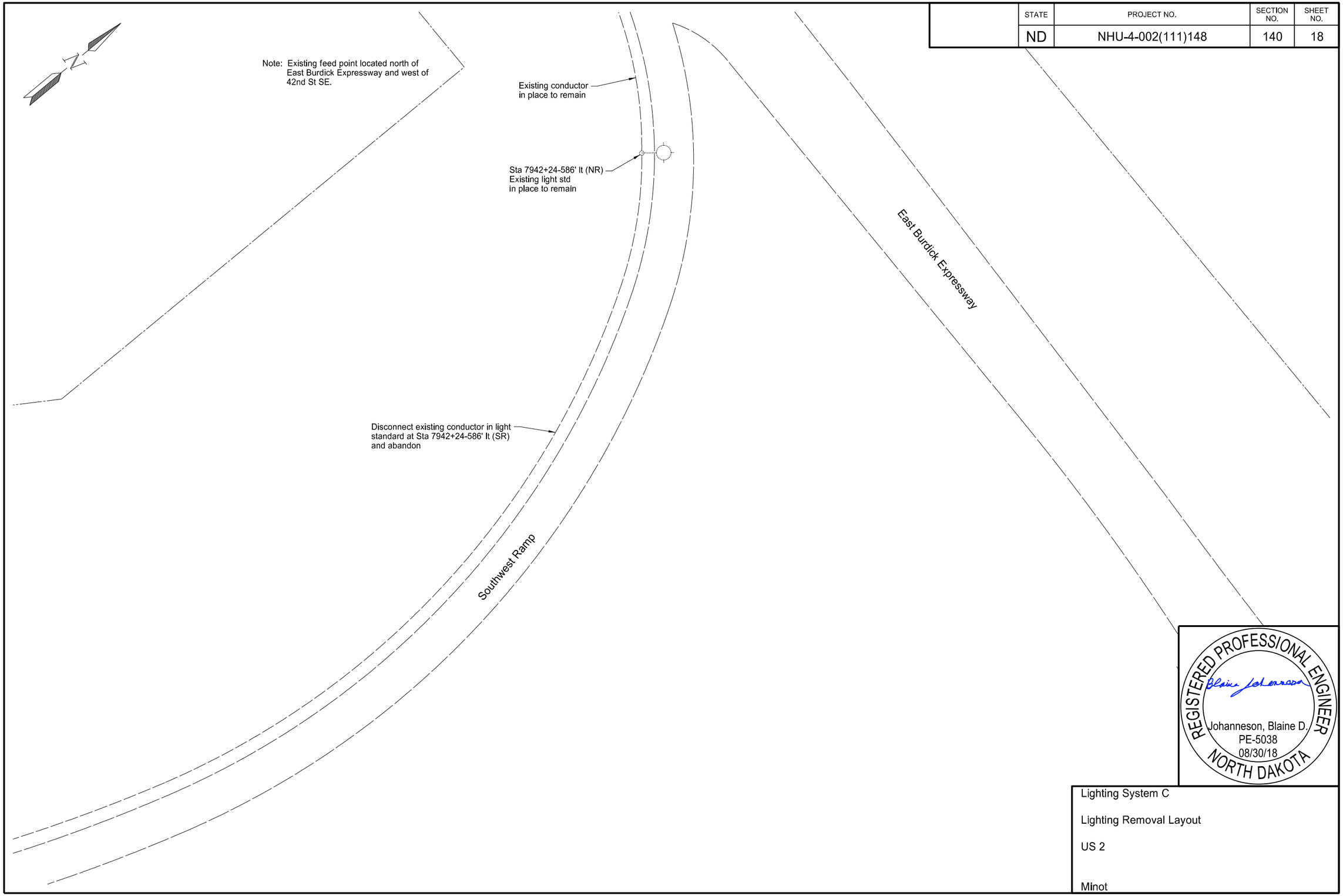
Lighting System C

Lighting Removal Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	18



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08/30/18
NORTH DAKOTA

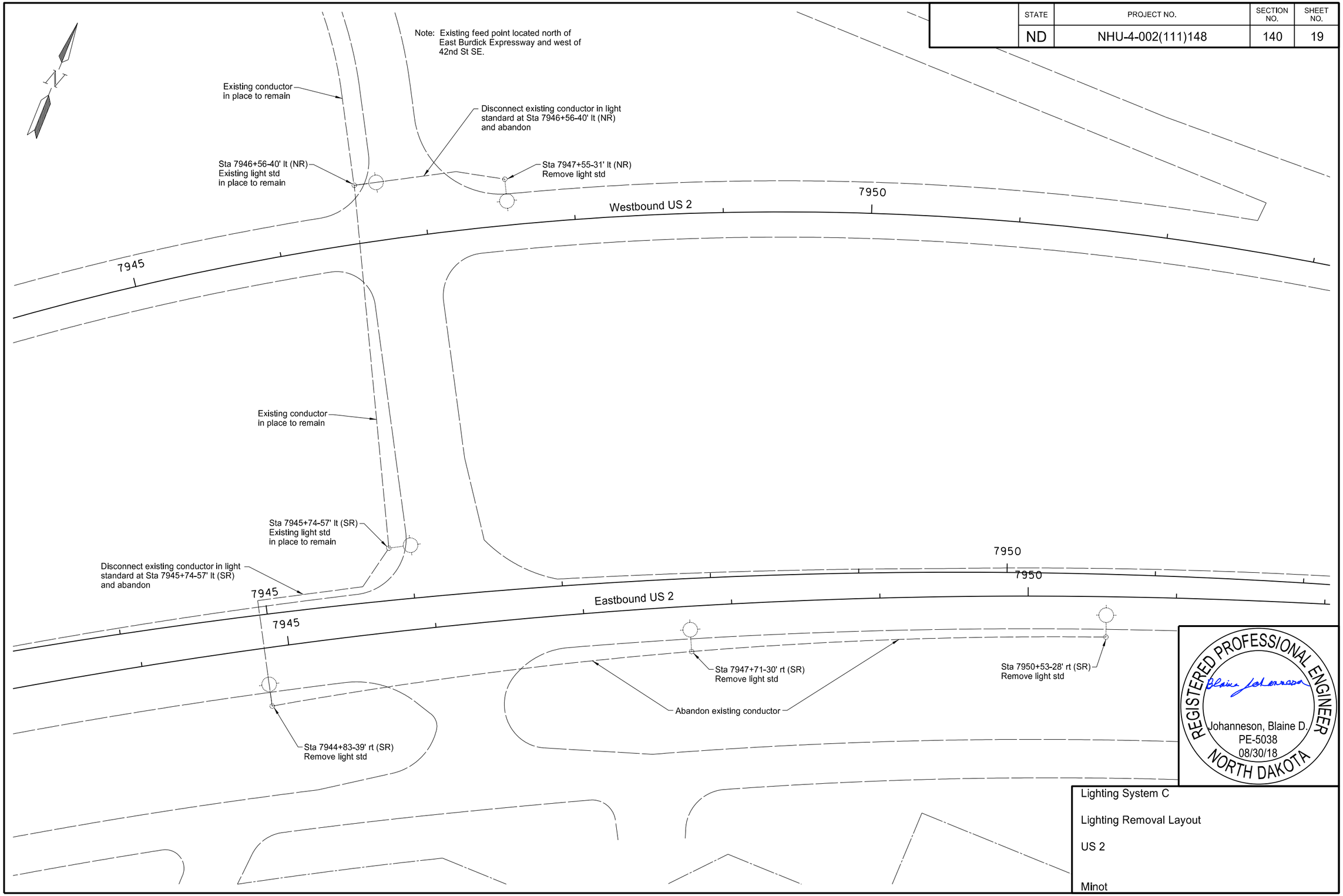
Lighting System C

Lighting Removal Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	19



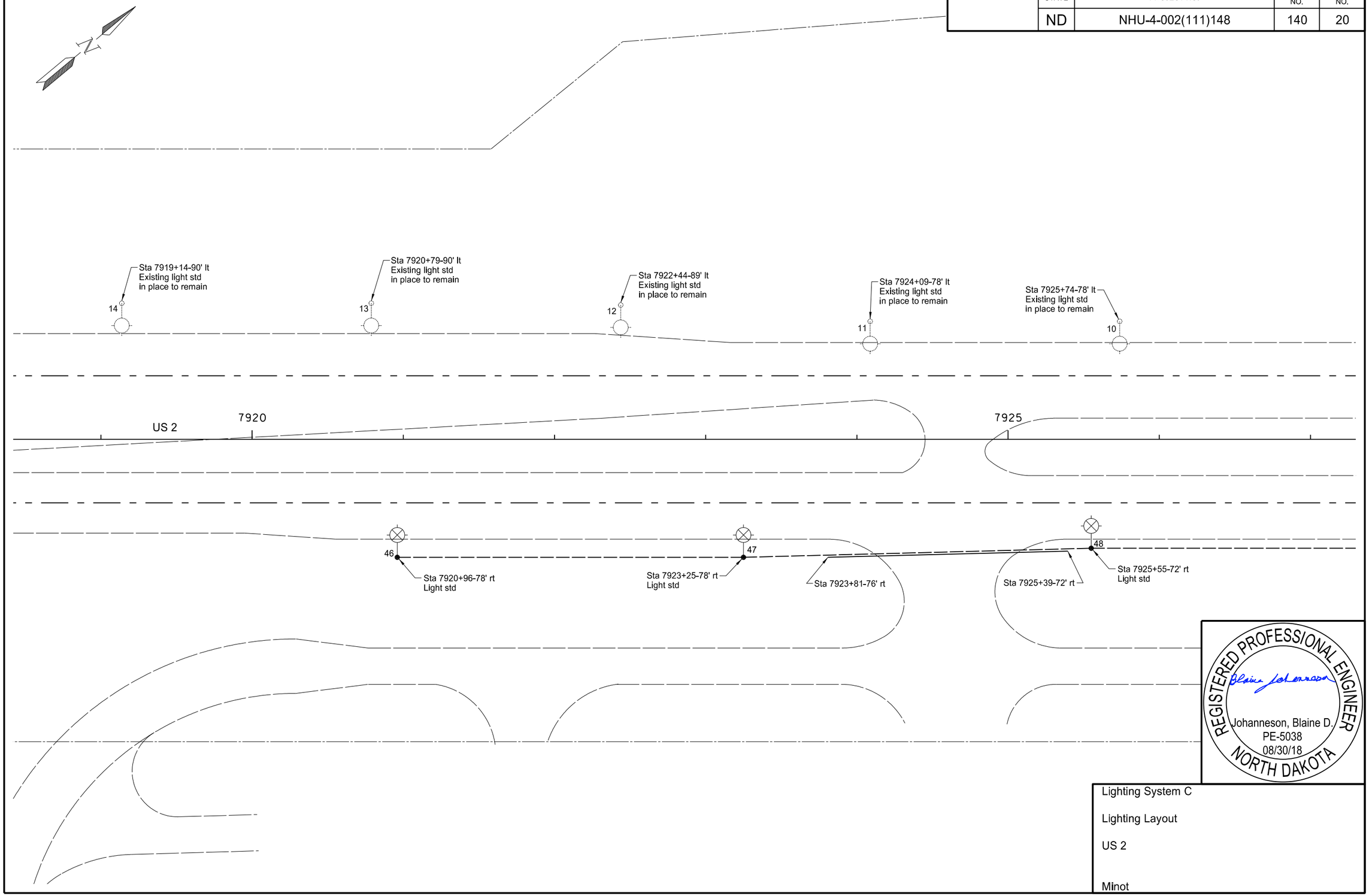
Lighting System C

Lighting Removal Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	20



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Johanneson, Blaine D.
PE-5038
08/30/18
NORTH DAKOTA

Lighting System C

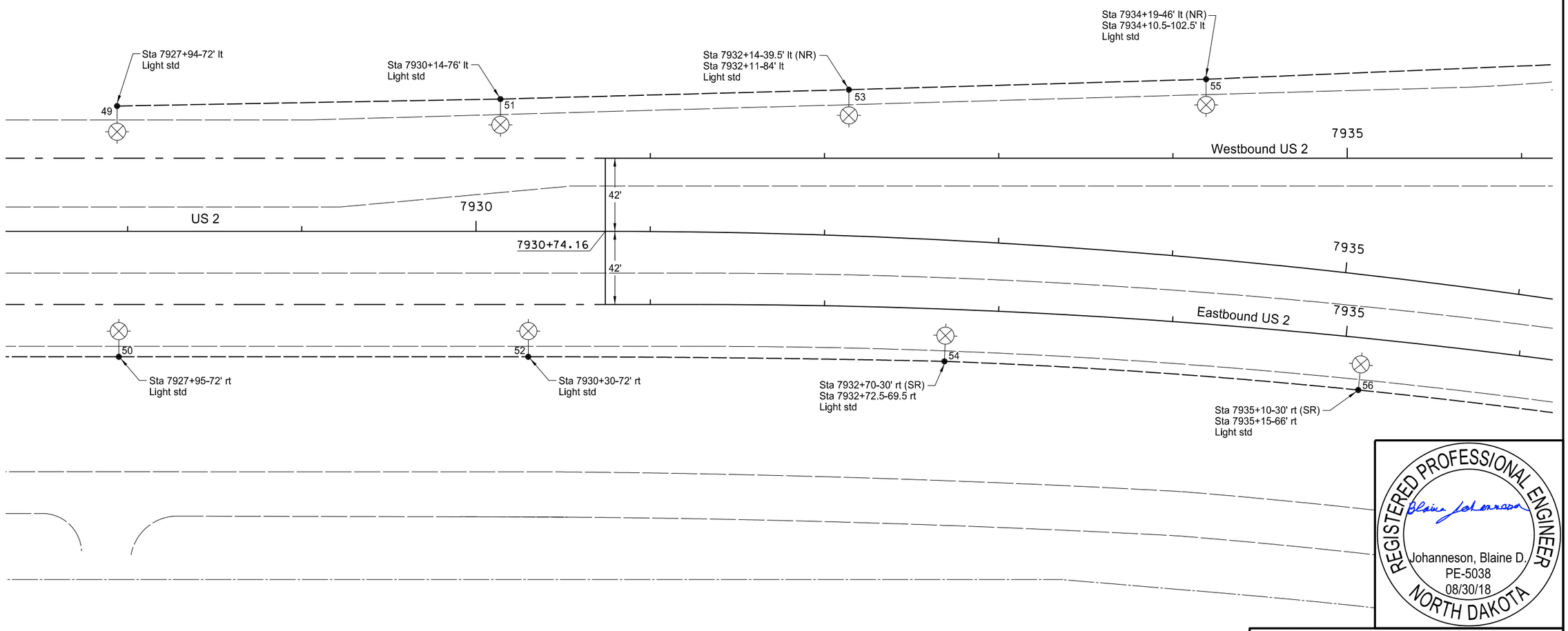
Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	21

Note: NR = North roadway office location
SR = South roadway office location



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08/30/18
NORTH DAKOTA

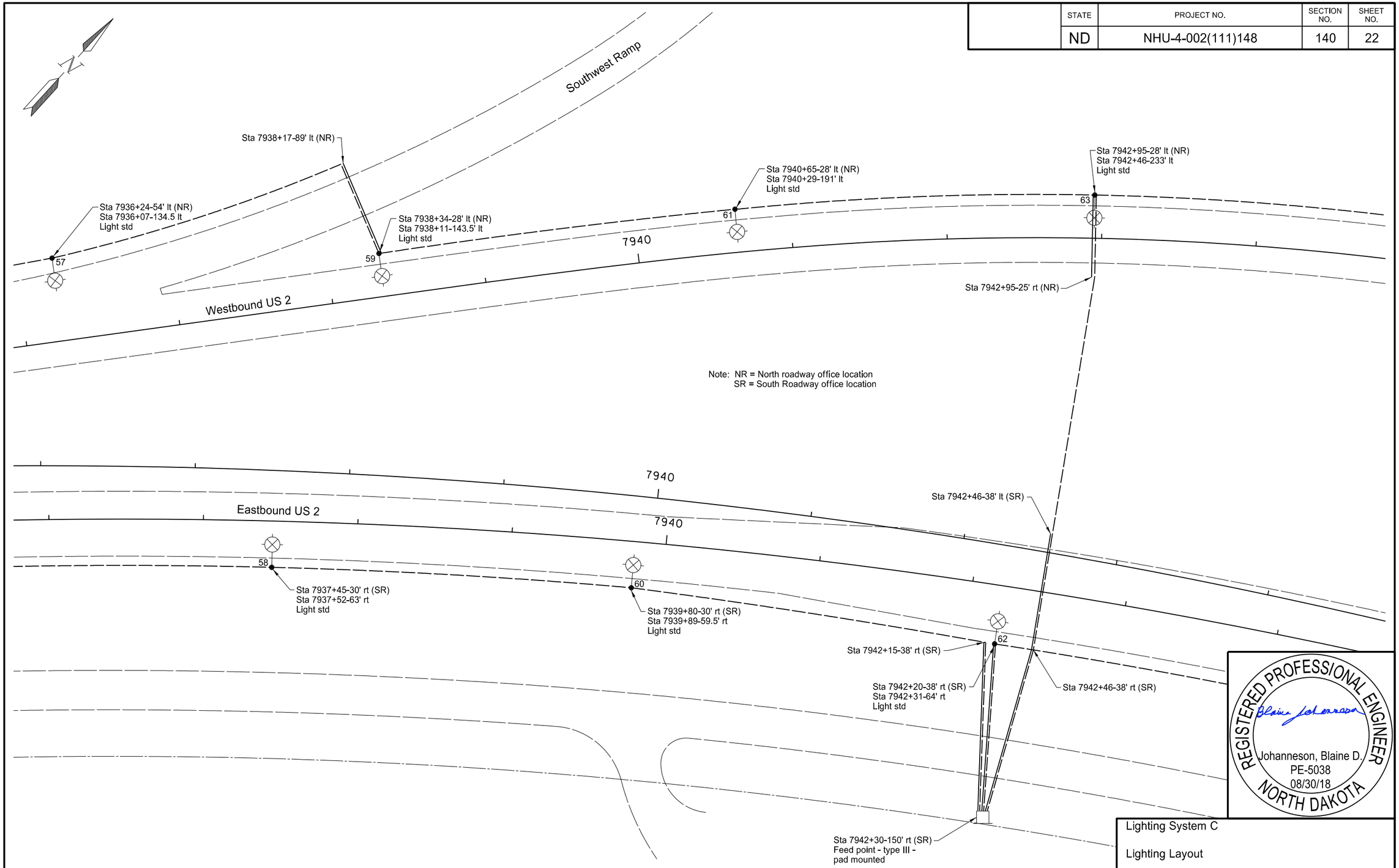
Lighting System C

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	22



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PE-5038
08/30/18
NORTH DAKOTA

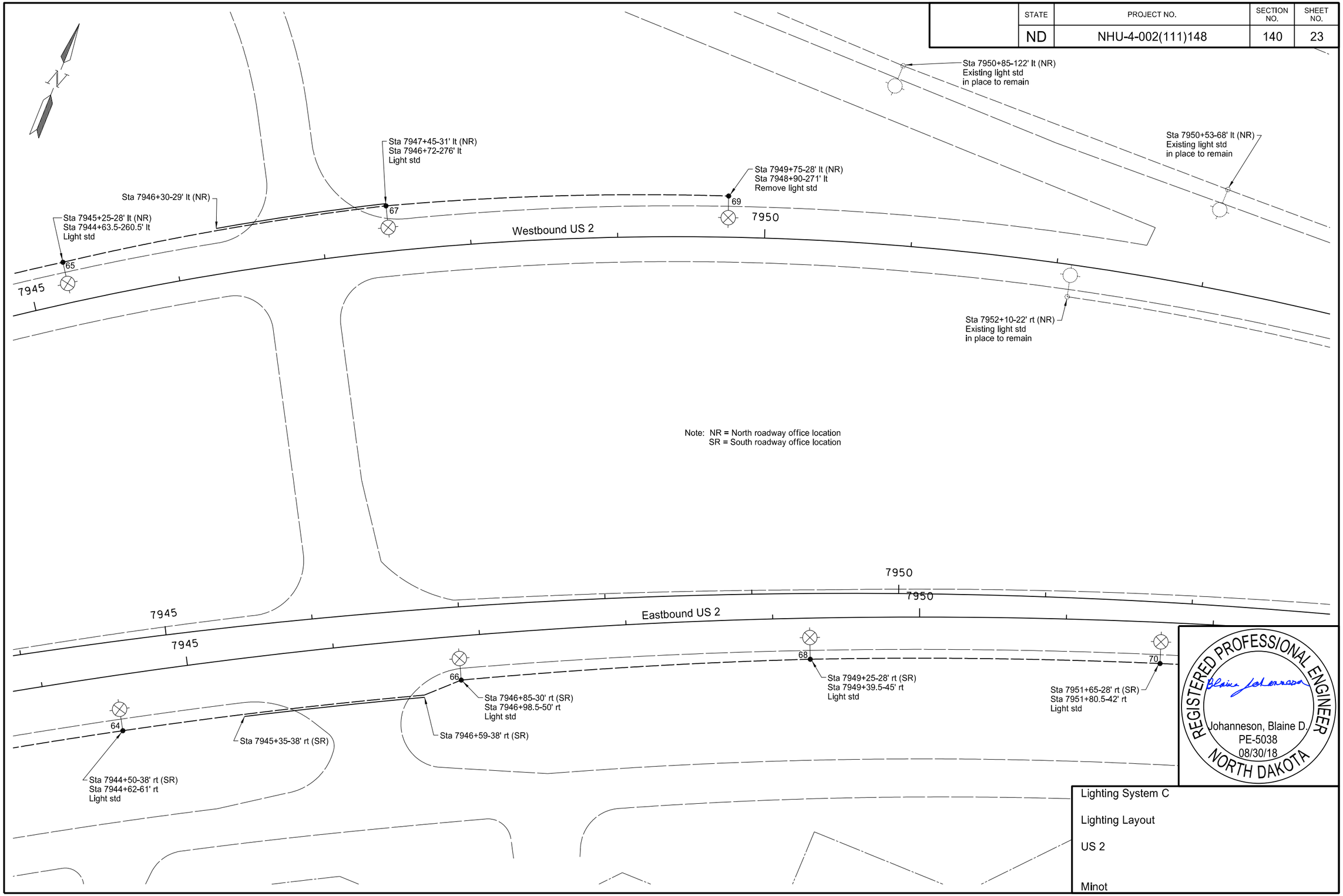
Lighting System C

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	23



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NORTH DAKOTA

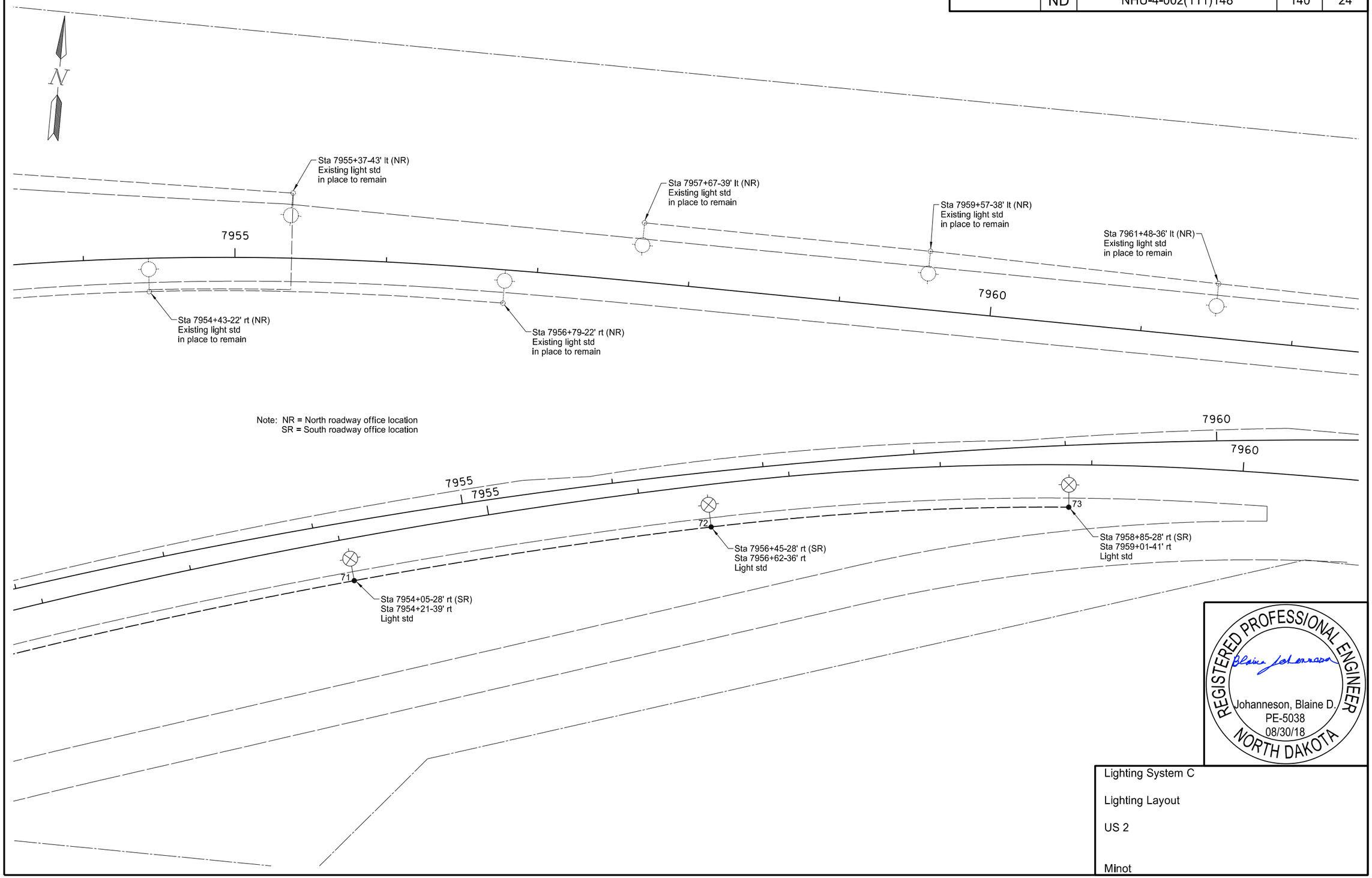
Lighting System C

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	24



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08/30/18
NORTH DAKOTA

Lighting System C

Lighting Layout

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	25

Light Std Number	Station	Cable Trench	Conduit Runs		Cable Runs	
		LF	LF	Dia	LF	Type
46 47	7920+96-78' rt to 7923+25-78' rt	227			237	3 No. 6 USE
47 48	7923+25-78' rt to 7923+81-76' rt to 7925+39-72' rt to 7925+55-72' rt	55 15	158	2"	238	3 No. 6 USE
48 50	7925+55-72' rt to 7927+95-72' rt	238			248	3 No. 6 USE
50 52	7927+95-72' rt to 7930+30-72' rt	233			243	3 No. 6 USE
52 54	7930+30-72' rt to 7932+70-30' rt (SR)	238			248	3 No. 6 USE
54 56	7932+70-30' rt (SR) to 7935+10-30' rt (SR)	236			246	3 No. 6 USE
56 58	7935+10-30' rt (SR) to 7937+45-30' rt (SR)	232			242	3 No. 6 USE
58 60	7937+45-30' rt (SR) to 7939+80-30' rt (SR)	232			242	3 No. 6 USE
60 FP	7939+80-30' rt (SR) to 7942+15-38' rt (SR) to 7942+30-150' rt (SR)	232	112	2"	360	3 No. 4 USE
49 51	7927+94-72' lt to 7930+14-76' lt	218			228	3 No. 6 USE
51 53	7930+14-76' lt to 7932+14-39.5' lt (NR)	198			208	3 No. 6 USE
53 55	7932+14-39.5' lt (NR) to 7934+19-46' lt (NR)	203			213	3 No. 6 USE
55 57	7934+19-46' lt (NR) to 7936+24-54' lt (NR)	203			213	3 No. 6 USE
57 59	7936+24-54' lt (NR) to 7938+17-89' lt (NR) to 7938+34-28' lt (NR)	196	62	2"	268	3 No. 6 USE
59 61	7938+34-28' lt (NR) to 7940+65-28' lt (NR)	230			240	3 No. 6 USE
61 63	7940+65-28' lt (NR) to 7942+95-28' lt (NR)	231			241	3 No. 6 USE
63 65	7942+95-28' lt (NR) to 7945+25-28' lt (NR)	231			241	3 No. 6 USE
65 67	7945+25-28' lt (NR) to 7946+30-29' lt (NR) to 7947+45-31' lt (NR)	106	116	2"	232	3 No. 6 USE
67 69	7947+45-31' lt (NR) to 7949+75-28' lt (NR)	232			242	3 No. 6 USE
63 FP	7942+95-28' lt (NR) to 7942+95-25' rt (NR) to 7942+46-38' lt (SR) to 7942+46-38' rt (SR) to 7942+30-150' rt (SR)	169	52 76 112	2" 2" 2"	425	3 No. 4 USE

Light Std Number	Station	Cable Trench	Conduit Runs		Cable Runs	
		LF	LF	Dia	LF	Type
FP 62	7942+30-150' rt (SR) to 7942+20-38' rt (SR)		111	2"	127	3 No. 6 USE
62 64	7942+20-38' rt (SR) to 7944+50-38' rt (SR)	226			236	3 No. 6 USE
64 66	7944+50-38' rt (SR) to 7945+35-38' rt (SR) to 7846+59-38' rt (SR) to 7846+85-30' rt (SR)	83 26	124	2"	243	3 No. 6 USE
66 68	7946+85-30' rt (SR) to 7949+25-28' rt (SR)	236			246	3 No. 6 USE
68 70	7949+25-28' rt (SR) to 7951+65-28' rt (SR)	236			246	3 No. 6 USE
70 71	7951+65-28' rt (SR) to 7954+05-28' rt (SR)	236			246	3 No. 6 USE
71 72	7954+05-28' rt (SR) to 7956+45-28' rt (SR)	237			247	3 No. 6 USE
72 73	7956+45-28' rt (SR) to 7958+85-28' rt (SR)	236			246	3 No. 6 USE

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NORTH DAKOTA

Lighting System C

Cable Runs

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	26

Light Standards - Feed Point D					
No.	Station	Wattage	Circuit	Pole Ht.	Mast Arm
46	7920+96-78' rt	200 - 210	1	42' (B)	10'
47	7923+25-78' rt	200 - 210	1	42' (B)	10'
48	7925+55-72' rt	200 - 210	1	42' (B)	10'
49	7927+94-72' lt	200 - 210	2	42' (B)	10'
50	7927+95-72' rt	200 - 210	1	42' (B)	10'
51	7930+14-76' lt	200 - 210	2	42' (B)	10'
52	7930+30-72' rt	200 - 210	1	42' (B)	10'
53	7932+14-39.5' lt (NR)	200 - 210	2	42' (B)	10'
54	7932+70-30' rt (SR)	200 - 210	1	42' (B)	10'
55	7934+19-46' lt (NR)	200 - 210	2	42' (B)	10'
56	7935+10-30' rt (SR)	200 - 210	1	42' (B)	10'
57	7936+24-54' lt (NR)	200 - 210	2	42' (B)	10'
58	7937+45-30' rt (SR)	200 - 210	1	42' (B)	10'
59	7938+34-28' lt (NR)	200 - 210	2	42' (B)	10'
60	7939+80-30' rt (SR)	200 - 210	1	42' (B)	10'
61	7940+65-28' lt (NR)	200 - 210	2	42' (B)	10'
62	7942+20-38' rt (SR)	200 - 210	3	42' (B)	10'
63	7942+95-28' lt (NR)	200 - 210	2	42' (B)	10'
64	7944+50-38' rt (SR)	200 - 210	3	42' (B)	10'
65	7945+25-28' lt (NR)	200 - 210	2	42' (B)	10'
66	7946+85-30' rt (SR)	200 - 210	3	42' (B)	10'
67	7947+45-31' lt (NR)	200 - 210	2	42' (B)	10'
68	7949+25-28' rt (SR)	200 - 210	3	42' (B)	10'
69	7949+75-28' lt (NR)	200 - 210	2	42' (B)	10'
70	7951+65-28' rt (SR)	200 - 210	3	42' (B)	10'
71	7954+05-28' rt (SR)	200 - 210	3	42' (B)	10'
72	7956+45-28' rt (SR)	200 - 210	3	42' (B)	10'
73	7958+85-28' rt (SR)	200 - 210	3	42' (B)	10'

(B) Breakaway

Lighting Quantities (A)												
Concrete Foundation - Highway Lighting	Concrete Foundation - Feed Point - Type B	Cable Trench - Type II	2" Dia Rigid Conduit	Multiple Underground Cable 3 No. 4 Style USE	Multiple Underground Cable 3 No. 6 Style USE	Feed Point - Type III - Pad Mounted	Light Std 10' MA 42' Pole Breakaway	LED Luminaire	Remove Light Std			Lighting System C
EA	EA	LF	LF	LF	LF	EA	EA	EA	EA			EA
28	1	5671	923	785	6107	1	28	28	7			1

(A) Do not bid seperately but include in the item "Lighting System C".

LIGHTING FOUNDATION TABLE		
Description	Footing Depth "D" 24" and 30" Dia	Footing Depth "D" 36" and 42" Dia
Light Standard 42' Pole	6'	5'

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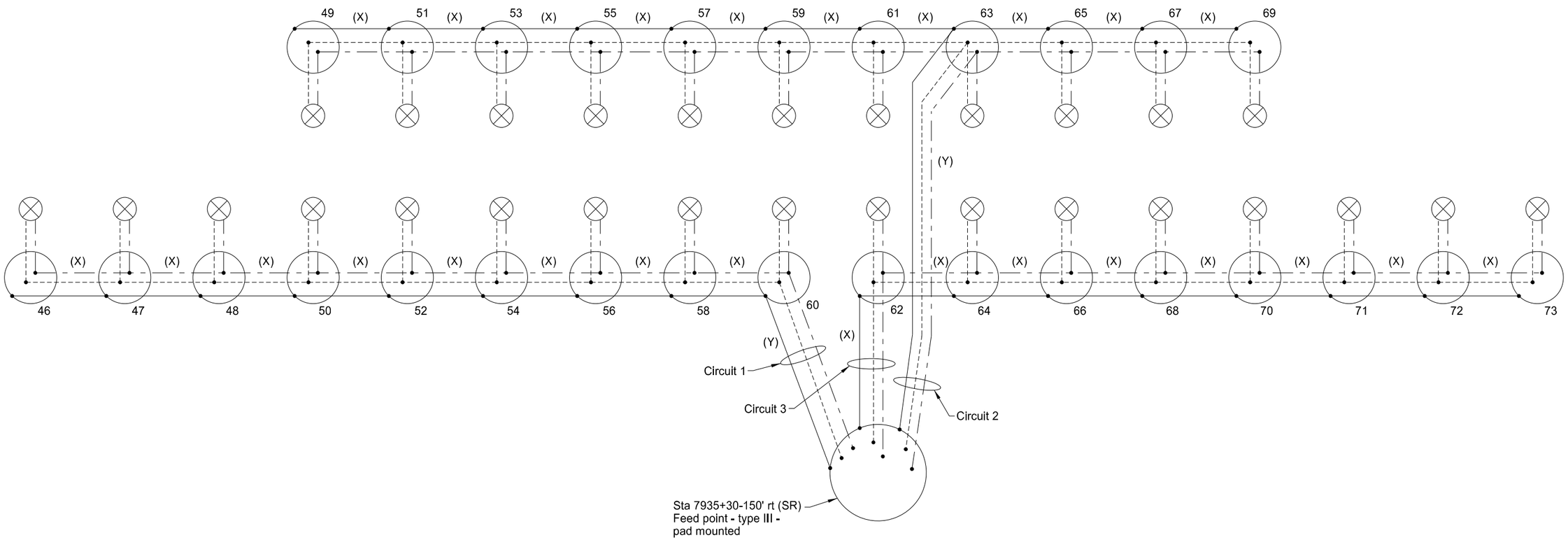
Lighting System C

Light Standards and Quantities

US 2

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	27



LEGEND

— - — - —	Phase conductor
- - - - - - - - - - - - - -	Phase conductor
————————	Ground conductor
(X)	Multiple underground Cable 3 No. 6 USE
(Y)	Multiple underground Cable 3 No. 4 USE
⊗	LED luminaire 120v x 240v operated on 240v
○	Light standard
55	Light standard number

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NORTH DAKOTA

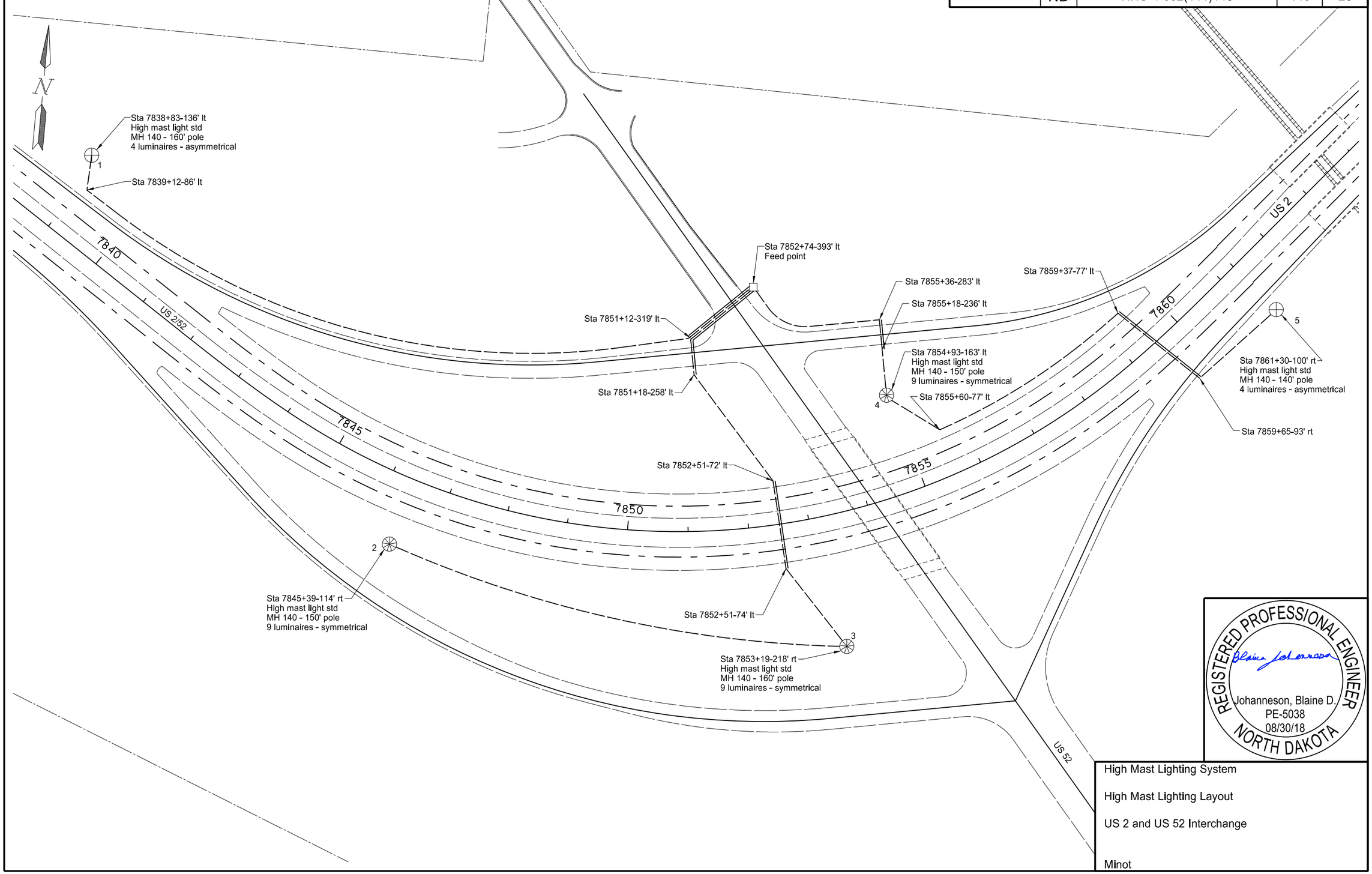
Lighting System C

Lighting Schematic - Feed Point D

US 2

Minot, ND

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	28



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08/30/18
NORTH DAKOTA

High Mast Lighting System

High Mast Lighting Layout

US 2 and US 52 Interchange

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	29

Light Std Number	Station	Cable Trench	Conduit Runs		Cable Runs	
		LF	LF	Dia	LF	Type
1	7838+83-136' lt to				1268	4 No. 6 USE
	7839+12-86' lt to	54				
	7851+12-319' lt to	1059				
FP	7852+74-393' lt		136	2"		
2	7845+39-114' rt to				790	4 No. 4 USE
3	7853+19-218' rt	777				
3	7853+19-218' rt to				739	4 No. 4 USE
	7852+51-74' rt to	159				
	7852+51-72' lt to		146	2"		
	7851+18-258' lt to	219				
	7851+12-319' lt to		59	2"		
FP	7852+74-393' lt	136				
5	7861+20-100' rt to				814	4 No. 6 USE
	7859+65-93' rt to	169				
	7859+37-77' lt to		173	2"		
	7855+60-77' lt to	353				
4	7854+93-163' lt	101				
4	7854+93-163' lt to				376	4 No. 6 USE
	7855+18-236' lt to	72				
	7835+36-283' lt to		49	2"		
FP	7852+74-393' lt	235				

Lighting Quantities

Concrete Foundation - Feed Point - Type B	Cable Trench - Type II	2" Dia Rigid Conduit	Multiple Underground Cable 4 No. 4 Style USE	Multiple Underground Cable 4 No. 6 Style USE	Feed Point - Type III - Pad Mounted	High Mast Lighting Assembly Type HM-140-4	High Mast Lighting Assembly Type HM-150-9	High Mast Lighting Assembly Type HM-160-4	High Mast Lighting Assembly Type HM-160-9	LED Luminaire - High Mast	
EA	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	
1	3334	563	1529	2458	1	1	2	1	1	35	

High Mast Light Standards

No.	Station	Circuit	IES-Type	Pole Ht.
1	7838+83-136' lt	1	Asym	160'
2	7845+39-114' rt	2	Sym	150'
3	7853+19-218' rt	2	Sym	160'
4	7854+93-163' lt	3	Sym	150'
5	7861+30-100' rt	3	Asym	140'

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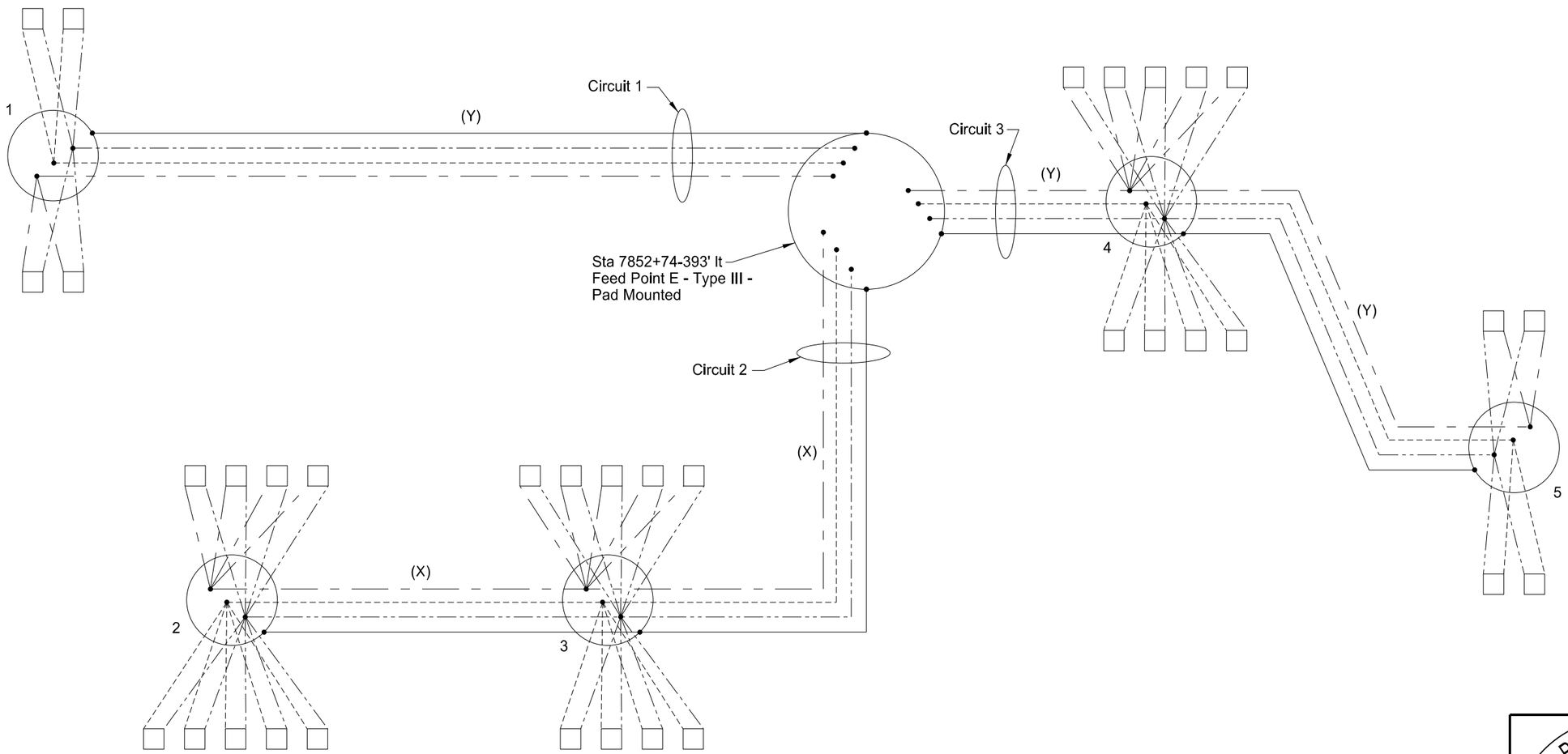
High Mast Lighting System

High Mast Lighting Cable Runs and Quantities

US 2 and US 52 Interchange

Minot

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(111)148	140	30



Legend

———	Ground Conductor
—·—·—	Nuetral Conductor
- - - - - -	Phase Conductor
— — —	Phase Conductor
(X)	4 No. 4 USE
(Y)	4 No. 6 USE
□	LED High Mast Luminaire 240v x 480v operated on 240v
○	High Mast Light Standard
4	High mast Light Standard Number

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High Mast Lighting System

Lighting Schematic - Feed Point E

US 2 and US 52 Interchange

Minot