PRELIMINARY PROJECT ANALYSIS

COMBINING
THE HOT SPRINGS OFFICE AND WORKCENTER
WITH
THE BURNSVILLE OFFICE AND BUSICK WORKCENTER

**Recommended By:** _____ 12/01/04
Project Leader Date:

**Recommended By:** _____ 12/15/04
District Ranger Date:

**Reviewed By:** _____ For 12/16/04
Lands Staff Officer Date:

**Reviewed By:** _____ 12/17/04
Forest Engineer Date:

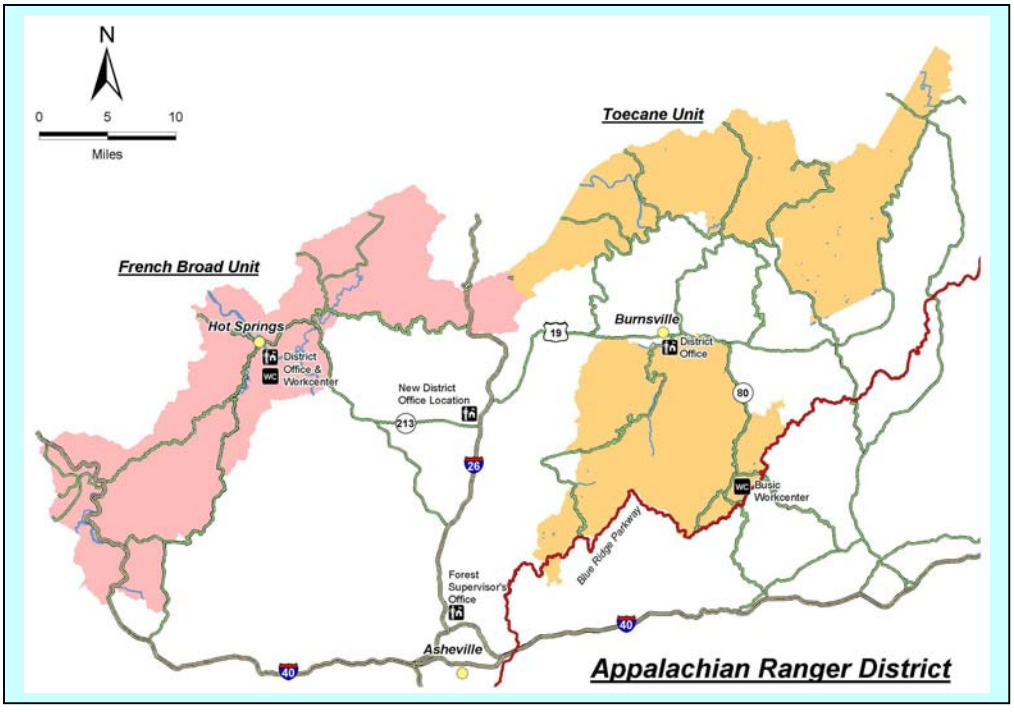
**Approved By:** _____ 12/17/04
Forest Supervisor Date:

# Executive Summary

In November of 2003, the Facility Master Plan for the National Forests in North Carolina was completed and approved by the Forest Supervisor and Regional Forester. In this plan a recommendation was made to construct a new consolidated office and work center adjacent to Interstate 26, near Mars Hill, North Carolina, to serve the Appalachian District. It was noted that implementation of this proposal would significantly reduce the costs of operation for the Appalachian Ranger District. It would consolidate the majority of the workforce at a single site that is located near the geographic center of the district. The proposed site will provide visitor information services for people traveling on Interstate 26 and US 19.

Because this is an administrative site with a land value exceeding $25,000, approval by the Department of Agriculture, Assistant Secretary for Administration is required prior to initiating action to acquire. This Preliminary Project Analysis follows the guidelines in FSH 7309.11, section 32, and Departmental Regulation 104-18.5007.

The Appalachian District was created with the consolidation of the French Broad and Toecane Districts in 1997. Presently the Appalachian District's west half is served by a leased office building in downtown Hot Springs, and a work center, including a small office building, located close to downtown. The east half of the district is served by an office in Burnsville, and a work center in Busick, North Carolina.




In FY 2002, Congress gave the Forest Service the authority to convey (sell) 10 of its administrative sites and keep the proceeds as a "pilot project". In 2003, Congress authorized 10 additional pilot sites for the Forest Service and extended the authority through 2006. Originally the proceeds from Pilot Conveyance sales return to the regions where the sites were located. They are

to be used for maintenance on that region's remaining facilities. The 2004 authorization authorizes proceeds from up to five new conveyances for new construction. The Appalachian Office/Workcenter was supported by the Regional Office, and was approved by the Washington Office for FY 2004.

This project was initiated to increase efficiency, visibility, and customer service. It includes disposing of the Burnsville Office, the Busick Work Center, the Ranger Dwelling in Hot Springs and the Allen's Gap Residence and garage. Proceeds from these sales will be used to construct a new consolidated office and work center, adjacent to Interstate 26, near Mars Hill, North Carolina on a tract to be purchased since there is no National Forest Land in this area.

- Hot Springs Office: The lease on the existing office is currently on a yearly basis. The District cannot extend the lease beyond this time frame without major improvements to the facility, which the owner has stated is not cost-effective to do. The building currently does not meet standard building codes. There are no other facilities available in the area to lease. There is a good possibility that the district will have to vacate this building at any time with very short notice.

- Burnsville Office: This 3920 sq ft building was constructed in 1992, and is in good shape. It is not large enough to accommodate the entire workforce of the Appalachian District.

- Busick Work Center: This site contains 10 buildings (12,288 sq ft) constructed between 1939 and 1995. The major buildings are old and run-down. Many are no longer used. Some do not meet building codes.

- Allen's Gap Residence and Garage: This property was part of a larger parcel purchase for protection of the Appalachian Trail corridor. The buildings and the land they sit on are not needed. The buildings need to be removed to reduce liability to the Forest Service.

Budgets have decreased to a point where it is impossible to keep up with annual repairs for facilities in the National Forests in North Carolina. The Forest has over $1 million in deferred maintenance backlog. During the past few years the Forest has spent approximately $100,000 per year on deferred maintenance items. However, deferred maintenance items continue to increase faster than they are fixed, due to the age of facilities and not enough funds being available for annual maintenance. The buildings being proposed for sale are among the oldest and most expensive to maintain on the Forest.

Completion of this project will reduce the Forest's annual maintenance need by over $60,000 (based on 3% of today's asset value) and decrease the deferred maintenance backlog by $300,000. Lease costs of $12,000 per year will also be eliminated.

In FY 2002, a congressional line item in the amount of $750,000 was appropriated to the National Forests in North Carolina for the purpose of constructing a new office for the Appalachian District.

Total cost of the project as proposed is estimated at $3 million. This estimate includes the cost of land, design, construction of an office (7600 sq ft), a warehouse/maintenance building (4000 sq ft), a pole shed/storage building (1000 sq ft), a hazardous materials building (1000 sq ft), parking lots, and aesthetic enhancements.

The remainder of this report discusses the Facility Master Plan for the National Forests in North Carolina, the specific needs of the Appalachian District, alternatives considered, analysis method, and recommended alternative. Additional supporting information is presented in the Appendices.

# Discussion of Proposal

## I Background

**District Consolidation:** The Toecane and French Broad Ranger Districts were consolidated into the Appalachian District in 1995 to reduce administrative costs and begin the process of building a more efficient organization. The workforce has decreased as duplicate resource jobs were combined into one. The support structure, including the fleet has also decreased. Many of the activities that took place at both the Hot Springs and Busick Work Centers have been replaced with contract work, are no longer done, or are now being done by one person.

**Pilot Conveyance Project:** In FY 2002, Congress gave the Forest Service the authority to convey (sell) 10 of its administrative sites and keep the proceeds as a "pilot project". In 2003, Congress authorized 10 additional pilot sites for the Forest Service and extended the authority through 2006. Originally the proceeds from Pilot Conveyance sales return to the regions where the sites were located. They are to be used for maintenance on that region's remaining facilities. The 2004 authorization authorizes proceeds from up to five new conveyances for new construction.

The regions were asked to submit nominations for pilot conveyance projects using the following criteria to choose the 2004 sites:

> Readiness: The Facilities Master Plan, NEPA, and Civil Rights Impact Analysis are complete, and funds are available for the proposal's cost.
>
> Contacts with and Support of Elected Officials: Describe discussions with local, State, and Federal elected officials and their level of support for the project.
>
> Funds**:** Estimated funds to be generated from the sale.
>
> Impacts to local communities**:** Interests or concerns expressed.
>
> Heritage: Historic evaluation is complete, State Historic Preservation Office (SHPO) clearance has been obtained, and disposal is in compliance with Section 106 of the Historic Preservation Act.
>
> Benefits to the agency: Reduction of deferred maintenance needs, elimination of hazards and liabilities, and creation of partnership opportunities.

The Appalachian Office/Workcenter was supported by the Regional Office, and was approved by the Washington Office for FY 2004.

**Forest Facility Master Plan Evaluation and Recommendations:** The following section gives background information used during development of the preferred alternative. The need to build a new office, as well as the need to get rid of quarters and

other buildings and properties is in large part based on the findings and recommendations of The Facilities Master Plan (FMP). This document provides guidance for overall forest planning and programming for facility-related actions that support the unit's existing and future work requirements. FMPs are designed to forecast the development, disposal, and major alteration and renovation needs that support a unit's or multiple units' long-term goals. The FMP evaluates the opportunity and cost-effectiveness of basic facilities-related strategies as they align with or impact Agency policies and directions.

The primary management direction is to provide safe, clean, attractive, efficient and accessible facilities for a projected workforce of 309 permanent employees while reducing costs through consolidation and decommissioning of unneeded facilities.

Annual operational and maintenance costs for the NFsNC exceed $250,000 (3% of asset value). Total deferred maintenance costs exceed $1.85 million (22% of asset value). Approximately $250,000 in FA&O facility maintenance dollars is available each year. Of this total only $125,000 is available to actually accomplish FA&O maintenance tasks after expending funds for condition surveys, health and safety inspections, planning, design, and contract administration. Annual maintenance cannot be adequately addressed with the funds available and the total forest deferred maintenance needs will continue to increase for the foreseeable future. USDA Space Policy: Since the 1980's facility needs have evolved as administrative units consolidated, staffing changed, and technology advanced. Some buildings are now vacant because they are no longer used or they do not meet current needs. Some are retained with the idea that they may be used someday. Others are underutilized.

Maintaining these buildings puts a significant drain on limited maintenance funds and is in violation of the USDA Space Policy, Washington Office policy, and Office of Management and Budget (OMB) Circular A-11. Starting in January 2003, the US Department of Agriculture requires the reporting of utilization rates for all owned and leased buildings.

The Utilization Rate of 150 square feet includes employee workstations, circulation (including reception), file space, consultation rooms and all private offices. Generally, this also includes all space finished as standard office space. Those items that constitute special space such as a laboratory, conference space, light industrial, and storage are not included in the UR. The Utilization Rate is computed using usable square feet as defined by the American National Standards Institute/Building Owners and Managers Association publication *Standard Method for Measuring Floor Area in Office Buildings*. Beginning in January 2003, USDA requires reporting of utilization rates for all owned and leased buildings.

It is not prudent to keep buildings and infrastructure just in case we might need them later. Those "blips" should be handled with temporary leased space or modular space that can be moved in and then removed when no longer needed. If an additional space need is anticipated to last for more than 10 years then construction or leasing of more permanent space should be considered.

Accessibility: In the early 1990s the Access to America's Great Outdoors initiative helped the USDA Forest Service to become aware and to move forward in the area of accessibility. The USDA Forest Service has worked since that time to integrate accessibility into its programs and facilities and has made many improvements. The USDA Forest Service is required to incorporate access standards into all of the agency's "Federally Conducted" or "Federally Assisted" facilities, programs, services, and activities. This direction is mandated in one or more of the following laws and regulations:

- The Architectural Barriers Act, 1968
- Section 504 of the Rehabilitation Act, as amended, 1978
- The American with Disability Act (ADA), 1990.
- Code of Federal Regulations, 7 CFR 15

Historic Preservation Plan: The National Forests in North Carolina has a number (33) of historic structures that need to be documented, evaluated and preserved in compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA). Some may have been significantly modified or allowed to deteriorate and may not meet criteria for significance and preservation.

No decision for removal of historic buildings will be made in the FMP unless compliance with Section 106 of the National Historic Preservation Act (NHPA) and consultation with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) has been completed. If a building or property has not gone through this process, the property will be placed in a holding category until the determination is complete.

NRHP eligible buildings that have been identified in the FMP plan as excess to the Forests' needs for administrative purposes will be the highest priority sites for determining use and /or disposition. Options such as mothballing, alternate uses, exchanges, re-location to another site, and demolition (as a last resort), will be considered.

This work is considered to be a very high priority in the Region in order to provide the necessary information needed to make sound facility decisions. Significant historic structures are deteriorating at an increasingly alarming rate on the Forest. Documentation meeting historic preservation standards (HABS / HAER), NRHP determinations of eligibility, and maintenance and restoration plans and their implementation for these Priority Heritage Assets must be completed. This is required to meet compliance with Section 110 of the NHPA. Other cultural and historic projects will be postponed as much as practical in order to provide support to this effort. Forest Staff are expected to support this effort to the greatest extent possible.

Busick Work Center: The Busick Work Center, consisting of 6 circa 1930 – 1940 structures (CCC constructed), needs to have NRHP eligibility formally determined and nomination completed ($15,000). Maintenance ($5,000 annually)

The site also needs archeological survey and testing ($18,000) to determine eligibility of the prehistoric component (5,000+ years of age).

Quarters: Forest Service is governed by policies and procedures contained in the Office of Management and Budget's Circular A-45, Rental and Construction of Government Quarters.

It is the policy of the Federal Government to rely on the private housing market to provide housing for its civilian employees. The exceptions to this policy are when Government employees are required to live on a Government compound for the protection of Government property or to provide necessary service to the public, and when private housing is not available.

Private housing is not considered to be "available" unless it complies with the same standards as Government-furnished quarters. These include complying with current occupancy standards for existing structures, and being in reasonably good repair. In locations where private housing is available, but doesn't meet those standards, government-owned housing may be needed, but that is no longer the case in many locations in Western North Carolina.

Over the past century, private development has spread to areas that were once remote. Forest Service housing at formerly isolated sites may now be near or within substantial communities. New Government housing cannot be constructed at these sites. Existing housing should be decommissioned if it is no longer needed.

The Forest Service Handbook 7309.11 - Buildings and Related Facilities Handbook requires that existing residences be renovated for access as opportunity and needs require. Where facilities present barriers to employment or advancement of an employee, renovation must be accomplished as soon as possible. When renovating any building, anything in the work area that can be made accessible must be made accessible. Each Forest Service unit was required to complete an accessibility evaluation survey of all facilities by 9/30/2001 and to develop a transition plan for those facilities that are not accessible.

Of the 21 buildings that are defined as dwellings, 15 will be removed during the next 10 years. Priorities will place occupied dwellings at the bottom of the list. The need for Forest Service housing is greatly reduced taking into account National Forest direction to get out of the “rental business” when adequate local housing is available. Only the two houses at the Cheoah Work Center qualify under this direction. One dwelling at the Cradle of Forestry is needed for security at the site.

Both the Busick Dwelling and the Ranger’s Dwelling in Hot Springs have been identified as being excess property in the Facility Master Plan. Pilot conveyance has presented the National Forests in North Carolina an opportunity to sell these two quarters.

Work Force: The Senior Community Service Employment Program (SCSEP) continues to be an integral part of the workforce on all Districts with approximately 200 enrollees working 3 days per week. Most of these enrollees are involved in facility and road

operations and maintenance work. Some are working in clerical positions. This year the Forest lost all slots on the Cheoah, Tusquitee, and Wayah Districts. However, they will continue to work on these Districts for the next two years under an agreement with the new program contractor. The future of the SCSEP program is only secure for the next two years. At that time the Department of Labor will re-evaluate the program. The NFsNC could conceivably lose the entire program, lose part of the program, or continue to operate with the same number of enrollees.

The uncertainty of the SCSEP combined with unknown results of competitive sourcing for maintenance activities could result in more of the operation and maintenance being contracted out. If this occurs, there will be a reduced need for storage space and maintenance facilities at Forest Service sites.

There are currently buildings and utility systems as well as entire sites that are marginally needed for administrative purposes, even without the worst-case scenario for reduction of in-house work.

**Facility Master Plan Goals and Objectives:**

The benefits of following the recommendations outlined in the "Forest Facilities Master Plan are as follows:

Overall Cost Savings: The plan is to sell thirteen buildings and property in order to purchase land and construct a new office/ work center complex. Of the thirteen buildings being sold, twelve are old and outdated. Six are dwellings and garages that are no longer used. The office in Burnsville is in good condition but is too small to accommodate all Appalachian Office employees. The plan will also move some employees out of an existing leased office that does not meet building codes. It is estimated that the Forest will save an estimated $72,000 in annual maintenance and lease costs. Additional cost savings would also be realized by reducing Facility operation and maintenance costs, administrative support and travel time, by eliminating duplicate services, and by increasing work efficiency when staff groups are physically located together.

Better Public Access: Currently, many of the Forest's offices are difficult for the visiting public to locate and access. It is the strategy of the Forest to locate offices in places that are readily visible and will provide easy access for local communities, business associates, and visitors traveling to the National Forests in North Carolina. The new office will be on the new I-26 highway running from Charlestown, SC through Asheville, NC and north into Tennessee. Visibility to the public and opportunities provide information will be increase significantly.

Reduction in Facility Deferred Maintenance: remove nearly $300,000 in deferred maintenance off the books. Two thirds of the facilities on the Forest are over 30 years old. 26% are over 50 years old. Given the Forest's typical maintenance budget, it is impossible to adequately maintain many of these facilities to current standards. Construction of new, energy efficient, sustainable facilities in optimum locations will

result in very low maintenance costs, particularly during their early life, and will allow the Forest to dispose of old, high maintenance, substandard buildings. Building disposal will eliminate $300,000 of deferred maintenance costs (Appendix B; Exhibit B).

Reduction in accessibility and/or gender equal barriers: None of the buildings at the Busick Work Center comply with the accessibility standards. The office in Hot Springs is marginally accessible, but similarly, it also does not comply with the required standards. The entire site of the new office and work center will meet the latest requirements of the Americans with Disability Act.

## II Purpose and Needs

During the development of the Facilities Master Plan, consultations were held with the Appalachian District to identify facility needs for personnel. The District identified the need to consolidate offices, reduce deferred maintenance costs, and increase operational efficiency. It is essential that facility plans meet the needs of all Forest Service Units and comply with the NFsNC Forest Facilities Master Plan.

This Preliminary Project Analysis documents the need for a facility and location near the center of the Appalachian District to serve the needs of the Forest. The proposed facility must not only meet the office and storage space needs of each Forest Service Unit, but must also be located to improve customer service and increase agency efficiency. In addition, other objectives, including increasing agency visibility, reducing deferred maintenance costs, maintaining fire response, and providing expansion capabilities, must be met.

The Appalachian Ranger District is responsible for multiple resource management on a land base that stretches over 70 miles from the southeast to northwest. Currently, District activities and program management are being administered from four separate locations as shown on the Map in Appendix A. The Hot Springs and Burnsville Office are about 50 miles apart. The Busick Work Center is about 18 miles from the Burnsville Office. The District's primary need is to consolidate staff to improve operational efficiencies, eliminate travel between facilities, eliminate duplication of services, and to reduce deferred maintenance costs.

Current conditions require that a new or expanded facility be proposed that will:

1. Provide facilities to replace outdated maintenance space and equipment, and provide adequate office and storage space;

2. Provide adequate office space, indoor and outdoor storage space, shop/fire cache space, and parking space to effectively consolidate Appalachian Ranger District offices into one location;

3. Be conveniently located to access the Appalachian Ranger District, minimize travel time, and maintain emergency response;

4. Be readily visible and accessible to the visiting public, local communities, Forest business associates, and employees.

5. Provide space to accommodate future expansion needs such as new or expanded Forest programs.

The National Forest in North Carolina were appropriated through a line item $750,000 for phase I of construction of a new office for the Appalachian Office. The Forest has requested that most of these funds be used to purchase a tract of land for the new office, to be replaced with some of the proceeds from the conveyance, in order that planning and design will not be delayed.

The Forest's request for Pilot Conveyance Authority to sell the Busick Work Center, the Burnsville Office, the French Broad Rangers Dwelling, and the house and garage at Allan's Gap, and to use the proceeds to construct a new office and work center was approved in FY 04.

Current facilities and employee numbers are presented in Appendix B. Facility requirements for District consolidation are presented in Appendix C.

## III Evaluation of Alternatives

The evaluation process for this Preliminary Project Analysis is completed in two parts. First, the facility needs are documented and alternatives to meet those needs are evaluated. Second, alternatives for the location of the facility are evaluated. The proposed facility must be located to serve the Forest Service work units and the public. Based on the alternative analysis, final recommendations for the facility and location are made.

**Evaluation of Facility Alternatives:** Five alternatives were analyzed: 1) No Action/Continue As Is, 2) Rent/Lease Available Office Space, 3) New Construction at or near the old Work Center in Hot Springs and a new Work Center in Burnsville, 4) Lease an Existing Facility, 5) Construct a New Forest Owned Facility on I-26 at the Mars Hill exit. The Choosing By Advantages process was used to evaluate alternatives for 1) Availability, 2) Customer Service, 3) Resource Protection 4) Security, 5) Current Needs, 6) Expansion Capability, and 7) Cost and Efficiency.

Alternative 1: No Action: This alternative does not meet the basic needs for an office. Employees would still be working out of three offices. The Hot Springs Office is a leased office that is old and run down and does not meet some basic health and safety codes. The owner has been asked but will not upgrade the building, stating that it is not cost effective. Customer service is inconvenient due to limited parking and congested

reception area at the Hot Springs Office. There is no secure parking for government vehicles in Hot Springs.

Alternative 2: Rent/Lease Available Office Space in Hot Springs: Studies have been completed during the past five years and there is no space available to lease in Hot Springs.

Alternative 3: New Office Construction in Hot Springs and New Work Center in Burnsville: This alternative would cost the same amount as alternative 5. Residents in Hot Springs would prefer that the Forest Service maintain a presence in town. Residents in Burnsville would welcome another business such as a new Work Center constructed close to town. Customer service would be improved in Hot Springs. These new facilities would provide good working conditions and increased security for all employees of the Appalachian District. However, they would still be working in two separate facilities. Some employees working in Hot Springs would report to a supervisor located in Burnsville, 50 miles away.

Alternative 4: Lease a New Office/Workcenter near Mars Hill: There are no suitable buildings available for lease near Mars Hill (the centroid of the Appalachian District). However, land may be available for construction by a third party. Although construction costs would be about the same as alternative 5, leasing costs would be higher than Alternative 5 (see section IV - Lease vs. Construct Analysis). The location would not be as visible and convenient for the public. Employees, in most cases, would have travel times to and from work increased. Those living in or east of Burnsville would add 50 minutes and those living in or west of Hot Springs would add 70 minutes per day to their commute.

Alternative 5: Construction a New Forest Owned Facility on I-26 Near Mars Hill Exit: The location would be visible and convenient for the public. Employees, in most cases, would have travel times to and from work increased. Those living in or east of Burnsville would add 40 minutes and those living in or west of Hot Springs would add 60 minutes per day to their commute. All employees would be working out of one location with the exception that some SCSEP employees would continue to work out of the Hot Springs Work Center. District employees currently working out of the Supervisor's Office in Asheville could report to Mars Hill. This alternative would improve existing levels of emergency fire protection, and would minimize work travel times. This alternative would provide a secure office and storage facility for employees and District vehicles and equipment. Office, warehouse, parking, and storage needs would be fully met and health and safety of all employees would be enhanced. The preferred site covers nine acres and is suitable for expansion if needed in the future. The new facilities would be designed (LEED certified) to be low maintenance, energy efficient, and sustainable.

**Evaluation of Location Alternatives:** Development of location alternatives was guided by the need for easy public and business access, and access to the entire Appalachian District from a location close to the center of the District. Potential sites were limited to six currently available locations, all located near the Mars Hill exit on I-26.

Parcel 1: Access is poor for this alternative. Travel to the site would have to go through Mars Hill and approach the property from the north. Costs would include $490,000 for land and moderate costs for constructing a building site. Utilities are available within 1 mile.

Parcel 2: This site has good access on a moderate grade, however travel from the nearest exit is approximately 3 miles. Costs would include $496,100 (has been appraised) for the land. The entire site is cleared, level and is constructed on engineered fill from the recent construction of I-26. The site is dry and has nice views. Development costs would be minimal. Utilities including electric, natural gas, water, and sewer are all located within ½ mile.

Parcel 3: Access is very close to the I-26 exit. The main problem with the site is a significant drainage running through the middle of the parcel. The entire site is wet. Costs for development would be significant. Utilities are readily available.

Parcel 4: Access is close to the I-26 exit south along a frontage road. The owner is not interested in subdividing the property and the total cost is $2,000,000. This facility only needs approximately 7-10 acres. Development costs would also be high due to the slopes on the site. Utilities including electric, natural gas, water, and sewer are all located within ½ mile.

Parcel 5: This parcel is just south of parcel 3 and access is still within a mile to the I-26 exit. The cost of the property is $454,000. The main problem with this site is it is long and narrow, with a drainage flowing through the only portion of the site suitable for construction. Development costs would be very high and options on site design would be very limited. Utilities including electric, natural gas, water, and sewer are all located within ½ mile.

Parcel 6: Access is a little further south than parcel 5. The property is expensive and includes a house and garage that will have to be removed. The cost is $913,000. Site development costs would be moderate when compared to the other sites. Utilities are readily available.

Appendix E provides details of the location alternatives evaluation process.

## IV Final Recommendation/Conclusion

A new facility including an office and work center constructed on parcel 2 is the best option. The property is ideal for construction, is very visible and accessible to the public. A new facility will be constructed that will meet office space, fire response, and storage needs of the Forest. This site and facility will provide the best service to the local and traveling public, maintain adequate emergency fire response, consolidate the District workforce, and serve business associates well.

# APPENDICES

**APPENDIX A - OFFICE LOCATION MAP**

**APPENDIX B - CURRENT FACILITIES**
EXHIBIT A – BUILDING SUMMARY
EXHIBIT B – BUILDING RATINGS
EXHIBIT C – DEFERRED MAINTENANCE COST SUMMARY

**APPENDIX C - FACILITY REQUIREMENTS**

**APPENDIX D – SECURITY RECOMMENDATIONS**

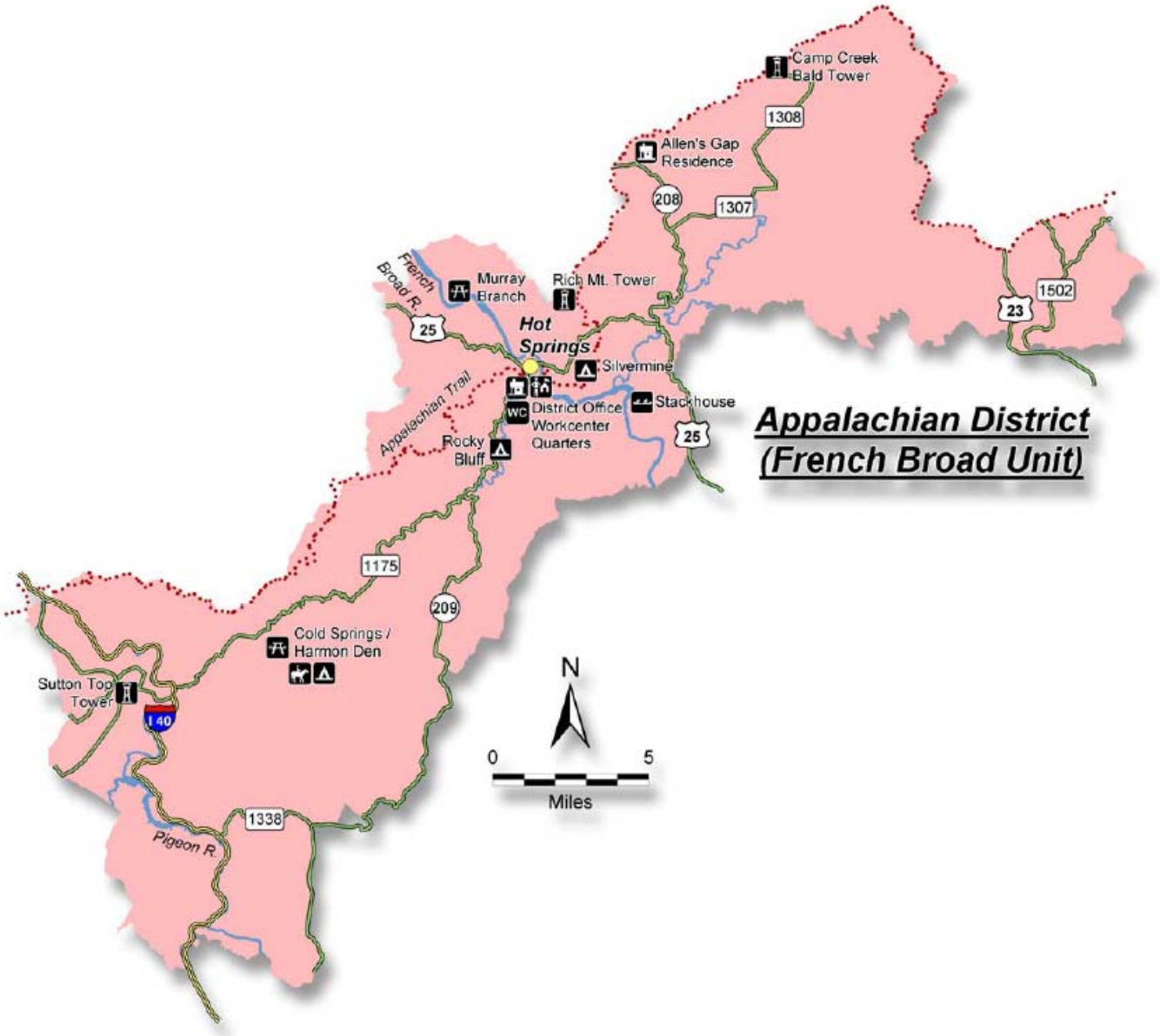
**APPENDIX E - FACILITY ALTERNATIVES AND EVALUATION**
EXHIBIT C - FACILITY LEASE COST ESTIMATE
EXHIBIT D - LEASE VS OWN ANNUAL COST COMPARISON

**APPENDIX F - LOCATION ALTERNATIVES AND EVALUATION**

**APPENDIX G -VISITOR INFORMATION CENTER SIZE CALCULATION**

**APPENDIX H -LEED CERTIFICATION**

# APPENDIX A – OFFICE LOCATIONS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WC
District Office
Workcenter
Quarters
Stackhouse
25
Rocky Bluff
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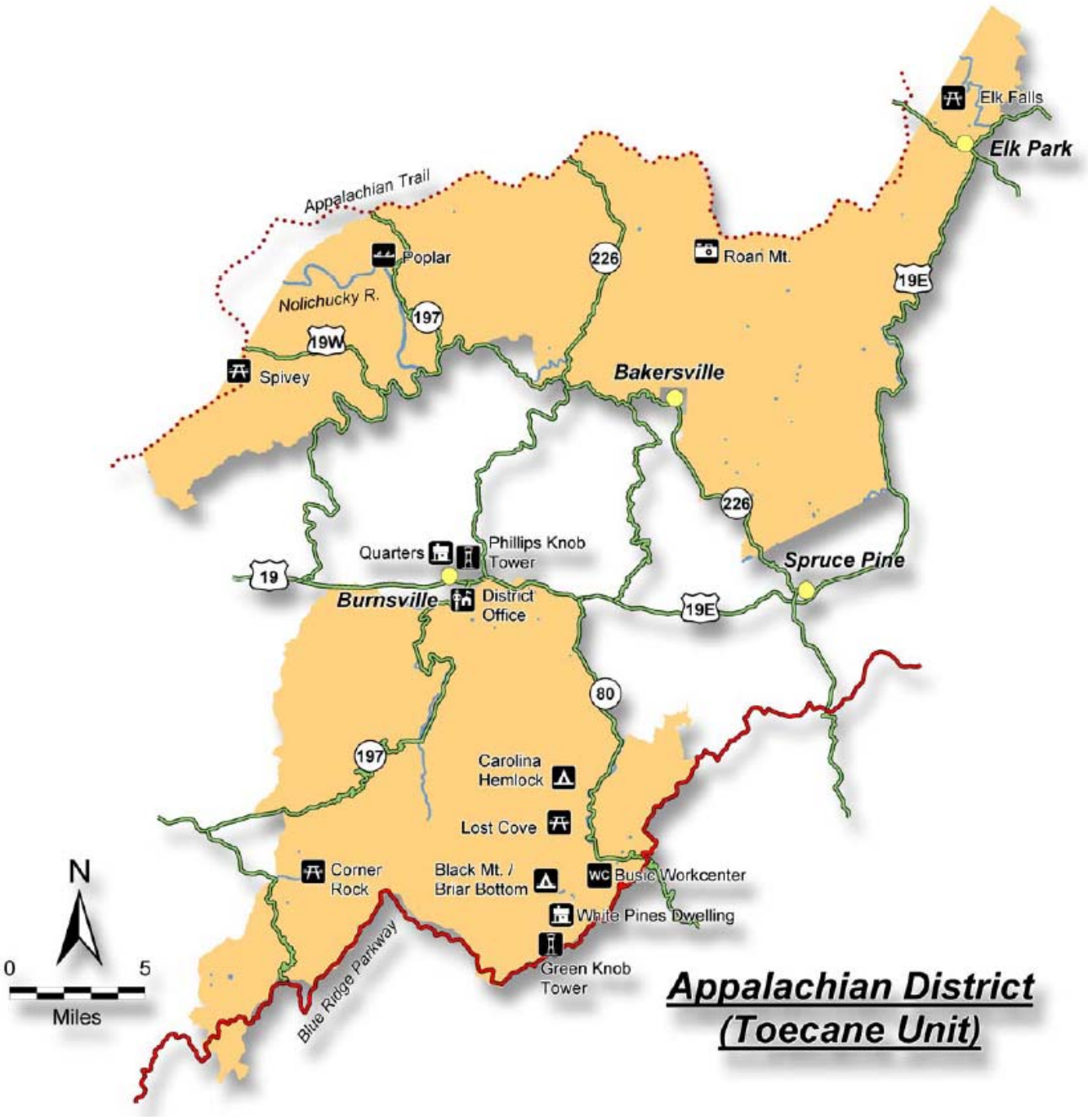
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Elk Park
Appalachian Trail
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Roan Mt.
19E
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197
19W
Spivey
Bakersville
226
Quarters
Phillips Knob
Tower
19
Burnsville
District
Office
Spruce Pine
19E
80
197
Carolina
Hemlock
Lost Cove
Corner
Rock
Black Mt. /
Briar Bottom
WC
Busic Workcenter
White Pines Dwelling
Green Knob
Tower
Blue Ridge Parkway
N
0
5
Miles
Appalachian District
(Toecane Unit)

# APPENDIX B: CURRENT FACILITIES

**EXHIBIT A – BUILDING SUMMARY**

**EXHIBIT B – BUILDING RATINGS**

**EXHIBIT C – DEFERRED MAINTENANCE COST SUMMARY**

## Existing Situation/Current Facilities

Table 1 summarizes current facility space and employee numbers for the Appalachian District. Currently, permanent employees work out of five locations: a leased office in Hot Springs, a small office building at the Hot Springs work center, and an office in Burnsville. The Senior Community Service Employment Program (SCSEP) employees work out of the Hot Springs and Busick Work Centers, where vehicles, tools and equipment are stored for facility and road maintenance work performed by these employees. One National Law Enforcement employee works at the Burnsville Office, as well as two state employees.

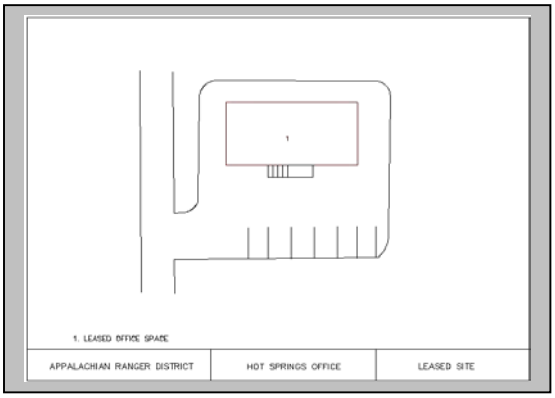
**Table 1. Current Facilities**

| | Office in Downtown Hot Springs | Office at WC in Hot Springs | Hot Springs Work Center | Burnsville Office | Busick Work Center | TOTALS |
|---|---|---|---|---|---|---|
| Permanent Employees | 7 | 3 | | 15 | | 25 |
| Senior Citizens | | | 22 | | 30 | 52 |
| Law Enforcement | | | | 1 | | 1 |
| Trainees | | | | 1 | | 1 |
| **Total Persons Requiring Space** | | | | | | **79** |
| Office Space | 1110 | 735 | | 2280 | | 4125 |
| Hallways, Bathrooms, etc | 750 | 389 | | 1920 | | 3059 |
| Reception | 100 | 0 | | 400 | | 500 |
| Conference Room | 90 | 0 | | 300 | | 390 |
| Inside Storage | 200 | 10 | | 500 | | 710 |
| **Total Office Space (SF)** | **2250** | **1134** | | **5400** | | **8784** |
| Fire Cache | | | 400 | | 1540 | 1940 |
| Inside Storage | | | 800 | | 720 | 1520 |
| Shop/Service | | | 4320 | | 4718 | 9038 |
| Pesticide Storage | | | 0 | | 104 | 104 |
| Flammable Storage | | | 576 | | 527 | 1103 |
| Polesheds | | | 1615 | | 1156 | 2771 |
| **Total Warehouse Space (SF)** | | | **7711** | | **8765** | **16476** |
| **Surfaced Outside Space (SF)** | 3000 | 300 | 31500 | 10000 | 22500 | **67300** |

| Quarters | Location | Living Space | Storage | Status |
|---|---|---|---|---|
| Ranger Dwelling | Burnsville | 2136 | | Sell |
| Asst Ranger Dwelling | Busick WC | 1190 | | Sell |
| Asst Ranger Dwelling Garage | Busick WC | | 718 | Sell |
| Ranger Dwelling | Hot Springs | 2030 | | Sell |
| Ranger Dwelling Carport | Hot Springs | | 352 | Sell |
| Ranger Dwelling Shed | Hot Springs | | 102 | Sell |
| Allen's Gap Residence | Allen's Gap | 2000 | | Sell |
| Allen's Gap Garage | Allen's Gap | | 1800 | Sell |
| | **Total:** | **7356** | **2972** | |

Hot Springs Office: This building on Bridge Street in downtown Hot Springs and was initially leased in 1978. The building has received only minor maintenance and has deteriorated over the past 25 years. Deficiencies include a layout that prevents full utilization of the space available. Meetings with more than eight persons are held in a building at the work center, located approximately 1 mile away. Access to some offices requires traveling though adjacent offices. The reception area is also broken up by travel corridors, and can be impassible when more than a couple of visitors are present. The electrical system is old and worn out, the ceilings are water-stained, and the HVAC system is inefficient.


The existing parking area is designed for 13 vehicles. Recreation vehicles must park on the street in front of the office. All the employees park their cars at the work center and drive or ride in government vehicles to the office.




In 1989, a pre-renewal canvass was made to see if more suitable space was available in Hot Springs. The only other Federal building, the post office did not have space for the Forest Service. It was determined that there was no other office space available and no one was interested in constructing a new office building for the Forest Service. The building has been under continuing one-year options and is currently leased for $12,000 per year.

Because it is a leased building there is no annual or deferred maintenance costs.

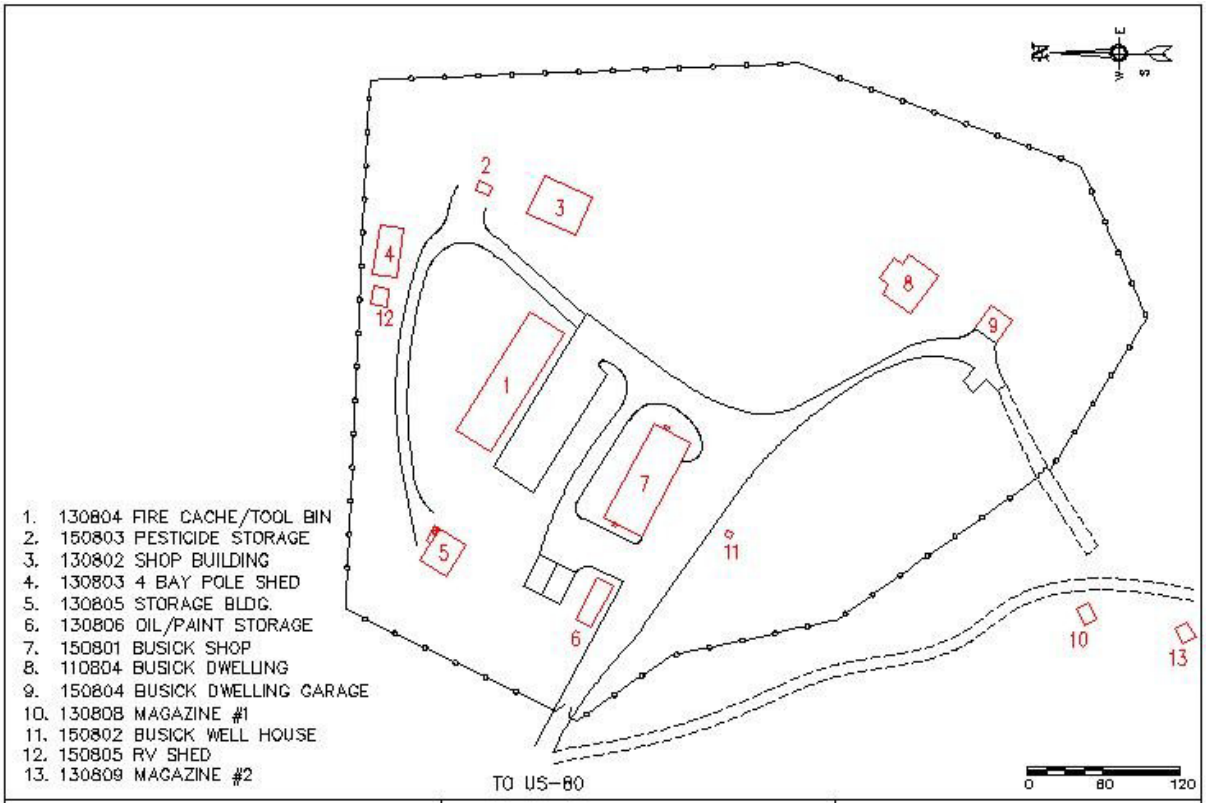
Office at the Hot Springs Work Center: The former office at the work center is a facility that was built in 1938. In 1978 it was determined that space needs were inadequate and personnel were moved from this office to the existing rented space on Bridge Street. In 1989, the District had grown to a point where the office on Bridge Street was not large enough.

In 1992, a decision was made to renovate this building and use it as an office annex that would house six employees. Renovations were completed in 1993. Although the building is small it is still in excellent condition. It is not visible to the public and has only one parking space.

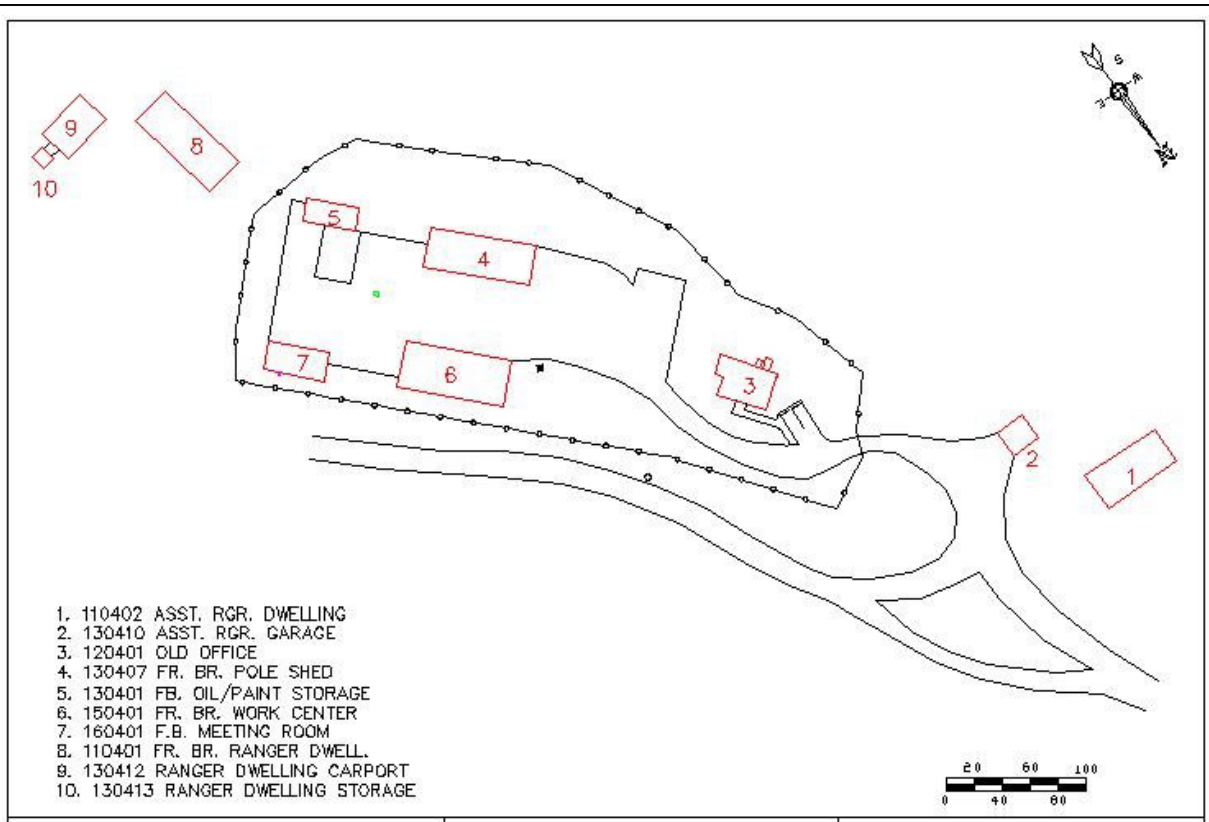
The annual maintenance costs is $ 4,900 per year (based on 3% of value) and the deferred maintenance is estimated at $ 1,750. When the current employees move out of the building it will be scheduled for decommissioning.

Burnsville Office: When the lease for an existing inadequately sized office came up for renewal in 1993, the Forest Service decided to advertise for new space. The Burnsville office was then constructed under Forest Service specifications by Earl Young and leased to the Forest Service for $10.35 per square foot (approximately $40,000 per year). In 1996 the Rosman Communication Site, a former Department of Defense installation on Forest Service land, was exchanged for lands and property that included the Burnsville office. The building is still in very good condition.

The annual maintenance costs $17,000 per year and the deferred maintenance is estimated at $1,000.




| APPALACHIAN RANGER DISTRICT | BUSICK WORK CENTER | INFRA SITE NUMBER: 71934 |
|---|---|---|




| APPALACHIAN RANGER DISTRICT | FRENCH BR. ADM SITE | INFRA SITE NUMBER: 71910 |
|---|---|---|

Busick Work Center: This 6.43 acre site contains 10 buildings (12,288 sq ft) constructed between 1939 and 1995. All of the buildings are still functional, however most are old and run-down. Many, including the dwelling, are no longer used. Some do not meet building codes. Some of the structures were constructed by the Civilian Conservation Corps (CCC) and are considered historic structures.

There is a high probability of a significant pre-historic Indian site at this center (some artifacts have been found). A municipal authority provides water under an agreement where the authority gets their water from a well previously drilled by the Forest Service at this administrative site.

The annual maintenance costs equal $29,000 per year and the deferred maintenance is estimated at $ 97,350.

Maintenance Bldg - Front

Maintenance Bldg - Rear

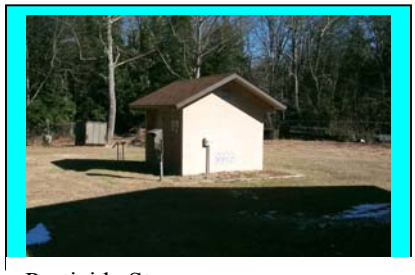
Shop

Pole shed

Storage

Fire Cache

Flammable Storage



Pesticide Storage

Busick Dwelling

Busick Dwelling Garage

French Broad Administrative Site: This site contains six buildings (7711), not including the office. Five were constructed by the CCCs in 1939. The buildings are still functional, but similar to the Busick Work Center, they are old and run down. Parking is inadequate and access is very congested.

The work center will remain and be used by the SCSEP employees as their base of operation and maintenance for the west half of the Appalachian District.

Maintenance Shop

Flammable Storage


Pole Shed

Meeting Room

Asst Ranger Dwelling

Asst Dwelling Garage

Hot Springs Ranger Dwelling: This 2030 square foot residence was constructed in 1963, and has received good annual and deferred maintenance during the past 10 years. It is in good shape. Annual maintenance is estimated at $2,540 and there is deferred maintenance items that will cost $41,465.


Hot Springs Ranger Dwelling

Carport

Storage

Allen's Gap Residence and Garage: This property was acquired through a land purchase to add a buffer area to the Appalachian Trail. The entire property is not needed as a buffer and the residence and garage is to be sold. At the present time the building is not fit for habitation and is not being maintained.

The annual maintenance costs equal $2,100. The deferred maintenance needed to bring the property up to standard is estimated at $ 85,000.

## EXHIBIT A - BUILDING SUMMARY

| Bldg # | Building Name | Area in Sq Feet | Year constructed | Maintenance Level | Condition | Historic | Fully Accessible | Deferred Maint Cost | Replacement Cost 2003 | Value | CFI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FRENCH BR. ADM SITE** | | | | | | | | | | | |
| 110401 | FR. BR. RANGER DWELL. | 2030 | 1963 | 4 | Fair | No | No | $36,825 | $119,863 | $83,038 | **44%** |
| 110402 | ASST. RGR. DWELLING | 1176 | 1939 | 4 | Fair | Yes | No | $29,800 | $84,080 | $54,280 | **55%** |
| 120401 | OLD OFFICE | 1134 | 1940 | 4 | Good | Yes | Yes | $1,750 | $163,863 | $162,113 | **1%** |
| 130401 | FB OIL / PAINT STORAGE | 576 | 1983 | 3 | Fair | No | No | $260 | $44,693 | $44,433 | **1%** |
| 130407 | FR. BD. POLE SHED | 2016 | 1971 | 3 | Fair | Yes | No | $1,925 | $62,570 | $60,645 | **3%** |
| 130410 | ASST. RGR. GARAGE | 400 | 1939 | 3 | Fair | Yes | No | $4,925 | $11,065 | $6,140 | **80%** |
| 130412 | RANGER DWELL CARPORT | 352 | 1965 | 3 | Fair | No | No | $80 | $1,376 | $1,296 | **6%** |
| 130413 | RANGERS DWELL STORAGE | 102 | 1984 | 2 | Poor | No | No | $4,560 | $5,000 | $440 | **1034%** |
| 150401 | FR. BR. WORK CENTER | 4320 | 1939 | 3 | Fair | Yes | No | $51,675 | $249,696 | $198,021 | **26%** |
| 160401 | F.B. MEETING ROOM | 800 | 1939 | 3 | Fair | Yes | No | $10,950 | $46,240 | $35,290 | **31%** |
| **FRENCH BROAD** | | | | | | | | | | | |
| 120403 | ALLENS GAP RESIDENCE | 2000 | 1955 | 1 | Poor | No | No | $75,000 | $125,000 | $50,000 | **150%** |
| 130411 | ALLENS GAP GARAGE | 1800 | 1960 | 1 | Critical | No | No | $10,000 | $30,000 | $20,000 | **50%** |
| **BUSICK WORK CENTER** | | | | | | | | | | | |
| 110804 | BUSICK DWELLING | 1190 | 1939 | 3 | Poor | Yes | No | $46,100 | $87,116 | $41,016 | **112%** |
| 130802 | SHOP BUILDING | 1565 | 1979 | 3 | Good | No | No | $4,600 | $160,915 | $156,315 | **3%** |
| 130803 | 4 BAY POLE SHED | 820 | 1975 | 3 | Fair | No | No | $5,250 | $46,240 | $40,990 | **13%** |
| 130804 | FIRE CACHE / TOOL BIN | 1540 | 1979 | 2 | Fair | No | No | $6,950 | $160,915 | $153,965 | **5%** |
| 130805 | STORAGE BLDG. | 720 | 1975 | 3 | Fair | No | No | $5,000 | $36,125 | $31,125 | **16%** |
| 130806 | OIL/PAINT STORAGE | 527 | 1970 | 3 | Fair | No | No | $0 | $40,429 | $40,429 | **0%** |
| 130808 | MAGAZINE #1 | 85 | 1930 | 1 | Critical | No | No | $500 | $1,000 | $500 | **100%** |
| 130809 | MAGAZINE #2 | 106 | 1930 | 1 | Critical | No | No | $500 | $1,000 | $500 | **100%** |
| 150801 | BUSICK SHOP | 3153 | 1939 | 3 | Fair | Yes | No | $28,100 | $499,392 | $471,292 | **6%** |
| 150802 | BUSICK WELLHOUSE | 62 | 1995 | 3 | Excellent | No | No | $100 | $3,584 | $3,484 | **3%** |
| 150803 | PESTICIDE STORAGE | 104 | 1990 | 3 | Good | No | No | $350 | $16,559 | $16,209 | **2%** |
| 150804 | BUSICK DWELLING GARAGE | 718 | 1939 | 2 | Poor | No | No | $0 | $14,504 | $14,504 | **0%** |
| 150805 | RV SHED | 336 | 1994 | 1 | Poor | No | No | $0 | $1,000 | $1,000 | **0%** |
| **TOECANE ADMIN.** | | | | | | | | | | | |
| 120801 | TOECANE RGR OFFICE | 5561 | 1992 | 4 | Excellent | No | Yes | $1,000 | $566,440 | $565,440 | **0%** |
| **TOECANE RANGER RESIDENCE** | | | | | | | | | | | |
| 110801 | TOECANE RANGER RES. | 2136 | 1960 | 4 | Fair | No | No | $27,550 | $106,222 | $78,672 | **35%** |

# EXHIBIT B - BUILDING RATINGS

| Bldg # | Building Name | Maintenance Level | Year | Age | Condition | Min Suitability Stds | Accessibility | Miles to Main Office | Miles Score | $ to Bring to Std | Standards Score | Liability Score | Final Rating | CFI (%) Deferred Maint cost / Value | Recommendation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRENCH BR. ADM SITE | | | | | | | | | | | | | | | |
| 110401 | FR. BR. RANGER DWELL. | 40 | 1963 | 40 | 20 | 0 | 0 | 2 | 0.07 | $36,825 | -12.28 | -3 | 4.79 | 0.44 | DISPOSE (SALE) |
| 110402 | ASST. RGR. DWELLING | 40 | 1939 | 64 | 20 | 0 | 0 | 2 | 0.07 | $29,800 | -9.93 | -3 | -16.87 | 0.55 | DECOMMISSION |
| 120401 | OLD OFFICE | 40 | 1940 | 63 | 30 | 0 | 40 | 2 | 0.07 | $1,750 | -0.58 | 0 | 46.48 | 0.01 | RETAIN |
| 130401 | FB OIL / PAINT STORAGE | 30 | 1983 | 20 | 20 | 0 | 0 | 2 | 0.07 | $260 | -0.09 | 0 | 29.98 | 0.01 | RETAIN |
| 130407 | FR. BD. POLE SHED | 30 | 1971 | 32 | 20 | 0 | 0 | 2 | 0.07 | $1,925 | -0.64 | 0 | 17.43 | 0.03 | RETAIN |
| 130410 | ASST. RGR. GARAGE | 30 | 1939 | 64 | 20 | 0 | 0 | 2 | 0.07 | $4,925 | -1.64 | 0 | -15.58 | 0.80 | DECOMMISSION |
| 130412 | RANGER DWELL CARPORT | 30 | 1965 | 38 | 20 | 0 | 0 | 2 | 0.07 | $80 | -0.03 | 0 | 12.04 | 0.06 | DISPOSE (SALE) |
| 130413 | RANGERS DWELL STORAGE | 20 | 1984 | 19 | 10 | 0 | 0 | 2 | 0.07 | $4,560 | -1.52 | 0 | 9.55 | 10.34 | DISPOSE (SALE) |
| 150401 | FR. BR. WORK CENTER | 30 | 1939 | 64 | 20 | 0 | 0 | 2 | 0.07 | $51,675 | -17.23 | -5 | -36.16 | 0.26 | RETAIN |
| 160401 | F.B. MEETING ROOM | 30 | 1939 | 64 | 20 | 0 | 0 | 2 | 0.07 | $10,950 | -3.65 | -5 | -22.58 | 0.31 | RETAIN |
| FRENCH BROAD | | | | | | | | | | | | | | | |
| 120403 | ALLENS GAP RESIDENCE | 10 | 1955 | 48 | 10 | -40 | 0 | 20 | 0.67 | $75,000 | -25.00 | -5 | -97.33 | 1.50 | DECOMMISSION |
| 130411 | ALLENS GAP GARAGE | 10 | 1960 | 43 | 0 | -40 | 0 | 20 | 0.67 | $10,000 | 0.00 | -5 | -77.33 | 0.00 | DECOMMISSION |
| BUSICK WORK CENTER | | | | | | | | | | | | | | | |
| 110804 | BUSICK DWELLING | 30 | 1939 | 64 | 20 | -20 | 0 | 20 | 0.67 | $48,000 | -15.37 | -5 | -53.70 | 1.12 | DISPOSE (SALE) |
| 130802 | SHOP BUILDING | 30 | 1979 | 24 | 30 | 0 | 0 | 20 | 0.67 | $6,350 | -1.53 | -3 | 32.13 | 0.03 | DISPOSE (SALE) |
| 130803 | 4 BAY POLE SHED | 30 | 1975 | 28 | 20 | 0 | 20 | 20 | 0.67 | $5,250 | -1.75 | 0 | 40.92 | 0.13 | DISPOSE (SALE) |
| 130804 | FIRE CACHE / TOOL BIN | 20 | 1979 | 24 | 20 | 0 | 0 | 20 | 0.67 | $1,450 | -2.32 | -5 | 9.35 | 0.05 | DISPOSE (SALE) |
| 130805 | STORAGE BLDG. | 30 | 1975 | 28 | 20 | 0 | 0 | 20 | 0.67 | $3,650 | -1.67 | -3 | 18.00 | 0.16 | DISPOSE (SALE) |
| 130806 | OIL/PAINT STORAGE | 30 | 1970 | 33 | 20 | 0 | 0 | 20 | 0.67 | $2,000 | 0.00 | 0 | 17.67 | 0.00 | DISPOSE (SALE) |
| 130808 | MAGAZINE #1 | 10 | 1930 | 73 | 0 | 0 | 0 | 20 | 0.67 | $500 | -0.17 | -5 | -67.50 | 1.00 | DISPOSE (SALE) |
| 130809 | MAGAZINE #2 | 10 | 1930 | 73 | 0 | 0 | 0 | 20 | 0.67 | $500 | -0.17 | -5 | -67.50 | 1.00 | DISPOSE (SALE) |
| 150801 | BUSICK SHOP | 30 | 1939 | 64 | 20 | 0 | 0 | 20 | 0.67 | $50,600 | -9.37 | -5 | -27.70 | 0.06 | DISPOSE (SALE) |
| 150802 | BUSICK WELLHOUSE | 30 | 1995 | 8 | 40 | 0 | 0 | 20 | 0.67 | $100 | -0.03 | 0 | 62.63 | 0.03 | DISPOSE (SALE) |
| 150803 | PESTICIDE STORAGE | 30 | 1990 | 13 | 30 | 0 | 0 | 20 | 0.67 | $1,900 | -0.12 | 0 | 47.55 | 0.02 | DISPOSE (SALE) |
| 150804 | BUSICK DWELLING GARAGE | 20 | 1939 | 64 | 10 | 0 | 0 | 20 | 0.67 | $3,925 | 0.00 | -3 | -36.33 | 0.00 | DISPOSE (SALE) |
| 150805 | RV SHED | 10 | 1994 | 9 | 10 | 0 | 0 | 20 | 0.67 | $1,200 | 0.00 | 0 | 11.67 | 0.00 | DISPOSE (SALE) |
| TOECANE ADMIN. | | | | | | | | | | | | | | | |
| 120801 | TOECANE RGR OFFICE | 40 | 1992 | 11 | 40 | 0 | 40 | 0 | 0.00 | $1,000 | -0.33 | 0 | 108.67 | 0.00 | DISPOSE (SALE) |
| TOECANE RANGER RESIDENCE | | | | | | | | | | | | | | | |
| 110801 | TOECANE RANGER RES. | 40 | 1960 | 43 | 20 | 0 | 0 | 2 | 0.07 | $27,550 | -9.18 | 0 | 7.88 | 0.35 | DISPOSE (SALE) |

## EXHIBIT C - DEFERRED MAINTENANCE ELIMINATED

| Bldg # | Building Name | Area in Sq Feet | Year constructed | Maintenance Level | Condition | Deferred Maint Cost |
|---|---|---|---|---|---|---|
| **FRENCH BR. ADM SITE** | | | | | | |
| 110401 | FR. BR. RANGER DWELL. | 2030 | 1963 | 4 | Fair | $36,825 |
| 130412 | RANGER DWELL CARPORT | 352 | 1965 | 3 | Fair | $80 |
| 130413 | RANGERS DWELL STORAGE | 102 | 1984 | 2 | Poor | $4,560 |
| **FRENCH BROAD** | | | | | | |
| 120403 | ALLENS GAP RESIDENCE | 2000 | 1955 | 1 | Poor | $75,000 |
| 130411 | ALLENS GAP GARAGE | 1800 | 1960 | 1 | Critical | $10,000 |
| **BUSICK WORK CENTER** | | | | | | |
| 110804 | BUSICK DWELLING | 1190 | 1939 | 3 | Poor | $48,000 |
| 130802 | SHOP BUILDING | 1565 | 1979 | 3 | Good | $6,350 |
| 130803 | 4 BAY POLE SHED | 820 | 1975 | 3 | Fair | $5,250 |
| 130804 | FIRE CACHE / TOOL BIN | 1540 | 1979 | 2 | Fair | $1,450 |
| 130805 | STORAGE BLDG. | 720 | 1975 | 3 | Fair | $3,650 |
| 130806 | OIL/PAINT STORAGE | 527 | 1970 | 3 | Fair | $2,000 |
| 130808 | MAGAZINE #1 | 85 | 1930 | 1 | Critical | $500 |
| 130809 | MAGAZINE #2 | 106 | 1930 | 1 | Critical | $500 |
| 150801 | BUSICK SHOP | 3153 | 1939 | 3 | Fair | $50,600 |
| 150802 | BUSICK WELLHOUSE | 62 | 1995 | 3 | Excellent | $100 |
| 150803 | PESTICIDE STORAGE | 104 | 1990 | 3 | Good | $1,900 |
| 150804 | BUSICK DWELLING GARAGE | 718 | 1939 | 2 | Poor | $3,925 |
| 150805 | RV SHED | 336 | 1994 | 1 | Poor | $1,200 |
| | SITEWORK-FIRE ENGINE FILL STATION | | | | Poor | $1,500 |
| | REPAVE ACCESS ROAD | | | | Poor | $40,000 |
| **TOECANE ADMIN.** | | | | | | |
| 120801 | TOECANE RGR OFFICE | 5561 | 1992 | 4 | Excellent | $1,000 |
| | | | | | **TOTAL:** | **$294,390** |

# APPENDIX C

# FACILITY REQUIREMENTS

## Facility Requirements:

Table 2 outlines projected employee numbers and spatial requirements for a facility that will accommodate the combined workforce of the Hot Springs and Burnsville offices. A total office size of 7600 square feet is needed. The recommended square footage meets the USDA Space Management Policy. It also meets the Regional guidelines for Interpretive/Sales area of 1,100 square feet (see Appendix G – VIS Calculations).

**TABLE 2 - Space Needs**

| | | | | | | | Sq Ft |
|---|---|---|---|---|---|---|---|
| **Non-Net Space (space allowed independent of number of employees)** | | | | | | | |
| Conference Room | | | | | | | 500 |
| Closet | | | | | | | 50 |
| Mechanical Room(s) | Based on need at Cheoah Office | | | | | | 350 |
| Communication Room | Based on need at Cheoah Office | | | | | | 50 |
| Pump Room (for ground source HVAC) | Based on need at Cheoah Office | | | | | | 100 |
| Public Restrooms | | | | | | | 300 |
| Reception Area | | | | | | | 300 |
| Interpretive/Sales | Based on R8 Guidelines (see appendix F) | | | | | | 1,100 |
| Staff Restrooms | | | | | | | 300 |
| | | | | | **Subtotal** | | **3,050** |
| **Included in Regulated Space (150 Sq Ft per Employee)** | | | | | | | |
| ***Hot Springs Office*** | | | | | | | |
| Assistant Ranger | GS-460-11 | Linda Randolf | 125 | | | | |
| Business Management Assistant | GS-303-06 | Darlene Huntsinger | 100 | | | | |
| Zone Botonist | GS-430-11 | Dave Danley | 125 | | | | |
| Forestry Technician | GS-424-09 | Arnold Reese | 100 | | | | |
| Forestry Technician | GS-462-07 | Matt Eldridge | 75 | | | | |
| Forestry Technician (Recreation) | GS462-05 | Vacant | 60 | | | | |
| Assistant FMO | GS-462-07 | Vacant | 75 | | | | |
| Engine Operator | GS-462-05 | Patrick Scott | 60 | | | | |
| Engine Crew Member | GS-462-03 | Anthony Thomas | 60 | | | | |
| Engine Crew Member | GS-462-03 | Joseph Norris | 60 | | | | |
| Forestry Technician | GS-462-07 | Arthur Frisbee | 75 | | | | |
| Information Receptionist | GS-304-03 | Louis Lawson | 50 | | | | |
| LEO | GS-09 | Wilt Stribling | 125 | | | | |
| ***Burnsville Office*** | | | | | | | |
| District Ranger | GS-340-13 | Paul Bradley | 150 | | | | |
| Operations Assistant | GS-460-11 | Dave McFee | 125 | | | | |
| Zone NEPA Planner | GS-460-12 | Michael Hutchins | 135 | | | | |
| Business Management | GS-342-9 | Cathy King | 125 | | | | |
| Zone NEPA Planner | GS-460-11 | Karen Compton | 125 | | | | |
| Engine Operator | GS-462-05 | Bruce Nason | 60 | | | | |
| Forestry Technician (Fire/Rec) | GS-462-05 | Vacant | 60 | | | | |
| Timber Technician | GS-462-09 | James Roper | 100 | | | | |
| Engineering Technician | GS-462-07 | Jerry Murphy | 75 | | | | |
| Fire Management Officer | GS-462-09 | Cleve Fox | 100 | | | | |
| Engine Crew Member | GS-462-04 | Brandon Jones | 60 | | | | |
| Resource Clerk | GS-303-05 | Rita Grindstaff | 100 | | | | |
| Information Receptionist | GS-304-03 | Vacant | 50 | | | | |
| Engine Crew Member | GS-462-03 | John Brooks | 60 | | | | |
| Trainee | GS-401-7/9 | Varies | 75 | | | | |
| ***Supervisor's Office*** | | | | | | | |
| Archeologist | GS-193-11 | Bob Noel | 125 | | | | |
| GIS Editor | GS-482-07 | Amber Vanderwolf | 125 | | | | |
| Storage | | | | | 250 | | |
| Break Room | | | | | 200 | | |
| Central Files/Mail/Copiers | | | | | 300 | | |
| | | | | 2740 + | 750 = | | **3,490** |
| Circulation (20%) | | | | | | | **1,047** |
| **Allowable space = 150 X 30 employees = 4,500** | | | | | | | |
| | | | | | **Total space needs** | **=** | **7,587** |
| | | | | | **USE 7,600 sq ft.** | | |

Three additional buildings will be required at the workcenter located adjacent and behind the new office. The size and function of these buildings were determined based on the

successful and cost efficient workcenter layouts on other Districts in North Carolina that have similar workloads. These buildings include a shop/maintenance/warehouse (4,000 sq ft), a hazardous materials building (1,000 sq ft), and a 5-bay pole shed (1,000 sq ft).

**Issues, needs, and objectives**:

1. The proposed facility must be easily accessible and highly visible to the public and business associates, preferably along a major access route into the Pisgah National Forest. Interstate 26 is the main access route from the north and bi-sects the Appalachian District.

2. The proposed facility should be located for timely emergency fire response and to minimize travel time from the office to the field. The proposed facility should be located reasonably close to or within the Forest boundary and along main travel routes in order to maintain emergency response coverage and minimize work travel time.

3. Forest visitors, contractors, and partners must be able to easily find the proposed facility.

4. The proposed facility must provide adequate office, storage, warehouse, and outside storage space to effectively consolidate the existing Hot Springs and Burnsville operations into one location.

5. The proposed facility must provide adequate parking space for the anticipated workforce, government vehicles, and the visiting public. There will be a large increase in visitors to the office, providing it is located in a highly visible and easily accessed area along a main travel route. Many of these public visitors will be traveling in motor homes and travel trailers. A large parking area must be designed to accommodate this need.

6. The size of the proposed facility and facility site must be flexible for future expansion of resource management programs, increases in employee numbers. The programs and workforce on the Forest changes over time.

7. The proposed facility must provide a safe and secure environment for all members of the workforce and the visiting public. The proposed facility must also provide a safe and secure place to park and store government owned vehicles and equipment. (See Appendix D - Security Requirements).

8. The proposed facility must incorporate low maintenance, energy efficient, sustainable design and construction. Design should meet the LEEDS certified rating of Gold or better. The useful life of the building must meet the typical design life of 50 years for major structures.

9. The proposed facility must be aesthetically pleasing. Landscaping and building design must be professional in appearance and compatible with the surrounding area and comply with the “Built Environment Image Guide”.

# APPENDIX D – SECURITY REQUIREMENTS

**Security:** The USDA Integrated Physical Security Standards & Procedures Handbook provides coordinated and uniform U.S. Department of Agriculture (USDA) procedures for effective asset protection, including facilities, communication and computer systems and people. The procedures outlined in this handbook apply to all USDA sites, however it is geared primarily to protect critical infrastructure (systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters). None of our facilities would qualify and we are not mandated to implement the strategies included in this handbook.

However, the message included in the policy statement *"In order to ensure that USDA critical physical and cyber infrastructure is protected, sites should identify related assets, resources, and property; determine the value and risk level associated with each asset; and identify and implement the appropriate protection" is appropriate for all Federal facilities.*

The application of the Security Design Criteria is based on a project-specific risk assessment that looks at threat, vulnerability, and consequences, three important components of risk. Threat is the actual or perceived source of jeopardy. Security measures should be based on a risk assessment that compares the risk level with costs of implementation, values of assets being protected, replacement costs, and health and safety issues. Security should be an integral part of new building and site planning, starting at the earliest phase and continuing throughout the process.

A building security plan may result in restricted access or controlled movement of staff and employees. Crime Prevention Through Environmental Design (CPTED) techniques should be used to help prevent and mitigate crime. Good strategic thinking on CPTED issues such as site planning, perimeter definition, lighting, etc., can reduce the need for engineering solutions.

**Considerations:** The following are some of the procedures considered and those in 'Bold Type' are recommended:

- R**educing the number of employee entrances to one or two.**
- **Visitor should only have one access point to the facility.**
- **Develop security zones for facilities that are "open" or have no restrictive barriers or walls to restrict the circulation or movement of personnel. Special attention should be taken to control the movement of visitors to critical areas containing assets or infrastructure vital to the operation of the building and the performance of the organization's mission.**
- **Evaluate if fencing, grilles, and doors should be designed to completely close down access to the entire building in unattended hours. Security fencing and screening may be provided at points of low activity to discourage anyone**

**from entering the site on foot, while still maintaining openness and natural surveillance.**

- **Consider the use of perimeter intrusion detection systems including closed circuit television, video, alarms, and clear zones. Integrate stand-alone security systems with communications, fire monitoring, and other environment alarms to form the foundation of access control.**
- **Analyze the need for a dedicated security force for the site that would control entry.** Conduct a random walk-through of critical areas. Test responses to alarms. **Verify responses to alarms from outside law enforcement agencies in case of emergency or disorder.**
- If the site is collocated with other tenants, evaluate the impact that "high-risk tenants" may have on the security of the site. For example, a USDA site collocated with a university or commercial institution may have more or different security issues to consider than a site located on its own. When warranted by a risk assessment, consideration should be given to acquiring adjacent sites or negotiating the rights-of-way of sites. Adjacent sites can affect the security of federal facilities.
- Ascertain whether or not the offices of key staff and leadership are in vulnerable locations, such as facing a public street. Determine if the public can look into windows and view key officials. Whenever possible, key officials and staff should have offices that are on the interior of the building, offices that face interior courtyards, or controlled areas. If moving key personnel is not possible, consider the use of blast protection for windows or other interior protection systems.
- Verify that the location of mailrooms is not close to critical services, utilities, distribution systems, and other important assets. Preferably, mailrooms should be located on an exterior wall on the perimeter of the building designed for pressure relief in case an explosion does occur. An area near the loading dock may be the preferred location for a mailroom.
- **Review the location of public toilets and other service spaces within the building. Public toilets, service spaces, or access to vertical circulation systems should not be located in non-secure areas.**
- Assess whether the location of loading docks, or shipping and receiving areas are located within 50 feet of critical utility rooms, utility mains, telephone or data rooms, or cooling and heating mains. If the site was designed with loading dock or shipping and receiving areas close to critical infrastructure areas, consider hardening the loading area to provide blast protection from potential vehicle or mail-borne explosives.
- Reduce the potential for concealment of devices at screening points by avoiding installation of features such as trash receptacles and mailboxes that can be used to hide improvised explosive devices. If mail or express boxes are used, the size of the opening should be restricted to prohibit the insertion of packages.
- Review the utilities coming into the building. Determine if utility feeders are underground or encased in metal conduit or if utilities are above ground and susceptible to criminal acts or sabotage. Utility lines should be concealed and given blast protection, including burial or proper encasement if possible.

- **Determine if unauthorized persons can gain access to rooftop heating and ventilation systems, electrical equipment, or other critical infrastructure areas. Develop locking mechanisms to prevent entry through roof hatches and stairwells.**
- For critical facilities, determine whether enhanced security measures such as bomb detection equipment, x-ray machines, magnetometers, and protection for air intake of heating, ventilation, and air conditioning systems is necessary.
- For critical sites, design a perimeter vehicle inspection point that stops vehicles, denies vehicles from leaving the vehicular inspection area, and prevents tailgating.
- Design site circulation controls to prevent high-speed approaches to buildings by vehicles. Use various types and designs of bollards and static barriers such as walls, fences, trenches, ponds and water, plantings, trees, sculpture, and street furniture to deny a vehicle a direct approach to a site. Offset vehicle entrances as necessary from the direction of a vehicle's approach to force a reduction in speed.
- Determine if unscreened vehicles are permitted to park within 25 feet of the site. Plan to set parking of unscreened vehicles as far away from the site as possible. Plan to enforce parking restrictions to help keep threats away from the building, if necessary.
- **Design landscaping elements that are attractive and welcoming, but that also enhance the security of the building. For example, plants can deter unwanted entry. Ponds and fountains can block vehicle access. Avoid landscaping that permits concealment by criminals or intruders, or obstructs the view of security personnel and closed circuit television cameras.**
- **Conduct an exterior survey of lighting to determine if enhancements are necessary for security of the building. Good lighting is the single most effective deterrent to criminal activity. The building entrance should have 15 foot candle lighting.**
- All present and future security/egress issues should be discussed with agency physical security specialists.
- Plans should include the ability to increase security in response to a heightened threat, as well as reduce security if changes in risk warrant.
- **Dumpsters should be located at least 25 feet away from buildings.**

**Security Specifications**

Security should be an integral part of new building and site planning, starting at the earliest phase and continuing throughout the process. Incorporation of physical security and force protection aids are best added to new construction early in the design process to save resources. Retrofitting sites with necessary security upgrades or landscaping after construction is completed can prove costly.

**Fencing:** The perimeter fence is usually the most obvious physical protective measure and a strong psychological deterrent to criminal activity. Fencing restricts, delays, channels, or impedes access and should be fully integrated to form a continuous obstacle

around a site, building, or area. Fencing should be focused on providing assets with an acceptable level of protection.

Use six-foot chain link with three-strand barbed wire top guard pointing away from the site for perimeter fencing. The chain link fence is the type of fence most used to secure perimeters. Perimeter fencing should be afforded a clear zone of at least ten feet on each side of the fence. Clear zones should be kept clear of weeds, trees, rubbish or other material that may provide concealment or assistance to an intruder attempting to breach the barrier. Chain link fencing (including gates) should be constructed of material (excluding the top guard) that is six feet in height. Chain link fences should be constructed with nine-gauge or heavier wire. They should be galvanized with mesh openings not larger than two inches per side. The wire should be taut and securely fastened to rigid metal or reinforced-concrete posts set in concrete. The barbed wire of a top guard should be at a 45-degree angle pointing upward and outward toward the unsecured side.

**Signage:**
An adequate amount of warning signs should be erected to ensure that possible intruders are aware of entry into government areas. Warning signs stating "U.S. Government Property – No Trespassing" should be installed along the physical borders and at each entry point where they can be seen by anyone approaching the site.

In areas where English is one of two or more languages commonly spoken, bilingual signs should be posted. Directional or parking signs should be erected and posted in accordance with this handbook Chapter 1, Part XVI Vehicle Control. Signs should always be readable and in good condition. Signage such as "Video Surveillance in Progress" should be posted at locations where Closed Circuit Television cameras are used.

The following is a list of possible signs:

- Speed Limit
- Parking (Visitor and Handicapped)
- No Hunting/Fishing
- U.S. Government Property
- No Trespassing
- CCTV Surveillance
- Chemical Storage
- Pesticide Storage
- Emergency Exit
- Authorized Personnel Only

**Vehicle Control:** The policy states that vehicles at USDA sites will be controlled in order to reduce the potential for threats against sites and employee exposure to criminal activity. Vehicles at USDA sites should be controlled with regard to entry, exit and parking.

At locations where special loading platforms or loading docks are available, specific procedures should be implemented by the location to ensure the control and escort of deliveries.
All vehicles should be parked 33 feet or more from any building (recommendation by DOD standards). However, if this objective is not feasible, e.g., existing construction of sites and roadways does not permit this distance, strive to limit parking closest to buildings to known staff or employees only.

Parking lot location should be far enough away from emergency exits, shipping/receiving areas, and other openings to discourage theft. The security of sites and parking area can be enhanced by routing vehicles to and from parking stalls in such a manner as to facilitate observation of possible vulnerable points.

When possible, a separate area should be used and clearly marked for visitor and handicapped parking.

Parking area design should require drivers to enter and leave the area at the point furthest from the site. This increases activity in remote areas and provides surveillance of parked vehicles and pedestrians approaching or leaving the site.

Order and install adequate signage. Signage should be adequate to reduce confusion and direct vehicles to the proper parking areas.

Order and install adequate lighting. Five-foot candles are recommended for parking areas. Effective lighting provides added security for employees and deters illegal or threatening activities.

Special attention should be given to loading platforms to ensure area remains clear and monitored.

**Restricted Areas:** The security protection afforded by a restricted area pertains particularly to the protection against damage, destruction, or theft of a critical asset that could have severe consequences. Barriers and an effective access control system should be established and maintained to preclude unauthorized entry. The degree of security and control required depends on the nature, sensitivity, or importance of the security interest.

Restricted areas are classified as controlled, limited, or exclusion areas:

(1) A controlled area is that portion of a restricted area usually near or surrounding a limited or exclusion area. Entry to the controlled area is restricted to personnel with an operational need for access. Movement of authorized personnel within this area is not necessarily controlled, since mere entry to the area does not provide access to the security interest. The controlled area is provided for administrative control, safety, or as a buffer zone for in-depth security for the limited or exclusion area.

(2) A limited area is a restricted area in proximity to the security interest. Uncontrolled movement may permit access to the item or asset. Escorts and other internal restrictions may prevent access within limited areas.

(3) An exclusion area is a restricted area containing a security interest or critical asset. Uncontrolled movement of personnel permits direct access to the item or asset.

A restricted area should be designated in writing. Designate restricted areas only for areas of critical site infrastructure or protection of vital assets. For example, the Law Enforcement Officer's office and evidence lockers would be designated a restricted area. The reception area and outside offices leading to the area may be designated as controlled areas for the purpose of curtailing the amount of personnel who have access.

Ensure restricted areas are afforded a higher level of security available including, but not limited to, barriers, doors, high security locks, vaults, and alarm monitoring.

Identify the locations of restricted areas in the Occupant Emergency Plan.

| Area Description | Restriction Designation | Security Measures to Consider during Design |
|---|---|---|
| Pesticide Storage Bldg | Controlled area | Non-FS locking system |
| Flammable Storage Bldg | Limited area | FS Lock |
| Paint Storage Bldg | Limited area | FS Lock |
| Marking Paint Storage | Controlled area | Unique lock (single person access) on separate cabinets within the paint storage building. |
| Maintenance Bldg and Grounds | Exclusion area | Separation from public parking and signing to keep public out. Install gate with FS lock. |
| Law Enforcement Office | Controlled area | Locate office to prevent unescorted access by the public. Unique lock (single person access) on Evidence Lockers. |
| General Office Area | Exclusion area | Restrict un-escorted access to public |
| Parking | None | Locate public parking a minimum of 50' from building except for handicapped spaces. |
| Visitor Information Area | None | Place so receptionists has unlimited view of sales and exhibit area. |
| Office Landscaping | None | |

**Electronic Access Control:**

Provide electronic means of controlling access to the main office and the maintenance building, identifying users, and providing access audit capabilities. This type of security system supplements manual locks and keys. The purpose of electronic security is to improve the reliability and effectiveness of life safety systems, security systems, and building functions. It should be integrated with a fire detection system and be connected to local law enforcement and fire protection agencies.

**Barriers:**
Use natural barriers in new site design whenever possible to deter unauthorized access. Natural barriers include natural rocks or boulders, mountains, ditches, water obstacles, or other terrain features that are difficult to traverse.

At locations where natural barriers are not available, consider man-made devices such as decorative concrete planters, concrete or metal bollards, or concrete benches that can offer aesthetically pleasing options while providing necessary security.

Bollards, natural barriers, or concrete posts should be used to prevent a vehicle from backing into critical infrastructures such as gas utility lines near a parking area. When considering the integration of physical security aids such as bollards to control vehicles and protect personnel and assets, care should be taken not to impact the environment in a negative way. Particular attention should also be paid to aesthetics in order to maintain a pleasing work environment. Bollards and other protective barriers should be strategically situated to delay unauthorized access. Appropriate vehicle barriers should be installed near critical buildings and other sites. Perimeter protection is the first line of defense for physical security of property, personnel, and other critical assets.

The use of bollards or other protective barriers such as fencing, gates, doors, grates, and windows (see figure 1) should be integrated to provide an overlapping concentric "defense in depth" to adequately protect a site and to deny, delay, or deter criminal or terrorist activity.

**Lighting:**

By policy all USDA sites should establish a lighting plan to ensure that an effective security lighting approach is used to protect critical assets and promote a secure environment.

Locate lighting where it will illuminate shadowed areas and can be directed at probable routes of intrusion. Establish a "whole site" lighting plan that takes into account the critical and priority resources and assets of the location. Conduct monthly lighting surveys to determine if lighting is operating properly or if maintenance or adjustments to lighting are required. Use the following lighting techniques where appropriate.

Continuous Lighting. The most familiar types of outdoor security lighting, which can be utilized to achieve two specific results, are glare projection and controlled lighting. The glare method of continuous lighting is particularly useful for lighting boundaries around a site, as well as approaches to a site. The controlled lighting approach is generally employed in situations where, due to surrounding neighbors or property owners, adjacent roadways, or other limitations due to geographical location, it is necessary for the light to be more precisely focused. For example, the controlled lighting method may be used to illuminate a wide strip inside a fence, and a narrow strip outside the fence so as not to disturb adjoining neighbors.

Standby Lighting. This concept of lighting generally consists of continuous systems designed for reserve or standby use. Standby lighting can be started either manually or automatically when the continuous system is inoperative or if additional lighting is needed. A standby system can be effectively used to selectively light a particular portion of a site should prowlers or intruders be anticipated. An example of this is a light which can be turned on by security to illuminate a selected area of the site if suspicious activity is detected.

Motion Sensitive Lighting. Motion sensitive lights are usually inexpensive and can be installed at strategic locations. Motion sensitive lights consist of flood or other lighting coupled with a sensor that detects motion. In effect, if an intruder enters the area of the sensor, the lights automatically illuminate providing a deterrent to criminal activity. Motion sensitive lighting can be used effectively to complement other area or building lighting to enhance the security of a location. Further, motion sensitive lighting may be used in areas where it is preferred not to increase existing lighting, as it would attract unwanted attention to a particular site or location. An example would be a site located in a rural area. Rather than call attention to the site at night with continuous lighting, motion sensitive lighting can be used to illuminate the area for security purposes if activated by the movements of an intruder.

Floodlights. Floodlights can be used to accommodate most outdoor security lighting needs. Floodlights can be used to illuminate boundaries, fences, and buildings and can provide emphasis on critical areas.

Street Lights. Use High-Pressure Sodium Vapor lights for parking areas. This is the best source of light available and the one favored by most police agencies because they are brighter, cheaper to maintain, and have strong color rendition traits that are very appropriate for traffic control lighting and crime prevention situations. High-pressure sodium vapor lamps provide high lumen efficiency (80-140 lumens per watt) and relatively good color rendition. Expected lamp life is approximately 24,000 hours.

**Air Intakes:**

Locate accessible air intakes to a publicly inaccessible location. Ideally, the intake should be located on a secure roof or high sidewall. The lowest edge of the outdoor air intakes should be placed at the highest feasible level above the ground or above any nearby accessible level (i.e., adjacent retaining walls, loading docks, handrail). These measures are also beneficial in limiting the inadvertent introduction of other types of contaminants, such as landscaping chemicals, into the building.

# APPENDIX E
# FACILITY ALTERNATIVES AND EVALUATION

## I **Office Space Alternatives:**

Alternatives considered should meet the minimum requirements described in Appendix B of this document and meet the objectives of the Facility Master Plan. Alternatives to be considered are as follow:

1. **No Action/Continue As Is:** Under this alternative, the Appalachian Ranger District will continue to operate out of three Offices, the Hot Springs Work Center and the Busick Work Center.

2. **Rent/Lease Available Office Space:** For this alternative, the Hot Springs Ranger District Offices will be consolidated in a new leased facility in or near Hot Springs. The Burnsville Office will still be utilized as is.

3. **New Construction at or near the old Work Center in Hot Springs and a new Work Center in Burnsville:** Under this alternative, new construction will occur at the existing Hot Springs Work Center site to accommodate those employees now located in Hot Springs. Employees working out of the Burnsville office will remain. The Busick Work Center would continue to be used.

4. **Lease an Existing Facility:** This alternative will consolidate the Appalachian Ranger District Offices staff into a leased facility in or near Mars Hill, North Carolina. The Burnsville Office and the Busick Work Center will be sold.

5. **Construct a New Forest Owned Facility on I-26 at the Mars Hill exit:** This alternative provides for the Forest Service to construct a new facility that will provide adequate office, storage, parking, and staging space necessary to consolidate the Burnsville Office, the leased office in Hot Springs, the existing office at the Work Center, and the Busick Work Center.

## II Evaluation Criteria

The following criteria have been established for the purpose of evaluating alternative proposals:

- **Availability:** The proposed site and/or facility must be available within a reasonable amount of time to meet existing needs. This time period is approximately three years.

- **Customer Service:** The proposed facility should be located in a convenient location to provide good customer service to contractors, permittees, the visiting public, and other government agencies.

- **Resource Protection:** The proposed facility should be located to maintain or improve existing levels of emergency fire protection, and to minimize work travel time.

- **Security:** A secure office and storage facility for employees and District vehicles and equipment is required.

- **Current Needs:** The proposed facility must provide adequate space to accommodate current needs, while meeting all legally required access and safety needs of employees and the public. This includes office, warehouse, parking, and outside storage needs.

- **Expansion Capability:** The proposed facility should allow for expansion to meet future changes in workforce size and resource programs, and to accommodate future collocation with other State, local, and/or Federal agencies.

- **Cost and Efficiency:** The proposed facility should be cost effective. Its' design and construction should involve a reasonable tradeoff between capital and operating costs. The new facility must be designed to be low maintenance, energy efficient, and sustainable.

III Evaluation/Analysis

Alternative Ratings

Alternatives were analyzed against the evaluation criteria using a modified Choosing-By-Advantages (CBA) process. A numerical score was assigned to each alternative to indicate how well the alternative responded to the evaluation criteria. Importance factors have been assigned to each criterion. Each criteria is ranked in terms of importance as follows:

3 = high importance;
2 = moderately important;
1 = low importance.

A final score for each alternative was calculated. The following table summarizes the results of scoring for each alternative considered.

RATINGS

| | Meets Criteria | | | | | | Importance | | RATINGS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Criteria** | **1** | **2** | **3** | **4** | **5** | | Factor | | **1** | **2** | **3** | **4** | **5** |
| Availability | 5 | 0 | 1 | 3 | 2 | | 1 | | 5 | 0 | 1 | 3 | 2 |
| Customer Service | 1 | 2 | 3 | 4 | 5 | | 3 | | 3 | 6 | 9 | 12 | 15 |
| Resource Protection | 2 | 2 | 2 | 5 | 5 | X | 2 | = | 4 | 4 | 4 | 10 | 10 |
| Security | 1 | 2 | 2 | 3 | 5 | | 2 | | 2 | 4 | 4 | 6 | 10 |
| Current Needs | 0 | 1 | 2 | 3 | 5 | | 1 | | 0 | 1 | 2 | 3 | 5 |
| Expansion Capability | 0 | 1 | 2 | 2 | 5 | | 1 | | 0 | 1 | 2 | 2 | 5 |
| Cost and Efficiency | 1 | 2 | 3 | 4 | 5 | | 2 | | 2 | 4 | 6 | 8 | 10 |
| | | | | | | | | | | | | | |
| **Total** | | | | | | | | | **16** | **20** | **28** | **44** | **57** |

*Alternative Ratings: 0 = least responds to criteria.
5 = best responds to criteria

**Alternative Rating Narrative:**

Alternative 1: No Action: This alternative does not meet the basic needs for an office. Employees would still be working out of three offices. The Hot Springs Office is a leased office that is old and run down and does not meet some basic health and safety codes. The owner has been asked but will not upgrade the building, stating that it is not cost effective. Customer service is inconvenient due to limited parking and congested reception area at the Hot Springs Office. There is no secure parking for government vehicles in Hot Springs.

Alternative 2: Rent/Lease Available Office Space in Hot Springs: Studies have been completed during the past five years and there is no space available to lease in Hot Springs.

Alternative 3: New Office Construction in Hot Springs and New Work Center in Burnsville: This alternative would cost the same amount as alternative 5. Residents in Hot Springs would prefer that the Forest Service maintain a presence in town. Residents in Burnsville would welcome another business such as a new Work Center constructed close to town. Customer service would be improved in Hot Springs. These new facilities would provide good working conditions and increased security for all employees of the Appalachian District. However, they would still be working in two separate facilities. Some employees working in Hot Springs would report to a supervisor located in Burnsville, 50 miles away.

Alternative 4: Lease a New Office/Workcenter near Mars Hill: There are no suitable buildings available for lease near Mars Hill (the centroid of the Appalachian District). However, land may be available for construction by a third party. Although construction costs would be about the same as alternative 5, leasing costs would be higher than Alternative 5 (see section IV - Lease vs. Construct Analysis). The location would not be as visible and convenient for the public. Employees, in most cases, would have travel times to and from work increased. Those living in or east of Burnsville would add 50 minutes and those living in or west of Hot Springs would add 70 minutes per day to their commute.

Alternative 5: Construction a New Forest Owned Facility on I-26 Near Mars Hill Exit: The location would be visible and convenient for the public. Employees, in most cases, would have travel times to and from work increased. Those living in or east of Burnsville would add 40 minutes and those living in or west of Hot Springs would add 60 minutes per day to their commute. All employees would be working out of one location with the exception that some SCSEP employees would continue to work out of the Hot Springs Work Center. This alternative would improve existing levels of emergency fire protection, and would minimize work travel times. This alternative would provide a secure office and storage facility for employees and District vehicles and equipment. Office, warehouse, parking, and storage needs would be fully met and health and safety of all employees would be enhanced. The preferred site covers nine acres and is suitable for expansion if needed in the future. The new facilities would be designed (LEED certified) to be low maintenance, energy efficient, and sustainable.

IV Work-Related Travel Time Analysis

An analysis was completed that compared travel times and costs between alternatives that maintained three separate offices and those that proposed consolidation into one office/work center complex near Mars Hill. The analysis contained four steps:

1. The District was divided into contiguous areas that focused on one of four basic work categories; fire/general forest, dispersed recreation, timber and silviculture, and developed recreation. These land units (polygons) were then ranked based on acres or use patterns.

    a. Fire and General Forest: The District was divided into seven large contiguous blocks based on access. Each of these blocks are approximately the same size or at least have the same general amount of activities occurring.
    b. Dispersed recreation: Each of the seven general forest was ranked as either heavy or moderate use. Those blocks of land that were ranked as heavy were determined to have twice as much activity as those ranked moderate. A person working in dispersed recreation would expect to spend twice as much time in an area ranked as heavy.
    c. Timber and silviculture: The District was subdivided into 18 areas (polygons) based on management areas deemed suitable for timber production in the Forest Plan. These areas were then ranked based on acres. It was assumed that a timber polygon with twice the acreage of another timber polygon would have twice the activity and therefore two times the number of trips for an employee who spent time working in timber and silviculture.
    d. Developed recreation: Sites are identified as points and are ranked from 0.5 to 3.0 according to how much use the site gets. Trips for operation and maintenance are divided accordingly.

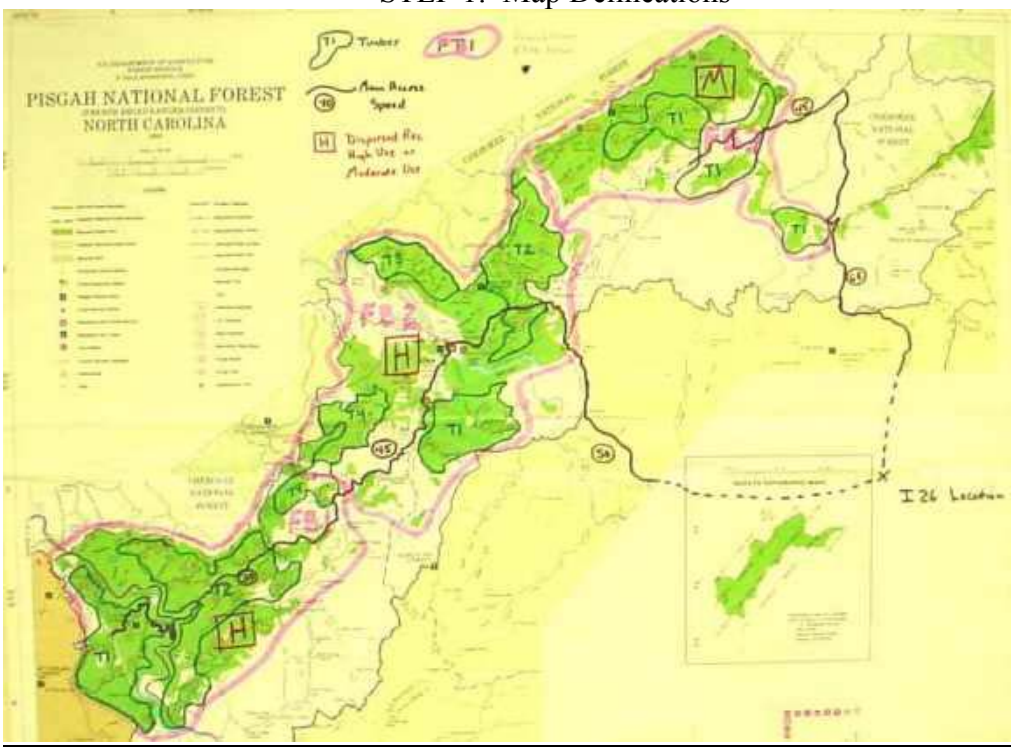
2. The main access roads to the centroid of each of these areas were identified and the average speed and travel times from each office to the centroid or site was calculated. A total of 150 trips linking each of five starting locations to each work locations were created and distances and travel times were calculated. These trips were finally consolidated in 36 distinct trips that an employee's field time could be related.

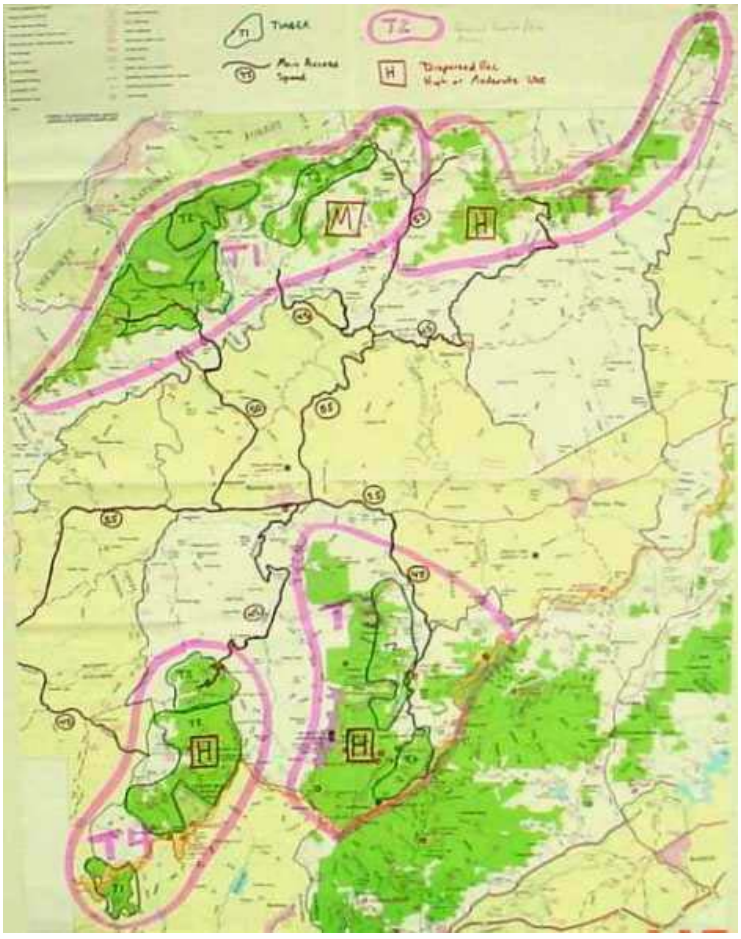
3. For each employee, the percentage of time spent in the office and the percentage spent in the field was estimated. The percentage of time working in each of the four categories was estimated. The locations where each person had to go to conduct fieldwork were determined. An assumption was made that on average three SCSEP employees travel together in one vehicle.

4. A spreadsheet was used to determine how many days an employee works in each of the four categories of work, where this work took place, and which of the 36

distinct trips had to be taken to get to the work sites. Cumulative travel times, personnel salary costs, and vehicles costs were then calculated. Two spreadsheets were used: one for the alternatives that consolidated offices and one for those that did not.

STEP 1:  Map Delineations



# STEP 2: Calculating Trip Times

**Trip-Time Calculation Table**

| Map ID | | Weight Factor | From Burnsville: Weighted Miles | Wgtd Miles | Ave Speed | Round Trip Time in Hours | From Busick WC: Weighted Miles | Wgtd Miles | Ave Speed | Round Trip Time in Hours | From Hot Springs: Weighted Miles | Wgtd Miles | Ave Speed | Trip Time in Hours | From I-26 Location: Weighted Miles | Wgtd Miles | Ave Speed | Round Trip Time in Hours | From Asheville: Weighted Miles | Wgtd Miles | Ave Speed | Round Trip Time in Hours |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **General Forest/Fire** | | | | | | | | | | | | | | | | | | | | | | |
| FB1 | Centroid at Cold Springs | 1.0 | 63 | 63 | 50 | 2.52 | | | | | 22 | 22 | 35 | 1.26 | 48 | 48 | 45 | 2.13 | 55 | 55 | 55 | 2.00 |
| FB2 | Centroid at Hot Springs | 1.0 | 48 | 48 | 50 | 1.92 | Not Applicable | | | | 7 | 7 | 40 | 0.35 | 33 | 33 | 40 | 1.65 | 32 | 32 | 50 | 1.28 |
| FB3 | | 1.0 | 40 | 40 | 55 | 1.45 | | | | | 17 | 17 | 40 | 0.85 | 31 | 31 | 55 | 1.13 | 40 | 40 | 55 | 1.45 |
| | **Weighted Average:** | | **Trip # 1** | | | **1.96** | | | | | **Trip # 14a** | | | **0.82** | **Trip # 20** | | | **1.64** | **Trip # 30** | | | **1.58** |
| TOE1 | Centroid at Poplar Boat Launch | 1.0 | 25 | 25 | 50 | 1.00 | 43 | 43 | 50 | 1.72 | 63 | 63 | 50 | 2.52 | 30 | 30 | 50 | 1.20 | 50 | 50 | 50 | 2.00 |
| TOE2 | Centroid at Roan Mountain | 1.0 | 32 | 32 | 50 | 1.28 | 50 | 50 | 50 | 2.00 | 80 | 80 | 50 | 3.20 | 55 | 55 | 50 | 2.20 | 67 | 67 | 50 | 2.68 |
| TOE3 | Centroid at Burick WC | 1.0 | 18 | 18 | 45 | 0.80 | 5 | 5 | 25 | 0.40 | 66 | 66 | 50 | 2.64 | 41 | 41 | 50 | 1.64 | 53 | 53 | 45 | 2.36 |
| TOE4 | Centroid at Corner Rock | 1.0 | 45 | 45 | 50 | 1.80 | 60 | 60 | 55 | 2.18 | 40 | 40 | 50 | 1.60 | 15 | 15 | 45 | 0.67 | 25 | 25 | 45 | 1.11 |
| | **Weighted Average:** | | **Trip # 2** | | | **1.22** | **Trip # 11** | | | **1.58** | **Trip # 14b** | | | **2.49** | **Trip # 21** | | | **1.43** | **Trip # 31** | | | **2.04** |
| **Suitable for Timber** | | | | | | | | | | | | | | | | | | | | | | |
| FB1T1 | | 2.0 | 71 | 142 | 40 | 7.10 | | | | | 30 | 60 | 30 | 4.00 | 56 | 112 | 40 | 5.60 | | | | |
| FB1T2 | | 2.0 | 68 | 136 | 40 | 6.80 | | | | | 27 | 54 | 30 | 3.60 | 53 | 106 | 40 | 5.30 | | | | |
| FB2T1 | *Generally add 5 miles of timber road to centroid distance to timber polygon and subtract 5 miles per hour for total trip time.* | 1.0 | 51 | 51 | 50 | 2.04 | | | | | 10 | 10 | 40 | 0.50 | 24 | 24 | 45 | 1.07 | | | | |
| FB2T2 | | 2.0 | 51 | 102 | 50 | 4.08 | Not Applicable | | | | 10 | 20 | 40 | 1.00 | 26 | 52 | 45 | 2.31 | Not Applicable | | | |
| FB2T3 | | 2.0 | 51 | 102 | 50 | 4.08 | | | | | 10 | 20 | 40 | 1.00 | 36 | 72 | 45 | 3.20 | | | | |
| FB2T4 | | 2.0 | 54 | 108 | 50 | 4.32 | | | | | 15 | 30 | 40 | 1.50 | 41 | 82 | 45 | 3.64 | | | | |
| FB3T1 | | 2.0 | 48 | 96 | 55 | 3.49 | | | | | 22 | 44 | 40 | 2.20 | 31 | 62 | 55 | 2.25 | | | | |
| | **Totals:** | 13.0 | | | | 31.91 | | | | | | | | 13.80 | | | | 23.38 | | | | |
| | **Weighted Average:** | | **Trip # 3** | | | **2.45** | | | | | **Trip # 15** | | | **1.06** | **Trip # 22** | | | **1.80** | | | | |
| TOE1T1 | | 1.0 | 25 | 25 | 40 | 1.25 | | | | | | | | | 48 | 48 | 45 | 2.13 | | | | |
| TOE1T2 | | 1.0 | 25 | 25 | 40 | 1.25 | | | | | | | | | 48 | 48 | 45 | 2.13 | | | | |
| TOE1T3 | | 2.0 | 25 | 50 | 45 | 2.22 | | | | | | | | | 43 | 86 | 50 | 3.44 | | | | |
| TOE3T1 | | 0.5 | 27 | 13.5 | 40 | 0.68 | | | | | | | | | 50 | 25 | 45 | 1.11 | | | | |
| TOE3T2 | | 2.0 | 17 | 34 | 40 | 1.70 | Not Applicable | | | | Not Applicable | | | | 40 | 80 | 45 | 3.56 | Not Applicable | | | |
| TOE4T1 | | 0.5 | 55 | 27.5 | 45 | 1.22 | | | | | | | | | 22 | 11 | 45 | 0.49 | | | | |
| TOE4T2 | | 2.0 | 50 | 100 | 45 | 4.44 | | | | | | | | | 20 | 40 | 45 | 1.78 | | | | |
| TOE4T3 | | 2.0 | 50 | 100 | 45 | 4.44 | | | | | | | | | 20 | 40 | 45 | 1.78 | | | | |
| | **Totals:** | 11.00 | | | | 17.21 | | | | | | | | | | | | 16.42 | | | | |
| | **Average Time per Trip:** | | **Trip # 4** | | | **1.56** | | | | | | | | | **Trip # 23** | | | **1.49** | | | | |
| **Developed Recreation** | | | | | | | | | | | | | | | | | | | | | | |
| FB | Cold Springs | 1.0 | 63 | 63 | 50 | 2.52 | | | | | 22 | 22 | 35 | 1.26 | 50 | 50 | 55 | 1.82 | | | | |
| FB | Max Patch | 2.0 | 60 | 120 | 45 | 5.33 | | | | | 18 | 36 | 40 | 1.80 | 45 | 90 | 45 | 4.00 | | | | |
| FB | Murray Branch | 2.0 | 44 | 88 | 50 | 3.52 | | | | | 3 | 6 | 45 | 0.27 | 29 | 58 | 50 | 2.32 | | | | |
| FB | Silvermine | 2.0 | 40 | 80 | 50 | 3.20 | Not Applicable | | | | 2 | 4 | 45 | 0.18 | 25 | 50 | 50 | 2.00 | Not Applicable | | | |
| FB | Rocky Bluff | 3.0 | 45 | 135 | 50 | 5.40 | | | | | 3 | 9 | 45 | 0.40 | 29 | 87 | 50 | 3.48 | | | | |
| FB | Harman Den | 2.0 | 60 | 120 | 45 | 5.33 | | | | | 18 | 36 | 40 | 1.80 | 45 | 90 | 45 | 4.00 | | | | |
| FB | Harman Den Horse Camp | 2.0 | 60 | 120 | 45 | 5.33 | | | | | 18 | 36 | 40 | 1.80 | 45 | 90 | 45 | 4.00 | | | | |
| | **Totals:** | 14.0 | | | | 30.64 | | | | | | | | 7.50 | | | | 21.62 | | | | |
| | **Average Time per Trip:** | | **Trip # 5** | | | **2.19** | | | | | **Trip # 16** | | | **0.54** | **Trip # 24** | | | **1.54** | | | | |
| TOE | Spivey Gap | 1.0 | 22 | 22 | 50 | 0.88 | 40 | 40 | 50 | 1.60 | | | | | 38 | 38 | 50 | 1.52 | | | | |
| TOE | Poplar Boat Launch | 2.0 | 25 | 50 | 50 | 2.00 | 43 | 86 | 50 | 3.44 | | | | | 40 | 80 | 50 | 3.20 | | | | |
| TOE | Roan Mountain | 3.0 | 32 | 96 | 50 | 3.84 | 50 | 150 | 50 | 6.00 | | | | | 55 | 165 | 55 | 6.00 | | | | |
| TOE | Elk Falls | 1.0 | 50 | 50 | 55 | 1.82 | 68 | 68 | 50 | 2.72 | | | | | 83 | 83 | 55 | 3.02 | | | | |
| TOE | Briar Bottom | 2.0 | 22 | 44 | 45 | 1.96 | 3 | 6 | 30 | 0.40 | Not Applicable | | | | 55 | 110 | 50 | 4.40 | Not Applicable | | | |
| TOE | Corner Rock | 1.0 | 45 | 45 | 50 | 1.80 | 63 | 63 | 50 | 2.52 | | | | | 10 | 10 | 45 | 0.44 | | | | |
| TOE | Black Mountain (cancezrianaire) | 2.0 | 22 | 44 | 45 | 1.96 | 3 | 6 | 30 | 0.40 | | | | | 45 | 90 | 50 | 3.60 | | | | |
| TOE | Lost Cove | 1.0 | 20 | 20 | 45 | 0.89 | 1 | 1 | 30 | 0.07 | | | | | 43 | 43 | 50 | 1.72 | | | | |
| TOE | Carolina Hemlocks (cancezrianair | 2.0 | 12 | 24 | 45 | 1.07 | 6 | 12 | 45 | 0.53 | | | | | 35 | 70 | 50 | 2.80 | | | | |
| | **Totals:** | 15.0 | | | | 16.20 | | | | 17.68 | | | | | | | | 26.70 | | | | |
| | **Average Time per Trip:** | | **Trip # 6** | | | **1.08** | **Trip # 12** | | | **1.18** | | | | | **Trip # 25** | | | **1.78** | | | | |
| **Dispersed Recreation** | | | | | | | | | | | | | | | | | | | | | | |
| FB1 | | 1.0 | 64 | 64 | 50 | 2.56 | | | | | 22 | 22 | 35 | 1.26 | 48 | 48 | 45 | 2.13 | | | | |
| FB2 | | 1.0 | 48 | 48 | 50 | 1.92 | Not Applicable | | | | 7 | 7 | 40 | 0.35 | 33 | 33 | 50 | 1.32 | Not Applicable | | | |
| FB3 | | 0.5 | 40 | 20 | 55 | 0.73 | | | | | 17 | 8.5 | 40 | 0.43 | 43 | 21.5 | 50 | 0.86 | | | | |
| | **Totals:** | 2.5 | | | | 5.21 | | | | | | | | 2.03 | | | | 4.31 | | | | |
| | **Average Time per Trip:** | | **Trip # 7** | | | **2.08** | | | | | **Trip # 17** | | | **0.81** | **Trip # 26** | | | **1.73** | | | | |
| TOE1 | | 0.5 | 30 | 15 | 50 | 0.60 | 48 | 24 | 50 | 0.96 | | | | | 48 | 24 | 55 | 0.87 | | | | |
| TOE2 | | 1.0 | 35 | 35 | 50 | 1.40 | 53 | 53 | 50 | 2.12 | | | | | 58 | 58 | 55 | 2.11 | | | | |
| TOE3 | | 1.0 | 25 | 25 | 45 | 1.11 | 5 | 5 | 30 | 0.33 | Not Applicable | | | | 48 | 48 | 50 | 1.92 | Not Applicable | | | |
| TOE4 | | 1.0 | 50 | 50 | 50 | 2.00 | 65 | 65 | 50 | 2.60 | | | | | 25 | 25 | 45 | 1.11 | | | | |
| | **Totals:** | 3.5 | | | | 5.11 | | | | 6.01 | | | | | | | | 6.01 | | | | |
| | **Average Time per Trip:** | | **Trip # 8** | | | **1.46** | **Trip # 13** | | | **1.72** | | | | | **Trip # 27** | | | **1.72** | | | | |
| **Asheville Airport** | | | 62 | 62 | 60 | **2.07** | Not Applicable | | | | 52 | 52 | 55 | **1.89** | 32 | 32 | 60 | **1.07** | 15 | 15 | 60 | **0.50** |
| | | | **Trip # 9** | | | | | | | | **Trip # 18** | | | | **Trip # 28** | | | | **Trip # 32** | | | |
| **Asheville Office** | | | 40 | 40 | 60 | **1.33** | Not Applicable | | | | 36 | 36 | 55 | **1.31** | 18 | 18 | 60 | **0.60** | | | | |
| | | | **Trip # 10** | | | | | | | | **Trip # 19** | | | | **Trip # 29** | | | | | | | |

| | | | |
|---|---|---|---|
| **Burnsville to Grandfather Off** **Trip # 33** | 84.0 | 60 | **2.80** |
| **Burnsville to Pisgah Office** **Trip # 34** | 70.0 | 60 | **2.33** |
| **I-26 to Grandfather Office** **Trip # 35** | 61.0 | 60 | **2.03** |
| **I-26 to Pisgah Office** **Trip # 36** | 47.0 | 60 | **1.57** |

## Steps 3 and 4: Consolidate into one office

**I-26 Consolidation Office Alternative**

| Employee | Work Days | On Fire Details Off District | Work Days on District | Salary | Primary Work Unit | Position | Percent in | Percent Breakdown for field work: Timber | Developed Rec Sites | Dispersed Rec | Fire | General Forest |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 Older Americans-west | 3300 | 0 | 3300 | $46 | Hot Springs | | 15 | | 70 | 15 | | 15 |
| 30 Older Americans-east | 4500 | 0 | 4500 | $46 | Burnsville | | 15 | | 70 | 15 | | 15 |
| Anthony Thomas | 261 | 30 | 231 | $137 | Hot Springs | Engine Crew | 90 | | | | 100 | |
| Authur Frisbee | 261 | 0 | 261 | $177 | Hot Springs | Rec Tech | 30 | | 100 | | | |
| Brandon Jones | 261 | 30 | 231 | $133 | Burnsville | Engine Crew | 10 | | 50 | | 50 | |
| Bruce Nason | 130 | 30 | 100 | $177 | Burnsville | Engine Operator | 10 | | | | 100 | |
| Cathy King | 261 | 30 | 231 | $227 | Burnsville | Business Mngr | 90 | | | | | 100 |
| Cleve Fox | 261 | 30 | 231 | $209 | Both | Fire - FMO | 50 | | | | 100 | |
| Darlene Huntsinger | 261 | 15 | 246 | $203 | Hot Springs | Business Mngr Asst | 98 | | | | | |
| David Danley | 261 | 30 | 231 | $302 | Both | Zone Biologist | 40 | | | | | 100 |
| David McFee | 261 | 30 | 231 | $295 | Both | Operations | 60 | | 50 | | 50 | |
| James Reese | 261 | 0 | 261 | $213 | Hot Springs | Timber Tech | 50 | 100 | | | | |
| James Roper | 261 | 30 | 231 | $240 | Burnsville | Rec Tech | 50 | | 100 | | | |
| Jerry Murphy | 261 | 30 | 231 | $190 | Burnsville | Engineering Tech | 30 | | | | | 100 |
| John Brooks | 130 | 30 | 100 | $130 | Hot Springs | Engine Crew | 10 | | | | 100 | |
| Joseph Norris | 130 | 30 | 100 | $130 | Hot Springs | Engine Crew | 10 | | | | 100 | |
| Karen Compton | 261 | 15 | 246 | $297 | Both | NEPA | 75 | | | | | 100 |
| Linda Randolph | 261 | 0 | 261 | $278 | Both | Operations | 60 | 100 | | | | |
| Louise Lawson | 261 | 0 | 261 | $122 | Hot Springs | Receptionist | 98 | | | | | |
| Matthew Eldridge | 261 | 30 | 231 | $187 | Hot Springs | Rec Tech | 30 | | 100 | | | |
| Michael Hutchins | 261 | 15 | 246 | $300 | Both | Zone Planner | 60 | | | | | 100 |
| Patrick Scott | 261 | 30 | 231 | $166 | Burnsville | Engine Operator | 80 | | | | 100 | |
| Paul Bradley | 261 | 30 | 231 | $422 | Both | Ranger | 80 | | 50 | | | 50 |
| Receptionist - vacant | 261 | 0 | 261 | $133 | Burnsville | Receptionist | 98 | | | | | |
| Rite Grindstaff | 261 | 30 | 231 | $162 | Burnsville | Resource Clerk | 98 | | | | | |
| Robert Noel | 261 | 30 | 231 | $250 | Both | Zone Archeologist | 40 | | | | | 100 |
| Vacant AFMO | 261 | 30 | 231 | $170 | Both | Fire - AFMO | 30 | | | | 100 | |
| Vacant Forestry Tech | 261 | 30 | 231 | $135 | Burnsville | Rec/Fire Tech | 20 | | 50 | | 50 | |

**I-26 Consolidation Office Alternative**

| Employee | Total Travel Days | Days Traveling: Trips to | Trips to Pisgah | Trips to | Regional | Remaining days for field work | Toecane Unit: Timber | Dev Rec | Disp Rec | Fire | General Forest | French Broad Unit: Timber | Dev Rec | Disp Rec | Fire | General Forest | Total Trip Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 Older Americans-west | 2805 | 0 | | | 0 | 2805 | | | | | | 0 | 1964 | 421 | 0 | 421 | 2805 |
| 30 Older Americans-east | 3825 | 0 | | | 0 | 3825 | 0 | 2678 | 574 | 0 | 574 | | | | | | 3825 |
| Anthony Thomas | 23 | 5 | | | 3 | 15 | | | | | | 0 | 0 | 0 | 15 | 0 | 15 |
| Authur Frisbee | 183 | 5 | | | 0 | 178 | | | | | | 0 | 178 | 0 | 0 | 0 | 178 |
| Brandon Jones | 208 | 5 | | | 3 | 200 | 0 | 100 | 0 | 100 | 0 | | | | | | 200 |
| Bruce Nason | 90 | 5 | | | 3 | 82 | 0 | 0 | 0 | 82 | 0 | | | | | | 82 |
| Cathy King | 23 | 15 | | | 3 | 5 | 0 | 0 | 0 | 0 | 5 | | | | | | 5 |
| Cleve Fox | 116 | 5 | | | 3 | 108 | 0 | 0 | 0 | 54 | 0 | | | | 54 | | 108 |
| Darlene Huntsinger | 5 | 5 | | | 0 | 0 | | | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| David Danley | 139 | 5 | | | 3 | 131 | 0 | 0 | 0 | 0 | 66 | | | | | 65 | 131 |
| David McFee | 92 | 12 | | | 3 | 77 | 0 | 20 | 0 | 20 | 0 | | 19 | | 19 | | 78 |
| James Reese | 131 | 5 | | | 0 | 126 | 63 | | | | | 63 | 0 | 0 | 0 | 0 | 126 |
| James Roper | 116 | 5 | | | 3 | 108 | 0 | 108 | 0 | 0 | 0 | | | | | | 108 |
| Jerry Murphy | 162 | 5 | | | 3 | 154 | 0 | 0 | 0 | 0 | 154 | | | | | | 154 |
| John Brooks | 90 | 5 | | | 3 | 82 | | | | | | 0 | 0 | 0 | 82 | 0 | 82 |
| Joseph Norris | 90 | 5 | | | 3 | 82 | | | | | | 0 | 0 | 0 | 82 | 0 | 82 |
| Karen Compton | 62 | 5 | 25 | 15 | 3 | 14 | 0 | 0 | 0 | 0 | 7 | | | | | 7 | 14 |
| Linda Randolph | 104 | 15 | | | 3 | 86 | 43 | 0 | 0 | 0 | 0 | 43 | | | | | 86 |
| Louise Lawson | 5 | 5 | | | 0 | 0 | | | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Matthew Eldridge | 162 | 5 | | | 3 | 154 | | | | | | 0 | 154 | 0 | 0 | 0 | 154 |
| Michael Hutchins | 98 | 35 | 25 | 15 | 3 | 20 | 0 | 0 | 0 | 0 | 10 | | | | | 10 | 20 |
| Patrick Scott | 46 | 5 | | | 3 | 38 | 0 | 0 | 0 | 38 | 0 | | | | | | 38 |
| Paul Bradley | 46 | 25 | | | 5 | 16 | 0 | 4 | 0 | 0 | 4 | | 4 | | | 4 | 16 |
| Receptionist - vacant | 5 | 5 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | 0 |
| Rite Grindstaff | 5 | 5 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | 0 |
| Robert Noel | 139 | 5 | | | 3 | 131 | 0 | 0 | 0 | 0 | 66 | | | | | 65 | 131 |
| Vacant AFMO | 162 | 5 | | | 3 | 154 | 0 | 0 | 0 | 77 | 0 | | | | 77 | | 154 |
| Vacant Forestry Tech | 185 | 5 | | | 3 | 177 | 0 | 88 | 0 | 88 | 0 | | | | | | 177 |

**I-26 Consolidation Office Alternative**

**Number of Field Trips Taken by Trip Number**

| Employee | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 35 | 36 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.64 | 1.43 | 1.80 | 1.49 | 1.54 | 1.78 | 1.73 | 1.72 | 1.07 | 0.60 | 2.03 | 1.57 |
| 22 Older Americans-west | 421 | | 0 | | 1964 | | 421 | | 0 | 0 | | |
| 30 Older Americans-east | 0 | 0 | | | | 2678 | | 574 | 0 | 0 | | |
| Anthony Thomas | 15 | | 0 | | 0 | | 0 | | 3 | 5 | | |
| Authur Frisbee | 0 | | 0 | | 178 | | 0 | | 0 | 5 | | |
| Brandon Jones | 0 | 100 | | | | 100 | | 0 | 3 | 5 | | |
| Bruce Nason | 0 | 82 | | | | 0 | | 0 | 3 | 5 | | |
| Cathy King | 0 | 0 | | | | 0 | | 0 | 3 | 15 | | |
| Cleve Fox | 54 | 54 | | | | 0 | | 0 | 3 | 5 | | |
| Darlene Huntsinger | 0 | | 0 | | 0 | | 0 | | 0 | 5 | | |
| David Danley | 65 | 66 | | | | 0 | | 0 | 3 | 5 | | |
| David McFee | 19 | 20 | | | 19 | 20 | | 0 | 3 | 12 | | |
| James Reese | 0 | | 63 | 63 | 0 | | 0 | | 0 | 5 | | |
| James Roper | 0 | 0 | | | | 108 | | 0 | 3 | 5 | | |
| Jerry Murphy | 0 | 0 | | | | 0 | | 0 | 3 | 5 | | |
| John Brooks | 82 | | 0 | | 0 | | 0 | | 3 | 5 | | |
| Joseph Norris | 82 | | 0 | | 0 | | 0 | | 3 | 5 | | |
| Karen Compton | 7 | 7 | | | | 0 | | 0 | 3 | 5 | 15 | 25 |
| Linda Randolph | 0 | 0 | 43 | 43 | | 0 | | 0 | 3 | 15 | | |
| Louise Lawson | 0 | | 0 | | 0 | | 0 | | 0 | 5 | | |
| Matthew Eldridge | 0 | | 0 | | 154 | | 0 | | 3 | 5 | | |
| Michael Hutchins | 10 | 10 | | | | 0 | | 0 | 3 | 35 | 15 | 25 |
| Patrick Scott | 0 | 38 | | | | 0 | | 0 | 3 | 5 | | |
| Paul Bradley | 4 | 4 | | | 4 | 4 | | 0 | 5 | 25 | | |
| Receptionist - vacant | 0 | 0 | | | | 0 | | 0 | 0 | 5 | | |
| Rite Grindstaff | 0 | 0 | | | | 0 | | 0 | 0 | 5 | | |
| Robert Noel | 65 | 66 | | | | 0 | | 0 | 3 | 5 | | |
| Vacant AFMO | 77 | 77 | | | | 0 | | 0 | 3 | 5 | | |
| Vacant Forestry Tech | 0 | 88 | | | | 88 | | 0 | 3 | 5 | | |

**Travel Time**

| Employee | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 Older Americans-west | 690 | 0 | 0 | 0 | 3024 | 0 | 728 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 Older Americans-east | 0 | 0 | 0 | 0 | 0 | 4766 | 0 | 987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Anthony Thomas | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Authur Frisbee | 0 | 0 | 0 | 0 | 274 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Brandon Jones | 0 | 143 | 0 | 0 | 0 | 178 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bruce Nason | 0 | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cathy King | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleve Fox | 89 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Darlene Huntsinger | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| David Danley | 107 | 94 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| David McFee | 31 | 29 | 0 | 0 | 29 | 36 | 0 | 0 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| James Reese | 0 | 0 | 113 | 94 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| James Roper | 0 | 0 | 0 | 0 | 0 | 191 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jerry Murphy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| John Brooks | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Joseph Norris | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karen Compton | 11 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 30 | 39 |
| Linda Randolph | 0 | 0 | 77 | 64 | 0 | 0 | 0 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Louise Lawson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Matthew Eldridge | 0 | 0 | 0 | 0 | 237 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Michael Hutchins | 16 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 21 | 0 | 0 | 0 | 0 | 0 | 30 | 39 |
| Patrick Scott | 0 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Paul Bradley | 7 | 6 | 0 | 0 | 6 | 7 | 0 | 0 | 5 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Receptionist - vacant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rite Grindstaff | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Robert Noel | 107 | 94 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vacant AFMO | 126 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vacant Forestry Tech | 0 | 126 | 0 | 0 | 0 | 157 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**I-26 Consolidation Office Alternative**

| Employee | Total Hours | Salary Cost | FOR - $225 | EOR - $0.15 | Vehicle Cost | Total Cost |
|---|---|---|---|---|---|---|
| 22 Older Americans-west | 4442 | $25,540 | $9,672 | $9,994 | $19,666 | **$45,206** |
| 30 Older Americans-east | 5753 | $33,079 | $13,190 | $12,944 | $26,133 | **$59,212** |
| Anthony Thomas | 31 | $530 | $156 | $209 | $365 | **$896** |
| Authur Frisbee | 277 | $6,121 | $1,838 | $1,867 | $3,706 | **$9,827** |
| Brandon Jones | 327 | $5,437 | $2,068 | $2,208 | $4,276 | **$9,713** |
| Bruce Nason | 123 | $2,732 | $848 | $833 | $1,682 | **$4,413** |
| Cathy King | 12 | $346 | $53 | $82 | $135 | **$482** |
| Cleve Fox | 172 | $4,493 | $1,117 | $1,161 | $2,278 | **$6,771** |
| Darlene Huntsinger | 3 | $76 | $0 | $20 | $20 | **$96** |
| David Danley | 207 | $7,821 | $1,355 | $1,399 | $2,754 | **$10,575** |
| David McFee | 135 | $4,979 | $807 | $228 | $1,035 | **$6,014** |
| James Reese | 210 | $5,598 | $1,303 | $1,419 | $2,723 | **$8,321** |
| James Roper | 198 | $5,927 | $1,112 | $1,334 | $2,446 | **$8,372** |
| Jerry Murphy | 6 | $147 | $1,590 | $42 | $1,632 | **$1,779** |
| John Brooks | 141 | $2,286 | $848 | $950 | $1,798 | **$4,084** |
| Joseph Norris | 141 | $2,286 | $848 | $950 | $1,798 | **$4,084** |
| Karen Compton | 28 | $1,028 | $145 | $47 | $192 | **$1,220** |
| Linda Randolph | 154 | $5,340 | $890 | $259 | $1,149 | **$6,489** |
| Louise Lawson | 3 | $46 | $0 | $20 | $20 | **$66** |
| Matthew Eldridge | 243 | $5,678 | $1,590 | $1,640 | $3,230 | **$8,908** |
| Michael Hutchins | 55 | $2,059 | $207 | $93 | $300 | **$2,359** |
| Patrick Scott | 61 | $1,262 | $395 | $411 | $806 | **$2,068** |
| Paul Bradley | 46 | $2,422 | $166 | $77 | $243 | **$2,665** |
| Receptionist - vacant | 3 | $50 | $0 | $20 | $20 | **$70** |
| Rite Grindstaff | 3 | $61 | $0 | $20 | $20 | **$81** |
| Robert Noel | 207 | $6,475 | $1,355 | $350 | $1,705 | **$8,179** |
| Vacant AFMO | 243 | $5,155 | $1,593 | $1,638 | $3,231 | **$8,386** |
| Vacant Forestry Tech | 290 | $4,893 | $1,829 | $1,957 | $3,786 | **$8,680** |
| | 9070 | $116,330 | $35,304 | $32,177 | $67,481 | **$183,811** |

Steps 3 and 4: Continue with Separate Offices in Hot Springs and Burnsville

**Do Nothing Alternative**

| Employee | Work Days | Daily Rate | Present Location | Trips to | Trips to | Trips to | Regional | Timber | Dev Rec | Disp Rec | Fire | General Forest - Toecane | General Forest-French Broad | Total Trip-Days |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 Older Americans-west | 3300 | $46 | Hot Springs | 0 | | | 0 | 0 | 1964 | 421 | 0 | 421 | | 2805 |
| 30 Older Americans-east | 4500 | $46 | Burnsville WC | 0 | | | 0 | 0 | 2678 | 574 | 0 | 574 | | 3825 |
| Anthony Thomas | 261 | $137 | Hot Springs | 5 | | | 3 | 0 | 0 | 0 | 15 | 0 | | 23 |
| Authur Frisbee | 261 | $177 | Hot Springs | 5 | | | 0 | 0 | 178 | 0 | 0 | 0 | | 183 |
| Brandon Jones | 261 | $133 | Burnsville | 5 | | | 3 | 0 | 100 | 0 | 100 | 0 | | 208 |
| Bruce Nason | 130 | $177 | Burnsville | 5 | | | 3 | 0 | 0 | 0 | 82 | 0 | | 90 |
| Cathy King | 261 | $227 | Burnsville | 15 | | | 3 | 0 | 0 | 0 | 0 | 5 | | 23 |
| Cleve Fox | 261 | $209 | Burnsville | 5 | | | 3 | 0 | 0 | 0 | 108 | 0 | | 116 |
| Darlene Huntsinger | 261 | $203 | Hot Springs | 5 | | | 0 | 0 | 0 | 0 | 0 | 0 | | 5 |
| David Danley | 261 | $302 | Hot Springs | 5 | | | 3 | 0 | 0 | 0 | 0 | 66 | 64 | 138 |
| David McFee | 261 | $295 | Burnsville | 12 | | | 3 | 0 | 39 | 0 | 39 | 0 | | 92 |
| James Reese | 261 | $213 | Hot Springs | 5 | | | 0 | 126 | 0 | 0 | 0 | 0 | | 131 |
| James Roper | 261 | $240 | Burnsville | 5 | | | 3 | 0 | 108 | 0 | 0 | 0 | | 116 |
| Jerry Murphy | 261 | $190 | Burnsville | 5 | | | 3 | 0 | 0 | 0 | 0 | 154 | | 162 |
| John Brooks | 130 | $130 | Hot Springs | 5 | | | 3 | 0 | 0 | 0 | 82 | 0 | | 90 |
| Joseph Norris | 130 | $130 | Hot Springs | 5 | | | 3 | 0 | 0 | 0 | 82 | 0 | | 90 |
| Karen Compton | 261 | $297 | Burnsville | 5 | 25 | 15 | 3 | 0 | 0 | 0 | 0 | 7 | 7 | 62 |
| Linda Randolph | 261 | $278 | Hot Springs | 15 | | | 3 | 86 | 0 | 0 | 0 | 0 | | 104 |
| Louise Lawson | 261 | $122 | Hot Springs | 5 | | | 0 | 0 | 0 | 0 | 0 | 0 | | 5 |
| Matthew Eldridge | 261 | $187 | Hot Springs | 5 | | | 3 | 0 | 154 | 0 | 0 | 0 | | 162 |
| Michael Hutchins | 261 | $300 | Burnsville | 35 | 25 | 15 | 3 | 0 | 0 | 0 | 0 | 20 | | 98 |
| Patrick Scott | 261 | $166 | Burnsville | 5 | | | 3 | 0 | 0 | 0 | 38 | 0 | | 46 |
| Paul Bradley | 261 | $422 | Burnsville | 25 | | | 5 | 0 | 8 | 0 | 0 | 8 | | 46 |
| Receptionist - vacant | 261 | $133 | Burnsville | 5 | | | 0 | 0 | 0 | 0 | 0 | 0 | | 5 |
| Rite Grindstaff | 261 | $162 | Burnsville | 5 | | | 0 | 0 | 0 | 0 | 0 | 0 | | 5 |
| Robert Noel | 261 | $250 | Asheville | 5 | | | 3 | 0 | 0 | 0 | 0 | 131 | | 139 |
| Vacant AFMO | 261 | $170 | Burnsville | 5 | | | 3 | 0 | 0 | 0 | 154 | 0 | | 162 |
| Vacant Forestry Tech | 261 | $135 | Burnsville | 5 | | | 3 | 0 | 88 | 0 | 88 | 0 | | 185 |

## Number of Field Trips Taken by Trip Number

| Employee | 1 | 2 | 4 | 5 | 6 | 9 | 10 | 11 | 12 | 13 | 14a | 14b | 15 | 16 | 17 | 18 | 19 | 30 | 32 | 33 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 Older Americans-west | | | | | | | | | | | 421 | | | 1964 | 421 | 0 | 0 | | | |
| 30 Older Americans-east | | 0 | | | | 0 | 0 | 574 | 2678 | 574 | | | | | | | | | | |
| Anthony Thomas | | | | | 0 | 0 | 0 | | | | 15 | | | | | 3 | 5 | | | |
| Authur Frisbee | | | | | | | | | | | | | | 178 | | 0 | 5 | | | |
| Brandon Jones | | 100 | | | 100 | 3 | 5 | | 0 | | | | | | | | | | | |
| Bruce Nason | | 82 | | | 0 | 3 | 5 | | | | | | | | | | | | | |
| Cathy King | | 5 | | | 0 | 3 | 15 | | | | | | | | | | | | | |
| Cleve Fox | | 108 | | | 0 | 3 | 5 | | | | | | | | | | | | | |
| Darlene Huntsinger | | | | | | | | | | | | | | 0 | | 0 | 5 | | | |
| David Danley | | | | | | | | | | | 66 | 64 | | 0 | | 3 | 5 | | | |
| David McFee | | 39 | | 19 | 20 | 3 | 12 | | | | | | | | | | | | | |
| James Reese | | | 63 | | | | | | | | | | 63 | 0 | | 0 | 5 | | | |
| James Roper | | 0 | | | 108 | 3 | 5 | | | | | | | | | | | | | |
| Jerry Murphy | | 154 | | | 0 | 3 | 5 | | | | | | | | | | | | | |
| John Brooks | | | | | 0 | 0 | 0 | | | | 82 | | | | | 3 | 5 | | | |
| Joseph Norris | | | | | 0 | 0 | 0 | | | | 82 | | | | | 3 | 5 | | | |
| Karen Compton | 7 | 7 | | | 0 | 3 | 5 | | | | | | | | | | | | 15 | 25 |
| Linda Randolph | | | 43 | | | | | | | | | | 43 | 0 | | 3 | 15 | | | |
| Louise Lawson | | | | | | | | | | | | | | 0 | | 0 | 5 | | | |
| Matthew Eldridge | | | | | | | | | | | | | | 154 | | 3 | 5 | | | |
| Michael Hutchins | 1 | 10 | | | 0 | 3 | 35 | | | | | | | | | | | | 15 | 25 |
| Patrick Scott | | 38 | | | 0 | 3 | 5 | | | | | | | | | | | | | |
| Paul Bradley | 4 | 4 | | 4 | 4 | 5 | 25 | | | | | | | | | | | | | |
| Receptionist - vacant | | 0 | | | 0 | 0 | 5 | | | | | | | | | | | | | |
| Rite Grindstaff | | 0 | | | 0 | 0 | 5 | | | | | | | | | | | | | |
| Robert Noel | | 0 | | | | | | | | | | | | | | | | 131 | 3 | |
| Vacant AFMO | | 154 | | | 0 | 3 | 5 | | | | | | | | | | | | | |
| Vacant Forestry Tech | | 88 | | | 88 | 3 | 5 | | | | | | | | | | | | | |

| Travel Time | | | | | | | | | | | | | | | | | | | | | | Cost Calculations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Employee | 1 | 2 | 4 | 5 | 6 | 9 | 10 | 11 | 12 | 13 | 14a | 14 b | 15 | 16 | 17 | 18 | 20 | 31 | 32 | 33 | 34 | Total Hours | Salary Cost | Vehicle FOR - $225 per month | Vehicle EOR - $0.15 per mile | Total Vehicle Cost | Total Cost |
| 22 Older Americans-west | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 345 | 0 | 0 | 1060 | 341 | 0 | 0 | 0 | 0 | 0 | 0 | 1746 | $10,041 | $9,672 | $2,947 | $12,619 | **$22,661** |
| 30 Older Americans-east | 0 | 0 | 0 | 0 | 2892 | 0 | 0 | 907 | 3159 | 987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7945 | $45,683 | $13,190 | $13,407 | $26,597 | **$72,280** |
| Anthony Thomas | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 43 | $737 | $239 | $290 | $529 | **$1,266** |
| Authur Frisbee | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 103 | $2,268 | $1,890 | $692 | $2,582 | **$4,850** |
| Brandon Jones | 0 | 122 | 0 | 0 | 108 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 243 | $4,037 | $2,151 | $1,639 | $3,790 | **$7,826** |
| Bruce Nason | 0 | 100 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 | $2,498 | $931 | $762 | $1,693 | **$4,191** |
| Cathy King | 0 | 6 | 0 | 0 | 0 | 6 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | $915 | $239 | $218 | $457 | **$1,372** |
| Cleve Fox | 0 | 131 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 | $3,762 | $1,195 | $972 | $2,167 | **$5,929** |
| Darlene Huntsinger | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | $166 | $52 | $44 | $96 | **$262** |
| David Danley | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 159 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 306 | $11,560 | $1,428 | $2,067 | $3,495 | **$15,054** |
| David McFee | 0 | 47 | 0 | 42 | 22 | 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | $4,889 | $956 | $895 | $1,851 | **$6,740** |
| James Reese | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 172 | $4,569 | $1,350 | $1,158 | $2,508 | **$7,077** |
| James Roper | 0 | 0 | 0 | 0 | 116 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 129 | $3,869 | $1,195 | $870 | $2,065 | **$5,934** |
| Jerry Murphy | 0 | 188 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 201 | $4,768 | $1,673 | $1,355 | $3,028 | **$7,795** |
| John Brooks | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 180 | $2,917 | $931 | $1,212 | $2,143 | **$5,060** |
| Joseph Norris | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 180 | $2,917 | $931 | $1,212 | $2,143 | **$5,060** |
| Karen Compton | 14 | 9 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 70 | 113 | $4,181 | $641 | $760 | $1,402 | **$5,583** |
| Linda Randolph | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 6 | 20 | 0 | 0 | 0 | 0 | 138 | $4,795 | $1,080 | $931 | $2,011 | **$6,806** |
| Louise Lawson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | $100 | $52 | $44 | $96 | **$196** |
| Matthew Eldridge | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 95 | $2,226 | $1,673 | $643 | $2,315 | **$4,541** |
| Michael Hutchins | 2 | 12 | 0 | 0 | 0 | 6 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 70 | 144 | $5,416 | $1,018 | $975 | $1,993 | **$7,409** |
| Patrick Scott | 0 | 47 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | $1,234 | $478 | $401 | $879 | **$2,113** |
| Paul Bradley | 8 | 5 | 0 | 9 | 4 | 10 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | $3,661 | $478 | $468 | $946 | **$4,607** |
| Receptionist - vacant | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | $111 | $52 | $45 | $97 | **$207** |
| Rite Grindstaff | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | $135 | $52 | $45 | $97 | **$231** |
| Robert Noel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 207 | 3 | 2 | 0 | 211 | $6,609 | $1,434 | $1,427 | $2,861 | **$9,470** |
| Vacant AFMO | 0 | 188 | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | $4,258 | $1,673 | $1,353 | $3,025 | **$7,283** |
| Vacant Forestry Tech | 0 | 108 | 0 | 0 | 95 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 216 | $3,648 | $1,912 | $1,459 | $3,371 | **$7,019** |
| | | | | | | | | | | | | | | | | | | | | | | **12,941** | **$141,968** | **$48,563** | **$38,293** | **$86,855** | **$228,823** |

**Results: Consolidation into one office/work center complex adjacent to 1-26 near Mars Hill would reduce travel costs by 19% or $ 26,000 per year. Implementing this alternative would also reduce vehicle costs by an additional $20,000 or 23% per year. It would add approximately 19% to the amount of time available for accomplishing the job once the employee(s) reached the site.**

## V Lease vs. Construct Analysis

**Method**

Prior to acquisition of a new major facility, the Office of Management and Budget (OMB) requires an economic analysis to determine whether to lease or to construct the needed facility. OMB Circular No. A-94 states: "Whenever a Federal Agency needs to acquire the use of a capital asset, it should do so in a way that is least expensive to the Government as a whole." The Circular provides the following guidance for the lease/construct Analysis and requires the following considerations must be included.

1. **Life-Cycle Cost**. Lease/construct analyses will compare the net discounted present value of the life-cycle cost of leasing with the full costs of constructing or purchasing an identical asset. The full costs of constructing or purchasing include the asset's purchase price plus the net discounted present value of any relevant ancillary services connected with the purchase. Nominal Discount Rates for lease/construct analysis are included in the Circular.

2. **Economic Life**. For purposes of lease/construct analysis, the economic life of an asset is its remaining or productive lifetime. It begins when the asset is acquired and ends when the asset is retired from service.

3. **Purchase Price**. The purchase price of the asset for purposes of lease/construct analysis is its fair market value, defined as the price a willing buyer could reasonably expect to pay a willing seller in a competitive market to acquire the asset.
   (a) In the case of property that is already owned by the Federal Government or that has been donated or acquired by condemnation, an imputed purchase price should be estimated.
   (b) If public land is used for the site of the asset, the imputed market value of the land should be added to the purchase price.
   (c) The asset's estimated residual value, as of the end of the period of analysis, should be subtracted from its purchase price.

4. **Taxes**. In analyzing the cost of a lease, the normal payment of taxes on the lessor's income from the lease should not be subtracted from the lease costs since the normal payment of taxes will also be reflected in the purchase cost. The cost to the Treasury of special tax benefits, if any, associated with the lease should be added to the cost of the lease. Examples of such tax benefits might include highly accelerated depreciation allowances or tax-free financing.

5. **Ancillary Services**. If the terms of the lease include ancillary services provided by the lessor, the present value of the cost of obtaining these services separately should be added to the purchase price. Such costs may be excluded if they are estimated to be the same for both lease and purchase alternatives or too small to affect the comparison. Examples of ancillary services include:

(a) All costs associated with acquiring the property and preparing it for use, including construction, installation, site, design, and management costs.
(b) Repair and improvement costs (if included in lease payments).
(c) Operation and maintenance costs (if included in lease payments).
(d) Imputed property taxes (excluding foreign property taxes on overseas acquisitions except where actually paid). The imputed taxes approximate the costs of providing municipal services such as water, sewage, and police and fire protection.
(e) Imputed insurance premiums.

6. **Residual Value**. A property's residual value is an estimate of the price that the property could be sold for at the end of the period of the lease/construct analysis, measured in discounted present value terms.
   (a) The recommended way to estimate residual value is to determine what similar, comparably aged property is currently selling for in commercial markets.
   (b) Alternatively, book estimates of the resale value of used property may be available from industry or government sources.
   (c) Assessed values of similar, comparably aged properties determined for property tax purposes may also be used.

7. **Renewal Options**. In determining the term of a lease, all renewal options shall be added to the initial lease period. This analysis assumes the initial period is 10 years with two 10-year renewal periods. Each renewal period lease rate is increased by 15 percent.

Exhibit D presents the spreadsheet model used to perform the lease/construct analysis. The spreadsheet model was developed by Missoula Technology Development Center to meet the requirements of OMB Circular No. A-94. Net Present value analyses are based on future benefits and costs. Since future economic conditions and facility requirements are uncertain, the data entered in the model are based on the most recent data available and the modeler's best professional judgment where data is not available.

The spreadsheet model includes five tables:

**Table 1:** Basic data including the name and location of the project, lease and lease/construct information, space requirements, relevant interest rates and time periods.

**Table 2**: Purchase alternative information, including ancillary costs, that may include imputed costs, as directed by the Circular.

**Table 3**: Construction costs and interest, including yearly expenditures during construction, for the construction alternative. The interest cost is included to reflect the opportunity cost associated with the use of Federal funds.

**Table 4**: Annual payments, which may include imputed costs, as directed by the Circular.

**Table 5:** Annual cash flows for the life of the analysis (used to determine net present values in the summary figures) and a summary indicating the best alternative based on the analysis.

Each table is organized into titles, data, and equations necessary to complete the analysis.

**Results**

The results of analyses are presented in Exhibit D and indicate constructing the needed facility is the best economic option available at this time.

**Facility Lease, Purchase, or Construction Spreadsheet**

**INDEX**



**TABLE 1 -- BASIC DATA**

| | | | | |
|---|---|---|---|---|
| Project: | **Appalachian Office/Work Center Complex** | | | |
| Location: | **Mars Hill Exit off I-26, North Carolina** | | | |
| Date: | **Nov 1, 2004** | | | |
| Lease Period: | **10 years** | | | |
| Gross Sq. ft. | | **16,320** | | |
| Net Usable sq. ft.(about 80-70% of gross) | | **13,600** | | |
| Lease Rate sq. ft. | | **$17.38** | Based on lease rate at the S.O. | |
| Lease Rate Renewal Period | **10 years** | **$19.99** | Office Space = $15.00/SF | 7600 sq ft |
| Ancillary Costs for lease | | **$3,000.00** | Warehouse = $8.00/SF | 6000 sq ft |
| Lease Purchase Rate sq. ft. | | **$34.00** | Parking = $1.00/SF | 42000 sq ft |
| Lease/Pur Renewal Period | | **$34.00** | | |
| ***Interest Rates:*** | | | | |
| Nom U.S. Treasury Rate | **20 Yr** | **5.30%** | (to find the proper rate, see "OMB_rates" worksheet) | |
| (See OMB A-94, App C) | **3 Yr** | **3.00%** | (to find the proper rate, see "OMB_rates" worksheet) | |
| Analysis Period (in Years) | | **20** | | |
| Design & Construction period (years) | | **3** | | |
| Economic Life (Construction) | | **50** | | |
| Economic Life (Purchase) | | **50** | | |

**TABLE 2 -- COSTS ASSOCIATED WITH PURCHASE ALTERNATIVE**

| | |
|---|---|
| Purchase Price- Building | **$2,500,000** |
| Land | **$500,000** |
| Other Imputed Costs | |
| Ancillary Costs/yr from table 4 | **$88,770** |

**TABLE 3 -- CONSTRUCTION AND INTEREST DURING CONSTRUCTION (ESTIMATED)**

Interest Rate **3.00%**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Construction | **$2,200,000** | | | | | | | |
| Design Costs (6-10% of const. $) | $132,000 | | | | | | | |
| Contract Supervis. (4-8% of const | $132,000 | | | | | | | |
| Land Value or actual cost | **$500,000** | | | | | | | |
| Total Construction | $2,964,000 | Year | Federal Appropriation | One-Half Annual Funding | Prior Years Funding | Prior Years Interest | Amount for Computing Interest | Federal Interest During Construction |
| All design + land purchased in Yr 1 | | 1 | $632,000 | $316,000 | $0 | $0 | $316,000 | $9,480 |
| % Constr & Supv in Yr 2: | **60.00%** | 2 | $1,399,200 | $700,000 | $632,000 | $9,480 | $1,341,480 | $40,240 |
| % Constr & Supv in Yr 3: | **40.00%** | 3 | $932,800 | $466,000 | $2,031,200 | $49,720 | $2,546,920 | $76,410 |
| | | Total | $2,964,000 | | | | Total: | $126,130 |

**Table 4 -- ANNUAL EXPENDITURES AND REVENUES**

| | Lease | Construction | Lease/ Purchase | Purchase | |
|---|---|---|---|---|---|
| Borrowing Term or Lease Term (yrs) | 20 | 3 | 20 | N/A | |
| Lease payment | $283,680 | | $554,880 | | |
| Renewal Period | $326,232 | | $554,880 | | |
| Real Estate Taxes | * | **$13,770** | * | **$13,770** | Madison County tax rate |
| Insurance | * | **$10,000** | * | **$10,000** | = $.51 per $100 |
| Building Maintenance | * | $44,000 | * | $50,000 | |
| Utilities | * | **$10,000** | * | **$10,000** | |
| Operations Costs | * | **$5,000** | * | **$5,000** | |
| Lease Administration | $1,750 | N/A | $1,750 | N/A | |
| Total Annual Costs | $285,430 | $82,770 | $556,630 | $88,770 | |
| Residual Value | | **$2,000,000** | **$2,000,000** | **$2,000,000** | |

*** Amount is Included in Lease Contract**

**TABLE 5 -- CASH FLOW AND NET PRESENT VALUE**

| | Annual Payments | | | |
|---|---|---|---|---|
| Year | Lease | Construction | Lease/Pur. | Purchase |
| 1 | ($288,430) | ($82,770) | ($556,630) | ($88,770) |
| 2 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 3 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 4 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 5 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 6 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 7 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 8 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 9 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 10 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 11 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 12 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 13 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 14 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 15 | ($285,430) | ($82,770) | ($556,630) | ($88,770) |
| 16 | ($327,982) | ($82,770) | ($556,630) | ($88,770) |
| 17 | ($327,982) | ($82,770) | ($556,630) | ($88,770) |
| 18 | ($327,982) | ($82,770) | ($556,630) | ($88,770) |
| 19 | ($327,982) | ($82,770) | ($556,630) | ($88,770) |
| 20 | ($327,982) | ($82,770) | ($556,630) | ($88,770) |

**TABLE 6 -- SUMMARY AND RECOMMENDATION**

| Net Present Value: | |
|---|---|
| Lease | ($3,555,374) |
| Construction | ($2,565,526) |
| Lease/Purchase | ($6,051,758) |
| Purchase | ($3,366,692) |

**PREFERRED OPTION:** **CONSTRUCTION**

APPENDIX F

# LOCATION ALTERNATIVES AND EVALUATION

**I Office Location:**

The proposed construction of a new facility to consolidate employees on the Appalachian District results in a need to analyze locations for that facility. The new site must be large enough to adequately accommodate the needed buildings for an office and work center. The new site must be conveniently located and highly visible for the traveling public, local public, business associates, fire response crews, and the office workforce. The preferred location would be near the center of the District and along a main travel corridor through the District.

Two major highway corridors divide the District in four quadrants. One is the new I-26 (old US 19/23), running south to north from Asheville, NC to the Tennessee State line. The other is an east-west corridor that connects Burnsville to Hot Springs along US 19 and SH 213. These two main corridors run concurrent for 2 miles north of Mars Hill, NC. The ideal location for a combined office and work center complex would be close to this intersection.

Location Alternative: Six parcels of land were considered. All are available and accessible from I-26 along this intersection of main road corridors.

Parcel 1: 14 acres, $35K/acre

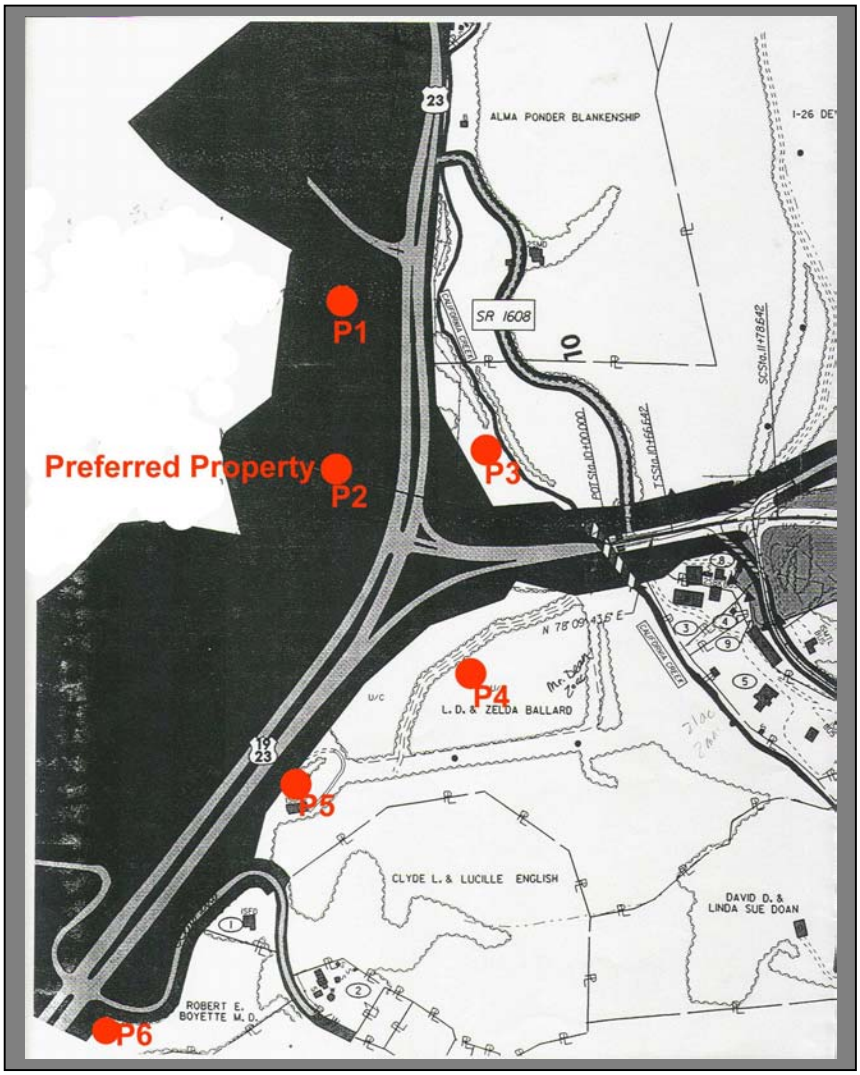
Parcel 2: 9.02 acres, $55K/acre

Parcel 3: Unknown

Parcel 4: 21 acres, $95K/acre

Parcel 5: 14 acres, $32.4K/acre

Parcel 6: 11 acres, 83K/acre



**II Evaluation Criteria:**

The following criteria have been established for the purpose of evaluating the location alternative proposed:

- Access
- Overall Capital Costs;
- Development Costs;
- Availability of Utilities

**III Evaluation of Location Alternatives:**

Parcel 1: Access is poor for this alternative. Travel to the site would have to go through Mars Hill and approach the property from the north. Costs would include $490,000 for land and moderate costs for constructing a building site. Utilities are available within 1 mile.

Parcel 2: This site has good access on a moderate grade, however travel from the nearest exit is approximately 3 miles. Costs would include $496,100 (has been appraised) for the land. The entire site is cleared, level and is constructed on engineered fill from the recent construction of I-26. The site is dry and has nice views. Development costs would be minimal. Utilities including electric, natural gas, water, and sewer are all located within ½ mile.

Parcel 3: Access is very close to the I-26 exit. Costs would include approximately _____ for the land. The main problem with the site is a significant drainage running through the middle of the parcel. The entire site is wet. Costs for development would be significant. Utilities are readily available.

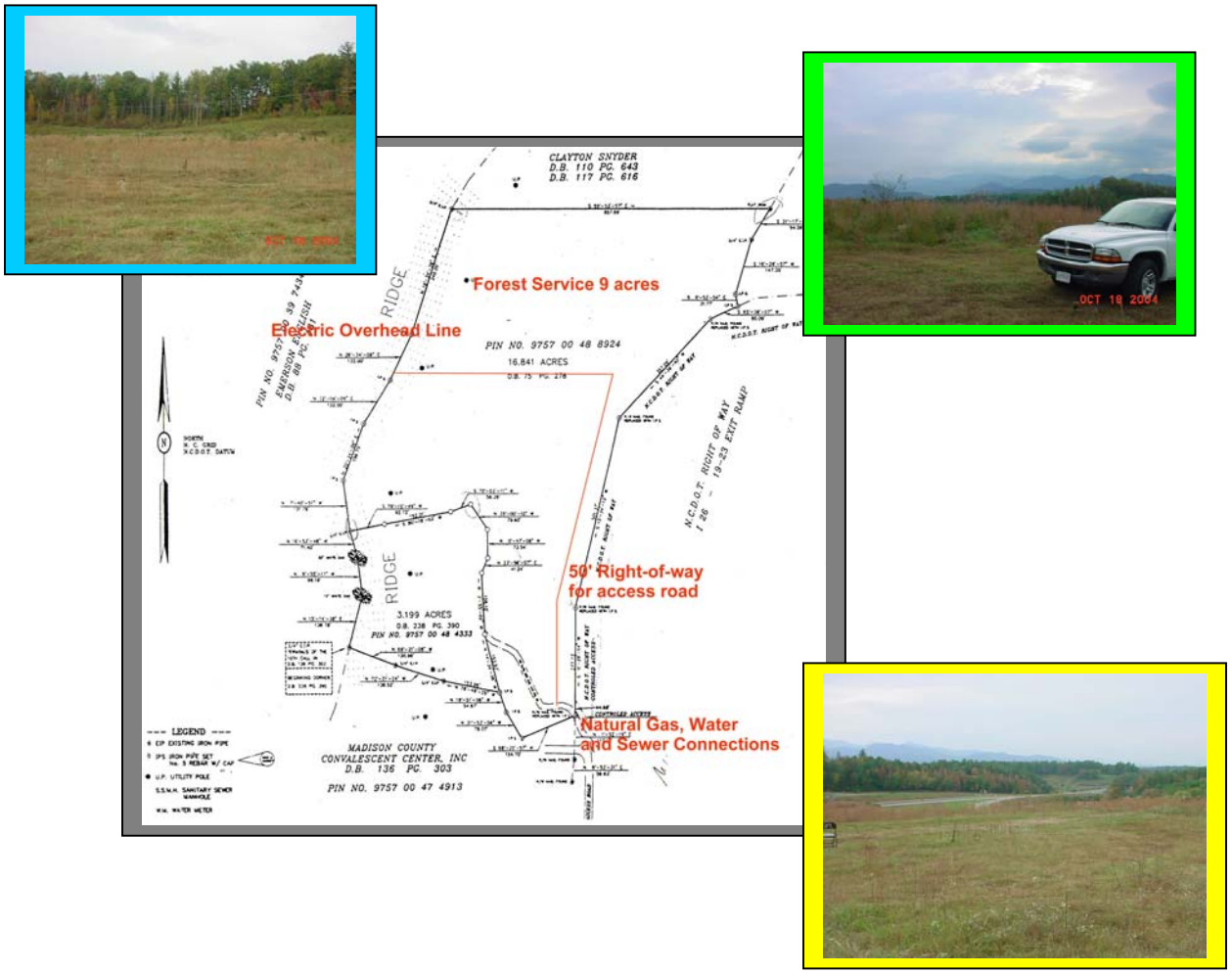
Parcel 4: Access is close to the I-26 exit south along a frontage road. The owner is not interested in subdividing the property and the total cost is $2,000,000. This facility only needs approximately 7-10 acres. Development costs would also be high due to the slopes on the site. Utilities including electric, natural gas, water, and sewer are all located within ½ mile.

Parcel 5: This parcel is just south of parcel 3 and access is still within a mile to the I-26 exit. The cost of the property is $454,000. The main problem with this site is it is long and narrow, with a drainage flowing through the only portion of the site suitable for construction. Development costs would be very high and options on site design would be very limited. Utilities including electric, natural gas, water, and sewer are all located within ½ mile.

Parcel 6: Access is a little further south than parcel 5. The property is expensive and includes a house and garage that will have to be removed. The cost is $913,000. Site development costs would be moderate when compared to the other sites. Utilities are readily available.

**IV Recommendation for site location: Parcel #2**

This parcel of land has several advantages over the other sites studied. The owner is willing to split the parcel up and give an option to the Forest Service for the upper nine acres. The layout of the office and workcenter can be optimized because the entire site is build-able. Views of the mountains and visibility from I-26 are the best of any parcel studied. Site development costs will be very low because it does not need to be cleared and grubbed. Landscaping costs may be higher because there are no existing shade trees. The electric power line runs along the west side of the property and natural gas, municipal water and sewer serve the adjacent property to the south. The access road from the existing state road is on a good grade and will require a minimum of excavation. Unfortunately, the access from I-26 is a couple of miles away. It is however a paved double-lane state secondary road.



# APPENDIX F

WELCOME AND INFORMATION MATRIX

## WELCOME AND INFORMATION MATRIX

**The matrix consists of three screens with assigned numerical value based upon population, traffic, distance, and seasons. Numerical values are added together and multiplied by 100. The minimum base area is 300 square feet, or the numerical total product if computed greater that 300 square feet. The office proximity too an attraction is significant. The base area should remain at 100% when located at the attraction. Reduce the base area as much as 50% when away from an attraction. Adjust between 50% and 100% depending on the influence from a near attraction. The matrix also adds 100 additional square feet of Interpretive Association sales area to the base area.**

Note:

- BASE AREA MINIMUM is 300 SQ. FT.
- EACH POINT IS WORTH 100 SQ. FT.

| EXAMPLE: LOCATED AT AN ATTRACTION (100%) | |
|---|---|
| XYZ – Ranger Station<br>*<- 50 miles to <100,000<br>*< - 3,000 within 2 mile's of site<br>< - 10,000 RVD January – April<br>*< - 100,000 RVD May-August<br>< - 10,000 RVD September – December<br>* For 1,2&3 below | 1. = 1<br>2. = 2<br>3. = 2<br>5 pts (5x100=500)>300 SF<br>Base = 500 SF (100%)<br>4. Store = 100 SF<br>TOTAL = 600 SQ. FT. |

**Step 1. Screen A:** There is a total population of less than 10,000 within 10 miles, less than 600,000 within 50 miles, and greater than 1 million within 80 miles. (Refer to Data Chart A at the end of this section)

| POPULATION | DISTANCE TO POPULATION CENTERS | | |
|---|---|---|---|
| | < 10 MILES | <50 MILES | <80 MILES |
| <10,000 | **1** | 0 | 0 |
| <50,000 | 2 | 1 | 0 |
| <200,000 | 3 | 2 | 1 |
| <600,000 | 4 | **3** | 2 |
| <1 MILLION | 5 | 4 | 3 |
| >1 MILLION | 6 | 5 | ***4*** |

**NOTE:** PICK HIGHEST NUMBER **4 x 100 = 400**

**Step 2. Screen B:** This location is adjacent to I-26 with a traffic count greater than 20,000 vehicles per day. (Use 5)

| TOTAL VEHICLE PER DAY | DISTANCE TO TOTAL Vehicles per Day | | |
|---|---|---|---|
| | <1 MILES | <3 MILES | <8 MILES |
| <500 | 1 | 0 | 0 |
| <2,000 | 2 | 1 | 0 |
| <6,000 | 3 | 2 | 1 |
| <12,000 | 4 | 3 | 2 |
| >12,000 | ***5*** | 4 | 3 |

**NOTE:** PICK HIGHEST NUMBER **5 x 100 = 500**

**Step 3. Screen C:** Total RVDs during the summer season is between 50,000 and 200,000.

| TOTAL RVD | SEASON OF USE | | |
|---|---|---|---|
| | JAN. -APRIL | MAY-AUG. | SEPT. -DEC. |
| <10,000 | 0 | 0 | 0 |
| <50,000 | 1 | 1 | 1 |
| <200,000 | 2 | ***2*** | 2 |
| <600,000 | 3 | 3 | 3 |
| <1 MILLION | 4 | 4 | 4 |
| >1 MILLION | 5 | 5 | 5 |

**NOTE:** PICK THE HIGHEST NUMBER **1 x 100 = 100**

**Step 4.** INTERPRETIVE STORE, ADD 100 SQ. FT. TO THE BASE AREA.

**Step 5. Step 1 + Step 2 + Step 3 +Step 4 = Total Square Feet Needed = <u>1100</u>**

Data Chart A – Population within Distance Zones

| | | | Distance | |
|---|---|---|---|---|
| **Population Center** | **Population** | **0-10 miles** | **0-50 miles** | **0-80 miles** |
| | | | | |
| Mars Hill, NC | 2000 | x | x | |
| | | | | |
| Asheville/ Buncombe | 200000 | | x | |
| Hendersonville/Co | 25000 | | x | |
| Haywood Co | 55000 | | x | |
| Marion/Mcdowell Co | 45000 | | x | |
| Yancey Co | 20000 | | | |
| Morgantown | 20000 | | x | |
| Brevard | 10000 | | x | |
| Polk Co | 20000 | | | |
| Mitchell Co | 16000 | | | |
| | | | | |
| Johnson City, TN | 60000 | | x | |
| Greenville, TN | 15000 | | x | |
| Newport, TN | 10000 | | x | |
| | | | | |
| Knoxville/Knox Co | 380000 | | | x |
| Kingsport | 50000 | | | x |
| Hickory | 40000 | | | x |
| Spartanburg, SC | 250000 | | | x |
| | | | | |
| | | | | |
| **Totals:** | | **2000** | **413000** | **1218000** |

*(Information from 2002 Rand McNally the Road Atlas)*

# APPENDIX H

# LEED™ GREEN BUILDING RATING SYSTEM

## LEED (Leadership in Energy & Environmental Design)

The LEED™ Green Building Rating System was developed by the U.S. Green Building Council, under contract with the Department of Energy. The basis for this contract was to develop a standard that improves environmental and economic performance of commercial buildings using established and/or advanced industry principles, practices, materials and standards.

The LEED System is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. The LEED system has been adopted by engineering in the Regional Office – R8 to become the system to use for all new major FA&O projects. There are four different achievement levels, Certified, Silver, Gold, and Platinum, based on the number and types of credits incorporated into the design.

*LEED was created to:*

- *Define "green building" by establishing a common standard of measurement*
- *Promote integrated, whole-building design practices*
- *Recognize environmental leadership in the building industry*
- *Stimulate green competition*
- *Raise consumer awareness of green building benefits*
- *Transform the building market*

*LEED provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.*

*LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources.*

A standard checklist has been developed that lists credit items that can be incorporated into designs and the points associated with each item. Detailed specifications have been developed and must be met prior to claiming a credit. Adding up the total points will demonstrate which level has been accomplished.

- Certified 26-32 points
- Silver 33-38 points
- Gold 39-51 points
- Platinum 52-69 points

The following pages contain credit items from the LEED checklist. Those items that can easily be accomplished for this project at no cost are highlighted in blue. Items that will increase costs, but can produce life-cycle economic efficiencies are highlighted in yellow.

The total points achievable for this project could place it in the Silver category. Regional Policy may soon require a minimum of 26 points.

# LEED™ Checklist

| Sustainable Sites | | 14 Points |
|---|---|---|
| Prereq 1 | **Erosion & Sedimentation Control** | LEED req |
| Prereq 2 | **Environmental Protection**, (AF Amendment) | Required |
| Prereq 3 | **Cultural Resources Protection**, (AF Amendment) | Required |
| Prereq 4 | **Clean Water Protection**, (AF Amendment) | Required |
| Credit 1 | **Site Selection** | 1 |
| Credit 2 | **Urban Redevelopment** | 1 |
| Credit 3 | **Brownfield Redevelopment** | 1 |
| Credit 4.1 | **Alternative Transportation**, Public Transportation Access | 1 |
| Credit 4.2 | **Alternative Transportation**, Bicycle Storage & Changing Rooms | 1 |
| Credit 4.3 | **Alternative Transportation**, Alternative Fuel Refueling Stations | 1 |
| Credit 4.4 | **Alternative Transportation**, Parking Capacity | 1 |
| Credit 5.1 | **Reduced Site Disturbance**, Protect or Restore Open Space | 1 |
| Credit 5.2 | **Reduced Site Disturbance**, Development Footprint | 1 |
| Credit 6.1 | **Stormwater Management**, Rate or Quantity | 1 |
| Credit 6.2 | **Stormwater Management**, Treatment | 1 |
| Credit 7.1 | **Landscape & Exterior Design to Reduce Heat Islands**, Non-Roof | 1 |
| Credit 7.2 | **Landscape & Exterior Design to Reduce Heat Islands**, Roof | 1 |
| Credit 8 | **Light Pollution Reduction** | 1 |

| Water Efficiency | | 5 Points |
|---|---|---|
| Credit 1.1 | **Water Efficient Landscaping**, Reduce by 50% | 1 |
| Credit 1.2 | **Water Efficient Landscaping**, No Potable Use or No Irrigation | 1 |
| Credit 2 | **Innovative Wastewater Technologies** | 1 |
| Credit 3.1 | **Water Use Reduction**, 20% Reduction | 1 |
| Credit 3.2 | **Water Use Reduction**, 30% Reduction | 1 |

| Energy & Atmosphere | | 17 Points |
|---|---|---|
| Prereq 1 | **Fundamental Building Systems Commissioning** | LEED req |
| Prereq 2 | **Minimum Energy Performance** | Required |
| Prereq 3 | **CFC Reduction in HVAC&R Equipment** | LEED req |
| Prereq 4 | **Air Quality Protection**, (AF Amendment) | Required |
| Credit 1.1 | **Optimize Energy Performance**, 20% New / 10% Existing | 2 |
| Credit 1.2 | **Optimize Energy Performance**, 30% New / 20% Existing | 2 |
| Credit 1.3 | **Optimize Energy Performance**, 40% New / 30% Existing | 2 |
| Credit 1.4 | **Optimize Energy Performance**, 50% New / 40% Existing | 2 |
| Credit 1.5 | **Optimize Energy Performance**, 60% New / 50% Existing | 2 |
| Credit 2.1 | **Renewable Energy**, 5% | 1 |
| Credit 2.2 | **Renewable Energy**, 10% | 1 |
| Credit 2.3 | **Renewable Energy**, 20% | 1 |
| Credit 3 | **Additional Commissioning** | 1 |
| Credit 4 | **Ozone Depletion** | 1 |
| Credit 5 | **Measurement & Verification** | 1 |
| Credit 6 | **Green Power** | 1 |

| Materials & Resources | | 13 Points |
|---|---|---|
| Prereq 1 | **Storage & Collection of Recyclables** | LEED req |
| Prereq 2 | **Hazardous Materials and Waste Management**, (AF Amendment) | Required |
| Credit 1.1 | **Building Reuse**, Maintain 75% of Existing Shell | 1 |
| Credit 1.2 | **Building Reuse**, Maintain 100% of Shell | 1 |
| Credit 1.3 | **Building Reuse**, Maintain 100% Shell & 50% Non-Shell | 1 |
| Credit 2.1 | **Construction Waste Management**, Divert 50% | 1 |
| Credit 2.2 | **Construction Waste Management**, Divert 75% | 1 |
| Credit 3.1 | **Resource Reuse**, Specify 5% | 1 |
| Credit 3.2 | **Resource Reuse**, Specify 10% | 1 |
| Credit 4.1 | **Recycled Content**, Specify 25% | 1 |
| Credit 4.2 | **Recycled Content**, Specify 50% | 1 |
| Credit 5.1 | **Local/Regional Materials**, 20% Manufactured Locally | 1 |
| Credit 5.2 | **Local/Regional Materials**, of 20% Above, 50% Harvested Locally | 1 |
| Credit 6 | **Rapidly Renewable Materials** | 1 |
| Credit 7 | **Certified Wood** | 1 |

| Indoor Environmental Quality | | 15 Points |
|---|---|---|
| Prereq 1 | **Minimum IAQ Performance** | LEED req |
| Prereq 2 | **Environmental Tobacco Smoke** (ETS) **Control** | Required |
| Prereq 3 | **Acoustics and Noise Control**, (AF Amendment) | Required |
| Credit 1 | **Carbon Dioxide** ($CO_2$ ) **Monitoring** | 1 |
| Credit 2 | **Increase Ventilation Effectiveness** | 1 |
| Credit 3.1 | **Construction IAQ Management Plan**, During Construction | 1 |
| Credit 3.2 | **Construction IAQ Management Plan**, Before Occupancy | 1 |
| Credit 4.1 | **Low-Emitting Materials**, Adhesives & Sealants | 1 |
| Credit 4.2 | **Low-Emitting Materials**, Paints | 1 |
| Credit 4.3 | **Low-Emitting Materials**, Carpet | 1 |
| Credit 4.4 | **Low-Emitting Materials**, Composite Wood | 1 |
| Credit 5 | **Indoor Chemical & Pollutant Source Control** | 1 |
| Credit 6.1 | **Controllability of Systems**, Perimeter | 1 |
| Credit 6.2 | **Controllability of Systems**, Non-Perimeter | 1 |
| Credit 7.1 | **Thermal Comfort**, Comply with ASHRAE 55-1992 | 1 |
| Credit 7.2 | **Thermal Comfort**, Permanent Monitoring System | 1 |
| Credit 8.1 | **Daylight & Views**, Daylight 75% of Spaces | 1 |
| Credit 8.2 | **Daylight & Views**, Views for 90% of Spaces | 1 |

| Innovation & Design Process | | 5 Points |
|---|---|---|
| Credit 1.1 | **Innovation in Design**: Specific Title | 1 |
| Credit 1.2 | **Innovation in Design**: Specific Title | |
| Credit 1.3 | **Innovation in Design**: Specific Title | |
| Credit 1.4 | **Innovation in Design**: Specific Title | |
| Credit 2 | **LEED™ Accredited Professional** | 1 |
| Credit 3 | **Integrated Landscape Management**, (AF Amendment) | 1 |
| Credit 4 | **Deconstruction**, (AF Amendment) | 1 |
| Credit 5 | **Advanced Resource Efficiency**, (AF Amendment) | 1 |

| Project Totals | 69 Points |
|---|---|

**Certified 26-32 points  Silver 33-38 points  Gold 39-51 points  Platinum 52-69 points**