

CITY OF AUSTIN ELECTRIC UTILITY DEPARTMENT**PURCHASE SPECIFICATION****FOR****POLES, WOOD, 30-95FT, CREOSOTE, PRESSURE TREATED**

<u>DATE</u>	<u>PREPARED BY</u>	<u>ISSUANCE/REVISION</u>	<u>APPROVAL BY DIVISION OR STANDARDS MANAGER</u>
2/23/1998	Peter G. Soosay	Revision	
3/15/2002	Peter G. Soosay P.E.	Revision	
6/21/2002	Peter G. Soosay P.E.	Revision	
9/24/2002	Peter G. Soosay P.E.	Revision	
12/4/2002	L.E. Hough P.E.	Revision	
3/20/2006	Mike A. Gaub	Revision	
6/27/2011	Arthur Gonzalez	Revision	
8/16/2011	Dennis Patrick	Revision	
8/20/14	Lee Emmick	Revision	
10/16/20	Julius Heslop	Revision	

<u>REASON FOR REVISION</u>	<u>AFFECTED PARAGRAPHS</u>
Numerical Format (3/15/02)	All Paragraphs
Updated Pole Treatment Process (3/15/02)	1.1, 3.3.1, 3.3.2, 3.4, 3.7, 4.1, 4.1.1, 4.3, 4.4, 5.1, 6.2.1, 6.2.3, 6.3, 6.4.2, 6.4.3, 8.1, 8.4
Southwest Timbers Laboratories Comments (6/21/02)	4.4.4, 6.1, 6.2.2, 8.5, 9.1(Delete), 9.3 (Delete), Attachment #3
Purchasing (9/24/02)	1.1.2, 1.1.3, 4.4.1
Purchasing Request (12/4/02)	1.1.1, 4.1, 4.1.1, 4.4.5(a), 6.2.4, 6.4.1, 6.4.4, 6.5.1, 7.1, 8.1, 8.2, 8.3, 8.6.2, 10.1
Update Specification/Add Attachment #4 (3/20/06)	All Paragraphs
Specified Conditioning Method of Pole (8/16/11)	5.10.1
Updated Contact Information (8/20/14)	6.3.1.2
Updated Contact Information, Remove Contract Documents, Formatting Attachments	6.3.1.2; 4.7, 5.8.3, 6.2.6,6.2.7; Attachment #3, Attachment #4

This specification, until revised or rescinded, shall apply to each future purchase and contract for the commodity described herein.
Retain for future reference.

**CITY OF AUSTIN ELECTRIC UTILITY DEPARTMENT
PURCHASE SPECIFICATION
FOR
POLES, WOOD, 30-95FT, CREOSOTE, PRESSURE TREATED**

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1.0 SCOPE AND CLASSIFICATION

1.1 Scope

- 1.1.1 The City of Austin Electric Utility Department is hereinafter referred to as Austin Energy (AE)
- 1.1.2 Austin Energy (AE) requires a qualified Contractor to provide full length pressure treated wood poles
- 1.1.3 The Contractor shall provide a single location for all third party inspection throughout the term of the contract.
- 1.1.4 If the Contractor is not the Manufacturer, the Contractor shall furnish a copy of his/her contract with the Manufacturer, to demonstrate reliability of supply for a minimum of one (1) year after bid opening date.

1.2 Classification

- 1.2.1 Wood poles pressure treated with creosote, inspections, treatment, workmanship, and delivery of poles.

2.0 APPLICABLE SPECIFICATIONS

2.1 The latest revision of the following standards:

- 2.1.1 ANSI 05.1-2017 - Specifications and Dimensions for Wood Poles
- 2.1.2 AWPA M1-2015 - Purchase of Treated Wood Products
- 2.1.3 AWPA M2-2019 - Inspection of Wood Products Treated with Preservatives
- 2.1.4 AWPA M3-2012 - Standard Quality Procedures for Wood Preserving Plants
- 2.1.5 AWPA C1 - All Timber Products-Preservative Treatment by Pressure Process
- 2.1.6 AWPA C4 - Poles - Preservative Treatment by Pressure Processes
- 2.1.7 AWPA P1/P13 - Creosote

3.0 FUNCTIONAL REQUIREMENTS

- 3.1 Wood poles shall support loads from transmission and distribution aerial conductors, associated material, and all mounted equipment in accordance with applicable standards

4.0 PERFORMANCE REQUIREMENTS

- 4.1 Wood pole species shall be marked per Attachment 1- Pole Species Code Letters, shall have limitations of knot sizes per Attachment 2- Limitations of Knot Size, shall be burn-branded per Attachment 3 Pole Design and Branding, and shall be species per Attachment 4 Pole Species of Length & Class
- 4.2 Wood poles shall be in classes per ANSI 05.1.

- 4.3 Wood poles shall be cut from live timber, well proportioned from butt to top, and free from imperfections, except as hereinafter set forth.
- 4.4 The manufacture, storage, and handling of material supplied under these specifications shall be as per ANSI 05.1, except as modified herein.
- 4.5 The Contractor shall meet the requirements of these specifications and shall provide quality workmanship.
- 4.6 The Contractor shall eliminate all material that is considered defective before offering the poles for inspection.
- 4.7 If the Contractor intends to use pretreated stock, the Contractor shall state such in the Bid. This pretreated stock can only be used after written permission from the AE Contract Manager.
- 4.7.1 The tops and butts of all poles shall be clipped for inspection
- 4.7.2 Fully treated stock, after roofing, gaining, and drilling, shall be run back through the treating cylinder for re-treatment
- 4.8 Wood Posts shall be 10 feet in length and shall have a diameter of 6.0 inches to 8.0 inches for the entire length of the post.

5.0 MATERIAL REQUIREMENTS

5.1 Rate of growth

- 5.1.1 The rate of growth shall be in compliance with ANSI 05.1

5.2 Shape

- 5.2.1 Bell shaped butts shall be trimmed to a natural taper of the pole

- 5.2.2 A pole may have a sweep subject to the following limitations:

5.2.2.1 Sweep

5.2.2.1.1 Where sweep is in one plane and one direction only, a straight line joining the surface of the pole at the butt and the edge of the pole at the top shall be distant from the surface of the pole at any point by more than 1.0 inch for each 10 feet of length between these points. Any pole not conforming to this standard is not acceptable.

5.2.2.2 Double Sweep

5.2.2.2.1 Any pole exhibiting sweep in two (2) planes is not acceptable

5.2.2.3 Short Crook

5.2.2.3.1 Poles exhibiting short crooks are not acceptable. Any localized deviation from straightness in a 5.0 foot section or less shall be classified as a short crook and the deviation from straightness shall not exceed 2.0 inches.

5.3 Knots

5.3.1 All poles shall be free of loose knots. Poles in which decayed matter, dead wood, and bark have been removed from the knots and the cavities worked, so as not to hold water and not to exceed 1/10th the diameter at that point, may be accepted, provided the strength and symmetry of the pole has not been impaired. The allowable size of individual knots and the sum of the diameters of all the knots in any 1.0 foot section, shall be as per Attachment #2.

5.4 Scars

5.4.1 Scars are permitted as defined in ANSI 05.1, provided that the depth of the trimmed scar is not more than 1.0 inch when the diameter of the pole is 10.0 inches or less or 1/10th the diameter at the location of the scar when the diameter of the pole is more than 10.0 inches.

5.5 Spiral Grain

5.5.1 No pole shall have more than one (1) complete twist of grain in the length of the pole.

5.6 Soundness

5.6.1 Whenever there is any sign of decay in untreated timber and in all cases where the condition of the timber is doubtful, the inspector shall insist that a section no less than 2.0 inches and no greater than 4.0 inches shall be cut from the butt and the top of each suspect pole.

5.6.2 When there is any evidence of decay such as softness of wood fibers, sponginess, or brownish discoloration, the material shall be rejected even though there are no definite areas of breakdown in the wood fibers.

5.6.3 On all air seasoned stock, the top and butt of each pole shall be sawed off for inspection

5.7 Trimming

5.7.1 Pole shall be smoothly machine trimmed

5.7.2 The depth of the machine cut shall be to a practicable minimum of the pole surface, and in no case shall it be more than ¼ inch, except for knot whorls

5.8 Framing

5.8.1 All poles shall be completely framed prior to treatment

5.8.2 All poles shall be framed in accordance with attached drawing (Attachment #3)

5.8.3 No poles shall be framed after treatment, unless written approval is obtained from the AE Contract Manager. Any pole framed after treatment shall be retreated in accordance with this specification

5.9 Marking

5.9.1 All poles shall be burn-branded in the butt and on the face, at the locations indicated in Attachment #3.

5.9.2 The initials AE (Austin Energy) shall be placed immediately above the required information

- 5.9.3** Numbers showing the month of treatment shall be shown with the year and plant location
- 5.9.4** Numerals showing the pounds per cubic foot specified shall either follow the species and preservative code letter – that is, SP 7.5 – or they can be at the bottom of the brand, as 7.5. In addition, the class and length shall be stamped or branded in the top and butt of the pole.
- 5.9.5** Metal aluminum tags for marking the butt will be acceptable alternate to the burn-brand, if the tag is approved by Austin Energy. The following information shall be on the tag:
- A)** The Contractors code or trademark
 - B)** The plant location and the year of treatment
 - C)** The true length and class of pole

5.10 Conditioning

- 5.10.1** Unless otherwise specified, all wood poles shall be steam conditioned to prevent bleeding, as well as materials associated therewith, and shall be in accordance with the American Wood Preservers Association (AWPA) Book of Standards

5.10.2 Poles shall be treated within ten (10) days after they have been inspected in the white

5.11 Loading For Treatment

- 5.11.1** All poles shall be loaded on properly cushioned trams to preclude warping and misshaping during the treatment process. Three (3) or more trams, equally spaced, shall be used for poles that are 50.0 feet and longer

5.12 Treatment

- 5.12.1** Treatment shall be done using Creosote, applied in accordance with Rueping/Lowry Empty-Cell Process, as per AWPA C1 and C4

5.13 Creosote

- 5.13.1** The Creosote shall meet the requirements of AWPA P1/P13 Standard
- 5.13.2** Treatment shall be AWPA C1 and C4
- 5.13.3** Full length pressure treatment shall be in compliance with AWPA C4, with 7.5 lb final retention per cubic foot, by assay, for class 3 through 5 poles and 10.0 foot posts, 9.0 final retention per cubic foot, by assay, for all other poles
- 5.13.4** All poles shall be bored for penetration determination in a plane approximately 1 to 2 feet below the brand. All poles shall comply with the minimum requirements of AWPA C4 for penetration. All poles shall be removed from trams and placed on skids to facilitate penetration testing. If more than four (4) of the first twenty (20) fail to meet minimum penetration, the entire charge will be rejected and, at the option of the contractor, may be retreated. Re-treatment of poles shall conform to AWPA Standard C1, Paragraph 6.

5.14 Appearance

- 5.14.1** The surface of all poles shall be clean and dry to the touch
- 5.14.1.1** All excessive treatment material on each pole shall be cleaned off the pole before shipment

5.14.2 If steaming is used to clean poles, it shall be applied in accordance with AWP A C1 & C4

6.0 SAMPLES, INSPECTION, AND TESTING REQUIREMENTS

6.1 Result of Treatment

- 6.1.1 Poles shall be inspected by the Contractor to determine the penetration and distribution of preservative, through core borings as per AWP A M2
- 6.1.2 The retention of each charge shall be as per AWP A A6
- 6.1.3 All bore penetration test holes shall be neatly circled with aluminum lumber crayon or spotted with silver paint
- 6.1.4 Austin Energy requires treatment results documented from the Contractor on a quarterly basis. Report shall be sent to the Standards Engineer referenced in Section 6.3.1.2
- 6.1.5 Austin Energy requires an Annual Inspection Report with totals from the quarterly inspections reports. Report shall be sent to the Standards Engineer referenced in Section 6.3.1.2

6.2 Inspection

- 6.2.1 Austin Energy requires all poles to be inspected by an independent inspection service. The inspection service shall be provided by the contractor and shall be a separate entity from the contractor. The inspection shall be performed by a qualified representative approved by the Austin Energy. The inspection shall be performed in accordance with this specification and AWP A M2 before, during, and after treatment. Any inspections conducted by Austin Energy or its authorized Agent, shall not relieve the Contractor of the responsibility of furnishing poles in compliance with this specification
- 6.2.2 The Contractor shall allow Austin Energy Inspector(s) free access to all points from which all materials are being processed for delivery to Austin Energy
- 6.2.3 The Contractor shall also provide any apparatus, adequate space, safe working conditions, and any necessary assistance for turning, moving, or spreading the poles for inspection and testing. The contractor shall accept the judgment of the inspector(s) as final in the rejection of materials found not suitable
- 6.2.4 It shall be the responsibility of the contractor to furnish material in accordance with this specification in its entirety. This responsibility remains notwithstanding any certificate (report) of inspection, which may have been issued by any inspection agency or others. Acceptance of an order for material under this specification shall also constitute evidence contractor's acceptance of this responsibility. Should Austin Energy find any questionable material at the final destination, personnel from the Independent Inspection Service shall, at no additional expense to the city, travel to the City of Austin, and Austin Energy location of questionable material to perform re-inspection. Re-inspection shall be performed within three (3) calendar days from request. If material fails to meet this specification, Inspection Service shall represent the City of Austin, Austin Energy in negotiation with contractor for replacement of such material.
- 6.2.5 If, Austin Energy requires the Inspection Service Provider to re-inspect material after delivery to Austin Energy and found to meet specification, the City of Austin, Austin Energy shall reimburse the Inspection Service Provider for the cost of the re-inspection plus travel costs in accordance with city travel policy.

All travel, lodging and per diem expenses in connection with the Contract for which reimbursement may be claimed by the Contractor under the terms of the Solicitation will be reviewed against the City's Travel Policy as published and maintained by the City's Controller's Office and the Current United States General Services Administration Domestic Per Diem Rates (the "Rates") as published and maintained on the Internet at:

<http://www.gsa.gov/portal/category/21287>

No amounts in excess of the Travel Policy or Rates shall be paid. All invoices must be accompanied by copies of detailed itemized receipts (e.g. hotel bills, airline tickets). No reimbursement will be made for expenses not actually incurred. Airline fares in excess of coach or economy will not be reimbursed. Mileage charges may not exceed the amount permitted as a deduction in any year under the Internal Revenue Code or Regulations.

- 6.2.6** The vendor shall pay the Independent Inspection Service employed for providing services to Austin Energy under this contract. The inspection fees and all costs associated with providing inspection services outlined in the solicitation instruction document shall be incorporated into the unit prices of poles supplied. Copies of the inspection service's billing invoices shall be sent to Austin Energy's Contract Manager.
- 6.2.7** Austin Energy shall require the supplier to solicit at least three (3) inspection services for bids for qualified inspection service providers and award in accordance with City purchasing policies and guidelines. Inspectors employed by these service providers should have the minimum qualifications for pole inspectors listed in the Rural Electrification Administration (Rural Utility Services) Specification, latest revision, for Quality Control and Inspection of Timber Products. Please include the names of the companies that qualified for the third party inspection and their bids on Price Sheet. Austin Energy shall evaluate, select and approve the inspection service provider to be used prior to execution of Contract.
- 6.2.8** Poles rejected by the Austin Energy Inspector, shall not be shipped to Austin Energy and shall have any AE identification markings removed

6.3 Pole Inspection Reports

- 6.3.1** Inspection summary reports shall be provided to Austin Energy which contains the required information in AWP Standard M2. Inspection summary reports shall be provided annually to the Standards Engineer referenced in section 6.3.1.2.
- 6.3.1.1** A report shall be made to the Austin Energy's Contract Manager of any chronic treating plant situation wherein only minimum standards can be maintained with regard to quality of materials, manufacturing, handling, processing and preservative, care of equipment and operating efficiency
- 6.3.1.2** Inspection reports shall be sent to the following:
Austin Energy – St. Elmo Service Center
Attn: Standards Group; Julius Heslop
4411-B Meinardus Drive
Austin, TX 78744-1835
- Or Sent Electronically To:
julius.heslop@austinenergy.com

6.4 Pole Inspection at Final Destination

- 6.4.1** Austin Energy Reserves the right to reject poles which are not in compliance with this specification, at the final destination

6.4.2 Poles rejected by Austin Energy at the final destination shall be replaced by the Contractor at no cost to Austin Energy

7.0 OTHER REQUIREMENTS

7.1 The plant shall spot the inspectors hammer mark on both the top and butt of each pole, with silver paint, before shipment

ATTACHMENT 1

POLE SPECIES CODE LETTERS

<u>SPECIES</u>	<u>CODE LETTERS</u>
----------------	---------------------

Cedar

Alaska Yellow	YC
Northern White (Eastern)	EC
Western Red	WC

Douglas Fir

DF

Fir, Western (True Fir)

WF

California Red
Grand
Noble
Pacific Silver
White

Hemlock, Western

WH

Pine

Jack	JP
Lodge pole	LP
Red (Norway)	NP

Southern

SP

Loblolly
Longleaf
Shortleaf
Slash

Redwood

RW


Spruce

Engelmann	ES
Sitka	SS
White	WS

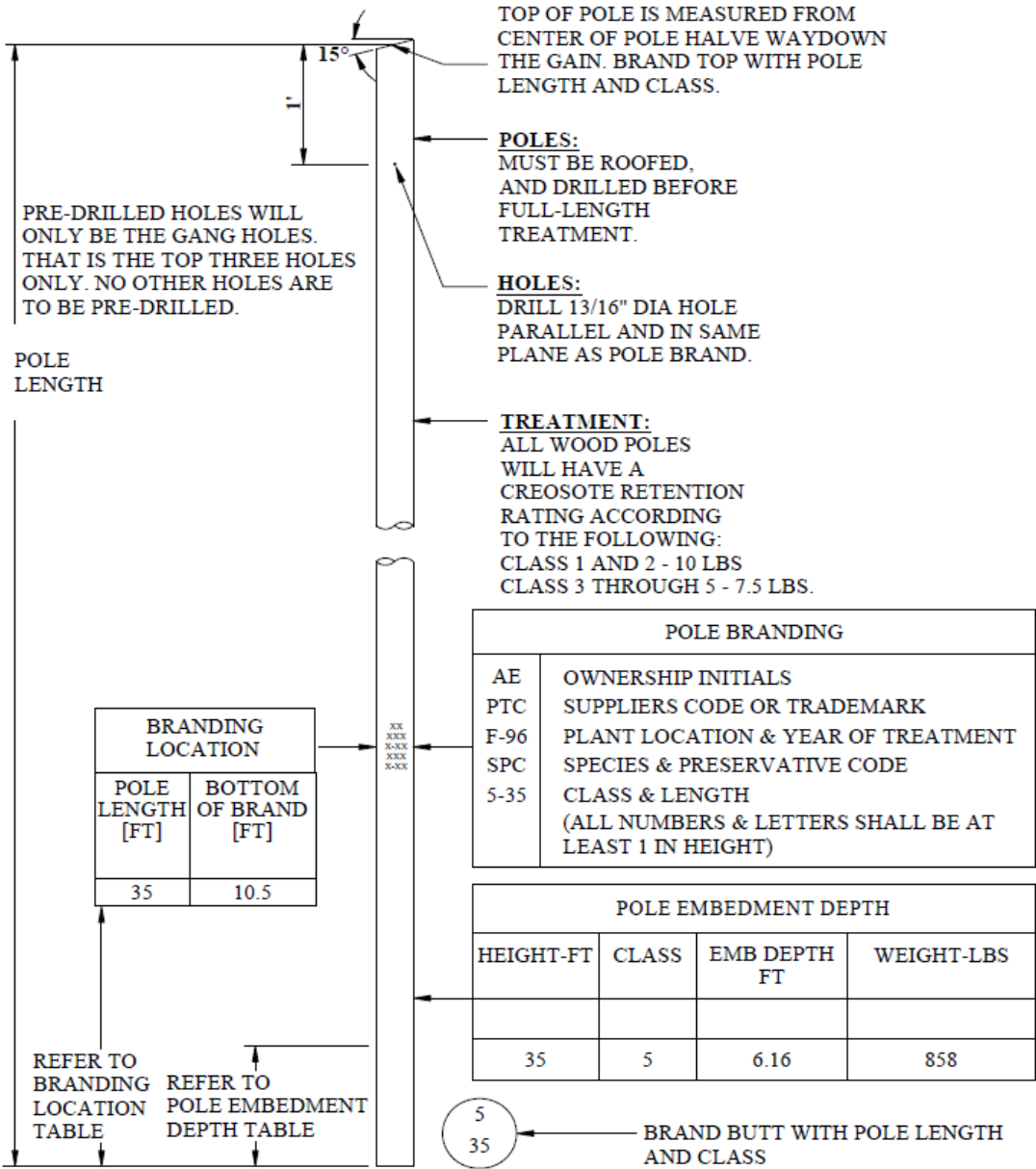
ATTACHMENT 2**LIMITATIONS OF KNOT SIZE****(Maximum Permitted Sizes)**


Length of Pole	Diameter of Single Knot (Classes 1 through 3)	Diameter of Single Knot (Classes 4 through 10)	Sum of Knot Diameters (In any 1 foot section)
45 ft. & Shorter			8"
Lower Half	12.9"	10.3"	
Upper Half	10.8"	9.4"	
50 ft. & Longer			10"
Lower Half	16.9"	13.2"	
Upper Half	13.4"	11.4"	

**ATTACHMENT 3
POLE DESIGN AND BRANDING**

1118-09	POLES, HARDWARE, AND FRAMING	
Sheet 1 of 2	DISTRIBUTION POLES	
11/01	POLES - WOOD 30 FT AND 35 FT	Rev: 10/02/14

- 1100 POLES, HARDWARE, AND FRAMING
- 1118 DISTRIBUTION POLES
- 1118-09 POLES - WOOD 30 FT AND 35 FT



	POLES, HARDWARE, AND FRAMING	1118-09
	DISTRIBUTION POLES	Sheet 2 of 2
	POLES - WOOD 30 FT AND 35 FT	11/01
Rev: 05/07/14		


CU

CU-ID	CU-REF	CU-DESCRIPTION
PW30-5	11180930	POLE WOOD 30FT.- 5

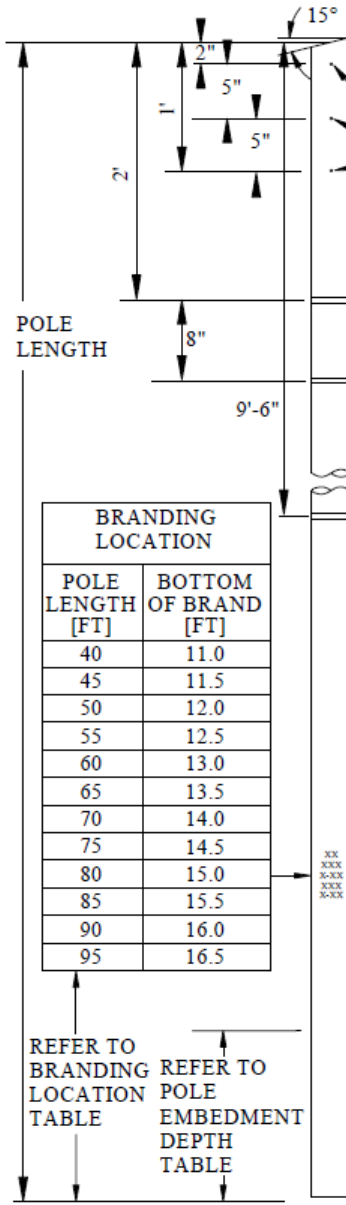
ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009814	POLE PINE 30 FT CLASS V	1	EA	11180930

PW35-5	11180935	POLE WOOD 35FT.- 5
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ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009810	POLE PINE 35 FT CLASS V	1	EA	11180935

1118-10	POLES, HARDWARE, AND FRAMING DISTRIBUTION POLES POLES - WOOD 40 FT AND ABOVE	
Sheet 1 of 4		
11/01		
		Rev: 10/02/14

1118-10 POLES - WOOD 40 FT AND ABOVE



TOP OF POLE IS MEASURED FROM CENTER OF POLE HALVE WAY DOWN THE GAIN.
 BRAND TOP WITH POLE LENGTH AND CLASS

POLES:
 MUST BE ROOFED, AND DRILLED BEFORE FULL-LENGTH TREATMENT.

HOLES:
 DRILL 13/16" DIA HOLE PARALLEL AND IN SAME PLANE AS POLE BRAND.


TREATMENT:
 ALL WOOD POLES WILL HAVE A CREOSOTE RETENTION RATING ACCORDING TO THE FOLLOWING:
 CLASS 1 AND 2 - 10 LBS
 CLASS 3 THRU 5 - 7.5 LBS.

NOTE:
 PRE-DRILLED HOLES WILL ONLY BE THE GANG HOLES. THAT IS THE TOP THREE HOLES ONLY. NO OTHER HOLES ARE TO BE PRE-DRILLED.

POLE BRANDING	
AE	OWNERSHIP INITIALS
PTC	SUPPLIERS CODE OR TRADEMARK
F-96	PLANT LOCATION & YEAR OF TREATMENT
SPC	SPECIES & PRESERVATIVE CODE
3-40	CLASS & LENGTH (ALL NUMBERS & LETTERS SHALL BE AT LEAST 1" IN HEIGHT)

POLE EMBEDMENT DEPTH			
HEIGHT-FT	CLASS	EMB DEPTH FT	WEIGHT-LBS
40	3	6.66	1421
45	1	7.33	2398
45	2	7.33	2081
45	3	7.33	1711
50	1	8	2843
50	2	8	2465
50	3	8	2030
55	1	8.5	3312
55	2	8.5	2873
60	1	9.16	3819
60	2	9.16	3306
65	1	9.66	4337
70	1	10.33	4886
75	1	11	5460
80	1	11.5	6057
85	1	12.16	6686
90	1	12.66	7326
95	1	13.33	7991

3
40 — BRAND BUTT WITH PROPER LENGTH AND CLASS

 Rev: 05/07/14	POLES, HARDWARE, AND FRAMING DISTRIBUTION POLES POLES - WOOD 40 FT AND ABOVE	1118-10 Sheet 2 of 4 11/01
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CU

CU-ID CU-REF CU-DESCRIPTION

PW40-3 11181040 POLE WOOD 40FT.- 3

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009811	POLE PINE 40 FT CLASS III	1	EA	11181040

PW45-3 11181045 POLE WOOD 45FT.- 3

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009812	POLE PINE 45 FT CLASS III	1	EA	11181045

PW45-2 11181046 POLE WOOD 45FT.- 2

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000000488	POLE PINE 45 FT CLASS II	1	EA	11181046

PW45-1 11181047 POLE WOOD 45FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000015930	POLE PINE 45 FT CLASS I	1	EA	11181047

PW50-3 11181050 POLE WOOD 50FT.- 3

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009800	POLE PINE 50 FT CLASS III	1	EA	11181050

PW50-2 11181051 POLE WOOD 50FT.- 2

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000000489	POLE PINE 50 FT CLASS II	1	EA	11181051

PW50-1 11181053 POLE WOOD 50FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000015931	POLE PINE 50 FT CLASS I	1	EA	11181053

PW55-2 11181055 POLE WOOD 55FT.- 2


ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009801	POLE PINE 55 FT CLASS II	1	EA	11181055

PW55-1 11181056 POLE WOOD 55FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000015932	POLE PINE 55 FT CLASS I	1	EA	11181056

PW60-2 11181060 POLE WOOD 60FT.- 2

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009802	POLE PINE 60 FT CLASS II	1	EA	11181060

1118-10	POLES; HARDWARE, AND FRAMING DISTRIBUTION POLES POLES - WOOD 40 FT AND ABOVE	
Sheet 3 of 4		
11/01		

CU-ID CU-REF CU-DESCRIPTION

PW60-1 11181061 POLE WOOD 60FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000015933	POLE PINE 60 FT CLASS I	1	EA	11181061

PW65-1 11181065 POLE WOOD 65FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009803	POLE PINE 65 FT CLASS I	1	EA	11181065

PW70-1 11181070 POLE WOOD 70FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009804	POLE PINE 70 FT CLASS I	1	EA	11181070

PW75-1 11181075 POLE WOOD 75FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009805	POLE PINE 75 FT CLASS I	1	EA	11181075

PW80-1 11181080 POLE WOOD 80FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009806	POLE PINE 80 FT CLASS I	1	EA	11181080

PW85-1 11181085 POLE WOOD 85FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009807	POLE PINE 85 FT CLASS I	1	EA	11181085

PW90-1 11181090 POLE WOOD 90FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009808	POLE PINE 90 FT CLASS I	1	EA	11181090

PW95-1 11181095 POLE WOOD 95FT.- 1

ID	PART NUM	PART DESC	QTY	EA	CU-REF
1	0000009809	POLE PINE 95 FT CLASS I	1	EA	11181095

**ATTACHMENT 4
POLE SPECIES OF LENGTH & CLASS**

POLE LENGTH (Ft.)	POLE CLASS	POLE SPECIES	AE PART #
30	V	SYP	XXXX
35	V	SYP	9810
40	I	SYP	XXXX
40	III	SYP	9811
45	I	SYP	15930
45	II	SYP	488
45	III	SYP	9812
50	I	SYP	15931
50	II	SYP	489
50	III	SYP	9800
50	H2	SYP	XXXX
55	I	SYP	15932
55	II	SYP	9801
60	I	SYP	15933
60	II	SYP	9802
60	H2	SYP	XXXX
65	I	SYP	9803
70	I	SYP or DF	9804
70	H2	SYP or DF	XXXX
75	I	SYP or DF	9805
75	H2	SYP or DF	XXXX
80	I	SYP or DF	9806
80	H2	SYP or DF	XXXX
85	I	SYP or DF	9807
85	H2	SYP or DF	XXXX
90	I	SYP or DF	9808
90	H2	SYP or DF	XXXX
95	I	SYP or DF	9809
95	H2	SYP or DF	XXXX

<p>SYP = Southern Yellow Pine DF = Douglas Fir</p>
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