

**SPECIAL MEETING OF THE CARBON COUNTY PLANNING
BOARD**

DECEMBER 15, 2022

THURSDAY 7:00 PM

CARBON COUNTY PERSONAL SERVICE BUILDING

10 OAKES AVENUE SOUTH

RED LODGE, MT

A. CALL TO ORDER

B. ROLL CALL

C. APPROVAL OF MINUTES OF PREVIOUS MEETING

September 15, 2022

D. PUBLIC HEARINGS

Elevated Signage Variance Request

E. REGULAR BUSINESS

Elevated Signage Variance – Recommendation to
Commissioners

Albin Subdivision – Recommendation to Commissioners

7D Subdivision and Variance Request – Recommendation
to Commissioners

F. PETITIONS & COMMUNICATION FROM AUDIENCE

G. WRITTEN COMMUNICATIONS

**H. REPORTS FROM PLANNING BOARD MEMBERS AND
COMMITTEES**

I. STAFF REPORTS

J. ADJOURN

Carbon County Planning Board
September Meeting
9-15-22

- A. Call Meeting to Order, 7:00 pm, Gordy Hill – Chairperson
- B. Roll Call
 - Present: Gordy Hill, Clinton Giesick, Skip Bratton, Mike Hayes, Clint Peterson, Dean Webb, Kim Ehrlich, Forrest Mandeville
 - Audience: see attached sign-in sheet
- C. Approval of 8-18-22 Minutes
 - Skip moved to approve. Dean second.
 - o Motion passed unanimously
- D. Public Hearings
 - *See Regular Business*
- E. Regular Business
 - *Royal Banco Subdivision & Variance Request*
 - o 2 lot subsequent minor subdivision
 - o 20.01 acre tract
 - o 9.98 and 10.03 acre lots
 - o East Bench Road
 - o Existing well and septic already on each lot
 - o Turnaround is proposed in middle of driveway vs. end of driveway, resulting in need for a variance
 - o Clint moved to recommend commissioners approval. Skip second.
 - Motion passed unanimously
 - *Switchback Ranch Conservation Easement*
 - o 9,650 acres proposed
 - o Subject acreage is in the process of being purchased
 - o Building envelope will allow for two residences on 40 acres
 - o Records indicate that the sale has not yet been finalized
 - o Planning Board would feel more comfortable providing comment once the purchase has been completed by the applicant
 - *Arthun Conservation Easement*
 - o 1,105 acres proposed
 - o 6 miles North of Joliet, MT
 - o Building envelope will allow for ag structures on 4 acres
 - o Easement is consistent with County Development Regulations

- *Study on Marijuana and Marijuana Businesses*
 - o Recommendation to Commissioners to extend Interim Zoning Regulations until 3-3-24

F. Audience Communication

- None

G. Written Communication

- Update on Group 2 Development Permits in the area

H. Committee Reports

- Carbon County Conservation District
 - o High amount of 310 permit applications in the Rock Creek drainage

I. Staff Reports

- None

J. Adjourn Meeting

8:45 pm

Matt Martin

November 15, 2022

Granite Peak Holdings d.b.a. Elevated
Owner
m.martin@elevatedmt.com
Billings, MT

To whom it may concern,

I am respectfully requesting a variance to numbers 2 & 5 of section c. iii of Resolution 2022-07. I currently have a sign at 1 1st st in Roberts MT that is compliant with 6 of the 8 requirements but it is 18' tall and within 1500 feet of another sign.

I believe the special circumstances that apply are that the sign was erected around mid-December 2020, well before Resolution 2022-07 at significant cost to my company. The sign was erected by licensed contractors and in full compliance at the time thus we were playing by the rules of the time not trying to circumvent. A strict application of the rules in this case would cause financial hardship in numerous ways. I will have paid over \$20,000 for a sign I cant use or rent out. I will incur cost of removing the sign and I will likely loose money at my business because of lack of visibility. I believe that granting a variance is necessary to reasonably use this land for retail. The property borders the highway but the building itself is small and set to the far back of the property such that the entrance is on 1st st making a sign compliantly close to the highway necessary to distinguish my business when on the highway. I am compliant with 6 of 8 requirements and ask for a modest variance in the matter. I don't believe granting this variance would be injurious or contrary to the common welfare. Elevated has operated quietly and compliantly for over two years and we intend to keep it that way. I believe that resolution 2022-07 is beneficial to the community and my business as well. I'm guessing that the intent of the signage portions of the resolution was to stop numerous billboards and other marijuana business signs from littering the highway frontage causing unnecessary angst in the community, I don't think one modest sign mid-town Roberts is contrary to that worthwhile intent.

Property Owners:

White Lexi & Hunter K
PO Box 2226, Red Lodge, MT, 59068-2226

Bauer Lexi
PO Box 2226, Red Lodge, MT, 59068-2226

Wayne Stephen W Trustee
3518 Rigolette Rd, Pineville, LA, 71360-7329

Carbon County Rural Fire Dist #6
General delivery, Roberts, MT, 59070-9999

Ash Justin Charles & Marsha Leeann
PO Box 94, Roberts, MT, 59070-0094

Common Man Concepts llc
PO Box 261, Roberts, MT, 59070-0261

Respectfully,

A handwritten signature in blue ink that reads "Matt Martin". The letters are stylized and connected, with a prominent "M" and "A" at the beginning.

Matt Martin

CARBON COUNTY
Planning Office
P.O. Box 466, Red Lodge, MT 59068
Main: (406) 446-1694
Fax: (406) 446-2640

VARIANCE REQUEST – STAFF REPORT

Date: December 2, 2022

To: Carbon County Planning Board/Board of Adjustment Members

From: Forrest J. Mandeville, AICP – Contract Planner

RE: Martin - Elevated Variance Request from Signage Requirements

Recommendation: Approval

Recommended Motion: *Having reviewed and considered the variance request, staff report, public comment, and all of the information presented, I hereby move to recommend approval of the variance request for a relaxation of signage requirements for Elevated.*

Project/Application Summary:

Matt Martin of Granite Peak Holdings, Inc., d/b/a Elevated, has submitted a variance request for relaxation of signage requirements of Resolution 2022-07, a Resolution to Enact Interim Zoning Regulations of the Sale and Production of Marijuana and Marijuana Business by Revising Section VII-A Group 2 Uses of the carbon County Development Regulations. The site of the proposed development is in Roberts, on the southwest corner of 1st Street and Cedar Street. The legal description is Lot 10 Block 1 of John Carrigan’s Addition to Roberts, and Tract 8 Block 2 of COS 1427 Amended, Section 32, T 5S, R 21E, Carbon County, MT.

The requested variance will allow an existing sign to continue in place. The sign is 18-feet in height and is located within 1500 feet of other signs. Section VII-A.4.c.iii. of Resolution 2022-07 contains several regulations specific to signage for marijuana businesses, including requirements that the maximum height of any sign not exceed 15 feet above the mean centerline elevation of the roadway and that any sign be separated by at least 1,500 feet from any other sign. Section VII-A.4.c.vi.4. states that “Nonconforming signs will have 30 days after the effective date to come into compliance.” The Resolution was adopted on March 3, 2022. All other requirements relating to signage appear to be in compliance.

The Cannabis Control Division of the Montana Department of Revenue requires licensees provide a statement from the County indicating any signage is compliant with existing zoning. Without an approved variance or reconstruction of the signage in question, the signage at Elevated is not currently in compliance.

The Carbon County Development Regulations allow an applicant to request a variance to allow for deviation from the literal interpretation of the requirements of the regulations. Variances may be granted if the request is determined to be not contrary to the public interest, and where, owing to special conditions, literal enforcement based on these regulations results in an unnecessary hardship, excluding financial hardships.



Subject Property (Blue) and Vicinity

Required Board Action:

Under the Development Regulations, the Planning Board, in its role as the Board of Adjustment, is tasked with holding a public hearing, evaluating the staff report, considering the requirements necessary to grant a variance, and recommending approval, approval with conditions, or denial of the variance request to the County Commissioners. The Board may recommend conditions related to the variance request. Any recommendation must be based on findings.

Development Regulations – Compliance Review/Findings Summary: (Section references are to the Carbon County Development Regulations unless otherwise noted)

Pursuant to Section V-C.3.c, the Board of Adjustment shall not recommend that a variance be granted unless:

1. Special conditions: There are special circumstances or conditions that are peculiar to the land or building for which the variance is sought that do not apply generally to land or buildings in County.

The existing sign was constructed prior to the adoption of Resolution 2022-07 and is located in the community of Roberts. The existing building on site fronts 1st Street, while the rear of property borders Highway 212. The sign location may help direct traffic from 212 to the building entrance. These circumstances are fairly unique in the County and are not generally applicable.

2. Not a result of the applicant: The special circumstances or conditions have not resulted from an act of the applicant or been established to circumvent these Regulations.

The applicant had the sign installed in December 2020, approximately 15 months prior to the adoption of Resolution 2022-07. The adoption of the Resolution was not an act of the applicant, and the construction of the sign was far enough prior to the adoption of the resolution that it was not likely done specifically to circumvent the Resolution.

3. Strict application unreasonable: Due to the special circumstances or conditions, the strict application of these Regulations would deprive the applicant of reasonable use of the land or building or create an undue hardship on the landowner.

Applying the 1,500 foot setback from other signs requirement strictly would likely disallow any marijuana business sign along Highway 212 in Roberts due to the amount of other business signage in the community. This could deprive the applicant of the ability to provide any external advertising for a business that has been operating for several years.

Strictly applying the 15-foot height limit for the existing sign would require the sign be reconstructed in order to be used. A variance would also be necessary to rent the sign out to another entity, since off-premise signs are regulated similarly to on-premise marijuana business signs, including the 1,500-foot setback and 15-foot height limit (Section VII-A.2.c.). Applying the Regulations strictly would likely make the existing sign completely unusable.



Looking North; Subject Property on Right



Looking East; Subject Property on Right



Looking South; Subject Property on Left

4. Necessary to provide reasonable use: Granting the variance is necessary to provide a reasonable use of the land or the building.

The property can be utilized without the granting of the variance, but the reasonability for use as a marijuana business, which is existing, is debatable as essentially no outside signage would be allowed.

5. Minimum variance: the variance is the minimum variance necessary to allow a reasonable use of the land or building.

Granting the requested variance is the minimum necessary, as it would allow existing signage to continue in the current state.

6. Not injurious: Granting the variance will not be injurious to the neighborhood or detrimental to the public welfare.

Granting of the variance should not be injurious to the neighborhood as the use and signage on the property have been in place for several years without known complaints.

7. Consistent with regulations: Granting the variance is consistent with the purposes and intent of these Regulations.

The purpose of requirements relating to sign height and density is typically to prevent crowding and/or to maintain views. The granting of this variance will not impede views or result in crowding of other properties.

Planning Staff Recommendation:

Planning Staff recommends approval of the Elevated variance request, pursuant to the following conditions (Section references are to the Carbon County Development Regulations):

1. The variance approval shall be interpreted as the minimum needed – i.e. to allow 18-foot tall sign within 1,500 feet of other signs. Any other deviation will be in violation of the Development Regulations.
2. If approved activity on site is inactive for six months this permit is deemed abandoned and a new permit must be obtained prior to activity resuming. (Section VII-A.4.c.vi.3.)
3. Any intensification of use shall be made known to the Carbon County Planning Department to determine whether an amended permit is required. (Section IV-A.2)
4. All other necessary permits must be obtained. (Section V-A.4.d.vii)

CARBON COUNTY
Planning Office
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PROJECT MEMORANDUM

TO: Members of the Carbon County Planning Board
FROM: Forrest J. Mandeville, AICP – Contract Planner
DATE: December 5, 2022
RE: Albin Subdivision Preliminary Plat Application–Staff Report and Findings

REQUIRED PLANNING BOARD ACTION: Review, receive public comment, and recommendation to approve, conditionally approve, or deny the proposed preliminary plat.

RECOMMENDATION: **Approval with Conditions**

RECOMMENDED MOTION: *Having reviewed and considered the application materials, project memorandum, public comments and all of the information presented, I hereby move to recommend approval of the Albin Subdivision with the findings and conditions included in the project memorandum.*

Project/Application Summary:

Red Lodge Surveying, on behalf of Cory Albin, has submitted a preliminary plat application for a four-lot minor subdivision, with lots designed for residential use. Engineering West is providing engineering services for the proposed subdivision. The subdivision area is approximately 82.679 acres; proposed new lots will range from 20.05 acres to 21.45 acres in size. The property was previously divided using an agricultural covenant (Certificate of Survey 1761 AG), which restricted the property to agricultural-use only. This subdivision would lift the agricultural covenant on the property and allow for residential use.

The subject property is located on Zumbrun Road southwest of the intersection of Zumbrun Road and Hyvonen Road, approximately five miles north of Red Lodge. The property is legally described as Tact 2, COS 1761 AG, Section 34, Township 6 South, Range 20 East, P.M.M., Carbon County, Montana.

Required Planning Board Action:

Following a public meeting, the Planning Board shall make a recommendation to the County Commission to approve, conditionally approve, or deny the preliminary plat. The Planning Board may recommend conditions for approval intended to ensure compliance with the Subdivision Regulations and to mitigate any anticipated impacts of the subdivision.



- LEGEND**
- SET NO. 1 NEIGH. WITH 1" DIA. YELLOW PLASTIC CAP
 - 1/4" DIA. YELLOW PLASTIC CAP
 - FOUND YELLOW PLASTIC CAP
 - FOUND UNPAINTED ALUMINUM CAP
 - FOUND REBAR
 - NO MONUMENT SET OR FOUND
 - PILL
 - TEST POLE
 - POWER POLE
 - OVERHEAD POWER LINE
 - SEWER
 - BARRIERS FENCE
 - ELECTRIC FENCE
 - TREE LINE
 - DRIVE
 - SECTION AND QUARTER CORNER

PLAT NO. _____ **PRELIMINARY**

PRELIMINARY PLAT OF ALBIN SUBDIVISION

A FIRST MINOR SUBDIVISION LYING IN TRACT 2 OF CERTIFICATE OF SURVEY NO. 1761 AG LYING IN TRACT W1/2NW1/4 OF SECTION 34, T.6S., R.20R., P.M.M., CUSTER COUNTY, MONTANA

PREPARED BY RED LOGGE SURVEYING LLC
 PO BOX 881 AND S DRAST AVE
 RED LOGGE, MT 59068

DRAWN: JULY 2022
 LANDOWNER: CORY ALBIN

STATEMENT OF PREPARATION AND LEGAL RESPONSIBILITY

We, the undersigned landowners, do hereby certify that we have caused to be surveyed, established and plotted on this plat the plat herein included, the particular boundary thereof as defined on file.

The plat of the NW 1/4 of Section 34, T.6S., R.20E., P.M.M., Custer County, Montana, shown as Tract 2 of Certificate of Survey No. 1761 AG, as filed in the office of the Clerk and Recorder of Custer County under Certificate No. 27949, containing 64.88 acres more or less and according to the attached plat, subject to easements and rights of way of record, apparent on the ground, and as shown on the plat herein.

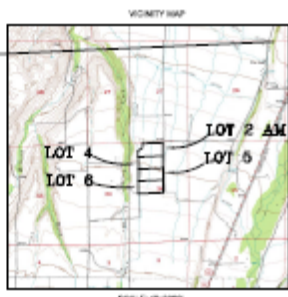
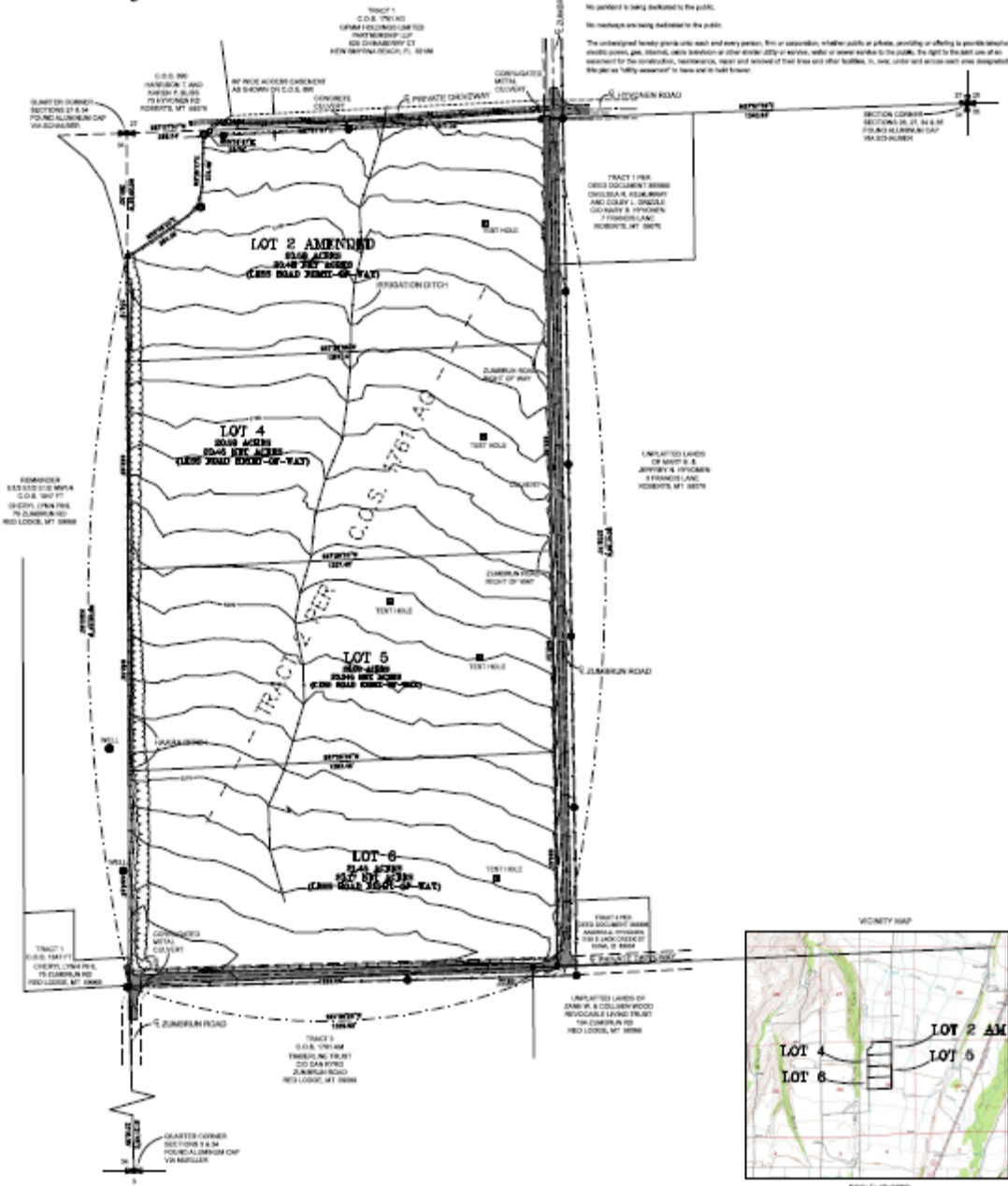
Legal and physical access is provided as set per 70-3-402(3)(1) MCA.

The above described tract of land to be known and designated as "ALBIN SUBDIVISION" and the lands included in all easements are hereby granted and dedicated to the use of the public forever. I have specifically listed herein the lands included in all easements shown hereon and to the public use and benefit of the public and I have specifically listed herein the lands included in all easements shown hereby dedicated to public use.

No portion is being dedicated to the public.

No easements are being dedicated to the public.

The undersigned hereby grants unto each and every person, firm or association, whether public or private, permitting or affecting its possible location, location, use, plan, location, width, location or other structure, utility or service, water or sewer works to the public, the right to the said use of an easement for the construction, maintenance, repair and removal of the lines and other facilities, to, over, under and across each one designated on the plat herein as necessary to have such use and service.





Proposed Subdivision Location (Blue) and Vicinity

Subdivision Regulations – Compliance Review/Findings Summary: (Section references are to the Carbon County Subdivision Regulations unless otherwise noted)

a. Relevant evidence relating to the public health, safety, and welfare

Each lot will utilize well and drainfield systems. Wells will be located on each lot; a common drainfield area will be provided on Lot 1 due to high groundwater in the area. County Sanitarian review and approval is required.

Access is provided by Zumbrun Road, a County-owned and maintained road providing access to Willow Creek Road to the west and Hyvonen Road to the east.

b. Summary of Probable Impacts

Except where exempt by state law, all subdivisions must be reviewed for the specific, documentable, and clearly defined impact on agriculture, agricultural water user facilities, local services, the natural environment, wildlife, wildlife habitat, and public health and safety.

- **Effect on agriculture:** The site (approximately 82.679 acres) is currently in agricultural production. This use would likely cease as a result of this subdivision, though the lots are large enough to potentially allow for some small-scale agriculture practices.

The site is classified by USDA as prime farmland if irrigated.

The area in which the subdivision is located is primarily agricultural with farmsteads and large-lot residential uses.

Finding: Because the subdivision is adjacent to similar uses and given the small scale of the subdivision, there should be minimal adverse impacts on agriculture as a result of this subdivision.

- Effect on agricultural water user facilities: The Haara Ditch runs along the west side of the subdivision and should be provided an easement on the final plat. There appear to be irrigation laterals on the property as well. If any of these laterals convey water to other properties, easements will need to be provided for these as well. The following language should also appear on the final plat: “Nothing herein nor any covenant shall diminish the unobstructed use and maintenance of the existing water delivery ditches, pipelines, and facilities in the subdivision that are necessary to convey water through the subdivision to land adjacent or to beyond the subdivision in quantities and in a manner that are consistent with historic and legal rights.” (Section V-A-18 of the Carbon County Subdivision Regulations)

The subdivider holds four water rights on the property. Because the proposed lots are greater than five acres the subdivider is not required to submit a plan to consolidate, transfer or sever these rights. (Section V-A-19)

Finding: Adverse impacts on agricultural water user facilities should be adequately mitigated in easements are provided for the Haara Ditch and any other ditch that conveys water to other properties, and if the required irrigation ditch language appears on the final plat.

- Effect on local services: The Carbon County Sherriff’s office will provide law enforcement services to the subdivision. According to documents provided in the subdivision application, Sheriff Josh McQuillan reports that adequate law enforcement can be provided to the subdivision with existing personnel and equipment. A response time would be 15-20 minutes in most circumstances.

Finding: This subdivision will have minimal adverse impacts on law enforcement, since services can be provided using existing personnel and equipment.

The Red Lodge Fire District provides fire protection in the area. The applicant submitted a Fire Control and Prevention Plan (FCPP) indicating recommendations and requirements relating to fire protection, which should be filed with the subdivision (Section V-A-21). The application included email correspondence with Deputy Chief Tim Ryan indicating approval of the FCPP.

Finding: Adverse impacts on area fire protection can be mitigated through the filing of a Fire Control and Prevention Plan.

Zumbrun Road is a gravel-surfaced County road, approximately 24-feet in width. Assuming eight trips per residence, the subdivision could generate 32 additional vehicle trips per day at full build out. The applicant included a copy of an approach permit application for the subdivision and an email from Commissioner Bullock indicating he had no concerns. There are currently no provisions for dust mitigation on Zumbrun Road.

Finding: There should be minimal impacts on the County road system due to the small scale of the subdivision and generally satisfactory condition of Zumbrun Road. Without dust control, complaints about dust could increase as a result of the subdivision.

Beartooth Electric Cooperative provides power in the area and reports the ability to serve the site via existing overhead power lines. Utility easements should be shown on the final plat per section V-A-15.a., and the standard utility language should be placed on the final plat, per section V-A-15.h. of the Subdivision Regulations: “The undersigned hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric, power, gas, cable television, water or sewer service to the public, the right to the joint use of an easement for the construction, maintenance, repair and removal of the lines and other facilities, in, over, under and across each area designated on this plat as “Utility Easement” to have and hold forever.”

Finding: There will be no significant adverse impacts on utility providers if utility easements are shown on the plat and the standard utility easement language is provided.

- Effect on the natural environment: A shared elevated sand mound drainfield system will be provided on Lot 1 for waste water disposal. This option was apparently chosen due to high groundwater in the subdivision. Groundwater monitoring data submitted as part of the subdivision application indicates water was encountered within four feet of the surface on Lots 2-4. The high water mark on Lot 1 was 4.34 feet on July 15. The Montana Department of Environmental Quality (DEQ) rules do not allow septic systems to be installed if there is less than four feet separation to groundwater. Sanitary sewer easements will be provided to access the multi-use drainfield and a Declaration of Multi-User Drainfield System has been prepared, as required by DEQ.

Individual wells are proposed for each lot. No additional subsurface water rights are required for this subdivision.

Review and approval of new water and wastewater systems are required by the Carbon County Sanitarian. (See Sections IV-B-8 and MCA 76-3-622).

Finding: New water and wastewater will not have an adverse impact on the natural environment if County Sanitarian review and approval is required to be obtained prior to final plat.

Zumbrun road is a gravel-surfaced County road. There are currently no provisions for dust mitigation on the road. Increased traffic could result in an increase in dust-related

complaints, though due to the small scale of the subdivision additional mitigation may not be justified.

Finding: Dust may increase somewhat on Zumbrun road due to the increase in traffic, but not likely to the extent to justify off-site dust mitigation.

The applicant submitted a Weed Inspection Report completed by Carbon County Weed District Coordinator Brian Ostwald dated July 11, 2022. The report indicates there were no weeds visible at the time and that the property was heavily grazed. No weed bond was required by the Weed District.

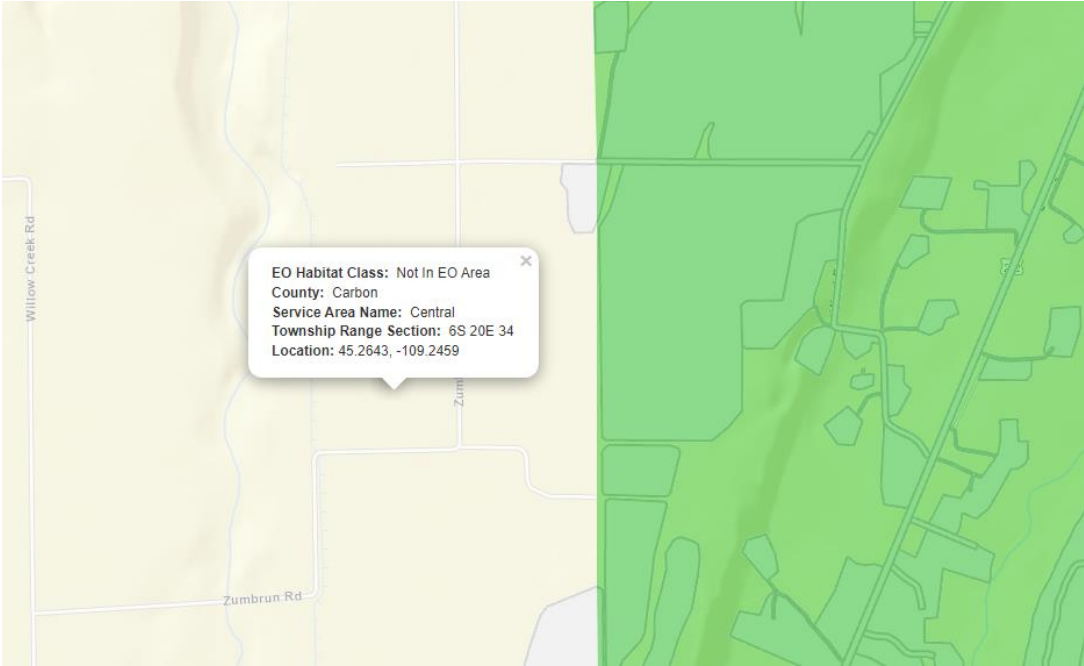
Finding: There should be minimal impacts on the natural environment due to the proliferation of noxious weeds, since there were no weeds within the project area.

- Effect on wildlife: Wildlife does frequent the area. However, since the project is in close proximity to existing similar development, no significant adverse impacts on wildlife is anticipated other than what may have already occurred.

Finding: No significant adverse impacts to wildlife is anticipated due to the proximity of existing similar development.

- Effect on wildlife habitat: No critical wildlife habitat has been identified on the property. The site is not identified as sage grouse habitat by the Montana Sage Grouse Habitat Conservation Program.

Finding: There should be no significant impact on wildlife habitat since there is no identified critical wildlife habitat on the property.



Sage Grouse General Habitat (Green) and Subdivision Vicinity

- Effect on public health and safety: The Carbon County Sheriff's office provides law enforcement service in the area. See discussion and findings under Effect on Local Services.

The Red Lodge Fire District provides fire protection in the area. Deputy Chief Tim Ryan has indicated approval of the Fire Control and Prevention Plan. See also the discussion and findings under Effect on Local Services.

County Sanitarian approval of well and septic provisions is required. See discussion under effects on the natural environment.

Finding: There should be no significant adverse impacts on public health and safety as long as conditions relating to the Fire Control and Prevention Plan and Sanitarian review of water and wastewater provisions are enforced.

c. Whether the application and plat conform to the provisions of the following:

- i. The Montana Subdivision and Platting Act: The Plat has been prepared and processed in accordance with the Montana Subdivision and Platting Act (MSPA). The final plat should include a notation that each lot has legal and physical access (76-3-608(3)(d), MCA, and Section IV-B-10.f.v of the Carbon County Subdivision Regulations).

The property was originally divided using an agricultural covenant pursuant to 76-2-207(1)(c), MCA, and IX-K of the Subdivision Regulations. A change in use to anything other than agricultural subjects the property to subdivision review (76-3-211, MCA). A revocation of the agricultural covenant signed by the landowner and Carbon County Commissioners should be filed with the subdivision.

Finding: Upon compliance with the recommended conditions of approval and adherence to the process outlined in statute, the subdivision will have complied with the MSPA. A document revoking the agricultural covenant should be filed with the subdivision.

- ii. Compliance with Survey Requirements: The final plat must be in compliance with the requirements of Title 76, Chapter 3, Part 4, MCA, as well as Uniform Standards for Final Subdivision Plats (24.183.1107, ARM). A requirement that, prior to filing, the plat be submitted to the County's Examining Land Surveyor (ELS), and that any comments of the ELS be addressed will ensure survey requirements are followed.

Finding: Upon review by the ELS and the addressing of any comments thereof, survey requirements will have been adhered to.

- iii. The Carbon County Subdivision Regulations: The subdivision, once conditions have been met, will conform to the requirements of the adopted Subdivision Regulations.

The final plat must be substantially similar to the preliminary plat application, except as modified by conditions. If the final plat differs substantially from the preliminary plat, additional review may be required (Section IV-C-5.b of the Carbon County Subdivision Regulations).

The Carbon County Subdivision Regulations, Section IV-B-11 states that a preliminary plat approval is in force for two years. If a final plat is not filed within that timeframe, an extension must be granted or a new application submitted. The County is under no obligation to grant such an extension.

A condition requiring final plat preparation to be in conformance with the Subdivision Regulations will ensure compliance with County requirements, even if not specifically discussed in this memorandum.

Finding: To ensure compliance with the Subdivision Regulations, conditions should be required to ensure the final plat is substantially similar to the preliminary plat and plans, that the final plat is filed within two years of preliminary plat approval, and that the final plat be submitted in conformance with the Subdivision Regulations.

- iv. Applicable Zoning Regulations: The Carbon County Development Regulations require a Group 1 Development Permit prior to development. The draft Declaration of Covenants, Conditions, and Restrictions indicates use and building restrictions that meet or exceed the requirements in the Development Regulations.

Finding: While not specifically referenced, the subdivision and the Declaration of Covenants, Conditions, and Restrictions do not appear to be in conflict with the County Development Regulations.

- v. Other regulations in effect in the area of the proposed subdivision: There are private covenants proposed for the subdivision (Declaration of Covenants, Conditions, and Restrictions). The County does not typically enforce private covenants but may require that certain standards are met (Section V-A-23). No other known regulations are in effect to which the subdivision would be subject.

Finding: The proposed private covenants should be finalized and filed with the final plat. The covenants should be prepared to the standards required in the Subdivision Regulations.

- vi. Whether DEQ has approved the subdivision for proposed subdivisions that will create parcels of less than twenty (20) acres: All lots are 20 acres or more, so DEQ approval is not required.

Finding: DEQ review and approval of the subdivision is not required, as the proposed lots are greater than 20 acres.

- vii. Whether the subdivider has demonstrated that there is an adequate water source and at least one are for a septic system and a replacement drainfield for each lot for a proposed subdivision that will create one or more parcels containing twenty (20) acres or more: The proposed lots are over 20 acres, so approval of the water and wastewater provisions by the Carbon County Sanitarian is required. (Section IV-B-8.b.ii of the Carbon County Subdivision Regulations)

Finding: Approval by the County Sanitarian will ensure water and wastewater provisions are adequate.

d. Compliance with Growth Policy:

State law, 76-1-605, MCA, requires that after the adoption of a growth policy, the governing body must be “guided by and give consideration to the general policy and pattern of development set out in the growth policy” in the “authorization, construction, alteration, or abandonment of public ways, public places, public structures, or public utilities; authorization, acceptance, or construction of water mains, sewers, connections, facilities, or utilities; and adoption of zoning ordinances or resolutions.” However, statute also states that “A growth policy is not a regulatory document and does not confer any authority to regulate that is not otherwise specifically authorized by law or regulations adopted pursuant to the law. A governing body may not withhold, deny, or impose conditions on any land use approval or other authority to act based solely on compliance with a growth policy [...]” It is, though, beneficial to examine the proposed subdivision in consideration of the adopted growth policy.

Carbon County adopted the 2020 Growth Policy in March of 2020. Chapter 6 contains goals and objectives for the implementation of the Growth Policy. The following goals and objectives may be relevant to the proposed subdivision:

- Objective 1.2: Increase understanding of present land use change trends and consequences. Develop factual information upon which to base regulations that will guide growth in a manner consistent with residents’ vision for the future.
 - 1.2.B. Track the number of acres of agricultural land converted to different uses. Report this number to the citizens of the county annually.
 - 1.2.C. Cooperate with other agencies to track the effects on agricultural lands, tourism, and wildlife associated with new development including, infrastructure, property value, water, air, and soil impacts
- Objective 1.4: Encourage development in areas that are not in agricultural production
 - 1.4.A. As authorized by the state legislature in 2003, in 76-3-509 MCA, formulate and adopt regulations to encourage cluster development for those developments that meet the definitions.
- Objective 1.7: Direct growth to existing communities, incorporated towns and cities, or platted unincorporated places.
 - 1.7.A. Explore the potential for future land use mapping in areas immediately adjacent to existing communities

e. Planning Staff Recommendation:

The basis for the governing body's decision to approve, conditionally approve, or deny a proposed subdivision is whether the subdivision application, preliminary plat, applicable environmental assessment, public hearing, planning board recommendations, or additional information demonstrates that development of the proposed subdivision is in compliance with the Montana Subdivision and Platting Act and the adopted Subdivision Regulations.

In consideration of the findings included in this Memorandum, Planning Staff recommends approval of Albin Subdivision pursuant to the following conditions (Section references are to the Carbon County Subdivision Regulations unless otherwise noted):

1. Filing of the final plat shall be subject to the review and approval by Carbon County Sanitarian for water and wastewater provisions. (Section IV-B-8.b.ii; Effect on the Natural Environment; Effect on Public Health and Safety)
2. An easement shall be provided for the Haara Ditch, and any other ditches that convey water across the property, of sufficient size to allow for the use, maintenance, and inspection of the ditch. (Section V-A-18; Effect on Agricultural Water Users Facilities)
3. The following statement shall appear on the final plat: Nothing herein nor any covenant shall diminish the unobstructed use and maintenance of the existing water delivery ditches, pipelines, and facilities in the subdivision that are necessary to convey water through the subdivision to land adjacent or to beyond the subdivision in quantities and in a manner that are consistent with historic and legal rights.” (Section V-A-18; Effect on Agricultural Water User Facilities)
4. The Fire Prevention and Control Plan shall be filed with the subdivision. (Section V-A-21; Effect on Local Services; Effect on Public Health and Safety)
5. The final plat shall show the location of all existing and required utility easements. (Section V-A-15.a; Effect on Local Services)
6. The final plat must include the following statement: “The undersigned hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric, power, gas, cable television, water or sewer service to the public, the right to the joint use of an easement for the construction, maintenance, repair and removal of the lines and other facilities, in, over, under and across each area designated on this plat as “Utility Easement” to have and hold forever.” (Section V-A-15.h; Effect on Local Services)
7. A notation shall be provided on the final plat that legal and physical access is provided per 76-3-608(3)(d), MCA. (Section IV-B-10.f.v; Compliance with the Montana Subdivision and Platting Act)
8. A document revoking the agricultural covenant signed by the landowner and the County Commissioners shall be filed with the final plat. (Section IX-K; Compliance with the Montana Subdivision and Platting Act)
9. Prior to filing the final plat, the plat shall be submitted to the County Examining Land Surveyor and any comments sufficiently addressed. (Section IV-C-3.b.vi; Compliance with Survey Requirements)
10. The final plat shall be in substantial compliance with the plans and documents submitted as part of the preliminary plat application. (Section IV-C-5.b; Compliance with the Subdivision Regulations)
11. The final plat shall be submitted within two years of the date of preliminary plat approval, or an extension(s) to the approval period obtained. (Section IV-B-11; Compliance with the Subdivision Regulations)
12. The final plat shall be prepared and reviewed in accordance with Section IV-C of the Carbon County Subdivision Regulations. (Compliance with the Subdivision Regulations)

13. The Declaration of Covenants, Conditions, and Restrictions shall be filed with the final plat and meet the standards of Section V-A-23. (Other regulations in effect in the area of the proposed subdivision)

CARBON COUNTY
Planning Office
P.O. Box 466, Red Lodge, MT 59068
Main: (406) 446-1694
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PROJECT MEMORANDUM

TO: Members of the Carbon County Planning Board
FROM: Forrest J. Mandeville, AICP – Contract Planner
DATE: November 4, 2022; Revised December 2, 2022
RE: 7D Subdivision Preliminary Plat Application and Variance Request from Fire Protection Design Standards–Staff Report and Findings

REQUIRED PLANNING BOARD ACTION: Review, receive public comment, and recommendation to approve, conditionally approve, or deny the proposed preliminary plat and variance request.

RECOMMENDATION: **Approval with Conditions**

RECOMMENDED MOTION: *Having reviewed and considered the application materials, project memorandum, public comments and all of the information presented, I hereby move to recommend **approval** of the 7D Subdivision and variance from fire protection design standards, with the findings and conditions included in the project memorandum.*

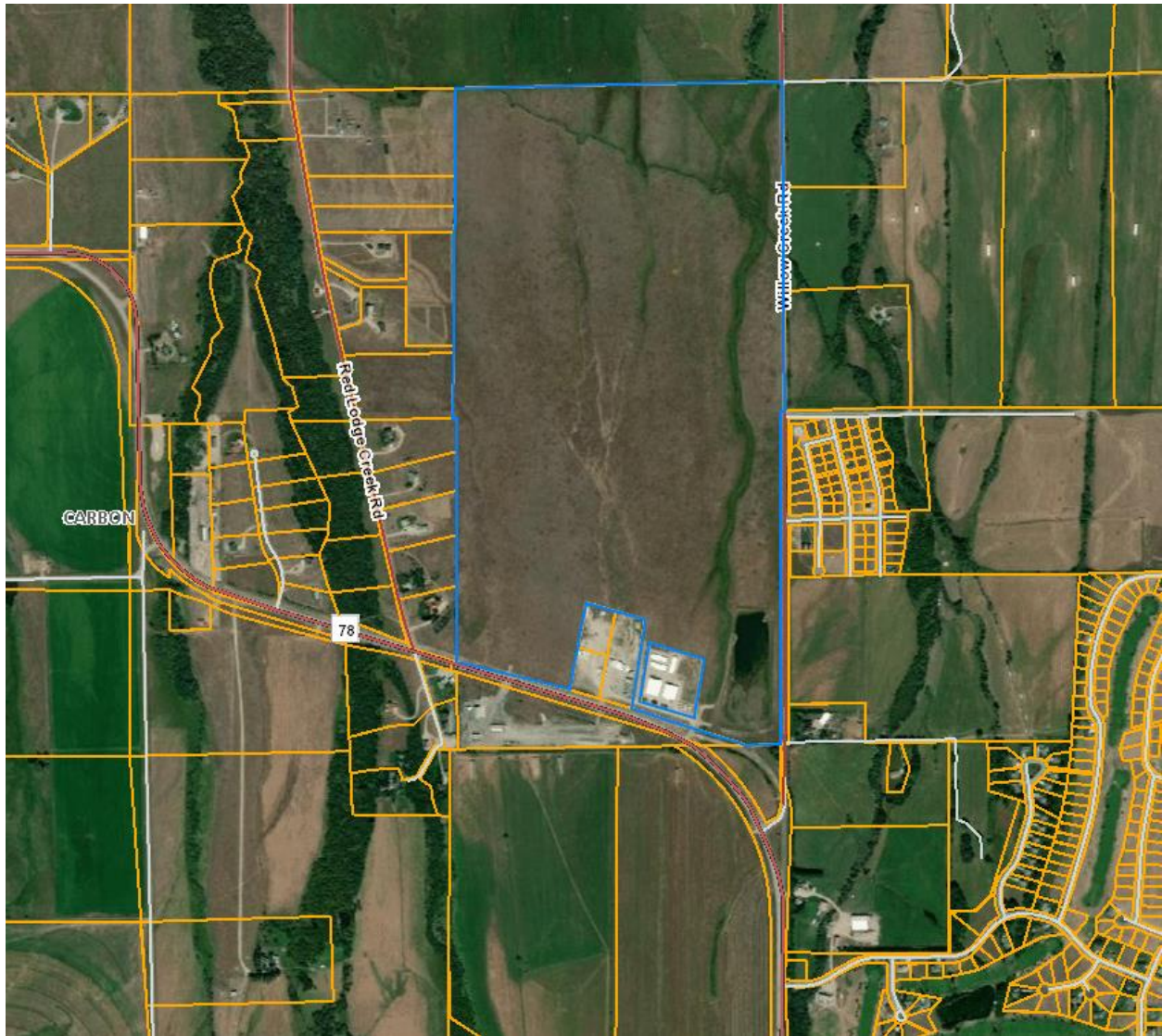
Project/Application Summary:

Red Lodge Surveying, on behalf of Draper Ranch Company (Edwin L. Draper), has submitted a preliminary plat application for a 10-lot subdivision, with lots designed for commercial use. Engineering West is providing engineering services for the proposed subdivision. The subdivision area is approximately 20 acres; proposed new lots will range from 1.63 acres to 2.65 acres in size. The property is located north of two previously developed commercial/industrial subdivisions: Schneider-Sheldon Subdivision (a one-lot subdivision filed in 2004) and Red Lodge Fire Rescue Foundation Subdivision (a three-lot subdivision filed in 2021). There is a remaining tract of record that would be created due to this subdivision. Since the remainder is greater than 160 acres, it is not subject to subdivision review.

The subject property is located north of Highway 78, approximately ¼ mile west of the intersection of Highway 78 and Willow Creek Road. The property is legally described as part of the SE4 of Section 16, Township 7 South, Range 20 East, P.M.M., Carbon County, Montana.

Required Planning Board Action:

Following a public hearing, the Planning Board shall make a recommendation to the County Commission to approve, conditionally approve, or deny the preliminary plat and variance request. The Planning Board may recommend conditions for approval intended to ensure compliance with the Subdivision Regulations and to mitigate any anticipated impacts of the subdivision.



Proposed Subdivision Location (Blue) and Vicinity

Subdivision Regulations – Compliance Review/Findings Summary: (Section references are to the Carbon County Subdivision Regulations unless otherwise noted)

a. Relevant evidence relating to the public health, safety, and welfare

Each lot will utilize individual well and drainfield systems. DEQ review and approval is required.

Access is provided by Highway 78 via existing unnamed private roads, which also provide access to existing subdivided property. These private roads will be extended through the subdivision to provide access to each lot. Access will also be provided to Willow Creek Road to the east of the subdivision.

A variance request has been submitted to allow a deviation from the fire protection design standards. The developer has rights to a well within the Red Lodge Fire Rescue Foundation Subdivision. The proposed variance will allow the off-site well to provide water for fire-fighting purposes.

b. Summary of Probable Impacts

Except where exempt by state law, all subdivisions must be reviewed for the specific, documentable, and clearly defined impact on agriculture, agricultural water user facilities, local services, the natural environment, wildlife, wildlife habitat, and public health and safety.

- Effect on agriculture: The site (approximately 20 acres) is currently part of an agricultural operation, and is primarily used for grazing. This use would cease as a result of this subdivision. There is remaining property in excess of 160 acres which will remain in agricultural production.

The site is classified by USDA as prime farmland if irrigated.

The property is adjacent to two commercial/industrial subdivisions. Lot 1 of the Schneider-Sheldon Subdivision consists of commercial storage units; Lot 1 of the Red Lodge Fire Rescue Foundation Subdivision contains training facilities owned by the Red Lodge Fire Rescue Foundation. There are two undeveloped lots in the Red Lodge Fire Rescue Subdivision, one owned by the Red Lodge Fire Rescue Foundation and one owned by Draper Ranch Company. The Montana Department of Transportation owns property across Highway 78 to the south. There are residential subdivisions to the west and northeast across the remaining lands of the developer.

Finding: Because the developer owns surrounding agricultural lands and the subdivision is adjacent to similar uses, there should be minimal adverse impacts on agriculture as a result of this subdivision.



Commercial/Industrial Uses Near Subdivision



Residential Uses Near Subdivision; New Road in Foreground

- Effect on agricultural water user facilities: There are no irrigation ditches within the proposed subdivision. According to the Environmental Assessment submitted as part of the subdivision application, no water rights will be transferred to lots within the subdivision, and the acquisition of water rights are not required for the subdivision.

Finding: Because there are no irrigation ditches on the property and no agricultural water rights associated with the subdivision, there should be minimal adverse impacts on agricultural water user facilities as a result of this subdivision.

- Effect on local services: The Carbon County Sherriff's office will provide law enforcement services to the subdivision. According to documents provided in the subdivision application, Sheriff Josh McQuillan reports that adequate law enforcement can be provided to the subdivision with existing personnel and equipment. A response time would be 15-20 minutes in most circumstances.

Finding: This subdivision will have minimal adverse impacts on law enforcement, since services can be provided using existing personnel and equipment.

The Red Lodge Fire District provides fire protection in the area. Chief Tom Kuntz in a phone conversation indicated that a dense (more than one lot per three acres) commercial subdivision creates a high fire hazard area, necessitating on-site water supply be provided. If the subdivision is approved without mitigating the increased fire hazard, it could impact area insurance rates due to the increased fire risk. The developer is proposing an off-site water supply to be provided by a well located on Lot 1 of the Red Lodge Fire Rescue Subdivision. A variance request has been submitted to address certain deviations from design standards as a result of this proposed mitigation.

The applicant submitted a Fire Prevention and Control Plan (FPCP) indicating recommendations and requirements relating to fire protection, which should be filed with the subdivision (Section V-A-21). The FPCP should be amended to discuss the hydrant.

Finding: This subdivision creates a potentially significant adverse impact on area fire protection due to the density and nature of the subdivision. This can be mitigated through the provision of a water supply (subject to variance approval) and the filing of a Fire Control and Prevention Plan. The Fire Department should review and approve of both the FPCP and the hydrant.



New Roads within Subdivision (Already Constructed)

Road names for the new internal subdivision roads are shown on the plat as Weaver Lane 1, Weaver Lane 2, and Weaver Lane 3. These will need to be approved by the County GIS Department and approved names shown on the final plat (Section V-A-10.a.xiii). A conversation with Tom Kohley, Carbon County GIS Coordinator, indicated the preferred option would be three unique road names; two running north and south and one for the east and west road.

Internal roads are proposed to be owned and maintained by a Lot Owners' Association through private covenants. Roads will be open and accessible to the public, but the County will not have any responsibility to maintain said roads. The following statement, to be modified as appropriate, should appear on the plat: "(I), (We) the undersigned property owner(s) do hereby certify that (I) (We) have caused to be surveyed, subdivided and planned into lots, parcels, blocks, roads and alleys, and other divisions and dedications, as shown by this plan hereunto included the following described tract of land (insert description). The above described tract of land is to be known and designated as _____, Carbon County, Montana, and the lands included in all roads, avenues, alleys, and parks or public squares shown on said plat are hereby granted and donated to the use of the public forever. The roadways dedicated to the public are accepted for public use but the county accepts no responsibility for maintaining the same. The owner(s) agree(s) that the County has no obligation to maintain the roads hereby dedicated to the public use."

Finding: Road names should be approved by the County GIS Department to ensure names are not duplicative and are easily located by emergency services. Roads should be dedicated to the public use but owned and maintained by a Property Owners Association. The standard road dedication language should be shown on the final plat.

Beartooth Electric Cooperative provides power in the area and reports the ability to serve the site through new easements from Willow Creek Road to the subdivision and along the internal subdivision roads. Northwestern Energy would be able to provide the subdivision with natural gas if an easement were extended from the south or east. Utility easements should be shown on the final plat per section V-A-15.a., and the standard utility language should be placed on the final plat, per section V-A-15.h. of the Subdivision Regulations: “The undersigned hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric, power, gas, cable television, water or sewer service to the public, the right to the joint use of an easement for the construction, maintenance, repair and removal of the lines and other facilities, in, over, under and across each area designated on this plat as “Utility Easement” to have and hold forever.”

Finding: There will be no significant adverse impacts on utility providers if utility easements are shown on the plat and the standard utility easement language is provided.

- Effect on the natural environment: New septic/drainfield systems will be utilized for each lot. Individual wells will serve each lot. Most wells will be located on the lot they serve, with the exception of Lot 2, which will use a well located on Lot 1, and Lot 4, which will utilize a well on Lot 6. Easements for off-site wells will need to be shown on the final plat. Review and approval of new septic, well, solid waste, and stormwater drainage is required by the Montana Department of Environmental Quality (DEQ) and the Carbon County Sanitarian, as appropriate. (See Sections III-B-11.c, V-A-11 through 14, and MCA 76-3-622). The acquisition of a new water right for the subdivision is not required unless the combined subdivision lots will use 10 acre-feet of water per year, or if a well will pump more than 35 gallons per minute.

There is a pond and intermittent drainage to the east of the subdivision on adjacent agricultural lands.

Finding: New water, wastewater, stormwater drainage, and solid waste disposal will not have an adverse impact on the natural environment if DEQ and County Sanitarian review and approval is required to be obtained prior to final plat.

Roads within the subdivision are proposed to be gravel-surfaced. Dust will be mitigated through the periodic application of water or magnesium chloride, according to the Environmental Assessment submitted as part of the subdivision application. As noted above under Effect of Local Services, roads will be maintained by a Lot Owners’ Association. Dust mitigation should be specifically addressed in the covenants per Section V-A-23.c.ix.

No paving was proposed as part of this subdivision, but may be required if determined to be necessary. The Subdivision Regulations, Section V-A-10.b.xvii, states that “Paving is recommended and may be required if it is deemed necessary in order to control erosion, dust, and preserve the natural environment.”

Finding: If provisions for dust control are included in the Property Owners’ Association covenants, adverse impacts on the natural environment from dust on the roads will be adequately mitigated.

The applicant submitted a Weed Inspection Report completed by Carbon County Weed District Coordinator Brian Ostwald dated March 22, 2022. The report indicates there is spotted knapweed surrounding the project area, but no weeds were present within the project area. No weed bond was required by the Weed District.

Finding: There should be minimal impacts on the natural environment due to the proliferation of noxious weeds, since there were no weeds within the project area.



Drainage on East Side of the Subdivision

- Effect on wildlife: Wildlife does frequent the area. However, since the project is in close proximity to existing similar development, no significant adverse impacts on wildlife is anticipated other than what may have already occurred.

Finding: No significant adverse impacts to wildlife is anticipated due to the proximity of existing similar development.

- Effect on wildlife habitat: No critical wildlife habitat has been identified on the property. The site is not identified as sage grouse habitat by the Montana Sage Grouse Habitat Conservation Program.

Finding: There should be no significant impact on wildlife habitat since there is no identified critical wildlife habitat on the property.

- Effect on public health and safety: The Carbon County Sheriff's office provides law enforcement service in the area. See discussion and findings under Effect on Local Services.

Chief Tom Kuntz in a phone conversation indicated that a dense commercial subdivision, such as this proposal, creates a high fire hazard area, necessitating on-site water supply be provided. If the subdivision is approved without mitigating the increased fire hazard, it could impact area insurance rates due to the increased fire risk. The developer is proposing an off-site water supply to be provided by a well located on Lot 1 of the Red Lodge Fire Rescue Subdivision. A variance request has been submitted to address certain deviations from design standards as a result of this proposed mitigation. The hydrant is within the required ½ mile of any lot, but would provide approximately 500 gallons per minute instead of the required 1000.

The applicant submitted a Fire Prevention and Control Plan (FPCP) indicating recommendations and requirements relating to fire protection, which should be filed with the subdivision (Section V-A-21). The FPCP should be amended to discuss the hydrant.

See also the discussion and findings under Effect on Local Services.

Road names for the new internal subdivision roads are shown on the plat as Weaver Lane 1, Weaver Lane 2, and Weaver Lane 3. These will need to be approved by the County GIS Department and approved names shown on the final plat (Section V-A-10.a.xiii). See also discussion and finding under effects on local services.

DEQ and County Sanitarian approval of well and septic provisions is required. See discussion under effects on the natural environment.

The Traffic Analysis from A2Z Engineering, PLLC, submitted with the preliminary plat application recommends "consideration of placing a stop sign on the eastern existing approach to MT-78, and possibly on the access that Weaver Lane 2 makes out to Willow Creek Road. Doing this would make the approaches consistent with both the western approach and the other county road intersections in the area." The Subdivision

Regulations, Section V-A-10.b.xvi requires traffic control devices at all intersections. No other improvements were recommended. Traffic generated by the development is anticipated to mostly use the approaches to Highway 78, though the access to Willow Creek Road “provides a significant amenity, redundancy and safety to the users of the development. However this access point does not provide a “short cut” or other benefit to users of the development that would encourage a significant daily number of trips.”



East Approach to Highway 78

A professional engineer should certify that the subdivision roads have been constructed per the requirements in Table-1 of the Subdivision Regulations (Section V-A-10.c.iv). Roads appear to have largely been constructed already.

Finding: If stop signs are provided at the eastern approach to Highway 78 and at the new intersection with Willow Creek Road, and an engineer certifies that the roads have been constructed per the requirements in the Subdivision Regulations, it will mitigate to the extent possible any safety concerns with traffic and road design.



Looking North Across Subdivision from East Approach to Highway 78

c. Whether the application and plat conform to the provisions of the following:

- i. The Montana Subdivision and Platting Act: The Plat has been prepared and processed in accordance with the Montana Subdivision and Platting Act (MSPA). The final plat should include a notation that each lot has legal and physical access (76-3-608(3)(d), MCA, and Section III-B-11.g.v of the Carbon County Subdivision Regulations).

Finding: Upon compliance with the recommended conditions of approval and adherence to the process outlined in statute, the subdivision will have complied with the MSPA.

- ii. Compliance with Survey Requirements: The final plat must be in compliance with the requirements of Title 76, Chapter 3, Part 4, MCA, as well as Uniform Standards for Final Subdivision Plats (24.183.1107, ARM). A requirement that, prior to filing, the plat be submitted to the County's Examining Land Surveyor (ELS), and that any comments of the ELS be addressed will ensure survey requirements are followed.

Finding: Upon review by the ELS and the addressing of any comments thereof, survey requirements will have been adhered to.

- iii. The Carbon County Subdivision Regulations: The subdivision, once conditions have been met, will conform to the requirements of the adopted Subdivision Regulations, with the exception of the provision of an on-site water supply for fire protection.

The final plat must be substantially similar to the preliminary plat application, except as modified by conditions. If the final plat differs substantially from the preliminary plat, additional review may be required (Section III-C-5.b of the Carbon County Subdivision Regulations).

The Carbon County Subdivision Regulations, Section III-B-12 states that a preliminary plat approval is in force for two years. If a final plat is not filed within that timeframe, an extension must be granted or a new application submitted. The County is under no obligation to grant such an extension.

A condition requiring final plat preparation to be in conformance with the Subdivision Regulations will ensure compliance with County requirements, even if not specifically discussed in this memorandum.

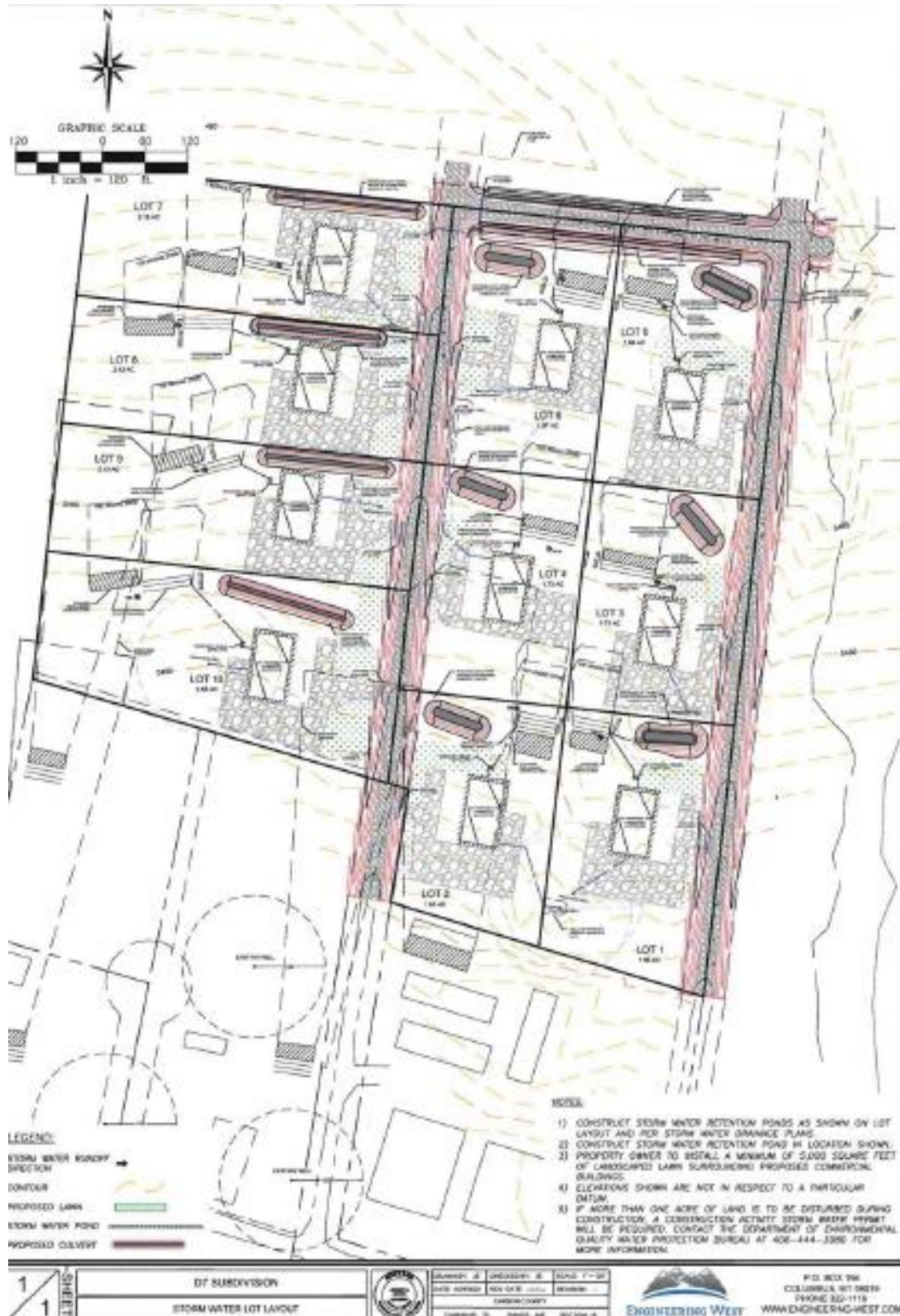
Finding: To ensure compliance with the Subdivision Regulations, conditions should be required to ensure the final plat is substantially similar to the preliminary plat and plans, that the final plat is filed within two years of preliminary plat approval, and that the final plat be submitted in conformance with the Subdivision Regulations.

A variance from design standards has been submitted to address the lack of compliance with on-site water supply requirements for fire-fighting purposes. The variance request has been submitted and reviewed as provided for in the Subdivision Regulations. If approved, there may be conditions specific to the granting of the variance. If the variance is denied, the subdivision would have to meet the strict requirements of the Regulations.

Finding: If a variance is obtained for a relaxation from design requirements relating to on-site water supply for fire protection and any conditions relating to the variance are met, the Subdivision will be in compliance with the Subdivision Regulations.

- iv. Applicable Zoning Regulations: The Carbon County Development Regulations require a Group 2 Development Permit or a Conditional Use Permit depending on the type of commercial/industrial development. A Development Permit is required to be obtained prior to development. The draft Declaration of Restrictions, Covenants, and Conditions provided with the subdivision application reference the current setback requirements of the Development Regulations, however, it may be more appropriate to reference the necessity of acquiring a Development Permit instead of referencing a current standard, in case the regulations are amended or greater setbacks are necessitated by building specifics. For example, commercial kennels and salvage yards require greater setbacks.

Finding: Compliance with zoning regulations would be ensured to the extent possible by requiring the covenants reference the County Development Regulations and state that there is a requirement to obtain a Development Permit prior to development.



Lot Layout/Drainage Plan

- v. Other regulations in effect in the area of the proposed subdivision: There are private covenants proposed for the subdivision (Declaration of Restrictions, Covenants and Conditions). The County does not typically enforce private covenants but may require that certain standards are met (Section V-A-23). No other known regulations are in effect to which the subdivision would be subject.

Finding: Private covenants should be filed with the final plat and prepared to the standards required in the Subdivision Regulations.

- vi. Whether DEQ has approved the subdivision for proposed subdivisions that will create parcels of less than twenty (20) acres: DEQ approval is required prior to final plat, as all lots are under 20 acres. (Sections III-B-11.C.ii and V-A-11, 12,13, and 14 of the Carbon County Subdivision Regulations).

Finding: DEQ review and approval of the subdivision should be a condition of final plat approval.

- vii. Whether the subdivider has demonstrated that there is an adequate water source and at least one are for a septic system and a replacement drainfield for each lot for a proposed subdivision that will create one or more parcels containing twenty (20) acres or more: No proposed lots are over 20 acres.

Finding: There are no lots over 20 acres in the proposed subdivision.

d. Compliance with Growth Policy:

State law, 76-1-605, MCA, requires that after the adoption of a growth policy, the governing body must be “guided by and give consideration to the general policy and pattern of development set out in the growth policy” in the “authorization, construction, alteration, or abandonment of public ways, public places, public structures, or public utilities; authorization, acceptance, or construction of water mains, sewers, connections, facilities, or utilities; and adoption of zoning ordinances or resolutions.” However, statute also states that “A growth policy is not a regulatory document and does not confer any authority to regulate that is not otherwise specifically authorized by law or regulations adopted pursuant to the law. A governing body may not withhold, deny, or impose conditions on any land use approval or other authority to act based solely on compliance with a growth policy [...]” It is, though, beneficial to examine the proposed subdivision in consideration of the adopted growth policy.

Carbon County adopted the 2020 Growth Policy in March of 2020. Chapter 6 contains goals and objectives for the implementation of the Growth Policy. The following goals and objectives may be relevant to the proposed subdivision:

- Objective 1.4: Encourage development in areas that are not in agricultural production
 - 1.4.A. As authorized by the state legislature in 2003, in 76-3-509 MCA, formulate and adopt regulations to encourage cluster development for those developments that meet the definitions.
- Objective 1.7: Direct growth to existing communities, incorporated towns and cities, or platted unincorporated places.
 - 1.7.A. Explore the potential for future land use mapping in areas immediately adjacent to existing communities
 - 1.7.B. Discourage development within the wildland-urban interface.
- Objective 4.1: Direct development to existing communities.
 - 4.1.A. Coordinate the review of subdivision and development permit applications within one mile of incorporated community boundaries, or in any cases where municipal services are being requested.

e. Variance Request:

The variance request is to allow an alternative form of fire risk mitigation. Section V-A-21 of the Subdivision Regulations requires high fire risk subdivisions to provide an on-site water supply with a connection to municipal water supply or by constructing a 30,000 year-round water source capable of flowing 1000 gallons per minute not located more than ½ mile from any structure. The variance request proposes to utilize an existing off-site well, located on Lot 1 of the Red Lodge Fire Rescue Foundation Subdivision, which would be attached to a hydrant and capable of flowing 500 gpm. The hydrant would have approved fittings and is within ½ mile of proposed structures in the subdivision.

Reasonable variances may be granted from the design and improvement standards of the Subdivision Regulations where it is found that strict compliance with the specific standard would result in undue hardship and strict compliance is not essential to the public health, safety, and welfare. Pursuant to Section VIII-B.c., a variance shall be based upon specific variance criteria, and may not have the effect of nullifying the purpose of these Regulations. Variances may not be approved without findings based upon the evidence presented in each specific case that:

- i. The granting of the variance will not be detrimental to the public health, safety, or general welfare or injurious to other adjoining properties. The requirement for providing an on-site water supply is directly related to findings that the proximity to a water supply reduces fire risk (as well as insurance rates). In this case, the proximity to an existing 500 gpm well owned by the developer may provide similar protection for the area. The applicant has indicated that in a conversation with the Fire Chief, the Chief was not opposed to the proposal.
- ii. Due to the physical surroundings, shape, or topographical conditions of the property involved, strict compliance with the regulations will impose an undue hardship on the owner. Undue hardship does not include personal or financial hardship, or any hardship that is self-imposed. The existing well may create an efficiency with water

supply in the area. If the existing well can adequately provide fire protection it may create an undue hardship to require an additional water supply within the subdivision.

The subdivider did have the well drilled, creating the potential for a self-imposed hardship. However, the well was drilled in 1997 so it is unlikely the well was drilled in its current location to circumvent the regulatory requirements for a subdivision proposed 25 years later and after several amendments to the Subdivision Regulations.

There may be some cost savings to utilizing the existing off-site well instead of a new dry hydrant or water line extension into the subdivision, but the financial implications should not be considered a hardship.

- iii. The variance will not cause a substantial increase in public costs. If this variance is granted it should not substantially increase any public costs. The developer will be responsible for installation of the hydrant.
- iv. The variance will not place the subdivision in nonconformance with any adopted zoning regulations. Carbon County has no zoning regulations with which this variance would not conform if granted.

Finding: The granting of the variance request is compliant with the Subdivision Regulations as long as conditions are imposed requiring the installation of the hydrant prior to final plat, and that evidence is provided that the Fire Department has tested and approved of the functionality of the hydrant.

f. Summary of Public Comment and Board Discussion:

The Planning Board held a public hearing on the proposed subdivision on November 17, 2022. Prior to the hearing written comments were received from Connie Baehr and Theodore Munsch; the Beartooth Recreational Trails Association (BRTA); Don Carrol; the City of Red Lodge Planning Director, Courtney Long; Jeff DiBenedetto, Barbara Pitman, and Angie Hazelswart; Andrew Evans; Scott and Julie Hancock; Bob and Mary Johnson; Maggie Karas; Lemuel “Chip” Miller and Peggy Miller; Mark Moak; Brent Nearpass; Marjorie Nearpass; Aimee Romeijn; Michael Schwab and Kathryn Kleinman; Nick Staynor, Kate McDevitt, Dell Staynor, and Pete Staynor; Corey Thompson; Bill Tucker; and Theresa Whistler. Chris and Kathy Benton and Theresa Whistler submitted additional written comments at the hearing. All written comment was made available to the Board members present.

There were comments received after the public hearing as well. Mark Allen submitted written comments received after the public hearing, which was not made available or discussed at the public hearing. Similarly, Kay Williams submitted comments postmarked November 16, but not received until November 28, which were not available or discussed at the hearing.

Individual written comments differed in some respects, but primarily focused on lighting and requested an additional condition or conditions requiring subdivision lighting be required to be

compliant with International Dark-Sky Association (IDA) recommendations, shielded, downward facing, only in use when needed, etc. There were also several comments expressing concerns about the possibility of noise and requesting hours of operation be established.

During the public comment portion of the public hearing, Ed Draper stated that the proposed well probably has better capacity than the City's hydrants. Lee St. Clair noted that lighting is important, as there have been several break-ins at the storage unity facility. Bev Draper stated the proposed covenants say there will be no residential use and no dogs on the site.

Theresa Whistler noted that the local Dark Skies Organization has worked on a revision of the Red Lodge ordinances regarding lighting within the past year and noted a desire to be designated as a Dark Skies Community. She also noted her group is working on building an observatory. She would like a lighting plan for the proposed subdivision that is IDA compliant.

Maggie Karas indicated a desire for shielded lighting that is downward facing. She also asked about limiting the height of light poles and the possibility of restricting noise. Ms. Karas did note that development is needed in the area.

Kay Williams indicated she agrees with the comments regarding dark skies, as did Scott Hancock who asked that the cumulative impacts of lights in subdivisions be considered.

There was no quorum of the Planning Board present, but members did discuss the subdivision and public comments. Betsy noted that lighting and hours of operation can be evaluated through the Development Permit process.

Mr. St. Clair noted that most businesses would operate during normal business hours. Mrs. Draper pointed out that the proposed covenants, Section XVII.B. addresses 'Lights, Sounds and/or Odors', and noted that business in the area will likely be plumbers, contractors, and similar professions. Mr. Draper that the Owners' Association has enforcement mechanisms that may have more teeth than a County subdivision condition regarding the contents of private covenants. Mr. Draper also noted that good lighting keeps people out that shouldn't be there.

Clint asked about the origin of irrigation wastewater on the property and was told it comes from other Draper properties. He also asked about well design and whether or not a cistern will be utilized. Staff indicated the final design will need to meet the 500 gallon per minute standard, and a cistern might be necessary to meet that criteria, but otherwise was not required. Clint indicated he is generally skeptical of covenants due to possible impacts on agriculture.

Skip indicated that this type of subdivision is needed, and noted that shielded lighting works really well.

g. Planning Staff Recommendation:

The basis for the governing body's decision to approve, conditionally approve, or deny a proposed subdivision is whether the subdivision application, preliminary plat, applicable environmental assessment, public hearing, planning board recommendations, or additional

information demonstrates that development of the proposed subdivision is in compliance with the Montana Subdivision and Platting Act and the adopted Subdivision Regulations.

In consideration of the findings included in this Memorandum, Planning Staff recommends approval of the 7D Subdivision and variance from fire protection design standards, pursuant to the following conditions (Section references are to the Carbon County Subdivision Regulations unless otherwise noted):

1. Filing of the final plat shall be subject to the review and approval by the Montana Department of Environmental Quality and Carbon County Sanitarian, as appropriate, for water, wastewater, solid waste, and stormwater drainage provisions. (Sections III-B-11.C.ii and V-A-11, 12,13, and 14; Effect on the Natural Environment; Effect on Public Health and Safety)
2. The Fire Prevention and Control Plan shall be filed with the subdivision. This Plan should reference the hydrant, it's location, and design criteria. (Section V-A-21; Effect on Local Services; Effect on Public Health and Safety)
3. A water supply shall be provided that meets the requirements of Section V-A-21, with the exception that the flow rate shall be a minimum of 500 gpm instead of 1000 gpm. (Section V-A-21; Effect on Local Services; Effect on Public Health and Safety; Variance Request)
4. Evidence shall be provided that the local Fire Department has reviewed the Fire Prevention and Control Plan, tested the hydrant, and approved of each. (Section V-A-21; Effect on Local Services; Effect on Public Health and Safety; Variance Request)
5. Road names shall be approved by the Carbon County GIS Department. Approved names shall be shown on the final plat. (Section V-A-10.a.xiii; Effect on Local Services)
6. Private covenants shall provide for road maintenance and the following dedication language shall appear on the final plat: “(I, (We) the undersigned property owner(s) do hereby certify that (I) (We) have caused to be surveyed, subdivided and planned into lots , parcels, blocks, roads and alleys, and other divisions and dedications , as shown by this plan hereunto included the following described tract of land (insert description) . The above described tract of land is to be known and designated as _____, Carbon County, Montana, and the lands included in all roads, avenues, alleys, and parks or public squares shown on said plat are hereby granted and donated to the use of the public forever. The roadways dedicated to the public are accepted for public use but the county accepts no responsibility for maintaining the same. The owner(s) agree(s) that the County has no obligation to maintain the roads hereby dedicated to the public use.” (Section V.A-10.a.vi.; Effect on Local Services)
7. Private covenants shall provide for dust mitigation through application of water and/or magnesium chloride. (Section V.A-23.c.ix.; Effect on the Natural Environment)
8. The final plat shall show the location of all existing and required utility easements. (Section V-A-15.a; Effect on Local Services)
9. The final plat must include the following statement: “The undersigned hereby grants unto each and every person, firm or corporation, whether public or private, providing or offering to provide telephone, telegraph, electric, power, gas, cable television, water or sewer service to the public, the right to the joint use of an easement for the construction,

maintenance, repair and removal of the lines and other facilities, in, over, under and across each area designated on this plat as “Utility Easement” to have and hold forever.” (Section V-A-15.h; Effect on Local Services)

10. Stop signs shall be installed at the eastern approach to Highway 78 and at the new intersection with Willow Creek Road. (Section V-A-10-b.xvi; Effect on Public Health and Safety)
11. Prior to final plat, the roads shown on the preliminary plat shall be constructed to the standards required in the Subdivision Regulations and the construction shall be certified by a registered professional engineer. (Section V-A-10.c. and Table 1; Effect on Public Health and Safety)
12. A notation shall be provided on the final plat that legal and physical access is provided per 76-3-608(3)(d), MCA. (Section III-B-11.g.v; Compliance with the Montana Subdivision and Platting Act)
13. Prior to filing the final plat, the plat shall be submitted to the County Examining Land Surveyor and any comments sufficiently addressed. (Section III-C-3.b.vi; Compliance with Survey Requirements)
14. The Declaration of Restrictions, Covenants, and Conditions for 7D Subdivision shall include language referencing the Carbon County Development Regulations and that a Development Permit must be obtained prior to development. (Section III-C-2; Compliance with Applicable Zoning Regulations)
15. The Declaration of Restrictions, Covenants, and Conditions for 7D Subdivision shall be filed with the final plat and meet the standards of Section V-A-23. (Other regulations in effect in the area of the proposed subdivision)
16. The final plat shall be in substantial compliance with the plans and documents submitted as part of the preliminary plat application. (Section III-C-5.b; Compliance with the Subdivision Regulations)
17. The final plat shall be submitted within two years of the date of preliminary plat approval, or an extension(s) to the approval period obtained. (Section III-B-12; Compliance with the Subdivision Regulations)
18. The final plat shall be prepared and reviewed in accordance with Section III-C of the Carbon County Subdivision Regulations. (Compliance with the Subdivision Regulations)

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting Covenants for 7D 10 Lot Major Commercial Subdivision

Dear Board Members:

I want to start by acknowledging an individual's private property right to create a commercial development, as well as the rapid growth that is occurring in both Red Lodge and on the West Bench – both in housing units and the commercial network needed to support that growth. I would like to suggest a condition of approval to mitigate the impact that 7D commercial subdivision will have on the surrounding Carbon County residents.

I would like to urge you to require the proposed subdivision include specific low impact outdoor lighting language, spelled out below, in the Declaration of Covenants, Conditions and Restrictions of the subdivision.

WHY LIGHT – AND RESEARCH

Typically there are four uses for outdoor lighting: Navigation- to assist in wayfinding, Safety – to render hazards more visible or assist personnel, Security - to protect people and property, and Aesthetics – to illuminate a display.

Research shows that non-dark sky compliant (up- and out-lighting), does not increase safety or security in residential or commercial developments. (See website #1, below). Although there are anecdotal reports that “improved lighting” (i.e. improved visibility) reduces crime, there is no evidence that crime is reduced with “more or brighter lighting”. In fact, non-shielded lighting created glare (light intense enough to impair a viewer's sight), which created advantages for criminals. Shielding of light fixtures is critical for cutting widespread glare

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The primary reason to require specific covenants for low-impact outdoor lighting is to preserve the amenities that matter to all Carbon County residents, old and new.

In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association recommendations will negatively impact surrounding residents for many miles due to the rural and elevated nature of the West Bench. An existing commercial development created by the same developer adjacent to this proposed subdivision does not have shielded fixtures and creates significant light pollution and so is visible for many miles.

Notably, low impact outdoor lighting would be a benefit to the developer, in terms of cost savings resulting from using more efficient lighting. The International Dark Skies Association (IDA) estimates that at least 30% of all outdoor lighting in the U.S. alone is wasted, mostly by lights that aren't shielded. "That adds up to \$3.3 billion ... per year."

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Research also shows that Circadian rhythms are disrupted when excessive outdoor lighting is used. Our sleeping patterns are "governed by the day-night cycle," so being exposed to artificial light during the nighttime disrupts our body's production of melatonin, a sleep-inducing hormone. This creates health issues.

Also, ecosystems are disrupted. For example, birds and bats are light-sensitive creatures and have difficulty hunting for insects in areas where light is plentiful.

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I would like to urge you to require the proposed subdivision include specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions document to allow only down-facing outdoor lighting that complies with International Dark-sky Association (IDA) recommendations to minimize light trespass from the building and site, reduce sky-glow, increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact from lighting on nocturnal environments.

As a resident of the Spires subdivision, I would like you to know what we ourselves are doing to preserve dark skies, particularly since that was part of the draw for living here.

Spires covenants require the following:

General:

- All exterior residential lighting must be free of glare and shall be fully shielded or shall be indirect.
- No lighting shall shine beyond a property's lot line.
- Fixtures shall be of a design and/or placed in such a way as to not pollute the night sky.
- Obtrusive flood lighting is prohibited.
- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.

The definition of a "Fully Shielded Light": Fixtures that stop light rays from being emitted at angles above the horizontal plane as certified by photometric testing.

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However, that language lacks specificity, and I imagine would lead to frustration for a contractor trying to comply. Therefore I would recommend these specifics, to start with, that I found through the websites listed at the end of this letter.

- Start by installing exterior light fixtures only in locations that require light for safety. Provide light where you need it, when you need it, in the minimum amount needed.
- The Illuminating Engineering Society (IES) has developed a Model Lighting Ordinance for various lighting zones. I would suggest that 7D require lighting be compliant with IES Lighting Zone 2 (LZ2): “moderate ambient lighting in areas such as light commercial business districts and ... mixed use residential districts”. (see website #5 below)
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 - Approved fixtures shall employ warm-toned (3000K and lower) white light sources or may employ amber light sources or filtered LED light sources. Because blue light brightens the night sky more than any other color of light, it’s important to minimize the amount emitted. Exposure to blue light at night has also been shown to harm human health and endanger wildlife. IDA recommends using lighting that has a color temperature of no more than 3000 Kelvins, and using only warm color lighting. This includes HPS and low-color-temperature LEDs.
 - Lighting must be full cutoff or recessed light fixtures. Full cut off fixtures prevent light from being emitted on or above the horizontal plane, and direct light downward where light is needed.
- Outdoor light fixtures (mounted or freestanding) shall be no higher than 18’
- Outdoor light fixtures illuminating signs should also be compliant with low impact lighting guidelines.

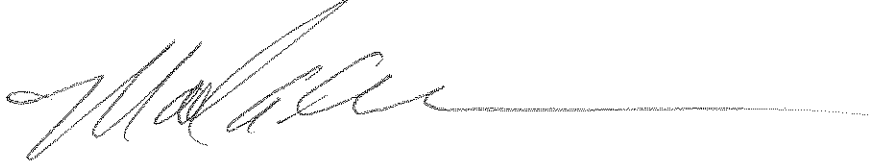
Contractors / developers could visit www.firstlighttechnologies.com or comparable website for assistance with lighting design that offer the lowest lifecycle costs.

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- 6) <https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/>

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Mark A. Allen", followed by a long horizontal line extending to the right.

Mark A. Allen
Trailhead Builders of Montana, LLC
PO Box 21280, Billings, MT 59104
O: [406.294.5355](tel:406.294.5355) | C: [406.672.5744](tel:406.672.5744)
mark@trailheadbuilders.com

November 14, 2022

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting Covenants for 7D 10 Lot Major Commercial Subdivision

Dear Board Members:

We recognize and appreciate individual owners property rights to create a commercial development. We also recognize that Red Lodge has had rapid growth in housing and the commercial arena.

We hereby suggest a condition of approval to minimize the impact that the 7D commercial subdivision will have on our community (The Spires) and the surrounding areas of Carbon County. Please require the proposed subdivision include specific low impact outdoor lighting language, spelled out below, in the Declaration of Covenants, Conditions and Restrictions of the subdivision.

Research shows that non-dark sky compliant (up- and out-lighting), does not increase safety or security in residential or commercial developments. (See website #1, below). Although there are anecdotal reports that "improved lighting" (i.e. improved visibility) reduces crime, there is no evidence that crime is reduced with "more or brighter lighting". In fact, non-shielded lighting created glare (light intense enough to impair a viewer's sight), which created advantages for criminals. Shielding of light fixtures is critical for cutting widespread glare.

The primary reason to require specific covenants for low-impact outdoor lighting it to preserve the amenities that matter to all Carbon County residents. In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association recommendations will negatively impact surrounding residents for many miles due to the rural and elevated nature of the West Bench. An existing commercial development created by the same developer adjacent to this proposed subdivision does not have shielded fixtures and creates significant light pollution and so is visible for many miles.

Notably, low impact outdoor lighting would be a benefit to the developer, in terms of cost savings resulting from using more efficient lighting. The International Dark Skies Association (IDA) estimates that at least 30% of all outdoor lighting in the U.S. alone is wasted, mostly by lights that aren't shielded. "That adds up to \$3.3 billion ... per year."

Any light pollution created by this new development will be disruptive to both residents nearby (we live almost directly across the street from the proposed development) and those who enjoy viewing the astronomical views available along the West Bench. During significant astronomical events, such as lunar eclipses, northern lights, comets and more, many who live within city limits where light pollution is intense can be found heading to the dark West Bench to witness these events.

Also, ecosystems are disrupted. For example, birds and [bats](#) are light-sensitive creatures and have difficulty hunting for insects in areas where light is plentiful.

As a condition of approval, please require the proposed subdivision include specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions document to allow only down-facing outdoor lighting that complies with International Dark-sky Association (IDA) recommendations to minimize light trespass from the building and site, reduce sky-glow, increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact from lighting on nocturnal environments.

As residents of the Spires subdivision, we are doing the following to preserve dark skies, particularly since that was part of the draw for living here. Spires covenants require the following:

- All exterior residential lighting must be free of glare and shall be fully shielded or shall be indirect.
- No lighting shall shine beyond a property's lot line.
- Fixtures shall be of a design and/or placed in such a way as to not pollute the night sky.
- Obtrusive flood lighting is prohibited.
- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.

The definition of a "Fully Shielded Light": Fixtures that stop light rays from being emitted at angles above the horizontal plane as certified by photometric testing.

And, although the original developer here installed streetlights, residents here, through the HOA, have elected to keep those turned off, both because we prefer seeing the night sky, but also because it costs less!

We would recommend these specifics, to start with, that our neighbor in the Spires found through the websites listed at the end of this letter.

- Start by installing exterior light fixtures only in locations that require light for safety. Provide light where you need it, when you need it, in the minimum amount needed.
- The Illuminating Engineering Society (IES) has developed a Model Lighting Ordinance for various lighting zones. I would suggest that 7D require lighting be compliant with IES Lighting Zone 2 (LZ2): "moderate ambient lighting in areas such as light commercial business districts and ... mixed use residential districts". (see website #5 below)
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- Approved fixtures shall employ warm-toned (3000K and lower) white light sources or may employ amber light sources or filtered LED light sources. Because blue light brightens the night sky more than any other color of light, it's important to minimize the amount emitted. Exposure to blue light at night has also been shown to harm [human health](#) and [endanger wildlife](#). [IDA recommends](#) using lighting that has a color temperature of no more than 3000 Kelvins, and using only warm color lighting. This includes HPS and low-color-temperature LEDs.
- Lighting must be full cutoff or recessed light fixtures. Full cut off fixtures prevent light from being emitted on or above the horizontal plane, and direct light downward where light is needed.
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Respectfully submitted,



 Connie Baehr and Theodore Munsch
 3010 Elderberry Avenue
 PO Box 2137
 Red Lodge, MT 59068



Beartooth Recreational Trails Association
PO Box 1872
Red Lodge, MT 59068

Carbon County Planning Board
10 Oakes Ave. South
Red Lodge, MT. 59068

November 10, 2022

RE: Proposed 7D 10-Lot Commercial Subdivision

Dear Carbon County Planning Board,

The BRTA Board of Directors would like to encourage the Carbon County Planning Board to create specific lighting guidelines for the proposed 7D 10-Lot Commercial Subdivision along highway 78 as developed by Dark Skies.

Both BRTA and our user groups from all over Carbon County believe that night light pollution lowers the quality of experience of outdoor recreation and is harmful to the natural circadian rhythms of all animals, including humans.

It has been proven that Dark-sky lighting can provide sufficient light in a safe way while reducing the scope and distance of light pollution. We recommend that the specific lighting guidelines include but are not limited to the following:

- (a) Outdoor light fixtures shall be shielded such that light rays emitted by the fixture are projected at 45° from a point on fixture where light is emitted.
- (b) Where used for security purposes, or to illuminate walkways, roadways, equipment yards and parking lots, only shielded outdoor light fixtures shall be utilized.
- (c) Outdoor fixtures shall be required to have all light focused downward.
- (e) Outdoor light fixtures shall be limited to fifteen (15) feet in height.
- (f) All outdoor light fixtures existing or hereafter installed and maintained upon private property within commercial or residential zones shall be turned off between 11:00 p.m. and sunrise except when permitted by the Director of Planning and Zoning. A permit will be issued if, in the opinion of the Director of Planning and Zoning:

Thank you for your consideration.

The BRTA Board of Directors

*Jennifer Drinkwalter, President
Derek Stiegmeier, Vice President
Bill Foisy, Treasurer
John Clayton, Secretary
Tom Kohley
Terry Jones,
Anita Philipsborn
Heidi Gilbert
Pete Himnon
Brian Sweet
Melisa Griffith*

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting Covenants for 7D 10 Lot
Major Commercial Subdivision

Dear Board Members:

I want to start by acknowledging an individual's private property right to create a commercial development, as well as the rapid growth that is occurring in both Red Lodge and on the West Bench – both in housing units and the commercial network needed to support that growth. I would like to suggest a condition of approval to mitigate the impact that 7D commercial subdivision will have on the surrounding Carbon County residents.

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In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association recommendations will negatively impact surrounding residents for many miles due to the rural and elevated nature of the West Bench. An existing commercial development created by the same developer adjacent to this proposed subdivision does not have shielded fixtures and creates significant light pollution and so is visible for many miles.

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Respectfully submitted,

Chris and Kathy Benton
3017 Elderberry Ave (Spikes Development)

bentonckmt@gmail.com
(406) 425-3808 - Chris

(406) 860-7008 - Kathy

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting Covenants for 7D 10 Lot Major Commercial Subdivision

Dear Board Members:

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Research also shows that Circadian rhythms are disrupted when excessive outdoor lighting is used. Our sleeping patterns are "[governed by the day-night cycle](#)," so being exposed to artificial light during the nighttime disrupts our body's production of melatonin, a sleep-inducing hormone. This creates health issues.

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- Obtrusive flood lighting is prohibited.
- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.

The definition of a "Fully Shielded Light": Fixtures that stop light rays from being emitted at angles above the horizontal plane as certified by photometric testing.

And, although the original developer here installed streetlights, residents here, through the HOA, have elected to keep those turned off, both because we prefer seeing the night sky, but also because it costs less!

However, that language lacks specificity, and I imagine would lead to frustration for a contractor trying to comply. Therefore I would recommend these specifics, to start with, that I found through the websites listed at the end of this letter.

- Start by installing exterior light fixtures only in locations that require light for safety. Provide light where you need it, when you need it, in the minimum amount needed.
- The Illuminating Engineering Society (IES) has developed a Model Lighting Ordinance for various lighting zones. I would suggest that 7D require lighting be compliant with IES Lighting Zone 2 (LZ2): “moderate ambient lighting in areas such as light commercial business districts and ... mixed use residential districts”. (see website #5 below)
 - IES developed something called a BUG Rating, which stands for backlight, uplight, and glare. **Backlight (B)** is the light directed behind the fixture, **uplight (U)** is any light directed upward above the horizontal plane of the luminaire, and **glare (G)** is the amount of light emitted from the luminaire at high angles.
 - For LZ2, , Backlight rating of B2 or less for lights 1 to 2 times the mounting height to the lighting boundary, and properly mounted, an Uplight rating of U2, and a Glare rating of G2.
- Utilize only Dark Skies compliant outdoor light fixtures as defined through the **IDA Fixture Seal of Approval program**, (website #6 below) which declares:
 - A fixture must be fully shielded and emit no light above the horizontal plane. There shall be no sag or drop lenses, side light panels, uplight panels, etc.
 - Approved fixtures shall employ warm-toned (3000K and lower) white light sources or may employ amber light sources or filtered LED light sources. Because blue light brightens the night sky more than any other color of light, it’s important to minimize the amount emitted. Exposure to blue light at night has also been shown to harm human health and endanger wildlife. IDA recommends using lighting that has a color temperature of no more than 3000 Kelvins, and using only warm color lighting. This includes HPS and low-color-temperature LEDs.
 - Lighting must be full cutoff or recessed light fixtures. Full cut off fixtures prevent light from being emitted on or above the horizontal plane, and direct light downward where light is needed.
- Outdoor light fixtures (mounted or freestanding) shall be no higher than 18’
- Outdoor light fixtures illuminating signs should also be compliant with low impact lighting guidelines.

Contractors / developers could visit www.firstlighttechnologies.com or comparable website for assistance with lighting design that offer the lowest lifecycle costs.

WEBSITE REFERENCES:

- 1) <https://www.darksky.org/light-pollution/lighting-crime-and-safety/>
- 2) <https://solutions.borderstates.com/what-is-dark-sky-compliance/>

- 3) <https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>
- 4) <https://www.usgbc.org/credits/ss8>
- 5) <https://www.firstlighttechnologies.com/solar-light-blog/lighting-fundamentals-bug-ratings/>
- 6) <https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/>

Thank you for your time and consideration.

Respectfully submitted,

A handwritten signature in black ink that reads "Don Carroll". The signature is written in a cursive, flowing style.

DON CARROLL
2902 Baneberry Ave,
The Spires, Red Lodge

Cc: City of Red Lodge

Re: Draper D7 Subdivision

Courtney Long <clong@CITYOFREDLODGE.COM>

Fri 11/4/2022 10:45 AM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Forrest,

I have forwarded this to Building and Public Works for their review and comments, if any.

The Red Lodge Dark Skies group are wanting to attend to make a public comment regarding lighting for the development. Considering its proximity to City limits I would like to see consideration for and encourage any conditions that would help us to "protect the night sky as a feature of rural character" as further described in the 2022 Red Lodge Zoning Regulations.

Will forward any comments from Brian or Jim to you.

Warmly,

Courtney Long
Planning Director
(406) 446-1606 ext. 118
Red Lodge, MT
cityofredlodge.net/com-dev

From: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Sent: Friday, November 4, 2022 10:32 AM

To: Courtney Long <clong@CITYOFREDLODGE.COM>

Subject: Re: Draper D7 Subdivision

Courtney,

Just to keep you updated on the Draper 7D Subdivision just west of Red Lodge on Highway 78. This will be on the Planning Board agenda on November 17, 7:00pm at the County Personal Services Building. I attached my staff report in case you wanted to take a look.

Let me know if there are any concerns or comments from the City side of things. They are proposed individual well and septic, but the project is pretty close to the Spires.

Thanks,

Forrest J. Mandeville, AICP
Owner/Planner
Forrest Mandeville Consulting
PO Box 337
Columbus, MT 59019
Forrest@ForrestMandevilleConsulting.com
Phone: (406) 690-1933
www.ForrestMandevilleConsulting.com

From: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>
Sent: Thursday, October 13, 2022 10:23 AM
To: Courtney Long <clong@CITYOFREDLODGE.COM>
Subject: Re: Draper D7 Subdivision

Courtney,

Just to follow up on this, I've attached a revised plat. There is a road between the proposed subdivision and Willow Creek Road that will be used as access to this subdivision. I expect this will be on the November 17 County Planning Board agenda, so if you have any questions or concerns please let me know.

Thanks!

Forrest J. Mandeville, AICP
Owner/Planner
Forrest Mandeville Consulting
PO Box 337
Columbus, MT 59019
Forrest@ForrestMandevilleConsulting.com
Phone: (406) 690-1933
www.ForrestMandevilleConsulting.com

From: Forrest Mandeville
Sent: Friday, September 23, 2022 10:29 AM
To: Courtney Long <clong@CITYOFREDLODGE.COM>
Subject: Draper D7 Subdivision

Courtney,

See attached. This just came in yesterday. It is a 10-lot commercial subdivision proposed for the Draper Ranch property north of the new Fire Department buildings on Highway 78. It would definitely be visible from the Spires, so my guess is that you'll probably get some questions, if you haven't already. I think they've already been working on the roads.

Let me know if you have any questions or concerns. I can get you more details if you want. I can also get a hard copy packet of the application for the City once the application is sufficient for review.

Thanks,

Forrest J. Mandeville, AICP
Owner/Planner
Forrest Mandeville Consulting
PO Box 337
Columbus, MT 59019
Forrest@ForrestMandevilleConsulting.com
Phone: (406) 690-1933
www.ForrestMandevilleConsulting.com

Carbon County Planning Board
10 Oakes Ave. South
Red Lodge, MT. 59068

November 16, 2022

RE: Proposed 7D 10-Lot Commercial Subdivision

Dear Carbon County Planning Board,

As a resident of Red Lodge and as someone who values the rural setting and ability to view our clear night skies, I am concerned about potential light pollution and sky glare from the proposed 7D 10-Lot Commercial Subdivision. Potential impacts of light pollution to the dark skies from the proposed subdivision along highway 78 and Willow Creek Road are not adequately addressed in the documents associated with this project or addressed in conditions for approval. Light pollution lowers the quality of outdoor recreation, including the experience of night sky viewing. Without adequate guidance to mitigate the potential for skyward and offsite glare from outdoor lighting, the proposed subdivision will have negative effects to dark skies and may present a nuisance to nearby residences. The Spires Residential Subdivision is within the City Limits of Red Lodge and approximately 600 feet to the east and northeast of the proposed 7D 10-Lot Commercial Subdivision. Other nearby rural residences may also be affected.

The City of Red Lodge has adopted lighting standards in the 2022 City of Red Lodge Zoning Regulations (see Section 4.5.71). The purpose of and intent is to “create a safe and comfortable nighttime environment, while protecting the night sky as a feature of rural character by reducing sky glow”. The standards are based on recommendations by the International Dark Sky Association and Illuminating Engineering Society of North America. These standards reduce negative effects of glare, light pollution and light trespass.

Given the proximity of the 7D 10-Lot Commercial Subdivision to present and future residential properties I encourage Carbon County Planning Board to consider adding specific lighting requirements as a condition for approval that will mitigate the effects of outdoor lighting to dark skies and the environment. These requirements are consistent with City of Red Lodge standards for protecting night skies. This includes:

- 1) Prohibit use of mercury vapor, low pressure sodium, or high pressure sodium fixtures; or upcast lights.
- 2) Prohibit any light fixtures that result in off-site glare or trespass onto adjacent property or streets.
- 3) All outdoor lighting be full cutoff as defined by Illuminating Society of North America (IESNA). Full cutoff light results in a light pattern where no light is permitted at or above a horizontal plane at the bottom of the fixture.
- 4) Unacceptable outdoor fixtures are those with exposed bare bulbs allowing light to escape in multiple directions causing light trespass and glare.
- 5) Acceptable fixtures are those that are fully or side shielded while directing light into areas necessary for better night vision.
- 6) To minimize blue light, use warm-white light or filtered LEDs that are 3,000 Kelvin or lower.
- 7) No lamps or fixtures shall exceed 1,000 lumens for any single lamp.
- 8) Limit height of outdoor fixtures to 15 feet or less.

- 9) All outdoor light fixtures shall be turned off between 11:00 p.m. and sunrise. To minimize overnight light trespass use of controls such as automated switching systems, use of timers, light dimmers, or motion sensors that reduce lighting should be used.

Adding these conditions to the proposed 7D 10-Lot Commercial Subdivision and accompanying 7D Subdivision Declaration of Restrictions, Covenants and Conditions is consistent with the intent and vision of the 2022 Carbon County Growth Policy. **Chapter 5 Vision** states:

- “The growth policy, by guiding land use decisions, is one way of moving towards the vision residents have of the future.”
- “Carbon County remains a good place to live as evidenced by good schools, high levels of community involvement, small family farms, low crime rates, clean air and water, open spaces and **scenic vistas**, abundant wildlife, and friendly people.”

Goal 4 Cooperation with Local Other Governments states, “Work cooperatively for the benefit of County residents with unincorporated communities, local governments in the county ...that could affect Carbon County residents.” Objective 4.1.A goes on to state “Coordinate the review of subdivision and development permit applications **within one mile** of incorporated community boundaries”.

Adding the requested outdoor light requirements to the conditions for approval and the accompanying 7D Subdivision Declaration of Restrictions, Covenants and Conditions would be consistent with Red Lodge Zoning Regulations designed to protect night skies and mitigate a potential nuisance to neighboring residences from light pollution, light trespass and offsite glare.

Thank you for your consideration.

Jeff DiBenedetto
317 South Haggin Ave.
Red Lodge, Montana 59068

Barbara Pitman
323 South Haggin Ave.
Red Lodge, Montana 59068

Angie Hazelswart
301 South Haggin Ave.
Red Lodge, Montana 59068

Re: 7D subdivision

Andrew Evans <evansad1991@gmail.com>

Tue 11/15/2022 6:58 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Good afternoon,

I am sending this email as a concerned citizen of Red Lodge, MT and the commercial subdivision off highway 78 on the west bench. As part of the night sky group of Red Lodge, we are asking that these lots require to follow the International Dark Skies Guidelines. As a tourist destination, it is important that we protect all aspects of outdoor recreation for tourists and residents. Requiring these guidelines would put very little burden on the new construction while protecting one of our towns greatest assets, our night skies.

Thanks for consideration,

Andrew Evans
Red Lodge Ales

703-300-6421

Draper 7D 10 Lot Commercial Subdivision

Scott/Julie Hancock <scottjuliehancock@gmail.com>

Mon 11/14/2022 2:59 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Carbon County Planning Board
Carbon County Administrative Building
P.O. Box 466
Red Lodge, MT 59068

Dear Carbon County Planning Board Members:

As residents of Carbon County west of Red Lodge, we urge the Planning Board to strongly consider the impacts of lighting choices made regarding the development of the proposed Draper Ranch 7D 10 Lot Commercial Subdivision. We request that the Board make a condition of approval of this subdivision the requirement that all exterior lighting associated with this development meet the low impact lighting standards set by the International Dark-Sky Association (IDA). These dark sky-friendly fixtures provide lighting that is visually appealing, functional and improves safety while eliminating glare and reducing light trespass.

The location of this subdivision on the West Bench, adjacent to many residential properties and Highway 78, means that its lighting will have a major impact on the surrounding city and county properties. Many residents, visitors and tourists to the area value their view of the night sky, astronomical events, and mountainscapes and the lack of disruptive glare from unshielded lights. The reduction of intrusive lighting positively affects property values of area residents whereas exposure to unshielded lighting and glare negatively affects the enjoyment, privacy, rights and value of exposed properties. Human health, wildlife movement and health, and property security and safety are all enhanced by low impact shielded lighting.

We strongly request that this commercial subdivision's developer, owners, and occupants only install dark-sky compliant exterior lighting which would include fully shielded fixtures which emit no lighting above a horizontal plane and have warm-toned, amber or filtered LED light sources. Such low impact lighting will result in significant energy and cost-savings to the developers along with increased good-will from affected county residents.

Although we reside several miles from the location of this subdivision, glare and non-dark-sky compliant lighting will be visible from our property and will affect the clarity of our view of the night sky. Having low-impact lighting a condition of approval for this 10 lot subdivision will have many benefits to the developers, owners and occupants, and area residents and will make the West Bench, City of Red Lodge, and county lands for many, many miles more livable, safe and economically viable. Thank you for carefully considering these comments.

Sincerely,

Scott and Julie Hancock
10 Beaver Trail Loop
P.O. Box 883
Re Lodge, MT 59068

Lighting and noise consideration for 7D 10Lot Major Commercial Subdivision

ROBERT MARY Johnson <msj1rpj1@msn.com>

Tue 11/15/2022 4:45 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting and Noise Restrictions for 7D 10 Lot Major Commercial Subdivision

Dear Planning Board Members:

Rather than paraphrase all that Maggie Karas said in her letter to you regarding lighting and noise in the newly proposed commercial subdivision, we are expressing our agreement, as outlined by Maggie, stating her ideas for mitigating the impact of noise and lighting on surrounding residents. We couldn't say it better.

We live in line of sight of the subdivision and would appreciate your consideration.

Thank you.

Sincerely,

Bob and Mary Johnson
91 Fox Rd
Red Lodge, MT 59068
701-641-3376

7D Subdivision - Comments on Lighting and Noise for Planning Board Consideration

Maggie Karas <mckaras33@gmail.com>

Thu 11/10/2022 8:02 AM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Forrest,

I have the following comments on the proposed 7D 10 Lot Commercial Subdivision for consideration by the Planning Board:

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting Restrictions for 7D 10 Lot Major Commercial Subdivision

Dear Planning Board Members:

The Karas and Draper families have been neighbors on the West Bench for 50 years. We've seen the area develop from mostly rural agricultural land use to more and more residential and commercial land, as is necessary to accommodate growth in this area. I want to recognize Draper Ranch's private property right to create a commercial development to accommodate this growth in businesses needed to support this population increase. I would also like to recognize some of the main reasons so many of us choose to live in the West Bench area, which are the vastness and quietness of both the land and the sky—including dark skies at night. I would like to suggest the Planning Board impose conditions of approval to mitigate the impact that 7D commercial subdivision will have on the surrounding Carbon County residents as far as lighting and noise.

I would like to urge you to require that the proposed subdivision include specific low impact outdoor lighting and noise control language as spelled out below, in the Declaration of Covenants, Conditions and Restrictions of the subdivision.

OUTDOOR LIGHTING:

The primary reason to require specific covenants for low-impact outdoor lighting is to preserve the amenities that matter to all Carbon County residents, old and new.

In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association (IDA) recommendations will negatively impact surrounding residents for many miles due to the open rural and elevated nature of the West Bench. An existing commercial business in a subdivision created by the same developer adjacent to this proposed subdivision (West Bench Mini Storage) does not have shielded or down facing outdoor light fixtures and creates significant light pollution visible for many miles.

Notably, low impact outdoor lighting would be a benefit to a new commercial business developer, in terms of cost savings resulting from using more efficient lighting and a desirable development to build in. The International Dark Skies Association (IDA) estimates that at least 30% of all outdoor lighting in the U.S. alone is wasted, mostly by lights that aren't shielded.

Any light pollution created by this new development will be disruptive to both residents nearby and those who enjoy the astronomical views available along the West Bench. During significant astronomical events, such as lunar eclipses, northern lights, comets and more, many who live within city limits where light pollution is intense can be found heading to the dark West Bench to witness these.

Research also shows that Circadian rhythms are disrupted when excessive outdoor lighting is used. Our sleeping patterns are "[governed by the day-night cycle](#)," so being exposed to artificial light during the nighttime disrupts our body's production of melatonin, a sleep-inducing hormone. This creates health issues. The existing West Bench Mini Storage commercial development is an example of light pollution due to the non-shielded outdoor light fixtures, creating offensive glare, and out- and up-lighting. A few years ago, I contacted the owner of this business requesting, and offering to help fund, shielded low-impact fixtures, but was told by the business owner that "...the Sheriff recommended they install..." this offensive type of lighting for security reasons. Evidence

proves otherwise that shielded lighting can offer equal, if not more, secure lighting at a reduced cost with less offensive pollution and glare.

I urge you to require the proposed 7D subdivision include specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions document to allow only down-facing outdoor lighting that complies with International Dark-sky Association (IDA) recommendations to minimize light trespass from the building and site, reduce sky-glow, increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact from lighting on nocturnal environments for the benefit of both the building owners, those driving along Highway 78, as well as the surrounding residents to whom the offensive lights would be visible potentially all night every night.

I would like to see conditions of approval which require the CC&R's to include language similar to:

- All exterior lighting, including but not limited to streets, structures, signage and parking areas, must be free of glare and shall be fully shielded or shall be indirect.
- No lighting shall shine beyond a property's lot line.
- Fixtures shall be of a shielded design and/or placed in such a way as to not pollute the night sky.
- Obtrusive flood lighting is prohibited.
- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.
- No fixture will be installed on or on a post higher than 18 feet from the ground.

The definition of a "Fully Shielded Light": Fixtures that stop light rays from being emitted at angles above the horizontal plane as certified by photometric testing.

However, that language lacks specificity, and I imagine would lead to frustration for a contractor trying to comply. Therefore, I would recommend these specifics to start with found through the websites listed at the end of this letter.

- Install exterior light fixtures only in locations that require light for safety. Provide light only where needed, when needed, in the minimum amount needed.
- The Illuminating Engineering Society (IES) has developed a Model Lighting Ordinance for various lighting zones. I would suggest that 7D require lighting be compliant with IES Lighting Zone 2 (LZ2): "moderate ambient lighting in areas such as light commercial business districts and ... mixed use residential districts". (see website #5 below)
 - IES developed something called a BUG Rating, which stands for backlight, uplight, and glare. **Backlight (B)** is the light directed behind the fixture, **uplight (U)** is any light directed upward above the horizontal plane of the luminaire, and **glare (G)** is the amount of light emitted from the luminaire at high angles.
 - For LZ2, , Backlight rating of B2 or less for lights 1 to 2 times the mounting height to the lighting boundary, and properly mounted, an Uplight rating of U2, and a Glare rating of G2.
- Utilize only Dark Skies compliant outdoor light fixtures as defined through the [IDA Fixture Seal of Approval program](#), (website #6 below) which declares:
 - A fixture must be fully shielded and emit no light above the horizontal plane. There shall be no sag or drop lenses, side light panels, uplight panels, etc.
 - Approved fixtures shall employ warm-toned (3000K and lower) white light sources or may employ amber light sources or filtered LED light sources. Because blue light brightens the night sky more than any other color of light, it's important to minimize the amount emitted. Exposure to blue light at night has also been shown to harm [human health](#) and [endanger wildlife](#). [IDA recommends](#) using lighting that has a color temperature of no more than 3000 Kelvins, and using only warm color lighting. This includes HPS and low-color-temperature LEDs.
 - Lighting must be full cutoff or recessed light fixtures. Full cut off fixtures prevent light from being emitted on or above the horizontal plane, and direct light downward where light is needed.
- Outdoor light fixtures (mounted or freestanding) shall be no higher than 18'
- Outdoor light fixtures illuminating signs should also be compliant with low impact lighting guidelines.

Contractors / developers could visit www.firstlighttechnologies.com or comparable website for assistance with lighting design that offer the lowest lifecycle costs.

WEBSITE REFERENCES:

- 1) <https://www.darksky.org/light-pollution/lighting-crime-and-safety/>

- 2) <https://solutions.borderstates.com/what-is-dark-sky-compliance/>
- 3) <https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>
- 4) <https://www.usgbc.org/credits/ss8>
- 5) <https://www.firstlighttechnologies.com/solar-light-blog/lighting-fundamentals-bug-ratings/>
- 6) <https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/>

NOISE:

Previously, a redi-mix plant was operating on commercial property adjacent to West Bench Mini Storage subdivided by Draper Ranch Company. The lot on which this business was located did not have a Declaration of Conditions, Covenants and Restrictions to the best of my knowledge, and the cement plant would fire up early in the morning - as I recall around 5:30 or 6 am during the construction season. This is a time when neighbors are sleeping with open windows, and due to the lack of trees to buffer the noise, it was quite offensive. I would like to see a condition of subdivision approval that requires more specific language included in the CC&R's to address the hours of the day noise is allowed, that being 7am – 8pm at a noise level of 80 dBA, reducing to a level of 70 dBA between 8pm and 7am daily.

I believe these light and noise restrictions will mitigate the potential negative impact this development will have on the night skies and peaceful surroundings and the overall rural quality of life so many of us enjoy, and want to maintain, in Carbon County.

Sincerely,

Maggie (Margaret) Karas
287 Highway 78
Red Lodge, MT 59068
406-425-1579

New contact form message for Forrest Mandeville Consulting via Contact Us

Lemuel Miller <notifications@mail.conversations.godaddy.com>

Thu 11/17/2022 10:54 AM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Forrest Mandeville Consulting has received a new message.

Reply to Conversation  Reply to Conversation

Name

Lemuel Miller

Email

lemilleriv@gmail.com

Message

11/17/2022 Dear Carbon County Planning Board, As the owners of the residential property under development at 3001 Elderberry in the Spires Subdivision, we wish to express support for Low Impact Outdoor Lighting Covenants for 7D 10 Lot Major Commercial Subdivision immediately adjacent to our property along Willow Creek Road. When we began the construction of our home in April of this year, there was no indication of any development on the property to the West. We do want to acknowledge an individual's private property right to create a commercial development, and recognize the rapid growth that is occurring in both Red Lodge and on the West Bench –both in housing units and the commercial network needed to support that growth. We would like to suggest a condition of approval to mitigate the impact that 7D commercial subdivision will have on the surrounding Carbon County residents. We would like to urge you to require the proposed subdivision include specific low impact outdoor lighting language, spelled out below, in the Declaration of Covenants, Conditions and Restrictions of the 7D subdivision. Specifically we are asking that the 7D Subdivision consider utilizing only Dark Skies compliant outdoor light fixtures as defined through the IDA Fixture Seal of Approval program. All of us enjoy the rural landscape that only our area provides. As long time residents of the Wyoming – Montana border area, we cherish our beautiful star filled night skies, and the solitude of our small rural communities. Our specific property in the Spires Subdivision, places us “front and center” regarding any night lighting impacts of the 7D development. We are asking that the 7D development incorporate Dark Skies lighting guidelines into their proposed Covenants and Restrictions. Respectfully, Lemuel “Chip”

Miller, Peggy L. Miller 3001 Elderberry, Red Lodge, MT. 59068 307-250-8707

Language
en-US

Submitted_from
Homepage

This message came from your contact form, [Forrest Mandeville Consulting](#)

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7D and Dark Skies

Mark Moak <moakm@rocky.edu>

Tue 11/15/2022 4:00 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Dear Carbon County Planning board,

I urge you to pass a condition of approval to require 7D Subdivision include International Dark Sky Association (IDA) guidelines in the 10-Lot Commercial Subdivision's Declaration of Covenants, Conditions and Restrictions. My wife and I own a place in Grizzly Peak Subdivision and are very interested in preserving and enhancing dark skies in Carbon County.

I'd also like to invite the board to come to an upcoming exhibit of seven photographers' work at the Carbon County Arts Guild: Dark Sky Visions. The opening reception is from 4-6pm, Saturday, January 7th, 2023. The show, which celebrates the night sky, will be up through February 24th.

Thank you so much for your consideration,
Mark

Mark S. Moak
Professor of Art Emeritus
Rocky Mountain College
1511 Poly Drive
Billings, Montana
59102

moakm@rocky.edu

Draper 7D 10 Lot Commercial Subdivision

Marge Nearpass <mbnearpass@gmail.com>

Tue 11/15/2022 11:15 AM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting and Noise Restrictions for 7D 10 Lot Major Commercial Subdivision

Dear Planning Board Members:

I want to recognize Draper Ranch's private property right to create a commercial development to accommodate the increased residential growth in our community and commercial entities needed to support this increase in homes and businesses. I would also like to recognize some of the main reasons so many residents choose to live in the West Bench area, which are the vastness and quietness of both the land and the sky—including dark skies at night. I would like to suggest the Planning Board impose conditions of approval necessary to mitigate the impact from lights and noise that 7D commercial subdivision will have on the surrounding Carbon County residents.

I urge you to require that the proposed subdivision includes specific low impact outdoor lighting and noise control language as spelled out below in the Declaration of Covenants, Conditions and Restrictions of the 7D subdivision.

OUTDOOR LIGHTING:

The primary reason to require specific restrictions for low-impact outdoor lighting is to preserve the amenities that matter to all Carbon County residents, old and new.

In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association (IDA) recommendations will negatively impact surrounding residents for many miles due to the open rural and elevated nature of the West Bench. An existing commercial development created by the same developer adjacent to this proposed subdivision (West Bench Mini Storage) does not have shielded or down facing outdoor light fixtures and thus creates significant light pollution visible for many miles.

Notably, low impact outdoor lighting would be a benefit to the new commercial lot developer, in terms of cost savings resulting from using more efficient lighting as well as making the development appealing to future commercial lot developers. The International Dark Skies Association (IDA) estimates that at least 30% of all outdoor lighting in the U.S. alone is wasted, mostly by lights that aren't shielded.

Any light pollution created by this new development will be disruptive to both residents nearby and those who enjoy the astronomical views available along the West Bench. During significant astronomical events, such as lunar eclipses, northern lights, comets and more, many who live within city limits where light pollution is intense can be found heading to the dark West Bench for a better view with our dark skies.

Research also shows that Circadian rhythms are disrupted when excessive outdoor lighting is used. Our sleeping patterns are "[governed by the day-night cycle](#)," so being exposed to artificial light during the nighttime disrupts our body's production of melatonin, a sleep-inducing hormone. This creates health issues. The existing West Bench Mini Storage commercial development is an example of light pollution due to non-shielded up- and out-lighting outdoor fixtures, creating offensive glare.

I would like to urge you to require the proposed 7D subdivision include specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions document to allow only down-facing outdoor lighting that complies with International Dark-sky Association (IDA) recommendations to minimize light trespass from the building and site, reduce sky-glow, increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact from lighting on nocturnal environments for the benefit of both the building owners, those driving along Highway 78, as well as the surrounding residents to whom the offensive lights would be visible all night – every night.

I would like to see conditions of approval which require the CC&R's to include specific language similar to:

- All exterior lighting, including but not limited to streets, structures, signage, and parking areas, must be free of glare and shall be fully shielded or shall be indirect.
- No lighting shall shine beyond a property's lot line.
- Fixtures shall be of a shielded design and/or placed in such a way as to not pollute the night sky.
- Obtrusive flood lighting is prohibited.
- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.
- The maximum height of any light fixture on a building or post shall be 18 feet.

The definition of a "Fully Shielded Light": Fixtures that stop light rays from being emitted at angles above the horizontal plane as certified by photometric testing.

However, that language lacks specificity, and I imagine would lead to frustration for a contractor trying to comply. Therefore, I would recommend these specifics to start with found through the websites listed at the end of this letter.

- Install exterior light fixtures only in locations that require light for safety. Provide light only where needed, when needed, in the minimum amount needed.
- The Illuminating Engineering Society (IES) has developed a Model Lighting Ordinance for various lighting zones. I would suggest that 7D require lighting be compliant with IES Lighting Zone 2 (LZ2): "moderate ambient lighting in areas such as light commercial business districts and ... mixed use residential districts". (see website #5 below)
 - IES developed something called a BUG Rating, which stands for backlight, uplight, and glare. **Backlight (B)** is the light directed behind the fixture, **uplight (U)** is any light directed upward above the horizontal plane of the luminaire, and **glare (G)** is the amount of light emitted from the luminaire at high angles.
 - For LZ2, , Backlight rating of B2 or less for lights 1 to 2 times the mounting height to the lighting boundary, and properly mounted, an Uplight rating of U2, and a Glare rating of G2.
- Utilize only Dark Skies compliant outdoor light fixtures as defined through the [IDA Fixture Seal of Approval program](#), (website #6 below) which declares:
 - A fixture must be fully shielded and emit no light above the horizontal plane. There shall be no sag or drop lenses, side light panels, uplight panels, etc.
 - Approved fixtures shall employ warm-toned (3000K and lower) white light sources or may employ amber light sources or filtered LED light sources. Because blue light brightens the night sky more than any other color of light, it's important to minimize the amount emitted. Exposure to blue light at night has also been shown to harm [human health](#) and [endanger wildlife](#). [IDA recommends](#) using lighting that has a color temperature of no more than 3000 Kelvins, and using only warm color lighting. This includes HPS and low-color-temperature LEDs.
 - Lighting must be full cutoff or recessed light fixtures. Full cut off fixtures prevent light from being emitted on or above the horizontal plane, and direct light downward where light is needed.
- Outdoor light fixtures (mounted or freestanding) shall be no higher than 18'
- Outdoor light fixtures illuminating signs should also be compliant with low impact lighting guidelines.

Contractors / developers could visit www.firstlighttechnologies.com or comparable website for assistance with lighting design that offer the lowest lifecycle costs.

WEBSITE REFERENCES:

- 1) <https://www.darksky.org/light-pollution/lighting-crime-and-safety/>
- 2) <https://solutions.borderstates.com/what-is-dark-sky-compliance/>
- 3) <https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>
- 4) <https://www.usgbc.org/credits/ss8>
- 5) <https://www.firstlighttechnologies.com/solar-light-blog/lighting-fundamentals-bug-ratings/>
- 6) <https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/>

NOISE:

We value the quietness of the West Bench for many reasons including being able to sleep peacefully at night with windows open. I would like to see a condition of subdivision approval require more specific language in the CC&R's to address the hours of the day noise is allowed, that being from 7am – 8pm at a noise level of 80 dBA, reducing to 70 dBA from 8pm and 7am daily.

I believe these light and noise restrictions will mitigate the potential negative impact this development will have on the night skies and peaceful surroundings and the overall rural quality of life so many of us enjoy, and want to maintain, in Carbon County.

Sincerely,

Brent Nearpass
147 Smith Road
Red Lodge, MT 59068
406.446.3854 or 406.425.0295

Draper's 7D Lot Commercial Subdivision

Marge Nearpass <marge_nearpass@redlodge.k12.mt.us>

Tue 11/15/2022 10:19 AM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Carbon County Planning Board

County Administrative Building

PO Box 466

Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting and Noise Restrictions for 7D 10 Lot Major Commercial Subdivision

Dear Planning Board Members:

I want to recognize Draper Ranch's private property right to create a commercial development to accommodate the increased residential growth in our community and commercial entities needed to support this increase in homes and businesses. I would also like to recognize some of the main reasons so many residents choose to live in the West Bench area, which are the vastness and quietness of both the land and the sky—including dark skies at night. I would like to suggest the Planning Board impose conditions of approval necessary to mitigate the impact from lights and noise that 7D commercial subdivision will have on the surrounding Carbon County residents.

I urge you to require that the proposed subdivision includes specific low impact outdoor lighting and noise control language as spelled out below in the Declaration of Covenants, Conditions and Restrictions of the 7D subdivision.

OUTDOOR LIGHTING:

The primary reason to require specific restrictions for low-impact outdoor lighting it to preserve the amenities that matter to all Carbon County residents, old and new.

In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association (IDA) recommendations will negatively impact surrounding residents for many miles due to the open rural and elevated nature of the West Bench. An existing commercial development

created by the same developer adjacent to this proposed subdivision (West Bench Mini Storage) does not have shielded or down facing outdoor light fixtures and thus creates significant light pollution visible for many miles.

Notably, low impact outdoor lighting would be a benefit to the new commercial lot developer, in terms of cost savings resulting from using more efficient lighting as well as making the development appealing to future commercial lot developers. The International Dark Skies Association (IDA) estimates that at least 30% of all outdoor lighting in the U.S. alone is wasted, mostly by lights that aren't shielded.

Any light pollution created by this new development will be disruptive to both residents nearby and those who enjoy the astronomical views available along the West Bench. During significant astronomical events, such as lunar eclipses, northern lights, comets and more, many who live within city limits where light pollution is intense can be found heading to the dark West Bench for a better view with our dark skies.

Research also shows that Circadian rhythms are disrupted when excessive outdoor lighting is used. Our sleeping patterns are "**governed by the day-night cycle**," so being exposed to artificial light during the nighttime disrupts our body's production of melatonin, a sleep-inducing hormone. This creates health issues. The existing West Bench Mini Storage commercial development is an example of light pollution due to non-shielded up- and out-lighting outdoor fixtures, creating offensive glare.

I would like to urge you to require the proposed 7D subdivision include specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions document to allow only down-facing outdoor lighting that complies with International Dark-sky Association (IDA) recommendations to minimize light trespass from the building and site, reduce sky-glow, increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact from lighting on nocturnal environments for the benefit of both the building owners, those driving along Highway 78, as well as the surrounding residents to whom the offensive lights would be visible all night – every night.

I would like to see conditions of approval which require the CC&R's to include specific language similar to:

- All exterior lighting, including but not limited to streets, structures, signage, and parking areas, must be free of glare and shall be fully shielded or shall be indirect.
- No lighting shall shine beyond a property's lot line.
- Fixtures shall be of a shielded design and/or placed in such a way as to not pollute the night sky.
- Obtrusive flood lighting is prohibited.

- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.
- The maximum height of any light fixture on a building or post shall be 18 feet.

The definition of a "Fully Shielded Light": Fixtures that stop light rays from being emitted at angles above the horizontal plane as certified by photometric testing.

However, that language lacks specificity, and I imagine would lead to frustration for a contractor trying to comply. Therefore, I would recommend these specifics to start with found through the websites listed at the end of this letter.

- Install exterior light fixtures only in locations that require light for safety. Provide light only where needed, when needed, in the minimum amount needed.
- The Illuminating Engineering Society (IES) has developed a Model Lighting Ordinance for various lighting zones. I would suggest that 7D require lighting be compliant with IES Lighting Zone 2 (LZ2): "moderate ambient lighting in areas such as light commercial business districts and ... mixed use residential districts". (see website #5 below)
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NOISE:

We value the quietness of the West Bench for many reasons including being able to sleep peacefully at night with windows open. I would like to see a condition of subdivision approval require more specific language in the CC&R's to address the hours of the day noise is allowed, that being from 7am – 8pm at a noise level of 80 dBA, reducing to 70 dBA from 8pm and 7am daily.

I believe these light and noise restrictions will mitigate the potential negative impact this development will have on the night skies and peaceful surroundings and the overall rural quality of life so many of us enjoy, and want to maintain, in Carbon County.

Sincerely,

Marjorie Nearpass

147 Smith Road

Red Lodge, MT 59068

406.446.3854

Re: Red Lodge Night Skies

A MROMEIJN <romeijn42@yahoo.com>

Wed 11/16/2022 8:10 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Thanks Forrest, not sure why the formatting changed on the first one, so the one below is with correct formatting. Much appreciated.

From: A MROMEIJN <romeijn42@yahoo.com>

Sent: Wednesday, November 16, 2022 12:09 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Subject: Red Lodge Night Skies

Hello,

Thanks for reading this email. I feel lucky and fortunate to live in Red Lodge, Montana. If you are like me, you enjoy the mountain living which is we live here. We spend nights many nights outside each year camping or just enjoying the night sky in our backyard. If you have had the opportunity to be outside at night, you know that the dark skies in Red Lodge brings a peaceful feeling and one that makes you truly appreciate the experience. Under a clear dark night sky, we are apt to see a stunning view of stars, the Milky Way, and hear and see shadows of birds flying overhead. It's one of my favorite pastimes to reflect on the serenity of where we live.

Studies are now just beginning to understand the negative effects of artificial light at night on wildlife and the impact on our health. As research progresses, we are likely to see the impact of light pollution and how it can adversely affect the wildlife. Taken from the website (<https://www.darksky.org/our-work/grassroots-advocacy/resources/public-outreach-materials>): It used to be that when the sun went down, celestial sources like the moon, stars, planets and the Milky Way lit the sky. Life learned to operate under the glow of these objects. For many animals, the natural night sky signals when to eat, sleep, hunt, migrate and even when to reproduce. It is estimated that half of all species on Earth start their "daily" activities at sundown.

For the sake of the environment, the animals, and the people who live here, let's be forward thinking in consulting and planning. Lighting up buildings at night does not necessarily improve security. Additionally, there are ways to mitigate lighting without impacting the night skies, our wildlife and our quality of living.

One of the ways to protect our night skies is to comply with the International Dark Sky Association's recommendations for shielding outside light fixtures, awareness of lumens and height and by not allowing the light extending beyond the property owner's lot line. For example, using only fully shielded, IDA dark sky certified fixtures for all outdoor lighting, so lights shine down, not up. There are several recommendations that help to protect our night skies.

Let's be proactive in our planning for the sake of our wildlife, quality of life and protect one of the many things that makes living in Red Lodge special.

Respectfully,

Aimee Romeijn
Red Lodge, Montana

On Nov 16, 2022, at 7:20 PM, Forrest Mandeville <Forrest@forrestmandevilleconsulting.com> wrote:

Thank you. I will make sure the Planning Board sees your comments.

Forrest J. Mandeville, AICP
Owner/Planner
Forrest Mandeville Consulting
PO Box 337
Columbus, MT 59019
Forrest@ForrestMandevilleConsulting.com
Phone: (406) 690-1933
www.ForrestMandevilleConsulting.com

From: A MROMEIJN <romeijn42@yahoo.com>
Sent: Wednesday, November 16, 2022 12:09 PM
To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>
Subject: Red Lodge Night Skies

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For the sake of the environment, the animals, and the people who live here, let's be forward thinking in consulting and planning. Lighting up buildings at night does not necessarily improve security. Additionally, there are ways to mitigate lighting without impacting the night skies, our wildlife and our quality of living.

Enter

You sent

One of the ways to protect our night skies is to comply with the International Dark Sky Association's recommendations for shielding outside light fixtures, awareness of lumens and height and by not allowing the light extending beyond the property owner's lot line. For example, using only fully shielded, IDA dark sky certified fixtures for all outdoor lighting, so lights shine down, not up. There are several recommendations that help to protect our night skies.

Let's be proactive in our planning for the sake of our wildlife, quality of life and protect one of the many things that makes living in Red Lodge special.

Respectfully,

Aimee Romeijn
Red Lodge, Montana

Low Impact Outdoor Lighting and Noise Restrictions for 7D 10 Lot Major Commercial Subdivision

Michael Schwab <michael@michaelschwab.com>

Thu 11/10/2022 12:07 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Dear Forrest and Planning Board Members:

I want to recognize Draper Ranch's private property right to create a commercial development to accommodate the increased residential growth in our community and commercial entities needed to support this increase in homes and businesses. I would also like to recognize some of the main reasons so many residents choose to live in the West Bench area, which are the vastness and quietness of both the land and the sky—including dark skies at night. I would like to suggest the Planning Board impose conditions of approval necessary to mitigate the impact from lights and noise that 7D commercial subdivision will have on the surrounding Carbon County residents.

I urge you to require that the proposed subdivision includes specific low impact outdoor lighting and noise control language as spelled out in the Declaration of Covenants, Conditions and Restrictions of the 7D subdivision.

OUTDOOR LIGHTING:

The primary reason to require specific restrictions for low-impact outdoor lighting is to preserve the amenities that matter to all Carbon County residents, old and new.

In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association (IDA) recommendations will negatively impact surrounding residents for many miles due to the open rural and elevated nature of the West Bench. An existing commercial development created by the same developer adjacent to this proposed subdivision (West Bench Mini Storage) does not have shielded or down facing outdoor light fixtures and thus creates significant light pollution visible for many miles.

Notably, low impact outdoor lighting would be a benefit to the new commercial lot developer, in terms of cost savings resulting from using more efficient lighting as well as making the development appealing to future commercial lot developers. The International Dark Skies Association (IDA) estimates that at least 30% of all outdoor lighting in the U.S. alone is wasted, mostly by lights that aren't shielded.

Any light pollution created by this new development will be disruptive to both residents nearby and those who enjoy the astronomical views available along the West Bench. During significant astronomical events, such as lunar eclipses, northern lights, comets and more, many who live within city limits where light pollution is intense can be found heading to the dark West Bench for a better view with our dark skies.

I would like to urge you to require the proposed 7D subdivision include specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions document to allow only down-facing outdoor lighting that complies with International Dark-sky Association (IDA) recommendations to minimize light trespass from the building and site, reduce sky-glow, increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact from lighting on nocturnal environments

for the benefit of both the building owners, those driving along Highway 78, as well as the surrounding residents to whom the offensive lights would be visible all night – every night.

I would like to see conditions of approval which require the CC&R's to include specific language similar to:

- All exterior lighting, including but not limited to streets, structures, signage, and parking areas, must be free of glare and shall be fully shielded or shall be indirect.
- No lighting shall shine beyond a property's lot line.
- Fixtures shall be of a shielded design and/or placed in such a way as to not pollute the night sky.
- Obtrusive flood lighting is prohibited.
- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.
- The maximum height of any light fixture on a building or post shall be 18 feet.

NOISE:

We value the quietness of the West Bench for many reasons including being able to sleep peacefully at night with windows open. I would like to see a condition of subdivision approval require more specific language in the CC&R's to address the hours of the day noise is allowed, that being from 7am – 8pm at a noise level of 80 dBA, reducing to 70 dBA from 8pm and 7am daily.

I believe these light and noise restrictions will mitigate the potential negative impact this development will have on the night skies and peaceful surroundings and the overall rural quality of life so many of us enjoy, and want to maintain, in Carbon County.

Thank you.

Sincerely,

Michael Schwab and Kathryn Kleinman

38 Fox Road

P.O. Box 2565

Red Lodge, MT 59068

<http://www.michaelschwab.com>

Comments Regarding 7D Subdivision

Nick Stayner <nickstayner@gmail.com>

Thu 11/17/2022 3:14 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

To Whom It May Concern:

My wife, two sons and I moved to the Spires subdivision of Red Lodge this past summer. We are writing today to voice our support for inclusion of specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions of the 7D commercial subdivision.

In addition to supporting the comments put forth by our friend and neighbor Traute Parrie, we would like to add that dark skies at night have been one of the most memorable highlights of our move here. The inclusion of dark sky preserving language in the covenants of the Spires was one of the many factors that drew us to build a home in the subdivision. We are excited to raise our children in an environment that values the clarity of the night sky. After living in Billings for the last 10 years, we have relished leaving the bright night skies of the city behind. We hope for it to remain that way, not only for our family and neighbors but for the residents of the West Bench, Red Lodge, and all who travel to this area seeking the aspects of the natural world that make our community so unique and desirable.

Our family hopes you will consider including specific low impact outdoor lighting language in the covenants of the 7D subdivision.

Sincerely,

Nick Stayner, Kate McDevitt, Dell Stayner, and Pete Stayner

New contact form message for Forrest Mandeville Consulting via Contact Us

Corey Thompson <notifications@mail.conversations.godaddy.com>

Wed 11/16/2022 7:39 AM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

Forrest Mandeville Consulting has received a new message.

Reply to Conversation  Reply to Conversation

Name

Corey Thompson

Email

coreycoqthompson@gmail.com

Message

As chair of the city of Red Lodge's Sustainability Board, I would strongly encourage your firm to include subdued lighting in your plan for proposed 7D 10-Lot commercial subdivision along highway 78. The city of Red Lodge has recently upgraded its zoning to include lighting as a condition of approval for residential and commercial buildings and this proposed subdivision is right on the edge of town. Not only is night skies friendly lighting more energy efficient, your neighbors will appreciate and respect your efforts to accommodate to our codes. Thanks! Corey Thompson Red Lodge Sustainability Board chair

Language

en-US

Submitted_from

Homepage

This message came from your contact form, [Forrest Mandeville Consulting](#)

Remember to download the [Conversations mobile app for iOS](#)

Sent via GoDaddy Websites + Marketing | Manage Emails

Fwd: 7D commercial subdivision

Bill Tucker <billbelltucker@gmail.com>

Thu 11/17/2022 4:20 PM

To: Forrest Mandeville <Forrest@forrestmandevilleconsulting.com>

----- Forwarded message -----

From: **Bill Tucker** <billbelltucker@gmail.com>

Date: Thu, Nov 17, 2022 at 4:19 PM

Subject: 7D commercial subdivision

To: <forrest@mandevilleconsulting.com>

Forrest,

I am writing with the greatest concern regarding the lighting at the 7D commercial subdivision. Please protect our Montana Dark Skies, moonlight, stars, nocturnal wildlife and the beauty that surrounds us.

Please rule in downward facing lights only!!!!!!!

We already have to look at the disgusting lights of the storage facility that looks like a UFO is landing. It is not necessary.

If your house faced this LED lighting and the potential upcoming lighting of this new development, you would be concerned and fighting this too.

It is time to listen to the locals that have to live next to this.

Downward facing lights only please...

Thank you.

Bill Tucker
19 Eveningstar St.
REd Lodge, MT 59068

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

November 14, 2022

Regarding: Outdoor Lighting Condition of Approval for 7D 10 Lot Major Commercial Subdivision

Dear Planning Board Members:

I'm writing on behalf of the **Red Lodge Dark Skies (RLDS) organization** that comprises members from both Carbon County and Red Lodge. We are an active community of residents, HOAs and nonprofits dedicated to preserving and protecting our dark sky by educating and partnering with the community, local government and developers.

One of the **Greatest Assets** we have is our **Dark Sky**. It's no less than the mountains, the prairies, or sun-filled skies surrounding us and it costs us nothing. We may have been taking it for granted because we're rural and the light pollution seen in Laurel and Billings hasn't caught up to us yet, but it's threatening us now with recent growth and development in our own area. **It costs us nothing to keep our sky dark** other than our protection and actions to preserve it.

The benefits of preserving our Dark Sky here, in Carbon County, are much greater to us than allowing its diminishment:

- The State has a committee actively strategizing to promote Astro-tourism in Montana – adding potential to bring a greater number of tourists to our area (a statewide economic boost)
- Our own chamber of commerce is following RLDS and standing ready to promote Astro-tourism in Red Lodge and Carbon County (a local economic boost)
- The RLDS chapter is working with the City to become an International Dark Sky (IDA) Community. This puts us on a national and international map as a recognized dark sky place – a place where people know they can travel to see, at the very least, the milky way and constellations (along with Yellowstone, Glacier, Medicine Rocks and other destinations)
- The City revised its Outdoor Lighting Ordinance to model international dark sky standards as part of its zoning regulations. Regulating the amount of glare and glow improves night-time visibility at a pedestrian level and therefore, provides greater security and safety.
- Our community is building an observatory in Van Dyke Park just south of the Rodeo Grounds that promises many star-gazing and educational events for residents, astronomy students and tourists.
- All living things, in their natural order, depend on the darkness of night for their health, wellness, habit and compass.

Everyone has a natural right to the darkness of the night sky, to see the milky way, the galaxies, stars, and all nocturnal phenomena. We would never deny anyone the ability to see, feel the warmth and light of the sun during the day; no one should be denied the same ability to see, experience, study or capture the wonder of the night sky and to sleep peacefully under it free from the intrusion of artificial light.

We don't need to do without light at night to protect and preserve our dark sky, we only **need to ensure outdoor lighting is thoughtfully planned**: fully-shielded from causing outward glare and upward glow.

Red Lodge Dark Skies Chapter is asking for one additional condition of the 7D subdivision approval: that by subdivision covenant (or other provision) any developer within the subdivision must submit and commit to **an outdoor lighting plan that complies with IDA lighting standards**. This would serve to mitigate the impacts of light pollution upon the community of Carbon County and Red Lodge preserving our night sky.

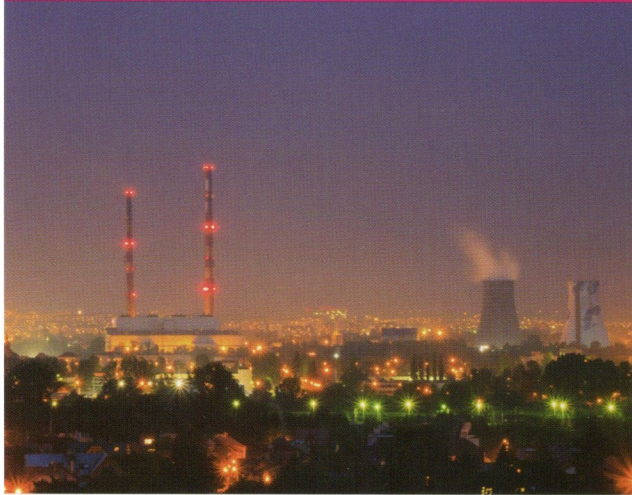
This picture represents the condition of the south-adjacent and previously developed commercial/industrial subdivisions (Schneider-Sheldon and RL Fire/Rescue Foundation) and what we're trying to avoid being replicated at the 7D subdivision lots as they're developed.



Sincerely,

Theresa Whistler
614 S Broadway Ave
Red Lodge, 59068 and Carbon County
9089-872-5596

Energy use and its impact on our environment has become one of the top concerns facing humanity.



Poorly designed outdoor lighting wastes energy by not being shielded, emitting more light than necessary or shining when and where it's not needed. Wasting energy in this way has huge economic and environmental consequences.

Leaving lights on overnight – such as those in office buildings – wastes energy and contributes to the general skyglow of the city. Dark sky friendly lighting does not mean “no light.” It means using the light that you need for a specific task in the most efficient manner possible.

“We can create a more sustainable, cleaner and safer world by making wiser energy choices.”

– Robert Alan Silverstein,
children's science book author



WHY DARK SKIES?

The need to protect and restore the natural nighttime environment is more urgent than ever. Light pollution, defined as light where it is not wanted or needed, affects our health, the environment, wildlife, and our ability to find awe in the natural night. Research indicates that light pollution is increasing at a global average rate of two percent per year.

ABOUT IDA

The International Dark-Sky Association, a 501(c)(3) nonprofit organization based in Tucson, Arizona, is dedicated to preserving and protecting the natural nighttime environment.



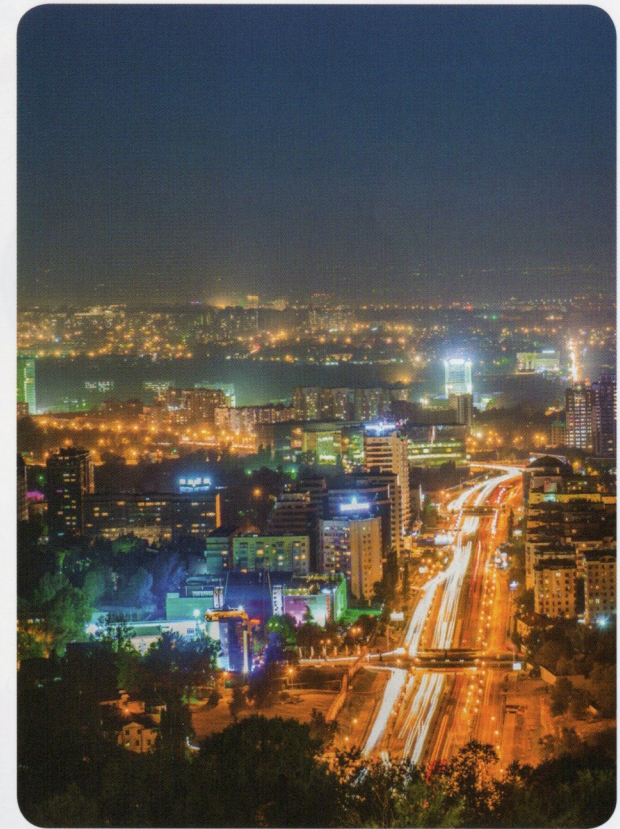
HELP US PROTECT THE NIGHT

Our work is made possible by support from IDA members. Become a member and support our work in protecting the natural nighttime environment. Please join us today!

**DARK
SKY.
ORG**

International Dark-Sky Association
5049 E. Broadway Blvd, # 105
Tucson, AZ 85711 USA

Light Pollution Wastes Energy and Money



INTERNATIONAL DARK-SKY ASSOCIATION

LIGHT POLLUTION COSTS MONEY AND WASTES RESOURCES

HOW DOES ENERGY WASTE HARM THE ENVIRONMENT?

Excess lighting pumps millions of tons of carbon into our atmosphere every year, and also causes light pollution.

Light pollution:

- Increases greenhouse gas emissions
- Contributes to climate change
- Increases our energy dependence

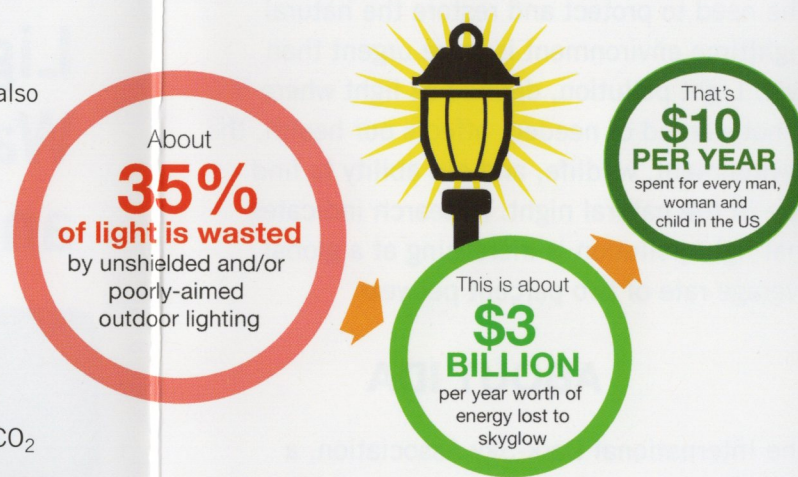
WHAT ABOUT OUR CARBON FOOTPRINT?

In the U.S. alone, about 15 million tons of CO₂ are emitted each year to power residential outdoor lighting. That equals the emissions of about 3 million passenger cars and adds up to 40,000 tons per day. To offset all that carbon dioxide, we'd need to plant about 600 million trees annually!



WHAT DOES LIGHT POLLUTION COST?

About \$3 billion dollars per year of energy is lost to bad lighting. This is about \$10 a year for every man, woman, and child in the U.S.



HOW MUCH ENERGY AM I WASTING?

The average house with poorly designed outdoor lighting wastes 0.5 kilowatt-hours (kWh) per night. A kilowatt-hour is a unit of energy equivalent to one kilowatt of power for an hour. It's enough energy to power a 50-inch plasma TV for one hour or run one load in your dishwasher!



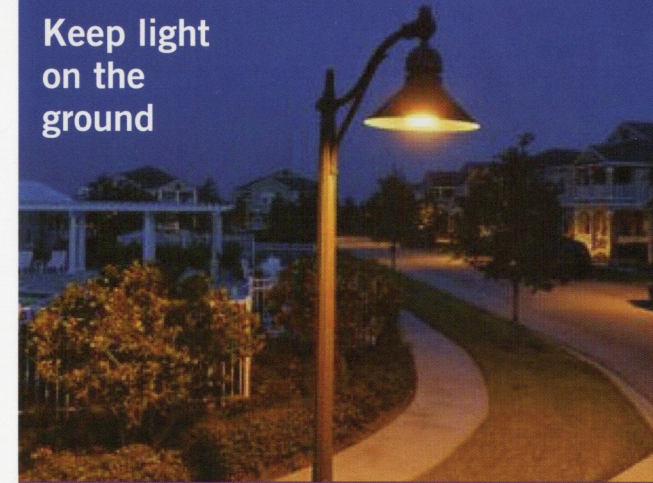
It just takes small changes to save energy, money and our night skies. You can make a difference today.

Good vs. Bad Lighting

This photo (right) shows examples of good and poor lighting design. The unshielded light fixture on the left throws light into the sky and creates glare, impairing visibility. The shielded light fixture on the right directs light to the ground where it is needed and does not create lighting pollution. To learn about light fixtures that are environmentally friendly, energy efficient and certified with the IDA Fixture Seal of Approval, visit darksky.org.



Keep light on the ground



ENERGY EFFICIENCY SOLUTIONS

Shielding outdoor lighting saves energy and money, reduces our carbon footprint and helps protect the natural nighttime environment. The solutions are easy. Work with your neighbors and local government to keep the light on the ground and the skies natural. It's a win-win for everyone. You save money while preserving a valuable natural resource.

Tips to help you conserve energy and use light efficiently:

- Install quality outdoor lighting to cut energy use by 60-70%, save money and cut carbon emissions.
- Fully shield all outdoor lighting — light should go down on the ground where it's needed, not up into the sky.
- Be aware that fully shielded fixtures can provide the same level of illumination as unshielded fixtures, but with lower cost and less energy waste.
- Turn off indoor lights in office buildings or homes when not in use to save money and energy.

Visit darksky.org for more information.

OUR MISSION

To protect the night
from light pollution.

ABOUT US

The International Dark-Sky Association fosters and empowers a global volunteer network that drives the worldwide dark sky movement by promoting eco-friendly outdoor lighting and educating policymakers and the public about the importance of nighttime conservation.

The IDA is a 501(c)(3) non-profit organization based in Tucson, Arizona USA.



JOIN THE DARK SKY MOVEMENT

SINCE 1988,
the International Dark-Sky Association
has led the global movement to protect
the night from light pollution. Our impact
now reaches more than 51 countries with
members, advocates, and dark sky places
on every inhabited continent.



Give Today

darksky.org/ways-to-give
+1-520-293-3198
contact@darksky.org

International Dark-Sky Association
5049 E Broadway Blvd, # 105
Tucson, AZ 85711 USA

darksky.org

Protect the Night

Front-panel photo by Shreevivasan Manickamann



INTERNATIONAL DARK-SKY ASSOCIATION

LIGHT POLLUTION HURTS OUR PLANET

The inappropriate or excessive use of artificial light — known as light pollution — can have serious environmental consequences for humans, wildlife, and our climate.



LIGHT POLLUTION DEVASTATES WILDLIFE.

Plants and animals depend on Earth's daily light and dark cycle to govern life-sustaining behaviors. Research shows that artificial light at night has adverse and even deadly effects on many species.



LIGHT POLLUTION WASTES ENERGY AND MONEY.

As much as 50% of outdoor lighting is wasted, which increases greenhouse gas emissions, contributes to climate change, and renders us all more energy-dependent.



LIGHT POLLUTION ROBS US OF OUR HERITAGE.

Our ancestors experienced a night sky that inspired science, religion, philosophy, art, and literature. Now, millions of children across the globe will never know the wonder of the Milky Way.



LIGHT POLLUTION CAN MAKE YOU LESS SAFE.

There is no clear scientific evidence that increased outdoor lighting deters crime. Poor outdoor lighting can decrease personal safety by making victims and property more visible to criminals.



LIGHT POLLUTION MAY HARM YOUR HEALTH.

Studies suggest that artificial light at night negatively affects human health by increasing our risks for obesity, sleep disorders, depression, diabetes, breast cancer, and more.

LIGHT POLLUTION IS **REVERSIBLE!**

Unlike other forms of pollution, light pollution is a problem with solutions that are easy to implement. These solutions deliver immediate and lasting results.

SUCCESS STORY In 2018, the City of Tucson, Arizona, USA (population 500,000) upgraded its streetlights; by doing so, it saved \$2.2 million per year in energy costs and reduced light pollution by 7%.

OUR PROGRESS



1,000+

More than 1,000 dark sky-certified lighting fixtures are available in the marketplace.

170+

IDA has designated more than 170 International Dark Sky Places, protecting over 110,000 sq km of dark places around the globe.

500+

IDA supports more than 500 volunteer advocates in 49 countries.

LIGHT TO PROTECT THE NIGHT

Follow IDA's Five Principles for Community Outdoor Lighting to reduce light pollution where you live.

MAKE SURE YOUR LIGHTING IS:

- 1 Useful**
Install lighting only when and where it's needed.
- 2 Targeted**
Shield your lights so they shine down on the ground, which reduces harmful glare and decreases skyglow.
- 3 Low Light Levels**
Light should be no brighter than necessary.
- 4 Controlled**
Use controls such as timers, dimmers, and motion sensors on outdoor lights.
- 5 The Appropriate Color**
Use warm color lights where possible. Limit the use of harmful blue wavelength lighting.

BEFORE



AFTER



**Bright outdoor lights
are not as safe as they
appear.**



A U.S. National Institute of Justice study concluded: "We can have very little confidence that improved lighting prevents crime." In fact, poor or too much lighting can actually have the opposite effect.

Real security depends on the wise use of lighting. Visibility should always be the goal. Instead of more and brighter lights, we need smart lighting that directs light down where it is most useful. It is possible to protect the natural nighttime environment without compromising safety.

"[W]hen risks are carefully considered, local authorities can safely reduce street lighting saving both costs and energy ... without necessarily impacting negatively upon road traffic collisions and crime."

— 2015 study published in the *Journal of Epidemiology and Community Health*

WHY DARK SKIES?

The need to protect and restore the natural nighttime environment is more urgent than ever. Light pollution, defined as light where it is not wanted or needed, affects our health, the environment, wildlife, and our ability to find awe in the natural night. Research indicates that light pollution is increasing at a global average rate of two percent per year.

ABOUT IDA

The International Dark-Sky Association, a 501(c)(3) nonprofit organization based in Tucson, Arizona, is dedicated to preserving and protecting the natural nighttime environment.



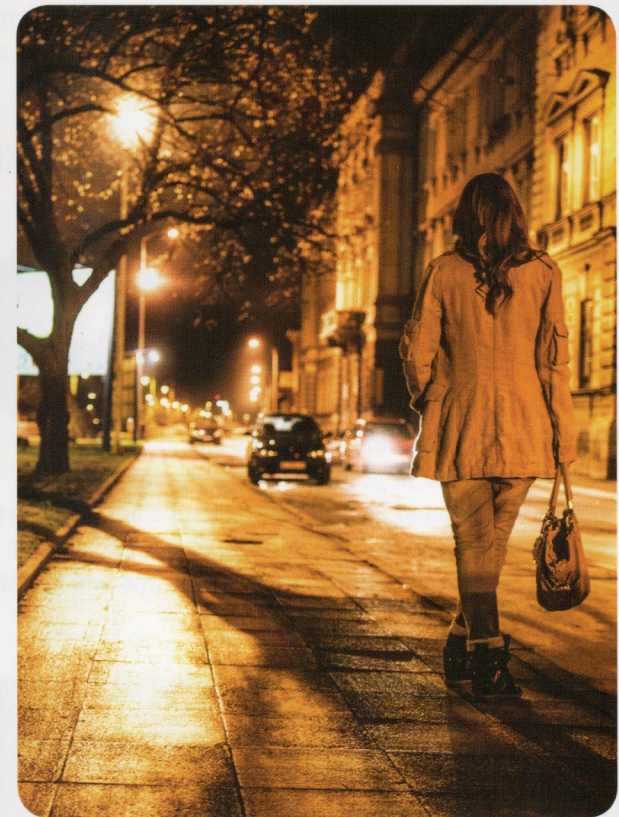
HELP US PROTECT THE NIGHT

Our work is made possible by support from IDA members. Become a member and support our work in protecting the natural nighttime environment. Please join us today!

**DARK
SKY.
ORG**

International Dark-Sky Association
5049 E. Broadway Blvd, # 105
Tucson, AZ 85711 USA

Outdoor Lighting, Crime, and Safety



INTERNATIONAL DARK-SKY ASSOCIATION

BRIGHTER DOES NOT MEAN SAFER

Lighting up the nighttime environment does not necessarily improve safety or security. This may seem contradictory, but there is no clear scientific evidence that increased outdoor lighting deters crime and increases safety.

AT HOME: POOR LIGHTING CREATES A FALSE SENSE OF SECURITY

Keeping yourself and your property safe from theft and vandalism is a major priority. However, badly designed outdoor lighting can actually make you less safe because bright and poorly aimed lights can hide danger. Bad lighting creates deep shadows where criminals can hide.

Some crimes like vandalism and graffiti actually thrive on night lighting. For example, bright dusk-to-dawn lights allow criminals to see the contents of parked cars.



AROUND TOWN: LIGHT FOR LIGHT'S SAKE DOES NOT EQUAL SAFETY

Towns, cities, and businesses often install lighting in parks, shopping areas, parking lots, and other public places to improve safety.

Improperly aimed and poorly shielded lights can actually attract criminals and allow them to see what they're doing. Property damage may be exacerbated by too many lights, particularly dawn-to-dusk lighting. A study by the city of Chicago actually found a correlation between increased crime and brightly lit alleyways.



ON THE ROAD: BAD LIGHTING CREATES UNSAFE DRIVING CONDITIONS

Poorly designed lighting on roadways and highways contributes to tragic accidents. Motorists and pedestrians can be temporarily blinded by glare from unshielded streetlights and electronic signs. The problem is more acute for older individuals.



A 2015 study published in the *Journal of Epidemiology and Community Health* found that streetlights don't prevent accidents or crime, but do cost a lot of money.

Poor Lighting Reduces Safety and Security

Glare from bright, unshielded lights actually decreases safety. See how glare in the closest photo makes it hard to see the man at the gate? Glare creates deep shadows, making it more difficult to see. The bright light shines into your eyes, constricting your pupils. This diminishes your eyes' ability to adapt to low-light conditions. So, is that bright light really making this area safer?

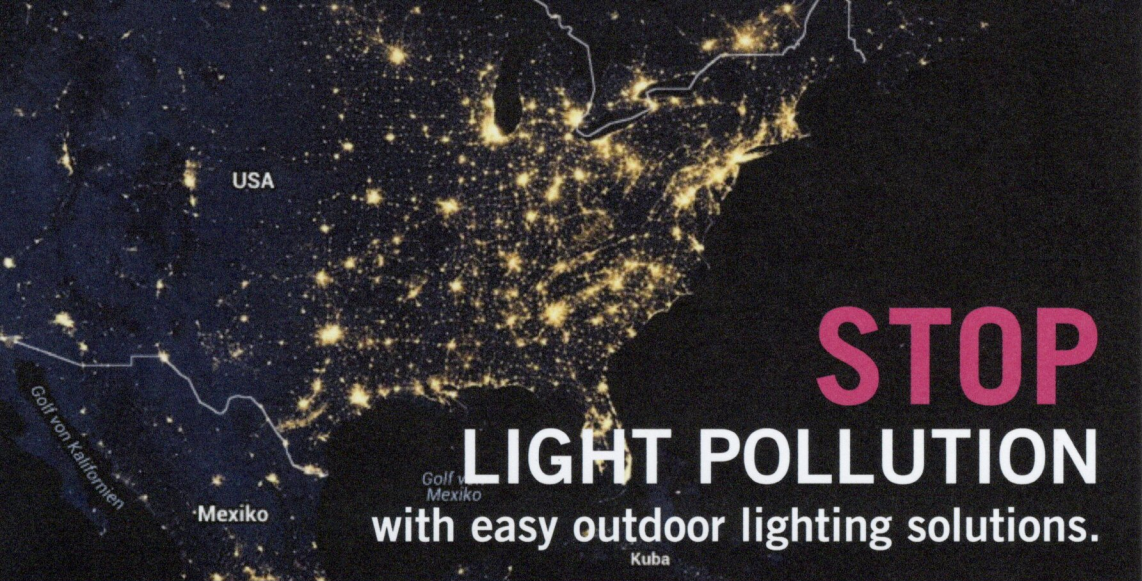


SAFE LIGHTING SOLUTIONS

Effective lighting that helps people be safe – not just feel safe – is a win-win situation for everyone. You can create a safer environment while preserving the natural night. Here are some simple rules to follow:

- Use fully shielded, dark-sky friendly fixtures. That means lights shine down, not up, and don't create glare and contrasts.
- Only use lights when and where needed. Install timers and dimmer switches, and turn off lights when not in use. If you must have security lighting, use motion sensors.
- Use the right amount of light. Too much light is wasteful and impairs vision.
- Use long-wavelength lights with a red or yellow tint to minimize negative health effects.
- Good lighting design can mitigate glare. Cities and towns can restrict the use of bright signs and flashing lights near roadways.

Visit darksky.org for more information.



STOP LIGHT POLLUTION

with easy outdoor lighting solutions.

Join the **International Dark-Sky Association** to help us protect the night sky and promote environmentally responsible outdoor lighting.



INTERNATIONAL DARK-SKY ASSOCIATION

Protecting the night sky starts with YOU!

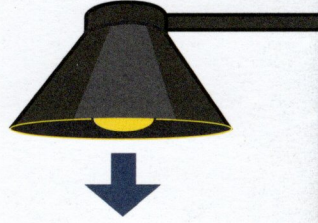
1 Light only what you need



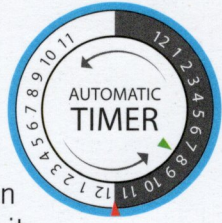
2 Use energy efficient bulbs and only as bright as you need



3 Shield lights and direct them down



4 Only use light when you need it



5 Choose warm white light bulbs



6 Join IDA!
We need your help to continue the fight against light pollution.

**DARK
SKY.
ORG**

Carbon County Planning Board
County Administrative Building
PO Box 466
Red Lodge, MT 59068

RE: Low Impact Outdoor Lighting Covenants for 7D 10 Lot Major Commercial Subdivision

Dear Board Members:

I want to start by acknowledging an individual's private property right to create a commercial development, as well as the rapid growth that is occurring in both Red Lodge and on the West Bench – both in housing units and the commercial network needed to support that growth. I would like to suggest a condition of approval to mitigate the impact that 7D commercial subdivision will have on the surrounding Carbon County residents.

I would like to urge you to require the proposed subdivision include specific low impact outdoor lighting language, spelled out below, in the Declaration of Covenants, Conditions and Restrictions of the subdivision.

WHY LIGHT – AND RESEARCH

Typically there are four uses for outdoor lighting: Navigation- to assist in wayfinding, Safety – to render hazards more visible or assist personnel, Security - to protect people and property, and Aesthetics – to illuminate a display.

Research shows that non-dark sky compliant (up- and out-lighting), does not increase safety or security in residential or commercial developments. (See website #1, below). Although there are anecdotal reports that “improved lighting” (i.e. improved visibility) reduces crime, there is no evidence that crime is reduced with “more or brighter lighting”. In fact, non-shielded lighting created glare (light intense enough to impair a viewer's sight), which created advantages for criminals. Shielding of light fixtures is critical for cutting widespread glare

WHY LOW-IMPACT OUTDOOR LIGHTING

The primary reason to require specific covenants for low-impact outdoor lighting is to preserve the amenities that matter to all Carbon County residents, old and new.

In this case, the impact from offensive outdoor lighting that does not comply with International Dark-sky Association recommendations will negatively impact surrounding residents for many miles due to the rural and elevated nature of the West Bench. An existing commercial development created by the same developer adjacent to this proposed subdivision does not have shielded fixtures and creates significant light pollution and so is visible for many miles.

Notably, low impact outdoor lighting would be a benefit to the developer, in terms of cost savings resulting from using more efficient lighting. The International Dark Skies Association (IDA) estimates that at least 30% of all outdoor lighting in the U.S. alone is wasted, mostly by lights that aren't shielded. "That adds up to \$3.3 billion ... per year."

Any light pollution created by this new development will be disruptive to both residents nearby and those who enjoy viewing the astronomical views available along the West Bench. During significant astronomical events, such as lunar eclipses, northern lights, comets and more, many who live within city limits where light pollution is intense can be found heading to the dark West Bench to witness these events.

Research also shows that Circadian rhythms are disrupted when excessive outdoor lighting is used. Our sleeping patterns are "governed by the day-night cycle," so being exposed to artificial light during the nighttime disrupts our body's production of melatonin, a sleep-inducing hormone. This creates health issues.

Also, ecosystems are disrupted. For example, birds and bats are light-sensitive creatures and have difficulty hunting for insects in areas where light is plentiful.

WHAT

I would like to urge you to require the proposed subdivision include specific low impact outdoor lighting language in the Declaration of Covenants, Conditions and Restrictions document to allow only down-facing outdoor lighting that complies with International Dark-sky Association (IDA) recommendations to minimize light trespass from the building and site, reduce sky-glow, increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact from lighting on nocturnal environments.

As a resident of the Spires subdivision, I would like you to know what we ourselves are doing to preserve dark skies, particularly since that was part of the draw for living here.

Spires covenants require the following:

General:

- All exterior residential lighting must be free of glare and shall be fully shielded or shall be indirect.
- No lighting shall shine beyond a property's lot line.
- Fixtures shall be of a design and/or placed in such a way as to not pollute the night sky.
- Obtrusive flood lighting is prohibited.
- Clear glass or exposed bulb (non-cutoff) fixtures are prohibited.

The definition of a "Fully Shielded Light": Fixtures that stop light rays from being emitted at angles above the horizontal plane as certified by photometric testing.

And, although the original developer here installed streetlights, residents here, through the HOA, have elected to keep those turned off, both because we prefer seeing the night sky, but also because it costs less!

However, that language lacks specificity, and I imagine would lead to frustration for a contractor trying to comply. Therefore I would recommend these specifics, to start with, that I found through the websites listed at the end of this letter.

- Start by installing exterior light fixtures only in locations that require light for safety. Provide light where you need it, when you need it, in the minimum amount needed.
- The Illuminating Engineering Society (IES) has developed a Model Lighting Ordinance for various lighting zones. I would suggest that 7D require lighting be compliant with IES Lighting Zone 2 (LZ2): “moderate ambient lighting in areas such as light commercial business districts and ... mixed use residential districts”. (see website #5 below)
 - IES developed something called a BUG Rating, which stands for backlight, uplight, and glare. **Backlight (B)** is the light directed behind the fixture, **uplight (U)** is any light directed upward above the horizontal plane of the luminaire, and **glare (G)** is the amount of light emitted from the luminaire at high angles.
 - For LZ2, , Backlight rating of B2 or less for lights 1 to 2 times the mounting height to the lighting boundary, and properly mounted, an Uplight rating of U2, and a Glare rating of G2.
- Utilize only Dark Skies compliant outdoor light fixtures as defined through the **IDA Fixture Seal of Approval program**, (website #6 below) which declares:
 - A fixture must be fully shielded and emit no light above the horizontal plane. There shall be no sag or drop lenses, side light panels, uplight panels, etc.
 - Approved fixtures shall employ warm-toned (3000K and lower) white light sources or may employ amber light sources or filtered LED light sources. Because blue light brightens the night sky more than any other color of light, it’s important to minimize the amount emitted. Exposure to blue light at night has also been shown to harm human health and endanger wildlife. IDA recommends using lighting that has a color temperature of no more than 3000 Kelvins, and using only warm color lighting. This includes HPS and low-color-temperature LEDs.
 - Lighting must be full cutoff or recessed light fixtures. Full cut off fixtures prevent light from being emitted on or above the horizontal plane, and direct light downward where light is needed.
- Outdoor light fixtures (mounted or freestanding) shall be no higher than 18’
- Outdoor light fixtures illuminating signs should also be compliant with low impact lighting guidelines.

Contractors / developers could visit www.firstlighttechnologies.com or comparable website for assistance with lighting design that offer the lowest lifecycle costs.

WEBSITE REFERENCES:

- 1) <https://www.darksky.org/light-pollution/lighting-crime-and-safety/>
- 2) <https://solutions.borderstates.com/what-is-dark-sky-compliance/>

- 3) <https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>
- 4) <https://www.usgbc.org/credits/ss8>
- 5) <https://www.firstlighttechnologies.com/solar-light-blog/lighting-fundamentals-bug-ratings/>
- 6) <https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/>

Respectfully submitted,

Kay Williams