Robinwood Shopping Center

19133 Willamette Drive
West Linn, Oregon

Site Improvements /
HVAC Screening

Class I Design Review

February 10, 2012

CLASS I DESIGN REVIEW APPLICATION
Robin Wood Shopping Center
West Linn, Oregon

INDEX

City of West Linn

Planning & Development • 22500 Salamo Rd #1000 • West Linn, Oregon 97068
Telephone 503.656.4211 • Fax 503.656.4106 • westlinnoregon.gov

DEVELOPMENT REVIEW APPLICATION

For Office Use Only		
STAFF CONTACT	PROJECT NO(S).	
NON-REFUNDABLE FEE(S)	REFUNDABLE DEPOSIT(S)	TOTAL

Type of Review (Please check all that apply):

- ☐ Annexation (ANX)
- ☐ Appeal and Review (AP) *
- ☐ Conditional Use (CUP)
- ☑ Design Review (DR)
- ☐ Easement Vacation
- ☐ Extraterritorial Ext. of Utilities
- ☐ Final Plat or Plan (FP)
- ☐ Flood Management Area
- ☐ Hillside Protection & Erosion Control
- ☐ Historic Review
- ☐ Legislative Plan or Change
- ☐ Lot Line Adjustment (LLA) */**
- ☐ Minor Partition (MIP) (Preliminary Plat or Plan)
- ☐ Non-Conforming Lots, Uses & Structures
- ☐ Planned Unit Development (PUD)
- ☐ Pre-Application Conference (PA) */**
- ☐ Street Vacation
- ☐ Subdivision (SUB)
- ☐ Temporary Uses *
- ☐ Time Extension *
- ☐ Variance (VAR)
- ☐ Water Resource Area Protection/Single Lot (WAP)
- ☐ Water Resource Area Protection/Wetland (WAP)
- ☐ Willamette & Tualatin River Greenway (WRG)
- ☐ Zone Change

Home Occupation, Pre-Application, Sidewalk Use, Sign Review Permit, and Temporary Sign Permit applications require different or additional application forms, available on the City website or at City Hall.

Site Location/Address:

19133 WILLAMETTE DRIVE

Assessor's Map No.: 21E23AD06101

Tax Lot(s): PARCEL #00362949

Total Land Area: 6.2 ACRES +/-

Brief Description of Proposal:

Site Lighting and circulation improvements, cart corrals; bale/pallet recycling area, roof top HVAC system

Applicant Name: (please print) Shawn Nguy - PACLAND — Phone: 503-659-9500

Address: 6400 SE Lake Road, Suite 300 — Email: Snguy@pacland.com

City State Zip: West Linn, OR 97068

Owner Name (required): (please print) William More - Robinwood Shopping Center, LLC. — Phone:

Address: 222 N. Rampart Street — Email:

City State Zip: New Orleans, LA 70112

Consultant Name: (please print) Same as applicant — Phone:

Address: — Email:

City State Zip:

1. All application fees are non-refundable (excluding deposit). **Any overruns to deposit will result in additional billing.**
2. The owner/applicant or their representative should be present at all public hearings.
3. A denial or approval may be reversed on appeal. No permit will be in effect until the appeal period has expired.
4. **Three (3) complete hard-copy sets (single sided) of application materials must be submitted with this application. One (1) complete set of digital application materials must also be submitted on CD in PDF format. If large sets of plans are required in application please submit only two sets.**

* No CD required / ** Only one hard-copy set needed

The undersigned property owner(s) hereby authorizes the filing of this application, and authorizes on site review by authorized staff. I hereby agree to comply with all code requirements applicable to my application. Acceptance of this application does not infer a complete submittal. All amendments to the Community Development Code and to other regulations adopted after the application is approved shall be enforced where applicable. Approved applications and subsequent development is not vested under the provisions in place at the time of the initial application.

Applicant's signature	Date	Owner's signature ***(required)***	Date
	1-23-12		1/23/12

Robinwood Shopping Center
19133 Willamette Drive
West Linn, OR

CLASS I DESIGN REVIEW

Located in the NE ¼ Section 23, Township 2 South, Range 1 East of the Willamette Meridian, West Linn, Clackamas County, OR

Proposed Project Description:

This Design Review application is made on behalf of the property owner of Robinwood Shopping Center. The project proposes improvements to the existing parking lot and site plan to enhance the operations of the Walmart Market remodel project. The proposed improvements include:

1. The addition of five (5) cart corrals around the parking lot for customers to drop off shopping carts and promote site cleanliness.

2. A 12-ft x 45-ft bale and pallet area is proposed west of the drive aisle near the truck loading dock. This area is designated for the storage of used cardboard bales, pallets, and plastic crates associated with the store until they can be picked up and hauled off site by Walmart. This area will be located on existing pavement area and will not impact the existing landscaping areas.

3. An addition of a drive aisle to improve traffic flow in the parking area north of the Wells Fargo Bank by removing a "dead end" drive aisle. A new planter island will be added adjacent to the new drive aisle.

4. Two 5-ft wide shopping cart corridors are proposed to allow employees to collect carts and push them between parking areas to return them to the store. The corridor also allows customers to push shopping carts between parking areas. The existing parking spaces in the middle parking row will be reduced from 9.5-ft wide to 9-ft wide to accommodate the cart crossing path.

5. Reconfiguration and reduction of parking spaces in the vicinity of the trash compactor and north of the existing loading docks to promote ease of access and maneuverability for service and delivery vehicles.

6. The addition of new light poles and the replacement of the old existing light poles to enhance site lighting and improve safety. The existing site lighting systems will be kept operational until the new lighting system can be installed and brought on line.

7. The addition of a new planter island adjacent to the new drive aisle north of the Wells Fargo Bank.

In addition to the improvements noted above, based on recent discussion with City staff, the rooftop mechanical units and HVAC system will also require Design Review approval to ensure that any visual and noise impacts have been properly mitigated.

Land Use Action:
A pre-application conference for the proposed improvements was held on December 15, 2011. Subsequent meetings were held with staff on January 17th, 20th and February 7th. The project seeks Class I Design Review approval of the items noted above.

Code Response:

City of West Linn Development Code Chapter 55 – DESIGN REVIEW;

55.090 APPROVAL STANDARDS – CLASS I DESIGN REVIEW
The Planning Director shall make a finding with respect to the following criteria when approving, approving with conditions, or denying a Class I design review application:

A. The provisions of the following sections shall be met:

1. CDC 55.100(B)(1) through (4), Relationship to the natural and physical environment, shall apply except in those cases where the proposed development site is substantially developed and built out with no remaining natural physical features that would be impacted.

Response: *The proposed improvements are located within a shopping center that has been developed and built out. As shown on the Site Plan, the bale/pallet storage area will be built on an existing paved area and will not impact existing vegetation. Existing topography and natural drainage patterns are not impacted by the project. This criteria is not applicable.*

2. CDC 55.100(B)(5) and (6), architecture, et al., shall only apply in those cases that involve exterior architectural construction, remodeling, or changes.

Response: *The criteria identified above relates to architectural construction, remodeling, or changes of buildings. The proposed improvements are associated with site circulation and cleanliness and not architectural construction, remodeling or changes of buildings. This criteria is not applicable.*

3. Pursuant to CDC 55.085, the Director may require additional information and responses to additional sections of the approval criteria of this section depending upon the type of application.

Response: *Based on the pre-application conference notes and subsequent meetings, city staff has noted that all of the improvements proposed by this project can meet approval criteria in that they improve or maintain the existing condition, rather than worsen it. Staff has identified additional code approval criteria to which the proposed project must demonstrate code compliance. For convenience, the additional code criteria and responses are summarized below along with the corresponding improvements to which they apply.*

Proposed Improvement #1: *The addition of five (5) cart corrals around the parking lot to promote site cleanliness and to reserve an area for customers to drop off shopping carts. This improvement will result in a reduction of five parking spaces from the existing parking lot. Staff requested confirmation that the loss of parking spaces would still comply with the required minimum for off-site parking spaces for the overall shopping center. This proposed improvement is required to demonstrate compliance with Code Section 46.090 Minimum Off-Street Parking Space Requirements.*

46.090 Minimum Off-Street Parking Space Requirements:

Response:

CDC Section 46.080.A states that, "where several uses occupy a single structure or a combination of uses in the same or separate buildings share a common parking area as in the case of a shopping center, the total off-street parking spaces and loading area shall be the sum of the requirements of the several uses, computed separately". CDC 46.090.C identifies the parking requirements for different commercial uses. The different commercial uses that currently occupy the Robinwood Shopping Center all fit within the use categories identified in CDC 46.090.C.

CDC Section 46.080.A goes on to say that "The total number of required parking spaces may be reduced by up to 10 percent to account for cross-patronage...of adjacent businesses or services in a commercial center with five or more separate commercial establishments." Since this shopping center has more than five separate commercial establishments, it qualifies for the 10% reduction of minimum parking requirements.

In addition, CDC Section 55.100.H.5 states that "If a commercial business center or multi-family project is adjacent to an existing or planned public transit stop, the parking requirement may be reduced by the multiplier of 0.9, or 10 percent". Since the shopping center is adjacent to the existing transit (Tri-met) stop on Willamette Drive, an additional 10% reduction in the required parking count is allowed.

Based on the computation methods outlined above, the parking requirements of CDC 46.090.C, and the existing tenant mix within the shopping center, the total required parking for the shopping center is calculated as shown in Table 1:

Table 1 - Robinwood Shopping Center Parking Requirements

Tenant	Use as defined by CDC 46.090.C	Square Footage	Required parking Ratio			Required Parking
Dr. Nolan Dentistry	*Dental*	2,400	1 per	250	sf	10
Robinwood Cleaners	*service*	1,200	1 per	500	sf	3
West Linn Intl Hairport	*service*	2,400	1 per	500	sf	5
Baskin Robins Str #4369	*takeout*	1,200	1 per	200	sf	6
Curves for Women	*general retail*	1,920	1 per	240	sf	8
Round Table Pizza	*restaurant*	4,320	1 per	100	sf	44
Action Mixed Martial Arts	*general retail*	3,600	1 per	240	sf	15
H & R Block	*professional office*	1,200	1 per	350	sf	4
Johnstone Financial Advisors	*professional office*	2,400	1 per	350	sf	7
Ace Computer Repair	*service*	700	1 per	500	sf	2
Magnolia Boutique	*general retail*	1,200	1 per	240	sf	5
Wells Fargo	*banks*	2,496	1 per	350	sf	8
Walmart	*general retail*	39,795	1 per	240	sf	166
Vacant	*general retail*	6,000	1 per	240	sf	25

Required Parking Count Total	308
10% Reduction for Shopping Center (Per 46.080.A)	-31
Adjusted Required Parking	277
10% Reduction for Transit (Per CDC 55.100.H.5)	-28
Total Adjusted Required Parking	**249**

Based on these code provisions, the total required parking count for the Robinwood Shopping Center is 249 spaces. The existing shopping center has 279 parking stalls. Therefore, a reduction of five (5) parking spaces from the existing parking lot to accommodate the placement of cart corrals conforms with the CDC with a remaining total parking spaces of 274. This criteria is met.

Proposed Improvement #2: *A 12-ft x 45-ft bale and pallet storage area is proposed west of the drive aisle near the truck loading dock. This area is designated for the storage of used cardboard bales and pallets until they can be picked up and hauled off site. This area will be located on existing pavement area and will not impact the existing landscaping areas and buffers. Based on comments from City Staff, this proposed improvement is required to demonstrate compliance with Code Section 55.100 (C) Compatibility between Adjoining Uses, Buffering, and Screening; Section 55.100 (D) (1-4) Privacy and Noise; and Section 55.100 (O)(1-5) Refuse and Recycling Standards.*

SECTION 55.100 APPROVAL STANDARDS

C. Compatibility between adjoining uses, buffering, and screening.

1. In addition to the compatibility requirements contained in Chapter 24 CDC, buffering shall be provided between different types of land uses; for example, buffering between single-family homes and apartment blocks. However, no buffering is required between single-family homes and duplexes or single-family attached units. The following factors shall be considered in determining the adequacy of the type and extent of the buffer:

a. The purpose of the buffer, for example to decrease noise levels, absorb air pollution, filter dust, or to provide a visual barrier.

b. The size of the buffer required to achieve the purpose in terms of width and height.

c. The direction(s) from which buffering is needed.

d. The required density of the buffering.

e. Whether the viewer is stationary or mobile.

Response: *The project is not proposing to reduce the existing vegetative buffer between the site and the adjoining properties. The area between the existing pavement area and the property line in the area of the pallet & bale storage consists of a dense vegetative buffer as approved with the original plans. This criterion is met.*

2. On-site screening from view from adjoining properties of such things as service areas, storage areas, and parking lots shall be provided and the following factors will be considered in determining the adequacy of the type and extent of the screening:

a. What needs to be screened?

b. The direction from which it is needed.

c. How dense the screen needs to be.

d. Whether the viewer is stationary or mobile.

e. Whether the screening needs to be year-round.

Response: *The bale/pallet storage area is proposed to be located north of the existing loading docks, in an enclosed CMU structure to promote site cleanliness. As shown in the picture below, this area has historically been used to store recycling bins for newspaper and other trash containers without specific delineation or screening, except for the existing dense vegetative buffer.*

The proposed bale/pallet storage area (similar to one shown below) is approximately 12-ft wide by 45-ft long.

The area will be screened from view from adjoining properties, with screens on the North, South, and East sides made of a CMU wall approximately 10 foot in height. A rod iron gate will enclose the storage area on the east side. Materials typically stored in this area include plastic crates, empty pallets, and cardboard bales. This criterion is met.

3. **Rooftop air cooling and heating systems and other mechanical equipment shall be screened from view from adjoining properties.**

Response: *This criterion is not applicable to the proposed bale/pallet area. It will be addressed with the rooftop unit/HVAC system section below.*

D. Privacy and noise.

1. **Structures which include residential dwelling units shall provide private outdoor areas for each ground floor unit which is screened from view from adjoining units.**

2. **Residential dwelling units shall be placed on the site in areas having minimal noise exposure to the extent possible. Natural-appearing sound barriers shall be used to lessen noise impacts where noise levels exceed the noise standards contained in West Linn Municipal Code Section 5.487.**

3. **Structures or on-site activity areas which generate noise, lights, or glare shall be buffered from adjoining residential uses in accordance with the standards in subsection C of this section where applicable.**

4. **Businesses or activities that can reasonably be expected to generate noise in excess of the noise standards contained in West Linn Municipal Code Section 5.487 shall undertake and submit appropriate noise studies and mitigate as necessary to comply with the code. (See CDC 55.110(B)(11) and 55.120(M).)**

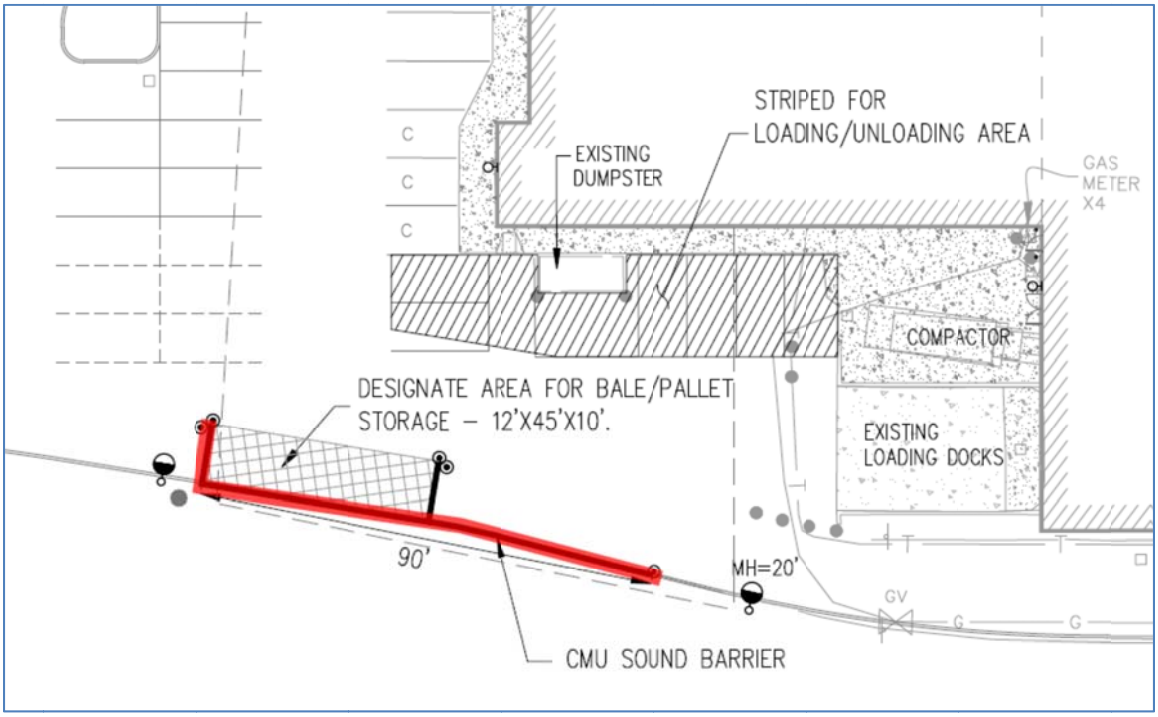
If the decision-making authority reasonably believes a proposed use may generate noise exceeding the standards specified in the municipal code, then the authority may require the applicant to supply professional noise studies from time to time during the user's first year of operation to monitor compliance with City standards and permit requirements.

Response: *As noted above, the bale/pallet storage area will be located in an area that is currently paved and its operations are consistent with historic use. The existing dense vegetative buffers will not be reduced by this project. In addition, the bale/pallet area is buffered/screened from the adjoining properties by CMU walls and existing dense vegetation as shown in the picture above.*

City staff has requested a noise study to evaluate the noise impacts associated with this improvement and to ensure that the proposed pale/ballet area complies with the city's noise standards. It is important to note that the pallet/bale area itself will not generate any noise as the items being stored will simply be sitting there. The noise generation will occur when employees bring items to the storage area, and when trucks pick up the stored materials and take them off site. These types of operations have taken place in this area the entire time the shopping center has been in place. These operations will be nearly identical with the proposed

Walmart store as they were with the previous grocery store. As noted previously, and as shown in the picture above, this area has historically been used for the storage of recycling bins and trash containers with no additional screening provided. Despite this, a noise study was conducted at the request of city staff to identify potential noise concerns associated with this improvement. Based on the results of the noise study, the operations of the bale/pallet area can comply with current ODEQ noise standards provided a noise barrier be installed at shown on the Site Plan and depicted in the picture above. The noise barrier will be comprised of the 10' CMU wall associated with the bale/pallet storage area itself, as well as an additional 10' CMU wall extending 45' to the south of the proposed bale & pallet storage area. See Figure 1 below. These CMU walls will provide noise attenuation of the operational activities when people are loading and unloading the bale & pallet area. The noise study is attached to this application. This criteria is met.

Figure 1 – Bale & Pallet Area Screen Wall



O. <u>Refuse and recycling standards</u>.

1. All commercial, industrial and multi-family developments over five units requiring Class II design review shall comply with the standards set forth in these provisions. Modifications to these provisions may be permitted if the Planning Commission determines that the changes are consistent with the purpose of these provisions and the City receives written evidence from the local franchised solid waste and recycling firm that they are in agreement with the proposed modifications.

Response: *Based on the pre-application conference with staff, the proposed project is required to demonstrate compliance with the provisions below. However, the bale & pallet storage area is not a refuse and recycling area that is handled by a local franchised solid waste and recycling firm. The bale & pallet storage area is used to store cardboard bales, pallets, and plastic crates associated with the store until they can be picked up and hauled off site by Walmart. Therefore, this criterion is not applicable.*

2. Compactors, containers, and drop boxes shall be located on a level Portland cement concrete pad, a minimum of four inches thick, at ground elevation or other location compatible with the local franchise collection firm's equipment at the time of construction. The pad shall be designed to discharge surface water runoff to avoid ponding.

Response: *This criterion is not applicable to the proposed bale/pallet storage area because it does not contain a compactor, container, or drop box. However, the bale/pallet area will be located on a 4" minimum thick concrete pad and will be designed to discharge stormwater runoff without ponding.*

3. Recycling and solid waste service areas.

a. Recycling receptacles shall be designed and located to serve the collection requirements for the specific type of material.

b. The recycling area shall be located in close proximity to the garbage container areas and be accessible to the local franchised collection firm's equipment.

c. Recycling receptacles or shelters located outside a structure shall have lids and be covered by a roof constructed of water and insect-resistive material. The maintenance of enclosures, receptacles and shelters is the responsibility of the property owner.

d. The location of the recycling area and method of storage shall be approved by the local fire marshal.

e. Recycling and solid waste service areas shall be at ground level and/or otherwise accessible to the franchised solid waste and recycling collection firm.

f. Recycling and solid waste service areas shall be used only for purposes of storing solid waste and recyclable materials and shall not be a general storage area to store personal belongings of tenants, lessees, property management or owners of the development or premises.

g. Recyclable material service areas shall be maintained in a clean and safe condition.

Response: *This criterion is not applicable to the proposed bale/pallet storage area because it is not a recycling and solid waste service area as described above.*

4. Special wastes or recyclable materials.

a. Environmentally hazardous wastes defined in ORS 466.005 shall be located, prepared, stored, maintained, collected, transported, and disposed in a manner acceptable to the Oregon Department of Environmental Quality.

b. Containers used to store cooking oils, grease or animal renderings for recycling or disposal shall not be located in the principal recyclable materials or solid waste storage areas. These materials shall be stored in a separate storage area designed for such purpose.

Response: *This criterion is not applicable to the proposed bale/pallet storage area because it is not a recycling and solid waste service area as described above. The proposed improvement is for the storage of cardboard bales pallets, and plastic crates. No environmentally hazardous wastes are proposed to be stored in this area. These criteria are not applicable.*

5. Screening and buffering.

a. Enclosures shall include a curbed landscape area at least three feet in width on the sides and rear. Landscaping shall include, at a minimum, a continuous hedge maintained at a height of 36 inches.

b. Placement of enclosures adjacent to residentially zoned property and along street frontages is strongly discouraged. They shall be located so as to conceal them from public view to the maximum extent possible.

c. All dumpsters and other trash containers shall be completely screened on all four sides with an enclosure that is comprised of a durable material such as masonry with a finish that is architecturally compatible with the project. Chain link fencing, with or without slats, will not be allowed.

Response: *Based on the above responses to items 1-4, this criteria is not applicable. What is proposed with the bale & pallet storage area does not qualify as a dumpster or other trash container, and therefore does not need to be completely screened on all four sides. Dumpsters and other trash containers are not proposed for this area. However, as shown on the site plan, the west, or back, side of the bale/pallet area is up against an existing dense vegetative buffer over 45 feet in width and will be screened from the views of adjacent properties to the west by both the existing vegetation and the proposed CMU wall as shown above.*

Proposed Improvement #3: *The project proposes a new drive aisle located north of the Wells Fargo Bank to improve traffic flow in the parking area by removing a "dead end" drive aisle. As shown in Figure 2, the existing parking lot has poor traffic circulation as one of the drive aisles in the parking field in front of the store dead ends against the Wells Fargo Bank. This creates a situation where vehicles would be required to do a "U-turn" in the drive aisle in order to leave this area of the parking lot if no parking spaces are available. Based on comments from City Staff, this improvement is required to demonstrate compliance with Code Section 46.150 (A)(4) (21) and Section 54.020 (E).*

Figure 2 - Existing Circulation Condition

Chapter 46 – Off-Street Parking, Loading and Reservoir Areas

46.150 DESIGN AND STANDARDS

The following standards apply to the design and improvement of areas used for vehicle parking, storage, loading, and circulation:

A. Design standards.

4. Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.

21. The parking and circulation patterns are easily comprehended and defined. The patterns shall be clear to minimize traffic hazards and congestion and to facilitate emergency vehicles.

Response: *As shown on the Site Plan and conceptually below in Figure 3, the proposed drive aisle is clearly delineated with traffic arrows and a landscape planter endcap. The proposed traffic circulation pattern is safe, unhindered, and promotes ease of ingress/egress from the parking field without requiring a "U-turn" maneuver. Six (6) spaces from the existing parking lot will be removed to accommodate this improvement. As demonstrated earlier, the total required minimum parking count for the Robinwood Shopping Center is 249 spaces. The existing shopping center has 279 parking stalls. Therefore, the removal of the previous five (5) parking spaces identified above (due to the addition of cart corrals) and the reduction of the additional six (6) parking spaces to accommodate the new drive aisle, 268 parking stalls remain, which is still in conformance with the CDC. These criteria are met.*

Figure 3 - Proposed Circulation Concept

Proposed Improvement #4: *Two 5-ft wide shopping cart corridors are proposed to allow employees to collect carts and push them between parking areas to return them to the store. The cart corridors also allow customers to push shopping carts between parking areas and to discourage customers from pushing shopping carts down the main west-east drive aisle that leads to Willamette Drive. This improvement will not cause a reduction in the number of parking stalls. In order to fit these corridors into the existing front parking field, the existing parking spaces in the middle parking row in the front parking field will be restriped from 9.5-ft wide to 9-ft wide stalls. Based on comments from City Staff regarding parking reconfiguration, this improvement is required to demonstrate compliance with Code Section 46.150 (A)(4) and (21).*

Chapter 46 – Off-Street Parking, Loading and Reservoir Areas

46.150 DESIGN AND STANDARDS

The following standards apply to the design and improvement of areas used for vehicle parking, storage, loading, and circulation:

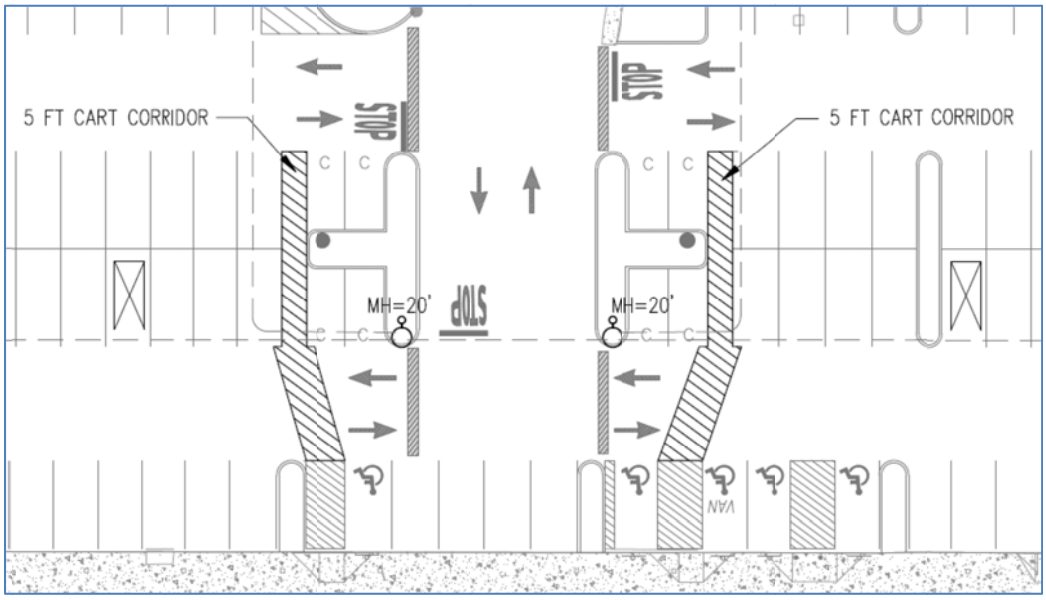
A. Design standards.

4. Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.

21. The parking and circulation patterns are easily comprehended and defined. The patterns shall be clear to minimize traffic hazards and congestion and to facilitate emergency vehicles.

Response: *As shown in Figure 4 below and on the Site Plan, the 5-ft cart corridors are clearly delineated and defined with striping that connects the parking field to the store front. The applicant believes that the cart corridors will facilitate the flow of customers with shopping carts through the parking field in a safe and efficient manner. These criteria are met.*

Figure 4 – Shopping Cart Corridors



Proposed Improvement #5: *Reconfiguration of parking spaces in the vicinity of the trash compactor and north of the existing loading docks to promote ease of access and maneuverability for service and delivery vehicles. Eleven parking spaces from the existing parking lot north of the store will be removed to accommodate this improvement. Based on comments from City Staff, the project is required to demonstrate compliance with Code Section 46.150 (A) (4) & (21).*

Chapter 46 – Off-Street Parking, Loading and Reservoir Areas

46.150 DESIGN AND STANDARDS

The following standards apply to the design and improvement of areas used for vehicle parking, storage, loading, and circulation:

A. Design standards.

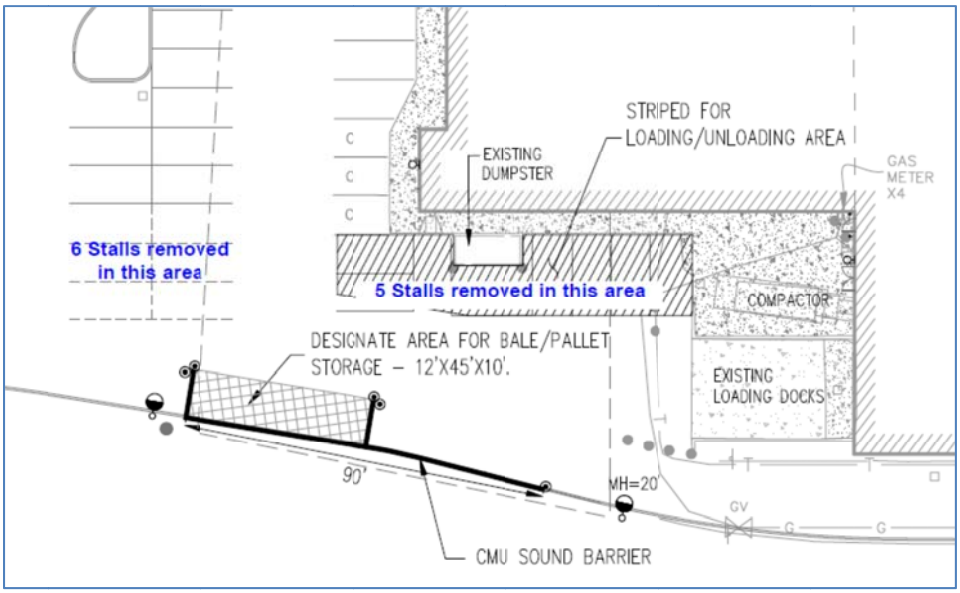
4. Service drives shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.

21. The parking and circulation patterns are easily comprehended and defined. The patterns shall be clear to minimize traffic hazards and congestion and to facilitate emergency vehicles.

Response: *As shown in Figure 5 below and on the Site Plan, this improvement proposes to stripe a loading area north of the trash compactor to facilitate traffic flow and promote ease of access for service and delivery vehicles. The current parking configuration hinders and blocks access to the trash compactor and makes it difficult for service and delivery vehicles to maneuver in this area. The proposed revision will maximize safety of traffic access and egress by defining a loading/unloading area that will be clearly delineated with striping as shown on the Site Plan. These criteria are met.*

It should also be noted that even though this proposal reduces the parking count by an additional 11 parking spaces, the project is still able to comply with the code required minimum parking spaces. As demonstrated earlier, the total required parking count for the Robinwood Shopping Center is 249 spaces. The existing shopping center has 279 parking stalls. The aforementioned installation of cart corrals will remove five (5) spaces. The addition of a new drive aisle by the Wells Fargo bank will remove six (6) spaces. Including the 11 parking spaces removed to accommodate the improvement of the loading area, this results in a total reduction of 22 parking spaces from the entire site to accommodate the overall project. Therefore, the parking lot will have a total of 257 parking spaces after all improvements are made, which is still above the minimum required parking of 249 spaces for the shopping center.

Figure 5 – Reconfiguration of Parking Stalls near Loading Area



Proposed Improvement #6: *The existing site lighting is insufficient to promote a safe environment. The project proposes the addition of new light poles and the replacement of the old existing light poles to enhance site safety and lighting. The existing lighting system will be kept operational until the new lighting system can be installed and activated. Based on comments from City Staff, this proposed improvement is required to demonstrate compliance with Code Section 46.150 (A)(13) and Section 55.100(J) (4-6).*

46.150 DESIGN AND STANDARDS

The following standards apply to the design and improvement of areas used for vehicle parking, storage, loading, and circulation:

A. Design standards.

13. Artificial lighting on all off-street parking facilities shall be designed to deflect all light downward away from surrounding residences and so as not to create a hazard to the public use of any road or street.

Response: *As shown on the attached lighting plan, all of the perimeter light fixtures are designed with flat lens combined with extreme glare shields attached to the fixtures to deflect lighting downward and to restrict lighting to the parking lot area. This criterion is met.*

55.100 APPROVAL STANDARDS

J. Crime Prevention and safety/defensible space

4. The exterior lighting levels shall be selected and the angles shall be oriented towards areas vulnerable to crime.

5. Light fixtures shall be provided in areas having heavy pedestrian or vehicular traffic and in potentially dangerous areas such as parking lots, stairs, ramps, and abrupt grade changes.

6. Fixtures shall be placed at a height so that light patterns overlap at a height of seven feet which is sufficient to illuminate a person. All commercial, industrial, residential, and public facility projects undergoing design review shall use low or high pressure sodium bulbs and be able to demonstrate effective shielding so that the light is directed downwards rather than omni-directional. Omni-directional lights of an ornamental nature may be used in general commercial districts only.

Response: *The lighting system was designed by a lighting professional with Hubbell Lighting and the light levels are designed to promote a safe and inviting environment for customers and the public. Refer to attached photometric plan. The design utilitizes 400 watt high pressure sodium bulbs and provides shielding for all perimeter units. A product brochure for the proposed lighting system is included with this application. These criteria are met.*

Proposed Improvement #7: *A new planter island will be added adjacent to the new drive aisle north of the Wells Fargo Bank. Based on city comments, the project is required to demonstrate compliance with the applicable code provisions in Section 54.020E.*

Chapter 54 – LANDSCAPING

E. Landscaping – By type, location and amount.

2. Non-residential uses**. A minimum of 20 percent of the gross site area shall be landscaped. Parking lot landscaping may be counted in the percentage.**

Response: *The Robinwood shopping center gross site area is approximately 268,530 sf. Approximately 55,716 sf of the existing site is landscaped, equating to an approximate 20.7% of the gross site area. The project will add an additional 185 sf of landscape planter area to the site, increasing the overall landscape percentage of the site to 20.8% of the gross site area. This criterion is met.*

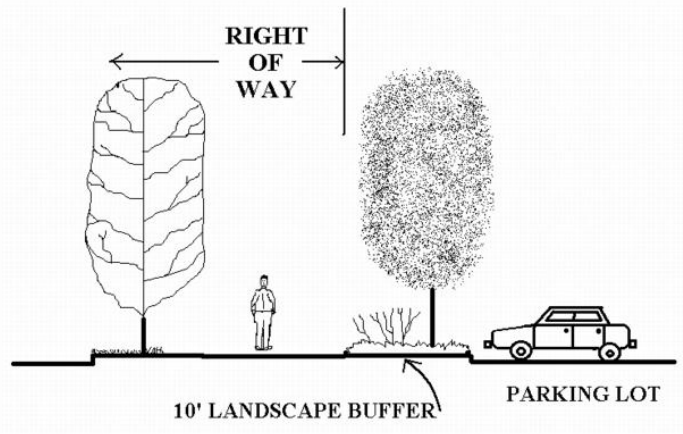
3. All uses (residential uses (non-single-family) and non-residential uses)**:**

a. The landscaping shall be located in defined landscaped areas which are uniformly distributed throughout the parking or loading area. There shall be one shade tree planted for every eight parking spaces. These trees shall be evenly distributed throughout the parking lot to provide shade. Parking lots with over 20 spaces shall have a minimum 10 percent of the interior of the parking lot devoted to landscaping. Pedestrian walkways in the landscaped areas are not to be counted in the percentage. The perimeter landscaping, explained in subsection (E)(3)(d) of this section, shall not be included in the 10 percent figure. Parking lots with 10 to 20 spaces shall have a minimum five percent of the interior of the parking lot devoted to landscaping. The perimeter landscaping, as explained above, shall not be included in the five percent. Parking lots with fewer than 10 spaces shall have the standard perimeter landscaping and at least two shade trees. Non-residential parking areas paved with a permeable parking surface may reduce the required minimum interior landscaping by one-third for the area with the permeable parking surface only.

b. The landscaped areas shall not have a width of less than five feet.

c. The soils, site, proposed soil amendments, and proposed irrigation system shall be appropriate for the healthy and long-term maintenance of the proposed plant species.

d. A parking, loading, or service area which abuts a street shall be set back from the right-of-way line by perimeter landscaping in the form of a landscaped strip at least 10 feet in width. When a parking, loading, or service area or driveway is contiguous to an adjoining parcel, there shall be an intervening five-foot-wide landscape strip. The landscaped area shall contain:



1) Street trees spaced as appropriate to the species, not to exceed 50 feet apart on the average;

2) Shrubs, not to reach a height greater than three feet, six inches, spaced no more than five feet apart on the average; or

3) Vegetative ground cover such as grass, wildflowers, or other landscape material to cover 100 percent of the exposed ground within two growing seasons. No bark mulch shall be allowed except under the canopy of low level shrubs.

e. If over 50 percent of the lineal frontage of the main street or arterial adjacent to the development site comprises parking lot, the landscape strip between the right-of-way and parking lot shall be increased to 15 feet in width and shall include terrain variations (e.g., one-foot-high berm) plus landscaping. This extra requirement only applies to one street frontage.

f. A parking, loading, or service area which abuts a property line shall be separated from the property line by a landscaped area at least five feet in width and which shall act as a screen and noise buffer, and the adequacy of the screen and buffer shall be determined by the criteria set forth in CDC 55.100(C) and (D), except where shared parking is approved under CDC 46.050.

g. All areas in a parking lot not used for parking, maneuvering, or circulation shall be landscaped.

h. The landscaping in parking areas shall not obstruct lines of sight for safe traffic operation.

i. Outdoor storage areas, service areas (loading docks, refuse deposits, and delivery areas), and above-ground utility facilities shall be buffered and screened to obscure their view from adjoining properties and to reduce noise levels to acceptable levels at the property line. The adequacy of the buffer and screening shall be determined by the criteria set forth in CDC 55.100(C)(1).

j. Crime prevention shall be considered and plant materials shall not be located in a manner which prohibits surveillance of public and semi-public areas (shared or common areas).

k. Irrigation facilities shall be located so that landscaped areas can be properly maintained and so that the facilities do not interfere with vehicular or pedestrian circulation.

l. For commercial, office, multi-family, and other sites, the developer shall select trees that possess the following characteristics:

1) Provide generous "spreading" canopy for shade.

2) Roots do not break up adjacent paving.

3) Tree canopy spread starts at least six feet up from grade in, or adjacent to, parking lots, roads, or sidewalks unless the tree is columnar in nature.

4) No sticky leaves or sap-dripping trees (no honey-dew excretion).

5) No seed pods or fruit-bearing trees (flowering trees are acceptable).

6) Disease-resistant.

7) Compatible with planter size.

8) Drought-tolerant unless irrigation is provided.

9) Attractive foliage or form all seasons.

m. Plant materials (shrubs, ground cover, etc.) shall be selected for their appropriateness to the site, drought tolerance, year-round greenery and coverage, staggered flowering periods, and avoidance of nuisance plants (Scotch broom, etc.).

Response: *The additional landscape planter will be added to the interior of parking lot. The parking lot is approximately 102,125 sf in size and currently has about 4,787 sf of landscape area (4.7% of parking lot area) within its interior, excluding the perimeter landscaping areas. The project will increase this total to approximately 4.9% and improve the existing condition. Plant materials will be consistent with code requirements and will match the ones currently planted with the shopping center. The new landscape planter will be irrigated to maintain the long-term health of the plants. These criteria are met.*

HVAC SYSTEM AND ROOFTOP UNITS: Based on recent discussions with City staff, the permitted and installed rooftop units and HVAC systems require Design Review approval to ensure that noise and visual impacts have been properly addressed. The project is required to demonstrate compliance with Code Section 55.100 (C)(3) & (D)(3).

Background: The project architects and mechanical engineers assessed the existing HVAC systems prior to plan submittal to assess their viability. It was determined at that time that the existing systems were antiquated and needed to be replaced in order to be code compliant. The building remodel project proposed the replacement of the existing antiquated HVAC systems, including the rooftop units, with a new system that meets the current energy codes. Based on staff review of the permit drawings, it was concluded at the time that this new HVAC system constituted a replacement in kind and did not require Design Review. Although the city code does not formally define "replacement in kind", both OSHA and the Code of Federal Regulation Title 40: 68.3 define it as "replacement that satisfies the design specifications". The new HVAC systems that were installed satisfied the current energy codes and specifications; therefore it could be viewed as a replacement in kind. The new HVAC system and associated rooftop units were previously reviewed and approved by the City during building permit review. However, after the building permit was issued and the systems were installed, the city and neighbors expressed concern regarding potential visual and noise impacts. This application will demonstrate the steps the remodel project will take to mitigate these impacts to stay in compliance with the city code.

SECTION 55.100 APPROVAL STANDARDS

C. Compatibility between adjoining uses, buffering, and screening.

3. Rooftop air cooling and heating systems and other mechanical equipment shall be screened from view from adjoining properties.

Response: *There are numerous existing roof top units within the Robinwood Shopping Center. Due to the topographical nature of the area behind the shopping center, most of the adjoining properties to the west of the site are elevated approximately 20 to 30 feet above the shopping center. From the elevated vantage point, most of the existing rooftop units within the entire shopping center, and not just the remodeled space, can be seen by some of the adjoining properties. The other adjoining properties are screened from the site by a dense row of tall existing trees. This is a condition that has been in place since the time the shopping center was constructed, as the adjoining residents were built at either the approximate same time or after the development of the shopping center.*

The approved remodel project proposed new roof top units to replace the old ones, as the ones installed to serve the previous tenants do not meet the current energy codes or design standards. In order to assess the visual impacts of the new units installed on the roof, a graphical and photographical sight line study was conducted to determine which of the new roof top units will need to be screened from the adjoining properties measured from the property line per direction from city staff. See attached sight line exhibits included with this application. Based on coordination with staff, the sight line was established

between the property line and the rooftop of the grocery store, with an assumed eye level view point set at 6'-0" above the elevation along the east property line. Based on this sight line, the screening plan (included with the application) was developed for the new roof top units. The project will implement a screening system to screen roof top units identified on the screening plan. With the implementation of the screening system, this criterion is met.

D. Privacy and noise.

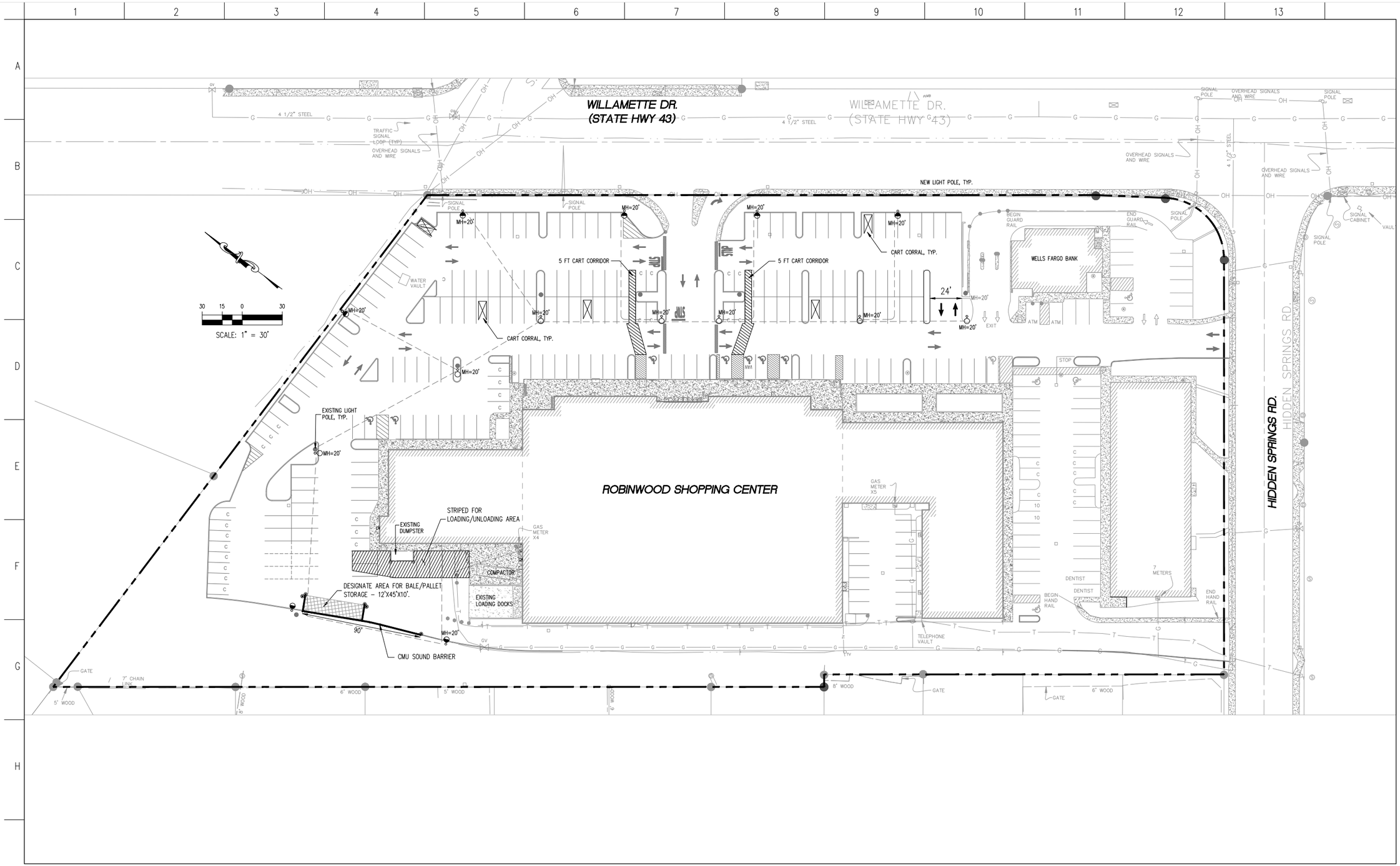
4. Businesses or activities that can reasonably be expected to generate noise in excess of the noise standards contained in West Linn Municipal Code Section 5.487 shall undertake and submit appropriate noise studies and mitigate as necessary to comply with the code. (See CDC 55.110(B)(11) and 55.120(M)).

If the decision-making authority reasonably believes a proposed use may generate noise exceeding the standards specified in the municipal code, then the authority may require the applicant to supply professional noise studies from time to time during the user's first year of operation to monitor compliance with City standards and permit requirements.

Response: *Based on staff comments, a noise study was initiated to evaluate noise impacts associated with the HVAC systems and is attached to this application. Based on the results of the noise analysis, the combination of the existing parapet and new modern HVAC units, will provide sufficient noise attenuation to meet the noise levels defined by the Oregon DEQ code, for both daytime and nighttime standards. In addition, the screening system as identified above in Section 55.100.C.3 will provide additional noise attenuation. This criterion is met.*

Conclusion

Based on the above responses, this application meets all of the applicable criteria regarding the proposed improvements. The applicant respectfully requests the Planning Director to approve this application.



No.	Date	By	Revision Description

Designed By:	Issue Date: 2/8/12
Drawn By:	Issue:
Checked By:	Project No.

PACLAND
6400 SE Lake Road, Suite 300
Portland, OR 97222
T (503) 659-2500
F (503) 659-2227
www.PacLand.com

ROBINWOOD SHOPPING CENTER
19133 WILLAMETTE DRIVE
WEST LINN, OR

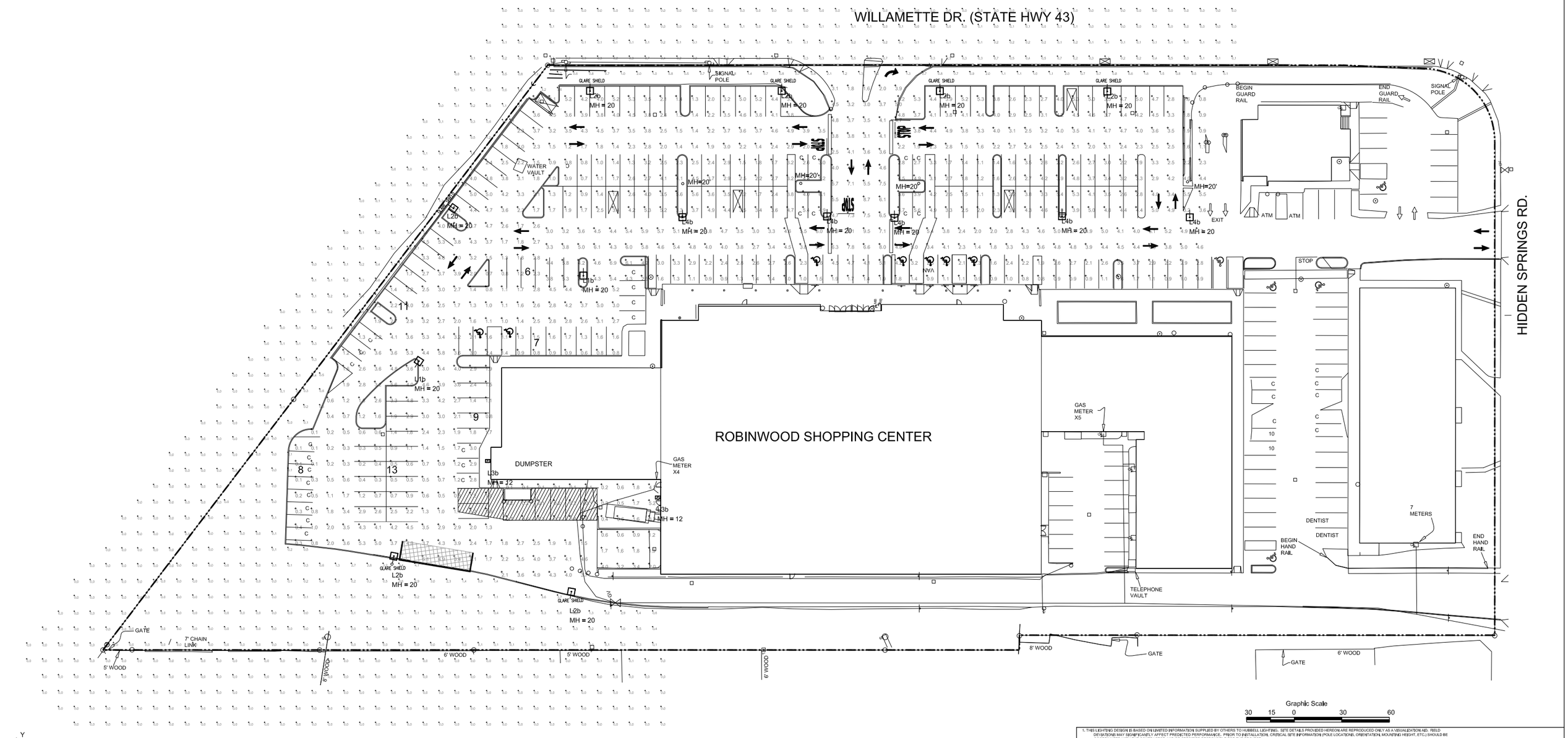
PROPOSED SITE CIRCULATION AND LIGHTING IMPROVEMENTS

C-1.0

P:\Oregon\West Linn\Grimes\Boles Thriftway NMK1\2Drawings\NMWLMSP_2-3-12.dwg Feb 07, 2012 - 5:21pm snguy

Calculation Summary						
Label	**Units**	**Avg**	**Max**	**Min**	**Avg/Min**	**Max/Min**
BEYOND PROP LINE	Fc	0.12	4.4	0.0	N.A.	N.A.
DSD LOADING DOOR	Fc	1.11	5.2	0.1	11.10	52.00
EXTRANEOUS AREA	Fc	0.53	4.1	0.0	N.A.	N.A.
PARKING LOT VERTICAL	Fc	1.43	11.0	0.0	N.A.	N.A.
ENTRY DRIVE ZONE	Fc	4.59	8.7	1.6	2.87	5.44
PARKING LOT ZONE HORIZONTAL	Fc	2.76	6.1	0.1	27.60	61.00
FRONT AISLE ZONE	Fc	3.54	9.5	0.8	4.43	11.88

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
	2	L1b	SINGLE	50000	0.750	MSV-A4-S40-V5P-F-Q-BL
	7	L2b	SINGLE	50000	0.750	MSV-A4-S40-V3P-F-Q-BL W/ FGGS2-BL
	2	L3b	SINGLE	9500	0.750	LMC-100S
	5	L4b	SINGLE	50000	0.750	MSV-A4-S40-V3P-F-Q-BL



NOT A CONSTRUCTION DOCUMENT - FOR DESIGN PURPOSES ONLY

1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO HUBBELL LIGHTING. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

REFERENCE ANGLE(S): 180 PLAN NORTH 0 270

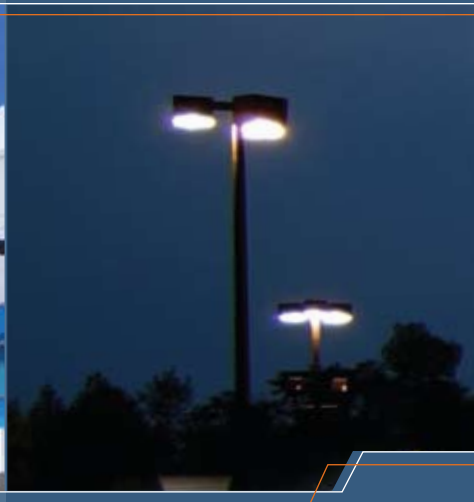
REVISED FROM DRAWING NUMBER(S):	
1155381	1257507
1155454	
1155492	
1155721	

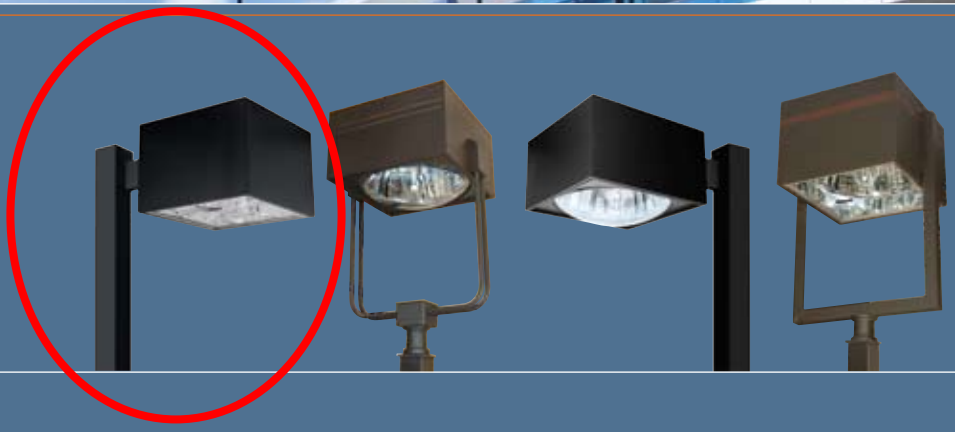
TITLE: ROBINWOOD SHOPPING CENTER

HUBBELL Hubbell Lighting, Inc. 701 MILLENNIUM BLVD GREENVILLE, SC 29607

SCALE: 1" = 30'
DRWN: ADC
DATE: 1/13/2012
APVD:
DRAWING NO.: 1257560

SPAULDING LIGHTING





MSV

M - P U L S I V E®

High Performance Area/Site Lighting

SITE / PARKING — ROADWAY — LARGE AREA

CLASSIC STYLING

The MSV M-PULSIVE® complements the surrounding architectural environment with its timeless shape and form. Sharp corners and clean lines mesh form with function.

DURABLE CONSTRUCTION

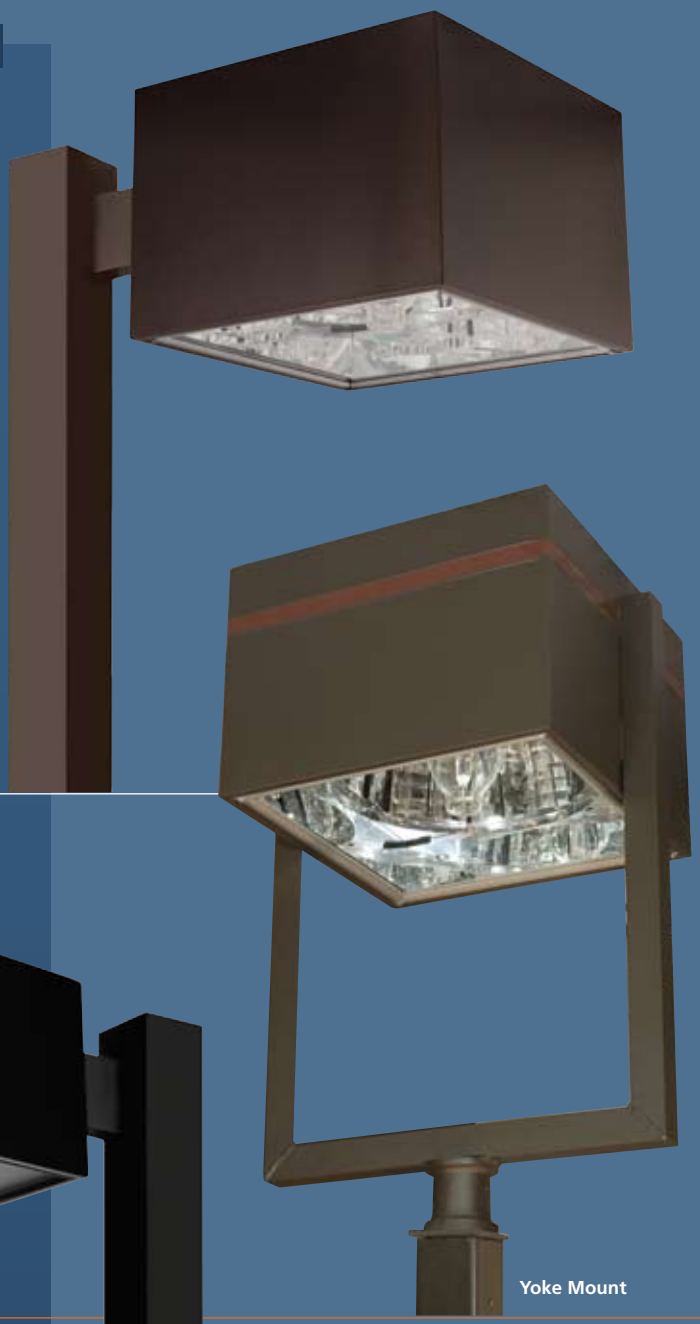
Rugged single-piece formed aluminum construction, with a galvanized end support for added strength, and Spaulding's Lektrocote® finish equates to years of value.

ENVIRONMENTAL PERFORMANCE

High performance segmented optics (w/ optional house side shielding) available in vertical and horizontal lamp configurations in Dark-Sky approved full cut off performance. Convex lens configuration available with vertical lamp orientation.

MULTIPLE MOUNTING CONFIGURATIONS

With arm, pole, wall, spider or yoke mounting options, the MSV M-PULSIVE® is the superior choice for any area/site lighting solution.



Yoke Mount

Spider Mount

ida APPROVED

StarView™ compliant

MSV M-PULSIVE®
FLAT LENS

Lektrocote®
Powder paint finish

Tool-Less Entry

The spring loaded latch system allows tool-less entry for easy installation and re-lamping.

Four Point Closure

Four spring loaded tabs allow fixture door to be opened in two directions or completely removed for versatile access.

Segmented Reflector

Rotatable optic for maximum photometric performance.

Sealed Gasket

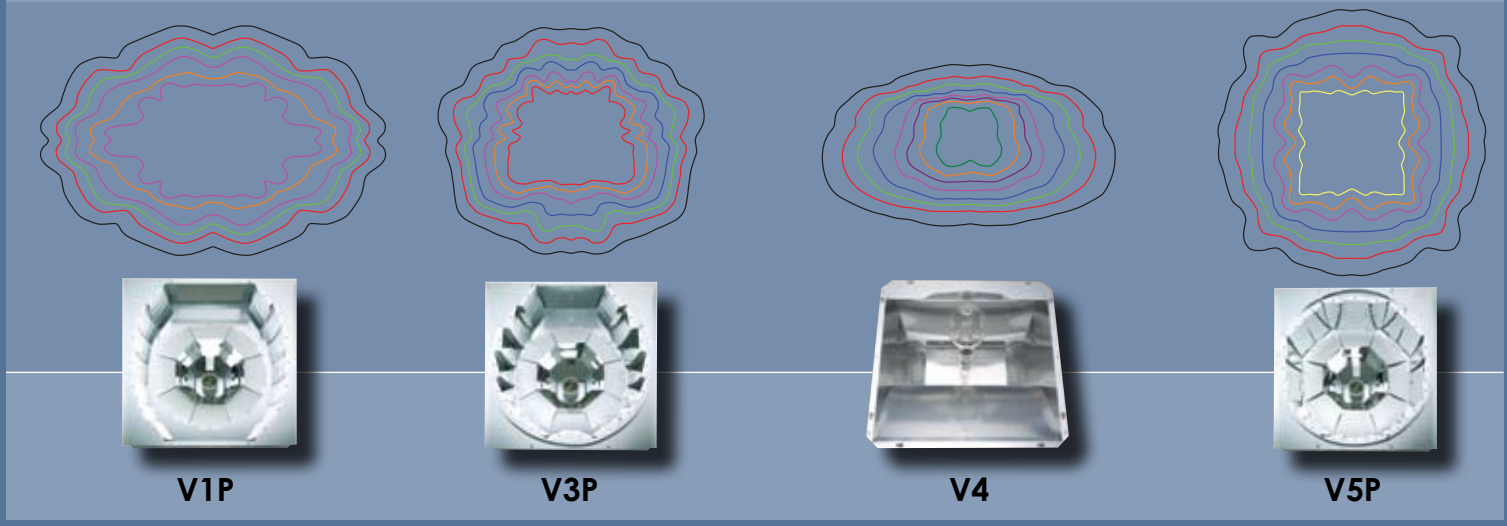
Fully sealed gasket, protects lamp and optics.

OPTICAL PERFORMANCE

VERTICAL LAMP DISTRIBUTIONS

Vertical orientation of H.I.D. light sources provides broad photometric distributions with excellent uniformity. This combination equates to wider fixture spacings, increased uniformity ratios, and higher visual appeal. Spaulding's MSV M-PULSIVE® vertical lamp optical systems are available in both full cutoff flat glass and convex lens configurations.

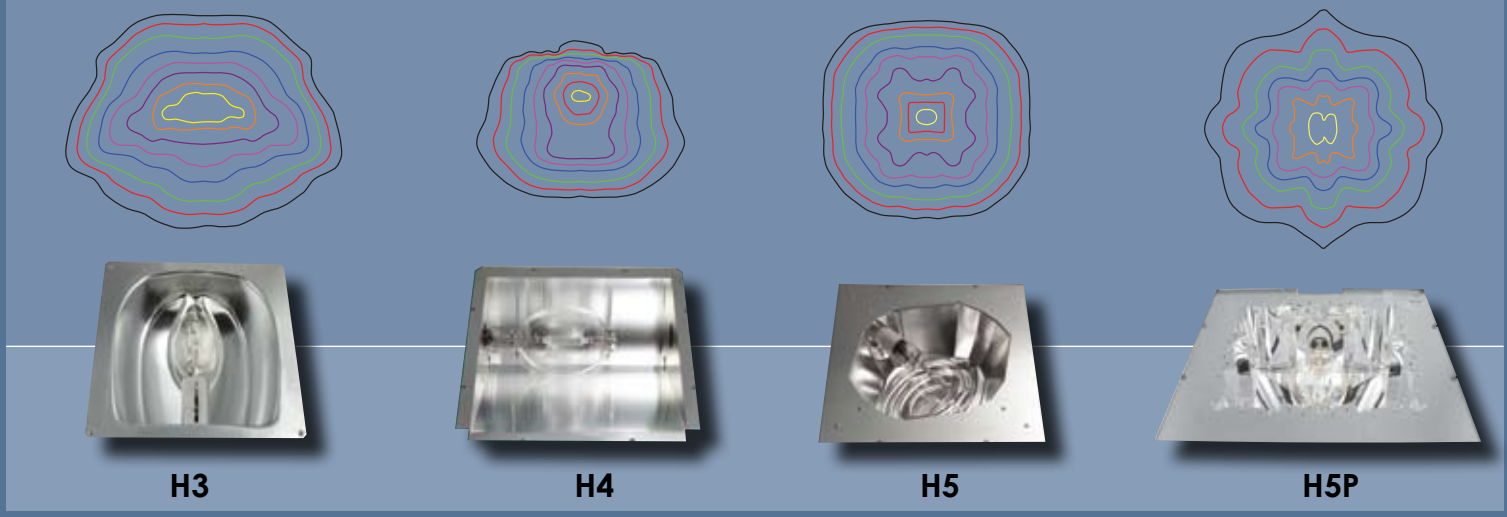
Vertical Lamp Isometric Patterns



HORIZONTAL LAMP DISTRIBUTIONS

Horizontal orientation of H.I.D. light sources provides photometric distributions with sharp cut off at higher visual angles. Increased high angle control equates to distributions that are both night sky and light trespass friendly. Spaulding's MSV M-PULSIVE® horizontal lamp optical systems are available in full cutoff flat glass configuration only.

Horizontal Lamp Isometric Patterns



DARK-SKY APPROVED

In a continued effort to be conscious of the environment and light pollution regulations, MSV IMPULSIVE® has earned the IDA's Dark-Sky friendly® fixture seal of approval with the full cutoff Starview compliant configuration.

StarView™ compliant

MSV M-PULSIVE® ORDERING INFORMATION

EXAMPLE LOGIC

SERIES	MOUNTING	WATTAGE/SOURCE		DISTRIBUTION		LENS	VOLTAGE	COLOR	OPTIONS			
MSV	A4	P25	MS1K	V1P	H3	F	Q	DB	W1	PR1	RPA2	VG
	A10	P32		V3P	H4	C	V	BL	W2	PR2	RPA3	QZ
		P35	P17	V4	H5		5	WH	W3	PR3	RPA4	
	WB	P40	S40	V5P	H5P		T	GR	W4	PR4	RPA5	L
	WBA4	P45	S60				E	PS	W5	PR5	RPA6	
	WBA10	P75	S75				0	RD	W6	PR6		
		P1K	S1K				1	FG			EB	
	0						2	CC	F1	P1	RDB	
							3		F2	P2	RBL	
	ST						4		F3	P3	RWH	
	YT								F4	P4	RGR	
									F5	P5	RPS	
									F6	P6	RRD	
											RFG	

SERIES

MSV	MSV-M-PULSIVE®

MOUNTING

A4	4" Arm Mount (incl. 4" rigid arm)
A10[8]	10" Arm Mount (incl. 10" rigid arm)
WB	Wall Bracket (arm not req'd or incl.)
WBA4	Wall Bracket (incl. 4" rigid arm)
WBA10	Wall Bracket (incl. 10" rigid arm)
0	No arm or bracket (only order w/o arm or wall bracket when mounting component is ordered as an accessory)
ST	Spider Mount (2-3/8" tenon)
YT	Yoke Mount (2-3/8" tenon)

WATTAGE/SOURCE

(METAL HALIDE)

H1K	1000 Watt (BT37)

(SUPER METAL HALIDE)

MS1K	1000 Watt (BT37)

(PULSE START METAL HALIDE)

P17	175 Watt (ED28)
P25	250 Watt (ED28)
P32	320 Watt (ED28)
P35	350 Watt (ED37)
P40	400 Watt (ED37)
P45	450 Watt (ED37)
P75	750 Watt (BT37)
P1K	1000 Watt (BT37)

(HIGH PRESSURE SODIUM)

S40	400 Watt (ED18)
S60	600 Watt (T14)
S75	750 Watt (BT37)
S1K	1000 Watt (ED37)

DISTRIBUTION

V1P	Vertical Type-I (segmented)
V3P	Vertical Type-III (segmented)
V4	Vertical Type-IV (multi-piece)
V5P	Vertical Type-V (segmented)
H3[1,9]	Horizontal Type-III (hydroformed)
H4[1,9]	Horizontal Type-IV (mult-piece)
H5[1,9]	Horizontal Type-V (hydroformed)
H5P[1]	Horizontal Type-V (segmented)

LENS

F	Flat Glass
C[7]	Convex Glass

VOLTAGE

Q[2]	Quad-Tap® - 120/208/240/277V
V[2]	Five-Tap - 120/208/240/277/480V
5	480V
T[2]	120/277/347V
E	50 Hz - 220/240V
0	No Ballast
1	120V
2	208V
3	240V
4	277V

COLOR

DB	Dark Bronze (textured)
BL	Black (textured)
WH	White (textured)
GR	Gray (textured)
PS	Platinum Silver (smooth)
RD	Red (smooth)
FG	Forest Green (textured)
CC	Custom Color (consult factory)

OPTIONS

VG	Polycarbonate Vandal Guard (flat glass only)
QZ[4]	Quartz Restrike w/ 150W DC bayonet lamp (not available w/ 50HZ ballast, 600W HPS, or 750W HPS)
L	Lamp

OPTIONS

W(X)	Wiring Prep (replace **X** with voltage: **1** - 120, **2** - 208, **3** - 240, **4** - 277, **5** - 480, **6** - 347)
F(X)[5]	Fusing (replace **X** with voltage: **1** - 120, **2** - 208, **3** - 240, **4** - 277, **5** - 480, **6** - 347)
PR(X)	Photo Cell Receptacle - (replace **X** with voltage: **1** - 120, **2** - 208, **3** - 240, **4** - 277, **5** - 480, **6** - 347)
P(X)[3]	Photo Button - (replace **X** with voltage: **1** - 120, **2** - 208, **3** - 240, **4** - 277, **5** - 347)
RPA2	Round Pole Adaptor (2 3/4" - 3 1/8")
RPA3	Round Pole Adaptor (3 1/4" - 3 3/4")
RPA4	Round Pole Adaptor (3 7/8" - 4 1/2")
RPA5	Round Pole Adaptor (5")
RPA6	Round Pole Adaptor (6")
EB	Embossed Band
RDB[6]	Reveal Color (Dark Bronze)
RBL[6]	Reveal Color (Black)
RWH[6]	Reveal Color (White)
RGR[6]	Reveal Color (Gray)
RPS[6]	Reveal Color (Platinum Silver)
RRD[6]	Reveal Color (Red)
RFG[6]	Reveal Color (Forest Green)

[1] Flat lens configurations only for horizontal lamp orientation.

[2] Factory wired for highest voltage unless specified.

[3] 400 watt maximum.

[4] Not available with 50 Hz ballast, 600 watt and 750 watt HPS, and convex lens with 1000W HPS.

[5] Not available with convex lens and 1000W HPS.

[6] Reveal selection requires EB - Embossed Band Option.

[7] Vertical lamp only.

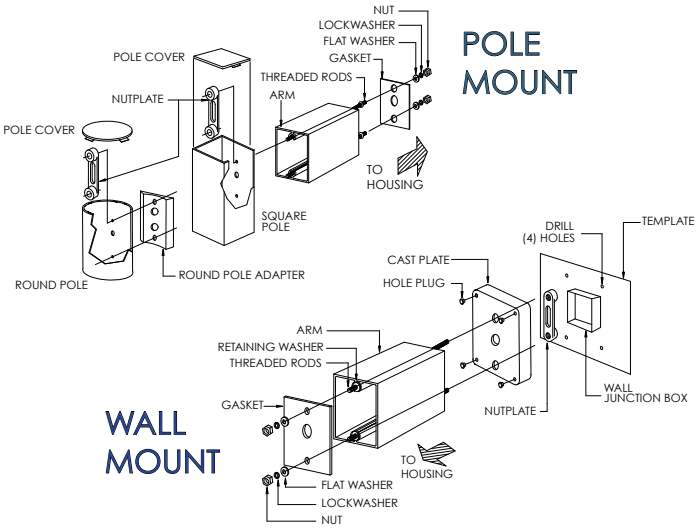
[8] Required for 90° configuration.

[9] 750W max.

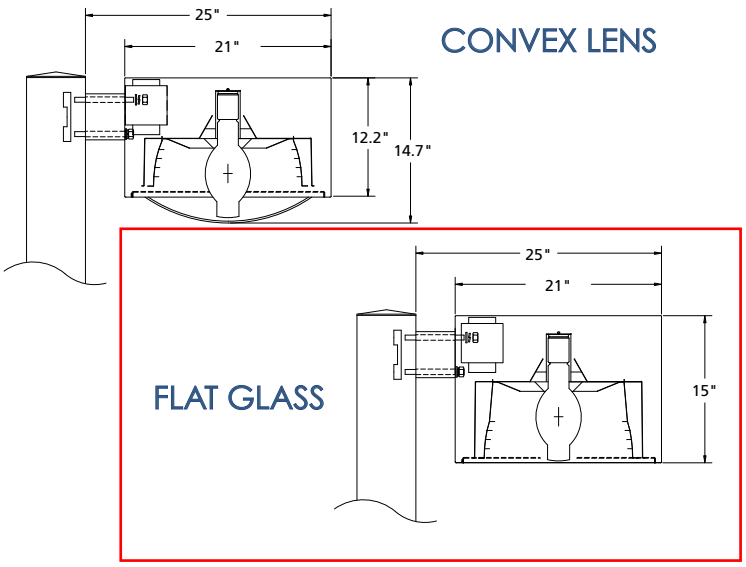
[10] Only available with 1000W PSMH, 600W HPS and 750W HPS.

***NOTE: Consult luminaire specification sheet for complete configuration compatibility.**

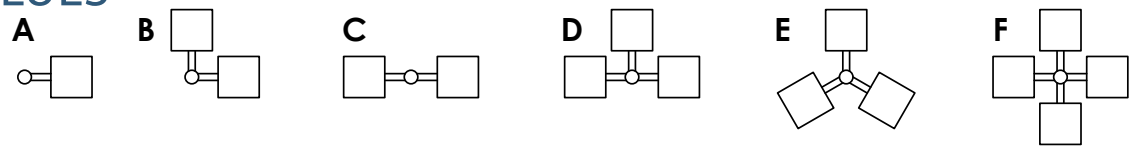
MOUNTING DETAILS



HOUSING DIMENSIONS



EPA VALUES



POLE LOGIC	FIXTURE ORIENTATION	FLAT LENS (w/ 4" arm)	FLAT LENS (w/ 10" arm)	CONVEX LENS (w/ 4" arm)	CONVEX LENS (w/ 10" arm)
A	SINGLE*	2.8	3.0	2.5	2.7
B	2@90	5.2	5.3	4.6	4.7
C	2@180	5.6	6.0	5.0	5.4
D	3@90	8.4	8.6	7.3	7.5
E	3@120	8.2	8.4	7.1	7.3
F	4@90	8.6	8.8	7.5	7.7

*Spider mount adds 0.5ft² EPA (9lbs). Yoke mount adds 1.6ft² EPA *(11.1lbs).

ACCESSORIES

FLUSH MOUNT HARDWARE

		Wt/lbs	EPA/ft²
FDMLH	Flush Mount Hardware - must order when no arm or adapter is desired on pole or adapter is desired on pole	2.5	-

ARMS

ARM-F-4-S-XX	4" Rigid Arm	2	.2
ARM-F-10-S-XX	10" Rigid Arm	5	.5
ARM-F-K-S-XX	Adjustable Arm for flat surfaces (10")	5.7	.5
ARM-F-TK-TA-XX	Tenon Arm (2-180°) adj. (2-3⅜" OD tenon)	5.7	.5
ARM-F-K-TA-XX	Tenon Arm (1) adj. (2-3⅜" OD tenon)	5.7	.5

TENON ADAPTERS

SSS-490-XX	Square - Slipfitter for 2-3/8" or 2-7/8" OD tenons - drilled for four (10" arm required for 90˚ config.)	20	.4
RSS-3120-XX	2-3/8" - 2-7/8" OD Slipfitter for three fixtures max (120˚) (must order F-RPA4-XX for each luminaire)	20	-
RSS-490-XX	2-3/8" - 2-7/8" OD for 10" arms only for four fixtures max (90˚) (must order F-RPA4-XX for each luminaire)	20	-

WALL PLATE

WB-CR-XX	Cast Wall Plate with fixture hardware, mounts over recessed 4" outlet boxes - lag hardware by others	5.7	-

Visit spaulding-ltg.com for complete pole information

POLE ADAPTER

		Wt/lbs	EPA/ft²
F-RPA2-XX	Nominal 2" OD Pole adapter provides a flat surface for arm or fixture mounting	1.5	-
F-RPA3-XX	Nominal 3" OD Pole adapter provides a flat surface for arm or fixture mounting	1.5	-
F-RPA4-XX	Nominal 4" OD Pole adapter provides a flat surface for arm or fixture mounting	1.5	-
F-RPA5-XX	Nominal 5" OD Pole adapter provides a flat surface for arm or fixture mounting	1.5	-
F-RPA6-XX	Nominal 6" OD Pole adapter provides a flat surface for arm or fixture mounting	1.5	-

GLARE SHIELD

MSV-GS	Glare shield (convex glass only) to reduce light in one direction	1.7	.5
MSV-FGGS-2	Extreme Glare Shield (flat glass only) only, restricts lighting in on direction	1.8	.5

FDMLH **SSS-490-XX** **WB-CR-XX** **F-RPAX-XX** **MSV-GS-X** **MSV-FGGS-X**

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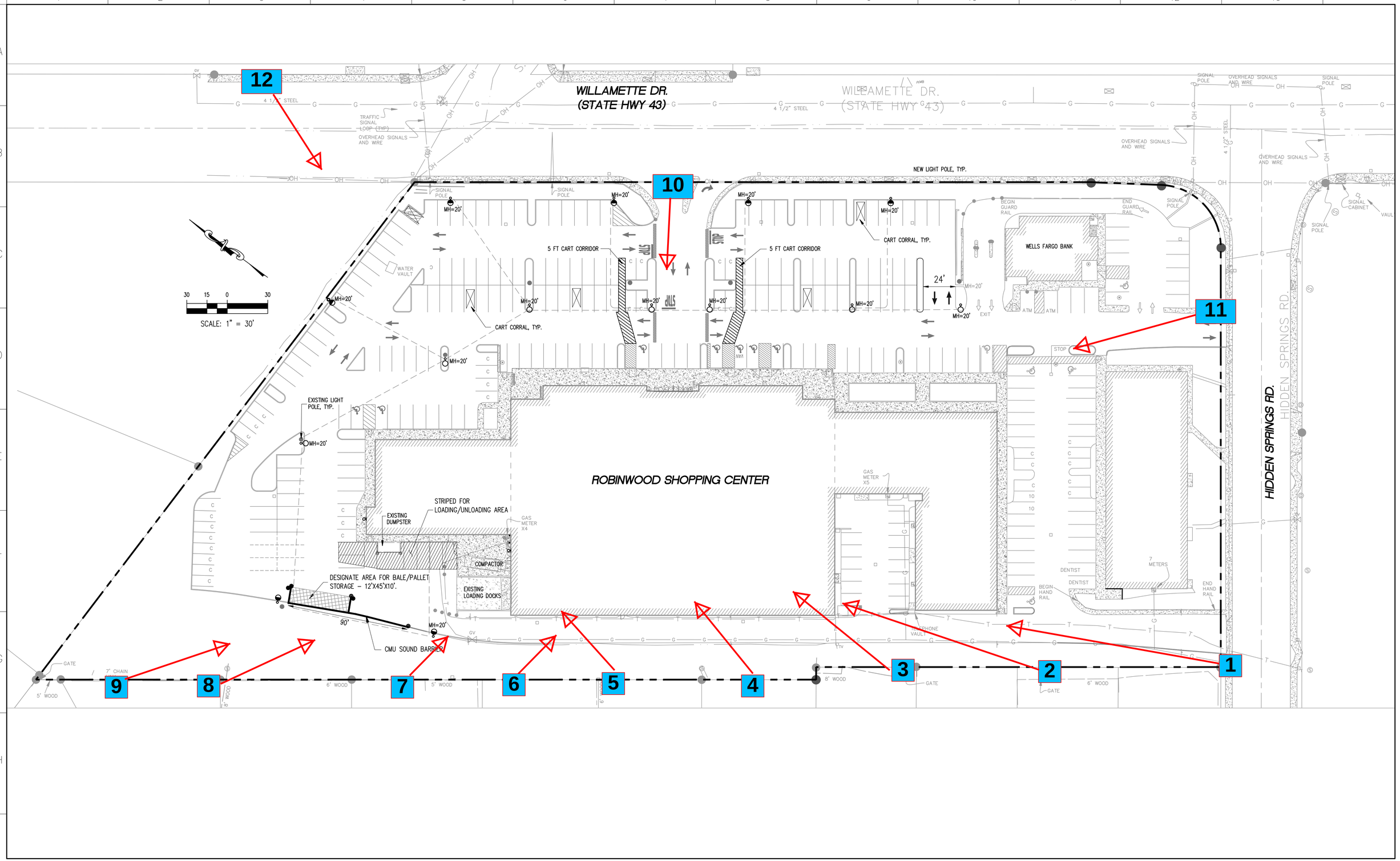

No.	Date	By	Revision Description

Designed By:	Issue Date: 2/8/12
Drawn By:	Issue:
Checked By:	Project No.

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C-1.0

P:\Oregon\West Linn\Grimes\Boles Thriftway NMKT\2Drawings\NMWLMSP_2-3-12.dwg Feb 07, 2012 - 5:49pm snguy

View 1

View 2

View 3

View 4

View 5

View 6

View 7

View 8

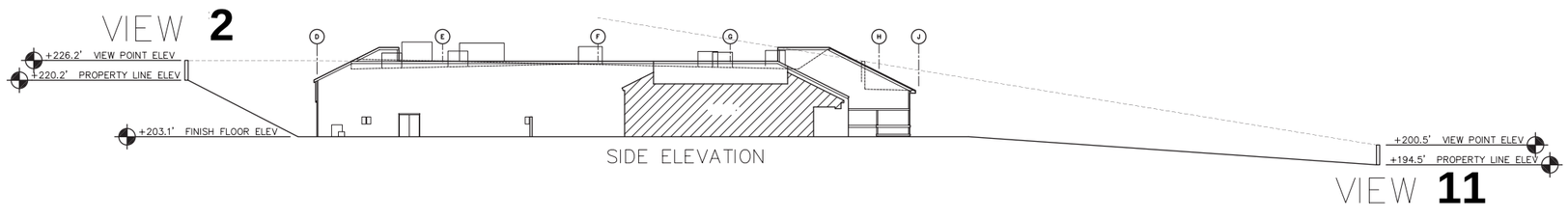
View 9

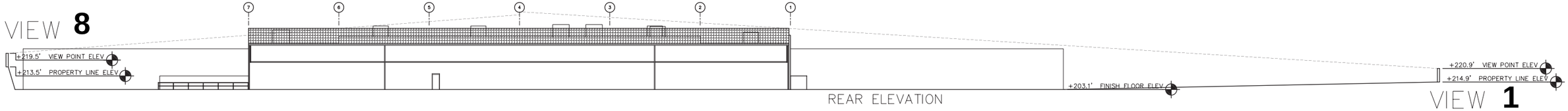
View 10

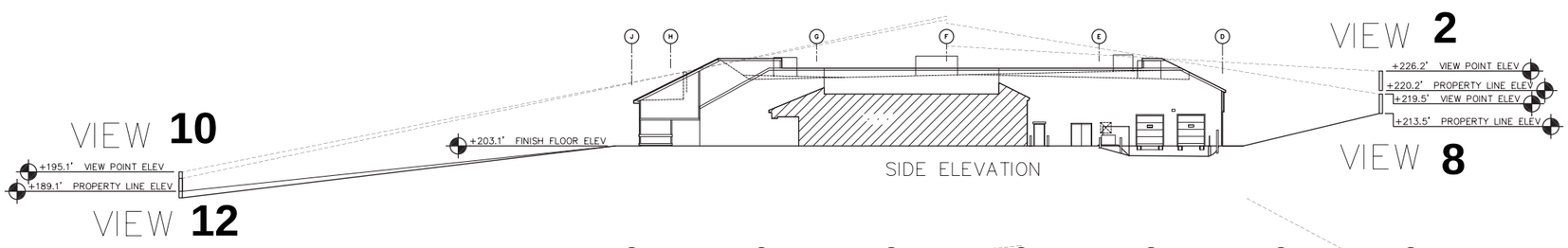
View 11

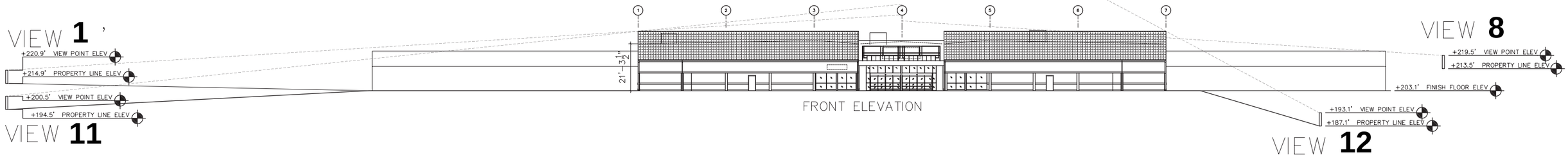
View 12

5994 WEST LINN, OR
RTU SIGHT LINE STUDY
ELEVATIONS









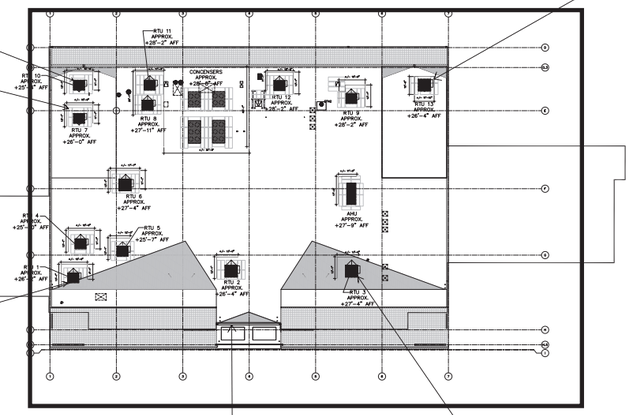
5994 WEST LINN, OR
RTU SIGHT LINE STUDY
SCREEN LAYOUT

ECLIPSE: VISUAL SCREENING

VIEW **1**
+214.9' PROPERTY LINE ELEV
+220.9' VIEW POINT ELEV

VIEW **2**
+220.2' PROPERTY LINE ELEV
+226.2' VIEW POINT ELEV

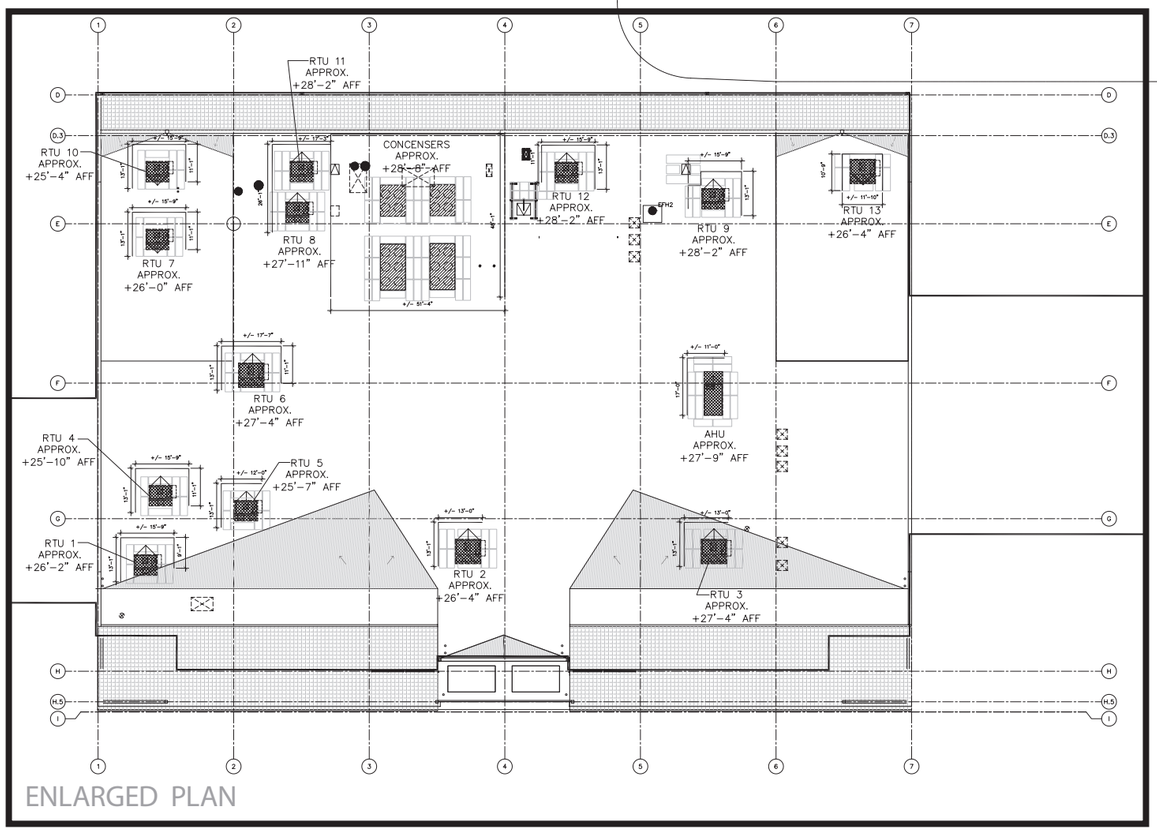
VIEW **8**
+213.5' PROPERTY LINE ELEV
+219.5' VIEW POINT ELEV



VIEW **11**
+194.5' PROPERTY LINE ELEV
+200.5' VIEW POINT ELEV

VIEW **10**
+189.1' PROPERTY LINE ELEV
+195.1' VIEW POINT ELEV

VIEW **12**
+187.1' PROPERTY LINE ELEV
+193.1' VIEW POINT ELEV



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Acoustical Analysis of Grocery Tenant

Submitted By: Tobin Cooley, P.E.
February 7, 2012

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Table of Contents

Executive Summary

Noise from typical operations at the Walmart Store in West Linn, OR will not exceed maximum permissible noise as defined by the Oregon DEQ code with the implementation of noise mitigation techniques described in this report. These techniques include providing a barrier on the rooftop for reducing condensing unit noise, and installing a sound wall at the bale/pallet storage area.

Introduction

This report presents the results of a noise analysis for the new rooftop units and bale/pallet storage area of the new Walmart Store in West Linn, OR. Existing noise from the site is created by the current rooftop mechanical equipment on adjacent rooftops and traffic noise from Highway 43. This report incorporates noise from new rooftop mechanical equipment and the addition of a bale/pallet storage area. The use of a storage area is not new to this site. The proposed bale/pallet area has historically been used as a storage area without any containment structure to store the recyclable material and promote site cleanliness. While this noise analysis has been conducted per the city's request, the neighbors in the surrounding area are likely accustomed to the noise associated with the use of the shopping center.

Background

Sound waves in air are created by varying pressure levels above and below that of the ambient pressure. Because the range of sound pressure levels significant to people is very large, it is convenient to express them on a logarithmic scale, in units of decibels (dB).

Noise is most often measured as an A-weighted sound level in units of decibels, symbolized as dBA. The A-weighting is a specific weighting filter in a sound level meter that corresponds approximately to the varying sensitivity of human hearing at the measured frequencies. Examples of noise levels typical of the urban environment include:

Source	*dBA*
Impact hammer on concrete at 25 feet	90
Outdoor amplified music at 50 feet	80
Freeway at a distance of 100 feet	70
Social gathering in a small room	60
Normal conversation at 5 feet	50
Quiet suburban neighborhood (average)	40
Rural background noise (no activity)	30

Because of the logarithmic scale, levels of sound pressure do not add up arithmetically. For example, if one impact hammer results in a sound pressure level of 90 dBA at a point 25 feet

away, two of the exact same hammers operating would produce 93 dBA at the same point at 25 feet.

In free field conditions, i.e. far from any reflective surfaces, the sound pressure level from a noise source is expected to be reduced by 6 dB for every doubling of distance; this assumes that the distances are large enough that the noise source is seen as a point source from the receiver positions. Free field conditions typically do not exist in many practical situations, and environmental factors must also be taken into account when considering outdoor sound propagation, particularly over relatively long distances, which alter the actual distance sound reduction.

Relative perceptual differences in decibel levels are important to understand in comparing sound levels. A 1 dB difference is not generally detectable, a 3 decibel difference is just noticeable, a 6 decibel difference is considered "significant", and a 10 decibel difference is considered "twice as loud".

Some important measures used in this analysis are as follows:

Equivalent-Continuous Sound Level, L_{eq}: A continuous (constant) level of sound in dBA over a given time period that has the same energy as a varying sound over the same time period.

Day-Night Average Sound Level, L_{dn}: The L_{eq} value over a 24-hour period where a 10 dBA addition is applied to each of the hourly L_{eq} levels between 10 p.m. and 7 a.m.; the 10 dBA addition emphasizes the significance of noise during nighttime hours.

Exceedance Levels, L_{xx}: The measured sound level in dBA that is met or exceeded for a percentage of the measurement time, where the percentage of the measurement time is indicated by "xx." For example, if the L_{25} value of a measurement period is stated as 55 dBA, the sound level during the measurement was at least 55 dBA for 25% of the time; this would be 15 minutes in the case of a one hour measurement period.

Site Noise Criteria

The site is located in the City of West Linn. CDC 55.110 of the West Linn City Development Code requires a sound study to be undertaken when new sound sources can potentially exceed noise standards. DEQ regulations (ORS Chapter 340, Division 35 DEQ 340-35-035) define the classes of land use for noise assessment purposes, specify maximum permitted noise levels based on the land uses, indicate exemptions to the maximum permitted noise levels, and discusses enforcement of the noise regulations.

The following is the applicable DEQ 340-35-035 Table 9:

Industrial and Commercial Noise Source Standards for Quiet Areas; Allowable Statistical Noise Levels in Any One Hour

7am – 10pm	10pm – 7 am
L50 – 50 dBA	L50 – 45 dBA
L10 – 55 dBA	L10 – 50 dBA
L1 – 60 dBA	L1 – 55 dBA

The site of the Walmart store is commercial. The adjacencies of interest to this study are the residential properties to the west which are residential "quiet areas".

Predicted Level Locations

Based on comments from City Staff, the activities of concern for the proposed improvements are listed below:

- New rooftop mechanical equipment;
- Bale/pallet storage activities;

Predicted noise levels from the activities noted above are predicted to four locations closest to the nearest residential receivers. These locations are shown in Figure 1 below.

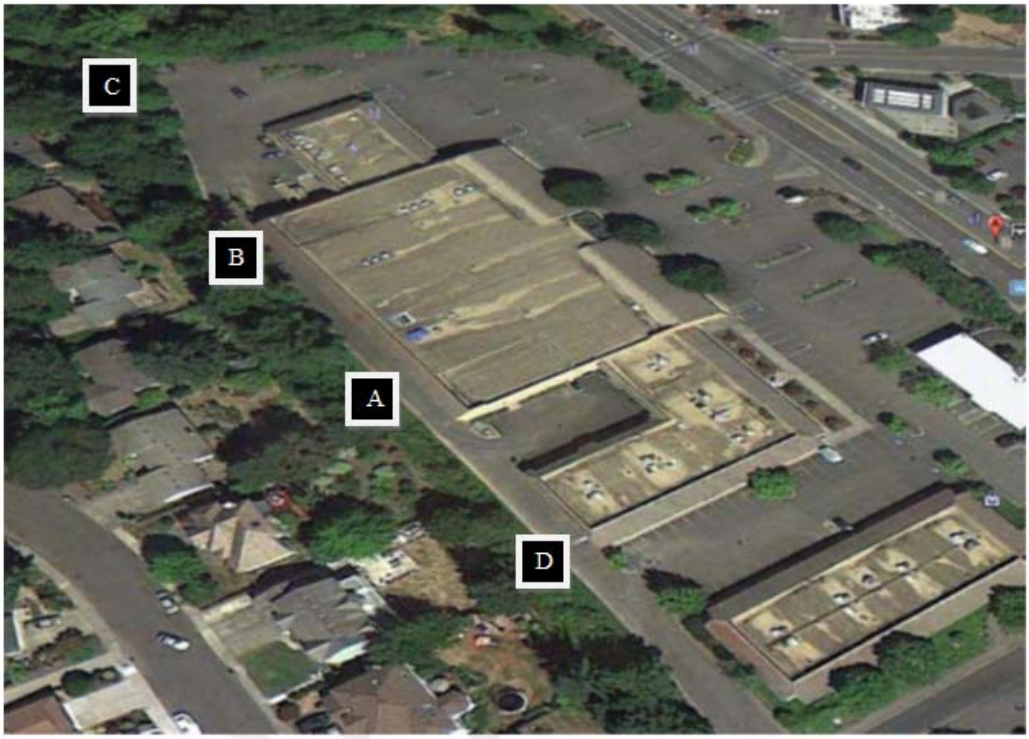


Figure 1: Locations for noise predictions.

Rooftop Mechanical Units

Based on the HVAC plans provided by the project mechanical engineers, the proposed rooftop mechanical unit configuration includes a Muntner AHU, Lennox 3, 5, and 10 ton Packaged Air Handlers, and Bohn 4 and 6 fan Condensers, as depicted in Table A1 in Appendix A.

Noise data has been provided for these units by the mechanical design team, and has been used to predict sound levels at the various locations around the perimeter of the property. Appendix A lists the mechanical unit sound data used in this analysis. The absolute worst-case scenario of every unit operating at all times is assumed in the calculations.

Noise levels were predicted to the various locations at the neighboring properties. Attenuation due to distance and the building parapet acting as a barrier (where applicable) affect the resultant noise level at each of the locations. The results of the predictions are given in Table 5.

DEQ states the receiver location must be either at the property line or 25' from a structure, whichever is furthest from the source. Based on the ODEQ Sound Measurement Procedures Manual NPCS-1, the receiver location is suggested to be located at 4 feet or more above the ground or floor surface. However, for this study, the applicant has chosen a scenario where the receiver location was selected as the property line, at a height of 8' above the grade level. The 8-ft height is comparable to an average height person standing at the property line with a sound meter raised in his hand. This represents a worst case scenario, more stringent than DEQ requirements for the receiver location.

Table 1: Predicted levels due to rooftop mechanical unit noise

Point	Location	Max. Allowed L_{50}, (dBA)	Predicted Level, 1 Hr. L_{eq} (dBA)
A	Residential	50 day / 45 night	44
B	Residential	50 day / 45 night	41
C	Residential	50 day / 45 night	42
D	Residential	50 day / 45 night	43

As indicated in Table 5, the maximum allowable nighttime noise levels are not exceeded with the new rooftop equipment at all receiver points. Daytime activities are predicted to be well below the maximum allowable sound levels. No mitigation is required to meet the DEQ sound limits.

Bale/Pallet Storage Area Noise

The bale/pallet storage operation is similar (although much less frequent) to current garbage collection functions on the site, which have been functioning for many years. The operation consists of manual hand pallet trucks pushing empty pallets, plastic crates, and cardboard bales to the loading area. A truck comes approximately once per week to load the pallets, using an electric forklift pallet jack. After parking, the truck shuts off its engine. The forklift is in use for approximately 30 minutes total during the operation. It takes approximately 45 minutes to fully load a truck. The majority of the noise is from the forklift.

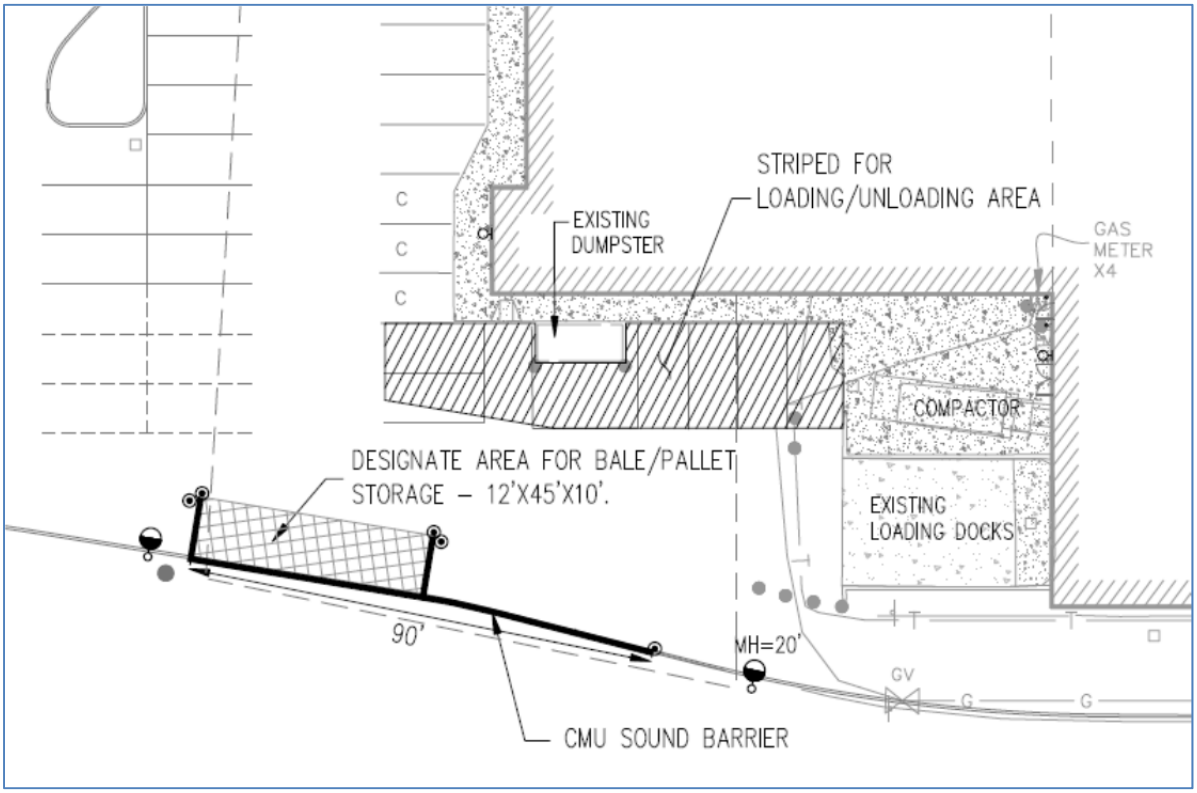


Figure 2: location of bale/pallet storage area

The analysis used in this study utilizes a likely-case scenario for noise potential, which would be a daytime pick-up.

The truck engine noise level used in the analysis is 69 dBA L_{50} at a distance of 50 feet. The forklift sound level is 67 dBA average at 20 feet. The levels used are based on Walmart truck and forklift noise measurements conducted by our firm. See Appendix B for the truck and forklift noise levels used in this analysis.

With the current configuration of the loading area and operations as described above, noise levels for typical operations are as indicated in Table 2.

Table 2: Predicted levels due to bale/pallet storage operation

Point	Location	Max. Allowed L_{50}, (dBA)	Predicted Level, L_{50} (dBA)
A	Residential	50 day / 45 night	51
B	Residential	50 day / 45 night	58
C	Residential	50 day / 45 night	53
D	Residential	50 day / 45 night	38

It can be seen from the table that noise mitigation is required, because the predicted noise levels exceed the DEQ noise level standard at all points except D. Recommendations are discussed under the Mitigation Recommendations section below.

Mitigation Recommendations

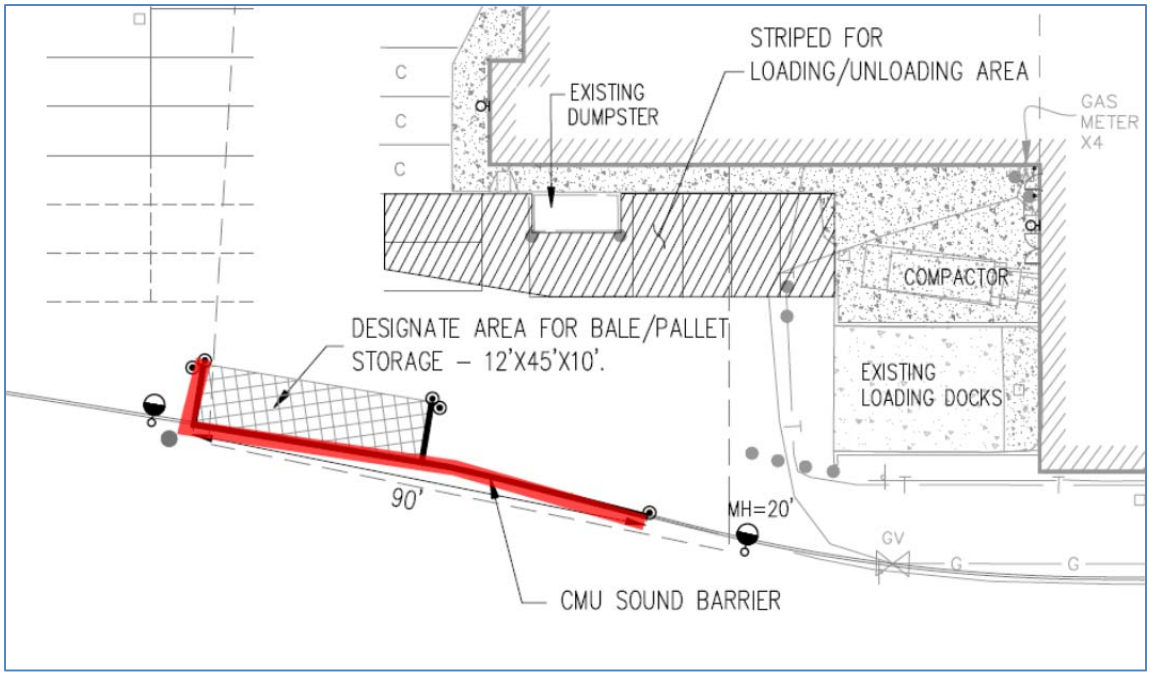
Mitigation includes:

1.) Adding a barrier to the loading dock area;

Details of each portion of the mitigation plan are described below.

1.) Adding a Bale/Pallet Storage Area Barrier

A barrier should be configured to provide a blocked line of sight (sound) from the truck loading area to the residences directly to the West. The barrier should extend a minimum of 75 feet in length, centered on the main loading area for the bales/pallets, and should wrap around the edges at the end of the barrier at least 12’ on the North Side. The barrier should be constructed with material which is 4 pounds per square foot minimum (concrete block preferred). Based on coordination with the Civil Engineer, the location of the sound barrier as outlined in red below will mitigate noise related issues from the operations of the bale/pallet area.



Resulting Sound Levels

With the mitigation recommendations above the resulting sound levels are as follows:

Table 4: Predicted levels due to bale and recycle operation WITH MITIGATION

Point	Location	Max. Allowed L_{50}, (dBA)	Predicted Level, L_{50} (dBA)
A	Residential	50 day / 45 night	33
B	Residential	50 day / 45 night	40
C	Residential	50 day / 45 night	42
D	Residential	50 day / 45 night	34

Summary

New rooftop mechanical equipment and bale/pallet storage operations are predicted to be below maximum allowable noise levels at the adjacent properties for typical rooftop unit and bale/pallet storage operations at the West Linn Walmart Store, provided that mitigation techniques given in this report are implemented. These recommendations include the construction of bale/pallet storage area screen walls.

If there are any questions, or if we can provide further information, please do not hesitate to call.

Sincerely,
LISTEN ACOUSTICS

Tobin Cooley, P.E.
President

Appendix A: Mechanical Rooftop Noise Levels.

The mechanical unit noise levels used in this analysis are shown below for rooftop equipment (Table A1) and compressors (Table A2).

Table A1: Rooftop equipment noise levels

Description	Make/Model	Sound Power Level (Lw, dB re 1pW)	Sound Pressure Level (Lp, dB re 20µPa) at distance (feet)
3-ton RTU	Lennox SG	76	--
5-ton RTU	Lennox SG	78	--
10-ton RTU	Lennox SG	88	--
AHU	Muntner	89	77 dBA at 15’

Table A2: Condenser noise data

Description	Make/Model	Sound Power Level (Lw, dB re 1pW)	Sound Pressure Level (Lp, dB re 20µPa) at distance (feet)
Remote Air Cooled Condenser	Bohn BNL -4	81	69 dBA at 10’
Remote Air Cooled Condenser	Bohn BNL-6	83	71 dBA at 10’

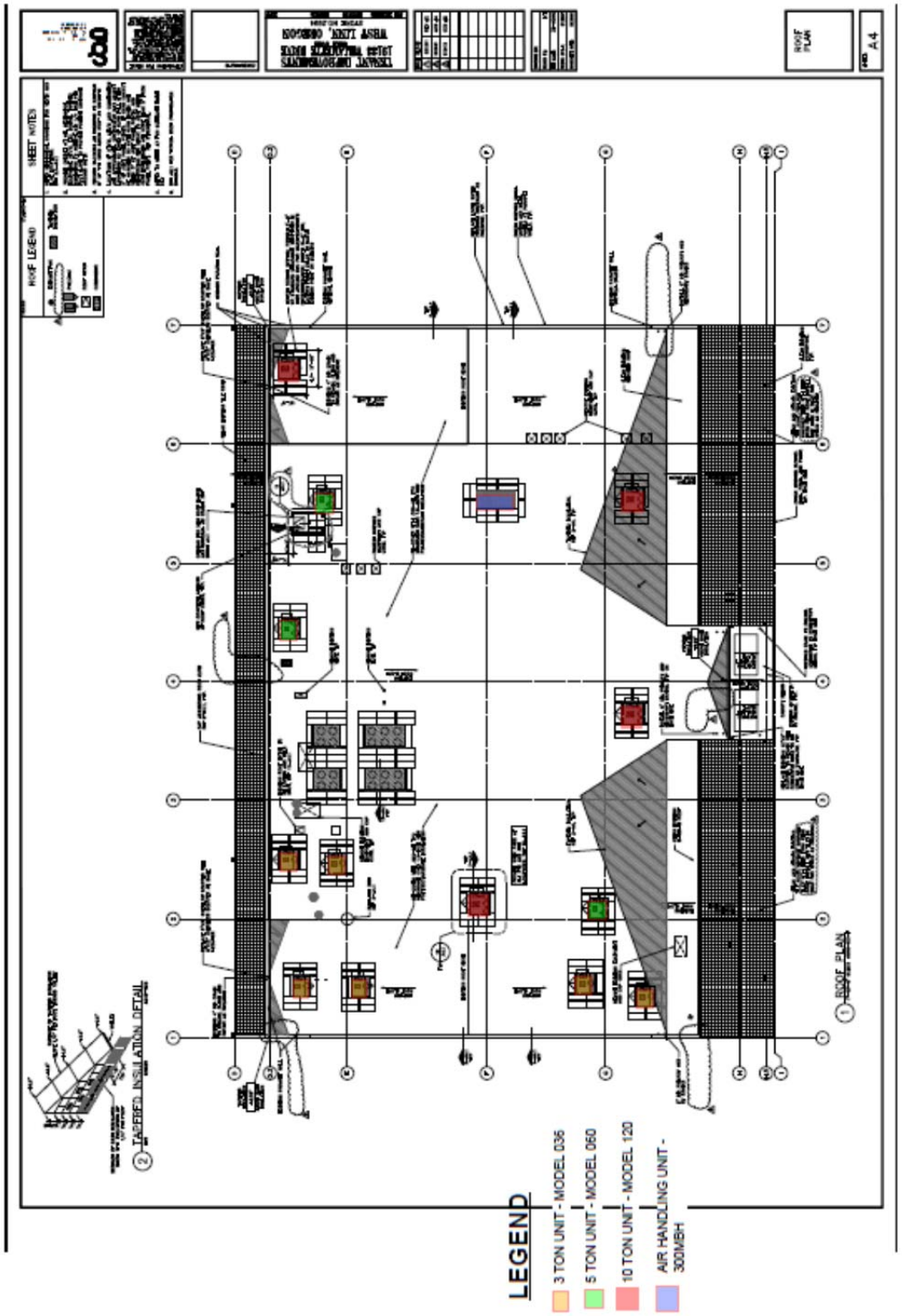
Appendix B: Truck and Forklift Noise Data

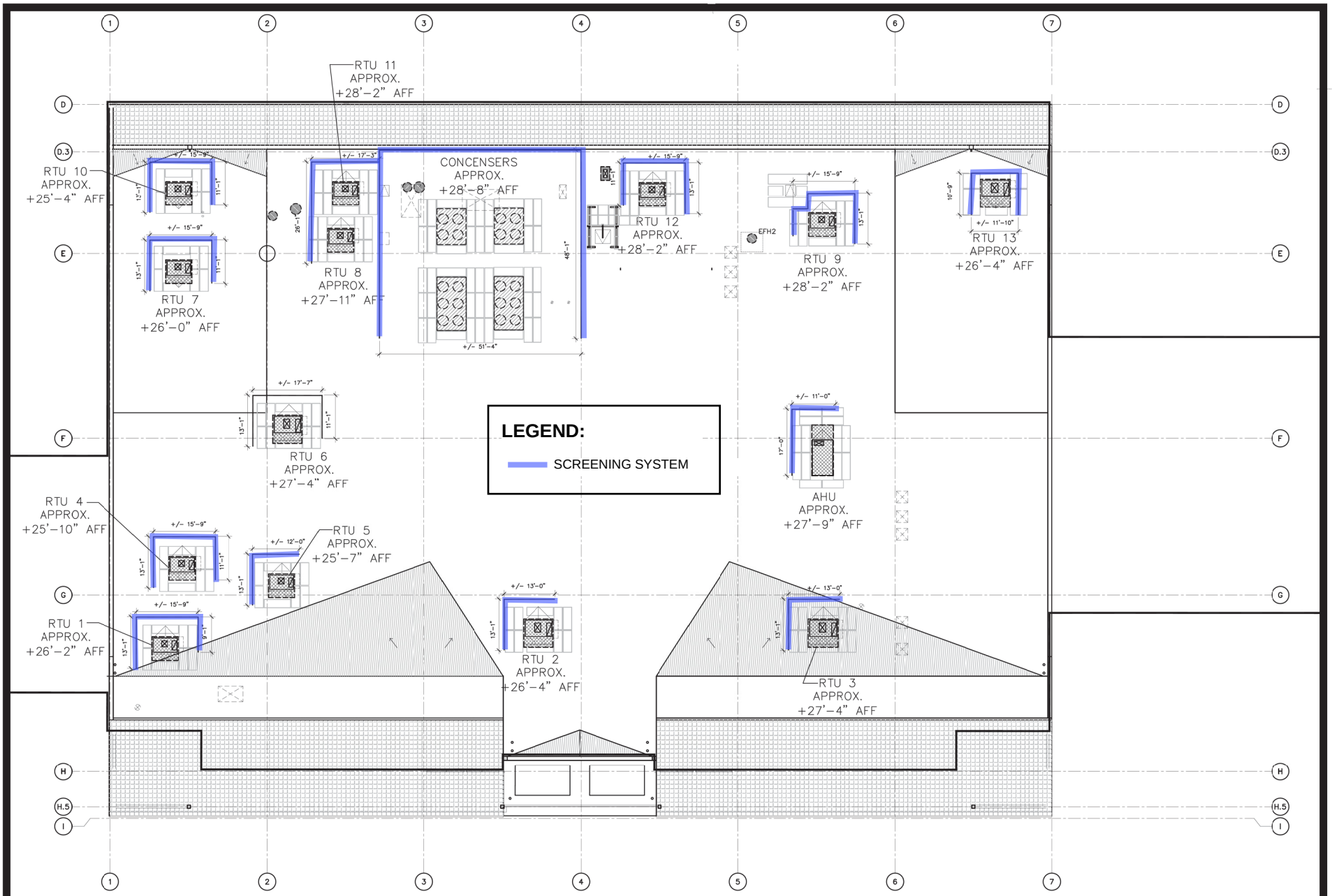
Table B1 below shows the truck and forklift noise levels used in the analysis. These noise levels have been measured by our firm on previous Walmart projects.

Table B1: Walmart Truck and Forklift Noise Levels.

Description	Distance	Level (dBA)
Walmart truck engine noise	50 feet	69
Forklift	20 feet	67

Appendix C: RTU Layout





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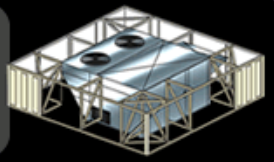

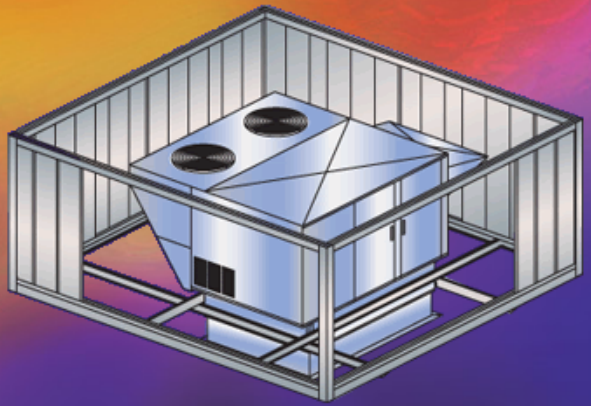

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