

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	AAC	Actinide Analytical Chemistry			Not in Builder TA 03-0029 Only
P			CVD	Confinement Vessel Disposition	
P			HCE	Hot Cell Enclosure	
P			OVEN	Oven	
P			RMS	Radiation Monitoring System	Includes neutron and gamma detection system.
P			SD	BG Sphere	
	ACHEM	Analytical Chemistry			Not in Builder
P			CSPEC	Plasma/Mass Spectrometry	
P			R5	Radiochemistry	
P			SMPPRP	Sample Preparation	
P			SOLA	Solids Analysis	
P			SOLCHM	Solution Chemistry	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	AO	Assembly Operation			Not in Builder
P			BRUSH	Brushing	
P			CLNOP	Cleaning Operations	
P			CRIMP	Tube Crimping	
P			DOWNDR	Downdraft Room Operations	
P			ECM	Electro Chemical Marking	
P			EVB	Evacuation and Bake Out	
P			FDENSE	Final Density	
P			FMASS	Final Mass, Volume Displacement System	
P			GPE	Grinding/Polishing/Etching	
P			INERT	Inert Storage	
P			LAZMK	Laser Marking	
P			LAZSMP	Laser Sampling	
P			LEAKS	Leak Testing System	
P			PTEST	Pressure Proof	
P			SBPREP	Sample Bottle Preparation System	
P			SUBLT	Sub Assembly Leak Testing	
P			ULTRAC	Ultrasonic Cleaning	

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	AQCL	Aqueous Chloride			Not in Builder
P			AMDO	Americium Oxide Dry Operations	
P			AQCLTP	Aqueous Chloride Transfer Piping	
P			CALCL	Calcination AQCL	
P			CLEAR	Chloride liquid effluent actinide recovery line	
P			CRUSH	Crushing	
P			DISSCL	Dissolution AQCL	
P			HYDCL	Hydroxide Precipitation -EXCEL	
P			IXCL	Ion Exchange AQCL	
P			OHCL	Hydroxide Precipitation -CLEAR	
P			OXCL	Oxalate Precipitation AQCL	
P			SX	Solvent Extraction	
	AQN	Aqueous Nitrate			Not in Builder
P			400FRN	400 Wing Forensics	
P			ATDIS	Dissolution ATLAS	
P			ATLIX	Ion Exchange ATLAS	
P			CALAT	Calcination ATLAS	
P			CASDIS	Cascade Dissolvers	
P			CF	Cementation	
P			EDDIS	Dissolution AQN	
P			EV	Evaporation	
P			HD	Nitrate Dissolution	
P			HNO3P	Nitric Acid Process Solutions	
P			NARS	Nitric Acid Recovery	
P			PMO	Pu Metal Oxidation AQN	
P			RESIN	IX Resins for Weapons Grade	
P			RFXCAL	Calcination AQN	
P			RFXIX	Ion Exchange RFX	
P			RFXOXP	Oxalate Precipitation AQN	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	ARIES	Advanced Recovery and Integrated Extraction System			Not in Builder
P			ACONV	Aries Conveyor	
P			APC	Aries Pit Cutter	
P			CONCAN	Packaging: Convenience Can Welder	
P			DMO2	Direct Metal Oxidation 2	
P			DMO3	Direct Metal Oxidation 3	
P			ELDE	Electrolytic Decontamination	
P			HEUOPS	Electrolytic Decontamination, Uranium size reduction, Oxidation, and packaging	
			ILMS	In-Line Material Storage	
P			INCAN	Packaging: Inner Can Welder	
P			NDAPDC	Non-Destructive Analysis	
P			OUTCAN	Packaging: Outer Can Welder	
P			PITD	PIT Disassembly	
P			PSF	Parts Sanitization Furnace	
P			RBLATH	Robotic Lathe	
P			RIPS	Robotic Integrated Packaging System	
	ASR	Aqueous Scrap Recovery			Not in Builder
P			BLML	Ball Milling ASR	
P			CALC	Calcination ASR	
P			DISS	Dissolution ASR	
P			HSVV	Heat Source Vessels and Vents	
P			HYDPRE	Hydroxide Precipitation ASR	
P			IX	Ion Exchange ASR	
P			OXPRE	Oxalate Precipitation ASR	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	BLDG	Building			
R			BSMNT	Basement	A20 Basement Construction A2020 Basement Walls A202001 Basement Wall Construction A202002 Moisture Protection A202003 Basement Wall Insulation A202090 Other Basement Walls See FOUND for basement floor.
R			BSTR	Building Structure	RLUOB Only Used to encompass entire building structural components. B20 Exterior Enclosure
R			CEILNG	Ceilings	C30 Interior Finishes C3030 Ceiling Finishes C303001 Acoustical Ceiling Tiles & Panels C303002 Gypsum Wallboard Ceiling Finishes C303003 Plaster Ceiling Finishes C303004 Wood Ceilings C303005 Suspension Systems C303006 Metal Strip Ceilings C303090 Other Ceiling & Ceiling Finishes C3040 Int Coatings / Special Finishes C304004 Metal Finishes
R			CONF	Confinement	Confinement used only for radiological barrier and marine doors. C10 Interior Construction C1020 Interior Doors C102090 Other Interior Specialty Doors (used for radiological and marine doors) C1030 Specialties C103090 Other Interior Specialties (use for radiological barriers other than doors)
R			COSTOR	Controlled Storage	C103001 Compartments, Cubicles & Toilet Partitions Storage area for like ML1 parts.

R			EXTENC	Exterior Enclosure	<p>B20 Exterior Enclosure (Use this when applicable to an entire building)</p> <p>B2010 Exterior Walls</p> <p>B201001 Exterior Closure (including siding)</p> <p>B201002 Exterior Wall Backup Construction</p> <p>B201003 Insulation & Vapor Retarder</p> <p>B201004 Parapets</p> <p>B201005 Exterior Louvers & Screens</p> <p>B201006 Balcony Walls & Handrails</p> <p>B201007 Exterior Soffits</p> <p>B201008 Flashing</p> <p>B201009 Exterior Painting and Special Coatings</p> <p>B201010 Exterior Joint Sealant</p> <p>B201011 Sun Control Devices</p> <p>B201012 Screen Walls</p> <p>B201090 Other Exterior Walls</p> <p>B2020 Exterior Windows</p> <p>B202001 Windows</p> <p>B202002 Storefronts</p> <p>B202003 Curtain Walls</p> <p>B2030 Exterior Doors</p> <p>B203001 Solid Doors</p> <p>B203002 Glazed Doors</p> <p>B203004 Overhead and Roll-Up Doors</p> <p>B203005 Hangar Doors</p> <p>B203006 Blast Resistant Doors</p> <p>B203007 Gates</p> <p>B203090 Other Exterior Specialty Doors – Use this for security doors</p> <p>B203091 Other Exterior Personnel Doors</p> <p>Door hardware, e.g. latches and releases, "Assessed as part of door"</p> <p>F10 Special Construction</p> <p>F1010 Special Structures</p> <p>F101001 Metal Building Systems</p> <p>F101002 Exterior Utility Buildings - Put security/guard towers under SEC/PIDAS</p> <p>F101003 Air-Supported Structures</p> <p>F101090 Other Special Construction</p> <p>(Use CONF System when radiological barrier)</p>
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G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
P			FIRING	Firing Lanes	Not in Builder Fixed targets, moveable target mechanisms, berm bullet traps
R			FIXLDR	Affixed Ladders	B20 Exterior Enclosure B2010 Exterior Walls B201001 Exterior Closure (includes exterior ladders) C10 Interior Construction C1030 Specialties C103090 Other Interior Specialties (includes interior ladders) This Sys is for ladders permanently affixed to the building structure.
R			FLOORC	Floors, Construction	B10 Superstructure B1010 Floor Construction B101001 Structural Frame B101003 Floor Decks and Slabs B101004 Inclined and Stepped Floors B101005 Balcony Construction B101006 Ramps B101007 Floor Raceway Systems B101090 Other Floor Construction
R			FLOPIN	Floors, Interior Finishes	C30 Interior Finishes C3020 Floor Finishes C302001 Tile Floor Finishes C302002 Terrazzo Floor Finishes C302003 Wood Flooring C302004 Resilient Floor Finishes C302005 Carpeting C302006 Masonry & Stone Flooring C302008 Stair Finishes C302009 Floor Toppings and Traffic Membranes C302010 Hardeners and Sealers C302011 Raised Access Flooring C302090 Other Flooring & Floor Finishes

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			FOUND	Foundations	A10 Foundations A1010 Standard Foundations A101001 Wall Foundations A101002 Column Foundations & Pile Caps A101090 Other Standard Foundations A1020 Special Foundations A102001 Pile Foundations A102090 Other Special Foundations A1030 Slab On Grade A103001 Standard Slab on Grade A103003 Trenches A103004 Pits and Bases A103090 Other Slab on Grade A20 Basement Construction A2010 Basement Excavation A201001 Excavation For Basements Use this for basement floors
R			FURNISH	Furnishings	E20 Furnishings E2010 Fixed Furnishings E201001 Fixed Artwork E201002 Window Treatments E201003 Seating (Fixed) E201004 Fixed Interior Landscaping E201090 Other Fixed Interior Furnishings E2020 Moveable Furnishings E202001 Moveable Art Work E202002 Modular Prefabricated Furniture E202003 Freestanding Furniture E202004 Rugs & Accessories E202005 Moveable Multiple Seating E202006 Moveable Interior Landscaping E202090 Other Moveable Furnishings

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			INTCON	Interior Construction	B10 Superstructure B1030 Wall Construction B103002 Structural Interior Walls C10 Interior Construction Use when Entire Building Interior C1010 Partitions C101001 Fixed Partitions C101002 Demountable Partitions C101003 Retractable Partitions C101004 Interior Guardrails & Screens C101005 Interior Windows C101006 Glazed Partitions & Storefronts C1020 Interior Doors C102001 Standard Interior Doors C102002 Glazed Interior Doors C102004 Sliding & Folding Doors C102005 Interior Overhead Doors C102006 Interior Gates – Use this for security doors and turnstiles C102090 Other Interior Specialty Doors (used for radiological and marine doors under CONF System) C102091 Other Interior Personnel Doors – Use for cipher lockset, with key pad, and Door Frame, Hardware, Motor, Signage, Surface, Window Glass. Door hardware, e.g. latches and releases, “Assessed as part of door” C30 Interior Finishes C3010 Wall Finishes C301001 Concrete Wall Finishes C301003 Gypsum Wallboard Finishes C301004 Tile & Terrazzo Wall Finishes C301005 Wall Coverings C301006 Acoustical Panels Adhered To Walls C301090 Other Wall Finishes (Use CONF System when radiological barrier) (Fire doors under FP/FBP)

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R			INTFIN	Interior Finishes	C30 Interior Finishes C3040 Int Coatings / Special Finishes C304001 General Requirements C304002 Concrete Finishes C304003 Concrete Masonry Finishes C304004 Metal Finishes C304005 Interior Wood Finishes C304006 Gypsum Wallboard Finishes C304007 Special Coatings On Walls Wall finishes under Sys INTCON.
R			KITCHN	Kitchen Equipment	E10 Equipment E1090 Other Equipment E109002 Food Service Equipment Examples: Walk-in freezer, commercial grills, large ice makers, dishwashers, etc.
P			LAB	Laboratory Equipment	E10 Equipment E1020 Institutional Equipment E102003 Laboratory Equipment (Calorimeter, fume hood, with countertop & base, complex, incl. fixtures, sterilizer, Mass Spectrometer, and ovens. Fume hood exhaust scrubbers will be assessed as part of the fume hood. Fume hood exhaust fans are under VNT/EXH. E1090 Other Equipment E109090 Other Specialized Fixed and Moveable Equipment Examples: Incubators, Refrigerators for Specimens, radiation generating devices other than medical or security x-ray equipment.
R			LDRY	Laundry	E10 Equipment E1010 Commercial Equipment E101004 Laundry Equipment
R			MISC	Miscellaneous	E1020 Institutional Equipment E102001 Miscellaneous Common Fixed & Moveable Equipment
R			NSB	Nuclear Support Building	TA55 only F10 Special Construction F1010 Special Structures F101090 Other Special Construction

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R			ROOF	Roofing	B30 Roofing B3010 Roof Coverings B301001 Steep Slope Roof Systems B301002 Low Slope Roof Systems B301003 Roof Insulation & Fill B301004 Flashings & Trim B301005 Gutters & Downspouts B301006 Roof Openings and Supports B301090 Other Roofing D20 Plumbing D2040 Rain Water Drainage D204002 Roof Drains D204003 Rainwater Drainage Equipment D204090 Other Rain Water Drainage System
R			ROOFC	Roof Construction	B10 Superstructure B1020 Roof Construction B102001 Structural Frame B102003 Roof Decks and Slabs B102004 Canopies B102090 Other Roof Construction
R			STAIRS	Stairs	C20 Stairs C2010 Stair Construction C201001 Interior and Exterior Stairs C201002 Fire Escape Stairs C201090 Stair Handrails, Guardrails and Accessories C30 Interior Finishes C3020 Floor Finishes C302008 Stair Finishes
R			WCFD	Laboratory Walls, Floors, Ceilings and Doors	PF4 only Not in Builder

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	CGS	Compressed Gas Supply			D20 Plumbing D2090 Other Plumbing Systems Regardless of system, no safety or relief valves will be assessed by Builder.
R			AR	Argon Gas	D209090 Other Special Plumbing Systems
R			AR100	Argon Gas (100 PSI)	D209090 Other Special Plumbing Systems
R			CA	Compressed Air	D209005 Compressed Air System – Non Breathing Air (Use this for large instrument air systems including dryers. Do not include moisture/oil separators or coolers. Do not include compressors for boilers burner systems. For systems supplying solely HVAC system as found in office or training buildings use the instrument air compressors found under HVAC System.)
R			CG	Calibration Gas	D209090 Other Special Plumbing Systems
R			CH4	Methane Gas	D209090 Other Special Plumbing Systems
P			CL2	Chlorine Gas	D209090 Other Special Plumbing Systems
P			CLDEL	Chlorine Gas Delivery	D209090 Other Special Plumbing Systems
P			CLDET	Chlorine Gas Detection	D209090 Other Special Plumbing Systems
R			CO2	Carbon Dioxide Gas	D209090 Other Special Plumbing Systems
R			H2	Hydrogen Gas	D209090 Other Special Plumbing Systems
R			H2S	Hydrogen Sulfide	D209090 Other Special Plumbing Systems
R			HE	Helium Gas	D209090 Other Special Plumbing Systems
R			IAS	Instrument Air System	D209090 Other Special Plumbing Systems
R			LAR	Liquid Argon (cryogenic)	D209090 Other Special Plumbing Systems
R			LN2	Liquid Nitrogen (cryogenic)	D209090 Other Special Plumbing Systems
R			MULTI	Gas Bottled System	D209090 Other Special Plumbing Systems
R			N2	Nitrogen Gas	D209090 Other Special Plumbing Systems
R			N2100	Nitrogen Gas (100 PSI +/-)	D209090 Other Special Plumbing Systems
R			N2H2	Nitrogen/ 6% Hydrogen	D209090 Other Special Plumbing Systems
R			O2	Oxygen Gas	D209090 Other Special Plumbing Systems
R			P10	P10 Gas	D209090 Other Special Plumbing Systems
R			PCA	Process Air Supply	D209090 Other Special Plumbing Systems
R			REGEN	Argon/6% Hydrogen Regen Gas	D209090 Other Special Plumbing Systems
R			RL	Refrigerant Liquid	D209090 Other Special Plumbing Systems
P			XE	Xenon Gas	D209090 Other Special Plumbing Systems

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	COMM	Communications			
R			CCTV	Closed Circuit Television	F10 Special Construction F1050 Special Ctrls / Instrumentation F105001 Recording Instrumentation Security cameras are under SEC, Security.
R			LPS	Local Paging System	D50 Electrical D5030 Communications & Security D503002 Public Address Systems
R			PA	Public Address	D503002 Public Address Systems – Use this for intercom also.
R			RC	Radio Communications	G40 Site Electrical Utilities G4030 Site Communication and Security G403001 Telecommunications Systems
R			REDNET	Secure Network	D503090 Other Communications & Alarm Systems
R			SPAS	Emergency Paging System	D503002 Public Address Systems
R			TEL	Telecommunications	G403001 Telecommunications Systems
	CONT	Containers			Not in Builder
P			CNTRC	Credited Containers	(Fire Rated Containers)
P			EHS	Encapsulated Heat Sources	
P			MIS	MIS Containers	
			POC	Pipe Overpack Containers	
P			SCNTR	Containers for Movement of SNM OS GBs	Includes Pipe Overpack Containers, 55 Gallon Drums (With or Without Overpack), 85 Gallon Drums, Standard Waste Boxes, and Ten Drum Overpack containers.
P			SMPCNT	Non VSS Containers	(Safety Mgmnt Program Containers)
P			TYPEA	Type A Containers	
P			TYPEB	Type B Containers	Includes TRUPACT-II, HallfPACT, 10-160B, and RH TRU 72B – VSS (P) containers.
P			VWBC	Vault Water Bath Containers	

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	COOLW	Cooling Water Systems			
R			CCCW	Central Circulating Chilled Water	TA55 Only D30 HVAC D3030 Cooling Generating Systems D303001 Chilled Water Systems – Use for chillers and condensers D304006 Chilled Water Distribution Systems – Use for pump, and tanks (expansion, chem feed, etc.)
R			LVCCW	Limited Volume Circulating Chilled Water	PF4 only D303001 Chilled Water Systems D304006 Chilled Water Distribution Systems – Use for pump, and tanks (expansion, chem feed, etc.)
R			NPCCW	Negative Pressure Circulating Chilled Water	PF4 only D303001 Chilled Water Systems D304006 Chilled Water Distribution Systems – Use for pump, and tanks (expansion, chem feed, etc.)
R			PPCCW	Positive Pressure Circulating Chilled Water	PF4 only D303001 Chilled Water Systems D304006 Chilled Water Distribution Systems – Use for pump, and tanks (expansion, chem feed, etc.)
R			TW	Tower Water	D30 HVAC D3020 Heat Generating Systems D302005 Equipment Thermal Insulation D302090 Other Heat Generating Systems - Use this for heat trace and tank heaters D3030 Cooling Generating Systems D303001 Chilled Water Systems D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD's)
P			VCCW	Vault Circulating Chilled Water	
	CRIT	Credited Criticality Safety			Not in Builder
P			CARTS	SNM Carts	
P			CRITSP	Engineered Criticality Spacing	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	CRUC	Crucibles			Not in Builder
P			CRUCC	Credited Crucibles	(This is for containment of molten Pu metal)
P			CRUCNC	Non-Credited Crucible	
	CS	Chemical Supply			D20 Plumbing D2090 Other Plumbing Systems D209090 Other Special Plumbing Systems CMMS will only accept all caps
R			ALNO3	Aluminum Nitrate	
R			BIOCID	Biocide	
R			CSC	Chemical Supply Caustic	500230 Only Caustic chemical supply, CST-1, CST-2, CST-3, etc.
R			CSP	Chemical Supply Process	500001 and 500230 Only Wet chemical feed, HCl, NaOH, lime, etc.
R			CSTBS	Nitric Acid Storage Tank and Berm	
R			FECL3	Ferric Chloride	FeCl3
R			FESUL	Ferric Sulfate	Fe2O12S3
R			H2O2	Hydrogen Peroxide	
R			H2SO4	Sulfuric Acid	
R			HCL	Hydrochloric Acid	
R			HFA	Hydrofluoric Acid	
R			HNO3	Nitric Acid	
R			KOH	Potassium Hydroxide	
R			MGCI2	Magnesium Chloride	MgCl2
R			MGSO4	Magnesium Sulfate	MgSO4
R			NACIT	Sodium Citrate	NaCIT
R			NAHSO3	Sodium Bisulfite	NaHSO3
R			NAOCI	Sodium Hypochlorite	NaOCI
R			NAOH	Sodium Hydroxide	NaOH
R			SO2	Sulfur Dioxide	

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	CTRL	Control Systems			
R			BAS	Building Automation System	F10 Special Construction F1050 Special Ctrls / Instrumentation F105002 Building Automation Systems (Use this when applicable to an entire building)
R			BPCS	Building Process Control System	Building Process Control System F105002 Building Automation Systems
R			FCS	Facility Control System	F105002 Building Automation Systems
R			FMS	Facility Management System	F105002 Building Automation Systems D50 Electrical D5090 Other Electrical Services D509006 Energy Management Control System
R			ICS	Instrument and Control System	F105090 Other Special Controls and Instrumentation
R			LCS	Local Control System	F105002 Building Automation Systems
R			SCADA	Supervisory Control & Data Acquisition	F105090 Other Special Controls and Instrumentation
	DRYOPS	Material Preparation			Not in Builder
P			BURN	CALCI Repack & Discard	Calcination Repack & Discard
P			CALCDO	Calcination DRYOPS	
	DTO	Dynamic Testing Operations			PF4 Only Not in Builder
P			40MM	40mm Launcher	
P			40MMTK	40mm Launcher Catch Tank	
P			IFIT	IFIT	
P			IFITAT	IFIT Ceiling Armr/Catch Tube Sys	
P			IFITRD	IFIT Relief Device	
P			KBOP	Kolsky Bar Operations	
	ECS	Environmental Chamber System			Not in Builder
P			ECOPS	Environmental Chamber Over-temperature Protection System	WETF

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	ENCL	Enclosures			Not in Builder
P			COVER	Covers for Material at Risk	
P			ENCLBE	Beryllium Lathe Enclosure	
P			GB	Gloveboxes	
P			OM	Oxygen Monitoring	Monitoring for specific oxygen levels within a glovebox or such. Not for personnel health and safety.
P			SPRTC	Credited Support Stands	
P			SPRTNC	Support Stands, Non-Credited	
P			TRLLY	Trolley Conveyer System	
P			WCG	Waste Characterization Glovebox	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	ES	Electrical Supply			D50 Electrical
R			130VDC	130 Volts Direct Current System	D5090 Other Electrical Services D509002 Emergency Lighting & Power – Backup and Standby Generators PF4 Only
R			APS	Auxiliary Power System	D509002 Emergency Lighting & Power – Backup and Standby Generators (Include battery banks not specific to UPS or Emergency Lighting) D30 HVAC D3010 Energy Supply D301001 Oil Supply System – Use for diesel fuel tanks
R			CP	Cathodic Protection	G40 Site Electrical Utilities G4090 Other Site Electrical Utilities G409001 Sacrificial Anode Cathodic Protection System G409002 Induced Current Cathodic Protection System
R			EBP	Electric Balance of Plant	D501004 Panelboards [Includes ATS, MTS, Safety Switch (CDD), Switchgear, and Lighting Panels] D501005 Enclosed Circuit Breakers D501006 Motor Control Centers
R			EDS	Electrical Distribution System	D5010 Electrical Service & Distribution (Use this when applicable to an entire building) D501001 Main Transformers – oil-filled, 15 kV with taps, 480 V secondary 3 phase, pad mounted D501003 Interior Distribution Transformers D501004 Panelboards [Includes ATS, MTS, Safety Switch (CDD), Switchgear, PDU's, and Power Panels] D501005 Enclosed Circuit Breakers D501006 Motor Control Centers D501090 Other Service and Distribution – Includes bus ducts D5020 Lighting & Branch Wiring D502001 Branch Wiring
R			EP	Electrical Power	500230 Only D501004 Panelboards [Includes ATS, MTS, Safety Switch (CDD), Switchgear, and Lighting Panels] D501005 Enclosed Circuit Breakers D501006 Motor Control Centers
R			FDG	Fire Diesel Generator	PF4 only D509002 Emergency Lighting & Power – Backup and Standby Generators

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			GND	Grounding System	D5090 Other Electrical Services D509003 Grounding Systems (Use this when applicable to an entire building) (This includes static grounding systems)
R			LPT	Lightning Protection	D5090 Other Electrical Services D509004 Lightning Protection Lightning protection aerials, grounding conductors, bonding conductors, and connections are all assessed as a system by the square footage of the roof. Lightning protection surge arrestors: <ul style="list-style-type: none"> • If in a panel, they are assessed as part of the panel. • If stand alone, they are assessed individually.
R			LTGEXT	Lighting, Normal, Exterior	D502002 Lighting Equipment Security Lighting under SEC Op Sys and PIDAS Sys D5030 Communications & Security D503090 Other Communications & Alarm Systems
R			LTGINT	Lighting, Normal, Interior	D502002 Lighting Equipment (Use this when applicable to an entire building)
R			OBP	Office Building Power	D501004 Panelboards [Includes ATS, MTS, Safety Switch (CDD), Switchgear, and Lighting Panels] D501005 Enclosed Circuit Breakers D501006 Motor Control Centers
R			PDS	Power Distribution System	D5010 Electrical Service & Distribution (Use this when applicable to an entire building) D501001 Main Transformers – oil-filled, 15 kV with taps, 480 V secondary 3 phase, pad mounted D501003 Interior Distribution Transformers D501004 Panelboards [Includes ATS, MTS, Safety Switch (CDD), Switchgear, PDU's, and Lighting Panels] D501005 Enclosed Circuit Breakers D501006 Motor Control Centers D501090 Other Service and Distribution – Includes bus ducts D5020 Lighting & Branch Wiring D502001 Branch Wiring
R			PV	Photovoltaic	D30 HVAC D3010 Energy Supply D301005 Solar Energy Systems

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R			SES	Security Electrical Supply	TA55 only D501004 Panelboards [Includes ATS, MTS, Safety Switch (CDD), Switchgear, and Lighting Panels] D501005 Enclosed Circuit Breakers D501006 Motor Control Centers
R			SPOS	Seismic Power Shut-Off System	D501004 Panelboards
R			UPS	Uninterruptible Power Supply	D5010 Electrical Service & Distribution D501005 Enclosed Circuit Breakers D5090 Other Electrical Services D509002 Emergency Lighting & Power Includes battery and inverter
R			UPS391	Credited Uninterruptible Power Supply	PF4 only D509002 Emergency Lighting & Power
	FND	Foundry Operations			Not in Builder
P			CAST	Casting Operations	
P			FRNOPS	Furnace Operations	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	FP	Fire Protection			D40 Fire Protection
R			FBP	Fire Barrier	B10 Superstructure B1030 Wall Construction B103002 Structural Interior Walls – Use for interior fire rated walls B20 Exterior Enclosure B2010 Exterior Walls B201001 Exterior Closure – Use for exterior fire rated walls B2030 Exterior Doors B203090 Other Exterior Specialty Doors – Use for exterior fire doors Door hardware, e.g. latches and releases, “Assessed as part of door” C10 Interior Construction C1020 Interior Doors C102003 Fire Doors – Use for interior fire doors Door hardware, e.g. latches and releases, “Assessed as part of door” C1030 Specialties C103012 Firestopping Penetrations C103013 Sprayed Fire-Resistive Materials Fire dampers not assessed by BUILDER due to inaccessibility.
R			FCA	Clean Agent Fire Suppression	D4090 Other Fire Protection Systems D409003 Clean Agent Systems
R			FEXT	Fire Extinguishers	D4050 Fire Protection Specialties D405001 Portable Extinguishers (common and special types of all sizes)
R			FP	Fire Protection	500230 Only
R			FPD	Fire Detection and Alarm	D4010 Fire Alarm and Detection Systems D401001 Fire Alarm Distribution (fire alarm control panel, batteries, addressable fire alarm, and addressable mass notification) This includes detectors, tamper switches, pull stations, notification devices (bells, lights, strobes, horn, or siren). These will not be assessed by Builder. All equipment on, or downstream of, the trip valve will fall under FPS. This includes the water motor gong.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			FPS	Fire Protection – Sprinkler System	<p>All equipment on, or downstream of, the trip valve will fall under FPS.</p> <p>D4030 Standpipe Systems D403001 Standpipe Equipment & Piping (includes risers and hoses)</p> <p>D4040 Sprinklers D404001 Sprinklers and Releasing Devices (Dry Pipe, Preaction, Deluge, and Wet Pipe) Includes nitrogen system or air compressors and dryers. Includes Fire Department Connections and Water Motor Gongs. Sprinkler heads and associated piping, instrumentation, etc. are assessed as part of the "system", and the parent equipment to link to is the riser, alarm check valve dry pipe valve, etc.</p> <p>D4090 Other Fire Protection Systems D409001 Carbon Dioxide Systems (includes agent containers, distribution piping and controls) D409002 Foam Generating Equipment D409003 Clean Agent Systems D409004 Hood & Duct Fire Protection</p>
R			FPW	Fire Protection – Water Supply	<p>D4020 Fire Water Supply / Equip D402001 Fire Protection Water Piping and Equipment (includes storage tank, BFP, OS&Y, PIV, hydrants, and underground distribution main) D402002 Fire Pump (includes controllers, relief valves, jockey pumps, test header, and flow meters)(includes day tank and battery chargers for diesel driven fire pumps)</p> <p>D30 HVAC D3020 Heat Generating Systems D302005 Equipment Thermal Insulation D302090 Other Heat Generating Systems - Use this for heat trace and tank heaters, including circulation pump. Note: The D302005 and D302090 will be replaced in the future under D4020 Fire Water Supply / Equip as the insulation, heat trace, pumps, and inline heaters or boilers are within the boundaries of the fire water supply system.</p> <p>D50 Electrical D5010 Electrical Service & Distribution D501004 Panelboards [Includes ATS, MTS, Safety Switch (CDD), Switchgear, and Lighting Panels]</p>
R			FSHWI	Fire Suppression Hybrid Water/Inert	PF4 only
R			SPHS	Standpipe System	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	FS	Fuel Supply			D30 HVAC D3010 Energy Supply
R			FO	Fuel Oil	D301001 Oil Supply System – Use for storage tanks, piping, pumps, etc. Day tanks belong to the supplied equipment. Dedicated equipment may be under own System such as FP for diesel fire pumps of ES for emergency diesel generators. Check equipment ID tags. LANL has no bulk storage tanks to supply other tanks or facilities.
R			NG	Natural Gas	D301002 Gas Supply System
R			LPG	Propane Gas	D301002 Gas Supply System
	FSTF	Full Scale Test Facility			Not in Builder
P			FSTFH2	Flammable Gas Control System	
P			FSTFRC	Credited FSTF	
P			FSTFU	Full-Scale Test Facility Uncredited	
P			GASOPS	Gas Operations	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	HMP	Hazard Monitoring and Protection			F10 Special Construction
R			CAMS	Continuous Air Monitor System	F10 Special Construction F1030 Special Construction Systems F103003 Radiation Protection
R			CAS	Criticality Alarm System	F10 Special Construction F1050 Special Ctrls / Instrumentation F105090 Other Special Controls and Instrumentation
R			ESM	Exhaust Stack Radiation Monitoring	F105090 Other Special Controls and Instrumentation
R			FASS	Fixed Air Head Sampling System	F105090 Other Special Controls and Instrumentation
			HAZD	Hazardous Gas Monitoring	F105090 Other Special Controls and Instrumentation All types of atmospheric monitoring except oxygen, e.g. propane, refrigerant, hydrogen.
P			HEP	High Explosives Processing	F105090 Other Special Controls and Instrumentation
P			O2R	Room Oxygen Monitoring	F105090 Other Special Controls and Instrumentation Monitoring for O2 levels sufficient for personnel safety in a room.
R			PCM	Personnel Contamination Monitors	F103003 Radiation Protection Includes the P10 bottles, manual valves, and PRV's for the system.
R			PSS	Personnel Safety System	F105090 Other Special Controls and Instrumentation Warning lights, interlocks, and trips to protect workers from radiation and explosive hazards Initiates accelerator beam, trips Beamstop. Functionally, a combination of a LANSCE-like radiation safety system (RSS) and a high explosive safety system (HESS). Use for TA18 interlocks.
P			BMSTP	Beam Stop	F103003 Radiation Protection
R			RADMON	Radiological Monitoring	F103003 Radiation Protection
R			RMS	Radiation Monitoring System	F103003 Radiation Protection
R			SHLD	Shielding	F103090 Other Special Construction Systems
R			SM	Exhaust Stack Monitoring (non-radiation)	F105090 Other Special Controls and Instrumentation

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	HSCHAR	HS-Pu Characterization			Not in Builder
P			ASPEC	Alpha Spectrometer	
P			CALOR	Calorimetry	
P			DCARC	Direct Current ARC	
P			ELTEST	Electrical Tester	
P			GASS	Gas Analysis & Sampling	
P			GSPEC	Gamma Spectrometer	
P			HAAS	HASS Lathe	
P			HELKCK	Helium Leak Check	
P			HSACHE	Heat Source Analytical Chemistry	
P			HSCAN	Heat Source Can Processing	
P			HSSEM	Heat Source Scanning Electronic Microscope	
P			HSUT	Ultrasonic Testing	
P			MET	Metallography	
P			NER	Neutron Emission Rate	
P			PARSA	Particle Size Analysis	
P			UVVIS	UV Vis	
P			WND	Weighing and Dimensioning	
	HSFF	HS-Pu Fuel Fabrication			Not in Builder
P			FGPREP	Fired Granulation Prep	
P			GRAN	Granular Formation	
P			HSFURN	Heat Source Furnace	
P			PELPR	Hot Press	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	INSP	Inspection (MQ-1)			Not in Builder
P			CMM1	Hot Infinity Coordinate Measuring Machine One	
P			CMM2	Hot Infinity Coordinate Measuring Machine Two	
P			CMMC	Cold Coordinate Measuring Machine	
P			CMMH	Hot Coordinate Measuring Machine	
P			EDGBRK	Edgebreak	
P			PROFO	Profilometry	
P			SHADOW	Shadow Graph Optical Comparator	
P			SHEFF	Sheffield Gauge	
	IS	Industrial Safety			
R			BA	Breathing Air	D20 Plumbing D2090 Other Plumbing Systems D209090 Other Special Plumbing Systems
R			FALPRO	Fall Protection	Not in Builder Identified tie-off points.
R			OSHA	OSHA Safety	D20 Plumbing D2010 Plumbing Fixtures D201090 Other Plumbing Fixtures - EYE – Eyewash SHS – Safety Shower, used also for combination of eyewash and safety shower. D50 Electrical D5020 Lighting & Branch Wiring D502002 Lighting Equipment - Exit Signs D509002 Emergency Lighting & Power - Emergency Lights F10 Special Construction F1010 Special Structures F101090 Other Special Construction – Use for training simulators F1050 Special Ctrls / Instrumentation F105090 Other Special Controls and Instrumentation Use IS/OSHA for windsocks and AED's, Not in Builder

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			STOR	Storage Cabinets	C10 Interior Construction C1030 Specialties C103009 Cabinets Storage cabinets for chemicals, flammables, spill kits, etc. Typically contain items that have PM's performed on them.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	LIFT	Lift			For anything associated with "lifting".
R			DOCKEQ	Loading Dock Equipment	E10 Equipment E1030 Vehicular Equipment E103002 Loading Dock Equipment (Architectural equipment, dock bumpers, rubber blocks, dock levelers, dock lifters, dock shelters, truck, scissor arms, etc.)
R			ELV	Elevators	D10 Conveying D1010 Elevators and Lifts D101001 General Construction Items D101002 Passenger Elevators (Includes permanently installed man-lifts) D101003 Freight Elevators D101004 Wheelchair Lift D101005 Dumbwaiters D101090 Other Vertical Transportation Equipment (Includes permanently installed lift table and other material handling lifts) D1090 Other Conveying Systems D109002 Conveyors
R			HC	Hoists and Cranes	D1010 Elevators And Lifts D101090 Other Vertical Transportation Equipment (use this for stationary, fixed in place, drum handling devices and such) D1020 Weight Handling Equipment D102001 Basic Requirements of Cranes and Monorails D102002 Overhead Cranes – Use for all others, even if unknown. Use for breaker handling devices permanently attached to switchgear. D102003 Monorails – Use if known to be a monorail E10 Equipment E1030 Vehicular Equipment E103002 Loading Dock Equipment – includes dock levelers E103004 Automotive Shop Equipment – Use for automotive lifts fixed in place. Hoists, cranes, or drum handlers fixed in place.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			MBLEQ	Mobile Lifting Equipment	Not in Builder For any type of equipment used for lifting and is not fixed in place, e.g. forklifts, man lifts, material lifts, lift tables, portable gantry cranes (on wheels designed to be pushed around the building), engine hoists, chain hoists, handling equipment such as drum handlers, breaker handling devices if they are designed to be moved around building. None of these will be linked to Builder as Builder is only for fixed assets. Breaker handling devices attached to the electrical cabinet are part of that cabinet.
R			RACK	Rack	Not in Builder Equipment storage racks and shelving.
R			RGNG	Rigging	Not in Builder Any rigging equipment such as slings, eye hooks, and shackles.
R			TRUDOC	TRUPACT II Working Platform	E103002 Loading Dock Equipment Elevated platform and controls/equipment necessary for TRUPACT-II Waste Handling.
	LLW	Low Level Waste			Not in Builder
R			EFF	Effluent	
R			UF	Ultra Filter	
	LLWBLP	Low Level Waste Balance of Plant			F10 only
R			AR	Argon Gas	See Builder Codes under CGS as Op Sys.
R			AS	Air Sampling	See Builder Codes under HMP as Op Sys. Vacuum Pump Stack Sampling System
R			BLDG	Building	See Builder Codes under BLDG as Op Sys.
R			CA	Compressed Air	See Builder Codes under CGS as Op Sys.
R			CS	Chemical Supply	See Builder Codes under CS as Op Sys.
R			CW	Chilled Water	See Builder Codes under VNT as Op Sys.
R			ED	Electrical Distribution	See Builder Codes under ES as Op Sys.
R			EP	Electrical Power	See Builder Codes under ES as Op Sys.
R			FCS	Facility Control System	See Builder Codes under CTRL as Op Sys.
R			FP	Fire Protection	See Builder Codes under FP as Op Sys.
R			HR	Heat Recovery	See Builder Codes under VNT as Op Sys.
R			HVAC	Heat, Vent, & Air Cond	See Builder Codes under VNT as Op Sys.
R			HW	Heating Water	See Builder Codes under VNT as Op Sys.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			LLWICS	Low Level Waste Internal Collection System	Not in Builder
R			LP	Lightning Protection	See Builder Codes under ES as Op Sys.
R			LTG	Lighting	See Builder Codes under ES as Op Sys.
R			NG	Natural Gas	See Builder Codes under FS as Op Sys
R			NPW	Non-Potable Water	See Builder Codes under WS as Op Sys.
R			P10	P10 Gas	See Builder Codes under CGS as Op Sys.
R			PCW	Process Cooling Water	See Builder Codes under VNT as Op Sys
R			PW	Potable Water	See Builder Codes under WS as Op Sys.
R			RM	Radiation Management	See Builder Codes under HMP as Op Sys.
R			RO	Reverse Osmosis	Not in Builder
R			SECW	Secondary Waste	Not in Builder
R			SS	Sanitary Sewer	See Builder Codes under WSTWTR as Op Sys.
R			VAC	Vacuum	See Builder Codes under VAC as Op Sys.
	LLWPRC	Low Level Waste Process			F10 only
R			CA	Compressed Air	See Builder Codes under CGS as Op Sys.
R			CS	Chemical Supply	See Builder Codes under CS as Op Sys.
R			EFL	Treated Effluent	Not in Builder
R			FESUL	Ferric Sulfate	Fe2O12S3
R			H2S04	Sulfuric Acid	See Builder Codes under CS as Op Sys.
R			HNO3	Nitric Acid	
R			HVAC	Heat, Vent, & Air Cond	See Builder Codes under VNT as Op Sys.
R			INF	Influent Storage	Not in Builder
R			IX	Ion Exchange	Not in Builder
R			LLWICS	Low Level Waste Internal Collection System	Not in Builder
R			MCRFLT	Microfilter	Not in Builder
R			MF	Microfiltration	Not in Builder
R			MGSO4	Magnesium Sulfate	MgSO4
R			NAOH	Sodium Hydroxide	See Builder Codes under VNT as Op Sys.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			RO	Reverse Osmosis	Not in Builder
R			RXN	Reaction/Precipitation	Not in Builder
R			SECW	Secondary Waste	Not in Builder
	MACH	Machining			Not in Builder
P			BOSTO	Bostomatic	
P			FMLATH	Back Machine	
P			HAASL1	CNC/Manuel Lathe for Part Prep and Disassembly	
P			LATS	Lathes	
P			MDMU	DMU-35 Manufacturing	
P			MDRILL	Manual Drill and Press	
P			MHARD1	Manual Hardinge1	
P			MHARD2	Manual Hardinge2	
P			MHARD3	Manual Hardinge3	
P			MLATHE	Myford Lathe	
			MMS	Milling Machines	
P			NNMACH	Non-Nuclear Machining	
P			TBASE1	Moore Tbase1	
P			TBASE2	Moore Tbase2	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	MAGGEN	Magnetic Generator			Not in Builder
P			CI	Chemical Injection	
P			DS	Drive System	
P			DSC	Drive System Cooling	
P			EX	Exciter	
P			EXC	Exciter Cooling	
P			GAD	Generator Air Drying	
P			GC	Generator Cooling	
P			GD	Generator Disassembly	
P			GLO	Generator Lube Oil	
P			GJ	Generator Jacking	
P			GLOC	Generator Lube Oil Cooling	
P			GT	Generator Turning Gear	
P			GW	Generator Waste Water	
P			HEAT	Heat	
P			HVAC	Heat, Vent, & Air Cond	
	MCPP	Metals & Ceramic Part Processing			Not in Builder
P			CENTOR	CENTORR Furnace Operation	
P			CM1750	CM Furnace Operation	
P			PRTPRS	Part Pressing	
P			PRTSAN	Non-SNM Part Sanitization	
	MISS	Material, Identification, Surveillance and Stabilization			Not in Builder
P			HGAS	Headspace Gas Analysis System	
			MISLC	MIS Large Can	
P			MISSC	MIS Small Can Sample	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	MTCHAR	Material Characterization			Not in Builder
P			MTA	Material Analysis	
P			MTPREP	Sample Material Preparation	
P			XRD	X-Ray Diffraction	
	NCERC	National Criticality Experiments Center			Not in Builder DAF Only
P			COMET	Comet	Support stand, two stacked hydraulic rams and a stepper motor drive. Comet is a general purpose critical assembly machine used to move nuclear materials into a critical configuration.
P			FLATOP	Flat-Top	Support table, two hydraulic rams and three stepper motor driven control rod drives. The Flat-Top critical assembly is a benchmark critical assembly consisting of a natural uranium reflector and two fissile cores, one enriched uranium, one plutonium.
P			GODIVA	Godiva	Core, hydraulic ram-driven safety block, compressed air cylinder-driven burst rod, 2 stepper-motor-driven control rods. A prompt burst critical assembly. The core consists of a stack of high enriched uranium rings and plates.
P			NI	Nuclear Instrumentation	Log-N, linear channel, startup counter, and area monitoring subsystems. Monitors the neutron leakage that is generated in the critical configuration.
P			OIS		Part of SCRAM
P			PLANET	Planet	
P			SCRAM	SCRAM	Buttons, interlocks, horns, beacons. Provides an automatic shutdown of the critical assemblies due to a trip of the Nuclear Instruments, an operator pushing a manual SCRAM button, or a door being opened during remote operation. Also provides warning horns and beacons that indicate a critical assembly operation is underway. SCRAM Safety System (SSS), Operational Interlock System (OIS)
P			SSS	SCRAM Safety System	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	NDA	Non-Destructive Analysis			Not in Builder
P			CAL	Calorimeter	
P			IRNDA	In Room NDA Devices	
P			ISO	Gamma Isotopic System	
P			NBC	Neutron Barrel Counter	
P			NSC	HOLDUP/Safeguards Neutron Slab Counter	
P			PANI	Passive/Active Neutron Counter	
P			QED	Low Level Drum Counter	
P			SAI	Solution Assay Instrument	
P			SGS	Segmented Gamma Scanner	
P			SH2	Uranium Shuffler	
P			SNAP	Special Non-Destructive Assay Platform	
P			TGSC	Tomographic Gamma Scanner, Can	
P			TGSD	Tomographic Gamma Scanner, Drum	
P			TNC	Thermal Neutron Counter	
P			WCAS	Crate Counter	
	NDE	Non-Destructive Evaluation			Not in Builder PF4 Only
P			CABRT	Cabinet Radiography Operations	
P			DYEPEN	Dye Penetrant	
P			EDDY	Eddy Current	
P			NDMOS	Nondestructive measurement and observation measurement system	
P			UT	Ultrasonic Testing	
	NONRAD	Non Radiological			Not in Builder Op Sys & Sys created to allow procurement. For Cold Lab Laboratory equipment
P			XPRDEV	Experimental Process Development	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	OSRP	Off-Site Source Recovery Program			Not in Builder
P			OSRPO	Pipe Overpack Container	
P			OSRPS	Off-Site Source Recovery Material Staging	
	PLW	Process Liquid Waste			TA55 only
R			AWS	Acid Waste System	D20 Plumbing D2090 Other Plumbing Systems D209002 Acid Waste Systems
R			CWS	Caustic Waste System	G30 Site Civil/Mechanical Utilities G3090 Other Site Mechanical Utilities G309090 Other Industrial Waste
R			IWS	Industrial Waste System	G309090 Other Industrial Waste
	PROG	Programs			
P			CONOPS	Conduct of Operations Performance Checks	No real equipment, but program. Not in Builder Includes F06 Quarterly Radioactive Material Inventory Surveillance
P			PSCS	Pressure Safety	Includes real and programmatic equipment. Relief devices will not be in Builder. Tanks and Pressure Vessels will be in Builder.
P			CHEM	Chemical Inventory	No real equipment, but program. Not in Builder

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	PSAA	Power Source Assembly Area			550005 Only
P			PCW	Process Cooling Water	D30 HVAC D3040 Distribution Systems D304004 Change Over Distribution Systems – Use for water to water heat exchangers D304006 Chilled Water Distribution Systems – Use for pump, and tanks (expansion, chem feed, etc.)
P			PSAVAC	PSAA Vacuum	Not in Builder
P			PSPROD	Power Source Production	Not in Builder
P			PSSHIP	Power Source Shipping	Not in Builder
P			PSTEST	Power Source Testing	Not in Builder
P			RGEN	Regen Gas	D20 Plumbing D2090 Other Plumbing Systems D209090 Other Special Plumbing Systems
P			YAGRTG	RTG Laser Welder	Not in Builder
	PVES	Pressure Vessels			TA55 Only Not in Builder
P			CPV	Containment Pressure Vessels	
P			HIP	Hot Isostatic Press	
	PYRO	Pyrochemistry WG-Pu			PF4 Only Not in Builder
P			CALDOR	Pu Metal Oxidation	
P			COAL	Coalescence	
			DOR	Direct Oxidation Reduction	
P			DORMC	Direct Metal Oxidation and Metal Chlorination	
P			ER	Electrorefining	
			MC	Metal Chlorination	
P			SALTS	Salt Casting	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	PYROLS	Pyrolysis HS-Pu			Not in Builder
P			HYDFLO	Hydroxide Precipitation & Flocculation PYROLS	
P			TSCM	Thermal Stabilization of 238 HS-Pu	
	QE	Quartz Encapsulation			Not in Builder
P					
	RDGRPH	Radiography			Not in Builder
P			HYTEC	Radiography HYTEC	
P			IRO	Interim Radiography Operations	
P			RADSCB	Closed Beam Radiography	
P			RADSOB	Open Beam Radiography	
P			RADRTR	Real Time Radiography	
P			RADSU	Radiography Unit	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	RLWCS	Low Level Waste Collection Systems			
R			ILW	Industrial Liquid Waste	D20 Plumbing D2090 Other Plumbing Systems D209090 Other Special Plumbing Systems
R			IWS	Industrial Waste System	G30 Site Civil/Mechanical Utilities G3090 Other Site Mechanical Utilities G309090 Other Industrial Waste D50 Electrical D5010 Electrical Service & Distribution D501004 Panelboards – Use for disconnect switches. D20 Plumbing D2030 Sanitary Waste D203003 Floor Drains – Use for floor drains and floor cups. D20 Plumbing D2010 Plumbing Fixtures D201004 Sinks – Use for sinks. IWS from PF4 goes to PLW, and is under that Op Sys.
R			LLWICS	Low Level Waste Internal Collection System	D209090 Other Special Plumbing Systems
R			RLW	Radioactive Liquid Waste Interior Collection System	D209090 Other Special Plumbing Systems
R			RLWECS	LLW Exterior Collection System	D209090 Other Special Plumbing Systems
R			RLWICS	LLW Interior Collection System	D209090 Other Special Plumbing Systems

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	RLWLLW	Low Level Waste Treatment Systems			F10 only
R			CIP	Clean-in-Place	Not in Builder
R			CL	Clarifiers	Not in Builder
R			CSP	Chemical Supply - Process	Not in Builder
R			CUF	Centrifugal Ultra Filter	Not in Builder
R			EFFEVP	Effluent Evaporation	Not in Builder
R			GRVF	Gravity Filter	Not in Builder
R			INF	Influent Storage	Not in Builder
R			LLWSTO	Low Level Storage	Not in Builder
R			MCRFLT	Microfiltration	Not in Builder
R			MF	Microfiltration	Not in Builder
R			PIX	Perchlorate Ion Exchange	Not in Builder
R			POL	Polish and Sample Effluent	Not in Builder
R			PRO	Primary Reverse Osmosis	Not in Builder
R			RLW	Radioactive Liquid Waste	Not in Builder
R			RO	Reverse Osmosis	Not in Builder
R			RVF	Rotary Vacuum Filter	Not in Builder
R			SRO	Secondary RO	Not in Builder
R			SW	Sanitary Waste	See Builder Codes under WSTWTR as Op Sys.
R			TUF	Tubular Ultra Filter	Not in Builder
R			WEVP	Waste Evaporation	Not in Builder
R			WM2	WM2 Influent - Effluent Distribution	Not in Builder
R			WMRM	Waste Mitigation Risk Mgmt	Not in Builder
R			ZLD	Zero Liquid Discharge	Not in Builder

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	RLWTRU	TRU Systems			Not in Builder F10 only
R			INF	Influent Storage	
R			TCS		
R			TINF	TLW or TRU Influent Storage	
R			TLT	TRU Liquid Treatment	
R			TST	TRU Sludge Treatment	
	SD	Steam Distribution			
R			CON	Condensate	D30 HVAC D3040 Distribution Systems D304002 Steam Distribution Systems (Use this when applicable to an entire building) D302004 Auxiliary Equipment – Use for tanks and pumps
R			STM	Steam	D30 HVAC D3020 Heat Generating Systems D302001 Boilers – For boilers, feedwater, makeup, blowdown, chemical addition, etc. Safety valves will not be assessed by Builder. D302004 Auxiliary Equipment – Use for tanks, including air separators. D3040 Distribution Systems D304002 Steam Distribution Systems – Reducing valves and steam traps will not be assessed by Builder.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	SEC	Security			
R			AACS	Automated Access Control	D50 Electrical D5030 Communications & Security D503005 Security Systems Badge readers, personal identification number (PIN) entry keypads (RAPs), biometric devices, door strikes, electric latches, door openers/closers/holders Turnstiles under B203007 Gates (outside) or C102006 Interior Gates (inside)
R			AFP	Argus Field Panel	D503005 Security Systems
R			ECF	Entrance Control Facility	D503005 Security Systems F10 Special Construction F1050 Special Ctrls / Instrumentation F105090 Other Special Controls And Instrumentation – Use for security x-ray equipment and cameras. G20 Site Improvements G2010 Roadways G202005 Guardrails & Barriers (Barriers used to restrict traffic for security reasons, slow approach, even hydraulic pop-up barriers at entrance gates)
R			IDS	Intrusion Detection System	D503090 Other Communications & Alarm Systems Intrusion detection inside the perimeter, includes detection, & alarms
P			MARTRK	Material at Risk Tracker	Not in Builder
R			PASS	PASS Site Access Control	D503005 Security Systems Site Access Control System
R			PIDAS	Perimeter Intrusion Detection/Assessment [& Delay]	D503090 Other Communications & Alarm Systems (Radio communications, microwave detection systems, metal detectors, tamper indicating switches) F1010 Special Structures F101002 Exterior Utility Buildings - Security tower F1050 Special Ctrls / Instrumentation F105090 Other Special Controls And Instrumentation – Use for security cameras. G2040 Site Development G204001 Fencing & Gates G204004 Security Structures (Guard stations) G40 Site Electrical Utilities G4020 Site Lighting G402002 Special Security Lighting Systems (Security lighting)

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			SAFE	Safe	E10 Equipment E1010 Commercial Equipment E101005 Security & Vault Equipment – Use for source safes like at TWF.
R			VTR	Vault Type Room	F10 Special Construction F1020 Integrated Construction F102090 Other Integrated Construction Structural assemblies
	SMPFAB	Sample Fabrication			Not in Builder
P			DMU35	DMU 35 Milling Machining	
P			LBASE	Moore L-Base Lathe	
P			PRECI1	Precitech Lathe1	
P			PRECI2	Precitech Lathe2	
	SNMST	Special Nuclear Material Storage			Not in Builder PF4 only
P			FRS	Fire Rated Safes	
P			KRX	Kardex	
P			SAFES	Safes, SNM	
P			STRG	NonCredited SNM Storage	
P			STRGC	Shelves, Storage Racks, Cages and Kardex	Credited shelves, storage racks, cages, Kardex Stores SNM, prevents criticality including during a seismic event.
	TOOL	Tool			Not in Builder
R			SHOPEQ	Stationary tools	Tools expected to be stationary such as large drill presses or lathes.
R			PORTL	Portable tools	Sys: PORTL – Portable Tools If it is designed to be moved, but not down the road, it is likely the Sys of Portable Tool under the Op Sys of TOOL. Examples would be carts designed to push around a building regardless of what is on the cart such as a welder, pressure tester, small air compressor, etc. Tools designed to be taken to the jobsite such as electric drills, chainsaws, skill saws, etc. Includes test equipment. Walk-behind snow blowers, walk-behind mowers, and weed eaters. Large mowers that are at times attached to tractors via 3-point hitches. Loader buckets, dozer blades, back blades, etc., that can be attached to tractors. Snow plows to be attached to trucks or tractors.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	TRIT	Tritium			
P			GTE	Gas Treatment, Effluent (SRL)	Not in Builder PF4 only
P			GTF	Gas Treatment, Furnace (SRL)	Not in Builder PF4 only
P			HIS	Hot-Inlet System	Not in Builder
R			TC	Tritium Containment Vessel	D20 Plumbing D2090 Other Plumbing Systems D209090 Other Special Plumbing Systems
R			TGCS	Tritium Gas Containment System	D209090 Other Special Plumbing Systems
R			TGHS	Tritium Gas Handling System	D209090 Other Special Plumbing Systems
R			TMS	Tritium Monitoring System	F10 Special Construction F1050 Special Ctrls / Instrumentation F105090 Other Special Controls and Instrumentation
R			TWTS	Tritium Waste Treatment System	D209090 Other Special Plumbing Systems
	TRU	Transuranic Liquid Waste			Not in Builder F10 only
R			INF	Influent Storage	
R			TCS		
R			TLT	TRU Liquid Treatment	
R			TST	TRU Sludge Treatment	
	UCOMM	Utilities Communications			
R			TEL	Telecommunications	G40 Site Electrical Utilities G4030 Site Communication and Security G403001 Telecommunications Systems G403003 Cables & Wiring G403004 Ductbanks, Manholes & Handholes G403005 Towers, Poles & Stands G403008 Other Communication & Alarm G403009 Grounding Systems

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	UEG	Utilities Electrical Generation			
R			CON	Condenser	D302001 Boilers – Use for steam turbine generator exhaust condenser, including pumps, gland exhaust, etc.
R			GT GTXXXX	Gas Turbine Generator	Not in Builder Gas compressors, air filtration, instrument air, fuel, motor control and low voltage electrical, lube oil
R			NGC	Natural Gas Compressor	G306006 Gas Distribution Piping For use in combustion gas turbine.
R			STG	Steam Turbine Generator	Not in Builder As of October 2, 2019, the BUILDER Catalog has no option for steam driven electrical generating system. These <i>utility scale</i> generators typically operate full time. Instrument air, motor control and low voltage electrical, generator breaker, lube oil Condenser, lube oils, control air/oil, cooling tower, circulating water, motor control and low voltage electrical

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
U	UES	Utilities Electrical Supply			
U			ET ETxx (example: ET03, ETMP)	Electrical Transmission (115kV)	D50 Electrical D5010 Electrical Service & Distribution D501001 Power Transformers – oil-filled, 115kV with taps, 15kV secondary, 3 phase, pad-mounted G40 Site Electrical Utilities G4010 Electrical Distribution G401001 Substations G401002 Transformers G401003 Switches, Controls & Devices G401005 Towers, Poles, Crossarms & Insulators G401007 Ductbanks, Manholes, Handholes & Raceways
U			ED EDxxxx (example: EDSM01, EDTA03)	Electrical Distribution (15kV)	D50 Electrical D5010 Electrical Service & Distribution D501001 Power/Distribution Transformers – oil-filled/dry-type, 15 kV with taps, >600V secondary 3/1-phase, pad-mounted/pole-mount G40 Site Electrical Utilities G4010 Electrical Distribution G401001 Substations G401002 Transformers G401003 Switches, Controls & Devices G401005 Towers, Poles, Crossarms & Insulators G401007 Ductbanks, Manholes, Handholes & Raceways
U			EM EMXXXX (example: EMS4, EMS17)	Electrical Meter	D50 Electrical D5010 Electrical Service & Distribution D501001 Metering G40 Site Electrical Utilities G4010 Electrical Distribution G401001 Primary Metering

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	UFS	Utilities Fuel Supply			LANL has no bulk fuel storage tanks to supply other tanks or facilities. Facility fuel storage tanks under FS Op Sys.
U			NG NG1 NG2 NG3 NG4 NG5	Natural Gas Natural Gas Line Segment Number	G30 Site Civil/Mechanical Utilities G3060 Fuel Distribution G306006 Gas Distribution Piping (Natural Gas only. LANL has no distribution system for propane) G306009 Other Gas Distribution NG1 - 5 (distribution) High Pr – NG Med Pr – NGM Low Pr – NGL Piping, pressure regulators/stations; block, relief, and control valves; rectifiers, meters, gauges, analyzers. NG1 (TAs 3, 60, 61), NG2 (TAs 6, 8, 9, 15, 16, 22, 69), NG3 (TAs 39, 49), NG4 (TAs 53), NG5 (TAs 35, 46, 48, 50-52, 54, 55, 59, 63, 64, 66) Distributes natural gas (NG1 - 5, Utilities), becomes NG just outside and within facilities for heating and process equipment such as furnaces. High Pr > 5 psig; Low Pr < 14" W.C.
	UOPS	Uranium Ops			Not in Builder
P			UCAL	Calorimeter	
P			UEE	Uranium Electrolytic Etching	
P			UOX	Uranium Oxidation	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	URG	Roads and Grounds			
R			BRIDGE	Bridges	G90 Other Site Construction G9090 Other Site Construction G909001 Bridges
R			PAVMNT	Pavement	G20 Site Improvements G2010 Roadways G201001 Bases & Subbases G201002 Curbs & Gutters G201003 Paved Surfaces G201004 Marking & Signage G201005 Guardrails & Barriers G201006 Resurfacing G201090 Other Roadways G2020 Parking Lots G202001 Bases & Subbases G202002 Curbs & Gutters G202003 Paved Surfaces G202004 Marking & Signage G202005 Guardrails & Barriers G202006 Resurfacing G202007 Miscellaneous Structures and Equipment G202090 Other Parking Lots G2030 Pedestrian Paving G203001 Bases & Subbases G203002 Curbs & Gutters G203003 Paved Surfaces G203004 Guardrails & Barriers G203005 Resurfacing G203090 Other Walks, Steps & Terraces Includes Roads, Curbs, Gutters, Trails, Striping, Parking Lots, Sidewalks, Signage

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			SB	Site Beautification	G20 Site Improvements G2040 Site Development G204001 Fencing & Gates G204002 Retaining Walls and Freestanding Walls G204003 Exterior Furnishings G204005 Signage G204006 Fountains & Pools G204008 Terrace and Perimeter Walls G204009 Flagpoles G204090 Other Site Improvements G2050 Landscaping G205006 Planters G205007 Irrigation Systems G205090 Other Landscaping
R			SIGNAL	Traffic Signals	G20 Site Improvements G2010 Roadways G201004 Marking & Signage

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
U			USTW	Utilities Storm Water	G30 Site Civil/Mechanical Utilities G3030 Storm Sewer G303001 Storm Sewer Piping G303002 Storm Sewer Structures G303003 Lift Stations G303004 Culverts G303005 Headwalls G303006 Erosion & Sediment Control Measures G303007 Stormwater Management G303090 Other Storm Sewer For stormwater under jurisdiction of Roads and Grounds. For individual buildings See WSTWTR/STW.
R			VB	Vehicle Barriers	G20 Site Improvements G2010 Roadways G201005 Guardrails & Barriers (Includes credited barriers preventing vehicles impacting critical facility structures as well as those for general traffic control or in lieu of guardrails) (Includes bollards, jersey barriers, cables, etc.) Barriers used for security purposes are under SEC/ECF.
	USD	Utilities Steam Distribution			Regardless of system, safety and relief valves will not be assessed by Builder.
R			BFW	Boiler Feedwater	D30 HVAC D3020 Heat Generating Systems D302001 Boilers – For boilers, feedwater, makeup, blowdown, chemical addition, etc. D302004 Auxiliary Equipment – Use for tanks, including air separators.
R			BLR	Boilers	D302001 Boilers – Includes forced draft fans, flue gas recirculating fans, etc.
R			CRS	Condensate Return System	D304002 Steam Distribution Systems – Condensate being returned from buildings to steam plant
R			TW	Cooling Towers	G30 Site Civil/Mechanical Utilities G3050 Cooling Distribution G305006 On-Site Cooling Towers
U			STM	Steam	D3040 Distribution Systems D304002 Steam Distribution Systems (From Central Plant) Includes manholes and pits Reducing valves and steam traps will not be assessed by Builder.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	UWSTWR	Utilities Waste Water			
R			UWWP	Utilities Waste Water Plant	G30 Site Civil/Mechanical Utilities G3020 Sanitary Sewer G302004 Packaged Sanitary Sewer Treatment Plants
U			UWWC	Utilities Waste Water Collection	F10 Special Construction F1020 Integrated Construction F102002 Integrated Assemblies (Sewage lagoon, aerator, etc.) G30 Site Civil/Mechanical Utilities G3020 Sanitary Sewer G302001 Sanitary Sewer Piping G302002 Sanitary Sewer Manholes & Cleanouts G302003 Lift Stations and Pumping Stations G302004 Packaged Sanitary Sewer Treatment Plants G302005 Septic Tanks G302006 Drain Fields G302090 Other Sanitary Sewer – Use for sumps, pumps, and tanks
	UWS	Utilities Water Supply			
U			WD WD1 WD2 WD3 WD4 WD5 WD6 WD7 WD8 WD9 WD10 WD11 WD12 WD13	Water Distribution	G30 Site Civil/Mechanical Utilities G3010 Water Supply G301002 Potable Water Distribution – Use this for the water distribution loop around site G301003 Potable Water Storage – Use this for water storage tanks. For dedicated FWST’s see Fire Protection. G301004 Fire Protection Water Distribution – Use this for fire hydrants and block valves outside building jurisdictions G301007 Pumping Stations TA00 – Utility water distribution line segment crossing multiple TA's WD1 (TAs 00, 53, 61, and 72), WD2 (TAs 00, 02, 21, 41, 43, and 73), WD3 (TAs 00, 03, 58, 59, and 60), WD4 (TAs 00, 48 and 64), WD5 (TAs 00 and 55), WD6 (TAs 00 and 16), WD7 (TAs 00, 06, 08, 09, 22, 40 and 69), WD8 (TAs 00, 11, 14 and 15), WD9 (TAs 00, 35, and 50), WD10 (TAs 00, 36, 52, and 63), WD11 (TAs 00, 18, 36, and 54), WD12 (TAs 00, 46 and 51), and WD13 (TAs 00, 33, 39, and 49)

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	VAC	Vacuum			D30 HVAC D3090 Other HVAC Systems and Equipment D309090 Other Special Mechanical Systems
R			DV	Dry Vacuum	D309090 Other Special Mechanical Systems In PF4, all DV in Area 300
R			DRYVAC	Dry Vacuum	D309090 Other Special Mechanical Systems RLUOB only
R			HEPVAC	Portable HEPA Vacuums	D309090 Other Special Mechanical Systems
			HDV	House Dry Vacuum	D309090 Other Special Mechanical Systems In PF4, all HDV in Areas 100, 200, and 400
R			HPV	Health Physics Vacuum	D309090 Other Special Mechanical Systems D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD's)
R			MVP	Miscellaneous Vacuum Pump	D309090 Other Special Mechanical Systems In PF4, all 1 st floor dry vacs are MVP
			VAC	Vacuum	D309090 Other Special Mechanical Systems Only in 480045, 480107, and 500230
R			WV	Wet Vacuum	D309090 Other Special Mechanical Systems
	VHCL	Vehicle			Not in Builder For equipment designed to go down the road. Not for anything associated with lifting such as cranes, fork lifts, man lifts, rigging, etc.
R			MOT	Motorized	Trucks, tractors, loaders, riding mowers, ATVs/OHVs, etc.
R			NMOT	Non-Motorized	Trailers of all types from small cargo trailers to belly dump pulled by tandem axle truck tractors. Large mowers pulled behind tractors that could also be moved by a truck.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	VNT	Ventilation			Regardless of system, safety and relief valves will not be assessed by Builder.
R			CCHW	Central Circulating Heating Water	D30 HVAC D3020 Heat Generating Systems D302001 Boilers – For boilers, feedwater, makeup, blowdown, chemical addition, etc. Safety valves will not be assessed by Builder. D302004 Auxiliary Equipment – Use for tanks, including air separators. D3040 Distribution Systems D304003 Hot Water Distribution Systems – Use for pumps D3060 Controls & Instrumentation – Some of these in MEL, but did not see any on initial Builder assessments. D306001 HVAC Controls – Including PDI’s D306002 Electronic Controls – Includes duct mounted smoke detectors D306003 Pneumatic Controls (includes VAV’s) D306004 Instrument Air Compressors (Use this for small systems supplying solely HVAC system as found in office or training buildings. For larger systems used for other purposes as well see Compressed Air System.)
R			CVS	Confinement Ventilation System	D3040 Distribution Systems D304007 Exhaust Systems – Includes fans. Filters, HEPA filters, and dampers will not be assessed.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			CW	Chilled Water	<p>D30 HVAC</p> <p>D3010 Energy Supply D301090 Other Energy Supply – Use for RLUOB ice storage</p> <p>D3030 Cooling Generating Systems D303001 Chilled Water Systems – Use for chillers and condensers (small HX's such as oil coolers will not be assessed individually, but as part of the chiller package) Use for cooling coils inside AHU's. D303002 Direct Expansion Systems</p> <p>D3040 Distribution Systems D304004 Change Over Distribution Systems – Use for water to water and glycol to water heat exchangers. D304005 Glycol Distribution Systems – Use for glycol chillers, condensers, circulating pumps, expansion tanks, chem feed, etc. (small HX's such as oil coolers will not be assessed individually, but as part of the chiller package) D304006 Chilled Water Distribution Systems – Use for pump and tanks (expansion, chem feed, etc.).</p> <p>D3090 Other HVAC Systems and Equipment D309090 Other Special Mechanical Systems – Use for refrigerant storage tanks/systems.</p> <p>D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD's)</p>
R			EXH	Exhaust	<p>D304007 Exhaust Systems – Includes fans, even fume hood and glove box exhaust fans, and stacks. Filters, HEPA filters, dampers, scrubbers, and duct mounted smoke detectors will not be assessed.</p> <p>D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD's)</p>
R			HR	Heat Recovery	<p>D304008 Air Handling Units D509090 Other Special Systems and Devices (Use for VFD's)</p>

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			HVAC	Heat, Vent, & Air Cond	<p>D30 HVAC</p> <p>D3020 Heat Generating Systems</p> <p> D302002 Furnaces</p> <p> D302003 Fuel-Fired Unit Heaters (use for HUG's)</p> <p> D302090 Other Heat Generating Systems</p> <p>D3040 Distribution Systems</p> <p> D304001 Air Distribution Heating & Cooling – Use for Fans, Humidifiers, Dehumidifiers, VAV Terminals.</p> <p> Duct Mounted Heating Coils and Dampers will not be assessed.</p> <p> D304008 Air Handling Units – Use also for air-to-air heat exchangers</p> <p> D304090 Other Distribution Systems</p> <p>D3050 Terminal & Package Units</p> <p> D305001 Unit Ventilators (fans, including makeup air)</p> <p> D305002 Unit Heaters (infrared and hydronic, which includes both HUW heating water and HUS steam) Use D305005 Electric Heating if electrically powered HUE. Use D302003 Fuel-Fired Unit Heaters if gas heated HUG.</p> <p> D305003 Fan Coil Units</p> <p> D305004 Fin Tube Radiation (baseboard)</p> <p> D305005 Electric Heating – Used this even when equip is Unit Heater if it is electrically powered.</p> <p> D305006 Package Units (Includes RUA's, heat pumps, evap coolers, air washers/pumps, and window AC units)</p> <p> D305090 Other Terminal & Package Units</p> <p>D3060 Controls & Instrumentation – Some of these in MEL, but did not see any on initial Builder assessments.</p> <p> D306002 Electronic Controls – Includes duct mounted smoke detectors</p> <p> D306003 Pneumatic Controls (includes VAV's)</p> <p> D306004 Instrument Air Compressors (Use this for small systems supplying solely HVAC system as found in office or training buildings. For larger systems used for other purposes as well as maybe HVAC see Compressed Air System.)</p> <p>D50 Electrical</p> <p> D5090 Other Electrical Services</p> <p> D509090 Other Special Systems and Devices (Use for VFD's)</p>
R			HVACCF	HVAC Confinement	<p>D509090 Other Special Systems and Devices (Use for VFD's)</p>

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			HVACOB	HVAC, Office Bldg	RLUOB only D30 HVAC D3010 Energy Supply D301090 Other Energy Supply – Use for RLUOB ice storage D3030 Cooling Generating Systems D303001 Chilled Water Systems – Use for chillers and condensers D303002 Direct Expansion Systems D3040 Distribution Systems D304006 Chilled Water Distribution Systems – Use for pump and tanks (expansion, chem feed, etc.) D3040 Distribution Systems D304001 Air Distribution Heating & Cooling – Use for Humidifiers, Dehumidifiers, and VAV Terminals. Dampers are not to be addressed due to low cost and inaccessibility. D304008 Air Handling Units – Use also for air-to-air heat exchangers D3050 Terminal & Package Units D305001 Unit Ventilators (fans, including makeup air) D305002 Unit Heaters (infrared and hydronic, which includes both heating water and steam) D305003 Fan Coil Units D305004 Fin Tube Radiation D305005 Electric Heating – Used this even when equip is Unit Heater if it is electrically powered. D305006 Package Units (Includes heat pumps, evap coolers, and window AC units) D3060 Controls & Instrumentation – Some of these in MEL, but did not see any on initial Builder assessments. D306001 HVAC Controls – Including PDI’s D306002 Electronic Controls – Includes duct mounted smoke detectors D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD’s)
R			HVACRL	HVAC, Radiological Lab	RLUOB only D509090 Other Special Systems and Devices (Use for VFD’S)
R			HVACUB	HVAC, Central Utility Building	RLUOB only D509090 Other Special Systems and Devices (Use for VFD’S)

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			HW	Heating Water	D30 HVAC D3020 Heat Generating Systems D302001 Boilers – For boilers, feedwater, makeup, blowdown, chemical addition, etc. Safety valves will not be assessed by Builder. D302004 Auxiliary Equipment – Use for tanks, including air separators. Need BUILDER Catalog item for condensate neutralizers used on the output of gas fired condensing boilers. D3040 Distribution Systems D304003 Hot Water Distribution Systems – Use for pumps-and heat exchangers D304004 Change Over Distribution Systems – Use for water to water heat exchangers D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD’s)
R			LRW	Lab Reheat Water	D30 HVAC D3020 Heat Generating Systems D302004 Auxiliary Equipment – Use for tanks, heat exchangers, and air separators. D3040 Distribution Systems D304003 Hot Water Distribution Systems – Use for pumps D304004 Change Over Distribution Systems – Use for water to water heat exchangers D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD’s) RLUOB Only
R			NNHVAC	Ventilation, Non-Nuclear	TA55 non-nuke D509090 Other Special Systems and Devices (Use for VFD’s)

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			PCW	Process Chilled Water or Process Cooling Water (building dependent)	RLUOB only D30 HVAC D3040 Distribution Systems D304004 Change Over Distribution Systems – Use for water to water heat exchangers D304006 Chilled Water Distribution Systems – Use for pumps, and tanks (expansion, chem feed, etc.) D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD's)
R			PG	Primary Glycol	RLUOB only D30 HVAC D3040 Distribution Systems D304005 Glycol Distribution Systems – Use for glycol chillers, condensers, circulating pumps, expansion tanks, chem feed, etc.
R			SCW	Secondary Chilled Water	RLUOB only D304006 Chilled Water Distribution Systems – Use for pumps and tanks (expansion, chem feed, etc.)
R			SHW	Secondary Heating Water	RLUOB only D304003 Hot Water Distribution Systems – Use for pumps
R			TW	Tower Water	D30 HVAC D3020 Heat Generating Systems D302005 Equipment Thermal Insulation D302090 Other Heat Generating Systems - Use this for heat trace and tank heaters D3030 Cooling Generating Systems D303001 Chilled Water Systems – Use for towers, fans, pumps, air separators, and chem add.
	WASTE	Waste Management			Not in Builder
P			RADW	Radioactive and Mixed Solid Waste Processing	For tools and equipment that deal with solid radioactive waste. The tools and equipment themselves are not waste.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	WELD	Welding			Not in Builder
P			1219W	1219 Welder	
P			267W	267 Welder	
P			295W	295 Welder	
P			297W	297 Welder	
P			3013W	3013 Welder	
P			EBEAM	Electron Beam	
P			GTA	Gas Tungsten Arc Welding Operation	
P			HVEBW	High Voltage EBEAM Welder	
P			IPGW	IPG Welder	
P			HSCG	HS Calibration Gas System	
P			LSRWLD	Laser, Weld	
P			LVEBW	Low Voltage Electron Beam Welder	
P			MOXW	MOX Welder	
P			PIGMA	PIGMA Welder	
P			YBLAZR	YB Laser Welder	
	WGCHAR	WG Characterization			Not in Builder
P			ACHAR	Analytical Chemistry Characterization	
P			OXPRO	Oxide Processing	

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	WS	Water Supply			D20 Plumbing Regardless of system, safety and relief valves will not be assessed by Builder.
R			DEMIN	Demineralized Water	D2090 Other Plumbing Systems D209090 Other Special Plumbing Systems D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD's)
R			DIS	Distilled Water	D209090 Other Special Plumbing Systems
R			DIW	Deionized Water	D209090 Other Special Plumbing Systems
R			IW	Industrial Water	D209090 Other Special Plumbing Systems
R			IWH	Industrial Water Hot	550005 Only D209090 Other Special Plumbing Systems
R			MKUP	Makeup Water	D209090 Other Special Plumbing Systems
R			NPW	Non-Potable Water	D209090 Other Special Plumbing Systems
R			NPWC	Non-Potable Water Cold	D209090 Other Special Plumbing Systems
R			NPWH	Non-Potable Water Hot	D209090 Other Special Plumbing Systems

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
R			PW	Potable Water	D20 Plumbing D2010 Plumbing Fixtures D201001 Waterclosets D201002 Urinals D201003 Lavatories D201004 Sinks D201005 Showers/Tubs D201006 Drinking Fountains and Coolers D201007 Bidets D201090 Other Plumbing Fixtures - includes Emergency Eye Wash & Shower D2020 Domestic Water Distribution D202001 Pipes & Fittings D202002 Valves & Hydrants - includes BFP's and hose bibs D202003 Domestic Water Equipment (includes storage tanks, booster pumps & motors, water heaters, and water treatment equipment) (Use this when applicable to an entire building) D30 HVAC D3010 Energy Supply D301005 Solar Energy Systems (use for solar hot water heating) D50 Electrical D5090 Other Electrical Services D509090 Other Special Systems and Devices (Use for VFD's)
R			PWH	Potable Water Hot	D202003 Domestic Water Equipment (includes storage tanks, booster pumps & motors, water heaters, and water treatment equipment) Some buildings use PW even for hot potable water. Check tags and drawings.
R			RO	Reverse Osmosis	D209090 Other Special Plumbing Systems
R			PWT	Potable Water Tepid	D202002 Valves & Hydrants - includes BFP's and hose bibs D202003 Domestic Water Equipment (includes storage tanks, booster pumps & motors, water heaters, and water treatment equipment) Use this for eye wash water heaters.

G	OSI	Op Sys	SI	Sys	Builder Code, Notes, and Misc
	WSTWTR	Waste Water			
R			EFLD	Effluent Discharge	D20 Plumbing D2090 Other Plumbing Systems D209090 Other Special Plumbing Systems Not storm water, not sanitary, suitable for discharge to environment. Example, cooling tower blowdown and sewage plant effluent.
R			LCONT	Liquid Containment	TWF Only This is for the pavement around buildings that ensures any liquid spill drains to the retention basin.
R			STW	Stormwater	D2040 Rain Water Drainage D204001 Pipe & Fittings D204002 Roof Drains D204003 Rainwater Drainage Equipment D204004 Insulation & Identification D204090 Other Rain Water Drainage System For individual buildings. Once Stormwater leaves building jurisdiction it comes under Utilities' Roads and Grounds. See RNG/STW.
R			SWP	Sanitary Sewer	D2030 Sanitary Waste D203001 Waste Pipe & Fittings D203002 Vent Pipe & Fittings D203003 Floor Drains D203004 Sanitary and Vent Equipment D203005 Insulation & Identification D203090 Other Sanitary Waste – Use for sumps and pumps D2090 Other Plumbing Systems D209003 Interceptors e.g. oil separators

Corrected spelling of “tub” to “tube” for IFIT Ceiling Armr/Catch Tube Sys.

Changed *Fire Suppression* to *Fire Protection – Sprinkler System*

Changed *Fire Water Supply* to *Fire Protection – Water Supply*

Added BPCS, Building Process Control System, as Sys under Op Sys CTRL, Control Systems, for RLUOB only.

Added System BURN, CALCI Repack & Discard, Calcination Repack & Discard, under Op Sys DRYOPS, Material Preparation.

Added System LCONT, Liquid Containment, under Op Sys WSTWTR for TWF only.

Revised the info for FP/FPD to clarify what equipment is under FPD and what is under FPS.

FPD	Fire Detection and Alarm	<p>D4010 Fire Alarm and Detection Systems</p> <p>D401001 Fire Alarm Distribution (fire alarm control panel, batteries, addressable fire alarm, and addressable mass notification)</p> <p>Detectors, pull stations, notification devices (bells, lights, strobes, horn, or siren) will not be assessed by Builder.</p> <p>This includes detectors, tamper switches, pull stations, notification devices (bells, lights, strobes, horn, or siren). These will not be assessed by Builder.</p> <p>All equipment on, or downstream of, the trip valve will fall under FPS. This includes the water motor gong.</p>
FPS	Fire Protection – Sprinkler System	<p>All equipment on, or downstream of, the trip valve will fall under FPS.</p> <p>D4030 Standpipe Systems</p> <p>D403001 Standpipe Equipment & Piping (includes risers and hoses)</p> <p>D4040 Sprinklers</p> <p>D404001 Sprinklers and Releasing Devices (Dry Pipe, Preaction, Deluge, and Wet Pipe) Includes nitrogen system or air compressors and dryers. Includes Fire Department Connections and Water Motor Gongs.</p> <p>Sprinkler heads and associated piping, instrumentation, etc. are assessed as part of the “system”, and the parent equipment to link to is the riser, alarm check valve dry pipe valve, etc.</p> <p>D4090 Other Fire Protection Systems</p> <p>D409001 Carbon Dioxide Systems (includes agent containers, distribution piping and controls)</p> <p>D409002 Foam Generating Equipment</p> <p>D409003 Clean Agent Systems</p> <p>D409004 Hood & Duct Fire Protection</p>