1 - Agenda

2 - Building & Septic Codes

3 - Airport Terminal Presentation

GUNNISON COUNTY BOARD OF COMMISSIONERS
MEETING NOTICE

DATE: **Tuesday, February 9, 2021**
PLACE: **Board of County Commissioners' Meeting Room at the Gunnison County Courthouse**
200 E. Virginia Avenue
Gunnison, CO 81230

GUNNISON COUNTY BOARD OF COUNTY COMMISSIONERS WORK SESSION:

8:30 am	•	HB 1177 Roundtable Report
9:00	•	Colorado River Water Conservation District Update
9:30	•	Gunnison County Building and Septic Code Revisions
10:30	•	Break
10:45	•	Gunnison-Crested Butte Regional Airport Terminal Design Presentation
	•	Adjourn

Please Note: Packet materials for the above discussions will be available on the Gunnison County website at http://www.gunnisoncounty.org/meetings prior to the meeting.

ZOOM LOGIN INSTRUCTIONS:

Join Zoom Meeting: https://us02web.zoom.us/j/81119572491?pwd=aUhwK2tMRGtEL3BudXBGZ2ZqNnNUdz09

Meeting ID: 811 1957 2491
Passcode: 789000
One tap mobile
+13462487799,,81119572491#,,,,*789000# US (Houston)
+14086380968,,81119572491#,,,,*789000# US (San Jose)

NOTE: This agenda is subject to change, including the addition of items up to 24 hours in advance or the deletion of items at any time. All times are approximate. The County Manager and Deputy County Manager's reports may include administrative items not listed. Regular Meetings, Public Hearings, and Special Meetings are recorded and ***ACTION MAY BE TAKEN ON ANY ITEM.*** *Work Sessions are not recorded and formal action cannot be taken. For further information, contact the County Administration office at 641-0248. If special accommodations are necessary per ADA, contact 641-0248 or TTY 641-3061 prior to the meeting.*

AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Gunnison County Building and Septic Code Revisions

Action Requested: Discussion

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

3 building proposals: Tiny Houses, Contractor Licensing, Air Leakage limits to discuss at a work session meeting,

Fiscal Impact:

Submitted by: Crystal Lambert **Submitter's Email Address:** clambert@gunnisoncounty.org

Finance Review: ○ Required ◉ Not Required

Comments:

Reviewed by: Discharge Date:

County Attorney Review: ◉ Required ○ Not Required

Comments:
recommend review of all 3 proposals, Tiny Houses, Contractor Licensing, Air Leakage, as submitted with further direction provided. ESG

Reveiwed by: GUNCOUNTY1\egaebler Discharge Date: 2/5/2021 Certificate of Insurance Required

Yes ○ No ◉

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\khaase Discharge Date: 2/5/2021

○ Consent Agenda ○ Regular Agenda ○ Worksession Time Allotted: 60

Agenda Date: 2/9/2021

Revised April 2015

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To: Board of County Commissioners

From: Crystal Lambert, Gunnison County Building Official

Date: January 20, 2021

Re: Building Contractor Licensing Program

Purpose:

Last March the BOCC held a work session to discuss a proposed building contractor licensing program and the consensus, at that time, was favorable to bring the proposal back to the BOCC as a resolution at a public hearing. Shortly after the work session, the County was impacted by the pandemic and the proposal was tabled for a later time. The purpose of this item is to propose, again, the same contractor licensing program with implementation dates moved out an additional year.

Background:

The idea of a contractor licensing program came about from feedback received from the local building community over the last several years.

A General Contractor Stakeholder meeting was held on January 16, 2019 to discuss the potential contractor licensing program. Feedback from the group was favorable towards a licensing program with both an insurance requirement and competency testing.

A trades and sub-contractor Stakeholder meeting was held on April 17, 2019 to discuss including trades in a potential licensing program. At the meeting were professionals from the mechanical, insulation, and concrete industries. The feedback was mixed. Some saw value in a program through ensuring everyone was at the same level when competing for work. The general consensus was to implement a program for Building Contractors only at this time.

The Planning Commission held two work-session meetings, on May 17, 2019 and December 20, 2019, to discuss the contractor licensing program. A Public Hearing with the Planning Commission was held on January 24, 2020 in which the members voted unanimously to recommend that the proposed program be brought to the Board of County Commissioners for consideration of adoption. All Gunnison County contractors and builders for which we have contact information for were invited to all of the meetings and provided copies of the meeting memos. Additionally, people from the building community who attended the Planning Commission meetings provided generally favorable feedback and offered their opinions on specific requirements of the program.

Proposed Contractor Licensing Program:

Staff is proposing the following details for contractor licensing that includes passing of an exam provided by the International Code Council's Contractor/Trades examination program and proof of insurance, with details addressing issuance of a license, terms of a license, license renewal, and enforcement of the terms of a license. Implementation of this program shall provide at least one year for Building Contractors to prepare and obtain the required certification(s).

Type of License	License Fee	Minimum Single Limit Insurance
Class A	$250	$1,000,000
Class B	$200	$1,000,000
Class C	$150	$1,000,000
License Term: Licenses are effective for thirty-six months after the date of issuance.		
License Re-application: Contractors holding licenses may apply for a new license within three months prior to the expiration of the license.		

Definitions:

Building Contractor: A person who for compensation directs, supervises, or undertakes any work for which a County building permit is required under the County Building Code or the County Land Use Resolution, with exception of the following:

- A person who acts as the contractor for the construction of a new residential dwelling on that person's own property no more than once within any four-year period, or any additions or alterations of a residential dwelling or accessory structure on that person's own property.
- A person whose sole function in the work is to perform labor under the supervision or direction of a building contractor.
- A person performing repair or maintenance work on property owned by that person.
- An employee performing repair or maintenance work on their employer's own property.
- A person required to be licensed by the State of Colorado who is performing work within the scope of their license, such as:
  - Electricians pursuant to Article 23, Title 12, C.R.S.,
  - Plumbers pursuant to Article 58, Title 12, C.R.S.,
  - Elevator and Conveyance Installers pursuant to Article 5.5, Title 9, C.R.S.,
  - Manufactured Home Installers pursuant to 24-32-3301 et sec C.R.S.

Building Official: The person directed and authorized to enforce the provisions of the building code in Gunnison County as the Building Official, who works under the direction of the Director of Community and Economic Development Department.

Board of Appeals: The Board appointed by the Board of County Commissioners of Gunnison County to hear and decide appeals of orders, decisions, or determinations made by the Building Official.

Types of Licenses: The following types of building contractor licenses are established and must be obtained as specified below:

- **Class A Contractors License-**This license entitles the holder to contract for the construction, alteration, tenant finish or repair of any type of structure permitted by the International Building Code or the International Residential Code.
- **Class B Contractors License-**This license entitles the holder to contract for the construction, alteration, tenant finish or repair of commercial buildings and single- or multi dwelling buildings not exceeding three stories in height as permitted by the International Building Code or the International Residential Code.
- **Class C Contractors License-**This license entitles the holder to contract for the construction, alteration, or repair of one- and two- family dwellings and accessory buildings as permitted by the International Building Code or the International Residential Code.

Conditions for Issuance of a License:

1. Submits a complete license application form along with the required administrative licensing fee.
2. Achieves a passing grade on the applicable International Code Council (ICC) exam related to the particular license type being applied for as follows:
    a. Class A Contractors License ICC Exam: National Standard General Building Contractor (A)
    b. Class B Contractors License ICC Exam: National Standard Building Contractor (B)
    c. Class C Contractors License ICC Exam: National Standard Residential Building Contractor (C)
3. Provides proof of current insurance coverage, including:
    a. Worker's Compensation Insurance as required by the State of Colorado.
    b. General Liability Insurance with a minimum combined single limit for each occurrence of $1,000,000.00. Certificate of insurance issued to the County.

License Term and Expiration/Reapplication:
Licenses shall be effective for thirty-six (36) months after their date of issuance. Licenses shall expire at the end of this term. Contractors holding licenses may apply for a new license within three (3) months prior to the expiration of their existing license. Contractors holding a valid County license who apply for a new license shall not have any unresolved building code violations.

Exams Administered by the International Code Council:

The International Code Council's Contractor/Trades examination program is an independent testing program designed to provide licensing agencies with information regarding qualified contractors.

The tests can be taken online or at a testing center. The three exams, for Class A, B, and C licenses, are open book and have a four hour time limit. The Class A exam is 90 Questions and the Class B and C exams are 80 questions.

The ICC provides outlines for each exam that can be used as a study reference, for example, the Class A exam is approximately 15% on Administration General Requirements, including code definitions and terms, and plan reading; 25% on Building Planning and Life Safety, including fire and smoke alarms, occupancy needs and the interior environment, exiting and

means of egress, and accessibility; 45% on Structural Systems, including footings and foundation, concrete, floors, wall framing and stairs, roof ceiling construction; and 15% on Building Envelope, which includes interior finishes, glass and glazing, and exterior finishes and roof coverings.

Certifications need to be renewed every three years and requires that a certain amount of Continuing Education Units (CEUs) have been earned. The ICC provides links to and lists of ways to earn CEUs that includes seminars, courses and trainings, many of which are available on-line. One certification requires 1.5 CEUs (15 hours of course duration) to renew every three years.

Proposed Enforcement:

Violations of the Licensing Program:

It shall be a violation for any Building Contractor to:

1. Provide any false or misleading information on a license application.
2. Fail to have or maintain adequate insurance as required.
3. Fail to obtain a required building or land-use permit or to follow any other applicable requirements of the Gunnison County Building Code and Land Use Resolution.
4. Perform work outside of the scope of an issued license, transfer a license to a person other than the licensee, or employ person in work under a County building permit who are required to be licensed.
5. Perform work as a Building Contractor without a license.

Actions that may be taken for violation of the Licensing Program:

1. A fine equal to the license fee for failure to obtain the required license prior to engaging in the business of being a building contractor.
2. The Building Official may revoke or suspend the Contractor's license.
3. The Building Official may stop/suspend work under an issued building or land-use permit; may stop work on a project that requires but does not have an issued building or land-use permit, may refuse to issue a Certificate of Occupancy or Completion or perform a final inspection under an issued building or land-use permit.
4. The Building Official may issue a written determination that a person is a Building Contractor required to obtain a license.
5. The County may pursue any other remedy allowed in law or equity.

Reapplication for Revoked License:

If a license is revoked, the applicant may reapply for a license, but not sooner than 90 days after the final decision of the Building Official or the Board of Appeals, as applicable.

Appeals to the Board of Appeals:

The decision may be appealed to the Gunnison County Board of Appeals.

A. Appeals to the Board of Appeals may be made by any person aggrieved by the following final decisions made in the course of administering the licensing program, including:
    1. Denial of a license application;
    2. Suspension or revocation of a license;
    3. Issuance of a stop work/suspension order or revocation of a building or land-use permit;
    4. Written determination that a person is a building contractor required to obtain a license.

B. Appeals to the Board of Appeals shall be in writing, state in reasonable detail the basis for the appeal and shall be received no later than 14 calendar days after the date of the decision.
C. Upon receipt of a complete and timely appeal the Building Official shall schedule a hearing with the Board of Appeals. The hearing shall be held as soon as practical after receipt of the appeal.

Recommendation:

At a public hearing on January 24, 2020, the Planning Commission recommended, unanimously, to adopt Building Contractor Licensing program for the unincorporated areas of Gunnison County. The licensing program would ensure that a person who for compensation directs, supervises, or undertakes any work for which a County building permit is required under the County Building Code has general liability insurance and has competency with the building code. Staff is recommending that implementation of the Building Contractor Licensing program provide at least one year for Building Contractors to prepare and obtain the required certification(s). County workstations at the Blackstock Government Center can be made available to Building Contractors wishing to utilize the on-line testing option, if needed. Additionally, staff is prepared to host building code study groups that will include, among other things, taking practice exams.

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To: Board of County Commissioners

From: Crystal Lambert, Gunnison County Building Official

Date: February 1, 2021

Re: Tiny House Building Codes

Purpose:

In the summer of 2019 the BOCC held a work session to discuss a proposal to implement building codes for Tiny Houses, dwellings less than 400 square feet. The consensus, at that time, was favorable to bring the proposal back to the BOCC as a resolution at a public hearing. The purpose of this item is to propose the special building provisions for Tiny Houses.

Background:

Typical building codes for residential construction can be discouraging to tiny house designs. Building Office staff has worked with customers who would like to build a small dwelling but are challenged with meeting the typical building code requirements for larger spaces, such as: stairs, ceiling heights, lofts, and emergency escape and rescue openings. Appendix Q: Tiny Houses of the *International Residential Code*, *2018 edition*, provides accommodating requirements for smaller spaces.

The Gunnison County On-site Wastewater Treatment System Regulations currently allow a reduction in the sizing of a system for Tiny Houses. If a proposed dwelling is less than 400 square feet in floor area a system can be designed for one bedroom instead of the two bedroom minimum required for all other dwellings.

The building permit and plan review fee for a 400 square foot dwelling is approximately $745.00. That number is based on an estimated construction value (labor and materials) of $49,472. A Workforce Housing Linkage Fee is not assessed on residential construction less than 500 square feet in floor area.

Discussion of changes:
Appendix Q: Tiny Houses allows for specific requirements of the International Residential Code to be relaxed in dwellings 400 square feet or less. The specific requirements are the following:

- Minimum Ceiling Height:

  A reduction in ceiling height from 7’ to 6’8” in habitable areas and hallways.
  A reduction in ceiling height from 6’8” to 6’4” in bathrooms.
  A reduction in ceiling height from 7’ to 6’4” in kitchens.

- Access to habitable lofts:

  Stair: If a habitable level or loft is accessed by a stair, the following changes to the stair requirements are:

  Stairway width: A change from 31.5” to 20”.
  Headroom height: A change from 6’8” to 6’2”.
  Tread depth and riser height: A change from requiring that treads have a minimum depth of 10” and a maximum riser height of 7.75” to the following formula:

  1. The tread depth shall be 20 inches minus four-thirds of the riser height.
  2. The riser height shall be 15 inches minus three-fourths of the tread depth. Riser heights shall be between 7” and 12”.

  Ladders, alternating tread devices, and ships ladders: A change to allow the use of ladders, alternating tread devices, and ships ladders to access a habitable loft level.

- Emergency Escape and Rescue Openings:

  A change to allow the required egress opening to be located in the roof in habitable lofts.

Recommendation:
The Planning Commission recommended, unanimously, adoption of *Appendix Q: Tiny Houses* of the *International Residential Code*, *2018 edition*, to be applied, along with the currently adopted *International Residential Code*, *2015 edition*, for the permitting and construction of dwellings 400 square feet or less in floor area.

Attachment A: *Appendix Q: Tiny Houses* of the *2018 International Residential Code*

Attachment A

APPENDIX Q

TINY HOUSES

This provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

User note:

About this appendix: *Appendix Q relaxes various requirements in the body of the code as they apply to houses that are 400 square feet in area or less. Attention is specifically paid to features such as compact stairs, including stair handrails and headroom, ladders, reduced ceiling heights in lofts and guard and emergency escape and rescue opening requirements at lofts.*

SECTION AQ101
GENERAL

AQ101.1 Scope. This appendix shall be applicable to *tiny houses* used as single *dwelling units*. *Tiny houses* shall comply with this code except as otherwise stated in this appendix.

SECTION AQ102
DEFINITIONS

AQ102.1 General. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions.

EGRESS ROOF ACCESS WINDOW. A *skylight* or roof window designed and installed to satisfy the emergency escape and rescue opening requirements of Section R310.2.

LANDING PLATFORM. A landing provided as the top step of a stairway accessing a *loft*.

LOFT. A floor level located more than 30 inches (762 mm) above the main floor, open to the main floor on one or more sides with a ceiling height of less than 6 feet 8 inches (2032 mm) and used as a living or sleeping space.

TINY HOUSE. A *dwelling* that is 400 square feet (37 m^2) or less in floor area excluding *lofts*.

SECTION AQ103
CEILING HEIGHT

AQ103.1 Minimum ceiling height. *Habitable space* and hallways in *tiny houses* shall have a ceiling height of not less than 6 feet 8 inches (2032 mm). Bathrooms, toilet rooms and kitchens shall have a ceiling height of not less than 6 feet 4 inches (1930 mm). Obstructions including, but not limited to, beams, girders, ducts and lighting, shall not extend below these minimum ceiling heights.

Exception: Ceiling heights in *lofts* are permitted to be less than 6 feet 8 inches (2032 mm).

SECTION AQ104
LOFTS

AQ104.1 Minimum loft area and dimensions. *Lofts* used as a sleeping or living space shall meet the minimum area and dimension requirements of Sections AQ104.1.1 through AQ104.1.3.

AQ104.1.1 Minimum area. *Lofts* shall have a floor area of not less than 35 square feet (3.25 m^2).

AQ104.1.2 Minimum dimensions. *Lofts* shall be not less than 5 feet (1524 mm) in any horizontal dimension.

AQ104.1.3 Height effect on loft area. Portions of a *loft* with a sloped ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

Exception: Under gable roofs with a minimum slope of 6 units vertical in 12 units horizontal (50-percent slope), portions of a *loft* with a sloped ceiling measuring less than 16 inches (406 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the *loft*.

AQ104.2 Loft access. The access to and primary egress from *lofts* shall be of any type described in Sections AQ104.2.1 through AQ104.2.4.

AQ104.2.1 Stairways. Stairways accessing *lofts* shall comply with this code or with Sections AQ104.2.1.1 through AQ104.2.1.5.

AQ104.2.1.1 Width. Stairways accessing a *loft* shall not be less than 17 inches (432 mm) in clear width at or above the handrail. The width below the handrail shall be not less than 20 inches (508 mm).

AQ104.2.1.2 Headroom. The headroom in stairways accessing a *loft* shall be not less than 6 feet 2 inches (1880 mm), as measured vertically, from a sloped line connecting the tread or landing platform nosings in the middle of their width.

AQ104.2.1.3 Treads and risers. Risers for stairs accessing a *loft* shall be not less than 7 inches (178 mm) and not more than 12 inches (305 mm) in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas:

1. The tread depth shall be 20 inches (508 mm) minus four-thirds of the riser height.
2. The riser height shall be 15 inches (381 mm) minus three-fourths of the tread depth.

AQ104.2.1.4 Landing platforms. The top tread and riser of stairways accessing *lofts* shall be constructed as a *landing platform* where the *loft* ceiling height is less

than 6 feet 2 inches (1880 mm) where the stairway meets the *loft*. The *landing platform* shall be 18 inches to 22 inches (457 to 559 mm) in depth measured from the nosing of the landing platform to the edge of the *loft*, and 16 to 18 inches (406 to 457 mm) in height measured from the *landing platform* to the *loft* floor.

AQ104.2.1.5 Handrails. Handrails shall comply with Section R311.7.8.

AQ104.2.1.6 Stairway guards. Guards at open sides of stairways shall comply with Section R312.1.

AQ104.2.2 Ladders. Ladders accessing *lofts* shall comply with Sections AQ104.2.1 and AQ104.2.2.

AQ104.2.2.1 Size and capacity. Ladders accessing *lofts* shall have a rung width of not less than 12 inches (305 mm), and 10-inch (254 mm) to 14-inch (356 mm) spacing between rungs. Ladders shall be capable of supporting a 200-pound (75 kg) load on any rung. Rung spacing shall be uniform within $^3/_8$ inch (9.5 mm).

AQ104.2.2.2 Incline. Ladders shall be installed at 70 to 80 degrees from horizontal.

AQ104.2.3 Alternating tread devices. Alternating tread devices accessing *lofts* shall comply with Sections R311.7.11.1 and R311.7.11.2. The clear width at and below the handrails shall be not less than 20 inches (508 mm).

AQ104.2.4 Ship's ladders. Ship's ladders accessing *lofts* shall comply with Sections R311.7.12.1 and R311.7.12.2. The clear width at and below handrails shall be not less than 20 inches (508 mm).

AQ104.2.5 Loft Guards. *Loft* guards shall be located along the open side of *lofts*. *Loft* guards shall be not less than 36 inches (914 mm) in height or one-half of the clear height to the ceiling, whichever is less.

SECTION AQ105
EMERGENCY ESCAPE AND RESCUE OPENINGS

AQ105.1 General. *Tiny houses* shall meet the requirements of Section R310 for emergency escape and rescue openings.

Exception: *Egress roof access windows* in *lofts* used as sleeping rooms shall be deemed to meet the requirements of Section R310 where installed such that the bottom of the opening is not more than 44 inches (1118 mm) above the *loft* floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1.

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To: BOCC

From: Crystal Lambert, Gunnison County Building Official

Date: February 1, 2021

Re: Limiting air leakage for new residential construction

Purpose:

The purpose of this item is to propose that residential dwellings be constructed to limit air leakage and be tested and verified as having an air leakage rate not to exceed three air changes per hour per the *International Residential Code (IRC)*.

Background:

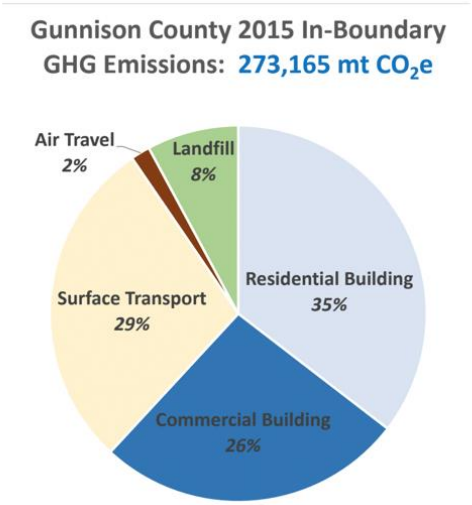
The *IRC*, 2015 edition, was adopted for use in Gunnison County in 2017 with amendments. One amendment deleted the code requirement to limit air leakage in new residential dwellings. The requirement to test all new residential dwellings for air leakage rates was adopted. The rationale was to provide time so that information could be collected about leakage rates of different types of structures that are built locally, i.e. log wall, and also so that the local building industry could become familiar with the testing, areas of leakage, and with test results for their projects.

Air leakage testing of building envelopes is typically conducted as a method of quality control to ensure that air flow in structures is limited to occupant control. Testing is used to identify leakage areas which may have been missed during construction thereby facilitating repairs and remediation and providing a guaranteed minimum performance expectation for home buyers. Sealing the building envelope is critical to good thermal performance of the building. The seal will prevent warm, conditioned air from leaking out around doors, windows and other cracks during the heating season, thereby reducing the cost of heating the residence. During hot summer months, a proper seal will stop hot air from entering the residence, helping to reduce the air-conditioning load on the building. Sealing of the building envelope is not a major cost contributor to construction projects and the benefits to the consumer and future occupants are significant, including comfort and reduced energy costs.

Since implementation of the air-leakage testing in 2017, the Department has collected results from 118 residential construction projects. Roughly 31% of the test results did not meet the threshold of 3 air changes per hour with about 20% coming in between 3 and 4 air changes per hour and 11% above 4 air changes per hour. Most builders have become able to meet the requirements consistently. Builders who have advanced their processes and skills to build tighter have no market advantage over those who have not and home buyers have no way to know the difference. Enforcement will ensure all builders are meeting the same minimum standards of

quality regarding air tightness, thereby protecting home owners from unexpected poor performance.

According to the Energy Department outside air infiltration accounts for 20-40% of an average home's energy demand in the U.S. The large temperature delta between outside air and indoor conditioned air in Gunnison County increases the impact of infiltration on energy use. Excessive energy use in buildings contributes to high energy costs and greenhouse gas emissions. Energy use in buildings accounts for 61% of greenhouse gas emissions in Gunnison County. Homes that meet IRC insulation and air tightness requirements use 30% less energy than the average home in Gunnison. By 2030 17% of homes in Gunnison County will have been built since the adoption of the 2015 IRC. More efficient buildings also protect homeowners from energy cost burden and hedge against future energy cost inflation.



Recommendation:

It is recommended that the air leakage testing section of the *IRC* be adopted for implementation without amendment. This section requires that residential dwellings be constructed to limit air leakage and be tested and verified as having an air leakage rate not to exceed three air changes per hour. The Planning Commission held a work session on December 18, 2020 to discuss this proposal and a public hearing on January 15, 2021 where they voted, 3-2, to recommend this proposal to the BOCC for adoption.

To promote achievement of limiting air leakage in new residential construction, we plan to include information and guidance in the building permit application and information packet, work with applicants and builders during the plan review process, identify and describe the necessary inspections on the building permit cards, and inspect and verify components of the air barrier system during construction.

Attachments:
Summary of air leakage test results
Table N1102.4.1.1: Air Barrier and Insulation Installation of the IRC, 2015 edition
Section N1102.4.1.2 Air Leakage Testing of the IRC, 2015 edition

Summary of air leakage test results 12-5-2018 to 12-28-2020

Date	ACH 50 Result	Date	ACH 50 Result	Date	ACH 50 Result
12/5/2018	1.595273	10/1/2019	1.33	6/25/2020	2.64
12/12/2018	2.62	10/11/2019	7.02	7/9/2020	1.8
12/12/2018	1.64	10/21/2019	4.28	7/23/2020	3.59
12/21/2018	2.999541	10/2/2019	3.98	7/23/2020	3.43
1/18/2019	2.970297	10/24/2019	8.2	7/29/2020	2.7
2/8/2019	3.18	10/24/2019	6.55	7/27/2020	2.77
2/26/2019	3.14	9/6/2019	3.79	7/27/2020	2.83
3/20/2019	2.719758	11/8/2019	1.028	7/27/2020	2.85
3/20/2019	2.804238	11/13/2019	3.34	7/27/2020	2.118
3/20/2019	2.937773	11/13/2019	3.89	7/29/2020	2.538
3/20/2019	2.986401	11/19/2019	2.4	8/11/2020	0.91
3/20/2019	2.906408	11/19/2019	2.2	8/14/2020	6.47
3/20/2019	2.991187	12/4/2019	2.99	8/19/2020	1.46
3/20/2019	2.937773	12/9/2019	4.8	8/19/2020	2.67
3/20/2019	2.826415	12/4/2019	1.18	9/1/2020	3.53
3/18/2019	2.47	12/4/2019	1.66	9/1/2020	1.62
4/16/2019	2.61	12/12/2019	2.68	9/10/2020	3.71
5/1/2019	4.85	12/24/2019	3.07	9/28/2020	2.29
5/1/2019	3.45	12/12/2019	3.64	9/28/2020	5.75
5/9/2019	2.92	1/6/2020	1.9	9/10/2020	2.14
5/20/2019	1.67	1/9/2020	2.46	10/9/2020	1.07
6/19/2019	3.41996	1/23/2020	2.31	10/5/2020	5.39
6/19/2019	0.94657	2/11/2020	2.730375	10/19/2020	1.86
6/19/2019	2.44984	2/5/2020	2.31	10/19/2020	0.67
6/19/2019	1.42	2/10/2020	2.33	9/30/2020	3.4
6/5/2019	3.85	3/6/2020	2.98	11/5/2020	1.53
6/17/2019	6.56	2/27/2020	3.25	11/24/2020	3.1
6/26/2019	1.69	3/10/2020	2.02	11/30/2020	1.82
7/9/2019	3.46	3/10/2020	1.55	12/16/2020	3.93
7/16/2019	1.92	4/8/2020	2.53	12/28/2020	0.77
7/16/2019	1.42	4/8/2020	2.34		
7/16/2019	3.55	4/8/2020	6.26		
7/17/2019	2.25	4/8/2020	3.61		
7/30/2019	2.78	4/13/2020	1.53		
8/14/2019	2.75	4/15/2020	0.97		
8/22/2019	1.86	5/5/2020	10.9		
9/5/2019	5.69	5/8/2020	3.15		
9/19/2019	4.22	5/15/2020	2.99		
5/30/2019	3.2	5/15/2020	1.11		
9/12/2019	1.45	6/16/2020	3.76		
9/9/2019	2.14	6/9/2020	1.28		
9/19/2019	1.58	6/17/2020	1.9		
9/19/2019	0.72265	6/19/2020	1.42		
10/1/2019	2.877	5/22/2020	2.36		

TABLE N1102.4.1.1 (R402.4.1.1)
AIR BARRIER AND INSULATION INSTALLATION[a]

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling or soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of not less than R-3 per inch. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and in continuous alignment with the air barrier.
Windows, skylights and doors	The space between framing and skylights, and the jambs of windows and doors, shall be sealed.	—
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
Floors including cantilevered floors and floors above garages.	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking. Alternatively, floor framing cavity insulation shall be in contact with the top side of sheathing or continuous insulation installed on the underside of floor framing; and extending from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Crawl space insulation, where provided instead of floor insulation, shall be permanently attached to the walls.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.	—
Narrow cavities	—	Batts to be installed in narrow cavities shall be cut to fit or narrow cavities shall be filled with insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	—
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be airtight and IC rated.
Plumbing and wiring	—	In exterior walls, batt insulation shall be cut neatly to fit around wiring and plumbing or insulation that on installation, readily conforms to available space, shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate the wall from the shower or tub.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical and communication boxes. Alternatively, air-sealed boxes shall be installed.	—
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the subfloor, wall covering or ceiling penetrated by the boot.	—
Concealed sprinklers	Where required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.	—

a. Inspection of log walls shall be in accordance with the provisions of ICC 400.

other fenestration that is not dynamic glazing shall not be permitted.

Exception: *Dynamic glazing* is not required to comply with this section when both the lower and higher labeled SHGC already comply with the requirements of Table N1102.1.2.

N1102.3.3 (R402.3.3) Glazed fenestration exemption. Up to 15 square feet (1.4 m^2) of glazed fenestration per dwelling unit shall be permitted to be exempt from *U*-factor and SHGC requirements in Section N1102.1.2. This exemption shall not apply to the *U*-factor alternative approach in Section N1102.1.4 and the total UA alternative in Section N1102.1.5.

N1102.3.4 (R402.3.4) Opaque door exemption. One side-hinged opaque door assembly up to 24 square feet (2.22 m^2) in area is exempted from the *U*-factor requirement in Section N1102.1.2. This exemption shall not apply to the *U*-factor alternative approach in Section N1102.1.4 and the total UA alternative in Section N1102.1.5.

N1102.3.5 (R402.3.5) Sunroom fenestration. S*unrooms* enclosing *conditioned space* shall meet the fenestration requirements of this code.

Exception: For *sunrooms* with *thermal isolation* and enclosing *conditioned space* in *Climate Zones* 2 through 8, the maximum fenestration *U*-factor shall be 0.45 and the maximum skylight *U*-factor shall be 0.70.

New fenestration separating the *sunroom* with *thermal isolation* from *conditioned space* shall meet the *building thermal envelope* requirements of this code.

N1102.4 (R402.4) Air leakage (Mandatory). The *building thermal envelope* shall be constructed to limit air leakage in accordance with the requirements of Sections N1102.4.1 through N1102.4.5.

N1102.4.1 (R402.4.1) Building thermal envelope. The *building thermal envelope* shall comply with Sections N1102.4.1.1 and N1102.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

N1102.4.1.1 (R402.4.1.1) Installation. The components of the *building thermal envelope* as listed in Table N1102.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table N1102.4.1.1, as applicable to the method of construction. Where required by the *building official*, an *approved* third party shall inspect all components and verify compliance.

N1102.4.1.2 (R402.4.1.2) Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding five air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ASTM E 779 or ASTM E 1827 and reported at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*. Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope*.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

N1102.4.2 (R402.4.2) Fireplaces. New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.

N1102.4.3 (R402.4.3) Fenestration air leakage. Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m^2), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m^2), when tested according to NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and *listed* and *labeled* by the manufacturer.

Exception: Site-built windows, skylights and doors.

N1102.4.4 (R402.4.4) Rooms containing fuel-burning appliances. In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel-burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table N1102.1.2, where the walls, floors and ceilings shall meet a minimum of the basement wall *R*-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section N1103. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.

Exceptions:

1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
2. Fireplaces and stoves complying with Sections N1102.4.2 and R1006.

GUNNISON
—
CRESTED BUTTE
REGIONAL AIRPORT

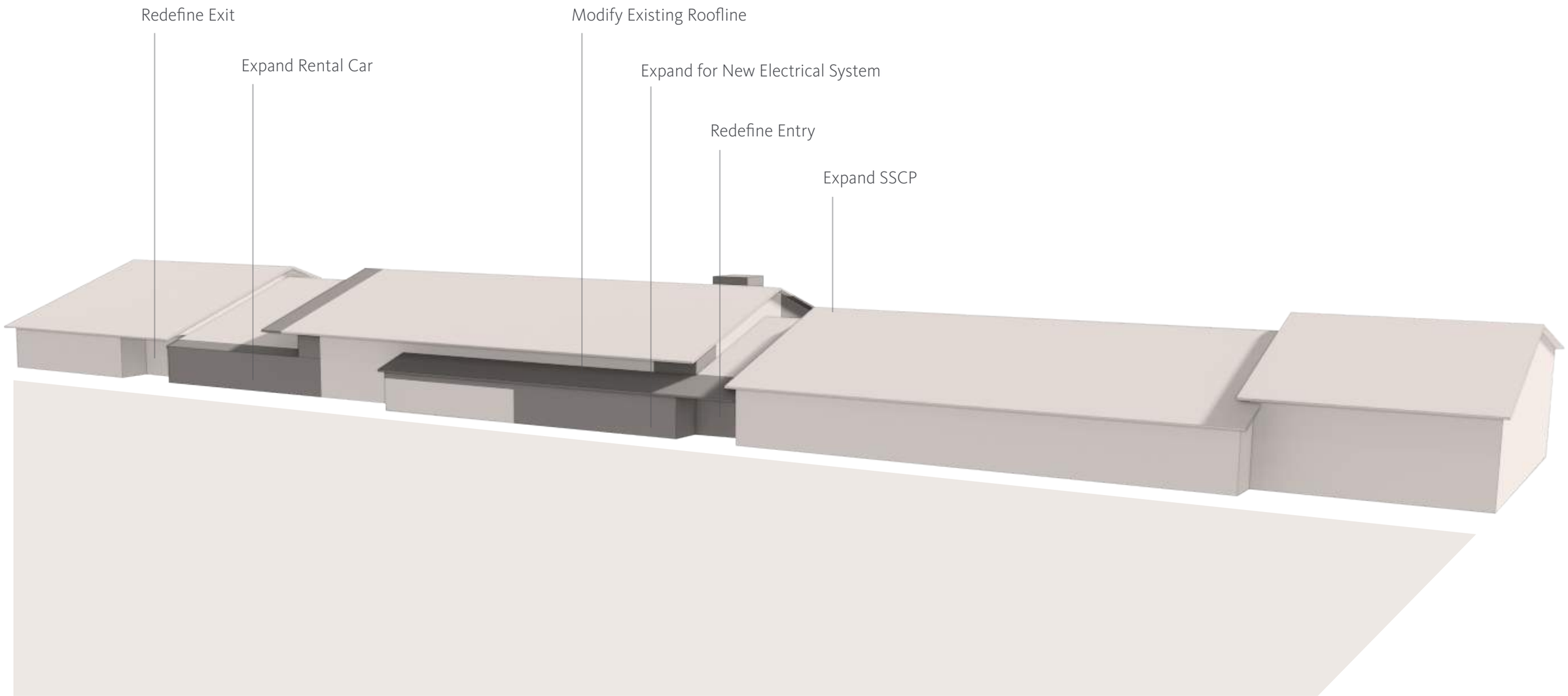
9 FEBRUARY 2021

Gensler

GOALS AND PRIORITIES

- **Passenger flow and experience**
- **Concessions**
- **SSCP and lower level hold room(s)**
- **Restrooms**
- **Relocation of GSE**
- **Make-up baggage system/process**
- **Baggage claim**

DESIGN STRATEGY



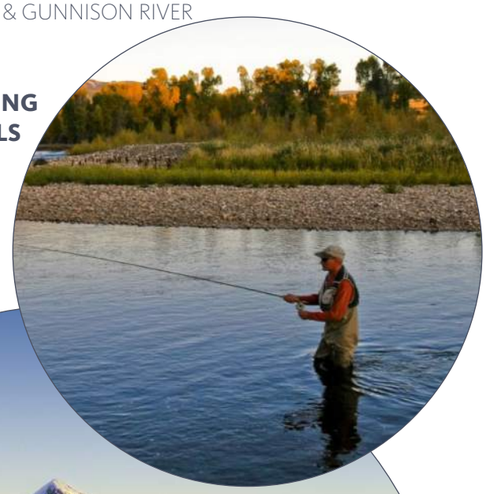
REGIONAL CONTEXT

DENVER & RIO GRANDE RAILROAD
ARRIVED IN GUNNISON IN 1881, AND DEVELOPED AS A TRADE CENTRE FOR MINING, FARMING, RANCHING & RECREATION

WESTERN STATE COLORADO UNIVERSITY
LIBERAL ARTS COLLEGE
ENROLLMENT APPROX. 3,000

FISHING - RIVER/STREAM + LAKE
BLUE MESA RESERVOIR IS COLORADO'S LARGEST BODY OF WATER
TOMICHI CREEK & GUNNISON RIVER

HUNTING
BIKING
ROCK CLIMBING
HIKING TRAILS
KAYAKING
CAMPING
SKIING



CRESTED BUTTE MOUNTAIN RESORT
BOUGHT BY VAIL RESORTS IN 2018
1,547 SKIABLE ACRES; 15 LIFTS; 121 TRAILS
234" ANNUAL AVERAGE SNOWFALL

WEST ELK WILDERNESS IN GUNNISON NATIONAL FOREST
THE CASTLE'S ARE PART OF THE 176,412 PROTECTED ACRES, ESTABLISHED IN 1964

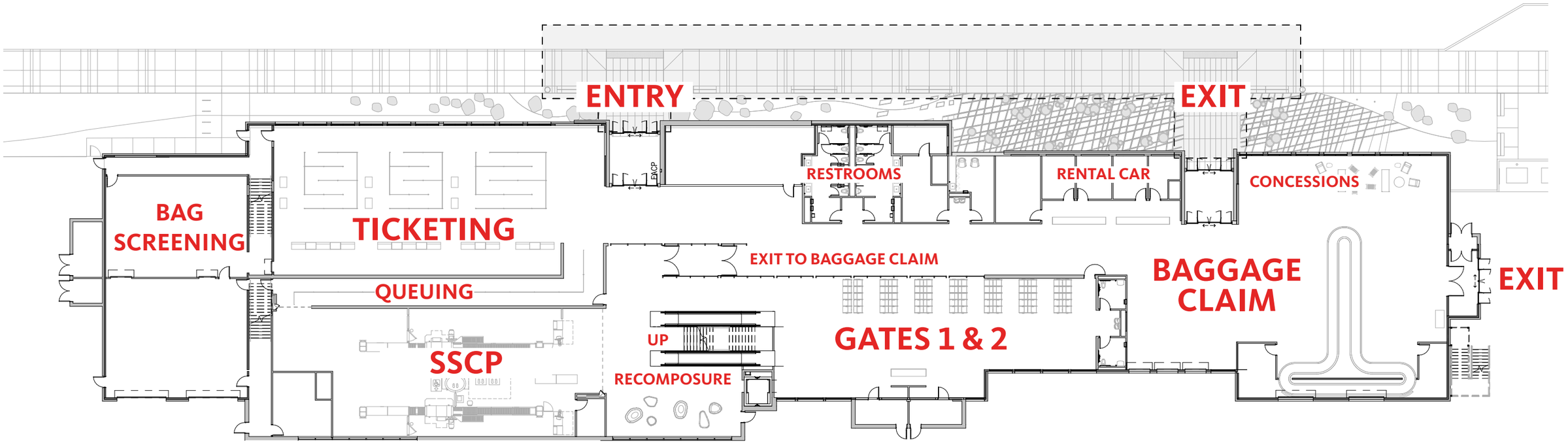
BLACK CANYON OF THE GUNNISON NATIONAL PARK
LIES ALONG THE GUNNISON RIVER, JUST NORTH OF THE SAN JUAN MOUNTAINS

CATTLEMAN'S DAYS PRCA RODEO
EVERY SUMMER SINCE 1900
GUNNISON RODEO GROUNDS

TOWN OF CRESTED BUTTE
POPULATION 1,681 (2019 ESTIMATE)
CALLED "THE LAST GREAT COLORADO SKI TOWN"
WILDFLOWER CAPITAL OF COLORADO

INTERIOR

LEVEL 1

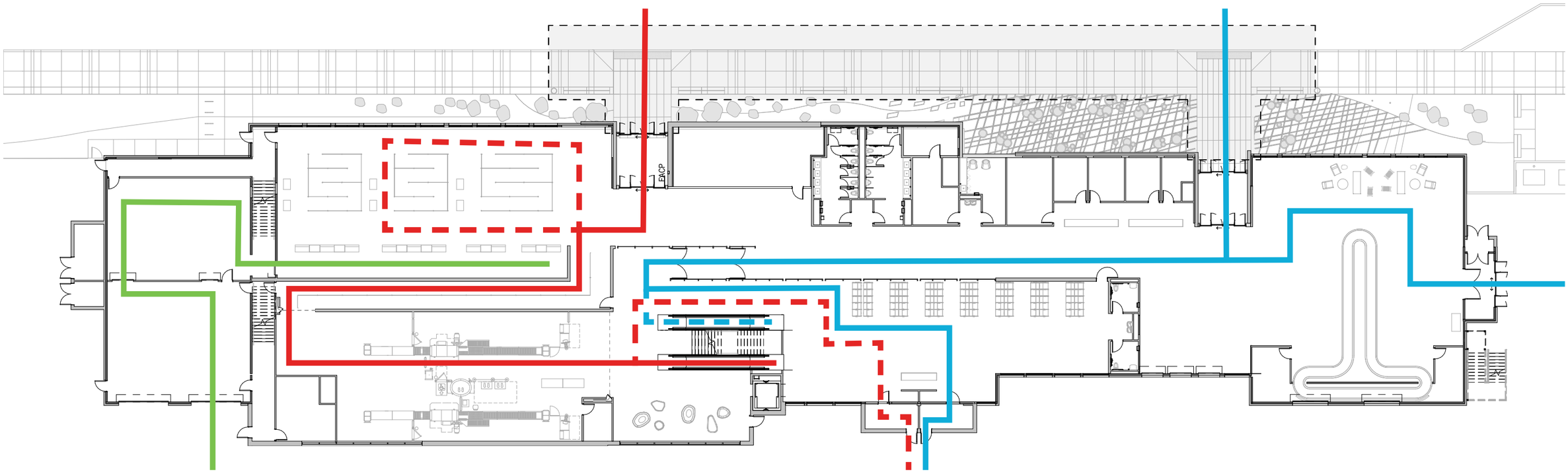

ENTRY
EXIT
BAG SCREENING
TICKETING
BAGS
RESTROOMS
RENTAL CAR
CONCESSIONS
EXIT TO BAGGAGE CLAIM
QUEUING
SSCP
UP
RECOMPOSURE
GATES 1 & 2
BAGGAGE CLAIM
EXIT

LEVEL 1

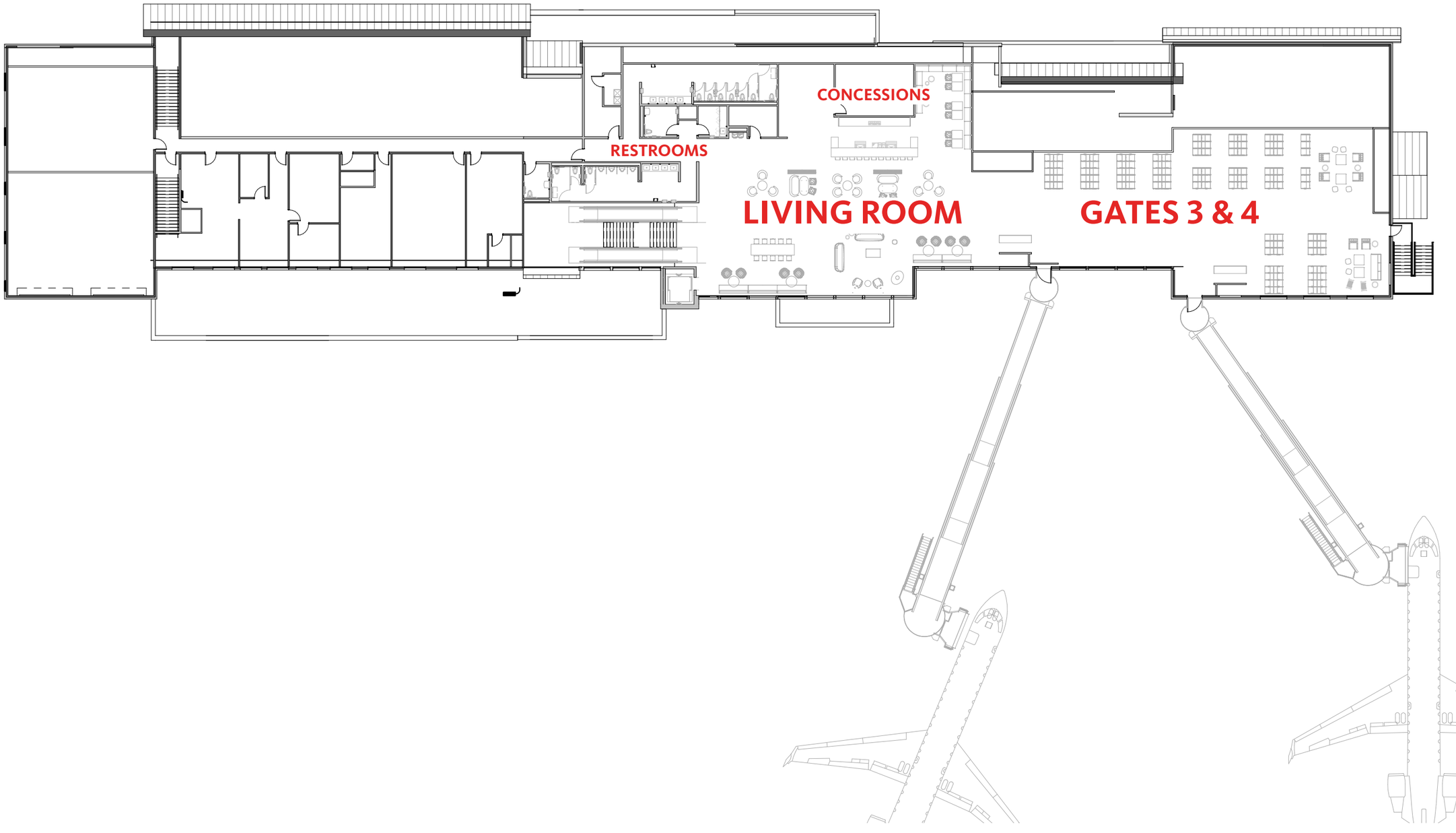
Departing Passenger

Arriving Passenger

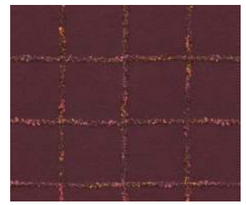
Baggage



LEVEL 2



INTERIOR DESIGN CONCEPT



BRANDING AND WAYFINDING

GUNNISON
CRESTED BUTTE
REGIONAL AIRPORT

GUNNISON
CRESTED
BUTTE

GUC

GUNNISON
CRESTED BUTTE

Wordmark

Exterior Signage Road

Exterior Signage Building

Entry Airside

Entry Landside

Logo

Print Advertising

Website

Internal Communications

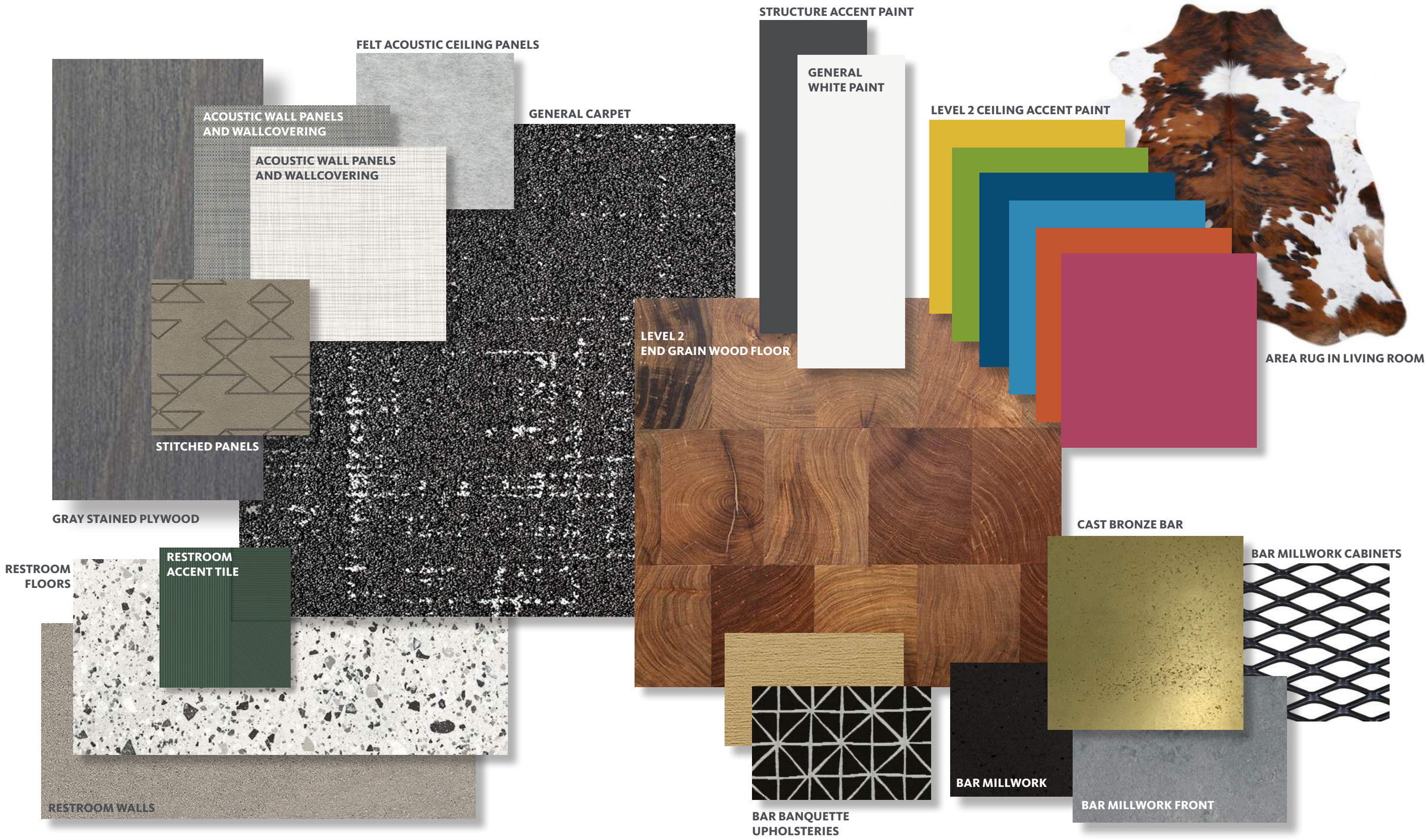
Icon

Exterior Signage Plaque

Social Media


GUNNISON
CRESTED BUTTE

INTERIOR MATERIAL PALETTE




TO ALL GATES
UNITED
GUNNISON
CRESTED BUTTE
REGIONAL AIRPORT


Grindelwald


GATES 1-2
GATES 3-4


American


BAGGAGE CLAIM
DO NOT E TER
38.5
54
107.
16

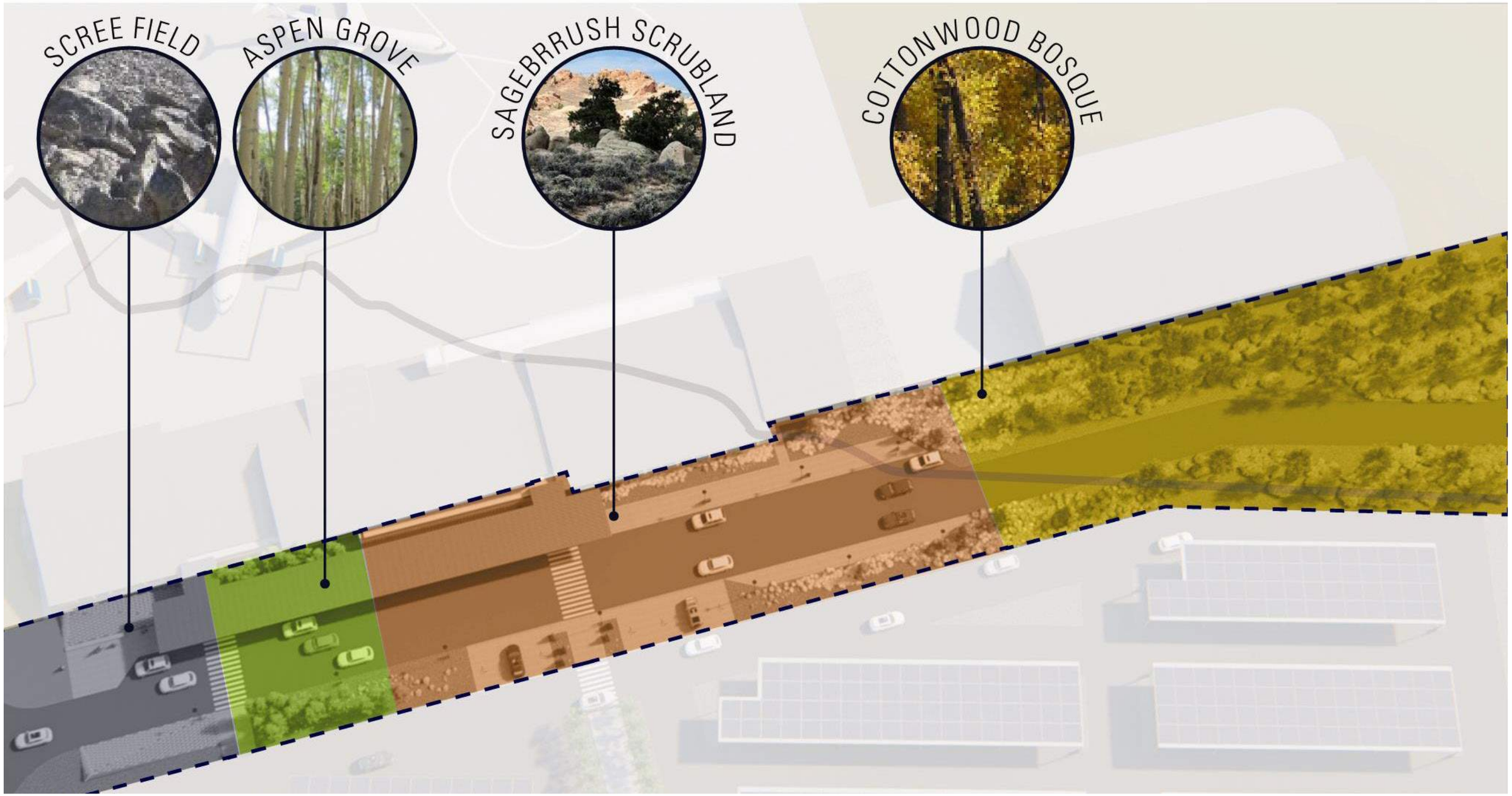

UNITED
38.57
54 N.
107.74


CRESTED BUTTE
COLORADO

EXTERIOR

REGIONAL CONTEXT

LANDSCAPE CONCEPT



EXTERIOR MATERIAL PALETTE

CMU VENEER

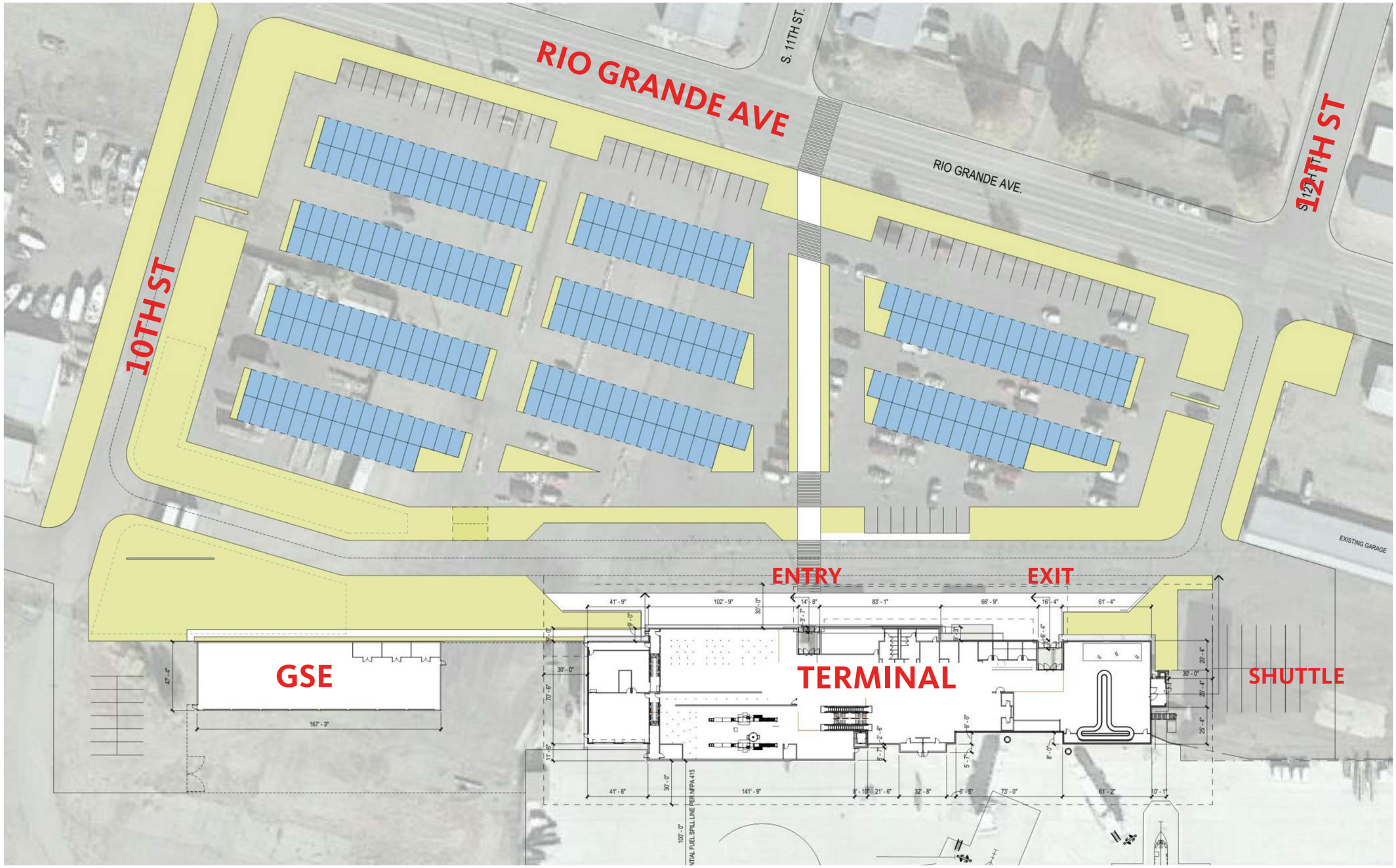
HORIZONTAL LAP FIBER CEMENT PANEL

HEAVY TIMBER VENEER

VERTICAL BOARD & BATTEN FIBER CEMENT PANEL

BONDERIZED STANDING SEAM METAL

SITE PLAN


RIO GRANDE AVE
S. 11TH ST.
RIO GRANDE AVE.
S. 12TH ST
10TH ST
ENTRY
EXIT
GSE
TERMINAL
SHUTTLE
EXISTING GARAGE


GUNNISON
CRESTED BUTTE
REGIONAL AIRPORT


GUC


DEPARTURES
GUC


VALS


GUNNISON
CRESTED BUTTE
REGIONAL AIRPORT

THANK YOU!