

Laminated Wood Systems, Inc.

E-LAM[®]

Field Raked Poles

**Southern Pine &
Coastal Douglas-fir**
32ft - 107ft

LWS

Laminated Wood Systems, Inc.

1-800-949-3526

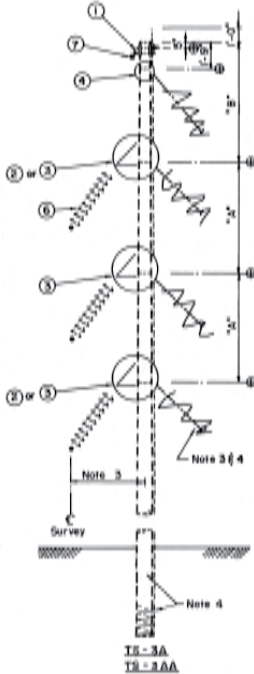
www.lwsinc.com

Structure Design Criteria

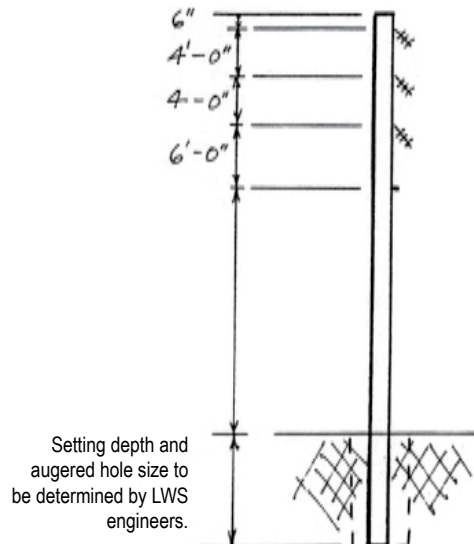
Submit online at: www.lwsinc.com

By providing our engineering department with pertinent design details and criteria, we can specify the raked poles suited to meet your pole and loading requirements.

Please Attach Your Drawing(s) Such as...



And/Or a Sketch Such as...



Customer Name _____

Contact Name _____

Project Name _____

Project Address _____

City _____ State _____

Phone _____ Fax _____

Email _____

City _____ State _____ Zip _____

Construction Type _____

Line Voltage(s) _____

Number of Conductors _____ Conductor Size _____

Number of Neutral/Shield Wires _____

Neutral/Shield Wire Size _____

Maximum Span (feet) _____

Line Angle Range (degrees) _____ to _____

Maximum Design Tension (lbs.) _____

60 Degree Fahrenheit Tension (lbs.) _____

Loading Conditions _____

(Example - NESC Heavy Loading, Grade B Construction)

Pole Height (above ground), Range _____ to _____

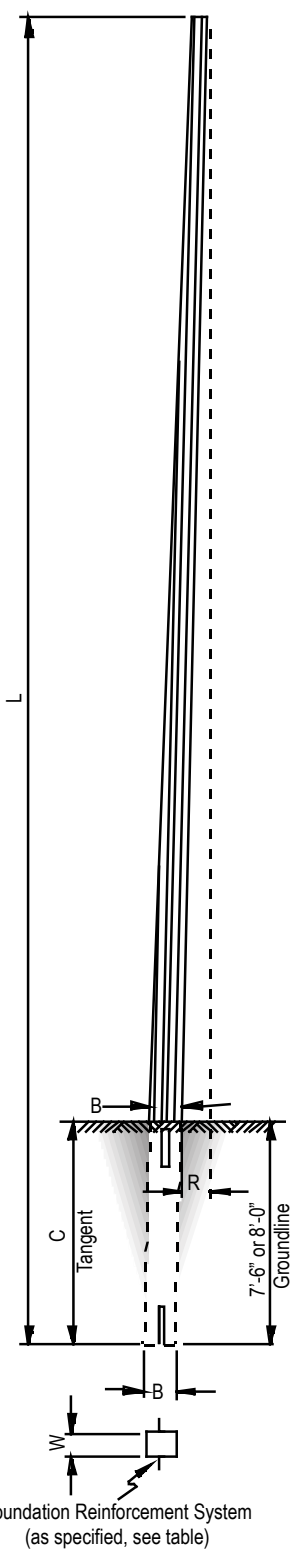
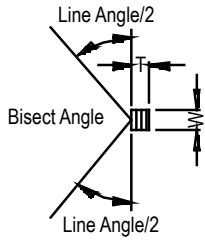
Typical Soil Type _____

Additional Comments: (Example - cable TV, telephone, etc.)

Fax Completed Form To: 402-643-4374



E-LAM® Standard Raked Poles • Southern Pine • 32 ft & 37 ft



Foundation Reinforcement System
(as specified, see table)

32 ft. Southern Pine

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-4-32	6-3/4	6 1/2	9 5/8	32	7.5	9	582	66	EDA-5
PELR-3-32	6-3/4	6 1/2	11	32	7.5	9	640	86	EDA-5
PELR-2-32	6-3/4	6 1/2	12-3/8	32	7.5	9	699	109	EDA-5
PELR-1-32	6-3/4	7 1/2	13-3/4	32	7.5	9	784	135	EDA-5
PELR-H1-32	6-3/4	7 1/2	15-1/8	32	7.5	9	842	163	EDA-5
PELR-H2-32	6-3/4	7 1/2	16-1/2	32	7.5	9	901	193	EDA-5
PELR-H3-32	6-3/4	8	17-7/8	32	7.5	9	973	225	EDA-8
PELR-H4-32	6-3/4	9	19-1/4	32	7.5	9	1,058	259	EDA-8
PELR-H5-32	6-3/4	10	20-5/8	32	7.5	9	1,142	295	EDA-8
PELR-H6-32	6-3/4	11	22	32	7.5	9	1,227	334	EDA-8
PELR-H7-32	6-3/4	12	23-3/8	32	7.5	9	1,312	375	EDA-8
PELR-H8-32	6-3/4	12	24-3/4	32	7.5	9	1,371	418	EDA-8
PELR-H9-32	8-1/2	13	24-3/4	32	7.5	9	1,760	526	EDB-8
PELR-H10-32	8-1/2	13	26-1/8	32	7.5	9	1,833	583	EDB-8
PELR-H11-32	8-1/2	14	27-1/2	32	7.5	9	1,940	643	EDB-8
PELR-H12-32	8-1/2	14	28-7/8	32	7.5	9	2,014	705	EDB-8
PELR-H13-32	8-1/2	15	30-1/4	32	7.5	9	2,121	770	EDB-8
PELR-H14-32	8-1/2	15	31-5/8	32	7.5	9	2,195	838	EDB-8
PELR-H15-32	8-1/2	16	33	32	7.5	9	2,302	909	EDB-8
PELR-H16-32	8-1/2	16	34-3/8	32	7.5	9	2,376	982	EDB-8

* - Field rake amount "R" will be determined by L.W.S.

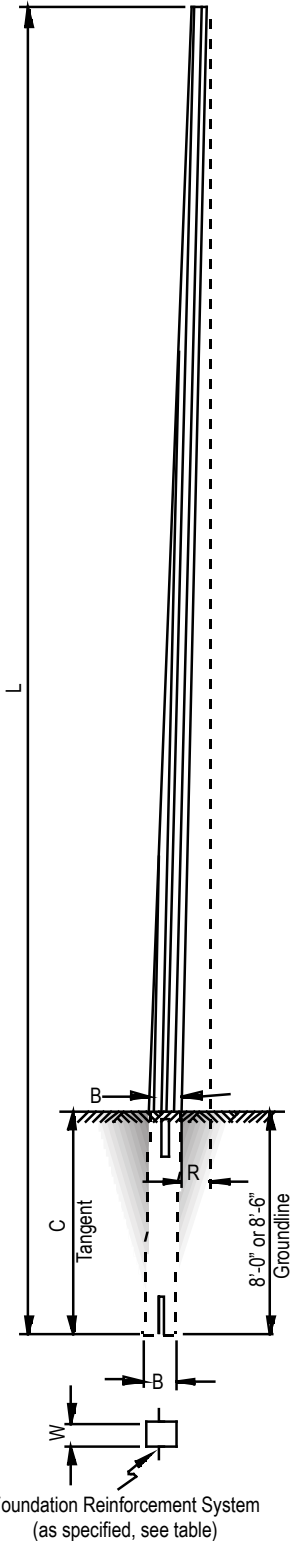
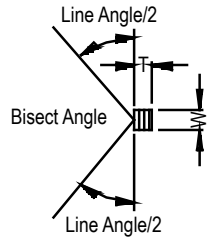
37 ft. Southern Pine

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-4-37	6-3/4	6-1/2	9-5/8	37	8	9	670	66	EDA-5
PELR-3-37	6-3/4	6-1/2	11	37	8	9	737	86	EDA-5
PELR-2-37	6-3/4	6-1/2	12-3/8	37	8	9	804	109	EDA-5
PELR-1-37	6-3/4	7-1/2	13-3/4	37	8	9	902	135	EDA-5
PELR-H1-37	6-3/4	7-1/2	15-1/8	37	8	9	968	163	EDA-5
PELR-H2-37	6-3/4	7-1/2	16-1/2	37	8	9	1,035	193	EDA-5
PELR-H3-37	6-3/4	8	17-7/8	37	8	9	1,117	225	EDA-8
PELR-H4-37	6-3/4	9	19-1/4	37	8	9	1,215	259	EDA-8
PELR-H5-37	6-3/4	10	20-5/8	37	8	9	1,313	295	EDA-8
PELR-H6-37	6-3/4	11	22	37	8	9	1,411	334	EDA-8
PELR-H7-37	6-3/4	12	23-3/8	37	8	9	1,509	375	EDA-8
PELR-H8-37	6-3/4	12	24-3/4	37	8	9	1,576	418	EDA-8
PELR-H9-37	8-1/2	13	24-3/4	37	8	9	2,024	526	EDB-8
PELR-H10-37	8-1/2	13	26-1/8	37	8	9	2,108	583	EDB-8
PELR-H11-37	8-1/2	14	27-1/2	37	8	9	2,231	643	EDB-8
PELR-H12-37	8-1/2	14	28-7/8	37	8	9	2,315	705	EDB-8
PELR-H13-37	8-1/2	15	30-1/4	37	8	9	2,439	770	EDB-8
PELR-H14-37	8-1/2	15	31-5/8	37	8	9	2,523	838	EDB-8
PELR-H15-37	8-1/2	16	33	37	8	9	2,646	909	EDB-8
PELR-H16-37	8-1/2	16	34-3/8	37	8	9	2,730	982	EDB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Southern Pine • 42 ft & 47 ft



42 ft. Southern Pine

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-4-42	6-3/4	6-1/2	11	42	8	12	831	86	EDA-5
PELR-3-42	6-3/4	6-1/2	12-3/8	42	8	12	905	109	EDA-5
PELR-2-42	6-3/4	6-1/2	13-3/4	42	8	12	979	135	EDA-5
PELR-1-42	6-3/4	7-1/2	15-1/8	42	8	12	1,090	163	EDA-5
PELR-H1-42	6-3/4	7-1/2	16-1/2	42	8	12	1,164	193	EDA-5
PELR-H2-42	6-3/4	7-1/2	17-7/8	42	8	12	1,238	225	EDA-8
PELR-H3-42	6-3/4	8	19-1/4	42	8	12	1,331	259	EDA-8
PELR-H4-42	6-3/4	9	20-5/8	42	8	12	1,442	295	EDA-8
PELR-H5-42	6-3/4	10	22	42	8	12	1,553	334	EDA-8
PELR-H6-42	6-3/4	11	23-3/8	42	8	12	1,663	375	EDA-8
PELR-H7-42	6-3/4	12	24-3/4	42	8	12	1,774	418	EDA-8
PELR-H8-42	8-1/2	12	24-3/4	42	8	12	2,234	526	EDB-8
PELR-H9-42	8-1/2	13	26-1/8	42	8	12	2,373	583	EDB-8
PELR-H10-42	8-1/2	13	27-1/2	42	8	12	2,467	643	EDB-8
PELR-H11-42	8-1/2	14	28-7/8	42	8	12	2,606	705	EDB-8
PELR-H12-42	8-1/2	14	30-1/4	42	8	12	2,700	770	EDB-8
PELR-H13-42	8-1/2	15	31-5/8	42	8	12	2,839	838	EDB-8
PELR-H14-42	8-1/2	15	33	42	8	12	2,933	909	EDB-8
PELR-H15-42	8-1/2	16	34-3/8	42	8	12	3,072	982	EDB-8
PELR-H16-42	8-1/2	16	35-3/4	42	8	12	3,165	1,058	EDB-8

* - Field rake amount "R" will be determined by L.W.S.

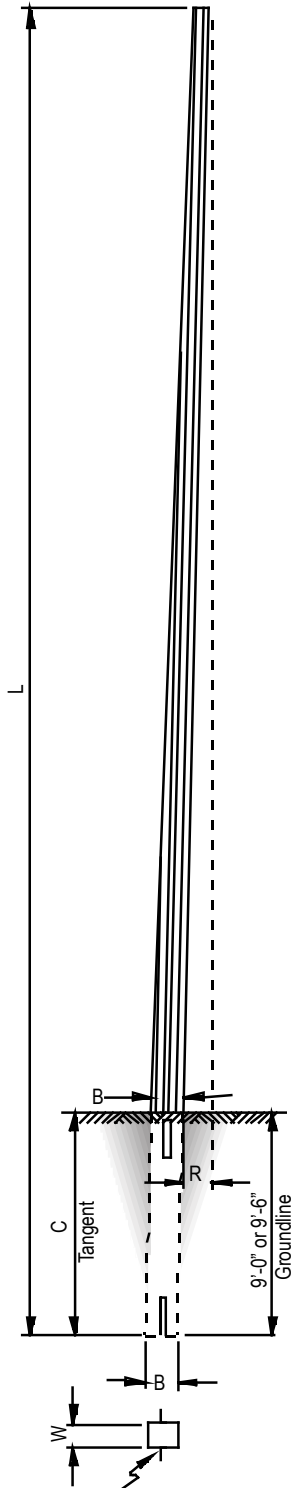
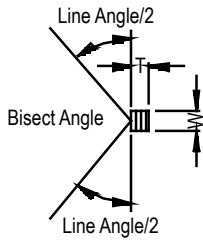
47 ft. Southern Pine

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-4-47	8-1/2	6-1/2	11	47	8.5	12	1,169	109	EDB-5
PELR-3-47	8-1/2	6-1/2	12-3/8	47	8.5	12	1,272	137	EDB-5
PELR-2-47	8-1/2	7-1/2	13-3/4	47	8.5	12	1,428	170	EDB-5
PELR-1-47	8-1/2	7-1/2	15-1/8	47	8.5	12	1,532	205	EDB-5
PELR-H1-47	8-1/2	7-1/2	16-1/2	47	8.5	12	1,635	244	EDB-8
PELR-H2-47	8-1/2	7-1/2	17-7/8	47	8.5	12	1,739	284	EDB-8
PELR-H3-47	8-1/2	8	19-1/4	47	8.5	12	1,869	326	EDB-8
PELR-H4-47	8-1/2	9	20-5/8	47	8.5	12	2,024	372	EDB-8
PELR-H5-47	8-1/2	10	22	47	8.5	12	2,180	421	EDB-8
PELR-H6-47	8-1/2	11	23-3/8	47	8.5	12	2,336	472	EDB-8
PELR-H7-47	8-1/2	12	24-3/4	47	8.5	12	2,492	526	EDB-8
PELR-H8-47	10-1/4	12	24-3/4	47	8.5	12	3,005	634	EDC-8
PELR-H9-47	10-1/4	13	26-1/8	47	8.5	12	3,193	703	EDC-8
PELR-H10-47	10-1/4	13	27-1/2	47	8.5	12	3,318	775	EDC-8
PELR-H11-47	10-1/4	14	28-7/8	47	8.5	12	3,506	850	EDC-8
PELR-H12-47	10-1/4	14	30-1/4	47	8.5	12	3,631	929	EDC-8
PELR-H13-47	10-1/4	15	31-5/8	47	8.5	12	3,819	1,011	EDC-8
PELR-H14-47	10-1/4	15	33	47	8.5	12	3,944	1,096	ETA-8
PELR-H15-47	10-1/4	16	34-3/8	47	8.5	12	4,132	1,184	ETA-8
PELR-H16-47	10-1/4	16	35-3/4	47	8.5	12	4,257	1,276	ETA-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Southern Pine • 52 ft & 57 ft



Foundation Reinforcement System
(as specified, see table)

52 ft. Southern Pine

Pole Class	Pole Dimensions						Approx. R * Weight (lbs.)	Ultimate Treated Moment (ft.-kips)	Standard Groundline Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)	(max.) (in.)			
PELR-3-52	8-1/2	6-1/2	12-3/8	52	9	15	1,404	137	EDB-5
PELR-2-52	8-1/2	7-1/2	13-3/4	52	9	15	1,577	170	EDB-5
PELR-1-52	8-1/2	7-1/2	15-1/8	52	9	15	1,690	205	EDB-5
PELR-H1-52	8-1/2	7-1/2	16-1/2	52	9	15	1,804	244	EDB-8
PELR-H2-52	8-1/2	7-1/2	17-7/8	52	9	15	1,918	284	EDB-8
PELR-H3-52	8-1/2	8	19-1/4	52	9	15	2,061	326	EDB-8
PELR-H4-52	8-1/2	9	20-5/8	52	9	15	2,233	372	EDB-8
PELR-H5-52	8-1/2	10	22	52	9	15	2,406	421	EDB-8
PELR-H6-52	8-1/2	11	23-3/8	52	9	15	2,578	472	EDB-8
PELR-H7-52	8-1/2	12	24-3/4	52	9	15	2,750	526	EDB-8
PELR-H8-52	10-1/4	12	24-3/4	52	9	15	3,316	634	EDC-8
PELR-H9-52	10-1/4	13	26-1/8	52	9	15	3,524	703	EDC-8
PELR-H10-52	10-1/4	13	27-1/2	52	9	15	3,661	775	EDC-8
PELR-H11-52	10-1/4	14	28-7/8	52	9	15	3,869	850	EDC-8
PELR-H12-52	10-1/4	14	30-1/4	52	9	15	4,007	929	EDC-8
PELR-H13-52	10-1/4	15	31-5/8	52	9	15	4,214	1,011	EDC-8
PELR-H14-52	10-1/4	15	33	52	9	15	4,352	1,096	ETA-8
PELR-H15-52	10-1/4	16	34-3/8	52	9	15	4,559	1,184	ETA-8
PELR-H16-52	10-1/4	16	35-3/4	52	9	15	4,697	1,276	ETA-8

* - Field rake amount "R" will be determined by L.W.S.

57 ft. Southern Pine

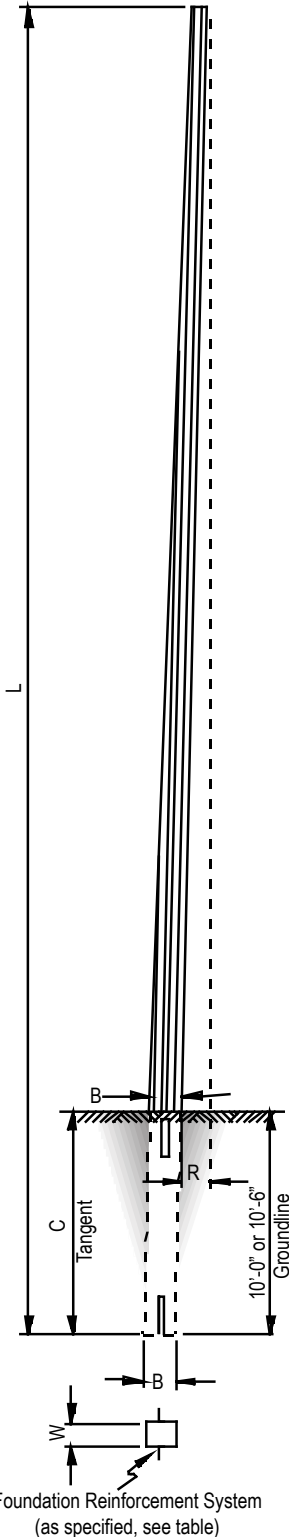
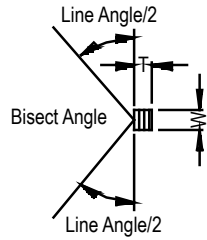
Pole Class	Pole Dimensions						Approx. R * Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)	(max.) (in.)			
PELR-2-57	8-1/2	7-1/2	15-1/8	57	9.5	15	1,849	205	EDB-5
PELR-1-57	8-1/2	7-1/2	16-1/2	57	9.5	15	1,973	244	EDB-8
PELR-H1-57	8-1/2	7-1/2	17-7/8	57	9.5	15	2,097	284	EDB-8
PELR-H2-57	8-1/2	7-1/2	19-1/4	57	9.5	15	2,222	326	EDB-8
PELR-H3-57	8-1/2	8	20-5/8	57	9.5	15	2,378	372	EDB-8
PELR-H4-57	8-1/2	9	22	57	9.5	15	2,567	421	EDB-8
PELR-H5-57	8-1/2	10	23-3/8	57	9.5	15	2,755	472	EDB-8
PELR-H6-57	8-1/2	11	24-3/4	57	9.5	15	2,944	526	EDB-8
PELR-H7-57	10-1/4	12	24-3/4	57	9.5	15	3,628	634	EDC-8
PELR-H8-57	10-1/4	12	26-1/8	57	9.5	15	3,777	703	EDC-8
PELR-H9-57	10-1/4	13	27-1/2	57	9.5	15	4,005	775	EDC-8
PELR-H10-57	10-1/4	13	28-7/8	57	9.5	15	4,155	850	EDC-8
PELR-H11-57	10-1/4	14	30-1/4	57	9.5	15	4,382	929	EDC-8
PELR-H12-57	10-1/4	14	31-5/8	57	9.5	15	4,532	1,011	ETA-8
PELR-H13-57	10-1/4	15	33	57	9.5	15	4,759	1,096	ETA-8
PELR-H14-57	10-1/4	15	34-3/8	57	9.5	15	4,909	1,184	ETA-8
PELR-H15-57	10-1/4	16	35-3/4	57	9.5	15	5,136	1,276	ETA-8
PELR-H16-57	10-1/4	16	37-1/8	57	9.5	15	5,286	1,371	ETA-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.



E-LAM[®] Standard Raked Poles • Southern Pine • 62 ft & 67 ft



62 ft. Southern Pine

Pole Class	Pole Dimensions					R * (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-62	10-1/4	7-1/2	16-1/2	62	10	18	2,583	294	ETA-5
PELR-H1-62	10-1/4	7-1/2	17-7/8	62	10	18	2,746	342	ETA-5
PELR-H2-62	10-1/4	7-1/2	19-1/4	62	10	18	2,908	394	ETA-5
PELR-H3-62	10-1/4	8	20-5/8	62	10	18	3,112	449	ETA-5
PELR-H4-62	10-1/4	9	22	62	10	18	3,359	507	ETA-8
PELR-H5-62	10-1/4	10	23-3/8	62	10	18	3,607	569	ETA-8
PELR-H6-62	10-1/4	11	24-3/4	62	10	18	3,854	634	ETA-8
PELR-H7-62	10-1/4	12	26-1/8	62	10	18	4,101	703	ETA-8
PELR-H8-62	10-1/4	12	27-1/2	62	10	18	4,263	775	ETA-8
PELR-H9-62	10-1/4	13	28-7/8	62	10	18	4,510	850	ETA-8
PELR-H10-62	10-1/4	13	30-1/4	62	10	18	4,672	929	ETA-8
PELR-H11-62	10-1/4	14	31-5/8	62	10	18	4,920	1,011	ETA-8
PELR-H12-62	10-1/4	14	33	62	10	18	5,082	1,096	ETA-8
PELR-H13-62	10-1/4	15	34-3/8	62	10	18	5,329	1,184	ETA-8
PELR-H14-62	10-1/4	15	35-3/4	62	10	18	5,491	1,276	ETA-8
PELR-H15-62	10-1/4	16	37-1/8	62	10	18	5,738	1,371	ETA-8
PELR-H16-62	10-1/4	16	38-1/2	62	10	18	5,900	1,469	1 1/2 ETA-8

* - Field rake amount "R" will be determined by L.W.S.

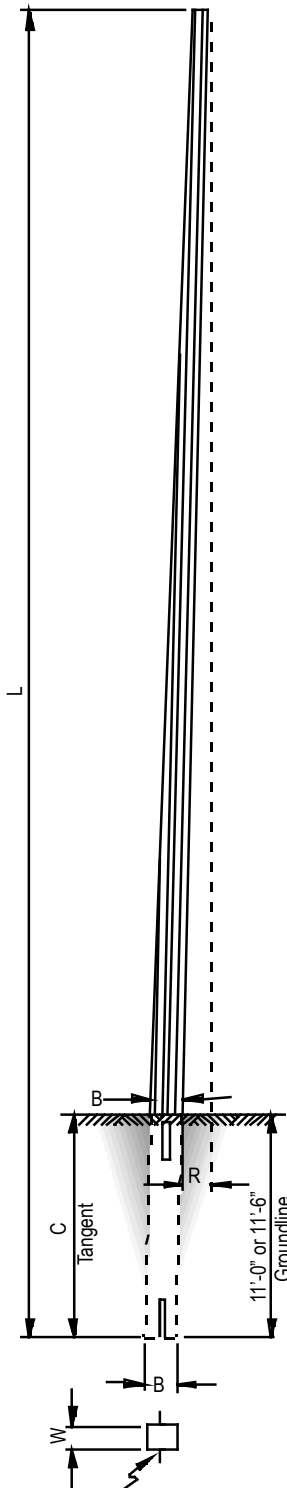
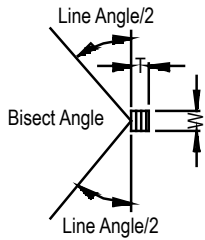
67 ft. Southern Pine

Pole Class	Pole Dimensions					R * (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-67	10-1/4	7-1/2	16-1/2	67	10.5	18	2,787	294	ETA-5
PELR-H1-67	10-1/4	7-1/2	17-7/8	67	10.5	18	2,962	342	ETA-5
PELR-H2-67	10-1/4	7-1/2	19-1/4	67	10.5	18	3,136	394	ETA-5
PELR-H3-67	10-1/4	8	20-5/8	67	10.5	18	3,357	449	ETA-5
PELR-H4-67	10-1/4	9	22	67	10.5	18	3,624	507	ETA-8
PELR-H5-67	10-1/4	10	23-3/8	67	10.5	18	3,891	569	ETA-8
PELR-H6-67	10-1/4	11	24-3/4	67	10.5	18	4,158	634	ETA-8
PELR-H7-67	12-1/4	12	24-3/4	67	10.5	18	5,080	758	ETA-8
PELR-H8-67	12-1/4	12	26-1/8	67	10.5	18	5,288	840	ETB-8
PELR-H9-67	12-1/4	13	27-1/2	67	10.5	18	5,607	926	ETB-8
PELR-H10-67	12-1/4	13	28-7/8	67	10.5	18	5,816	1,016	ETB-8
PELR-H11-67	12-1/4	14	30-1/4	67	10.5	18	6,135	1,110	ETB-8
PELR-H12-67	12-1/4	14	31-5/8	67	10.5	18	6,343	1,208	ETB-8
PELR-H13-67	12-1/4	15	33	67	10.5	18	6,662	1,310	ETB-8
PELR-H14-67	12-1/4	15	34-3/8	67	10.5	18	6,871	1,415	ETB-8
PELR-H15-67	12-1/4	16	35-3/4	67	10.5	18	7,190	1,525	1 1/2 ETB-8
PELR-H16-67	12-1/4	16	37-1/8	67	10.5	18	7,398	1,638	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Southern Pine • 72 ft & 77 ft



Foundation Reinforcement System
(as specified, see table)

72 ft. Southern Pine

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-72	10-1/4	7-1/2	16-1/2	72	11	21	2,991	294	ETA-5
PELR-H1-72	10-1/4	7-1/2	17-7/8	72	11	21	3,178	342	ETA-5
PELR-H2-72	10-1/4	7-1/2	19-1/4	72	11	21	3,365	394	ETA-5
PELR-H3-72	10-1/4	8	20-5/8	72	11	21	3,602	449	ETA-5
PELR-H4-72	10-1/4	9	22	72	11	21	3,888	507	ETA-8
PELR-H5-72	10-1/4	10	23-3/8	72	11	21	4,175	569	ETA-8
PELR-H6-72	10-1/4	11	24-3/4	72	11	21	4,462	634	ETA-8
PELR-H7-72	12-1/4	12	24-3/4	72	11	21	5,452	758	ETB-8
PELR-H8-72	12-1/4	12	26-1/8	72	11	21	5,675	840	ETB-8
PELR-H9-72	12-1/4	13	27-1/2	72	11	21	6,018	926	ETB-8
PELR-H10-72	12-1/4	13	28-7/8	72	11	21	6,241	1,016	ETB-8
PELR-H11-72	12-1/4	14	30-1/4	72	11	21	6,583	1,110	ETB-8
PELR-H12-72	12-1/4	14	31-5/8	72	11	21	6,807	1,208	ETB-8
PELR-H13-72	12-1/4	15	33	72	11	21	7,149	1,310	ETB-8
PELR-H14-72	12-1/4	15	34-3/8	72	11	21	7,373	1,415	ETB-8
PELR-H15-72	12-1/4	16	35-3/4	72	11	21	7,715	1,525	1 1/2 ETB-8
PELR-H16-72	12-1/4	16	37-1/8	72	11	21	7,939	1,638	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

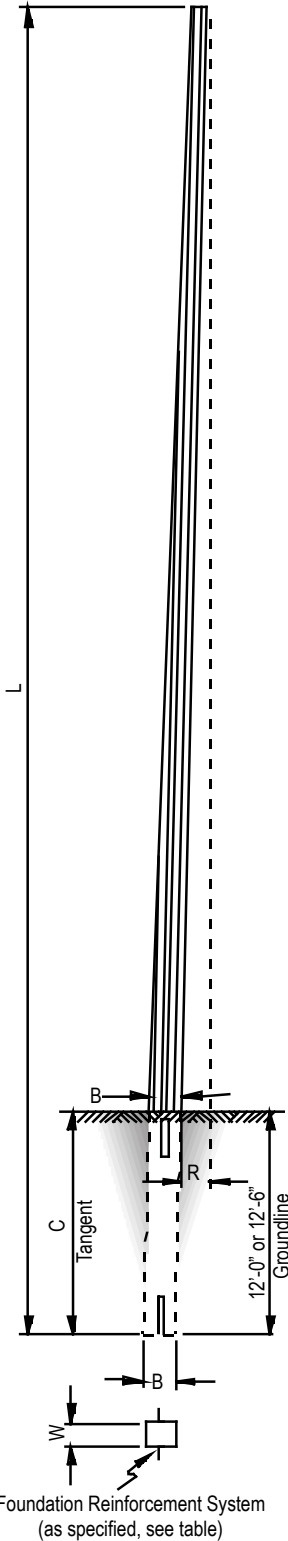
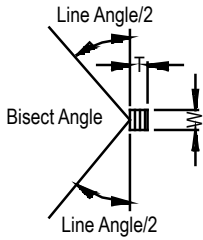
77 ft. Southern Pine

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-77	10-1/4	7-1/2	17-7/8	77	11.5	21	3,394	342	ETA-5
PELR-H1-77	10-1/4	7-1/2	19-1/4	77	11.5	21	3,593	394	ETA-5
PELR-H2-77	10-1/4	7-1/2	20-5/8	77	11.5	21	3,793	449	ETA-5
PELR-H3-77	10-1/4	8	22	77	11.5	21	4,045	507	ETA-8
PELR-H4-77	10-1/4	9	23-3/8	77	11.5	21	4,352	569	ETA-8
PELR-H5-77	10-1/4	10	24-3/4	77	11.5	21	4,658	634	ETA-8
PELR-H6-77	12-1/4	11	24-3/4	77	11.5	21	5,695	758	ETB-8
PELR-H7-77	12-1/4	12	26-1/8	77	11.5	21	6,062	840	ETB-8
PELR-H8-77	12-1/4	12	27-1/2	77	11.5	21	6,300	926	ETB-8
PELR-H9-77	12-1/4	13	28-7/8	77	11.5	21	6,666	1,016	ETB-8
PELR-H10-77	12-1/4	13	30-1/4	77	11.5	21	6,904	1,110	ETB-8
PELR-H11-77	12-1/4	14	31-5/8	77	11.5	21	7,270	1,208	ETB-8
PELR-H12-77	12-1/4	14	33	77	11.5	21	7,508	1,310	ETB-8
PELR-H13-77	12-1/4	15	34-3/8	77	11.5	21	7,875	1,415	ETB-8
PELR-H14-77	12-1/4	15	35-3/4	77	11.5	21	8,113	1,525	1 1/2 ETB-8
PELR-H15-77	12-1/4	16	37-1/8	77	11.5	21	8,479	1,638	1 1/2 ETB-8
PELR-H16-77	12-1/4	16	38-1/2	77	11.5	21	8,717	1,756	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Southern Pine • 82 ft & 87 ft



82 ft. Southern Pine

Pole Class	Pole Dimensions					R * (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-82	10-1/4	7-1/2	19-1/4	82	12	24	3,822	394	ETA-5
PELR-H1-82	10-1/4	7-1/2	20-5/8	82	12	24	4,034	449	ETA-5
PELR-H2-82	10-1/4	7-1/2	22	82	12	24	4,245	507	ETA-8
PELR-H3-82	10-1/4	8	23-3/8	82	12	24	4,514	569	ETA-8
PELR-H4-82	10-1/4	9	24-3/4	82	12	24	4,840	634	ETA-8
PELR-H5-82	12-1/4	10	24-3/4	82	12	24	5,922	758	ETB-8
PELR-H6-82	12-1/4	11	26-1/8	82	12	24	6,311	840	ETB-8
PELR-H7-82	12-1/4	12	27-1/2	82	12	24	6,701	926	ETB-8
PELR-H8-82	12-1/4	12	28-7/8	82	12	24	6,954	1,016	ETB-8
PELR-H9-82	12-1/4	13	30-1/4	82	12	24	7,344	1,110	ETB-8
PELR-H10-82	12-1/4	13	31-5/8	82	12	24	7,597	1,208	ETB-8
PELR-H11-82	12-1/4	14	33	82	12	24	7,987	1,310	ETB-8
PELR-H12-82	12-1/4	14	34-3/8	82	12	24	8,240	1,415	ETB-8
PELR-H13-82	12-1/4	15	35-3/4	82	12	24	8,630	1,525	1 1/2 ETB-8
PELR-H14-82	12-1/4	15	37-1/8	82	12	24	8,882	1,638	1 1/2 ETB-8
PELR-H15-82	12-1/4	16	38-1/2	82	12	24	9,272	1,756	1 1/2 ETB-8
PELR-H16-82	12-1/4	16	39-7/8	82	12	24	9,525	1,877	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

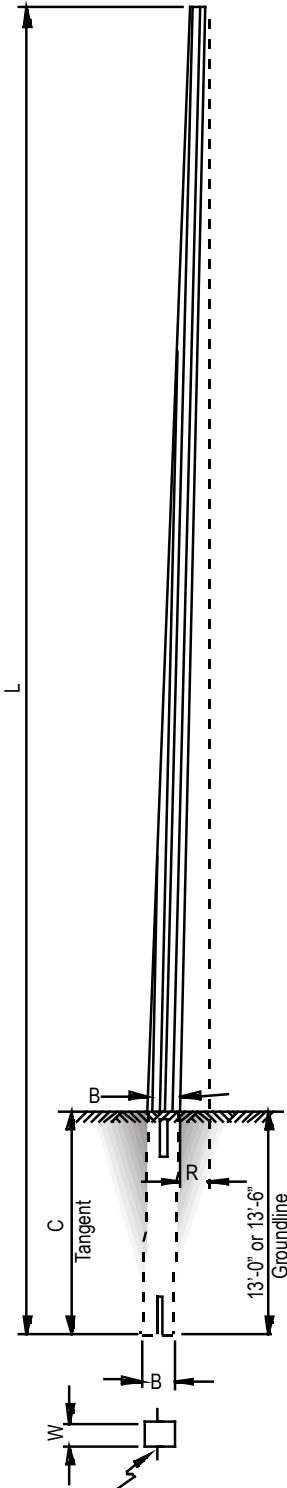
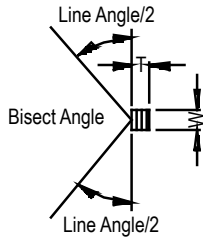
87 ft. Southern Pine

Pole Class	Pole Dimensions					R * (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-87	10-1/4	7-1/2	20-5/8	87	12.5	24	4,275	449	ETA-5
PELR-H1-87	10-1/4	7-1/2	22	87	12.5	24	4,498	507	ETA-8
PELR-H2-87	10-1/4	7-1/2	23-3/8	87	12.5	24	4,722	569	ETA-8
PELR-H3-87	10-1/4	8	24-3/4	87	12.5	24	5,007	634	ETA-8
PELR-H4-87	12-1/4	9	24-3/4	87	12.5	24	6,130	758	ETB-8
PELR-H5-87	12-1/4	10	26-1/8	87	12.5	24	6,544	840	ETB-8
PELR-H6-87	12-1/4	11	27-1/2	87	12.5	24	6,957	926	ETB-8
PELR-H7-87	12-1/4	12	28-7/8	87	12.5	24	7,371	1,016	ETB-8
PELR-H8-87	12-1/4	12	30-1/4	87	12.5	24	7,638	1,110	ETB-8
PELR-H9-87	12-1/4	13	31-5/8	87	12.5	24	8,052	1,208	ETB-8
PELR-H10-87	12-1/4	13	33	87	12.5	24	8,319	1,310	ETB-8
PELR-H11-87	12-1/4	14	34-3/8	87	12.5	24	8,733	1,415	ETB-8
PELR-H12-87	12-1/4	14	35-3/4	87	12.5	24	9,001	1,525	1 1/2 ETB-8
PELR-H13-87	12-1/4	15	37-1/8	87	12.5	24	9,414	1,638	1 1/2 ETB-8
PELR-H14-87	12-1/4	15	38-1/2	87	12.5	24	9,682	1,756	1 1/2 ETB-8
PELR-H15-87	12-1/4	16	39-7/8	87	12.5	24	10,095	1,877	1 1/2 ETB-8
PELR-H16-87	12-1/4	16	41-1/4	87	12.5	24	10,363	2,001	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Southern Pine • 92 ft & 97 ft



Foundation Reinforcement System
(as specified, see table)

92 ft. Southern Pine

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-92	12-1/4	7-1/2	20-5/8	92	13	27	5,397	536	ETB-8
PELR-H1-92	12-1/4	7-1/2	22	92	13	27	5,679	606	ETB-8
PELR-H2-92	12-1/4	7-1/2	23-3/8	92	13	27	5,962	680	ETB-8
PELR-H3-92	12-1/4	8	24-3/4	92	13	27	6,321	758	ETB-8
PELR-H4-92	12-1/4	9	26-1/8	92	13	27	6,758	840	ETB-8
PELR-H5-92	12-1/4	10	27-1/2	92	13	27	7,195	926	ETB-8
PELR-H6-92	12-1/4	11	28-7/8	92	13	27	7,632	1,016	ETB-8
PELR-H7-92	12-1/4	12	30-1/4	92	13	27	8,069	1,110	ETB-8
PELR-H8-92	12-1/4	12	31-5/8	92	13	27	8,352	1,208	ETB-8
PELR-H9-92	12-1/4	13	33	92	13	27	8,789	1,310	ETB-8
PELR-H10-92	12-1/4	13	34-3/8	92	13	27	9,072	1,415	ETB-8
PELR-H11-92	12-1/4	14	35-3/4	92	13	27	9,509	1,525	1 1/2 ETB-8
PELR-H12-92	12-1/4	14	37-1/8	92	13	27	9,791	1,638	1 1/2 ETB-8
PELR-H13-92	12-1/4	15	38-1/2	92	13	27	10,228	1,756	1 1/2 ETB-8
PELR-H14-92	12-1/4	15	39-7/8	92	13	27	10,511	1,877	1 1/2 ETB-8
PELR-H15-92	12-1/4	16	41-1/4	92	13	27	10,948	2,001	1 1/2 ETB-8
PELR-H16-92	12-1/4	16	42-5/8	92	13	27	11,230	2,130	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

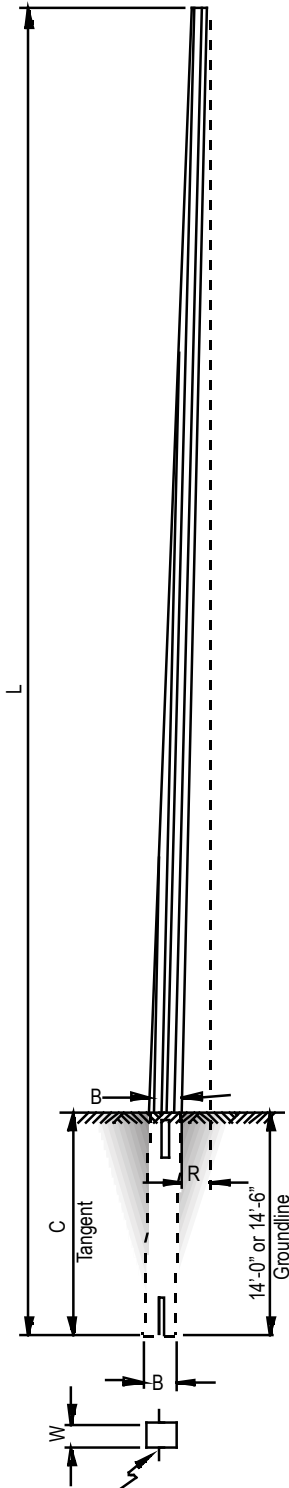
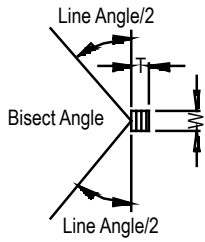
97 ft. Southern Pine

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-97	12-1/4	7-1/2	22	97	13.5	27	5,982	606	ETB-8
PELR-H1-97	12-1/4	7-1/2	23-3/8	97	13.5	27	6,279	680	ETB-8
PELR-H2-97	12-1/4	7-1/2	24-3/4	97	13.5	27	6,576	758	ETB-8
PELR-H3-97	12-1/4	8	26-1/8	97	13.5	27	6,955	840	ETB-8
PELR-H4-97	12-1/4	9	27-1/2	97	13.5	27	7,416	926	ETB-8
PELR-H5-97	12-1/4	10	28-7/8	97	13.5	27	7,877	1,016	ETB-8
PELR-H6-97	12-1/4	11	30-1/4	97	13.5	27	8,337	1,110	ETB-8
PELR-H7-97	12-1/4	12	31-5/8	97	13.5	27	8,798	1,208	ETB-8
PELR-H8-97	12-1/4	12	33	97	13.5	27	9,095	1,310	ETB-8
PELR-H9-97	12-1/4	13	34-3/8	97	13.5	27	9,556	1,415	ETB-8
PELR-H10-97	12-1/4	13	35-3/4	97	13.5	27	9,853	1,525	1 1/2 ETB-8
PELR-H11-97	12-1/4	14	37-1/8	97	13.5	27	10,314	1,638	1 1/2 ETB-8
PELR-H12-97	12-1/4	14	38-1/2	97	13.5	27	10,611	1,756	1 1/2 ETB-8
PELR-H13-97	12-1/4	15	39-7/8	97	13.5	27	11,072	1,877	1 1/2 ETB-8
PELR-H14-97	12-1/4	15	41-1/4	97	13.5	27	11,369	2,001	1 1/2 ETB-8
PELR-H15-97	12-1/4	16	42-5/8	97	13.5	27	11,830	2,130	2 ETB-8
PELR-H16-97	12-1/4	16	44	97	13.5	27	12,127	2,263	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Southern Pine • 102 ft & 107 ft



Foundation Reinforcement System
(as specified, see table)

102 ft. Southern Pine

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-102	12-1/4	7-1/2	23-3/8	102	14	30	6,597	680	ETB-8
PELR-H1-102	12-1/4	7-1/2	24-3/4	102	14	30	6,909	758	ETB-8
PELR-H2-102	12-1/4	7-1/2	26-1/8	102	14	30	7,221	840	ETB-8
PELR-H3-102	12-1/4	8	27-1/2	102	14	30	7,619	926	ETB-8
PELR-H4-102	12-1/4	9	28-7/8	102	14	30	8,103	1,016	ETB-8
PELR-H5-102	12-1/4	10	30-1/4	102	14	30	8,588	1,110	ETB-8
PELR-H6-102	12-1/4	11	31-5/8	102	14	30	9,072	1,208	ETB-8
PELR-H7-102	12-1/4	12	33	102	14	30	9,556	1,310	ETB-8
PELR-H8-102	12-1/4	12	34-3/8	102	14	30	9,868	1,415	ETB-8
PELR-H9-102	12-1/4	13	35-3/4	102	14	30	10,352	1,525	1 1/2 ETB-8
PELR-H10-102	12-1/4	13	37-1/8	102	14	30	10,664	1,638	1 1/2 ETB-8
PELR-H11-102	12-1/4	14	38-1/2	102	14	30	11,149	1,756	1 1/2 ETB-8
PELR-H12-102	12-1/4	14	39-7/8	102	14	30	11,461	1,877	1 1/2 ETB-8
PELR-H13-102	12-1/4	15	41-1/4	102	14	30	11,945	2,001	1 1/2 ETB-8
PELR-H14-102	12-1/4	15	42-5/8	102	14	30	12,257	2,130	2 ETB-8
PELR-H15-102	12-1/4	16	44	102	14	30	12,741	2,263	2 ETB-8
PELR-H16-102	12-1/4	16	45-3/8	102	14	30	13,053	2,399	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

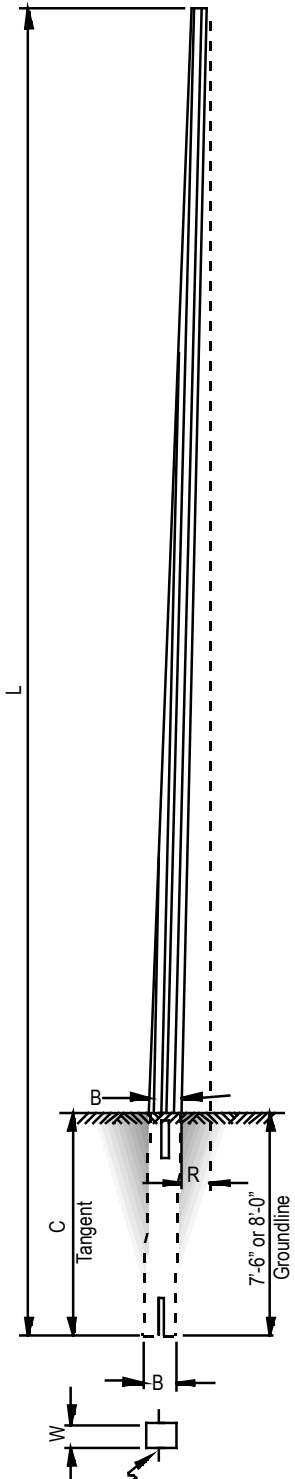
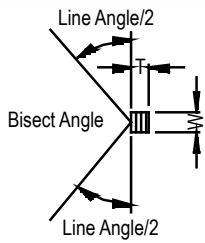
107 ft. Southern Pine

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
PELR-1-107	12-1/4	7-1/2	24-3/4	107	14.5	30	7,241	758	ETB-8
PELR-H1-107	12-1/4	7-1/2	26-1/8	107	14.5	30	7,568	840	ETB-8
PELR-H2-107	12-1/4	7-1/2	27-1/2	107	14.5	30	7,895	926	ETB-8
PELR-H3-107	12-1/4	8	28-7/8	107	14.5	30	8,312	1,016	ETB-8
PELR-H4-107	12-1/4	9	30-1/4	107	14.5	30	8,820	1,110	ETB-8
PELR-H5-107	12-1/4	10	31-5/8	107	14.5	30	9,328	1,208	ETB-8
PELR-H6-107	12-1/4	11	33	107	14.5	30	9,836	1,310	ETB-8
PELR-H7-107	12-1/4	12	34-3/8	107	14.5	30	10,344	1,415	ETB-8
PELR-H8-107	12-1/4	12	35-3/4	107	14.5	30	10,671	1,525	1 1/2 ETB-8
PELR-H9-107	12-1/4	13	37-1/8	107	14.5	30	11,178	1,638	1 1/2 ETB-8
PELR-H10-107	12-1/4	13	38-1/2	107	14.5	30	11,505	1,756	1 1/2 ETB-8
PELR-H11-107	12-1/4	14	39-7/8	107	14.5	30	12,013	1,877	1 1/2 ETB-8
PELR-H12-107	12-1/4	14	41-1/4	107	14.5	30	12,340	2,001	1 1/2 ETB-8
PELR-H13-107	12-1/4	15	42-5/8	107	14.5	30	12,848	2,130	2 ETB-8
PELR-H14-107	12-1/4	15	44	107	14.5	30	13,175	2,263	2 ETB-8
PELR-H15-107	12-1/4	16	45-3/8	107	14.5	30	13,683	2,399	2 ETB-8
PELR-H16-107	12-1/4	16	46-3/4	107	14.5	30	14,009	2,539	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM[®] Standard Raked Poles • Coastal Douglas-fir • 32 ft & 37 ft



Foundation Reinforcement System
(as specified, see table)

32 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-4-32	6-3/4	6-1/2	10-1/2	32	7.5	9	549	65	EDA-5
ELR-3-32	6-3/4	6-1/2	12	32	7.5	9	606	85	EDA-5
ELR-2-32	6-3/4	6-1/2	13-1/2	32	7.5	9	662	108	EDA-5
ELR-1-32	6-3/4	7-1/2	15	32	7.5	9	742	133	EDA-5
ELR-H1-32	6-3/4	7-1/2	16-1/2	32	7.5	9	799	161	EDA-5
ELR-H2-32	6-3/4	7-1/2	18	32	7.5	9	856	191	EDA-5
ELR-H3-32	8-3/4	8	18	32	7.5	9	1,124	248	EDB-8
ELR-H4-32	8-3/4	9	19-1/2	32	7.5	9	1,228	291	EDB-8
ELR-H5-32	8-3/4	10	21	32	7.5	9	1,332	338	EDB-8
ELR-H6-32	8-3/4	11	22-1/2	32	7.5	9	1,436	388	EDB-8
ELR-H7-32	8-3/4	12	24	32	7.5	9	1,540	441	EDB-8
ELR-H8-32	10-1/4	12	22-1/2	32	7.5	9	1,717	454	EDC-8
ELR-H9-32	10-1/4	13	24	32	7.5	9	1,839	517	EDC-8
ELR-H10-32	10-1/4	13	25-1/2	32	7.5	9	1,925	583	EDC-8
ELR-H11-32	10-1/4	14	27	32	7.5	9	2,047	654	EDC-8
ELR-H12-32	10-1/4	14	28-1/2	32	7.5	9	2,133	728	EDC-8
ELR-H13-32	10-1/4	15	30	32	7.5	9	2,254	807	EDC-8
ELR-H14-32	10-1/4	15	31-1/2	32	7.5	9	2,340	890	EDC-8
ELR-H15-32	12-1/4	16	30	32	7.5	9	2,737	965	EDD-8
ELR-H16-32	12-1/4	16	31-1/2	32	7.5	9	2,840	1,064	ETB-8

* - Field rake amount "R" will be determined by L.W.S.

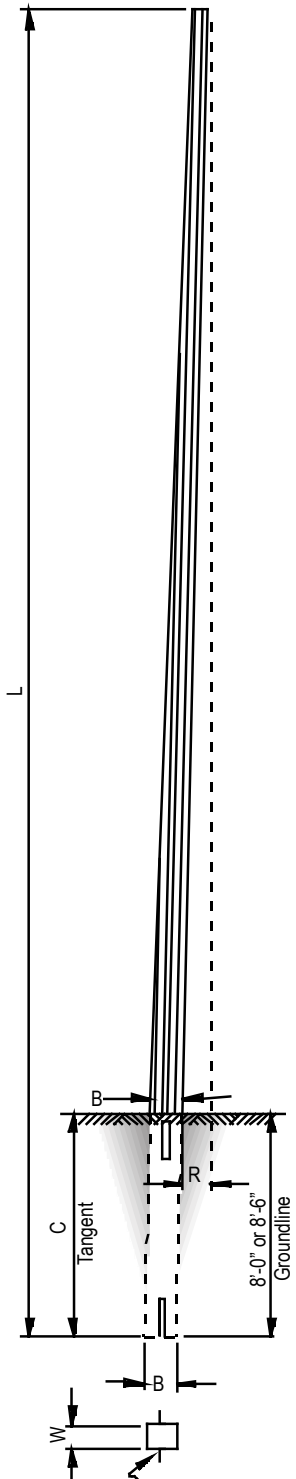
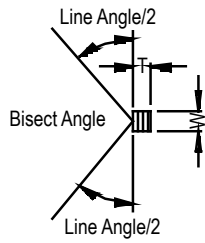
37 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-4-37	6-3/4	6-1/2	10-1/2	37	8	9	632	65	EDA-5
ELR-3-37	6-3/4	6-1/2	12	37	8	9	697	85	EDA-5
ELR-2-37	6-3/4	6-1/2	13-1/2	37	8	9	761	108	EDA-5
ELR-1-37	6-3/4	7-1/2	15	37	8	9	853	133	EDA-5
ELR-H1-37	6-3/4	7-1/2	16-1/2	37	8	9	918	161	EDA-5
ELR-H2-37	6-3/4	7-1/2	18	37	8	9	983	191	EDA-5
ELR-H3-37	8-3/4	8	18	37	8	9	1,292	248	EDB-8
ELR-H4-37	8-3/4	9	19-1/2	37	8	9	1,411	291	EDB-8
ELR-H5-37	8-3/4	10	21	37	8	9	1,531	338	EDB-8
ELR-H6-37	8-3/4	11	22-1/2	37	8	9	1,651	388	EDB-8
ELR-H7-37	8-3/4	12	24	37	8	9	1,770	441	EDB-8
ELR-H8-37	10-1/4	12	22-1/2	37	8	9	1,976	454	EDC-8
ELR-H9-37	10-1/4	13	24	37	8	9	2,116	517	EDC-8
ELR-H10-37	10-1/4	13	25-1/2	37	8	9	2,214	583	EDC-8
ELR-H11-37	10-1/4	14	27	37	8	9	2,354	654	EDC-8
ELR-H12-37	10-1/4	14	28-1/2	37	8	9	2,452	728	EDC-8
ELR-H13-37	10-1/4	15	30	37	8	9	2,592	807	EDC-8
ELR-H14-37	10-1/4	15	31-1/2	37	8	9	2,690	890	EDC-8
ELR-H15-37	12-1/4	16	30	37	8	9	3,148	965	EDD-8
ELR-H16-37	12-1/4	16	31-1/2	37	8	9	3,265	1,064	ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Coastal Douglas-fir • 42 ft & 47 ft



42 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-4-42	6-3/4	6-1/2	12	42	8	12	785	85	EDA-5
ELR-3-42	6-3/4	6-1/2	13-1/2	42	8	12	857	108	EDA-5
ELR-2-42	6-3/4	6-1/2	15	42	8	12	929	133	EDA-5
ELR-1-42	6-3/4	7-1/2	16-1/2	42	8	12	1,033	161	EDA-5
ELR-H1-42	6-3/4	7-1/2	18	42	8	12	1,104	191	EDA-5
ELR-H2-42	8-3/4	7-1/2	18	42	8	12	1,432	248	EDB-8
ELR-H3-42	8-3/4	8	19-1/2	42	8	12	1,546	291	EDB-8
ELR-H4-42	8-3/4	9	21	42	8	12	1,681	338	EDB-8
ELR-H5-42	8-3/4	10	22-1/2	42	8	12	1,816	388	EDB-8
ELR-H6-42	8-3/4	11	24	42	8	12	1,951	441	EDB-8
ELR-H7-42	10-1/4	12	22-1/2	42	8	12	2,226	454	EDC-8
ELR-H8-42	10-1/4	12	24	42	8	12	2,335	517	EDC-8
ELR-H9-42	10-1/4	13	25-1/2	42	8	12	2,493	583	EDC-8
ELR-H10-42	10-1/4	13	27	42	8	12	2,602	654	EDC-8
ELR-H11-42	10-1/4	14	28-1/2	42	8	12	2,760	728	EDC-8
ELR-H12-42	10-1/4	14	30	42	8	12	2,869	807	EDC-8
ELR-H13-42	10-1/4	15	31-1/2	42	8	12	3,028	890	EDC-8
ELR-H14-42	12-1/4	15	30	42	8	12	3,488	965	EDD-8
ELR-H15-42	12-1/4	16	31-1/2	42	8	12	3,677	1,064	ETB-8
ELR-H16-42	12-1/4	16	33	42	8	12	3,808	1,167	ETB-8

* - Field rake amount "R" will be determined by L.W.S.

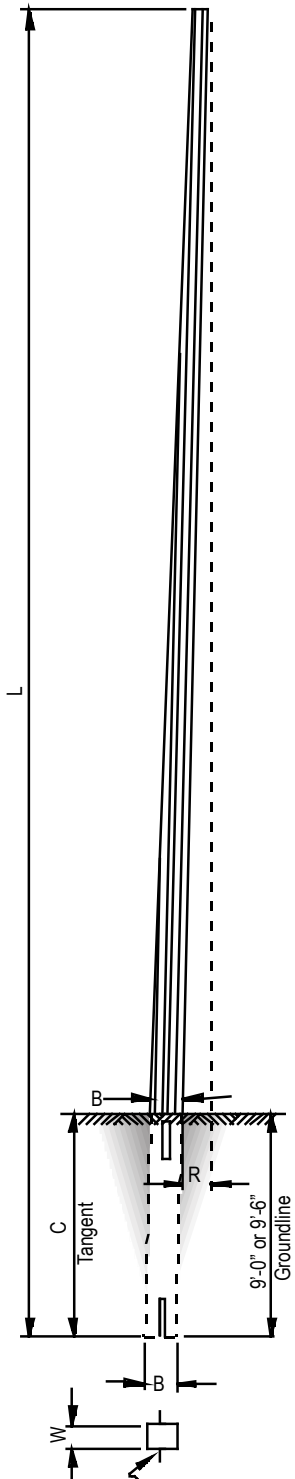
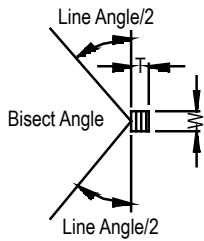
47 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-4-47	8-3/4	6-1/2	12	47	8.5	12	1,136	110	EDB-5
ELR-3-47	8-3/4	6-1/2	13-1/2	47	8.5	12	1,239	140	EDB-5
ELR-2-47	8-3/4	7-1/2	15	47	8.5	12	1,390	172	EDB-5
ELR-1-47	8-3/4	7-1/2	16-1/2	47	8.5	12	1,493	208	EDB-5
ELR-H1-47	8-3/4	7-1/2	18	47	8.5	12	1,596	248	EDB-8
ELR-H2-47	8-3/4	7-1/2	19-1/2	47	8.5	12	1,699	291	EDB-8
ELR-H3-47	8-3/4	8	21	47	8.5	12	1,827	338	EDB-8
ELR-H4-47	8-3/4	9	22-1/2	47	8.5	12	1,977	388	EDB-8
ELR-H5-47	8-3/4	10	24	47	8.5	12	2,128	441	EDB-8
ELR-H6-47	10-1/4	11	22-1/2	47	8.5	12	2,428	454	EDC-8
ELR-H7-47	10-1/4	12	24	47	8.5	12	2,605	517	EDC-8
ELR-H8-47	12-1/4	12	22-1/2	47	8.5	12	2,969	543	EDD-8
ELR-H9-47	12-1/4	13	24	47	8.5	12	3,180	617	EDD-8
ELR-H10-47	12-1/4	13	25-1/2	47	8.5	12	3,325	697	EDD-8
ELR-H11-47	12-1/4	14	27	47	8.5	12	3,536	781	EDD-8
ELR-H12-47	12-1/4	14	28-1/2	47	8.5	12	3,680	871	EDD-8
ELR-H13-47	12-1/4	15	30	47	8.5	12	3,892	965	EDD-8
ELR-H14-47	12-1/4	15	31-1/2	47	8.5	12	4,036	1,064	ETB-8
ELR-H15-47	12-1/4	16	33	47	8.5	12	4,247	1,167	ETB-8
ELR-H16-47	12-1/4	16	34-1/2	47	8.5	12	4,392	1,276	ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM[®] Standard Raked Poles • Coastal Douglas-fir • 52 ft & 57 ft



52 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-3-52	8-3/4	6-1/2	13-1/2	52	9	15	1,367	140	EDB-5
ELR-2-52	8-3/4	7-1/2	15	52	9	15	1,534	172	EDB-5
ELR-1-52	8-3/4	7-1/2	16-1/2	52	9	15	1,647	208	EDB-5
ELR-H1-52	10-1/4	7-1/2	16-1/2	52	9	15	1,930	244	EDC-8
ELR-H2-52	10-1/4	7-1/2	18	52	9	15	2,063	291	EDC-8
ELR-H3-52	10-1/4	8	19-1/2	52	9	15	2,227	341	EDC-8
ELR-H4-52	10-1/4	9	21	52	9	15	2,422	396	EDC-8
ELR-H5-52	10-1/4	10	22-1/2	52	9	15	2,617	454	EDC-8
ELR-H6-52	10-1/4	11	24	52	9	15	2,813	517	EDC-8
ELR-H7-52	12-1/4	12	22-1/2	52	9	15	3,277	543	EDD-8
ELR-H8-52	12-1/4	12	24	52	9	15	3,436	617	EDD-8
ELR-H9-52	12-1/4	13	25-1/2	52	9	15	3,670	697	EDD-8
ELR-H10-52	12-1/4	13	27	52	9	15	3,828	781	EDD-8
ELR-H11-52	12-1/4	14	28-1/2	52	9	15	4,062	871	EDD-8
ELR-H12-52	12-1/4	14	30	52	9	15	4,221	965	EDD-8
ELR-H13-52	12-1/4	15	31-1/2	52	9	15	4,454	1,064	ETB-8
ELR-H14-52	12-1/4	15	33	52	9	15	4,613	1,167	ETB-8
ELR-H15-52	12-1/4	16	34-1/2	52	9	15	4,846	1,276	ETB-8
ELR-H16-52	12-1/4	16	36	52	9	15	5,005	1,389	ETB-8

* - Field rake amount "R" will be determined by L.W.S.

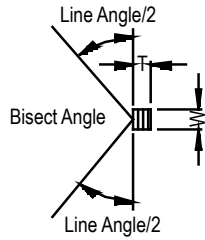
57 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-2-57	10-1/4	7-1/2	15	57	9.5	15	1,966	202	EDC-5
ELR-1-57	10-1/4	7-1/2	16-1/2	57	9.5	15	2,111	244	EDB-8
ELR-H1-57	10-1/4	7-1/2	18	57	9.5	15	2,255	291	EDC-8
ELR-H2-57	10-1/4	7-1/2	19-1/2	57	9.5	15	2,400	341	EDC-8
ELR-H3-57	10-1/4	8	21	57	9.5	15	2,580	396	EDC-8
ELR-H4-57	10-1/4	9	22-1/2	57	9.5	15	2,793	454	EDC-8
ELR-H5-57	10-1/4	10	24	57	9.5	15	3,007	517	EDC-8
ELR-H6-57	12-1/4	11	22-1/2	57	9.5	15	3,503	543	EDD-8
ELR-H7-57	12-1/4	12	24	57	9.5	15	3,759	617	EDD-8
ELR-H8-57	12-1/4	12	25-1/2	57	9.5	15	3,932	697	EDD-8
ELR-H9-57	12-1/4	13	27	57	9.5	15	4,188	781	EDD-8
ELR-H10-57	12-1/4	13	28-1/2	57	9.5	15	4,361	871	EDD-8
ELR-H11-57	12-1/4	14	30	57	9.5	15	4,616	965	EDD-8
ELR-H12-57	12-1/4	14	31-1/2	57	9.5	15	4,789	1,064	ETB-8
ELR-H13-57	12-1/4	15	33	57	9.5	15	5,045	1,167	ETB-8
ELR-H14-57	12-1/4	15	34-1/2	57	9.5	15	5,218	1,276	ETB-8
ELR-H15-57	12-1/4	16	36	57	9.5	15	5,474	1,389	ETB-8
ELR-H16-57	12-1/4	16	37-1/2	57	9.5	15	5,647	1,507	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM[®] Standard Raked Poles • Coastal Douglas-fir • 62 ft & 67 ft



62 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-62	12-1/4	7-1/2	15	62	10	18	2,551	241	ETB-5
ELR-H1-62	12-1/4	7-1/2	16-1/2	62	10	18	2,738	292	ETB-5
ELR-H2-62	12-1/4	7-1/2	18	62	10	18	2,926	347	ETB-5
ELR-H3-62	12-1/4	8	19-1/2	62	10	18	3,158	408	ETB-5
ELR-H4-62	12-1/4	9	21	62	10	18	3,436	473	ETB-8
ELR-H5-62	12-1/4	10	22-1/2	62	10	18	3,714	543	ETB-8
ELR-H6-62	12-1/4	11	24	62	10	18	3,991	617	ETB-8
ELR-H7-62	12-1/4	12	25-1/2	62	10	18	4,269	697	ETB-8
ELR-H8-62	12-1/4	12	27	62	10	18	4,457	781	ETB-8
ELR-H9-62	12-1/4	13	28-1/2	62	10	18	4,734	871	ETB-8
ELR-H10-62	12-1/4	13	30	62	10	18	4,922	965	ETB-8
ELR-H11-62	12-1/4	14	31-1/2	62	10	18	5,199	1,064	ETB-8
ELR-H12-62	12-1/4	14	33	62	10	18	5,387	1,167	ETB-8
ELR-H13-62	12-1/4	15	34-1/2	62	10	18	5,664	1,276	ETB-8
ELR-H14-62	12-1/4	15	36	62	10	18	5,852	1,389	ETB-8
ELR-H15-62	12-1/4	16	37-1/2	62	10	18	6,129	1,507	1 1/2 ETB-8
ELR-H16-62	12-1/4	16	39	62	10	18	6,317	1,630	1 1/2 ETB-8

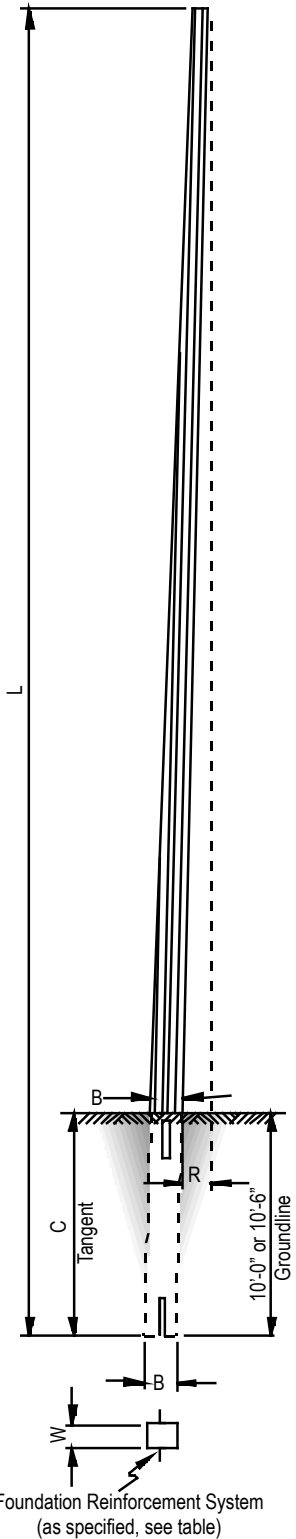
* - Field rake amount "R" will be determined by L.W.S.

67 ft. Coastal Douglas-fir

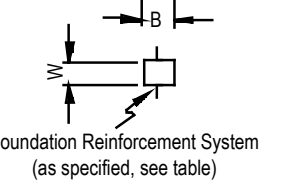
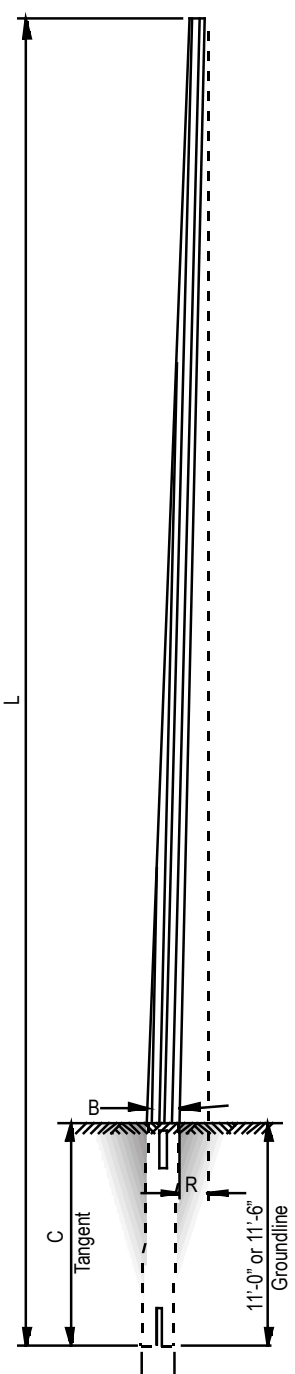
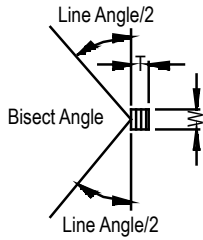
Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-67	12-1/4	7-1/2	16-1/2	67	10.5	18	2,955	292	ETB-5
ELR-H1-67	12-1/4	7-1/2	18	67	10.5	18	3,156	347	ETB-5
ELR-H2-67	12-1/4	7-1/2	19-1/2	67	10.5	18	3,358	408	ETB-5
ELR-H3-67	12-1/4	8	21	67	10.5	18	3,609	473	ETB-5
ELR-H4-67	12-1/4	9	22-1/2	67	10.5	18	3,909	543	ETB-8
ELR-H5-67	12-1/4	10	24	67	10.5	18	4,208	617	ETB-8
ELR-H6-67	12-1/4	11	25-1/2	67	10.5	18	4,508	697	ETB-8
ELR-H7-67	12-1/4	12	27	67	10.5	18	4,808	781	ETB-8
ELR-H8-67	12-1/4	12	28-1/2	67	10.5	18	5,010	871	ETB-8
ELR-H9-67	12-1/4	13	30	67	10.5	18	5,310	965	ETB-8
ELR-H10-67	12-1/4	13	31-1/2	67	10.5	18	5,511	1,064	ETB-8
ELR-H11-67	12-1/4	14	33	67	10.5	18	5,811	1,167	ETB-8
ELR-H12-67	12-1/4	14	34-1/2	67	10.5	18	6,013	1,276	ETB-8
ELR-H13-67	12-1/4	15	36	67	10.5	18	6,313	1,389	ETB-8
ELR-H14-67	12-1/4	15	37-1/2	67	10.5	18	6,514	1,507	1 1/2 ETB-8
ELR-H15-67	12-1/4	16	39	67	10.5	18	6,814	1,630	1 1/2 ETB-8
ELR-H16-67	12-1/4	16	40-1/2	67	10.5	18	7,016	1,758	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.



E-LAM[®] Standard Raked Poles • Coastal Douglas-fir • 72 ft & 77 ft



72 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-72	12-1/4	7-1/2	16-1/2	72	11	21	3,171	292	ETB-5
ELR-H1-72	12-1/4	7-1/2	18	72	11	21	3,387	347	ETB-5
ELR-H2-72	12-1/4	7-1/2	19-1/2	72	11	21	3,603	408	ETB-5
ELR-H3-72	12-1/4	8	21	72	11	21	3,872	473	ETB-5
ELR-H4-72	12-1/4	9	22-1/2	72	11	21	4,194	543	ETB-8
ELR-H5-72	12-1/4	10	24	72	11	21	4,516	617	ETB-8
ELR-H6-72	12-1/4	11	25-1/2	72	11	21	4,837	697	ETB-8
ELR-H7-72	12-1/4	12	27	72	11	21	5,159	781	ETB-8
ELR-H8-72	12-1/4	12	28-1/2	72	11	21	5,375	871	ETB-8
ELR-H9-72	12-1/4	13	30	72	11	21	5,697	965	ETB-8
ELR-H10-72	12-1/4	13	31-1/2	72	11	21	5,913	1,064	ETB-8
ELR-H11-72	12-1/4	14	33	72	11	21	6,235	1,167	ETB-8
ELR-H12-72	12-1/4	14	34-1/2	72	11	21	6,451	1,276	ETB-8
ELR-H13-72	12-1/4	15	36	72	11	21	6,773	1,389	ETB-8
ELR-H14-72	12-1/4	15	37-1/2	72	11	21	6,989	1,507	1 1/2 ETB-8
ELR-H15-72	12-1/4	16	39	72	11	21	7,311	1,630	1 1/2 ETB-8
ELR-H16-72	12-1/4	16	40-1/2	72	11	21	7,527	1,758	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

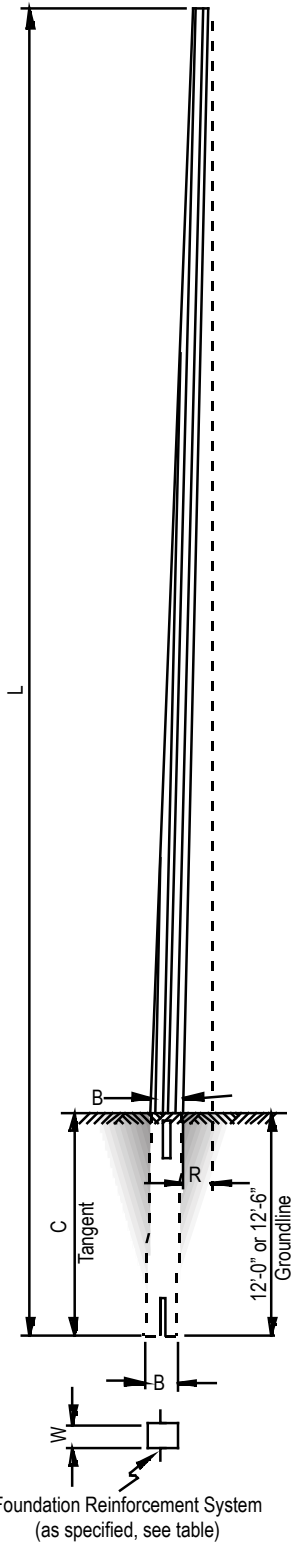
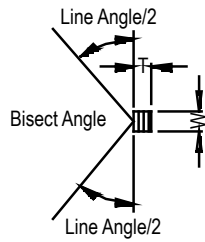
77 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-77	12-1/4	7-1/2	18	77	11.5	21	3,617	347	ETB-5
ELR-H1-77	12-1/4	7-1/2	19-1/2	77	11.5	21	3,847	408	ETB-5
ELR-H2-77	12-1/4	7-1/2	21	77	11.5	21	4,078	473	ETB-5
ELR-H3-77	12-1/4	8	22-1/2	77	11.5	21	4,365	543	ETB-8
ELR-H4-77	12-1/4	9	24	77	11.5	21	4,709	617	ETB-8
ELR-H5-77	12-1/4	10	25-1/2	77	11.5	21	5,053	697	ETB-8
ELR-H6-77	12-1/4	11	27	77	11.5	21	5,397	781	ETB-8
ELR-H7-77	12-1/4	12	28-1/2	77	11.5	21	5,741	871	ETB-8
ELR-H8-77	12-1/4	12	30	77	11.5	21	5,972	965	ETB-8
ELR-H9-77	12-1/4	13	31-1/2	77	11.5	21	6,316	1,064	ETB-8
ELR-H10-77	12-1/4	13	33	77	11.5	21	6,546	1,167	ETB-8
ELR-H11-77	12-1/4	14	34-1/2	77	11.5	21	6,890	1,276	ETB-8
ELR-H12-77	12-1/4	14	36	77	11.5	21	7,120	1,389	ETB-8
ELR-H13-77	12-1/4	15	37-1/2	77	11.5	21	7,464	1,507	1 1/2 ETB-8
ELR-H14-77	12-1/4	15	39	77	11.5	21	7,695	1,630	1 1/2 ETB-8
ELR-H15-77	12-1/4	16	40-1/2	77	11.5	21	8,039	1,758	1 1/2 ETB-8
ELR-H16-77	12-1/4	16	42	77	11.5	21	8,269	1,891	1 1/2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM® Standard Raked Poles • Coastal Douglas-fir • 82 ft & 87 ft



82 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-82	12-1/4	7-1/2	19-1/2	82	12	24	4,092	408	ETB-5
ELR-H1-82	12-1/4	7-1/2	21	82	12	24	4,337	473	ETB-5
ELR-H2-82	12-1/4	7-1/2	22-1/2	82	12	24	4,582	543	ETB-8
ELR-H3-82	12-1/4	8	24	82	12	24	4,887	617	ETB-8
ELR-H4-82	12-1/4	9	25-1/2	82	12	24	5,253	697	ETB-8
ELR-H5-82	12-1/4	10	27	82	12	24	5,619	781	ETB-8
ELR-H6-82	12-1/4	11	28-1/2	82	12	24	5,985	871	ETB-8
ELR-H7-82	12-1/4	12	30	82	12	24	6,352	965	ETB-8
ELR-H8-82	12-1/4	12	31-1/2	82	12	24	6,596	1,064	ETB-8
ELR-H9-82	12-1/4	13	33	82	12	24	6,962	1,167	ETB-8
ELR-H10-82	12-1/4	13	34-1/2	82	12	24	7,207	1,276	ETB-8
ELR-H11-82	12-1/4	14	36	82	12	24	7,573	1,389	ETB-8
ELR-H12-82	12-1/4	14	37-1/2	82	12	24	7,818	1,507	1 1/2 ETB-8
ELR-H13-82	12-1/4	15	39	82	12	24	8,184	1,630	1 1/2 ETB-8
ELR-H14-82	12-1/4	15	40-1/2	82	12	24	8,429	1,758	1 1/2 ETB-8
ELR-H15-82	12-1/4	16	42	82	12	24	8,795	1,891	1 1/2 ETB-8
ELR-H16-82	12-1/4	16	43-1/2	82	12	24	9,040	2,028	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

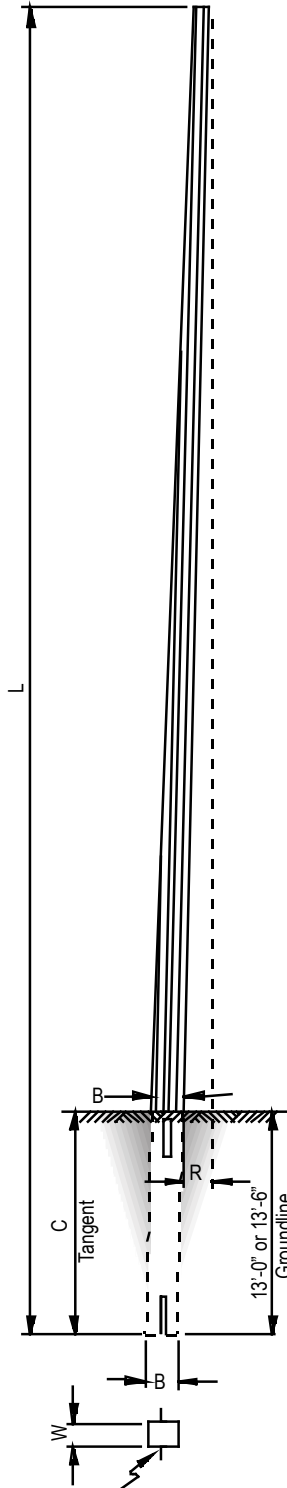
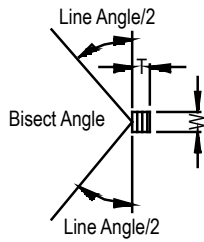
87 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R * (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-87	12-1/4	7-1/2	21	87	12.5	24	4,596	473	ETB-5
ELR-H1-87	12-1/4	7-1/2	22-1/2	87	12.5	24	4,855	543	ETB-8
ELR-H2-87	12-1/4	7-1/2	24	87	12.5	24	5,114	617	ETB-8
ELR-H3-87	12-1/4	8	25-1/2	87	12.5	24	5,437	697	ETB-8
ELR-H4-87	12-1/4	9	27	87	12.5	24	5,826	781	ETB-8
ELR-H5-87	12-1/4	10	28-1/2	87	12.5	24	6,214	871	ETB-8
ELR-H6-87	12-1/4	11	30	87	12.5	24	6,602	965	ETB-8
ELR-H7-87	12-1/4	12	31-1/2	87	12.5	24	6,991	1,064	ETB-8
ELR-H8-87	12-1/4	12	33	87	12.5	24	7,250	1,167	ETB-8
ELR-H9-87	12-1/4	13	34-1/2	87	12.5	24	7,638	1,276	ETB-8
ELR-H10-87	12-1/4	13	36	87	12.5	24	7,897	1,389	ETB-8
ELR-H11-87	12-1/4	14	37-1/2	87	12.5	24	8,285	1,507	1 1/2 ETB-8
ELR-H12-87	12-1/4	14	39	87	12.5	24	8,544	1,630	1 1/2 ETB-8
ELR-H13-87	12-1/4	15	40-1/2	87	12.5	24	8,933	1,758	1 1/2 ETB-8
ELR-H14-87	12-1/4	15	42	87	12.5	24	9,192	1,891	1 1/2 ETB-8
ELR-H15-87	12-1/4	16	43-1/2	87	12.5	24	9,580	2,028	2 ETB-8
ELR-H16-87	12-1/4	16	45	87	12.5	24	9,839	2,171	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM[®] Standard Raked Poles • Coastal Douglas-fir • 92 ft & 97 ft



Foundation Reinforcement System
(as specified, see table)

92 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-92	12-1/4	7-1/2	22-1/2	92	13	27	5,128	543	ETB-8
ELR-H1-92	12-1/4	7-1/2	24	92	13	27	5,401	617	ETB-8
ELR-H2-92	12-1/4	7-1/2	25-1/2	92	13	27	5,675	697	ETB-8
ELR-H3-92	12-1/4	8	27	92	13	27	6,017	781	ETB-8
ELR-H4-92	12-1/4	9	28-1/2	92	13	27	6,427	871	ETB-8
ELR-H5-92	12-1/4	10	30	92	13	27	6,838	965	ETB-8
ELR-H6-92	12-1/4	11	31-1/2	92	13	27	7,248	1,064	ETB-8
ELR-H7-92	12-1/4	12	33	92	13	27	7,658	1,167	ETB-8
ELR-H8-92	12-1/4	12	34-1/2	92	13	27	7,932	1,276	ETB-8
ELR-H9-92	12-1/4	13	36	92	13	27	8,342	1,389	ETB-8
ELR-H10-92	12-1/4	13	37-1/2	92	13	27	8,615	1,507	1 1/2 ETB-8
ELR-H11-92	12-1/4	14	39	92	13	27	9,026	1,630	1 1/2 ETB-8
ELR-H12-92	12-1/4	14	40-1/2	92	13	27	9,299	1,758	1 1/2 ETB-8
ELR-H13-92	12-1/4	15	42	92	13	27	9,710	1,891	1 1/2 ETB-8
ELR-H14-92	12-1/4	15	43-1/2	92	13	27	9,983	2,028	2 ETB-8
ELR-H15-92	12-1/4	16	45	92	13	27	10,393	2,171	2 ETB-8
ELR-H16-92	12-1/4	16	46-1/2	92	13	27	10,667	2,318	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

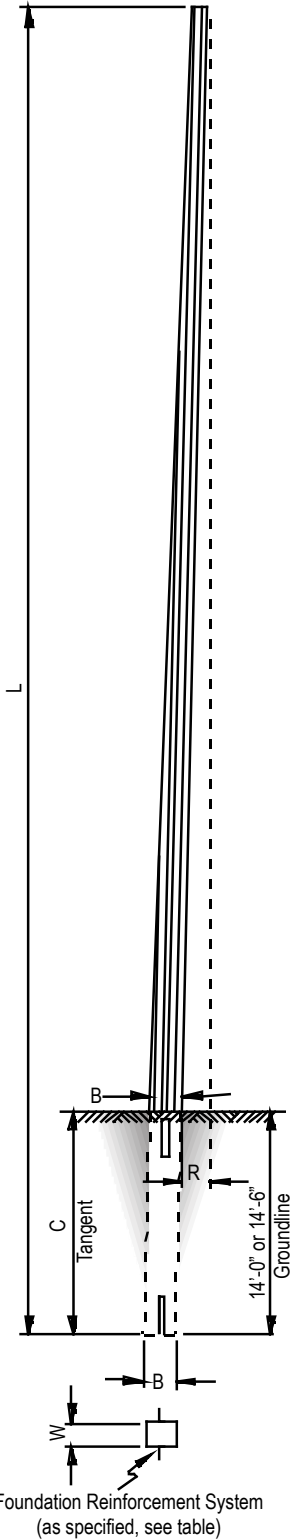
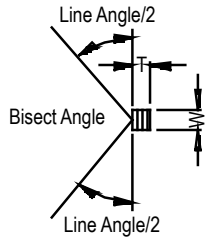
97 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R* (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-97	12-1/4	7-1/2	24	97	13.5	27	5,689	617	ETB-8
ELR-H1-97	12-1/4	7-1/2	25-1/2	97	13.5	27	5,977	697	ETB-8
ELR-H2-97	12-1/4	7-1/2	27	97	13.5	27	6,264	781	ETB-8
ELR-H3-97	12-1/4	8	28-1/2	97	13.5	27	6,625	871	ETB-8
ELR-H4-97	12-1/4	9	30	97	13.5	27	7,057	965	ETB-8
ELR-H5-97	12-1/4	10	31-1/2	97	13.5	27	7,490	1,064	ETB-8
ELR-H6-97	12-1/4	11	33	97	13.5	27	7,922	1,167	ETB-8
ELR-H7-97	12-1/4	12	34-1/2	97	13.5	27	8,355	1,276	ETB-8
ELR-H8-97	12-1/4	12	36	97	13.5	27	8,642	1,389	ETB-8
ELR-H9-97	12-1/4	13	37-1/2	97	13.5	27	9,075	1,507	1 1/2 ETB-8
ELR-H10-97	12-1/4	13	39	97	13.5	27	9,363	1,630	1 1/2 ETB-8
ELR-H11-97	12-1/4	14	40-1/2	97	13.5	27	9,795	1,758	1 1/2 ETB-8
ELR-H12-97	12-1/4	14	42	97	13.5	27	10,083	1,891	1 1/2 ETB-8
ELR-H13-97	12-1/4	15	43-1/2	97	13.5	27	10,515	2,028	2 ETB-8
ELR-H14-97	12-1/4	15	45	97	13.5	27	10,803	2,171	2 ETB-8
ELR-H15-97	12-1/4	16	46-1/2	97	13.5	27	11,236	2,318	2 ETB-8
ELR-H16-97	12-1/4	16	48	97	13.5	27	11,523	2,470	2 ETB-8

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

E-LAM[®] Standard Raked Poles • Coastal Douglas-fir • 102 ft & 107 ft



102 ft. Coastal Douglas-fir

Pole Class	Pole Dimensions					R * (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-102	12-1/4	7-1/2	25-1/2	102	14	30	6,279	697	ETB-8
ELR-H1-102	12-1/4	7-1/2	27	102	14	30	6,581	781	ETB-8
ELR-H2-102	12-1/4	7-1/2	28-1/2	102	14	30	6,883	871	ETB-8
ELR-H3-102	12-1/4	8	30	102	14	30	7,261	965	ETB-8
ELR-H4-102	12-1/4	9	31-1/2	102	14	30	7,716	1,064	ETB-8
ELR-H5-102	12-1/4	10	33	102	14	30	8,170	1,167	ETB-8
ELR-H6-102	12-1/4	11	34-1/2	102	14	30	8,625	1,276	ETB-8
ELR-H7-102	12-1/4	12	36	102	14	30	9,080	1,389	ETB-8
ELR-H8-102	12-1/4	12	37-1/2	102	14	30	9,382	1,507	1 1/2 ETB-8
ELR-H9-102	12-1/4	13	39	102	14	30	9,836	1,630	1 1/2 ETB-8
ELR-H10-102	12-1/4	13	40-1/2	102	14	30	10,138	1,758	1 1/2 ETB-8
ELR-H11-102	12-1/4	14	42	102	14	30	10,593	1,891	1 1/2 ETB-8
ELR-H12-102	12-1/4	14	43-1/2	102	14	30	10,895	2,028	2 ETB-8
ELR-H13-102	12-1/4	15	45	102	14	30	11,350	2,171	2 ETB-8
ELR-H14-102	12-1/4	15	46-1/2	102	14	30	11,652	2,318	2 ETB-8
ELR-H15-102	12-1/4	16	48	102	14	30	12,106	2,470	2 ETB-8
ELR-H16-102	12-1/4	16	49-1/2	102	14	30	12,408	2,626	1 1/2 ETB-12

* - Field rake amount "R" will be determined by L.W.S.

107 ft. Coastal Douglas-fir

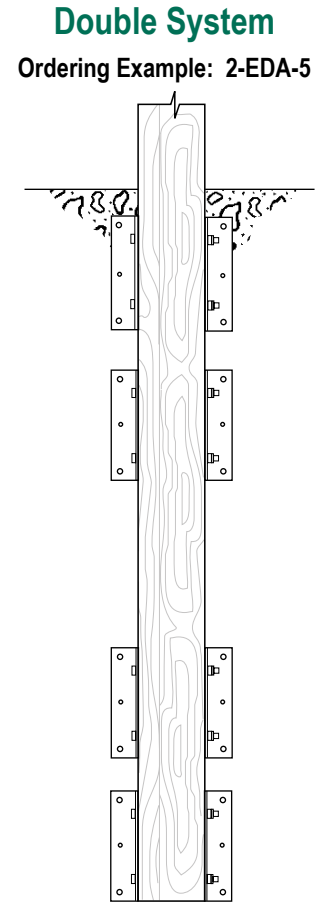
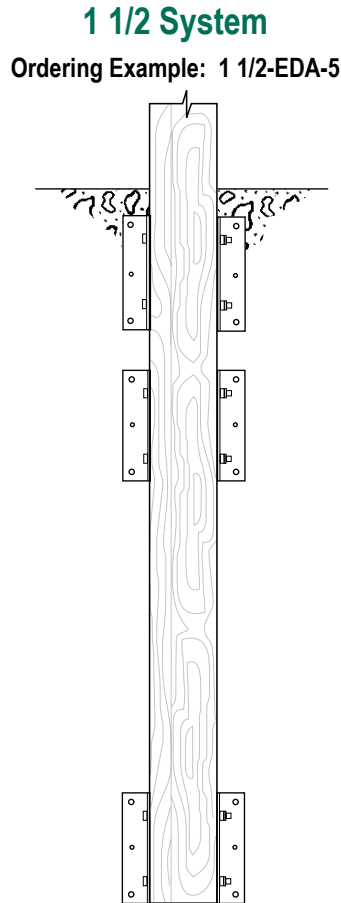
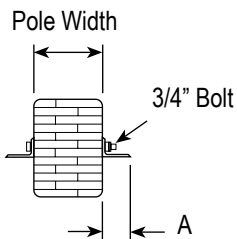
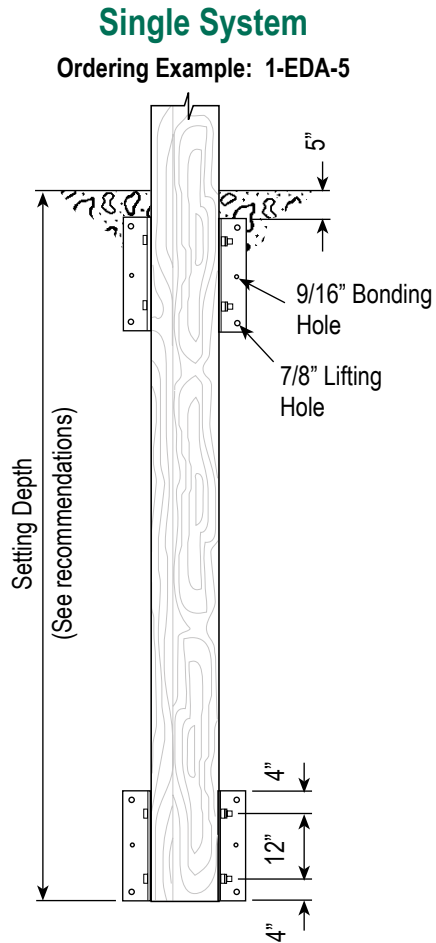
Pole Class	Pole Dimensions					R * (max.) (in.)	Approx. Treated Weight (lbs.)	Ultimate Groundline Moment (ft.-kips)	Standard Found. Reinf. System
	W (in.)	T (in.)	B (in.)	L (ft.)	C (ft.)				
ELR-1-107	12-1/4	7-1/2	27	107	14.5	30	6,897	781	ETB-8
ELR-H1-107	12-1/4	7-1/2	28-1/2	107	14.5	30	7,213	871	ETB-8
ELR-H2-107	12-1/4	7-1/2	30	107	14.5	30	7,530	965	ETB-8
ELR-H3-107	12-1/4	8	31-1/2	107	14.5	30	7,926	1,064	ETB-8
ELR-H4-107	12-1/4	9	33	107	14.5	30	8,403	1,167	ETB-8
ELR-H5-107	12-1/4	10	34-1/2	107	14.5	30	8,880	1,276	ETB-8
ELR-H6-107	12-1/4	11	36	107	14.5	30	9,356	1,389	ETB-8
ELR-H7-107	12-1/4	12	37-1/2	107	14.5	30	9,833	1,507	1 1/2 ETB-8
ELR-H8-107	12-1/4	12	39	107	14.5	30	10,150	1,630	1 1/2 ETB-8
ELR-H9-107	12-1/4	13	40-1/2	107	14.5	30	10,626	1,758	1 1/2 ETB-8
ELR-H10-107	12-1/4	13	42	107	14.5	30	10,943	1,891	1 1/2 ETB-8
ELR-H11-107	12-1/4	14	43-1/2	107	14.5	30	11,419	2,028	1 1/2 ETB-8
ELR-H12-107	12-1/4	14	45	107	14.5	30	11,736	2,171	1 1/2 ETB-8
ELR-H13-107	12-1/4	15	46-1/2	107	14.5	30	12,213	2,318	2 ETB-8
ELR-H14-107	12-1/4	15	48	107	14.5	30	12,529	2,470	2 ETB-8
ELR-H15-107	12-1/4	16	49-1/2	107	14.5	30	13,006	2,626	1 1/2 ETB-12
ELR-H16-107	12-1/4	16	51	107	14.5	30	13,322	2,788	1 1/2 ETB-12

* - Field rake amount "R" will be determined by L.W.S.

NOTE: Please refer to pages 20 & 21 for additional information about foundation reinforcement systems.

Foundation Reinforcement Systems

Distribution - "ED"



Assembly Number	"A"	Angle Number	Angle Size	Bolt Length	Weight Lbs.
6-3/4" Pole Width					
EDA-5	5"	ELFRDB	5" x 3" x 1/4"	10"	52
EDA-8	8"	ELFRDE	8" x 3" x 3/8"	10"	100
8-1/2" or 8-3/4" Pole Width					
EDB-5	5"	ELFRDB	5" x 3" x 1/4"	12"	53
EDB-8	8"	ELFRDE	8" x 3" x 3/8"	12"	101
10-1/4" Pole Width					
EDC-5	5"	ELFRDB	5" x 3" x 1/4"	14"	54
EDC-8	8"	ELFRDE	8" x 3" x 3/8"	14"	102
12-1/4" Pole Width					
EDD-5	5"	ELFRDB	5" x 3" x 1/4"	16"	55
EDD-8	8"	ELFRDE	8" x 3" x 3/8"	16"	103

Backfill

Reference page 19 for backfill recommendations. At a minimum, backfill should consist of compacted aggregate tamped in 6" lifts.

NOTE: For slumping soil or ground water conditions the customer may consider installing a concrete or steel culvert to contain the select backfill.

Each Single System Assembly Includes:

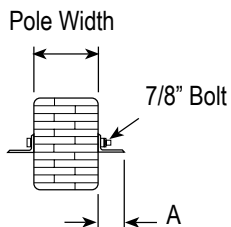
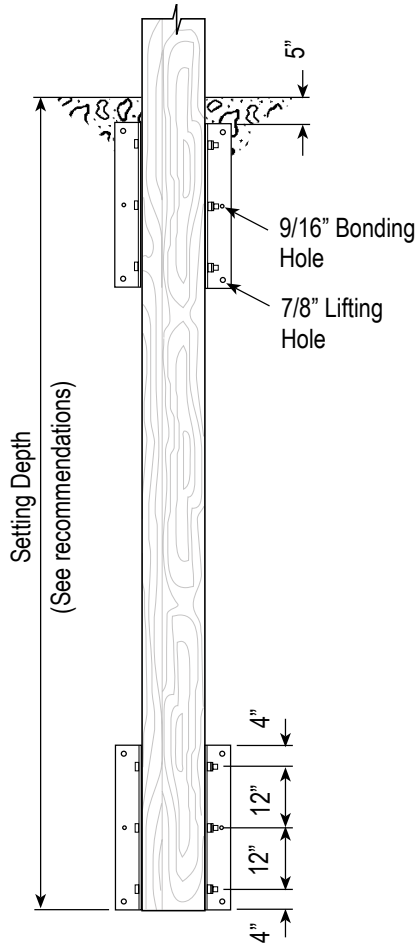
Four (4) Angles, 20" Long; Four (4) Bolts & Nuts (Field Assembly Required)

E-LAM® Standard Raked Poles - Foundations

Transmission - "ET"

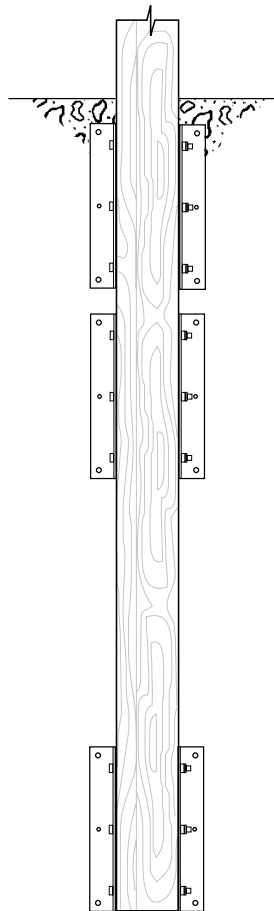
Single System

Ordering Example: 1-ETA-5



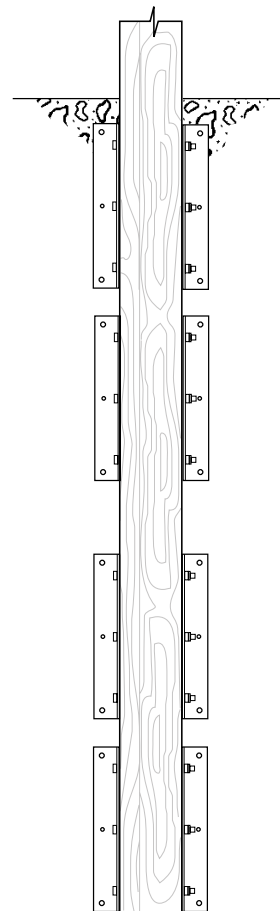
1 1/2 System

Ordering Example: 1 1/2-ETA-5



Double System

Ordering Example: 2-ETA-5



Assembly Number	"A"	Angle Number	Angle Size	Bolt Length	Weight Lbs.
10-1/4" Pole Width					
ETA-5	5"	ELFRTB	5" x 3" x 1/4"	14"	90
ETA-8	8"	ELFRTE	8" x 3" x 3/8"	14"	170
ETA-12	12"	ELFRTE	12" x 3" x 3/8"	14"	222
12-1/4" Pole Width					
ETB-5	5"	ELFRTB	5" x 3" x 1/4"	16"	92
ETB-8	8"	ELFRTE	8" x 3" x 3/8"	16"	172
ETB-12	12"	ELFRTE	12" x 3" x 3/8"	16"	224
14-1/4" Pole Width					
ETC-5	5"	ELFRTB	5" x 3" x 1/4"	18"	94
ETC-8	8"	ELFRTE	8" x 3" x 3/8"	18"	174
ETC-12	12"	ELFRTE	12" x 3" x 3/8"	18"	226
16-1/4" Pole Width					
ETD-5	5"	ELFRTB	5" x 3" x 1/4"	20"	96
ETD-8	8"	ELFRTE	8" x 3" x 3/8"	20"	176
ETD-12	12"	ELFRTE	12" x 3" x 3/8"	20"	228

Backfill

Reference page 19 for backfill recommendations. At a minimum, backfill should consist of compacted aggregate tamped in 6" lifts.

NOTE: For slumping soil or ground water conditions the customer may consider installing a concrete or steel culvert to contain the select backfill.

Each Single System Assembly Includes:
Four (4) Angles, 32" Long; Six (6) Bolts & Nuts (Field Assembly Required)

Installing E-LAM[®] Field Raked Laminated Wood Structures

Identification of Poles

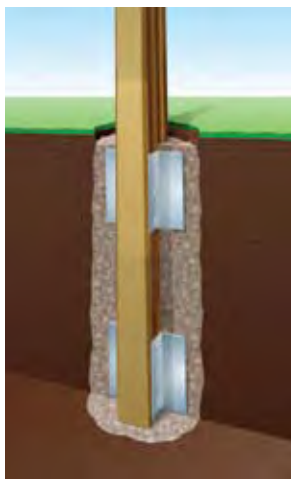
Each E-LAM[®] laminated wood pole is tagged with the class and length on the face and the butt. If a variety of poles are required on a project, make sure the appropriate pole is spotted at the correct structure location. Additionally, poles of the same class may be drilled for different structures, and verification of structure types should also be confirmed.

Verify and Assemble Appropriate Foundation Reinforcement System

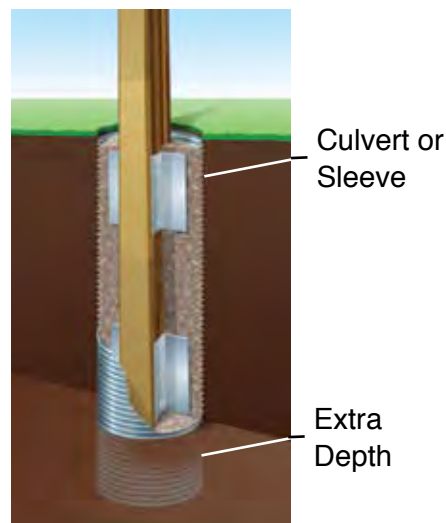
Field raked poles are drilled for and furnished with a foundation reinforcement system. The foundation systems, consisting of fabricated galvanized angles and assembly bolts, are shipped separate from the poles and need to be located and assembled prior to setting. The assemblies are application specific and require verification as to which system is used per structure location.

Our staff will assist the user in determining which foundation system is appropriate for each installation based on loading and soil conditions provided by the owner. A “standard” foundation system for each pole class can be found with the Ultimate Groundline Moment information in the catalog. The actual foundation system that is supplied could vary from the “standard” because of site conditions. Where poor soil conditions exist, steel or concrete sleeves (culverts) may be required.

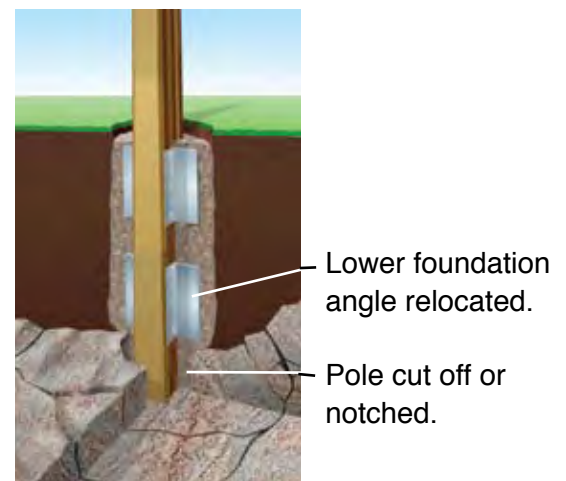
NOTE: It is always, however; the ultimate decision of the owner to accept final responsibility for the foundation and setting requirements.



**Standard Foundation
for Typical Soil Type
Class 5**



**Standard Foundation for
Soft Soil Installations**



**Standard Foundation
when Rock is
Encountered**

E-LAM® Standard Raked Poles - Installation

Auger Size

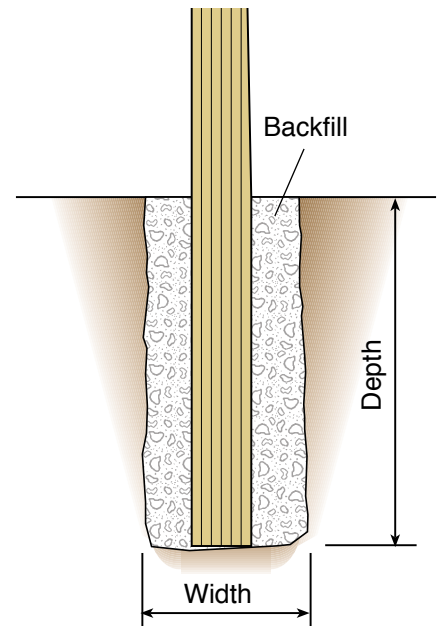
The size of the hole is unique to the type of soil and loading for each individual installation. Laminated Wood Systems will develop specific information or tables based on the design information supplied by the utility at time of order placement.

Setting Depth

The setting depth of each installation has been identified prior to manufacturing (typically 10% of the nominal length plus 4 feet). Individual soil types should be confirmed to verify the setting depth.

Lifting

All poles are identified with "BP" on the face of the width (constant dimension) to identify the approximate balance point before any framing materials are added. The approximate weight of the treated pole will also be located at this point. The poles should be lifted with a steel choker or gut line rather than a flat nylon strap. The choker will slightly indent the edges on the radiused corners insuring a firm hold without slipping.



Handling

Poles can be handled just like any other wood pole. If rotation is required to bisect the angle, a regular cant hook for round poles can be used. Any field drilling and preservative treatment application should be consistent with the practice for other wood products acceptable to the individual utility.

These are general recommendations and in no way should be given precedence when they come in conflict with an individual utility's accepted and established working practice.

Setting Recommendations

Follow general installation and handling recommendations as described on page 2. Install appropriate foundation system and auger hole to diameter and depth as recommended by LWS.



Adjust and align structure using a cant hook or similar tool.

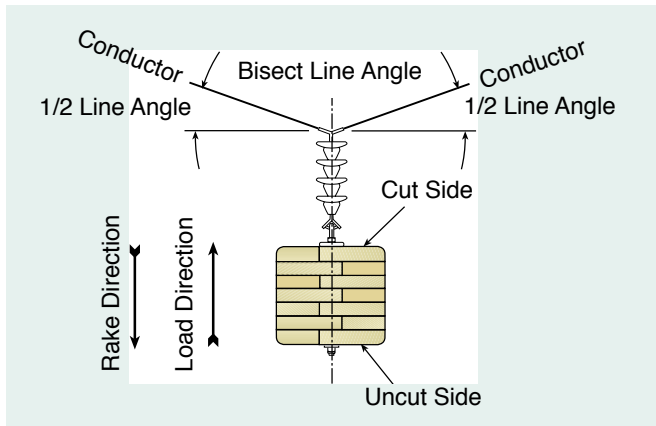
E-LAM[®] Standard Raked Poles - Installation

Field Raking

Raking: The field rake amount is typically designed to resist the 60 degree F load which is induced by the line angle or dead-end. The field rake amount will be calculated by the LWS engineering staff. A maximum field rake of 3% of the above-ground height is recommended on any installation.

Angle: In most cases, the pole needs to be oriented so the face of the pole bisects the line angle equally.

Plumbing: The back face of each pole has a straight edge which can be used for plumbing and raking the pole. A field Raking Detail is included within the drawings for each field raked pole.

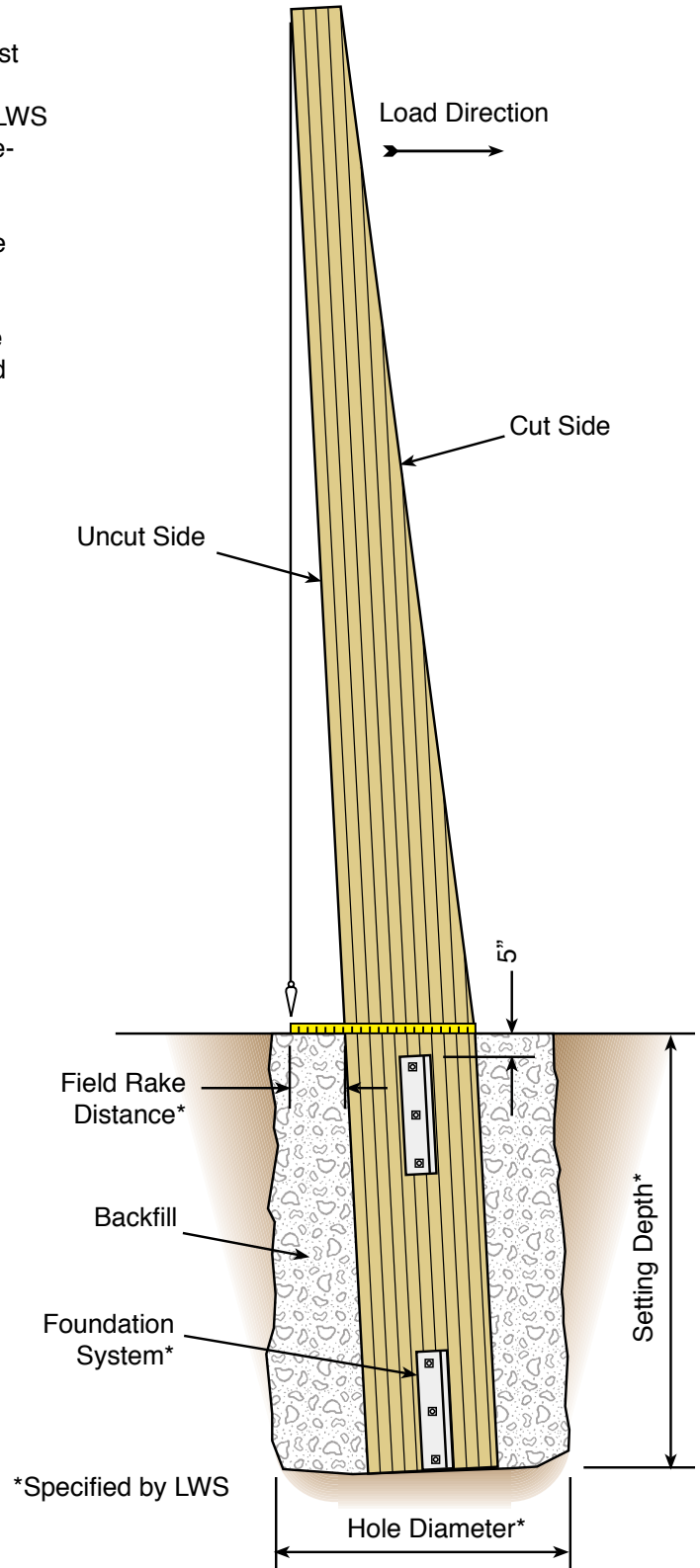


Backfill

Compacted aggregate tamped in 6" lifts, high density foam, or concrete should be used. Native soil shall not be used.

Tensioning

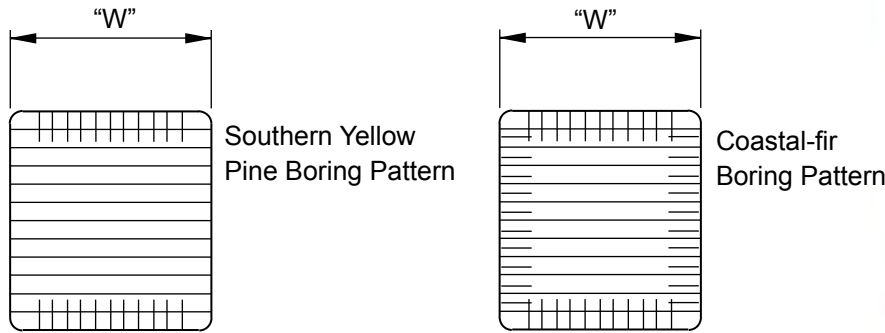
After pulling the conductor and/or shield wires to "every day" design tensions, allow the poles to set for a minimum of 30 minutes to reach a point of equilibrium. Verify tensions or bring back to design loads prior to clipping.



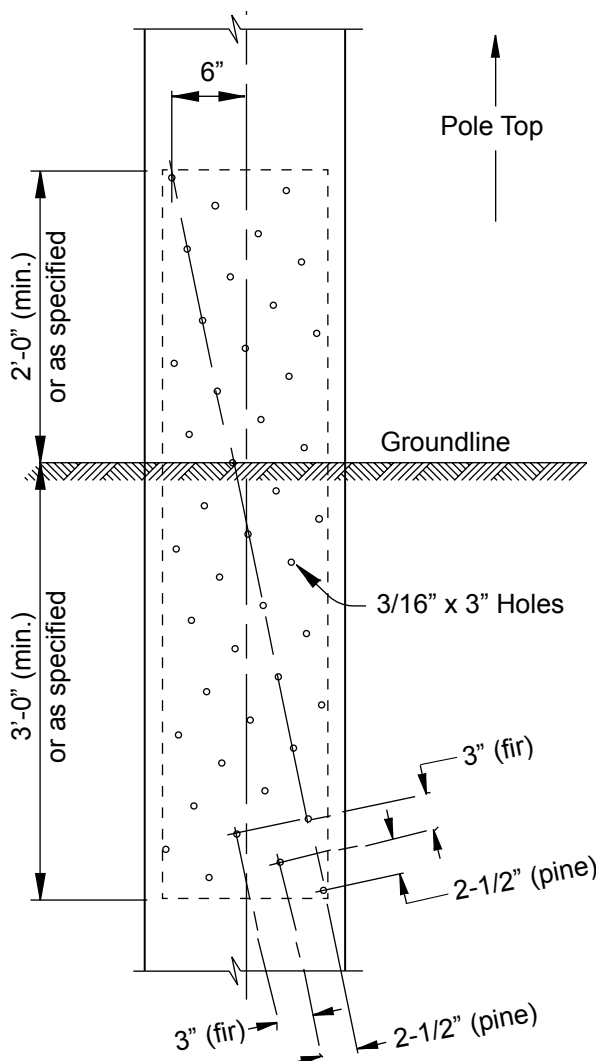
Preservative Treatment of E-LAM® Poles

All poles are treated in accordance with AWPA specification C1, C4, M2, and especially C28. The most common treatment is penta & oil. CCA and copper naphthenate can also be used upon request.

Standard Groundline Deep Boring for Southern Pine & Coastal Fir E-LAM Poles (Prior to Treatment)



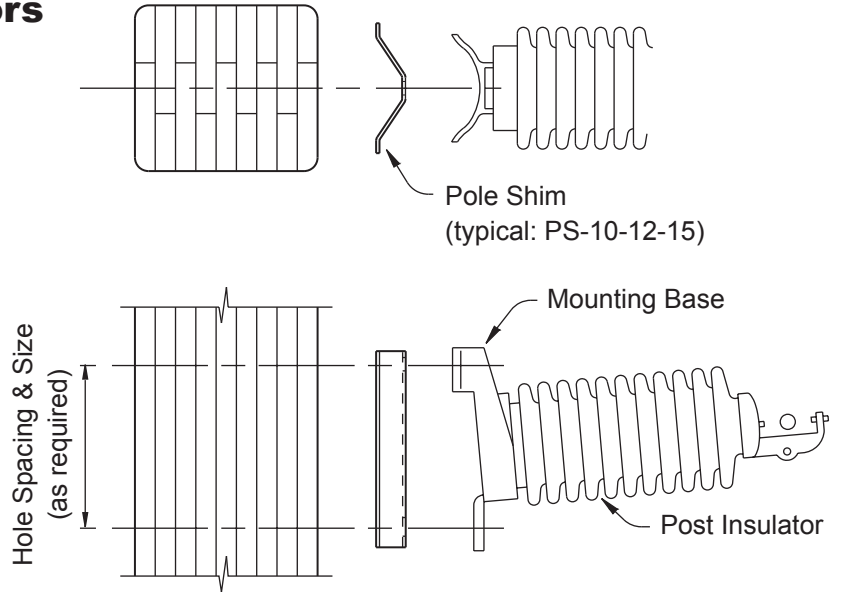
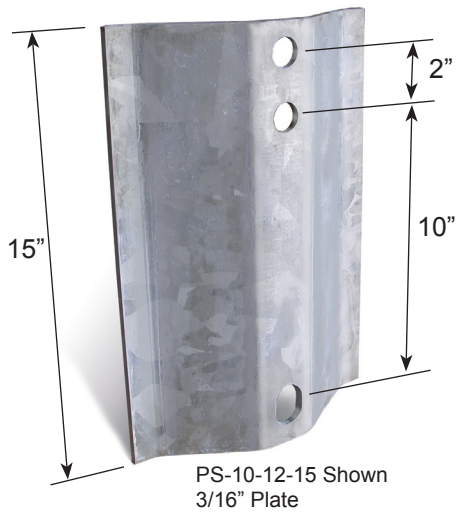
Typical treatment penetration at groundline.



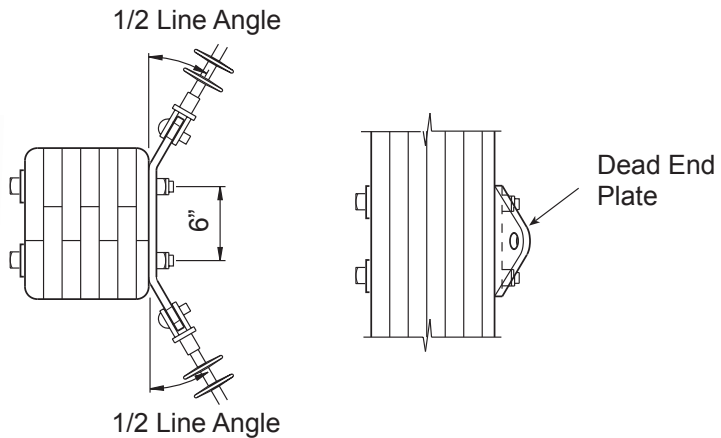
Groundline deep boring.

Hardware for E-LAM® Poles

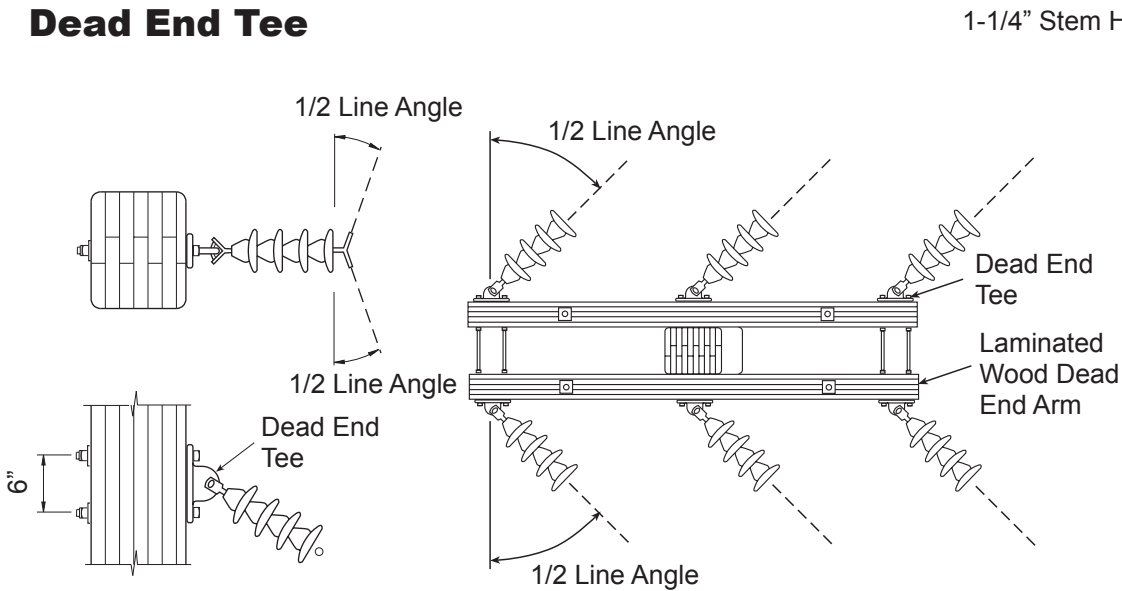
Pole Shims for Post Insulators



Dead End Plate



Dead End Tee



Ordering Example:
DET - FD - *

- * 13 for 3/4" Bolts
- * 15 for 7/8" Bolts

Typical Installations



Natural Beauty & Engineered Strength

- **Complete Structure Designs and Support Material Packages-**

Includes Free Direct-Embed
Foundation Designs

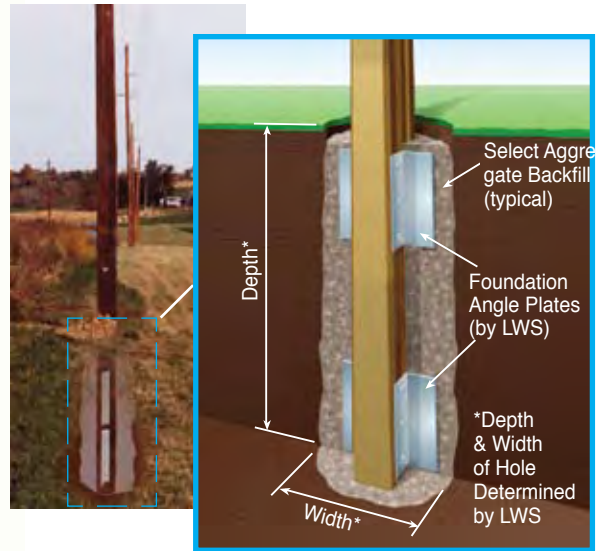
- **Climbable with Standard Hooks-**

Easily Modified
in the Field with
Standard Drills



- **FREE Imaging**

Helps Expedite Permitting and Construction



View Rotated 90°



- **Short Lead Times** - Typically 4 to 6 Weeks After Approval of Drawings
- **Manufactured from Renewable Wood Resource** - No Shortages or Surcharges
- **Proven Product** - In Service Since 1948 for Arms & Framing, Since 1963 for Poles (2 years before the first tubular steel poles) with an Unmatched Performance Record
- **The “Best Looking” Product Above Grade** - Makes Siting & Construction Quicker
- **Transmission & Distribution Unguyed Angle, Dead End, H-frame & Single Pole Structures Through 150 ft.** as well as **Switch & Substation Structures**
- **Woodpecker Resistant** - Due to Shape & Dry Material
- **Accepts Standard Pole Line Hardware**
- **Dimensionally Stable** - Will Not Warp, Twist or Deep Check- Ideal for Phase-over-phase Switch Structures
- **Manufactured per ANSI 05.2 & Treated per AWPA C28**
- **Joint-use Wired & Wireless Telecommunication Structures**



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Laminated Wood Systems,
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