

**Transmission & Distribution
Material & Installation Specification**

**Double Down Guy & Anchor
with Insulator**

I. Quantity

The base bid shall include the indicated number of down guy anchors of this type furnished and installed as hereinafter specified.

II. Material

- A. The material shall be equal in quality, design, performance, and appearance to the items specified on drawing TDMIS-101.
- B. All steel hardware to be hot dipped galvanized.
- C. Guy Plate - plate, guy, 6" bolt hole spacing for 3/4" to 7/8" bolt, for use with guy strain insulator, 7/8" pin, material ductile iron finish galvanized. Maclean # EPR-66S-7 or approved equal.
- D. Guy Wire - Guy wire to be Alumoweld steel, .386" O.D., 7 strand with 16,000 lbs. breaking strength per DOP Wire and Cable specifications.
- E. Screw Anchor - Screw type, 1-1/2" sq. shaft, 5' length w/1-10" and 1-12" helix, galvanized steel, 24,000 lb. pullout. Chance # PO12642-EJ, Joslyn # J23382ACA or approved equal.
- F. Anchor Extension - 1 1/2" sq. shaft x 7' length, galvanized steel, Chance #12657, Joslyn # J23378.7 or approved equal.
- G. Anchor Extension - 1 1/2" sq. shaft x 3 1/2' length, galvanized steel, Chance # 12655, Joslyn # J23378.3 or approved equal.
- H. Adapter - Double eye for 1 1/2" sq. shaft, galvanized steel, Chance # C102-0024, Joslyn # J23365 or approved equal.

- I. Guy Guard - Plastic, 1-1/2" x 2" x 8', yellow, for use on 3/16" – 1/2" guy wire, Chance # 96-FRPM-YEL, Preformed # PG-5718 or approved equal.
- J. Preformed Grip - Grip for 16M guy wire, 3/8"-7 #8 Alumoweld, color code: orange, Chance #16M-AWSBG, Preformed # AWDE-4122 or approved equal.
- K. Insulator - Insulator, strain, fiberglass, 7/8" x 96", min. strength 30,000 lbs., clevis-clevis end fittings, one sheave wheel, Joslyn # 300-96, Anderson # APF396R or approved equal.

III. Installation

- A. The installation shall be as shown on drawing TDMIS-101.
- B. The anchor must penetrate into soil stiff enough for the required holding strength. Additional anchor extensions may be necessary to reach sufficiently stiff soils.
- C. The digger operator shall maintain constant downward pressure on the anchor as it is installed such that for each revolution of the anchor during installation the anchor advances at a rate equal to the pitch of the anchor's helix.
- D. Uniform advancement of the anchor is necessary to screw the anchor into the soil. Turning the anchor without advancement will have a negative impact on the anchor's holding capabilities.
- E. Anchors and extensions shall be installed in line with guy wire. The difference between the angle that the anchor is installed and the guy angle should not exceed +/-5 degrees.
- F. Anchors must be installed a minimum of 6 feet as measured along the anchor extension.
- G. Anchor extension rods should be installed so that the anchor eye is 6 to 12 inches above grade.
- H. Multiple anchor installations should be separated by a minimum of 5 feet.
- I. The anchor shall be installed approximately 25 feet from the pole or as indicated on the drawings. When an anchor must be moved due to an obstruction, every effort should be made to move it further from the pole than specified.

CITY OF COLUMBUS DEPT. OF PUBLIC UTILITIES – DIVISION OF POWER DOUBLE DOWN GUY & ANCHOR WITH INSULATOR		
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- J. The guy plate shall be installed on the pole as shown on the drawings or as directed by the engineer. The guy plate shall be bolted to the pole using pre-drilled holes. When new holes must be drilled in the pole, the new holes shall be treated to prevent decay of the wood pole.
- K. The fiberglass guy insulator shall attach to the guy plate with a 3/4" clevis pin which is secured with a cotter pin.
- L. Additional fiberglass guy insulators may be required for adequate clearance. When connecting the insulators back to back use a 90-degree figure 8 link.
- M. Guy wires must be installed before line conductors are installed. Guy wires shall be pulled taut by means of a hoist until the pole is pulled over slightly toward the guy.
- N. Prefomed guy grips shall be used to terminate the guy strand to the fiberglass guy insulator and anchor adapter. The ends of the grips are wrapped around the guy strand and snapped into position completing the installation.
- O. The guy guard shall be installed over the ground wire from a point near the ground.

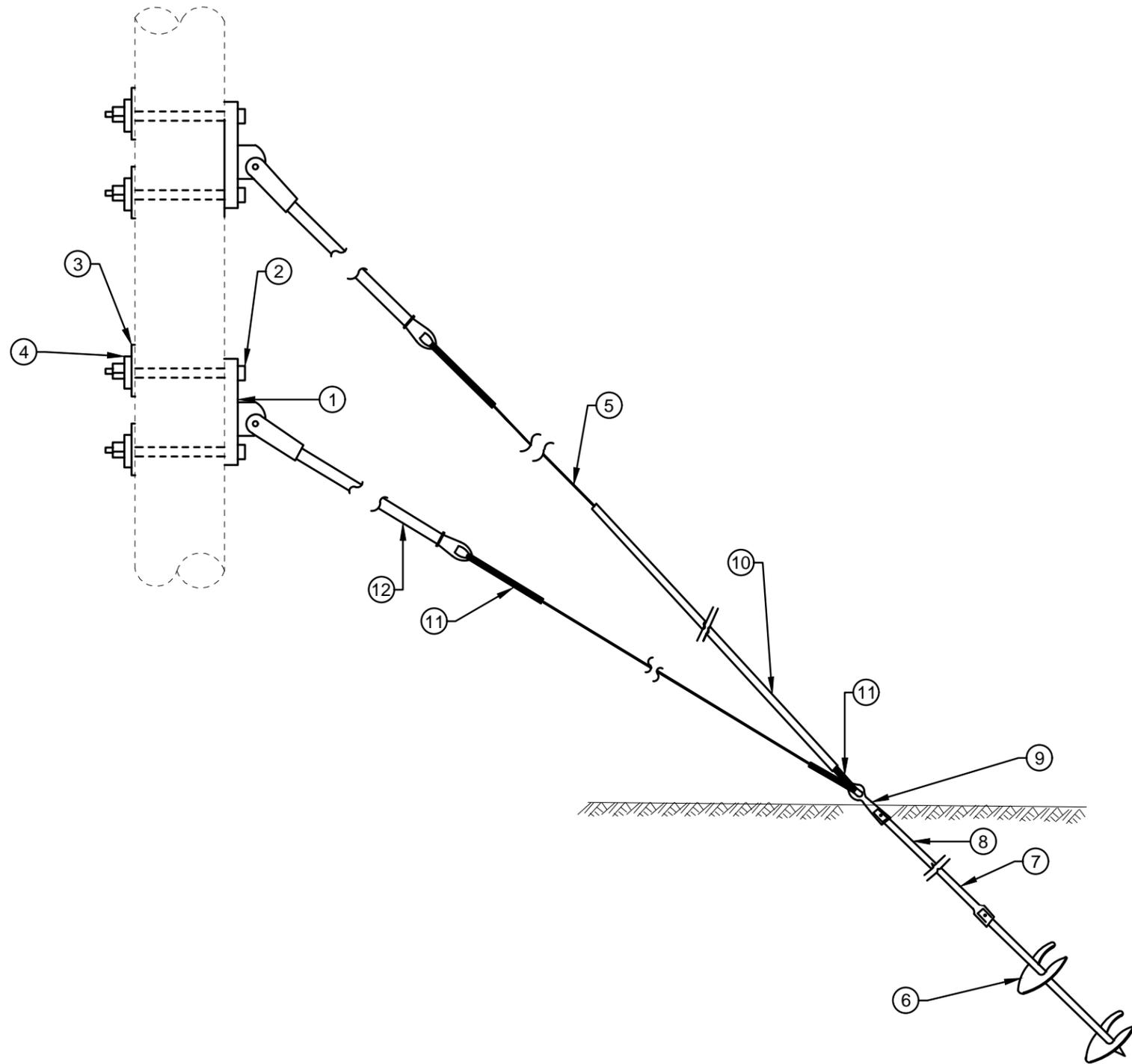
IV. Method of measurement

Shall be for complete assembly including anchor, guy strand (length as required), grips, eye plates, bolts and misc. hardware, labor, guy pulling, equipment, tools and all miscellaneous required for a complete and functional module

V. Basis of payment

Items	Unit	Description
TDMIS-101	Each	Double down guy & anchor with insulator module

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DETAIL 1
DOUBLE DOWN GUY & ANCHOR WITH INSULATOR

ITEM LIST			
ITEM #	DESCRIPTION	PART #	QTY.
①	PLATE, GUY	20318	2
②	BOLT, MACHINE 3/4" X LENGTH AS REQUIRED	42372	4
③	WASHER, CURVED SQUARE. 4" X 4" X 1/4", 13/16" DIA. HOLE	18899	4
④	WASHER, SPRING LOCK, 13/16" DIA. HOLE, DOUBLE COIL	18894	4
⑤	WIRE, GUY ALUMOWELD, 0.386" OD.	19987	AS REQ.
⑥	ANCHOR, SCREW, 1-1/2" SQUARE 5' LONG, W/1-12" & 1-10" HELIX	19215	1
⑦	EXTENSION, SCREW ANCHOR, 1 1/2" SQUARE SHAFT, 7' LONG	19223	1
⑧	EXTENSION, SCREW ANCHOR, 1 1/2" SQUARE SHAFT, 3 1/2' LONG	19222	1
⑨	ADAPTER, SCREW DOUBLE EYE, 1 1/2" SQUARE SHAFT	19207	1
⑩	GUARD, GUY, PLASTIC, YELLOW, 1 1/2" X 8"	19232	1
⑪	GRIP, GUY ANCHOR, PREFORMED FOR 16M, 3/8"	19225	4
⑫	INSULATOR, STRAIN, FIBERGLASS, 7/8" X 96"L, 30,000 LBS.	20241	AS REQ.

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DOUBLE DOWN GUY & ANCHOR WITH INSULATOR MPDDGI		
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SCALE: NTS	SHEET: 3 OF 3	