May 8, 2025

Mr. Dave Reynolds, Town Administrator
Town of New Castle
P.O. Box 90
New Castle, Colorado 81647

RE: Lot 1 Highway PUD, 7051 County Road 335
Preliminary Plat, Final Plat, Preliminary PUD, Final PUD Review

Dear Dave,

The purpose of this letter serves to provide comments, concerns and questions regarding the proposed development of 7051 County Road 335, Lot 1 Riverside Subdivision. To conduct this review, we are in receipt of the Coal Seam Compiled Land Use Application, (354 pages) and have reviewed the following engineering submittal information from the application:

Exhibit A - Legal Description
Exhibit C - Geotechnical Subsoil Study (HP Geotech)
Exhibit D - Traffic Impact Study (Kellar Engineering)
Exhibit E - Water + Sewer Report
Exhibit H - Rockfall Mitigation Report
Exhibit M - Will Serve Letters
Exhibit N - Drawing Package
- Plat (Pinnacle Design Consulting Group)
- Survey (Tuttle Surveying Services, Inc.)
- Floodplain Maps (Schmueser Gordon Meyer Engineers & Surveyors)
- Civil Plans (Pinnacle Design Consulting Group)
- Civil Drainage Report (Pinnacle Design Consulting Group)
- Landscape + Irrigation Plan (The Stevens Group, Inc.)
- Rockfall Mitigation Plan (CTL Thompson)

The general engineering comments provided for the initial review in June 2024 were responded to by the Applicant in a letter dated January 17, 2025 and provided in the submittal package. The Applicant has submitted general information requested in the SGM email to the town dated 6/25/24 which has provided the ability to perform a more complete and specific final plat and construction review of the project.

Exhibit A – Legal Description
See attached survey review comments

Exhibit C - Geotechnical Subsoil Study (HP Geotech)
The subsoil study provided is for *Riverside Park Townhome Development* dated August 1999 completed on the previously developed property immediately east. The scope for the study does not include the Lot 1 Highway PUD project area.

Exhibit D - Traffic Impact Study (Kellar Engineering)

1. Since the development is immediately adjacent to the I-70 interchange and increases the design hourly volume on the "access" to I 70, the study should be prepared in accordance with section 2.3(5) of the State Highway Access Code for a Level Two analysis and coordinated with CDOT.
2. March 21, 2024, AM traffic data collected by ATD is missing from the appendix.
3. The project trip generation calculation appears to overestimate trip generation as it does not include the residential component and substitutes higher generating retail and restaurant uses in place of the planned 11 residential units. Pasted below is a comparison spreadsheet below based on interpretation of the submittal.

Trip Generation
ITE Trip Generation, 11th Edition

			Design Hour Rates							Weekday Design Hour Traffic				
KELLAR TIS	Number	ITE	Weekday	AM	AM	AM	PM	PM	PM	Weekday	AM	AM	PM	PM
Land Use	of Units	Code	Rate	Rate	Entering	Exiting	Rate	Entering	Exiting	Traffic	IN	OUT	IN	OUT
Hotel	71	310	7.99	0.46	0.27	0.19	0.59	0.32	0.27	375	19	13	23	19
Strip Plaza (<40k)	16.47	822	54.45	2.36	1.42	0.94	6.59	3.30	3.30	925	23	16	54	54
Restaurant	8.85	932	107.20	9.57	5.26	4.31	9.05	5.52	3.53	949	47	38	49	31
									TOTAL TRIPS:	**2,249**	**89**	**67**	**126**	**104**
										per access	45		63	

			Design Hour Rates							Weekday Design Hour Traffic				
"PLANNED" LAND USE	Number	ITE	Weekday	AM	AM	AM	PM	PM	PM	Weekday	AM	AM	PM	PM
Land Use	of Units	Code	Rate	Rate	Entering	Exiting	Rate	Entering	Exiting	Traffic	IN	OUT	IN	OUT
Multi-Family (Low-rise)	11	220	13.27	2.39	0.57	1.81	2.30	1.45	0.85	146	6	20	16	9
Hotel	71	310	7.99	0.46	0.27	0.19	0.59	0.32	0.27	375	19	13	23	19
Strip Plaza (<40k)	5.666	822	54.45	2.36	1.42	0.94	6.59	3.30	3.30	469	8	5	19	19
Restaurant	4.73	932	107.20	9.57	5.26	4.31	9.05	5.52	3.53	507	25	20	26	17
									TOTAL TRIPS:	**1,497**	**58**	**58**	**84**	**64**
										per access	29		42	

4. Provide an evaluation of the need for a State highway Access Permit based on comparison of project traffic versus 2024 traffic on Bruce Road. The development appears to require a State Highway Access Permit based on the 20% threshold.
5. Provide an Auxiliary Turn Lane analysis for the project accesses at CR 335. Auxiliary turn lane requirements for access to roadways are based on the projected DHVs, the speed limit and geometry of the highway adjacent to the access, and the classification of the roadway. CDOT SHAC are typically used by local agencies where local standards do not exist. The project traffic appears to warrant an eastbound left turn lane at each project access.
6. The operational analysis appears acceptable. The study should include a brief discussion of 95th percentile queue lengths at the study intersections.
7. Address the Garfield County LUDC Standards for a Major Collector standard at volumes greater than 2501 vpd.
8. Provide a sight distance analysis at the Bruce Road / CR 335 intersection and project intersections with CR 335.

Exhibit E - Water + Sewer Report

1. Provide a PE stamp on the report.
2. Provide discussion of EQR Summary and Fee spreadsheet in the body of the narrative, include total EQR's, equivalent design flows for water and sewer, and calculated fee.
3. Provide final design information for the increased total flows for the shared Sewage Lift Station. Include pumping requirements, float locations, pipe size verification / confirmation.
4. Provide basis for WSFU count to GPM flows and/or Town EQR's and include discussion in the narrative.

Exhibit H - Rockfall Mitigation Report

No comments.

Exhibit M - Will Serve Letters
Final design coordination to be completed with Xcel for electric service connections.

Exhibit N - Drawing Package

Plat (Pinnacle Design Consulting Group)
Survey (Tuttle Surveying Services, Inc.)
See attached survey review comments
Survey dated May 2015 – prior to paved trail

Floodplain Maps (Schmueser Gordon Meyer Engineers & Surveyors)
No comments.

Civil Plans (Pinnacle Design Consulting Group, Stamped and dated 11/27/24)

1. Overall comments below, see marked up pdf plan comments for additional detail and clarification.
2. For the construction drawings, the engineer will need to provide all anticipated details for construction in the plan set to avoid any interpretation issues during construction between the contractor/engineer and Town. All work will need to be performed in accordance with the Town's Public Works Manual.
3. We anticipate that the project is going to be constructed in a single phase, however, if it becomes necessary to phase the project, it will be necessary to provide phasing plans for the improvements to assure utility service, access and emergency services can be provided with future infrastructure improvements also being secured.
4. Notes and Legend
    a. Update per comments.
5. Grading, Drainage, and Erosion Control Plan
    a. Show Rockfall Berm grading and details on civil plan.
        i. Berm as designed is not maintainable and susceptible to erosion and will require a rounded or flat top area with consistent 3-foot height.
        ii. Berm currently encroaches into the existing asphalt trail.
    b. Provide multiple cross sections of CR 335, Trail, and proposed Rockfall Berm and Curb & Gutter to understand surface drainage impacts in CR 335 ROW. Provide adequate drainage solutions to protect asphalt trail edges from surface drainage ponding.
    c. Provide plans and details for trail reconstruction as needed. Lack of a recent field survey results in uncertainty of trail location that needs to be resolved in the plans.
    d. Provide profile for each access to CR 335, with construction level detail for tie-in to the existing road and trail crossing.
    e. Provide detailed spot elevation grading in areas between and adjacent to buildings to ensure adequate surface drainage away from buildings per geotechnical recommendations.
    f. Provide construction detailing (spot elevation and layout) for ADA Ramps at parking interface.
    g. Provide Storm Drain system profile of 15" piping and include invert elevations for area and trench drains (add details) and 6" piping connection to storm drain manholes and inlets.
    h. For storm drain utility crossings, confirm adequate frost protection will exist or provide insulation.

i. Provide construction details for Stormtech Chambers, including detailed plan, cross section, inlet, outlet, volumes and design storm. Also noting the maintenance and access route.
j. Provide detail for French Drain, including minimum separation from building foundation.
k. Retaining Wall types, materials, construction details are required to understand the impacts to existing and proposed utility easements and facilities.
l. Provide typical section, profile, and easement of Emergency Access connection from River Park condos to CR 335.
m. Provide clarity to Erosion Control Blanket locations with hatching.
n. Provide clarity of use of SCL/SCF on plan and details.
o. Provide retaining wall profile that includes, top of wall, bottom of wall, footing, existing and finished grade.

6. Parking Plot Centerline Profile
    a. Add Access and Storm Profiles
7. Drainage Basins
    a. Provide a summary of Drainage Report notes on the Plan sheet as noted.
    b. Construction drawings will need to identify the specific grades for storm drain (plan and profile) as well as all of the detailed design of WQVC, detention ponds and outfalls.
8. Intersection Signage and Striping
    a. Provide construction detailing (spot elevation and layout) for ADA Ramp at trail crossings at each access crossing.
    b. Provide detail of crosswalk striping.
    c. Clarify the use of Bike/Pedestrian signs and Vehicular signage using MUTCD sign designations.
    d. Parking and ADA parking striping.
9. Master Utility Plan
    a. Provide construction detailed notes for all water, sewer, and shallow utility connections. Provide clear direction for all utility removals, resets, and protection in place. Several items not addressed in Plans, shown in other comments and on Plans.
    b. All water and sanitary sewer line alignments, including service locations to the buildings, will need access available for maintenance and repair with a minimum of 15’ easements provided.
    c. Provide clarity depicting the existing and proposed utilities with text style, symbols, and linetypes.
    d. For dry utilities, when preparing the final plan for construction and prior to construction, the drawings will need to be updated to ensure that the proposed dry utility designs (prepared by the utility provider) continue to integrate with all of the improvements and planning proposed by the developer’s team. Providers will require easements for the electric and gas utility installations. These will be reflected on the plat and the representative signature blocks need to be provided.
    e. Provide final construction details for the shared Sewage Lift Station. Include pumping requirements, float locations, pipe size verification / confirmation.
    f. Include profile views of the water line alignments, avoiding low and high points, if necessary, provide blow offs, air release/vacuum vaults or hydrants at high points or drains

at low points in the lines. Profiles should show the crossing of other utilities (existing and proposed) and storm drain; the proposed retaining wall should also be shown.

g. Service lines will need to be shown for each building/unit complete with the locations of the curb stops and meter locations
h. Proposed 8" water main tie-in to existing main will be completed by cutting in new tee and (3) 8" gate valves.
i. Valves on each side of each tee (including hydrants) will be required.
j. Show Concrete Reaction Block locations on the plans.
k. Note that all water line fittings are to be polywrapped ductile iron pipe fittings and not PVC.
l. Assure that all water/sewer crossings can be provided with a minimum separation of 18", including all water/storm drain crossings. Assure that water/storm drain crossings provide adequate freeze protection at each crossing.
m. If water and sewer mains are constructed in areas of fill; a note shall be included on the profile stating the Contractor shall provide a minimum of 95% compaction 10 feet either side of the Sewer / Water main with compaction testing at 200 foot increments in fill areas under pipe, minimum two test locations required per area.
n. Where water and sewer connections are to be provided to existing facilities, provide details as to the work required for the connection; existing conditions (size, material, depth), removals, fittings, thrust blocks, testing procedures, etc.
o. Provide information on how pressure testing, sanitizing, flushing, air release and subsequent operation of the water, sanitary sewer, and storm sewer utilities are performed.
p. Note that due of SB 18-167, all utilities will need to be installed to be electronically locatable. Details will need to be revised to provide instruction to the contractor that provide tracer wire, magnetic tape, etc… on all subsurface utilities including service lines.
q. Pothole all existing utility crossings prior to construction of new facilities.
r. Proposed Retaining Wall generally paralleling east property line crosses and is in the impact area (construction and future maintenance) of several existing and proposed utilities. Provide retaining wall profile that includes, top of wall, bottom of wall, footing, existing and finished grade, and all utility crossings.
s.

10. Details
    a. Provide construction details for maintainable, non-erodible berm. Contractor should be able to reference civil plan and construct berm without reference to CTL report.
    b. Provide asphalt trail reconstruction typical section.
    c. Provide Lift Station detail.
    d. Provide Bollard detail.

<u>Civil Drainage Report (Pinnacle Design Consulting Group)</u>

1. Provide a Professional Engineer stamp on the cover of the report.
2. Provide discussion of WQCC design storm and sand filter material, including the on-site soil materials compatibility with the sand filter design.
3. Provide construction detail for the stormtech chambers and sand filter design.

4. Provide manufacturers documentation of inlet grate open area and discuss clogging factor used for site design.
5. Discuss and include calculations for inlet control capacity for pipes with storm inlets to confirm adequate capacity.

Landscape + Irrigation Plan (The Stevens Group, Inc.)

1. Provide seed mix and coordination of landscape plan and civil erosion control plan regarding erosion control blanket placement and reseeding areas.

Rockfall Mitigation Plan (CTL Thompson)

1. Incorporate CTL berm and structural wall design parameters into Civil and Structural plans sets with construction level detail.

Subdivision Improvements Agreement

Not submitted.

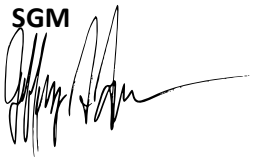
Parking Requirements

1. Parking analysis based on ITE Parking Generation Manual 6th Edition and verified 123 spaces is acceptable, without consideration of shared parking.

Upon your receipt and review, if you have any questions, please don't hesitate to call.

Respectfully,

SGM



Jefferey S. Simonson, P.E.
Principal

April 1, 2025

Town of New Castle

Re: Reviewing Surveyor Comments:

Land Use application for COAL SEAM Hotel, Mixed Use Development

7051 335 County Road, New Castle, Colorado 81647

Regarding Coal Seam Subdivision Plat Table of contents items VIII and XII exhibit N items Plat and Survey

I have reviewed the final subdivision plat that was submitted to me for compliance with: C.R.S. 38-51-105- Monumentation of Subdivisions C.R.S. 38-51-106 - Land Survey Plats, and have the following comments:

Regarding plat monumentation

A. Address new monumentation per C.R.S. 38-51-105(1) (a)

B. Address existing monumentation per C.R.S. 38-51-105(1) (b)

C. Address new monumentation per C.R.S. 38-51-105(3) (a)

D. Address new monumentation per C.R.S. 38-51-105(7) (a), (7)(b) (I)-(7)(c)

E. Address conflicting boundary evidence, if any. C.R.S. 38-51-106(1)(k)

   Recommend bearing and distance ties to found monuments (such as those noted close to the westerly line) not along the boundary, show measured and record distances. Note sources of research board rule E2

Regarding boundary details

A. Address conflicting boundary evidence, if any. C.R.S. 38-51-106(1)(b)(c)(e)(f)(i)(j)(k)(l):

   (b) Provide complete reference of adjoining right of way (row) county road 335 stating width if known and nature of the public, private…

   (c) recommend showing measured and record distances

(e) provide a basis of bearings statement and recommend using one of the four commonly accepted board methods (Board rule H), label basis of bearings on map view.

(f) provide complete description of monuments found and set to include cap type and accessories such as rebar or pipe (board rule M)

(i) the written description in the owner's acknowledgement does not match that of the existing conditions map nor the legal description on submittal sheet 47 Exhibit A – Legal Description

(j) on final document please provide signature and seal and other required information for surveyor.

(k) label ad joiners, suggest clarify lot names with record reference to Lot 1 and not lots 1a and 1b created by this plat. Plat name is confusing consider dropping word; Lot 1 Highway PUD.

(l) provide a statement regarding lineal units used to produce this survey

Regarding Topographical Survey Map does not conform to and was likely not intended to confirm to C.R.S. 38-51-106

B. Address conflicting boundary evidence, if any. C.R.S. 38-51-106(1)(b)(c)(e)(f)(i)(j)(k)(l):

(b) Provide complete reference of adjoining right of way (row) county road 335 stating width if known and nature of the public, private…

(c) recommend showing measured and record distances to survey monuments

(e) provide a basis of bearings statement and recommend using one of the four commonly accepted board methods (Board rule H), label basis of bearings on map view.

(f) provide complete description of monuments found and set to include cap type and accessories such as rebar or pipe (board rule M)

(i) provide a written descriptions of the parcel being surveyed. The map name does not reflect the record parcel name nor the proposed PUD name.

(j) on final document please provide signature and seal and other required information for surveyor. The certification on this document appears to not conform to board rule 2

(k) label ad joiners, suggest clarify map name relative to parcel legal description. Suggest name: *Topographical Survey Lot 1 Riverside Park Subdivision*.

(l) provide a statement regarding elevation datum, site benchmark and contour intervals

Regarding Coal Seam Exhibit A legal description does not match the legal description on either the plat of existing conditions map

Regards,

Scott A. Hemmen

Colorado P.L.S. #38182

For, and on behalf of SGM