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## **INTRODUCTION**

This Project Narrative and the information that follows represent the proposal for the design and development of a residential Project, to be known as 48.7± acres, located on the easterly side of Michael Road in the Town of East Greenbush, Rensselaer County, New York located in the north-eastern portion of the City of Troy, Rensselaer County, New York, just south of the intersection of Luther Road (NYS Rt. 151), and is identified as Tax Map Number 156.-6-18.125.

The project applicant, Covered Bridge Partners, LLC, represented by Mr. Armand Quadrini as the Managing Member, is under agreement for purchase and is authorized, by the owners, to pursue approvals for the proposed development. The subject parcel is undeveloped land and is entirely located in the R-B Residential Buffer Zoning District.

## **PROJECT DESCRIPTION**

Covered Bridge Village is proposing a Planned Development District (PDD) for the construction of seven (7) apartment buildings. Six (6) units will contain 28 units per building and the seventh building will contain 118 units. The proposed development will generally contain 36 studio apartments, 94 one-bedroom apartments, 140 two-bedroom apartments and 16 three-bedroom apartments; a total of 286 units.

The Project site is currently wooded, vacant land. It is to be developed as apartment housing. The Project will have a connecting roadway along Michael Road, associated utilities, attached garages, surface parking lots, community clubhouse for meetings and social gatherings, on-site fitness center, pool, tennis courts, multi-use field, walking trails and enclosed parking. The plan calls for a three and four-story building types. All buildings will have an enclosed parking garage together with surface parking space for each unit and guest.

The applicant intends to construct the apartment units in a floor plan and material finish that will appeal to renters and to future home buyers. The development will provide new, fresh and energy efficient residential apartment opportunities to the residents of the Town of East Greenbush and surrounding area. The project will add significant tax assessment to the Town and Rensselaer County tax base and local community benefit to the residents of the Town of East Greenbush.

The Project will be located on the easterly side of Michael Road and extends some 2,350±' along Michael Road. The property is generally rectangular in shape measuring 970' average width by 2,350' long.

The property is bounded westerly by Michael Road; easterly by Interstate 90; a National Grid electric transmission corridor which bypasses the property in a northeast-southwest alignment and divides the main body of the property into two areas; southerly by undeveloped lands; and northerly by lands containing a garage and storm water detention basin for an adjacent property to the west of Michaels Road.

The subject property begins on Michael Road, approximately 650' southerly of Luther Road (New York State Route 151) intersection with Michael Road. Municipal water and sanitary sewer utilities are located on Michael Road, north of the property. The intersection of Michael Road and Luther Road is a signalized intersection. Development on the westerly side of Michael Road in the project vicinity consists of the East Greenbush Community Library, a YMCA facility, and Hawthorne Ridge Senior Apartments; all three facilities are located along Community Way, a private drive.

The infrastructure development of the site will consist of the construction of approximately 4,600 linear feet of connecting private roadway, together with utility extensions for water, sanitary, electric, gas, telephone, cable and landscape improvements. The water main and sanitary sewer will be located within utility easements, to be offered for dedication to the Town of East Greenbush, upon completion. Stormwater management will consist of a collection system(s) and management area(s)

## **ZONING & LAND USE**

The Project is in the R-B Residential Buffer Zoning District which is a transition zone between Commercial-Apartment Land use and single family residential land use. Lands to the west is in a Planned Development District (PDD), comprise of community and commercial land uses (i.e. East Greenbush Public Library, a YMCA facility and the Hawthorne Ridge Senior Citizen Apartment facility). Lands to the east is Interstate 90 (I-90) which has a corridor width of 300'-400'. The I-90 corridor creates a natural buffer between the proposed Project land uses easterly of I-90. The remaining lands are also in the R-B Residential Buffer Zoning District and are largely undeveloped lands with areas of steep topography.

The existing land use between the northerly boundary of the Project and Luther Road consists of a single-family residence and garage. This area has limited to no opportunity for additional development due to small size of the parcel, and limiting natural features of Michael Road, Luther Road and the Mill Creek water course and stream buffer. The remaining lands to the south, along Michaels Road is predominantly residential in nature.

## **SOIL CONDITIONS, GROUNDWATER & TOPOGRAPHY**

The parcel is undeveloped lands with wooded areas and areas of open brush/meadow. Site topography is moderate with steep slope areas. Mill Creek, a Town of East Greenbush, significant watercourse, runs through the property generally parallel with Michael Road and has a FEMA identified flood plain along its course. The property contains several wetlands, the largest surrounds Mill Creek and is 10.1± acres in size. The Town of East Greenbush requires a 25' setback from all Federal jurisdiction wetlands. The Town of East Greenbush has identified Mill Creek as an important community feature and has identified an area 50' to either side of the watercourse as a protected corridor.

According to soil mapping and descriptions provided by the Soil Survey of Rensselaer County, New York (USDA, 1978), soil types found on-site consist of the following:

Bernardston Series consistent of deep, well drained soils on glaciated uplands, 15 to 25 percent slopes; Limerick Series consistent of deep, poorly drained soils on flood plains rolling, 0 to 3 percent slopes; and Pittstown Series consistent of deep, moderately well drained soils on glacial uplands, 0-35 percent slopes.

The topography of the site is varied, with steep sections and flatter plateaus. Approximately 100% of the site drains to the west, collecting within a low area located along Mill Creek. The drainage area of the site is tributary to the Hudson River. The topography of the property will require the use of terraces and retaining walls to develop pads for buildings, parking and driveways. The terraces and walls will become distinctive site features to buffer and screen parking lots and add to the aesthetic qualities of the development. An internal sidewalk system will be developed to encourage resident passive exercise and pedestrian circulation throughout the site. Two (2) apartment buildings will be developed along the proposed private section of Michael Road. These units will be located outside the FEMA flood plain and elevated so that the first-floor elevation would be a minimum of 2' above the flood plain elevation.

## **MILL CREEK ASSESSMENT**

Mill Creek is a Class C(TS) stream which bisects the project site. A 10.1± acre federal wetland has been delineated along Mill Creek's course. The Town of East Greenbush requires a 25' buffer around wetlands. The development proposes no development within this 25' buffer except for where Covered Bridge Way intersects Mill Creek. The access roadway would bridge across the Creek and not alter its channel. Where practical, a walking trail would be developed along the course of stream for public enjoyment of the natural feature. Stabilized Stormwater Management discharge features would also occur within the corridor for the discharge of development stormwater to Mill Creek. These discharge points would be minimized, and the

areas of construction disturbance would be restored to their original condition. The Mill Creek corridor will be protected by a Conservation restriction against future development. There would be minimal, if any at all, impact to Mill Creek and its adjacent area caused by the development.

### **STORMWATER MANAGEMENT & DRAINAGE**

To accommodate the proposed development, it will be necessary to add an on-site stormwater collection system and management area. The stormwater collection system will be provided using Best Stormwater Management Practices (BMP). Downstream control structures and basins will regulate the discharge rate by not exceeding the peak flows for pre-development conditions. Major runoff from roofs, pavement and other impervious areas will be directed to the storm sewer system and management areas. The flow data will be generated and based on the Rational Runoff & Storage-Induction Methods for both pre-developed and post-developed conditions and the Water Quality and Quantity Controls according to the NYS Stormwater Pollution Prevention Plan (SWPPP) Design Manual, January 2015 and NYSDEC GP-0-15-002 Permit Requirements.

The stormwater management model used for the design of the stormwater management areas will be based upon 1-year, 10-year, and 100-year peak frequency twenty-four-hour storm events for pre-development and 1-year, 10-year, and 100-year peak frequency twenty-four-hour storm events for post-development.

The discharge rates and volumes of the control structures, ponds, and direct runoff will be regulated. The post-developed flows will be stored and released over time through various Stormwater Management Practices (SMP) for water quality and quantity utilizing porous pavements, swales and Detention Ponds.

All erosion and sediment control measures will be implemented prior to commencing excavation or grading as shown on the plans and will remain in operation until the projects' end.

### **WATER SUPPLY**

Presently, an 8-inch water main is proposed as an extension of the existing municipal infrastructure, together with hydrants and related appurtenances to be installed within a combined water and sewer utility easement, in accordance with Town of East Greenbush standards. The costs of the extension of utility infrastructure system, including upgrades to existing infrastructure, would be the responsibility of the Developer and conveyed to the Town of East Greenbush upon completion.

It is estimated that the peak average daily flow for the proposed development will be 110 gallons per day per capita (gpd) per bedroom (110 x 1.0 x 286 DU), for a total of 31,460 gpd and using a peak factor four (4) is 125,840 gpd or 87.4 GPM. The water main will be installed at a minimum depth of 5 feet 6 inches. The flow pressure and capacity of the existing interconnection mains will be investigated as part of the Project engineering design. Initial investigations indicate that the Project water demands will not have a significant impact on the Town's water system.

### **PRESSURE DATA**

The existing eight (8) inch diameter water mains located along Michael Road will be extended and connected to form a loop within the proposed development. Though not directly related to the Covered Bridge project, the connection should produce needed demand to service the proposed development. In general, the Covered Bridge project will be making one (1) connection to the existing 8-inch water main along the west side of Michael Road.

Hydrant flow tests were conducted near the proposed water main at the intersection of Michael Road and Luther Road by the Town of East Greenbush personal on October 17, 2017. The static pressure was measured at 75 pounds per square inch (psi), with a residual of 65 psi. The flow measured at the flow hydrant was 1,350 gallons per minute (gpm). Based on the elevation at a hydrant at the highest point in the development (350 feet), when as compared to the elevation at the flow test hydrant (290 feet), the difference in static head pressure head is 60 feet or 138.6 psi. With the addition of friction head losses (30± feet) to the static head loss, the total head loss is estimated 90 feet, or 207.9 psi loss. Based on these measurements, the calculated fire flow at the residual hydrant at the residual pressure of 20 psi is well above the needed fire flow of 1,000 gpm.

Using a desired residual pressure of 20 psi at the same hydrant location in the development, the calculate available flow is estimate as follows:

$$Q_r = Q_f \times \frac{h_r^{0.54}}{h_f^{0.54}}$$

where:  $Q_r$  = the flow available at the desirable residual pressure, in gpm

$Q_f$  = the sum of the flows from all hydrants, in gallons per minute

$h_r$  = the difference in pressure between the static pressure measured at the residual hydrant and the desired residual pressure, in pounds per square inch

$h_f$  = the difference between the static pressure and residual pressure measured at the residual hydrant, in pounds per square inch

Known: Fire Hydrant Flow Test Data

Static Pressure = 70 psi

Residual Pressure = 65 psi

Total Field Flow = 1,350 gpm-207.9 gpm = 1,142.10 gpm

Desired Residual Pressure = 20 psi

$$Q_r = 1142.1 \text{ gpm} \left[ \frac{(75 \text{ psi} - 20 \text{ psi})^{0.54}}{(75 \text{ psi} - 65 \text{ psi})^{0.54}} \right] = 2,723.6 \text{ gpm (AVAILABLE FLOW @ 20 PSI)}$$

According to the American Water Works Association Manual of Water Supply Practices-Distribution System Requirements for Fire Protection, the needed fire flow requirement, the existing Niskayuna Water District Water Distribution System has the capacity to supply the proposed Rivers Ledge of Niskayuna with an adequate water supply for domestic and fire demand.

In accordance with ISO and GLUMRB, fire hydrants should be provided at intermediate points between intersections. Generally, fire hydrant spacing ranges from 350 – 650 Feet. For needed fire flows of 1,000 GPM, each fire hydrant is expected to cover approximately 160,000 square feet. As the needed fire flow increases, the average area covered by a fire hydrant decreases. Thus, for this project, fire hydrants will be located at approximate 500-foot maximum intervals. Automatic combination air valves will be installed at high points in the water main to remove accumulated air.

### **WASTEWATER DISPOSAL**

Presently, a Low-Pressure Sewer (LPS) system is proposed and to connect into the existing system at the intersection of Michael Road and Community Way that is presently directed to the Couse/Luther Road Pump Station. Additional analysis will be performed to determine the capacity for the development.

It is estimated that the average daily flow for the proposed development will be 110 gallons per day per capita (gpcd) per bedroom (110 x 1.0 x 286 DU), for a total of 31,460 gpd. The total maximum peak flow using a factor of four (4) is 125,840 gpd or 87.4 GPM or 0.19 cfs. Initial investigations indicate that the Project sewer demands will not have a significant impact on the Town's sewer system.

### **ROADWAYS & TRANSPORTATION**

The subject parcel has frontage on one (1) public road, Michael Road. The Institute of Transportation Engineers' (ITE) Trip Generation, 8<sup>th</sup> Edition (an industry standard) was used to approximate the increase in traffic due to the proposed project. The Trip Generation Summary

will be prepared by Creighton Manning Engineering, LLP, though presently identifies the AM Peak Hour to be 122 total trips, and the PM Peak Hour to be 146 total trips resulting from this project. Traffic impacts are anticipated on weekdays during peak commuter traffic periods of between 7AM and 9AM and between 4PM and 6PM. The trips would be distributed over two (2) proposed points of interest, Michael Road and Luther Road.

Access to the proposed development will be from Michael Road. A private drive, tentatively named Covered Bridge Way, will exit from, Michael Road, cross Mill Creek, and provide access to seven (7) apartment buildings. The 24' wide paved portion of Covered Bridge Way will terminate approximately 2,200' into the site. A gravel roadway will extend for  $\pm 1,100'$  and terminate at Michael Road immediately south of the existing Michael Road/Mill Creek crossing. Covered Bridge Way will be privately owned and maintained by the development and will contain a "New England" style covered bridge as a development identity feature.

The property boundary presently runs along the center of Michael Road and the Town has a by-right maintenance easement within Michael Road for the highway elements maintained by the Town. For the portion of Michael Road to remain public the proposed development would transfer by deed that portion of highway right-of-way located within the development limits. This portion of right-of-way will be established as a 30' wide strip from the centerline of pavement easterly therefrom.

The project proposes realigning a portion of Michael Road along the easterly property line adjacent to the proposed public park and recreation area. This new alignment change will integrate an improved visual and stopping sight distance along this portion of the roadway. Together with local traffic using Michael Road, the entrance to the new town park will also benefit from the alignment.

Considering the location of other main arterials in the area, it is not anticipated that peak and off-peak vehicle trips will have an appreciable impact to the present traffic conditions of the neighboring community. The revised level of service analysis prepared by CME will determine if capacity exists to accommodate the proposed development and what improvements, if any, are required to maintain an acceptable level of service.

## **COMMUNITY SERVICES**

The Project will have little impact to police, fire, and emergency medical services. These services already exist within the Town and cover the development area. No new equipment or personnel are required because of the proposed development. The development has provided several access points to aid with emergency access response.



The Project has the potential to add school age children to the East Greenbush School District. Planning guidelines indicate that apartment development may generate 0.1 school age child per dwelling unit. This could be the case for the one-bedroom and two-bedroom apartments, where the studio apartments are generally one adult occupant.

The Project will have a total of 286 dwelling units with the potential for 29 school age children. The East Greenbush School District has the capacity to accept additional school children. Since the development will be phased, this estimated number would be spread over time and could occur only at full build-out and occupancy. This impact is considered to be minimal and could be offset by the additional school tax revenue generated by this project.

### **VISUAL, NOISE, ENVIRONMENT AND MISCELLANEOUS**

Though visual and noise aspects are a concern, adjoining parcels of land that are presently developed support residential-type development. This development is comparable to the adjoining properties and should not have an appreciable impact relative to visual aesthetics and noise.

The proposed development will have a minimal to slight impact on the environmental character of the property. Development is proposed to occur in the meadow-brushy areas of the property, while preserving to the greatest extent the existing wooded area. The Mill Creek stream and stream buffer are proposed to be preserved to the greatest extent possible. Impact will occur at the driveway entrance crossing Mill Creek and at points of stormwater discharge to the creek. However, these impacts will be minimized to the greatest extent practical. The development proposes over 38 acres (78%) of the total project to remain as green area/open/woods space. Of which 25 acres (52%) to remain undisturbed. The potential for wildlife disturbed by development will relocate to the undisturbed portions of the site and remain on or in close proximity to the development. Areas disturbed by the development will be re-vegetated and new landscaping, lawn and trees will be added around the buildings, parking areas and roadway.

Proposed apartment buildings will also exhibit a "New England" theme, and architectural features. The site and buildings will be terraced to take advantage of the parcel's topography. Parking has been provided at a ratio of 1.7 spaces per studio and one-bedroom apartments, 2.0 spaces per two-bedroom apartment and 2.2 spaces for three-bedroom apartments. Several apartment buildings will incorporate garage parking on their lower level to accommodate one enclosed space for two-unit and three-unit apartments. Project development also incorporates

a community club house for meetings and social gatherings, an on-site fitness center, a swimming pool and tennis courts as resident amenities.

Electric, telephone, cable television, and natural gas exist in the development vicinity and would be extended to service the development. The costs to extend these utilities to the development would be the Developer's responsibility.

### **SOLID WASTE DISPOSAL**

Solid waste collection will be by an independent and qualified refuse contractor. In 2006, the United States Environmental Protection Agency (USEPA) estimated that the national per capita garbage generation rate was 4.6 pounds per person per day. The recycling rate was 1.5 pounds per person per day. Therefore, the discard rate after recycling was 3.1 pounds per person per day. Assuming one person per bedroom, on average, the total Project discard rate would be  $(3.1 \times 1 \times 458) = 1,420$  pounds per day, or  $21.3\pm$  tons per month. The cart hauler services will be contracted with a private company. Based on the amount generated and type of use proposed, it is anticipated that the solid waste produced will have no appreciable impact on the community's existing services.

### **DEVELOPMENT IMPACTS AND MITIGATION TO ADJACENT NEIGHBORHOODS**

The proposed apartment development would be consistent with the existing residential and commercial uses located along Community Way. These existing uses include the East Greenbush Community Library, a YMCA facility, and the Hawthorne Ridge Senior Apartments. The development is bounded by Interstate 90 on the east and is buffered from highway traffic by topographic conditions and a substantial wooded/brush area. The property located along southerly boundary is wooded, undeveloped lands with challenging topographic conditions. There is limited existing development between the northern boundary of the property and Luther Road. Most of the proposed development is setback several hundred feet from Michael Road and would be buffered by the existing vegetated corridor along Mill Creek. The development of Covered Bridge Village PDD will have a minor impact on the adjacent neighborhood. The phasing of the project will reduce the impact caused by construction vehicle traffic. Realigning Community Way and Michael Road will cause temporary interruption in traffic due to lane closures and construction vehicles. Standard work-zone traffic control practices will be employed to minimize these disruptions and provide safe travel during these temporary periods.

### **COMMUNITY BENEFITS FROM THE PDD**

The proposed Covered Bridge PDD is fully compatible and in harmony with adjacent commercial and residential land uses. The existing zone allows a development density of 2 dwelling Units

per acre which allows approximately 34 units when constrained lands are taken into consideration. The Project contains 5.9 dwelling units per acre of gross land area. The Project proposes to provide several important and beneficial Community benefits to the Town of East Greenbush as inducement for the Town Board's consideration and approval of the proposed Covered Bridge Village PDD and its development density. The proposed Community benefits would be in addition to the Town "development mitigation fees" and "Sewer I/I fees". The proposed Community benefits are estimated in the range of \$2,500,000 - \$2,750,000 and covers two proposed Community benefit projects as follows:

- I) Realignment of Michael Road to make improvements to sight and stopping distance. The Town Highway Department has also identified the portion of Michael Road which parallels Community Way as a high maintenance portion of highway and supports realignment of Michael Road. The Developer of Covered Bridge Village offers, as a Community benefit to the Town of East Greenbush, to construct approximately 1,500+/- linear feet for a new alignment of a portion Michael Road, with bike/walking path. The Developer's proposal for this new highway construction is estimated to cost in the range of \$600,000-\$800,000 which represents is a substantial contribution to the Town while also improving the condition and functionality of the local highway system.
- II) The donation of developable lands along Michael Road for the creation and construction of a town park and recreation facility, has been discussed, but is not a viable solution for the town this time. This being the case, it is proposed to include an additional park mitigation fee, in the amount of \$1,000.00 per unit, increasing original mitigation fee for the project from \$2,288,000.00 to \$2,574,000.00.

The Community benefit projects proposed by the Developer of Covered Bridge Village should be identified as substantial and provides meaningful improvements benefitting Town residents and the Town of East Greenbush.

## **CONCLUSION**

The conditions outlined in this report represent existing and proposed conditions and engineering and planning methods for the development of this site. It is believed that this project will not result in significant adverse effects on the environment and that it will not pose detrimental impacts on water, sewer, drainage, traffic, noise, visual or other impacts on the adjoining properties or to the community.

Covered Bridge Village PDD will provide modern, fresh and energy efficient residential opportunities for residents of East Greenbush and the surrounding area. The "New England"

theme of the Covered Bridge feature and building architecture will provide an aesthetically pleasing appearance and setting. The proposed development attempts to accent the natural setting of area while complimenting the surrounding neighborhood and adjacent commercial land uses. Covered Bridge Village will enhance revenue for the Town of East Greenbush and Rensselaer County with minimal community investment or impact to community services.