

AI-09 Asset Type Guideline

Ver. 1

Date: 5 October 2015

This guideline defines the asset types to be captured. This list excludes the requirements for local network wastewater pumping stations (Refer to DP-06).

Item	Description
Actuators	<ul style="list-style-type: none"> Actuators shall be capitalised as separate assets.
Antenna System	<ul style="list-style-type: none"> Includes cable to the antenna, brackets and lightning protection equipment.
Batteries	<ul style="list-style-type: none"> Shall be capitalised as a group per site/facility/process area
Buildings & Large Chambers	<ul style="list-style-type: none"> Capitalisation of buildings shall be inclusive of all doors, windows and other building items. New doors and/or windows would be either an improvement or a maintenance cost, depending on the reason for replacement. A significant upgrade to a building, e.g. new roof on a building would either be a maintenance project or an improvement. The project manager shall discuss these projects with the Finance Department in these instances. A good way to separate structures is by process area, e.g. Clarifiers, membrane tanks, wastewater tank, chemical building etc.
Cables – Instrumentation, data & communications	<ul style="list-style-type: none"> All instrument cable, including communications cables are capitalised with the connecting instrument as appropriate for each site.
Cables – 230v LV Cabling	<ul style="list-style-type: none"> All 230V cables are capitalised with the connecting equipment as appropriate for each site.
Cables – 415 LV Cabling	<ul style="list-style-type: none"> 415V cables are capitalised with the connecting equipment as appropriate for each site.
Cables - HV Cabling (3.3, 11, 22 & 33kV)	<ul style="list-style-type: none"> 3.3kV cables or larger are individually capitalised.
Cathodic Protection (CP)	<ul style="list-style-type: none"> Identify as separate assets the rectifier and anode bed installation.
Communications	<ul style="list-style-type: none"> Control System radio's are individually capitalised.
Cranes and Lifting Gear	<ul style="list-style-type: none"> These typically consist of two assets, crane or beam and lifting gear including trolleys, hoists, controls, chain blocks etc.
DCS & SCADA	<ul style="list-style-type: none"> Servers, work stations, LAN/WAN switches Hubs & Firewalls are capitalised as a single asset.
DCS Cabinets	<ul style="list-style-type: none"> The Controller shall be itemised as an individual asset. The individual IO cards shall be capitalised with the controller. The balance of materials within the DCS cabinet shall be capitalised against the cabinet.
Distribution Board /	<ul style="list-style-type: none"> Refer Switchboards otherwise

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Sub Board (DB) & Junction Box (JB)	<ul style="list-style-type: none"> Identify each electrical distribution board separately.
Earthing	<ul style="list-style-type: none"> Identify each earth system and associated equipment and capitalise.
Field Cabinet	<ul style="list-style-type: none"> Each field cabinet should be identified separately.
Filter Media	<ul style="list-style-type: none"> Filter media is capitalised separately from the filter structure, examples are: <ul style="list-style-type: none"> ➤ Wastewater Bio-filter media ➤ Water Treatment Plant filter media ➤ Membrane modules
Instruments	<ul style="list-style-type: none"> Instruments are capitalised as an individual asset. Mounting brackets and wet gear plates inclusive of small instrument specific pipe work can be capitalised with the asset if appropriate. Otherwise such pipe work may be capitalised with an associated housing, e.g. monitoring box.
Man Holes & Small Chambers	<ul style="list-style-type: none"> Manholes and chambers shall be capitalised individually inclusive of chamber lids, manhole covers and internal ladders. If a lid or manhole cover is being replaced because of damage it would be considered operational expenditure. If the lid or manhole cover is being replaced as an improvement (e.g. replacing heavy cast iron lids with aluminium lids) they should be capitalised as an improvement against the associated chamber or manhole. Refer Wastewater.
Monitoring Boxes	<ul style="list-style-type: none"> The RTU cabinets around the network will have the controller and any individual instruments itemised as individual assets. Batteries shall be capitalised as a group The balance of materials (e.g. wiring, etc) shall be capitalised with the monitoring box.
Motor Control Centre (MCC)	<ul style="list-style-type: none"> Refer Switchboards.
Motor Starters	<ul style="list-style-type: none"> Refer switchboards.
Pipe Bridges	<ul style="list-style-type: none"> Refer Wastewater & Water Mains.
Pipe work (non-mains)	<ul style="list-style-type: none"> Pipe work of greater than ≥ 100mm dia shall be capitalised individually from valves and fittings. On small diameter pipe work (<100mm dia), the manual valves and fittings shall be capitalised with the associated pipe work, unless there is a specialist (and expensive) fitting. Actuators shall be capitalised individually. Bypass pipe work of a particular diameter and construction within a line valve, meter or cross-connection assembly should be shown as one asset. Asset is split at diameter and material type changes. T-sections are captured as nodes only – no value is assigned. Process Pipe work - aggregated assets are defined for all pipe work

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	of a given diameter within a process area, a definable location, or between two nodes or processes. For example, "40mm Pipe work, Lime Dosing" would be an asset.
Platforms & Steel Work	<ul style="list-style-type: none"> Where there are significant quantities of platforms and steelwork, these shall be capitalised separately to the asset they are associated with but collectively as single asset. i.e. All the steelwork and ladders within a pump station could be a single asset, or capitalised with the pump station depending on the size and significance.
Power Factor Correction (PFC)	<ul style="list-style-type: none"> Refer to Switchboards otherwise Power Factor asset includes capacitors, mountings, enclosure and ancillary equipment for each unit.
Pumps/Motors/Rotating equipment.	<ul style="list-style-type: none"> Separate assets are required for a pump and motor, unless it is assembled as a single unit i.e. submersible pump. Sump pumps are considered a separate asset. However in local networks sump pumps are captured as part of the building it is operating in.
RTU's, PLC's & DCS Controllers	<ul style="list-style-type: none"> RTU's, PLC's and DCS controllers are capitalised as individual assets. Individual cards are capitalised as part of the controller.
Security	<ul style="list-style-type: none"> Includes card scanners, electronic locks, detector units, swipe cards and associated security equipment as a grouped asset by area served.
Software	<ul style="list-style-type: none"> Capitalised as an individual asset for pump stations and smaller sites. Broken into process areas or controllers as separate assets for treatment plants and larger sites. Packaged software (eg: DeltaV licences, InTouch) is normally capitalised as one asset and configuration software (the engineered code) as a separate asset.
Switchboards.	<ul style="list-style-type: none"> 230V switchboards and distribution boards are capitalised as individual assets, inclusive of all the wiring and components. Switchboards of voltage greater than 230V (i.e. 415V and larger) typically found in pump stations, process areas etc <ul style="list-style-type: none"> ➤ Identify each switchboard as a primary asset. Identify the major components in the switchboard separately as associated assets. A major component is deemed to be a device with a current capacity of more than 100 Amps. ➤ This may include: Isolators; Circuit Breakers; Motor Protection Relays; Soft Starters; Variable Speed Drives and Power Factor Correction Capacitors. ➤ If unsure, the project manager shall confirm the degree of capitalisation with the Assets Specialist.
Valves	<ul style="list-style-type: none"> Separate assets are required for every valve separately identified in the P&ID, As-Built or other drawings. Generally valves < 100mm are captured with the pipe unless it serves a special function i.e. 50mm valves on rider mains are important valves to be captured. Refer to

Item	Description
	Pipework. <ul style="list-style-type: none"> •
Tanks	<ul style="list-style-type: none"> • Each tank to be a separate asset, includes ladders, platforms, nozzles, lids etc.
Transformer ≥400V	<ul style="list-style-type: none"> • Each transformer is a separate asset. This does not include 240V transformers that connect to single-phase power outlets.
Ventilation System	<ul style="list-style-type: none"> • Each fan including ducting, silencer, and filter may be grouped as one asset. • Similar for each aircon unit.
Wastewater	<ul style="list-style-type: none"> • A manhole is an asset and each section of pipe/sewer between manholes is also an asset. • Asset is split at diameter and material type changes. • Separate assets are required for pipe bridges
Watermains	<ul style="list-style-type: none"> • Separate assets are required for sections of pipe between isolation valves. (not hydrants, air valves or scours) • Asset is split at diameter and material type changes. • T-sections are captured as nodes only – no value is assigned. • Separate assets are required for pipe bridges • Bypass valves and associated small bore pipe work shall be capitalised individually.