

Los Angeles Southwest College - Campus Standards Matrix

Note: Campus preferences are indicated first followed by additional manufacturers, which are being considered by the College and/or the District.

This Campus Standard Matrix is to be used as a guide. In case there is a valid need to deviate from these Standards, a written request will need to be submitted and a formal written approval will be required by the Campus Maintenance & Operations (M&O). This is a living document and is updated regularly.

These Standards are not to be deviated from and for the purpose of Value Engineering. The college will have the right to refuse and have changed at contractor expense.

STANDARD	CAMPUS ALTERNATIVES
DIV. 07: THERMAL & MOISTURE PROTECTION	
ROOFING	CAMPUS ALTERNATIVES
GENERAL	Sarnafli, Modified Bitumen 30-yr Garland, no single ply. Build-up roof multi-ply (district Standards)
FIREPROOFING	CAMPUS ALTERNATIVES
GENERAL	Monokote, KAFCO, PDI
DIV. 08: OPENINGS	
HARDWARE	CAMPUS ALTERNATIVES
KEY SYSTEM	Best Kaba Peaks 7-Pin
KEYS	Best SFIC Core 1CK7B21-626, Best 1AK1B21 NiAg Key Blanks, Best 7 Pin
CYLINDERS	Best 1E72, 1E74 (sole-source)
MECHANICAL LOCKDOWN LOCKSETS	Von Duprin PA-AX-98-L-F-2SI-06 with XB13-088 and 630AM Finish Schlage L9050-L-06-N-L283-711 with L583-363 and 630AM Finish
STANDARD LOCKSETS	Von Duprin PA-AX-98-L-F-06 with 630AM Finish Schlage L9080-L-06-N with 630AM Finish
ELECTRIFIED LOCKSETS	Von Duprin LD-PA-AX-LX-RX-QEL-98-L-NL-06-F-CON and 630AM Finish Schlage L9092EU-L-06-N-RX-LX with 630AM Finish
UNACCEPTABLE LOCKSETS	Cylindrical, Vertical Rod, Magnetic, Electric Strike
CABINET LOCKSETS	Olympus, Haworth, HON
MULLION (DOUBLE DOORS)	Removable Lockable Von Duprin KR9954 with 689 Finish

HINGE	IVES Continuous Stainless Steel
ELECTRIFIED TRANSFER HINGE	Von Duprin EPT-10C (with Molex connectors)
DOOR CLOSER	LCN-4040XP (swing to wall)
AUTO OPENER	LCN-2810 Senior Swing Series Operators
DOOR HOLDER	Sentronic SEM 7800 Series Magnets
DOOR POSITION SENSOR	Schlage 7764 (with Molex connector)
ADA COMPLIANT PEDESTRIAN SWING DOOR OPERATOR	Record 8100 series automatic door opener, surface mount installed application, for doors weighing less than 350 LBS.
ADA COMPLIANT PEDESTRIAN SWING DOOR OPERATOR (Continued)	SDC Low Energy Swing Automatic Door Opener ADA Compliant***
DIV. 09: FINISHES	
FLOOR/ WALL FINISHES	CAMPUS ALTERNATIVES
CARPET	Tandus 36X36 (District contract in effect, mold and mildew resistant Or EQUAL
RESILIENT FLOORING	FORBO or EQUAL, Estri, Armstrong, Mannington, Parterre, International, (Mold Resistant)
CARPET MODULES	Tandus 36X36 (District contract in effect) mold resistant
RESILIENT TILES/SHEET FLOORING	FORBO or EQUAL, Estri, Armstrong, Mannington, Parterre, International
HARD SURFACE (GYMNASIUM)	MONDO, Acer, Noble House, Teraflex,
WALL BASE	Roppe, Burke
RAISED FLOORING SYSTEMS	Tate, Interface AR, Maxcess, Smith
PORCELAIN TILE-CERAMIC	Specific to design standard with installation floor to ceiling
WALL COVERINGS	Vista Paint
PAINT	Vista Paint, Dunn Edwards for Exterior, Dulux, ICI, No Custom Colors
ANTI-GRAFFITI COATING	To all paintable surfaces on exteriors and masonry finish
COATINGS	Vista Paint, Dunn Edwards, Dulux, ICI, Master Coating, Technologies, Scuffmaster

CEILING SYSTEMS	CAMPUS ALTERNATIVES
ACOUSTICAL TILE	Armstrong, USG, 2X4 preferred
GRID SYSTEM	Armstrong, USG, 2X4 preferred
DIV. 10: SPECIALTIES	
SOAP & PAPER TOWEL DISPENSERS	CLEA, BRADLEY, BOBRICK WAXIE, APC(LT-108) Quick Touch, SuperMax Jumbo Tissue dispenser (SuperMax#855807), SuperMax Jumbo tissue Dispenser with Stub Roll (SuperMax Plus #855806)
Toilet paper dispensers	Jumbo
HAND DRYER	BOBRICK, Trim Line-Surface-Mounted ADA dryer B-7120 (22-ga mild steel zinc plated w/ high-gloss white epoxy paint finish h)
BATHROOM PARTITIONS	BOBRICK, Bradley, Trespa, Santana, Flush metal, Accurate
BATHROOM MIRRORS	Apply Anti-Graffiti Film by 3M
RESTROOM ACCESSORIES	BOBRICK, Bradley
LOCKERS	Debourgh, Lyon, Penco, Republic
STORAGE/TRANSFER	Tyga-Box System or EQUAL
FIRE EXTINGUISHERS/ CABINET W/LOCKS	CAMPUS ALTERNATIVES
GENERAL	Larsens, Potter Roeme, JL Industries (KEY # LL24)
DIV. 11: EQUIPMENT	
FOOD SERVICE EQUIPMENT	Hobart, Wolfe, Dwyer
KITCHEN, APPLIANCES	Chambers, KitchenAid
DIV. 12: FURNISHINGS	
BLEACHERS	CAMPUS ALTERNATIVES
INTERIOR, GYMNASIUM, TELESCOPIC, STND.	Irwin Telescopic, Studisteel
WINDOW COVERING	CAMPUS ALTERNATIVES
SOLAR SHADE	Mecho Shade Motorized or EQUAL
BIKE RACK	CAMPUS ALTERNATIVES
GENERAL	Match existing Bike Racks at Cox Annex. Brandir, Cycloops (frames to be of a lockable design),
DIV. 13: SPECIAL CONSTRUCTION	
MODULAR STRUCTURES	GE, Capital, Williams Scotsman, Aurora
DIV. 14: CONVEYING EQUIPMENT	
STANDARD ELEVATORS	Mitsubishi
CONTROLLER	MOTION CONTROLS.....CONTROLLER CANNOT BE PROPRIETARY

ELEVATOR DOORS Graffiti proof interior	GAL DOOR EQUIPMENT
ELEVATOR CAB LIGHT FIXTURE	ERIM FIXTURES
WHEELCHAIR LIFTS	Mitsubishi,
EXIT STAIR EVACUATION CHAIRS	Garaventa Evacuation chairs, EVACU-TRAC CD7 or better
DIV. 21: FIRE SUPPRESSION	
HYDRANTS	James Jones or EQUAL
DIV. 22: PLUMBING	
PIPE	CAMPUS ALTERNATIVES
DOMESTIC, /POTABLE	C900 BLUE, COPPER K, #80 PVC
UNDERGROUND WATER IRRIGATION PIPING	Schedule 40 and 80 PVC ½" TO 3"
UNDERGROUND SANITARY PIPING	CAST IRON, SDR-35
ABOVE GROUND SANITARY PIPING	CAST IRON TYLER PIPE/DWV COPPER
PIPE TUBING AND FITTINGS	C-900, MEGA LUG FTGS APPROVED CI CONN FLANGE
STEEL PIPE FUEL GAS/NATURAL GAS	BLACK SCH 40 INDOOR ONLY W/ SIMILAR FTGS
STEEL PIPE WATER OR AIR	Galvanized Domestic Only NO SUBSTITUTE
BRASS PIPE	Red Brass, Schedule 40
COPPER TUBING	Type "K" or "TYPE L" GRADES ONLY, NO "M", No Substitutes
BRASS SCHEDULE 40 SOLDER JOINT FTG's	Domestic
SCREWED FITTINGS	Domestic
GAS PIPING UNDERGROUND	POLY PIPE, STEEL TRANSITION, YELLOW TRACER WIRE, BUTT FUSION OR SOCKET
BUILDING DRAIN, WASTE & VENT	CAST IRON NO HUB, NO HUB COUPLINGS, CAST IRON, FTGS./DWV COPPER
PIPE AND FITTINGS	Standard D2751-88 Cast Iron, no-hub pipe and fittings (waste)
PLUMBING FIXTURES	CAMPUS ALTERNATIVES
TOILET FIXTURES (Low Flow, Viterous China)	American Standard-Only
SINKS	American Standard, Kohler (Vitreous China Lavatories)
KITCHEN SINKS	Elkay, Kohler (Stainless Steel) (or as determined acceptable by LASC)
SERIVCE SINKS	American Standard, Zurn

URINALS (Low Flow)	American Standard, Sloan, Kohler
FAUCETS	MANUAL ONLY, NO ZURN OR SUBSTITUTE
FLUSH VALVES - TOILETS, URINALS	Sloan Wes-111 uppercut 3720000 closet duel flush valve 1.6/1.1-Only
FLUSH VALVES-URINALS	Sloan Manual Low Flow-Only
DOMESTIC WATER HEATER	RHEEM, A.O SMITH, BRADFORD WHITE
CIRCULATING PUMP	BELL & GOSSETT, GRUNDFOS WITH EQUAL TIMERS IF NECESSARY/NO SUBSTITUTE
PLUMBING VALVES AND ACCESSORIES	CAMPUS ALTERNATIVES
GENERAL	NIBCO OR EQUAL DOMESTIC PRODUCT ONLY, LEAD FREE WHERE APPLICABLE/ NO SUBSTITUTE
EXPANSION TANKS	AMTROL, Bell & Gossett, Watts
BACKFLOW PREVENTERS	Watts, Zurn, WILKINS
EXTINGUISHERS/CABINETS	Larsens, Potter Roeme, JL Industries
CLEAN OUTS	J.R. Smith, Zurn,
FLOOR DRAINS	J.R. Smith, Zurn, MIFAB
TRAP PRIMERS	PPP Inc., MIFAB (use for system having low-flow fixtures)
ROOF DRAINS	J.R. Smith, Zurn, Josam
BALL VALVES	NIBCO (BRASS, FULL PORT)
GATE VALVES	NIBCO (UNION BONNET, RAISED STEM)
GLOBE VALVES	NIBCO (BRASS)
CHECK VALVES	NIBCO (BRASS)
VALVES (WATER, BELOW GROUND)	STOCKHAM (CAST IRON FLANGED AWWA WITH OPERATING NUT)
EMERGENCY EYEWASH & SHOWER	CAMPUS ALTERNATIVES
EMERGENCY EYEWASH & SHOWERS	Haws, Encon, Bradley, Watersaver
WATER FOUNTAINS	CAMPUS ALTERNATIVES
DRINKING	Haws, Halsey Taylor, Bobrick
DIV. 23: HEATING, VENTILLATION & AIR CONDITIONING (HVAC)	(MUST HAVE BACNET CONTROL PANEL TO TALK TO CAMPUS NETWORK)
A/C UNITS, ROOF MOUNTED	(GAS ELECTRICS/HEAT PUMPS) CARRIER, YORK & TRANE
A/C UNITS WALL MOUNTED	BARD, HEAT PUMPS, TRANE
AIR HANDLERS – CUSTOM	TEMTRON, UNITED METAL PRODUCTS, TRANE, ENERGY LABS
AIR HANDLERS	CARRIER, YORK, TRANE
HVAC HYDRONIC CONTROL VALVE	BELIMO TWO WAY
HVAC HEATING & COOLING CONTROL VALVE	BELIMO PICCV TWO WAY WITH RESERVING SWITCH
HVAC HYDRONIC PIPE FLANGE ADAPTER	OMNI,

CONNECTIONS	
MOTORS	BALDOR, GE, DAYTON
PUMPS	PACO, BELL & GOSSETT, ARMSTRONG
COOLING TOWERS	BALTIMORE AIR COIL, MARLEY, EVAPCO (STAINLESS STEEL)
OTHER FILTERS	AMERICAN, FAN & TRIDERN, 3-M
BOILER CONTROLS-HOT WATER	Raypack condensing boiler 98% efficient
BOILER CONTROLS-STEAM	Parker
FAN COILS DX	Carrier, York, Trane
COMPUTER ROOM AC UNITS	APC, LIEBERT, DATA AIRE
CHILLED WATER FAN COILS	Carrier, York, Trane, Magic air
AIR COOLED CHILLER	Carrier, York, Trane,
CENTRIFUGAL WATER-COOLED CHILLER	Carrier, York, Trane,
SCREW-TYPE AIR COOLED CHILLER	Carrier, York, Trane,
SCREW-TYPE WATER COOLED CHILLER	Carrier, York, Trane,
SCROLL-TYPE AIR COOLED CHILLER	Carrier, York, Trane,
CHILLER-GENERAL	Carrier, York, Trane,
ABSORBTION CHILLER	Carrier, York, Trane,
OTHER ABSORBTION CHILLER	BROAD, THERMAX
VENTILATORS AND EXHAUST FANS	COOK, GREENHECK
FIRE SMOKE DAMPER	BELIMO W/ END SWITCH TO COMMUNICATE TO EMS, RUSKIN AND KRUGER
VARIABLE FREQUENCY DRIVES	ABB, (With BACnet compatibility)
HYDRONIC PIPING	CARBON STEEL, SCH 80, INSULATED PVC PERMA PIPE, THERMACOR AND ROVANCO
Water Treatment flushing Chilled/ Hot	Must meet industrial standards testing reports to be review with LASC staff before connecting to Central Plant
AIR CONIDITIONING THERMOSTAT	TOTAL LINE, 3-HEATING/2-COOL/HEATPUM/DIGTIAL 7 DAY PROGRAMMABLE PIN P 374-2800
THERMOSTAT LOCK BOX	HONEYWELL/LARGE OPQUE/PINTG 512B1007
DIV. 25: INTEGRATED AUTOMATION	
ENERGY MANAGEMENT SYSTEM	Alerton-Climatec (sole-source)
DIV. 26: ELECTRICAL	
ELECTRICAL FIXTURES	CAMPUS ALTERNATIVES
INTERIOR LIGHT FIXTURES(LED) No incandesce light fixture	Prudential, Lithonia, HE Williams, Lightolier, must meet DLC, Energy Star requirements
CONNECT WITH EMERGENCY LIGHTS	Alerton to emergency grid
EXIT SIGNS	LED, Active Safety™, Pentico, or equal

ELECTRONIC WIRELESS WALL CLOCKS	MATCH EXISTING Campus Clock system Visiplex, TYCO SimplexGrinnell ONLY NO SUB
INTERIOR SUSPENDED LIGHTS	Prudential, Lithonia
LIGHTING/INDOOR-OUTDOOR	CAMPUS ALTERNATIVES
VANDAL PROOF LIGHTING FIXTURES	Rude, Stanco, Sequoia, BE, Lucalux, Matalux
LANDSCAPING FIXTURES	CAMPUS ALTERNATIVES
EXTERIOR LIGHTS-PARKING LOT	LED, (Lamp wattage to match existing)
LIGHT SENSORS	"Watt Stopper", LUTRON, match existing or Equal
PARKING LOT	Philips, Gardco, Gullwing LED GL 13 & GL 18
ATHLETIC FIELD	Musco
ELECTRICAL EQUIPMENT	CAMPUS ALTERNATIVES CAMPUS ALTERNATIVES
MAIN SWITCHBOARD	Square D, selection to match existing
MAIN DISTRIBUTION SWITCHBOARDS	Square D. Selection to match existing
DRY TYPE TRANSFORMERS	Square D
MAGNETIC MOTOR STARTERS	Square D, Dialog Plus Controller
SOFT START MOTOR STARTERS	Square D, GE, Cutler Hammer.
PANELBOARDS	Square D, GE, Cutler Hammer.
MCC (MOTOR CONTROL CENTERS)	Square D, GE, Cutler Hammer.
DRIVES	ABB
ELECTRICAL FINISH FACE PLATES	STAINLESS FINISH PLATES
ELECTRIC VEHICLES/ CHARGERS	CAMPUS ALTERNATIVES
ELECTRICAL VEHICLES AND CHARGERS	Taylor Dunn,
CHARGER Mfr	Taylor Dunn,
EMERGENCY POWER SYSTEM-GRID MATRIX	CAMPUS ALTERNATIVES
CONNECT WITH SUMP PUMPS	Alerton to emergency grid
CONNECT WITH CO2 SENSORS	Alerton to emergency grid
CONNECT WITH EMS/CMMMS	Alerton to emergency grid
EMERGENCY MANAGEMENT SYSTEM	CAMPUS ALTERNATIVES
EMERGENCY MANAGEMENT SYSTEM	Alerton-Climatec
ENERGY MANAGEMENT SYSTEM	Alerton-Climatec
FIRE PROTECTION	Tyco SimplexGrinnell Sole Source no sub Mass Notification Speaker Stroll
ELECTRONICS	Alerton
FIRE ALARM PULL STATION	SimplexGrinnell Tyco CAT 45 KEY
SPEAKER/STROLL AMBER ALERT	SimplexGrinnell Tyco W/ MASS NOTIFICATION

LIGHTING SUPPLIES	F28-W, F25-w, T8,90LPW,85CRI, HI Performance (T8F32T8/XL/SPXxx/HI/ECO)
LIGHT BULBS, FLOURESCNETS T-8's	Sylvania, GE, Phillips, 4100K, Min 90 CRI, (Sylvania Preferred), LED
BALLASTS	Sylvania, Phillips, GE (Sylvania Preferred), NEMA-Premium Ballast only, Programmed-Start Electronic Ballast for frequent switching only. Ballast Factor 1.00
EMERGENCY POWER SYSTEMS	CAMPUS ALTERNATIVES
GENERATORS	Kohler Must have DPF within 100m of K-12
UPS	APC, EATON
DIV. 27: COMMUNICATIONS	
DIV. 27: Licensing	ALL Div. 27 and Div. 28 (IT devices) requiring licenses MUST INCLUDE ALL REQUIRED LICENSES BY CONTRACTOR CFCI. CONTRACTOR MAY NOT ASSUME LICENSES ARE PROVIDED BY THE COLLEGE. Contractors must be required to consult with IT for interoperability/integration planning detail PRIOR to implementation due to the rapidly changing and complex IT environment.
27 05 00 COMMON RESULTS FOR COMM	CAMPUS ALTERNATIVES
Structured Cabling System Warranty	Minimum 25-year warranty from General/Panduit or Siemon (includes re-installation labor)
27 05 26 GROUNDING & BONDING	CAMPUS ALTERNATIVES
Bus Bar	Lyncote XIT, Chatsworth, Hargar
27 05 28 PATHWAYS FOR COMM SYSTEMS	CAMPUS ALTERNATIVES
EMT Conduits & Couplings & Connectors	Appleton, Crouse-Hinds
Conduit Supports	Kindorf, Unistrut, Thomas & Betts
Hangers & Cable Ties	Chatsworth Products, Cooper B-Line, Caddy, Mono
Metal Outlet Boxes - Double Gang, Extra Deep	Appleton, Raco, Steel City
Pull Boxes and Cabinets	Hoffman Enclosures, Wire Guard
Cable Tray	Cooper B-Line. Horizontal cable tray in IDF/BDF at least 18" wide.
Floor data/power	FSR recessed floor box when possible, if poke through is required, use Hubbell Fire-Rated SystemOne Poke-Throughs (recessed with 8-Inch Diameter Core). Preference is (1) wall-based data and power where FF&E planning allows (2) FSR then (3) Hubbell SystemOne as stated.
27 05 43 UG DUCTS & RACEWAY FOR COMMUNICATION	CAMPUS ALTERNATIVES
Manholes	Utility Vault (Oldcastle), Jensen, Brooks
Pull boxes	Utility Vault (Oldcastle), Jensen, Brooks w/ Spring Loaded LID
MH/PB Hardware	INWESCO products
Conduits (Schedule 40 or Type C)	Carlon
Detectable Warning Tape	Carlon
Pull, Rope 1700 lb tensile strength	Carlon

Bonding ribbon (In vaults)	INWESCO Cat 12A55
Bonding ribbon clamps (In vaults)	INWESCO Cat 12A56
Fargo Clamp	INWESCO Cat 12A57
Ground Rod	INWESCO Cat 12A60
Ground Inserts (Cast Bronze)	INWESCO Cat 12H69
Manhole Lids	Alhambra Foundry , Preferred Round covers
Manhole Ladders	Alhambra Foundry - Model A-3382 w/ A3383 Support bar
27 11 00 COMM EQUIP. ROOM	CAMPUS ALTERNATIVES
BDF/IDF Architecture	BDF/IDFs must be stacked, and require direct interior corridor entrance with keycode access control.
Ladder Racks	Chatsworth, APC, Homaco, Square D, Minimum 18" wide in BDF/IDF
2-post IDF racks	Chatsworth, APC, Eaton
Wall-Mounted Cabinets	Cooper B-Line DAMAC **DO NOT USE WALL MOUNTED CABINETS FOR IT SWITCH EQUIPMENT OR PATCH PANELS. THESE MUST USE FLOOR MOUNTED MINIMUM 42RU CABINETS AND RACKS.** Wall-mounted boxes are acceptable for certain utility control panels such as access control panels, building management panels, and are acceptable for certain cable management boxes such as fiber tube splice boxes and telecom block housing. 8" depth for wall-mounted cabinets must be included in minimum clearance calculations.
Equipment Cabinet	APC Netshelter, Chatsworth, Eaton. Each IDF/BDF must have a minimum of (1) 4-post 42" deep 42RU equipment cabinet with L6-30 power and quad 5-30 power for equipment housing (5KVA UPS for switch cabinet). Patch panel racks may be 2-post for housing both patch panels and associated switches in the same rack (stack each 48-port switch with a 48-port patch panel with <1' patch cables).
Network Switches	HP
Horizontal Managers	Panduit, SIEMON WM - 145-5, Chatsworth, Ortronics and APC
Fiber Optic Terminals (FOT's)-Housing	SIEMON RIC-3-72-01, Panduit
Fiber Terminal Adapters and Connectors	SIEMON RIC-FLC6-01 and connectors, Panduit
Plywood	Arch. Wood Protection, Chemco, National Plywood Industries, 1" minimum – Fire rating stamp must remain visible (do not paint over fire stamps)
Fire Retardant Paint	Flamort Co., Inc., FireNoMore International, International Fire Retardants, Inc. or EQUAL
Patch panels	Pan/Gen, SIEMON Z-MAX CAT6A/F/ UTP Shielded or equal. Each patch panel to have individual ground to rack ground bus bar, which is grounded to main ground bus bar (electrician to verify code compliance).
Cable Tags & Splice Labels	3M, Panduit, Tech Products
Protector Panels	Circa, Emerson, CommScope, Cook
27 13 00 COMM BACKBONE CABLING	CAMPUS ALTERNATIVES
Fiber (OSP and Riser) – Single Mode	SM: Corning or Sumitomo Electric FutureFLEX. Sumitomo tubing design must include structure for future additions both from BDF/IDF and to manholes along route for other college buildings

	and must not be built as a “standalone”.
Fiber (OSP and Riser) – Multi-Mode	OM4: Corning or Sumitomo Electric FutureFLEX ABF-50U OM4. See note above regarding tube design. Also, for multi-mode fire alarm panels must be planned separately from Comm Backbone cabling and may require different fiber (e.g. 62.5MM may be in use).
Copper OSP Cable	General Cable, Superior Essex, CommScope
Splice Bay & Relay Labels	3M, 5000 Scotchlite Decal System
ABF Tube Clips	Sumitomo Electric FutureFLEX
27 15 00 COMM HORIZONTAL CABLING	CAMPUS ALTERNATIVES
Station Cabling	PanGen or SIEMON Cat 6A, F/UTP Plenum-rated, Shielded
Jacks	PanGen or SIEMON Z-MAX 6A Shielded
Faceplates	PanGen or SIEMON
27 21 33 WIRELESS ACCESS POINTS	CAMPUS ALTERNATIVES
Indoor Access Points	Aruba – Wireless Access Points are Aruba with latest technology. (Design note: Each access point requires 2 CAT6A ports, each home run to separate patch panels in the same IDF/BDF rack with 30’ service loop above AP location except where this exceeds ethernet distance limitation).
Outdoor Access Points (entire perimeter coverage)	Aruba – Wireless Access Points are Aruba with latest technology. (Design note: Each access point requires 2 CAT6A ports, each home run to separate patch panels in the same IDF/BDF rack with 15’ service loop inside building at penetration).
27 40 00 AUDIO VISUAL	CAMPUS ALTERNATIVES
CONTROL SYSTEM and SWITCHING	UTELOGY or Extron controls, Extron Switches. (Reference models: IN1608xi or latest that supports HDBT WUXGA for WUXGA projectors and IN1808 or latest that supports 4k and HDBT for flat panels).
PROJECTOR	Epson, Panasonic, NEC- Minimum 1920 x 1200 resolution, 6000 lumens laser light source, 3-chip light processing (single chip laser is not acceptable), HDBase-T Connectivity, 2-power 200m Lens w/image shift in all directions
PROJECTOR SCREEN	DA-LITE, ELITE (match projector native aspect ratio and follow district standard for image size required based on seating in each room). Must be flush ceiling mount to maximize image. If manual is used for any reason, it must allow positioning lock.
FLAT SCREEN LED/LCD DISPLAYS	Samsung, Sony, NEC, LG latest technology designed specifically for and warranted specifically for COMMERCIAL INSTALLATIONS with associated control capabilities with multi-year commercial service warranties that include on-site service accommodations. Must follow district standard for image size and position required based on seating in each room.
LECTERN	SPECTRUM FREEDOM XRS, FORBES-AV, VREM AV
DOCUMENT CAMERA	ELMO, Epson, SAMSUNG
MICROPHONE	SHURE (technology must have static suppression when unmuted)
ANNOTATION DEVICE	SMART TECHNOLOGIES, POLYVISION, STEELCASE
INTERACTIVE DISPLAY/WHITEBOARD	Smart Technologies, Epson, Panasonic, POLYVISION, STEELCASE
CLASSROOM LIGHTING CONTROL	LUTRON, EXTRON (lights for area impacting display screens must be on discrete control)

SPEAKERS	JBL, Extron and , QSC
PC COMPUTERS	HP
LECTURE CAPTURE	Ensemble
DIV. 28: ELECTRONIC SAFETY & SECURITY	
DIV. 28: Licenses	ALL Div. 27 and Div. 28 (IT devices) requiring licenses MUST INCLUDE ALL REQUIRED LICENSES BY CONTRACTOR CFCI. CONTRACTOR MAY NOT ASSUME LICENSES ARE PROVIDED BY THE COLLEGE. Contractors must be required to consult with IT for interoperability/integration planning detail PRIOR to implementation due to the rapidly changing and complex IT environment.
28 10 00 ELECTRONIC ACCESS CONTROL	CAMPUS ALTERNATIVES
CARD READER	HID Global 920PMPTEKEA007, 921PMPTEKEA008, 910PMPTEKEA007 (use OSDP communication only)
CREDENTIALS	HID Global 5006PGGAN with LACCD Corporate 1000 Format: H800003
ACCESS CONTROL CABLE	Belden 638AFS
ACCESS CONTROL PANEL	Lenel LNL-X4420
POWER SUPPLY	LifeSafety Power FPO150/250-3D8P2M8NL4E8M2/P16 with BDM
REQUEST TO EXIT	Built into lockset. Motion sensor style not acceptable.
DOOR POSITION SENSOR	Schlage 7764 (with Molex connector)
LOCKDOWN BUTTON	STI SS2026LD-EN with 6/18 cable to Access Control Panel
ACCESS CONTROL SYSTEM	Lenel OnGuard Enterprise
28 20 00 ELECTRONIC SURVEILLANCE	CAMPUS ALTERNATIVES
IP CAMERAS	Axis Communication 8+ Megapixel
CAMERA MOUNTS	Axis Communication (Interior: Recessed, Exterior: Pendant style)
BIRD CONTROL SPIKES	Axis Communication (Installed on all susceptible cameras)
CAMERA POWER SUPPLY	Power Over Ethernet via Category 6A Ethernet only
RECORDING SERVER	BCD Video BCD215XH-EVS-LACCD-180T
VIEWING WORKSTATION	BCD Video BCDT6I-MVW-LACCD
VIDEO MANAGEMENT SYSTEM	Milestone XProtect Corporate
TV Panels	Samsung, Sony, NEC, LG latest technology designed specifically for and warranted specifically for COMMERCIAL INSTALLATIONS with associated control capabilities with multi-year commercial service warranties that include on-site service accommodations.
28 31 00 INTRUSION DETECTION	CAMPUS ALTERNATIVES
ALARM KEYPAD	Lenel LNL-CK
DURESS BUTTON	Bosch ISC-PB1-100
MOTION DETECTOR	Bosch DS9370
GLASS BREAK DETECTOR	Bosch DS1103I

INTRUSION DETECTION SYSTEM	Lenel OnGuard Enterprise
28 XX 00 EMERGENCY PHONES	CAMPUS ALTERNATIVES
PEDESTAL	Talk-A-Phone Co. WEBS-MT/R-OP2-4 with VOIP-500E
WALL	Talk-A-Phone Co. ETP-WMS-OP2 with VOIP-500E
AREA OF REFUGE	Talk-A-Phone Co. VOIP-500E
ELEVATOR	Talk-A-Phone Co. VOIP-500E
EMERGENCY PHONE CABLE	6-Strands of Single Mode Fiber for Pedestal and Elevator Category 6A Ethernet for Wall / Area of Refuge
CLASSROOM CAMPUS STANDARD PHONE	One location in each instructional space (e.g. classroom, lab). Place near exit door with full ADA compliance (height/clearances) and no interference in wall position from other devices (suggest allow 12"x12" as Cisco IP phone is wide).
28 XX 00 MASS-NOTIFICATION	
IP SPEAKER	TBD - throughout all transient and occupied spaces (e.g. corridors and bathrooms included)
MASS NOTIFICATION SYSTEM	TBD
DIV. 32: EXTERIOR IMPROVEMENTS	
IRRIGATION SYSTEMS	Match existing Campus Irrigation System REVIEW WITH LASC GARDENING STAFF
IRRIGATION CONTROLLER	Calsense ET 2000E (IP)
CONTROLLER REMOTE SITE MANAGEMENT	Toro TriComm Site Management
CONTROLLER HAND-HELD REMOTE CONTROL	Toro TMR-1
CONTROLLER ENCLOSURE	V.I.T. Strong Box SB-xxSS with QP, CSA, RGVRSS Options
RAIN SENSOR	Toro TRS
CONTROL WIRE - COMMON	Paige P7001D 12 AWG White
CONTROL WIRE – HOT	Paige P7001D 14 AWG Colored
WATERPROOF WIRE CONNECTOR	Spears DS-500 Dri-Splice
GROUNDING ROD	Paige 182007 with Paige 1820037P Connection
DIELECTRIC CONNECTION	Approved by Electrical Engineer
BOOSTER PUMP	Barrett Irriboost with Variable Speed Drive and SS Enclosure
BASKET STRAINER	Yardney SBx-T Series, Purple
BASKET STRAINER ENCLOSURE	V.I.T. Strong Box SBBC-xxSS with QP Option
PRESSURE REGULATOR	Wilkins 500 Series
MASTER VALVE	Toro 220 Brass or Toro P-220S Plastic, or Rainbird P220 Brass series with Pressure regulator
FLOW SENSOR	Toro TFS Series
FERTILIZER INJECTOR	EZ-FLO EZ Series
GATE VALVE (2" and SMALLER)	Nibco T-113 Series

GATE VALVE (2 1/2" and LARGER)	Nibco F-619-SON Series
BIRD DETERRANTS	EAGLE EYE BIRD CONTROL OR EQUAL
GROUND PREPARATION FOR LANDSCAPING	NO CONCRETE OR ASPALT ANT NO , AGGREATE OVER 1/4" , NEW TOP SOIL REQUIRED TOP 6"
BALL VALVE (2" and SMALLER)	Nibco T-585-70 Series
AIR RELEASE VALVE	Cla-Val #33-A Series
QUICK COUPLING VALVE	Rain Bird #44-NP or TORO #44 NP Series
ELECTRIC CONTROL VALVE	Rainbird P-220 brass series
DRIP ZONE VALVE KIT	Toro TPV Series
VALVE BOX	NDS Pro Plus Series (green plastic with purple bolt-down cover)
MAINLINE PIPING (6" and LARGER)	Pacific Plastics or equal CL200 PVC Gasketed – Purple
MAINLINE PIPING (2" - 4")	Pacific Plastics or equal CL315 Solvent-Weld PVC – Purple
MAINLINE PIPING (1 1/2" and SMALLER)	Pacific Plastics or equal SCH 40 Solvent-Weld PVC – Purple or Sch 80 PVC
LATERL LINE PIPING	Pacific Plastics or equal SCH 40 Solvent-Weld PVC – Purple or Sch 80 PVC
PIPE / WIRE SLEEVING	Pacific Plastics or equal SCH 40 Solvent-Weld PVC
PIPE FITTINGS (MAINLINE)	Spears or equal SCH 80 PVC
PIPE FITTINGS (LATERAL LINES)	Spears or equal SCH 40 PVC
ARTIFICIAL TURF COOLING SYSTEM HEADS	Toro TS90TP Series
LARGE TURF ROTOR HEADS	Hunter I-40, I-40 O/N
MEDIUM ROTOR HEADS	Hunter I-20
SMALL ROTOR HEADS	HunterPGP
FIXED SPRAY HEADS	Hunter PS
FLOOD BUBBLER	Hunter
TREE ROOT WATERING SYSTEM	Rain Bird RWS Series
DRIP LINE SYSTEMS	Toro DL2000 RGP-xxx-xx-E Series
DRIP SYSTEM FITTINGS / ACCESSORIES	Toro – Miscellaneous
LANDSCAPE DESIGN	CAMPUS ALTERNATIVES
LARGE TREES	Ceadrus deodora, Deodar cedar
	Platanus racemosa, California sycamore
	Quercus agrifolia, Coast live oak
MEDIUM TREES PRIMARILY FOR SHADE	Cinnamonium camphora, Camphor tree, Liriodendron arnoldii, Tulip tree
	Platanus acerifolia 'Yarwoodii', Yarwood plane tree
	Podocarpus gracilior, Fern pine
	Quercus ilex, Holly oak

SMALL TREES FOR FLOWERS & FRAGRANCE	Agonis flexusa, Pepermint tree
	Arbutus 'Marina', Marina strawberry tree
	Bauhinia 'Blakeana' Hong Kong orchid tree
	Callistemon viminalis, Weeping bottle brush
	Cassia leptophylla, Gold medallion tree
	Eucalyptus erythricorys, Red cap gum
	Eucalyptus torquata, Coral gum
	Lagerstromia indica, Crape myrtle
	Laurus nobolis, Sweet bay
	Lyonothamus asplenifolius, Catalina ironwood
	Magnolia "Little gem", Little gem magnolia
	Pistacia chinensis, Chinese pistace
	Tabebuia lpe, Pink trumpet tree
PALMS	Chamaerops humilis, Meditteranean fan palm
	Cycas revoluta, Sago palm
	Trachycarpus fortunei, Winmill palm
SHRUBS INACTIVE AREAS	Achillea sp., Yarrow
	Arctostaphylos 'Sunset', Sunset manzanita
	Berberis 'Golden abundance' Oregon grape
	Carpenteria Calif., Bush anemone
	Fremontedendron 'California gold', California fremontia
	Garrya eliptica, Coast silk tassle
	Heteromeles arbutifolia, Toyon
	Heuchera sp., Alum root
	Penstemon 'Margarita BOP', Penstemon
	Rhamnus calif. 'San Bruno's mound', Coffeeberry
	Rhus integrifolia, Lemonade berry
	Ribes sanguineum, Pink flowering currant
	Ribes viburnifolium, Catalina evergreen currant
	Romneya coulteri, Matilija poppy
SHRUBS IN IRRIGATED AREAS	Agave attenuatta, Fox tail agave
	Anigozanthus sp., Kangaroo paw
	Baccharis pilularis 'Pigeon point', Coyote bush
	Callistemon 'Little John' Little John bottlebrush

	Cistus sp., Rockrose
	Coelonema pulchrum, Pink breath of heaven
	Cotoneaster sp., Cotoneaster
	Elaeagnus pungens, Silverberry
	Hemerocallis sp., Daylily
	Juniperus sp., Juniper
	Leptospermum sp., Australian tea tree
	Ligustrum texanum, Texas privet
	Myrtus communis, Myrtle
	Osmanthus fragrans, Sweet olive
	Phormium tenax, Flax
	Pittosporum tobira sp., Tobira
	Raphiolepis indica sp., Indian hawthorne
	Viburnum tinus sp., Laurustinus