

1.0 DEVELOPMENT PERMIT AREA 1 – GENERAL (DPA-1)

1.1 DPA-1 OBJECTIVES & APPLICATION

The objectives of this Development Permit Area are based the following 5 fundamental elements:

- (A) **SITE CHOICE & EFFICIENT LAND USE:** The first objective is to appropriately plan and manage how land is developed. Appropriate site choices are those that ensure environmentally and archaeologically sensitive and hazard lands, as well as scenic and community character are protected. As per OCP policy, development preference is given to lands within the Growth Centres. Physically designing North Cowichan’s public and private spaces – first from the overall regional scale and down to the site-specific scale – must occur through a coordinated approach to ensure that every form of land use and development approved is located in the appropriate place, and that appropriate buffering (fencing and vegetation), noise, dust and light controls between different and incompatible uses are provided. Using land efficiently helps achieve a number of goals, including improving the life-cycle cost of municipal services and infrastructure; controlling greenhouse gas emissions, energy and water consumption; and supporting the retention of North Cowichan’s rural and scenic resources.
- (B) **MOBILITY:** Mobility is crucial in achieving interconnectivity across the municipality and within neighbourhoods, and in supporting and promoting successful site planning and integrated development. The aim is to ensure that residents, employees and visitors have comprehensive access to a multi-modal transportation system that provides them with a variety of options to get around comfortably and safely.
- (C) **SITE DESIGN & LANDSCAPING:** North Cowichan has an outstanding scenic character and is located in the Coastal Douglas-fir ecosystem. Supporting and respecting North Cowichan’s existing landforms, biodiversity and vegetation in the development review, during the construction process and through landscaping will help retain the characteristics that define and enhance residential quality of life and the visitor experience.
- (D) **INFRASTRUCTURE & SERVICING IMPACTS:** Good design, construction and management practices can help ensure that community goals are achieved with respect to managing energy and water use, controlling greenhouse gas (GHG) emissions, improving the life-cycle of municipal infrastructure and reducing the production of solid waste.
- (E) **BUILDING FORM & CHARACTER:** New developments shall contribute to North Cowichan’s evolving design aesthetic by respecting its past and considering its natural landforms and visual characteristics in design, and ensure that best management practices are incorporated in ongoing site and building maintenance. The four previous objectives inform this one for building form and character.

The guidelines contained within DPA-1 will be applied to all multi-family (3 units or greater), commercial and industrial developments within the Municipality of North Cowichan. Development Permits will only be issued in this Development Permit Area (DPA-1) subject to consideration of the following specific design practices. These guidelines should be carefully considered from conceptual design through to detailed design and refinement of a development proposal.

1.2 DPA-1 EXEMPTIONS

See Table 1 (Page 6)

1.3 DPA-1 SITE CHOICE & EFFICIENT LAND USE

1.3.1 CREATING COMPLETE COMMUNITIES

Proposed development should integrate with the various needs of the community. This can mean providing a range of uses and densities; providing ready access to recreation, public facilities, institutions and employment; and contributing to the establishment of a sustainable economy.

SAFETY AND ACCESSIBILITY STANDARDS:

- (A) New developments should incorporate principles related to “*Crime Prevention Through Environmental Design*” (CPTED) and the “safety lens.”
- (B) Well-defined public and private spaces, adequately lit exterior spaces and clear sightlines should be considered to create healthy, safe environments.
 - i. Parking lots should be designed so that pedestrian access is clearly separated from driveways and parked vehicles. At the main entrance, the public street and parking areas should be linked by a walkway.
- (C) Building designs should enhance public safety and comfort by providing protection from the elements through the use of awnings, canopies and overhangs.
- (D) Building entrances should be well defined through architectural means such as overhangs, porticos and awnings. Primary entrances should be clearly expressed and easily accessed from the public street and/or water edge. Secondary accesses may be from pedestrian paths, interior courtyards or decks.
- (E) Maximizing physical accessibility for all members of the community should be incorporated in the planning and design process.
- (F) Accessibility standards should be met for accesses, public circulation areas, corridors, doors, flooring, windowsills, outlets and switches, and plumbing in common rooms.
- (G) Ensure that all signage, exit doors, baseboards and door trims, handles and edge strips in all common rooms are colour-contrasting for those who are visually impaired.
- (H) Provide an appropriate number of dwelling units designed to be internally fully accessible.
- (I) Glare and light spill onto surrounding properties is not supported; address through site and building design to control all visible lighting. Benefits include reduced energy use, lighting product or areas without glare ensure better visibility of the product on display or the general area being lighted for safety purposes. Focus lighting straight down, control lighting power density, and do not permit light to trespass. Light sources should ensure appropriate colour rendering of the product or area being lighted.

AMENITY SPACE:

- (J) Maximize the amount of shared multi-purpose amenity space that includes covered outdoor multi-purpose areas for recreation, the hanging of laundry, storage for bicycles and garden equipment, and scooter and stroller parking.
- (K) Provide open space for residential and mixed-use commercial buildings at grade that allows for active play areas, community gardens and/or passive activities such as enjoying sunlight, views and landscaping.
- (L) Ensure that site orientation (e.g., for access to sunlight) and the provision and location of play and recreation areas reflect the needs of the anticipated residential population, and optimize residential orientation to ensure dwelling units have access to sunlight.
- (M) For amenity space, consider the addition of supports such as storage and ready access to water (non-potable for landscaping), seating, shade and sunlight.
- (N) Include adequate safe places for outdoor play, visible from dwelling units and away from vehicle areas.
- (O) Consider landscaped roof top gathering places in addition to at grade amenity space.

- (P) Design internal fencing and vegetation to distinguish between private and semi-private spaces but not at the expense of obscuring view lines from dwelling units or commercial spaces. Fencing is not supported along the public corridors.

PRIVATE AMENITY SPACE:

- (Q) Provide individual private outdoor amenity space for each dwelling unit in multi-family residential and mixed-use commercial sites: at grade for townhouse units and ground-level apartment units; and as balconies for second-storey and higher dwelling units.
- (R) Provide privacy landscape screening along property lines abutting neighbouring properties using a mix of decorative fencing and natural vegetation.
- (S) Give preference to local wood and stone when choosing fencing material. Chain link fencing and solid fencing and retaining walls along public roads over 1.2 m high are not supported. Chain link fencing abutting private properties should also be well landscaped.
- (T) Prevent headlight disturbances to neighbouring residence and businesses by using a combination of hard and soft landscaping materials to screen drive aisles and parking stalls.

1.3.2 IMPROVE THE PUBLIC REALM

Developing land in ways that respect and enhance the public realm encourages community interaction, which in turn creates lively “people places” that attract residents and visitors and supports local commerce.

- (A) Protect public views of ridges, sky lines, and water views and to reduce the massing along the street creating a pedestrian scale by considering appropriate horizontal and vertical articulation;
- (B) Develop terraced buildings to respect natural contours (also see Objective 3 Site Design and Landscaping); and in commercial cores create interest by incorporating horizontal building articulation at ground level to establish view protection as well as pedestrian scale
- (C) Enhance community uniqueness by ensuring design that reflects native landscape and local heritage values.
 - i. Integrate landscape features and elements with the adjacent streetscape, use established vegetation where feasible, and ensure a mature and varied appearance after project completion.
 - ii. Along highway, highway service and arterial roads outside the Urban Containment Boundary, extend landscaping from the property line that abuts such roads to a depth of at least 8 m where possible.
 - iii. While recognizing the need for commercial and industrial visibility along highway, highway service and arterial roads outside the Urban Containment Boundary, use significant quantities of native trees and shrubs in landscaping along public rights of ways.
- (D) Treat as frontages all façades of multi-family, commercial and industrial buildings that front onto transportation corridors or can be publicly viewed from the ocean. Do this with entrances, significant glazing and windows to create active connection to the public realm. In the case of industrial buildings ensure design elements are interesting forms and articulation that fits the local environment. Orient buildings to ensure that the building frontage and pedestrian access face the public street.
 - i. Vary a building’s horizontal articulation at the pedestrian level. Avoid creating blank or undifferentiated façades at the ground level.
 - ii. Vary a building’s vertical articulation along public streetscapes to provide light to public streets and to diminish wind tunnel effects. For example, buildings could be stepped back above the second storey and provide areas of protection along the street.
- (E) When the project is adjacent to public open space and recreation areas, consider design elements that will enhance public use.

- i. Link ground-level open spaces to adjacent streets, sidewalks and pathways, and create linkages to off-site open space, parks and trails, and other residential and commercial land uses in the local community.
 - ii. Avoid landscaping elements that inhibit pedestrian or barrier-free access along sidewalks or approaching buildings, and ensure that landscaping is designed to maintain sight lines for personal safety.
 - iii. To enhance the pedestrian experience, integrate public art and unique design features (including appropriate paving patterns) into public spaces, compatible with adjacent development and street patterns. Ensure access to sun and provide protection from inclement weather.
 - iv. Include public pedestrian amenities, such as courtyards and seating areas, within and adjacent to multi-family developments and commercial buildings.
- (F) Consider how topography creates unique wind conditions, and locate buildings and vegetation appropriately in response.
- (G) In pedestrian-scale streetscapes provide sufficient space for pedestrian activity; and avoid allowing garages, cars, and storage and service areas to dominate.
 - i. Use basements to create underground parking and, where that is not possible, locate parking away from public areas and streetscapes.
 - ii. Incorporate seating areas and shelters (from wind, sunlight, shade, noise) into landscape and building features.
 - iii. Use benches, planters, garbage bins, bicycle racks and bicycle shelters that are compatible with the community and neighbourhood character.
 - iv. To enhance street vitality, consider human proximity to active areas, views and visibility with the aim of enabling people in buildings to maintain interaction with the public street.
 - v. Maintain adequate setbacks in public areas to accommodate pedestrians, street activities and street furniture, services and utilities.
 - vi. Avoid building retaining walls. Where necessary to have terraces, ensure that they do not exceed a maximum overall height of 1.2 m and that landscaping and seating are provided.
- (H) Do not place building mechanical systems where they can be viewed from public places or streets. Instead, locate mechanical systems on the roof or at the rear of buildings and screen them from view from adjacent properties or public spaces using vegetation and fencing.
- (I) Service doors (e.g., an overhead door to a loading dock) should not be located on a building façade that faces a street. Service doors should be designed to fit in with the overall design of the building.
- (J) To minimize visual and noise impacts on adjacent properties and the public streetscape, site garage entrances and garbage containers (including those for general refuse, recycling, organics and grease) should be located away from building fronts or any side visible from the public street, and should be fully screened using vegetation and fencing. Consider allowing the use of berms on industrial sites for this purpose.
- (K) Review proposed uses with respect to potential negative impacts on each other and those of adjacent properties and provide detail as to how they will be mitigated
- (L) Utility wires in new developments must be located underground.
- (M) Utility wires in site specific redevelopment projects are strongly encouraged to be located underground.
- (N) Utility wires in large-scale redevelopment areas or sites are strongly encouraged and may be required to be located underground.

1.4 DPA-1 MOBILITY

1.4.1 ACTIVE TRANSPORTATION

Non-motorized mobility options should be given primary attention to reduce greenhouse gas emissions, as well as to promote safe and healthy communities. Development should increase the opportunities for residents and visitors to use non-vehicular modes of transportation. Generally this

means putting emphasis on pedestrian and cyclist safety and comfort so that the experience of using active transportation options is safe and enjoyable and therefore used frequently.

- (A) Enhance connections to a defined and continuous system of pathways, trails and sidewalks with clear sightlines. Support easy barrier-free walking and cycling access.
 - i. Ensure that pedestrian routes are visible from the dwelling units and commercial spaces.
 - ii. Consider provision of the installation of maps, landmarks, and appropriate pedestrian-scale lighting.
 - iii. incorporate the following along the public street: courtyards, sitting areas, eating areas, view outlooks, public art and local points of interest on the property or on the adjacent public street.
 - iv. Provide facilities for pedestrian, commuter, recreational and child cyclists, and scooter user on site.
 - v. Design of signage, buildings and other elements on and adjacent to travel corridors will be reviewed on the basis of the primary purpose of the street (e.g., pedestrian areas should have human scale components).
 - vi. Provide appropriate gradients on all active transportation routes, meaning 2–5%, which is the most comfortable for walking, cycling, wheelchair and scooter uses.
- (B) Ensure that site circulation and grade changes facilitate movement by people with disabilities, and that colour contrast in materials in outdoor areas adequately marks transitions (e.g., to stairs between two levels) for those who are visually impaired.
- (C) Connect on-site and off-site pedestrian areas, adding links if they are missing.
 - i. Minimize the width of curb cuts and ensure that sidewalks at curb cuts have a cross-slope no greater than 2%.
- (D) Incorporate sufficient drainage, boulevards, medians, street trees and similar street-side amenities into pedestrian and cyclist right-of-ways.
 - i. Provide street-side amenities such as weather-protected bicycle racks and seating areas with wind, sun and rain protection, and position them in highly visible and accessible locations.
 - ii. Provide employee and resident support facilities for cyclists and pedestrians, such as showers, changing facilities and safe, conveniently accessible weather-protected storage areas.
- (E) Ensure easy access to secure bicycle parking locations (Class I and II bicycle parking).
- (F) Provide Class I and II bicycle parking.

1.4.2 ALTERNATIVE TRAVEL OPTIONS

Alternatives to private automobiles should be incorporated into development and redevelopment plans. Ensuring ready access to transit or rail facilities and ensuring connectivity to destinations help reduce greenhouse gas (GHG) emissions and the life-cycle cost of developing and maintaining roads, as does introducing supports for carpooling and car share programs and facilities.

- (A) Include alternative transportation and public transit options in the site design.
- (B) Ensure that transit stops, when provided, are convenient, comfortable and sheltered, and that access to and from transit stops is along safe, attractive and convenient sidewalks, paths or walkways.
- (C) Ensure that access to and from train stations is along safe, attractive, and convenient, sidewalks, paths or walkways.
- (D) Include preferential parking for high occupancy vehicles (HOV; vans, carpooling, car share).
- (E) Include on-site charging stations for electrical cars.
- (F) Include short and long-term bicycle parking and related facilities in commercial, industrial and multi-unit residential developments.

1.4.3 MANAGING VEHICULAR IMPACTS

The Municipality recognizes that vehicle transportation is critical for carrying goods and services to and from North Cowichan. It also recognizes that development and redevelopment plans must incorporate measures to protect the environment from vehicular transportation impacts such as: increased impermeability and water run-off contaminated with pollution particulates; greater carbon emissions; and greater noise and visual impacts to pedestrian and neighbourhood experiences.

- (A) Reduce negative visual and land use impacts of parking and parking garages by locating them underground or at the rear of a site. Reduce the amount and size of at-grade parking areas and locate them away from public areas, views and streetscapes by giving preference to locating parking underground where feasible and at the rear of the property where underground parking is not feasible.
 - i. Design garage door entrances to be away from the public street and underground. The visibility of garage door entrances from the public street is discouraged, and should be designed to not negatively impact abutting properties.
 - ii. Provide trees, shrubs and vegetated swales and/or rain gardens within the site's parking areas and along abutting public streets and places. Cluster parking in groups of eight and intersperse significant (i.e. the inclusion of trees and shrubs) landscaping between clusters.
 - iii. Provide pollutant, hydrocarbon filtration and separation in parking areas.
 - iv. Provide methods for infiltration of rainwater in driveways, parking lots and roads (e.g., using infiltration trenches, interlocking pavers, rain gardens) and, when possible, limit paving to tracks or well-travelled areas.
 - v. Minimize the use of impervious paving and dark-coloured absorptive materials for sidewalks, driveways, roads and parking lots.
 - vi. Maximize the use of concrete unit pavers or other permeable surfaces for parking lots, walkways and driveways.
- (B) Improve standards for the delivery and pick-up of goods and services in new developments (e.g., loading, access manoeuvres, garbage/recycling/organics pick-up and storage). Provide appropriate locations for loading bays and service areas, consider safe pedestrian access, and avoid negative visual impacts to public and private places, streets and views.
- (C) Provide noise buffers between major transportation corridors and residential and mixed uses.
 - i. Provide a minimum buffer of 15 m between the structure and the property line along a major corridor (for example, TCH, Highway 18, Rail Right of Way) for residential development, and provide noise controls for each dwelling unit.
 - ii. Treat all building façades that face a public street or major transportation corridor as frontage in the design.
 - iii. Consider inclusion of strategies on site that reduce the negative impact of traffic noise (e.g., introduce white noise through water fountains, buffers).
- (D) Ensure that colour contrast in materials in outdoor parking and pedestrian areas adequately marks transitions for those who are visually impaired

1.5 DPA-1 SITE DESIGN & LANDSCAPING

1.5.1 BIODIVERSITY

A major threat to biodiversity is environmental destruction through inappropriate development or development at the wrong time of year (e.g., during bird nesting). Mature tree retention can add to property values, support drainage systems, and clean the air. Site disturbances should be minimized. Additional DPA's may be applicable. The following design practices should be carefully considered from conceptual design through to detailed design and refinement of a development proposal:

- (A) Identify, retain, enhance and preserve biodiversity corridors. Reduce development impacts on wildlife corridors (e.g., through the strategic control of roads, use of fences and installation of other built disruptions).
- (B) Use sensitive site-clearing techniques to preserve existing landscape values, maintain natural grades and reduce cut and fill. Use chipping or removal to clear vegetation. See Fire Protection Bylaw.
- (C) Maintain topsoil on site for reuse to retain ecological functioning.
- (D) Protect mature trees (unless otherwise identified as a hazard by a qualified arborist) and other vegetation, and retain original vegetation as much as possible, particularly where larger blocks or groves of trees and vegetation can be maintained, rather than long narrow strips that may be prone to wind-throw and root damage as a result of new exposure. Where this is not possible, natural vegetation and drainage restoration efforts should be undertaken.
- (E) Prevent soil and water contamination. Incorporate erosion control measures and silt protection of water bodies including stormwater systems.
- (F) Address site access sensitively. Used paved areas for unloading and stacking construction material and for staging, and minimize the number of staging areas used.
- (G) Provide, protect and manage useable green space as parks, biodiversity corridors or water areas.

1.5.2 ON-SITE LANDSCAPING

Using appropriate native or other landscaping that considers the site context offers benefits such as reduced need for pesticides and water, and promotes rainwater infiltration.

- (A) Fully landscape all areas not covered by buildings, structures, driveways and parking.
- (B) Provide appropriate buffering between all residential, commercial, industrial uses and agricultural lands.
- (C) Consider the incorporation of roof gardens and rooftop common areas for mixed-use, industrial and apartment buildings, while protecting the privacy of adjacent neighbours.
- (D) Use landscaping to soften service and storage areas and to improve pedestrian comfort (wind protection, balance with pedestrian safety and visibility).
- (E) Retain existing native mature trees and shrubs in setback areas where feasible. Protect or provide large native tree species along major transportation corridors for multi-family, commercial and industrial uses.
- (F) Incorporate vegetated buffer areas throughout and around paved areas to filter rainwater, moderate urban heat island effects and air emissions. Use plant materials that reduce run-off, filter run-off and support rainwater infiltration.
- (G) Plant deciduous trees on the south and west sides of a building to increase summer shading and plant coniferous trees on the north sides of a building to block winter wind.
- (H) Use local indigenous, hardy plant species in landscaping and remove invasive plants.
- (I) Retain or bring in a healthy, absorbent layer of topsoil deep enough to allow for well-rooted planting and reduce irrigation requirements.
- (J) Consider the installation of free-standing green (living) wall systems as an alternative to concrete fencing systems and retaining walls.
- (K) Use native or naturalized species of trees, shrubs and ground cover wherever possible, including those that are naturally disease and pest resistant.
- (L) Group plantings according to water and sun requirements and the site location and provide groupings of shade trees and shrubs on large expanses of lawn and other major open spaces.
- (M) Strongly encourage natural alternatives to pesticide and herbicide uses.
- (N) Consider alternative designs for golf courses and use of alternative natural/native species or treatments for other large expansive "lawn" areas.
- (O) Minimize the use of water-intensive lawn types and/or use lawn alternatives such as natural ground covers and native grasses.

1.5.3 LANDSCAPING IN THE PUBLIC REALM

Enhancing the quality of streetscapes and therefore of neighbourhoods can be done through the overall design of the development.

- (A) Link ground-level open spaces through landscaping to adjacent streets, sidewalks and pathways;
 - i) Outdoor gathering spaces, places between buildings, and pedestrian connections should all be designed in conjunction with the building plans to maximize usability and community aesthetics.
 - ii) Patios, decks and other outdoor spaces should be well connected physically and visually with other waterfront activities and oriented to maximize view opportunities.
 - iii) Open space should be considered within building envelopes or as terraces or rooftop patios.
 - iv) Physical comfort should be considered at the detailed design stages through site planning, use of windscreens and arbours, or planting for sun protection.
 - v) Landscaping should define edges of development areas while providing continuity between buildings within a development area.
 - vi) Planting areas should have adequate space to ensure viability.
 - vii) Trees should be used in development plans at the street edge and in any pedestrian circulation or gathering spaces.
- (B) Shared driveways are encouraged for adjoining developments to minimize pavement and street intersections.
- (C) Maximize the use of permeable pavers for private residential streets (strata roads), plazas/squares, courtyards, school yards, parking lots, driveways, walking and bicycle paths, and also on public roads where appropriate.
- (D) Use gravel, bark mulch and wood chips for occasionally used walking paths.
- (E) Work with natural grades wherever possible and do not negatively impact the grades or drainage of adjacent lands. Avoid the use of retaining walls adjacent to public spaces, streets and areas.
- (F) Situate buildings to maximize public views and view corridors.
- (G) Minimize obstruction of views from public pedestrian areas, public water areas, common living areas of other developments, and existing residential units by working with natural grades and architectural massing, including building terracing.
- (H) Add to the urban forest (treed ecosystems within urban areas) through creation or expansion of existing forested and wooded areas, parks and street trees.
- (I) Enhance the natural green network by increasing the quantity, density and diversity of trees.
- (J) Encourage street trees, using staggered double rows where possible.
- (K) Plant trees and other vegetation along streets, in parking areas and in other paved open spaces, particularly large parking lots, roads, sidewalks and driveways.
- (L) Encourage installation of community garden infrastructure (e.g., planting beds, water, seating areas) in multi-family residential developments.

1.5.4 NATURAL LANDFORMS AND VIEWS

Natural landforms, views and waterscapes contribute to defining North Cowichan's character. New developments should, where possible, respect and attempt to work within existing contours and natural grades.

- (A) Terrace slopes to avoid erosion and slope failures on steep or disturbed lands.
- (B) Developments on steeply sloping sites should be terraced to "sit lightly on the land," minimizing environmental impact. Building forms that step up and away from the water's edge are preferred to reduce the impact and add interest. Perched structures with exposed supports and foundations are discouraged.
- (C) Minimize the use of cut and fill. Respect the grades of adjacent properties and do not negatively impact them.

(D) Retaining walls higher than 1.2 meter along a public right of way are strongly discouraged.

1.5.5 SITE-APPROPRIATE SIGNAGE

Signage that has a positive influence on public space while respecting the needs of business to identify their presence is desired. Overused, cluttered, glaring, and oversized signage is discouraged. Signage should not be visible from residentially zoned properties.

- (A) Use unique, scale-appropriate signage and street furniture (e.g., benches, bollards, lighting, information kiosks, wayfinding aids, on-site mapping).
 - i. To ensure it is coherent and respectful of abutting properties and economic goals, coordinate site signage through a signage management plan that addresses the quantity, location and size of signs on lots.
 - ii. Locate signage only at main entrances of a business or multi-family building. One free-standing sign is permitted on a lot. Off-site third-party signage is not permitted. Low wayfinding signage, less than 1.0 meter above grade, may be supported internally on complex sites as navigational aids.
 - iii. Ensure that sign display meets basic needs without creating clutter and negative visual impacts. Building forms or architectural design that produce a billboard signage effect are not supported.
 - iv. Integrate signage into landscaping or with building design in a coherent manner. (See also Sign Bylaw.)
- (B) Internally illuminated box glow signs are not supported; box signs where the letters only are internally lit (i.e. white letters dark background) are acceptable;
- (C) Large neon signs and/or flashing signs, (greater than 1m²) are not supported.
- (D) In the commercial core areas specifically, signage should be pedestrian-oriented in scale, not driver-oriented. Low (less than 1.5 m) free standing signs that identify a building (not individual businesses) are encouraged; the free standing sign should be designed to be linked to the architecture and incorporated into the landscaping of the building.
 - i. Signs mounted flush with building façades on the first storey should be located close to or just above the business entrance;
 - ii. Hanging signs to a maximum size of 0.5 m², that do not extend above the first storey or roof parapet or eaveline of a one storey building, that are at right angle to the building façade and are to be hung no lower than 2.4 m (7.87 ft.) above the sidewalk are encouraged;
 - iii. Window signs, especially retail display windows and upper floor office windows (neon, paint, wood or metal signs permitted) up to a maximum of 1.0 m² and located towards the bottom or top of the window (to ensure visibility into and out of the business space) are permitted;
 - iv. Non-illuminated or powered sandwich-board signs to a maximum size of 0.5 m² in retail areas on private property where they do not pose an obstacle to pedestrians; sandwich-board signs are not permitted on public rights of way; and the signs must be designed specifically for the business using them.
 - v. In Crofton, signs are expected to use lettering and motifs that capture Crofton's village-by-the-sea character with preference given to professionally wood-carved and/or hand-painted hanging signs.
 - vi. In Chemainus, signs are expected to use lettering and motifs that capture Chemainus' artistic character with preference given to professionally wood-carved and/or hand-painted hanging signs.
 - vii. Colours are expected to be dark with letters and logos provided using other contrasting colours.
 - viii. Lighting is expected to be spot, non-glare that highlights the sign from above.
 - ix. Corporate logos must fit within the permitted sign face area.

1.6 DPA-1 INFRASTRUCTURE AND SERVICING IMPACTS

1.6.1 ENERGY CONSERVATION

- (A) With respect to energy, show how conservation is incorporated and how the project endeavours to use renewable energy sources. Building siting is an important component.
- (B) Select materials and colours in building and roof construction that minimize heat absorption.
- (C) Select materials that encourage thermal massing and seasonal thermal energy storage.
- (D) Use energy-efficient exterior lighting systems with timers and sensors to provide light only when required.
- (E) Where possible, use lighting systems that are powered by renewable energy sources, such as solar energy.
- (F) Control light glare such that light does not rise more than 90 degrees from the ground (nadir) and does not cross property boundaries. Consider installing high efficiency lighting and use shields to reduce glare to the outside.
- (G) Minimize the amount of lighting on signs. Installation of video, reader board, neon or LED signs is discouraged.
- (H) Applicants are encouraged, where feasible, to use on-site renewable energy generation systems to supply electrical and heating and cooling needs to buildings and other structures, and to operate water pumps, sewage pumps and/or charging stations for electric vehicles. Renewable and alternative energy sources include, but are not limited to: geothermal energy (heat loops and wells), wind (turbines), low-impact hydropower, passive solar heating (collectors, photovoltaic panels); co-generation; fuel cells; heat energy extracted from air (heat pumps), biomass, bio-gas and wastewater effluent.

1.6.2 WATER CONSERVATION

- (A) With respect to water, show how conservation is incorporated. Site landscaping is an important component (see Objective 3 – Site Design and Landscaping).
 - i. Manage stormwater flows and water quality by designing systems in accordance with the Ministry of Environment’s Stormwater Planning: A Guidebook for British Columbia.
 - ii. Install above-or below-ground rainwater collection systems such as naturalized ponds, bioswales, rain gardens and/or cisterns to capture, store and potentially re-use rainwater to irrigate non-edible plants and landscaping.
 - iii. Design, install and manage cost-effective and efficient irrigation systems that support water, soil and energy conservation practices (including system features such as temporary (2 year plant establishment), drip irrigation, mulching, watering schedules, moisture sensors and timers, and water-use monitoring for leakages).
 - iv. Where possible, use recycled water for irrigating non-edible plants and landscaping and for washing vehicles.
 - v. To ensure that irrigation systems are cost-effective and efficient, use certified irrigation designers and installers. The Irrigation Industry Association of British Columbia is a certifying body in the province.
 - vi. Use low or no water toilets, appliances and fixtures.
 - vii. Consider installing “purple pipes” (pipes carrying reclaimed water, coloured purple to distinguish them from pipes carrying potable water).
- (B) Manage stormwater flows and water quality.
 - i. Discuss plans with the District to determine the site and off site (downstream) needs for storm water management to establish design parameters for infiltration, retention, and detention.
 - ii. Minimize the length and amount of infrastructure (such as sewer and water lines, and roads) planned for a site.

1.6.3 SOLID WASTE

Reducing the amount of construction waste that ends up in landfills assists the Municipality and the Regional District in meeting their goals of reducing the amount of solid waste requiring disposal and in attaining the long-term goal of Zero Waste. It also reduces GHG emissions generated by transport of waste.

- (A) Consider renovation and adaptive reuse of existing buildings.
- (B) Use durable exterior and interior finishes to reduce the likelihood of material ending up in landfills.
- (C) Consider using salvaged materials (where permitted in BC Building Code), both for buildings and landscape (as per BC Landscape standards).
- (D) Consider specifying materials that are recycled, reused, and renewable or contain recycled content.
- (E) Select locally sourced materials. North Cowichan supports, through Council policy, the “Wood First” initiative of the provincial government.
- (F) Consider using products made from wood waste where appropriate (but watch for indoor air quality and possible off-gassing).
- (G) Consider designing structures to maximize the use of standard size materials in building design for the efficient use of materials (less waste)
- (H) In assessing and selecting finishes, review their comparative aesthetics, comfort and acoustical control.
- (I) Select appropriate material for all projects (e.g., through life-cycle assessments).
- (J) Consider building materials that have low “embodied energy,” are from rapidly renewable sources, and/or have been acquired with minimal transportation kilometres. Consider using:
 - i. locally manufactured materials;
 - ii. low embodied energy materials such as wood;
 - iii. durable materials for long service life and low maintenance;
 - iv. materials with recycled material content, locally harvested materials, and sustainably harvested and certified wood.
- (K) Maximize the use of safe and healthy materials.
 - i. Use roofing materials that support rainwater harvesting (cedar and asphalt can transfer chemicals).
 - ii. Use insulation that does not contain harmful chemicals such as hydrochlorofluorocarbons or extruded polystyrene.
 - iii. Use high-performance windows.
 - iv. Choose wood with natural preservatives over chemically treated wood where appropriate.
 - v. Avoid manufactured products with pollutants such as urea formaldehyde.
 - vi. Specify low volatile organic compound (VOC) building products.
 - vii. Avoid materials that trap dust and odours.
- (L) Minimize the generation of solid waste in construction.
 - i. Install with deconstruction in mind to allow for material reuse.
 - ii. Avoid demolition of old buildings to waste. Consider reuse/renovation as an option.
 - iii. Prepare a plan for materials staging to protect materials from damage and possible waste (e.g., schedule just-in-time delivery; fence and protect staging area from weather).
 - iv. Use preassembled, pre-cut components (e.g., trusses) to reduce site waste.
 - v. Minimize the selection of materials with excessive packaging.
- (M) Maximize the diversion of solid waste from landfill.
 - i. Use local facilities for reuse and recycling of products that are not at the end of their useful lives (consider providing a facility on site for multi or large developments).
 - ii. Incorporate full recycling options for the completed development (e.g., recycling, organics, composting), as well as garbage collection.

- iii. Use chipped vegetation as mulch on site, and use logged wood from the site in the design of the building or components.
 - iv. Design adequately for waste diversion techniques on site, and locate these conveniently for use but not to negatively impact public access, corridors or areas.
- (N) Make areas for recycling collection, composting and waste disposal sufficiently large and easily accessible and plan them so they have the capacity for expansion.

1.7 DPA-1 BUILDING FORM & CHARACTER

1.7.1 CULTURE, CONTEXT AND HERITAGE

In design, it is important to respect North Cowichan's past and present while working for a sustainable future. Representing the municipality's history in new developments helps to retain the community's uniqueness and sense of place.

- (A) Protect, restore and rehabilitate historic buildings and other site components to deepen residents' connection to their community.
- i. Maintain or preserve existing uses and buildings as much as possible (enough to preserve a memory of previous uses and forms on site).
 - ii. Retain heritage trees and vegetation and recognize them as a central feature or landmark of a community's history.
 - iii. Consider use of local craft traditions in building and landscape design.
 - iv. Indigenous or authentic east coast of Vancouver Island materials such as wood, stone or metal should be used appropriately.
 - v. Cues should be taken from effective local industrial, commercial and residential structures along the existing waterfronts. Local craftspeople or products should be considered in the design process, if appropriate.
 - vi. Where possible, reuse existing infrastructure (e.g., roads, bridges, streetlights).
 - vii. Consider adaptive reuse of historic buildings and landmarks that play a significant role in a neighbourhood's history.
 - viii. Restore or "daylight" streams to recreate original landscapes.
- (B) Build awareness of, and appreciation among residents and visitors for the Municipality of North Cowichan's unique heritage.
- i. Use historic design elements in new buildings (but avoid repetition) that support continuity of local history but also serve current and future needs.
 - ii. Use history and designated heritage to inform new architecture design.
 - iii. Incorporate local historic names into buildings and places, increasing memory and connection to past events and people.
 - iv. Incorporate art early in the design process to allow it to take on a more meaningful and functional role in the design.
 - v. Use local labour and local training programs that reflect local traditions.
- (C) Ensure that architecture style takes its cue from positive and high quality examples of local neighbourhood, community, landforms or working rural or historical character. Encourage recognition of local, identifiable neighbourhood character by supporting appropriate building scale and massing, landscaping, public art and architecture.
- i. Infill buildings should be sensitively integrated with the existing neighbourhood. Scale and mass should be consistent with either the existing area, or in keeping with the broader long-term intent of any Local Area or Revitalization plans.

1.7.2 BUILDING DESIGN CONSIDERATIONS

- (A) To promote active uses at the public street level locate residential entrances, porches, windows, habitable space along public street; locate utility equipment and building mechanical equipment in inactive service areas away from public realm.

- (B) Consider impact of buildings on surrounding spaces, abutting properties, public spaces, access and protection from sunlight, wind, rain and snow.
- (C) Building design should, as a first priority, respond to site context, neighbourhood scale, community integration, and urban design improvements and landforms. (See objective 1 for public realm design practices.)
 - i. On flat sites, a series of smaller, clustered structures is preferred to monolithic solutions. Sites that permit higher densities than adjacent properties should focus their density away from the lower density neighbour.
 - ii. On sloped sites terrace buildings to suit the land form rather than altering the land. The buildings should step up or down a slope or water's edge. Reduce massing by terracing. Perched structures with exposed supports and foundations are not supported.
 - iii. Buildings should be situated and oriented to maximize public views beyond and between buildings, especially to give views out to the water.
 - iv. Provide a base, middle and top to the building by grounding the base to earth-type materials such as stone. Keep exposed concrete to a minimum. The middle should be finished with materials such as wood and detailed coherently with windows and textures for interest. The top of the building should consist of roof massing and forms that reflect the local environment.
 - v. Vary building mass to minimize its scale. Avoid box-like design and monolithic forms.
 - vi. Ensure that there are at least two storeys of habitable (usable) space for multi-family, commercial and industrial building uses.
 - vii. Address the compatibility of scale between new buildings and existing adjacent buildings, especially in infill situations. For example, terrace building massing down to avoid significant height changes, and incorporate similar floor elevations with existing buildings or create the illusion of having done so.
 - viii. Orient buildings so that blank walls are not visible from the street and do not negatively impact adjacent properties. Commercial building façades that face vacant or underused properties should have interesting texture, materials, colour and/or form.
 - ix. Design buildings and landscape elements to minimize shading and intrusion on privacy of adjacent buildings.
 - x. Design detailing to be in keeping with the character of the building and landscape. Provide significant detailing and articulation, especially at eye level, with cladding material, architectural features and structures, frequent windows and doors, landscaping, seating areas and patios, or public space features.
 - xi. Encourage the use of high quality finishing materials and details to achieve a harmonious integration with the neighbourhood. Avoid use of exposed concrete; carry finishes around façades along public streets and public spaces.
 - xii. Use muted natural colour finishes, including on trims and mullions.
- (D) Use building mass and detailing to emphasize the entrance to buildings.
 - i) Ensure that pedestrian building entries are fully visible from the public streetscape, clearly articulated and accessible.
 - ii) Incorporate weather protection at key locations on the site (entries, seating areas) using canopies, structural awnings, stand-alone shelters with benches.
 - iii) Ensure that residential, street-side townhouse dwelling units provide individual building front entrances and doors facing the public streetscape.
 - iv) Ensure that apartment buildings have at least one common building entrance or foyer facing the street, at street level (but not a vehicle or garage door); and that street-side apartment units provide individual amenity space facing public streetscapes (e.g., patios, balconies). Consider incorporating at grade entrances for individual dwelling units to add rhythm, interest and activity along public streets.

- v) Commercial buildings should contain significant windows and entrances along all public streets and public spaces to add to street vitality and the comfort and safety of pedestrians and cyclists.

(E) Chemainus Mural Walls:

The following guidelines apply specifically to Chemainus in relation to the Mural Walls:

- i) Walls on the front or flanking façade of a building should not be selected for murals.
- ii) Walls appropriate for murals are those that are situated such that a mural will not be obstructed by parking or, if it might be, can be positioned at least 1.5 m above ground level; situated to permit unobstructed viewing by pedestrians; and constructed of a suitable medium for painting.
- iii) Completed mural walls should be:
 1. illuminated with appropriate down or spot lighting designed into the building and that does not reflect or shine into nearby property; and
 2. framed or accented with shrubbery and/or landscaped borders.
 3. No product advertising in murals is permitted unless the advertisement is considered to be historic. Historic advertisements are to be maintained and preserved.

1.7.3 BEST MANAGEMENT PRACTICES – BUILDING DESIGN

The use of 'Best Management Practices' in the design of new buildings, or the redevelopment of older buildings, will assist with informing North Cowichan's unique design aesthetic and addressing conservation goals.

- (A) Respect the character of the existing neighbourhood in building design and placement.
- (B) Consider converting existing buildings to higher density uses.
- (C) Design layouts (e.g., lot lines and road layouts) to optimize solar gain for each building.
- (D) Build curved rather than long straight streets to reduce wind impacts.
- (E) Orient buildings towards the south to maximize winter solar gain and summer cooling. Incorporate natural day-lighting techniques to reduce need for electrical energy; and consider the addition of such features as controllable awnings, overhangs, clerestory windows, skylights and atriums.
- (F) Minimize obstructions that could block a building's access to sunlight.
- (G) Orient main building façades towards prevailing breezes to maximize opportunities for passive ventilation and passive cooling, taking into account possible conflict with orientation for solar gain.
- (H) Locate windows on the south-facing façade to maximize winter solar gain and natural light. Use deep window overhangs and/or fixed adjustable external shades on south-facing façades that can block out high-angle summer sun and allow entry of low-angle winter sun.
- (I) Minimize windows on north façade to limit heat loss and maximize solar gain, reducing the need for heating and air conditioning.
- (J) Limit and carefully locate windows on east and west façades where the morning and evening sun's rays are low in the sky and difficult to control.
- (K) Locate operable windows to maximize natural ventilation, ideally on opposing or adjacent walls.
- (L) Coordinate roof overhangs, window placement and landscaping to provide cooling and shade during the summer and solar access in winter.
- (M) Design roof surfaces to accommodate solar energy collection devices. The installation of skylights is encouraged.
- (N) Choose roof shape and roof orientation to maximize passive solar gain and opportunities for solar energy collection. Vary building height, roof lines and massing to reduce the shading of neighbouring buildings and to optimize sun exposure for heat gain and daylight.
- (O) Use compact building shapes that reduce the building envelope surface area and improve the building's energy performance.
- (P) Use building shapes that minimize adverse wind effects and optimize conditions for passive ventilation and cooling

(Q) Consider using thermal mass in building construction, where possible.

1.7.4 BEST MANAGEMENT PRACTICES – OPERATIONS AND MANAGEMENT

As part of the design process consider on-going operation and maintenance 'Best Management Practices' to maximize efficiencies related to energy and water conservation.

(A) Consider adopting a formal building systems commissioning plan that includes:

- i. Building system plan;
- ii. Audit program; and
- iii. Operations and Maintenance Plan