Macadam Corridor Design Guidelines

Portland, Oregon
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City of Portland, Bureau of Planning
ADDENDUM TO DESIGN GUIDELINES:
DESIGN DISTRICT THRESHOLDS

Section 33.825.030 of the Portland Zoning Code outlines the procedures for Major and Minor Design Review. Major Design Reviews are processed through the Type III procedure, which requires a public hearing. Minor Design Reviews are processed through the Type II procedure; they are approved by staff based on specific criteria. A hearing is held if the decision is appealed.

The level of Design Review is determined by the type of development, the value of the improvements, or the location of the project. There are three threshold levels for use throughout the City:

Threshold 1: New buildings over 1,000 square feet in area or exterior alterations valued over $200,000 (in 1990 dollars) require Major Design Review. Smaller projects require Minor Design Review.

Threshold 2: New development or exterior alterations, valued over $1,000,000 (in 1990 dollars), require Major Design Review. Smaller projects require Minor Design Review.


The thresholds are also applied to the Special District Design Zones, so designated for their particular character or historic value. In these cases, all projects within the Design Zone are subject to the thresholds as follows:

Districts assigned to Threshold 1:
- Downtown Design District
- Skidmore/Old Town Historic Design Subdistrict
- Yamhill Historic Design Subdistrict
- NW 13th Street Historic Design Subdistrict
- The blocks zoned CX in the NW Triangle Plan area which abut the North Park Blocks
Districts assigned to Threshold 2:
- Macadam Design District
- All areas in the Central City Plan District subject to design review that are not covered by Threshold 1
- All areas outside the Central City Plan District with a CXd or EXd designation

Districts assigned to Threshold 3:
- Lair Hill Design District
- Ladd’s Addition Design District

Special Terwilliger Blvd. Design District Thresholds:

Major Design Review:
- New development that would be visible from Terwilliger Blvd., except for houses.

Minor Design Review:
- New houses visible from Terwilliger Blvd.
- Alterations to existing development that is visible from Terwilliger Blvd.

Exempt from Design Review:
- New development that will not be visible from Terwilliger Blvd.
- Alterations to existing development that will not be visible from Terwilliger Blvd.

The Planning Permit Center staff can answer any questions about the design review process or the assigned thresholds. The telephone number is 823-7526.
# Table of Contents

- Introduction 1
- Background and History for Macadam Corridor Design Review 2
- Review Process 5
- Application Requirements 6
- Goals for Macadam Corridor Design 7
- Guidelines 11
  - 1. Visual Connections 12
  - 2. Physical Connections 15
  - 3. The Water's Edge 19
  - 4. The Boulevard 21
  - 5. Sub-Area Context 24
  - 6. Signs 26
  - 7. Johns Landing Masterplan 28
Introduction
Within the Macadam Corridor, (shown on the map on page 9), the Design Guidelines contained in this document must in the view of the Design Commission be met by each new development or remodeling requiring a building permit. Additionally, within those parts of the Corridor which are also within the Willamette River Greenway, the Greenway requirements listed in Chapter 77 of Title 33, the City Planning and Zoning Code, must also be met.

Major projects are reviewed by the full Design Commission at a public hearing for which notice is given. Ordinarily, the Design Commission will render a decision at the hearing. This decision may be tentative, to be finalized when completed by introduction of appropriate findings at a subsequent hearing. Projects which are found to be minor will be reviewed administratively. Appeals of such administrative reviews are to the full Design Commission.

The Design Commission may approve, approve with conditions, or deny request for design review approval brought before them. The Commission's decision may be appealed to the City Council within 14 days of the final decision by any person with standing. Standing is limited to those who participated in person, in writing, or through a representative prior to or at the hearing and who raised objections which were not resolved by the Commission's decision.

Background and History for Macadam Corridor Design Review

The Macadam Avenue Corridor has been shaped by people responding to its role as a transportation route and by changes in the nature of transportation on this route. During the City's early growth, lands between the Willamette River and Macadam developed into an industrial area where many firms took advantage of both river and land transportation modes. The area was close to the downtown, abutted the river on the navigable side of Ross Island, was provided with rail service and tied together by Macadam Avenue. The area west of the Avenue filled with supporting industrial and commercial activities and back from Macadam, housing. Much of this housing was constructed to meet the needs of those employed in the industries along this stretch of the river.

Industrial development with its attendant rail, auto and truck traffic on Macadam has historically separated the Willamette from the residential neighborhoods west of the avenue.

Over the decades and particularly since World War II much of the industry in the Corridor has relocated. This migration of industrial activity is attributable to shifts in industrial technology, emphasizing horizontal rather than vertical industrial plants, and changes in shipping facility needs requiring large areas of land for support. The role of the Macadam area as part of the City's marine industrial base has steadily declined except in the northern area where much larger land area is available to meet river-related industrial needs. For a time non
river-related industrial plants replaced the marine based operations but were not as vigorous as earlier development.

The softness of these new firms coupled with the resurgence of the downtown and inner city residential neighborhoods fostered redevelopment. This was capitalized on by the Johns Landing private urban renewal project of the 1970's.

Johns Landing established new standards of design and land use direction on both sides of Macadam. For the first time significant residential development between Macadam and the Willamette was realized. Also, for the first time, Macadam became a regional shopping area. The Landing's campus atmosphere contrasted sharply with the functionalist industrial facilities to the north and south of the project. In addition to the development of housing and major retailing, Johns Landing introduced large scale commercial offices into the area.

The Johns Landing project made realization possible of the long term objective of creating more public access to the river. Coupling the public creation of Willamette Park with the agreement by the Landing to dedicate and develop a recreational trail along the river produced the first opportunities for public enjoyment of the river in this part of the City.

The objective of greater public access to the river in this area was formalized with the adoption of the Willamette River Greenway Plan and its implementing ordinances. The bulk of the Macadam Corridor was designated and zoned for scenic development under the Greenway Plan. The implementing WSD (Willamette Scenic Development) overlay zoning was imposed with the following intent statement explaining the City's objective for the Greenway in this area:

**Intent:** To allow for use and development consistent with the underlying zoning while allowing for public use and enjoyment of the waterfront and enhancing the river's scenic qualities.

Concurrent with the emergence of the Johns Landing project was the formation of the Corbett, Terwilliger, Lair Hill Planning Committee* and ultimately the adoption of the Corbett, Terwilliger, Lair Hill Policy Plan. The process of developing the policy plan began in 1972 in response to three factors:

1. The effects of urban renewal in the South Auditorium area and its potential impact on the future development of the Lair Hill and Corbett neighborhood.
2. The construction of the Johns Landing development and its effect on the surrounding Terwilliger residential neighborhood.
3. The possible improvements to Macadam Avenue and their effect on business in the Macadam Corridor.

The policy plan was approved by the Planning Commission in 1976 and was adopted in part by the Council in 1977. The second and third

*In 1984 the Corbett, Terwilliger, Lair Hill Planning Committee was renamed the Corbett, Terwilliger, Lair Hill Neighborhood Association.
issues listed above relate directly to problems of new development within the commercially and industrially zoned lands along Macadam.

Since the policy planning effort was completed, the 3.35 million dollar Macadam Improvement Project has been finished and a significant number of industrial firms have relocated out of the Corridor. The Macadam Improvement Project resulted in Macadam being widened, rebuilt and landscaped with a planted median strip to create a full boulevard treatment. The recommendation of the Macadam Avenue Improvement Project included, in addition to specific proposals for right-of-way improvements and landscaping, the following language:

"Implement a design zone with sign control in the Corridor to guide future development."

Macadam Avenue is designated as a boulevard in the City's Arterial Streets Classification Policy. This designation is intended to assist in beautification of the City and has been implemented in part through the Macadam Avenue Improvement Project. The Corbett, Terwilliger, Lair Hill Plan states that steps should be taken to "ensure quality development in a single entry corridor to the CBD," (page 112 of the plan). However, while consideration of such factors as urban design and sign control have been repeatedly called for, they were beyond the scope of earlier planning activities.

Macadam Avenue functions as a corridor for sub-regional trips from Sellwood, Dunthorpe, parts of Lake Oswego, West Linn and Oregon City. Over 23,000 vehicles a day travel Macadam; many of them commuting to the center city. In addition to its boulevard designation, Macadam is also shown as a major city traffic street and a major city transit street in the Arterial Streets Classification Policy. The vehicles, autos, trucks and public transit that travel Macadam separate the residential neighborhood west of Macadam and the Willamette. The bridging of Macadam has been a significant concern of the Corbett, Terwilliger and Lair Hill neighborhood and the City for some time. One of the neighborhood’s original reasons for supporting the Macadam Avenue improvements was to improve for pedestrians access across the boulevard to the Greenway Trail and Willamette Park. The sub-committee appointed by the Neighborhood Association to work with the staff on the Macadam Study set improved access across Macadam to the river as a major objective of the Study.

The neighborhood has also stressed a strong desire to avoid strip commercial development along Macadam. One of the goals for the Macadam Corridor included in the Neighborhood Policy Plan (Page 11 of 1977 document) although not adopted by the Council, is "Commercial drive-in facilities shall be discouraged in order to avoid ... commercial strip development." It was Council's recognition of this continuing concern that prompted the study which produced these guidelines. Strip commercial redevelopment could conflict with both long standing neighborhood concerns and the public's investment of the Macadam Avenue Improvement Project.
The 1977 Corbett, Terwilliger, Lair Hill Policy Plan concludes (Page 10) that "A shift in land use along the river can be expected. The Willamette Greenway Plan, which will be a component of the Comprehensive Plan, is currently studying this part of the river with the intent of proposing that the land along the river, south of the Marquam Bridge be eventually converted to residential, commercial and recreational use." This understanding is reflected in the intent statement accompanying Policy C previously quoted (page 3).

Urban waterfront redevelopment has been popular over the last ten to fifteen years nationwide. Such developments are limited by the Willamette Greenway Plan, for the most part, to lands upstream from the Broadway Bridge. The area with the greatest potential for private waterfront redevelopment along the Willamette in Portland is the Macadam Corridor. This potential helped create the environment that attracted the Johns Landing project. Today it continues to support that project and to attract new development proposals.

This potential and the long standing concern of the neighborhood and the City prompt public review of new development proposals within the Macadam Corridor. In requiring such a review it is appropriate and to the benefit of both the public and the development community for the City to publish these guidelines of design acceptability. This document is intended to convey to project developers the public's design concerns within the Macadam Corridor. It will also be used by the Design Commission in the review of project plans for design acceptability.

The Review Process

Authority and procedures for design review and approval are established by Chapter 33.62 of the Portland City Code. The goals and guidelines are intended to supplement and aid implementation of that Chapter and other chapters of the City Zoning Code. The adopted guidelines are used by the Design Review Commission to review projects requiring building permits within the Design Zone.

Major projects are reviewed by the Design Commission. Proposals will be reviewed as either major or minor projects. A minor project is one that the Planning Director and Design Commission Chair find will not significantly affect the character, use and future development of the Macadam Avenue Corridor. Minor projects are reviewed by the Planning Director or the Director's delegated staff. Where there is both a Design Zone and a Sign Zone the sign review will be administered by the Design Commission. In its decision, the Design Commission shall establish findings which address the project's compliance with the Macadam Corridor Design Guidelines.

Upon receipt of a complete application and drawings adequately describing the project, a hearing on the proposed project will be scheduled with the Design Commission. The Neighborhood Association and area business association(s) will be notified of the application by the Bureau of Planning and the date and time of the Commission's hearing. A recommendation from neighborhood and business groups fifteen days prior to the date of the hearing will be requested. These
recommendations will be a part of the staff report to the Design Commission. The date of the Design Commission hearing will be not more than 60 days following the date of receipt of the complete application. Unless the applicant or other person with standing objects to any aspect of a decision of the Design Commission, the decision is final. Those wishing to appeal a Design Commission decision have 14 days in which to file the appeal. Appeals are heard by the Portland City Council. The Commission and the Council may approve, deny or approve with conditions.

Project designers are strongly encouraged to request a preapplication conference with the Bureau of Planning prior to formal application for Design Review. Such meetings provide an opportunity for informal discussion of the specific circumstances of the project and how the guidelines might affect the development.

Application Requirements

Applications for Design Review may be obtained at the Portland Bureau of Planning and City Permit Center, both located at 1120 S.W. Fifth Avenue. An application for Design Review must be accompanied by ten sets of plans and renderings including the following:

- A written statement explaining how the proposed design responds to the Macadam Corridor Guidelines;

- A masterplan including proposed land use, building heights, densities, building placement, parking amount and placement, and pedestrian, transit and vehicular features and access, including public rights-of-way, private streets and easements;

- A site plan showing the dimensions and arrangement of proposed and existing buildings and other structures and any changes in existing development or use of existing facilities;

- Drawings or other materials completely describing the architectural scale, style, siting, lighting, building material, color and exterior finishes to be used in the proposed project;

- A landscape plan indicating the location of proposed trails, easements, planting, screenings, plant materials, views and special natural features located on the site; and

In addition, prior to erection of any signs, the following information must be submitted for Design Review.

- The location, type, size, color, shape and height of all permanent signs, and of all incidental signs relating to the Greenway.
Goals for Macadam Corridor Design
The following goals are general statements of the aim of the Design Review process in the Macadam Corridor. Design guidelines are used by the Design Commission to review projects requiring building permits within the design zone. The goals provide a framework for the Design Review process.

- Create and improve connections, both physical and visual, between the river, Greenway Trail, Willamette Park and the residential community west of Macadam.

- Encourage opportunities for public use and enjoyment of the waterfront.

- Promote a quality of development in this scenic entry corridor to the Downtown that complements Macadam's landscape treatment.

- Require excellence in design for projects within the Corridor, particularly by assuring that new development contributes to the formation of a rich and diverse mixture of uses and styles in scale with each other.

- Add to the scenic qualities of the river and the Greenway Trail.

- Promote compatibility of new development with the river, surrounding uses and the neighborhood.

These goals express the desired ends of the Design Review process. They are drawn from the design concerns raised during the last decade-and-a-half of planning activity on Macadam. They reflect ideas and statements included in the Corbett, Terwilliger and Lair Hill Policy Plan (1977), the Arterial Streets Classification Policy, the Macadam Avenue Improvement Project, the 1983 Report and Recommendations on Land Use and Urban Design in the Macadam Corridor, the Comprehensive Plan and the Willamette River Greenway Plan. They also reflect concerns raised by area business, neighborhood and environmental interest groups who participated in their development.
MACADAM CORRIDOR DESIGN ZONE

- DESIGN ZONE BOUNDARY
- GREENWAY TRAIL
- CENTER LINE POTENTIAL LRT FACILITY

WILLAMETTE RIVER
1.

Visual Connections

Issue:

A major attraction of Portland and perhaps the single, most significant amenity within the Corbett, Terwilliger, Lair Hill neighborhood is the Willamette River. The development of Willamette Park and the Greenway Trail not only enhance the scenic qualities of the river and offer recreational opportunities, but they also add to the beauty of the City. The river itself, long invisible because of intervening development, has been visually united with the City by recent redevelopment activity. Significant opportunity exists for additional redevelopment activity along the Corridor. Failure to take advantage of these opportunities would detract from the potential attractiveness of the City and the realization of the Willamette River Greenway.

Guideline:

Create public views to the river, Greenway Trail and Willamette Park from Macadam Avenue and other public parks and rights-of-way west of Macadam as well as views from the river and the Greenway to the west.

In Doing This:

• Promote physical and visual contact between the river and the area west of Macadam Avenue.

• Orient buildings which front Macadam Avenue to preserve views of the river, Willamette Park and the Greenway.

• Integrate the east and west sides of Macadam Avenue by creating views of the river which align with streets on the east side of Macadam.

• Take particular advantage of opportunities to create and protect views which align with Southwest Texas, Florida, Pendleton, Idaho, Nebraska, Dakota and Hamilton Streets.

• Rooftops of buildings should be carefully designed to enhance views.

• Plant on site trees which will grow to a sufficient height to soften new development and screen parking areas while selecting species and planting locations which enhance view corridors to the river.
Example 1

Two possible building footprints. Proposal A fosters a view by locating the narrower building frontage on Macadam. Proposal B eliminates possible views from Macadam by using the building's long dimension on the Macadam frontage.

Example 2

East-west right-of-way alignments such as Richardson Court can be preserved as view corridors by carefully locating new building and landscaping.
Example 3

Buildings which are designed with attractive roof tops can add to the quality of public and private views from hillside locations.
2. Physical Connections

Issue:

Macadam itself, with four lanes of traffic and over 23,000 vehicles traveling the avenue each day, separates the residential community to the west from the river, the Greenway and Willamette Park. This sense of separation can be either mitigated or worsened by the design and layout of new development.

Guideline:

Create a common sense of unity that ties both sides of Macadam together with each other, the river to the east and the residential area to the west. Create public walkways that physically connect the Macadam Avenue right-of-way with Willamette Park, the Greenway Trail and the Willamette River.

In Doing This:

• Orient structures and parking areas to facilitate access for pedestrians between adjacent uses.

• Extend street tree plantings west of Macadam.

• Reinforce connections for pedestrians between the Willamette River Greenway and Macadam Avenue.

• Provide safe, comfortable places where people can slow down, sit and relax. Locate these places adjacent to sidewalks, walkways and the Greenway Trail.

• Provide sidewalks and pathways through larger developments with landscaping which screens or separates these from parking and motor vehicle maneuvering areas.

• Provide walkways which link parking areas to district-wide access systems for pedestrians.

Example 1

A clearly identified pathway system is necessary if the Greenway is to be used by the public.
Example 2

Such connections can be constructed from landscape materials like vines and low plantings as well as trees. Views into interior spaces adjacent or near walkways connect these interior spaces and activities to the pedestrian.

Example 4

The provision of places to slow down, sit, relax along sidewalks, trails and walkways adds to the attractiveness of these circulation systems.

Example 3

Provision of trees on both sides of this sidewalk provides an attractive landscape canopy which extends west of Macadam and creates a visual tie to the Johns Landing "campus" environment.
Example 5

Ground level retail and service activities opening onto Macadam can reinforce connections across Macadam.

Example 6

Orienting plazas and open spaces to receive sunlight, particularly during the late morning and afternoon, will encourage their use.
Example 7

Provision of clear, attractive and conveniently located connections for pedestrians between projects and to transit service will help humanize the area and encourage both short walking trips and use of transit.
3.

The Water's Edge

Issue:

The Willamette River Greenway is a dream and an emerging reality shared by the entire state. Implementation of the Greenway and the Greenway Trail is increasing both the attractiveness and the livability of Portland. Within the Macadam Corridor new development has the potential of greatly enhancing the scenic qualities of the river and the use of the Greenway Trail, but designs for developments which do not consider this potential are unlikely to contribute to the fulfillment of the Greenway dream.

Guideline:

Enhance the scenic qualities of the river and sites that abut the riverbank to contribute to an attractive and enjoyable Greenway Trail.

In Doing This:

- Identify natural areas of the Willamette riverbank and preserve the natural qualities of these areas.

- Locate buildings to protect access to sunlight on the Greenway Trail.

- Screen parking, loading and vehicular movement areas from the Greenway with rich landscape plantings.

Example 1

Stepping buildings down to the Greenway reduces both the mass of large projects as seen from the river and Greenway and shadows cast onto the Greenway Trail.
Example 2

Setting buildings back from the Greenway Trail contributes to the sense of its accessibility to the public and increases its attractiveness.

Example 3

Small buildings may be located close to the Greenway if a strong landscaped screen of plantings is provided as a buffer.

Example 4

A variety of building sizes and shapes along the river adds interest to the Greenway as well as expressing the urban nature of the Willamette in Portland.
4.

The Boulevard

Issue:

With completion of the Macadam Avenue Improvement Project the Avenue has the potential to become one of the City's most attractive boulevards. The heavy planting of street trees and provision of a landscaped medium beautify the street and enhance this entrance to the city and the downtown. New development along Macadam has the potential of contributing to or disrupting the avenue's attractiveness.

Guideline:

Coordinate with and enhance Macadam's boulevard treatment and contribute to the attractiveness of this entrance to the city.

In Doing This:

- Consider using awnings or other weather protection, street furniture, plazas, sculpture courts or other amenities for pedestrians to reinforce the boulevard design of Macadam.

- Abut pedestrian pathways with buildings or landscaping. Buffer with landscape screens, parking lots and structures which are not oriented to pedestrians.

- Use landscaping to reinforce the boulevard character of Macadam and to provide visual connections with private property adjacent to Macadam.

- Trees interspersed with low-growing vegetation or grass should visually predominate over impervious surfaces.

- Provide frequent views from Macadam into interior ground level spaces of projects located along the Avenue.

Example 1

Where right-of-way width limits curb planting areas and street trees, well planted setback areas are particularly important.
Example 2

The Macadam Avenue boulevard treatment is typified by a heavily planted median and street tree plantings at both east and west curb lines.

Example 3

Extending the pattern of street tree planting back from Macadam to both the east and west reinforces the boulevard character of Macadam and helps to lace the sides of the corridor together.
Example 4

Landscaping of parking areas can give the boulevard character of Macadam depth, expanding and enhancing the perceived size and attractiveness of the boulevard.

Example 5

A strongly landscaped edge can improve the compatibility of large parking areas with Macadam’s boulevard treatment.

Example 6

Raised planters can be used to enhance the boulevard treatment and to improve the sense of protection afforded pedestrians from traffic.
5.

Sub-Area Context

Issue:

Macadam Corridor can presently be viewed as a mixture of several areas, each with a variety of strong or emerging characters. These sub-areas are industrial, commercial, residential and mixed. A variety of styles of architecture and types of buildings are represented. Over the coming years a significant construction activity is expected. This new development can enhance the existing character of established areas and make a contribution to the emerging character of developing areas. When new projects are designed with little consideration for how they may contribute to the overall attractiveness of their surroundings, a major opportunity is missed.

Guideline:

Enhance a site's character through designs that are compatible with features of their surroundings and contribute to the development of an attractive character in the vicinity of the project site. Pay particular attention to cases where the adjacent use is different from that which a project will house.

In Doing This:

- Locate buildings to avoid excessive shadow on public open spaces, especially Willamette Park and the Greenway Trail.

- Isolated or independent buildings and open spaces should provide design solutions of merit which consciously set a precedent for neighboring future developments.

- Buildings and open spaces should establish complementary relationships in terms of color, texture, scale of architectural elements, and proportions with neighboring developments.

- Provide sensitive transitions between new development and adjacent residential areas.
Example 1

The relationship of new commercial uses to adjacent older residential uses can be critical in protecting the attractiveness of the nearby residences and the residential neighborhood.

Example 2

Use of setbacks and landscaping help blend this new office building into the Johns Landing environment.

Example 3

Similarity of roof treatment, proportions, scale and compatibility of colors and materials helps overcome differences between adjacent uses.
6.

Signs

Issue:

Although accessory to the principal activity of any project, signs play a significant role in forming the character of a street. The signage employed along Macadam Avenue can either detract from or contribute to the boulevard treatment given the right-of-way. Careful consideration of how signage can support the beautification of this entrance to the city is appropriate.

Guideline:

Keep signage consistent with and supportive of Macadam Avenue's role as a scenic boulevard while using signs to connect the activities housed by a project to the boulevard.

In Doing This:

- The cumulative effect of signage should not create confusion for the motorist, visual clutter, or adverse visual impacts on the neighborhood.
- Signs along Macadam should not be directed to motorists on Interstate 5.
- The design, scale, color and illumination of signs should be consistent with the features of adjacent buildings and activities.

Example 1

Restrained use of signage on buildings which pre-date the current "campus" character of development along Macadam helps maintain compatibility with both the boulevard and recent projects.
Example 2

Grouping identification signs together for projects at access points leading to several buildings can reduce sign clutter and help maintain the boulevard character of Macadam.

Example 3

Restrained freestanding monument signs are characteristic of much new development along Macadam and reinforce the "campus" character of Johns Landing.
7.

Johns Landing Masterplan

Issue:

The planning Process which led to approval of the Johns Landing Project was extensive. The project as proposed was for phased development stretching over a number of years. Concerns raised during this process about the problems associated with phased projects were addressed by requiring that Johns Landing projects be in compliance with an approved masterplan. The masterplan is a specific document embracing land use and other issues not ordinarily addressed by design guidelines. These concerns are still relevant to new projects within the Johns Landing development.

Guideline:

Comply with the provisions of the Johns Landing masterplan.*

Example 1

Johns Landing Masterplan

*The masterplan may be amended through review by the Planning Commission.
8.

Future Light Rail Transit

Issue:

Preservation of the potential for light rail transit within the Macadam Corridor.

Guideline:

Preserve the potential for a two-direction, light rail facility within the Macadam Corridor Design Zone as illustrated. Until the LRT facility is constructed, the required setback area may be used for parking and landscaping requirements.

In Doing This:

- Use the following illustrations as exemplary guidelines.

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Example 1

Minimum setbacks required from center line of potential light rail transit facility.
Example 2

Minimum setbacks required from center line of potential light rail transit facility adjacent to Macadam Avenue at right turn lane.

- **15'-0"** on tangent sections
- **13'-0"** on curves sharper than R=1,700 feet
- **12'-0"** for commercial structures
- **10'-0"** for occupied commercial or residential structures
- **10'-0"** for unoccupied structures
- **8'-0"** for potential LRT facility
- **5'-0"** on curves sharper than R=1,700 feet

Center line of existing right-of-way:
- **31'-0"**

Center line of existing Macadam Avenue right-of-way:
- **15'-0"
- **13'-0"
- **12'-0"
- **10'-0"
- **10'-0"
- **10'-0"
- **8'-0"

Primary plane:
- **30'-0"
- **25'-0"

Secondary plane:
- **30'-0"
- **25'-0"

Secondary right-of-way plane:
- **30'-0"
- **25'-0"
Example 3

Minimum setbacks required from center line of potential LRT facility adjacent to Macadam Avenue.

- 5'-0" setback for commercial structures.
- 10'-0" setback for residential structures.
- 12'-0" for tangent sections shorter than 8,500 feet.
- 13'-0" on curves longer than 8,500 feet.

Building line for unoccupied structures.

Commercial occupancy allowed up to 12'-0" above grade.