MASTER PLAN

FOR THE

LONESOME PINE REGIONAL

BUSINESS & TECHNOLOGY PARK

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FOR THE

LONESOME PINE REGIONAL

BUSINESS & TECHNOLOGY PARK

PREPARED FOR

WISE COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY

WISE, VIRGINIA

PREPARED BY

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T+L PROJECT NO. 6270-00

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EXECUTIVE SUMMARY

This document is the conceptual development of a master plan for the Lonesome Pine Regional Business & Technology Park (Park). As such, its intended use is to aid the Wise County Industrial Development Authority (IDA) in developing the proposed park in such a way as to attract potential office and technology-based companies to the region.

Unlike a traditional industrial park where the end result is a manufactured product, the primary focus of a business and technology park is services rendered. Because of the nature of this type of park, a "college campus" arrangement is appropriate and has been used as the central theme for this master plan. Parcels are laid out in such a manner as to provide small 1.5 acre to 4.4 acre sites as well as large 20-plus acre sites. Access is provided by boulevards and streets. Green areas are dispersed throughout the Park and the streets resemble a "small town" atmosphere.

The key to successful development of this type of park is often dependent on employee well-being. To address employee needs, amenities such as walking trails and green areas are dispersed throughout the Park to aid in relieving work related stress and tension. Recreation areas have been included at the east and west boundaries of the Park. These recreation areas will provide services to the employees and will efficiently utilize areas of the site that are unsuitable for development as building parcels. A Town Center has been included in the plan to meet the needs of the employees and thus creating a benefit for the employer as well. The Town Center is envisioned to include related services such as a day care center, restaurant, and small shops.

Business needs such as a training, copying and faxing service centers are also a part of the master plan and will provide support to smaller businesses located in the Park. The plan also includes an incubator building intended to aid small, growing businesses.

Statements of probable project cost are provided for the infrastructure to accommodate access and development of each parcel of the Park. These costs are presented in independent segments in order to provide for maximum flexibility in the Park development. The infrastructure necessary to accommodate the ultimate development of the Park includes water system improvements, a wastewater system, roads, and stormwater management. These costs are presented in the Project Costs section of this report. Costs for buildings and individual site development *are not* included in this report since these costs are site and tenant specific. An Infrastructure Site Schematic included in Appendix A of this report depicts the complete infrastructure for which costs have been provided.

INTRODUCTION

The Lonesome Pine Regional Business & Technology Park consists of approximately 195 acres of land adjacent to the Lonesome Pine Regional Airport, located on State Route 723, in Wise County, Virginia. A general location map depicting the Lonesome Pine Regional Business and Technology Park is presented on page 4. The Park is located on a previously surface mined area. Topographic relief of the site varies from an average of 2% to 5% grade across the site.

In response to a need for land development suitable for attracting technology oriented businesses such as relay centers, telephone call centers, service centers or research and computer related office facilities, the Wise County Industrial Development Authority commissioned a design team consisting of Thompson + Litton, Hill Studio, P.C., EDC and Schnabel Engineering Associates to study and develop a master plan for the proposed development of the Lonesome Pine Regional Business & Technology Park. The results of this study are included in this report. Included in Appendix A of this report are site schematics depicting the overall layout of the Park and renderings of what the Park may resemble when fully developed.

MARKET ANALYSIS

The key to master planning a corporate office, industrial, and research park is flexibility. Flexibility manifests itself physically with three primary factors: parcel size, circulation and utilities.

The first and most important factor is parcel size. The three uses contemplated for the Lonesome Pine Regional Business & Technology Park have disparate parcel size requirements. Industrial and telephone call centers typically require large parcels while research and computer related office facilities require substantially smaller parcels. The most advantageous solution is to subdivide the parcels in order to provide a variety of possible development solutions. Also, the smaller parcels should be configured to allow the assemblage of multiple smaller parcels into larger parcels. This configuration avoids limiting the options at the early stages of development. Care must be used in assigning parcels to prospective users to avoid "land-locking" smaller parcels in the initial development phases and limiting future options. Parcel sizes for research and computer office uses are in the range of three to five acres at a development density of 10,000 to 12,500 square feet per acre. This density assumes a parking ratio of four spaces for every 1,000 square feet. A typical industrial user requires a seven to ten acre parcel with a significantly smaller parking requirement. Telephone call centers range in size from three to five acres. Parking requirements are significantly higher and are typically in the range of six to eight spaces for every 1,000 square feet.

The second factor is vehicular circulation including parking and delivery requirements. The Park should be configured to allow industrial users access to the primary feeder road system, thereby restricting truck access on smaller secondary roadways. Nonindustrial users should be located off of the secondary roadways. The telephone call centers typically have significant parking requirements which present two challenges. The first challenge is distributing the parking areas around the

buildings to minimize walking distance and prevent creating large, unattractive surface parking fields. The second challenge is addressing the entering and exiting traffic from the call centers. Typically, shifts change on a regular schedule and large numbers of workers exit simultaneously. This can create traffic bottlenecks if the exit loading is not considered.

The third factor is utilities. Utility distribution should allow for a variety of uses corresponding to the subdivision master plan. Industrial users may require more significant gas, water and sewer service while computer and call centers will require more significant communications infrastructures. Both uses will require significant electrical service.

Addressing these three factors in the master plan will improve the marketability of the sites and allow the Park to adapt to ever changing development requirements.

CONCEPTUAL DEVELOPMENT PLAN

The 195-acre Lonesome Pine Regional Business & Technology Park is planned as a high-amenity working environment, where the business center contributes to the health and welfare of employees. This concept is derived from the goals of maximizing the employment potential of the Mountain Empire region while utilizing the present scenic resources. Master planned for flexibility, the Park features an education service and child care oriented Town Center, a clear circulation pattern and a substantial allocation of space to recreation areas and greenways, allowing for each parcel to be endowed with mountain scenery, greenway connections and pedestrian connections to the Town Center and other amenities of the Park.

Six exhibits are included in this report and are located in Appendix A. Two of the exhibits are the Overall Site Schematic and the Infrastructure Schematic, which depict the potential layout of the Park when fully developed and the infrastructure required to support the full growth of the Park, respectively. The four remaining exhibits are artistic renderings of different facets of the Park. The renderings include an Overall Site Perspective which gives an aerial view of what the Park may look like when fully developed and a Town Center Perspective. The two remaining renderings are of typical small and large parcel developments, entitled Site Perspective Parcel 4 and Site Perspective Parcel 1, respectively.

Greenway axes connect the Town Center to the recreation areas, incorporating greenway trails and underground utilities along these buffer corridors. The recreation areas on each end double to serve regional stormwater detention and water quality objectives, while adding significant amenity value of their own.

A central circulation artery traverses the site in a south to north alignment. This road is designed as a boulevard, with a 30 foot median through the Park that is sufficient to allow for large trees. Setbacks from this boulevard are 100 feet on either side, allowing for significant meadow development as a theme for the Park.

In order to connect the Park with U.S. Alternate Route 58, Clinch Valley College and the Town of Wise, a new connector road is proposed, entering the Park from the west, along the northwest corner of the property. This road, along with the transportation considerations of the potential traffic to the Park, has been investigated in another study. This feasibility study was prepared by Maxim Engineering, Inc. in December 1998 for Wise County and the LENOWISCO Planning District Commission. This road is located within the property to allow for double-loaded development, while to the west it scales a steep ridge, with dramatic views of the western recreation area before moving out of the property.

Utilizing the alignments of the central boulevard and the connector road, a West Loop Road is fashioned through the Park. This road will serve as the service entrance to parcels 1 and 2, and the Town Center, and will function for both employee and service entrances to parcels 3 - 19.

The outer parcels, 1, 2, 3 and 14, are the backbone for the Park, and compose approximately 65% of the business land allocation. These large parcels are strategically located on the outer perimeter of the Park, as businesses interested in these parcels will be more self-contained and need room for expansion. Parcels 1 and 2 are allowed to have customer and employee access onto the boulevard. These parcels are located near the eastern and western recreation areas, to provide recreation relief for large numbers of employees during short breaks.

Within the design of a business park master plan, flexibility is the key to the success of the business. With this in mind, the inner parcels are designed from 1.5 acres to 4.4 acres in size and can be linked through a "flex-block" process. For example, one block would include parcels 4, 5, and 6 and 7, 8, and 9 another block; 10, 11, and 12 comprise a third block; 14, 15, 16, and 17 comprise a fourth block; and parcels 18 and 19 for the fifth parcel block. This allows for a number of businesses to be sought, not relying on size. The parcel can be as small as 1.5 acres and the combinations provide for sizes comparable to the larger outer parcels if needed. It should be noted that parcels nearest the Town Center are most appropriate for smaller businesses as these need most of the services of the Town Center. Design guidelines for parcels 4-19 include:

Placement of the main building of the parcel toward the loop road.

Placement of parking behind the Town Center, toward the airport or toward the southern boundary of the property.

Service docks, dumpsters or other detractors are sited out of view from the greenway and boulevard and other visitor drives.

Greenway linkages will be provided to allow outer parcels access to the Town Center.

Placement of the buildings on parcels 4 - 9 should be sited toward the loop road.

The Town Center is a 20,000 square foot hub located just west of State Route 723 in the center of the Park. The Town Center serves as a retail focus for the Park and for this part of the County. Businesses in the Center could include a copy, fax, parcel, and mail center, restaurants, coffee shops, boutiques and other establishments to support the work force.

A village green is sited in the middle of the Town Center with greenway linkages on axes east and west to both large recreation areas. Parcel 6, the training center parcel, is sited to share parking with the Town Center. It may be noted that the training center could be located within the Town Center during the initial development of the Park and moved out to Parcel 6 as the Park grows and a larger space is needed. Parcel 13 is ideally suited for the day care facility as it has the Town Center, education center and the western recreation area ties. The architecture of the Town Center is designed with reference to turn-of-the-century commercial buildings found in local commercial areas such as the City of Norton and Town of Wise. Large drop-off loops for visitors are available at both the eastern and western ends along the greenway. A clock tower and a large fountain are theme elements and arcaded spaces link retail out of the weather and link greenways to the central parts of the Park.

Two large recreation areas, identified as the East Common and the West Common, are placed on the far eastern and western ends of the Park. The Overall Site Schematic in Appendix A shows the location of the East and West Common areas in relation to the Park boundary. The West Common is envisioned as a rustic nature recreation area potentially featuring a three-acre lake, amphitheatre, picnic area, scout camping area and playground to coincide with the child care facility. The East Common is foreseen to be a sports and recreation area with baseball fields, soccer fields, group picnic facility and access trails. Together, these areas and their associated greenway buffer areas use approximately one-third of the Park acreage. This acreage is high in amenity value but low in development potential for business uses. Stormwater management is also a part of the program for these areas.

SITE ACCESS

Main access to the Park will be provided by two boulevards. The boulevards will initially consist of two lanes with a grass median for landscaping and turning lanes. One boulevard will be an improvement to State Route 723 which runs in a north/south direction from State Route 646 to the Lonesome Pine Airport. This boulevard basically divides the Park into its eastern and western halves. The second boulevard will be a portion of a proposed connector road which will enter the Park near the northwestern corner of the property and intersect with State Route 723.

The connector road, which runs from the Park to U.S. Alternate Route 58 in the Ramsey section of the City of Norton, has been studied in a separate, independent report. This report, entitled "Feasibility Study For The Proposed Ramsey / Clinch Valley College / Business & Technology Park / Lonesome Pine Airport Connector Road," was prepared by Maxim Engineering, Inc. in December 1998. The report was prepared for Wise County and the LENOWISCO Planning District Commission.

The small portion of the connector road project near the northwestern portion of the Park is considered to be included initially in the West Loop Road development and may need to be constructed prior to the connector road project to allow for access to certain parcels in the Park.

Service roads will provide employee, visitor and service access to each of the parcels. All roads are planned to be 30 feet wide, two-lanes, with curb and gutter and a piped stormwater collection system. These service roads create two loops running through the western and eastern portions of the Park, the West Loop Road and the East Loop Road, respectively. Both the West Loop Road and the East Loop Road will start just inside the Park limits to the south and connect to

State Route 723. The West Loop Road will then turn north and intersect with the connector road in the northwest portion of the Park. The East Loop Road will turn north, then west to connect back to State Route 723 just inside the Park limits to the north. The actual entrance, parking and service areas for each lot will be constructed as needed during development of individual parcels. The Infrastructure Site Schematic, located in Appendix A, shows the roads that are to be constructed during the development of the Park.

EARTHWORK

The average grade across the Park property is between 2% and 5%, except in isolated areas. This will keep rough grading of the property to a minimum. Rough grading in isolated areas will give the Park a gentle rolling topography that will drain well and allow for future development with minimal final grading costs. The existing deep drainage swale at the Town Center and parcels 6 and 7 will be backfilled to allow for future building construction in that area. The resulting swale will allow for proper drainage of the areas until a storm drain system is constructed during future development. Potential borrow areas are located on parcels 2, 14 and 16. The north/south boulevard (State Route 723) on the south side of the site should be lowered when road improvements are made so the road and surrounding parcels will blend well together. The ponds in the recreation areas will be graded to accommodate erosion and sediment control and stormwater management facilities.

Areas where boulevards and service roads are located will require some means of site preparation such as deep dynamic compaction or undercut/backfill or a combination thereof. During future development, roads, parking areas and building locations will also require site preparation. The geotechnical overview herein provides a more in-depth explanation of site preparation requirements.

UTILITIES

At the present time, adequate utilities needed for the ultimate development of the Park are not available on-site. During the master plan development of the Park, the utilities will be placed along the boulevards and service roads as depicted in the Infrastructure Site Schematic located in Appendix A. A main water line will connect to the Town of Wise water system near the Town's Recreation Park, just south of the Lonesome Pine Regional Business & Technology Park, and follow State Route 723 north. A water pumping station and elevated storage tank will eventually be added to assure that adequate fire flows can be supplied to all parcels in the Park. A second water line will follow the West Loop Road and connect to the State Route 723 main water line near the intersection of the roads. A third water line will then connect to the State Route 723 main line and run along the south side of the East Loop Road and end just before the road turns north.

The Bear Creek Sewer Extension Project, which was studied in a separate report prepared for the Wise County IDA by Thompson + Litton in October, 1996, will supply the Park with sanitary sewer service. The sanitary sewer will enter the Park from the west, near the Town Center, and will end near the center of the Park on the West Loop Road. The sanitary sewer will then split in direction, with sewers running along the West Loop Road in both the north and south directions until they both join State Route 723. The southern portion of the sewer will extend past State Route 723 and continue on the East Loop Road until it reaches the far southeast portion of the Park. This sewer system will allow for the convenient connection of service laterals from individual sites when further development occurs.

The underground telephone and electrical lines will be installed along all boulevards and service roads constructed during the master plan development. They will enter the Park most likely from the connector road from the west and split up at each road, similar to the sanitary sewer.

STORMWATER MANAGEMENT

The stormwater conveyance system will consist of storm drain lines that will follow all boulevards and service roads constructed during the master plan development. Curb and gutter along the roads will require curb drop inlets to be strategically located along the roads. These inlets will tie into the storm drain lines, which will also allow for ease of connection of drop inlets and roof drains from various parcels when they are developed. An additional storm drain line will run through the Town Center from State Route 723 to the western service road to collect runoff from the Town Center. All storm drain lines installed during the master plan development will be sized to adequately carry all runoff from their respective drainage areas during all phases of the Park development. The storm drain lines will likely outlet to one of the two detention ponds in each of the recreation areas for erosion and sediment control and to detain post-development peak runoff rates to the pre-development values to protect downstream property.

GEOTECHNICAL OVERVIEW

The Lonesome Pine Regional Business & Technology Park site is located within the area of a reclaimed surface mine near the Lonesome Pine Airport in Wise County, Virginia. Prior to mining, the local topography was characterized by steep-sided hills and narrow drainage valleys. One such valley dominated the central portion of the site. Upon completion of mining operations, the site was reclaimed by filling the mined areas and the valley up to existing grades. According to information in previous reports, mining and reclamation at this site occurred prior to 1986. In the 13 years since, the site has been primarily used as pastureland for livestock.

Marshall Miller and Associates performed a preliminary geotechnical engineering study of the project site in 1994 for the Wise County Industrial Development Authority. Their investigation of the subsurface conditions consisted of a seismic refraction survey and four test borings. The seismic refraction survey indicated that from 50 feet to over 150 feet of heterogeneous mine spoil fill covers the site. According to the survey results, depths to bedrock are more uniform in the western half of the site, typically varying from 120 to 150 feet. In a majority of the eastern half of the site, bedrock depths are more erratic. The authors attributed this variability to past mining in this vicinity which apparently resulted in numerous highwalls at varying depths. None of the test borings drilled for the preliminary study extended completely through the fill to bedrock.

In 1997, American Geotech, Inc. performed a geotechnical engineering study at this site, also for the Wise County Industrial Development Authority. Their investigation of the subsurface conditions consisted of 18 test borings across a potential building footprint. These test borings indicated that a heterogeneous mine spoil fill underlies the site. None of the test borings for this study extended through the fill to bedrock.

Schnabel Engineering Associates personnel observed the excavation of seven test pits at this site on December 4, 1997. These test pits extended to depths of 7 to 13.5 feet below the ground surface. The pits contained a heterogeneous mixture of soil, shale rock fragments and sandstone rock fragments in the excavations.

The mine spoil fill covering the site consists of a random mixture of soil and rock fragments ranging in size from gravel to boulders. Soil contained within the fill matrix appears to consist primarily of silty sands and low plasticity silts and clays. Rocks within the fill consist of a relatively uniform mixture of shale, sandstone and siltstone. The density and consistency of fill soils are also variable, though some improvement with depth can be inferred from most of the seismic refraction data. No groundwater was encountered in any of the borings to the depths explored.

It has been shown that uncontrolled fills have the potential to settle significant amounts beneath their own weight, with settlement continuing for long periods after placement. Total and differential settlement potential of uncontrolled fills is even greater when new loads are added. Factors affecting the magnitude and duration of total and differential settlements include placement procedures, material composition, depth of fill, age of fill, groundwater levels, rate of surface water infiltration and loading conditions. Some of these factors are more difficult to quantify than others. Overall, estimating uncontrolled fill settlement is very imprecise. However, empirical correlations indicate that an uncontrolled fill could settle between 1 and 3 percent of its thickness under its own weight for a period of 20 to 30 years after placement. At this site, that could translate into total long-term settlements of up to 4 feet. While a majority of these settlements would be expected to occur during placement and in the two to three years immediately following placement, significant settlements could continue for 30 or more years. Assuming that fill placement was completed just prior to 1986, it is estimated that an additional 8 inches of settlement are possible in areas where fill

depths are about 150 feet. As aforementioned, additional fill settlements would be expected upon the addition of new loads.

Development of reclaimed mine sites for building construction is common in this part of southwest Virginia. However, the abundance of large rock blocks typically encountered within mine spoil fills and the uncontrolled nature in which mine spoils were placed complicate the site development and building construction processes. The existing heterogeneous mine spoil fill will require special consideration during the site grading phase of the project. Segregation and/or disposal of large rock blocks within the excavated mine spoil will probably be required prior to its reuse as compacted structural fill. The new compacted fill will have to be defined in different classes depending on its depth and proximity to the proposed development. Due to the potential for damaging total and differential settlements of the existing uncontrolled fills, some form of ground improvement is usually required prior to foundation or building construction. Based on the available data, it appears that the mine spoil covering the site is not suitable for direct foundation support and ground improvement will be required prior to development.

The type and extent of ground improvement required will depend on the amount of site grading needed to prepare the site, the type of construction, magnitude of loads and the locations of structures and pavements. The most economical means of ground improvement at this site will be either dynamic compaction, surcharge preloading or a combination of both. Dynamic compaction is a reliable method for densification of low plasticity soils and rock fills to depths of up to 20 or 25 feet. The dynamic compaction process effectively creates a 20 to 25 foot thick raft of improved material which is suitable for support of lightly to moderately loaded shallow foundations. Based on previous experience, with dynamic compaction on sites similar to this, it is possible to achieve an allowable bearing pressure of the improved fill on the order of 2500 psf to 3000 psf. Unimproved

materials below this raft will still be susceptible to settlements beneath their own weight and beneath the weight of new fill at the surface. Surcharge preloading is expected to be an effective means for inducing and accelerating settlements of these deeper, unimproved soils. A surcharge height of 20 to 25 feet, left in place for a period of four to six months, may be required in building areas. Lesser heights of surcharge will probably be required in pavement areas. In areas where significant cuts will be required to grade the site, it may be possible to reduce surcharge heights due to the past loading imparted by the excavated material.

In the Marshall Miller and Associates preliminary report, some areas of the site were termed less favorable for development than others based on the seismic survey results. These less favorable areas were those where, according to the survey, the depths to bedrock and the consistency or density of mine spoil fill are highly variable. Areas where depths to bedrock, and thus thickness of fill, change abruptly are unfavorable for building construction due to the increased potential for damaging differential settlements. However, presuming that the amount of organic matter in the mine spoil is minimal, the existing variability in the consistency or density of the mine spoil is not considered a limiting factor in development. The purpose of ground improvement is to minimize or eliminate this variability, thereby producing a more competent and consistent load bearing mass.

Once building and pavement locations and grades have been established, an additional site exploration and final geotechnical engineering study should be performed at this site. The site exploration should consist of additional test borings and an additional seismic refraction survey with seismic lines parallel and perpendicular to building column lines. The final geotechnical study should provide specific recommendations regarding site preparation, earthwork, ground improvement, foundation design and construction considerations. As part of the final study, it is felt that it will be very important to reevaluate the mining history at this site with a particular emphasis on the

completion date of reclamation activities. The age of an uncontrolled fill is a critical factor in evaluating its potential settlement and can significantly impact the type and extent of ground improvement recommended.

Following design and prior to the advertisement of bids, a geotechnical engineer should be retained to assist in the preparation of specifications for the ground improvement and earthwork phases of the project. Comprehensive monitoring and testing during earthwork, ground improvement and building construction will also be very important. With regards to post-improvement evaluation, it is anticipated that a seismic refraction survey performed along the same lines as the pre-construction survey will be the most reliable means for evaluating the effectiveness of the ground improvement program.

PROJECT COSTS

Project costs have been developed for the infrastructure considered necessary to accommodate access and development of each parcel of the Park. These costs are presented in independent segments in order to provide for maximum flexibility in the Park development. The infrastructure necessary to accommodate the ultimate development of the Park includes water system improvements, a sanitary sewer system, roads, and stormwater management. Costs for buildings and individual site development *are not* included in this report since these costs are site and tenant specific. Also, telephone and electrical utility costs *are not* included in these infrastructure estimates. This report assumes that the costs of telephone and electrical utilities will be prorated into the ultimate user fees. An Infrastructure Site Schematic included in Appendix A of this report depicts the complete infrastructure for which costs have been provided.

The project costs are based upon preliminary layouts, descriptions, and service area design calculations and, therefore, represent preliminary statements of probable project costs for the Lonesome Pine Regional Business & Technology Park Master Plan. Table 1 summarizes the project costs for each independent segment of the Park infrastructure. Tables 2 through 9 itemize more detailed probable costs for each of the independent segments.

Project costs are defined as the sum of estimated construction costs and related costs. It should be noted that 10 percent of the estimated construction cost has been assumed to cover contingency items. It is important to stress that these costs are subject to further revision as field surveys are completed and detailed plans are developed for the project. Experience on similar projects, manufacturers' cost information, and actual unit cost bids received on similar projects were utilized during the calculation of all project costs (i.e., construction and related costs).

TABLE 1

SUMMARY OF

PRELIMINARY STATEMENTS OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

Segment	**Total Project Cost**
Water Line Extension	$ 291,000
Water Pumping Station and Storage Tank	$ 998,000
Bear Creek Sanitary Sewer Extension	$ 1,847,300
On-Site Sanitary Sewer	$ 233,400
State Route 723 Improvements	$ 944,900
West Loop Road	$ 1,299,700
East Loop Road	$ 1,282,700
Stormwater Management	$ 603,000
TOTAL INFRASTRUCTURE COST	**$ 7,500,000**

TABLE 2

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

WATER LINE EXTENSION

Construction Cost:

4,000 L.F. of 12-inch water line @ $30/L.F.	$ 120,000	
4,000 L.F. of 8-inch water line @ $25/L.F.	100,000	
Subtotal		$ 220,000
Contingency (10% of Construction Cost)		$ 22,000
TOTAL CONSTRUCTION COST		**$ 242,000**

Related Cost:

20% of Total Construction Cost	$ 49,000	
TOTAL RELATED COST		**$ 49,000**
TOTAL PROJECT COST		**$ 291,000**

TABLE 3

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

WATER PUMPING STATION AND STORAGE TANK

Construction Cost:

1 EA. pump station @ $125,000/EA.	$ 125,000	
1 EA. 500,000 gallon tank (elevated) @ $630,000/EA.	630,000	
Subtotal		$ 755,000
Contingency (10% of Construction Cost)		$ 76,000
TOTAL CONSTRUCTION COST		**$ 831,000**

Related Cost:

20% of Total Construction Cost	$ 167,000	
TOTAL RELATED COST		**$ 167,000**
TOTAL PROJECT COST		**$ 998,000**

TABLE 4

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

BEAR CREEK SANITARY SEWER EXTENSION

Construction Cost:

14,200 L.F. 10-inch gravity sewer line @ $48/L.F.	$ 681,600	
10,500 L.F. 8-inch gravity sewer line @ $42/L.F.	441,000	
1,250 L.F. 4-inch service lateral @ $18/L.F.	22,500	
92 EA. standard manholes @ $1,800/EA.	165,600	
8 EA. drop manholes @ $2,000/EA.	16,000	
150 V.F. manhole extensions @ $90/EA.	13,500	
25 EA. 4-inch service wyes @ $90/EA.	2,250	
25 EA. 4-inch plugs @ $15/EA.	375	
25 EA. 4-inch cleanouts @ $200/EA.	5,000	
2 EA. road crossings @10,000/EA.	20,000	
350 Tons miscellaneous aggregate @ $15/Ton	5,250	
175 C.Y. miscellaneous concrete @ $150/C.Y.	26,250	
Subtotal		$1,399,325
Construction Contingency (10% of Total Construction Cost)		$ 140,000
TOTAL CONSTRUCTION COST		**$1,539,300**

Related Cost:

20% of Total Construction Cost	$ 308,000	
TOTAL RELATED COST		**$ 308,000**
TOTAL PROJECT COST		**$1,847,300**

TABLE 5

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

ON-SITE SANITARY SEWER

Construction Cost:

4,200 L.F. on-site 8-inch sanitary sewer @ $42/L.F.	$ 176,400	
Subtotal		$ 176,400
Contingency (10% of Construction Cost)		$ 18,000
TOTAL CONSTRUCTION COST		**$ 194,400**

Related Cost:

20% of Total Construction Cost	$ 39,000	
TOTAL RELATED COST		**$ 39,000**
TOTAL PROJECT COST		**$ 233,400**

TABLE 6

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

STATE ROUTE 723 ROAD IMPROVEMENTS

Construction Cost:

62,500 S.F. demolition @ $0.30/S.F.	$ 18,800	
128,000 S.F. site preparation @ $1.75/S.F.	224,000	
58,400 S.F. pavement @ $1.75/S.F.	102,200	
4,900 L.F. curb & gutter @ $15/L.F.	73,500	
8,700 S.F. sidewalks @ $2/L.F.	17,400	
7,600 C.Y. earthwork @ $5/C.Y.	38,000	
2,600 L.F. storm drains @ $60/L.F.	156,000	
10 EA. curb inlets @ $5,000/EA.	50,000	
4 Acres seeding @ $1,500/Acre	6,000	
Erosion and sediment control, L.S.	29,000	
Subtotal		$ 714,900
Contingency (10% of Construction Cost)		$ 72,000
TOTAL CONSTRUCTION COST		**$ 786,900**

Related Cost:

20% of Total Construction Cost	$ 158,000	
TOTAL RELATED COST		**$ 158,000**
TOTAL PROJECT COST		**$ 944,900**

TABLE 7

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

WEST LOOP ROAD

Construction Cost:

138,400 S.F. site preparation @ $1.75/S.F.	242,200	
62,800 S.F. pavement @ $1.75/S.F.	109,900	
5,300 L.F. curb & gutter @ $15/L.F.	79,500	
9,300 S.F. sidewalks @ $2/L.F.	18,600	
47,800 C.Y. earthwork @ $5/C.Y.	239,000	
2,900 L.F. storm drains @ $60/L.F.	174,000	
11 EA. curb inlets @ $5,000/EA.	55,000	
23 Acres seeding @ $1,500/Acre	34,500	
Erosion and sediment control, L.S.	31,000	
Subtotal		$ 983,700
Contingency (10% of Construction Cost)		$ 99,000
TOTAL CONSTRUCTION COST		**$ 1,082,700**

Related Cost:

20% of Total Construction Cost	$ 217,000	
TOTAL RELATED COST		**$ 217,000**
TOTAL PROJECT COST		**$ 1,299,700**

TABLE 8

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

EAST LOOP ROAD

Construction Cost:

177,600 S.F. site preparation @ $1.75/S.F.	$ 310,800	
80,800 S.F. pavement @ $1.75/S.F.	141,400	
6,800 L.F. curb & gutter @ $15/L.F.	102,000	
12,000 S.F. sidewalks @ $2/L.F.	24,000	
10,600 C.Y. earthwork @ $5/C.Y.	53,000	
3,700 L.F. storm drains @ $60/L.F.	222,000	
14 EA. curb inlets @ $5,000/EA.	70,000	
5 Acres seeding @ $1,500/Acre	7,500	
Erosion and sediment control, L.S.	40,000	
Subtotal		$ 970,700
Contingency (10% of Construction Cost)		$ 98,000
TOTAL CONSTRUCTION COST		**$ 1,068,700**

Related Cost:

20% of Total Construction Cost	$ 214,000	
TOTAL RELATED COST		**$ 214,000**
TOTAL PROJECT COST		**$ 1,282,700**

TABLE 9

PRELIMINARY STATEMENT OF PROBABLE PROJECT COST

FOR THE

LONESOME PINE REGIONAL BUSINESS & TECHNOLOGY PARK

STORMWATER MANAGEMENT

Construction Cost:

Stormwater detention pond, L.S.	$ 300,000	
2,600 L.F. storm drains @ $60/L.F.	156,000	
Subtotal		$ 456,000
Contingency (10% of Construction Cost)		$ 46,000
TOTAL CONSTRUCTION COST		**$ 502,000**

Related Cost:

20% of Total Construction Cost	$ 101,000	
TOTAL RELATED COST		**$ 101,000**
TOTAL PROJECT COST		**$ 603,000**

IMPLEMENTATION

"The development of the Lonesome Pine Regional Business & Technology Park would be a major regional economic development initiative and would have substantial regional impact. The Park would be one of the most focused and comprehensive technology developments in southwest Virginia."

. . . Virginia Coalfield Economic Development Authority

Identified strategic alliances that are required for the successful implementation of the development of this Park include, but may not necessarily be limited to, the following:

- Clinch Valley College
- University of Virginia
- Mountain Empire Community College
- Southwest Virginia Center for Higher Education
- Virginia Tech/Corporate Research Center/Center for Coal and Energy Research
- Wise County Information Technology Task Force
- Center for Economic Technology
- Coal Industry
- Forest Products Industry
- Bell Atlantic - Virginia
- Old Dominion Power Company
- LENOWISCO Planning District Commission
- Wise County Board of Supervisors
- Wise County Industrial Development Authority
- City of Norton
- Town of Wise
- Town of Coeburn
- Town of Pound
- Town of Big Stone Gap
- Town of Appalachia
- Town of St. Paul

The implementation of the Park's development must be led by the Wise County Industrial Development Authority. Activities for the IDA to consider include:

- Form Alliances
- Apply for Funding
- Support marketing activities led by Virginia Coalfield Economic Development Authority

"The development would help position the coalfield region for technology job growth in the future and would greatly enhance economic diversification in the region. This important initiative will require dedicated commitment of the Virginia Coalfield Economic Development Authority, Wise County Industrial Development Authority, LENOWISCO Planning District Commission, local governments of Wise County, City of Norton, Town of Wise, and public education officials."

. . . Virginia Coalfield Economic Development Authority

APPENDIX A

EXHIBITS