Wisconsin DOT Transmission Lines
Lessons Learned



Bob Fasick
NextGen Highways

November 3, 2026

NEXTGEN HIGHWAYS

2003 Wisconsin Act 89

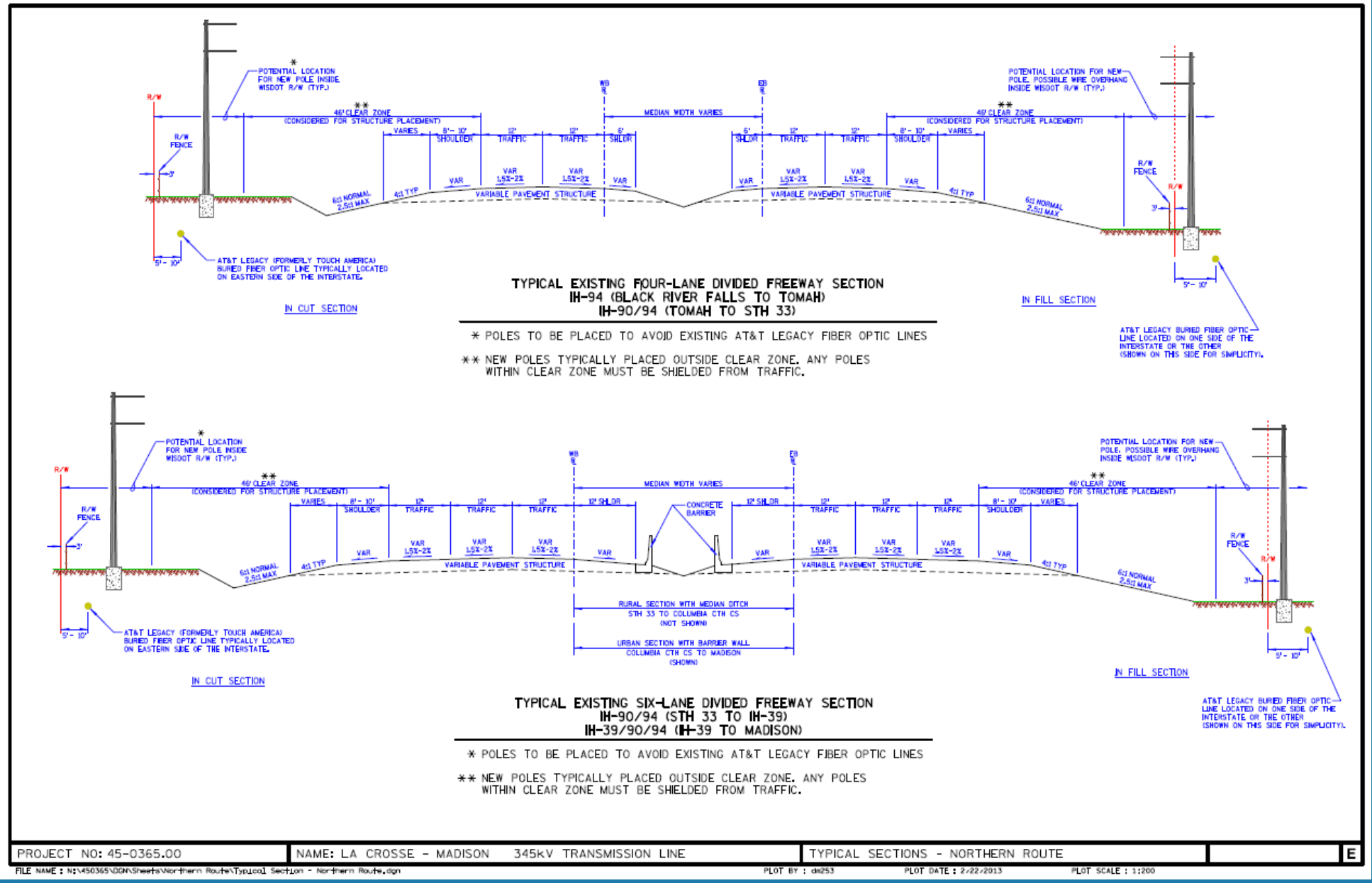
- **SECTION 1.** 1.12 (6) of the statutes is created to read:
- 1.12 **(6)** SITING OF ELECTRIC TRANSMISSION FACILITIES. **In the siting of new electric transmission facilities, including high-voltage transmission lines,** as defined in s. 196.491 (1) (f), it is the policy of this state that, to the greatest extent feasible that is consistent with economic and engineering considerations, reliability of the electric system, and protection of the environment, **the following corridors should be utilized in the following order of priority:**
- (a) Existing utility corridors.
- **(b) Highway and railroad corridors.**
- (c) Recreational trails, to the extent that the facilities may be constructed below ground and that the facilities do not significantly impact environmentally sensitive areas.
- (d) New corridors.

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WisDOT Playbook for Collocation

1. Existing Interstate, freeway, and railroad ROW are now priority corridors for new transmission development (2003 Wisconsin Act 89)
2. Updated WisDOT's Utility Accommodation Policy to facilitate the longitudinal installation of electric transmission in controlled-access highway ROW
3. Establish a cooperative agreement between WisDOT and the Public Service Commission (PSC)
4. When possible, utilities should utilize engineering firms with WisDOT highway design and construction expertise
5. Utilities should work with WisDOT to produce Constructability Reports

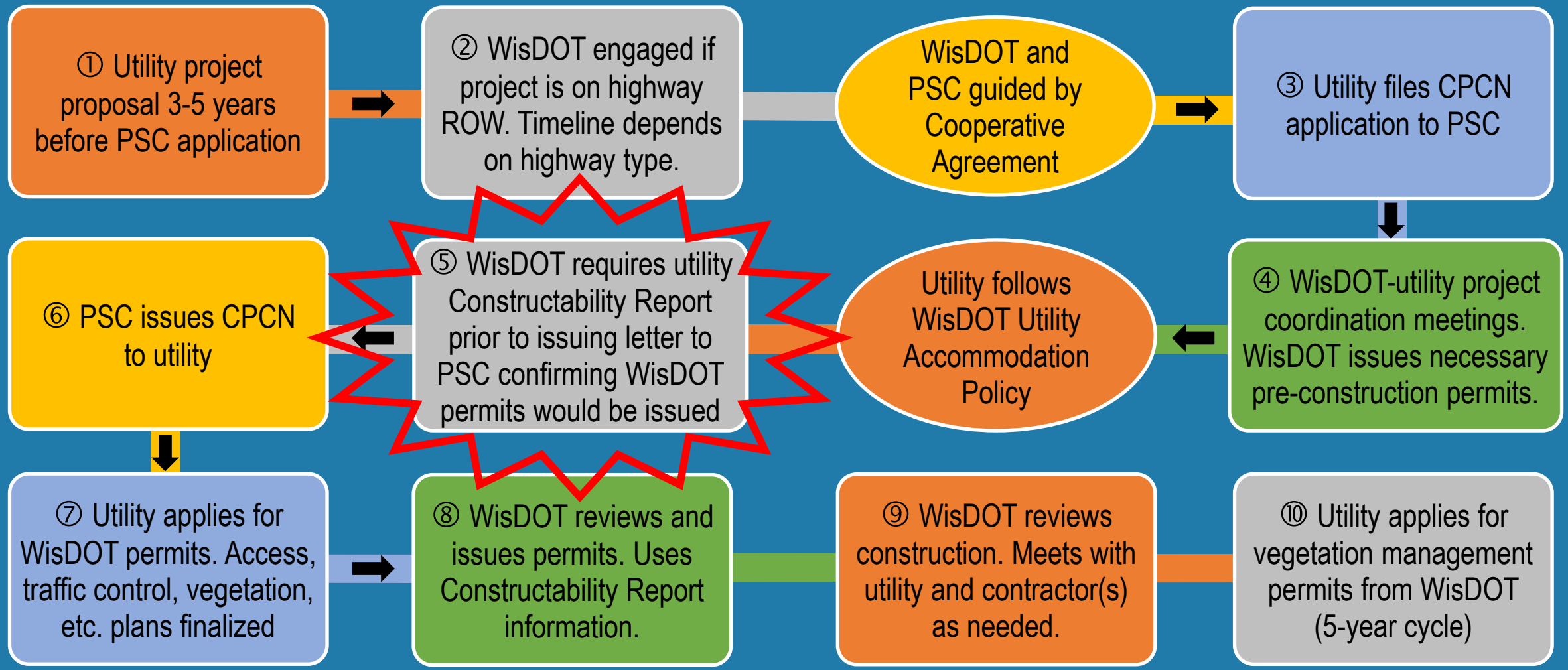
NEXTGEN HIGHWAYS



Constructability Report – Typical Section

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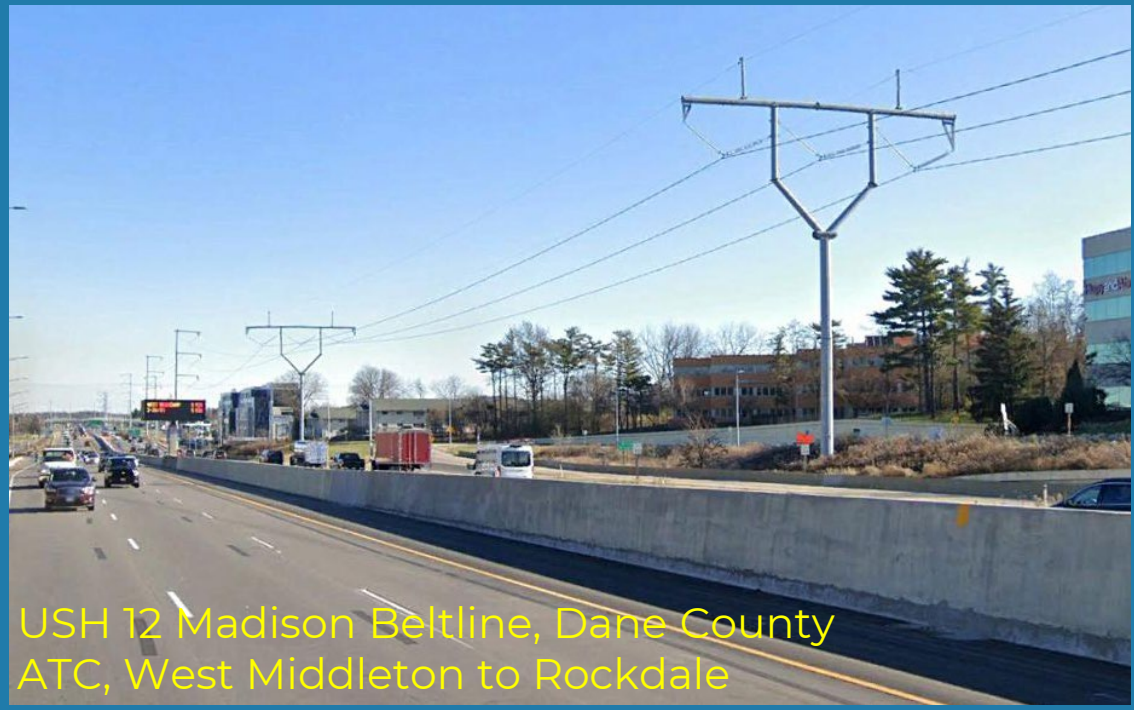
Transmission Project Process with WisDOT Permits



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WisDOT Electric Transmission Line Policy

- Crossings allowed
  - Region offices issue permits
- Longitudinal allowed
  - Central Office issues permits
  - ROW occupation & vegetation removal fees charged
- CO handles coordination with PSC
  - Region office reviews to determine potential conflicts with upcoming (6-yr plan) and long-range highway projects



USH 12 Madison Beltline, Dane County
ATC, West Middleton to Rockdale

Content and photos from WisDOT

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WisDOT Electric Transmission Line Policy

- Placement
  - Near edge of ROW
    - If pole is in clear zone, guardrail must be installed or extended
  - Includes airspace overhang
    - Blowout clearances
  - 75’ from bridge abutments
    - Facilitate crane placement and boom swinging for girder replacement



Content and photos from WisDOT

NEXTGEN HIGHWAYS

Clear zone and guardrail analysis

Segment G Poles											Beamguard Calculations											Comments
Pole ID	Station	Offset from Travel Lane to Pole Center	Pole or Foundation Diameter	Offset from Travel Lane to Pole Edge	Design Speed of Adjacent Road (MPH)	Clear Zone (CZ)	Pole outside Clear Zone?	Protected by Existing Barrier?	Curve Correction Factor Kcz	Working width	X1 (LON)	EAT	LON (ADJ. BY EAT)	BEAM GUARD SECTIONS	SECTIONS BEYOND HAZARD	TOTAL LENGTH OF INSTAL.	BEAM GUARD	THRIE BEAM	TYPE 2 ANCH.	MGS BEAM GUARD	
121910	1035+72	78.0	9.0	73.5	60	44.0	Yes	--	1.0												
121911	1039+93	120.0	7.5	116.3	60	44.0	Yes	--	1.0												
121912	1043+45	180.6	8.0	176.6	60	44.0	Yes	--	1.0												
121913	1049+83	180.8	3.7	179.4	60	44.0	Yes	--	1.0												
121914	1054+72	180.4	2.8	179.0	60	44.0	Yes	--	1.0												
121915	1062+19	180.2	2.7	178.8	60	44.0	Yes	--	1.0												
121916	1069+48	180.6	5.5	177.9	60	44.0	Yes	--	1.0												
121917	1076+67	180.5	2.8	179.1	60	44.0	Yes	--	1.0												
121918	1083+89	181.1	3.5	179.4	60	44.0	Yes	--	1.0												
121919	1091+06	180.3	3.5	178.6	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121920	1098+25	168.8	3.3	167.1	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121921	1105+45	167.0	8.0	163.0	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121922	1110+16	132.1	8.0	128.1	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121923	1115+34	91.8	2.9	90.4	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121924	1121+42	42.9	3.2	41.3	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121925	1127+17	57.5	3.2	55.9	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121926	1132+50	50.6	7.0	47.1	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121927	1138+61	80.9	2.7	79.5	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121928	1144+46	87.7	2.8	86.3	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121929	1150+20	84.6	3.8	82.7	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121930	1155+95	59.5	6.0	56.5	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121931	1162+95	79.5	6.0	76.5	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121932	1170+04	53.4	9.5	48.7	50	28.0	Yes	--	1.0												Lower posted speed limit on USH 14 (45 mph), thus clear zone width is reduced.
121933	18+89	88.1	3.4	86.4	60	44.0	Yes	--	1.0												
121934	24+89	56.8	3.2	55.2	60	44.0	Yes	--	1.0												
121935	30+00	59.6	3.6	57.8	60	44.0	Yes	--	1.0												
121936	36+74	138.4	7.0	134.9	60	44.0	Yes	--	1.0												
121937	43+48	42.9	3.7	41.1	55	32.0	Yes	--	1.0												Pole location is adjacent to a portion of an interchange ramp where lower traffic speeds are expected (< 55 mph). Thus, the clear zone width is reduced.
121938	50+93	39.6	2.9	38.1	60	44.0	No	--	1.0	33.1	228	1	188	16	2	278.125	225	0	1	Yes	
121939	57+14	51.0	2.8	49.6	60	44.0	Yes	--	1.0												
121940	63+21	64.3	2.8	62.9	60	44.0	Yes	--	1.0												
121941	69+30	62.0	2.9	60.6	60	44.0	Yes	--	1.0												
121942	75+38	61.8	2.8	60.4	60	44.0	Yes	--	1.0												
121943	81+57	50.0	2.9	48.6	60	44.0	Yes	--	1.0												
121944	88+33	41.4	3.0	39.9	60	44.0	No	Yes	1.0	32.1	213	1	175	18	0	275	225	0	0	No	Remove existing EAT and extend existing beam guard.
121945	91+86	33.9	3.4	32.2	60	44.0	No	--	1.0	22.2	187	0	187	11	2	162.5	162.5	0	1	No	Extend existing beam guard.
121946	98+80	69.0	3.5	67.3	60	44.0	Yes	--	1.0												
121947	103+13	58.9	3.1	57.4	60	44.0	Yes	--	1.0												
121948	108+10	45.0	2.6	43.7	60	44.0	No	--	1.0	38.6	231	1	191	16	2	278.125	225	0	1	Yes	Shielding to be revised with auxiliary lane project.
121949	113+08	30.0	3.1	28.5	60	44.0	No	--	1.0	23.4	218	1	177	15	2	265.625	212.5	0	1	Yes	Shielding to be revised with auxiliary lane project.
121950	119+16	51.2	3.4	49.5	60	44.0	Yes	--	1.0												
121951	125+23	40.3	3.1	38.8	60	44.0	No	--	1.0	33.4	226.44	1	186	15	2	265.625	212.5	0	1	Yes	Shielding to be revised with auxiliary lane project.
121952	131+24	41.8	3.7	40.0	60	44.0	No	--	1.0	35.0	230	1	190	16	2	278.125	225	0	1	Yes	Shielding to be revised with auxiliary lane project.
121953	138+30	68.3	3.6	66.5	60	52.8	Yes	--	1.2												Clear zone width adjusted due to curve on Beltline.
121954	145+19	53.8	8.0	49.8	60	44.0	Yes	--	1.0												
121955	149+54	32.0	7.5	28.3	50	28.0	Yes	--	1.0												Pole location is adjacent to a portion of an interchange ramp where lower traffic speeds are expected (< 50 mph). Thus, the clear zone width is reduced.
121956	154+95	48.4	3.9	46.5	60	52.8	No	--	1.2	43.5	254	1	194	16	2	278.125	225	0	1	Yes	Clear zone width adjusted due to curve on Beltline.
121957	160+01	74.4	9.0	69.9	60	52.8	Yes	--	1.2												Clear zone width adjusted due to curve on Beltline.
121958	163+46	73.4	8.5	69.2	60	44.0	Yes	--	1.0												
121959	167+91	85.2	4.0	83.2	60	44.0	Yes	--	1.0												
121960	173+00	42.6	7.5	38.9	60	44.0	No	--	1.0	30.9	215	1	174	14	2	253.125	200	0	1	Yes	
121961	178+08	42.6	7.0	39.1	60	44.0	No	--	1.0	31.0	214	1	174	14	2	253.125	200	0	1	Yes	
121962	183+19	68.3	4.0	66.3	60	44.0	Yes	--	1.0												
121963	188+34	79.3	4.3	77.2	60	44.0	Yes	--	1.0												
121964	193+44	70.6	10.0	65.6	60	44.0	Yes	--	1.0												
121965	198+82	84.4	8.0	80.4	60	44.0	Yes	--	1.0												
121966	202+82	59.1	7.5	55.4	60	44.0	Yes	--	1.0												
121967	208+33	142.0	8.0	138.0	60	44.0	Yes	--	1.0												Offset with respect to WisDOT 2012 ramp improvements.
121968	213+48	69.0	3.7	67.1	45	24.0	Yes	--	1.0												Offset with respect to WisDOT 2012 ramp improvements. Use same design speed (45 mph) and clear zone width as WisDOT ramp reconstruction project.
121969	220+50	41.0	4.0	39.0	45	24.0	Yes	--	1.0												Offset with respect to WisDOT 2012 ramp improvements. Use same design speed (45 mph) and clear zone width as WisDOT ramp reconstruction project.
121970	226+32	54.7	3.2	53.1	60	44.0	Yes	--	1.0												Offset with respect to WisDOT 2012 ramp improvements.
121971	232+13	57.9	3.3	56.3	60	44.0	Yes	--	1.0												Offset with respect to WisDOT 2012 ramp improvements.
121972	238+18	56.1	3.6	54.3	60	44.0	Yes	--	1.0												Offset with respect to WisDOT 2012 ramp improvements.
121973	243+68	55.0	6.0	52.0	60	44.0	Yes	--	1.0												Offset with respect to WisDOT 2012 ramp improvements.
121974	250+93	66.5	6.0	63.5	60	44.0	Yes	--	1.0												
121975	258+43	67.0	6.0	64.0	60	44.0	Yes	--	1.0												
121976	264+65	47.0	6.0	44.0	60	44.0	No	--	1.0												
121977	271+82	73.6	3.5	71.9	60	44.0	Yes	--	1.0												
121978	278+99	57.4	3.4	55.7	60	44.0	Yes	--	1.0												
121979	285+82	39.7	3.7	37.9	60	44.0	No	--	1.0	32.9	229	1	188	16	2	278.125	225	0	1	Yes	
121980	292+37	67.0	3.6	65.2	60	44.0	Yes	Yes	1.0												
121981	299+98	10.9	4.0	8.9	40	18.0	No	--	1.0	6.3	128	1	87	1	2	90.625	37.5	0	1	Yes	Pole location is adjacent to a portion of an interchange ramp where lower traffic speeds are expected (< 40 mph). Thus, the clear zone width is reduced.
121982	308+26	39.4	7.5	35.7	55	32.0	Yes	Yes	1.0												Pole location is adjacent to a portion of an interchange ramp where lower traffic speeds are expected (< 55 mph). Thus, the clear zone width is reduced.
121983	313+18	55.0	7.0	46.5	60	44.0	Yes	Yes	1.0												
121984	316+26	60.0	3.3	58.4	60	44.0	Yes	--	1.0												
121984A	323+34	57.8	3.1	56.3	60	44.0	Yes	--	1.0												
121985	328+43	56.8	3.1	55.3	60	44.0	Yes	--	1.0												
121986	333+53	54.8	3.0	53.3	60	44.0	Yes	--	1.0												
121987	338+62	49.0	7.5	45.3	60	44.0	Yes	--	1.0												
121988	341+68	54.0	8.5	29.8	60	44.0	No	--	1.0	19.8	192	1	151	13	19	453.125	400	40	0	Yes	Remove all existing beam guard.
												12					2775	40	11		

NOTES:

1. All offsets are from travel lane of USH 14, Beltline, or closest interchange ramp unless noted otherwise.
2. Length of need for frontage road beam guard protection was not included in this analysis. Frontage roads typically have barrier curb and are posted for 30 mph or less.
3. Design Speed on US 14 varies between 60 mph and 50 mph (55 mph and 45 mph posted).
4. Design Speed on Beltline is 60 mph (posted speed is 55 mph).
5. Design Speeds on entrance ramps vary as noted.
6. Each existing EAT removal itemized as 50' beam guard removal
7. Each turn down anchorage removal itemized as 62.5' (5 sections at 12.5') beam guard removal

Clear zone and guardrail analysis

Segment O Poles

Pole ID	Station	Offset from Travel Lane to Pole Center	Pole or Foundation Diameter	Offset from Travel Lane to Pole Edge	Design Speed of Adjacent Road (MPH)	Clear Zone (CZ)	Pole outside Clear Zone?	Protected by Existing Barrier?	Curve Correction Factor Kcz	Working width
121960	173+00	42.6	7.5	38.9	60	44.0	No	--	1.0	30.9
121961	178+08	42.6	7.0	39.1	60	44.0	No	--	1.0	31.0
121962	183+19	68.3	4.0	66.3	60	44.0	Yes	--	1.0	

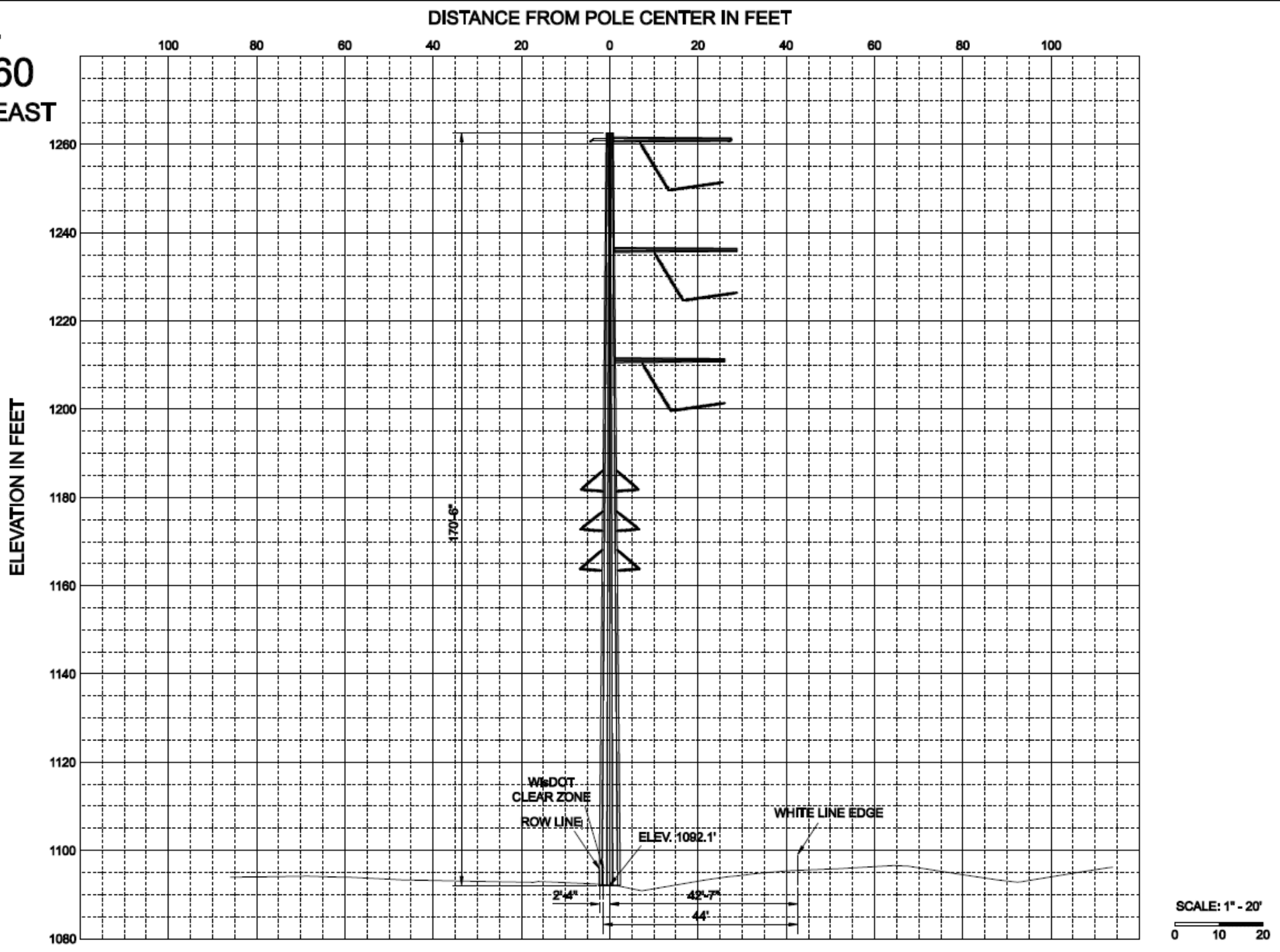
Beamguard Calculations

Working width	X1 (LON)	EAT	LON (ADJ. BY EAT)	BEAM GUARD SECTIONS	SECTIONS BEYOND HAZARD	TOTAL LENGTH OF INSTAL.	BEAM GUARD	THRIE BEAM	TYPE 2 ANCH.	MGS BEAM GUARD
30.9	215	1	174	14	2	253.125	200	0	1	Yes
31.0	214	1	174	14	2	253.125	200	0	1	Yes

NEXTGEN HIGHWAYS

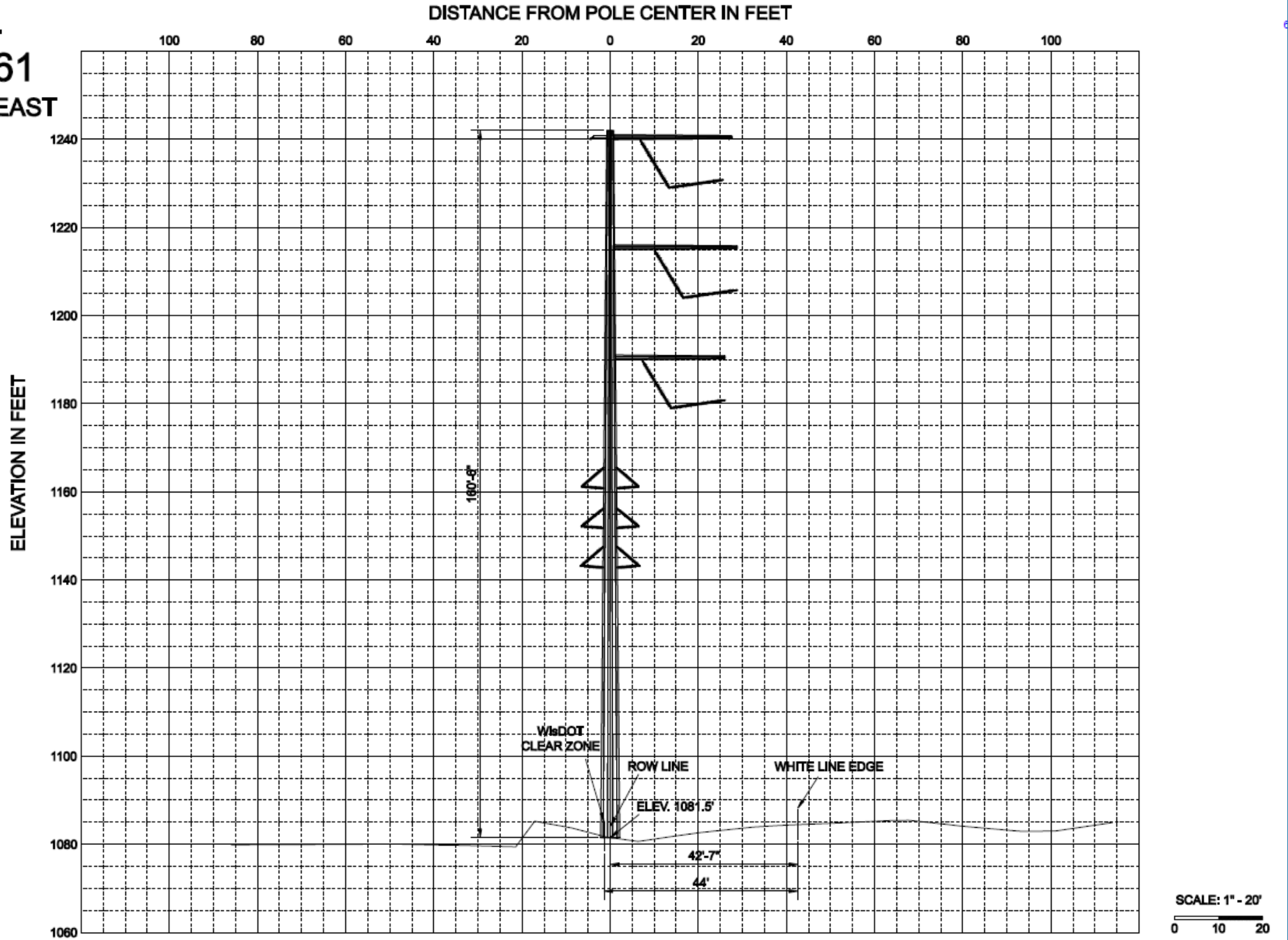
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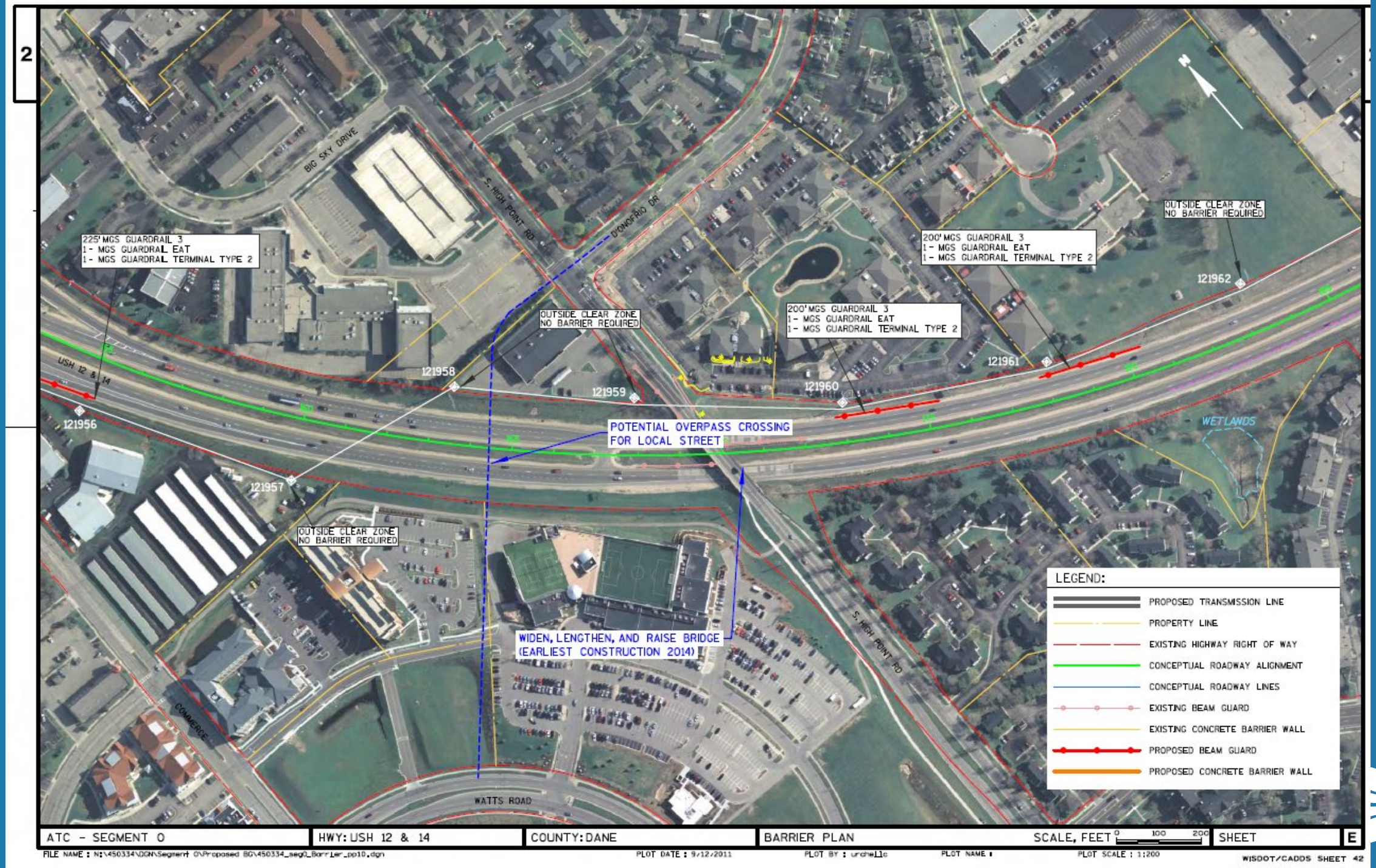
LOOKING EAST



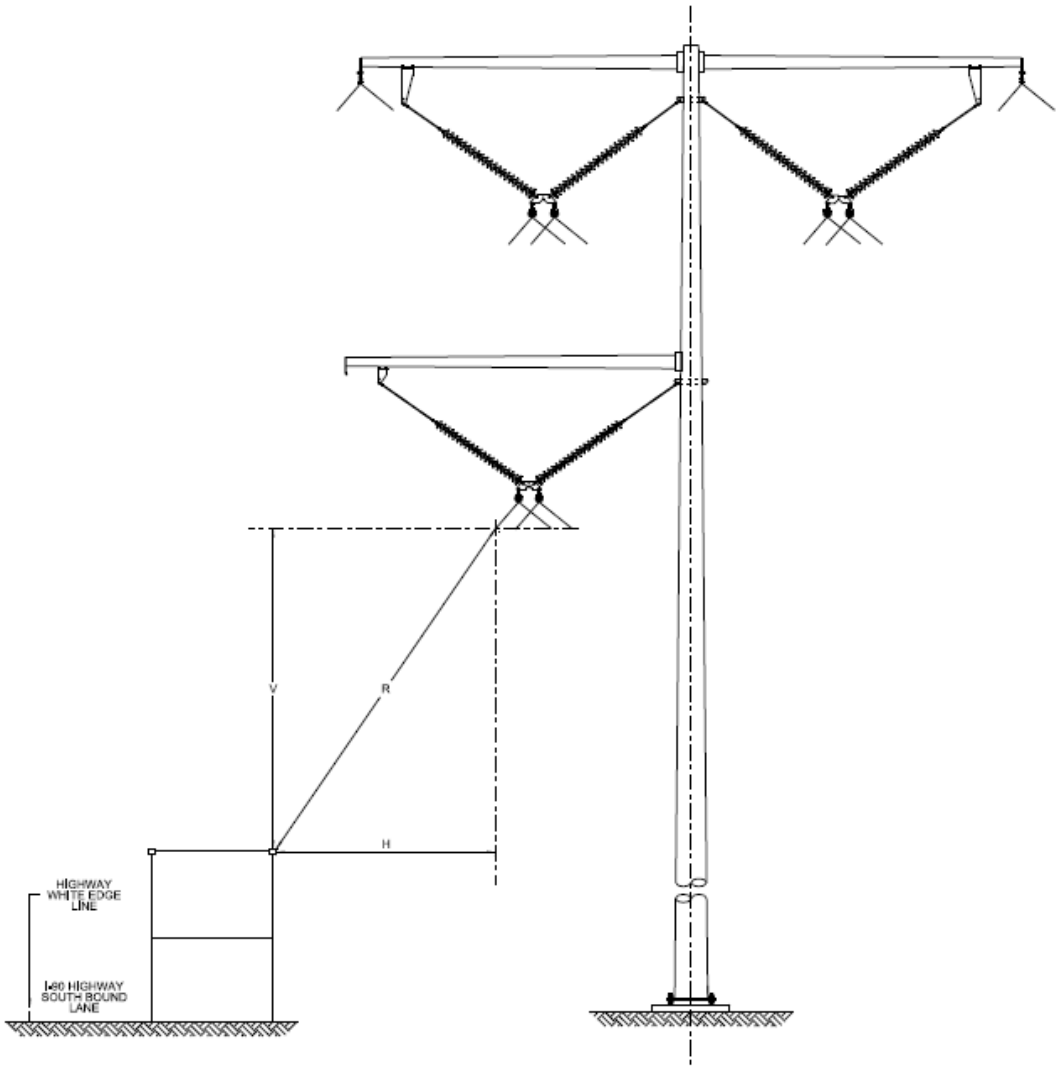
STR. #121961

LOOKING EAST




2
BIG SKY DRIVE
S. HIGH POINT RD
DIGNOFRIO DR
225' MGS GUARDRAIL 3
1 - MGS GUARDRAIL EAT
1 - MGS GUARDRAIL TERMINAL TYPE 2
OUTSIDE CLEAR ZONE
NO BARRIER REQUIRED
200' MGS GUARDRAIL 3
1 - MGS GUARDRAIL EAT
1 - MGS GUARDRAIL TERMINAL TYPE 2
OUTSIDE CLEAR ZONE
NO BARRIER REQUIRED
200' MGS GUARDRAIL 3
1 - MGS GUARDRAIL EAT
1 - MGS GUARDRAIL TERMINAL TYPE 2
121962
121961
121960
121959
121958
121957
121956
USH 12 & 14
POTENTIAL OVERPASS CROSSING
FOR LOCAL STREET
WETLANDS
OUTSIDE CLEAR ZONE
NO BARRIER REQUIRED
WIDEN, LENGTHEN, AND RAISE BRIDGE
(EARLIEST CONSTRUCTION 2014)
COMMERCE
WATTS ROAD
S. HIGH POINT RD
LEGEND:
PROPOSED TRANSMISSION LINE
PROPERTY LINE
EXISTING HIGHWAY RIGHT OF WAY
CONCEPTUAL ROADWAY ALIGNMENT
CONCEPTUAL ROADWAY LINES
EXISTING BEAM GUARD
EXISTING CONCRETE BARRIER WALL
PROPOSED BEAM GUARD
PROPOSED CONCRETE BARRIER WALL
ATC - SEGMENT 0
HWY: USH 12 & 14
COUNTY: DANE
BARRIER PLAN
SCALE, FEET 0 100 200
SHEET
E
FILE NAME : N:\450334\DGN\Segment 0\Proposed BG\450334_seg0_Barrier_pp10.dgn
PLOT DATE : 9/12/2011
PLOT BY : urchellc
PLOT NAME :
PLOT SCALE : 1:200
WISDOT/CADDS SHEET 42

TYPICAL DOT SIGN CROSS SECTION
COLUMBIA COUNTY



DOT Mile Marker	Roadway	Highway Lane Direction	Description	V (FT)	V(FT) Required	H (FT)	H(FT) Required	R (FT)	Reference STR	STR Distance to Sign (FT)
105.2	I-90	Southbound	Green and White Portage Baraboo Exit 106	10.9	14.6	16.1	14.1	25.9	137626	282
105.3	I-90	Southbound	Blue and White Gas and Camping Exit 106	22.8	14.6	32.2	14.1	41.7	137627	128
105.5	I-90	Southbound	Brown and White Devils Lake State Park	21.8	14.6	50.8	14.1	58.8	137629	305
105.5	I-90	Southbound	Brown and White Ski Area	18.7	14.6	25.5	14.1	36.1	137628	237
105.6	I-90	Southbound	Hostpital Exit 106	29.2	14.6	47.1	14.1	58.5	137629	159
106.2	I-90	Southbound	Green and White Portage Baraboo exit 106	12.2	14.6	53.8	14.1	58.5	137630	334
107.2	I-90	Southbound	Green and White Wausua Merrimac Exit 106	51.6	14.6	16.7	14.1	61.5	137639	108
107.8	I-90	Southbound	Blue and White Food Exit 108A	41.2	14.6	32.3	14.1	60.4	137643	353
108.0	I-90	Southbound	Blue and White Gas and Lodging Exit 108	60.8	14.6	101.2	14.1	123.8	137644	372
108.2	I-90	Southbound	Green and White Wausua Merrimac Exit 106	23.8	14.6	94.3	14.1	123.2	137645	397

* ACCORDING TO NESC CLEARANCE CODE 234 ONLY HORIZONTAL **OR** VERTICAL CLEARANCE IS REQUIRED

Blowout clearances: Guide signs

NOTES:
- ONLY THE DIMENSION FOR THE CONDUCTOR CLOSEST TO THE WIS DOT SIGN IS PROVIDED.
- WEATHER CASES ARE: 212° F FINAL SAG AND 0 PSF WIND
  60° F FINAL SAG 6 PSF WIND.
- REQUIRED CLEARANCE BASED OFF NATIONAL ELECTRIC SAFETY CODE.
- STRUCTURE DEFLECTION IS NOT INCLUDED IN THE DIMENSIONS.
- ALL DIMENSIONS AND GEOMETRY ARE SUBJECT TO CHANGE PENDING FINAL DESIGN.
- THE STRUCTURE SHOWN IS FOR VISUAL REPRESENTATION ONLY.
  THE MEASURED DISTANCE IS TO THE WIRE WHERE IT IS CLOSEST TO THE SIGN.

REV	DATE	WO/#	DESCRIPTION	DRAWN	CHKD	APPD	DEPT
B	12/17/15	68245	UPDATED CLEARANCE DISTANCES FOR 630 - 645	MRT	TJA	CDJ	ECI
A	10/26/15	68245	ISSUED FOR REVIEW - SEGMENT 3	MJM	TJA	CDJ	ECI

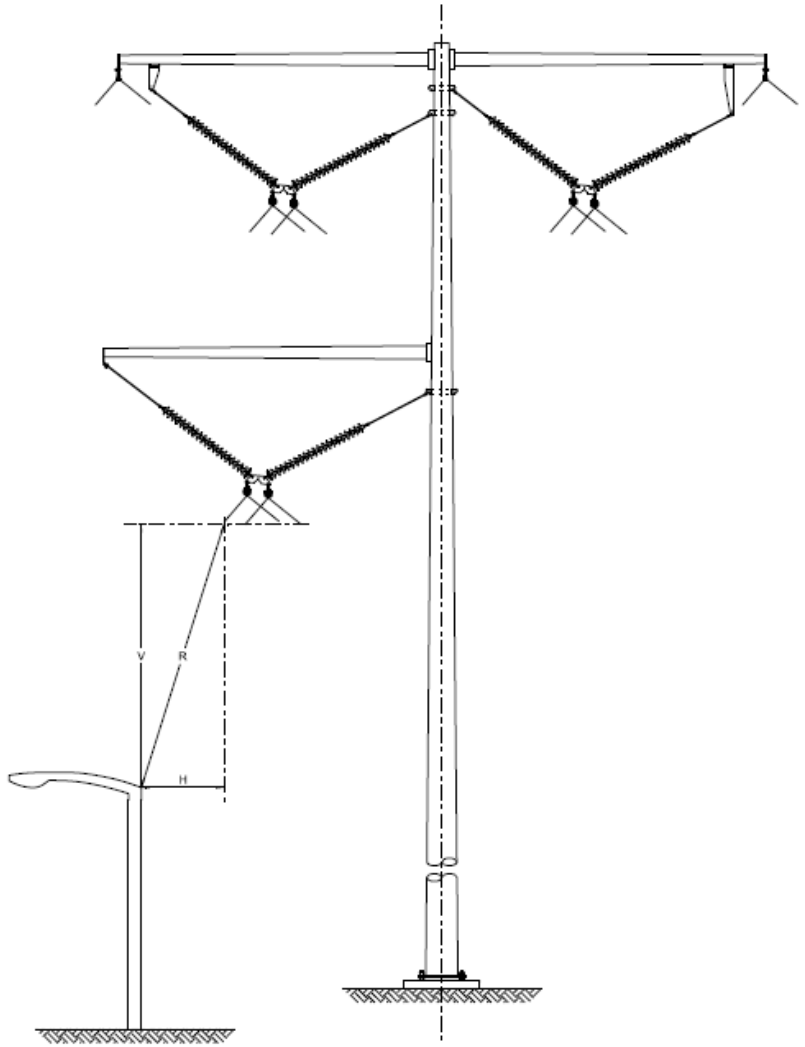
SCALE: NTS

TYPICAL DOT SIGN CROSS SECTION
GENERAL DRAWING
W13-BRIGGS ROAD-NORTH MADISON 345/138kV

ENGINEERING RECORD DRAWING No. ER-10- 000694 -308

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TYPICAL LIGHT POLE CROSS SECTION



DOT Mile Marker	Roadway	Highway Lane Direction	Description	V (FT)	V(FT) Required	H (FT)	H(FT) Required	R (FT)	Reference STR	Distance to STR (FT)
113.2	I-90/I-94 On ramp from rest stop	Northbound	Light Pole	44.8	11.2	53.2	11.9	73.4	137671	157.7
113.2	I-90/I-94 On ramp from rest stop	Northbound	Light Pole	58.5	11.2	47.5	11.9	76.2	137671	70.3
113.2	I-90/I-94 On ramp from rest stop	Northbound	Light Pole	35.6	11.2	3.3*	11.9	35.7	137671	208.9
113.2	I-90/I-94 On ramp from rest stop	Northbound	Light Pole	46.4	11.2	32.7	11.9	56.8	137671	373.1
113.4	Reststop road and parking lot	Northbound	Light Pole	42.4	11.2	45.8	11.9	68.9	137672	304.5
113.4	Reststop road and parking lot	Northbound	Light Pole	54.1	11.2	64.0	11.9	86.6	137672	132.6
113.4	Reststop road and parking lot	Northbound	Light Pole	58.2	11.2	57.3	11.9	83.4	137672	84.7
113.4	Reststop road and parking lot	Northbound	Light Pole	21.4	11.2	26.3	11.9	38.2	137672	143.8
113.4	Reststop road and parking lot	Northbound	Light Pole	12.2	11.2	21.1	11.9	30.6	137672	268.7
113.4	Reststop road and parking lot	Northbound	Light Pole	6.6*	11.2	17.2	11.9	25.6	137672	390.9
113.4	Reststop road and parking lot	Northbound	Light Pole	5.9*	11.2	15.1	11.9	24.3	137672	520.4
113.4	Reststop road and parking lot	Northbound	Light Pole	9.5*	11.2	14.4	11.9	26.2	137673	399.9
113.4	Reststop road and parking lot	Northbound	Light Pole	17.0	11.2	25.7	11.9	30.8	137673	271.5
113.6	Reststop road and parking lot	Northbound	Light Pole	29.3	11.2	24.5	11.9	38.2	137673	147.3
113.6	Reststop road and parking lot	Northbound	Light Pole	69.4	11.2	54.1	11.9	88.0	137673	76.3
113.6	Reststop road and parking lot	Northbound	Light Pole	70.5	11.2	58.0	11.9	91.3	137673	111.9
113.6	Reststop road and parking lot	Northbound	Light Pole	56.8	11.2	49.7	11.9	62.4	137673	275.5
113.6	I-90/I-94 Off ramp to rest stop	Northbound	Light Pole	22.4	11.2	9.6*	11.9	24.4	137673	457.3
113.6	I-90/I-94 Off ramp to rest stop	Northbound	Light Pole	28.0	11.2	31.0	11.9	41.7	137674	339.1
115.8	I-90/I-94 Off ramp to HWY CS	Northbound	Light Pole	4.1*	11.2	39.7	11.9	41.0	137686	340.1
115.8	I-90/I-94 Off ramp to HWY CS	Northbound	Light Pole	53.4	11.2	46.4	11.9	70.7	137686	334.4

* ACCORDING TO NESC CLEARANCE CODE 234 ONLY HORIZONTAL OR VERTICAL CLEARANCE IS REQUIRED

Blowout clearances: Light poles

NOTES:

- ONLY THE DIMENSION FOR THE CONDUCTOR CLOSEST TO THE WIS DOT SIGN IS PROVIDED.
- WEATHER CASES ARE: 212° F (MOT) FINAL SAG AND 0 PSF WIND
  60° F FINAL SAG 6 PSF WIND.
- REQUIRED CLEARANCE BASED OFF NATIONAL ELECTRIC SAFETY CODE.
- STRUCTURE DEFLECTION IS NOT INCLUDED IN THE DIMENSIONS.
- ALL DIMENSIONS AND GEOMETRY ARE SUBJECT TO CHANGE PENDING FINAL DESIGN.
- THE STRUCTURE SHOWN IS FOR VISUAL REPRESENTATION ONLY.
  THE MEASURED DISTANCE IS TO THE WIRE WHERE IT IS CLOSEST TO THE STRUCTURE.

REV	DATE	W.O.#	DESCRIPTION	DRAWN	CHKD	APPD	ENGR
A	10/23/15	98245	ISSUED FOR REVIEW - SEGMENT 2	AT	ZLP	CDJ	EC

SCALE: NTS

TYPICAL LIGHT POLE CROSS SECTION
GENERAL DRAWING
W13-BRIGGS ROAD-NORTH MADISON 345/138kV

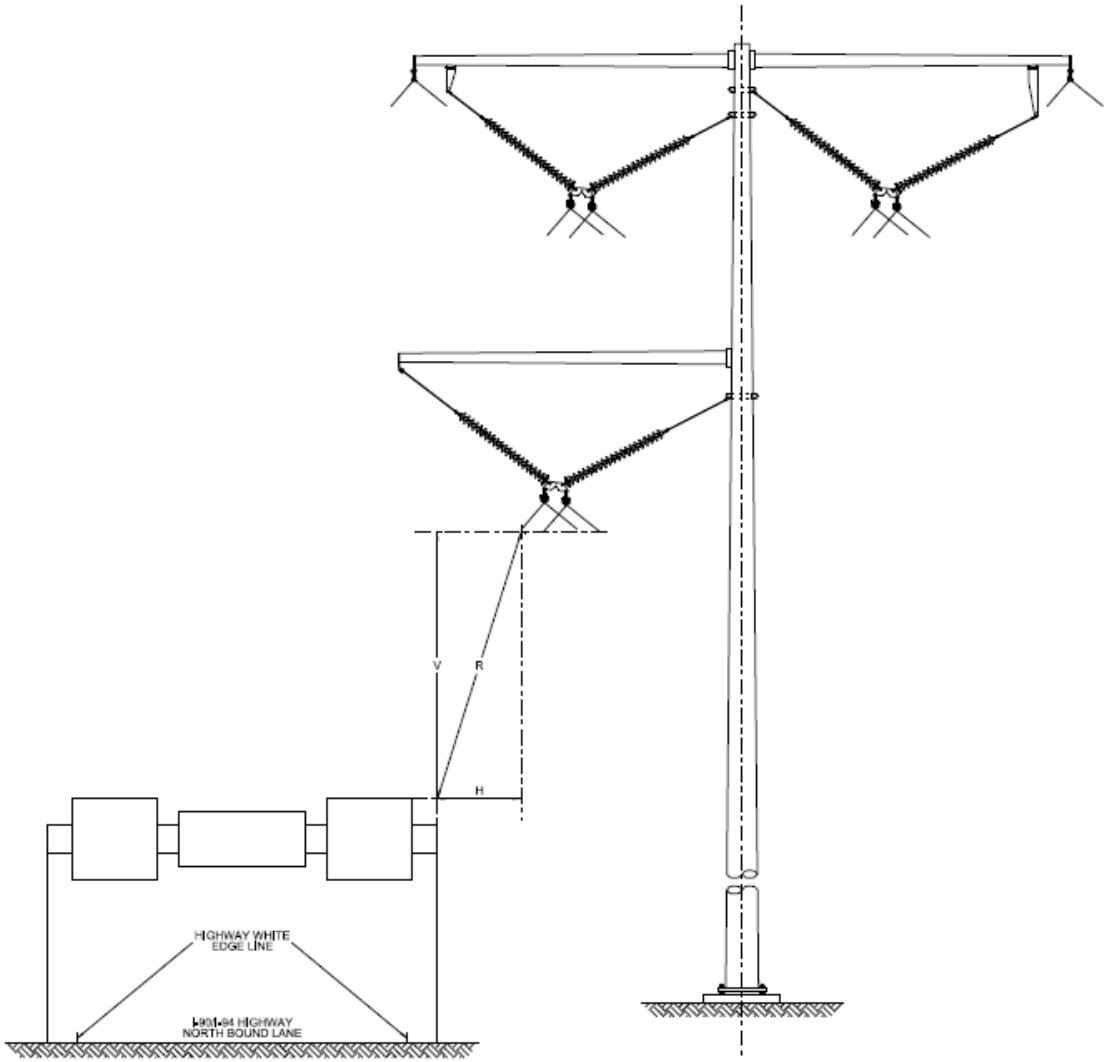
ENGINEERING RECORD DRAWING No. ER-10- 000694 -001

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DOT Mile Marker	Roadway	Highway Lane Direction	Description	V (FT)	V(FT) Required	H (FT)	H(FT) Required	R (FT)	Reference STR	Distance to Sign (FT)
109.2	I-90/I-94	Northbound	Green and white Exit 108 A 78 South Exit 108 B I-39 North 90/94 West Wis Dells	32.2	14.6	71.7	14.9	82.5	137651	137.0
109.4	I-90/I-94	Northbound	Green and white Exists 108 A-B	4.7*	14.6	26.6	14.9	32.5	137652	367.0
110.0	I-90/I-94	Northbound	Green and white Exists 108 A-B 3/4 Mile	33.3	14.6	24.9	14.9	47.5	137656	70.7

* ACCORDING TO NESC CLEARANCE CODE 234 ONLY HORIZONTAL OR VERTICAL CLEARANCE IS REQUIRED

TYPICAL OVERHEAD SIGN CROSS SECTION



Blowout clearances: Overhead signs

NOTES:

- ONLY THE DIMENSION FOR THE CONDUCTOR CLOSEST TO THE WIS DOT SIGN IS PROVIDED.
- WEATHER CASES ARE: 212° F /MOT) FINAL SAG AND 0 PSF WIND
  60° F FINAL SAG 6 PSF WIND.
- REQUIRED CLEARANCE BASED OFF NATIONAL ELECTRIC SAFETY CODE.
- STRUCTURE DEFLECTION IS NOT INCLUDED IN THE DIMENSIONS.
- ALL DIMENSIONS AND GEOMETRY ARE SUBJECT TO CHANGE PENDING FINAL DESIGN.
- THE STRUCTURE SHOWN IS FOR VISUAL REPRESENTATION ONLY.
  THE MEASURED DISTANCE IS TO THE WIRE WHERE IT IS CLOSEST TO THE SIGN.

REV	DATE	WO/#	DESCRIPTION	DRAWN	CHKD	APPD	DEPT
A	10/23/15	66245	ISSUED FOR REVIEW - SEGMENT 2	AT	ZLP	CDJ	EC

SCALE: NTS

TYPICAL OVERHEAD SIGN CROSS SECTION
GENERAL DRAWING
W13-BRIGGS ROAD-NORTH MADISON 345/138kV

ENGINEERING RECORD DRAWING No. ER-10- 000694 -002

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Content and photos from WisDOT

Construction





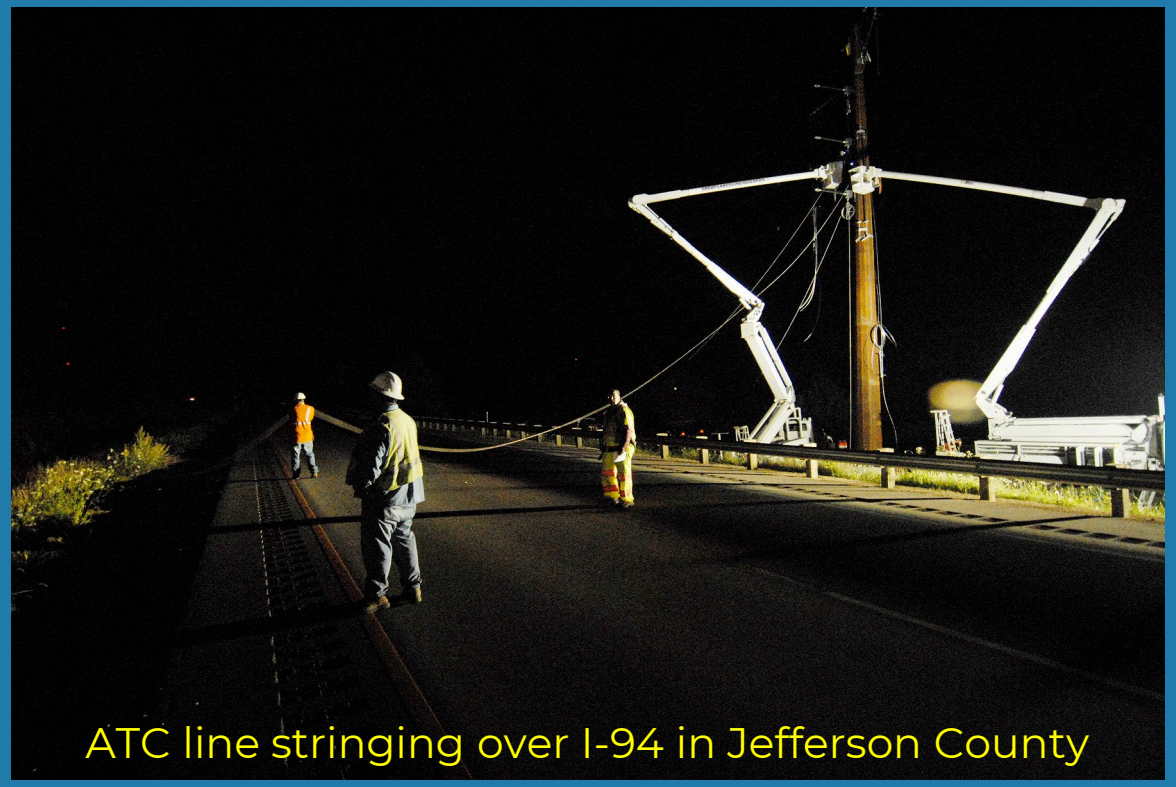
USH 12 Madison Beltline, Dane County
ATC, West Middleton to Rockdale



Content and photos from WisDOT

NEXTGEN HIGHWAYS

Construction



ATC line stringing over I-94 in Jefferson County



USH 12 Madison Beltline, Dane County
ATC construction access via WisDOT security fence

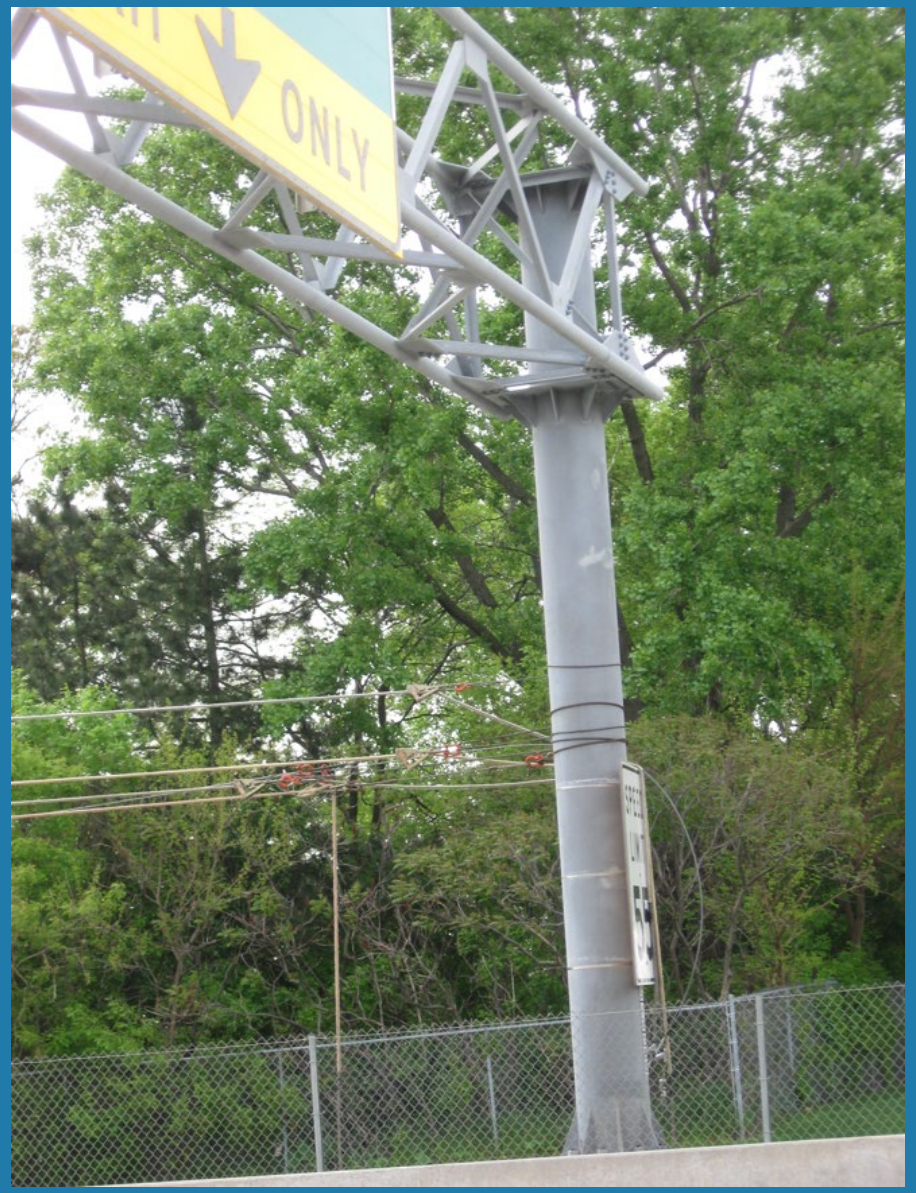


I-90/94, ATC Badger – Coulee project

Content and photos from WisDOT

Line Stringing?





Content and photos from WisDOT

NEXTGEN HIGHWAYS

Induced voltage issues

- Crane operator felt “tingling” during placement of bike/ped bridge over Madison Beltline
- Other reports of people getting a mild shock when touching metal crosswalk button on traffic signal directly under the line



NEXTGEN HIGHWAYS



NEXTGEN HIGHWAYS



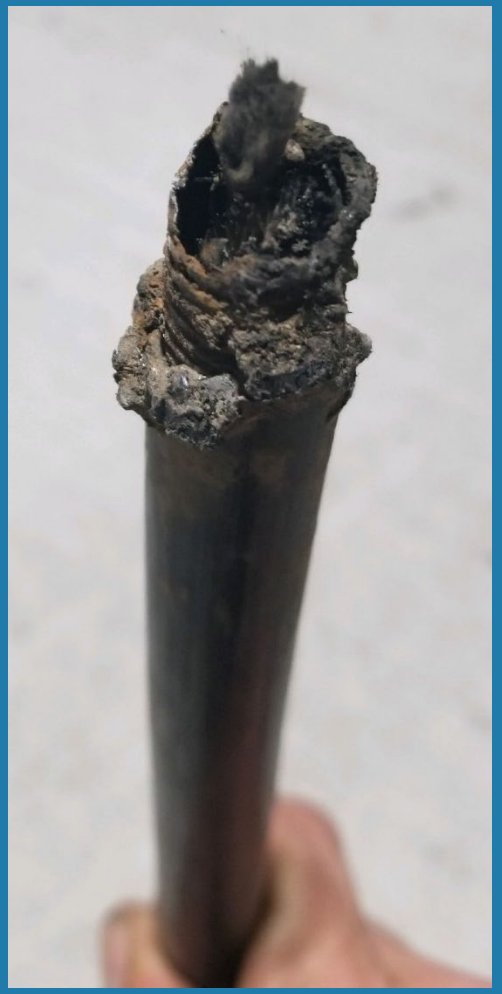




NEXTGEN HIGHWAYS

Induced voltage issues

- WisDOT fiber optic cable damaged due to induced voltage
  - Cable was not grounded
  - Occurred during winter prior to snow
    - Frozen ground is more conductive (super dry)
  - Eventually grounded the cable every 2,000’
- AT&T splicer went to the hospital after receiving a shock
  - AT&T cable was not grounded either
  - WisDOT told AT&T about the issue



NEXTGEN HIGHWAYS

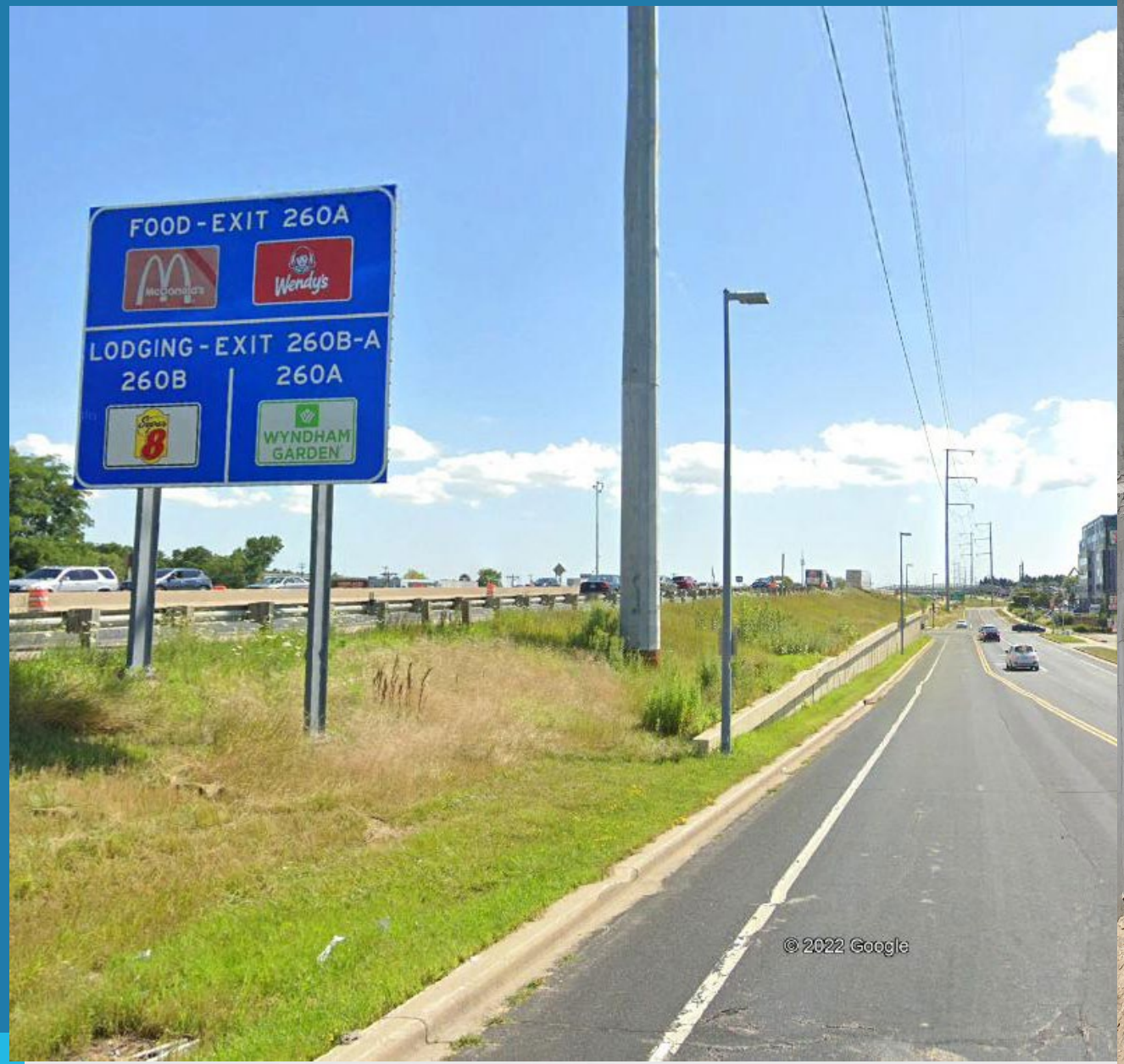
Electric Transmission Lines in WisDOT ROW

- 26 projects
- 7 projects utilizing Interstate ROW
- ~225 miles in controlled-access highway ROW
- Over 1500 poles in the ROW
  - Assumed average 750-foot pole spacing
- 0 projects with work zone or other construction safety issues
- 0 projects requiring structure relocation
- 1 pole hit by a vehicle (Interstate entrance ramp)

NEXTGEN HIGHWAYS

Designing Around Existing Transmission

NEXTGEN HIGHWAYS





News Release

Wisconsin Department of Transportation

Wisconsin State Patrol Southwest Region DeForest Post **608-846-8500**

Sent On: 01/02/2026 12:24 PM

Contact Name:
Contact Phone:

Crash Information - Initial Release

Highway: I-39 NB
Location: MILE MARKER 146
County: DANE

At 2:39 AM on Friday January 02, 2026 a crash occurred on I-39 NB at Mile marker 146 in DANE County near MC FARLAND.

No assisting agencies were reported.

The crash involved 1 injury. Vehicle and occupant information, if available, is on the last page(s).

The details of the crash are as follows:

Interstate lanes are closed along I-39/90 north at County N near Stoughton following a single-vehicle semi crash just before 3:00 am on January 2. A semi hauling food products left the roadway and stuck a high-voltage power pole, knocking down the pole and lines near the northbound lanes of I-39/90.

The driver was trapped, extricated, and transported to a local hospital with non-life-threatening injuries. The crash remains under investigation by the Wisconsin State Patrol.

Two lanes of I-39/90 northbound and the I-39/90 northbound on ramp from County N remain closed while crews make repairs. The closure is expected to last into the weekend and alternate routes should be considered as backups along I-39/90 north near Stoughton are expected.

The alternate route is I-39/90 north to US 51/WIS 73 exit 160 (near Edgerton). Wis 73 north to US 12/18 west.

Check 511wi.gov for the latest travel information.

###

I-39 Pole Crash



NEXTGEN HIGHWAYS

KRL0MFXHR1
000332-3405

WISCONSIN MOTOR VEHICLE CRASH REPORT

WI STATE PATROL SWR/DEF
911 W NORTH ST
DE FOREST, WI 53532 1971
(608) 846-8500

KRL0MFXHR1

Document Number Override	Primary Crash Document #	Agency Crash Number	Investigating Officer/Deputy	
		000332-3405	[redacted]	
Crash Date	Crash Time	Date Arrived	Time Arrived	
01/02/2026	02:34 AM	01/02/2026	02:44 AM	
Date Notified	Time Notified	Total Units	Total Injured	Total Killed
01/02/2026	02:39 AM	01	01	00

☐ On Emergency	☐ Hit and Run	☑ Lane Closure	☐ Work Zone	☑ Trailer or Towed	☑ Reporting Threshold
☑ Government Property	☐ Active School Zone	School Bus Related: NO		Tags	
☑ Reportable	Crash Type: DT4000 (STANDARD CRASH)			☐ Amended	☐ Secondary Crash

Description [redacted]

Diagram



Reconstruction By

Photos By [redacted]

Additional Information
CMV INSPECTION, PHOTOS, WITNESS STATEMENTS, OTHER VIDEO

NEXTGEN HIGHWAYS

1/2/26 I-39 Pole Incident



ActionDate	Action/Call Time	Action/Call		
1/2/2026	2:34 AM	incident occurred	Edit	Delete
1/2/2026	2:46 AM	STOC called RIMC - initial notification	Edit	Delete
1/2/2026	3:38 AM	DSP called RIMC - additional notification	Edit	Delete
1/2/2026	3:54 AM	DSP called DCH to assist with closure	Edit	Delete
1/2/2026	4:10 AM	STOC called RIMC to report ATC on scene to cut power	Edit	Delete
1/2/2026	4:24 AM	DCH called RIMC to confirm lane closures	Edit	Delete
1/2/2026	4:31 AM	RIMC called STOC to update that both lanes 2 & 3 were going to be closed and requested to have DMS boards downstream with lane closures	Edit	Delete
1/2/2026	6:15 AM	RIMC on scene and talked with Sgt [redacted]. Got current status. Tractor is holding pole off ground; temp pole will be placed. Sgt [redacted] taking over soon. DCH had lane closures set by 6:30am. queue was already 1.6m at 7am.	Edit	Delete
1/2/2026	9:58 AM	Lt. [redacted] called for update	Edit	Delete
1/2/2026	10:45 AM	STOC called queue is >3mi, significant incident and will email BTO. 3.8 @ 10:50am.	Edit	Delete
1/2/2026	11:01 AM	DCH called asking if alt route should be used	Edit	Delete
1/2/2026	11:16 AM	RIMC to STOC to request that "use alt route" be added to DMS boards.	Edit	Delete
1/2/2026	12:08 PM	DCH called, ATC estimates closure can be picked up at 6pm	Edit	Delete
1/2/2026	2:15 PM	RIMC spoke with Trooper [redacted]. One trailer has been removed. second trailer plus tractor remain. Once the trailer and tractor are removed, the ATC pole can be dismantled. Two temp wood post will then be used to support lines.	Edit	Delete
1/2/2026	3:00 PM	TEAMS mtg with DSP, DOT & DCH.	Edit	Delete
1/2/2026	3:24 PM	RIMC called ATC [redacted] 608-438[redacted]. His shift is complete, [redacted] new contact 608-774-[redacted]	Edit	Delete
1/2/2026	4:00 PM	RIMC spoke with [redacted] Transmission lines over ramp will have >20; clearance and lines will remain de-energized for duration of time that they are on this temporary post system.	Edit	Delete
1/2/2026	5:15 PM	[redacted] with ATC called RIMC. lanes 2&3 can start to be opened at 7 or 7:30pm. Ramp at 10pm.	Edit	Delete
1/2/2026	5:31 PM	Sgt [redacted] called RIMC for current update. RIMC also told her that [redacted] would relieve me for 12hrs starting at 8pm. I gave her his contact info.	Edit	Delete
1/2/2026	9:03 PM	Lanes 2 & 3 open. Ramp still closed	Edit	Delete
1/2/2026	10:00 PM	Ramp open	Edit	Delete

Videos

- https://youtu.be/mcE3sGjuqIA?si=Q1cx4HZClbduCYdR
- Semi slams power pole near Stoughton, causes I-39 traffic delays
- Semi vs power pole sends 1 to hospital

NEXTGEN HIGHWAYS

For additional information

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(608) 576-8891
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Former Statewide ROW Permits Engineer
WisDOT, Bureau of Highway Maintenance

NEXTGEN HIGHWAYS