APPLICATION SUMMARY

Case Number: Z18-19

Request:
A) Rezoning to a Conditional Use I-2 Zoning District
B) Special Use Permit for a high intensity mining operation

Applicant: Stephen D. Coggins – Rountree Losee LLP
Property Owner(s): Hilton Properties Limited Partnership

Location: 4117 Castle Hayne Road/Sledge Road
Acreage: 63.02

PID(s): R00900-001-002-000
Comp Plan Place Type: Commerce Zone

Existing Land Use: Undeveloped
Proposed Land Use: High intensity mining operation

Current Zoning: RA
Proposed Zoning: (CUD) I-2

SURROUNDING AREA

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>ZONING</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>RA</td>
</tr>
<tr>
<td>East</td>
<td>RA</td>
</tr>
<tr>
<td>South</td>
<td>I-2</td>
</tr>
<tr>
<td>West</td>
<td>RA</td>
</tr>
<tr>
<td>Undeveloped Manufacturing (GE)</td>
<td></td>
</tr>
</tbody>
</table>

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**ZONING HISTORY**

<table>
<thead>
<tr>
<th>Date</th>
<th>Zoning Class</th>
</tr>
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<tbody>
<tr>
<td>July 1, 1985</td>
<td>Initially zoned RA (Castle Hayne)</td>
</tr>
</tbody>
</table>

**COMMUNITY SERVICES**

<table>
<thead>
<tr>
<th>Service</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water/Sewer</td>
<td>Water and sewer services are not proposed for the operation. CFPUA services are not available in this area.</td>
</tr>
<tr>
<td>Fire Protection</td>
<td>New Hanover County Fire Services, New Hanover County Northern Fire District, New Hanover County Station Castle Hayne</td>
</tr>
<tr>
<td>Schools</td>
<td>The proposed mining operation will not generate students.</td>
</tr>
<tr>
<td>Recreation</td>
<td>Northern Regional Park</td>
</tr>
</tbody>
</table>

**CONSERVATION, HISTORIC, & ARCHAEOLOGICAL RESOURCES**

| Category        | Details                                                             |
|-----------------|                                                                    |
| Conservation    | No known conservation resources                                      |
| Historic        | No known historic resources                                          |
| Archaeological  | No known archaeological resources                                     |

**PROPOSED SITE PLAN**

- The application proposes to develop a high intensity sand mine located in Castle Hayne, approximately two miles west of NC 133.
- The Zoning Ordinance classifies mining operations under two categories: low intensity and high intensity. Low intensity mining operations are limited to no more than 20 acres of area, cannot use on-site processing equipment or explosives, and have a maximum excavation depth of 35 feet if dewatering. The proposed mine is classified as high intensity due to its permitted size (28.10 acres). No use of explosives, on-site processing, or
Proposed Site Plan
TRANSPORTATION – Modified to reflect changes made as a result of the Planning Board hearing.

- Access is provided to the subject property by Castle Hayne Road (NC 133) via Sledge Road (private).

- Sledge Road is a private gravel road, approximately 10 feet in width, that runs about two miles from the subject site to Castle Hayne Road. About a half mile of the road is adjacent to a residential neighborhood (Wooden Shoe Subdivision). The subdivision contains 68 lots with nine existing single-family dwellings and an equestrian facility directly abutting Sledge Road.

- During the rezoning application review process, concerns were raised by the nearby residents regarding potential noise, vibration, and dust impacts generated by the trucks traveling to and from the mine. In response, the applicant initially proposed improvements to Sledge Road at a meeting with the owners of the properties abutting the road. Revisions based on feedback from that meeting were presented to the Planning Board at their March 7th meeting. Additional conditions were also added to by the Planning Board at the meeting.

- The proposed improvements, illustrated on the site plan included in the packet (Exhibit B), consist of:
  - Paving the portion of Sledge Road generally abutting the residential homes and equestrian facility in the Wooden Shoe neighborhood to 20 feet in width.
  - Installation of buffer along the northeastern side of Sledge Road abutting the residential properties consisting of a 10-foot tall stick-built wooden fence and two rows of staggered vegetation.
  - Installation of one row of vegetation along the equestrian facility property where a ditch currently exists.

**Notable Details on the Site Plan (Exhibit B)**

*Pavement Detail*

![Pavement Detail Diagram](image)
Buffer Details Along Abutting Residential Lots (Plan View)

Buffer Details Along Abutting Residential Lots (Cross-Section)
Fence Detail

NOTES:
1. ALL WOOD MEMBERS SHALL BE PRESSURE TREATED FOR EXTERIOR USE.
2. SOLID FACE OF FENCE SHALL FACE TOWARD ADJACENT PROPERTIES. REAR OF FENCE SHALL FACE BUFFER.
3. FACE OF FENCE SHALL BE LOCATED 1.0 FOOT FROM PROPERTY LINE.

Buffer Details Along Abutting Equestrian Facility (Plan View)

SECTION B - BUFFER PLAN VIEW

PROPERTY LINE
EXISTING Ditch TO REMAIN

PROPERTY LINE
WAX MYRTLE (TYPICAL)
EXISTING Ditch TO REMAIN
- The number of trips generated by the mine is expected to vary based on the demand, however according to the applicant, the mine will average 60-80 truckloads a day while it is in operation.

- The Institute of Transportation Engineers (ITE) does not provide trip generation estimates for mining operations. Based on the applicant’s estimate and the hours of operation, it is expected that the proposed mine will not exceed 100 trips in the peak hours. Staff consulted with NCDOT staff regarding the trip generation for this proposal and they concur based on the information provided by the applicant.

- A driveway permit from NCDOT is required for access to Castle Hayne Road. NCDOT has reviewed the proposal and provided preliminary comments. The comments indicate modifications will have to be made to the Sledge Road driveway, but did not define the specific improvements at this time.

**Traffic Counts – January 2018**

<table>
<thead>
<tr>
<th>Road</th>
<th>Location</th>
<th>Volume</th>
<th>Capacity</th>
<th>V/C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castle Hayne Road</td>
<td>Near the 4100 Block</td>
<td>10,232</td>
<td>16,200</td>
<td>0.63</td>
</tr>
</tbody>
</table>
**Nearby Planned Transportation Improvements and Traffic Impact Analyses**

No TIAs are currently being drafted or have been completed for projects within a one-mile radius from the subject site within the last five years, or in the general vicinity of the site in the Castle Hayne area.

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**Regional Transportation Plans:**

- **STIP Project U-5863**
  - Project to widen Castle Hayne Road to multi-lanes from I-140 to MLK Parkway. Construction is expected to begin in 2023.

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**ENVIRONMENTAL**

- Portions of the property along the northern property line are within an AE Special Flood Hazard Area.
- The property is not within a Natural Heritage Area.
- The site is classified as Wetland Resource Protection on the 2006 CAMA Land Classification MAP. Per Section 72-42: Mining, of the Zoning Ordinance, high intensity mining operations are permitted in this classification.
- The US Army Corps of Engineers determined in 2013 that the proposed mine will not impact jurisdictional waters or wetlands. However, this determination is no longer valid and a new determination must be issued by the Corps prior to commencing of the mining operation.
- The property is within the Cape Fear River (C;Sw) and Prince Georges Creek (C;Sw) watersheds.
- Per the Classification of Soils in New Hanover County for Septic Tank Suitability, soils on the property consist of Class I (suitable/slight limitation) soils.
- The issuance of the state mining permit on December 15, 2015 was a modification of a permit initially issued in February 2014 to “address concerns of groundwater contamination on the neighboring General Electric property.” The modification reduced the size of the mining operation (from 56.63 acres to 28.10), and required monitoring wells to be installed near the contaminated area. The permit states that “mining shall cease immediately upon notification that regulatory limits have been exceeded” at the monitoring wells.

**2016 COMPREHENSIVE LAND USE PLAN**

- The New Hanover County Future Land Use Map provides a general representation of the vision for New Hanover County’s future land use, as designated by place types describing the character and function of the different types of development that make up the community. Specific goals of the comprehensive plan are designated to be promoted in each place type, and other goals may be relevant for particular properties.

<table>
<thead>
<tr>
<th>Place Type Description</th>
<th>Commerce Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves to provide areas for employment and production hubs, predominantly composed of light and heavy industrial uses, though office and complementary commercial uses are also allowed. Densities are dependent, in part, on the type of industry, and residential uses are discouraged.</td>
<td></td>
</tr>
</tbody>
</table>
The subject property, located to the northwest of the GE site, was designated Commerce Zone on the Future Land Use Map to allow for future GE expansions and/or other industrial uses. The County’s industrial zoning districts are compatible with this place type. Mining is classified as intensive manufacturing in the Zoning Ordinance and is permitted in industrial districts.

The proposed sand mine is generally CONSISTENT with the intent of the Commerce Zone place type to provide areas for industrial uses.

### STAFF PRELIMINARY CONCLUSIONS AND FINDINGS OF FACT:

Staff has conducted an analysis of the proposed use and the information provided as part of the application package and has created preliminary findings of fact for each of the conclusions required to be reached to approve the special use permit request. These preliminary findings of fact and conclusions are based solely on the information provided to date, prior to any information or testimony in support or opposition to the request that may be presented at the upcoming public hearing at the Board meeting.

Persons in opposition to this request have provided information suggesting that one or more of the conclusions cannot be met. This information is included in the Board’s packet and will be presented by the opposition at the upcoming hearing. All competent, material, and substantial evidence must be considered by the Board when determining if the required conclusions have been satisfied. The Board has the discretion to modify the findings of fact for each conclusion, and add additional findings of fact based on competent, material, and substantial evidence provided at the hearing.

**Conclusion 1: The Board must find that the use will not materially endanger the public health or safety where proposed and developed according to the plan as submitted and approved.**

A. The site is accessed from Castle Hayne Road, an arterial street and North Carolina highway (NC 133).
B. The subject property is located in the New Hanover County North Fire Service District.
C. Traffic impacts are reviewed by NCDOT through the driveway permitting process, and any required roadway improvements must be installed in accordance with NCDOT’s standards prior to the mine being in operation.
D. According to the applicant, the mine will average 60-80 truckloads a day while it is in operation.
E. The proposed operation obtained a mining permit from the North Carolina Department of Environmental Quality. The permit allows for up to 28.10 acres to be utilized for the mining operation.
F. The state mining permit, initially issued in February 2014, was modified on December 15, 2015 to “address concerns of groundwater contamination on the neighboring General Electric property.” The permit set operating conditions for the mine, including utilizing monitoring wells and leaving the portion of the property around the contaminated area as an
undisturbed buffer. The state mining permit also requires that the mining cease immediately upon notification that regulatory limits have been exceeded at the monitoring wells.

G. The state mining permit requires that a water truck or other appropriate means be utilized during mining operations to prevent dust from leaving the permitted area including the access road. In addition, the applicant will pave the portion of Sledge Road abutting the residential homes.

H. The operation will use wet mining techniques. No detwatering will occur at the site.

Staff Suggestion: Evidence provided by the applicant at this time supports a finding that the use will not materially endanger the public health or safety in the location proposed. The state mining permit includes operational conditions to mitigate the environmental impacts of the nearby groundwater contamination.

Conclusion 2: The Board must find that the use meets all required conditions and specifications of the Zoning Ordinance.

A. The site is proposed to be zoned I-2, Heavy Industrial.
B. High intensity mining operation are allowed by special use permit in the I-2 zoning districts.
C. The site plan complies with all applicable County technical standards including Zoning Ordinance Section 72-42: Mining.
D. The site is classified as Wetland Resource Protection on the 2006 CAMA Land Classification MAP. Per Section 72-42: Mining, of the Zoning Ordinance, high intensity mining operations are permitted in this classification.

Staff Suggestion: Evidence in the record at this time supports a finding that the use meets all of the required conditions and specifications of the Zoning Ordinance.

Conclusion 3: The Board must find that the use will not substantially injure the value of adjoining or abutting property or that the use is a public necessity.

A. The surrounding area is mostly undeveloped.
B. The property abuts an approximate 1,600-acre parcel of land that is zoned 1-2, Heavy Industrial.
C. The access road to the mine (Sledge Road) runs along nine existing single-family dwellings and an equestrian facility located in the Wooden Shoe subdivision, and a total of 68 lots are located within the neighborhood.
D. The applicant provided an analysis of the impacts an active sand mine will have on single-family residential property values within a close proximity to the mining operations (Proposed Sane Mine – What impact does the presence of an active sand mine have on home values in the adjacent neighborhoods? – Prepared by Trevor Tarleton & F. Blynn Beall, Streamline Evaluation Services). The analysis examined three sand mines located near residential neighborhoods and found “no significant economic impacts to home values as result of an active sand mine in close proximity to each neighborhood.”

Staff Suggestion: Evidence provided by the applicant at this time supports a finding that the use will not substantially injure the value of adjoining or abutting property.
Conclusion 4: The Board must find that the location and character of the use if developed according to the plan as submitted and approved will be in harmony with the area in which it is to be located and in general conformity with the plan of development for New Hanover County.

A. The property is located in the Commerce Zone place type, as classified in the 2016 Comprehensive Plan.
B. The Commerce Zone place type areas serve as employment and production hubs, predominantly composed of light and heavy industrial uses.
C. The proposal is consistent with the recommended uses of the Commerce Zone place type.
D. The property abuts an approximate 1,600-acre parcel of land that is zoned 1-2, Heavy Industrial and an approximate 4,000-acre parcel of land that is zoned RA, Rural Agricultural.
E. The access road to the mine (Sledge Road) runs along nine existing single-family dwellings and an equestrian facility located in the Wooden Shoe subdivision, and a total of 68 lots are located within the neighborhood.
F. The number of trips generated by the mine is expected to vary based on the demand, however according to the applicant, the mine will average 60-80 truckloads a day while it is in operation.
G. The applicant has modified the originally proposed improvements to Sledge Road after feedback received from the January and March Planning Board meetings, and the February meeting with Wooden Shoe residents. The portion of Sledge Road generally adjacent the Wooden Shoe subdivision is currently proposed to be paved 20 feet in width and a buffer consisting of vegetation and fencing will be installed along road abutting the residential properties (see Exhibit B).

Staff Suggestion: The proposed location of the mining operation is generally consistent with Comprehensive Plan and the Commerce Zone place type. However, the access road to the mine may generate impacts to the abutting residential neighborhood. Without improvements along this section of the road to mitigate those impacts, the potential truck traffic may not be in harmony with the area.

PLANNING BOARD ACTION

The Planning Board considered this application at their January 10, and March 7, 2019 meetings. At the January meeting, the Board recommended approval of the rezoning of the property (5-1), finding it to be:

1. **Consistent** with the purposes and intent of the 2016 Comprehensive Plan because the property is classified as Commerce Zone, a place type that encourages light and heavy industrial uses.
2. **Reasonable** and in the **public interest** because the proposed mining operation site is located adjacent to existing heavy industrial zoning and will provide employment opportunities. Additionally, the mining operation site is located approximately 1.5 miles from an existing single-family subdivision. However, truck traffic generated by the operation could be heavy at times and without sufficient mitigation could impact the nearby homes.
However, the Planning Board continued the item (6-0) to their March 7, 2019 meeting prior to taking action on the companion special use permit for the mining operation. The Board suggested that the applicant meet with the residents of the properties adjacent to Sledge Road and requested that the applicant provide specific details regarding the improvements proposed for that portion of Sledge Road.

In accordance with the direction of the Planning Board, staff organized a meeting on February 19th between the applicant and the owners of the properties directly abutting Sledge Road, with approximately 12 residents attending. At the meeting, the applicant provided a site plan showing the specific improvements they proposed to install along Sledge Road.

In response to feedback received at the meeting, the applicant revised the proposed improvements, which are explained in a letter to staff (Exhibit A) and illustrated on an updated site plan (Exhibit B), and provided updated conditions of approval.

At their March 7th meeting, the Planning Board reopened the public hearing to consider new testimony relating to the proposed improvements to Sledge Road. After deliberation, the Planning Board recommended approval of the special use permit (5-0) with conditions.

**RECOMMENDED CONDITIONS**

The Board of Commissioners can add reasonable and appropriate conditions to the special use permit. The following conditions were recommended by the Planning Board:

1. Sledge Road shall be improved as illustrated on a site plan dated February 26, 2019 (Exhibit B), included with the application, and as noted below:
   a. Sledge Road shall be paved, 20 feet in width, generally along the residential properties and equestrian facility, including the extension of the road as illustrated on the site plan.
      i. The pavement shall consist of at minimum 8 inches of NCDOT ABC stone atop the subgrade and 3 inches of NCDOT S9.5B asphalt pavement.
      ii. In addition to geotechnical testing, proof rolling methods shall be utilized to test the subgrade of the road prior to paving.
      iii. The improvements to the road shall be designed and constructed so that the road is pitched away from the abutting residential lots so that it drains to the existing ditch along the southwestern side of the road. The improvements to Sledge Road shall comply with State and County stormwater rules.
   b. A buffer shall be installed along the northeastern side of Sledge Road abutting the residential properties and equestrian facility as illustrated on the site plan.
      i. Section A of the buffer shall consist of:
         1. A 10-foot-high wooden fence. The fence shall be stick-built on site with posts embedded in concrete to 4-foot depth. The fence shall contain a gate/door entrance to allow access to 2 existing groundwater monitoring wells located at 5711 Dekker Road.
         2. Two rows of staggered planted vegetation. The vegetation shall be spaced as noted on the site plan and so that there is a 5-foot wide opening through which access can be gained to the two groundwater wells located along Sledge Road behind the residential properties at 5715 and 5719 Dekker Road.
      ii. Section B of the buffer shall consist of:
         1. One row of vegetation as illustrated on the site plan.
iii. The vegetation within the buffer shall consist of at minimum 3-gallon bulb Wax Myrtles, Green Giant Arborvitaes, or Nelly Springs Hollies at planting.

2. The applicant/owner of the mining site shall be responsible to repair any damage to drinking wells on the adjacent properties caused by the improvements to Sledge Road.

3. The applicant/owner of the mining site shall maintain Sledge Road and the culvert underneath Sledge Road.

4. The existing entrance gate on Sledge Road shall be relocated approximately 1,000 feet west on the road in order to prevent queuing of trucks onto Castle Hayne Road attempting to gain access to the mine site.

5. The hours of operation of the mining operation shall be Monday through Friday, 8:00 a.m. to 5:00 p.m., closed on New Year’s Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

6. Speed limit will be 15 MPH along the section of Sledge Road behind the residences. There will be speed limit signs along the road and the mine operator will be required to implement procedures for enforcing the speed.

7. The mining operation shall comply with the County’s noise ordinance.