


MASTER SITE DEVELOPMENT PLAN
SITE 7 - WATERMARK, ROCKY VIEW COUNTY

May 2012

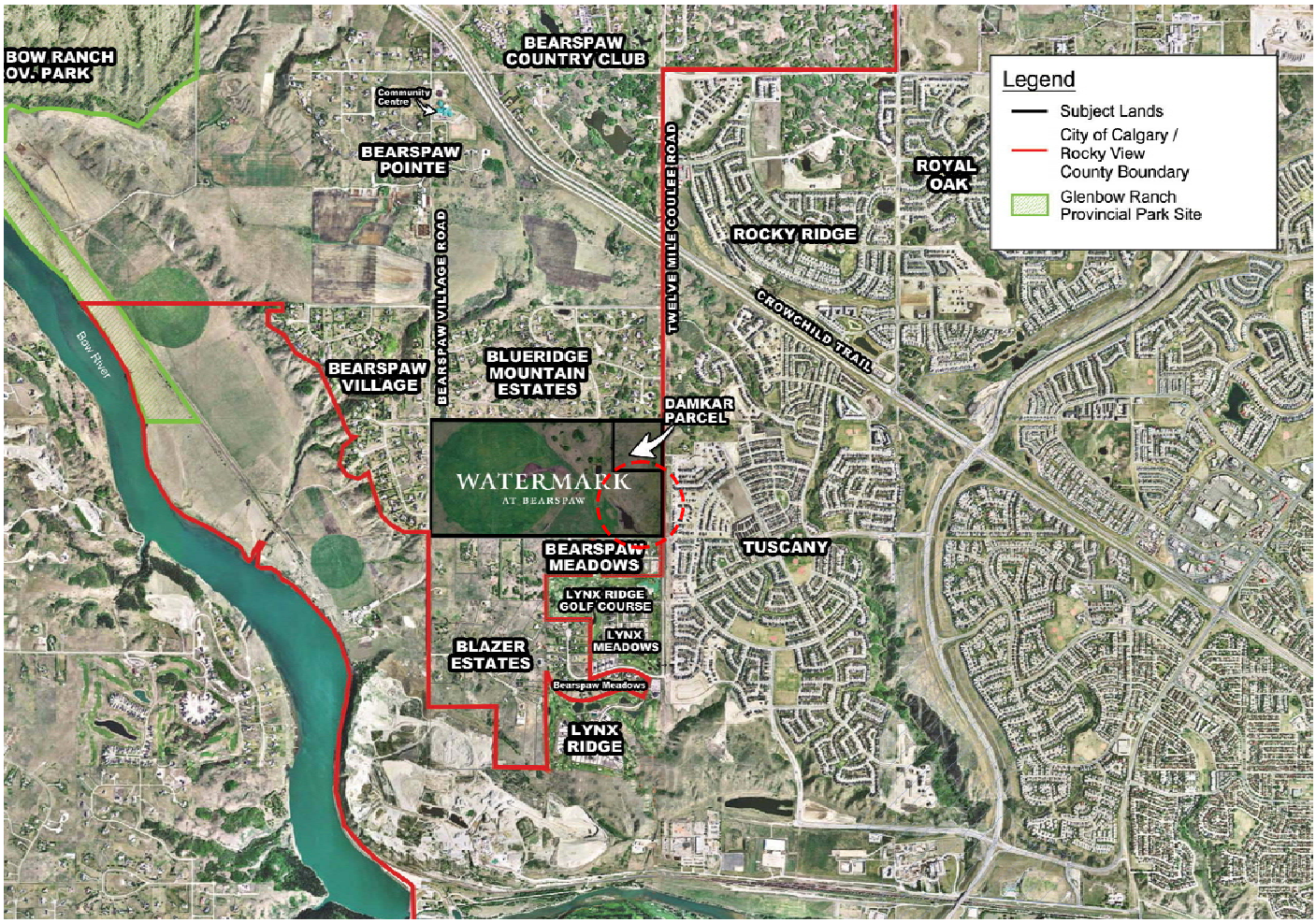
Contents

Introduction

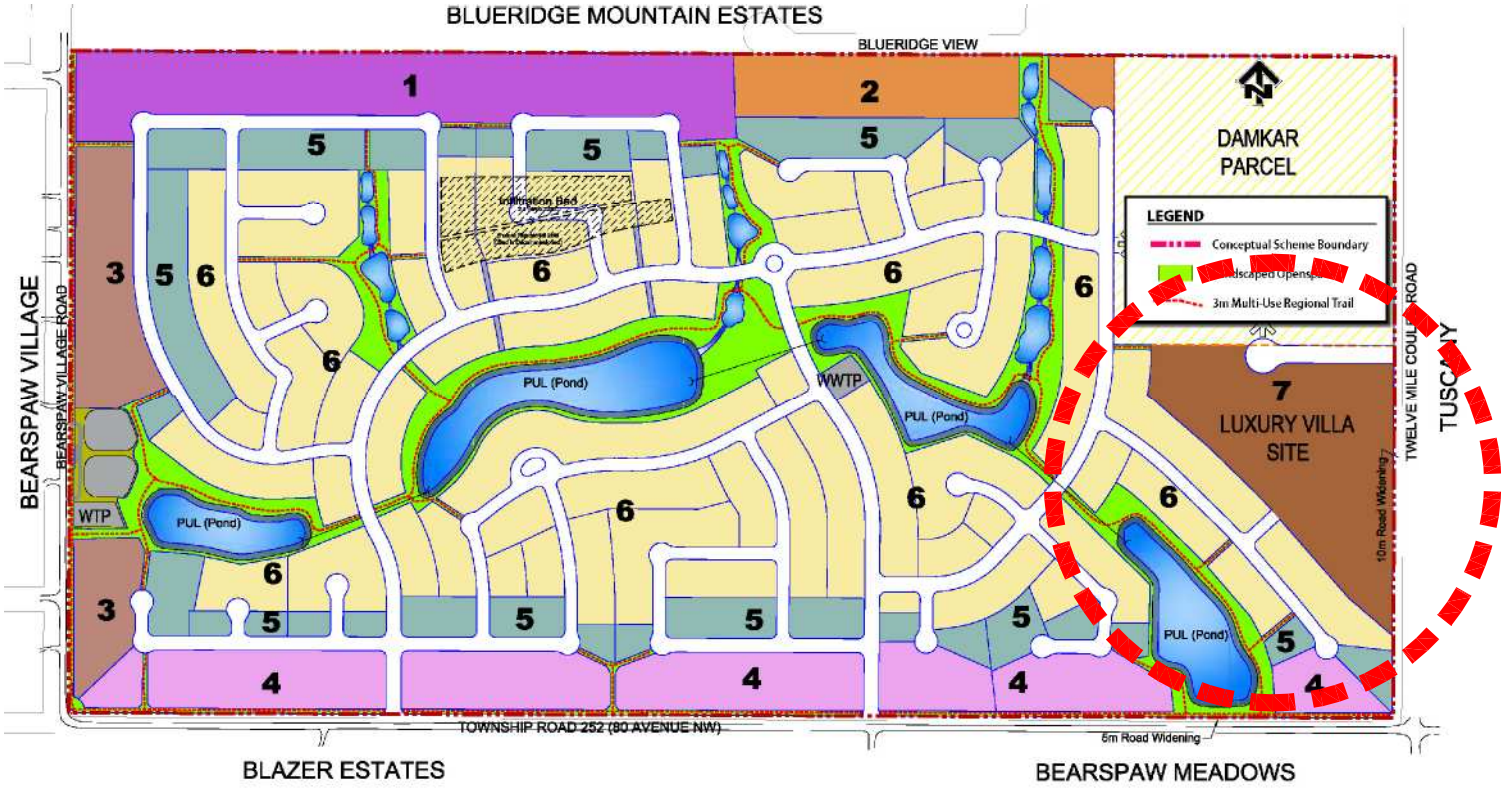
Site 7 at Watermark comprises part of the overall development called Watermark at Bearspaw which received land use approval from Rocky View County in February of 2010.
As a component of that approval, this portion of the masterplan (Site 7), consists of 5.98 hectares (14.78 acres) and was zoned to allow 101 units, in structures containing no more than two units per building.
All the conditions of the overall approval are contained in the Watermark Conceptual Scheme Bylaw C-6798-2009 adopted July 14, 2009 and the Rocky View County Direct Control Bylaw C-6854-2009 adopted February 9, 2010, which together provide all the conditions of the Watermark approval.

In summary, the MSDP for Site 7 is consistent in all respects with the approved Conceptual Scheme and DC Bylaw C-6854-2009.

Aerial Context



Site Location Plan



MASTER SITE DEVELOPMENT PLAN
SITE 7 - WATERMARK, ROCKY VIEW COUNTY
April 2012

Layout Plan

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Development Principles

Overall Development Principles

One of the guiding principles in planning this community was to maximize view opportunities. As a result of its sloped site, all the homes will have dramatic year round views across the valley to a backdrop of sharply silhouetted peaks. This approach led to a solution with a series of benches stepping from top to bottom of the site. There is one main spine road that leads to the branch streets which will define smaller enclaves of homes, reducing the feeling of long rows of buildings. On the lowest level immediately adjacent to the single family homes, there are 3 significant landscaped spaces interspersed between buildings which will further break down the massing to have no more than 4 buildings between each landscape buffer.

The main road features a sidewalk throughout its length, which terminates in a pedestrian connection to the trails and public amenities of the Watermark single family site, while also providing a visual outlet with a view to the mountains. Building setbacks from the main road are enlarged to accommodate the sidewalk and a row of street trees, creating an open feeling to the project. Only two driveways access directly off the spine road, further giving it a feeling that it is much more a part of the public realm, with the branch streets having a more intimate and therefore private feel. On these branch streets, due to their shorter length, single loaded orientation and relationship to a limited number of homes, the pedestrian and vehicular traffic will share the space. With no through access, traffic speeds will be minimal in these locations. As a result of all these factors, the decision not to provide sidewalks on these spine roads will not compromise safety. In addition, this design approach will allow abundant landscaping to commence directly behind the curbs, creating a more pleasing streetscape for these quiet roadways.

The community Amenity building is lined up on axis such that upon entry it is the first building you see. This structure is subtly different from the homes, with variations in roof forms and materials treatments to signify its position as a community building.

One of the objectives identified in the Conceptual Scheme is “To create a unique and prestigious residential development that respects adjacent country residential development, takes advantage of the proximity to the Bow River and views of the Rocky Mountains, provides an appropriate transition from high density urban development within the City of Calgary, and generally enhances the unique site opportunities.”

In reference specifically to the details of Site 7, the Conceptual Scheme states “The concept of luxury villas within the Watermark project was initially suggested and then strongly supported by virtually all participants at the neighbourhood visioning workshop.” This MSDP is consistent with the objectives and development concepts delineated in the Conceptual Scheme.

Emergency Access

At the ends of each residential street, the plan provides a fire truck maneuvering area to facilitate turning movements. On the site plan the required radii for emergency vehicles are shown as a template in these locations. For certain branch streets (specifically 4 conditions generally located toward the top of the site), their length does not require a maneuvering area, and therefore it is not indicated on the plan.

There is a second means of egress indicated on the northwest corner of the site. This route would be for emergency access or egress only, with appropriate bollards or other approved barrier to prevent daily use. This egress point connects directly to the road network for the Watermark single family homes. All the roads and emergency vehicle maneuvering areas on both Site 7 and the single family areas are designed to accommodate the vehicle loading imposed by emergency and service vehicles.

Development Principles

Transportation Study

A Transportation Impact Assessment was prepared by Bunt & Associates (Alberta) Ltd (originally dated February 2008) and submitted as a part of the overall Watermark approvals. An update of this report was completed in May of 2011 to reflect the proposed development on this site. The densities for Site 7 are completely in conformance with the original parameters for that study. The recommendations in the report delineated specific upgrades to be completed as development proceeds - the developer will continue to work with Rocky View County and the City of Calgary as necessary to complete these works.

Parking

In all cases, each of the homes on Site 7 has a two car garage, with additional length to accommodate such things as boat, motorcycle, or snowmobile storage or work area. Driveways are sized such that parking will not be encouraged with the intent of improving the streetscape. Thirty six visitor parking spaces are provided, spread evenly throughout the project. This ratio is in excess of 0.25 spaces per home (a typical ratio for multi-family projects such as this in many jurisdictions) and is therefore more than adequate.

Snow Management

In considering snow management for Site 7, certain areas have been set aside and designed for snow storage. Specifically these occur along each of the individual roads, and also at the ends, in the area beyond the required emergency vehicle maneuvering locations. There are also areas along each of the roads where parallel parking spots are provided that could be utilized for short term storage in the event of a heavy storm. The main spine road will have sufficient space all along its length for storage of snow as well. Planting in each of these specific areas considers the fact that snow will be piled there at certain times of the year.

The average snowfall in Calgary between October and April is 112 cm, and the maximum daily temperature in October and April is 12.1 and 11.3 degrees respectively, effectively negating the 25 cm of snow in those months, leaving an average of 87 cm of snowfall. A typical year statistically will have approximately 6 snow “events” where the majority of the snow falls. This statistic suggests that the average snowfall per event is on the order of 15 cm. Most often, snow events are followed by Chinook conditions, resulting in significant snowmelt - in fact, Calgary annually has up to 45 days of Chinook conditions. A snow event of 15 cm on Site 7 would result in approximately 110 cubic meters of snow per 100 meters of road, and if we apply a “compaction factor” of 50% as a result of plowing the snow, we will have approximately 0.55 m3 of snow per lineal meter of road, most of which will be accommodated on the immediate road edges, and the rest deposited in the designated snow storage areas shown on the site plan. This doesn't take into account the Chinook effect which has a significant impact on the speed of snow melt in the period following each snow event.

In summary, snow management has been carefully considered and adequately addressed.

Development Principles

The following Land Use Regulations are provided in accordance with the Rocky View Direct Control Bylaw C-6854-2009 requirements and should be read in conjunction with the Bylaw.

3.1.0 Purpose and Intent

The purpose and intent is to provide for a multi-family residential development to be comprehensively planned via the Master Site Development Plan process.

3.2.0 Uses, Permitted

3.2.1 Dwelling, *Semi-detached*
3.2.2 Dwelling, *Single-detached*
3.2.3 Accessory Buildings
3.2.4 Community Signs
3.2.5 Home Based Business, *Type 1*
3.2.6 Private Swimming Pools
3.2.7 Utilities
3.2.8 Show Homes
3.2.9 Signs
3.2.10 Temporary Sales Centre

3.3.0 Total Number of Dwelling Units: 101 in semi-detached and detached configuration.

3.4.0 Maximum And Minimum Requirements

3.4.1 Minimum Lot Sizes Sq.m. / Sq.ft.

3.4.1.1 272.00 sq.m (2927.87 sq.ft.)

3.4.1.2 The Subdivision Authority may grant a variance to each site's minimum lot size by a maximum of 5%.

3.4.2 Minimum Lot Dimensions for Standard, Rectangular-Shaped Lots Meters/Feet

3.4.2.1 Min depth 27.00m (88.58 ft.) Min width 9.50m (31.16 ft.)

3.4.1.2 The Subdivision Authority may grant a variance to each site's minimum dimension for standard, rectangular-shaped lots by a maximum of 5%.

3.4.3 Maximum Number of Dwelling Units per titled area: 1

3.4.4 Minimum Habitable Floor Area: 176.50 sq.m. (1900.00 sq.ft.)

Development Principles

3.4.5 Maximum Number of Accessory Buildings - none

3.4.6 Maximum Building Height:
Principal Building: 9.00m. (29.53 ft.)

3.5.0 Minimum Building Envelope Setback Requirements (bare land condo lots, excluding decks and overhangs)

3.5.1 Front Yard: 1.75m (5.74 ft)

3.5.2 Side Yard: Zero setback where a fire separation is built on a bare land condominium unit property line which separates units within a semi-detached building, 1.83m. (6.00 ft.) in all other cases.

3.5.3 Rear Yard: 4.36m (14.30 ft)

3.5.4 The Development Authority may grant a variance to each site's minimum front yard, side yard and rear yards by a maximum of 5%.

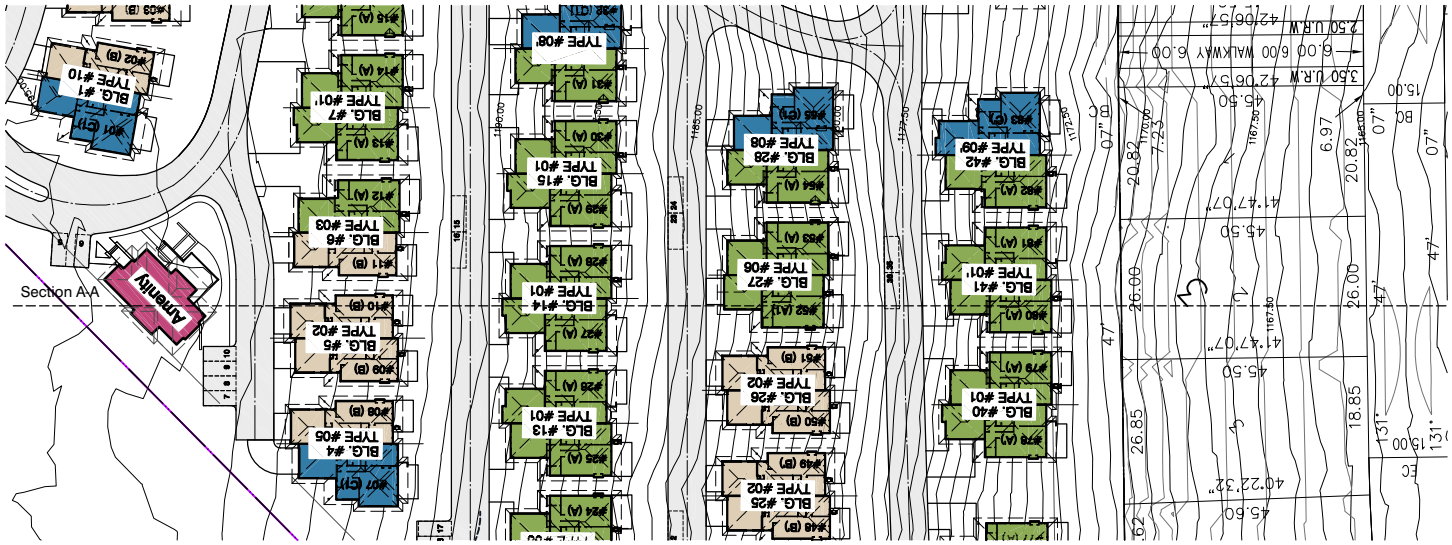
3.6.0 Parking Requirements
Provided - 2 per unit in garage
36 additional spaces to be provided at the time of bare land condominium subdivision

3.7.0 The proposed Amenity Building is defined as an Amenity Space for Pedestrian Use which requires an amendment to Bylaw C- 6854 - 2009 in order to permit its construction.

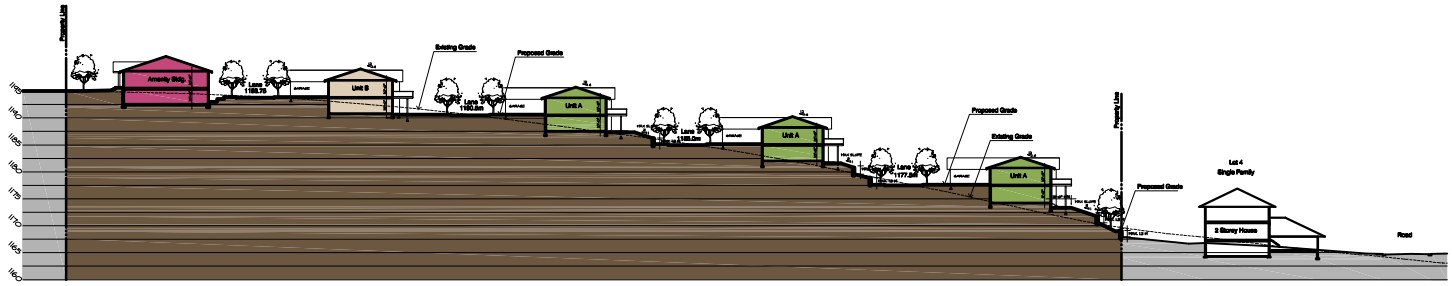
Site Section

Topography and Drainage

Site 7 of the Watermark project slopes generally from northeast to southwest, with approximately 20 meters of total grade change. Road grading has been designed such that it meets all requirements of Rocky View County. Storm water management has been coordinated with the overall approach on the single family portion of the site such that the systems work in a unified, seamless manner, utilizing the already constructed network of ponds for storm water detention. For more detail on this system, refer to the Servicing Summary section of this document.



Site Plan (partial)



Site Section A-A

Landscape Principles

Site 7 has no significant existing landscape other than a mix of both native and introduced species of grasses, reflecting its former use as pasture. The new landscape in this community, like the architecture, is influenced by both the mountains and the prairie.

The main entry features a grove of trees that begins to tell this story, with a palette of conifers and woodland plants plus a few ornamental trees as highlights. This space provides a transition between the public realm and the private world within - the entry monument itself is a series of stepped stone walls that frame the road and tie into the perimeter fencing which is a consistent theme for the overall Watermark site.

The main access road winds down through the site in a dished area that recalls a stream ambling down a gentle slope, with pockets of dense landscaping on the sides that reference what a stream bank might feel like. There are specific areas of the site between buildings and on the main access to the Watermark trail system that are planted in the same style as a native woodland trail, a backdrop of conifers with new apple green foliage in the spring and yellow flashes in the fall as the Aspens prepare to shed their leaves.

Other parts of the site are planted in a variety of tall prairie grasses and wildflowers. The only areas of manicured lawn occur immediately adjacent to the homes. This subtle referential landscape design utilizing mostly native plant materials will resonate as contextual even if people are not directly aware of the design intent.

The percentage of this site that is finished in soft landscape constitutes approximately 40% of the total site area.

A pedestrian connection centrally located at the lower end of the site will link this project with the single family components of Watermark, and thus, to the Regional Trail System in the greater community.

This main pedestrian axis comes off the spine road, connecting the sidewalk to a series of stairs, creating an informal trail that is entirely compatible with the character of the area. It is anticipated that the trail system will be a highly used amenity throughout the Watermark community.

Lighting

The approved Conceptual Scheme speaks of lighting designed to “maintain a more subdued night time environment.” It states further that “Only low level, ground oriented light standards will be permitted throughout the site in order to minimize the impact of lighting on adjacent country residential properties.” With these principles in mind, the design approach to the site lighting for this project is to adhere to 'dark sky' principles, with a series of low level lights that will direct light to the ground rather than into the sky. In addition to roadside fixtures, recessed lighting will be installed on the garage fronts (activated by photocell) to supplement the fixtures as necessary, casting sufficient light for safety purposes while still retaining the casual country residential character that is a part of the Bearspaw community. Along the main spine road, the lighting treatment will be supplemented somewhat in order to reflect both its position in the road hierarchy, and also the fact that it represents the main pedestrian path.

Landscape Principles

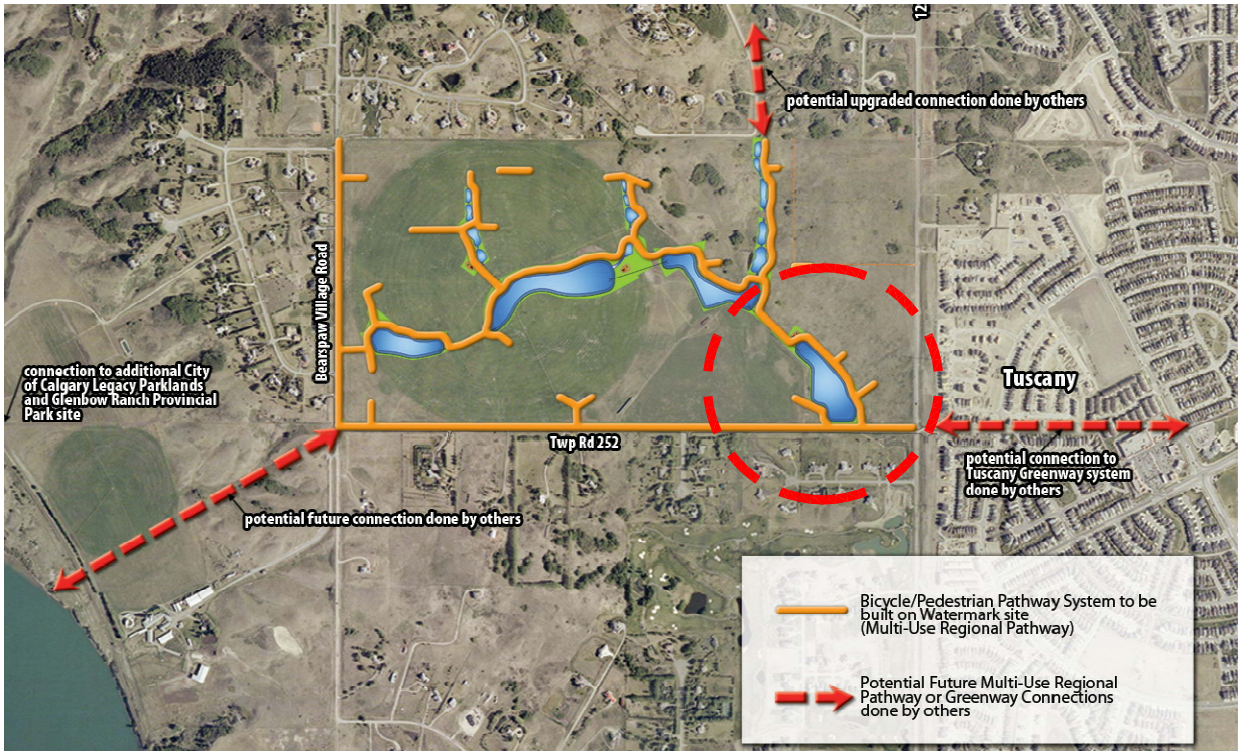
Environmental / Sustainability

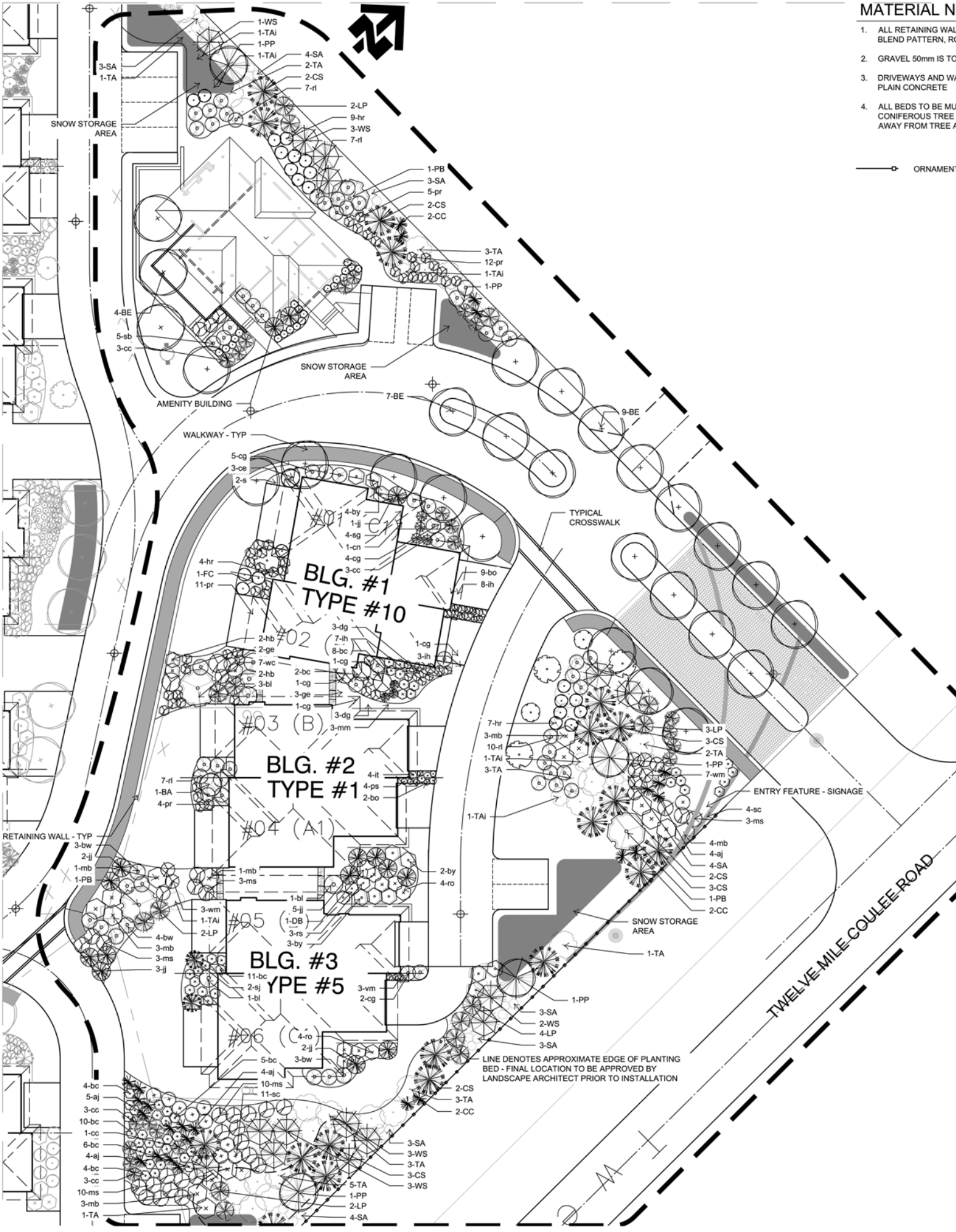
One of the Development Principles identified in the Conceptual Scheme refers to a community that incorporates "innovative development standards to create a progressive community that promotes water conservation and energy efficiency."

Perhaps one of the most relevant environmental initiatives lies in the actual site planning, where the concentration of homes on a finite site allows an inherently more efficient use of the land.

All homes will meet or exceed the latest Building Code requirements for energy usage, and passive design incorporating deep overhangs to provide sun shading will reduce cooling loads significantly.

The use of extensive native planting is a further enhancement to the overall environment. To enhance water conservation in a visible way, rain barrels will be incorporated into each home, connected to the roof drains to both limit surges of storm water into the system, but also to serve as supplementary irrigation in drier times of the year.




MATERIAL N
1. ALL RETAINING WAL
BLEND PATTERN, RO
2. GRAVEL 50mm IS TO
3. DRIVEWAYS AND WA
PLAIN CONCRETE
4. ALL BEDS TO BE MU
CONIFEROUS TREE
AWAY FROM TREE A
ORNAMENT
1-WS
1-TAi
1-PP
1-TAi
4-SA
2-TA
2-CS
7-rl
3-SA
1-TA
SNOW STORAGE AREA
2-LP
9-hr
3-WS
7-rl
1-PB
3-SA
5-pr
2-CS
2-CC
3-TA
12-pr
1-TAi
1-PP
4-BE
5-sb
3-cc
SNOW STORAGE AREA
AMENITY BUILDING
7-BE
9-BE
WALKWAY - TYP
5-cg
3-ce
2-s
#01 (C1)
4-by
1-jj
4-sg
1-cn
4-cg
3-cc
BLG. #1
TYPE #10
4-hr
1-FC
11-pr
9-bo
8-ih
TYPICAL CROSSWALK
#02 (7-ih 8-bc)
3-dg
2-hb
2-ge
7-wc
2-hb
3-bl
1-cg
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3-ge
1-cg
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TYPE #1
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2-bo
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RETAINING WALL - TYP
3-bw
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1-PB
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1-bl
5-jj
#05 (1-DB)
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3-by
3-wm
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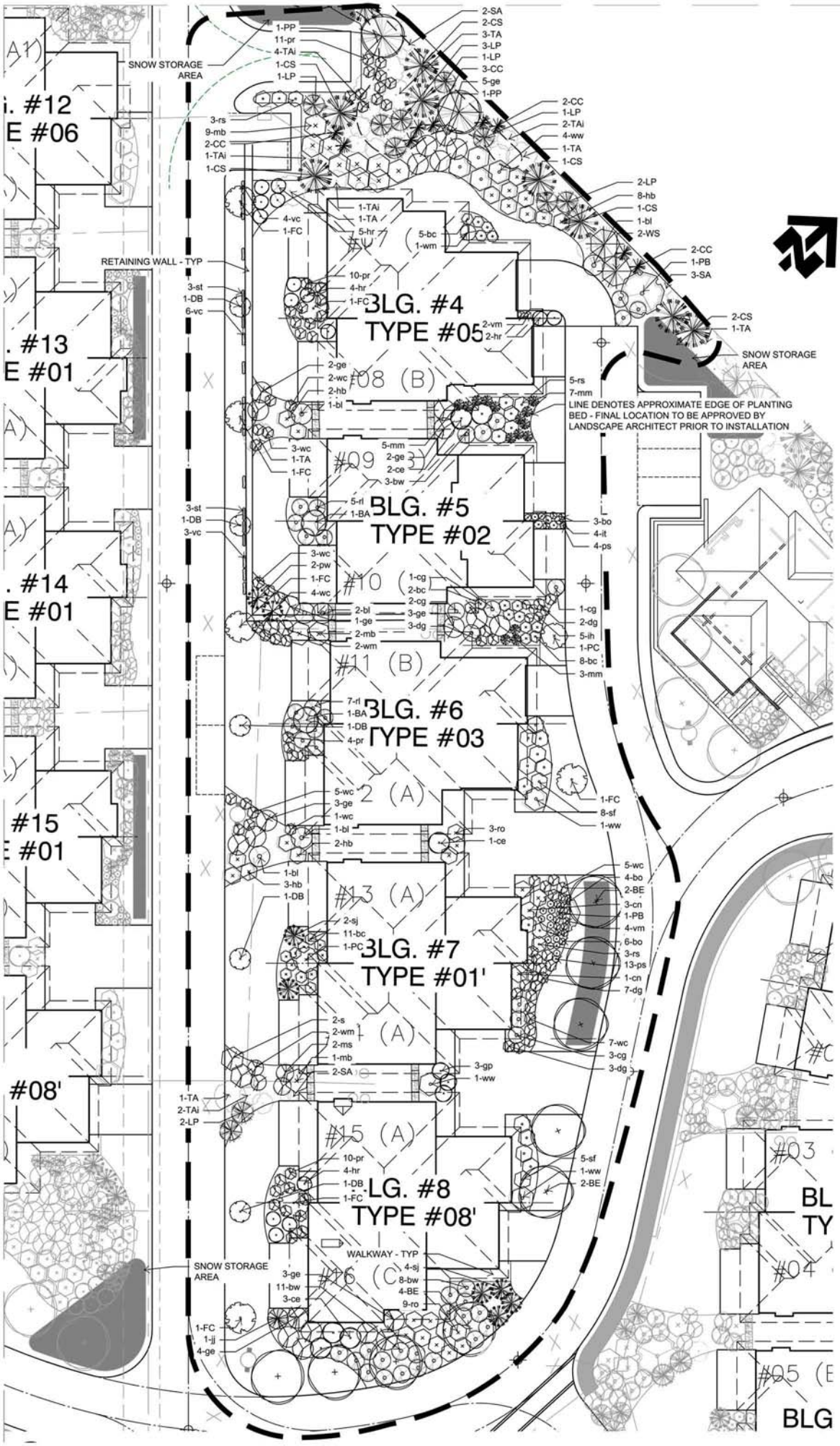
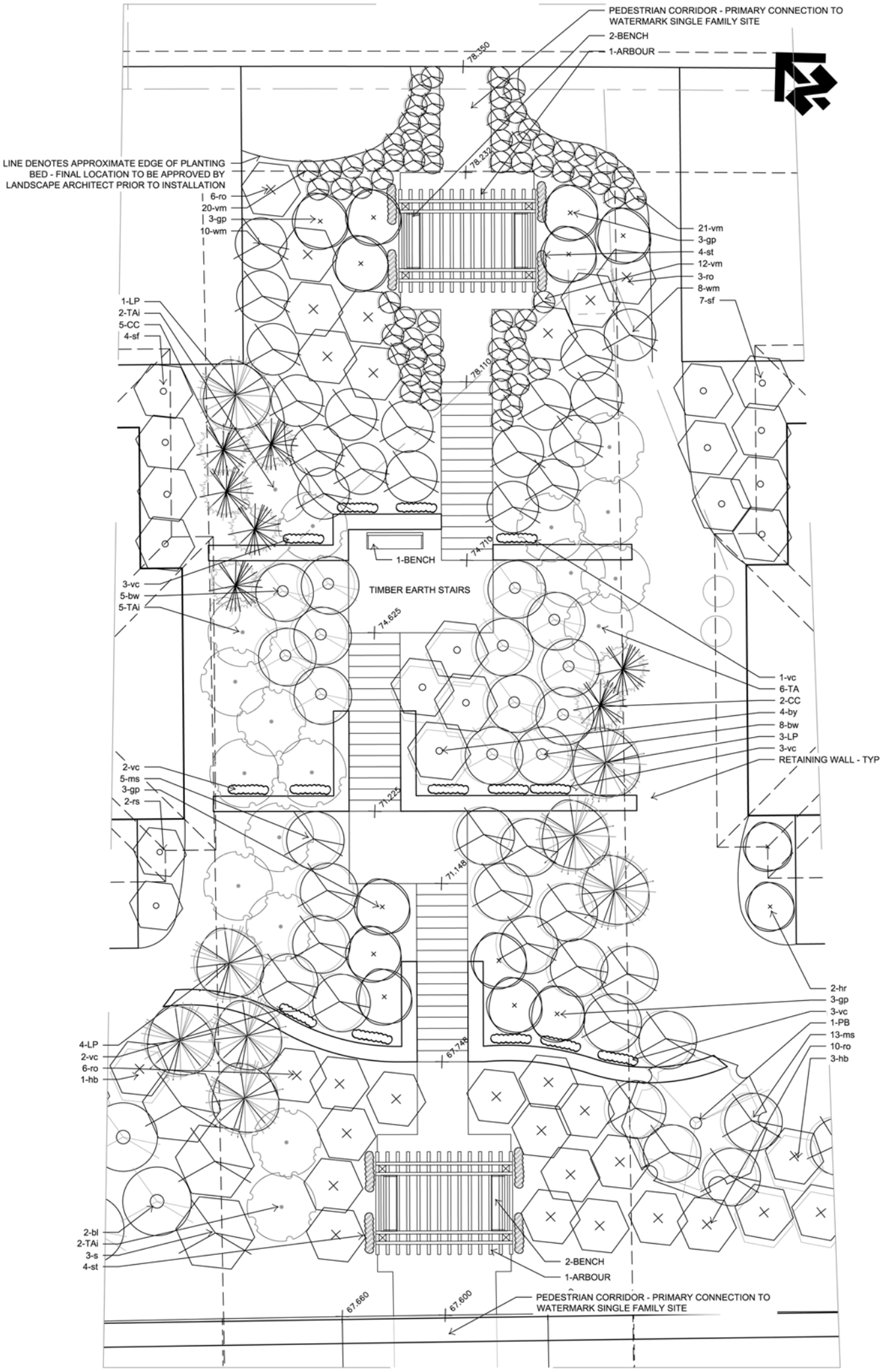
2-LP
4-bw
3-mb
3-ms
3-jj
BLG. #3
YPE #5
11-bc
2-sj
1-bl
3-vm
2-cg
#06 (C4)
4-ro
2-jj
5-bc
3-bw
4-aj
10-ms
11-sc
4-bc
5-aj
3-cc
10-bc
1-cc
6-bc
4-aj
4-bc
3-cc
10-ms
3-mb
1-TA
7-hr
3-mb
10-rl
1-TAi
3-TA
3-LP
3-CS
2-TA
1-PP
7-wm
ENTRY FEATURE - SIGNAGE
1-TAi
4-sc
3-ms
4-mb
4-aj
4-SA
2-CS
3-CS
1-PB
2-CC
SNOW STORAGE AREA
1-TA
1-PP
3-SA
2-WS
4-LP
3-SA
LINE DENOTES APPROXIMATE EDGE OF PLANTING BED - FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION
2-CS
3-TA
2-CC
3-SA
3-WS
3-TA
3-CS
3-WS
5-TA
1-PP
2-LP
4-SA
TWELVE MILE COULEE ROAD
A
A
2


SNOW STORAGE AREA
RETAINING WALL - TYP
LINE DENOTES APPROXIMATE EDGE OF PLANTING BED - FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION
WALKWAY - TYP
BLG. #4 TYPE #05
BLG. #5 TYPE #02
BLG. #6 TYPE #03
BLG. #7 TYPE #01'
BLG. #8 TYPE #08'
#08 (B)
#09
#10
#11 (B)
#12 (A)
#13 (A)
#14 (A)
#15 (A)
#16 (C)
1-PP 11-pr 4-TAi 1-CS 1-LP
2-SA 2-CS 3-TA 3-LP 1-LP 3-CC 5-ge 1-PP
2-CC 1-LP 2-TAi 4-ww 1-TA 1-CS
2-LP 8-hb 1-CS 1-bl 2-WS
2-CC 1-PB 3-SA
2-CS 1-TA
3-rs 9-mb 2-CC 1-TAi 1-CS
4-vc 1-FC
1-TAi 1-TA 5-hr
5-bc 1-wm
10-pr 4-hr 1-FC
3-st 1-DB 6-vc
2-vm 2-hr
2-ge 2-wc 2-hb 1-bl
5-rs 7-mm
3-wc 1-TA 1-FC
5-mm 2-ge 2-ce 3-bw
5-rl 1-BA
3-st 1-DB 3-vc
3-bo 4-it 4-ps
3-wc 2-pw 1-FC 4-wc
1-cg 2-bc 2-cg 3-ge 3-dg
2-bl 1-ge 2-mb 2-wm
1-cg 2-dg 5-ih 1-PC 8-bc 3-mm
7-rl 1-BA 1-DB 4-pr
1-FC 8-sf 1-ww
5-wc 3-ge 1-wc 1-bl 2-hb
3-ro 1-ce
5-wc 4-bo 2-BE 3-cn 1-PB 4-vm 6-bo 3-rs 13-ps 1-cn 7-dg
1-bl 3-hb 1-DB
2-sj 11-bc 1-PC
2-s 2-wm 2-ms 1-mb 2-SA
3-gp 1-ww
7-wc 3-cg 3-dg
1-TA 2-TAi 2-LP
10-pr 4-hr 1-DB 1-FC
5-sf 1-ww 2-BE
3-ge 11-bw 3-ce
4-sj 8-bw 4-BE 9-ro
1-FC 1-jj 4-ge
#03
#04
#05 (E
BL
TY
BLG


PEDESTRIAN CORRIDOR - PRIMARY CONNECTION TO WATERMARK SINGLE FAMILY SITE
2-BENCH
1-ARBOUR
78.350
78.232
LINE DENOTES APPROXIMATE EDGE OF PLANTING BED - FINAL LOCATION TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION
6-ro
20-vm
3-gp
10-wm
21-vm
3-gp
4-st
12-vm
3-ro
8-wm
7-sf
1-LP
2-TAi
5-CC
4-sf
78.110
1-BENCH
74.710
TIMBER EARTH STAIRS
3-vc
5-bw
5-TAi
74.625
1-vc
6-TA
2-CC
4-by
8-bw
3-LP
3-vc
RETAINING WALL - TYP
2-vc
5-ms
3-gp
2-rs
71.225
71.148
2-hr
3-gp
3-vc
1-PB
13-ms
10-ro
3-hb
4-LP
2-vc
6-ro
1-hb
67.748
2-bl
2-TAi
3-s
4-st
2-BENCH
1-ARBOUR
67.660
67.600
PEDESTRIAN CORRIDOR - PRIMARY CONNECTION TO WATERMARK SINGLE FAMILY SITE

Architectural Character

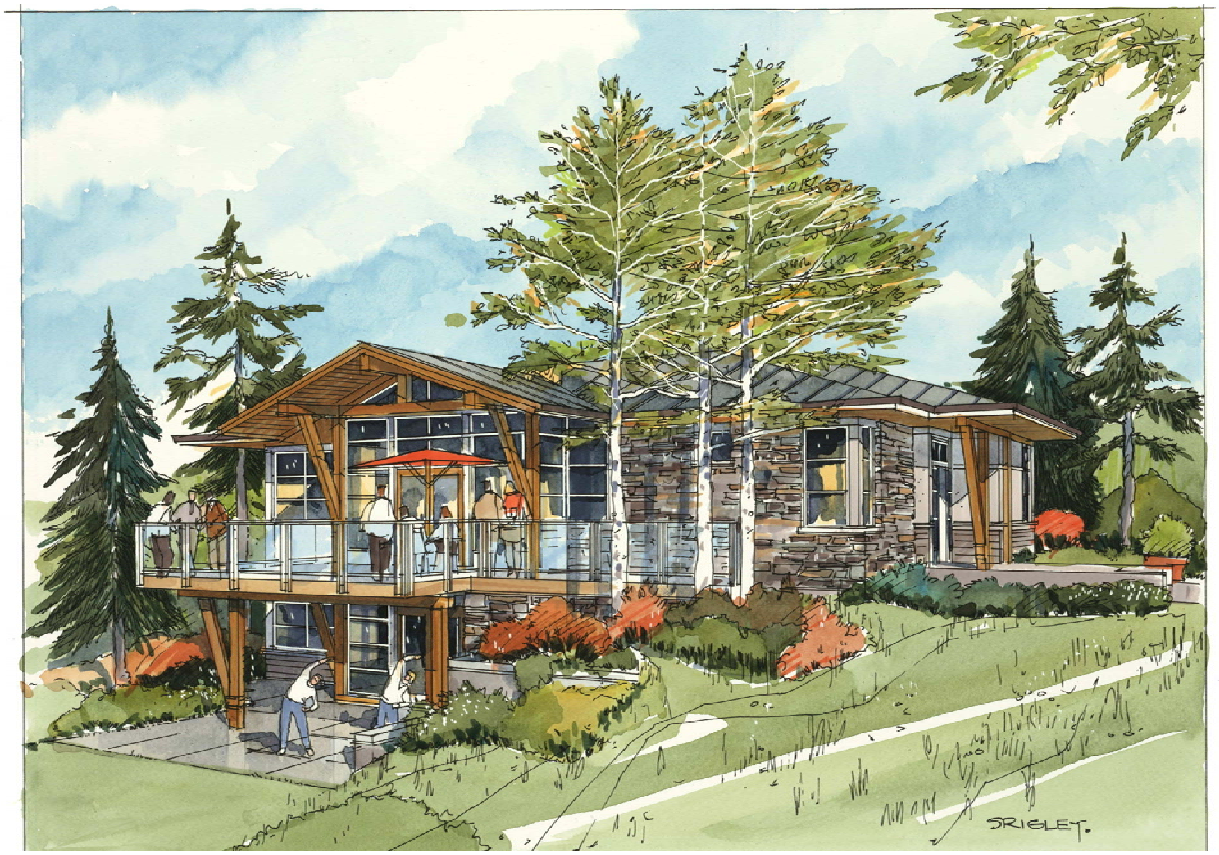
The language of architecture for the homes on Site 7 seeks to define a new Contemporary Prairie style, with a combination of clapboard siding and stucco accented with stone and clear coated timber detailing. This composite style of architecture is of the prairie, but aspiring to connect to the mountains, a style that is very much integrated into the place. The implementation of hip roofs on these homes allows them to sit lower visually on the land, while also maximizing view opportunities between buildings from the homes above.

The details are finely crafted, with timbers that are joined with intricate steel plates to the stone surfaces. The expansive windows (to fully capture the mountain views) stretch across the rear of these homes, sheltered from the summer sun with extra deep overhangs. Wood soffits in a rich golden hue further distinguish these homes, establishing a unique character.

Each of the homes will have a significantly sized main floor deck and additionally, a lower floor terrace connecting the outside and inside seamlessly.

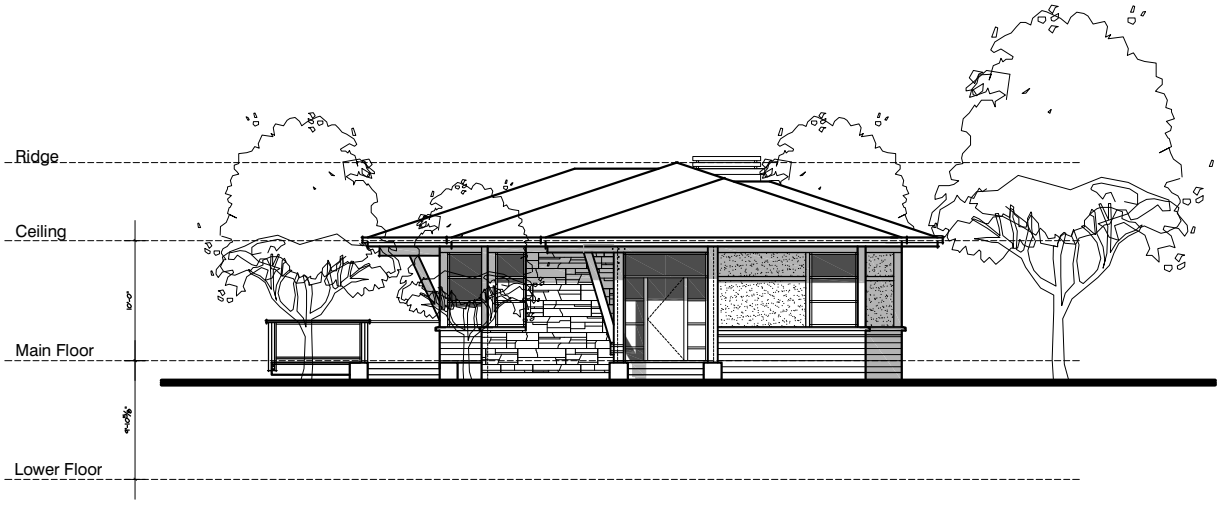
Amenities

At the Mallard Club, amenities include a fully equipped fitness centre that will have specific areas for cardio, resistance training, and yoga or stretching. A multipurpose room on the entry level is perfect for watching a sports event while shooting pool, relaxing with friends, or having a fully catered function facilitated by one of the local restaurants. This facility will become the gathering place for all residents of the community.

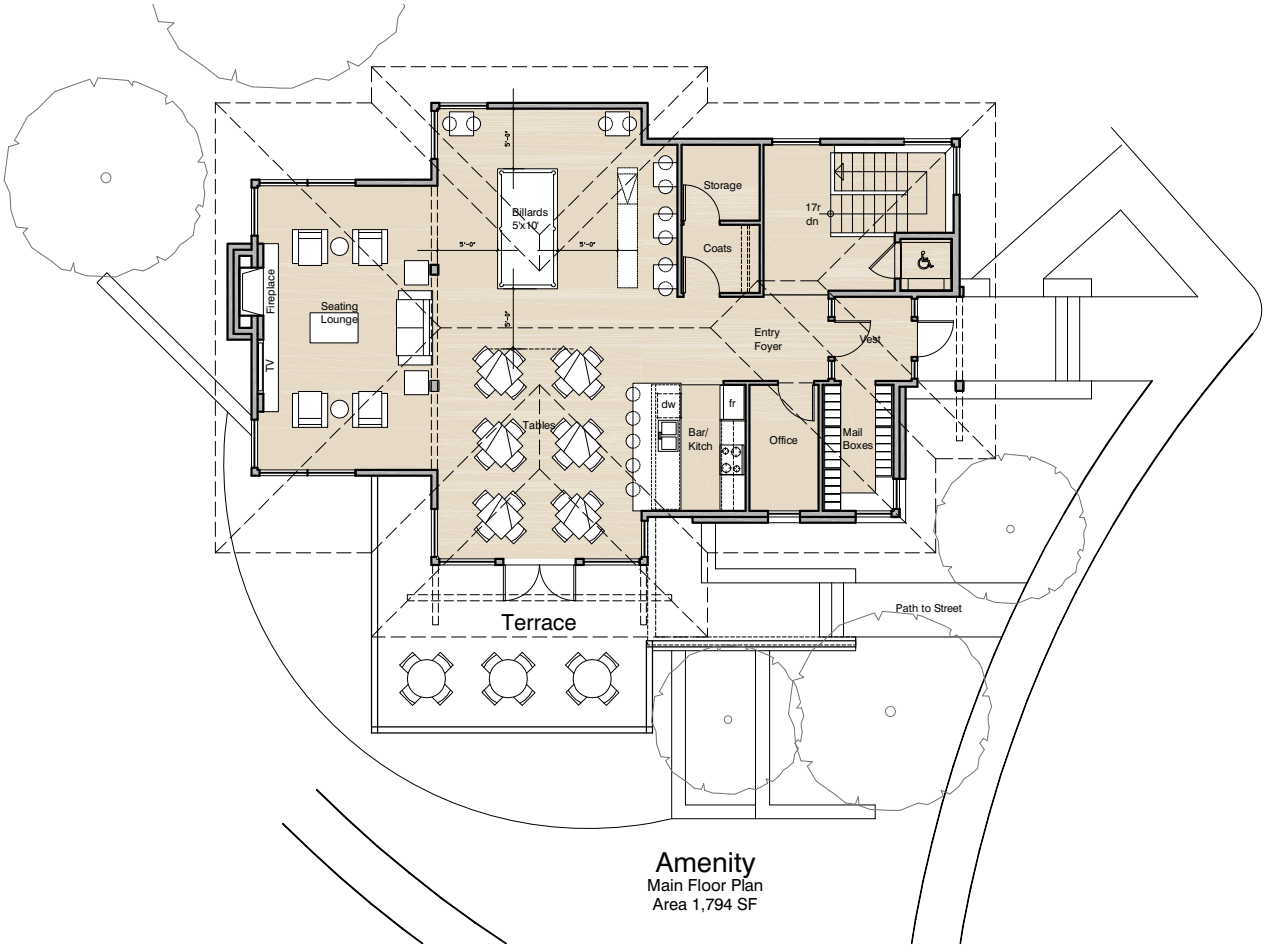


The main pedestrian trail coming off the spine road and connecting through to the Watermark single family site and the Regional Trails and Parks in Rocky View will be a highly used amenity in this community.

Mallard Club Amenity



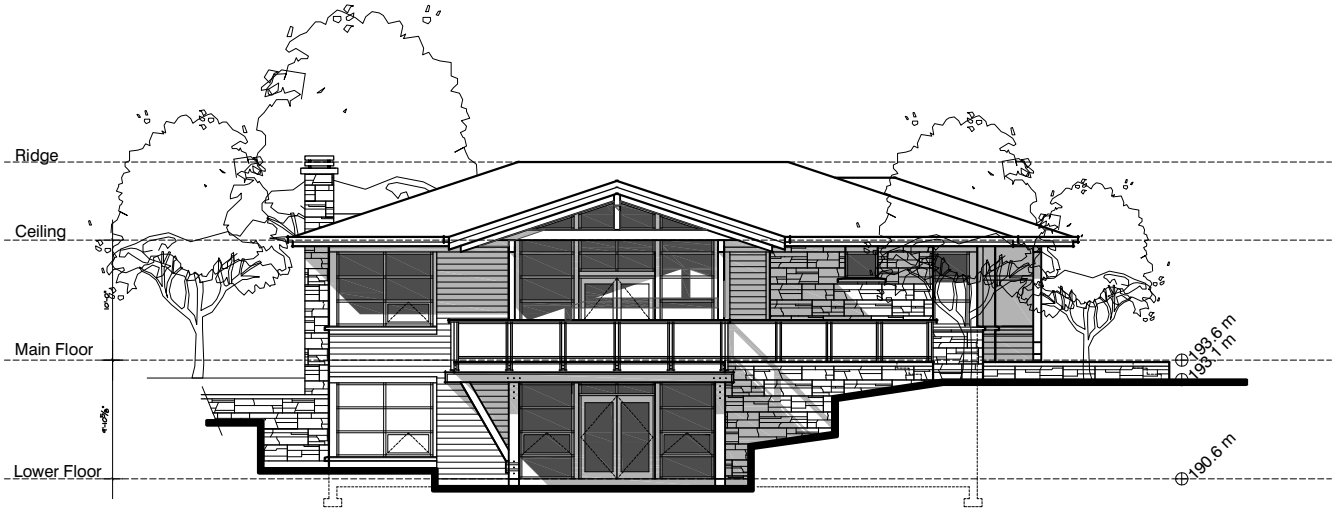
Front Elevation



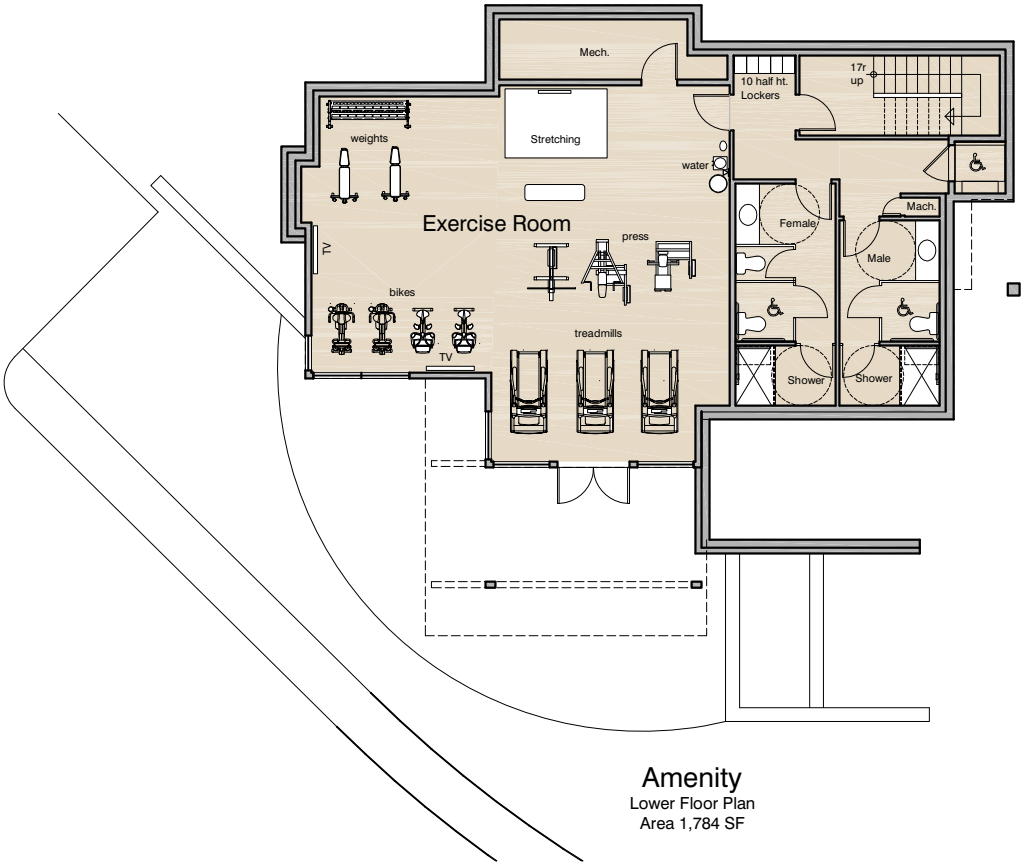
Amenity
Main Floor Plan
Area 1,794 SF

6.2

Mallard Club Amenity



Side Elevation



Amenity
Lower Floor Plan
Area 1,784 SF

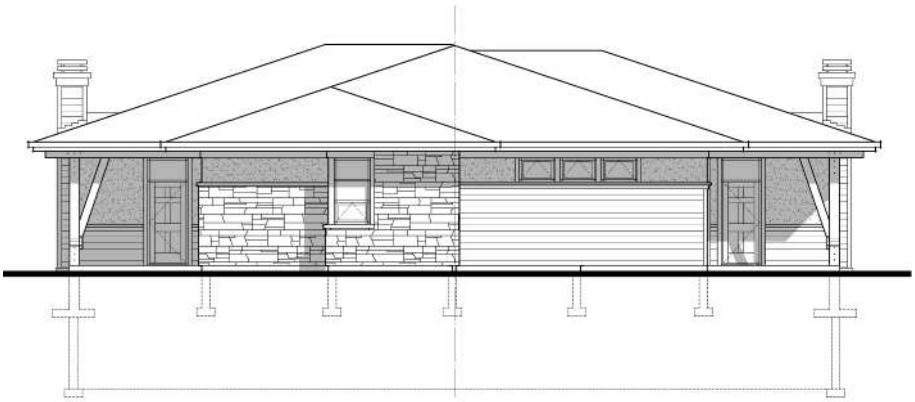
MASTER SITE DEVELOPMENT PLAN
SITE 7 - WATERMARK, ROCKY VIEW COUNTY
April 2012

Development Program

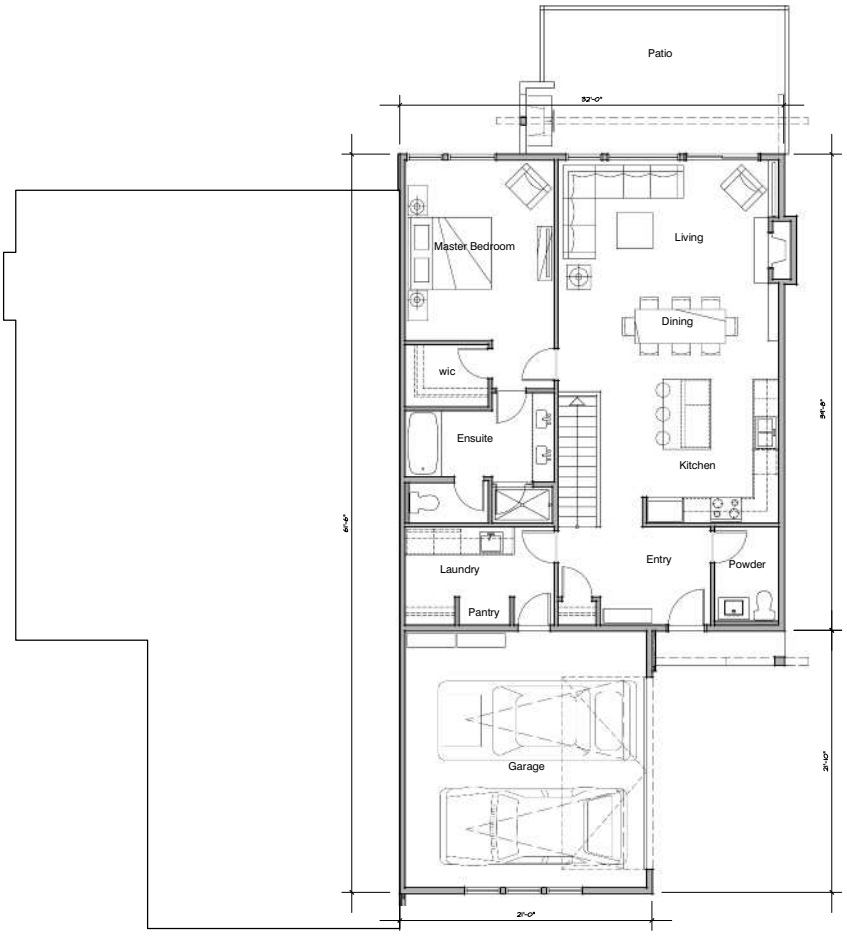
The homes on Site 7 range in size from approximately 1,900 up to 2,600 square feet of finished area, and are all oriented toward the mountain views, with a main living level just above the road elevation and a lower “walk out” level below. This configuration means that in all cases, the homes present a one storey plus roof height from the street, creating a very low, bungalow-style massing that will minimize the feeling of bulk on the site. The majority of the homes have master bedrooms on the main floor, with optional configurations on the lower level that can incorporate a media room, wine cellar, recreation space, or multiple bedroom layouts, leaving plenty of space for guests or multi-generational families.

Garages have specific storage areas for skis, mountain bikes and all the other gear essential to the active life enjoyed by owners. The floor plans and elevations shown on pages 7.1 - 7.8 are conceptual in nature, and are included to indicate design intent only - they do not constitute part of the land use regulations, as final configurations may be subject to change. Building footprints as shown on the Layout Plan will remain consistent within the requirements outlined in Section 3 of this document. Development statistics such as site coverage, setbacks, and heights are shown in detail on Page 8.0.

Dwelling Types



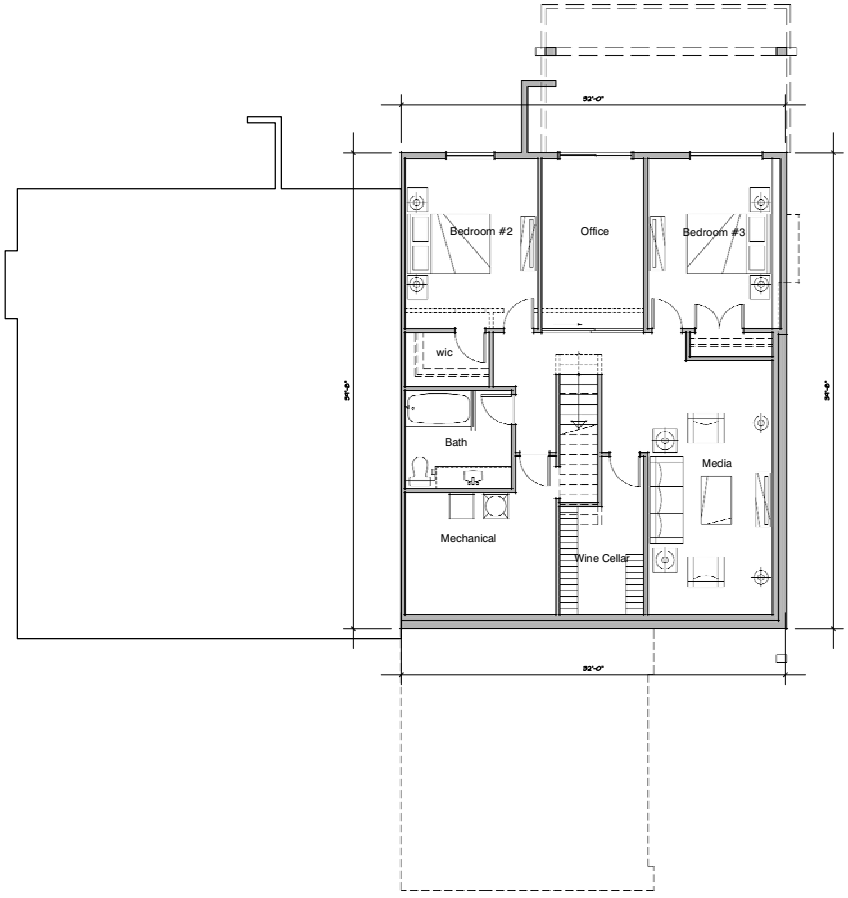
Front Elevation of Unit A & A



Unit A
Conceptual Main Floor Plan

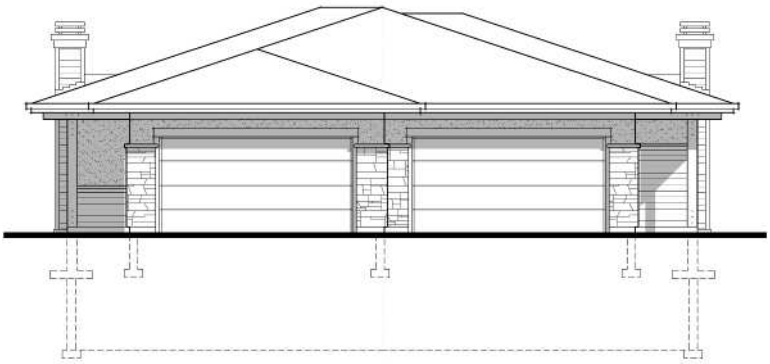
Dwelling Types

Rear Elevation of Unit A & A (Alt)

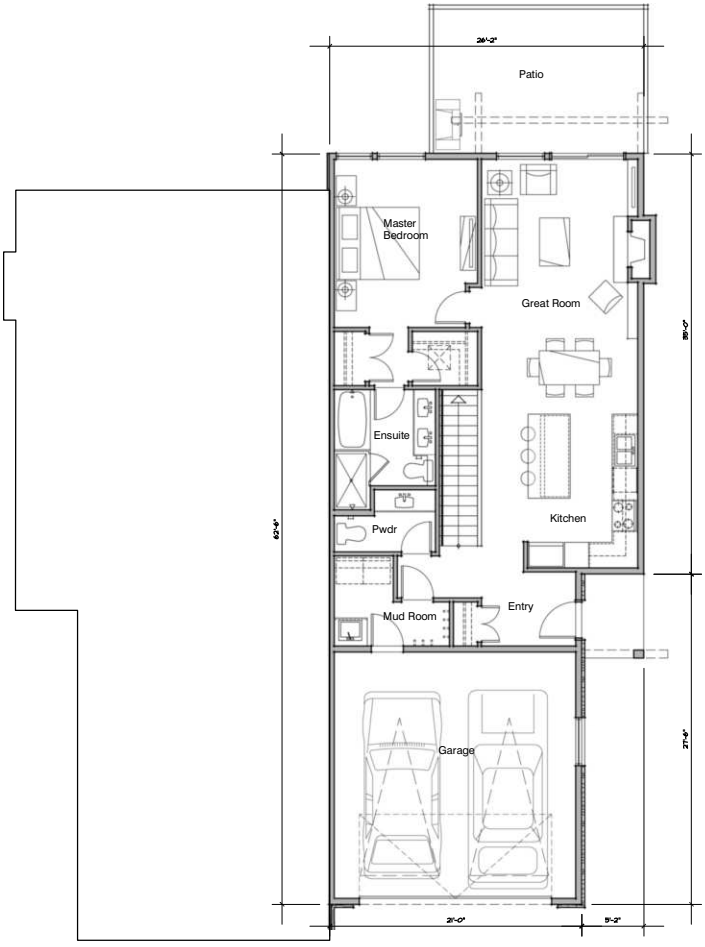


Unit A
Conceptual Lower Floor Plan

Dwelling Types

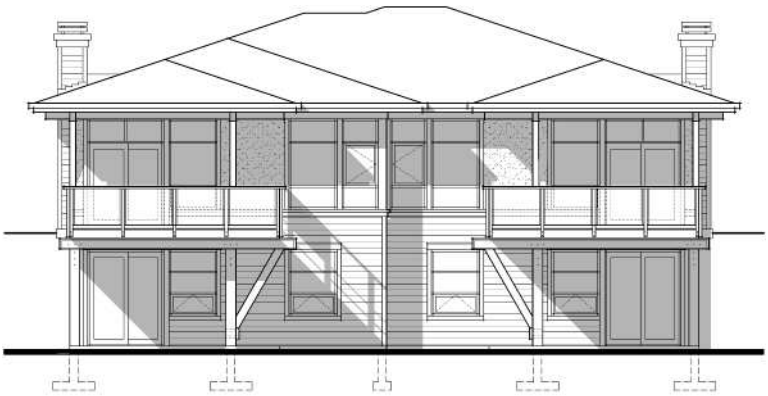


Front Elevation of Unit B & B

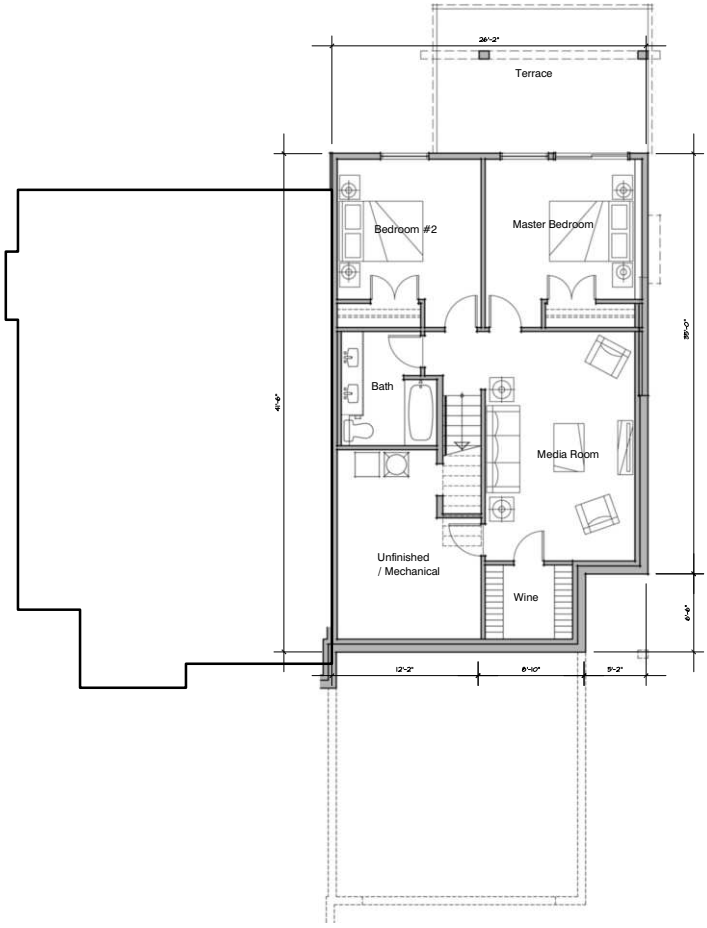


Unit B
Conceptual Main Floor Plan

Dwelling Types

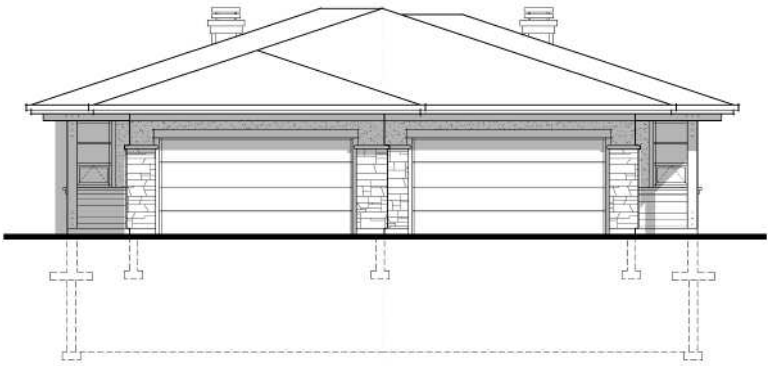


Rear Elevation of Unit B & B

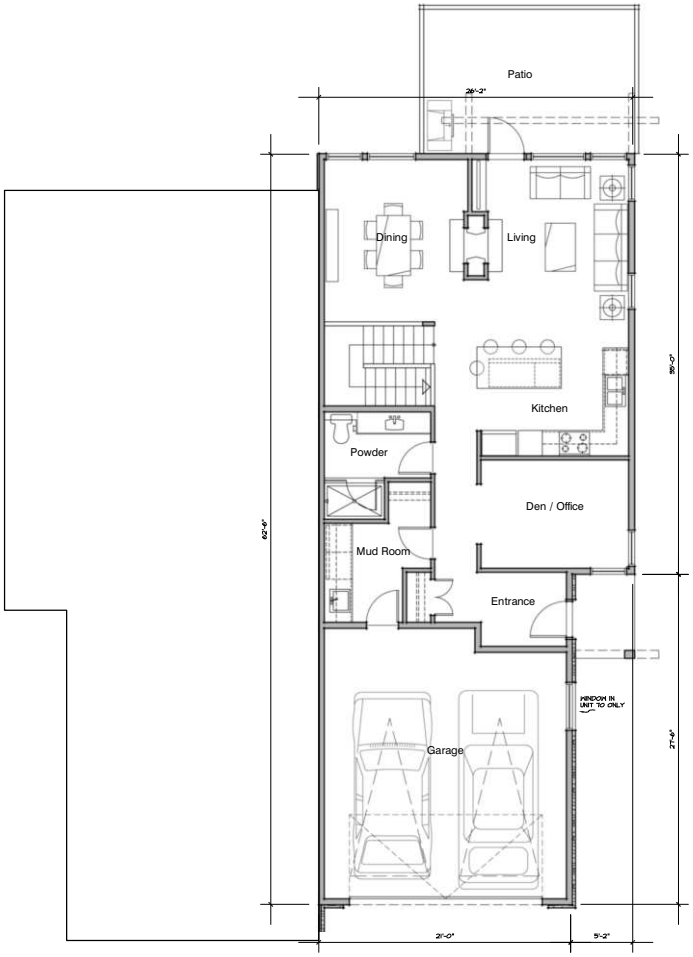


Unit B
Conceptual Lower Floor Plan

Dwelling Types



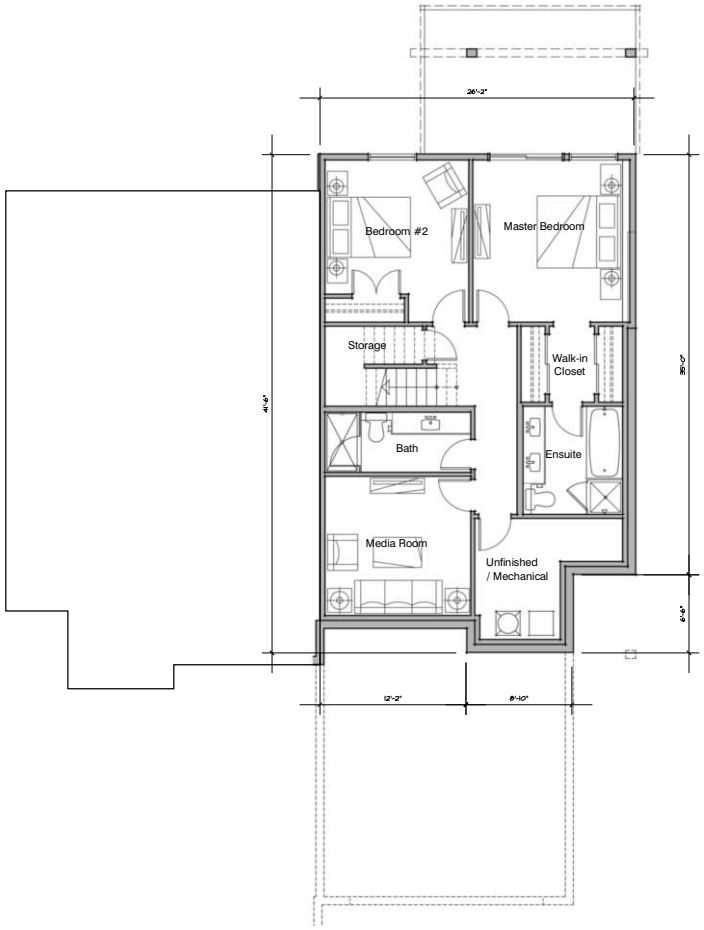
Front Elevation of Unit B1 & B1



Unit B1
Conceptual Main Floor Plan

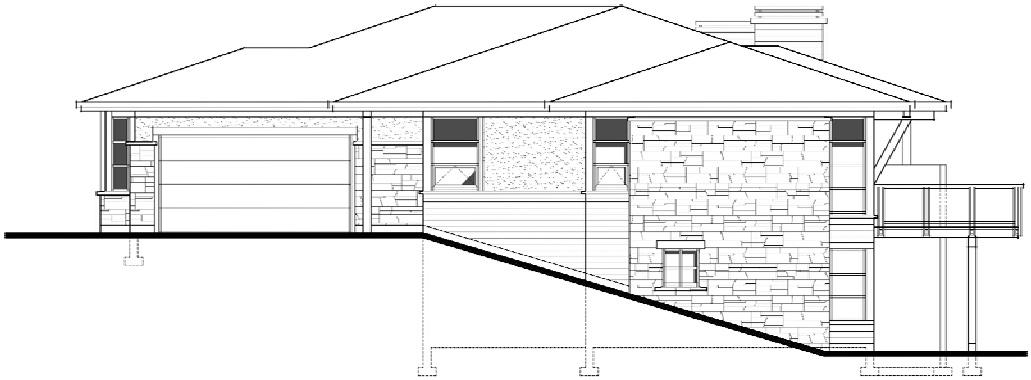
Dwelling Types

Rear Elevation of Unit B1 & B1

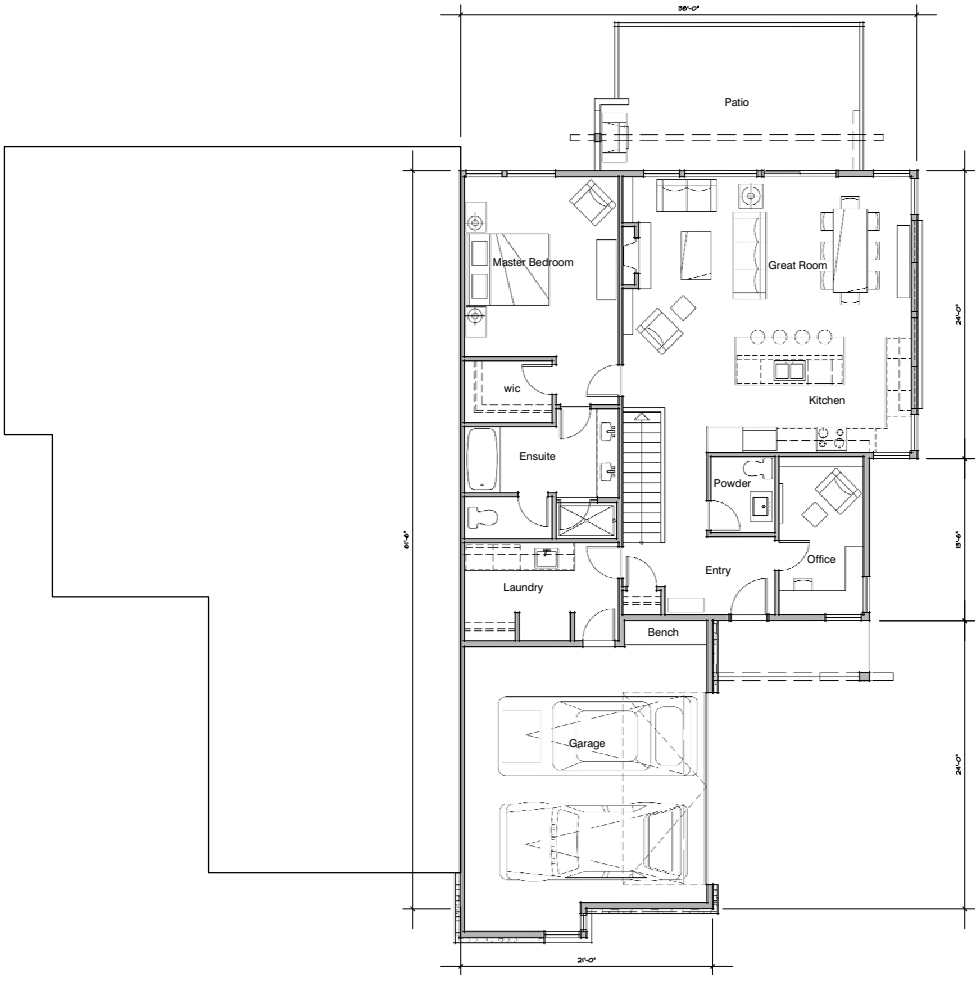


Unit B1
Conceptual Lower Floor Plan

Dwelling Types



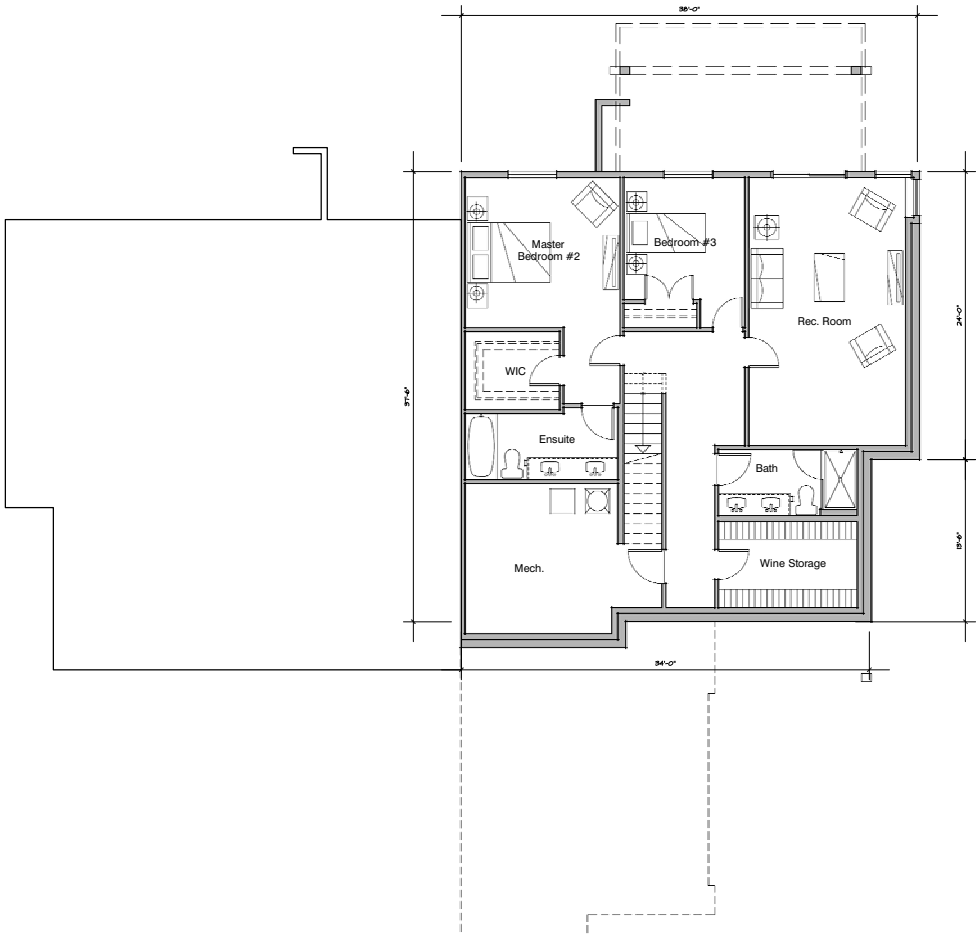
Side Elevation of Unit C1



Unit C1
Conceptual Main Floor Plan

Dwelling Types

Rear Elevation of Unit C1 & A1



Unit C1
Conceptual Lower Floor Plan

Development Statistics

Note that these Development Statistics are not regulations for the purposes of the DC Bylaw C-6854 - 2009, but are informational to indicate relevant statistics for the project.

Site Area:	643,637	sf	59,793.9	sm	14.776	acres
FSR:	247,413	sf			0.384	FSR
Density: (Units per Acre)		Total # of Dwellings		101	6.835	UPA
Site Coverage			166,160	sf	26%	

Gross Square Footage for FSR (includes unfinished space & amenity building & excludes garage)

Dwelling type		total area		percentage mix	Total Area	
A	42	2,550	SF	41.6%	107,100	SF
B	42	2,120	SF	41.6%	89,040	SF
C	17	2,805	SF	16.8%	47,685	SF
Amenity		3,588	SF		3,588	SF
Total FSR	101 homes				247,413	SF

Parking:

	Stalls per Dwelling	2.0	101	dwellings	202	stalls
	Visitor Stalls	36			36	stalls

Building Height Calulation

Typical Building	Elevation 1	Front	21.90	ft		
	Elevation 2	Side	27.00	ft		
	Elevation 3	Rear	32.83	ft		
	Elevation 4	Slde	27.00	ft		
		Average Building Height			27.18	FT
					8.29	M

Building Setbacks from external Property Lines (excluding decks and overhangs)

North	7.5	m	24.61	ft
East	7.5	m	24.61	ft
Southwest (adjacent to single family)	12.0	m	39.37	ft

Amenity Gross Square Footage for FSR

Level	Total Area	
Lower Floor	1,794	SF
Main Floor	1,794	SF
Total FSR	3,588	SF

Site Servicing Summary

The 101 units on this site consist of 50 - 2 unit buildings, one single detached home, plus a detached Community Amenity building. Each building will have one set of services consisting of potable water, sanitary, and storm water services. Potable and waste water will be conveyed by the underground piping to the service mains built within Watermark's first phase of single family development, immediately to the west of Site 7. Water, sanitary, and storm services are stubbed at the mid-point of Site 7's western property line. A second water service is stubbed at the northwest corner of the site. The aforementioned piping system will be located within Site 7's internal roads. All aspects of the site service design shall conform to the latest Provincial and Rocky View County standards.

Water Service

Blazer Water Systems Ltd, a privately owned treated water utility located on the grounds of the Lynx Ridge Golf Course (immediately south of the Watermark Development) will be providing treated water for both domestic use and fire suppression to Site 7 of Watermark. The connection for this water supply has been sized, located and constructed to accommodate the full volume of Site 7's treated water requirements. A 200 mm looped water service network is proposed for this site, and each individual building will be serviced with a 50 mm PEX pipe.

Fire Suppression

All buildings will be provided with sprinkler systems in accordance with Rocky View County requirements.

Sanitary Service

The sanitary system for this site connects into the single family portion of the Watermark site, and consequently into the Waste Water Treatment Plant that will be constructed and operated as a part of the overall Watermark development plan. All sanitary sewer pipes within Phase One of the Watermark single family development have been sized, located, and constructed to accommodate all of the Site 7 raw sanitary sewage volumes. Sanitary services will be located at a depth which will allow the lower levels of each individual home to achieve gravity flow into the system.

Site Servicing Summary

Storm Water Management

Rainwater will be collected by catch basins at the side of the internal road and conveyed by pipes to the main system. Each individual building will be provided with one storm connection for weeping tile drainage only. All roof drains will be directed to the surface by means of down spouts - landscape design shall provide adequate drainage in these specific locations. As a part of the overall storm water management strategy, rain barrels will be incorporated for each home to limit surges of storm water into the system, while also serving as supplementary irrigation in drier times of the year. The water accumulated by the rain barrels has not been calculated into the overall stormwater amounts, and thus provides additional margin against potential system overload.

As set forth in the overall Watermark site design by exp Services Inc., Site 7 is allowed to discharge into the storm main in Watermark Phase 1 at a maximum discharge rate of 786 litres per second. Additionally, as per the storm water management report for Watermark Phase I, the 45 meter wide strip along the south property line is allowed to drain overland to the adjacent Phase 1 street. Invert Control Devices (ICDs) will be incorporated in all catch basins in order to meet the maximum discharge rate, with excess water during heavy rainfall events to be stored on the streets. In a case where the design storm event for the storm piping system is exceeded, an emergency spill route has been designed for all the detention ponds on the single family portion of the site. The emergency spill elevation shall be at least 0.30m below the floor elevation of the proximate building or buildings. This system was designed initially to include the construction of the 101 homes on Site 7.

Shallow Utilities

All the primary services will follow the route of the deep utilities, with appropriate separations as required. One electric transformer shall be installed for every 8 - 10 units, or as per the requirements of the Utility provider.

Internal Road Configuration

The internal road network is as delineated on the architectural site plan. At the dead end road conditions, a hammer head configuration is proposed (with approved turning radii) to provide proper emergency and service vehicle movements. On some of the shorter streets off the main spine road, a turnaround is not required by the Building Code and is therefore not provided (this condition exists in 4 locations on the upper part of the site). The typical internal road is 7.0 m in width (from face of curb to face of curb), and the slope of the roads is no greater than 8% with the slope at all intersections designed to be less than 5%. Actual construction standards will comply with Rocky View County Servicing Standards. In Policy 6.7.2 of the Conceptual Scheme (regarding the adjacent Damkar parcel), it states that “transportation access will be from 12 Mile Coulee Road and will be shared with Sub Area 7 of the Watermark project.” On Figure 11 of the same document, it refers to this section of road as being built to an “Entranceway Standard” shown in Figure 12a and similar to that utilized in the Single Family entries. This configuration is indicated on the site Layout, Landscape, and Subdivision plans, and meets all City of Calgary and Rocky View County standards. This widened area at the entry will be dedicated to Rocky View County to ensure access to the Damkar parcel in this location should it be required in the future.

Waste Collection

Curbside pickup of solid waste and recycling will be arranged with a private contractor. All garages have been designed with sufficient space for storage of waste receptacles and recycling containers.