

DATE: February 6, 2024
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PROJECT NAME: City of Deadwood, Parking Garage Site Feasibility Assessment
PROJECT NUMBER: 21-005022.11

INTRODUCTION

The City of Deadwood has been contemplating the merits and considerations related to a potential new parking structure within the city, provided to supplement the current city parking inventory. As part of the development of the City of Deadwood Parking Management Plan, Walker Consultants worked with partners JLG Architects and FMG Engineering to conduct a feasibility study of three potential sites for a possible new parking garage in Deadwood. The study aimed to evaluate each site's feasibility and pros and cons and recommend a preferred site for a potential new garage. **This study will guide the City of Deadwood and its partners in deciding garage timing and placement.** At that point, further analysis and design will be warranted.

POTENTIAL PARKING GARAGE SITES

The three sites evaluated were as follows, all existing surface parking lots owned and operated by the City of Deadwood:

- **Welcome Center Lot:** 501 Main Street, 226 parking spaces.
- **Miller Street Lot:** Located behind Jacobs Brewhouse Restaurant at 79 Sherman Street between Sherman Street and Miller Street, 110 parking spaces.
- **Sherman Street Lot:** Located behind the First Interstate Bank at 152 Sherman Street, 280 parking spaces.

Each parking facility has benefits and drawbacks when considering the placement of a potential new parking garage in the city.

EVALUATION CRITERIA

The team worked with the City of Deadwood to establish criteria to evaluate each potential garage site. Some criteria are quantifiable and objective, while others are more subjective. The criteria address needs and concerns critical to maintaining the City of Deadwood's ongoing health, beauty, and vibrancy.

The selected evaluation criteria were as follows:

1. **Total number of spaces overall:** This is the raw number of spaces that could be built in a parking garage on the site.
2. **Net number of spaces added:** This is the net number of spaces added when accounting for the parking garage size that could be built and the number of spaces lost in the current surface parking lot used as the construction site.
3. **Expected relative costs:** This criterion deals with the relative costs of building a parking garage on the site, including land costs, excavation, construction, utility work, etc. Note that this study does not provide specific cost estimates; cost estimates should be obtained via additional future evaluation once the ramp site is determined.
4. **Area, land uses, and users served:** This criterion deals with the site's location relative to nearby destinations and the ability of the site to serve multiple types of parking users.
5. **Public-private partnership potential:** This criterion deals with the potential of a parking garage to be built on each site under a public-private partnership approach with nearby land uses. Note that this is based on what is known at this time.
6. **Pedestrian access and walking distances:** This criterion deals with how accessible each potential garage site is from a pedestrian standpoint and a distance and walk comfort/safety perspective.
7. **Parking user level of service:** This criterion deals with the level of service of parkers using a garage on each potential site. The garage site and layout impact the level of service.
8. **Vehicular traffic access:** This criterion deals with the location and accessibility of each garage site for vehicles entering and exiting.
9. **Site utilities:** This criterion deals with the expected impacts of constructing a garage on each potential site on existing utilities and the effects on feeding utilities to each possible garage site.
10. **Aesthetics, viewshed, and historic considerations:** This criterion deals with the impacts a garage on each potential site would have on the City of Deadwood's aesthetics, views, and historic character.
11. **Non-parking / active use opportunity:** This criterion deals with each garage site's potential to provide broader non-parking and community activation benefits.

It is important to note that although all criteria are deemed worthy, the relative importance of one criterion over another is a personal choice that City of Deadwood staff must make with the City Commission and relevant community stakeholders.

EVALUATION RESULTS

Evaluation results are summarized below for each potential garage site and each evaluation criterion. Results are organized by garage site.

GARAGE SITE OPTION 1: WELCOME CENTER LOT

The Welcome Center Lot sits on approximately 1.6 acres on the northern edge of Deadwood. It is currently utilized as a surface parking lot, available to residents and visitors throughout the year.

Total Number of Spaces Overall

This site could accommodate approximately 500 structured parking spaces. Final numbers will vary depending on garage configuration and building concepts.

Net Number of Spaces Added

With the existing surface parking lot at 226 spaces, this site provides a net increase of approximately 274 parking spaces for the City of Deadwood.

Expected Relative Costs

The Welcome Center surface lot is relatively flat, with few, if any, obstructions or barriers to construction. The relative costs of construction on this site are low.

Area, Land Uses, and Users Served

A parking garage on the Welcome Center lot would cater primarily to visitors from the north and be attractive on peak volume days. On non-peak days, when visitor volumes are relatively low, a parking garage on this site is expected to be less popular than parking facilities closer to the city's core. This site could offer some benefits as a less proximate (and perhaps cheaper) option for employee parking.

Public-Private Partnership Potential

There are no known public-private partnerships or financing options for a parking garage on the Welcome Center lot.

Pedestrian Access and Walking Distances

This site is home to the newly constructed Deadwood Welcome Center and is a key destination point for any first-time visitor to the local area. In addition to the historic Main Street to the west, the site is centrally located to several large venues to the east, including Cadillac Jacks, The Days of '76 Event Complex, and The Lodge Hotel and Casino along CanAm Highway. The site is adjacent to the Mickelson Trail and Whitewood Creek. The proximity to the Mickelson Trail could be an asset as it would allow easy access to and from the trail. The site is close to shopping, gaming, and other destinations. The Welcome Center site sits 0.58 miles from Outlaw Square in Downtown Deadwood, about a 12- 15-minute walk.

Parking User Level of Service

The site, located near the Deadwood Welcome Center, offers an ideal starting point for visitors coming to Deadwood. Relative to a potential parking garage, the site is the most efficient from a stall per square foot perspective, close to the other potential garage sites, representing more parking for less cost. Given the current site's large size, several design options exist, and as few as two supported levels (three total levels) would be required to provide as many as 500 structured parking spaces. This represents minimum vehicular circulation and a high parking user level of service.

Vehicular Traffic Access

The site is evident and accessible for vehicles coming from the north, offering an obvious stopping point and keeping circulating vehicular traffic out of the core of Deadwood. The site offers several options for unobstructed vehicular ingress and egress.

Site Utilities

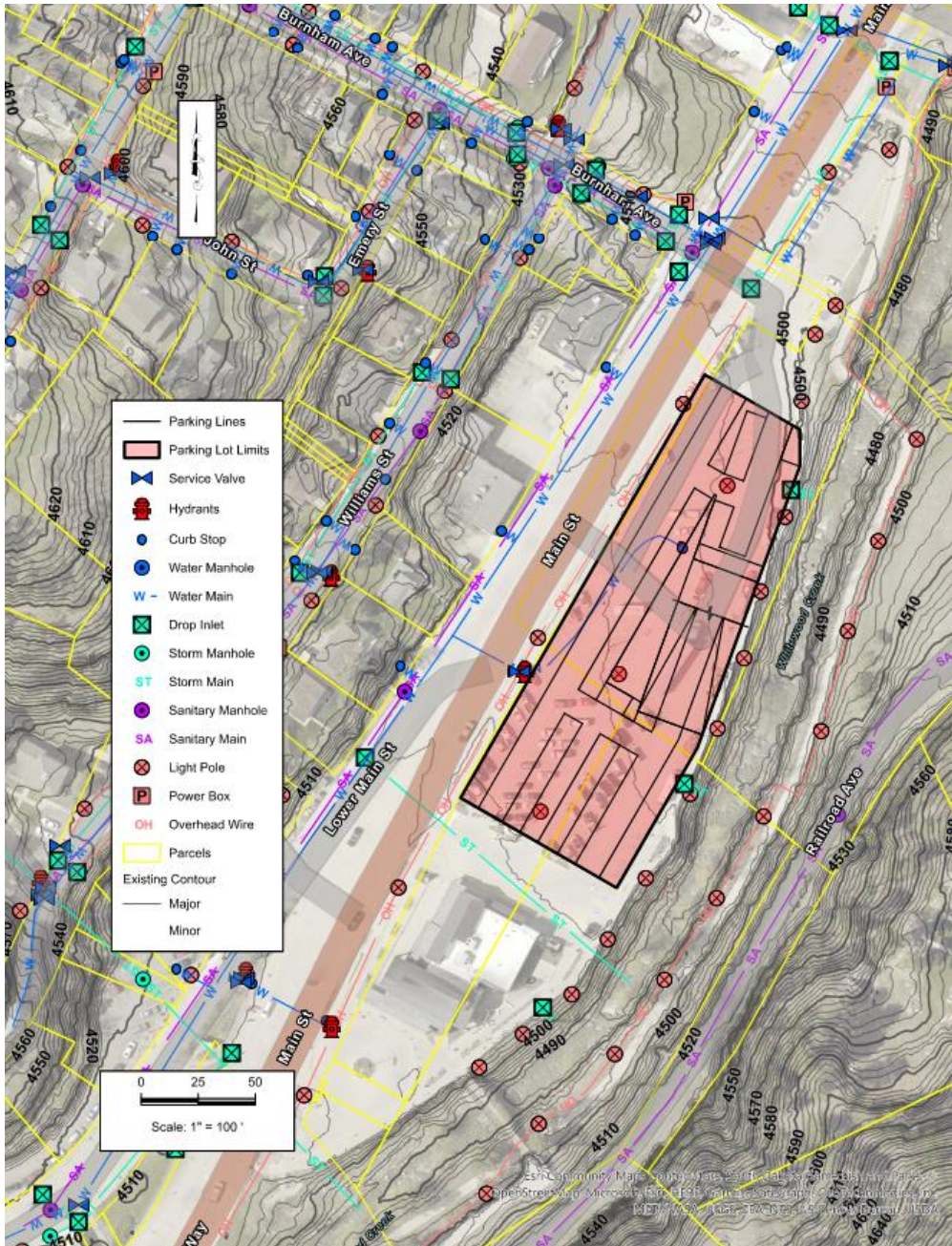
Existing grading and utilities appear to be the least complex and most cost-effective relative to other potential garage sites, causing some (albeit minimal) disruption to current services and local businesses. Possible utility conflicts include the following:

- 1" water service line and curb stops will require abandonment.
- Numerous streetlights would need to be removed for the structure, and power lines must be rerouted to serve the remaining streetlights.
- Short segments of 12" and 18" storm sewer outfalls and inlets exist. Depending on the terrain and drainage of the remaining parking lot areas and streets, it may be necessary to construct new inlets and storm sewer outfalls.

Additionally, the site does have potential encroachment into a nearby floodplain. A formal floodplain survey should be conducted to confirm.

Figure 1 below depicts existing utilities around a potential parking garage on the Welcome Center lot.

Figure 1: Welcome Center Lot Utilities



Source: Walker Consultants, FMG Engineering, City of Deadwood, 2023

Aesthetics, Viewshed, and Historic Considerations

This lot is in one of the most critical viewsheds of Deadwood (with those entering from the north), with open views to the surrounding hills. There are no known historic structures within a one-block radius of this site. This location's parking structure (especially a 2-3 level structure) could impact the context. It will need to be carefully studied by the design team to ensure it matches the historical nature of Deadwood and preserves essential views.

Figure 2 below depicts a massing rendering of what a three-level structure would look like on this site for perspective.

Figure 2: Welcome Center Lot Massing Rendering



Source: JLG Architects, 2023

Non-Parking /Active Use Opportunity

Located on US-85 on the northern edge of the downtown area, it is the gateway to the core of Deadwood for traffic coming from the north. This stretch of road has the largest vehicle count coming into the City of Deadwood. The recently developed Welcome Center building (2017) offers a natural stopping place for people from out of town to get information on the City of Deadwood and surrounding areas. Development in the area is sparse compared to the downtown area, so a parking structure in this site could link the core of downtown with this northern part of the city.

GARAGE SITE OPTION 2: MILLER STREET LOT

The Miller Street Lot sits on approximately $\frac{3}{4}$ acre in the core of Deadwood. It is currently utilized as a surface parking lot, available to visitors, residents, and local business parking.

Total Number of Spaces Overall

This site could accommodate approximately 350 structured parking spaces. Final numbers will vary depending on garage configuration and building concepts.

Net Number of Spaces Added

With the existing surface parking lot at 110 spaces, this site provides a net increase of approximately 240 parking spaces for the City of Deadwood.

Expected Relative Costs

The Miller Street surface lot is relatively flat, but potential obstacles to construction include the slopes to the east and utility conflicts. These obstacles increase the relative cost of constructing a parking garage on this site. This site is undergoing a current construction project to stabilize the slope along Whitewood Creek and other minor utility improvements. Any future parking structure design will need to work within the constraints of the ongoing project and seek to accomplish new construction as desired with minimal impact on the ongoing project. The narrow site, steep hillside, and numerous utilities on the Miller Street Site would pose a challenge to developing a parking structure on this site.

Area, Land Uses, and Users Served

A parking garage at the Miller Street lot would serve all users due to its proximity to retail and other destinations in the core of Deadwood. The Miller Street site is behind a vibrant group of businesses, including Jacobs Brewhouse and the new Landmark Casino in the Adams Block Building. Of all potential garage sites, it is expected a garage on this site would see the highest relative parking utilization throughout all parts of the year, whether peak or non-peak times. This site is scheduled to be popular with all users, particularly visitors eating dinner, staying in nearby hotels, dining, and visiting local attractions. This site may not be the best place to have employees parking all day or vehicles parking overnight, as its convenient location should be leveraged for shorter-term parking stays.

Public-Private Partnership Potential

This site represents an opportunity to form a partnership with the private sector to finance the construction and ongoing operations of a new parking garage. Personal development interests in the area have expressed the desire for additional parking supply nearby and an interest in working with the city to discuss a potential partnership. If desired, the City of Deadwood should conduct conversations and evaluate the merits of a possible construction and operations partnership. Among other factors, capital costs, ongoing operations costs, and the accessibility of parking spaces should be considered.

Pedestrian Access and Walking Distances

The site is the closest of any potential garage site to Outlaw Square in the core of Deadwood, at approximately 0.17 miles or an easy five-minute walk. The location is very convenient for pedestrians as it is close to the downtown core and within a block of several significant historical structures, including but not limited to – the U.S. Post Office, Adams Museum, Lawrence County Courthouse, and the Deadwood History and Information Center.

Parking User Level of Service

From a layout standpoint, the site is relatively inefficient, requiring four supported levels (five total levels) to reach 350 spaces, leading to more excellent driver circulation. This yields a physically imposing structure with fewer spaces than other site options. The site is the least efficient of all three options from a stall per square foot perspective, yielding the highest cost for the least amount of parking spaces added. Space constraints are expected to deliver a negative user experience, with a single parking bay challenging to navigate, mainly when it is complete.

Vehicular Traffic Access

The location of the Miller Street lot would bring traffic into the downtown area. The garage entrance and exit will likely need to be behind existing structures or via a short road segment like Center Street, which is not currently equipped to handle entry and exit traffic. Routing traffic to enter and exit may be challenging, and finding the facility without adequate signage could be an issue (drivers currently experience challenges finding the Miller Street parking lot). An inefficient layout and a single parking bay could yield garage circulation and navigation challenges, leading to traffic congestion at entry and exit. This could be further exacerbated by pedestrian activity in the area.

Site Utilities

Possible utility conflicts at the Miller Street lot include the following:

- An existing 24" sanitary sewer in the alley generally runs parallel to a potential structure. The sewer crosses under two corners of the proposed structure. It may be necessary to construct at least 550± of new 24" sewer along with three manholes. The extent of reconstruction will vary depending on elevations and possible conflicts with the existing storm sewer and inlets.
- A 24" storm sewer segment may conflict with the sanitary sewer relocation. Depending on actual reconstruction needs for the sanitary sewer, it may be necessary to construct a new storm sewer and possibly inlets.
- A parking garage infringes on the hillside to the east; grading and retaining walls may need to be constructed.

Figure 3 below depicts existing utilities around a potential parking garage on the Miller Street lot.

Aesthetics, Viewshed, and Historic Considerations

The Miller Street site is generally not visible from Main Street of downtown Deadwood or adjacent arterial streets due to its positioning behind several local businesses and adjacent to a large hillside. The limited size of the site would mean at least a four-level (60' or greater) parking structure to accommodate the same number of spaces as either the Welcome Center Site or the Sherman Street Site. The one-block separation from US 85 would help with the street-level viewshed, but the 4-5-level height would significantly affect the viewshed to the eastern hillside.

Figure 4 below depicts a massing rendering of what a four-level structure would look like on this site for perspective.

Figure 4: Miller Street Lot Massing Rendering



Source: JLG Architects, 2023

Non-Parking /Active Use Opportunity

The site is adjacent to the Recreation and Aquatics Center, just off Sherman Street. The site is very convenient in supporting Deadwood destinations. Popular businesses and destinations are nearby, and the Landmark Casino promises to bring a host of new demands to the area.

GARAGE SITE OPTION 3: SHERMAN STREET LOT

The Sherman Street Lot sits on approximately 2 1/2 acres on the southern edge of Deadwood. It is currently utilized as a surface parking lot, available to residents and visitors throughout the year.

Total Number of Spaces Overall

This site could accommodate approximately 540 structured parking spaces. Final numbers will vary depending on garage configuration and building concepts.

Net Number of Spaces Added

With the existing surface parking lot at 280 spaces, this site provides a net increase of approximately 260 parking spaces for the City of Deadwood.

Expected Relative Costs

The Sherman Street lot is relatively flat, with few obstructions or barriers to construction. The relative costs of construction on this site are low. Historically, there have been flood concerns, and the city has specific zoning regulations prohibiting development in the floodplain zone.

Area, Land Uses, and Users Served

Due to its location, a potential parking garage on this site would be expected to be utilized by visitors to nearby retail, historic attractions, and recreation destinations. This site may offer a logical location for more remote employee parking, mainly if it could be provided to employees at a less expensive rate than the Broadway Parking Ramp.

This site is also undergoing a current Federal Emergency Management Association (FEMA)-backed construction project primarily geared towards stabilizing the slope along Whitewood Creek and other minor utility improvements. Any future parking structure design will need to work within the constraints of the ongoing project and seek to accomplish new construction as desired with minimal impact on the ongoing project. This ongoing project may compromise the Sherman Street lot site as a potential parking garage site.

Public-Private Partnership Potential

There are no known public-private partnerships or financing options for a parking garage on the Welcome Center lot.

Pedestrian Access and Walking Distances

The Sherman Street lot site sits 0.45 miles from Outlaw Square in Downtown Deadwood, about a 10 – 12-minute walk (closer to the core of Deadwood than the Welcome Center lot, but not as convenient as the Miller Street lot). The site is also within a block of several significant historical structures – C.B. & Q. Engine House, Adams House Museum, Homestake Adams Research & Cultural Center, Old Depot Building (First Interstate Bank), and several historic private residences.

Parking User Level of Service

Only two supported parking levels (three total levels) are expected to be needed to reach 500 spaces. Due to the site's size, various configurations are possible for a potential parking garage, yielding easy circulation and a high level of service for parking users. This site is the second most efficient site of the three options. However, the new construction on this site (proposed trailhead development) might limit the size of the garage, which could impact its size and efficiency compared to the other sites.

Vehicular Traffic Access

Located on US-85 on the southern edge of Deadwood, this is the most traveled road into the city from the south. A parking garage at this site is expected to yield minimal traffic congestion, although a formal traffic study should be performed. A garage on this site would keep vehicular traffic out of downtown.

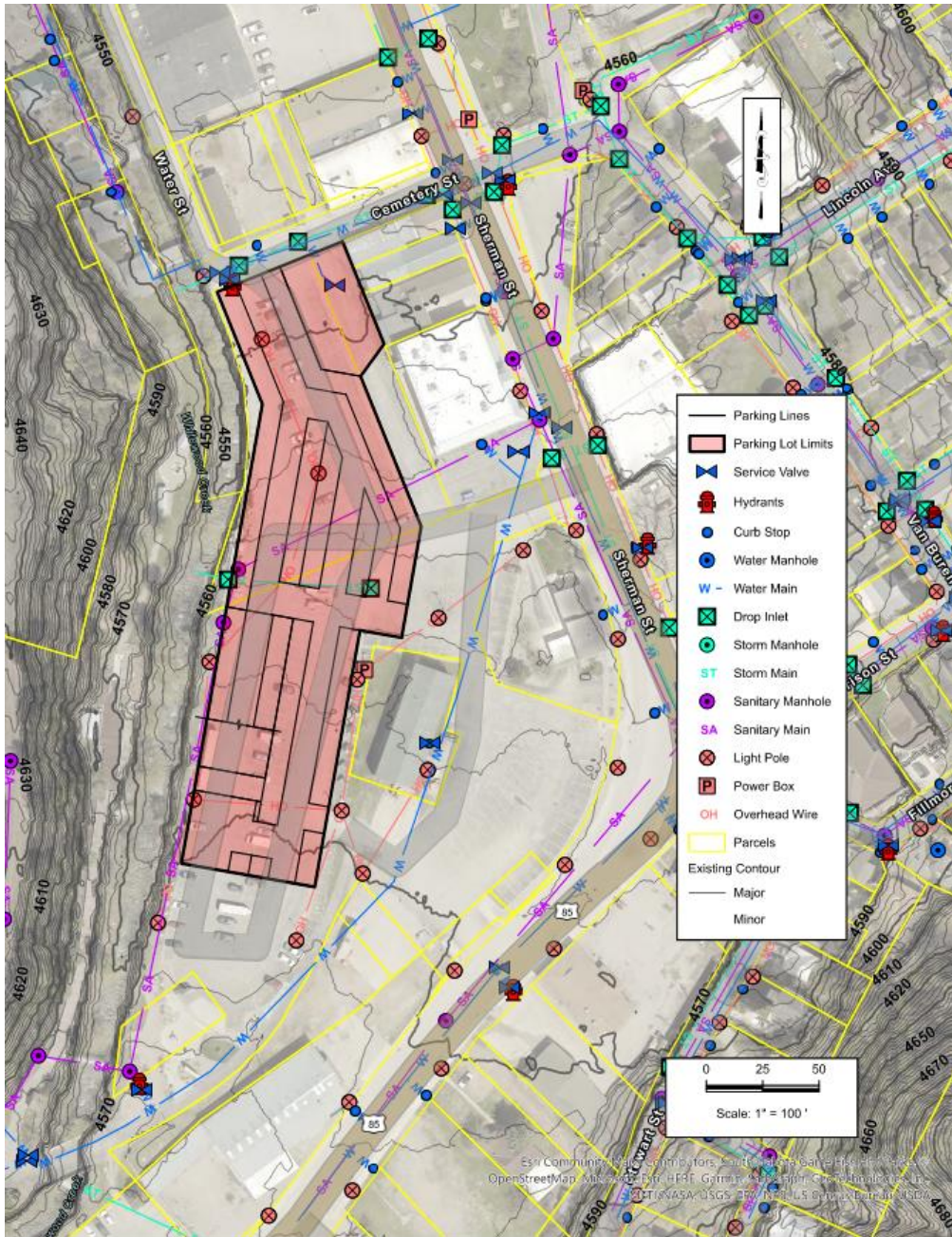
Site Utilities

Possible utility conflicts at the Miller Street lot include the following:

- An existing 24" sanitary sewer runs parallel to the rear of the structure. Then it crosses under the proposed structure. It may be necessary to construct at least 620± of new 24" sewer along with four manholes. The extent of reconstruction will vary depending on elevations and the acquisition of easements for the rebuilding.
- Numerous streetlights will be removed for the structure, and power lines must be rerouted to serve the remaining streetlights.
- An 18" storm sewer segment and at least one inlet must be removed. Depending on the terrain and drainage of the remaining parking lot areas and streets, it may be necessary to construct new inlets and storm sewer outfall.
- A fire hydrant and at least one short water segment (potentially service) line will be impacted.

Figure 5 below depicts existing utilities around a potential parking garage on the Sherman Street lot.

Figure 5: Sherman Street Lot Utilities



Source: Walker Consultants, FMG Engineering, City of Deadwood, 2023

Aesthetics, Viewshed, and Historic Considerations

The Sherman Street lot is generally away from the primary viewsheds in the core of Deadwood. However, a parking garage on this site could obstruct views of Whitewood Creek and the forest cover and granite rock formations along the steep hillside. A 2-3-level parking structure would have a moderate effect on the western edge of the viewshed in this area. Care in planning any parking structure on this site would be required to preserve views.

Non-Parking /Active Use Opportunity

This site is a crucial location as it serves as the starting trailhead to the 109-mile George S. Mickelson Trail, a popular destination for visitors and activities throughout the year, and access to fishing, hiking, walking, and biking paths. This could be an essential asset for Deadwood visitors. The existing lot site is adjacent to Whitewood Creek and shares a lot with First Interstate Bank, Homestake Adams, a historic rail depot, and local businesses. The area is not as built up with retail and dining destinations as the area around the Miller Street lot. Still, the region has the potential for additional development and activity over time. This site has the most vital connection to nature and access to trails.

CONCLUSION

Figure 6 below provides a matrix summarizing the results of evaluating potential garage sites. The matrix scores each garage site based on each evaluation criteria. **The scores indicate how each possible garage site performs relative to the two other potential garage sites for each evaluation criterion.** The scoring is as follows:

- **Score of 0:** Poor; the site performs poorly in addressing the evaluation criterion or does not address it at all;
- **Score of 1:** Fair; the site does a fair job of addressing the evaluation criterion and
- **Score of 2:** Good; the site performs well in addressing the evaluation criterion.

Figure 6: Garage Site Evaluation Summary

Use	Welcome Center Lot	Miller Street Lot	Sherman Street Lot
Total number of spaces added	2	1	2
Net number of spaces added	2	2	2
Expected relative costs	2	0	2
Area, land uses, and users served	1	2	1
Public-private partnership potential	0	2	0
Pedestrian access and walking distances	1	2	1
Parking user level of service	2	0	2
Vehicular traffic access	2	0	2
Site utilities	1	1	1
Aesthetics, viewshed, and historical considerations	2	0	1
Non-parking / active use opportunity	2	2	2
Total	17	12	16

Source: Walker Consultants, 2023

Having scored the highest relative to the selected evaluation criteria, it is the opinion of the consultant team, including Walker Consultants, JLG Architects, and FMG Engineering, that the Welcome Center lot presents the preferred site for a potential new parking structure. This is due to the site's efficiency and vehicular access, location near the Welcome Center, relatively low impact on viewsheds, and low relative cost.

The relative importance of one evaluation criterion over another is a personal choice that the City of Deadwood staff must make with the City Commission and relevant community stakeholders. Once a final decision is made, a formal study and evaluation should be conducted on the preferred site to understand how a parking garage could be configured and constructed.