Washington Association of Maintenance and Operation Administrators

WAMOA

# Dear Designer

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# EXTERIOR

- Landscaping
  - Focus on drought resistant/low maintenance design/plants
  - Increase hardscapes
  - Do not plant close to buildings or air intakes (minimum 2’ from edge of buildings)
  - No trees, walls, fences or other structures that facilitate roof access for vandals
  - No plants taller than 2’-4’ foot tall– need improved sight lines across campus
  - Consider tree placement and growth pattern to prevent obstruction of traffic site lines, light fixtures, and readerboards.
  - Select more evergreen shrubs and trees, with color, slower growth to limit pruning and leaf disposal
- Lighting
  - Extend lighting design beyond parking lots (highlight wooded areas/surrounding land)
  - Be aware of where lights shine on neighbors (LED, views, houses)
  - Avoiding lighting that requires renting lifts (very expensive)
  - Motion lights around play areas
  - Consider location and materials of exterior light fixtures to prevent water intrusion
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# EXTERIOR

## Water/System Management

- Prepare for 100 year rain (increased capacity)
- Clean out for sewers directly outside of each building
- More rain gardens

## Roofs

- No flat roofs (depending on district and area)
- If flat roofs are specified, no interior drains, low parapets, equipment at roof edge, small roof well areas, complicated flashing or oversize roof access
- Leaf/debris guarded gutters
- Be aware of access points for non-authorized people
- Consider OSHA/WISHA standards for roof access and safety
- Easy access for personnel
- Easily accessible systems that are on roof (make one-man job)
- Better accessibility to HVAC equipment as well as room to work or replace parts/filters

## Security

- More cameras, higher resolution, and IT backbone to support bandwidth

# EXTERIOR

## Traffic Patterns

- Add separate secondary emergency vehicle access – away from main entrance
- Separate bus loops from parent drop/pick-up (dangerous when too close), but combine walking access to both, if possible.

## Playgrounds

- Work with maintenance/operations and district risk management before accepting donated playground equipment or specifying new equipment so that they comply with code and district standards
- Need higher performing fall protection when play areas are close to athletic fields (cleats tear up easily - very expensive to replace); No play chips
- Higher function/performance of equipment and surfacing for ease of  maintenance, inspections, and repair
- Consider a primary access to synthetic fields that protects the track

## Miscellaneous

- Better access and size to dumpsters and recycle receptacles; consider ramps and potential L&I concerns
  - Closer to appropriate buildings / not across parking lots
- Exterior building colors; fit into the area and timeless
- Simplify color palette for ease of long-term maintenance

# INTERIOR

## Security

- Protected foyer / easily locked-down
- Security vestibules; Best practice protection; No floor-to-ceiling glazing anywhere.
- More cameras, higher resolution – better coverage if less cameras
- OT network alongside IT
- Mass notification system (emergency interior communication)
- Key controls and limiting access
- Office wing separate from ED wing

## Layout/systems

- Improved access for CTE classroom with appropriate space
- Increased size of J-closets to handle necessary storage (increase the #); consider layout of equipment/shelving inside J-closets
- Eye wash stations/Chemical showers w/ floor drains
- Improved spaces for servicing systems and equipment / placement for serviceability
- Windows that open in the bottom floor
- All DDC controls IP based (open source)
- Connect HVAC and lighting through DDC for greater conservation/performance
- No operable walls

# INTERIOR

## Layout/Systems

- Elevator machine roomless vs. the on-going maintenance.  Does not save money
- Mop sinks in kitchens / operating floor drains
- Mezzanine access stairs in lieu of ladders
- Include/increase the number of dehumidifiers
- HVAC filter consistency
- Hoist in mechanical rooms for simplified maintenance, especially when located on the second floor

## Finishes

- Do not select custom or sale items that are not easily available later
- Need more consistency with finishes throughout district to optimize on-going maintenance costs/labor
  - Limit the number of different light fixtures and consider placement for easy accessibility
- Increased lifecycle of materials for lower maintenance cost
- More tackable wall surfaces
- Asbestos-free buildings/products
- No lead water fixtures
  - Be aware of imported products that do not provide ingredient transparency (ie., OSB from Canada has gluten which causes excess mold/mildew issues)

# INTERIOR

## Finishes (continued)

- Map of interior materials at the time of turnover that includes updated SOP's
- Always include corridor wainscot

## Miscellaneous

- Do not select an out-of-state architect (they do not understand our region)
- Involve operations/maintenance in full design process, beginning with ed specs, and in constructability review process
- Need 35-40 year lifecycle
  - Better balance of design and function
- Value Engineering should weigh construction budget vs. lifecycle costs – key performance items including mechanical should not to be VE'd as a first option
- Specs to include HANDS-ON and VIDEO training for systems and products
  - Set aside Capital Project funds to support training for new buildings
    - Multiple sessions (increased technical advances need greater support)
- Recommission building in 3 years (heating/cooling)
- Include maintenance team during inspection process
- Electronic copy of approved exiting for future duplication
- Leave wall space near interior doors to mount emergency exit plans