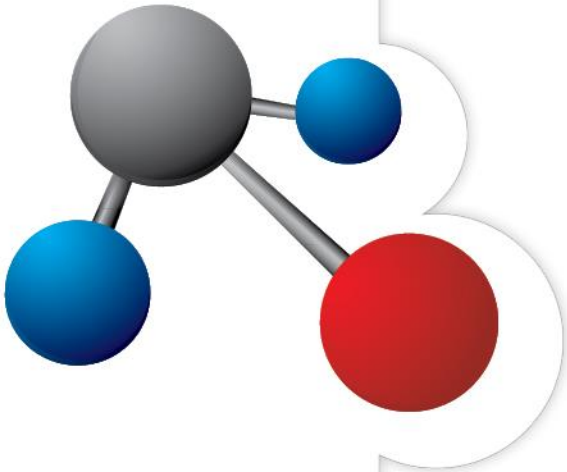
POWDER HOUSE PASS COMMUNITY IMPROVEMENT DISTRICT



COMPREHENSIVE PLAN

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December 10, 2018

P14003-2017-004

COMPREHENSIVE PLAN

FOR

POWDER HOUSE PASS
COMMUNITY IMPROVEMENT DISTRICT

Prepared By:
Advanced Engineering and Environmental Services, Inc.

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1.0 INTRODUCTION

1.1 BACKGROUND AND PURPOSE

Advanced Engineering and Environmental Services Inc. (AE2S) has been retained to complete a Comprehensive Plan for the Powder House Pass Community Improvement District (CID). The plan primarily identifies corridors for future infrastructure including; sanitary sewer, storm drainage, water distribution and storage, and transportation. Land uses will be developed in accordance with the overall densities previously approved by Lawrence County. Individual phases of development will comply with the original requirements of the Planned Unit Development (PUD) that were established when the property was re-zoned in 2010.

The Comprehensive Plan acknowledges that as development has occurred since the inception of the Powder House Pass CID the original phasing plan has changed. However, it is the intent of this plan to maintain the overall approved development densities approved by Lawrence County:

- Total maximum number of 900 single-family residential dwelling units
- Total maximum number of 1,000 multi-family residential dwelling units
- Total maximum number of 72 commercial/industrial acres/lots.

1.2 PROJECT AREA

The study area is located 3 miles south of Lead, South Dakota adjacent to Highway 85. The entire Powder House Pass CID includes an area of approximately 1,023 acres. Current land uses within the Comprehensive Plan area mainly forest with platted residential development occurring north of Powder House Trail in the Phase I area, which includes the former Wilderness Estates development. Additional development has occurred south of Powder House Trail and is accessed by Fireside Court, Outlaw Pass, and Springwood Court. Figure 1 illustrates the general boundaries and topography of the Powder House Pass CID.

Raw water service is provided through the Lead-Deadwood Sanitary District No. 1. The Powder House Pass CID owns and operates a water treatment facility, ground storage reservoir, and distribution system. Wastewater treatment is provided by a recently-constructed facility located near the northeastern boundary of the CID.

1.3 PROJECT SCOPE

This study presents a planning-level projection of the Powder House Pass CID's infrastructure systems needed to support continued expansion of the approved development densities approved when the PUD was formed. The report specifically identifies the future sanitary sewer collection, water supply, transportation connectivity, land use and density, and storm drainage locations. The project also includes development of Geographic Information System (GIS) based records usable for the management of infrastructure data and land parcels.

1.4 PLANNING HORIZON

Previous planning efforts completed for the study area included scenarios based on predicted rates of development. The original master plan completed in 2010 suggested four six-year phases of construction for a total projected development span of 24 years for the entire CID area.

For purposes of this study, the phasing of development does not include a specific timeframe or predicted year of final build-out. Instead, the Powder House Pass Comprehensive Plan includes the establishment of five new "Phase Areas" based primarily on sanitary sewer basins. Phase I of the Powder House Pass CID was approved by Lawrence County in 2014. The Phase I area is included in the Comprehensive Plan to display continuity of the transportation, water distribution, and sanitary sewer collection systems.

Because the pace of development is difficult to predict, the infrastructure plans presented in this study were created to direct the orderly growth of Powder House Pass, reduce the impacts of sprawl, and adhere with Lawrence County's expectation that, "Population growth and economic development are directed to designated areas in an orderly fashion with appropriate land uses, infrastructure and services."

1.5 PREVIOUS STUDIES AND REPORTS

1.5.1 Powder House Pass 2010 Master Plan

A master plan entitled, "Powder House Pass Master Plan" was prepared in 2010. The plan included six subareas with several land use categories for the entire CID area. The master plan depicted a total number of 1,972 development units (Single-Family Residential, Multi-Family Residential, or Commercial/Industrial Lots) for the entire area. The master plan was submitted to Lawrence County as part of the original zoning request in 2010.

1.5.2 Economic Impact Report

An economic impact report was prepared in 2010 by Dale Jahr, in association with the Center for Business, Entrepreneurship & Tourism, Black Hills State University. The report quantified the direct and indirect economic impacts the Powder House Pass CID would have on Lawrence County. The report was based on a planning horizon that included four, six-year phases of construction with a total projected development span of 24 years.

1.5.3 Planned Unit Development Zoning

A series of public meetings were held in 2010 with the Lawrence County Planning and Zoning Board and the Lawrence County Commission to consider a proposal to re-zone the subject property from the Park Forest (PF) District to a Planned Unit Development (PUD) District to create a create a multi-zoned development known as Powder House Pass. In October of 2010 the Lawrence County Commission approved the re-zoning with a series of stipulations, including:

1. A final boundary plat be submitted and approved prior to the COZ taking effect;
2. A waste management (garbage) plan be submitted and included in the General Development Agreement;
3. A traffic impact study be completed, and data be submitted into all Final Development Agreements;
4. All exemptions given are included in the General Development Agreement;
5. The developer shall be required to submit a plan for what infrastructure is going to be built, by when, and by whom and how these are related to the order of platting and construction, prior to any platting being done in any phase;
6. A CID-Community Improvement District shall be approved, or bonding shall be obtained prior to any platting;
7. All infrastructure and plans may be reviewed by an inspector upon reasonable discretion of the County;
8. The developer shall construct turning lanes at the intersection on the Rochford Road at Highway 85 and on the Rochford Road at the Brownsville Road intersection when the traffic numbers on the Rochford Road reach 250+ vehicles per hour; and
9. The developer shall construct a turning lane on the Brownsville Road at the intersection with the Rochford Road when the vehicle count reaches 450+ vehicles per hour on the Brownsville Road.

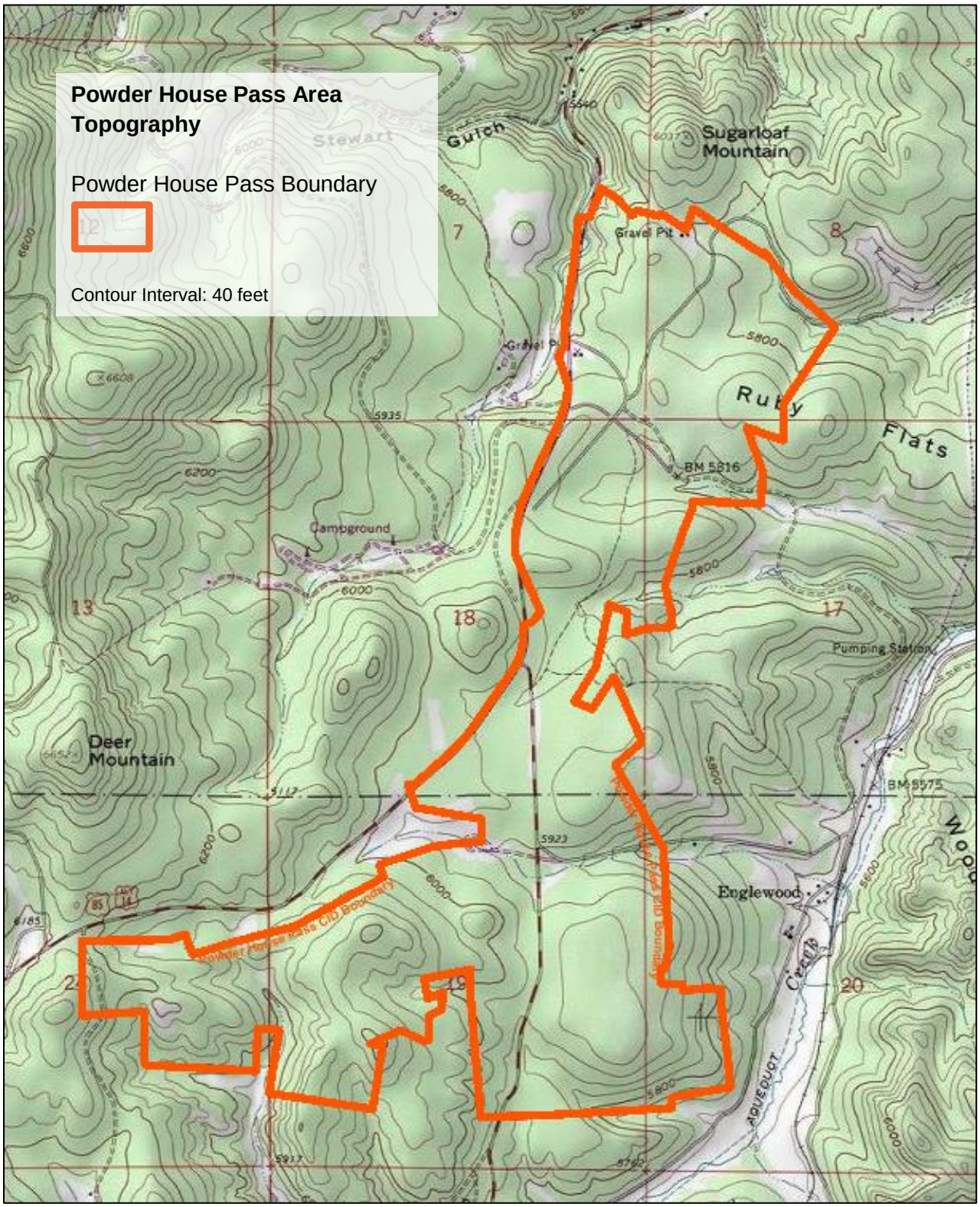
1.5.4 General Development Agreement

In October of 2010 a General Development Agreement (GDA) was approved by Lawrence County in conjunction with the Change of Zoning request that resulted in the Planned Unit Development (PUD) designation for the entire Powder House Pass area. The GDA set forth restrictions and conditions for infrastructure development within the Powder House Pass PUD/CID, including the requirement to submit individual Final Development Plans for review and approval by Lawrence County for each phase of development.

1.5.5 Phase I Final Development Agreement and Final Development Plan

In April of 2014 a Final Development Agreement (FDA) for the Phase I area within the Powder House Pass CID was approved by Lawrence County. The FDA identified a series of development requirements for the Phase I area.

Figure 1 – Powder House Pass Topography



2.0 SUMMARY OF INFRASTRUCTURE SYSTEMS

The primary focus of this Comprehensive Plan is to establish the most cost-effective and efficient routing of infrastructure and land development patterns to both create a community that is designed to take advantage of the natural terrain of the Black Hills, while adhering to the PUD zoning requirements of Lawrence County.

Planning for the extension of services within the project area relies on previous studies and engineering reports. Available data regarding recent wastewater collection and treatment capacity for the Phase I development area north of Powder House Trail has been used to predict future capacity and flow characteristics.

The Comprehensive Plan focuses on the needed capacity for existing and future conditions. Detailed study and engineering designs of specific selected projects will be required to implement recommended improvements. However, by establishing a five-phase approach to future extension of infrastructure, planning for capital expenditures can be used for phasing and financing of improvements.

2.1 PUBLIC IMPROVEMENTS AND DESIGN STANDARDS

As each new Phase of development occurs, all building construction shall follow existing international building codes requirements adopted by Lawrence County and any existing amendments thereto, as established in the previously-approved Final Development Agreement for the Phase I area.

2.2 SANITARY SEWER BASINS

Specific tasks for this section of the Comprehensive Plan include:

- Identify Future Sanitary Sewer Basins
- Identify future phases of growth by sanitary sewer basin.
- Establish network of trunk sewer collection piping.
- Locate proposed lift stations and force mains.

The Future Sanitary Sewer Basin Areas were identified using ESRI's ArcGIS PRO Software with Geospatial Analysis and 3D Modeling Add-ins. A Digital Surface Model (DSM) was generated using National Elevation Dataset (NED) 1/3 Arc-second elevation model merged with spatially adjusted customer supplied LIDAR elevation data.

The two data sets were merged and exported as a Digital Surface Model (DSM) for analysis using ArcHydro Tools Workflows. Using these methods, this study has identified 5 (five) new sewer basins locations. As these basins generally drain in a west to east direction and the CID area is elongated in a north to south direction, each of these basins will require lift stations to convey the wastewater to the recently constructed treatment facility.

While the Outlaw pass lift station can service the Phase 1 area, each of the subsequent phases will require the construction of its own lift station. The locations for these proposed lift stations is detailed in Figure 1.

2.2.1 Lift stations

A total of five (5) new lift stations will be required to accommodate full build out of Powder House Pass. Due to the general west to east topology of the property, these new lift stations and the existing Outlaw Pass Lift station will need to be sized/resized to handle the outflows of the latter stages of development. For example, the Phase 3 lift station will need to have the capacity to transfer the outflows from the Phase 4-6 development areas.

2.2.2 Collection System

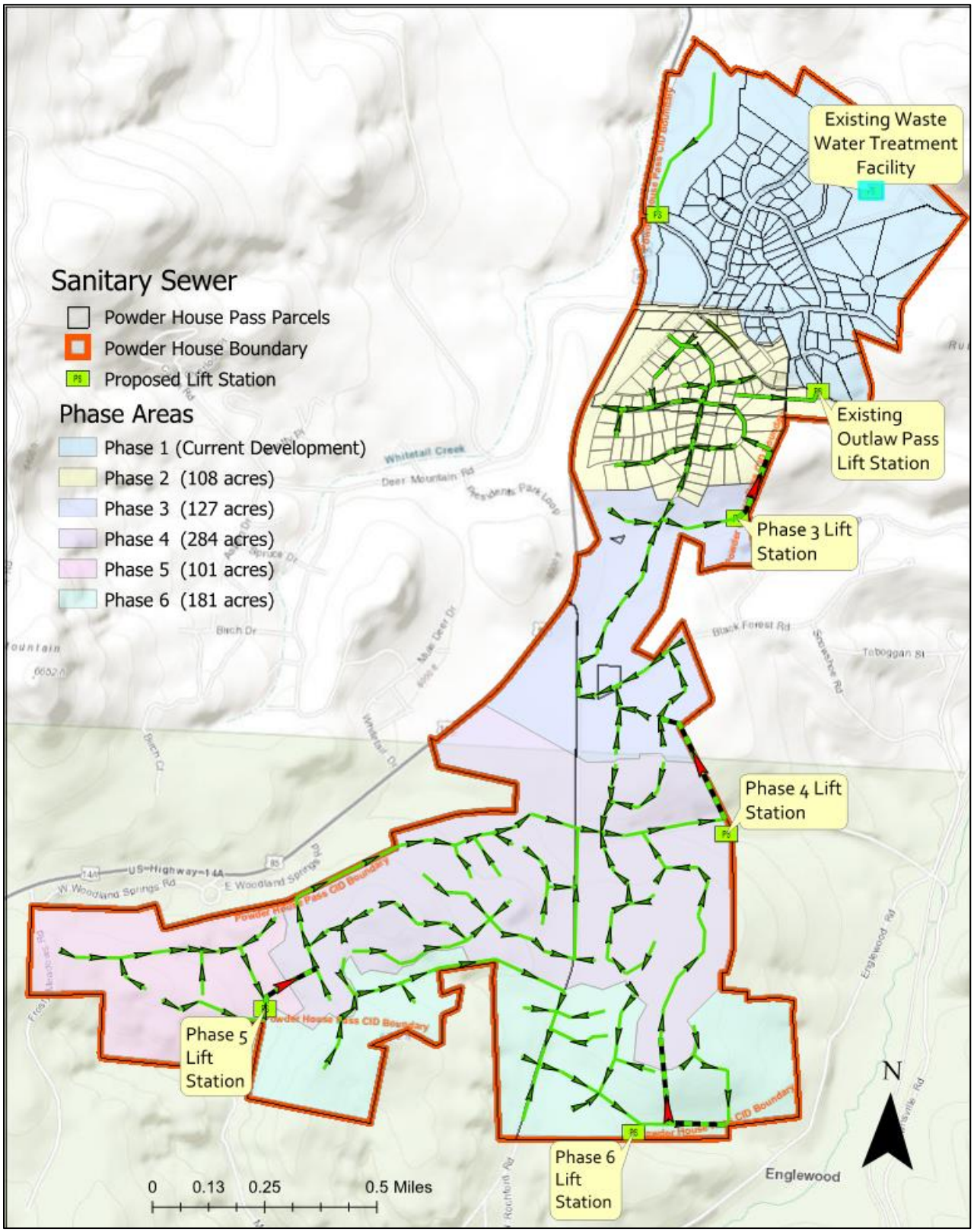
The purpose and function of the sewer collection system is to provide waste water collection service to all parcels within the study area while minimizing the need for lift stations and unnecessarily deep sewer mains. Normally sewer mains are routed within the right of way provided by streets. Due to the existing topography and the intent of the study to provide the most visually appealing lots, a street centerline placement was not always possible.

Alternative sewer collection systems will be needed in areas not conducive to being part of the CID sewer collection system (areas of steep terrain, etc.). As such, these areas will be serviced by engineered/designed individual or cluster septic systems. These alternative systems will be maintained by the CID.

Other areas of development, currently outside the immediate sewer collection system, may have interim systems, such as engineered and approved holding tanks (to be pumped out by the CID) or engineered individual or cluster septic systems (maintained by the CID). These interim systems will be converted/replaced by the CID sewer collection system when there is availability in these areas to the sewer lines and the ensuing provision of service.

Per the South Dakota Department of Natural Resources Design Criteria, the minimum sanitary sewer collection main diameter is eight (8) inches. Given the approved population densities for the CID it is projected that no sewer mains will be larger than this eight (8) inch minimum.

Figure 2 - Sanitary Sewer Basins



2.3 STORM DRAINAGE BASINS

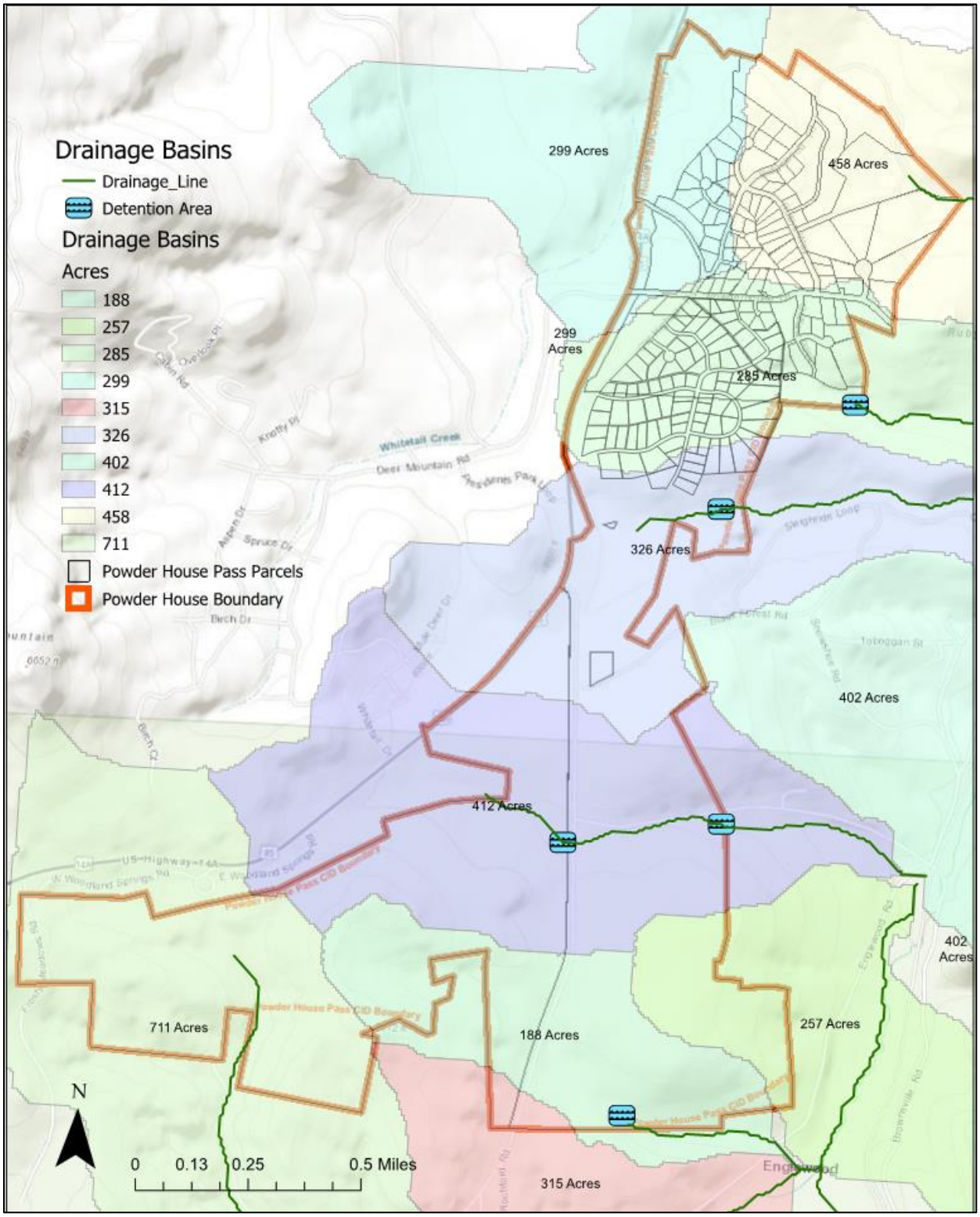
Specific tasks for this section of the Comprehensive Plan include:

- Identify Future Storm Drainage Basins
- Identify future storm drainage basin boundaries and directional flow patterns.
- Establish potential detention pond locations and drainageways.

The Storm Drainage Basin areas were identified using a similar methodology and inputs as the Sanitary Sewer Basins. A total of eight drainage basins are presented within the development. Five general locations for storm water detention areas are also identified.

Specific drainage easements, culverts, and other storm drainage improvements have not been identified. As individual phases of development occur, appropriate storm drainage facilities will be designed to provide capacity for increased runoff from future development.

Figure 3 – Storm Drainage Basins



2.4 WATER SYSTEM

Specific tasks for this section of the Comprehensive Plan include:

- Review existing water distribution system and identify potential routes for future improvements.
- Establish future storage locations and identify capacity needs.

BH Development, LLC, established an agreement with Lead-Deadwood Sanitary District #1 in 2010 to receive raw water to serve Powder House Pass. Water treatment, storage, and distribution is owned by the CID and is managed through a third-party agreement.

For future water planning purposes, the Lead-Deadwood Sanitary District #1 has agreed to the following calculations:

Average Day:

Estimated 1,900 residential dwelling units (2.5 people/unit) * 150 gallons/day= 712,500 gallons per day (gpd)

Maximum Day:

Factor 1.25 * Average Day = 890,625 gpd (618 gallons per minute).

The CID currently relies on a single 100,000-gallon tank located just east of Highway 14a with a base elevation of approximately 5,990 feet above sea level. While the tank has the capacity and elevation to supply the current Phase 1 and most of the future Phase 2-3 development, the tank's capacity will not supply the final development's required fire flows nor does the current elevation allow for sufficient pressure for Phase 4 through 6 developments.

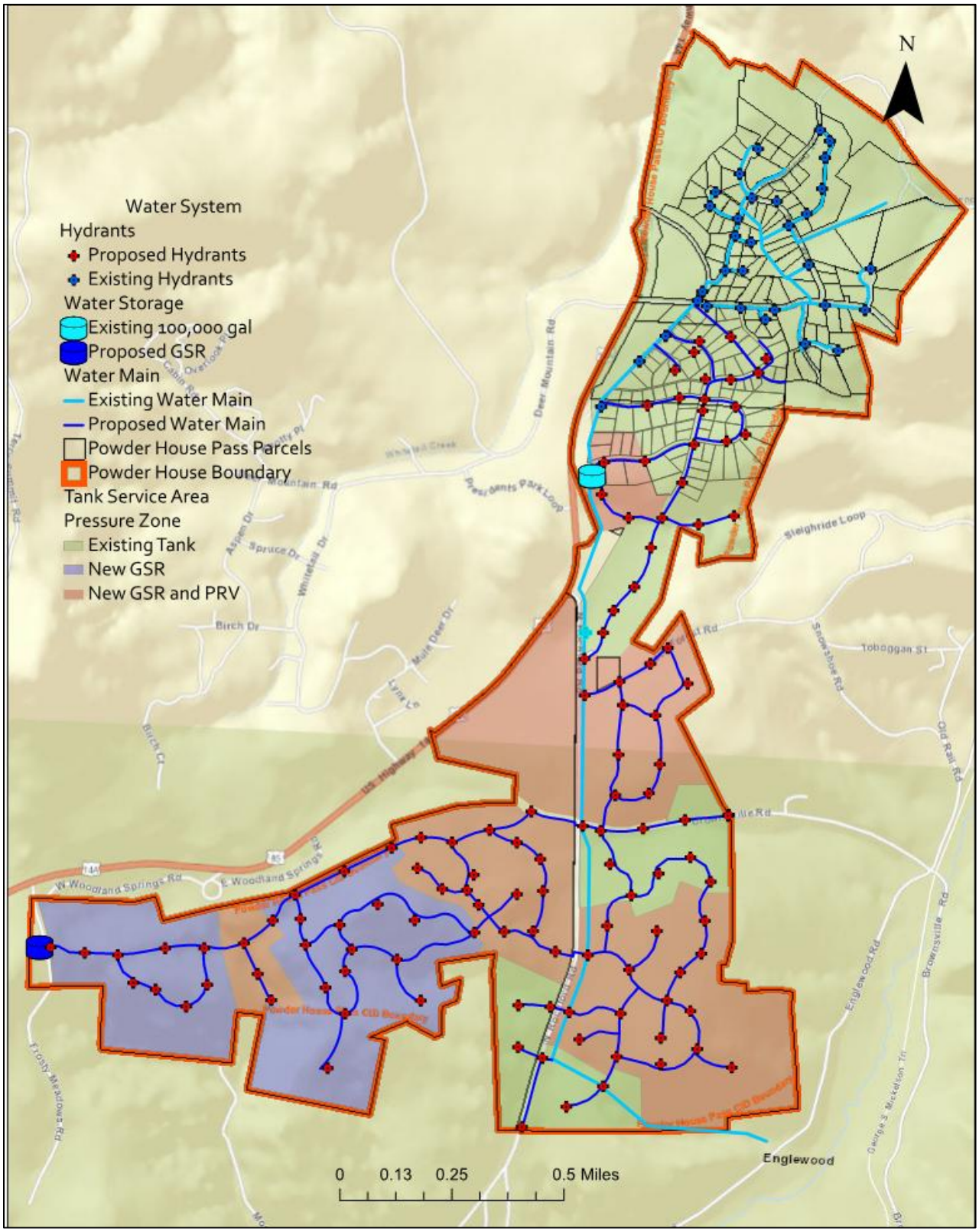
2.4.1 Storage

A potential location for new Ground Storage Reservoir (GSR) is proposed for the extreme south west end of the development. This location will provide the ability to supply the entire development with sufficient water pressure as well as minimize negative visual impacts.

2.4.2 Distribution System

The CID currently relies on a frame work of six (6) inch distribution mains bisecting the development from north to south. Six (6) inch mains will be sufficient to supply the peak daily demands of the approved development densities.

Figure 4 – Water Distribution System



2.5 TRANSPORTATION SYSTEM

Specific tasks for this section of the Comprehensive Plan include:

- Develop internal network of arterial, collector, and local streets.

A significant aspect of developing the Comprehensive Plan for Powder House includes the necessity to create both an internal circulation pattern for residents, but also provide for connectivity with the adjoining road network.

The intent of this Comprehensive Plan is to minimize environmental impact of development by utilizing existing roads/trails as alignments for future roads. The North Rochford Road, Brownsville Road, and Black Forest Road will be used as collectors and, whenever possible, various trails/unimproved roads within the CID's boundaries will be improved and used as the basis for local roads.

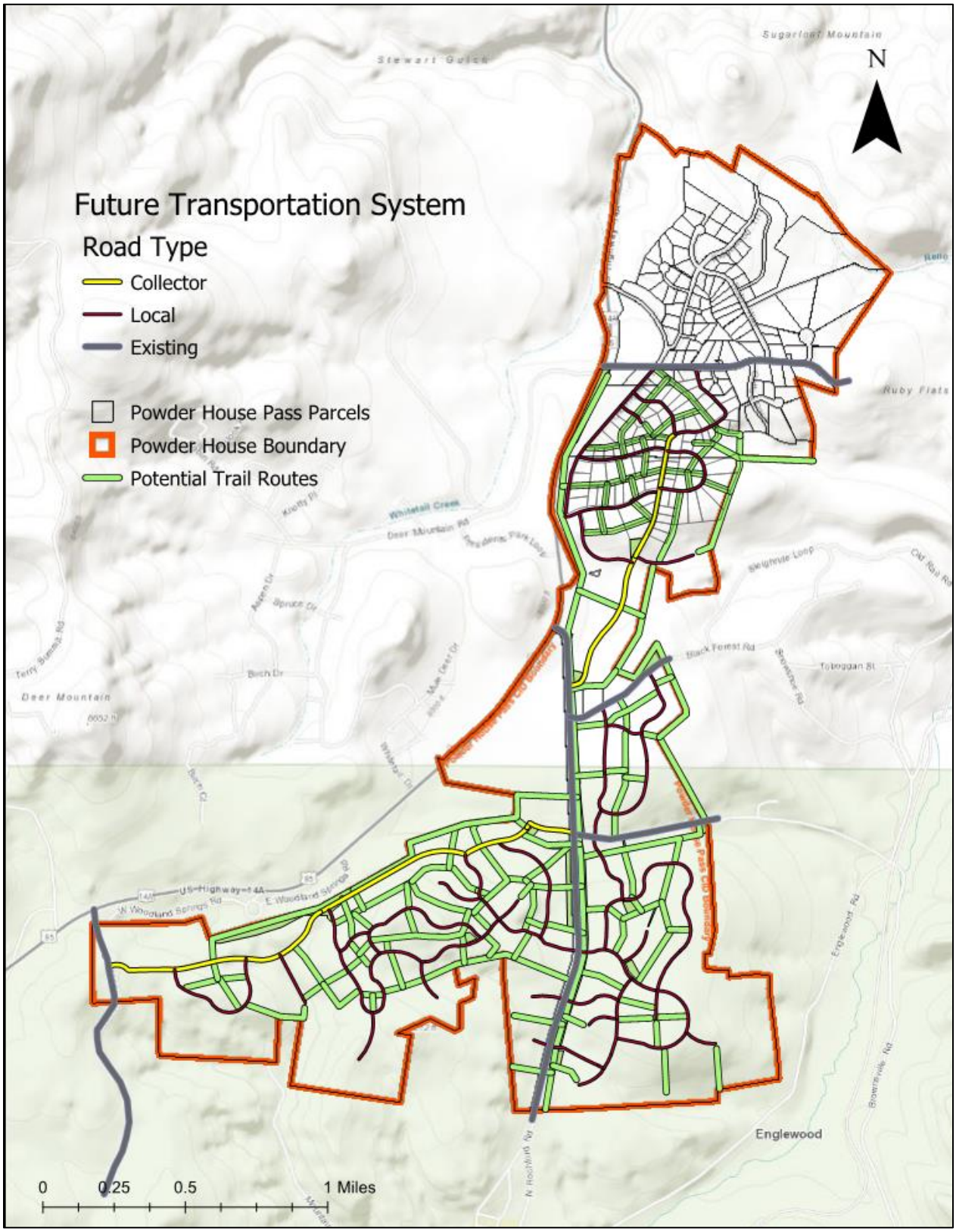
Powder House Trail has been established as the primary access for the development and has adequate pavement width and right-of-way. As development continues to the south, a series of collector and local streets have been planned.

To provide a level of consistency and accommodate increased traffic volumes, all collector streets will be designed with 66 feet of right-of-way (typically 24 feet of pavement width). All local streets will be designed with 40 to 50 feet of right-of-way (with potential easements along the right-of-way and typically 24 feet of pavement width).

As required with the original PUD zoning, turning lanes at the intersection on the Rochford Road at Highway 85 and on the Rochford Road at the Brownsville Road intersection will be constructed when the traffic numbers on the Rochford Road reach 250+ vehicles per hour. Likewise, a turning lane on the Brownsville Road at the intersection with the Rochford Road will be constructed when the vehicle count reaches 450+ vehicles per hour on the Brownsville Road.

Internal multi-use trails will be developed with the establishment of utility easements and corridors throughout Powder House Pass. Additionally, the Powder House CID Board of Supervisors are in discussions with local, state, and federal officials to ensure connections to the Mickelson Trail, snowmobile trails, and ATV trails can be accommodated as development occurs. Figure 4 illustrates the locations of potential trails associated with utility easements.

Figure 5 – Transportation System



2.6 LAND USE

Specific tasks for this section of the Comprehensive Plan include:

- Update existing land use plan, based on approved and projected development densities.

As established in the PUD zoning approved by Lawrence County, Powder House Pass was approved for a mixture of single-family, multi-family, commercial, and industrial uses:

- Maximum number of 900 single-family residential dwelling units
- Maximum number of 1,000 multi-family residential dwelling units
- Maximum number of 72 commercial/industrial acres/lots

The overall average density of development is projected to be 1.9 residential dwelling units/acre.

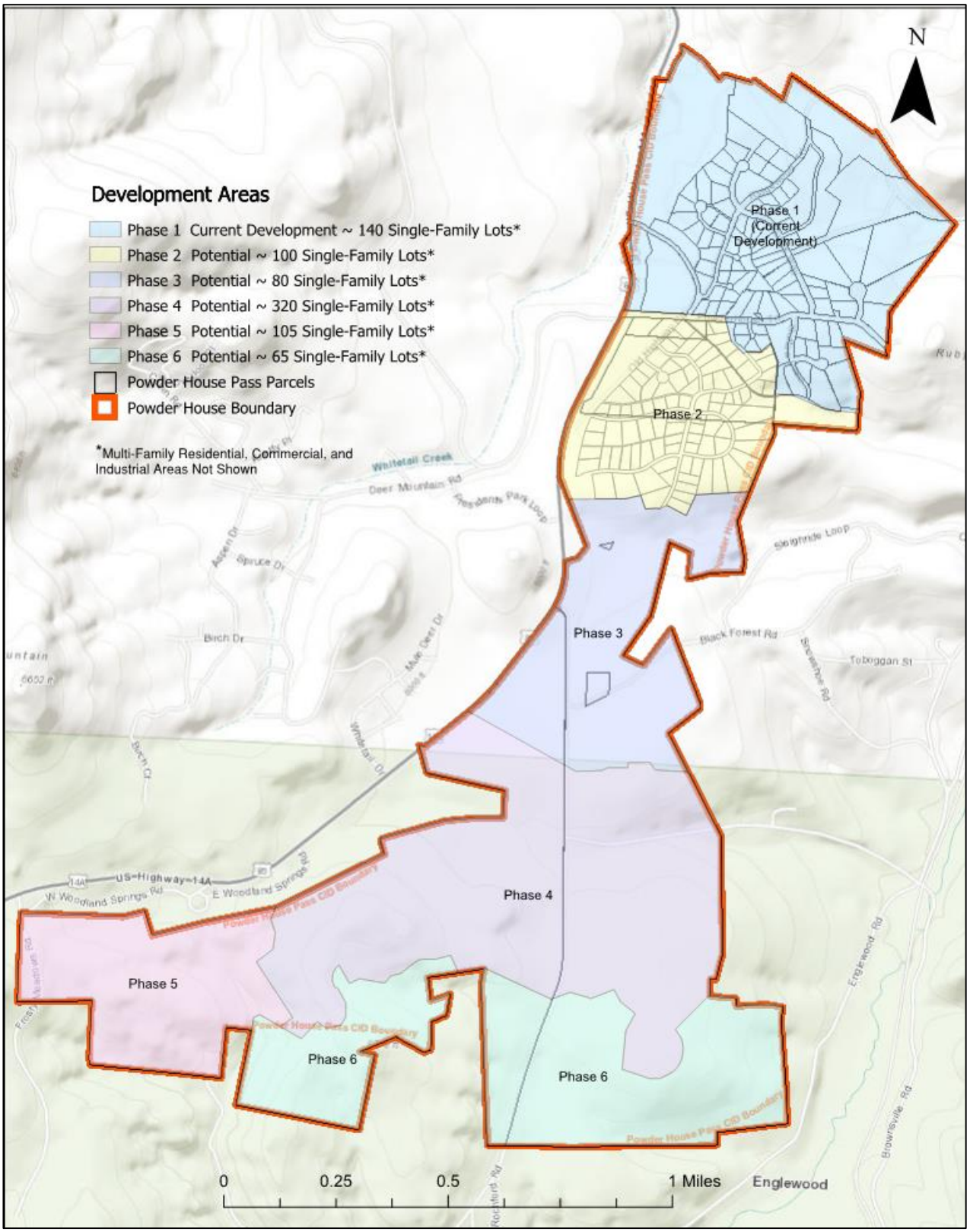
The current land development pattern in the Phase 1 area includes single-family homes and a commercial sales office. The Phase 2 area is currently being considered for continued single-family development, like the Phase 1 area.

To date, no multi-family or commercial development opportunities have been approved in Powder House Pass. Generally, future industrial, commercial, and multi-family development will be encouraged along major transportation routes to discourage non-resident traffic traveling through the development.

Final Development Agreements will be submitted to Lawrence County for review and approval prior to the initiation of subsequent phases of development.

To maintain the natural beauty of the area, a multi-use trail system is being planned and will generally follow utility easements throughout the development.

Figure 6 – Land Use



2.7 GEOGRAPHIC INFORMATION SYSTEM (GIS) MAPPING

Specific tasks for this section of the Comprehensive Plan include:

- Data Management, Production, and Analysis
- Compile datasets and as-builts from projects and develop a master GIS file
- Calculate front and square footages
- Cartographic Production
    - Location map for website
    - Wall map of all development phases
- GIS Application Development
- Update interactive map of development for use in the Powder House Pass sales office

Throughout the development of the Powder House Pass Comprehensive Plan, all utility, parcel, and land use data has been collected in ESRI's ArcGIS PRO Software with Geospatial Analysis and 3D Modeling Add-ins.

All electronic data will be available through a variety of easily-accessible methods, including an internet-based mapping application. Three-dimensional imagery and survey data has been collected and is also available for use with the Comprehensive Plan.

2.8 PLANNED UNIT DEVELOPMENT COORDINATION

Specific tasks for this section of the Comprehensive Plan include:

- Provide overall project management services including coordination with private utilities.
- Coordinate with Lawrence County on land use plan review and approvals.
- Establish Engineering Design Standards for future development requests.

The process to obtain approval of the original PUD required a series of public meetings with Lawrence County, including several presentations by representatives of BH Development and future members of the Powder House Pass CID Board.

At full build-out the Powder House Pass CID will function much the same as other communities in the northern Black Hills. It is important to recognize that coordination with Lawrence County will continue to be important, including providing the County the opportunity to review and comment on this Plan.

2.8.1 Comprehensive Plan Updates and Amendments

The Powder House Pass Comprehensive Plan acknowledges that housing and commercial market conditions will likely change over time and new opportunities for development that were not foreseen during the development of the plan will occur.

It is anticipated that amendments to the plan will come before the Powder House Pass Community Improvement District Board of Supervisors for consideration. Establishing a formal process to allow the submittal and consideration of plan amendments will permit while maintaining all plan policies.

Substantial changes to development patterns could impact the transportation, sanitary sewer, water supply, and stormwater elements of the plan. Establishing an ongoing planning process that includes internal provisions for review of significant changes to the plan to both preserve the original intent of the plan, while encouraging innovative design and development. Proposed amendments to the Powder House Pass Comprehensive Plan must be submitted to the Powder House Pass CID Board of Supervisors for their consideration. Requested amendments should address the following:

1. What land use-related factors support the requested amendment?
2. What is the impact on the existing and/or planned infrastructure?
3. How is the amendment consistent with the overall vision and policies of the Powder House Pass Community Improvement District?

At the end of each calendar year, updates on the ongoing infrastructure costs of water supply, wastewater collection and treatment, transportation, and storm drainage should also be reviewed with the Powder House Pass Community Improvement District Board of Supervisors to aid in capital replacement planning and annual budgeting.

2.8.2 *Capital Improvements*

The infrastructure layout and phasing plans for the Powder House Pass CID were originally designed around individual sanitary sewer basins as logical breaks between development. In addition to these being natural demarcation lines, the primary benefit of this approach is the economy of scale associated with developing a single lift station and associated wastewater collection infrastructure at a single time.

Due to the overall sizing of the sewer basins and the current rate of development of the CID, undertaking a phase in its entirety could result in the construction of excess system capacity that is not supported by system revenues. Table 2-1 provides a projection of capital improvements to extend infrastructure for future phases of the CID. Annual infrastructure investments should be based on expected land consumption rates and historical growth trends for the CID.

Table 2-1 Example Phasing of Capital Improvements

Phase	Year	Costs
Phase 1	2019	$2.1 Million
Phase 2a	2021	$2.5 Million
Phase 2b	2023	$2.6 Million
Phase 3a	2025	$1.8 Million
Phase 3b	2027	$1.9 Million
Phase 4	Beyond Study Timeframe	
Phase 5	Beyond Study Timeframe	
Phase 6	Beyond Study Timeframe	