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AGENDA
CITY PLANNING COMMISSION REGULAR MEETING
THURSDAY, FEBRUARY 12, 2026, 6:00 PM
COUNCIL CHAMBERS CITY HALL

CALL TO ORDER AND ROLL CALL

APPROVAL OF MINUTES:

1. Approval of the January 8, 2026 Planning Commission Regular Meeting Minutes

VISITOR OR PUBLIC COMMENT: (An opportunity for the Public to comment on any items not on tonight's agenda)

NEW BUSINESS:

2. Presentation by Cushing Terrell on Focus Group Findings
3. Short Term Rental Policy Discussion
4. Summary of Zoning and Subdivision Regulations Rewrite

PUBLIC HEARINGS AND RECOMMENDATIONS:

5. **Request for a Conditional Use Permit to construct 40 units of Apartment in the Columbia Falls Zoning Jurisdiction:**

The owner, Norton Luxury Homes, LLC, is requesting a Conditional Use Permit to construct 40 units of apartments in two buildings, twenty units in each building. The proposed two-story apartments will access Meadow Lake Blvd and at the intersection with Best Way. The vacant property is approximately 2.2 acres in size and is located approximately ¼ mile north of Highway 2 at 302 Meadow Lake Blvd. The property is described as Tracts 1 & 2 of COS 16142 (Assessors' Tract's 2BDEA and 2BDAEA) of Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County.

ADJOURNMENT

Next Regular Planning Commission Meeting – March 12, 2026

**CITY OF COLUMBIA FALLS
PLANNING COMMISSION MEETING MINUTES
HELD JANUARY 8, 2026**

REGULAR MEETING – 6:00 PM.

President Fisher called Meeting to order at 6:01 PM

PRESENT: President Fisher, Commissioner Ping, Commissioner Johnson, Commissioner Berube, Commissioner Kavanagh

ABSENT: None

Also present: City Manager Hanks, City Planner Mulcahy, City Attorney Breck, Public Works Director Bates, Clerk Sobczak

APPROVAL OF MINUTES:

Approval of December 11, 2025 Regular Meeting Minutes

Motion made by Kavanagh to approve the December 11, 2025 minutes as presented, Seconded by Ping. Motion carried with all present voting AYE.

VISITOR OR PUBLIC COMMENT: (An opportunity for the Public to comment on any items not on tonight's agenda)

Roger Hopkins, 949 Vans Ave., Columbia Falls, commented on wastewater capacity concerns related to Meadow Lake flows and infiltration, annexation considerations, and long-term planning implications.

UNFINISHED BUSINESS:

Wastewater System Capacity Allocation Update and Housing Development Discussion. City Manager Hanks began by addressing the previous public comment stating that this is a very important issue and contract negotiations need to be started by 2029. City Staff is requesting guidance from the Planning Commission and City Council on interim allocation priorities before Staff reviews and presents new development applications to those bodies. New procedures would not be incorporated after MLUPA is adopted sometime after May. The 2025 Housing Study should be considered when developing priorities.

City Manager Hanks presented an update on wastewater system capacity and its relationship to near-term housing and development allocation decisions. He stated that the City's wastewater treatment plant is currently estimated to support a maximum service population of 8,174 persons, based on the 2023 engineering design. He reported the current service population to be 6,280, which equates to 5,733 City residents plus Meadow Lake Water and Sewer District average population, leaving an estimated remaining capacity of 1,894 people. He clarified that the current PER is focused on modeling the conveyance system rather than full facility redesign, and that engineers have confirmed the 2023 capacity numbers. A future facility performance reassessment is anticipated in Fall 2026, which may increase capacity.

Hanks explained that peak flow events are driven by inflow and infiltration within the conveyance system during high rainfall or snowmelt events, rather than deficiencies at the treatment facility. He emphasized that the treatment plant has not exceeded DEQ permit limits during high flow events and that higher flows often result in lower concentrations, allowing efficient treatment. There is no infiltration from the Flathead River into the treatment plant. He stated that individual by-right residential projects, such as single-family homes and ADUs, will not be impacted by allocation decisions, noting that the discussion is focused on larger developments.

Hanks reviewed current and pending development applications and discussed staff's recommendations, including moving forward with projects that already have allocated capacity and permitted zoning, and negotiating adjustments to larger applications to avoid fully exhausting remaining capacity. He stated that staff's recommendation was to allocate approximately 1,500 people of the remaining capacity while retaining a reserve.

Commissioner Ping asked whether any of the current or near-term development applications included units designated as affordable units under the 2025 Housing Study. City Planner Mulcahy responded that the applications are market-rate, with the exception of Habitat for Humanity projects, which were not included due to their relatively small capacity impact.

The Commission discussed the importance of focusing on policy direction related to housing type and location rather than approving or denying specific developments, noting that detailed application materials were not before the Commission.

Public comment opened 6:25 PM

Mike Burr, 560 Talbot Rd., Columbia Falls, stated that decisions should align closely with the Housing Study, particularly regarding affordability. He cautioned against moving too quickly, expressed concern about allocating capacity to high-cost housing, and noted the need for public understanding of infrastructure repair costs and potential impacts on water and sewer rates.

Shirley Folkwein, 285 Shooting Star Dr., Columbia Falls, cautioned using the capacity numbers provided and allocating all of the available capacity, echoed concerns regarding affordability and encouraged the City to explore a variety of funding and partnership opportunities, including continued support for organizations such as Habitat for Humanity. She noted that slower, more deliberate development may better serve community needs.

Public comment closed 6:34 PM

The Commission discussed City policy recommendations on prioritizing allocation of the existing wastewater system.

City Planner Mulcahy responded to questions regarding affordable housing requirements, clarifying that state law prohibits local governments from requiring housing to meet specific affordability thresholds or price points. He explained that incentive-based tools such as density bonuses, reduced parking requirements, dimensional flexibility, or alternative design standards, could be explored through future planning and development regulations. Mulcahy stated that the City is required to plan for projected growth and cannot simply defer accommodation of housing demand, but that policy goals and incentives may be included in growth policy documents to guide outcomes.

President Fisher stated that the Commission's purpose for the evening was to provide policy direction and guidance to City Council rather than to review or take action on specific development applications. He emphasized that the discussion should focus on broader principles that could be applied consistently to current and future proposals and cautioned against debating individual projects without full application materials before the Commission.

Commissioner Johnson stated that he believes that mixed-use multi-type housing developments, townhomes and apartment complexes, are what needs to be prioritized. Affordable single-family residences would be ideal but if single-family residences were prioritized then they would end up unaffordable. Capacity allocation should be reduced where possible.

Commissioner Kavanagh discussed the complexity of affordable and deed-restricted housing projects, noting that such developments often require significant financial tradeoffs to remain viable. He explained that, in his experience, mixed-use and multifamily components are frequently necessary to support more economical housing options and that separating or reducing portions of a project can undermine feasibility. He stated that it is important for the Commission to recognize the role that townhomes and apartments play within larger developments, rather than evaluating proposals solely on the number of single-family units.

Commissioner Ping emphasized prioritizing more economical housing products such as apartments, townhomes, and attached units, noting that these products typically result in lower per-unit costs. Ping expressed concern about

allocating a substantial portion of the remaining wastewater capacity in the near term and stated that retaining a meaningful reserve would preserve flexibility for future mixed-use, commercial, or innovative housing proposals that may better align with community needs.

Commissioner Ping further stated that economic vitality is closely tied to the City's ability to accommodate future commercial and mixed-use development, including hotels and job-producing uses. He cautioned that exhausting wastewater capacity on large, high-cost single-family subdivisions could limit opportunities for employment-generating projects and reduce the City's long-term economic resilience. He noted that infill development and development adjacent to existing infrastructure are generally more cost-effective, reduce the need for new extensions of utilities, and are more consistent with efficient service delivery than isolated annexations.

Commissioner Kavanagh and Commissioner Ping shared concerns based on prior experience, noting that broad or indefinite moratoria can create legal exposure and economic uncertainty. Discussion between the Commission and City staff focused on the importance of avoiding blanket restrictions and, if any moratorium were to be considered, ensuring it would be narrowly tailored, temporary in duration, and clearly tied to infrastructure analysis timelines, including the anticipated Fall 2026 wastewater capacity reassessment.

The Commission discussed staff's recommendation to allocate approximately 1,500 people of the remaining wastewater capacity. City Manager Hanks clarified that the Staff capacity recommendation would leave an approximate reserve capacity of 400 people for the smaller scale infill and permitted developments. Commissioner Ping expressed concern that this approach would leave insufficient flexibility for future proposals and suggested retaining a larger reserve to allow consideration of developments that better meet housing and economic objectives. City Planner Mulcahy clarified that he believes that the 1,500-person allocation is where Commissioner Johnson suggestion of cutting back capacity allocation lies, specifically with the Garnier Heights and Teakettle Heights applications. Commissioner Ping suggested holding back a reserve capacity of 35% of the 1,894-person available capacity, about 600 people. A developer with goals aligned with the Cities priorities might come along and the reserve capacity could be used for them as well. Commissioner Kavanagh and Ping noted the importance of understanding the reserve in a near-term context, particularly given the expectation of improved capacity information following future engineering analysis.

President Fisher noted that the River Highlands development, given what was released the public would be difficult to approve due to the nature of the housing there not aligning with stated Commission housing type priorities and the geographic location far from City limits and over the Flathead River. Commissioner Johnson and Commissioner Ping suggested prioritizing development adjacent or inside of City limits. Commissioner Ping was not supportive of limiting density for the Teakettle Heights development, due to it having the type of housing that the Commission wants to prioritize. President Fisher clarified that they are not picking or endorsing that specific project but instead are using it as an example of the type of development that should be prioritized because it has the preferred housing types.

Through continued discussion, Commissioners generally aligned around the concept of holding approximately 600 people of remaining wastewater capacity in reserve in the near term, while allowing allocations for projects consistent with the Commission's stated preferences regarding an incentive based approach to affordability – goals and zoning tools –, housing types – mixed product apartments, townhomes and single family –, location – adjacent or inside City limits –. Timing of construction and occupancy of projects was determined to not be an issue.

The Commission emphasized that future allocation decisions should balance infrastructure limitations, documented housing needs, economic vitality, and the results of upcoming engineering and land use planning efforts, and that additional refinement of these policies would occur as part of ongoing planning work on MLUPA.

Commissioners reiterated that no formal action was taken and that the discussion was intended to provide advisory guidance to City Council.

OTHER BUSINESS:

City Manager Hanks provided an update on the Montana Land Use Planning Act (MLUPA) process. Growth projections used by the City are 2.3% on the high end for the water and sewer PERs, and a 1.8% growth population estimate for the

low-end estimate. January 26 Joint Council and Planning Commission Workshop on existing conditions document and survey results, February Infrastructure Meeting on new recommendations. February 12 Planning Commission Land Use Planning Meeting to discuss existing conditions and survey results and first look at subdivision and zoning regulation rewrite and short-term rental policy. March Land Use Map and recommendation workshop, outreach round one in progress, previous survey and future focus groups which are scheduled in January.

ADJOURNMENT – Meeting duly adjourned at 7:45 PM

President

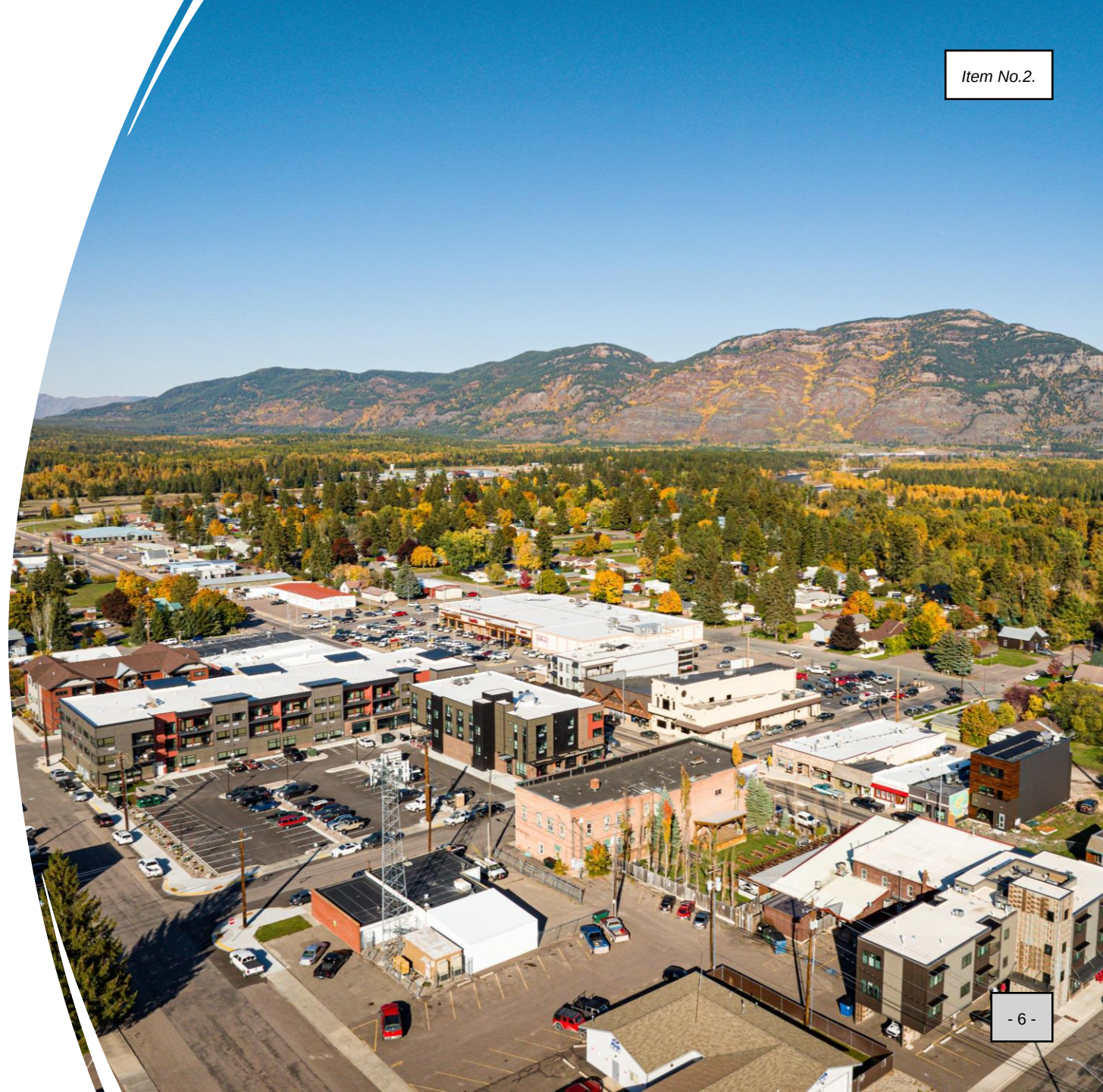
Attest:

Public Works Clerk

Columbia Falls Land Use Plan

Focus Group Findings

February 12, 2026



Agenda



Follow-up on anything from our last meeting

Survey results

Existing Conditions highlights



Focus Group Findings



Short-term Rentals



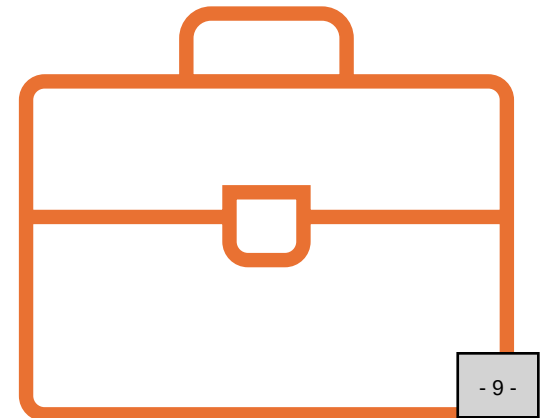
Land Use Code Update

Focus Groups

- 8-12 people per group
- Stakeholders from nonprofits, partner organizations, advocacy groups
- Subject-matter experts to help us ask the right questions and learn what we need to study further

Economic Development

- Weyhauser
- Stotlz Timber
- Nomad GCS
- SmartLam
- Western Building Center
- Schellinger Construction
- Chamber of Commerce
- Glacier Bank
- Whitefish Credit Union
- Stockman's Bank
- Parkside Credit Union
- First Interstate Bank
- Freedom Bank
- Night Owl
- Backslope Brewery
- MT West Economic Development



Land Use & Housing

- Northwest Community Land Trust
- Habitat for Humanity
- Livable Flathead
- Realtor Association
- Montana Heritage Home Builders
- Flathead Building Association
- Shelter Whitefish
- Upper Flathead Neighborhood Association
- Meadow Lake HOA
- Flathead Land Trust
- Climate Smart Glacier Country
- Whitefish Housing Authority
- Chamber of Commerce



Natural Resources & Recreation

- National Forest Service
- Montana Fish, Wildlife & Parks
- Flathead Rivers Alliance
- Gateway to Glacier Trails
- Glacier Institute
- Dream Adaptive
- Pursuit
- Flathead Valley Paddling Society
- North Valley Search and Rescue
- North Fork Trails Association
- North Fork Preservation Association
- North Valley Search & Rescue
- Mountain Mamas



Discussion Highlights

Housing

- The housing market (both price and availability) is the most significant issue for businesses to be able to hire and retain staff
 - This is especially strained in the summer months when some long-term rentals turn to short-term rentals
- Businesses want to expand their operations but are unable to due to the lack of workforce
- Banks are seeing requests for more creative financing for people to purchase a home
- National Park is losing employees because much of their housing is in Kalispell
- The housing market is no longer attainable to local residents
 - It has become difficult to build small homes on small lots – need to reduce or eliminate minimum lot sizes and setbacks
 - Need to look at ways to make Accessory Dwelling Units easier to build
 - Single family zoning is a limited factor
 - Cost of land and building infrastructure is a challenge for housing development (particularly to make it affordable)

Discussion Highlights

Columbia Falls Location & Amenities

- “Gateway to Glacier” location & local amenities are an asset
 - Location sets it apart from other communities with proximity to Glacier National Park, the Glacier Park International Airport, and recreation opportunities
- Public lands surrounding the City
 - Important to maintain access to public lands
 - Educating visitors to care about the land is needed
- River access needs to be preserved
- Community assets:
 - River’s Edge Park
 - Teakettle River Access

Discussion Highlights

Areas of Needed Improvement

- Restaurants and bars struggle to stay afloat in Columbia Falls
 - Liquor licenses are difficult to obtain and cost-prohibitive
 - Many licenses have moved from Cfalls to Whitefish in the last 5 years
 - Breakfast and lunch establishments fair better than those offering dinner where there's an expectation that you can order alcohol
- Desire for enhanced and consistent wayfinding signage throughout town
- Lack of childcare is a struggle for families
 - The City is lacking an existing building suitable for a childcare facility that wouldn't need cost-prohibitive renovations
- Walkability is poor
 - Appreciation for recent efforts to build sidewalks, which should continue
 - Desire for trail connectivity between Cfalls and Columbia Mountain Trailhead, Bad Rock Canyon, Gateway to Glacier, and Cedar Flats
- Need for increased volunteer-ism

Discussion Highlights

Schools

- Need for additional large gathering places in town
 - School properties and fields are well utilized but get booked up
- Funding for schools
 - People want to support the schools, but property taxes can be a burden
 - Wages are trying to catch up with the high cost of living but it's not balancing out
 - High school is overdue for renovations, but the issue is funding
- School District's largest challenge is finding bus drivers because there are so many routes
 - Routes were already decreased by 40%
- Safe Routes to Schools should be prioritized with sidewalks

Discussion Highlights

County Coordination

- County supports paving North Fork Road for opportunities to bring more visitors to the Park, but can't afford it and would need Federal transportation funding
- County generally encourages annexation near incorporated communities
- Seeing a shift in the types of subdivisions being proposed (more minor than major subdivisions) in unincorporated County
- Commercial area on Highway 2 north of the airport is underutilized and hampering economic growth
 - People flying into the airport go south to Kalispell for hotel lodging when most recreation destinations are north
 - Additional hotels will be hard to build near the airport because of septic limitations

Discussion Highlights

Zoning & Land Use

- Needed zoning changes:
 - Reduce or eliminate minimum lot sizes and setbacks
 - Allow the next increment of density in each zone district (Strong Towns approach)
 - Density bonuses and other voluntary incentives for deed-restricted affordable units
 - Relaxations on parking requirements
- Manufacturing use on the industrial portion of the CFAC site would create good-paying jobs
- Development/annexation outside City limits
 - Would prefer to preserve areas across the River and focus housing development west and south of the City
 - Support bringing sewer service north of the railroad tracks
 - Would be good to get Aluminum City off of old/failing/unpermitted septic systems

Notes from
Focus
Groups are
on the
website



<https://columbia-falls-land-use-plan-ctagroup.hub.arcgis.com/>

Public Feedback on Existing Conditions

- Clarifications requested (most of which have been completed)
 - Further detail on certain data points
 - Methodology for the underutilization analysis
 - Land ownership
- Questions posed:
 - Why CFalls has fewer remote workers than neighboring communities

Community desires:

- Increased walk/bike-ability
- Reduce impacts from industrial uses
- Protect rivers, streams, and wetlands
- Preserve wildlife habitat and corridors
- Encourage density within City limits/near existing development and limit sprawl
- Considerations for the limits in existing Covenants in some subdivisions
- Shared parking model for downtown to concentrate parking to create more infill opportunity and loosen parking requirements

Public Feedback on Existing Conditions

- Not incorporated:
 - 500-year floodplain (not required or utilized in State in these types of planning documents)
 - Considerations of viewsheds in height restrictions (not in the scope of the Land Use Plan)

Columbia Falls Land Use Plan

Draft Existing Conditions Report – Submitted December 19, 2025

Data sources

- U.S. Census Decennial Survey
- U.S. Census American Community Survey (ACS) 5-year estimates.
- U.S. Census Longitudinal Employer-Household Dynamics (LEHD) data to evaluate employee commuting trends.
- Quarterly Census of Employment and Wages (QCEW) data from the Montana Department of Labor and Industry and the U.S. Bureau of Labor Statistics, and employment projections prepared by the Department of Labor and Industry.
- Flathead County property data, mapping information, vacation rental license data.
- Building permit and vacation rental license data from the city of Columbia Falls.
- Existing housing and development plans and studies in the Columbia Falls Area.

Some data was pulled directly from the following documents:

- 2019 Columbia Falls Growth Policy (which utilizes data from the 2005 Resource and Analysis document)
- 2025 Housing Needs Assessment
- 2021 Transportation Plan
- 2025 Water/Sewer PERs

Geographies

- “Columbia Falls” refers to the official city boundaries.
- “Columbia Falls Planning Area” is used for the land use and growth section and is an official boundary used by the City for land planning purposes.
- “Columbia Falls Area” is the 59912 zip code, used as a geography for U.S. Census data as a proxy for the city’s metropolitan area.
- “Kalispell Area” is the 59901 zip code, used as a geography for U.S. Census data as a proxy for the city’s metropolitan area.
- “Whitefish Area” is the 59937 zip code, used as a geography for U.S. Census data as a proxy for the city’s metropolitan area.

Natural Resources

Hydrology & Water Resources

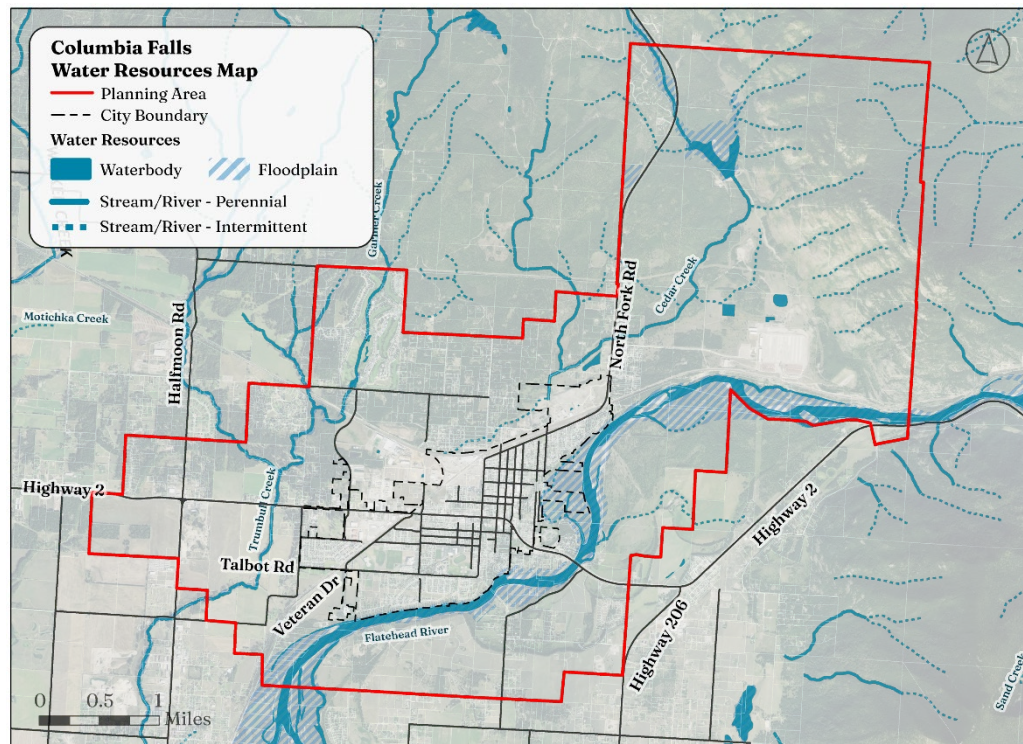
Water Quality

- Water quality continues to be an important issue to the community and ways to avoid nutrient loading and other forms of water contamination to the Flathead River basin become critical.
- Water quality has the potential to be degraded by development due to erosion, stormwater discharge, and on-site sewage treatment systems.

Surface Water

- A vast network of surface water flows through the planning area and along the southern border of the city.
- Prominent sources consist of Trumbull Creek, Garnier Creek, Cedar Creek, and the Flathead River.
- There are several small pockets throughout the area consisting of man-made bodies of water, such as small ponds and reservoirs.
- The Flathead Conservation District promotes management of natural resources, conservation projects, and administration of Montana's Natural Streambed and Land Preservation Act of 1975 for most of the Columbia Fall planning area.

Figure 1: Columbia Falls Planning Area Water Resources Map

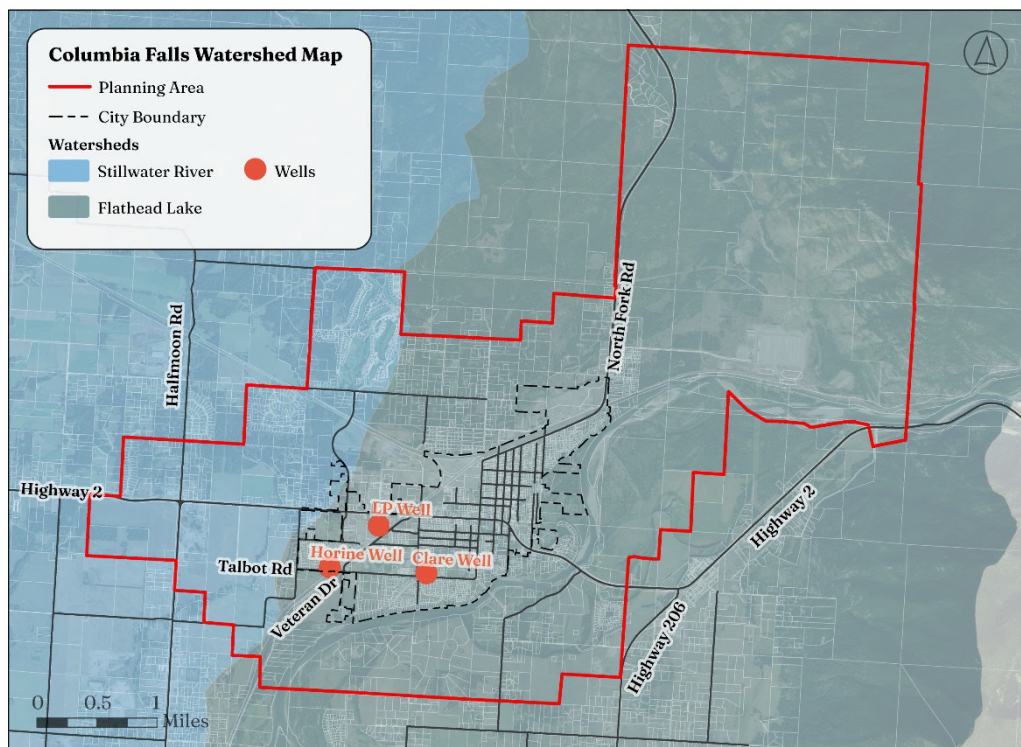


Source: Montana Hydrography and Watershed Boundaries Framework

Groundwater

- Columbia Falls and its planning area are situated on the border of two large watersheds, the Stillwater River watershed and the Flathead Lake watershed.
- These watersheds also make up a portion of a major river basin called Clark Fork/Kootenai River Basin.
- These groundwater resources feed into three main wells in the city, the LP well, the Horine well, and the Clare well.
- Groundwater used in the Flathead Basin is primarily from alluvial aquifers in the valley bottoms. All the major communities in Flathead County, except Whitefish - which uses surface water, rely on these shallow aquifers for their water supply.

Figure 2: Columbia Falls Planning Area Watershed Map

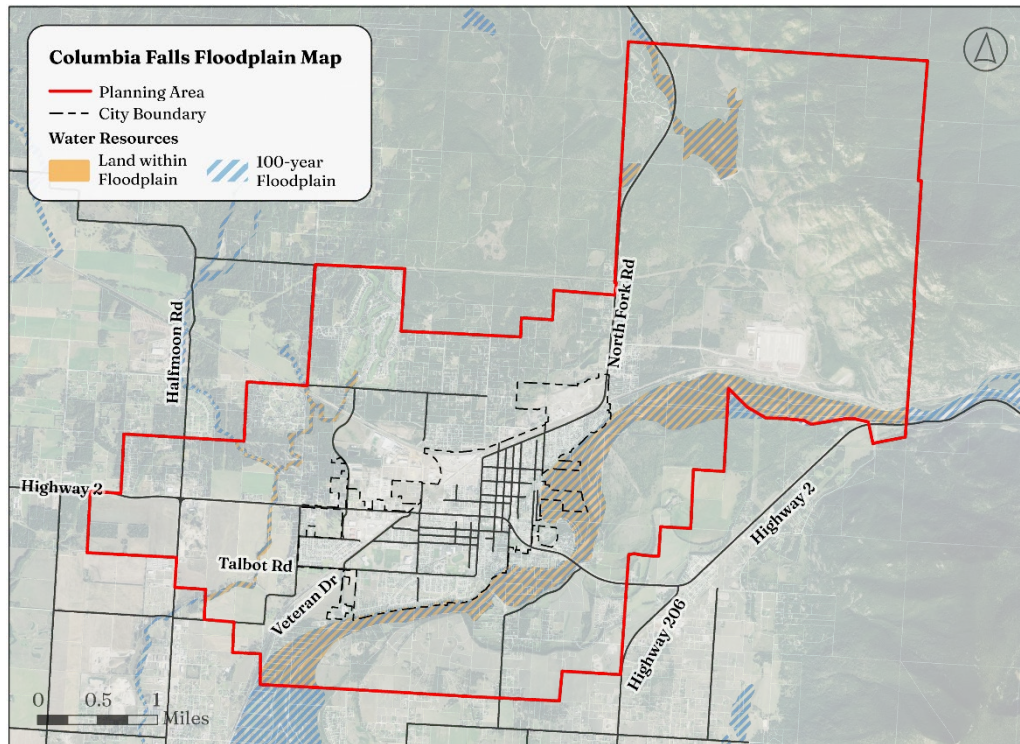


Source: City of Columbia Falls, Montana Hydrography and Watershed Boundaries Framework

Floodplain

- The Flathead River, which bisects the eastern portion of the planning boundary, creates a minimal floodplain area.
- This floodplain occupies 648.7 acres of the planning area boundary – not including the area of the Flathead River itself or any land inside both the 100-year floodplain and the city boundary. This equates to 5.2% of the planning area being within the 100-year floodplain.
- Within the boundaries of Columbia Falls, only around 61 acres fall within the 100-year floodplain – which equates to only 4.2% of the city's land area. These areas are primarily along the southern and eastern borders of the boundary.

Figure 3: Columbia Falls Planning Area Floodplain Map



Source: City of Columbia Falls, FEMA Flood Map Service Center

Wetlands and Hydric Soils

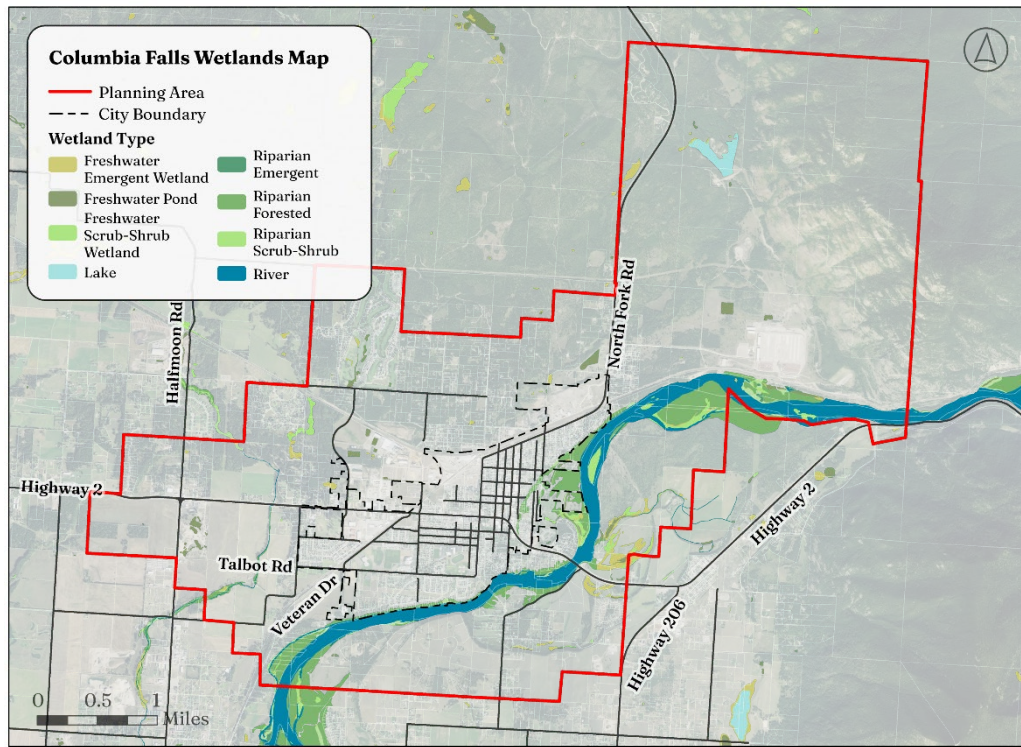
- The majority of wetlands found within the city boundary as well as the planning area are concentrated along the Flathead River.
- Most of the wetland types within the planning boundary consist of river and riparian forested types, with river making up 44.70% and riparian forested being 29.39%.

Table 1: Wetlands by Type

Wetland Type	Acres	Percent
Freshwater Emergent Wetland	83.54	7.77%
Freshwater Pond	57.51	5.35%
Freshwater Scrub-Shrub Wetland	75.13	6.99%
Lake	33.12	3.08%
Riparian Emergent	2.87	0.27%
Riparian Forested	315.89	29.39%
Riparian Scrub-Shrub	26.30	2.45%
River	480.35	44.70%

Source: The Montana Wetland and Riparian Framework

Figure 4: Columbia Falls Planning Area Wetlands Map

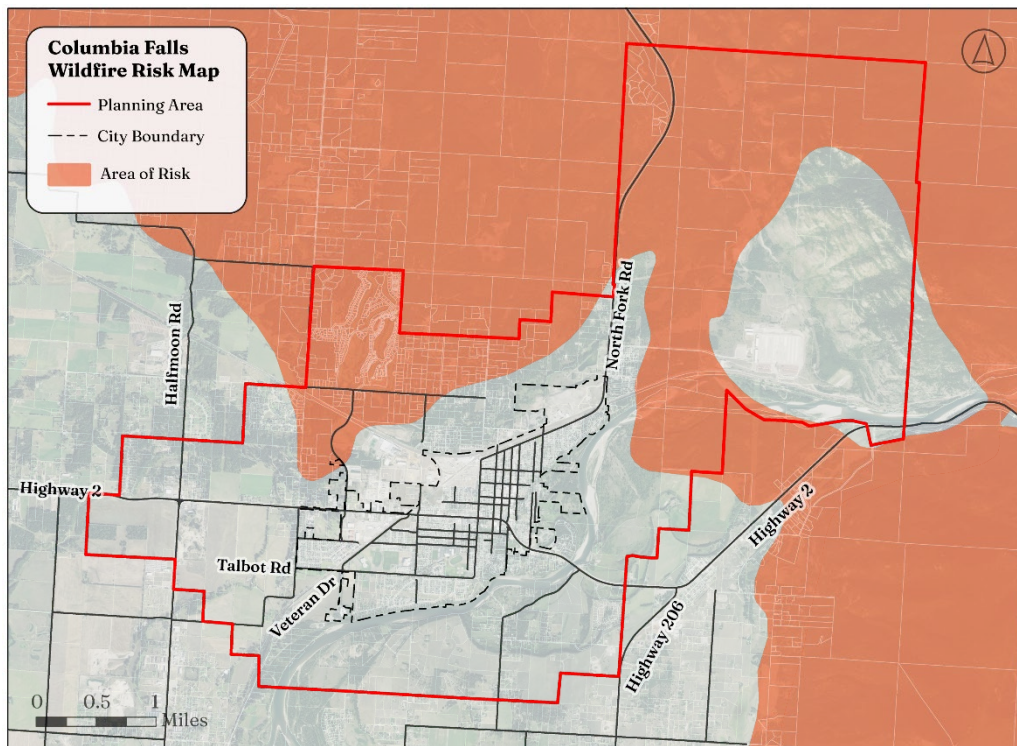


Source: The Montana Wetland and Riparian Framework

Air Quality

- The planning area is within and surrounded by multiple areas listed as fire risks, which could create major impacts on air quality in the event of a wildfire.

Figure 5: Columbia Falls Planning Area Wildfire Risk Map



Source: Montana Department of Natural Resources Conservation

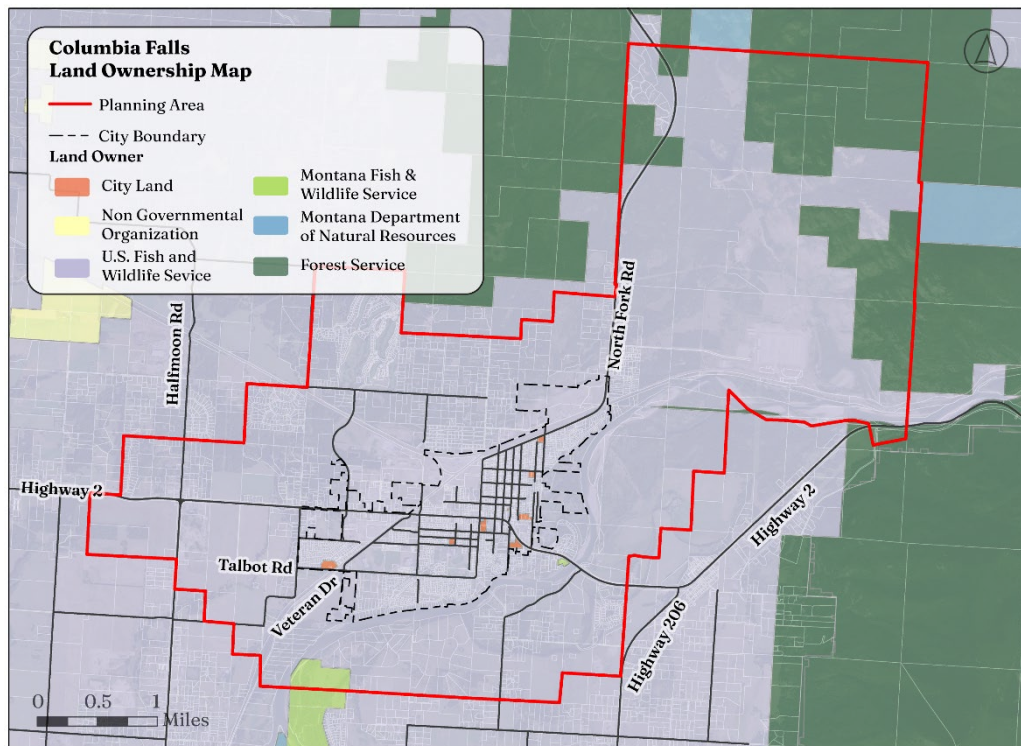
Soils

- The majority of soil within the city boundary consists of mires gravelly loam, with small pockets of various types of sand and gravel.
- Areas disturbed during development of subdivisions can contribute to erosion and the spread of noxious weeds if not properly re-vegetated and maintained.
- Continued growth and development in areas of the Planning Area where sand and gravel resources are currently found will result in continued land use conflicts and may limit the availability of these types of resources into the future.

Forest Resources

- Timber stands and corporate land ownership (Stoltze and Weyerhaeuser) with sizeable ownership by the Forest Service covers much of the northern portion of the jurisdiction.

Figure 6: Columbia Falls Planning Area Land Ownership Map



Source: USGS Protected Area Database, 2022

Wildlife

- Bad Rock Canyon Wildlife Management Area is a 772-acre area managed by Montana Fish, Wildlife & Parks just east of Columbia Falls along US Highway 2. The property sits at a geographic pinch point and helps connect large conservation lands on both sides of the Flathead River. It protects critical habitat and movement pathways for species like elk, moose, white-tailed deer, grizzly bears, bull trout, and many others.

Land Use Plan Implications

- The natural environment is an important part of what makes the area an appealing place to live, and could be jeopardized if growth is not managed through zoning oversight.
- Various sectors of the City's economy depend upon and impact the natural environment.
- Unregulated development of hillside areas may pose limitations due to soil disturbance and potential erosion.
- The Wellhead Protection Zone, floodplains, riparian zones, and stream outlets should continue to be protected.
- Between 2010-2020, 2,937,098 acres of Montana's forests have burned in wildfire events. Given the Planning Area's proximity to areas of high fire risk, Columbia Falls' Land Use Plan update should align with the Western Montana Regional Hazard Mitigation Plan.

- Most of the Flathead River along with its tributaries located in the valley floor flow through glacial outwash which makes up the river's floodplains and terraces. This severely limits construction along the southeast boundary of the City and through this portion of the Planning Area.
 - Development in the Flathead River floodplain should be limited to non-residential, low-impact uses (like parks, trails, agriculture).
 - Federal lands in the northern jurisdiction can be leveraged for recreation, conservation, and fire management.
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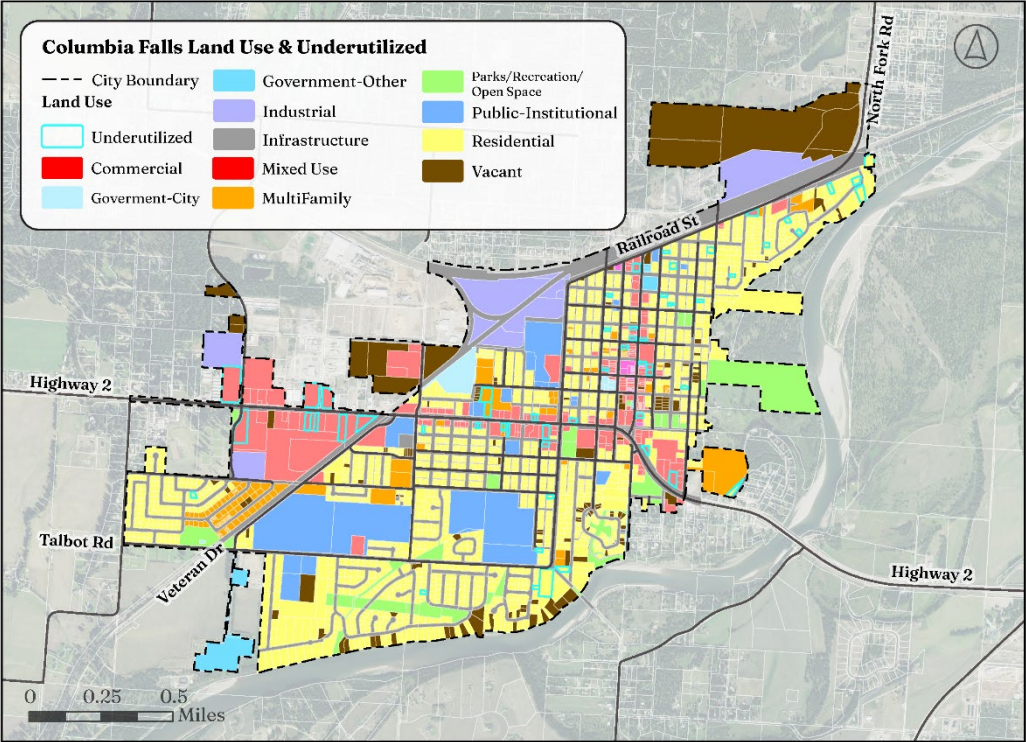
Land Use & Growth

Land Use

Existing Land Use & Underutilized Property

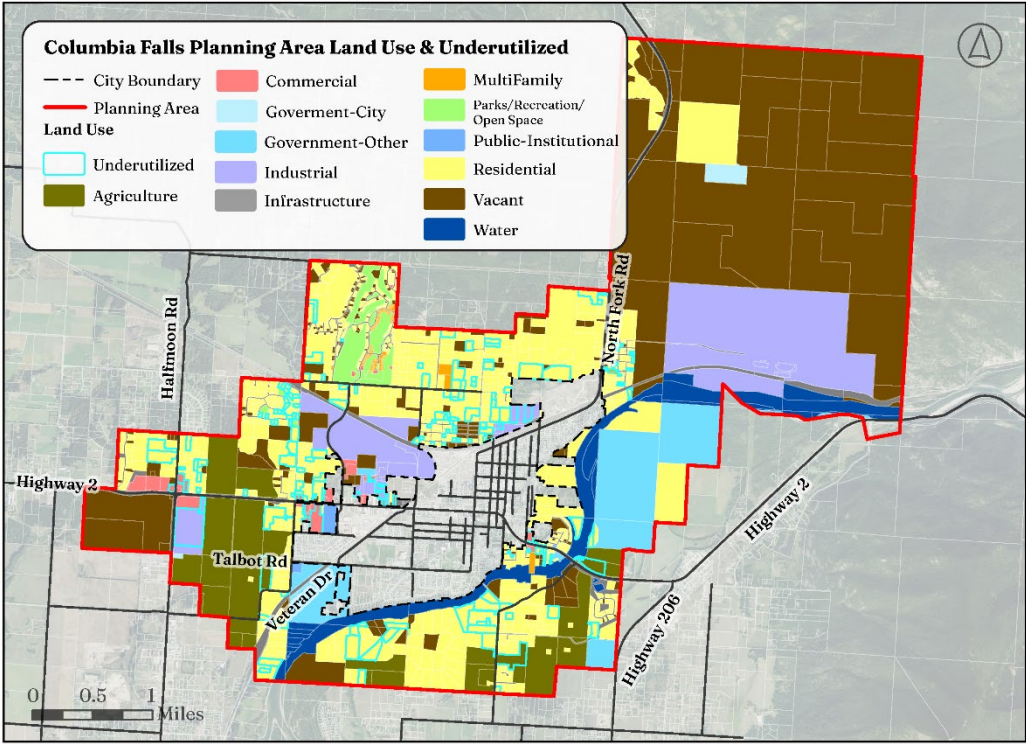
- Within the City of Columbia Falls, the most prevalent land use is residential, making up 30.7% of land area. Infrastructure is the second most prevalent land use making up nearly a quarter (24.4%) of land area within the City, a much higher proportion than in the Planning Area.
- Columbia Falls Planning Area's most prevalent land use is vacant land, 234 parcels or one third (34.7%) of its land area. A major contributor to this finding is the Columbia Falls Aluminum Company (CFAC) properties, which is largely undevelopable due to steep terrain and other ecological factors. There are 8 vacant CFAC parcels, totaling 1,565 acres, or 36% of vacant land area in the Planning Area. Residential land uses are the second most prevalent at over a quarter (26.0%) of land area, followed by Industrial land uses at 9.4% and Agricultural land uses at 8.7%. There are no mixed-use parcels in the Planning Area.
- 15.7% of the Planning Area and 39.8% of the City's land area is tax exempt because it falls into the Government-City, Government-Other, Infrastructure, Parks/Recreation/Open Space, or Public-Institutional category.
- A property is designated "Underutilized" when its land value is twice or more the value of its improvement or building. An underutilized parcel must have a building (not vacant), be at least 0.1 acres, and is not a tax exempt land use such as Government-City, Government-Other, Infrastructure, Parks/Recreation/Open Space, or Public-Institutional. There are 58 underutilized properties in the City totaling 33.9 acres and 175 properties in the Planning Area totaling 589.5 acres.

Figure 7: Columbia Falls Land Use and Underutilized Map



Source: City of Columbia Falls

Figure 8: Columbia Falls Planning Area Land Use & Underutilized



Source: City of Columbia Falls

Table 2: Existing Land Use, Columbia Falls

	Columbia Falls Planning Area				Columbia Falls			
	Area (ac)	% of Area	# Parcels	% of Parcels	Area (ac)	% of Area	# Parcels	% of Parcels
Agriculture	1,085.4	8.7%	32	1.5%	0.0	0.0%	0	0.0%
Commercial	107.2	0.9%	54	2.5%	141.7	9.7%	248	9.3%
Government-City	36.8	0.3%	2	0.1%	12.1	0.8%	10	0.4%
Government-Other	958.1	7.7%	13	0.6%	16.7	1.1%	12	0.4%
Industrial	1,173.7	9.4%	34	1.6%	75.0	5.1%	8	0.3%
Infrastructure	769.3	6.2%	246	11.2%	356.2	24.4%	257	9.6%
Mixed Use	0.0	0.0%	0	0.0%	2.7	0.2%	52	1.9%
Multifamily	36.0	0.3%	195	8.9%	58.0	4.0%	150	5.6%
Parks/Recreation/Open Space	161.2	1.3%	19	0.9%	71.5	4.9%	36	1.3%
Public-Institutional	22.4	0.2%	3	0.1%	125.7	8.6%	26	1.0%
Residential	3,250.4	26.0%	1322	60.4%	448.5	30.7%	1,743	65.1%
Vacant	4,345.1	34.7%	234	10.7%	154.8	10.6%	135	5.0%
Water	562.6	4.5%	33	1.5%	0	0.0%	0	0.0%
Total	12,508.0	100.0%	2,187	100.0%	1,462.7	100.0%	2,677	100.0%
Underutilized	589.5	4.7%	175	8.0%	33.9	2.3%	58	2.2%

Source: City of Columbia Falls

Zoning

- Columbia Falls' current Zoning Regulation was adopted in February 2020 and applies to land located within city limits.
- The extraterritorial jurisdiction extending about a mile (and in some places more than that) outside city boundaries, dissolved in 2024. As a result, the Flathead County Commissioners approved County zoning in the former "doughnut" around the city of Columbia Falls in October 2025.

Agricultural Districts

Agriculture Districts are divided into three districts. These districts resemble traditional county zoning, each allowing for a variety of traditional agricultural uses, low density residential development, and limited commercial uses.

- AG-20 AGRICULTURE
- CSAG-10 SUBURBAN AGRICULTURE
- CSAG-5 SUBURBAN AGRICULTURAL

Residential Districts

Residential Districts are distributed across six (6) different districts, each representing a different level of development intensity. Density is controlled by right through minimum lot size, maximum building coverage, and allowable uses.

- CR-1 SUBURBAN RESIDENTIAL 1 acre minimum lot size, SFD only

- CR-2 ONE-FAMILY LIMITED RESIDENTIAL 20,000sf minimum lot size with water/sewer infrastructure, SFD only
- CR-3 ONE FAMILY RESIDENTIAL 9,600sf minimum lot size & requires public utilities, SFD only
- CR-4 URBAN RESIDENTIAL 7,200sf minimum lot size requires public utilities, SFD only
- CR-5 TWO-FAMILY RESIDENTIAL 5,400 sf minimum lot size, allows SFD and two-family housing
- CRA-1 RESIDENTIAL APARTMENT 7,500sf SFD and two-family Dwelling allowed by right, MF buildings not allowed by right- Conditional Use only.

Commercial & Industrial Districts

Commercial and Industrial Districts are broken into seven (7) districts, each one intending to support different intensity uses and building forms. Residential uses are permitted (either by right or conditionally) in every district except CB-1 though density and minimum lot sizes.

- CB-1 NEIGHBORHOOD/PROFESSIONAL BUSINESS – No minimum lot size, no max lot coverage, max lot area of 5 acres, limited commercial uses permitted by right, no residential permitted. It is also not intended for buildings larger than 3,000 square feet.
- CB-2 GENERAL BUSINESS – No minimum lot size. SFD permitted by right, wide variety of commercial uses allowed, Accessory Apartment conditional use, no setbacks unless next to residential zone.
- CB-3 LIMITED BUSINESS – SFD permitted by right, limited commercial uses allowed by right, 9,600sf minimum lot size. Maximum lot area is 3 acres. It is not intended for buildings larger than 4,000 square feet.
- CB-4 CENTRAL BUSINESS – Mixed use permitted by right, but large buildings require a conditional use permit, wide variety of commercial uses allowed, no setbacks unless next to residential zone. No minimum lot size. Permitted density is unknown.
- CB-5 RESORT BUSINESS – SFD or two-family dwellings allowed by right, many uses listed as conditional. Minimum District size 5 acres.
- CI-1 LIGHT INDUSTRIAL- Variety of industrial and manufacturing uses allowed. Watchman/caretakers facility conditionally permitted. No minimum lot area.
- CI-2 HEAVY INDUSTRIAL- Limited industrial and manufacturing uses allowed. Watchman/caretakers facility conditionally permitted. No minimum lot area.

Public Districts

There is one district within the existing code that permits community facilities intended to serve the general public. These uses would include schools, public buildings, parks and open spaces, etc.

- CP-1 PUBLIC – SFD is the only residential use permitted. Limited commercial uses allowed. No minimum lot area.

Special Districts

- CPUD PLANNED UNIT DEVELOPMENT-Available to projects two acres or larger. Must meet additional criteria in order to provide flexibility to underlying code requirements. Any residential building types are permitted under CPUD. Density bonus available for many zones. Residential PUD not permitted in CSAG-20, CB-2, CB-4, CBR-4 or Industrial zones. Landscape, architectural design and parking included in PUD scope.

- MH MANUFACTURED HOME OVERLAY DISTRICT - that may be approved as a zone change in the CSAG-20, CSAG-10, CSAG-5, CR-1, CR-2, CR-3, CR-4, CR-5 and CRA-1 zone districts. Project must be a minimum of 10 acres in size. No additional flexibility in use or dimensional requirements are included. This will be updated to comply with the Montana Land Use Planning Act in 2026.
- CBR-4 RESORT BUSINESS – Requires an Overall Development Plan. Minimum Residential Lot Area: One single-family dwelling: seven thousand five hundred (7,500) square feet. Two-family dwelling or larger: additional two thousand (2,000) square feet for each dwelling unit in excess of one.

Residential Density

- Columbia Falls does not define a minimum density requirement in any zone, but does define minimum lot sizes for many zones (all residential zones and some commercial zones). Density is also controlled by limiting the type of housing permitted in each zone. Single family dwellings are permitted by right in a majority of zones, two-family dwellings are permitted in two zones and multi-family and mixed-use buildings are not permitted by right in any district. These building types are only allowed through the conditional use permit review and hearing process.
- Residential density bonus is available for projects with an approved PUD commensurate with the project's underlying zone.

Table 3: Density Bonus for Residential PUDs

Underlying Zone	Units allowed by right	Maximum PUD Density
CSAG-10	1 DU per 10 acres	1 DU per 10 gross acres
CSAG-5	1 DU per 5 acres	1 DU per 5 gross acres
CR-1	1 DU per 1 acre	1.5 DU per 1 gross acre
CR-2	2.18 DU per 1 acre	4 DU per 1 gross acre
CR-3	4.54 DU per 1 acre	7 DU per 1 gross acre
CR-4	6.05 DU per 1 acre	12 DU per 1 gross acre
CR-5	8.06 DU per 1 acre	12 DU per 1 gross acre
CRA-1	5.81 DU per 1 acre	15 DU per 1 gross acre
CB-1	no min lot area defined	20 DU per 1 NET acre
CB-3	4.35 DU per 1 acre	20 DU per 1 NET acre
CB-5	No min lot area defined	15 DU per NET acre

Source: City of Columbia Falls

Building Height

- Three stories tall is a typical residential building height permitted in Columbia Falls under current zoning code. Taller building Heights are only permitted in the General Business (CB-2), Industrial (CI-1 and CI-2) and Public (CP-1) zones. Building height regulations will be updated to comply with the Montana Land Use Planning Act in 2026.
- Columbia Falls limits building height to 35 feet in the most intensive residential and commercial zones.

Large Buildings

- “Large building” means a building in areas zoned B2 or B4 with a floor area of 10,000 square feet or more. Requires review and approval of a conditional use permit and architectural consideration for building mass, scale, materiality, and entrance.

Landscape

Landscaping shall not be less than 15% of the total lot area and shall include the retention of existing native vegetation to the maximum extent possible. Including:

- Perimeter landscaping
- Parking Lot Landscaping

Small Buildings

- “Small building” means any building in any commercial or residential zone, except suburban agricultural zones, that is not defined as a large building, excluding residential buildings that have fewer than five units. Requires review of architectural consideration for building mass, scale, materiality, and entrance.

Parking

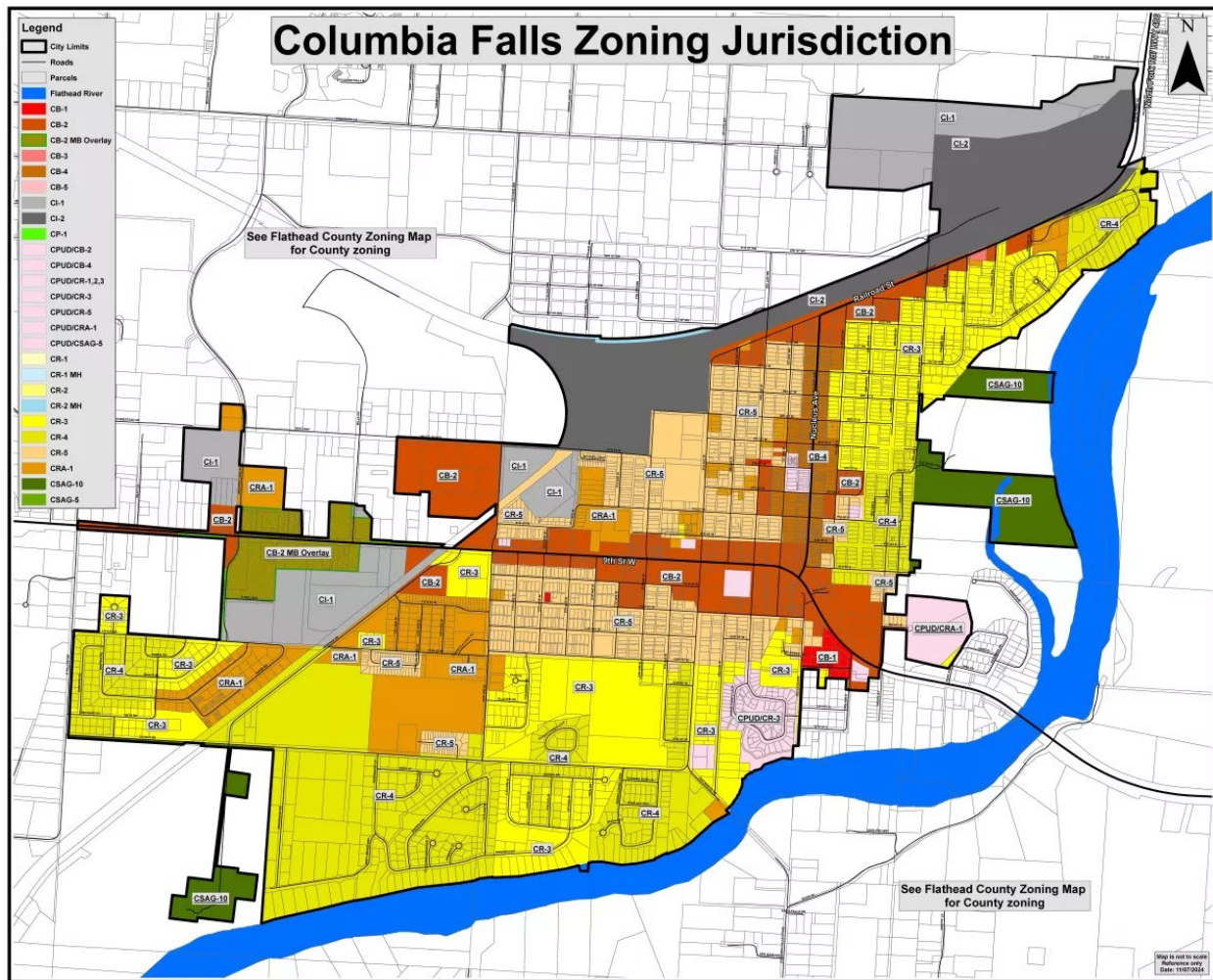
- Columbia Falls relies on minimum parking requirements calculated based on use. All residential uses are required to provide **two spaces per dwelling unit** regardless of zone or building form except for the Special Conditions defined for CR-1, CR-2, CR-3, CR-4, CR-5, CRA-1 CB-5 and CB-1, CB-2, CB-4, CI-1, CI-2. Parking requirements will be updated to comply with the Montana Land Use Planning Act in 2026.
- Commercial parking requirements vary depending on use and building size but are the same in each zone except for the Special Conditions defined for CR-1, CR-2, CR-3, CR-4, CR-5, CRA-1 CB-5 and CB-1, CB-2, CB-4, CI-1, CI-2.

Industrial District Buffer

Columbia Falls has multiple industrial sites located within city limits. To protect health, safety, and welfare, these provisions separate incompatible or different uses through additional landscape buffering.

- Buffer width is dependent on the uses and can vary between 10- 20 ft.
- Buffer height must be ultimately 10ft and provide no less than 70% screening.

Figure 9: Columbia Falls Zoning Map



Source: City of Columbia Falls

Table 4: Zoning Characteristics

Zoning Designation	Zoning ID	Area (ac)	% of Area
Central Business	CB-4	30.6	2.1%
Central Business w/Planned Unit Development	CPUD/CB-4	3.0	0.2%
General Business	CB-2	154.5	10.6%
General Business w/Marijuana Business Overlay	CB-2 MB Overlay	32.0	2.2%
General Business w/Planned Unit Development	CPUD/CB-2	4.6	0.3%
Heavy Industrial	CI-2	150.3	10.3%
Light Industrial	CI-1	124.4	8.5%
Limited Business	CB-3	0.7	0.0%
Limited Business w/ Planning Unit Development	CPUD/CB-3	22.5	1.5%
Neighborhood/Professional Business	CB-1	6.3	0.4%
One-Family Limited Residential w/ Manufactured Home Overlay	CR-2 MH	3.1	0.2%

One-Family Residential	CR-3	244.9	16.8%
Public	CP-1	1.8	0.1%
Residential Apartment	CRA-1	121.3	8.3%
Residential Apartment w/ Planned Unit Development	CPUD/CRA-1	13.9	1.0%
Resort Business w/ Planned Unit Development	CPUD/CR-5	0.7	0.0%
Suburban Agriculture	CSAG-10	58.5	4.0%
Suburban Residential	CR-1	0.0	0.0%
Suburban Residential w/ Manufactured Home Overlay	CR-1 MH	0.0	0.0%
Two-Family Residential	CR-5	185.5	12.7%
Urban Residential	CR-4	301.7	20.7%

Source: City of Columbia Falls

Land Ownership

- Land within the Columbia Falls Planning Area is primarily locally controlled with over 70% of parcels owned by City residents.
- There is a small amount of out of state ownership in the Columbia Falls Planning Area. This outside ownership is primarily larger parcels.

Table 5: Land Ownership, Columbia Falls & Planning Area

	Columbia Falls Planning Area				Columbia Falls			
	Area (ac)	% of Area	# Parcels	% of Parcels	Area (ac)	% of Area	# Parcels	% of Parcels
Live in CF	3,593.3	41.7%	1,285	71.7%	816.3	71.2%	1,697	71.2%
Live in MT, outside CF	1,718.1	19.9%	268	15.0%	206.8	18.0%	475	19.9%
Live outside MT	3,310.1	38.4%	239	13.3%	123.4	10.8%	213	8.9%
Total	8,621.4	100%	1,792	100%	1,146.5	100.0%	2,385	100.0%

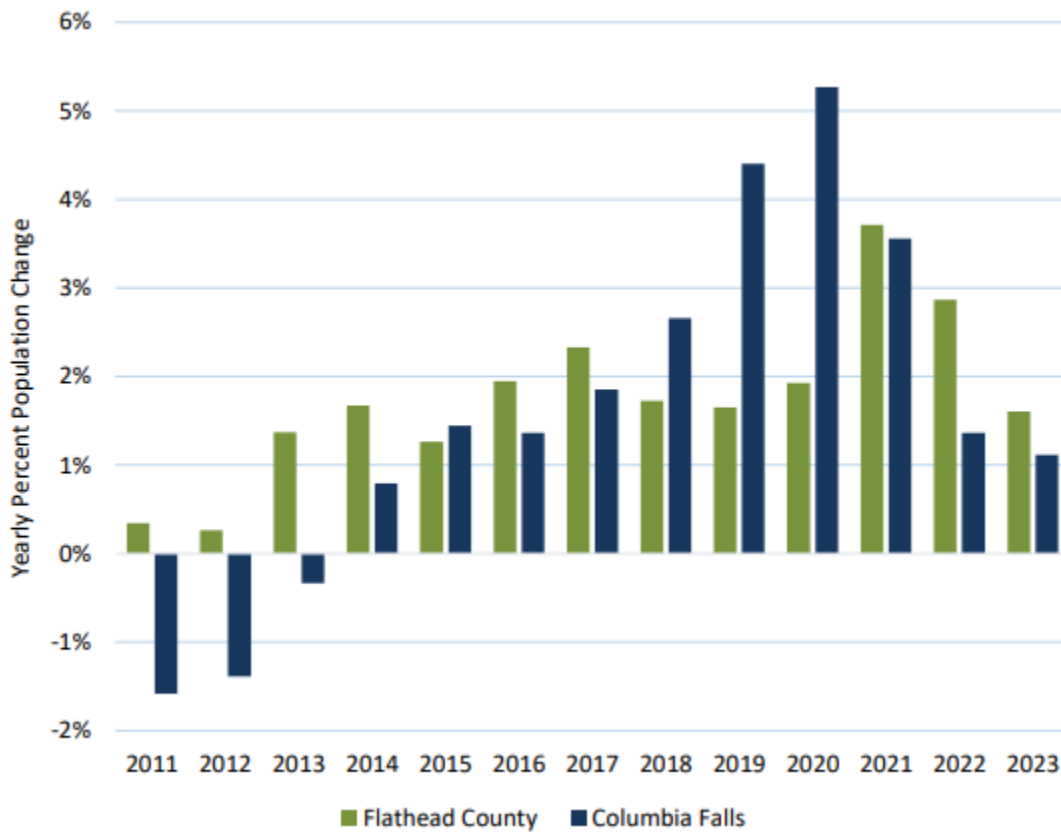
Note: parcels without owner information omitted.

Source: Montana State Library GIS

Population Growth & Projections

- The City lost population following the 2008 recession and 2009 closure of the Columbia Falls Aluminum Company. The City also recovered from the recession slower than other areas and continued to lose population until 2014. The County, however, showed modest growth throughout this period.
- Between 2018 and 2020, the City grew much faster than the County and other cities, breaking its typical trend of slower growth. The City grew at a rate of 4.8% per year compared to 1.8% in the County, 3.9% in Whitefish, and 3.1% in Kalispell.
- Beginning in 2021, the City's population has been growing more slowly than the County and notably more slowly than Kalispell and Whitefish, returning to 2015/2016 growth rates.
- The City of Columbia Falls estimates a 20-year 1.8% lower bound growth rate and a 2.3% upper bound growth rate. Based on 2024 US Census population estimates combined with City building permit data, it's estimated the current 2025 population in Columbia Falls is 5,733. From there, the 1.8% and 2.3% linear growth rates are applied. Based on this forecast, Columbia Falls could have between 2,458 and 3,301 additional residents for a total population between 8,191 and 9,034 people by 2045.

Figure 10: Historical Population Change, Columbia Falls and Flathead County



Source: U.S. Census Population and Housing Units Estimates Program (compiled by the Montana Department of Commerce)

Table 6: Population Growth Projections

	1.8%	Cumulative Growth	2.3%	Cumulative Growth
2024	5,713	-	5,713	-
2025	5,733	20	5,733	20
2026	5,836	103	5,865	132
2027	5,941	208	6,000	267
2028	6,048	315	6,138	405
2029	6,157	424	6,279	546
2030	6,268	535	6,423	690
2031	6,381	648	6,571	838
2032	6,496	763	6,722	989
2033	6,612	879	6,877	1,144
2034	6,732	999	7,035	1,302
2035	6,853	1,120	7,197	1,464
2036	6,976	1,243	7,362	1,629

2037	7,102	1,369	7,532	1,799
2038	7,229	1,496	7,705	1,972
2039	7,360	1,627	7,882	2,149
2040	7,492	1,759	8,063	2,330
2041	7,627	1,894	8,249	2,516
2042	7,764	2,031	8,439	2,706
2043	7,904	2,171	8,633	2,900
2044	8,046	2,313	8,831	3,098
2045	8,191	2,458	9,034	3,301

**2024: US Census, July 1, 2024 estimate*

**2025: City of Columbia Falls, estimated 20 person growth*

**2026 - 2045: Linear 1.8% (lower bound) or 2.3% (upper bound) linear growth rate projection*

Source: City of Columbia Falls

Land Use Plan Implications

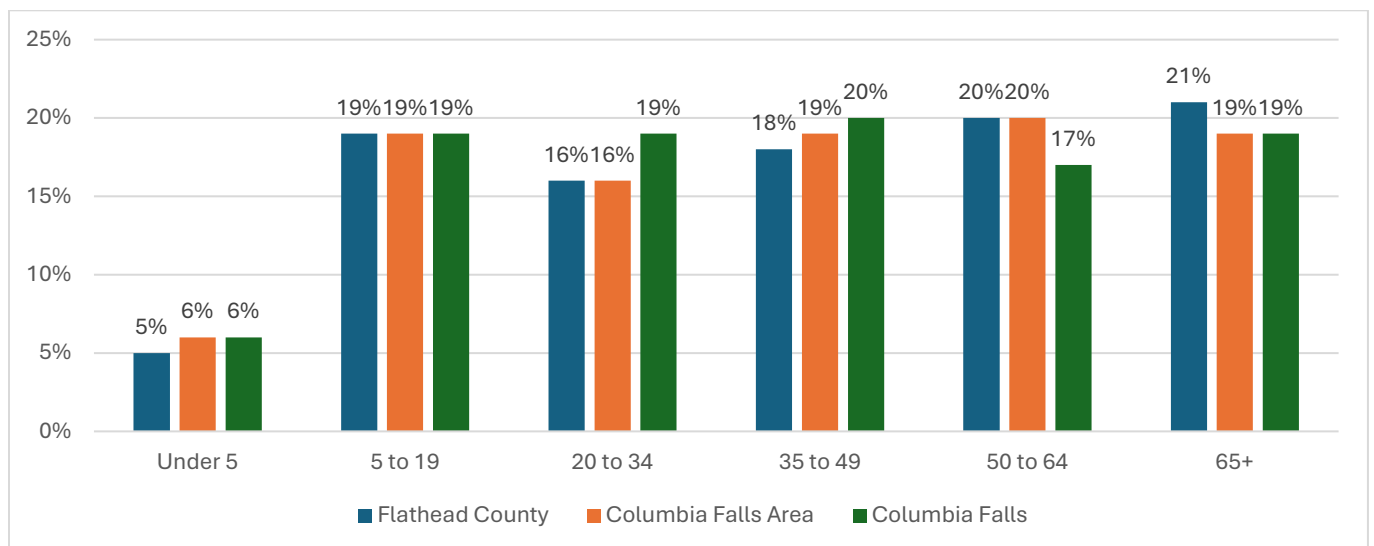
- The City has physically grown 38% in the past 25 years, however, with current growth, there is limited vacant developable land within the City for significant residential, commercial, or industrial use. Future growth will occur through annexation and development of vacant lands on the perimeter of the City.
- Low density development in outlying areas has been the predominant local growth pattern of recent decades, creating inefficiencies in providing services.
- There are 135 vacant lots within the City and 234 in the Planning Area that present opportunities for new development. Additionally, there are 58 underutilized parcels within the City and 175 in the Planning Area that have redevelopment potential.
- The City should consider creating an Affordable Housing Incentive program that allows density bonuses and building height flexibility in exchange for deed-restricted, permanently affordable housing.
- The City should evaluate whether existing parking requirements provide the City with the most desirable and highest and best land use, and will need to update them to comply with the Montana Land Use Planning Act. Consider adding provision for flexibility outside of PUD.
- Relying on the use of minimum lot size to control density can create difficulties for communities wishing to promote infill development over sprawl. Consider the pros/cons of replacing with a defined maximum or minimum density.
- The City will need to update current building height limits to comply with the Montana Land Use Planning Act. Industry design standards typically rely on 10ft floor to ceiling stories. Building height limitations, minimum lot area, parking, and maximum building area may constrain development of higher density development within close proximity to existing City infrastructure.
- Evaluate whether Large Building and Small Building architectural standards are encouraging the type of development that align with City goals and priorities. If it is, consider adopting these standards in all zone districts.

People & Community Services

Demographics

- The age distribution of the Columbia Falls Area and Flathead County are very similar, with populations averaging just over 42 years of age.
- The City of Columbia Falls is slightly younger (38.5 years on average) than the County. The City has a higher percentage of working age residents between the ages of 20 and 49, with a slightly lower percentage of persons 65 and older.
- Persons ages 65 and older were the fastest growing segment of the population throughout the Valley between 2010 and 2020, increasing in number from 60% to 75% during the decade. The City also had a notable 19% increase in persons between the ages of 35 and 49. Just under one-third of households in the county (32%) and 27% in the City have a person age 65 and older.
- The 2023 5-year ACS indicates that the working population between the ages of 35 and 64 continued to increase in the City and Columbia Falls Area, with a corresponding decline in the percentage of households age 65 and over. This rise coincides with people moving in post-COVID, as well as job growth in the Columbia Falls Area during this period, helping to attract new working professionals.

Figure 11: Age Distribution, 2020



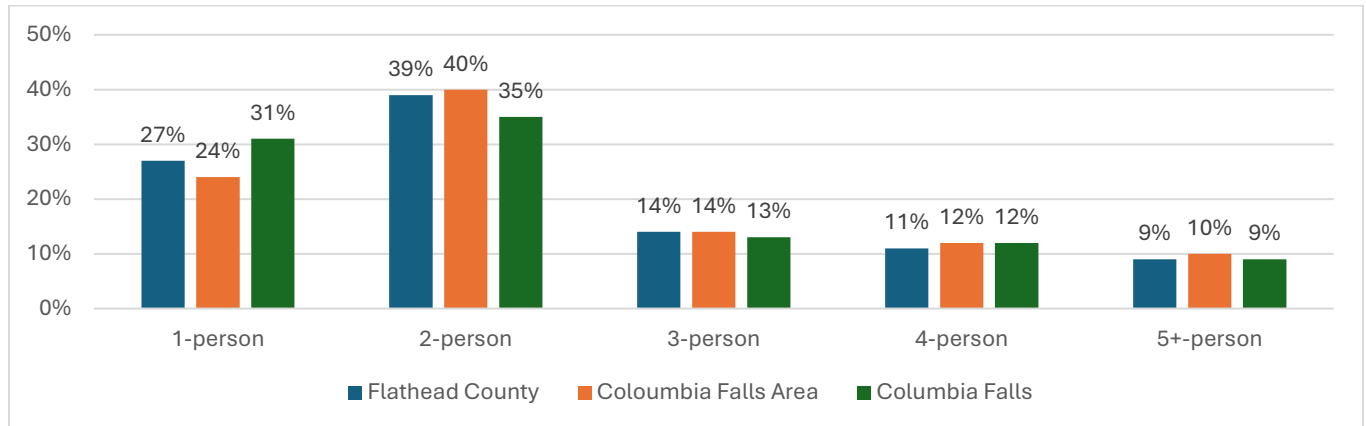
Note: may not sum to 100% due to rounding

Source: U.S. Census Bureau Decennial Census 2020

- Households in Columbia Falls average about 2.5 people per household, similar to the County and Columbia Falls Area. Kalispell's household size is slightly lower (2.4) and Whitefish has the lowest average household size of the County's municipalities at 2.0 people per household. The average household size shows little change through 2023.
- The distribution of households by size in the County, Columbia Falls Area and Columbia Falls is similar, with two primary exceptions:
 - The Columbia Falls Area has a lower share of people living alone than the city or county.

- The city has a lower share of 2-person households (35%) than in the Columbia Falls Area and Flathead County (about 40%).

Figure 12: Household Size, 2020



- The distribution of households by type in Columbia Falls differs from the County and other County jurisdictions. The share of couples without children is lower than in Flathead County and the Columbia Falls Area, whereas the share of people living alone is higher. The distribution of households by type in the City is more closely aligned with Kalispell and Whitefish than the Columbia Falls Area and County.
- The 2023 5-year ACS indicates there has been little change to household type distributions in the County, but shows a potential rise in single parent households in the Columbia Falls Area and the City. Single parent households often find it more difficult than other types of households to afford housing.

Table 7: Household Type, 2020

	Flathead County	Columbia Falls Area	Columbia Falls
Couple, without children	35%	36%	27%
Couple, with children	17%	18%	17%
Single parent households	7%	7%	9%
Other family households, without children	7%	7%	7%
Living alone	27%	24%	31%
Other non-family households (e.g., roommates)	7%	7%	9%

Note: may not sum to 100% due to rounding

Source: U.S. Census Bureau Decennial Census 2020

- The number of families with children increased in Flathead County between 2010 and 2020 by about 2% (176 households). Despite this, because other household types grew at a faster rate, the ratio of total households in the County with children declined from 27% of households in 2010 to 24% in 2020.
- The percentage of families with children dropped by six (6) percentage points in the City of Columbia Falls during this same decade (from 32% in 2010 to 26% in 2020), due both to a slight loss in the number of family households with children (about 30 households lost), as well as stronger growth in non-family households.
- Although the decline in the percentage of households with children is a national trend, the faster rate of loss in the City compared to the County indicates families are experiencing financial hardship in the City.

Ensuring housing is available and affordable for young families to grow in the Columbia Falls Area will help retain these households.

Table 8: Change in Household Type Distribution, 2010-2020

	Flathead County	Columbia Falls Area	Columbia Falls
Families with children	-3%	-4%	-6%
Families without children	2%	2%	1%
Living alone	0%	1%	2%
Other non-family	0%	1%	3%

Source: U.S. Census Bureau Decennial Census (2010 & 2020)

Public Facilities

Water System

- The City exclusively uses groundwater from the Flathead Valley Deep Alluvial Aquifer for its water supply, which it does not treat due to its high-water quality.
- The City maintains a 2 million gallon storage tank and three operational wells.
- City maintains approximately 44 miles of transmission and distribution piping and 345 fire hydrants. The water system pipes include PVC, galvanized iron, cast iron, ductile iron, asbestos cement, steel, and HDPE. Pipe sizes range from ¾" to 16". Pipe ages in the older sections of the system were installed in the 1950s to the 1970s.
- The average daily demand is 1.24 MGD, maximum daily demand is 3.49 MGD, and peak hourly demand is 6.98 MGD.
- The 2025 Water Preliminary Engineering Report found that:
 - The system has a single pressure zone with static pressures ranging from 60 psi to over 110 psi. The system currently experiences pressures in excess of DEQ's recommended maximum system pressure, 60-80 psi with a maximum of 100 psi. Property service lines have individual pressure reducing valves which keep the system within DEQ recommendations, but the higher unregulated pressure in the distribution system adds additional wear on the infrastructure.
 - Pipe age, material, and sizes restrict available fire flow
 - Allowable land uses in the zoning equate to certain fire flow criteria that cannot be met in some portions of the system
 - Source well capacity appears to be undersized for current conditions, so an additional well will be needed
 - Redundancy and additional capacity are needed for the transmission main and storage tank

Sewer System

- Columbia Falls operates a biological nutrient removal wastewater treatment plant, which was upgraded in 2025 to an advanced 5-stage Bardenpho process bioreactor.
- The treatment plant can treat 0.71 MGD, and with population projections, will meet full capacity in 2035.
- There are still approximately 47 properties served by individual septic systems within the City from historical use.

- The City serves the Meadow Lake Water and Sewer District one mile north of the City by private contract. The 48-year service contract was signed in 1984 and will expire in 2032. Meadow Lake Water and Sewer District utilizes 15-18% of the wastewater treatment plant capacity.
- The remainder of areas outside the City have no access to public sewer treatment and use individual septic tank and drain field.

Stormwater Management

- The Department of Environmental Quality (DEQ) and Montana Department of Transportation (MDT) are responsible for stormwater management and water runoff in Columbia Falls Planning Area. DEQ also requires municipalities develop a stormwater management program. The six criteria in the program must include:
 - Public education and outreach
 - Public participation/involvement
 - Illicit discharge detection and elimination
 - Construction site stormwater runoff control
 - Post-construction stormwater management
- The 2005 Public Works Standards provides detailed on the types of required improvements, basis for required improvements, and the general design of the improvements including design size, discharge design, easements, and discharge in wellhead zone.

Solid Waste Disposal

- The City of Columbia Falls does not provide solid waste collection. A private firm, Evergreen Disposal provides contract service to all residents and businesses in the City and Planning Area.
- Flathead County administers the County Landfill Site 6 miles south of Whitefish on US 93. Based on current and projected solid waste flows, Flathead County estimates that it has capacity to operate the landfill through 2055.
- Flathead County offers a “green box” site on the northwest side of Columbia Falls where residents can deposit their waste at no charge for collection.

Police

- The Columbia Falls Police Department (CFPD) has primary law enforcement responsibility within city limits, the Flathead County Sheriff’s Office (FCSO) is responsible for areas outside the City.
- The Columbia Falls Police Department has a Chief, (2) Sergeants, (1) Detective, (9) Patrol Officers, and one office professional. CFPD maintains a single temporary holding cell where persons can be detained until transferred to the Flathead County Detention Center. The department also maintains an Intoxilyzer for DUI processing.
- Columbia Falls Police and Fire are part of the Flathead Emergency Communications Center (FECC), a consolidated 911 Communications Center located in Kalispell. The FECC receives calls and dispatches for three municipal police departments and the County Sheriff’s Office. This Center handles all emergency call taking and dispatching for law enforcement, fire, and ambulance in Flathead County.
- The Sheriff anticipates slow emergency response times and minimal routine patrolling in outlying areas, due to understaffing and dispersed population growth. Response time in the rural portion of the Planning Area is limited because of its vastness. Due to the expansive size of Flathead County, the FCSO may have

extended response times. As such, the CFPD will assist the FCSO in the north end of Flathead County, responding to emergency calls.

- All misdemeanor arrests occurring in city limits are adjudicated through the Columbia Falls Municipal Court.

Fire

- Columbia Falls Fire Department (CFFD) is a hybrid department comprised of 1 full-time paid chief, 3 full-time paid career staff, and 30 volunteers. In 2026, the Department maximized enrollment at 34 members. CFFD has two fire stations: the city station, on 1st Ave in Columbia Falls with six in-service apparatus, and the rural fire station, on U.S. Highway 2 with four in-service apparatus.
- CFFD provides all-hazard emergency services to the City of Columbia Falls and most of the Planning Area North and West of the Flathead River. The areas east and south of the river fall under the jurisdiction of the Badrock Volunteer Fire Department, which operates a main station on U.S. Highway 206 and a rural station on Middle Road.
- CFFD participates in a mutual aid network with all neighboring fire departments. These standing agreements ensure coordinated automatic responses to structure fires and provide coverage in situations where staffing or resources are limited.
- Volunteer members are required to respond to at least 7% percent of annual calls and complete a minimum of 30 hours of training each year. Outside of Career Firefighter working hours, weekdays from 9:00 a.m. and 5:00 p.m., the City relies entirely on volunteer firefighter response.
- CFFD responds to more than 400 incidents annually. Emergency medical service (EMS) calls within the Planning Area are handled by Three Rivers EMS, a private provider covering approximately 1,400 calls per year across a broader regional service area.
- Major transportation corridors, including U.S. Highway 2 and the Burlington Northern Santa Fe (BNSF) railway line, present an elevated risk for hazardous materials incidents. During such events, CFFD coordinates with regional HazMat response teams based in Kalispell and Missoula
- CFFD currently holds an Insurance Services Office (ISO) rating of 5 for both areas inside and outside City limits.

Hospital/EMS

- Major healthcare providers within Columbia Falls includes:
 - Logan Health – operates a primary care facility, rehabilitation center, and pharmacy in the Columbia Falls Area.
 - Glacier Medical Associates Cedar Palace – operates a primary care facility
 - Other family practices also exist within the City.

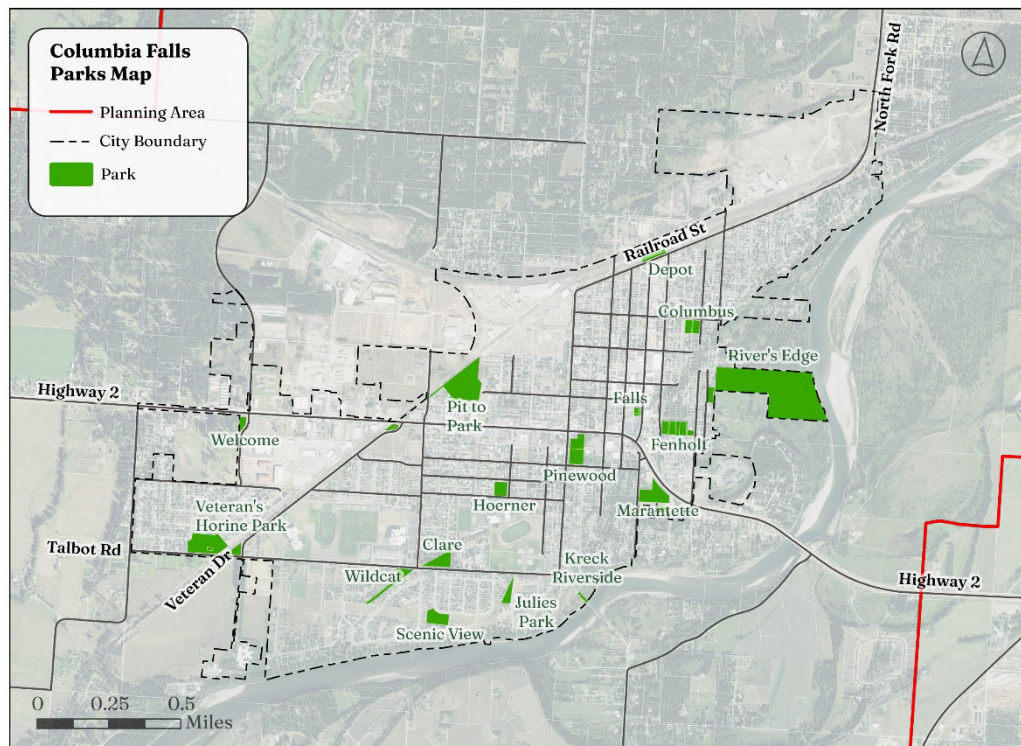
Parks & Recreation

- The City currently manages 12 public parks which are accessible to residents and visitors. River's Edge Park, encompassing approximately 27.7 acres, is the City's sole community or regional park. The remaining parks within the Planning Area each measure six acres or less, are classified as neighborhood parks.
- The 2019 River's Edge Park Master Plan outlines the long-term vision and priorities for the City's largest recreation area. Upcoming projects in 2026 will enhance fishing pond accessibility and improved

informational signage concerning the City's History, Flathead River, and Bear Awareness and Safety. A parking area expansion is also planned within the next five years to accommodate increased visitation.

- School District No. 6 facilities provide additional recreational opportunities for public use outside of school hours, including access to playgrounds, basketball and volleyball courts, soccer and softball fields, and running tracks.
- Since 2006, Columbia Falls is a designated Tree City USA community, Columbia Falls continues to promote urban forestry by planting an average of five to ten new trees each year through municipal and grant-supported programs.

Figure 13: Columbia Falls Parks Map



Source: City of Columbia Falls

Schools & Childcare

- All residents of Columbia Falls and the surrounding Planning Area are served by Columbia Falls School District No. 6. Geographically, District 6 is the largest school district in Montana, encompassing a substantial portion of northern Flathead County.
- The District has two K-5 elementary schools – Ruder Elementary and Glacier Elementary, Columbia Falls Junior High serving grades 6-8, and Columbia Falls High School serving grades 9-12. Between 2020 and 2022, the District completed major construction and renovation projects at both elementary schools, modernizing facilities to align with current safety and educational standards. In contrast, Columbia Falls High School remains an aging facility requiring significant improvements to meet the community's future educational and safety needs.
- In Fall 2025, the district had 2,161 students enrolled, down from 2,216 in the previous year.

Other Community Services

Senior Services

- North Valley Senior Citizens Center, located in Columbia Falls, leads the local “Meals on Wheels” program and includes fitness/wellness services.
- Flathead County Agency on Aging, located in Kalispell, provides additional services and programming for those aged 60 and older in the County.

Library

- The Columbia Falls Library branch of the Flathead County Library system is located at 130 6th Street West, #C. It is open Monday-Friday, 10am-6pm and Saturday, 10am-2pm.

Higher Education

- Flathead Valley Community College is located north of Kalispell and approximately 18 miles from Columbia Falls. It had an enrollment of 615 full-time and 1,586 part-time students in 2023. Programs include vocational and academic programs and the school offers two-year associate degrees and certificates.

Land Use Plan Implications

- As the 65+ age group grows, the community could benefit from senior housing developments to better meet the needs of the aging population while simultaneously freeing up larger housing types for families (a demographic that’s growing slower than other household types).
 - As population increases in the rural area, crime may increase at least proportionately and the issue of adequate rural police protection will become even more critical.
 - Water and sewer fees are some of the lowest in Montana. Fee structure should continue to be analyzed to sustain long-term capital improvements to both systems that would facilitate future growth within city limits.
 - With the recent completion of Gateway Glacier Elementary school, Columbia Falls has capacity for current and future elementary aged children.
 - The community should continue to collaborate with Flathead Valley Community College and local businesses to support job growth, and an avenue for Columbia Falls children to stay local if they choose.
-

Urban Design / Historic & Cultural Facilities

Town Center (Nucleus Avenue)

- Over the last 10 years, Columbia Falls and its residents and business owners have worked to revitalize the town center, Nucleus Avenue. Entrepreneurs have constructed several new buildings and remodeled others. There are still a number of buildings that are underutilized and need maintenance but land and business owners are investing in the downtown.
- The town center area has a traditional grid style layout.

Design Standards

- The City implemented design standards in 2007 for commercial buildings in the Commercial and Industrial zone districts.
- In 2008, the City implemented the “Industrial Buffer” provisions that require landscaping to buffer these intensive land uses from residential uses.
- The City has reviewed and updated the sign regulations several times over the last 15 years.

Historic Resources

- The Montana Veterans’ Home has several historic buildings dating over 100 years old. Support for the Veterans’ Home has funded substantial improvements and restorations to the historic service building, Old Main, and the supervisors quarters.
- Other structures listed on the National Register of Historic Places in Columbia Falls include the Flathead River Bridge and St. Richard’s Church.
- The Columbia Falls Historical Society is a 501©(3) nonprofit organization, established in 2008 to preserve the history of the northeast corner of Flathead County including: Columbia Falls, Hungry Horse, Martin City, West Glacier, Glacier National Parks, and the Flathead River. The Historical Society runs a museum at 639 9th Street West, where the public can learn about the area’s history.

Cultural Facilities

- Don Lawrence Amphitheater hosts concerts and community events.
- Flathead County Public Library has a location in Columbia Falls and provides educational and recreational materials, programs, and resources.
- Columbia Falls is in close proximity to Flathead National Forest and Glacier National Park.

Land Use Plan Implications

- Columbia Falls is the gateway to Glacier National Park and as such, design standards should create a positive representation of the City, while emphasizing Columbia Falls’ identity as a community integrated with nature, supporting recreation-oriented businesses and eco-friendly development.
- The traditional grid supports walkability, which emphasizes pedestrian-friendly design, bike lanes, and public gathering spaces.
- New commercial development continues to develop along 9th Street.
- Nucleus Avenue is the downtown core of Columbia Falls with coffee shops, bars, restaurants, gift shops, businesses, multi-family residential buildings, and grocery stores.
- Underutilized buildings can be targeted for mixed-use redevelopment, affordable housing, or incubator spaces for small businesses.
- The “Industrial Buffer” provisions highlight the importance of zoning transitions, suggesting future land use maps should reinforce clear separations between heavy industry and neighborhoods.
- Proximity to Flathead National Forest and Glacier National Park positions Columbia Falls as a staging area for tourism, requiring land use strategies for lodging, visitor services, and trail connectivity.

Housing

Housing Inventory

Housing Supply

- The City of Columbia Falls has about 2,600 housing units. The City's housing stock represents about 34% of the Columbia Falls Area's housing stock and just 5% of Flathead County's stock. Since 2010, the City's housing stock has increased by almost one-third (30%), outpacing residential growth in the larger Columbia Falls Area and the County.
- About 90% of housing units in the City are occupied by local residents. Unoccupied units primarily represent homes used for seasonal/vacation use, including short-term rentals. Occupancy rates show little change since 2010.

Table 9: Dwelling Units

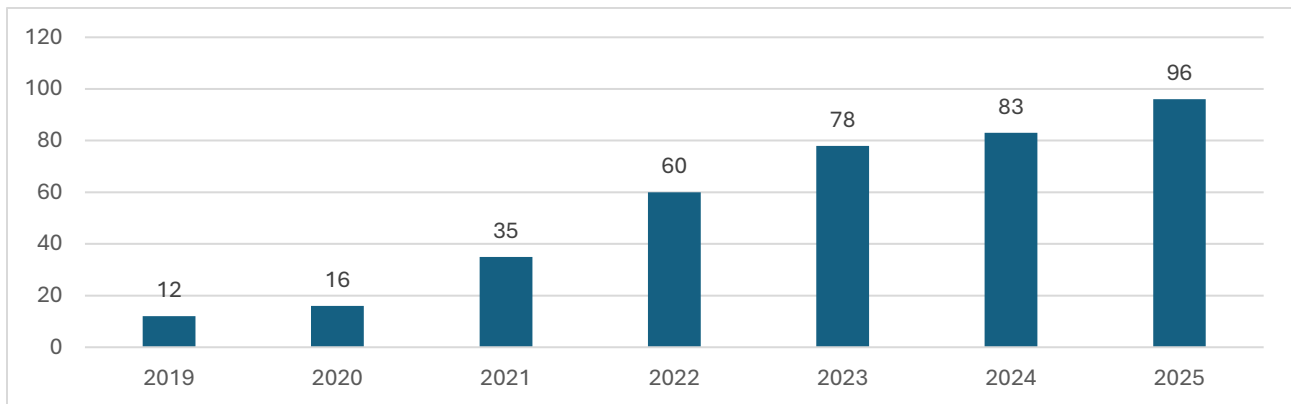
	Columbia Falls Area		Columbia Falls	
Year	Housing Units (#)	Occupied Units (%)	Housing Units (#)	Occupied Units (%)
2010	6,048	88%	1,994	93%
2020	6,820	89%	2,348	93%
2024 (est.)	7,544	88%	2,599	91%
% change (2010-2024)	25%	0%	30%	-2%

Source: U.S. Decennial Census (2010, 2020); 2019-2023 American Community Survey 5-Year Estimates; HUD DOCDs Building Permits; Flathead City-County Health Department; City of Columbia Falls

Short-Term Rentals

- Vacation rentals are a permitted use by right in three of the City's business zoning districts. Vacation rentals in suburban agricultural and residential zoning districts must obtain an Administrative Conditional Use Permit.
- To operate a vacation rental in the City, property owners must obtain a State of Montana Public Accommodation License and a City of Columbia Falls business license. Both licenses require an initial and yearly renewal fee of \$40. Vacation rentals must collect and remit the 3% Resort Tax to the City and a 4% Lodging Facility Use Tax and a 4% Lodging Sales Tax to the State.
- There were 96 active vacation rental licenses in the Columbia Falls in 2025. Since 2019, there has been a steady increase in this trend with each year having more listings than the last. These units include a combination of existing homes being utilized as short-term rentals, as well as new units built, including 24 units built in the past six years downtown. Real estate agents note that investor buyer interest in purchasing homes to short-term rent increased in Columbia Falls post-COVID, but settled when interest rates rose over 7%.

Figure 14: Units with Vacation Rental Business Licenses, Columbia Falls



Source: City of Columbia Falls

Income-Restricted Rentals

- There are 92 income-restricted rentals in Columbia Falls, all of which were constructed over 20 years ago.
- All units are restricted for households earning 60% or less of the area median income. Most are restricted for seniors/persons with disabilities (56 total).
- The units are primarily 1- and 2-bedrooms serving seniors/persons with disabilities, with only Columbia Villa providing a few larger 3-bedroom units for families.
- The units were constructed with a combination of funding, including low-income housing tax credits (LIHTC), USDA funding, Section 515, Section 202, and HUD insured mortgages.
- Properties for seniors/persons with disabilities are full, with waitlists spanning several months to 1-year or more. A few income-restricted senior apartments in Kalispell were contacted and were similarly full with waitlists.
- Apartments constructed with the LIHTC program after 1990, including Columbia Villa and Teakettle Vista Apartments, must remain affordable for 30 years, but can seek to remove this restriction after 15 years. Twenty-four (24) income-restricted rentals for seniors could expire as soon as this year (2025), with another 56 units potentially expiring in 2030. Unless rent restrictions are preserved, units could shift to market prices.

Table 10: Income Restricted rentals

Project	Total Units	1-b	2-b	3-b	Income level	placed in service	target population	earliest/latest subsidy end
Columbia Arms Apartments	12	8	4	0	<60% AMI	1991	Elderly/disabled	2041
Columbia Villa Apartments	36	0	24	12	<60% AMI	2000	Family	203/2040
Teakettle Vista Apartments	20	19	1	0	<60% AMI	2000	Elderly/disabled	2030/2031
Teakettle Vista Apartments II	24	20	4	0	<60% AMI	2004	Elderly/disabled	2025/2053

Total Rentals	92	47	33	12				
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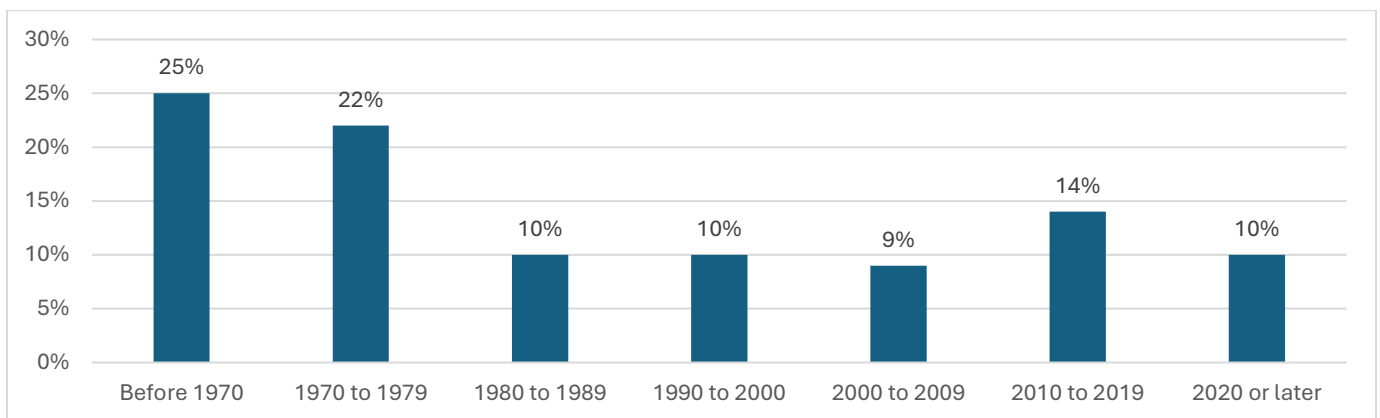
Source: U.S. Department of Housing and Urban Development, LITHC database

Housing Characteristics

Age

- In Columbia Falls, almost half of homes were built prior to 1979 and half after. About one quarter (24%) of Columbia Falls' housing stock has been built since 2010, with much of the new development occurring since 2018. The age of the total housing stock is relatively well-balanced.
- One quarter (25%) of the housing stock is now at least 55 years old. Older homes are typically in need of repairs and upgrades.

Figure 15: Age of Housing Stock, 2023



Source: U.S. Census Bureau, 2019-2023 American Community Survey 5-Year Estimates

Unit Type

- The City's housing stock is dominated by single-family homes (72%). Despite this, the housing stock in Columbia Falls is more diverse than in Flathead County and the Columbia Falls Area. About one-in-four homes are in buildings with two or more units (e.g., duplexes, fourplexes, apartments) in the City. There are relatively few mobile homes.

Table 11: Unit Type

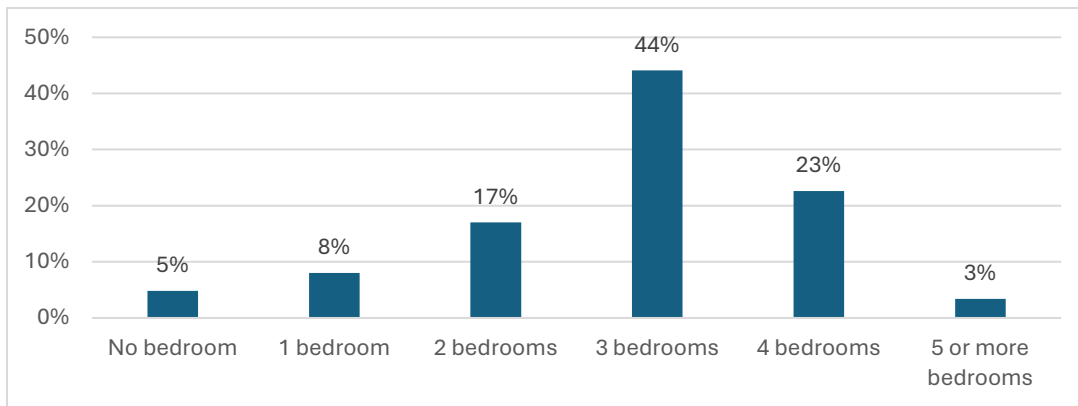
Unit Type	Flathead County	Columbia Falls Area	Columbia Falls
Single Family	78%	78%	72%
Duplex Triplex, Fourplex	5%	4%	11%
Other Multi-Family	7%	5%	13%
Mobile Homes	10%	13%	4%

Source: U.S. Census Bureau, 2019-2023 American Community Survey 5-Year Estimates

Bedrooms

- Most housing in Columbia Falls consists of 3-bedroom units. While 2- or 4-bedroom units are common, few are a studio (no bedrooms) or contain more than 5 bedrooms.

Figure 16: Number of Bedrooms, Columbia Falls



Source: U.S. Census Bureau, 2019-2023 American Community Survey 5-Year Estimates

Housing Tenure

- While most households are owner-occupied, a significant portion of Columbia Falls residents are renters. Conversely, the Columbia Falls Area has a higher concentration of owner-occupied households than the City and County.

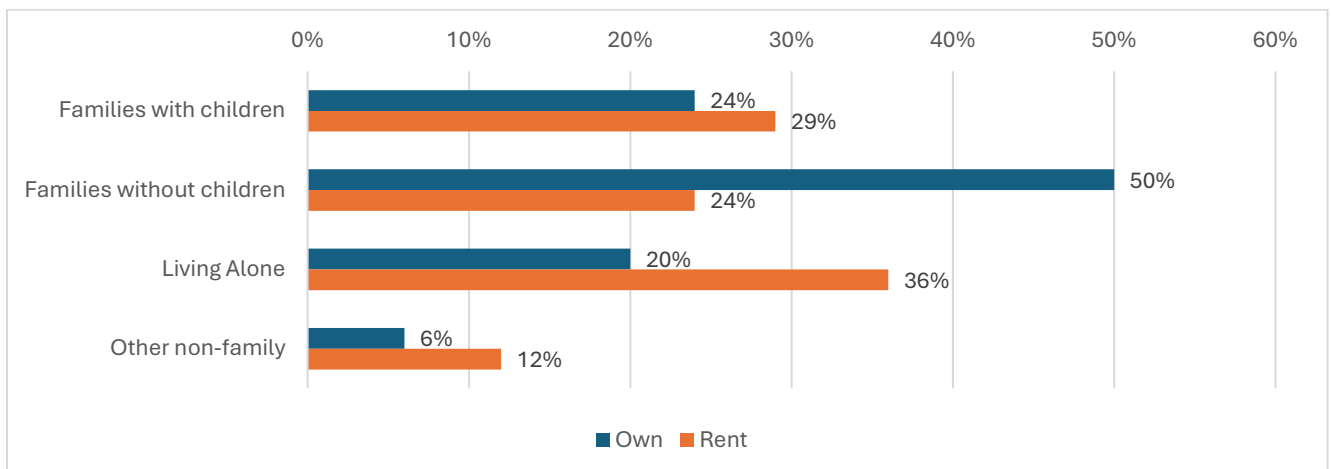
Table 12: Tenure Type

	Flathead County	Columbia Falls Area	Columbia Falls
Own	74%	77%	64%
Rent	26%	23%	36%

Source: 2019-2023 American Community Survey 5-Year Estimates

- Owners are comprised of a higher percentage of families without children than renters.
- Renters are much more likely to be living alone (36%) or with roommates (12%) than owners.
- A slightly larger percentage of renter households are families with children (29%) than households that own (24%). Property managers noted a shortage of rentals affordable for families in the Area. Families with children that rent are disproportionately single parent households.

Figure 17: Household Type by Tenure, Columbia Falls Area



Source: U.S. Census Bureau Decennial Census 2020

Affordability

Residential Home Value

- The median home sale price in the Columbia Falls Area rose 85% since 2019, more than both the County (81%) and Kalispell (77%). The Whitefish Area increased 125%, surpassing all communities.
- The median sale price in the Columbia Falls Area is now just below the County median and is 8% higher than in Kalispell.

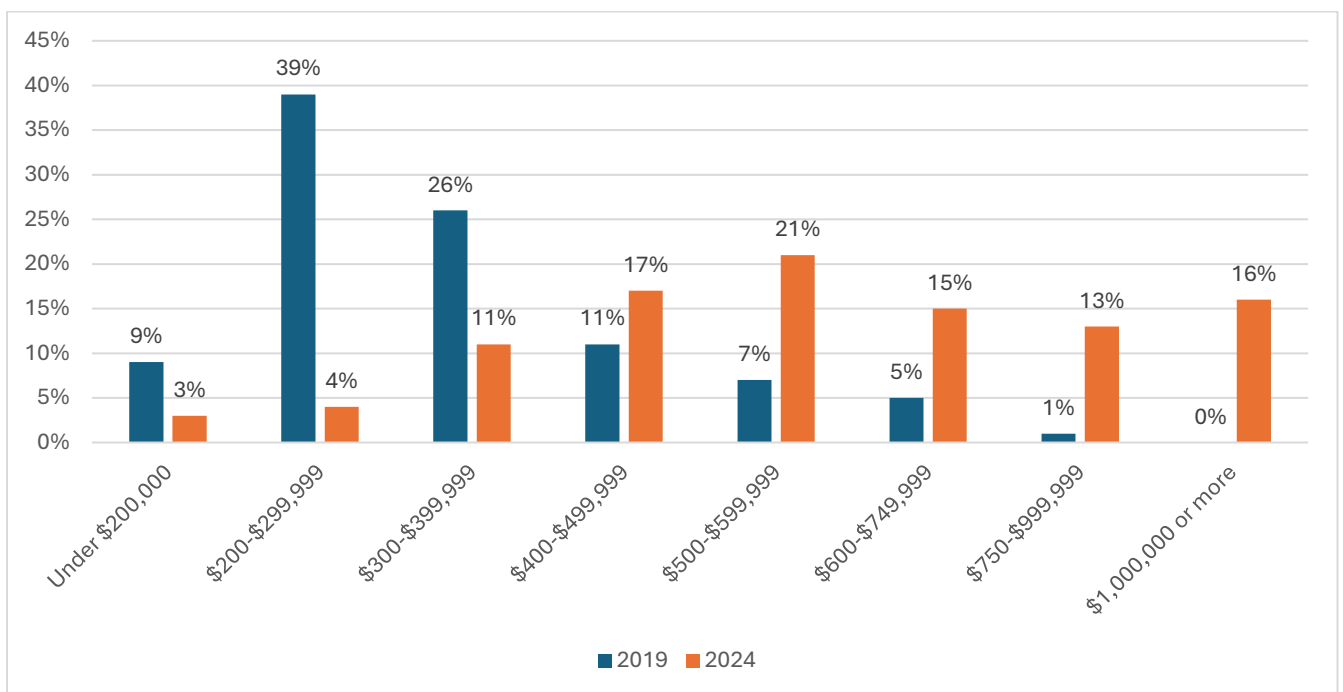
Table 13: Median Residential Sale Price

	2019	2024	% change
Columbia Falls	\$310,000	\$575,000	+85%
Kalispell	\$299,900	\$530,000	+77%
Whitefish	\$433,250	\$975,000	+125%
Flathead County	\$325,000	\$587,000	+81%

Source: Montana Regional MLS 2019 - 2024

In 2019, 48% of homes sold for under \$300,000 and 6% sold for over \$600,000. In 2024, this pattern reversed: 7% of homes sold for under \$300,000 and 45% sold for over \$600,000.

Figure 18: Percentage of Sold Homes by Price, Columbia Falls Area



Source: Montana Regional MLS 2019 – 2024

Rent Growth

- Since 2019, the median gross rent rose an average of 9.2% per year in the City of Columbia Falls. This was a faster rate of growth than other communities in the Valley. Columbia Falls' gross rents were about 21% less than the County in 2019, they are now 9% less. The City still provides the lowest median rent in the Valley, but the gap is closing.

Table 14: Average Yearly Change in Median Gross Rent

Flathead County	Whitefish	Kalispell	Columbia Falls Area	Columbia Falls
6.4%	6.1%	6.7%	8.7%	9.2%

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates (2015-2019, 2019-2023)

Cost Burden

- Households are cost-burdened if their housing payment (rent and mortgage plus utilities) exceeds 30% of their gross income and are severely cost burdened if it exceeds 50%. Cost-burdened households often have insufficient income left over for other life necessities, including food, clothing, transportation, and health care.
- Based on ACS 5-year estimates, 27% to 32% of households in the city of Columbia Falls are cost-burdened, with 12% to 16% needing over one-half of their income to pay for housing costs, which is similar to rates seen in the County.

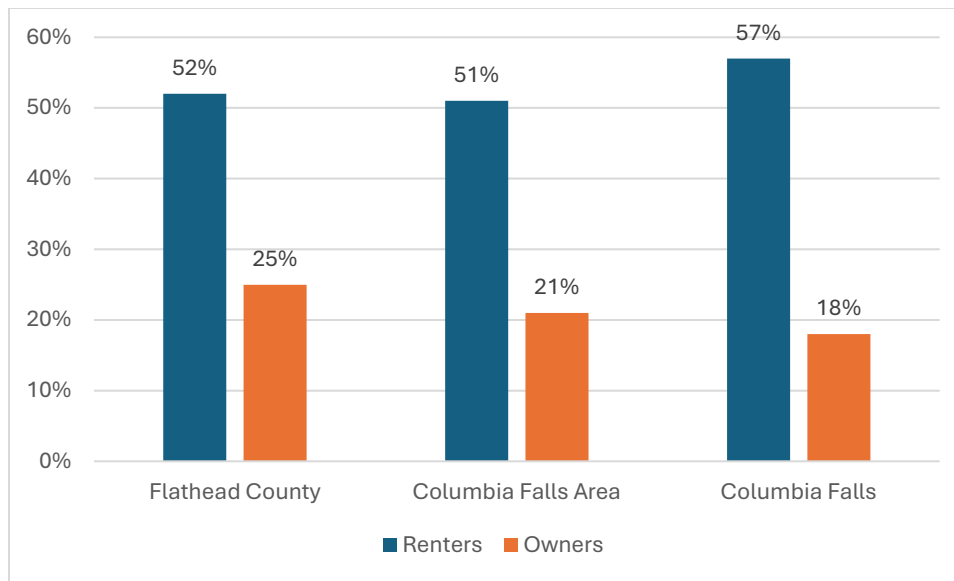
Table 15: Cost Burdened Households

Housing payment as percent of income	2018	2023	% change
30.1%-50%	15%	16%	+1%
>50%	12%	16%	+4%
total cost burdened households	27%	32%	+5%

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates (2014-2018, 2019-2023)

- This problem affects both owners and renters, but renters are disproportionately impacted. In Columbia Falls, more renters are cost-burdened (57% cost-burdened) than not. A much lower 15% to 20% of owners are cost-burdened.
- There is a larger gap between renter and owner cost burdened households in Columbia Falls compared to other areas. This is also concerning since Columbia Falls has a higher percentage of renters than other areas.

Figure 19: Cost Burdened Households by Tenure



Source: U.S. Census Bureau, American Community Survey 5-Year Estimates (2015-2019, 2019-2023)

Employer Assisted Housing

- Employers stated that paying higher wages than nearby communities for the same job (28%) and providing housing to employees (28%) are the most commonly employed strategies to help compete for employees and compensate for the higher cost of living.
- Housing search assistance is provided by 25% of employers, helping employees find housing.
- Less common strategies include master leasing stipends/sign-on bonuses (13%).

Table 16: Type of Housing Assistance Provided by Employers

	% of employers providing assistance
Pay higher wages than nearby communities	28%
Own units/rooms occupied by employees	28%
Assist employees with housing search	25%
Master lease units that are rented to employees	13%
Salary stipend/sign-on bonus	13%
Down payments or help with mortgage	0%
TOTAL	63%

Note: The sum of the percentages exceed 63% because some employers provide more than one form of assistance.

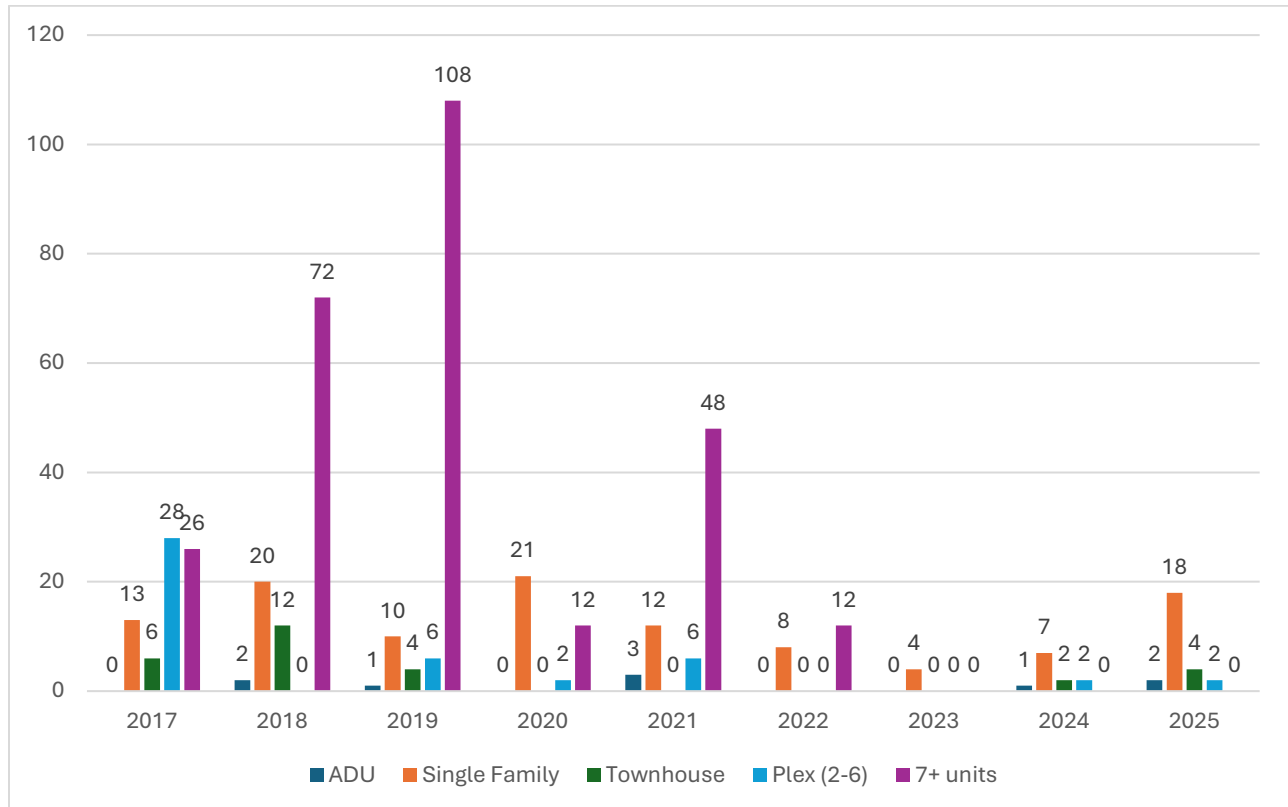
Source: 2024 Employer survey

Future Housing

Building Permits

- From 2017 to 2025, 474 total building permits were issued for an average of about 53 permits per year. Permits issued were for a diverse mix of housing types.
- Most permits were issued for units in buildings with seven or more units (62%) while only 21% of permits were issued for single family units, the next highest housing type share.

Figure 20: Annual Building Permits, Columbia Falls



Source: City of Columbia Falls, 2017-2024

Residential Development Pipeline

- At the end of 2025, at least 227 market-rate housing units had been approved but not yet built in the Columbia Falls Area.
- 7 developments have the potential to house 1,943 people in 873 new units of housing.

Table 17: Residential Development Pipeline

Location/Address	Type	Population	# of Units
Tamarack Meadows	Single Family	258	103
812 4 th Ave. W	Townhomes	30	12
274 Meadowlake Blvd.	Townhomes	50	20

Garnier Heights	Single Family, Single Family Attached	255	26 SF, 76 A
Teakettle Heights	Apartments, Townhomes, Single Family	844	240 Apt, 56 TH, 125 SF
302 Meadowlake Blvd	Apartments	68	40
River Highlands	Single Family	438	175
		1,943	873

Source: City of Columbia Falls

Housing Projections

- Based on estimated current and future needs in the Columbia Falls Area, an additional 1,400 housing units will be needed through 2034. This equates to an average of 140 units per year over the next ten years in the Area, including between 45 to 65 units per year in the City.
- Given current market and cost of construction conditions, it is expected that about 40% of this need will be met by the private development market alone. The other 60% (about 835 units) will need to be priced below current market prices.

Table 18: Future Housing Needs, Columbia Falls Area & Columbia Falls

	Columbia Falls Area	Columbia Falls
Total Current Needs	620	245
Overcrowding	50	20
Forced to commute	570	225
Total Future Needs (through 2034)	780	200 to 405*
Job Growth	610	110 to 315*
Retiring Employees**	170	90
Total Housing Needs (through 2034)	1,400	445 to 650*
Average per year	140	45 to 65*
Total Housing Needs (2034-2044)		
Job Growth		
Retiring Employees		

Source: Housing Needs Assessment, 2025

*Range is based on retaining current commuting patterns (18% of Area employees live in the city) (low end) or building enough units to house employees filling 100% new jobs in the city (upper end).

**Employers estimate that 6% of employees will retire by the end of 2029; the ten year projection assumes another 6% will retire between 2029 and 2034.

Land Use Plan Implications

- Renter households with incomes below 60% AMI (\$45,000 per year) have very few options affordable to them in the Area. These households are also the most likely of other income groups to be cost burdened by rental housing costs. More rental units for these households are needed.
- Rental units for families earning up to 80% AMI (\$60,000 per year) are also in short supply. Two- and three-bedroom units priced below \$1,500 per month are needed.

- The core need for residents looking to purchase homes is for homes priced between \$200,000 and \$400,000, which are affordable for households earning between \$60,000 and \$120,000 per year (about 80% to 160% AMI). Since price increases post-COVID, there are almost no homes priced for sale under \$300,000 in the Area and homes priced up to \$500,000 often need significant repairs.
- Homes priced between \$400,000 to \$500,000 are in moderate need for residents. Subsidies are required to build single family homes at this price. The private market can build attached product (e.g., townhomes) in this price range given the proper balance of land prices and permitted densities. Residents able to buy attached units in this price range are often competing with investment buyers and available units may not be designed with local families in mind. Supporting the construction of a variety of housing types, such as townhomes and duplexes, would help the market provide more housing options for residents.
- Further study should be done on short-term rentals to find and understand their impact on local housing supply and prices. Comparisons to Whitefish, Kalispell, and other peer communities should be made to understand what, if any, regulations would be most effective. Fees for permitting of these units should also be regularly updated.

Economics & Labor Force

Labor Force

- Columbia Falls Area has a slightly lower average annual wage than comparison areas.

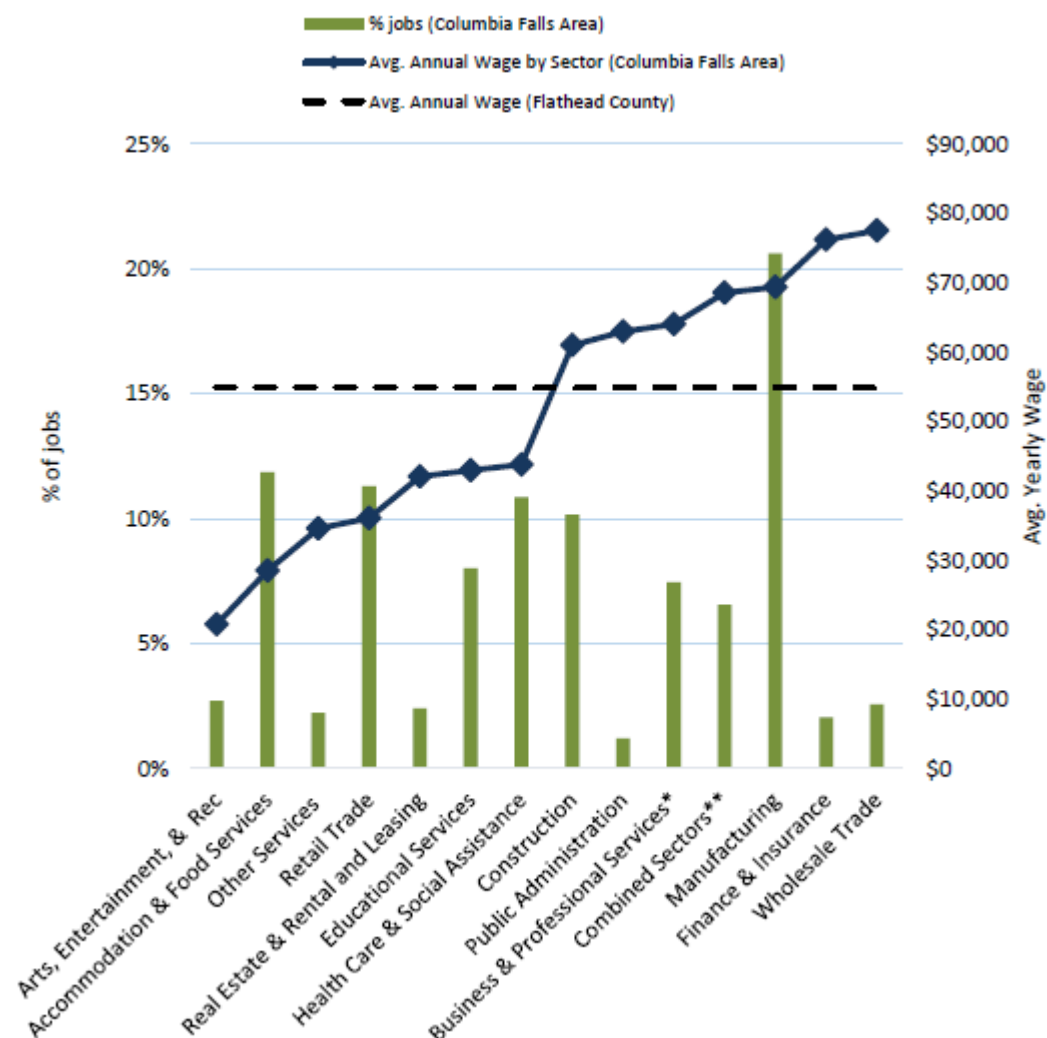
Table 19: Average Annual Wage

Flathead County	\$54,907
Columbia Falls Area	\$52,061
Kalispell Area	\$57,289
Whitefish Area	\$53,821

Source: QCEW, Montana Department of Labor and Industry

- Jobs directly tied to the tourism economy, including retail, lodging, restaurants, entertainment, and recreation pay the lowest average wages. Most of these jobs range from minimum wage (\$10.55 per hour) up to \$20 per hour on average.
- Education and health care comprise about 20% of jobs in the Area and pay close to \$44,000 per year on average (about \$22 per hour), which is still well below the average wage in the County.
- Manufacturing is the largest job sector in the Area, comprising 21% of jobs, and pays almost \$70,000 per year on average, which is well over the County's average wage.

Figure 21: Jobs and Wages by Sector



*"Business and Professional Services" includes the following sectors: Information; Professional, Scientific, and Technical Services; Management of Companies and Enterprises; Administrative and Support and Waste Management and Remediation Services.

***"Combined Sectors" includes the following sectors: Agriculture, Forestry, Fishing and Hunting; Mining; Utilities; Transportation and Warehousing

Source: QCEW, Montana Department of Labor and Industry

- Employers reported increased difficulty recruiting and retaining workers to fill positions. With unfilled positions, businesses struggle to provide quality services and generate needed revenue during peak business periods. Unfilled jobs are a key indicator of the need for additional housing for employees.
- Employers responding to the Housing Needs Assessment survey reported that about 8% of jobs were unfilled this fall/winter. With 5,675 jobs in the Area, this means that about 460 jobs were unfilled.
- The vast majority of Columbia Falls Area employers (74%) report that recruiting and retaining employees has become more difficult over the past three years.

Table 20: Unfilled Jobs

Total workers	4,730
Average number of jobs per worker	1.2
Total jobs	5,675
# Jobs unfilled	460
% jobs unfilled	8%

Source: 2024 Employer survey, interviews

Job Projections

- Between 2013 and 2023, Flathead County employment increased by 2.4% per year and the Columbia Falls Area increased by 2.5% per year. Looking ahead, the Montana Department of Labor and Industry for the Northwest Region, which includes Flathead County, projects jobs to grow at a much slower 1.2% per year through 2034. This rate would assume a significant economic slowdown in the County and ignores that Flathead County has been growing at a faster rate than other counties in the Northwest Region.
- Therefore, the City of Columbia Falls has decided to parallel its estimated 20-year population growth rate range of 1.8% lower bound and 2.3% upper bound growth rates. The Housing Needs Assessment estimates that there were 5,675 jobs in the Columbia Falls Area in 2024. From there, the 1.8% and 2.3% linear growth rates are applied. Based on this forecast, Columbia Falls could have between 2,579 and 3,474 additional jobs for between 8,254 and 9,149 total job opportunities by 2045.

Table 21: Job Projections, Columbia Falls Area

	1.8%	Cumulative Growth	2.3%	Cumulative Growth
2024	5,675	-	5,675	-
2025	5,777	102	5,806	131
2026	5,881	206	5,939	264
2027	5,987	312	6,076	401
2028	6,095	420	6,215	540
2029	6,204	529	6,358	683
2030	6,316	641	6,505	830
2031	6,430	755	6,654	979
2032	6,546	871	6,807	1,132
2033	6,663	988	6,964	1,289
2034	6,783	1,108	7,124	1,449
2035	6,905	1,230	7,288	1,613
2036	7,030	1,355	7,455	1,780
2037	7,156	1,481	7,627	1,952
2038	7,285	1,610	7,802	2,127
2039	7,416	1,741	7,982	2,307
2040	7,550	1,875	8,165	2,490
2041	7,686	2,011	8,353	2,678

2042	7,824	2,149	8,545	2,870
2043	7,965	2,290	8,742	3,067
2044	8,108	2,433	8,943	3,268
2045	8,254	2,579	9,149	3,474

2024: Based on Housing Needs Assessment, 2025 estimate

2025 - 2045: Linear 1.8% (lower bound) or 2.3% (upper bound) linear growth rate projection

Source: City of Columbia Falls

Commuting

- Employers in the Columbia Falls Area were asked where their employees live. Based on responses, the Columbia Falls Area employs about 4,730 people on average year-round to fill its 5,675 jobs. The majority of these jobs are filled by workers that live outside of the Columbia Falls Area. About 2,550 employees (54%) commute into the Columbia Falls Area for work throughout the year, on average.
- Slightly more workers commute in from Kalispell (about 1,135) than from other areas in the County (about 1,015).
- Less than 10% of employees live outside of Flathead County (about 400), which includes workers commuting from neighboring counties, as well as remote workers.
- Employers indicate that seasonal workers primarily live in the City, zip code, and Canyon area. Some employers help provide accommodations for their seasonal employees.
- Employers estimate that about 37% of their in-commuting employees would prefer to live in the Columbia Falls Area if housing they could afford housing that was available. Many employees that currently live in the Area need to have roommates to afford rentals. Employees that are unable to live near their place of employment are at higher risk of leaving jobs to find employment nearer their residence.

Table 22: Where Columbia Falls Area Workers Live

	# workers (est.)	% workers (survey)	LEHD (2022)*
Columbia Falls Area	2,180	46%	41%
Canyon area	320	7%	3%
Whitefish Area	360	8%	8%
Kalispell - Evergreen	1,135	24%	28%
Other Flathead County	335	7%	4%
Outside Flathead County	400	8%	16%
TOTAL	4,730	100%	100%

*adjusted to include sole proprietors

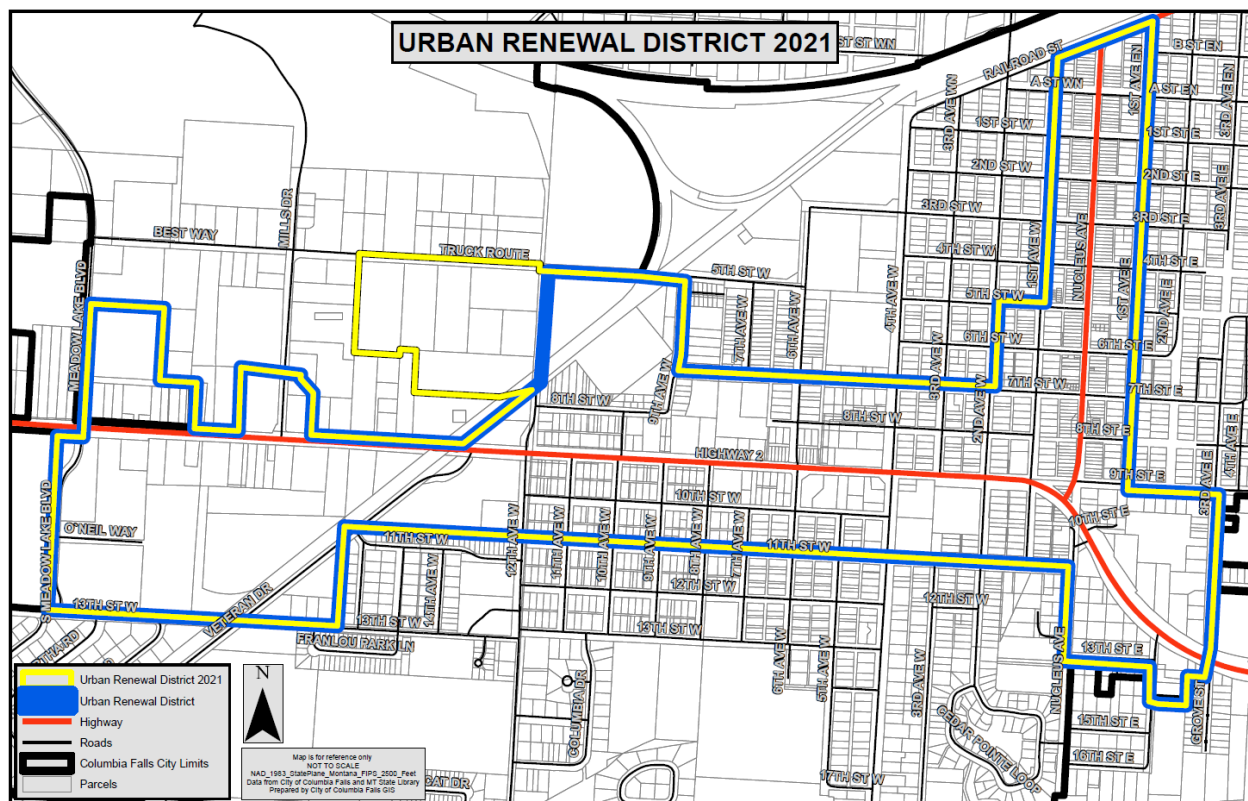
Source: 2024 Employer Survey; U.S. Census Bureau LEHD (2022)

Economic Areas

Urban Renewal District (URD)

- Columbia Falls Urban Renewal District was established in 2015 and updated in 2021. The tax increment financing program will sunset in December 2029 after which this financing tool will no longer be available.
- The original boundary includes downtown Columbia Falls generally north / south along Nucleus Avenue from Railroad Avenue (MT 486) on the north end to the city limits on the south side of US Highway 2; and US Highway 2 - from Meadow Lake Boulevard on the west end to the city limits on the east end which provides entry into the community from both the east and west.
- In 2021, the boundary expanded to incorporate an area adjacent to the district that would benefit ongoing-revitalization efforts within the URD as well as the City as a whole. This area, locally known as the Cedar Palace, consists of 7 parcels addressed at 500 12th Avenue W in Columbia Falls and encompassing 23.87 acres.

Figure 22: Columbia Falls Urban Renewal District Map



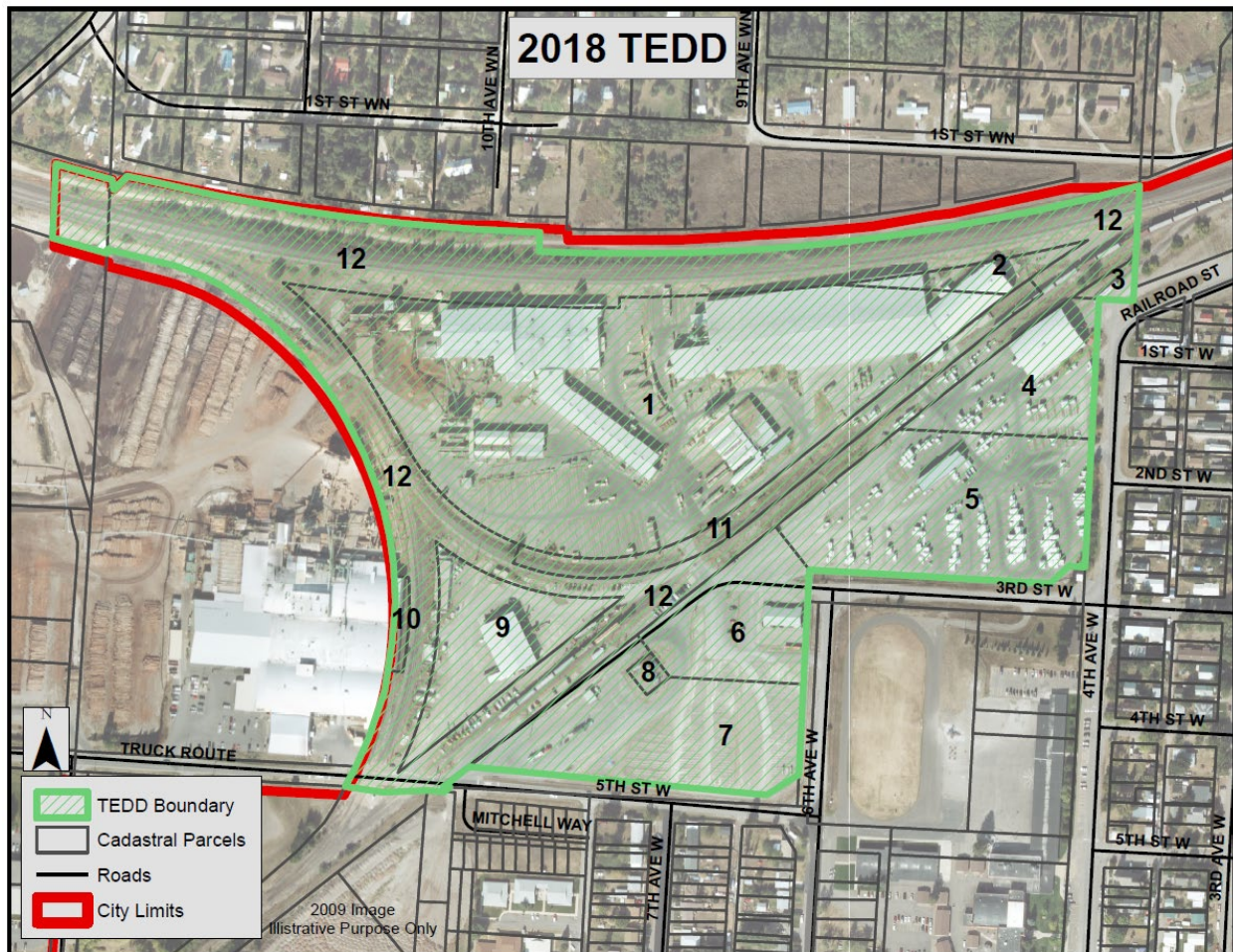
Source: City of Columbia Falls

Targeted Economic Development Districts (TEDD)

Columbia Rising TEDD

- The goal of this process to establish a TEDD is to encourage the development of complimentary and compatible value-adding businesses, which will contribute to the overall economic well-being of the City of Columbia Falls. The TEDD establishes a TIF District, which will sunset in 2033.
- The site, which is comprised of approximately 54 acres, was acquired by Weyerhaeuser in 2016, when the company merged with Plum Creek Timber. In September of 2017, Weyerhaeuser sold a portion of the site to local investors, Ruis Holdings and Stargazer Land and Cattle. The investors, in turn have secured an anchor tenant, SmartLam® to manufacture construction-related engineered wood products. Columbia Rising, an LLC formed in partnership by Ruis Holdings and Stargazer Land and Cattle, intends to redevelop the remainder of the property into a rail-served industrial area.
- The Columbia Rising industrial area is generally described as approximately 54 acres located northwest of the truck route, and south and east of the railroad rights-of-way in Section 8, Township 30 North, Range 20 West, P.M.M., Flathead County, Montana. More specifically, the area is located west of 4th Avenue West and 6th Avenue West, north of 3rd Street West and 5th Street West, east of the extension of 12th Avenue West, and south of the Vetville for Vets subdivision.

Figure 23: Columbia Rising Targeted Economic Development District Map



Source: City of Columbia Falls

Industrial Park TEDD

- A TEDD was established in the Columbia Falls Industrial Park in 2015, whose TIF district will sunset in 2030.
- The Industrial Park TEDD is located on a 110 acre site that was formerly occupied by the Superior Building Company Lumber Mill. It is located north of the railroad and west of North Fork Road. The purpose of establishing the TEDD was to increase employment opportunities through infrastructure development, provide support for industries, encourage secondary, value-adding industries, and facilitate reinvestment on the site.
- The property lacks adequate roadway infrastructure to access individual lots. The railroad crossing is in poor condition and prevents commercial and fire trucks from accessing the site from the south. The site is partially served by municipal water service but currently operates on a private septic system and needs to connect to the City's sewer system.

Figure 24: Industrial Park Targeted Economic Development District Map



Source: City of Columbia Falls

Land Use Plan Implications

- Columbia Falls was on a growing trend before COVID brought growth to everyone, indicating a strengthening economy. In 2018, the population was growing faster than in the County and jobs were increasing.
- Of recent job growth, other strong growing sectors included tourism-related service jobs in lodging, food services, retail and recreation, which pay among the lowest wages in the Area.

- Jobs increased faster in the Columbia Falls Area than the County and other cities over the past five years, many of which were higher-paying jobs in construction, manufacturing, and business and professional services.
- Employers reported that 8% of jobs were unfilled during fall/winter 2024 (460 jobs). Some employers are considering leaving the area due to difficulties finding and retaining employees under the scarce and expensive housing market. Because housing prices are well beyond the scale of local wages, employers cannot pay enough to keep up.
- The City should work with Flathead County Economic Development Authority and other agencies to attract hotels and more traditional lodging accommodations to provide an alternative to short-term rentals and their effects on the long-term supply of housing in Columbia Falls, as well as generate additional lodging tax revenue.

Transportation

Roads & Traffic

- A significant amount of traffic, including truck traffic and seasonal tourist traffic, pass through the City on Hwy 2 (9th Street) contributing to traffic congestion along Hwy 2; particularly at the Truck Route and Nucleus Avenue.
- The highest recorded traffic volumes are found on state highway system facilities, including US Highway 2, MT 40, Secondary Highway 486, and Secondary Highway 206.
- The most traveled City-maintained facilities include Railroad Street (3,102), Truck Route (2,342), and 6th Avenue West (2,285) running along the BNSF mainline on the north end of the City.

Figure 25: Job Inflow/Outflow, Columbia Falls



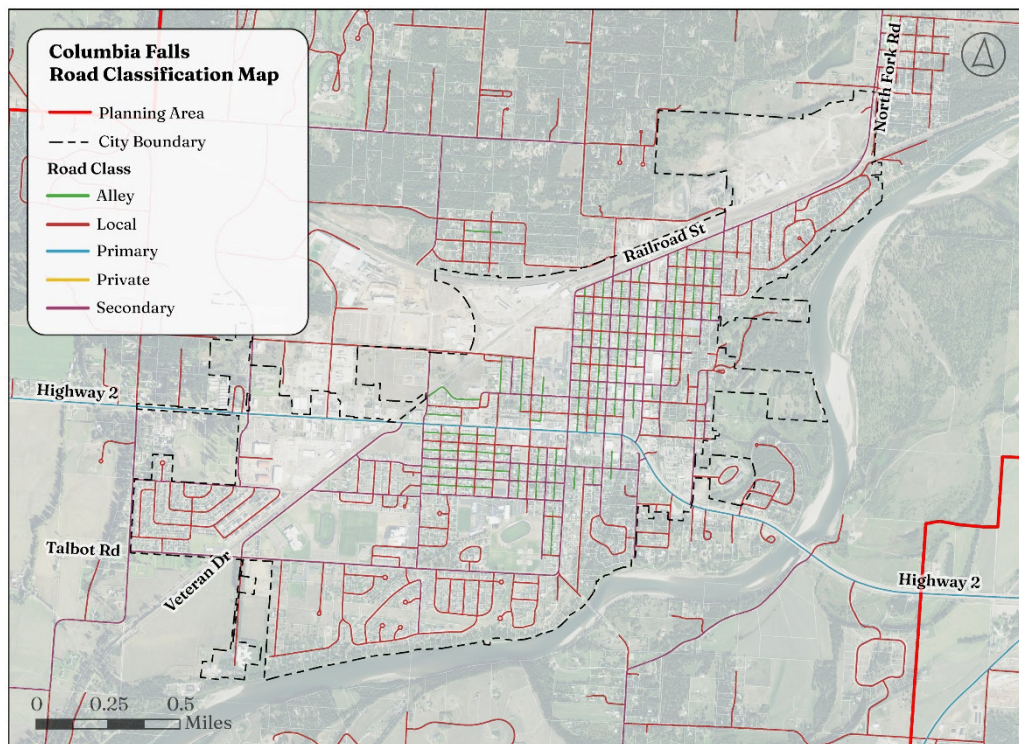
Source: 2021 Transportation Plan

Table 23: Existing Functional Classification Mileage and FHWA Recommended Ranges

Functional Class	Miles	% of Total	FHWA Rural Recommendation	Within Range
Principal Arterial	9.94	8.4%	4% to 9%	Yes
Minor Arterial	0.94	0.8%	7% to 14%	No
Major Collector	10.03	8.4%	3% to 16%	Yes
Minor Collector	4.37	3.7%	3% to 16%	Yes
Local Streets	93.46	78.7%	62% to 74%	No
Total	118.73	100%		

Source: 2021 Transportation Plan, MDT

Figure 26: Columbia Falls Road Classification Map



Source: City of Columbia Falls

Commuting Trends

- The vast majority (88.9%) of workers in the City of Columbia Falls drive to work alone. Compared to the region, Columbia Falls residents drive alone in higher proportion than residents of neighboring cities and the State of Montana.

Table 24: Commute Mode

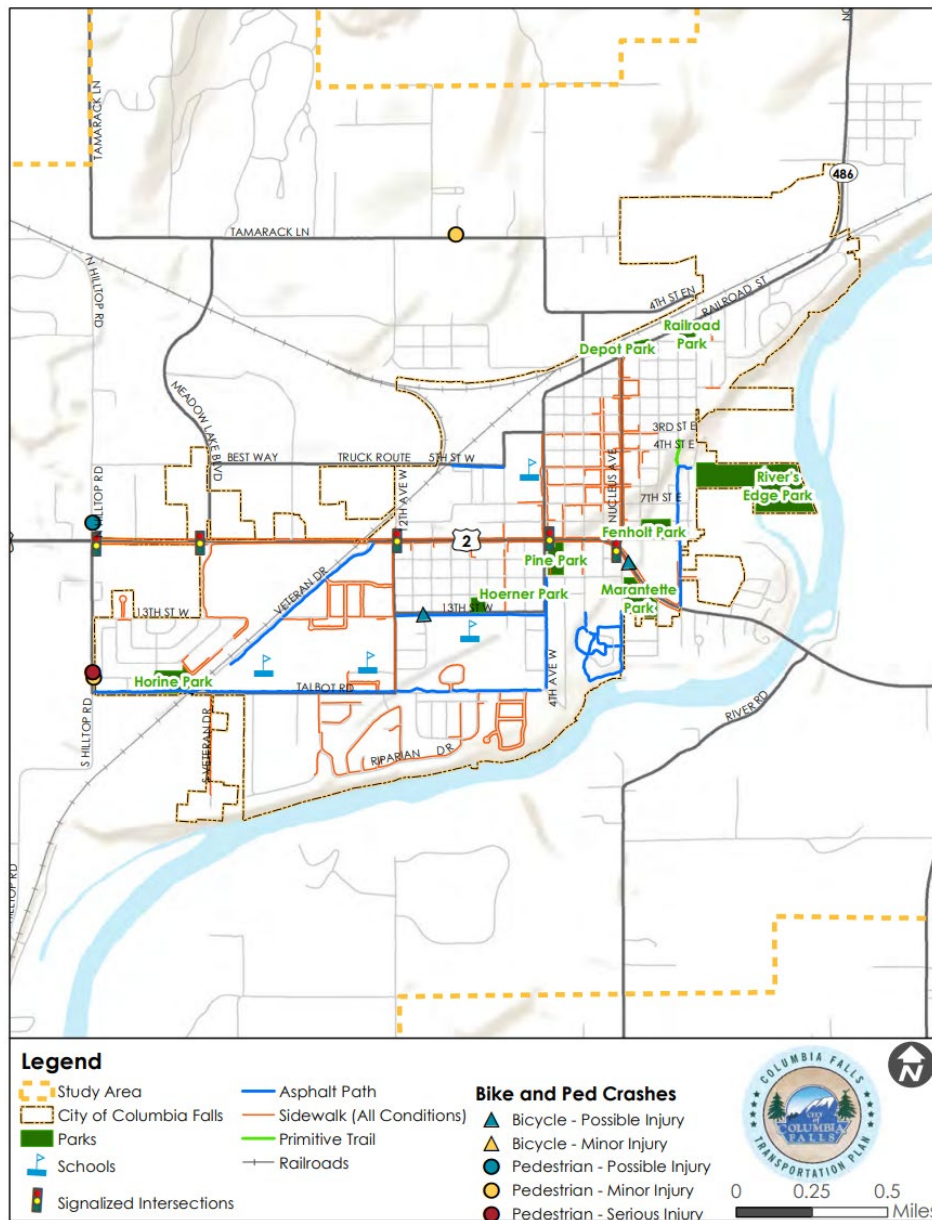
Mode	Columbia Falls	Whitefish	Kalispell	Flathead County	Montana
Drove alone	88.9%	74.9%	82.8%	81.4%	75.6%
Carpooled	4.3%	6.8%	6.6%	6.9%	9.7%
Transit	0.0%	1.1%	1.6%	0.8%	0.8%
Walked	0.7%	9.7%	2.4%	3.3%	5.1%
Other	3.2%	2.9%	2.0%	1.9%	2.4%
Worked at home	2.8%	4.5%	4.6%	5.8%	6.4%
Avg Commute Time	18.4 minutes	16.4 minutes	15.4 minutes	19.1 minutes	17.8 minutes

Source: Columbia Falls Transportation Plan, U.S. Census 2017 American Community Survey

Pedestrian Infrastructure

- US Highway 2 bisects the community east-west, restricting movement north-south both in terms of free pedestrian movement and north-south vehicle movement.
- The BNSF Railroad and Secondary Highway 486 also bisect the community and restrict pedestrian and vehicle movement east-west.
- Since 2023, the City has prioritized expanding sidewalk connectivity within the Urban Renewal District and along designated Safe Routes to Schools. The City is advancing this goal through the construction of integrated sidewalks and multi-use pathways along 13th Street West, 4th Avenue West, 7th Street West, and Railroad Street. These improvements will establish a continuous pedestrian and bicycle corridor linking the northeastern and southwestern areas of the City, ensuring safe, accessible routes to all local schools and the downtown district.
- Nearly half of all roads in Columbia Falls have sidewalk facilities – including major corridors such as U.S. 2 and Nucleus Ave.

Figure 27: Bicycle and Pedestrian Facilities



Source: 2021 Transportation Plan

Bicycle Infrastructure

- The City has built over 3 miles of bike path/pedestrian trails in the City: 4th Ave West from Highway 2 to Talbot Road, Veteran's Drive from Talbot Road to Highway 2, and 3rd Ave East from Highway 2 to 5th Street East.
- Between 2014 and 2018 there were six bicycle-involved crashes.

Regional Transportation

- Columbia Falls is well connected to the greater region via US Highway 2, the BNSF Railroad, and Glacier Park International Airport.

- Flathead County operates a regional transit service, Mountain Climber, which provides public transportation for the cities of Kalispell, Whitefish, and Columbia Falls. Mountain Climber provides on-demand shared rides, ADA-accessible transportation, and morning and afternoon fixed route transportation linking Kalispell, Columbia Falls, and Whitefish.

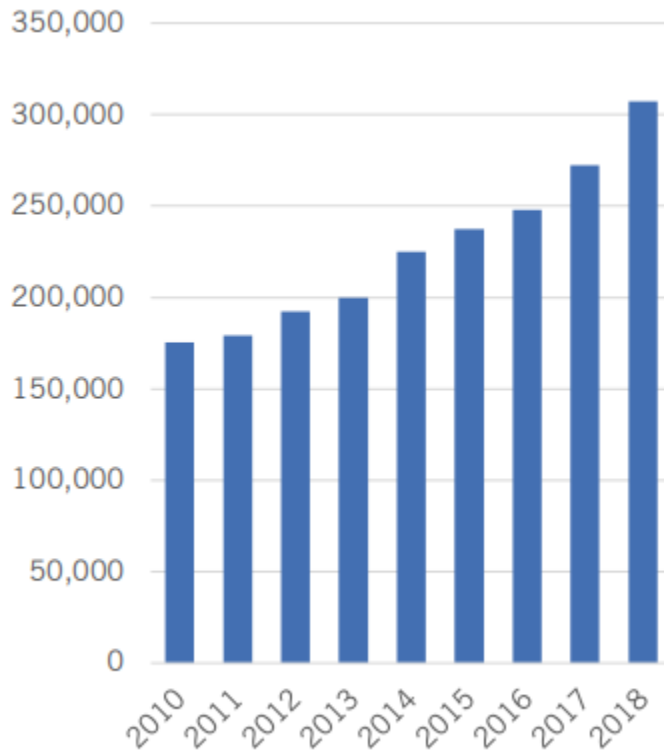
Table 2526: Transit Ridership by Route

Route	FY 2018	FY 2019	FY 2020
Whitefish City Bus	4,336	6,390	5,792
Columbia Falls City Bus	3,185	4,288	3,024
Tri-City Commuter	9,103	5,771	4,540

Source: 2021 Transportation Plan

- The BNSF Railroad is an important part of the local economy, connecting local manufacturing to national shipping routes.
- The City of Columbia Falls has expressed an interest in developing a quiet zone along the BNSF mainline through the northern part of the community.
- The Kalispell-Glacier Park International Airport lies southwest of Columbia Falls on US Highway 2.
- Alaska Airlines, Allegiant, American Airlines, Delta, and United provide regular scheduled commercial flights from this airport – with a combined passenger volume of 306,487 as of 2018, an increase of 75% from 2010.
- Starting in 2020 and with phase 1 completed in 2025, the airport expanded their passenger terminal space from 75,000 square feet to 210,000 square feet to keep up with growing passenger volumes. The first phase added a new baggage claim area, a new ticketing area, and a new waiting area for passengers. The final phase of the expansion project is set to be completed in 2026.
- Major destinations from Kalispell-Glacier International Airport include Salt Lake City, Minneapolis, St. Paul, Atlanta, Los Angeles, Denver, Chicago, Seattle, Portland, Las Vegas, Phoenix, Oakland, and Dallas.

Figure 28: Passenger Volumes at Kallispell-Glacier Park International Airport



Source: 2021 Transportation Plan

Land Use Plan Implications

- While connectedness with the outside community is good, Columbia Falls faces several natural and man-made barriers to free movement, such as being bisected by U.S. Highway 2, Secondary Highway 486, and the BNSF Railroad.
- Pedestrian safety issues are prevalent due to the lack of sidewalks and/or pedestrian/bike paths through the neighborhoods.
- Bike and Pedestrian facilities serve many purposes for residents and visitors to Columbia Falls, providing safe, convenient travel and promoting an active lifestyle and outdoor engagement. The needs for these facilities range from critical transportation to leisure activities. Critical needs include connections to neighborhoods and schools and the provision of secure, viable travel options for residents without access to a private vehicle or with mobility restrictions.
- Bike and pedestrian networks should include connections to major destinations in the area. Major destinations include the Gateway to Glacier trail system (a shared use path that leads from Columbia Falls to West Glacier), downtown Columbia Falls and Nucleus Avenue, the North Fork, and Whitefish.
- Most workers in the City of Columbia Falls drive to work alone. Compared to the rest of the region, Columbia Falls residents drive alone in higher proportion than residents of neighboring cities and the State of Montana, likely due to the lack of a local public transportation system and substandard bike and pedestrian infrastructure.
- The proposed quiet zone for the BNSF railroad will require infrastructure changes (e.g., upgraded crossings, barriers), which may influence adjacent land uses and limit certain types of development.

- Opportunities exist for logistics hubs, warehouses, and intermodal facilities near the rail line to maximize economic benefits.
- Passenger growth and expanded destinations create demand for hotels, restaurants, and retail near the airport and along Highway 2.
- Expanded air service to major hubs (Seattle, Denver, Los Angeles, Chicago, etc.) strengthens Columbia Falls' role as a gateway, encouraging tourism-oriented land uses.
- Routes like the Tri-City Commuter strengthen workforce mobility, so industrial and commercial land uses should be aligned with transit stops to support commuting patterns.

Columbia Falls

Short Term Rental Analysis, Policy, and Zoning

Item No.3.

Agenda

- Policy & Procedures
- Heatmap
- Analysis of Current Activity
- Policy Alignment
- Available Tools
- Implementation Path



What is a Short-Term Rental?

A short-term rental is the rental of an entire furnished, privately owned house, townhouse, condominium unit, apartment, or other dwelling unit - or any portion of a dwelling unit for stays less than 30 days to transient guest or tourists.

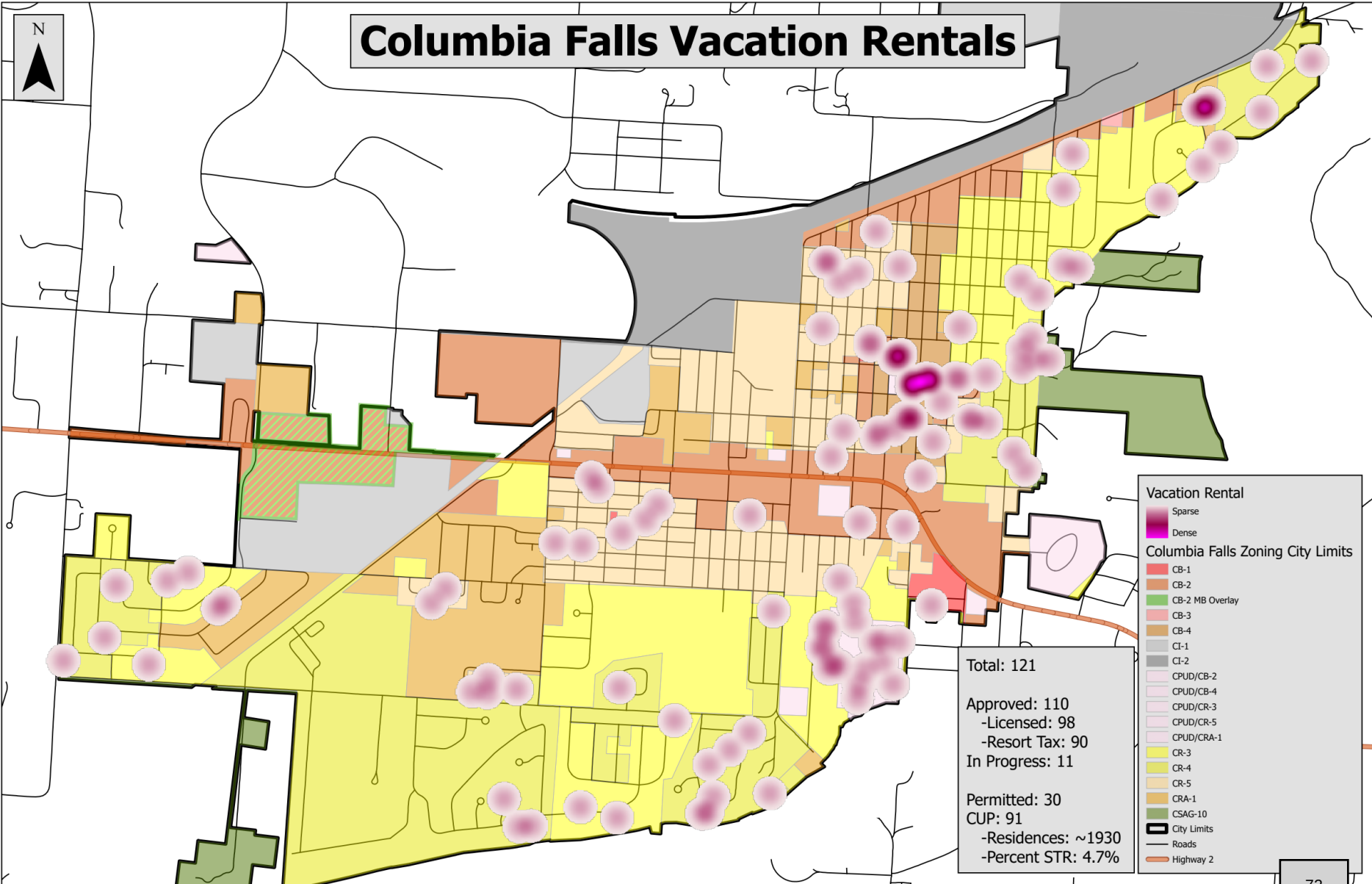
- Within the Columbia Falls City jurisdiction, there are specific steps property owners must take to operate a legal short-term vacation rental.
- Straightforward Administrative Conditional Use Permit (ACUP) process. To comply, owners must complete the following:
 - Flathead County Accommodations Inspection
 - Fire Department Inspection
 - Registration with the Montana Department of Revenue for business licensing and bed tax
 - Submission of a complete ACUP application
- Policies and all forms are listed on our website www.cityofcolumbiafalls.org/bc-pbzc/page/short-term-rentals

Current Process	Commercial	Residential & Agricultural Item No.3.
Register business name or DBA with the State of Montana.	X	X
Submit a completed City of Columbia Falls Vacation Rental application.	X	
Or submit a completed City of Columbia Falls Administrative Conditional Use Permit Determination Request and pay the \$325 permit fee.		X
City Zoning Administrator and Fire Marshall Review - \$75 Reviews for conformance with zoning provisions and safety checks.	X	X
Obtain and provide a State of Montana Public Accommodation License for a Tourist Home and pay the \$40 license fee. The City will accept a passing health inspection report as proof of Accommodation License obtainment. <i>(The Flathead City-County Health Department administers this license and requires submittal of a completed application and payment of \$280)</i>	X	X
Register for and remit to the Department of Revenue the Montana Lodging Facility Sales and Use Tax. These two taxes are a 4% Lodging Facility Use Tax and a 4% Lodging Sales Tax. Provide proof of registration to the City.	X	X
Identify a local contact person responsible for the property.	X	X
Obtain Homeowner Association permission (if applicable)	X	X
City notifies nearby neighbors who have a 15-day comment period . Neighbor comments are reviewed by the City and presented to the applicant.		X
After approval, obtain a City of Columbia Falls Business License - \$40	X	X
Collect and remit to the City a 3% Resort Tax every quarter	X	X
Annual (January) Renewal of City of Columbia Falls Business License - \$40	X	X
Annual Renewal of Montana Public Accommodation License - \$40	X	X

Heatmap

Item No.3.

Columbia Falls Vacation Rentals



Analysis of Current Activity

Item No.3.

Total Short Term Rental Permits: 121

- Approved: 110
 - Licensed: 98
 - Resort Tax Payers: 90
- Applications in progress: 11

2025 Key Metrics:

- \$3.2M in 2025 Gross Revenue
- Homeowner Revenue – Gross Revenue
 - 10 STRs >\$50K
 - 28 STRs \$25K - \$50K
 - 25 STRs \$15K - \$25K
 - 32 STRs <\$15K
- Resort Tax Revenue \$96,000

Zoning:

- Permitted Use: 30
- Conditional Use Permit: 91
- Total Residential Properties = ~1930
 - **4.7% have STR CUPs**

Unlicensed Activities

“Known issue with an unknown scale”

- Incomplete or No Permits
 - Fire Inspection and Health Inspection are most common
- Permitted but no business license
- Pay Resort Tax but No Permit or License

Challenges:

- STR program management is difficult. Cities often invest in specialized software and/or third-party compliance contracts.
- Small Multi-Tasked Staff: Code Compliance, Short Term Rentals, and Resort Tax aren't highest staff priority.
- Fair and consistent enforcement

Opportunities:

- Added City Accountant in Nov 2025
- MLUPA Updates – now is the time for a reset on policies and enforcement.

Policy Context:

- How should STR regulations achieve community goals related to housing, neighborhood character, and economic vitality?
- How to incorporate simple, reasonable, and fair policies that are enforceable with limited administrative capacity?

Policy Alignment – How should we consider and prioritize:

- Impacts to housing inventory for long term rentals
- Owner-occupied residents' supplemental income to afford higher housing costs
- Casual home-sharing vs. full-time commercial
- Neighborhood livability
- Business investments for local and non-local owners
- Impacts to local tourism economy

Common STR Management Tools to Consider

Item No.3.

- Zoning – Permitted Use and Conditional Use Permits (CUP)
 - Residential zones vs. Mixed-Use/Commercial
 - Explore language for STR CUPs transferability during change of property owner
 - New owner: new inspections and administrative requirements
- Capacity Controls: Max number or percentage by City or zoning type
- Tiered Permit System
 - Create STR Types
 - Owner may occupy during partial property rental (room, ADU, etc.)
 - Owner-occupied primary residence; rental of entire home
 - Investment property that is not an owner-occupied primary residence
 - Seasonal: If a capacity policy is adopted, allow increased permits for non-peak season to allow owner flexibility to have STR during owner's winter relocation.
- Require city registration number on all advertisements and hosting websites, like VRBO and AirB&B.
- Non-compliant STRs will be reported to hosting websites for review - leading to temporary suspensions or complete removal.

Implementation Path

Item No.3.

- Implementation January 2027
- City will have re-focused effort on new policies and enforcement standards
 - Upgraded Forms and Application Package
 - Community Outreach and Notification
 - Social Media
 - Newspaper
 - City Council and Planning Commission meetings
- Grandfathering Clause
 - Conditional Grandfathering - existing permitted STRs may continue only if:
 - Remain continuously permitted (not to exceed 4-months lapse)
 - Renew Business License annually (not to exceed 4-months lapse)
 - Maintain good standing with Resort Tax payments (not to exceed 6-months)
 - Including requirement to report no income in quarterly reporting
 - Avoid verified nuisance violations
 - Attrition-Based Grandfathering – Grandfather STR rights terminate upon:
 - Sale or transfer of ownership (no automatic transferability)
 - Transferability increases investor activity and slows housing recovery
 - Reduces permits to improve marketability of a property for sale with no intent to use the property as a STR
 - Permit or Business License lapse (not to exceed 4-months lapse)



130 6TH STREET WEST
ROOM A
COLUMBIA FALLS, MT 59912

Planning Department

PHONE (406) 892-4391

FAX (406) 892-4413

Date: February 4, 2026
To: Columbia Falls Planning Commission
From: Eric H. Mulcahy, AICP
Subject: Summary of Zoning and Subdivision Rewrite

Summary

Along with the creation of the Columbia Falls Land Use Plan, SB 382 requires that the City of Columbia Falls rewrites its zoning and subdivision code to address the shift in processing of applications along with numerous other changes required from the 2023 and 2025 Legislative Session.

I am currently working on draft of the Codes and all changes are shown with the track changes tool and cites the Bill or reason for the proposed change.

Although the original intent of SB 382 was to remove public review of applications and instead move public review of policy to the Land Use Plan, SB 121 passed in 2025. This Bill adds public notice requirements to the administrative approval process and opportunity to appeal an administrative decision to staff, planning commission, and city council.

Another important change is that Conditional Use Permits (CUP) get moved to the permitted use categories. The City can and should place special provision standards on some of these uses that can have negative impacts on neighboring uses.

The Planned Unit Development process can go in one of two ways, it can be purely administrative with the standards that are currently in the code, or like a zone change/amendment it could be required to go through a hearing process with the Planning Commission and City Council.

Duplex and ADU's are added to all single-family zones. (SB323 and SB528)

Multi-Family and mixed-use development are now a permitted use in Downtown and general commercial zones. (SB245)

Building height is 60-feet in the downtown, general commercial, and industrial zones. (SB243)

Parking is limited to one space per residential unit (SB243)

Items to Consider

Does the Commission want staff to produce a PUD or similar code that provides incentives for deed restricted affordable housing?

Since conditional use permits are moving from the public hearing format where conditions can be added by the governing bodies, are there other uses that need special provisions to guide staff in reviewing and conditioning particular uses. Examples are found in the special provision section

of the zoning code and address things such as accessory dwellings, home occupations, kennels, etc.

Since we no longer have extra-territorial zoning we should eliminate the Suburban Agricultural zones and the Agricultural zones as we would not annex agricultural lands unless they were going to develop.

Lastly, the zoning and subdivision codes are living documents and can continue to be updated and amended to address issues or concerns as we know these will arise.

Development Strategies

Section 19 of SB 382 requires that the City adopt a minimum of five listed housing strategies to include in its zoning ordinance.

We can provide the following:

- Allow, as a permitted use, for at least a duplex where a single-family dwelling is permitted (Also required by SB 323)
- Zone for higher density housing near transit stations, places of employment, higher education facilities, and other appropriate population center, as determined by local government. (Also required by SB 245)
- Eliminate or reduce off-street parking requirements to require no more than one parking space per dwelling unit (Also required by SB 243)
- All, as a permitted use, for at least one internal or detached accessory dwelling unit on a lot with a single-unit dwelling occupied as a primary residence. (Also required by SB 528)
- Allow for single room occupancy development. (The Columbia Falls Zoning Code has always allowed four unrelated individuals to live in a single-family residence)
- Provide for zoning that specifically allows or encourages the development of tiny houses, as defined in Appendix Q of the international Residential Code as it was printed on January 1, 2023. (The Columbia Falls Zoning Code has never mandated a minimum house size. We would just need to adopt appendix Q to allow this strategy)
- Allow multi-unit dwellings or mixed-use development as a permitted use on all lots where office, retail, or commercial are primary permitted uses (Also required by SB 245)
- Allow multi-unit dwellings as a permitted use on all lots where triplexes or fourplexes are permitted uses. (The CRA-1, multifamily zone, currently a CUP for a triplex or larger but with the removal of the CUP from the Code, multi-family will become a permitted use.)

We could have up to eight of the strategies and comply with the SB 382 requirements.

CITY OF COLUMBIA FALLS
NOTICE OF PUBLIC HEARING

Item No.5.

The Columbia Falls Planning Commission will hold a public hearing for the following item at their regular meeting on Thursday, February 12, 2026 at 6:00 p.m. at the Council Chambers of City Hall, 130 6th Street West, Columbia Falls, Montana. The Columbia Falls City Council will hold a subsequent hearing on Monday March 2, 2026 starting at 7:00 p.m. in the same location. The City website, <https://cityofcolumbiafalls.org>, will contain updated information if there is any change to the planned hearings

Request for a Conditional Use Permit to construct 40 units of Apartment in the Columbia Falls Zoning Jurisdiction:

The owner, Norton Luxury Homes, LLC, is requesting a Conditional Use Permit to construct 40 units of apartments in two buildings, twenty units in each building. The proposed two-story apartments will access Meadow Lake Blvd and at the intersection with Best Way. The vacant property is approximately 2.2 acres in size and is located approximately ¼ mile north of Highway 2 at 302 Meadow Lake Blvd. The property is described as Tracts 1 & 2 of COS 16142 (Assessors' Tract's 2BDEA and 2BDAEA) of Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County.

Persons can attend the hearing and provide comment or they can submit written comments prior to the meeting. Written comments carry the same weight as public testimony given during the hearing. Written comments may be sent to Columbia Falls City Hall, Attention: Barb Staaland, City Clerk, 130 6th Street West, Room A, Columbia Falls, MT 59912 or via email: public-comment@cityofcolumbiafalls.com. For more information on the proposed Conditional Use Permit, please call Eric Mulcahy, Columbia Falls City Planner at 755-6481.

DATED this 19th day of January, 2026

Eric Hanks

Eric Hanks, City Manager/Planning & Zoning Administrator
COLUMBIA FALLS PLANNING COMMISSION

Publish: Daily Interlake Wednesday, January 28, 2026

**CONDITIONAL USE PERMIT REQUEST
COLUMBIA FALLS AREA ZONING JURISDICTION**

Item No.5.

COLUMBIA FALLS PLANNING OFFICE STAFF REPORT #CCU-26-01

Norton Luxury Homes, LLC

January 30, 2026

1

A report to the Columbia Falls City Planning Commission and the Columbia Falls City Council regarding a request to permit a conditional use located at 302 Meadow Lake Boulevard. The Conditional Use request is scheduled for a public hearing before the Planning Commission on Thursday, February 12, 2026 at 6:00 PM and Columbia Falls City Council on Monday, March 2, 2026 at 7:00 p.m.

BACKGROUND INFORMATION

A. PETITIONERS

Owner/Applicant: Norton Luxury Homes, LLC
P.O. Box 669
Bigfork, MT 59911

B. PETITIONER'S TECHNICAL ASSISTANCE

PCA Architects – Patric Conover, Principal Architect
600 Hogue Drive
Bigfork, MT 59911
(406) 314-6393

TD&H Engineering – Doug Peppmeier, PE
450 Corporate Dr
Kalispell, MT 59901

C. LOCATION/DESCRIPTION

The property is located at 302 Meadow Lake Boulevard in Columbia Falls. The property is described as Assessor's Tract 2BDAE and 2BDAEA (Tracts 1 & 2 of COS 16142) in Section 7, T30N, R20W, P.M.M., Flathead County, MT.

D. REQUEST

The applicant is requesting a CUP to develop a multi-family apartment complex on 2.251 acres. The applicant proposes 40 units in two buildings. Each building is two stories with a height of 34'-8". The unit count consists of 36 two-bedroom units and four (4) one-bedroom units.

E. NATURE OF THE REQUEST

The property previously had a CUP approval for 36 units, but the permit expired and was never built. With the initial CUP, the City also approved a zone change to CRA-1 (Multi-Family). The new owner is now requesting the CUP for 40 apartment units with a very similar site plan.

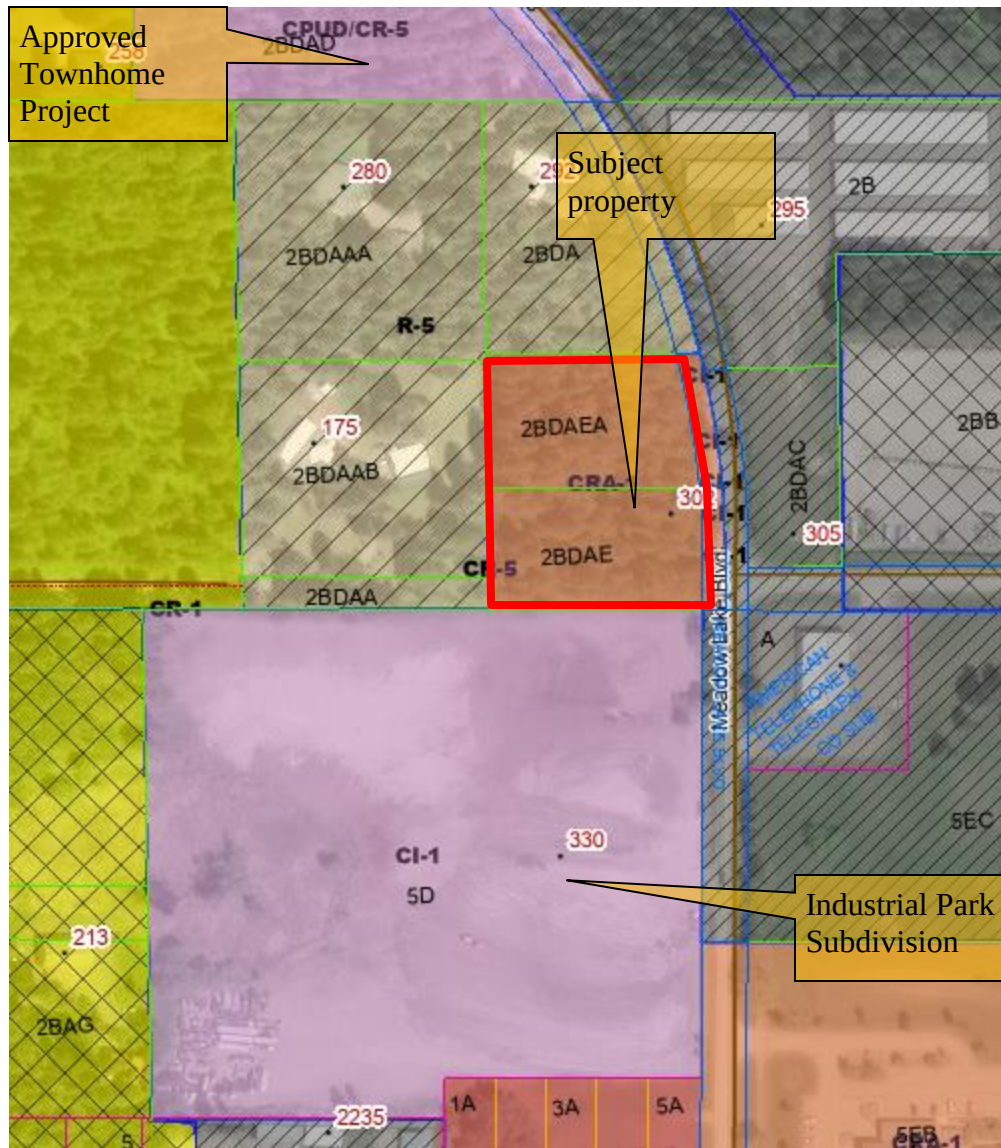
F. EXISTING LAND USE

The subject property is currently vacant. The project is located along Meadow Lake Boulevard which is a collector road and transitional area between industrial uses on the east and suburban densities to the west. There is also a light industrial subdivision just south of the property and a 20-unit townhome development was approved two properties to the north.



G. ADJACENT ZONING AND LAND USE:

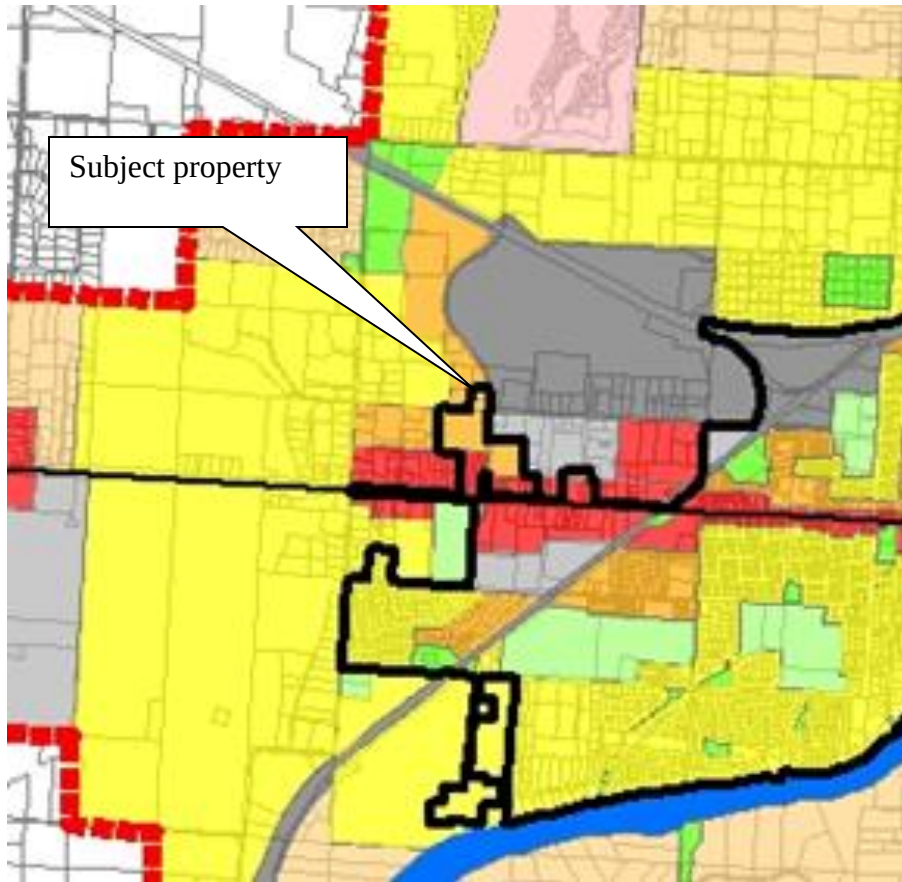
North	CR-5	Single Family Residential uses and a 20-unit townhome subdivision.
South	CI-1 and CB-2	A recently approved five lot light industrial subdivision and a new commercial development with hotel where the Lazy Days manufactured home park once stood.
East	CI-1	Storage warehouses, industrial uses, and Green Box site.
West	CR-5 and CR-1	Single Family Residential Uses



Source Flathead County GIS Subject Parcels are outlined in red

H. **GROWTH POLICY DESIGNATION:**

- I. The 2019 Columbia Falls Growth Policy Map shows the subject property as well as neighboring properties to the north and south as Multi-Family Residential. Multi-Family Residential is defined in the Growth Policy as “8 or more units per acre. High density residential includes townhouses and apartment units. Served by urban services and may be a buffer or transitional area between low density residential and non-residential.”



I. UTILITIES/SERVICES:

Sewer: City Sewer is available

Water: City Water is available with extension of main

Solid Waste: Private Contract Hauler

Police: Columbia Falls Police

Fire: Columbia Falls Fire Department

EVALUATION BASED ON REQUIRED CRITERIA

18.332.030 Criteria Required for Consideration of a Conditional Use Permit:

A Conditional Use Permit may be granted only if the proposal, as submitted, conforms to all of the following general Conditional Use Permit criteria, as well as to all other applicable criteria that may be requested.

- a. Site Suitability. (That the site is suitable for the use) This includes:
 - i) Adequate Usable Space: The site proposed for development is 2.251 (2.029 net) acres in size or 88,383 square feet net and the CRA-1 zoning district has a minimum lot size of 7,500 square feet. The Columbia Falls Zoning Ordinance allows maximum lot coverage of 45%. Each of the proposed buildings are 10,420 square feet or 20,840 square feet of lot coverage for both; giving a lot

coverage of 23% for the site. The parking requirement for 40 units regardless of bedrooms is two spaces per unit. The applicants propose 82 parking spaces to meet the parking standards of the zoning ordinance. The applicant is able to provide parking spaces, comply with setbacks, and provide required landscape buffers.

- ii) Adequate Access: The property fronts on Meadow Lake Boulevard which is a County maintained collector road. The access to the apartment project lines up with Best Way.

The applicants provided a Traffic Impact Study (TIS) for the project which shows a trip generation of 270 vehicle trips per day and a traffic load increase of 5 to 10% to neighboring roads. The TIS indicates a slight drop in Level of Service grade at the Best Way intersection and less than a one second delay per vehicle at said intersections and no drop in Level of Service for the Highway 2 and Meadow Lake Blvd Intersection or the Meadow Lake and Tamarack Lane intersections. The TIS has a recommendation for sight distance clearing to the north to meet standards. Staff will place a condition on the CUP requiring the developers to work with the Columbia Falls Public Works and Flathead County Road and Bridge on the recommendations of the TIS as part of any approval.

Parking Lots: The applicant proposed parking for the development on-site. The parking lot as proposed will have two-way access with a single approach onto Meadow Lake Boulevard at the intersection with Best Way. The Fire Chief, Karl Weeks, reviewed the site plan and approves the circulation.

Pedestrian Access: The Concept Site Plan dated 12/31/25 of the application package shows internal pedestrian walkways around the perimeter of the buildings as well as from the buildings to Meadow Lake Boulevard. They did not show any sidewalk along Meadow Lake Boulevard, but this will be a requirement of the development as there are two projects to the south developing sidewalk meaning there will be pedestrian connection from the apartments south to the sidewalks on Highway 2.

- iii) Absence of Environmental Constraints: As the development will be served by public sewer and water, there does not appear to be any significant environmental constraints. As the lot is mostly flat with the exception of the southeast corner. There does not appear to be any danger of flooding or slumping. The applicant is required to maintain all drainage on-site as part of the public works and building permit approval process. The drainage requirement protects adjoining neighbors from this project's roof and parking lot run-off.

- b. Appropriateness of Design. The site plan for the proposed use will provide the most convenient and functional use of the lot. Consideration of design should include:

- i) **Parking Scheme:** There is no on-street parking available, so the zoning regulations require off-street parking at a ratio of two spaces per unit. The applicant is showing 82 parking spaces which meet the requirements of the zoning code. All parking lots and driveways will be paved with a minimum 5-foot landscape buffer along the western property line and 15 feet along Meadow Lake Boulevard. The site plans are meeting the setback requirements of the CRA-1 zoning classification. The parking is internal of the development providing convenient movement from the spaces to the units.
 - ii) **Required parking for Residential Apartment (18.518)** is a minimum of two spaces per residential unit. The application indicates the correct number of parking stalls for the building types.
 - iii) **Traffic Circulation:** Access to the lot is via Meadow Lake Boulevard which is a collector street in Columbia Falls. The TIS supplied with the application set shows 270 average daily trips at full occupancy. The TIS is recommending roadside vegetation removal for 560-feet north of the new approach to increase site distance for the project.
 - iv) **Open Space:** The applicant's proposal meets all front, side and rear yard setbacks as required by zoning as well as the maximum lot coverage.
 - v) **Fencing/Screening:** The applicant proposes to leave native vegetation, to the extent possible, in the setback areas as buffers along with a six-foot privacy fence on the north, south and western property lines.
 - vi) **Landscaping:** The applicant is providing an eight to ten-foot wide landscape buffer on the north and south property lines. On the west boundary they are proposing approximately 15 feet of landscape buffer. It appears that the front and back setbacks meet the minimum setbacks. Most of the site will be disturbed by the construction of this project and most of the trees will be removed. The applicant provides a conceptual perspective showing that all disturbed areas not covered with building or asphalt will be relandscaped. A detailed landscape plan compliant with the large building standards (18.428.070) will be provided to the City for review and approval prior to the issuance of a building permit.
 - vii) **Signage:** Signage will conform to existing Columbia Falls sign regulations for the CRA-1 zone. The applicants propose building mounted signage but no details as yet. The Sign Ordinance will limit the sign to 16 square feet per face maximum if an identification sign is requested.
- c. **Availability of Public Services and Facilities.** The following services and facilities are to be available and adequate to serve the needs of the use as designed and proposed:
- i. **Schools:** Using County wide average of 0.34 school aged children per residence, (There were 17,446 students recorded with the Flathead County Superintendent of Schools Office including public, private and home-schooled children at the beginning of the 2022 school year. The US Census Bureau 2021 counted 50,808 housing units in Flathead County – 17,446 students / 50,808 housing units = 0.343 students per unit), the 40 residential lots would generate approximately fourteen students to the K – 12 school system. The additional

students should not negatively impact the School District. School children will attend Ruder Elementary, Columbia Falls Junior High and Columbia Falls High School. School District #6 provides school bus pick up and drop off and will work with the applicants on a school bus stop.

ii. Parks and Recreation: The project is not close to any public parks with the closest being $\frac{3}{4}$ mile to the south at John Horine Park. The development is proposing a tot-lot and a dog park area to the rear of the development.

iii. Police: The Columbia Falls Police Department is responsible for the proposed development. The development may have a slight increase in potential impact as it brings 40 more residential units to the City and these families will be living in close proximity to each other.

iv. Fire Protection: The Columbia Falls Fire Department provides fire protection to this neighborhood. The Columbia Falls Building Inspector will review the development for all building and fire code requirements. Hydrants will be installed with the project, and the number and locations will be reviewed and approved by the Columbia Falls Public Works Director and Fire Chief.

v. Water: City water service is available approximately 300 to the south along Meadow Lake Boulevard.

vi. Sewer: All lots will be serviced by City Sewer. A sewer main is located in Meadow Lake Boulevard.

vii. Solid Waste: The applicants show two refuse receptacles in the northwest corner of the parking lot. Impact to the Flathead County landfill should be minimal. The owner shall make arrangements with a private hauler to collect and remove solid waste from the site.

- d. Immediate Neighborhood Impact. The proposal is similar in size and nature to the existing development such as the assisted living facility to the east and the approved townhome project to the north. The recently approved industrial park to the south along with the proposed hotel in the former Lazy Day manufactured home park are changing the land use pattern in the neighborhood. The proposed apartments also buffer the industrial uses on the east side of Meadow Lake Boulevard from the single-family uses located to the west of the property.
- e. Typical negative impacts which extend beyond the proposed site include, but are not limited to:
 - i) Excessive Traffic Generation: The applicants provided a Traffic Impact Study (TIS) for the project which shows a trip generation of 270 vehicle trips per day and a traffic load increase of 5 to 10%. The TIS indicates a slight drop in Level of Service grade at the Best Way intersection and less than a one second delay per vehicle at said intersections and no drop in Level of Service for the Highway

2 and Meadow Lake Blvd Intersection or the Meadow Lake and Tamarack Lane intersections. The TIS has a recommendation for sight distance clearing to the north to meet standards.

- ii) Noise or Vibration: There will be noise and activity associated with the normal construction process. Once completed, further activity will be residential in use with all traffic, garbage, light and noise consistent with that use.
- iii) Dust, Glare, Or Heat: No change to existing conditions is anticipated.
- iv) Smoke, Fumes, Gas, and/or Odors: No change to existing conditions is anticipated.
- v) Inappropriate Hours of Operation: None proposed.
- vi) Signage: 18.438.010 Permitted Signs in Zoning Districts allows the applicant to have signs that comply and do not exceed the standards of section 18.438.080(3).

APPLICABLE REGULATIONS

The following sections of the Columbia Falls Zoning Regulations are applicable to this proposal:

Chapter 18.210 Conditional Use Permits

Chapter 18.332 CRA-1 Residential Apartment

Chapter 18.504.030 Parking facilities

Chapter 18.438 Signs

Chapter 18.428 Large Building

SUMMARY

The Conditional Use Request for permitting 40 apartment units in two buildings located at 302 Meadow Lake Boulevard. Staff recommends that the CUP should be approved based upon the information presented in the attached application and a review of the property and the associated findings of fact.

1. The multi-family nature of the project complies with the recommendations of the Columbia Falls City-County Growth Policy. The building design has incorporated design elements as required in the large building standards, but this will be reviewed more closely at the building permit stage.
2. The proposal meets or exceeds the minimum setback, parking, and small building standards and the project is well under the maximum lot coverage.
3. Environmental constraints from the development are considered to be minimal.
4. The project density and intensity is consistent with some neighboring uses.
5. Impacts to the Level of Service of neighboring roads shows only a slight drop in service at the Best Way intersection and no drops at the Highway 2 or Tamarack Drive intersections.

RECOMMENDATIONS

In accordance with 18.210.100 the Planning Commission and City Council must make a finding of fact for the items enumerated in the “evaluation based on criteria.”

Staff recommend that the Planning Commission adopt this report as findings of fact and send a recommendation for approval of CCU-26-01 with conditions to the Columbia Falls City Council. The granting of this conditional use is contingent upon the facilities initial and continued compliance with the following conditions of approval:

1. The applicant shall develop the project as proposed, except as modified by these Conditions.
2. The applicant shall secure approval of the Public Works Director and Flathead County Road Department for the new approach onto Meadow Lake Blvd. The approach shall incorporate the recommendations for sight distance found in the TIS.
3. The applicant shall pave all parking areas and driveways.
4. The applicant shall provide an engineered drainage plan to address on site storm water disposal. In addition, the applicant shall designate a snow storage area on site to accommodate parking lot snow disposal. This plan will need to be accepted by the City Public Works Department prior to issuance of a building permit.
5. A five-foot wide sidewalk shall be constructed along Meadow Lake Boulevard in compliance with Columbia Falls Public Works standards.
6. The applicant shall fully enclose with a fence or screen with growing materials the garbage collection site as shown on the site plan.
7. All sewer and water hookups shall be built according to plans and specifications approved by the City of Columbia Falls and meeting the City Standards for Public

Works Improvements and the Montana Public Works Standard Specifications. In addition, the sewer, water, and stormwater extensions shall also be approved by the MDEQ.

8. The Public Works Director and Fire Chief shall approve the number and placements of proposed fire hydrants.
9. All internal parking lot lighting and exterior building lighting shall comply with the Columbia Falls Zoning Ordinance and be fully shielded. Parking lots lighting shall be a maximum 18 feet tall measured from finish grade to the top of the fixture.
10. A detailed landscape plan compliant with the small building standards (18.441.070) will be provided to the City for review and approval prior to the issuance of a building permit.
11. All conditions provided above and all improvements necessary for the operation of an apartment complex must be in place prior to the occupancy of the complex. Any elements such as landscaping not finished prior to the issuance of an occupancy permit, may be bonded for with signed improvements agreement approved by the City Manager for an amount not less than 125% of the cost of the remaining improvement.
12. Signage shall comply with Section 18.438.080 of the Columbia Falls Zoning Regulations.
13. The applicant shall provide on-site recreational amenities (fenced tot lot and dog park) as shown in the application drawings.
14. The applicant shall provide two bike racks per building.
15. The applicants shall provide the City a contract with the applicable solid waste hauler prior to issuance of occupancy permits.
16. The applicants shall construct a six-foot privacy fence on the North, south, and west sides of the property as described in the application.
17. The Conditional Use Permit shall terminate 18 months from the date of issuance if commencement of the authorized activity has not begun.

APPLICATION FOR CONDITIONAL USE PERMIT

FILING FEE ATTACHED \$ 2,600.00

SEE FEE SHEET

PROPOSED USE: Multi - family housing (40 units)

(Describe in detail, indicate if continued to attached pages)

OWNER(S) OF RECORD:Name: Norton Luxury Homes, LLCMailing Address: PO Box 669City/State/Zip: Bigfork, MT 59901Phone: (434) 216-6698**PERSON(S) AUTHORIZED TO REPRESENT THE OWNER(S) AND TO WHOM ALL CORRESPONDENCE IS TO BE SENT:**Name: PCA Architects - Patrick Conover CEO/Principal ArchitectMailing Address: 600 Hogue DriveCity/State/Zip: Bigfork, MT 59911Phone: 406-314-6393**LEGAL DESCRIPTION OF PROPERTY** (Refer to Property Records):

302 Meadow Lake Blvd, 2BDAEA

Street Address Columbia Falls, MT Tract 2BDAE Block Lot

Subdivision Name n/aSection 7 Township 30N Range 20W

The Applicant is responsible for providing sufficiently complete information (see 18.210.090). Attached is the *Required Criteria for Conditional Use Application* the Planning Board and Council must use to create a "Finding of Fact" in making a decision. Please review the Criteria carefully before providing the following information and documents.

18.210.090 Burden of proof.

The burden of proof for satisfying the aforementioned criteria shall rest with the applicant and not the planning board. The granting of a conditional use permit rests in the discretion of the city council as to whether or not the proposal conforms to the criteria and requirements set forth in Chapter 18.210.080

1. Zoning District and Zoning Classification in which use is proposed: CRA-1

2. Attach a plan of the affected lot which identifies the following items:

- a. Surrounding land uses.
- b. Dimensions and shape of lot.
- c. Topographic features of lot.
- d. Size(s) and location(s) of existing buildings.
- e. Size(s) and location(s) of proposed buildings.
- f. Existing use(s) of structures and open areas.

- g. Proposed use(s) of structures and open areas.
- h. Existing & proposed landscaping and fences.

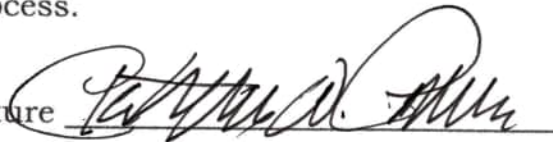
3. On a separate sheet of paper, discuss the following topics relative to the proposed use:

- a Traffic flow and control.
- b Access to and circulation within the property.
- c Off-street parking and loading.
- d Refuse and service areas.
- e Utilities.
- f Screening and buffering.
- g Signs, yards and other open spaces.
- h Height, bulk and location of structures.
- i Location of proposed open space uses.
- j Hours and manner of operation.
- k Noise, light, dust, odors, fumes and vibration.
- l If the application is for a home occupation conditional use permit provide the following information:
 - 1 Number of employees that will work on the premises.
 - 2 Number of employees that are not family members residing at the premises.
 - 3 Estimated number and frequency of clients/patrons that will visit the on-site business.
 - 4 How much area will be used for the business. Compared to the area used for residential purposes.

4. Attach supplemental information for proposed uses that have additional requirements.

I hereby certify under penalty of perjury and the laws of the State of Montana that the information submitted herein, on all other submitted forms, documents, plans or any other information submitted as a part of this application, to be true, complete, and accurate to the best of my knowledge. Should any information or representation submitted in connection with this application be incorrect or untrue, I understand that any approval based thereon may be rescinded, and other appropriate action taken. The signing of this application signifies approval for the planning staff to be present on the property for routine monitoring and inspection during the approval and development process.

Applicant Signature



Date

DEC. 27, 2025

Required Criteria for Conditional Use Application

18.210.080 Criteria required for consideration of a conditional use permit.

A conditional use permit may be granted only if the proposal, as submitted, conforms to all of the following general conditional use permit criteria, as well as to all other applicable criteria that may be requested.

- A. Site Suitability. That the site is suitable for the use. This includes:
 1. Adequate usable space,
 2. Adequate access, and
 3. Absence of environmental constraints.
- B. Appropriateness of Design. The site plan for the proposed use will provide the most convenient and functional use of the lot. Consideration of design should include:
 1. Parking scheme,
 2. Traffic circulation,
 3. Open space,
 4. Fencing/screening,
 5. Landscaping, and
 6. Signage.
- C. Availability of Public Services and Facilities. The following services and facilities are to be available and adequate to serve the needs of the use as designed and proposed:
 1. Sewer,
 2. Water,
 3. Storm water drainage,
 4. Fire protection,
 5. Police protection, and
 6. Streets.
- D. Use will not be detrimental to abutting properties in particular and the neighborhood in general. Typical negative impacts which extend beyond the proposed site include, but are not limited to:
 1. Excessive traffic generation,
 2. Noise or vibration,
 3. Dust, glare, or heat,
 4. Smoke, fumes, gas, or odors, and
 5. Inappropriate hours of operation
 6. Economic impacts if the building is a large building with a minimum floor area of 60,000 square feet.



600 Hogue Drive
P.O. Box 1153
Bigfork, Montana 59911
406.314.6393

The proposed project is located on 2.251 acres at 302 Meadow Lake Blvd. The project consists of two (2) new two (2) story multi-family buildings with a total of forty (40) units (ten (10) units per floor, with thirty-six (36) two-bedroom units and four (4) one-bedroom units). The buildings will have exterior entrances to each unit, with stairs to the second-floor units.

A total of 80 parking spaces will be provided. Each unit will have two parking spaces. There are four ADA parking spaces provided on site, along with two loading areas provided in the parking area.

Parking is located between the buildings in the center of the property in a looped circulation pattern. Access is located off of Meadow Lake Blvd. at the southeast corner of the property, aligning with Best Way and providing ample north and south line- of-sight to Meadow Lake Blvd. Both horizontal lap siding and board & batt siding are used on the exteriors of the buildings, along with shingle siding and wood truss accents. The roofing is asphalt shingles.

Two screened refuse containers are located in the parking area. The building footprints are 10,420 square feet each and 34'-8 ½" maximum height. The building coverage is 21.2%. Landscaping coverage is 23.6%.

A monument sign will be located along Meadow Lake Blvd.

Utilities (electrical, water and sewer) are to be extended up Meadow Lake.

A Tot Lot playground area is to be located near the southwest corner of the north building, along with an adjacent dog park on the west side of the north building.

Narrative

3. Meadow Lake Apartments CUP Application

a. Traffic flow and control

The subject property is located at 302 Meadow Lake Boulevard, Columbia Falls, Montana. This project is an undeveloped site. The proposed improvements include two twenty-unit, two-story apartment buildings. Based on the updated Traffic Impact Study (TIS), Meadow Lake Boulevard and the surrounding streets are anticipated to be able to accommodate the additional traffic volume from the proposed development.

b. Access to and circulation within the property

The subject property is accessed from Meadow Lake Boulevard. The proposed access to the site is from Meadow Lake Boulevard and will allow for full circulation of traffic on site including fire trucks and solid waste vehicles. Once circulated through the site, traffic will exit through the singular access onto Meadow Lake Boulevard. There will be internal sidewalks installed to allow pedestrian flow from the parking lots to the buildings with a connection to Meadow Lake Boulevard. On the west side of the property a walking path is also proposed connecting pedestrian traffic from both buildings.

c. Off-street parking and loading

Off-street parking is provided in close proximity to each building. The proposed project provides 85 spaces which meets the City of Columbia Falls parking requirements of two spaces per unit per the zoning regulations.

d. Refuse and service areas

Solid waste service by contract hauler is proposed for the site with the solid waste container located in the westerly interior of proposed parking lot island.

e. Utilities

The project proposes a new fire service line to each building along with water services and irrigation. The proposed service lines will connect to the future water main in Meadow Lake Boulevard which is being extended as part of the development improvements. Sizes of services will be determined in conjunction with Columbia Falls Public Works and Columbia Falls Fire Department input.

Sanitary sewer service to each building will be provided with new separate E/One grinder pumps and low-pressure sewer services for each building connecting to the existing sewer force main located on the west side of the Meadow Lake Boulevard Right-of-Way.

Storm drainage will be provided with surface sheet flows across the parking area into inlets, manholes, and storm drain piping into a treatment structure which is then

connected to an underground detention/infiltration structure in the southeast corner of the of the parking lot/access area. Flows are not anticipated to cause an increase to pre-development flow conditions and a storm report supporting this will be provided with engineering plans as required.

All dry utilities exist in Meadow Lake Boulevard Right-of-Way adjacent to the proposed development site and are proposed to be provided underground by directional boring under Meadow Lake Boulevard.

f. **Screening and buffering**

There is a proposed 6' privacy fence on the south, west, and north property boundaries. Every effort will be made to maintain all existing mature trees outside the construction zone and development footprint.

g. **Signs, yards and other open spaces**

A future ground mounted monument sign may be included in the eastern island area of the parking lot.

h. **Height, bulk and location of structures.**

The project proposes two twenty-unit apartment buildings that total approximately 22,240 SF coverage. Building height allowed is 35 ft and proposed building heights will follow the zoning designation parameters. The proposed buildings will not encroach on any building setbacks and will be located at a minimum of 15' from the front/rear property boundaries and a minimum of 5 ft. from side property boundaries.

i. **Location of proposed open space and uses**

On site open spaces are primarily setback areas along Meadow Lake Boulevard, the western side setback of the lot, various island areas incorporated in the parking/access areas, and all areas between the sidewalks and the buildings. All open areas proposed as landscaped or planted areas. A "Tot Lot" and a "Dogtopia" will be included in the northwest corner of the proposed project amenities.

j. **Hours and manner of operation**

Based on multi-family use the main traffic in and out of the site will be in the mornings and evenings. There are no proposed outside amenities that would create additional neighborhood Impacts.

k. **Noise, light, dust, odors, fumes and vibration**

No adverse impacts are expected from any of the mentioned items after the project is completed. During construction the contractor will be required to mitigate any impacts from construction activities. Most activity from the proposed will be performed during normal residential hours and should not adversely impact any surrounding lots.

302 Meadow Lake Blvd
Meadow Lake Apartments - Vicinity Map



Imagery ©2025 Airbus, CNES / Airbus, Maxar Technologies, USDA/FPAC/GEO, Landsat / Copernicus, Map data ©2025 Google 1000 ft



Columbia Falls
Meadow Lake Apartments



Imagery ©2025 Airbus, Maxar Technologies, USDA/FPAC/GEO, Map data ©2025 Google 200 ft

CERTIFICATE OF SURVEY

LOCATED IN THE N.E. 1/4 OF THE S.W. 1/4 OF SECTION 7, T30N, R20W, PM, M,
FLATHEAD COUNTY, MONTANA



PREPARED BY:
JACKOLA ENGINEERING & ARCHITECTURE, P.C.
JAMES H. BURTON, R.L.S.
1830 3RD AVENUE EAST
3RD FLOOR, SOUTHFIELD TOWER
P.O. BOX 1134
KALISPELL, MT 59903
406-755-3208

PREPARED FOR:
SHARON CURTISS-RIVERA

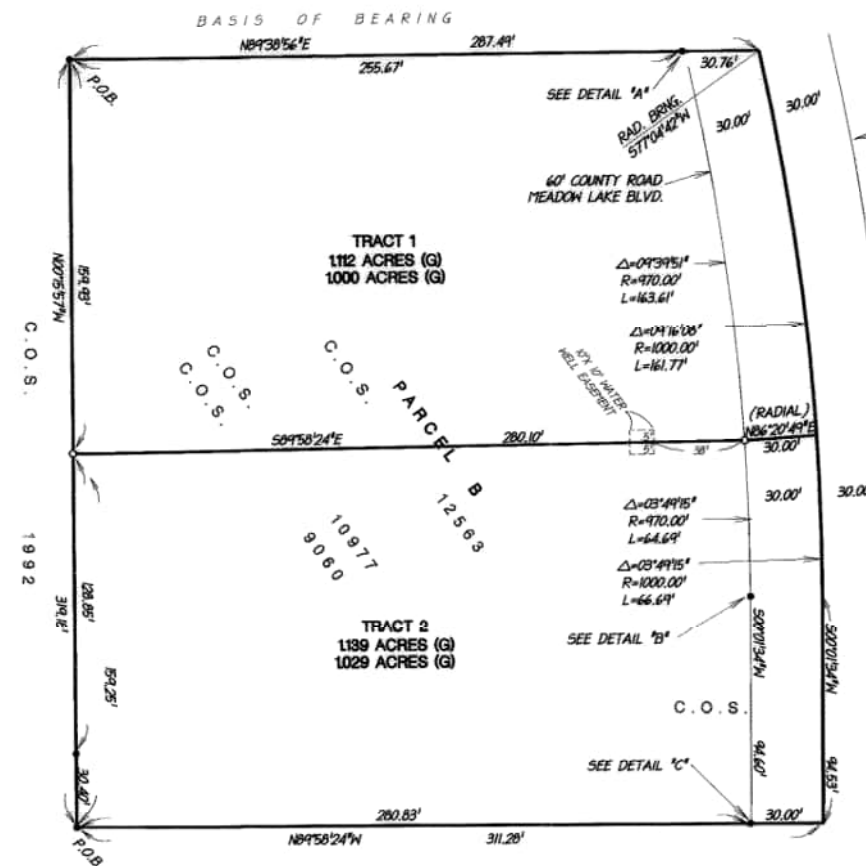
SEPTEMBER 1999

PURPOSE OF SURVEY
IMMEDIATE FAMILY TRANSFER

1" = 50'
50 25 0 50 100



- FOUND 5/8" RE-BAR WITH PLASTIC SURV-CAP AS PER C.O.S. 12563
- SET 5/8" X 24" RE-BAR WITH PLASTIC SURV-CAP MARKED 'BURTON 54285'



DESCRIPTION - TRACT 1

A TRACT OF LAND LOCATED IN THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 30 NORTH, RANGE 20 WEST, PRINCIPAL MERIDIAN, MONTANA, FLATHEAD COUNTY, MONTANA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF PARCEL B OF CERTIFICATE OF SURVEY NUMBER 12563, RECORDS OF FLATHEAD COUNTY AND WHICH POINT IS THE TRUE POINT OF BEGINNING;

THENCE N89°38'56"E, ON AND ALONG THE NORTH BOUNDARY OF SAID PARCEL B, A DISTANCE OF 287.49 FEET TO A POINT AND WHICH POINT IS THE NORTHEAST CORNER OF SAID PARCEL B AND WHICH POINT LIES ON THE CENTERLINE OF A 60-FOOT COUNTY ROAD KNOWN AS MEADOW LAKE BOULEVARD AND WHICH POINT IS IN THE MIDST OF A CURVE;

THENCE SOUTHERLY, ON AND ALONG SAID CENTERLINE, ON A CURVE TO THE RIGHT (DELTA = 09°16'08", RADIUS = 1000.00 FEET AND RADIAL BEARING = 57°04'42"W), AN ARC LENGTH OF 161.77 FEET TO A POINT;

THENCE S86°20'49"W, AND LEAVING SAID CENTERLINE, A DISTANCE OF 30.00 FEET TO A SET 5/8" RE-BAR AND WHICH POINT LIES ON THE WEST RIGHT-OF-WAY BOUNDARY OF SAID 60-FOOT COUNTY ROAD;

THENCE N89°58'24"N, AND LEAVING SAID WEST RIGHT-OF-WAY BOUNDARY, A DISTANCE OF 280.10 FEET TO A SET 5/8" RE-BAR AND WHICH POINT LIES ON THE WEST BOUNDARY OF SAID PARCEL B;

THENCE N00°15'57"W, ON AND ALONG SAID WEST BOUNDARY OF PARCEL B, A DISTANCE OF 159.93 FEET TO THE TRUE POINT OF BEGINNING.

THIS TRACT CONTAINS 1.112 ACRES AND SUBJECT TO AND TOGETHER WITH THOSE EASEMENTS AS SHOWN HEREON AND SUBJECT TO AND TOGETHER WITH ALL APPURTENANT EASEMENTS OF RECORD.

DESCRIPTION - TRACT 2

A TRACT OF LAND LOCATED IN THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 7, TOWNSHIP 30 NORTH, RANGE 20 WEST, PRINCIPAL MERIDIAN, MONTANA, FLATHEAD COUNTY, MONTANA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF PARCEL B OF CERTIFICATE OF SURVEY NUMBER 12563, RECORDS OF FLATHEAD COUNTY AND WHICH POINT IS THE TRUE POINT OF BEGINNING;

THENCE N00°15'57"W, ON AND ALONG THE WEST BOUNDARY OF SAID PARCEL B, A DISTANCE OF 159.25 FEET TO A SET 5/8" RE-BAR;

THENCE S89°58'24"E, AND LEAVING SAID WEST BOUNDARY, A DISTANCE OF 280.10 FEET TO A SET 5/8" RE-BAR AND WHICH POINT LIES ON THE WEST RIGHT-OF-WAY BOUNDARY OF A 60-FOOT COUNTY ROAD KNOWN AS MEADOW LAKE BOULEVARD;

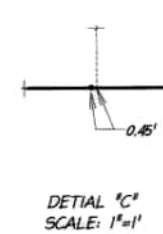
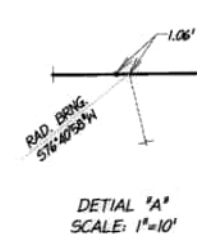
THENCE N86°20'49"E, AND LEAVING SAID WEST RIGHT-OF-WAY, A DISTANCE OF 30.00 FEET TO A POINT AND WHICH POINT LIES ON THE CENTERLINE OF SAID 60-FOOT COUNTY ROAD AND WHICH POINT IS IN THE MIDST OF A CURVE;

THENCE SOUTHERLY, ON AND ALONG SAID CENTERLINE, ON A CURVE TO THE RIGHT (DELTA = 03°49'15", RADIUS = 1000.00 FEET AND RADIAL BEARING = 586°20'49"W), AN ARC LENGTH OF 66.69 FEET TO A POINT OF NON-TANGENCY;

THENCE S00°01'34"W, ON AND ALONG SAID CENTERLINE, A DISTANCE OF 94.53 FEET TO A POINT AND WHICH POINT IS THE SOUTHEAST CORNER OF SAID PARCEL B;

THENCE N89°58'24"N, ON AND ALONG THE SOUTH BOUNDARY OF SAID PARCEL B, A DISTANCE OF 311.28 FEET TO THE TRUE POINT OF BEGINNING.

THIS TRACT CONTAINS 1.139 ACRES AND SUBJECT TO AND TOGETHER WITH THOSE EASEMENTS AS SHOWN HEREON AND SUBJECT TO AND TOGETHER WITH ALL APPURTENANT EASEMENTS OF RECORD.



CERTIFICATE OF OWNER'S: I HEREBY CERTIFY THAT THE PURPOSE OF THIS SURVEY IS TO TRANSFER TRACT 1, TO TEKSU RIVERA, MY HUSBAND; THAT THIS IS THE FIRST GIFT OR SALE TO HIM; I CERTIFY THAT I AM IN COMPLIANCE WITH ALL THE CONDITIONS IMPOSED ON THE USE OF THIS EXEMPTION; THEREFORE, THIS DIVISION IS EXEMPT FROM REVIEW AS A SUBDIVISION PURSUANT TO SECTION 76-3-207(1)(b), M.C.A.

SHARON CURTISS-RIVERA

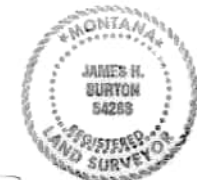
COUNTY OF FLATHEAD)
STATE OF MONTANA) SS

ON THIS 14th DAY OF May, 2004, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC FOR THE STATE OF MONTANA, PERSONALLY APPEARED SHARON CURTISS-RIVERA AND KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT SHE EXECUTED THE SAME.

IN WITNESS WHEREOF, I HAVE SET MY HAND AND AFFIXED MY NOTARIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.



NOTARY PUBLIC FOR THE STATE OF MONTANA
RESIDING AT KALISPELL, MONTANA
MY COMMISSION EXPIRES 6/18/2007



JAMES H. BURTON
REGISTERED LAND SURVEYOR
REGISTRATION NUMBER 54285

APPROVED: 520, 2004

BRYAN B. BLOCK
EXAMINING LAND SURVEYOR
REGISTRATION NUMBER 79185

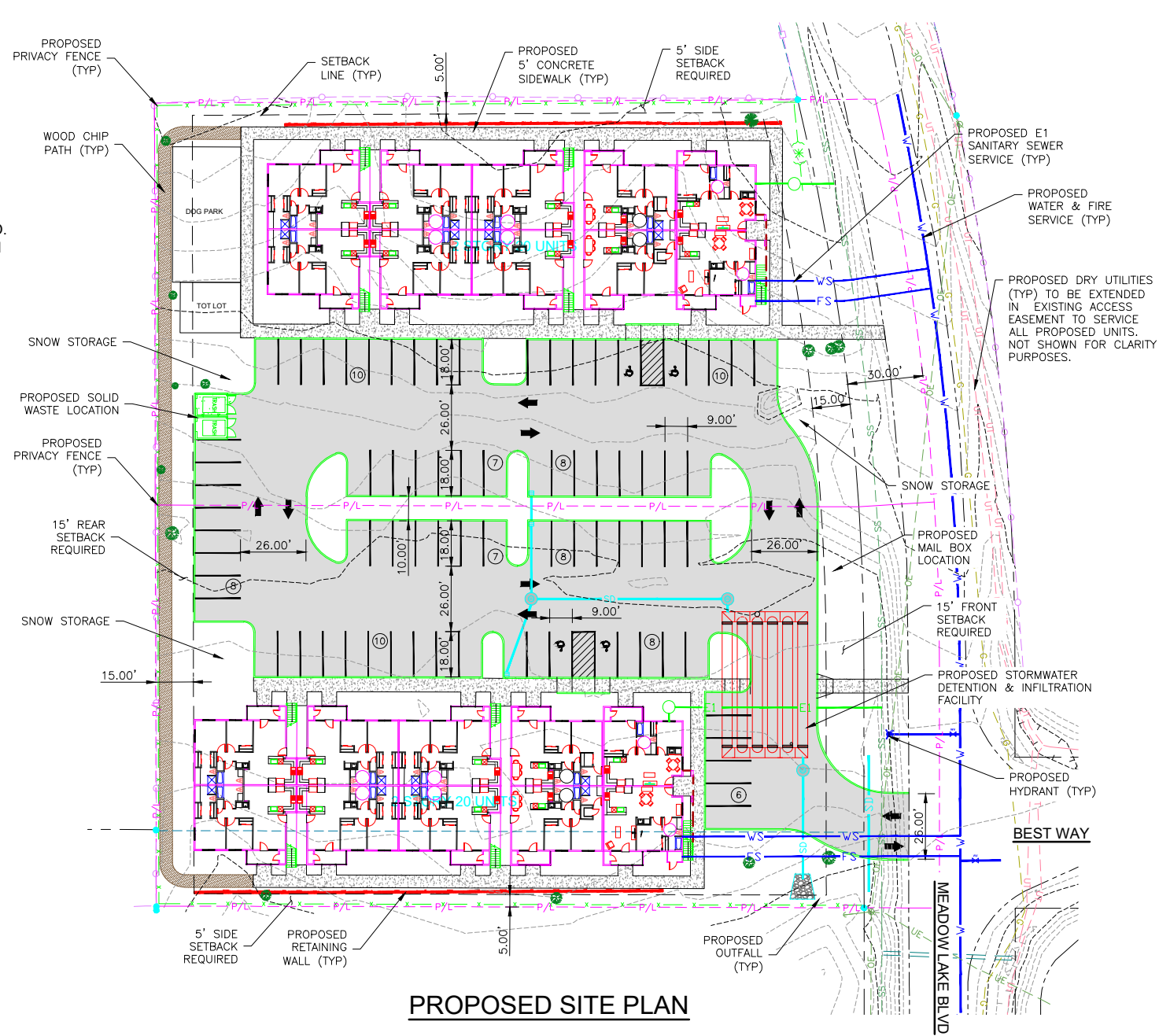
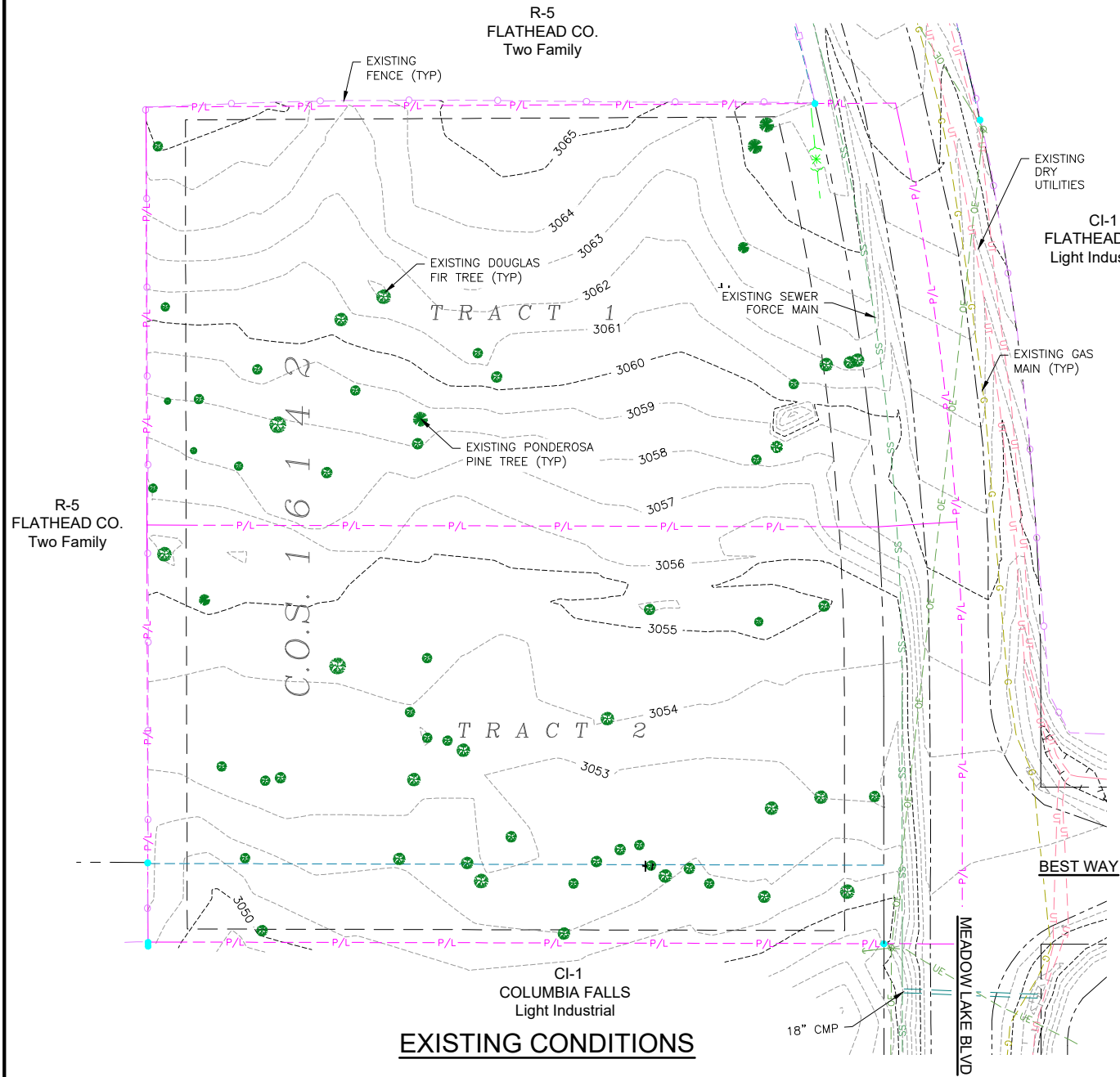
STATE OF MONTANA)
COUNTY OF FLATHEAD) SS

FILED ON THE 11 DAY OF June
2004, AT 8:32 O'CLOCK P.M.

Paula Robinson
COUNTY CLERK AND RECORDER

BY Monica R. Eisenjorn
DEPUTY

FILING FEE 6
CERTIFICATE OF SURVEY NO. 16142



GENERAL NOTES

DESCRIPTION

TRACTS 1 & 2, COS #16142, CITY OF COLUMBIA FALLS, SECTION 7, T30N, R20W, PMM, FLATHEAD COUNTY, MONTANA, RECORDS OF FLATHEAD COUNTY.

SUBDIVISION NOT REQUIRED.

ASSESSOR # - 0008732, 0982067

PROPOSED USE
MULTI-FAMILY RESIDENTIAL.

ZONING
CURRENT ZONING IS CITY OF COLUMBIA FALLS ZONING ORDINANCE, DESIGNATION CRA-1, RESIDENTIAL APARTMENT. SETBACKS ARE BASED ON SAID DESIGNATION.

LANDSCAPE

LANDSCAPING PER CITY OF COLUMBIA FALLS STANDARDS.

TRAFFIC
INGRESS & EGRESS OFF MEADOW LAKE BOULEVARD.

PARKING 82 SPACES TOTAL, NONE COVERED.
78 STD SPACES
4 ADA SPACES

LIGHTING
SITE LIGHTING WILL BE INSTALLED PER CITY OF COLUMBIA FALLS STANDARDS

LOT AREA
TRACTS TOTAL - 98053.56 SF / 2.251 AC

MUNICIPAL SERVICES

SANITARY SEWER AND WATER SERVICES BY THE CITY OF COLUMBIA FALLS AND WILL BE INSTALLED PER CITY OF COLUMBIA FALLS PUBLIC WORKS STANDARDS. A WATER MAIN EXTENSION WILL BE REQUIRED. SOLID WASTE DISPOSAL BY CONTRACT HAULER. MULTI CONTAINERS IN ENCLOSURE. STORM DRAINAGE TO BE COLLECTED, TREATED, AND INFILTRATED THROUGH A NEW PROPOSED SYSTEM.

MAIL DELIVERY
GROUP MAILBOX PROPOSED IN WESTERN PARKING ISLAND.

EMERGENCY SERVICES
POLICE PROTECTION PROVIDED BY THE CITY OF COLUMBIA FALLS. FIRE PROTECTION PROVIDED BY COLUMBIA FALLS FIRE DEPARTMENT.

Item No.5.

MEADOW LAKE APARTMENTS
302 MEADOW LAKE BOULEVARD, COLUMBIA FALLS, MT 59912

CUP EXHIBIT

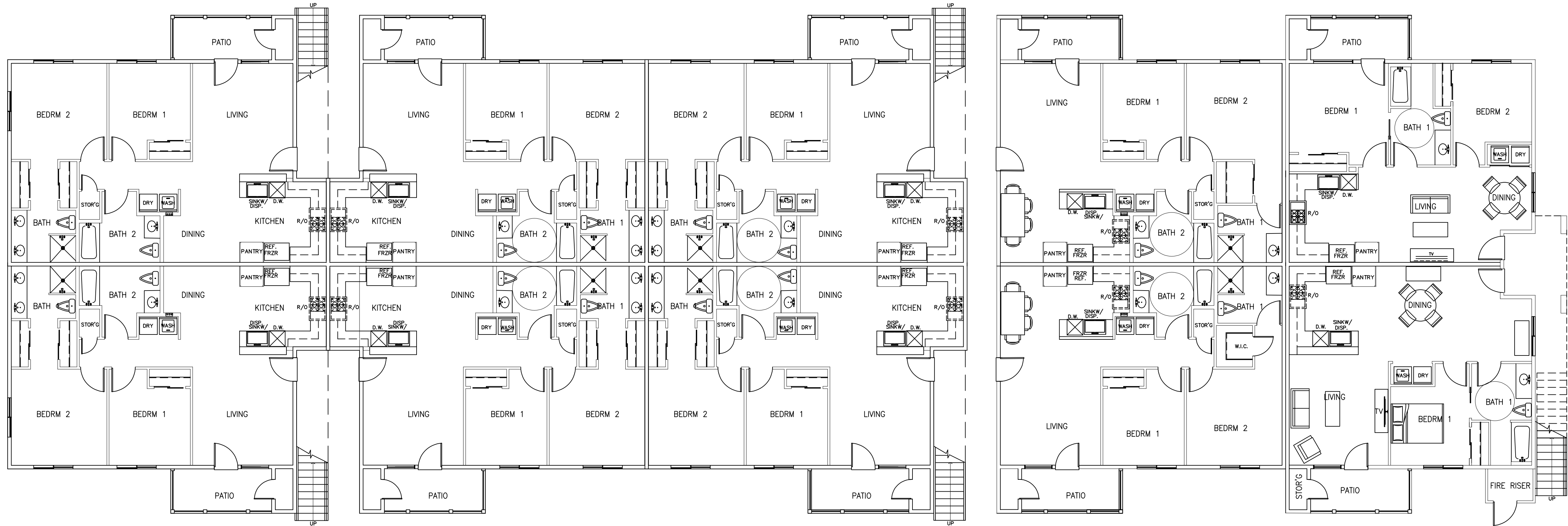
EXISTING CONDITIONS & PROPOSED PROJECT LAYOUT



DRAWN BY: DJK
DESIGNED BY: PCA/DJK
QUALITY CHECK: DAP
DATE: 12.24.2025
JOB NO. K25-067
FIELDBOOK

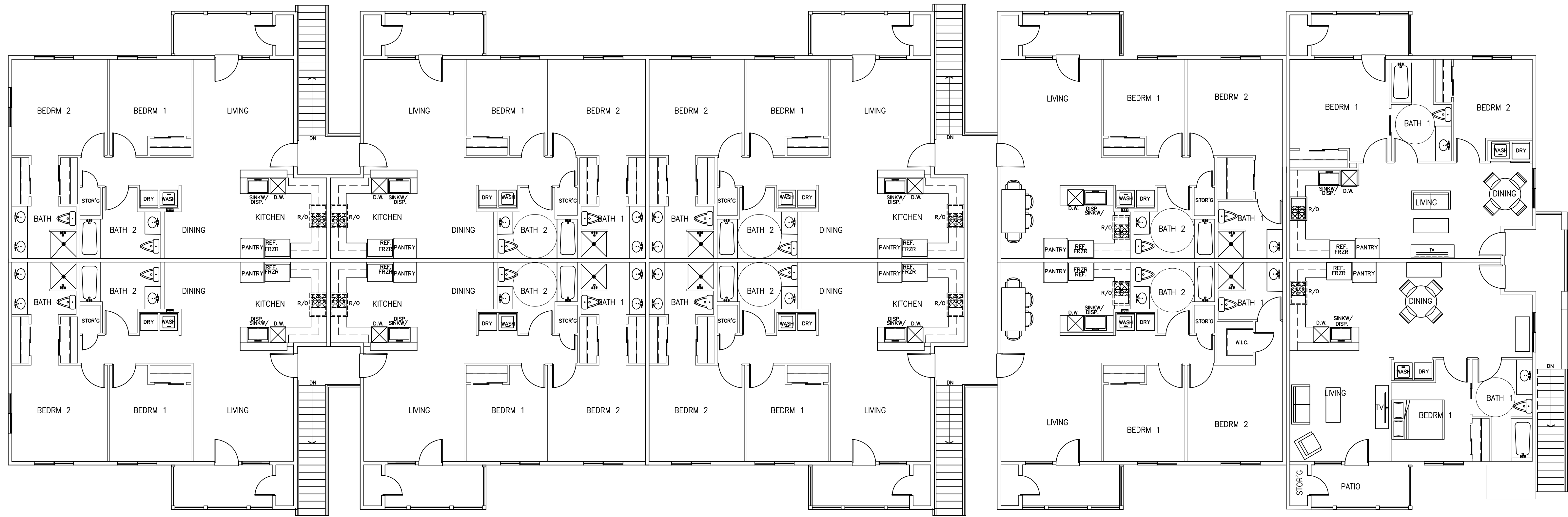
REV	DATE	REVISION

NOT FOR
CONSTRUCTION



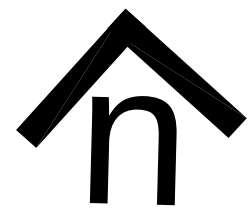
First Floor Plan

SCALE: 1/8" = 1'-0"



Second Floor Plan

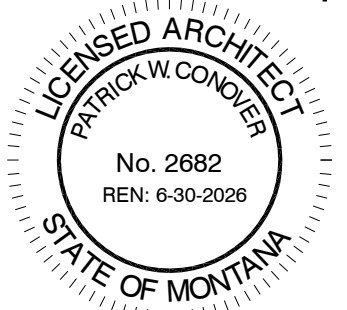
SCALE: 1/8" = 1'-0"



600 Hogue Drive
P.O. Box 1153
Bigfork, Montana 59911
P: 406.314.6393
Email: pconover@pca-architect.com

Consultant

Professional Stamp



Project

Meadow Lake Apts
302 Meadow Lake Blvd.
Columbia Falls, Montana

THE PLANS, DETAILS AND SPECIFICATIONS SHOWN ON THESE DRAWINGS ARE THE PROPERTY AND COPYRIGHT OF PCA ARCHITECTS P.C., AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH PCA ARCHITECTS P.C.
WRITTEN DIMENSIONS SHALL TAKE PRECEDENT OVER SCALED DIMENSIONS AND SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT PRIOR TO THE COMMENCEMENT OF ANY WORK.

Revisions		
PLAN	CHECK	CORRECTIONS

PROJECT No.	PATRICK
DATE	2022-11
DRAWN BY:	REVIEW
ISSUED FOR:	2/20/22
SHEET TITLE	SITE_PLAN
SHEET No.	A200



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Consultant

Professional Stamp



Project

Meadow Lake Apts
302 Meadow Lake Blvd.
Columbia Falls, Montana

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Revisions

PLAN CHECK CORRECTIONS

PROJECT No.
PATRICK

DATE
2025-11

DRAWN BY:
REVIEW

ISSUED FOR:
11/24/2025

SHEET TITLE
ELEVATIONS

SHEET No.

A400

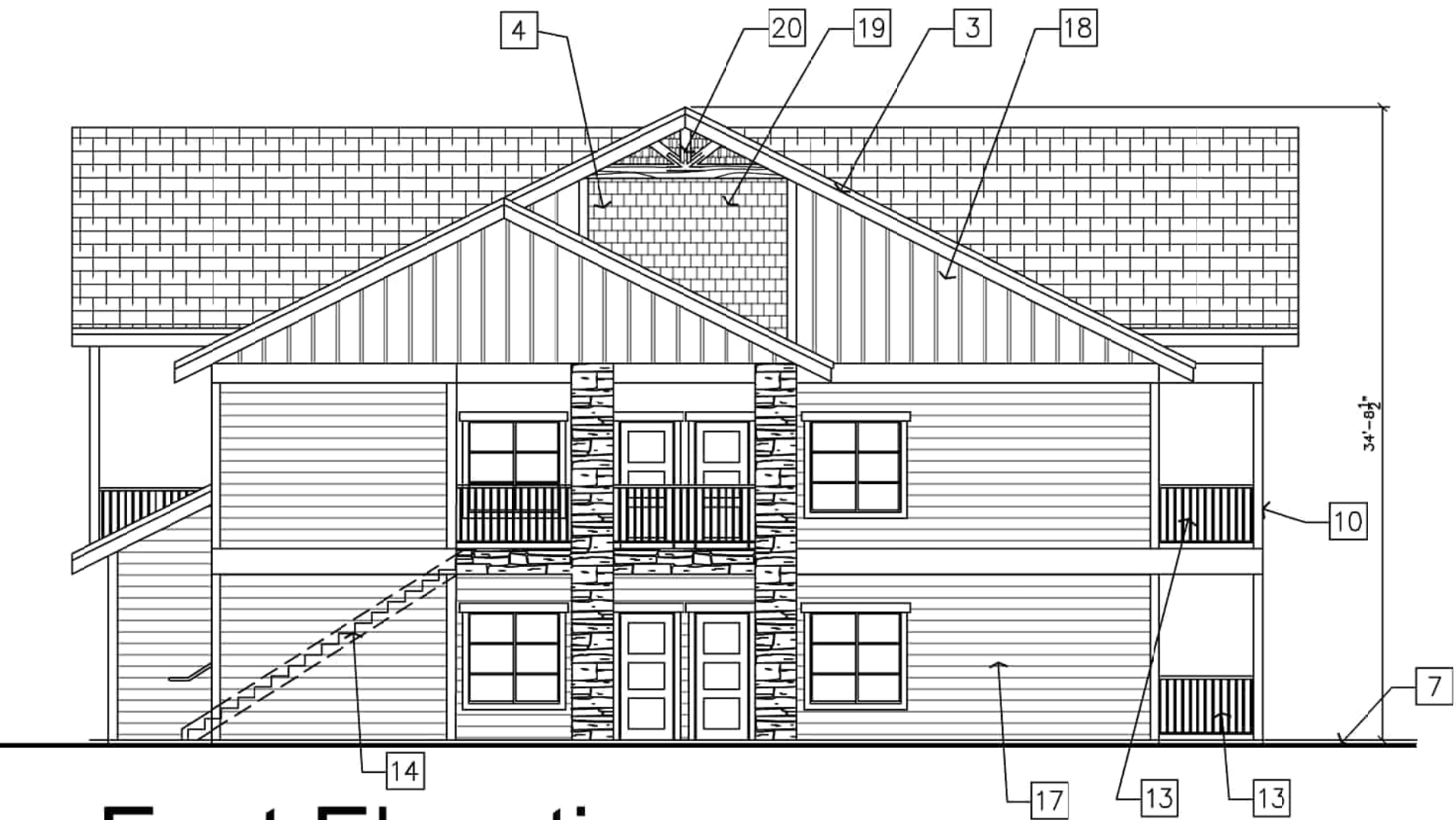
ELEVATION KEYNOTES

- 1 PATIO DOOR. SEE DOOR SCHEDULE
- 2 LP SMART SIDING 12 INCH HORIZONTAL BAND BOARD COLOR
- 3 LP FASCIA. COLOR
- 4 6 INCH LP TRIM. COLOR TO BE
- 5 BLACK FRAME DUAL PANE LOW E WINDOWS
- 6 DECORATIVE LIGHTING.
- 7 FINISH GRADE
- 8 OWENS CORNING DURATION ASPHALT SHINGLES COLOR TO BE ESTATE GREY.
- 9 8X8 HEM FIR BEAM TO STAIN
- 10 8X8 HEM FIR POST
- 11 DOOR PER SCHEDULE. SEE SHT. A700
- 12 IN-WALL HVAC. SEE MECHANICAL PLANS
- 13 36" HIGH WROUGHT IRON GUARDRAIL. PAINT BLACK
- 14 METAL FRAMED STAIRS. SEE DETAIL ON SHEET
- 15 PROVIDE SHEET METAL COUNTERFLASHING WHERE HORIZONTAL SIDING MEETS VERTICAL SIDING.
- 16 STANDING SEAM METAL ROOF OVER MOISTURE BARRIER.
- 17 LP SMART HORIZONTAL LAP SIDING. COLOR TO BE
- 18 LP SMART BOARD & BATT SIDING. COLOR TO BE
- 19 LP SMART SHINGLE SIDING. COLOR TO BE
- 20 DECORATIVE WOOD TRUSS. SEE DETAIL.
- 21
- 22
- 23



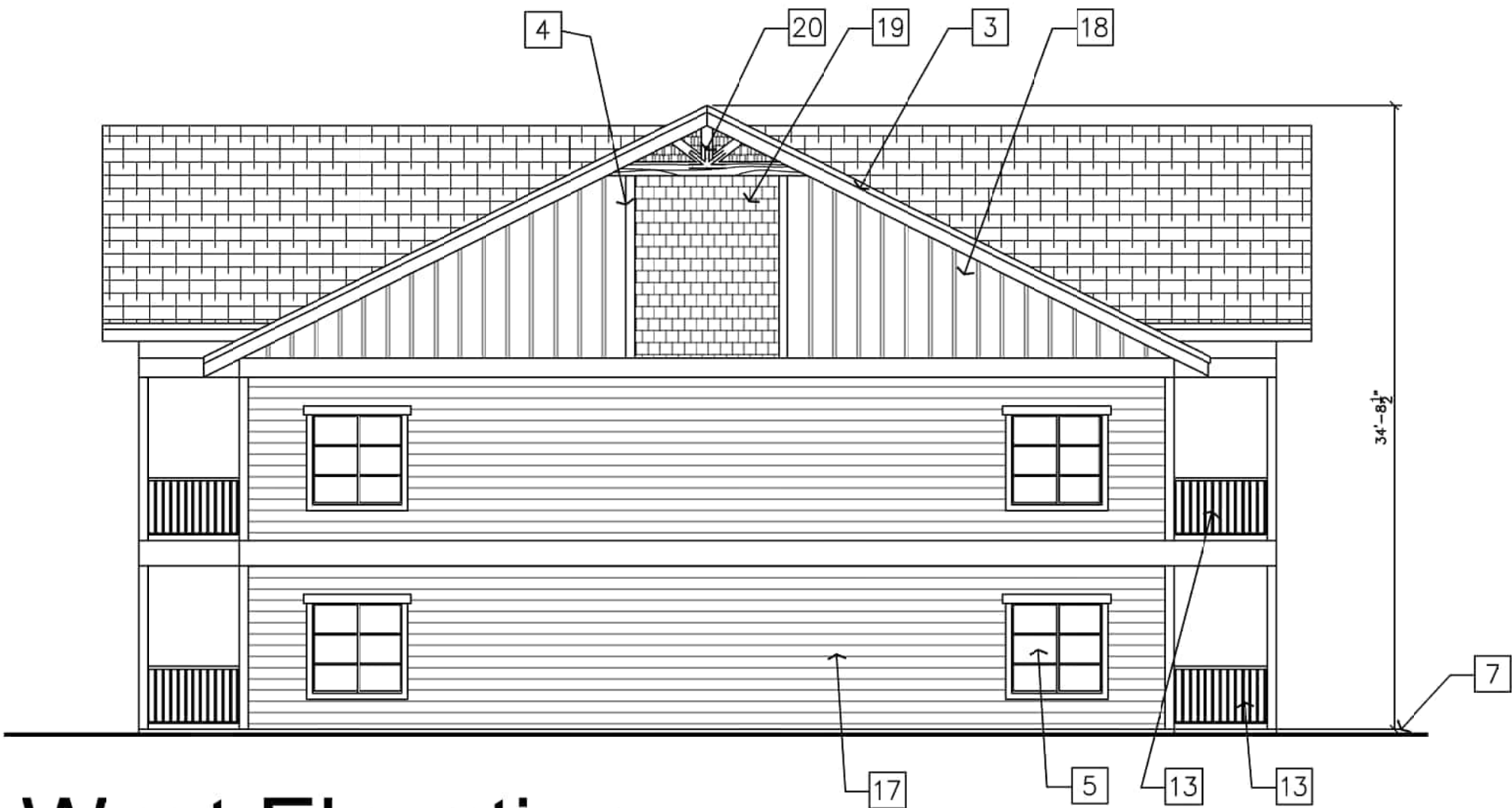
South Elevation

SCALE: 1/8" = 1'-0"



East Elevation

SCALE: 1/8" = 1'-0"



West Elevation

SCALE: 1/8" = 1'-0"



North Elevation

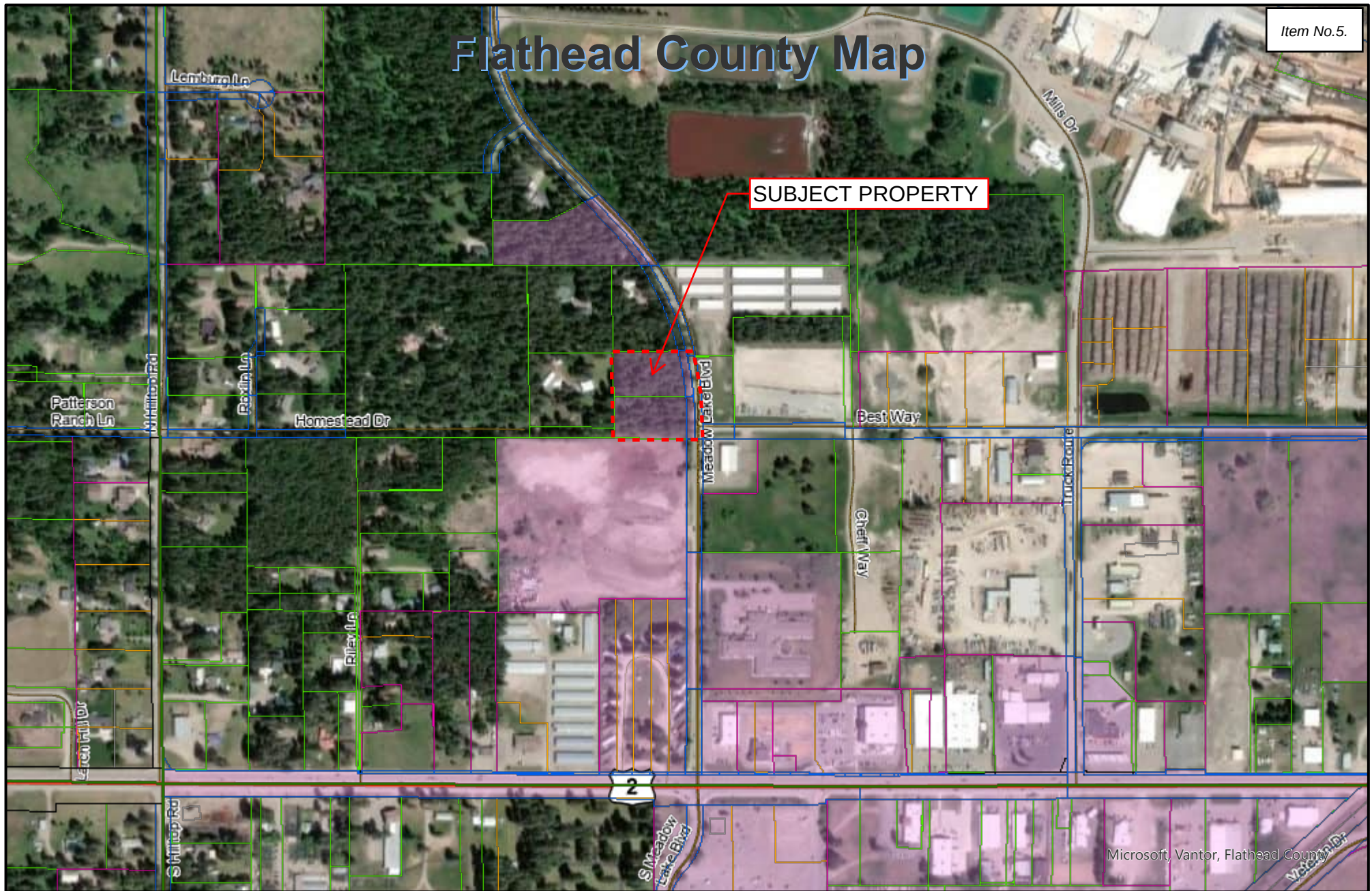
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Flathead County Map

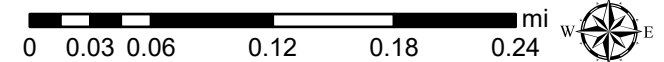
Item No.5.



Flathead County
GIS Department



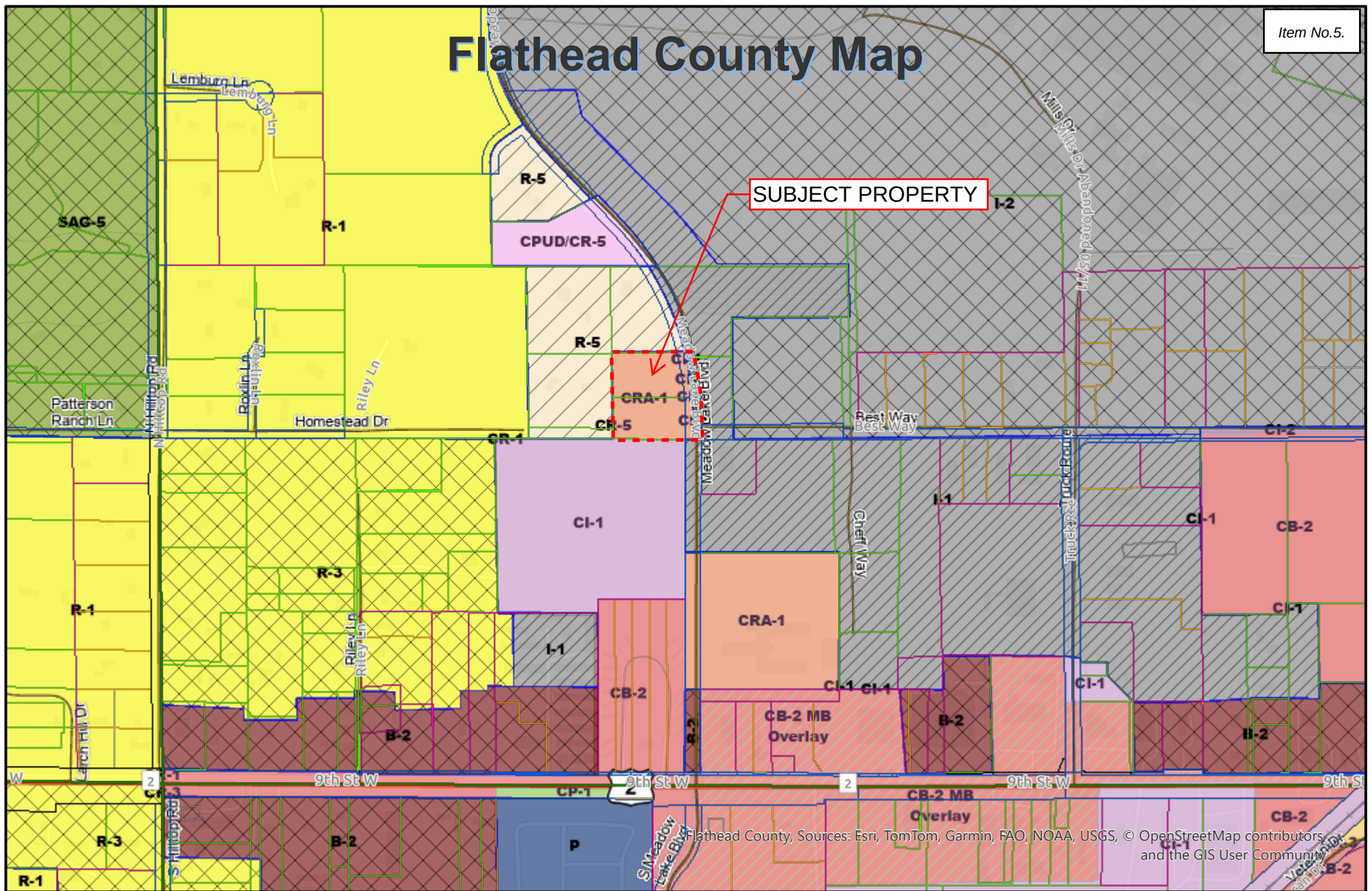
800 South Main Street
Kalispell, Montana 59901



The areas depicted on these maps are for illustrative purposes only and do not necessarily meet mapping, surveying, or engineering standards. Deriving conclusions from this map is done at the assumed risk.

Flathead County Map

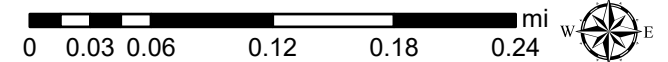
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Flathead County GIS Department



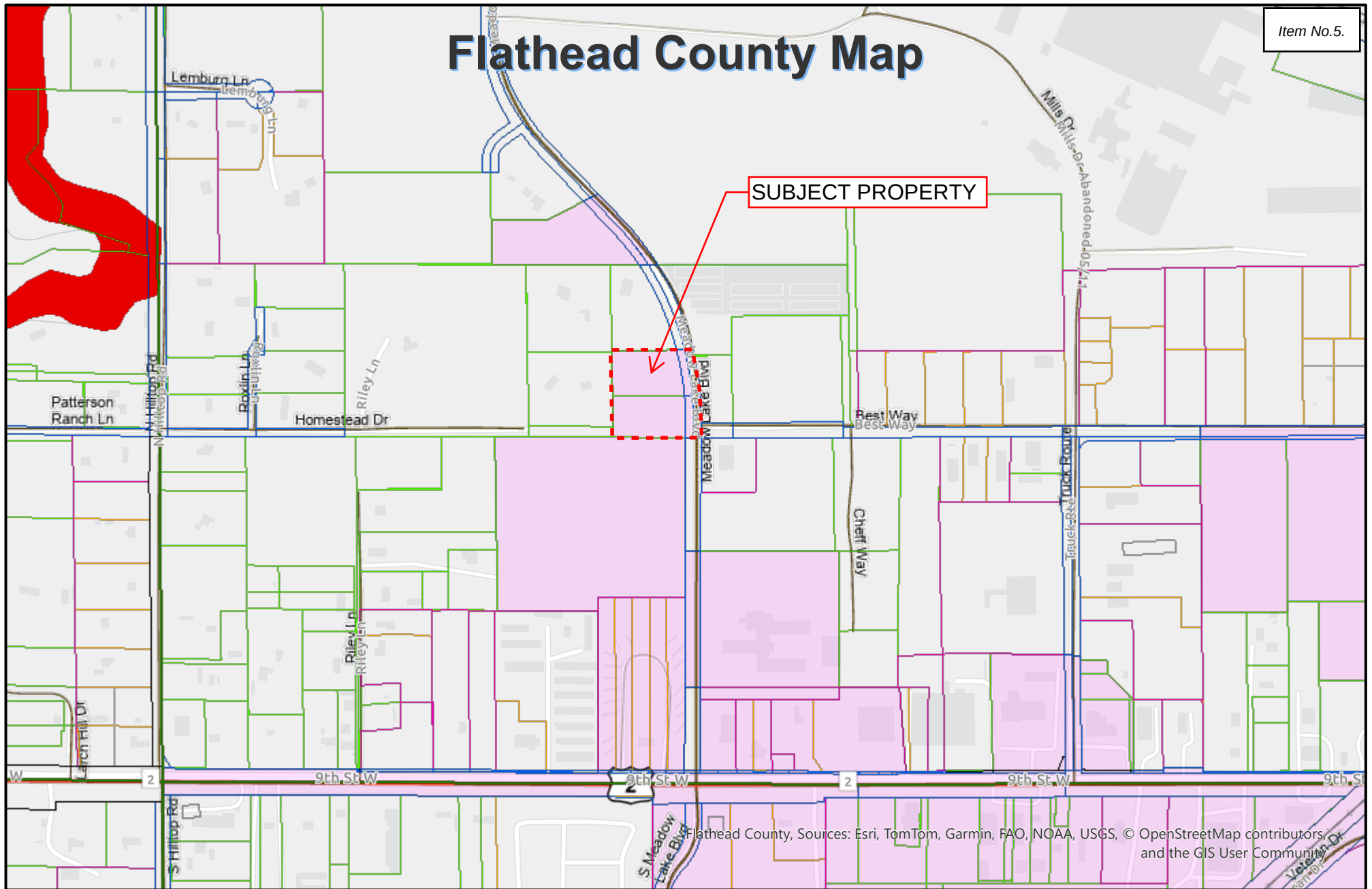
800 South Main Street
Kalispell, Montana 59901



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Flathead County Map

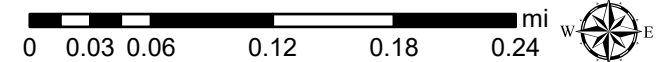
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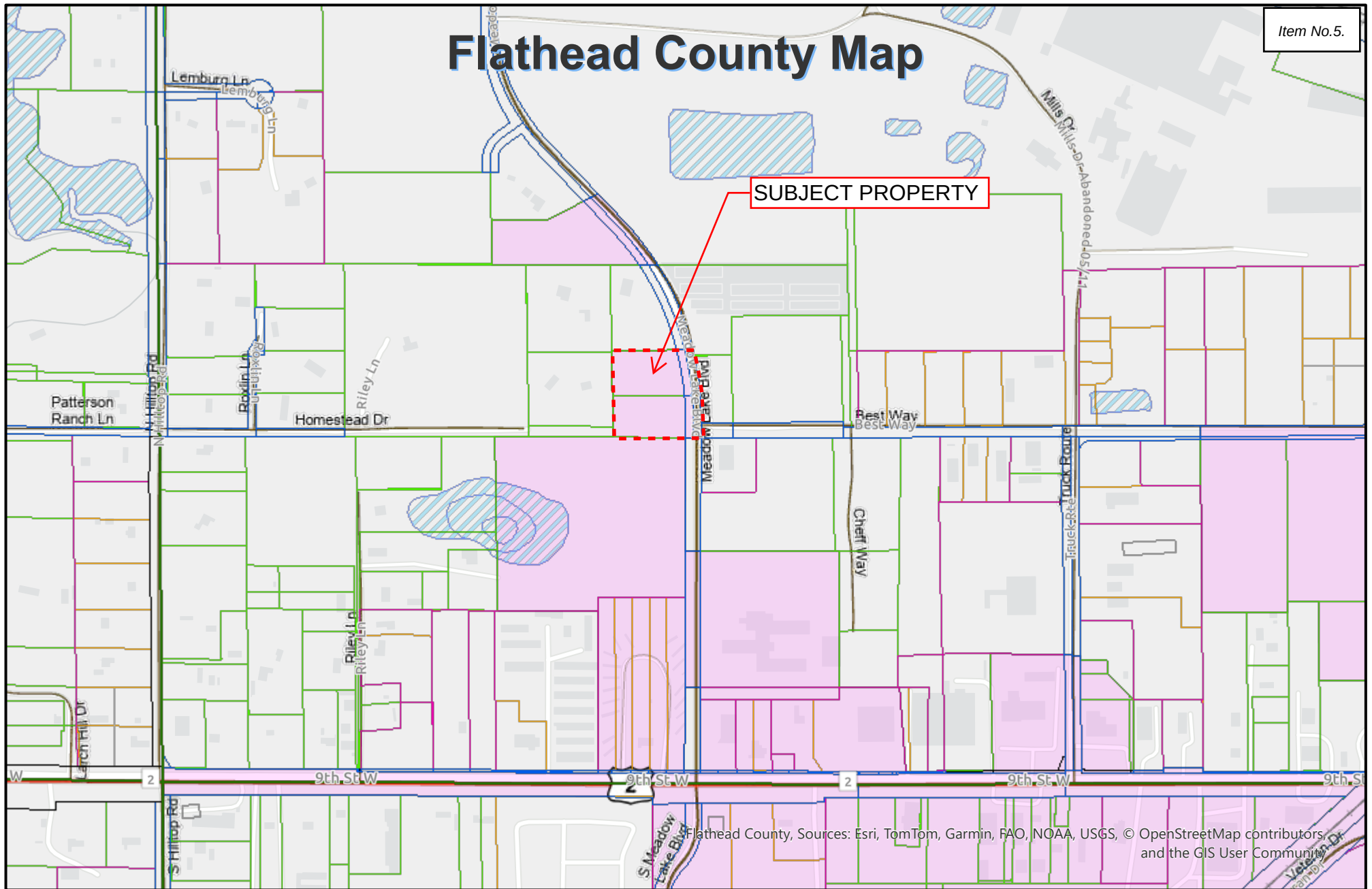
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Flathead County Map

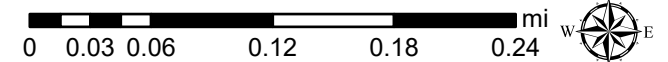
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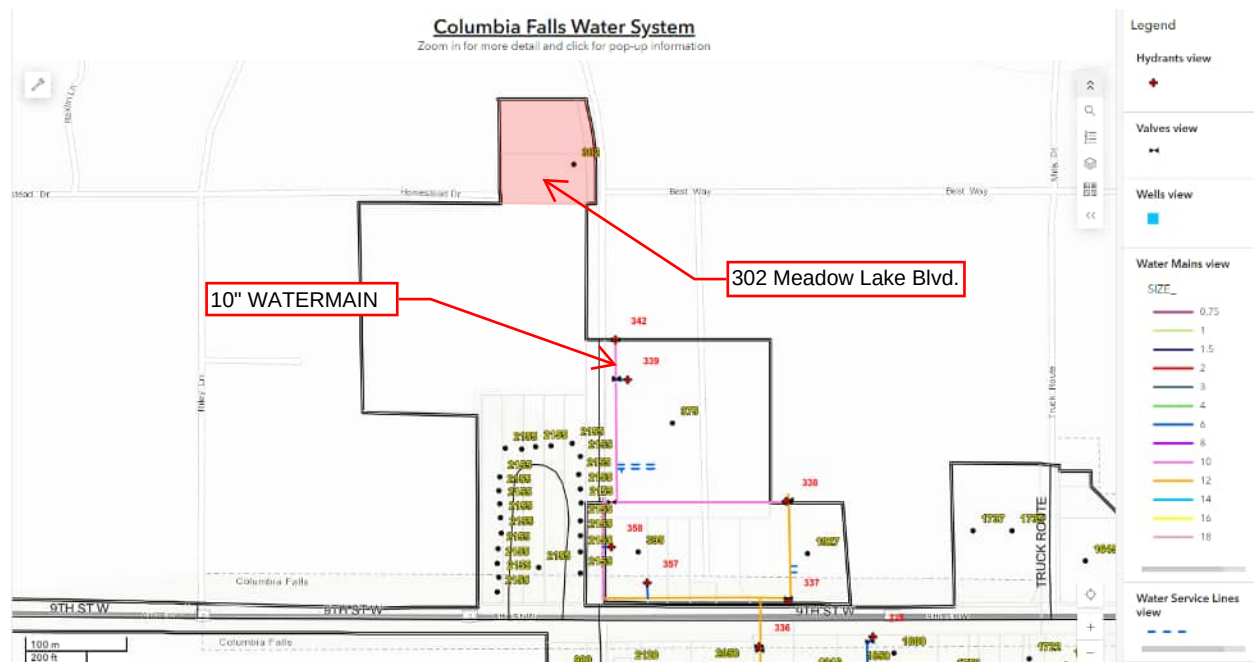
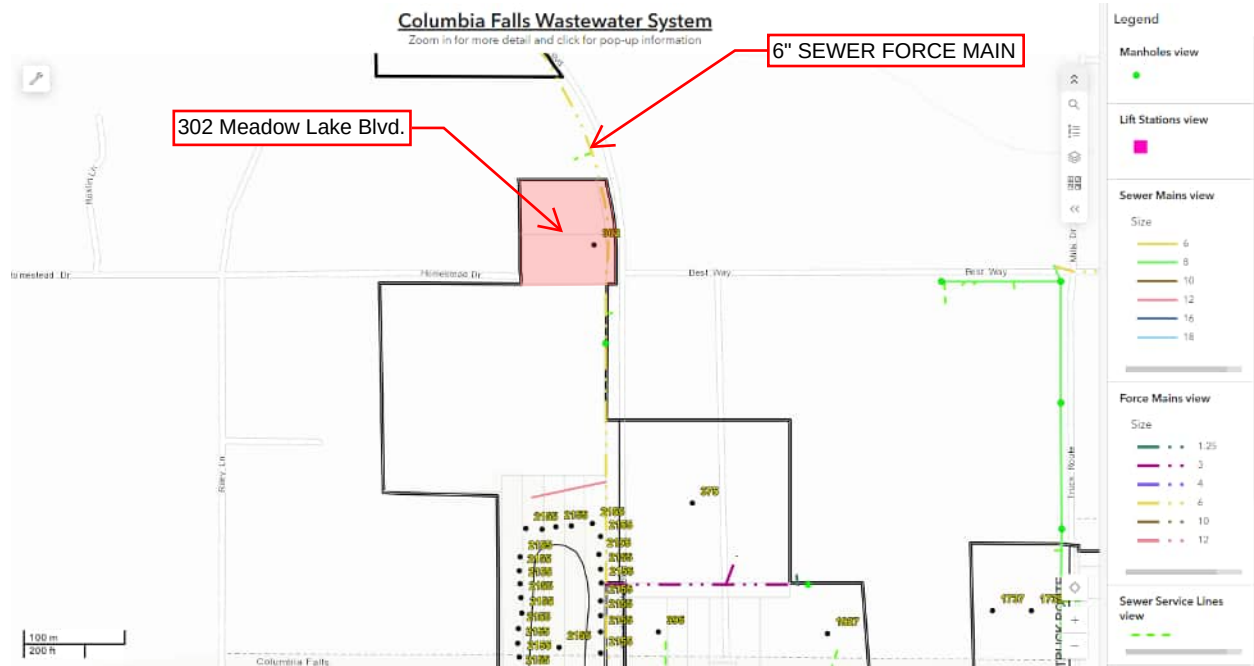


800 South Main Street
Kalispell, Montana 59901



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Existing Utility Map





Meadow Lake Boulevard Apartments Traffic Impact Study Columbia Falls, Montana



Prepared For:

**PCA ARCHITECTS P.C.
600 Hogue Drive
Bigfork, Montana 59911**

December 2025

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Meadow Lake Boulevard Apartments Traffic Impact Study Columbia Falls, Montana

A. EXECUTIVE SUMMARY

The Meadow Lake Boulevard Apartments project includes 2.25 acres of land located west of Meadow Lake Boulevard in Columbia Falls, Montana which would be developed into 40 apartment units. At full build-out the development will produce up to 270 daily vehicle trips. As proposed, the traffic impacts from the Meadow Lake Boulevard Apartments at adjacent intersections will be minimal. Total intersection delays will increase by less than one second per vehicle and total traffic loads on the adjacent street will increase by 5% to 10%. The roadside vegetation along the west side of Meadow Lake Boulevard should be trimmed to provide a minimum of 560 feet of visibility to the north from the new approach to the Meadow Lake Boulevard Apartments.

B. PROJECT DESCRIPTION

This document studies the possible effect on the surrounding road system from the Meadow Lake Boulevard Apartments currently proposed at the intersection of Meadow Lake Boulevard and Best Way in Columbia Falls, MT. The document identifies any traffic and geometry mitigation efforts that this project may require. ATS previously studied this project in 2022 and provided road improvement recommendations at that time. This report updates those recommendations based on current traffic conditions and adjacent land use plans.

C. EXISTING CONDITIONS

The subject property consists of 2.25 acres of forested land west of Meadow Lake Boulevard across from the intersection with Best Way. The development is planned to include 40 apartment units in two buildings. The building site is currently undeveloped forest land with rural residential properties to the north and west. See **Figure 1** for a location map of the proposed development.

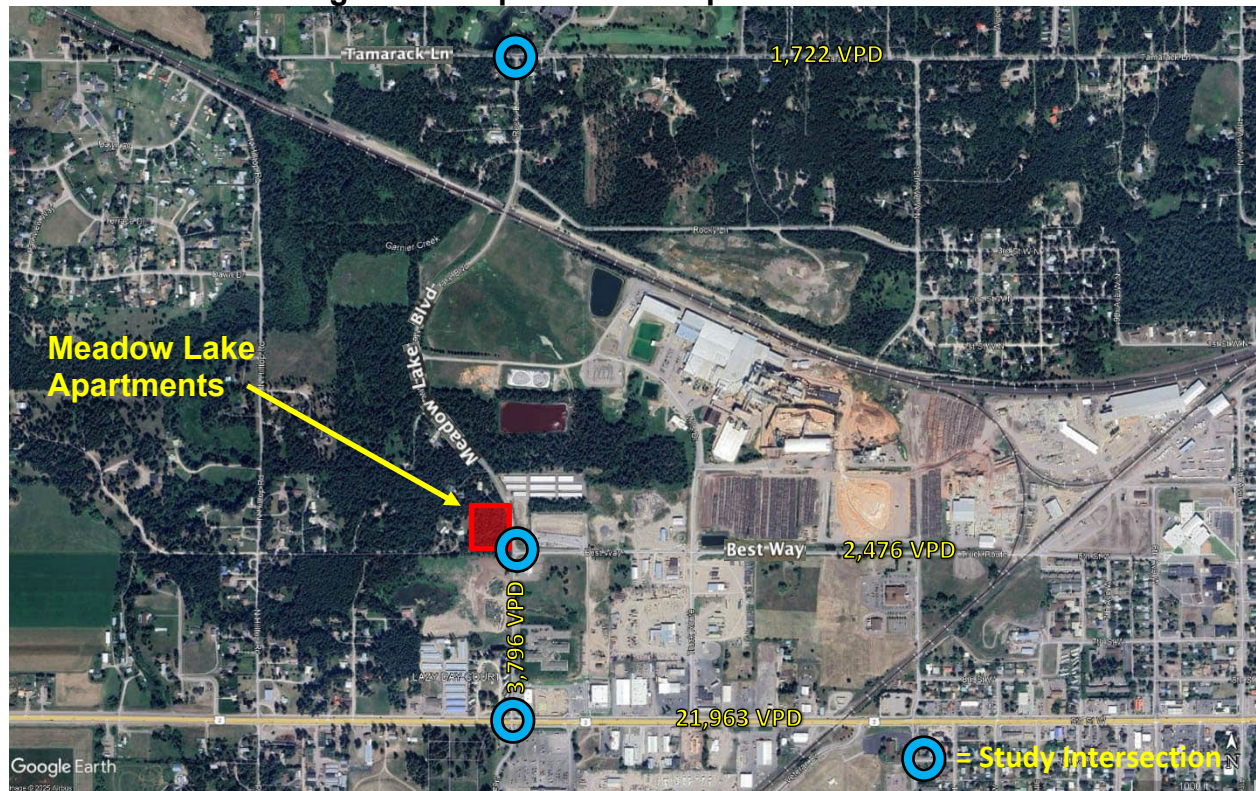
Adjacent Roadways

U.S. Route 2 is an east/west principle arterial route that extends east from Whitefish through Columbia Falls. This segment of the highway has a five-lane cross-section with a center two-

way left-turn lane. US Route 2 is under traffic signal control at the intersection with Meadow Lake Boulevard and has a 45 MPH posted speed limit. According to traffic counts conducted by MDT in 2024, the roadway currently carries 21,963 Vehicles per Day (VPD).

Meadow Lake Boulevard is a north/south major collector route which extends north from 13th Street and intersects with US Route 2 before continuing north to Tamarack Lane. The roadway serves a variety of commercial, light industrial, and residential areas north of US Route 2. Meadow Lake Boulevard has a rural two-lane cross-section with a paved width of 24 feet. Meadow Lake Boulevard is under traffic signal control at the intersection with US Route 2 and is STOP controlled at the T-intersection with Tamarack Lane. The route has a posted speed limit of 35 MPH. Just north of Best Way, the roadside environment along Meadow Lake Boulevard becomes forested and curves to the west creating limited sight distances. The road carried 3,796 VPD in 2024.

Figure 1- Proposed Development Site



Best Way is an east/west major collector that extends east from a STOP controlled T-intersection with Meadow Lake Boulevard and provides access to light industrial land uses in the area. The roadway has a paved width of 24 feet and a posted speed of 25 MPH. It carried 2,476 VPD in 2024.

Tamarack Lane is an east/west major collector route which extends east from Halfmoon Road, turns 90-degrees to the south toward US Route 2, then turns 90-degrees to the east near the railroad tracks and continues to the east past Meadow Lake Boulevard. The roadway is designated as a major collector route and provides access to the rural residential area northwest of the city of Columbia Falls. Tamarack Lane has a rural cross-section with a paved width of 24 feet and the posted speed limit is 35 MPH. The road carried 1,722 VPD in 2024.

Traffic Counts

In June 2025, Abelin Traffic Services (ATS) collected traffic data to evaluate current operational roadway characteristics. This effort included peak-hour turning movement counts at the intersections along Meadow Lake Boulevard at Highway 2, Best Way, and Tamarack Lane. The raw data collected for this project may be adjusted for seasonal variation in accordance with the data collected from MDT's annual count station located on US Highway 2 north of Columbia Falls (Station A-060). This count station data indicated that the data collected in June is approximately 115% of the AADT (Average Annual Daily Traffic) in this area. To provide more conservative results and a more accurate assessment of peak summer traffic conditions, no seasonal factoring was performed on the traffic data collected for this analysis. The raw traffic data is included in **Appendix A** of this report.

Vehicle speed data was also collected along Meadow Lake Boulevard just north of Best Way during the June count period. This information suggested that the average vehicle speed on Meadow Lake Boulevard north of Best Way was 36 MPH with an 85th percentile speed of 40 MPH for all recorded vehicles. In general, vehicle travel speeds on this section are higher than the posted 35 MPH speed limit. Maximum vehicle speeds of 50-60 MPH were recorded. These speeds should be taken into account when considering intersection and road designs through this section.

Historic Traffic Data

Abelin Traffic Services collected historic traffic data from Montana Department of Transportation (MDT) for the surrounding road system to help develop short-term background growth rates for the area. The information indicates that traffic volumes along US Route 2 have increased at an average annual rate of 1.5% over the past ten years. Traffic volumes on Meadow Lake Drive have been stable over this time period. The historic traffic volumes for this area are shown in **Table 1**.

Table 1 – Historic Average Daily Traffic Data

Location	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
US 2 East of MT 40 #15-4A-012	19,950	19,712	19,397	21,256	21,150	18,712	20,452	20,493	26,381	26,223
US 2 btw Truck Rt & RR tracks 40 #15-4A-028	20,690	21,308	20,967	23,221	24,458	22,306	22,019	21,642	22,096	21,963
Meadow Lake North of US 2 #15-4A-055	3,870	3,325	3,435	3,574	2,917	3,425	3,699	3,758	3,781	3,796
Meadow Lake S of Tamarack #15-4A-056	3,320	2,651	2,797	2,921	2,939	3,091	3,338	2,754	2,771	3,118
Best Way W of Truck Route #15-4A-060	2,850	2,040	2,071	2,102	1,895	2,069	2,235	2,451	2,466	2,476
Tamarack W of Woodland Rd #15-4A-057	1,400	1,311	1,616	1,187	1,194	1,514	1,635	1,966	1,978	1,722

Area Crash History

ATS reviewed crash data from MDT's public crash site to report the conflict experienced within the study area over the 5-year period from (2020-2024). This database provides insight to identify crash trends which may point to potential geometric, traffic control and roadway characteristic deficiencies. Crashes are expressed as a rate of crashes per million vehicles entering (MVE) an intersection or per million vehicle miles traveled (MVMT) along a given segment. Crash rates at rural and urban intersections in Montana typically range from 0.5 to 1.5 crashes per MVE.

Fourteen crashes were reported (0.3 per MVE) at the signalized intersection of US Route 2 with Meadow Lake Boulevard and three crashes (0.5 per MVE) reported at the STOP controlled intersection of Meadow Lake Boulevard and Best Way. The level of conflict experienced within the 5-year period is commensurate with statewide averages. There are no definable trends pin-pointing a correctable condition.

Planned Road Improvements

The 2021 *Columbia Falls Transportation Plan* predicts that traffic volumes on US 2 west of Meadow Lake Boulevard will reach 32,200 VPD by 2040. The Plan identifies a future

intersection improvement at the intersection of US 2 & Meadow Lake Boulevard to include a new eastbound right-turn lane (estimated cost \$80,000).

Other Projects

The Meadow Lake Commercial Development is located at the northwest corner of Highway 2 and Meadow Lake Boulevard in Columbia Falls. The project proposes to remove the existing mobile home park and develop a hotel, retail space, and a convenience store. The project would produce 1,937 daily trips once completed. The projected traffic from this project has been included in the future traffic modeling for this analysis.

The 10.7-acre Meadow Lake industrial development is current in the planning stages for the property just south of the Meadow Lake Boulevard Apartments. This project will create four new light-industrial lots on this property. Based on the ITE trip generation recommendations for land use #110, this project could produce 556 new vehicle trips when completed. The projected traffic from this project has also been included in the future traffic modeling for this analysis.

Level of Service

Using the data collected for this project, ATS conducted a Level of Service (LOS) analysis at the study intersection of US 2 & Meadow Lake Blvd. This evaluation was conducted in accordance with the procedures outlined in the Transportation Research Board's *Highway Capacity Manual 7th Edition: A Guide for Multimodal Mobility Analysis* using Synchro 12 software. Intersections are graded from A to F representing the average delay that a vehicle entering an intersection can expect. Typically, a LOS of C or better is considered acceptable for peak-hour conditions.

Table 2 shows the existing 2025 LOS for the AM and PM peak hours without the traffic from the proposed development. The historic 2022 LOS for these intersections is shown in **Table 3**. The LOS calculations are included in **Appendix C**. The table shows that the study intersections are currently operating well at LOS A & B in both peak hours and the LOS calculations have changed only slightly since the intersections were previously studied in 2022. The northbound lanes from Meadow Lake Boulevard are separated into a right-turn lane and a combined left-turn and through lane. While this lane configuration is functional, it is less efficient than creating a separated left-turn lane at the intersection which removes the conflicted left-turn traffic from the northbound through traffic. This sub-optimal lane configuration at the traffic signal is largely due to an offset lane geometry which makes it difficult to line up the northbound and southbound through lanes across the intersection.

Table 2 – Existing 2025 Level of Service Summary

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (Sec.)	LOS	Delay (Sec.)	LOS
US Route 2 & Meadow Lake	9.4	A	8.3	A
Meadow Lake & Best Way	10.5	B	13.3	B
Meadow Lake & Tamarack	9.8	A	10.5	B

Table 3 – Historic 2022 Level of Service Summary

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (Sec.)	LOS	Delay (Sec.)	LOS
US Route 2 & Meadow Lake	11.7	B	12.9	B
Meadow Lake & Best Way	10.9	B	10.4	B
Meadow Lake & Tamarack	9.5	A	9.9	A

D. PROPOSED DEVELOPMENT

The proposed Meadow Lake Boulevard Apartments are planned for development west of Meadow Lake Boulevard at Best Way. The development would include 40 apartment units housed in two buildings on 2.25 acres of land with on-site parking for all vehicles. Access to the development would be from a single approach onto Meadow Lake Boulevard directly across from the intersection with Best Way. The development includes 72 on-site parking spaces. The Meadow Lake Boulevard Apartments site plan is shown in **Figure 2**.

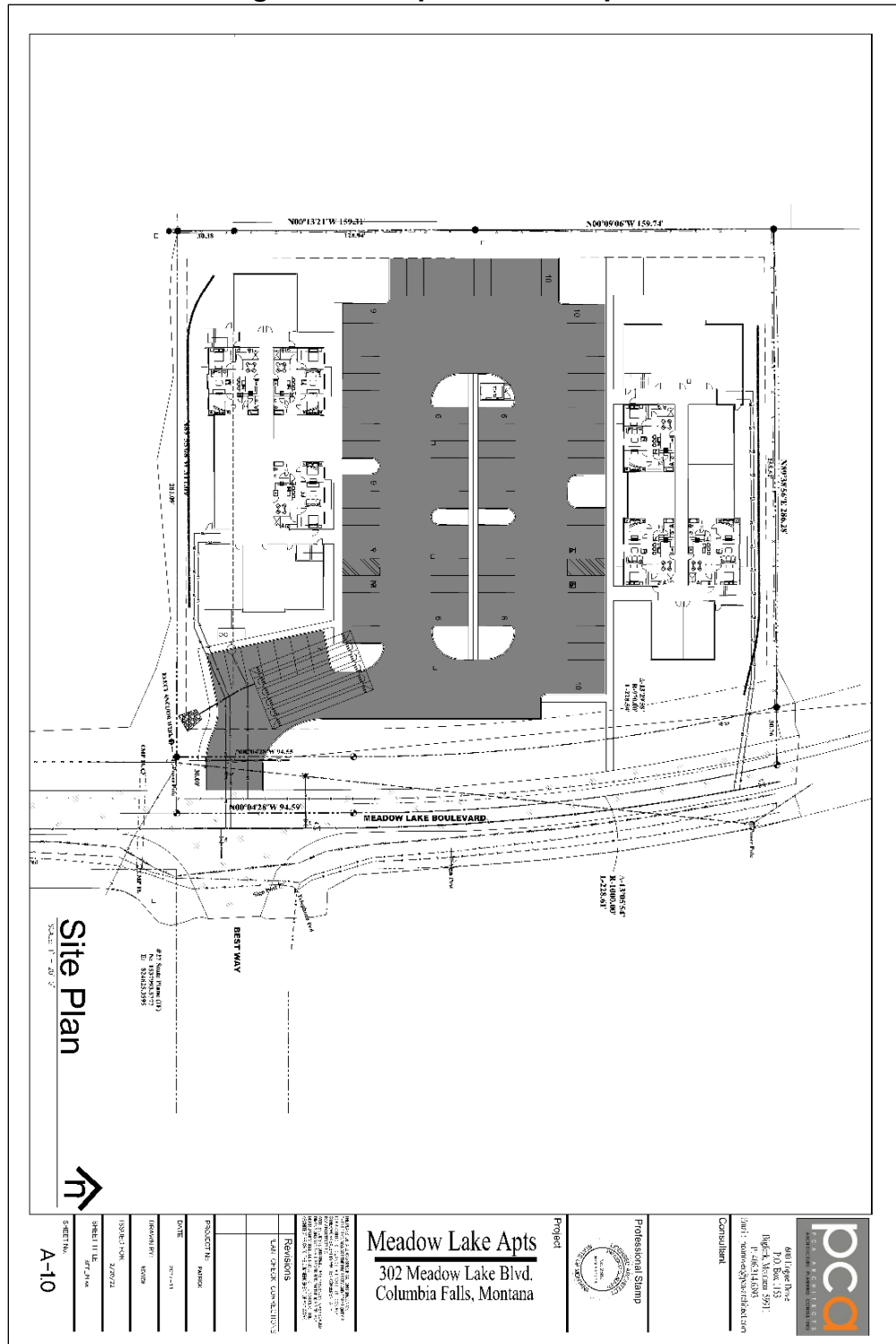
E. TRIP GENERATION AND ASSIGNMENT

ATS performed a trip generation analysis to determine the anticipated future traffic volumes from the subdivision using the trip generation rates contained in *Trip Generation* (Institute of Transportation Engineers, Eleventh Edition). These rates are the national standard and are based on the most current information available to planners. A vehicle “trip” is defined as any trip that either begins or ends at the development site. ATS determined that the critical traffic impacts on the intersections and roadways would occur during the weekday morning and evening peak hours. The Meadow Lake Boulevard Apartments would produce 16 AM peak hour trips, 20 PM peak hour trips, and 270 daily trips. See **Table 4** for detailed trip generation information.

Table 4 - Trip Generation Rates

Land Use	Units	AM Peak Hour Trip Ends per Unit	Total AM Peak Hour Trip Ends	PM Peak Hour Trip Ends per Unit	Total PM Peak Hour Trip Ends	Weekday Trip Ends per Unit	Total Weekday Trip Ends
Multi-Family Apartments ITE# 220	40	0.4	16 (4in/12out)	0.51	20 (13in/8out)	6.74	270

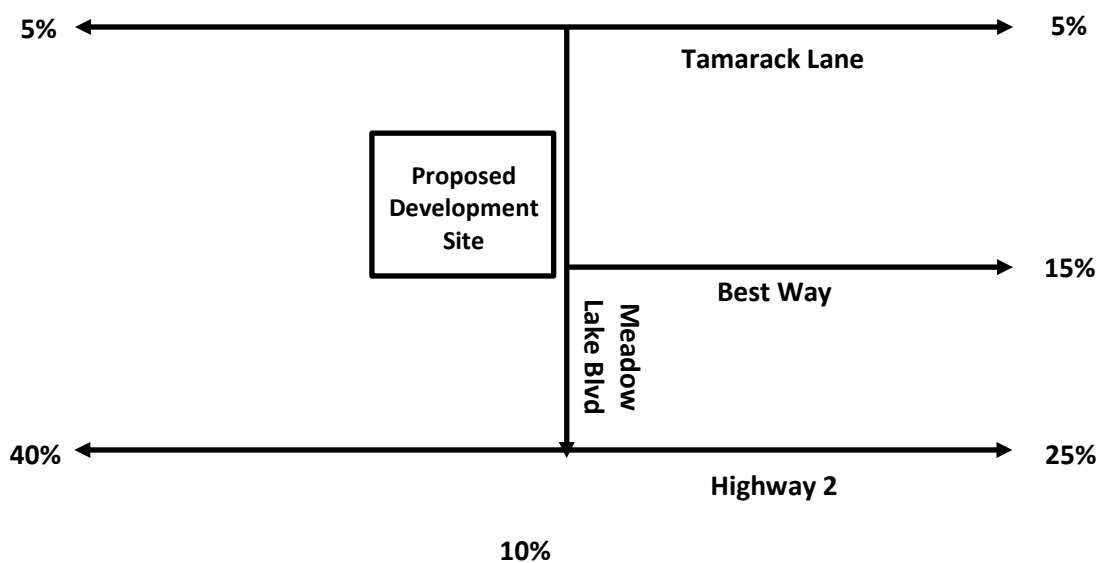
Figure 2 – Proposed Development



F. TRIP DISTRIBUTION

The traffic distribution and assignment for the proposed subdivision was based upon the existing ADT volumes and the peak-hour turning volumes along the adjacent roadways. It is expected that the majority of traffic will take US Route 2 (40% westbound, 25% eastbound) and the rest of the traffic will distribute onto Tamarack Lane, Best Way, and south on Meadow Lake Boulevard. **Figure 3** shows the detailed trip distribution from the proposed Meadow Lake Boulevard Apartments.

Figure 3- Trip Distribution



G. TRAFFIC IMPACTS OUTSIDE THE DEVELOPMENT

Using the trip generation and trip distribution numbers, ATS determined the future Level of Service for the area intersections. The anticipated no-build intersection LOS and the projected LOS with the planned development is shown in **Tables 5 & 6**. The no-build analysis includes traffic from the Meadow Lake commercial and industrial developments to the south. The traffic volume calculations are included in **Appendix B** of this report. The LOS calculations are included in **Appendix C**.

Table 5 – Projected 2026 No-Build Level of Service Summary

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (Sec.)	LOS	Delay (Sec.)	LOS
US Route 2 & Meadow Lake	13.6	B	20.6	C
Meadow Lake & Best Way	11.1	B	14.7	B
Meadow Lake & Tamarack	10.0	B	10.7	B

Table 6 – 2026 Level of Service Summary With Proposed Development

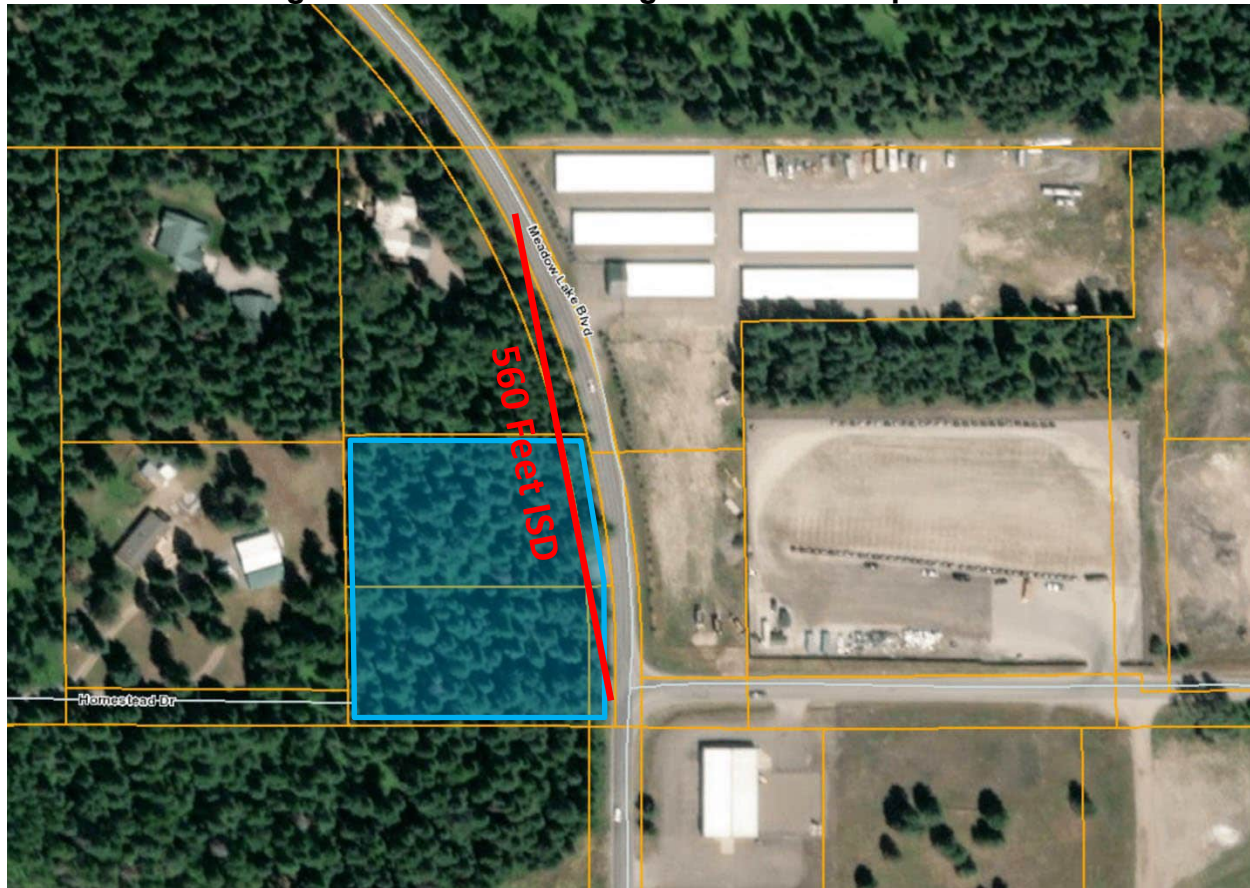
Intersection	AM Peak Hour		PM Peak Hour	
	Delay (Sec.)	LOS	Delay (Sec.)	LOS
US Route 2 & Meadow Lake	14.1	B	21.8	C
Meadow Lake & Best Way*	9.5/11.3	A/B	10.2/15.4	B/C
Meadow Lake & Tamarack	10.0	B	10.7	B

*Eastbound/Westbound LOS & Delay.

The analysis shows that all intersections will function at acceptable levels of service with an increase in overall intersection delay of less than 1 second per vehicle. Total traffic loads on the adjacent road system will increase by 50 to 150 VPD (5% to 10%) with the development of the Meadow Lake Boulevard Apartments.

The only potential concern from this project at the intersection of Meadow Lake Boulevard and Best Way are possible intersection sight distance restrictions from the proposed access location looking towards the north. The Intersection Sight Distance (ISD) is unrestricted to the south and east but becomes restricted to the north by heavy roadside vegetation growing along the west side of the Meadow Lake Boulevard which currently restricts the ISD to the north to less than 400 feet. According to the *MDT Road Design Manual Figure 13.4 D*, the recommended ISD at a STOP controlled intersections on a 35 MPH road is 390 feet for passenger cars and 490 feet for single trucks. If the current speeds on Meadow Lake Boulevard are taken into account (40 MPH 85th percentile speed), the ISD should be 445 feet for cars and 560 feet for single-unit trucks. Available Stopping sight distance on Meadow Lake Boulevard exceeds the minimum desirable threshold for the prevailing 85th percentile speeds. If the Meadow Lake Boulevard Apartments approach at Best Way is developed as planned, the developers should take steps to remove the roadside vegetation and landscaping from the west side of Meadow Lake Boulevard as shown in **Figure 4** to ensure that the intersection sight distance to the north is a minimum of 560 from the proposed project approach location.

If the approach to the Meadow Lake Boulevard Apartments were to become public in the future, then the ISD should be increased to a minimum of 680 feet to accommodate tractors and semitrailers. Alternatively, if sufficient ISD cannot be developed at this location, the City may consider changing the traffic control at this location to a four-way STOP to improve intersection safety and eliminate the intersection sight distance issues.

Figure 4 – Intersection Sight Distance Requirements

H. IMPACT SUMMARY & RECOMMENDATIONS

As proposed, the traffic impacts from the Meadow Lake Boulevard Apartments at adjacent intersections will be minimal. Total intersection delays will increase by less than one second per vehicle and total traffic loads on the adjacent street will increase by 5% to 10%. The roadside vegetation along the west side of Meadow Lake Boulevard should be trimmed to provide a minimum of 560 feet of visibility to the north from the new approach to the Meadow Lake Boulevard Apartments.

APPENDIX A

Traffic Data

Turning Movement Count

All Vehicles

Location Columbia Falls - US2 and Meadow Lake

Date 2025-06-18

	Northbound				Southbound				Eastbound				Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	9	0	9	0	5	3	19	0	3	107	9	0	3	144	1	0	312
7:30 - 7:45	17	0	12	0	12	3	26	0	9	124	7	0	4	172	4	0	390
7:45 - 8:00	14	3	21	0	24	4	39	0	8	157	10	0	5	202	5	0	492
8:00 - 8:15	13	4	19	0	28	4	20	0	12	214	14	0	11	173	8	0	520
8:15 - 8:30	11	7	17	0	18	9	30	0	15	142	12	0	5	179	7	0	452
8:30 - 8:45	10	8	13	0	8	5	35	0	16	150	10	0	6	165	10	0	436
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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12:15 - 12:30	21	12	8	0	22	9	24	0	15	159	21	0	9	174	7	0	481
12:30 - 12:45	20	11	12	0	9	5	25	0	20	162	13	0	6	163	5	0	451
12:45 - 1:00	12	5	15	0	11	8	15	0	20	128	28	0	10	173	15	0	440
1:00 - 1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 - 1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 - 1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 - 2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 - 2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 - 2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 - 2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 - 3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 - 3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 - 3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 - 3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 - 4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	27	11	14	0	19	16	37	0	17	185	35	0	14	173	10	0	558
4:30 - 4:45	20	12	14	0	14	18	21	0	22	201	22	0	11	231	13	0	599
4:45 - 5:00	17	8	23	0	11	13	23	0	24	214	32	0	10	210	8	0	593
5:00 - 5:15	25	14	12	0	8	14	23	0	34	222	29	0	14	208	21	0	624
5:15 - 5:30	13	8	13	0	10	13	21	0	27	257	34	0	12	212	11	0	631
5:30 - 5:45	15	15	14	0	20	14	12	0	33	255	36	0	21	175	8	0	618
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	256	127	231	0	234	145	393	0	293	2860	336	0	149	2931	144	0	8099

Turning Movement Count

All Vehicles

Location Columbia Falls - Meadow Lake and Best Way

Date 2025-06-18

	Northbound				Southbound				Eastbound				Westbound				TOTAL
	Left	Thr	Right	Peds	Left	Thr	Right	Peds	Left	Thr	Right	Peds	Left	Thr	Right	Peds	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	11	4	0	4	23	0	0	0	0	0	0	7	0	5	0	54
7:30 - 7:45	0	11	2	0	7	38	0	0	0	0	0	0	9	0	2	0	69
7:45 - 8:00	0	8	6	0	3	32	0	0	0	0	0	0	12	0	5	0	66
8:00 - 8:15	0	19	9	0	5	21	0	0	0	0	0	0	15	0	5	0	74
8:15 - 8:30	0	14	5	0	6	25	0	0	0	0	0	0	12	0	5	0	67
8:30 - 8:45	0	15	14	0	6	26	0	0	0	0	0	0	15	0	8	0	84
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 - 1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 - 1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 - 1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 - 2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 - 2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 - 2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 - 2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 - 3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 - 3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 - 3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 - 3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 - 4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	0	42	19	0	12	25	0	0	0	0	0	0	23	0	12	0	133
4:30 - 4:45	0	41	18	0	12	29	0	0	0	0	0	0	22	0	12	0	134
4:45 - 5:00	0	35	12	0	10	19	0	0	0	0	0	0	25	0	13	0	114
5:00 - 5:15	0	43	7	0	5	28	0	0	0	0	0	0	14	0	10	0	107
5:15 - 5:30	0	51	8	0	4	35	0	0	0	0	0	0	6	0	12	0	116
5:30 - 5:45	0	44	11	0	4	30	0	0	0	0	0	0	9	0	2	0	100
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	334	115	0	78	331	0	0	0	0	0	0	169	0	91	0	1118

Turning Movement Count

All Vehicles

Location Columbia Falls - Meadow Lake and Tamarack

Date 2025-06-18

	Northbound				Southbound				Eastbound				Westbound				TOTAL
	Left	Thr	Right	Peds	Left	Thr	Right	Peds	Left	Thr	Right	Peds	Left	Thr	Right	Peds	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	7	0	6	0	0	0	0	0	0	1	4	0	26	3	0	0	47
7:30 - 7:45	6	0	6	0	0	0	0	0	0	2	15	0	23	3	0	0	55
7:45 - 8:00	8	0	3	0	0	0	0	0	0	7	5	0	20	3	0	0	46
8:00 - 8:15	11	0	10	0	0	0	0	0	0	2	13	0	13	2	0	0	51
8:15 - 8:30	13	0	8	0	0	0	0	0	0	4	11	0	19	6	0	0	61
8:30 - 8:45	12	0	11	0	0	0	0	0	0	4	14	0	17	5	0	0	63
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 - 1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 - 1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 - 1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 - 2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 - 2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 - 2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 - 2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 - 3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 - 3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 - 3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 - 3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 - 4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 - 4:30	22	0	24	0	0	0	0	0	0	13	19	0	16	14	0	0	108
4:30 - 4:45	21	0	31	0	0	0	0	0	0	13	15	0	15	11	0	0	106
4:45 - 5:00	8	0	28	0	0	0	0	0	0	17	18	0	11	4	0	0	86
5:00 - 5:15	16	0	38	0	0	0	0	0	0	12	12	0	18	10	0	0	106
5:15 - 5:30	7	0	46	0	0	0	0	0	0	18	17	0	16	9	0	0	113
5:30 - 5:45	10	0	34	0	0	0	0	0	0	20	16	0	16	12	0	0	108
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	141	0	245	0	0	0	0	0	0	113	159	0	210	82	0	0	950

For Project:	MeadowLake North					Item No.5.
Project Notes:						
Location/Name:	Merged					
Report Generated:	7/18/2025	8:37:07 AM				
Speed Intervals	1 MPH					
Time Intervals	Instant					
Traffic Report From	6/17/2025	9:00:00 AM	through	6/18/2025	10:59:59 AM	
85th Percentile Speed	40 MPH					
85th Percentile Vehicles	3365					
Max Speed	59 MPH	on	6/18/2025	6:50:22 AM		
Total Vehicles	3959					
AADT:	3654					

Volumes - weekly counts

Time	5 Day	7 Day
Average Daily	1979	1979
AM Peak	11:00 AM 242	242
PM Peak	4:00 PM 343	343

Speed

Speed Limit:	35	
85th Percentile Speed:	40	
50th Percentile Speed:	36	
10 MPH Pace Interval:	31.0 MPH	41.0 MPH
Average Speed:	35.8	

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Count over limit	N/A	1637	509	N/A	N/A	N/A	N/A
% over limit	N/A	53.4	56.8	N/A	N/A	N/A	N/A
Avg Speeder	N/A	39.1	39.3	N/A	N/A	N/A	N/A
Avg Speed	N/A	35.7	36.1	N/A	N/A	N/A	N/A

Class Counts

	Number	%
VEH_SM	36	0.9
VEH_MED	3823	96.6
VEH_LG	100	2.5
[VEH_SM=motorcycle,	VEH_MED = sedan,	VEH_LG = truck]

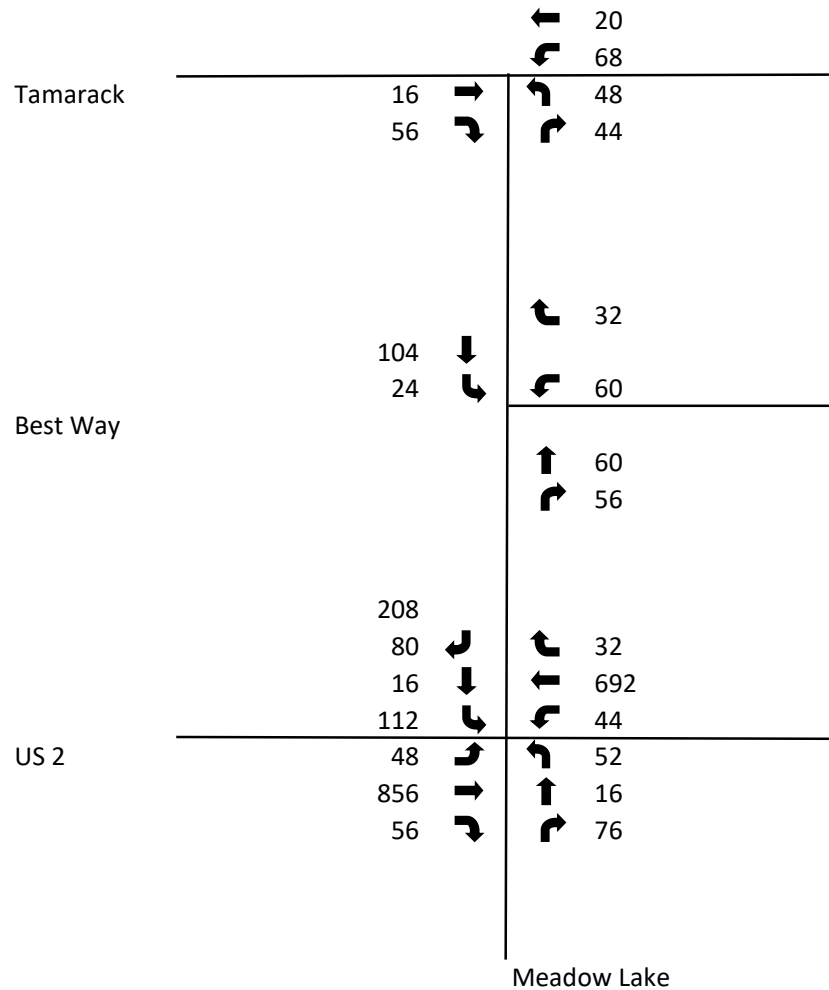
	Jun 2025									
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week	Weekend	Week Day 85%
Hour								Day Avg	Avg	Avg Speed
0 - 1	*	*	11	*	*	*	*	11	0	40.5
1 - 2	*	*	8	*	*	*	*	8	0	40
2 - 3	*	*	2	*	*	*	*	2	0	38
3 - 4	*	*	9	*	*	*	*	9	0	47
4 - 5	*	*	20	*	*	*	*	20	0	41
5 - 6	*	*	51	*	*	*	*	51	0	42.4
6 - 7	*	*	123	*	*	*	*	123	0	41.8
7 - 8	*	*	191	*	*	*	*	191	0	39.6
8 - 9	*	*	237	*	*	*	*	237	0	38.8
9 - 10	*	47	242	*	*	*	*	144.5	0	39.55
10 - 11	*	238	2	*	*	*	*	120	0	37.1
11 - 12	*	242	*	*	*	*	*	242	0	39.4
12 - 13	*	256	*	*	*	*	*	256	0	39.6
13 - 14	*	251	*	*	*	*	*	251	0	39.7
14 - 15	*	263	*	*	*	*	*	263	0	39.4
15 - 16	*	280	*	*	*	*	*	280	0	39.9
16 - 17	*	343	*	*	*	*	*	343	0	39.4
17 - 18	*	336	*	*	*	*	*	336	0	40.2
18 - 19	*	250	*	*	*	*	*	250	0	40.4
19 - 20	*	180	*	*	*	*	*	180	0	39.9
20 - 21	*	149	*	*	*	*	*	149	0	40.6
21 - 22	*	132	*	*	*	*	*	132	0	39.4
22 - 23	*	63	*	*	*	*	*	63	0	39
23 - 24	*	33	*	*	*	*	*	33	0	38
Totals	0	3063	896	0	0	0	0			
% of Total	0%	55.04%	16.1%	0%	0%	0%	0%			

APPENDIX B

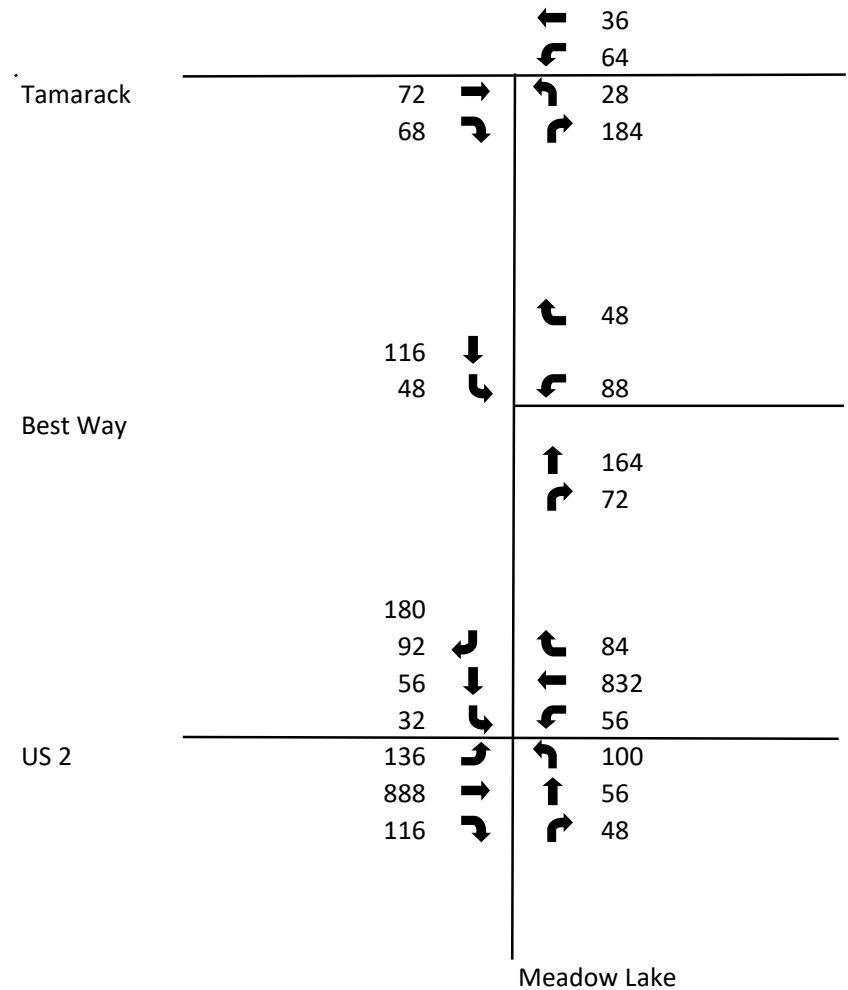
Traffic Model

Meadow Lake Apartments
Traffic Model
AM Peak Hour (15 Min X 4)
Existing 2025 Traffic

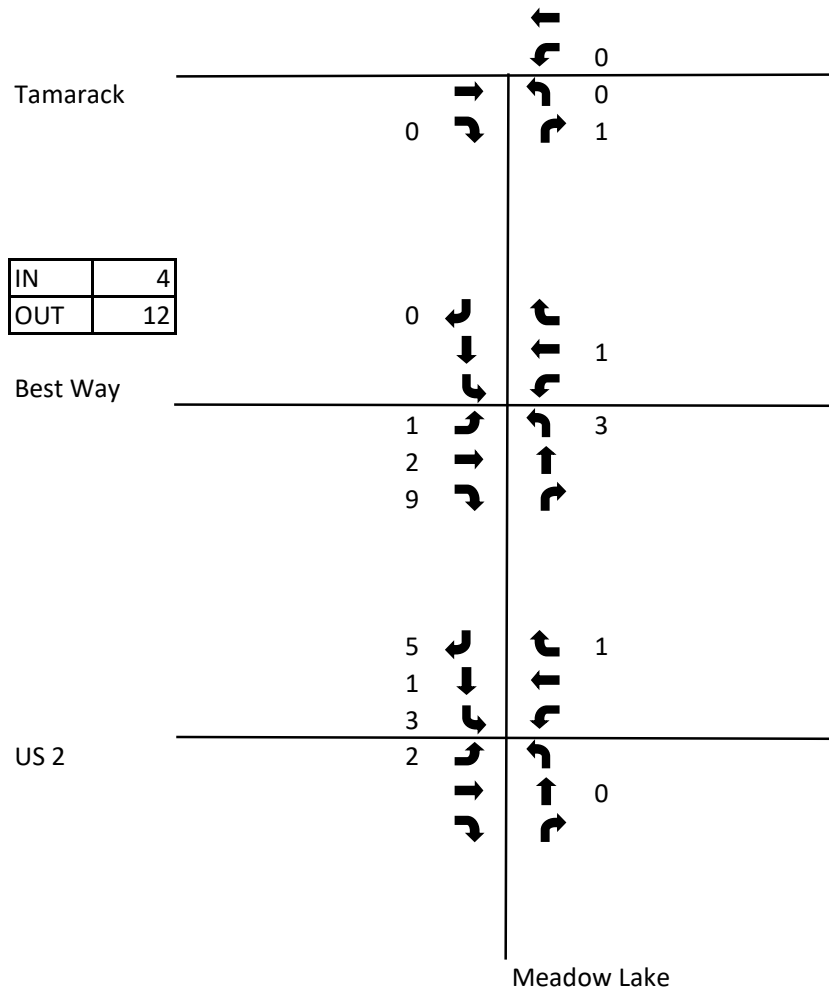
Seasonal Factor 1



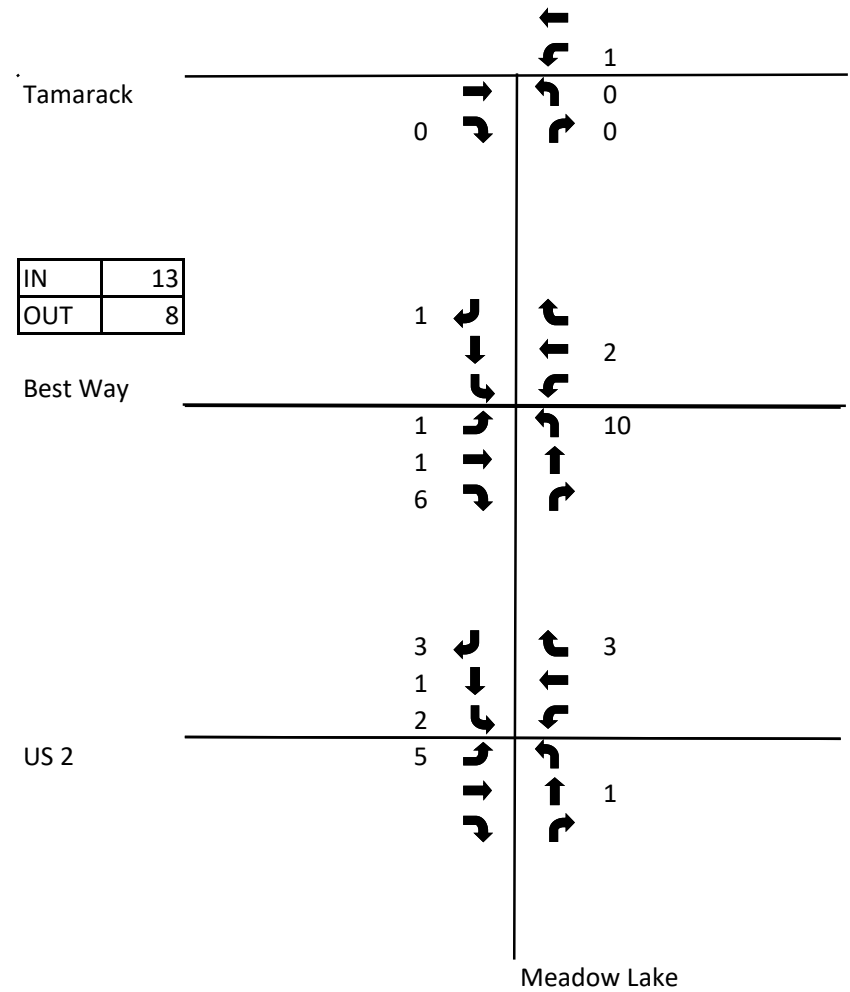
PM Peak Hour (15 Min X 4)
Existing 2025 Traffic



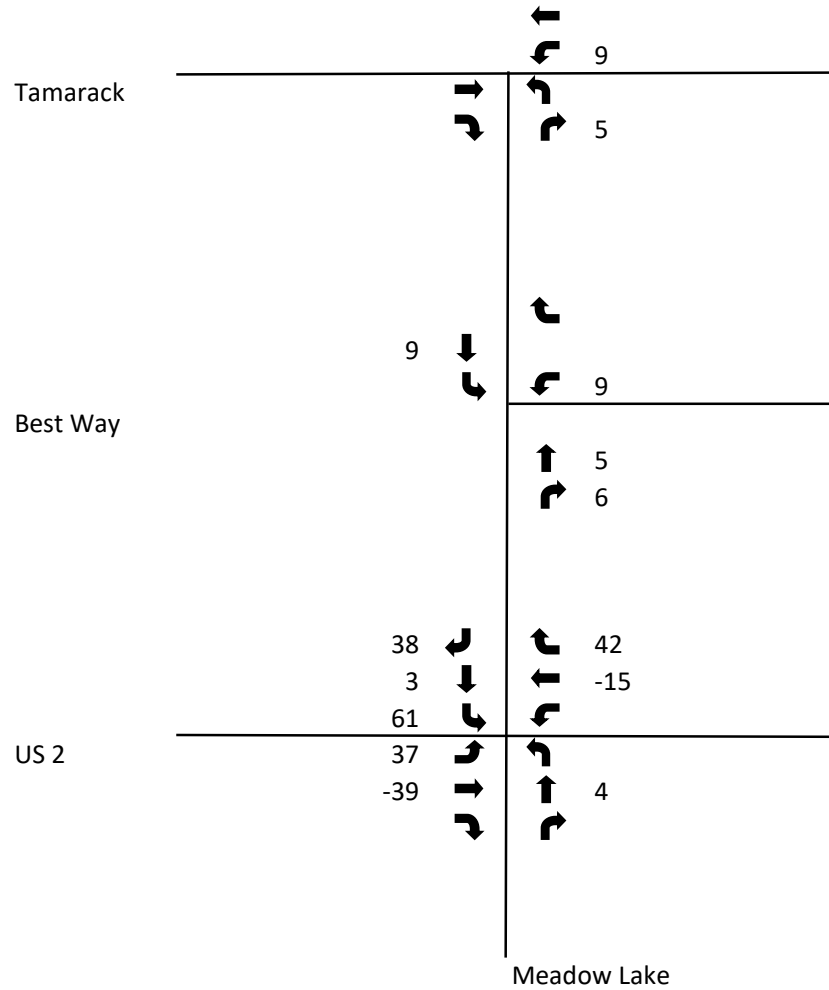
Meadow Lake Apartments
Traffic Model
AM Peak Hour Model
Site Generated Traffic



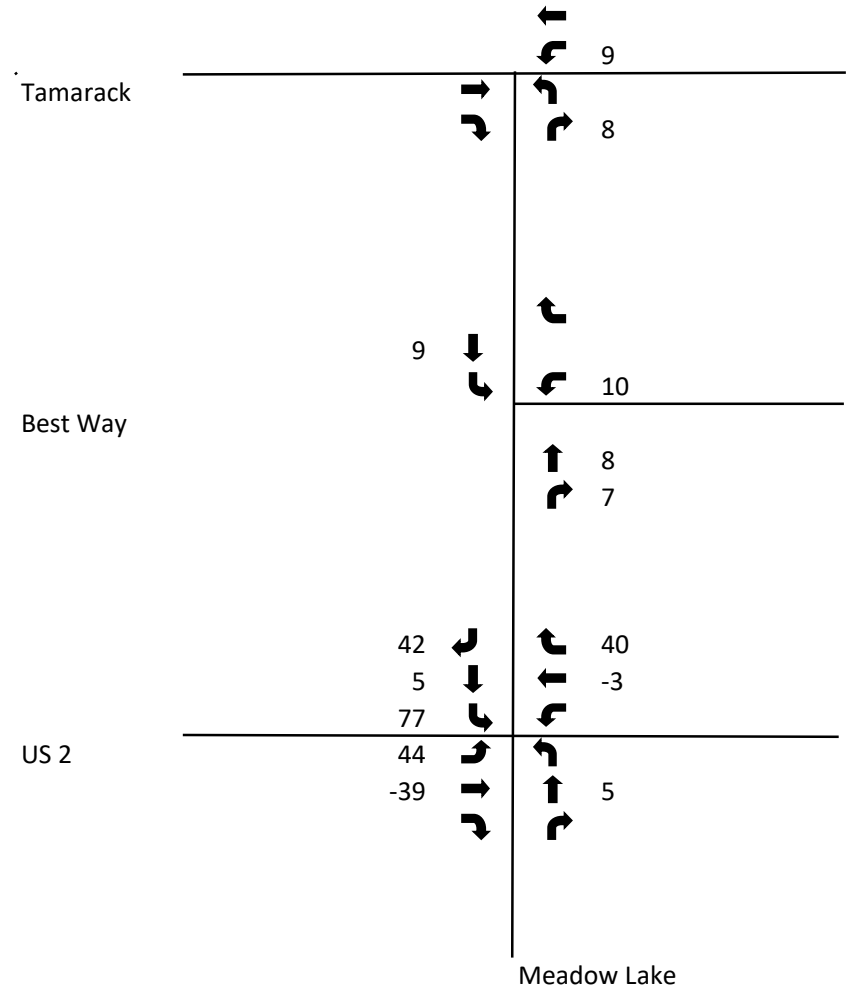
PM Peak Hour Model
Site Generated Traffic



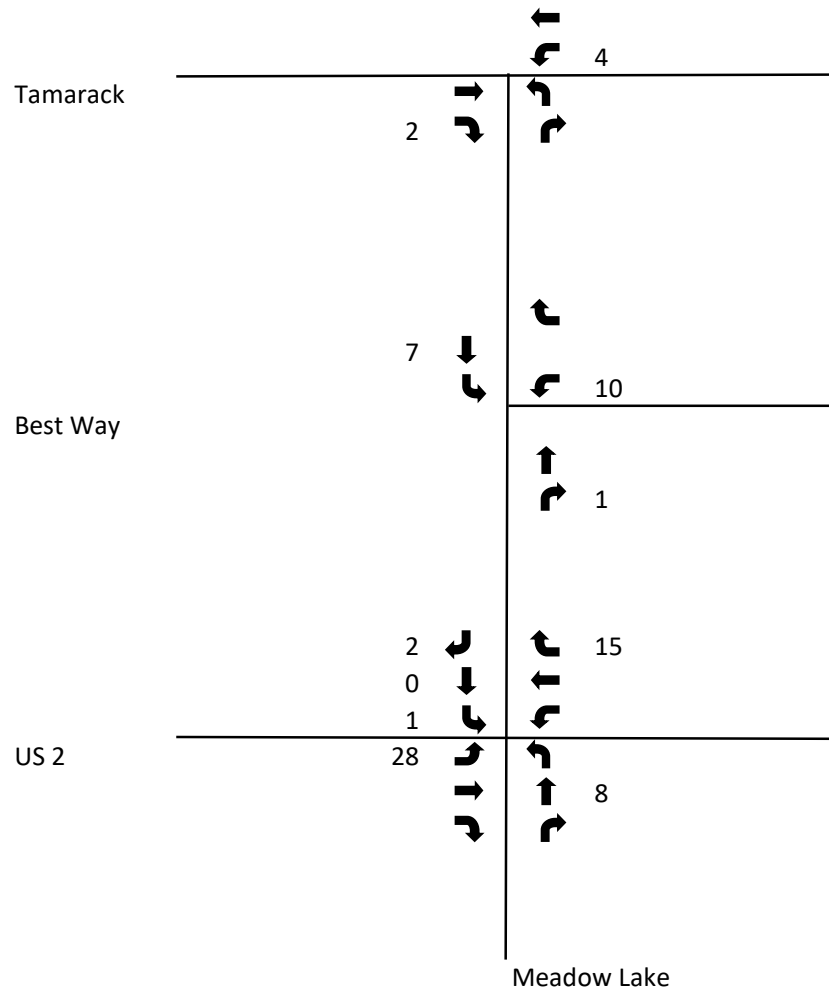
Meadow Lake Apartments
Traffic Model
AM Peak Hour
Projected Traffic
Meadow Lake Commercial



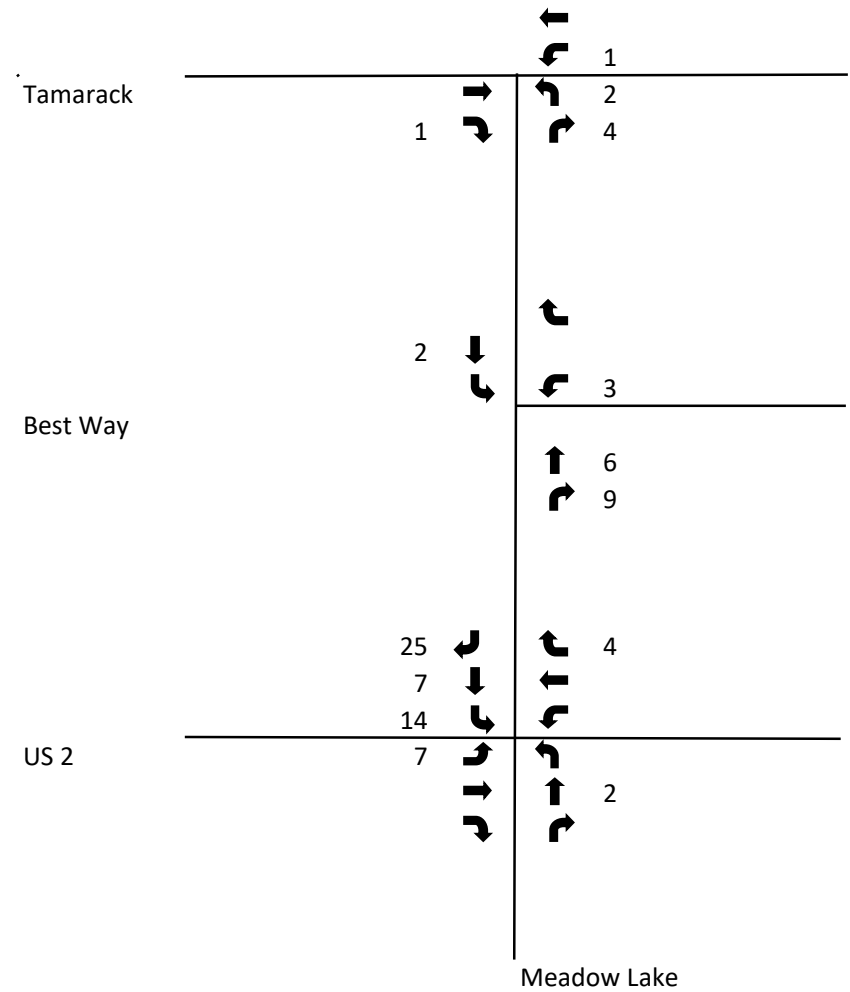
PM Peak Hour (15 Min X 4)
Projected Traffic
Meadow Lake Commercial



Meadow Lake Apartments
Traffic Model
AM Peak Hour
Projected Traffic
Industrial Subdivision



PM Peak Hour (15 Min X 4)
Projected Traffic
Industrial Subdivision



Meadow Lake Apartments **Growth Factor:** 1.02

Traffic Model

AM Peak Hour Total

Projected 2026

No-Build

Includes Commercial + Ind Subs

			←	20
			↩	83
Tamarack	16	→	↩	49
	59	↩	↩	50
Best Way	0	↩	↩	33
	122	↓	←	0
	24	↩	↩	81
	0	↩	↩	0
	0	→	↑	66
	0	↩	↩	64
US 2	122	↩	↩	91
	20	↓	←	691
	177	↩	↩	45
	115	↩	↩	53
	833	→	↑	28
	57	↩	↩	78

Meadow Lake

PM Peak Hour Total

Projected 2026

No-Build

Includes Commercial + Ind Subs

			←	37
			↩	75
Tamarack	73	→	↩	31
	70	↩	↩	200
Best Way	0	↩	↩	49
	130	↓	←	0
	49	↩	↩	103
	0	↩	↩	0
	0	→	↑	182
	0	↩	↩	90
US 2	162	↩	↩	130
	69	↓	←	846
	125	↩	↩	57
	191	↩	↩	102
	866	→	↑	64
	118	↩	↩	49

Meadow Lake

Meadow Lake Apartments
 Traffic Model
 AM Peak Hour Total
 Total Projected Traffic 2026
 With Meadows Lake Apartments
 Includes All Projects

			← 20	
			↶ 83	
Tamarack	16	→	↶ 49	
	59	↶	↶ 51	
	0	↶	↶ 33	
	122	↓	← 1	
Best Way	24	↶	↶ 81	
	1	↶	↶ 3	
	2	→	↑ 66	
	9	↶	↶ 64	
	328			
	127	↶	↶ 92	
	21	↓	← 691	
	180	↶	↶ 45	
US 2	117	↶	↶ 53	
	833	→	↑ 28	
	57	↶	↶ 78	
				Meadow Lake

PM Peak Hour Total
 Total Projected Traffic 2026
 With Meadows Lake Apartments

			← 37	
			↶ 76	
Tamarack	73	→	↶ 31	
	70	↶	↶ 200	
	1	↶	↶ 49	
	130	↓	← 2	
Best Way	49	↶	↶ 103	
	1	↶	↶ 10	
	1	→	↑ 182	
	6	↶	↶ 90	
	362			
	165	↶	↶ 133	
	70	↓	← 846	
	127	↶	↶ 57	
US 2	196	↶	↶ 102	
	866	→	↑ 65	
	118	↶	↶ 49	
				Meadow Lake

APPENDIX C

LOS Calculations

Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	856	56	44	692	32	52	16	76	112	16	80
Future Volume (vph)	48	856	56	44	692	32	52	16	76	112	16	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		150	150		150
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.993				0.850		0.948	
Flt Protected	0.950			0.950				0.963			0.974	
Satd. Flow (prot)	1770	3507	0	1770	3514	0	0	1794	1583	0	1720	0
Flt Permitted	0.311			0.221				0.755			0.798	
Satd. Flow (perm)	579	3507	0	412	3514	0	0	1406	1583	0	1409	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			7				84		42	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		360			1608			433			377	
Travel Time (s)		5.5			24.4			11.8			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	53	941	62	48	760	35	57	18	84	123	18	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	1003	0	48	795	0	0	75	84	0	229	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		

2025 AM Meadow Lake Apt. 7:00 am 06/03/2025 Existing
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Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	
Total Split (s)	49.0	49.0		49.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	45.0	45.0		45.0	45.0		37.0	37.0	37.0	37.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Act Effect Green (s)	20.3	20.3		20.3	20.3			12.8	12.8			12.8
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.31	0.31			0.31
v/c Ratio	0.19	0.58		0.24	0.46			0.17	0.15			0.49
Control Delay (s/veh)	8.6	9.3		10.5	8.2			12.6	4.5			14.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay (s/veh)	8.6	9.3		10.5	8.2			12.6	4.5			14.3
LOS	A	A		B	A			B	A			B
Approach Delay (s/veh)		9.3			8.3			8.3				14.3
Approach LOS		A			A			A				B

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 41.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay (s/veh): 9.4

Intersection LOS: A

Intersection Capacity Utilization 62.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Meadow Lake Rd & 9th St W



Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	888	116	56	832	84	100	56	48	32	56	92
Future Volume (vph)	136	888	116	56	832	84	100	56	48	32	56	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		150	150		150
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.986				0.850		0.931	
Flt Protected	0.950			0.950				0.969			0.991	
Satd. Flow (prot)	1770	3479	0	1770	3490	0	0	1805	1583	0	1719	0
Flt Permitted	0.275			0.242				0.722			0.920	
Satd. Flow (perm)	512	3479	0	451	3490	0	0	1345	1583	0	1595	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			22				49		60	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		360			1608			433			377	
Travel Time (s)		5.5			24.4			11.8			7.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	139	906	118	57	849	86	102	57	49	33	57	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	1024	0	57	935	0	0	159	49	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		

2025 PM Meadow Lake Apt. 4:00 pm 06/03/2025 Existing
RLASynchro 12 Report
Page 1

Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	
Total Split (s)	59.0	59.0		59.0	59.0		31.0	31.0	31.0	31.0	31.0	
Total Split (%)	65.6%	65.6%		65.6%	65.6%		34.4%	34.4%	34.4%	34.4%	34.4%	
Maximum Green (s)	55.0	55.0		55.0	55.0		27.0	27.0	27.0	27.0	27.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Act Effect Green (s)	27.9	27.9		27.9	27.9			13.5	13.5			13.5
Actuated g/C Ratio	0.63	0.63		0.63	0.63			0.31	0.31			0.31
v/c Ratio	0.43	0.46		0.20	0.42			0.38	0.09			0.35
Control Delay (s/veh)	12.2	6.8		8.0	6.5			19.6	6.9			13.5
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay (s/veh)	12.2	6.8		8.0	6.5			19.6	6.9			13.5
LOS	B	A		A	A			B	A			B
Approach Delay (s/veh)		7.5			6.6			16.6				13.5
Approach LOS		A			A			B				B

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 44

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay (s/veh): 8.3

Intersection LOS: A

Intersection Capacity Utilization 68.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Meadow Lake Rd & 9th St W



HCM 7th TWSC

4: Meadow Lake Rd & Tamarack Lake/Tamarack Lane

12/29/2025

Intersection

Int Delay, s/veh 5.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	16	56	68	20	48	44
Future Vol, veh/h	16	56	68	20	48	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	61	74	22	52	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	78
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1520
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1520
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.79	9.82
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	847	-	-	1391	-
HCM Lane V/C Ratio	0.118	-	-	0.049	-
HCM Ctrl Dly (s/v)	9.8	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	60	0	32	0	60	56	24	104	0
Future Vol, veh/h	0	0	0	60	0	32	0	60	56	24	104	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	65	0	35	0	65	61	26	113	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	230	291	113	261	261	96	113	0	0	126	0	0
Stage 1	165	165	-	96	96	-	-	-	-	-	-	-
Stage 2	65	126	-	165	165	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	725	619	940	692	644	961	1476	-	-	1460	-	-
Stage 1	837	762	-	911	816	-	-	-	-	-	-	-
Stage 2	945	792	-	837	762	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	685	607	940	679	632	961	1476	-	-	1460	-	-
Mov Cap-2 Maneuver	685	607	-	679	632	-	-	-	-	-	-	-
Stage 1	821	747	-	911	816	-	-	-	-	-	-	-
Stage 2	911	792	-	821	747	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	10.49	0	1.41
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1476	-	-	-	756	338	-
HCM Lane V/C Ratio	-	-	-	-	0.132	0.018	-
HCM Ctrl Dly (s/v)	0	-	-	0	10.5	7.5	0
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0.1	-

HCM 7th TWSC

4: Meadow Lake Rd & Tamarack Lake/Tamarack Lane

12/29/2025

Intersection

Int Delay, s/veh 6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	68	64	36	28	184
Future Vol, veh/h	72	68	64	36	28	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	74	70	39	30	200

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	152
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1429
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1429
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4.9	10.46
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	889	-	-	1152	-
HCM Lane V/C Ratio	0.259	-	-	0.049	-
HCM Ctrl Dly (s/v)	10.5	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.2	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	88	0	48	0	164	72	48	116	0
Future Vol, veh/h	0	0	0	88	0	48	0	164	72	48	116	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	96	0	52	0	178	78	52	126	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	409	487	126	448	448	217	126	0	0	257	0	0
Stage 1	230	230	-	217	217	-	-	-	-	-	-	-
Stage 2	178	257	-	230	230	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	553	481	924	521	506	822	1460	-	-	1308	-	-
Stage 1	772	714	-	785	723	-	-	-	-	-	-	-
Stage 2	824	695	-	772	714	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	496	460	924	499	484	822	1460	-	-	1308	-	-
Mov Cap-2 Maneuver	496	460	-	499	484	-	-	-	-	-	-	-
Stage 1	739	683	-	785	723	-	-	-	-	-	-	-
Stage 2	771	695	-	739	683	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	13.33	0	2.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1460	-	-	-	579	527	-
HCM Lane V/C Ratio	-	-	-	-	0.255	0.04	-
HCM Ctrl Dly (s/v)	0	-	-	0	13.3	7.9	0
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	1	0.1	-

Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	833	57	45	691	91	53	28	78	177	20	122
Future Volume (vph)	115	833	57	45	691	91	53	28	78	177	20	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		150	150		150
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.983				0.850		0.948	
Flt Protected	0.950			0.950				0.968			0.973	
Satd. Flow (prot)	1770	3504	0	1770	3479	0	0	1803	1583	0	1718	0
Flt Permitted	0.263			0.213				0.749			0.778	
Satd. Flow (perm)	490	3504	0	397	3479	0	0	1395	1583	0	1374	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			23				86		42	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		360			1608			433			377	
Travel Time (s)		5.5			24.4			11.8			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	126	915	63	49	759	100	58	31	86	195	22	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	978	0	49	859	0	0	89	86	0	351	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		

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Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	
Total Split (s)	49.0	49.0		49.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	45.0	45.0		45.0	45.0		37.0	37.0	37.0	37.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Act Effect Green (s)	25.2	25.2		25.2	25.2			19.2	19.2			19.2
Actuated g/C Ratio	0.47	0.47		0.47	0.47			0.36	0.36			0.36
v/c Ratio	0.55	0.59		0.26	0.52			0.18	0.14			0.68
Control Delay (s/veh)	22.3	12.3		14.4	11.3			14.9	4.7			21.7
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay (s/veh)	22.3	12.3		14.4	11.3			14.9	4.7			21.7
LOS	C	B		B	B			B	A			C
Approach Delay (s/veh)		13.4			11.4			9.9				21.7
Approach LOS		B			B			A				C

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 53.5

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay (s/veh): 13.6

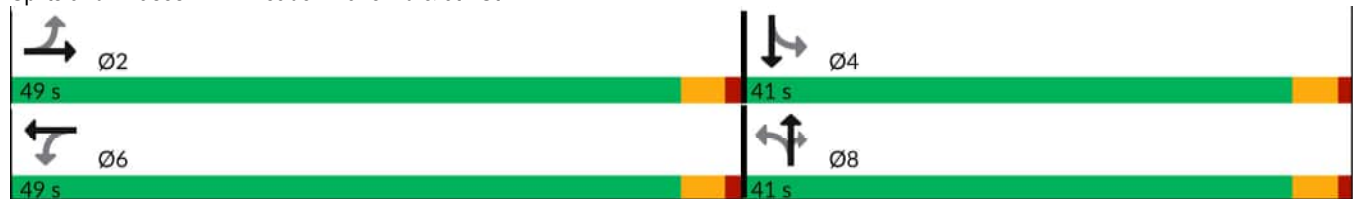
Intersection LOS: B

Intersection Capacity Utilization 68.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Meadow Lake Rd & 9th St W



Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	866	118	57	846	130	102	64	49	125	69	162
Future Volume (vph)	191	866	118	57	846	130	102	64	49	125	69	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		150	150		150
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.980				0.850		0.939	
Flt Protected	0.950			0.950				0.970			0.983	
Satd. Flow (prot)	1770	3476	0	1770	3468	0	0	1807	1583	0	1719	0
Flt Permitted	0.205			0.202				0.576			0.757	
Satd. Flow (perm)	382	3476	0	376	3468	0	0	1073	1583	0	1324	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			27				54			57
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		360			1608			433			377	
Travel Time (s)		5.5			24.4			11.8			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	210	952	130	63	930	143	112	70	54	137	76	178
Shared Lane Traffic (%)												
Lane Group Flow (vph)	210	1082	0	63	1073	0	0	182	54	0	391	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		

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Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	
Total Split (s)	49.0	49.0		49.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	45.0	45.0		45.0	45.0		37.0	37.0	37.0	37.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Act Effect Green (s)	45.5	45.5		45.5	45.5			23.7	23.7			23.7
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.31	0.31			0.31
v/c Ratio	0.93	0.53		0.29	0.52			0.55	0.10			0.88
Control Delay (s/veh)	68.6	11.8		15.3	11.8			28.4	5.6			42.4
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay (s/veh)	68.6	11.8		15.3	11.8			28.4	5.6			42.4
LOS	E	B		B	B			C	A			D
Approach Delay (s/veh)		21.1			12.0			23.2				42.4
Approach LOS		C			B			C				D

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 77.3

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay (s/veh): 20.6

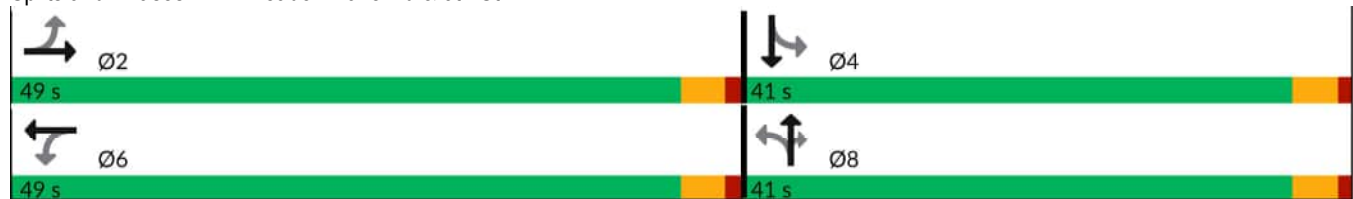
Intersection LOS: C

Intersection Capacity Utilization 75.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: Meadow Lake Rd & 9th St W



HCM 7th TWSC

4: Meadow Lake Rd & Tamarack Lake/Tamarack Lane

12/29/2025

Intersection

Int Delay, s/veh 5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	16	59	83	20	49	50
Future Vol, veh/h	16	59	83	20	49	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	64	90	22	53	54

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	82
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1516
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1516
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	6.06	10.01
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	826	-	-	1450	-
HCM Lane V/C Ratio	0.13	-	-	0.06	-
HCM Ctrl Dly (s/v)	10	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	81	0	33	0	66	64	24	122	0
Future Vol, veh/h	0	0	0	81	0	33	0	66	64	24	122	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	88	0	36	0	72	70	26	133	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	257	326	133	291	291	107	133	0	0	141	0	0
Stage 1	185	185	-	107	107	-	-	-	-	-	-	-
Stage 2	72	141	-	185	185	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	697	592	917	661	619	948	1452	-	-	1442	-	-
Stage 1	817	747	-	899	807	-	-	-	-	-	-	-
Stage 2	938	780	-	817	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	657	581	917	648	607	948	1452	-	-	1442	-	-
Mov Cap-2 Maneuver	657	581	-	648	607	-	-	-	-	-	-	-
Stage 1	801	732	-	899	807	-	-	-	-	-	-	-
Stage 2	902	780	-	801	732	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	11.11	0	1.24
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1452	-	-	-	713	296	-
HCM Lane V/C Ratio	-	-	-	-	0.174	0.018	-
HCM Ctrl Dly (s/v)	0	-	-	0	11.1	7.5	0
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.1	-

HCM 7th TWSC

4: Meadow Lake Rd & Tamarack Lake/Tamarack Lane

12/29/2025

Intersection

Int Delay, s/veh 6.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	70	75	37	31	200
Future Vol, veh/h	73	70	75	37	31	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	76	82	40	34	217

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	155
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1425
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1425
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.14	10.73
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	879	-	-	1205	-
HCM Lane V/C Ratio	0.286	-	-	0.057	-
HCM Ctrl Dly (s/v)	10.7	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0.2	-

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	103	0	49	0	182	90	49	130	0
Future Vol, veh/h	0	0	0	103	0	49	0	182	90	49	130	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	112	0	53	0	198	98	53	141	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	446	543	141	495	495	247	141	0	0	296	0	0
Stage 1	248	248	-	247	247	-	-	-	-	-	-	-
Stage 2	198	296	-	248	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	523	447	907	485	476	792	1442	-	-	1266	-	-
Stage 1	756	701	-	757	702	-	-	-	-	-	-	-
Stage 2	804	668	-	756	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	465	426	907	463	454	792	1442	-	-	1266	-	-
Mov Cap-2 Maneuver	465	426	-	463	454	-	-	-	-	-	-	-
Stage 1	722	669	-	757	702	-	-	-	-	-	-	-
Stage 2	750	668	-	722	669	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	14.72	0	2.18
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1442	-	-	-	535	493	-
HCM Lane V/C Ratio	-	-	-	-	0.309	0.042	-
HCM Ctrl Dly (s/v)	0	-	-	0	14.7	8	0
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	1.3	0.1	-

Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	117	833	57	45	691	92	53	28	78	180	21	127
Future Volume (vph)	117	833	57	45	691	92	53	28	78	180	21	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		150	150		150
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.982				0.850		0.948	
Flt Protected	0.950			0.950				0.968			0.973	
Satd. Flow (prot)	1770	3504	0	1770	3476	0	0	1803	1583	0	1718	0
Flt Permitted	0.261			0.212				0.746			0.781	
Satd. Flow (perm)	486	3504	0	395	3476	0	0	1390	1583	0	1379	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			23				86		43	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		360			1608			433			377	
Travel Time (s)		5.5			24.4			11.8			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	129	915	63	49	759	101	58	31	86	198	23	140
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	978	0	49	860	0	0	89	86	0	361	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		

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Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	
Total Split (s)	49.0	49.0		49.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	45.0	45.0		45.0	45.0		37.0	37.0	37.0	37.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Act Effect Green (s)	25.7	25.7		25.7	25.7			19.8	19.8			19.8
Actuated g/C Ratio	0.47	0.47		0.47	0.47			0.36	0.36			0.36
v/c Ratio	0.57	0.59		0.26	0.52			0.18	0.14			0.69
Control Delay (s/veh)	24.0	12.7		15.1	11.7			14.8	4.6			21.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay (s/veh)	24.0	12.7		15.1	11.7			14.8	4.6			21.9
LOS	C	B		B	B			B	A			C
Approach Delay (s/veh)		14.0			11.9			9.8				21.9
Approach LOS		B			B			A				C

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 54.6

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay (s/veh): 14.1

Intersection LOS: B

Intersection Capacity Utilization 68.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Meadow Lake Rd & 9th St W



Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	866	118	57	846	133	102	66	49	127	70	165
Future Volume (vph)	197	866	118	57	846	133	102	66	49	127	70	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	150		150	150		150
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.980				0.850		0.939	
Flt Protected	0.950			0.950				0.971			0.983	
Satd. Flow (prot)	1770	3476	0	1770	3468	0	0	1809	1583	0	1719	0
Flt Permitted	0.203			0.201				0.580			0.751	
Satd. Flow (perm)	378	3476	0	374	3468	0	0	1080	1583	0	1314	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			28				54			57
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		360			1608			433			377	
Travel Time (s)		5.5			24.4			11.8			7.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	216	952	130	63	930	146	112	73	54	140	77	181
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	1082	0	63	1076	0	0	185	54	0	398	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		

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RLA

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Lanes, Volumes, Timings

2: Meadow Lake Rd & 9th St W

12/29/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	2	2		6	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	
Total Split (s)	49.0	49.0		49.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	54.4%	54.4%		54.4%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	45.0	45.0		45.0	45.0		37.0	37.0	37.0	37.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	
Act Effect Green (s)	45.5	45.5		45.5	45.5			24.2	24.2			24.2
Actuated g/C Ratio	0.58	0.58		0.58	0.58			0.31	0.31			0.31
v/c Ratio	0.98	0.53		0.29	0.53			0.55	0.10			0.89
Control Delay (s/veh)	79.8	12.1		15.6	12.0			28.1	5.6			43.6
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay (s/veh)	79.8	12.1		15.6	12.0			28.1	5.6			43.6
LOS	E	B		B	B			C	A			D
Approach Delay (s/veh)		23.4			12.2			23.0				43.6
Approach LOS		C			B			C				D

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 77.8

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay (s/veh): 21.8

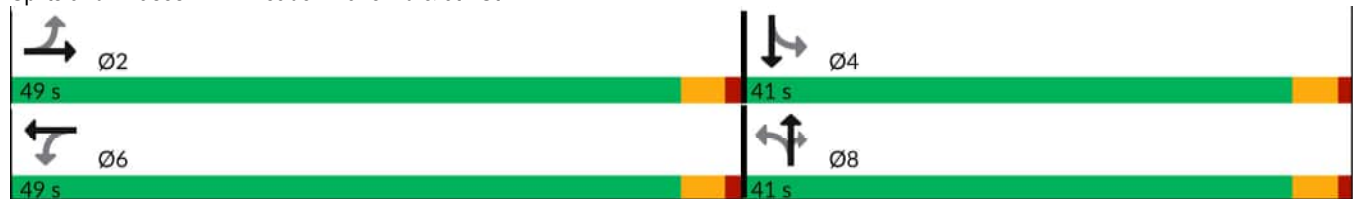
Intersection LOS: C

Intersection Capacity Utilization 76.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 2: Meadow Lake Rd & 9th St W



HCM 7th TWSC

4: Meadow Lake Rd & Tamarack Lake/Tamarack Lane

12/29/2025

Intersection

Int Delay, s/veh 5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	16	59	83	20	49	51
Future Vol, veh/h	16	59	83	20	49	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	64	90	22	53	55

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	82
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1516
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1516
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	6.06	10.01
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	828	-	-	1450	-
HCM Lane V/C Ratio	0.131	-	-	0.06	-
HCM Ctrl Dly (s/v)	10	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	10	81	1	33	3	66	64	24	122	0
Future Vol, veh/h	1	2	10	81	1	33	3	66	64	24	122	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	2	11	88	1	36	3	72	70	26	133	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	264	333	133	299	298	107	133	0	0	141	0	0
Stage 1	185	185	-	113	113	-	-	-	-	-	-	-
Stage 2	79	148	-	186	185	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	689	587	917	653	614	948	1452	-	-	1442	-	-
Stage 1	817	747	-	892	802	-	-	-	-	-	-	-
Stage 2	930	775	-	816	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	647	574	917	629	601	948	1452	-	-	1442	-	-
Mov Cap-2 Maneuver	647	574	-	629	601	-	-	-	-	-	-	-
Stage 1	801	732	-	890	800	-	-	-	-	-	-	-
Stage 2	891	773	-	788	732	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.49	11.3	0.17	1.24
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	37	-	-	816	696	296	-
HCM Lane V/C Ratio	0.002	-	-	0.017	0.18	0.018	-
HCM Ctrl Dly (s/v)	7.5	0	-	9.5	11.3	7.5	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0.1	-

HCM 7th TWSC

4: Meadow Lake Rd & Tamarack Lake/Tamarack Lane

12/29/2025

Intersection

Int Delay, s/veh 6.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	70	76	37	31	201
Future Vol, veh/h	73	70	76	37	31	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	76	83	40	34	218

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	155
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1425
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1425
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.17	10.74
HCM LOS			B

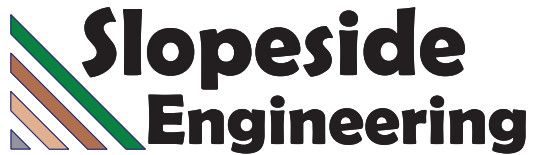
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	878	-	-	1211	-
HCM Lane V/C Ratio	0.287	-	-	0.058	-
HCM Ctrl Dly (s/v)	10.7	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0.2	-

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	6	103	2	49	10	182	90	49	130	1
Future Vol, veh/h	1	1	6	103	2	49	10	182	90	49	130	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	7	112	2	53	11	198	98	53	141	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	469	566	142	517	517	247	142	0	0	296	0	0
Stage 1	248	248	-	268	268	-	-	-	-	-	-	-
Stage 2	221	317	-	248	249	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	505	434	906	469	462	792	1440	-	-	1266	-	-
Stage 1	756	701	-	737	687	-	-	-	-	-	-	-
Stage 2	782	654	-	756	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	443	410	906	439	437	792	1440	-	-	1266	-	-
Mov Cap-2 Maneuver	443	410	-	439	437	-	-	-	-	-	-	-
Stage 1	721	669	-	730	681	-	-	-	-	-	-	-
Stage 2	720	648	-	715	669	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	10.16		15.42		0.27		2.17	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	60	-	-	707	512	489	-	-
HCM Lane V/C Ratio	0.008	-	-	0.012	0.327	0.042	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	10.2	15.4	8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.4	0.1	-	-



May 19, 2022

Foley Engineering, Inc.
105 Village Loop, Suite B
Kalispell, MT, 59901

**Subject: Geotechnical Investigation
 Meadow Lake Boulevard Apartments
 Columbia Falls, Montana
 Job No. 22-423**

Dear Mr. Brent Foley,

At your request, Slopeside Engineering, LLC (Slopeside) has conducted a geotechnical investigation for the planned Meadow Lake Boulevard apartments in Kalispell, Montana. The Vicinity Map, Figure 1, shows the general location of the site. The investigation was conducted to evaluate subsurface materials, conditions at the site, and develop recommendations for site preparation, earthwork, building foundations, concrete slab-on-grade floors, utility trench backfill, and AC pavement sections. The investigation included a review of existing subsurface information for the site vicinity, subsurface explorations, and engineering analyses. This report describes the work accomplished and provides our conclusions and recommendations for use in the design and construction of the proposed project. Slopeside has strived to perform the investigation and develop recommendations in a manner consistent with the degree of care that is presently standard to the geotechnical engineering profession.



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406-270-3480

*PO Box 7460
Kalispell, MT, 59904*

PROJECT DESCRIPTION

The project site is located at 302 Meadow Lake Boulevard, in Columbia Falls, Montana. The location of the site and general site layout are shown on the Site Plan, Figure 2. Available design details and information provided by the Project Team indicate the proposed buildings are two- to three-story apartment style structures with concrete slab-on-grade floors. We anticipate maximum column and continuous wall loads will be less than 150 kips and 5 kips per lineal ft, respectively. Asphaltic concrete (AC) paved parking and roadways will provide access to the buildings. Cuts and fills with a maximum depths of about 5 ft are anticipated, and utility trench depths will range from about 6 to 8 ft deep. No basements or below grade spaces are planned for this project.

SITE DESCRIPTION

General

The project site is located in a forested area, at the northwest corner of the Meadow Lake Boulevard and Best Way intersection. The site is undeveloped and bordered by forested land and residential structures to the north and west, Meadow Lake Boulevard to the east, and a previously forested area that was recently cleared of trees to the south. The site is vegetated with mostly evergreen trees and underbrush. Groundwater consisting of seeps or springs was not observed at the ground surface throughout the site.

Topography

Site observations indicate the site is relatively flat with a slight gradient downward to the south. Slopes are flatter than 10H:1V.

Geology

The project site lies in the Rocky Mountain Trench bounded by the Salish Mountains to the West and the Swan Range to the East. The trench was traversed by the Flathead Glacier and was covered by substantial areas of glacial lakes during recession of the ice mass. The surficial geology of the area consists of alluvial river gravels and sands deposited during the migration of the Flathead River. These soils are present for extensive depths and are underlain by Precambrian bedrock.

Site Seismicity

The site lies within the Intermountain Seismic Belt and is mapped as a zone of potentially significant seismic ground movement. Subsurface materials encountered during this limited investigation indicate the site soils should be classified as Site Class D, in accordance with the International Building Code (IBC 2018). Based on the anticipated depth to ground water, the risk of liquefaction during the design level earthquake is low.

SUBSURFACE CONDITIONS

General

Subsurface materials and conditions at the site were investigated on April 22, 2022 with six test pits, designated TP-1 through TP-6. The test pits were excavated to depths of about 8 ft below the ground surface. The approximate locations of the subsurface explorations are shown on the Site

Plan, Figure 2. Logs of the test pits are provided on Figures 1A through 6A.

Soils

Typical soils observed at the ground surface consist of a topsoil layer with abundant organics, underlain by silt and sand soils that tend to coarsen with depth. For the purpose of discussion, the materials and soils disclosed by the subsurface investigation have been grouped into the following categories:

1. TOPSOIL

2. SILT and SAND

1. TOPSOIL. All test pits advanced for this project encountered topsoil at the ground surface. The topsoil consists of dark brown silt with varying percentages of sand and abundant organics. The topsoil is generally dark brown, moist, and medium stiff. The topsoil typically extends to depths of 6 inches to 15 inches below the existing ground surface and is underlain by silt and sand soils.

2. SILT and SAND. Sandy silt to silty sand was encountered below the topsoil layer in all test pits advanced for this project. The sandy silt and sand soils are typically medium dense and brown to light brown. Scattered roots are present within this layer and extend to depths of about 2 ft. The soils tend to coarsen with depth as the silt content decreases. The sand becomes relatively clean below a depth of about 3.5 to 6 ft in all of the test pits. The sand is fine grained and appears dry of the optimum moisture content for compaction (ASTM D698). Caving of the excavation sidewalls was observed in many of the test pits below a depth of about 5 ft. All test pits advanced for this project were terminated in the sand soils at depths of about 8 ft below the ground surface.

Groundwater

Groundwater was not encountered in any of the test pits advanced for this project, and is anticipated to be more than 20 ft below the ground surface. We anticipate the groundwater level rises and lowers somewhat in response to the dry and wet seasons; however, we do not anticipate much more than about a 5 ft fluctuation.

ENGINEERING ANALYSIS

General

Based on discussions with the project team at the time of this investigation, we understand the proposed structures will consist of two- to three-story apartment style structures with concrete slab on grade floors, and no basements or crawl spaces. We anticipate cuts and fills up to about 5 ft will be necessary for construction of the project. Maximum column and wall loads of 150 kips and 5 kips per lineal ft, respectively, are anticipated for the planned structures. We anticipate utility trench depths will be up to 6 to 8 ft deep.

Site Preparation

The soils encountered at the ground surface in the vicinity of the planned improvements consist of topsoil underlain by sandy silt and sand soils. Site stripping will need to be conducted in

all planned development areas. We anticipate the topsoil and rooted zones will vary between 6 and 15 inches in most areas. Larger topsoil thicknesses may be present in low lying areas and in drainage swales. We anticipate an average stripping thickness of about 12 inches for this site.

The soils encountered near the ground surface within the planned site development area consist primarily of fine-grained moisture-sensitive soils. Based on past experience, the near-surface fine-grained soils encountered during this investigation have little cohesion. As a result, these soils can be easily disturbed and strength diminished during construction if in-situ moisture contents are greater than the optimum moisture content for compaction. This is of particular concern during the seasonally wet times of the year when seepage or surface water is allowed to pond and infiltrate. Therefore, positive site drainage is of critical importance to both construction and long-term performance of the proposed improvements. Based on our experience in the project vicinity and observations during the subsurface investigation, we anticipate groundwater depths will be greater than 20 ft below the ground surface at most locations, and are anticipated to be below the planned excavation limits and utility construction.

Earthwork

We understand it is desirable to use on-site soils for the construction of Structural Fills and utility trench backfill. Near surface, on-site soils consist primarily of fine-grained, moisture-sensitive silt and sand soils. Soils encountered beneath the topsoil zone are suitable for Structural Fill construction as long as the soils are free of organics or other deleterious materials, and cobbles and boulders larger than 3 inch maximum size are removed. Compaction of Structural Fill and utility trench backfill shall be accomplished when moisture contents are within 3 percent of the optimum moisture content as determined by ASTM D698. Observations in the upper 10 ft of soil during the subsurface and laboratory investigations revealed that the in situ soils are typically dry of the optimum moisture content as determined by ASTM D698, indicating moisture conditioning with water will likely be necessary to approach the optimum moisture content for compaction. Use of on-site, fine grained soils will be a weather-sensitive earthwork operation, and commonly utilizes large spaces when moisture conditioning the material. It should be realized that fine grained soils can be difficult to compact, particularly during wet or cold weather. Construction of Structural Fill using fine grained soils during relatively wet weather or when temperatures are below freezing (including nightly low temperatures), will significantly reduce the efficiency of earthwork operations. Limiting mass grading to the relatively dry and warm late spring, summer or early fall months will reduce the likelihood of weather affecting construction operations.

Foundation Design

Shallow foundations for the planned structures shall be established in the native silty sand and sand soils compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698, for a depth of 8 inches below the foundation subgrade. Moisture contents of the foundation subgrade shall be within 3 percent of the optimum moisture content at the time of compaction. An alternative to compaction of the on site soils for foundation support is removal of the native soils to at least 8 inches below foundation subgrade and replacement with $\frac{3}{4}$ inch minus crushed base course gravel, compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. The gravel shall be within 3 percent of the optimum moisture content

at the time of compaction.

Based on past experience, we anticipate maximum spread column and continuous wall loads will be less than 150 kips and 5 kips per lineal foot, respectively. We recommend using allowable bearing pressures of 2,500 psf for spread columns and 2,000 psf for continuous wall footing design. Design using the recommended allowable bearing pressures will tend to maintain total load settlements at less than 1-inch and differential settlements of less than $\frac{1}{2}$ the total settlement for footings established on compacted sandy silt, sand or base course gravel. Additional foundation recommendations are provided in the **Recommendations** section of this report.

Dampproofing or waterproofing shall be provided consistent with the desired level of protection. In areas where concrete slab-on-grade floors are planned above surrounding grades, a vapor retarding membrane (installed per the manufacturer's recommendations) beneath the slab-on-grade floors should be considered in areas where moisture sensitive flooring is planned, and where extra precaution against moist floors is desired.

Pavement Analysis

Flexible pavement designs have been conducted using the 1993 edition of the AASHTO Guide to Pavement Design. Light duty pavement sections are provided and should be used in areas where vehicular traffic typically consists of cars, pick-ups, vans, and occasional small delivery vehicles, i.e. parking lots and access roads. A CBR value of 5 was used to model the subgrade, assuming the subgrade consists of native sandy silt, sand or Structural Fill compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698 and the moisture content is within 3 percent of the optimum moisture content at the time of compaction. The pavement section is presented in the **Recommendations** section of this report.

RECOMMENDATIONS

1.0 General Site Preparation

- 1.1 The removal of topsoil and other organic material, including the clearing and grubbing of surficial vegetation and root zones, should be accomplished within the construction zone prior to any earthwork construction. An average stripping thickness of about 12 inches to remove topsoil is anticipated across the site. Following removal of surface organics, the underlying soils shall be evaluated by a qualified geotechnical engineer for suitability as a subgrade material in all pavement, earthwork, and building areas. The subgrade shall consist of silt or sand soils, scarified to a depth of 8 inches, and then compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698, and be within 3 percent of the optimum moisture content at the time of compaction.
- 1.2 Surface drainage should be established to direct runoff away from the construction area. Ditching and detention/retention ponds with sump pumps may be needed to control the flow of runoff water.
- 1.3 Soils encountered at the site are primarily fine-grained, moisture-sensitive soils that are

easily disturbed by construction activities and traffic when moisture contents are greater than the optimum moisture content as determined by ASTM D698. Care should be taken to minimize construction traffic over moisture sensitive subgrade soils. During wet weather conditions, in areas where heavy construction traffic is anticipated, haul roads with a minimum gravel thickness of 2 feet should be constructed over the planned subgrade. The gravel shall consist of a well-graded gravel with a maximum size of 3 inches with no more than 7 percent passing the No. 200 sieve. Geotextile fabric placed between the fine-grained soils and gravel for the haul road will reduce the risk of continued maintenance of the haul road during construction. Provided that the haul road is constructed over compacted subgrade as previously recommended, it can be used as a portion of the subbase course for the roadways.

- 1.4 The stability of construction excavations and associated worker safety are the responsibility of the contractor in accordance with current OSHA regulations; this responsibility may require design by a registered professional engineer. Based on the predominant soil types encountered during our investigation, temporary construction excavations that are to be planned in accordance with OSHA provisions should assume Type C material conditions due to the presence of relatively clean sand soils. Actual subsurface conditions at the time of excavation should be observed by a geotechnical engineer to determine whether slope flattening, bracing or other stabilization is necessary due to seepage or other unexpected conditions.

2.0 Excavation, Earthwork, and Construction Materials

- 2.1 Based on observations during Slopeside's subsurface investigation, we anticipate subgrade soil moisture contents will be at or less than the optimum moisture content for compaction. However, if the moisture contents of subgrade soils are greater than the optimum moisture content as determined by ASTM D698, track-mounted hydraulic excavators should be used to accomplish excavation to subgrade in all Structural Fill, roadway and foundation areas. The use of track-mounted equipment will reduce the risk of disturbing the underlying moisture-sensitive, fine-grained soils. Rubber-tired equipment, including graders and scrapers, used within 2 feet of subgrade elevation will greatly increase the risk of disturbing the underlying subgrade soils when moisture contents are greater than the optimum moisture content for compaction.
- 2.2 Structural Fill constructed within proposed roadways, parking lots, building pads, engineered slopes and all other areas that are settlement sensitive shall be comprised of soils that are free of organics and deleterious materials. All Structural Fill material shall be placed in no greater than 8-inch thick lifts and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In addition, the moisture content of the Structural Fill at the time of compaction shall be within 3 percent of the optimum moisture content as determined by ASTM D698. Cobbles and boulders larger than 3 inch maximum size shall not be used as fill material. Structural Fills shall consist of on-site soils or be from a material source approved by our geotechnical engineer and meet the following composition guidelines:

- The sand and gravel-size particles comprising the fill should be hard, durable rock materials that will not degrade by moistening or under mechanical action of the compacting equipment; i.e. not shale or other clayey rock types.
- The binder/fines should have maximum Liquid Limit and Plasticity Index values of 25 and 10 percent, respectively.
- No frozen, organic, or other deleterious materials should be present in the Structural Fill.

- 2.3 In the event that fill operations are planned for the relatively wet fall, winter and spring months, the fill material may need to be comprised of granular Structural Fill free of organics and deleterious materials. All granular Structural Fill material shall be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In addition, the moisture content of the granular Structural Fill at the time of compaction shall be within 3 percent of the optimum moisture content as determined by ASTM D698. Granular Structural Fills shall consist of aggregate from a material source approved by our geotechnical engineer and meet the following gradation and composition guidelines:

Screen or Sieve Size	Percent Passing by Weight
3-inch	100
1½-inch	85-100
No. 4	30-60
No. 200	10 maximum

- The sand and gravel-size particles comprising the fill should be hard, durable rock materials that will not degrade by moistening or under mechanical action of the compacting equipment; i.e. not shale or other clayey rock types.
- The binder/fines should have maximum Liquid Limit and Plasticity Index values of 25 and 10 percent, respectively.
- No frozen, organic, or other deleterious materials should be present in the Structural Fill.

- 2.4 Fill placement should be observed and tested by our geotechnical site representative. Any areas of rutting, excessive deformation, or other non-uniform performance should be moisture conditioned and recompacted, or removed and replaced, as recommended by our geotechnical engineer. Structural Fill should not be placed on frozen subgrade material or

previously placed Structural Fill or subgrade that has frozen.

- 2.5 Utility trench and foundation wall backfill materials shall be approved by our geotechnical engineer and be placed in uniform lifts of maximum 8-inch loose thickness and be compacted to 95 percent of the maximum dry density as determined by ASTM D698. Backfill materials shall be placed and compacted per Item 2.2 or 2.3. We anticipate the moisture contents of the excavated materials will be relatively dry of the optimum moisture content and moisture conditioning will be required, making it difficult to compact during relatively wet conditions and when temperatures are less than 40 degrees (F). Backfill shall not be placed on frozen subgrade material or previously placed backfill that has frozen. Based on observations during the subsurface investigation, it appears the on site sand soils may be suitable for pipe bedding material. Assuming the sand soils meets the gradation and composition guidelines per the City of Columbia Falls Construction Standards, in our opinion, the sand is a suitable pipe bedding material. Compaction within 5 feet of foundation structures shall be accomplished using hand-operated tamping equipment only.
- 2.6 Permanent slopes shall be no steeper than 2H:1V within this development. Since it is difficult to compact the surface of fill slopes, we recommend fill slopes be overbuilt by 2 feet and trimmed back after construction to provide a surface that is more resistant to localized sloughing. Following construction of all slopes, topsoil can be placed and “track walked” with an appropriately sized dozer. It is important to vegetate and promote root growth after placement of the topsoil on sand and silt soils to reduce the risk of localized sloughing.
- 3.0 Foundation Preparation and Design**
- 3.1 Continuous wall, grade beams, and spread footing foundations shall be constructed on compacted native silt, sand, or $\frac{3}{4}$ inch minus base gravel, as indicated in the Engineering Analysis section of this report. We recommend our geotechnical engineer observe the conditions at the bottom of all footing excavations for suitability of the proposed foundation bearing pressures. Footing surfaces shall be cleaned of loosened or softened material prior to footing formwork or concrete placement.
- 3.2 Where the removal of unsuitable material is required, replacement Granular Structural Fill should be placed and compacted per Item 2.3 to attain foundation grade. Unsuitable materials include uncontrolled previously placed fill materials, soils with support capability less than the bearing values planned for a specific footing, and any saturated or softened/disturbed soils that may occur due to isolated seepage, weather, or construction activities.
- 3.3 Spread footing and continuous wall foundations shall be established on compacted silt, sand, or $\frac{3}{4}$ inch minus base gravel. Spread footings can then be designed with maximum allowable bearing pressures of **2,500 psf**, and continuous wall foundations can be designed with maximum allowable bearing pressures of **2,000 psf**, provided load-settlement relations discussed in the **Engineering Analysis** are acceptable. Continuous wall, and spread footing foundations shall have minimum footing widths of 16 inches and 2 ft, respectively. Larger

footings are anticipated and will depend on the planned loading. All foundations shall be designed by a Structural Engineer.

- 3.4 All foundation footings should have a minimum embedment of 1.0 ft below finished interior surfaces. Exterior wall footings should be embedded a minimum of 3.5 ft below exterior grades to establish frost protection.
- 3.5 Lateral load resistance can be provided by friction acting along footing bases and passive pressure acting on the footing sides. For design purposes, the following parameters are appropriate:

Material	Friction Coefficient	Passive Resistance (psf/ft depth)
Silty Sand and Sand	0.35	200*
Granular Structural Fill per Item 2.3	0.50	300*

*Assumes foundation backfill compacted per Item 2.5

4.0 Lateral Earth Pressure

- 4.1 Lateral earth pressure parameters for design of cantilevered walls backfilled in accordance with Item 2.4 and Detail 1, can be designed using active earth pressures with an equivalent fluid weight of 35 pcf, assuming drainage design recommendations discussed in Item 5.1 below are implemented. A minimum uniform pressure of 100 psf should be added to the above design pressures for cantilevered walls to allow for surcharge effects during construction. Larger pressures may be necessary depending on the contractor's approach to the work.

5.0 Site Drainage

- 5.1 Relief of hydrostatic pressure against cantilevered retaining walls shall be provided using drainage as shown on Detail 1, or an approved alternate system.
- 5.2 Finished site grades should be positively sloped away from foundation and backfill zones. Grading should be designed and maintained to route runoff away from the building areas.
- 5.3 Seeps and springs or wet areas observed at the ground surface or in areas where Structural Fill is planned, can be controlled with french drains sloped to drain to an acceptable outlet. French drains shall be constructed per Detail 2 and shall consist of a typical 2-ft by 2-ft trench. The french drain shall consist of a minimum 4-inch diameter perforated pipe, surrounded by open-graded drain rock (rounded gravel is acceptable) and enveloped with a nonwoven drainage geotextile. The fabric shall be protected with a minimum cover of 12 inches.

6.0 Slab-on-Grade Design/Capillary Break

6.1 Interior concrete slab subgrades, prior to placement of gravel, shall consist of compacted native soils or Structural Fill. Areas of unsuitable fill material or areas where rutting, yielding, or other non-uniform subgrade performance is observed, shall be removed or recompacted as recommended by our geotechnical engineer. A subgrade modulus value of 150 psi/in should be assumed for the subgrade prepared in accordance with Sections 1.0, 2.0, and 3.0 in the concrete slab area.

6.2 Following the subgrade preparation of Item 6.1, a nominal 8-inch thick layer of $\frac{1}{4}$ to $1\frac{1}{2}$ inch open-graded angular crushed rock ($\frac{3}{4}$ inch gravel chips work well for this purpose) shall be provided to provide a capillary break. The upper 2 inches of this 8 inch thick layer can be substituted with $\frac{3}{4}$ inch minus crushed rock to provide a compact surface for construction activities. The slab-on-grade base course shall be compacted using vibratory compaction methods until well-keyed. It is anticipated that a vapor barrier installed per the manufacturer's recommendations will also be necessary for the interior slabs.

7.0 Asphaltic Concrete Pavement

7.1 In preparation for subbase course, the subgrade shall be scarified to a depth of 8 inches, moisture conditioned, and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. In areas where Structural Fill has been previously compacted as part of the Earthwork operations for this project, scarifying and recompacting the subgrade will not be necessary unless the subgrade has previously frozen or is disturbed. Any areas where rutting, yielding, or non-uniform subgrade performance is observed, shall be repaired and improved as recommended by our geotechnical engineer. Compacted silty sand or sand is the assumed pavement subgrade material.

7.2 Placement of a woven separation geotextile fabric between the silty sand subgrade and the subbasecourse layer will improve constructability and reduce the risk of the subgrade soils contaminating the subbase course material. In addition, the geotextile will significantly reduce the risk of subgrade disturbance during spring thaw, when subgrade soils are weakest. The recommended geotextile should consist of Mirafi 500X or equivalent and should be placed to the manufacturer's specifications.

7.3 The following flexible pavement thickness design section assume a 20-year design period, provided the traffic assumptions discussed in the **Engineering Analysis** are acceptable. The pavement section assumes construction procedures and material requirements as outlined in the *Montana Public Works Standard Specifications, Sixth Edition, 2010*, are followed.

Pavement Component	Light-Duty Section*
Asphaltic Concrete Pavement	3 in.
³ / ₄ -inch minus Crushed Base Course	3 in.
3-inch minus Subbase Gravel	12 in.

*Assumes geotextile equivalent to Mirafi 500X is placed between subgrade and subbase. In the event a geotextile is not used, we recommend increasing the Base Course thickness by 3 inches for both the light-duty and heavy-duty pavement sections.

8.0 Exterior Concrete Flatwork

8.1 Concrete flatwork that is allowed to move independently, such as sidewalks, typically has minimal damage of the concrete due to frost heave. As long as the concrete is allowed to raise and lower without being fixed at the edges, minimal cracking due to frost heave is anticipated.

8.2 To reduce the risk of frost heave occurring within the limits of the exterior concrete flatwork and affecting entryways and fixed concrete slabs, Slopeside recommends a combination of reducing water infiltration and removing some of the frost susceptible soils. Slopeside recommends reducing the amount of surface water infiltrating into the ground by collecting roof water in gutters and hard piping the runoff to an acceptable outlet approved by the Civil Engineer. Slopeside also recommends the frost susceptible subgrade soils be overexcavated to a depth of about 2 ft below the bottom of concrete elevation and backfilled with at least 18 inches of Granular Structural Fill consisting of 3 inch minus "pit run" gravel with no more than 7 percent passing the No. 200 sieve, and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D698. The upper 6 inches of base material below the concrete should consist of ¹/₄ inch to 1 inch open-graded angular drain rock. The angular drain rock shall be compacted using vibratory methods until well-keyed, and be provided a drainage outlet.

9.0 Seismic Design

9.1 Seismic design following the static procedures outlined in the International Building Code may be conducted using a Site Class D (2018 IBC). A site specific seismic hazard study will be necessary if dynamic procedures are to be followed.

10.0 Construction Services and Quality Control

10.1 Geotechnical observation should be provided to monitor the site preparation, earthwork, and foundation stages of construction. These geotechnical services should ascertain that subsurface conditions are reasonably consistent with those determined by our investigation, and should ascertain that site and foundation preparation are consistent with our recommendations.

CONCLUSION

The foregoing recommendations present our initial geotechnical input for design and construction of the project. In order for these recommendations to be properly incorporated in the subsequent design and construction stages we recommend that our geotechnical engineering staff remain involved with the project to ascertain that our recommendations have been properly interpreted both during design and construction. These services will reduce the potential for misinterpretation of subsurface conditions and geotechnical design recommendations that are important in the preparation of project plans, specifications and bid documents.

LIMITATIONS

Slopeside Engineering, LLC, has strived to prepare this report in accordance with generally accepted geotechnical engineering practices in this area solely for use by the client for design purposes and is not intended as a construction or bid document representing subsurface conditions in their entirety. The conclusions and recommendations presented are based upon the data obtained during the investigation as applied to the proposed design and construction details discussed in this report. The nature and extent of variations between the subsurface explorations may not become evident until construction. If variations are then exposed, it will be necessary to reevaluate the recommendations of this report.

If changes in the concept, design data, or location of the structures are planned, the recommendations contained in this report shall not be considered valid unless the changes are reviewed by our geotechnical engineer, and a written response is provided.

Sincerely,



Joshua C. Smith, PE
Principal Geotechnical Engineer

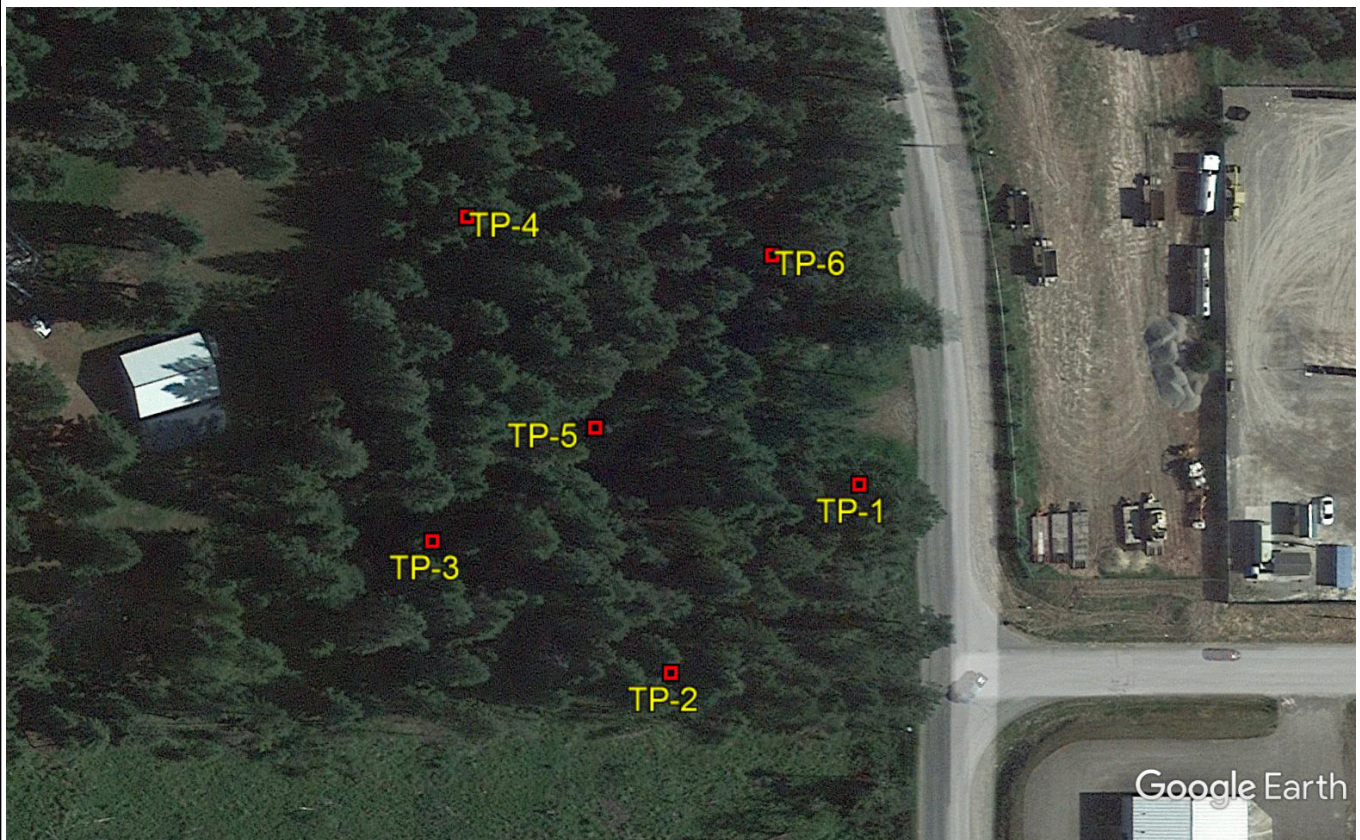
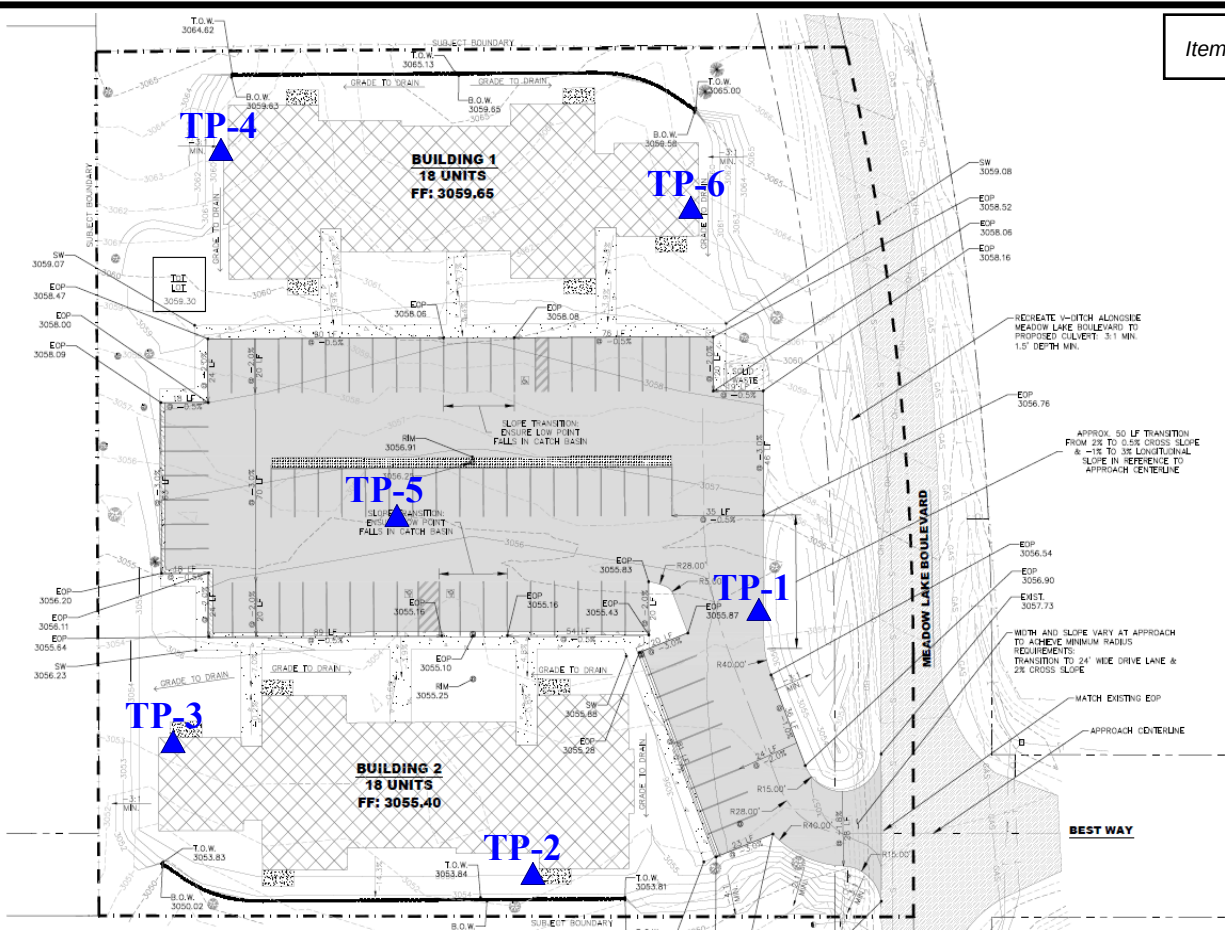


Project: Meadow Lake Boulevard Apartments
Columbia Falls, Montana

Job Number: 22-423
Date: May 16, 2022

Vicinity Map
Slopeside Engineering, LLC
Kalispell, MT
FIGURE 1

**Slopeside
Engineer**



Project: Meadow Lake Boulevard Apartments
Columbia Falls, Montana

Job Number: 22-423
Date: May 16, 2022

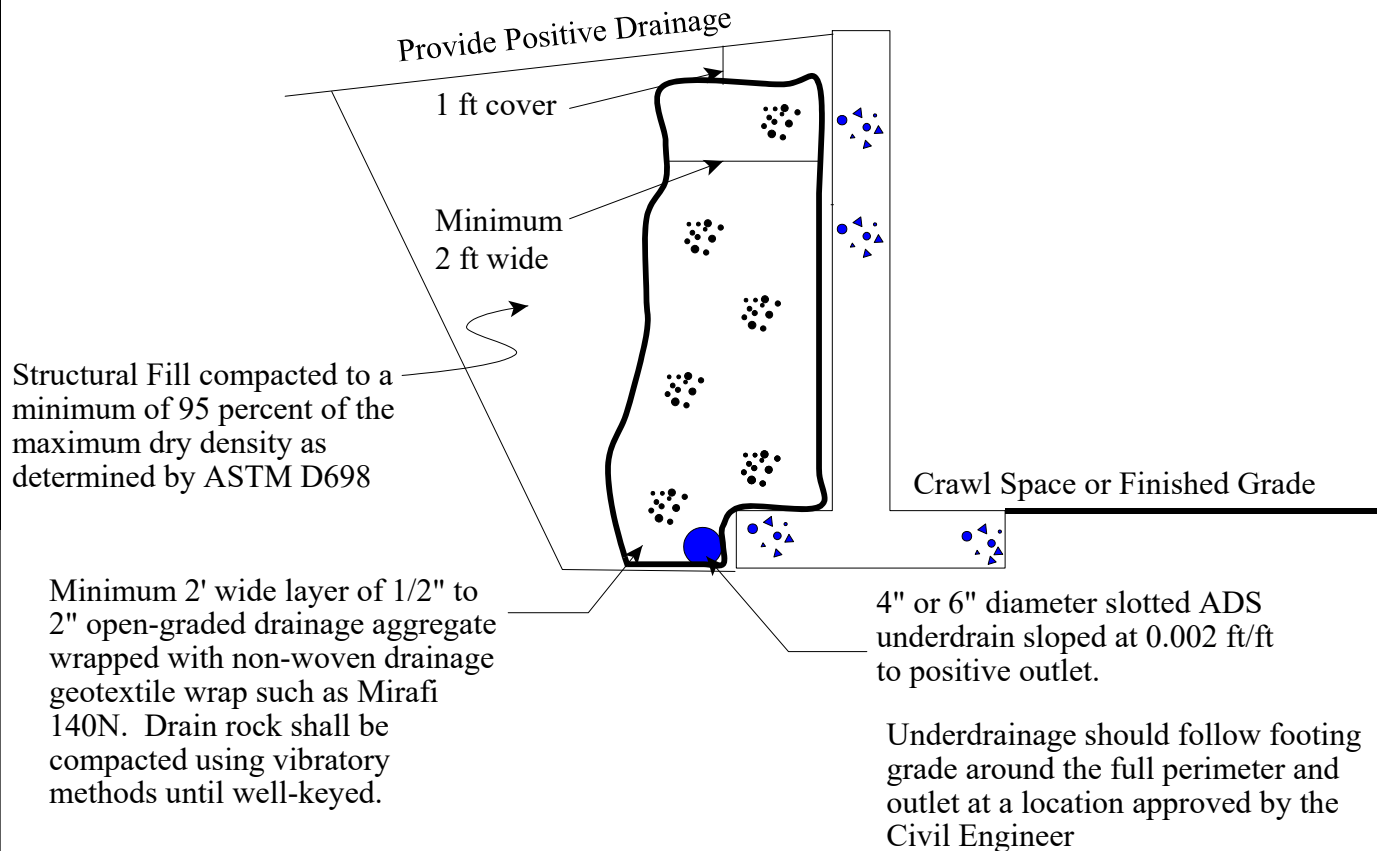
Site Plan
Slopeside Engineering, LLC
Kalispell, MT
FIGURE 2



**Slopeside
Engineer** - 17

Wall Backfill/Drainage

Item No.5.



No Scale Intended

Project: Meadow Lake Boulevard Apartments
Columbia Falls, Montana

Job Number: 22-423
Date: May 16, 2022

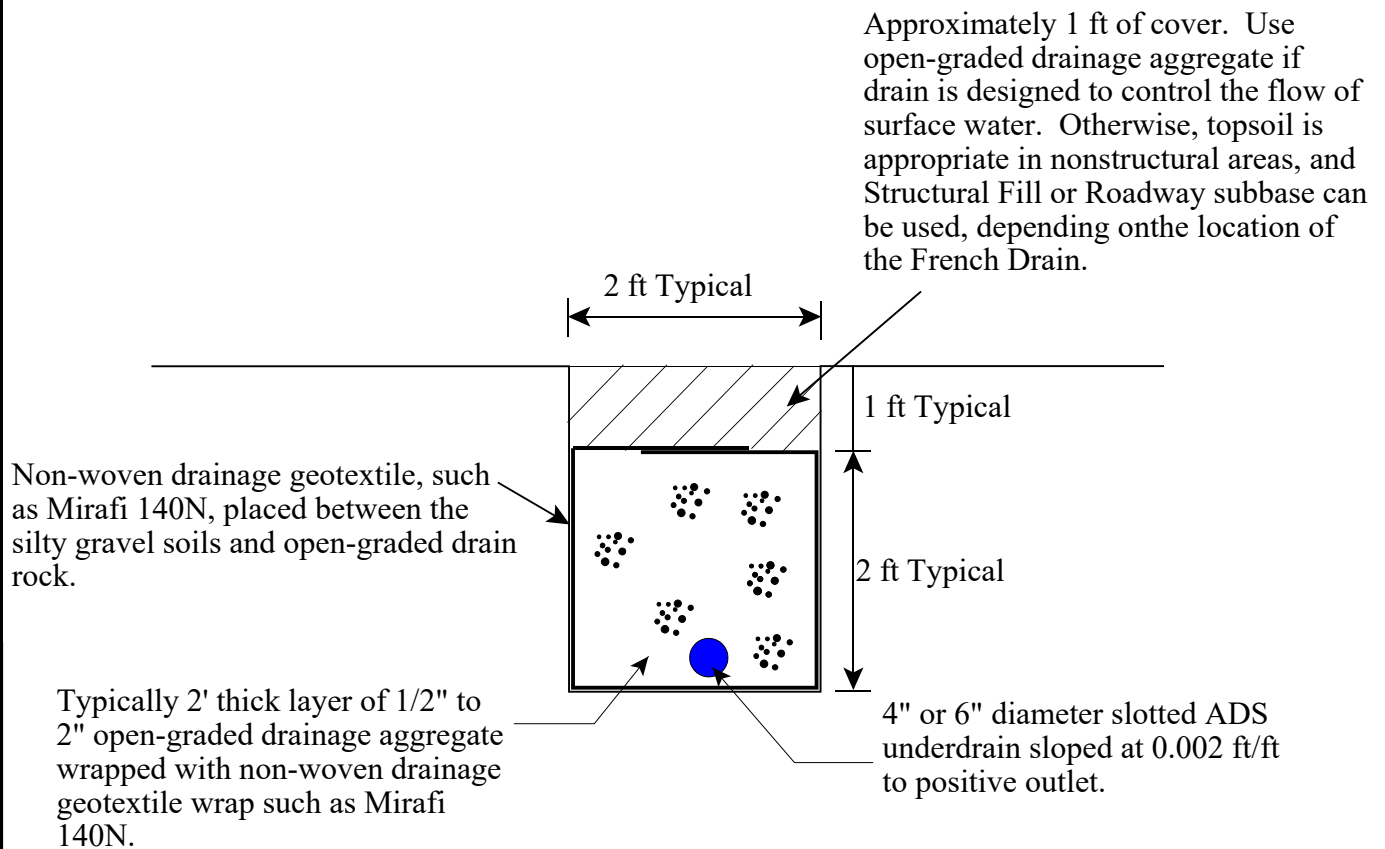
Perimeter Underdrainage
Slopeside Engineering, LLC
Kalispell, MT
Detail 1

**Slopeside
Engineer**

- 173 -

Typical French Drain

Item No.5.



No Scale Intended

Project: Meadow Lake Boulevard Apartments
Columbia Falls, Montana

Job Number: 22-423
Date: May 16, 2022

Typical French Drain
Slopeside Engineering, LLC
Kalispell, MT
Detail 2

**Slopeside
Engineer**

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TP-1

PROJECT: Meadow Lake Boulevard Apartments

CLIENT: Foley Engineering, Inc.

LOCATION: See Site Plan

SUBCONTRACTOR: Watson Excavating, Inc.

METHOD: Kubota U45 Track-mounted Excavator

PROJECT NO.:

Item No.5.

DATE: April 22, 2022

ELEVATION: 3,054 ft

LOGGED BY: Joshua Smith

GW:

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS									
						Plastic Limit					Liquid Limit				
						Water Content					(percent)				
0						10	20	30	40	50	60	70	80	90	
			0.5	✓✓✓✓✓✓✓✓✓✓	TOPSOIL/FOREST DUFF: SILT with Sand; medium stiff, dark brown, abundant roots and organics, moist										
			1.0	••••••••••	Silty SAND; medium dense, fine grained, brown, moist										
			1.5	••••••••••	- Scattered roots to 2 ft.										
2.5			2.0	••••••••••	- Sand content increases with depth as silt content decreases.										
			2.5	••••••••••	SAND with Silt to clean, below 3.5 ft.										
			3.0	••••••••••											
			3.5	••••••••••											
			4.0	••••••••••											
			4.5	••••••••••											
			5.0	••••••••••											
			5.5	••••••••••											
			6.0	••••••••••											
			6.5	••••••••••											
7.5			7.0	••••••••••											
			7.5	••••••••••											
			8.0		Test Pit TP-1 terminated at 8 ft.										
			8.5												
			9.0												
			9.5												
			10.0												
			10.5												
			11.0												
			11.5												
			12.0												
			12.5												
			13.0												
			13.5												
			14.0												
			14.5												
			15.0												
			15.5												
			16.0												
			16.5												
			17.0												
17.5			17.5												

Groundwater not encountered.



TP-2

PROJECT: Meadow Lake Boulevard Apartments

CLIENT: Foley Engineering, Inc.

LOCATION: See Site Plan

SUBCONTRACTOR: Watson Excavating, Inc.

METHOD: Kubota U45 Track-mounted Excavator

PROJECT NO.:

Item No.5.

DATE: April 22, 2022

ELEVATION: 3,052 ft

LOGGED BY: Joshua Smith

GW:

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS													
						Plastic Limit					Liquid Limit								
						Water Content					(percent)								
0			0.5	✓✓✓✓✓	TOPSOIL/FOREST DUFF: SILT with Sand; medium stiff, dark brown, abundant roots and organics, moist														
				✓✓✓✓✓	Sandy SILT; medium dense, brown to light brown, fine grained sand, scattered roots, moist														
2.5			3.0	✓✓✓✓✓	SAND with Silt; medium dense, fine grained, brown, moist														
				✓✓✓✓✓	- Sand content increases with depth as silt content decreases.														
5				✓✓✓✓✓	- Scattered fine gravel at 4.5 to 5 ft.														
				✓✓✓✓✓	- Clean SAND and caving below 5 ft.														
7.5				✓✓✓✓✓															
					Test Pit TP-2 terminated at 8 ft.														
10																			
12.5																			
15																			
17.5																			

Groundwater not encountered. Sidewalls cave below 5 ft.



TP-3

PROJECT: Meadow Lake Boulevard Apartments

CLIENT: Foley Engineering, Inc.

LOCATION: See Site Plan

SUBCONTRACTOR: Watson Excavating, Inc.

METHOD: Kubota U45 Track-mounted Excavator

PROJECT NO.:

Item No.5.

DATE: April 22, 2022

ELEVATION: 3,053 ft

LOGGED BY: Joshua Smith

GW:

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS									
						Plastic Limit	-----		Liquid Limit		Water Content				(percent)
						10	20	30	40	50	60	70	80	90	
0				✓✓✓✓✓	TOPSOIL/FOREST DUFF: SILT with Sand; medium stiff, dark brown, abundant roots and organics, moist										
1.3				✓✓✓✓✓	Sandy SILT; medium dense, brown to light brown, fine grained sand, scattered roots, moist										
2.5															
3.0					SAND with Silt; medium dense, fine grained, brown, moist										
5					- Sand content increases with depth as silt content decreases.										
					- Scattered fine to coarse gravel at 4.5 to 5.5 ft.										
7.5					- Clean SAND and caving occurs below 5 ft.										
10					Test Pit TP-3 terminated at 8 ft.										
12.5															
15															
17.5															

Groundwater not encountered. Sidewalls cave below 5 ft.



TP-4

PROJECT: Meadow Lake Boulevard Apartments

CLIENT: Foley Engineering, Inc.

LOCATION: See Site Plan

SUBCONTRACTOR: Watson Excavating, Inc.

METHOD: Kubota U45 Track-mounted Excavator

PROJECT NO.:

Item No.5.

DATE: April 22, 2022

ELEVATION: 3,053 ft

LOGGED BY: Joshua Smith

GW:

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS									
						Plastic Limit					Liquid Limit				
						Water Content					(percent)				
0					TOPSOIL/FOREST DUFF: SILT with Sand; medium stiff, dark brown, abundant roots and organics, moist	10	20	30	40	50	60	70	80	90	
0.8					SAND with Silt; medium dense, brown to light brown, fine grained sand, scattered roots to 2 ft, moist										
2.5					- Sidewalls cave below 3 ft.										
3.0					- Sand content increases with depth as silt content decreases.										
					SAND with Silt; medium dense, fine grained, brown, moist										
					- Sand content increases with depth as silt content decreases.										
5					- Scattered fine to coarse gravel at 4.5 to 5.5 ft.										
					- Clean SAND and caving occurs below 5 ft.										
7.5															
					Test Pit TP-4 terminated at 8 ft.										
10															
12.5															
15															
17.5															

Groundwater not encountered. Sidewalls cave below 3 ft.



TP-5

PROJECT: Meadow Lake Boulevard Apartments

PROJECT NO.:

Item No.5.

CLIENT: Foley Engineering, Inc.

DATE: April 22, 2022

LOCATION: See Site Plan

ELEVATION: 3,055 ft

SUBCONTRACTOR: Watson Excavating, Inc.

LOGGED BY: Joshua Smith

METHOD: Kubota U45 Track-mounted Excavator

GW:

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS													
						Plastic Limit					Liquid Limit								
						Water Content					(percent)								
0			0.8		TOPSOIL/FOREST DUFF: SILT with Sand; medium stiff, dark brown, abundant roots and organics, moist														
					SAND with Silt; medium dense, fine grained, brown, moist, scattered roots to 2 ft														
2.5					- Sand content increases with depth as silt content decreases.														
					- Clean SAND and caving occurs below 6 ft.														
5																			
7.5																			
					Test Pit TP-5 terminated at 8 ft.														
10																			
12.5																			
15																			
17.5																			

Groundwater not encountered. Sidewalls cave below 6 ft.



TP-6

PROJECT: Meadow Lake Boulevard Apartments

PROJECT NO.:

Item No.5.

CLIENT: Foley Engineering, Inc.

DATE: April 22, 2022

LOCATION: See Site Plan

ELEVATION: 3,063 ft

SUBCONTRACTOR: Watson Excavating, Inc.

LOGGED BY: Joshua Smith

METHOD: Kubota U45 Track-mounted Excavator

GW:

This information pertains only to this boring and should not be interpreted as being indicative of the site.

DEPTH (feet)	SAMPLERS	SAMPLE NO.	DEPTH (feet)	SOIL TYPE	MATERIAL DESCRIPTION	TEST RESULTS									
						Plastic Limit					Liquid Limit				
						Water Content					(percent)				
0			0.8		TOPSOIL/FOREST DUFF: SILT with Sand; medium stiff, dark brown, abundant roots and organics, moist	10	20	30	40	50	60	70	80	90	
					SAND with Silt; medium dense, fine grained, brown, moist, scattered roots to 2 ft										
2.5					- Sand content increases with depth as silt content decreases.										
					- Clean SAND and caving occurs below 3 ft.										
5															
7.5															
					Test Pit TP-6 terminated at 8 ft.										
10															
12.5															
15															
17.5															

Groundwater not encountered. Sidewalls cave below 3 ft.



130 6TH STREET WEST
ROOM A
COLUMBIA FALLS, MT 59912

Planning Department

PHONE (406) 892-4391

FAX (406) 892-4413

Item No.5.

January 28, 2026

Re: Public hearing notice for a CUP to construct 40 apartment units.

Dear Adjacent Property Owner:

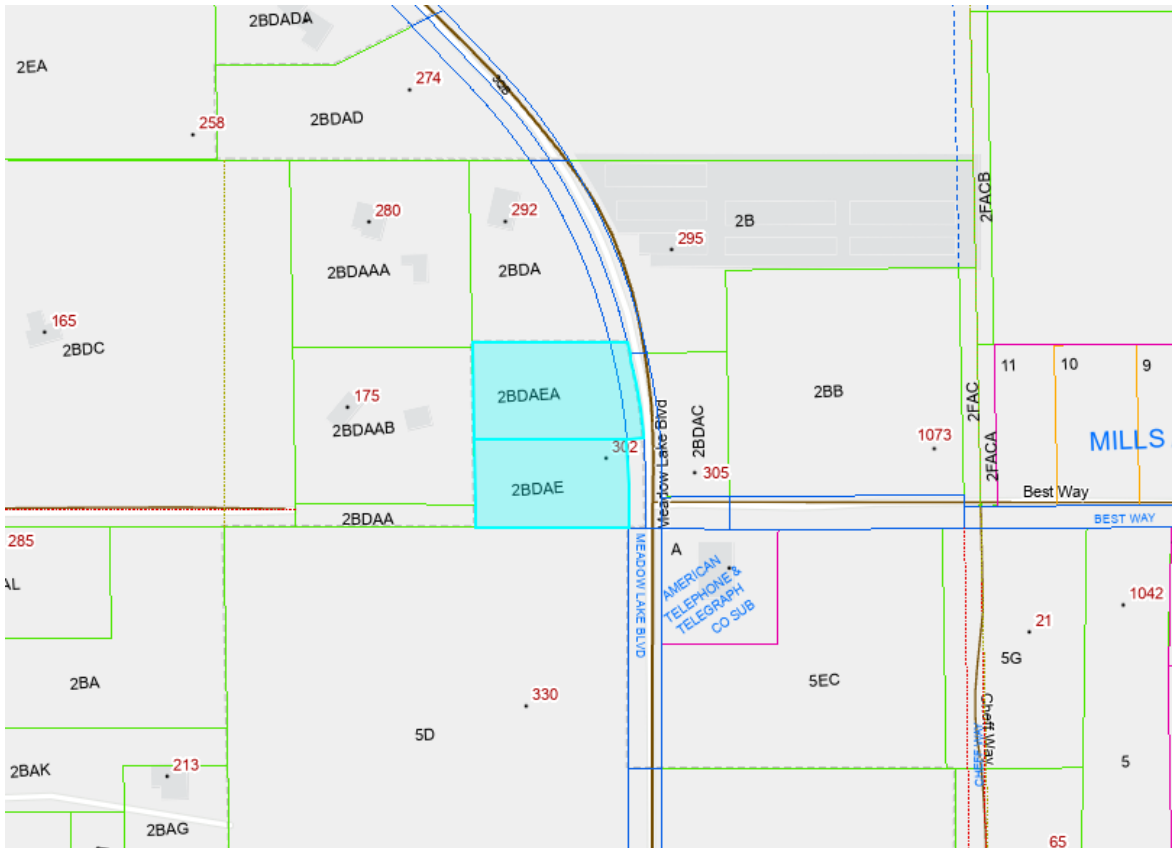
Our records indicate that you are the owner of property owner within 150-feet of the proposed project.

As the Planning Staff for the Columbia Falls Planning Jurisdiction, I am writing to provide you with a notice of a public hearing for a Conditional Use Permit (CUP). The CUP request will construct 40 apartment units in two buildings, twenty units each. The proposed two-story apartments will access Meadow Lake Blvd and at the intersection with Best Way. The vacant property is approximately 2.2 acres in size and is located approximately ¼ mile north of Highway 2 at 302 Meadow Lake Blvd. The property is described as Tracts 1 & 2 of COS 16142 (Assessors' Tract's 2BDEA and 2BDAEA) of Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County.

If you have question or comments concerning this matter, please call, visit or write me at City Hall. For written comment to be included in the Planning Board packet, it needs to be submitted to the City Clerk, 130 6th Street West, Columbia Falls, MT 59912 no later than Thursday February 5, 2026 or by email: public-comment@cityofcolumbiafalls.com. Written or emailed comment may be provided up to 5:00 pm on the day of the hearing, it will just be emailed and/or passed out at the hearing.

Sincerely,

Eric H. Mulcahy, City Planner



CITY OF COLUMBIA FALLS
NOTICE OF PUBLIC HEARING

The Columbia Falls Planning Commission will hold a public hearing for the following item at their regular meeting on Thursday, February 12, 2026 at 6:00 p.m. at the Council Chambers of City Hall, 130 6th Street West, Columbia Falls, Montana. The Columbia Falls City Council will hold a subsequent hearing on Monday March 2, 2026 starting at 7:00 p.m. in the same location. Both hearings will be conducted in accordance with the most current recommended and/or required public health and safety protocols in place at the time of the hearing. The City website, <https://cityofcolumbiafalls.org>, will contain updated information if there is any change to the planned hearings

Request for a Conditional Use Permit to construct 40 units of Apartment in the Columbia Falls Zoning Jurisdiction:

The owner, Norton Luxury Homes, LLC, is requesting a Conditional Use Permit to construct 40 units of apartments in two buildings, twenty units in each building. The proposed two-story apartments will access Meadow Lake Blvd and at the intersection with Best Way. The vacant property is approximately 2.2 acres in size and is located approximately ¼ mile north of Highway 2 at 302 Meadow Lake Blvd. The property is described as Tracts 1 & 2 of COS 16142 (Assessors' Tract's 2BDEA and 2BDAEA) of Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County.

Persons can attend the hearing and provide comment or they can submit written comments prior to the meeting. Written comments carry the same weight as public testimony given during the hearing. Written comments may be sent to Columbia Falls City Hall, Attention: Barb Staaland, City Clerk, 130 6th Street West, Room A, Columbia Falls, MT 59912 or via email: public-comment@cityofcolumbiafalls.com. For more information on the proposed Conditional Use Permit, please call Eric Mulcahy, Columbia Falls City Planner at 755-6481.

public-comment@cityofcolumbiafalls.com

From: Watt, Erin <ewatt@mt.gov>
Sent: Thursday, February 5, 2026 12:02 PM
To: public-comment@cityofcolumbiafalls.com
Cc: Juelfs, Justun; Anderson, Rebecca; Wosoba, LeRoy
Subject: MDT Comments- Public Hearing Notice for a CUP to Construct 40 Apartment Units
Attachments: Notice-CUP-302-Meadow-Lake-Blvd.pdf

Flag Status: Flagged

Good afternoon,

The Montana Department of Transportation (MDT) staff has reviewed the above referenced notice of a public hearing for a Conditional Use Permit (CUP) requesting to construct 40 apartment units in two buildings, twenty units each located approximately ¼ mile north of Highway 2 at 302 Meadow Lake Blvd in Columbia Falls, MT. From the information provided, this project may impact MDT facilities. If during the design or construction of the project, MDT facilities are impacted please have the owner contact Justun Juelfs, Kalispell Area Maintenance Chief, at (406) 751-2010 or jjjuelfs@mt.gov. He will work with the owner on the MDT requirements.

Thank you for the opportunity to comment.



Erin Watt

SIAP Project Manager
 Asset Strategy Program
 Montana Department of
 Transportation
 2701 Prospect Ave
 PO Box 201002
 Helena, MT 59620
 406-444-1518 |
mdt.mt.gov

Asset Strategy, Operations, &
 Maintenance

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