

ZONING CODE TEXT AMENDMENT SUMMARY

<i>Initiator:</i>	Council Member Reich
<i>Introduction Date:</i>	November 6, 2015
<i>Prepared By:</i>	<u>Shanna Sether</u> , Principal City Planner, (612) 673-2307
<i>Intent:</i>	Amending regulations to allow for snow storage site with development standards.

APPLICABLE SECTION(S) OF THE ZONING CODE

- Chapter 520, Introductory Provisions
- Chapter 536, Specific Development Standards
- Chapter 550, Industrial Districts
- Chapter 551, Overlay Districts

The following chapters were also introduced: Chapter 525, Administration and Enforcement, Chapter 530, Site Plan Review, Chapter 535, Regulations of General Applicability, Chapter 546, Residence Districts, Chapter 547, Office Residence Districts, Chapter 548, Commercial Districts and Chapter 549, Downtown Districts. However, staff is not recommending changes to these chapters as part of this amendment and is therefore recommending returning them to the author.

BACKGROUND

On November 6, 2015, Council Member Reich introduced subject matter to amend ordinances related to *snow storage* and to allow for a new definition and specific development standards for a land use where snow is moved from an off-site location and stored on public or private property.

Snow storage is presently addressed as a site plan review standard in Chapter 54I Off-Street Parking Loading, in the zoning code. Specifically, 54I.380 states that required parking spaces, driveways, access aisles and landscaping shall not be used for the purpose of snow storage. However, there are no existing land uses that specifically identify or include snow storage as a *principal use* of a property. Staff is aware of existing properties that utilize snow storage as a principal use, which has been removed from an off-site location – public streets, alleys and parking lots. Zoning Enforcement staff has observed off-site impacts including flooding and water collection in the public right of way, sediment carried off-site, trash and litter on- and off-site. Therefore, staff has proposed a definition of the use, identified appropriate zoning classifications where the use would be allowed permitted, as right, prohibited and several specific development standards to allow regulations that address the unique characteristics of the proposed land use.

PURPOSE

What is the reason for the amendment?

The purpose of the amendment is to define snow storage site as a principal use, identify the appropriate zoning classifications where the use would be permitted and the specific development standards that would apply to the use to mitigate off-site impacts.

Snow storage is presently addressed as a site plan review standard in Chapter 54I Off-Street Parking Loading, in the zoning code. Specifically, 54I.380 states that required parking spaces, driveways, access aisles and landscaping shall not be used for the purpose of snow storage. However, there are no existing land uses that specifically identify or include snow storage as a *principal use* of a property. Staff is aware of existing properties that utilize snow storage as a principal use. Zoning Enforcement staff has observed off-site impacts including flooding and water collection in the public right of way, sediment carried off-site, trash and litter on- and off-site. Therefore, staff is proposing to prohibit snow storage sites in the FP Floodplain Overlay District.

What problem is the amendment designed to solve?

Staff is aware of existing properties that utilize snow storage as a principal use. Zoning Enforcement staff has observed off-site impacts including flooding and water collection in the public right of way, sediment carried off-site, trash and litter on- and off-site. The proposed amendment has identified several development standards that would specifically address the unique off-site impacts that this use has the potential to create. There is concern that snow removed from parking areas and streets is more likely to carry trash, solvents, gasoline, oil and metals; therefore, staff is recommending that snow storage sites be prohibited in the FP Floodplain Overlay District, to avoid further impact on sensitive ecosystems and watersheds. Finally, all new snow storage lots would be required to be reviewed through the Preliminary Development Review (PDR) process, which allows CPED and Public Works staff the opportunity to review each site and make specific recommendations to ensure compliance with the proposed zoning development standards and Public Works standards.

What public purpose will be served by the amendment?

The proposed ordinance amendment first establishes that appropriate zoning classification that this use would be allowed. Staff is recommending that all new snow storage sites be allowed as permitted use in the I1 Light Industrial District, I2 Medium Industrial District and I3 General Industrial District. Further, staff is proposing the following specific development standards:

- (1) In the I1 District, the use shall be located at least three hundred fifty (350) feet from any residence or office residence zoning district and shall have a minimum lot area of twenty thousand (20,000) square feet.
- (2) The use shall comply with all applicable regulations governing stormwater management, and shall employ on-site best management practices and collection infrastructure such as catch basins, bioretention facilities, drainage swales or underground storage to minimize off-site stormwater or snowmelt runoff, maximize overland flow and flow distances over surfaces covered with vegetation, increase on-site filtration, minimize off-site discharge of pollutants, encourage natural filtration function, and prevent negative stormwater impacts to adjacent properties or right-of-way.
- (3) Landscaping and screening shall be provided in transition areas between the snow storage area and adjacent property and public right of way.
- (4) The use and vehicles shall minimize the effects of lighting and noise on surrounding property.
- (5) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter, debris, and/or sediment found thereon.
- (6) The use shall comply with all applicable regulations governing erosion and sediment control, and shall employ on-site best management practices to minimize soil erosion and off-site sedimentation.

The I1 District is more likely to be located near or adjacent to residential uses and districts and staff was concerned that these properties may not have sufficient area to manage stormwater or would negatively impact nearby property with lighting and noise of trucks dumping or managing snow piles. The remainder of the development standards would all industrial districts, operators of new storage sites would be responsible for demonstrating how they plan to manage stormwater, re-establish vegetation and screening during the times of year when snow is not located on site and clear the site and surrounding area of debris and trash.

What problems might the amendment create?

The proposed amendment would define snow storage sites as a principal use, permitted in any industrial district with development standards to ensure compatibility of the use with the surrounding area. The Public Works department manages contracts with private contractors to remove snow in Special Service Districts. Presently, there are no requirements or specific zoning classifications where snow storage can occur in the City of Minneapolis. This proposed amendment may reduce the available locations of snow storage sites in the City and would require a PDR submission, which includes civil, architectural and landscape plans.

TIMELINESS

Is the amendment timely?

The proposed amendment was introduced November 2015, by Council Member Reich. The amendment is being brought forward now so that adoption can occur prior to the establishment of new snow

storage sites anticipated during the 2016-2017 winter season. The amendment was in response to known adverse impacts that have been observed related to snowmelt, including flooding, trash on-site and carried off-site and general unsightliness during the spring and early summer, when the vegetation has not yet established.

Is the amendment consistent with practices in surrounding areas?

Staff conducted peer city research to determine what types of ordinances exist for regulating on- and off-site impacts related to snow storage. Staff has found snow disposal site design criteria from Anchorage, Alaska, and best management practices from the Tahoe Regional Planning Agency, which are attached to this report. In addition, staff has completed a table with several United States cities and Canadian providences and cities with regulations on characteristics for snow storage sites and best management practices.

Are there consequences in denying this amendment?

Denial of the proposed text amendment would allow additional snow storage sites to establish in the City of Minneapolis without regulation of appropriate location, stormwater management or design and maintenance of the site during the months when there is no snow. Further, there is no current prohibition of snow storage sites where snow may be removed from parking areas and streets, which are more likely to carry trash, solvents, gasoline, oil and metals and placed in sensitive environmental areas in the FP Floodplain Overlay District.

COMPREHENSIVE PLAN

The amendment will implement the following applicable policies of *The Minneapolis Plan for Sustainable Growth*:

Staff has identified the following applicable policies that support an amendment to add a new land use classification and specific development standards for snow storage sites in the zoning code:

Urban Design Policy 10.23 Promote climate-sensitive design principles to make the winter environment safe, comfortable and enjoyable.

- 10.23.1 Consider solar access, shelter from wind and snow storage and removal in site design.
- 10.23.4 Encourage snow removal and storage practices that promote pedestrian and bicycle activity and safety.
- 10.23.7 Consider topography and site grading so that snowmelt is directed away from roads and pedestrian areas to avoid icy conditions and from basements to avoid snowmelt infiltration.
- 10.23.8 Develop guidance that encourages climate-sensitive design for residential and commercial buildings, parking lots, and open spaces and parks.

Urban Design Policy 10.19: Landscaping is encouraged in order to complement the scale of the site and its surroundings, enhance the built environment, create and define public and private spaces, buffer and screen, incorporate crime prevention principles, and provide shade, aesthetic appeal, and environmental benefits.

- 10.19.1 In general, larger, well-placed, contiguous planting areas that create and define public and private spaces shall be preferred to smaller, disconnected areas.
- 10.19.2 Plant and tree types should complement the surrounding area and should include a variety of species throughout the site that include seasonal interest. Species should be indigenous or proven adaptable to the local climate and should not be invasive on native species.
- 10.19.3 Landscaped areas should include plant and tree types that address ecological function, including the interception and filtration of stormwater, reduction of the urban heat island effect, and preservation and restoration of natural amenities.
- 10.19.4 Landscaped areas should be maintained in accordance with Crime Prevention Through Environmental Design (CPTED) principles, to allow views into and out of the site, to preserve view corridors and to maintain sight lines at vehicular and pedestrian intersections.
- 10.19.5 Landscaping plans should be designed to facilitate future maintenance including the consideration of irrigation systems, drought and salt-resistant species, ongoing performance of storm water treatment practices, snow storage, access to sun, proximity to buildings, paved surfaces and overhead utilities.
- 10.19.6 Green roofs, living walls, and porous pavement are encouraged but are not meant to be a substitute for ground-level landscaping of sites as landscaping provides both a natural amenity and aesthetic beauty to the urban landscape.
- 10.19.7 Boulevard landscaping and improvements, in accordance with applicable city policies, are encouraged.

Environment Policy 6.11: Take measures to reduce noise pollution at point and non-point sources.

- 6.11.1 Work with other governmental units, owners and developers to identify and implement ways to buffer and reduce noise originating from businesses, industries, railroads and rail corridors, freeways and highways, and airports.
- 6.11.3 Seek stricter enforcement of noise standards for businesses, vehicles (especially motorcycles, trucks and buses), small engines (leaf blowers, lawnmowers, snow blowers and chain saws) and sound systems.

This amendment is supported by the above policies and is consistent with the above policies of the comprehensive plan.

RECOMMENDATIONS

The Department of Community Planning and Economic Development recommends that the City Planning Commission and City Council adopt staff findings to amend Title 20 of the Minneapolis Code of Ordinances, as follows, and further recommends that Chapters 525, 530, 535, 546, 547, 548 and 549 be returned to the author:

A. Text amendment amending regulations for snow storage sites.

Recommended motion: **Approve** the text amendment to amend the zoning code to allow for a new use, snow storage site.

Chapter 520 related to the Zoning Code: *Introductory Provisions*

Chapter 536 related to the Zoning Code: *Specific Development Standards*

Chapter 550 related to the Zoning Code: *Industrial Districts*

Chapter 551 related to the Zoning Code: *Overlay Districts*

ATTACHMENTS

1. Ordinance amending Chapters 520, 536, 550 and 551.
2. Tahoe Regional Planning Agency's Best Management Practices Toolkit
3. Anchorage, Alaska's site design criteria for snow disposal sites
4. Peer city research table

ORDINANCE

By Reich

Amending Title 20 of the Minneapolis Code of Ordinances relating to Zoning Code.

The City Council of the City of Minneapolis do ordain as follows:

Section 1. That Section 520.160 contained in Chapter 520, Introductory Provisions, be amended by adding thereto a new definition for "Snow storage site" to read as follows:

520.160 Definitions.

Unless otherwise expressly stated, or unless the context clearly indicates a different meaning, the words and phrases in the following list of definitions shall, for the purposes of this zoning ordinance, have the meanings indicated. Additional definitions may be found within specific chapters of this zoning ordinance. All words and phrases not defined shall have their common meaning.

Snow storage site. A use in which a principal activity is the storage of snow, transported from an off-site location.

Section 2. That Section 536.20 contained in Chapter 536, Specific Development Standards, be amended to read as follows:

536.20. - Specific development standards.

The uses listed below are subject to the following specific development standards, in addition to all other applicable regulations:

Alternative financial establishment.

- (1) The use shall be located at least one thousand (1,000) feet from all existing alternative financial establishments, pawnshops and missions.
- (2) Back-lighted signs, back-lighted awnings, portable signs, temporary signs and freestanding signs shall be prohibited.
- (3) The window and door area of any existing first floor façade that faces a public street or sidewalk shall not be reduced, nor shall changes be made to such windows or doors that block views into the building at eye level.
- (4) For new construction, at least thirty (30) percent of the first floor façade that faces a public street or sidewalk shall be windows or doors of clear or lightly tinted glass that allow views into and out of the building at eye level.
- (5) The use of bars, chains or similar security devices that are visible from a public street or sidewalk shall be prohibited.
- (6) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Animal shelter. Except in the I3 District, all activity shall be within a completely enclosed building with soundproofing and odor control. Outdoor kennels shall be prohibited.

Art Studio.

- (1) An art studio may include the design and fabrication of jewelry, ornamental ceramics, pottery and visual arts.
- (2) Metalworking shall be prohibited, except for jewelry making. Except in the C4, B4S and B4C Districts, jewelry making shall be limited to twelve hundred (1,200) square feet and the main entrance shall open to a retail or office component equal to not less than fifteen (15) percent of the floor area of the use.

Athletic field.

- (1) The athletic field shall be at least fifty (50) feet from the nearest property line of a residential use located in a residence or office residence district or any permitted or conditional residential use.
- (2) The athletic field shall be situated in such a way as to minimize the effects of lighting and noise on surrounding property.
- (3) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected after an event for purposes of removing any litter found thereon.

Automobile convenience facility.

- (1) The sale or repair of vehicles shall be prohibited.
- (2) The use shall employ best management practices regarding the venting of odors, gas and fumes. Such vents shall be located a minimum of ten (10) feet above grade and shall be directed away from residential uses. All storage tanks shall be equipped with vapor tight fittings to preclude the escape of gas vapors from the fill pipes.
- (3) Service area canopy light fixtures shall be completely recessed within the canopy so that the lenses shall not extend beyond the surface of the canopy.
- (4) The total light output used for illuminating service area canopies shall not exceed forty (40) initial bare-lamp lumens per square foot of canopy.
- (5) The premises of all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.
- (6) Facilities that provide for unattended, automated dispensing of gasoline or other engine fuel shall provide lighting on site that maintains a minimum acceptable level of security at all times, while not creating glare or excessive lighting of the site and come into compliance with the lighting standards in section 535.590.
- (7) The use and all operations associated with the use shall comply with all applicable provisions of the Minnesota State Fire Code.

Automobile rental. Fuel pumps for the purpose of the retail sale and dispensing of fuel to the general public shall be prohibited. If the use includes dispensing of fuel for the automobiles maintained on-site, the use shall employ best management practices regarding the venting of odors, gas and fumes. Such vents shall be located a minimum of ten (10) feet above grade and shall be directed away from residential uses. All storage tanks shall be equipped with vaportight fittings to preclude the escape of gas vapors from the fill pipes.

Automobile repair, major.

- (1) All vehicles waiting for repair or pick-up shall be stored on the site within an enclosed building or in parking spaces in compliance with Chapter 541, Off-Street Parking and Loading.
- (2) Except in the I3 District, all repairs shall be performed within a completely enclosed building.
- (3) All vehicles parked or stored on-site shall display a current license plate with a current license tab. Outside storage of automotive parts or storage of junk vehicles shall be prohibited.
- (4) The sale of vehicles shall be prohibited.

(5) The use shall employ best management practices regarding the venting of odors, gas and fumes. Such vents shall be located a minimum of ten (10) feet above grade and shall be directed away from residential uses. All storage tanks shall be equipped with vaportight fittings to preclude the escape of gas vapors from the fill pipes.

(6) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

(7) In the I1, Light Industrial District, the use shall be located at least three hundred (300) feet from a residence or office residence district.

(8) Unattended, automated dispensing of gasoline or other engine fuel shall be prohibited.

Automobile repair, minor.

(1) All vehicles waiting for repair or pick-up shall be stored on the site in an enclosed building or in parking spaces in compliance with Chapter 541, Off-Street Parking and Loading.

(2) Except in the I3 District, all repairs shall be performed within a completely enclosed building.

(3) All vehicles parked or stored on-site shall display a current license plate with a current license tab. Outdoor storage of automotive parts or storage of junk vehicles is prohibited.

(4) The sale of vehicles shall be prohibited.

(5) In the C1, C2 and C3S Districts, all service vehicles associated with the establishment shall be parked or stored in an enclosed structure after business hours.

(6) The use shall employ best management practices regarding the venting of odors, gas and fumes. Such vents shall be located a minimum of ten (10) feet above grade and shall be directed away from residential uses. All storage tanks shall be equipped with vaportight fittings to preclude the escape of gas vapors from the fill pipes.

(7) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

(8) Unattended, automated dispensing of gasoline or other engine fuel shall be prohibited.

Automobile sales.

(1) Fuel pumps for the purpose of the retail sale and dispensing of fuel to the general public shall be prohibited. If the use includes dispensing of fuel for the automobiles maintained on-site, the use shall employ best management practices regarding the venting of odors, gas and fumes. Such vents shall be located a minimum of ten (10) feet above grade and shall be directed away from residential uses. All storage tanks shall be equipped with vaportight fittings to preclude the escape of gas vapors from the fill pipes.

(2) The rental of passenger automobiles shall be prohibited, except as an accessory use.

Bed and breakfast home.

(1) The owner or operator of the bed and breakfast home shall occupy the property as his or her primary residence and reside in the home when it is in operation.

(2) There shall be no more than eight (8) bedrooms available to bed and breakfast guests.

(3) Separate kitchen facilities shall not be available for guests. Meals shall be prepared and served by the operator and shall be available to registered guests only.

(4) The home shall have a minimum of two thousand (2,000) square feet of habitable residential floor area.

(5) The home shall be licensed in accordance with Chapter 297A, Bed and Breakfast Facilities, of the Minneapolis Code of Ordinances.

(6) Exterior alterations or modifications that change the residential character or appearance of the dwelling, any accessory buildings or the zoning lot shall be prohibited.

- (7) Exterior stairways shall be prohibited.
- (8) Historically designated structures may apply for a variance from the regulations regarding bed and breakfast homes, as specified in Title 23, Heritage Preservation, of the Minneapolis Code of Ordinances

Birth center.

- (1) The operator shall submit a management plan for the facility and a floor plan showing delivery rooms, emergency exits and bathrooms.
- (2) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.
- (3) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Blood/plasma collection facility.

- (1) Trash receptacles shall be located at the public entrance(s), and the premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.
- (2) The facility shall include a waiting area and departure lounge of a size large enough to accommodate all donors within the building, but not less than five hundred (500) square feet in area.
- (3) The operator shall submit a management plan for the facility and a floor plan showing the waiting area and departure lounge and number of donor beds.

Board and care home, nursing home, assisted living.

- (1) On-site services shall be for residents of the facility only.
- (2) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.
- (3) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.
- (4) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Car wash.

- (1) Water from the car wash shall not drain across any sidewalk or into a public right-of-way.
- (2) Vacuum facilities shall be located in an enclosed structure or located away from any residential use to avoid the impacts of noise.
- (3) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Child care center.

- (1) In the residence and OR1 Districts, the use shall be located in a nonresidential structure existing on the effective date of this ordinance, or nursing home.
- (2) The use shall provide a designated area for the short-term parking of vehicles engaged in loading and unloading children, as specified in Chapter 541, Off-Street Parking and Loading. The designated area shall be located as close as practical to the principal entrance of the building and shall be connected to the building by a sidewalk.

(3) Play equipment shall not be located in required front, side or rear yards and shall be effectively screened from any adjacent residential use located in a residence or office residence district or from a ground floor permitted or conditional residential use, as specified in Chapter 530, Site Plan Review.

(4) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(5) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Club or lodge. In the office residence districts, clubs and lodges shall have a minimum of twelve thousand (12,000) square feet of gross floor area.

Cluster development.

(1) Any application for cluster development approval shall include a development plan which shall consist of a statement of the proposed use of all portions of the land to be included in the cluster development and a site plan showing all existing and proposed development, including but not limited to the location of structures, parking areas, vehicular and pedestrian access, open space, drainage, sewerage, fire protection, building elevations, landscaping, screening and bufferyards, and similar matters, as well as the location of existing public facilities and services.

(2) All land proposed for cluster development shall be platted or replatted into one or more lots suitable for cluster development, and as such shall comply with all of the applicable requirements contained in Chapter 598, Land Subdivision Regulations.

(3) The cluster development shall meet the minimum lot area and lot width requirements of the zoning district. There shall be no minimum lot area or lot width requirements for individual lots within the cluster development.

(4) Yards of at least such minimum width as required by the zoning district shall be maintained along the periphery of the cluster development. Yards for individual lots within the cluster development shall not be required. The distance between principal buildings within the cluster development shall be not less than ten (10) feet.

(5) Not less than forty (40) percent of the land in a cluster development shall be designated as common space for the benefit of all of the residents of the development. Such common space shall be a contiguous area under common ownership or control and shall be located so that it is directly accessible to the largest practical number of dwellings within the development. Safe and convenient pedestrian access shall be provided to such common space for dwellings not adjoining such space. Common space shall include but is not limited to landscaped yards, recreation areas, wetlands, waterbodies and common parking facilities. However, not more than one-half ($\frac{1}{2}$) of required common space shall consist of such parking facilities, driveways and private roadways. The city planning commission may approve alternatives to this requirement where strict adherence is impractical because of site location or conditions and the proposed alternative meets the intent of this section.

(6) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood. Not less than eighty (80) percent of the habitable floor area of single or two-family dwellings and multiple-family dwellings of three (3) and four (4) units shall have a minimum width of twenty-two (22) feet. Cluster developments not otherwise governed by Chapter 530, Site Plan Review, shall comply with the principal entrance and windows requirements of Chapter 535, Regulations of General Applicability. The city planning commission may approve alternatives to this requirement where strict adherence is impractical because of site location or conditions and the proposed alternative meets the intent of this section.

(7) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

(8) Any cluster development which includes a manufactured home park shall be first allowed in the R2 District.

Coffee shop. The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

College or university. All new colleges and universities and expansions of existing colleges or universities shall submit a master development plan that describes proposed physical development for a period of five (5) years and a period from five (5) to ten (10) years and shall include a description of proposed development phases and plans, including development priorities, the probable sequence for proposed development, estimated dates of construction, and anticipated interim use of property awaiting to be developed.

Community center.

(1) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(2) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Community correctional facility.

(1) The use shall be located at least one-fourth ($\frac{1}{4}$) mile from all existing community correctional facilities.

(2) On-site services shall be for residents of the facility only.

(3) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(4) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

(5) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.

Community garden.

(1) Overhead lighting shall be prohibited.

(2) No more than two (2) vehicles shall be parked on-site, excluding those parked within an enclosed structure.

(3) Accessory retail sales are subject to the development standards for farmstands specified in Chapter 537, Accessory Uses and Structures.

(4) The use shall not be located in a required interior side yard.

(5) Outdoor growing associated with a community garden shall be exempt from the enclosed building requirements of the zoning ordinance.

(6) Keeping of animals is prohibited.

Community residential facility.

(1) The use shall be located at least one-fourth ($\frac{1}{4}$) mile from all existing community residential facilities.

(2) On-site services shall be for residents of the facility only, except where part of a regimen of scheduled post-residential treatment.

(3) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(4) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening, and other site improvements consistent with the character of the neighborhood.

(5) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.

Community service facility.

(1) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

(2) An appointment or set hours for the acceptance of donated merchandise shall be required.

(3) All receipt, sorting and processing of goods shall occur within a completely enclosed building.

Concrete, asphalt and rock crushing facility.

(1) All concrete, asphalt and rock crushing facilities shall be located at least three hundred (300) feet from any residence or office residence district.

(2) Any new concrete, asphalt and rock crushing facility and any substantial intensification of an existing facility shall require approval of a conditional use permit. For the purposes of regulating concrete, asphalt and rock crushing facilities, substantial intensification shall mean any of the following:

a. Any geographic expansion of the facility.

b. The addition of any structure or expansion to the bulk of any structure, except additions or expansions designed primarily to provide weather protection or noise or air pollution abatement for existing crushing or grinding equipment for the handling of concrete, asphalt, rock or similar materials included on a certified list of such equipment properly submitted to the zoning administrator by August 31, 1992, in accordance with the requirements of the zoning code of 1963, and which do not change machine capacity or facility capacity.

c. The addition of any crushing or grinding equipment for the handling of concrete, asphalt, rock or similar materials, or the replacement of any existing crushing or grinding equipment for the handling of concrete, asphalt, rock or similar materials not included on a certified list of such equipment properly submitted to the zoning administrator by August 31, 1992, in accordance with the requirements of the zoning code of 1963.

d. The replacement of any existing crushing or grinding equipment for the handling of concrete, asphalt, rock or similar materials included on a certified list of such equipment properly submitted to the zoning administrator by August 31, 1992, in accordance with the requirements of the zoning code of 1963, which results in an increase of greater than ten (10) percent in the rated compression capacity, shear force capacity or other appropriate power or capacity measurement approved by the zoning administrator for the piece of equipment being replaced.

(3) All concrete, asphalt and rock crushing facilities shall provide the following with any application for conditional use permit:

a. A vicinity plan that includes the following:

1. A description of natural features, including streams, rivers, lakes, wetlands and major topographical features located within three hundred fifty (350) feet of the site.

2. A description of the proposal and how it compares to land uses within three hundred fifty (350) feet of the site.

3. A description of any potential environmental hazard due to existing or proposed land uses, including soil, water and air contamination.
- b. An air quality plan describing stationary and mobile source air emissions, their quantities and composition, and indicating conformance with all applicable air quality regulations.
- c. A dust management plan describing dust emission sources, their quantity and composition, and how dust will be collected, managed and disposed of, and indicating conformance with all applicable dust emission regulations.
- d. A sound attenuation plan describing sources of sound and indicating conformance with all applicable sound and noise regulations.
- e. A vibration dampening plan describing sources of vibration and indicating conformance with all applicable vibration regulations.
- f. A drainage plan for stormwater management and runoff.
- g. A landscape plan showing compliance with the requirements of Chapter 350, Recycling Activities and Salvage Yards, of the Minneapolis Code of Ordinances and Chapter 530, Site Plan Review.
- h. A traffic plan describing the number of truck trips the proposal will generate and the principal access routes to the facility, including a description of the facility's traffic impact on the surrounding area.

Consignment clothing store.

- (1) Only clothing, shoes and related accessories shall be sold.
- (2) Individual consignors shall not be paid for the merchandise until the merchandise has been sold by the consignment store to a third party.
- (3) An appointment or set hours shall be required for the acceptance of merchandise.
- (4) No donations shall be accepted.

Convent, monastery or religious retreat center. The use shall be subject to the same requirements for maximum number of persons served and minimum lot area as community residential facilities located in the zoning district.

Day labor agency.

- (1) A waiting area for clients shall be provided which shall be available to clients one (1) hour prior to the posted opening of the use and shall include toilet facilities.
- (2) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Developmental achievement center. In the residence and OR1 Districts, the use shall be located in a nonresidential structure existing on the effective date of this ordinance, or nursing home.

Dormitory. The use shall be owned by and be located contiguous to or within one-fourth ($\frac{1}{4}$) mile of the educational facility served.

Dry cleaning establishment. The use shall employ best management practices regarding the venting of odors, gas and fumes. Such vents shall be located a minimum of ten (10) feet above grade and shall be directed away from residential uses.

Early childhood learning center.

- (1) A designated area for the short-term parking of vehicles engaged in loading and unloading children shall be provided, as specified in Chapter 541, Off-Street Parking and Loading. The designated area shall

be located as close as practical to the principal entrance of the building and shall be connected to the building by a sidewalk.

(2) Play equipment shall not be located in required front, side or rear yards and shall be effectively screened, as specified in Chapter 530, Site Plan Review.

(3) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(4) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Educational arts center.

(1) In the OR1 and OR2 Districts, the use shall be located in a nonresidential structure existing on the effective date of this ordinance.

(2) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(3) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Electricity generation plant, hydroelectric and non-nuclear powered. All energy generation plants shall provide the following with any application for conditional use permit:

(1) A vicinity plan that includes the following:

a. A description of natural features, including streams, rivers, lakes, wetlands and major topographical features located within three hundred fifty (350) feet of the site.

b. A description of the proposal and how it compares to land uses within three hundred fifty (350) feet of the site.

c. A description of any potential environmental hazard due to existing or proposed land uses, including soil, water and air contamination.

(2) An air quality plan describing stationary and mobile source air emissions, their quantities and composition, and indicating conformance with all applicable air quality regulations.

(3) A dust management plan describing dust emission sources, their quantity and composition, and how dust will be collected, managed and disposed of, and indicating conformance with all applicable dust emission regulations.

(4) A sound attenuation plan describing sources of sound and indicating conformance with all applicable sound and noise regulations.

(5) A vibration dampening plan describing sources of vibration and indicating conformance with all applicable vibration regulations.

(6) A drainage plan for stormwater management and runoff.

(7) A landscape plan showing compliance with the requirements of Chapter 530, Site Plan Review.

(8) A traffic plan describing the number of truck trips the proposal will generate and the principal access routes to the facility, including a description of the facility's traffic impact on the surrounding area.

Emergency shelter.

(1) The use shall be located at least one thousand (1,000) feet from all existing emergency shelters and overnight shelters.

(2) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the area.

(3) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the area.

(4) Shelter guests shall be provided with an enclosed waiting area one (1) hour prior to opening each evening, except when the shelter accepts guests by appointment only or is open twenty-four (24) hours per day.

(5) The operator shall submit a management plan for the facility, and a floor plan showing sleeping areas, emergency exits, bathing and restrooms.

(6) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Exhibition or temporary market.

(1) A scaled and dimensioned site plan showing the layout of the entire market area shall be submitted.

(2) All vehicles necessary for the operation of the use shall be located on a dustless all-weather hard surface capable of carrying a wheel load of four thousand (4,000) pounds and shall not remain idling while the use is open.

(3) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

(4) Canopies shall be securely fastened so as to stay in place during inclement weather. Canopies for temporary markets shall be removed during days that the market is not open to the public.

Faculty house. The use shall be located on a zoning lot used as a fraternity, sorority or rooming house on the effective date of this ordinance which is located within one-half (½) mile of the educational facility served. There shall be no more than twelve (12) rooming or dwelling units.

Farmers' market.

(1) A scaled and dimensioned site plan showing the layout of the entire market area, including parking spaces for the use, shall be submitted.

(2) All vehicles necessary for the operation of the use shall be located on a dustless all-weather hard surface capable of carrying a wheel load of four thousand (4,000) pounds and shall not remain idling while the use is open.

(3) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

(4) Canopies shall be securely fastened so as to stay in place during inclement weather. Canopies for temporary farmers' markets shall be removed during days that the farmers' market is not open to the public.

(5) Farmers' markets shall be exempt from the enclosed building requirements of the zoning ordinance.

Film, video and audio production.

(1) Except in the I3 District, all activity shall be within a completely enclosed building with soundproofing, and sound shall not be audible outside the building.

(2) The zoning administrator may authorize a reduction to, or elimination of, the minimum window area requirement for film, video and audio production uses where it is determined that compliance with the window requirement would unreasonably interfere with the soundproofing needs of the business. In order to meet the intent of the ordinance, the zoning administrator may impose conditions to mitigate the impact of the reduced window area. To achieve this reduction, film, video and audio production uses are subject to the following:

a. Submission of a report prepared by an acoustical engineer detailing the need for additional soundproofing that is not attainable through the use of windows or a separate interior structure and/or

second internal envelope. All options, architectural and acoustic, shall have been explored with proof given.

b. Blank, uninterrupted walls that do not include windows, entries, recesses or projections, or other architectural elements, shall not exceed twenty-five (25) feet in length.

c. The applicant shall propose amenities or improvements that address any adverse effects of reducing the window requirement. Amenities or improvements may include, but are not limited to, additional landscaping and screening, murals, or other graffiti resistant treatments.

Firearms dealer.

(1) The use shall be located at least two hundred fifty (250) feet from the nearest residence or office residence district.

(2) The use shall be located at least five hundred (500) feet from the following protected uses: religious institution, K-12 school, child care center or family or group family day care, library or park.

(3) No firearms or ammunition shall be displayed in window areas or any area where they can be viewed from any public right-of-way.

(4) Firing ranges shall be prohibited.

(5) The use shall meet the required security standards mandated by Minnesota Statutes.

(6) Firearms dealers existing on or before October 7, 1995, and in all other respects in conformance with the provisions of this ordinance, shall be permitted to continue as nonconforming uses in accordance with the provisions of Chapter 531, Nonconforming Uses and Structures.

Fraternity or sorority.

(1) The use shall be located on a zoning lot used as a fraternity, sorority, or rooming house on the effective date of this ordinance.

(2) The use shall be located within one-half (½) mile of the educational facility served.

(3) The maximum number of persons served shall not exceed thirty-two (32).

(4) On-site services shall be for residents of the facility only.

(5) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(6) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening, and other site improvements consistent with the character of the neighborhood.

(7) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.

Funeral home. Crematories shall be prohibited, except where accessory to a cemetery.

Golf course. Clubhouses and other structures shall be at least fifty (50) feet from the nearest property line of a residential use located in a residence or office residence district or any permitted or conditional residential use.

Grain mill, small-scale. The portion of the use dedicated to production and processing activities shall not exceed five thousand (5,000) square feet of gross floor area.

Grocery store. The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Horse and carriage assembly/transfer site.

- (1) The use shall comply with the requirements of Chapter 76, Stables, of the Minneapolis Code of Ordinances.
- (2) The use shall be located at least one hundred (100) feet from a residence or office residence district, a ground floor permitted or conditional residential use, or a food or beverage use.
- (3) The site plan and routes shall be approved by the health department and the city engineer.

Hospital. All new hospitals and expansions of existing hospitals shall submit a master development plan that describes proposed physical development for a period of five (5) years and a period from five (5) to ten (10) years and shall include a description of proposed development phases and plans, including development priorities, the probable sequence for proposed development, estimated dates of construction, and anticipated interim use of property waiting to be developed.

Hospitality residence.

- (1) The use shall be located within one-half ($\frac{1}{2}$) mile of a hospital.
- (2) There shall be no more than fifty (50) rooming units or dwelling units.
- (3) On-site services shall be for the residents of the facility only.
- (4) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.
- (5) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening, and other site improvements consistent with the character of the neighborhood.
- (6) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.

Hotel, 5-20 rooms.

- (1) The use shall provide customary hotel services such as linen, maid service, and the use and upkeep of furniture.
- (2) The use shall include an office and/or lobby that is staffed twenty-four (24) hours per day.

Hotel, 21 rooms or more.

- (1) The use shall provide customary hotel services such as linen, maid service, and the use and upkeep of furniture.
- (2) The use shall include an office and/or lobby that is staffed twenty-four (24) hours per day.

Indoor recreation area. In the industrial districts, indoor recreation areas shall be located in buildings existing on the effective date of this ordinance.

Inebriate housing.

- (1) Inebriate housing shall be located at least one-fourth ($\frac{1}{4}$) mile from all existing inebriate housing and from all of the following uses, except in the B4H Overlay District:
 - a. Community correctional facility.
 - b. Community residential facility.
 - c. Supportive housing.
 - d. Motel.
 - e. Overnight shelter.
- (2) The maximum number of persons served shall not exceed thirty-two (32), except in the B4H Overlay District.
- (3) On-site services shall be for residents of the facility only.

(4) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(5) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening, and other site improvements consistent with the character of the neighborhood.

(6) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.

Intermodal freight facility. Loading and unloading activities shall be located at least three hundred (300) feet from any residence or office residence district. All intermodal facilities shall provide the following with any application for conditional use permit:

(1) A vicinity plan that includes the following:

a. A description of natural features, including streams, rivers, lakes, wetlands and major topographical features located within three hundred fifty (350) feet of the site.

b. A description of the proposal and how it compares to land uses within three hundred fifty (350) feet of the site.

c. A description of any potential environmental hazard due to existing or proposed land uses, including soil, water and air contamination.

(2) An air quality plan describing stationary and mobile source air emissions, their quantities and composition, and indicating conformance with all applicable air quality regulations.

(3) A dust management plan describing dust emission sources, their quantity and composition, and how dust will be collected, managed and disposed of, and indicating conformance with all applicable dust emission regulations.

(4) A sound attenuation plan describing sources of sound and indicating conformance with all applicable sound and noise regulations.

(5) A vibration dampening plan describing sources of vibration and indicating conformance with all applicable vibration regulations.

(6) A drainage plan for stormwater management and runoff.

(7) A landscape plan showing compliance with the requirements of Chapter 530, Site Plan Review.

(8) A traffic plan describing the number of truck trips the proposal will generate and the principal access routes to the facility, including a description of the facility's traffic impact on the surrounding area.

Laundry, commercial. The use shall employ best management practices regarding the venting of odors, gas and fumes. Such vents shall be located a minimum of ten (10) feet above grade and shall be directed away from residential uses.

Limited Production and Processing.

(1) The portion of the use dedicated to production and processing activities shall not exceed five thousand (5,000) square feet of gross floor area.

(2) The main entrance shall open to a retail, dining or office component equal to not less than fifteen (15) percent of the floor area of the use, except in the C4 District where such district standards shall apply.

Limousine service. In the I1 District, the use shall be located at least three hundred (300) feet from a residence or office residence district.

Liquor store, off-sale.

(1) The use shall comply with the requirements of Title 14, Liquor and Beer, of the Minneapolis Code of Ordinances and Chapter 4 of the Minneapolis City Charter.

(2) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Market gardens.

(1) In the Residence and OR1 districts:

a. Mechanized equipment similar in scale to that designed for household use shall be permitted. Use of larger mechanized farm equipment is generally prohibited; provided, however, that during the initial preparation of the land heavy equipment may be used to prepare the land between 7:00 a.m. and 7:00 p.m.

b. Accessory retail sales are subject to the development standards for farmstands specified in Chapter 537, Accessory Uses and Structures.

c. No more than two (2) vehicles shall be parked on-site, excluding those parked within an enclosed structure.

d. Shipment and delivery of products or supplies shall be limited to between 7:00 a.m. and 7:00 p.m. and shall regularly occur only in single rear axle straight trucks or smaller vehicles normally used to serve residential neighborhoods.

e. Overhead lighting shall be prohibited.

(2) In the C3A and downtown zoning districts market gardens shall be limited to rooftops or indoor operations unless accessory to a principal use located on the same zoning lot.

(3) Any equipment or supplies needed for garden operations shall be enclosed or otherwise screened from the street and any adjacent residential uses.

(4) The use shall not be located in a required interior side yard.

(5) Keeping of animals is prohibited.

(6) Outdoor growing associated with a market garden shall be exempt from the enclosed building requirements of the zoning ordinance.

Memorial monuments. The use shall be located within three hundred (300) feet of a cemetery and shall not exceed twenty thousand (20,000) square feet in lot area.

Mission.

(1) The use shall be located at least one thousand (1,000) feet from all existing missions, alternative financial establishments and pawnshops.

(2) The use shall conspicuously post legible signs at the public entrance(s) advising patrons of the hours of operation of the facility and its meal service, if applicable.

(3) A waiting area for clients shall be provided which shall be available to clients one (1) hour prior to the posted opening of the use and shall include toilet facilities.

(4) Trash receptacles shall be located at the public entrance(s), and the premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

(5) An appointment or set hours for the acceptance of donated merchandise shall be required.

(6) All receipt, sorting and processing of goods shall occur within a completely enclosed building.

Motor freight terminal.

(1) Loading and unloading activities shall be located at least one hundred (100) feet from a residence or office residence district boundary.

(2) Any overnight facilities for drivers shall provide on-site management twenty-four (24) hours a day. The name of the on-site management, and telephone number, shall be filed with the zoning administrator.

Mounted patrol stable.

(1) The use shall comply with the requirements of Chapter 76 of the Minneapolis Code of Ordinances, Stables.

(2) The use shall be located not less than one hundred (100) feet from a residence or office residence district, a ground floor permitted or conditional residential use, or a food or beverage use.

(3) The site plan and routes shall be approved by the health department and the city engineer.

Multiple family dwelling, five units or more.

(1) All multiple family dwellings of five (5) or more units that include at least one (1) dwelling with three (3) or more bedrooms shall provide an outdoor children's play area to serve residents of the development on sites meeting the following criteria:

- a. At least twenty thousand (20,000) square feet of lot area.
- b. Located in the R5 or R6 Multiple Family Districts.
- c. Located at least one thousand five hundred (1,500) feet from a public park.
- d. Located outside the UA University Area Overlay District.

(2) All required outdoor children's play areas shall be subject to the following requirements:

- a. An active, outdoor children's play area shall be a minimum of fifty (50) square feet for each unit containing three (3) or more bedrooms, but not less than three hundred (300) square feet of play area to a maximum required area of two thousand (2,000) square feet.
- b. The play area shall be secure, shall be separated from parking and maneuvering areas, and shall be designed to facilitate adult supervision.
- c. Play equipment shall be effectively screened from any adjacent residential use located in a residence or office residence district or from a ground floor permitted or conditional residential use, as specified in Chapter 530, Site Plan Review.
- d. The play area shall include play equipment, or natural features suitable for children in both preschool and elementary school. If pre-fabricated, play equipment shall be installed to manufacturer's specifications.
- e. Areas should be designed for winter use and relate to the built form with consideration given to elements such as providing shelter from wind, utilizing seasonally appropriate materials, maximizing access to sunlight and providing for snow and ice removal.
- f. Play equipment shall not be located in a required yard and not more than twenty-five (25) percent of the required square footage of the play area may be located in a required yard.

Nightclub.

(1) Where alcoholic beverages are served, the use shall comply with the requirements of Title 14, Liquor and Beer, of the Minneapolis Code of Ordinances and Chapter 4 of the Minneapolis City Charter.

(2) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

(3) Nightclubs established or expanded after the effective date of this ordinance shall be located at least five hundred (500) feet from a residence or office residence district boundary.

Nursery or greenhouse. In the residence districts, nurseries and greenhouses shall be subject to the following:

(1) Only plant materials grown on the premises shall be sold on the premises.

- (2) The retail sales area shall not exceed twenty (20) percent of the gross floor area of the use, including inside loading areas, mechanical and work areas and inside growing areas.
- (3) The use shall be screened from residential uses, as provided in Chapter 530, Site Plan Review.

Outdoor recreation area. The use shall be screened from any residential use located in a residence or office residence district or any permitted or conditional residential use, as specified in Chapter 530, Site Plan Review.

Overnight shelter.

- (1) The use shall be located at least one thousand (1,000) feet from all existing emergency shelters and overnight shelters.
- (2) Except in the DS Downtown Shelter Overlay District, the total number of shelter guests shall not exceed one hundred-fifty (150) persons.
- (3) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the area.
- (4) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the area.
- (5) Shelter guests shall be provided with an enclosed waiting area one (1) hour prior to opening each evening, except when the shelter accepts guests by appointment only or is open twenty-four (24) hours per day.
- (6) The operator shall submit a management plan for the facility, and a floor plan showing sleeping areas, emergency exits, bathing and restrooms.
- (7) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Package delivery service. Overnight facilities for drivers shall be prohibited.

Pawnshop.

- (1) The use shall be located at least one thousand (1,000) feet from all existing pawnshops, alternative financial establishments and missions.
- (2) Back-lighted signs, back-lighted awnings, portable signs, temporary signs and freestanding signs shall be prohibited.
- (3) The window and door area of any existing first floor façade that faces a public street or sidewalk shall not be reduced, nor shall changes be made to such windows or doors that block views into the building at eye level.
- (4) For new construction, at least thirty (30) percent of the first floor façade that faces a public street or sidewalk shall be windows or doors of clear or lightly tinted glass that allow views into the building at eye level.
- (5) The use of bars, chains or similar security devices that are visible from a public street or sidewalk shall be prohibited.
- (6) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.
- (7) All receipt, sorting and processing of goods shall occur within a completely enclosed building.

Pet store. All activity shall be within a completely enclosed building with soundproofing and odor control. Outdoor kennels shall be prohibited.

Planned unit development. A planned unit development shall conform to the standards of Chapter 527, Planned Unit Development.

Preschool.

- (1) In the residence and OR1 Districts, the use shall be located in a nonresidential structure existing on the effective date of this ordinance.
- (2) A designated area for the short-term parking of vehicles engaged in loading and unloading children shall be provided, as specified in Chapter 541, Off-Street Parking and Loading. The designated area shall be located as close as practical to the principal entrance of the building and shall be connected to the building by a sidewalk.
- (3) Play equipment shall not be located in required front, side or rear yards and shall be effectively screened from any adjacent residential use located in a residence or office residence district or from a ground floor permitted or conditional residential use, as specified in Chapter 530, Site Plan Review.
- (4) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.
- (5) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Pretrial detention facility, adult.

- (1) The facility shall be limited to a single block located in the area designated "Government district" in the city's comprehensive plan.
- (2) In order to determine whether the facility meets the design standards of this ordinance, a site plan including building elevations, vehicular and pedestrian access, landscaping and similar matters, shall be submitted which shall comply with the following requirements:
 - a. In order to protect the image and form of the downtown skyline and the prominence of city hall, the height and scale of the facility shall be related to the scale of surrounding development, but shall be no higher than the bottom of the face of the clock on the city hall clock tower (elevation one thousand fifty-six (1,056) feet).
 - b. In order to promote a street level environment that contributes to downtown's vitality and security, where practical, the facility's street level frontage shall contain office, commercial, or lobby space.
 - c. Where practical, the exterior walls of the facility at the street and skyway levels shall include windows of non-reflective glass providing views into office, commercial and lobby areas. Where windows are not practical, an alternative façade treatment that substantially achieves the objective of this standard may be approved, such as wall enhancements or architectural features including false windows that create visual interest.
 - d. Access and circulation shall be designed to promote a safe street level environment and minimize conflicts with pedestrian traffic. Curb cuts for service entrances, prisoner entrances, truck loading and parking areas shall be minimized. All truck loading and parking areas shall be located within or below the building.
 - e. In order to minimize shadowing of public sidewalks and to avoid blocking views along the street, the facility shall not encroach into or over any public sidewalk or street except for approved skyways connecting to adjacent properties.
 - f. Street trees at least four (4) inches caliper in size and spaced approximately twenty-five (25) feet on center shall be provided along the perimeter of the facility. Alternative street tree placement may be approved to allow a site plan of exceptional design that will enhance the area or that is more consistent with the design of the facility.

g. The facility shall include an extension of the skyway system connecting adjacent properties to the north and south. Skyways shall conform to approved standards for skyway design and hours of operation.

h. The facility shall be compatible with any nearby historic buildings with respect to building placement, architectural design and exterior materials.

(3) Transit access shall be provided as approved by the city planning commission.

Pretrial detention facility, juvenile.

(1) In order to determine whether the facility meets the design standards of this ordinance, a site plan including building elevations, vehicular and pedestrian access, landscaping and similar matters, shall be submitted which shall comply with the following requirements:

a. In order to protect the image and form of the downtown skyline and the prominence of city hall, the height and scale of the facility shall be related to the scale of surrounding development, but shall be no higher than the bottom of the face of the clock on the city hall clock tower (elevation one thousand fifty-six (1,056) feet).

b. In order to promote a street level environment that contributes to downtown's vitality and security, where practical, the facility's street level frontage shall contain office, commercial, or lobby space.

c. Where practical, the exterior walls of the facility at the street and skyway levels shall include windows of non-reflective glass providing views into office, commercial and lobby areas. Where windows are not practical, an alternative façade treatment that substantially achieves the objective of this standard may be approved, such as wall enhancements or architectural features including false windows that create visual interest.

d. Access and circulation shall be designed to promote a safe street level environment and minimize conflicts with pedestrian traffic. Curb cuts for service entrances, prisoner entrances, truck loading and parking areas shall be minimized. All truck loading and parking areas shall be located within or below the building.

e. In order to minimize shadowing of public sidewalks and to avoid blocking views along the street, the facility shall not encroach into or over any public sidewalk or street except for approved skyways connecting to adjacent properties.

f. Street trees at least four (4) inches caliper in size and spaced approximately twenty-five (25) feet on center shall be provided along the perimeter of the facility. Alternative street tree placement may be approved to allow a site plan of exceptional design that will enhance the area or that is more consistent with the design of the facility.

g. The facility shall include an extension of the skyway system connecting adjacent properties to the north and south. Skyways shall conform to approved standards for skyway design and hours of operation.

h. The facility shall be compatible with any nearby historic buildings with respect to building placement, architectural design and exterior materials.

(2) Transit access shall be provided as approved by the city planning commission.

Radio or television station.

(1) In the C1 Neighborhood Commercial District, the area designated for a live, in building audience is limited to five hundred (500) square feet or thirty (30) seats, whichever is less.

(2) All communication towers, antennas or base units associated with the use must comply with the requirements of Chapter 535 Regulations of General Applicability, Article VIII. Communication Towers, Antennas and Base Units.

Railroad switching yard or freight terminal. Loading and unloading activities shall be located at least three hundred (300) feet from any residence or office residence zoning district. All railroad switching yards and freight terminals shall provide the following with any application for conditional use permit:

(1) A vicinity plan that includes the following:

a. A description of natural features, including streams, rivers, lakes, wetlands and major topographical features located within three hundred fifty (350) feet of the site.

b. A description of the proposal and how it compares to land uses within three hundred fifty (350) feet of the site.

c. A description of any potential environmental hazard due to existing or proposed land uses, including soil, water and air contamination.

(2) An air quality plan describing stationary and mobile source air emissions, their quantities and composition, and indicating conformance with all applicable air quality regulations.

(3) A dust management plan describing dust emission sources, their quantity and composition, and how dust will be collected, managed and disposed of, and indicating conformance with all applicable dust emission regulations.

(4) A sound attenuation plan describing sources of sound and indicating conformance with all applicable sound and noise regulations.

(5) A vibration dampening plan describing sources of vibration and indicating conformance with all applicable vibration regulations.

(6) A drainage plan for stormwater management and runoff.

(7) A landscape plan showing compliance with the requirements of Chapter 350, Recycling Activities and Salvage Yards, of the Minneapolis Code of Ordinances and Chapter 530, Site Plan Review.

(8) A traffic plan describing the number of truck trips the proposal will generate and the principal access routes to the facility, including a description of the facility's traffic impact on the surrounding area.

Reception or meeting hall.

(1) Where alcoholic beverages are served, the use shall comply with the requirements of Title 14, Liquor and Beer, of the Minneapolis Code of Ordinances and Chapter 4 of the Minneapolis City Charter.

(2) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Recycling facility. The use shall be performed in a fully enclosed building, except that paper and cardboard may be stored outside in fully enclosed containers or trailers. For the purposes of this requirement, "enclosed" shall mean completely enclosed with no outdoor storage, sorting or processing of materials.

Regional financial service center. The use shall be limited to locations within the downtown area bounded by Interstate 35W, Interstate 94, Plymouth Avenue, and the Mississippi River.

Regional sports arena. The use shall be limited to locations within the downtown area bounded by Interstate 35W, Interstate 94, Plymouth Avenue, and the Mississippi River.

Residential hospice.

(1) The maximum number of persons served shall not exceed eight (8).

(2) On-site services shall be for residents of the facility only.

(3) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(4) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

(5) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.

Restaurant, delicatessen. The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Restaurant, fast food. The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Restaurant, sit down.

(1) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

School, grades K—12.

(1) The use shall include a regular course of study accredited by the State of Minnesota.

(2) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(3) An appropriate transition area between the facility and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

School, vocational or business.

(1) Except in the I3 District, all activities shall be conducted within an enclosed building.

(2) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.

(3) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening and other site improvements consistent with the character of the neighborhood.

Scrap/salvage yard, metal milling facility.

(1) Scrap/salvage yards, metal milling facilities established or expanded after the effective date of this ordinance shall be located at least three hundred (300) feet from any residence or office residence district.

(2) Any new scrap/salvage yard, metal milling facility and any substantial intensification of an existing facility shall require approval of a conditional use permit. For the purposes of regulating scrap/salvage yards, metal milling facilities, substantial intensification shall mean any of the following:

a. Any geographic expansion of the facility.

b. The addition of any structure or expansion to the bulk of any structure, except additions or expansions designed primarily to provide weather protection or noise or air pollution abatement for existing shredding, milling, grinding, baling or packing equipment for the handling of scrap or salvage materials included on a certified list of such equipment properly submitted to the zoning administrator by August 31, 1992, in accordance with the requirements of the zoning code of 1963, and which do not change machine capacity or facility capacity.

c. The addition of any shredding, milling, grinding, baling or packing equipment for the handling of scrap or salvage materials, or the replacement of any existing shredding, milling, grinding, baling or packing equipment for the handling of scrap and salvage materials not included on a certified list of such equipment properly submitted to the zoning administrator by August 31, 1992, in accordance with the requirements of the zoning code of 1963.

d. The replacement of any existing shredding, milling, grinding, baling or packing equipment for the handling of scrap and salvage materials included on a certified list of such equipment properly submitted to the zoning administrator by August 31, 1992, in accordance with the requirements of the zoning code of 1963, which results in an increase of greater than ten (10) percent in the rated compression capacity, shear force capacity or other appropriate power or capacity measurement approved by the zoning administrator for the piece of equipment being replaced.

(3) All scrap/salvage yard, metal milling facilities shall provide the following with any application for conditional use permit:

a. A vicinity plan that includes the following:

1. A description of natural features, including streams, rivers, lakes, wetlands and major topographical features located within three hundred fifty (350) feet of the site.

2. A description of the proposal and how it compares to land uses within three hundred fifty (350) feet of the site.

3. A description of any potential environmental hazard due to existing or proposed land uses, including soil, water and air contamination.

b. An air quality plan describing stationary and mobile source air emissions, their quantities and composition, and indicating conformance with all applicable air quality regulations.

c. A dust management plan describing dust emission sources, their quantity and composition, and how dust will be collected, managed and disposed of, and indicating conformance with all applicable dust emission regulations.

d. A sound attenuation plan describing sources of sound and indicating conformance with all applicable sound and noise regulations.

e. A vibration dampening plan describing sources of vibration and indicating conformance with all applicable vibration regulations.

f. A drainage plan for stormwater management and runoff.

g. A landscape plan showing compliance with the requirements of Chapter 350, Recycling Activities and Salvage Yards, of the Minneapolis Code of Ordinances and Chapter 530, Site Plan Review.

h. A traffic plan describing the number of truck trips the proposal will generate and the principal access routes to the facility, including a description of the facility's traffic impact on the surrounding area.

Secondhand goods store.

(1) Back-lighted signs, back-lighted awnings, portable signs, temporary signs and freestanding signs shall be prohibited.

(2) The window and door area of any existing first floor façade that faces a public street or sidewalk shall not be reduced, nor shall changes be made to such windows or doors that block views into the building at eye level.

(3) For new construction, at least thirty (30) percent of the first floor façade that faces a public street or sidewalk shall be windows or doors of clear or lightly tinted glass that allow views into the building at eye level.

(4) The use of bars, chains or similar security devices that are visible from a public street or sidewalk shall be prohibited.

(5) The premises of all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

- (6) All receipt, sorting and processing of goods shall occur within a completely enclosed building.
- (7) An appointment or set hours for the acceptance of donated goods shall be required.

Shopping center.

- (1) Only uses allowed in the zoning district in which the shopping center is located shall be allowed in the shopping center.
- (2) Uses which require a conditional use permit, site plan review or other land use approval shall comply with all review and approval requirements of this zoning ordinance.
- (3) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Small engine repair.

- (1) All vehicles or small engines waiting for repair or pick-up shall be stored in an enclosed building.
- (2) All repairs shall be performed within a completely enclosed building.

Snow storage site.

- (1) In the I1 District, the use shall be located at least three hundred fifty (350) feet from any residence or office residence zoning district and shall have a minimum lot area of twenty thousand (20,000) square feet.
- (2) The use shall comply with all applicable regulations governing stormwater management, and shall employ on-site best management practices and collection infrastructure, such as catch basins, bioretention facilities, drainage swales or underground storage to minimize off-site stormwater or snowmelt runoff, maximize overland flow and flow distances over surfaces covered with vegetation, increase on-site filtration, minimize off-site discharge of pollutants, encourage natural filtration function, and prevent negative stormwater impacts to adjacent properties or public right-of-way.
- (3) Landscaping and screening shall be provided in transition areas between the snow storage area and adjacent property and public right-of-way.
- (4) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alley within one hundred (100) feet shall be inspected regularly for purposes of removing any litter, debris, and/or sediment found thereon.
- (5) The use shall comply with all applicable regulations governing erosion and sediment control, and shall employ on-site best management practices to minimize soil erosion and off-site sedimentation.

Supportive housing.

- (1) Supportive housing shall be located at least one-fourth (¼) mile from all existing supportive housing and from all of the following uses, except in the B4H Overlay District:
 - a. Community correctional facility.
 - b. Community residential facility.
 - c. Inebriate housing.
 - d. Motel.
 - e. Overnight shelter.
- (2) On-site services shall be for residents of the facility only, except where part of a regimen of scheduled post-residential treatment.
- (3) To the extent practical, all new construction or additions to existing buildings shall be compatible with the scale and character of the surroundings, and exterior building materials shall be harmonious with other buildings in the neighborhood.
- (4) An appropriate transition area between the use and adjacent property shall be provided by landscaping, screening, and other site improvements consistent with the character of the neighborhood.

(5) The operator shall submit a management plan for the facility and a floor plan showing sleeping areas, emergency exits and bathrooms.

Taxicab service. In the I1 District, the use shall be located at least three hundred (300) feet from a residence or office residence district.

Theater, indoor. A theater which is nonconforming as to off-street parking shall not be altered by partitioning or dividing such theater into two (2) or more separate seating areas unless sufficient off-street parking spaces are provided as required by conditional use permit, notwithstanding nonconforming parking rights. In addition to the conditional use standards, the city planning commission shall consider, but not be limited to the following factors in determining the number of off-street parking spaces required:

- (1) Documentation supplied by the applicant regarding the actual parking demand for the proposed use.
- (2) The impact of the proposed use on the parking and roadway facilities in the surrounding area.
- (3) Whether the theater is located near a parking area that is available to the customers, occupants, employees and guests of the proposed use.
- (4) The availability of alternative forms of transportation.

Tobacco shop.

- (1) Back-lighted signs, back-lighted awnings, portable signs, temporary signs and freestanding signs shall be prohibited.
- (2) The window and door area of any existing first floor façade that faces a public street or sidewalk shall not be reduced, nor shall changes be made to such windows or doors that block views into the building at eye level.
- (3) For new construction, at least thirty (30) percent of the first floor façade that faces a public street or sidewalk shall be windows or doors of clear or lightly tinted glass that allow views into and out of the building at eye level.
- (4) The use of bars, chains or similar security devices that are visible from a public street or sidewalk shall be prohibited.
- (5) The premises, all adjacent streets, sidewalks and alleys, and all sidewalks and alleys within one hundred (100) feet shall be inspected regularly for purposes of removing any litter found thereon.

Urban farm.

- (1) Keeping of animals is prohibited.
- (2) Any equipment or supplies needed for farm operations shall be fully enclosed or otherwise effectively screened from the street and any adjacent residential uses.
- (3) The use shall not be located in a required interior side yard.
- (4) Outdoor growing associated with an urban farm shall be exempt from the enclosed building requirements of the zoning ordinance.

Veterinary clinic. All activity shall be within a completely enclosed building with soundproofing and odor control. Outdoor kennels shall be prohibited.

Waste hauler. No waste shall be stored or maintained on-site.

Waste transfer or disposal facility. Waste transfer or disposal facilities shall be located at least three hundred (300) feet from any residence or office residence district. All waste transfer or disposal facilities shall provide the following with any application for conditional use permit:

(1) A vicinity plan that includes the following:

a. A description of natural features, including streams, rivers, lakes, wetlands and major topographical features located within three hundred fifty (350) feet of the site.

b. A description of the proposal and how it compares to land uses within three hundred fifty (350) feet of the site.

c. A description of any potential environmental hazard due to existing or proposed land uses, including soil, water and air contamination.

(2) An air quality plan describing stationary and mobile source air emissions, their quantities and composition, and indicating conformance with all applicable air quality regulations.

(3) A dust management plan describing dust emission sources, their quantity and composition, and how dust will be collected, managed and disposed of, and indicating conformance with all applicable dust emission regulations.

(4) A sound attenuation plan describing sources of sound and indicating conformance with all applicable sound and noise regulations.

(5) A vibration dampening plan describing sources of vibration and indicating conformance with all applicable vibration regulations.

(6) A drainage plan for stormwater management and runoff.

(7) A landscape plan showing compliance with the requirements of Chapter 350, Recycling Activities and Salvage Yards, of the Minneapolis Code of Ordinances and Chapter 530, Site Plan Review.

(8) A traffic plan describing the number of truck trips the proposal will generate and the principal access routes to the facility, including a description of the facility's traffic impact on the surrounding area.

Section 3. That Section 550.30 contained in Chapter 550, Industrial Districts, be amended to read as follows:

550.30. - Principal uses for the industrial districts.

(a) *In general.* Table 549-1, Principal Uses in the Industrial Districts, lists all permitted and conditional uses in the industrial districts.

(b) *Permitted uses.* Uses specified with a "P" are permitted as of right in the district or districts where designated, provided that the use complies with all other applicable provisions of this ordinance. Persons wishing to establish a permitted use shall obtain a zoning certificate for such use as specified in Chapter 525, Administration and Enforcement.

(c) *Conditional uses.* Uses specified with a "C" are allowed as a conditional use in the district or districts where designated, provided that the use complies with all other applicable provisions of this ordinance. Persons wishing to establish or expand a conditional use shall obtain a conditional use permit for such use, as specified in Chapter 525, Administration and Enforcement.

(d) *Prohibited uses.* Any use not listed as either "P" (permitted) or "C" (conditional) in a particular district or any use not determined by the zoning administrator to be substantially similar to a use listed as permitted or conditional shall be prohibited in that district.

(e) *Specific development standards.* Permitted and conditional uses specified with an "✓" under the Specific Development Standards column shall be subject to the specific development standards of Chapter 536, Specific Development Standards.

(f) *General use categories.* Table 550-1 employs general use categories for some types of uses. A particular use may be determined to be within a general use category if not listed specifically elsewhere in Table 550-1 and if not determined to be within another general use category. Determination of whether a particular use is included within a general use category shall be made by the zoning administrator in the manner provided for in Chapter 525, Administration and Enforcement, governing determination of substantially similar uses.

(1) *Light industrial uses.* Light industrial uses are low impact uses which produce little or no noise, odor, vibration, glare or other objectionable influences and which have little or no adverse effect on surrounding properties. Light industrial uses generally do not include processing of raw materials or production of primary materials. Light industrial uses include, but are not limited to, the production or processing of the following:

- a. Apparel and other finished products made from fabrics.
- b. Computers and accessories, including circuit boards and software.
- c. Electronic components and accessories.
- d. Fabricated leather products such as shoes, belts and luggage, except no tanning of hides.
- e. Furniture and fixtures, except no metal working.
- f. Household appliances and components, except no metal working.
- g. Measuring, analyzing, and controlling instruments.
- h. Medical and optical goods and technology.
- i. Musical instruments.
- j. Novelty items, pens, pencils, and buttons.
- k. Office and commercial equipment, except no metal working.
- l. Paper and paperboard products, except no pulp, paper or paperboard mills.
- m. Pharmaceuticals, health and beauty products.
- n. Precision machined products, including jewelry.
- o. Printing and publishing, including distribution.
- p. Signs, including electric and neon signs.
- q. Sporting and athletic goods.
- r. Telecommunications products.

(2) *Medium industrial uses.* Medium industrial uses include metal working, glass and other uses which have the potential to produce greater amounts of noise, odor, vibration, glare or other objectionable influences than light industrial uses and which may have an adverse effect on surrounding properties. Medium industrial uses may include processing of raw materials or production of primary materials. Medium industrial uses include, but are not limited to, the production or processing of the following:

- a. Electrical equipment such as motors and generators, lighting, wiring, and transmission and distribution equipment.
- b. Fabricated metal products such as cans and shipping containers, cutlery, hand tools and general hardware.
- c. Fabricated plastic and rubber products, except tires and inner tubes.
- d. Glass and glass products, ceramics, and china and earthenware such as dishes and kitchenware.
- e. Gypsum, drywall and plaster products.
- f. Latex paints.

- g. Lumber and wood products, including plywood.
- h. Machinery and equipment such as engines and turbines, farm, lawn and garden equipment, heating, cooling and refrigeration equipment, and machine tools.
- i. Metal working such as stamping, welding, machining, extruding, engraving, plating, grinding, polishing, cleaning and heat treating.
- j. Screw machine products such as bolts, nuts, screws, and washers.
- k. Textiles and fabrics.
- l. Transportation equipment.

(3) *General industrial uses.* General industrial uses include high impact and outdoor uses which are likely to have a substantial adverse effect on the environment or on surrounding properties and which require special measures and careful site selection to ensure compatibility with the surrounding area. General industrial uses often include processing of raw materials and production of primary materials. General industrial uses include, but are not limited to, the production or processing of the following:

- a. Asphalt, paving and roofing materials.
- b. Battery manufacture and reprocessing.
- c. Chemicals and chemical products including ammonia, chlorine, household cleaners, detergent, fertilizer, and industrial and agricultural chemicals.
- d. Oil-based paints, varnishes, lacquers, and enamels.
- e. Petroleum and coal products, except no mining or extraction.
- f. Plastics and synthetic resins and fibers.
- g. Primary metals, including steelworks, rolling and finishing mills, forge or foundry.
- h. Sand and gravel, except no mining or extraction.
- i. Stone, clay and concrete products such as cement, bricks, tile and concrete blocks.
- j. Tanned hides and leather.
- k. Tires and inner tubes.

Table 550-1 Principal Uses in the Industrial Districts

Use	I1	I2	I3	Specific Development Standards
INDUSTRIAL USES				
Generalized Use Categories				
Light industrial	P	P	P	
Medium industrial		P	P	

General industrial			C	
Specific Industrial Uses				
Concrete, asphalt and rock crushing facility			C	✓
Contractor yard		P	P	
Dry cleaning establishment	C	P	P	✓
Film, video and audio production	P	P	P	✓
Food and beverage products	P	P	P	
Furniture moving and storage	P	P	P	
Grain elevator or mill			C	
Grain mill, small-scale	P	P	P	✓
Greenhouse, wholesale	P	P	P	
Industrial machinery and equipment sales, service and rental	C	P	P	
Laundry, commercial	P	P	P	✓
Packaging of finished goods	P	P	P	
Research, development and testing laboratory	P	P	P	

Recycling facility		C	C	✓
Scrap/salvage yard, metal milling facility			C	✓
Self service storage	P	P	P	
<u>Snow storage site</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>✓</u>
Urban farm	P	P		✓
Wholesaling, warehousing and distribution	P	P	P	
Planned Unit Development	C	C	C	✓
Commercial Uses				
Retail Sales and Services				
Art gallery	P	P		
Art studio	P	P		
Building material sales	P	P		
Child care center	P	P		✓
Contractor's office	C	P	P	
Day labor agency	C	C	P	✓

Farmers' market	P	P		✓
Liquor store, off-sale	C	C		✓
Motorized scooter sales	P	P	P	
Neighborhood electric vehicle sales	P	P	P	
Office supply sales and service	P	P		
Photocopying	P	P		
Veterinary clinic	P	P		✓
Offices	P	P	P	
Automobile Services				
Automobile convenience facility	C	C	C	✓
Automobile rental	C	C	C	✓
Automobile repair, major	C	C	C	✓
Automobile repair, minor	C	C	C	✓
Automobile sales	C	C	C	✓
Car wash	C	C	C	✓

Food and Beverages				
Catering	P	P		
Coffee shop, with limited entertainment	P	P		✓
Nightclub	C	C		✓
Restaurant, delicatessen	P	P		✓
Restaurant, fast food	C	C		✓
Restaurant, sit down, including the serving of alcoholic beverages with general entertainment	P	P		✓
Commercial Recreation, Entertainment and Lodging				
Indoor recreation area	P	P		✓
Hotel, 5—20 rooms	P	P		✓
Hotel, 21 rooms or more	P	P		✓
Radio or television station	P	P		
Regional sports arena	P			✓
Sports and health facility	P			
Medical Facilities				

Birth center	P	P		✓
Clinic, medical or dental	P	P		
Hospital	C	C		✓
Laboratory, medical or dental	P	P		
Transportation				
Ambulance service	C	C	C	
Bus garage or maintenance facility	C	C	C	
Horse and carriage assembly/ transfer site	C	C	C	✓
Intermodal containerized freight facility			C	✓
Limousine service	C	C	C	✓
Motor freight terminal		C	C	✓
Motor vehicle storage lot		C	C	
Package delivery service	C	C	C	✓
Railroad switching yards and freight terminal			C	✓
Taxicab service	C	C	C	✓

Towing service		C	C	
Truck, trailer, boat, recreational vehicle or mobile home sales, service or rental	C	C	C	
Waste hauler		C	C	✓
PARKING FACILITIES				
Parking facility	C	C	C	
INSTITUTIONAL AND PUBLIC USES				
Educational Facilities				
School, vocational or business	P	P	P	✓
Social, Cultural, Charitable, and Recreational Facilities				
Athletic field	P	P	P	✓
Club or lodge, with general entertainment	P	P		
Community center	P	P		✓
Community garden	P	P		✓
Community service facility	P	P	P	✓
Development achievement center	P	P		

Educational arts center	P	P		
Mission	C	C	C	✓
Park	P	P	P	
Religious Institutions				
Place of assembly	P	P		
RESIDENTIAL USES				
Community correctional facility serving up to thirty-two (32) persons	C	C	C	✓
PUBLIC SERVICES AND UTILITIES				
Animal shelter	C	C	C	✓
Bus turnaround	C	C	C	
Communication exchange	C	C	C	
Electric or gas substation	C	C	C	
Electricity generation plant, hydroelectric	C	C	C	✓
Electricity generation plant, non-nuclear			C	✓
Fire station	C	C	C	

Garage for public vehicles	C	C	C	
Heating or cooling facility	C	C	C	
Mounted patrol stable	C	C	C	✓
Passenger transit station	C	C	C	
Police station	C	C	C	
Post office	C	C	C	
Railroad right-of-way	C	C	C	
River freight terminal			C	
Stormwater retention pond	C	C	C	
Street and equipment maintenance facility	C	C	C	
Vehicle emission testing station	C	C	C	
Waste transfer or disposal facility			C	✓
Water pumping and filtration facility	C	C	C	

Section 4. That Section 551.600 contained in Chapter 551, Overlay Districts, be amended to read as follows:

551.600. – Prohibited uses in the FP Overlay District.

(a) *In general.* All uses not allowed as permitted or conditional uses by this article shall be prohibited, regardless of the underlying primary zoning district.

(b) *Waste transfer or disposal facilities.* Waste transfer, treatment or disposal facilities shall be prohibited.

(c) *Manufactured homes and manufactured home parks.* Manufactured homes, manufactured home parks, and recreational vehicles greater than four hundred (400) square feet in area shall be prohibited.

(d) *Snow storage site.* Snow storage sites shall be prohibited as a principal use.

4.2-c SNOW STORAGE

DESCRIPTION

Snow is removed from streets, roadways, and parking areas to ensure public safety and to accommodate transportation. Plowed snow can contain pollutants such as salt, sand, oil, grease, heavy metals, and trash, which can accumulate in the area where the snow is stored and can be released when the snow melts.

In the Lake Tahoe Region snow storage practices vary dependent upon land use conditions: 1) in residential areas snow is plowed from roads onto road shoulders, and from driveways to pervious areas adjacent to driveways; 2) in commercial areas snow is commonly plowed to the corners of a parking lot; and 3) in the most densely developed areas (e.g., Lake Tahoe Boulevard in the City of South Lake Tahoe), snow is removed and stored at an off-site location. The guidance provided for this BMP primarily targets appropriate snow storage practices for commercial areas and densely developed areas.



This snow storage area is ideal because it is on a paved surface, upslope of drainage BMPs and the sign clearly indicates the area is dedicated for snow storage.

APPLICABILITY

- Appropriate snow storage practices are necessary for all properties and facilities where snow is plowed and stored.
- Snow should not be stored within a Stream Environment Zone (SEZ) or an SEZ setback.
- Snow should not be stored in stormwater treatment BMPs. Exceptions may be temporarily granted by the permitting authority on a case-by-case basis for dry basins or infiltration basins installed as part of a BMP Retrofit with severe space constraints. Refer to Design and Installation Considerations below for more details.

BMP DESIGN APPROACH

Pollutant Source Control

Hydrologic Source Control

Stormwater Treatment

SCALE OF APPLICATION

All SFR and MFR < 1 acre

MFR 1-5 Acre and CICU < 5 acres

MFR and CICU > 5 acres and all WQIPs

BMP TYPE

Temporary

Permanent

- Snow should not be stored within BMPs defined in this Handbook as a Wet Basin or a Media Filter.
- Snow may be stored above a vegetated Filter Strip as defined in this Handbook.

Advantages

- If properly sited and designed, snow storage practices can prevent the surface discharge of poor quality melt water.
- Regional snow storage facilities, where applicable, provide locations where pollutants in plowed/hailed snow can be directed through large scale stormwater treatment BMPs.

Disadvantages

- Requires designated locations for snow storage that may take up parking or other useful space.
- Can damage landscaping and vegetation.

DESIGN AND INSTALLATION CONSIDERATIONS

- Snow storage areas should be sited and designed to minimize pollutant and runoff impacts.
- Size the area designated for snow storage to accommodate the expected volume of snow. As a rule of thumb, size snow storage areas to be roughly 20 percent of the plowed area.
- Do not locate snow storage areas on top of drain inlets.
- Snow storage within dry basins and infiltration basins may be acceptable if the following conditions are met:
 - Drainage design standards for the responsible jurisdiction allow the practice.
 - The limits of snow storage within the basin are clearly designated and do not encroach on the inlet and outlet structures of the basin.
 - Basin capacity has been increased to accommodate expected snow storage amounts in addition to the design storm (typically the 20-yr/1-hr storm). The basin must retain the capacity to hold the design storm at all times during snow storage operations.
 - Stabilized access for snowplowing equipment is provided.
 - Maintenance is conducted annually after spring snowmelt to remove material and debris from the basin, rehabilitate the infiltration capacity of the basin, and to confirm conveyance facilities are functional.
- Clearly identify the boundaries of the snow storage area to be visible under winter conditions.
- Site pervious snow storage areas so that plowing and snowmelt will cause the least disturbance to soils and vegetation. Avoid siting snow storage on compacted or poorly draining soils.
- When storing snow in close proximity to an SEZ setback or other sensitive areas, construct a berm around the perimeter of the snow storage area to contain the

snowmelt. Alternatively, construct a vegetated filter strip between the SEZ setback and the snow storage area.

- For snow that may contain elevated levels of pollutants (e.g., commercial parking lots or roads), site snow storage on an impervious surface that drains to a stormwater treatment BMP described in this Handbook.
- If an appropriate on-site snow storage area cannot be sited or designed, make arrangements for removal of snow and off-site storage.
- When storing snow in landscaped areas, plant with native and adapted species tolerant of snow storage (perennials that die back annually and shrubs/trees that can bend with weight, but not break).
- Employ concave landscaped areas rather than mounded landscapes for snow storage.
- Locate snow storage areas to maximize solar exposure and away from primary roadways to the greatest extent feasible.



Snow shall not be stored in the shoreline where polluted snowmelt can go directly into Lake Tahoe.

- For unpaved snow storage areas where snowplowing equipment will operate, the snow storage area should be covered with gravel or plowed to maintain 12 inches of packed snow to reduce soil disturbance and soil compaction.
- Site basins outside of the jurisdictional snow storage ROWs – usually 15-20 feet off of roadway.

INSPECTION AND MAINTENANCE

- Before and after winter, clean the designated snow storage area of accumulated sand, trash, and debris, and inspect any associated drainage outlets or conveyance facilities for damage or erosion.

- Before and after winter, repair any damage or erosion that may have occurred to the snow storage area from snow removal equipment or other snow storage activities.

EFFECTIVENESS CONSIDERATIONS

When properly sited, designed, and maintained, snow storage areas can significantly reduce the discharge of poor quality melt water to receiving waters and other sensitive areas.

Section 2.150 SNOW DISPOSAL SITE DESIGN CRITERIA

2.150 A. Introduction

Snow disposal sites provide storage areas for snowfall that exceeds the storage capacity of street rights-of-way and other public facilities. The criteria established in this section are for snow disposal sites managed by MOA, the State of Alaska and as well as large, private disposal sites operating under conditional use permits.

1. Objective

The objective of these design criteria is to provide project managers and site designers with information needed to site and design snow disposal sites that are safe, efficient, and protective of surface water and groundwater quality. Water quality concerns for meltwater includes chloride and other salts, suspended sediment, turbidity, and metals associated with sediment and turbidity.

Besides storing snow, snow disposal sites are designed to discharge meltwater through a combination of infiltration and surface discharge. Siting criteria, design features, and operational procedures described in this section are all intended to manage the impacts of discharges on receiving waters by these three principals:

- maximize infiltration,
- minimize sediment and other pollutants in meltwater
- provide for pollutant dilution.

2. Codes and Review Process

These siting, design, and operational criteria function as a framework for preparing plans for commission reviews or approvals required under various portions of the Anchorage Municipal Code (AMC), as listed below. Note that the Anchorage Municipal Code is continually being revised; always refer to the most recently printed edition.

For all sites:

- AMC Section 21.15.015 - Public facility site review requires a review by the planning and zoning commission of any snow disposal site.
- AMC Section 21.15.025 - Public facility project landscaping review by the urban design commission is required for public facilities and land use permits.

In addition, for private and state sites:

- AMC Section 21.40.200.B.1. - I-1 Light Industrial District, lists snow disposal sites as a conditional use that requires an annual administrative permit.
- AMC Section 21.15.055 - Annual administrative permit establishes the annual administrative permit.
- AMC 21.15.030 - Approval of site plans and conditional uses outlines general requirements for site plan approval.

- AMC 21.50.270 - Conditional use standards - snow disposal sites outlines specific requirements for snow disposal sites. In particular, this section requires submitting a drainage and water quality plan and a dust and litter control plan.
- AMC 21.67 – Stormwater discharge establishes stormwater discharge restrictions and requires a system plan review.
- AMC 15.70.080 - Property line noise emission standards establishes noise standards.
- AMC 21.05.115 – Implementation – Anchorage Wetlands Management Plan establishes guidelines for managing wetlands.

2.150 B. Site Selection Criteria

Site selection criteria consider effects of on-site infiltration and effects of surface discharges on surface water, including lakes, streams, and wetlands.

1. Snow disposal sites are not permitted within 200 feet of a Class A or B well or within 100 feet of a Class C well [18 Alaska Administrative Code 80.020, Table A]. For disposal sites that are located more than 200 feet and less than 1,000 feet upgradient from a Class A or B well, or more than 100 feet and less than 1,000 feet upgradient from a Class C well, perform an engineering evaluation of the potential impact of dissolved solids on ground water.
2. Snow disposal sites are not permitted within 500 feet upgradient of an on-site sewage disposal system.
3. Avoid areas with high potential for contaminating potable water aquifers. The intent is to prevent meltwater having a high salt content from entering and contaminating these aquifers.

Assess potential for such infiltration for both the site itself and for the complete flow path of the meltwater. Anchorage’s surface geology is typically quite complex and locally highly variable over short distances. This siting criterion should be addressed by a hydrogeologist experienced in Anchorage area surficial geology, and in the hydrology and interaction of ground water and surface water.

4. Avoid areas with high potential for contaminating “closed” lake or wetland systems.

The intent is to prevent salt buildup in these types of surface water features, where dilution can not mitigate this effect. Meltwater from snow disposal sites should not be discharged to “closed” basin surface water features that have little or no surface water outlet.

5. Avoid sites that would discharge to streams with a base (winter) flow of less than 3 cubic feet per second (cfs). The minimum receiving water discharge is based on probable adequacy for assimilation of chloride releases from snowmelt to achieve compliance with EPA water quality criteria. MOA PM&E can provide maps of streams, site-specific channel geometry, baseline stream chemistry, and estimates of stream baseflow throughout the municipality.

On-site dilution of snow site meltwater may be performed prior to discharge to meet treatment goals (listed in 2.150 D.2).

6. Select sites that offer optimum opportunity for infiltration to shallow, non-potable ground water systems.

The intent is to provide the maximum opportunity for diluting salt (chloride) in shallow ground waters, thus minimizing the scale of site detention and dilution facilities that might otherwise be required. This siting criterion is secondary to criteria protecting potable aquifers, wetlands, lakes, and streams.

7. Avoid sites that would negatively impact wetlands. Meltwater from snow disposal sites should not be discharged to wetlands such that the discharge significantly reduces overall functionality (as catalogued in the Anchorage Wetlands Management Plan and its cited documents) of either the entire contiguous wetland feature or the impacted fraction alone.

The intent is to ensure that meltwater quality and discharge volume is managed to support an acceptable long-term threshold functionality of the receiving wetland, while allowing some adjustment in species composition in a small fraction of the wetland. Research of storm water impacts to Anchorage wetlands is continuing. Planners and designers should view the criteria as preliminary guidance and contact MOA PM&E for site-specific and/or more current information.

8. Select sites that offer optimum opportunity for slope and aspect orientation. Sites should be selected that are generally suitable for constructing storage pads that are sloped down from south to north.

The intent is to provide optimum opportunity for conformance with site design and operation criteria. Note that the aspect of the site need not be northerly, but the site should be amenable to constructing a pad sloping generally from south to north.

2.150 C. Design Information

The following information is required for snow disposal site design:

1. Soil Investigation

A soil investigation is performed to provide knowledge of the soil and potential problems with geotechnical concerns such as freeze/thaw effects and other constraints to site construction. Soils analysis shall conform to information criteria in Chapter 1 of this Design Criteria Manual.

A detailed soils report is required if the site is suspected of marginal conditions for site stability due to high ground water, high potential for saturation or erosion concerns.

2. Surveying and Mapping

A map shall be formed to document watercourses, storm water features and other criteria that may be affected by the site. Mapping should include the following features:

- Site topography with 2-foot contour intervals
- Existing roads, culverts, ditches, storm drains, and other drainage features
- Location and depth of domestic wells and on-site sewage disposal systems within 500 feet of site boundaries

- Surface water features within 500 feet of the site, including wetlands, creeks, and lakes

3. Groundwater Investigation

A site-specific ground water investigation is conducted to protect potable aquifer supplies and receiving waters. Site-specific ground water level (seasonal high and low), gradient, direction, and the uses of the local aquifer should be compiled or determined.

2.150 D. Specific Design Criteria

In the snow disposal site design, include a constructed pad for snow storage, separate area(s) for wastes, and design features for water retention and discharge. Manage discharged water to meet stated water quality objectives. These site-specific design criteria serve as the basis of the drainage and water quality plan required under AMC 21.50.270.

1. Snow Storage Pads – See Figure 2-26.

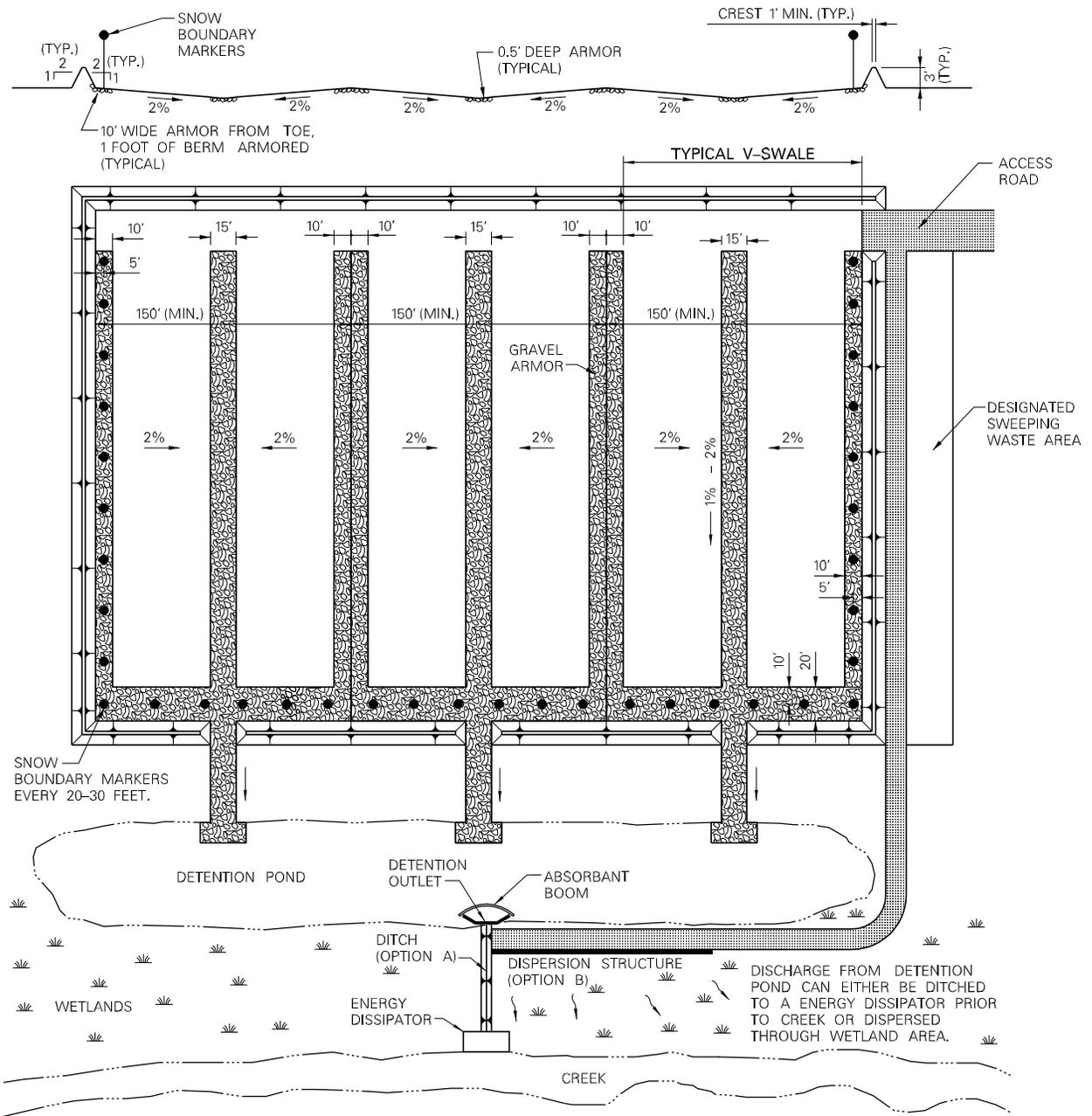
- a. **Pad Design.** Snow disposal should take place on an engineered working surface composed of competent native material or select imported fill. Construct snow disposal pads to have single or multiple “V”-swale cross-sections. A “V”-swale shall have a 2 percent side slope and a longitudinal slope of 1 to 2 percent. Each “V”-swale shall have a minimum width from crest to crest of 150 feet (45 meters). Pads may be constructed of a single “V”-swale spanning the width of an entire site, or of a continuous series of “V”-swales. However, given the operational requirements of “V”-swales, and the required side slope, a series of minimum-sized “V”-swales may be generally preferable to one large swale.

The intent of “V”-swales is to maintain movement of meltwater inside the snow pack away from fine sediments generated on top of and adjacent to the pack. This minimizes contact of flowing water with easily eroded sediments and reduces turbidity released from the site. Properly operated and constructed “V”-swale snow disposal pads are anticipated to limit turbidity at pad discharge points to a seasonal average of about 50 nephelometric turbidity units (NTU).

- b. **Pad Orientation.** Orient V-swale snow storage pads preferentially with the downslope (discharge) end of the swale axis to the north.

The intent is to promote melt of the snow pack (due to a more favorable aspect and proper site operation) to progress preferentially from the uphill side of the stored snow towards the downhill (discharge) side. Promoting this melt progression minimizes exposure of loose sediment to flowing meltwater.

- c. **Pad Vegetation.** Vegetate all unarmored snow storage pad surfaces. A vegetated surface is essential to properly operate a snow disposal site. Vegetation resists pad erosion, traps fine sediments mobilized in snowmelt, and promote absorption of metals and other pollutants. Select and design a vegetative mix that is resistant to seasonal shallow burial [1 to 2 inches (2 to 5 cm) of loose sand fill annually] and to elevated salt and metals soil concentrations.



**MULTIPLE V- SWALE SNOW SITE
DESIGN CONCEPT**

FIGURE 2-26

When constructing the pads, “trackwalk” all “V”-swale side slopes immediately prior to their vegetation. Trackwalking consists of imprinting the ground surface with crawler tractor tread marks along the fall line (i.e., trafficking directly up-slope and downslope).

- d. Channel and Berm Armoring. Armor all critical pad surfaces and flow channels, provide permanent and temporary setback markers, and accommodate for icing storage in select armored channels. In particular: perform the following:
- Construct armored surfaces along the centerline of each “V”-swale; along the crests of all multiple, interior “V”-swales; along the toe of all perimeter and interior berms; along all discharge channels; and at all discharge points (Figure 2-26).
 - Armor from an elevation of 1 foot (0.3 meters) up from the toe of each berm and extending down the side of the berm and across the pad surface for a distance of 10 feet (3 meters) from the toe of the berm. Armor the central (longitudinal) channel of each “V”-swale to a minimum width of 15 feet (4.5 meters).
 - Armor both sides of the crest of each interior “V”-swale for a distance of 10 feet (3 meters) from the top of the crest.
 - Armor a 20-foot (6-meter) wide band in front of the toe of the end perimeter berm for the full width of the lower end of each “V”-swale.
 - Armor shall be at least four inches (10 centimeters) thick.

Maintain the elevation of all armored surfaces slightly depressed below the vegetated pad surfaces to assure flow of meltwater onto and through the armored surface and not parallel to it. Size armoring material according to expected flow velocities and Figure 2-17. Peak discharge of snowmelt from snow disposal sites can be up to 1 cfs.

Provide subdrain or other design elements along all discharge channels to accommodate decreased channel flow capacity lost to icing storage early in the melt season.

- e. Mark limits of snow storage area. Provide permanent snow poles as snow storage setback guides at a distance of 10 feet (3 meters) from the toe of the end perimeter berm and 5 feet (1.5 meters) from the toe of all interior and lateral berms. Where multiple “V”-swales are constructed, provide supports for temporary setback poles along the interior crests of all “V”-swales.

2. Meltwater Detention and Discharge

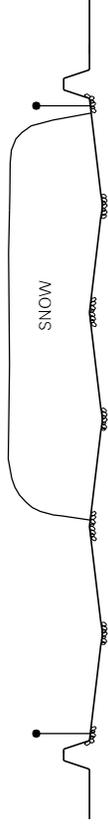
Provide dry ponds for early season meltwater detention and/or infiltration and for late season sedimentation. Specific design criteria for detention basins are included in Section 2.100. Supplementary criteria and criteria deserving emphasis are described below.

RIGHT



CROSS SECTION
NOT TO SCALE

PLACE SNOW CREST TO CREST IN INDIVIDUAL V-SWALE



CROSS SECTION
NOT TO SCALE

WRONG

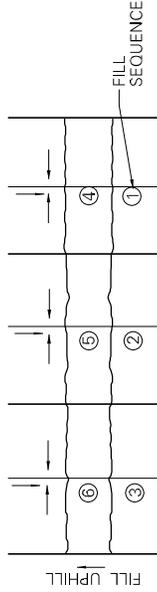


CROSS SECTION
NOT TO SCALE



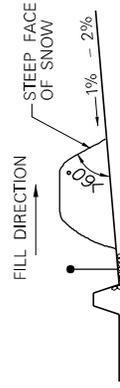
CROSS SECTION
NOT TO SCALE

SNOW CAN SPAN MORE THAN ONE V-SWALE; EACH V-SWALE SHOULD BE FILLED CREST TO CREST

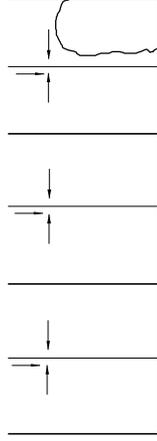


PLAN VIEW
NOT TO SCALE

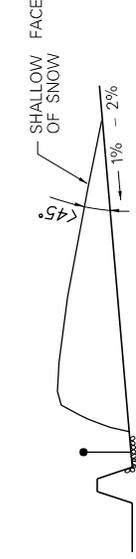
FILL Laterally across all V-crests before filling longitudinally down the slope of the pad



LONGITUDINAL SECTION
NOT TO SCALE



PLAN VIEW
NOT TO SCALE



LONGITUDINAL SECTION
NOT TO SCALE

THE ADVANCING FACE OF THE SNOW MASS SHOULD BE STEEP TO KEEP THE FOOTPRINT OF THE SNOW AS SMALL AS POSSIBLE

SNOW SITE FILL PROCEDURE
FIGURE 2-27

- a. Detention Pond Design. Detention pond design is primarily based on hydrologic characteristics of the meltwater from snow sites and secondarily sedimentary removal rates. Design for minimum storage volume at the beginning of the winter. Minimum storage volume in the pond above the allotted sediment and ice/snow storage shall include all runoff from the March 23, 1974, snowmelt hyetograph for a 40-hour duration (Figure 2-13).

Storage volume goals for the pond above the allotted sediment and ice/snow storage shall provide for dilution of meltwater so that treatment goals for chloride are met.

Meltwater properties for design purposes are:

- 1-hour concentration of 8,000-ppm in 1 cfs of meltwater
- 4-day average concentration of 6,000-ppm chloride in 1 cfs of meltwater
- 30-day average concentration of 1,000-ppm in 0.5 cfs of meltwater

Treatment goals for chloride (based on EPA recommendations), as measured at the end of any allowable stream mixing zones, include the following: (1) a 4-day average concentration of <230 parts per million (ppm) exceeded less than once in 3 years, and (2) a 1-hour average concentration of <860 ppm exceeded less than once in 3 years.

The treatment goal for chloride as measured at the point of site discharge into wetlands is a 30-day average concentration of <3,200 ppm to maintain wetland functionality and minimum impact zones.

The intent is to ensure that meltwater quality and discharge is maintained to support an acceptable long-term threshold functionality of the entire receiving wetland while allowing some local species change and adjustment in a small fraction of the wetland. These values may change; check with MOA PM&E for current chloride threshold values.

The pond treatment goal for sediment, as measured at the point of pond discharge, is 95 percent removal of all particle sizes $\geq 100\mu$ (0.1mm) in diameter.

- b. Outlets. Provide floating oil-absorptive booms guyed around all detention pond outlets. Provide cleanout access aprons at all inlets to detention ponds. Provide heavy maintenance vehicles access to all pond control structures. Provide for dispersion of all meltwater discharge into wetlands and for flow energy dissipation at discharge points into lakes and streams. Design wetland dispersion structures to limit the size of the wetland impact zone while assuring flows low enough to prevent erosion and extended, artificial ponding.

3. Waste Sediment Areas

Provide a separate storage area with proper drainage and access for any waste sediment storage proposed for the site. Access to the storage area should not require traverse of any part of the snow storage area or its immediate access routes. Drainage from any sediment storage areas may be directed to the snow site detention pond but should not be directed across any portion of the snow storage pad.

2.150 E. General Design Criteria

General site design criteria, including lighting, noise control, parking, signage, landscaping, fencing and traffic access, are specified in AMC 21.50.270 and in Chapters 3 and 5 of this Design Criteria Manual. Supplementary criteria are described below.

1. Traffic Access

- a. Prohibit uncontrolled vehicular access to the site. A lockable gate should be provided.
- b. Construct access driveway with a minimum width of 24 feet and a maximum width of 34 feet.
- c. If site access is from a paved road, pave the approach at least 450 feet into the site. The maximum grade is 8 percent. Approach centerline radii shall be 40 feet and match the off-site access road.

2. Lighting/Illumination

- a. Install permanent lighting at all disposal sites anticipated to be operated while dark. Safety is the primary reason for lighting; lighting for disposal operations is a secondary concern.
- b. Strategically locate lighting at vehicular access points, retention basins, or other necessary areas. Provide a minimum of 0.3 foot-candles at these locations. Give particular attention to adjoining property users to avoid stray lighting annoyances. Additional information on lighting is provided in Chapter 5 of this Design Criteria Manual.

3. Landscaping

The urban design commission must approve the landscaping plan for snow disposal sites; Chapter 3 of this Design Criteria Manual provides guidelines. Supplementary criteria are described below.

- a. Ensure that landscaping on the outside of the berms and buffer areas of the site provides year-round visual enhancement where possible. Plant woody vegetation away from equipment circulating and maneuvering areas.
- b. Provide a vegetative ground cover for the non-armored areas of the snow disposal pads, which is necessary for the proper functioning of the pad. Select salt-tolerant plants and perform maintenance as necessary on an annual basis.
- c. Install an inexpensive irrigation system to be used at least during plant establishment periods.

2.150 F Operational Considerations

Operations include managing litter, placing snow in winter, and maintaining vegetation in summer. While not part of design criteria, operational considerations are essential to the

objectives of snow disposal site performance. In the case of private sites, these considerations are incorporated into the dust and litter control plan required under AMC 21.50.270.

1. Snow placement (see Figure 2-27).

- a. Place snow across the full width of each “V”-swale. Do not place snow along the length of swales. If multiple interior swales are used in a site design, fill must be placed across either the full width of all the swales or across the complete width of one or more of the swales. Swales must not be filled across some fraction of their width or on one side along their length. Non-conformance will increase turbidity in meltwater.

Supports to allow use of temporary setback staking along interior swale crests can help operators prevent partial filling of adjacent swales when operations call for filling just one interior swale.

Sequence placement of hauled snow starting at the downhill side of the site and filling uphill (always across the full width of each swale cross section) to minimize erosion of the dirt released from the snow pack during the latter stages of melt.

Maintain the snow fill in as compact and thick a mass as possible. This will reduce the footprint of the residual dirt when it is finally released from the snowmass to the pad, and therefore substantially reduce the total mass of sediment mobilized by the final meltwater flows.

- b. Maintain a snow fill setback from all berms. Maintain a 10-foot setback from the end of a “V”-swale and a 5-foot setback from all side berms. Snow fill should overlap the armor placed along berms but should not extend past setback markers.
2. Maintain vegetation of all non-armored pad surfaces. With proper initial application of an appropriate seed mix, very little attention should be required to promote seasonal growth of vegetation across the surface of the snow storage pad. Little or no mowing should be required. However, trafficking and regrading of the site should be absolutely minimized, particularly in the late melt season. Confine access to the pad or to control structures to trafficking along armored features.
 3. Maintain all materials storage, including waste sediment, separate from the snow storage pad. No temporary storage of any sort should be allowed on the pad surface. No trafficking should be allowed during the melt season and access should be restricted throughout the year.

Planning for Snow Management

Disposal Site Selection

Disposal Site Characteristics

Disposal Site Preparation and Maintenance

Alaska

Develop plowing and removal/redistribution plans; determine snow capacity; map surface water drainage systems and proximity to sensitive water bodies; identify structures (berms, settling basins or ponds, that are in place to control or handle snowmelt runoff;

Estimate how much snow disposal capacity is needed for the season --> number of sites to be selected and prepared; identify sites that could potentially be used (community or municipal open space) determining soils, slopes, flow patterns, receiving waters; prioritize the identified site with the least environmental impact, consider acquisition of sites to be dedicated to snow storage - preferable to have permanent sites solely for snow disposal. Permanent sites can be engineered to minimize environmental impacts and may be less costly than a number of temporary sites.

Locate on or adjacent to pervious surfaces, upland, away from water resources (filter soil, leave sand and debris for removal in spring); flat slope, outside of the floodplain and well above the groundwater table; choose sites with well-drained soil to allow filtration, adsorption and microbial activity; Avoid dumping of snow into any ice covered or open waterbody, if near water, use a vegetated buffer, avoid areas near groundwater for drinking water; avoid sanitary landfills and gravel pits; avoid top of storm drain catch basins or storm water drainage swales or ditches - the combo of sand and debris can block these systems, causing flooding; avoid parks/playgrounds used for direct contact recreation after the snow season - high incidence of metals.

Maintenance measures to reduce water quality impacts of meltwater on surface and groundwaters and reduce the amount of meltwater leaving the site: silt fence, earthen berm or equivalent barrier, placed securely on the downgradient side of the snow disposal site, these types of structures can be used to direct meltwater and surface runoff to settling ponds or detention basins and minimize possible seepage of contaminants into groundwater, if earthen berms or channels are used to contain or direct the flow of meltwater they should be stabilized to prevent soil erosion during high flows; Use a vegetative buffer strip to filter pollutants out of the meltwater, these should be maintained during the growth season, between the disposal site and adjacent waterbodies or storm drains that discharge surface water. Debris/litter should be cleared from the site and properly disposed prior to and at the end of the snow season. Restore the soil, if needed; regrade if channelization from snowmelt or flowing water has occurred; reseed with appropriate vegetation. Monitor the quality of snowmelt and the receiving water, especially if it is likely to infiltrate the groundwater.

Alberta, CA	Find a permanent site large enough to accommodate the annual snow accumulation.	Avoid landfills, agricultural land, determine the locaiton, depth and nature of groundwater acquifers, locate below ground or above ground utilities; not in recreation areas due to high levels of metals and salts; waterbody setback of 200 meters (over 200 m with a gradient of 15% or more).	Consider noise impacts - 350 meters from existing or planned residential housing; sufficient storage capacity or adequate drainage from the site to prevent flooding of adjacent lands and where drainage systems are not obstructed; sites should maximize sun exposure during the midday;	Containment structures, settling ponds, grading, release of meltwater, site base, security
Anchorage	Soil investigation, surveying and mapping, groundwater investigation	200 feet from a Class A or B or within 100 feet of a Class C well; greater setbacks of sites with a slope towards a waterbody; avoid areas where aquifers could experience contamination; avoid closed lake or wetland systems; avoid areas where infiltration is near shallow, non-potable ground water systems;	Traffic access; lighting and illumination; landscaping; operational (snow placement, maintain vegetation on non-armored pad surfaces, maintain all materials storage, separate from snow storage pad); maximize infiltration, minimize sediment and other pollutants in meltwater and provide for pollutant dilution	Pad design - engineered work surface, pad orientation, pad vegetation, channel and berm armoring, meltwater detention and discharge, detention pond design, outlets, waste sediment areas,
Connecticut	Follow procedures; when extrardinary winter conditions present, the commissioner may relax provisions - with notification.	Upland areas only - away from freshwater or tidal wetlands, away from the top of storm drain catch basins, away from storm drainage swales, away from stream or river banks, away from drinking water supplies	Upland sotrage and dipsosal - athletic fields, parks and other flat, open-field sites; saltwater bodies, before freshwater bodies; no storage in or near wetlands or similar; avoid shoreline or steam bank damage or erosion	snow must not be visibly contaminated except from salt and sand from road clearing

Massachusetts	Use maps from MassGIS to show publicly owned open spaces, approximate locations of sensitive environmental resources.	Avoid dumping snow into any waterbody. Do not dump snow within a Zone II or Interim Wellhead Protection Area or within 75 feet of a well. Avoid dumping snow into sanitary landfills and gravel pits. Avoid snow on top of storm drain catch basins, stormwater drainage swales or ditches.	Things to consider: noise (tailgates, jake brakes, heavy equipment and backup alarms), sufficient lighting (lighting towers and heavy equipment lights), location (next to stream or pond, sufficient space for different types of truck and turning radius), accessibility (roads leading to site - arterials/collectors, haul routes - day and night) and environmental regulations (run-off, drainage, testing for heavy metals, oil, conductivity, temperature and pH, barriers for run-off on the down gradient edge of the snow dump site).	Clean up your site from trash, litter, etc. and check vegetation for damage
Quebec City, CA	Have 14 dump sites; 7.2M cubic yards with a capacity of 12.7M cubic yards. 49% of city is contracted, 51% is handled by the city, snow removal budget \$59M,	Primary considerations: distance from operations, location (industrial zone, access to highways), capacity (volume of snow, number of truckloads/hour), noise in residential neighborhoods, surface water and groundwater protection. For emergency sites - used a paved surface, make sure the surface water from the site will flow to a sewage system for treatment.	Parcel should be rectangular, with site drainage to allow for a peripheral ditch and meltwater directed to a decantation basin with an oil and grease separator. The size of the decantation basin should be based on the volume of water generated on the site by a heavy rainfall combined with snow melt in one hour, may need waterproof basin depending on soils and groundwater, elongated basins are more efficient.	To prevent avalanches, make sure ya distance of at least 45 degrees from the ground to the top. To stabilize the snow bank, use an abutment made of snow from trucks. Clean the site and remove all debris, remove sediment from ditches and basins and repair all fences.

Wisconsin	Avoid landfills, wetlands, floodplains, storm sewers, surface waters, steep slope, playgrounds, ballparks and parking lots;	Land where contaminants and debris can be gradually released, contained or collected; protect groundwater, 1,000 feet from water supply, downhill of wells, avoid lakes, streams and wetlands, fine-textured soils, avoid areas with fractured bedrock or near surface	remove debris from snowplows after thaw or before flooding; fencing will prevent litter from blowing off-site or into waterways
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