CITY OF MILWAUKIE
PLANNING COMMISSION
MINUTES
Milwaukie City Hall
10722 SE Main Street
TUESDAY, June 12, 2012
6:30 PM

COMMISSIONERS PRESENT	**STAFF PRESENT**
Lisa Batey, Chair	Katie Mangle, Planning Director
Nick Harris, Vice Chair	Scot Siegel, Interim Planning Project Manager
Chris Wilson	Ryan Marquardt, Associate Planner
Mark Gamba	Li Alligood, Assistant Planner
Scott Churchill	Kenny Asher, Community Development Director
Clare Fuchs	
Shaun Lowcock	Damien Hall, City Attorney

1.0 Call to Order – Procedural Matters*
Chair Batey called the meeting to order at 6:30 p.m. and read the conduct of meeting format into the record.

***Note**: The information presented constitutes summarized minutes only. The meeting video is available by clicking the Video link at http://www.ci.milwaukie.or.us/meetings.*

2.0 Planning Commission Minutes
2.1 April 10, 2012

Chair Batey noted a correction on Line 32 to read "Commission***er*** Lowcock introduced…"

Commissioner Gamba moved to approve the April 10, 2012, Planning Commission minutes as corrected. Vice Chair Harris seconded the motion, which passed unanimously.

3.0 Information Items

Katie Mangle, Planning Director, noted Scot Siegel had been selected as the Interim Planning Director as a consultant until the position was filled.

4.0 Audience Participation –This is an opportunity for the public to comment on any item not on the agenda. There was none.

5.0 Worksession Items
5.1 Summary: Neighborhood Main Streets Project update
Staff: Ryan Marquardt

Ryan Marquardt, Associate Planner, introduced the project.

Jay Higgins and Kelly Moosbrugger of the PSU team of graduate students presented their recommendations for the Neighborhood Main Streets project.

6.0 Public Hearings

5.1 Summary: Portland to Milwaukie Downtown Light Rail Station
Applicant/Owner: KLK Consulting/TriMet
Address: 11301 SE 21st Ave
File: CSU-12-03
Staff: Li Alligood

Chair Batey opened the public hearing for CSU-12-03 and read the conduct of minor quasi-judicial hearing into the meeting record.

Li Alligood, Assistant Planner, presented the staff analysis and recommendation via PowerPoint.

Jeb Doran, TriMet, presented the application and outlined how he believed it met the Downtown Design Guidelines.

The Commission asked questions regarding catenary poles, the future station building site to the southeast, security, bike parking, phones on the platform, and platform paving patterns.

Chantelle Gamba and Greg Hemer of the Design and Landmarks Committee (DLC) presented the DLC's recommendation on the Design Review application.

Ms. Alligood clarified that improvements in the right-of-way were not triggered by the development on site nor subject to the Design Review process.

Chair Batey called for public testimony.

David Aschenbrenner commented as a Milwaukie resident and as a light rail Citizen Advisory Committee (CAC) member. He agreed with the DLC's recommendations but disagreed with the proposed bike parking condition, and questioned how bus transit would work after light rail was complete.

Mr. Aschenbrenner thanked Katie Mangle for all she had done for the City and what he had learned from her, and wished her well.

Mr. Hemer was concerned about lack of ADA access from the south, and was supportive of benches but concerned about implications of future development on the station building site.

Chair Batey called for questions for staff and Applicant's rebuttal.

Kenny Asher, Community Development Director, addressed questions regarding future development of the station building site.

Mr. Doran explained the bench placement strategy and requested that no additional condition be made to add more benches.

The Commission asked staff to clarify on-street parking and ADA access to the south end of the platform.

Chair Batey closed public testimony.

The Commission discussed the need for more bike parking and benches, the interim conditions of the station building site, and agreed that the shelter did not need a cornice. They agreed with the bench condition as recommended by staff.

Commissioner Churchill clarified that the station building site was not subject to design review with this application. Staff asked if this was a concern of the Commission. The Commission was frustrated by the situation.

It was moved by Commissioner Gamba and seconded by Commissioner Wilson to approve CSU-12-03, DR-12-04, VR-12-02 Portland to Milwaukie Light Rail Downtown Station with revised findings and conditions requiring an increase by 12 to 48 bicycle parking spaces onsite or adjacent to the site. The motion passed unanimously

7.0 Planning Department Other Business/Updates

7.1 Meeting schedule for July – discuss possible need for 3rd meeting in July to accommodate public hearings.

Ms. Mangle reviewed the forecast of public hearings for the summer. The Commission agreed to cancel the June 26th meeting and add a possible third meeting to July on July 31st.

8.0 Planning Commission Discussion Items

9.0 Forecast for Future Meetings:

June 20, 2012	1. Public Hearing: ZA-11-02 Residential Development Standards *continued from 4/24/12*
June 26, 2012	1. Public Hearing: CSU-12-03 Downtown Light Rail Station *tentative continued*

Meeting adjourned at approximately 10:34 p.m.

Respectfully submitted,

Alicia Martin, Administrative Specialist II

Lisa M. Batey

Lisa Batey, Chair

AGENDA

MILWAUKIE PLANNING COMMISSION
Tuesday, June 12, 2012, 6:30 PM

MILWAUKIE CITY HALL
10722 SE MAIN STREET

1.0 Call to Order - Procedural Matters

2.0 Planning Commission Minutes – Motion Needed

2.1 April 10, 2012

3.0 Information Items

4.0 Audience Participation – This is an opportunity for the public to comment on any item not on the agenda

5.0 Worksession Items

5.1 Summary: PSU Neighborhood Main Streets Project presentation (30 minutes)
Staff: Ryan Marquardt/PSU Graduate Students

6.0 Public Hearings – Public hearings will follow the procedure listed on reverse

6.1 Summary: Portland to Milwaukie Light Rail Downtown Station
Applicant/Owner: KLK Consulting/TriMet
Address: 11301 SE 21st Ave
File: CSU-12-03
Staff: Li Alligood

7.0 Planning Department Other Business/Updates

7.1 Meeting schedule for July – discuss possible need for 3rd meeting in July to accommodate public hearings

8.0 Planning Commission Discussion Items – This is an opportunity for comment or discussion for items not on the agenda.

9.0 Forecast for Future Meetings:

June 20, 2012	1. Public Hearing: ZA-11-02 Residential Development Standards
June 26, 2012	1. Public Hearing: CSU-12-03 Downtown Light Rail Station *tentative continued*

Milwaukie Planning Commission Statement

The Planning Commission serves as an advisory body to, and a resource for, the City Council in land use matters. In this capacity, the mission of the Planning Commission is to articulate the Community's values and commitment to socially and environmentally responsible uses of its resources as reflected in the Comprehensive Plan

1. **PROCEDURAL MATTERS.** If you wish to speak at this meeting, please fill out a yellow card and give to planning staff. Please turn off all personal communication devices during meeting. For background information on agenda items, call the Planning Department at 503-786-7600 or email planning@ci.milwaukie.or.us. Thank You.

2. **PLANNING COMMISSION MINUTES.** Approved PC Minutes can be found on the City website at www.cityofmilwaukie.org

3. **CITY COUNCIL MINUTES** City Council Minutes can be found on the City website at www.cityofmilwaukie.org

4. **FORECAST FOR FUTURE MEETING.** These items are tentatively scheduled, but may be rescheduled prior to the meeting date. Please contact staff with any questions you may have.

5. **TIME LIMIT POLICY.** The Commission intends to end each meeting by 10:00pm. The Planning Commission will pause discussion of agenda items at 9:45pm to discuss whether to continue the agenda item to a future date or finish the agenda item.

Public Hearing Procedure

Those who wish to testify should come to the front podium, state his or her name and address for the record, and remain at the podium until the Chairperson has asked if there are any questions from the Commissioners.

1. **STAFF REPORT.** Each hearing starts with a brief review of the staff report by staff. The report lists the criteria for the land use action being considered, as well as a recommended decision with reasons for that recommendation.

2. **CORRESPONDENCE.** Staff will report any verbal or written correspondence that has been received since the Commission was presented with its meeting packet.

3. **APPLICANT'S PRESENTATION.**

4. **PUBLIC TESTIMONY IN SUPPORT.** Testimony from those in favor of the application.

5. **NEUTRAL PUBLIC TESTIMONY.** Comments or questions from interested persons who are neither in favor of nor opposed to the application.

6. **PUBLIC TESTIMONY IN OPPOSITION.** Testimony from those in opposition to the application.

7. **QUESTIONS FROM COMMISSIONERS.** The commission will have the opportunity to ask for clarification from staff, the applicant, or those who have already testified.

8. **REBUTTAL TESTIMONY FROM APPLICANT.** After all public testimony, the commission will take rebuttal testimony from the applicant.

9. **CLOSING OF PUBLIC HEARING.** The Chairperson will close the public portion of the hearing. The Commission will then enter into deliberation. From this point in the hearing the Commission will not receive any additional testimony from the audience, but may ask questions of anyone who has testified.

10. **COMMISSION DISCUSSION AND ACTION.** It is the Commission's intention to make a decision this evening on each issue on the agenda. Planning Commission decisions may be appealed to the City Council. If you wish to appeal a decision, please contact the Planning Department for information on the procedures and fees involved.

11. **MEETING CONTINUANCE.** Prior to the close of the first public hearing, *any person* may request an opportunity to present additional information at another time. If there is such a request, the Planning Commission will either continue the public hearing to a date certain, or leave the record open for at least seven days for additional written evidence, argument, or testimony. The Planning Commission may ask the applicant to consider granting an extension of the 120-day time period for making a decision if a delay in making a decision could impact the ability of the City to take final action on the application, including resolution of all local appeals.

The City of Milwaukie will make reasonable accommodation for people with disabilities. Please notify us no less than five (5) business days prior to the meeting.

Milwaukie Planning Commission:

Lisa Batey, Chair
Nick Harris, Vice Chair
Scott Churchill
Chris Wilson
Mark Gamba
Clare Fuchs
Shaun Lowcock

Planning Department Staff:

Katie Mangle, Planning Director
Scot Siegel, Interim Planning Project Manager
Brett Kelver, Associate Planner
Ryan Marquardt, Associate Planner
Li Alligood, Assistant Planner
Alicia Martin, Administrative Specialist II

CITY OF MILWAUKIE
PLANNING COMMISSION
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COMMISSIONERS PRESENT	**STAFF PRESENT**
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Nick Harris, Vice Harris	Ryan Marquardt, Associate Planner
Chris Wilson	Li Alligood, Assistant Planner
Mark Gamba	Damien Hall, City Attorney
Scott Churchill	
Clare Fuchs	
Shaun Lowcock	

COMMISSIONERS ABSENT

1.0 Call to Order – Procedural Matters*

Chair Batey called the meeting to order at 6:30 p.m. and read the conduct of meeting format into the record.

***Note**: The information presented constitutes summarized minutes only. The meeting video is available by clicking the Video link at http://www.ci.milwaukie.or.us/meetings.*

2.0 Planning Commission Minutes - None

3.0 Information Items

Katie Mangle, Planning Director, introduced the new Planning Commission, Shaun Lowcock.

Commission Lowcock introduced himself and described his background and his reasons for becoming a Commissioner.

Ms. Mangle introduced the Planning Commission alternate, Wilda Parks, who was sitting in the audience, and explained the intent of the new position.

4.0 Audience Participation –This is an opportunity for the public to comment on any item not on the agenda.

Dick Shook inquired when the Lake Road Improvement Project was scheduled to be done and

commented that the detour was not being enforced.

Ms. Mangle noted that the Engineering and Police Departments were taking the detour enforcement issue seriously, and although many of those drivers who go through the detour live in the area, Police are ticketing more drivers. She assured that Jason Rice, the Civil Engineer project manager, would get in touch with Mr. Shook regarding the timeline.

5.0 Worksession Items

5.1 Summary: North Clackamas Park North Side Master Plan
File: CPA-10-01
Staff Person: Li Alligood

Li Alligood, Assistant Planner, reviewed the background of the application and the North Clackamas Park. She noted the request for a second worksession was for direction from the Commission on the application and whether to move forward with a hearing. She explained the process of a master plan and the City's practice around park master plans, and clarified that the City was a joint applicant in order to assist with the adoption process.

Michelle Healy and Katie Dunham, North Clackamas Parks and Recreation District (Parks District) reviewed the history of the Parks District and the North Clackamas Park, and presented the North Side Master Plan via PowerPoint. Ms. Dunham noted the elements called out in the Plan and additional elements that would be new to the park including a walking trail, additional fencing, signage and storyboards, restoration and improvement to the dog park.

Ms. Dunham addressed additional information as requested regarding general parking and Milwaukie Center parking, sustainability practices and program elements, and the dog park. She also noted the upcoming Mt Scott Creek Restoration Project that would be an implementation project of the Master Plan.

Commissioner Churchill noted his reservations about the southwest part of the park, reiterating he would like a cohesive master plan for the entire park.

Ms. Mangle clarified the City's request of the Parks District was for a master plan for the north side portion. The decision needed to be whether this master plan was a good plan for this portion or not worth blessing because it was not complete enough. She noted the intention was to leave the southwest corner as an unplanned open space.

The Commission agreed to move the North Side Master Plan forward to a public hearing.

6.0 Public Hearings

6.1 Summary: Residential Development Standards *continued from 3/27/12*
Applicant: City of Milwaukie
File: ZA-11-03
Staff: Li Alligood

Chair Batey opened the public hearing for ZA-11-03 and read the conduct of continued legislative hearing into the meeting record.

Ms. Mangle noted that after hearing public testimony, the Commission would continue with deliberations and review additional information requested of staff.

Commissioner Wilson arrived.

Chair Batey reopened public testimony.

Wesley Birch would like to see a more lenient policy regarding ADUs to offer more flexibility to allow an ADU on account of the current economic climate.

Sandra Ostrander felt people should be able to use temporary structures to park RVs and boats in front driveway, noting temporary structures look better than tarps and the cost of storage was not an option.

Brenda Huber owned a large lot which was all front yard. She had the need for temporary structures and believed it was bad timing economically to enforce a ban on temporary structures.

John Sehorn explained his past situation with the City for a temporary structure, noting he was not allowed to build a permanent structure so in turn built a temporary structure. He felt that if the City banned temporary structures, it left citizens with no alternative.

Don Sparks complimented staff on the proposed amendments and noted it was written for maximum opportunity for individuality, and personal choices and needs. However, he was concerned about limits on garages being placed toward the front of the house, and window requirements should be reduced as they were not always applicable or wanted. The articulation requirements would add cost, and was an aesthetics statement and not preferred by everyone. A ban on temporary structures was too limiting on personal choice and lifestyle.

Jean Baker noted the letter submitted to the Commission at the previous meeting. Multifamily communities should be built with family-friendliness in mind, as many were built with no provisions for children or older residents. She felt it was in Milwaukie's best interest to build for families.

Joseph Kelly was concerned about the tarp prohibition. Removal was reasonable if there were safety hazards or a neighborhood wanted a change, but government should not rule for a whole city or act as a homeowners' association.

James Knight concerned about the neighborhood of SE 28th Ave south of Lake Rd which was originally zoned R1 but now zoned R7. Due to the change, all the lots and houses were therefore nonconforming as they were built for high density. There needed to be a process for legalizing nonconforming properties and illegal ADUs. The proposed setback requirements would also impact these sites and would create issues for garages and accessory structures close to setbacks.

Verey Luciano was against the temporary structure ban. She was recently noticed for a 'temporary structure' that has been there since she moved in, which was well-kept, and there was no option for a permanent structure.

Mark Brawn was against the temporary structure ban.

Orlando Celestine was against the temporary structure ban as long as the structure was in good condition.

David Godin was against the temporary structure ban.

Chair Batey closed public testimony.

Planning Commission Deliberation

Ms. Alligood noted discussion topics in the staff report to review.

Accessory Dwelling Units – **Mr. Marquardt** outlined the current proposal, review process, and considerations for different size examples. **Ms. Mangle** summarized that staff were asking for direction from the Commission on the simple ADU, the 2-story ADUs, and conversion of nonconforming structures into ADUs. The Commission agreed and gave direction as follows:

- If a 1-story ADU was outside of the base zone setbacks, Type I review sufficient as long as privacy measures were taken (i.e. screening, fencing, privacy windows).
- For 2-story ADUs, Type II review was sufficient. .
- The current proposal for conversion of legal nonconforming structures to ADUs was appropriate. If structures did not meet setback requirements, a conversion could be allowed under Type III review.
- Type I review for an ADU in the front yard (new or existing) if the structure was 60ft back from front lot line.

Multifamily Amenities

- **Ms. Alligood** reviewed the current proposal for multifamily amenities with regard to resident amenities, and sustainability and livability provisions. She asked the Commission to review the current proposal and consider if additional suggested amenities should be included.
- **The Commission** directed staff to expand the amenities list to include both smaller and larger items, to create a sliding point system for amenities based on the size of the complex, and to require covered bike parking in complexes with 5 or more units.

Commission Churchill moved to continue the public hearing for ZA-11-03 to April 27, 2012. Commission Fuchs seconded the motion, which passed unanimously.

7.0 Planning Department Other Business/Updates

7.1 Milwaukie Main Streets Project update – *postponed*

8.0 Planning Commission Discussion Items

9.0 Forecast for Future Meetings:

April 24, 2012	1.	Public Hearing: CSU-12-01 Royalton Place Monument Sign
	2.	Public Hearing: ZA-11-03 Residential Development Standards *tentative*
May 8, 2012	1.	Worksession: Tacoma Station Planning update

Meeting adjourned at approximately 10:33 p.m.

Respectfully submitted,

Alicia Martin, Administrative Specialist II

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Lisa Batey, Chair

MILWAUKIE
Dogwood City of the West

To: **Planning Commission**

Through: **Katie Mangle, Planning Director**

From: **Ryan Marquardt, Associate Planner**

Date: **June 5, 2012, for June 12, 2012, Worksession**

Subject: **Neighborhood Main Streets Project**

ACTION REQUESTED

Consider report on Neighborhood Main Street Project outreach and recommendations, and give staff direction on whether to come back in Fall 2012 with proposed code zoning amendments for neighborhood commercial areas.

BACKGROUND INFORMATION

A. History of Prior Actions and Discussions

- **April 10, 2012:** Staff gave the Planning Commission a brief overview of the Neighborhood Main Street Project (NMSP), including its purpose, upcoming events, and expected results.

B. Other subheadings and text as needed

Milwaukie has some small commercial districts located within larger residential areas throughout the city. City residents, particularly in the central and eastern areas of the city, have often expressed a desire to have more places to walk and bike to in their neighborhood, such as a small store or café. City staff is aware that there are obstacles in the zoning ordinance that make it difficult for these types of neighborhood-focused commercial areas to exist with Milwaukie's small commercial districts. In some instances the zoning is very restrictive in the array of uses allowed, such as not allowing a restaurant or eatery. In other instances, the zoning allows automobile dependent uses that can hinder creation of a walkable neighborhood commercial area.

There was a strategy to address these issues as part of the larger Commercial Core Enhancement Program (CCEP). Due to the uncertainty of when the CCEP will be able to proceed, staff looked for ways to keep moving forward on the neighborhood commercial areas.

Staff believed that zoning code amendments would be necessary to fix some, but not all, of the hindrances to establishing successful neighborhood commercial areas, but did not have the resources to facilitate the discussion with citizens and stakeholders about the amendments.

Staff submitted a project proposal for this work to Portland State University's School of Urban and Regional Planning for consideration as a workshop project for graduate students. The City was fortunate to be 1 of 5 projects selected by the students for a workshop project out of more than 40 project proposals. The project group, dubbed Horizon Planning, includes Jay Higgins, Allison Moe, Kelly Moosbrugger, Levi Roberts and Tony Vi.

Horizon Planning has worked diligently for the past few months on a dialogue with the community about what they would like to see for neighborhood commercial areas. The specific focus of the Neighborhood Main Streets Project (NMSP) has been 32nd Avenue in the Ardenwald Neighborhood and the area near 42nd Avenue and Harrison Street in Hector Campbell Neighborhood. The project and its events have been advertised in The Pilot, on Oregonlive.com, on community fliers, to interested person's lists, and on the City's project website. A summary of the public involvement they've conducted is:

- Walking Tours of the commercial areas – 20-25 attendees
- Main Streets Visioning workshop – 16 attendees
- Project open house – 34 attendees
- Online and paper survey – 101 responses
- Attendance at Ardenwald, Hector Campbell, and Lewelling NDA meetings in February, March, April and May
- Project presentation at Hillside Manor resident's meeting – 20 residents
- Individual interviews with 11 business owners, property owners, and individual residents

At the Planning Commission meeting, Horizon Planning will present the NMSP and recommendations for the commercial areas. Staff and Horizon Planning will emphasize the recommendations about zoning amendments, which include:

- Creation of a neighborhood commercial zone. Uses allowed will focus on neighborhood-scale uses like eating establishments, small retail, and services.
- Possible expansion of commercial area zoning boundaries to include other properties on the same block face as existing commercial areas or properties that have historically been commercial properties, but are currently zoned residential. Staff may consider expanding the neighborhood commercial zone to apply to other pockets of commercially zoned areas.
- Revise development standards for the zone to bring storefronts closer to the street and encourage storefront windows. Staff may also consider revising the Sign Ordinance to ensure that signage in the district is consistent with what is found in other successful neighborhood commercial areas in the region.
- Greater allowance for temporary/seasonal uses

The NMSP explored many aspects of the study areas, and also makes recommendations about transportation and economic development. Some highlights of these recommendations that may be brought up at the meeting include:

- Transportation
  - Identification of gaps in pedestrian and bicycle network
  - Suggested connections between the two commercial areas
- Economic Development
  - Improve city's capacity for economic development assistance

- Consider programs like the storefront improvement program for the neighborhood main streets
- Encourage work spaces that house small businesses as they get established
- Organization among business and property owners, such as a business association

Staff's focus will be on implementing the recommendations related to zoning. While the discussions about the neighborhood commercial areas covered a broad range of topics, staff directed Horizon Planning to do outreach and recommendations specific to zoning ordinance amendments. Comments and recommendations on other aspects of the neighborhood commercial areas may serve as the basis for updates to capital project lists, possible Walk Safely Milwaukie project, or implementation of other programs.

Staff seeks direction from the Planning Commission on how to proceed with the project. Horizon Planning has done an impressive job of engaging the community in discussions about neighborhood commercial areas and drafting recommendations based on that involvement. Staff believes that it is appropriate to begin drafting code amendments based on their work since the outreach has been of such high quality. This would result in staff drafting the code, presenting the amendments at a limited number of Planning Commission and City Council worksessions, and proceeding with adoption hearings. The stakeholders, residents and NDAs would be notified of the project's status and be able to have input as the amendments are prepared. However, staff would not carry on the broad public involvement that has been part of the NMSP up to this point.

ATTACHMENTS

1. Map of NMSP Study Areas
2. Project Workplan and Deliverables

32nd Avenue and 42nd Avenue Commercial Areas

Existing commercial zoning in solid red outline; potential new areas in dashed red outline

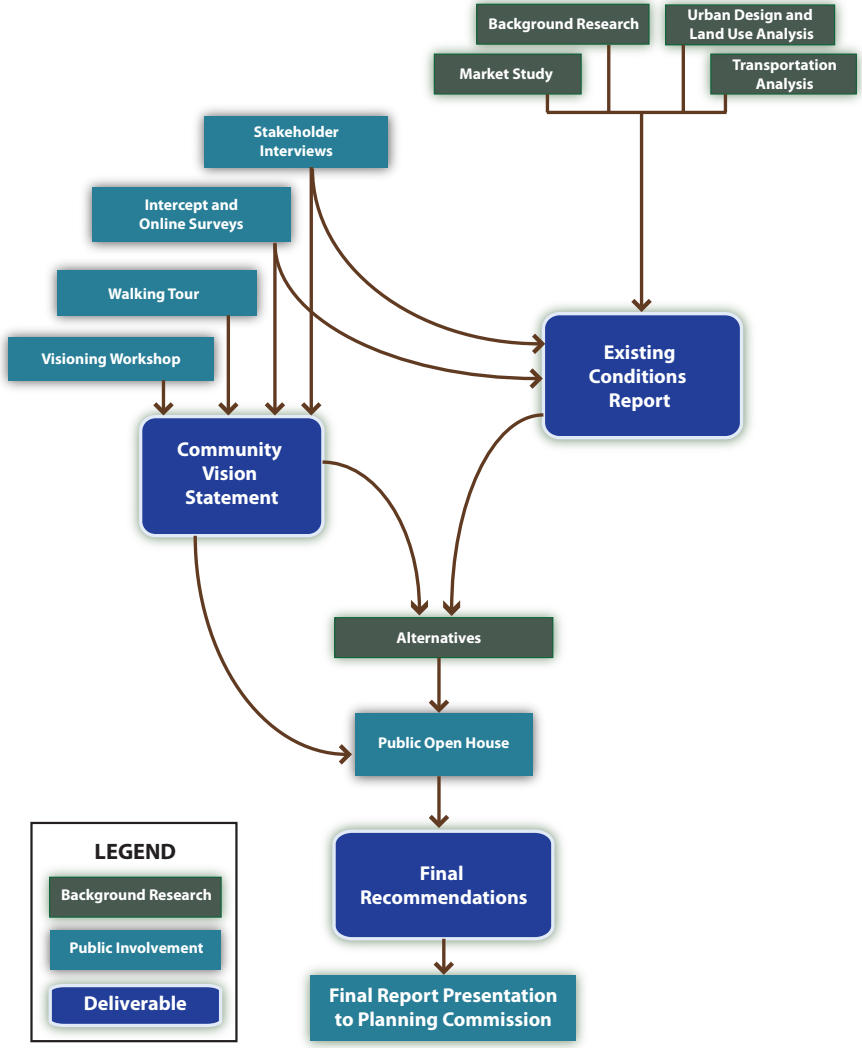
32nd Avenue and 42nd Avenue Commercial Areas

Existing commercial zoning in solid red outline; potential new areas in dashed red outline

PROJECT APPROACH

Figure 1. Project Outreach Timeline

Project Approach Flow Chart



MILWAUKIE
Dogwood City of the West

To: **Planning Commission**

Through: **Scot Siegel, Contract Planning Project Manager**
for Katie Mangle, Planning Director

From: **Li Alligood, Assistant Planner**

Date: **June 5, 2012, for June 12, 2012, Public Hearing**

Subject: **File:** CSU-12-03, DR-12-04, VR-12-02

Applicant: Jeff Joslin, KLK Consulting, Inc.

Owner(s): TriMet[1]

Address: 11301 SE 21st Ave and Union Pacific Railroad property between Lake, 21st Ave, and Adams St

Legal Description (Map & Taxlot): 1S1E36BC03300

NDA: Historic Milwaukie

ACTION REQUESTED

Review and approve applications CSU-12-03, DR-12-04, and VR-12-02 with the recommended Findings and Conditions of Approval found in Attachments 1 and 2. This action would approve a design for the Portland Milwaukie Light Rail (PMLR) station in downtown Milwaukie.

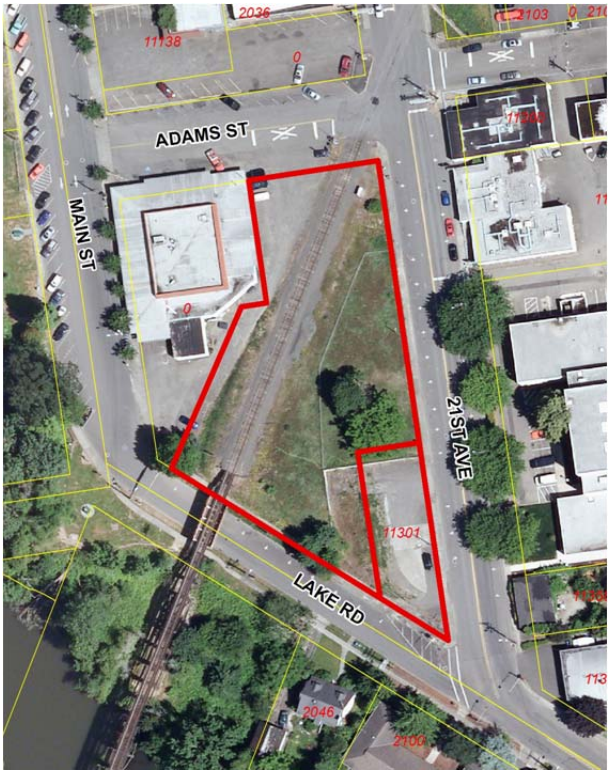
BACKGROUND INFORMATION

A. Site and Vicinity

The site is triangular in shape and is comprised of an existing tax lot at 11301 SE 21st Ave and a portion of the Union Pacific Railroad (UPRR) property between Lake Rd, 21st Ave, and Adams St. The site contains a paved area in the northwest corner, rail tracks through the center, and a surface parking lot in the southeast corner.

[1] The site at 11301 SE 21st Ave is currently owned by Jeffrey Horton; the Union Pacific Railroad site is under UPRR ownership. TriMet has eminent domain authority and is in the process of purchasing portions of the sites listed above and/or acquiring the necessary easements to construct the light rail station.

The surrounding area consists of government and commercial uses to the west; a surface parking lot to the north; office and light industrial uses to the east; residential areas to the southeast, and Lake Road and Kellogg Lake to the south. The images below show an aerial view of the site (left); the site from the north at 21st Ave and Adams St (top right); and the site from the south at Lake Rd (bottom right).



B. Zoning Designation

Downtown Office Zone (DO). A portion of the southern end of the site is within 100 feet of the Kellogg Lake protected natural resource areas.

C. Comprehensive Plan Designation

Town Center (TC).

D. Land Use History

There are no previous land use actions by the City on record for this site. However, the entire PMLR alignment has an existing land use approval that was issued by Metro in 2008.[2] This land use final order (LUFO) was made pursuant to House Bill 3478 (1996), which provides for the review and siting of regional transportation facilities through local jurisdictions.

[2] Metro Resolution No. 08-3964 entitled 2008 South/North Land Use Final Order (LUFO) Amendment.

House Bill 3478 allows the City to review the light rail station against the City's design and development standards to ensure that it respects Milwaukie's existing small town character, fine-grained development pattern, and future development aspirations. The City may subject the proposed light rail station to reasonable and necessary conditions of approval to ensure conformance with local standards and appropriate mitigation of local impacts. It cannot, however, condition the approval of the light rail station in such a way as to prevent the implementation of the 2008 LUFO.

E. Proposal

The applicant is seeking land use approvals for construction of a light rail station, and a determination that submitted materials meet a condition of approval of land use file #WG-11-01 (Kellogg Bridge) related to the jump span lighting. See Attachment 3 for details.

The proposal includes the following:

- Kellogg Bridge jump span lighting
- Light rail platform and fixtures
- Pedestrian connections to the north and south
- On-site retaining walls
- Bike plaza

Although construction of a station building is anticipated on this site, it will be subject to review at the time of design and construction. This review is limited to the station itself.

The project requires approval of the following applications by the Planning Commission:

1. Design Review (DR-12-04): Design Review application DR-12-04 was reviewed by the Design and Landmarks Committee (DLC) on May 23, 2012. The DLC recommended approval of the application at that time. The DLC's recommended findings and conditions of approval have been incorporated into Attachments 1 and 2 respectively.
2. Community Service Use (CSU-12-03): The proposed light rail station is permitted in the DO zone as a Passenger Terminal, subject to community service use review.
3. Variance Review (VR-12-02): The applicant has requested a variance to the development standards of the DO zone related to maximum setback and minimum floor area ratio (FAR). The DLC recommended approval of variance application VR-12-02 on May 23, 2012. The DLC's recommended findings and conditions of approval have been incorporated into Attachments 1 and 2 respectively.

F. Specific Design Elements

The applicant has refined the design of the proposed light rail station over the last several months in consultation with its design and engineering team and based on feedback from City staff and the DLC. As such, many design issues have been discussed, and some have been resolved, in advance of the Planning Commission's review of this application. Below is an overview of the key design elements under review, including design alternatives that have been considered and the applicant's current design proposal. See Attachment 5 for detailed comments from City staff on the light rail station design from a project partner perspective.

- Jump span over Lake Rd – During the land use review for the Kellogg Bridge (WG-11-01), the Planning Commission established a condition of approval requesting additional information and different light fixture options for lighting underneath the Kellogg Bridge jump span, to be submitted for consideration during the land use proceedings for the Milwaukie light rail station. The revised proposal includes linear LED luminaires recessed within the jump span slabs and placed at regular intervals, as well as wall-washing LED fixtures at the abutment walls and piers. The applicant's photometric analysis indicates that the proposed fixtures will provide uniform lighting beneath the jump span, which minimizes glare and deep shadows. See Exhibits P 5A-B and P 6A-E of the application for details.
- Wall finishes – The surface of the pre-cast concrete abutment wall (north side of Lake Rd), safety walls (west of the platform) and retaining walls on site (east of the platform) will be textured with a formliner that resembles a rusticated masonry surface to create a unified appearance and visual interest at the Lake Rd and 21st Ave pedestrian level. The applicant did not include detail about the on-site retaining walls or safety walls in the application, though it is referenced in the structural plans in Exhibit T 21 of the application. See Exhibits P2 – P4 of the application for illustrations of the Lake Rd abutment wall. See Exhibit T21 of the application for structural elevations of the retaining wall to the east of the future platform. See Attachment 4 Exhibit F for details.
- Platform paving – The "furniture zone" of the platform surface will be paved with pale gray pavers in a herringbone pattern instead of flat concrete to provide detailing and texture. The edges of the platform will be paved in dark gray for contrast. The applicant did not include detail about the platform pavers in the application, though they are referenced in the architectural plans in Exhibit T31 of the application.
- Fixtures – Most station fixtures will be painted "Milwaukie black" instead of standard gray or stainless steel including: ornamental railings; fencing; platform shelter poles and rafters;[3] trash cans; bench bases; TVM shelter rafters; bike shelter rafters; bike racks; bike lockers; bollards; and OCS poles. The following "elements of consistency" will be stainless steel: handrails; platform light fixtures; wind screens; bench seating surfaces; leaning rails; electrical cabinets; and TVM shelter posts.
- Fencing and railings – Ornamental "Milwaukie black" metal railings are proposed instead of standard stainless steel railings to reinforce Milwaukie's small town urban character and high standards of design. Fencing on the retaining wall between the tracks is an open wire and bollard design rather than chain link, which is industrial in character and in appropriate for the highly visible urban space.
- Lake Rd pedestrian access – Pedestrian access to the south end of the station is via stairs from Lake Rd. The stairs are integrated into the Lake Rd abutment wall and are flanked by ornamental black railings to the south and terraced stormwater plantings to the north. A light fixture at the landing is Milwaukie streetscape standard rather than TriMet standard in order provide a visual connection to the street below. The terraced stormwater planters are wrapped in weathering steel to reference the bridge structure and other planters; the terraced planters and landscaping at the base of the stairs softens the effect of the concrete abutment wall. The station meets universal accessibility requirements; use of stairs rather than a ramp preserves

[3] With the exception of a stainless steel "sock" at the base of the poles.

space on site for future building development and does not negatively impact patron access to the station.[4]

- Cantilevered platform access – Ornamental black railings guide passengers from the pedestrian access at Adams St and 21st Ave to the ticket vending machines (TVMs) and platform. A light fixture on the platform access is Milwaukie streetscape standard rather than TriMet standard in order provide a visual and design connection to the street below. See Exhibits P2 – P5 and P9 of the application for illustrations.
- Platform shelter – The platform shelter is glass-roofed with "Milwaukie black" metal poles and rafters. Public art is integrated into the design of the shelter, as well as a bench and wind screen.
- Stormwater treatment facilities – Stormwater treatment facilities are integrated into the site and are located in a plaza in the southeastern corner of the site, at the base of the pedestrian stair access from Lake Rd, and in terraced planters to the north of the pedestrian stair access. The dispersal and integration of the stormwater plantings softens the visual impact of the concrete areas of the site and provides aesthetic benefits.

G. Compliance with the Downtown Design Guidelines

As conditioned, the light rail station generally meets the intent and spirit of the Milwaukie Downtown Design Guidelines by reinforcing Milwaukie's sense of place, respecting the natural environment, creating view opportunities, integrating site-specific art, enhancing the pedestrian environment, creating compatible and well-designed structures that respond to their surroundings, and using lighting to highlight key gateways access points.

Though the light rail station is utilitarian in purpose—and contains all of the necessary elements to carry out its function (e.g. OCS poles, safety railings, TVM shelters)—it has been thoughtfully designed by a team of architects and urban designers to fit into the existing fabric of downtown Milwaukie. The scale of the station is appropriate for the site and for south downtown.

The overall design of the station respects the character of downtown Milwaukie through its use of uncluttered design, simple detailing, a subdued palette of materials, station-specific fixtures in "Milwaukie black," and integration of stormwater plantings and public art into the site. The cantilevered platform access will provide views to the Willamette River and Kellogg Lake that are not currently available in the subject location and cannot be provided elsewhere.

The rusticated ashlar stone formliner used on the Lake Rd abutment wall, the integration of public art with the light rail station design, and the provision of stormwater plantings at the base of the wall add visual interest at the pedestrian level south of the station. The construction of a bicycle plaza, the rusticated ashlar stone textured retaining wall, the use of decorative railings to guide pedestrians to the northern entrance, and the installation of landscaping adjacent to Adams St add visual interest at the pedestrian level north of the station.

[4] TriMet, in consultation with the Citizens for Accessible Transportation Committee, determined that the ramping distance needed to provide universal access to the south end of the station was longer than the distance between Lake Rd and the universal access at the north end of the station.

The use of materials and finishes with depth and texture, traditional materials such as concrete texturized with rusticated stone formliners, weathering steel, and “Milwaukie black” fixtures provide a sense of permanence and quality and respect the City’s urban design aspirations.

The Milwaukie standard lighting on the access stairs and cantilevered platform contributes to the overall detailed design of the southern access, and the lighting under the Lake Rd jump span articulates the bridge design, creates interesting visual effects, and adds a measure of safety and comfort for pedestrians.

Overall, the light rail station appears to meet the intent and spirit of the Milwaukie Downtown Design Guidelines; however, some refinements are needed with respect to the pedestrian experience at the station to ensure compliance. To that end, staff has recommended a condition of approval specific to seating, which is incorporated into Attachment 2.

KEY ISSUES

Summary

Staff has identified the following key issues for the Planning Commission’s deliberation. Aspects of the proposal that are described in the analysis below are addressed in the Findings (see Attachment 1) because they either require less analysis and discretion by the Commission or have already been vetted by the DLC.

A. Does the jump span lighting proposal meet the condition of approval of WG-11-01 (Kellogg Bridge)?

B. Does the station design meet the applicable Design Guidelines and criteria for modification of a Design Standard?

C. Does the station design meet the Downtown Design Guidelines related to the pedestrian environment?

Analysis

A. Does the jump span lighting proposal meet the condition of approval #6 of WG-11-01 (Kellogg Bridge)?

The Planning Commission adopted a condition of approval for WG-11-01 (Kellogg Bridge) related to the jump span lighting. The applicant has provided a memo outlining compliance with the condition of approval (see Attachment 4B) and illustrations of the proposed lighting design (see Attachment 4D).

The DLC reviewed the proposed lighting treatment at its May 23, 2012, design review meeting, and recommended approval of the design. However, a more detailed discussion of the proposal would be beneficial, as the applicant is seeking a Planning Commission determination that this condition of approval is satisfied.

The proposal is intended to create an interesting pattern of lights on the underside of the jump span; it references the pattern of the “botts” to be installed beneath the bridge. From

an urban design standpoint, the lighting proposal is elegant and streamlined and appears to meet the spirit of the condition.

- The applicant has provided additional information regarding how the light interacts with the "ceiling" of the jump span and creates a comfortable, attractive, and safe pedestrian environment. Light will reflect off the walls, roadway, and sidewalks and will create a glow on the ceiling of the space.
- The applicant's exhibits and photometric studies indicate that the fixtures would be linear LED luminaires; would light the area beneath the jump span to an average level of 3.05 foot candles in nighttime conditions; and would provide uniform lighting levels outside of and underneath the jump span, which minimizes glare and deep shadows. A well-lit area with minimal shadows and glare will increase the pedestrian's sense of safety and comfort.
- A total of 42 light fixtures are proposed: 24 linear LED fixtures, which are recessed within the jump span slabs at regular intervals; 16 linear LED wall-wash fixtures surface-mounted at the intersection of the wall and jump span and parallel to the abutment and pier walls; and two linear LED surface-mounted fixtures on the back side of the piers on the south side of Lake Rd. Although the proposed fixtures are modern, their minimal dimensions and recessed installation create a patterned visual effect (as shown in the jump span reflected lighting plan, Exhibit P 5 of the application) and allows the fixtures to be visually subordinate to the jump span design.
- The wall-wash fixtures will be surface mounted with a steel angle shield to hide the fixtures (see Attachment 4G). The steel angle shield will be galvanized to allow it to blend in with the concrete surface and not draw attention to it. The fixtures behind the piers will also be surface-mounted, but are screened from pedestrian view by a 6-in concrete lip where the concrete deck meets the steel tubs at the end of the jump span.

B. Does the bike shelter design meet the applicable Design Guidelines and criteria for modification of design standards?

During review of the submitted materials, staff identified the need for modification to the design standards for roofs in the downtown zones and has initiated the request on behalf of the applicant. Staff did not identify this need prior to the DLC review of this application, and the DLC did not provided a recommendation at the May 23, 2012, design review meeting. Staff is requesting Planning Commission guidance regarding this request.

The downtown design guidelines require that buildings with flat roofs (roofs with a slope of equal to or less than 2:12) include a cornice of at least 6 inches depth and 12 inches in height. The proposed bike shelter includes a cantilevered glass roof, which does not meet the minimum slope for a pitched roof. The applicant has indicated that the roof form is an element of continuity for the light rail system, and staff believes that the proposed roof is integral to the overall design concept of the building, substantially meets the intent of the design standard, and is substantially consistent with the applicable downtown design guidelines. The proposed roof references the Jackson Street bus shelter roofs, which are also cantilevered glass.

The intent of the cornice requirement for flat roofs is to ensure that rooftop mounted mechanical equipment is screened from street-level view, as well as to provide a

decorative visual “cap” to a sheer wall. The proposed structure does not include any roof-mounted mechanical or other equipment, and it is not necessary to hide these components from view.

The proposed cantilevered roof provides the dual function of protecting bicycles from the weather, while allowing for ease of access to the bike racks beneath it, as no corner support columns are needed The proposed roof design is clean and modern, and allows the roof to visually recede. Staff believes that the use of a cornice on the roof would be visually unappealing and inappropriate.

C. Does the station design meet the Downtown Design Guidelines related to the pedestrian environment?

The applicant has identified three public spaces on the site: the platform (including southern stairs and cantilevered access); a bike plaza; and a southerly plaza. As proposed, the platform includes a shelter, benches, leaning rails, TVM shelters, and other transit-related amenities. The bike plaza contains a bike shelter, bike racks, bike lockers, and a site-specific sculpture. The southerly plaza is a landscaped stormwater facility with wide, paved walkways on the north and west sides. See Attachment 3 Exhibit O 6 for illustrations of these areas.

The Downtown Design Guidelines place a strong emphasis on the pedestrian environment and the creation of successful outdoor public spaces. Although three public spaces are proposed for the light rail station site, only the bike plaza and southerly plaza are truly public spaces, available for use by all pedestrians. The platform, while thoughtfully designed for the comfort of transit users, is available only to paying passengers and is not truly “public” space.

The applicant has opted not to provide seating outside of those areas reserved for paying passengers. Staff believes that successful public spaces depend on the presence of people to provide casual surveillance of the space (or “eyes on the street"), create vitality, and connect the space with the adjacent streetscape activities. This is particularly true at the light rail station site, which is a key area of downtown Milwaukie and an anchor for future higher density development in the area.

At the May 23, 2012, DLC design review meeting, staff suggested a condition of approval requiring the installation of seating in the bike plaza. The applicant objected to the condition, arguing that the plaza is too small, its proximity to the rail tracks creates a false sense of security for those who might wait for a train there, and that personal safety and bike thefts are a concern near the bike lockers. The DLC determined that seating in the bike plaza is not appropriate due to safety and space concerns, and recommended approval of the design review application without a proposed condition related to seating.

Staff agrees that the bike plaza, as designed, may not be the most appropriate location for seating. However, staff feels that in order for the light rail station to respond to the downtown pedestrian environment, and for the proposed plazas to fully comply with the Pedestrian Emphasis design guideline, some accommodation should be made for seating or places to rest along the 21st Ave frontage. Such seating should be appropriately located and designed to activate the edges of the site and allow for informal use of these spaces. Staff requests Commission guidance regarding a potential condition of approval related to the provision of public seating on site. See Attachment 2.

CONCLUSIONS

A. Staff recommendation to the Planning Commission is as follows:

Approve the application for the PMLR light rail station with the recommended findings and conditions of approval in Attachments 1 and 2.

CODE AUTHORITY AND DECISION-MAKING PROCESS

The portion of the proposal being considered by the Design and Landmarks Committee (DLC) is subject to the Milwaukie Design Guidelines and the following provisions of the Milwaukie Zoning Ordinance, which is Title 19 of the Milwaukie Municipal Code (MMC).

- Section 19.310 Downtown Zones
- Section 19.904 Conditional Service Uses
- Section 19.907 Downtown Design Review
- Section 19.911 Variances
- Chapter 19.1000 Review Procedures

The Commission has 3 decision-making options as follows:

A. Approve the application subject to the recommended Findings and Conditions of Approval.

B. Approve the application with modified Findings and Conditions of Approval. Any modifications must be read into the record.

C. Continue the hearing to June 26, 2012. The final decision on the application, which includes any appeals to the City Council, must be made by August 25, 2012, in accordance with the Oregon Revised Statutes and the Milwaukie Zoning Ordinance. Unless the applicant extends the time period within which the City must make a decision, a hearing continuation beyond June 26, 2012, is not feasible.

All three applications are subject to Type III review by the Planning Commission at a public hearing. In Type III reviews, the Planning Commission considers the DLC recommendation on the Design Review application, assesses all three applications against all applicable provisions of the Milwaukie Zoning Ordinance, and evaluates testimony and evidence received at the public hearing.

COMMENTS

The application was referred for comment to the following agencies and persons: City of Milwaukie Building, Engineering, and Community Development Departments; Clackamas County Fire District #1; Clackamas County; Metro; TriMet; and Oregon Department of Transportation.

It was also forwarded to the Historic Milwaukie and Island Station Neighborhood District Associations, and public copies were made available at City Hall, Ledding Library, and the Planning Department. Additionally, the Community Services Department advertised design review meeting and public hearing on the application through direct e-mailings and the City's PMLR project website.

The following is a summary of the comments received by the City on or before June 5, 2012. Any additional comments received after this date but before the June 12, 2012, public hearing will be brought to the meeting. See Attachment 5 for further details.

- **Tom Larsen, City of Milwaukie Building Official:** Any construction on the site must comply with the applicable Oregon Specialty Codes as adopted by the City of Milwaukie.

  Staff Response: This comment has been incorporated into the Findings.

- **Zach Weigel, City of Milwaukie Civil Engineer:** Advisory notes regarding requirements at the time of development permit submittal.

  Staff Response: This comment has been incorporated into the Findings.

- **Kenny Asher and Wendy Hemmen, City of Milwaukie, Light Rail Design Team:** Believe that TriMet has incorporated all of the City staff's design suggestions into the final station design, specifically requests such as stair access from Lake Rd.

ATTACHMENTS

Attachments are provided only to the Planning Commission unless noted as being attached. All material is available for viewing upon request.

1. Recommended Findings in Support of Approval (attached)
2. Recommended Conditions of Approval (attached)
3. Draft minutes of the May 23, 2012, Design Review Meeting
4. Applicant's Narrative and Supporting Documentation, received April 26, 2012 (attached)
   A. Narrative
   B. Memo from applicant to City staff regarding jump span lighting, dated April 15, 2012
   C. Exhibits O – P (Illustrations)
   D. Exhibit T (Architectural Plans)
   E. Railing detail, received May 7, 2012
   F. East side retaining wall detail, received May 10, 2012
   G. Jump span light shield detail, received May 16, 2012
5. Comments Received (attached)
6. Exhibits List

Recommended Findings in Support of Approval

1. The applicant, Jeff Joslin, KLK Consulting, Inc, for TriMet, submitted three land use applications (the "application") for approval of a light rail station as part of the Portland Milwaukie Light Rail (PMLR) project. The applicant requests approval for the station design. The application has been assigned the following file numbers and consists of the following application types:

   - CSU-12-03: Community Service Use
   - DR-12-04: Design Review
   - VR-12-02: Variance Review

2. The PMLR alignment, which includes the location of specific project elements such as the light rail station, has an existing land use approval that was issued by Metro in 2008.[1] This land use final order (LUFO) was made pursuant to House Bill 3478 (1996), which provides for the review and siting of regional transportation facilities through local jurisdictions. The City may subject the light rail station to reasonable and necessary conditions of approval to ensure conformance with local standards and appropriate mitigation of local impacts. It cannot, however, condition the approval of the bridge in such a way as to prevent the implementation of the 2008 LUFO.

3. The station site is approximately 1.1 ac, consisting of 11300 SE 21st Ave (Tax Lot 11E36BC03300, 0.16 ac), and the Union Pacific Railroad property to the west of the site (Tax Lot 11E36BCRAILS, 0.94 ac). The site is developed with a paved area in the northwest corner, rail track along the western lot line, and a surface parking lot in the southeast corner. TriMet has eminent domain authority and is in the process of purchasing portions of the sites listed above and/or acquiring the necessary easements to construct the light rail station.

4. The proposal includes the following elements:

   - Kellogg Bridge jump span lighting
   - Light rail platform and fixtures
   - Pedestrian connections to the north and south
   - On-site retaining walls
   - Bike plaza

   Though the light rail station is utilitarian in purpose—and contains all of the necessary elements to carry out its function (e.g. OCS poles, safety railings, TVM shelters)—it has been thoughtfully designed by a team of architects and urban designers to fit into the existing fabric of downtown Milwaukie. The scale of the station is appropriate for the site and for south downtown.

5. The application was submitted on March 27, 2012. It was initially deemed incomplete by City staff on April 6, 2012. The applicant revised and resubmitted the application on April 26, 2012, and the City deemed the application complete on April 27, 2012. The City has until August 25, 2012, to issue a final decision on the application.

6. The light rail station site has a base zone designation of Downtown Office (DO). A small portion of the site (i.e. the southern end of the station) is within 100 ft of the Kellogg Lake

[1] Metro Resolution No. 08-3964 entitled 2008 South/North Land Use Final Order (LUFO) Amendment.

habitat conservation and water quality resource areas. As proposed, the light rail station is subject to Design Review, Community Service Use review, and Variance Review.

7. The application is further subject to the following at or before the time of development permit submittal:

   A. Natural resource review, specifically submittal of a Construction Management Plan pursuant to MMC Section 19.402.9. The purpose of this review is to verify that measures will be established on the subject property to protect adjacent natural resource areas.

   B. Development Review pursuant to MMC Section 19.906. The purpose of Development Review is to ensure compliance with applicable standards and conditions of approval through an efficient review process that effectively coordinates the City's land use and development permit review functions.

8. The Design and Landmarks Committee (DLC) evaluated the Design Review application (DR-12-04) on May 23, 2012, pursuant to MMC 19.1011 Design Review Meetings. The DLC recommended that the Planning Commission adopt Finding 14 as the findings of approval for the light rail station Design Review application. Staff proposed the addition of Condition 1.B.i related to the Downtown Design Guidelines for Planning Commission review.

9. The Planning Commission (PC) evaluated the entire application at a public hearing on June 12, 2012, pursuant to MMC Section 19.1006 Type III Review.

10. The May 23, 2012, DLC design review meeting and the June 12, 2012, PC public hearing on the application were properly noticed through direct mailings and sign postings pursuant to Milwaukie Municipal Code (MMC) Subsection 19.1006.3 Type III Public Notice and MMC Subsection 19.1011.2. Design Review Meeting Notice Requirements.

11. The application was referred for comment to the following City departments and agencies: City of Milwaukie Engineering, Building, and Community Development Departments; Clackamas County Fire District #1; Oregon Department of Transportation; Clackamas County, Metro, and TriMet. It was also forwarded to the Historic Milwaukie and Island Station Neighborhood District Associations, and public copies were made available at City Hall, Ledding Library, and the Planning Department. Additionally, the Community Services Department broadly advertised the DLC's design review meeting and the PC's public hearing on the application at various public forums, such as the Milwaukie Farmers Market, and through direct e-mailings and the City's PMLR project website.

    Three written comments, from the City of Milwaukie Building and Engineering Departments and the City's light rail design team, were received by the City prior to June 12, 2012. Additionally, one person testified at the May 23, 2012, DLC design review meeting. All verbal and written comments are summarized in and/or attached to the June 12, 2012, PC staff report.

12. The application is subject to the Milwaukie Design Guidelines and the following provisions of the Milwaukie Zoning Ordinance, which is Title 19 of the Milwaukie Municipal Code (MMC):

    - Section 19.310 Downtown Zones
    - Section 19.904 Community Service Use

- Section 19.907 Downtown Design Review
- Section 19.911 Variance Review
- Chapter 19.1000 Review Procedures

Provisions not addressed in these findings are found to be not applicable to the decision on the application.

13. MMC Subsection 19.904.4 contains the approval criteria for community service use (CSU) applications. An application for a CSU may be allowed if the following criteria are met:

A. The building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone are met. Where a specific standard is not proposed in the CSU, the standards of the underlying zone are met.

The proposed use is for a light rail station, which subject to the Community Service Use standards as a Utility – Passenger Terminal. The proposed structures require a variance to the setback and FAR standards of the DO zone; other development and design standards are met. Per land use file #P-12-02,[2] no off-street parking is required on the site, and at least 24 bicycle parking spaces will be provided on site.

The Planning Commission finds, with the approval of variances to the setback and FAR standards, that this criterion is met.

B. Specific standards for the proposed uses as found in Subsections 19.904.7-11 are met.

The only two applicable standards pertain to site improvements and lighting. Subsection 19.904.9.A requires that utilities, streets, or other improvements necessary for the use shall be provided by the agency constructing the use. Subsection 19.904.9.F requires that lighting shall be designed to avoid glare on adjacent residential uses and public streets.

Pedestrian access to the light rail station is from Adams St, Lake Rd, and 21st Ave. Although not required by this particular development, the applicant proposes to improve the public right-of-way adjacent to the station and underground adjacent utilities as part of the PMLR project. Temporary utilities for staging and construction proposed, including power and water, will be removed upon completion of construction.

Lighting on the site has been located and shielded to ensure that light is directed downward and does not impact residences and public streets.

As conditioned, the Planning Commission finds that this criterion is met.

C. The hours and levels of operation of the proposed use are reasonably compatible with surrounding uses.

The light rail station is part of a regional transportation network; the hours and levels of use of the station area are tied to the operations of the system, which respond to the needs of system users. Trains will be active at 10-30 minute

[2] Parking Quantity Determination request; decision issued April 17, 2012.

intervals, daily between 5:30am and 1:30am. Currently, the surrounding uses are primarily daytime commercial and office uses, with the exception of the adjacent heavy rail track. However, the desired future uses in the area, as supported by the DO zone and the 2011 South Downtown Concept Plan, are 24-hour active uses. The hours and levels of operation of the light rail station are reasonably compatible with both current and anticipated surrounding uses.

The Planning Commission finds that this criterion is met.

D. The public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood.

The public benefits resulting from development of the PMLR project are expected to be substantial, both locally and regionally. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development. Additionally, locating the light rail station on a vacant site adjacent to existing freight rail tracks minimizes the impact to adjacent properties and asks as a catalyst for transit oriented development in the south downtown area.

Potential negative impacts include noise and vibration, visual impacts, and loss of existing off-street parking. Noise and vibration impacts to individual properties will be mitigated according to the Federal Transit Authority (FTA) rules and guidelines. Visual impacts have been mitigated by the downtown design review process. The loss of off-street parking will be mitigated by improved pedestrian and bicycle facilities on Adams St, 21st Ave, and Lake Rd, as well as by the expansion of transit options between downtown Milwaukie and downtown Portland.

The Planning Commission finds that this criterion is met.

E. The location is appropriate for the type of use proposed.

The location of the light rail station is consistent with the preferred station location and Locally Preferred Alternative (LPA) alignment adopted by City Council in 2008,[3] as well as the South Downtown Concept Plan adopted by City Council in 2011.[4] Additionally, the location of the station was vetted through the Final Environmental Impact Statement (FEIS) process, which reviewed the impacts of the alignment on the downtown Milwaukie area.

The location of the station on a vacant site adjacent to the existing freight rail minimizes the disruption of existing uses; additionally, the location of the station in the south downtown area supports the City's plans for adjacent development.

The Planning Commission finds that this criterion is met.

14. MMC 19.907 establishes the approval criteria for design review applications and the process for modifications to the downtown design standards.

[3] Light rail station location adopted by Res. 51, 2008. LPA adopted by Res. 69-2008.
[4] Res. 82-2011.

A. MMC 19.907.7 contains the approval criteria for design review applications. The approval authority may approve, approve with conditions, or deny a design review application based on the following criteria:

i) Compliance with Title 19 Zoning Ordinance.

The development standards for the DO zone are located in MMC 19.310.4. The applicable standards pertain to setbacks and floor area ratio (FAR). MMC 19.310.4.2 requires that new buildings have a minimum floor area ratio (FAR) of 0.5:1. The applicant is proposing structures with an FAR of 0:0, and has requested a variance to this standard (see Finding 15.B). MMC 19.310.4.5 establishes a minimum street setback of 0 ft and a maximum street setback of 10 ft. The applicant is proposing structures that are set back further than 10 ft from 21st Ave and Lake Rd, and has requested a variance to this standard (see Finding 15.B).

The design standards for the DO zone are located in MMC 19.310.6. The applicable standards pertain to wall materials and roofs. MMC 19.310.6.C.2 contains the design standards for walls. The applicant is not proposing any wall-mounted mechanical equipment or any prohibited wall materials. MMC 19.320.6.C.4 contains design standards for roofs. The applicant is proposing a building with a flat roof, and has requested a modification to this standard.

As conditioned and with the approval of the requested variance and modification, the Planning Commission finds that the proposal complies with the applicable standards of the zoning ordinance and that this criterion is met.

ii) Substantial consistency with the Downtown Design Guidelines

Refer to Table 1 below for detailed findings pertaining to this approval criterion.

As conditioned, the Planning Commission finds that the proposal is substantially consistent with the Downtown Design Guidelines and that this approval criterion is met.

iii) Submittal of a complete application and applicable fee as adopted by the City Council.

The applicant submitted a revised application on April 26, 2012, and requested that the City deem the application complete. The applicable design review application fee was paid March 27, 2012.

The Planning Commission finds that this approval criterion is met.

B. MMC 19.907.10 establishes the process and criteria for modifications to the design standards. This section requires that the requested modification be integral to the overall design concept of the building; substantially meets the intent of the design standard either individually or in combination with other design elements of the project; and is substantially consistent with the relevant Downtown Design Guidelines.

The applicant has proposed the establishment of a bike shelter in the bike plaza. The bike shelter is considered a building by the City's zoning ordinance, and is subject to the design standards of MMC 19.310.6. The DO zone requires that all

flat roofs include a cornice of at least 6 in deep and 12 in high. Although the proposed bike shelter roof has a slight slope, it is considered flat, and it does not include a cornice. Therefore, a modification to the design standards for roofs is required.

The requested modification would allow for the use of a flat, cantilevered glass roof on the bike shelter building. The flat roof design is clean and modern, and allows the roof to visually recede. The use of a cornice on the roof would be visually unappealing and inappropriate.

The intent of the design standard, in combination with the architectural design guideline regarding roofs, is to ensure that rooftop mounted mechanical equipment is screened from street-level view. The proposed structure does not include any roof-mounted mechanical or other equipment, and it is not necessary to hide these components from view.

Finally, the building design and overall station design, as conditioned, are substantially consistent with the applicable Downtown Design Guidelines as outlined in Table 1, which include “Define the Pedestrian Environment”; “Protect the Pedestrian from the Elements”; and “Silhouette and Roofline.”

15. MMC 19.911 establishes the process and criteria for requests for variances from specific code provisions.

The applicant has proposed the development of a light rail station that contains several unenclosed structures at various distances from the property lines. The DO zone requires a minimum floor area ratio (FAR) of 0.5:1 as part of any development. As proposed, the station structures do not contain floor area, and the FAR is 0:0. The DO zone also requires that structures be set back a maximum of 10 ft from adjacent streets, to provide a sense of enclosure along street frontages. As proposed, the platform and related structures are set back more than 10 ft from both 21st Ave and Lake Rd. Therefore, variances to the minimum FAR standard and maximum setback standard are required.

A. MMC 19.911.3 establishes the review process for variances. MMC 19.911.3.B lists Type II variances for some limited variations to numerical standards.

There is no Type II variance for the minimum FAR, and the numerical variance to the maximum setbacks exceeds that allowed through Type II review. Therefore, the Planning Commission finds that the proposed development is subject to the Type III variance procedure as per MMC 19.911.3.C.

B. MMC 19.911.4 provides the approval criteria for variances. Specifically, MMC 19.911.4.B.1 provides discretionary relief criteria for approving Type III variances.

i. MMC 19.911.4.B.1.a requires an alternatives analysis of the impacts and benefits of the variance proposal as compared to the baseline code.

a. Setbacks

The DO zone requires a minimum setback of 0 ft and a maximum setback of 10 ft. As proposed, the station platform and shelters will be set back further than 10 ft from 21st Ave and Lake Rd.

The purpose of the DO setback standards is to create connections between buildings and the street as well as a sense of enclosure for pedestrians.

The proposed setbacks from Lake Rd exceed the baseline standards in order to allow for pedestrian access from Lake Rd via the stairs and cantilevered platform. This access is necessary to provide connectivity between the south end of the station, the future Kellogg Bridge pedestrian access, Dogwood Park, and the future Main Street plaza.

The proposed platform and structure setbacks from 21st Ave address baseline standards to: 1) allow for parallel alignment of and minimum required separation between the LRT tracks and the existing heavy rail track; 2) allow the station platform to be located adjacent the LRT tracks in a manner that provides level boarding of trains: 3) reduce disturbance and impact to surrounding properties; and 4) provide adequate safe stopping distance for northbound trains approaching the Adams St and 21st Ave intersection.

Locating the station platform boarding area closer to the intersection would pose a significant safety risk to pedestrians and vehicles in the event of a train overrun at the platform. Additionally, the proposed setbacks accommodate future development of the 21st Ave frontage of the site.

Prior to completion of the PMLR project, TriMet will adjust the property boundaries of the site to allow development of a station building. A variance to this standard will accommodate the needed light rail station components while preserving the 21st Ave street frontage for a future station building as outlined in the 2011 Memorandum of Understanding (MOU) between the City and TriMet.[5]

b. Floor Area Ratio

The purpose of the FAR standard is to direct more intense forms of development to appropriate areas of downtown. The DO zone requires a minimum FAR of 0.5:1, or 0.5 sq ft of floor area for every 1 sq ft of site area. The proposed structures are not enclosed and provide an FAR of 0:0.

Construction of buildings that would meet the FAR standards would preclude the use of the site for its primary function as a light rail station platform. As proposed, the development and layout of the station preserves a large area of the site for future development along the 21st Ave frontage. It is anticipated that the future development will provide the intensity of use desired in the DO zone.

ii. MMC 19.911.4.B.1.b requires that the requested variance be both reasonable and appropriate and meet at least one of three criteria related to (1) minimizing impacts to surrounding properties, (2) providing desirable public benefits, and (3) responding to the existing built or natural environment in a creative and sensitive manner.

[5] Res. 81-2011, adopted by City Council on September 6, 2011.

a. Setbacks

The requested variance to the setback standard allows the design to respond to the grade change of the site by providing a stair access from the south, provides the opportunity to divide the site in the future, and allows for future development of a station building on the site. The station design responds to the significant grade changes on site (approximately 10 ft on the south end) by including retaining walls and preserving a flat, generally rectilinear development site.

b. Floor Area Ratio

The requested variance to the FAR standard will allow minimal development of the site with the proposed glass-roofed structures, preserving sight lines into and through the shelters from adjacent streets, providing a benefit to transit users. Additionally, the use of open structures on the site minimizes visual impacts to adjacent properties.

iii. MMC 19.911.4.B.1.c requires mitigation of impacts from the requested variance to the extent possible.

a. Setbacks

A potential impact of the variance is the lack of structures placed close enough to the street to create a sense of enclosure along 21st Ave. The site layout mitigates this impact by preserving an area for future development of a station building on the site, which will be required to meet setback standards. The placement of bicycle facilities, public art, and on-site landscaping areas near 21st Ave anticipates the future development of the site.

b. Floor Area Ratio

A potential impact of the variance is the lack of enclosed, active buildings on the site in the near term. This impact will be mitigated by the future development of a station building on the site in accordance with the 2011 MOU between the City and TriMet.

The Planning Commission finds that the proposed development is reasonable and appropriate and the criteria of both MMC 19.911.4.B.1.b(1) and b(2) are met.

The Planning Commission approves the requested variances to the setback and FAR standards established in MMC 19.310.4.2 and 5.

16. Pursuant to Subsection 19.1001.7.E.2, the time period within which the applicant must obtain development permits for the light rail station is 2 years, and the time period within which the applicant must pass all final inspections is 4 years, from the date of the land use decision on this application.

Table 1: Design Review Findings

MILWAUKIE CHARACTER GUIDELINES	
Applicant Information	**Recommended Findings**
a. Reinforce Milwaukie's Sense of Place = Strengthen the qualities and characteristics that make Milwaukie a unique place.	
The station area, by making a visual connection to Kellogg Lake and Kronberg Park, provides new and unique views to those areas, and celebrates those spaces. The design of the station also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, artistic representation, sympathetic materials and colors, incorporated landscape, and environmental art pieces. Landscape plantings on site have been designed to provide visual interest and uniqueness to the city. Careful consideration has been given to the planting palate to select unique foliage textures, colors, and flowers so that these planted spaces will help extend the existing character and uniqueness of this area while adding to planting diversity. All plants selected for use in stormwater planters meet city standards for these types of facilities and will tolerate periods of inundation. Dogwood trees have been located in areas where appropriate and street tree species have been selected in accordance with the CoM downtown master plan for street trees. The guideline is met.	The overall design of the light rail station reinforces Milwaukie's sense of place as a small town with a long history of rail activity both in the form of freight rail (e.g. Union Pacific Railroad) and local and regional passenger rail (e.g. Portland Traction Company and Amtrak). As proposed, the light rail station respects Milwaukie's sense of place by emphasizing special relationships at the pedestrian level through detailing of abutment walls, the use of ornamental railings to guide pedestrians to the station, and the use of landscaping to soften the visual impact of concrete on the site. The cumulative effect of upgrading the elements on the site is a reduction of visual clutter. Additionally, the use of uncluttered design, simple detailing, a subdued palette of materials, station-specific fixtures in "Milwaukie black," and integration of stormwater plantings and public art into the site, and the graceful transition between the station and Lake Rd and nearby natural areas enhance Milwaukie's small town urban character. *The proposal meets this guideline.*
b. Integrate the Environment = Building design should build upon environmental assets.	
The design of the station area, respects the character of the nearby natural area through simple detailing, material selection, and landscaped areas. The cantilevered platform access to the south will afford unique views to the environmental assets of Kellogg Lake and Kronberg Park, as well as to the Willamette River and hills beyond. Removal of invasive plants currently on the vacant site, and landscaping with appropriate replacements, will further enhance the immediate environmental quality. The inclusion of a water quality facility, where art is used to both highlight and celebrate stormwater, raises awareness of water quality at Kellogg Lake, south of the station, and the Willamette River to the west. The art is reflective of a waterfall and natural streambed. In addition, access and circulation patterns to the station facilitate enhanced pedestrian connections to existing parks and natural areas.	As proposed, the design of the station respects the character of the Kellogg Lake natural area through its integration of stormwater plantings into the site design and provision of pedestrian access to Lake Rd, Dogwood Park, and the future Kellogg Lake pedestrian bridge. The cantilevered platform access provides view opportunities to Dogwood Park, Kellogg Lake, and Kronberg Park. Additionally, the public art installation at the south end of the station provides an opportunity to view water as it moves through the terraced stormwater plantings, underneath the cantilevered platform access, and down a granite waterfall sculpture; the movement of the water allows for interaction with the sculpture. *The proposal meets this guideline.*

Though the station does not consist of, or include, a building, the guideline is met.	
c. Promote Linkages to Horticultural Heritage = Celebrate Milwaukie's heritage of beautiful green spaces.	
The station area, by making a visual connection to Kellogg Lake and Kronberg Park, provides new and unique views to those areas, and celebrates those spaces. The design of the station also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, artistic representation, sympathetic materials and colors, incorporated landscape, and environmental art pieces. Landscape plantings on site have been designed to provide visual interest and uniqueness to the city. Careful consideration has been given to the planting palate to select unique foliage textures, colors, and flowers so that these planted spaces will help extend the existing character and uniqueness of this area while adding to planting diversity. All plants selected for use in stormwater planters meet city standards for these types of facilities and will tolerate periods of inundation. Dogwood trees have been located in areas where appropriate and street tree species have been selected in accordance with the CoM downtown master plan for street trees. The guideline is met.	As proposed, the design of the station respect's Milwaukie's heritage of green spaces through integration of stormwater plantings throughout the site, construction of a stormwater facility in the southeast corner of the site, a variety of landscaping to the east of the southbound light rail track, and installation of dogwood trees and shrubs to the west of the rail track. The "mill stone" sculpture references Milwaukie's horticultural heritage by incorporating Milwaukie's history as a center for flour production. *The proposal meets this guideline.*
d. Establish or Strengthen Gateways = Projects should use arches, pylons, arbors, or other transitions to mark special or primary entries and/or borders between public and private spaces.	
The carefully designed station platform is accentuated on all sides by railings with openings at designated safe entry points. The 42" high metal railings with historic Milwaukie motif demarcate the site and guide users to designated entry points. These access points are marked by small glass roofed shelters that house the Ticket vending machines. Signage and inlaid bronze lettering at the base of the ramps to the platform further delineate the threshold to the station area. The cantilevered platform access also serves as a promontory, connecting the station visually to public and private spaces beyond. The stone-patterned abutment walls, patterned masonry, landscaped plazas, unique Milwaukie-specific ornamental handrails, street enhancements, and public art; all serve to transition gracefully between the public station area and the surrounding private areas and properties. The guideline is met.	As proposed, the jump span over Lake Rd , along with the abutment wall and support columns on either side, create a unique passageway through which drivers, bicyclists, and pedestrians can travel. Though not designed with this purpose in mind, this passageway serves as a sort of a gateway into the south downtown area and to the future Main Street plaza. Specific design features of this passageway are evaluated under other guidelines. The northern access to the platform is a gateway a between the public street and the light rail platform. The transition is marked through a combination of a crescent shaped sidewalk connecting the station to Adams St and 21st Ave, ornamental railings, cobbled surface texture, signage, and TVM shelters and textured paving at the station entrance The southern gateway to the platform from Lake Rd is marked by integrated public art and stormwater plantings flanking the entrance to the stairs, terraced

	stormwater plantings adjacent to the stairs, ornamental railings, Milwaukie standard street lights on the landing and platform, signage, and TVM shelters and textured pavement at the platform entrance. *The proposal meets this guideline.*
e. Consider View Opportunities = Building designs should maximize views of natural features or public spaces.	
The station platform and platform access will result in new and very different viewpoints of Kellogg Lake, Kronberg Park, and views to the river and Greenway beyond, for the many passengers riding it each day. The plazas include seating, which allows viewing from, and between, these new public spaces. Though the project does not include building design, to the extent it is applicable, the guideline is met.	As proposed, neither the southerly plaza nor the bike plaza contains seating. As conditioned, seating will be included along the 21st Ave frontage, and will be appropriately located and designed to activate the edges of the site and allow for informal use of these spaces. The cantilevered platform access of the light rail station provides passengers with unique views of Dogwood Park, Kronberg Park, Kellogg Lake, and the Willamette River to the west that are not currently available by any other means. *The proposal meets this guideline.*
f. Consider Context = A building should strengthen and enhance the characteristics of its setting, or at least maintain key unifying patterns.	
No buildings are proposed as part of the station application.	*This guideline is not applicable.*
g. Promote Architectural Compatibility = Buildings should be "good neighbors." They should be compatible with surrounding buildings by avoiding disruptive excesses. New buildings should not attempt to be the center of attention.	
No buildings are proposed as part of the station application.	*This guideline is not applicable.*
h. Preserve Historic Buildings = Historic building renovation, restoration, or additions should respect the original structure.	
No historic buildings are proposed to be renovated, restored, or expanded as part of the station application.	*This guideline is not applicable.*
i. Use Architectural Contrast Wisely = Contrast is essential to creating an interesting urban environment. Used wisely, contrast can provide focus and drama, announce a socially significant use, help define an area, and clarify how the downtown is organized.	
The use of Milwaukie Black is proposed on all street elements and railings. However certain elements of the station shelters and the light poles are proposed as a bead blasted stainless steel. While this aligns with TriMet standards, the design offers an interesting contrast to the black to accentuate the platform area. When combined with the glass roof of the shelters, artwork, and railing design, the platform becomes a	As proposed, the design of the light rail station uses contrast in an intentional and thoughtful manner throughout. • Streetscape elements and railings and most platform fixtures will be finished in "Milwaukie black." Platform light poles, TVM bases, bench surfaces, and the base of the shelter will be finished in bead blasted stainless steel. These

distinctive community amenity that is still easily recognized as part of the Light rail system. The simple detailing of the abutment wall, landscape plantings, and stairs along Lake Road add dramatic elements that will pronounce permanence and welcoming appropriate to this significant public work. The small public plazas - with associated landscaping, surface treatments, and furniture – will further serve to define the site as a public amenity, while providing a graceful transition between the neighborhood and the platform area. The south platform access, serving as a promontory overlooking Kellogg Lake and Kronberg Park, will further pronounce the station's public purpose in a dramatic-yet-integrated manner. The guideline is met.	elements create interest in the station composition and create a distinctive "Milwaukie" feel. • The textured surfaces of the pre-cast concrete abutment wall (north side of Lake Rd) for the southern access contrast with the smooth weathering steel face of the Kellogg Bridge jump span and terraced stormwater planting surfaces. • The design of the jump span and abutment wall on the north side of Lake Rd is rusticated and textured. The design of the jump span lighting is contemporary and creates interesting visual effects in contrast with the surrounding materials. *The proposal meets this guideline.*
j. Integrate Art = Public art should be used sparingly. It should not overwhelm outdoor spaces or render buildings mere backdrops. When used, public art should be integrated into the design of the building or public open space.	
TriMet's public art program installs a variety of artwork at locations along its light rail lines. The art is developed to be sensitively integrated, and specifically respectful of this guideline. The art has been vetted through the Public Art Advisory Committee, with input from the committed Milwaukie public and respective City Commissions in order to ensure the result is appropriate and contributory. The station art consists of two "milling wheels" at the north end near the bike shelters, carved "tree" columns under the station shelter, and a carved streambed and waterfall at the south end, included as part of the storm water treatment landscaping. These respective art elements are highly specific to the site, tied thematically to Milwaukie heritage. To the extent this guideline is applicable, it is met.	The proposal includes public art work in three locations on the station site: bicycle plaza at the north end; the platform shelter; and the southern platform entrance. The art elements are professionally designed by Brian Goldbloom and are site-specific. The "millstone" art at the northern entrance references both a previous mill building on the site and the city's early prosperity in the milling industry; the integrated station shelter "tree" columns reference the city's strong connection to lumber milling; and the carved streambed and waterfall at the southern entrance references the community's natural areas and the station's proximity to Kellogg Lake. TriMet has convened a Public Art Advisory Committee (PAAC) as part of the Portland Milwaukie Light Rail project. The PAAC is a citizen committee charged with artist selection and final review and approval of all art concepts along the alignment. It has representatives from along the entire alignment including several from the Milwaukie and Oak Grove areas. *The proposal meets this guideline.*

PEDESTRIAN EMPHASIS GUIDELINES

Applicant Information	Recommended Findings
a. Reinforce and Enhance the Pedestrian System = Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminated, so that the pedestrian is the priority in all development projects.	

The station area preserves existing pedestrian paths, and creates a number of additional and well-defined new paths. The sidewalk along SE 21st will be widened to 16' to improve circulation. Pedestrian scaled lighting will be introduced. There are specifically introduced guardrails and signal control devices designed to guide pedestrian movement, protecting the pedestrian from grade changes and allowing track crossings at appropriate and safe locations. These features combine to enhance the focus on the pedestrian as the priority. A universal primary access is provided at the north end of the station, which provides direction connections to the Bus transfers at 21st and Washington, as well as the adjacent high school, businesses, and new and existing pedestrian amenities along the streets. In addition, Stairs from Lake Road are used to overcome significant grade differences, to introduce a secondary pedestrian pathway to the station. Guard and hand Rails throughout the project area are designed in a manner that provides paths and visual cues to move them safely and efficiently about the site. All associated elements maintain a high degree of quality and craftsmanship. These areas are well lit and avoid obstructions, further prioritizing the pedestrian. Overall, the project results in a well-defined visual attraction that will enhance the pedestrian experience. The guideline is met.	As proposed, the light rail station does not introduce any new barriers to pedestrian movement. As conceptualized in the South Downtown Concept Plan, pedestrian access to the north entrance is via a crescent shaped sidewalk connecting 21st Ave and Adams St to the station. While this route is somewhat indirect, the shape and location of the access walk is necessitated by the need to guide pedestrians safely across three sets of tracks. Pedestrians are guided across the tracks via a system of ornamental railings, textured pavement, landscaping, and visual cues. Stairs at the south end of the station overcome significant grade differences and introduce a secondary pedestrian pathway to the station from Lake Rd and 21st Ave. As proposed, the pedestrian experience is enhanced by the introduction of new pedestrian pathways between Lake Rd and 21st Ave and the station, and the provision of a safe route to the north end of the station. *The proposal meets this guideline.*
b. Define the Pedestrian Environment = Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.	
The station platform and shelters are modest in scale. The shelters, paving materials, wall materials, guardrail designs, landscaping, plazas, and associated furniture all contribute to the variety and richness of the area. Along Lake Road, the masonry abutment walls are patterned to a pedestrian scale. Highly detailed and integrated stair and rails enhance this portion of the public realm. The views to and from the cantilevered platform access further add to the richness and enhancement of the public realm. This guideline is met.	As proposed, the light rail station introduces human-scaled design treatments where the station intersects with the pedestrian environment. • The station structures are modest in scale. The overall quality of design including detailing of the paving materials and wall materials; the use of ornamental railings to guide pedestrians to the station and platform; and landscaping throughout the site enhance the pedestrian experience. • The southern stair access incorporates public art, textured wall surfaces, street-level plantings, ornamental railings, terraced stormwater facilities, weathering steel finishes, and traditional-style lights. The quality of the design and the progression and layering of the elements (landscaping, railings, light fixtures) along the stairs add variety and richness to the pedestrian experience. • The proposed jump span lighting provides visual

	interest and uniform lighting of the area beneath the jump span. The lighting design provides for a comfortable, attractive, and safe pedestrian environment. *The proposal meets this guideline.*
c. Protect the Pedestrian from the Elements = Protect pedestrians from wind, sun, and rain.	
The station shelter designs provide windscreens with integrated benches, and a widened roof to protect pedestrians from wind and rain. The glass roof is coated for UV protection from the sun. TVM shelters are also provided as shelter for patrons while purchasing fare. The guideline is met.	As proposed, the light rail station contains several structures designed to protect passengers from the elements: the station platform, bike shelter, and TVM shelters. The platform shelter provides windscreens, integrated benches, and UV coating of the roof for protection from the sun. The bike shelter provides a covered area to lock up a bike. The TVMs on site include glass overhangs to protect passengers while purchasing their fares. *The proposal meets this guideline.*
d. Provide Places for Stopping and Viewing = Provide safe, comfortable places where people can stop to sit and rest, meet and visit with each other, and otherwise enjoy the downtown surroundings.	
The station and TVM shelters will provide places to gather sheltered from the weather, and the station platform includes benches. Additional city standard benches are provided on Adams near the proposed bike locker amenities. The introduction of plazas around the station area will provide places to meet as well. The integrated art areas will certainly become landmarks for meeting up with others, as well as an opportunity to enjoy the art in its own right. The guideline is met.	As proposed, the light rail station contains three public spaces, and two spaces that are open to the public (e.g. are not restricted to paying passengers): the bike plaza and southerly plaza. The cantilevered platform access provides a unique view of Kellogg Lake, Dogwood Park, and the Willamette River. Passengers and members of the public can view the natural areas to the south, as well as the public art at this location. The bike plaza provides bicycle parking and pedestrian access to the station from the north. A prominent public art piece is located in the plaza. The southerly plaza is a landscaped stormwater facility. As proposed, the southerly plaza functions as a landscaped area and the bike plaza functions primarily as a bicycle storage area. As conditioned, the site provides safe, comfortable places for people to stop and view their surroundings. *As conditioned, the proposal complies with this guideline.*
e. Create Successful Outdoor Spaces = Spaces should be designed for a variety of activities during all hours and seasons.	
The variety and placement of plazas, and the additional gathering areas such as the cantilevered platform access and the station area, results in a flexible layering of spaces that will support various uses during all hours	As proposed, the light rail station includes a bike plaza that is open to the public, includes easily accessible covered bicycle parking, and large-scale public art. It does not contain seating due to its small size and

and all seasons. Art and plaza spaces will provide energy and interest along new paths at all hours. Landscaped areas will change with the seasons. The guideline is met.	because primary function of the plaza is to provide bicycle parking. A sense of enclosure is provided by the textured concrete retaining wall and railings on the west side and street trees on the east side. The plaza is small in scale, and the textured surface of the pre-cast concrete retaining wall is appropriately human-scaled. The plaza is visible from both the street level and from the elevated platform area, is designed for year-round use, and is accessible at all hours. *The proposal meets this guideline.*
f. Integrate Barrier-Free Design = Accommodate handicap access in a manner that is integral to the building and public right-of-way and not designed merely to meet minimum building code standards.	
Tri Met consistently includes exceptional barrier free design in all of its projects. The station is a part of a region wide accessible transportation network, and all elements associated with the project will exceed minimum standards, both technically and aesthetically. The station area provides level boarding for all patrons, and a primary access point that is universal and connects directly to the proposed on-street LIFT space, bus stops at SE 21st and Washington, and existing sidewalk and street networks. While the north end is a stairway, a ramp option was not deemed viable at this location. Given the significant grade changes at the south end of the platform, a ramped access would result in a longer path of travel for patrons, than if they went to the primary access at the north. The TVM landing and connections between the proposed and future platforms provide level access in anticipation of the ADA access from the future building development. In addition, TriMet has vetted the design with the Citizens for Accessible Transportation Committee, a vital resource for determining appropriate accessible station design throughout the Light Rail system. This guideline is met.	ADA access to the light rail station is provided by an at-grade access at the north end of the platform. The access point connects directly to the on-street LIFT space, but stops at SE 21st and Washington, and existing sidewalk and street network. Access from the south is via stairway. Given the significant grade changes at the south end of the platform, TriMet (after discussion with the Citizens for Accessible Transportation Committee) determined that a ramped access would result in a longer path of travel for passengers than accessing the primary access via 21st Ave. Additionally, use of a ramp at this location would preclude future development of a building on the site. The southern stair access is a key feature of the station design, and a ramp at this location would be unnecessary and inappropriate. *The proposal meets this guideline.*

ARCHITECTURE GUIDELINES

Applicant Information	Recommended Findings
a. Corner Doors = Locate entry doors on corners of commercial and retail buildings wherever possible.	
No doors are proposed as part of the station application.	*This guideline is not applicable.*
b. Retail and Commercial Doors = Doors should create an open and inviting atmosphere.	

No doors are proposed as part of the station application.	*This guideline is not applicable.*
c. Residential Doors = Residential front doors should define a friendly transition between the public and the private realm.	
No doors are proposed as part of the station application.	*This guideline is not applicable.*
d. Wall Materials = Use materials that create a sense of permanence.	
TriMet consistently applies the use of long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, bead blasted stainless steel, glass, painted metal, and hardy landscape plants have been selected and utilized in a manner that will ensure that the structure is of a consistent and well maintained quality, both physically and visually for the life of the project. The guideline is met.	As proposed, the abutment walls on Lake Rd, the safety walls to the west of the tracks, and the retaining walls on site are made of concrete and textured with a formliner that resembles a rusticated masonry surface. The textured surface provides depth and substance. *The proposal meets this guideline.*
e. Wall Structure = Use scale defining devices to break up the longitudinal dimensions of buildings, creating a comfortable sense of enclosure by establishing an uninterrupted street edge.	
Shelter structures are highly detailed and articulated, in order to provide comfortable protection and define gathering areas in a way that is pedestrian scaled and finished. Landscape, art, a bike shelter, and street trees, further reinforce the street edge. Although, this guideline applies exclusively to buildings, the guideline is met to the extent applicable.	As proposed, the abutment wall on the north side of Lake Rd is made of pre-cast concrete and textured with a formliner that resembles a rusticated masonry surface; the textured surface creates a unified appearance and visual interest at the pedestrian level. The textured wall surfaces have the appearance of stacked ashlar stone with formliner seams hidden as much as possible, and individual stone dimensions that are proportionally appropriate for the wall surface areas and the pedestrian environment. The wall is articulated and light in color throughout the pedestrian; the exposed smooth concrete at the base of the wall is softened by stormwater plantings. *The proposal meets this guideline.*
f. Retail Windows =Use windows that create an open and inviting atmosphere.	
No retail windows are proposed as part of the station application.	*This guideline is not applicable.*
g. Residential Bay Windows =Provide bays to add variety and visual interest to façade and interesting views and outdoor spaces from the interiors.	
No residential bay windows are proposed as part of the station application.	*This guideline is not applicable.*
h. Silhouette and Roofline = Create interest and detail in silhouette and roofline.	

The rooflines of the shelters will be enhanced both by their form, and by their modulated and fine-scaled detail, whether viewed from across the site, or from down below. The roof material is glass, with structural steel roof supports painted black. The black color allows the structure to recede, yet the transparency of the glass allows the materials to visibly accentuate the roofline. These elements will be further enhanced by the more subtle play of light and shadow and color that will result from the contrast in color and texture This guideline is met.	As proposed, the shelter structures on the site provide the main vertical element of the light rail station both structurally and visually. All of the shelters have glass roofs, with structural steel roof supports. The roof supports, or rafters, of the platform TVM, and bike shelters will be painted "Milwaukie black." The platform shelter has a pitched roof, which relates to traditional train station design. The other shelters have cantilevered glass roofs, which are more contemporary and contrast with the platform shelter. Overall, the variety of silhouettes created a unified, interesting design. *The proposal meets this guideline.*
i. Rooftops = Integrate rooftop elements into building design.	
No rooftops are proposed as part of the station application.	*This guideline is not applicable.*
j. Green Architecture = New construction or building renovation should include sustainable materials and design.	
TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, glass, painted metal and Stainless steel have been designed and detailed in a manner that will ensure that the structures are sustainable with low life cycle costs. The steel elements, as well as the concrete, will include recycled content, and have been structurally designed to be as efficient as possible. LED lights are being utilized for the jump-span lighting, and platform lighting, to provide high efficiency lighting throughout the project. Finally, a majority of the materials are potentially recyclable – most readily the predominant use of steel – should the project ever have an end-of-use. The guideline is met.	As proposed, the light rail station will be constructed of quality, durable materials with low lifecycle costs. The steel elements, as well as the concrete, include recycled content, and have been structurally designed to be as efficient as possible. High-efficiency LED lighting will be utilized for platform and jump span lighting. Finally, a majority of the materials are potentially recyclable should the project ever have an end-of-use. *The proposal meets this guideline.*
k. Building Security = Buildings and site planning should consider and employ techniques that create a safe environment.	
Safety is a prime design consideration for Tri Met in all its projects. Crime Prevention Through Environmental Design (CPTED) principles are followed throughout the station area design. TriMet's safety and security committee has reviewed the project and determined that in both construction and use, the design will contribute to a visibly open, safe, and inviting environment. TriMet has included intrusion detection on the bridge adjacent the platform, to deter trespass, and will install security cameras on the platforms for added security. In addition, lighting has	As proposed, the light rail station employs numerous techniques to create a safe environment for passengers. • Intrusion detection devices on the bridge deter trespassers and CCTV surveillance on the platform deters crime. • Pedestrians are guided from 21st Ave to Adams St to the station platform via a crescent shaped sidewalk and a system of guard rails, textured paving, and landscaping.

been provided that exceed safety standards and maintain uniformity on the platform. Signage, signals, and railings have been included in the design, with the track crossing circulation oriented toward the direction of train travel to where possible, so patrons can see and acknowledge oncoming trains. The station platform has been cited to ensure safe train operations for adjacent track crossings at the street level. This guideline is met.	• The on-site lighting illuminates the station platform and access points at sufficiently high levels for safe pedestrian travel. • The area underneath the jump span at Lake Rd includes lighting at sufficiently high enough levels for safe vehicular and pedestrian travel. • The proposed plant materials and landscaping design utilizes Crime Prevention Through Environmental Design (CPTED) principles to ensure that the site is easily observable and increases passenger safety. *The proposal meets this guideline.*
l. Parking Structures = Parking structures should be designed so that they appear like most other buildings in the downtown.	
No parking structures are proposed as part of the station application.	*This guideline is not applicable.*

LIGHTING GUIDELINES

Applicant Information	Recommended Findings
a. Exterior Building Lighting = Architectural lighting should be an integral component of the façade composition.	
This guideline is intended to apply typically to buildings when implementing an architectural lighting plan. The architectural lighting the station is limited to lighting integrated into the design of the shelters. There is street and platform lighting placed about the overall station area that has been selected and composed to integrate into overall context. The lighting under and about the jump span has been further refined in response to the DLC's guidance and associated Condition of Approval, resulting in a highly-integrated approach that will contribute to the quality and safety of this evolved lighting approach. The guideline is met.	As proposed, the area underneath the jump span at Lake Rd includes 24 Winona LED linear light fixtures recessed within the concrete of the jump span; 16 Winona LED linear light fixtures mounted above the abutment wall and piers; and 2 Winona LED linear light fixtures mounted behind the piers. The applicant's photometric studies indicate that the fixtures would light this area to an average level of 3.05 foot candles. The recessed fixtures would be placed in a randomized pattern to provide visual interest, and would wash the concrete wall and column surfaces, creating both a visually interesting and safe pedestrian experience. As proposed, the platform shelter will be illuminated with integrated LED lighting. The internal illumination will highlight the shelter design and will create an outline effect to add visual interest to the shelter in nighttime conditions. *The proposal meets this guideline.*
b. Parking Lot Lighting = Ornamental street lights should be used to be compatible with downtown streetlight standards identified in the Public Area Requirements.	
No parking lots are proposed as part of the station application.	*This guideline is not applicable.*

c. Landscape Lighting = Lighting should be used to highlight sidewalks, street trees, and other landscape features. Landscape lighting is especially appropriate as a way to provide pedestrian safety during holiday periods.	
The sidewalks and other pedestrian routes have lighting placed to maximize visibility and exceed safety standards, while minimizing glare. In response to the DLC's guidance and associated Condition of Approval, particular attention has been paid to developing a lighting program under and around the jump span the lights the sidewalks evenly and effectively. Lights along the stairs from Lake Road are sensitively integrated to enhance the safety and experience of that important path. Lighting is also included to accentuate the art pieces. Together, these lighting amenities highlight the station area and provide safe, uniform lighting for the site. The guideline is met.	As proposed, the light rail station is illuminated by a combination of platform lighting, lighting on the cantilevered platform access, and lighting at the southern pedestrian access to Lake Rd and 21st Ave. Off-platform lighting is located on the cantilevered platform access, on the south stair entrance, and on the pedestrian connection between the stairs and 21st Ave. The ornamental light fixtures meet Milwaukie's streetscape design standards to provide continuity between the site and the adjacent streetscape. In-grade LED lighting is proposed to accent the "mill stone" sculpture in the bike plaza. *The proposal meets this guideline.*
d. Sign Lighting = Sign lighting should be designed as an integral component of the building and sign composition.	
Signs on site are to be directional and informative in nature, and modest in scale. They are not to be interiorly lit, as they are too small to warrant integrated lighting. However station signs are located on Light poles and placed to be adequately illuminated by the ambient light resulting from pole-mounted fixtures above. The signs themselves are carefully placed and mounted to be both legible by patrons on the platforms as well as trains, and well integrated with the various elements to which they are attached. The digital displays are internally lit by definition, and are well integrated into the respective shelter design. The guideline is met.	No sign lighting is proposed as part of the light rail station application. *This guideline is not applicable.*

SIGN GUIDELINES

Applicant Information	Recommended Findings
a. Wall Signs	
Signs on site are to be directional and informative in nature, and modest in scale. The signs are carefully placed and mounted to be both legible, and well integrated with the various elements to which they are attached. The digital displays are well integrated into the respective shelter design. The guideline is met.	No wall signs are proposed as part of the light rail station application. *This guideline is not applicable.*

b. Hanging or Projecting Signs	
Station signage is oriented both toward platform entrances and the approaching trains, as well toward a train stopped at the platform for easy station identification. All are easily visible and highly recognized as part of the Light Rail system. The guideline is met.	No hanging or projecting signs are proposed as part of the light rail station application. *This guideline is not applicable.*
c. Window Signs	
No window signs are proposed as part of the station application.	*This guideline is not applicable.*
d. Awning Signs	
No awning signs are proposed as part of the station application.	*This guideline is not applicable.*
e. Information and Guide Signs	
Signs on site are to be directional and informative in nature, modest in scale, and placed in a visually logic order to guide passengers. They are scaled to be no larger than necessary, but appropriately legible, and consistent with station signage throughout the light rail system. The guideline is met.	As proposed, light rail station signs are one of the "elements of consistency" throughout the alignment. They are attached to light poles that are located at regular intervals along the platform, and affixed to the shelter to indicate the station name. The signs are small scale, of consistent dimensions, and located in a visually logical order. *The proposal meets this guideline.*
f. Kiosks and Monument Signs	
No kiosk or monument signs are proposed as part of the station application.	*This guideline is not applicable.*
g. Temporary Signs	
No temporary signs are proposed as part of the station application.	*This guideline is not applicable.*

ATTACHMENT 2

Recommended Conditions of Approval

1. The applicant shall submit a Type I Development Review application with final construction plans for construction of the Portland Milwaukie Light Rail station ("station"). These plans shall be in substantial conformance with the plans reviewed by the Design and Landmarks Committee (DLC) and Planning Commission (PC) and date stamped by the City on April 26, May 7, May 10, and May 16, 2012. The plans shall be modified only as described in these conditions of approval or through a subsequent design review or formal modification process. The following items shall be addressed during review of this application:

   A. The development permit submission for the light rail station shall include a detailed description of any proposed changes to approved plans that are not part of these conditions of approval, or that the final decision-making authority did not specify in its decision; such plan change shall be subject to the City's review and approval.

   B. The development permit submission for the light rail station shall include the following item to demonstrate conformance with the Milwaukie Downtown Design Guidelines, specifically those that address the pedestrian environment and safety.

      i. Partner with the City to provide seating within the public areas of the site or within the adjacent 21st Ave public right-of-way. Work with the Planning Director to determine the appropriate location, quantity and design of seating, and submit seating area plan for City review and approval.

   C. The development permit submission for the light rail station shall include the following items to demonstrate conformance with the Community Service Use criteria.

      i. Submit photometric studies to demonstrate that lighting on the site will not cause glare or excessive light trespass onto the street or other properties.

   D. The development permit submission for the light rail station shall include the following items to demonstrate conformance with the Milwaukie Public Works Standards. Development permits shall not be issued until the Engineering Director has reviewed and approved the following items.

      i. Submit a storm water management plan prepared by a qualified professional engineer with required development/building permits as part of the proposed development. The plan shall conform to Section 2 – Stormwater Design Standards of the City of Milwaukie Public Works Standards.

      ii. The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development site.

      iii. The storm water management plan shall demonstrate compliance with City of Milwaukie water quality standards, in accordance with the City of Portland Stormwater Management Manual.

      iv. Development/building permits will not be issued for construction until the storm water management plan has been approved by the City of Milwaukie.

   E. Any construction on the site must comply with the applicable Oregon Specialty Codes as adopted by the City of Milwaukie.

   F. The applicant shall provide a recorded easement for construction of the light rail platform and associated fixtures within the Union Pacific Railroad (UPRR) private right-of-way.

2. Prior to commencement of any earth disturbing activities, the applicant shall:

   A. Submit a Type I Construction Management Plan pursuant to MMC Section 19.402.9.

   B. Obtain an erosion control permit pursuant to MMC Title 16 Erosion Control.

3. During site development, the applicant shall:

   A. Limit development activity from 7 a.m. to 7 p.m. Monday through Friday and 8 a.m. to 5 p.m. Saturday and Sunday pursuant to Milwaukie Public Works Standards Division 105.13, unless otherwise approved by the Engineering Director, and abide by MMC Chapter 8.08 regarding construction noise. Variances to maximum permitted noise levels or prohibited noises as identified in MMC Chapter 8.08 may be granted by the Police Department pursuant to MMC Subsection 8.08.110.

   B. Ensure that all site development activities conform to the approved Construction Management Plan.

4. Prior to final inspection of the light rail station, the applicant shall complete the following items to the satisfaction of the Planning Director:

   A. Remove temporary utilities for staging and construction.

   B. Adjust the boundaries of the site per the September 7, 2011, Memorandum of Understanding between TriMet and the City in order to allow development of a station building adjacent to 21st Ave. This adjustment shall comply with the procedures and standards of Title 17 Land Division.

5. Prior to final inspection of the light rail station, the applicant shall complete the following items to the satisfaction of the Engineering Director:

   A. Construct a private storm management system to accommodate stormwater runoff from the light rail station. The private storm management system shall be constructed according to the approved storm water management plan.

6. Pursuant to Subsection 19.1001.7.E.2, the time period within which the applicant must obtain development permits for the light rail station is 2 years, and the time period within which the applicant must pass all final inspections is 4 years, from the date of the land use decision on this application.

PLANNING DEPARTMENT
6101 SE Johnson Creek Blvd
Milwaukie OR 97206

PHONE: 503-786-7630
FAX: 503-774-8236
E-MAIL: planning@ci.milwaukie.or.us

Application for Land Use Action

Master File #: CSU-12-03

Review type*: ☐ I ☐ II ☒ III ☐ IV ☐ V

CHECK ALL APPLICATION TYPES THAT APPLY:

- ☐ Amendment to Maps and/or Ordinances:
  - ☐ Comprehensive Plan Text Amendment
  - ☐ Comprehensive Plan Map Amendment
  - ☐ Zoning Text Amendment
  - ☐ Zoning Map Amendment
- ☐ Code Interpretation
- ☒ Community Service Use
- ☐ Conditional Use
- ☐ Development Review
- ☐ Director Determination
- ☒ Downtown Design Review
- ☐ Extension to Expiring Approval
- ☐ Habitat Conservation Area Review
- ☐ Historic Resource
  - ☐ Alteration
  - ☐ Demolition
  - ☐ Status Designation
  - ☐ Status Deletion
- ☐ Land Division
  - ☐ Final Plat
  - ☐ Lot Consolidation
  - ☐ Partition
  - ☐ Property Line Adjustment
  - ☐ Replat
  - ☐ Subdivision
- ☐ Miscellaneous:
  - ☐ Barbed Wire Fencing
  - ☐ Bee Colony
  - ☐ Multifamily Recycling Area
- ☐ Mixed Use Overlay Review
- ☐ Modification to Existing Approval
- ☐ Natural Resource Review
- ☐ Nonconforming Use Alteration
- ☐ Parking:
  - ☐ Quantity Determination
  - ☐ Quantity Modification
  - ☐ Shared Parking
  - ☐ Structured Parking
- ☐ Planned Development
- ☐ Residential Dwelling:
  - ☐ Accessory Dwelling Unit (Type 1)
  - ☐ Accessory Dwelling Unit (Type 2)
  - ☐ Manufactured Dwelling Park
  - ☐ Temporary Dwelling Unit
- ☐ Sign Review
- ☐ Transportation Facilities Review
- ☒ Variance:
  - ☐ Use Exception
  - ☒ Variance
- ☐ Willamette Greenway Review
- ☐ Other: _____

Use separate application forms for:

- Annexation and/or Boundary Change
- Compensation for Reduction in Property Value (Measure 37)
- Daily Display Sign
- Appeal

RESPONSIBLE PARTIES:

APPLICANT (owner or other eligible applicant—see reverse): **TriMet c/o Leah Robbins**

Mailing address: 710 NE Holladay Street Zip: 97232

Phone(s): 503 962 2264 E-mail: RobbinsL@tri-met.org

APPLICANT'S REPRESENTATIVE (if different than above): **KLK Consulting LLC c/o Jeff Joslin**

Mailing address: 906 NW 23rd Avenue Portland, OR Zip:97210

Phone(s): 503 329 2143 E-mail: jeffjoslin@klk-consulting.com

SITE INFORMATION:

Address: 11301 SE 21ST AVE Map & Tax Lot(s): C224713 / 11E36BC03300,

Comprehensive Plan Designation: Town Ctr. Zoning: DO Size of property: approximately 1 acre

PROPOSAL (describe briefly):

A light rail station area, to include: a light rail stop/platform, shelters, bike racks and a bike shelter, small plazas, and a stair connection between the station area and Lake Road below..

SIGNATURE:

ATTEST: I am the property owner or I am eligible to initiate this application per Milwaukie Municipal Code (MMC) Subsection 19.1001.6.A. If required, I have attached written authorization to submit this application. To the best of my knowledge, the information provided within this application package is complete and accurate.

Submitted by: Leah Robbins Date: March 26, 2012

IMPORTANT INFORMATION ON REVERSE SIDE

*For multiple applications, this is based on the highest required review type. See MMC Subsection 19.1001.6.B.1.

WHO IS ELIGIBLE TO SUBMIT A LAND USE APPLICATION (excerpted from MMC Subsection 19.1001.6.A):

Type I, II, III, and IV applications may be initiated by the property owner or contract purchaser of the subject property, any person authorized in writing to represent the property owner or contract purchaser, and any agency that has statutory rights of eminent domain for projects they have the authority to construct.

Type V applications may be initiated by any individual.

PREAPPLICATION CONFERENCE:

A preapplication conference may be required or desirable prior to submitting this application. Please discuss with Planning staff.

REVIEW TYPES:

This application will be processed per the assigned review type, as described in the following sections of the Milwaukie Municipal Code:

- Type I: Section 19.1004
- Type II: Section 19.1005
- Type III: Section 19.1006
- Type IV: Section 19.1007
- Type V: Section 19.1008

THIS SECTION FOR OFFICE USE ONLY:

FILE TYPE	FILE NUMBER	FEE AMOUNT*	PERCENT DISCOUNT	DISCOUNT TYPE	DEPOSIT AMOUNT	DATE STAMP
Master file	CSU-12-03	$ 1700			$	RECEIVED MAR 27 2012 CITY OF MILWAUKIE PLANNING DEPARTMENT
Concurrent application files	VR-12-02	$ 1275 — (1175)			$	
	DR-12-04	$ 1275			$	
		$ -100 → -$100		Prompte app conf.	$	
		$			$	
SUBTOTALS		$ 4150			$	

TOTAL AMOUNT RECEIVED: $ 4150 RECEIPT #: RCD BY:

Associated application file #s (appeals, modifications, previous approvals, etc.):

Neighborhood District Association(s):

Notes:

*After discount (if any)

PLANNING DEPARTMENT
6101 SE Johnson Creek Blvd
Milwaukie OR 97206

PHONE: *503-786-7630*
FAX: *503-774-8236*
E-MAIL: *planning@ci.milwaukie.or.us*

For all Land Use Applications
(except Annexations and Development Review)

Submittal Requirements

All land use applications must be accompanied by a signed copy of this form (see reverse for signature block) and the information listed below. The information submitted must be sufficiently detailed and specific to the proposal to allow for adequate review. Failure to submit this information may result in the application being deemed incomplete per the Milwaukie Municipal Code (MMC) and Oregon Revised Statutes.

Contact Milwaukie Planning staff at 503-786-7630 or planning@ci.milwaukie.or.us for assistance with Milwaukie's land use application requirements.

1. **All required land use application forms and fees**, including any deposits.

   Applications without the required application forms and fees will not be accepted.

2. **Proof of ownership or eligibility to initiate application** per MMC Subsection 19.1001.6.A.

   Where written authorization is required, applications without written authorization will not be accepted.

3. **Detailed and comprehensive description** of all existing and proposed uses and structures, including a summary of all information contained in any site plans.

   Depending upon the development being proposed, the description may need to include both a written and graphic component such as elevation drawings, 3-D models, photo simulations, etc. Where subjective aspects of the height and mass of the proposed development will be evaluated at a public hearing, temporary on-site "story pole" installations, and photographic representations thereof, may be required at the time of application submittal or prior to the public hearing.

4. **Detailed statement** that demonstrates how the proposal meets all applicable application-specific approval criteria (check with staff) and all applicable development standards (listed below):

   a. **Base zone standards** in Chapter 19.300.

   b. **Overlay zone standards** in Chapter 19.400.

   c. **Supplementary development regulations** in Chapter 19.500.

   d. **Off-street parking and loading standards and requirements** in Chapter 19.600.

   e. **Public facility standards and requirements**, including any required street improvements, in Chapter 19.700.

5. **Site plan(s), preliminary plat, or final plat** as appropriate.

   See Site Plan, Preliminary Plat, and Final Plat Requirements for guidance.

6. **Copy of valid preapplication conference report**, when a conference was required.

APPLICATION PREPARATION REQUIREMENTS:

- Five copies of all application materials are required at the time of submittal. Staff will determine how many additional copies are required, if any, once the application has been reviewed for completeness.
- All application materials larger than 8½ x 11 in. must be folded and be able to fit into a 10- x 13-in. or 12- x 16-in. mailing envelope.
- All application materials must be collated, including large format plans or graphics.

ADDITIONAL INFORMATION:

- Neighborhood District Associations (NDAs) and their associated Land Use Committees (LUCs) are important parts of Milwaukie's land use process. The City will provide a review copy of your application to the LUC for the subject property. They may contact you or you may wish to contact them. Applicants are strongly encouraged to present their proposal to all applicable NDAs prior to the submittal of a land use application and, where presented, to submit minutes from all such meetings. NDA information: http://www.ci.milwaukie.or.us/communityservices/neighborhoods-program.
- Submittal of a full or partial electronic copy of all application materials is strongly encouraged.

As the authorized applicant I, (print name) LEAH ROBBINS, attest that all required application materials have been submitted in accordance with City of Milwaukie requirements. I understand that any omission of required items or lack of sufficient detail may constitute grounds for a determination that the application is incomplete per MMC Subsection 19.1003.3 and Oregon Revised Statutes 227.178. I understand that review of the application may be delayed if it is deemed incomplete.

Furthermore, I understand that, if the application triggers the City's sign-posting requirements, I will be required to post signs on the site for a specified period of time. I also understand that I will be required to provide the City with an affidavit of posting prior to issuance of any decision on this application.

Applicant Signature: Leah Robbins

Date: 3/23/12

Official Use Only

Date Received (date stamp below):

RECEIVED

MAR 27 2012

CITY OF MILWAUKIE
PLANNING DEPARTMENT

Received by: VAC

TRIMET

Memo

Date: August 2, 2011

To: City of Milwaukie Planning Department

From: Leah Robbins, TriMet, PMLR East Segment Director

Subject: Application Submittal Authorization

This memorandum authorizes KLK Consulting LLC to submit Land Use applications on behalf of TriMet pertaining to the Portland-Milwaukie Light Rail Project.

Furthermore, please be informed that TriMet does have the authority to apply for applications on any sites and ownerships within per MMC 19.1001.6 Applications:

> A. Initiation
> Type I, II, III, and IV applications may be initiated by the property owner or contract purchaser of the subject property, any person authorized in writing to represent the property owner or contract purchaser, and any agency that has statutory rights of eminent domain for projects they have the authority to construct.

TriMet's enabling statute vests the district with eminent domain authority. Specifically, ORS 267.200(2) provides that TriMet may "[a]quire by condemnation, purchase, lease, devise, gift or voluntary grant real and personal property or any interest therein, located inside the boundaries of the district and take, hold, possess and dispose of real and personal property purchased or leased from, or donated by, the United States, or any state, territory, county, city or other public body, nonprofit corporation or person for the purpose of providing or operating a mass transit system in the district and aiding in the objects of the district."

MLW-4667
MP.15E.D.836

CITY OF MILWAUKIE

PreApp Project ID #: 11-012PA

PRE-APPLICATION CONFERENCE REPORT

This report is provided as a follow-up to a meeting that was held on 11/17/2011 at 11:00 am

Applicant Name:	JEFF JOSLIN
Company:	KLK CONSULTING
Applicant 'Role':	Architect
Address Line 1:	906 NW 23RD AVE
Address Line 2:	
City, State Zip:	PORTLAND OR 97210
Project Name:	PORTLAND-MILWAUKIE LIGHT RAIL DOWNTOWN STATION
Description:	
ProjectAddress:	SE 21st AVE & SE LAKE RD
Zone:	Downtown Office (DO), small portion of site within 100 ft of HCA
Occupancy Group:	
ConstructionType:	
Use:	Transit stop.
Occupant Load:	
AppsPresent:	Jeff Joslin, Joe Recker, Karen Karlsson, Jeb Doran
Staff Attendance:	Kenny Asher, Katie Mangle, Wendy Hemmen, Susan Shanks, Li Alligood, Zach Weigel

BUILDING ISSUES

ADA:	
Structural:	
Mechanical:	
Plumbing:	
Plumb Site Utilities:	
Electrical:	
Notes:	No comment at this time. For questions contact: Tom Larsen; (503) 786-7611 or larsent@ci.milwaukie.or.us.

Please note all drawings must be individually rolled. If the drawings are small enough to fold they must be individually folded.

FIRE MARSHAL ISSUES

Fire Sprinklers:

Fire Alarms:

Fire Hydrants:

Turn Arounds:

Addressing:

Fire Protection:

Fire Access:

Hazardous Mat.:

Fire Marshal Notes:

PUBLIC WORKS ISSUES

Water: The water System Development Charge (SDC) is based on the size of water meter serving the property. The corresponding water SDC will be assessed with installation of a water meter. Water SDC credit will be provided based on the size of any existing water meter serving the property removed from service. The water SDC will be assessed and collected at the time the building permits are issued.

Sewer: If wastewater service is extended to serve the light rail station, the following applies. The wastewater SDC is assessed using a plumbing fixture count from Table 7-3 of the Uniform Plumbing Code. The wastewater SDC connection units are calculated by dividing the fixture count of new plumbing fixtures by sixteen. The wastewater SDC will be assessed and collected at the time the building permits are issued.

Storm: Submission of a storm water management plan by a qualified professional engineer is required as part of the proposed development. The plan shall conform to Section 2 - Stormwater Design Standards of the City of Milwaukie Pubic Works Standards.
The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development property. Also, the plan shall demonstrate compliance with water quality standards. The City of Milwaukie has adopted the City of Portland 2008 Stormwater Management Manual for design of water quality facilities.
All new impervious surfaces, including replacement of impervious surface with new impervious surfaces, are subject to the water quality standards. See City of Milwaukie Public Works Standards for design and construction standards and detailed drawings.

The storm SDC is based on the amount of new impervious surface constructed at the site. One storm SDC unit is the equivalent of 2,706 square feet of impervious surface. The storm SDC will be assessed and collected at the time the building permits are issued.

Street:	N/A
Frontage:	The light rail station as proposed does not trigger the requirements of MMC Section 19.700.
Right of Way:	N/A
Driveways:	N/A
Erosion Control:	N/A
Traffic Impact Study:	N/A
PW Notes:	

PLANNING ISSUES

Setbacks:	Downtown Office zone: No minimum or maximum setbacks along northwest property line, adjacent to the light rail platform; setbacks on Lake Rd and 21st Ave frontages are 0 ft minimum setback and 10 ft maximum setback.
Landscape:	No minimum landscaping required.
Parking:	The site is not in the area of downtown that is exempt from minimum parking requirements. The proposed use, a transit stop, is not listed in Table 16.605.1, and the quantity requirements must be determined per MMC 19.605.2. This is a Type II land use application subject to the criteria contained in MMC 19.605.2.C. Any off-street parking requirement could be met through a shared parking agreement. The standards and procedures for review of a shared parking agreement are detailed in MMC 19.605.4. Bicycle parking would be required at a ratio of 10% of the minimum parking requirement. Compliance with standards in MMC 19.609 would be required for the design and location of bike parking.
Transportation Review:	The Engineering Director has indicated that the project does not trigger compliance with MMC 19.700. Please see the Public Works section of these notes for more information.
Application Procedures:	The proposal is subject to Community Service Use (CSU) review; Downtown Design Review (DR); Variance Request (VR) review; and Parking Quantity Modification (P) review. Any requirement for a Type I construction management plan review (see Natural Resource Review below) would be completed at the time of building permit review and would not involve any additional time or cost. The proposed site is composed of a small existing tax lot and a portion of the railroad right-of-way. No information has been provided about potential boundary changes or land divisions needed to create the development site. These actions may require land use applications under MMC Title 17 Land Division. The applications, timelines, and costs for such applications are not included in these notes. Community Service Use (CSU): CSU approval is required for the proposed use, which is identified as a Utility – Passenger Terminal. The application fee is $1,700. The application is reviewed through a Type III review per MMC 19.1006. The approval criteria for a CSU application are in MMC 19.904.4. Downtown Design Review (DR): The application fee is $1,700. The application is reviewed through a Type III review per MMC 19.1006, with a Design Review Meeting by the Design and Landmarks Committee (DLC) per MMC 19.1011. The Design Review Meeting is held by the DLC as a public

meeting, and is a forum for the DLC to make a recommendation to the Planning Commission about approval of the DR application. The DLC considers only the DR portion of the proposal and does not consider other concurrent applications. The DLC's decision is a non-binding recommendation to the Planning Commission. The Planning Commission is the final decision maker for DR applications, and their review is conducted at a public hearing. The application requirements and approval criteria for a DR application are in MMC 19.907.

Variance Request (VR): The application fee is $1,700. The application is reviewed through a Type III review per MMC 19.1006. The procedures and approval criteria for a VR application are in MMC 19.911.4

Parking Quantity Modification (P): The application fee is $900. The application is reviewed through a Type II review per MMC 19.1005. The procedures and approval criteria for a P application are in MMC 19.605.2.B-C. This application can be submitted independently of the other applications.

For the City's initial review, the applicant should submit 5 complete copies of the application, including all required forms and checklists. A determination of the application's completeness will be issued within 30 days. If deemed incomplete, additional information will be requested. If deemed complete, additional copies of the application will be required for referral to other departments, the Neighborhood District Association (NDA), and other relevant parties and agencies. City staff will inform the applicant of the total number of copies needed.

General application procedures:
Land use applications need to include the land use application form, the submittal requirements form, and the site plan requirements checklist. Copies can be obtained from our office or on the City's website. The application narrative must address the applicable criteria and standards, which are identified in these notes.

Fees:
There is a fee discount for concurrent land use applications. The application with the highest fee is charged, and all other land use application fees are reduced by 25%. The discount does not apply to deposits. In addition, half of the $200 preapplication conference fee can be discounted from the total application fee amount.

Natural Resource Review: The project site does not contain any Water Quality Resource or Habitat Conservation Area. It appears that a small portion of the site along the Lake Rd property line is with 100 ft of a Habitat Conservation Area (HCA) south of the site. Development within this area would require that a construction management plan be submitted to document the measures used to avoid impacts to the HCA during construction. The construction management plan should include the information outlined in MMC 19.402.9, and is subject to Type I review. There is no fee for this application.

Lot Geography: The proposed site is triangular in shape. The minimum lot size for a new lot in the Downtown Office zone is 5,000 sq ft, and a minimum of 30 ft of frontage on a public street is required. There are no specified dimensions for lot width or depth.

Planning Notes: 1) Development Standards

As proposed, the transit stop would require an adjustment to three development standards.

The first is the maximum 10 ft setback along Lake Rd and 21st Ave. The proposed structures are set back between approximately 0 ft and 50 ft from 21st Ave. Staff believes the maximum setback issue could be addressed through a Type III variance, based on the argument that the location of the transit stop shelter and associated structures are a unique use that has desirable public benefits.

The second standard is the required off-street parking requirements. This requirement could be addressed through a Type II Parking Quantity Modification (P) application, per MMC 19.605.2. A suggested basis for a request of no required parking would be comparison of other jurisdictions with a similarly-scaled high capacity transit stop.

The third standard is the Floor Area Ratio (FAR) for the DO zone. The minimum FAR for new development in the DO zone is 0.5:1. The proposed development does not include enclosed space and does not meet this requirement. A Type III Variance Request to this standard will be required.

2) Design Standards

According to the information provided, it appears that the majority of the elements of the proposed transit stop would meet the design standards in MMC 19.310.6.C. The level of detail provided was insufficient for staff review of the retaining walls on site, which will be subject to the design standards of MMC 19.310.6.C.2.

3) Downtown Design Guidelines

The level of detail provided was insufficient for staff review of the proposed development with respect to the Downtown Design Guidelines. Based on the information provided, staff believes that the following design guidelines would be applicable to the proposed development. The application narrative should discuss how the proposal substantially conforms to each of these guidelines.

Milwaukie Character Guidelines:
Potentially applicable guidelines: 'Reinforce Milwaukie's Sense of Place'; 'Integrate the Environment'; 'Promote linkages to Horticultural Heritage'; 'Establish or Strengthen Gateways'; 'Consider View Opportunities'; and 'Integrate Art'. Conformance with 'Sense of Place' can be bolstered by providing special relationships at the pedestrian level through wall treatments, design references, or landscaping. The 'Promote Linkages to Horticultural Heritage' guideline would suggest that the small plazas and open spaces should be nicely planted and feature dogwoods, cherry, and other flowering, ornamental trees. The 'Establish or Strengthen Gateways' guideline would suggest the use of non-utilitarian gateway materials that indicate transitions from public to private spaces. The guidelines for 'Integrate the Environment' and 'Consider View Opportunities' would suggest making visual linkages toward the riverfront and Kellogg Lake area as much as possible. The 'Integrate Art' guideline would suggest that art be designed for and integrated into the site, and used sparingly overall. Review of the public art would be restricted to substantial conformance with this guideline.

Pedestrian Emphasis Guidelines:
Potentially applicable guidelines: 'Reinforce and Enhance the Pedestrian System'; 'Define the Pedestrian Environment'; 'Create Successful Outdoor Spaces'; and 'Integrate Barrier-Free Design.' Substantial compliance with the 'Reinforce and Enhance the Pedestrian System' guideline should involve a discussion of the reasons for any transit stop-related pedestrian routes that are indirect or present barriers in the form of gates and other obstructions. Depending on the final design and program for the open areas at the northwest corner (bike parking area) and southeast corner of the site, the 'Create Successful Outdoor Spaces' guideline may apply.

Architectural Guidelines:
Potentially applicable guidelines: 'Wall Materials'; 'Wall Structure'; 'Silhouette and Roofline'; and 'Green Architecture.'

Lighting Guidelines:

Potentially applicable guidelines: 'Exterior Building Lighting'; 'Landscape Lighting'; and 'Sign Lighting'.

Sign Guidelines:
Potentially applicable guidelines: 'Information and Guide Signs'; 'Kiosks and Monument Signs'.

Based on the information provided, it appears that the following components of the proposed transit stop would be subject to design review: bicycle parking shelter and lockers; TVM shelters; platform shelter; public art; retaining walls; cantilevered platform area; jump span lighting; railings; site and platform lighting; signage; and pedestrian connection and circulation to the north; and plaza areas in the north and southeast areas of the site. Depending on the final design, additional elements may be subject to design review. The applicant should provide as much information as possible about these elements (exact location, design, materials, etc.) with the application.

As part of the Design Review application, it is important that the applicant define the transit stop's 'Elements of Consistency' and 'Elements of Distinction'. The application narrative should include a discussion of the 'Consistency' options available and the reason the proposed package was chosen. The narrative should also identify areas of the 'Distinction' options that are open to DLC influence and input.

4) Downtown Office uses: The proposed transit stop would meet the use standards in the DO zone as a Community Service Use.

5) On-site staging: As long as the entire site is under TriMet ownership, a Community Service Use (CSU) application would not be required for use of the eastern portion of the site as a staging area. It is unclear if a CSU application for staging use would be required if a portion of the property is divided and sold to another party while construction is underway.

6) Additional Information

Additional information is needed for thorough evaluation of the proposal, including: small components shown and not labeled in the submitted plans; proposed site signage; cantilevered deck details, including the design of the jump span lighting; signal bungalow details; the design and proposed location of the bike shelters and lockers; the design of the shelter platform and TVM shelters; pedestrian and ADA access to the platform; the program (if any) for the small open areas/plazas at the northwest and southeast corners of the site; landscaping on site; and the final extent of the site and location of property lines, including what portions of the station site will be located in the public right-of-way.

7) Though the application for the light rail bridge indicated that a stormwater facility would be located on the light rail station site, the above-ground design of the facility has not been reviewed. The stormwater facility and its components (walls, art, landscaping etc.) are subject to design review as part of the station site land use process. The design of the stormwater facility must first be approved before the City can issue construction permits. See Public Works notes for additional information about when this facility will likely need to be constructed as part of the Kellogg Bridge permitting process.

8) The preapplication conference is valid for purposes of submitting future land use applications as described in 19.1002.4. In general, a preapplication conference is valid for 2 years.

ADDITIONAL NOTES AND ISSUES

County Health Notes:

Other Notes:

This is only preliminary preapplication conference information based on the applicant's proposal and does not cover all possible development scenarios. Other requirements may be added after an applicant submits land use applications or building permits. City policies and code requirements are subject to change. If you have any questions, please contact the City staff that attended the conference (listed on Page 1). Contact numbers for these staff are City staff listed at the end of the report.

Sincerely,

City of Milwaukie Development Review Team

BUILDING DEPARTMENT
Tom Larsen - Building Official - 503-786-7611
Bonnie Lanz - Permit Specialist - 503-786-7613

ENGINEERING DEPARTMENT
Gary Parkin - Engineering Director - 503-786-7601
Brad Albert - Civil Engineer - 503-786-7609
Zach Weigel - Civil Engineer - 503-786-7610
Jason Rice - Civil Engineer - 503-786-7605
Matt Palmer - Associate Engineer - 503-786-7602

COMMUNITY DEVELOPMENT DEPARTMENT
Jeanne Garst - Administrative Supervisor - 503-786-7655
Marcia Hamley - Admin Specialist - 503-786-7656
Blanca Marston -Admin Specialist - 503-786-7600
Alicia Martin -Admin Specialist - 503-786-7600

PLANNING DEPARTMENT
Katie Mangle - Planning Director - 503-786-7652
Susan P. Shanks - Senior Planner - 503-786-7653
Brett Kelver - Associate Planner - 503-786-7657
Ryan Marquardt - Associate Planner - 503-786-7658
Li Alligood - Assistant Planner - 503-786-7627

CLACKAMAS FIRE DISTRICT
Doug Whiteley - Lieutenant Deputy Fire Marshal - 503-742-2692

DOWNTOWN DESIGN REVIEW CHECKLIST

Project/Applicant Name: PORTLAND MILWAUKIE LIGHT RAIL DOWNTOWN STATION / TRIMET

Project Address: 11301 SE 21ST AVE.

Application Submission Date: 3-26-12

Zoning: DO

Building Use: LIGHT RAIL STATION AREA

Completed By: JEFF JOSLIN / KLK CONSULTING on: 3-22-12

STANDARDS AND GUIDELINES

A. Development and Design Standards	Complies Yes	No	NA
1. Development Standards			
a. Permitted Use	☒	☐	☐
b. Minimum Lot Size	☒	☐	☐
c. Floor Area Ratio	☐	☒	☐
d. Building Height	☐	☐	☒
e. Residential Density	☐	☐	☒
f. Street Setbacks	☐	☒	☐
g. Side and Rear Setbacks	☐	☒	☐
h. Ground-floor Retail	☐	☐	☒
i. Ground-floor Windows/Doors	☐	☐	☒
j. Drive-through Facilities	☐	☐	☒
k. Off-street Parking Requirements – T.B.D by P Review	☐	☐	☐
l. Landscaping	☐	☐	☒
2. Design Standards			
a. Residential Entries and Porches	☐	☐	☒
b. Garages and Parking Areas	☐	☐	☒
c. Courtyards	☐	☐	☒
d. Balconies	☐	☐	☒
e. Walls	☐	☐	☒
f. Windows	☐	☐	☒
g. Roofs	☐	☐	☒

B. Design Guidelines			
1. Milwaukie Character			
a. Reinforce Milwaukie's Sense of Place	☒	☐	☐
b. Integrate the Environment	☒	☐	☐
c. Promote Linkages to Horticultural Heritage	☒	☐	☐
d. Establish or Strengthen Gateways	☒	☐	☐
e. Consider View Opportunities	☒	☐	☐
f. Consider Context	☒	☐	☐
g. Promote Architectural Compatibility	☐	☐	☒
h. Preserve Historic Buildings	☐	☐	☒
i. Use Architectural Contrast Wisely	☒	☐	☐
j. Integrate Art	☒	☐	☐

DOWNTOWN DESIGN REVIEW CHECKLIST

	Complies Yes	No	NA
2. Pedestrian Emphasis			
a. Reinforce and Enhance the Pedestrian System	☒	☐	☐
b. Define the Pedestrian Environment	☒	☐	☐
c. Protect the Pedestrian from the Elements	☒	☐	☐
d. Provide Places for Stopping and Viewing	☒	☐	☐
e. Create Successful Outdoor Spaces	☒	☐	☐
f. Integrate Barrier-Free Design	☑	☐	☐
3. Architecture			
a. Corner Doors	☐	☐	☒
b. Retail and Commercial Doors	☐	☐	☒
c. Residential Doors	☐	☐	☑
d. Wall Materials	☑	☐	☐
e. Wall Structure	☒	☐	☐
f. Retail Windows	☐	☐	☒
g. Residential Bay Windows	☐	☐	☑
h. Silhouette and Roofline	☒	☐	☐
i. Rooftops	☒	☐	☐
j. Green Architecture	☒	☐	☐
k. Building Security	☒	☐	☐
l. Parking Structures	☐	☐	☒
4. Lighting			
a. Exterior Building Lighting	☑	☐	☐
b. Parking Lot Lighting	☒	☐	☐
c. Landscape Lighting	☒	☐	☐
d. Sign Lighting	☑	☐	☐
5. Signs			
a. Wall Signs	☒	☐	☐
b. Hanging or Projecting Signs	☑	☐	☐
c. Window Signs	☐	☐	☒
d. Awning Signs	☐	☐	☒
e. Information and Guide Signs	☒	☐	☐
f. Kiosk Monument Signs	☐	☐	☒
g. Temporary Signs	☐	☐	☒

Notes:

PORTLAND-MILWAUKIE
LIGHT RAIL PROJECT

Downtown Milwaukie Station

MILWAUKIE, OREGON

APPLICATION FOR
Community Service Use Review
Design Review
Variances Review

KLK CONSULTING LLC
April 25, 2012

PORTLAND-MILWAUKIE
LIGHT RAIL PROJECT

DOWNTOWN MILWAUKIE STATION
APPLICATION STANDARDS AND CRITERIA RESPONSE

Procedure Type
MNQJ/Planning Commission

Reviews Required

DESIGN REVIEW
COMMUNITY SERVICE USE REVIEW
VARIANCE REVIEW

REVIEW EXTENT

VARIANCE

As it's been identified that two development standards (setbacks, and floor area ratio) are not met, variance reviews are required.

DESIGN REVIEW

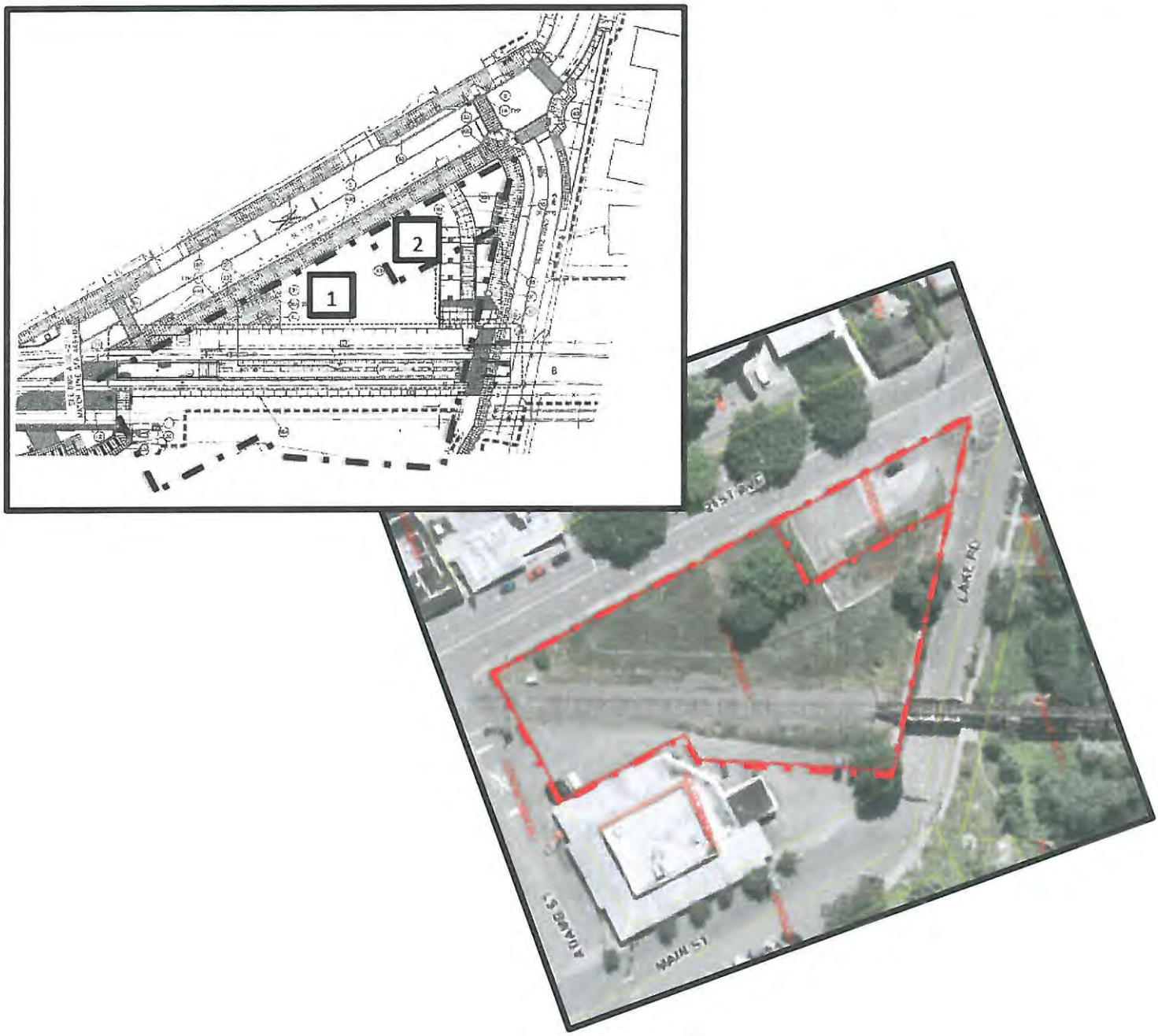
As the Station is with the DO (Downtown Office) Zone, Design Review is required.

COMMUNITY SERVICE USE

As the Station use has been defined as Utility-Passenger Terminal, a Community Service Use Review is required.

PROPERTIES WITHIN THE EXTENT OF THE REVIEW

lot #	Street		Property ID #	Assessor Reference #
1	No Address Available		not available	11E36BC03300
2	11301 SE 21ST AVE		C224713	11E36BC03300



DETAILED PROPOSAL DESCRIPTION

The Portland Milwaukie Light Rail project is a 7.3 mile extension of the TriMet regional rail system. The rail system includes a station in downtown Milwaukie, and another just south of Milwaukie at Park Avenue and McLoughlin (Exhibits O1 and O2).

Various portions and aspects of the project have gone through land use reviews, and others will come through future reviews. Among the elements in the immediate vicinity already reviewed are: the "jump span" bridge over Lake Road, and the abutment wall also along Lake Road directly underneath the jump span.

One condition of approval from the WG-11-01 final decision applies directly to this review, and is addressed accordingly. That condition reads as follows:

6. The DLC requested more information and different light fixture options for lighting underneath the jump span than what was presented by the applicant at the Oct 17 DLC design review meeting. The applicant shall resubmit this design item for consideration during the land use proceedings for the Milwaukie Light Rail Station. A summary of the DLC's design direction to the applicant is as follows:
    A. Provide more detailed information about the underside of the jump span (the "ceiling" of the room) and the light from the light fixtures that demonstrates how the light interacts with the ceiling to make for a comfortable, attractive, and safe pedestrian environment.
    B. Provide more detailed information about the light from the light fixtures that demonstrates how the location, output, and angle of the light enhances the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.
    C. Provide a less modern and utilitarian light fixture option. Specifically, provide detailed information that demonstrates how the style and color of the light fixture and the method of mounting compliments the style of the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.
    D. Provide illustrations and analysis demonstrating that the proposed lighting achieves the following during both daytime and nighttime conditions:
        - Uniform lighting of the sidewalk
        - Minimal glare
        - Minimal deep shadows beneath the structure
    E. Explore other energy efficient and low-pollutant lighting options with a focus on comparing fluorescent lighting with LED and other feasible lighting options. Provide a memo that summarizes key findings and includes a rationale for the final lighting selection.

The purpose of this application is to seek the following approvals for the downtown station design and use specifically, and is limited to the elements in the area circumscribed by Lake Road, SE 21st Avenue, and an existing railroad right-of-way.

1. The station use, characterized as Utility-Passenger Terminal, is subject to a **Community Service Use Review**.

2. The need for a **Variance Review** for setbacks and floor area ratio requirements has also been identified.

3. **Design Review** approval for station elements include.

    - The platform access, cantilevered over Lake Road.
    - The abutment wall along Lake Road, except for the portion already approved through the earlier Kellogg Crossing Design Review.
    - The rail station platform.
    - Retaining walls on-site.
    - The rail station shelter color and glass canopy roof material.
    - Stairs connecting the platform to Lake road to the south end of the station area.
    - A bicycle shelter.
    - Location of Bicycle racks, and a bicycle locker.
    - Railings, paving, landscaping, and other associated site treatments.
    - The lighting under the jump span bridge, per the Condition of Approval identified above, demonstrating compliance with Condition 6 of WG-11-01. The narrative response (key findings) is found in Exhibit P19, addressing each of the components of the Condition. Associated Exhibits (Exhibits P5A, P5B, P6, P6A, P6B, P6C, P6D, and 6E) are included to fully describe and assess these lighting elements in response to all aspects of the condition.

    Future Station and Private Development Areas

    - A graded area seeded as lawn preserves space for a future city building project and a landscape bed between the station trackway, and the lawn area preserves future station platform. These designs are proposed until such time as the site is otherwise segregated and developed as per a memorandum of understanding between the city and TriMet.

There is also public art (Exhibits P15, P16, P17, P18), integrated into the project in three different areas including the station shelter, a plaza area to the north, and another integral to the abutment wall along Lake Road. The art is being vetted through a public art process, and is complimentary to the station design.

Throughout the light rail system, there has been an effort to define both “Elements of Continuity” and “Elements of Distinction”.

Elements of Continuity (Exhibits P7) are those that serve to provide a familiarity and continuity from station to station. Use of like elements at respective stations serves a number of purposes. Successfully guiding passengers as they get on and off at each station is one: the similarity of such elements serves to help orient passengers. This orientation aspect also contributes to the safety of passengers, as they successfully and efficiently navigate their way though the station sequence. Cost-effectiveness of both acquisition and maintenance is also best-served by these standardized elements.

Elements of Continuity include: internal signs, track, catenary poles, platform lighting, ticket vending machines, equipment boxes, light standards, and shelter structures. These elements are within the area being reviewed and are included for reference, however these items are not subject to review.

In addition, railroad facilities and equipment, including track, signals, and signal bungalows, are a part of the railroad system and are subject to the federal Interstate Commerce Commission Termination Act of 1995, which preempts local and state law related to that subject matter. Therefore, the location, design, and other features of these elements are not subject to review.

Elements of Distinction (Exhibits P9, P10, P11, P12)) are those that have been selected or modified to give stations a unique character, and contribute to the successful integration of the station area into the respective context. In the case of Milwaukie, a number of Elements of Distinction are proposed. They include:

- An ashlar masonry pattern for the Lake Road abutments and other wall surfaces.
- Light standards (though not subject to review, as they are public improvements) consistent with downtown Milwaukie street lighting. The Milwaukie lighting standard has also been incorporated into the Stairway design leading to the south platform to extend streetscape design.
- Off-platform bollards, and benches selected to be consistent with the downtown street furniture.
- Railings designed in a Milwaukie-specific motif.
- The painting of these respective identified elements to correspond to the downtown Milwaukie street furniture pallette.
- Plantings schemes created to connect thematically to nearby natural areas, enhance station area design and anticipate future development.
- Glass canopy for the station shelter with historic Milwaukie black color used on painted metal materials. The glass canopy is an atypical treatment, and the use of Milwaukie Black is unique to this station.

The applicable standards and approval criteria have been identified and addressed below. The proposal has been designed to be consistent with those approval criteria, and seeks an approval at this time.

APPLICABLE APPROVAL CRITERIA

Those Code sections determined to be Applicable have been identified as follows.

Community Service Use

19.904.4 APPROVAL CRITERIA COMMUNITY SERVICE USE
19.904.9 Specific Standards for Institutions..and other Facilities not Covered by Other Standards

Design Review

19.907.7 APPROVAL CRITERIA FOR DESIGN REVIEW
MILWAUKIE DOWNTOWN DESIGN GUIDELINES

Variance Review

19.911.4.B.1 APPROVAL CRITERIA for Variances

APPLICABLE DEVELOPMENT STANDARDS

The site is located in the DO Zone – Development Standards of MMC 19.310.4 apply. The development standards which need to be addressed through the variance review have been identified as follows. All others are met.

	Standard	**Response**
19.310.4, B.5 setbacks and Table 19.310.4		
	19.310.4, B.5 and Table 19.310.4 identify a maximum 10' setback, applied to the front setback (not to side and rear),	The requirement applies along Lake Road and SE 21st Avenue. The proposed structures are setback between 0 feet and 50 feet from 21st Avenue. Therefore, a Variance is required, and has been assessed below.
19.310.4, B.2 Floor Area Ratios and Table 19.310.4		
	19.310.4, B.2 and Table 19.310.4 identifies floor area ratio (FAR) requirements as a minimum of .5:1 and a maximum of 3:1.	The proposed structures are not enclosed structures and, as such, do not count towards FAR. Therefore, a Variance is required, and has been assessed below.

COMMUNITY SERVICE USE

The use is allowed in the DO Zone as a CSU-Utility, and is subject to the CSU Standards of MMC 19.904.4. As such, elements associated with this use such as the Station platform, \, nearby bike parking, railings, and associated landscaping are subject to review.

19.904.4 Approval Criteria

Criteria		**Findings**
1. The building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone are met. Where a specific standard is not proposed in the CSU, the standards of the underlying zone are met		Off-street parking requirements are being addressed through earlier- submitted Application #P-12-01. The Parking Determination Review application requests approval for no off-street parking, given the site's use as a public transit facility. Bike parking for 6 covered racks (12 spaces) and 6 bike lockers (12 spaces) is identified in that application. Variances are necessary for building setback and floor area ratio requirements. All other underlying zone standards are met by-right. The variance requests have been addressed within this application, and have been found to be consistence with variance approval criteria. With approval of the variances, the criterion is therefore met.
2. Specific standards for the proposed uses as found in Subsections 19.904.7-11 are met		The activities have been assessed against the specific standards for the proposed uses as found in Subsections 19.904.7-11 (specifically, 19.904.9), and have been found to be met (see below), The criterion is met.
3. The hours and levels of operation of the proposed use are reasonably compatible with surrounding uses		The hours and levels of use of the station area are tied to the train activity, which is reflective of commuter needs. Trains are anticipated to run at intervals varying from 10 to 30 minutes, occurring between 5 a.m. and 1:30 a.m. The downtown area surrounding the station contains predominately commercial uses, with some residential and Community amenities (Milwaukie High School) located to the south and east respectively. The trains will service Downtown businesses, transport students to the high school, and daily commuters connecting to entertainment and employment centers both in Milwaukie and the surrounding region. These uses have varying hours that collectively coincide with the station's operating hours. As such, the hours and level of the use enhance surrounding uses, and existing transportation network, and are therefore compatible with them. The criterion is therefore met.

4. The public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood		The public benefits resulting from the construction, completion, and utilization of the rail system are substantial, both locally and regionally. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development. Locally, benefits will include access to job corridors in the region readily accessible by light rail, and a reduction in congestion on 99E and other nearby roads. The only negative impacts anticipated are acoustic, which have been mitigated according to the Federal Transit Authority rules and guidelines. The criterion is met.
5. The location is appropriate for the type of use proposed		The station platform location has been vetted through a protracted Final Environmental Impact Station (FEIS) process, as well as a substantial ongoing public outreach program and multiple public hearings, to ensure its location maximizes potential benefits, appropriately serves the downtown area, enhances bike and pedestrian amenities, connects to parks and open spaces in the area, serves community amenities, such as the high school, and is consistent with the Portland-Milwaukie Light Rail Locally Preferred Alternative adopted by the City of Milwaukie, Metro, and other regional partners. Additionally, the City of Milwaukie approved the South Downtown Concept Plan, which anticipates the future light rail station in this location. The site is located in the downtown area, which is designed to support - and be supported by – transit. As the site is currently vacant, there is no disruption of existing uses. The criterion is met.

19.904.9 Specific Standards for Institutions…and other Facilities not Covered by Other Standards		
Criteria		**Findings**
A. Utilities, streets, or other improvements necessary for the public facility or institutional use shall be provided by the agency constructing the use.		All utilities and street improvements warranted by the project are being constructed as part of the project and are being provided by TriMet. Temporary utilities for staging and construction purposes including power and water will be removed following construction completion. The criterion is met.
B. When located in or adjacent to a residential zone, access should be located on a collector street if practicable. If access is to a local residential street, consideration of a request shall include an analysis of the projected average daily trips to be generated by the proposed use and their distribution pattern, and the impact of the traffic on the capacity of the street system which would serve the use. Uses which are estimated to generate fewer than 20 trips per day are exempted from this subsection.		As there is not permanent vehicular access, the criterion has been found to be inapplicable.
C. When located in a residential zone, lot area shall be sufficient to allow required setbacks that are equal to a minimum of ⅔ the height of the principal structure. As the size of the structure increases, the depth of the setback must also increase to provide adequate buffering.		The location is not within a residential zone. The criterion is not applicable.
D. The height limitation of a zone may be exceeded to a maximum height of 50 ft provided Subsection 19.904.9.C of this subsection is met.		The maximum station shelter height is approximately 12’-6” from the surface of platform, therefore the structure does not exceed the height limit. The criterion is met.
E. Noise-generating equipment shall be sound-buffered when adjacent to residential areas.		There will be no noise generating equipment present on site. The criterion is met.
F. Lighting shall be designed to avoid glare on adjacent residential uses and public streets.		Lighting associated with the facility has been designed to meet all safety standards, while being placed and shielded to ensure light is focused downward and does not impact residences and public streets. The criterion is met

G. Where possible, hours and levels of operation shall be adjusted to make the use compatible with adjacent uses.		The hours and levels of use of the station area are tied to the train activity. The downtown area is commercial with community amenities such as the high school and post office. The trains will bring customers to and from the area. As such, the hours and level of the use enhance surrounding uses and are therefore compatible with them. The criterion is met
H. A spire on a religious institution may exceed the maximum height limitation. For purposes of this subsection, "spire" means a small portion of a structure that extends above the rest of the roofline, or a separate structure that is substantially smaller than the main structure and extends above the roofline of the main structure. "Spire" includes but is not limited to ornamental spires, bell towers, other towers, minarets, and other similar structures or projections. The number of spires on a religious institution property is not limited, so long as the spires remain only a small portion of the area of the structures		No spire is being proposed by this project The criterion is not applicable
I. The minimum landscaping required for religious institutions is the lesser of 15% of the total site area and the percentage required by the underlying zone.		No religious institution is being proposed, and the DO zone has no minimum landscaping requirement. The criterion is not applicable
J. Park-and-ride facilities may be encouraged for institutions along transit routes that do not have days and hours in conflict with weekday uses (e.g., religious institutions or fraternal organizations). Such uses may be encouraged to allow portions of their parking areas to be used for park-and-ride lots.		This development will not include an off-street parking area. The criterion is not applicable

VARIANCES

The site is located in the DO Zone and requires variances from two development standards of MMC 19.310.4.VARIANCE 1

Table 19.310.4 identifies a maximum 10' setback. As this setback applies to primary frontage (not to side and rear), the requirement applies along Lake Road and 21st Avenue. The proposed structures are setback between 0 feet and 50 feet from 21st Avenue.

19.911.4.B.1 Approval Criteria

Criteria		Findings
1. Discretionary Relief Criteria a. The applicant's alternatives analysis provides, at a minimum, an analysis of the impacts and benefits of the variance proposal as compared to the baseline code requirements.		The station platform location is consistent with the FEIS. The station platform orientation must align parallel to the trackway to allow level boarding access for all patrons. In addition, the station location must accommodate a future city-led development on site. As a result, The station and associated structures will include structures set back further than ten feet from SE 21st. Along 21st, the station platform is setback approximately ninety feet from the intersection. This increased setback from the street is required to allow safe train operations near the intersection. Along Lake Road, the topography results in a station platform elevated above Lake Road grade requiring a substantial abutment wall, penetrated by a stair to provide station access to the south of the platform. The baseline code requirements are intended to ensure development connects to the street activity and contributes to urban enclosure. The platform layout maintains connections to existing and future streets, bike, and pedestrian amenities. The activity generated by the station will greatly enhance the vitality of the area, and will contribute to the creating an environment that will support new Downtown development activities along nearby streets. Additionally, The city and TriMet have agreed to a Memorandum of Understanding that guides the site layout to provide adequate space for future development of the site with a building. The City of Milwaukie and TriMet have committed to examine joint development opportunities that enhance the vitality of the downtown. The site layout retains approximately 8900 square feet of developable area on the two parcels. This area accommodates concept designs for a future development established by the city that will contribute to downtown economic revitalization, and increased Light Rail ridership.

		The concept design is consistent with the South Downtown Plan. Both the development concept design and South Downtown Plan have been endorsed by the City Council. After construction activities have ceased, and prior to completion of the PMLR project, TriMet will adjust the property boundaries of the site and work with staff to pursue a developer. The city will take ownership of the development parcel adjacent SE 21st. The future building is anticipated to meet all setback requirements. In the interim, the future development portion of the site will be landscaped to further contribute to the enhancement of the area. The enclosure that would be provided by required setbacks is fully provided on Lake Road by the abutment wall. The stairs, cantilevered platform area above, and the station platform itself all provide eyes on Lake Road, and increase safety and security while contributing to its sense of activity. Similarly, the proposed shelters and plazas will contribute to the activity and safety on SE 21st. Landscaping, street trees, and the bike shelter will contribute to the sense of urban enclosure along this street. The criterion is met.
b. The proposed variance is determined by the Planning Commission to be both reasonable and appropriate, and it meets one or more of the following criteria: (1) The proposed variance avoids or minimizes impacts to surrounding properties. (2) The proposed variance has desirable public benefits. (3) The proposed variance responds to the existing built or natural environment in a creative and sensitive manner.		The station area contains a number of structures placed at various distances from SE 21st Avenue. The proposed variance results in minimal impact to adjacent parcels as the site is bounded on all sides: by streets to the north, east, and south, and the existing RR tracks to the west. Therefore the site is essentially isolated from adjacent properties. In addition, The structures are nominally visible to other properties on SE 21st Avenue, given their modest scale, transparent glass roofline, and distance, as well as being screened by a rich landscape of street trees along SE 21st Avenue, to be installed at the time of construction. The proposed variance results in multiple desirable public benefits. The configuration allows for level boarding access to the trains on traveling along the LRT trackway. In addition, the layout preserves future development potential for the site as adopted by the City Council. The site configuration also responds to the built and natural environment as the trackway LRT tracks and station align with the existing freight railroad. This minimizes impacts to adjacent parcels and natural area, while reflecting the current built amenities. In addition, two small plaza areas to the south and to the north contain art features, further enhance the area and highlight connections to the street, and provide pedestrian

		and bicycle amenities. Along Lake Road, the abutment wall, stair railings, cantilevered platform access above, all result in a treatment that activates the area and gracefully responds to the topography of the site, transitioning from Lake Road below to the station area with high-quality and thematically-appropriate materials that respond to the natural environment as well as the historical Milwaukie traditions. The criterion is met.
c. Impacts from the proposed variance will be mitigated to the extent practicable.		The impacts from the proposed variance will be the lack of structures immediately adjacent to SE 21st Avenue. The site layout mitigates the impacts as it preserves the ability for the future development on the site. The placement of bike facilities, art, and landscape areas in proximity to the street also anticipate and accentuate the future development of the site. Impacts are also mitigated through the use of quality materials, public art, and the activity that will result from the passenger activity. The criterion is met.

VARIANCE 2

Table 19.310.4 identifies floor area ratio (FAR) requirements as a minimum of .5:1 and a maximum of 3:1. The proposed structures are not enclosed structures and, as such, do not count towards FAR.

19.911.4.B.1 Approval Criteria		
Criteria		**Findings**
1. Discretionary Relief Criteria a. The applicant's alternatives analysis provides, at a minimum, an analysis of the impacts and benefits of the variance proposal as compared to the baseline code requirements.		The station and associated structures will not result in building area that is measurable as FAR. The station is a unique use with desirable public benefits. The baseline code requirements are intended to ensure that development supports street activity and makes efficient use of land and available services. The activity generated by the station will greatly enhance the vitality of the area, and will contribute to the creating an environment that will support new downtown development activities along nearby streets. The increased use of transit will also allow for more efficient development of adjacent properties by minimizing parking demand. Additionally, the site layout makes efficient use of the site as it

		preserves a potential future building site that would continue to support efficient and viable future development, which may ultimately result in the site being developed to an even more contributory degree. Other broader public benefits resulting from the construction, completion, and utilization of the station, and rail system, are substantial, both locally and regionally. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development. The local benefits directly associated with requiring a minimum FAR include supporting existing nearby development by providing increased pedestrian activity and an enlarged customer base, The number of people brought to the area because they use the light rail station will greatly exceed the number that would be produced by a building on the site meeting the FAR requirements, and this will ultimately support new development activities and associated benefits. Therefore the variance allowing the station construction is entirely consistent with the purpose of FAR standard, which is to ensure land is developed to an appropriate density that contributes to the activity and vitality of an area, and is suitable for the services available. The criterion is met.
b. The proposed variance is determined by the Planning Commission to be both reasonable and appropriate, and it meets one or more of the following criteria: (1) The proposed variance avoids or minimizes impacts to surrounding properties. (2) The proposed variance has desirable public benefits. (3) The proposed variance responds to the existing built or natural environment in a creative and sensitive		The station area contains a number of structures placed at various distances from SE 21st Avenue. The proposed variance results in minimal impact to adjacent parcels as the site is bounded on all sides: by streets to the north, east, and south, and the existing RR tracks to the west. Therefore the site is essentially isolated from adjacent properties. In addition, The structures are nominally visible to other properties on SE 21st Avenue, given their modest scale, transparent glass roofline, and distance, as well as being screened by a rich landscape of street trees along SE 21s. The proposed variance results in multiple desirable public benefits. The configuration allows for level boarding access to the trains on traveling along the LRT trackway. In addition, the layout preserves future development potential for the site as adopted by the City Council. The site configuration also responds to the built and natural

manner.		environment as the trackway LRT tracks and station align with the existing freight railroad. This minimizes impacts to adjacent parcels and natural area, while reflecting the current built amenities. In addition, two small plaza areas to the south and to the north contain art features, further enhance the area and highlight connections to the street, and provide pedestrian and bicycle amenities. Along Lake Road, the abutment wall, stair railings, cantilevered platform access above, all result in a treatment that activates the area and gracefully responds to the topography of the site, transitioning from Lake Road below to the station area with high-quality and thematically-appropriate materials that respond to the natural environment as well as the historical Milwaukie traditions. The criterion is met.
c. Impacts from the proposed variance will be mitigated to the extent practicable.		The impacts from the proposed variance will be the lack of occupiable development in the near term. These impacts have been mitigated through execution of a Memorandum of Understanding that defines City of Milwaukie and TriMet efforts to develop the site. In addition, the activity that will occur at the station, as well as the resulting overall enhancement of the immediate area and lack of impact to adjacent properties further mitigates impacts. This enhancement is furthered through the use of quality materials, and public art. The criterion is met.

DESIGN REVIEW

The site is located in the Downtown Office zone and is subject to Downtown Design Review. Addressed below are the following:

- **The applicable approval criteria of MMC 10.907.7**
- **The Condition of Approval from the preceding Design Review intended to be addressed at this time.**
- **The applicable Design Guidelines.**

19.907.7 Approval Criteria for Design Review		
Criteria		**Findings**
A. Compliance with Title 19;		The applications requirements and development standards of Title 19 have been met, but for the required variances addressed above. With approval of the variances, the criterion is therefore met.
B. Substantial consistency with the Downtown Design Guidelines;		The project has been reviewed below, and has been found to be consistent with the applicable Downtown Design Guidelines The criterion is met.
C. Submittal of a complete application and applicable fee as adopted by the City Council.		The project has been reviewed for completeness; missing items have been identified, and are herein addressed. The criterion is met.

Condition of Approval from WG 11-11-01 (Previous Design Review		
Criteria		**Findings**
A. Provide more detailed information about the underside of the jump span (the "ceiling" of the room) and the light from the light fixtures that demonstrates how the light interacts with the ceiling to make for a comfortable, attractive, and safe pedestrian environment.		More detailed information about the design of the jump span, the lighting approaches, and the anticipated lighting results, have been provided (Exhibits P5, P6). The result is a well-integrated approach that results in a comfortable, attractive, and safe pedestrian environment.
B. Provide more detailed information about the light from the light fixtures that demonstrates how the location, output, and angle of the light enhances the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.		More detailed information about the specific light fixtures, and the anticipated lighting results, have been provided (Exhibits P5, P6). The result is a well-integrated approach that enhances the proposed wall treatments and results in a comfortable, attractive, and safe pedestrian environment. This portion of the Condition is therefore met.

C. Provide a less modern and utilitarian light fixture option. Specifically, provide detailed information that demonstrates how the style and color of the light fixture and the method of mounting compliments the style of the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.		New light fixtures have been identified and proposed that are well-suited for the environment, compliment the proposed wall treatments, and results in a comfortable, attractive, and safe pedestrian environment. This portion of the Condition is therefore met.
D. Provide illustrations and analysis demonstrating that the proposed lighting achieves the following during both daytime and nighttime conditions: • Uniform lighting of the sidewalk • Minimal glare • Minimal deep shadows beneath the structure		Illustrations and analysis (Exhibits P5, P6) have been provided that demonstrate the new lighting approach and its success in achieving: uniform sidewalk lighting, minimized glare, and minimal deep shadows beneath the structure. This portion of the Condition is therefore met.
E. Explore other energy efficient and low-pollutant lighting options with a focus on comparing fluorescent lighting with LED and other feasible lighting options. Provide a memo that summarizes key findings and includes a rationale for the final lighting selection.		The most efficient fixtures available that meet the other lighting goals of the Condition have been selected and proposed. A memo is provided as Exhibit P19 more fully addressing each component of this condition. This portion of the Condition is therefore met.

DESIGN GUIDELINES: MILWAUKIE CHARACTER		
Guideline		**Findings**
Reinforce Milwaukie's Sense of Place **Strengthen the qualities and characteristics that make Milwaukie a unique place.**		Milwaukie's history is largely formed and defined by its natural surroundings and unique transportation systems. The project's parallel relationship to the existing rail trestle reinforces this transportation/technological history. Light rail is the steamship of the 21st century, and will provide Milwaukie with a new link to the region. It will provide unique views to the natural and urban areas that are Milwaukie today and will reinforce Milwaukie's qualities and characteristics in the future. As a result of public participation efforts, including public workshops, meetings with officials, and input from the Design and Landmarks Committee, numerous elements have been integrated into the design of the station that are specifically responsive to Milwaukie's unique qualities and characteristics. These elements include: stone-patterning of the various wall treatments (including those adjacent to the future platform), bollard and furniture treatments appropriate to Milwaukie's palette, pedestrian scale street light standards consistent with Milwaukie's current pattern, custom rail treatments incorporating detail, complimentary landscape design, and motifs specific to Milwaukie. The guideline is met.
Integrate the Environment **Building design should build upon environmental assets.**		The design of the station area, respects the character of the nearby natural area through simple detailing, material selection, and landscaped areas. The cantilevered platform access to the south will afford unique views to the environmental assets of Kellogg Lake and Kronberg Park, as well as to the Willamette River and hills beyond. Removal of invasive plants currently on the vacant site, and landscaping with appropriate replacements, will further enhance the immediate environmental quality. The inclusion of a water quality facility, where art is used to both highlight and celebrate stormwater, raises awareness of water quality at Kellogg Lake, south of the station, and the Willamette River to the west. The art is reflective of a waterfall and natural streambed. In addition, access and circulation patterns to the station facilitate enhanced pedestrian connections to existing parks and natural areas. Though the station does not consist of, or include, a building, the guideline is met.

Promote Linkages to Horticultural Heritage **Celebrate Milwaukie's heritage of beautiful green spaces.**		The station area, by making a visual connection to Kellogg Lake and Kronberg Park, provides new and unique views to those areas, and celebrates those spaces. The design of the station also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, artistic representation, sympathetic materials and colors, incorporated landscape, and environmental art pieces. Landscape plantings on site have been designed to provide visual interest and uniqueness to the city. Careful consideration has been given to the planting palate to select unique foliage textures, colors, and flowers so that these planted spaces will help extend the existing character and uniqueness of this area while adding to planting diversity. All plants selected for use in stormwater planters meet city standards for these types of facilities and will tolerate periods of inundation. Dogwood trees have been located in areas where appropriate and street tree species have been selected in accordance with the CoM downtown master plan for street trees. The guideline is met.
Establish or Strengthen Gateways **Projects should use arches, pylons, arbors or other transitions to mark special or primary entries and/or borders between public and private spaces.**		The carefully designed station platform is accentuated on all sides by railings with openings at designated safe entry points. The 42" high metal railings with historic Milwaukie motif demarcate the site and guide users to designated entry points. These access points are marked by small glass roofed shelters that house the Ticket vending machines. Signage and inlaid bronze lettering at the base of the ramps to the platform further delineate the threshold to the station area. The cantilevered platform access also serves as a promontory, connecting the station visually to public and private spaces beyond. The stone-patterned abutment walls, patterned masonry, landscaped plazas, unique Milwaukie-specific ornamental handrails, street enhancements, and public art; all serve to transition gracefully between the public station area and the surrounding private areas and properties. The guideline is met.

Consider View Opportunities **Building designs should maximize views of natural features or public spaces.**		The station platform and platform access will result in new and very different viewpoints of Kellogg Lake, Kronberg Park, and views to the river and Greenway beyond, for the many passengers riding it each day. The plazas include seating, which allows viewing from, and between, these new public spaces. Though the project does not include building design, to the extent it is applicable, the guideline is met.

Use Architectural Contrast Wisely **Contrast is essential to creating an interesting urban environment. Used wisely, contrast can provide focus and drama, announce a socially significant use, help define an area and clarify how the downtown is organized.**		The use of Milwaukie Black is proposed on all street elements and railings. However certain elements of the station shelters and the light poles are proposed as a bead blasted stainless steel. While this aligns with TriMet standards, the design offers an interesting contrast to the black to accentuate the platform area. When combined with the glass roof of the shelters, artwork, and railing design, the platform becomes a distinctive community amenity that is still easily recognized as part of the Light rail system. The simple detailing of the abutment wall, landscape plantings, and stairs along Lake Road add dramatic elements that will pronounce permanence and welcoming appropriate to this significant public work. The small public plazas - with associated landscaping, surface treatments, and furniture – will further serve to define the site as a public amenity, while providing a graceful transition between the neighborhood and the platform area. The south platform access, serving as a promontory overlooking Kellogg Lake and Kronberg Park, will further pronounce the station's public purpose in a dramatic-yet-integrated manner. The guideline is met.
Integrate Art **Public art should be used sparingly. It should not overwhelm outdoor spaces or render building mere backdrops. When used, public art should be integrated into the design of the building or public open space.**		TriMet's public art program installs a variety of artwork at locations along its light rail lines. The art is developed to be sensitively integrated, and specifically respectful of this guideline. The art has been vetted through the Public Art Advisory Committee, with input from the committed Milwaukie public and respective City Commissions in order to ensure the result is appropriate and contributory. The station art consists of two "milling wheels" at the north end near the bike shelters, carved "tree" columns under the station shelter, and a carved streambed and waterfall at the south end, included as part of the storm water treatment landscaping. These respective art elements are highly specific to the site, tied thematically to Milwaukie heritage. To the extent this guideline is applicable, it is met.

DESIGN GUIDELINES: PEDESTRIAN EMPHASIS		
Guideline		**Findings**
Reinforce and Enhance the Pedestrian System **Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminated, so that the pedestrian is the priority in all development projects.**		The station area preserves existing pedestrian paths, and creates a number of additional and well-defined new paths. The sidewalk along SE 21st will be widened to 16' to improve circulation. Pedestrian scaled lighting will be introduced. There are specifically introduced guardrails and signal control devices designed to guide pedestrian movement, protecting the pedestrian from grade changes and allowing track crossings at appropriate and safe locations. These features combine to enhance the focus on the pedestrian as the priority. A universal primary access is provided at the north end of the station, which provides direction connections to the Bus transfers at 21rst and Washington, as well as the adjacent high school, businesses, and new and existing pedestrian amenities along the streets. In addition, Stairs from Lake Road are used to overcome significant grade differences, to introduce a secondary pedestrian pathway to the station. Guard and hand Rails throughout the project area are designed in a manner that provides paths and visual cues to move them safely and efficiently about the site. All associated elements maintain a high degree of quality and craftsmanship. These areas are well lit and avoid obstructions, further prioritizing the pedestrian. Overall, the project results in a well-defined visual attraction that will enhance the pedestrian experience. The guideline is met.
Define the Pedestrian Environment **Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.**		The station platform and shelters are modest in scale. The shelters, paving materials, wall materials, guardrail designs, landscaping, plazas, and associated furniture all contribute to the variety and richness of the area. Along Lake Road, the masonry abutment walls are patterned to a pedestrian scale. Highly detailed and integrated stair and rails enhance this portion of the public realm. The views to and from the cantilevered platform access further add to the richness and enhancement of the

		public realm. This guideline is met.
Protect the Pedestrian from the Elements **Protect pedestrians from wind, sun and rain.**		The station shelter designs provide windscreens with integrated benches, and a widened roof to protect pedestrians from wind and rain. The glass roof is coated for UV protection from the sun. TVM shelters are also provided as shelter for patrons while purchasing fare. The guideline is met.
Provide Places for Stopping and Viewing **Provide safe, comfortable places where people can stop to sit and rest, meet and visit with each other, and otherwise enjoy the downtown surroundings.**		The station and TVM shelters will provide places to gather sheltered from the weather, and the station platform includes benches. Additional city standard benches are provided on Adams near the proposed bike locker amenities. The introduction of plazas around the station area will provide places to meet as well. The integrated art areas will certainly become landmarks for meeting up with others, as well as an opportunity to enjoy the art in its own right. The guideline is met.
Create Successful Outdoor Spaces **Spaces should be designed for a variety of activities during all hours and seasons.**		The variety and placement of plazas, and the additional gathering areas such as the cantilevered platform access and the station area, results in a flexible layering of spaces that will support various uses during all hours and all seasons. Art and plaza spaces will provide energy and interest along new paths at all hours. Landscaped areas will change with the seasons. The guideline is met.
Integrate Barrier-free Design **Accommodate handicap access in a manner that is integral to the building and public right-of-way and not designed merely to meet minimum building code standards.**		Tri Met consistently includes exceptional barrier free design in all of its projects. The station is a part of a region wide accessible transportation network, and all elements associated with the project will exceed minimum standards, both technically and aesthetically. The station area provides level boarding for all patrons, and a primary access point that is universal and connects directly to the proposed on-street LIFT space, bus stops at SE 21rst and Washington, and existing sidewalk and street networks. While the north end is a stairway, a ramp option was not deemed viable at this location. Given the significant grade changes at the south end of the platform, a ramped access would result in a longer path of travel for patrons, than if they went to the primary access at the north. The TVM landing and

		connections between the proposed and future platforms provide level access in anticipation of the ADA access from the future building development. In addition, TriMet has vetted the design with the Citizens for Accessible Transportation Committee, a vital resource for determining appropriate accessible station design throughout the Light Rail system. This guideline is met.

DESIGN GUIDELINES: ARCHITECTURE		
Guideline		**Comments**
Wall Materials **Use materials that create a sense of permanence.**		TriMet consistently applies the use of long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, bead blasted stainless steel, glass, painted metal, and hardy landscape plants have been selected and utilized in a manner that will ensure that the structure is of a consistent and well maintained quality, both physically and visually for the life of the project. The guideline is met.
Wall Structure **Use scale-defining devices to break up the longitudinal dimensions of buildings, creating a comfortable sense of enclosure by establishing an uninterrupted street edge.**		Shelter structures are highly detailed and articulated, in order to provide comfortable protection and define gathering areas in a way that is pedestrian scaled and finished. Landscape, art, a bike shelter, and street trees, further reinforce the street edge. Although, this guideline applies exclusively to buildings, the guideline is met to the extent applicable.
Silhouette and Roofline **Create interest and detail in silhouette and roofline.**		The rooflines of the shelters will be enhanced both by their form, and by their modulated and fine-scaled detail, whether viewed from across the site, or from down below. The roof material is glass, with structural steel roof supports painted black. The black color allows the structure to recede, yet the transparency of the glass allows the materials to visibly accentuate the roofline. These elements will be further enhanced by the more subtle play of light and shadow and color that will result from the contrast in color and texture This guideline is met.

Green Architecture **New construction or building renovation should include sustainable materials and design.**		TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the concrete, glass, painted metal and Stainless steel have been designed and detailed in a manner that will ensure that the structures are sustainable with low life cycle costs. The steel elements, as well as the concrete, will include recycled content, and have been structurally designed to be as efficient as possible. LED lights are being utilized for the jump-span lighting, and platform lighting, to provide high efficiency lighting throughout the project. Finally, a majority of the materials are potentially recyclable – most readily the predominant use of steel – should the project ever have an end-of-use. The guideline is met.
Building Security **Buildings and site planning should consider and employ techniques that create a safe environment.**		Safety is a prime design consideration for Tri Met in all its projects. Crime Prevention Through Environmental Design (CPTED) principles are followed throughout the station area design. TriMet's safety and security committee has reviewed the project and determined that in both construction and use, the design will contribute to a visibly open, safe, and inviting environment. TriMet has included intrusion detection on the bridge adjacent the platform, to deter trespass, and will install security cameras on the platforms for added security. In addition, lighting has been provided that exceed safety standards and maintain uniformity on the platform. Signage, signals, and railings have been included in the design, with the track crossing circulation oriented toward the direction of train travel to where possible, so patrons can see and acknowledge oncoming trains. The station platform has been cited to ensure safe train operations for adjacent track crossings at the street level. This guideline is met.

DESIGN GUIDELINES: LIGHTING		
Guideline		**Findings**
Exterior Building Lighting **Architectural lighting should be an integral component of the facade composition.**		This guideline is intended to apply typically to buildings when implementing an architectural lighting plan. The architectural lighting the station is limited to lighting integrated into the design of the shelters. There is street and platform lighting placed about the overall station area that has been selected and composed to integrate into overall context. The lighting under and about the jump span has been further refined in response to the DLC's guidance and associated Condition of Approval, resulting in a highly-integrated approach that will contribute to the quality and safety of this evolved lighting approach. The guideline is met.
Parking Lot Lighting **Ornamental streetlights should be used to be compatible with downtown streetlight standards identified in the Public Area Requirements.**		Proposed ornamental streetlights are consistent with downtown streetlight standards. The guideline is met.
Landscape Lighting **Lighting should be used to highlight sidewalks, street trees and other landscape features. Landscape lighting is especially appropriate as a way to provide pedestrian safety during holiday periods.**		The sidewalks and other pedestrian routes have lighting placed to maximize visibility and exceed safety standards, while minimizing glare. In response to the DLC's guidance and associated Condition of Approval, particular attention has been paid to developing a lighting program under and around the jump span the lights the sidewalks evenly and effectively. Lights along the stairs from Lake Road are sensitively integrated to enhance the safety and experience of that important path. Lighting is also included to accentuate the art pieces. Together, these lighting amenities highlight the station area and provide safe, uniform lighting for the site. The guideline is met.

Sign Lighting **Sign lighting should be designed as an integral component of the building and sign composition.**		Signs on site are to be directional and informative in nature, and modest in scale. They are not to be interiorly lit, as they are too small to warrant integrated lighting. However station signs are located on Light poles and placed to be adequately illuminated by the ambient light resulting from pole-mounted fixtures above. The signs themselves are carefully placed and mounted to be both legible by patrons on the platforms as well as trains, and well integrated with the various elements to which they are attached. The digital displays are internally lit by definition, and are well integrated into the respective shelter design. The guideline is met.

DESIGN GUIDELINES: SIGNS		
Guideline		**Findings**
Wall Signs **Signs should be sized and placed so that they are compatible with the building's architectural design.**		Signs on site are to be directional and informative in nature, and modest in scale. The signs are carefully placed and mounted to be both legible, and well integrated with the various elements to which they are attached. The digital displays are well integrated into the respective shelter design. The guideline is met.
Hanging or Projecting Signs **Hanging signs should be oriented to the pedestrian, and highly visible from the sidewalk.**		Station signage is oriented both toward platform entrances and the approaching trains, as well toward a train stopped at the platform for easy station identification. All are easily visible and highly recognized as part of the Light Rail system. The guideline is met.
Information and Guide Signs **Directional signs should be small scale and of consistent dimensions, and located in a visually logical order. These signs also should provide on-site directional information.**		Signs on site are to be directional and informative in nature, modest in scale, and placed in a visually logic order to guide passengers. They are scaled to be no larger than necessary, but appropriately legible, and consistent with station signage throughout the light rail system. The guideline is met.

RECEIVED
APR 26 2012
CITY OF MILWAUKIE
PLANNING DEPARTMENT

KLK CONSULTING, LLC

Memo

Date: April 15, 2012

To: Li Aligood, City of Milwaukie Senior Planner

From: Jeff Joslin

Subject: Response to Condition 6 of Case No. WG-11-01, Pertaining To Jump Span Lighting Options

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Background

TriMet received final land use approval from the City of Milwaukie on January 17, 2012 for a light rail bridge over Kellogg Lake that spans between Lake Road and the planned bridge abutment on the south side of SE McLoughlin Blvd. This memo serves to satisfy Condition 6, and particularly 6E. The condition reads as follows with the relevant portion of 6E underlined:

6. The DLC requested more information and different light fixture options for lighting underneath the jump span than what was presented by the applicant at the Oct 17 DLC design review meeting. The applicant shall resubmit this design item for consideration during the land use proceedings for the Milwaukie Light Rail Station. A summary of the DLC's design direction to the applicant is as follows:
   A. Provide more detailed information about the underside of the jump span (the "ceiling" of the room) and the light from the light fixtures that demonstrates how the light interacts with the ceiling to make for a comfortable, attractive, and safe pedestrian environment.
   B. Provide more detailed information about the light from the light fixtures that demonstrates how the location, output, and angle of the light enhances the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.
   C. Provide a less modern and utilitarian light fixture option. Specifically, provide detailed information that demonstrates how the style and color of the light fixture and the method of mounting compliments the style of the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.
   D. Provide illustrations and analysis demonstrating that the proposed lighting achieves the following during both daytime and nighttime conditions:
      - Uniform lighting of the sidewalk
      - Minimal glare
      - Minimal deep shadows beneath the structure
   E. Explore other energy efficient and low-pollutant lighting options with a focus on comparing fluorescent lighting with LED and other feasible lighting options. Provide a memo that summarizes key findings and includes a rationale for the final lighting selection.

The narrative response (key findings) is below, in response to each of the components of the Condition. Associated Exhibits (Exhibits P5A, P5B, P6, P6A, P6B, P6C, P6D,and 6E) are included in the land use application CSU 12-03 to fully describe and assess these lighting elements in response to all aspects of the condition.

Condition and Key Findings

A. Provide more detailed information about the underside of the jump span (the "ceiling" of the room) and the light from the light fixtures that demonstrates how the light interacts with the ceiling to make for a comfortable, attractive, and safe pedestrian environment.

Findings:
The proposed lighting solution utilizes linear LED luminaires mounted at intervals in recesses in the concrete slabs that span Lake Road, as well as linear LED wall-wash fixtures at perimeter walls. The solution provides an uncluttered lighting design that will provide uniform light levels under the bridge with minimal glare. Light reflected off of the adjacent walls, roadway, and sidewalks will create a glow on the ceiling of the space, creating, at night, a frame of light that reinforces the sense of gateway already established by the jump span walls, piers, and ceiling. The well-lit environment will unify the space and create a sense of safety. The pattern and texture of joints and recesses, and the interesting pattern of lights at the underside of the jump span, will create a rich visual environment, enhancing the pedestrian experience.

B. Provide more detailed information about the light from the light fixtures that demonstrates how the location, output, and angle of the light enhances the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.

Findings:
The wall-wash light fixtures will provide light on the patterned walls of the concrete abutment and piers, highlighting the architectural treatment by accentuating the texture of the wall surface. The location and spacing of the fixtures is designed to cast an even light across the walls, avoiding dark areas or excessively bright areas, contributing to a comfortable and safe environment.

C. Provide a less modern and utilitarian light fixture option. Specifically, provide detailed information that demonstrates how the style and color of the light fixture and the method of mounting compliments the style of the proposed wall treatments and provides for a comfortable, attractive, and safe pedestrian environment.

Findings:
The minimal dimensions of the light fixtures, and their mounting in recesses in the jump span slabs, allow the individual fixtures to recede and become part of the larger composition of textures and surfaces of the jump span elements. The pattern of parallel lighting recesses alternating with the joints between the concrete slabs of the jump span, along with the pattern

of the light fixtures themselves, creates a visual richness and variety in the ceiling of the jump span that complements the texture of the adjacent walls and is sympathetic to the pattern and character of the bridge art proposal.

D. Provide illustrations and analysis demonstrating that the proposed lighting achieves the following during both daytime and nighttime conditions:

- Uniform lighting of the sidewalk

Findings:
Photometric analysis of the proposed lighting layout shows uniform light levels at the sidewalks.

- Minimal glare

Findings:
The uniform light levels shown in the photometric analysis of the proposed lighting layout will prevent the glare that can occur with contrasting light levels.

- Minimal deep shadows beneath the structure

Findings:
The even light levels on roadway, sidewalk, wall, and ceiling surfaces will eliminate deep shadows.

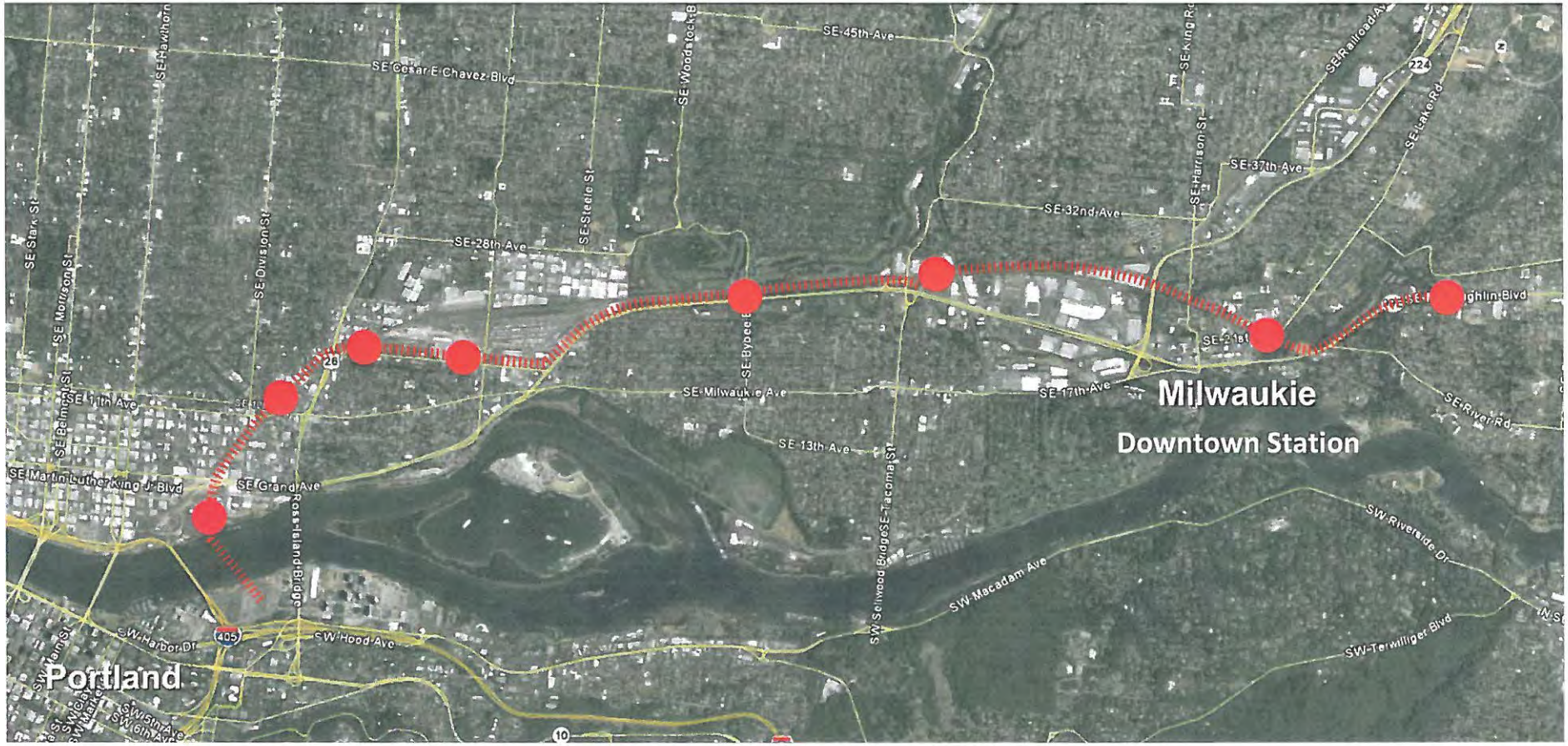
E. Explore other energy efficient and low-pollutant lighting options with a focus on comparing fluorescent lighting with LED and other feasible lighting options. Provide a memo that summarizes key findings and includes a rationale for the final lighting selection.

Findings:
LED lighting fixtures are among the most efficient light fixtures currently available on the market. They are significantly more energy efficient than fluorescent fixtures when comparing equivalent light output. LED lamps last significantly longer than lamps of other lighting types, requiring minimal maintenance. Their minimal size makes them material efficient, and allows lighting solutions that enhance, without competing with, architectural and landscape spaces.

Conclusion

As the lighting elements discussed in this memo have already been vetted with the Design and Landmarks Committee and found to be appropriately response, additional detailed information has been provided, and the memo itself is here provided, Approval is requested determining compliance with Condition 6 of WG-11-01.

ATTACHMENT 4C

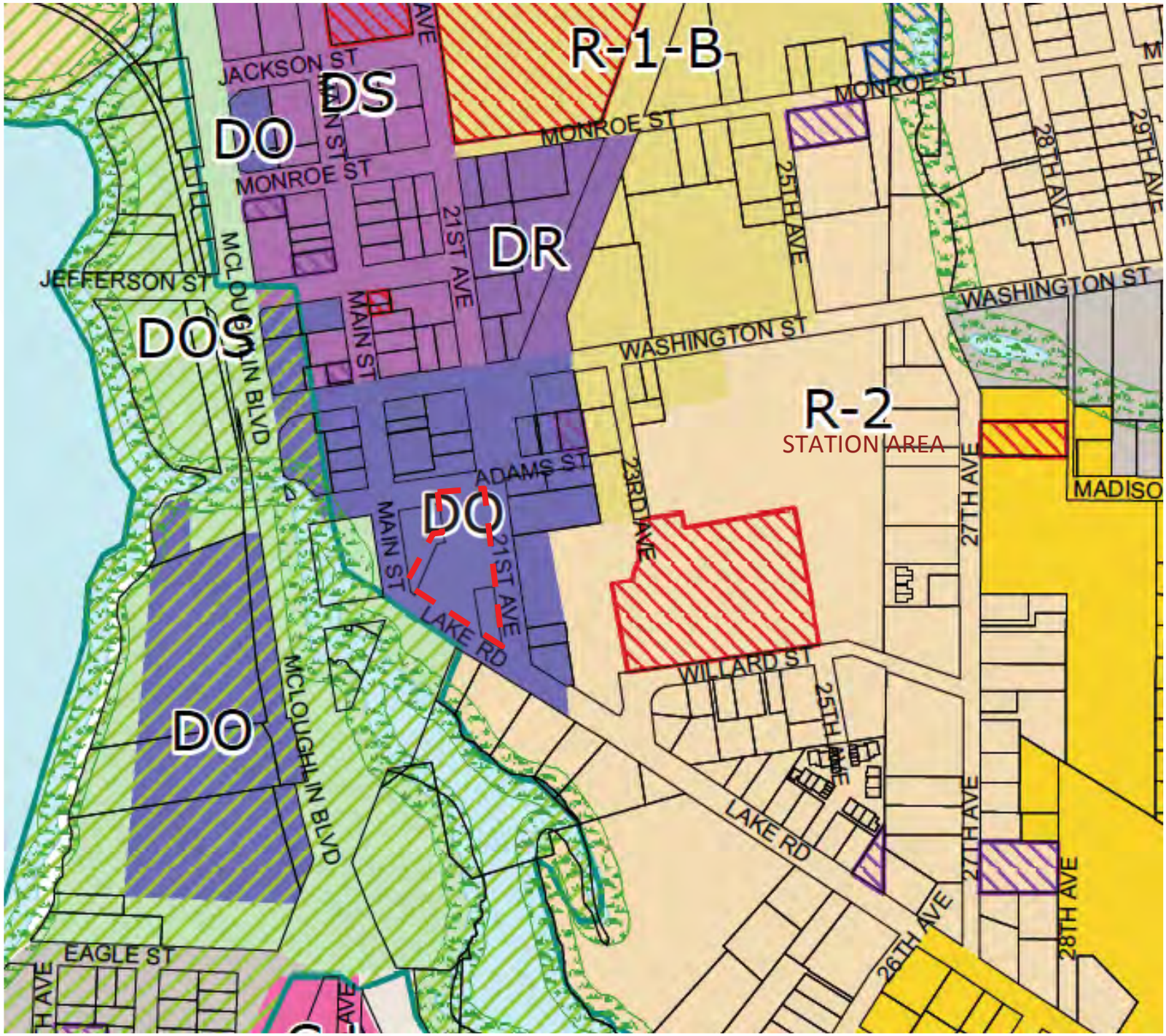


Downtown Station In Context of Overall Line

Exhibit O 1

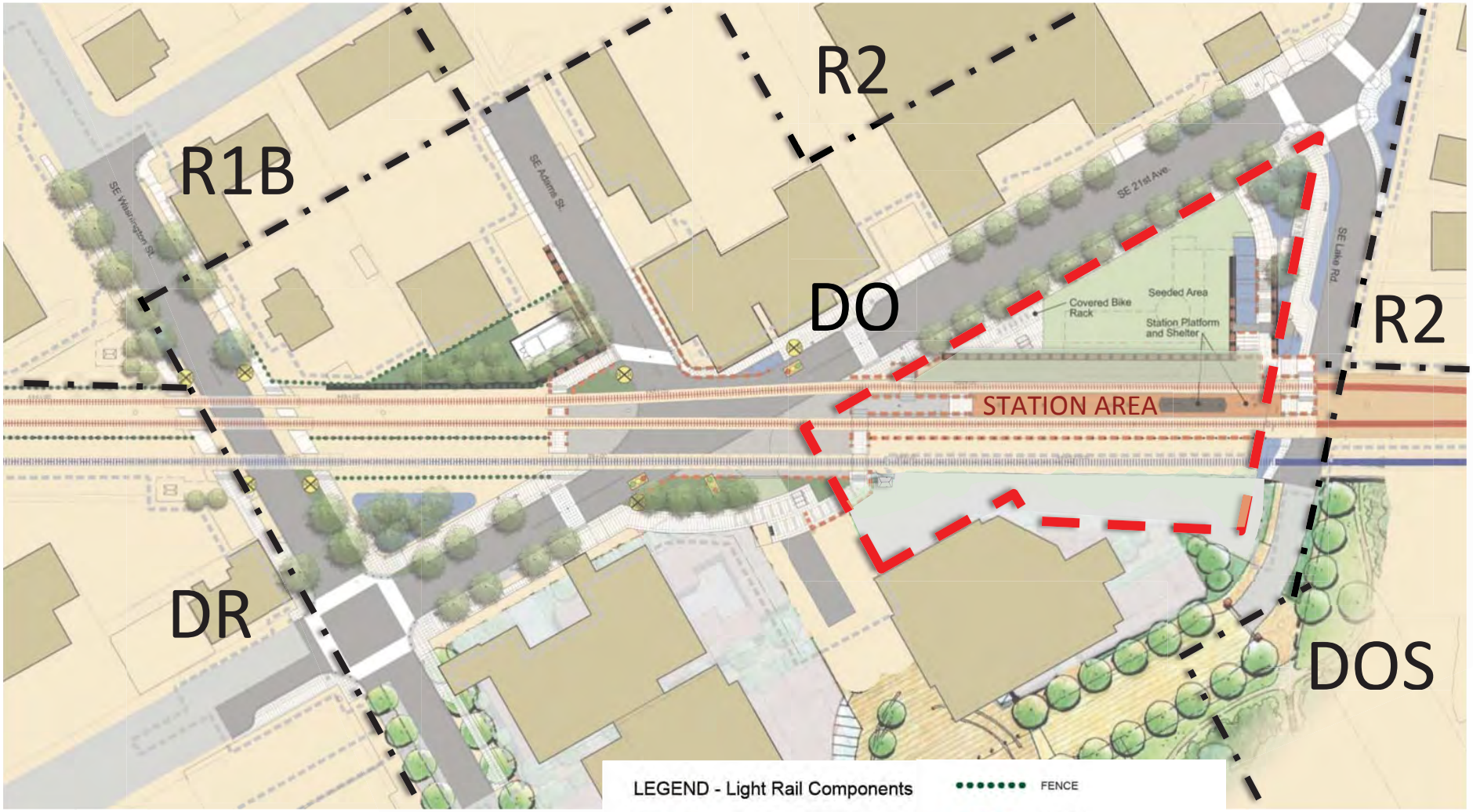
Downtown Station and Adjacent Stations

Exhibit O 2



Site Location and Downtown Zoning

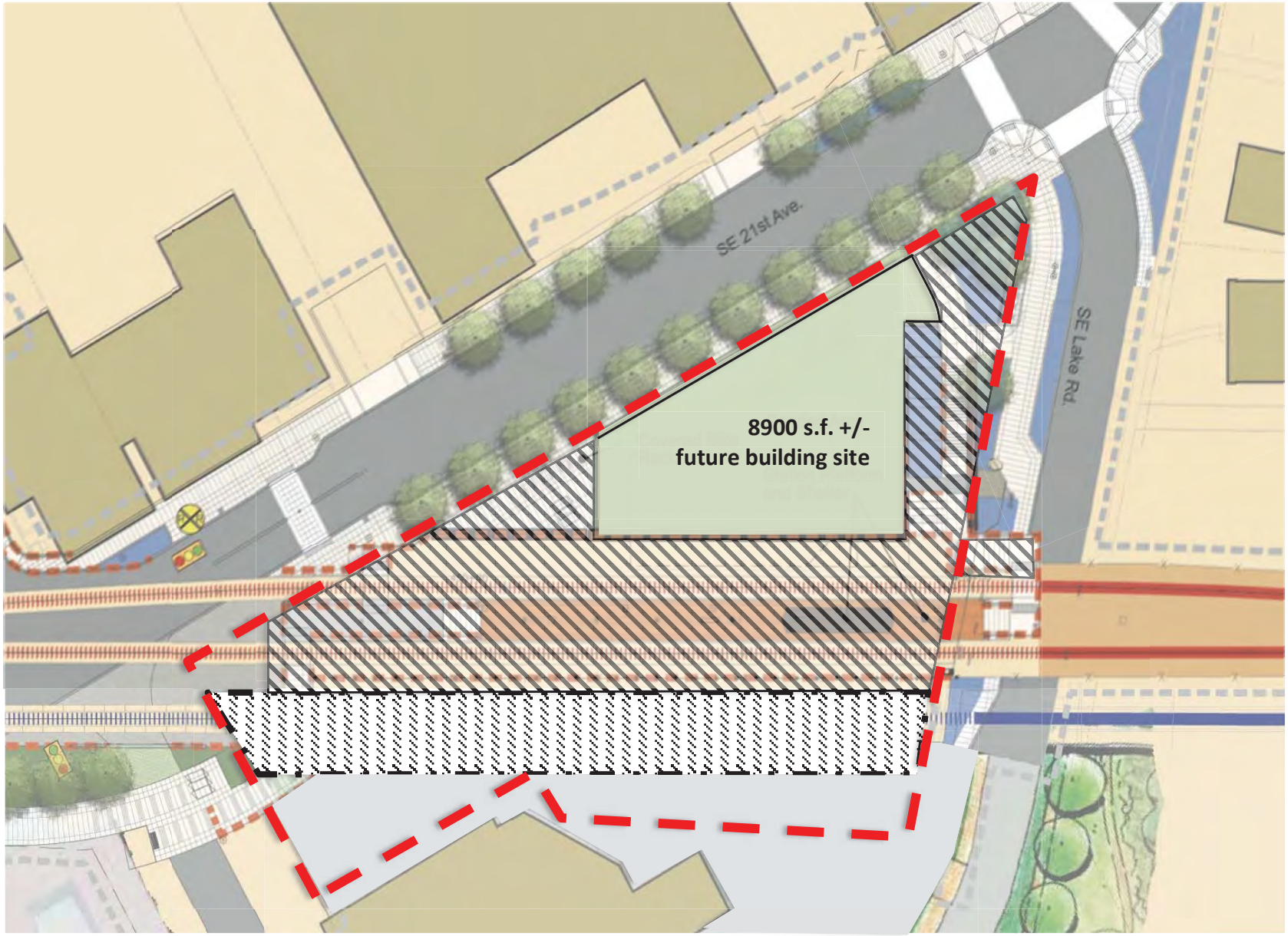
Exhibit O 3



Affected Lot Boundary

Zoning Approximations – Immediate Station Vicinity

Exhibit O 4



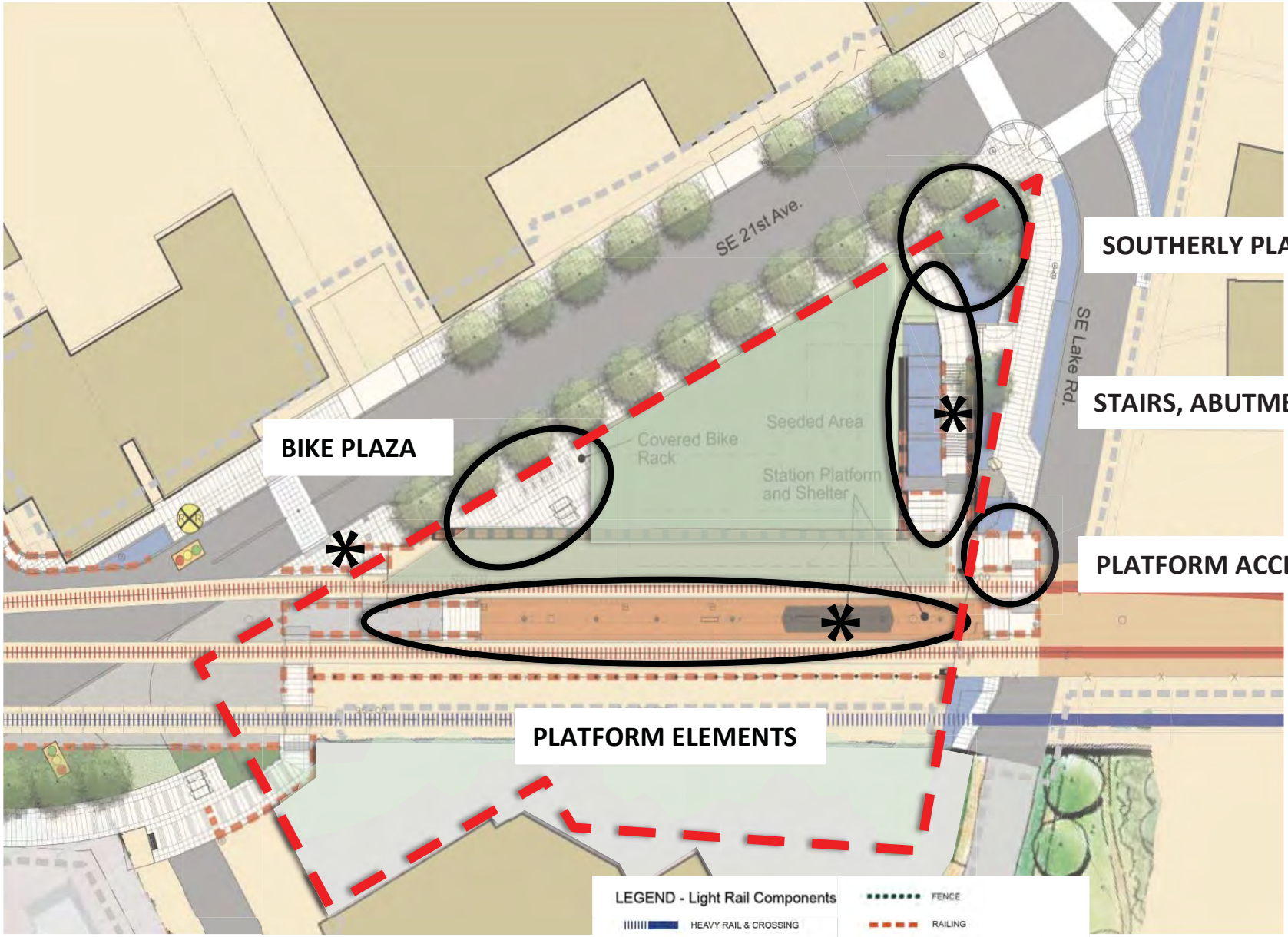
Area of Review Focus

Area of Site Within Railroad Corridor

Affected Lot Boundary

Exhibit O 5

Review Focus

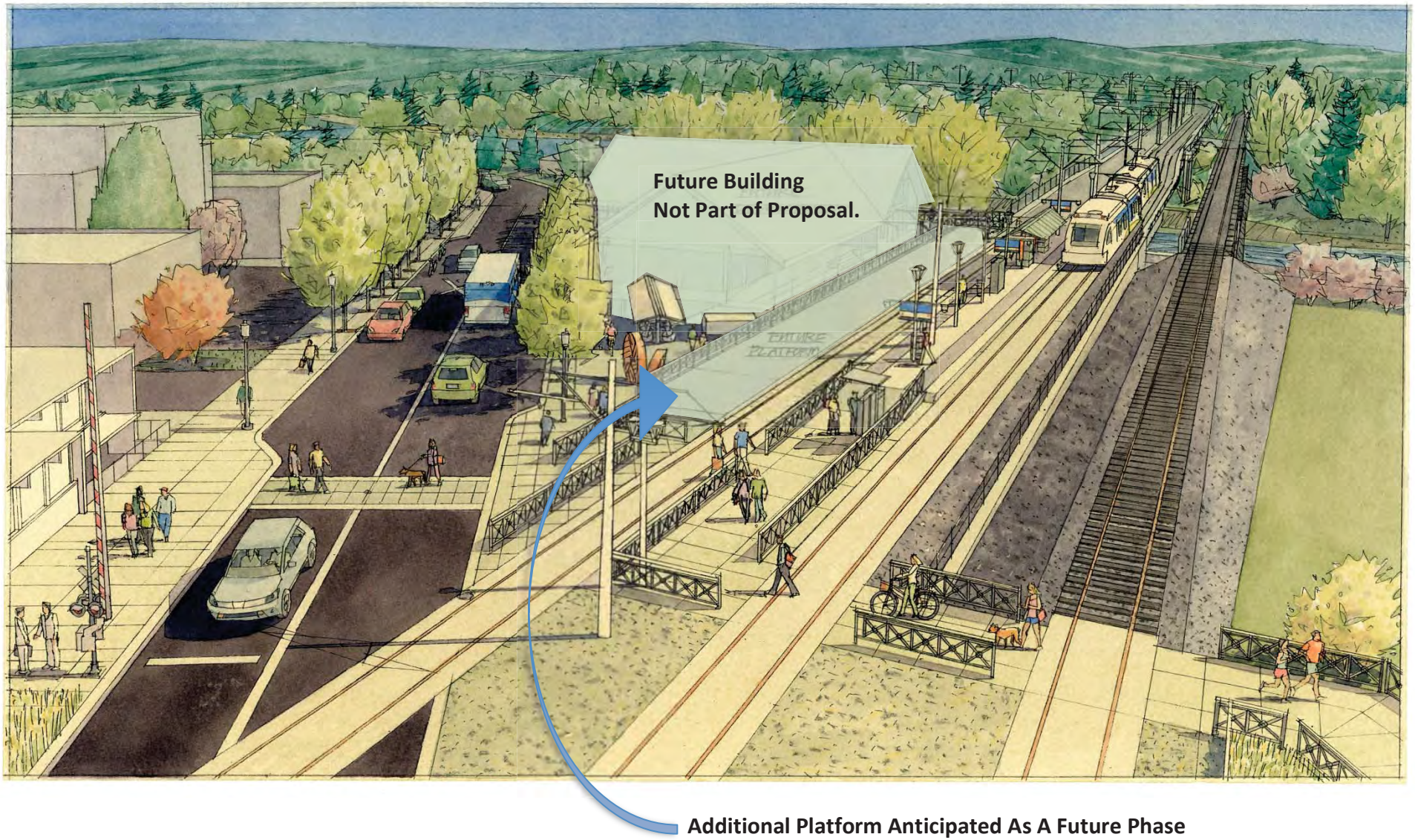


Affected Lot Boundary

* Art Locations (not in review – for reference only)

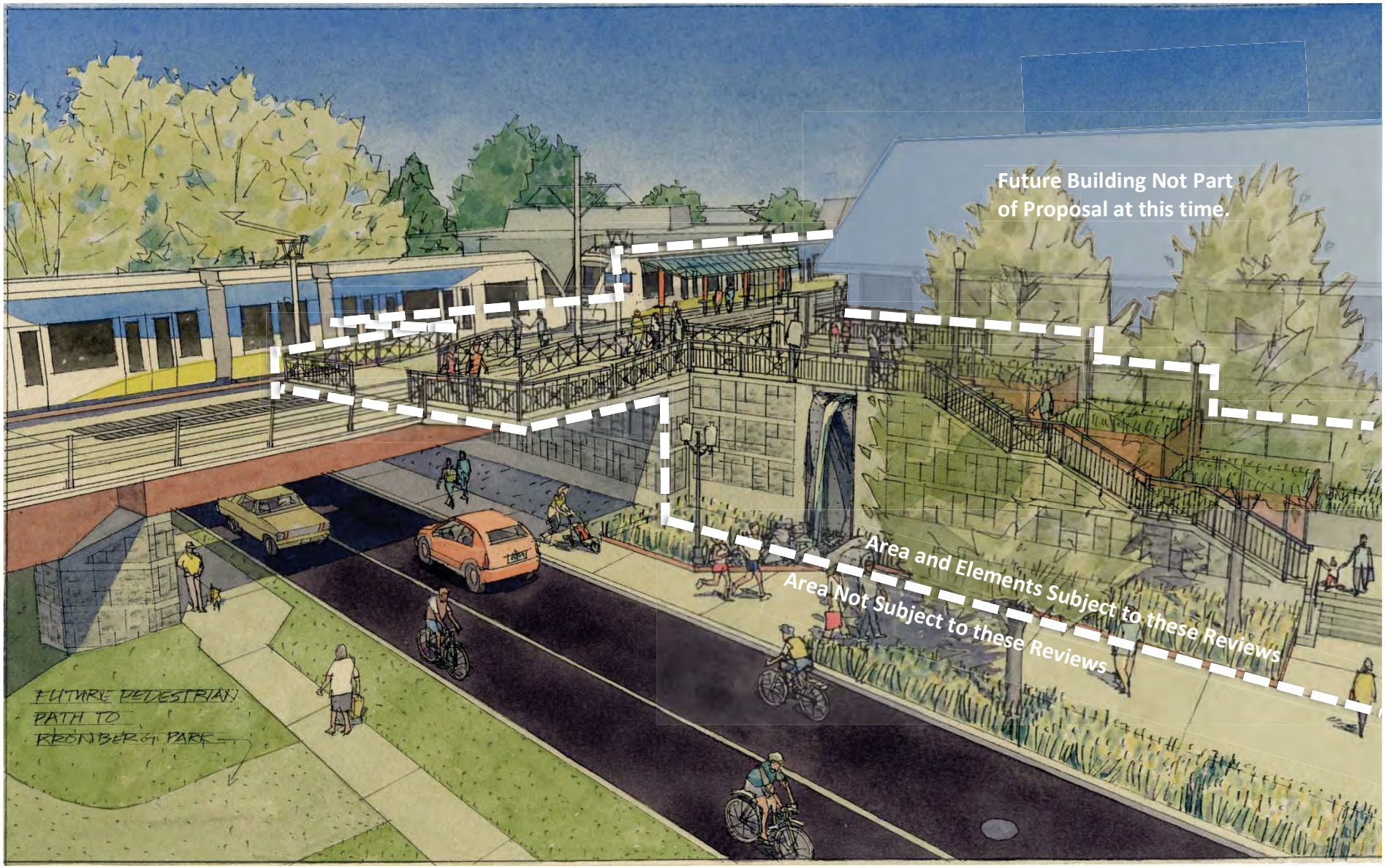
Primary Elements of Review

Exhibit O 6



View of Downtown Station from North

Exhibit P 1

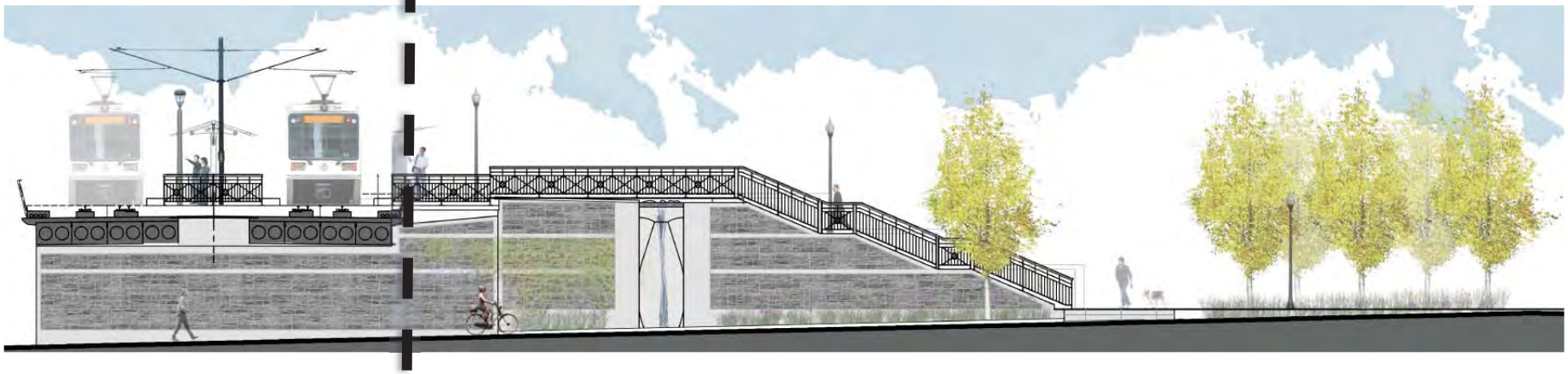


View of Downtown Station from South

Exhibit P 2

Earlier Review

Current Review



Abutment Wall, Stairs, and Cantilevered Access, and Art Location

Exhibit P 3

FITZGERALD FORMLINERS

Forming The Future ™

PATTERN 16999
Georgia Ashlar

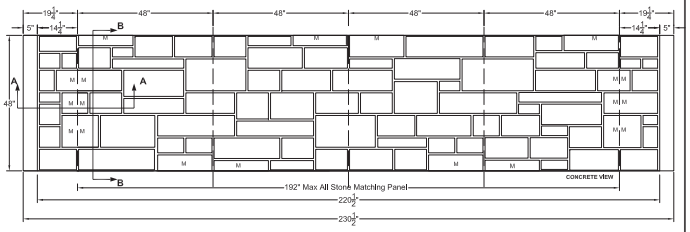
Linear cut ashlar block

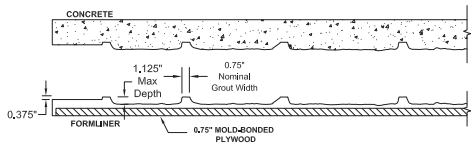
GrayLastic™

Elastomeric Urethane • up to 100 uses.
Mold bonded to 0.75" plywood, Add 1.125" to liner thickness.

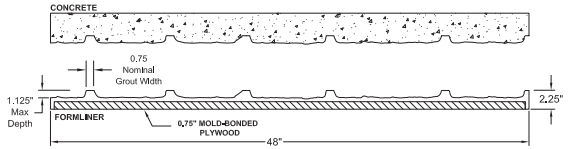
Stone & Rock
Part Size: 220.5" W x 48" H
Max Depth: 1.125"
Stone Sizes: 7"- 28" W
3"- 12" H

M= Match point
Dashed line indicates
vertical match point locations
192" Max All Stone Matching Panel





SECTION A-A
FORMLINER DETAIL



SECTION B-B
FORMLINER DETAIL

FITZGERALD FORMLINERS
1500 East Chestnut Avenue • Santa Ana, CA 92701 • Fax (714) 245-9715
Ph: (800) 547-7760 • Ph (714) 547-6710 • www.formliners.com

Pattern can be requested in AutoCad format.

File Name: S-16999-GR-9-27-07 Page 1 of 2

FITZGERALD FORMLINERS

Forming The Future ™

PATTERN 16999
Georgia Ashlar

Linear cut ashlar block

GrayLastic™

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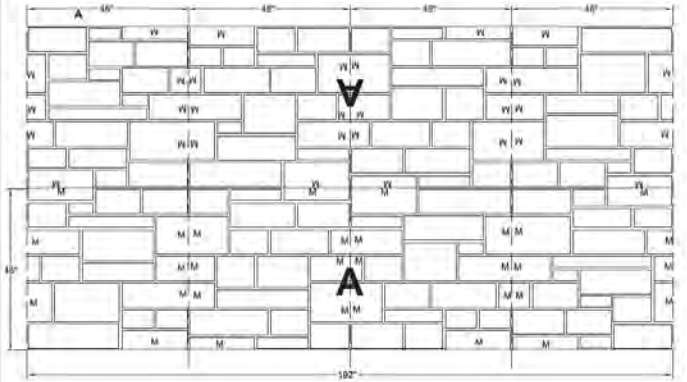

FITZGERALD FORMLINERS
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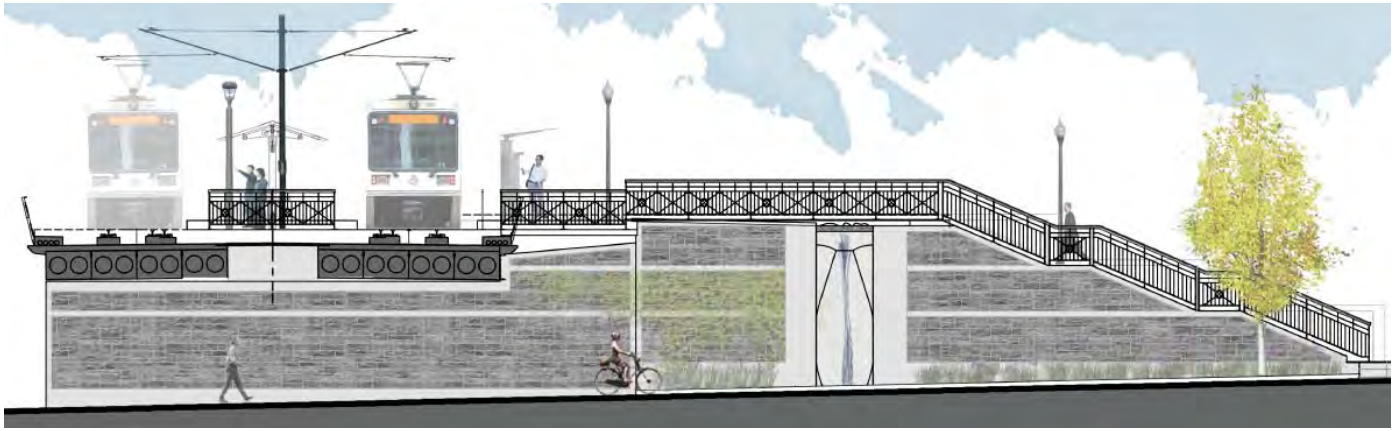
Pattern can be requested in AutoCad format.

File Name: S-16999-GR-9-27-07 Page 2 of 2

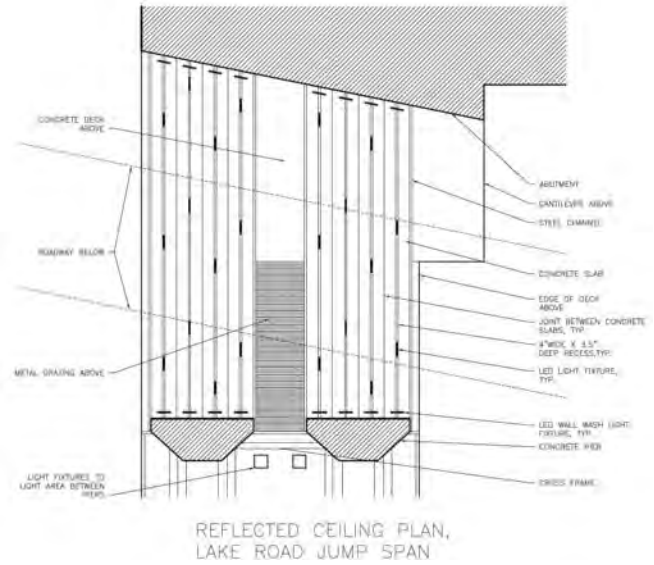


Ashlar Abutment Wall Details

Exhibit P 4

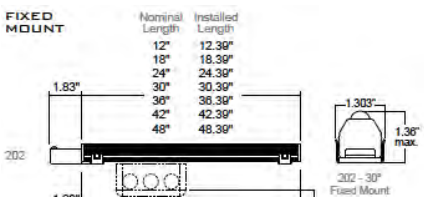
View Under Jump Span Showing Fixture Placement

Night View – Lake Road

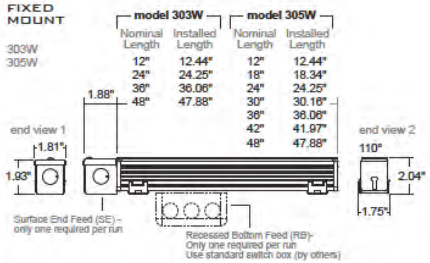


Jump Span Reflected Lighting Plan

Mid-Column Fixtures



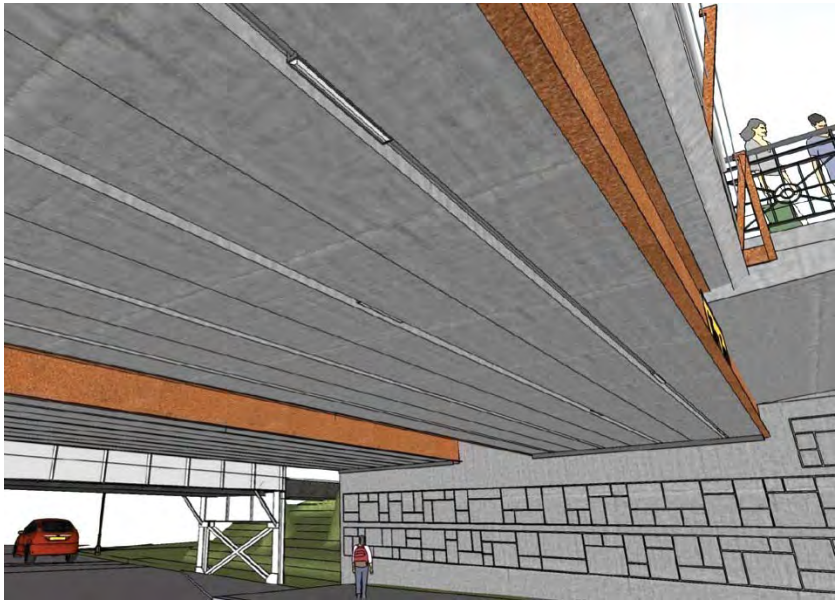
Wall Washing Fixtures



Recess Mounted Fixtures

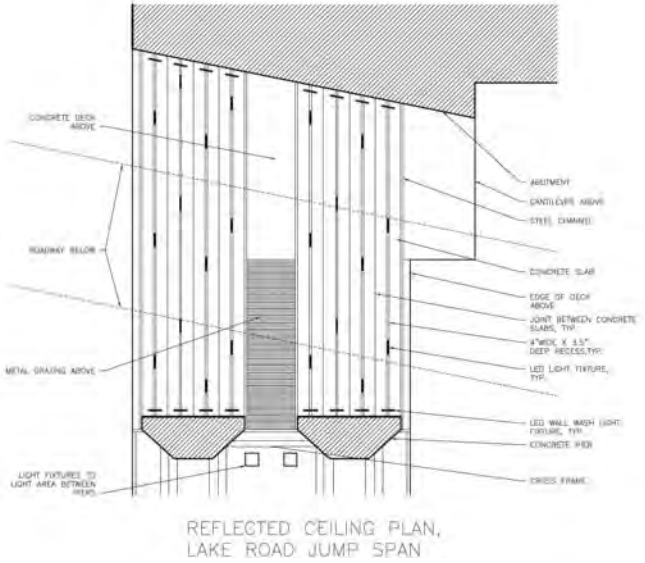
Jump Span Lighting Refinements

Exhibit P 5



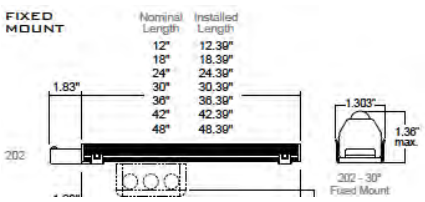
View Under Jump Span Showing Fixture Placement

Night View – Lake Road

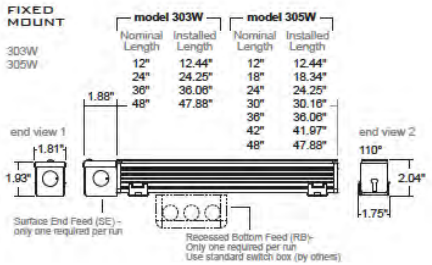


Jump Span Reflected Lighting Plan

Mid-Column Fixtures



Wall Washing Fixtures

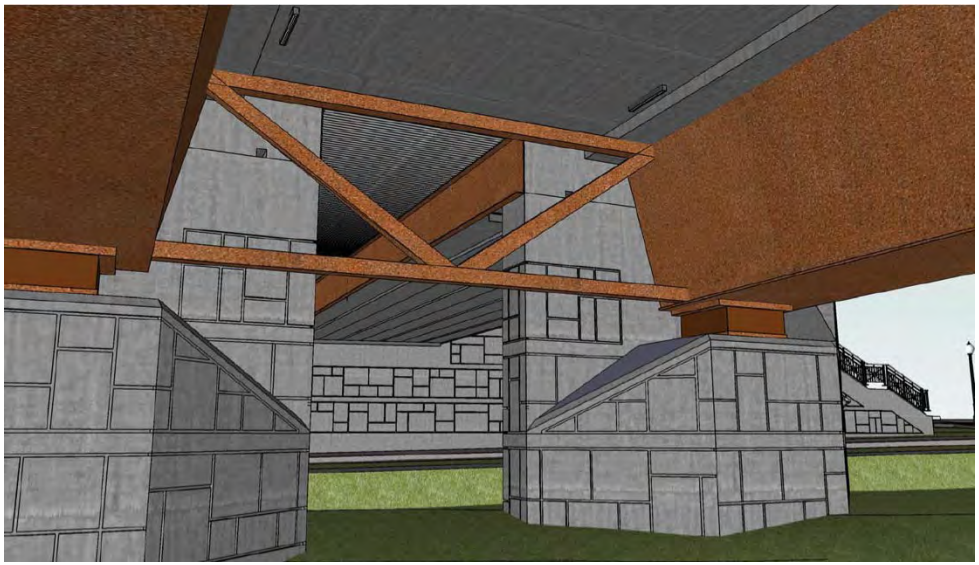


Recess Mounted Fixtures

Jump Span Lighting Refinements

Exhibit P 5A

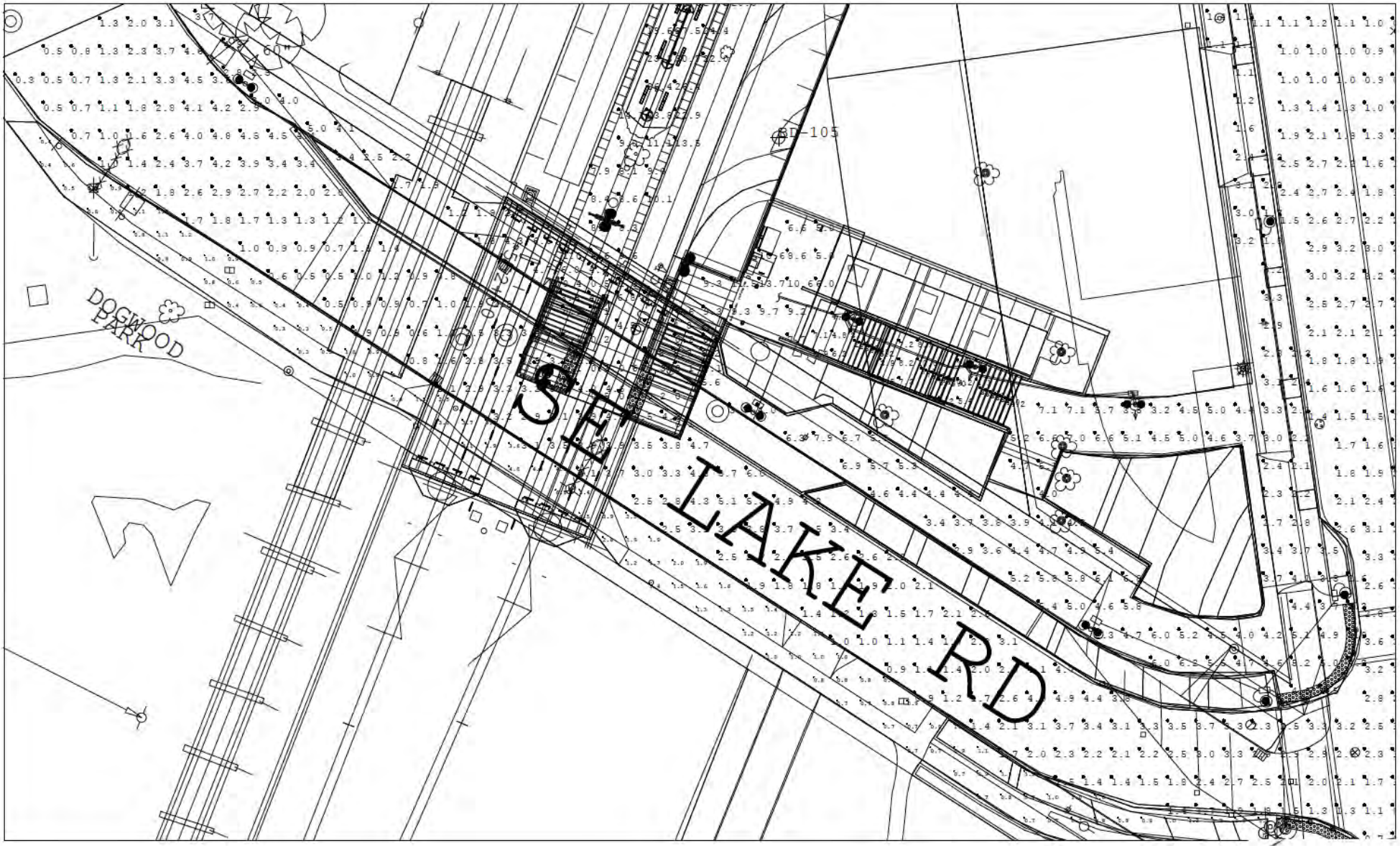
Fixture Placement By Columns



Jump Span Lighting: Night and Day from Lake Road

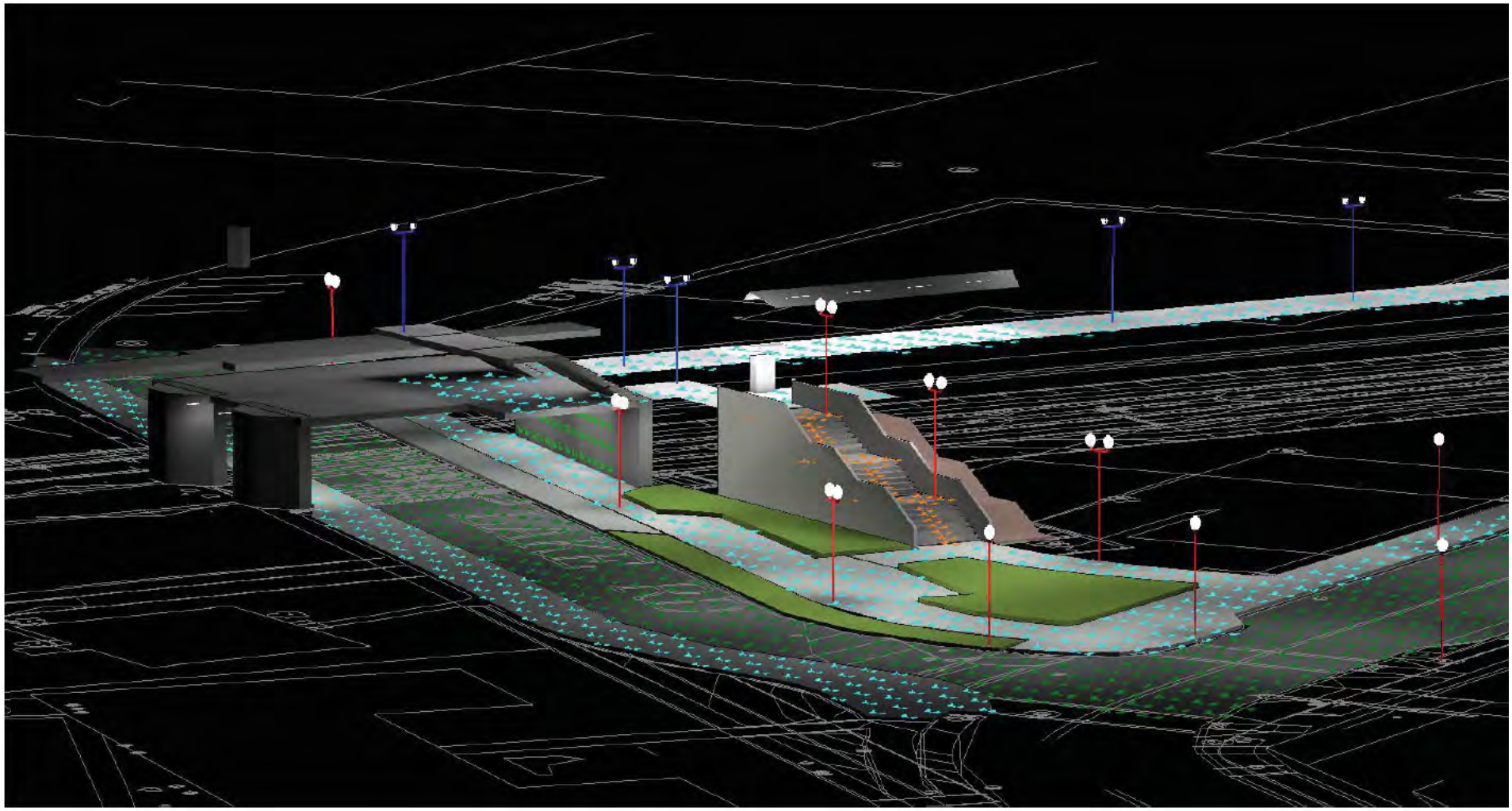
Jump Span Lighting Refinements

Exhibit P 5B



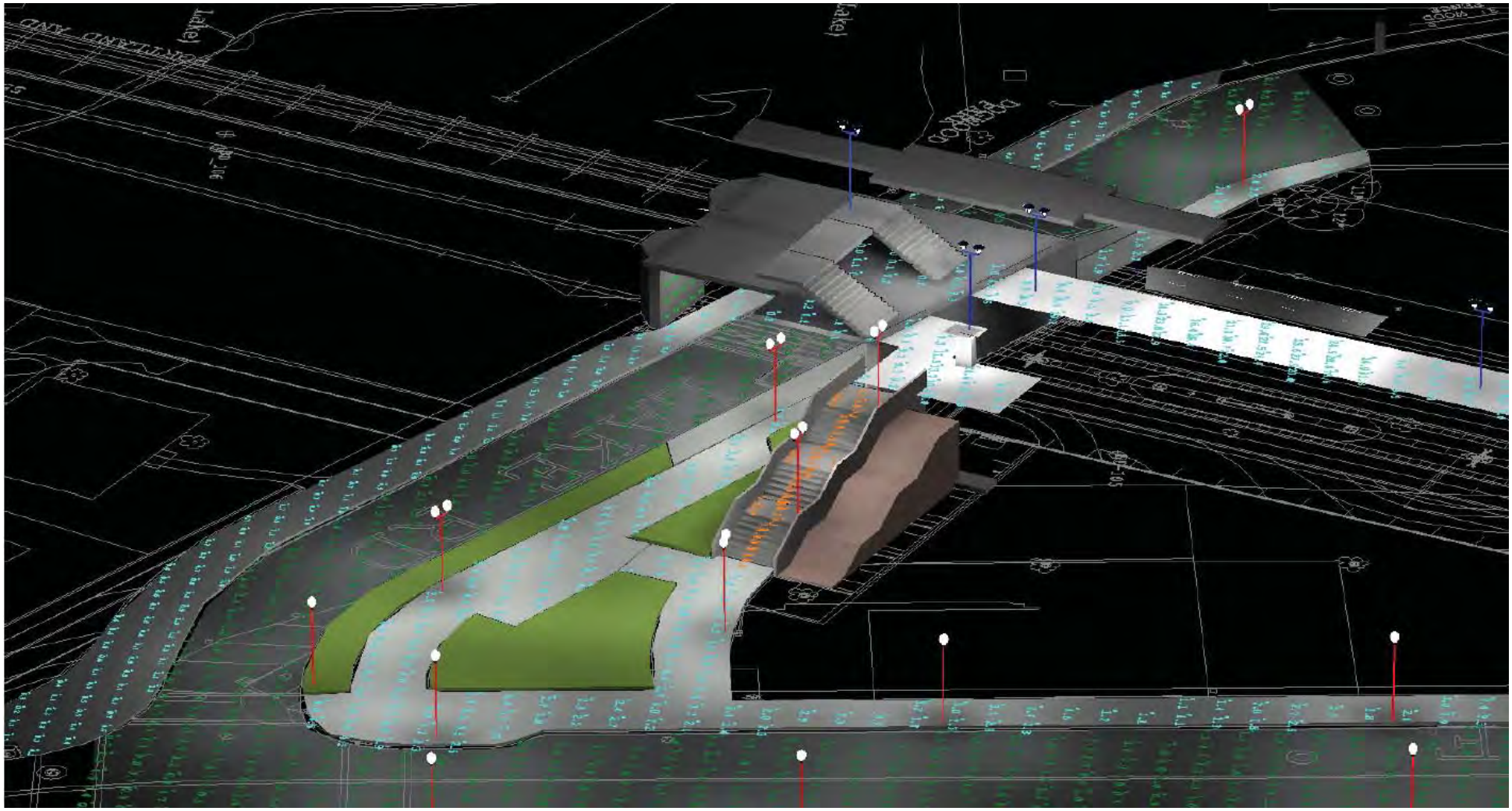
Jump Span Photometric Analysis

Exhibit P 6A



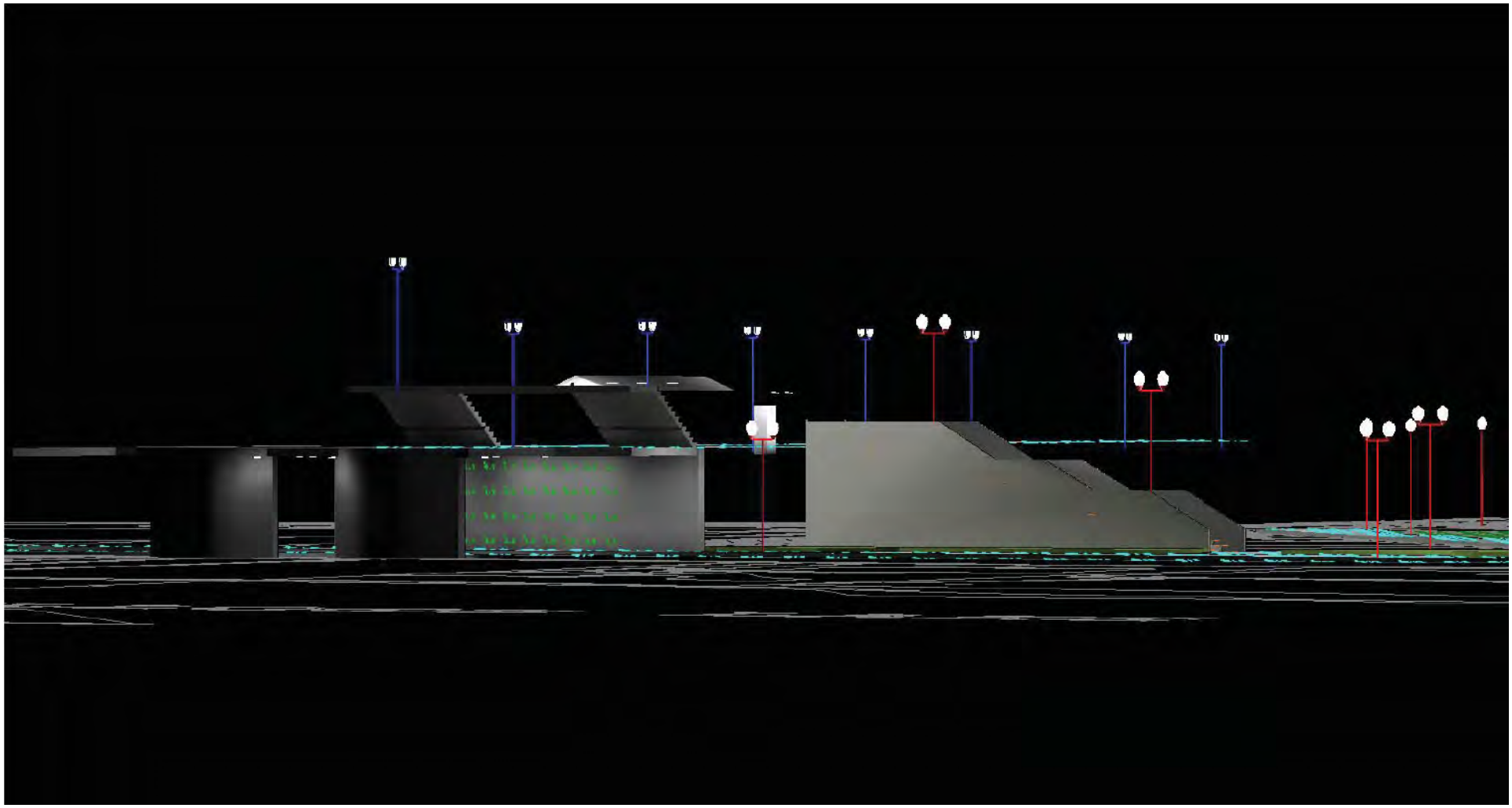
Photometric Analysis

Exhibit P 6B



Photometric Analysis

Exhibit P 6C



Photometric Analysis

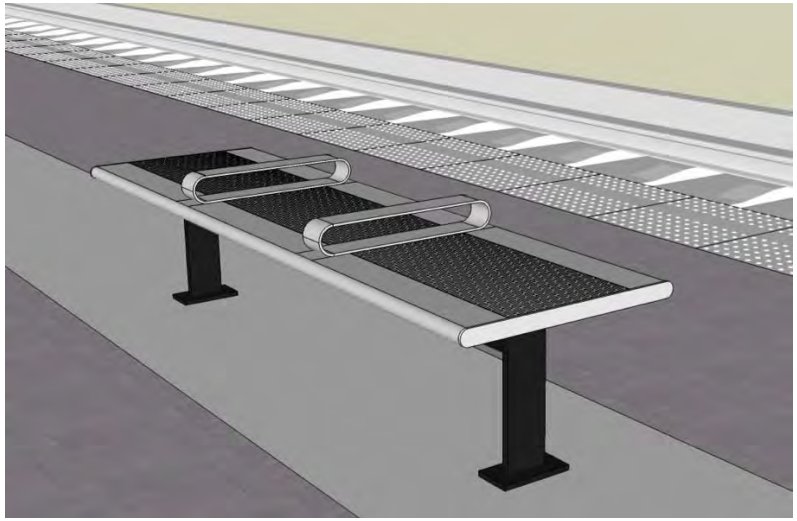
Exhibit P 6D

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	4	TVM	SINGLE	N.A.	0.279	TVM - Winona WSL 305W 65 5k LTL20528
	8	SA15	SINGLE	5800	0.711	SA15 Guth Marquee 2T8
	8	SA3	BACK-BACK	N.A.	0.808	SA3 - Beta ARE EDR 5M 10 D UL 350 60K (350mA)
	6	SA5B	BACK-BACK	16000	0.595	SA5B - Hadco TW5
	16	SA21A	SINGLE	4196	0.183	SA21A - Winona WSL-305W-4-30-30K-ND24V-A-NAA
	24	SA21	SINGLE	N.A.	0.182	SA21 - Winona WSL-305W-4-110-30K-ND24V-A-NAA
	12	SA5A	SINGLE	16000	0.595	SA5B - Hadco TW5

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ABUTMENT	Illuminance	Fc	3.62	6.9	0.7	5.17	9.86
Lake Road_Top_1	Illuminance	Fc	2.43	6.0	0.3	8.10	20.00
PIER 1	Illuminance	Fc	3.58	6.1	1.7	2.11	3.59
PIER 2	Illuminance	Fc	4.36	6.9	2.5	1.74	2.76
Platform_Planar	Illuminance	Fc	7.68	30.7	0.0	N.A.	N.A.
Sidewalk1_Top_1	Illuminance	Fc	3.86	7.9	1.1	3.51	7.18
Sidewalk2_Top	Illuminance	Fc	1.18	6.5	0.2	5.90	32.50
Stairs_1_Side_11	Illuminance	Fc	6.20	6.2	6.2	1.00	1.00
Stairs_1_Side_13	Illuminance	Fc	5.50	5.5	5.5	1.00	1.00
Stairs_1_Side_15	Illuminance	Fc	4.90	4.9	4.9	1.00	1.00
Stairs_1_Side_17	Illuminance	Fc	4.00	4.0	4.0	1.00	1.00
Stairs_1_Side_19	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
Stairs_1_Side_5	Illuminance	Fc	6.97	10.0	3.5	1.99	2.86
Stairs_1_Side_7	Illuminance	Fc	7.10	7.1	7.1	1.00	1.00
Stairs_1_Side_9	Illuminance	Fc	7.00	7.0	7.0	1.00	1.00
Stairs_2_Side_11_1	Illuminance	Fc	3.50	3.5	3.5	1.00	1.00
Stairs_2_Side_13_1	Illuminance	Fc	5.00	5.0	5.0	1.00	1.00
Stairs_2_Side_15_1	Illuminance	Fc	5.80	5.8	5.8	1.00	1.00
Stairs_2_Side_17_1	Illuminance	Fc	5.20	5.2	5.2	1.00	1.00
Stairs_2_Side_5_1	Illuminance	Fc	5.00	7.1	3.1	1.61	2.29
Stairs_2_Side_7_1	Illuminance	Fc	2.50	2.5	2.5	1.00	1.00
Stairs_2_Side_9_1	Illuminance	Fc	2.90	2.9	2.9	1.00	1.00
Stairs_Side_11_1	Illuminance	Fc	3.10	3.1	3.1	1.00	1.00
Stairs_Side_13_1	Illuminance	Fc	3.90	3.9	3.9	1.00	1.00
Stairs_Side_15_1	Illuminance	Fc	3.70	3.7	3.7	1.00	1.00
Stairs_Side_17_1	Illuminance	Fc	4.00	4.0	4.0	1.00	1.00
Stairs_Side_19_1	Illuminance	Fc	4.20	4.2	4.2	1.00	1.00
Stairs_Side_5_1	Illuminance	Fc	2.90	5.4	0.0	N.A.	N.A.
Stairs_Side_7_1	Illuminance	Fc	3.00	3.0	3.0	1.00	1.00
Stairs_Side_9_1	Illuminance	Fc	3.10	3.1	3.1	1.00	1.00
LAKE ROAD - UNDER OVERPASS	Illuminance	Fc	3.05	6.9	0.0	N.A.	N.A.

Photometric Analysis

Exhibit P 6E



Freestanding Platform Bench

Bike Lockers

Platform System Signage

Platform Equipment

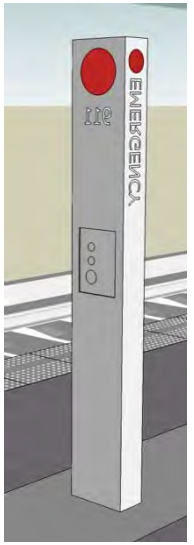
Stainless Receptacles

Transit Information Signage

Signal Bungalows

Ticket Vending Machines

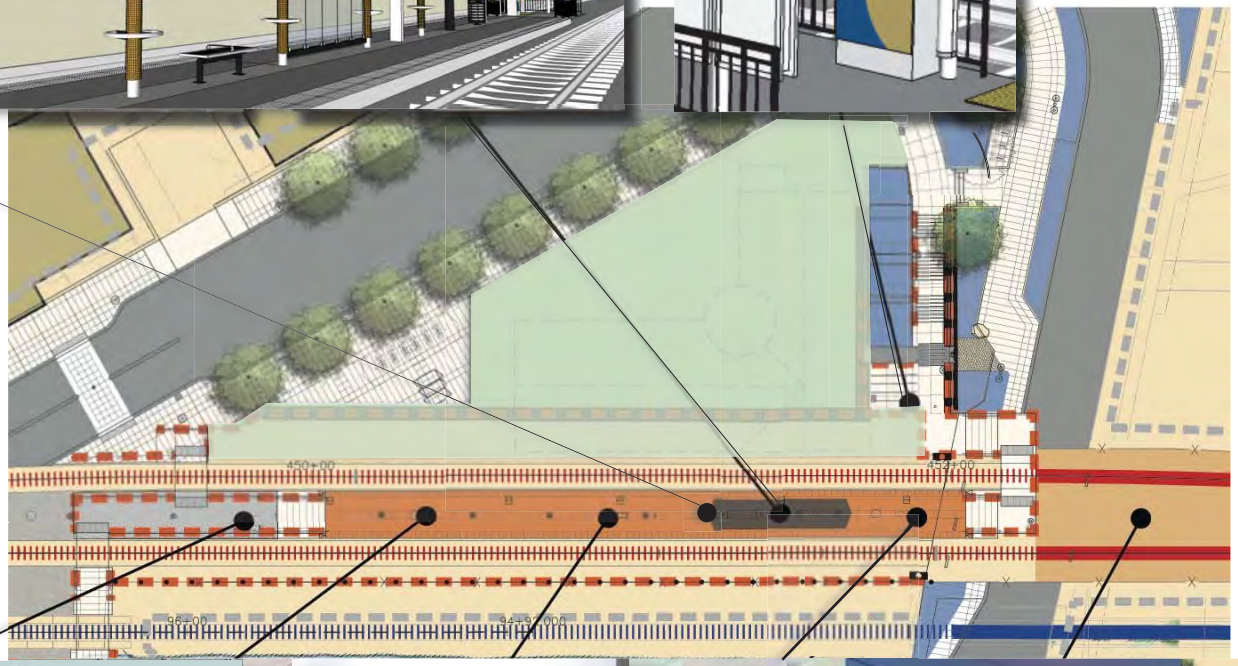
OCS Poles



Phone

Elements of Continuity (For Information only. Not subject to review)

Exhibit P 7



Station Elements

Exhibit P 8

Off-Platform Milwaukie-Black Benches and Receptacles (not under review)

Milwaukie Standard Street Lights (not under review)

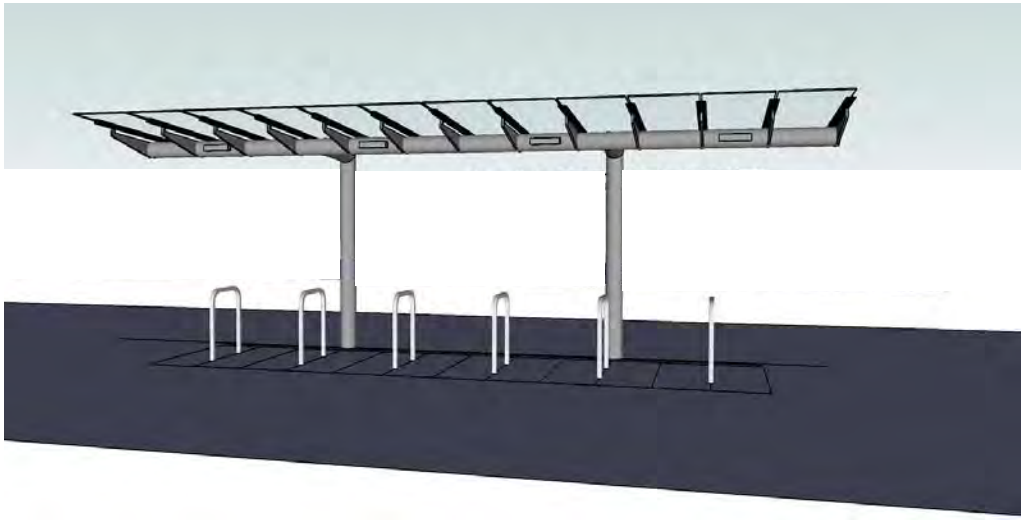
Milwaukie Specific Railings (mock-up shown)

Ashlar Modular Wall

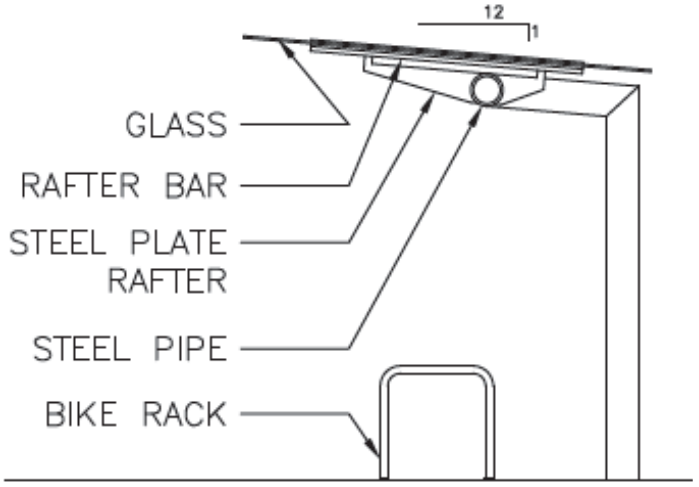
Detailed Bollards (not under review)

Milwaukie Specific Plantings

Exhibit P 9

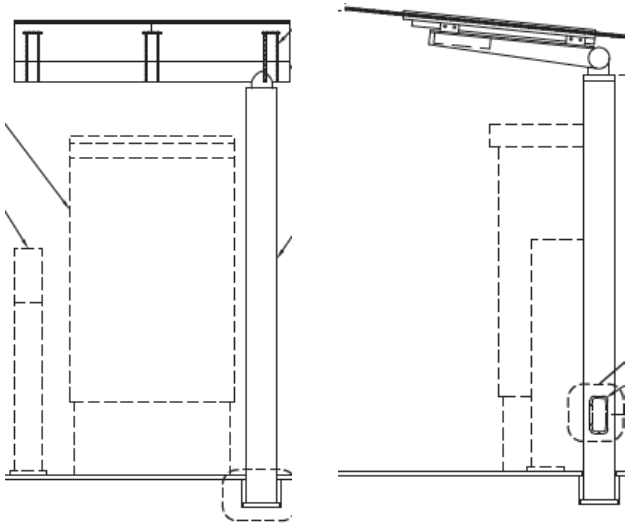


Bike Shelter and Racks



Bike Shelter Section

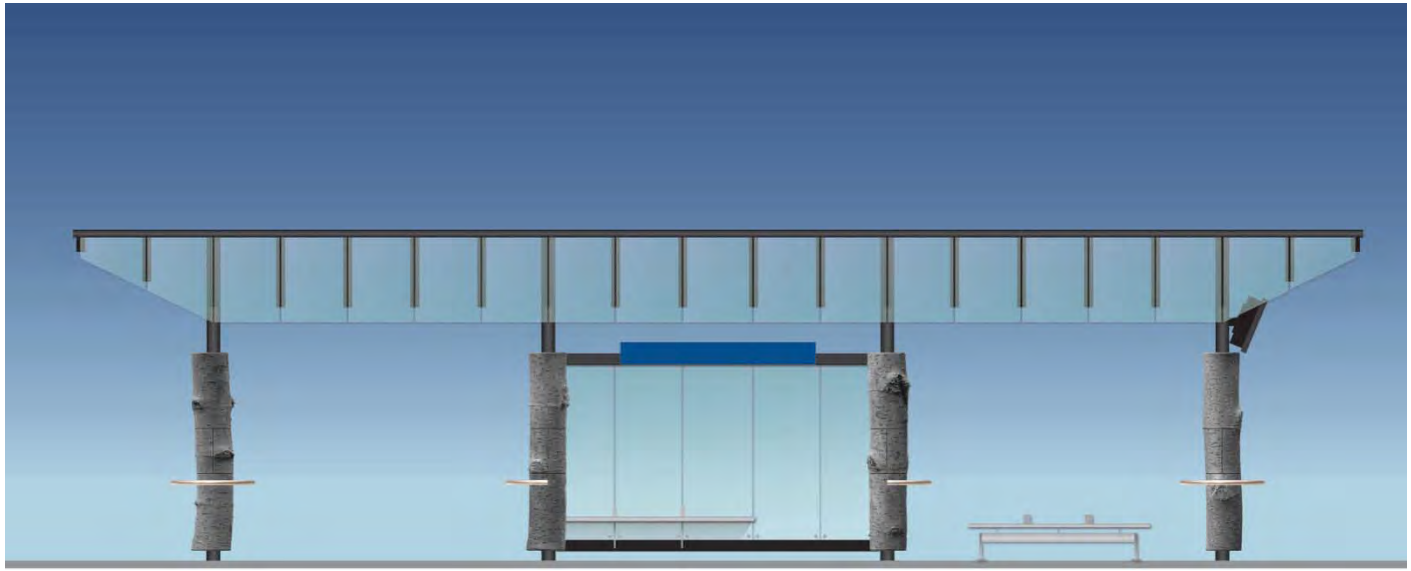
Station-specific Shelter and TVM Shelter With Other Platform Amenities



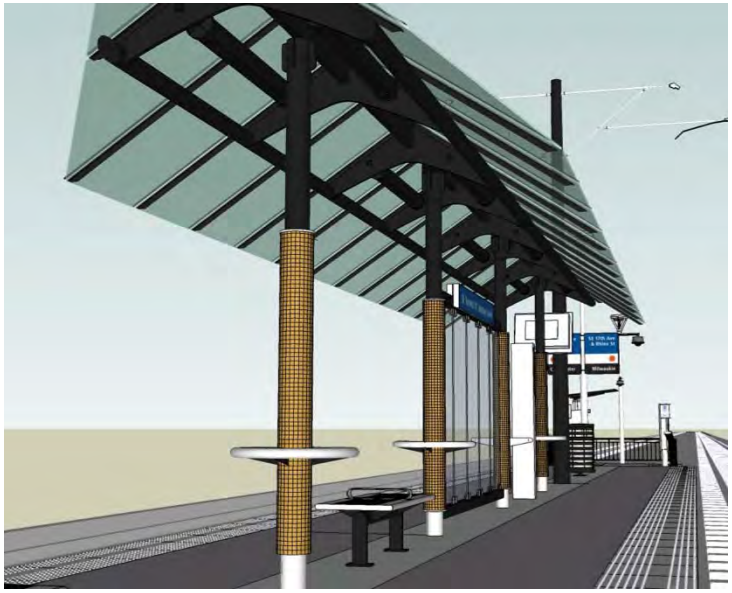
TVM Shelter Elevation & Section

Elements of Distinction – Bike and TVM Shelters

Exhibit P 10



View of Shelter With Integrated Art



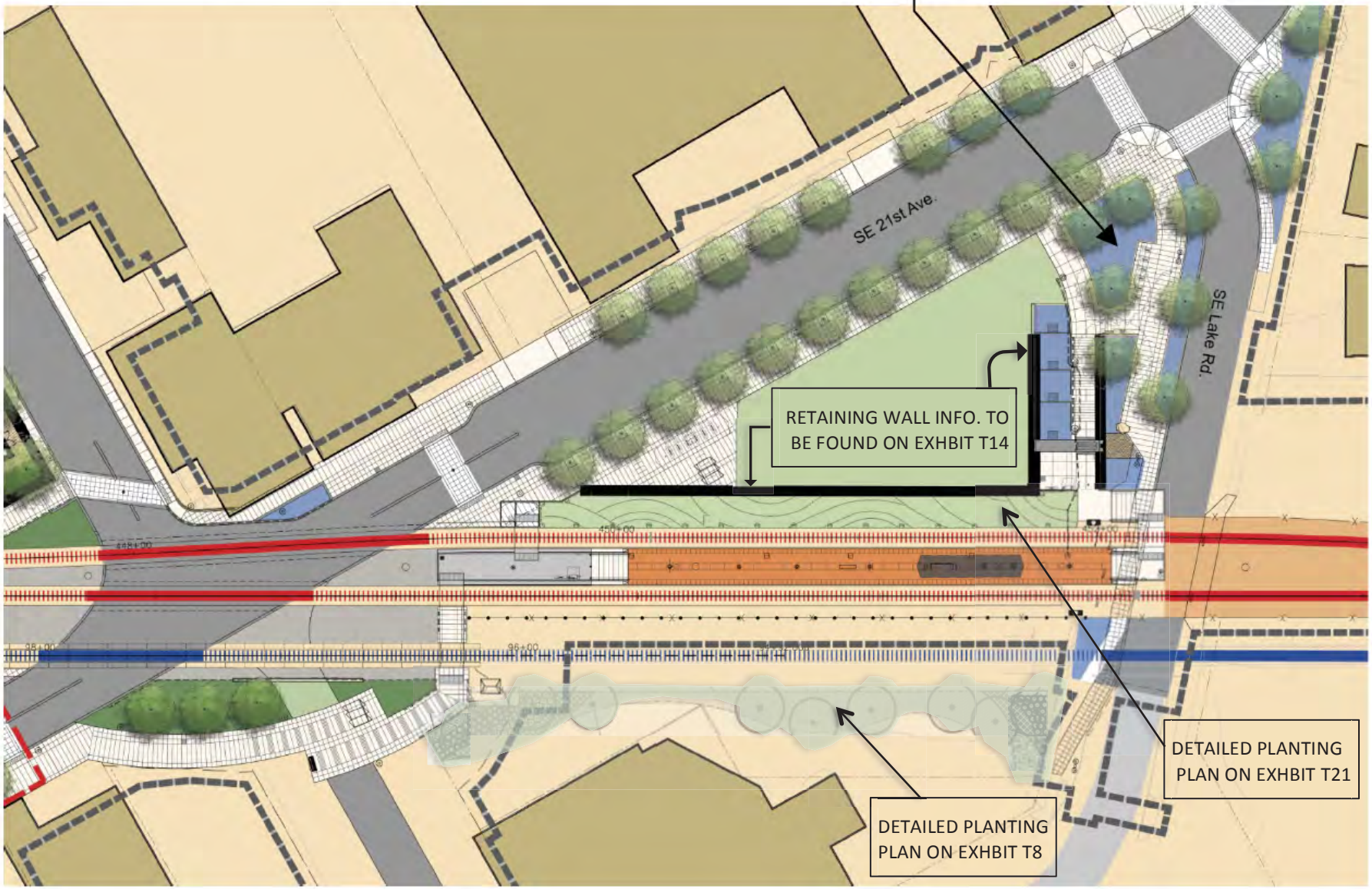
Diagrammatic Views With Additional Platform Amenities
(See above for specific column intentions)

Elements of Distinction – Platform Shelter Design

Exhibit P 11

Elements of Distinction in Place

Exhibit P 12

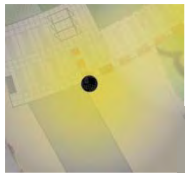


Landscape Plan with Plant Selections

Exhibit P 13

Street Light
(not in review)

Platform Light
(not in review)

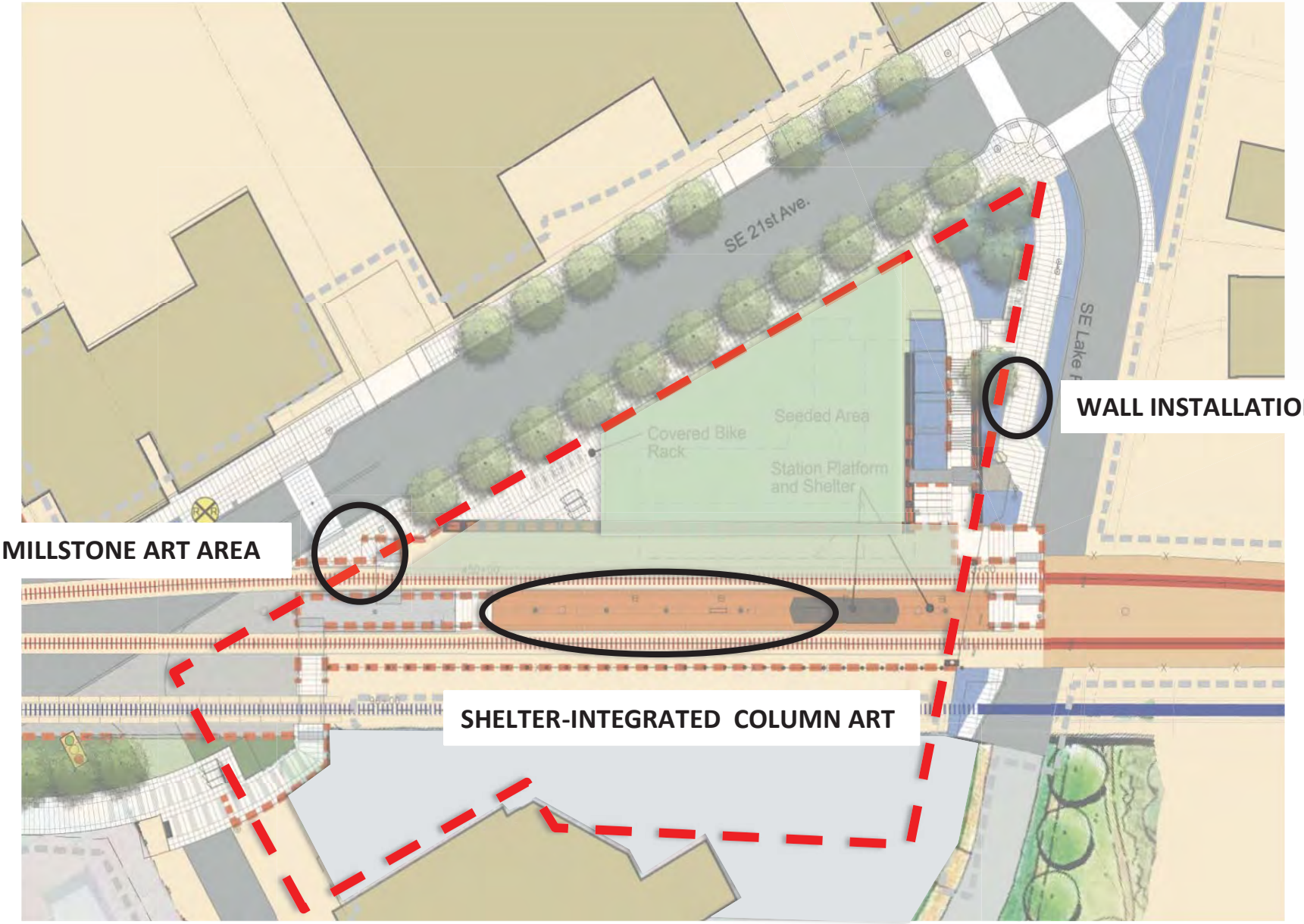


Street Lighting

Light from Platform Fixture Directly Above Street

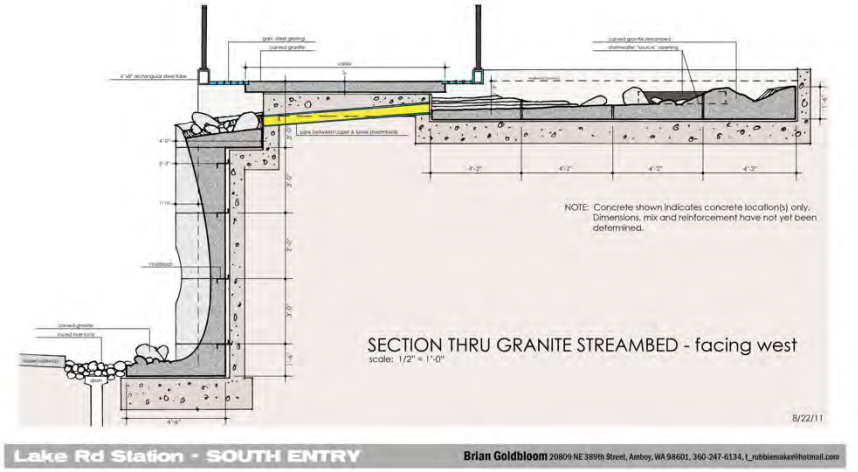
Ambient Lighting of Streets in Vicinity of the Station

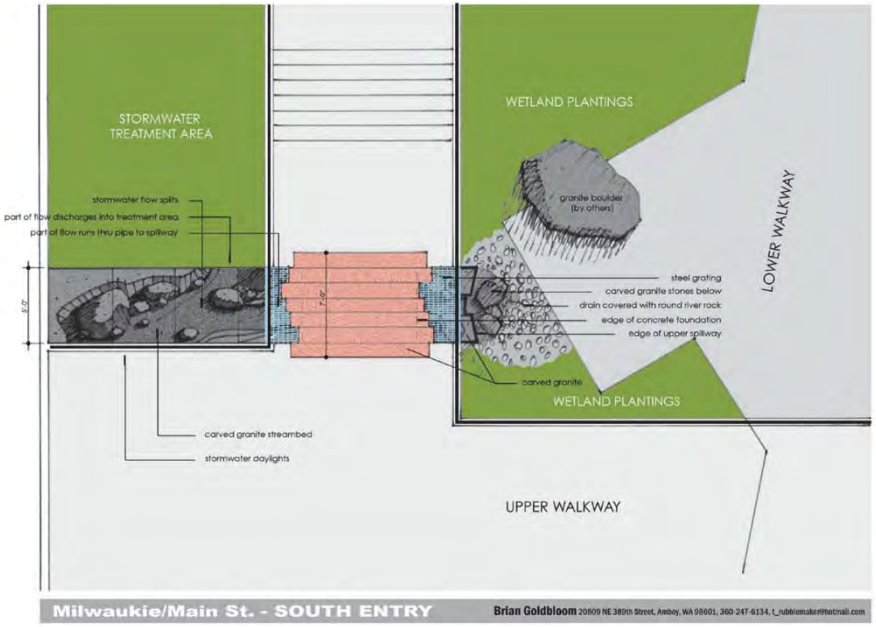
Exhibit P14



Art Locations (art not subject to review: for information only)

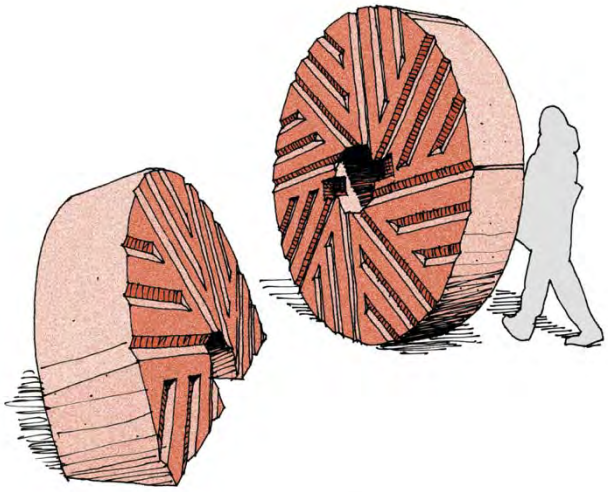
Exhibit P 15

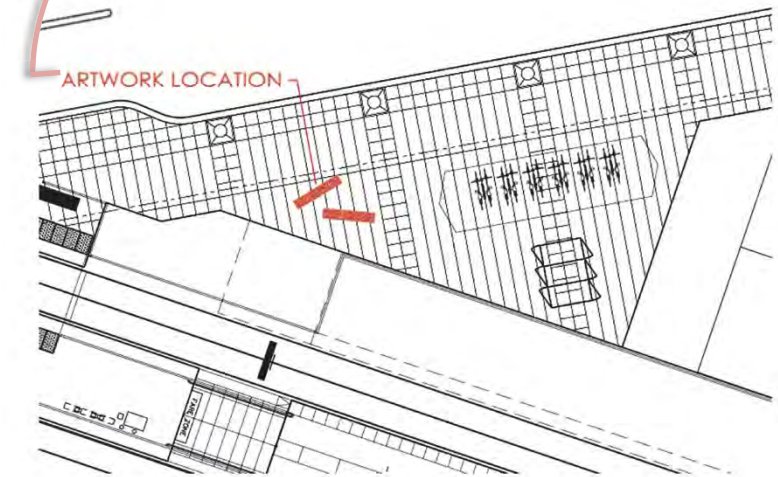


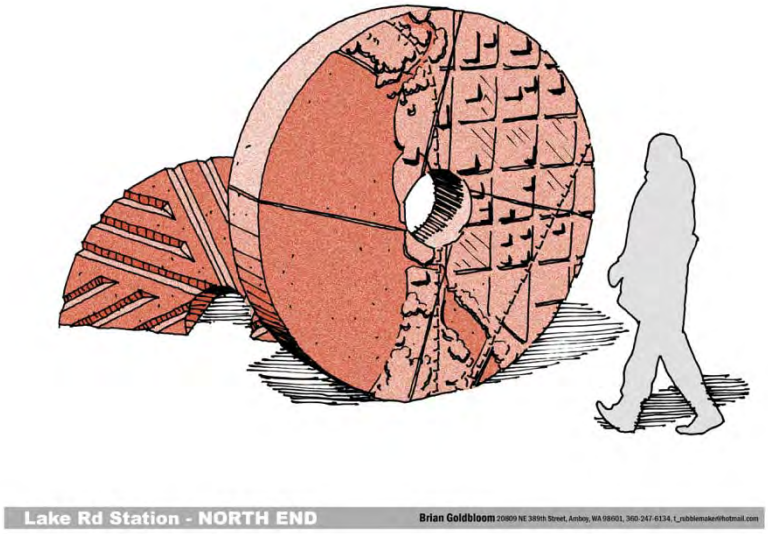


Lake Road Art Installation

Exhibit P 16

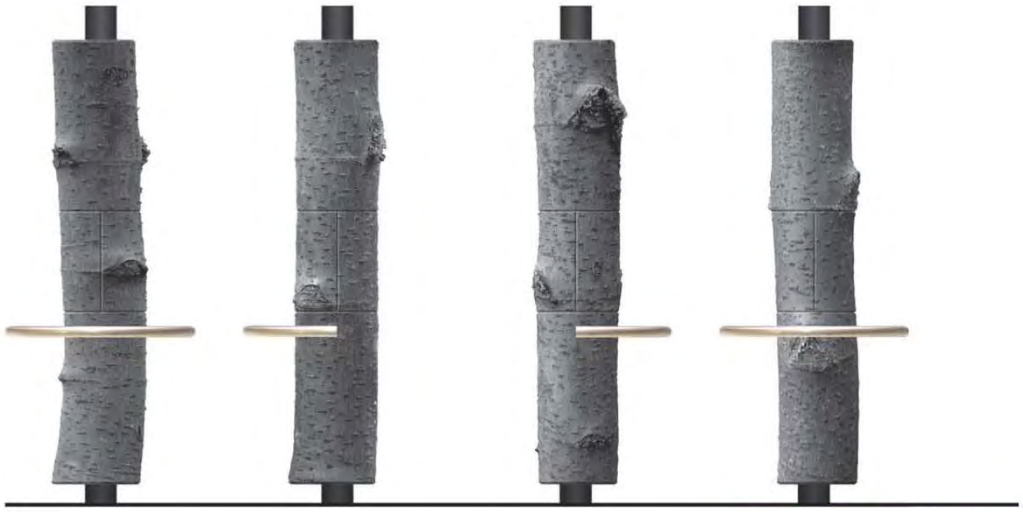




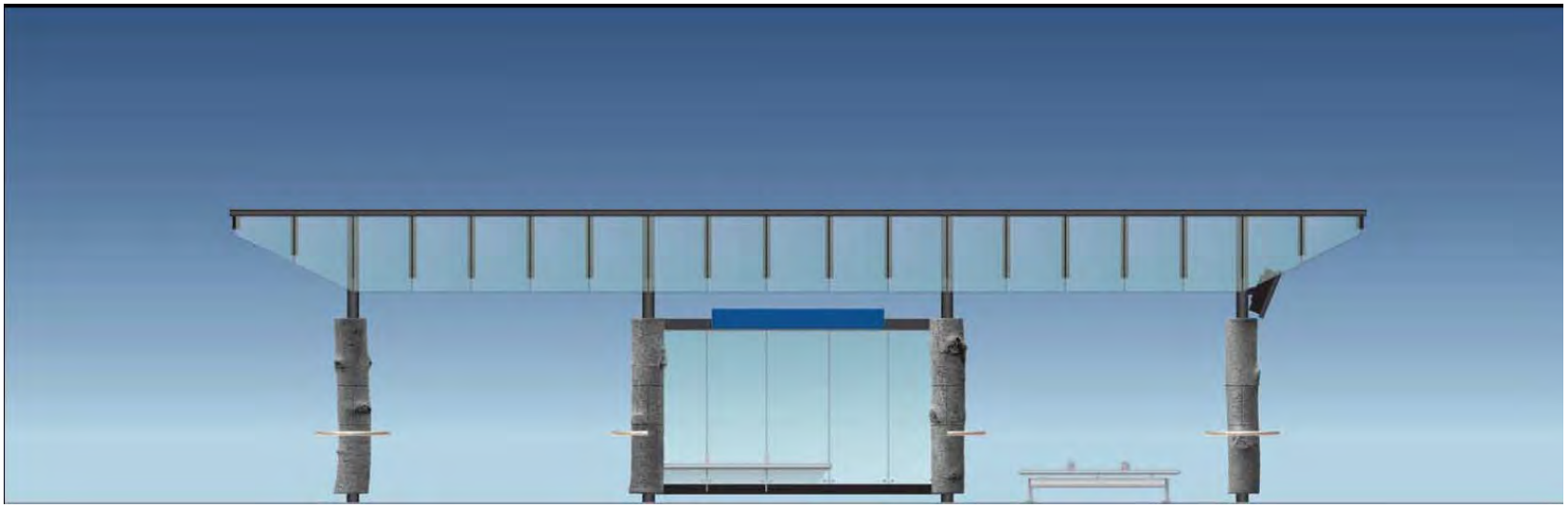


Millstone Art Installation

Exhibit P 17



Detailed View of Columns



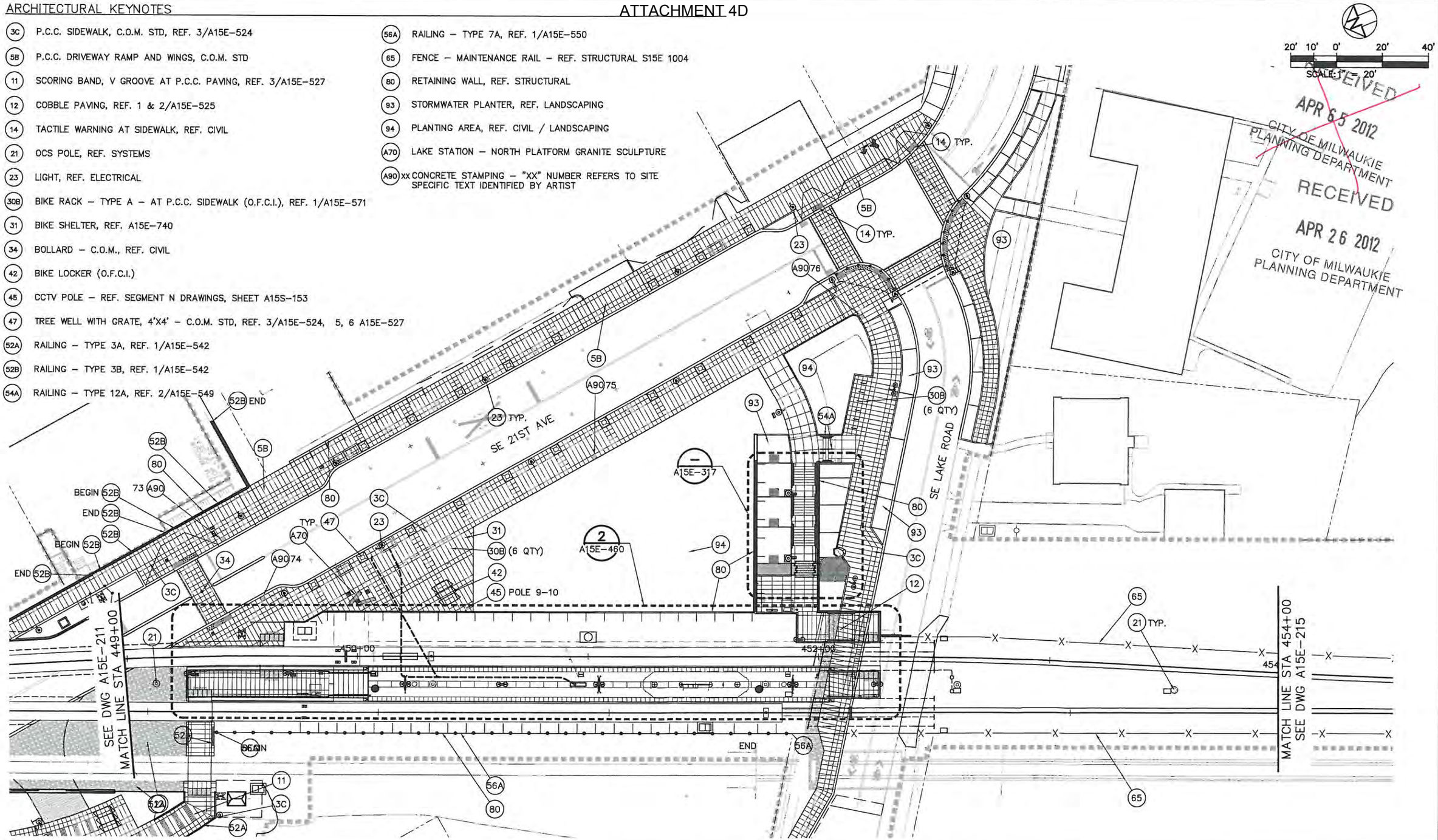
Station Platform Column Art Installation

Exhibit P 18

ATTACHMENT 4D

ARCHITECTURAL KEYNOTES

- 3C — P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E–524
- 5B — P.C.C. DRIVEWAY RAMP AND WINGS, C.O.M. STD
- 11 — SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E–527
- 12 — COBBLE PAVING, REF. 1 & 2/A15E–525
- 14 — TACTILE WARNING AT SIDEWALK, REF. CIVIL
- 21 — OCS POLE, REF. SYSTEMS
- 23 — LIGHT, REF. ELECTRICAL
- 30B — BIKE RACK – TYPE A – AT P.C.C. SIDEWALK (O.F.C.I.), REF. 1/A15E–571
- 31 — BIKE SHELTER, REF. A15E–740
- 34 — BOLLARD – C.O.M., REF. CIVIL
- 42 — BIKE LOCKER (O.F.C.I.)
- 45 — CCTV POLE – REF. SEGMENT N DRAWINGS, SHEET A15S–153
- 47 — TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E–524, 5, 6 A15E–527
- 52A — RAILING – TYPE 3A, REF. 1/A15E–542
- 52B — RAILING – TYPE 3B, REF. 1/A15E–542
- 54A — RAILING – TYPE 12A, REF. 2/A15E–549
- 56A — RAILING – TYPE 7A, REF. 1/A15E–550
- 65 — FENCE – MAINTENANCE RAIL – REF. STRUCTURAL S15E 1004
- 80 — RETAINING WALL, REF. STRUCTURAL
- 93 — STORMWATER PLANTER, REF. LANDSCAPING
- 94 — PLANTING AREA, REF. CIVIL / LANDSCAPING
- A70 — LAKE STATION – NORTH PLATFORM GRANITE SCULPTURE
- A90 XX — CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST



RECEIVED
APR 25 2012
CITY OF MILWAUKIE
PLANNING DEPARTMENT

RECEIVED
APR 26 2012
CITY OF MILWAUKIE
PLANNING DEPARTMENT

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX	XXX	ISSUED FOR CONSTRUCTION

RAH DESIGNED	06-01-11	DATE
JFC DRAWN	06-01-11	DATE
TLC CHECKED	11-03-11	DATE
APPROVED	5-14-12	DATE

REGISTERED — CAROL MAYER-REED — OREGON — LANDSCAPE ARCHITECT — PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5–14–12		5–14–12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 1
ARCHITECTURAL
SITE PLAN (MILWAUKIE/MAIN STREET STATION)
STA 449+00 TO STA 454+00

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=20'	A15E–213	RH100544JB	

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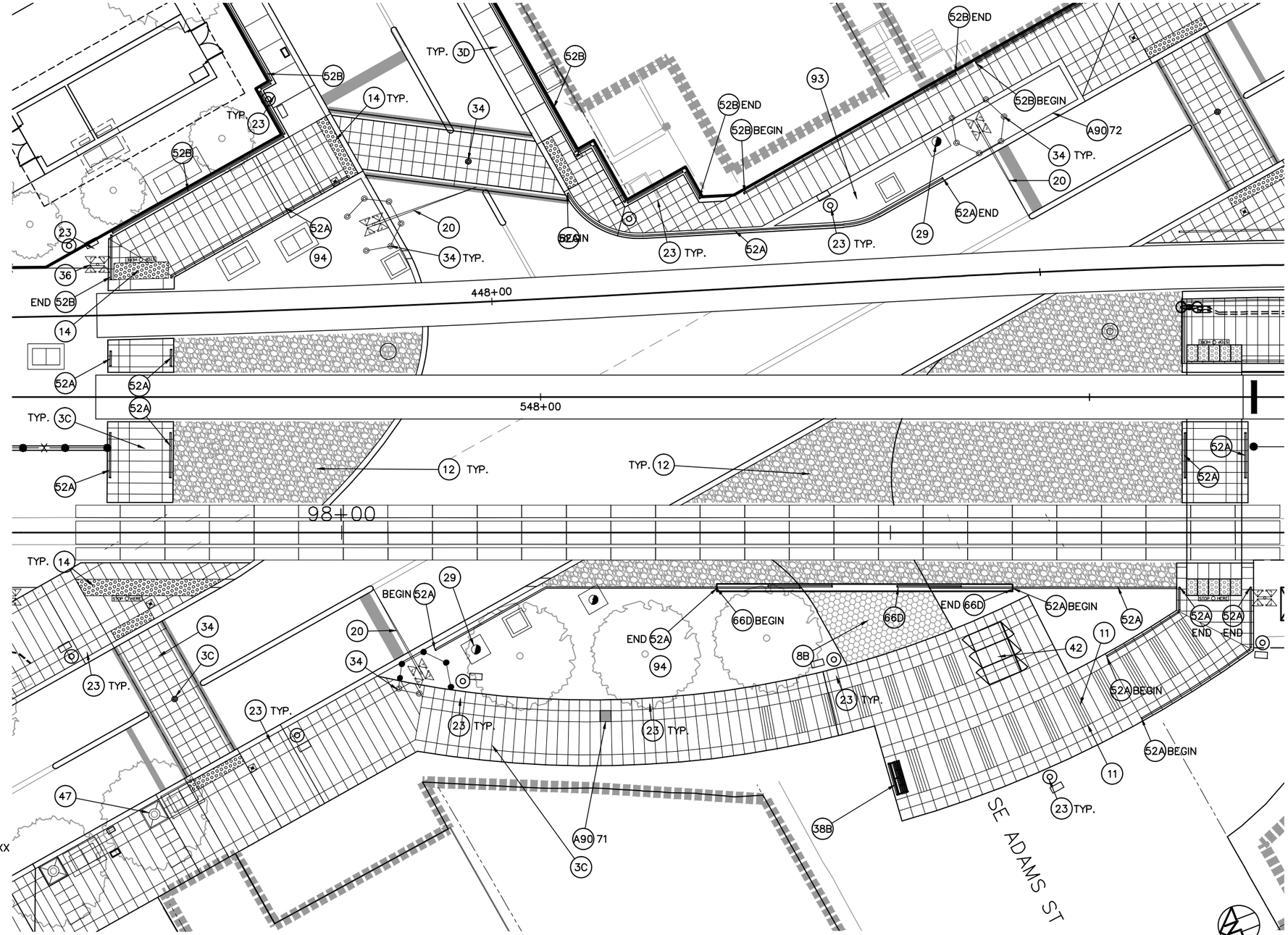
Mar 20, 2012 10:35am RHelden

ARCHITECTURAL KEYNOTES

- 3C — P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E–524
- 3D — P.C.C. SIDEWALK. SCORING PER PLANS
- 8B — FLEXIBLE POROUS PAVING, REF. 1/A15E–526
- 11 — SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E–527
- 12 — COBBLE PAVING, REF. 1 & 2/A15E–525
- 14 — TACTILE WARNING AT SIDEWALK, REF. CIVIL
- 20 — CROSSING GATE, REF. CIVIL
- 21 — OCS POLE, REF. SYSTEMS
- 23 — LIGHT, REF. ELECTRICAL
- 29 — TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS
- 34 — BOLLARD – C.O.M., REF. CIVIL
- 36 — PEDESTRIAN WARNING DEVICE, REF. ELEC.
- 38B — BENCH – TYPE A – C.O.M. STD. (O.F.C.I), REF. 1/A15E–572
- 42 — BIKE LOCKER (O.F.C.I.)
- 47 — TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E–524, 5, 6 A15E–527
- 52A — RAILING – TYPE 3A, REF. 1/A15E–542
- 52B — RAILING – TYPE 3B, REF. 2/A15E–542
- 60B — FENCE – TYPE 9B – 72" WELDED WIRE FENCE, REF. X/A15E–XXX
- 66D — GATE – FIRE ACCESS, REF. 1/A15E–547
- 93 — STORMWATER PLANTER, REF. LANDSCAPING
- 94 — PLANTING AREA, REF. CIVIL / LANDSCAPING
- A90 xx — CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST



ENLARGED PLANS – SE ADAMS STREET (1)
SCALE: 1" = 10'–0"

SCALE: 1" = 10'

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

RAH DESIGNED	06–01–11 DATE	
JFC DRAWN	06–01–11 DATE	
TLC CHECKED	11–03–11 DATE	
APPROVED	5–14–12 DATE	

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 2
ARCHITECTURAL
ENLARGED PLAN
SE ADAMS ST

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5–14–12		5–14–12	1"=10'	A15E–316	RH100544JB	

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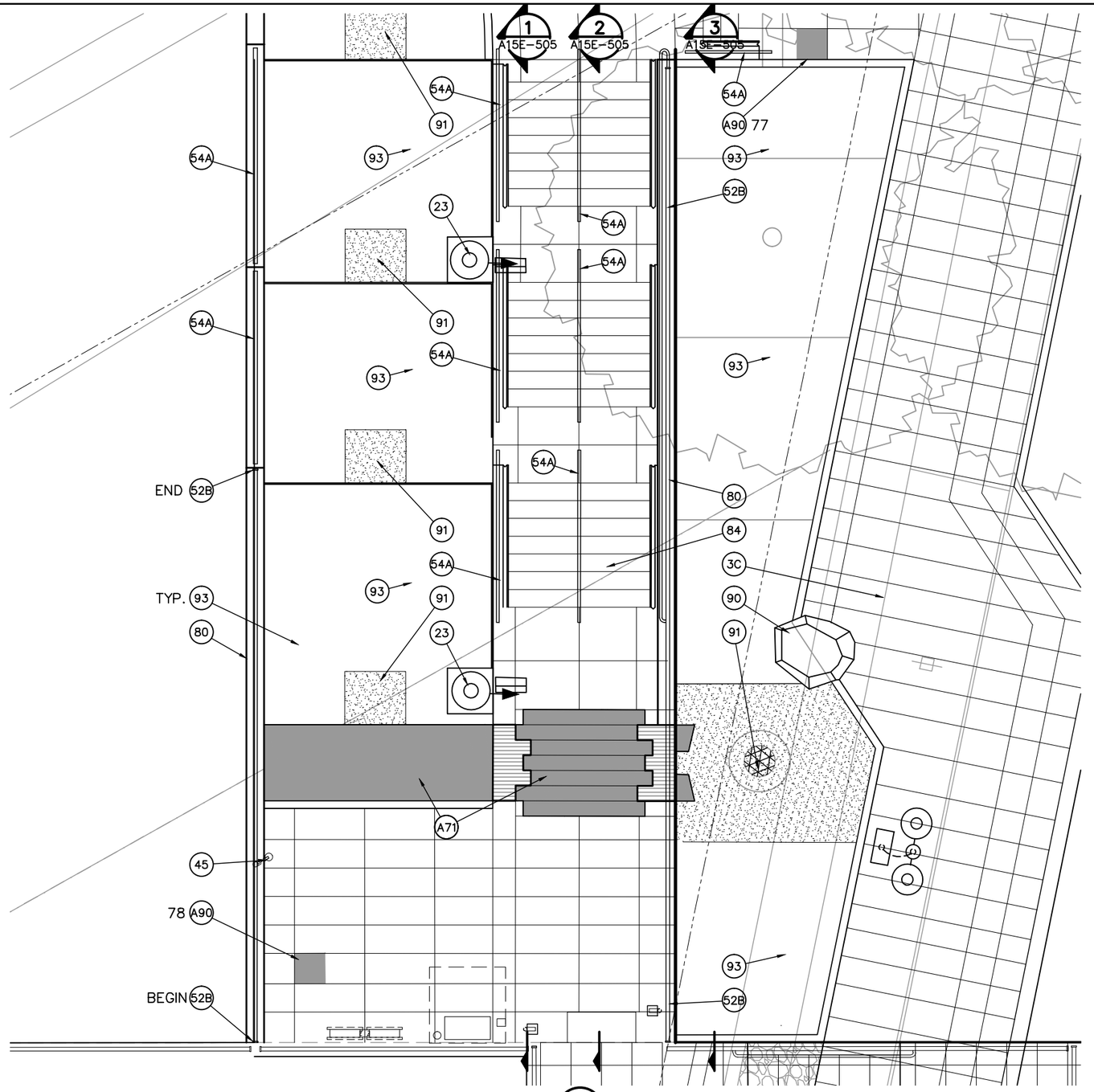

ENLARGED PLANS – SE LAKE ROAD 1

SCALE: 1/4" = 1'-0"

ARCHITECTURAL KEYNOTES

- 3C P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E-524
- 23 LIGHT, REF. ELECTRICAL
- 45 CCTV POLE – REF. SEGMENT N DRAWINGS, SHEET A15S-153
- 52A RAILING – TYPE 3A, REF. 1/A15E-542
- 52B RAILING – TYPE 3B, REF. 1/A15E-542
- 54A RAILING – TYPE 12A, REF. 2/A15E-549
- 80 RETAINING WALL, REF. STRUCTURAL
- 84 P.C.C. STEPS WITH HANDRAIL, REF. 2/A15E-549 FOR HANDRAIL, REF. STRUCTURAL FOR STEPS
- 90 GRANITE BOULDER, REF. 7/A15E-526
- 91 AGGREGATE SPLASH PAD
- 93 STORMWATER PLANTER, REF. LANDSCAPING
- A71 LAKE STATION – SOUTH PLATFORM GRANITE SCULPTURE
- A90 xx CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

RAH DESIGNED 06-01-11 DATE
JFC DRAWN 06-01-11 DATE
TLC CHECKED 11-03-11 DATE
APPROVED 5-14-12 DATE

REGISTERED 82 CAROLYN TYER-REED OREGON LANDSCAPE ARCHITECT
PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
ENLARGED PLAN
SE LAKE RD

Exhibit T 3

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5-14-12		5-14-12	1/4"=1'-0"	A15E-317	RH100544JB	

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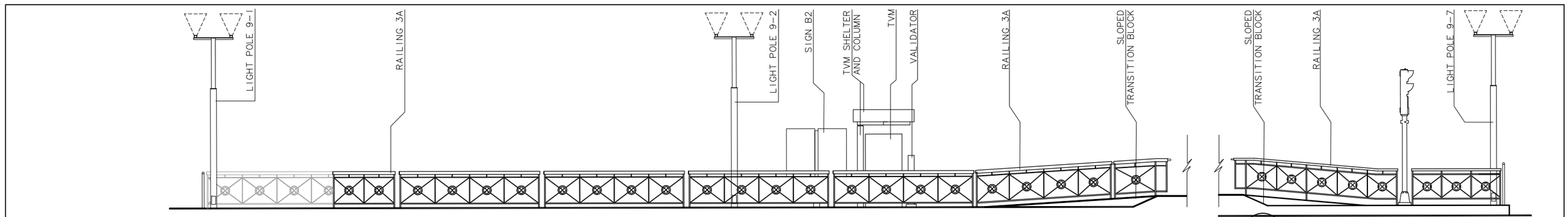
Mar 20, 2012 10:37am CJ
RHelden

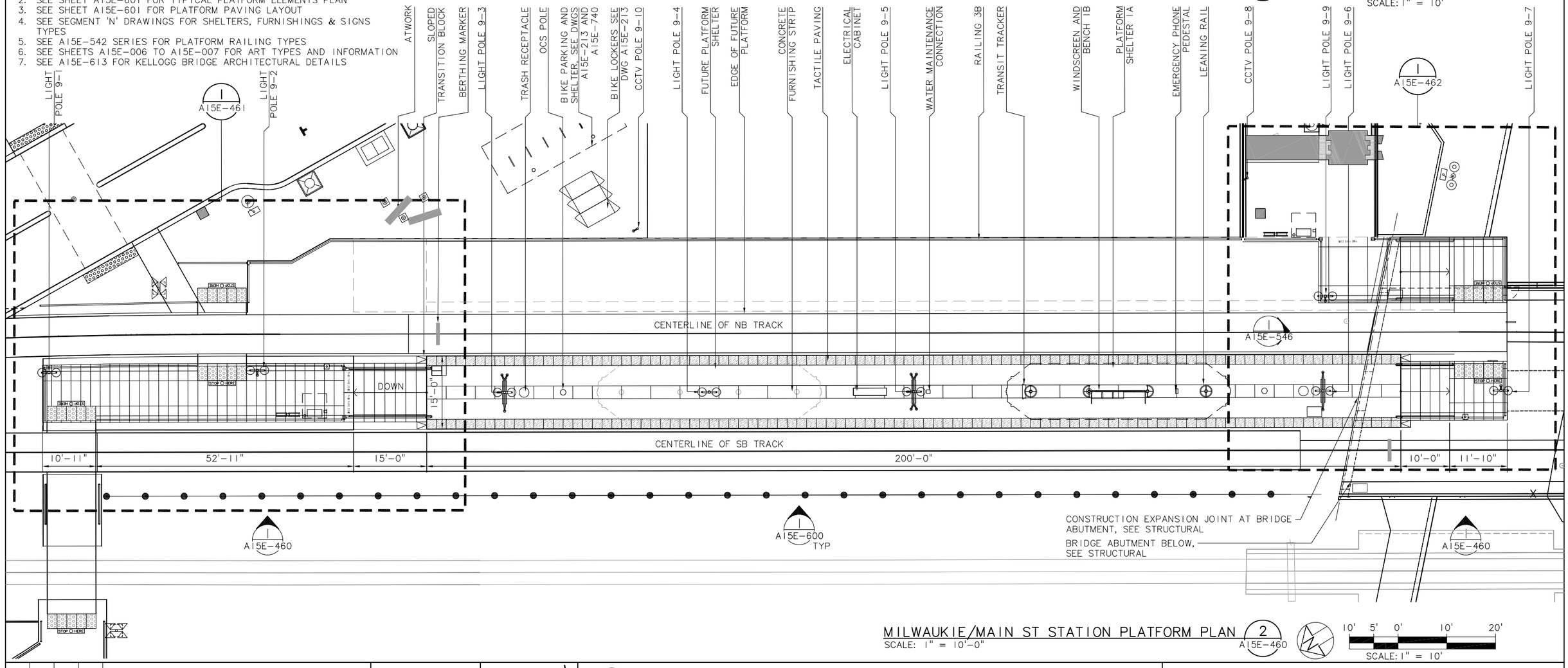


MILWAUKIE/MAIN ST STATION PLATFORM ELEVATION
SCALE: 1" = 10'-0"

1 A15E-460

10' 5' 0' 10' 20'
SCALE: 1" = 10'

GENERAL NOTES:
1. SEE SHEET A15E-600 FOR TYPICAL PLATORM ELEMENTS ELEVATION
2. SEE SHEET A15E-601 FOR TYPICAL PLATFORM ELEMENTS PLAN
3. SEE SHEET A15E-601 FOR PLATFORM PAVING LAYOUT
4. SEE SEGMENT 'N' DRAWINGS FOR SHELTERS, FURNISHINGS & SIGNS TYPES
5. SEE A15E-542 SERIES FOR PLATFORM RAILING TYPES
6. SEE SHEETS A15E-006 TO A15E-007 FOR ART TYPES AND INFORMATION
7. SEE A15E-613 FOR KELLOGG BRIDGE ARCHITECTURAL DETAILS



MILWAUKIE/MAIN ST STATION PLATFORM PLAN
SCALE: 1" = 10'-0"

2 A15E-460

10' 5' 0' 10' 20'
SCALE: 1" = 10'

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11 DATE
MH DRAWN	5-20-11 DATE
MH CHECKED	3-08-12 DATE
APPROVED	5-14-12 DATE

REGISTERED ARCHITECT · JON C. STYNER · PORTLAND, OREGON · STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, Interiors & planning

DAVID EVANS AND ASSOCIATES INC.

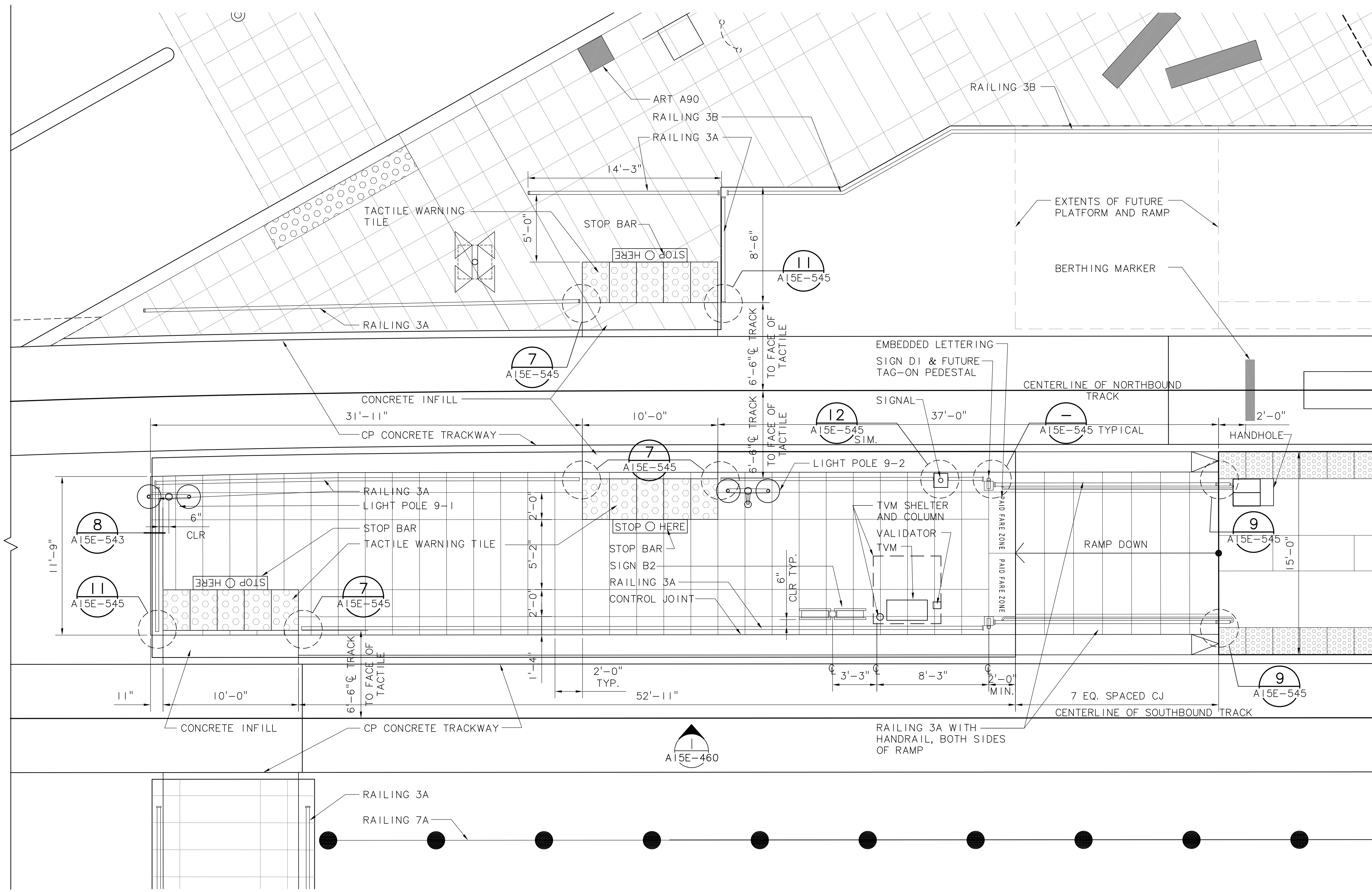
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE: 5-14-12	APPROVED:	DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
Exhibit T 4
ARCHITECTURAL
MILWAUKIE/MAIN ST STATION
PLATFORM PLAN AND ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 10'-0"	A15E-460	RH100544JB	

P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\400_Segment D\A15E-460.dwg Mar. 20, 2012 - 9:40 AM meredith hendricks
Plot Date:3/20/2012 9:44 AM meredith hendricks



GENERAL NOTES:

1. SEE SHEET A15E-600 FOR TYPICAL PLATORM ELEMENTS ELEVATION AND PLAN
2. SEE SHEET A15E-601 FOR TYPICAL PLATFORM DETAILS
3. SEE SEGMENT 'N' DRAWINGS FOR SHELTERS, FURNISHINGS & SIGN TYPES
4. SEE SHEETS A15E-004 AND A15E-542 SERIES FOR PLATFORM RAILING TYPES
5. SEE SHEETS A15E-005 FOR ART TYPES AND INFORMATION
6. SEE TRAFFIC DRAWINGS FOR STOP BAR AND PEDESTRIAN SIGNAL INFORMATION
7. SEE SYSTEMS DRAWINGS FOR HANDHOLES AND VAULT INFORMATION
8. SEE CIVIL DRAWINGS FOR PRECAST CONCRETE CROSSING PANEL
9. SEE TRAFFIC DRAWINGS AND SYSTEMS DRAWINGS FOR SIGNALS

NORTH END ENLARGED PLATFORM PLAN 1 / A15E-461

SCALE: 1/4"=1'-0"

SCALE: 1/4" = 1'-0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	03-26-12				ISSUED FOR CONSTRUCTION

DESIGNED	MM	5-01-11
DRAWN	MH	03-07-12
CHECKED	MH	3-07-12
APPROVED		5-14-12

REGISTERED ARCHITECT · JON C. STYNER · PORTLAND, OREGON · STATE OF OREGON · PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

DAVID EVANS AND ASSOCIATES INC.

TRIMET

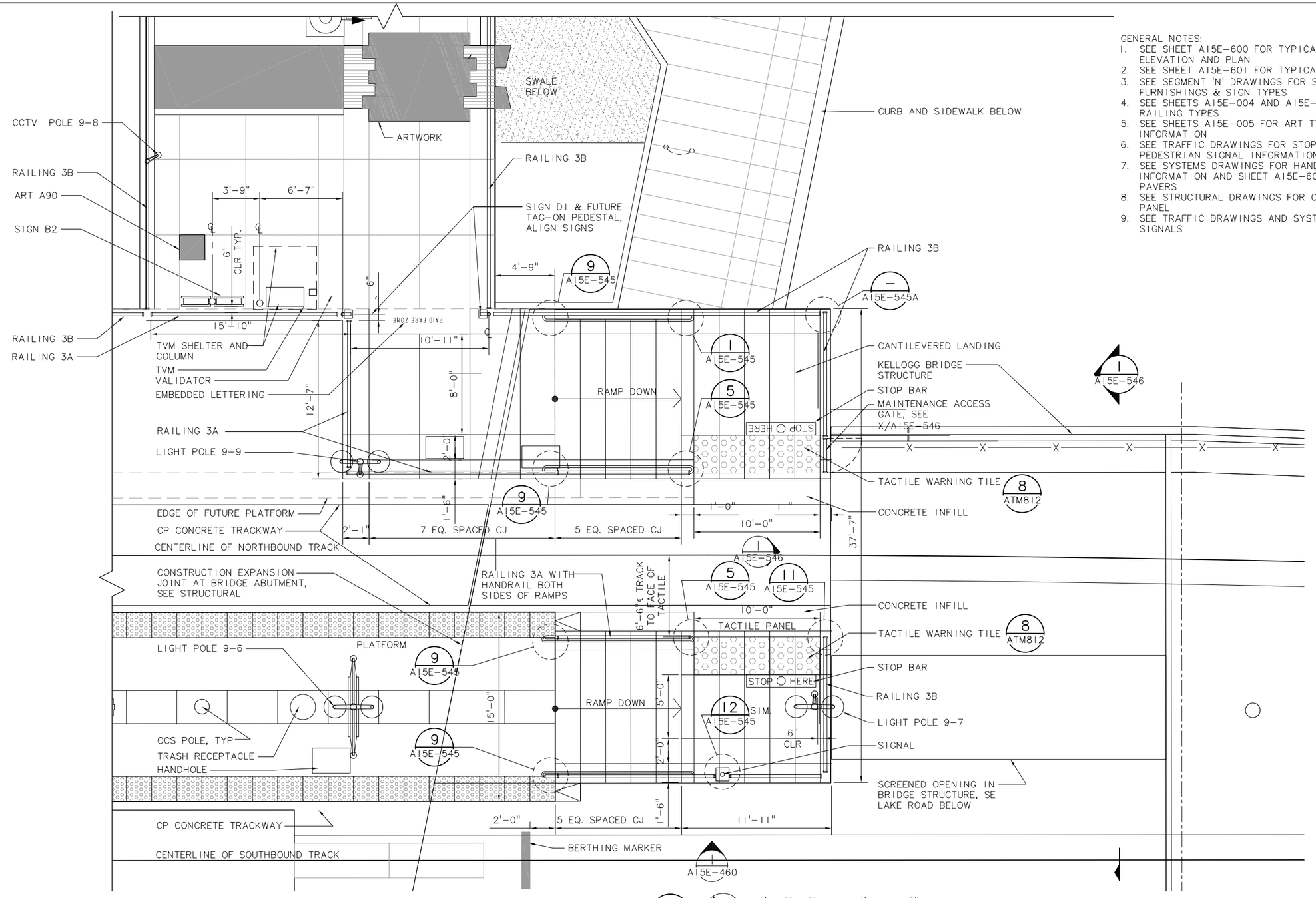
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
MILWAUKIE/MAIN ST STATION
ENLARGED PLATFORM END PLAN

Exhibit T 5

SUBMITTED: | DATE: 5-14-12 | APPROVED: | DATE: 5-14-12 | SCALE: 1/4"=1'-0" | DRAWING NO.: A15E-461 | CONTRACT NO.: RH100544JB | SHEET NO.:

P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\400_Segment D\A15E-461.dwg Mar. 09, 2012 - 3:08 PM meredith hendricks
Plot Date: 3/20/2012 11:43 AM_meredith hendricks



GENERAL NOTES:

1. SEE SHEET A15E-600 FOR TYPICAL PLATORM ELEMENTS ELEVATION AND PLAN
2. SEE SHEET A15E-601 FOR TYPICAL PLATFORM DETAILS
3. SEE SEGMENT 'N' DRAWINGS FOR SHELTERS, FURNISHINGS & SIGN TYPES
4. SEE SHEETS A15E-004 AND A15E-542 FOR PLATFORM RAILING TYPES
5. SEE SHEETS A15E-005 FOR ART TYPES AND INFORMATION
6. SEE TRAFFIC DRAWINGS FOR STOP BAR AND PEDESTRIAN SIGNAL INFORMATION
7. SEE SYSTEMS DRAWINGS FOR HANDHOLES AND VAULT INFORMATION AND SHEET A15E-601 FOR LOCATION AT PAVERS
8. SEE STRUCTURAL DRAWINGS FOR CONCRETE CROSSING PANEL
9. SEE TRAFFIC DRAWINGS AND SYSTEMS DRAWINGS FOR SIGNALS

SOUTH END ENLARGED PLATFORM PLAN

SCALE: 1/4"=1'-0"

1 A15E-462

SCALE: 1/4" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11	DATE
MH DRAWN	3-02-12	DATE
MH CHECKED	3-02-12	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT JON C. STYNER PORTLAND, OREGON STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
MILWAUKIE/MAIN ST STATION
ENLARGED PLATFORM END PLAN

Exhibit T 6

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1/4"=1'-0"	A15E-462	RH100544JB	

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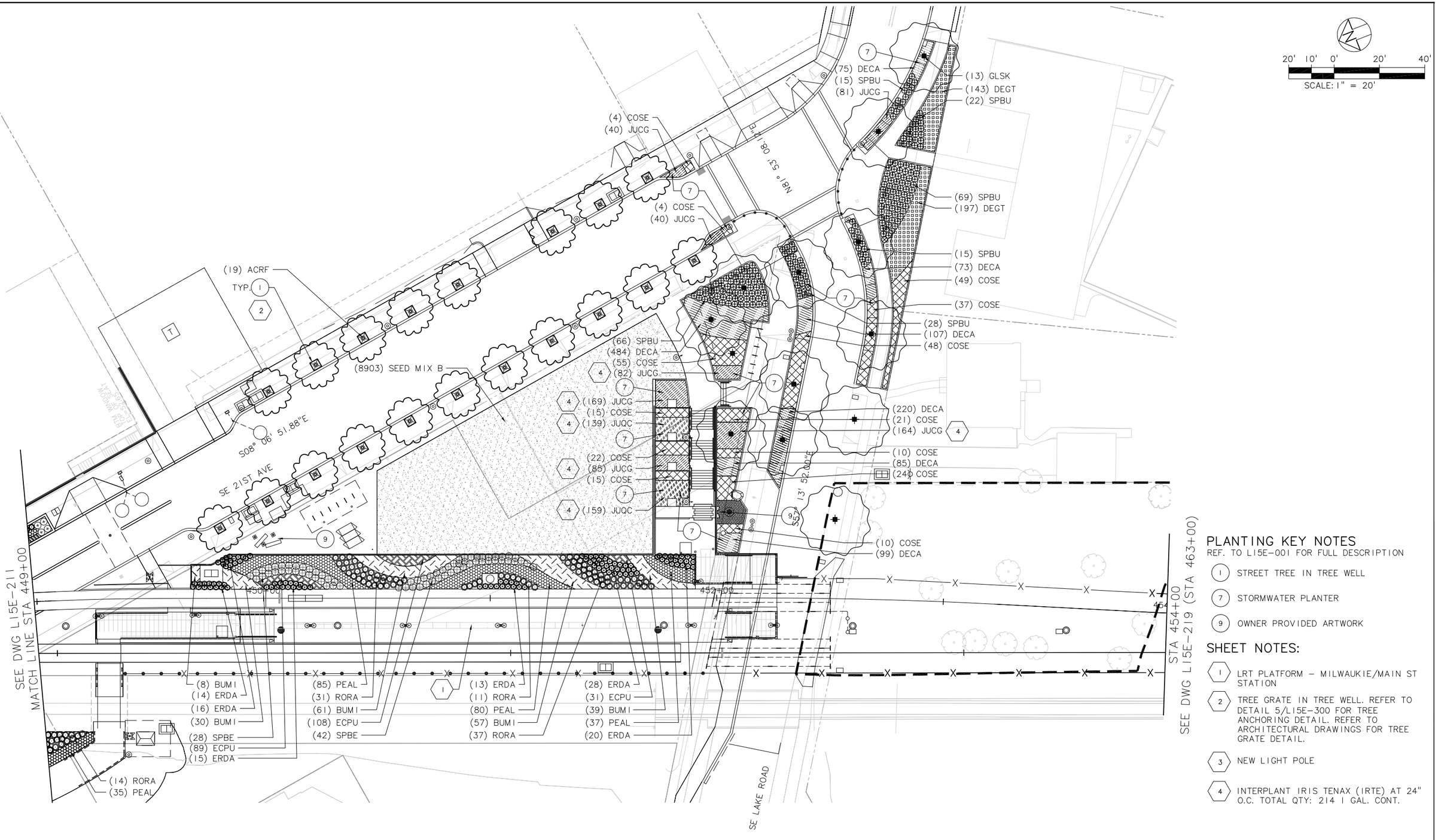
Plot Date:3/20/2012 12:17 PM meredith hendricks



PLANTING KEY NOTES

REF. TO L15E-001 FOR FULL DESCRIPTION

1. STREET TREE IN TREE WELL
7. STORMWATER PLANTER
9. OWNER PROVIDED ARTWORK

SHEET NOTES:

1. LRT PLATFORM – MILWAUKIE/MAIN ST STATION
2. TREE GRATE IN TREE WELL. REFER TO DETAIL 5/L15E-300 FOR TREE ANCHORING DETAIL. REFER TO ARCHITECTURAL DRAWINGS FOR TREE GRATE DETAIL.
3. NEW LIGHT POLE
4. INTERPLANT IRIS TENAX (IRTE) AT 24" O.C. TOTAL QTY: 214 1 GAL. CONT.

3-26-12	TS	MF	ISSUED FOR CONSTRUCTION	

SK DESIGNED	05-03-11 DATE
CM/AP DRAWN	10-19-11 DATE
TS CHECKED	11-01-11 DATE
APPROVED	3-26-12 DATE

REGISTERED LANDSCAPE ARCHITECT
242
F. MICHAEL FAHA
12/31/1988
OREGON
PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	3-26-12		3-26-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING PLAN
STA 449+00 TO STA 454+00

Exhibit T 7

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=20'	L15E-213	RH100544JB	

\\Gw01\public\Projects\110116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\D- Milwaukie\L15E-213.dwg Mar. 19, 2012 - 10:41 AM shawn kummer
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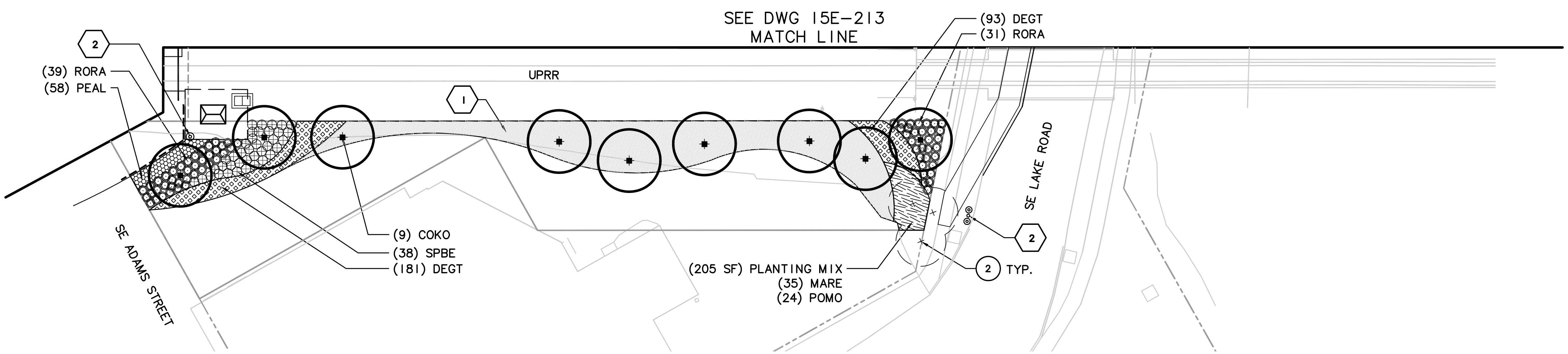


PLANTING KEY NOTES

REF. TO L15E-001 FOR FULL DESCRIPTION

(2) PRESERVE EXISTING TREES

SHEET NOTES:

(1) BARK MULCH, AS SPECIFIED

(2) LIGHT POLE

05-14-12	TS	MF	ISSUED FOR CONSTRUCTION

SK DESIGNED	05-03-11 DATE
CM/AP DRAWN	10-19-11 DATE
TS CHECKED	04-17-12 DATE
APPROVED	05-14-12 DATE

PRELIMINARY — REGISTERED LANDSCAPE ARCHITECT, F. MICHAEL FAHA, OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC. — TRIMET

CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

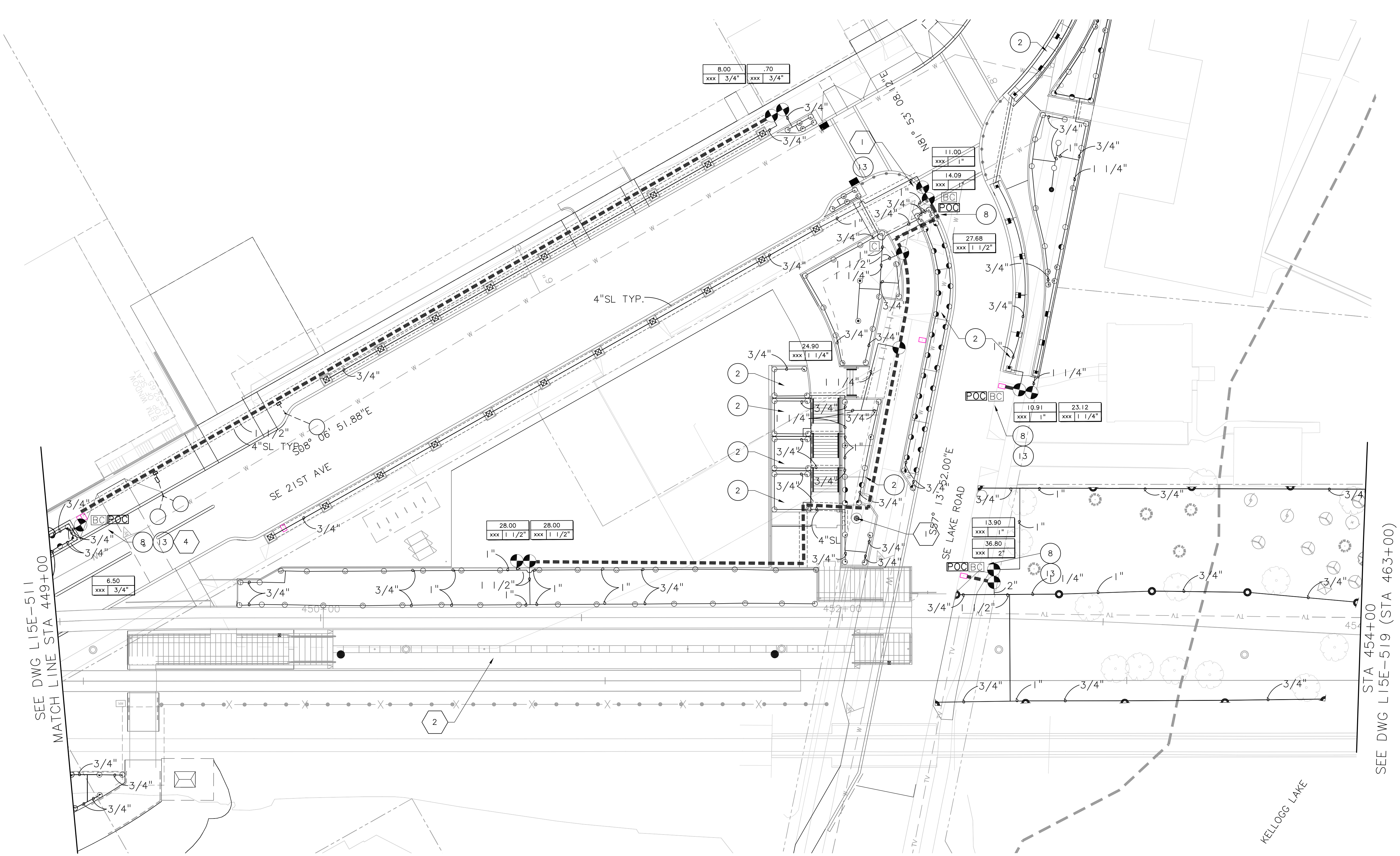
SUBMITTED: — DATE: 05-14-12 — APPROVED: — DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING PLAN
STA 449+00 TO STA 454+00

Exhibit T 8

SCALE: 1"=20' — DRAWING NO.: L15E-214 — CONTRACT NO.: RH100544JB — SHEET NO.:

\\Gw01\public\Projects\10116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\D- Milwaukie\L15E-214.dwg Apr. 20, 2012 - 1:07 PM shawn kummer
Plot Date: 4/20/2012 3:23 PM_shawn kummer



IRRIGATION KEY NOTES

REF. TO L15E-015 FOR FULL DESCRIPTION

- (2) STORMWATER PLANTER
- (8) BATTERY OPERATED CONTROLLER
- (13) WATER METER – REFER TO UTILITY DRAWINGS FOR METER LOCATION AND INSTALLATION

SHEET NOTES:

- (1) STORMWATER TREATMENT DRAIN
- (2) LRT PLATFORM – MILWAUKIE/MAIN ST. STATION
- (3) TWO WATER METERS TO BE ADDED TO THIS LOCATION.
- (4) WATER METER TO BE LOCATED IN PLANTING AREA.

3-26-12	MF/DE	MF	ISSUED FOR CONSTRUCTION

RT DESIGNED 12-19-11 DATE
AS/DD DRAWN 12-19-11 DATE
MF/DE CHECKED DATE
APPROVED 3-26-12 DATE

REGISTERED LANDSCAPE ARCHITECT F. MICHAEL FAHA OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 3-26-12 APPROVED: DATE: 3-26-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
IRRIGATION PLAN
STA 449+00 TO STA 454+00

Exhibit T 9

SCALE: 1"=20' DRAWING NO.: L15E-513 CONTRACT NO.: RH100544JB SHEET NO.:

\\Gw01\public\Projects\110116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\Irrigation\L15E-513.dwg Mar. 20, 2012 - 1:16 PM shawn kummer
Plot Date:3/20/2012 1:30 PM_shawn kummer

GENERAL PLANTING NOTES

1. REFER TO DRAWING NOS. L15E-002 THROUGH L15E-013 FOR PLANTING LEGENDS AND QUANTITIES.
2. REFER TO DRAWING L15E-014 FOR PLANTING SHEET LAYOUT INDEX.
3. REFER TO DRAWING NOS. L15E-300 THROUGH L15E-302, AND TRIMET DIRECTIVE DRAWINGS LTM301 AND LTM302 FOR LANDSCAPE DETAILS.
4. NUMBERS IN CIRCLES ((#)) REFER TO PLANTING KEY NOTES. NUMBERS IN HEXAGONS (⟨#⟩) REFER TO PLANTING SHEET NOTES.
5. INDIVIDUAL TEXT SYMBOL CALLOUTS ON PLAN SHEETS REFER TO PLANT SPECIES SHOWN IN LEGENDS ON SHEETS L15E-002 THROUGH L15E-007. TEXT SYMBOL CALLOUTS ARE PROVIDED FOR EACH CONTIGUOUS CLUSTER OF SIMILAR PLANTINGS PER SHEET. SOME PLANTING AREAS RECEIVE ONLY ONE TEXT SYMBOL CALLOUT PER SPECIES, PER CONTIGUOUS PLANTING AREA FOR OVERALL LEGIBILITY PER SHEET.
6. CONTRACTOR MUST FIELD VERIFY ALL EXISTING TREES IN FIELD PRIOR TO CONSTRUCTION ACTIVITIES. ALL EXISTING TREES NOT SHOWN IN CIVIL DEMO PLANS AS REMOVED ARE TO BE PROTECTED AND PRESERVED IN PLACE. REFER TO SPECIFICATION SECTION 01535 FOR TREE PRESERVATION AND PROTECTION AND EXISTING TREE PROTECTION DETAIL ON L15E-303.
7. REFER TO SPECIFICATION SECTION 32 93000 FOR LANDSCAPE PLANTINGS.
8. CONTRACTOR SHALL PROVIDE TOPSOIL, SOIL AMENDMENTS, AND COMPOST IN REQUIRED QUANTITIES TO CREATE THE PLANTING SOIL FOR PLANTED AND SEEDED AREAS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS AS PART OF THE CONSTRUCTION DOCUMENTATION PACKAGE. 12" DEPTH PLANTING SOIL AS SPECIFIED IN SPECIFICATION SECTION 32 93000 IS REQUIRED FOR ALL TREE AND SHRUB PLANTING AREAS (EXCEPT FOR STORMWATER FACILITIES), AND 6" DEPTH OF PLANTING SOIL FOR ALL SEEDED AREAS SHOWN ON LANDSCAPE PLANS.
9. 18" DEPTH STORMWATER FACILITY TOPSOIL, AS SPECIFIED IN SPECIFICATION SECTION 32 93000, IS REQUIRED FOR ALL STORMWATER FACILITIES, INCLUDING SWALES, PLANTERS, AND BASINS. REFER TO CIVIL DRAWINGS FOR STORMWATER FACILITY DETAILS.
10. ALL PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS PROVIDED AS PART OF THE CONSTRUCTION DOCUMENT PACKAGE.
11. QUANTITIES ARE LISTED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL COUNTS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION. IN THE CASE OF A DISCREPANCY BETWEEN THE LEGEND AND THE PLAN, PLANTS INDICATED ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN THE LEGEND.
12. INSTALL AND MAINTAIN TREES FURNISHED BY TRIMET ("OWNER-FURNISHED TREES"). SEE PLANTING LEGENDS FOR SPECIES AND QUANTITIES THAT WILL BE PROVIDED. COORDINATE DELIVERY AND RECEIPT THROUGH RESIDENT ENGINEER (RE).
13. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND ROUTING OF EXISTING UNDERGROUND UTILITIES PRIOR TO STARTING EXCAVATION. REPAIR ONLY DAMAGE TO EXISTING PIPES, UTILITIES, OR RELATED FACILITIES AT THE CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY THE ENGINEER.
14. ADJUST PLANT LOCATIONS SO THAT VEGETATION DOES NOT CONFLICT WITH ABOVE-GROUND UTILITIES, OR WITH TRAFFIC SIGHT LINES, SIGNS, OR OTHER APPURTENANCES.
15. PRESERVE, PROTECT, AND MAINTAIN ALL IMPROVEMENTS WITHIN WORK AREAS, INCLUDING EXISTING TREES AND VEGETATION. THOROUGHLY CLEAN ALL IMPROVEMENTS AFTER COMPLETION OF WORK.
16. PROVIDE 12" ROOT BARRIER WHERE TREES ARE WITHIN 6' OF PAVED SURFACES, CURBS, OR WALLS, AND IN ALL TREE WELLS, UNLESS OTHERWISE REQUIRED BY APPLICABLE JURISDICTIONS, OR AS INDICATED ON PLANS. REFER TO DETAIL 4, SHEET L15E-300. REFER TO STANDARD PBOT DETAIL P-581 FOR ALL STREET TREES IN CITY OF PORTLAND.
17. ALL TREES TO BE BALLED AND BURLAPPED (B&B), UNLESS OTHERWISE INDICATED IN LEGEND OR IN DRAWINGS.
18. REFER TO DEMOLITION DRAWINGS FOR TREES TO BE REMOVED.
19. CONTRACTOR SHALL PROVIDE MULCH FOR PLANTED AREAS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS.
20. ALL PLANTINGS LOCATED IN CITY OF PORTLAND RIGHT-OF-WAY WILL BE HAND-WATERED DURING THE 2-YEAR ESTABLISHMENT PERIOD. REFER TO IRRIGATION DRAWINGS FOR WATERING REQUIREMENTS IN ALL OTHER PLANTING AREAS OF THE PROJECT.
21. ALL TREES THAT ARE LOCATED IN SEEDED AREAS OR WHERE NO PLANTING IS SHOWN SHALL RECEIVE A 5' DIAMETER BARK MULCH RING, AT 3" DEPTH.

PLANTING KEY NOTES

(1) STREET TREE IN TREE WELL – REFER TO TRIMET DIRECTIVE DRAWING 5, SHEET LTM301 FOR TREE STAKING AND PLANTING. REFER TO STANDARD PBOT DETAIL P-581 FOR ALL STREET TREES IN CITY OF PORTLAND. REFER TO DETAIL 3, SHEET L15E-300 FOR ROOT BARRIER DETAIL. INSTALL TREE GRATE AND ROOTBALL ANCHOR SYSTEM AT LOCATIONS INDICATED ON PLANS. REFER TO ARCH DRAWINGS FOR TREE GRATE DETAILS. REFER TO DETAIL 5, SHEET L15E-300 FOR ROOTBALL ANCHOR SYSTEM DETAIL.

(2) PRESERVE EXISTING TREE – PRIOR TO CONSTRUCTION, INSTALL 4' HEIGHT ORANGE PLASTIC CONSTRUCTION FENCING AROUND EXISTING TREES AS INDICATED ON PLANS. TREE PROTECTION FENCING SHALL BE LOCATED AROUND EACH TREE AT THE DRIPLINE, OR AT 8' DIAMETER MINIMUM. SECURE FENCING TO STEEL POSTS PLACED 6' O.C. WITH PLASTIC TIES. REFER TO SPECIFICATION SECTION 01535 – TREE AND PLANT PROTECTION.

(3) VINE PLANTING AT WALL – REFER TO DETAIL 1, SHEET L15E-300 FOR VINE PLANTING IN PLANTING AREAS, AND DETAIL 5, SHEET L15E-300 FOR VINE PLANTINGS IN PAVING.

(4) MITIGATION PLANTING – REFER TO L15E-700 SERIES SHEETS FOR MITIGATION PLANTING PLANS AND DETAILS.

(5) WATER QUALITY SWALE – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 9300 TO ZONE 'A' PLANTING AREAS, PLACE 2" DEPTH BARK MULCH TO ZONE 'B' PLANTING AREAS UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY SWALES LOCATED WITHIN RIGHT-OF-WAY.

(6) WATER QUALITY BASIN – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 9300 TO ZONE 'A' PLANTING AREAS, PLACE 2" DEPTH BARK MULCH TO ZONE 'B' PLANTING AREAS UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY BASINS LOCATED WITHIN RIGHT-OF-WAY.

(7) STORMWATER PLANTER – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 9300 THROUGHOUT FACILITY UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY PLANTERS LOCATED WITHIN RIGHT-OF-WAY.

(8) EXISTING LANDSCAPE TO REMAIN – PRESERVE AND PROTECT LANDSCAPE ON PRIVATE PROPERTY. REFER TO SPECIFICATION SECTION 01535 FOR TREE AND PLANT PROTECTION.

(9) OWNER-PROVIDED ARTWORK – REFER TO ARCH. DRAWINGS FOR LOCATIONS.

DETAIL REFERENCES

PLANTING DETAILS APPLY TO ALL PLANTS SHOWN ON LEGENDS AND LAYOUT SHEETS AS FOLLOWS:

Detail	Ref.	Applies to
TREE PLANTING AND STAKING	5 / LTM301	APPLIES TO ALL DECIDUOUS AND CONIFER TREES PLANTED ON SLOPES LESS STEEP THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
TREE PLANTING ON SLOPE	6 / LTM301	APPLIES TO ALL DECIDUOUS AND CONIFER TREES PLANTED ON SLOPES STEEPER THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
PLANTING BED GRADING	1 / LTM302	TO ALL PROJECT PLANTING AREAS, EXCEPT FOR STORMWATER QUALITY FACILITIES
PLANTING	2 / LTM302	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED ON THE PROJECT ON SLOPES LESS STEEP THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
PLANTING AT SLOPE	3 / LTM302	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED ON THE PROJECT ON SLOPES STEEPER THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
VINE PLANTING	1 / L15E-300	APPLIES TO ALL VINE PLANTINGS INSTALLED ON THE PROJECT AS SHOWN ON PLANS
VINE PLANTING IN PAVING	5 / L15E-300	APPLIES TO ALL VINE PLANTINGS INSTALLED IN PAVING AREAS ON THE PROJECDT AS SHOWN ON PLANS
PLANT SPACING	2 / L15E-300	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED IN ALL PROJECT PLANTING AREAS
ROOT BARRIER – TREES IN PLANTING STRIP	3 / L15E-300	APPLIES TO ALL TREE PLANTING AREAS ADJACENT TO PAVED AREAS, AS INDICATED ON PLANS AND IN GENERAL PLANTING NOTES
TREE PLANTING – ROOTBALL ANCHOR	4 / L15E-300	APPLIES TO TREE PLANTINGS LOCATED IN TREE WELLS WITH TREE GRATES AT LOCATIONS INDICATED ON PLANS.
PLANTING – 17TH AVE CORRIDOR ARTWORK	1 / L15E-302	APPLIES TO ALL SHRUBS AND GRASSES INSTALLED WITHIN AND AROUND OWNER-PROVIDED ARTWORK ALONG 17TH AVENUE
TYPICAL PLANT LAYOUT PER SPACING TYPE	1 / L15E-301	APPLIES TO ALL SHRUB AND GROUNDCOVER PLANTING AS REPRESENTED WITH HATCHES IN THE DRAWINGS.

3-26-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

TS — DESIGNED — 05-03-11
CM/AP — DRAWN — 08-10-11
SK/TS — CHECKED — 11-02-11
APPROVED — 3-26-12

REGISTERED LANDSCAPE ARCHITECT — F. MICHAEL FAHA — 242 — 1988 — OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION — 710 N.E. HOLLADAY STREET — PORTLAND, OREGON 97232

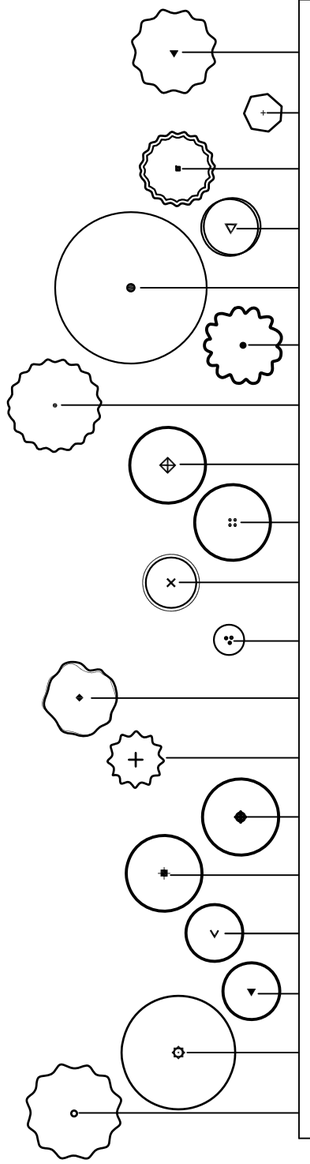
SUBMITTED: — DATE: 3-26-12 — APPROVED: — DATE: 3-26-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING NOTES

Exhibit T 10

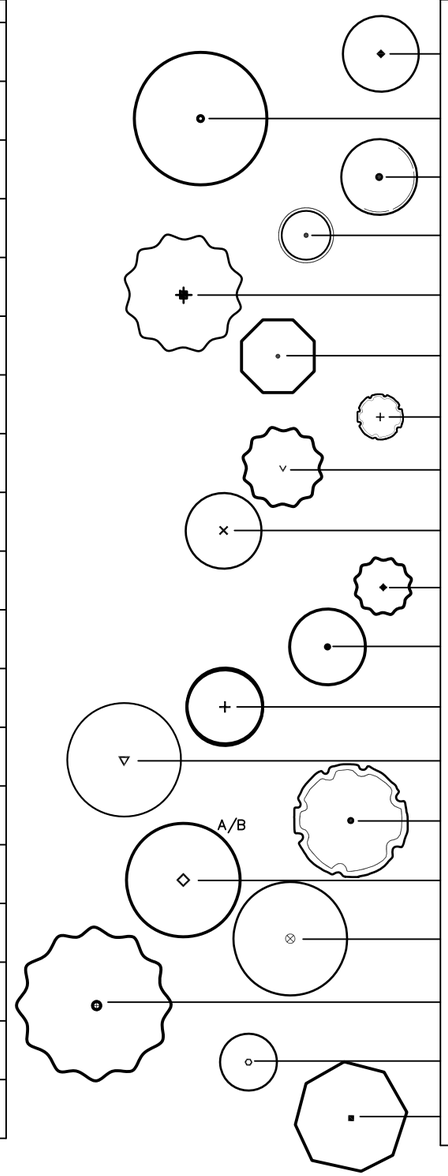
SCALE: 1"=20' — DRAWING NO.: L15E-001 — CONTRACT NO.: RH100544JB — SHEET NO.:

MASTER TREE LEGEND



DECIDUOUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
ACCA	Acer campestre 'Evelyn'	QUEEN ELIZABETH HEDGE MAPLE	2 1/2" CAL.		7
ACCI	Acer circinatum	VINE MAPLE	7'-8',MULTI-STEM, 3 STEM MIN.	69	
ACGI	Acer ginnala 'Flame'	FLAME MAPLE	2 1/2" CAL., MULTI-STEM, 3 STEM MIN.		21
ACGR	Acer grandidentatum 'Schmidt'	ROCKY MOUNTAIN GLOW MAPLE	2 1/2" CAL.		9
ACMA	Acer macrophyllum	BIG LEAF MAPLE	2 1/2" CAL.		15
ACRF	Acer rubrum 'Franks Red'	RED SUNSET MAPLE	2 1/2" CAL.		26
ALRU	Alnus rubra	RED ALDER	2 1/2" CAL.		46
AMAL	Amelanchier alnifolia	SERVICEBERRY	2 1/2" CAL.		23
AMJF	Amelanchier laevis 'JFS-Arb' PP 15304	SPRING FLURRY SERVICEBERRY	2 1/2" CAL.		30
AMSN	Amelanchier laevis 'Snowcloud' PP 7203	SNOWCLOUD SERVICEBERRY	2 1/2" CAL.		16
ARME	Arbutus menziesii	PACIFIC MADRONE	5 GAL.	3	
BEPA	Betula papyrifera 'Renci' PP12768	RENAISSANCE REFLECTION PAPER BIRCH	2 1/2" CAL.		6
COSA	Cornus kousa 'Satomi'	SATOMI DOGWOOD	2" CAL.	2	
COEW	Cornus x 'Eddie's White Wonder'	EDDIE'S WHITE WONDER DOGWOOD	2 1/2" CAL.		26
COKO	Cornus kousa 'Chinensis'	KOUSA DOGWOOD	2 1/2" CAL.		3
CONU	Cornus nuttalli	PACIFIC DOGWOOD	5 GAL.	2	
FASY	Fagus sylvatica 'Fastigiata'	FASTIGIATE EUROPEAN BEECH	2 1/2" CAL.		23
FRLA	Fraxinus latifolia	OREGON ASH	2 1/2" CAL.		18
FRCI	Fraxinus pennsylvanica 'Cimmzam' PP8077	CIMMARON GREEN ASH	2 1/2" CAL.		30



DECIDUOUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
FRRU	Fraxinus pennsylvanica 'Rugby'	PRAIRIE SPIRE GREEN ASH	2 1/2" CAL.		66
GIAU	Ginkgo biloba 'Autumn Gold'	AUTUMN GOLD GINKGO	2 1/2" CAL.		22
GIMG	Ginkgo biloba 'Magyar'	Magyar GINKGO	2" CAL.	18	
GIPR	Ginkgo biloba 'Princeton Sentry'	PRINCETON SENTRY GINKGO	2" CAL.		51
GLSK	Gleditsia triacanthos inermis 'Skyline'	SKYLINE HONEYLOCUST	2 1/2" CAL.		41
MAGA	Magnolia x 'Galaxy'	GALAXY MAGNOLIA	2" CAL.		70
MATR	Malus transitoria 'Schmidtcutleaf' Golden Raindrops	CUTLEAF CRABAPPLE	1 1/2" CAL.	14	
NYSY	Nyssa sylvatica	BLACK TUPELO	2 1/2" CAL.		102
PAPE	Parrotia persica	PERSIAN IRONWOOD	2 1/2 " CAL.		35
PRSA	Prunus sargentii 'Columnaris'	COLUMNAR SARGENT CHERRY	2 1/2" CAL.		10
PRVI	Prunus virginiana	CHOKECHERRY	2 1/2" CAL.		14
PRCA	Prunus virginiana 'Canada Red"	CANADA RED CHOKECHERRY	2 1/2" CAL.		26
QUFR	Quercus frainetto 'Schmidt'	FOREST GREEN OAK	2 1/2" CAL.	4	95
QUGM	Quercus gambelii	GAMBEL OAK	2 1/2" CAL.		1
QUGA	Quercus garryana	OREGON WHITE OAK	A= 2 1/2" CAL. B= 3" CAL.	1	5 25
QULO	Quercus lobata	VALLEY OAK	2 1/2" CAL.		1
ULJA	Ulmus japonica x wilsoniana 'Morton'	ACCOLADE ELM	2 1/2" CAL.		18
ZEMU	Zelkova serratta 'Mussashino'	MUSSASHINO COLUMNAR ZELKOVA	2 1/2" CAL.	25	
ZESE	Zelkova serrata 'Village Green'	VILLAGE GREEN ZELKOVA	2 1/2" CAL.		41

* CF = CONTRACTOR FURNISHED OF = OWNER FURNISHED

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION	

TS DESIGNED	05-03-11 DATE	
CM/AP DRAWN	08-10-11 DATE	
SK/TS CHECKED	11-02-11 DATE	
APPROVED	05-14-12 DATE	

REGISTERED LANDSCAPE ARCHITECT F. MICHAEL HAHA 2988 OREGON

PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION 710 N.E. HOLLADAY STREET PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	05-14-12		05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 11

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=20'	L15E-002	RH100544JB	

\\gw01\Public\Projects\110116_PMLR_Design\02_Drawings\02_Current_Drawings\GRN\Sheets\General\L15E-002.dwg Apr. 04, 2012 - 11:11 AM danae davison
Plot Date: 4/6/2012 4:51 PM_danae davison

MASTER TREE LEGEND CONT'D

CONIFEROUS TREES					
TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
CADE	Calocedrus decurrens	INCENSE CEDAR	A=10-12' HT. B=14-16' HT.	7 119	
CHNO	Chamaecyparis nootkatensis 'Glauca Pendula'	WEEPING ALASKA CEDAR	15-18' HT.	33	
CUSE	Cupressus sempervirens	ITALIAN CYPRESS	12-14' HT.	26	
PSME	Pseudotsuga menziesii	DOUGLAS FIR	A=10-12' HT. B=14-16' HT.	33 30	
TADI	Taxodium distichum 'Mickelson'	SHAWNEE BRAVE BALD CYPRESS	14' -16' HT.	26	
THPL	Thuja plicata	WESTERN RED CEDAR	A=10-12' HT. B=14-16' HT.	64 49	
THPF	Thuja plicata 'Fastigiata'	HOGAN CEDAR	A=10-12' HT. B=14-16' HT.	78 76	
TSHE	Tsuga heterophylla	WESTERN HEMLOCK	A=10-12' HT. B=14-16' HT.		

* CF = CONTRACTOR FURNISHED, OF = OWNER FURNISHED

EXISTING TREES

EXISTING TREE TO BE PROTECTED AND PRESERVED - SEE SPECIFICATIONS SECTION 01535.
SYMBOL SIZE DOES NOT NECESSARILY REFLECT ACCURATE EXISTING CANOPY SIZE IN FIELD. CONTRACTOR MUST FIELD VERIFY CANOPY EXTENTS AND ADHERE TO TREE PRESERVATION DETAIL PER APPLICABLE JURISDICTION.

05-14-12 SK/TS MF ISSUED FOR CONSTRUCTION

TS DESIGNED 05-03-11 DATE
CM/AP DRAWN 08-10-11 DATE
SK/TS CHECKED 11-02-11 DATE
APPROVED 05-14-12 DATE

REGISTERED LANDSCAPE ARCHITECT OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 12

SUBMITTED: | DATE: 05-14-12 | APPROVED: | DATE: 05-14-12 | SCALE: 1"=20' | DRAWING NO.: L15E-003 | CONTRACT NO.: RH100544JB | SHEET NO.:

MASTER SHRUBS/GROUNDCOVER LEGEND

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
ABGR	Abelia x grandiflora 'Francis Mason'	FRANCIS MASON ABELIA	2 GAL.	AS SHOWN
ARUN	Arbutus unedo 'Compacta'	COMPACT STRAWBERRY TREE	5 GAL.	AS SHOWN
ARMA	Arctostaphylos uva-ursi 'Massachusetts'	MASSACHUSETTS KINNICKINNICK	1 GAL.	18" O.C.
ARUV	Arctostaphylos uva-ursi	KINNICKINNICK	1 GAL.	18" O.C.
ARWO	Arctostaphylos uva-ursi 'Woods Compacta'	WOOD'S COMPACT KINNICKINNICK	1 GAL.	18" O.C.
BEBU	Berberis buxifolia 'Nana'	BOXLEAF BARBERRY	1 GAL.	18" O.C.
BUMI	Buxus microphylla 'Green Gem'	GREEN GEM BOXWOOD	1 GAL.	24" O.C.
CAAC	Calamagrostis x acutiflora 'Avalanche'	AVALANCHE FEATHER REED GRASS	1 GAL.	18" O.C.
CAAO	Calamagrostis x acutiflora 'Overdam'	VARIEGATED REED GRASS	1 GAL.	18" O.C.
CARA	Campsis radicans 'Flava'	YELLOW TRUMPET VINE	5 GAL.	AS SHOWN STAKED
CAAL	Carex albula 'Frosty Curls'	FROSTY CURLS SEDGE	1 GAL.	18" O.C.
CABU	Carex buchananii	LEATHERLEAF SEDGE	1 GAL.	12" O.C.
CADN	Carex densa	DENSE SEDGE	1 GAL.	12" O.C.
CAIC	Caryopteris incana 'Sunshine Blue'	SUNSHINE BLUE CARYOPTERIS	1 GAL.	18" O.C.
CAGO	Carex morrowii 'Gold Band'	GOLD BAND JAPANESE SEDGE	1 GAL.	12" O.C.
CAMO	Carex morrowii 'Ice Dance'	ICE DANCE JAPANESE SEDGE	1 GAL.	12" O.C.
CAVA	Carex morrowii 'Variegata'	VARIEGATED JAPANESE SEDGE	1 GAL.	12" O.C.
CETH	Ceanothus thyrsifolia 'Victoria'	VICTORIA CALIFORNIA LILAC	2 GAL.	AS SHOWN
COSG	Cornus sanguinea	BLOODTWIG DOGWOOD	3 GAL.	36" O.C.
COSE	Cornus sericea 'Kelseyi'	DWARF RED-TWIG DOGWOOD	1 GAL.	24" O.C.
COST	Cornus stolonifera	RED-TWIG DOGWOOD	3 GAL.	AS SHOWN
COAF	Cornus stolonifera 'Arctic Fire'	ARCTIC FIRE DOGWOOD	5 GAL.	AS SHOWN
COLG	Cotoneaster adpressus 'Little Gem'	CREEPING LITTLE GEM COTONEASTER	1 GAL.	24" O.C.

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
CODA	Cotoneaster dammeri 'Lowfast'	LOWFAST BEARBERRY COTONEASTER	1 GAL.	24" O.C.
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.
DEGT	Deschampsia cespitosa 'Goldtau'	GOLD DEW TUFTED HAIRGRASS	1 GAL.	18" O.C.
ECPU	Echinacea purpurea 'Magnus'	MAGNUS PURPLE CONEFLOWER	1 GAL.	12" O.C.
ELAC	Eleocharis acicularis	DWARF HAIRGRASS	1 GAL.	12" O.C.
ELPA	Eleocharis palustris	CREEPING SPIKERUSH	1 GAL.	12" O.C.
EQHY	Equisetum hyemale	SCOURING RUSH	1 GAL.	12" O.C.
ERDA	Erica x darleyensis 'Kramer's Rote'	KRAMER'S ROTE WINTER HEATH	2 GAL.	AS SHOWN
EUCH	Euphorbia characias ssp. characias 'Humpty Dumpty'	HUMPTY DUMPTY EUPHORBIA	1 GAL.	18" O.C.
FEGL	Festuca glauca 'Boulder Blue'	BOULDER BLUE FESCUE	1 GAL.	12" O.C.
FEID	Festuca idahoensis	IDAHO BLUE FESCUE	1 GAL.	12" O.C.
FRCH	Fragaria chiloensis	BEACH STRAWBERRY	1 GAL.	12" O.C.
HESE	Helictotrichon sempervirens	BLUE OAT GRASS	1 GAL.	18" O.C.
HEPA	Hesperaloe parviflora 'Yellow'	YELLOW FALSE YUCCA	1 GAL.	24" O.C.
HODI	Holodiscus discolor	OCEAN SPRAY	5 GAL.	AS SHOWN
HYQU	Hydrangea quercifolia 'Pee Wee'	PEE WEE OAK LEAF HYDRANGEA	1 GAL.	AS SHOWN
ILCC	Ilex crenata 'Convexa'	CONVEXA JAPANESE HOLLY	1 GAL.	AS SHOWN
ILVO	Ilex vomitoria 'Stokes Dwarf'	STOKES DWARF YAUPON HOLLY	1 GAL.	AS SHOWN
IRTE	Iris tenax	OREGON IRIS	1 GAL.	12" O.C.
JUEF	Juncus effusus	COMMON RUSH	1 GAL.	12" O.C.

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

TS — DESIGNED — 05-03-11 — DATE
CM/AP — DRAWN — 08-10-11 — DATE
SK/TS — CHECKED — 11-02-11 — DATE
APPROVED — 05-14-12 — DATE

REGISTERED LANDSCAPE ARCHITECT — F. MICHAEL FAHA — OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRI-MET — CAPITAL PROJECTS AND FACILITIES DIVISION — 710 N.E. HOLLADAY STREET — PORTLAND, OREGON 97232

SUBMITTED: — DATE: 05-14-12 — APPROVED: — DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 13

SCALE: 1"=20' — DRAWING NO.: L15E-004 — CONTRACT NO.: RH100544JB — SHEET NO.:

\\gw01\Public\Projects\110116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\General\L15E-004.dwg Apr. 02, 2012 - 1:17 PM dance davison
Plot Date: 4/6/2012 4:51 PM_dance davison

MASTER SHRUBS/GROUNDCOVER LEGEND CONT'D

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
JUQC	Juncus effusus 'Quartz Creek'	SOFT RUSH	1 GAL.	12" O.C.
JUEN	Juncus ensifolius	DAGGER LEAF RUSH	1 GAL.	12" O.C.
JUPA	Juncus patens	SPREADING RUSH	1 GAL.	12" O.C.
JUCG	Juncus patens 'Carmen's Gray'	CARMEN'S GRAY RUSH	1 GAL.	12" O.C.
JUEB	Juncus patens 'Elk Blue'	ELK BLUE SPREADING RUSH	1 GAL.	12" O.C.
JUTE	Juncus tenuis	SLENDER RUSH	1 GAL.	12" O.C.
LEFO	Leucothoe fontanesiana 'Nana'	DWARF DROOPING LEUCOTHOE	2 GAL.	AS SHOWN
LIBB	Liriope muscari 'Big Blue'	BIG BLUE LIRIOPE	1 GAL.	12" O.C.
LIMU	Liriope muscari 'Evergreen Giant'	EVERGREEN GIANT LIRIOPE	1 GAL.	12" O.C.
LOIN	Lonicera involucrata	TWINBERRY	5 GAL.	AS SHOWN
LOPI	Lonicera pileata	BOXLEAF HONEYSUCKLE	1 GAL.	AS SHOWN
MAAQ	Mahonia aquifolium	OREGON GRAPE	3 GAL.	AS SHOWN
MAAQ	Mahonia aquifolium	OREGON GRAPE	3 GAL.	24" O.C.
MACO	Mahonia aquifolium 'Compacta'	COMPACT OREGON GRAPE	2 GAL.	24" O.C.
MANE	Mahonia nervosa	DULL OREGON GRAPE	2 GAL.	AS SHOWN
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	18" O.C.
MYCA	Myrica californica	PACIFIC WAX MYRTLE	5 GAL.	AS SHOWN
NAFO	Narcissus 'Fortissimo'	FORTISSIMO DAFFODIL	3 BULBS	12" O.C.
PATR	Parthenocissus tricuspidata	BOSTON IVY	5 GAL.	AS SHOWN STAKED
PEAL	Pennisetum alopecuroides 'Hameln'	HAMELN PENNISETUM	1 GAL.	24" O.C.
PHLE	Philadelphus lewisii	MOCK ORANGE	5 GAL.	AS SHOWN
PHCA	Physocarpus capitatus	PACIFIC NINE BARK	5 GAL.	AS SHOWN

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	AS SHOWN
RHMA	Rhododendron macrophyllum	PACIFIC RHODODENDRON	5 GAL.	AS SHOWN
RISA	Ribes sanguineum	RED FLOWERING CURRANT	3 GAL.	AS SHOWN
RORA	Rosa 'Radcor'	RAINBOW KNOCKOUT ROSE	3 GAL.	AS SHOWN
ROCS	Rosa 'Radsun'	CAREFREE SUNSHINE FLOWERING CARPET ROSE	1 GAL.	AS SHOWN
RONU	Rosa nutkana	NOOTKA ROSE	3 GAL.	AS SHOWN
RUHI	Rudbeckia hirta 'Goldsturm'	GOLDSTURM BLACK-EYED SUSAN	1 GAL.	18" O.C.
SASC	Salix scouleriana	SCOULER'S WILLOW	6' MIN. HT.	36/100 SF
SALS	Salix scouleriana	SCOULER'S WILLOW	LIVE STAKES	5' O.C.
SARA	Sambucus racemosa	RED ELDERBERRY	3 GAL.	AS SHOWN
SPBE	Spiraea betulifolia 'Tor'	BIRCHLEAF SPIREA	1 GAL.	AS SHOWN
SPBU	Spiraea x bumalda 'Gold Flame'	GOLD FLAME SPIREA	1 GAL.	AS SHOWN
SPDE	Spiraea densiflora	ALPINE SPIREA	2 GAL.	24" O.C.
SPDO	Spiraea douglasii	DOUGLAS SPIREA	3 GAL.	AS SHOWN
SPJA	Spiraea japonica 'Goldmound'	GOLDMOUND SPIREA	1 GAL.	AS SHOWN
SYMO	Symphoricarpos mollis	CREEPING SNOWBERRY	2 GAL.	24" O.C.
VAOV	Vaccinium ovatum	EVERGREEN HUCKLEBERRY	3 GAL.	24" O.C.
VIDA	Viburnum davidii	DAVID VIBURNUM	2 GAL.	AS SHOWN
VIED	Viburnum edule	HIGHBUSH CRANBERRY	2 GAL.	AS SHOWN
VITI	Viburnum tinus 'Spring Bouquet'	SPRING BOUQUET VIBURNUM	5 GAL.	AS SHOWN

05-14-12 SK/TS MF ISSUED FOR CONSTRUCTION

TS DESIGNED 05-03-11 DATE
CM/AP DRAWN 08-10-11 DATE
SK/TS CHECKED 11-02-11 DATE
APPROVED 05-14-12 DATE

REGISTERED LANDSCAPE ARCHITECT F. MICHAEL FAHA OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION 710 N.E. HOLLADAY STREET PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12 APPROVED: DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 14

SCALE: 1"=20' DRAWING NO.: L15E-005 CONTRACT NO.: RH100544JB SHEET NO.:

\\gw01\Public\Projects\110116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\General\L15E-005.dwg Apr. 04, 2012 - 11:22 AM dance davison
Plot Date: 4/6/2012 4:51 PM_dance davison

MASTER PLANTING MIXES LEGEND

MIX A

NOTES: WOODLAND UNDERSTORY MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	40%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	30%
VAOV	Vaccinium ovatum	EVERGREEN HUCKLEBERRY	3 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	30%

MIX B

NOTES: MAHONIA/SWORD FERN MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	2' O.C.	GROUPS OF 5, 7, OR 9	60%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	2' O.C.	GROUPS OF 3, 5, OR 7	40%

MIX C

NOTES: UPLAND RIPARIAN MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MANE	Mahonia nervosa	DULL OREGON GRAPE	2 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	27%
PICA	Physocarpus capitatus	PACIFIC NINE BARK	5 GAL.	3' O.C.	GROUPS OF 1, 2, OR 3	10%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	3' O.C.	GROUPS OF 5, 7, OR 9	27%
RISA	Ribes sanguineum	RED FLOWERING CURRANT	3 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	10%
RONU	Rosa nutkana	NOOTKA ROSE	3 GAL.	3' O.C.	GROUPS OF 1, 2, OR 3	10%
SPDO	Spiraea douglasii	DOUGLAS SPIREA	3 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	10%
SYAL	Symphoricarpos albus	SNOWBERRY	1 GAL.	3' O.C.	GROUPS OF 5, 7, OR 9	6%

MIX D

NOTES: STORMWATER ZONE A

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
CAOB	Carex obnupta	SLOUGH SEDGE	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	20%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	12" O.C.	GROUPS OF 5, 7, OR 9	5%
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	20%
JUEF	Juncus effusus	COMMON RUSH	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	30%
JUEN	Juncus ensifolius	DAGGER LEAF RUSH	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	25%

MIX E

NOTES: STORMWATER ZONE B

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
COST	Cornus stolonifera	RED-TWIG DOGWOOD	1 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	20%
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	3' O.C.	GROUPS OF 12, 15, OR 17	25%
MAAQ	Mahonia aquifolium	OREGON GRAPE	1 GAL.	3' O.C.	GROUPS OF 12, 15, OR 17	20%
RISA	Ribes sanguineum	RED FLOWERING CURRANT	1 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	10%
SPDO	Spiraea douglasii	DOUGLAS SPIREA	1 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	25%

MIX F

NOTES: DESCHAMPSIA/JUNCUS MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.	GROUPS OF 5, 7, OR 9	50%
JUPA	Juncus patens	SPREADING RUSH	1 GAL.	12" O.C.	GROUPS OF 3, 5, OR 7	50%

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

TS DESIGNED 05-03-11 DATE
CM/AP DRAWN 08-10-11 DATE
SK/TS CHECKED 11-02-11 DATE
APPROVED 05-14-12 DATE

REGISTERED LANDSCAPE ARCHITECT F. MICHAEL FAHA 242 OREGON 1988 PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON
GREENWORKS
DAVID EVANS AND ASSOCIATES INC.
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12 APPROVED: DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND
Exhibit T 15

SCALE: 1"=20' DRAWING NO.: L15E-006 CONTRACT NO.: RH100544JB SHEET NO.:

MASTER PLANTING MIXES LEGEND CONT'D

MIX G

NOTES: OAK MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
BADE	Balsamorhiza deltoidea	BALSAMROOT	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
BRCA	Bromus carinatus	CALIFORNIA BROME	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
FERO	Festuca roemeri	ROEMER'S FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
FERU	Festuca rubra	RED FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
FRCH	Fragaria chiloensis	BEACH STRAWBERRY	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
RAOC	Ranunculus occidentalis	WESTERN BUTTERCUP	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
SYMO	Symphoricarpos mollis	CREEPING SNOWBERRY	2 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%

MIX H

NOTES: PLAZA MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
AQFO	Aquilegia formosa	RED COLUMBINE	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
ASSU	Aster subspicatus	DOUGLAS' ASTER	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
DEGT	Deschampsia cespitosa 'Goldtau'	GOLD DEW TUFTED HAIRGRASS	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	30%
FEID	Festuca idahoensis	IDAHO FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	30%
KOCR	Koehleria cristata	JUNE GRASS	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
SIID	Sisyrinchium idahoense	BLUE-EYED GRASS	1 GAL.	18" O.C.	GROUPS OF 5, 7, OR 9	5%

SEED MIX A

NOTES: PERMANENT SEED MIX

BOTANICAL NAME	COMMON NAME	% PLS	APPLICATION RATE
Achillea millefolium	COMMON YARROW	1.5%	2 LBS./ 1,000 SF
Alyssum maritium	DWARF WHITE ALLYSSUM	2.5%	
Armeria maritima	SEA PINK	2%	
Bellis perennis	DWARF ENGLISH DAISY	1%	
Festuca ovina var. azay blue	AZAY BLUE SHEEP FESCUE	18%	
Festuca rubra var. sealink	SEALINK SLENDER CREEPING RED FESCUE	55%	
Limnanthes douglasii	DOUGLAS MEADOWFOAM	4%	
Nemophilia menziesii	BABY BLUE EYE'S	5%	
Trifolium fragiferum	STRAWBERRY CLOVER	8%	
Trifolium repens	MICRO CLOVER	3%	

SEED MIX B

NOTES: 1. PROTIME 705 PDX BY HOBBS & HOPKINS

2. PERCENTAGES OF SPECIES NOT AVAILABLE, ONLY AVAILABLE AS PROPRIETARY BLEND

BOTANICAL NAME	COMMON NAME	% PLS	APPLICATION RATE
Achillea millefolium	COMMON YARROW	N/A	1.5-2 LBS./ 1,000 SF
Festuca ovina duriuscula	HARD FESCUE	N/A	
Lobularia maritima	SWEET ALYSSUM	N/A	
Lolium perenne	DWARF PERENNIAL RYEGRASS	N/A	
Trifolium fragiferum	STRAWBERRY CLOVER	N/A	
Trifolium repens	MICRO CLOVER	N/A	

LANDSCAPE MATERIALS

	TYPE
BARK MULCH	AS SPECIFIED IN SPECIFICATION SECTION 32 9300
ROUNDED RIVER ROCK MULCH	AS SPECIFIED IN SPECIFICATION SECTION 32 9300

05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

TS DESIGNED 05-03-11 DATE
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REGISTERED LANDSCAPE ARCHITECT F. MICHAEL FAHA OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION 710 N.E. HOLLADAY STREET PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12 APPROVED: DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

Exhibit T 16

SCALE: 1"=20' DRAWING NO.: L15E-007 CONTRACT NO.: RH100544JB SHEET NO.:

\\gw01\Public\Projects\10116_PMLR_Design\02_Drawings\01_CAD\02_Current_Drawings\GRN\Sheets\General\L15E-007.dwg Apr. 02, 2012 - 1:28 PM dance davison
Plot Date: 4/6/2012 4:51 PM_dance davison

ARCHITECTURAL PLAN NOTES

1. P.C.C. TRACKWAY, REF. CIVIL
2A. P.C.C. ROADWAY, HEAVY TINED FINISH
2B. P.C.C. ROADWAY, BLACK INTEGRAL COLOR
3A. P.C.C. SIDEWALK, PBOT STD, REF. 4/A15E–523
3B. P.C.C. SIDEWALK, ODOT STD, REF. 5/A15E–523
3C. P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E–524
3D. P.C.C. SIDEWALK, SCORING PER PLANS
3E. P.C.C. SIDEWALK, OMSI STD, REF. 2/A15E–523
3F. P.C.C. SIDEWALK, PED./BIKE MIXING ZONE, SCORE AS SHOWN
3G. P.C.C. SIDEWALK, TACOMA STD, REF. 1 & 2/A15E–524
3H. P.C.C. SIDEWALK, SE PARK AVE STD, REF. 4/A15E–524
4. P.C.C. SIDEWALK, MATCH EXISTING FOR COLOR, SCORING AND FINISH
5A. P.C.C. DRIVEWAY RAMP AND WINGS, REF. CIVIL – SCORE PER PLANS
5B. P.C.C. DRIVEWAY RAMP AND WINGS, C.O.M. STD – SEE NOTE 14 THIS SHEET
6. A.C. PAVEMENT, REF. CIVIL
7. WHEEL STOPS, REF. CIVIL
8A. BASALT COBBLESTONE PAVING, REF 5/A15E–526
8B. FLEXIBLE POROUS PAVING, REF. 1/A15E–526
9. **PRECAST CONCRETE UNIT PAVERS – TYPE 3 – 8 CM, REF. 3/A15E–525**
10A. **PRECAST CONCRETE UNIT PAVERS – TYPE 1 – 6 CM, REF. 3/A15E–525**
10B. **PRECAST CONCRETE UNIT PAVERS – TYPE 2 – 6 CM, REF. 3/A15E–525**
11. SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E–527
12. COBBLE PAVING, REF. 1 & 2/A15E–525
13. CROSSWALK STRIPING, REF. TRAFFIC
14. TACTILE WARNING AT SIDEWALK, REF. CIVIL
15. EXISTING SIDEWALK TO REMAIN, REF. CIVIL
16. BUS A.D.A. LOADING ZONE
17. P.C.C. GREENWAY – SCORING PER PLAN, REF. 1/A15E–523
18. P.C.C. BRIDGE PAVING – SCORING TO MATCH PMLRTB (WRTB) PLANS
19. P.C.C. GREENWAY PLAZA WITH INTEGRAL COLOR, REF. 3/A15E–301
20. CROSSING GATE, REF. CIVIL
21. OCS POLE, REF. SYSTEMS
22. JOINT USE POLE WITH LIGHTING, REF. SYSTEMS
23. LIGHT, REF. ELECTRICAL
24. UTILITY VAULT, REF. CIVIL
25. FIRE HYDRANT, REF. UTILITIES
26. S.S. BANDS, REF. 7/A15E–527
27. P.C.C. TRAFFIC MEDIAN, SCORE PER PLANS
28. GRAVEL, REF. CIVIL
29. TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS
30A. **BIKE RACK – TYPE 1 AT P.C.C. SIDEWALK (O.F.C.I), REF. 1/A15E–571**
30B. **BIKE RACK – TYPE A – C.O.M. STD. AT P.C.C. SIDEWALK (O.F.C.I), REF. 1/A15E–571**
30C. **BIKE RACK – TYPE 1 AT CONCRETE PAVERS (O.F.C.I), REF. 2/A15E–571**
31. BIKE SHELTER, REF. A15E–740
31A. BIKE SHED, REF. A15E–750
32A. OMSI POLE LIGHT SHROUD – REF. A15E–500
32B. OMSI CABLE LIGHT SHROUD – REF. A15E–500
33A. **REMOVABLE TROLLEY TRAIL BOLLARD, REF. C15E–1600**
33B. **BASALT TROLLEY TRAIL BOLLARD, REF. C15E–1600**
34. BOLLARD – C.O.M., REF. CIVIL
35A. **REMOVABLE BOLLARD, REF. C15E–492**
35B. **REMOVABLE BOLLARD AT OLD WATER AVE., REF. 4/A15E–526**
36. PEDESTRIAN WARNING DEVICE, REF. ELEC.
37. TVM SHELTER (O.F.C.I), REF. SEGMENT N DRAWINGS
38A. **BENCH – TYPE 4 – (O.F.C.I)**
38B. **BENCH – TYPE A – C.O.M. STD., REF. 1/A15E–572**
38C. **BENCH – TYPE B – GABION BASKET SEATWALL, REF. 1/A15E–570**
38D. **BENCH – TYPE C – PORTLAND GREENWAY, REF. 4/A15E–572**
39. TRAFFIC BOLLARD WITH CHAIN, REF. 1/A15E–554
40A. **TRASH RECEPTACLE – TYPE A – C.O.M STD., REF. 2/A15E–572**
40B. **TRASH RECEPTACLE – TYPE 1 – (O.F.C.I.)**
42. **BIKE STORAGE LOCKER (O.F.C.I.)**
43. STREETCAR SHELTER (N.I.C.)
44. BUS STOP SHELTER (N.I.C.)
45. CCTV POLE – REF. SEGMENT N DRAWINGS, SHEET A15S–153
46A. NEW TREE WELL, 4'X4', REF. 3/A15E–524
46B. NEW TREE WELL, 4'X6', REF. 1 & 2/A15E–521 (SIM)
46C. NEW TREE WELL, 4'X9', REF. 1 & 2/A15E–521
46D. NEW TREE WELL, 6'–6"X9', REF. 3 & 4/A15E–521
47. TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E–524, 5, 6 A15E–527
48. ADA CAST IRON TRENCH GRATE AT STORMWATER INLET, REF. CIVIL
49. OSPREY NESTING PLATFORM, REF. 1/A15E–504
50A. RAILING – TYPE 1A – 36" HT. PED. RAIL, REF. 1/A15E–542
50B. RAILING – TYPE 1B – 36" PAINTED PED. RAIL, REF. 1/A15E–542
50C. RAILING – TYPE 1C – 42" HT. PED. GUARDRAIL, REF. 1/A15E–542
51A. RAILING – TYPE 2A, REF. 1/A15E–541
51B. RAILING – TYPE 2B, REF. A15E–541
51C. RAILING – TYPE 2C, REF. A15E–540
52A. RAILING – TYPE 3A, REF. 1/A15E–542
52B. RAILING – TYPE 3B, REF. 1/A15E–542
53A. RAILING – TYPE 4A, REF. 1/A15E–542
53B. RAILING – TYPE 4B, REF. 1/A15E–542
54A. RAILING – TYPE 12A, REF. 1/A15E–549
54B. RAILING – HANDRAIL AT EXISTING SIDEWALK TYPE 12A, REF. 1/A15E–549
54C. RAILING – HANDRAIL AT BYBEE DECK TYPE 12A, REF. 4/A15E–549
55A. RAILING – PMLRTB PEDESTRIAN RAILING REF. A15E–551
55B. RAILING – PMLRTB PEDESTRIAN RAILING REF. A15E–552
56A. RAILING – TYPE 7A, REF. 1/A15E–550
57. RAILING – TYPE OMSI STREETCAR STATION, REF. A15E–553
58A. RAILING – CORTI PROPERTY, REF. 3/A15E–549

ARCHITECTURAL ABBREVIATIONS

AL	ALIGN
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
DIM.	DIMENSION
EJ	EXPANSION JOINT
EX.	EXISTING
F.G.	FINISH GRADE
JT	JOINT
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
NTS	NOT TO SCALE
O.C.	ON CENTER
O.F.C.I.	OWNER FURNISHED / CONTRACTOR INSTALLED
P.C.C.	PORTLAND CEMENT CONCRETE
REF.	REFERENCE
S.S.	STAINLESS STEEL
S.F.R.C.	STEEL FIBER REINFORCED CONCRETE
SIM.	SIMILAR
TYP.	TYPICAL

FOR OTHER ABBREVIATIONS, REFERENCE TRIMET STANDARD ABBREVIATIONS, SHEET STM011, TRIMET STANDARD DRAWINGS.

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. FIELD VERIFY DIMENSIONS BEFORE PROCEEDING WITH THE WORK. WHERE NEW WORK IS TO MATCH EXISTING FEATURES TO REMAIN, RECORD EXISTING CONDITIONS PRIOR TO DEMOLITION SO THAT SPACING AND LAYOUT OF PROPOSED ELEMENTS CAN BE PROPERLY LOCATED TO MATCH THE EXISTING CONSTRUCTION MODULE. NOTIFY ENGINEER IMMEDIATELY OF ANY DIMENSIONAL ERRORS OR CONFLICTS WITH THE WORK OF OTHER TRADES.
2. ALL ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE WORK, INCLUDING STRUCTURAL, ELECTRICAL, LANDSCAPE AND CIVIL DRAWINGS.
3. EMBEDDED ITEMS SUCH AS PIPES, INSERTS, SLEEVES, CONDUITS AND STRUCTURAL SUPPORTS AND OPENINGS OR RECESSES REQUIRED FOR ELECTRICAL AND CIVIL WORK ARE NOT SHOWN ON ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL REFER TO TRADES FOR LOCATION AND DETAILS OF THESE ITEMS.
4. ALL WORK SHALL CONFORM TO THE LATEST ADOPTED LOCAL, STATE, AND NATIONAL CODES AND REGULATORY REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION. CONFLICTS, WHERE NOTED BY THE CONTRACTOR, SHALL BE IMMEDIATELY FORWARDED TO THE ENGINEER.
5. EXISTING WORK IS SHOWN BY SCREENED LINE IN THE DRAWING AND/OR IDENTIFIED BY THE TERM ïEXISTING.ò
6. DIMENSIONS ARE TO FACE OF CONCRETE OR MASONRY WALLS OR CENTERLINE OF COLUMN OR MEMBER UNLESS OTHERWISE NOTED.
7. PAVEMENT ELEVATIONS ARE TO TOP OF STRUCTURAL CONCRETE SLABS OR TO TOP OF ARCHITECTURAL FINISHES UNLESS OTHERWISE NOTED.
8. SEE CIVIL DRAWINGS FOR NEW AND EXISTING GRADES OF PAVING AND SIDEWALK ELEVATIONS.
9. ARCHITECTURAL SYMBOLS APPLY TO A15E– SERIES DRAWINGS.
10. ON DRAWINGS DEPICTING LRT PLATFORMS, IF PLAN AND ELEVATION INFORMATION CONFLICT, FOLLOW PLAN INFORMATION.
11. ALL EXPOSED METAL ON SIDEWALK FURNISHINGS, POLES, SHELTERS, HATCHES AND MISCELLANEOUS ELEMENTS MUST BE GROUNDED IF WITHIN 15 FEET OF LRT TRACK CENTERLINE. SEE DETAILS FOR GROUNDING ATTACHMENTS. SEE J15–SERIES DRAWINGS AND E15–SERIES DRAWINGS FOR PLATFORM AND SIDEWALK GROUNDING PLANS.
12. PRESERVE AND PROTECT ALL EXISTING TREES NOT IDENTIFIED FOR REMOVAL. SEE CIVIL AND LANDSCAPE PLANS. SEE L15E–SERIES DWGS FOR TREE PROTECTION AND PRESERVATION NOTES.
13. SOME ITEMS ON THESE DRAWINGS ARE NOT IN CONTRACT (INDICATED N.I.C.), BUT ARE FURNISHED AND INSTALLED BY OTHERS. FOOTINGS OR THICKENED SLABS ARE REQUIRED FOR ANCHORAGE OF MANY OF THESE ITEMS.
14. SCORE DRIVEWAYS OUTSIDE DOWNTOWN MILWAUKIE AREAS IN ACCORDANCE WITH C.O.M. DETAILS #502A–E. MATCH CONDITIONS WITH APPROPRIATE DETAIL.

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	XXX		XXX	ISSUED FOR CONSTRUCTION

JMS	DESIGNED	08–09–11 DATE
JFC	DRAWN	08–10–11 DATE
TLC	CHECKED	11–03–11 DATE
	APPROVED	5–14–12 DATE

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT CAROL MAYER-REED OREGON PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 17
ARCHITECTURAL
GENERAL NOTES / ABBREVIATIONS AND LEGEND

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5–14–12		5–14–12	NONE	A15E–004	RH100544JB	

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ARCHITECTURAL PLAN NOTES

(59) FENCE – TYPE 9A/9C – 48" WELDED WIRE FENCE, REF. 3/A15E–562

(60A) FENCE – TYPE 9A – 48" WELDED WIRE FENCE, REF. 3/A15E–560

(60B) FENCE – TYPE 9B – 72" WELDED WIRE FENCE, REF. 1/A15E–560

(60C) FENCE – TYPE 9C – 48" GALVANIZED WELDED WIRE FENCE, REF. 3/A15E–560

(60D) FENCE – TYPE 9D – 72" GALVANIZED WELDED WIRE FENCE, REF. 1/A15E–560

(61A) FENCE – TYPE 10A – CL4, 48" CHAIN LINK FENCE, REF. ODOT STD DWG RD815

(61B) FENCE – TYPE 10B – CL6, 72" CHAIN LINK FENCE, REF. ODOT STD DWG RD815

(61C) FENCE GATE – TYPE 10 – CHAIN LINK FENCE GATE, REF. ODOT STD DWG RD815

(61D) FENCE – TYPE 10C – CL8R 96" CHAIN LINK FENCE, REF. ODOT STD DWG DTL 1810

(61E) FENCE – TYPE 10E – CL4, 48" CHAIN LINK FENCE, BLACK VINYL COATED, REF ODOT STD DWG RD815

(62A) FENCE – THROW BARRIER, WWM FENCING, REF. STRUCTURAL

(62B) FENCE – THROW BARRIER, MLK VIADUCT, REF. 1/A15E–563

(62C) FENCE – THROW BARRIER, CONCRETE BARRIER MOUNTED, REF. ODOT STD DWG 1830

(63) FENCE – SCREEN, 72" WELDED WIRE FENCE, REF. 2/A15E–560

(64) FENCE – TYPE 11 – 72" WOOD FENCE, REF A15E–564

(65) FENCE – MAINTENANCE RAIL – REF. STRUCTURAL S15E–1004

(66A) GATE – WELDED WIRE FENCE, MATCH FENCE HEIGHT, REF. 1/A15E–561

(66B) GATE – LOCKABLE GATE AT CHAIN LINK FENCE / RAILING

(66C) GATE – ODOT STANDARD REF. 1/A15E–548

(66D) GATE – FIRE ACCESS REF. 1/A15E–547

(66E) GATE – LOCKABLE GATE AT WOOD FENCE, REF A15E–564

(67) BOLLARD IN BALLAST TRACK, REF. 2/A15E–550

(68) FENCE TRANSITION, REF. 2/A15E–562

(69) NOT USED

(70) NOT USED

(71) NOT USED

(72) NOT USED

(73) NOT USED

(74) NOT USED

(75) NOT USED

(76) NOT USED

(77) NOT USED

(78) NOT USED

(79) NOT USED

(80) RETAINING WALL, REF. STRUCTURAL

(81) NOT USED

(82) GABION RETAINING WALL, REF. STRUCTURAL

(83) CONCRETE BARRIER, REF. CIVIL

(84) P.C.C. STEPS WITH HANDRAIL, REF. 2/A15E–549 FOR HANDRAIL, REF. STRUCTURAL FOR STEPS

(85) RR SAFETY WALL, REF. STRUCTURAL

(86) SOUND WALL, REF. CIVIL / STRUCTURAL

(87) MASONRY WALL, REF. LANDSCAPE

(88) PARK & RIDE SIGN, REF. SEGMENT N DRAWINGS

(89) VINE PLANTING PIT, REF. 3/A15E–522

(90) GRANITE BOULDER, REF. 7/A15E–526

(91) AGGREGATE SPLASH PAD, REF. 3/A15E–522

(92) SAWCUT STREET TREE PLANTER FROM EXISTING SIDEWALK

(93) STORMWATER PLANTER, REF. LANDSCAPING

(94) PLANTING AREA, REF. CIVIL / LANDSCAPING

(95) TROLLEY TRAIL, REF. CIVIL

(96) PROPOSED BUS STOP (N.I.C.)

(97) EXISTING BUS STOP TO REMAIN (N.I.C.)

(98) PRESERVE AND PROTECT EXISTING TREE, REF. LANDSCAPING

(99) UTILITY POLE

ART PLAN NOTES

REF. ART MATRIX SHEETS A15E–010 AND A15E–011 FOR MORE INFORMATION

(A10) OMSI STATION – VIDEO DISPLAY AT SHELTER

(A20) CLINTON STATION – LARGE FREE STANDING STEEL SCULPTURE

(A21) CLINTON STATION – SMALL STEEL SCULPTURE

(A30) POWELL UNDERPASS – TBD

(A40) 17TH AVE CORRIDOR – BOAT SHAPED STEEL SCULPTURES

(A50) BYBEE STATION – KINETIC ILLUMINATED SCULPTURE

(A60) TACOMA STATION PARK AND RIDE – LARGE SCALE "EARTH CAST" SCULPTURES

(A70) LAKE STATION – NORTH PLATFORM GRANITE SCULPTURE

(A71) LAKE STATION – SOUTH PLATFORM GRANITE SCULPTURE

(A80) PARK STATION PARK AND RIDE – LARGE SCALE SCULPTURE

(A90) XX CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST

(A100) KELLOGG BRIDGE – "BOTTS" ADHERED TO UNDERSIDE OF BRIDGE STRUCTURE

(A101) SHELTER COLUMN TREATMENT

(A102) BRIDGE ABUTMENT ART – REF. PMLRTB CONTRACT DWGS.

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED 06-01-11 DATE
JFC DRAWN 06-01-11 DATE
TLC CHECKED 11-01-11 DATE
APPROVED 5-14-12 DATE

PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: 5–14–12 | APPROVED: | DATE: 5–14–12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 18
ARCHITECTURAL
GENERAL NOTES / ABBREVIATIONS AND LEGEND

SCALE: NONE | DRAWING NO.: A15E–005 | CONTRACT NO.: RH100544JB | SHEET NO.:

Mar 20, 2012 10:49am RHelden
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NOTES:
1. THIS TABLE DOES NOT COUNT FUTURE SHELTERS, FUTURE TVM'S, OR FUTURE SIGNAGE

LOCATION	PLATFORM SHELTER			SHELTER WINDSCREEN			TVM SHELTER		BIKE SHELTER	LIGHT POLE				CCTV POLE	BENCH							TRASH RECEPTACLE		EMERGENCY PHONE	BIKE RACK		BIKE LOCKER	ART ENCLOSURE	TVM AND VALIDATOR	SIGNS									
	TYPE 1A	TYPE 1B	TYPE 2A	TYPE 1A	TYPE 1B	TYPE 1C	TYPE 1	TYPE 3		TYPE 1	TYPE 2	TYPE 3	TYPE 4		TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE A	TYPE B	TYPE C	TYPE 1	TYPE A		TYPE 1	TYPE A				TYPE A1	TYPE B1	TYPE B2	TYPE C1	TYPE D1	TYPE D2	TYPE E1	TYPE F1	TYPE G1	TYPE H1
OWNER FURNISHED / CONTRACTOR INSTALLED	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X				X		X	X		X	X	X	X	X	X	X	X	X		X	X	X
CONTRACTOR FURNISHED / CONTRACTOR INSTALLED									X										X	X	X		X				X											
STATION																																						
OMSI/SE WATER AVE (NB)				2			2			3		3		1								2		1	3			1		4		2	2	4					2
OMSI/SE WATER AVE (SB)				2			2			3		3		2								2		1	9			1		4		2	2	4					2
OMSI/SE WATER AVE – OFF PLATFORM																																						
CLINTON/SE 12TH AVE			1			1	2			6	3			2								2		1	26					6		2	1	4					2
CLINTON/SE 12TH AVE – OFF PLATFORM																																						
SE 17TH AVE & RHINE ST			1		1		2			3	3		1	1								2		1	4					6		2	1	4					2
SE 17TH AVE & RHINE ST – OFF PLATFORM																																						
SE 17TH AVE & HOLGATE BLVD			1			1	2			2	3		2									2		1	8					6		2	1	4					2
SE 17TH AVE & HOLGATE BLVD – OFF PLATFORM																																						
SE BYBEE BLVD	1					1				2	3											4		1	29					6		2	1	4			2		2
SE BYBEE BLVD – OFF PLATFORM																																						
SE TACOMA ST/JOHNSON CREEK			1			1	2			6	3		1									2		1	17					6		2	1	4		1			2
SE TACOMA ST/JOHNSON CREEK – OFF PLATFORM																																						
MILWAUKIE/MAIN ST	1				1		2			5	3											2		1	12					6		2	1	4					2
MILWAUKIE/MAIN ST – OFF PLATFORM																																						
SE PARK AVE	1				1		2			6	6		2									2		1	6					6		4	1	8					2
SE PARK AVE – OFF PLATFORM																																						
TOTALS	8	0	4	9	3	4	20	0	0	42	27	12	6	6	0	0	0	0				26		12	114			2		62	0	20	16	52		1	2	4	24

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED 06-01-11 DATE
SPT DRAWN 06-01-11 DATE
TLC CHECKED 11-01-11 DATE
APPROVED 5-14-12 DATE

REGISTERED 82 PROFESSIONAL CAROL MARIE REED OREGON LANDSCAPE ARCHITECT PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: 5-14-12 | APPROVED: | DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 19
ARCHITECTURAL
PLATFORM AMENITIES AND SIGNAGE MATRIX PORTLAND SEGMENT

SCALE: NONE | DRAWING NO.: A15E-006 | CONTRACT NO.: RH100544JB | SHEET NO.:

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LEGEND

ART – CONCRETE STAMPING

BICYCLE TRAFFIC MARKING, REF. TRAFFIC PLANS

BOLLARD

BOLLARD IN BALLAST TRACK

COLORED P.C.C.

FENCING

FIRE HYDRANT

FLEXIBLE POROUS PAVING

FREESTANDING BENCH

GRAVEL

LIGHT

LIMIT OF WORK

MORTAR SET COBBLE PAVING

OCS POLE

PEDESTRIAN RAMP

PRECAST CONCRETE PAVERS

PRECAST TACTILE PAVERS

PROPOSED BIKE RACKS

PROPOSED BIKE RACKS WITH BIKE SHELTER

RAILINGS

RETAINING WALL

SHELTER – REF PLANS FOR TYPE

TACTILE WARNING

TRASH RECEPTACLE

TRAFFIC SIGNAL POLE

TREE AT PLANTER

TREE GRATE – TYPE 1, 4'X4'

UNIT PAVERS

UTILITY POLE

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11	DATE
SPT DRAWN	06-01-11	DATE
TLC CHECKED	11-04-11	DATE
APPROVED	5-14-12	DATE

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT CAROL MARIE REED OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 20
ARCHITECTURAL
LEGEND

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5-14-12		5-14-12	NONE	A15E-007	RH100544JB	

Mar 20, 2012 10:50am RHeiden

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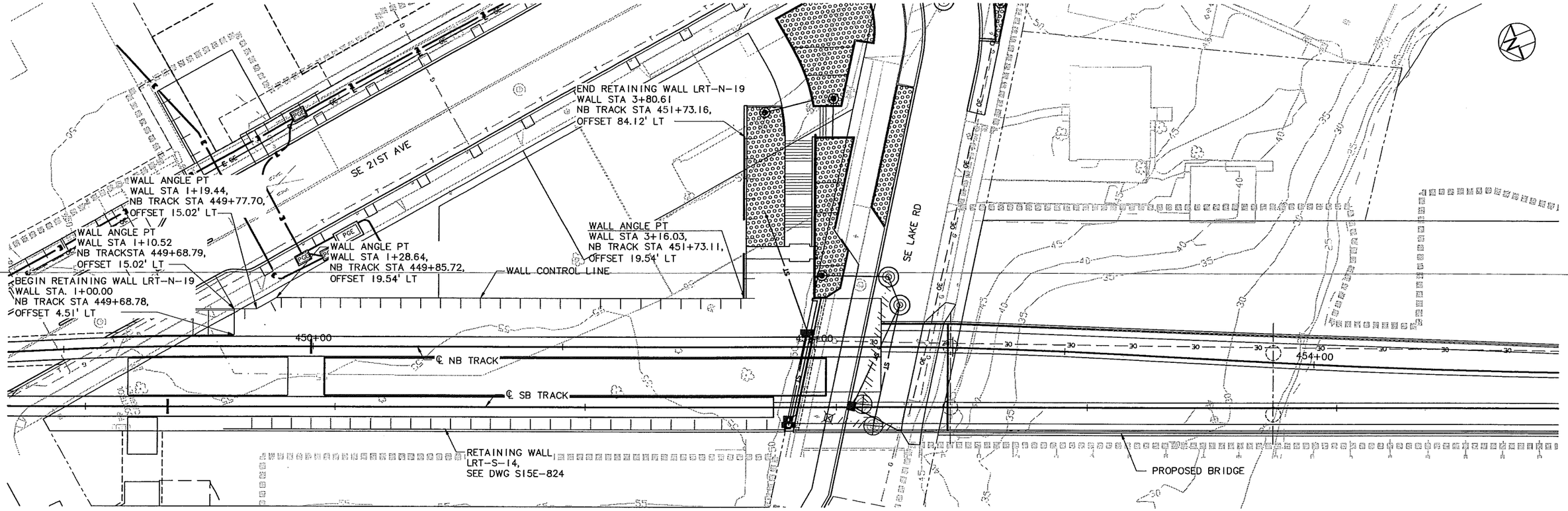
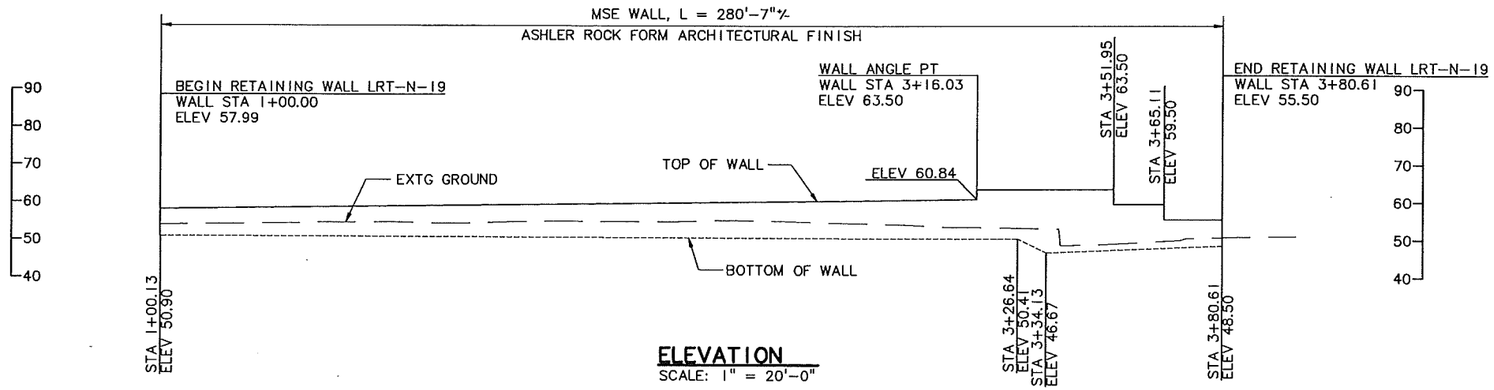


GENERAL NOTES:

1. WALL CONTROL LINE IS THE FRONT FACE OF WALL AT TOP OF BALLAST, UNLESS NOTED OTHERWISE.

PLAN

SCALE: 1" = 20'-0"



ELEVATION

SCALE: 1" = 20'-0"

NOTE:

ALL HORIZONTAL DIMENSIONS MEASURED ALONG WALL CONTROL LINE

90% FINAL DESIGN
11-28-11

NO.	DATE	BY / CHK.	APPD.	REVISIONS

GAP DESIGNED	4/27/11 DATE
JJC DRAWN	5/4/11 DATE
... CHECKED	.... DATE
. APPROVED	.. DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: APPROVED: DATE:

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 21
STRUCTURAL
MILWAUKIE - RETAINING WALLS
PLAN AND ELEVATION - LRT-N-19

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	S15E-823	RH100544JB	

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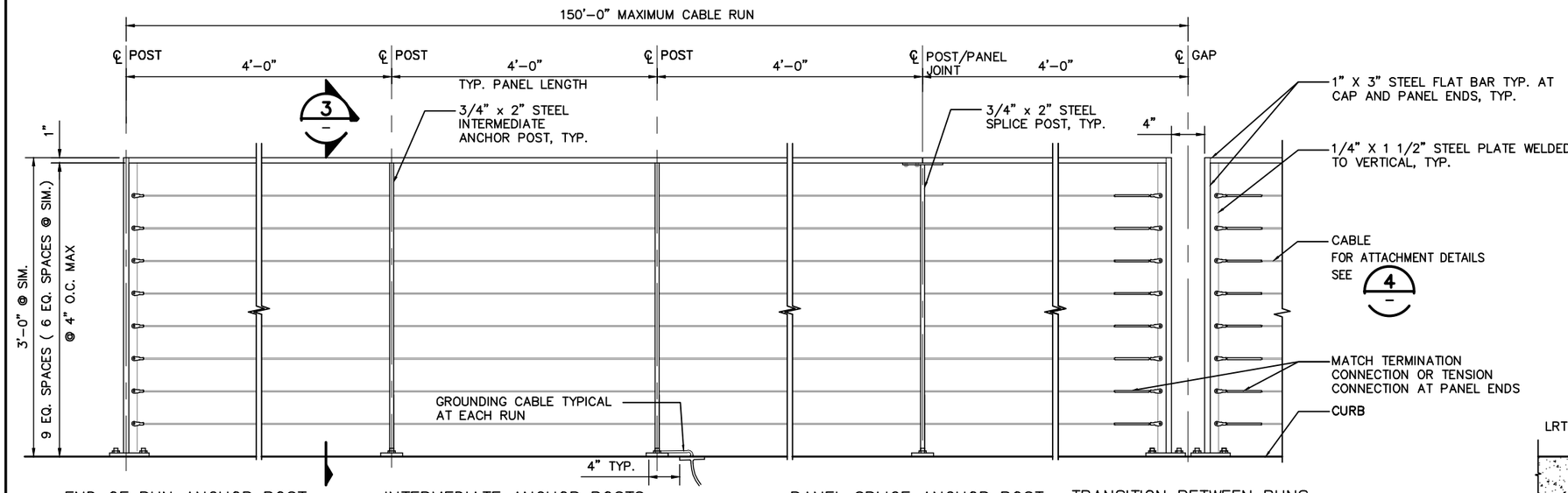
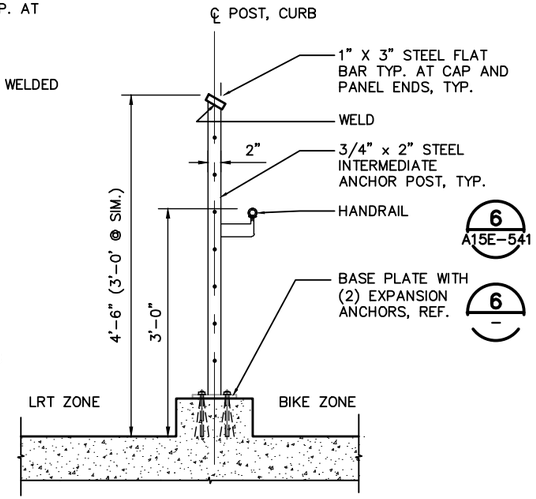
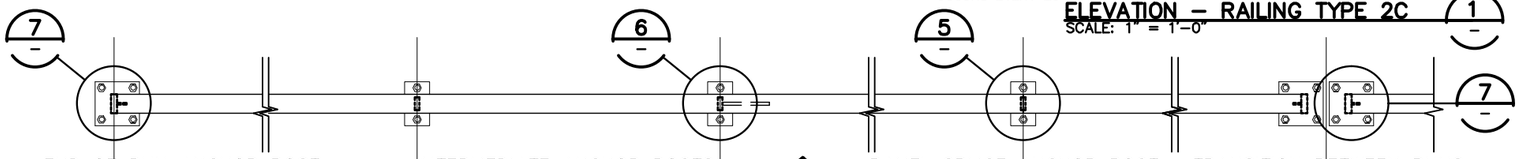


ELEVATION – RAILING TYPE 2C 1
SCALE: 1" = 1'–0"



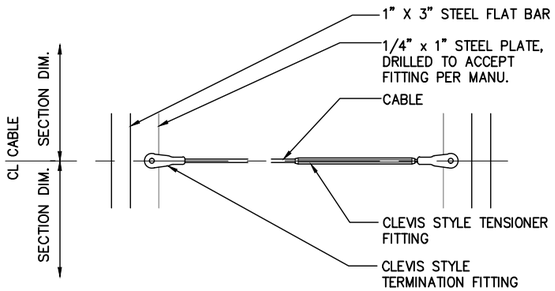
SECTION – RAILING TYPE 2C 3
SCALE: 1" = 1'–0"



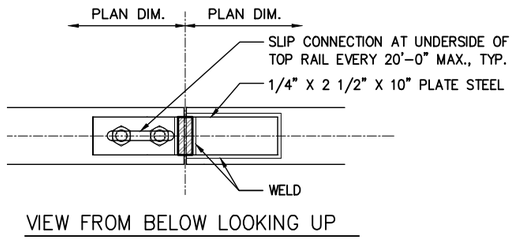
NOTE: END POSTS AT TYPE 2C RAIL TO HAVE REFLECTIVE MATERIAL – REF. TRAFFIC PLANS

PLAN – RAILING TYPE 2B/2C 2
SCALE: 1" = 1'–0"

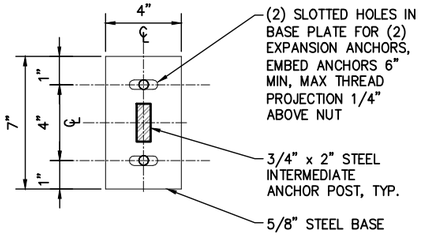
GENERAL NOTES:
1. ALL STEEL IN RAILING ASSEMBLIES TO BE GALVANIZED.
2. ALL CABLE TO BE 3/16" STAINLESS STEEL.
3. ALL CABLE FITTINGS TO BE STAINLESS STEEL.
4. RUN LENGTHS NOT TO EXCEED 150'
5. POSTS SHOULD ALIGN WITH SCORED CONCRETE JOINTS OR MIDWAY BETWEEN JOINTS AS POSSIBLE.
6. GRIND ALL WELDS SMOOTH



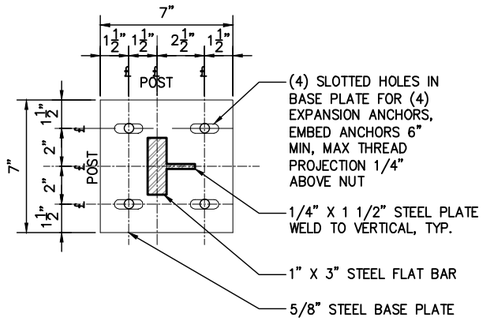
RAILING CABLE FITTINGS 4
SCALE: 3" = 1'–0"



SLIP CONNECTION 5
SCALE: 3" = 1'–0"



INTERMEDIATE BASE PLATE 6
SCALE: 3" = 1'–0"



END OF RUN BASE PLATE 7
SCALE: 3" = 1'–0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	10-19-11	DATE
SPT DRAWN	10-19-11	DATE
TLC CHECKED	11-04-11	DATE
APPROVED	5-14-12	DATE

REGISTERED CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT — PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5–14–12		5–14–12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
DETAILS – RAILINGS

Exhibit T 22

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E–540	RH100544JB	

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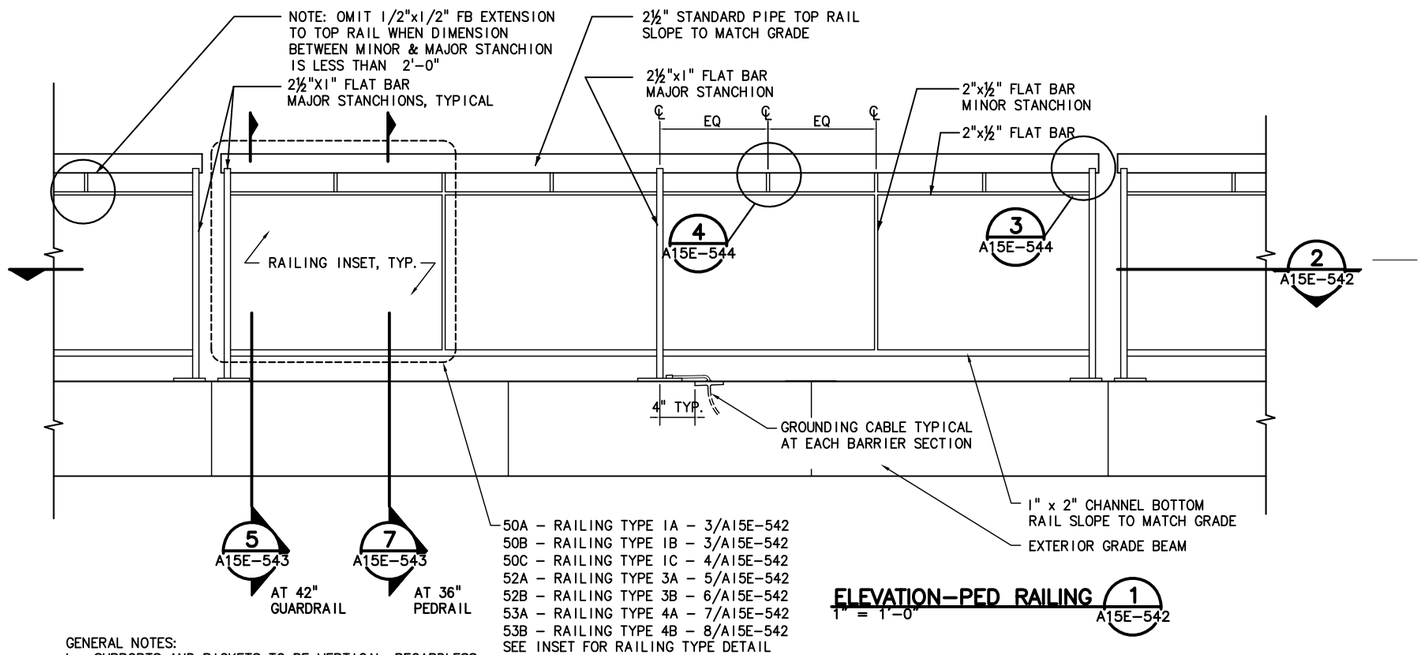
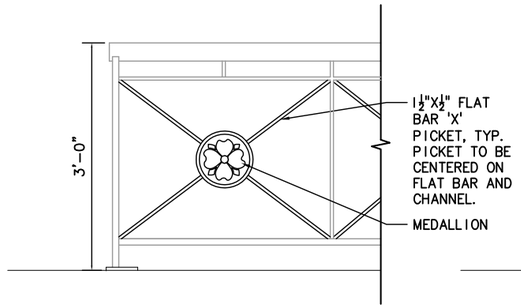
Mar 20, 2012 10:59am
RHelden

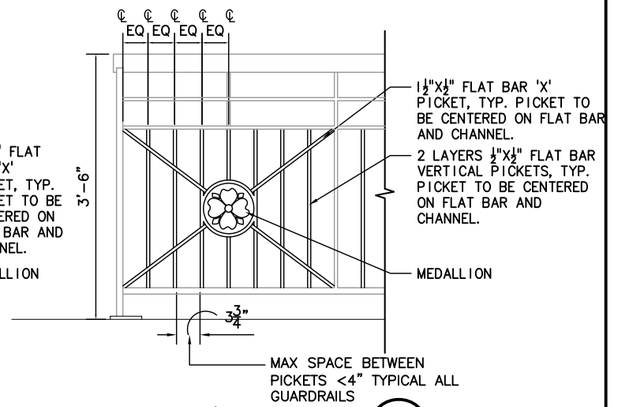


ELEVATION–PED RAILING 1 A15E-542
1" = 1'-0"

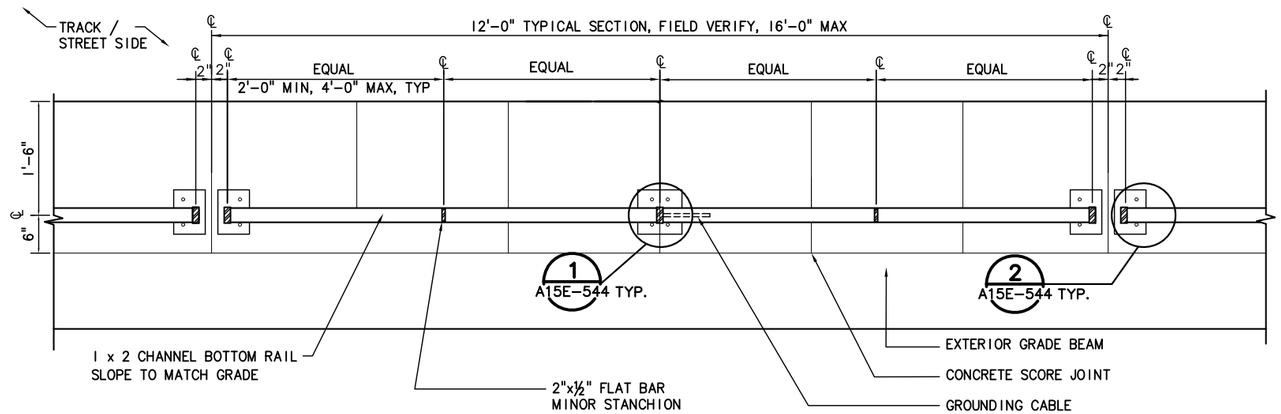
GENERAL NOTES:
1. SUPPORTS AND PICKETS TO BE VERTICAL, REGARDLESS OF PAVING SLOPE.
2. BUILD GUARD/PED-RAIL IN STRAIGHT SECTIONS TANGENT WITH SIDEWALK PROFILE.
3. HOT DIP GALVANIZE AFTER FABRICATION, TYPICAL, UNLESS OTHERWISE NOTED.
4. RAILING COMBINATION WITH INSET 52A AND 52B TO BE PAINTED P2 BLACK, SEE SPECIFICATION. HANDRAIL, WHERE OCCURS, TO REMAIN STAINLESS STEEL FINISH.



INSET 52A/3A 5 A15E-542
1" = 1'-0"



INSET 52B/3B 6 A15E-542
1" = 1'-0"



PLAN–PED RAILING 2 A15E-542
1"=1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11	DATE
VC DRAWN	10-07-11	DATE
WB CHECKED	11-06-11	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT JON C. SKINNER STATE OF OREGON PORTLAND, OREGON
PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning
Mayer/Reed

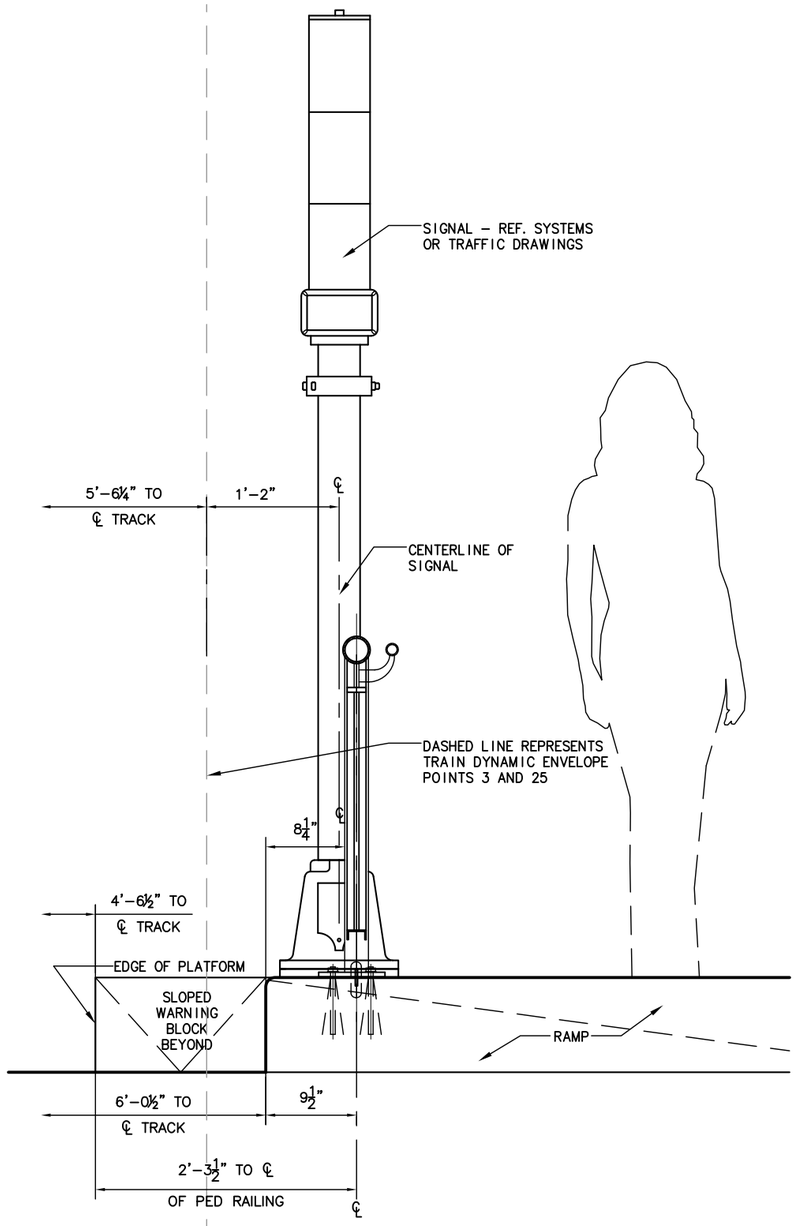
TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 23
ARCHITECTURAL
TYPICAL GUARD / PED RAILING
ELEVATIONS

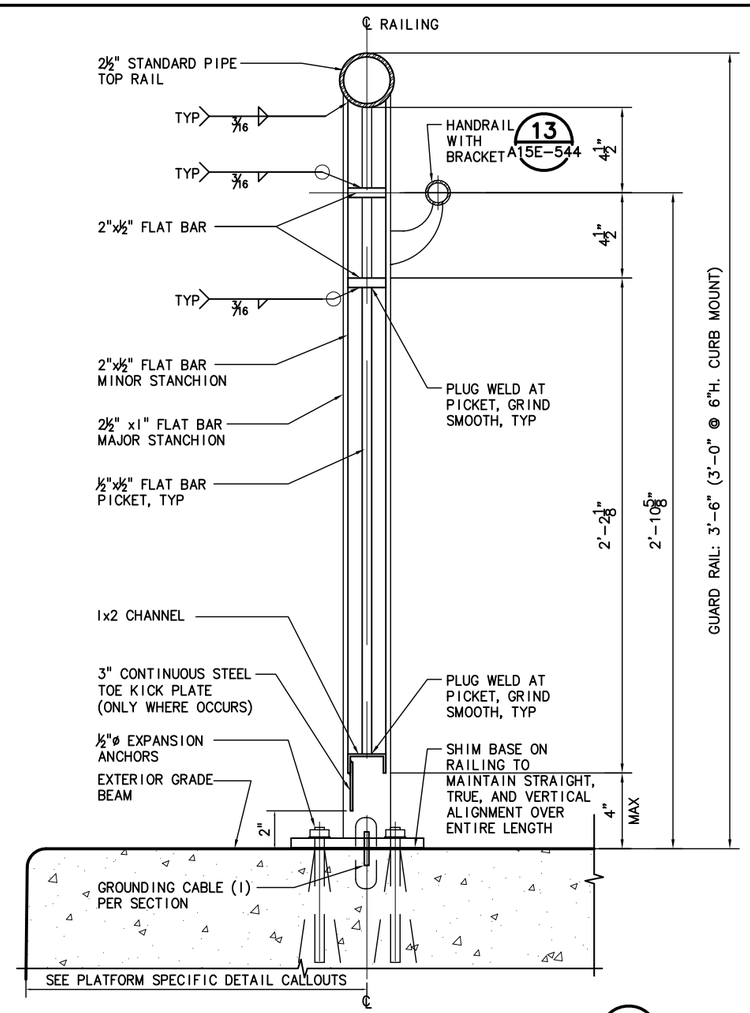
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E-542	RH100544JB	

P:\10_jobs\0350.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E-542.dwg Mar. 13, 2012 - 12:57 PM meredith hendricks
Plot Date:3/20/2012 12:19 PM_meredith hendricks



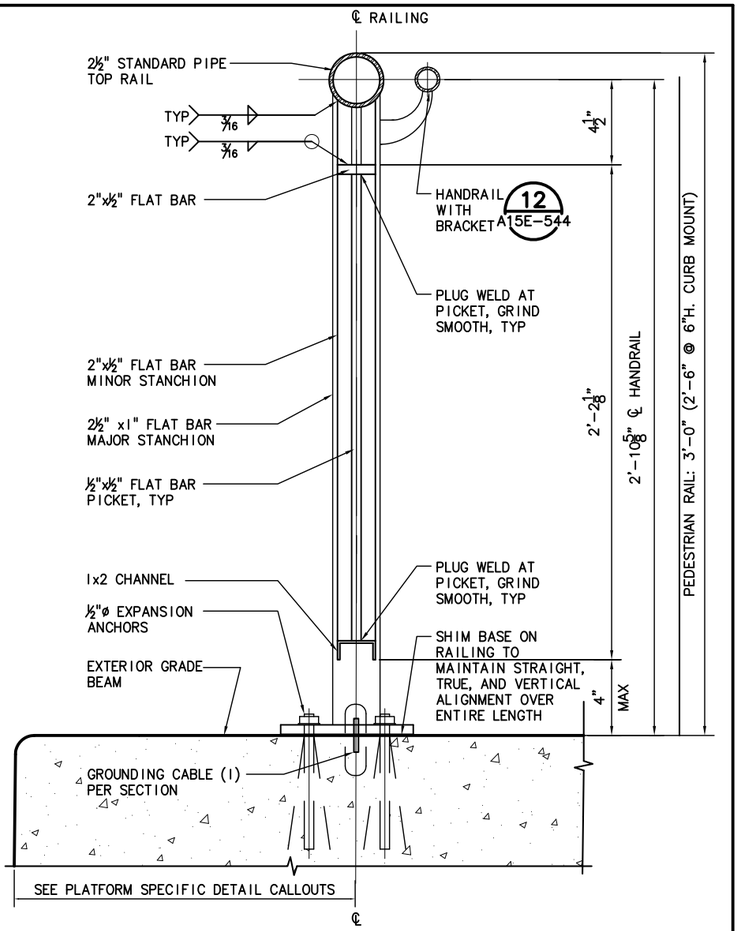
SECTION – SIGNAL & RAILING LOCATION 1 / A15E-543

1 1/2" = 1'–0"



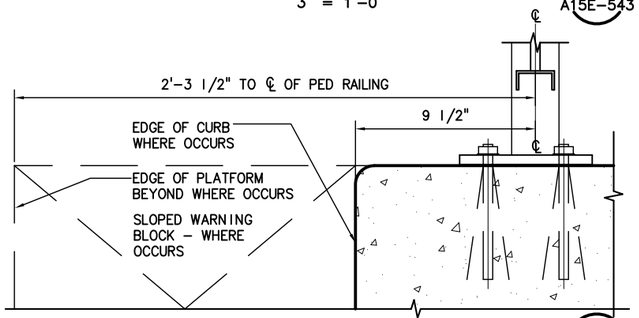
SECTION – GUARDRAIL 5 / A15E-543

3" = 1'–0"



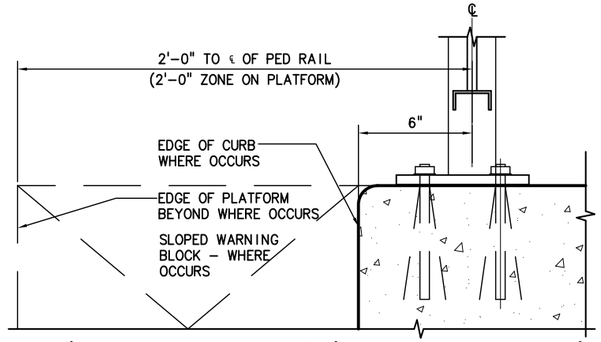
SECTION – PED RAIL 7 / A15E-543

3" = 1'–0"



GUARD/PED RAIL BASE PLATE (WITH SIGNAL ø RAILING) 6 / A15E-543

3" = 1'–0"



GUARD/PED RAIL BASE PLATE (NO SIGNAL ø RAILING) 8 / A15E-543

3" = 1'–0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	03-26-12				ISSUED FOR CONSTRUCTION

MM DESIGNED	5-01-11	DATE
VC DRAWN	10-07-11	DATE
WB CHECKED	11-06-11	DATE
APPROVED	5-14-12	DATE

REGISTERED ARCHITECT JON C. [illegible] PORTLAND, OREGON STATE OF OREGON

PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

Mayer/Reed

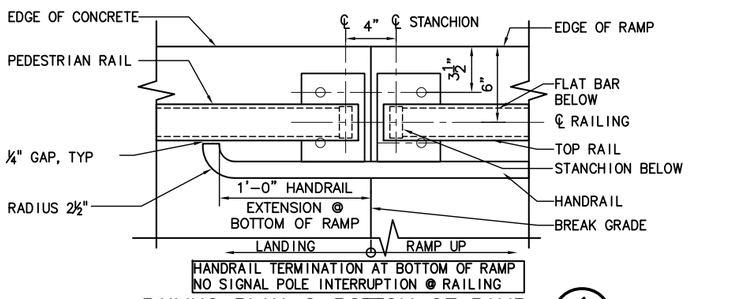
TRIMET

CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

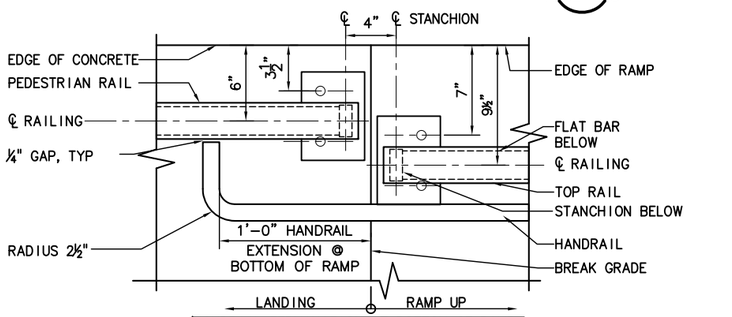
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 24
ARCHITECTURAL
TYPICAL GUARD / PED RAILING SECTIONS

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5–14–12		5–14–12	VARIES	A15E–543	RH100544JB	

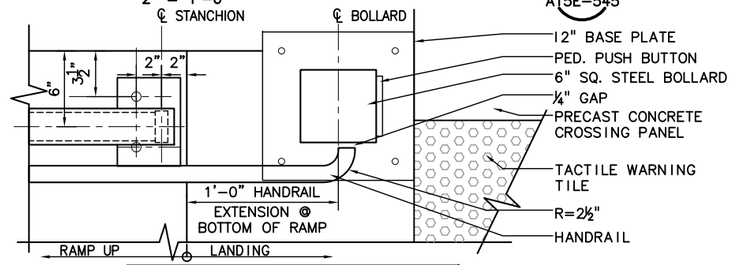
P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E-543.dwg Mar. 13, 2012 - 12:58 PM meredith hendricks
Plot Date: 3/20/2012 12:21 PM meredith hendricks



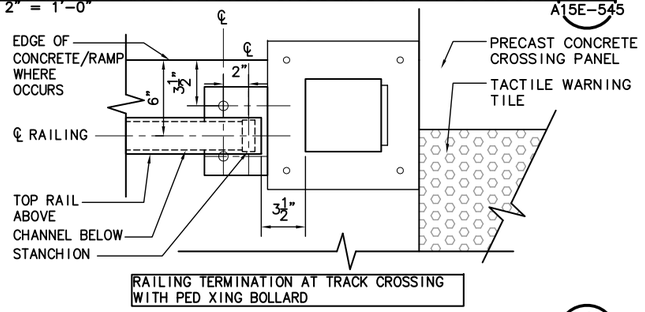
RAILING PLAN @ BOTTOM OF RAMP 1
2" = 1'-0" — A15E-545



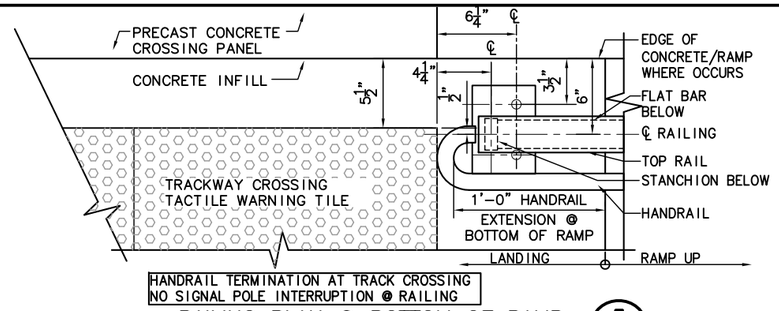
RAILING PLAN @ BOTTOM OF RAMP 2
2" = 1'-0" — A15E-545



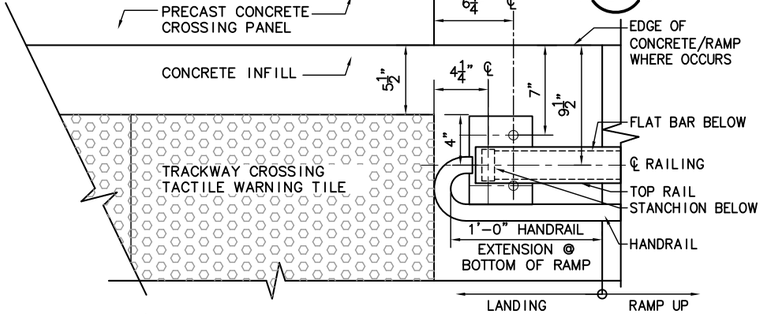
RAILING PLAN @ TRACK CROSSING WITH BOLLARD 3
2" = 1'-0" — A15E-545



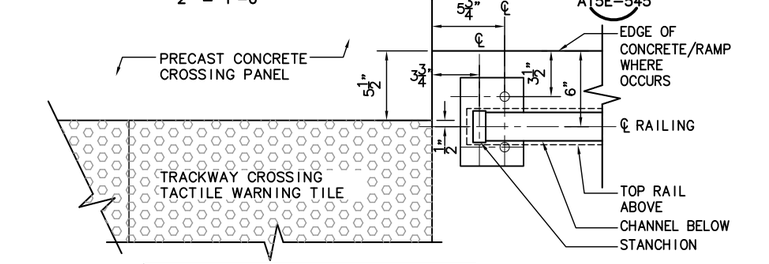
RAILING PLAN @ TRACK CROSSING WITH BOLLARD 4
2" = 1'-0" — A15E-545



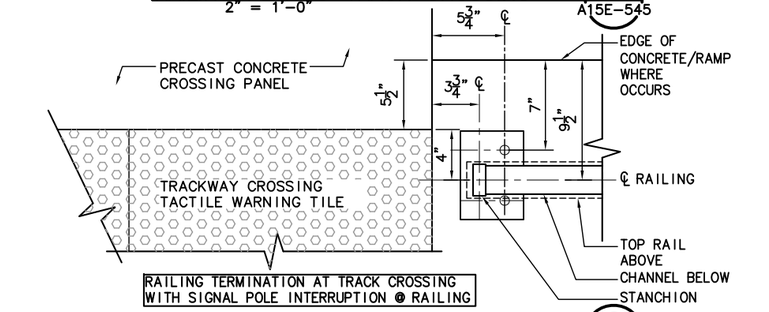
RAILING PLAN @ BOTTOM OF RAMP 5
2" = 1'-0" — A15E-545



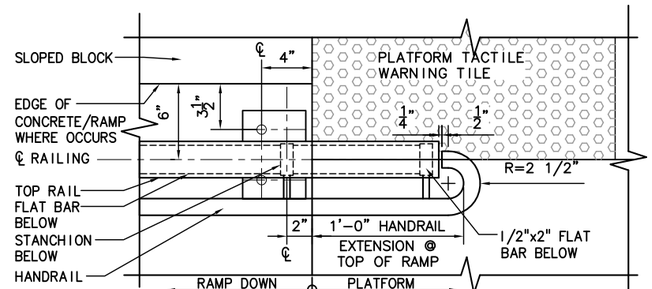
RAILING PLAN @ BOTTOM OF RAMP 6
2" = 1'-0" — A15E-545



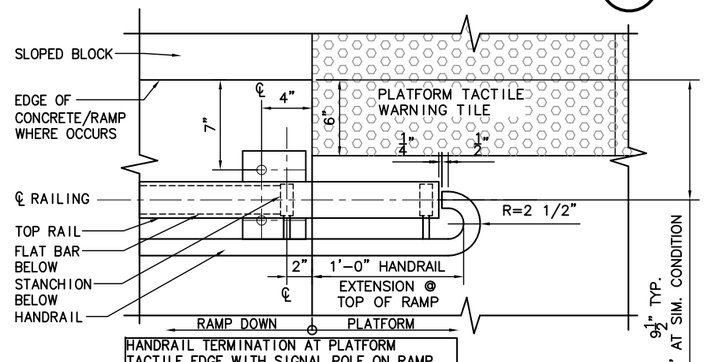
RAILING PLAN @ TRACK CROSSING 7
2" = 1'-0" — A15E-545



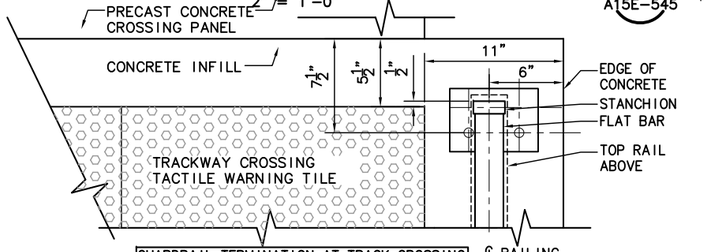
RAILING PLAN @ TRACK CROSSING 8
2" = 1'-0" — A15E-545



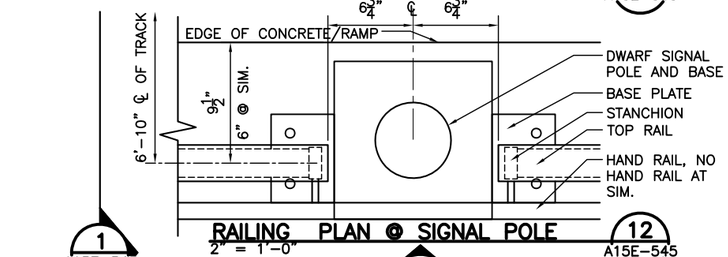
RAILING PLAN @ TOP OF RAMP 9
2" = 1'-0" — A15E-545



RAILING PLAN @ TOP OF RAMP 10
2" = 1'-0" — A15E-545



RAILING PLAN @ TRACK CROSSING 11
2" = 1'-0" — A15E-545



RAILING PLAN @ SIGNAL POLE 12
2" = 1'-0" — A15E-545

1 A15E-543

10 A15E-544

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-09-11 DATE
VC DRAWN	10-17-11 DATE
WB CHECKED	11-06-11 DATE
APPROVED	5-14-12 DATE

REGISTERED ARCHITECT JON C. SKINNER PORTLAND, OREGON STATE OF OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning — Mayer/Reed

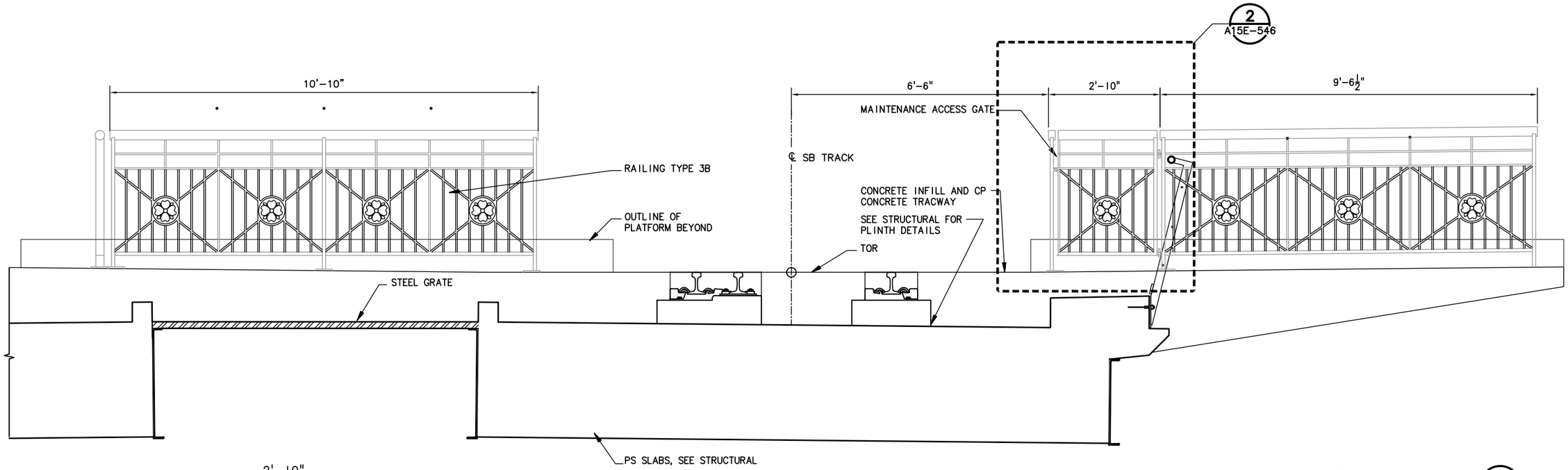
TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION, 710 N.E. HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

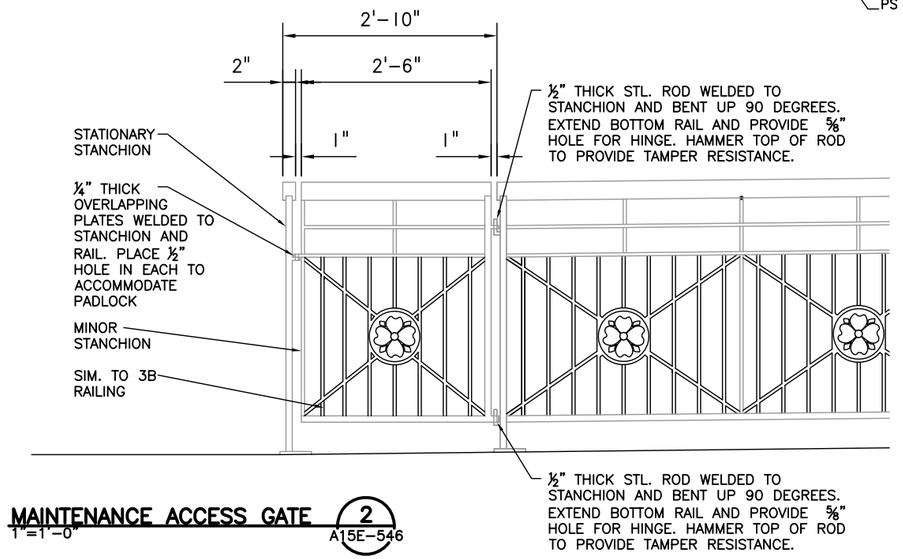
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT Exhibit T 25
ARCHITECTURAL
TYPICAL GUARD / PED RAILING
DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E-545	RH100544JB	

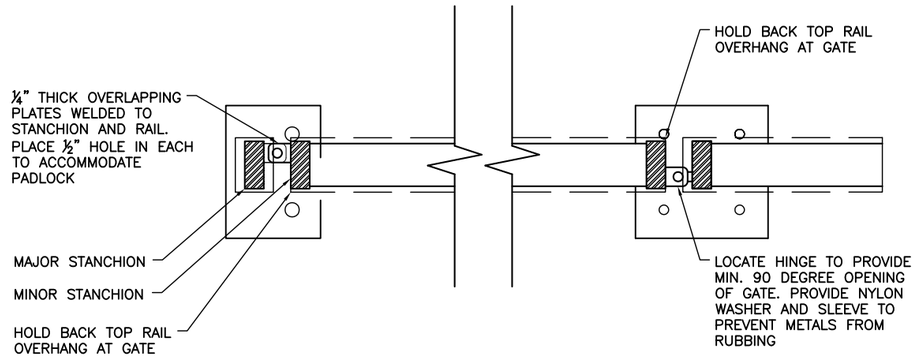
P:\10_jobs\030.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E-545.dwg Mar. 13, 2012 - 1:00 PM meredith hendricks
Plot Date:3/20/2012 12:22 PM_meredith hendricks



RAILING AT MILWAUKIE/MAIN ST STATION 1
3/4"=1'–0" A15E–546



MAINTENANCE ACCESS GATE 2
1"=1'–0" A15E–546



MAINTENANCE ACCESS GATE 3
3"=1'–0" A15E–546

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5–09–11 DATE
MH DRAWN	5–09–11 DATE
WB CHECKED	11–06–11 DATE
APPROVED	5–14–12 DATE

REGISTERED ARCHITECT JON C. MAYER PORTLAND, OREGON STATE OF OREGON
PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning
Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

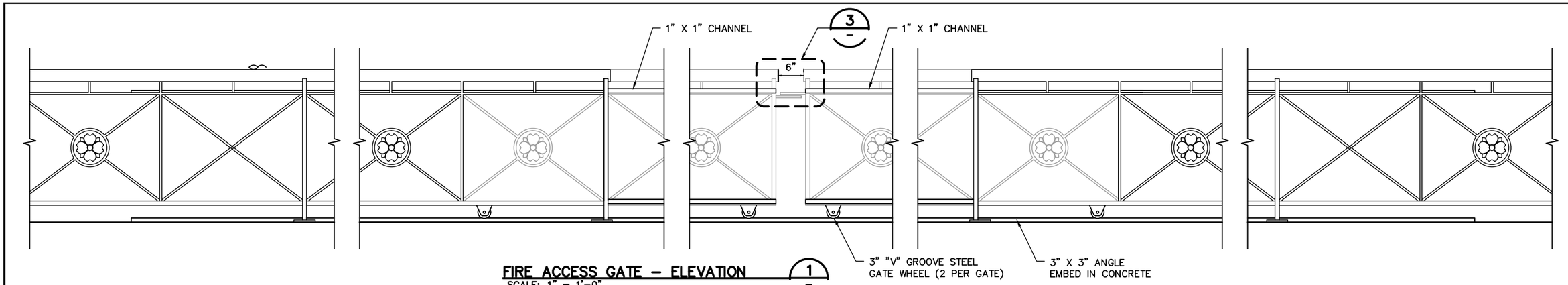
SUBMITTED:	DATE:	APPROVED:	DATE:
	5–14–12		5–14–12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
GUARD RAIL DETAILS
MILWAUKIE

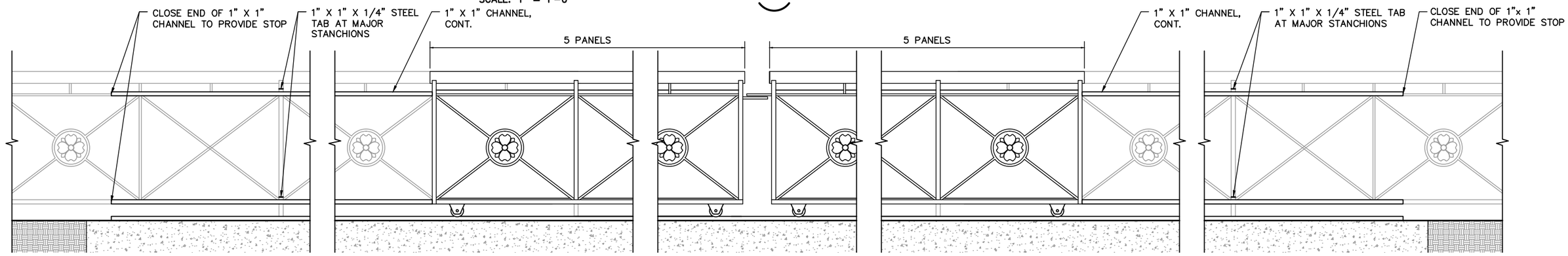
Exhibit T 26

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E–546	RH100544JB	

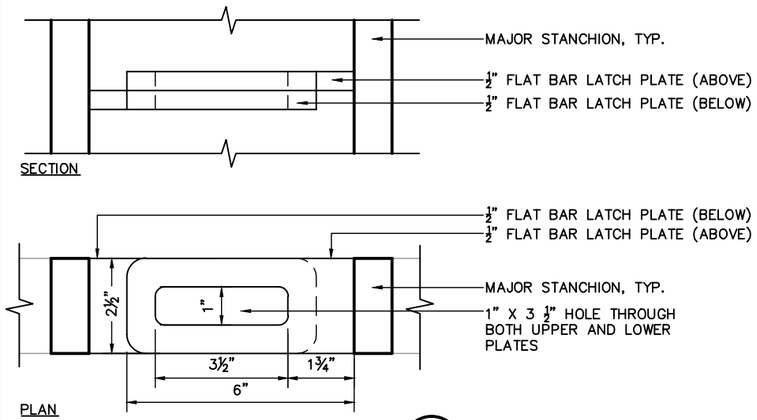
P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\500_Railings\A15E–546.dwg Mar. 16, 2012 – 1:41 PM meredith hendricks
Plot Date:3/20/2012 2:47 PM_meredith hendricks



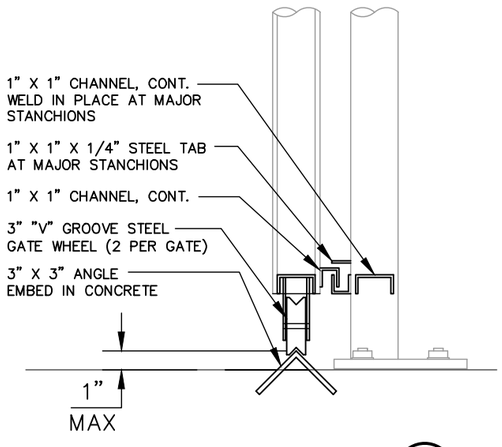
FIRE ACCESS GATE – ELEVATION 1
SCALE: 1" = 1'–0"



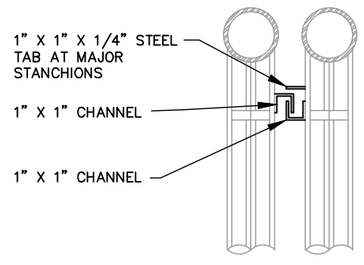
FIRE ACCESS GATE – ELEVATION 2
SCALE: 1" = 1'–0"



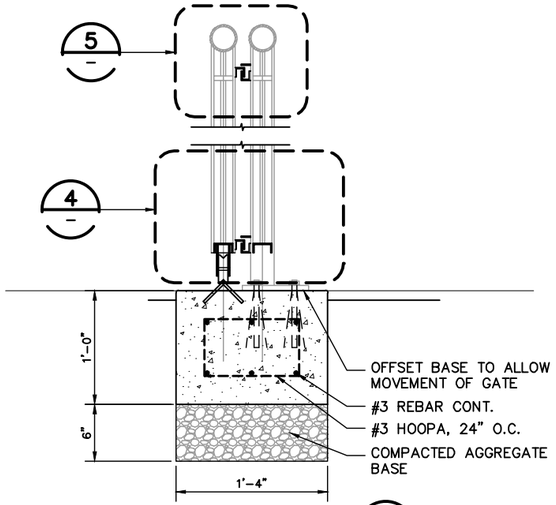
FIRE GATE – LATCH 3
SCALE: 3" = 1'–0"



FIRE GATE – BOTTOM CHANNEL 4
SCALE: 3" = 1'–0"



FIRE GATE – TOP CHANNEL 5
SCALE: 3" = 1'–0"



FIRE GATE – SECTION 6
SCALE: 1–1/2" = 1'–0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED 06–01–11 DATE
SPT DRAWN 06–01–11 DATE
TLC CHECKED 11–04–11 DATE
APPROVED 5–14–12 DATE

REGISTERED CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT PRELIMINARY

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

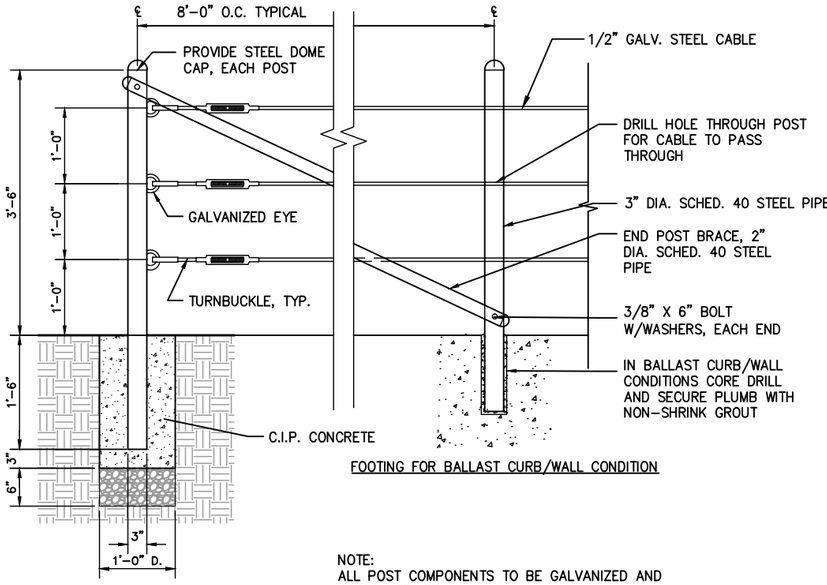
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 5–14–12
APPROVED: DATE: 5–14–12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT Exhibit T 27
ARCHITECTURAL
DETAILS – FIRE GATE ACCESS

SCALE: VARIES | DRAWING NO.: A15E–547 | CONTRACT NO.: RH100544JB | SHEET NO.:

M:\1 LA PROJECTS\PME\dwgs\sheets\A15E–547.dwg
Mar 20, 2012 2:21pm RHelden

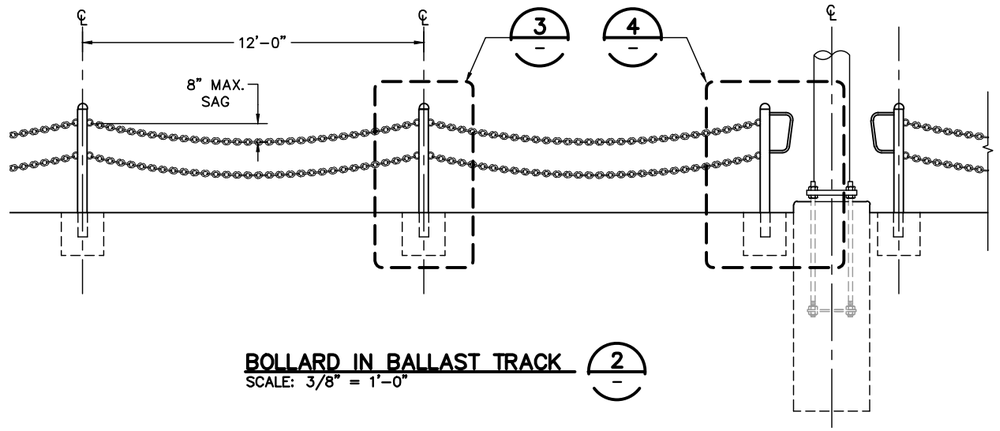


FOOTING FOR BALLAST CURB/WALL CONDITION

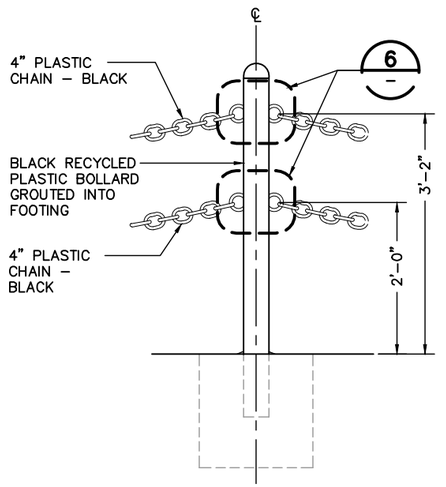
FOOTING FOR IN-GRADE CONDITION

NOTE:
ALL POST COMPONENTS TO BE GALVANIZED AND PAINTED BLACK.

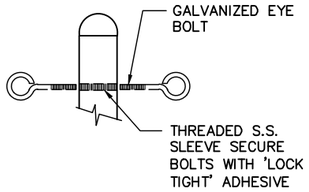
RAILING - TYPE 7A (CABLE SAFETY RAILING) 1
SCALE: 1" = 1'-0"



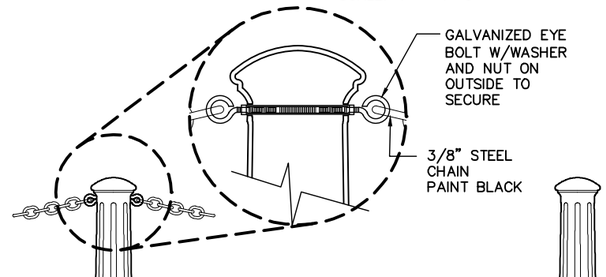
BOLLARD IN BALLAST TRACK 2
SCALE: 3/8" = 1'-0"



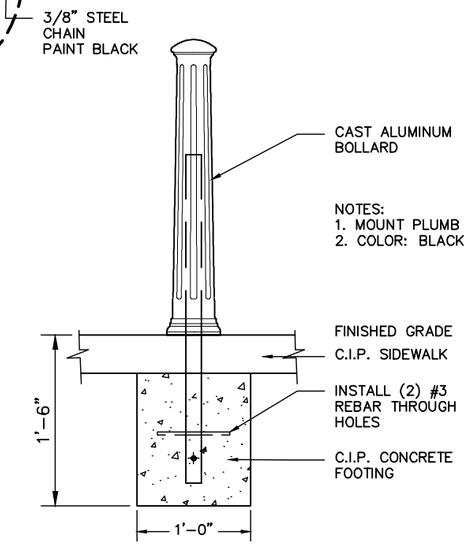
PLASTIC BOLLARD W/ CHAIN - TYPICAL 3
SCALE: 1" = 1'-0"



CHAIN CONNECTION DETAIL 6
SCALE: 1-1/2" = 1'-0"

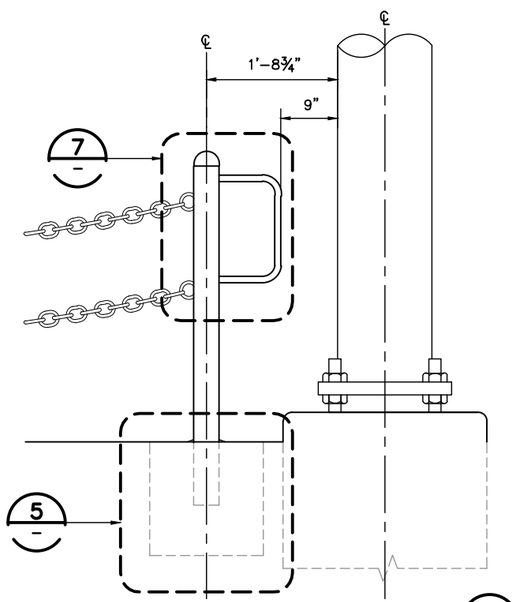


BOLLARD WITH CHAIN IN LANDSCAPE

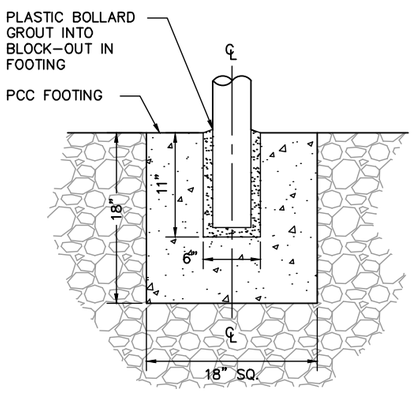


FREE STANDING BOLLARD IN WALKWAYS

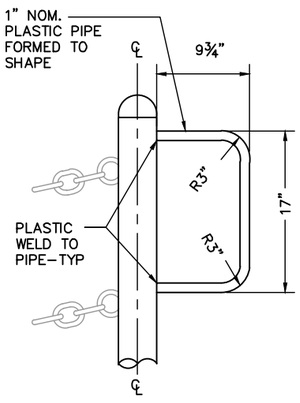
CITY OF MILWAUKIE BOLLARD 8
SCALE: 1-1/2" = 1'-0"



PLASTIC BOLLARD AT OCS POLE 4
SCALE: 1" = 1'-0"



PLASTIC BOLLARD FOOTING 5
SCALE: 1-1/2" = 1'-0"



PLASTIC BOLLARD EXTENSION 7
SCALE: 1-1/2" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	XXX	XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11 DATE	
SPT DRAWN	06-01-11 DATE	
TLC CHECKED	11-04-11 DATE	
APPROVED	5-14-12 DATE	

REGISTERED CAROL MAUER REED OREGON LANDSCAPE ARCHITECT
PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

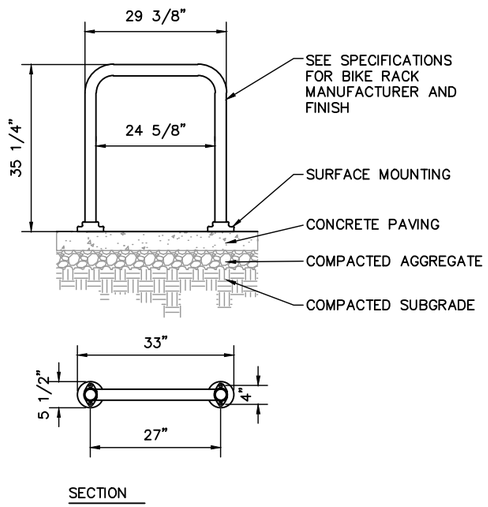
DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

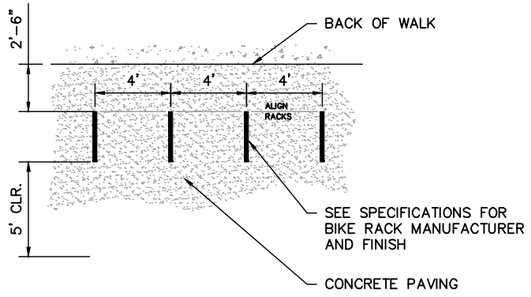
PORTLAND - MILWAUKIE LRT
EAST SEGMENT Exhibit T 28
ARCHITECTURAL
DETAILS - PED BOLLARDS

SUBMITTED:	DATE: 5-14-12	APPROVED:	DATE: 5-14-12	SCALE: VARIES	DRAWING NO.: A15E-550	CONTRACT NO.: RH100544JB	SHEET NO.:

M:\1 LA PROJECTS\PME\dwgs\sheets\A15E-550.dwg
Mar 20, 2012 11:02am
RHelsden



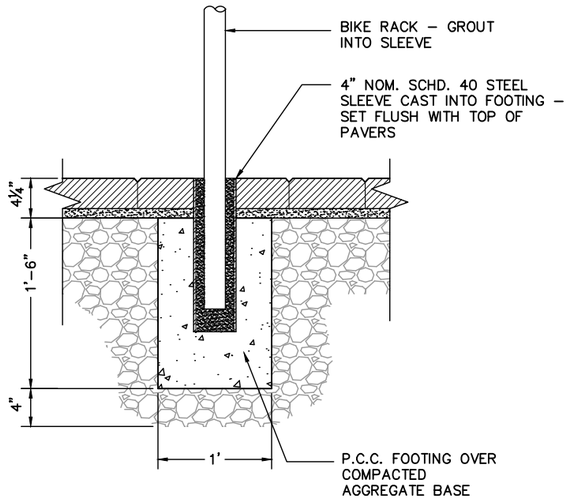
SECTION



PLAN

BIKE RACK AT P.C.C. SIDEWALK (O.F.C.I.) (FREESTANDING SURFACE MOUNT)

NTS — 1 / –



BIKE RACK AT CONCRETE PAVER

NTS — 2 / –

BIKE LOCKER

NTS — 3 / –

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	XXX		XXX	ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11	DATE
SPT DRAWN	06-01-11	DATE
TLC CHECKED	11-04-11	DATE
APPROVED	5-14-12	DATE

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT — CAROL MAYER-REED — OREGON — PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION, 710 N.E. HOLLADAY STREET, PORTLAND, OREGON 97232

PORTLAND – MILWAUKIE LRT
EAST SEGMENT Exhibit T 29
ARCHITECTURAL
DETAILS – FURNISHING

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	5-14-12		5-14-12	VARIES	A15E-571	RH100544JB	

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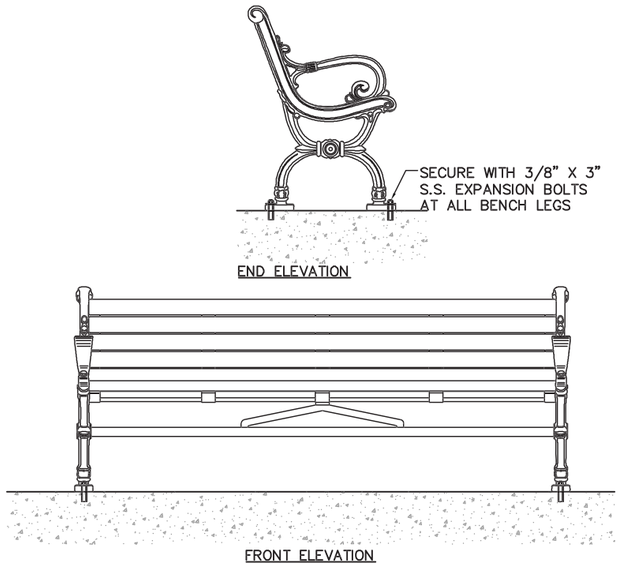
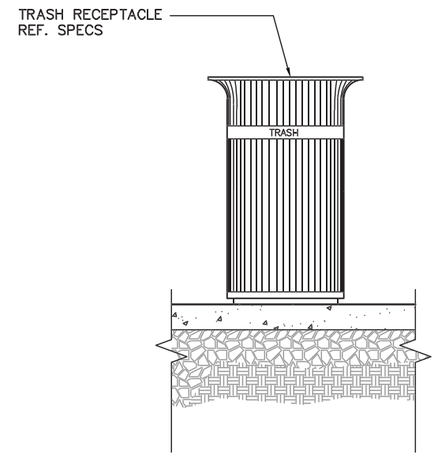


CITY OF MILWAUKIE BENCH (1)

NTS



TRASH RECEPTACLE – TYPE 1 (O.F.C.I.) (CITY OF MILWAUKIE) (2)

NTS

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	XXX / XXX		ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11 DATE	
SPT DRAWN	06-01-11 DATE	
TLC CHECKED	11-04-11 DATE	
APPROVED	5-14-12 DATE	

REGISTERED 82 OREGON CAROL BAKER REED LANDSCAPE ARCHITECT PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT Exhibit T 30
ARCHITECTURAL
DETAILS – FURNISHING

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E-572	RH100544JB	

Mar 20, 2012 11:05am RHelden

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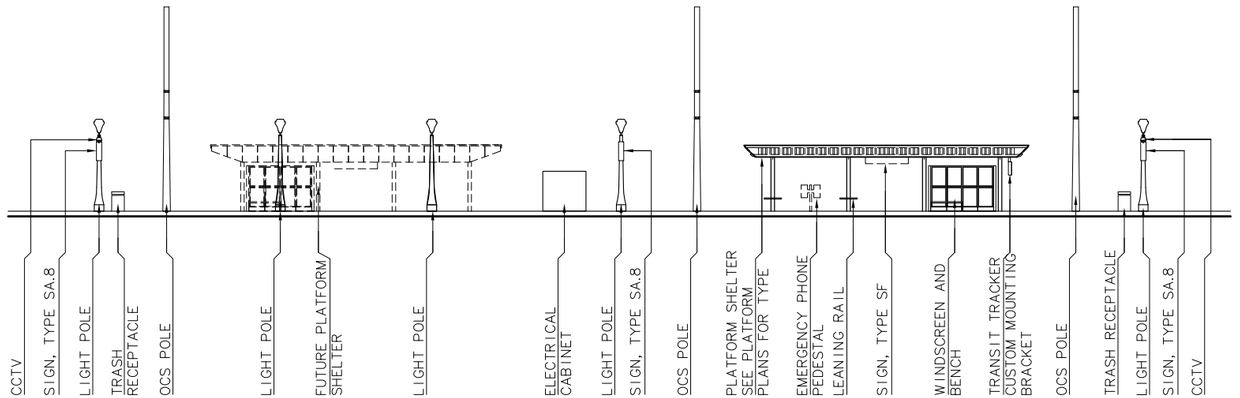


TYPICAL STATION PLATFORM ELEVATION

SCALE: 1" = 10'-0"

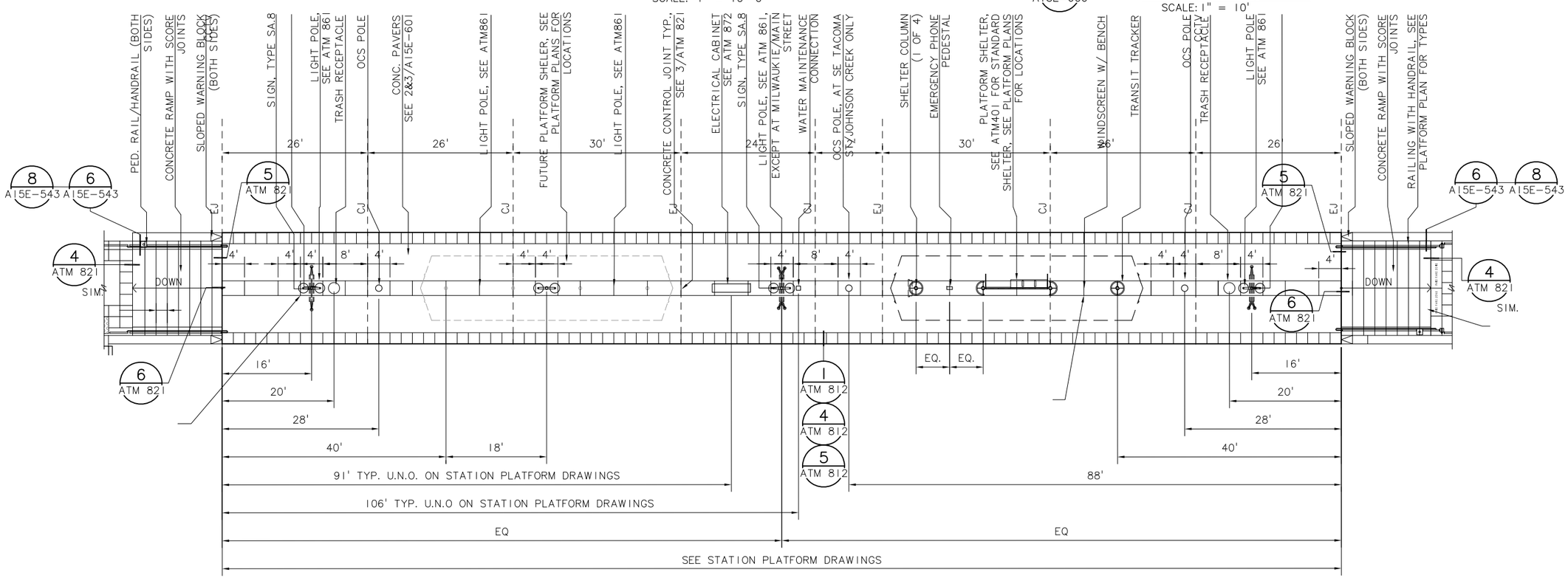
1 / A15E-600

10' 5' 0' 10' 20'

SCALE: 1" = 10'

GENERAL NOTE:

1. LOCATE PLATFORM ELEMENTS AS SHOWN UNLESS DIMENSIONED OTHERWISE ON STATION PLATFORM DRAWINGS.
2. SEE PLATFORM DRAWINGS AND UTILITY DRAWINGS FOR ADDITIONAL OCS POLE LOCATIONS.
3. ADDITIONAL CCTV REQUIRED AT OMSI/SE WATER AVE., SEE A15E-400 AND A15E-401 FOR PLATFORM LOCATIONS.
4. MODIFIED PLATFORM SHELTERS TO BE INSTALLED AT OMSI/SE WATER AVE, SE BYBEE BLVD, MILWAUKIE/MAIN STREET AND SE PARK AVE. STATIONS.
5. SEE CIVIL FOR PLATFORM CONSTRUCTION DETAILS.
6. SEE STRUCTURAL FOR PLATFORM ELEMENTS FOUNDATION DETAILS.
7. PROVIDE ALL FOUNDATIONS AND UTILITIES FOR FUTURE SHELTERS.
8. SEE STRUCTURAL FOR EXPANSION AND CONTRACTION JOINT DETAILS.
9. SEE SHEET A15E-601 FOR TYPICAL PLATFORM ELEMENTS PLAN LOCATIONS AND DETAILS.
10. SEE A15E-800 SERIES SHEETS FOR SIGN TYPES.
11. SEE SHEETS A15E-542 FOR ON & OFF PLATFORM RAILING TYPES.
12. SEE SHEETS A15E-005 FOR ART TYPES AND INFORMATION



PLATFORM PLAN

SCALE: 1" : 10'-0"

2 / A15E-600

10' 5' 0' 10' 20'

SCALE: 1" = 10'

NO.	DATE	BY CHK.	APPD.	REVISIONS
	03-26-12			ISSUED FOR CONSTRUCTION

MM DESIGNED	5-09-11 DATE
AM DRAWN	5-18-11 DATE
WB CHECKED	11-06-11 DATE
APPROVED	3-26-12 DATE

REGISTERED ARCHITECT JON C. SKINNER PORTLAND, OREGON STATE OF OREGON PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

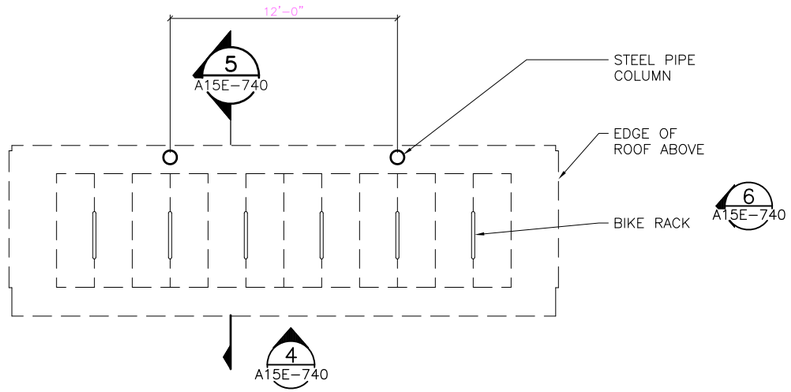
SUBMITTED:	DATE: 3-26-12	APPROVED:	DATE: 3-26-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT **Exhibit T 31**

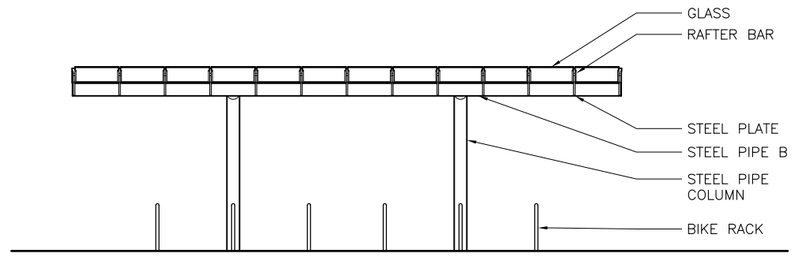
ARCHITECTURAL
PLATFORM DETAILS
STANDARD PLATFORM ELEMENTS ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1" = 10'-0"	A15E-600	RH100544JB	

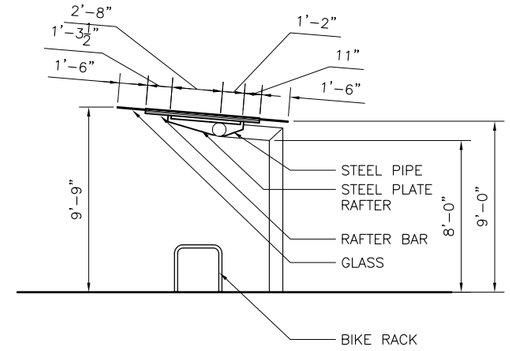
P:\10_jobs\10.30.01 Portland Milwaukie Light Rail\cad\Sheets\600_Platform Details\A15E-600.dwg Mar. 07, 2012 - 3:51 PM meredith hendricks
Plot Date: 3/20/2012 2:49 PM meredith hendricks



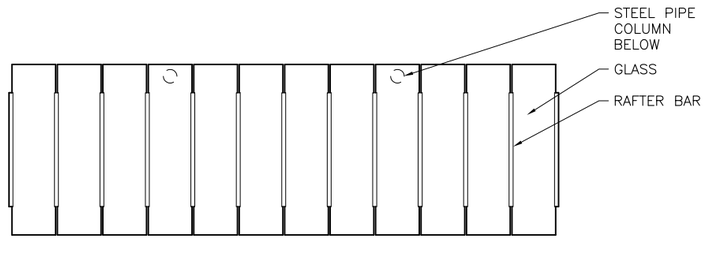
BIKE SHELTER PLAN 1
1/4" = 1'-0" A15E-740



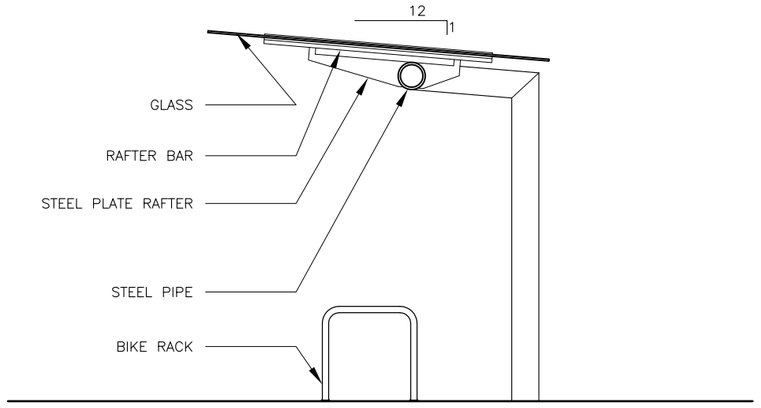
BIKE SHELTER FRONT ELEVATION 4
1/4" = 1'-0" A15E-740



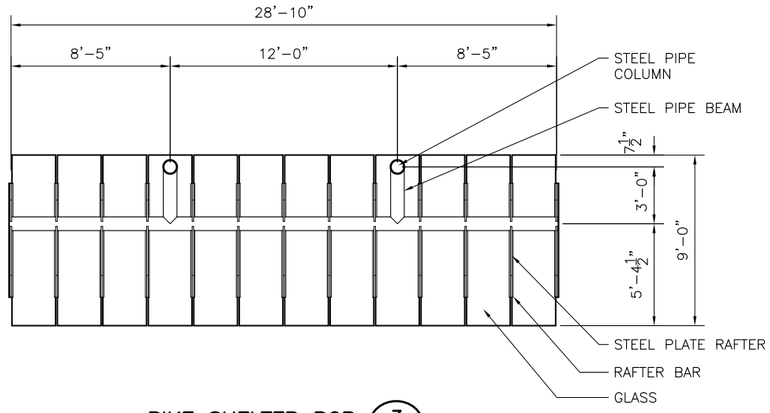
BIKE SHELTER SIDE ELEVATION 6
1/4" = 1'-0" A15E-740



BIKE SHELTER ROOF PLAN 2
1/4" = 1'-0" A15E-740



BIKE SHELTER SECTION 5
1/2" = 1'-0" A15E-740



BIKE SHELTER RCP 3
1/4" = 1'-0" A15E-740

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-14-12				ISSUED FOR CONSTRUCTION

MM DESIGNED	05-09-11	DATE
MH DRAWN	05-09-11	DATE
WB CHECKED	11-07-11	DATE
APPROVED	05-14-12	DATE

REGISTERED ARCHITECT · JON C. SKINNER · PORTLAND, OREGON · STATE OF OREGON · PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, Interiors & planning

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	05-14-12		05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT **Exhibit T 32**
ARCHITECTURAL
BIKE SHELTER
PLAN, SECTION, ELEVATION AND DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS SHOWN	A15E-740	RH100544JB	

P:\10_jobs\1030.01 Portland Milwaukie Light Rail\cad\Sheets\700_Auxiliary Buildings\A15E-740.dwg Mar. 20, 2012 - 9:28 AM meredith hendricks
Plot Date:3/20/2012 2:50 PM meredith hendricks

LOCATION	PLATFORM SHELTER		SHELTER WINDSCREEN			TVM SHELTER		LIGHT POLE				CCTV POLE	BENCH		TRASH RECEPTACLE	EMERGENCY PHONE	BIKE RACK	ART ENCLOSURE	SIGN								
STATION	TYPE 1A	TYPE 2A	TYPE 1A	TYPE 1B	TYPE 1C	TYPE 1	TYPE 2	TYPE 1	TYPE 2	TYPE 3	TYPE 4		TYPE 1	TYPE 2					TYPE A1	TYPE B1	TYPE B2	TYPE C1	TYPE D1	TYPE E1	TYPE F1	TYPE G1	TYPE H1
LINCOLN ST/SW 3RD AVE	1			1		2		2	3				1	1	2	1			6	2		1	4				2
SOUTH WATERFRONT/SW MOODY AVE (NB)	2		2			2		2		3				3	2	1		1	3	2		2	4			1	2
SOUTH WATERFRONT/SW MOODY AVE (SB)	2		2			2		2		3				3	2	1		1	3	2		2	4			1	2
OMSI/SE WATER AVE (NB)	2		2			2		3		3		1		3	2	1	3	1	4		2	2	4			1	2
OMSI/SE WATER AVE (SB)	2		2			2		3		3		2		3	2	1	9	1	4		2	2	4			1	2
CLINTON/SE 12TH AVE		1			1	2		6	3			2	1	1	2	1	26		6		2	1	4				2
SE 17TH AVE & RHINE ST		1		1		2		3	3		1	1	1	1	2	1	4		6		2	1	4				2
SE 17TH AVE & HOLGATE BLVD		1			1	2		2	3		2		1	1	2	1	8		6		2	1	4				2
SE BYBEE BLVD	1				1			2	3				1	1	4	1	29		6		2	1	4		2		2
SE TACOMA ST/JOHNSON CREEK		1			1	2		6	3		1		1	1	2	1	17		6		2	1	4	1			2
MILWAUKIE/MAIN ST	1			1		2		5	3				1	1	2	1	12		6		2	1	4				2
SE PARK AVE	1			1		2	2	6	6		2		1	3	2	1	6		6		4	1	8				2
TOTALS	12	4	8	4	4	22	2	42	27	12	6	6	8	22	26	12	114	4	62	6	20	16	52	1	2	4	24

AMENITIES MATRIX

1

90% FINAL DESIGN
2-2-12

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED 01-27-12 DATE
EAC DRAWN 01-27-12 DATE
KHF CHECKED 01-27-12 DATE
APPROVED DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES
AMENITIES MATRIX

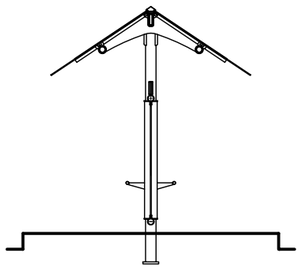
Exhibit T 33

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	G15N-002	RH100186JB	

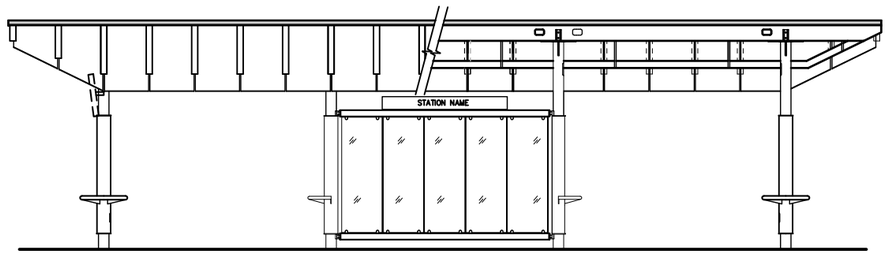
R:\15-CD DUMP\15N - SIGNAGE\90% FINAL DESIGN\G15N-002.dwg, 1/30/2012 1:10:47 PM, lortsb

NOTES:

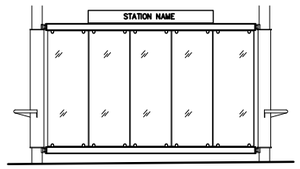
1. SEE A15S–002 SCHEDULE
2. REF. PMLR EAST & WEST SEGMENT DRAWINGS FOR QUANTITIES, A15E–006, A15W–003



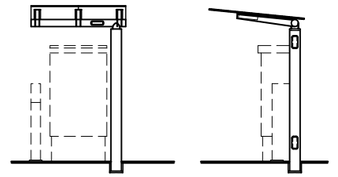
GLASS ROOF PLATFORM SHELTER – TYPE 1A
REF A15S–011



GLASS ROOF PLATFORM SHELTER – TYPE 1A
REF A15S–010



WINDSCREEN – TYPE 1A (W/O WINGS AND BENCH)
REF A15S–030



TVM SHELTER – TYPE 1
REF A15S–040

PLATFORM SHELTER & WINDSCREEN FAMILY

1

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR	DESIGNED	01–27–12 DATE
JFC	DRAWN	01–27–12 DATE
RAH	CHECKED	03–19–12 DATE
KHF	APPROVED	03–23–12 DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 34
PLATFORM SHELTER, WINDSCREEN & TVM SHELTER FAMILY

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
					A15S–001	RH100186JB	

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-001.dwg Mar 22, 2012 1:33pm jcarlson

NOTES:

1. PLATFORM SLOPE VARIES. SEE PMLR EAST & WEST CIVIL PLANS AND FIELD VERIFY.
2. REF. A15S-001 FOR PLATFORM SHELTER, WINDSCREEN & TVM SHELTER TYPES.
3. REF. A15S-021 FOR LEANING RAIL TYPES.

			PLATFORM SHELTER				WINDSCREEN
STATION	REF. DWG.	PLATFORM SLOPE	TYPE	QTY.	COLOR	LEANING RAIL	TYPE
LINCOLN ST. / SW 3RD AVE.	A15W-226	3.50	1A	1	P4	2	1A
SOUTH WATERFRONT / SW MOODY AVE. (NB)	A15W-227	1.09	1A	2	P4	2	1A
SOUTH WATERFRONT / SW MOODY AVE. (SB)	A15W-228	1.09	1A	2	P4	2	1A
OMSI / SE WATER AVE. (NB)	A15E-400/A15E-401	1.09	1A	2	P4	2	1A
OMSI / SE WATER AVE. (NB)	A15E-400/A15E-401	1.09	1A	2	P4	2	1A
CLINTON / SE 12TH AVE.	A15E-410	0.52	2A	1	P4	1	1C
SE 17TH AVE. & RHINE ST.	A15E-420	0.47	2A	1	P4	1	1B
SE 17TH AVE. & HOLGATE BLVD.	A15E-430	0.12	2A	1	P4	1	1C
SE BYBEE BLVD.	A15E-440	0	1A	1	P4	1	1C
SE TACOMA ST. / JOHNSON CREEK	A15E-450	0.76	2A	1	P4	1	1C
MILWAUKIE / MAIN ST.	A15E-460	1.32	1A	1	P1	1	1B
SE PARK AVE.	A15E-470	3.00	1A	1	P4	1	1B

PLATFORM SHELTER & WINDSCREEN SCHEDULE

1

TVM SHELTER

STATION	REF. DWG.	QTY.	TYPE	MIRROR LAYOUT	COLOR
LINCOLN ST. / SW 3RD AVE.	A15W-220	2	3		P4
SOUTH WATERFRONT / SW MOODY AVE. (NB)	A15W-222	2	1	1	P4
SOUTH WATERFRONT / SW MOODY AVE. (SB)	A15W-224	2	1	1	P4
OMSI / SE WATER AVE. (NB)	A15E-402	2	1	1	P4
OMSI / SE WATER AVE. (NB)	A15E-402	2	1		P4
CLINTON / SE 12TH AVE.	A15E-411	2	1		P4
SE 17TH AVE. & RHINE ST.	A15E-421	2	1		P4
SE 17TH AVE. & HOLGATE BLVD.	A15E-431	2	1		P4
SE TACOMA ST. / JOHNSON CREEK	A15E-451/A153-452	2	1		P4
MILWAUKIE / MAIN ST.	A15E-461/A15E-462	2	1		P1
SE PARK AVE.	A15E-471/A15E-472	4	1		P4

TVM SCHEDULE

2

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

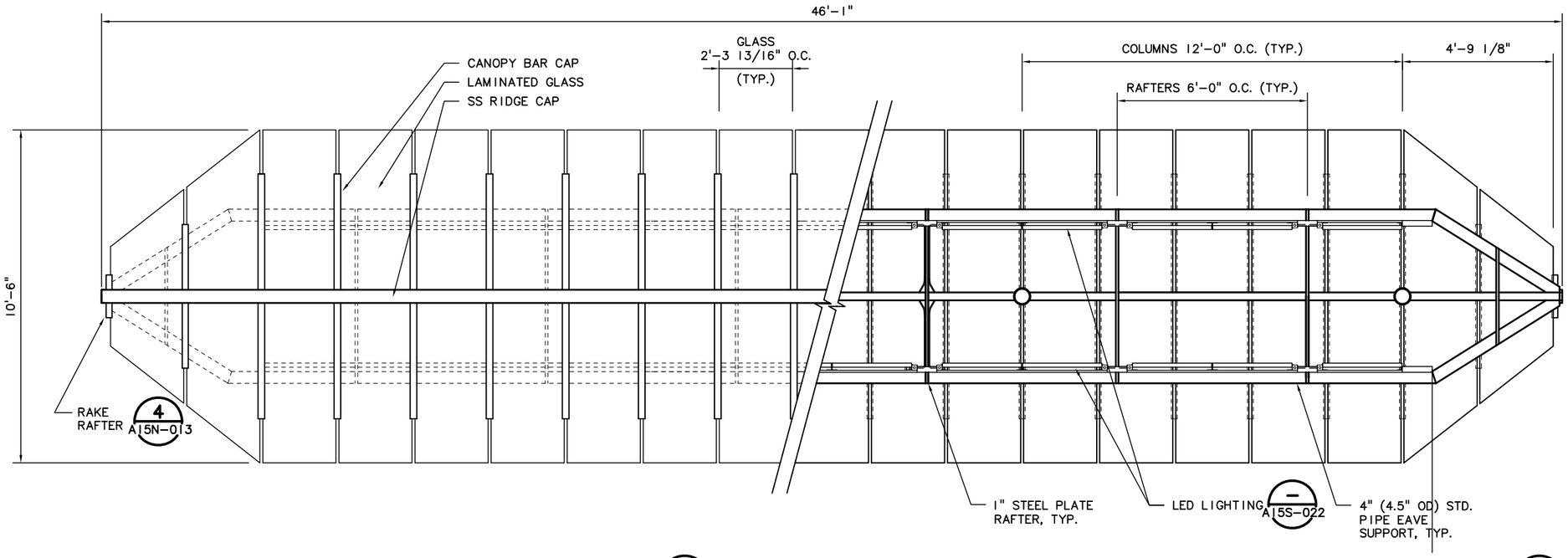
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 35
PLATFORM SHELTER, WINDSCREEN & TVM SHELTER SCHEDULE

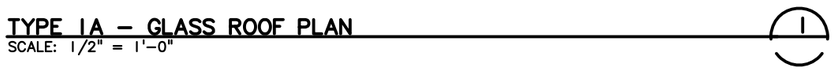
SCALE: AS NOTED | DRAWING NO.: A15S-002 | CONTRACT NO.: RH100186JB | SHEET NO.:

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-002.dwg Mar 22, 2012 10:52pm jcarlson



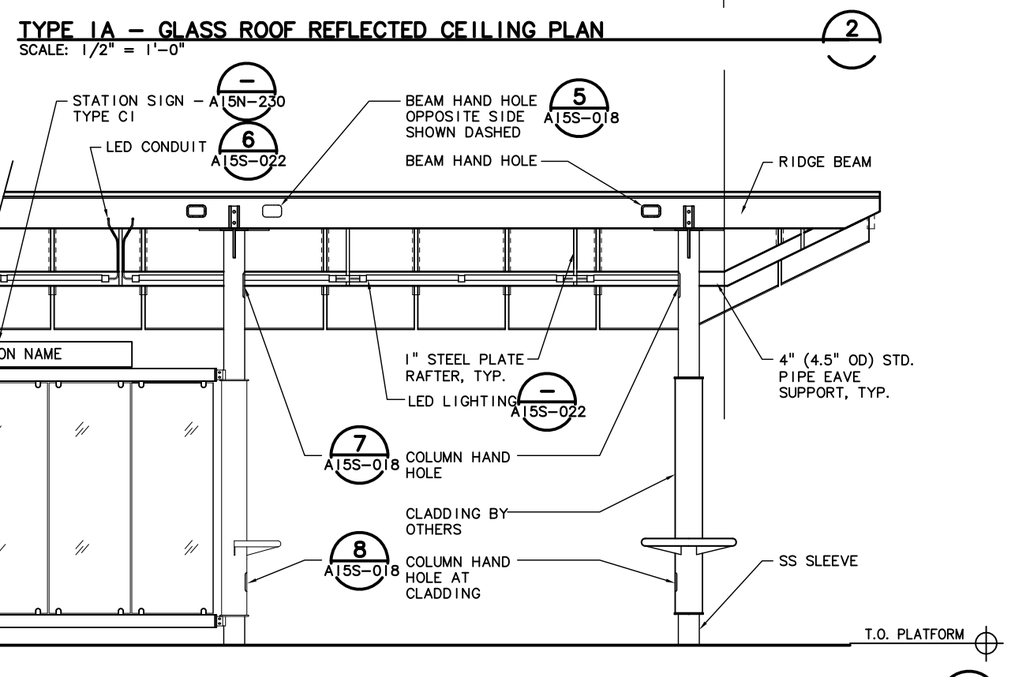
TYPE 1A – GLASS ROOF PLAN
SCALE: 1/2" = 1'-0"

1



TYPE 1A – SIDE ELEVATION
SCALE: 1/2" = 1'-0"

3



TYPE 1A – LONGITUDINAL SECTION
SCALE: 1/2" = 1'-0"

4

TYPE 1A – GLASS ROOF REFLECTED CEILING PLAN
SCALE: 1/2" = 1'-0"

2

NOTES:

1. PLATFORM SLOPE VARIES. SEE PMLR EAST & WEST CIVIL PLANS AND FIELD VERIFY.
2. COLUMNS SHALL BE PLUMB WITH ROOF AND WINDSCREEN STRUCTURE LEVEL REGARDLESS OF PLATFORM SLOPE.
3. 2 HAND HOLES PER SHELTER COLUMN.
4. SEE A15S-002 SHELTER SCHEDULE FOR WINDSCREEN TYPE, LEANING RAIL TYPE AND PAINT COLOR.
5. SEE PMLR EAST & WEST ARCHITECTURAL PLANS FOR TRANSIT TRACKER LOCATION AND WINDSCREEN CONFIGURATION.
6. ALL MILD STEEL COMPONENTS PAINTED, EXCEPT AS NOTED.
7. ELECTRICAL TO LIGHT FIXTURES BY OTHERS. REF. PMLR EAST & WEST SEGMENT ELECTRICAL DRAWINGS.

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

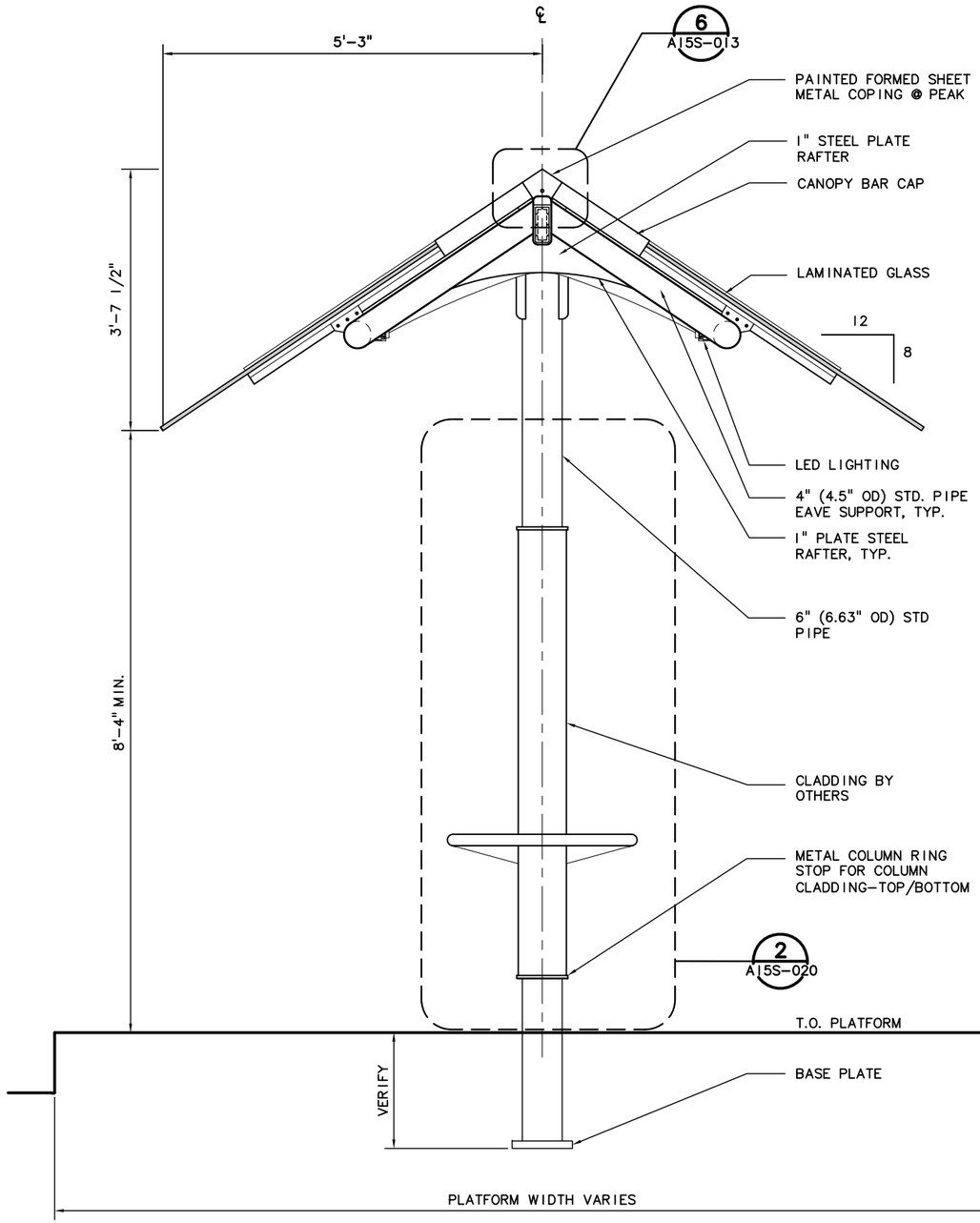
Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

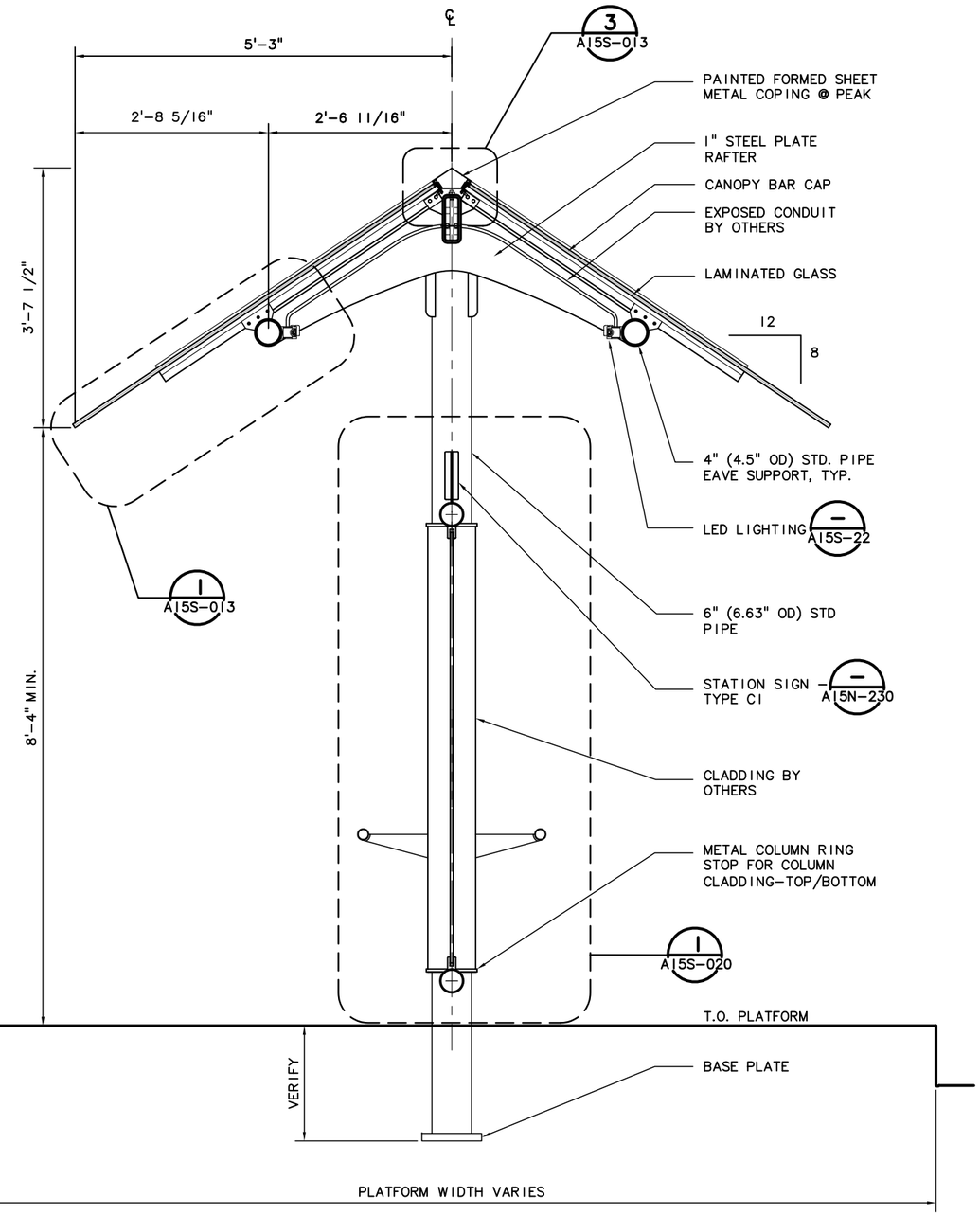
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 36
PLATFORM SHELTER – TYPE 1A
PLAN & ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-010	RH100186JB	



TYPE A1 – ELEVATION END VIEW
SCALE: 1" = 1'-0"

1



TYPE A1 – SECTION
SCALE: 1" = 1'-0"

2

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR	DESIGNED	01-27-12 DATE
JFC	DRAWN	01-27-12 DATE
RAH	CHECKED	03-19-12 DATE
KHF	APPROVED	03-23-12 DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

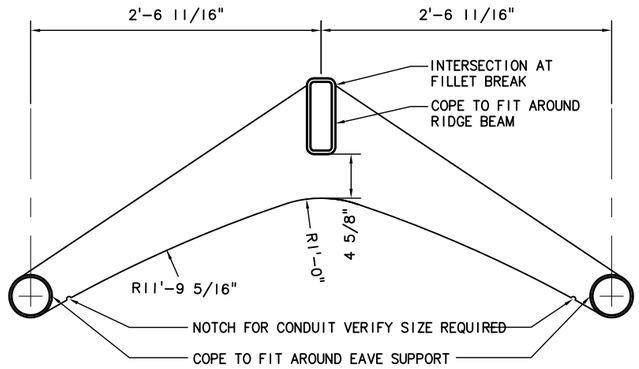
SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES
PLATFORM SHELTER – TYPE 1A
ELEVATION & SECTION

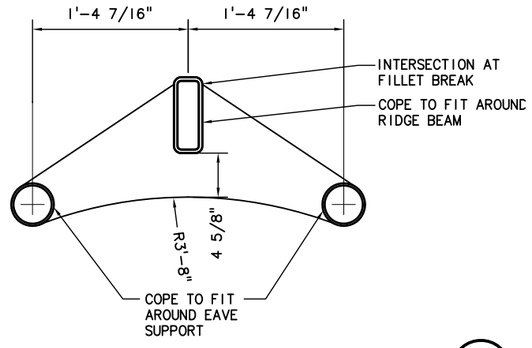
Exhibit T 37

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-011	RH100186JB	

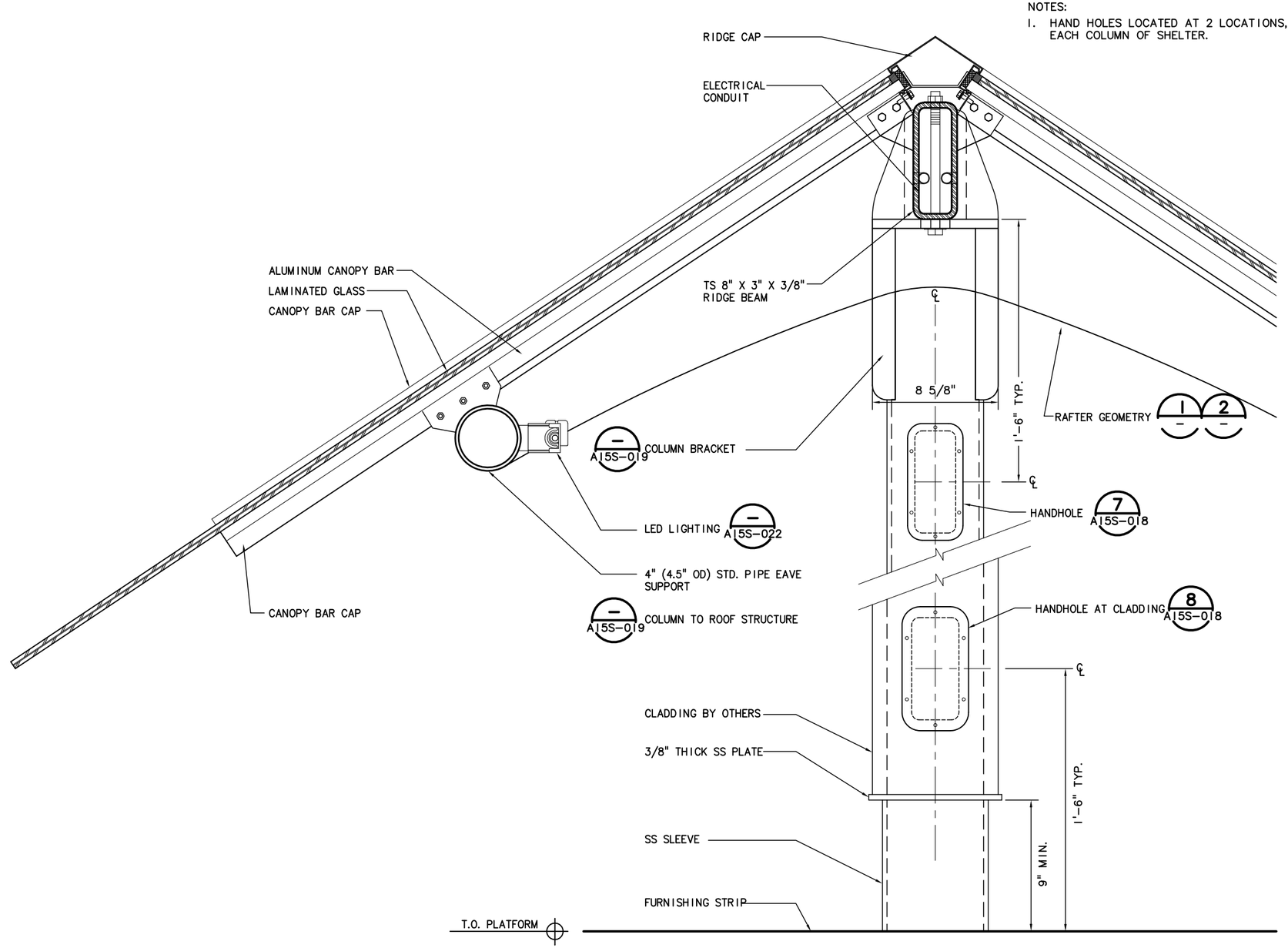
NOTES:
1. HAND HOLES LOCATED AT 2 LOCATIONS, EACH COLUMN OF SHELTER.



TYPE IA – COPING AT TYPICAL RAFTER 1
SCALE: 1 1/2" = 1'-0"



TYPE IA – COPING AT END RAFTER END 2
SCALE: 1 1/2" = 1'-0"



TYPE IA – SHELTER DETAIL 3
SCALE: 3" = 1'-0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

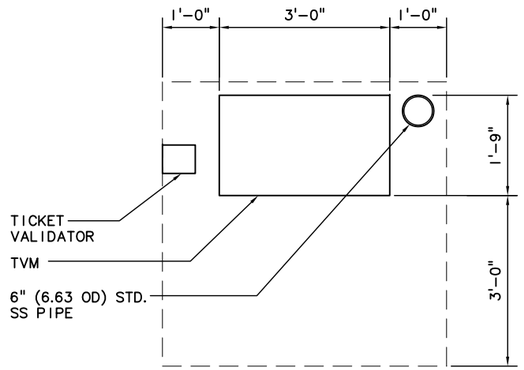
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

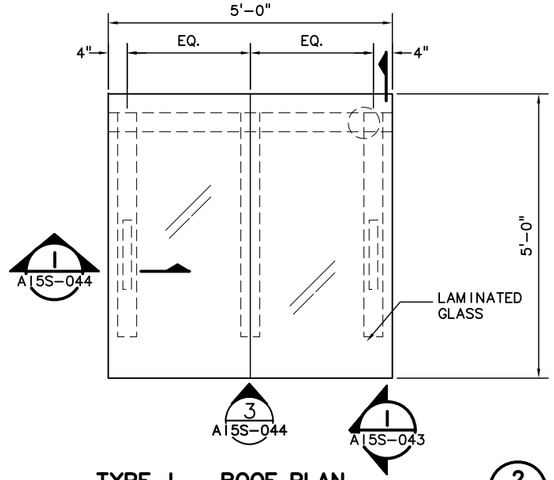
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 38
PLATFORM SHELTER – TYPE IA
DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-012	RH100186JB	

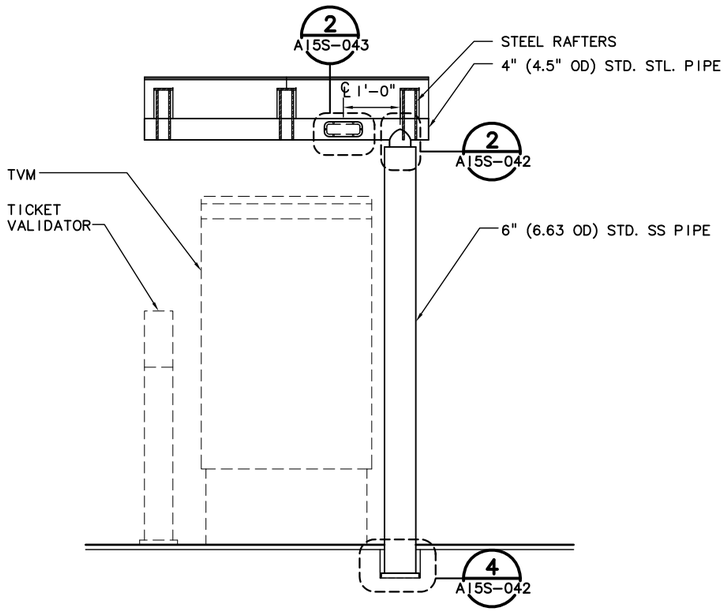
M:\2_VC PROJECTS\TMA\DUTY\2012-03-23 100%\DWGS\A15S-012.dwg
Mar 22, 2012 11:07pm jcarlson



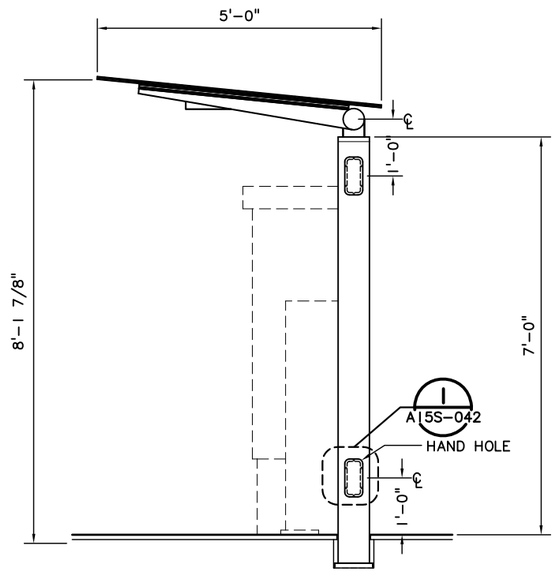
TYPE I – EQUIPMENT PLAN (1)
SCALE: 3/4" = 1'-0"



TYPE I – ROOF PLAN (2)
SCALE: 3/4" = 1'-0"



TYPE I – FRONT ELEVATION (3)
SCALE: 3/4" = 1'-0"



TYPE I – SIDE ELEVATION (4)
SCALE: 3/4" = 1'-0"

NOTES:

1. ROOF DIMENSIONS INDICATE MINIMUM ROOF OVERHANG CLEARANCE AT TVM.
2. MIRROR LAYOUT WITH SUPPORT COLUMN ON LEFT WHERE INDICATED ON SHELTER SCHEDULE. REF. A15S-002
3. TVM AND TICKET VALIDATOR OWNER FURNISHED.
4. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. PMLR EAST AND WEST SEGMENT DRAWINGS.
5. ELECTRICAL & LIGHT FIXTURES BY OTHERS. REF. PMLR EAST & WEST SEGMENT DRAWINGS.

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12 DATE	
EAC DRAWN	01-27-12 DATE	
RAH CHECKED	03-19-12 DATE	
KHF APPROVED	03-23-12 DATE	

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

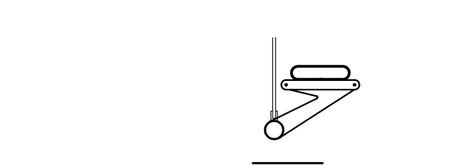
Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

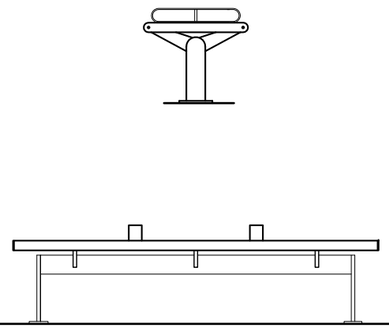
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 39
TVM SHELTER – TYPE I
PLAN & ELEVATION

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
				AS NOTED	A15S-040	RH100186JB	

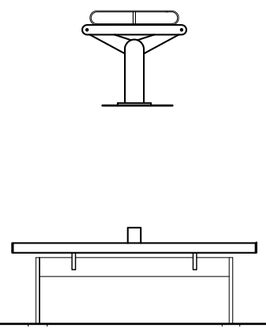
M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-040.dwg
Mar 22, 2012 3:15pm
bmartin



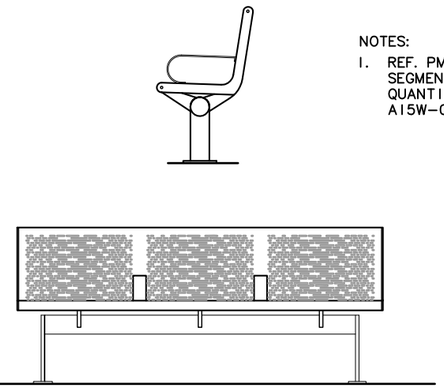
BENCH – TYPE 1
WINDSCREEN MOUNTED
REF. A15S–110



BENCH – TYPE 2
FREESTANDING, 3 SEAT
REF. A15S–111



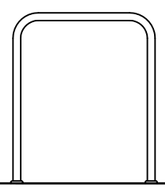
BENCH – TYPE 3
FREESTANDING, 2 SEAT
REF. A15S–112



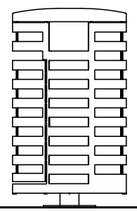
BENCH – TYPE 4
FREESTANDING, 3 SEAT W/ BACK
REF. A15S–114

NOTES:

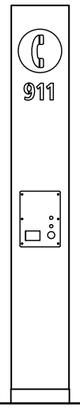
1. REF. PMLR EAST & WEST SEGMENT DRAWINGS FOR QUANTITIES, A15E–006, A15W–003.



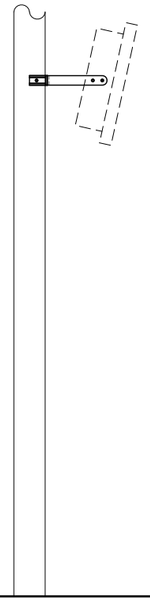
BIKE RACK
REF. A15S–134



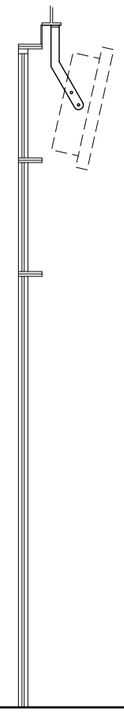
TRASH RECEPTACLE
REF. A15S–120



EMERGENCY PHONE
REF. A15S–130



TRANSIT TRACKER TYPE 1
REF. A15S–170



TRANSIT TRACKER TYPE 2
REF. A15S–171

FURNISHINGS FAMILY

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR	DESIGNED	01–27–12 DATE
JFC	DRAWN	01–27–12 DATE
RAH	CHECKED	03–19–12 DATE
KHF	APPROVED	03–23–12 DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

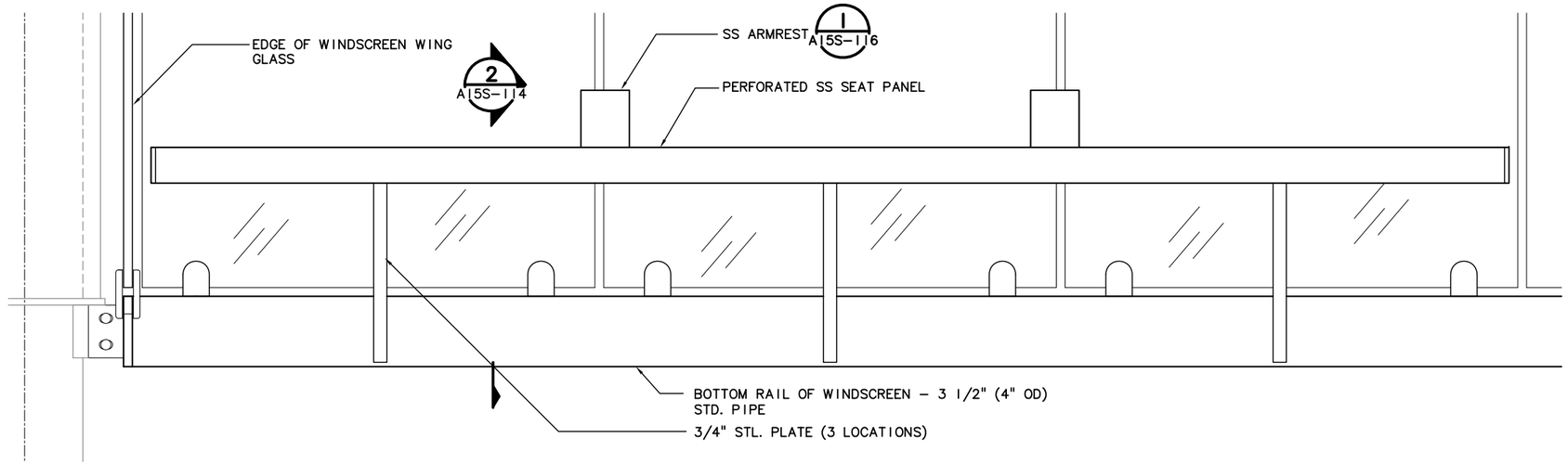
Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 40
FURNISHINGS FAMILY

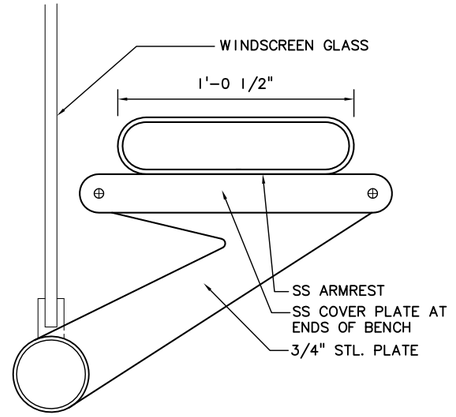
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S–100	RH100186JB	



BENCH TYPE I – ELEVATION AT WINDSCREEN

SCALE: 3" = 1'-0"

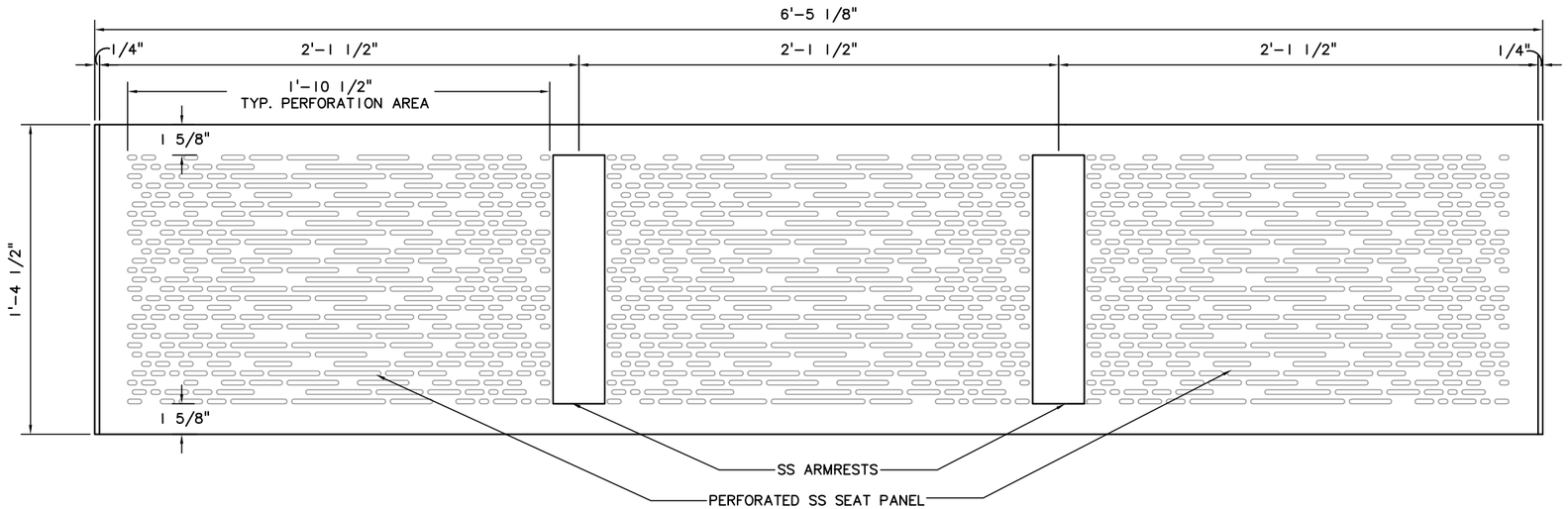
1



BENCH TYPE I – END ELEVATION

SCALE: 3" = 1'-0"

2



BENCH TYPE I – PLAN

SCALE: 3" = 1'-0"

3

NOTES:

1. FINISH ALL STEEL BENCH COMPONENTS WITH ABRASION RESISTANT COATING EXCEPT AS NOTED. COLOR TO MATCH WINDSCREEN.
2. STAINLESS STEEL FINISH AS SPECIFIED.
3. PERFORATED PATTERN DIGITAL ARTWORK PROVIDED BY OWNER.

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

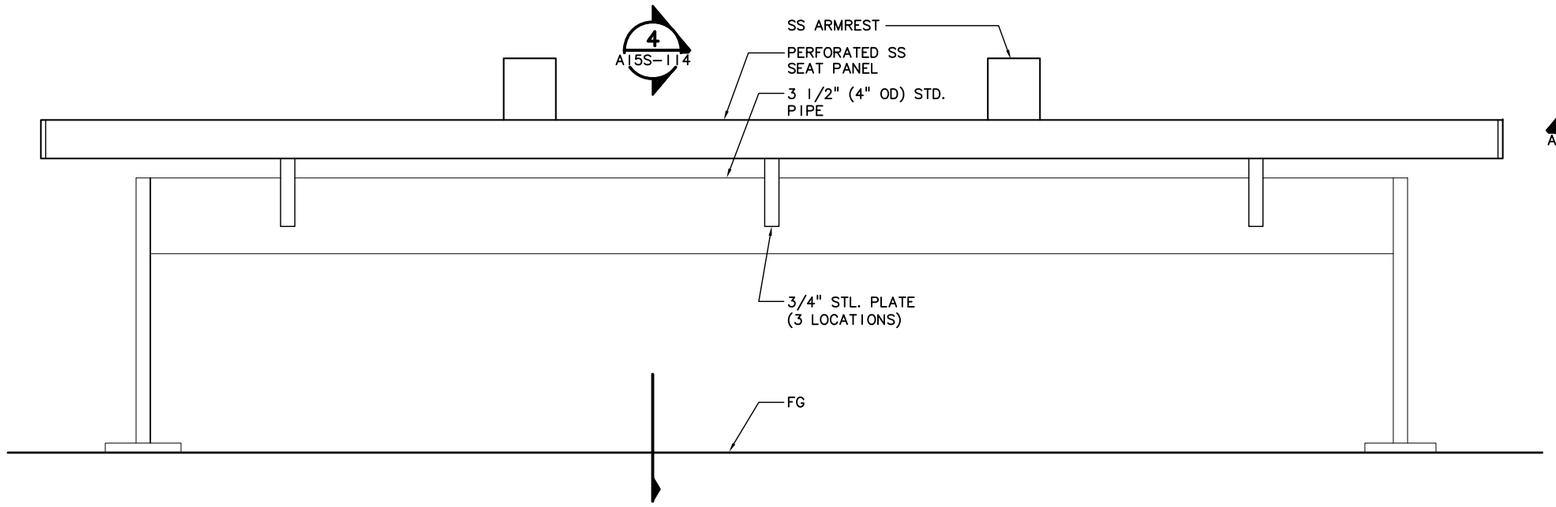
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 41
BENCH – TYPE I
PLAN & ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-110	RH100186JB	

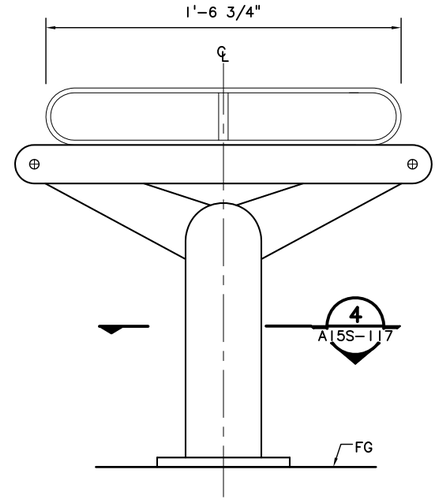
M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-110.dwg Mar 21, 2012 10:05pm bmartin



BENCH TYPE 2 – ELEVATION

SCALE: 3" = 1'-0"

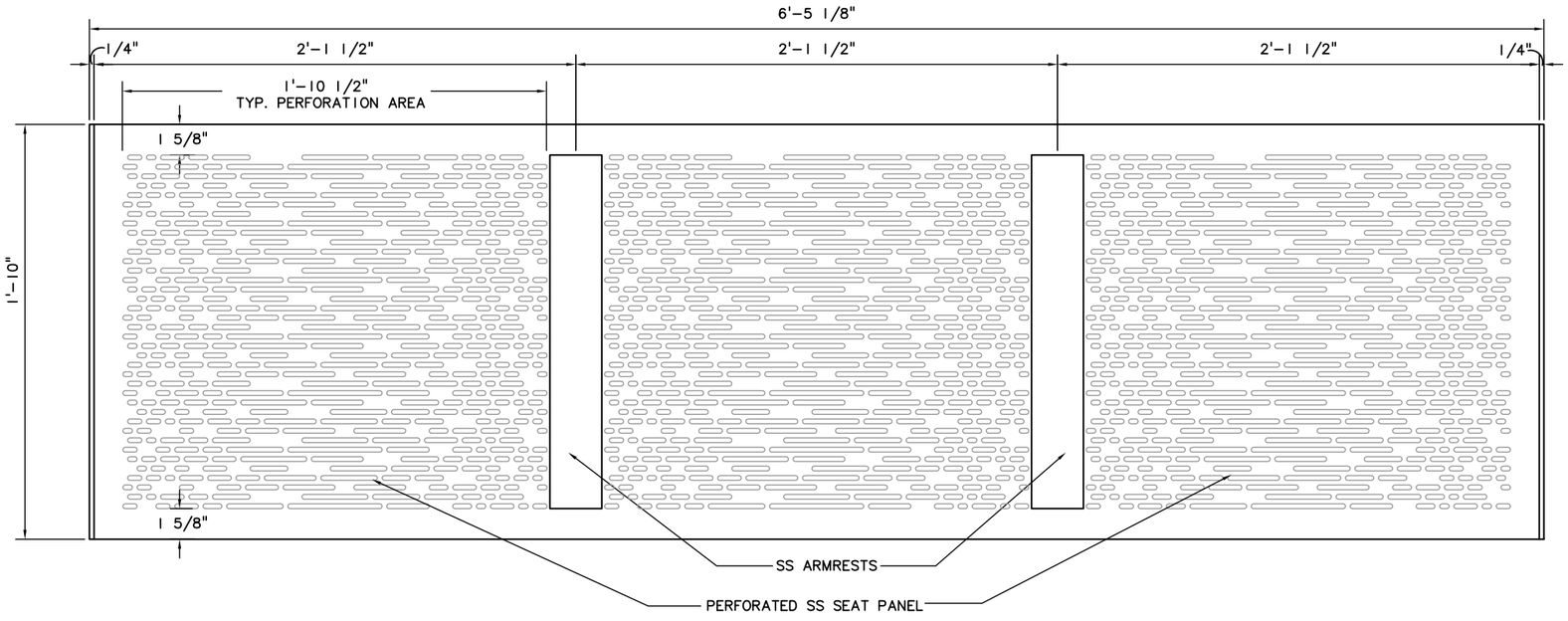
1



BENCH TYPE 2 – END ELEVATION

SCALE: 3" = 1'-0"

2



BENCH TYPE 2 – PLAN

SCALE: 3" = 1'-0"

3

NOTES:

1. FINISH ALL STEEL BENCH COMPONENTS WITH ABRASION RESISTANT COATING EXCEPT AS NOTED. COLOR TO MATCH WINDSCREEN.
2. STAINLESS STEEL FINISH AS SPECIFIED.
3. PERFORATED PATTERN DIGITAL ARTWORK PROVIDED BY OWNER.

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

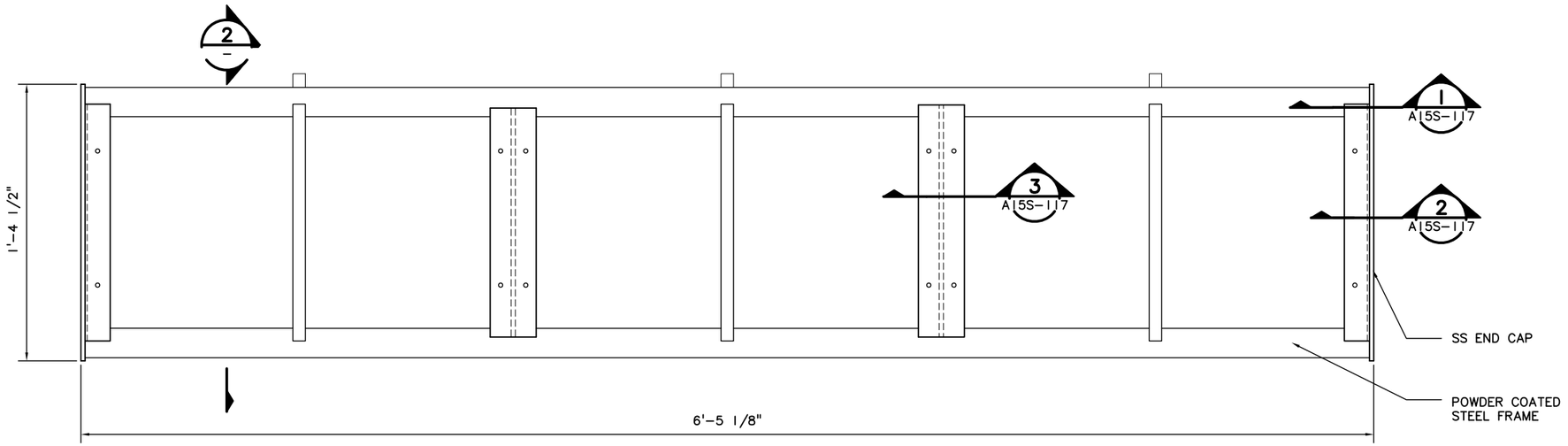
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 42
BENCH – TYPE 2
PLAN & ELEVATION

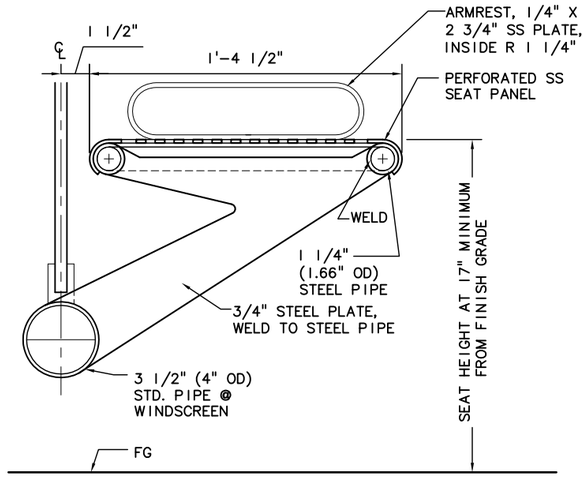
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-111	RH100186JB	

bmartin Mar 21, 2012 10:06pm
M:\2_VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-111.dwg



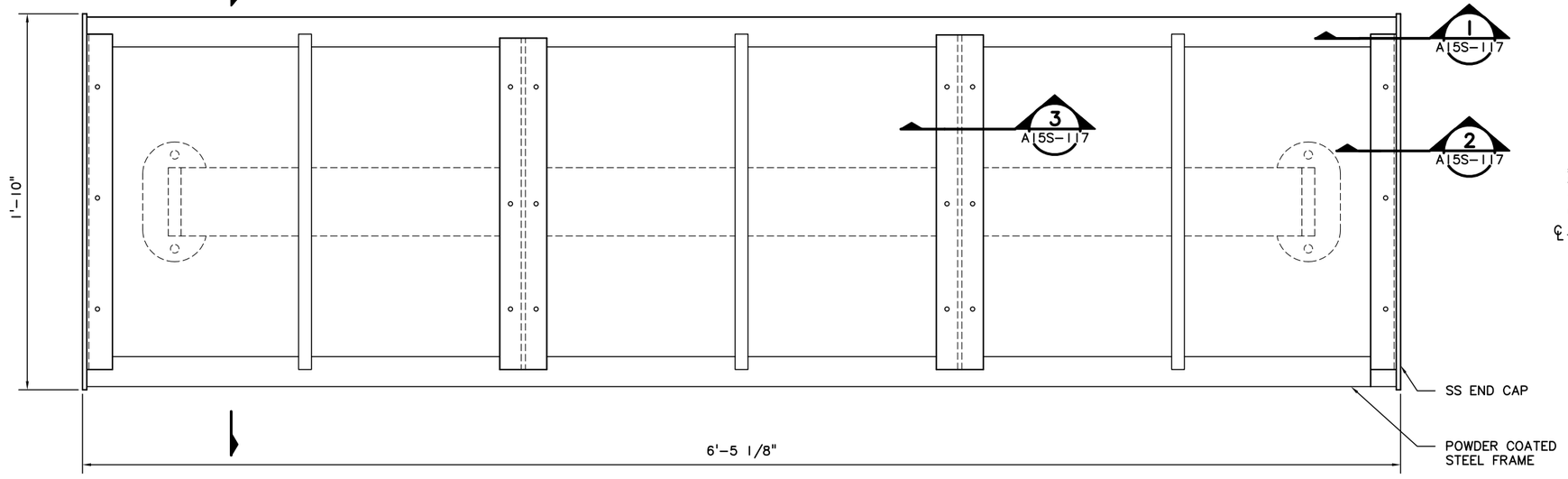
BENCH TYPE 1 – FRAME PLAN
SCALE: 3" = 1'-0"

1



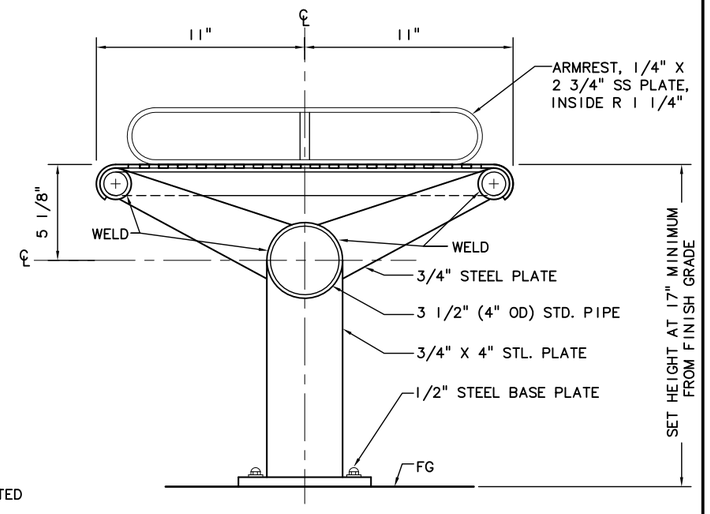
BENCH TYPE 1 – SECTION
SCALE: 3" = 1'-0"

2



BENCH TYPE 2 – FRAME PLAN
SCALE: 3" = 1'-0"

3



BENCH TYPE 2 – SECTION
SCALE: 3" = 1'-0"

4

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

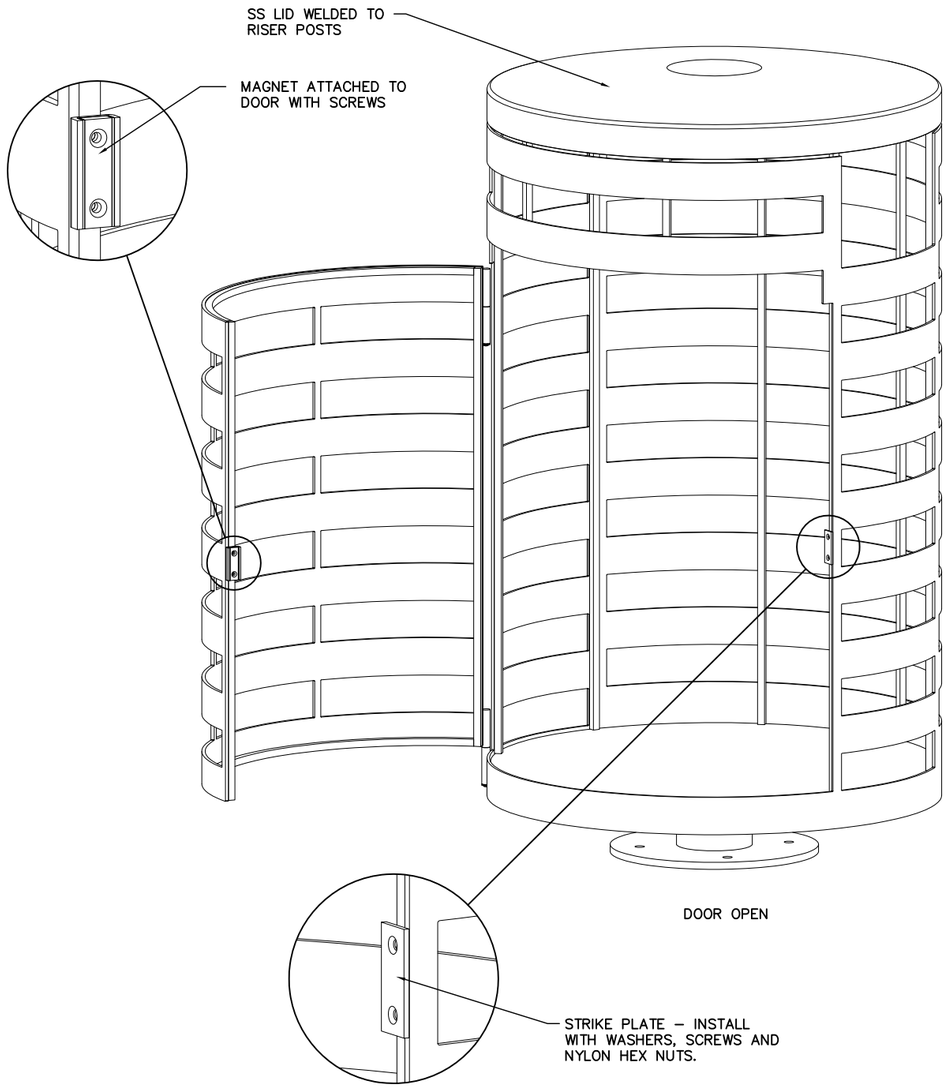
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 43
BENCH – TYPE 1 & 2
FRAME PLAN & SECTION

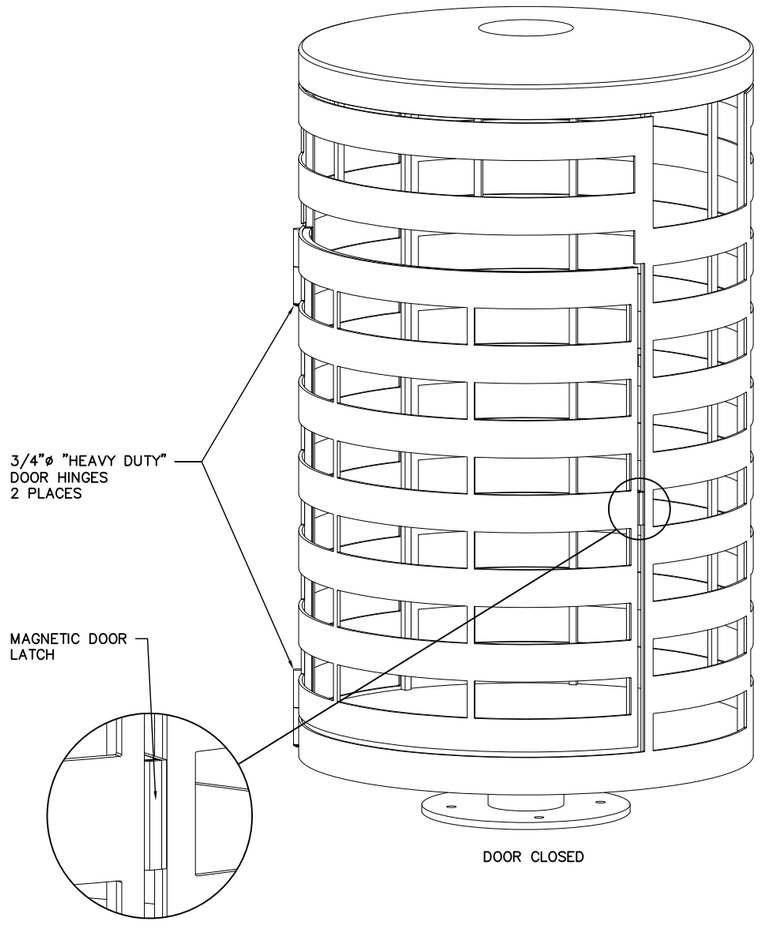
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-114	RH100186JB	

Mar 21, 2012 10:09pm bmartin
M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-114.dwg

NOTES:

1. POWDERCOAT COLOR MATCH TO PLATFORM SHELTER COLOR. REF. A15S–002
2. NON–CORROSIVE ANCHORING HARDWARE SUPPLIED BY OTHERS.
3. PROVIDE (2) CLEAR 36 GALLON PLASTIC LINERS PER TRASH RECEPTACLE.





TRASH RECEPTACLE – PERPECTIVE

SCALE: NTS

1

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01–27–12	DATE
EAC DRAWN	01–27–12	DATE
RAH CHECKED	03–19–12	DATE
KHF APPROVED	03–23–12	DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT

AMENITIES Exhibit T 44

TRASH RECEPTACLE – TYPE 1

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S–120	RH100186JB	

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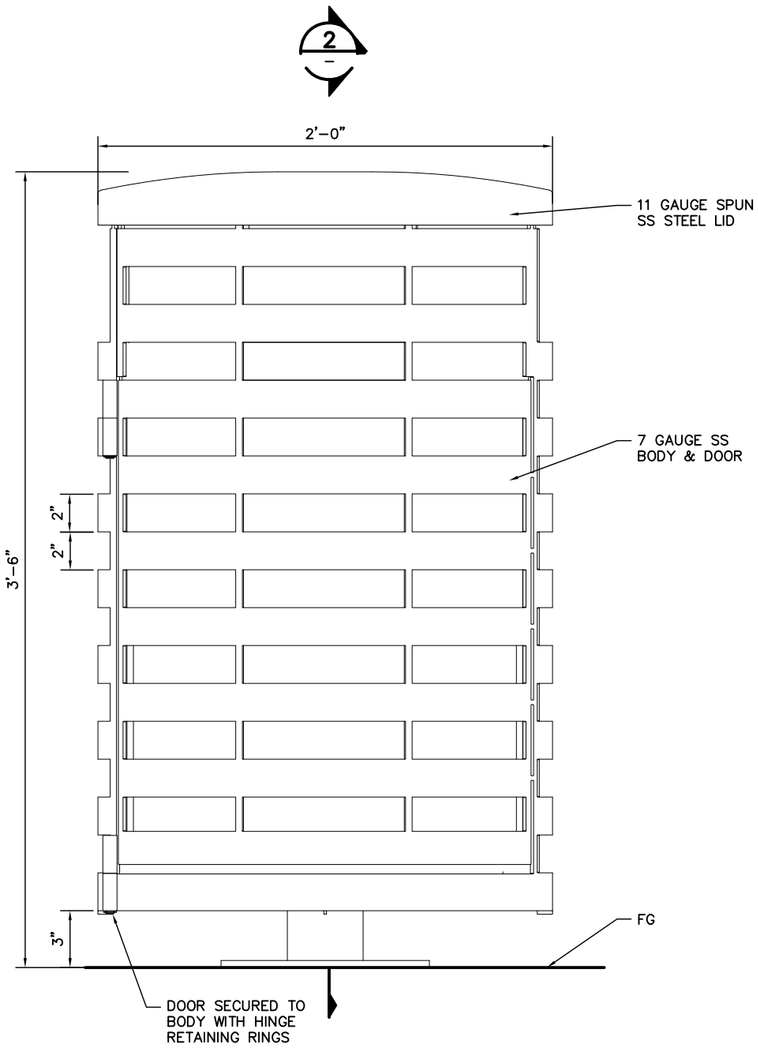
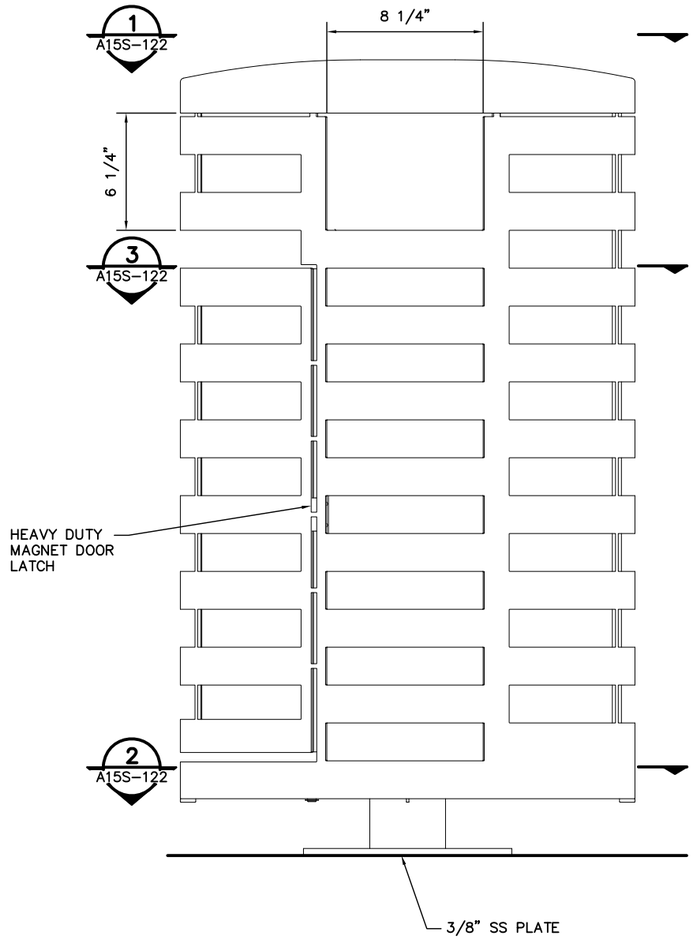
NOTES:

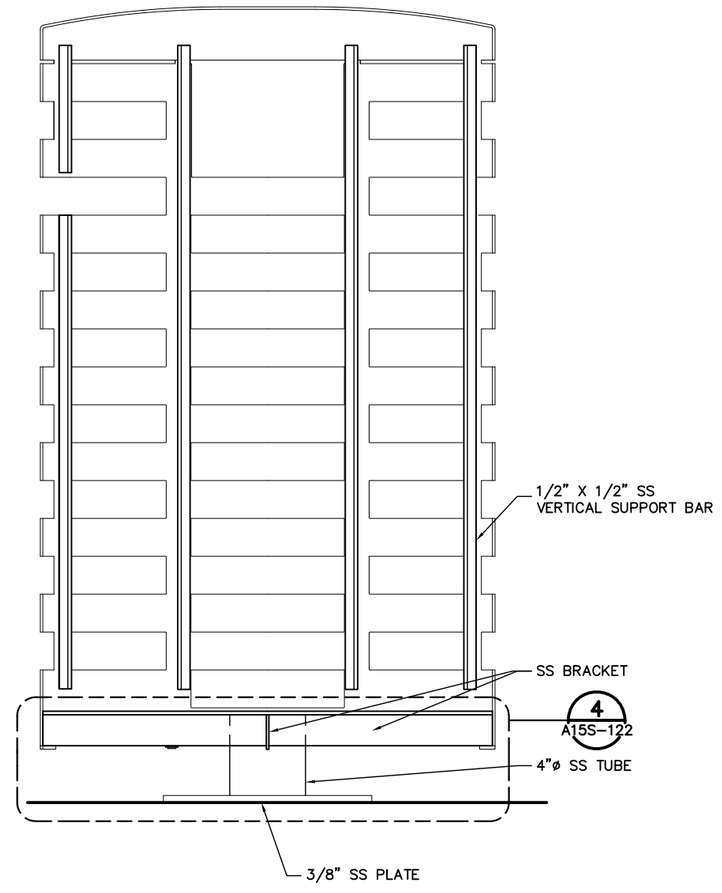
1. POWDERCOAT COLOR MATCH TO PLATFORM SHELTER COLOR. REF. A15S–002
2. NON–CORROSIVE ANCHORING HARDWARE SUPPLIED BY OTHERS.
3. PROVIDE (2) CLEAR 36 GALLON PLASTIC LINERS PER TRASH RECEPTACLE.



TRASH RECEPTACLE – ELEVATION (1)
SCALE: 3" = 1'–0"



TRASH RECEPTACLE – ELEVATION (2)
SCALE: 3" = 1'–0"



TRASH RECEPTACLE – SECTION (3)
SCALE: 3" = 1'–0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01–27–12	DATE
EAC DRAWN	01–27–12	DATE
RAH CHECKED	03–19–12	DATE
KHF APPROVED	03–23–12	DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

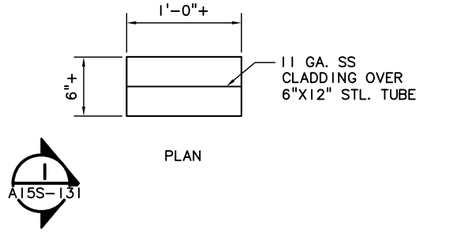
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES
Exhibit T 45
TRASH RECEPTACLE – TYPE 1
ELEVATION & SECTION

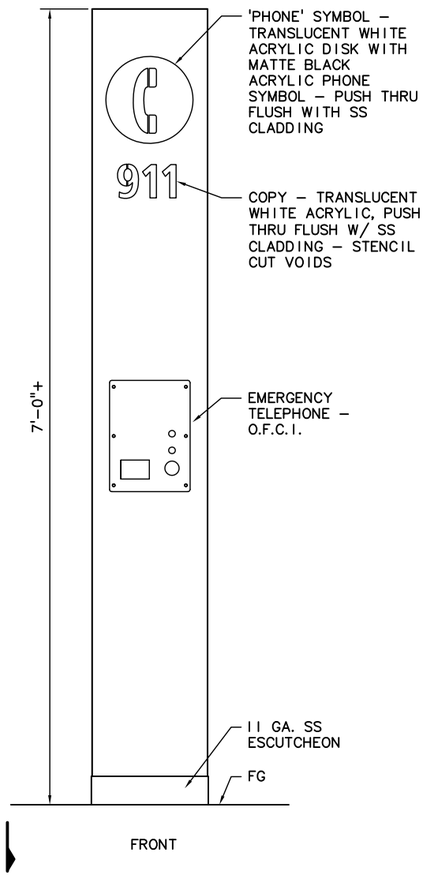
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S–121	RH100186JB	

NOTES:

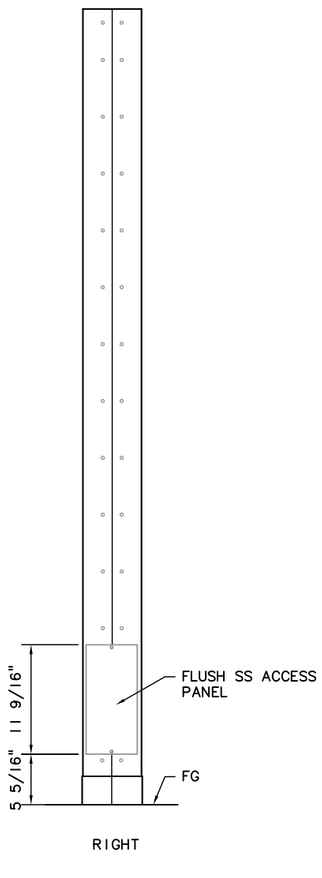
1. STAINLESS STEEL FINISH: AS SPECIFIED.
2. REF. PMLR EAST & WEST SEGMENT ARCHITECTURAL PLANS FOR LOCATIONS.
3. PHONE TO BE LOCATED ON THE PEDESTAL SIDE CLOSEST TO THE CENTER OF PLATFORM.
4. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. PMLR EAST & WEST DRAWINGS.
5. DIGITAL ARTWORK FOR SIGN LAYOUT TO BE PROVIDED BY OWNER.
6. TELEPHONE PROVIDED BY OWNER.



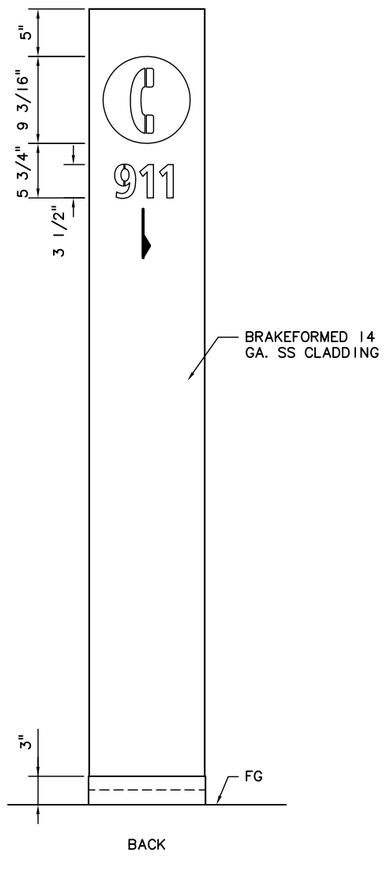
PLAN



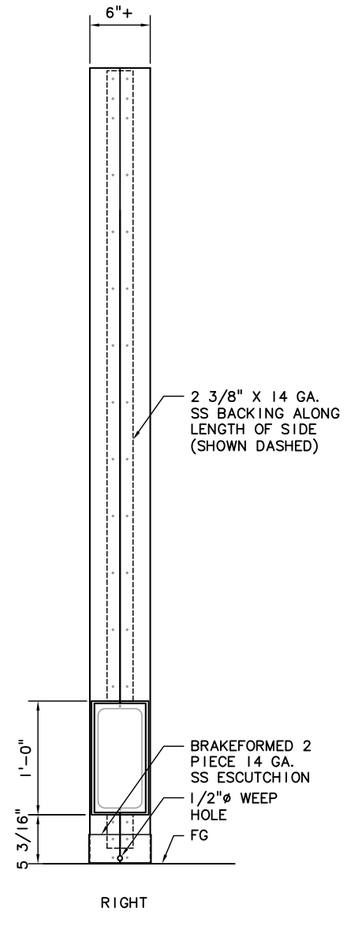
FRONT



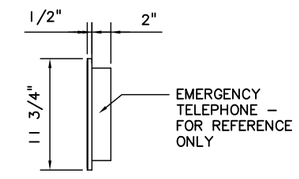
RIGHT



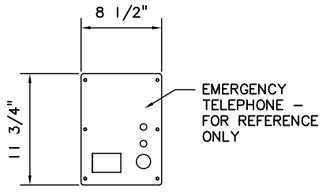
BACK



RIGHT



SIDE



FRONT

TELEPHONE 2
SCALE: 1 1/2" = 1'-0"

EMERGENCY PHONE PEDESTAL ELEVATION 1
SCALE: 1 1/2" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

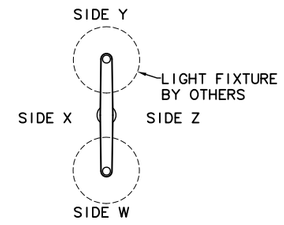
Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

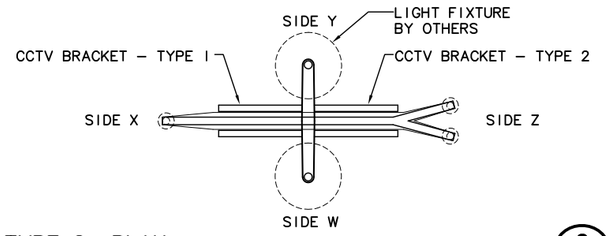
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 46
EMERGENCY PHONE PEDESTAL ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-130	RH100544JB	



TYPE 1 PLAN
SCALE: 1/2" = 1'-0"

1 – A15S-150

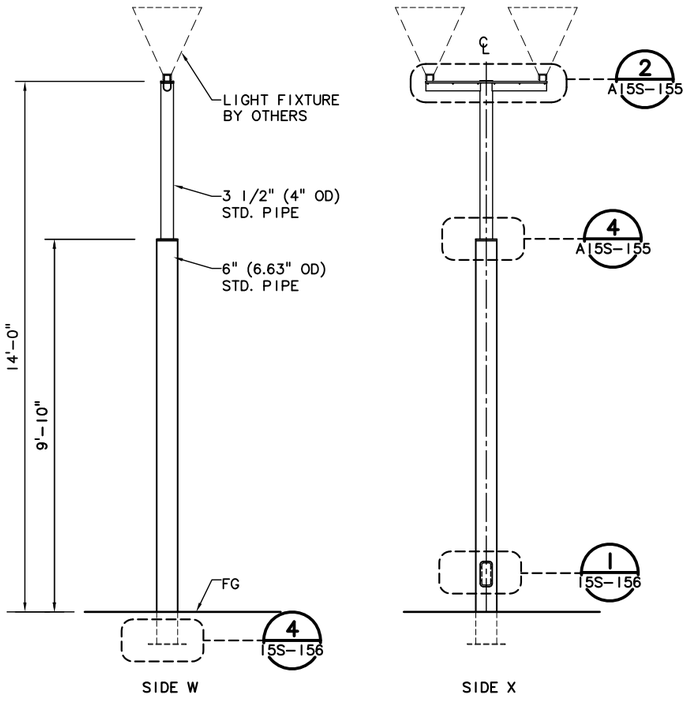


TYPE 2 PLAN
SCALE: 1/2" = 1'-0"

2 – A15S-150

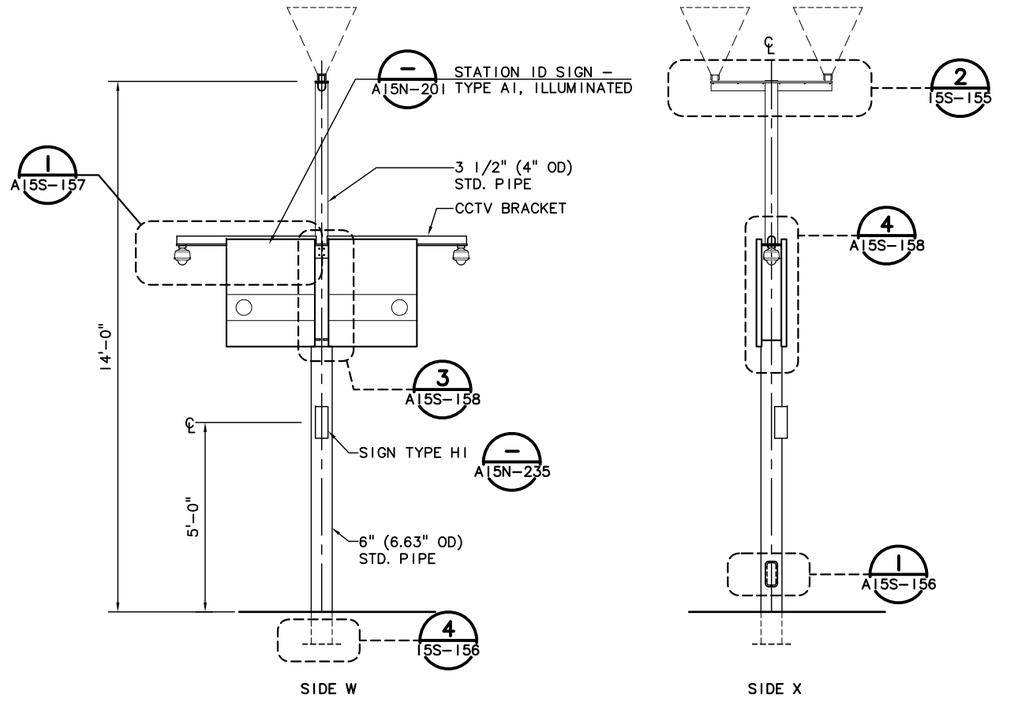
NOTES:

1. SIDE "W" TO BE ORIENTED TO SOUTHBOUND END OF PLATFORM.
2. CCTV BRACKET TYPE AND POSITION VARIES. REF. A15S-153, A15S-154 LIGHT AND CCTV POLE SCHEDULE.
3. REF. A15S-157 FOR CCTV BRACKET TYPE 1 & 2.
4. SIGHT TYPE H1 NOT APPLIED TO ALL LIGHT POLES. REF. A15N-281 FOR LOCATIONS.
5. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. EAST & WEST SEGMENT DRAWING.
6. ELECTRICAL, LIGHT FIXTURE & CCTV CAMERAS BY OTHERS. REF. PMLR EAST & WEST SEGMENT DRAWINGS.



TYPE 1
SCALE: 1/2" = 1'-0"

3 – A15S-150



TYPE 2
SCALE: 1/2" = 1'-0"

4 – A15S-150

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
EAC DRAWN	01-27-12	DATE
RAH CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

CAPITAL PROJECTS AND FACILITIES DIVISION
TRIMET
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

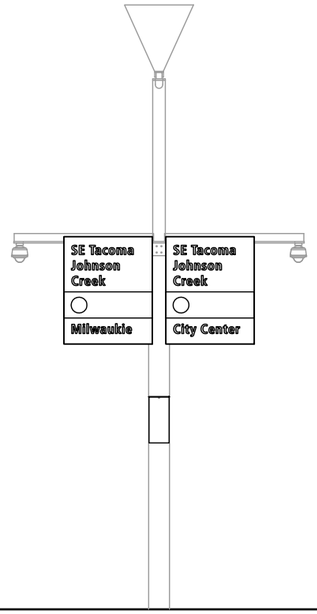
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 47
LIGHT POLE – TYPE 1 & 2
PLAN & ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15S-150	RH100186JB	

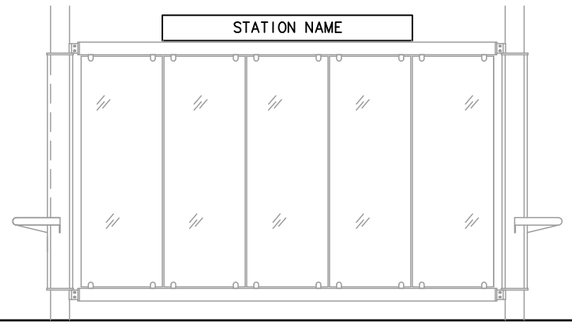
M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15S-150.dwg Mar 22, 2012 1:52pm bmartin

NOTES:

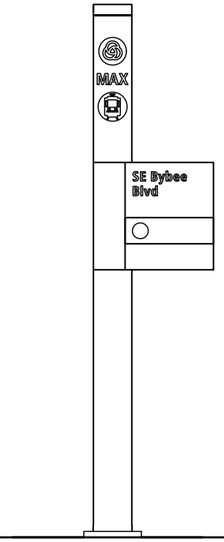
1. REF. PMLR EAST & WEST SEGMENT DRAWINGS FOR QUANTITIES, A15E-006, A15W-003.



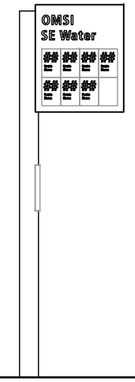
STATION ID SIGN – TYPE A1
LIGHT POLE MOUNTED
REF. A15N-210



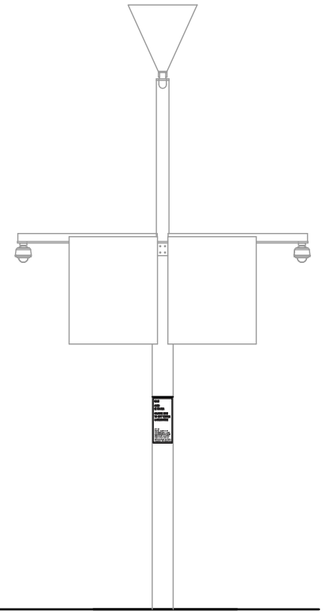
STATION ID SIGN – TYPE C1
WINDSCREEN MOUNTED
REF. A15N-230



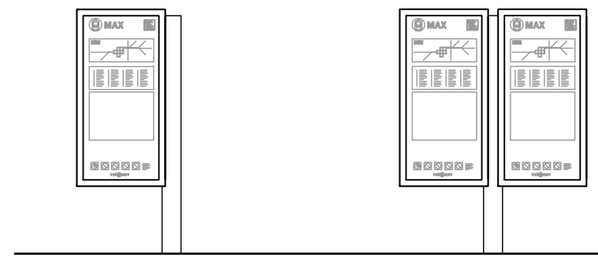
STATION ID PYLON SIGN – TYPE F1
REF. A15N-260



BUS STOP SIGN – TYPE G1
REF. A15N-270

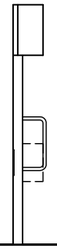


TACTILE SIGN – TYPE H1
REF. A15N-280

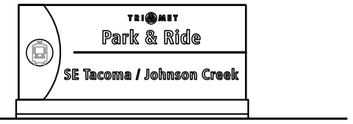


TRANSIT INFORMATION SIGN – TYPE B1
DOUBLE SIDED
REF. A15N-220

TRANSIT INFORMATION SIGN – TYPE B2
SINGLE SIDED
REF. A15N-220



FARE ZONE SIGN – TYPE D1
REF. A15N-216



PARK & RIDE SIGN – TYPE E1
REF. A15N-217

SIGN FAMILY

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12 DATE	
JFC DRAWN	01-27-12 DATE	
DFS CHECKED	03-19-12 DATE	
KHF APPROVED	03-23-12 DATE	

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

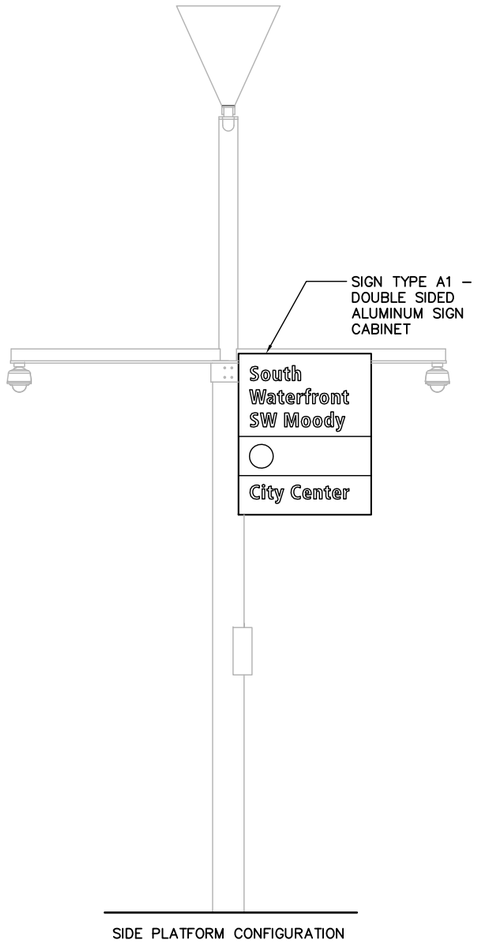
PORTLAND TO MILWAUKIE LRT
AMENITIES
SIGN FAMILY

Exhibit T 48

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-200	RH100544JB	

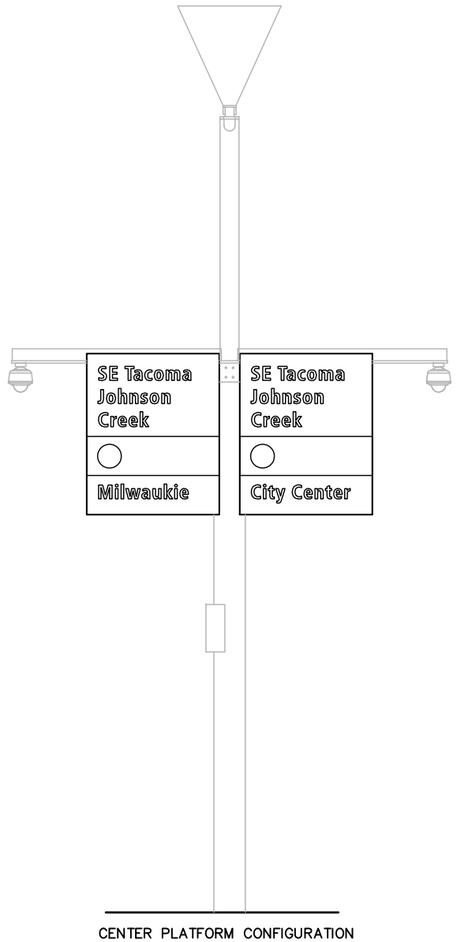
NOTES:

1. COORDINATE SIGN INSTALLATION FIT–UP WITH LIGHT POLE FABRICATION. REF. A15S–150.
2. DIGITAL ARTWORK FOR SIGN LAYOUTS PROVIDED BY OWNER.
3. ELECTRICAL TO LIGHT FIXTURE BY OTHERS. REF. PMLR EAST & WEST DRAWINGS.



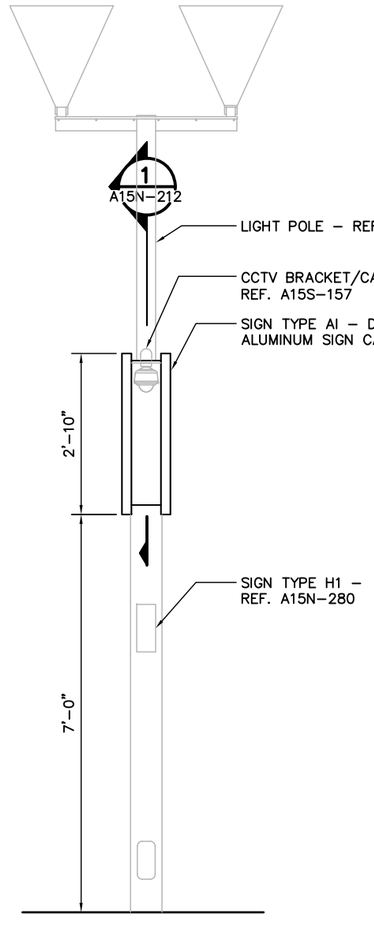
SIDE PLATFORM CONFIGURATION

TYPE A1 – SINGLE SIGN 1
SCALE: 3/4" = 1'–0"

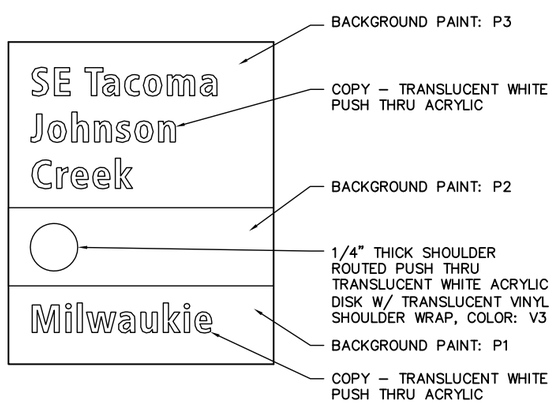


CENTER PLATFORM CONFIGURATION

TYPE A1 – DOUBLE SIGN 2
SCALE: 3/4" = 1'–0"



TYPE A1 – END VIEW 3
SCALE: 3/4" = 1'–0"



TYPE A1 – SIGN FACE DETAIL 4
SCALE: 1 1/2" = 1'–0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01–27–12 DATE	
JFC DRAWN	01–27–12 DATE	
DFS CHECKED	03–19–12 DATE	
KHF APPROVED	03–23–12 DATE	

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 49
STATION ID SIGN – TYPE A1
ELEVATION

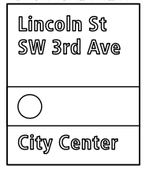
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N–210	RH100544JB	

M:\2_VC_PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-210.dwg
Mar 22, 2012 2:32pm
jcarlson

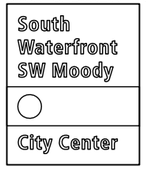
NOTES:

1. DIGITAL ARTWORK FOR SIGN LAYOUTS PROVIDED BY OWNER.
2. LAYOUT THE SAME FOR BOTH SIDES OF CABINET.
3. REFERENCE A15S-153 AND A15S-154 POLE SCHEDULE FOR LOCATIONS.

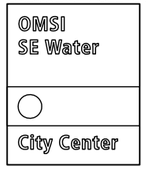
LIGHT POLE #: 1-1, 1-4, 1-5
SIGN CABINET: POLE SIDE Z



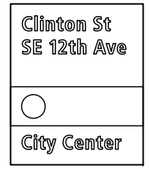
LIGHT POLE #:2-2, 2-4, 2-5
SIGN CABINET: POLE SIDE Z



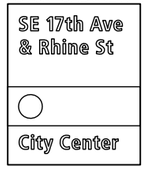
LIGHT POLE #:3-2, 3-5, 3-6 SIGN
CABINET: POLE SIDE Z



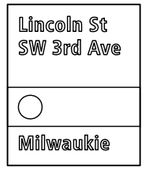
LIGHT POLE #: 4-3, 4-4, 4-6
SIGN CABINET: POLE SIDE Z



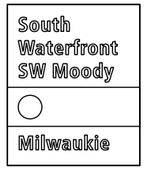
LIGHT POLE #: 5-2, 5-3, 5-5
SIGN CABINET: POLE SIDE Z



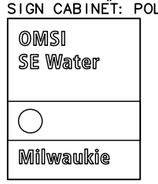
LIGHT POLE #: 1-1, 1-4, 1-5
SIGN CABINET: POLE SIDE X



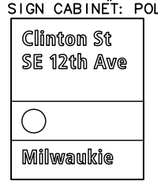
LIGHT POLE #: 2-6, 2-7, 2-9
SIGN CABINET: POLE SIDE X



LIGHT POLE # 3-7, 3-8, 3-11,
SIGN CABINET: POLE SIDE X

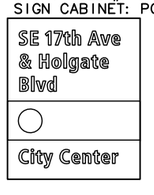


LIGHT POLE #: 4-3, 4-4, 4-6
SIGN CABINET: POLE SIDE X

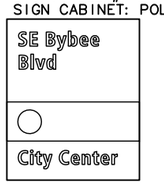


LIGHT POLE #: 5-2, 5-3, 5-5
SIGN CABINET: POLE SIDE X

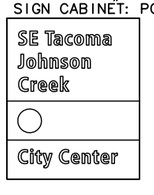
LIGHT POLE #: 6-2, 6-3, 6-5
SIGN CABINET: POLE SIDE Z



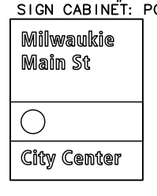
LIGHT POLE #: 7-1, 7-3, 7-4
SIGN CABINET: POLE SIDE Z



LIGHT POLE #: 8-3, 8-6, 8-7
SIGN CABINET: POLE SIDE Z

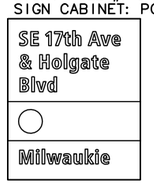


LIGHT POLE #: 9-3, 9-5, 9-6
SIGN CABINET: POLE SIDE Z

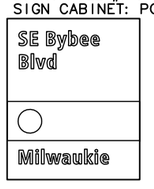


LIGHT POLE #: 10-2, 10-5, 10-6,
10-8, 10-10, 10-11
SIGN CABINET : POLE SIDE X & Z

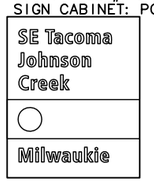
LIGHT POLE #: 6-2, 6-3, 6-5
SIGN CABINET: POLE SIDE X



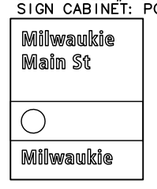
LIGHT POLE #: 7-1, 7-3, 7-4
SIGN CABINET: POLE SIDE X



LIGHT POLE #: 8-3, 8-6, 8-7
SIGN CABINET: POLE SIDE X



LIGHT POLE #: 9-3, 9-5, 9-6
SIGN CABINET: POLE SIDE X



TYPE A1 LAYOUTS

SCALE: 3/4" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

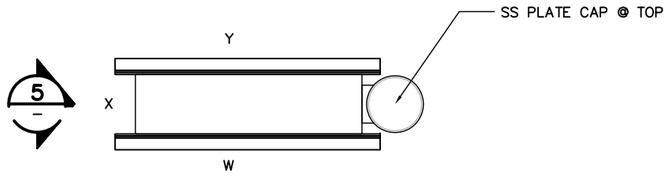
Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

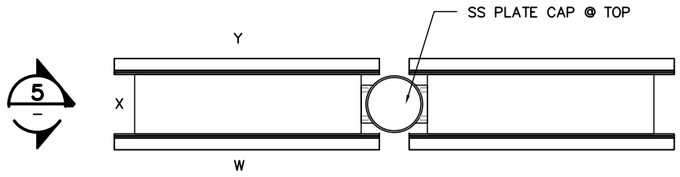
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 50
STATION ID SIGN - TYPE A1
LAYOUTS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-211	RH100544JB	



TYPE B1 – PLAN
SCALE: 1 1/2" = 1'–0"

1

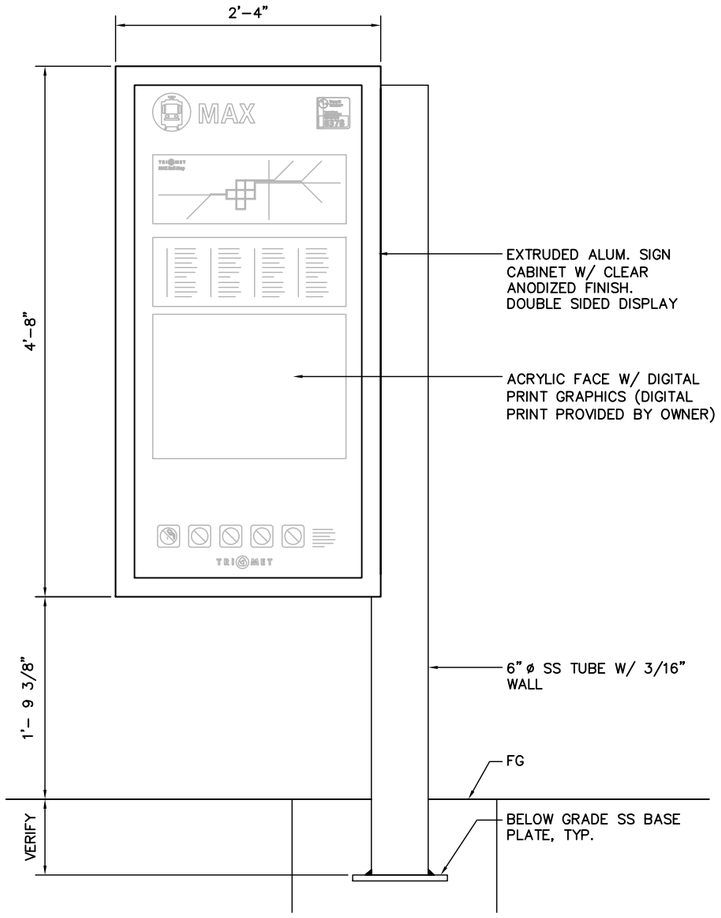


TYPE B2 – PLAN
SCALE: 1 1/2" = 1'–0"

2

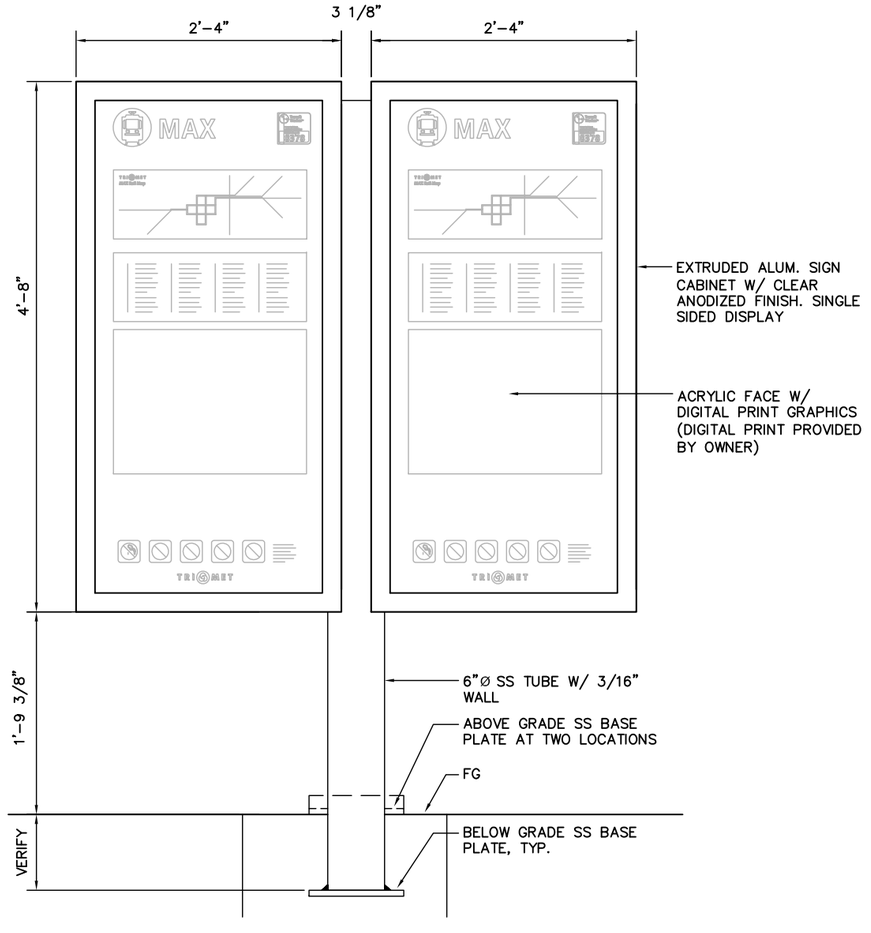
NOTES:

1. REF. PMLR EAST & WEST SEGMENT ARCHITECTURAL PLANS FOR LOCATIONS.
2. ABOVE GRADE BASE PLATE REQUIRED AT BYBEE STATION, REF. A15E–443.
3. FOUNDATION & ANCHOR BOLTS BY OTHERS. REF. PMLR EAST & WEST SEGMENT DRAWINGS.
4. ELECTRICAL TO LIGHT FIXTURE BY OTHERS. REF. PMLR EAST & WEST SEGMENT ELECTRICAL DRAWINGS.



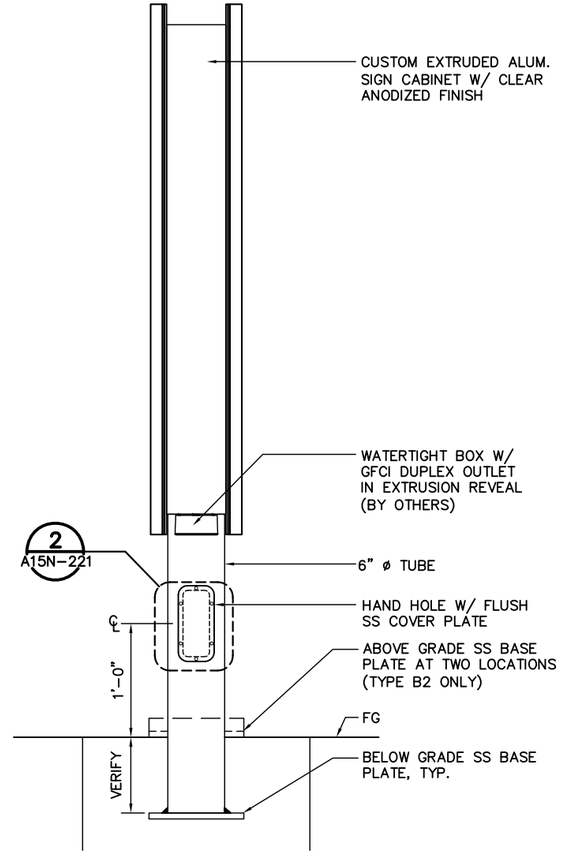
TYPE B1 – ELEVATION W
SCALE: 1 1/2" = 1'–0"

3



TYPE B2 – ELEVATION W
SCALE: 1 1/2" = 1'–0"

4



TYPE B1 & B2 – ELEVATION X
SCALE: 1 1/2" = 1'–0"

5

NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR	DESIGNED	01–27–12 DATE
JFC	DRAWN	01–27–12 DATE
DFS	CHECKED	03–19–12 DATE
KHF	APPROVED	03–23–12 DATE

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

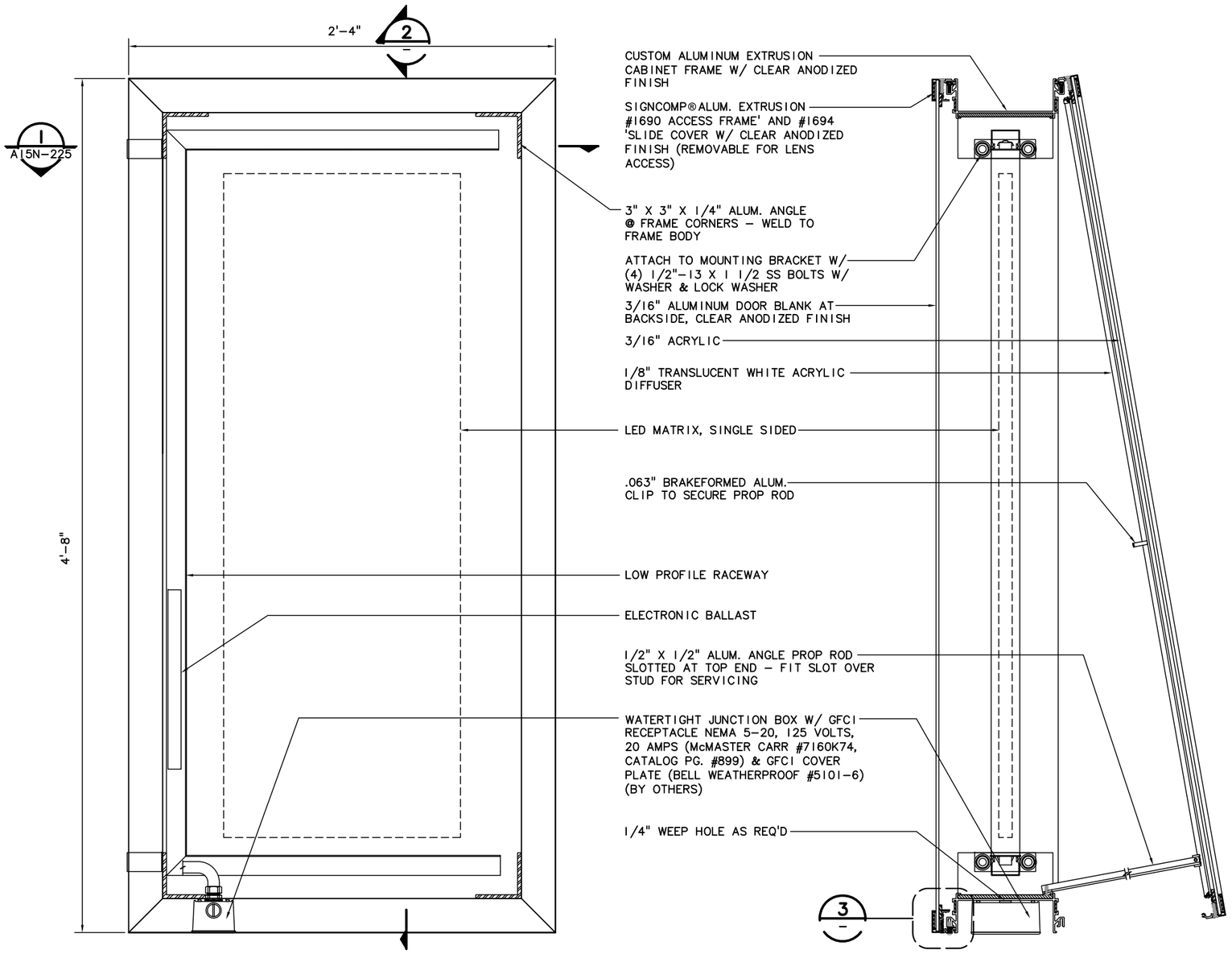
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 51
TRANSIT INFORMATION SIGN – TYPE B1, B2
PLAN & ELEVATION

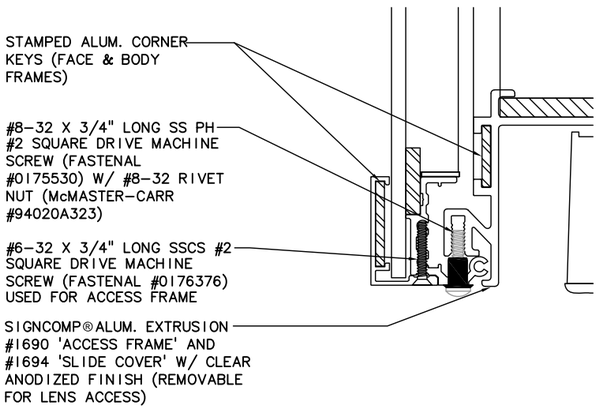
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N–220	RH100544JB	

jcarlson Mar 22, 2012 2:54pm
M:\2_VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-220.dwg

NOTES:

1. DOOR HINGE ALLOWS FOR 45° MAX. OPEN ANGLE
2. ALUM. ANGLE PROP ROD – ONE PER CABINET FACE, ON COLUMN SIDE





TYPE B2 – SINGLE SIDED CABINET DETAIL 1
SCALE: 3" = 1'-0"

TYPE B2 – SECTION 2
SCALE: 3" = 1'-0"

TYPE B2 – ACCESS FRAME DETAIL 3
SCALE: 1'-0" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

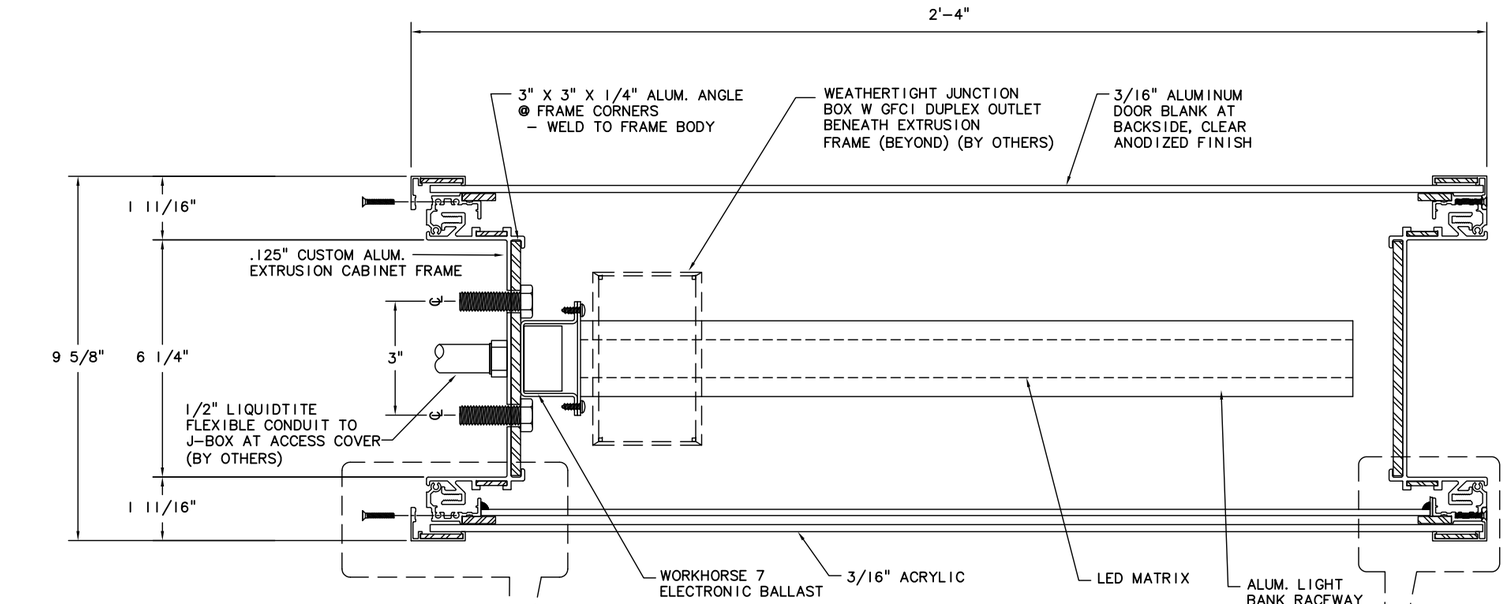
PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 52
TRANSIT INFORMATION SIGN – TYPE B2
DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-224	RH100544JB	

M:\2_VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-224.dwg Mar 21, 2012 9:42pm bmartin

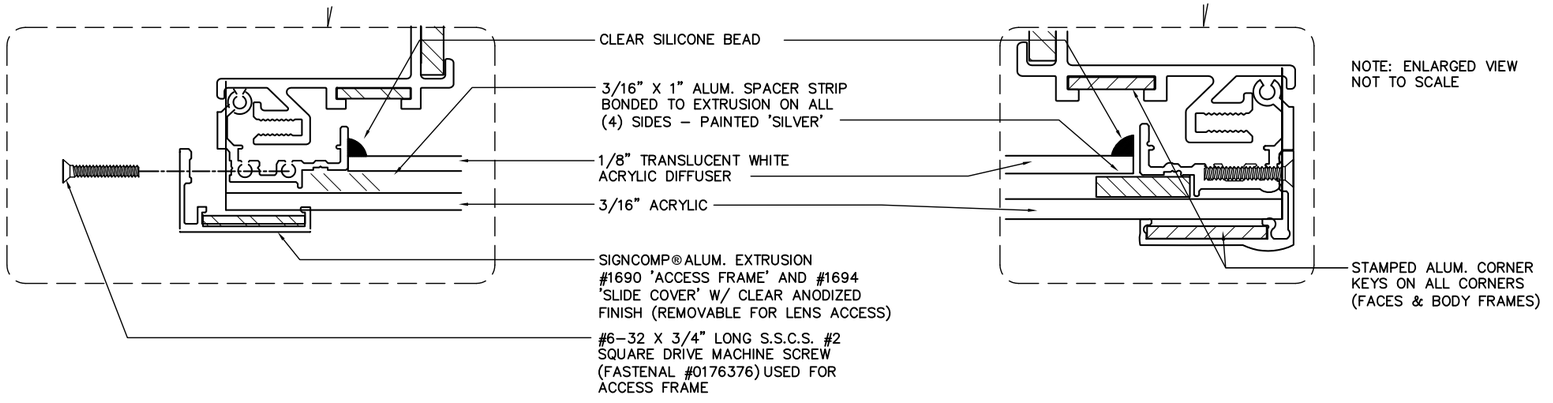
NOTES:

1. FACE FRAMES ARE CUT 1/16" LARGER THAN CABINETS FOR PROPER FIT.



TYPE B2 – PLAN SECTION (1)

SCALE: 6" = 1'-0"



NO.	DATE	BY / CHK.	APPD.	REVISIONS

MDR (DESIGNED)	01-27-12	DATE
JFC (DRAWN)	01-27-12	DATE
DFS (CHECKED)	03-19-12	DATE
KHF (APPROVED)	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT

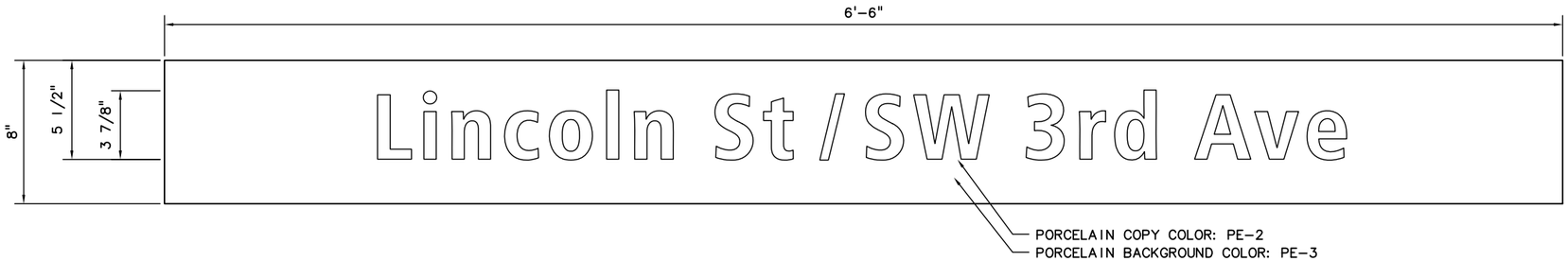
AMENITIES

Exhibit T 53

TRANSIT INFORMATION SIGN – TYPE B2 DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-225	RH100544JB	

NOTES:
1. DIGITAL ARTWORK FOR SIGN LAYOUTS PROVIDED BY OWNER.



TYPE C1 – TYPICAL SIGN LAYOUT
SCALE: 3" = 1'-0"

1

Lincoln St / SW 3rd Ave

South Waterfront / SW Moody

OMSI / SE Water

Clinton St / SE 12th Ave

SE 17th Ave & Rhine St

SE 17th Ave & Holgate Blvd

SE Bybee Blvd

SE Tacoma / Johnson Creek

Milwaukie / Main St

SE Park Ave

TYPE C1 – SIGN LAYOUTS
SCALE: 1" = 1'-0"

2

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayor/Reed

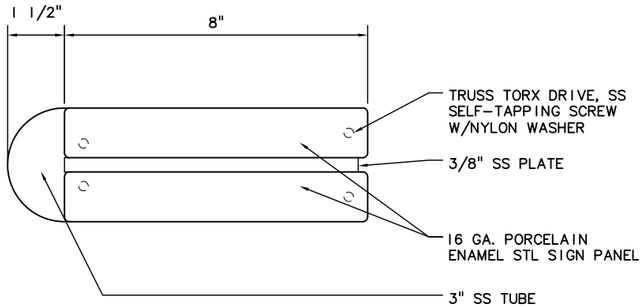
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: | DATE: | APPROVED: | DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 54
STATION ID SIGN – TYPE C1
LAYOUTS

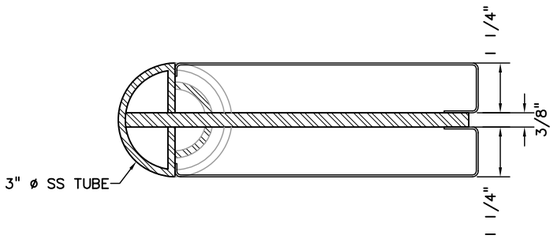
SCALE: AS NOTED | DRAWING NO.: A15N-231 | CONTRACT NO.: RH100544JB | SHEET NO.:

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-231.dwg Mar 21, 2012 9:47pm bmartin

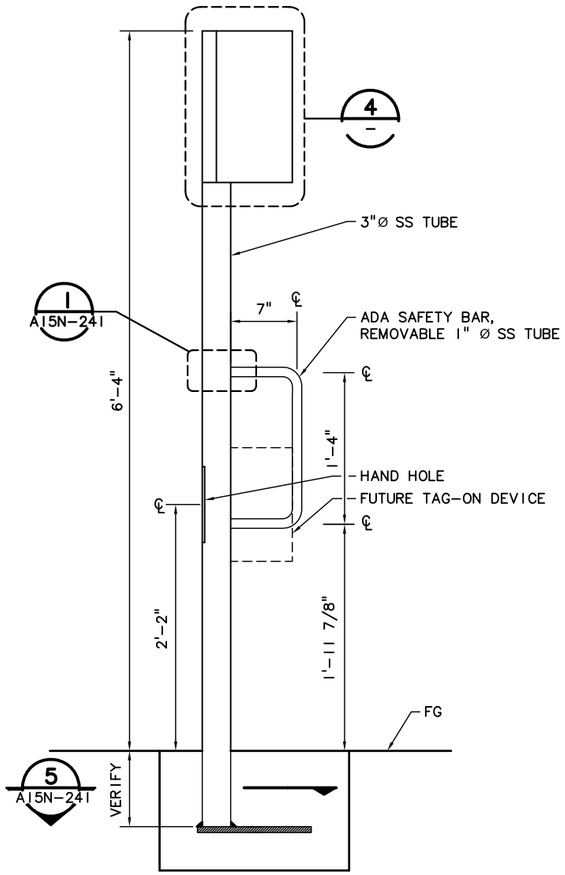


TYPE DI – PLAN
SCALE: 6" = 1'-0"

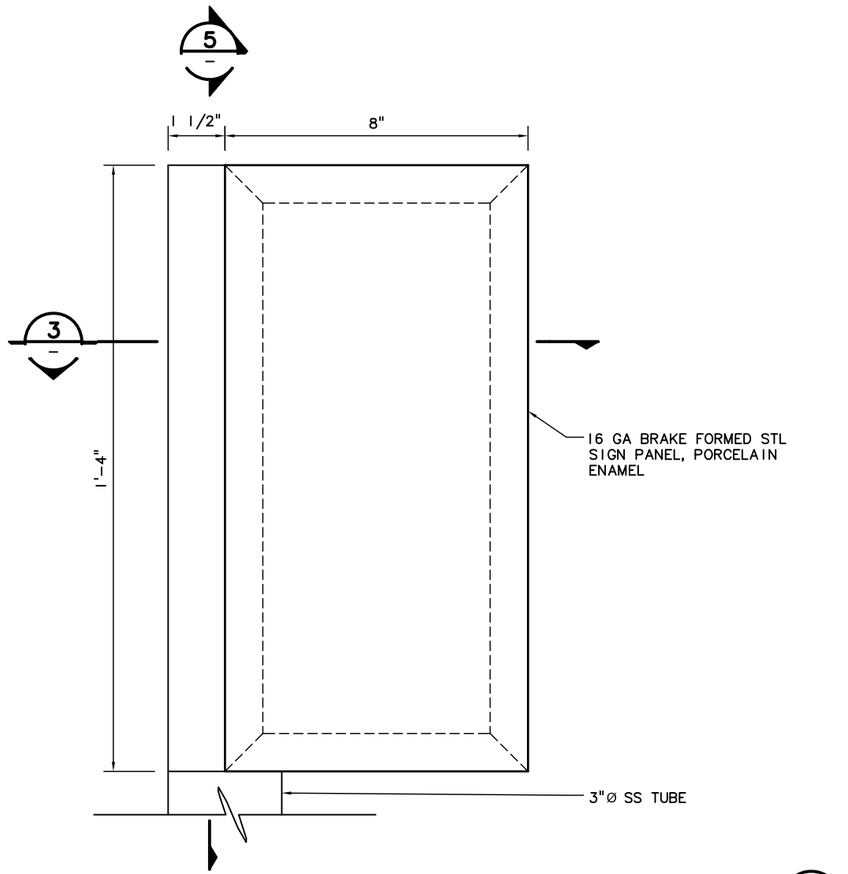
NOTES:
1. DIGITAL ARTWORK FOR SIGN LAYOUT PROVIDED BY OWNER.
2. REFERENCE PMLR EAST & WEST ARCHITECTURAL PLANS FOR LOCATIONS.



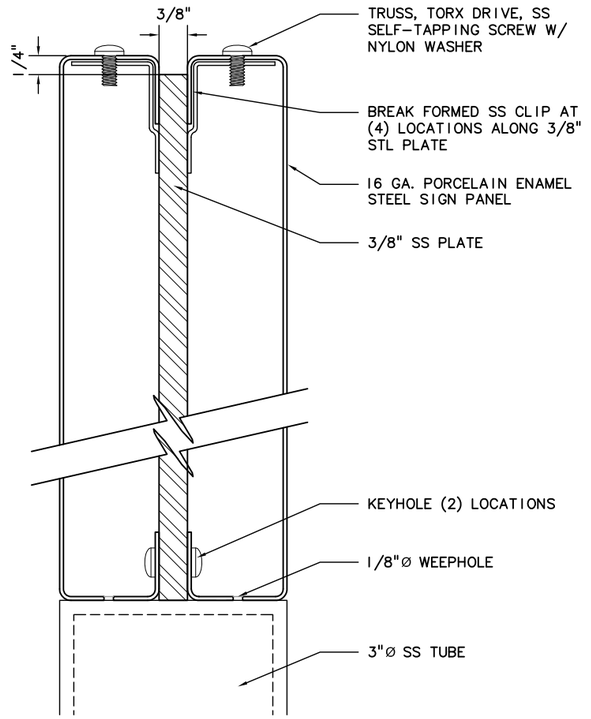
TYPE DI – PLAN SECTION
SCALE: 6" = 1'-0"



TYPE DI – SIGN POST – ELEVATION
SCALE: 1 1/2" = 1'-0"



TYPE DI – SIGN DETAIL
SCALE: 6" = 1'-0"



TYPE DI – SECTION
SCALE: 1'-0" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

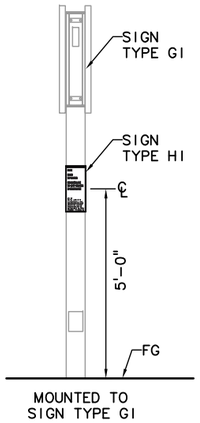
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

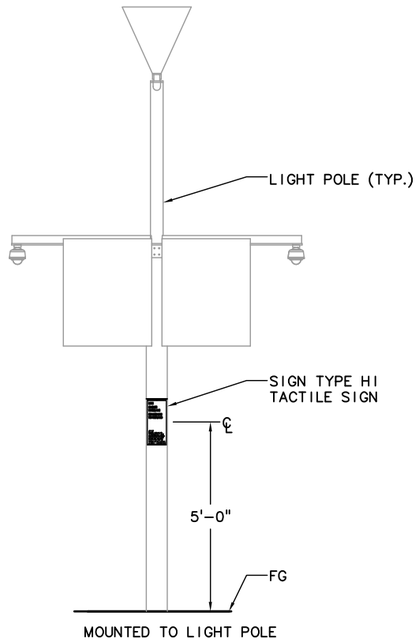
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 55
FARE ZONE SIGN – TYPE DI
PLAN, ELEVATION & DETAILS

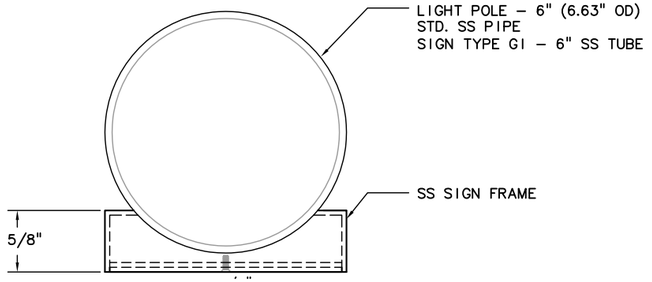
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-240	RH100544JB	

M:\2 VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-240.dwg Mar 21, 2012 9:48pm bmartin

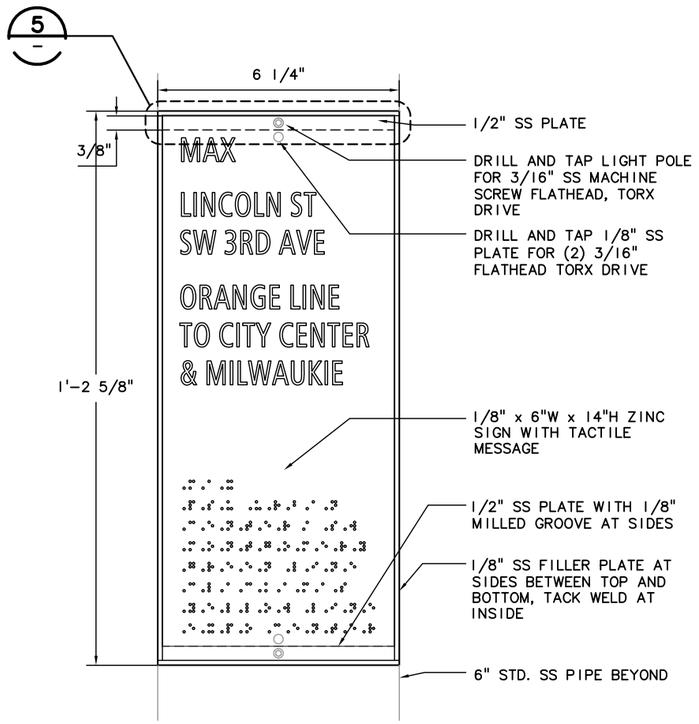




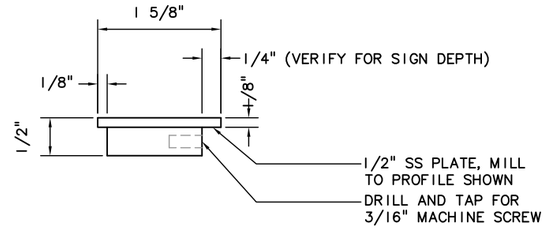
TYPE HI – ELEVATION
SCALE: 1/2" = 1'-0"



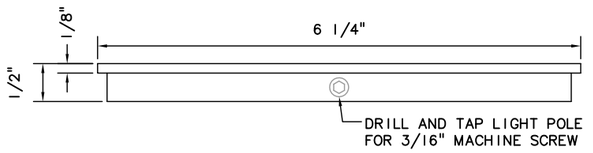
TYPE HI – PLAN
SCALE: 6" = 1'-0"



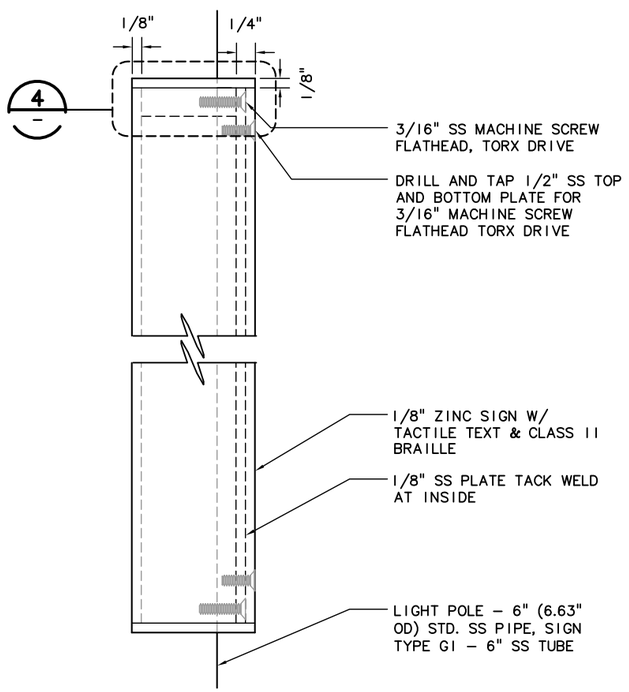
TYPE HI – FRONT ELEVATION
SCALE: 6" = 1'-0"



TOP/BOTTOM FRAME – DETAIL SIDE VIEW
SCALE: 1'-0" = 1'-0"



TOP/BOTTOM FRAME – DETAIL FRONT VIEW
SCALE: 1'-0" = 1'-0"



TYPE HI – SIDE ELEVATION
SCALE: 1'-0" = 1'-0"

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET
CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 56
TACTILE SIGN – TYPE HI
PLAN, ELEVATION & DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-280	RH100544JB	

LIGHT POLE 1-1
SIDE Y

LIGHT POLE 1-5
SIDE W

LIGHT POLE 2-1, 2-10
SIDE Y

LIGHT POLE 2-5, 2-6
SIDE W

LIGHT POLE 3-1, 3-7
SIDE Y

LIGHT POLE 3-6, 3-12
SIDE W

LIGHT POLE 4-3
SIDE Y

LIGHT POLE 4-6
SIDE W

LIGHT POLE 5-2
SIDE Y

LIGHT POLE 5-5
SIDE W

SIGN TYPE G1:
NORTHBOUND

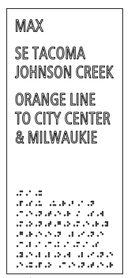
SIGN TYPE G1:
NORTHBOUND

LIGHT POLE 6-2
SIDE Y

LIGHT POLE 6-5
SIDE W

LIGHT POLE 7-1
SIDE Y

LIGHT POLE 7-4
SIDE W



LIGHT POLE 8-3
SIDE Y

LIGHT POLE 8-7
SIDE W

LIGHT POLE 9-3
SIDE Y

LIGHT POLE 9-6
SIDE W

LIGHT POLE 10-2, 10-8
SIDE Y

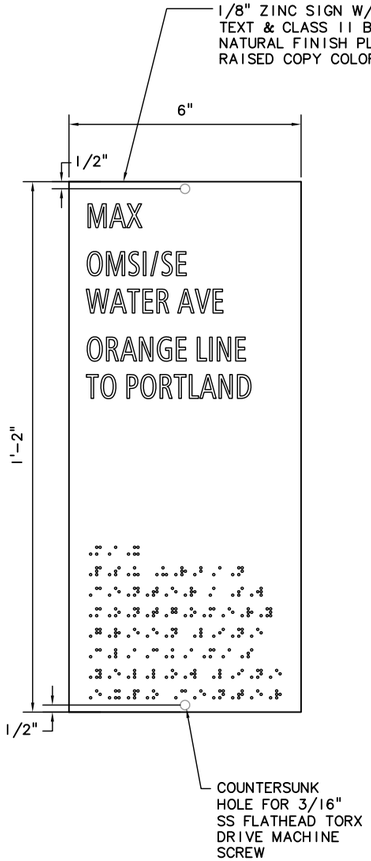
LIGHT POLE 10-6, 10-10
SIDE W

SIGN TYPE G1:
SOUTHBOUND

SIGN TYPE G1:
SOUTHBOUND

NOTES:

1. DIGITAL ARTWORK FOR SIGN LAYOUT PROVIDED BY OWNER.
2. FABRICATOR IS RESPONSIBLE FOR BRAILLE TEXT.
3. REFERENCE A15S-153 AND A15S-154 POLE SCHEDULE FOR LIGHT POLE LOCATIONS.
4. REFERENCE:
   A15E-400
   A15E-401
   A15W-227
   A15W-228
   PLAN VIEW FOR SIGN TYPE G1 LOCATIONS



TYPE H1 – LAYOUTS

SCALE: 3" = 1'-0"

1

TYPE H1 – ENLARGED LAYOUT

SCALE: 6" = 1'-0"

2

NO.	DATE	BY CHK.	APPD.	REVISIONS

MDR DESIGNED	01-27-12	DATE
JFC DRAWN	01-27-12	DATE
DFS CHECKED	03-19-12	DATE
KHF APPROVED	03-23-12	DATE

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

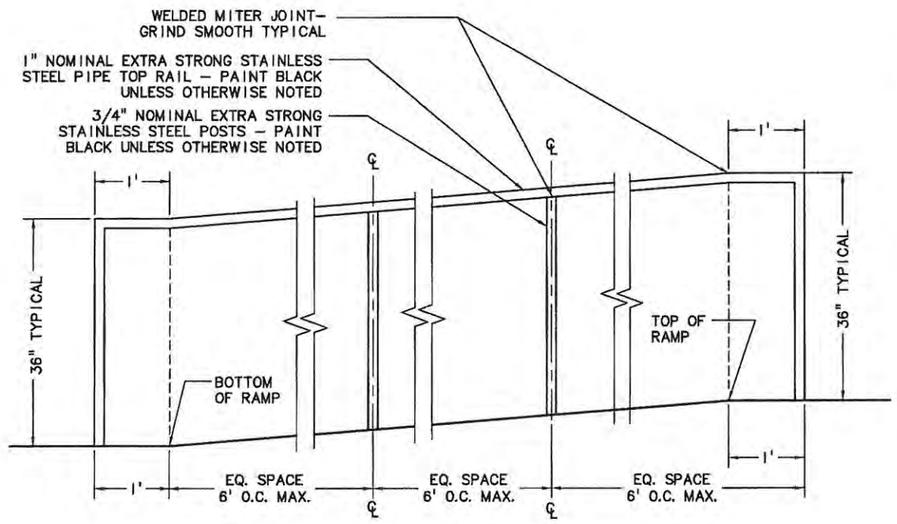
SUBMITTED:	DATE:	APPROVED:	DATE:

PORTLAND TO MILWAUKIE LRT
AMENITIES Exhibit T 57
TACTILE SIGN – TYPE H1
LAYOUTS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15N-281	RH100544JB	

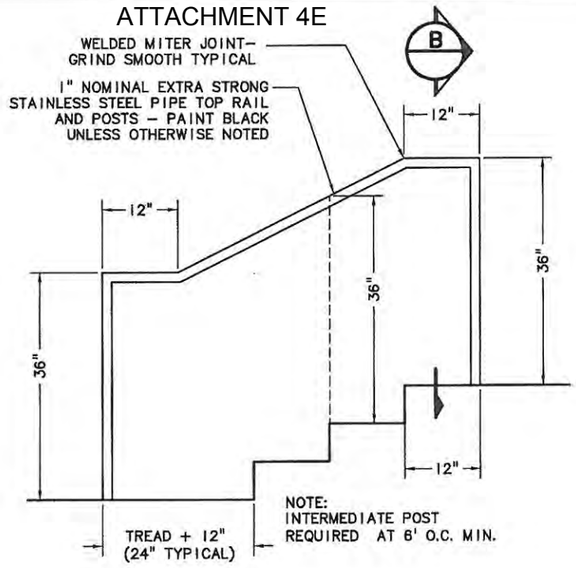
M:\2_VC PROJECTS\TMA\OUT\2012-03-23 100%\DWGS\A15N-281.dwg
bmartin Mar 21, 2012 10:00pm

ATTACHMENT 4E

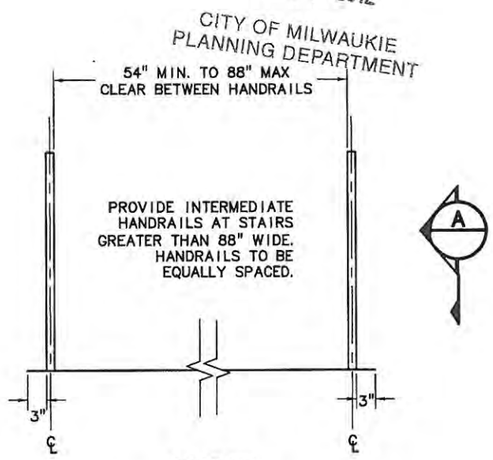


RAILING – TYPE 12A HANDRAIL AT RAMP (1)

SCALE: 1"=1'-0"



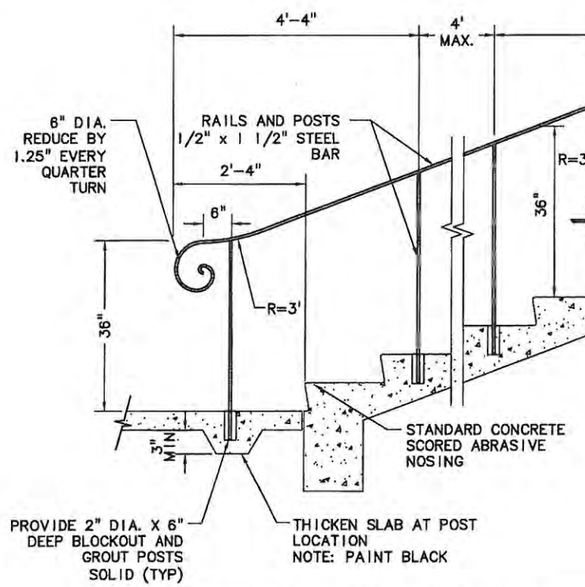
A ELEVATION



B SECTION

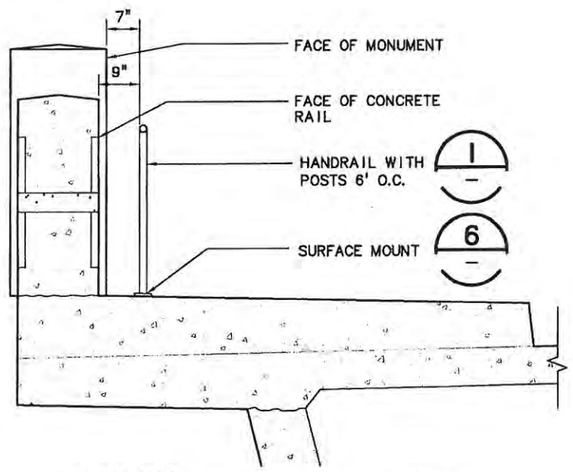
RAILING – TYPE 12A P.C.C. STEPS WITH HANDRAIL (2)

SCALE: 1"=1'-0"



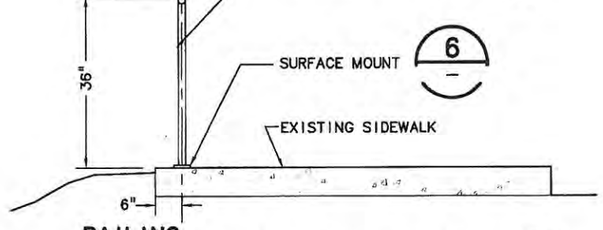
RAILING – CORTI PROPERTY (3)

SCALE: 3/4"= 1'-0"



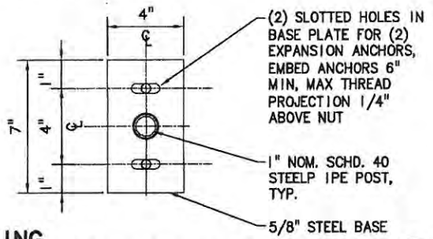
RAILING HANDRAIL AT BYBEE DECK (4)

SCALE: 3/4" = 1'-0"



RAILING HANDRAIL AT EXISTING SIDEWALK (5)

SCALE: 3/4" = 1'-0"



RAILING SURFACE MOUNT AT PCC SIDEWALK (6)

SCALE: 3" = 1'-0"

NO.	DATE	BY	CHK	APPD.	REVISIONS
	5-14-12	RAH	CMR		ISSUED FOR CONSTRUCTION

CHECK PRINT 4-23-12

JMS	DESIGNED	06-01-11
SPT	DRAWN	06-01-11
RAH	CHECKED	04-17-12
	APPROVED	5-14-12

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayor/Reed

DAVID EVANS AND ASSOCIATES INC.

SUBMITTED: DATE: 5-14-12

TRIMET CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

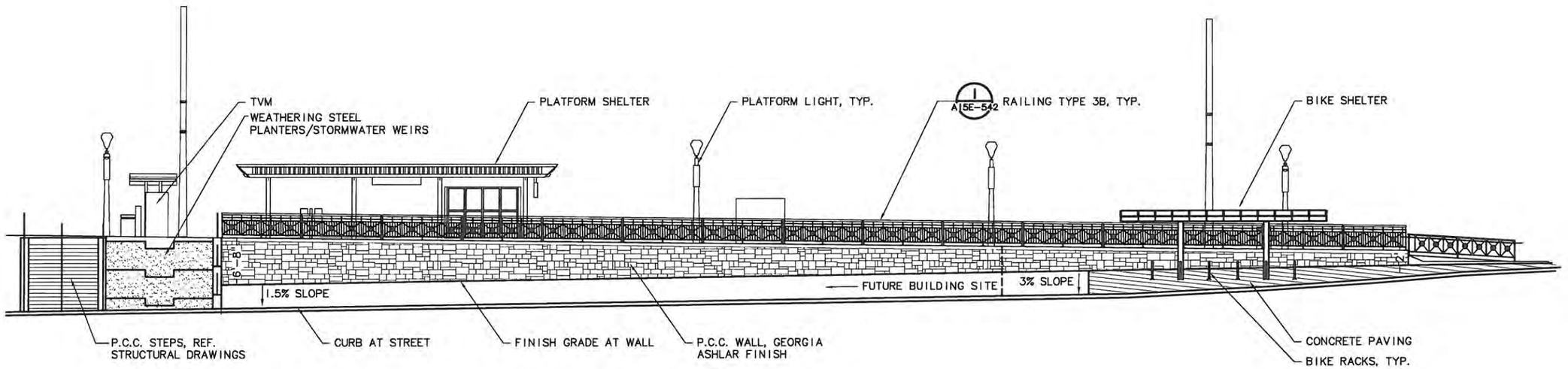
APPROVED: DATE: 5-14-12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
DETAILS – RAILINGS

SCALE: VARIES | DRAWING NO.: A15E-549 | CONTRACT NO.: RH100544JB | SHEET NO.:

R:\15-CD DUMP\15E-EASTWAR ROOM\05- Architectural\A15E-549.dwg, 4/23/2012 1:25:41 PM, mcbridej

ATTACHMENT 4F



WALL – EAST ELEVATION
SCALE: 1/8" = 1'-0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	JMS		CMR	ISSUED FOR CONSTRUCTION

RAH DESIGNED	09-12-11 DATE
JC DRAWN	06-01-11 DATE
JMS CHECKED	04-17-12 DATE
APPROVED	5-14-12 DATE

PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

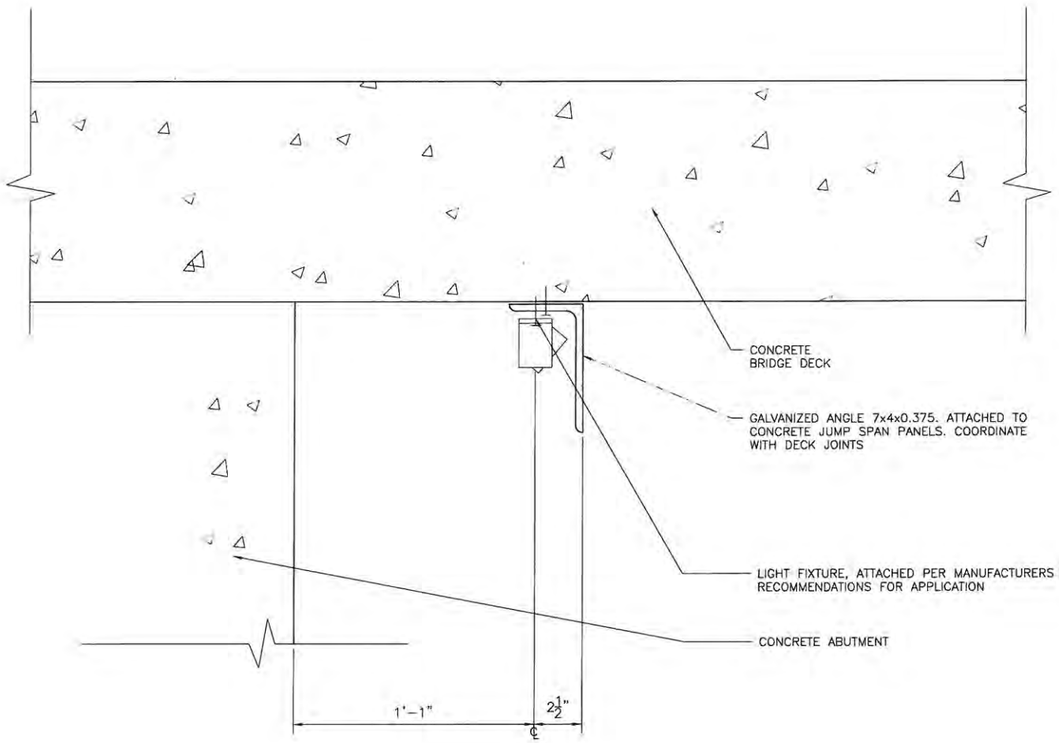
TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED:	DATE:	APPROVED:	DATE:
	5-14-12		5-14-12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
ELEVATION – MILWAUKIE PLATFORM EAST ELEVATION

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS SHOWN	WALL ELEV	RH100544JB	

ATTACHMENT 4G



SHIELD AT KELLOGG JUMP SPAN (1)
SCALE: 3" = 1'-0"

MM DESIGNED	05-01-11 DATE	TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON	PORTLAND TO MILWAUKIE LRT EAST SEGMENT ARCHITECTURAL KELLOGG BRIDGE JUMP SPAN LIGHTING SHEILD
MH DRAWN	05-20-11 DATE	TRIMET CAPITAL PROJECTS AND FACILITIES DIVISION 710 N.E. HOLLADAY STREET PORTLAND, OREGON 97232	
CHECKED	DATE		
APPROVED	DATE		

SUBMITTED:	DATE:	APPROVED:	DATE:	SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
	05-14-12		05-14-12	VARIES		RH100544JB	

Alligood, Li

From: Larsen, Tom
Sent: Wednesday, May 02, 2012 11:41 AM
To: Alligood, Li
Subject: Light Rail Station; CSU-12-03 etc.

Li,
I have no specific comment on this application. Any construction on the site must comply with the applicable Oregon Specialty Codes as adopted by the City of Milwaukie.
Thanks,

Tom Larsen, CBO
Building Official, City of Milwaukie
Phone: (503) 786-7611
Fax: (503) 786-7612

MEMORANDUM

TO: Community Development Department

THROUGH: Gary Parkin, Director of Engineering

FROM: Zachary Weigel, Civil Engineer

RE: Light Rail Station
CSU-12-03, DR-12-04, VR12-02

DATE: May 11, 2012

TriMet proposes to build a light rail station in the Downtown Office Zone.

Recommended Conditions of Approval

None

Advisory Notes

The following are advisory notes for the applicant. The advisory notes are a list of requirements that may apply to the proposed development at the time of building permit. The advisory notes are for informational purposes only.

Storm Water Management

Submit a storm water management plan prepared by a qualified professional engineer with required development/building permits as part of the proposed development. The plan shall conform to Section 2 – Stormwater Design Standards of the City of Milwaukie Public Works Standards.

- The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development site.
- The storm water management plan shall demonstrate compliance with water quality standards in accordance with the City of Portland Stormwater Management Manual.
- Development/building permits will not be issued for construction until the storm water management plan has been approved by the City of Milwaukie.

MILWAUKIE
Dogwood City of the West

Memorandum

To: **Design and Landmarks Committee**

From: **Kenny Asher, Community Development and Public Works Director, PMLR Project Manager**
Wendy Hemmen, P.E., Light Rail Design Coordinator

CC: **Li Alligood, Assistant Planner**

Date: **May 14, 2012**

Re: **Comments on PMLR Station Design Review Application (DR-12-04)**

The purpose of this memo is to share with the DLC staff comments on the proposed design, having contributed to the design process over the past year and a half. For the purpose of this memo, the term "station" is meant to describe the platforms and trackway between Adams Street and Lake Road, and associated ramps and structures including the ramp structures above Lake Road.

Milwaukie staff has met frequently with TriMet's design team since the Preliminary Engineering phase of the project came to an end in 2010. We offered specific suggestions and feedback to help the design team work through its process; during public meetings over the last six months, the DLC provided design guidance and significantly shaped the project that TriMet has submitted for Design Review.

As we participated in the design and facilitated the public discussion over the past year, City staff encouraged the design team to design a light rail station that would reflect the Downtown Design Guidelines and address City Council's recommendations on the Conceptual Design Report. With that background, we offer the following observations and comments about the progression and status of the station design for the DLC's consideration:

- *The City asked TriMet to coordinate station design with Milwaukie's South Downtown development plans.*

  The station design reflects the adopted South Downtown Concept Plan's "transit connection" concept in the following ways:

  - The principal connection to the station is from 21st Ave and Adams St via a crescent-shaped sidewalk that guides pedestrians and bicycles across three rail tracks to the station.

- The secondary connection to the station a direct pedestrian connection between the south end of the station and Lake Rd via a staircase.

- *The City asked TriMet to design the station in anticipation of a joint development project that will occur on the "triangle site" adjacent to the northbound platform.*

  The design team has designed the platform and necessary components (access, fixtures, and public art) to allow development of the remainder of the site. The proposed platform and plaza design supports the active uses desired on the site in the future. The submitted materials provide information about the design and scale of the retaining walls on site, which will be the primary built feature until such a time as the station building is developed. Staff looks forward to seeing additional information about the detailing and scale of the walls viewed from 21st Ave.

- *The City asked TriMet to consult with the DLC on the design of the station to ensure that the design supports future development on adjacent parcels and enhances pedestrian connections in the area.*

  The design team has consulted with the DLC on numerous occasions to refine the design of the station, including connection points between the platform and the street network; and understanding future platform connections with the future building; and the relationship between each.

- *The City asked TriMet to develop the station design to ensure that platform infrastructure and amenities are located outside of the 21st Ave public right-of-way.*

  The proposed platform infrastructure and amenities are contained entirely on site. The station was pulled to the south from 21st Ave right of way. The railing is minimized to allow better pedestrian circulation on the westerly public sidewalk of 21st Ave.

- *The City asked TriMet to coordinate with City staff to design transit shelters and furnishings that are distinctive and complement the character of downtown Milwaukie.*

  - The design team has proposed various options for distinctive shelters and furnishings including: shelter design; OCS poles; railings; platform paving treatments; retaining walls; and site landscaping during community open houses and in multiple meetings with the DLC.

  - With DLC input, the design team has proposed a sloped, glass-roofed shelter with integrated column art that reflects the station's adjacency and connection to nature. The columns and structural steel roof of the shelter will be painted "Milwaukie black" to reflect Milwaukie's downtown standards.

  - The proposal includes distinctive platform elements including: black rounded OCS poles; Milwaukie-specific black railings, trash cans, bench bases, and OCS poles; rusticated ashlar stone formliner retaining walls and safety walls; direct pedestrian access between the south end of the platform and Lake Rd; Milwaukie standard street lighting at the southern pedestrian access; and artwork that emphasizes the pedestrian environment and Milwaukie history.

- *The City asked TriMet to coordinate with City staff to improve the design of platform access; to place an emphasis on designing the access at the north end of each platform to be safe, universally accessible, and welcoming; and to minimize the construction of large retaining walls or ramps at the south end.*

  The access at the north end of the platform is universally accessible; public art and black ornamental railings at the access point are welcoming. Access is provided between 21st Ave and Adams St to the north via a crescent shaped sidewalk and black ornamental railings that guide passengers across three tracks to the station platform. There is a bench located along the from the Adams Street access, which leads to the Main Street plaza area, south downtown, City parks, and the Post Office. The access at the south end is by a straight flight of stairs. The visual mass of the retaining wall at Lake Rd is reduced through the use of human-scale texture and landscaping at the base of the wall and ivy plantings designed to climb the wall. The water quality facility and art work are integrated into the retaining walls.

- *The City asked TriMet to explore options for providing appropriate ADA access to the platforms and consider alternatives to TriMet standards.*

  The TriMet design team has worked with City staff and the Citizens for Accessible Transportation Committee to provide universally accessible access to the platforms from the north side; an alternative access has been provided at the south due to the fact that the grade change at Lake Rd required ramped access that resulted in a longer path of travel for passengers than using the primary access at the north. Elevator access providing an additional ADA route to the station may be obtained with the future building development.

- *The City asked TriMet to carefully design the pedestrian route from the platform to sidewalks on 21st Avenue and Lake Road to be safe, and to use downtown-appropriate streetscape elements, such as landscaping and decorative bollards, to guide pedestrians.*

  The northern pedestrian route from the platform to Adams St and 21st Ave is a crescent-shaped sidewalk on each side of 21st Avenue, as adopted by the South Downtown Concept Plan. It is important for the 21st Avenue sidewalk on both sides to look and feel like part of the City standard sidewalks built with the project, yet retain safety elements to protect pedestrians around the trains. Pedestrians are guided to and from the platform by a combination of ornamental black railings and gates, landscaping, Milwaukie standard bollards, and textured paving. Pedestrians are guided to Lake Rd and 21st Ave via the by black ornamental railings, Milwaukie standard decorative street lights, stormwater landscaping, and integrated public art.

- *The City asked that the station be designed with pedestrian connections at both platform ends to facilitate easy and clear access between the platform and the City's future plaza and Dogwood Park at the south end of Main Street.*

  The pedestrian connection at the north end is at-grade and provides a universally accessible entrance to the platform. Principal connection between the light rail station and the future Main Street plaza will be along Adams St. The pedestrian stair access at the south end of the platform provides an important connection between the station, Lake Rd, Dogwood Park, the future pedestrian bridge across Kellogg Lake, and the future Main Street plaza.

- *The City asked TriMet to integrate station lighting to provide a safe nighttime environment on the platform and under the bridge over Lake Road, such that lighting becomes a defining feature of the station.*

  The design team has submitted an ambient light study of new street lights in the vicinity of the station, and a photometric study of the proposed station and jump span lighting. The photometric study has demonstrated that the proposal will provide a safe nighttime environment on the platform and under the Kellogg Bridge jump span. The platform lighting includes a combination of City of Milwaukie standard fixtures (at the south stair access) and TriMet standard fixtures (on the center platform). The jump span lighting is elegant and simple and will become a defining feature of the Lake Rd access to the future Main St plaza. Lake Rd, 21st Avenue, and Adams Street will have City standard lights.

- *The City asked that the space created under the Kellogg Bridge jump span over Lake Road be well lit and comfortable. This will be an important passageway from the platforms and Lake Road to the plaza.*

  The design team has proposed an elegant and minimalist lighting plan for the Lake Rd jump span. The proposed lighting plan creates a well-lit, comfortable, and visually interesting passage from Lake Rd and 21st Ave to the future Main St plaza. The sidewalks under the bridge are wide to provide adequate pedestrian circulation, and provide as open a feeling as possible with the structure overhead. The structure is also designed to allow daylight through the center to Lake Rd below.

- *The City asked that TriMet explore creative incorporation of art along the alignment and at stations.*

  The station art is located in three areas of the station, and each piece of art work reflects the purpose and character of those areas. The design has been enthusiastically received by the DLC and the community. The art is integrated into the station design and will delight station users.

- *The City asked that TriMet make extensive use of plantings/vegetation to soften the visual impact of the station and related structures.*

  Several landscaped areas are proposed as part of the station design. The pedestrian access from Adams St and 21st Ave includes landscaping to guide pedestrians toward the platform. Landscaping is proposed to the west of the tracks to provide visual enhancement at the points where the track meets the public realm at the north and south of the platform. The pedestrian access at the south end of the platform is enhanced and softened by terraced stormwater facilities along the stairs and along the base of the abutment wall, as well as ivy plants designed to cover the wall in the future. Finally, the future second platform will be planted with landscaping until funding is available for its construction. Landscaping is being provided on the west side of the freight tracks on both Adams and Lake Road frontages, to enhance the look and feel of the station area and tie the west side to the east side of the light rail structure.