SECTION 16132

PULL AND JUNCTION BOXES

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section describes general provisions, products and methods of execution relating to pull and junction boxes approved for use at ANC. Furnish all such boxes required to conform to requirements for maximum pulling length and maximum number of bends allowed.

1.2 QUALITY ASSURANCE

A. Pull and junction boxes 50 cubic inches and smaller shall conform to specifications for outlet boxes, Section 16131.

B. Pull and junction boxes larger than 50 cubic inches shall conform to UL Standard 50-1970, Cabinets and Boxes. The UL label shall constitute proof of acceptable quality.

PART 2 - PRODUCTS

2.1 INDOOR PULL AND JUNCTION BOXES

A. Indoor pull and junction boxes shall conform to Article 370 of the NEC and the following requirements:

1. Sheet metal boxes are approved for use in all dry, interior, nonhazardous locations.

2. Boxes installed in wet locations shall be NEMA 4.

3. Special boxes as required by the application shall be installed in areas of specific service and/or hazards.

B. Junction box extension rings will not be accepted on new boxes. Appropriate size boxes shall be used for each application.

2.2 TELECOMMUNICATION SYSTEM PULL BOXES

A. Telecommunication system Pull Boxes shall also conform to the latest editions of ANSI/EIA/TIA 569 and the BICSI Telecommunications Distribution Methods (TDM) Manual.

B. Dimensions:

1. Pull boxes for straight through pulls shall have minimum interior dimensions in accordance with the following Table:

Maximum Trade Size Conduit	Size of Box			For Each Additional Conduit Increase Width
	Width (inches)	Length (inches)	Depth (inches)	
1 Inch	4	16	3	2 inches
1 1/4 Inch	6	20	3	3 inches
1 1/2 Inch	8	27	4	4 inches
2 Inch	8	36	4	5 inches
2 1/2 Inch	10	42	5	6 inches
3 Inch	12	48	5	6 inches
3 1/2 Inch	12	54	6	6 inches
4 Inch	15	60	8	8 inches

2.3 UNDERGROUND PULL AND JUNCTION BOXES

A. Boxes set in ground shall be either precast concrete or cast iron. Covers shall be galvanized steel or cast iron, and shall be bonded to the grounding system with a stranded grounding conductor secured with a grounding lug. Provide sufficient slack to allow removal of the cover and normal working access.

B. Underground concrete pull boxes installed in traffic areas shall be constructed to withstand AASHTO HS-20 wheel loading (Landside only). Underground concrete pull boxes installed on the Airside (ramp areas) shall be constructed to withstand AASHTO HS-80 wheel loading.

2.4 OUTDOOR ABOVE-GROUND PULL AND JUNCTION BOXES

A. Boxes exposed to rain or installed in wet locations shall be NEMA 4.

B. Outdoor pull and junction boxes and conduit bodies for use with galvanized conduits shall be made of galvanized ferrous metal or cast aluminum, with integral threaded hubs or Myers-type weathertight hubs of matching composition and finish.

C. Outdoor pull and junction boxes for use with PVC or plastic-coated conduits shall be made of fiberglass, with matching gasketed covers secured with captive monel or stainless steel screws; Hoffman A-JFG series or accepted equal. Each metallic conduit entry (including liquidtight flex) shall be provided with a bronze bond bushing and NEC-sized copper bonding jumper inside the enclosure.

2.5 PA SYSTEM TERMINAL CABINETS

A. Refer to requirements in Section 16770 for PA System Terminal Cabinets.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Junction and pull boxes shall be installed so that covers are readily accessible and adequate working clearance is maintained after completion of the installation.

B. Select boxes properly sized per NEC for power and lighting applications.

3.2 TELECOMMUNICATIONS SYSTEM PULL BOXES

A. Where a pull box is required in a 1 inch conduit run, outlet boxes as specified in Section 16131 - Outlet Boxes may be used. Where a pull box is required in a conduit run 1 1/4 inch or larger, or where required for multiple raceways, the box shall be sized in accordance with the Table in this Section

B. Pull boxes shall be located in straight-through sections of horizontal cabling pathways (conduits). Pull boxes shall not be used for angle pulls or to accomplish changes in direction of the pathway

C. Multiple raceways connecting to telecommunications system pull boxes shall penetrate box walls such that they are distributed evenly along the Box wall.

3.3 TELECOMMUNICATIONS SYSTEM JUNCTION BOXES

A. Junction boxes shall not be used in interior horizontal pathway conduits or interior backbone pathway conduits unless specifically allowed by ANC. Where specifically allowed, junction boxes shall be located in a readily accessible location. Junction boxes shall not be located in above ceiling spaces unless specifically allowed by ANC.

B. Junction boxes for telecommunication shall be hinged covered cabinets, sized in accordance with the requirements of ANSI/EIA/TIA-569.

C. Junction cabinets shall have a fire-treated plywood backboard suitable for mounting punch-down style terminal blocks, in accordance with Section 16745.

END OF SECTION