



City of Tacoma

## **Public Works Facilities Management**

**ADDENDUM NO. 1**

**DATE: 10/11/2024**

### **REVISIONS TO:**

**Request for Proposals Specification No. PW24-0192F  
Facility Condition Assessment**

### **NOTICE TO ALL PROPOSERS:**

This addendum is issued to clarify, revise, add to or delete from, the original specification documents for the above project. This addendum, as integrated with the original specification documents, shall form the specification documents. The noted revisions shall take precedence over previously issued specification documents and shall become part of this contract.

### **REVISIONS TO THE SUBMITTAL DEADLINE:**

The submittal deadline remains the same.

### **REVISIONS TO THE GENERAL INFORMATION AND REQUIREMENTS:**

Facility Condition Assessment – TVE

**NOTE:** Acknowledge receipt of this addendum by initialing the corresponding space as indicated on the signature page. Vendors who have already submitted their bid/proposal may contact the Purchasing Division at 253-502-8468 and request return of their bid/proposal for acknowledgment and re-submittal. Or, a letter acknowledging receipt of this addendum may be submitted in an envelope marked Request for Proposals Specification No. PW24-0192F Addendum No. 1. The City reserves the right to reject any and all bids, including, in certain circumstances, for failure to appropriately acknowledge this addendum.

cc: Stephanie Mehr-Hickson/Public Works



**Tacoma Venues & Events**

2023 Facility Condition Assessment

# Facility Detail Report



Prepared by MENG Analysis  
July 28, 2023

## Facility Summary

### Tacoma Venues & Events

Greater Tacoma Convention Center  
Greater Tacoma Convention Center

1500 Commerce Street  
Tacoma, WA 98402

Facility Size - Gross S.F.	227,449
Year Of Original Construction	2004
Facility Use Type	Convention Center
Construction Type	Medium
# of Floors	5
Energy Source	Gas
Year Of Last Renovation	2004
Historic Register	No



		Total Project Cost	Total Project Cost Present Value
Weighted Avg Condition Score	2.5		
Facility Condition Index (FCI)	0.10	Observed Deficiencies 2023 - 2028	\$4,326,000
Current Replacement Value (CRV)	\$164,673,000	Predicted Renewal Budget 2029 - 2042	\$73,678,000
Beginning Budget Year	2023	Opportunities	\$6,218,000
Escalation	3%		N/A
Discount Rate	1.5%		

## Facility Condition Summary

Opened in November of 2004, the Greater Tacoma Convention Center is one of the largest meeting locations in Washington State, with a substantial expo hall floor, banquet rooms, and a number meeting rooms. It has the full complement of back-of-house support systems including a large commercial kitchen for event catering, loading dock, an attached three-story parking structure, and parking floor below the convention center. Roofing is TPO membrane and exterior cladding is a combination of multi-story glass curtain walls with steel exterior sunshades, metal and cementitious panel cladding, over-sized pairs of aluminum storefront doors, and an array of overhead coiling doors for event loading. HVAC is a four-pipe central plant with two boilers, two chillers, two cooling towers, and two sets of two pumps for each hydronic system, supplying nine air handling units. Plumbing includes restrooms, central kitchen, concessions kitchen, drinking fountains, and several kitchenettes. Domestic hot water is from two gas-fired boilers and multiple electric tank-type units. Domestic and fire pumps are provided due to low city water pressure. Power is 480V three-phase with four different 2,000A services for the main building, plus one smaller for the west parking garage. Lighting is a mix of original fluorescent and LED. Data is high-speed fiber-optic, with guest services provided by a third party. The convention center kitchen grease interceptor is located in the adjacent hotel parking garage, and the hotel main electrical service, generator, and fuel tank are located at the convention center.

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## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>A Substructure</b>			<b>2.0</b>			
<b>A10 Foundations</b>						
<b>A1010 Standard Foundations</b>	2004	2004	2	TRB	06/05/23	Concrete foundations, no issues reported.
<b>A1030 Slab On Grade</b>	2004	2004	2	TRB	06/05/23	Concrete slab on grade, no issues reported. Minor cracking.
<b>A20 Basements</b>						
<b>A2020 Basement Walls</b>	2004	2004	3	TRB	06/05/23	Limited basement area, some efflorescence noted at east parking structure back wall.
<b>B Shell</b>			<b>2.7</b>			
<b>B10 Superstructure</b>						
<b>B1010 Floor Construction</b>	2004	2004	2	TRB	06/05/23	Composite concrete with steel pan deck on steel wide-flange structure and fireproofing. Batt insulation with faced vapor barrier below parking structure. Effervescence below post-tension slabs at parking structure, and there are areas of known corrosion of topping slab reinforcing mesh. Based on evidence of moisture exposure in the slab, there are concerns of corrosion of the post-tension cables.
<b>B1020 Roof Construction</b>	2004	2004	2	TRB	06/05/23	Steel on wide flange and heavy steel truss structure, no issues reported.
<b>B20 Exterior Closure</b>						
<b>B2010 Exterior Walls</b>	2004	2004	3	TRB	06/05/23	Wall cladding is a combination of pre-finished horizontal box rib metal siding with exposed fasteners and painted cementitious stucco on metal studs. The south wall at Ballroom D leaks. It was reportedly constructed as a temporary seven-year wall with no insulation and vapor barrier (intended to have the hotel built up against the convention center and was not constructed as a permanent wall).



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<b>B Shell</b>				<b>2.7</b>			
<b>B20 Exterior Closure</b>							
<b>B2020 Exterior Windows</b>	2004	2004	3	TRB	06/05/23	Significant area of north- and east-facing curtain wall glazing. Concerns expressed with fifth floor seals, NE corner picture windows switched with art project, minor issues observed with sealant spacers, but no leakage reported or apparent. Continue regular monitoring.	
<b>B2030 Exterior Doors</b>	2004	2004	3	TRB	06/05/23	Aluminum storefront entry systems. Wear and tear on heavy-use overhead doors, but operational. Entry hardware is at end of life and experiencing issues on pairs of oversized public entry doors (hinges, locking pins failing to engage and secure doors, panic hardware issues primarily on third floor). ADA power-assist is now working, but has had a history of recurring maintenance needs.	
<b>B30 Roofing</b>							
<b>B3010 Roof Coverings</b>	2004	2004	3	TRB	06/05/23	TPO membrane in generally good condition. One small leak over fifth floor pre-function/lobby that may or may not be related to flashings or roofing (could also be from small leak in fire sprinkler line). This section of roof area above Commerce Street was inaccessible for evaluation during the survey and requires special safety equipment to access. Have a roofer conduct investigation and patch area as needed.	
<b>B3020 Roof Openings</b>	2004	2004	3	TRB	06/05/23	Access hatch (accessed via alternating tread ships ladder) and roof access doors. No issues reported.	
<b>B3030 Projections</b>	2004	2004	3	TRB	06/05/23	Metal sun shade structure along Commerce Street, with corrosion occurring on top connection components. North shade system bars coated in dirt and moss. Loading dock canopy is open air, there is some corrosion, and there are bird nesting issues. Deck waterproof traffic surfacing (at "Canyon" and adjacent balconies) past end of life.	

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Systems	Original System Date	Renewal Date Last	Score	Surveyor	Survey Date	Comments
<b>C Interiors</b>			<b>2.2</b>			
<b>C10 Interior Construction</b>						
<b>C1010 Partitions</b>	2004	2004	3	TRB	06/05/23	Gypsum on steel studs and areas of aluminum storefront glazing walls. Operable ("air") walls in exec hall, ballroom, and 300 rooms. Difficult to operate and in need of maintenance and tuning (pending this month). Some parts have fallen off; Huffcore was the original manufacturer and is no longer in business.
<b>C1020 Interior Doors</b>	2004	2004	3	TRB	06/05/23	Wood doors in metal frames, some door frame corrosion on inside at admin offices. Hardware closure issues at ballrooms; locking pins failing and floor plates broken, minor maintenance to replace and repair components. Other back-of-house interior doors are typically painted hollow metal in hollow metal frames, high-traffic doors in need of some finish touch-up. Overhead coiling security grille doors in bathrooms.
<b>C1030 Fittings</b>	2004	2004	2	TRB	06/05/23	Stainless base, artwork, painted metal handrails, identifying devices, special meeting room entry surrounds, lockers at staff area. Perforated stainless and glass top convention event beverage bar features.
<b>C20 Staircases</b>						
<b>C2010 Stair Construction</b>	2004	2004	2	TRB	06/05/23	Decorative steel and grates in front of house serving floors 3 to 4, and 4 to 5. Patina on factory-finish grating on stairs and ramps caused by fading and orange tone patchy discoloration from UV exposure. Steel pan with poured-in-place concrete treads and landings at back of house. Other main convention circulation stairs include cast-in-place concrete with inset non-slip safety nosings.
<b>C30 Interior Finishes</b>						
<b>C3010 Wall Finishes</b>	2004	2004	2	TRB	06/05/23	Painted walls and MDF wainscot at public corridors and expo hall spaces. Some areas of corrugated perforated steel and polycarbonate around elevator shafts. Fabric-wrapped acoustical wall panels in some meeting conference rooms. 12 x 12 wainscot ceramic tile in restrooms.

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<b>C Interiors</b>			<b>2.2</b>			
<b>C30 Interior Finishes</b>						
<b>C3020 Floor Finishes</b>	2004	2019	2	TRB	06/05/23	New carpet, 12x12 ceramic tiles in restrooms, quarry tile in kitchen, other areas of VCT at some back-of-house areas.
<b>C3030 Ceiling Finishes</b>	2004	2004	2	TRB	06/05/23	Painted gypsum, painted gypsum floating clouds, stainless-look perforated 2x2 lay-in acoustic tiles, food grade 2x4 suspended acoustic tiles in kitchen, painted structure in main convention area.
<b>D Services</b>			<b>2.5</b>			
<b>D10 Vertical Transportation</b>						
<b>D1010 Elevators and Lifts</b>	2004	2004	2	DCS	06/05/23	One 10k-lb and two 4k-lb back-of-house three-stop hydraulic freight elevators; two 4k-lb front-of-house passenger overhead traction elevators. Three pairs of escalators. The freight elevator machinery room is in the east parking garage and includes two Bard through-wall air conditioning units with no issues reported. The passenger elevator overhead traction machine room has one cooling unit and thermostat providing good cooling for one elevator, but not the other, which overheats.
<b>D1090 Other Conveying Systems</b>	2004	2004	2	DCS	06/05/23	Five dock levelers, one motorized hydraulic, others manual.
<b>D20 Plumbing</b>						
<b>D2010 Plumbing Fixtures</b>	2004	2004	2	DCS	06/05/23	Restroom plumbing fixtures with water-conserving 1.6-gpf water closets; all flushing fixture flush valves and lavatory faucets have been retrofit with battery-operated automatic infrared trim (faucets and flush valves). Showers at staff locker room bathrooms. Drinking fountains, some with filtered water bottle fillers. Safety shower and eyewash at chiller room.

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<b>D Services</b>				<b>2.5</b>			
<b>D20 Plumbing</b>							
<b>D2020 Domestic Water Distribution</b>	2004	2004	3	DCS	06/05/23	Four-inch service with pressure at 50 psig, hence a triplex booster pump system is installed. Each pump is 7.5-hp. The originally designed water softener system is not installed, but no taste or color issues are reported. Copper distribution piping, with some hot water piping missing insulation - minor maintenance to install where missing, mostly near hot water tanks. Two one-million btu/hr gas-fired Laars domestic hot water heaters with recirculation pumps and two 119-gallon storage tanks. Several temperature mixing valves, plus building loop recirculation pumps. About one-dozen smaller electric domestic hot water heaters where more remote from the central system. Hot water pipe insulation missing in some locations, especially at smaller distributed water heaters - minor maintenance to insulate per code.	
<b>D2030 Sanitary Waste</b>	2004	2004	3	DCS	06/05/23	Mix of cast iron and ABS, some cast iron is rusting. Grease waste system was failed and has been partially replaced. Rust and corrosion observed at cast iron fittings in east parking garage, with signs of recent leakage.	
<b>D2040 Rain Water Drainage</b>	2004	2004	2	DCS	06/05/23	Roof drains and overflow roof drains, all internal to storm and overflow to grade via tongues. Light-duty plastic roof drain screens with multiple blown off during site visit - minor maintenance to replace missing and fasten all to remain in place during windy weather.	
<b>D2090 Other Plumbing Systems</b>	2004	2004	3	DCS	06/05/23	Atlas Copco air compressor in chiller room supplying the exhibition hall utility boxes with distributed compressed air. The utility boxes also include water and drain service; along with power and communications.	

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<b>D Services</b>				<b>2.5</b>			
<b>D30 HVAC</b>							
<b>D3010 Energy Supply</b>	2004	2004	2	DCS	06/05/23	Natural gas to space heating boilers, domestic hot water heaters, and commercial kitchen equipment; no issues reported. No apparent submetering, other than at main service entry, which appears vandalized - see G3060 Fuel Distribution.	
<b>D3020 Heat Generating Systems</b>	2004	2004	3	DCS	06/05/23	Two Weil-McLain standard-efficiency (80%) 1,928-mbh gas-fired space heating hot water boilers with two distribution system circulating pumps and two boiler pumps. Five to ten years remaining life with continued good maintenance. Two heating hot water distribution pumps with 30-hp variable frequency drive motors. Two boiler circulating pumps of smaller capacity. Air separator and expansion tank. Insulated heating hot water distribution piping to air handling units and reheat coils.	
<b>D3030 Cooling Generating Systems</b>	2004	2004	3	DCS	06/05/23	Two aged McQuay chillers and two aged BAC cooling towers; two 30-hp condenser water pumps (900 gpm @ 70 ft tdh) and two 50-hp chilled water pumps (900 gpm @ 125 ft tdh) with variable frequency drives. Air separator, expansion tank, thermal storage tank, water chemistry for cooling tower, and chiller room refrigerant leak monitoring and ventilation. Insulated and heat-traced condenser water piping to outside cooling tower; insulated chilled water distribution piping inside the convention center.	

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<b>D Services</b>			<b>2.5</b>			
<b>D30 HVAC</b>						
<b>D3040 HVAC Distribution Systems</b>	2004	2004	2	DCS	06/05/23	Nine four-pipe air handling units; some with open-plenum return with supply fan only, some fully-ducted with supply and return fans. All air handling unit (AHU) fans with variable frequency drives. AHUs have full economizer (free cooling), MERV-8 prefilters, MERV-11 final filters, heating and cooling coils, fans, and COVID-19-era discharge duct ionization devices. Reportedly, three open-plenum return AHUs serve the main exhibit hall, the others are fully ducted serving ballrooms, common areas, and support spaces. Various other equipment including several large return air fans in the lower air handling room. AHU and other large fans range from about 7.5-hp up to about 30-hp; most or all with Danfoss variable frequency drives. Poor service in contract sales area. Ongoing problem with buses and other vehicles idling in alley adjacent to mid-level mechanical room air handling unit outside air intake louvers - minor maintenance to install an air quality sensor and coordinate with security to keep this area clear of idling vehicles. High humidity in the water feature pump under the stairs.
<b>D3050 Terminal and Package Units</b>	2004	2004	3	DCS	06/05/23	Variable air volume terminal units with mix of electric resistance for smaller and hot water for larger reheat coils. Several packaged air conditioning or heat pump units. Several unit, wall, and cabinet heaters. Recently installed ductless-split system at loading dock yard guard shack. Dedicated cooling for elevator machinery rooms and data room.
<b>D3060 Controls and Instrumentation</b>	2004	2015	3	DCS	06/05/23	Piecemeal upgrades and various programming for changes in operations over the years. Upcoming compliance deadline for WA State Clean Buildings program.
<b>D3090 Other HVAC Systems and Equipment</b>	2004	2004	3	DCS	06/05/23	Grease hoods; two large at main kitchen, two small at concessions kitchen, with rooftop exhaust fans and make-up air from main HVAC system (no dedicated make-up air system).

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<b>D Services</b>				<b>2.5</b>			
<b>D40 Fire Protection</b>							
<b>D4010 Fire Protection Sprinkler Systems</b>	2004	2004	2	DCS	06/05/23	Eight-inch service to backflow preventer to 60-hp electric fire pump (1,000 gpm @ 75 psi) with jockey pump, then six-inch distribution throughout, with multiple four-inch and smaller wet- and dry-pipe sprinkler risers with alarm valves and air compressors. Several minor fire pump control issues - minor maintenance to address. Base of riser city pressure is 50 psig, boosted to 160 psig at fire and jockey pump station. Recent sprinkler confidence testing completed ok.	
<b>D4020 Stand-Pipe and Hose Systems</b>	2004	2004	2	DCS	06/05/23	Hose cabinets without hoses, but connections for fire department use only.	
<b>D4030 Fire Protection Specialties</b>	2004	2004	2	DCS	06/05/23	Fire extinguishers, first aid kits, and AEDs at various locations.	
<b>D4090 Other Fire Protection Systems</b>	2004	2004	2	DCS	06/05/23	The two passenger elevators have remote control at the security office. Reportedly, the HVAC system includes an atrium smoke control system, but special controls and/or fire command center were not observed - confirm operability meets code and fire marshal requirements.	
<b>D50 Electrical</b>							
<b>D5010 Electrical Service and Distribution</b>	2004	2004	2	DCS	06/05/23	Five services all at 480V, with A, B, C, & D at 2,000A in main electrical room, and smaller E at west parking garage electrical room. Each of the five services has a separate Tacoma Power utility meter. Multiple transformers and many dozens of 480V and 208V, three-phase electrical power distribution panels throughout, including flexible distribution system for the exhibit hall, plus three-phase powered floor boxes - reportedly as many as sixty boxes. Main and satellite electrical rooms are ventilated and/or cooled with no issues reported.  The main electrical services for the adjacent hotel complex are located in the convention center main electrical room; the three services each include a dedicated Tacoma Power utility meter.	

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<b>D Services</b>				<b>2.5</b>			
<b>D50 Electrical</b>							
<b>D5020</b>	<b>Lighting and Branch Wiring</b>	2004	2004	3	DCS	06/05/23	Mix of fluorescent and compact fluorescent at common areas, offices, meeting rooms and support spaces, with LED at the main exhibit hall and in both (east and west) parking garages. Both Lutron and Crestron lighting controls, with mix of manual at support areas and scene-type controls at program and event spaces. The aging controls are increasingly problematic. Some local occupancy sensor control, but some are slow to respond or failed. Reportedly, there are over sixty different original lighting fixtures, ballasts, and lamp types, complicating maintenance.
<b>D5032</b>	<b>Low Voltage Communication</b>	2004	2004	2	DCS	06/05/23	VoIP telephone, intercoms, public address, program space A/V support, with no issues reported.
<b>D5037</b>	<b>Low Voltage Fire Alarm</b>	2004	2004	3	DCS	06/05/23	Aged fire alarm with obsolete fire alarm control panel and limited notification in some areas, such as parking garages. Reportedly aged and failing specialties, such as beam detection system.
<b>D5038</b>	<b>Low Voltage Security</b>	2004	2004	3	DCS	06/05/23	Newer city standard CyberLock system at main entry doors, but with aging card-key access at some internal doors. CCTV at building perimeter and certain inside areas. Reportedly, the building is staffed 24x7, hence no intrusion detection system. While the CyberLock system is problematic at other city facilities, the staff report no issues at the convention center. Some spaces require a mix of traditional keys to access.
<b>D5039</b>	<b>Low Voltage Data</b>	2004	2015	2	DCS	06/05/23	City operations with high-speed fiber-optic data, distribution, and WiFi. Event guest data provided by third party (Mobility) via WiFi and some networked drops, including at exhibit hall floor boxes. The two systems share a common MDF, complete with two air conditioning systems. Several IDF racks support distributed operations, specifically for the exhibit hall floor boxes. No issues reported.



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<b>D Services</b>				<b>2.5</b>			
<b>D50 Electrical</b>							
<b>D5090 Other Electrical Systems</b>	2004	2004	3	DCS	06/05/23	400-kW emergency diesel generator in loading dock area mechanical yard, with automatic transfer switch (ATS) No. 1 serving the west parking garage and ATS No. 2 serving the main building. Egress lighting is designated lamps and fixtures throughout, with dedicated exit signs. The emergency generator is only for emergency life/safety loads; for example, no standby power for the many kitchen coolers and freezers.	
<b>E Equipment and Furnishings</b>				<b>3.0</b>			
<b>E10 Equipment</b>							
<b>E1010 Commercial Equipment</b>	2004	2004	3	DCS	06/05/23	Office equipment, residential appliances at kitchenettes, other miscellaneous equipment.	
<b>E1020 Institutional Equipment</b>	2004	2004	3	DCS	06/05/23	Commercial kitchen equipment at main and concessions kitchens, including multiple walk-in coolers and freezers, plus multiple reach-in units. Light-duty maintenance shop equipment and tools. Commercial laundry equipment was not observed but may be present in service tenant (Aramark) space.	
<b>E1030 Vehicular Equipment</b>	2004	2004	3	DCS	06/05/23	Dock levelers with ICC restraints but no signaling system. Parking garage control islands, but control equipment all removed, in favor of self-reporting payment via wireless self-service kiosks. No space availability signaling system. No motorized gates, however the east garage has motorized roll-up doors. Various other internal roll-up doors.	
<b>E20 Furnishings</b>							
<b>E2010 Fixed Furnishings</b>	2004	2004	2	TRB	06/05/23	Wood veneer built-in casework and plastic laminate counters in admin and break rooms. Stainless counter systems at kitchen and related food service areas.	

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### F Special Construction

F10 Special Construction

F1040 Special Facilities

2004 2004 3 DCS 06/05/23 Bee hives on the roof to SW. Bird poison broadcast machine failed and tipped over on roof.

## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

B1010	Floor Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	1	\$20,000.00	LS	\$20,000	\$39,000

**Deficient Material:** Concrete Deck

Significant areas of parking structure effervescence and cracking is showing up on two floors of the post-tension slabs below decks exposed to weather. Evidence of efflorescence observed at what appear to be post-tension end cap plugs. There are areas of known corrosion of topping slab reinforcing mesh (see also G2020 Parking Lots). Based on observed moisture exposure, there are concerns about post-tension cable corrosion.

**Remedial Action:**

Have special testing company investigate and test post-tension cabling for potential corrosion. (Estimate is only a placeholder for investigation and testing only, not including any repair work if issues are found.)

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

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Escalation 3%

Discount Rate 1.5%

B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	5,000	\$95.00	SF	\$475,000	\$930,000

**Deficient Material:** Exterior Wall

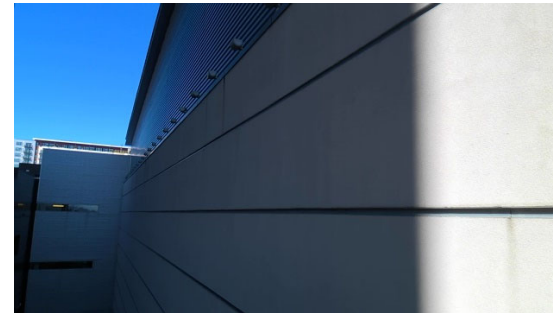
South wall at the "Canyon," cement stucco showing water intrusion, and reportedly leaks into Ballroom D in wind-driven rain events. It was reportedly constructed as a temporary seven-year wall with no insulation and vapor barrier (intended to have the hotel built up against the convention center and was not constructed as a permanent wall).

**Remedial Action:**

Remove cladding, insulate wall, install sheathing, weather-resistive barrier and drainage plane, install new rain screen cladding and all associated flashings.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Escalation 3%

Discount Rate 1.5%

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B2030	Exterior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	6	\$1,000.00	EA	\$6,000	\$12,000

**Deficient Material:** Door Hardware

Entry hardware is at end of life issues on public entry doors (locking pins failing to engage and secure doors panic hardware issues, primarily on third floor).

**Remedial Action:**

Replace hardware and adjust operations.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	7,525	\$17.00	SF	\$127,925	\$251,000

**Deficient Material:** Balcony

Deck waterproof traffic surfacing at "Canyon" and adjacent balconies past end of life.

**Remedial Action:**

Remove, prep, and reinstall waterproof traffic coatings.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Escalation 3%

Discount Rate 1.5%

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B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	1	\$15,000.00	LS	\$15,000	\$29,000

**Deficient Material:** Canopy

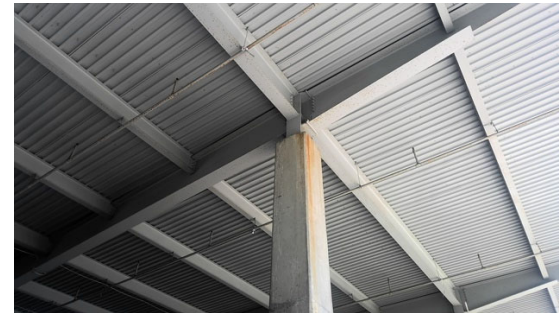
Corrosion of loading dock steel components beginning to bloom.

**Remedial Action:**

Strip, prep, and recoat loading canopy steel with industrial exterior steel coating system.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$25,000.00	LS	\$25,000	\$49,000

**Deficient Material:** Shade Device

Metal sun shade structure on east facade along Commerce Street, with corrosion occurring on top connection components. South shade system bars coated in dirt and moss.

**Remedial Action:**

Strip, prep, and recoat shade device structural components that are corroding with industrial exterior steel coating system.  
Clean south-facing system components.

**Action Type:**

Other





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

C1020	Interior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	14	\$1,400.00	EA	\$19,600	\$38,000

**Deficient Material:** Door Frames

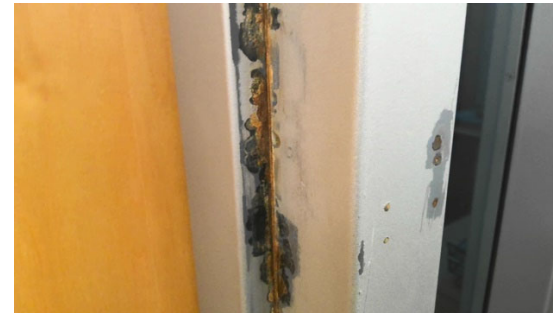
14 door frames corroding from the inside at the admin offices, likely due to chemical reaction with frame fireproofing filler.

**Remedial Action:**

Remove and replace frames.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D1010	Elevators and Lifts	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Elevator  
Reported hydraulic leak at Freight Elevator No. 5.

**Remedial Action:**  
Repair leak.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D1010	Elevators and Lifts	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$11,000.00	LS	\$11,000	\$22,000

**Deficient Material:** Elevator Machine Room Cooling  
Poor cooling distribution at the passenger overhead traction machine room.

**Remedial Action:**  
Provide supplemental cooling for the second passenger elevator traction motor and controls.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D1010	Elevators and Lifts	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	2	\$14,000.00	EA	\$28,000	\$55,000

**Deficient Material:** Escalator

The floor 3/4 escalator is problematic, reportedly due to poorly fit moving handrail.

**Remedial Action:**

Repair floor 3/4 escalator.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D2020	Domestic Water Distribution	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	2	\$35,000.00	EA	\$70,000	\$137,000

**Deficient Material:** Hot water heater

Domestic hot water heaters beginning to approach end of life.

**Remedial Action:**

Budget to replace upon failure.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D2030	Sanitary Waste	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	227,449	\$0.30	SF	\$68,235	\$134,000

**Deficient Material:** Cast Iron waste piping

Rusted and corroding waste piping at east parking garage ceiling with several signs of recent leakage.

**Remedial Action:**

Clean, inspect, test, and repair or replace rusted and corroded waste piping at east parking garage. Inspect other waste piping throughout and repair as needed.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D3030	Cooling Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	2	\$100,000.00	EA	\$200,000	\$392,000

**Deficient Material:** Chiller

Chillers are original (2004); one has a refrigerant leak, both are aging.

**Remedial Action:**

Renew chillers, including leak repair.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D3030	Cooling Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	2	\$40,000.00	EA	\$80,000	\$157,000

**Deficient Material:** Cooling tower

Original (2004) cooling towers aging with increasing problems; the fill is aging, brittle, and beginning to fail.

**Remedial Action:**

Fully service cooling towers including new fill and fan bearings to extend life 10 to 15 years prior to more severe failure.

**Action Type:**

Significant Operational Impact





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D3030	Cooling Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$15,000.00	LS	\$15,000	\$29,000

**Deficient Material:** Cooling tower fan

One cooling tower fan has failed, resulting in only 50% capacity available from this tower until fixed.

**Remedial Action:**

Repair or replace damaged cooling tower fan.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$8,500.00	LS	\$8,500	\$17,000

**Deficient Material:** Pump room humidity

Water feature pump room under the stairs has high humidity, despite apparent retrofit of a forced-air cooling unit. While forced-air cooling may work for comfort cooling, it appears insufficient for the high humidity produced by the water feature sump and support equipment.

**Remedial Action:**

Install industrial-grade dehumidification and/or increase ventilation to control humidity.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	2,000	\$22.00	SF	\$44,000	\$86,000

**Deficient Material:** Sales HVAC  
Poor HVAC service at lower level sales area.

**Remedial Action:**  
Upgrade to an engineered system to more fully support the tenant improvement which split the former open space into multiple smaller spaces and private offices.

**Action Type:**  
Code Issue



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D3050	Terminal and Package Units	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	5	\$17,500.00	EA	\$87,500	\$171,000

**Deficient Material:** Package units

Aging packaged units, including both split-Dx and fully-packaged units.

**Remedial Action:**

Budget to replace upon failure.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

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D3050	Terminal and Package Units	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	25	\$1,350.00	EA	\$33,750	\$66,000

**Deficient Material:** VAV terminal units

Aging variable air volume terminal units, with minor problems likely to increase as units age.

**Remedial Action:**

Renew variable air volume units prior to or upon failure.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

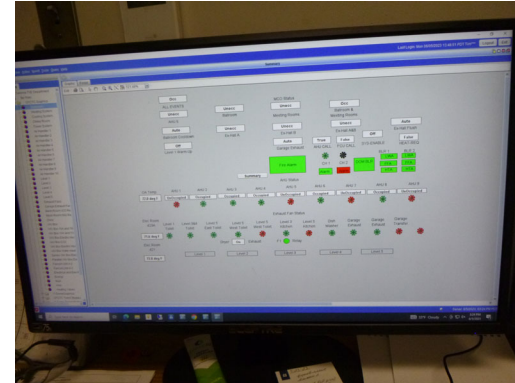
Discount Rate 1.5%

D3060	Controls and Instrumentation	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	227,449	\$0.50	SF	\$113,725	\$223,000

**Deficient Material:** Controls  
Somewhat aged controls.

**Remedial Action:**  
Budget to update hardware and software to keep up to date and optimize performance; coordinate with work supporting Clean Buildings compliance.

**Action Type:**  
Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D5020	Lighting and Branch Wiring	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	227,449	\$0.75	SF	\$170,587	\$334,000

**Deficient Material:** Lighting controls  
Aging and failing lighting controls.

**Remedial Action:**  
Upgrade hardware and software to restore full functionality.

**Action Type:**  
Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

D5037	Low Voltage Fire Alarm	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	227,449	\$1.80	SF	\$409,408	\$802,000

**Deficient Material:** Fire alarm

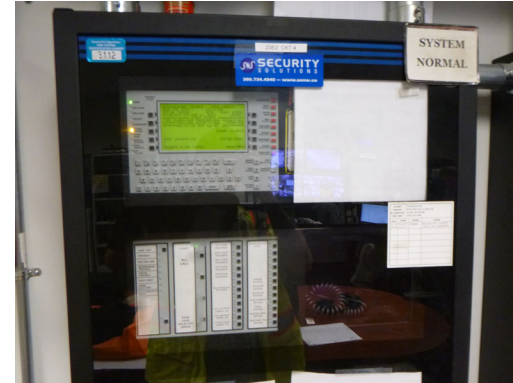
Aged and increasingly obsolete fire alarm system with failing specialty devices and minimal coverage at parking garages.

**Remedial Action:**

Renew the fire alarm system.

**Action Type:**

Life Safety





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

E1020	Institutional Equipment	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$50,000.00	LS	\$50,000	\$98,000

**Deficient Material:** Dishwasher

Main kitchen dishwasher components are increasingly failing and difficult to obtain.

**Remedial Action:**

Replace with new at end of life.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

E1020	Institutional Equipment	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	10	\$12,000.00	EA	\$120,000	\$235,000

**Deficient Material:** Refrigeration

Aging commercial kitchen refrigeration equipment with increasingly obsolete refrigerant.

**Remedial Action:**

Replace with new upon failure, including inside evaporator, outside condenser, interconnecting line set, and controls.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center

Escalation 3%

Discount Rate 1.5%

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F1040	Special Facilities	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$5,000.00	EA	\$5,000	\$10,000

**Deficient Material:** Bird poison broadcaster

Bird poison broadcaster damaged and tipped over on membrane roof.

**Remedial Action:**

Renew broadcaster or remove from roof; patch roof as needed.

**Action Type:**

Other



## Facility Summary

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### Tacoma Venues & Events

Greater Tacoma Convention Center

Greater Tacoma Convention Center Infrastructure

1500 Commerce Street  
Tacoma, WA 98402

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## Facility Condition Summary

The property is largely taken up by the convention center with only a small setback off the property line on S 15th Street and Commerce Street with stairs, sidewalks, and a fountain feature. The lot also includes a three-story parking structure attached to the convention center at the upper deck loading dock. The building is abutted to the Hilton Hotel to the south. City water, fire, sewer, and storm. Tacoma Power electrical power. Puget Sound Energy natural gas. High-speed fiber-optic data. Failed irrigation system. Utility interconnections with adjacent hotel property to south, including power and sewer. Other site systems include newer permanent guard shack at loading dock area entry.

# Facility Summary

Tacoma Venues & Events  
Greater Tacoma Convention Center  
Greater Tacoma Convention Center Infrastructure

1500 Commerce Street  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>						
<b>G20 Site Improvements</b>						
<b>G2010 Roadways</b>	2004	2004	3	TRB	06/05/23	Concrete entry curb cuts and approach aprons at Market Street, S 17th Street, and concrete ramp into Commerce Street garage entrance.
<b>G2020 Parking Lots</b>	2004	2004	3	TRB	06/05/23	Upper deck concrete lot (permit only parking) and truck loading docks (access off Market Street). Some evidence of corroding reinforcing in concrete slab noted in upper deck of parking, and moisture intrusion to structure below. (See related serious structural concern write up in Section B1010 Floor Construction.) It was reported that a company that specializes in highway bridge repairs was contacted in the past to evaluate and add a waterproof traffic coating, but no evidence of any coating work was observed.
<b>G2030 Pedestrian Paving</b>	2004	2004	3	TRB	06/05/23	Sidewalk and stairs along S 15th Street and Commerce Street frontages.
<b>G2040 Site Development</b>	2004	2004	2	TRB	06/05/23	Security fencing off Market Street upper parking with manual rolling vehicular gate. Trash containers and benches on S 15th Street.
<b>G2050 Landscaping</b>	2004	2004	3	TRB	06/05/23	Small amount shrubs on S 15th Street and Market Street frontages, no longer irrigated, with some plant materials and trees in need of pruning and weeding.
<b>G30 Site Civil / Mechanical Utilities</b>						
<b>G3010 Water Supply</b>	2004	2004	2	DCS	06/05/23	Four-inch city water, eight-inch fire service, both near 50 psig. Fire department connections at building exterior facade. No observed post-indicator valves. Failed irrigation system - minor maintenance to repair. Failed water feature controls - minor maintenance to repair.

# Facility Summary

Tacoma Venues & Events  
Greater Tacoma Convention Center  
Greater Tacoma Convention Center Infrastructure

1500 Commerce Street  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>							
<b>G30 Site Civil / Mechanical Utilities</b>							
<b>G3020 Sanitary Sewer</b>	2004	2004	2	DCS	06/05/23	City sewer, plus reported 6,500-gallon grease interceptor in parking garage of adjacent hotel.	
<b>G3030 Storm Sewer</b>	2004	2004	2	DCS	06/05/23	Roof and parking drains to City storm via one of three oil/water separators (OWS) where applicable, reportedly serviced recently. No storm water treatment or detention, other than OWS.	
<b>G3050 Cooling Distribution</b>	2004	2004	3	DCS	06/05/23	Condenser water piping heat traced and insulated to two cooling towers at utility yard to west.	
<b>G3060 Fuel Distribution</b>	2004	2004	2	DCS	06/05/23	Puget Sound Energy rotary gas meter with 16,000 cfh capacity, delivered at 2 psig via seismic shut-off valve. Building energy management system meter sensor is damaged - minor maintenance to repair or replace. The meter damage may be due to a vandalized gas meter security cage - minor maintenance to repair. Fuel tank at west utility yard belongs to adjacent hotel and supports the generator which also belongs to the hotel. The convention center generator includes a belly tank with about 500-gallon capacity.	

# Facility Summary

Tacoma Venues & Events  
 Greater Tacoma Convention Center  
 Greater Tacoma Convention Center Infrastructure

1500 Commerce Street  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>							
<b>G40 Site Electrical utilities</b>							
<b>G4010 Electrical Distribution</b>	2004	2004	2	DCS	06/05/23	Power from Tacoma Power vault at west parking garage vault room, then underground to the main building main electrical room, with five separate services, each with separate meter; four at 480V, 2,000A at the main building, and one 400A at the west parking garage. Two 480V, 3,000A services to adjacent hotel. The loading dock area mechanical service yard to west includes one 400-kW emergency diesel generator with on-board 500-gallon double-contained fuel oil storage belly tank with unclear venting - minor maintenance to improve venting to current code. Newer 1,000-kW diesel generator with estimated 1,000-gallon separate fuel oil storage tank, both belonging to adjacent hotel, and located in the convention center west service yard. The service yard area also includes the exhaust fan for the Tacoma Power vault below.	
							Convention center electrical service meter numbers as follows: A = P08407, B = P08409, C = P08408, D = P08406, and E = P06700 (meter E at west parking garage). For reference the Hotel TP meter numbers are: P07906, P07908 and P07909 ("retail").
<b>G4020 Site Lighting</b>	2004	2004	3	DCS	06/05/23	Mostly original inefficient metal halide or CFL at building perimeter, including up-lighting; mostly failed in-ground up-lighting at west pedestrian paving.	
<b>G4030 Site Communications and Security</b>	2004	2004	2	DCS	06/05/23	High-speed fiber-optic data, CCTV perimeter monitoring, manually-operated loading dock access gate, and motorized gate control of east parking. Uncontrolled west parking garage access.	
<b>G90 Other Site Construction</b>							
<b>G9010 Service and Pedestrian Tunnels</b>	2004	2004	2	DCS	06/05/23	Tunnel formed under fifth floor connection from main building to west parking garage.	
<b>G9090 Other Site Systems</b>	2004	2004	2	TRB	06/05/23	Freestanding security guard station at Market Street vehicular entry. Trash management at loading dock with two hydraulic trash compactors, both aging, one failed.	

## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center Infrastructure

Escalation 3%

Discount Rate 1.5%

G2020	Parking Lots	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	34,000	\$8.50	SF	\$289,000	\$566,000

**Deficient Material:** Concrete Deck

Some evidence of corroding reinforcing in concrete topping slab noted in upper deck permit parking area, and moisture intrusion damage to structure below.

**Remedial Action:**

Treat and repair reinforcing for corrosion, patch concrete, and add waterproof traffic top coating to drive surfaces exposed to weather to thwart further water intrusion and potential damage to structure.

**Action Type:**

Life Safety





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center Infrastructure

Escalation 3%

Discount Rate 1.5%

G4020	Site Lighting	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	24	\$500.00	EA	\$12,000	\$24,000

**Deficient Material:** Exterior Lighting

Failed or failing up-lighting at east street-level pedestrian paving.

**Remedial Action:**

Repair failed east pedestrian paving up-lighting.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center Infrastructure

Escalation 3%

Discount Rate 1.5%

G9090	Other Site Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$60,000.00	LS	\$60,000	\$118,000

**Deficient Material:** Trash compactor

One failed trash compactor, with trash piling up on open dumpster, resulting in increased bird activity and adverse impact on loading dock areas health and safety.

**Remedial Action:**

Replace failed trash compactor.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Facility: Greater Tacoma Convention Center Infrastructure

Escalation 3%

Discount Rate 1.5%

G9090	Other Site Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$28,000.00	LS	\$28,000	\$55,000

**Deficient Material:** Trash compactor  
Second trash compactor heavily used.

**Remedial Action:**  
Renew second trash compactor prior to failure.

**Action Type:**  
Significant Operational Impact



# Deficiency Repair Cost Markups By System

2023 - 2028

## Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Escalation 3%  
Discount Rate 1.5%

Facility	System	Direct Construction Cost	Contingency 20%	Contractor's OH & P 20%	Project Soft Cost 36%	Total Project Cost	Total Project Cost (Present Value)
Greater Tacoma Convention Center	B10 Superstructure	\$20,000	\$4,000	\$4,800	\$10,368	\$39,000	\$42,000
	B20 Exterior Closure	\$481,000	\$96,200	\$115,440	\$249,350	\$942,000	\$942,000
	B30 Roofing	\$167,925	\$33,585	\$40,302	\$87,052	\$329,000	\$333,000
	C10 Interior Construction	\$19,600	\$3,920	\$4,704	\$10,161	\$38,000	\$41,000
	D10 Vertical Transportation	\$44,000	\$8,800	\$10,560	\$22,810	\$87,000	\$88,000
	D20 Plumbing	\$138,235	\$27,647	\$33,176	\$71,661	\$271,000	\$286,000
	D30 HVAC	\$582,475	\$116,495	\$139,794	\$301,955	\$1,141,000	\$1,179,000
	D50 Electrical	\$579,995	\$115,999	\$139,199	\$300,669	\$1,136,000	\$1,165,000
	E10 Equipment	\$170,000	\$34,000	\$40,800	\$88,128	\$333,000	\$350,000
	F10 Special Construction	\$5,000	\$1,000	\$1,200	\$2,592	\$10,000	\$10,000
	<b>Facility Total</b>	<b>\$2,208,229</b>	<b>\$441,646</b>	<b>\$529,975</b>	<b>\$1,144,746</b>	<b>\$4,326,000</b>	<b>\$4,436,000</b>
Greater Tacoma Convention Center Infrastructure	G20 Site Improvements	\$289,000	\$57,800	\$69,360	\$149,818	\$566,000	\$583,000
	G40 Site Electrical utilities	\$12,000	\$2,400	\$2,880	\$6,221	\$24,000	\$24,000
	G90 Other Site Construction	\$88,000	\$17,600	\$21,120	\$45,619	\$173,000	\$173,000
	<b>Facility Total</b>	<b>\$389,000</b>	<b>\$77,800</b>	<b>\$93,360</b>	<b>\$201,658</b>	<b>\$763,000</b>	<b>\$780,000</b>
	<b>Site Total</b>	<b>\$2,597,229</b>	<b>\$519,446</b>	<b>\$623,335</b>	<b>\$1,346,404</b>	<b>\$5,089,000</b>	<b>\$5,216,000</b>

# Opportunity Summary By Subsystem

## Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Total Site Opportunity Cost: **\$7,505,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
<b>Facility: Greater Tacoma Convention Center</b> <b>System: Plumbing</b>							<b>\$128,000</b>
D2010	Plumbing Fixtures						
	Battery-operated plumbing fixture trim (faucets and flush valves), added maintenance and expense, plus periodic fixture down-time.	Upgrade to hardwired fixture trim.	75.00	\$400.00	EA	\$30,000	\$59,000
D2040	Rain Water Drainage						
	Roof drain system, central plant open-cycle cooling tower, and significant water feature including basin.	Rain water harvesting for cooling tower or water feature make-up in lieu of potable city water.	1.00	\$35,000.00	LS	\$35,000	\$69,000
<b>Facility: Greater Tacoma Convention Center</b> <b>System: HVAC</b>							<b>\$940,000</b>
D3020	Heat Generating Systems						
	Standard-efficiency (80%) boilers.	Upgrade to high-efficiency (90%+) condensing upon replacement.	2.00	\$85,000.00	EA	\$170,000	\$333,000
D3040	HVAC Distribution Systems						
	Solar heating effect at east-facing atrium.	Use solar heated air from atrium to provide free heat to adjacent spaces.	1.00	\$100,000.00	LS	\$100,000	\$196,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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# Opportunity Summary By Subsystem

## Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Total Site Opportunity Cost: **\$7,505,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
D3040	HVAC Distribution Systems	Air handling system supply air ionization units installed for COVID-19 risk reduction. These devices are typically shown to cause more harm than good to human occupants. UV is proven to work better and have no negative impact on human occupants.	9.00	\$15,000.00	EA	\$135,000	\$264,000
D3090	Other HVAC Systems and Equipment	Commercial kitchen hood make-up air is from the main HVAC system - no dedicated make-up air.	3.00	\$25,000.00	EA	\$75,000	\$147,000
<b>Facility: Greater Tacoma Convention Center</b> <b>System: Electrical</b>							<b>\$4,856,000</b>
D5020	Lighting and Branch Wiring	Original fluorescent lighting at common area, support area, and meeting rooms, with manual control. Over sixty types of original light fixtures, ballasts, and lamps.	150,000.00	\$14.00	SF	\$2,100,000	\$4,113,000
D5032	Low Voltage Communication	Foam board posters and easels used for meeting room and program wayfinding.	12.00	\$8,500.00	EA	\$102,000	\$200,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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## Opportunity Summary By Subsystem

### Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Total Site Opportunity Cost: **\$7,505,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
D5038	Low Voltage Security	Seemingly overly complex access control with mix of CyberLock keys, card-key access and multiple traditional keys.	227,449.00	\$1.00	SF	\$227,449	\$445,000
D5090	Other Electrical Systems	Emergency generator reportedly minimally loaded during power outages.	1.00	\$50,000.00	LS	\$50,000	\$98,000
<b>Facility: Greater Tacoma Convention Center</b> <b>System: Equipment</b>							<b>\$294,000</b>
E1020	Institutional Equipment	Nearly one-dozen standalone commercial kitchen coolers and freezers with multiple condensing units in the east parking garage.	1.00	\$150,000.00	LS	\$150,000	\$294,000
<b>Facility: Greater Tacoma Convention Center Infrastructure</b> <b>System: Site Civil / Mechanical Utilities</b>							<b>\$98,000</b>
G3020	Sanitary Sewer	Grease interceptor located in adjacent hotel parking garage, costing more to pump, and requiring coordination to pump with hotel management.	1.00	\$50,000.00	LS	\$50,000	\$98,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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# Opportunity Summary By Subsystem

## Tacoma Venues & Events

Site: Greater Tacoma Convention Center

Total Site Opportunity Cost: **\$7,505,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
<b>Facility: Greater Tacoma Convention Center Infrastructure</b> <b>System: Site Electrical utilities</b>							<b>\$1,189,000</b>
<b>G4010</b>	<b>Electrical Distribution</b>						
	Rough-in for electric vehicle charging at west parking garage, but no chargers installed. No provision for electric vehicle charging at west parking garage.	Install electric vehicle charging stations at existing rough-in at east parking garage. Install new electric vehicle charging stations as west parking garage.	12.00	\$7,000.00	EA	\$84,000	\$165,000
	Large areas with good solar exposure and no renewable energy on-site.	Install substantial 100kW photovoltaic system.	100.00	\$4,500.00	EA	\$450,000	\$881,000
<b>G4020</b>	<b>Site Lighting</b>						
	Inefficient metal halide and CFL lighting as building exterior perimeter, including many up-lights.	Replace with LED.	36.00	\$500.00	EA	\$18,000	\$35,000
<b>G4030</b>	<b>Site Communications and Security</b>						
	Manually-operated loading dock access gate.	Upgrade to motorized loading dock area access gate.	1.00	\$25,000.00	LS	\$25,000	\$49,000
	Safety and security concerns for staff and guests at parking garages, and no blue light emergency call system.	Install blue light system at parking garages.	2.00	\$15,000.00	EA	\$30,000	\$59,000

Note: Cost estimates shown include project markups, but exclude escalation.



## Facility Summary

### Tacoma Venues & Events

Pantages Theater  
Pantages Theater

901 Broadway  
Tacoma, WA 98402

Facility Size - Gross S.F.	23,958
Year Of Original Construction	1918
Facility Use Type	Performing Arts Center
Construction Type	Heavy
# of Floors	7
Energy Source	Gas
Year Of Last Renovation	1918
Historic Register	No



Weighted Avg Condition Score	3.0		Total Project Cost	Total Project Cost Present Value
Facility Condition Index (FCI)	0.16	Observed Deficiencies 2023 - 2028	\$3,480,000	\$3,569,000
Current Replacement Value (CRV)	\$18,927,000	Predicted Renewal Budget 2029 - 2042	\$6,615,000	\$7,660,000
Beginning Budget Year	2023	Opportunities	\$2,533,000	N/A
Escalation	3%			
Discount Rate	1.5%			

## Facility Condition Summary

The Pantages Theater and combined seven-floor Jones Building were constructed circa 1918. There was a renovation to bring the theater use back in 1982, and more work around the 1990s and 2008. In 2014, there was a lobby expansion and interior renovation of the lobby and theater. Roofing is at end of life. The terracotta exteriors have minor wear in areas, but are in remarkable condition given the age. There are ADA challenges for full compliance with the old structure. The interior finishes of the theater appear to be in very good condition overall. Some seismic upgrades reported in past are reported to have included the balcony and box seats, but should be confirmed if a comprehensive analysis of the entire building has been conducted and work completed for a full seismic upgrade.

The central plant serves the Pantages Theater complex including adjacent annex and/or Theater on the Square. The plant includes boilers, chiller, fire sprinkler, domestic hot water and power. The theater is served by central station forced-air heating and cooling system, however there is no apparent service to the stage. The Jones office tower is served by baseboard heaters and operable windows. Plumbing fixtures are distributed throughout with an electric hot water heater. Fire sprinkler is provided in most areas, but not the theater auditorium. Power is both 480V and 208V. Lighting is a mix of incandescent, fluorescent, LED, and others with mix of manual and automatic control. Low voltage systems are aged and slow. Stage lighting and A/V systems are a mix of older and newer.

# Facility Summary

Tacoma Venues & Events  
Pantages Theater  
Pantages Theater

901 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>A Substructure</b>			<b>3.0</b>			
<b>A10 Foundations</b>						
<b>A1010 Standard Foundations</b>	1918	1918	3	TRB	05/30/23	Assumed to be standard 1918 era concrete spread footings. No settlement reported.
<b>A1030 Slab On Grade</b>	1918	1918	3	TRB	05/30/23	No issues reported with concrete slab-on-grade areas, rough areas in basement, but from original condition or past work.
<b>A20 Basements</b>						
<b>A2020 Basement Walls</b>	1918	1918	3	TRB	05/30/23	Past leaks evident. Current leaks ongoing into basement at Commerce Street elevator.
<b>B Shell</b>			<b>3.3</b>			
<b>B10 Superstructure</b>						
<b>B1010 Floor Construction</b>	1918	1918	3	TRB	05/30/23	Cast concrete and cast beams. 2018 rake slab floor at auditorium seating overbuilt over existing floor system. Floor above subbasement appears to be cast-in-place concrete slab/beam. Upper floors appear to be ribbed pan deck with concrete joists and concrete beams.
<b>B1020 Roof Construction</b>	1918	1918	3	TRB	05/30/23	Concrete roof deck on original black iron riveted trusses and beams. Cracking and spalling in areas observed, including areas of exposed and corroded reinforcing steel.
<b>B20 Exterior Closure</b>						
<b>B2010 Exterior Walls</b>	1918	1918	3	TRB	05/30/23	Glazed ornamental terracotta, painted heavy stucco, and brick, on brick masonry walls. Some minor wear and tear on terracotta, but appears from the surface to generally be in fair condition, especially given the cladding age.

# Facility Summary

Tacoma Venues & Events  
 Pantages Theater  
 Pantages Theater

901 Broadway  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>B Shell</b>				<b>3.3</b>			
<b>B20 Exterior Closure</b>							
<b>B2020 Exterior Windows</b>	1918	2008	3	TRB	05/30/23	Exterior wood windows at theater lobby and the Jones Building retrofitted with thermally glazed units in 2008. Juliette balcony windows are original, leak, and have been screwed shut to prevent patron access. They appear to remain in fair condition except for the leaks. Minor maintenance to install additional weatherstripping to remediate leak issues rather than replacing historic systems. Clean balconies of accumulated debris and clear drains to prevent water backup over door sills as minor maintenance.	
<b>B2030 Exterior Doors</b>	1918	2008	3	TRB	05/30/23	Mostly wood exterior doors. Issues with loose hardware (risk of jimmy), locks, inconsistent maintenance operations - regular maintenance to maintain. Other aluminum storefront door.	
<b>B30 Roofing</b>							
<b>B3010 Roof Coverings</b>	1918	2000	5	TRB	05/30/23	Built-up roofing and flashings are at end of life with numerous roof leaks occurring and causing damage to interiors. Numerous maintenance patches and repairs have been ongoing to thwart leaks, however expect conditions to continue to worsen as other sections of the roofing system begin to fail. The insulation has been reported as saturated. See also separate April 26 roofing report by V&R Roofing.	
<b>B3020 Roof Openings</b>	1918	1982	4	TRB	05/30/23	Smoke doors above stage leak. Roof ladder to elevator tower is past end of useful life, appears original with extensive corrosion, weak connections, and not up to modern OSHA or code standards. Skylights with stained glass undersides over the west lobby.	

# Facility Summary

Tacoma Venues & Events  
Pantages Theater  
Pantages Theater

901 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>B Shell</b>				<b>3.3</b>			
<b>B30 Roofing</b>							
<b>B3030 Projections</b>	1918	1918	3	TRB	05/30/23	Marquee, Juliette balconies, and terracotta ornamental cornices. Plaster soffit over ticket booth access windows and entry. Copper look and glass canopy extensions over the west sidewalks and lower (NE) classroom entry. Painted steel fire escapes. Maintenance access to Juliette balconies has been restricted, in addition to observed trash, it is unclear if drains are being cleared regularly (reports of past leaks below may be related to backup).	
<b>C Interiors</b>				<b>2.8</b>			
<b>C10 Interior Construction</b>							
<b>C1010 Partitions</b>	1918	1918	3	TRB	05/30/23	Plaster on hollow core masonry, brick, and concrete. Lath and plaster and/or gypsum on wood studs in areas (especially office partitions). Some minor plaster damage on interior due to past roof leaks. Painted metal toilet partitions. Some modern CMU wall partitions. Seismic resilience investigation strongly recommended.	
<b>C1020 Interior Doors</b>	1918	2014	3	TRB	05/30/23	Wood doors and wood frames typical, some hollow metal doors and frames. Interior door hardware operations include a mix of ADA-compliant lever-style hardware, but are reported as "funky" in operations with some electronic locking mechanisms creating occasional securing issues. Roll-up fire doors, one at back of stage, and very tall at side for rolling scenes and orchestra shells in from side. Coiling counter door at concessions.	
<b>C1030 Fittings</b>	1918	2008	3	TRB	05/30/23	Rubber base, some areas of marble base in more public areas. Wood corridor rub rails, handrails in stairs. Velvet curtains at auditorium entrances and back wall.	

# Facility Summary

Tacoma Venues & Events  
 Pantages Theater  
 Pantages Theater

901 Broadway  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>C Interiors</b>				<b>2.8</b>			
<b>C20 Staircases</b>							
<b>C2010 Stair Construction</b>	1918	2008	2	TRB	05/30/23	A variety of vintage concrete stairs, wood stairs, and 2014 steel pan with site poured concrete treads and landings on composite steel deck. Aluminum stair and landing at rooftop entrance to elevator tower machine room.	
<b>C2020 Stair Finishes</b>	1918	1918	3	TRB	05/30/23	Continuous carpet over treads, risers, and landings at lobby circulation and in auditorium in fair condition, but concerns raised about safety by staff for not having separate and visually differentiating safety nosing. Marble on the lower floor stair at the Jones Building and terrazzo on upper levels of the office building stair tower. Terrazzo showing some wear, but maintaining the historic character (micro grinding and polishing possible as minor maintenance to restore luster).	
<b>C30 Interior Finishes</b>							
<b>C3010 Wall Finishes</b>	1918	2014	2	TRB	05/30/23	Paint for the vast majority of wall finishes.	
<b>C3020 Floor Finishes</b>	1918	2014	3	TRB	05/30/23	Carpet in the lobby and auditorium, lobby area has loose pile waves that could become tripping hazards, some fade patterns on balcony level facing Juliette balconies. Stage deck sprung floor has surface wear. Upper floor carpeting with some seams pulling. Terrazzo on upper floor hallways cracked and some wear evident. Asbestos tile on some Jones Building basement level storage rooms.	
<b>C3030 Ceiling Finishes</b>	1918	2014	3	TRB	05/30/23	Primarily painted plaster ceilings generally in good condition with spot exceptions where water damage has occurred. Suspended acoustic tile in the Jones Building office areas with damaged and bowing tiles nearing end of life.	

# Facility Summary

Tacoma Venues & Events  
 Pantages Theater  
 Pantages Theater

901 Broadway  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>			<b>3.0</b>			
<b>D10 Vertical Transportation</b>						
<b>D1010 Elevators and Lifts</b>	1918	1984	3	DCS	05/30/23	One eight-stop overhead traction elevator serving the Jones Building with GE 30-hp motor. The older Montgomery elevator system was modernized with Kone controls, no issue reported. One hydraulic stage lift. One sidewalk lift to east which leaks water into the subbasement; this is to be expected for a sidewalk elevator. One orchestra pit spiral lift, with reported binding - minor maintenance to fully service.
<b>D20 Plumbing</b>						
<b>D2010 Plumbing Fixtures</b>	1918	1984	3	DCS	05/30/23	Mix of older fixtures in office areas and newer in public areas. Mix of flushometer and tank-type flushing fixtures. Mix of manual and automatic fixture trim (faucets and flush valves). A few plumbing kitchenettes and several makeshift kitchenettes.
<b>D2020 Domestic Water Distribution</b>	1918	1984	3	DCS	05/30/23	Three-inch city water enters NW riser room with reduced pressure backflow preventer and pressure-reducing valve, supplying mix of older galvanized and newer copper piping. Lower water pressure at upper floors. Bottled water dispensers at various locations; no drinking fountains observed. Domestic hot water from a single 1984 National 36-kW electric hot water heater in subbasement, with newer Baldor 1/3-hp recirculation pump. Portions for hot water distribution piping are not insulated - minor maintenance to insulate where accessible.
<b>D2030 Sanitary Waste</b>	1918	1984	3	DCS	05/30/23	Mix of older and newer cast iron drain, waste, and vent piping, no issues reported.
<b>D2040 Rain Water Drainage</b>	1918	1984	4	DCS	05/30/23	Multiple roof areas mostly draining to just one roof drain, with rusted and corroded drain body and damaged roof penetration, with one overflow roof drain.
<b>D30 HVAC</b>						
<b>D3010 Energy Supply</b>	1918	1984	3	DCS	05/30/23	Natural gas piping from adjacent annex building to two gas-fired boilers in subbasement and to standby generator.

# Facility Summary

## Tacoma Venues & Events

Pantages Theater

Pantages Theater

901 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>			<b>3.0</b>			
<b>D30 HVAC</b>						
<b>D3020 Heat Generating Systems</b>	1918	1984	3	DCS	05/30/23	Two 2010 Cleaver Brooks Clearfire boilers: 1) 1.5 mmbtuh heater hot water, and 2) 591 mbtuh steam boiler. The smaller boiler burner front is partially disassembled - minor maintenance to reassemble. The larger boiler is locked out from failure - minor maintenance to service and restore function. Two 1979 Cam Industries 225 kW electric steam boilers. One duplex pump Mollier steam condensate receiver, with vent to inside subbasement. Two heating hot water circulating pumps. It is unclear which lines and systems in the plant serve which Pantages complex buildings or areas. The heat is on with relative warm temperatures outside (60+ deg F); at least one heating hot water pump is running with no apparent heat. Water chemistry observed for the steam condensate system, but unclear for heating hot water.
<b>D3030 Cooling Generating Systems</b>	1918	2014	3	DCS	05/30/23	2014 Trane water-cooled 100-ton chiller in sub-basement, with 2014 Evapco cooling tower on the high roof. One 2014 300-gpm, 7.5-hp condenser water pump. One 1984 chilled water pump, leaking. Water chemistry with pumps and controls at both basement and roof levels. Large chilled water cooling coil at subbasement air handling unit AHU-1. While AHU-1 serves the theater with no issues reported, there is no plant cooling service to the office tower, where potable A/C units are used in some spaces, and window vent fans in others.
<b>D3040 HVAC Distribution Systems</b>	1918	1984	3	DCS	05/30/23	Central station AHU-1 at subbasement with return air fan at penthouse incorporating economizer for free cooling and sheet metal ductwork supplying and returning air to and from the theater seating area. No observed HVAC service to the stage. Office tower bathrooms are naturally ventilated, but theater men's and women's rooms are mechanically exhausted. Chilled water, hot water, steam, and condensate distribution piping. Office tower is naturally ventilated via operable windows; no corridor ventilation.
<b>D3050 Terminal and Package Units</b>	1918	1984	3	DCS	05/30/23	Several dozen terminal reheat coils serving theater areas. Many baseboard heaters at all office tower areas - failing manual control valves (see D3040 HVAC Distribution Systems).

# Facility Summary

Tacoma Venues & Events  
 Pantages Theater  
 Pantages Theater

901 Broadway  
 Tacoma, WA 98402

## Facility Components

Systems		Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>					<b>3.0</b>			
<b>D30 HVAC</b>								
<b>D3060</b>	<b>Controls and Instrumentation</b>	1918	2009	3	DCS	05/30/23	Automated Logic direct digital control (DDC) system installed by Sunbelt Controls, with some apparent original pneumatic controls still in place, but with unclear functionality, such as theater attic heat relief louver and stack. Observed thermostats are non-controllable by occupants.	
<b>D40 Fire Protection</b>								
<b>D4010</b>	<b>Fire Protection Sprinkler Systems</b>	1918	1984	3	DCS	05/30/23	Six-inch service from NW to riser room with one 3-inch riser, then six-inch to subbasement to multiple risers. One additional six-inch riser of unclear source or service in subbasement. Wet-pipe fire sprinkler throughout, including stage fly tower, but not at theater seating.	
<b>D4020</b>	<b>Stand-Pipe and Hose Systems</b>	1918	1984	3	DCS	05/30/23	Standpipes at stairwells. Manual hose stations at office tower core, theater lobby, and stage, but with multiple units missing parts. Standpipe to roof, with at least one connection dangerously close to parapet - minor maintenance to extend to safer connection point.	
<b>D4030</b>	<b>Fire Protection Specialties</b>	1918	2018	2	DCS	05/30/23	Newer fire extinguishers on hooks; first aid cabinet; AED sign, but unclear location - minor maintenance to confirm.	
<b>D4090</b>	<b>Other Fire Protection Systems</b>	1918	1984	3	DCS	05/30/23	Theater stage fly tower roof heat and smoke relief vents with unclear testing - minor maintenance to test.	
<b>D50 Electrical</b>								
<b>D5010</b>	<b>Electrical Service and Distribution</b>	1918	1984	3	DCS	05/30/23	2019 Siemens 208V, 2,000A switchboard, and 1984 Square D 480V, 2,000A switchboard; with multiple distribution panels - most 1984 Square D, but some 2019 Siemens, but not powered-up. Stage A/V isolation transformer at subbasement with power to stage for touring A/V and powered sets.	



# Facility Summary

Tacoma Venues & Events  
 Pantages Theater  
 Pantages Theater

901 Broadway  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>				<b>3.0</b>			
<b>D50 Electrical</b>							
<b>D5020</b>	<b>Lighting and Branch Wiring</b>	1918	1984	3	DCS	05/30/23	Mix of T12 and T8 fluorescent; LED, metal halide, and others, with mix of manual and automatic controls. Newer LED house lighting system. Aging but functional branch wiring, with no issues reported.
<b>D5032</b>	<b>Low Voltage Communication</b>	1918	2018	3	DCS	05/30/23	Obsolete plain old telephone system wiring abandoned in place in telecom closets on each floor at the office tower. Sound and video system with main sound booth at upper balcony with auxiliary station at back of main floor seating - no issues reported. Theater speaker system at dressing rooms, but no hardwired intercom or video system.
<b>D5037</b>	<b>Low Voltage Fire Alarm</b>	1918	2018	2	DCS	05/30/23	Modern addressable fire alarm, with voice notification. Early detection system in theater areas due to no fire sprinkler. Beam detection at balcony seating. Wireless alarm transmission.
<b>D5038</b>	<b>Low Voltage Security</b>	1918	2014	3	DCS	05/30/23	Aging electronic key access system.
<b>D5039</b>	<b>Low Voltage Data</b>	1918	2014	3	DCS	05/30/23	Slow, piecemeal cable-type data distribution with makeshift floor-by-floor switches and WiFi antennas.
<b>D5090</b>	<b>Other Electrical Systems</b>	1918	1984	4	DCS	05/30/23	Aged 55-kW natural-gas-fired standby generator, battery-pack exit signs, aged automatic transfer switch.
<b>E Equipment and Furnishings</b>				<b>3.0</b>			
<b>E10 Equipment</b>							
<b>E1010</b>	<b>Commercial Equipment</b>	1918	1984	3	DCS	05/30/23	Light-duty kitchenette appliances and office equipment.
<b>E1020</b>	<b>Institutional Equipment</b>	1918	1984	3	DCS	05/30/23	Theater specialties.

# Facility Summary

Tacoma Venues & Events  
Pantages Theater  
Pantages Theater

901 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>E Equipment and Furnishings</b>				<b>3.0</b>			
<b>E20 Furnishings</b>							
<b>E2010</b>	<b>Fixed Furnishings</b>	1918	2018	3	TRB	05/30/23	1274 seats in the auditorium. The seats are an ongoing maintenance burden, repeatedly broken by patrons using the thin wood seat back in front of them to pull themselves up and the combination of thin veneer wood and short screws rip out of the steel supports. Some staining and seat pattern crushing wear on velvet backs and cushions.
<b>F Special Construction</b>							
<b>F10 Special Construction</b>							
<b>F1020</b>	<b>Integrated Construction</b>	1990	1990	5	TRB	05/30/23	Fly system is at end of life, wire rope bird caging and is becoming a safety and functionality concern. Parts are needing to be replaced often. Fire curtain support structure at head is improperly fabricated and installed, and bolts are pulling from the masonry wall above the proscenium opening.

## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

B1010	Floor Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2023	1,000	\$50.00	SF	\$50,000	\$98,000

**Deficient Material:** Concrete Floor

Many of the upper floor (ribbed pan deck with concrete joists and concrete beams) joists have exposed reinforcing due to improper clear distance between the reinforcing and the bottom of the joists. The joists have limited strength due to the reinforcing not being fully engaged in concrete.

**Remedial Action:**

A structural evaluation should be performed to assess the structural capacity of the joists with some bars not effectively engaged, or the exposed reinforcing should be cleaned and the joists patched.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

B1010	Floor Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2023	80	\$775.00	EA	\$62,000	\$121,000

**Deficient Material:** Concrete Floor

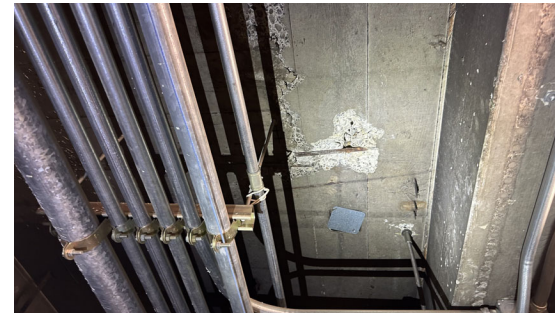
Cast-in-place concrete floor slab above subbasement has 60-80 small spalls, most would average 12"x12" or less, most with exposed reinforcing.

**Remedial Action:**

A structural evaluation should be performed to assess the structural capacity of the slab with some bars not effectively engaged, or the exposed reinforcing should be cleaned and the spalls patched.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

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B1020	Roof Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	40	\$850.00	EA	\$34,000	\$67,000

**Deficient Material:** Roof Decking

Cracking and spalling in areas observed including many small spalls, most average 12"x12" or less, most with exposed deteriorating reinforcing.

**Remedial Action:**

Exposed reinforcing should be cleaned and the spalls patched.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

B3010	Roof Coverings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2025	11,216	\$33.00	SF	\$370,128	\$725,000

**Deficient Material:** Roof Covering

Built-up roofing and flashings are at end of life with numerous roof leaks occurring and causing damage to interiors. Numerous maintenance patch and repairs have been ongoing to thwart leaks, however expect conditions to continue to worsen as other sections of the roofing system begin to fail. The insulation has been reported as saturated. See also separate April 26 roofing report by V&R Roofing.

**Remedial Action:**

Remove flashing, roofing, and insulation. Install new insulation, roofing, and all coping and flashing systems. Inspect terracotta wall caps, including mortar joints and have professional mason repoint mortar joints.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

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B3020	Roof Openings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2023	2	\$5,500.00	EA	\$11,000	\$22,000

**Deficient Material:** Flashings & Venting Caps

Smoke vents over the fly loft are reported as leaking.

**Remedial Action:**

Investigate leaks by manufacturer. Repair and seal seams and weatherstripping. Replace sealants or replace with new smoke venting system units if determined at end of life.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

---

B3020	Roof Openings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$7,100.00	EA	\$7,100	\$14,000

**Deficient Material:** Roof Ladder

Roof access ladder is past end of useful life, with significant corrosion, not up to current OSHA or code standards, with dubious securement.

**Remedial Action:**

Remove and replace with modern safety rated access including fall restraint cage.

**Action Type:**

Life Safety





## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

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C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1,600	\$16.00	SF	\$25,600	\$50,000

**Deficient Material:** Asbestos Tile

Asbestos tile on some Jones Building basement level storage rooms.

**Remedial Action:**

Abate and replace or encapsulate with new sheet good flooring over the top.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

---

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

---

C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	2,000	\$8.00	SF	\$16,000	\$31,000

**Deficient Material:** Carpet

Upper floor office and corridor carpet nearing end of life with seam runs and failures starting.

**Remedial Action:**

Remove and replace with carpet tile.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	4,000	\$2.25	SF	\$9,000	\$18,000

**Deficient Material:** **Carpeting**

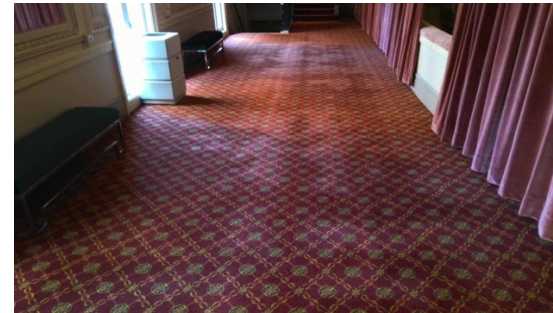
Carpet in the lobby and auditorium, lobby area has loose waves that could become tripping hazards, some fade patterns on balcony level facing Juliette balconies.

**Remedial Action:**

Professionally restretch and secure carpet in lobby (basis of cost estimate). Eventually replace carpeting.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

---

C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	3,500	\$5.00	SF	\$17,500	\$34,000

**Deficient Material:** Stage

Masonite stage finish worn and differential paint patches visible.

**Remedial Action:**

Strip and repaint floor with proper Masonite stage floor coating for clearance and safety.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	1	\$15,000.00	LS	\$15,000	\$29,000

**Deficient Material:** Terrazzo

Numerous lateral cracks in terrazzo flooring across hallways (appear to be quite historic and not new). Some wear.

**Remedial Action:**

Have cracks professionally restored. It may be as simple as blending with epoxy filler and finish to maintain the historic appeal and minimize appearance and maintenance issues with cracks. Fill other voids and micro grind and polish to restore luster.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

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C3030	Ceiling Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	20,000	\$5.75	SF	\$115,000	\$225,000

**Deficient Material:** ACT Ceiling

Suspended acoustic tile in the Jones Building office areas with damaged and bowing tiles nearing end of life.

**Remedial Action:**

Remove the replace office floor acoustical ceiling tiles.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

---

C3030	Ceiling Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2023	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Plaster Ceiling

Spot areas of water damage to ornamental plaster in auditorium.

**Remedial Action:**

Verify leak has been addressed and resolved, repair plaster, repaint.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

---

C3030	Ceiling Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	3,000	\$18.00	SF	\$54,000	\$106,000

**Deficient Material:** **Suspended Ceiling**

Water-damaged and buckling suspended plaster and wire mesh ceilings in Jones Building top floor offices, and continues down to usher's closet floor level.

**Remedial Action:**

Repair or remove and replace damaged sections of suspended plaster ceilings and repaint.

**Action Type:**

Other





## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D2020	Domestic Water Distribution	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	23,958	\$1.00	SF	\$23,958	\$47,000

**Deficient Material:** Galvanized water pipe

Low water pressure and detectable metal in water distribution due to aged galvanized pipe.

**Remedial Action:**

Replace aged galvanized pipe with new copper and/or non-metallic PEX tubing.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D2040	Rain Water Drainage	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	4	\$12,000.00	EA	\$48,000	\$94,000

**Deficient Material:** Roof drains

Just one roof drain serving multiple roof areas, with rusted and corroded roof drain body and damaged roof penetration.

**Remedial Action:**

Install dedicated roof drain for each major roof area, with overflow roof drain for each.

**Action Type:**

Code Issue



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D3020	Heat Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Condensate receiver vent

The steam condensate receiver vent is to inside the subbasement, creating high humidity and deteriorating building structure and other mechanical and electrical systems.

**Remedial Action:**

Direct steam condensate receiver vent to outside.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D3020	Heat Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	12	\$500.00	EA	\$6,000	\$12,000

**Deficient Material:** Condensate traps

Reportedly aged steam condensate traps blowing by, reportedly wasting energy and causing collateral damage (not observed, but reported by staff).

**Remedial Action:**

Replace traps.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	23,958	\$5.00	SF	\$119,790	\$235,000

**Deficient Material:** Ductwork

Damaged and missing ductwork insulation; unclear airflow balancing and duct sealing, especially central station built-up air handing plenums and shafts.

**Remedial Action:**

Conduct test, adjust, and balance (TAB) and repair ductwork and air handling to restore design airflows throughout. Repair or replace damaged or missing insulation.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	23,958	\$4.00	SF	\$95,832	\$188,000

**Deficient Material:** HVAC piping

Rusted or corroded piping in some locations, missing or damaged pipe insulation at others, some heating control valves inoperable.

**Remedial Action:**

Clean, test, and repair or replace rusty or corroded HVAC piping. Repair or replace damaged or missing insulation. Test and repair or replace inoperable valves.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	3,000	\$50.00	SF	\$150,000	\$294,000

**Deficient Material:** Stage HVAC

No observed HVAC system for the stage, with too cold complaints in the winter - except for teardrop circulation fans at near the top of the fly tower.

**Remedial Action:**

Design and install HVAC service to the stage.

**Action Type:**

Code Issue



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D3060	Controls and Instrumentation	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	23,958	\$2.50	SF	\$59,895	\$117,000

**Deficient Material:** Controls

Signs of erratic and suboptimal controls operation, such as heating hot water pump running with no heat and steam heat provided with no call for heat and windows open to relieve heat.

**Remedial Action:**

Tune-up control system.

**Action Type:**

Energy Efficiency





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D4010	Fire Protection Sprinkler Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	15,000	\$10.00	SF	\$150,000	\$294,000

**Deficient Material:** Theater sprinkler  
No fire sprinkler for theater seating area.

**Remedial Action:**  
Install fire sprinkler.

**Action Type:**  
Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

D4020	Stand-Pipe and Hose Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	10	\$500.00	EA	\$5,000	\$10,000

**Deficient Material:** Hose Cabinets  
Multiple hose cabinets missing parts and pieces.

**Remedial Action:**  
Replace missing parts and restore full hose cabinet operability.

**Action Type:**  
Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

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D5090	Other Electrical Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$50,000.00	LS	\$50,000	\$98,000

**Deficient Material:** Generator

Aged generator, may not be functional. Aged automatic transfer switch.

**Remedial Action:**

Replace aged generator and automatic transfer switch.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

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F1020	Integrated Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2024	2	\$5,700.00	EA	\$11,400	\$22,000

**Deficient Material:** Fire Curtain

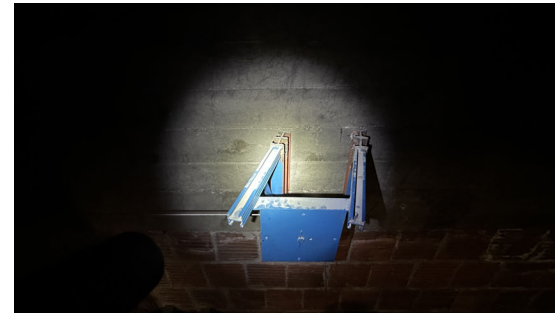
Fire curtain support structure above the proscenium opening was not properly fabricated, is bending, and is pulling out of the masonry.

**Remedial Action:**

Replace support frame structure.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater

Escalation 3%

Discount Rate 1.5%

F1020	Integrated Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2024	1	\$260,000.00	LS	\$260,000	\$509,000

**Deficient Material:** Fly System

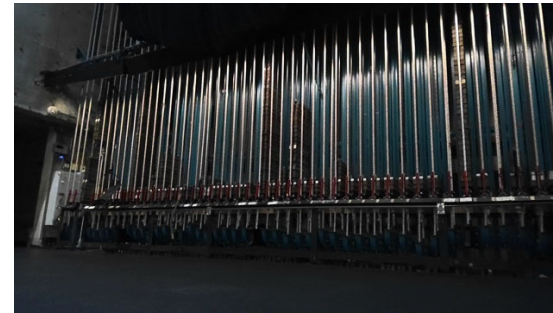
Fly system is past expected useful life, wire rope is bird caging, and parts are needing to be replaced often.

**Remedial Action:**

See rigging report for scope to be done. Have a certified rigging design company evaluate the current system and provide specifications and bid documents to conduct a complete system restoration and upgrade of all needed components, including critical life safety and functional components as necessary to meet current industry standards.

**Action Type:**

Life Safety



## Facility Summary

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Tacoma Venues & Events

Pantages Theater

Pantages Theater Infrastructure

901 Broadway  
Tacoma, WA 98402

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## Facility Condition Summary

The building occupies nearly 100% of the lot in this urban property set on the hill, with only a small area of covered plaza at the ticket booth and entry and a small parking loading area. City sidewalks abut the building on the east, north, and west sides, with the annex building and Theater on the Square attached directly to the south.

City water, fire, sewer, and storm; Tacoma Power electricity; Puget Sound Energy natural gas; and medium-speed cable data. Utilities are shared with adjacent annex and Theater on the Square.

# Facility Summary

Tacoma Venues & Events  
Pantages Theater  
Pantages Theater Infrastructure

901 Broadway  
Tacoma, WA 98402

## Facility Components

Systems		Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>							
<b>G20 Site Improvements</b>							
<b>G2030</b>	<b>Pedestrian Paving</b>	1917	2014	2	TRB	05/30/23	A small covered concrete entry plaza at the ticket booth and main building entry area.
<b>G30 Site Civil / Mechanical Utilities</b>							
<b>G3010</b>	<b>Water Supply</b>	1917	1984	3	DCS	05/30/23	City water from 3-inch meter entering from NW to basement riser room. Fire service 6-inch also entering from NW to basement riser room, but with fire department fire sprinkler and fire department standpipe connections outside daylight basement to east.
<b>G3020</b>	<b>Sanitary Sewer</b>	1917	1984	3	DCS	05/30/23	City sewer with no issues reported.
<b>G3030</b>	<b>Storm Sewer</b>	1917	1984	3	DCS	05/30/23	Building roof drains piped to City storm with no issues reported. However, there is basement seasonal flooding at basement under City street.
<b>G3040</b>	<b>Heating Distribution</b>	1917	1984	3	DCS	05/30/23	Central plant with steam and/or heating hot water from Pantages subbasement to Pantages Theater, Jones Building, adjacent annex, and interconnected Theater on the Square, all with no apparent metering.
<b>G3060</b>	<b>Fuel Distribution</b>	1917	1984	3	DCS	05/30/23	Puget Sound Energy natural gas to adjacent annex building, sub-fed, but not metered to Pantages subbasement boilers.
<b>G40 Site Electrical utilities</b>							
<b>G4010</b>	<b>Electrical Distribution</b>	1917	2019	2	DCS	05/30/23	Two Tacoma Power services from underside walk vaults underground to the theater complex Pantages subbasement: 1) 1982, 480V, 2,000A Square D switchboard with Meter No. P07822, and 2) 2019 Siemens 208V, 2,000A switchboard with Meter No. P07824.

## Facility Summary

Tacoma Venues & Events  
Pantages Theater  
Pantages Theater Infrastructure

901 Broadway  
Tacoma, WA 98402

### Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>						
<b>G40 Site Electrical utilities</b>						
<b>G4020 Site Lighting</b>	1917	1984	3	DCS	05/30/23	Minimal site lighting with most illumination from street lights. Some lighting from marquee and other exterior decorative lighting.
<b>G4030 Site Communications and Security</b>	1917	1984	3	DCS	05/30/23	Aged and slow cable data service; no site electronic security. The Pantages Theater sub-feeds data to the nearby Rialto Theater.
<b>G90 Other Site Construction</b>						
<b>G9010 Service and Pedestrian Tunnels</b>	1917	1984	3	DCS	05/30/23	Subbasement under sidewalk with seasonal flooding (see G3030 Storm Sewer). Basement and/or subbasement passages to adjacent annex. Some original (1918) passages closed off during modernizations and abandoned in place.
<b>G9090 Other Site Systems</b>	1917	1977	3	DCS	05/30/23	Bing Crosby Memorial Christmas Tree stand area reportedly with power for tree lighting.



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater Infrastructure

Escalation 3%

Discount Rate 1.5%

G3030	Storm Sewer	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$25,000.00	LS	\$25,000	\$49,000

**Deficient Material:** **Strom Drain**

Seasonal flooding at basement where under City sidewalk and other pubic right-of-way.

**Remedial Action:**

Collaborate with City to improve drainage at City sidewalks, curbs, and gutters.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Pantages Theater

Facility: Pantages Theater Infrastructure

Escalation 3%

Discount Rate 1.5%

G4020	Site Lighting	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	1	\$25,000.00	LS	\$25,000	\$49,000

**Deficient Material:** Marquis

Marquee readerboard has failing pixels and unclear chasing light function.

**Remedial Action:**

Modernize marquee and readerboard.

**Action Type:**

Significant Operational Impact



# Deficiency Repair Cost Markups By System

2023 - 2028

Tacoma Venues & Events

Site: Pantages Theater

Escalation 3%  
Discount Rate 1.5%

Facility	System	Direct Construction Cost	Contingency 20%	Contractor's OH & P 20%	Project Soft Cost 36%	Total Project Cost	Total Project Cost (Present Value)
Pantages Theater	B10 Superstructure	\$146,000	\$29,200	\$35,040	\$75,686	\$286,000	\$291,000
	B30 Roofing	\$388,228	\$77,646	\$93,175	\$201,257	\$761,000	\$782,000
	C30 Interior Finishes	\$257,100	\$51,420	\$61,704	\$133,281	\$503,000	\$538,000
	D20 Plumbing	\$71,958	\$14,392	\$17,270	\$37,303	\$141,000	\$145,000
	D30 HVAC	\$436,517	\$87,303	\$104,764	\$226,290	\$856,000	\$870,000
	D40 Fire Protection	\$155,000	\$31,000	\$37,200	\$80,352	\$304,000	\$304,000
	D50 Electrical	\$50,000	\$10,000	\$12,000	\$25,920	\$98,000	\$99,000
	F10 Special Construction	\$271,400	\$54,280	\$65,136	\$140,694	\$531,000	\$540,000
	<b>Facility Total</b>		<b>\$1,776,203</b>	<b>\$355,241</b>	<b>\$426,289</b>	<b>\$920,784</b>	<b>\$3,480,000</b>
Pantages Theater Infrastructure	G30 Site Civil / Mechanical Utilities	\$25,000	\$5,000	\$6,000	\$12,960	\$49,000	\$50,000
	G40 Site Electrical utilities	\$25,000	\$5,000	\$6,000	\$12,960	\$49,000	\$51,000
	<b>Facility Total</b>	<b>\$50,000</b>	<b>\$10,000</b>	<b>\$12,000</b>	<b>\$25,920</b>	<b>\$98,000</b>	<b>\$101,000</b>
<b>Site Total</b>		<b>\$1,826,203</b>	<b>\$365,241</b>	<b>\$438,289</b>	<b>\$946,704</b>	<b>\$3,578,000</b>	<b>\$3,670,000</b>

# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Pantages Theater

Total Site Opportunity Cost: **\$2,661,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
<b>Facility: Pantages Theater</b> <b>System: Plumbing</b>							<b>\$59,000</b>
D2010	Plumbing Fixtures	Several makeshift kitchenettes in Jones Building and some backstage areas.	3.00	\$10,000.00	EA	\$30,000	\$59,000
<b>Facility: Pantages Theater</b> <b>System: HVAC</b>							<b>\$1,746,000</b>
D3020	Heat Generating Systems	Increasingly obsolete and hard to maintain steam heating system.	23,958.00	\$13.00	SF	\$311,454	\$610,000
D3030	Cooling Generating Systems	Portable air conditioning (A/C) units used in multiple office tower spaces; through-window air circulating fans in most others; no forced-air A/C in office tower.	10,000.00	\$38.00	SF	\$380,000	\$744,000
D3040	HVAC Distribution Systems	Natural ventilation via operable windows at office tower, with no ventilation for most corridor areas.	10,000.00	\$20.00	SF	\$200,000	\$392,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Pantages Theater

Total Site Opportunity Cost: **\$2,661,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
<b>Facility: Pantages Theater</b> <b>System: Electrical</b>							<b>\$728,000</b>
D5020	Lighting and Branch Wiring	Mix of older fluorescent and newer LED lighting and mix of manual and automatic lighting controls.	23,958.00	\$9.50	SF	\$227,601	\$446,000
		Upgrade to all LED with automatic controls throughout.					
D5032	Low Voltage Communication	No theater production intercom or video system; stage sound monitoring only.	12.00	\$2,000.00	EA	\$24,000	\$47,000
		Install theater production intercom and/or video system.					
		Slow data service with makeshift switch and WiFi service.	23,958.00	\$3.00	SF	\$71,874	\$141,000
		Upgrade to modern high-speed fiber with permanent WiFi service.					
D5038	Low Voltage Security	Aging electronic key access system.	23,958.00	\$2.00	SF	\$47,916	\$94,000
		Upgrade to modern card-key access.					
<b>Facility: Pantages Theater Infrastructure</b> <b>System: Site Civil / Mechanical Utilities</b>							<b>\$39,000</b>
G3040	Heating Distribution	No apparent steam or hot water metering between buildings.	3.00	\$5,000.00	EA	\$15,000	\$29,000
		Install steam and/or hot water metering to facilitate proactive energy management and carbon footprint reduction.					

Note: Cost estimates shown include project markups, but exclude escalation.

## Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Pantages Theater

Total Site Opportunity Cost: **\$2,661,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
G3060 Fuel Distribution	No gas submetering from annex building to Pantages subbasement boilers.	Install gas submetering.	1.00	\$5,000.00	LS	\$5,000	\$10,000
<b>Facility: Pantages Theater Infrastructure</b> <b>System: Site Electrical utilities</b>							<b>\$89,000</b>
G4030 Site Communications and Security	No site electronic security.	Add CCTV system.	1.00	\$35,000.00	LS	\$35,000	\$69,000
	Aged and slow cable data service.	Upgrade to modern high-speed fiber-optic data.	1.00	\$10,000.00	LS	\$10,000	\$20,000

# Facility Summary

## Tacoma Venues & Events

Rialto Theater  
Rialto Theater

310 S 9th Street  
Tacoma, WA 98402

Facility Size - Gross S.F.	10,800
Year Of Original Construction	1919
Facility Use Type	Performing Arts Center
Construction Type	Heavy
# of Floors	2
Energy Source	Gas
Year Of Last Renovation	1991
Historic Register	No



		Total Project Cost	Total Project Cost Present Value
Weighted Avg Condition Score	3.3		
Facility Condition Index (FCI)	0.19	<b>Observed Deficiencies 2023 - 2028</b>	\$3,956,000
Current Replacement Value (CRV)	\$8,532,000	<b>Predicted Renewal Budget 2029 - 2042</b>	\$2,296,000
Beginning Budget Year	2023	<b>Opportunities</b>	\$2,197,000
Escalation	3%		N/A
Discount Rate	1.5%		

## Facility Condition Summary

A historic 10,8000 SF theater building with a stage, sloping auditorium, and upper balcony level seating originally constructed in 1919 as a movie house, and updated in 1950 and the 1980s, and a substantial renovation in 1991. It was listed on the National Register of Historic Places in 1992. Roofing leaks have caused interior moisture damage. The roofing, although recently patched, is nearing end of life. Historic architectural terra cotta details and windows are degrading, interior elements like seating are aged, and carpeting is at end of life.

While significant portions of the original 1919 HVAC heat & vent system are still in place, most is abandoned or only partially reused. The 1991 modernization sharply reduced HVAC airflow, but was still heat & vent only (no air conditioning). In 2006, the 1991 heat & vent unit was replaced with an even smaller rooftop gas-pack unit, adding air conditioning, but further reducing ventilation. The current system is marginal at best, too hot or too cold with poor ventilation (air quality), with service to the lobby, but none for the stage. There are no elevators or lifts. There are fire sprinkler and fire alarm, but no electronic security other than smart door locks. Plumbing is relatively modern, but without plumbed concessions or green room. Power is modern 208V, three-phase with ample capacity. Lighting is mostly LED, but with insufficient fixtures and mostly manual control. Theatrical lighting is aged; however a new audio system is being installed. Data service is insufficient to support full theater operation.

# Facility Summary

Tacoma Venues & Events  
Rialto Theater  
Rialto Theater

310 S 9th Street  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Score	Surveyor	Survey Date	Comments	
<b>A Substructure</b>				<b>3.0</b>			
<b>A10 Foundations</b>							
<b>A1010</b>	<b>Standard Foundations</b>	1919	1919	3	TRB	04/19/23	Concrete, no settlement or issues noted.
<b>A1030</b>	<b>Slab On Grade</b>	1919	1919	3	TRB	04/19/23	Concrete slab on grade, no issues noted.
<b>A20 Basements</b>							
<b>A2020</b>	<b>Basement Walls</b>	1919	1919	3	TRB	04/19/23	Concrete walls below S 9th Street grade. Past water seepage concerns appear to be from past events (leak at sidewalk to wall above before resealing, and possibly roofing and parapet flashing all recently repaired). Minor leaks in the 1991 egress stair during heavy snowmelt events.
<b>B Shell</b>				<b>3.4</b>			
<b>B10 Superstructure</b>							
<b>B1010</b>	<b>Floor Construction</b>	1919	1919	3	TRB	04/19/23	Concrete raked auditorium seating on integral concrete structure. Concrete in the rake area crumbles easily when replacing seating carriage bolts.



# Facility Summary

Tacoma Venues & Events  
 Rialto Theater  
 Rialto Theater

310 S 9th Street  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>B Shell</b>			<b>3.4</b>			
<b>B10 Superstructure</b>						
<b>B1020 Roof Construction</b>						
	1919	1919	4	TRB	04/19/23	Solid built-up wood 2x car decking on end spanning between riveted black iron heavy trusses. Decking was reported as rotted and at end of life, but while replaced sections were evident and visible from the catwalk below, there was only past minor water staining evident; no rot observed and no readily apparent cause for replacement was evident on this observation. However, as there has been past and recent significant roofing and flashing failures (especially along the east and south perimeter), it is likely that there is some localized damage and possible rot to the top layer of decking which may not be evident from below. See B3010 Roof Coverings for related deficiency assumptions. Additional structural investigation may be advised in advance of any roofing project to verify the structure is not of concern. No insulation present inside structure.
<b>B20 Exterior Closure</b>						
<b>B2010 Exterior Walls</b>						
	1919	1991	3	TRB	04/19/23	Masonry exterior mass walls comprised largely of cement stucco and terra cotta on brick on hollow clay masonry units. Some upgrades to structure and finishes in 1991 including seismic steel bracing and CMU stair egress tower. Stucco showing decay. Parapet terra cotta missing (reported stored at City of Tacoma Streets and Grounds). Painted mural along entire east wall. Other ornamental plaster and terra cotta finishes and details degrading. Detail plaster and terra cotta around rotunda is beginning to degrade. South upper interiors of exterior walls had experienced significant moisture intrusion damage and is currently under repair, so it has not been included as an observed deficiency as this work has already been accounted for and is in progress.
<b>B2020 Exterior Windows</b>						
	1919	1919	4	TRB	04/19/23	Single-pane wood windows leak water and air. They are thermally inefficient, paint is peeling (very significantly on many), and lead-based paint is likely present based on age.

# Facility Summary

Tacoma Venues & Events  
 Rialto Theater  
 Rialto Theater

310 S 9th Street  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>B Shell</b>				<b>3.4</b>			
<b>B20 Exterior Closure</b>							
<b>B2030 Exterior Doors</b>	1919	1991	3	TRB	04/19/23	Exterior painted metal person doors. Operations staff report that some stick. Security gate added on rotunda and egress alcoves. Others temporarily boarded up to thwart camping and vandalism. Ongoing hardware maintenance. Weatherstripping is needed. Vandalism and attempted break-ins have damaged some doors which are now loose.	
<b>B30 Roofing</b>							
<b>B3010 Roof Coverings</b>	1919	1991	4	TRB	04/19/23	A combination of composition shingles and TPO membrane on the south and north low-slope roof areas. It appears roofing layers have been installed on top of prior layers. Past and recently repaired roof and parapet flashing leaks reported and evident in interiors. Recent repair work was predominately located along the east and south parapets. The adjacent parking garage wall that the north edge of the roof connects to is slowly pulling away from the theater building, creating additional leak potential that should be monitored regularly. Drawings indicate some rigid insulation below roof covering.	
<b>B3020 Roof Openings</b>	1919	1991	3	TRB	04/19/23	Single roof access hatch rusting.	
<b>B3030 Projections</b>	1919	1991	3	TRB	04/19/23	Rotunda entry canopies, roofing at end of life with no proper drainage path, terra cotta cornice work and finial details in significant need of cleaning and repair (see B2010 Exterior Walls). Marquee sign appears in fair condition, but reported issues with electronics and connectivity. Hard to access for maintenance without a lift. Lighting not upgraded, and likely not outdoor rated.	
<b>C Interiors</b>				<b>3.2</b>			
<b>C10 Interior Construction</b>							
<b>C1010 Partitions</b>	1919	1991	3	TRB	04/19/23	Plaster on hollow core clay masonry, and some wood walls presumed. Some areas of cracked plaster. Painted metal toilet partitions.	

# Facility Summary

Tacoma Venues & Events  
 Rialto Theater  
 Rialto Theater

310 S 9th Street  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>C Interiors</b>				<b>3.2</b>			
<b>C10 Interior Construction</b>							
<b>C1020 Interior Doors</b>	1919	1991		3	TRB	04/19/23	Wood doors in metal frames. Inadequate door stop hardware at circulation doors out of auditorium.
<b>C1030 Fittings</b>	1919	1991		3	TRB	04/19/23	Wood base, metal handrails, wood and stone counters in lobby, other rails and balustrades.
<b>C20 Staircases</b>							
<b>C2010 Stair Construction</b>	1919	1991		3	TRB	04/19/23	Mix of wood and concrete stairs. Steel engineered egress stairs with poured-in-place concrete treads and landings at 1991 egress stairs.
<b>C2020 Stair Finishes</b>	1919	1991		5	TRB	04/19/23	Worn and frayed carpet in auditorium and wardrobe, becoming tripping hazard liability; minor maintenance to replace carpet in heavily-worn areas.
<b>C30 Interior Finishes</b>							
<b>C3010 Wall Finishes</b>	1919	1991		3	TRB	04/19/23	Some areas of cracking plaster. Settlement and dust on sound baffles. Stage walls worn, peeling paint from water intrusion. Minor area in southeast area with lead-based paint found in interior hazardous materials survey.
<b>C3020 Floor Finishes</b>	1919	1991		4	TRB	04/19/23	Carpeting past useful life and exhibits tripping hazards (rips, frays, loose wavy piles, temporary protection matting taped down to thwart tripping) and stains.
<b>C3030 Ceiling Finishes</b>	1919	1991		3	TRB	04/19/23	Suspended wire mesh reinforced cement plaster ceiling with ornate plaster detailing and grilles in generally good condition with some areas of water damage. Some areas of water-stained and warped plaster ceilings. Some decorative plaster loose near S 9th Street. Large areas along entire south side upper level undergoing repairs from past moisture intrusion and mold remediation (including rotunda), but as it is currently under repair, has not been included as an observed deficiency as this work has already been accounted for and is in progress.

# Facility Summary

Tacoma Venues & Events  
 Rialto Theater  
 Rialto Theater

310 S 9th Street  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>			<b>3.3</b>			
<b>D20 Plumbing</b>						
<b>D2010 Plumbing Fixtures</b>	1919	1991	3	DCS	04/19/23	Men's and women's restroom water closets, urinals, and lavatories, with all-manual trim (faucets and flush valves), aged, but all tested fixtures are functional. Most fixtures are not water-conserving; consider water-conserving type when replacements are needed. One shower at the guest-of-honor dressing room restroom. A few single-height (non-ADA) drinking fountains and multiple bottled water dispensers. One small bar sink in the upper level rotunda. No fixtures for concessions or green room. The reports of rusted fixtures are assumed to be regarding the restroom stall partitions, not fixtures themselves (see C1010 Partitions).
<b>D2020 Domestic Water Distribution</b>	1919	1991	3	DCS	04/19/23	Copper distribution piping where observed. Good flow, color, and pressure throughout, except at drinking fountains; assume this is a fixture, not water distribution issue and minor maintenance to correct. One 2016 electric domestic tank-type hot water heater observed in the main women's room utility closet including expansion tank, but no recirculation pump.
<b>D2030 Sanitary Waste</b>	1919	1991	3	DCS	04/19/23	Cast iron drain, waste, and vent piping where observed, with tested fixtures (most) flushing and draining well, and no issues reported, except back-ups several years ago through floor drains.
<b>D2040 Rain Water Drainage</b>	1919	1991	3	DCS	04/19/23	Roof drains at each corner of the roof, with at least two overflows. The roof drain wells are fouled with dirt and debris; minor maintenance to keep clean.
<b>D30 HVAC</b>						
<b>D3010 Energy Supply</b>	1919	1991	3	DCS	04/19/23	Natural gas piping from riser room to rooftop gas-pack unit, with capacity well in excess of that needed for the gas-pack furnace (1 million btu/hr meter capacity, with only 250,000 btu/hr furnace). Unusually high gas use from 2021 is reportedly due to use of the HVAC system to dry-out the building following roof water intrusion.

# Facility Summary

## Tacoma Venues & Events

Rialto Theater  
Rialto Theater

310 S 9th Street  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
D Services			3.3			
D30 HVAC						
D3040 HVAC Distribution Systems	1919	1991	4	DCS	04/19/23	<p>The original HVAC system included a large heated supply air fan at the main floor to north and large relief air fan at southeast mezzanine platform connected to an extensive network of galvanized sheet metal ductwork in the attic, plus several shafts and chases. Except for the supply fan and heater, most original HVAC distribution remains in place; some is abandoned and some repurposed during the 1991 renovation. In 1991, one rooftop heat and vent (H&amp;V) unit was installed to the northwest and connected to the original attic ductwork, per plans with 11 kcfm of air flow capacity or near 1 cfm/sf of floor area. The original system is estimated at up to 3 cfm/sf capacity. In 2006, the H&amp;V unit was replaced with an even smaller capacity rooftop gas-pack unit adding air conditioning (mechanical cooling), and further reducing air flow. Both thermal comfort and ventilation indoor air quality complaints are frequent. There is only one HVAC zone for the entire building. In addition to the rooftop gas-pack unit, there are three exhaust fans serving: 1) dressing room restrooms, 2) patron restrooms, and 3) projection booth. There are operable windows for some spaces along the north facade. While the roof is reportedly insulated, the attic below, housing uninsulated ductwork, is vented to outside at the east gable end. The original west gable vent has been repurposed as the newer HVAC system ventilation relief air pathway. The overall design intent and integrity of ductwork, shafts, and chases has been partially lost. Functionality of the entire system is questionable, with no reported design documents for the 2006 rooftop unit replacement. Additionally, the 1991 plans call for fire dampers, which are somewhat unclear in the 2016 work. Furthermore, the integrity of shafts and plenums appears lost in some areas, potentially compromising the overall building life safety system integrity - further investigation suggested.</p>

# Facility Summary

## Tacoma Venues & Events

Rialto Theater  
Rialto Theater

310 S 9th Street  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date Last	Score	Surveyor	Survey Date	Comments
<b>D Services</b>			<b>3.3</b>			
<b>D30 HVAC</b>						
<b>D3050 Terminal and Package Units</b>	1919	2006	4	DCS	04/19/23	Facility is currently served by an aging (2006) rooftop gas-pack unit Carrier model 48HJD024 with 4-hp supply fan, no return or powered exhaust, 20-ton R-22 on-board Dx cooling and 250 mbh gas input furnace with 80% efficiency (200 mbh output). This is less than half the previous (1991) heat & vent unit capacity of 800 mbh input (616 mbh output). Supply air flow capacity is estimated at 8,000 cfm, or 26% less than the previous (1991) heat & vent unit it replaced, with 10,800 cfm capacity.
<b>D3060 Controls and Instrumentation</b>	1919	1991	4	DCS	04/19/23	Controls reportedly down the street at the Pantages Theater. Thermostat poorly located in organ pipe room - minor maintenance to provide dedicated programmable controls at the Rialto Theater.
<b>D40 Fire Protection</b>						
<b>D4010 Fire Protection Sprinkler Systems</b>	1950	1991	2	DCS	04/19/23	Four-inch fire service to northwest riser room at 110 psig, with backflow preventer and four-inch fire department connection. Wet-pipe metallic mains, with non-metallic laterals observed in some locations; no issues reported. While the east half of the attic is cold, there are no reports of freeze damage. The stage appears to have conventional fire sprinkler protection, same as the rest of the building. Signs of older (1950s) sprinkler protection at projection booth.
<b>D4030 Fire Protection Specialties</b>	1919	1991	3	DCS	04/19/23	Fire extinguishers in cabinets with out-of-date inspections - minor maintenance to update. First aid kit and AED in cabinets in coat closet.

# Facility Summary

## Tacoma Venues & Events

Rialto Theater  
Rialto Theater

310 S 9th Street  
Tacoma, WA 98402

## Facility Components

Systems		Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>				<b>3.3</b>			
<b>D50 Electrical</b>							
<b>D5010</b>	<b>Electrical Service and Distribution</b>	1919	1991	3	DCS	04/19/23	Westinghouse main switchboard in east partial basement electrical room; 208V, three-phase with 1200A capacity feeding five distribution panels: DP (dimming), L1, L2, L and P - all observed are also Westinghouse from the 1991 modernization, and all with spares. While staff report insufficient power, this appears to be a circuiting issue, not distribution and minor maintenance to correct (run branch circuits to new devices as needed).
<b>D5020</b>	<b>Lighting and Branch Wiring</b>	1919	1991	3	DCS	04/19/23	Aging light fixtures with failing lamps and ballasts, despite many upgraded to LED. Mostly manual control, a few spaces have occupancy sensors. Dim house lighting, with failed east house chandelier crashed and failed; temporarily replaced with dining room fixture. Aged wiring devices, with some observed ground-fault receptacles not testing; minor maintenance to replace all.
<b>D5032</b>	<b>Low Voltage Communication</b>	1919	1991	4	DCS	04/19/23	Plain old telephone system with minimal service; 1991 intercom system.
<b>D5037</b>	<b>Low Voltage Fire Alarm</b>	1919	1991	4	DCS	04/19/23	Obsolete Spectronics zoned (analog) fire alarm system with no stage special effect bypass, but with relatively new AES wireless alarm transmitter. At least one fire detector was observed taped over from recently completed painting work. All fire alarm detectors and notification devices should be checked for operability, including being open to the spaces serviced (not covered or taped).
<b>D5038</b>	<b>Low Voltage Security</b>	1991	2018	3	DCS	04/19/23	Smart key only. Rodent repelling system in the main electrical room.
<b>D5039</b>	<b>Low Voltage Data</b>	1919	1991	4	DCS	04/19/23	Low-speed data sub-fed from Pantages Theater and distributed via makeshift set of routers.
<b>D5090</b>	<b>Other Electrical Systems</b>	1919	1991	3	DCS	04/19/23	Combination egress pathway and exit sign battery-backed fixtures. Tested fixtures have failed batteries; minor maintenance to replace.

# Facility Summary

Tacoma Venues & Events  
 Rialto Theater  
 Rialto Theater

310 S 9th Street  
 Tacoma, WA 98402

## Facility Components

Systems		Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>E Equipment and Furnishings</b>				<b>3.4</b>			
<b>E10 Equipment</b>							
<b>E1010</b>	<b>Commercial Equipment</b>	1919	1991	3	DCS	04/19/23	Microwave in rotunda, ice boxes in concessions storage.
<b>E1020</b>	<b>Institutional Equipment</b>	1919	1991	3	DCS	04/19/23	Theatrical lighting with aged dimming panel. Aged sound system actively being replaced.
<b>E20 Furnishings</b>							
<b>E2010</b>	<b>Fixed Furnishings</b>	1950	1991	4	TRB	04/19/23	Auditorium seating includes some 1950 era salvaged seating installed in 1985 in the main auditorium, and 1991 seats in the balcony, with all fabric at end of life with stains and wear, worn paint off metal frames and wood armrests. Many seat bolts are coming loose from the concrete. 760 to 780 seats. Dressing rooms have built-in plastic laminate makeup counters.
<b>F Special Construction</b>							
<b>F10 Special Construction</b>							
<b>F1010</b>	<b>Special Structures</b>	1919	1919	3	DCS	04/19/23	Original orchestra pit under stage; staff indicate an orchestra pit is desirable - consider modifying stage to restore original orchestra pit function.



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

B1020	Roof Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$5,000.00	EA	\$5,000	\$10,000

**Deficient Material:** Catwalk Access

Access to catwalk is hazardous, with a wall-mounted ladder behind a grab bar, and an outswinging door that blocks the left side ladder handrail.

**Remedial Action:**

Revise attic access to meet OSHA requirements, or at least replace door with inswinging door.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	1	\$150,000.00	LS	\$150,000	\$294,000

**Deficient Material:** Architectural Ornamentation

Parapet terra cotta missing (reported stored at City of Tacoma Streets and Grounds). Other ornamental plaster and terra cotta finishes and details degrading with hairline cracking of glazed surfaces, and other pieces broken. Rotunda parapet top ornamentation pieces in various states of degradation. Other detail plaster and terra cotta around the facade beginning to degrade.

**Remedial Action:**

Have architectural historic preservation specialist investigate and have repairs made to systems to repair and resecure per historic preservation standards by a qualified contractor.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	8,000	\$24.00	SF	\$192,000	\$376,000

**Deficient Material:** Cement Plaster

Stucco showing decay, cracking, and areas of moisture intrusion.

**Remedial Action:**

Clean, repair, seal, and refinish plaster finishes.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

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B2020	Exterior Windows	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2024	16	\$3,800.00	EA	\$60,800	\$119,000

**Deficient Material:** Exterior Windows

Single-pane wood windows leak water and air. They are thermally inefficient, paint is peeling (very significantly on many), and lead-based paint is likely present based on age.

**Remedial Action:**

Replace with historically appropriate thermally insulated windows to match the historic character.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

B2030	Exterior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$6,100.00	EA	\$6,100	\$12,000

**Deficient Material:** Hollow Metal Doors & Frames  
Exterior pair of egress doors and frame damaged by fires and break-in attempt.

**Remedial Action:**  
Replace door and frame. Install security grille at vestibule to match others.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

B3010	Roof Coverings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2024	10,621	\$33.30	SF	\$353,679	\$693,000

**Deficient Material:** Roof Coverings

Roofing leaks and is at end of life. Past reports suggest the roof deck is rotten, however from this rapid visual assessment, many areas appear intact. It is possible that portions of the deck around the perimeter are damaged, but other areas are still ok.

**Remedial Action:**

Remove all layers of existing roofing. It should be assumed that roof insulation at past leak areas is damaged and needs to be removed (especially along the entire east and south parapet lines). Inspect and evaluate the top layer condition of the roof decking. It is advisable to have a contingency plan in place with unit costs to selectively cut away portions of rotten or compromised decking, treat, and infill layers with structural material per the direction of a structural engineer. For this estimate, we have assumed a premium has been included in the price to cover a contingency. Upgrade rigid insulation to meet or exceed current code above deck. Install new roofing and flashings integrated into parapet conditions, transitions, and flexible movable flashings (like a seismic joint) at the intersection at the garage wall. Include additional fall restraint system tie-offs secured to structure.



**Action Type:**

End of Life

## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	3	\$5,000.00	EA	\$15,000	\$29,000

**Deficient Material:** Canopy

Rotunda entry canopies, roofing at end of life with no proper drainage path, canopy facade paint coating peeling, rust blooms on structural steel, and glass skirt units are dirty.

**Remedial Action:**

Clean facade, strip paint, refinish, polish and repair glass under skirt elements, provide drainage, and reroof canopies.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

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C1010	Partitions	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Partitions

Painted metal toilet partitions with rust spotting in men's toilet room near wardrobe.

**Remedial Action:**

Remove toilet partitions and replace with new.

**Action Type:**

Other





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

C3010	Wall Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	1	\$14,000.00	LS	\$14,000	\$27,000

**Deficient Material:** Plaster

Some areas of plaster cracking or water damaged plaster, and cracking of CMU header.

**Remedial Action:**

Patch, repair, and repaint plaster finishes where issues occur. Continue monitoring crack in CMU header.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

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C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	8,000	\$9.00	SF	\$72,000	\$141,000

**Deficient Material:**        **Carpeting**

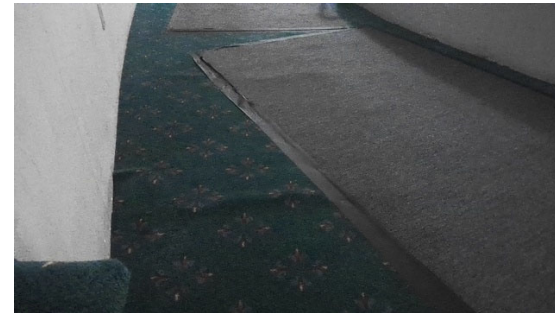
Carpeting past useful life and exhibits tripping hazards (rips, frays, loose wavy piles) and stains.

**Remedial Action:**

Remove and replace carpeting.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

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C3030	Ceiling Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2023	2,000	\$6.30	SF	\$12,600	\$25,000

**Deficient Material:** Acoustic Ceiling Tile  
Numerous areas of water-stained acoustical ceiling tiles.

**Remedial Action:**  
Remove and replace ceiling tiles.

**Action Type:**  
Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

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C3030	Ceiling Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	300	\$40.00	SF	\$12,000	\$24,000

**Deficient Material:** Plaster Ceiling

Some areas of water stained, cracked, and warped plaster ceilings. Some decorative plaster loose near S 9th Street.

**Remedial Action:**

Repair plaster ceilings in areas with damage.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	10,800	\$70.00	SF	\$756,000	\$1,481,000

**Deficient Material:** HVAC system

Poor comfort and air quality; chronically too cold in the winter and too hot in the summer, with stale air quickly developing during performances. The current 2006 system is near half the capacity of the 1991 modernization system, which appears to have been half or less the capacity of the original 1919 system. The current system has little or no service to multiple spaces, including the lobby, ticket booth, stage, and many smaller rooms.

**Remedial Action:**

Redo HVAC to provide full heating and cooling to and ventilation per code.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

D3050	Terminal and Package Units	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	1	\$100,000.00	LS	\$100,000	\$196,000

**Deficient Material:** Roof Top Unit

Aging (2006) rooftop gas-pack unit with signs of rust and corrosion, noise, and vibration, in difficult to maintain location.

**Remedial Action:**

Budget to replace upon failure, including work to provide reasonable maintenance access.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

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D5020	Lighting and Branch Wiring	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$5,000.00	EA	\$5,000	\$10,000

**Deficient Material:** House light fixture

East house light fixture temporarily replaced with residential dining room fixture.

**Remedial Action:**

Repair or replace with proper house chandelier fixture.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

D5020	Lighting and Branch Wiring	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	8,000	\$3.00	SF	\$24,000	\$47,000

**Deficient Material:** House lighting  
Dim house lighting; safety hazard for patrons and staff.

**Remedial Action:**  
Increase house lighting level to industry standard.

**Action Type:**  
Code Issue





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

D5032	Low Voltage Communication	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	5	\$1,000.00	EA	\$5,000	\$10,000

**Deficient Material:** Theater communications

Aged theatrical intercom system; reportedly some features or stations are non-functional.

**Remedial Action:**

Restore full function to all stations.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

D5037	Low Voltage Fire Alarm	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	10,800	\$2.00	SF	\$21,600	\$42,000

**Deficient Material:** Fire alarm

Obsolete zoned (analog) fire alarm system without special effect bypass feature.

**Remedial Action:**

Replace with modern addressable (digital) fire alarm system, including stage special effect bypass feature.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

D5039	Low Voltage Data	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	10,800	\$2.40	SF	\$25,920	\$51,000

**Deficient Material:** Data System

Makeshift network routers with no MDF/IDF, and no permanent WiFi wireless access points (WAPs).

**Remedial Action:**

Install permanent high-speed network system in conjunction with new high-speed data service to building (see G4030 Site Communications and Security).

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater

Escalation 3%

Discount Rate 1.5%

E2010	Fixed Furnishings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	780	\$235.00	EA	\$183,300	\$359,000

**Deficient Material:** Seating

Seat fabric at end of life with stains and wear, worn paint off metal frames and wood armrests. Many seat bolts are coming loose from the concrete.

**Remedial Action:**

Refinish, reupholster, and resecure auditorium seating.

**Action Type:**

Significant Operational Impact



## Facility Summary

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Tacoma Venues & Events

Rialto Theater

Rialto Theater Infrastructure

310 S 9th Street  
Tacoma, WA 98402

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## Facility Condition Summary

Sloping urban site housing Rialto Theater with zero lot line development. Sitework limited to the rotunda entry, and steel and concrete egress stairs.

City water, sewer, fire, and storm; Tacoma Power electrical power underground to building at modern 208V, three-phase; Puget Sound Energy natural gas with meter inside northwest riser room; landline telephone; data underground from Pantages Theater two blocks to east with limited bandwidth. No site electronic security.

# Facility Summary

Tacoma Venues & Events  
 Rialto Theater  
 Rialto Theater Infrastructure

310 S 9th Street  
 Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>						
<b>G20 Site Improvements</b>						
<b>G2030 Pedestrian Paving</b>	1919	1991	3	TRB	04/19/23	Steps and round ornamental terrazzo pavement at rotunda entry, cracked and areas broken and chipped.
<b>G30 Site Civil / Mechanical Utilities</b>						
<b>G3010 Water Supply</b>	1919	1991	3	DCS	04/19/23	City water from meter at street to northwest underground to unknown point of service entry; locate to enable shut-off in case of leak in building. Four-inch fire from adjacent vault to northwest riser room, with northwest corner exterior wall fire department connection. Water pressure observed at riser room at 110 psig.
<b>G3020 Sanitary Sewer</b>	1919	1991	3	DCS	04/19/23	City sewer with no current issues reported, but reportedly several years ago there was backflow; tested fixtures inside flushed and drained well.
<b>G3030 Storm Sewer</b>	1919	1991	3	DCS	04/19/23	Several roof drains appear piped form inside building underground to City storm at street with no issues reported. Overflow roof drains discharge to sidewalk, then drain to street storm. No site storm drainage other than from roof at this zero-lot line building.
<b>G3060 Fuel Distribution</b>	1919	1991	3	DCS	04/19/23	Puget Sound Energy natural gas meter No. 642905 inside northwest riser room with 1,000 cfh capacity, electronic radio transmitter, and pressure-reducing valve vent to roof, but no seismic shut-off valve; minor maintenance to install.
<b>G40 Site Electrical utilities</b>						
<b>G4010 Electrical Distribution</b>	1919	1991	3	DCS	04/19/23	Tacoma Power underground to main electrical room at east semi-basement level, with meter No. P0785 for 208V, three-phase service. No utility transformer observed but may be in vault below sidewalk.

# Facility Summary

Tacoma Venues & Events

Rialto Theater

Rialto Theater Infrastructure

310 S 9th Street  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>						
<b>G40 Site Electrical utilities</b>						
<b>G4020 Site Lighting</b>	1919	1991	3	DCS	04/19/23	Several exterior wall lights at alley to east in poor condition, even though they have LED lamps; two newer LED wall sconces, but one is failing. Decorative lighting at main entry canopy with many dozens of small fluorescent lamps. Marquee with dozens of specially-controlled fluorescent lamps. Series of aged lamp sockets along north parapet vertical face with fluorescent or LED lamps. Reportedly, the north top of parapet had decorative ball lamps, but water intrusion forced removal; the glass balls are stored inside the building.
<b>G4030 Site Communications and Security</b>	1919	1991	4	DCS	04/19/23	Aged plain old telephone service, data service sub-fed underground from Pantages Theater two blocks to east with insufficient bandwidth; no site electronic security other than digital door keys.
<b>G90 Other Site Construction</b>						
<b>G9090 Other Site Systems</b>	1919	1991	3	DCS	04/19/23	Covered egress stairwell to northeast with egress path partially blocked by debris; minor maintenance to keep clear.

## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater Infrastructure

Escalation 3%

Discount Rate 1.5%

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G2030	Pedestrian Paving	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	1	\$8,000.00	LS	\$8,000	\$16,000

**Deficient Material:** Egress Landing

Rusting pipe rail spalling out side of landing concrete.

**Remedial Action:**

Remove material, patch concrete with new railing sleeves.

**Action Type:**

Significant Operational Impact





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater Infrastructure

Escalation 3%

Discount Rate 1.5%

G2030	Pedestrian Paving	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Pedestrian Paving

Round ornamental terrazzo pavement at rotunda entry, areas broken and chipped, presenting a future trip hazard.

**Remedial Action:**

Repair and seal cracks and chips to thwart future degradation (especially protect from moisture intrusion and freeze thaw).

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater Infrastructure

Escalation 3%

Discount Rate 1.5%

G4020	Site Lighting	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$40,000.00	LS	\$40,000	\$78,000

**Deficient Material:** Marquee  
Aged marquee with reportedly failing lamps.

**Remedial Action:**  
Modernize marquee, including LED lamps.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater Infrastructure

Escalation 3%

Discount Rate 1.5%

G4020	Site Lighting	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	30	\$600.00	EA	\$18,000	\$35,000

**Deficient Material:** Outside lighting

Various failed, failing, or non-code-compliant exterior light fixtures and obsolete fluorescent lamps.

**Remedial Action:**

Replace or repair fixtures and upgrade all lamps to LED.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Rialto Theater

Facility: Rialto Theater Infrastructure

Escalation 3%

Discount Rate 1.5%

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G4030	Site Communications and Security	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$20,000.00	LS	\$20,000	\$39,000

**Deficient Material:** Data

Insufficient data bandwidth to support full theater operation.

**Remedial Action:**

Upgrade to dedicated high-speed fiber-optic data service.

**Action Type:**

Significant Operational Impact



# Deficiency Repair Cost Markups By System

2023 - 2028

Tacoma Venues & Events

Site: Rialto Theater

Escalation 3%  
Discount Rate 1.5%

Facility	System	Direct Construction Cost	Contingency 20%	Contractor's OH & P 20%	Project Soft Cost 36%	Total Project Cost	Total Project Cost (Present Value)
Rialto Theater	B10 Superstructure	\$5,000	\$1,000	\$1,200	\$2,592	\$10,000	\$10,000
	B20 Exterior Closure	\$408,900	\$81,780	\$98,136	\$211,974	\$801,000	\$848,000
	B30 Roofing	\$368,679	\$73,736	\$88,483	\$191,123	\$722,000	\$734,000
	C10 Interior Construction	\$5,000	\$1,000	\$1,200	\$2,592	\$10,000	\$10,000
	C30 Interior Finishes	\$110,600	\$22,120	\$26,544	\$57,335	\$217,000	\$225,000
	D30 HVAC	\$856,000	\$171,200	\$205,440	\$443,750	\$1,677,000	\$1,733,000
	D50 Electrical	\$81,520	\$16,304	\$19,565	\$42,260	\$160,000	\$164,000
	E20 Furnishings	\$183,300	\$36,660	\$43,992	\$95,023	\$359,000	\$386,000
	<b>Facility Total</b>	<b>\$2,018,999</b>	<b>\$403,800</b>	<b>\$484,560</b>	<b>\$1,046,649</b>	<b>\$3,956,000</b>	<b>\$4,110,000</b>
Rialto Theater Infrastructure	G20 Site Improvements	\$13,000	\$2,600	\$3,120	\$6,739	\$26,000	\$27,000
	G40 Site Electrical utilities	\$78,000	\$15,600	\$18,720	\$40,435	\$152,000	\$157,000
	<b>Facility Total</b>	<b>\$91,000</b>	<b>\$18,200</b>	<b>\$21,840</b>	<b>\$47,174</b>	<b>\$178,000</b>	<b>\$184,000</b>
	<b>Site Total</b>	<b>\$2,109,999</b>	<b>\$422,000</b>	<b>\$506,400</b>	<b>\$1,093,824</b>	<b>\$4,134,000</b>	<b>\$4,294,000</b>

# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Rialto Theater

Total Site Opportunity Cost: **\$2,465,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost	
<b>Facility: Rialto Theater</b> <b>System: Interior Construction</b>							<b>\$10,000</b>	
C1020	Interior Doors	Inadequate door stop hardware at circulation doors.	Upgrade door hardware to include closers and door stop hardware to meet functional needs.	8.00	\$625.00	EA	\$5,000	\$10,000
<b>Facility: Rialto Theater</b> <b>System: Vertical Transportation</b>							<b>\$908,000</b>	
D1010	Elevators and Lifts	No lift to stage.	Install lift to stage.	1.00	\$48,500.00	LS	\$48,500	\$95,000
		No elevator from entry lobby to balcony seating.	Install elevator from lobby to balcony level.	1.00	\$380,000.00	LS	\$380,000	\$744,000
D1090	Other Conveying Systems	No stage lighting grid.	Install stage ceiling grid.	1.00	\$35,000.00	LS	\$35,000	\$69,000
<b>Facility: Rialto Theater</b> <b>System: Plumbing</b>							<b>\$37,000</b>	
D2010	Plumbing Fixtures	No plumbing fixtures at concessions or green room.	Add plumbed fixtures to concessions and green room.	2.00	\$9,500.00	EA	\$19,000	\$37,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Rialto Theater

Total Site Opportunity Cost: **\$2,465,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost	
<b>Facility: Rialto Theater</b> <b>System: HVAC</b>							<b>\$59,000</b>	
D3040	HVAC Distribution Systems	Abandoned original (1919) HVAC equipment and ductwork, mostly in the attic; increasing weight on the building structure, risk of failure and collapse, and complicating attic maintenance access.	If not planned for future use, remove abandoned equipment and ductwork.	1.00	\$30,000.00	LS	\$30,000	\$59,000
<b>Facility: Rialto Theater</b> <b>System: Electrical</b>							<b>\$494,000</b>	
D5020	Lighting and Branch Wiring	1991 light fixtures retrofitted with LED lamps, but little or no dimming and no color effects.	Upgrade to native LED fixtures with dimming and color-changing in selected locations.	10,800.00	\$14.50	SF	\$156,600	\$307,000
D5032	Low Voltage Communication	No theatrical CCTV for production and performance teams.	Install theatrical CCTV.	1.00	\$24,000.00	LS	\$24,000	\$47,000
		No broadcast capability.	Install broadcast-quality audio and video systems.	1.00	\$35,000.00	LS	\$35,000	\$69,000
D5038	Low Voltage Security	No electronic security other than smart keys and rodent repelling.	Install perimeter monitoring, intrusion detection, and CCTV.	10,800.00	\$3.35	SF	\$36,180	\$71,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Rialto Theater

Total Site Opportunity Cost: **\$2,465,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost	
<b>Facility: Rialto Theater</b> <b>System: Equipment</b>							<b>\$681,000</b>	
E1010	Commercial Equipment	No ice machine in concessions area, requiring ice be brought in by hand cart and stored in ice boxes during events.	Install permanent ice maker in concessions area.	1.00	\$7,500.00	LS	\$7,500	\$15,000
E1030	Vehicular Equipment	No stage loading dock.	Sidewalk elevator to back of stage; some plans imply included in original construction; signs on-site of past side-walk elevator.	1.00	\$340,000.00	LS	\$340,000	\$666,000
<b>Facility: Rialto Theater</b> <b>System: Furnishings</b>							<b>\$8,000</b>	
E2010	Fixed Furnishings	Fixed seating does not allow for different types of performances.	Modify seating to allow for eight removable seats in front.	8.00	\$485.00	EA	\$3,880	\$8,000
<b>Facility: Rialto Theater Infrastructure</b> <b>System: Site Electrical utilities</b>							<b>\$268,000</b>	
G4010	Electrical Distribution	Mostly open roof with no current renewable energy.	Install 25 kVA photovoltaic power system on high roof.	25.00	\$4,800.00	EA	\$120,000	\$235,000
G4030	Site Communications and Security	No site electronic security.	Install CCTV system.	1.00	\$17,000.00	LS	\$17,000	\$33,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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# Facility Summary

## Tacoma Venues & Events

Tacoma Dome  
Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

Facility Size - Gross S.F.	401,663
Year Of Original Construction	1983
Facility Use Type	Arena
Construction Type	Medium
# of Floors	3
Energy Source	Gas
Year Of Last Renovation	1983
Historic Register	No



Weighted Avg Condition Score	3.0		Total Project Cost	Total Project Cost Present Value
Facility Condition Index (FCI)	0.16	Observed Deficiencies 2023 - 2028	\$76,408,000	\$77,169,000
Current Replacement Value (CRV)	\$447,453,000	Predicted Renewal Budget 2029 - 2042	\$204,515,000	\$235,290,000
Beginning Budget Year	2023	Opportunities	\$19,968,000	N/A
Escalation	3%			
Discount Rate	1.5%			

## Facility Condition Summary

With the grand opening occurring on April 21, 1983, the Tacoma Dome opened as "the largest wood domed structure in existence," with a volume of 18 million cubic feet; 5 acres under the dome and a roof surface area of 6 acres, circumference of 1,665.05 ft, and a height of 15 stories (155 ft.) floor-to-roof or 20 stories to top of flagpole. The Tacoma Dome has a total area of 401,663 sq. ft. including upper tiers (with 180,000 sq. ft. of exhibit space) and an attached exhibit hall with an additional 30,000 sq. ft. The opening seating capacity was 30,000.

HVAC includes central condenser water plant for heat pump heating and cooling with failing PVC distribution piping, supplemented by original two cooling towers and two newer gas-fired boilers. There are four central station air handling systems, one for each quadrant, with shared top-of-dome cupola set of relief louvers. Support for multiple commercial kitchen grease hoods. Plumbing includes extensive restroom fixtures, but with failing potable water main and support for concessions, including central kitchen. Fire sprinkler at main and mezzanine levels, but not the wood-framed dome itself, except small dry-pipe system serving the cupola. The dry-pipe system includes a diesel-engine-driven fire pump. Fire alarm is aged and obsolete zone (analog) type. Power is modern 480V, three-phase, plus 208V three-phase, with substantial show power, but insufficient for some larger shows. One emergency diesel generator for the three elevators and emergency lighting. Lighting is new LED for the arena, but otherwise mostly original fluorescent with manual control. Mostly original sound and scoreboard systems failing and need replacement. WiFi data service is provided by a contracted third party for patron benefit.

# Facility Summary

Tacoma Venues & Events

Tacoma Dome

Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Renewal Date	Last Score	Surveyor	Survey Date	Comments	
<b>A Substructure</b>				<b>2.8</b>			
<b>A10 Foundations</b>							
<b>A1010</b>	<b>Standard Foundations</b>	1983	1983	2	TRB	06/01/23	Concrete spread footing foundations.
<b>A1030</b>	<b>Slab On Grade</b>	1983	1983	4	TRB	06/01/23	Concrete slab on grade. At Dome, former hockey rink infilled with concrete, other areas of the slab have received many patches over time. Settling in areas and degrading with large areas of cracking, joints opening, areas of cracking and chips at joints, and some differential finish elevation settlement that are large enough to thwart lift equipment mobility and safe operations.
<b>A20 Basements</b>							
<b>A2020</b>	<b>Basement Walls</b>	1983	1983	3	TRB	06/01/23	Limited quadrant areas of basement below grade walls. Concrete and CMU stacked bond, some efflorescence above where wall meets fan rooms above (see D3030 Cooling Generating Systems for removed condensate drain pan and associated flooding as the likely cause of efflorescence).
<b>B Shell</b>				<b>3.1</b>			
<b>B10 Superstructure</b>							
<b>B1010</b>	<b>Floor Construction</b>	1983	1983	2	TRB	06/01/23	Concourse areas are composed of cast-in-place beams/columns, precast concrete hollow-core planks and concrete topping.

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome

Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>B Shell</b>				<b>3.1</b>			
<b>B10 Superstructure</b>							
<b>B1020 Roof Construction</b>	1983	1983	3	TRB	06/01/23	Foam insulation above 2x8 wood tongue-and-groove decking (salvaged from Mt. St. Helen's eruption blow-down timber) on wood timber purlins on heavy curved glulam beams set on a perimeter concrete tension ring at the base. Sections were assembled in pie-shaped forms on the ground and lifted into place. Thousands of signatures are visible on the timber members when viewed from the top copula level. Rigid insulation on metal deck on open web steel joists/girders at exhibition hall.	
<b>B20 Exterior Closure</b>							
<b>B2010 Exterior Walls</b>	1983	1983	3	TRB	06/01/23	Partially grouted stack bond CMU in ribbed and raked, and smooth face textures. Composite wood rain screen paneling recently installed over CMU units at the dome. CMU walls at exhibition hall have degraded with daylight visible between joints with significant water intrusion. Exterior walls of the dome also include precast concrete parapet panels around base of dome and are in need of cleaning.	
<b>B2020 Exterior Windows</b>	1983	1983	3	TRB	06/01/23	Box office single-glazed pre-ADA event ticketing/transaction windows (also serve as vision and daylighting windows for office space within).	
<b>B2030 Exterior Doors</b>	1983	1983	4	TRB	06/01/23	Exterior hollow metal event entry and egress doors, frames, and hardware are at end of life. Hardware reinstalled numerous times and ongoing maintenance issues to repair. Overhead coiling service and loading doors at concourse and main event floor level,	

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome  
Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>B Shell</b>			<b>3.1</b>			
<b>B30 Roofing</b>						
<b>B3010 Roof Coverings</b>	1983	1983	4	TRB	06/01/23	HPG reinforced polyolefin membrane roof system has exceeded its expected useful life. Installed over cement board, over original membrane, over spray-on foam on wood deck. Has individual area patches. A number of roof leaks are reported as ongoing, with one leak reported by staff occurring every March right over the basketball courts. Dome perimeter gutter system drains clog and cause water intrusion into the building. This gutter has been coated with tar on the inside, facing the dome (not compatible with adjacent PVC roof membrane). There is a significant leak all along the wall at the exhibit hall and it floods the kitchen hallway. The different color triangle patterning on the dome, emulating the surrounding mountains, may be attributed to an initial diamond pattern by Architect Lyn Messenger, but a "flower" designs by the Artist Andy Wharhol had been proposed, and it appears that in 2014 colored test patterns were installed on top of the dome in consideration of replacing the pattern with the artists initial conception. These color tests are still present on top of the dome and all appear to have failed with early degradation of the materials. See the Wetherholt report for a more comprehensive description of systems and issues.
<b>B3020 Roof Openings</b>	1983	1983	3	TRB	06/01/23	Roof access hatches at top of dome and event center. No ladder hand hold extensions provided, and are recommended be installed to improve safety as minor maintenance.
<b>B3030 Projections</b>	1983	1983	5	TRB	06/01/23	Dome exterior ramps to the concourse level are comprised of concrete cast-in-place topping slabs, on precast hollow-core concrete planks, on cast-in-place concrete beams and columns, and are in extremely poor condition due to moisture intrusion, reinforcing steel corrosion, and subsequent concrete spalling. Precast concrete panels are mounted around the perimeter of the tension ring at the base of the dome structure, and guard rails around the exterior pedestrian ramps that ring the barrel of the dome base.

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome  
Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>C Interiors</b>				<b>3.0</b>			
<b>C10 Interior Construction</b>							
<b>C1010</b>	<b>Partitions</b>	1983	1983	3	TRB	06/01/23	CMU typical, some limited areas of drywall on studs. Metal bathroom partitions rusting and failing. Operable walls in event center are reported as problematic (difficult to move and assemble, failing hardware, and generally at end of useful life).
<b>C1020</b>	<b>Interior Doors</b>	1983	1983	3	TRB	06/01/23	Hollow metal doors and frames. Concession stands center posts missing/broken. Issues with hardware and doors at center mullions. Recurring issues with malfunctioning CyberLock system. Roll-up doors at field turf storage. Other overhead coiling security grilles.
<b>C1030</b>	<b>Fittings</b>	1983	1983	3	TRB	06/01/23	Railings and hand rails with worn and chipping paint. Perforated corrugated metal acoustic panels (roughly 45' long and 10+' tall) mounted along back walls at floor and concourse levels with significant impact denting and sharp edges at bottom portion around concourse level. Similar, roughly 7'-tall units line the event center space with the same damage and bent and broken sharp trim and edges.
<b>C20 Staircases</b>							
<b>C2010</b>	<b>Stair Construction</b>	1983	1983	3	TRB	06/01/23	Cast concrete stairs in the dome area, concrete on steel pan egress stairs.
<b>C2020</b>	<b>Stair Finishes</b>	1983	1983	3	TRB	06/01/23	Original painted treads in stands seating areas now worn away and nearly indistinguishable. Other concrete stairs with painted or applied safety nosing also faded and all surfaces stained with 40 years of event traffic.
<b>C30 Interior Finishes</b>							
<b>C3010</b>	<b>Wall Finishes</b>	1983	1983	3	TRB	06/01/23	Paint with usual ongoing touch up.

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome

Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments	
<b>C Interiors</b>				<b>3.0</b>				
<b>C30 Interior Finishes</b>								
<b>C3020</b>	<b>Floor Finishes</b>		1983	1983	3	TRB	06/01/23	Rubber raised tread flooring between painted concrete sections on concourse level. Carpet tile in office areas and sheet goods in break areas, VCT in staff training room. VCT in concourse level toilet rooms at end of life with failing seams and chips. Newer epoxy with color chips on event floor restrooms and corridor. Newer carpet in artists quarters with large format tile in toilet/shower. Quarry tile and worn painted concrete in kitchen.
<b>C3030</b>	<b>Ceiling Finishes</b>		1983	1983	3	TRB	06/01/23	Vinyl faced fiberglass acoustic panels mechanically fastened to underside of dome. Some panels with face damage, especially near catwalk access point, minor maintenance to reface damaged areas over the top of the existing. Suspended acoustic tile at end of life with significant areas of water-stained tiles and sagging tiles. Based on age, existing ceiling suspension grid also assumed to not meet modern seismic requirements.
<b>D Services</b>				<b>2.9</b>				
<b>D10 Vertical Transportation</b>								
<b>D1010</b>	<b>Elevators and Lifts</b>		1983	1983	3	DCS	06/01/23	Three original hydraulic passenger elevators (A, B, and C); two 4,000-lb light freight and one 2,500-lb passenger, with two separate elevator machinery rooms (EMRs). The larger EMR houses two elevator hydraulic power units; this room has no permanent cooling and overheats during events with heavy elevator use. Two new loading dock motorized dock levelers complete with ICC signaling and ICC bar locking mechanism.
<b>D1090</b>	<b>Other Conveying Systems</b>		1983	2000	2	DCS	06/01/23	Approximately 66 motorized hoists associated with ceiling show grid, sub-grid, and curtain grid system, collectively requiring ongoing maintenance to keep operational.

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome  
Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>			<b>2.9</b>			
<b>D20 Plumbing</b>						
<b>D2010 Plumbing Fixtures</b>	1983	1983	3	DCS	06/01/23	Mix of original and new fixtures at patron restrooms. Drinking fountains, some with bottle-fillers. Sinks at concessions and custodial; many portable sinks for concessions. Most flushing fixtures and gang hand-wash basins have automatic infrared control, battery-operated flush valves, and hardwired basins. Kitchenette at admin area. No kitchenettes at VIP suites. Gang showers at former locker rooms, now dressing rooms, plus private showers at VIP lounge restrooms. While men's room troughs are reported as failing due to corrosion, no evidence of this was observed during the site visit - assume minor maintenance to repair damage at troughs not observed.
<b>D2020 Domestic Water Distribution</b>	1983	1983	3	DCS	06/01/23	Original six-inch galvanized water service and distribution is failing throughout. Newer gas-fired 1-million btu/hr domestic hot water heater at the boiler plant with recirc pump and multiple storage tanks at mezzanine with additional recirc pump. Three electric hot water tanks at admin area with recirc pump. Dozens of electric tank-type hot water tanks at the many concession stands.
<b>D2030 Sanitary Waste</b>	1983	1983	3	DCS	06/01/23	Cast iron drain, waste, and vent piping with no issues reported, except for user error. Recent waste piping leak at SE dome HVAC supply air plenum requiring immediate action as minor maintenance to correct leak and clean-up and sanitize air plenum. 25- to 50-gallon point-of-use grease interceptors are located in each cooking kitchen area.
<b>D2040 Rain Water Drainage</b>	1983	1983	3	DCS	06/01/23	The dome sheet flows down to perimeter low-slope roof ring, in turn draining to exterior perimeter scuppers and downspouts to storm, with no issues reported. Some scuppers were observed blocked by debris with signs of past leakage to inside the building, due to overflow drain cut in precast panels above the flashing protecting the dome. No provisions for roof and roof drain cleaning at perimeter narrow roof and gutter system. Blocked and plugged roof drains in multiple locations resulting in overflow and staining of exterior and in some cases flooding into the buildings - minor maintenance to keep clean and flowing.

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome  
Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>				<b>2.9</b>			
<b>D30 HVAC</b>							
<b>D3010 Energy Supply</b>	2000	2000	2	DCS	06/01/23	Newer natural gas service to two space heating boilers and one domestic hot water boiler. The gas service has over 7-million btu/hr capacity, but only 5-million btu/hr load.	
<b>D3020 Heat Generating Systems</b>	1983	2000	3	DCS	06/01/23	Two Aerco natural gas-fired 2-million btu/hr heating hot water boilers with three primary condenser water loop circulating pumps (7A, 7B, and 7C), estimated at 50-hp each. Two of the three (7A & 7C) are driven by variable frequency drives, the other (7B) is constant speed. Several secondary loop pumps. Two hydronic heating coil sets in each of the four dome quadrant coil rooms. BTU meters appear installed for boiler output monitoring, but the meters appear inoperable - minor maintenance to restore function as needed. The boiler room combustion air intake hood is damaged on the roof above - minor maintenance to repair. Portions of boiler heating hot water piping are uninsulated - minor maintenance to insulate. One of the two original 1.2 megawatt electric boilers is abandoned in place in the boiler room - minor maintenance to remove.	
<b>D3030 Cooling Generating Systems</b>	1983	1983	3	DCS	06/01/23	Two closed-loop fluid-cooler BAC cooling towers with 5-hp evaporative spray cooling pumps. Two water-to-water heat pump chillers. One cooling coil in each of the four dome quadrant coil rooms. At least one pair of condenser and evaporator fluid pumps for each of the two chillers, about 10- to 15-hp each.	



# Facility Summary

## Tacoma Venues & Events

Tacoma Dome  
Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>			<b>2.9</b>			
<b>D30 HVAC</b>						
<b>D3040 HVAC Distribution Systems</b>	1983	1983	3	DCS	06/01/23	<p>Failing PVC condenser water distribution, sheet metal duct in better condition. New four-pipe hydronic water distribution system piping routed from NE central plant to south sub-central plant - incomplete project abandoned in place. Newer LG variable refrigerant flow (VRF) system serving the VIP suites to east with heat recovery ventilation, but this system is reportedly under-capacity and working poorly. Damaged rooftop equipment and duct between dome and exhibition hall.</p> <p>The dome arena HVAC system includes four central station (built-up) systems, one per quadrant, each with large economizer room, rigid MERV-8 prefilters and MERV-11 bag filters, face &amp; static bypass (half) cooling coil, full heating coil, 100-hp supply fan, and supply air chamber up to distribution. Economizer relief is via a 360-deg network of relief air louvers in the dome roof cupola base. Capacity is 100 kcfm per fan or 400 kcfm total at full speed. All four supply air fans are on variable frequency drives. There are no return or relief fans in the dome arena HVAC system.</p>
<b>D3050 Terminal and Package Units</b>	1983	1983	4	DCS	06/01/23	<p>Mostly original water-to-air heat pumps throughout, failing, except for two newer units recently replaced. Three completely failed heat pumps at exhibition hall, leaving this area with no permanent HVAC equipment.</p>
<b>D3060 Controls and Instrumentation</b>	1983	2000	3	DCS	06/01/23	<p>Mix of original pneumatic and newer digital controls; all Johnson Controls, needs work. Unclear WA State Clean Buildings compliance plan, but reportedly a separate project is underway to address this issue.</p>
<b>D3090 Other HVAC Systems and Equipment</b>	1983	1983	3	DCS	06/01/23	<p>Kitchen grease hoods and light industrial exhaust.</p>

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome  
Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>				<b>2.9</b>			
<b>D40 Fire Protection</b>							
<b>D4010</b>	<b>Fire Protection Sprinkler Systems</b>	1983	1983	3	DCS	06/01/23	Four wet-pipe systems for lower levels; no protection for dome and open arena area. Sprinkler bolts have been coming loose from concert vibrations. Dry-pipe system with diesel engine fire pump for dome cupola protection.
<b>D4020</b>	<b>Stand-Pipe and Hose Systems</b>	1983	1983	3	DCS	06/02/23	Standpipes to hose stations for fire department use.
<b>D4030</b>	<b>Fire Protection Specialties</b>	1983	1983	3	DCS	06/01/23	Extinguishers, AEDs, and first aid kits.
<b>D4090</b>	<b>Other Fire Protection Systems</b>	1983	1983	3	DCS	06/02/23	Kitchen hood fire suppression with no issues reported.
<b>D50 Electrical</b>							
<b>D5010</b>	<b>Electrical Service and Distribution</b>	1983	1983	3	DCS	06/01/23	Three services - two house, one show, with many dozens of inside transformers and distribution panels. Each service is fed by an outside City-owned 12.5 kV to 480V three-phase 2,500 kVA transformer. The three services feed eight 480V switchboards ranging from 800A to 1,600A capacity each, with most in the main electrical room at the central plant, but several remote, including at the show power gallery and south chilled mechanical area. The electrical power distribution system is aging but functional with five to ten years remaining life with continued good maintenance, excepting failing original aluminum feeders. Further noting insufficient power for the largest of shows (see G4010 Electrical Distribution).
<b>D5020</b>	<b>Lighting and Branch Wiring</b>	1983	2000	3	DCS	06/01/23	Mix of new LED for arena and aged fluorescent in common and support areas.
<b>D5032</b>	<b>Low Voltage Communication</b>	1983	1983	3	DCS	06/01/23	Mostly aged A/V speakers, amps, and scoreboards. Multi-function cable tray in arena mezzanine corridor north; J-hooks south.

# Facility Summary

## Tacoma Venues & Events

Tacoma Dome

Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

## Facility Components

Systems			Original Renewal Date Last System Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>				<b>2.9</b>			
<b>D50 Electrical</b>							
<b>D5037</b>	<b>Low Voltage Fire Alarm</b>		1983 1983	4	DCS	06/01/23	Aged and obsolete analog (non-addressable) fire alarm system, but with newer wireless alarm transmitter. A first responder digital antenna system (DAS) was installed in 2016 with no issues reported.
<b>D5038</b>	<b>Low Voltage Security</b>		1983 2000	3	DCS	06/01/23	Aging cyber-key system. 26 metal detectors. Limited CCTV, but new system was being installed at time of site visit to be completed Summer 2023.
<b>D5039</b>	<b>Low Voltage Data</b>		1983 2010	2	DCS	06/01/23	Contracted to third party (Mobility) with no issues reported; high-speed wireless WiFi service is provided for all guests. The original comm and data room water-source heat pump is abandoned in place in the ceiling space - minor maintenance to remove, as modern dedicated cooling has replaced this equipment.
<b>D5090</b>	<b>Other Electrical Systems</b>		1983 1983	3	DCS	06/01/23	Marathon diesel generator with Cummins engine, 480V with 230 kW capacity, and Onan 400A automatic transfer switch; reportedly carries elevators and emergency lighting.
<b>E Equipment and Furnishings</b>				<b>3.0</b>			
<b>E10 Equipment</b>							
<b>E1010</b>	<b>Commercial Equipment</b>		1983 1983	3	DCS	06/01/23	Kitchen, laundry, and office appliances and equipment.
<b>E1020</b>	<b>Institutional Equipment</b>		1983 1983	3	DCS	06/01/23	Theatrical and sports event equipment and special materials. Electronic scoreboard system failing (known deficiency condition, see separate specialty sports equipment quote).
<b>E1030</b>	<b>Vehicular Equipment</b>		1983 1983	3	DCS	06/01/23	Support for monster truck rallies and other extreme events - further review suggested if deemed useful.

## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

A1030	Slab On Grade	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	16,800	\$15.00	SF	\$252,000	\$494,000

**Deficient Material:** Concrete Slab on Grade

At Dome, concrete slab on grade settling in areas and degrading with large areas of cracking. Spalls at joints and some differential finish elevations that are large enough to thwart lift mobility. Some other joints have opened to about 1". Vertical displacement estimated under 1/2".

**Remedial Action:**

Sawcut and demo areas of cracking concrete, repour with high-strength concrete, and trowel smooth finish to match good sections of concrete. Recommend doweling into surrounding existing concrete to help prevent vertical differential. Along widened joints, grind any slabs protruding above adjacent slabs and grout widened joint.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	24,800	\$11.00	SF	\$272,800	\$534,000

**Deficient Material:** CMU walls

Event center CMU has regularly spaced vertical joint cracks, some of which you can see daylight through.

**Remedial Action:**

Repoint CMU joints by a professional mason in accordance with industry standards for CMU walls to remove and replace mortar in a way that will maintain the structural properties of the wall, improve the appearance of the wall, and form renewed weather-tight joints.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	13,190	\$3.00	SF	\$39,570	\$77,000

**Deficient Material:** Precast Concrete

Precast concrete parapet panels around base of dome and ramps and are in need of cleaning.

**Remedial Action:**

Power wash and inspect. Consider also spray applying concrete sealant to shed water, protect systems, and maintain appearance.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

B2030	Exterior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	60	\$2,600.00	EA	\$156,000	\$306,000

**Deficient Material:** Hollow Metal Doors

Exterior hollow metal event entry and egress doors, frames, and hardware are at end of life. Hardware reinstalled numerous times and ongoing maintenance issues to repair. Some doors with rotating astragal do not lock on close. Doors with vision glass are constantly broken by vandalism and attempted break-ins and many doors now have been fixed by welding steel panels to the inside face.

**Remedial Action:**

Remove and replace all doors and hardware including thresholds (do not include glass relites), replace with heavy-duty systems and industry-standard heavy-duty panic hardware.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

B3010	Roof Coverings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2023	1	\$24,623,816.00	LS	\$24,623,816	\$48,223,000

**Deficient Material:** Membrane Roofing

PVC Membrane roofing on Dome and Event Center has exceeded its expected useful life, with numerous leaks reported. See the Wetherholt report for a more comprehensive description of systems and issues.

**Remedial Action:**

Remove and replace all membrane roofing on Dome and Event Center, and upgrade insulation to meet current code. See the Wetherholt report for a more comprehensive description options. See "Tacoma Dome Roof Upgrades" by RC Cost Group for detailed cost.

**Action Type:**

End of Life





## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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B3020	Roof Openings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	800	\$100.00	SF	\$80,000	\$157,000

**Deficient Material:** Skylights

Translucent panel pyramids weathered, appear to have lost face coating, and are nearing end of life.

**Remedial Action:**

Remove and replace with new translucent panel skylighting.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	12	\$15,000.00	EA	\$180,000	\$353,000

**Deficient Material:** Concrete Deck

Concrete beams and columns ring the perimeter of the dome, supporting hollow core planks, and are in extremely poor condition due to moisture intrusion, steel reinforcing steel corrosion, and subsequent concrete spalling. Staff was notified Immediately.

**Remedial Action:**

Conduct in-depth investigations immediately by qualified structural engineer for recommendations on temporary requirements and repairs, and permanent repairs to the structure.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	5	\$10,000.00	EA	\$50,000	\$98,000

**Deficient Material:** Concrete Deck

A number of precast hollow-core deck planks have been damaged with the bottom layer of the concrete, exposing the hollow core voids.

**Remedial Action:**

Replace concrete hollow-core planks.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	11,000	\$26.00	SF	\$286,000	\$560,000

**Deficient Material:** Concrete Topping Slab

Cast-in-place topping slab on hollow-core concrete planks in extremely poor condition due to moisture intrusion, steel reinforcing steel corrosion, and subsequent concrete spalling.

**Remedial Action:**

Remove concrete and reinforcing, and repour decks with waterproof mix concrete. Finish all ramp surfaces with waterproof traffic coating. Recommend installing additional area drains as necessary to capture and remove rainwater from ramps to thwart future structural desegregation.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$10,000.00	LS	\$10,000	\$20,000

**Deficient Material:** Precast Panels

At least one precast wall panel found with structural clip attachments never installed. Other areas of panels with significant cracking observed. Panels also dirty from exposure.

**Remedial Action:**

Install stabilizing clips at the back side of the panel to the bottom of the concrete edge beam.  
Clean all panels. Seal other cracks in panels.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

C1010	Partitions	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	3	\$90,000.00	EA	\$270,000	\$529,000

**Deficient Material:** Operable Walls

Operable walls in event center are reported as problematic (difficult to move and assemble, failing hardware, and generally at end of useful life).

**Remedial Action:**

Remove and replace systems with new. Verify if track system can be reused.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

C1010	Partitions	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	200	\$2,700.00	EA	\$540,000	\$1,058,000

**Deficient Material:** Toilet Partitions

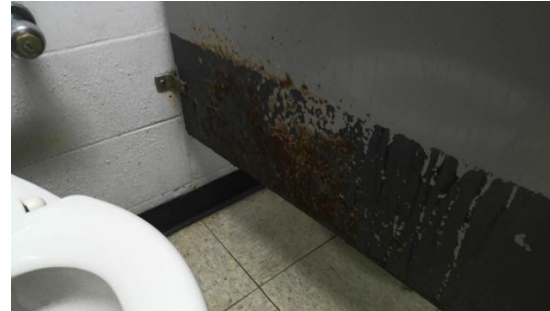
Metal toilet partitions on the concourse level public restrooms in the dome are corroding and are at end of life.

**Remedial Action:**

Remove and replace public bathroom toilet partitions with new (consider alternative and more durable and lower-maintenance systems as a replacement).

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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C1020	Interior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	5	\$3,000.00	EA	\$15,000	\$29,000

**Deficient Material:** Coiling Counter Doors

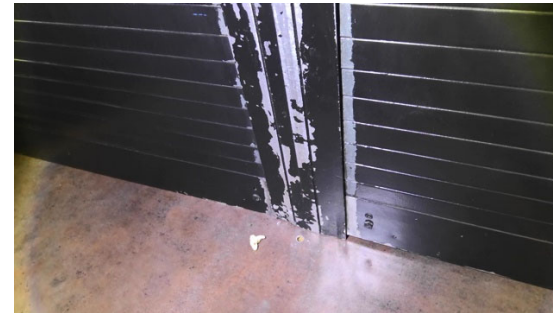
Coiling counter doors at concessions areas have damaged center mullion and locking pin hardware.

**Remedial Action:**

Repair and/or upgrade concessions counter door systems.

**Action Type:**

Significant Operational Impact





## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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C1020	Interior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	16	\$1,100.00	EA	\$17,600	\$34,000

**Deficient Material:** Interior Hardware

Deterioration issues with hardware and doors at center mullions, especially at exhibition hall.  
Bolts and hardware missing, some do not lock.

**Remedial Action:**

Replace mullion hardware.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

C1030	Fittings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	3,500	\$30.00	SF	\$105,000	\$206,000

**Deficient Material:** Acoustic Paneling

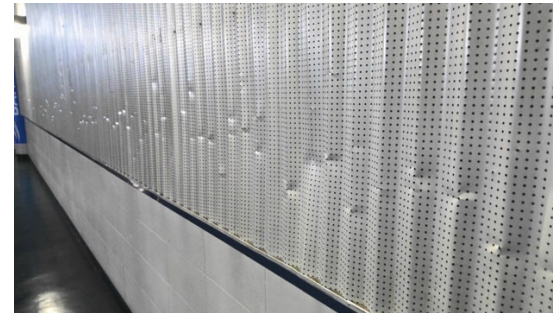
Perforated corrugated metal acoustic panels at concourse level with significant impact denting and sharp edges at bottom portion.

**Remedial Action:**

Retain existing panels, but install abuse-resistant acoustic protection panels over the bottom 4' to hide damage, provide protection, and still allow functionality of the acoustic absorption (possible materials include perforated wood veneer MDF panels or slat acoustic wall system).

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

C1030	Fittings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	3,710	\$25.00	SF	\$92,750	\$182,000

**Deficient Material:** Acoustic Paneling

Perforated corrugated metal 7'-tall acoustic panels at interior perimeter of event center with significant impact denting and sharp edges at bottom portion.

**Remedial Action:**

Remove or retain existing panels, and install fabric-wrapped resin-impregnated acoustic panels or alternatively upgrade and use a wood slat or perforated panel acoustic wall panels to maintain the wood finish theme and warmth.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

---

C1030	Fittings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	1	\$70,000.00	LS	\$70,000	\$137,000

**Deficient Material:** Balusters & Handrails

All railings and hand rails in public seating and circulation areas with worn and chipping paint,

**Remedial Action:**

Sand, prep, prime, and refinish with durable paint system.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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C1030	Fittings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	500	\$100.00	LF	\$50,000	\$98,000

**Deficient Material:** Guard Rails

2018 replacement guardrails were improperly installed, with bolts shot into the edge of concrete, causing concrete edge to break away. Entire system is loose and seems unsafe, and further concrete damage is likely to occur as remaining anchors fail.

**Remedial Action:**

Remove system, repair concrete, install edge angle iron properly secured into concrete with drilled epoxy anchors into face of concrete and reanchor guardrail system to new angle iron.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

C2020	Stair Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	10,000	\$6.50	SF	\$65,000	\$127,000

**Deficient Material:** Stair Finish

Concrete stairs from stands to concourse level with painted or applied safety nosing faded and chipped. Surfaces stained with 40 years of event traffic.

**Remedial Action:**

Deep clean concrete surfaces. Provide new safety nosing. Seal concrete with non-slip coating.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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C2020	Stair Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2024	20,000	\$4.00	SF	\$80,000	\$157,000

**Deficient Material:** Stair Finishes

Concrete stairs in stands were once painted and now faded. Surfaces stained with 40 years of event traffic.

**Remedial Action:**

Clean all stairs, repaint treads for contrast visibility and non-slip coating.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	4,000	\$7.50	SF	\$30,000	\$59,000

**Deficient Material:** **Carpeting**

Carpeting in areas, including former locker room areas nearing end of life.

**Remedial Action:**

Remove and replace carpet.

**Action Type:**

Other





## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	4,000	\$8.50	SF	\$34,000	\$67,000

**Deficient Material:** VCT

VCT in concourse level toilet rooms at end of life with failing seams and chips.

**Remedial Action:**

Remove VCT, prep floor, and install new flooring finish.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

C3030	Ceiling Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	100,000	\$7.75	SF	\$775,000	\$1,518,000

**Deficient Material:** Acoustic Ceiling Tile

Suspended acoustic tile at end of life with significant areas of water-stained tiles and sagging tiles. Based on age, existing ceiling suspension grid is also assumed to not meet modern seismic requirements.

**Remedial Action:**

Remove and replace ceiling grid and tile systems.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D1010	Elevators and Lifts	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$8,500.00	LS	\$8,500	\$17,000

**Deficient Material:** EMR cooling

No permanent cooling for large elevator machinery room (EMR).

**Remedial Action:**

Install permanent EMR cooling.

**Action Type:**

Code Issue



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D2020	Domestic Water Distribution	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	401,663	\$1.80	SF	\$722,993	\$1,416,000

**Deficient Material:** Galvanized pipe

Failing original galvanized piping, damaging new plumbing fixture trim, and leaking throughout the building. Some corroding copper piping as well.

**Remedial Action:**

Replace with copper and/or PEX.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D2030	Sanitary Waste	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1,000	\$20.00	LF	\$20,000	\$39,000

**Deficient Material:** Waste piping

Waste piping in unheated spaces subject to freeze and subsequent failure.

**Remedial Action:**

Heat-trace and insulate waste piping in unheated spaces, including HVAC plenums subject to freeze.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D2040	Rain Water Drainage	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	4	\$3,500.00	EA	\$14,000	\$27,000

**Deficient Material:** Overflow roof drains

Exhibition hall multiple roof drains along north and south parapets, but only one overflow roof drain at each corner.

**Remedial Action:**

Install additional overflow roof drains.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D2040	Rain Water Drainage	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	24	\$500.00	EA	\$12,000	\$24,000

**Deficient Material:** Roof drain system

Dome perimeter narrow roof / gutter overflow roof drain cuts above dome flashing, resulting in water overflowing into building when primary roof drains are backed up.

**Remedial Action:**

Cut overflow drains lower than dome flashing.

**Action Type:**

Code Issue



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3020	Heat Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	2	\$80,000.00	EA	\$160,000	\$313,000

**Deficient Material:** Boilers  
Aging Aerco heating hot water boilers.

**Remedial Action:**  
Budget to replace upon failure.

**Action Type:**  
Energy Efficiency





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3030	Cooling Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	2	\$150,000.00	EA	\$300,000	\$588,000

**Deficient Material:**

**Chiller**

Original water-cooled chillers nearing end of life.

**Remedial Action:**

Renew chillers.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3030	Cooling Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	4	\$5,000.00	EA	\$20,000	\$39,000

**Deficient Material:** Cooling coil

The central station cooling coils are missing drain pans and condensate piping in two quadrants and are damaged or dysfunctional in the other two. Slab slopes cause the condensate to drain away from, instead of toward the floor drains. Overflowing condensate passes through structural floor slab cracks and gaps and floods into spaces below.

**Remedial Action:**

Engineer a comprehensive solution to cooling coil condensate removal.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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D3030	Cooling Generating Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	2	\$250,000.00	EA	\$500,000	\$979,000

**Deficient Material:** Cooling towers

Aged cooling towers nearing end of life with rust, corrosion, and failing components.

**Remedial Action:**

Replace cooling towers.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	401,663	\$2.65	SF	\$1,064,407	\$2,085,000

**Deficient Material:** Condenser water piping

Aged and failing PVC condenser water piping; piping also restricts heating hot water temperature to 90 deg F, limiting dome heating capability.

**Remedial Action:**

Replace with more robust pipping, such as Aquatherm.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	5	\$12,000.00	EA	\$60,000	\$118,000

**Deficient Material:** HVAC Equipment

HVAC rooftop equipment and duct between dome and exhibition hall is rusted, corroded, damaged, or failed.

**Remedial Action:**

Repair or replace equipment and ductwork between dome and exhibition hall.

**Action Type:**

Code Issue



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	4	\$7,500.00	EA	\$30,000	\$59,000

**Deficient Material:** Supply fans

Dome arena supply fan bearings are aging, requiring increasing grease, which in turns leaks.

**Remedial Action:**

Rebuild or replace supply fan bearings. Fully clean fan housings and fan wheels, align shafts, test and adjust to reduce vibration.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3040	HVAC Distribution Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$25,000.00	LS	\$25,000	\$49,000

**Deficient Material:** VIP VRF System

New VIP variable refrigerant flow (VRF) system undersized and not working correctly - supplies heat when set for cooling. Add system capacity to meet load.

**Remedial Action:**

Repair VRF system controls. Add capacity as needed to provide VIP guest comfort.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3050	Terminal and Package Units	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	30	\$24,500.00	EA	\$735,000	\$1,439,000

**Deficient Material:** Heat pumps  
Failing water-to-air heat pumps.

**Remedial Action:**  
Replace.

**Action Type:**  
Energy Efficiency





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D3050	Terminal and Package Units	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	3	\$115,000.00	EA	\$345,000	\$676,000

**Deficient Material:** Rooftop units

Three rooftop heat pump air handling units serving the exhibition hall are failed.

**Remedial Action:**

Replace with standalone all-electric air-source heat pumps.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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D3060	Controls and Instrumentation	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	401,663	\$6.00	SF	\$2,409,978	\$4,720,000

**Deficient Material:** Controls  
Aged and failing pneumatic controls.

**Remedial Action:**  
Upgrade pneumatic to motor-operated controls and upgrade DDC controls to new, where aged, and optimize programming.

**Action Type:**  
Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D4010	Fire Protection Sprinkler Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	150,000	\$0.35	SF	\$52,500	\$103,000

**Deficient Material:** Bolts

Threaded rod anchor bolts and/or lock nuts are loosening from acoustic vibrations during concerts, weakening fire sprinkler and potential other mechanical and electrical support systems.

**Remedial Action:**

Inspect and tighten all suspended mechanical and electrical system supports, bolts, lock nuts, and other fasteners subject to concert vibration and loosening.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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D4010	Fire Protection Sprinkler Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$40,000.00	LS	\$40,000	\$78,000

**Deficient Material:** Fire pump engine

Aged fire pump diesel engine, obsolete with parts increasingly difficult or impossible to obtain.

**Remedial Action:**

Replace fire pump prior to complete failure.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

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D5010	Electrical Service and Distribution	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	401,663	\$1.00	SF	\$401,663	\$787,000

**Deficient Material:** Aluminum feeders  
Failing original aluminum feeders.

**Remedial Action:**  
Test all aluminum feeders and replace as needed.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D5032	Low Voltage Communication	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	2	\$300,000.00	EA	\$600,000	\$1,175,000

**Deficient Material:** **Scoreboard**  
Aged, obsolete, and failing scoreboard system.

**Remedial Action:**  
Replace scoreboards with modern digital system.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D5032	Low Voltage Communication	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	401,663	\$4.50	SF	\$1,807,484	\$3,540,000

**Deficient Material:** Sound system  
Original, aged sound system.

**Remedial Action:**  
Renew sound system.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D5037	Low Voltage Fire Alarm	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	401,663	\$3.75	SF	\$1,506,236	\$2,950,000

**Deficient Material:** Fire alarm

Aged and obsolete analog (non-addressable) fire alarm system.

**Remedial Action:**

Replace with modern digital (addressable) system.

**Action Type:**

Life Safety





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D5090	Other Electrical Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	1	\$30,000.00	LS	\$30,000	\$59,000

**Deficient Material:** Automatic Transfer Switch  
Aging automatic transfer switch.

**Remedial Action:**  
Budget to replace upon failure.

**Action Type:**  
Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D5090	Other Electrical Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$10,000.00	LS	\$10,000	\$20,000

**Deficient Material:** Emergency lighting  
North emergency lighting reportedly non-functional.

**Remedial Action:**  
Troubleshoot and repair north emergency lighting.

**Action Type:**  
Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

D5090	Other Electrical Systems	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	50	\$550.00	EA	\$27,500	\$54,000

**Deficient Material:** Exit signs  
Aged exit signs.

**Remedial Action:**  
Replace with modern exit signs.

**Action Type:**  
Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome

Escalation 3%

Discount Rate 1.5%

F1020	Integrated Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	2	\$8,000.00	EA	\$16,000	\$31,000

**Deficient Material:** State Funded Art

SE and NE concourse state-funded neon art installation panel walls art by New York artist Stephen Antonakos reported as not all functioning.

**Remedial Action:**

Investigate repairs needed with a neon restoration specialty company.

**Action Type:**

Other



## Facility Summary

### Tacoma Venues & Events

Tacoma Dome

Tacoma Dome

2727 East D Street  
Tacoma, WA 98421

### Facility Components

Systems		Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>E Equipment and Furnishings</b>					<b>3.0</b>			
<b>E10 Equipment</b>								
<b>E1090</b>	<b>Other Equipment</b>	1983	1983	3	DCS	06/01/23	Remnants of Zamboni support with no issues reported, other than need for floor drains (see D2030 Sanitary Waste opportunity) following removal of ice rink trenching.	
<b>E20 Furnishings</b>								
<b>E2010</b>	<b>Fixed Furnishings</b>	1983	2020	3	DCS	06/02/23	All new fixed seating at upper levels, reportedly failing prematurely and without manufacturer response, despite being under warranty - further investigation suggested, potentially legal action.	
<b>E2020</b>	<b>Moveable Furnishings (Capital Funde</b>	1983	2019	4	TRB	06/02/23	Extensive Erwin motorized five-year-old retractable aluminum bleacher seating, but requires constant maintenance (parts recalled, parts break, bolts shaking loose causing cross members to fall off, drive wheels slip on concrete and kick the telescoping sections system out of alignment when retracting). See report by others for known warranty and ongoing deficiencies.	
<b>F Special Construction</b>								
<b>F10 Special Construction</b>								
<b>F1010</b>	<b>Special Structures</b>	1983	2008	3	TRB	06/02/23	Suspended aluminum light bar truss rigging system (by Atlanta Rigging Systems) was the largest in the world, should be inspected by qualified specialty professional bi-annually, especially for suspension system continuity with vibration concerns from concerts.	
<b>F1020</b>	<b>Integrated Construction</b>	1983	1983	4	TRB	06/02/23	SE and NE concourse state-funded neon art installation panel walls art by New York artist Stephen Antonakos reported as not all functioning.	

## Facility Summary

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Tacoma Venues & Events

Tacoma Dome

Tacoma Dome Infrastructure

2727 East D Street  
Tacoma, WA 98421

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## Facility Condition Summary

The site contains the Tacoma Dome, exhibition hall, and standalone ticket booths, and is surrounded by several acres and tiers of asphalt parking, and some perimeter landscaping on the site perimeter and around the building.

City water, fire, sewer, and storm. Puget Sound Energy natural gas and Tacoma Power medium voltage (12.5-kV) electrical service. High-speed fiber-optic data, but minimal site electronic security. Aged and inefficient parking lot lighting. On-site above ground diesel and gasoline fuel oil storage tanks. Two-dozen recreational vehicle hook-ups. Trash management area. Clock tower with three clocks. 2019 loading dock with powered dock levelers.

## Facility Summary

Tacoma Venues & Events

Tacoma Dome

Tacoma Dome Infrastructure

2727 East D Street  
Tacoma, WA 98421

### Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>						
<b>G20 Site Improvements</b>						
<b>G2010 Roadways</b>	1983	1983	3	TRB	06/02/23	Asphalt on-site circulation between parking lots. See G2020 Parking Lots for full asphalt refresh.
<b>G2020 Parking Lots</b>	1983	1983	4	TRB	06/02/23	Numerous tiers of asphalt parking lots, significantly weathered with alligating and weed growth. Paint striping faded. ADA parking lots provided, but degraded.
<b>G2030 Pedestrian Paving</b>	1983	1983	4	TRB	06/02/23	Concrete sidewalks around the perimeter of publicly-accessible areas connecting to concrete ramps and stairs. Some areas of asphalt used also as drive isles (see G2020 Parking Lots for related deficiency renewal). Veterans plaza concrete between pavers degrading and spalling. Stairs between east lot degraded.
<b>G2040 Site Development</b>	1983	2003	2	TRB	06/01/23	Original wood flagpole on top of Tacoma Dome was replaced with a 55'-tall aluminum pole in 2003. Three aluminum poles at the veterans plaza entry. Vehicular security gates in fair condition, but areas of on-site chain link fencing and gates at parking lots are past end of life. Concrete trash containers, some concrete benches. A comprehensive perimeter security fencing system is currently planned to be installed in the near future. There are security issues under the Dome access ramps - add fencing as minor maintenance to problem areas; including at the exterior beer cooler to west.
<b>G2050 Landscaping</b>	1983	1983	4	TRB	06/02/23	Landscaping largely limited to perimeter, strips between lots and drives, and areas of more intense planting and landscaping around the building perimeter. Perimeter areas are largely planted with trees, shrubs, and grass. Areas especially around the dome are overgrown and in some cases being taken over with invasive species.

## Facility Summary

Tacoma Venues & Events

Tacoma Dome

Tacoma Dome Infrastructure

2727 East D Street  
Tacoma, WA 98421

### Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>							
<b>G30 Site Civil / Mechanical Utilities</b>							
<b>G3010</b>	<b>Water Supply</b>	1983	1983	3	DCS	06/01/23	Six-inch city water service, water pressure at 60-psi. Irrigation service, but irrigation system is mostly non-functional. Four fire services - one to each quadrant, including exterior wall fire department connections. Frost free yard hydrant at trash management area.
<b>G3020</b>	<b>Sanitary Sewer</b>	1983	1983	3	DCS	06/01/23	City sewer with no issues reported; all grease interceptors reported to be inside the building; observed several of these.
<b>G3030</b>	<b>Storm Sewer</b>	1983	1983	3	DCS	06/01/23	Dome roof drains to city storm. Observed parking lots sheet flow to city streets or adjacent landscape. No reported or observed storm water detention or treatment, but no issues reported.
<b>G3050</b>	<b>Cooling Distribution</b>	1983	2000	3	DCS	06/01/23	One packaged beer cooler on exterior wall to west, attractive nuisance for transients - see G2040 Site Development to add fencing.
<b>G3060</b>	<b>Fuel Distribution</b>	1983	2000	2	DCS	06/01/23	Modern natural gas service from Puget Sound Energy with rotary meter No. 1379056 delivered at 2-psi with 7,000 cfm capacity via seismic shut-off valve. Reportedly, serves only two space heating boilers and one domestic hot water boiler, with combined full load near 5,000 cfm, hence surplus capacity, such as for gas-fired cooking equipment or an additional space heating boiler. One 500-gallon double-contained gasoline storage tank with vehicle fuel dispenser at north end of maintenance shed. One 500-gallon double-contained diesel storage tank with vehicle fuel dispenser and piped to boiler room for standby diesel generator and diesel-engine-driven fire pump. Multiple propane tanks stored at forklift covered storage.



## Facility Summary

### Tacoma Venues & Events

Tacoma Dome

Tacoma Dome Infrastructure

2727 East D Street  
Tacoma, WA 98421

### Facility Components

Systems	Original System Date	Renewal Date Last	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>						
<b>G40 Site Electrical utilities</b>						
<b>G4010 Electrical Distribution</b>	1983	1983	3	DCS	06/01/23	Tacoma Power 12.5-kV medium voltage service underground from overhead street lines to north, to pad-mounted switch and three 12.5 kV to 480V pad-mounted transformers at east service yard, then underground to the central plant main electrical room. The exact location of the street feed is unclear, but suspected from access road north of the loading dock and service yard area. Two transformers power house loads, and one is dedicated to show loads. Some high-demand shows exceed the capacity of the show transformer, requiring portable generator, transformer, and distribution cabling. Power rough-in to two-dozen RV camp sites at parking lot.
<b>G4020 Site Lighting</b>	1983	1983	3	DCS	06/01/23	Aged parking lot lighting with high-intensity discharge (HID) lamps and manual control. Some newer decorative LED lighting at several main entries. Pedestrian pathway lighting at ramps and entries on during daylight hours - minor maintenance to install automatic control.
<b>G4030 Site Communications and Security</b>	1983	2010	3	DCS	06/01/23	High-speed fiber-optic data service. Original plain old telephone service for legacy system use. About one-dozen CCTV cameras on parking lot light poles with central monitoring.
<b>G90 Other Site Construction</b>						
<b>G9010 Service and Pedestrian Tunnels</b>	1983	1983	3	DCS	06/01/23	Four substantial areas under main entry access ramps, some are an attractive nuisance to transients - see G2040 Site Development for fencing to better protect.
<b>G9090 Other Site Systems</b>	1983	1983	3	DCS	06/01/23	Three sets of ticket booths, one parking lot attendant station booth, police cone storage locker, trash management area including powered trash compactor, clock-tower with three powered clocks, and miscellaneous site development.

## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

G2020	Parking Lots	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2023	26,000	\$2.00	SF	\$52,000	\$102,000

**Deficient Material:** ADA Parking

ADA parking striping faded, cross slopes appear in some locations to exceed current ADA standards, painted cross walks from ADA stalls to sidewalks are faded or missing, concrete curb ramp from ADA isle to sidewalk also appears to exceed transition tolerance for ADA. No modern tactile warning at transitions from sidewalks to drive surfaces.

**Remedial Action:**

Update ADA parking to current standards, including concrete saw-cut and replacement of adjacent non-compliant sidewalk transition surfaces (include tactile warning surfaces), and restripe ADA lot including international accessibility symbols. (Upgrade work will not be required with any parking resurfacing project including slurry or top coat.)

**Action Type:**

ADA



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

G2020	Parking Lots	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	600,000	\$1.00	SF	\$600,000	\$1,175,000

**Deficient Material:** Asphalt Paving

Numerous tiers of asphalt parking lots, significantly weathered with alligating and weed growth. Paint striping faded.

**Remedial Action:**

Remove weeds, clean and seal cracks, repair compact and fill potholes, apply slurry coat to asphalt to prolong system life, repaint stripe lots.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

G2030	Pedestrian Paving	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	10,000	\$18.00	SF	\$180,000	\$353,000

**Deficient Material:** Plaza Paving

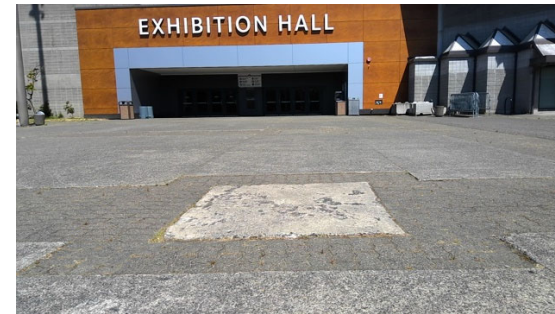
Veterans plaza concrete between pavers degrading and spalling. Differential settlement.

**Remedial Action:**

Reconstruct plaza; clean and salvage pavers and demolish concrete. Prep and compact grade and base, repour concrete, and reinstall salvaged pavers.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

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G2030	Pedestrian Paving	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Stairs

Stairs between east lot degraded.

**Remedial Action:**

Demo and rebuild stairs and railings.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

G2040	Site Development	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	2,000	\$20.00	LF	\$40,000	\$78,000

**Deficient Material:** Chain-link Fencing

Parking lot chain link fencing and gates between lots are past end of life and no longer secure the site.

**Remedial Action:**

Remove and repair on-site chain link fencing and gates.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

G2050	Landscaping	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$20,000.00	LS	\$20,000	\$39,000

**Deficient Material:** Landscaping

Areas especially around the building are overgrown and in some cases being taken over with invasive species.

**Remedial Action:**

Remove invasive species, volunteer trees, ivy, and blackberry, and trim back and neaten up plantings.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

G3010	Water Supply	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$35,000.00	LS	\$35,000	\$69,000

**Deficient Material:** Irrigation  
Mostly failed irrigation system.

**Remedial Action:**  
Renew irrigation.

**Action Type:**  
Other





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

G4010	Electrical Distribution	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	24	\$2,400.00	EA	\$57,600	\$113,000

**Deficient Material:** RV power  
 Parking lot J RV camp site power receptacles missing.

**Remedial Action:**  
 Install RV parking receptacles.

**Action Type:**  
 Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Tacoma Dome

Facility: Tacoma Dome Infrastructure

Escalation 3%

Discount Rate 1.5%

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G4030	Site Communications and Security	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	25	\$5,300.00	EA	\$132,500	\$259,000

**Deficient Material:** CCTV

Aged, failing, and limited coverage CCTV system with recurring transient security issues.

**Remedial Action:**

Install modern full-coverage CCTV system.

**Action Type:**

Significant Operational Impact



# Deficiency Repair Cost Markups By System

2023 - 2028

## Tacoma Venues & Events

Site: Tacoma Dome

Escalation 3%  
Discount Rate 1.5%

Facility	System	Direct Construction Cost	Contingency 20%	Contractor's OH & P 20%	Project Soft Cost 36%	Total Project Cost	Total Project Cost (Present Value)
Tacoma Dome	A10 Foundations	\$252,000	\$50,400	\$60,480	\$130,637	\$494,000	\$531,000
	B20 Exterior Closure	\$468,370	\$93,674	\$112,409	\$242,803	\$917,000	\$932,000
	B30 Roofing	\$25,229,816	\$5,045,963	\$6,055,156	\$13,079,137	\$49,411,000	\$49,411,000
	C10 Interior Construction	\$1,160,350	\$232,070	\$278,484	\$601,525	\$2,273,000	\$2,371,000
	C20 Staircases	\$145,000	\$29,000	\$34,800	\$75,168	\$284,000	\$296,000
	C30 Interior Finishes	\$839,000	\$167,800	\$201,360	\$434,938	\$1,644,000	\$1,651,000
	D10 Vertical Transportation	\$8,500	\$1,700	\$2,040	\$4,406	\$17,000	\$17,000
	D20 Plumbing	\$768,993	\$153,799	\$184,558	\$398,646	\$1,506,000	\$1,529,000
	D30 HVAC	\$5,649,385	\$1,129,877	\$1,355,852	\$2,928,641	\$11,065,000	\$11,404,000
	D40 Fire Protection	\$92,500	\$18,500	\$22,200	\$47,952	\$181,000	\$185,000
	D50 Electrical	\$4,382,883	\$876,577	\$1,051,892	\$2,272,087	\$8,585,000	\$8,811,000
F10 Special Construction	\$16,000	\$3,200	\$3,840	\$8,294	\$31,000	\$31,000	
	<b>Facility Total</b>	<b>\$39,012,797</b>	<b>\$7,802,560</b>	<b>\$9,363,071</b>	<b>\$20,224,235</b>	<b>\$76,408,000</b>	<b>\$77,169,000</b>
Tacoma Dome Infrastructure	G20 Site Improvements	\$897,000	\$179,400	\$215,280	\$465,005	\$1,757,000	\$1,786,000
	G30 Site Civil / Mechanical Utilities	\$35,000	\$7,000	\$8,400	\$18,144	\$69,000	\$70,000
	G40 Site Electrical utilities	\$190,100	\$38,020	\$45,624	\$98,548	\$372,000	\$381,000
	<b>Facility Total</b>	<b>\$1,122,100</b>	<b>\$224,420</b>	<b>\$269,304</b>	<b>\$581,697</b>	<b>\$2,198,000</b>	<b>\$2,237,000</b>
	<b>Site Total</b>	<b>\$40,134,897</b>	<b>\$8,026,980</b>	<b>\$9,632,375</b>	<b>\$20,805,932</b>	<b>\$78,606,000</b>	<b>\$79,406,000</b>

# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Tacoma Dome

Total Site Opportunity Cost: **\$31,337,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
<b>Facility: Tacoma Dome</b> <b>System: Exterior Closure</b>							<b>\$39,000</b>
B2020	Exterior Windows	Single-glazed pre-ADA event ticketing windows (also double duty as vision and daylighting windows for office space within).	10.00	\$2,000.00	EA	\$20,000	\$39,000
		For energy efficiency, thermal comfort, ADA compliance, and optimized functionality, replace and upgrade ticket windows with thermally glazed laminated safety glazed systems with modern transaction/teller communication and transaction systems, including ADA transaction windows and counters.					
<b>Facility: Tacoma Dome</b> <b>System: Plumbing</b>							<b>\$208,000</b>
D2010	Plumbing Fixtures	No kitchenettes at new VIP suites to east.	2.00	\$10,000.00	EA	\$20,000	\$39,000
		Install several kitchenettes at VIP suites.					
		Over one hundred battery-operated flushometers requiring periodic battery replacement.	100.00	\$500.00	EA	\$50,000	\$98,000
		Upgrade to hardwired (permanently powered) flushometers.					

Note: Cost estimates shown include project markups, but exclude escalation.

# Opportunity Summary By Subsystem

## Tacoma Venues & Events

Site: Tacoma Dome

Total Site Opportunity Cost: **\$31,337,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
D2030 Sanitary Waste	When the ice rink was removed, so were all arena floor drains. Many special events result in water and other liquids on the arena floor with nowhere to drain, flush, or clean up, other than with buckets and mops.	Restore floor drain service to arena floor.	12.00	\$3,000.00	EA	\$36,000	\$71,000
<b>Facility: Tacoma Dome</b> <b>System: HVAC</b>							<b>\$8,514,000</b>
D3010 Energy Supply	There is about 2-million btu/hr of unused natural gas service capacity. The main kitchen is an all-electric kitchen and the electrical system is overloaded at some large events.	Convert large cooking equipment to gas, and make resultant surplus power available to show and other electrical power only energy use. Cost is to extend natural gas service to new loads only, not new gas-fired appliances or equipment; ideally this change would be made at kitchen equipment nears end of life or is obsolete for kitchen operational needs.	1.00	\$40,000.00	LS	\$40,000	\$78,000
D3020 Heat Generating Systems	No permanent access to large hydronic system pumps in overhead of the main mechanical room.	Install maintenance platform to facilitate service, repair, and replacement of overhead hydronic piping, pumps, valves, and controls.	1.00	\$30,000.00	LS	\$30,000	\$59,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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## Opportunity Summary By Subsystem

### Tacoma Venues & Events

Site: Tacoma Dome

Total Site Opportunity Cost: **\$31,337,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
D3020 Heat Generating Systems	One of the three primary condenser water pumps (pump 7B) is missing its variable frequency drive (VFD).	Install VFD for third condenser water pump (7B).	1.00	\$7,500.00	EA	\$7,500	\$15,000
D3030 Cooling Generating Systems	Existing cooling tower fans are across-the-line start, placing heavy load on the fan shaft.	Upgrade to soft-start to reduce heavy load on the aging fan shaft and other fan components.	2.00	\$6,000.00	EA	\$12,000	\$24,000
	The HVAC system does not appear to be designed for full cooling; whereas Tacoma Venues & Events advertises full cooling during summer events to draw guests. Cooling Tacoma Dome down during the summer prior to events can take up to one week.	Upgrade the HVAC system to provide full cooling capacity by increasing central plant and distribution chilled water capacity, and adding a second set of cooling coils, plus condensate service to each of the four quadrant fan systems.	401,633.00	\$10.50	SF	\$4,217,147	\$8,259,000

## Opportunity Summary By Subsystem

### Tacoma Venues & Events

Site: Tacoma Dome

Total Site Opportunity Cost: **\$31,337,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
D3040 HVAC Distribution Systems	The arena HVAC system was designed for ice hockey, but the hockey rink was demolished. Modern programmatic use suggests reconfiguration of the HVAC system to better support current programmatic needs. Reportedly, a different system including utility demand peak shifting ice storage has been designed, and even some construction completed, such as the four-pipe hydronic piping installed between the main and south satellite mechanical plants; however, there is no utility demand charge from Tacoma Power, so this project was reportedly stopped before completion. Before significant expense is made to modernize the existing HVAC system, this report suggests Tacoma Events & Venues prepare a master plan for Tacoma Dome, with more comprehensive analysis of the HVAC and other energy using systems, in harmony with the City's climate action plan, and WA State Clean Buildings compliance plan.	Prepare HVAC portion of a 21st Century Tacoma Dome master plan.	401,663.00	\$0.10	SF	\$40,166	\$79,000
<b>Facility: Tacoma Dome</b> <b>System: Fire Protection</b>							<b>\$3,545,000</b>
D4010 Fire Protection Sprinkler Systems	No fire sprinkler for dome and open arena.	Install fire sprinkler.	220,000.00	\$8.00	SF	\$1,760,000	\$3,447,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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## Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Tacoma Dome

Total Site Opportunity Cost: **\$31,337,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
D4020	Stand-Pipe and Hose Systems	No observed standpipes.					
		Install to service high-risk areas.	5.00	\$10,000.00	EA	\$50,000	\$98,000
<b>Facility: Tacoma Dome</b> <b>System: Electrical</b>							<b>\$7,662,000</b>
D5020	Lighting and Branch Wiring	Aged fluorescent with manual control in common and support areas.					
		Upgrade to LED with automatic control.	250,000.00	\$12.00	SF	\$3,000,000	\$5,875,000
D5032	Low Voltage Communication	Cable tray at mezzanine north, but J-hooks only south.					
		Continue cable tray south to provide 360-deg user-friendly wire management around the dome.	750.00	\$50.00	LF	\$37,500	\$73,000
D5038	Low Voltage Security	Reportedly, the limited number of metal detectors are critical path for getting guests into events, frustrating both staff and guests.					
		Procure one dozen additional metal detectors.	12.00	\$6,000.00	EA	\$72,000	\$141,000
		Aging cyber-key system; no intrusion detection; no inside CCTV.					
		Upgrade to card-key; add CCTV.	401,663.00	\$2.00	SF	\$803,326	\$1,573,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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Page 5 of 7



## Opportunity Summary By Subsystem

### Tacoma Venues & Events

Site: Tacoma Dome

Total Site Opportunity Cost: **\$31,337,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
<b>Facility: Tacoma Dome Infrastructure</b> <b>System: Site Civil / Mechanical Utilities</b>							<b>\$98,000</b>
G3020	Sanitary Sewer						
	Grease interceptors inside.	Upgrade to exterior grease interceptor for the main kitchen and smaller concession kitchens in this quadrant of the Dome; includes interceptor and new grease waste piping from kitchens and building to vault.	1.00	\$50,000.00	LS	\$50,000	\$98,000
<b>Facility: Tacoma Dome Infrastructure</b> <b>System: Site Electrical utilities</b>							<b>\$11,271,000</b>
G4010	Electrical Distribution						
	Insufficient power for high-demand shows, requiring large temporary portable generator, transformer(s), and cabling.	Add additional show transformer and service to building, plus associated show power distribution.	1.00	\$450,000.00	LS	\$450,000	\$881,000
	No electric vehicle (EV) charging stations.	Add EV charging stations; assume one dozen stations at each of ten parking lots.	120.00	\$6,000.00	EA	\$720,000	\$1,410,000
	Open parking lot areas with good solar exposure and no current on-site renewable energy.	Install photovoltaic covered parking at five parking lots; assume 100-kW each.	500.00	\$9,000.00	EA	\$4,500,000	\$8,813,000
G4020	Site Lighting						
	Inefficient HID parking lot lighting on manual control.	Upgrade to LED lighting with automatic control.	100.00	\$500.00	EA	\$50,000	\$98,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Tacoma Dome

Total Site Opportunity Cost: \$31,337,000

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
G4030 Site Communications and Security	No blue light emergency call system.	Install blue light system with one station at each parking lot.	10.00	\$3,500.00	EA	\$35,000	\$69,000

## Facility Summary

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Tacoma Venues & Events  
Theater on the Square  
Theater on the Square

915 Broadway  
Tacoma, WA 98402

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Facility Size - Gross S.F. 45,698  
Year Of Original Construction 1994  
Facility Use Type Performing Arts Center  
Construction Type Medium  
# of Floors 3  
Energy Source Gas  
Year Of Last Renovation 1994  
Historic Register No



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			Total Project Cost	Total Project Cost Present Value
Weighted Avg Condition Score	2.9			
Facility Condition Index (FCI)	0.16	Observed Deficiencies 2023 - 2028	\$5,037,000	\$5,201,000
Current Replacement Value (CRV)	\$36,101,000	Predicted Renewal Budget 2029 - 2042	\$10,187,000	\$11,705,000
Beginning Budget Year	2023	Opportunities	\$1,552,000	N/A
Escalation	3%			
Discount Rate	1.5%			

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## Facility Condition Summary

Constructed in 1994, the facility contains a number of performing arts spaces that include a 312-seat auditorium performance theater with an orchestra pit, two large black-box-type performance studios, and a dance studio, including support spaces that with dressing and green rooms, music library, and equipment storage. Roofing is built-up roofing that is at end of life, and exterior cement stucco that is also at end of life and failing. Other exterior exposed structural steel members are beginning to corrode.

HVAC is rooftop packaged units, some configured for use with VAV terminal units in spaces below. Most units are 2012 gas-pack units with gas furnace heat and on-board direct expansion (Dx) cooling. Plumbing includes modern fixtures with electric tank-type hot water. Fire sprinkler and alarm throughout, but alarm system is aged. Power is 208V, three-phase with no standby or emergency power generator. Lighting is mostly original fluorescent; main stage dimming system is at end of life. Sound and lighting for stage and studios. Marginal data system.

# Facility Summary

Tacoma Venues & Events  
Theater on the Square  
Theater on the Square

915 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments	
<b>A Substructure</b>			<b>2.4</b>				
<b>A10 Foundations</b>							
<b>A1010</b>	<b>Standard Foundations</b>	1994	1994	3	TRB	05/31/23	Standard foundations assumed (where the structure is not connected with Pierce County Transit station below).
<b>A1030</b>	<b>Slab On Grade</b>	1994	1994	2	TRB	05/31/23	Concrete slab on grade, no issues reported.
<b>A20 Basements</b>							
<b>A2020</b>	<b>Basement Walls</b>	1994	1994	2	TRB	05/31/23	Concrete, no issues reported.
<b>B Shell</b>			<b>3.4</b>				
<b>B10 Superstructure</b>							
<b>B1010</b>	<b>Floor Construction</b>	1994	1994	2	TRB	05/31/23	Concrete and steel pan deck on wide flange steel columns and girders.
<b>B1020</b>	<b>Roof Construction</b>	1994	1994	3	TRB	05/31/23	Steel pan deck on wide-flange steel beams and joists with spray-on fire protection.
<b>B20 Exterior Closure</b>							
<b>B2010</b>	<b>Exterior Walls</b>	1994	1994	4	TRB	05/31/23	Significant cracking and leak intrusion on cement plaster stucco walls, especially bad water intrusion on the west facade on the studio wall. Rust areas needing repair.
<b>B2020</b>	<b>Exterior Windows</b>	1994	1994	3	TRB	05/31/23	Thermally glazed commercial aluminum windows and storefront systems.

# Facility Summary

Tacoma Venues & Events  
Theater on the Square  
Theater on the Square

915 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>B Shell</b>				<b>3.4</b>			
<b>B20 Exterior Closure</b>							
<b>B2030 Exterior Doors</b>	1994	1994		3	TRB	05/31/23	Hollow metal doors and frames, pervasive issues with closing, operations issues with hardware, and floor thresholds coming loose. Some doors with corrosion of frames.
<b>B30 Roofing</b>							
<b>B3010 Roof Coverings</b>	1994	1994		5	TRB	05/31/23	Built-up roofing is at end of life, ongoing leaks reported, and past evidence of leaks.
<b>B3020 Roof Openings</b>	1994	1994		3	TRB	05/31/23	Smoke exhaust hood vents faded and heavily weathered, but no leaks reported.
<b>B3030 Projections</b>	1994	1994		4	TRB	05/31/23	Cantilevered covered walks with plaster and painted steel on underside soffits, areas of rust blooms on steel. Balcony access has been restricted as floor planks off balcony are unsecured (over Commerce Street).
<b>C Interiors</b>				<b>3.0</b>			
<b>C10 Interior Construction</b>							
<b>C1010 Partitions</b>	1994	1994		3	TRB	05/31/23	CMU walls, plaster on stud walls.
<b>C1020 Interior Doors</b>	1994	1994		3	TRB	05/31/23	Hollow metal doors and frames typical. Sound barrier door between Totts and Studio 2 malfunctions a large percentage of the time. CyberLocks are malfunctioning, pin gets stuck and requires regular maintenance. All door hardware not functioning properly with a variety of issues and failures.
<b>C1030 Fittings</b>	1994	1994		3	TRB	05/31/23	Rubber base, painted steel handrails, full-length wall mirror at dance studio with curtain, full-height curtain system on perimeter wrap around tracks in Studios 2 and 3.

# Facility Summary

Tacoma Venues & Events  
Theater on the Square  
Theater on the Square

915 Broadway  
Tacoma, WA 98402

## Facility Components

Systems		Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>C Interiors</b>				<b>3.0</b>			
<b>C20</b>	<b>Staircases</b>						
<b>C2010</b>	<b>Stair Construction</b>	1994	1994	2	TRB	05/31/23	Prefabricated painted steel pan stairs with field poured concrete stair treads and landings.
<b>C2020</b>	<b>Stair Finishes</b>	1994	1994	2	TRB	05/31/23	Rubber treads at lobby stair.
<b>C30</b>	<b>Interior Finishes</b>						
<b>C3010</b>	<b>Wall Finishes</b>	1994	1994	3	TRB	05/31/23	Paint typical, areas of wear and tear, especially at high-traffic and equipment use areas.
<b>C3020</b>	<b>Floor Finishes</b>	1994	1994	4	TRB	05/31/23	Carpet at end of life, especially the theater space with frayed edges. Other areas of carpet loose and creating waves. Laminate floors with holes, tears, and rips.
<b>C3030</b>	<b>Ceiling Finishes</b>	1994	1994	3	TRB	05/31/23	Ceilings in theater and studio are in good shape. Studios 1 and 2 spray applied black acoustic/fire protective and exposed finish is visually unappealing.
<b>D Services</b>				<b>2.6</b>			
<b>D10</b>	<b>Vertical Transportation</b>						
<b>D1010</b>	<b>Elevators and Lifts</b>	1994	1994	3	DCS	05/31/23	Five-stop, two-door, 10,900-lb hydraulic freight elevator with 75-hp motor and reported power issues. Two-stop, single-door, ticket lobby hydraulic passenger elevator with 30-hp motor with aging controls. Two-stop Wheel-O-Vator passenger lift for orchestra pit access.
<b>D20</b>	<b>Plumbing</b>						
<b>D2010</b>	<b>Plumbing Fixtures</b>	1994	1994	3	DCS	05/31/23	Mostly original plumbing fixtures with mostly manual trim (faucets and flush valves). Showers in dressing room area restrooms. Several sets of drinking fountains. Shop and support area sinks. Kitchenette sinks. Dressing room sinks. Concessions sinks at catering kitchen and lobby serving bar. No specific issues reported; tested fixtures work well.

# Facility Summary

Tacoma Venues & Events  
Theater on the Square  
Theater on the Square

915 Broadway  
Tacoma, WA 98402

## Facility Components

Systems		Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>					<b>2.6</b>			
<b>D20 Plumbing</b>								
<b>D2020</b>	<b>Domestic Water Distribution</b>	1994	1994	2	DCS	05/31/23	City 2.5-inch water service with backflow preventer to copper distribution piping. 2010 A.O. Smith 119-gallon electric domestic hot water heater with recirculation pump - pump was off, but appeared in good condition. 50-psig water pressure at riser. Dedicated backflow preventer and line to main theater control booth equipment room steam humidifier.	
<b>D2030</b>	<b>Sanitary Waste</b>	1994	1994	2	DCS	05/31/23	Cast iron drain, waste, and vent piping where observed. Floor drains in restrooms with hydraulic trap primer; tested fixtures flushed and drained well, with no issues reported.	
<b>D2040</b>	<b>Rain Water Drainage</b>	1994	1994	3	DCS	05/31/23	Roof drains piped to storm and overflow roof drains piped to exterior cow tongues. Most observed drains need cleaning. The annex west roof drains have been overflowing down the west facade, staining the building. Drain body and/or roof deck seal failure has resulted in moisture intrusion and collateral damage. The small roof over the east green room projection is completely blocked by debris - minor maintenance to clear. Minor ongoing maintenance to clean roofs and roof drains.	
<b>D30 HVAC</b>								
<b>D3010</b>	<b>Energy Supply</b>	1994	1994	3	DCS	05/31/23	Natural gas to rooftop gas-pack HVAC units, including pressure-reducing valves.	
<b>D3030</b>	<b>Cooling Generating Systems</b>	1994	2012	3	DCS	05/31/23	One rooftop condensing unit serving the Area 51 shop heat pump furnace. The previous condensing unit is abandoned in place on the roof - minor maintenance to remove.	

# Facility Summary

Tacoma Venues & Events  
Theater on the Square  
Theater on the Square

915 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>			<b>2.6</b>			
<b>D30 HVAC</b>						
<b>D3040 HVAC Distribution Systems</b>	1994	1994	2	DCS	05/31/23	Galvanized sheet metal duct, factory-insulated flexible duct, and grilles, registers, and diffusers (GRDs) mostly in good condition; damaged insulation in several locations - minor maintenance to repair. Several rooftop general exhaust fans in fair condition, except one on the roof (NW) missing cover - minor maintenance to replace. Variable air volume system terminal unit reheat coils supplied with hydronic heating hot water from adjacent Pantages boiler plant. In many cases hydronic piping run-outs are uninsulated - minor maintenance to fully insulate. One 1984 rooftop air handler above the annex with hydronic hot water heat with recently upgraded motor control. Good ventilation for all studios and main theater, including the main stage. Uneven temperature is reported in the lobby, but this is to be expected given the large expanses of south- and west-facing glazing; ceiling fans may help.
<b>D3050 Terminal and Package Units</b>	1994	1994	2	DCS	05/31/23	Up to several dozen variable air volume (VAV) boxes with hot water reheat appear to be in good condition with few issues reported. Several electric wall heaters and electric ceiling radiant panel heaters - aging but functional. About eight 2012 rooftop gas-pack units, and one special VAV cooling-only rooftop unit.
<b>D3060 Controls and Instrumentation</b>	1994	2014	2	DCS	05/31/23	Modern direct digital control (DDC) HVAC control system with minor issues - minor maintenance to tune up to optimize performance.
<b>D3090 Other HVAC Systems and Equipment</b>	1994	1994	3	DCS	05/31/23	Shop welding exhaust hood up to 1984 exhaust fan with unclear operability, but no issues reported. Six main stage rooftop heat relief vents.
<b>D40 Fire Protection</b>						
<b>D4010 Fire Protection Sprinkler Systems</b>	1994	1994	2	DCS	05/31/23	Six-inch service to four-inch backflow preventer to four-inch wet-pipe riser with 50-psig pressure at riser base. Four-inch fire department connection from west facade of annex. Wet-pipe fire sprinkler throughout with no issues reported.



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Tacoma Venues & Events  
Theater on the Square  
Theater on the Square

915 Broadway  
Tacoma, WA 98402

## Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>D Services</b>				<b>2.6</b>			
<b>D40 Fire Protection</b>							
<b>D4030 Fire Protection Specialties</b>	1994	1994	2	DCS	05/31/23	Fire extinguishers on hooks and in cabinets, and first aid kits in cabinets.	
<b>D50 Electrical</b>							
<b>D5010 Electrical Service and Distribution</b>	1994	1994	2	DCS	05/31/23	Siemens 208V, 2,500A main switchboard with Tacoma Power meter No. P07823, and supplying large mechanical panels M in electrical room, MA on roof, and other distribution panels. Three Siemens 208V, 225A distribution panels in the main electrical room, with other panels throughout the facility.	
<b>D5020 Lighting and Branch Wiring</b>	1994	1994	3	DCS	05/31/23	Mostly original fluorescent lighting, with of T12, T8, T5HO, CFL and others, with mix of manual and scene control. Newer digital-controlled lighting in some theater area. Aged ENR Series 96 dimmer rack in main electrical room.	
<b>D5032 Low Voltage Communication</b>	1994	1994	3	DCS	05/31/23	Avaya telephone system; stage audio system with volume-controlled speakers at operations area such as dressing rooms.	
<b>D5037 Low Voltage Fire Alarm</b>	1994	1994	4	DCS	05/31/23	Original fire alarm control panel and devices, but with new AES wireless alarm transmitter; the system includes a voice address subsystem.	
<b>D5038 Low Voltage Security</b>	1994	1994	3	DCS	05/31/23	Aged CyberLock access. No other electronic security.	
<b>D5039 Low Voltage Data</b>	1994	1994	3	DCS	05/31/23	Aged cable data with minimal functionality.	
<b>D5090 Other Electrical Systems</b>	1994	1994	3	DCS	05/31/23	Battery-backed and nuclear exit signs, battery-backed egress pathway lighting - minor maintenance to replace any weak batteries or end-of-life nuclear signs. One egress pathway fixture in the music room is damaged - minor maintenance to replace.	

## Facility Summary

Tacoma Venues & Events  
Theater on the Square  
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915 Broadway  
Tacoma, WA 98402

### Facility Components

Systems		Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>E Equipment and Furnishings</b>					<b>3.0</b>			
<b>E10 Equipment</b>								
<b>E1010</b>	<b>Commercial Equipment</b>	1994	1994	3	DCS	05/31/23	Two sets of residential laundry washers and dryers; appliances at kitchenettes.	
<b>E1020</b>	<b>Institutional Equipment</b>	1994	1994	3	DCS	05/31/23	Theatrical specialty equipment with no issues reported.	
<b>E20 Furnishings</b>								
<b>E2010</b>	<b>Fixed Furnishings</b>	1994	1994	3	TRB	05/31/23	312 auditorium seats, all are at end of life. Concrete anchors at some seats that had been removed are now failing.	
<b>E2020</b>	<b>Moveable Furnishings (Capital Funde</b>	1994	1994	5	TRB	05/31/23	Orchestra pit assembly and forestage apron extension system do not meet load requirements, and have damaged components. Additionally, the heavy components make adjusting the environment very time- and labor-intensive.	
<b>F Special Construction</b>								
<b>F10 Special Construction</b>								
<b>F1020</b>	<b>Integrated Construction</b>	1994	1994	5	TRB	05/31/23	Fly system is past expected useful life, wire rope is bird caging, securement methods are not proper for modern safe operations, and parts are needing to be replaced often. Catwalk system includes non-compliant plywood deck.	

## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2026	10,000	\$35.00	SF	\$350,000	\$685,000

**Deficient Material:** Exterior Siding

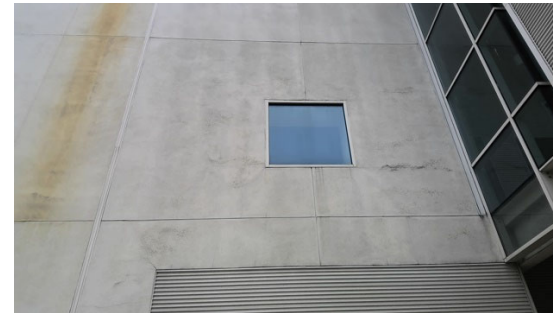
Significant cracking and leak intrusion on cement plaster stucco walls, especially bad interior water intrusion on the west facade on the studio wall.

**Remedial Action:**

Remove sections of plaster to determine extent of system failure and moisture intrusion. Clean surfaces, repair damage, seal all cracks, and refinish exterior with appropriate elastomeric finish coating system.

**Action Type:**

End of Life



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

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B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	2,000	\$7.00	SF	\$14,000	\$27,000

**Deficient Material:** Insulation

Vapor barrier peeling away from face of insulation at exterior wall. Dark staining of batts could indicate mold.

**Remedial Action:**

Investigate if dark staining is dust or mold. If mold, remove and identify source and make repairs. Otherwise, install new vapor/air barrier to back side of batt insulation.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

B2010	Exterior Walls	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	1	\$40,000.00	LS	\$40,000	\$78,000

**Deficient Material:** Metals

Exterior exposed steel structural elements corroding where paint finish has degraded.

**Remedial Action:**

Strip off existing finish, remove and treat oxidation and corrosion, prime and repaint with industrial-grade exterior metal paint coating system.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

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B2020	Exterior Windows	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$8,500.00	EA	\$8,500	\$17,000

**Deficient Material:** Aluminum Windows (Flashing)

West-facing window has significant moisture intrusion during rain events.

**Remedial Action:**

Remove exterior plaster, identify source, reflash with kick flashing to direct water away from window system to exterior.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

B2030	Exterior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	3	\$3,000.00	EA	\$9,000	\$18,000

**Deficient Material:** Doors and Door Hardware

Hollow metal doors and frames, pervasive issues with closing, operations issues with hardware, and floor thresholds coming loose. Some doors with corrosion of frames.

**Remedial Action:**

Treat, prime, and repaint. Replace hardware including astragal and thresholds.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

B3010	Roof Coverings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2024	14,310	\$26.00	SF	\$372,060	\$729,000

**Deficient Material:** Built Up Roofing / Flashing

Built-up roofing is at end of life.

**Remedial Action:**

Remove and replace roofing, flashing, and parapet caps. Recommend conducting replacement as part of Pantages Theater reroof project.

**Action Type:**

Significant Operational Impact





## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$8,000.00	LS	\$8,000	\$16,000

**Deficient Material:** Balcony

Balcony access has been restricted as steel diamond tread planks on balcony are unsecured (over Commerce Street). Panels appear to have been installed in the incorrect order.

**Remedial Action:**

Solidly secure balcony floor panels to structure in the correct order.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

B3030	Projections	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	2	\$5,000.00	EA	\$10,000	\$20,000

**Deficient Material:** Glazed Projection

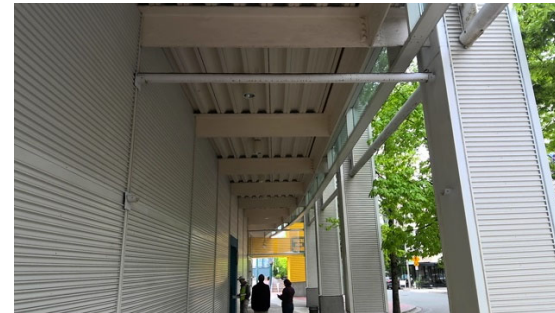
Plexiglass sandwich panel sign broken and missing (after impact from forklift), other side plexiglass panels damaged.

**Remedial Action:**

Replace missing and damaged glass panel system, or remove if no longer desired.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

C1020	Interior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	50	\$270.00	EA	\$13,500	\$26,000

**Deficient Material:** Doors and Frames

Finishes on painted hollow metal doors and frames are chipped and damaged from heavy use and impacts.

**Remedial Action:**

Strip prep and repaint doors and frames.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

C1020	Interior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	70	\$900.00	EA	\$63,000	\$123,000

**Deficient Material:** Hardware

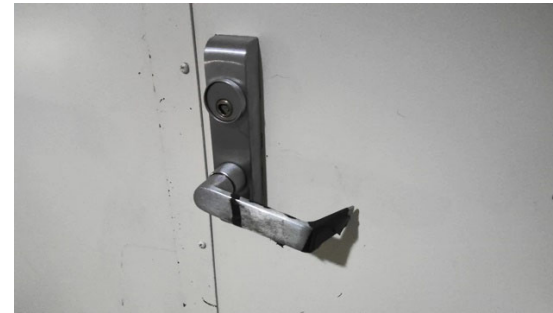
Almost all door hardware not functioning properly with a variety of issues and failures, much related to electronic lock system, and other doors failing to lock consistently.

**Remedial Action:**

Replace door hardware systems.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

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C1020	Interior Doors	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Sound Door

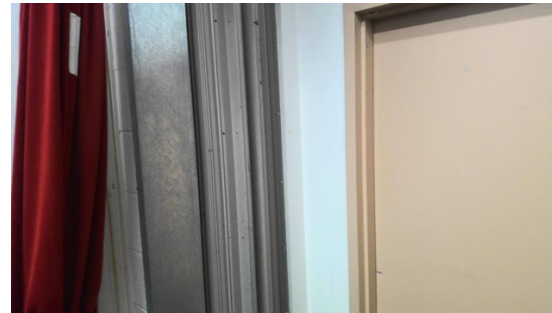
Won-Door sound barrier door between Totts and Studio 2 malfunctions frequently.

**Remedial Action:**

Have Won-Door controls and operator evaluated and fixed by manufacturer.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

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C3010	Wall Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2028	10,000	\$4.00	SF	\$40,000	\$78,000

**Deficient Material:** Interior Paint

Areas of wear and tear on painted walls, especially at high-traffic and equipment use areas.

**Remedial Action:**

Patch and repair where damage has occurred, repaint.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

C3020	Floor Finishes	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	10,000	\$8.00	SF	\$80,000	\$157,000

**Deficient Material:** **Carpeting**

Carpet at end of life, especially the theater space with frayed edges. Other areas of carpet loose and creating waves. Laminate floors with holes, tears, and rips.

**Remedial Action:**

Replace all carpet with carpet tile, install new sheet good flooring at damaged sheet good floor areas.

**Action Type:**

Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

D1010	Elevators and Lifts	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	2	\$20,000.00	EA	\$40,000	\$78,000

**Deficient Material:** Elevators

Freight and passenger elevators with electrical power and control issues.

**Remedial Action:**

Renew freight and passenger elevator controls including resolution of power issues.

**Action Type:**

Significant Operational Impact





## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

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D2040	Rain Water Drainage	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	1	\$5,000.00	LS	\$5,000	\$10,000

**Deficient Material:** Roof drains  
Roof drains at annex west leaking into building.

**Remedial Action:**  
Clean, repair, or replace and fully seal roof and roof drain.

**Action Type:**  
Other



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

D5020	Lighting and Branch Wiring	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	1	\$220,000.00	LS	\$220,000	\$431,000

**Deficient Material:** Stage lighting  
Aged ENR stage lighting system at end of life.

**Remedial Action:**  
Replace with modern stage lighting system.

**Action Type:**  
Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

D5037	Low Voltage Fire Alarm	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2025	45,698	\$3.50	SF	\$159,943	\$313,000

**Deficient Material:** Fire alarm  
Aged 1994 fire alarm system.

**Remedial Action:**  
Upgrade to modern fully addressable fire alarm system.

**Action Type:**  
Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

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E2010	Fixed Furnishings	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2027	312	\$650.00	EA	\$202,800	\$397,000

**Deficient Material:** Fixed seating

Auditorium seats are at end of life.

**Remedial Action:**

Replace auditorium seating with new. Install some in the front rows that are intentionally designed to be removable for reconfiguration for different types of performances.

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

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### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

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E2020	Moveable Furnishings (Capital Funded Only)	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2026	1	\$575,000.00	LS	\$575,000	\$1,126,000

**Deficient Material:** Orchestra Pit Assembly

Forestage apron extension system plastic feet are getting crushed. Assembly not designed to accommodate loads. Same for the orchestra pit cover

**Remedial Action:**

Remove and replace with more convenient system that can also accommodate forklift loading (consider adjustable orchestra pit platform lift system, similar to Pantages Theater).

**Action Type:**

Significant Operational Impact



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

F1020	Integrated Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1,400	\$40.00	SF	\$56,000	\$110,000

**Deficient Material:** Catwalks

Catwalks walk surfaces are plywood (with poor attachment in some locations), and is a fire hazard.

**Remedial Action:**

Remove plywood decking and install proper catwalk grating.

**Action Type:**

Life Safety



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square

Escalation 3%

Discount Rate 1.5%

F1020	Integrated Construction	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		5	2023	2023	1	\$300,000.00	LS	\$300,000	\$588,000

**Deficient Material:** Fly System

Fly system is past expected useful life, wire rope is bird caging, securement methods are not proper for modern safe operations, and parts are needing to be replaced often.

**Remedial Action:**

Have a certified rigging design company evaluate the current system and provide specifications and bid documents to conduct a complete system restoration and upgrade of all needed components, including critical life safety and functional components as necessary to meet current industry standards.

**Action Type:**

Life Safety



## Facility Summary

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Tacoma Venues & Events

Theater on the Square

Theater on the Square Infrastructure

915 Broadway  
Tacoma, WA 98402

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## Facility Condition Summary

The urban site is largely occupied by the Theater on the Square building, bounded on the east and west by public right of way, the square (park) to the south, and the attached Pantages Theater to the north. The building also sits over the top of a Pierce County Transit station.

City water, sewer, fire, and storm shared between the annex and Theater on the Square buildings. Power to the annex and Theater on the Square buildings from the Theater on the Square electrical service. Natural gas service is shared between Pantages Theater, the annex, and Theater on the Square buildings, with three different lines but no submetering. Data is limited to cable. No site electronic security.



# Facility Summary

Tacoma Venues & Events  
Theater on the Square  
Theater on the Square Infrastructure

915 Broadway  
Tacoma, WA 98402

## Facility Components

Systems		Original System Date	Last Renewal Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>							
<b>G20 Site Improvements</b>							
<b>G2020</b>	<b>Parking Lots</b>	1994	1994	3	TRB	05/31/23	Loading zone/pull at the back-of-house loading doors near the west studio wall and Pantages Theater.
<b>G2030</b>	<b>Pedestrian Paving</b>	1994	1994	3	TRB	05/31/23	Concrete and brick pavers.
<b>G2040</b>	<b>Site Development</b>	1994	2023	1	TRB	05/31/23	Site security fencing is currently being installed (anticipated June completion) to enhance security and thwart unauthorized access and human habitation along the southeast side.
<b>G30 Site Civil / Mechanical Utilities</b>							
<b>G3010</b>	<b>Water Supply</b>	1994	1994	2	DCS	05/31/23	City water to riser room with 2.5-inch service, pressure at 50 psig. Fire service to riser room to west with 6-inch service and 4-inch fire department connection at west wall.
<b>G3020</b>	<b>Sanitary Sewer</b>	1994	1994	2	DCS	05/31/23	City sewer with no issues reported.
<b>G3030</b>	<b>Storm Sewer</b>	1994	1994	2	DCS	05/31/23	City storm with past water intrusion reported.
<b>G3040</b>	<b>Heating Distribution</b>	1994	1994	2	DCS	05/31/23	Heating hot water from adjacent Pantages Theater boiler plant - see Pantages Theater Infrastructure for details.
<b>G3060</b>	<b>Fuel Distribution</b>	1994	1994	2	DCS	05/31/23	Natural gas service shared with adjacent Pantages Theater. Gas is from Puget Sound Energy via meter No. 1294240, with 5,000 cfm capacity, delivered at 2-psig, via seismic shut-off valve. No submetering between buildings - see Pantages Theater Infrastructure for opportunity to submeter.

## Facility Summary

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Tacoma Venues & Events  
Theater on the Square  
Theater on the Square Infrastructure

915 Broadway  
Tacoma, WA 98402

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### Facility Components

Systems	Original System Date	Renewal Date	Last Date	Score	Surveyor	Survey Date	Comments
<b>G Sitework</b>							
<b>G40 Site Electrical utilities</b>							
<b>G4010</b>	<b>Electrical Distribution</b>	1994	1994	2	DCS	05/31/23	Tacoma Power vault under sidewalk to east, underground to main electrical room at 208V, three-phase meter No. P07823.
<b>G4020</b>	<b>Site Lighting</b>	1994	1994	3	DCS	05/31/23	Most site lighting from city street lamps; plus failing can lights under SW entry canopy, and several other specialty fixtures including neon squiggle and check mark at SE facade. Can lights on during day time hours - minor maintenance to adjust controls to turn off during daylight hours.
<b>G4030</b>	<b>Site Communications and Security</b>	1994	1994	3	DCS	05/31/23	Obsolete and abandoned plain old telephone service. Slow, minimally functional cable data service.

## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square Infrastructure

Escalation 3%

Discount Rate 1.5%

G4020	Site Lighting	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	12	\$500.00	EA	\$6,000	\$12,000

**Deficient Material:** Exterior Lighting

Most compact fluorescent (CFL) can lights are failed at SW entry facade.

**Remedial Action:**

Replace with LED fixtures.

**Action Type:**

Energy Efficiency



## Detailed Assessment - Observed Deficiencies 2023 - 2028

### Tacoma Venues & Events

Site: Theater on the Square

Facility: Theater on the Square Infrastructure

Escalation 3%

Discount Rate 1.5%

G4020	Site Lighting	Score	Survey Year	Budget Year	Qty	Unit Cost	Unit	Direct Cost	Marked Up Cost
		4	2023	2024	2	\$12,500.00	EA	\$25,000	\$49,000

**Deficient Material:** Neon lights  
Signature neon light squiggle and check mark both failed.

**Remedial Action:**  
Renew neon lighting.

**Action Type:**  
Significant Operational Impact



# Deficiency Repair Cost Markups By System

2023 - 2028

Tacoma Venues & Events

Site: Theater on the Square

Escalation 3%

Discount Rate 1.5%

Facility	System	Direct Construction Cost	Contingency 20%	Contractor's OH & P 20%	Project Soft Cost 36%	Total Project Cost	Total Project Cost (Present Value)
Theater on the Square	B20 Exterior Closure	\$421,500	\$84,300	\$101,160	\$218,506	\$825,000	\$862,000
	B30 Roofing	\$390,060	\$78,012	\$93,614	\$202,207	\$765,000	\$775,000
	C10 Interior Construction	\$81,500	\$16,300	\$19,560	\$42,250	\$159,000	\$165,000
	C30 Interior Finishes	\$120,000	\$24,000	\$28,800	\$62,208	\$235,000	\$245,000
	D10 Vertical Transportation	\$40,000	\$8,000	\$9,600	\$20,736	\$78,000	\$81,000
	D20 Plumbing	\$5,000	\$1,000	\$1,200	\$2,592	\$10,000	\$10,000
	D50 Electrical	\$379,943	\$75,989	\$91,186	\$196,962	\$744,000	\$767,000
	E20 Furnishings	\$777,800	\$155,560	\$186,672	\$403,212	\$1,523,000	\$1,598,000
	F10 Special Construction	\$356,000	\$71,200	\$85,440	\$184,550	\$698,000	\$698,000
		<b>Facility Total</b>	<b>\$2,571,803</b>	<b>\$514,361</b>	<b>\$617,233</b>	<b>\$1,333,223</b>	<b>\$5,037,000</b>
Theater on the Square Infrastructure	G40 Site Electrical utilities	\$31,000	\$6,200	\$7,440	\$16,070	\$61,000	\$62,000
	<b>Facility Total</b>	<b>\$31,000</b>	<b>\$6,200</b>	<b>\$7,440</b>	<b>\$16,070</b>	<b>\$61,000</b>	<b>\$62,000</b>
	<b>Site Total</b>	<b>\$2,602,803</b>	<b>\$520,561</b>	<b>\$624,673</b>	<b>\$1,349,293</b>	<b>\$5,098,000</b>	<b>\$5,263,000</b>

# Opportunity Summary By Subsystem

Tacoma Venues & Events

Site: Theater on the Square

Total Site Opportunity Cost: **\$1,572,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
<b>Facility: Theater on the Square</b> <b>System: Interior Finishes</b>							<b>\$271,000</b>
C3010	Wall Finishes						
	Paint and wall damage along wall of dance studio.	Consider adding wainscot paneling along high-impact area in dance studio to protect wall.	1,200.00	\$90.00	SY	\$108,000	\$212,000
C3030	Ceiling Finishes						
	Studios 1 and 2 spray applied black acoustic/fire protective and exposed finish is in need of a refresh.	Apply a new slat-type acoustic ceiling system suspended below the acoustic spray on finish to enhance aesthetics.	3,000.00	\$10.00	SF	\$30,000	\$59,000
<b>Facility: Theater on the Square</b> <b>System: HVAC</b>							<b>\$24,000</b>
D3040	HVAC Distribution Systems						
	Reported uneven temperatures in lobby.	Install ceiling fans at upper and lower main lobby areas.	4.00	\$3,000.00	EA	\$12,000	\$24,000
<b>Facility: Theater on the Square</b> <b>System: Electrical</b>							<b>\$1,257,000</b>
D5020	Lighting and Branch Wiring						
	Original fluorescent lighting with manual control.	Upgrade to LED with automatic control.	45,698.00	\$12.00	SF	\$548,376	\$1,074,000

Note: Cost estimates shown include project markups, but exclude escalation.

Print Date: 07/28/23

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## Opportunity Summary By Subsystem

### Tacoma Venues & Events

Site: Theater on the Square

Total Site Opportunity Cost: **\$1,572,000**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Direct Cost	Total Project Cost
D5032	Low Voltage Communication	No stage video monitoring and/or operational support intercom system.	1.00	\$25,000.00	LS	\$25,000	\$49,000
D5039	Low Voltage Data	Aged cable data with minimal functionality.	45,698.00	\$1.50	SF	\$68,547	\$134,000
<b>Facility: Theater on the Square Infrastructure</b> <b>System: Site Electrical utilities</b>							<b>\$20,000</b>
G4030	Site Communications and Security	Obsolete cable data service.	1.00	\$10,000.00	LS	\$10,000	\$20,000