

Pierce Transit Facilities Condition Assessment Report

Prepared for

Pierce Transit

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ACRONYMS

AIM	Asset Inventory Module
EMT	electric metallic tube
ENV SP	Envision Sustainability Professional
FAST Act	Fixing America’s Surface Transportation Act of 2015
FTA	Federal Transit Authority
MAP–21	Moving Ahead for Progress in the 21st Century Act
NTD	National Transit Database
PE	Professional Engineer
PVC	Polyvinyl chloride
SE	Structural Engineer
SR	State Route
TAM	Transit Asset Management
TERM Lite	Transit Economic Requirements Model Local Investment Tool Edition
WSDOT	Washington State Department of Transportation

EXECUTIVE SUMMARY

The Pierce County Transportation Benefit Area Authority (dba Pierce Transit) is a separate municipal corporation founded in 1979 that provides fixed route, paratransit, vanpool, and specialized seasonal public transportation services. In accordance with the recently promulgated 49 U.S.C. § 5335, Pierce Transit is required to report the condition of each facility supporting transit operations and report the findings to the National Transit Database at least once every four years. Additional information on Pierce Transit and the legislative requirement can be found in Chapter 1.

Pierce Transit hired Parametrix to provide an objective and qualified assessment of facilities to support this requirement. Parametrix assembled a team of structural, mechanical, and electrical engineers to provide an expert and objective assessment of all Pierce Transit facilities. The assessment team made on-site visits to Pierce Transit facilities to gather information and perform visual observations to make a recommendation as to the condition of the existing facilities. More details on the scope of work performed can be found in Chapter 1.

For each facility, a rating was determined for each primary level (e.g., substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, equipment, and site) of the facility and for the overall facility. Ratings were assigned based on the TERM Lite Scale, as noted in Table ES-1, below. Additional details about methodology used to perform the assessment and calculation of ratings can be found in Chapter 2.

Table ES-1. Summary of TERM Lite Rating Scale

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Administrative and Maintenance Facility Condition Ratings

Eight administrative and maintenance facilities were assessed. The eight facilities are located in Lakewood, Washington, at Pierce Transit headquarters. Pierce Transit Administrative and Maintenance facilities include:

- Building 1 – Vehicles Maintenance:** Building 1 is a one-story, 79,045-square-foot facility used for fleet maintenance. It is located at 3701 96th Street SW, Lakewood, Washington (98499) on the western end of the Pierce Transit headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains vehicle service bays, vehicle service pits, body shop, paint booth, tire shop, component rebuild room, dynamometer room, chassis wash, battery room, upholstery room, and a warehouse. *Building 1 received a condition rating of 3.4.*
- Building 2 – Facilities and Bus Wash:** Building 2 is a one-story, 6,604-square-foot facility used for facilities maintenance. It is located at 3701 96th Street SW, Lakewood, Washington (98499) on

the northwestern end of the Pierce Transit headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains offices, facilities maintenance shop, storage, and a bus wash. *Building 2 received a condition rating of 3.4.*

- **Building 3 – Fuel House:** Building 3 is a one-story, 4,505–square-foot facility located at 3701 96th Street SW, Lakewood, Washington (98499) on the north end of the Pierce Transit headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains a fueling and service station and vault. *Building 3 received a condition rating of 3.5.*
- **Building 4 – Administration:** Building 4 is a two-story, 36,987–square-foot facility used for administrative offices. It is located at 3701 96th Street SW, Lakewood, Washington (98499) on the eastern end of the Pierce Transit headquarters site. It is the only customer-facing facility at headquarters and it is accessible to the public through an entrance on the northern side of 96th Street SW. The facility was constructed in 1987 and contains office space, conference rooms, copy center, file rooms, lunch room, server room, and an operators’ lobby, break room, and kitchen. Office space is provided for service planning and scheduling, employee services, risk management, budget, operations, payroll/accounting, information technology, general counsel, and executive departments. *Building 4 received a condition rating of 3.4.*
- **Building 5 – Training Center:** Building 5 is a two-story, 26,500-square-foot administrative facility used as a safety and training facility. It is located at 3720 96th Street SW, Lakewood, Washington (98499) on the southern side of 96th Street SW, across the street from the main Pierce Transit headquarters. The facility was constructed in 2005 and contains office space, conference and meeting rooms, and computer labs. Office space serves the safety and training, public safety, customer service, service monitoring, and marketing departments. It also houses the vanpool and SHUTTLE (paratransit) programs. Customer service representatives are available at Building 5, but only accessible by telephone. *Building 5 received a condition rating of 3.6.*
- **Building 6 – TBD¹:** Pierce Transit’s new addition to headquarters is Building 6 located north of the intersection of 40th Avenue SW and 100th Street SW at 9622 40th Avenue SW in Lakewood, Washington, 98499. The facility was constructed in 1978 and contains an 11,200-square-foot warehouse/industrial building on a 0.77-acre site. The building is one story and contains 4,000 square feet of office space and 7,200 square feet of production/warehouse space. The building is currently unoccupied. *Building 6 received a condition rating of 3.7.*
- **Building 7 – Radio and Service Supervisors:** Building 7 is a complex of buildings consisting of a one-story, wood-framed building and a pre-engineered metal building in an L-shape. The one-story, wood-framed building contains office and break room space for service supervisors. Under the roof of the metal building, an area has been enclosed to house a radio maintenance area, while at the west end, a two-story office/locker area has been built under the metal canopy. There is also an open-air shell for van storage and a wood-frame shed at the “L” in the metal building. It is located at the northeast corner of 39th Avenue SW and 96th Street SW at 9411 39th Avenue Court SW in Lakewood, Washington, 98499. It is accessed through a security gate on the east side of 39th Avenue SW. The facility is owned by Pierce County. *Building 7 received a condition rating of 3.0.*

¹ The agency’s occupant will be determined in 2018 and indicated in the naming convention accordingly.

- Building 8 – Screaming Eagle Warehouse:** Building 8 is a one-story, 11,950-square-foot facility originally constructed in 1977 with an add-on in 1995. It is located at 9421 39th Avenue Court SW, Lakewood, Washington (98499) and accessed through a locked gate on the east side of 39th Avenue SW. The facility is a warehouse that is used for storage. There is also office space located in the warehouse, but it is currently unused. There is a small one-story office space added on to the west side of the warehouse. The facility is owned by Pierce County. *Building 8 received a condition rating of 3.0.*

The administrative and maintenance facility condition ratings are summarized in Table ES-2 below. All facilities are in adequate condition with facility condition ratings ranging from 3.0 to 3.7. Although overall facilities are in adequate condition, there are components within each facility that have been identified as deficient. A summary of the deficiencies of each facility is described in Chapter 3, with additional details in Appendix A. Buildings 7 and 8 were the lowest rated facilities, rated at 3.0. Buildings 5 and 6 were the highest rated facilities, with conditions at 3.6 and 3.7, respectively. The total cost to address deficiencies for all Administrative and Maintenance facilities is estimated to be \$1,243,120.

Table ES-2. Summary of Administrative and Maintenance Facility Condition Ratings

	Building 1	Building 2	Building 3	Building 4	Building 5	Building 6	Building 7	Building 8
Substructure	4.2	4.0	4.0	4.2	4.0	4.0	4.0	4.0
Shell	2.9	3.5	3.5	3.5	3.5	3.5	2.6	2.5
Interiors	3.8	3.5	3.5	3.8	4.0	3.0	3.5	3.5
Conveyance	4.0	N/A	N/A	3.0	4.0	N/A	N/A	N/A
Plumbing	2.5	2.5	4.0	4.0	4.0	4.0	4.0	3.5
HVAC	3.5	3.0	4.0	4.0	4.0	4.0	3.5	3.5
Fire Protection	3.5	3.8	3.5	3.8	4.0	3.0	3.0	3.0
Electrical	3.5	3.5	3.5	3.5	2.9	3.8	3.0	3.0
Equipment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Site	3.3	3.3	3.3	3.0	3.5	3.7	3.0	2.8
FACILITY	3.4	3.4	3.5	3.4	3.6	3.7	3.0	3.0
Total Cost for Recommended Actions	\$366,000	\$30,000	\$11,200	\$112,550	\$21,620	\$67,700	\$493,650	\$140,400
Total Cost for all Administrative and Maintenance Facilities					\$ 1,243,120			

Passenger and Parking Facility Condition Ratings

Eight passenger and five parking facilities were assessed throughout Pierce County. Pierce Transit passenger and parking facilities include:

- **72nd Street and Portland Avenue Transit Center:** The 72nd Street and Portland Avenue Transit Center is located 1319 East 72nd Street in Tacoma, Washington (98433). The facility was constructed in 1995, has 68 parking stalls, and is approximately 3 acres. The facility has four bus shelters and one utility building that houses an employee restroom facility and utility room. The restroom facility is locked and not available to the public. *The facility received a condition rating of 3.4.*
- **Commerce Street Transfer Center:** The Commerce Street Transfer Center is located at 930 Commerce Street in Tacoma, Washington (98402). The facility was constructed in 1992. The facility has an underground bus tunnel (not open to the public) that is accessed on the west side of Commerce Street. The bus tunnel has several rooms including an Operators' Lobby for employees to rest, the former Bus Shop (formerly used for ticket sales but currently unoccupied and used for storage), additional rooms for storage, and mechanical rooms. Above the bus tunnel is a landscaped park area with fountains. *The facility received a condition rating of 3.1.*
- **Lakewood Towne Center Transit Center:** The Lakewood Towne Center Transit Center is located at 5719 Lakewood Towne Center Boulevard SW in Lakewood, Washington (98499). The facility was constructed in 1992 and is approximately 1 acre. The facility has no on-site parking, but has four bus shelters and one utility building that houses an employee restroom facility and utility room. The restroom facility is locked and not available to the public. *The facility received a condition rating of 3.8.*
- **Parkland Transit Center:** The Parkland Transit Center is located 213 121st Street South in Tacoma, Washington (98444). The facility was constructed in 1984, is approximately 1.3 acres, and has 62 parking stalls. On site, there are two small bus shelters, one large bus shelter, and one utility building that houses an employee restroom facility and utility room. The restrooms are locked and not available to the public. *The facility received a condition rating of 3.4.*
- **South Hill Mall Transit Center:** The South Hill Mall Transit Center is located at 503 39th Avenue SW in Puyallup, Washington (98373). The facility was constructed in 1998 and is approximately 1.5 acres. The facility has four bus shelters and one utility building that houses an employee restroom facility and utility room, and no on-site parking. The restroom facility is locked and not available to the public. *The facility received a condition rating of 3.4.*
- **Tacoma Community College Transit Center:** The Tacoma Community College Transit Center is located at 6615 South 19th Street in Tacoma, Washington (98402). The facility was constructed in 1984 and has 95 parking stalls, two bus shelters, one utility building that houses an employee restroom facility and utility room, and overhead lighting throughout. *The facility received a condition rating of 3.4.*
- **Tacoma Dome Station:** The Tacoma Dome Transit Center is located at 610 Puyallup Avenue East in Tacoma, Washington (98421). The facility was originally constructed in 1997 and is comprised of two parking garages and the bus shop. The "east garage," or Phase I, was constructed in 1997, and the "west garage," or Phase II was constructed in 2001. Together, both parking garages have 2,337 parking stalls over 6 levels of parking (including the roof) and 733,100 square feet. The bus shop is a customer-facing space where passengers can purchase transit fares, receive information,

and access lost and found. There is additional office space in the bus shop for Pierce Transit service departments. *The facility received a condition rating of 3.1.*

- **Tacoma Mall Transit Center:** The Tacoma Mall Transit Center is located 2508 South 47th Street in Tacoma, Washington (98409). The facility was constructed in 1985 and is approximately 1 acre. The facility has two bus shelter structures: a shelter in the middle of the site and a shelter to the north, adjacent to 47th Street. There is one utility building on the south side of the site which houses two employee restrooms (not for public use) and a utility room. *The facility received a condition rating of 3.1.*
- **Kimball Drive Park-and-Ride:** The Kimball Drive Park-and-Ride is located at 6808 Kimball Drive North West, Gig Harbor, WA (98335). The facility was constructed in 1997 and has 306 parking stalls, two bus shelters, one employee restroom/utility building, and overhead lighting throughout. *The facility received a condition rating of 3.0.*
- **Narrows/Skyline Park-and-Ride:** The Narrows/Skyline Park-and-Ride is located at 7201 6th Avenue, northwest of the Skyline Drive and 6th Avenue intersection in Tacoma, Washington (98406). The facility was constructed in 1986 and has 195 parking stalls, one small bus shelter and overhead lighting throughout. There is no permanent onsite restroom facility. *The facility received a condition rating of 3.3.*
- **North Purdy Park-and-Ride:** The North Purdy Park-and-Ride is located 6519 144th Street North West in Gig Harbor, Washington (98332), northeast of the 144th Street NW and State Route (SR) 302 intersection. The facility was constructed in 1991. It is approximately two acres and has 200 parking stalls, one bus shelter, one portable employee restroom facility, two bike storage cabinets, and overhead lighting through the facility. *The facility received a condition rating of 3.3.*
- **Point Defiance Bus Layover Facility:** The Point Defiance Bus Layover Facility is at 5810 North Pearl Street located between the Vashon Ferry dock and Metropolitan Parks Point Defiance parking entrance in Tacoma, Washington (98405). The facility was jointly developed and constructed in 1992 by Pierce Transit, Metropolitan Parks District, and Washington State Department of Transportation (WSDOT). Pierce Transit maintains one bus shelter and the bus layover area. There is a restroom facility on-site that is maintained by the Metropolitan Parks District. *The facility received a condition rating of 3.5.*
- **WA State Route (SR) 512 Park-and-Ride:** The WA State Route 512 Park-and-Ride is located southwest of the I-5 and SR 512 interchange on 10617 South Tacoma Way in Lakewood, Washington (98499). The facility was constructed in 1988 and is approximately 8 acres and has 493 parking stalls. On site, there are two bus shelters and one utility building that houses an employee restroom facility and utility room. *The facility received a condition rating of 2.4.*

The passenger and parking facility condition ratings are summarized in Tables ES-3 and ES-4, below. All facilities are in adequate or marginal condition with condition ratings ranging from 2.4 to 3.8. There is one facility in marginal condition and twelve facilities in adequate condition. Although 12 of the 13 facilities are in adequate condition, there are components within each facility that have been identified as deficient. A summary of the deficiencies of each facility is described in Chapter 4, with additional details in Appendix B. The WA State Route 512 Park-and-Ride was the lowest rated facility, rated at 2.4. The facility with the highest rating was Lakewood Towne Center Transit Center, rated at 3.8. The total cost to address deficiencies for all passenger and parking facilities is estimated to be \$1,399,600.

ES-3: Summary of Passenger Facility Condition Ratings

	72nd St. and Portland Ave.	Commerce Street	Lakewood Towne Center	Parkland	South Hill Mall	Tacoma Community College	Tacoma Dome	Tacoma Mall
Substructure	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.1
Shell	2.9	3.2	3.5	3.4	3.5	3.6	2.9	2.5
Interiors	3.7	3.2	3.5	3.7	4.0	3.6	3.8	3.6
Conveyance	N/A	N/A	N/A	N/A	N/A	N/A	1.5	N/A
Plumbing	4.0	3.0	4.0	3.8	3.7	3.3	3.5	3.5
HVAC	3.3	2.5	3.0	3.5	3.7	3.5	3.5	3.5
Fire Protection	N/A	3.0	N/A	N/A	N/A	N/A	3.8	N/A
Electrical	4.0	2.9	4.0	3.5	3.4	3.5	3.2	2.5
Fare Collection	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Site	3.5	3.2	3.8	3.3	3.3	3.4	3.7	3.3
FACILITY	3.4	3.1	3.8	3.4	3.4	3.4	3.1	3.1
Total Cost for Recommended Actions	\$34,000	\$92,100	\$25,900	\$31,050	\$96,200	\$58,600	\$579,900	\$50,900
Total Cost for all Passenger Facilities				\$968,650				



ES-4: Summary of Parking Facility Condition Ratings

	Kimball Drive	Narrows/ Skyline	North Purdy	Point Defiance	WA SR 512
Substructure	4.0	4.0	4.0	4.0	4.0
Shell	3.8	4.0	3.0	3.3	2.5
Interiors	3.1	N/A	N/A	N/A	3.0
Conveyance	N/A	N/A	N/A	N/A	N/A
Plumbing	3.5	3.3	4.0	N/A	3.2
HVAC	3.8	N/A	N/A	N/A	3.1
Fire Protection	N/A	N/A	N/A	N/A	N/A
Electrical	3.5	3.2	4.0	3.5	3.8
Fare Collection	N/A	N/A	N/A	N/A	N/A
Site	2.8	3.2	3.2	3.8	2.2
FACILITY	3.0	3.3	3.3	3.5	2.4
Total Cost for Recommended Actions	\$10,100	\$20,100	\$23,500	\$13,000	\$364,250
Total Cost for all Parking Facilities: \$430,950					



1. INTRODUCTION

1.1 Pierce Transit

The Pierce County Transportation Benefit Area Authority (dba Pierce Transit) was founded in 1979 and currently serves 292 square miles of Pierce County and approximately 70 percent of the County’s population. Serving Washington’s second largest county, Pierce Transit provides four types of services: fixed route bus service, SHUTTLE paratransit, commuter vanpools, and seasonal trolleys to help get passengers to jobs, schools, and appointments throughout the South Puget Sound area. Pierce Transit is a separate municipal corporation and operates independently of Pierce County, the City of Tacoma, or Sound Transit. Pierce Transit headquarters are located at 3701 96th Street SW in Lakewood, Washington (98496). The headquarters site is zoned public/institutional and surrounded by industrial and commercial zoning.

MISSION: Pierce Transit improves people’s quality of life by providing safe, reliable, innovative and useful transportation services that are locally based and regionally connected.

More information on Pierce Transit and services provided can be found at: www.piercetransit.org/

1.2 Background

The Moving Ahead for Progress in the 21st Century Act (MAP–21) (Pub. L. 112–141, July 6, 2012), established new Transit Asset Management (TAM) data-reporting requirements for 49 U.S.C. § 5326. The Federal Transit Administration (FTA) recently promulgated the TAM rule in 49 CFR part 625 to affect this statutory requirement. On December 4, 2015, then President Barack Obama signed into law the Fixing America’s Surface Transportation (“FAST”) Act (Pub. L. 114–94), which supersedes MAP–21; however, FAST made no amendments to the transit asset management statute in 49 U.S.C. § 5326.

In accordance with 49 U.S.C. § 5335, agencies are required to calculate and report new data elements to the National Transit Database (NTD). New and updated regulations require transit agencies reporting to the NTD to include condition information on all assets reported to the database. To satisfy this new requirement, the condition of each facility supporting transit operations must be reported to the NTD at least once every four years. The TAM rule established performance measures to be reported to the NTD Asset Inventory Module (AIM) in 49 CFR part 625, Subpart D – Performance Management.

In addition to AIM reporting, the TAM rule requires asset inventory and condition assessments at a level of detail sufficient to monitor and predict the performance of assets and to inform investment prioritization in the TAM Plan. Facility condition assessments must be conducted by assessing the condition of and assigning a rating for facility assets using FTA’s Transit Economic Requirements Model (TERM) Local Investment Tool Edition (Lite) scale. TERM is the capital needs analysis tool used by FTA to provide analysis of transit investment scenarios at a national level and is an extensive database of industry assets. TERM Lite is a similar tool developed specifically for local agencies for use in long-range capital planning and budgeting.



1.3 Purpose

The purpose of this report is to document the facilities conditions assessment² process and findings for the Lakewood headquarters buildings and customer-facing properties owned and operated by Pierce Transit, located throughout Pierce County, Washington. Pierce Transit hired Parametrix to provide an objective and qualified assessment of facilities. Parametrix is a hundred-percent employee-owned firm dedicated to providing high quality civil engineering, land surveying, planning, and environmental sciences. Parametrix has over 500 professionals across the Western United States providing multidisciplinary services and is recognized as one of the top planning, engineering, and environmental firms in the West. Parametrix strives to provide high quality service to assist our clients in making informed decisions.

For this assignment, a team of structural, mechanical, and electrical engineers was assembled to provide an expert and objective assessment of Pierce Transit facilities. The assessment team made on-site visits to Pierce Transit facilities to gather information and perform visual observations to make a recommendation as to the condition of the existing facilities. Observations and assessments were based on current existing conditions and did not project long-term deterioration. The Parametrix assessment team was comprised of the following members:

- Steve Wagner, Professional Engineer (PE), Structural Engineer (SE) – Steve is a Senior Structural Engineer with 42 years of industry experience and led the assessment of the substructure, shell, interior, and site primary level components.
- Joel Linke, PE, Envision Sustainability Professional (ENV SP) – Joel is a Senior Mechanical Engineer with 11 years of industry experience and led the assessment of the conveyance, plumbing, HVAC, and site primary level components.
- Jeff Reinmuth – Jeff is an Electrical Designer with 12 years of industry experience and led the assessment of the electrical primary level components.
- Parametrix subcontracted with FSi Consulting Engineers, a mechanical engineering firm founded in 1985 with specialty expertise in fire protection services, to perform the assessment of the fire protection primary level components.

The Facilities Condition Assessment Report contains the following:

- **Chapter 1** provides an overview of the background for the facility condition assessment requirement, describes the purpose of the report, and scope of work performed.
- **Chapter 2** documents the process used to perform the facility condition assessments and methodology for documenting findings and aggregating condition ratings.
- **Chapter 3** describes the overall findings for all the administrative and maintenance facilities that were assessed, including a summary of primary and secondary level ratings, identified deficiencies, and recommended corrective actions and associated costs.
- **Chapter 4** documents the overall findings for all the passenger and parking facilities that were assessed, including a summary of primary and secondary level ratings, identified deficiencies, and recommended corrective actions and associated costs.

² Throughout this report, the process of observing facilities, documenting conditions, and making recommendations is referred to as “assessment” rather than inspection. Inspection denotes a formal process performed by certified and licensed inspector and conforming to certain set standards. Assessments were made in conformance with FTA Guidance as a formal inspection process has not been established and certified inspectors are not required.

- **Chapter 5** details the overall facility group performance measures calculated for the administrative and maintenance and the passenger and parking facility group ratings.
- **Appendix A** contains the complete facility condition assessments for the administrative and maintenance facilities.
- **Appendix B** contains the complete facility condition assessments for the passenger and parking facilities.

2. FACILITY CONDITION ASSESSMENT PROCESS

This chapter documents the facility condition assessment process and includes descriptions of facility types, condition assessment procedures, condition assessment rating methodology, and project safety considerations. The facility condition assessment process follows the recommendations described in the *TAM Facility Performance Measure Reporting Guidebook* published by the FTA in April 2017³, hereafter referred to as the FTA Guidebook. The FTA Guidebook details the methodology and procedures for compliance with the condition assessment requirement described in Section 1.1.

2.1 Facility Types

The FTA Guidebook describes the two overarching groups of facilities: 1) Administrative and Maintenance; and 2) Passenger and Parking. Pierce Transit is required to submit condition assessments for each facility, which will be aggregated to calculate the facility condition performance measure metric.

Administrative facilities are facilities that house management and supporting activities for overall transit operations such as accounting, finance, engineering, legal, safety, security, customer services, scheduling, and planning.

Maintenance facilities are facilities where routine maintenance and repairs or heavy maintenance are conducted. Agencies must not report maintenance facilities where third-party vendors perform services, such as a local gasoline station or body shop.

Pierce Transit administrative and maintenance facilities include:

- Building 1 – Vehicles Maintenance
- Building 2 – Facilities and Bus Wash
- Building 3 – Fuel House
- Building 4 – Administration
- Building 5 – Training Center
- Building 6 – New Acquisition (TBD)⁴
- Building 7 – Radio and Service Supervisors
- Building 8 – Screaming Eagle Warehouse

Passenger facilities include transit centers, transfer centers, and transit malls that have an enclosed structure (building) for passengers for items such as ticketing, information, restrooms, concessions, and telephones.

Parking facilities include park-and-ride lots as well as parking garages. Note that passenger and parking facilities are often collectively referenced as “passenger facilities.” Parking facilities are those immediately adjacent to passenger facilities.

³ FTA 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

⁴ The agency’s occupant will be determined in 2018 and indicated in the naming convention accordingly

Pierce Transit passenger facilities include:

Transit Centers

- 72nd Street and Portland Avenue Transit Center
- Commerce Street Transfer Facility
- Lakewood Towne Center Transit Center
- Parkland Transit Center
- South Hill Mall Transit Center
- Tacoma Community College Transit Center
- Tacoma Dome Station
- Tacoma Mall Transit Center

Pierce Transit parking facilities include:

Park-and-Ride Lots

- Kimball Drive Park-and-Ride
- Narrows/Skyline Park-and-Ride
- North Purdy Park-and-Ride
- Point Defiance Bus Layover Facility
- WA State Route 512 Park-and-Ride

2.2 Condition Assessment Procedures

The condition assessment is primarily intended to assess the overall physical condition of the facility to support capital investment decisions and compliance with federal regulations.

To determine the overall condition of a facility, Pierce Transit is required to assess, at a minimum, each primary level (as applicable) for each facility. Primary and secondary levels for administrative and maintenance and parking and passenger facilities as defined in the FTA Guidebook are provided in Table 1 and Table 2, respectively.

Assessment of secondary levels is not required, but was used by the assessment team to help inform a more thorough and accurate rating of each primary rating.

Table 1. Administrative and Maintenance Facilities: Rating Level

ID#	Primary Level	Secondary Level
A.	Substructure	Foundations; basement
B.	Shell	Superstructure/structural frame; roof; exterior walls, etc.; shell appurtenances
C.	Interiors	Partitions; stairs; finishes
D.	Conveyance	Elevators; escalators; lifts
E.	Plumbing	Fixtures; water distribution; sanitary waste; rain water drainage
F.	HVAC	Energy supply; heating and cooling generation and distribution systems; testing, balancing, controls, and instrumentation; chimneys and vents
G.	Fire Protection	Sprinklers; standpipes; hydrants
H.	Electrical	Electrical service/distribution; lighting and branch wiring; communications and security
I.	Equipment ⁵	Equipment related to the function of the facility
J.	Site	Roadways/driveways; parking lots; pedestrian areas; site development features; landscaping; utilities

Table 2. Passenger and Parking Facilities: Rating Level

ID#	Primary Level	Secondary Level
A.	Substructure	Foundations; basement
B.	Shell	Superstructure/structural frame; roof; exterior walls, etc.; shell appurtenances
C.	Interiors	Partitions; stairs; finishes
D.	Conveyance	Elevators; escalators; lifts
E.	Plumbing	Fixtures; water distribution; sanitary waste; rain water drainage
F.	HVAC	Energy supply; heating and cooling generation and distribution systems; testing, balancing, controls, and instrumentation; chimneys and vents
G.	Fire Protection	Sprinklers; standpipes; hydrants
H.	Electrical	Electrical service/distribution; lighting and branch wiring; communications and security
I.	Fare Collection Equipment	Turnstiles; ticket machines; major equipment related to fare collection
J.	Site	Roadways/driveways; parking lots; pedestrian areas; site development features; landscaping; utilities

⁵ The FTA Guidebook notes that agencies may choose to include equipment assets as an administrative and maintenance facilities asset or inventory the equipment in their TAM Plan in the equipment asset category. Equipment valued between \$10,000 and \$50,000 may be rated in a facility. If equipment is valued at \$50,000 or more, or is a piece of equipment that would be inventoried separately in the TAM Plan, it may not be rated in a facility. For the purposes of this report, the equipment primary level was not assessed.

During the on-site assessment, the assessment team observed the primary and secondary level conditions identified in Table 1 and performed tasks to assess each primary and secondary level as detailed in Table 6 of the FTA Guidebook. The assessment team then recorded a description of each secondary level, describing the current condition, corrective actions (as needed), and estimated cost to address the corrective actions (as needed). In addition, assessors noted and reported any defects that may constitute a safety concern and may require immediate attention. Each secondary level was rated using the five-point scale used in the FTA’s TERM Lite software program.

The scale has the following values, as indicated in Table 3. The TERM Lite scale uses integer values; however, Pierce Transit and Parametrix agreed to add a tenths decimal place to more accurately indicate the condition of the facility.

Table 3. TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

An asset is deemed to be in good repair if it has a rating of 3.0 or above on the TERM Lite scale. Likewise, an asset is deemed to not be in good repair if it has a rating of less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional but may be nearing the end of its useful life. All costs identified are included in the total estimated cost to bring the facility into a *State of Good Repair*. Generally speaking, FTA notes that the condition of an asset or system is said to be in a “State of Good Repair” when no backlog of capital needs exists, all life cycle investment needs have been addressed, and the asset has not exceeded its useful life.

Pierce Transit has adopted State of Good Repair performance measures and targets for three asset categories: facilities, equipment, and rolling stock. For facilities, the target is to rehabilitate and restore at least 75 percent of capital facilities to a condition rating of 3.0 or above on the TERM Lite scale by the end of the calendar year 2021. Pierce Transit is required to update performance measures and targets annually.

2.3 Condition Assessment Rating Methodology

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. The FTA Guidebook notes that transit agencies have flexibility in how to weight their secondary levels, when aggregating to the primary level rating. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the FTA Guidebook. Within each primary level, all secondary level ratings were sorted in ascending order. If

there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating as described in Section 4.1 of the FTA Guidebook. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit in VFA.facility.⁶ To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating. This was used for all overall facility conditions ratings, with the exception of Buildings 6⁷, 7, and 8, which are facilities that are not owned by Pierce Transit; therefore, no detailed replacement costs were available. For Buildings 6, 7, and 8, a median value approach was used to aggregate primary level ratings into the condition rating. The aggregated facility condition rating was calculated as follows:

$$FR = \frac{\sum_i CR_i CW_i}{\sum_i CW_i}$$

Where **FR** is the overall facility condition rating, **CR_i** is the TERM Lite score for the primary level rating, and **CW_i** is the replacement cost.

2.4 Project Safety

Project safety was a fundamental focus during all on-site facility assessments. Prior to site visits, the assessment team reviewed and discussed Pierce Transit’s and Parametrix’s safety policies and held an internal safety meeting. While on-site, the assessment team held a safety briefing with Pierce Transit staff.



⁶ Since 2011, Pierce Transit has used VFA.facility to manage facility condition information. VFA.facility is a web-based database tool designed to help the agency gather and maintain accurate information about facilities condition requirements and is used to aid in capital planning and budgeting.

⁷ At the time of these assessments, Building 6 was privately owned and its sale was pending. Ownership was legally transferred to Pierce Transit on November 30, 2017 when the escrow closed.

3. ADMINISTRATIVE AND MAINTENANCE FACILITY CONDITION RATINGS

This chapter provides a summary of administrative and maintenance facility condition assessment ratings. It also includes a brief description of each building and highlights key findings and identified deficiencies. Complete and discrete facility condition assessments for each building can be found in Appendix A.

3.1 Administrative and Maintenance Facility Condition Ratings Summary

Table 4 summarizes facility and primary level ratings for Buildings 1 through 8 located on the Pierce Transit headquarters campus, as well as total cost to perform the recommended corrective actions.

All facilities are in adequate condition with facility condition ratings ranging from 3.0 to 3.7. Although overall facilities are in adequate condition, there are components within each facility that have been identified as deficient. A summary of the deficiencies of each facility is described in Chapter 3, with additional details in Appendix A. Buildings 7 and 8 were the lowest rated facilities, rated at 3.0. Buildings 5 and 6 were the highest rated facilities, rated at 3.6 and 3.7, respectively. The total cost to address deficiencies for all Administrative and Maintenance facilities is estimated to be \$1,243,120.

Table 4. Summary of Building Facility Condition Assessment Ratings

	Building 1	Building 2	Building 3	Building 4	Building 5	Building 6	Building 7	Building 8
Substructure	4.2	4.0	4.0	4.2	4.0	4.0	4.0	4.0
Shell	2.9	3.5	3.5	3.5	3.5	3.5	2.6	2.5
Interiors	3.8	3.5	3.5	3.8	4.0	3.0	3.5	3.5
Conveyance	4.0	N/A	N/A	3.0	4.0	N/A	N/A	N/A
Plumbing	2.5	2.5	4.0	4.0	4.0	4.0	4.0	3.5
HVAC	3.5	3.0	4.0	4.0	4.0	4.0	3.5	3.5
Fire Protection	3.5	3.8	3.5	3.8	4.0	3.0	3.0	3.0
Electrical	3.5	3.5	3.5	3.5	2.9	3.8	3.0	3.0
Equipment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Site	3.3	3.3	3.3	3.0	3.5	3.7	3.0	2.8
FACILITY	3.4	3.4	3.5	3.4	3.6	3.7	3.0	3.0
Total Cost for Recommended Actions	\$366,000	\$30,000	\$11,200	\$112,550	\$21,620	\$67,700	\$493,650	\$140,400
Total Cost for all Administrative and Maintenance Facilities					\$1,243,120			



Figure 1. Pierce Transit Administrative and Maintenance Facility Building Locations

3.1.1 Building 1 – Vehicles Maintenance

Building 1 is a one-story, 79,045-square-foot facility used for fleet maintenance. It is located at 3701 96th Street SW, Lakewood, Washington (98499), on the western end of the Pierce Transit headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains vehicle service bays, vehicle service pits, body shop, paint booth, tire shop, component rebuild room, Chassis Dynamometer room, chassis wash, battery room, reupholstery room, and a warehouse.

Building 1	Rating
Substructure	4.2
Shell	2.9
Interiors	3.8
Conveyance	4.0
Plumbing	2.5
HVAC	3.5
Fire Protection	3.5
Electrical	3.5
Equipment	N/A
Site	3.3
FACILITY	3.4

Key Findings:

- Overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 5, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$366,000.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 5. Summary of Building 1 Deficiencies

Deficiency	Corrective Action	Estimated Cost
Primary Level: Shell Secondary Level: Roof Description: Skylights are nearing end of useful life, are glazed, and lack fall-through protection.	Replace skylights and provide safety protection.	\$100,000
Primary Level: Shell Secondary Level: Exterior Description: Bus bay rollup doors are heavily damaged and in various states of disrepair.	Replace damaged roll-up doors, as necessary. Some may be at end of design life, recommend further evaluation and planned approach to replace on a planned schedule.	\$200,000
Primary Level: Interiors Secondary Level: Finishes Description: Automotive shop has flaking paint on south wall which indicates exterior wall with water penetration.	Seal wall and repair.	\$5,000
Primary Level: Plumbing Secondary Level: Fixtures Description: Hot water tanks are working but have exceeded their expected typical life and are not correctly seismically restrained per the Uniform Plumbing Code. There is also a small leak in the pressurized air piping in the Running Repair Service Bay and a slow but visible leak in the small piping near the larger water heater in the mechanical room accessed from the Upholstery Room.	Replace hot water tanks and secure with two horizontal straps around the circumference of the unit. Repair leak in pressurized air piping. Repair leak in piping near water heater in Upholstery Room.	\$2,100

Table 5. Summary of Building 1 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Plumbing Secondary Level: Water distribution</p> <p>Description: There was evidence of several locations of repaired water distribution piping from small leaks. Staff noted that these leaks happen approximately every month and may be due to either electrolysis or acidic water. The other buildings on this site have not had leak issues, so electrolysis may be the culprit.</p>	<p>Determine source of electrolysis and isolate it from the water distribution piping.</p>	<p>Unknown</p>
<p>Primary Level: Electrical Secondary Level: Other (emergency lighting)</p> <p>Description: Emergency lighting is in various states of repair throughout building. Some appear to be in working order, but some do not work when test button is pressed or are indicating battery failure.</p>	<p>Evaluate and repair emergency lighting and repair damaged light fixtures. Performing check and necessary repair of the emergency egress lighting</p>	<p>\$300</p>
<p>Primary Level: Site Secondary Level: Utilities</p> <p>Description: There are several hydrants located around the exterior of the building. Three of the hydrants are behind curbs but are not protected by bollards including on the southwest, southeast, and northeast corners of the building.</p> <p>There was temporary site lighting set up in the southwest, northeast, and middle of the east side of the building. This indicates poor or inadequate lighting provided by the permanent site lights.</p>	<p>Add bollards to unprotected hydrants.</p> <p>Add additional permanent site lighting in locations of temporary lighting setups.</p>	<p>\$18,000</p>
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix A.</p>	<p>\$40,600</p>



3.1.2 Building 2 – Facilities and Bus Wash

Building 2 is a one-story, 6,604-square-foot facility used for facilities maintenance. It is located at 3701 96th Street SW, Lakewood, Washington (98499) on the northwestern end of the Pierce Transit headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains offices, facilities maintenance shop, storage, and a bus wash.

Key Findings:

- Overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 6, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$30,000.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Building 2	Rating
Substructure	4.0
Shell	3.5
Interiors	3.5
Conveyance	N/A
Plumbing	2.5
HVAC	3.0
Fire Protection	3.8
Electrical	3.5
Equipment	N/A
Site	3.3
FACILITY	3.4

Table 6. Summary of Building 2 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Plumbing Secondary Level: Fixtures</p> <p>Description: Emergency eyewash near restroom drains to the floor. Staff stated that they were planning on moving the eyewash to an exterior wall so that the drain could penetrate the wall and terminate outside of the building.</p> <p>Hot water tank on second floor is working but has exceeded its typical life. In addition, the unit is not correctly seismically restrained per the Uniform Plumbing Code.</p>	<p>Relocate eyewash or pipe drain piping to exterior wall.</p> <p>Replace water heater and secure with two horizontal straps around the circumference of the unit.</p>	\$2,500
<p>Primary Level: Plumbing Secondary Level: Water distribution</p> <p>Description: There is a slow but visible leak on second floor on cold water piping near hot water heater.</p> <p>Pipe hanger in second floor drawings and plans area is broken and needs to be repaired.</p>	<p>Repair cold water piping slow leak.</p> <p>Replace or repair pipe hanger.</p>	\$350
<p>Primary Level: Electrical Secondary Level: Lighting and branch wiring</p> <p>Description: Overhead lighting in tent storage is fed with extension cord to general use receptacle. Festoon lighting intended for temporary use has been modified to supply power to larger LED luminaires.</p>	<p>Temporary light installation in tent storage area should be replaced with a more permanent solution.</p>	\$5,000

Table 6. Summary of Building 2 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix A.</p>	<p>\$22,150</p>



3.1.3 Building 3 – Fuel House

Building 3 is a one-story, 4,505-square-foot facility located at 3701 96th Street SW, Lakewood, Washington (98499) on the north end of the Pierce Transit headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains a fueling and service station and vault.

Building 3	Rating
Substructure	4.0
Shell	3.5
Interiors	3.5
Conveyance	N/A
Plumbing	4.0
HVAC	4.0
Fire Protection	3.5
Electrical	3.5
Equipment	N/A
Site	3.3
FACILITY	3.5

Key Findings:

- Overall facility was rated at 3.5.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 7, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$11,200.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 7. Summary of Building 3 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Roof</p> <p>Description: Awning roof on east side is ripped and worn and is no longer functioning properly.</p>	Replace awning.	\$2,500
<p>Primary Level: Plumbing Secondary Level: Fixtures</p> <p>Description: There is a small air leak in the compressed air piping in Fuel Island 2. Some of the nuts and bolts on the compressed natural gas flanges are rusting and are adjacent to dissimilar metals. Water heater in the mechanical/electrical room has exceeded its typical design life and is not seismically restrained per the Uniform Plumbing Code. The unit needs to be secured with two horizontal straps around the circumference of the unit.</p>	Repair air leak. Replace rusted bolts with stainless steel bolts to match the flanges. Replace water heater and install two horizontal straps around unit.	\$1,500
<p>Primary Level: Electrical Secondary Level: Branch wiring</p> <p>Description: Conduit seal fittings at Fuel Island 1 not filled with sealing compound or plug fitting.</p>	Seal fittings at Fuel Island 1 should be filled with sealing compound or plug fitting. Remaining seal fittings should be questioned and inspected for proper installation.	\$200
<p>Primary Level: Site Secondary Level: Utilities</p> <p>Description: Temporary lighting setup on the west side of the building seems to indicate poor permanent site lighting in this area.</p>	Add additional permanent site lighting in locations of temporary lighting setups.	\$5,000

Table 7. Summary of Building 3 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix A.</p>	<p>\$2,000</p>



3.1.4 Building 4 – Administration

Building 4 is a two-story, 36,987-square-foot facility used for administrative offices. It is located at 3701 96th Street SW, Lakewood, Washington (98499) on the eastern end of the Pierce Transit headquarters site. It is the only customer-facing facility at headquarters and it is accessible to the public through an entrance on the northern side of 96th Street SW, adjacent to S. Tacoma Way. The facility was constructed in 1987 and contains office space, conference rooms, copy center, file rooms, lunch room, server room, and an operators’ lobby and break room. Office space is provided for service planning and scheduling, employee services, risk management, budget, operations, payroll/accounting, information technology, general counsel, and executive management.

Building 4	Rating
Substructure	4.2
Shell	3.5
Interiors	3.8
Conveyance	3.0
Plumbing	4.0
HVAC	4.0
Fire Protection	3.8
Electrical	3.5
Equipment	N/A
Site	3.0
FACILITY	3.4

Key Findings:

- Overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 8, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$112,550.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 8. Summary of Building 4 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Skylights</p> <p>Description: Skylights at entry and operator’s entry are compound units of four panels. Have dirt in valleys between units. Some condensation inside double dome and glazing of acrylic show the skylights might need replacing.</p>	Replace skylights.	\$15,000
<p>Primary Level: Plumbing Secondary Level: Fixtures</p> <p>Description: Water heater in utility room (across from the Quiet Room) is still operating but has exceeded its expected useful life. This unit will need to be replaced soon. In addition, the water heater in the utility room is not seismically restrained per the Uniform Plumbing Code. The unit needs to be secured with two horizontal straps around the circumference of the unit.</p>	Replace water heater and install with two horizontal straps.	\$5,000

Table 8. Summary of Building 4 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: HVAC Secondary Level: Heating/cooling generation</p> <p>Description: One of the roof-mounted HVAC units has a gravity damper blade that has partially fallen off. Staff is aware of the deficiency, which requires a special type of rivet to repair. This affects performance of the unit because the blades are no longer preventing air from entering the unit at this penetration.</p>	Replace damper blade.	None, if work is performed by Pierce Transit staff.
<p>Primary Level: Site Secondary Level: Site development</p> <p>Description: Pedestrian gate on northeast side of the building is not shutting properly. In addition, the push button for exiting from the inside is not functioning.</p>	Repair gate return function of gate. Repair push button exiting functionality.	\$1,000
<p>Primary Level: Site Secondary Level: Landscaping</p> <p>Description: Landscaping is dying in several areas around building including by the front sign, on both sides of the vehicle entrance/exit gate, and by the backup generator. One of the planters in front of the employee entrance is void of plants.</p>	Replace dead and dying landscaping. Add plants to empty planter.	\$5,000
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	As described in Appendix A.	\$86,550



3.1.5 Building 5 –Training Center

Building 5 is a two-story, 26,500-square-foot administrative facility used as a safety and training facility. It is located at 3720 96th Street SW, Lakewood, Washington (98499) on the southern side of 96th Street SW, across the street from the main Pierce Transit headquarters. The facility was constructed in 2005 and contains office space, conference and meeting rooms, and computer labs. Office space serves the Safety and Training Division, Public Safety Officers, Customer Service, service monitoring, and Marketing Departments. It also houses the vanpool and SHUTTLE (paratransit) programs. Customer service representatives are available at Building 5, but only accessible by telephone.

Building 5	Rating
Substructure	4.0
Shell	3.5
Interiors	4.0
Conveyance	4.0
Plumbing	4.0
HVAC	4.0
Fire Protection	4.0
Electrical	2.9
Equipment	N/A
Site	3.5
FACILITY	3.6

Key Findings:

- Overall facility was rated at 3.6.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 9, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$21,620.
- **A deficiency was identified in electrical panel R5 that would constitute a safety concern and requires immediate attention. This deficiency is described below in Table 9.**

Table 9. Summary of Building 5 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: HVAC Secondary Level: Heating/cooling generation</p> <p>Description: Wall-mounted air conditioner unit on first floor of electrical/phone room not working. Staff was made aware of the non-working unit during the site visit. HVAC ducts are leaking in the storage room of the Training 1 room.</p>	<p>Repair or replace the wall-mounted air conditioner unit.</p> <p>Seal the HVAC ducts in the Training 1 room storage room.</p>	\$1,200
<p>Primary Level: Electrical Secondary Level: Electrical distribution</p> <p>Description: Two safety concerns were found in Panel R5. The plastic breaker blank plate has a broken retention clip and falls out exposing the unguarded electrical bus inside the panel. The plastic breaker cover on the main breaker is not seated properly. Corrective measures should be completed as soon as possible.</p>	<p>Replace with new plastic breaker blank plate. Corrective measures should be completed as soon as possible.</p>	\$20 (if completed by staff)

Table 9. Summary of Building 5 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Electrical Secondary Level: Communications and security</p> <p>Description: Polyvinyl chloride (PVC) conduit for wireless communications installed on roof is not installed in compliance with the National Electrical Code, Article 352.30. The PVC shares roof block supports with an electric metallic tube (EMT) conduit run. This does not allow for required movement for thermal expansion. The roof block supports are farther apart than 3 feet permitted by Table 352.30.</p>	<p>Replace PVC conduit with EMT to match other existing conduit or provide appropriate PVC expansion fittings. Additional conduit support will be necessary if PVC remains. This is a low priority repair unless cables used are not rated for an environment without conduit or conduit separation occurs resulting in cable damage.</p>	<p>\$800</p>
<p>Primary Level: Site Secondary Level: Landscaping</p> <p>Description: Some of the landscaping appears to be dying in the front of the building. Vegetation has grown into the parking lot area in the southwest corner. Landscaping outside of the curb in the southwest corner of the parking lot needs to be graded and replanted.</p>	<p>Replace dying landscaping in front of building. Remove vegetation from parking area. Grade and replant vegetation in southwest corner of lot.</p>	<p>\$1,000</p>
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix A.</p>	<p>\$18,600</p>



3.1.6 Building 6 – (Agency’s Occupant or Purpose to be Determined)

Pierce Transit’s new addition to the headquarters campus is Building 6, located north of the intersection of 40th Avenue SW and 100th Street SW at 9622 40th Avenue SW in Lakewood, Washington (98499). The facility was constructed in 1978 and contains an 11,200-square-foot warehouse/industrial building on a 0.77-acre site. The building is one story and contains 4,000 square feet of office space and 7,200 square feet of production/warehouse space. The building is currently unoccupied

Building 6	Rating
Substructure	4.0
Shell	3.5
Interiors	3.0
Conveyance	N/A
Plumbing	4.0
HVAC	4.0
Fire Protection	3.0
Electrical	3.8
Equipment	N/A
Site	3.7
FACILITY	3.7

Key Findings:

- Overall facility was rated at 3.7.
- No deficiencies (items rated below 3.0) were identified in the secondary levels. Some deficiencies were noted in assets that rated 3.0 and above but were not substantive enough to warrant a rating of below 3.0. See Table 10, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$67,700.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 10. Summary of Building 6 Deficiencies

Deficiency	Corrective Action	Estimated Cost
No deficiencies were noted in the secondary levels.		
Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.	As described in Appendix A.	\$67,700



3.1.7 Building 7 – Radio and Service Supervisors Building

Building 7 is a complex of buildings consisting of a one-story, wood-framed building and a pre-engineered metal building in an L-shape. The one-story, wood-framed building contains office and break room space for service supervisors. Under the roof of the metal building, an area has been enclosed to house a radio maintenance area, while at the west end, a two-story office/locker area has been built under the metal canopy. There is also an open-air shell for van storage and a wood-framed shed at the “L” in the metal building.

It is located at the northeast corner of 39th Avenue SW and 96th Street SW at 9411 39th Avenue Court SW in Lakewood Washington (98499). It is accessed through a security gate on the east side of 39th Avenue SW; another gate on the north end of the site is chained and locked. The facility is owned by Pierce County.

Building 7	Rating
Substructure	4.0
Shell	2.6
Interiors	3.5
Conveyance	N/A
Plumbing	4.0
HVAC	3.5
Fire Protection	3.0
Electrical	3.0
Equipment	N/A
Site	3.0
FACILITY	3.0

Key Findings:

- Overall facility was rated at 3.0.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 11, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$493,650.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 11. Summary of Building 7 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Superstructure/structural frame</p> <p>Description: The asphalt paving has been placed against the wood siding at the service supervisors building and there appears to be areas of rotted siding at the wall bottoms and weeds growing in cracks between the paving and the building.</p> <p>The PEMB canopy and columns have rust on the roof purlins and frames.</p> <p>The rigid frame bracing was removed at the east wall north-south wing and there is column damage at second column from south on east wall.</p> <p>Wood frame shed at “L” has significant damage and is in visibly poor condition.</p>	<p>Cut asphalt paving to prevent water from sitting next to siding.</p> <p>If facility is to continue to be in use, recommend sandblast and painting of canopy structure, review of lateral bracing and replacing missing bracing elements, and repair of damaged columns.</p> <p>Recommend demolition of wooden shed.</p>	<p>\$105,150</p>

Table 11. Summary of Building 7 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Roof Description: Metal roofing is in marginal condition. There are rust holes in the roof at the through fasteners, visible to the east of the radio maintenance area. Zee roof purlins show rust and may have significant damage. Aerial photos show that roof may have been over coated.</p>	<p>Metal roof needs additional investigation. If canopy is to be in continued use, it may need roof panel replacement and zee purlins may need to be repaired or replaced if significantly corroded.</p>	<p>\$250,000</p>
<p>Primary Level: Shell Secondary Level: Exterior Description: Metal siding badly damaged at south wall with collision damage to lower panels at south and west walls, by parking area.</p>	<p>Replace damaged siding.</p>	<p>\$100,000</p>
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix A.</p>	<p>\$38,500</p>



3.1.8 Building 8 – Screaming Eagle Warehouse

Building 8 is a one-story, 11,950-square-foot facility originally constructed in 1977 with an add-on in 1995. It is located at 9421 39th Avenue Court SW, Lakewood, Washington (98499) and accessed through a locked gate on the east side of 39th Avenue SW. The facility is a warehouse that is used for storage. There is also office space located within, but it is currently unused. There is a small one-story office space added onto the west side of the warehouse.

Building 8	Rating
Substructure	4.0
Shell	2.5
Interiors	3.5
Conveyance	N/A
Plumbing	3.5
HVAC	3.5
Fire Protection	3.0
Electrical	3.0
Equipment	N/A
Site	2.8
FACILITY	3.0

Key Findings:

- Overall facility was rated at 3.0.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 12, below.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$140,400.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 12. Summary of Building 8 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Superstructure/structural frame</p> <p>Description: CMU walls are in adequate condition and are showing water penetration at the south wall. Door header is cut out at the north door on the west wall. Wood frame of office portion of building is too close to grade and may be susceptible to rot.</p>	<p>Reseal CMU walls. Install steel header at door and patch CMU. Cut paving to provide grade separation and drainage.</p>	\$25,000
<p>Primary Level: Shell Secondary Level: Exterior</p> <p>Description: Rollup doors are damaged but still functional. CMU exterior paint is in good condition. Siding is damaged in many places and is in marginal condition on south wall and west wall; it is no longer functioning and has exceeded its useful life. The bottom of the wood siding between the two exterior doors accessible from the street and the siding on the south side of the office part of the building is beginning to rot.</p> <p>The facade trim on the south side of the roof line is rotting and failing. It appears that the trim is aesthetic, but it is unsightly and should be replaced.</p> <p>Exterior door is missing its door handle and the trim is rotting.</p>	<p>Replace rotted siding. Remove/replace fascia and trim. Replace door handle and trim.</p>	\$25,000

Table 12. Summary of Building 8 Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Shell appurtenances</p> <p>Description: Shed roof on north side is heavily damaged and in marginal condition. There appears to be poor roof drainage at interior gutters and exterior downspouts. One of the roof downspouts has been extended approximately 100 feet from the building to help prevent water from pooling and entering from under the warehouse roll-up doors.</p>	<p>Remove shed if not needed, otherwise repair damaged columns and upgrade wind uplift capacity.</p> <p>Rework roof drainage to eliminate long runs, possibly by routing underground.</p>	<p>\$20,000</p>
<p>Primary Level: Site Secondary Level: Roadways/driveways and drainage</p> <p>Description: Site asphalt is in poor condition with many cracks and lots of plants and weeds growing out of it on the north side of the site.</p>	<p>Repair or replace worst sections of asphalt and seal the rest of the cracks.</p>	<p>\$10,000</p>
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix A for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix A.</p>	<p>\$60,000</p>



4. PASSENGER AND PARKING FACILITY CONDITION RATINGS

This chapter provides a summary of passenger and parking facility condition assessment ratings. It also includes a brief description of each facility and highlights key findings and identified deficiencies. Complete and discrete facility condition assessments for each building can be found in Appendix B.

4.1 Passenger and Parking Facility Condition Ratings Summary

Table 13 and Table 14 summarize facility and primary level ratings for Pierce Transit passenger and parking facilities, as well as the total costs to perform the recommended corrective actions.

The passenger and parking facility condition ratings are summarized in Table 13 and Table 14, below. All facilities are in adequate or marginal condition with condition ratings ranging from 2.4 to 3.8. There is one facility in marginal condition and twelve facilities in adequate condition. Although 12 of the 13 facilities are in adequate condition, there are components within each facility that have been identified as deficient. A summary of the deficiencies of each facility is described in Chapter 4, with additional details in Appendix B. The WA State Route 512 Park-and-Ride was the lowest rated facility, rated at 2.4. The facility with the highest rating was Lakewood Towne Center Transit Center, rated at 3.8. The total cost to address deficiencies for all passenger and parking facilities is estimated to be \$1,399,600.

Table 13. Summary of Passenger Facility Condition Ratings

	72nd St. and Portland Ave.	Commerce Street	Lakewood Towne Center	Parkland	South Hill Mall	Tacoma Community College	Tacoma Dome	Tacoma Mall
Substructure	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.1
Shell	2.9	3.2	3.5	3.4	3.5	3.6	2.9	2.5
Interiors	3.7	3.2	3.5	3.7	4.0	3.6	3.8	3.6
Conveyance	N/A	N/A	N/A	N/A	N/A	N/A	1.5	N/A
Plumbing	4.0	3.0	4.0	3.8	3.7	3.3	3.5	3.5
HVAC	3.3	2.5	3.0	3.5	3.7	3.5	3.5	3.5
Fire Protection	N/A	3.0	N/A	N/A	N/A	N/A	3.8	N/A
Electrical	4.0	2.9	4.0	3.5	3.4	3.5	3.2	2.5
Fare Collection	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Site	3.5	3.2	3.8	3.3	3.3	3.4	3.7	3.3
FACILITY	3.4	3.1	3.8	3.4	3.4	3.4	3.1	3.1
Total Cost for Recommended Actions	\$34,000	\$92,100	\$25,900	\$31,050	\$96,200	\$58,600	\$579,900	\$50,900
Total Cost for all Passenger Facilities				\$968,650				

Table 14. Summary of Parking Facility Condition Ratings

	Kimball Drive	Narrows/ Skyline	North Purdy	Point Defiance	WA SR 512
Substructure	4.0	4.0	4.0	4.0	4.1
Shell	3.8	4.0	3.0	3.3	2.5
Interiors	3.1	N/A	N/A	N/A	3.0
Conveyance	N/A	N/A	N/A	N/A	N/A
Plumbing	3.5	3.3	4.0	N/A	3.2
HVAC	3.8	N/A	N/A	N/A	3.1
Fire Protection	N/A	N/A	N/A	N/A	N/A
Electrical	3.5	3.2	4.0	3.5	3.8
Fare Collection	N/A	N/A	N/A	N/A	N/A
Site	2.8	3.2	3.2	3.8	2.2
FACILITY	3.0	3.3	3.3	3.5	2.4
Total Cost for Recommended Actions	\$10,100	\$20,100	\$23,500	\$13,000	\$364,250
Total Cost for all Parking Facilities: \$430,950					

4.2 Passenger Facility Condition Ratings

4.2.1 72nd Street and Portland Avenue Transit Center

The 72nd Street and Portland Avenue Transit Center is located 1319 East 72nd Street in Tacoma, Washington, 98433. The facility was constructed in 1995, has 68 parking stalls, and is approximately three acres. The facility has four bus shelters and one utility building that houses an employee restroom facility and utility room/custodial closet. The restroom facility is locked and not available to the public.

Key Findings:

- The overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 15, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$34,000.
- No defects were identified that would constitute a safety concern that would require immediate attention.

72nd St. and Portland Ave.	Rating
Substructure	4.0
Shell	2.9
Interiors	3.7
Conveyance	N/A
Plumbing	4.0
HVAC	3.3
Fire Protection	N/A
Electrical	4.0
Fare Collection	N/A
Site	3.5
FACILITY	3.4

Table 15. Summary of 72nd Street and Portland Avenue Transit Center Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Superstructure/structural</p> <p>Description: Gable end roof rafters rotted at bus shelters.</p> <p>Utility building is in adequate condition. There is freeze damage on the east wall CMU block but the building is still structurally sound and functional.</p>	<p>Repair rafter ends and install stainless steel flashings.</p> <p>Repair damaged utility building wall.</p>	\$30,000
<p>Primary Level: Shell Secondary Level: Appurtenances</p> <p>Description: Southwest shelter, east downspout is dislodged with gaps at joints and there is evidence of leaks. All four bus shelters have leaking gutters in each corner of the shelter.</p> <p>Utility building downspout collector box is not under the wall opening (opening may be overflow scupper).</p>	<p>Repair leaking gutters.</p>	\$1,000
<p>Primary Level: HVAC Secondary Level: Heating/cooling generation</p> <p>Description: Baseboard heaters located in utility room are aging and have reached the end of their typical life.</p>	<p>Replace electric heaters in restrooms and utility room.</p>	\$500

Table 15. Summary of 72nd Street and Portland Avenue Transit Center Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Site Secondary Level: Pedestrian areas</p> <p>Description: Pedestrian crossings are not painted; different paving surface delineates crosswalks. Difference between paving is not as clear when paving is wet. Painted crossings provide higher visibility for safer pedestrian crossings.</p>	<p>Paint pedestrian crossings.</p>	<p>\$2,500</p>



4.2.2 Commerce Street Transfer Center

The Commerce Street Transfer Center is located at 930 Commerce Street in downtown Tacoma, Washington (98402). The facility was constructed in 1992. The facility has a bus tunnel (not open to the public) that is accessed on the west side of Commerce Street. The bus tunnel has several rooms including an Operators’ Lobby and restrooms for employees use, the former Bus Shop (formerly used for ticket sales but currently unoccupied and used for storage), additional rooms for storage, and mechanical rooms. Above the bus tunnel and along Broadway is a landscaped park area, known as Theatre Square, with cascading fountains on the east side leading to Commerce Street.

Commerce Street	Rating
Substructure	4.0
Shell	3.2
Interiors	3.2
Conveyance	N/A
Plumbing	3.0
HVAC	2.5
Fire Protection	3.0
Electrical	2.9
Fare Collection	N/A
Site	3.2
FACILITY	3.1

Key Findings:

- The overall facility was rated at 3.1.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 16, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$92,100.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 16. Summary of Commerce Street Transfer Center Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Plumbing Secondary Level: Fixtures</p> <p>Description: There was a slow leak from the hose connection in the mop sink in the Work Room (Sprinkler Valve Room) while onsite.</p>	<p>Repair leaking hose connection.</p>	<p>\$100</p>
<p>Primary Level: Plumbing Secondary Level: Water distribution</p> <p>Description: There are significant signs of corrosion throughout the pump room. Corrosion that is left unchecked will eventually cause failures in pipe joints, hangers and supports, structural bases for equipment, and electrical and auxiliary systems.</p> <p>There is significant condensation collecting in the small piping near the chlorine injection system. This moisture is causing coatings to fail and causing nearby pipes, joints, hangers, and supports to corrode.</p>	<p>Evaluate and implement strategies for reducing corrosion including recoating pipes, increasing fresh air flow, and separating the chlorine equipment from the rest of the room.</p> <p>Increase fresh air flow and recoat pipes in chlorine injection system.</p>	<p>\$1,000</p>

<p>Primary Level: HVAC Secondary Level: Heating/cooling systems</p> <p>Description: The HVAC equipment in the Operators’ Lobby break room was not able to provide the cooling temperature set on the thermostat. Staff has placed numerous box type fans throughout the area to supplement the HVAC system for this area. The HVAC unit could not be located at the time of the site visit, but it has either reached the end of its useful life, needs to be repaired, or needs to be increased in size.</p> <p>The fan system in the electrical room of the pump room is showing signs of corrosion. The corrosion can reduce fan performance, which reduces the air changes in the room, and can affect the code classification of the room.</p> <p>The HVAC system in the pump room hinders the ability to maintain the rest of the equipment in the room. This can cause safety issues during operation and maintenance in the room.</p> <p>The fans in the room above the bus tunnel are nearing the end of their expected useful life. The personnel access to the fan room is limited to a door approximately three feet by three feet that is located in a vault on the north side of the room.</p> <p>Thermostats in the Operators’ Lobby are aging and should be replaced when the cooling system is repaired or replaced.</p>	<p>Repair or replace HVAC cooling system in the Operators’ Lobby.</p> <p>Inspect fan in electrical room in pump room and check performance. Replace parts as needed to maintain original performance.</p> <p>Refurbish or replace fans in room above bus tunnel.</p>	<p>\$55,500</p>
<p>Primary Level: Electrical Secondary Level: Lighting</p> <p>Description: Lighting is in poor condition in the bus shop, with only one of four lights working.</p> <p>Operators’ Lobby lighting is adequate but multiple lights not working or pulsating in the main room and small central room south of kitchenette.</p> <p>Receptacle in south end of upper plaza missing weatherproof cover. Two other junction boxes at north end of plaza have receptacle missing leaving access to exposed conductors.</p> <p>Severe corrosion is located in multiple locations:</p> <ol style="list-style-type: none"> 1. Junction boxes and control transformer in pump room have severe corrosion and should be replaced. 2. Junction box in main electrical room has severe corrosion and should be replaced. 3. Electrical gutter in storage room. 	<p>Replace ballasts and lamps as necessary.</p> <p>Receptacle in south end of upper plaza, cover should be replaced or receptacle removed and blank cover installed. Receptacle covers in north end of upper plaza should be removed and blank plates installed.</p> <p>Replace junction boxes and control transformer in pump room.</p> <p>Replace junction box in main electrical room. Replace electrical gutter in storage room.</p>	<p>\$3,100</p>

<p>Primary Level: Site Secondary Level: Pedestrian areas</p> <p>Description: The drain at the top of the first wheelchair ramp going up from Commerce Street was clogged at the time of the site visit. Staff became aware of this issue at the time of the site visit.</p> <p>In addition, water was collecting at the top of the wheelchair ramp near Broadway. It appears that decorative blocks where the water was collecting was supposed to drain the water. Staff became aware of this issue at the time of the site visit.</p>	<p>Repair drain function at wheelchair ramp.</p> <p>Repair draining function to brick walkway near Broadway.</p>	<p>\$400</p>
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix B.</p>	<p>\$32,000</p>



4.2.3 Lakewood Towne Center Transit Center

The Lakewood Towne Center Transit Center is located at 5719 Lakewood Towne Center Boulevard SW in Lakewood, Washington (98499). The facility was constructed in 1992 and is approximately one acre. The facility has no on-site, transit-specific parking since parking for retail customers is available in adjacent lots. The transit center has four bus shelters and one utility building that houses an employee restroom facility and utility room. The restroom facility is locked and not available to the public.

Lakewood	Rating
Substructure	4.0
Shell	3.5
Interiors	3.5
Conveyance	N/A
Plumbing	4.0
HVAC	3.0
Fire Protection	N/A
Electrical	4.0
Fare Collection	N/A
Site	3.8
FACILITY	3.8

Key Findings:

- The overall facility was rated at 3.8.
- No deficiencies (items rated below 3.0) were identified in the secondary levels. Some deficiencies were noted in assets that rated 3.0 and above but were not substantive enough to warrant a rating of below 3.0. See Table 17, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$25,900.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 17. Summary of Lakewood Towne Center Transit Center Deficiencies

Deficiency	Corrective Action	Estimated Cost
No deficiencies were noted in the secondary levels.		
Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.	As described in Appendix B.	\$25,900



4.2.4 Parkland Transit Center

The Parkland Transit Center is located 213 121st Street South in Tacoma, Washington (98444). The facility was constructed in 1984, is approximately 1.3 acres, and has 62 parking stalls. On site, there are two small bus shelters, one large bus shelter, and one utility building that houses an employee restroom facility and utility room/custodial closet. The restrooms are locked and not available to the public.

Parkland	Rating
Substructure	4.0
Shell	3.4
Interiors	3.7
Conveyance	N/A
Plumbing	3.8
HVAC	3.5
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	3.3
FACILITY	3.4

Key Findings:

- The overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 18, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$31,050.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 18. Summary of Parkland Transit Center Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Shell appurtenances</p> <p>Description: Large shelter gutters are in marginal condition. There are three locations where the gutters appear to be leaking, two on the west side and one on the east side.</p>	<p>Repair or replace gutters on large shelter.</p>	<p>\$2,500</p>
<p>Primary Level: Site Secondary Level: Roadways/driveways</p> <p>Description: There are some visible cracks and joints that need sealing in concrete areas. Asphalt paving is cracked and alligatored, dirt and grass in cracks, and some break-up at parking entrance. The striping and signage in the parking lot is in good condition; however, the handicap parking stall pavement marking is worn and faded. Curb in front of utility building is broken and needs to be repaired. Curb on the east side of the southeast bus entrance is broken and needs to be repaired. Curb by the southwest parking entrance is broken and needs repair.</p>	<p>Seal cracks and joints in concrete. Clean and seal cracks and alligatored portions of asphalt. Repaint handicap stall. Repair curbs.</p>	<p>\$10,000</p>

<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix B.</p>	<p>\$18,550</p>
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4.2.5 South Hill Mall Transit Center

The South Hill Mall Transit Center is located at 503 39th Avenue SW in Puyallup, Washington (98373). The facility was constructed in 1998 and is approximately 1.5 acres. The facility has four bus shelters and one utility building that houses an employee restroom facility and utility room/custodial closet, but no on-site parking. The restroom facility is locked and not available to the public.

Key Findings:

- The overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 19, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$96,200.
- No defects were identified that would constitute a safety concern that would require immediate attention.

South Hill Mall	Rating
Substructure	4.0
Shell	3.5
Interiors	4.0
Conveyance	N/A
Plumbing	3.7
HVAC	3.7
Fire Protection	N/A
Electrical	3.4
Fare Collection	N/A
Site	3.3
FACILITY	3.4

Table 19. Summary of South Hill Mall Transit Center Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Site Secondary Level: Roadways/driveways</p> <p>Description: Interior roadways are concrete pavement with cracks and broken paving slabs. There are several cracks in the concrete throughout the site. The worst location is at the vault on the east side of the site.</p>	Replace portions of concrete paving with severe cracks. Seal remaining cracks.	\$50,000
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	As described in Appendix B.	\$46,200



4.2.6 Tacoma Community College Transit Center

The Tacoma Community College Transit Center is located at 6615 South 19th Street in Tacoma, Washington (98402). The facility was constructed in 1984 and has 95 parking stalls, two bus shelters, one utility building that houses an employee restroom facility and utility room/custodial closet, and overhead lighting throughout.

Key Findings:

- The overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 20, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$58,600.
- No defects were identified that would constitute a safety concern that would require immediate attention.

	Rating
Substructure	4.0
Shell	3.6
Interiors	3.6
Conveyance	N/A
Plumbing	3.3
HVAC	3.5
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	3.4
FACILITY	3.4

Table 20. Summary of Tacoma Community College Transit Center

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Site Secondary Level: Roadways, driveways, parking lots</p> <p>Description: Parking lot asphalt has cracking and possible sub-base failure. Many of the bus area concrete panels are cracked.</p> <p>Several sections of curbing are damaged or broken in the parking area and some sections have the red paint fading or peeling off. The entire parking area has either faded parking stall striping or it is missing altogether.</p>	<p>Reseal/repair cracks in asphalt and concrete. Repair curbing and repaint red curbing that is fading.</p> <p>Repaint parking stall lines.</p>	\$30,000
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix B.</p>	\$28,600



4.2.7 Tacoma Dome Station

The Tacoma Dome Station is located at 610 Puyallup Avenue East in Tacoma, Washington (98421). The facility was originally constructed in 1997 and is comprised of two parking garages and the Bus Shop. The “east garage,” or Phase I, was constructed in 1997, and the “west garage,” or Phase II was constructed in 2001. Together, both parking garages have 2,337 parking stalls over six levels of parking (including the roof) and 733,100 square feet. The Bus Shop is a customer-facing space where passengers can purchase transit tickets, receive trip information, and access lost and found articles. There is additional office space in the Bus Shop for various Pierce Transit customer service functions. The “east garage” bus bays along Puyallup Avenue are used by Pierce Transit, along with Intercity Transit and Sound Transit for regional express service. A Greyhound Bus terminal is located on the ground floor of the “west garage.”

	Rating
Substructure	3.5
Shell	2.9
Interiors	3.8
Conveyance	1.5
Plumbing	3.5
HVAC	3.5
Fire Protection	3.8
Electrical	3.2
Fare Collection	N/A
Site	3.7
FACILITY	3.1

Key Findings:

- The overall facility was rated at 3.1.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 21, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$579,900.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 21. Summary of Tacoma Dome Station Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level:</p> <p>Description: The east garage has corrosion at northeast corner, at both steel at sill and door frame. There is also tile missing at corner.</p> <p>The east garage also has corrosion at door in southeast corner. Tiles are missing at columns on the south side.</p> <p>Tiles are also missing on the north wall of the west garage.</p> <p>All steel structures including elevator towers, stair enclosures, bus shop framing and pedestrian bridge – green paint is peeling. Appears to be due to poor adhesion between primer and top coat, but could also be due to fumes from toxic waste spill that occurred nearby.</p>	<p>Repair and paint rusted door frame, replace missing tiles.</p> <p>Steel structures are not compromised in function, but repainting recommended for all steel structures to prevent more costly repairs later.</p>	\$505,000
<p>Primary Level: Shell Secondary Level: Appurtenances</p> <p>Description: Pedestrian ramp at west end of west garage has damaged concrete, loose handrail, likely from Nisqually Earthquake.</p>	<p>Remove loose concrete and recast with epoxy bonded repairs.</p>	\$10,000

<p>Primary Level: Conveyance Secondary Level: Elevators Description: Elevators were in working order and appear to be in good condition. Elevators were locked out from public use during the site visit. Staff stated that the intercom system was not working properly and is a safety concern, but it was scheduled for repair.</p>	<p>Repair intercom system if it is still not working properly.</p>	<p>Varies</p>
<p>Primary Level: Plumbing Secondary Level: Rainwater drainage Description: Drainage in west parking garage has backed up twice on the bottom floor in the last 10 years according to security staff. The drain system drains to the sound and both instances occurred during a high tide. Electrical controls room in west parking garage has water that leaks in from the ceiling during rainy weather. Staff is aware of the issue and have mitigated most of the leak by sealing the pavement above the room. The leak is still present but not as bad as it once was. Storage room adjacent to facilities maintenance work room has evidence of water leaking in from the back of the room. It was unclear at the time of the site visit if the leak had been corrected or not.</p>	<p>Inspect downstream drainage system pipes for partial blockages. Continue to seal pavement above electrical controls room to prevent water from damaging electrical and controls equipment. Confirm that water no longer enters the back of the storage room.</p>	<p>Varies</p>
<p>Primary Level: HVAC Secondary Level: Heating/cooling generation systems Description: West end of bus shop HVAC system was not able to provide enough cooling and was noticeably warmer than the east end of the Bus Shop. Staff confirmed that the cooling system was not able to keep up on warm summer days and stated that a separate HVAC unit serviced their end of the Bus Shop. Access to the unit was very limited and could not be visually inspected. Unit has either reached the end of its useful life or needs to be replaced with a larger unit. Radiant heaters in public restroom at pick-up/drop-off island were operational during the site visit while the outside temperature was approximately 80 degrees Fahrenheit. Both restrooms were uncomfortably hot. The thermostats in both of the restrooms appear to have been removed from the wall and the wires from the thermostat are exposed.</p>	<p>Repair/replace HVAC unit that serves the west end of the Bus Shop. Replace thermostats in public restrooms and install lockable covers on thermostats to help prevent tampering.</p>	<p>\$5,100</p>
<p>Primary Level: Site Secondary Level: Parking lots Description: Parking lot striping is faded and in marginal condition.</p>	<p>Repaint parking lot striping.</p>	<p>\$20,000</p>

<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix B.</p>	<p>\$39,800</p>
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4.2.8 Tacoma Mall Transit Center

The Tacoma Mall Transit Center is located 2508 South 47th Street in Tacoma, Washington (98409). The facility was constructed in 1985 and is approximately one acre. The facility has two bus shelter structures; a shelter in the middle of the site and a shelter to the north, adjacent to 47th Street. There is one utility building on the south side of the site which houses two employee restrooms (not for public use) and a utility room/custodial closet.

Tacoma Mall	Rating
Substructure	4.1
Shell	2.5
Interiors	3.6
Conveyance	N/A
Plumbing	3.5
HVAC	3.5
Fire Protection	N/A
Electrical	2.5
Fare Collection	N/A
Site	3.3
FACILITY	3.1

Key Findings:

- The overall facility was rated at 3.1.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 22, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$50,900.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 22. Summary of Tacoma Mall Transit Center Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Superstructure Description: North bus shelter has vehicle damage which knocked out the northwest column and damaged the glulam roof beam. It was splinted with plywood side plates after the damage. Roof is shored with wood post.</p>	Repair/replace damaged column and glulam roof beam.	\$15,000
<p>Primary Level: Shell Secondary Level: Roof Description: Exposed ends of rafters at utility building are weathered and beginning to rot. Both bus shelters have rotted rafter ends at gable ends and where downspouts exit.</p>	Replace rotten and weathered rafters.	\$15,000
<p>Primary Level: Shell Secondary Level: Exterior Description: Glass panels vandalized with scratches. Seats are fold down type and are in good condition. There is one set of seats missing in the south shelter.</p>	Replace glass and missing seats.	\$5,000
<p>Primary Level: Electrical Secondary Level: Lighting Description: Lights on exterior of utility building have reached end of useful life. Lights at bus shelters in need of repair. Two of nine total shelter lights have broken covers and two are missing covers.</p>	Replace exterior restroom structure lights. Repair/replace broken or missing light covers at bus shelters.	\$600

<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix B.</p>	<p>\$15,300</p>
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4.3 Parking Facility Condition Ratings

4.3.1 Kimball Drive Park-and-Ride

The Kimball Drive Park-and-Ride is located at 6808 Kimball Drive North West, Gig Harbor, Washington (98335). The facility was constructed in 1997 and has 306 parking stalls, two bus shelters, one employee restroom and utility building/custodial closet, and overhead lighting throughout.

Key Findings:

- The overall facility was rated at 3.0.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 23, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$10,100.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Kimball Dr.	Rating
Substructure	4.0
Shell	3.8
Interiors	3.1
Conveyance	N/A
Plumbing	3.5
HVAC	3.8
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	2.8
FACILITY	3.0

Table 23. Summary of Kimball Drive Park-and-Ride Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Site Secondary Level: Roadways, driveways</p> <p>Description: Several locations in the north end of the parking lot has thick moss growing on the asphalt. One section of curbing near the north parking lot exit has been hit and should be replaced, but otherwise in adequate condition.</p>	<p>Remove the moss growing on the asphalt.</p> <p>Replace section of curbing.</p>	\$2,000
<p>Primary Level: Site Secondary Level: Parking lots</p> <p>Description: Parking lot stalls and parking number markings are fading.</p>	<p>Re-stripe parking lot and stall numbers.</p>	\$5,000
<p>Primary Level: Site Secondary Level: Pedestrian areas</p> <p>Description: The paint on the asphalt for four of the ADA stalls has faded or flaked and needs to be repainted. The handrails to the south parking area have a couple spots where the rail has separated at a joint. There are unused newspaper distribution boxes that should be removed from the site to prevent theft, damage, graffiti, etc.</p>	<p>Re-paint the ADA signage on the ground in the parking lot.</p> <p>Weld separated handrail joints.</p> <p>Remove the newspaper distribution boxes.</p>	\$1,000

<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix B.</p>	<p>\$2,100</p>
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4.3.2 Narrows/Skyline Park-and-Ride

The Narrows/Skyline Park-and-Ride is located at 7201 6th Avenue, northwest of the Skyline Drive and 6th Avenue intersection in Tacoma, Washington (98406). The facility was constructed in 1986 has 195 parking stalls, one small bus shelter and overhead lighting throughout. There is no permanent onsite restroom facility.

Key Findings:

- The overall facility was rated at 3.3.
- No deficiencies (items rated below 3.0) were identified in the secondary levels. Some deficiencies were noted in assets that rated 3.0 and above but were not substantive enough to warrant a rating of below 3.0. See Table 24, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$20,100.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Narrows/Skyline	Rating
Substructure	4.0
Shell	4.0
Interiors	N/A
Conveyance	N/A
Plumbing	3.3
HVAC	N/A
Fire Protection	N/A
Electrical	3.2
Fare Collection	N/A
Site	3.2
FACILITY	3.3

Table 24. Summary of Narrows/Skyline Park-and-Ride Deficiencies

Deficiency	Corrective Action	Estimated Cost
No deficiencies were noted in the secondary levels.		
Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.	As described in Appendix B.	\$20,100



4.3.3 North Purdy Park-and-Ride

The North Purdy Park-and-Ride is located 6519 144th Street North West in Gig Harbor, Washington (98332), northeast of the 144th Street NW and SR 302 intersection. The facility was constructed in 1991. It is approximately two acres and has 200 parking stalls, one bus shelter, one portable employee restroom facility, two bike storage cabinets, and overhead lighting through the facility.

North Purdy	Rating
Substructure	4.0
Shell	3.0
Interiors	N/A
Conveyance	N/A
Plumbing	4.0
HVAC	N/A
Fire Protection	N/A
Electrical	4.0
Fare Collection	N/A
Site	3.2
FACILITY	3.3

Key Findings:

- The overall facility was rated at 3.3.
- No deficiencies (items rated below 3.0) were identified in the secondary levels. Some deficiencies were noted in assets that rated 3.0 and above but were not substantive enough to warrant a rating of below 3.0. See Table 25, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$23,500.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 25. Summary of North Purdy Park-and-Ride Deficiencies

Deficiency	Corrective Action	Estimated Cost
No deficiencies were noted in the secondary levels.		
Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.	As described in Appendix B.	\$23,500



4.3.4 Point Defiance Bus Layover Facility

The Point Defiance Bus Layover Facility is at 5810 North Pearl Street, located between the Vashon Ferry access and Metropolitan Parks Point Defiance parking entrance in Tacoma, Washington (98405). The facility was jointly developed and constructed in 1992 by Pierce Transit, Metropolitan Parks District, and WSDOT. Pierce Transit maintains one bus shelter and the bus layover area. There is a restroom facility on-site that is maintained by the Metropolitan Parks District.

Point Defiance	Rating
Substructure	4.0
Shell	3.3
Interiors	N/A
Conveyance	N/A
Plumbing	N/A
HVAC	N/A
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	3.8
FACILITY	3.5

Key Findings:

- The overall facility was rated at 3.5.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 26, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$13,000.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 26. Summary of Point Defiance Bus Layover Facility Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Site Secondary Level: Roadways/Driveways</p> <p>Description: Curb markings need repainting. Asphalt area prior to concrete paving needs to be repaired.</p>	Repaint curb and repair asphalt.	\$5,000
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	As described in Appendix B.	\$13,000



4.3.5 WA State Route 512 Park-and-Ride

The WA State Route 512 Park-and-Ride is located southwest of the I-5 and SR 512 interchange on 10617 South Tacoma Way in Lakewood, Washington, (98499). The facility was constructed in 1988 and is approximately eight acres and has 493 parking stalls. On site, there are two bus shelters and one utility building that houses an employee restroom facility and utility room/custodial closet.

WA SR 512	Rating
Substructure	4.0
Shell	2.5
Interiors	3.0
Conveyance	N/A
Plumbing	3.2
HVAC	3.1
Fire Protection	N/A
Electrical	3.8
Fare Collection	N/A
Site	2.2
FACILITY	2.4

Key Findings:

- The overall facility was rated at 2.4.
- Deficiencies (items rated below 3.0) were identified and are summarized in Table 27, below.
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$364,250.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 27. Summary of WA State Route 512 Park-and-Ride Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Shell Secondary Level: Roof</p> <p>Description: Bus shelter roof appears to be at end of design life. Roof gables and rafters have some rot, especially at the ends. The utility building has some rot on the gable rafter ends.</p>	<p>Replace bus shelter rotten rafters, planking, and gable end rafters.</p> <p>Replace plastic roofing.</p> <p>Repair rot on utility building gable rafter ends and planking at gutters.</p>	\$15,000
<p>Primary Level: Shell Secondary Level: Exterior</p> <p>Description: Bus shelter glass side panels have settled and chipped. Wood panels are chipped and the paint is peeling. The utility building doors and finishes are in good condition with the exception of some rust near the bottom of the door frames. The utility room door jamb seal is separating from the frame by the door handle.</p>	<p>Repair bus shelter wood and glass paneling.</p> <p>Repair utility building door frames and door jamb seal on utility room door.</p>	\$3,500
<p>Primary Level: Shell Secondary Level: Shell appurtenances</p> <p>Description: Bus shelter metal gutters are leaking in some locations. Gutters and downspouts are pulled away from the roof and appear at the end of their design life. Some fold-down seats are broken or missing.</p>	<p>Repair bus shelter gutter and downspouts. Repair and/or replace broken/missing bus shelter fold-down seats.</p>	\$1,500
<p>Primary Level: HVAC Secondary Level: Heating/cooling generation</p> <p>Description: Heaters in men’s and women’s restrooms have thermostat knobs missing. Heaters are aging and have reached the end of their typical life.</p>	<p>Replace electric heaters in restrooms.</p>	\$250

Table 27. Summary of WA State Route 512 Park-and-Ride Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Primary Level: Site Secondary Level: Roadways, driveways, parking lots</p> <p>Description: Main roadway and parking lot asphalt shows signs of cracking and sub-base failure in many areas. Bus area asphalt is cracked with some alligating and rutting. North bus lane asphalt is alligatored with ruts at bus stopping areas. Numerous potholes throughout facility. All asphalt surfaces have reached the end of their design life. The concrete panels in front of the utility building are separating, collecting debris, and have plants growing in them.</p> <p>Extensive amount of curbing is damaged or broken in the parking area. Many of the concrete curbs around the trees in the middle of the parking area are broken and need to be replaced.</p> <p>Two sections of concrete sidewalk on the west side of the parking area have separated from each other and the adjacent top of curb because of tree roots.</p> <p>The asphalt around the northernmost tree island in the parking area has been damaged by tree roots pushing the asphalt up.</p> <p>There are many stormwater grates throughout the parking area and bus paths. Some of the grates have sunk or need the asphalt repaired around them, including the grate in the southeast corner of the parking area.</p> <p>Fire lane marking and crosswalks worn off at north entry.</p> <p>The entire parking area has either faded parking stall striping or it is missing altogether.</p>	<p>Complete resurfacing of all asphalt surfaces in the park-and-ride lot, including roadway area, bus areas, parking areas, and bus lanes.</p> <p>Replace curbing and adjust stormwater grates as needed to match grade.</p> <p>Fill concrete control joints to prevent debris and plants from collecting in them.</p> <p>Repair/replace pavement around stormwater drainage grates.</p> <p>Repaint crosswalks and fire lane markings at the north entry.</p> <p>Repaint parking stripes.</p>	<p>\$335,000</p>
<p>Primary Level: Site Secondary Level: Pedestrian Areas</p> <p>Description: Bus island waiting platforms have areas where brick pavers are sunken. Concrete walkway joints need sealant.</p> <p>The brick pavers under the tree in the southwest corner of the parking/passenger area are loose and need to be removed or reset.</p> <p>The restroom doors need better signage. Currently, sharpie markings designate the men’s versus women’s restrooms.</p>	<p>Reset settled pavers and reseal concrete walkways.</p> <p>Add signage to men’s and women’s restrooms.</p>	<p>\$6,000</p>

Table 27. Summary of WA State Route 512 Park-and-Ride Deficiencies

Deficiency	Corrective Action	Estimated Cost
<p>Other: Additional deficiencies were noted within secondary levels that were rated 3.0 or above. This indicates that a small or minor portion of the described secondary level asset may require a corrective action or that the overall condition of the described asset is functional but may be nearing the end of its useful life and may require corrective actions in the near future. Please consult the respective <i>Facility Condition Assessment</i> in Appendix B for additional deficiencies, corrective actions, and estimated costs for the corrections.</p>	<p>As described in Appendix B.</p>	<p>\$3,000</p>



5. FACILITY GROUP PERFORMANCE MEASURES

After determining overall facility condition ratings for each administrative and maintenance, and passenger and parking facilities, Pierce Transit is required to calculate the performance measure for each of the overarching facility groups as noted in Section 5.0 of the FTA Guidebook. To determine the performance measure for a facility category, the number of facilities with a rating below 3.0 are counted and divided by the total number of facilities in the facility category (e.g. administrative and maintenance or passenger and parking). The performance measure is reported as a percentage.

5.1 Administrative and Maintenance Facilities

Table 4 summarizes facility and primary level ratings for all administrative and maintenance facilities. There are no facilities that have a rating below 3.0. Therefore, the performance measure for administrative and maintenance facilities is 0 percent.

5.2 Passenger and Parking Facilities

Table 13 and Table 14 summarize facility and primary level ratings for Pierce Transit passenger and parking facilities. There is one facility out of 13 that has a rating below 3.0. Therefore, the performance measure for passenger and parking facilities is 8 percent.

Appendix A

Administrative and Maintenance Facility Condition Assessments

Pierce Transit

Maintenance Facility Condition Assessment – Building 1 Vehicles Maintenance

Facility Snapshot

Building 1 is a one-story, 79,045 square foot facility used for fleet maintenance. It is located at 3701 96th Street SW, Lakewood, Washington, 98499, on the western end of the Pierce Transit Headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains vehicle service bays, vehicle service pits, body shop, paint booth, tire shop, component rebuild room, dynamometer room, chassis wash, battery room, upholstery room, and a warehouse.

Facility Condition Assessment Summary

Building 1 was assessed on July 31, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were found in the shell and plumbing primary levels. Additional deficiencies were noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$366,000.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 1 Facility and Primary Level Rating Summary

	Rating
Substructure	4.2
Shell	2.9
Interiors	3.8
Conveyance	4.0
Plumbing	2.5
HVAC	3.5
Fire Protection	3.5
Electrical	3.5
Equipment	N/A
Site	3.3
FACILITY	3.4



Building 1 Vehicles Maintenance – Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.2		
Foundation	Poured concrete spread footings (assumed), slab on grade floor.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.2	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell					
Superstructure/structural frame	Frame includes Concrete Masonry Unit (CMU) bearing and shear walls and steel tube columns, steel bar joist roof framing, and steel B-deck roof decking.	Frame is in good condition. No significant visible damage such as cracking, spalling, sagging, rust or shifting.	4.2	None	N/A
Roof	Multi-section roof with expansion joints, membrane surface, interior roof drains paired with overflow drains, perimeter scuppers. Southeast corner of roof is newer built-up roof with mopped coating and walking paths. Roof vent hoods.	Generally good condition, there are limited areas where water collects in "bird-baths". Roof section over lunchroom has a disconnected satellite dish laying on roof. Sheet metal vent hoods are rusty.	3.0	Remove unused dish and mountings. Paint or replace damaged hoods.	\$1,500
	Skylights.	Majority of skylights have glazed Plexiglas due to UV exposure, which indicates that they are near end of their useful life. There is one broken skylight at NW corner and skylights have perimeter leak repairs in roof area over lunchroom. Skylights lack fall-through protection.	1.9	Replace Plexiglas skylights, provide safety protection to meet OSHA 1926.501(b)(4), and replace broken skylight in NW corner.	\$100,000
Exterior	Window/mandoors, bus bay rollup doors, exterior wall paint.	Windows and mandoors are in good condition with little sign of damage. Bus bay rollup doors are in various states of disrepair. Some have been repaired with new panels, others remain damaged and in marginal condition. Exterior wall paint is in good condition, though dirty. Some pressure washing may be needed to clean off dirt.	2.9	Replace damaged roll-up doors, as necessary. Some may be at end of design life, recommend further evaluation and planned approach to replace on a planned schedule. Pressure wash exterior surfaces and repaint as necessary.	\$200,000
Shell appurtenances	Balconies, fire escapes, gutters, downspouts.	All exterior shell appurtenances are in functional and in good condition.	4.2	None	N/A



Building exterior






Building exterior

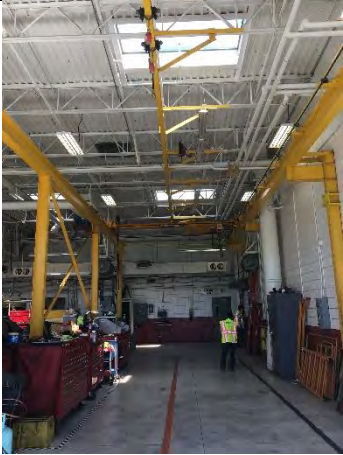







Roof and skylights



Roof and skylights

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors					
Partitions	Interior metal doors.	Generally adequate throughout building, with some minor damage that does not affect functionality.	3.8	None	N/A
Stairs	Interior stairs and landings.	Steel stair to roof access is in good condition, however height is low and head hazard is marked. Mezzanines in parts, storage, and tire shop are original construction with concrete deck and are in good condition. Stairs are in good shape.	4.5	None	N/A
Finishes:	Floors (bare concrete, except in lunch room).	Concrete floors are generally in good condition.	4.0	None	N/A
	Ceilings.	Ceilings generally exposed structure, except for suspended ceilings in lunch room, upholstery shop and radio room. Some water stains seen in radio room (leak repaired?).	3.2	Replace missing or damaged ceiling panels.	\$500
	Automotive shop.	Automotive shop has flaking paint on south wall (exterior wall with water penetration).	2.7	Seal wall and repair.	\$5,000
					
Building interior		Building interior		Building interior	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level D. Conveyance					
Lifts	All building lifts (includes Running Repairs Service Bay – One ton bridge crane, Warehouse one ton Stanley Vidmar STAK adjustable racking system, Main Service Bay – ½ ton jib crane, Component Rebuild Room – one 1 ton and three 2 ton jib cranes, Lube/Compressor Room – 150 pound manual chain hoist, Wash Room – 2 ton wall mounted jib crane.	All lifts were functioning and in good condition.	4.0	None	N/A
					
Running Repairs Service Bay - 1 ton bridge crane		Warehouse - 1 ton Stanley Vidmar STAK adjustable racking system		Main Service Bay - ½ ton jib crane	
					
Component Rebuild Room - One 1 ton and three 2 ton jib cranes		Lube/Compressor Room - 150 pound manual chain hoist		Wash Room - 2 ton wall mounted jib crane	

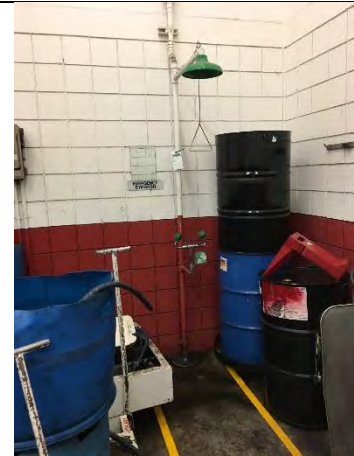
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			2.5		
Fixtures	Bathroom fixtures, emergency showers and eyewashes (Washroom and Main Service Bay).	Fixtures in bathroom are working and in adequate condition. Eyewashes and showers are working and in adequate condition.	3.5	None	N/A
	Two hot water tanks in mechanical room (accessed from the Upholstery Room).	Hot water tanks are working but have exceeded their expected typical life. In addition, both units are not correctly seismically restrained per the Uniform Plumbing Code.	2.0	Replace hot water tanks and secure with two horizontal straps around the circumference of the unit.	\$2,000
	Running Repair Service bay – pressurized air piping.	Small leak in the pressurized air piping in the Running Repair Service Bay.	2.5	Repair leak in pressurized air piping.	\$50 for parts, assuming Pierce Transit staff performs the work.
Water distribution	Upholstery Room water heater.	Slow but visible leak in the small piping near the larger water heater in the mechanical room accessed from the Upholstery Room. Pierce Transit staff noted that this room requires frequent repairs.	2.2	Repair leak.	\$50 for parts, assuming Pierce Transit staff performs the work.
	Water distribution pipes.	There was evidence of several locations of repaired water distribution piping from small leaks. Staff noted that these leaks happen approximately every month and may be due to either electrolysis or acidic water. Staff has attempted to ground the water distribution piping where possible but the leaks are still occurring. The other buildings on this site have not had leak issues, so electrolysis may be the culprit.	2.5	Determine source of electrolysis and isolate it from the water distribution piping.	Varies
Sanitary waste	Sanitary waste system.	Sanitary waste system functioning with no apparent leaks.	3.5	None	N/A
Rain water drainage	Roof drains.	Most of the roof drains rain water adequately. One location near and HVAC unit on the south end of the roof shows evidence of a low area that collects water and debris and does not draining properly. This does not appear to be causing any current issues and no changes are recommended.	3.2	None	N/A



Hot water tank has exceeded expected typical lifespan



Hot water tank has exceeded expected typical lifespan



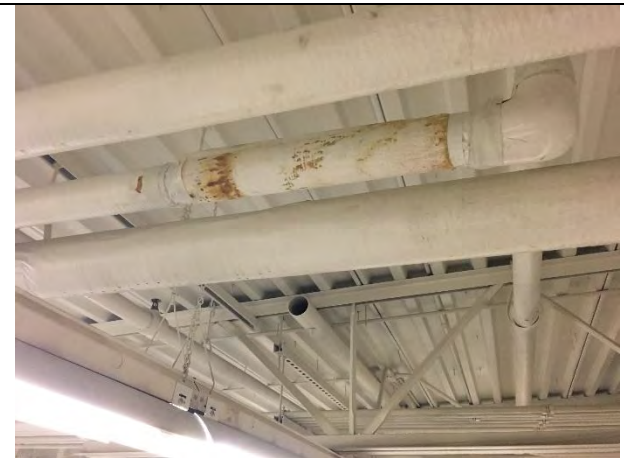
Eye wash and shower station



Slow leak near the larger water heater in the mechanical room



Slow leak near the larger water heater in the mechanical room



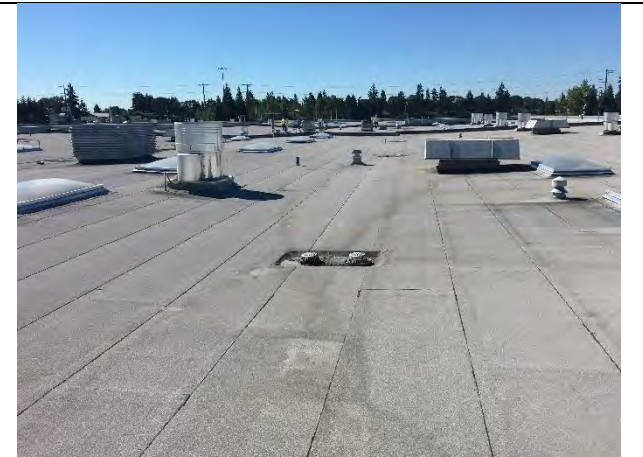
Evidence of repaired water distribution piping from small leaks






Evidence of repaired water distribution piping from small leaks

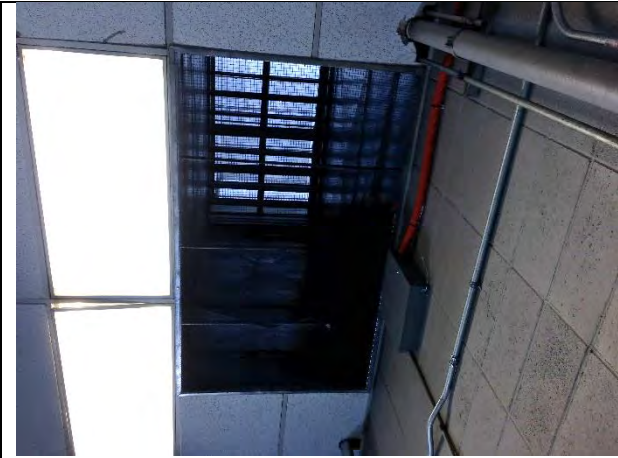


Evidence of low area on roof that collects water and debris from not draining properly






Most of the roof area drains properly

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.5		
Energy supply	Electric power to HVAC units.	Power appears to be adequate and no issues are noted.	3.6	None	N/A
Heat/cooling generation and distribution systems	HVAC systems, roof mounted cooling units and exhaust fans. Heating and cooling systems provided in building. Building duct surfaces.	Several roof mounted cooling units and exhaust fans are located on the roof and are in adequate condition. Staff indicated that the radiant heaters located in some of the rooms have been disconnected and are no longer used. Support Vehicle Shop has paint peeling off some of the ducts. This is most likely due to poor surface preparation and is mostly an aesthetic issue.	3.5	None	N/A
Testing, balancing, controls, and instrumentation	HVAC instrumentation.	HVAC instrumentation appears to be functioning and in adequate condition. No issues noted.	3.5	None	N/A
Chimneys and vents	Generator intake vent.	Generator intake vent is in good condition.	4.0	None	N/A
					
Roof mounted cooling units and exhaust fans		Radiant heaters no longer in use		Paint peeling off the ducts in the support vehicle shop	

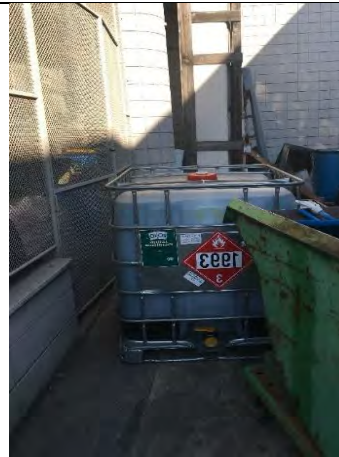


Generator intake vent

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection			3.5		
Sprinklers	Building contains wet and dry sprinkler systems. Sprinkler systems are in all required areas. However, sprinkler configuration may need to be updated based on contents in various spaces.	Building contains primarily older style sprinkler heads (except in recently renovated areas) which are adequate and within service life.	3.5	Modern sprinkler heads will respond to a developing fire faster. Provide new quick response sprinkler heads throughout building except in the eastern bays which appear to have been renovated recently.	\$24,000
Fire Risers	Building contains two fire risers.	Onsite certifications indicate system been tested and approved on a regular basis.	3.5	None	N/A
<p>Other fire protection notes from consultant team that do not pertain directly to facility condition assessment:</p> <ul style="list-style-type: none"> • Confirm installed shelf storage is code compliant with sprinklers. Generally, storage over 12' requires much more ceiling sprinklers or in rack sprinklers and it does not look like either were provided. • Confirm tire quantity in tire shop is under the allowable limit and storage configuration for standard sprinklers that are provided. Likely that this requires a sprinkler improvement. • Confirm oil and windshield wiper fluid (high ethanol content) are properly stored to meet the NFPA 30 requirements. The ethanol should be stored under the sprinkler coverage and may require secondary containment. • Rack storage in the mezzanine is too close to the sprinkler heads. Leave 30" clear below sprinkler heads for full sprinkler pattern development. Remove top shelf to prevent future storage and provide signage. • Confirm foam storage in mezzanine and paper quantity does not exceed allowable limits in NFPA 13 or provide additional sprinkler coverage to meet the higher hazard. • Provide hydrogen detector in battery charging room. • Vent fire cabinets. • Confirm sprinkler coverage is adequate for flammable liquid storage in the parts cleaning room. • Restroom in paint area sprinkler head is obstructed by ceiling tile. Repair ceiling tiles. • Paint outside piping for dry system to prevent further rust deterioration. 					
					
Fire riser #1 (Wet System)		Fire riser #1 (Dry System)		Shelf storage	



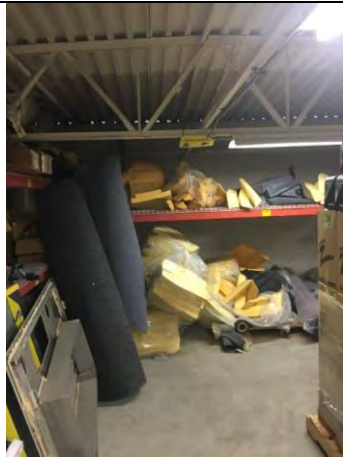
Rusted exterior dry system piping



Windshield wiper fluid



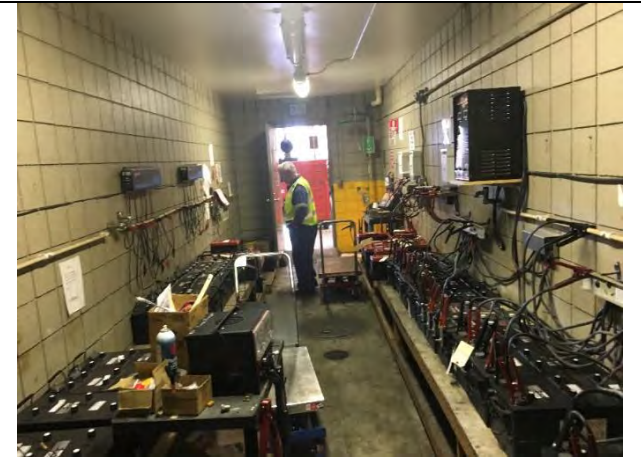
Rack storage in mezzanine



Foam storage in mezzanine



Fire cabinet (unvented)



Battery room



Fire riser #2



Paint area restroom sprinkler head

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.5		
Electrical service and distribution	Electrical distribution.	Electrical distribution is original to the building. Working space in front of electrical panels is kept clear.	3.5	None	N/A
Lighting and branch wiring (interior and exterior)	Work area lighting and branch wiring.	<p>Most of the lighting in good working order with spaces well lit. There are two areas that will need to be addressed.</p> <ol style="list-style-type: none"> 1. The Tire Shop had one light that has been pulled to clear mezzanine loading area. 2. The Quick Check Service Bay has vapor-tight fluorescent lighting mounted to walls have cover latches that are broken or missing. Plastic zip-ties are used to hold in place. One cover missing. <p>Branch wiring is in good working order. Power strips are poorly supported in the Running Repair Service Bay area.</p>	3.2	<p>Permanently relocate light allowing access.</p> <p>Repair wall mounted vapor-tight fluorescent lighting and replace broken or missing cover latches.</p> <p>Permanent electrical raceway and receptacles should be added to provide support for power strips in Running Repair Service area.</p>	No cost if replacement latches available and repairs done by PT staff, or \$2,000 to replace existing lighting.
Communications and security	Card key access (exterior) and security cameras (exterior and interior).	Card key access around exterior of building is in good condition. Cameras located at interior and exterior are in good condition. Exterior cameras recently replaced or added.	4.0	None	N/A
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Generator.	Generator and automatic transfer switches recently replaced.	5.0	None	N/A
	Emergency lighting.	<p>Emergency lighting in various states of repair throughout building. Some appear to be in working order, but some do not work when test button is pressed or are indicating battery failure.</p> <p>Light in the Compressor Room is disconnected from junction box and hanging from electrical conductors.</p> <p>Light on mezzanine level of Warehouse is blocked by shelves and stored material.</p>	2.5	Evaluate and repair emergency lighting and repair damaged light fixtures. Performing check and necessary repair of the emergency egress lighting.	\$300



One light in tire shop



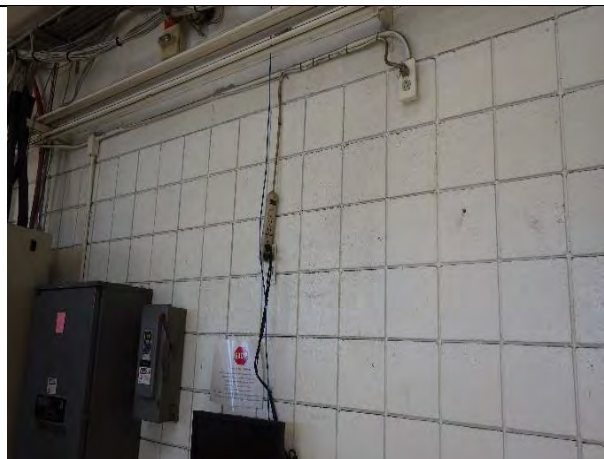
Lights in quick check service bay



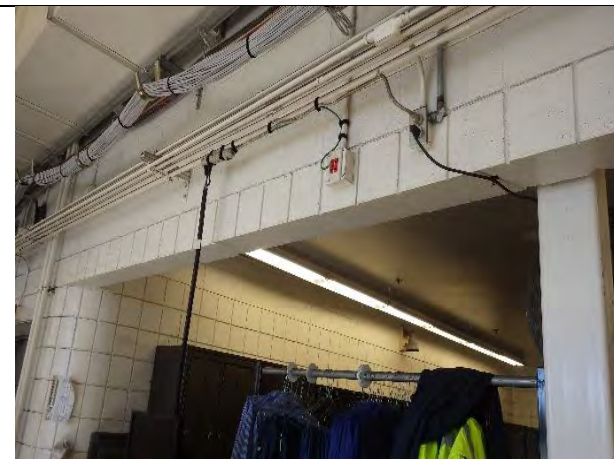
Lights in quick check service bay



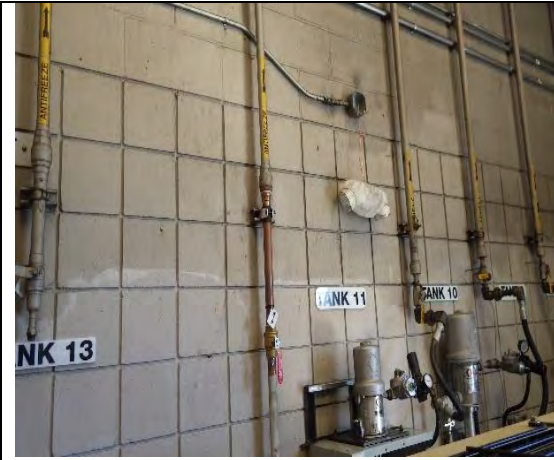
Lights



Branch wiring



Branch wiring



Light in compressor room is disconnected from junction box



Light on mezzanine level is blocked by shelves



Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site					
Roadways, parking lots and associated signage, markings, and equipment	Roadways, parking lots, curbs, and site gates. (Large site driveway and parking areas inside the fence was assumed to be part of this building)	In general, the parking and driving areas are concrete panels throughout the site and are in adequate condition. There were some cracks in panels on the southwest side of the building that are large enough that weeds are growing. There appears to be a low spot in the concrete parking area on the southwest side of the building where there is no drain. Both the concrete parking and asphalt sidewalk have settled that spot indicating an issue with initial compaction or the soil underneath eroding away. In the southwest corner of the area, the concrete relief joint has enlarged and the panels have completely separated. There were a few sections of broken curb on the south side of the building. The personnel gates for the employee parking area was working properly and the entrance and exit vehicular gates were working properly and overall in good condition.	3.3	Remove weeds and fill in concrete cracks and gaps to prevent any further damage to the concrete. Repair settled area and add drain if possible. Fill relief joint with sealant and monitor for further enlargement. Repair sections of broken curb.	\$8,000
Pedestrian areas and associated signage, markings, and equipment	Smoking shelter.	Smoking shelter is functional but has a cracked window and tinted film that is splitting.	3.3	Replace windows in smoking shelter.	\$2,000
Site development such as fences, walls, and miscellaneous structures	Site fence.	The perimeter fence is in overall good condition, but there are a couple locations where the vertical fence posts are bowed out and where the top rail has been bent.	3.5	Repair sections of fence with bowed and bent posts and rails.	\$3,000
Site utilities	Fire hydrants, temporary site lighting	There are several hydrants located around the exterior of the building. Three of the hydrants are behind curbs but are not protected by bollards including on the southwest, southeast, and northeast corners of the building. There was temporary site lighting setup in the southwest, northeast and middle of the east side of the building. This indicates poor or inadequate lighting provided by the permanent site lights.	2.5	Add bollards to unprotected hydrants. Add additional permanent site lighting in locations of temporary lighting setups.	\$18,000



Low spot in concrete and sidewalk on southwest side of building that has settled



Enlarged concrete joint in southwest corner of parking area



Smoking shelter window is cracked



Smoking shelter window tint is splitting



Temporary lighting set up all around site



Cracked concrete slab on patio, outside lunch room



Vertical fence posts are bowed out and the top rail has been bent.



Personnel gate from employee parking lot



Fire hydrant needs bollards protecting it



Site curbs



Vehicular gate



Cracks in panels on the southwest side of the building

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Maintenance Facility Condition Assessment – Building 2 Facilities and Bus Wash

Facility Snapshot

Building 2 is a one-story, 6,604 square foot facility used for facilities maintenance. It is located at 3701 96th Street SW, Lakewood, Washington, 98499, on the north western end of the Pierce Transit Headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains offices, facilities maintenance shop, storage, and a bus wash.

Facility Condition Assessment Summary

Building 2 was assessed on July 31, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were found in the plumbing primary level. Additional deficiencies were noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$30,000.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 2 Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.5
Interiors	3.5
Conveyance	N/A
Plumbing	2.5
HVAC	3.0
Fire Protection	3.8
Electrical	3.5
Equipment	N/A
Site	3.3
FACILITY	3.4



Building 2 Facilities Maintenance – Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.




The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete spread footings, slab on grade floors (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.5		
Superstructure/structural frame	Building has Concrete Masonry Unit (CMU) walls, steel bar joists, and metal B-deck roof decking. Fabric "tent" structure on east side of building, arches set on structural steel pedestals bolted to pavement slab.	The steel bar joists are functional but are rusting in the bus wash room. The walls near the entrance and exit of the bus wash are functional but there are a few minor cracks in the wall and the walls are dirty. There is a broken block at bus wash entry at west wall door jamb.	3.5	Clean and paint rusted steel joists and decking. Repair broken CMU.	\$6,000
Roof	Built up roof with silver coating.	Roof is in adequate condition with some alligatoring observed on the roof coating which is mainly cosmetic and does not affect functionality. One drain on roof is partially clogged with long pine needles. Staff stated that they typically have to clear the roof of debris once and year and the task had not been performed yet this year.	3.7	Monitor condition of roofing. Clear debris from roof drains during routine maintenance.	N/A
Exterior	Building paint, windows, and doors.	Paint is in adequate conditions, peeling paint was observed on north and south CMU wall which indicates moisture in wall. Windows and doors are in adequate condition. They are functional but showing wear.	3.5	Pressure wash and paint CMU walls	\$2,500
					
Peeled and chipped paint on north and south walls		Some alligatoring on roof coating		Drain on roof that is partially clogged with pine needles	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.5		
Partitions	Interior walls and two interior mezzanines (one appears to be original, one appears to be a newer floor mounted commercial unit).	Walls are in adequate condition. There is some cosmetic wall damage at removed fasteners and at door jambs. Mezzanines show minimal wear and are in good condition.	3.5	Patch and repair when routine maintenance is done.	\$100
Stairs	Steel stairs to mezzanines.	Stairs are functional and in good condition. Show minimal signs of wear.	4.0	None	N/A
Finishes	Interior paint, bare concrete floors in main shop, linoleum office floors, suspended ceilings.	Interior paint and floors is in good condition with very little sign of wear. Suspended ceiling in the office area has a leak at the north wall in the northwest corner near roof drain and there is water damage on the wall. There is water damage on the ceiling in the equipment room at the southwest corner of the bus wash on the south wall.	3.3	Determine the source of water damage and repair as necessary. Replace damaged ceiling panels.	\$1,000



Interior of shop, looking northeast



Interior of shop, looking east






Interior of shop, looking northeast



Stairs to the mezzanine



Stairs to the mezzanine in north storeroom

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing					
Fixtures	Bathroom fixtures, emergency eye wash stations, hot water tank.	Fixtures in bathroom are working and in adequate condition. Emergency eyewash near restroom drains to the floor. Staff stated that they were planning on moving the eyewash to an exterior wall so that the drain could penetrate the wall and terminate on outside of the building. Hot water tank on second floor is working but has exceeded its typical life. In addition, the unit is not correctly seismically restrained per the Uniform Plumbing Code.	2.5	Relocate eyewash or pipe drain piping to exterior wall. Replace water heater and secure with two horizontal straps around the circumference of the unit.	\$2,500
Water distribution	Building water distribution.	Building water distribution is mostly in adequate condition. There is a slow but visible leak on second floor on cold water piping near hot water heater. Pipe hanger in second floor drawings and plans area is broken and needs to be repaired.	2.2	Repair cold water piping slow leak. Replace or repair pipe hanger.	\$350
Sanitary waste	Sanitary waste system.	Sanitary waste system functioning with no apparent leaks.	3.5	None	N/A
					
Fixtures in restroom are working and in adequate condition		Hot water tank on second floor		Visible leak on second floor on cold water piping	



Close up view of cold water piping leak



Pipe hanger on second floor is broken

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.0		
Energy supply	Building energy supply.	Energy supply appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Heat/cooling generation and distribution systems	Heating and cooling systems. Heater located adjacent to the second floor storage room is natural gas. Heating and cooling for offices and restroom are provided by a gas-fired roof mounted unit.	Notes on the heating unit indicate four different repairs in the last two years, which indicate that it may be approaching the end of its useful life. Roof mounted unit that appears to be aging by signs of surface rust but is still in working operation.	3.0	Replace heater adjacent to storage room.	\$10,000
Testing, balancing, controls, and instrumentation	HVAC instrumentation.	HVAC instrumentation appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Chimneys and vents	Intake and exhaust louvers located in mechanical room, shop room exhaust fan, restroom exhaust fan.	Intake and exhaust systems are functioning and in good condition. No issues noted.	4.0	None	N/A



Heating and cooling systems provided for building is natural gas



Roof mounted unit is aging and shows signs of surface rust






Intake and exhaust louvers located in mechanical room



Functioning exhaust hood in shop



Exhaust fan in restroom functional

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection			3.8		
Sprinklers	Building sprinklers.	Building contains wet sprinklers in all required areas except the tented area. Sprinklers are in adequate condition. Building contains older style sprinkler heads. Modern sprinkler heads will respond to a developing fire faster.	3.8	Current systems is functional, but it is recommended to provide new quick response sprinkler heads throughout building.	\$2,000
Standpipes	Building contains single fire riser.	Onsite certifications indicate system been tested and approved on a regular basis.	3.8	None	N/A
Other fire protection notes from consultant team that do not pertain directly to facility condition assessment:					
<ul style="list-style-type: none"> Storage tent directly against the building does not meet code requirements for building separation unless a dry sprinkler system is provided. Dry sprinkler system should take the rack storage arrangement and chemicals of storage into account. Vent fire cabinets. 					
					
Fire sprinkler head		Fire Riser		Tented area east of Building 2	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical					
Electrical service and distribution	Electrical distribution.	Electrical distribution is original to the building. Working space in front of electrical panels is kept clear.	3.5	None	N/A
Lighting and branch wiring (interior and exterior)	Lighting and branch wiring.	General lighting in main part of building in good working order with one item to address. Overhead lighting in Tent Storage is fed with extension cord to general use receptacle. Festoon lighting intended for temporary use has been modified to supply power to larger LED luminaires.	2.5	Temporary light installation in tent storage area should be replaced with a more permanent solution.	\$5,000
Communications and security	Building card key access and exterior security cameras.	Card key access around exterior of building. Cameras located at building exterior have been recently added. Both systems are functional and in good working order.	4.0	None	N/A
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Generator.	Building standby power is supplied by generator located at Building 1 Fleet Maintenance. Generator is new and in excellent condition.	5.0	None	N/A
	Rooftop HVAC unit electrical disconnect.	Rooftop unit electrical disconnect protective coating has exceeded its useful life.	3.5	Rooftop unit electrical disconnect should be replaced or have protective coating restored.	\$300



Overhead lighting in tent storage fed by extension cord



Festoon lighting modified to supply power to larger LED luminaires



Rooftop electrical disconnect protective coating has exceeded useful life

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.3		
Roadways/driveways and associated signage, marking, and equipment	Description for this secondary level covered in Building 1.	Condition for this secondary level covered in Building 1.	N/A	N/A	N/A
Parking lots and associated signage, markings, and equipment	Description for this secondary level covered in Building 1.	Condition for this secondary level covered in Building 1.	N/A	N/A	N/A
Pedestrian areas and associated signage, markings, and equipment	Building signage.	Some of the signs facing south on the building have coatings that are beginning to fail, possibly due to sun exposure. Signs are in adequate condition and are still legible.	3.3	Replace signs as they become illegible.	\$250



Sign on building facing south

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Maintenance Facility Condition Assessment – Building 3 Fuel House

Facility Snapshot

Building 3 is a one-story, 4,505 square foot facility located at 3701 96th Street SW, Lakewood, Washington, 98499, on the north end of the Pierce Transit Headquarters site. The facility is accessed through a locked gate on the northern side of 96th Street SW. The facility was constructed in 1987 and contains a fueling and service station and vault.

Facility Condition Assessment Summary

Building 3 was assessed on July 31, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.5.
- No deficiencies (items rated below 3.0) were found in the facility primary levels. However, deficiencies were noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$11,200.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 3 Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.5
Interiors	3.5
Conveyance	N/A
Plumbing	4.0
HVAC	4.0
Fire Protection	3.5
Electrical	3.5
Equipment	N/A
Site	3.3
FACILITY	3.5



Building 3 Fuel House – Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.




The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete spread footings (assumed, not visible), slab on grade floors.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.5		
Superstructure/structural frame	Building has Concrete Masonry Unit (CMU) walls. Roof structure is concealed by ceilings.	CMU walls appear to be in good condition with no signs of damage or problems noted.	4.0	None	N/A
Roof	Built up roof with mopped on silver coating. Awning roof on east side of building.	Building roof appears to be in good condition. Awning roof on east side is ripped and worn and is no longer functioning properly.	2.5	Replace awning.	\$2,500
Shell appurtenances	Roof access by exterior ladder with locked ladder guard. There are interior downspouts with overflows through parapet.	Roof ladder is functional but there is some rust on metal at top of ladder. Downspouts are in good condition but there is a loose flashing segment on north parapet.	3.5	Paint rusted ladder components. Reattach loose flashing.	\$1,000
					
Awning roof on east side is ripped and worn		Roof access ladder with locked ladder guard	Rust on metal at top of ladder		

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.5		
Partitions	Interior in fare counting room at northwest corner and in the equipment room at northeast corner have gypsum board walls and suspended ceilings.	Walls are generally in adequate condition. There are water leak stains on the north wall of the Fare Counting Room. Water stains may be from leaks that have been repaired or condensation on utilities above ceiling. Water stains do not appear to affect functionality.	3.5	Check for source for water stains and repair as need.	\$1,000
Finishes	Paint, carpet in rooms.	Paint and floor finishes in good condition.	4.0	None	N/A



Water leak stains on north wall of fare counting room



Water leak stains on north wall of fare counting room

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			4.0		
Fixtures	Bathroom fixtures, compressed air piping, water heater in mechanical/electrical room.	Fixtures in bathroom are working and in adequate condition. There is a small air leak in the compressed air piping in Fuel Island 2. Some of the nuts and bolts on the compressed natural gas flanges are rusting and are adjacent to dissimilar metals. Water heater in the Mechanical/Electrical room has exceeded its typical design life and is not seismically restrained per the Uniform Plumbing Code. The unit needs to be secured with two horizontal straps around the circumference of the unit.	2.5	Repair air leak. Replace rusted bolts with stainless steel bolts to match the flanges. Replace water heater and install two horizontal straps around unit.	\$1,500
Water distribution	Water distribution system.	Water distribution system functioning with no apparent leaks.	4.0	None	N/A
Sanitary waste	Water distribution system.	Water distribution system functioning with no apparent leaks.	4.0	None	N/A
Rain water drainage	Building roof drainage.	Roof appears to be properly sloped and drainage appears to be functioning.	4.0	None	N/A



Small air leak in compressed air piping at fuel island #2



Rusty bolts on compressed natural gas flanges



Water heater needs to be seismically restrained



Roof appears to be properly sloped and drainage is functioning properly

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			4.0		
Energy supply	Building energy supply.	Energy supply appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Heating/cooling generation and distribution systems	Heating and cooling systems.	The heating and cooling is provided for building by roof mounted unit and is in adequate condition.	4.0	None	N/A
Testing, balancing, controls, and instrumentation	Building instrumentation.	No issues were noted on HVAC instrumentation and appear to be in good working order.	4.0	None	N/A
Chimneys and vents	Building vent and exhaust systems.	The exterior of the wall louver for mechanical/electrical room is covered by a shipping container on the outside of the building. The location of the shipping container significantly reduces the air flow capacity through the louver. This did not appear to be affecting performance of any equipment in the room. If more air flow is needed or desired in the future, consider moving the shipping container. The screen for fuel island exhaust vent on the roof has fallen off and needs to be reinstalled or replaced.	3.0	Replace screen on fuel island exhaust vent.	None, if work is performed by Pierce Transit staff.





Roof mounted heating and cooling unit



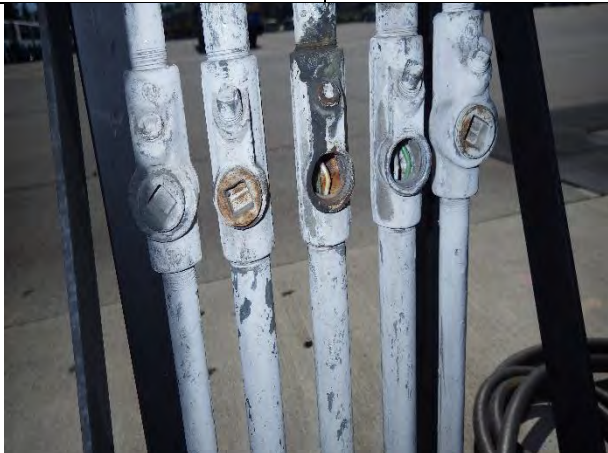
Exterior wall louver for mechanical/electrical room covered by shipping container directly next to building



Screen for fuel island exhaust vent has fallen off

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection			3.5		
Sprinklers	Building sprinkler system.	Building contains dry sprinklers in all required areas. Building contains modern style sprinkler heads that are in good condition.	3.5	None	N/A
Fire Risers	Building contains single fire riser.	Onsite certifications indicate system been tested and approved on a regular basis.	3.5	None	N/A
Other fire protection notes from consultant team that do not pertain directly to facility condition assessment: Note: Confirm dry system compressor is adequate to meet the requirement for NFPA 13 and the International Fire code for FM/UL listing					
					
Fire Riser (Dry System)				Air Compressor for Dry Sprinkler System	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.5		
Electrical service and distribution	Electrical distribution.	Electrical distribution is original to the building. Working space in front of electrical panels is kept clear.	3.5	None	N/A
Lighting and branch wiring (interior and exterior)	Interior and exterior lighting.	Interior lighting is adequate. Unable to view functionality of exterior lighting at time of inspection as it is on photocell and timer. Conduit seal fittings at Fuel Island 1 not filled with sealing compound or plug fitting.	2.5	Seal fittings at fuel island 1 should be filled with sealing compound or plug fitting. Remaining seal fittings should be questioned and inspected for proper installation.	\$200
Communications and security	Exterior card key access and security cameras (interior and exterior).	Card key access to building interior is functional and good working order. Cameras located on exterior of building and within Money Counting Room. Security of Money Counting Room in excellent working order with prompt response by security personnel.	4.0	None	N/A
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Generator.	Building standby power is supplied by generator located at Building 1 Fleet Maintenance. Generator is new and in excellent condition.	5.0	None	N/A



Conduit seal fittings at fuel island 1 not filled with sealing compound or plug fitting

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.3		
Roadways/driveways and associated signage, marking, and equipment	Description for this secondary level covered in Building 1.	Condition for this secondary level covered in Building 1.	N/A	N/A	N/A
Parking lots and associated signage, markings, and equipment	Description for this secondary level covered in Building 1.	Condition for this secondary level covered in Building 1.	N/A	N/A	N/A
Site utilities	Temporary lighting.	Temporary lighting setup on the west side of the building seems to indicate poor permanent site lighting in this area.	Rating part of Building 1	Add additional permanent site lighting in location of temporary lighting setup.	\$5,000



Temporary lighting on west side of building

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Administrative Facility Condition Assessment – Building 4 Administration

Facility Snapshot

Building 4 is a two-story, 36,987 square foot facility used for administrative offices. It is located at 3701 96th Street SW, Lakewood, Washington, 98499, on the eastern end of the Pierce Transit Headquarters site. The facility is accessible to the public through an entrance on the northern side of 96th Street SW. The facility was constructed in 1987 and contains office space, conference rooms, copy center, file rooms, lunch room, server room, and an operator’s lobby and breakroom. Office space is provided for service planning and scheduling, employee services, risk management, budget, operations, payroll/accounting, information technology, general counsel, and executive departments.

Facility Condition Assessment Summary

Building 4 was assessed on August 1, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were found in the conveyance primary level. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$112,550.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 4 Facility and Primary Level Rating Summary

	Rating
Substructure	4.2
Shell	3.5
Interiors	3.8
Conveyance	3.0
Plumbing	4.0
HVAC	4.0
Fire Protection	3.8
Electrical	3.5
Equipment	N/A
Site	3.0
FACILITY	3.4



Building 4 Administration – Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.2		
Foundation	Poured concrete spread footings (assumed, not visible). Ground floor is concrete slab on grade.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.2	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.5		
Superstructure/structural frame	Structure is mostly hidden; it is assumed it is a concrete frame. Roof and upper floor structures are steel bar joists and concrete filled B deck.	No problems noted that would indicate structural deficiencies.	4.5	None	N/A
Roof	Built up roofing with mineral cap sheets. Lower roof used as outdoor patio area and has traffic pads. Upper roof has good walkway pads to equipment. Some patches at roof to wall parapet. Interior roof drains and overflow scuppers through parapets.	Overall roof is in good condition. Stainless steel flashing at walls and tops of parapets also in good condition. Roof has good slope and appears to be draining properly.	4.0	None	N/A
	Skylights.	Skylights at entry and operator's entry are compound units of four panels. Have dirt in valleys between units. Some condensation inside double dome and glazing of acrylic show they might need replacing.	2.9	Replace skylights in near future.	\$15,000
Exterior	Windows, exterior doors, exterior paint.	Windows and doors functioning and in good condition. Windows, window sills and siding are dirty. Paint is in adequate conditions, there is peeling paint on south side of penthouse indicating moisture in wall.	3.5	Clean windows and window sills. Pressure wash penthouse wall to remove loose paint. Treat with sealer and repaint.	\$5,000





Skylight at entry has dirt in valleys between units



Roof has good slope and appears to be draining properly



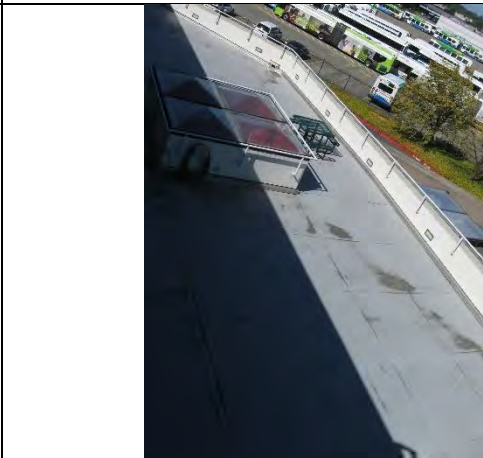
Skylight



Skylight at operator entry has dirt in valleys between units



Peeling paint on south side of penhouse



Lower roof used as outdoor patio

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.8		
Partitions	Interior walls and doors.	Interior walls and doors are in adequate condition, there is some damage at limited areas of walls and doors. Exits are well marked with labels on doors.	3.8	None	N/A
Stairs	Main entry stair (carpeted) and rear escape stair (bare concrete).	Both sets of stairs are in good condition with no visible damage.	4.1	None	N/A
Finishes	Carpet, tile flooring, wall paint, suspended ceilings.	<p>Carpet and tile are generally in good condition. However, there is some tile breakage at main entry, at door sill and tile to carpet transition.</p> <p>Wall paint is generally in good condition with some damage observed from fasteners at removed hangings and corner damage at operator rest area entry.</p> <p>Suspended ceiling is generally in good condition however there are water stains at high ceiling over main entry, likely from either a roof leak or drain condensation. There are some displaced panels and cuts for utilities in the suspended ceiling, but does not appear to affect its functionality.</p>	3.5	Repair broken tile, provide protective threshold in transition between carpet and tile.	\$1,000



Tile breakage at main entry at door sill and tile to carpet transition



Water stains at high ceiling over main entry

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level D. Conveyance					
Elevators	Building elevator.	Elevator was not working at the time of the site visit. A note over the operating buttons indicated that it was "Out of Service". An additional note indicates there are issues with the elevator if the door is held open for too long and that it may make beeping noises. Staff was aware of the elevator issues. Pierce Transit notified assessment team that elevator had been fixed as of December 2017.	3.0	None	N/A

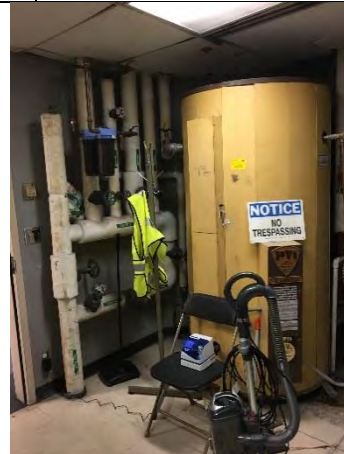


Elevator

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			4.0		
Fixtures	Bathroom fixtures, water heater.	Fixtures in bathrooms are working and in adequate condition. Water heater in utility room (across from the Quiet Room) is still operating but has exceeded its expected useful life. This unit will need to be replaced soon. In addition, the water heater in utility room is not seismically restrained per the Uniform Plumbing Code. The unit needs to be secured with two horizontal straps around the circumference of the unit.	2.5	Replace water heater and install with two horizontal straps.	\$5,000
Water distribution	Water distribution system.	Water distribution system is working and functional with no apparent leaks.	4.0	None	N/A
Sanitary waste	Sanitary waste system.	Sanitary waste system is working and functional with no apparent leaks.	4.0	None	N/A
Rain water drainage	Roof appears to be properly sloped and drainage appears to functioning.	(covered above)	4.0	None	N/A



Fixtures in bathrooms are working and in adequate condition



Water heater in utility room across from quiet room

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			4.0		
Energy supply	Building energy supply.	Energy supply appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Heating/cooling generation and distribution systems	Building HVAC systems.	One of the roof mounted HVAC units has a gravity damper blade that has partially fallen off. Staff is aware of the deficiency, which requires a special type of rivet to repair. This affects performance of the unit because the blades are no longer preventing air from entering the unit at this penetration. The two largest HVAC units on the roof appear to be aging but their age could not be determined during the site visit because sun exposure has made the equipment nameplate unreadable.	2.5	Replace damper blade.	None, if work is performed by Pierce Transit staff.
Testing, balancing, controls, and instrumentation	HVAC instrumentation.	HVAC instrumentation appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Chimneys and vents	No issues noted.	Exhaust and venting systems appear to be functioning and in good condition. No issues noted.	4.0	None	N/A



Roof mounted HVAC units gravity damper blade



Two largest HVAC units on the roof

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection			3.8		
Sprinklers	Building contains wet sprinklers in all required areas.	Building contains older style sprinkler heads. Modern sprinkler heads will respond to a developing fire faster.	3.8	Current systems is functional, but it is recommended to provide new quick response sprinkler heads throughout building.	\$11,000
Fire Risers	Building contains single fire riser.	Onsite certifications indicate system been tested and approved on a regular basis.	3.8	None	N/A

Other fire protection notes from consultant team that do not pertain directly to facility condition assessment:

- Confirm sprinklers at IT department provide adequate coverage. Several are close to ceiling soffits and the installed full height storage cabinets likely block sprinkler coverage.
- Now that mechanical level room is being used as a workout room, this building would be considered 3 stories. Remove the equipment from the room or update the fire riser standpipe in the stairway to provide hose connections.



Sprinkler heads near soffit



Standpipe in stairway with no hose connections



Fire riser

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.5		
Electrical service and distribution	Electrical service and distribution.	<p>Generally, electrical distribution is original to the building and in good working order. There were two items found that will need to be addressed.</p> <ol style="list-style-type: none"> 1. Electrical panel A7 on the first floor has a failure in the cover attachment mechanism. Currently there is a self-drilling screw holding the cover shut. The sharp point poses a hazard to the conductors inside. 2. Located in the second floor Server Room have field fabricated breaker handle ties. These field fabricated handle ties do not meet the function requirements of the National Electrical Code. 	3.5	<p>To correct deficiencies in Electrical Panel A7 it is recommended that the self-drilling screw be removed and replaced with multiple (match number of factory attachment points) blunt point machine screws installed through the front cover into tapped holes in the panel enclosure.</p> <p>To correct deficiencies in electrical panels UPS-A and UPS-B the breakers should be evaluated for suitability in a multi-pole application. If rated for the application, an approved handle tie should be installed. If not rated for the application, the breakers should be replaced.</p>	\$200
Lighting and branch wiring (interior and exterior)	Interior and exterior lighting. Branch wiring.	<p>Most of the lighting in good working order with two areas to address.</p> <ol style="list-style-type: none"> 1. Operators Break Room had multiple pendant lights not functioning. 2. Payroll Office light is missing diffuser. <p>Exterior lighting appeared to be in good working order, however should be assessed during nighttime hours. Additional temporary light standards have been added around the bus yard area to augment existing lighting while improvements are being worked on.</p> <p>Branch wiring is in good working order with two items to address.</p> <ol style="list-style-type: none"> 1. Executive Office cubicle work stations located in old second floor lobby area currently have power strips plugged into power strips or other means of temporarily adding receptacles. Permanent receptacles should be added to accommodate the work station electrical needs. 2. Executive Office cubicle work station missing electrical cover plates. 	3.5	<p>Replace nonfunctioning light fixtures in Operators Break Room and diffuser in Payroll Office.</p> <p>Add permanent receptacles in Executive office to accommodate work station electrical needs</p> <p>Install missing cover plates.</p>	\$1,000
Communications and security	Key access to building with security system installed. Vehicle gate.	Card key access at unmonitored exterior locations with additional card key access through interior. Cameras located at interior and exterior. Exterior cameras recently replaced or added. Systems appear to be functioning and in good working order.	3.5	None	N/A

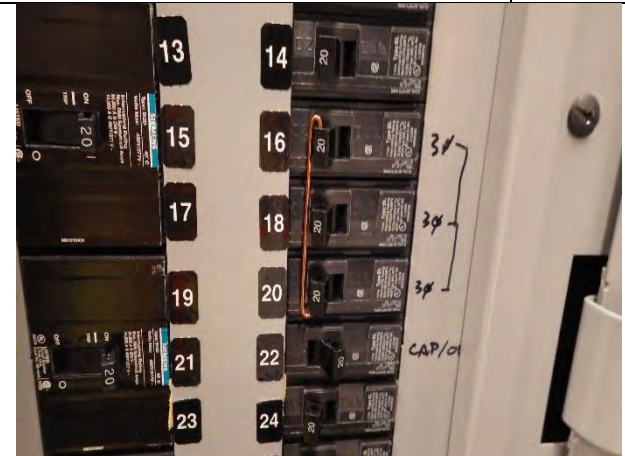
<p>Other electrical system-related pieces such as lightning protection, generators, and emergency lighting</p>	<p>Generator, emergency lighting, ADA automatic door opener, fire alarm horn.</p>	<p>Generator appeared to be in good working order. Latch on generator panel located at building exterior is broken and in need of repair to maintain enclosure rating.</p> <p>Emergency lighting appears to be in good working order.</p> <p>Single exterior door on north side of building with ADA opener does not function properly. The door is locked shut with card access from the exterior and crash bar on the interior. The door open button is located far enough from door that a single person cannot press the crash bar and door open button at the same time. On the exterior there is enough delay after activating the card key to press the door open button.</p> <p>Fire alarm horn is obstructed by whiteboard trim in Alder Conference Room. There is no means to maintain the equipment and it is unclear if it is working as designed with the speaker blocked.</p>	<p>3.0</p>	<p>Repair latch on generator panel.</p> <p>Repair ADA door opener.</p> <p>Modify trim above whiteboard to allow access.</p>	<p>\$350</p>
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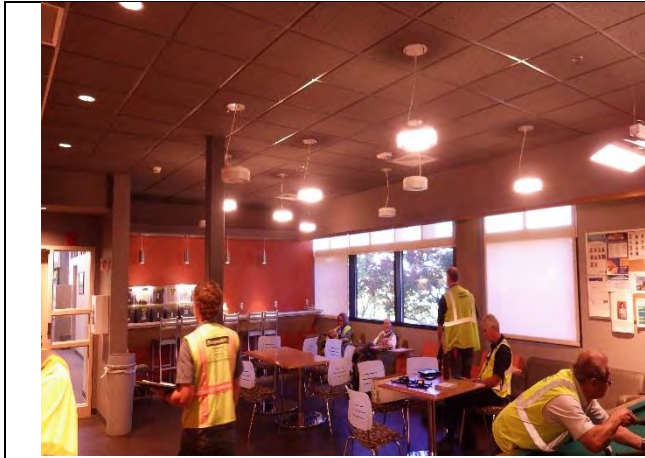
Electrical panel A7 on the first floor



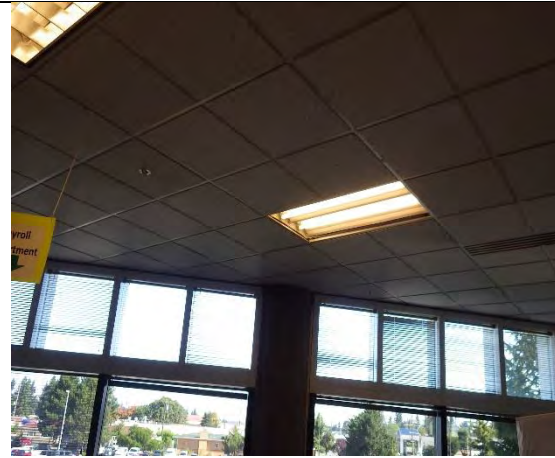
Electrical panel UPS-A located in the second floor server room



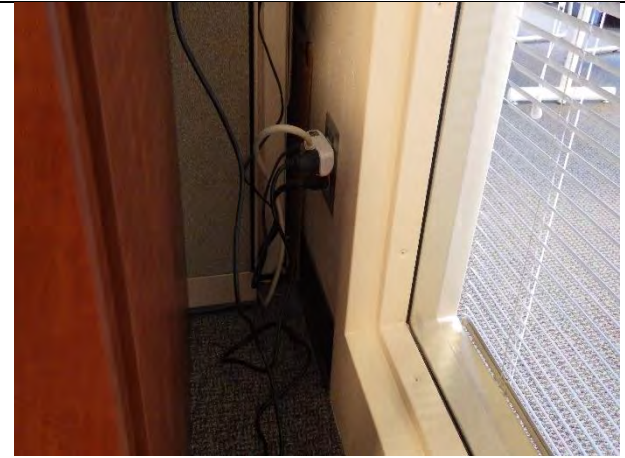
Electrical panel UPS-B located in the second floor server Room



Operators Break Room had multiple pendant lights not functioning



Payroll Office light is missing diffuser



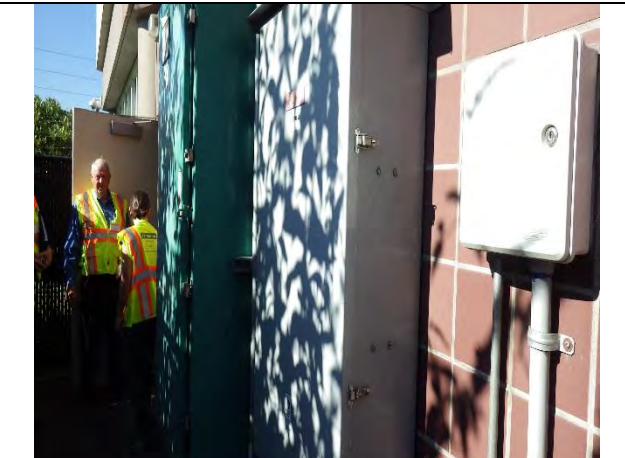
Executive Office cubicle work stations located in old second floor lobby area currently have power strips plugged into power strips or other means of temporarily adding receptacles



Executive Office cubicle work stations located in old second floor lobby area currently have power strips plugged into power strips or other means of temporarily adding receptacles



Executive Office cubicle work station missing electrical cover plates



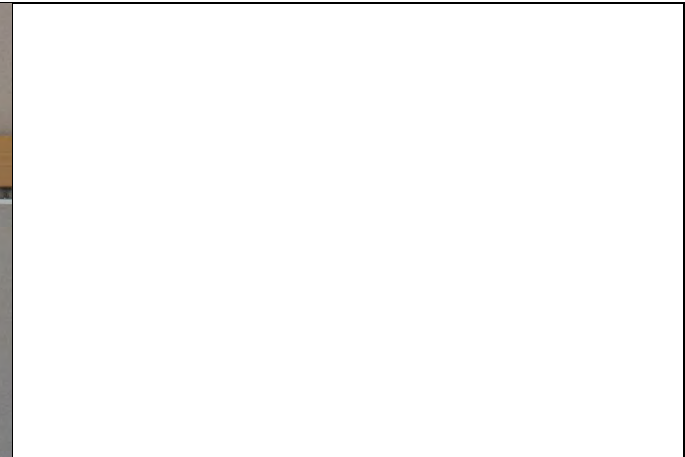
Broken Generator Panel enclosure latch



Single exterior door on north side of building with ADA opener does not function properly



Fire alarm horn is obstructed by display in Alder Conference Room



Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.0		
Roadways, driveways, Parking lots and associated signage, markings, and equipment	Roadways, driveways, curbs, vehicular access gate.	<p>Asphalt in parking area has many small and long cracks throughout the area. Asphalt in front of vehicular gate has several large cracks and needs to be repaired.</p> <p>The painted curbs in the parking area appear to have been painted recently and are in good condition.</p> <p>There are some broken curbs throughout the parking area including on the north side of the lot and by the smoking shelter on the southeast side of the lot.</p> <p>Vehicular gate for employees parking area is functioning and in good condition. (It was noted that north Gate to 94th St SW from employee parking lot has non-functioning gate opener. Currently the gate is chained shut. It is unclear if this is intentional to restrict access.)</p>	3.0	<p>Seal cracks in parking lot area asphalt and in front of vehicular gate.</p> <p>Repair broken curbs.</p> <p>Repair gate opener if desired</p>	\$7,000
Pedestrian areas and associated signage, markings, and equipment	Site pedestrian area and signage.	<p>The bracket for positioning the lighting on the east side of the large, street facing Pierce Transit sign is broken. It was unclear if the light is functioning at the time of the site visit, but even if it is, it would not light up the sign as intended.</p> <p>Main employee entrance concrete is in good condition with only minor areas of cracks in the concrete.</p> <p>Some signs in the parking lot area, including the Loading Zone signs, are missing some of their painted letters.</p> <p>The concrete sidewalk panels in front of the front entrance are in good condition with only minor and insignificant cracking.</p>	3.4	<p>Repair light mounting bracket. Check for functionality of light.</p> <p>Repair or replace signs with missing letters.</p>	\$1,000
Site development such as fences, walls, and miscellaneous structures	Site pedestrian gate.	<p>Pedestrian gate on northeast side of building is not shutting properly. In addition, the push button for exiting from the inside is not functioning.</p>	2.0	<p>Repair gate return function of gate. Repair push button exiting functionality.</p>	\$1,000
Landscaping and irrigation	Site landscaping.	<p>Landscaping is dying in several areas around building including by the front sign, on both sides of the vehicle entrance/exit gate, and by the backup generator.</p> <p>One of the planters in front of the employee entrance is void of plants.</p>	2.5	<p>Replace dead and dying landscaping.</p> <p>Add plants to empty planter.</p>	\$5,000

Site utilities	Site utility features including bollards and storm grates.	<p>Hydrant and bollards on east side of building is sunken into ground. Bollards are too low to protect hydrant.</p> <p>Storm grates in the asphalt and appropriate sloping to them appear to provide adequate drainage. One storm grate in front of the generator has had the asphalt around it settle which has caused a low spot for debris to settle.</p> <p>A hose bib on the front of the building appears to have a very slow leak and has caused a scale buildup down the side of the building. Mineral scaling can build-up inside of pipes causing partial or full blockages over time.</p>	3.0	<p>Raise hydrant above grade and replace bollards so that they adequately protect the hydrant (hydrant may be in right-of-way and not Pierce Transit's responsibility).</p> <p>Repair grate in the low spot by the generator.</p> <p>Repair the slow leak if it is still present on the exterior hose bib.</p> <p>Consider a water softener to remove minerals that cause scaling to increase the life of the water supply piping in the building.</p>	\$60,000
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The bracket for positioning the lighting on the east side of the large, street facing Pierce Transit sign is broken



Landscaping is dying in several areas around building including by the front sign, on both sides of the vehicle entrance/exit gate, and by the backup generator



Landscaping is dying in several areas around building including by the front sign, on both sides of the vehicle entrance/exit gate, and by the backup generator



A hose bib on the front of the building appears to have a very slow leak and has caused a scale buildup down the side of the building



Non-functional gate opener on north side of employee parking lot

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Administrative Facility Condition Assessment – Building 5 Training Center

Facility Snapshot

Building 5 is a two-story, 26,500 square foot administrative facility used as a safety and training facility. It is located at 3720 96th Street SW, Lakewood, Washington, 98499, on the southern side of 96th Street SW, across the street from the main Pierce Transit headquarters. The facility was constructed in 2005 and contains office space, conference/meeting rooms, and computer labs. Office space serves the safety and training, public safety, customer service, service monitoring, and marketing departments. It also houses the vanpool and SHUTTLE (paratransit) programs.

Facility Condition Assessment Summary

Building 5 was assessed on August 2, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.6.
- Deficiencies (items rated below 3.0) were found in the electrical primary level. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$21,620.
- **A deficiency was identified in electrical panel R5 that would constitute a safety concern and requires immediate attention. This deficiency is described in detail on page 17.**

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 5 Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.5
Interiors	4.0
Conveyance	4.0
Plumbing	4.0
HVAC	4.0
Fire Protection	4.0
Electrical	2.9
Equipment	N/A
Site	3.5
FACILITY	3.6



Building 5 Training Center – Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete slab on grade. Spread footings under columns (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.5		
Superstructure/structural frame	Concrete columns and shear walls. Steel floor framing with wide flange beams and bar joists. Metal Q-deck with cast in place concrete floors.	<p>Steel frame is in good condition and appears to be painted with red primer for architectural reasons.</p> <p>There is one horizontal crack at shear wall in back hallway and corner cracks at lunch room windows. There are shrinkage cracks in other panels in many locations in building. Cracks appear to be shrinkage cracks and do not indicate any structural concerns.</p> <p>Concrete columns in the front of the building have voids (likely from air trapped in forms) from original construction.</p> <p>At two concrete columns on northeast side of entry, there are vertical streaks running down that are starting to remove the cement material, which is unsightly and may become worse over time. It appears that this is just from rain water erosion streaking down the pillars. Water runs down from upper wall and sun screens.</p>	3.7	It is recommended to check top of concrete pillars for corroding metal and paint during routine maintenance.	None
Roof	Single ply membrane roof, roof drains, perimeter scuppers.	<p>Roof membrane is in good condition with no damage observed.</p> <p>Roof has several low spots that collect water and debris, including some spots directly in front of the roof drains. Overall function of draining the roof is still adequate.</p> <p>Perimeter scuppers on roof have overflows and are in good condition.</p>	3.8	It is recommended to clean out roof debris from roof during routine maintenance.	None
Exterior	Windows and doors, exterior canopy framing, and sunscreen fasteners.	<p>Exterior windows and doors are in good condition.</p> <p>Exterior canopy framing is functional but showing rust. If rusting continues, will stain concrete piers and walkways underneath.</p>	3.5	Touch up primer paint on rusting exterior steel.	\$2,500
Shell appurtenances	Gutters, downspouts, sun screen.	<p>Gutters and downspouts appear to be functioning and in good condition.</p> <p>Sunscreen is constructed of aluminum and is joined by steel fasteners. Many of these fasteners are functional but are showing signs of corrosion.</p>	3.5	Replace fasteners and/or washers with stainless steel.	\$10,000



Concrete columns



Steel beams at loading dock, northwest corner. Beams have some rust appearing



Steel beams and concrete column



Voids and streaks on concrete columns at northeast side of entry



Voids and streaks in concrete columns at northeast side of entry



Concrete columns and canopy at north side of building



Exterior canopy framing, note rusted bolt/washer



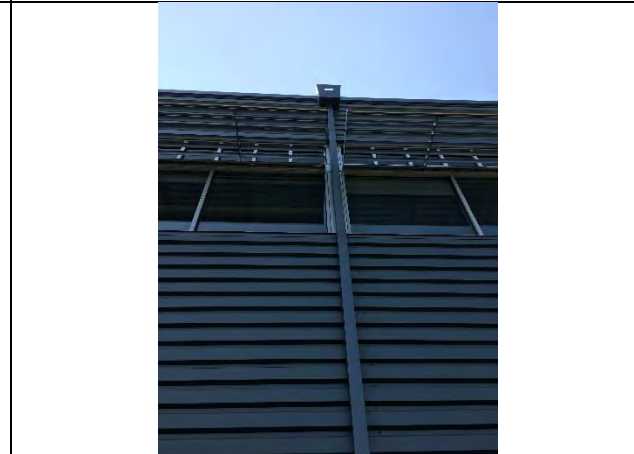
View of roof looking north, showing some low spots with debris and roof mounted conduit runs



Roof



Roof looking north at penthouse, showing antenna structures



Downspout from roof on north side of building



Downspout from roof at west side of building



Southwest corner of building



Southwest corner of building



Southwest corner of building showing upper metal siding and sun screens



South wall of building



West wall of building, showing lunchroom windows and stains at wall tile joints



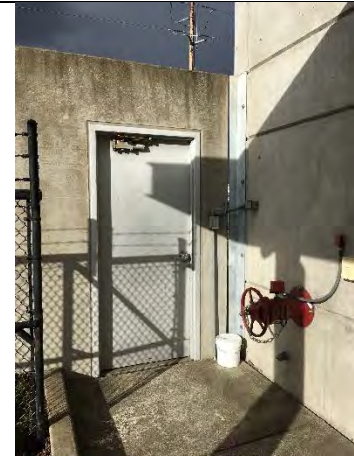
West wall of building showing caulk joint between precast concrete panels



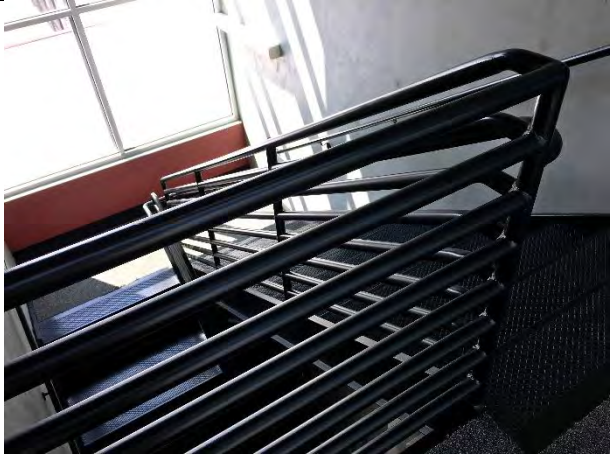
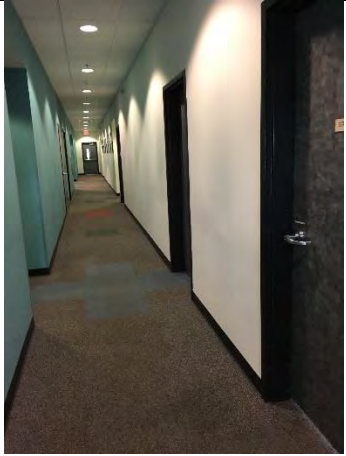



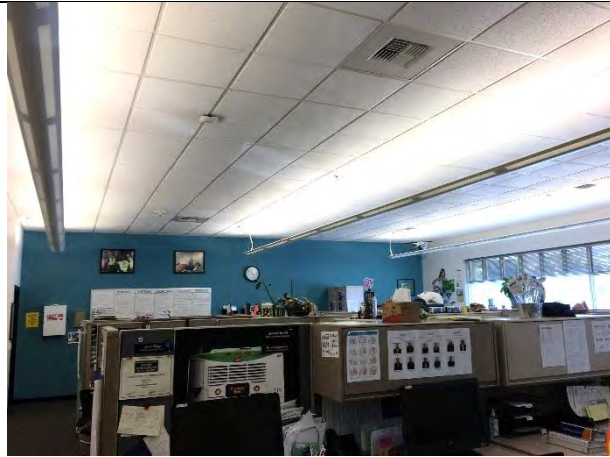
West entry door









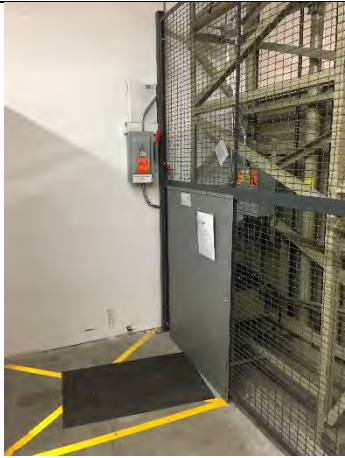
Canopy at shipping dock, northwest corner



Northwest corner of building, showing door through enclosure wall and sprinkler valve

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			4.0		
Partitions	Interior walls.	Interior walls are in adequate condition with minor cosmetic damage at walls and doors from carts or other office traffic.	3.8	None	N/A
Stairs	Interior stairways.	Building stairways are in good condition with minimal sign of wear.	4.0	None	N/A
Finishes	Carpet and paint.	Building carpet and paint are in good condition with minimal sign of wear.	4.0	None	N/A
					
Stairwell		Carpet in hallway		Interior door	
					
Interior ceiling and workstations		Interior walls, ceiling and lighting		Interior walls, ceiling, and workstations	

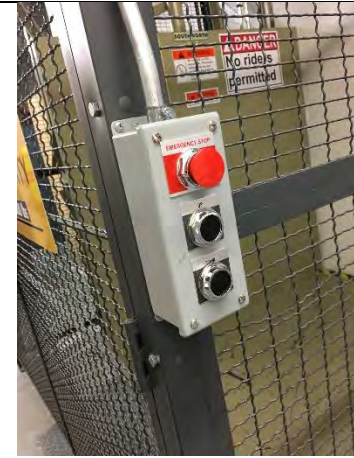
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level D. Conveyance			4.0		
Elevators	Personnel elevator.	Building elevator is functional and in working order. No visible damage was observed.	4.0	None	N/A
Lifts	Maintenance lift.	Maintenance lift is functional and in working order. No visible damage was observed.	4.0	None	N/A
					
Elevator first floor		Elevator second floor		Equipment in elevator room	
					
Equipment in elevator room		Elevator maintenance control program		Elevator electrical approval	




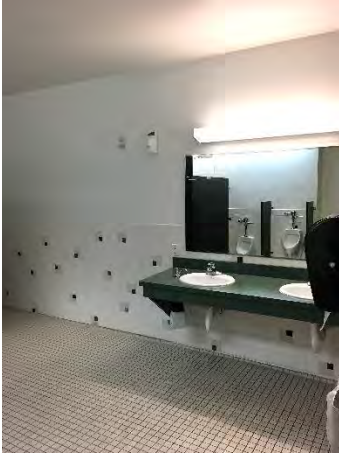




Maintenance lift first floor



Maintenance lift first floor



Maintenance lift operating buttons with emergency stop

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			4.0		
Fixtures	Fixtures in bathrooms, water heater in utility room.	Restroom fixtures were checked and are working and in good condition. Water heater is in good condition and is braced properly.	4.0	None	N/A
Water distribution	Building water distribution system.	Water distribution system is working and functional.	4.0	None	N/A
Sanitary waste	Building sanitary waste system.	Sanitary waste distribution system is working and functional.	4.0	None	N/A
					
Men's restroom partitions		Men's restroom sinks		Men's restroom urinals	
					
Men's restroom toilets		Men's restroom		Men's restroom sinks	



Plumbing under kitchen sink in good working condition



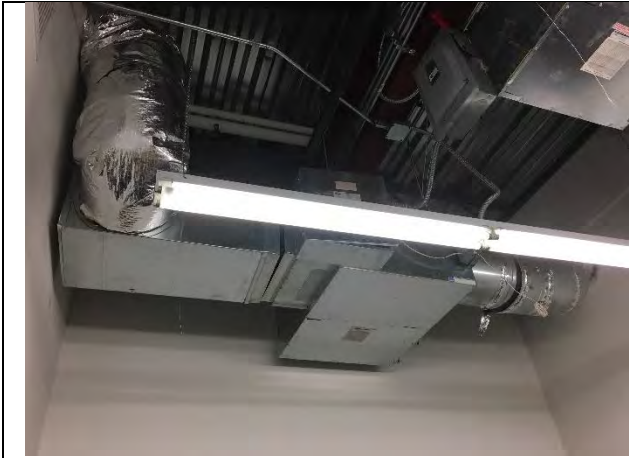
Water heater in utility room



Kitchen sink

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			4.0		
Energy supply	Building energy supply system.	Energy supply appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Heating/cooling generation and distribution systems	Building HVAC systems including air conditioning, HVAC ducts, and associated equipment.	Wall mounted air conditioner unit on first floor Electrical/Phone room not working. Staff was made aware of the non-working unit during the site visit. HVAC ducts are leaking in the storage room of the Training 1 Room. Roof mounted HVAC equipment appears to be functioning and in good working condition.	2.7	Repair or replace the wall mounted air conditioner unit. Seal the HVAC ducts in the Training 1 Room storage room.	\$1,200
Testing, balancing, controls, and instrumentation	HVAC instrumentation.	HVAC instrumentation appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Chimneys and vents	Building vents.	No issues noted.	4.0	None	N/A

		
<p>Roof mounted equipment</p>	<p>Johnson Controls thermostat</p>	<p>Wall mounted air conditioner unit in server room</p>







HVAC ducts in storage room



HVAC ducts in storage room



Roof, showing screening at roof mounted HVAC equipment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection			4.0		
Sprinklers	Building contains wet sprinklers in all required areas (except possibly under exterior awnings, see note bottom row).	Building contains modern style sprinkler heads.	4.0	No recommended corrective actions are required. However, confirm that awnings do not require fire sprinkler protection. They are fully non-combustible construction and the fire marshal may have allowed the project to omit sprinkler coverage.	N/A
Fire Risers	Building contains single fire riser.	Onsite certifications indicate system been tested and approved on a regular basis.	4.0	None	N/A
Other fire protection notes from consultant team that do not pertain directly to facility condition assessment: Storage under stair return on the first floor is being used for storage. Remove storage under the stair return at the first floor and block for future storage.					
					
Exterior awning with no fire sprinklers (east side of building)	Exterior awning with no fire sprinklers (north side of building)	Fire riser	Storage under stairs		

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical					
Electrical service and distribution	Electrical distribution.	Overall, electrical distribution is good working order. However, two safety concerns were found in Panel R5. Plastic breaker blank plate has broken retention clip and falls out exposing unguarded electrical bus inside panel. Plastic breaker cover on main breaker is not seated properly. Corrective measures should be completed as soon as possible.	1.5	Replace with new plastic breaker blank plate. Corrective measures should be completed as soon as possible.	\$20 (if completed by staff)
Lighting and branch wiring (interior and exterior)	Interior lighting and branch wiring.	Interior lighting is functional and in good working order. Branch wiring appears to be in good working order. One problem was found on the roof. Conduit to small roof-top unit has separated at conduit coupling.	3.8	Conductors should be checked for damage. Conduit should be reinserted into coupling and wrench tightened.	No cost if conductors are not damaged.
Communications and security	Building card key access around exterior of building, security cameras, and wireless communications.	Exterior card key access system appears to be functional and in good working condition. Security cameras are located in interior and exterior locations and all appear to be functional and in good working condition. It appears that exterior rooftop cameras have been recently added. Polyvinyl chloride (PVC) conduit for wireless communications installed on roof is not installed in compliance with the National Electrical Code, Article 352.30. The PVC shares roof block supports with an electric metallic tube (EMT) conduit run. This does not allow for required movement for thermal expansion. The roof block supports are farther apart than three feet permitted by table 352.30.	2.9	Replace PVC conduit with EMT to match other existing conduit or provide appropriate PVC expansion fittings. Additional conduit support will be necessary if PVC remains. This is a low priority repair unless cables used are not rated for environment without conduit or conduit separation occurs resulting in cable damage.	\$800
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Generator on-site, emergency lighting, modular office electrical service	Generator appears to be functional and in good working order. Emergency lighting appears to be in good working order. One light on stair to roof access did not function when test button was pushed. Electrical services located at south of building. Not currently in use. Appear to be in acceptable condition.	4.0	Check operation of emergency lighting and replace as necessary.	\$100



Modular Office electrical service



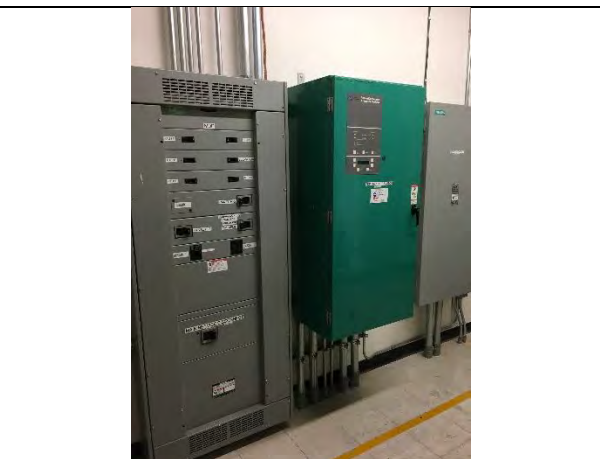
View of northwest corner of building and west entry gate



Generator



Panel R5 Breaker



Generator transfer switch



Conduit separated on roof to be repaired

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.5		
Roadways/driveways, parking lots, associated signage, marking, and equipment.	Roadways/parking lot concrete, vehicular gates, fire lanes and parking, site signage and marking.	Concrete panels in parking area are in good condition with only minor cracking. East vehicular gate for employees parking area is functioning and in good condition. West vehicular gate was damaged and not functional at the time of the site visit. Pierce Transit staff is aware of the issue and in the process of repairing the gate. The red curbs and signage by the fire hydrants is faded. The painted numbers on parking stalls are fading and need to be repainted but the stall markers are in good condition. Vegetation is growing into the southwest corner of the parking lot and around parking lot storm drains.	3.5	Repair west vehicular gate. Repaint curb and lettering by hydrants. Repaint stall numbers. Remove the vegetation growing into the parking lot area.	\$3,000
Site development such as fences, walls, and miscellaneous structures	Bike lockers, site bus shelter, fire hydrant protection.	Bike lockers and bus shelter appear to be in good working condition. There are three unprotected hydrants located around the parking area. One on the east side of the parking area and two located in the middle of the lot.	3.5	Add bollards to unprotected hydrants.	\$3,000
Landscaping and irrigation	Site landscaping and irrigation.	Some of the landscaping appears to be dying in the front of the building. Vegetation has grown into the parking lot area in the southwest corner. Landscaping outside of the curb in the southwest corner of the parking lot needs to be graded and replanted.	2.9	Replace dying landscaping in front of building. Remove vegetation from parking area. Grade and replant vegetation in southwest corner of lot.	\$1,000
Site utilities	Site drainage.	There are several storm grates onsite and drainage appears to be adequate for the site.	4.0	None	N/A



Painted numbers on parking stalls fading



East vehicular gate



Gate for employee parking



Fire hydrant on east side of parking lot



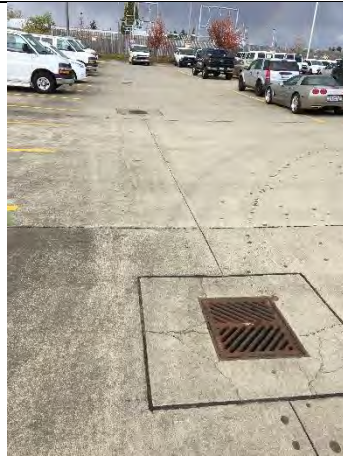
Fire hydrant and curbing on east side of parking lot



Storm drain



Storm drain in parking area



Storm drain in parking area



West vehicular gate not in working order



Vegetation overgrowth at southwest corner of parking lot



Vegetation overgrowth at southwest corner of parking lot



Landscaping in southwest corner of parking lot



Fire hydrants unprotected in middle of parking lot



Landscaping at front of building



Landscaping at front of building



Bus shelter at front entrance



Front entrance to facility

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Administrative Facility Condition Assessment – Building 6 TBD

Facility Snapshot

Building 6 is located north of the intersection of 40th Avenue SW and 100th Street SW at 9622 40th Avenue Southwest in Lakewood, Washington, 98499. The facility was constructed in 1978 and contains an 11,200 square foot warehouse/industrial building on a 0.77 acre site. The building is one story and contains 4,000 square feet of office space and 7,200 square feet of production/warehouse space. The building is currently unoccupied.

Facility Condition Assessment Summary

Building 6 was assessed on August 2, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.7
- No deficiencies (items rated below 3.0) were found in the overall primary levels. However, deficiencies were noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$67,700.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 6 Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.5
Interiors	3.0
Conveyance	N/A
Plumbing	4.0
HVAC	4.0
Fire Protection	3.0
Electrical	3.8
Equipment	N/A
Site	3.7
FACILITY	3.7



Building 6 TBD – Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

Since replacement cost information was not available to perform a weighted average condition approach, a median value approach was used to calculate the overall facility rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete slab on grade – thickened edge (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.5		
Superstructure/structural frame	Pre-engineered metal building. Steel rigid frame, clear span with light gage steel wall and roof framing.	Structure appears to be in good condition, no signs of distress noted. Structure not visible except near loading dock area.	4.0	None	N/A
Roof	Metal roof.	Roof appears to be in adequate condition based on aerial photos and what could be seen from ground level. There is no permanent roof access and could not access without ladder. Roof appears to have been coated with white roof mastic coating.	3.5	Check condition of grommets on roofing attachment screws and flashings at HVAC penetrations. Repair or apply sealants if required.	N/A
Exterior	Building windows, building access doors, rollup garage door (at loading dock), metal siding, and paint.	Good light from large windows, windows in good condition. Hollow metal doors are in good condition. Roll-up garage door at loading dock in adequate condition, but door jambs dented from vehicle impact. Metal siding is in adequate condition. Lower portion of metal siding is dented from vehicles on all sides of building. Damage is extensive, but mostly cosmetic. Asphalt paving has been placed against the bottom of the siding causing corrosion at bottom edges. Siding is still weather-tight. Color is faded. Appears to have been repainted at some time (not factory finish). A portion of siding has been patched on the north wall, either from vehicle impact or break-in attempt. Paint does not match. Overall, these elements show cosmetic damage but functioning as designed.	3.0	Repair or replace metal roll-up door jambs. Complete replacement of damaged panels may not be warranted. Suggest limited replacement in most visible and objectionable areas. Chip out asphalt covering bottom of panels and paint.	\$9,500
Shell appurtenances	Gutters and downspouts	Gutter and downspouts appear to be functioning but may be inadequately sized.	3.5	Roof drainage adequate for general conditions, but may overflow during heavy rainfall. No upgrade recommended at this time.	N/A



Shed roof carport on south side of building, employee entrance at left edge of photo



Siding on north wall of building with graffiti



Patched siding on north wall of building



View of roof framing and insulation above roll-up door in shipping room



South side of building



East wall of building, showing rusted siding at bottom edge



Dents in metal siding at east wall



Dents in metal siding at southeast corner



Dents in metal siding and door jamb at roll-up door northeast corner



Asphalt covering bottom of metal siding



Asphalt fill and dented siding along west wall



Roll up garage door at east wall



Rollup garage door from interior






Building downspout



Exterior windows, east wall



Exterior windows, south wall

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors					
Partitions	Gypsum wall board (GWB) interior walls, partitions in men's and women's restrooms.	Interior walls appear to be in good condition. The women's restroom appears to have a stall intended to meet ADA requirements because of grab bars installed on the sides of the stall, but the dimensions of the stall do not meet current ADA requirements. The men's restroom appears to have a stall intended to meet ADA requirements because of grab bars installed on the sides of the stall, but the dimensions of the stall do not meet current ADA requirements. In addition, a stall entrance is inside of the ADA stall which does not meet the requirements of the International Plumbing Code.	3.0	If a women's ADA stall is needed, remove the adjacent stall partition and relocate the door to make room the required clearances for ADA stalls. If a men's ADA stall is needed, remove the stall inside of the ADA stall and relocate the door to make room for the required clearances for ADA stalls.	\$2,000
Finishes	GWB paint, linoleum floor, and office space carpet.	All finishes show minimal signs of wear and are in good condition.	4.0	None	N/A
					
Interior walls in good condition		Linoleum flooring and suspended ceiling in large work-room		Women's restroom sinks	



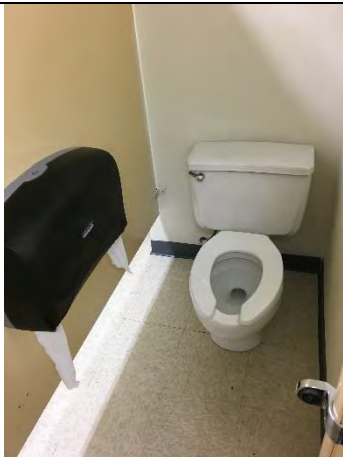
Women's restroom partition walls



Women's ADA stall does not meet ADA requirements



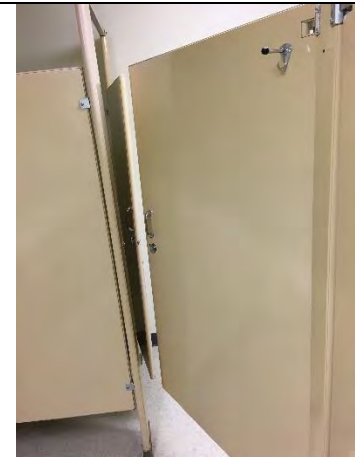
Men's restroom sinks



Men's restroom toilet



Men's restroom urinal



Access to one restroom is located inside the ADA restroom



Stall defined as ADA, but does not meet ADA design requirements



Interior of building in large work-room



Office space carpet

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			4.0		
Fixtures	Bathroom fixtures and water heater.	Fixtures in bathrooms are working and in adequate condition. Water heater in kitchen area in adequate condition and is braced properly but nearing the end of its typical useful life.	3.5	None	N/A
Water distribution	Water distribution system.	Water distribution system is working and functional. No leaks were observed.	4.0	None	N/A
Sanitary waste	Sanitary waste system.	Sanitary waste system is working and functional. No leaks were observed.	4.0	None	N/A



Water Heater



Kitchen



Kitchen sink



Under kitchen sink

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			4.0		
Energy supply	Building energy supply.	Energy supply appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Heating/cooling generation and distribution systems	Six roof mounted HVAC units.	HVAC units could not be accessed for visual inspection. Each unit was working properly during the site visit.	4.0	None	N/A
Testing, balancing, controls, and instrumentation	HVAC instrumentation.	HVAC instrumentation appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Chimneys and vents	Two exhaust hoods in kitchen area.	Exhaust hoods may be slightly outdated but are in working order.	3.5	None	N/A



Honeywell Thermostat



Roof mounted HVAC units

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection			3.0		
Sprinklers	Building contains no fire sprinklers.	Building contains no fire sprinklers. Fire Protection system is adequate for current use (unoccupied), but must be upgraded for occupancy change.	3.0	If building is upgraded for future occupancy, provide sprinkler and networked fire alarm system when the building is upgraded. If used for records storage, consider dry agent system to protect paper records from potential water damage.	\$56,000

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.8		
Electrical service and distribution	Electrical service and distribution.	Electrical service and distribution appear to be in good working order. Electrical panels are slightly outdated, but not in need of replacement. Access is available for future building modifications to suit Pierce Transit needs.	3.8	None	N/A
Lighting and branch wiring (interior and exterior)	Interior and exterior lighting.	Interior lighting in good working order. Exterior lighting was not able to be tested at time of inspection. Based on review of the existing site light locations, there may be low lighting in the southwest and northwest corners of the site, but could not be confirmed.	3.5	It is suggested that exterior lighting is assessed during nighttime hours.	N/A
Communications and security	Key access to building with security system installed.	Security system appears to be functioning and in good working order.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
					
<p>North wall of building showing electrical service equipment</p>	<p>Electrical Utility Meter</p>	<p>Utility Transformer</p>			
					
<p>Exterior lighting on building</p>	<p>Exterior lighting in parking lot</p>	<p>Electrical panels</p>			

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.7		
Roadways/driveways and associated signage, marking, and equipment. Parking lots and associated signage, markings, and equipment	Roadways/driveways, parking lots, signage, and pavement markings.	<p>Curbs around parking lot are in good condition. Yellow paint on curbs is in good condition as well.</p> <p>Asphalt cracks on the south side of the building have been sealed and the asphalt on the east and west sides of the building are in good condition with no cracking at this time.</p> <p>The paint for the stall markers is in adequate condition, but is starting to fade.</p> <p>There appears to be adequate drainage with several storm grates onsite.</p> <p>There is vegetation growing into the SW corner of the lot.</p> <p>There are some weeds growing in the cracks between the asphalt and building foundation.</p>	3.7	Remove the vegetation growing into the parking lot area and remove weeds from cracks.	None, assuming work is performed by Pierce Transit staff.
Site development such as fences, walls, and miscellaneous structures	Site fencing and miscellaneous.	<p>There is an eight-foot tall chain link fence with three strands of vertical barb wire on the west perimeter of the site that is in very good condition.</p> <p>There was a bird nest just under the roof line in the southeast corner of the roof. Bird droppings have streaked down the side of the building under the nest and onto the ground.</p>	3.5	Remove bird nest, clean side of building and add netting to prevent future bird intrusion.	\$200
Landscaping and irrigation	Site landscaping.	There is minimal landscaping onsite, mostly just off the entrance road and the plants are in good condition.	4.0	None	N/A
Site utilities	Site drainage.	There are several storm grates onsite and drainage appears to be adequate for the site.	3.8	None	N/A



Asphalt cracks have been sealed



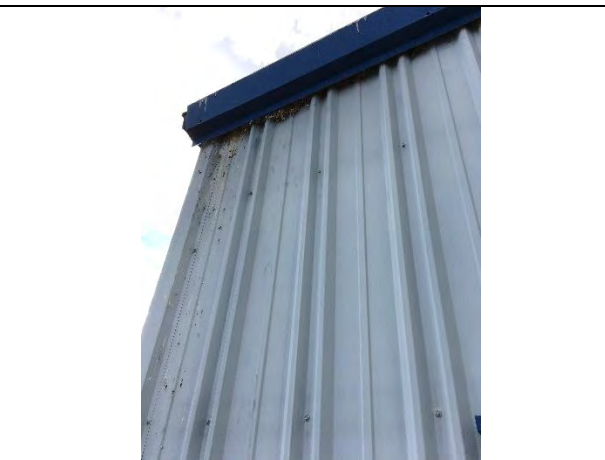
Parking lot striping is faded, but adequate



Storm grates appear to have adequate drainage



Weeds in the cracks between the asphalt and foundation



Birds nest located in southwest corner of building



Chain link fence located on west perimeter of site

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Maintenance Facility Condition Assessment – Building 7 Radio and Service Supervisors

Facility Snapshot

Building 7 is a complex of buildings consisting of a one-story wood framed building and a pre-engineered metal building in an L-shape. The one-story wood framed building contains office and breakroom space for service supervisors. Under the roof of the metal building an area has been enclosed to house a radio maintenance area, while at the west end, a two-story office/locker area has been built under the metal canopy. There is also an open air shell for van storage and a wood frame shed at “L” in metal Building.

It is located at the northeast corner of 39th Avenue SW and 96th Street SW at 9411 39th Avenue Court Southwest in Lakewood Washington, 98499. It is accessed through a security gate on the east side of 39th Avenue SW, another gate on the north end of the site is chained and locked. The facility is owned by Pierce County.

Facility Condition Assessment Summary

Building 7 was assessed on August 2, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.0
- Deficiencies (items rated below 3.0) were found in the shell primary level. Additional deficiencies were noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$493,650.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 7 Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	2.6
Interiors	3.5
Conveyance	N/A
Plumbing	4.0
HVAC	3.5
Fire Protection	3.0
Electrical	3.0
Equipment	N/A
Site	3.0
FACILITY	3.0



Building 7 Radio and Service Supervisors– Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance and equipment primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

Since replacement cost information was not available to perform a weighted average condition approach, a median value approach was used to calculate the overall facility rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	<ul style="list-style-type: none"> Foundations were not visible, but assumed to be configured as follows: Service supervisor building and restroom/locker building are assumed to be concrete strip footings with perimeter walls. The floors are concrete slab on grade. The pre-engineered metal building (PEMB) canopy and radio maintenance area has spread footings support the rigid frame structure, with concrete slab on grade floor. 	The concrete foundations are in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			2.6		
Superstructure/structural frame	<ul style="list-style-type: none"> Service supervisors building is wood frame. Office/locker building wood frame (under PEMB roof) is a wood frame structure. Radio maintenance area appears to have been built of light gage steel studs with exterior metal siding and there is insulation on roof and walls. <p>The PEMB canopy consists of steel rigid frames with light gage steel zee roof and wall framing. There is siding only along the south and west walls of the L-shaped canopy. There is lateral bracing with rod braces in north-south wing at west wall; east-west wing has knee braced bay at radio maintenance area.</p>	<p>The asphalt paving has been placed against the wood siding at the service supervisors building and there appears to be areas of rotted siding at the wall bottoms and weeds growing in crack between paving and building.</p> <p>The PEMB canopy and columns have rust on roof purlins and frames.</p> <p>The rigid frame bracing removed at east wall north-south wing and there is column damage at second column from south on east wall.</p>	2.5	Cut asphalt paving to prevent water from sitting next to siding. If facility is to continue to be in use, recommend sandblast and painting of canopy structure, review of lateral bracing and replacing missing bracing elements, and repair of damaged columns.	\$105,000
	<ul style="list-style-type: none"> Wood frame shed at "L" in Metal Building. 	Shed has significant damage and is in visibly poor condition.	1.0	Recommend demolition.	\$1,500
Roof	<ul style="list-style-type: none"> Shift Supervisor composition asphalt shingle roof. Office/locker roof under PEMB. PEMB canopy, metal roofing and light gage steel zee purlins. 	<p>Shift supervisors building roof appears to be in good condition with little visible damage.</p> <p>Office/locker roof under PEMB appears to be in good condition with little visible damage.</p> <p>Metal roofing is in marginal condition. There are rust holes in the roof at the through fasteners, visible to east of radio maintenance area. Zee roof purlins show rust and may have significant damage. Aerial photos show that roof may have been over coated.</p>	2.6	Metal roof needs additional investigation. If canopy is to be in continued use, it may need roof panel replacement and zee purlins may need to be repaired or replaced if significantly corroded.	\$250,000
Exterior	<ul style="list-style-type: none"> Shift supervisor building and office/locker hard board bevel siding and paint. PEMB canopy siding. 	<p>Exterior paint on shift supervisor building and office/locker building is cosmetically "fair" and in adequate condition.</p> <ul style="list-style-type: none"> Metal siding badly damaged at south wall with collision damage to lower panels at south and west walls, by parking area. 	2.7	Replace damaged siding.	\$100,000
Shell appurtenances	<ul style="list-style-type: none"> Shift Supervisors and locker/restroom gutters and downspouts. 	<p>Shift supervisors building gutters are damaged but appear to be functional.</p> <p>Locker/restroom building downspouts are damaged but appear to be functional.</p>	3.0	Repair gutters and downspouts.	\$2,500



East wall entry of service supervisors building



West wall of service supervisors building



South wall of service supervisors building



North wall of service supervisors building and narrow gap to metal building



Underside of roof at the metal building on the west end



Southeast corner of the metal building



East wall of radio maintenance area, vintage bus parking



East wall of metal building, showing south wing of "L"



South wall of "L", showing damaged siding



Southwest corner of "L", south wall of radio maintenance area



Wood frame shed at "L" corner



Radio maintenance area



Northwest corner of service supervisors building showing damaged gutter



Southwest corner of service supervisors building

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.5		
Partitions	<ul style="list-style-type: none"> Service supervisors building interior Gypsum Wall Board (GWB) walls. Office/locker building interior GWB walls and restroom partitions. 	Supervisors building walls are adequate but show signs of wear and cosmetic damage. It appears some interior walls were removed and it is believed that they were not load bearing walls as there are no signs of distress. Locker/Restroom building walls are adequate but show signs of wear and cosmetic damage.	3.5	Confirm that walls removed are not load bearing.	N/A
Stairs	<ul style="list-style-type: none"> Stairs in office/locker building. 	Carpeted wood stairs are functioning as designed, however carpeted surface is worn and dirty.	3.5	None	N/A



Office/locker building interior



Service supervisors building interior



Stairs to second level in two story office at the west end of the metal building.



Men's restroom



Men's restroom partitions

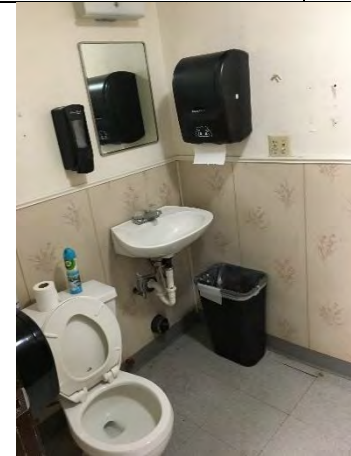
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing					
Fixtures	Bathroom/kitchen fixtures in service supervisor building and office/locker building. Water heater in second floor of restroom/locker building. Water heater in radio service building.	Bathroom fixtures are working and in adequate condition. Both water heaters appear to be in adequate condition but are not seismically restrained per the Uniform Plumbing Code. The units need to be secured with two horizontal straps around the circumference of the unit.	3.5	Secure two horizontal straps around the circumference of the water heater units.	\$100
Water distribution	Water distribution system.	Water distribution system is working and functional. No leaks were observed.	4.0	None	N/A
Sanitary waste	Sanitary waste system.	Water distribution system is working and functional. No leaks were observed.	4.0	None	N/A



Sink in radio maintenance area



Men's restroom



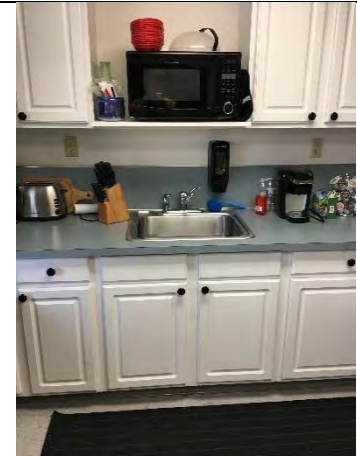
Women's restroom



Women's restroom under sink



Service supervisor building sink



Service supervisor building kitchen in common area







Office/locker building under sink on second floor



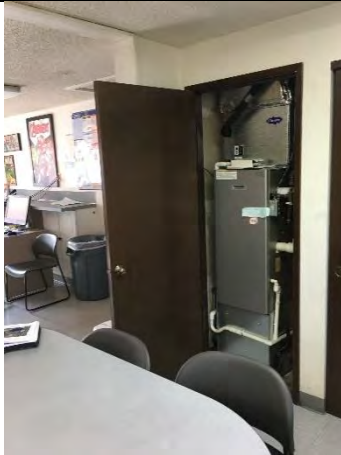
Office/locker building sink on second floor



Service supervisor building kitchen sink in common area

		
<p>Office/locker building water heater on second floor</p>	<p>Water heater in radio maintenance area</p>	<p>Office/locker building restroom on second floor</p>
		
<p>Office/locker building shower on second floor</p>		

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.5		
Energy supply	Energy supply.	Energy supply appears to be functioning and in good condition. No issues noted.	4.0	None	N/A
Heating/cooling generation and distribution systems	HVAC system in the service supervisors building. Heaters in radio service area. Exhaust fan in men's restroom. Heater in men's restroom.	System is working but is not balanced well. Staff had manually closed multiple vents in an attempt to balance the system better. Manually closing vents causes the HVAC system to work harder and shortens the life of the system. Staff on site reported that heat in shop garage is adequate. Exhaust fan in men's restroom working adequately. Wall heater in men's restroom appears to be in adequate condition.	3.0	Balance heating and cooling system in the service supervisors building.	\$1,000
Testing, balancing, controls, and instrumentation	Testing, balancing, controls, and instrumentation.	HVAC instrumentation appears to be functioning and in adequate condition. No issues noted.	3.5	None.	N/A



Interior of HVAC system for service supervisors building



Interior of HVAC system for service supervisors building



Interior of HVAC system for service supervisors building



Exterior of HVAC system for service supervisors building



Exterior of HVAC system for service supervisors building



Gas meter and appurtenances



Wall heater in men's restroom



Exhaust fan in men's restroom



Heater in shop garage

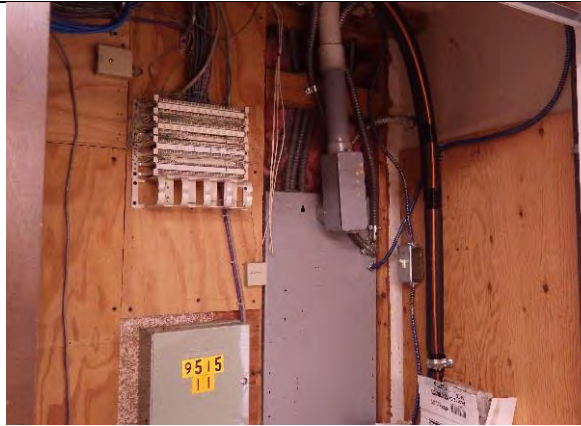
		
Thermostat in radio maintenance area	Thermostat in radio maintenance area	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection					
Sprinklers	Building contains no fire sprinklers.	Building contains no fire sprinklers. Fire Protection system is adequate for current use, but must be upgraded for occupancy change.	3.0	Consider providing sprinkler and a networked fire alarm for both buildings if building is purchased from Pierce County.	\$29,200

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.0		
Electrical service and distribution	Electrical panel in service supervisor office space. Electrical Panel on exterior of radio maintenance area.	Electrical panel in service supervisor office does not have the dedicated working space required by the National Electrical Code, Article 110.26. Electrical Panel on exterior of radio maintenance area is showing signs of corrosion.	3.0	The desk blocks the front access to the electrical panel in service supervisor office and should be shortened allowing 36 inches deep by 30 inches wide clear space in front of electrical panel. Move office furniture. Protective coating should be restored to Electrical Panel on exterior of radio maintenance area.	\$100
Lighting and branch wiring (interior and exterior)	Lighting, branch wiring, and receptacles.	Existing lighting is in good working order. Additional temporary light standards have been added at building exterior while improvements are being worked on. Branch wiring in good working order with three areas to address: 1) Communication closet, located directly behind panel in Service Supervisor Office, has Metal-Clad (MC) cable routed without proper support, 2) Furnace closet in Service Supervisor Office has MC cable routed without proper support. Support should be within 12 inches of cable termination and at intervals not exceeding 6 feet, and 3) Receptacles located at kitchenette and restroom on second floor do not appear to be GFCI protected.	3.0	Provide additional branch wiring support as noted. Receptacles should be replaced with GFCI receptacles for personal protection.	\$150 if performed by PT maintenance staff.
Communications and security	Interior security system, phone, and radio communications.	Security, phone, and radio communications appear to be functioning and in good working order.	3.5	None	N/A
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Generator. Emergency light in radio service area.	Generator appears to be in working order. Emergency light did not function when test button was pressed.	3.0	Check operation of emergency lighting and replace as necessary.	\$100



Electrical panel in service supervisor office



MC cable in need of support



MC cable in need of support



Generator



Replace receptacles with GFCI protection



Replace receptacles with GFCI protection



Restore protective coating on panel enclosure



Non-functioning egress light

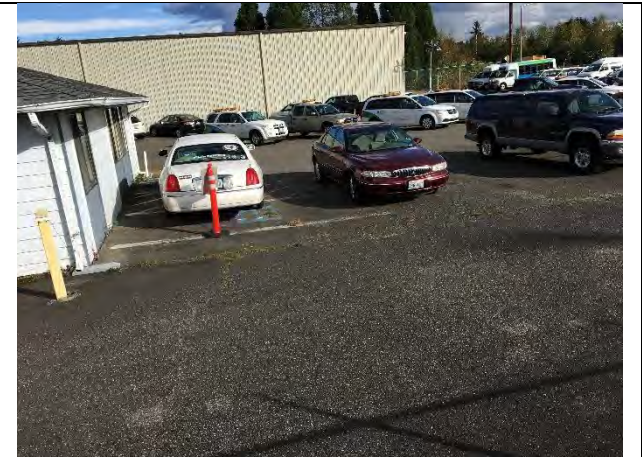
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.5		
Roadways, driveways, parking lots and associated signage, marking, and equipment.	Asphalt parking lot and other paved areas, site boards, vehicular gates.	<p>Parking lot asphalt is in adequate condition. The joint between newer and older asphalt needs to be resealed. There are cracks in the asphalt throughout the parking lot and other asphalt areas. Some cracks have weeds and grass growing in them.</p> <p>There are many bollards throughout the site protecting electrical panels, gas meter, condenser, the office building, fuel tank, garage door openings, and other items. There are in working condition but have minor cosmetic damage and fading paint.</p> <p>Vehicular automatic gate on the southwest side of property was functional and in working condition. Vehicular gate on northwest side of property was changed from an automatic gate to a manual gate that is locked with a padlock and chain.</p>	3.2	<p>Remove the plants from the asphalt cracks and then seal them. Reseal asphalt joints and cracks.</p> <p>Repaint bollards.</p>	\$4,000
Site development such as fences, walls, and miscellaneous structures	Site 6 foot chain link fence with three strands of vertical barbed wire on the north, west and south sides of the perimeter. The east side has an 8 foot fence with barbed wire.	The fence and barbed wire are in good condition with minimal signs of wear.	4.0	None	N/A
Landscaping and irrigation	Site landscaping.	Most of the site is asphalt paved, but there is some grass in good condition on the outside of the fence.	4.0	None	N/A
Site utilities	Site drainage.	Drainage in the parking lot area appears to be adequate, but there is evidence of rain water pooling near the downspouts on the east side of the property. This does not appear to affect the function of the property.	3.5	None	N/A



Electric entry gate on southwest corner of property



Southwest corner of property



South side of service supervisors building



Bollards around fuel tank



Cracks in asphalt where grass and weeds are growing through



Chained manual gate on northwest corner of property



Bollards protecting building and equipment



Bollards protecting the electrical panels



Bollards in front of generator and garage doors

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Maintenance Facility Condition Assessment – Building 8 Screaming Eagle Warehouse

Facility Snapshot

Building 8 is a one-story, 11,950 square foot facility originally constructed in 1977 with an add-on in 1995. It is located at 9421 39th Avenue Court Southwest, Lakewood, Washington, 98499, and accessed through a locked gate on the east side of 39th Avenue SW. The facility is a warehouse that is used for storage. There is also office space located in the warehouse, but it is currently unused. There is a small one-story office space added on to the west side of the warehouse.

Facility Condition Assessment Summary

Building 8 was assessed on August 2, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.0
- Deficiencies (items rated below 3.0) were found in the shell and site primary levels. Additional deficiencies were noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$140,400.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Building 8 Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	2.5
Interiors	3.5
Conveyance	N/A
Plumbing	3.5
HVAC	3.5
Fire Protection	3.0
Electrical	3.0
Equipment	N/A
Site	2.8
FACILITY	3.0



Building 8 Screaming Eagle Warehouse – Site Location



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance and equipment primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

Since replacement cost information was not available to perform a weighted average condition approach, a median value approach was used to calculate the overall facility rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete slab on grade. (Assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			2.5		
Superstructure/structural frame	Concrete Masonry Unit (CMU) bearing walls for warehouse. Wood frame for office section of building.	CMU walls are in adequate condition and are showing water penetration at south wall. Door header cut out at north door on west wall. Wood frame of office portion of building is too close to grade and may be susceptible to rot.	2.9	Reseal CMU walls. Install steel header at door and patch CMU. Cut paving to provide grade separation and drainage.	\$25,000
Roof	Roof (no roof access, assume built-up roof).	Roof structure not visible.	N/A	N/A	N/A
Exterior	Roll-up doors garage doors, exterior paint, T1-11 fascia siding and trim, façade trim, exterior door.	Rollup doors are damaged but still functional. CMU exterior paint is in good condition. Siding is damaged in many places and is marginal condition on south wall and west wall; it is no longer functioning and has exceeded its useful life. The bottom of the wood siding between the two exterior doors accessible from the street and the siding on the south side of the office part of the building are beginning to rot. The facade trim on the south side of the roof line is rotting and failing. It appears that the trim is aesthetic, but it is unsightly and should be replaced. Exterior door is missing its door handle and the trim is rotting.	2.5	Replace rotted siding. Remove/replace fascia and trim. Replace door handle and trim.	\$25,000
Shell appurtenances	Shed roof at north side, gutters and downspouts.	Shed roof on north side is heavily damaged and in marginal condition. There appears to be poor roof drainage at interior gutters and exterior downspouts. One of the roof downspouts has been extended approximately 100 feet from the building to help prevent water from pooling and entering from under the warehouse roll-up doors.	1.5	Remove shed if not needed, otherwise repair damaged columns and upgrade wind uplift capacity. Rework roof drainage to eliminate long runs, possibly by routing underground.	\$20,000



Office space add-on on west side



Warehouse exterior



Warehouse exterior under shed roof on north side



Damaged gutter



Exterior gutters and downspouts



Door header cut out at north door on west wall

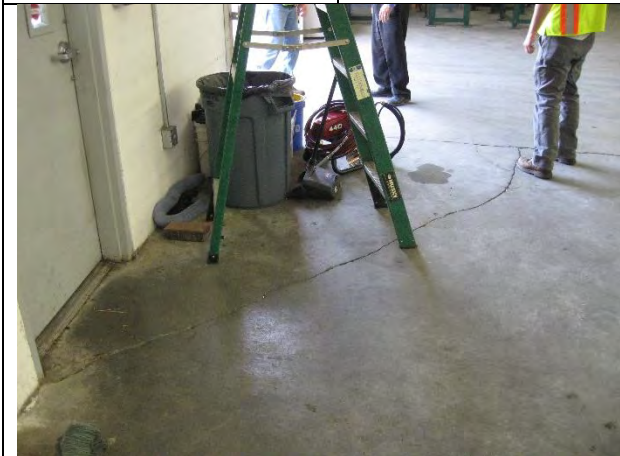


Damaged façade trim



Damaged façade trim

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.5		
Partitions	Interior framed rooms.	Appear to be functional and in good condition.	4.0	None	N/A
Finishes	Warehouse floors.	Were done in single pour and shrinkage cracks are visible, however does not affect functionality.	3.5	None	N/A






Warehouse floors






Warehouse floors and interior office space



Warehouse floors

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			3.5		
Fixtures	Fixtures in bathrooms and kitchen.	Fixtures in bathrooms are working and in adequate condition.	3.5	None	N/A
Water distribution	Water distribution.	Water distribution system is working and functional. No leaks were observed.	3.5	None	N/A
Sanitary waste	Sanitary waste.	Sanitary waste system is working and functional. No leaks were observed.	3.5	None	N/A
					
	Bathroom fixtures in adequate condition	Kitchen fixtures		Women's restroom sink	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC					
Energy supply	Energy supply.	Energy supply appears to be functioning and in good condition. No issues noted.	3.5	None	N/A
Heating/cooling generation and distribution systems	Heaters in warehouse area, wall mounted unit heaters, baseboard heaters.	Two gas powered heaters hanging from ceiling provide adequate heating for the areas. Heaters appear to provide adequate heat for the office spaces. Baseboard heater in men's restroom has items too close to it.	3.5	Relocated items away from baseboard heater.	None, assuming Pierce Transit performs the work.
Testing, balancing, controls, and instrumentation	Testing, balancing, controls, and instrumentation.	HVAC instrumentation appears to be functioning and in adequate condition. No issues noted.	3.5	None	N/A
Chimneys and vents	Exhaust fan	Located in one warehouse area and an intake louver with gravity damper is located in the adjacent warehouse area. System operated adequately during site visit.	3.5	None	N/A
					
Gas powered heater hanging from ceiling in warehouse		Gas powered heater hanging from ceiling in warehouse		Wall mounted unit heaters in office spaces	

		
Exhaust fan in warehouse area	Intake louver in other warehouse area	Baseboard heater in men's restroom

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection					
Sprinklers	Building contains no fire sprinklers.	Building contains no fire sprinklers. Fire Protection system is adequate for current use (unoccupied), but must be upgraded for occupancy change.	3.0	There are no sprinklers or fire alarm devices at this building. Once the building use is known, evaluate if sprinklers are needed. Consider adding sprinklers and a networked fire alarm when building is occupied, whether they are required or not.	\$60,000

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical					
Electrical service and distribution	Electrical service.	Electrical service appears to be in working order. Panels should have circuit identification clearly listed.	3.0	Update panel schedules and post within panels.	None if performed by PT staff.
Lighting and branch wiring (interior and exterior)	Lighting in main bus shelter work area.	Lighting is adequate, but many lamps were not working. Many of the lights in the old office spaces are not functional. These offices are not in use. If needed in the future, repairs will be necessary.	3.0	Replace lamps and ballasts as necessary.	\$50-200
Communications and security	Security system.	Security system has been recently added to alarm perimeter. No cameras present.	5.0	None	N/A



Electrical service in working order



Lighting in main bus shelter work area

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site					
Roadways/driveways, parking lots and associated signage, markings, and equipment	Site asphalt paving.	Site asphalt is in poor condition with many cracks and lots of plants and weeds growing out of it on the north side of the site.	2.5	Repair or replace worst sections of asphalt and seal the rest of the cracks.	None, assuming work under Site Utilities is completed.
Site development such as fences, walls, and miscellaneous structures	Site fence.	North fence is functional and in adequate condition, however shows some signs rust and rust/damage.	3.3	Prep surface and cold galvanize areas of rust.	\$200
Site utilities	On-site drainage.	Drainage is in marginal condition. One of the roof downspouts has been extended approximately 100 feet from the building to help prevent water from pooling and entering from under the warehouse roll-up doors.	2.8	Add a storm drain onsite, repave site with proper slope away from building, or repave with pervious asphalt.	\$10,000

 <p>Northwest corner of property</p>	 <p>Cracks in asphalt</p>	 <p>Fence line on west side of warehouses</p>
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Rolling entrance gate on west side of property



Weeds growing up against the fence



West side of building and warehouse, site asphalt and fence



Gutter extended to about 100 feet from building

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Appendix B

Parking and Passenger Facility Condition Assessments

Pierce Transit

Passenger Facility Condition Assessment – 72nd Street and Portland Avenue Transit Center

Facility Snapshot

The 72nd Street and Portland Avenue Transit Center is located 1319 East 72nd Street in Tacoma, Washington, 98433. The facility was constructed in 1995, has 68 parking stalls, and is approximately three acres. The facility has four bus shelters and one utility building that houses an employee restroom facility and utility room (see site photo on page 2). The restroom facility is locked and not available to the public.

Facility Condition Assessment Summary

The 72nd Street and Portland Avenue Transit Center was assessed on September 15, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.4.
- Deficiencies (items rated below 3.0) were found in the shell primary level. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$33,150.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: 72nd Street and Portland Avenue Transit Center Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	2.9
Interiors	3.7
Conveyance	N/A
Plumbing	4.0
HVAC	3.3
Fire Protection	N/A
Electrical	4.0
Fare Collection	N/A
Site	3.5
FACILITY	3.4



72nd and Portland Avenue Transit Center



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance, fire protection, and fare collection primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a minor corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Note: The assessment was conducted in September 2017. Since that time, this facility is undergoing refurbishing work to bring it up to a State of Good Repair and a rating of 3.5 or better on the TERM Lite scale. The work will include _____. The work will directly address deficiencies identified in this report. The project is scheduled to commence on _____ and complete by _____. The total cost estimate for the repairs and upgrades is \$_____.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelters and utility building (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			2.9		
Superstructure/structural	Bus shelter concrete columns, glulam roof structure, and wooden roof rafters. Utility building concrete masonry unit (CMU) walls.	Gable end roof rafters rotted at bus shelters. Utility building is in adequate condition. There is freeze damage on the east wall CMU block but the building is still structurally sound and functional.	2.9	Repair rafter ends and install stainless steel flashings. Repair damaged utility building wall.	\$20,000
Roof	Shelters with translucent plastic panel roof. Utility building with built-up roof is not visible without ladder.	Bus shelter roof panels are functional, but somewhat dirty. Roof of utility building not visible without ladder. Assume it is built up roof. Roof edge parapets trap leaves and debris and are probably a maintenance issue.	3.8	None	N/A
Exterior	Bus shelter glass walls, Utility building exterior paint.	The glass bus shelter walls are scratched with vandalism. Anti-tamper nuts missing at window sill beams at northeast shelter. Utility building paint is worn on the northeast side.	3.3	Replace vandalized glass. Replace missing nuts at sill beams. Repaint utility building.	\$3,500
Shell appurtenances	Bus shelter gutter and downspouts. Utility building downspouts.	Southwest shelter, east downspout is dislodged with gaps at joints, evidence of leaks. All four bus shelters had leaking gutters in each corner of the shelter. Utility building downspout collector box is not under the wall opening (opening may be overflow scupper).	2.9	Repair leaking gutters	\$1,000








CMU damage on utility building






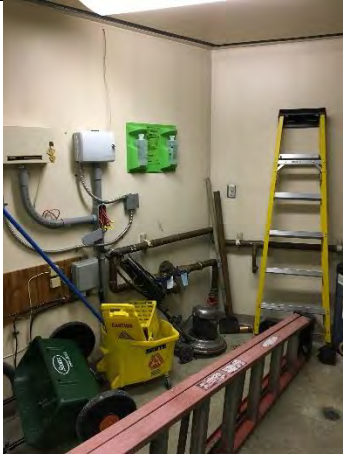





Bus shelter gable end roof rafters rotted



Utility building downspout collector box.

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.7		
Partitions	Utility building interior walls and restroom partitions.	Utility building gypsum wallboard (GWB) interior walls and partitions are in good condition in restrooms. Signage in good condition.	4.0	None	N/A
Finishes	Utility building wall paint and flooring.	Paint on walls and ceilings is in good condition. Vinyl tile floors in restroom are somewhat worn, but still functional and within useful life.	3.7	None	N/A
					
Bathroom partitions		Interior restroom walls		Flooring in men's restroom	
					
Tile flooring in men's restroom		Tile flooring in women's restroom			

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing					
Fixtures, water distribution, sanitary water, rain water drainage	Utility building water, sewer, valves and utility controls. Hot water tank and mop sink in utility room.	Restroom and utility room fixtures in good working condition. No issues seen with water distribution or sanitary waste. Site stormwater drains are in good condition and appear to function properly.	4.0	None	N/A
					
Restroom fixtures are in good condition	Storm drains throughout site provide sufficient drainage	Hot water tank in utility room			
					
Mop sink	Leaking gutter at bus shelter	Miscellaneous storage in utility room			




Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC					
Energy supply	HVAC equipment energy supply fed from utility room panel.	No issues related to the energy supply to HVAC equipment.	3.8	None	N/A
Heat/cooling generation and distribution systems	Electrical heaters and exhaust fans in utility building. Baseboard heaters in utility room.	Heaters in men's and women's restrooms have remote thermostats with locked covers. Baseboard heater located in utility room are aging and have reached the end of their typical life. Exhaust fans in restrooms were operating and functional during site visit. The actual equipment is located in the attic space and could not be visually observed.	2.9	Replace electric heaters in restrooms and utility room.	\$500
Chimneys and vents	Restroom doors vents.	Restroom doors have fixed louvers for air admittance into room to balance the exhaust fans. Some of the blades are bent, but the louvers are functional and in adequate condition.	3.3	None	N/A
					
Restroom heaters located under sinks		Remote thermostat with locked cover		Utility room ceiling exhaust fan	



Utility room baseboard heater



Restroom door

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical					
Electrical service and distribution	Underground electrical, meter on side of utility building.	Site electrical service and distribution appears to be functioning property.	4.0	None	N/A
Lighting and branch wiring (interior and exterior)	Exterior site lighting, bus shelter lighting, electrical receptacles. Interior lighting in utility building.	Lighting appears to be adequate and well-spaced, however, the site was assessed during daytime hours. Bus shelter Florescent fixtures on center beam in bus shelters appears adequate but was assessed during daytime hours. Cover missing on outside electrical receptacle on south wall of utility building. Existing electrical receptacles do not appear to be GFCI (Ground Fault Circuit Interrupter) protected when located in areas required by the NEC National Electrical Code). Items are being stored in front of one of the electrical panels in the utility room.	3.5	Replace fixture cover. Replace existing receptacles within restrooms and in other locations defined by the NEC. Relocate items that are being stored in front of electrical panel. It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities.	\$150
Communications and security	Site security cameras.	Cameras appear to be functioning properly.	4.0	None	N/A
					
Bus shelter flourescent fixtures installed on center beam	South wall of utility building, cover missing on outside electrical receptacle	Meter on side of utility building			



Lighting near utility building



Electrical panels



Relocate items located in front of electrical panel

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site					
Roadways/driveways, parking lots, and associated signage, marking, and equipment	Asphalt paving on perimeter roads and parking area. Concrete roadways.	Pavement markings in good condition Concrete paving at bus lanes are in adequate condition, but some cracks and joints need sealing.	3.5	Seal cracks and joints in bus lanes.	\$5,000
Pedestrian areas and associated signage, markings, and equipment	Crosswalks and concrete walkways.	Pedestrian crossings not painted, different paving surface delineates crosswalks. Difference between paving is not as clear when paving is wet. Painted crossing provide higher visibility for safer pedestrian crossings. Walkways in good condition, many around shelters look like they have been recently replaced. Walkways leading from parking lot appear older but are still adequate.	2.5	Paint pedestrian crossings.	\$2,500
Site development such as fences, walls, and miscellaneous structures	CMU seating walls, bike lockers, and bike stands.	CMU seating walls are functional but the paint has worn off. The bike lockers and stands appear to be stainless steel and are in good condition.	3.5	Repaint CMU seating walls.	\$500
Landscaping and irrigation	Site landscaping.	Site landscaping including, grass, shrubs, and trees are in good condition. Irrigation valve boxes near west side sidewalk appear to be functional.	4.0	None	N/A
Site utilities	Large drain ditch on west side of site with three concrete bridges.	Concrete bridges are weathered but functioning properly. Stainless steel railings on bridge are in good shape. Drainage appears to be functioning properly.	3.6	None	N/A



Bike locker and stands are in good condition



Concrete panels are in adequate condition



Pedestrian crossing not as visible when surface is wet



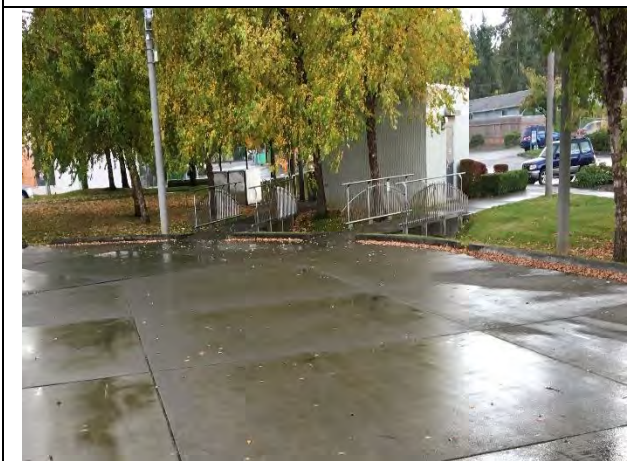
CMU seating in bus shelter – paint is worn



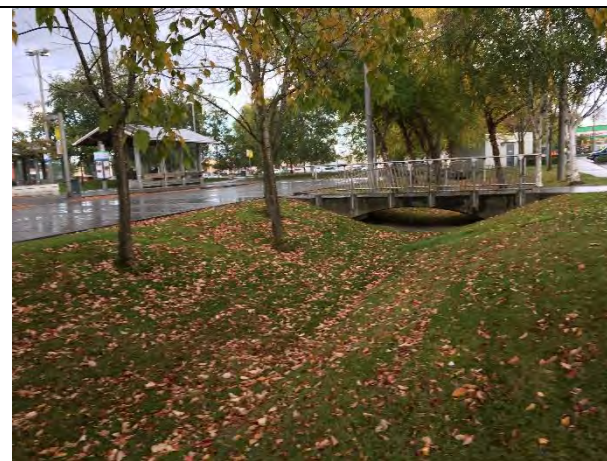
Site landscaping



CMU seating needs paint



Concrete paving and concrete bridge to the utility building



Concrete bridge and large drainage ditch



Asphalt in parking area

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Passenger Facility Condition Assessment – Commerce Street Transfer Center

Facility Snapshot

The Commerce Street Transfer Center is located at 930 Commerce Street in Tacoma, Washington, 98402. The facility was constructed in 1992. The facility has an underground bus tunnel (not open to the public) that is accessed on the west side of Commerce Street. The bus tunnel has several rooms including a Operator’s Lobby for employees to rest, the former Bus Shop (formerly used for ticket sales but currently unoccupied and used for storage), additional rooms for storage, and mechanical rooms. Above the bus tunnel is a landscaped park area with fountains.

Facility Condition Assessment Summary

The Commerce Street Transit Center was assessed on August 2, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.1.
- Deficiencies (items rated below 3.0) were found in the HVAC and electrical primary levels. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$92,100.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Commerce Street Transfer Center Overall and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.2
Interiors	3.2
Conveyance	N/A
Plumbing	3.0
HVAC	2.5
Fire Protection	3.0
Electrical	2.9
Fare Collection	N/A
Site	3.2
FACILITY	3.1



Commerce Street Transfer Center



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.


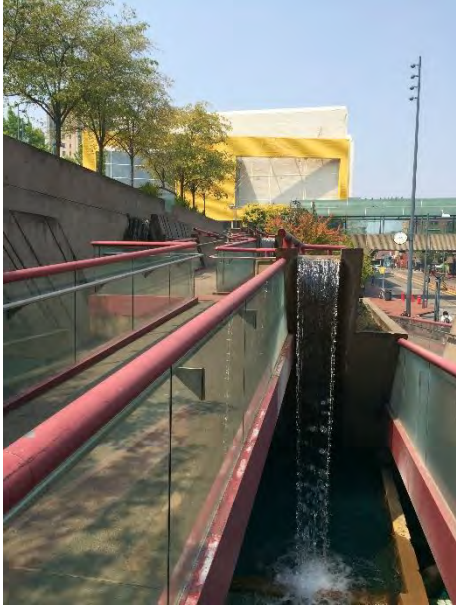

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Underground retaining walls.	No structural issues or defects were noted, underground retaining walls appear to be in good condition.	4.0	None	N/A



Underground retaining walls

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell					
Superstructure/structural frame	Frame is concrete pre-stress beams; area between beams is painted black.	Concrete is in good condition with no observed cracks or deflections.	4.0	None	N/A
Roof	Roof structure is covered with park, fountains, and landscaping features.	Roof could not be directly observed. Fountains, landscaping covered below.	N/A	None	N/A
Exterior	Exterior of former Bus Shop area (currently unused).	Exterior is in adequate condition; however, one glass window was broken at time of site visit. Windows appear to be vulnerable to breakage and vandalism.	3.2	Consider more rugged covering of window openings.	\$10,000
					
Concrete pre-stress beams spanning bus bay		Fountains on roof surface		Exterior of bus shop area	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.2		
Partitions	Bus shop (unused) and Operator's Lobby both have Gypsum Wallboard walls, suspended ceilings, and tile floors.	Both Old Bus Shop (currently unused) and the Operator's Lobby interiors have cosmetic damage to walls, ceilings, and floors but otherwise in adequate condition and functional. Bus shop walls are in adequate condition and it was noted that fixtures have been partially removed. Ceiling panels have been removed in some locations, unclear the reason.	3.3	Repair damage and touch up paint as required in Operator's Lobby. Since Old Bus Shop is unused, no corrective actions are recommended at this time.	\$3,000
Finishes	Bus tunnel fascia.	Fascia is damaged in front of Operator's Lobby. Damage is cosmetic and doesn't appear to affect functionality.	3.2	No repairs recommended immediately since this portion of facility is not open to public.	N/A



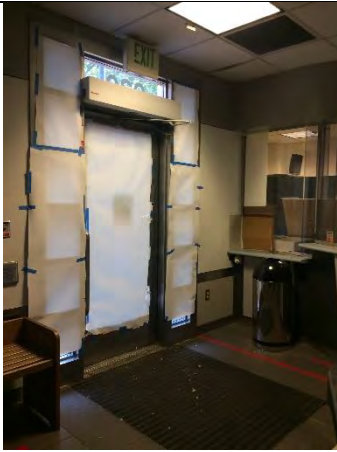
Former bus shop



Damaged fascia in bus tunnel



Bus Shop ceiling






Bus shop



Ceiling tiles missing



Ceilings and walls

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing					
Fixtures	Restrooms in the Operator's Lobby and public restrooms accessed from Commerce Street.	Restroom fixtures are functional and appear to be in working condition.	3.5	None	N/A
	The water heater tank in the Work Room (Sprinkler Valve Room).	Water heater in Work Room (Sprinkler Valve Room) requires two horizontal straps around its circumference to meet the Uniform Plumbing Code (UPC) requirements, there is currently only one strap.	3.0	Add a second horizontal strap to meet UPC code requirements.	\$100
	Mop sink in the Work Room.	There was a slow leak from the hose connection in the mop sink in the Work Room (Sprinkler Valve Room) while onsite.	2.5	Repair leaking hose connection.	\$100
Water distribution	Pump room and the small piping near the chlorine injection system.	There are significant signs of corrosion throughout the pump room. Corrosion that is left unchecked will eventually cause failures in pipe joints, hangers, and supports; structural bases for equipment; and electrical and auxiliary systems. There is significant condensation collecting in the small piping near the chlorine injection system. This moisture is causing coatings to fail and causing nearby pipes, joints, hangers, and supports to corrode.	2.5	Evaluate and implement strategies for reducing corrosion including recoating pipes, increasing fresh air flow, and separating the chlorine equipment from the rest of the room. Increase fresh air flow and recoat pipes in chlorine injection system.	\$1,000
	Water fountains.	Fountains performing as desired during the site visit.	4.0	None	N/A
Sanitary waste	The water distribution and sanitary waste for the driver break-room/rest area.	The access area is very limited. There were not any functional issues at the time of the site visit but staff noted the difficulty of access for maintenance and repair.	3.0	None	N/A
					
	Restrooms in Operator's lobby are in adequate condition	Water heater tank in the work room	Pump room - corrosion throughout		



Pump room – corrosion throughout



Condensation collecting on the small piping near the chlorine injection system



Condensation collecting on the small piping near the chlorine injection system



Fountains performing as desired



Fountains performing as desired



Difficult access for maintenance and repair for the water distribution and sanitary waste for driver break room/rest area



Difficult access for maintenance and repair for the water distribution and sanitary waste for driver break room/rest area



The drain in the walkway at the top of the first wheelchair ramp going up from Commerce Street was clogged at the time of the site visit

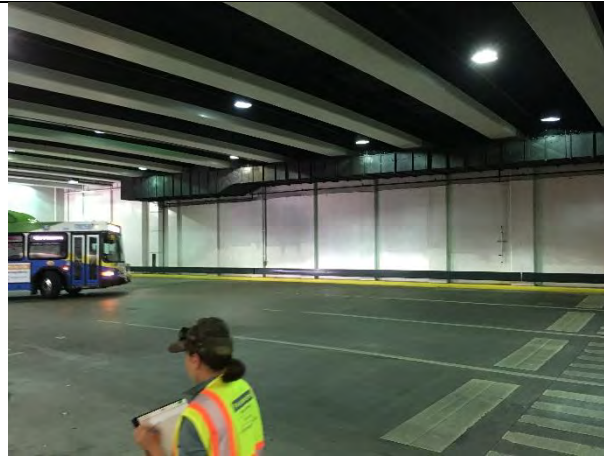


Water was collecting at the top of the wheelchair ramp near Broadway

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			2.5		
Energy supply	Energy supply to the HVAC equipment.	No noticeable defects were observed. Note that the electrical connections for many of the fans and other pieces of equipment could not be observed because they were in the ceiling or behind walls.	3.5	None	N/A
Heating/cooling generation and distribution systems	The driver break-room/rest area cooling system.	The equipment was not able to provide the cooling temperature set on the thermostat. Staff has placed numerous box type fans throughout the area to supplement the HVAC system for this area. The HVAC unit could not be located at the time of the site visit, but it has either reached the end of its useful life, needs to be repaired, or needs to be increased in size.	2.0	Repair or replace HVAC cooling system.	\$5,000
Heating/cooling generation and distribution systems	The HVAC system for the bus tunnel area.	The system appeared to be working adequately.	3.5	None	N/A
Heating/cooling generation and distribution systems	The fan in the electrical room for the pump room.	The system is showing signs of corrosion. The corrosion can reduce fan performance, which reduces the air changes in the room, and can affect the code classification of the room.	2.5	Inspect fan and check performance. Replace parts as needed to maintain original performance.	Varies
Heating/cooling generation and distribution systems	The HVAC system in the pump room.	The HVAC system hinders the ability to maintain the rest of the equipment in the room. This can cause safety issues during operation and maintenance in the room.	2.5	None. Without major changes to the existing equipment and piping, there are no recommended HVAC changes for this item.	N/A
Heating/cooling generation and distribution systems	The large fans in the room above the bus tunnel entrance.	The fans are nearing the end of their expected useful life. The personnel access to the fan room is limited to a door approximately 3'x3' that is located in a vault on the north side of the room.	2.5	Refurbish or replace fans.	\$25,000 - \$50,000
Testing, balancing, controls, and instrumentation	Driver Break Room area thermostats.	Thermostats are aging and should be replaced when the cooling system is repaired or replaced.	2.5	Replace thermostats.	\$500
Chimneys and vents	Bus tunnel and Pump Room vents.	Louver and manual damper between the bus tunnel and Pump Room was in the open position. Equipment was in good condition.	3.5	None	N/A



The driver break-room/rest area cooling system



HVAC system in bus tunnel



Pump Room fan in Electrical Room



HVAC duct in Pump Room



Large fan above bus tunnel entrance



The personnel access to the fan room is limited to a door approximately 3'x3' that is located in a vault on the north side of the room

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection					
Sprinklers (General Facility)	Building contains a dry sprinkler system. Sprinkler systems are in all required areas (except possibly under slatted ceiling over entrance doors in bus tunnel).	Building contains a mix of quick response and standard response sprinkler heads within the space. NFPA requires sprinkler heads to match in a space/zone.	3.5	Modern sprinkler heads will respond to a developing fire faster. Provide new quick response sprinkler heads throughout building.	\$5,000
Sprinklers (Mechanical Room)	Mechanical Room contains dry sprinkler system.	Sprinkler Piping in Mechanical Room is heavily corroded.	1.0	Replace sprinkler piping in Mechanical Room with stainless steel piping throughout. Replace existing sprinkler heads with wax coated sprinkler heads for corrosion resistance.	\$8,000
Fire Riser	Building contains single fire riser.	Onsite certifications indicate system is overdue for dry valve operation testing per NFPA 25.	3.5	Perform Dry Valve testing.	N/A
<p>Other fire protection notes from consultant team that do not pertain directly to facility condition assessment:</p> <ul style="list-style-type: none"> • Remove chair and any other combustibles materials from the electrical room. • A post indicator valve was not seen in the area of the FDC. Confirm arrangement is acceptable to Fire Marshall. • A fire hydrant was not seen within 100' of the FDC. Confirm arrangement of FDC and fire hydrant is acceptable to Fire Marshall. • Compressor does not appear to be UL listed for dry sprinkler use. This may have been acceptable at the time of installation, but should be replaced when this compressor fails. • Confirm area under slatted ceiling does not require fire protection. 					



Fire Riser (Dry System Valving)



Fire Riser (Dry System Valving)



Fire Riser (Dry System Air Compressor)



Rusted Mechanical Room Sprinkler Piping

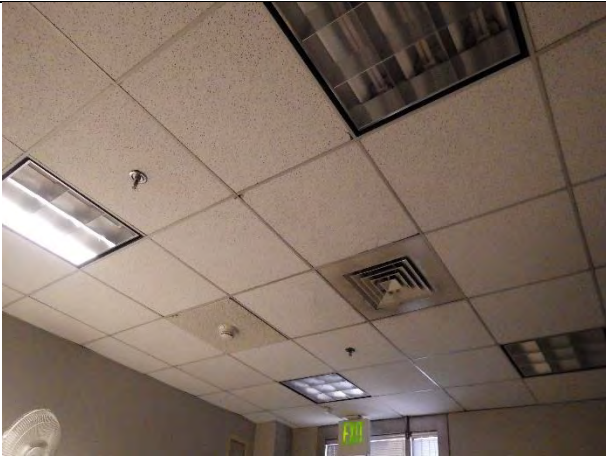


Rusted Mechanical Room Sprinkler Piping



Slatted Ceiling in Tunnel

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			2.9		
Electrical service and distribution	Electrical equipment enclosures in main electrical room and electrical panel in north electrical room.	There are signs of corrosion in the electrical equipment enclosures in the main electrical room. Equipment is located above distribution panels with low voltage cabling hanging into the dedicated working space of the distribution panels (electrical panel in north electrical room).	3.0	Replace electrical equipment enclosures. Relocate equipment above electrical panels out of dedicated distribution panel space.	\$6,000
Lighting and branch wiring (interior and exterior)	Bus tunnel lighting.	Bus tunnel lighting is functioning and appears to be in good working order.	3.5	None	N/A
Lighting and branch wiring (interior and exterior)	Bus shop lighting.	Lighting is in poor condition, with only one of four lights working.	2.2	Replace ballasts and lamps as necessary.	\$500
Lighting and branch wiring (interior and exterior)	Operator's lobby lighting.	Lighting is adequate but multiple lights not working or pulsating in the main room and small central room south of kitchenette.	2.9	Replace ballasts and lamps as necessary.	\$500
Lighting and branch wiring (interior and exterior)	Branch wiring.	Receptacle in south end of upper plaza missing weatherproof cover. Two other junction boxes at north end of plaza have receptacle missing leaving access to exposed conductors.	2.9	Receptacle in south end of upper plaza, cover should be replaced or receptacle removed and blank cover installed. Receptacle covers in north end of upper plaza should be removed and blank plates installed.	\$100
Lighting and branch wiring (interior and exterior)	Water infiltration into electrical raceways.	Severe corrosion is located in multiple locations: <ol style="list-style-type: none"> 1. Junction boxes and control transformer in pump room have severe corrosion and should be replaced. 2. Junction box in main electrical room has severe corrosion and should be replaced. 3. Electrical gutter in storage room. 	2.5	Replace junction boxes and control transformer in pump room. Replace junction box in main electrical room. Replace electrical gutter in storage room.	\$2,000
Communications and security	Cameras and communications equipment.	Cameras were noted in Operator's Lobby and bus tunnel open space and appear to be functioning adequately. There are signs of water dripping onto security equipment in closet.	3.0	Repair source of water or relocate equipment.	\$300
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Emergency lighting.	Appears to be in working order. Fixtures should be regularly tested for function.	3.5	None	N/A
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Operator's lobby unknown equipment.	There is an unknown piece of low-voltage equipment located on wall under the counter in the Operator's Lobby. has disconnected plug in transformer.	N/A	Verify use of low-voltage equipment in driver rest area and repair or remove depending on use.	None if performed by PT staff.



Police storage area lighting



Receptacle in south end of upper plaza missing weatherproof cover



Junction box at north end of plaza have receptacle missing leaving access to exposed conductors



Junction box at north end of plaza have receptacle missing leaving access to exposed conductors



Junction boxes and control transformer in pump room have severe corrosion and should be replaced



Junction box in main electrical room has severe corrosion and should be replaced



Electrical gutter in storage room has severe corrosion and should be replaced



Signs of water dripping on security equipment



Electrical panel obstruction



Unknown piece of low-voltage equipment located on wall under counter in the Operator's lobby has disconnected plug in transformer

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site					
Roadways/driveways and associated signage, marking, and equipment	Bus tunnel roadway.	Bus tunnel signage is in good condition with clear directions. Concrete painting markings are in good condition. Concrete panels are in good condition with no damage noted.	4.0	None	N/A
Pedestrian areas and associated signage, markings, and equipment	The walkway at the top of the first wheelchair ramp going up from Commerce Street. The wheelchair ramp near Broadway.	The drain at the top of the first wheelchair ramp going up from Commerce Street was clogged at the time of the site visit. Staff became aware of this issue at the time of the site visit. In addition, water was collecting at the top of the wheelchair ramp near Broadway. It appears that decorative blocks where the water was collecting was supposed to drain the water. Staff became aware of this issue at the time of the site visit.	1.5	Repair drain function at wheelchair ramp. Repair draining function to brick walkway near Broadway.	\$400
Site development such as fences, walls, and miscellaneous structures	Site features.	Concrete and glass walls on wheelchair walkway are in good condition.	3.5	None	N/A
Landscaping and irrigation	Site landscaping and irrigation.	Landscaping was in good condition with exception to the grass areas adjacent to Broadway which has died, possibly from lack of irrigation.	3.2	Repair or install irrigation system to grass.	Varies
Site utilities	Site water fountains, sculpture.	Water fountains throughout site were in working condition. The salmon sculpture in the fountain by Broadway was removed for repairs because of vandalism and is temporary housed in the bus tunnel.	3.1	Repair salmon sculpture and return to fountain.	\$200



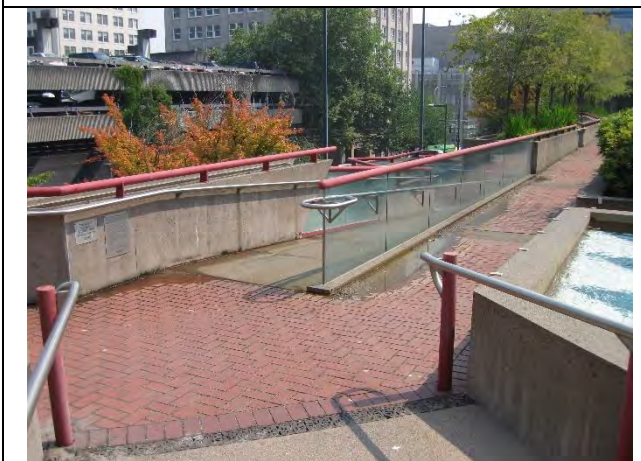
Bus tunnel paint markings on concrete



Concrete panels in bus tunnel



Wheelchair ramp landing with clogged drain



Wheelchair ramp at the plaza



Signage in bus tunnel



Water fountains onsite

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Passenger Facility Condition Assessment – Lakewood Towne Center Transit Center

Facility Snapshot

The Lakewood Towne Center Transit Center is located at 5719 Lakewood Towne Center Boulevard SW in Lakewood, Washington, 98499. The facility was constructed in 1992 and is approximately one acre. The facility has no onsite parking, but has four bus shelters and one utility building that houses an employee restroom facility and utility room (see site photo on page 2). Restroom facility is locked and not available to the public.

Facility Condition Assessment Summary

The Lakewood Towne Center Transit Center was assessed on September 15, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.8.
- No deficiencies (items rated below 3.0) were found in any primary level. However, deficiencies are noted in secondary levels as described in Table 3.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$25,900.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Lakewood Towne Center Transit Center Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.5
Interiors	3.5
Conveyance	N/A
Plumbing	4.0
HVAC	3.0
Fire Protection	N/A
Electrical	4.0
Fare Collection	N/A
Site	3.8
FACILITY	3.8



Lakewood Towne Center Transit Center



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance, fire protection, and fare collection primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.




Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Note: The assessment was conducted in September 2017. Since that time, this facility is undergoing refurbishing work to bring it up to a State of Good Repair and a rating of 3.5 or better on the TERM Lite scale. The work will include _____. The work will directly address deficiencies identified in this report. The project is scheduled to commence on _____ and complete by _____. The total cost estimate for the repairs and upgrades is \$_____.

Table 3: Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelters and utility building (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

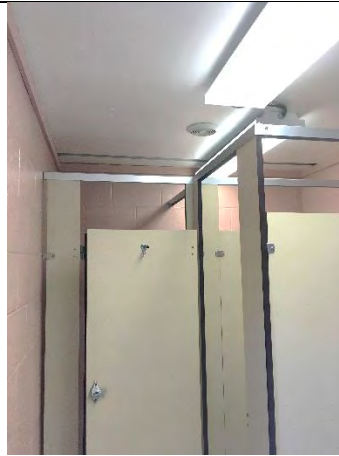
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.5		
Superstructure/structural frame	Bus shelters steel tube frames. Utility building concrete masonry unit (CMU) walls.	Bus shelter steel framing appears to be in good condition, but has minor cosmetic damage with peeling paint on steel frame and on lower window framework. Some missing screws on lower window frame cross members. Utility building walls are in good condition with no visible defects or damage.	3.5	Repaint bus shelter steel shelter framework and replace missing screws.	\$20,000
Roof	Bus shelters translucent plastic roofs. Utility building flat roof (not visible without ladder access).	Bus shelter roofs appear to be functional and are in adequate condition. The translucent plastic roofs are dirty and yellowed and stainless steel flashings are functional but dirty. Utility building is assumed to have built up roofing, but not visible without ladder access.	3.7	Clean shelter roofs.	\$2,500
Exterior	Utility building doors and finishes.	Exterior finishes of utility building are in good condition. Bottom of door frames are beginning to rust and door jamb seal is becoming separated on utility room door.	3.5	Repaint doors and frames and replace door jamb seal on Utility room.	\$200
					
Peeling paint on steel framing on bus shelter		Bus shelter steel framing and plastic roofs		Utility building	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors					
Partitions	Utility building interior walls and restrooms partitions.	Interior walls and restroom partitions are in good condition.	4.0	None	N/A
Finishes	Driver restroom walls and flooring finishes. (Onsite locked bathroom facilities are for driver use only and are not open to the public).	Restrooms furred out gypsum board walls and ceiling are in good condition. Vinyl tile flooring in men's restroom is broken and stained in several locations. It is still functional but nearing end of life. Women's restroom flooring is cracking around tile edges but is still functional. Utility room interior painted concrete block walls and gypsum board ceiling are in good condition.	3.5	Replace the flooring in the men's restroom.	\$2,500

		
Men's restroom wall	Vinyl tile flooring in men's room	Vinyl tile flooring in men's room and partitions






Women's restroom walls






Women's restroom partitions



Women's restroom toilet

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			4.0		
Fixtures	Utility building sinks, faucets, and water heater.	Restroom sinks and faucets appear to be in good condition and functional. Utility Room mop sink drain is plugged and screen has been removed. Water heater appears to have started leaking and is not properly braced.	3.1	Repair mop sink. Repair hot water heater leak and attach two horizontal bracing straps to the wall.	\$350
Water distribution	Hot and cold water distribution.	Water distribution system is working and functional.	4.0	None	N/A
Sanitary waste	Employee restroom.	Sanitary waste system is working and functional.	4.0	None	N/A
Rain water drainage	Storm drains for rain water drainage.	Storm drains on site provide surface water drainage and appear to be functioning properly. No evidence of clogged drains.	4.0	None	N/A
					
Utility room mop sink drain plugged		Water heater needs straps and appears to be leaking		Storm drains appear to be functioning properly	




Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.0		
Energy supply	Electric fed from work room panel.	Energy supply to HVAC equipment appears to be working and functional.	4.0	None	N/A
Heating/cooling generation and distribution systems	Electrical heaters and exhaust fans in Utility building.	Heaters have remote thermostats. Men's restroom electric heater was on, the fan was blowing air, but the air was not warm. The women's restroom heater appears to be functioning but is aging and needs to be replaced. Exhaust fans in restrooms were operating and functional during site visit. The actual equipment is located in the attic space and could not be visually observed. Baseboard heater along north wall of Utility Room has items and storage too close to it.	3.0	Replace electric heaters in restrooms. Move items and storage away from baseboard heater.	\$250
					
	Men's Restroom heater	Restroom thermostat		Women's restroom heater	

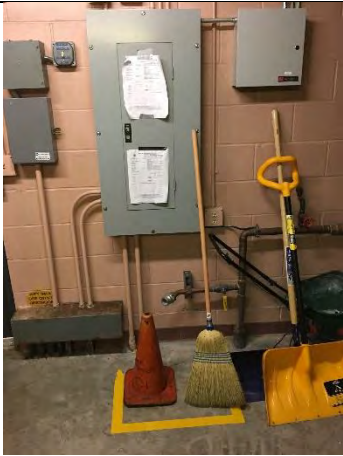


Baseboard heater in utility room



Baseboard heater along north wall has items stored too close




Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			4.0		
Electrical service and distribution	Site electrical is underground electrical. One single phase panel in electrical room. Outdoor electrical box on east side of utility building.	Electrical panel is in good condition; circuits were updated in 2006. Many spare conduits in floor of work room and spare spaces in panel. Outdoor electrical box appears functional but is rusting.	3.5	Paint outdoor electrical box.	\$100
Lighting and branch wiring (interior and exterior)	Site lighting, bus shelter lighting, and interior lighting in utility building.	Lighting appears to be adequate and well-spaced, however, the site was assessed during daytime hours. Interior lighting in utility building appears to be functional and in working order.	4.0	It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities.	N/A
Communications and security	Security cameras and radio communication equipment.	Cameras and communication equipment appear to be functional and it appears there are no hidden areas on site.	4.0	None	N/A
					
Single phase panel in electrical room		Rusty electrical box located on east side of utility building		Cameras on site	



Electrical Box



Cameras and radio communication located on utility building

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.8		
Roadways/driveways and associated signage, marking, and equipment	Site roadways and driveways, including concrete bus travel lanes and site asphalt. Site signage.	Concrete paving appears to be in good condition and does not show signs of cracking. Asphalt paving is in adequate condition and shows wear and some cracking, notably around storm drains. Site signage appears to be in good condition.	3.6	None	N/A
Pedestrian areas and associated signage, markings, and equipment	Pedestrian crosswalks, pedestrian sidewalks, and concrete in bus shelter waiting areas.	Crosswalks are painted and in good condition. Concrete sidewalks joints in sidewalks are open and collecting debris, but concrete is in good condition.	3.8	None	N/A
Site development such as fences, walls, and miscellaneous structures	CMU seating walls.	Seating walls are functional but show signs of weathering.	3.7	None	N/A
Landscaping and irrigation	Site landscaping including grass, shrubs and trees.	Landscaping is in good condition. Irrigation controller observed but was not in operation during site visit.	4.0	None	N/A
Site utilities	Site storm drains.	Reviewed under plumbing section.	N/A	None	N/A
Other site	Bike lockers, bike Racks, and metal trash cans.	Bike lockers and racks are located at street side on the south end and are in good condition. Trash cans are located around site are in good condition.	4.0	None	N/A
					
Crosswalks		Internal bus travel lane		Metal trash bins and signage	



Concrete seating



Internal bus travel lane



Bike lockers

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Passenger Facility Condition Assessment – Parkland Transit Center

Facility Snapshot

The Parkland Transit Center is located 213 121st Street South in Tacoma, Washington, 98444. The facility was constructed in 1984, is approximately 1.3 acres, and has 62 parking stalls. On site, there are two small bus shelters, one large bus shelter, and one utility building that houses an employee restroom facility and utility room (see site photo on page 2). The restrooms are locked and not available to the public.

Facility Condition Assessment Summary

The Parkland Transit Center was assessed on September 28, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.4.
- No deficiencies (items rated 1 or 2) were found in any primary level. However, deficiencies are noted in secondary levels as described in Table 3.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$31,050.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Parkland Transit Center Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.4
Interiors	3.7
Conveyance	N/A
Plumbing	3.8
HVAC	3.5
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	3.3
FACILITY	3.4



Parkland Transit Center



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance, fire protection, and fare collection primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a minor corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelters and utility building (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.4		
Superstructure/structural frame	Utility building concrete masonry unit (CMU) walls and wooden roof framing. Bus shelter concrete columns and glulam roof frame.	Utility building rafters are rotted at gable ends, but the CMU walls and framing are in good condition. Large bus shelter appears to have a previous repair which flashed and painted rafter ends and subsequently is in good condition. Both small shelters have had had previous repairs which flashed and painted the rafter ends. The small shelters are in good condition.	3.4	Repair rafter ends on utility building by adding stainless steel flashing and repaint wood.	\$10,000
Roof	Bus shelter translucent plastic roofs and wooden eaves. Utility building translucent plastic roof and wooden eaves.	Bus shelter roofs are functional and in adequate condition, however there are some discolored panels at the large bus shelter. Wooden eaves are in good condition. Eaves of utility building shows signs of being wet and drying out. The ends of the eaves are showing sign of rot.	3.6	Replace discolored panels and clean the remaining panels. Repair utility building eave ends at same time as repairing rafter ends.	\$2,500
Exterior	Utility building door frames and wall paint. Bus shelter glass panels.	Utility building door frames rusted through, one of the jams had previously been repaired. Exterior wall paint is in good condition. Bus shelter glass panels are in good condition. The restroom doors need better signage; currently, sharpie markings designate the men's versus women's restrooms.	3.6	Fix door frame bottoms and paint. Add signage to restroom doors.	\$1,000
Shell appurtenances	Utility building gutters, bus shelter gutters and downspouts. All gutters and downspouts are stainless steel.	Utility building has gutters that drain at east end and freefall to the ground. Appear to be functional and in good condition. Large shelter gutters are in marginal condition. There are three locations where the gutters appear to be leaking, two on the west side and one on the east side. Small shelter gutters and downspouts have no visible leaks and appear to be in good working condition.	2.9	Repair or replace gutters on large shelter.	\$2,500



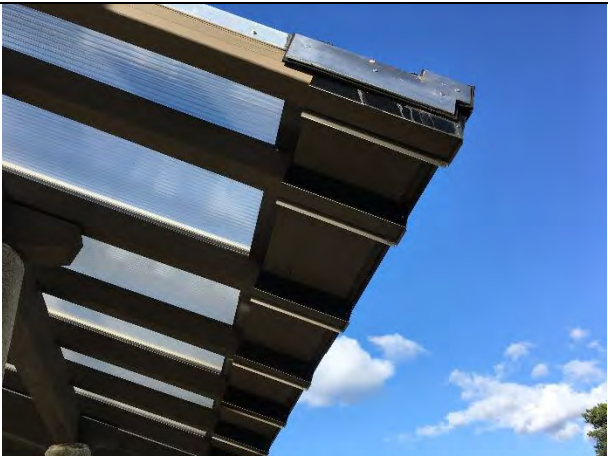
Large bus shelter



Large shelter eaves



Glass in large shelter



Large bus shelter eave



Small bus shelter



Small shelter



Utility building eaves



Utility building eaves








Utility building rafters









Utility building eave






Utility building eave

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors					
Finishes and Partitions	Utility building partitions, flooring, interior walls, and ceilings.	Restroom partitions have small dents but the interiors generally in good condition. Vinyl tile in restrooms is aging and the joints are dirty but the flooring is still functional. Walls and ceilings are in good condition.	3.7	None	N/A
					
Restroom partitions		Restroom walls and ceiling		Vinyl tile in restrooms	
					
Men's restroom		Men's restroom			

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			3.8		
Fixtures	Restroom sinks, faucets, urinals, and toilets.	Sinks, faucets, urinals, and toilets appear to be in good condition and are functional. Cast iron drain piping in the Women's Restroom slop sink has surface rust, but is still functional.	3.8	None	N/A
Water distribution	Hot and cold water supply.	Hot and cold water are in working condition with no visible leaks or defects.	4.2	None	N/A
Sanitary waste	Restroom sanitary waste.	Sanitary waste system was working properly during the site visit. The drain and p-trap piping for the mop sink in the women's restroom showed signs of surface rust, but it still functional and not an immediate issue.	3.8	None	N/A
Rain water drainage	Surface water storm drains in bus lane area (two) and passenger parking areas (two).	Site appears to be adequately sloped to the drains and storm drains are appear to be functioning properly.	4.0	None	N/A
					
Urinal in men's restroom		Mop sink in women's restroom		Surface rust on mop sink p-trap piping	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.5		
Energy supply	HVAC equipment power is fed from utility room panel.	No issues related to the energy supply to the HVAC equipment.	4.0	None	N/A
Heat generation and distribution systems	Heaters in restrooms and exhaust fans in utility building.	Restroom heaters are missing thermostat knobs. They are aging and appear to have exceeded their typical life. Exhaust fans were functioning at the time of the site visit. The actual equipment is located in the attic space and could not be visually observed.	3.3	Replace electric heaters in restrooms and utility room.	\$250
Vents	Passive, manual opposed blade louvered ceiling vents in each restroom.	Both vents were closed at the time of the site visit. Vents open to the open air space between the roof structure and ceiling of the restrooms. Appear to be functioning and in good condition.	3.5	None	N/A
					
Restroom heater with missing thermostat knob		Ceiling louver/vent in restroom		Restroom heater with missing thermostat knob	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.5		
Electrical service and distribution	Utility power.	One electric power meter on north side appears to be in good condition, but is obstructed by brush.	3.5	Clear brush away from front of electric meter.	\$100
Lighting and branch wiring (interior and exterior)	Utility building interior lighting, bus shelter exterior lighting, site lighting, and electrical receptacles.	Lighting fixtures in utility building have discolored lenses but are still functional. Bus shelters have fluorescent fixtures mounted on roof beams which are outdated but appear to be functioning and adequate for lighting under the shelters. Site lighting appears to be adequate and well-spaced. However, the site was assessed during daytime hours. Existing electrical receptacles do not appear to be GFCI (ground fault circuit interrupter) protected when located in areas required by the NEC (National Electrical Code).	3.5	Replace existing receptacles within restrooms and in other locations defined by the NEC. It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities.	\$100
Communications and security	Cameras, phone line, and public phones.	Cameras located on pole by utility building and on north end of large bus shelter are in good condition. There are no cameras located in the parking area. The phone line that comes off pole on 121st and enters the utility building is in good condition. Two public phones at shelters appear to be in working condition.	4.0	None	N/A
					
Power meter obstructed by brush		Restroom lighting		Site cameras	



Pay phone at shelter



Pay phone at shelter



Phone line to the Utility Building

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.3		
Roadways/driveways and associated signage, marking, and equipment	Concrete in bus lane area, asphalt parking lot, and curbs.	<p>There are some visible cracks and joints that need sealing in concrete areas.</p> <p>Asphalt paving is cracked and alligatored, dirt and grass in cracks, and some break-up at parking entrance.</p> <p>The striping and signage in the parking lot is in good condition; however, the handicap parking stall pavement marking is worn and faded.</p> <p>Curb in front of utility building is broken and needs to be repaired. Curb on the east side of the southeast bus entrance is broken and needs to be repaired. Curb by the southwest parking entrance is broken and needs repair.</p>	2.8	<p>Seal cracks and joints in concrete.</p> <p>Clean and seal cracks and alligatored portions of asphalt.</p> <p>Repaint handicap stall.</p> <p>Repair curbs.</p>	\$10,000
Pedestrian areas and associated signage, markings, and equipment	Pedestrian crosswalks and signage, poured concrete in pedestrian waiting areas, and sidewalks.	<p>Crosswalks and signage are in good condition.</p> <p>Concrete in pedestrian waiting areas is in good condition.</p> <p>The sidewalks are worn along roadways especially on the north side of the site.</p>	3.3	Smooth jagged areas and repair as needed.	\$2,500
Site development such as fences, walls, and miscellaneous structures	Bike Lockers and Site Memorial.	Bike lockers are in good condition. Memorial located at the entrance to the parking lot is in good condition but has graffiti on the painted brick.	3.6	Clean graffiti from memorial.	\$100
Landscaping and irrigation	Site landscaping.	Landscaping is generally in good condition with several well established trees. There is some bare dirt at southeast corner by the sign.	3.4	Add soil and plantings by sign.	\$2,000



Broken curbing in front of Utility Building



Memorial showing graffiti



Broken curbing by the southwest parking lot entrance



Alligatored asphalt in parking lot



Alligatored asphalt in parking lot with plant growth in cracks



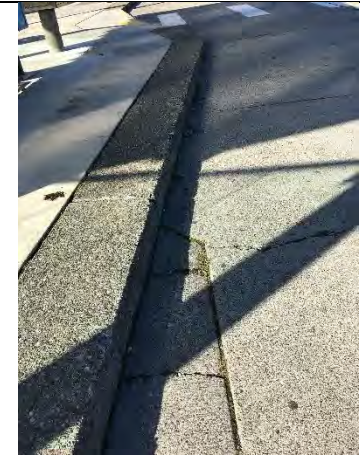
Disabled parking stall needs repainted



Crosswalk bars are in good condition



Cracks in sidewalk need repair



Cracks in bus lane that need sealing



Broken curb just south of utility building



Bike Locker and Bike Rack are in good condition



Passenger walkways and waiting areas

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Passenger Facility Condition Assessment – South Hill Mall Transit Center

Facility Snapshot

The South Hill Mall Transit Center is located at 503 39th Avenue South West in Puyallup, Washington, 98373. The facility was constructed in 1998 and is approximately 1.5 acres. The facility has four bus shelters and one utility building that houses an employee restroom facility and utility room, and no onsite parking (see site photo on page 2). The restroom facility is locked and not available to the public.

Facility Condition Assessment Summary

The South Hill Mall Transit Center was assessed on September 21, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.4.
- No deficiencies (items rated below 3.0) were found in any primary level. However, deficiencies are noted in secondary levels as described in Table 3.
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$96,200.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: South Hill Mall Transit Center Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.5
Interiors	4.0
Conveyance	N/A
Plumbing	3.7
HVAC	3.7
Fire Protection	N/A
Electrical	3.4
Fare Collection	N/A
Site	3.3
FACILITY	3.4



South Hill Mall Transit Center



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance, fire protection, and fare collection primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a minor corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure					
Foundation	Poured concrete foundation for bus shelters and utility building (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.5		
Superstructure/structural frame	Utility building concrete masonry unit (CMU) walls, concrete columns, and glulam roof beams. Bus shelter concrete columns, glulam roof framing, and glass walls.	Utility building CMU walls with concrete columns at corners, and glulam roof beams are in good condition. Gable end rafters showing signs of rot on the ends. Bus shelter concrete columns, glulam roof framing, and glass walls are in good condition. Gable end rafters on bus shelters are showing signs of rot on the ends.	3.5	Repair gable end rafters with stainless steel flashings and repaint wood rafters on bus shelters and utility buildings.	\$5,000
Roof	Utility building and bus shelter roofs.	Translucent plastic roof panels on bus shelters are dirty but still functional. Utility building raised seam metal roofing with skylight at corner is in good condition.	3.8	None	N/A
Exterior	Utility building exterior walls and doors.	Exteriors of Utility building are adequate but have some cosmetic damage. Unmarked door at utility building is dented and deadbolt lock is loose. It appears to have been damaged from being tampered with. Door to utility room needs paint. CMU walls on utility building are dirty.	3.3	Paint utility room door. Repair deadbolt lock on utility room door. Clean CMU walls.	\$5,000
Shell appurtenances	Utility building and bus shelters, gutters and downspouts.	Stainless downspouts and gutters on utility building and bus shelters are in good condition and appear to be functioning.	4.0	None	N/A




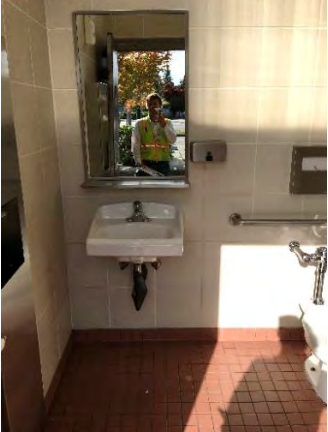

Unmarked door








Utility room door






CMU walls need cleaning

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			4.0		
Partitions	Utility building restroom partitions and interior walls.	Locked bathroom facilities onsite for driver use only (not open to the public) are in good condition. Restroom partitions, and painted gypsum wallboard walls and ceilings in utility building are in good condition.	4.0	None	N/A
Finishes	Utility building wall and floor finishes.	Tile wainscot on walls and red tile floors are in good condition.	4.0	None	N/A
					
Bathroom facilities		Bathroom facilities		Gypsum wallboard walls	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			3.7		
Fixtures	Utility building plumbing and fixtures.	Restroom plumbing is functioning and in good condition. The cover was open on the lockable water hose bib at the back side of the utility building. It requires a square socket for operation and was unclear if it was still functional at the time of the site visit. Two drinking fountains on the side of the Utility Building were not functioning. One had the push bar missing.	3.1	Lock the water hose bib cover. Remove non-functioning drinking fountains, cap water lines, and grout over CMU wall holes.	\$200
Water distribution	Utility building water distribution.	No issues with the water distribution in the restrooms. Utility room was not accessible at the time of the site visit.	4.0	None	N/A
Sanitary waste	Utility building sanitary waste.	Sanitary waste system in good condition.	4.0	None	N/A
Rain water drainage	Utility building and bus shelters piping for downspouts.	Underground piping for downspouts are in good condition and appear to be functioning.	3.7	None	N/A
					
Restroom plumbing		Cover open on lockable water hose bib		Drinking fountains on side of Utility building	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.7		
Heating/cooling generation and distribution systems	Utility building radiant heaters.	Radiant heaters in restroom appear to be functional, though slightly outdated.	3.7	None	N/A
Chimneys and vents	Utility building ventilation.	Ventilation in each restroom appears to be functioning, though slightly outdated. Fan equipment was not accessible at the time of the site visit.	3.7	None	N/A
					
Radiant heater in restroom		Ventilation in restrooms			

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical					
Electrical service and distribution	Utility building electrical service.	There is one meter on the east side of utility building that appears to be in good condition. Interior panels in utility room could not be accessed at the time of the site visit.	4.0	None	N/A
Lighting and branch wiring (interior and exterior)	Utility building, bus shelters, and site lighting.	Exterior site lighting and lighting at each bus stop location appear to be in good condition. Site lighting appears to be adequate and well-spaced. However, the site was assessed during daytime hours. Interior lighting in utility building appears to be functional and in good condition.	4.0	It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities.	N/A
Communications and security	Security cameras and site communications.	Cameras located on light poles at various locations and radio antenna on the utility building appear to be in good condition. Four pay phones in shelters have had the receivers removed and are not in working condition. One has a stainless steel panel covering where the unit was previously.	3.4	Remove remaining three pay phones and cover with stainless steel panels.	\$1,000
					
	Meter	Radio antenna on utility building		Pay phone with receiver removed	



Previous payphone unit covered

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.3		
Roadways/driveways and associated signage, marking, and equipment	Site concrete roadways and signage.	Interior roadways are concrete pavement. They have cracks and broken paving slabs. There are several cracks in the concrete throughout the site. The worst is location at the vault on the east side of the site. Roadway signage is in good condition.	2.9	Replace portions of concrete paving with severe cracks. Seal remaining cracks.	\$50,000
Pedestrian areas and associated signage, markings, and equipment	Pedestrian crossing areas, plazas, and sidewalks.	Pedestrian crossings are not painted. They are marked by concrete pavement color/joints which appear to be in good condition. Plaza and sidewalks are cracked, joints are open and collecting debris which can lead to further concrete damage.	3.0	Repair cracks and seal joints.	\$20,000
Site development such as fences, walls, and miscellaneous structures	Site CMU seating.	Site has CMU walls with concrete caps for seating. Concrete is worn with some cracks. Anti-skateboard lugs have been installed. The bolts on the lugs are rusting.	3.3	Pressure wash CMU, repair concrete cracks.	\$10,000
Landscaping and irrigation	Site landscaping.	Plantings are in good condition. There is a washed out area at the north side of the site.	3.4	Repair wash out by filling and replacing plantings.	\$5,000
Site utilities	Site utilities and storm drains.	There are many telephone, electric, communication, and irrigation vaults on the site that appear to be in good condition. Site has three storm drains: One on the south end and two on the north side of the side. Site is sloped to drains and appear to be functioning properly.	4.0	None	N/A
Other	Bike lockers and trash containers.	These are located at the west end of site and are in good condition.	4.0	None	N/A



Cracks along interior roadway



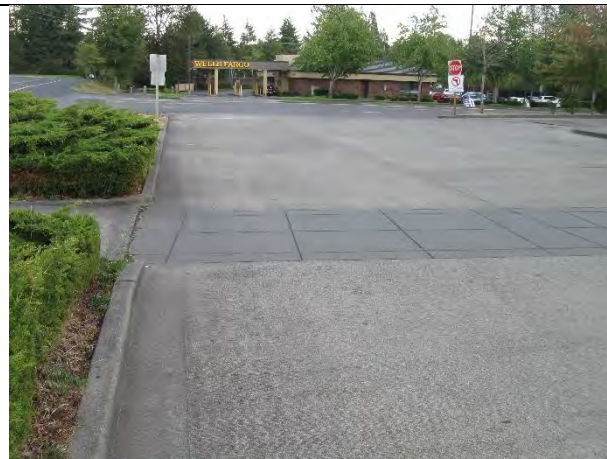
Cracks in concrete walkways



Cracks in concrete walkways



Cracks in interior concrete pavement



Pedestrian crossings not painted



Cracks in interior roadway concrete



Anti-skateboard lugs showing rust



Telephone, electric, communication, and irrigation vaults

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Parking Facility Condition Assessment – Tacoma Community College Transit Center

Facility Snapshot

The Tacoma Community College Transit Center is located at 6615 South 19th Street in Tacoma, Washington, 98402. The facility was constructed in 1984 and has 95 parking stalls, two bus shelters, one utility building that houses an employee restroom facility and utility room, and overhead lighting throughout.

Facility Condition Assessment Summary

The Tacoma Community College Transit Center was assessed on September 28, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.4.
- No deficiencies (items rated below 3.0) were found in the overall primary levels. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$58,600.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Tacoma Community College Transit Center Overall and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.6
Interiors	3.6
Conveyance	N/A
Plumbing	3.3
HVAC	3.5
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	3.4
FACILITY	3.4



Tacoma Community College Transit Center



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Note: The assessment was conducted in September 2017. Since that time, this facility is undergoing refurbishing work to bring it up to a State of Good Repair and a rating of 3.5 or better on the TERM Lite scale. The work will include _____. The work will directly address deficiencies identified in this report. The project is scheduled to commence on _____ and complete by _____. The total cost estimate for the repairs and upgrades is \$_____.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelters and utility building.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.6		
Superstructure/structural frame	West and east bus shelter.	Both shelters are in adequate condition. West bus shelter middle column has been damaged and replaced with steel post. East bus shelter rafters are rotted at gable ends and downspouts.	3.3	Repair rafter ends – add stainless steel flashing on east bus shelter. Replace column at west shelter.	\$20,000
Roof	Bus shelters translucent plastic roof. Utility building shingle roof.	Bus shelter roofs appear to be in good condition. Utility building roof appears in good condition and looks recently replaced.	3.9	None	N/A
Exterior	Utility building doors and masonry. Bus shelter glass panels.	There are some scratches on the glass on the bus shelters, but otherwise in adequate condition. The doors, masonry, and paint is in good condition on the utility building.	3.6	Replace scratched glass.	\$2,000
Shell appurtenances	Bus shelter stainless steel gutters. Utility building is painted metal K type.	All gutters and downspouts appear clear and in good condition.	4.0	None	N/A





Bus shelter framing and roofing



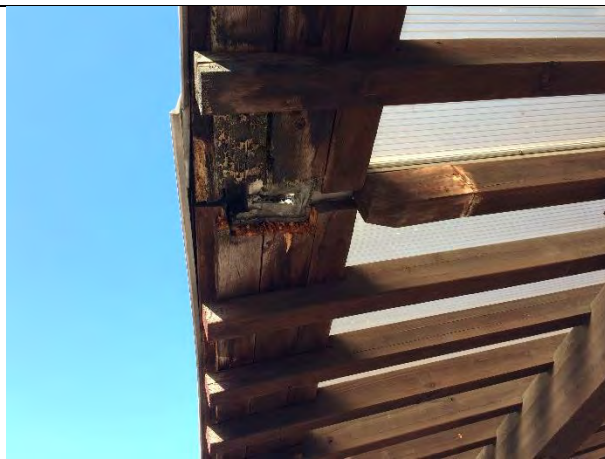
West bus shelter



East bus shelter with utility building in background



West bus shelter



West bus shelter rafters showing rot



West bus shelter with middle column replaced with steel post



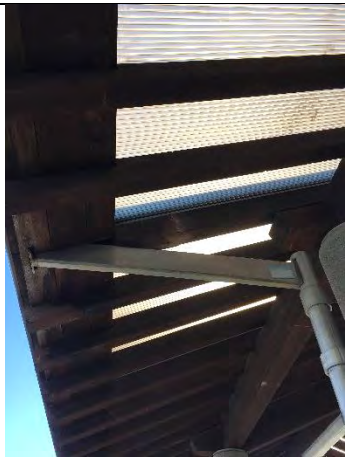
West bus shelter gable rot



West bus shelter showing rot at downspouts



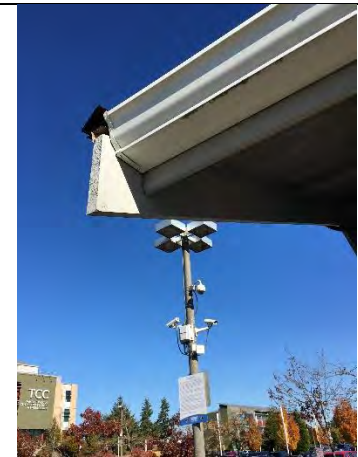
West bus shelter rot damage



Bus shelter gutter downspout



Utility building



Utility building gable end






Utility building downspout



Utility building



Utility building

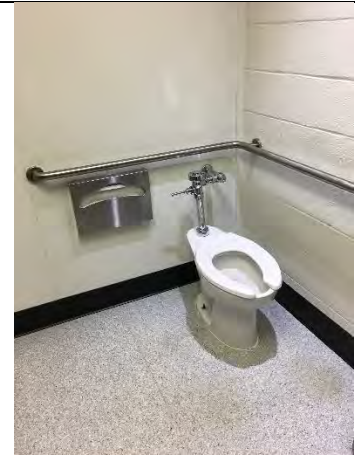
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.6		
Finishes	Utility building floors, partitions, and doors.	Utility building restrooms have sheet vinyl flooring which is in good condition in most places, however there is some staining in front of the urinal. There is vinyl wainscot at sinks that is in good condition with no tears or stains. Concrete Masonry Unit (CMU) and plywood/wallboard on walls and ceiling is painted. Doors frames rusted at bottoms. Men and Women signs marked with an "M" and "W" in black marker below the "Employees Only" sign on door. These facilities are on-site for driver use only (not open to the public).	3.6	None	N/A
					
Vinyl wainscot behind sink		Men's restroom toilet		Vinyl flooring in front of toilet	



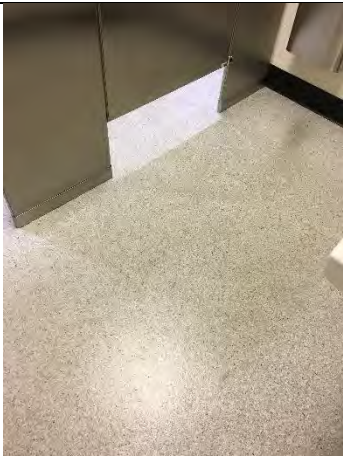
Urinal



Staining on floor in front of urinal






Women's restroom toilet



Vinyl flooring in women's restroom

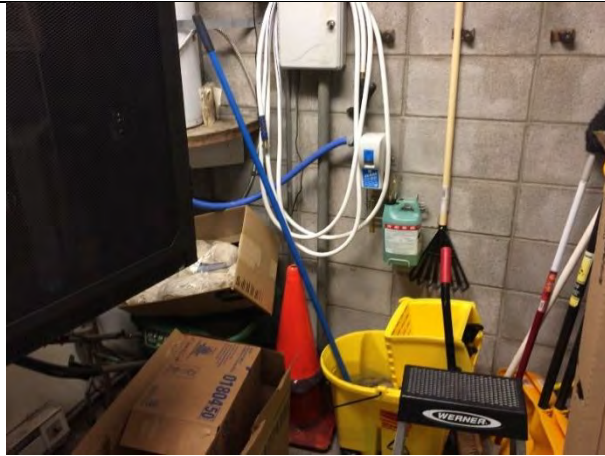


Rust on doors of bathroom at the utility building


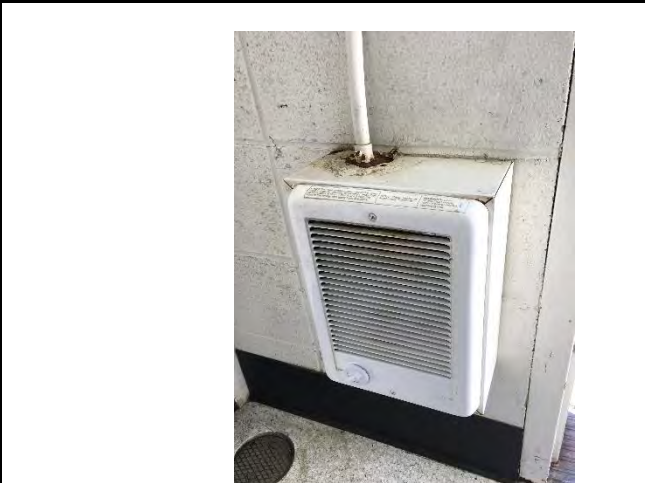

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			3.3		
Fixtures, water distribution, sanitary waste, rain water drainage	Utility building water, sewer, valves and utility controls. Hot water tank in utility room.	Valves and controls in restroom are in good condition. Sewer and drainage at utility building are in good condition. Hot water tank in utility room is braced incorrectly based on the Uniform Plumbing Code which requires two horizontal straps for seismic restraint. There is a slop sink in the women's restroom that is working and is in good condition.	3.3	Install additional horizontal straps on hot water tank.	\$100
Rain water drainage	Rain water drainage with gutters provided on bathroom facility and two shelters. Onsite driveway drainage with storm drains.	Gutters, downspouts, storm drains appear to be in good condition and working properly.	4.0	None	N/A
					
Slop sink in women's restroom		Hot water tank in utility room		Small piping in utility room	



Soap/cleaner dispensing equipment



Miscellaneous storage in utility room

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.5		
Energy supply	Electric fed from utility room panel.	There are no issues related to the energy supply to HVAC equipment.	4.0	None	N/A
Heating/cooling generation and distribution systems	Electrical heaters and exhaust fans in utility building.	Wall-mounted unit heater in the men's restroom is rusty and appears to have reached its expected life. Women's restroom heater is in good condition. The baseboard heater in the utility room needs to have clearance of 12 inches on all sides of the unit.	3.2	Replace heater in Men's restroom. Clear/move all items from area near the heater.	\$200
Chimneys and vents	Restroom doors and exhaust fans.	Restroom doors have fixed louvers for air admittance into room to balance the exhaust fans. Some of the blades are bent, but the louvers are functional and in adequate condition. Exhaust fans were functioning at the time of the site visit but were not physically observed because they were located in the attic space.	3.5	None	N/A
					
Rusty heater in men's restroom		Rusty heater in men's restroom		Items located too close to baseboard heater in utility room	






Paper towel dispenser



Women's restroom unit heater



Restroom exhaust fan and light timers

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.5		
Electrical service and distribution	Utility power.	Site electrical power appears to be adequate for the electrical needs of the facility.	3.5	None	N/A
Lighting and branch wiring (interior and exterior)	Exterior site lighting. Fluorescent tube lighting in bus shelters and utility building. Electrical receptacles.	Lighting appears to be adequate and well-spaced, however, the site was assessed during daytime hours. Bus shelter and utility building fluorescent tube lighting is outdated; however, still meets the needs of facility. Existing electrical receptacles do not appear to be GFCI (Ground Fault Circuit Interrupter) protected when located in areas required by the NEC (National Electric Code).	3.2	It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities. Replace existing receptacles within restrooms and in other locations defined by the NEC.	\$100
Communications and security	Security cameras and communications equipment.	Cameras were observed in several locations on site and appear to be in good condition. Server is located in utility room with antennas on roof, appear to be functioning and in good condition.	4.0	None	N/A
					
	Site lighting and security cameras	Site lighting		Electrical panel in utility building	



Security camera



Electrical equipment in utility room



Electrical meter

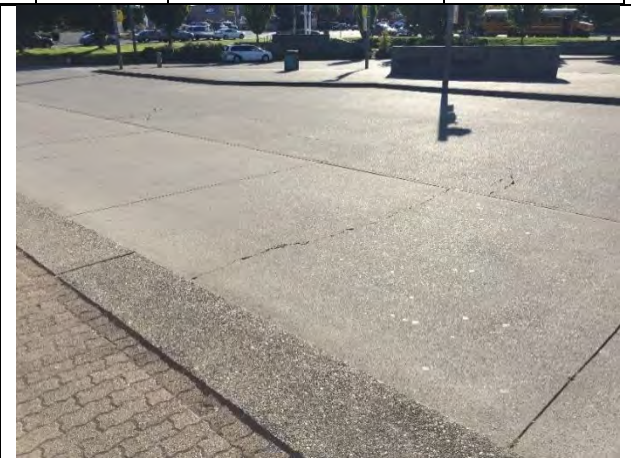
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.4		
Roadways, driveways, and parking lots	Driveways, parking areas, and bus lanes.	Parking lot asphalt has cracking and possible sub-base failure. Many of the bus area concrete panels are cracked. Several sections of curbing are damaged or broken in the parking area and some sections have the red paint fading or peeling off.	2.7	Reseal/repair cracks in asphalt and concrete. Repair curbing and repaint red curbing that is fading.	\$25,000
Parking lots and associated signage, markings, and equipment	Roadway and parking lot striping and paint.	The entire parking area has either faded parking stall striping or it is missing altogether. "Do Not Enter" sign at the northwest entrance has graffiti on it.	3.0	Repaint parking stall lines. Remove graffiti from signs.	\$5,000
Pedestrian areas and associated signage, markings, and equipment	Pedestrian areas and bike lockers at east side by utility building.	Pedestrian areas are concrete pavers and are generally in good condition. Some pavers have plants growing in the cracks. One asphalt pedestrian walkway has been damaged from root growth. Pedestrian crosswalk striping is in adequate condition. Bike lockers are in need of pressure washing.	3.4	Remove plants from paver cracks. Remove roots and smooth out pedestrian walkway. Pressure wash bike lockers.	None, assuming Pierce Transit staff performs the work.
Site development such as fences, walls, and miscellaneous structures	Passenger seating, garbage containers.	Seating is generally in good condition. A couple rotating seats were missing. Garbage containers are weathered but adequate.	3.5	Replace missing seats.	\$200
Landscaping and irrigation	Landscaping in and around parking lot and pedestrian area.	Some planting areas are missing ground cover.	3.5	Plant ground cover.	\$1,000
Site utilities	Water, sewage, and drainage.	Drainage appears to be functioning properly.	3.9	None	N/A



Pedestrian walkway with root growth



Landscaping missing ground cover



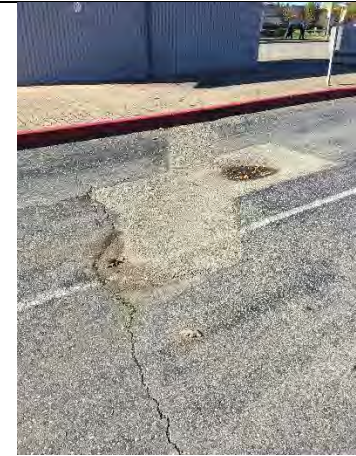
Cracks in concrete panels



Broken section of curbing



Pedestrian crosswalk paint in adequate condition



Previously repaired roadway that needs another repair



Broken section of curbing



Irrigation system in utility room



Communication box on outside of utility building



Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Passenger Facility Condition Assessment – Tacoma Dome Station

Facility Snapshot

The Tacoma Dome Transit Center is located at 610 Puyallup Avenue East in Tacoma, Washington, 98421. The facility was originally constructed in 1997 and is comprised of two parking garages and a bus shop. The “east garage,” or Phase I, was constructed in 1997, and the “west garage,” or Phase II was constructed in 2001. Together, both parking garages have 2,337 parking stalls over 6 levels of parking (including the roof) and 733,100 square feet. The bus shop is a customer-facing space where passengers can purchase transit services, receive information, and access lost and found. There is additional office space in the bus shop for Pierce Transit service departments.

Facility Condition Assessment Summary

The Tacoma Dome Transit Center was assessed on August 1, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the TERM Lite Condition Assessment Scale are defined in Table 1. To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.1.
- Deficiencies (items rated below 3.0) were found in the shell and conveyance primary levels. Additional deficiencies were noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$579,900.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

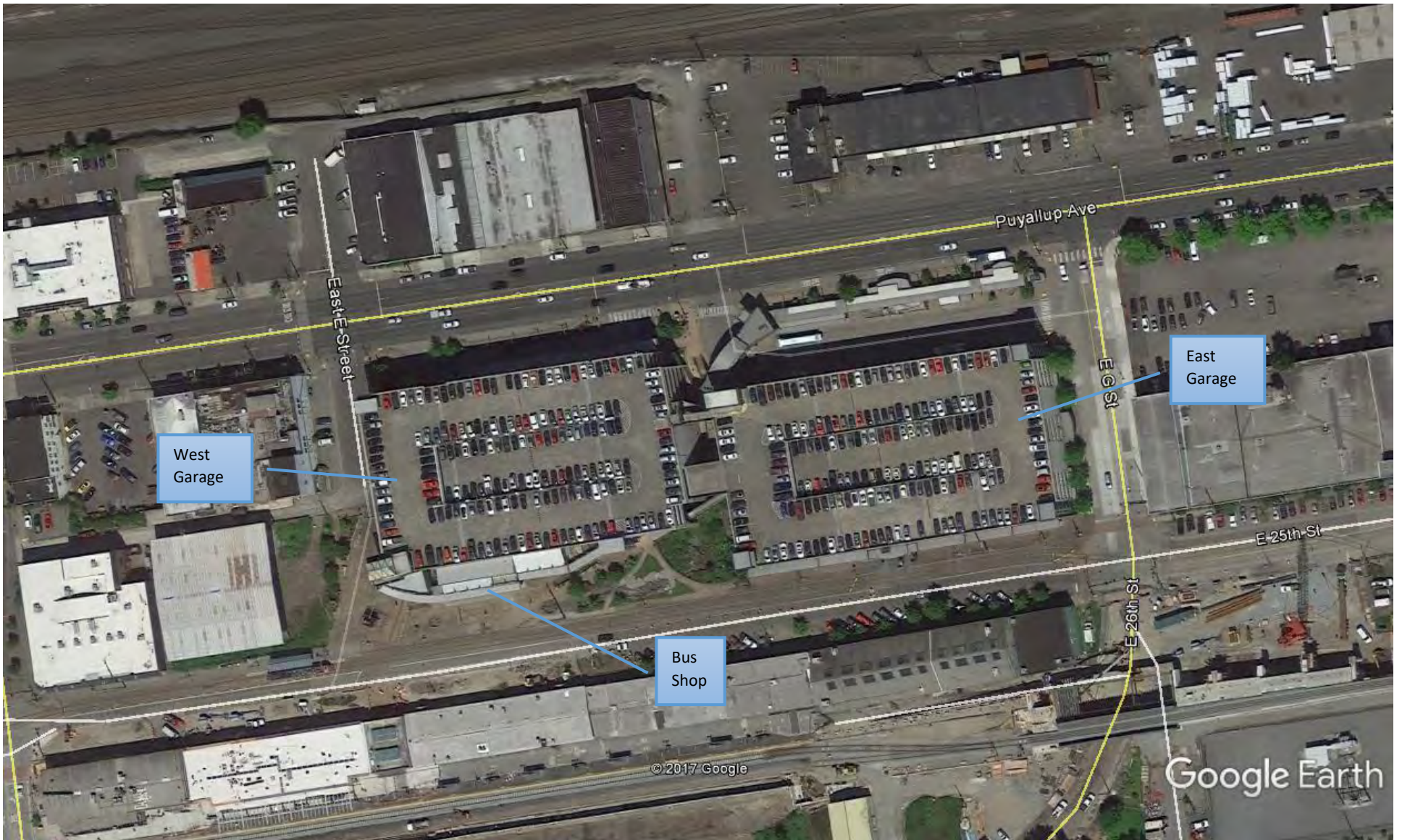
Source: FTA, 2017

Table 2: Tacoma Dome Station Overall and Primary Level Rating Summary

	Rating
Substructure	3.5
Shell	2.9
Interiors	3.8
Conveyance	1.5
Plumbing	3.5
HVAC	3.5
Fire Protection	3.8
Electrical	3.2
Fare Collection	N/A
Site	3.7
FACILITY	3.1



Tacoma Dome Station



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Note: The assessment was conducted in August 2017. Since that time, this facility is undergoing refurbishing work to bring it up to a State of Good Repair and a rating of 3.5 or better on the TERM Lite scale. The work will include _____ . The work will directly address deficiencies identified in this report. The project is scheduled to commence on _____ and complete by _____. The total cost estimate for the repairs and upgrades is \$_____.

Table 3: Detailed Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			3.5		
Foundation	East garage foundation is poured concrete slab on grade. Column and wall foundations are concrete – piling supported, not visible but shown on drawings seen on site.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	3.8	None	N/A
	West garage foundation is poured concrete slab on grade. Column and wall foundations are concrete – piling supported not visible but shown on Drawings seen on site.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems or signs of distress or settlement.	3.8	None	N/A
Basement	East garage basement rooms (notably: elevator room, maintenance/east server room, facility maintenance work room).	East garage basement areas are in adequate condition. There is efflorescence at north exterior wall of elevator room and broken concrete masonry unit (CMU) at ceiling in northwest corner. There is also efflorescence on the CMU on the south wall of the maintenance/server room.	3.5	Repair CMU blocks in elevator room. Clean off white crust from efflorescence in elevator room and maintenance/east server room and see if it reappears. If so, locate source of moisture and repair.	\$3,000
	West garage basement rooms (notably: electrical room, server room).	West garage basement rooms are in adequate condition. The electrical room has cracks on ceiling and a minor leak. The server room appears to have leak issues, as many patches were observed. There is water damage at slop sink.	3.3	Patch cracks to eliminate leaks.	\$5,000



East garage- broken CMU in northwest corner



Patched cracks at west garage server room

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			2.9		
Superstructure/structural frame	West and east garage concrete frame.	Minor hairline cracks were observed in the concrete floors and floor beams. These cracks are cosmetic and do not affect functionality. There are some cracks at the exterior column to floor beam joints but appear to be cosmetic do not affect functionality. These cracks have been patched and may have been from The Nisqually earthquake.	3.6	None	N/A
Roof	Metal roof at bus shop. There are no roofs over east or west parking garages.	Bus shop roof is in adequate condition; water stains were observed at ceiling at joint between metal roof and concrete structure.	3.5	Check for active water leakage and reseal as required.	\$2,500
Exterior	West and east garage exterior.	The east garage has corrosion at northeast corner, at both steel at sill and door frame. There is also tile missing at corner. The east garage also has corrosion at door in southeast corner. Tiles are missing at columns on the south side. Tiles are also missing on the north wall of the west garage.	2.5	Repair and paint rusted door frame, replace missing tiles.	\$5,000
	East and west garage and bus boarding island paint finishes.	All steel structures including elevator towers, stair enclosures, bus shop framing and pedestrian bridge – green paint is peeling. Appears to be due to poor adhesion between primer and top coat, but could also be due to fumes from toxic waste spill that occurred nearby.	2.9	Steel structures are not compromised in function, but repainting recommended for all steel structures to prevent more costly repairs later.	\$500,000
Shell appurtenances	West garage pedestrian ramp on west end.	Pedestrian ramp at west end of west garage has damaged concrete, loose handrail, likely from Nisqually Earthquake.	2.1	Remove loose concrete and recast with epoxy bonded repairs.	\$10,000



Column to beam joints on east garage showing patched cracking



Peeling paint on underside of pedestrian bridge



West garage southwest corner elevator tower has peeling paint



Damaged concrete at ramp on west side of west Garage



Column to beam joints on north wall of west garage showing patched cracking



Corroded doorway at southeast corner of east garage



Rusty door frame at northeast corner of east garage



Steel structures at north side shows paint peeling and rust at joints



Peeling paint on underside of stairway



Missing tile and corroded steel frame at northeast corner of east garage



Southeast corner of east garage – missing tile under canopy support rod



Missing tile approximately 20 feet west on south wall of east garage

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.8		
Partitions	Interior walls in bus shop.	Walls are in good condition with no damage observed.	4.0	None	N/A
Stairs	East and west garage concrete stairs with steel railings.	Stairs were in generally good condition.	4.0	None	N/A
Finishes	East garage and west garage.	Garage finishes are mostly bare concrete and in good condition (roadway/parking surfaces covered in "Site" section).	3.8	None	N/A
Finishes	Bus shop has steel frame, B-deck ceiling exposed structure, and carpet floor.	Bus shop finishes including paint and carpet generally in good condition. There are leak stains at garage concrete to roof steel at east end (covered above in roof section).	3.8	None	N/A
Other	Ticket sales counter (bus shop) acoustics.	The public visitor booths are functional but staff stated that it is very hard to hear visitors when speaking through the glass, especially when more than one visitor booth is being talked through at the same time.	3.0	Add sound absorbing panels, needs acoustic expert to direct solution.	\$2,500





Bus shop interior



Bus shop interior



Bus shop interior

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level D. Conveyance					
Elevators	Elevators located in garage structure and elevator located on pick-up/drop-off area island.	Elevators were in working order and appear to be in good condition. Elevators were locked out from public use during the site visit. Staff stated that the intercom system was not working properly and is a safety concern, but it was scheduled for repair.	1.5	Repair intercom system if it is still not working properly.	Varies
					
Elevators located in garage structure		Elevator equipment in equipment room			

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			3.5		
Fixtures	Fixtures in the security room restroom, bus shop restrooms, and pick-up/drop-off area island restrooms.	Security room restroom fixtures appear to be in good condition with no visible leaks. Bus shop restrooms appears to be in good condition with no visible leaks. The bus shop restrooms are for public use and the fixtures are in condition. Fixtures in pick-up/drop-off area restroom are in good condition.	4.0	None	N/A
Fixtures	Facility water heaters.	Water heater for the public restroom in the pick-up/drop-off island area is not properly braced per the Uniform Plumbing Code. Water heater in the storage room with mop sink is not properly braced per the Uniform Plumbing Code. Water heater in the facilities maintenance work room is not properly braced per the Uniform Plumbing Code. Water heater tank in the staff room near the public restrooms is not properly braced in the facilities work room per the Uniform Plumbing Code.	3.2	All water heaters need two horizontal straps around its circumference to meet the Uniform Plumbing Code requirements.	\$500
Water distribution	Water distribution system.	Water distribution system is working and functional. No leaks were observed.	3.5	None	N/A
Sanitary waste	Sanitary waste system.	Sanitary waste system is working and functional. No leaks were observed.	3.5	None	N/A
Rain water drainage	Water drainage in the west parking structure. Electrical/controls room in the west parking garage. Storage room adjacent to the facilities maintenance work room.	Drainage in west parking garage has backed up twice on the bottom floor in the last 10 years according to security staff. The drain system drains to the sound and both instances occurred during a high tide. Electrical controls room in west parking garage has water that leaks in from the ceiling during rainy weather. Staff is aware of the issue and have mitigated most of the leak by sealing the pavement above the room. The leak is still present but not as bad as it once was. Storage room adjacent to facilities maintenance work room has evidence of water leaking in from the back of the room. It was unclear at the time of the site visit if the leak had been corrected or not.	2.5	Inspect downstream drainage system pipes for partial blockages. Continue to seal pavement above electrical controls room to prevent water from damaging electrical and controls equipment. Confirm that water no longer enters the back of the storage room.	Varies



Security room restroom



Bus shop restroom



Pick-up/drop-off area island restrooms



Water heater in storage room with mop sink



Water heater tank in the facilities maintenance work room



Water heater tank in the staff room near the public restrooms



Water drainage in the west parking structure



Electrical/controls room in the west parking garage, cracks/leaks in ceiling repaired with sealant tape

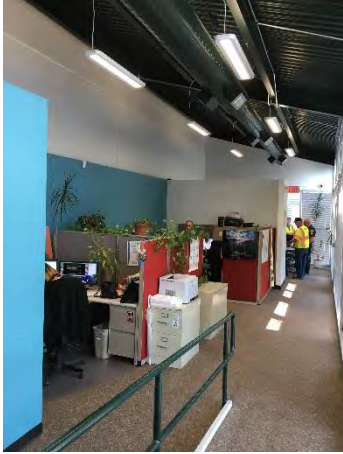


Storage room adjacent to the facilities maintenance work room



Storage room adjacent to the facilities maintenance work room

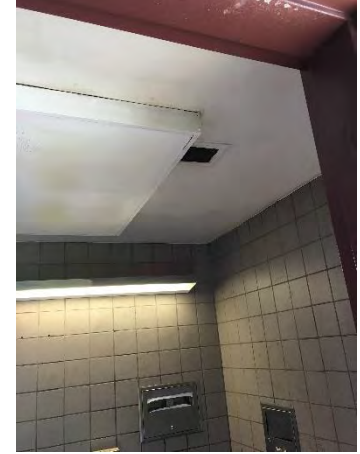
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.5		
Energy supply	Energy supply to HVAC system.	No issues related to the energy supply to HVAC equipment.	3.8	None	N/A
Heating/cooling generation and distribution systems	Security room HVAC system.	Appears in good condition and able to provide desired temperatures to occupants.	3.8	None	N/A
Heating/cooling generation and distribution systems	Bus Shop (east end) HVAC system.	Appears in good condition and able to provide desired temperatures to occupants. Unit was replaced earlier this year but could not be visually inspected because of very limited access.	4.0	None	N/A
Heating/cooling generation and distribution systems	Bus shop (west end) HVAC system.	System was not able to provide enough cooling and was noticeably warmer than the east end of the Bus Shop. Staff confirmed that the cooling system was not able to keep up on warm summer days and stated that a separate HVAC unit serviced their end of the Bus Shop. Access to the unit was very limited and could not be visually inspected. Unit has either reached the end of its useful life or needs to be replaced with a larger unit.	2.5	Repair/replace HVAC unit that serves the west end of the Bus Shop.	\$100-\$5,000
Heating/cooling generation and distribution systems	The radiant heaters in both of the public restrooms on the pick-up/drop-off area island.	Radiant heaters were operational during the site visit while the outside temperature was approximately 80 degrees Fahrenheit. Both restrooms were uncomfortably hot. The thermostats in both of the restrooms appear to have been removed from the wall and the wires from the thermostat are exposed.	1.5	Replace thermostats in public restrooms and install lockable covers on thermostats to help prevent tampering.	\$100
Ventilation	Ventilation in restrooms.	All restroom exhaust fans were functioning at the time of the site visit but were not physically observed because they were located in the attic space.	3.5	None	N/A



Bus Shop (east end) HVAC distribution system



Bus Shop (west end) HVAC distribution system



The radiant heaters in both of the public restrooms on the pick-up/drop-off area island



Radiant heater thermostat in public restrooms on the pick-up/drop-off area island

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level G. Fire Protection			3.8		
Sprinklers	Building contains no fire sprinklers.	N/A	N/A	Provide fire sprinklers for interior occupied areas like Customer Service.	\$18,000
Standpipes	Building contains standpipes in all parking garage stairwells as well as a centrally located standpipe at the center of each parking garage.	Onsite certifications indicate system has been tested and approved on a regular basis.	3.8	None	N/A

Other fire protection notes from consultant team that do not pertain directly to facility condition assessment:

- Consider including sprinklers for areas like under the bus rain shelters and under the skyway bridges that could be structurally compromised by a bus fire.
- Consider a dry sprinkler system in the parking area. A single car fire could compromise the structure in the local area, limiting use of the facility prior to repair.
- A fire hydrant was not seen within 100' of the FDC serving the West Garage. Confirm arrangement of FDC and fire hydrant is acceptable to Fire Marshall.

		
Standpipe in Garage	Garage (Un-sprinklered)	Exterior Bus Rain Shelter



Customer Service (Un-sprinklered)



Garage (East) FDC



Garage (West) FDC

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.2		
Electrical service and distribution	Electrical distribution.	Electrical distribution is generally adequate. Plastic trim around the main breaker in Panel P1 (East Garage Electrical Room) is not seated properly.	3.2	Properly install plastic trim.	None
Lighting and branch wiring (interior and exterior)	Facility lighting and branch wiring.	In general lighting is adequate. Branch wiring is in good condition. Some lamps are out in the public garage space, but staff noted that facility is checked monthly and lamps are replaced. In the west garage storage area, two fluorescent lights were not functioning and the third in photo was pulsating. In the west garage electrical room, it appears that new conductors pulled for a project have been left hanging out of junction box.	3.2	Continue monthly lighting checks and replace lamps and ballasts as necessary Replace lamps and ballasts in west garage storage area. In west garage electrical room, installation should be completed, or at least conductors pulled into electrical gutter and made safe.	\$100 Plus normal maintenance costs associated with monthly lighting checks.
Communications and security	Communications and security systems, equipment and conduits in west garage and east garage communications rooms.	Staff noted that new cameras and system installed in the last two years and there are 100+ cameras throughout garage structure. Emergency call boxes located on each floor at each stair and out at the bus shelters located at either end. Cameras and call boxes appear to be functioning and in good condition. Old camera equipment has been left in West Garage Communications Room. Conduits in west garage communications room show signs of water damage and corrosion. East garage communications room is cluttered with items stored near equipment.	3.5	It is recommended that old equipment related to closed circuit television cameras should be removed from communications room. Repair source of water leak in west garage communications room. In east garage communications room, working space should be established around equipment. Unused equipment and conductors should be removed.	\$2,200
Other electrical system-related pieces such as lightning protection, generators, and emergency lighting	Two on-site generators.	There is one dedicated generator for each parking structure. Emergency lighting is supplied by generator power to general lighting. The generator in the east garage is functional and does not need any immediate changes.	3.5	Note that when the east garage generator needs to be replaced, the fuel tank vents will need to be extended to the exterior of the building at least 12 feet above grade per National Fire Protection Association 30.	N/A



Generator in East Garage



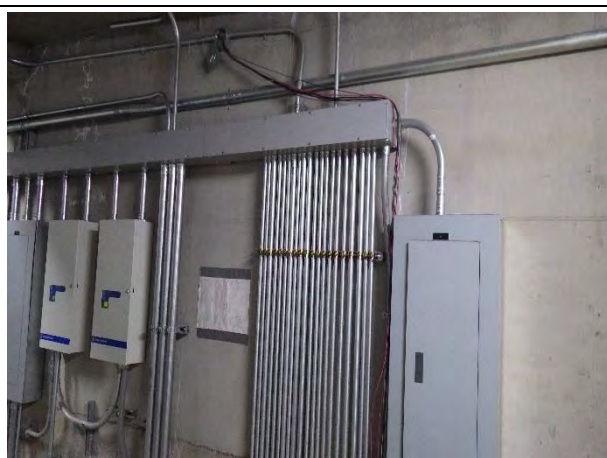
Plastic trim around the main breaker in Panel P1 (East Garage Electrical Room) is not seated properly



Two fluorescent lights were not functioning and the third in photo was pulsating



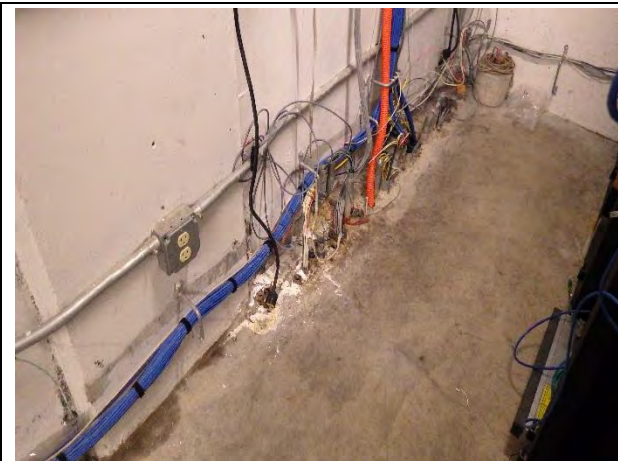
Old camera equipment should be removed



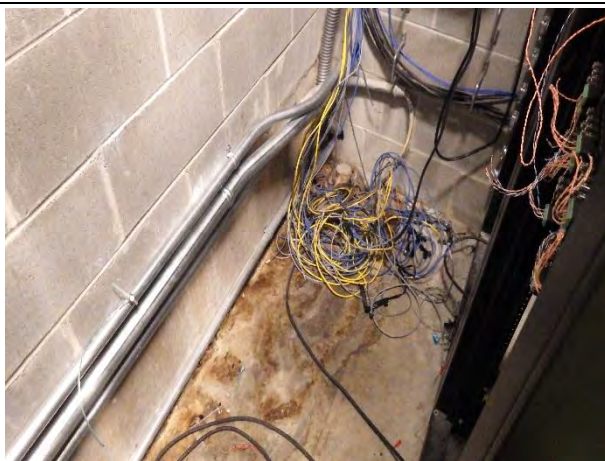
West garage electrical room



East garage communications room



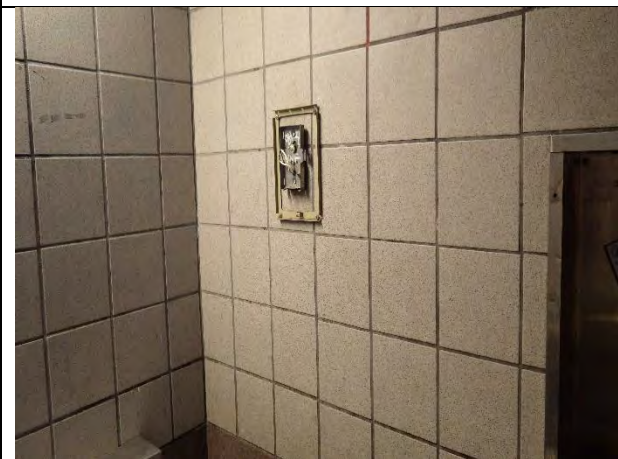
Conduits in west garage communications room



East garage communications room



East garage communications room






Thermostats have been removed

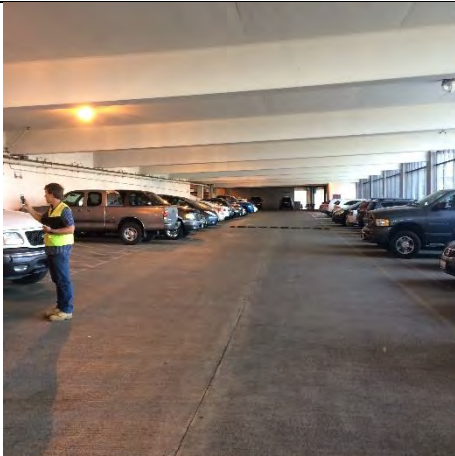


Thermostats have been removed

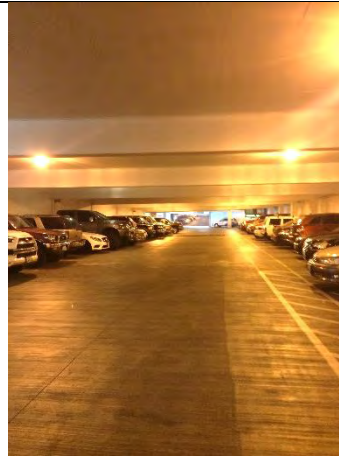


Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.7		
Roadways/driveways and associated signage, marking, and equipment	Parking garage and bus driveway area concrete panels.	Concrete panels within parking garage and the bus driveway area are in very good condition with only minor cracks that should be repaired.	3.7	Repair minor concrete cracks.	\$1,000
Parking lots and associated signage, markings, and equipment	Parking lot striping and signage.	Parking lot striping is faded and in marginal condition. Signage is in good condition.	2.9	Repaint parking lot striping.	\$20,000
Pedestrian areas and associated signage, markings, and equipment	Pedestrian crosswalks and walkways.	Pedestrian crosswalks need to be repainted. Concrete panels in pedestrian walkway areas are in very good condition with only minor cracking.	3.2	Repaint pedestrian crosswalks. Repair minor concrete cracks.	\$5,000
Site development such as fences, walls, and miscellaneous structures	Bike lockers and storage area.	Bike lockers and locked storage area for bikes are in good condition.	3.9	None	N/A
Landscaping and irrigation	Site landscaping.	Landscaping on north and south sides is well established and in good condition.	3.7	None	N/A

		
Parking lot striping has faded and needs repainting	Pedestrian crosswalks need to be repainted	Parking lot striping has faded and needs repainting



Concrete panels in good condition



Concrete panels in good condition



Parking lot striping has faded and needs repainting



Elevators and stair case



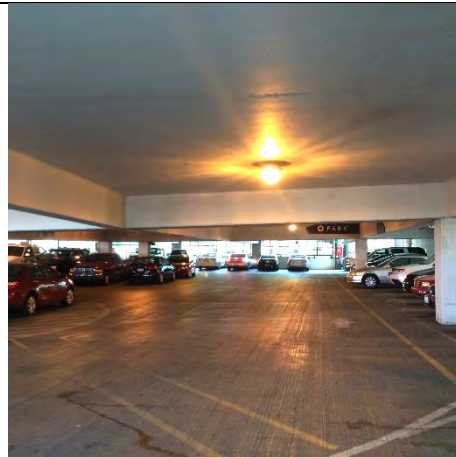
Parking lot striping has faded and needs repainting



Parking lot striping has faded and needs repainting



Parking lot striping has faded and needs repainting



Concrete panels in good condition



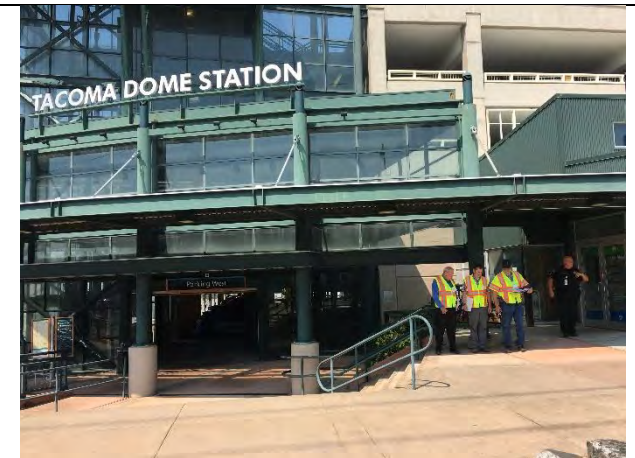
Sky bridge for pedestrians to avoid crosswalk



Pedestrian walkway concrete in good condition



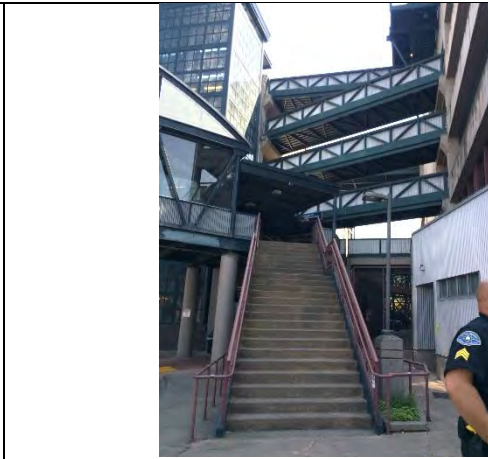
Pedestrian walkway concrete in good condition



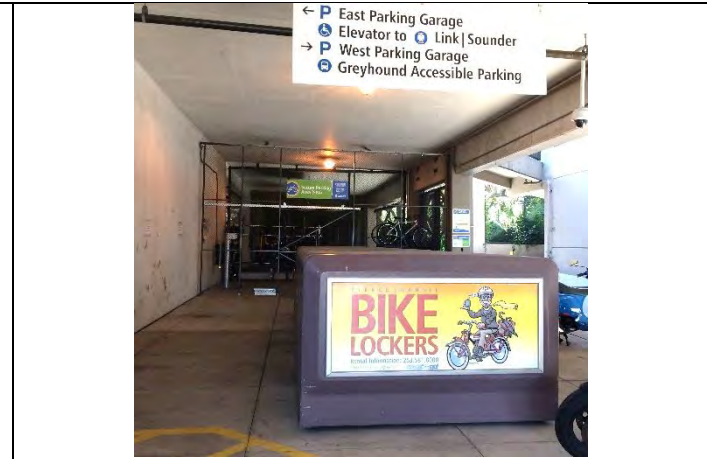
Bus shop and garage entrances



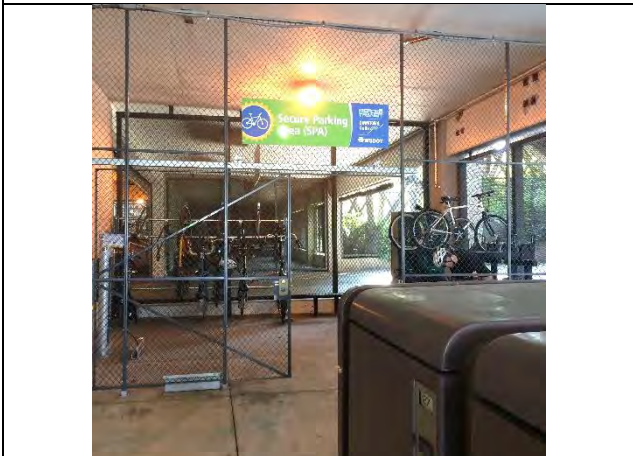
Landscaping on north side is in good condition



Exterior stair case



Bike lockers in good condition



Locking storage area for bikes



Landscaping on south side is in good condition

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Passenger Facility Condition Assessment – Tacoma Mall Transit Center

Facility Snapshot

The Tacoma Mall Transit Center is located 2508 South 47th Street in Tacoma, Washington, 98409. The facility was constructed in 1985 and is approximately 1 acre. The facility has two bus shelter structures: a shelter in the middle of the site and a shelter to the north, adjacent to 47th Street. There is one utility building on the south side of the site which houses two driver restrooms (not for public use) and a utility room.

Facility Condition Assessment Summary

The Tacoma Mall Transit Center was assessed on August 1, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.1.
- Deficiencies (items rated below 3.0) were found in the shell and electrical primary levels. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$50,900.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Tacoma Mall Transit Center Overall and Primary Level Rating Summary

	Rating
Substructure	4.1
Shell	2.5
Interiors	3.6
Conveyance	N/A
Plumbing	3.5
HVAC	3.5
Fire Protection	N/A
Electrical	2.5
Fare Collection	N/A
Site	3.3
FACILITY	3.1



Tacoma Mall Transit Center



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Note: The assessment was conducted in August 2017. Since that time, this facility is undergoing refurbishing work to bring it up to a State of Good Repair and a rating of 3.5 or better on the TERM Lite scale. The work will include _____. The work will directly address deficiencies identified in this report. The project is scheduled to commence on _____ and complete by _____. The total cost estimate for the repairs and upgrades is \$_____.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelters and utility building (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			2.5		
Superstructure/structural frame	Bus shelters wood roof framing, concrete columns with wood infill panels. Utility building concrete masonry unit (CMU) walls.	North bus shelter has vehicle damage which knocked out the northwest column and damaged the glulam roof beam. It was splinted with plywood side plates after the damage. Roof is shored with wood post. South bus shelter columns and structure are in good condition. Utility building CMU walls are in good condition.	2.1	Repair/replace damaged column and glulam roof beam.	\$15,000
Roof	Translucent plastic panels on wood rafters and glulam ridge and edge beams.	Exposed ends of rafters at utility building are weathered and beginning to rot. Both bus shelters have rotted rafter ends at gable ends and where downspouts exit.	2.7	Replace rotten and weathered rafters.	\$15,000
Exterior	Bus shelter glass panels and fold down seats.	Glass panels vandalized with scratches. Seats are fold down type and are in good condition. There is one set of seats missing in the south shelter.	2.5	Replace glass and missing seats.	\$5,000
Shell appurtenances	Stainless steel structure gutters and downspouts.	Gutters and down spouts are stainless steel and are in good condition.	4.0	None	N/A



Utility building



Power meter on utility building



South bus shelter structure is in good condition



Shelter gable ends are rotting



Debris on gable ends causing additional rot



Missing seat in south bus shelter






Weathered gable ends on bus shelter



North bus shelter with wood post shoring roof beam



North bus shelter with wood post shoring roof beam

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.6		
Passenger areas	Bus shelter concrete paver floors.	Bus shelter pavers are in adequate condition. There are a few locations where plants have grown in paver seams.	3.6	Remove plants growing in bus shelter pavers.	None, assuming Pierce Transit performs the work.
Finishes	Utility building restroom and mechanical rooms.	Restroom flooring, ceiling, walls and partitions are in good condition.	3.8	None	N/A
					
Restroom walls, ceiling, and partitions are in good condition		Restroom flooring and walls		Bus shelter pavers in good condition	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			3.5		
Fixtures	Restroom facility fixtures.	Fixtures in bathrooms are working and in adequate condition. Some fixtures have been updated recently.	3.6	None	N/A
Water distribution	Restroom facility water distribution system.	Water distribution system functioning with no apparent leaks. Sprinkler system for landscaping appears to no longer be in use.	3.5	None	N/A
Sanitary waste	Restroom facility sanitary waste system.	Sanitary waste system functioning with no apparent leaks. Portable toilets currently onsite for public use. Transit staff stated that they were planning on removing the portable toilets.	3.5	None	N/A
Rain water drainage	Rain water drainage with gutters provided on bathroom facility and two shelters. Onsite driveway drainage.	One shelter drain that terminates in the street curb appears to be clogged with debris. Onsite driveway drainage is provided by three storm water grates that appear to be functioning.	3.1	Remove debris from drain termination in street.	None, assuming Pierce Transit performs the work.



Toilet in driver restroom facility





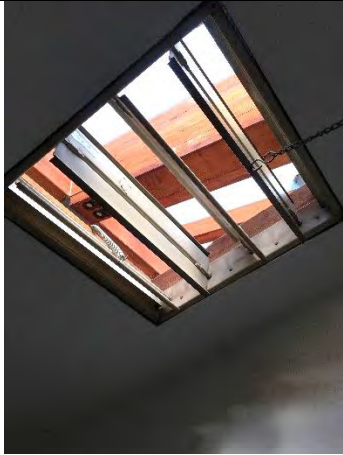
Sink and slop sink in driver restroom facility



Shelter drain appears to be clogged



Storm water grate in bus driveway

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.5		
Energy supply	Electric power most likely fed from locked room that was not accessible at the time of the site visit.	No issues related to the energy supply to HVAC equipment.	3.8	None	N/A
Heat and cooling generation and distribution systems	Restroom facility wall mounted heaters.	Heating provided by electric wall mounted unit heaters. Units appear to be functional but are reaching the end of their expected life. The thermostat knob on the west restroom heater appears to be missing. It was unclear at the time of the site visit if this causes the unit to not function or if just the temperature control is no longer adjustable.	3.5	Replace unit heaters in restrooms.	\$300
Ventilation	Restroom facility exhaust fans. A single bathroom exhaust fan was provided in each restroom with an on/off switch. Restroom facility passive, manual opposed blade louvered ceiling vents.	Exhaust fan was in working condition at the time of the site visit. Both vents were open at the time of the site visit. Vents open to the open air space between the roof structure and ceiling of the building.	3.5	None	N/A
					
West restroom heater		Restroom facility exhaust fan and louvered vent		Restroom facility louvered ceiling vents	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			2.5		
Electrical service and distribution	Electrical distribution.	Unable to inspect electrical distribution at time of inspection.	N/A	None	N/A
Lighting and branch wiring (interior and exterior)	Interior structure lights and exterior facility lighting.	Lights on exterior of utility building have reached end of useful life. Lights at bus shelters in need of repair. Two of nine total shelter lights have broken covers and two are missing covers. Pole mounted lights around walkway areas appeared to be in working condition.	2.5	Replace exterior restroom structure lights. Repair/replace broken or missing light covers at bus shelters.	\$600
Communications and security	Security cameras.	Cameras around facility observing public spaces appear to be in working condition.	3.5	None	N/A

		
Utility building exterior lights	Utility building exterior lights	Utility building exterior lights






Bus shelter lights







Bus shelter lights



Bus shelter lights

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.3		
Roadways/driveways and associated signage, marking, and equipment	Roadway pavement, concrete bus loading/unloading area.	Main bus driveway concrete panels are in adequate condition. There are several panels with cracking that should be repaired. There is sections of asphalt in the bus driveway area that has also cracked and needs to be sealed/repaired.	3.1	Reseal cracks in asphalt. Repair cracks in concrete.	\$5,000
Pedestrian areas and associated signage, markings, and equipment	Pedestrian crossing areas, plazas, and sidewalks.	Pedestrian crosswalk lanes are marked with white bars painted on the concrete and asphalt. They are in good condition with only minor fading and chipping. Concrete sidewalks and pavers in pedestrian waiting areas are in good condition.	3.5	None	N/A
Site development such as fences, walls, and miscellaneous structures	Trash cans and bollards.	The trash cans in the passenger island areas are in good condition. Bollards are located near the east entrance/exit but are not in front of the north shelter.	3.3	Add bollards in front of the north shelter to protect waiting pedestrians and the shelter from future vehicle damage.	\$10,000
Landscaping and irrigation	Landscaping and irrigation.	Trees and other landscaping are established and no longer need irrigation tubing.	3.5	Remove irrigation tubing from site.	None, assuming Pierce Transit staff performs the work.
					
Pedestrian crosswalks from street sidewalk to bus island		Buses on both sides of bus island		Pedestrian crosswalk to utility building	

		
<p>Pedestrian waiting area pavers are in good condition</p>	<p>Concrete panels with some cracking</p>	<p>Pedestrian waiting area pavers are in good condition</p>
		
<p>Bollards near bus entrance/exit</p>		

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Parking Facility Condition Assessment – Kimball Drive Park-and-Ride

Facility Snapshot

The Kimball Drive Park-and-Ride is located at 6808 Kimball Drive North West, Gig Harbor, WA, 98335. The facility was constructed in 1997 and has 306 parking stalls, two bus shelters, one employee restroom/ utility building, and overhead lighting throughout.

Facility Condition Assessment Summary

The Kimball Drive Park-and-Ride was assessed on August 29, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- The overall facility was rated at 3.0
- Deficiencies (items rated below 3.0) were found in the site primary level. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$10,100.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Kimball Drive Park-and-Ride Overall and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.8
Interiors	3.1
Conveyance	N/A
Plumbing	3.5
HVAC	3.8
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	2.8
FACILITY	3.0



Kimball Drive Park-and-Ride



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.




The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelters and utility building (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.8		
Superstructure/structural frame	Bus shelter has concrete columns and glulam beam roof system. Utility building has concrete masonry unit (CMU) walls, with a glulam beam roof system above. Corners of building are inset with concrete columns that mimic the bus shelter features.	The bus shelter columns are in good condition with no visible damage. The utility building walls are in good condition with no significant visible damage.	3.8	None	N/A
Roof	Utility building and bus shelter roofs are raised seam metal roofs. It appears that they have been rebuilt from the original translucent plastic roofing common on other Pierce Transit facilities.	There is some water damage at the ends of the gable end rafters but it is not significant. Metal flashing has been installed with the newer metal roof that has prevented further deterioration.	3.5	Repaint gable ends.	\$500
Exterior	Wood roof beams have been painted. CMU walls on the utility building are in good shape.	Paint appears to be in good condition.	4.0	None	N/A
Shell appurtenances	Utility building and bus shelters, gutters and downspouts.	Bus shelter downspouts appear to be in good operating condition. Stainless downspouts and gutters on utility building are in good condition and appear to be functioning.	3.8	None	N/A
					
	Interior of bus shelter	Gable ends of bus shelter	Edge of bus shelter roof, showing metal flashing and downspout		






North bus shelter



South bus shelter



Utility meter and water fountain on utility building

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors			3.1		
Partitions	Utility building restroom partitions and interior walls. Restroom partitions, and painted gypsum wallboard.	Locked bathroom facilities onsite for driver use only (not open to the public) are in good condition. Public bathroom facilities appear to be missing items from walls but otherwise in adequate condition.	3.5	None	N/A
Finishes	Utility building and public restrooms wall and floor finishes.	Tile wainscot on walls and gray tile floors are in good condition in the public restrooms. Mirrors in both public restrooms as well as the doors and windows above the doors have graffiti.	3.1	Replace public restroom mirrors and remove graffiti	\$1,000
					
Public restroom mirror is scratched		Public restroom mirror is scratched		Driver restroom paper towel dispenser and trash	



Graffiti on public restroom door



Public restroom wall and floor



Driver restroom wall-hung accessories

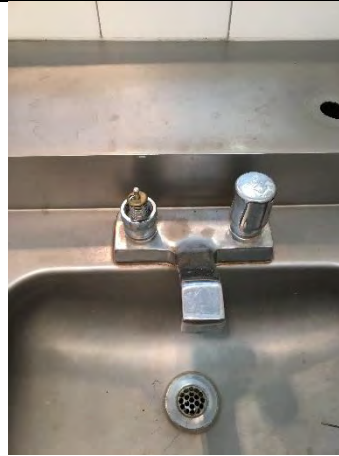


Driver restroom mirror and shelf

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing					
Fixtures	Utility building plumbing and fixtures.	Restroom plumbing is functioning and no leaks were observed. The south public restroom is missing a push knob on the sink faucet. Accessory items in public restroom appear to be missing, however, it is not recommended to replace these items.	3.2	Replace push knob on sink faucet.	None if work is performed by Pierce Transit staff.
Water distribution	Utility building water distribution.	No issues with the water distribution in the restrooms. No apparent leaks were observed.	3.8	None	N/A
Sanitary waste	Utility building sanitary waste.	Sanitary waste system in good condition and functioning. No apparent leaks were observed.	3.8	None	N/A
Rain water drainage	Catch basins and piped systems.	Catch basins are located in adequate locations to maintain good drainage. Several of the catch basins were completely covered with leaves at the time of the site visit. Downspouts are in good condition and appear to be functioning.	3.5	Clean debris from catch basins.	None if work is performed by Pierce Transit staff.



Sink and mirror in public restroom



South restroom with missing faucet knob



Toilet in public restroom



Sink and mirror in driver restroom



Toilet in driver restroom



Sink and toilet in public restroom





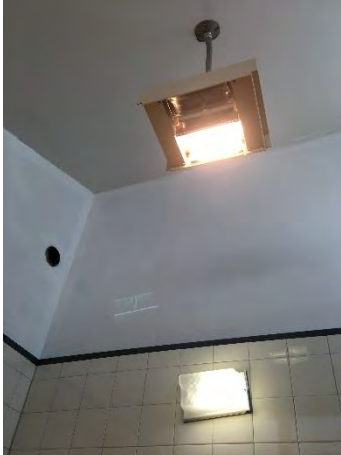
Sink in public restroom






Storm grate covered by leaves (leaves were moved for photo)



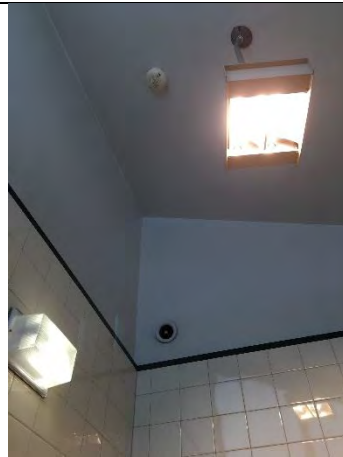
Storm grating in parking area

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.8		
Energy supply	Electric power most likely fed from locked room that was not accessible at the time of the site visit.	No issues related to the energy supply to HVAC equipment.	3.8	None	N/A
Heating/cooling generation and distribution systems	Utility building radiant heaters.	Radiant heaters in restroom appear to be functional but one of the radiant heater bulbs was out at the time of the site visit in the south restroom.	3.5	Replace radiant heater bulb.	None, if work is performed by Pierce Transit staff.
Testing, balancing, controls, and instrumentation	Utility building ventilation.	Ventilation in each restroom appears to be functioning. Vent opening covers were missing in the public restrooms, but it is not recommended to replace them.	3.8	None	N/A
					
Ventilation fan vent with missing cover in public restroom		Ventilation fan vent in driver restroom		Radiant heater with one bulb out	

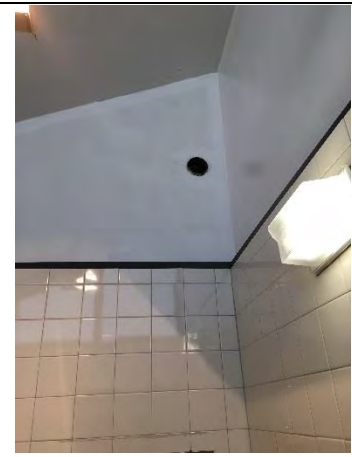
Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical					
Electrical service and distribution	Utility power.	Utility power appears to be adequate for the electrical need of the facility. Site service vaults are in good condition. The power meter on utility building has graffiti on enclosure and should be removed or painted over. High voltage electrical lines run above most of the facility.	3.8	Remove or paint over graffiti on power meter.	None, assuming work is performed by Pierce Transit staff.
Lighting and branch wiring (interior and exterior)	Lot lighting and restroom lighting.	Exterior site lighting and lighting at each bus stop location appear to be in good condition. One site light on the north end was on despite it being daytime hours. Site lighting appears to be adequate and well-spaced. However, the site was assessed during daytime hours. Lighting diffusers cracked or yellowed with age.	3.5	Repair/replace photocell in site light. It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities. Replace damaged diffuser.	\$100
					
Utility meter with graffiti		High voltage transmission lines over site		Site lighting	



Site service vaults



Driver restroom with functioning light



Public restroom light with broken diffuser

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			2.8		
Roadways/driveways and associated signage, marking, and equipment	Site concrete roadways and signage.	Interior roadways are concrete pavement and in good condition. Several locations in the north end of the parking lot has thick moss growing on the asphalt. One section of curbing near the north parking lot exit has been hit and should be replaced, but otherwise in adequate condition. Roadway signage is in good condition.	2.5	Remove the moss growing on the asphalt. Replace section of curbing.	\$2,000
Parking lots and associated signage, markings, and equipment	Parking striping.	Parking lot stalls and parking number markings are fading.	2.8	Re-stripe parking lot and stall numbers.	\$5,000
Pedestrian areas and associated signage, markings, and equipment	ADA signage, wheelchair ramp handrails, and unused newspaper distribution boxes.	The paint on the asphalt for four of the ADA stalls has faded or flaked and needs to be repainted. The handrails to the south parking area have a couple spots where the rail has separated at a joint. There are unused newspaper distribution boxes that should be removed from the site to prevent theft, damage, graffiti, etc.	2.8	Re-paint the ADA signage on the ground in the parking lot. Weld separated handrail joints. Remove the newspaper distribution boxes.	\$1,000
Site development such as fences, walls, and miscellaneous structures	Site fencing and retaining walls, bike lockers, and bike racks.	Retaining wall and fencing are in adequate condition with no damage noted, however retaining wall is dirty. Bike rack is in good condition. The paint on the bike lockers is peeling and in adequate condition.	3.5	Pressure wash the retaining wall. Re-paint bike lockers.	\$500
Landscaping and irrigation	Site landscaping.	Plantings are in good condition but many of the trees are overgrown and the shrubs are expanding outside of the border into the parking areas, especially on the north end of the parking area.	3.5	Prune trees back to help increasing lighting and line of sight. Prune all shrubbery back away from the parking areas.	None, assuming work is performed by PT staff.
Site utilities	All site utilities underground	All site utilities appear to be functioning and in adequate condition.	3.8	None	N/A



Parking striping and numbers in need of repainting



ADA stall asphalt paint needs repainting



Landscaping needs to be trimmed from parking area



Bike locker #1



Newspaper distribution boxes should be removed



Retaining wall with relief drains

		
<p>Landscaping near north end of parking area</p>	<p>Signage is in good condition</p>	<p>North parking area driveway</p>
		
<p>Moss growing over asphalt in north parking area</p>	<p>Curb that needs to be replaced near north parking lot exit</p>	<p>Handrail joint that has separated</p>

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Parking Facility Condition Assessment – Narrows/Skyline Park-and-Ride

Facility Snapshot

The Narrows/Skyline Park-and-Ride is located at 7201 6th Avenue, northwest of the Skyline Drive and 6th Avenue intersection in Tacoma, Washington, 98406. The facility was constructed in 1986 has 195 parking stalls, one small bus shelter and overhead lighting throughout. There is no permanent onsite restroom facility.

Facility Condition Assessment Summary

The Narrows/Skyline Park-and-Ride was assessed on September 28, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.3.
- There were no deficiencies (items rated below 3.0) found in the any primary levels. However, additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$20,100.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Narrows/Skyline Park-and-Ride Overall and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	4.0
Interiors	N/A
Conveyance	N/A
Plumbing	3.3
HVAC	N/A
Fire Protection	N/A
Electrical	3.2
Fare Collection	N/A
Site	3.2
FACILITY	3.3



Narrows/Skyline Park-and-Ride



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Concrete pad for bus shelter.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A




Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			4.0		
Superstructure/structural frame	Bus shelter steel tube frame and glass.	Painted steel shelter frame is in good condition. No damage or issues noted.	4.0	None	N/A
Roof	Bus shelter translucent plastic roof.	Roof of the shelter is in good condition, no damage noted.	4.0	None	N/A
Exterior	Bus shelter glass wall panels.	Bus shelter glass is in good condition, no damage noted.	4.0	None	N/A






Bus Shelter on 6th Avenue



Bus shelter and waiting area

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing			3.3		
Rain water drainage	Storm water drainage.	Parking lot is sloped downhill from entrance towards Memorial Park. Storm water runs downhill and is collected by storm drains along the way with two drains at the bottom near the park turn-around. Drainage appears to be adequate.	3.3	None	N/A
					
Storm Drain grates at bottom of parking lot in turn-around in front of Memorial Park entrance		Storm drains at upper part of parking lot.		Storm drains at upper part of parking lot.	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.2		
Electrical service and distribution	Electrical service is mostly underground, electrical cabinet on east side of site.	Electrical cabinet has graffiti that needs to be cleaned or painted over.	3.2	Clean or paint over graffiti.	\$100
Lighting and branch wiring (interior and exterior)	Parking lot lighting.	Exterior site lighting and lighting at each bus stop location appear to be in good condition. Site lighting appears to be adequate and well-spaced. However, the site was assessed during daytime hours. Some light distribution is being hindered by large trees. One site light was on despite it being daytime hours.	3.2	It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities. Trim trees back to provide better distribution of site lighting. Repair/replace photocell in site light.	\$1,000
					
	Electrical cabinet has graffiti		Site light pole		Site light is on during daytime hours

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site					
Roadways/driveways and associated signage, marking, and equipment	Bus turnout paving asphalt off street, parking lot asphalt, signage.	Bus turnout asphalt appears in good condition. Parking lot asphalt near storm drain in middle of site needs to be repaired. Signage appears in good condition.	3.3	Repair asphalt next to storm grate.	\$1,000
Parking lots and associated signage, markings, and equipment	Parking lot asphalt and parking lot striping.	Parking lot striping is in adequate condition with some lines worse than others. Painted numbers in parking lot are fading. Parking lot has some cracks that should be sealed.	3.0	Restripe lot, paint lot numbers, seal asphalt cracks.	\$10,000
Pedestrian areas and associated signage, markings, and equipment	Concrete sidewalks and pedestrian signage.	Concrete sidewalks are in adequate condition. One concrete panel on walkway on south side has been lifted one inch by tree roots. Several spots of curbing in parking lot are crumbling and broken. Most of the signage appears to be in good condition. There was a missing sign near the parking lot entrance (post with no sign).	3.2	Shave down edges of concrete panel. Repair damaged curbs. Replace missing sign.	\$5,000
Site development such as fences, walls, and miscellaneous structures	Bike lockers, trash bins.	Bike lockers located at the southeast corner are in good condition. Two trash receptacles are located next to the bus shelter and are in good condition.	4.0	None	N/A
Landscaping and irrigation	Site landscaping and irrigation.	There is missing ground cover adjacent to 6 th Avenue, some missing from the middle of the site and footpaths worn by shelter. There are irrigation hoses around established trees.	3.0	Should add sidewalk on West side of shelter to avoid foot paths through the landscaped area. Replace missing ground cover. Remove irrigation hoses from established trees.	\$3,000



Bus pull-out asphalt paving and concrete sidewalk



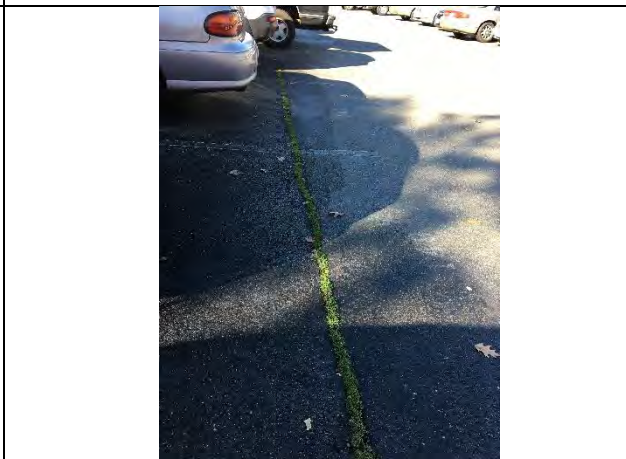
Trash bins near shelter



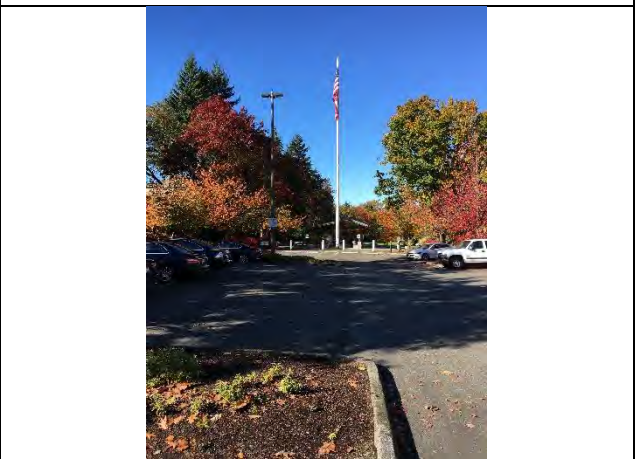
ADA parking stalls



Broken curb and cracked asphalt



Cracked asphalt with plant growth



Landscaping and parking area on west end



Bus shelter concrete in good condition



Bus shelter concrete in good condition



Parking lot striping and numbers are fading



Landscaping adjacent to street



Bike Lockers



Grass area on east side of parking lot

		
<p>Missing sign</p>	<p>Irrigation hose around established tree</p>	<p>Broken curb</p>
		
<p>Concrete sidewalk panel lifted by tree roots</p>	<p>Concrete sidewalk panel lifted by tree roots</p>	

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Parking Facility Condition Assessment – North Purdy Park-and-Ride

Facility Snapshot

The North Purdy Park-and-Ride is located 6519 144th Street North West in Gig Harbor, Washington, 98332, northeast of the 144th Street NW and SR 302 intersection. The facility was constructed in 1991. It is approximately two acres and has 200 parking stalls, one bus shelter, one portable employee restroom facility, two bike storage cabinets, and overhead lighting throughout the facility.

Facility Condition Assessment Summary

The North Purdy Park-and-Ride was assessed on August 11, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.3.
- No deficiencies (items rated below 3.0) were found in the overall primary levels. Deficiencies were noted in secondary levels and described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$23,500.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

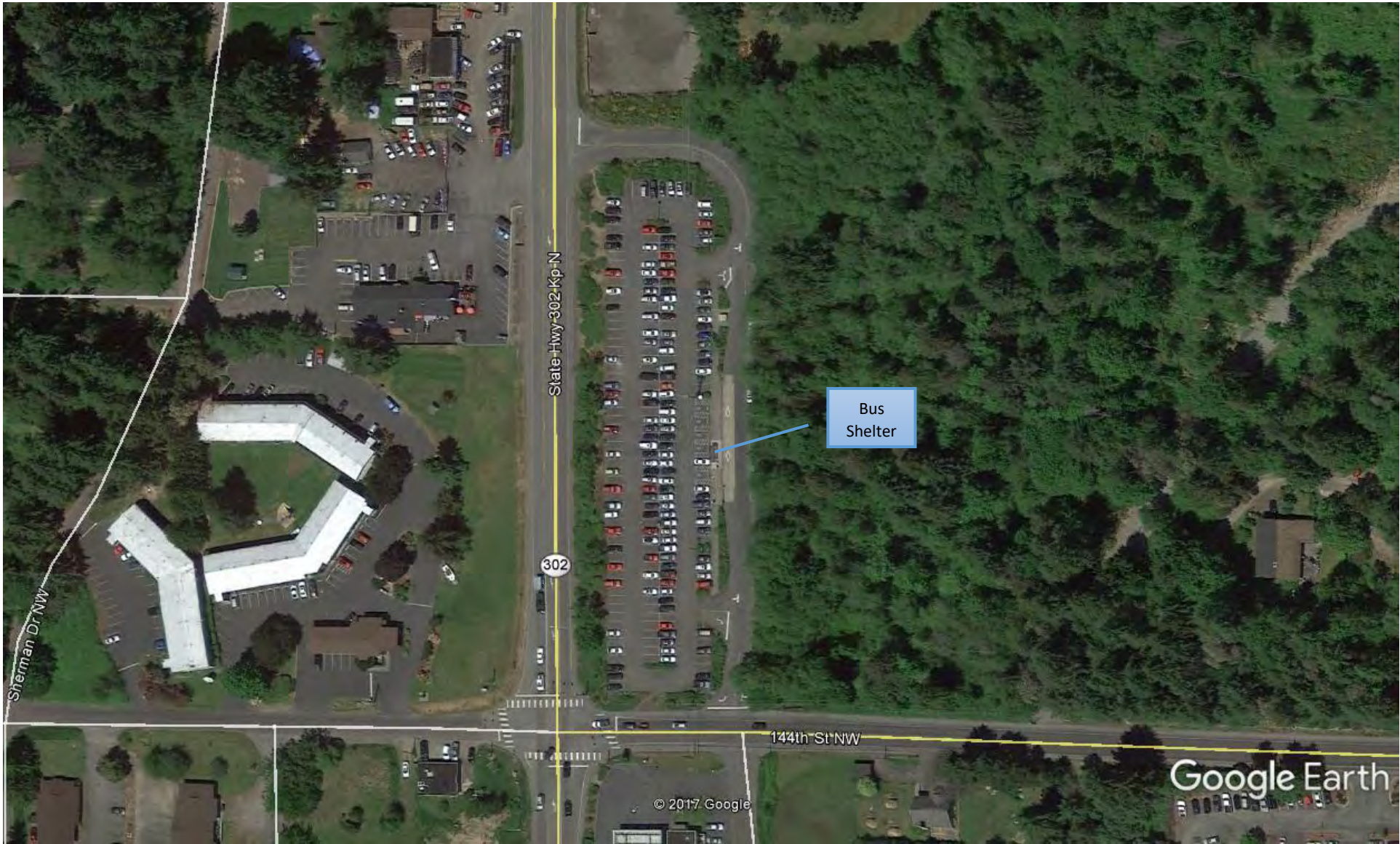
Source: FTA, 2017

Table 2: North Purdy Park-and-Ride Overall and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.0
Interiors	N/A
Conveyance	N/A
Plumbing	4.0
HVAC	N/A
Fire Protection	N/A
Electrical	4.0
Fare Collection	N/A
Site	3.2
FACILITY	3.3



North Purdy Park-and-Ride



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance, fire protection, and fare collection primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a minor corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.





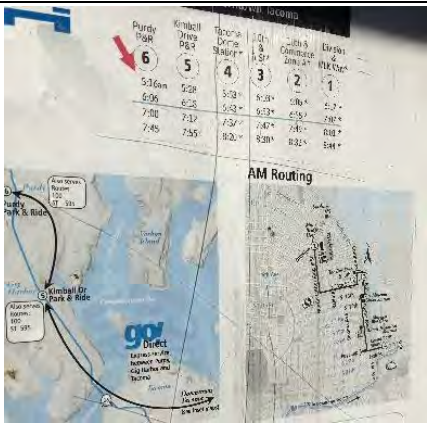
The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.







Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.




A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelter.	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems. Shelter is bolted to concrete sidewalk panels.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			3.0		
Superstructure/structural frame	Bus shelter steel tube frame and glass.	Bus shelter frame is in good condition. Sidewall glass is also in good condition but should be pressure washed. Bench inside the shelter is in good condition. There is rust on the bolts that attaches it to the concrete and one bolt is missing on each of the bench support legs.	3.5	Remove surface rust and paint bolts. Replace missing bolts.	None, assuming work is completed by Pierce Transit staff.
Roof	Bus shelter roof.	The shelter roof is made out of plastic and has a hole in it.	3.0	Replace the plastic roofing.	\$5,000
					
Bus shelter		Hole in bus shelter roof	Bus shelter roof panels		
					
Bus shelter bench		Bus map cabinet with scratched plexiglas			

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing					
Sanitary waste	Portable restroom facilities (locked for employees, not available to public).	Portable restroom available for employees with padlock on door. Not assessed since not permanent part of facility.	N/A	None	N/A
Rain water drainage	Catch basins.	Basins are adequate size and in appropriate locations to accommodate drainage needs.	4.0	None	N/A
					
Portable restroom		Portable restroom lock		Stormwater catch basin	
					
Stormwater catch basin		Stormwater draignage basin		Stormwater catch basin	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical					
Electrical service and distribution	Utility power.	Post mounted electrical service. Site electrical power appears to be adequate for the electrical needs of the parking lot.	4.0	None	N/A
Lighting and branch wiring (interior and exterior)	Exterior site lighting and lighting cabinet.	Lighting appears to be adequate and well-spaced, however, the site was assessed during daytime hours. Paint on light pole bases is worn. Lighting cabinet installed on a power pole appears functional but has graffiti on it.	4.1	It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities. Remove or paint over graffiti on power cabinet.	None, if Pierce Transit staff performs work.
Communications and security	Pay phone booth on site.	There is a pay phone booth installed on the site, however, the phone has been removed and there is graffiti all over the booth.	3.0	Recommend removal of the phone booth and repair of the concrete as needed.	\$500
					
Parking lot lighting		Parking lot lighting		Parking lot lighting	



Control cabinet with graffiti




Utility power

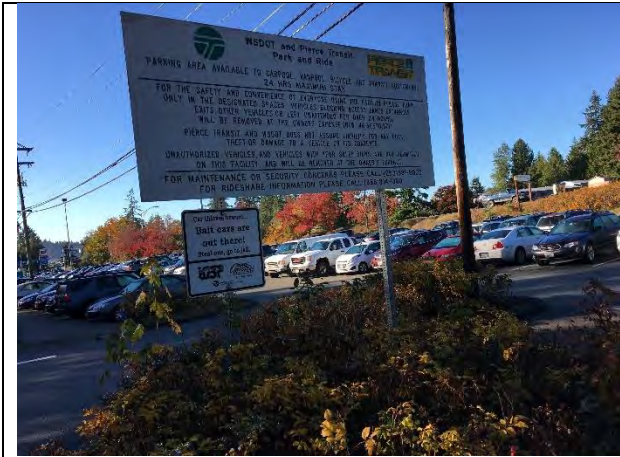


Pay phone booth

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.2		
Roadways/driveways and associated signage, marking, and equipment	Roadway pavement, concrete bus loading/unloading area.	Main roadway and parking lot asphalt shows signs of cracking and sub-base failure in many areas. There is evidence of some cracks in the asphalt that have been sealed, but needs to be resealed again. Concrete pavement area is separating, collecting debris, and have plants growing in them.	3.5	Reseal cracks in asphalt. Remove debris and repair cracks.	\$7,000
Parking lots and associated signage, markings, and equipment	Parking lot striping, ADA parking stalls painting, parking lot curbs.	Parking lots striping and ADA markings are nearing end of life. All parking stalls need to be repainted. Additionally, the other striping in the parking lot that provides directional information as well as stopping lines all need to be repainted. Some of the curbing is damaged or broken in the parking area. Many of the concrete curbs around the trees in the middle of the parking area are broken and need to be replaced. Curbing should be added to the south end of the lot to help prevent sloughing of the parking lot asphalt.	3.1	Repaint stalls and other striping. Repaint ADA striping and signage. Repair curbs and install new curb on the south end of the lot.	\$10,000
Pedestrian areas and associated signage, markings, and equipment	Bus map cabinet.	Plexiglas that protects bus map is scratched with graffiti.	3.2	Replace Plexiglas.	\$500
Site development such as fences, walls, and miscellaneous structures	Bike Lockers, trash cans, bollards behind bus shelter.	Exterior of bike lockers appears worn and paint is peeling. The trash cans in the parking lot are in fair condition. The cover on the trash can next to the bus shelter has been broken and needs to be replaced. Bollards behind the bus shelter are worn and need to be repainted.	3.1	Pressure wash and repaint bike lockers. Repair trash can. Repaint bollards.	\$500
Landscaping and irrigation	Site landscaping.	Many planters have broken concrete perimeters. The shrubs along the bus pick up lane near the north entrance and need to be cut back. Several of the concrete sidewalk joints have plants growing in them.	3.4	Trim brush away from north driveway entrance and remove plants from concrete joints.	None, assuming work is completed by Pierce Transit staff.

		
<p>Driveway entrance from the north</p>	<p>Parking stall numbers are fading</p>	<p>Asphalt cracks with previous seal repair</p>
		
<p>Asphalt cracking</p>	<p>Asphalt cracking with previous seal repair</p>	<p>Handicap parking stalls and bus loading zones</p>

		
<p>Cracks in concrete curb</p>	<p>Cracking handicap paint on asphalt</p>	<p>Curb stop and handicap stall sign</p>
		
<p>Cracking/missing handicap paint on asphalt</p>	<p>Cracking stop line paint</p>	<p>Asphalt sloughing on south end of parking lot, needs curbing</p>



WSDOT signage on-site



Bike lockers



Bike lockers



Parking area (viewing from the south)



Entrance from the north



Parking area (viewing from the north)

		
<p>North driveway entrance needs bushes trimmed</p>	<p>North driveway entrance needs bushes trimmed</p>	<p>Trash can in parking lot</p>
		
<p>Trash can next to bus shelter</p>	<p>Plants growing in sidewalk cracks</p>	

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Parking Facility Condition Assessment – Point Defiance Bus Layover Facility

Facility Snapshot

The Point Defiance Bus Layover Facility is at 5810 North Pearl Street located between the Vashon Ferry access and Anthony’s and Metropolitan Parks Point Defiance parking entrance in Tacoma, Washington, 98405. The facility was jointly developed and constructed in 1992 by Pierce Transit, Metropolitan Parks District, and WSDOT. Pierce Transit maintains one bus shelter and the bus layover area. There is a restroom facility on-site that is maintained by the Metropolitan Parks District.

Facility Condition Assessment Summary

The Point Defiance Bus Layover Facility was assessed on September 28, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- Overall facility was rated at 3.5.
- No deficiencies (items rated below 3.0) were found in the primary levels. However, additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of recommended repairs or corrective actions needed to bring the facility up to a State of Good Repair is \$13,000.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: Point Defiance Bus Layover Facility Overall and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	3.3
Interiors	N/A
Conveyance	N/A
Plumbing	N/A
HVAC	N/A
Fire Protection	N/A
Electrical	3.5
Fare Collection	N/A
Site	3.8
FACILITY	3.5



Point Defiance Bus Layover Facility



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.




The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.



Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure					
Foundation	Foundation of bus shelter.	Foundation of bus shelter appears to be functional and in good condition. However, it is noted that the foundation of the utility building appears to be settling on the east side about 1" at doorways.	4.0	This currently affects the utility building and not the bus shelter, so no action is required. If action is desired on the utility building, then the sidewalk will need to be demolished and new sidewalk installed or sidewalk will need to be shaved down to prevent a tripping hazard.	\$10,000 (not included in summary of costs).

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell					
Superstructure/structural frame	Bus shelter glulam roof framing and side glass enclosure.	Bus shelter rafters are rotted at gable ends. Glass enclosure is functioning but graffiti has been etched in glass.	3.3	Repair rafter ends and install stainless steel flashing. Replace vandalized glass.	\$8,000
Roof	Translucent plastic roof panels on bus shelter.	Plastic roof has some moss on battens but otherwise functional.	3.5	Pressure wash/clean roof during routine maintenance.	None
					
Underside of water damaged rafters		Southeast corner of bus shelter, showing rotted rafter end		Southwest corner of bus shelter	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.5		
Electrical service and distribution	Utility power.	Utility power appears to be functioning and adequate for the electrical needs of the facility.	4.0	None	N/A
Lighting and branch wiring (interior and exterior)	Exterior site lighting and bus shelter lighting.	Lighting appears to be adequate and well-spaced, however, the site was assessed during daytime hours. Bus shelter and utility building fluorescent tube lighting is outdated; however, still meets the needs of facility.	3.5	It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities.	N/A
					
Pole mounted light on east side of building		South side of bus shelter, showing lights			

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			3.8		
Roadways/driveways and associated signage, marking, and equipment	Concrete paved bus pull-in lane and nearby asphalt.	Concrete paving in good condition. Curb markings need repainting. Asphalt area prior to concrete paving needs to be repaired.	2.8	Repaint curb and repair asphalt.	\$5,000
Parking lots and associated signage, markings, and equipment	No parking lot for this facility, signage for bus routes and pedestrians.	Signage shows minor wear but appears adequate and not in need of replacement.	3.8	None	N/A
Site development such as fences, walls, and miscellaneous structures	Bike lockers.	Site bike lockers appear to be in good condition.	4.0	None	N/A
Landscaping and irrigation	Trees planted around site, within paved area with cast iron grates.	Site landscaping appear to be in good condition.	4.0	None	N/A
Site utilities	Site storm drainage.	Storm drainage for site appears to be adequate and functioning properly.	3.8	None	N/A



Tree landscaping on south side of facility



Curb at West side bus pull-up area needs repainting



Bike locker on north side of building



Asphalt near concrete paving needs repair



Looking West into Metro Parks parking area



Storm drains on site appear adequate

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)

Pierce Transit

Parking Facility Condition Assessment – WA State Route 512 Park-and-Ride

Facility Snapshot

The WA State Route 512 Park-and-Ride is located southwest of the I-5 and SR 512 interchange on 10617 South Tacoma Way in Lakewood, Washington, 98499. The facility was constructed in 1988 and is approximately eight acres and has 493 parking stalls. On site, there are two bus shelters and one utility building that houses an employee restroom facility and utility room (see site photo on page 2).

Facility Condition Assessment Summary

The WA State Route 512 Park-and-Ride was assessed on July 19, 2017. The Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) Lite Condition Assessment Scale was used to rate primary and secondary levels within the facility. Values on the FTA TERM Lite Condition Assessment Scale are defined in Table 1.

To determine the overall condition of the facility, the following primary level components were inspected and assessed: substructure, shell, interiors, conveyance, plumbing, HVAC, fire protection, electrical, fare collection equipment, and site (if present). The overall rating of the facility, in addition to each primary level rating, is presented in Table 2.

Key Findings

- The overall facility was rated at 2.4.
- Deficiencies (items rated below 3.0) were found in the shell and site primary levels. Additional deficiencies are noted in secondary levels as described in Table 3 (page 3).
- The combined cost estimate of corrective actions needed to bring the facility up to a State of Good Repair is \$364,250.
- No defects were identified that would constitute a safety concern that would require immediate attention.

Table 1: TERM Lite Scale Rating Levels

Rating	Condition	Description
4.8 – 5.0	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4.0 – 4.7	Good	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional
3.0 – 3.9	Adequate	Moderately deteriorated or defective; but has not exceeded useful life
2.0 – 2.9	Marginal	Defective or deteriorated, in need of replacement; exceeded useful life
1.0 – 1.9	Poor	Critically damaged or in need of immediate repair; well past useful life

Source: FTA, 2017

Table 2: WA State Route 512 Park-and-Ride Facility and Primary Level Rating Summary

	Rating
Substructure	4.0
Shell	2.5
Interiors	3.0
Conveyance	N/A
Plumbing	3.2
HVAC	3.1
Fire Protection	N/A
Electrical	3.8
Fare Collection	N/A
Site	2.2
FACILITY	2.4



WA State Route 512 Park-and-Ride



Facility Condition Assessment

The facility condition assessment, including primary and secondary level ratings, is presented in Table 3. Only components present in the facility are included in Table 3. For this facility, no components were observed in the conveyance, fire protection, and fare collection primary levels.

An asset is deemed to be in good repair if it has a rating of 3.0 or higher. Likewise, an asset is deemed to not be in good repair if it has a rating less than 3.0. Recommended corrective actions and estimated costs are provided for secondary level components that are rated below 3.0. In some instances, recommended corrective actions and estimated costs are listed for secondary level components that are rated above 3.0. This indicates that one portion of the described secondary level asset may require a minor corrective action; however, the overall condition of the described asset is functional and has not exceeded its useful life. All costs identified in Table 3 are included in the total estimated cost to bring the facility into a State of Good Repair.

The following describes the methodology for aggregation of secondary level ratings and aggregation of primary level ratings to provide an overall facility condition rating.

Secondary level ratings were aggregated to provide a rating for each primary level. If more than one secondary component was assessed, a median value approach was used to aggregate secondary ratings into the primary level rating, as described in Section 4.2 of the Condition Assessment Calculation guidebook (FTA 2017). Within each primary level, all secondary level ratings were sorted in ascending order. If there is an odd number of values, the median is the value that falls in the middle of the list. If there is an even number of values, the lower value of the middle values was selected as the median value.

A weighted average condition approach was used to calculate the overall facility condition rating. The approach uses primary level TERM Lite ratings and respective estimated replacement costs provided by Pierce Transit. To calculate the facility condition rating, the sum of each primary level TERM Lite score was multiplied by its respective replacement cost. The total was then divided by the sum of all the replacement costs to provide a facility condition rating.

Note: The assessment was conducted in July 2017. Since that time, this facility is undergoing refurbishing work to bring it up to a State of Good Repair and a rating of 3.5 or better on the TERM Lite scale. The work will include _____. The work will directly address deficiencies identified in this report. The project is scheduled to commence on _____ and complete by _____. The total cost estimate for the repairs and upgrades is \$_____.

Table 3: Facility Condition Assessment

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level A. Substructure			4.0		
Foundation	Poured concrete foundation for bus shelters and utility building (assumed, not visible).	The concrete is in good condition. No significant cracks or deflections were observed that would indicate foundation problems.	4.0	None	N/A

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level B. Shell			2.5		
Superstructure/structural components	Bus shelter concrete columns and glulam beam system. Utility building concrete masonry unit (CMU) walls. Glulam roof system above.	The bus shelter columns are in good condition with no visible damage. The utility building walls are in good condition with no significant visible damage.	4.0	None	N/A
Roof	Bus shelter translucent plastic roof, wooden beams and rafters. Utility building translucent plastic roof and wooden beams and rafters.	Bus shelter roofs appears to be at end of design life. Roof gables and rafters have some rot, especially at the ends. The utility building has some rot on the gable rafter ends.	2.5	Replace bus shelter rotten rafters, planking and gable end rafters. Replace plastic roofing. Repair rot on utility building gable rafter ends and planking at gutters.	\$15,000
Exterior	Bus shelter clear glass side panels with wood panels below. Utility building doors and finishes.	Bus shelter glass side panels have settled and chipped. Wood panels are chipped and the paint is peeling. The utility building doors and finishes are in good condition with exception to some rust near the bottom of the door frames. The utility room door jamb seal is separating from the frame by the door handle.	2.7	Repair bus shelter wood and glass paneling. Repair utility building door frames and door jamb seal on utility room door.	\$3,500
Shell appurtenances	Bus shelter metal gutters, downspouts, and plastic fold down seats. Utility building metal gutters.	Bus shelter metal gutters are leaking in some locations. Gutters and downspouts are pulled away from the roof and appear at end of design life. Some fold down seats are broken or missing. Utility building has gutters with no downspouts and appear to be functioning properly. The gutters freefall on the south side of the building.	2.1	Repair bus shelter gutter and downspouts. Repair and/or replace broken/missing bus shelter fold down seats.	\$1,500



Bus shelter



Bus shelter gutters and downspouts



Bus shelter glass and wooden side panels






Utility building doors



Utility building view under gutters



Utility building showing gutters with no downspouts

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level C. Interiors					
Finishes	Utility building interior paint and flooring.	Vinyl tile flooring is chipped and missing in several locations in the men's restroom. The paint on walls and ceiling is in good condition.	3.0	Replace vinyl tile flooring in men's restroom.	\$2,000
					
Men's restroom has damaged vinyl flooring		Men's restroom has damaged vinyl flooring		Women's restroom sink and mop sink	

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level E. Plumbing					
Fixtures, water distribution, sanitary waste, rain water drainage.	Utility building water, sewer, valves and utility controls. Hot water tank in utility room.	Valves and controls in restroom are in good condition. Sewer and drainage at utility building are in good condition. Hot water tank in utility room appears to be leaking and is braced incorrectly based on the Uniform Plumbing Code which requires two horizontal straps for seismic restraint. Hose bib connection in utility room appears to be leaking and needs to be repaired.	3.2	Repair or replace leaking hot water tank. Install two horizontal bracing straps. Repair hose bib connection leak.	\$500



Valves and controls in utility room in utility building



Hot water tank in utility room



Hose bib connection in utility room

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level F. HVAC			3.1		
Energy supply	Electric fed from utility room panel.	No issues related to the energy supply to HVAC equipment.	4.0	None	N/A
Heating/cooling generation and distribution systems	Electrical heaters and exhaust fans in utility building.	Heaters in men's and women's restrooms have thermostat knobs missing. They are aging and have reached the end of their typical life. Exhaust fans in restrooms were operating and functional during site visit. The actual equipment is located in the attic space and could not be visually observed.	2.9	Replace electric heaters in restrooms.	\$250
Chimneys and vents	Restroom doors.	Restroom doors have fixed louvers for air admittance into room to balance the exhaust fans. Some of the blades are bent, but the louvers are functional and in adequate condition.	3.1	None	N/A





Men's Restroom heater – missing thermostat knobs



Exhaust fans in restrooms



Restroom door louver

	
Exhaust fan timer control knob	Women's restroom heater – missing thermostat knob

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level H. Electrical			3.8		
Electrical service and distribution	Utility power.	Site electrical power appears to be adequate for the electrical needs of the facility. Power meter on backside of utility building has graffiti on cover and should be removed or painted over.	3.8	Remove or paint over graffiti on power meter cover.	None, assuming work is performed by Pierce Transit staff during routine maintenance.
Lighting and branch wiring	Exterior site lighting. Fluorescent tube lighting in bus shelters and utility building. Electrical receptacles.	Lighting appears to be adequate and well-spaced, however, the site was assessed during daytime hours. Bus shelter and utility building fluorescent tube lighting is outdated; however, still meets the needs of facility. Existing electrical receptacles do not appear to be GFCI (Ground Fault Circuit Interrupter) protected when located in areas required by the NEC (National Electric Code).	3.2	It is suggested to perform lighting assessment during nighttime hours similar to what was done at the headquarters facilities. Replace existing receptacles within restrooms and in other locations defined by the NEC.	\$100
Communications and Security	Security cameras.	Cameras were observed in several locations on site and appear to be in good condition.	4.0	None	N/A



Utility transformer



Cameras installed inside utility room and around site



Cameras installed around site






Utility room in utility building



Restroom fluorescent tube lighting

Secondary Level	Description	Current Condition	TERM Lite Rating	Recommended Corrective Action	Estimated Cost
Primary Level J. Site			2.2		
Roadways, driveways, and parking lots	Driveways, parking areas, and bus lanes.	<p>Main roadway and parking lot asphalt shows signs of cracking and sub-base failure in many areas. Bus area asphalt is cracked with some alligating and rutting. North bus lane asphalt is alligatored with ruts at bus stopping areas. Numerous potholes throughout facility. All asphalt surfaces have reached the end of their design life.</p> <p>The concrete panels in front of the utility building are separating, collecting debris, and have plants growing in them.</p> <p>Extensive amount of curbing is damaged or broken in the parking area. Many of the concrete curbs around the trees in the middle of the parking area are broken and need to be replaced.</p> <p>Two sections of concrete sidewalk on the west side of the parking area have separated from each other and the adjacent top of curb because of tree roots.</p> <p>The asphalt around the northernmost tree island in the parking area has been damaged by tree roots pushing the asphalt up.</p>	1.2	<p>Complete resurfacing of all asphalt surfaces in the park and ride lot, including roadway area, bus areas, parking areas and bus lanes.</p> <p>Replace curbing and adjust storm water grates as needed to match grade.</p> <p>Fill concrete control joints to prevent debris and plants from collecting in them.</p>	\$300,000
	Storm water drainage grates.	There are many storm water grates throughout the parking area and bus paths. Some of the grates have sunk or need the asphalt repaired around them including the grate in the southeast corner of the parking area.	1.8	Repair/replace pavement around storm water drainage grates.	\$20,000
	Roadway and parking lot striping and paint.	<p>Fire lane marking and crosswalks worn off at north entry.</p> <p>The entire parking area has either faded parking stall striping or it is missing altogether.</p>	1.3	<p>Repaint crosswalks and fire lane markings at the north entry.</p> <p>Repaint parking stripes.</p>	\$15,000
Pedestrian areas	Concrete walkways and brick pavers in bus shelter areas.	<p>Bus island waiting platforms have areas where brick pavers have sunken. Concrete walkway joints need sealant.</p> <p>The brick pavers under the tree in the southwest corner of the parking/passenger area are loose and need to be removed or reset.</p> <p>The restroom doors need better signage. Currently, sharpie markings designate the men's versus women's restrooms.</p>	2.2	<p>Reset settled pavers and reseal concrete walkways.</p> <p>Add signage to men's and women's restrooms.</p>	\$6,000

Site development components	Outside concrete seating benches, garbage containers.	Concrete seating is in good condition. Garbage containers are weathered but adequate. Bollards in front of the bike lockers are worn and need to be repainted.	3.6	Repaint bollards and bike lockers.	\$200
Landscaping	Landscaping in and around parking lot and pedestrian area.	Many planters have broken concrete perimeters and some tree roots are damaging adjacent asphalt and brick pavers.	3.6	(Repairs to concrete, curb, and asphalt are covered earlier in this section.)	N/A
Site utilities	Water, sewage, and drainage.	Drainage system has outwater separator and discharges to WSDOT storm water system. Drainage appears to be functioning properly. A power vault on the north side of the Utility building is extruding from the ground at a significant angle. The vault should be reset to be parallel with the ground.	3.8	Reset the power vault parallel to the ground.	\$200
					
Main roadway		Faded striping in parking area		Parking lot sub base failure	

		
<p>Sunken storm water grate that needs repair</p>	<p>Worn crosswalk striping</p>	<p>Concrete walkway joints with plant growth</p>
		
<p>Northern most tree in parking area causing asphalt damage</p>	<p>Damaged curbing around trees in parking area</p>	<p>Power Vault extruding from ground</p>

Reference:

FTA, 2017. TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation, Federal Transit Administration (April 2017)