

City Utilities Design Standards Manual

CADD Standards

Chapter CADD 6

Layers

Discipline: Electrical
Model File Layers/Levels

Level/Layer Naming		Graphic Defaults				User-Defined Data Fields	Model File Types - Coming soon							
		Line Style	Line Width (mm)	AutoCAD Color #	MicroStation Color #									
AIA Format	Level/Layer Description													
General Information														
E-ANNO-DIMS	Sheet-specific dimensions (witness/extension lines, dimension terminators, dimension text)	Continuous	0.35	6	5									
E-ANNO-KEYN	Sheet-specific reference keynotes with associated leaders	Continuous	Varies	Varies	Varies									
E-ANNO-LEGN	Legends and symbol keys	Continuous	Varies	Varies	Varies									
E-ANNO-MASK	Text/shape mask for use with photo backgrounds	Continuous	0.35	255	24									
E-ANNO-MATC	Match lines	Continuous	0.70	7	0									
E-ANNO-NOTE	General notes and general remarks	Continuous	0.35	6	5									
E-ANNO-NPLT	Non-plotting graphic information	Continuous	0.18	5	1									
E-ANNO-PATT-D	Demolition Patterning, poche, shading, and hatching	Continuous	0.13	244	9									
E-ANNO-PATT-E	Existing Patterning, poche, shading, and hatching	Continuous	0.13	202	9									
E-ANNO-PATT-N	New Patterning, poche, shading, and hatching	Continuous	0.13	120	9									
E-ANNO-PATT-F	Future Patterning, poche, shading, and hatching	Varies	0.18	8	9									
E-ANNO-REDL	Redlines	Continuous	0.35	1	3									
E-ANNO-REFR	Reference files and raster attachments	Continuous	0.35	7	0									
E-ANNO-REVS	Revision indicators and text	Continuous	0.35	4	2									
E-ANNO-SCHD-MAJR	Schedule Major Lines	Continuous	0.35	6	5									
E-ANNO-SCHD-MINR	Schedule Minor Lines	Continuous	0.70	7	0									
E-ANNO-SYMB	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	Varies	0.25	6	5									
E-ANNO-TEXT	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	Continuous	0.35	6	5									
Alarms														
E-ALRM-EQPM	Alarm: Equipment	Continuous	0.30	1	3									
Clock Systems														
Closed-Circuit Television Systems														
Communications														
E-COMM-CIRC-N	Communications: circuits	Continuous	0.30	6	5									
E-COMM-DATA-CABL-E	Communication: Existing Cable such as Telephone and Data (excluding Fiber optics)	Continuous	0.13	42	182									
E-COMM-DATA-CABL-N	Communication: Cable such as Telephone and Data (excluding Fiber optics)	DashDot	0.50	42										
E-COMM-FLOR-D	Demo Floor-Mounted, Telephone, Data & Special Outlets	Continuous	0.35	222										
E-COMM-FLOR-E	Existing Floor-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	222										
E-COMM-FLOR-N	Floor-Mounted, Telephone, Data & Special Outlets	Continuous	0.35	62										
E-COMM-HIDD-FLOR-D	Demo Existing Hidden Floor-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	222										
E-COMM-HIDD-FLOR-E	Demo Existing Hidden Floor-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	162										
E-COMM-HIDD-FLOR-N	Hidden Floor-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	122										
E-COMM-HIDD-WALM-D	Demo Existing Hidden Wall-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	222										
E-COMM-HIDD-WALM-E	Existing Hidden Wall-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	162										
E-COMM-HIDD-WALM-N	Hidden Wall-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	122										
E-COMM-IDEN	Identifier tags, symbol modifiers, and text	Continuous	0.30	6	5									
E-COMM-JBOX-N	Communications junction boxes, pull boxes, pedestals, and splices	Continuous	0.30	6	5									
E-COMM-MHOL-N	Communications manholes and handholes	Continuous	0.30	6	5									
E-COMM-OVHD-CATV-N	Overhead Cable TV Communications	Continuous	0.30	6	5									
E-COMM-OVHD-FIBR-E	Existing Overhead Fiber Optic Communications	OHFIB	0.13	42	182									
E-COMM-OVHD-FIBR-N	Overhead Fiber Optic Communications	Divide	0.50	50										
E-COMM-OVHD-IDEN	Identifier tags, symbol modifier and text	Continuous	0.30	6	5									
E-COMM-OVHD-PHON-N	Overhead Telephone Lines	OHTEL	0.30	6	5									
E-COMM-OVHD-TRAF-N	Overhead Traffic signal system	OHTRAF	0.30	6	5									
E-COMM-POLE-N	Communication Poles	Continuous	0.30	6	5									
E-COMM-POLE-GUYS-N	Communication Guying equipment	Continuous	0.30	6	5									
E-COMM-POLE-IDEN	Identifier tags, symbol modifiers, and text	Continuous	0.30	6	5									
E-COMM-SWCH-N	Communication: Switches and Routers	Continuous	0.30	6	5									
E-COMM-TOWR-N	Communication: Towers and Telemetry	Continuous	0.30	6	5									

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AIA Format	Level/Layer Description													
E-COMM-UGND-CATV-N	Underground Cable TV Communications	UGCATV	0.30	6	5									
E-COMM-UGND-FIBR-E	Existing Underground Fiber Optic Communications	UGFIB	0.13	42	182									
E-COMM-UGND-FIBR-N	Underground Fiber Optic Communications	UGFIB	0.30	6	5									
E-COMM-UGND-IDEN	Identifier tags, symbol modifier and text	Continuous	0.30	6	5									
E-COMM-UGND-PHON-N	Underground Telephone Lines	UGTEL	0.30	6	5									
E-COMM-UGND-TRAF-N	Underground Traffic signal system	UGTRAF	0.30	6	5									
E-COMM-WALM-D	Demo Wall-Mounted, Telephone, Data & Special Outlets	Continuous	0.35	222										
E-COMM-WALM-E	Existing Wall-Mounted, Telephone, Data & Special Outlets	Continuous	0.13	162										
E-COMM-WALM-N	Wall-Mounted, Telephone, Data & Special Outlets	Continuous	0.35	83										
Details and Centerlines														
E-DETL-CNTR-E	CENTERLINES	Center	0.13	205										
E-DETL-CNTR-D	CENTERLINES	Center	0.13	241										
E-DETL-CNTR-N	CENTERLINES	Center	0.13	133										
Diagrams														
E-DIAG-BKRS-N	Diagram Breakers	Continuous	0.30	6	5									
E-DIAG-BUSS-N	Diagram Bus duct	Continuous	0.30	6	5									
E-DIAG-COAX-N	Diagram Coax cable	Continuous	0.30	6	5									
E-DIAG-ENCL-N	Diagram Equipment enclosers	Continuous	0.30	6	5									
E-DIAG-EQPM-N	Diagram Equipment	Continuous	0.30	6	5									
E-DIAG-FEED-N	Diagram Feeders	Continuous	0.30	6	5									
E-DIAG-FLOR-N	Diagram Floor	Continuous	0.30	6	5									
E-DIAG-GRND-N	Diagram Ground	Continuous	0.30	6	5									
E-DIAG-JACK-N	Diagram Jacks	Continuous	0.30	6	5									
E-DIAG-SYMB-D	Diagram Demo General elec. symbols (most schematic symbols, E-con., junction and pull boxes, etc.)	Continuous	0.35	221										
E-DIAG-SYMB-E	Diagram Existing General elec. symbols (most schematic symbols, E-con., junction and pull boxes, etc.)	Continuous	0.13	161										
E-DIAG-SYMB-N	Diagram General elec. symbols (most schematic symbols, E-con., junction and pull boxes, etc.)	Continuous	0.35	71										
E-DIAG-SWCH-N	Diagram Switch, Circuit breakers, Contacts, Gang operated disconnects, Reclosers	Continuous	0.30	6	5									
E-DIAG-WIRE-N	Diagram or Schematic Wiring	Continuous	0.30	6	5									
E-DIAG-XFMR-N	Diagram Transformers	Continuous	0.30	6	5									
Energy Monitoring Control Systems														
Fire Protection														
E-FIRE-MISC-D	DEMOLITION	Continuous	0.35	220										
E-FIRE-EQPM-F	FUTURE FIRE PROTECTION EQUIPMENT	Dashed	0.25	65										
E-FIRE-CLNG-E	EXISTING CEILING MOUNTED FIRE PROTECTION (SMOKE DETECTORS)	Continuous	0.13	140										
E-FIRE-CLNG-N	FIRE PROTECTION CEILING MOUNTED	Continuous	0.35	65										
E-FIRE-EQPM-E	EXISTING FIRE PROTECTION EQUIPMENT	Continuous	0.13	165										
E-FIRE-EQPM-N	FIRE PROTECTION EQUIPMENT	Continuous	0.35	165										
E-FIRE-HIDD-D	HIDDEN DEMOLITION	Hidden	0.13	240										
E-FIRE-HIDD-EQPM-E	EXISTING HIDDEN FIRE PROTECTION EQUIPMENT	Hidden	0.13	185										
E-FIRE-HIDD-EQPM-N	HIDDEN FIRE PROTECTION EQUIPMENT	Hidden	0.13	125										
E-FIRE-PANL-E	EXISTING FIRE ALARM CONTROL AND ANNUNCIATOR PANELS	Continuous	0.13	171										
E-FIRE-PANL-N	FIRE ALARM CONTROL AND ANNUNCIATOR PANELS	Continuous	0.35	81										
E-FIRE-WALM-E	EXISTING FIRE PROTECTION WALL MOUNTED (PULL STATIONS, HORN/LIGHT DEVICES)	Continuous	0.13	160										
E-FIRE-WALM-N	WALL MOUNTED FIRE PROTECTION (PULL STATIONS, HORN/LIGHT DEVICES)	Continuous	0.35	60										
Floor Information														
Ground Systems														
E-GRND-CIRC-N	Ground system: circuits	Continuous	0.35	6	5									
E-GRND-CNMB-N	Ground system: circuit number	Continuous	0.35	6	5									

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AIA Format	Level/Layer Description	Line Style	Line Width (mm)	AutoCAD Color #	MicroStation Color #									
E-GRND-DIAG-N	Ground system: Diagrams	Continuous	0.35	6	5									
E-GRND-EQPM-N	Ground system: equipment	Continuous	0.35	71										
E-GRND-LOOP-WIRE-E	Existing Ground loop wiring (plan and site)	Continuous	0.13	42	182	LOOP								
E-GRND-LOOP-WIRE-N	Ground loop wiring (plan and site)	Center	0.50	30		LOOP								
Lighting														
E-LITE-CLNG-FIXT-E	EXISTING LIGHT FIXTURES CEILING MOUNTED (PENDENT AND GRID MOUNTED)	Continuous	0.13	141										
E-LITE-CLNG-FIXT-N	LIGHT FIXTURES CEILING MOUNTED (PENDENT AND GRID MOUNTED)	Continuous	0.50	31										
E-LITE-EMER-E	EXISTING LIGHT FIXTURES AND EMERGENCY EXIT SIGNS	Continuous	0.13	161										
E-LITE-EMER-N	LIGHT FIXTURES AND EMERGENCY EXIT SIGNS	Continuous	0.35	64										
E-LITE-FIXT-D	LIGHT FIXTURES DEMOLITION	Continuous	0.35	223										
E-LITE-FIXT-E	EXISTING LIGHT FIXTURES	Continuous	0.13	153										
E-LITE-FIXT-HIDD-D	LIGHT FIXTURES HIDDEN DEMOLITION	Continuous	0.13	243										
E-LITE-FIXT-N	LIGHT FIXTURES	Continuous	0.50	153										
E-LITE-HIDD-FIXT-E	EXISTING LIGHT FIXTURES HIDDEN	Continuous	0.13	203										
E-LITE-HIDD-FIXT-N	Hidden Light Fixtures	Continuous	0.13	123										
E-LITE-POLE-FIXT-E	EXISTING LIGHT FIXTURES POLE MOUNTED	Continuous	0.13	152										
E-LITE-POLE-FIXT-N	LIGHT FIXTURES POLE MOUNTED	Continuous	0.50	55										
E-LITE-WALM-FIXT-E	EXISTING LIGHT FIXTURES WALL MOUNTED	Continuous	0.13	151		WALM								
E-LITE-WALM-FIXT-N	LIGHT FIXTURES WALL MOUNTED	Continuous	0.50	43		WALM								
Lighting Protection Systems														
Power														
E-POWR-CABL-TRAY-E	Existing Cable trays for power and signal wiring (plan and elevation)	Continuous	0.13	10	10									
E-POWR-CABL-TRAY-N	Cable trays for power and signal wiring (plan and elevation)	Continuous	0.35	82										
E-POWR-CIRC-N	circuit	Continuous	0.30	6	5									
E-POWR-CNMB-N	Circuit number	Continuous	0.30	6	5									
E-POWR-CNDT-N	Conduit	Continuous	0.30	6	5									
E-POWR-CONT-TRAY-E	Existing Wireways for power and control wiring (plan and schematic)	Continuous	0.35	71										
E-POWR-CONT-TRAY-N	Wireways for power and control wiring (plan and schematic)	Continuous	0.35	71										
E-POWR-DEVC-N	Capacitors, voltage regulators, motors, buses, generators, meters, grounds and markers	Continuous	0.30	6	5									
E-POWR-DUCT-CNDT-E	Existing Duct banks (site), conduit in concrete slabs and walls (POWER)	Continuous	0.13	10	10									
E-POWR-DUCT-CNDT-N	Duct banks (site), conduit in concrete slabs and walls (POWER)	Continuous	0.50	41										
E-POWR-EQPM-D	Demolition - Electrical Equipment	Continuous	0.25	235										
E-POWR-EQPM-PADM-E	Existing Pad mounted substations, switchgear, mcc's, transformers, ups	Continuous	0.13	180										
E-POWR-EQPM-PADM-N	Pad mounted substations, switchgear, mcc's, transformers, ups	Continuous	0.35	82										
E-POWR-FREE-EQPM-E	Existing Electrical Equipment mounting For Free Standing Equipment (Stanchion mounting For Panels & Boxes)	Continuous	0.13	183										
E-POWR-FREE-EQPM-N	Free-Standing Equipment	Continuous	0.25	91										
E-POWR-FFLW-EQPM-N	Limit Switches, Flow Meters, Transmitters, (Plan and Schematic) Equipment, Etc.	Continuous	0.35	63										
E-POWR-FFLW-EQPM-E	Existing Limit Switches, Flow Meters, Transmitters, (Plan and Schematic) Equipment, Etc.	Continuous	0.13	163										
E-POWR-FFLW-EQPM-D	Demolition Limit Switches, Flow Meters, Transmitters, (Plan and Schematic) Equipment, Etc.	Continuous	0.35	223										
E-POWR-FLOR-D	Demo Floor-Mounted Receptacles	Continuous	0.35	222										
E-POWR-FLOR-E	Existing Floor-Mounted Receptacles	Continuous	0.25	162										
E-POWR-FLOR-N	Floor-Mounted Receptacles	Continuous	0.35	62										
E-POWR-HIDD-FLOR-D	Demo Existing Hidden Floor-Mounted Receptacles	Continuous	0.13	222										
E-POWR-HIDD-FLOR-E	Existing Hidden Floor-Mounted Receptacles	Continuous	0.13	162										
E-POWR-HIDD-FLOR-N	Hidden Floor-Mounted Receptacles	Continuous	0.13	122										
E-POWR-HIDD-WALM-D	Demo Existing Hidden Wall-Mounted Receptacles	Continuous	0.13	222		WALM								
E-POWR-HIDD-WALM-E	Existing Hidden Wall-Mounted Receptacles	Continuous	0.35	162		WALM								
E-POWR-HIDD-WALM-N	Hidden Wall-Mounted Receptacles	Continuous	0.13	122		WALM								
E-POWR-HIDD-WIRE-D	Existing Hidden Wire to be Demolished	Hidden	0.13	241		WALM								
E-POWR-HIDD-WIRE-E	Existing Hidden Wire	Hidden	0.13	142		WALM								

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AIA Format	Level/Layer Description	Line Style	Line Width (mm)	AutoCAD Color #	MicroStation Color #									
E-POWR-HIDD-EQPM-D	Demolition - Electrical Equipment Hidden	Continuous	0.13	243										
E-POWR-HIDD-EQPM-E	Existing Pad Mounted Substations, Switchgear, Mcc'S, Transformers, Ups Hidden	Continuous	0.13	203										
E-POWR-HIDD-EQPM-N	Hidden Limit Switches, Flow Meters, Transmitters, (Plan and Schematic) Equipment, Etc.	Continuous	0.13	133	5									
E-POWR-HIDD-MOTR-D	DEMO Hidden MOTORS, UNIT HEATERS AND FANS HIDDEN (PLAN AND SCHEMATIC)	Continuous	0.13	240		MOTR								
E-POWR-HIDD-MOTR-E	EXISTING Hidden MOTORS, UNIT HEATERS AND FANS HIDDEN (PLAN AND SCHEMATIC)	Continuous	0.13	200		MOTR								
E-POWR-HIDD-MOTR-N	MOTORS, UNIT HEATERS AND FANS HIDDEN (PLAN AND SCHEMATIC)	Continuous	0.13	120		MOTR								
E-POWR-MOTR-D	DEMO MOTORS, UNIT HEATERS AND FANS (PLAN AND SCHEMATIC)	Continuous	0.35	220		MOTR								
E-POWR-MOTR-E	EXISTING MOTORS, UNIT HEATERS AND FANS (PLAN AND SCHEMATIC)	Continuous	0.13	160		MOTR								
E-POWR-MOTR-N	MOTORS, UNIT HEATERS AND FANS (PLAN AND SCHEMATIC)	Continuous	0.35	82		MOTR								
E-POWR-OVHD-CNDT-E	Existing Exposed conduits, overhead power lines	Continuous	0.13	10	10									
E-POWR-OVHD-CNDT-N	Exposed conduits, overhead power lines	Continuous	0.50	30										
E-POWR-PADM-EQPM-N	Pad-Mounted Equipment (Substation, Switchgear, Transformers, MCCs & UPS)	Continuous	0.30	6	5									
E-POWR-PADS-EQPM-E	Existing Electrical Equipment Pads	Continuous	0.13	193										
E-POWR-PADS-EQPM-N	Electrical Equipment Pads	Continuous	0.25	111										
E-POWR-POLM-EQPM-N	Pole-Mounted Equipment	Continuous	0.30	6	5									
E-POWR-IDEN	Identifier tags, symbol modifiers, and text	Continuous	0.30	6	5									
E-POWR-JBOX-N	Junction boxes, pull boxes, pedestals, splices	Continuous	0.30	6	5									
E-POWR-MHOL-N	Manholes and Handholes	Continuous	0.30	6	5									
E-POWR-PANL-N	Panel	Continuous	0.30	6	5									
E-POWR-POLE-N	Poles	Continuous	0.30	6	5									
E-POWR-POLE-GUYS-N	Guying equipment	Continuous	0.30	6	5									
E-POWR-POLE-IDEN	Identifier tags, symbol modifiers, and text	Continuous	0.30	6	5									
E-POWR-SWCH-D	H-O-A, light, unit heater, and exhaust fan switches (combination motor starter, disconnect)	Continuous	0.35	222										
E-POWR-SWCH-E	H-O-A, light, unit heater, and exhaust fan switches (combination motor starter, disconnect)	Continuous	0.13	170										
E-POWR-SWCH-N	H-O-A, light, unit heater, and exhaust fan switches (combination motor starter, disconnect)	Continuous	0.35	60										
E-POWR-UGND-CNDT-E	Existing Concealed conduits under slabs, directly buried conduits	Continuous	0.13	10	10									
E-POWR-UGND-CNDT-N	Concealed conduits under slabs, directly buried conduits	Dashed	0.50	53										
E-POWR-WALM-D	Demo Floor-Mounted Receptacles	Continuous	0.35	222		WALM								
E-POWR-WALM-E	Existing Wall-mounted Receptacles	Continuous	0.13	162		WALM								
E-POWR-WALM-N	Wall-mounted Receptacles	Continuous	0.35	83		WALM								
E-POWR-WALM-EQPM-E	Existing Electrical Equipment Wall-Mounted Control And Power Panels, Transformers	Continuous	0.13	191										
E-POWR-WALM-EQPM-N	Wall or Stanchion Mounted Equipment: control and power panels, transformers, etc...	Continuous	0.35	60		WALM								
E-POWR-WIRE-D	Existing Wiring to be Demolished	Continuous	0.50	213		WALM								
Security Systems														
Sound Systems														
TV Antenna Systems														