SECTION 641
PRESTRESSED CONCRETE POLES

641-1 Description.

Furnish and install prestressed concrete poles for service pole applications (Type N-II), luminaire support (Type N-III), and strain poles for span wire support of traffic signals, signs, and other devices (multiple types).

641-2 Materials.

Only use poles listed on the Qualified Products List.

641-3 Installation Requirements.

641-3.1 General: Furnish poles of the type and length shown on the plans. Provide catenary cable of the size shown on the plans. Ground poles in accordance with Section 620. Install span wire assemblies in accordance with Section 634.

Do not consider the poles acceptable for use if the camber of the pole, measured as the maximum deviation between the centerline of the pole and a straight line connecting the centroids of the cross-sections at each end of the pole, is greater than the total pole length in inches [millimeters] divided by 140].

641-3.2 Footings: Provide footings 3 feet 6 inches [1 m] in diameter and of the depth specified in the plans for strain poles used for span wire support of traffic signals. Provide footings for all other pole applications as specified in the plans. Construct the footings with Class I concrete as specified in Section 347.

For the excavation and backfill of the footing, meet the requirements specified in 125-4 and 125-8.2 with the exception of the backfill density. In lieu of the requirements for obtaining the specified density, the Contractor may hand tamp the backfill in 4 inches [100 mm] maximum layers or machine tamp the backfill in 6 inches [150 mm] maximum layers. When performing such operations, ensure that the material is neither dry nor saturated. The Contractor may backfill with concrete.

Use forms, when required, meeting the requirements of 700-8.3. If the footing is cast in an oversize hole, place the concrete in the top 6 inches [150 mm] in a form. Trowel all exposed surfaces to a smooth finish.

641-3.3 Orientation of Poles: For poles supporting one catenary wire, orient the pole so that the load face is perpendicular to the catenary wire. For poles supporting two catenary wires, orient the pole so that the load face is perpendicular to a line bisecting the angle between the two catenary wires.

641-4 Method of Measurement.

641-4.1 General: Measurement for payment will be in accordance with the following work tasks.

641-4.2 Furnish and Install: The Contract unit price for Prestressed Concrete Poles, Furnish and Install, will consist of the pole plus all labor, concrete for the foundation and other materials necessary for a complete and accepted installation as specified in the Contract Documents.

641-4.3 Furnish: The Contract unit price for Prestressed Concrete Poles, Furnish, will include the cost of the pole and shipping, handling, and delivery of the pole to the site designated in the Contract Documents.

641-4.4 Install: The Contract unit price for Prestressed Concrete Poles, Install, will include all labor, concrete for the foundation and other materials necessary for a complete and accepted installation as specified in the Contract Documents. The Engineer will supply the poles.

641-5 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

Item No.	641-	Prestressed Concrete Poles - each.
Item No.	2641-	Prestressed Concrete Poles - each.