

Gresham Transit Station Area Master Plan

CITY OF GRESHAM PLANNING DIVISION
1333 NW EASTMAN GRESHAM, OREGON 97030
503-661-3000

RECEIVED 1980 2 133

December 18, 1980

ANDY COTUGNO
Metro
527 SW Hall Street
Portland, OR 97201

Subject: Attachment for December 15th letter

Dear Andy:

Attached is additional information that should have accompanied my letter to you dated December 15, 1980.

If you need any further information, please let me know.

Sincerely,

Rick Walker

RICK WALKER
Project Coordinator

1h

attachment



- (B) Profiles shall show existing and proposed elevations along center lines of all streets. When a proposed street intersects an existing street or streets, the elevation along the center line of the existing street or streets within one hundred (100) feet of the intersection shall be shown. Approximate radii of all curves, lengths of tangents, and central angles on all streets.
- (C) Plans and profiles shall show the locations and typical cross-section of street pavements including curbs and gutters, sidewalks, drainage easements, rights-of-way, manholes, and catch inlets; the locations of street trees, the location of replacement trees for those to be removed in the development process; the location, size, direction of flow, and invert elevations of existing and proposed sanitary sewers, storm water system, and fire hydrants.
- (D) Streets and storm water systems shall be shown on the same set of drawings.
- (E) Sanitary sewerage and water systems shall be shown on the same set of drawings.
- (F) Location, size, elevation, and other appropriate description of any existing facilities or utilities shall be shown on the drawings. In addition, all elevations shall be referred to the U.S.G.S. datum plane.
- (G) All specifications and references required by the City's construction standards and specifications shall be shown on the construction drawings.
- (H) Title, name, address, and signatures of the engineer and surveyor, and date, including revision dates shall be shown on the drawings.

Section: 6.0430 - Design Standards

Section: 6.0431 - Principal/Major Arterial

Section: 6.0431.1 - Function

To expedite the movement of traffic to and from major trip generators and between communities; to collect and distribute traffic from freeways or expressways to minor arterial streets, collector streets, or directly to traffic generators. The design of principal and major arterials is identical; the difference is that principal arterials carry inter-county trips while major arterials carry intra-county or community trips.

Section: 6.0431.2 - Standards

- (a) Traffic Volume: 16,000 or more vehicles per day.
- (b) Right-of-Way: 80-90 ft.; additional setback can be provided to a maximum of 60 ft. from centerline.
- (c) Pavement Width: 66 ft.
- (d) Number of Moving Lanes: 4 or more.
- (e) Speed Limits: 35-45 mph.
- (f) Access Control: Minimum of 300' sight distance.

Residential Uses: No direct access.

Commercial Uses: Curb cuts 50 ft. to curb return (minimum); no access if an alternative exists; a maximum of 1 curb cut per site per frontage or fraction thereof (shared driveways encouraged); left hand turning at intersections only or 1 left turn lane per 400 ft. if controlled.

Industrial Uses: Curb cuts 100 ft. to curb return (minimum); no access if alternative exists; a maximum of 1 curb cut per site per frontage; left hand turning at intersections only, or 1 left turn lane per 400 ft. if controlled.

- (g) Parking: Restricted to emergency parking only.
- (h) Intersection design:

Exclusive left and right turn lanes. Signalization at intersection with principal and minor arterials and collectors as warrants require.

Bus turnouts.

Designated crosswalks at controlled locations.

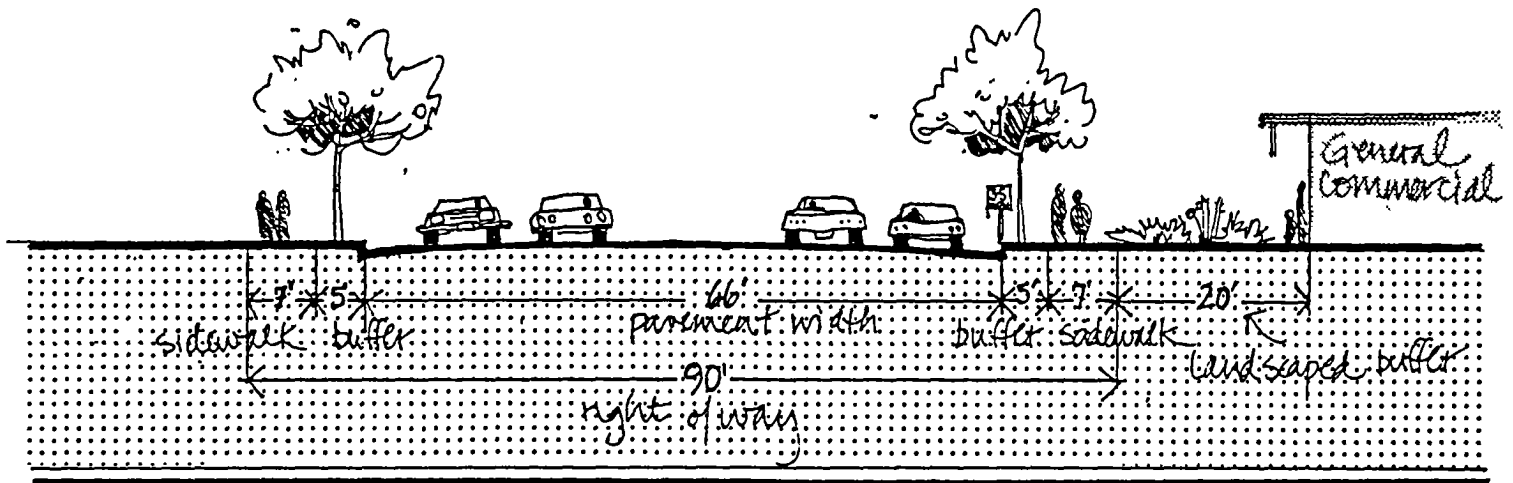
Street alignments at intersections shall be continuous.

90° intersection angles (minimum 75°)

500 feet minimum distance between intersections.

When intersections of other than 90° are unavoidable, the right-of-way lines along the acute angle shall have corner radius of 23 feet. All right-of-way lines at intersections with streets shall have a corner radius of 13 feet except as otherwise directed.

- (i) Bicycle Lanes: Area to be provided on each side of street for combined emergency parking and bicycles.
- (j) Sidewalks: Separate from street with minimum 5 ft. planting strip.
- (k) Slope: Maximum 6%. In flat areas, finish street grades shall have a minimum slope of one-half percent.
- (l) Curves: Centerline radii of curves shall not be less than 300 feet.
- (m) Trees: Street trees shall be provided 30' on center.



PRINCIPAL/MAJOR ARTERIAL

Section: 6.0432 - Minor Arterial Street

Section: 6.0432.1 - Function

To collect and distribute traffic from Principal Arterials to collectors and Neighborhood Collectors, or directly to traffic desinations; to facilitate traffic movement between neighborhoods.

Section: 6.0432.2 - Standards

- (a) Traffic Volume: 10,000 - 16,000 vehicles per day.
- (b) Right-of-Way: 60 - 80 ft.
- (c) Pavement Width: 44 - 66 ft.
- (d) Number of Moving Lanes: 2 - 4.
- (e) Speed Limit: 35 - 40 mph.
- (f) Access Control: Minimum sight distance of 275 ft.; and,
 - Residential Uses: Curb cuts 200 ft. to curb return (minimum); no access if alternative exists; left-hand turns allowed only at intersections.
 - Commercial Uses: Curb cuts 100 ft. to curb return (minimum); maximum 1 curb cut per site per frontage, shared driveways encouraged; left-hand turns only at intersections, if possible, or 1 left-hand turn per 200 ft. Option of continuous left turn lane.
 - Industrial Uses: Curb cuts 100 ft. to curb return (minimum); no access if lesser alternative exists; maximum 1 curb cut per site per frontage; left-hand turns allowed only at intersections if possible, or 1 left-hand turn per 200 ft. Option of continuous left turn lane.
- (g) Landscaping: Planting easements. Where approval of streets less than 60 feet in width is granted, additional easements for street trees, shrubs, sidewalks and utilities may be required.
- (h) Parking: Allowed on one side in some areas.

(i) Intersection Design:

Turn lanes/flared intersections may be required. Signalized at all intersecting Principal and Minor Arterials or others as warrants require.

Bus turnout.

Designated crosswalks at controlled locations.

No parking within 100 ft. of intersection.

90° intersection angles (minimum 75°).

Street alignments at intersections shall be continuous.

400 ft. minimum distance between intersections.

When intersections of other than 90° are unavoidable, the right-of-way lines along the acute angle shall have corner radius of 23 feet. All right-of-way lines at intersections with streets will have a minimum corner radius of 13 feet, except as otherwise directed.

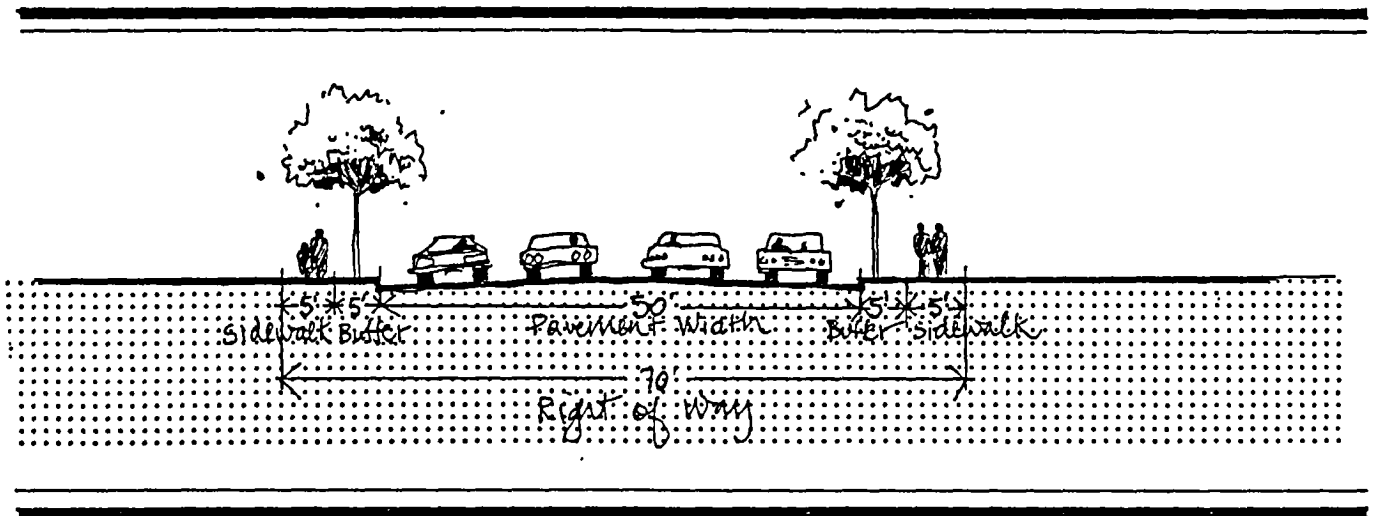
(j) Bicycle lanes: Area to be provided on each side of street for combined emergency parking and bicycles.

(k) Sidewalks: Separate from street with minimum 5 ft. planting strip where possible.

(l) Slope: Maximum 6%. In flat areas, finish street grades shall have a minimum slope of one-half percent.

(m) Curves: Centerline radii of curves shall not be less than 200 feet.

(n) Trees: Street trees shall be provided 30 ' on center.



MINOR ARTERIAL

Section: 6.0433 - Collector Streets

Section: 6.0433.1 - Function:

To collect and distribute traffic from Principal and Minor Arterials to Neighborhood Collectors and Local Streets, or directly to traffic destinations.

Section: 6.0433.2 - Standards:

- (a) Traffic Volume: 4,000 - 10,000 vehicles per day.
- (b) Right-of-Way: 50 - 60 ft.
- (c) Pavement Width: 40 - 44 ft.
- (d) Number of Moving Lanes: 2
- (e) Speed Limit: 25 - 30 mph.
- (f) Access Control:
 - Residential Uses: Curb cuts 45 ft. to curb return (minimum); no access if a lesser alternative exists; no restrictions regarding left-hand turns.
 - Commercial Uses: Curb cuts 100 ft. to curb return (minimum); no restrictions regarding left-hand turns.
 - Industrial Uses: Curb cuts 100 ft. to curb return (minimum); no restrictions regarding left-hand turns.
- (g) Landscaping: 30 ft. minimum setback from curb return; 10 ft. minimum setback from any drive access; landscaping to be maintained by owner.
- (h) Trees:
 - Residential Uses: Two trees minimum (three, if corner lot) or one per 30 ft. interval.
 - Commercial Uses: Two trees minimum (three, if corner lot) or one per 20 ft. interval.
 - Industrial Uses: One per 20 ft. interval.
- (i) Parking: Can be restricted on one side, both sides, or during peak hours; not allowed at any time within 30 ft. of an intersection.

- (j) Intersection Design: Signed as warrants require at intersecting principal arterials, minor arterials and collectors.

90° intersections (minimum 75°)

No parking within 30 ft. of intersection.

Street alignments at intersections shall be continuous.

Minimum of 400 feet between intersections.

When intersections of other than 90° are unavoidable, the right-of-way lines along the acute angle shall have corner radius of 23 feet. All right-of-way lines at intersection with streets shall have a minimum corner radius of 13 feet, except as otherwise directed.

- (l) Bus/Truck Restrictions: Trucks allowed only if trip destination is on a connecting residential or commercial local street. No thru truck traffic allowed.
- (m) Bicycle Lanes: Where parking is not allowed, area to be provided on side of street for combined emergency parking and bicycle use.
- (n) Sidewalks: Separate from street with minimum five foot planting strip where possible.
- (o) Slope: Maximum 8%. In flat areas, finish street grades shall have a minimum slope of one-half percent.
- (p) Curves: Centerline radii of curves shall not be less than 100 feet.

Section: 6.0434 - Neighborhood Collector Street

Section: 6.0434.1 - Function

To collect and distribute traffic from arterial streets to neighborhood access streets or directly to traffic destinations.

Section: 6.0434.2 - Standards:

- (a) Traffic Volume: 1,000 - 4,000 vehicles per day.
- (b) Right-of-Way: 50 - 60 ft.
- (c) Pavement Width: 32 - 36 ft.
- (d) Number of Moving Lanes: Two
- (e) Speed Limit: 20-25 mph.
- (f) Access Control: No restrictions.
- (g) Landscaping: landscaping to be maintained by property owner; and
- (h) Trees: Street trees shall be provided as follows:
 - 1) Residential Uses: Two trees minimum (three if corner lot) or one per 30 ft. interval.
 - 2) Commercial Uses: Two trees minimum (three, if corner lot) or one per 20 ft. interval.
 - 3) Industrial Uses: One per 20 ft. interval.
- (i) Parking: Parking allowed, both sides.
No parking within 30 ft. of an intersection.
- (j) Intersection Design: 90° intersection (75° minimum).

Minimum of 100 ft. between intersections.

No parking within 30 feet of intersection.

Street alignments at intersections shall be continuous until it meets streets of a higher designation. Signed as warrants require.

When intersections of other than 90° are unavoidable, the right-of-way lines along the acute angle shall have corner radius of 23 feet. All right-of-way lines at intersections with streets shall have a minimum curve radius of 20 feet, except as otherwise directed.
- (k) Bus/Truck Restrictions: No trucks (in residential or commercial areas) except local delivery or service vehicles.
- (l) Bicycle Lanes: None required.
- (m) Sidewalks: Adjacent to curb.

Residential: 4 ft. minimum.

Commercial: 6 ft. minimum.

- (n) Slope: Maximum 10%. In flat areas, finish street grades shall have a minimum slope of one-half percent.
- (o) Curves: Centerline radii of curves shall not be less than 100 feet.

Section: 6.0435 - Local Street

Section: 6.0435.1 - Function:

To provide direct access to abutting property and connect to collector streets.

Section: 6.0435.2 - Standards

- (a) Traffic Volume: Less than 1,000 vehicles per day.
- (b) Right-of-Way: 40 feet
- (c) Pavement Width: 28' - 32'
- (d) Number of Moving Lanes: Two
- (e) Speed Limit: 15 - 20 mph.
- (f) Access Control: No restrictions.
- (g) Landscaping: landscaping to be maintained by property owner.
- (h) Trees: Street trees shall be provided as follows:
 - Residential Uses: Two trees minimum (three, if corner lot) or one per 30 ft. interval.
 - Commercial Uses: Two trees minimum (three, if corner lot) or one per 20 ft. interval.
 - Industrial Uses: One per 20 ft. interval.
- (i) Parking: Parking allowed on both sides of a 32' wide street.
Parking allowed on one side of 28' wide street.

- (j) Intersection Design: 90° intersection encouraged (minimum 75°).

Signed as warrants required.

Avoid street alignments which encourage thru traffic.

Minimum of 100 ft. between intersections.

When intersections of other than 90° are unavoidable, the right-of-way lines along the acute angle shall have corner radius of 23 feet. All right-of-way lines at intersections with streets shall have a curve radius of 20 feet, except as otherwise directed.

- (k) Bus/Truck Restrictions: No trucks (in residential or commercial areas) except local delivery or service vehicles.

- (l) Bicycle Lanes: None.

- (m) Sidewalks: Residential: 4 ft. minimum

Commercial: 5 ft. minimum.

- (n) Slope: 12% Maximum, on slopes or exposure to the northeast and 16% with exposure to the southwest, unless otherwise approved by the City Engineer. However, in no case shall the slope exceed 16%.

- (o) Curves: Centerline radii of curves shall not be less than 100 feet.

Section: 6.0436 - Cul-De-Sac

Section: 6.0436.1 - Function

A cul-de-sac is a short dead-end street with a circular turnaround at the end designed to provide direct access to abutting property.

Section: 6.0436.2 - Standards:

- (a) Traffic Volume: Shall serve no more than 18 dwelling units.

- (b) Right-of-Way: 50 foot radius for turnaround
50 feet on linear street sections.
20 foot minimum radius at cul-de-sac entrances.

- (c) Pavement Width: 28 ft. of pavement width with 41 ft. of turnaround if the depth of the cul-de-sac is 250 ft. or less.
32 ft. of pavement width with 43 ft. of turnaround will be required for cul-de-sac depths in excess of 250 ft.
- (d) Number of Moving Lanes: Two.
- (e) Speed Limit: 10 - 15 mph.
- (f) Parking: Parking allowed on one side of a 28 feet wide street. Parking allowed on both sides of a 32 feet wide street. No parking shall be allowed within 30 feet of the curb return.
- (g) Intersections: 90° intersection angle (minimum 75°).
100 feet minimum between intersections.
Signed as warranted.
Street alignments at intersections shall be continuous.
- (h) Bus/Truck Restrictions: No trucks shall be allowed (except local delivery or service vehicles).
- (i) Bicycle Lanes: None.
- (j) Sidewalks: 4 ft.
- (k) Slope: 12% maximum on slopes with northeast exposure or 16% maximum on slopes with southwest exposure, unless otherwise approved by the City Engineer. However, in no case shall the slope exceed 16%.
- (l) Length: No cul-de-sac shall be greater than 600 feet in length.

Section: 6.0437 - Alleyways

Section: 6.0437.1 - Function:

Provides vehicular access to the rear or sides of properties.

Section: 6.0437.2 - Standards

- (a) Right-of-Way: 20 feet.
- (b) Pavement Width: 20 feet.

- (c) Location: Alleys may be provided in commercial and industrial districts when approved by the approval authority.
- (d) Intersection: Alley intersections and sharp changes of alignment shall be avoided. The corners of necessary alley intersections shall have a radius of not less than 12 feet.

Section: 6.0440 - Functional Classification Designation

Streets

Rights-of-Way

Section: 6.0441 - Principal Arterials

S.E. Burnside Road	120'
S. E. Division Street (181st to N. E. Roberts)	90'
S. E. Division Street (N.E. Roberts to S. E. Burnside)	80'
Hogan Road (North City Boundary S. E. Burnside Road)	80'
Route 26 (Powell/Burnside Intersection South to Boundary)	120'

Section: 6.0442 - Major Arterials

Highland Drive/190th Avenue (Powell Blvd. to South City Boundary)	80'
S. E. Division Street (S.E. Burnside Road to Kane)	90'
E. Powell Boulevard (S.E. 182nd to Burnside Road)	90'
S. E. Stark Street (to Troutdale Road)	80'
S.E. 182nd Avenue (Powell Valley Rd. North to City Boundary)	90'
221st - 223rd Avenue (Burnside to Powell Blvd.)	90'
S.E. 257th Avenue (S.E. Stark Street to S.E. First)	90'
Hogan Road (S.E. Burnside Road to Palmquist Road)	90'

Section: 6.0443 - Minor Arterials

S.E. 221st - 223rd (Powell Blvd. to Helney Road)	80'
S.E. 221st - 223rd (Burnside North to City boundary)	90'
S.E. Division Street (S.E. Kane to N.E. Centurion)	90'
East Powell Boulevard (West City Boundary to 223rd Avenue)	90'
East Powell (S. E. Burnside Road to S.E. Kane)	90'
S.E. 257th Avenue (S.E. Orient to S.E. 1st)	80'
Palmquist Road (Hogan Road to Route 26)	80'
Orient Drive (257th South-East to City Boundary)	80'
Hogan (Palmquist Road South to City Boundary)	80'

Section: 6.0444 - Collectors

Anderson Road (Orient Drive - South)	60'
N.W. Birdsda le (221st Avenue to Burnside Road)	60'
S.E. Butler Road (S.E. 190th Avenue to Regner Road)	60'
N.E. Cleveland Avenue (E. Powell Boulevard to S.E. Stark)	60'
S.E. Division Street (N.E. Centurion to East City Boundary)	60'
Hillyard Road (S.E. 252nd Avenue to Anderson Road)	60'
N.E. Hood Avenue (S.E. Roberts Avenue to E. Powell Boulevard)	60'
N.E. Kelly Avenue (E. Powell Boulevard to S.E. Burnside Road)	60'
N. Main Avenue (E. Powell Boulevard to S.E. Burnside Road)	60'
Palmblad Road (Palmquist South to City Boundary)	60'
Palmquist Road (S.E. Roberts Avenue to Route 26)	60'

Streets

Rights-of-Way

East Powell Boulevard (S.E. 257th to City Boundary)	60'
Regner Road (S.E. Roberts Avenue - South)	60'
S.E. Roberts Avenue (S.E. Hood Avenue to Palmquist Road)	50'
Salquist Road (S.E. Orient Drive to S.E. 282nd Avenue)	60'
S.E. 1st Street (S.E. Burnside Road to S.E. 257th)	60'
S.E. 3rd. Street (S.E. 1st Street to East Powell Boulevard)	60'
N.E. 5th Avenue (S.E. 221st Avenue to N.E. Cleveland Avenue)	60'
N.E. 17th Drive (N.E. Kane Drive - East to City Boundary)	60'
S.W. 19th Drive - Heiney Road (S.E. Regner Road to S.E. 190th Avenue)	60'
S.E. Towle Avenue (Heiney Road to Butler Road)	60'
S. E. 252nd Avenue (Palmquist Road - South to City Boundary)	60'
S.E. 190th Avenue (Highland Drive to East Powell Blvd.)	60'

Section: 6.0445 - Neighborhood Collectors

S.E. Cleveland Avenue (Regner Road to Hogan Road)	60'
Chase Road (S.E. Orient Drive to S.E. 282nd Avenue)	60'
N.E. Hood Avenue (E. Powell Boulevard to S.E. Division Street)	60'
S.E. Roberts Avenue (S.E. Hood Avenue to E. Powell Boulevard)	50'
N.W. Wallula Avenue (E. Powell Blvd. - North to City Boundary)	60'
S.W. Walters Drive- S.W. Blaine Avenue (E. Powell Blvd. S.E. 19th Drive)	50'
Welch Road (S.E. Orient Drive to S.E. 282nd Avenue)	60'
S.W. Towle Road (S.E. 223rd Ave. to E. Powell Boulevard)	60'
S.E. 4th Avenue (S.E. Roberts Avenue to Hogan Road)	50'
N.E. 8th Avenue (N.E. Kane Drive to S.E. Division Street)	60'
N.E. 23rd Avenue (N.E. Cleveland Avenue to N.E. Kane Road)	60'
S.W. 31st Avenue - S.W. Willow Parkway (S.E. 209th Ave. to S.E. 190th Ave.)	60'
S.E. 190th Avenue (West 19th Drive to E. Powell Boulevard)	60'
S.E. 262nd Avenue - Barnes Rd. (E. Powell Blvd. to S.E. Division Street)	60'
S.E. 268th - Williams Road (E. Powell Blvd. to S.E. Division Street)	60'

Section: 6.0446 - Local Streets - Cul-de-Sacs - Alleyways

All others

Section: 6.0450 - Standard Engineering Specifications
(to be included at a future date)