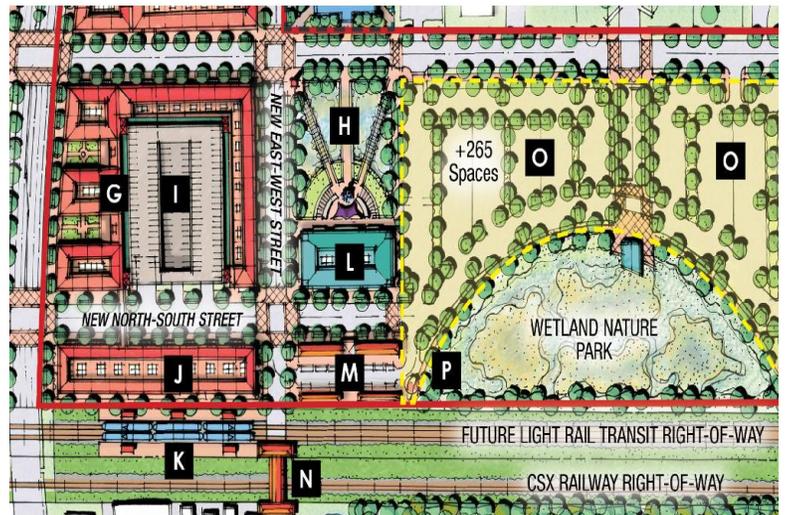


# WALDORF URBAN REDEVELOPMENT CORRIDOR

An Analysis and Recommendations for Implementing a “Phase One” Transit-Oriented Development Project in Downtown Waldorf, Maryland



Prepared for the Department of Planning and Growth Management  
Charles County Government

February, 2013



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### Report Limitations

This report (the "Report") was prepared for the exclusive use of Charles County Government, Maryland, to support its internal discussions and evaluation for the implementation of a Phase One Development within the Waldorf Urban Redevelopment Corridor (WURC).

The Report is intended to provide an overview of the implementation strategies for a Phase One Development within the WURC. This report is based upon publicly available information, information provided by Charles County Department of Planning and Growth Management staff, public officials, visual site observations, and the professional judgment of the WURC Team. The WURC Team has assumed that the information provided by public agencies and/or officials, including plans of record, are factual and accurate and thus we may not have independently verified the accuracy or completeness of such information. The WURC Team accepts no responsibility for any deficiency, misstatement, or inaccuracy contained in this Report as a result of inaccuracies, omissions, misinterpretations or fraudulent acts of others, or plans of record. With respect to our discussion of regulations and financial incentives, these are subject to periodic amendment and interpretation and those interpretations may change over time. Further, this report addresses the implementation of this project in a general manner only. The information contained herein must therefore be considered generalized in nature and subject to further refinement as the project progresses through its next stages. No warranty is either expressed or implied. The WURC Team can assume no responsibility for interpretations of the enclosed information made by others or how this information is used based upon those interpretations

The scope of the WURC Team's review is described in this Report, and is subject to restrictions, assumptions, and limitations. Except as noted herein, the work was conducted in accordance with the scope, terms and conditions of Loiederman Soltesz Associates' (LSA) Proposal dated May 10, 2011, RFP No. 11-45 Waldorf Urban Design Study as accepted by Contract signed by Mr. David Cooksey, General Manager/Sr. Vice President, (LSA) and Mrs. Candice Quinn Kelly, President for the Charles County Commissioners, Charles County Maryland on July 27, 2011. The analysis, conclusions and recommendations contained in this report represent the best professional judgment and advice of the WURC Team and opinions presented herein are based upon information that existed at the time of the writing of the Report. It is understood that the services provided for in the scope of work allowed the WURC Team to form no more than an opinion of the potential implementation of a Phase One Development within the WURC and the development opportunities for the WURC itself.

Should you have any questions concerning this report, or the limitations set herein, please do not hesitate to contact our office.

\_\_\_\_\_  
David W. Cooksey, Principal  
Loiederman Soltesz Associates, Inc.

\_\_\_\_\_  
Date

## WURC – INTRODUCTION

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### A. INTRODUCTION

The Waldorf Urban Design Study (WUDS) was initiated by the Charles County Commissioners in 2008 to create a transit-oriented, mixed-use, walkable new urban center in Downtown Waldorf. The WUDS area of Downtown Waldorf covers approximately 300 acres along the Old Washington Road corridor (MD Route 925), north of Acton Lane to south of Leonardtown Road (MD Business 5), and between U.S. 301 and the CSX railroad tracks. In 2010, the Charles County Commissioners adopted the results of the completed study—the *Downtown Waldorf Vision Plan and Design Guidelines*, and *Zoning Ordinance*—as an amendment and update to the 2006 *Charles County Comprehensive Plan*.

Additional impetus for the WUDS was provided by the initiation of a concurrent study by the Maryland Transit Administration, the “*Southern Maryland Transit Corridor Preservation Study*,” also completed in 2010, which for the first time identified an alignment for future high-capacity, fixed-route mass transit service between the Metrorail transit station at Branch Avenue in Prince George’s County, and Waldorf and White Plains in Charles County. The Charles County segment of the transit alignment recommended by the MTA study, and subsequently endorsed by Charles and Prince George’s counties, is immediately adjacent to the CSX railroad right-of-way that runs north and south through the WUDS area, parallel to and east of Old Washington Road.

The complementary nature of the two studies was evident at the outset, and informed the work of both project teams. It was clear that the development and implementation of a plan for the redevelopment of the Old Washington Road corridor, focusing on transit-oriented development within walking distance of future transit stations at Leonardtown Road and Acton Lane, would significantly enhance the feasibility of extending high-capacity, fixed-route transit to Charles County—preferably light rail transit which has been a regional goal for decades.

Similarly, a significant study by the State of Maryland that defined, for the first time, a future transit alignment connecting Waldorf and Washington, D. C. would provide a tangible incentive for new private sector investment in Downtown Waldorf, especially as the initiative gathered momentum and support, detailed planning and engineering studies were completed, State and federal funding commitments were made, and the construction and arrival of passenger rail service became imminent.

In both Charles and Prince George’s counties, a high-capacity mass transit alignment would provide additional tools for effective growth management in both jurisdictions. By incentivizing denser development in the urban core near future transit stations, mass transit could provide the means to offer a wider spectrum of housing and lifestyle choices, and reduce pressure for development in rural areas. In Charles County, where the State projects that the population will grow by 74,000 people and more than 30,000 households in the next 25 years, this could have a significant impact on protecting the historical character and identity of the County’s rural communities, and reducing the cost of extending infrastructure and public services into undeveloped areas of the County.

A successful transit-oriented redevelopment strategy for Downtown Waldorf could also be replicated within the half-mile walking distance of other proposed transit stations along the entire 6-mile Charles County Transit Development Corridor. During the 13 to 15-years needed to plan and construct a light rail transit system,

## WURC – INTRODUCTION

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an effective transit-oriented development program would ensure that Charles County has the potential transit ridership necessary to compete for federal and State funds and build the system.

In this context, the Charles County Commissioners, having adopted the *Downtown Waldorf Vision Plan, Design Guidelines* and *Zoning Ordinance*, decided to take the next logical step, and commissioned an implementation study, which is the subject of this report. The WUDES, now re-named the Waldorf Urban Redevelopment Corridor, or WURC, needed a “plan of action” or implementation strategy that would breathe life into the vision plan adopted in 2010.

Central to the implementation of the Downtown Plan for Waldorf is the concept of a “Phase One” project with the potential to begin the transformation of the WURC into a transit-oriented new urban center. This report and its recommendations provide an integrated, coherent design concept for a dynamic new urban place focused on quality of life, mobility and economic opportunity for its residents, visitors and the County as a whole.

The foundation for this concept rests on transit-oriented development and urban design concepts that have proven successful in other places, where visionary public and private sector leaders are working together to transform their communities and build competitive local economies linked to efficient rapid transit infrastructure. The consultant team has analyzed all the ingredients of success: site selection, the local and regional market, infrastructure and land requirements, cost-benefit and revenue potential, the funding strategy, and the institutional capacity needed to implement the project. Our findings and recommendations are presented on the following pages.

### B. EXECUTIVE SUMMARY

This report presents an analysis and recommendations for implementing a “Phase One” transit-oriented development project at “Waldorf Center” in the Waldorf Urban Redevelopment Corridor (WURC).

The Waldorf Urban Design Study, Design Guidelines and Zoning, which were completed and adopted by the Charles County Commissioners in 2010, set forth a vision for the transformation of an automobile-dependent downtown Waldorf to a transit-oriented, walkable, mixed-use new urban community—a place to live, work and play. This report presents an analysis of what it will take to begin this transformation, and a concrete and specific plan of action for bringing the vision to reality on a strategically-located “Phase One” site within the WURC.

This analysis and “Phase One” implementation plan is the result of more than eighteen months of work by an interdisciplinary consultant team of experts in all aspects of urban planning, design, engineering, infrastructure, land use, economics, and intergovernmental relations.

After an extensive review of possible candidate locations within the 300-acre WURC, the consultant team identified a prime site for the “Phase One” project on +/- 30 acres north of the intersection of Leonardtown Road (MD Business 5) and Old Washington Road (MD 925), between U.S. 301 and the CSX Railroad. This site has long been identified as an opportunity for strategic redevelopment and reinvestment, at one of the most highly visible and accessible locations in Charles County and Southern Maryland. In 2010, the Maryland Transit Administration defined a high-capacity, fixed-route transit alignment corridor between Waldorf and Washington, D.C., proposing a future light rail station adjacent to the selected “Phase One” development site, providing a potential future catalyst for private sector investment in transit-oriented development (TOD) at this location.

The market analysis for a “Phase One” project at this location indicated support for a development program consisting of 659,000 square feet of mixed-use development— residential, commercial office and retail—including a specialty grocer, a new 80-100 room hotel, Class A office space, and a fitness center, enhanced by community assets and public amenities such as a public square, parks and open space, a civic center, and a public market. The entire “Phase One” site is within a quarter-mile walk of the future transit station—which initially would be a commuter bus stop and 540-space park and ride lot until plans for light rail transit service can be implemented. The Phase One plan is therefore not dependent on transit, and acknowledges that the transition from automobile and commuter bus to high-capacity fixed-route transit will occur later at this site.

The “Phase One” and “Phase Two” development concepts in this report suggest how the site could evolve in the future. For example, the Park and Ride Lot in Phase One would transition into mixed-use development with structured parking in Phase Two, when the arrival of light rail is imminent. The design concept for “Waldorf Center” is subject to change as new public and private sector partners become engaged in the project, but as a “design for living” this plan would create a unique “sense of place” and offer an alternative to conventional development patterns that can be found nowhere else in Charles County and Southern Maryland.

The in-depth infrastructure analysis performed for this report determined that significant public sewer improvements are needed at the “Phase One” site and in Waldorf generally. The sanitary sewer system in this part of Waldorf is antiquated, deteriorating, obsolete, and undersized. Steps need to be taken, which are recommended in this report, to upgrade and modernize the sewer system. The need for these improvements is greater than the “Phase One” project or the WURC alone would justify, but perhaps this report will provide the impetus for action necessary to maintain the economic growth potential of northern Charles County. Some of the required engineering and design work is already programmed in the

## WURC – EXECUTIVE SUMMARY

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County's CIP. Other projects would need to be added to the CIP or Water and Sewer Enterprise Fund, or accelerated so they could start in FY 2014.

The first year (FY 2014) implementation budget for the "Phase One" development is \$4.2 million. \$3.2 million of this total is already in the County's Capital Improvement Program or unspent prior years funding. \$700,000 for design and engineering projects would need to be included in the Water and Sewer Enterprise Fund, and \$300,000 would need to be included in the General Fund Operating Budget to create and staff the redevelopment office for "Downtown Waldorf," or be allocated to a combination of these local funding sources.

It is typical for new TOD projects to rely on local funding in the early years of implementation, with State, federal, and private sector contributions playing a greater role later in the implementation process. This report includes funding recommendations that will eventually mobilize all potential sources of public sector support at the local, regional, state and federal levels, and the private sector. The opportunity exists for the State to play a major role in this project, through the agencies and funding resources represented on the "Governor's Smart Growth Subcabinet" and their interest in the redevelopment of "Downtown Waldorf" as a walkable new urban community linked to transit.

The recommendations that appear on the following pages provide the action steps that need to be taken by the Charles County Commissioners in their current budget deliberations, and in the remaining months of FY 2013 and in FY 2014, to put the "Phase One" development plan at "Waldorf Center" on a path toward successful implementation.

### C. RECOMMENDATIONS

The WURC Consultant Team recommends that the Charles County Commissioners take the following actions to begin implementation of the “Phase One” development plan at “Waldorf Center”:

- Initiate the four “Very High Priority” infrastructure priorities for the “Phase One” development plan in FY 2014, with funding in the Charles County Capital Improvement Program (CIP), and the Water and Sewer Enterprise Fund, to begin the design and engineering phase of an upgraded public sewer and water system in the Waldorf area, coordinated with the reconstruction of Old Washington Road.
- Commit County funds in the FY 2014 General Fund Operating Budget to establish a “Downtown Waldorf” redevelopment office with an executive leader in transit-oriented development (TOD) and access to real estate, finance and legal experts.
- Begin securing the land needed to implement the “Phase One” development plan.
- Design a branding strategy for “Downtown Waldorf” and begin implementing a public relations campaign for the “Phase One” development plan.
- Begin an outreach effort to engage civic and community groups, business and property owners in the Waldorf Urban Redevelopment Corridor.
- Brief the Governor, State legislative leaders, cabinet secretaries (including the “Smart Growth Subcabinet), the Congressional Delegation, and other potential intergovernmental partners at the State and federal levels on the “Phase One” development plan, and pursue State and federal funding commitments.
- Pursue State designations and eligibility for special funding for elements of the “Phase One” development plan, such as the Maryland Department of Transportation’s Transit-Oriented Development (TOD) Designation.
- Designate a Tax Increment Financing (TIF) District, and request amendments to enabling legislation for “Special Taxing Districts” and other statutes that may be needed to facilitate the redevelopment plan.
- Facilitate the implementation of public projects in the development plan, such as the Multi-Generational Senior Center, the Public Square Urban Park, the Wetland Nature Park, and a future Fine Arts/Performing Arts/Civic Center with State and private sector support.
- Continue the momentum of the Charles County Commissioners’ High-Capacity Fixed-Route (Light Rail) Transit Initiative, and expedite the formal transit planning and federal project development process with the Maryland Department of Transportation (MDOT) and Prince George’s County, as a catalyst for future

## WURC – RECOMMENDATIONS

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private sector investment in the “Phase One” development, the WURC and the Charles County Transit Development Corridor.

- Request that transportation projects supporting the “Phase One” development be included in the MDOT’s Consolidated Transportation Program (CTP), such as a new Park and Ride Lot and Transit Stop at “Waldorf Center,” enhanced improvements on MD 5 Business, reconstruction of Old Washington Road (MD 925), and the Light Rail Transit Initiative.
- After progress on infrastructure priorities and land assembly is underway, develop an RFP/RFQ to experienced TOD developers in the mid-Atlantic region to initiate discussion of the private sector role and the opportunity for public-private partnerships in the implementation process.

### D. SELECTION OF “PHASE ONE” DEVELOPMENT SITE

#### INTRODUCTION

This document is intended to provide an overview of the Phase 1 Development Plan site identification, feasibility testing and site planning process for the Waldorf Urban Redevelopment Corridor (WURC). The study area for the WURC process included all designated lands and parcels within both the Waldorf Activity Center and Acton Activity Center Zoning Districts, generally bounded by State Route 301/Crain Highway to the west, the CSX Railway right-of-way to the east, Holly Tree Avenue to the north and Terrace Drive to the south.

#### THE PLANNING PROCESS

##### The Workshop

The Consultant Team began the WURC Phase 1 Development Plan process by conducting a three-day workshop with Charles County Planning and Growth Management (PGM) staff on June 12-14, 2012. The primary purpose of the workshop was to: identify potential sites for Phase 1 Development, establish a marketable program for the development, assess utility needs to support the development and prepare a parking resource assessment and strategy to support the Phase 1 Development.

Day one started with a kick-off discussion of project Goals and Principles with PGM staff followed by a morning tour and site reconnaissance of the Old Washington Road Corridor study area. Afternoon interviews were held with local stakeholders, developers and real estate professionals followed by an end-of-day session with PGM Staff summarizing the day's activities and Team findings. During the site tour, the Planning Team identified 5-6 initial candidate sites for Phase 1 Development that were offered to PGM Staff for consideration. The sites were narrowed to three for further study, including:

- A “Waldorf Center North” site;
- An “Acton Center South” site; and,
- An “Acton Center North” site.

Each of these sites is further discussed in this section.

Day two of the workshop focused on testing the potential site size, development program, parking program, utility/infrastructure needs and design layout that could be achieved on each of the initial study sites. In all cases, larger land areas than were required for the marketable Phase 1 Development were initially assessed, so that future layouts could be adjusted to fit final land availability, land options, street and utility

requirements, phasing, etc.

Work continued on the site testing efforts into Day three, resulting in the three initial site concepts depicted on Figures 2, 6 and 10 shown later in this section. The workshop culminated in an afternoon consultant team presentation and work session with PGM Staff where preliminary Phase 1 recommendations were presented for the:

- Preliminary marketing study;
- Phase 1 site development program;
- Three Phase 1 Development site concepts;
- Phase 1 Development parking strategy;
- Phase 1 Development utility network, improvements & stormwater management needs; and
- Preliminary Site Selection Criteria Matrix for a preferred Phase 1 Development site.

##### Initial Site Identification

The Phase 1 Development site selection process considered the following conditions in identifying the top three candidate sites for consideration.

- Currently vacant or underutilized land parcels;
- Lands in proximity to the proposed future light rail right-of-way and recommended light rail station locations;
- Locations that had accessibility to infrastructure
- Lands in proximity to direct and/or indirect access from US Route 301, MD Route 5 and the planned Acton Lane extension;
- Highly visible locations for marketing development

##### Preliminary Site Testing

To properly assess and compare the Development Potential of each site a common set of guiding principles were followed in developing the initial site development concepts. They included the following assumptions:

- Development frontage along Old Washington Road, Route 5/Leonardtown Road or Acton Lane;
- A street grid of two to three additional local roads serving the Phase 1 Development;
- A minimum one acre public park space;
- An optimal five-story development height for buildings and six-levels for parking structures;
- Mixed-use development with ground floor retail fronting all primary streets with office and/or residential above;

## WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

- Provisions for Park & Ride facilities for both short-term bus transit and longer-term light rail transit.

### Site Feasibility Criteria Assessment

The Preferred Phase 1 Development Site Selection Criteria Matrix Process proved to be a valuable tool in further assessing the three candidate sites with the Consultant Team and PGM Staff. Each of the candidate sites were evaluated through the following criteria questions:

1. **What is the study site’s ability to attract and support a strong development program?** - Strong = lots of private sector development, mix of uses. Suitability of the site to the market
2. **Is the study site composed of readily developable land or is there a need to redevelop, move or relocate existing uses?** - Site ready for County to "get started" vs. waiting on private property owner decisions
3. **How easily can the study site lands be assembled for redevelopment?** Consider the number of parcels, property owner interest, existing vacancies (land for sale) and land assessment costs.
4. **Does the site require major upgrades to the County Sewer System?** i.e. Mattawoman force main parallel (not needed for all test sites?) and Zekiah Pump Station.
5. **How easily can the site accommodate the required level of storm water management and filtration?**
6. **What is the anticipated quality and ease of rail access to one (or both) side(s) of the CSX Railway?** (i.e. Both sides?, parking, station spacing)
7. **What is the anticipated quality and level of ease for vehicle access to and within the site?** i.e. From area roads, to bring traffic in/out of the site. (supportive capital projects, i.e. SHA Route 5 Improvement Project)
8. **How visible is the site from US 301 and what is the site’s ability to generate excitement that things are happening?** (i.e. view/perspective of a signature building)
9. **What is the site’s potential for stimulating/ catalyze additional development along the WURC corridor?** (i.e. domino, spin off effect)

10. **Does the site present an opportunity to provide quality public park/green space for the Waldorf and Charles County community?**
11. **What is the site’s ability to maintain, mitigate or improve existing environmental features?**
12. **Ability for parking to support the development program?** (i.e. Ease of parkers to reach destinations, site availability, cost of parking development.)

These questions are provided for your reference, so that you may also consider them as you review each of the three study site development concepts outlined in the next section.

### The Preliminary Workshop Concepts

Preliminary site development framework concepts for each of the three candidate sites were prepared during the workshop process. The purpose for preparing the concepts was to quickly identify potential land assemblages and their site development capacities, so that an optimum amount of land and Phase 1 Development Program could be determined. Each study site varied slightly in size and characteristics, yet each was found to accommodate a similar Phase 1 program.

# WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

## Site 1 – Waldorf Center North Site Concept

The first study area, Waldorf Center North, is located north of Route 5/Leonardtown Road between US Route 301 and the CSX Railway to the east. The study area illustrated to the right is +43.5 acres and comprised of twenty-three (23) land frontage parcels in varying stages of use.

The initial concept sketch plan developed for site testing below focuses 5-story mixed-use development (residential over commercial) along expanded Leonardtown and Old Washington Roads. Similar development is suggested for both a new East-West street linking Route 301 with a future light rail station and a new North-South street paralleling the future light rail station and right-of-way. A new urban park square, is suggested for the center of the development



Figure 1: Waldorf Center North Study Area

Source: Bing Map



Figure 2: Waldorf Center North Site Workshop Concept Plan

## WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

along Old Washington Road, offering a prime location for outdoor events, sidewalk dining and stormwater biofiltration. Parking is accommodated with two, multi-level parking structures, one surface parking lot and on-street parking along all streets, with the exception of Leonardtown Road. A shared-use surface parking lot has also been suggested for near-term bus transit patrons and longer-term light rail transit riders. This parking is also envisioned for evening retail/ restaurant use during non-peak transit hours.

Two existing facilities, The Jaycees Community Center and the Old Waldorf School, were retained and integrated into the west side of the concept plan as an emerging “Civic Campus” for Waldorf. Future public development can be accommodated on the Jaycees and School properties surface parking lots as public needs warrant additional facilities and as structured parking would be completed for the western portion of the Phase 1 Development site.

The Leonardtown Road/Route 5 corridor is also approved for north side R.O.W. widening to accommodate new intersection upgrades, a bike lane and walkway installation between Old Waldorf Road and the CSX Railway. This is an added benefit for this site to improve site access, visibility and marketability.

### Site 2 - Acton Center South Site Concept



Figure 4: Candidate sites for Phase 1 redevelopment on the west side of Old Washington Road in the Waldorf Center.

The second study area, Acton Center South, is located south of Acton Lane between State Route 301 to the west and the CSX Railway to the east. The study area, illustrated to the right, is ±39 acres in area and comprised of seventeen (17)



Figure 3: The old Exxon Gas Station and vacant parcels to the north represent a key redevelopment opportunity for Waldorf Center.



land parcels that front onto either Old Washington Road, Acton Lane or US Route 301. The study area incorporates an existing three-story office building along Route 301 and Acton Lane, and abuts, but does not include, the existing Waldorf Toyota Dealership at Route 301 and Acton Lane.

The initial sketch plan pictured below, again focuses 5-story mixed-use development (residential over commercial) along both Old Washington Road and two new East-West streets linking Route 301 with a potential future light rail station and its associated 70 foot railway right-of-way, paralleling the CSX Railway to the east. The Route 301 frontage is suggested for 4-5 story, commercial, hotel and office uses that benefit from the high visibility and access, while also tolerating the highway noise. Additional 5-story residential buildings are suggested



Figure 5: View of South Acton Center Study Site Source: Bing Map

## WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

along the new interior streets for a quieter environment and to maintain Old Washington Road as a mixed-use environment with ground floor activity. The resulting development blocks would be served by at least two centralized, multi-level parking structures, with the potential for additional private structures as future development expansion may require.

A third, new North-South frontage street is also suggested to parallel the light rail right-of-way to provide much improved,

implementation.

A one-acre public park and plaza space is suggested as a terminus to the Acton Lane view corridor, providing added visibility for the Acton Center light rail station.

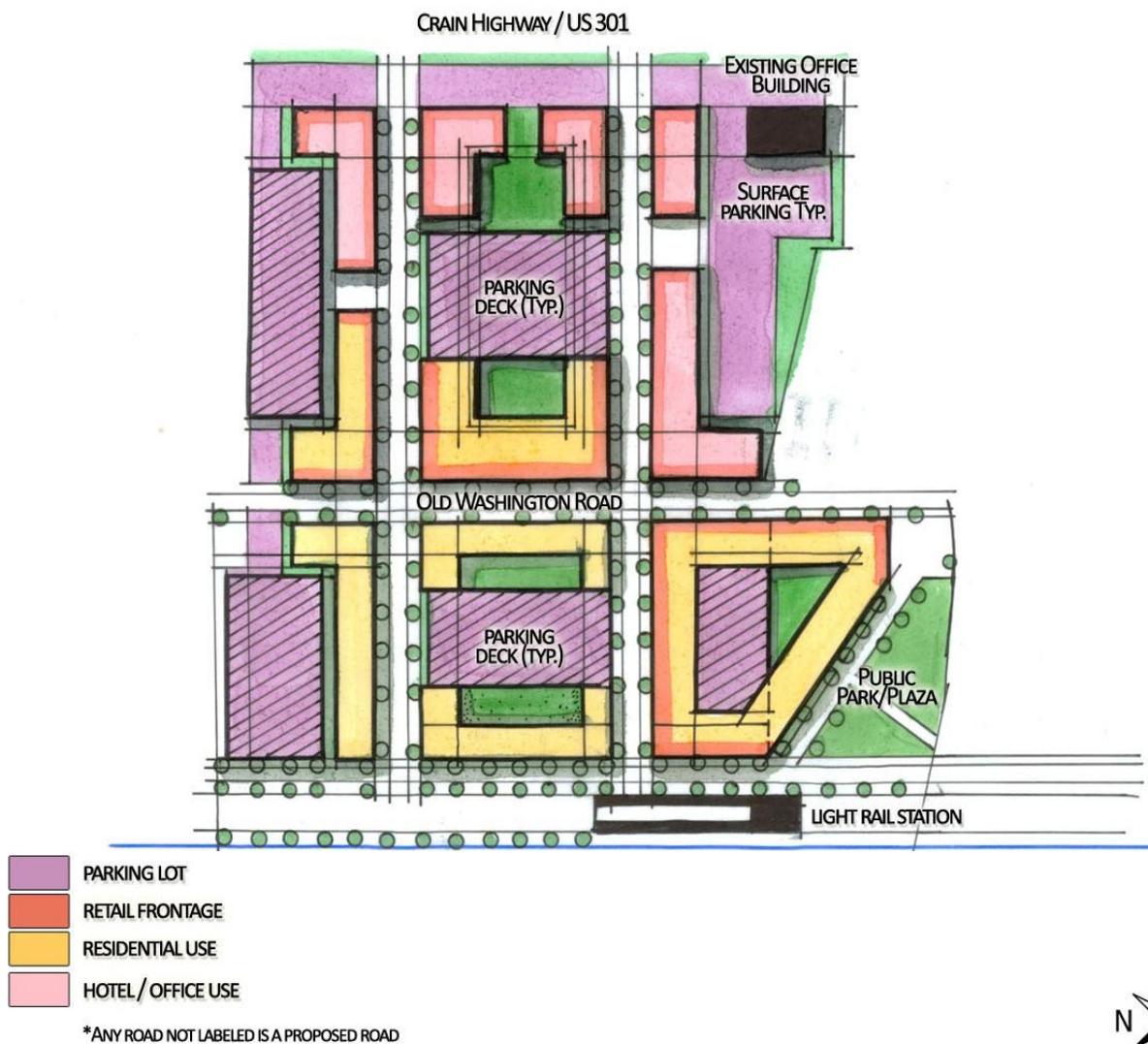


Figure 6: Acton Center South Site Workshop Concept Plan

direct access to the proposed light rail station and nearby parking resources. The expanded street grid system will help to disperse traffic loads that may otherwise become congested if Route 301, Acton Lane and Old Washington Road were to remain the only access routes prior to eventual light rail

## WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

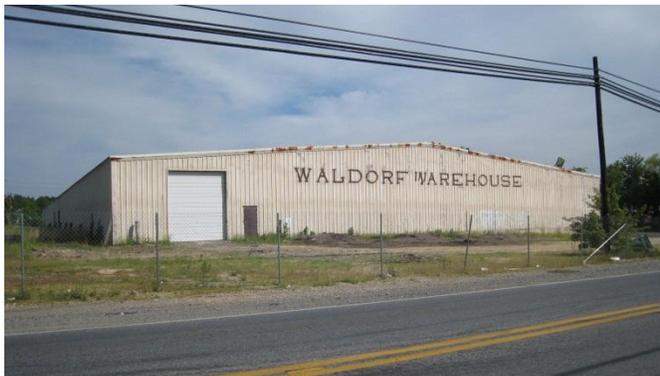


Figure 7: The Waldorf Warehouse is a large and vacant site that is central to the Acton South study area.

### Site 3 -Acton Center North Site Concept

The Acton Center North site is located north of Acton Lane between US Route 301 to the west and the CSX Railway to the east. The initial study area, illustrated in Figure 8, is larger than the others at ±57.5 acres and comprised of twenty- five (25) land parcels. The study area originally included the existing Wal-Mart site for initial redevelopment testing; however, since the time of the workshop, Wal-Mart has been contacted and company representatives indicated that the current store parcel is not available for redevelopment for the foreseeable future. This removed 15 acres from consideration for the candidate redevelopment area as the site criteria assessment was refined, post workshop.



Figure 8: View of North Acton Center Study Site Source: Bing Map

The area is also encumbered by an existing in-line stormwater drainage system on the Wal-Mart site that lies within a protected stream corridor traversing the larger area from north

to south. The extent of this corridor and its relationship to the frontage from the U.S.301 corridor is clearly illustrated in the initial concept sketch plan illustrated in Figure 10. Removal of the Wal-Mart site from consideration coupled with the extent of probable stream corridor buffers and constraints made this area more difficult to accommodate the Phase 1 development Program than was originally envisioned during the workshop. The initial concept is described below to document the plan for future consideration in the Acton Center area.



Figure 9: Existing conditions along Old Washington Road in the Acton North study area.

The initial sketch plan for Site 3 testing, pictured within Figure 10, focuses on five-story mixed-use development along Leonardtown and Old Washington Roads. The Route 301 frontage is suggested for 4-5 story, hotel and hospitality uses that benefit from the high visibility and access, while also tolerating the highway noise. Additional 5-story residential buildings are suggested north of the Wal-Mart site along the new interior streets for a quieter environment and to maintain the southern portion of the site as a mixed-use environment with ground floor activities and street life animating Acton Lane, Old Washington Road, the Light Rail platform and the park square.

Seven new urban development blocks have been created with an expanded street grid comprised of two local, north-south streets, two east-west streets and two smaller east-west lanes or alleys to the north. A future light rail station, platform and seventy-foot wide rail right-of-way are located along the eastern edge of the site, with the station serving as an architectural feature and focal point for Acton Center development.

# WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

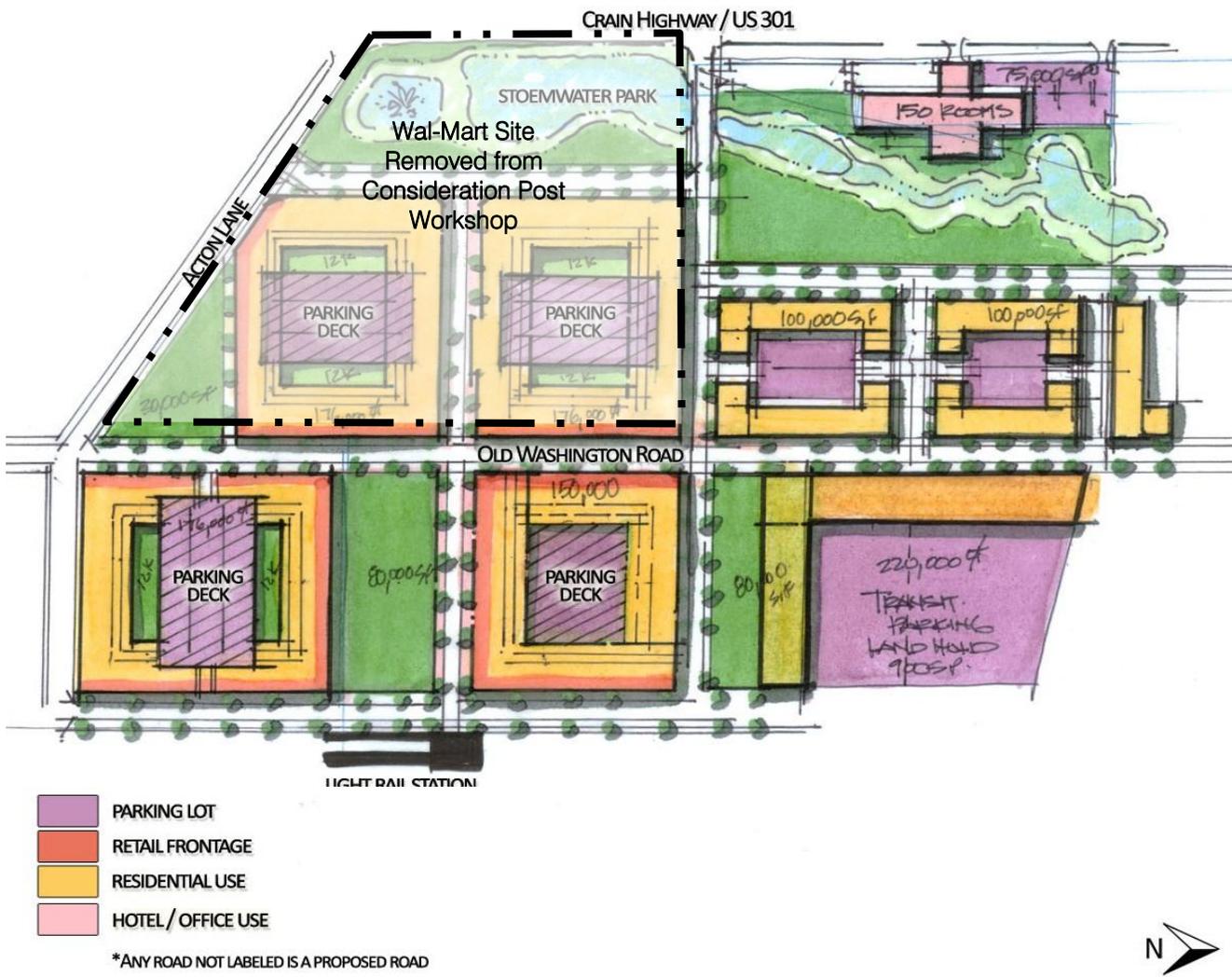


Figure 10: Acton Center North Site Workshop Concept Plan

Similar to Site 1, a new urban park square, is suggested for the center of the development along Old Washington Road, offering a prime location for outdoor events, sidewalk dining and stormwater biofiltration. Parking is accommodated in up to four, multi-level parking structures, three surface parking lots and on-street parking along all new and reconstructed streets, with the possible exception of Acton Lane. A shared-use surface parking lot has also been suggested in the northeast corner of the site for near-term bus transit patrons and longer-term light rail transit riders.



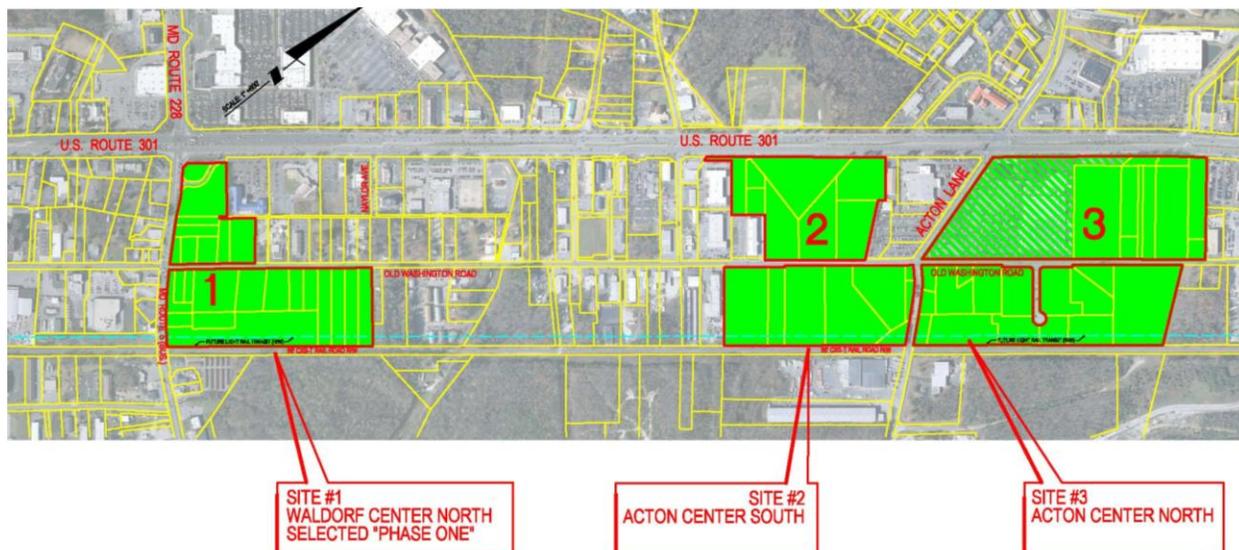
## WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

### SELECTION OF “PHASE ONE” DEVELOPMENT SITE – SUMMARY

Based on a reconnaissance of the Waldorf Urban Redevelopment Corridor, and armed with the insights of members of the consulting team with deep knowledge of the terrain and dynamics of the area, three possible locations for the Phase One development were identified:

- Waldorf Center (north of the intersection of Leonardtown Road (MD 5 Business) and Old Washington Road (MD 925) between U.S. 301 and the CSX Railroad right-of-way
- Acton Center South (south of the intersection of Old Washington Road and Acton Lane, between U.S. 301 and the CSX Railroad right-of-way
- Acton Center North (north of the intersection of Old Washington Road and Acton Lane, between U.S. 301 and the CSX Railroad right-of-way

Candidate Site Location Map



The following are several key criteria that would prove to be decisive in choosing the prime site for the Phase One development. The key criteria and the specific characteristics that the team used in recommending the best site are presented below:

#### Visibility

- Prime location with high visibility at key intersections
- High traffic counts
- Visibility of the site and new buildings from U. S. 301 and major roads
- Highly visible location from a marketing standpoint

## **WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE**

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- Site would offer a “high profile” location for a signature building
- Visibility would allow the public to see new development and observe the transformation of the area as it happens
- Ability to generate anticipation, excitement, and interest in visiting

### **Accessibility**

- Quality and ease of vehicle access to the site from U. S. 301 and regional highways
- Lands in proximity to direct access from U. S. 301 and local road network
- Opportunity to improve access by creating urban street grid and improving local roads that support the proposed development
- Potential for traffic management on the site and within the Phase One development
- Planned bike lane and pedestrian improvements
- State highway improvements and County capital projects are programmed that support the Phase One development

### **Land Assembly Requirements**

- Comparative cost of parcels needed for Phase One development at three sites
- Critical mass of vacant or underutilized properties
- Availability of underdeveloped Land
- Comparative ease of land assembly
- Lands in proximity to access from U.S, 301 and regional arterials
- Readily developable land suitable for Phase One project
- Little need to redevelop, move or relocate existing uses
- No major uses occupying critical parcels
- Site ready for County to get started

### **Access to Future Light Rail Transit**

- Potential for access to future light rail transit
- Land in proximity to future proposed LRT right-of-way and proposed station
- Potential for transit-oriented development
- Opportunity for transit center (commuter park and ride lot) in the Phase One development, before the arrival of LRT
- Potential for TOD on east side of the CSX Railroad corridor

### **Infrastructure Requirements**

- Comparative cost of infrastructure upgrades required for each site

## **WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE**

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- Site near location of public infrastructure improvements already programmed
- Logical starting point in the WURC for major County infrastructure improvements

### **Suitability of Site to the Market**

- Site offers a strong market for the Phase One development program
- Ability to attract and support development program
- Site offers the highest potential to stimulate new private sector investment
- Phase One development at this site has the potential to catalyze new development in adjacent areas of the WURC

### **Achievable Scale**

- Site presents opportunity to start the redevelopment process at an achievable scale
- Scale of Phase One development is more likely to be achieved at the proposed site
- Ability to build upon the existing retail, finance, secondary education and public uses, facilities and patronage in the area

### **Location for Community Activities**

- Site is an established venue for community events and activities
- Ability to accommodate significant new community facilities within the development site

### **Environmental Requirements**

- Ability to maintain, mitigate or improve existing environmental features
- Potential to improve existing on-site trapped wetland conditions, while meeting new stormwater and TMDL requirements on site
- Ability of the site to accommodate required level of stormwater management and filtration
- A minimum one-acre public park space

The evaluation and comparison of each of the three potential sites resulted in the recommendation of the Waldorf Center site as the best site for the implementation of the Phase One development plan. Waldorf Center surpassed the two other candidate sites on almost all criteria. In the few examples where one of the Acton Lane sites had an advantage, it was outweighed by the overwhelming number and magnitude of advantages offered at the Waldorf Center site. The following are some of the reasons.

One of the most important criteria considered was the visibility of each site. Waldorf Center is one of the most visible sites in all of Southern Maryland and Charles County, not only the most visible of the three options considered by the project team in the Waldorf Urban Redevelopment Corridor. Historically, the highway network in the heart of Waldorf at the intersection of U.S. 301 and Leonardtown Road (now MD 5 Business) carries traffic through Charles County from Virginia and points south to the Washington and Baltimore areas, Charles and St.

## WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

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Mary’s County commuters traveling to and from the Washington area, and local traffic in the Waldorf area. The Waldorf Center site occupies part of the northeast quadrant of this key regional crossroads intersection.

An important empirical measurement of the Waldorf Center site’s visibility is the State Highway Administration’s traffic count for locations in the vicinity of the site. In 2011, the State’s daily traffic count on U.S. 301 south of the highway’s intersection with Leonardtown Road was 56,711 vehicles. The traffic count on Leonardtown Road one-tenth of a mile south of the Old Washington Road intersection was 36,031. And the traffic count on Old Washington Road (MD 925) south of its intersection with Leonardtown Road was 10,092. The occupants of vehicles in all of these locations can see the Waldorf Center site, and the progress of new Phase One development would have a significant visual impact.

The other two sites lack the advantage of visibility. The Acton South and North sites are “deep in the WUDS,” so to speak, with the existing Waldorf Toyota and Wal-Mart buildings allowing little or no visibility from U.S. 301 for a new Phase One development. These large occupants of the key parcels at the Acton Lane intersection with U.S. 301 would obscure the sight lines to a current Phase One development to the east. So the visibility of new Phase One development there would be limited to traffic on Acton Lane or Old Washington Road, and to motorists who are seeking out a specific destination within the future development.

Access to Waldorf Center from U.S. 301, MD 5 Business, and local roads is excellent. In addition, this site offers the potential for establishing an urban street grid, which was one of the recommendations of the “Waldorf Urban Transportation Improvement Plan.” The extension of Naylor Avenue, for example, as an east-west street at the northern edge of the Waldorf Center site, from U.S. 301 to the future light rail alignment, could become part of a new urban street grid, as could other north-south and east-west streets in the compact new center of downtown Waldorf. State Highway Administration improvements in the WURC along MD 5 Business at Old Washington Road, such as an improved right turn, bike lanes and sidewalks, support the selection of the Waldorf Center location. Access to the Acton South and North site is also good, but lacks the connectivity present at Waldorf Center.

Regarding land assembly, the total cost of parcels needed at Waldorf Center is likely to be significantly less than at either Acton South or North. See the chapter of this report on “Land Requirements” for details. There are a number of vacant or underutilized parcels at Waldorf Center that are readily developable, and fewer well-established parcels with significant structures. A significant amount of land is owned by the County at Waldorf Center which is in civic use.

All three candidate sites are near future proposed light rail transit stations. But the transit station at Waldorf Center would be in the most visible location, adjacent to the CSX Railroad alignment and 100 feet from MD 5 Business (Leonardtown Road). All of the properties that comprise the entire Waldorf Center Phase One site are within a quarter-mile of the future transit station, a five to ten-minute walk. Residents, patrons or workers in transit-oriented development which may be planned on the east side of the CSX right-of-way, could gain access the future light rail transit station via an elevated pedestrian bridge across the railroad tracks. Until LRT service arrives, plans would include a 540-space park and ride lot and bus transit station. The plans for Waldorf Center include these facilities.

## WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE

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A successful Phase One plan cannot afford to be an exclusively transit-dependent plan. At present Charles County is largely an automobile-dependent community. The Phase One development plan begins to prepare downtown Waldorf for a transit-oriented future, while remaining responsive to the reality that the Phase One development will need excellent access and facilities for auto traffic during the implementation of the light rail transit strategy.

Regarding infrastructure requirements, a major upgrade of the sanitary sewer system serving all three sites is needed, and in addition to posing an obstacle to the implementation of the Phase One project, will be an obstacle to the future development of the entire Waldorf area if not addressed. This report and the data it contains will provide clear and convincing evidence of the need to begin that process, starting with funding in the County’s FY 2014 capital budget to complete the detailed engineering of the system upgrade. Combining the cost of infrastructure, site preparation and land acquisition for the Phase One project, the sum of these costs at Waldorf Center are significantly less than at Acton South or North. The cost of sanitary sewer upgrades at Waldorf Center are slightly more than at Acton North, but the cost of land at Acton North is significantly higher, outweighing this factor. Waldorf Center is where the necessary land can be assembled most easily, at less cost. The County’s reconstruction of Old Washington Road is already programmed in the CIP, to begin at Leonardtown Road, adding additional resources to the implementation of the Phase One plan at Waldorf Center.

The intersection of Leonardtown Road and Old Washington Road has been in need of revitalization, reinvestment and redevelopment for a generation. The Phase One project in this location could be a catalyst for new development in adjacent areas in the WURC. Early success could spread across Leonardtown Road and north toward Acton Lane. Waldorf Center is the best location to establish a “beachhead” for the redevelopment process in the WURC. Conversely, if Acton South or North were selected as the Phase One site, early success there would be harder to achieve and less likely to stimulate new investment elsewhere in the WURC.

The two Acton Lane sites may become the future epicenter of the WURC, with the highest density and tallest buildings within walking distance of transit, but market and economic feasibility needs to be proven on a smaller scale, which is possible at Waldorf Center. Development at Acton Lane would be expected to produce taller buildings and higher density development, when the market in this part of Waldorf is unproven and the economy is still recovering from the recession. Wal-Mart and Toyota dominate the Acton Lane sites, with no immediate plans to relocate, on two large parcels that are not yet in play. The scale of Phase One Development at Waldorf Center is far more achievable in the Waldorf Central (WC) zone at 2-5 stories than it would be in the Acton Urban Center (AUC) zone at 3-10 stories.

The Waldorf Center site is shared with County-owned properties that are occupied by widely known venues for community events—the Jaycees Community Center and the Old Waldorf School. The Waldorf Center site will enable the Phase One plan to strengthen this dimension of civic and community life. This opportunity stands in sharp contrast with the limitations of the Acton South and North sites.

Finally, the Waldorf Center site presents an opportunity to meet environmental requirements and at the same time create new quality of life assets like urban parks, and protect natural wetland areas that also offer some passive recreational opportunities in an urban setting.

## **WURC – SELECTION OF “PHASE ONE” DEVELOPMENT SITE**

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Based on this analysis and evaluation of the three candidate sites, Waldorf Center was selected by the project team as the Phase One Development site.

## E. “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

### The Preferred Phase 1 Development Site

The final Workshop Site Program Testing and Site Criteria Evaluation results indicated that the Waldorf Center site is the preferred site for Phase 1 Development, with the Acton Center North and Acton Center South sites ranking second and third respectively in desirability. The Waldorf Center Site was selected for its:

- Prime location and high visibility at the intersection of two highly traveled roads in Charles County;
- Ability to build upon the existing retail, finance, secondary education and public uses, facilities and patronage in the area;
- Critical mass of vacant or underutilized properties that are currently for sale along the corridor;
- Potential to improve existing on-site trapped wetland conditions, while meeting new stormwater MS-4 and TMDL requirements on site;
- Potential for rail station access and transit-oriented development on both sides of the CSX Railway corridor;
- Planned access, bike lane and pedestrian improvements along Route 5;
- Potential to catalyze additional redevelopment south of Route 5 and on/around the Jaycee Center/Old Waldorf School campus;
- Ability to accommodate a new, significant public/community facility within the development site; and,
- An ability to accommodate a new, urban town square/gathering space to reinforce the identity of the Waldorf Center community.

Some of these attributes were shared by the other candidate development sites as well; however, the Waldorf Center Site presented the strongest rationale for pursuing Phase 1 Development in the Waldorf area in the next 2-5 years. For this reason, a detailed Phase 1 Development Plan for the Waldorf Center was prepared to test the financial viability of the project in today's economic climate. The resulting plan provided in a fold-out in the coming pages is summarized here.

### A Focus on Urban Redevelopment and Transit-Oriented Development

The Waldorf Center Phase 1 Development Plan is intended to be the pilot project that shows a County program shift toward compact, urban, multi-modal, smart growth development in Waldorf that will strengthen Charles County's competitive position and draw in the National Capital Region. The two foremost guiding principles that were followed during the preparation of the WURC Phase 1 Development Plan were: 1] The development plan must follow and emulate the urban requirements, quality and characteristics required in the WUDS Zoning District Regulations and Design Guidelines; and 2] The development plan must be a transit-oriented development focused around preserved lands for a future light rail station and right-of-way, while still accommodating today's vehicle dependent market conditions and MTA shuttle bus/Van-Go transit needs. The resulting plan meets all of the WUDS requirements and accommodates shorter-term single occupancy vehicle and bus/van traffic patterns, while also planning for future light rail transit implementation needs.

### Phase 1 Market Development Program and Parking Resource Program

Prior to developing the final recommended Phase 1 Development Plan, a final development program had to first be advanced from the market study, workshop and interview findings. The Waldorf Urban Redevelopment Corridor Market Study concluded that 659,000 square feet of development space should be planned for the Phase 1 Development Plan to be marketable and financially viable. The recommended program mix illustrated in the final development plan includes:

- 60,000 SF of Anchor Store use, i.e. a specialty grocery
- 15,000 SF of Full Service Restaurant uses
- 7,000 SF of Tavern/Pub uses
- 4,000 SF of Limited service restaurants
- 23,000 SF of Personal Service and Retail Uses
- 20,000 SF of Fitness Center and Recreation uses
- 50,000 SF of Class A Office space
- 440,000 SF of Residential Living space, i.e. 1,100 SF per apartment on average.
- 40,000 SF of Hotel space (±100 keys)

The final development program was then assessed by the consultant team's parking planner for typical parking program needs, with careful consideration given for shared use parking to avoid unnecessary overages in parking spaces and funding

## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

on the site. The resulting parking program included over 1200 parking spaces to serve the development program distributed within parking structures, surface parking and on-street parking resources. An additional 540 surface parking spaces are also envisioned to serve shorter-term Park and Ride transit needs and future light rail transit ridership.

short and longer-term public improvements, including; urban park space, wetland park enhancements, a public market, Park and Ride facilities, an MTA and Van-Go station, future light rail transit right-of way and station(s), and possible future Route 301 and Route 5 urban intersection adjustments. The Park and Ride parking facilities may eventually be redeveloped in a future Phase 2 Public/Private mixed-use redevelopment effort, also illustrated in the Site Development Plan on the following pages.

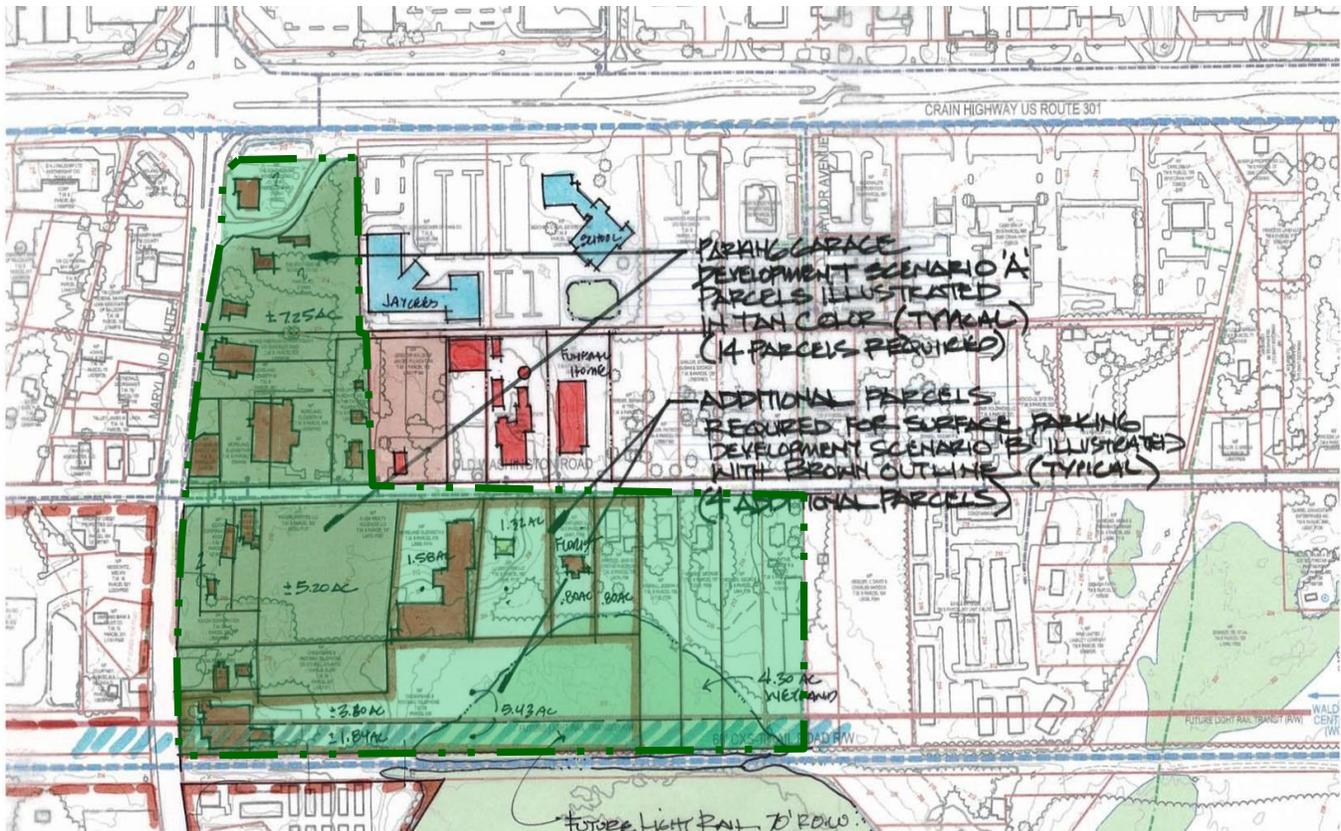


Figure 11: Initial Waldorf Center Detailed Site Parcel Assessment for Phase 1 and Phase 2 Development Plans

### Phase 1 Development Site Parameters

The recommended Phase 1 Development Site Plan includes a total of twenty-three (23) existing parcels highlighted in green in Figure 11. The majority of the private development program and parking program can be accommodated on the seven (7) parcels west and six (6) parcels east of Old Washington Road, illustrated in the gray tone here. The existing surface parking lot parcel for the Jaycees Center (highlighted in brown) is envisioned for future public development and community use and is not under consideration for the Phase 1 development. The parcels highlighted in lighter green are also envisioned for

### Phase 1 Development Plan Recommendations

The final Phase 1 Development Plan works to incorporate all of the identified parcels and their associated private and public program items into one cohesive vision plan to be implemented through private and public sector partnership(s) where appropriate. The intent of the Phase 1 Development Plan is to illustrate, not mandate, a desired mix of programmed uses, an urban layout and established sense of place for the Waldorf Community. Depending on land acquisitions and implementation phasing, the implemented vision may ultimately take on a different appearance than that illustrated herein, as

## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

the plan is also intended to be flexible in its format as long as the following recommendations are met .Outlined below is a summary of the primary urban design and planning recommendations for a successful WURC Phase 1 Development.

### Recommendation 1: Expanded Street System

Current street access in the Waldorf Center area is limited to US Route 301, MD Route 5/Leonardtown Road, and Old Washington Road. Both the US Route 301 intersection and Old Washington Road intersections on MD Route 5 experience peak hour congestion. Although the high traffic volume is beneficial to the visibility and marketability of the Waldorf Center development, it can also be a detriment that will keep people away from the area. To correct this situation it is critical to begin establishing an expanded local street system that provides alternative routes for accessing and exiting Waldorf Center. Key additions to the street grid include:

- A new East-West street linking the US Route 301 Service Drive to the future light Rail corridor;
- An extension of Naylor Avenue to the CSX Railway corridor to the east and possibly beyond;
- A new North- South street parallel to the light rail corridor and linking Leonardtown Road with Naylor Avenue extended;
- A short connector street between Old Washington Road and the North-South street. This street could be extended to the east to connect with the Old Waldorf School campus and alleyway; and,
- A new North-South street linking Leonardtown Road with the interior alleyway behind the Jaycees Center Building.

The addition of these streets establishes a pattern of blocks that offer increased development frontage, access to off-street parking and service, and additional opportunities for on-street parking, bikeways, walkways and service lay-bys.



Figure 12: Old Washington Road and Leonardtown Road are envisioned to be complete streets with bicycle lanes - Tempe, AZ

### Recommendation 2: Mixed-Use Development Program

The majority of the Phase 1 development program is envisioned to be accommodated in vertically integrated, mixed-use buildings that line the proposed streets and development blocks. The two keynote buildings/blocks ('E' and 'G') at the intersection of Leonardtown Road and Old Washington Road are generally programmed to be commercial uses on the ground floor with four floors of residential apartments above. Building E would contain the 30,000 SF Fitness Center on its Leonardtown Road Frontage and 24,400 SF of personal service, retail, pub and restaurant uses mixed in along Old Washington Road and the New North-South street to the west. On the four floors above, 128 apartment units would have access to rooftop terraces on the fitness center below.

Building 'G' is suggested for a 60,000 SF specialty grocer on either one or two floors along the Leonardtown Road frontage and 25,200 SF of personal service, retail, pub and restaurant uses again mixed in along Old Washington Road and the New North-South street to the east. On the four floors above, 156 apartment units would have access to rooftop terraces on the grocery store below and eight ground-floor apartments would line the park frontage to the north.

**A WALDORF CIVIC CAMPUS**  
Includes: Present Waldorf Jaycees Community Center and Old Waldorf School, Fine Arts/Performing Arts/Civic Center and Waldorf Multi-Generational & Senior Center

**B GATEWAY OFFICE BUILDING**  
50,000 SF of class A office space in 4 stories

**C GATEWAY HOTEL**  
40,000 SF in 4-5 stories, 80-100 rooms

**D FUTURE FINE ARTS/PERFORMING ARTS/CIVIC CENTER**  
1500 seat auditorium

**E MIXED-USE DEVELOPMENT**  
20,000 SF ground floor fitness center  
24,400 SF ground floor retail/commercial  
128 residential apartments on 4 upper floors

**F PARKING STRUCTURE**  
666 parking spaces on 6 levels with retail/commercial loading and service included on ground level

**G MIXED-USE DEVELOPMENT**  
60,000 SF ground floor grocery on 1-2 floors  
25,200 SF ground floor retail/commercial with 156 residential apartments on 4 upper floors and 8 ground floor residential apartments

**H PUBLIC SQUARE URBAN PARK**  
1 acre park space for event use and bio-filtration

**I PARKING STRUCTURE**  
756 spaces on 6 levels with retail/commercial loading and service included on ground level

**J RESIDENTIAL BUILDING**  
110 residential apartment units on 5 floors

**K FUTURE LIGHT RAIL TRANSIT STATION**  
300' platform for 3 passenger cars

**L POTENTIAL PUBLIC MARKET HOUSE LOCATION**  
12,000 - 15,000 SF facility

**M PHASE 1 TRANSIT STOP**  
MTA bus and VAN GO stations

**N AERIAL CROSSOVER FOR CSX TRACKS**

**O PARK AND RIDE LOTS**  
265 parking spaces in South lot  
275 parking spaces in North lot  
\*Future sites for mixed-use development and parking structures

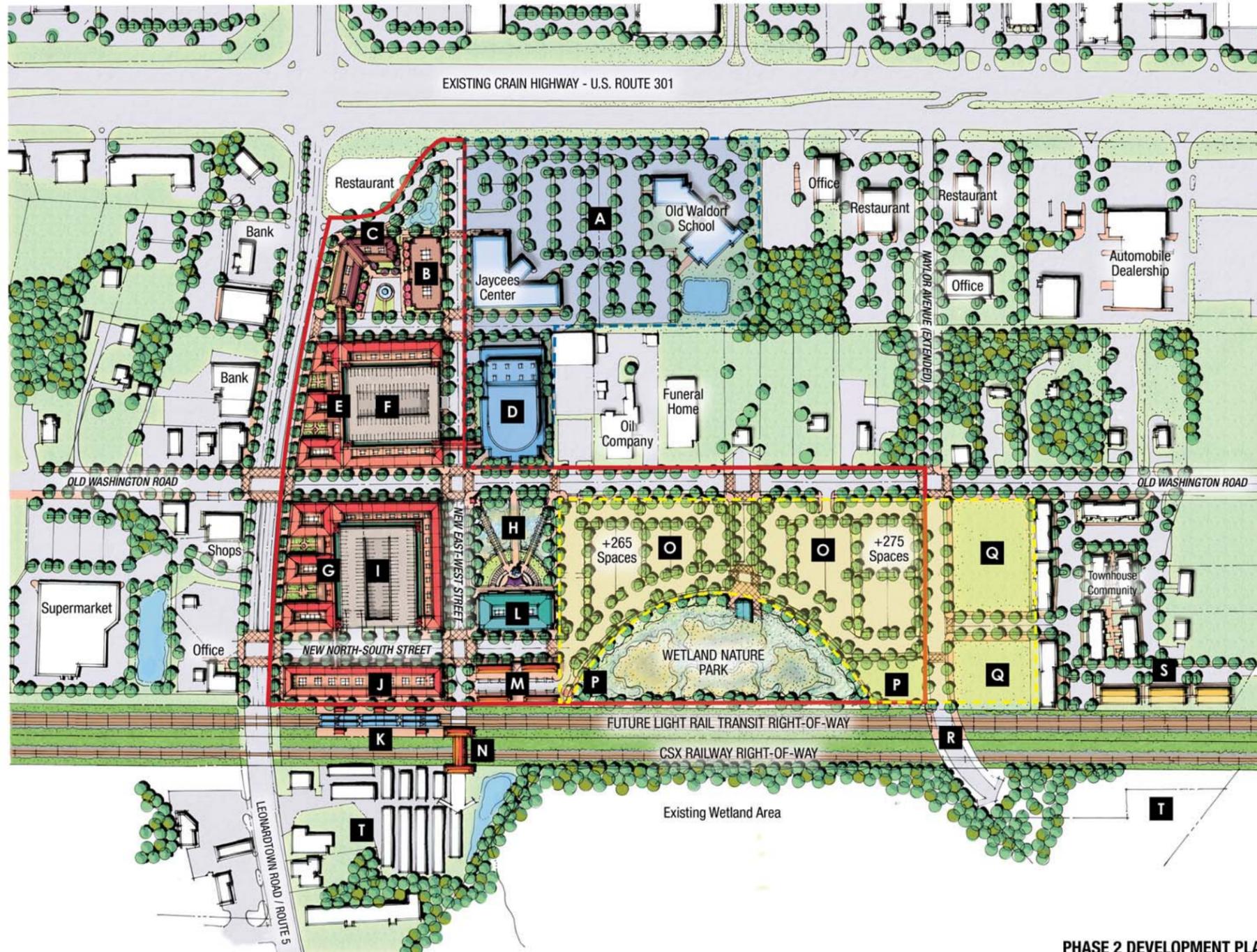
**P FUTURE COMMUNITY PARK BUILDING SITES**

**Q FUTURE REDEVELOPMENT SITES**  
Commercial/residential mix

**R FUTURE NAYLOR AVENUE EXTENSION ACROSS RAILWAY**

**S FUTURE RESIDENTIAL RECONSTRUCTION ALONG LIGHT RAIL ALIGNMENT**  
Three townhome building clusters

**T FUTURE PLANNED TRANSIT-ORIENTED REDEVELOPMENT SITES**



# WALDORF URBAN REDEVELOPMENT CORRIDOR

## PHASE 1 DEVELOPMENT PROGRAM

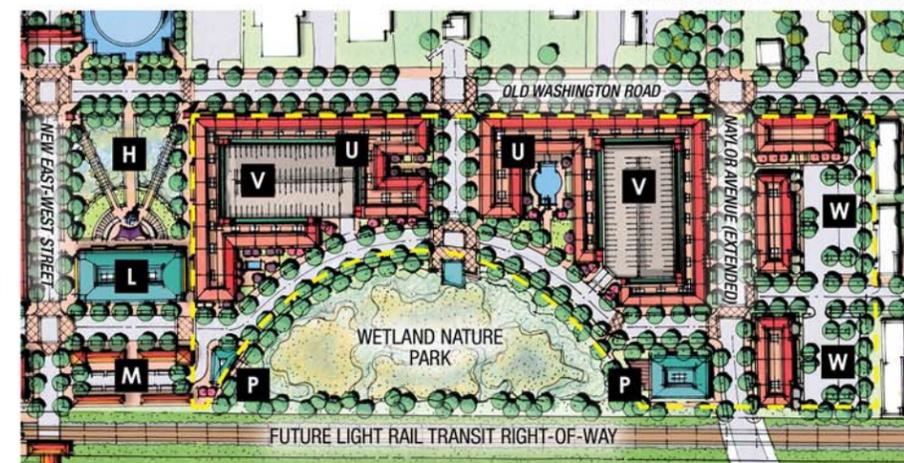
60,000 sf	ANCHOR (SPECIALTY GROCERY)
15,000 sf	FULL SERVICE RESTAURANTS
7,000 sf	BAR/PUB
4,000 sf	LIMITED SERVICE RESTAURANTS
23,000 sf	PERSONAL SERVICE / RETAIL
20,000 sf	FITNESS CENTER / RECREATION
50,000 sf	OFFICE
440,000 sf	RESIDENTIAL
40,000 sf	HOTEL
<b>659,000 sf</b>	<b>TOTAL DEVELOPMENT SPACE</b>

- RECOMMENDED PHASE 1 DEVELOPMENT AREA
- POTENTIAL FUTURE PHASE 2 DEVELOPMENT AREA
- POTENTIAL CIVIC CAMPUS AREA

## PHASE 2 DEVELOPMENT PLAN

### PHASE 2 DEVELOPMENT PROGRAM

- U PHASE 2 MIXED-USE DEVELOPMENT**  
Each additional north and south building is five stories with +30,000 - 35,000 SF of ground floor commercial space, +140 upper floor apartments and 14 to 16 additional ground floor residential units
- V PHASE 2 PARKING STRUCTURES**  
Each north and south parking structure has the potential for +500 spaces on six levels with commercial loading and service locations included within the ground level
- W PHASE 2 RESIDENTIAL APARTMENTS**  
Three-story garden apartments on the north side of Naylor Avenue extended



# WALDORF CENTER - PHASE 1 AND PHASE 2 DEVELOPMENT PLAN

1/4 MILE



JANUARY 29, 2013

Prepared for:

Department of Planning and Growth Management, Charles County, MD

URBAN DESIGN PLANNING + LANDSCAPE ARCHITECTURE

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EDSA



## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”



Figure 13: Comparable transit-oriented mixed-use development envisioned for Waldorf Center – Norfolk, VA.



Figure 15: Sample residential living along light rail corridor in Charlotte, NC



Figure 14: Example of Safeway Grocery store incorporated within ground floor of mixed-use residential development. Note: This is taller than that envisioned for the Waldorf Center.

Building ‘G’ is also linked to a second residential apartment building J via a pedestrian bridge for direct parking access. This building is envisioned to be a single use, residential apartment structure based on current market program needs; however, future transit station oriented business, service, ticketing, restrooms and concierge could be incorporated in the ground floor of this building along the proposed light rail station platform. Building J includes 110 residential apartments on five floors.

Both gateway office building ‘B’ and the business hotel building ‘C’ are also illustrated as single use structures with the potential for added ground floor commercial uses as the market dictates in the future. The hotel is suggested to be four to five stories with approximately 100 rooms and small conferencing meeting facilities on the ground floor. The office building contains 50,000 SF of Class A office space on four floors, so an additional floor could be added to the program if additional office, commercial or restaurant/retail space is marketable at the time of development. The hotel and office building enclose a formal arrival court for visitors and the hotel is linked to the nearby parking structure via a second pedestrian bridge.



Figure 16: Comparable Waldorf scale business hotel - Savannah, Georgia

# WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”



Figure 17: Sample gateway office/mixed-use development envisioned along the Route 301 Waldorf Center frontage.



Figure 18: Sample office building envisioned for the WURC with ground level retail animating street – Norfolk, VA.

### Recommendation 3: Structured Parking and On-Street Parking

Parking for the mixed-use program would be primarily accommodated in two, six-level parking structures ‘F’ and ‘I’ in the development plan. Parking structure ‘F’ is estimated to accommodate 666 parking spaces with commercial service areas included on the ground level. Parking structure ‘I’ is slightly larger with approximately 756 spaces and ground level commercial service spaces. Together these structures can accommodate over 1400 spaces, which exceeds the 1200

spaces projected for the development program under shared use conditions.



Figure 19: Centralized parking structures wrapped by mixed-use and residential development are envisioned for the WURC.



The lower levels of the parking structures are generally intended to serve the commercial uses of the plan and the upper floors would be secured to serve the apartment residents and hotel guests. Depending upon final design and layout, the parking structures may be able to be reduced to 5 or 5.5 levels to accommodate the program and better align with the five-story building floors that will ultimately wrap the parking structures on three sides.

Additional short-term, on-street public parking is planned for both sides of Old Washington Road and either one or both sides of all additional new streets proposed in the development plan. This has the potential to provide an additional 100 to 150 parking spaces for the area. Additional information for the parking strategy for the Waldorf center can be found in Section “G”, Task A.4 of this report.

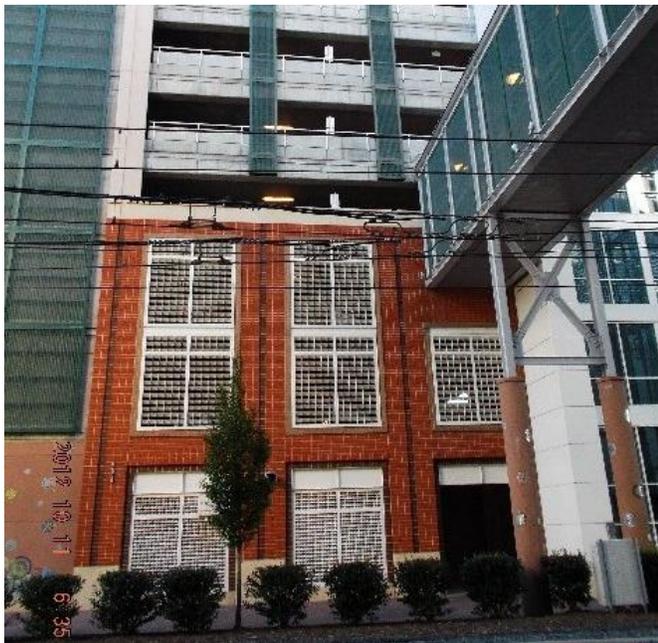


Figure 20: Parking structures can be linked to surrounding development blocks with pedestrian bridges - Charlotte, NC

#### Recommendation 4: Parks and Open Space

The Old Washington Road corridor lacks a civic sense of place that identifies the Waldorf Activity Center and lets visitors know that they have arrived at a special district or destination in Waldorf. With the Phase 1 redevelopment, it is critical to establish a strong network of public walkways, bikeways, formal urban park/plaza spaces, and natural greenway spaces, all supported by a clear wayfinding program for motorists and pedestrians. Each of these open space elements is incorporated into the recommended Phase 1 Development Plan to establish a high-quality public realm environment for the Waldorf Center.

Open space in the Waldorf Center is currently limited to the small areas around the Jaycees Center and Old Waldorf School property. Improving these spaces on the “Waldorf Civic Campus” and providing additional park spaces for the community to explore and enjoy is a key initiative of the Phase 1 Development. Two park spaces have been suggested for the Phase 1 development. The first is a one to two acre public square or commons located in the center of the study area, surrounded by mixed-use development, animated storefronts and anchored on its east-west axis by a possible future Performing Arts Center and the Public Market discussed earlier. The ‘Public Square’ is a key feature of the plan as it will be a focal point and quality of life amenity for the community that is being created. The ‘Square’ may be either formal or informal in its future design; however, it must serve the dual

purpose of a biofiltration resource for the development area and a common ground for community gatherings and events. This element has added significance in that it would be Waldorf’s first urban park/plaza space to be created and implemented.



Figure 21: Public Square - Lakeland, FL

The second park space, the ‘Wetland Nature Park’, is equally important to the overall quality of the Phase 1 and future Phase 2 Developments. The nature park is envisioned to be a two to three acre park created by enhancing an existing man-made wetland body that exists along the CSX Railway corridor. Future implementation of the Light Rail corridor will impact the existing trapped wetland, so the intent is to mitigate this encroachment by expanding and enhancing the wetland body and vegetation to convert an isolated liability into a community amenity and valued open space resource.



Figure 22: The Wetland Nature Park would be linked with other park spaces with multi-use trails and walkways.

## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

### Recommendation 5: Potential Public Market House

In an effort to attract more countywide residents to the new Waldorf Center, a potential Public Market building 'L' of 12,000 to 15,000 SF has been suggested to anchor the east side of the public square ('H'). On the ground level it is envisioned to be an enclosed marketplace lined with vendors and open to the public at least 3-days a week. The lower level could also offer indoor and outdoor access to public restrooms, utility rooms and maintenance equipment for the public square. The second story could house administrative offices for the facility or it could simply be a tall one-story structure on the park.

### Recommendation 6: Expanding the Role and Size of the Waldorf Civic Campus

The Jaycees Center and Old Waldorf School sites are community facilities that receive significant use throughout the year. Given their prime location on US Route 301 and juxtaposition to the Phase 1 Development area, there is great potential for creating an expanded Waldorf Civic Campus that would include future improvements to the Jaycees Center and Old Waldorf School, while adding a new Fine arts/Performing Arts/Civic Center and Multi-Generational Community and Senior Center (Building 'D') on the site of the Jaycee's east side surface parking lot. Charles County has such a facility currently listed in its capital improvement plans; however, a location has yet to be determined for the facility. Locating this facility within the Waldorf Center Phase 1 Development would help to show the County's commitment to sustainable urban development while easing future parking needs through shared public/private parking agreement.

### Recommendation 7: Phase 1 Bus/Shuttle Transit Stop and Park and Ride Lots

For the foreseeable future, transit service for the Waldorf Center area will be served by MTA Bus and Van-Go shuttle services, until the light rail corridor is funded, rights-of way are acquired, and design and implementation is completed. To best accommodate these transit services, a centralized transit Stop, building 'M', has been included adjacent to the public market and future light rail platform to facilitate future multi-modal transfers, while also serving a growing population of Park and Ride commuters. The station is intended to facilitate designated MTA Bus loading on the east side and Van-Go loading on the west side to minimize conflicts. During the initial development, two Park and Ride surface parking lots, 'O', are recommended as a parallel public initiative providing over 540

spaces for near-term commuter use. These parking lots will also serve as land banking for future Phase 2 transit-oriented development discussed below.



Figure 23: Sample bus/shuttle transit stop for Waldorf Center Park & Ride facility.

### Recommendation 8: Future Light Rail Line and Station

The preferred alignment for the light rail corridor in the Waldorf Center area is within a parallel seventy (70) foot right-of-way abutting the western edge of the existing CSX Railway right-of-way. The light rail right-of-way may be able to be narrowed in some locations; however, for the purposes of this study and plan, seventy feet has been maintained as a constant width. Within the Waldorf Center study site, the light rail corridor will cross seven properties and one mapped wetland area between the Oak Manor Townhouse Community and Leonardtown Road.

The preferred Waldorf Center Light Rail Station location is indicated as item 'K' to the north of Leonardtown Road. There a three-hundred foot (300') long platform has been shown to accommodate loading for three light rail passenger cars, rather than limit it to the two car capacity that the system may begin with. An aerial crossover pedestrian bridge, item 'N', has also been suggested at the end of the new East-West street to connect with future development to the east.



Figure 24: Sample aerial crossover envisioned at the CSX Tracks to facilitate future transit development east of Waldorf Center.



Figure 25: Construction methods and scale envisioned for the WURC five story development limits.

### Recommendation 9: Planning for Future Phase 2 Development

Once Waldorf Center becomes a recognized destination with the Phase 1 Development, this momentum will inevitably look to expand to the north and/or south with a subsequent Phase 2 Development program. To plan for this expansion, a possible Phase 2 development Plan has been incorporated with the Phase 1 Development Plan illustration. In Phase 2, the North-South street along the railway is extended north to wrap the Wetland Nature Park and connect with Naylor Avenue. The remaining acreage of the Park and Ride lots is programmed for mixed-use development ('U' buildings) that includes 60,000 to 70,000 SF of additional ground floor commercial space along the Town Square and Old Washington Road frontage. An additional 310 residential apartments can be accommodated on the four upper floors and ground floor accessible apartments can be accommodated on private, pool amenity spaces or facing out to the street and Wetland Nature Park.

Again, each mixed-use development is envisioned to wrap a 5-6 level parking structure with a capacity of approximately ±500 spaces in each structure. This would allow ample parking for the expanded commercial and residential uses, while also accommodating an adequate number of Park and Ride spaces for either light rail, bus or van/shuttle users.



Figure 26: Sample public realm streetscape environs envisioned for the Phase 1 and Phase 2 Development streets – Reston, VA.

To the north of Naylor Avenue extended, three 3-story apartment buildings, item 'W', are suggested to help transition the scale of the 5-story development down to the neighboring two-story townhouse community. These apartments are meant to front onto Old Washington Road and Naylor Avenue with surface parking provided out of view to the rear of the buildings. An additional access road is also recommended from Naylor Avenue extended into the townhouse community from the south.

### Recommendation 10: Townhome Community Residential Reconstruction

Acquiring the lands or partial lands needed for the anticipated 70 foot light rail transit right-of-way will likely require the demolition of three townhome buildings located along the CSX Railway at the north end of the Waldorf Center. Based on initial

## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

site testing, it appears these townhome structures could be demolished and reconstructed on-site in an alternate layout that would accommodate the required spacing and parking needed for the development. The townhome structures are labeled as building ‘S’ on the Phase 1 and Phase 2 Development Plan.

### Recommendation 11: Surrounding Future Transit-Oriented Development

For transit-oriented development to be successful, the stations and early phased developments should preferably be located in places where both sides of the light rail corridor are free of development constraints. The Waldorf Center Station proposed location on the north side of Leonardtown Road allows for future transit-oriented development on the northeast side of the CSX Railway as well as the southeast and south west quadrants below Leonardtown Road. Each of these areas is a potential candidate for future redevelopment as the market and smart growth policies will dictate.

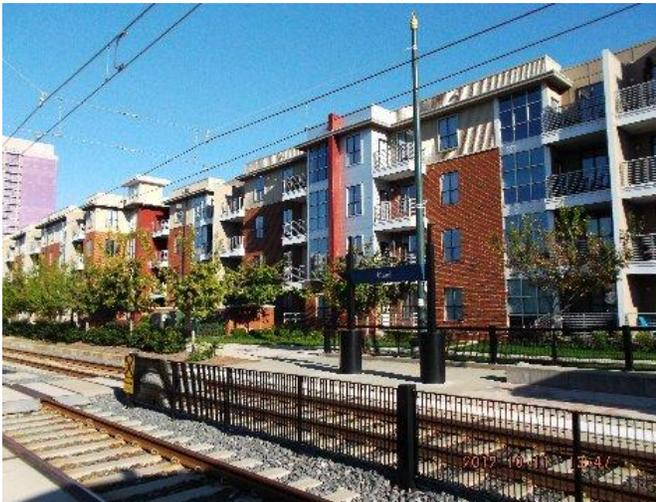


Figure 27: Mixed-use along light rail corridor- Charlotte, NC.

### Recommendation 12: Future U.S. Route 301/Route 5 Interchange Option

Two regional transportation improvement initiatives are currently being considered for Charles County that can play a key role in the success of the Waldorf Center Development. The first is the light rail corridor that has been discussed at length and second, is the proposed improvement in place of U.S. Route 301 to mitigate through and local traffic conflicts and intersection congestion. One of the most congested intersections lies adjacent to the Waldorf Center at the intersection of U.S. Route 301 and MD Route5/Leonardtown

Road.

One of the improvements that has been mentioned for this area is the introduction of grade separated intersections, where either US Route 301 or the cross roads would be raised or lowered to pass over the other. The photo below shows an example of what the new intersection could look like if U.S. 301 were to pass beneath an elevated Leonardtown Road profile.

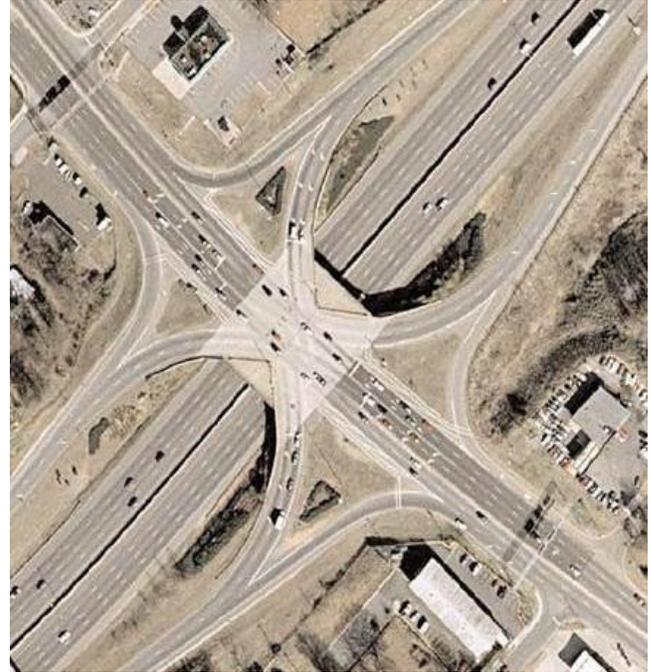


Figure 28: Sample Single Point Urban Interchange – Interstate 695 at Reisterstown Road interchange, Pikesville, MD.

The second exhibit on the following page shows an Optional Phase 1 Plan of what the new intersection could look like if U.S. 301 were to be elevated over Leonardtown Road and how this option could be best integrated with the Waldorf Center Phase 1 Development Plan. This option would likely have less impact to existing businesses in the area and blend better with the Phase 1 plan because Leonardtown Road remains at-grade, closer to its current profile.

A full size copy of this plan is located within the Appendix of this report.

# WALDORF URBAN REDEVELOPMENT CORRIDOR

**A WALDORF CIVIC CAMPUS**  
Includes: Present Waldorf Jaycees Community Center and Old Waldorf School, Fine Arts/Performing Arts/Civic Center and Waldorf Multi-Generational & Senior Center

**B GATEWAY OFFICE BUILDING**  
50,000 SF of class A office space in 4 stories

**C GATEWAY HOTEL**  
40,000 SF in 4-5 stories, 80-100 rooms

**D FUTURE FINE ARTS/PERFORMING ARTS/CIVIC CENTER**  
1500 seat auditorium

**E MIXED-USE DEVELOPMENT**  
20,000 SF ground floor fitness center  
24,400 SF ground floor retail/commercial  
128 residential apartments on 4 upper floors

**F PARKING STRUCTURE**  
666 parking spaces on 6 levels with retail/commercial loading and service included on ground level

**G MIXED-USE DEVELOPMENT**  
60,000 SF ground floor grocery on 1-2 floors  
25,200 SF ground floor retail/commercial with 156 residential apartments on 4 upper floors and 8 ground floor residential apartments

**H PUBLIC SQUARE URBAN PARK**  
1 acre park space for event use and bio-filtration

**I PARKING STRUCTURE**  
756 spaces on 6 levels with retail/commercial loading and service included on ground level

**J RESIDENTIAL BUILDING**  
110 residential apartment units on 5 floors

**K FUTURE LIGHT RAIL TRANSIT STATION**  
300' platform for 3 passenger cars

**L POTENTIAL PUBLIC MARKET HOUSE LOCATION**  
12,000 - 15,000 SF facility

**M PHASE 1 TRANSIT STOP**  
MTA bus and VAN GO stations

**N AERIAL CROSSOVER FOR CSX TRACKS**

**O PARK AND RIDE LOCATIONS**  
Spaces provided within parking structures

**P FUTURE COMMUNITY PARK BUILDING SITES**

**R FUTURE NAYLOR AVENUE EXTENSION ACROSS RAILWAY**

**S FUTURE RESIDENTIAL RECONSTRUCTION ALONG LIGHT RAIL ALIGNMENT**  
Three townhome building clusters

**T FUTURE PLANNED TRANSIT-ORIENTED REDEVELOPMENT SITES**

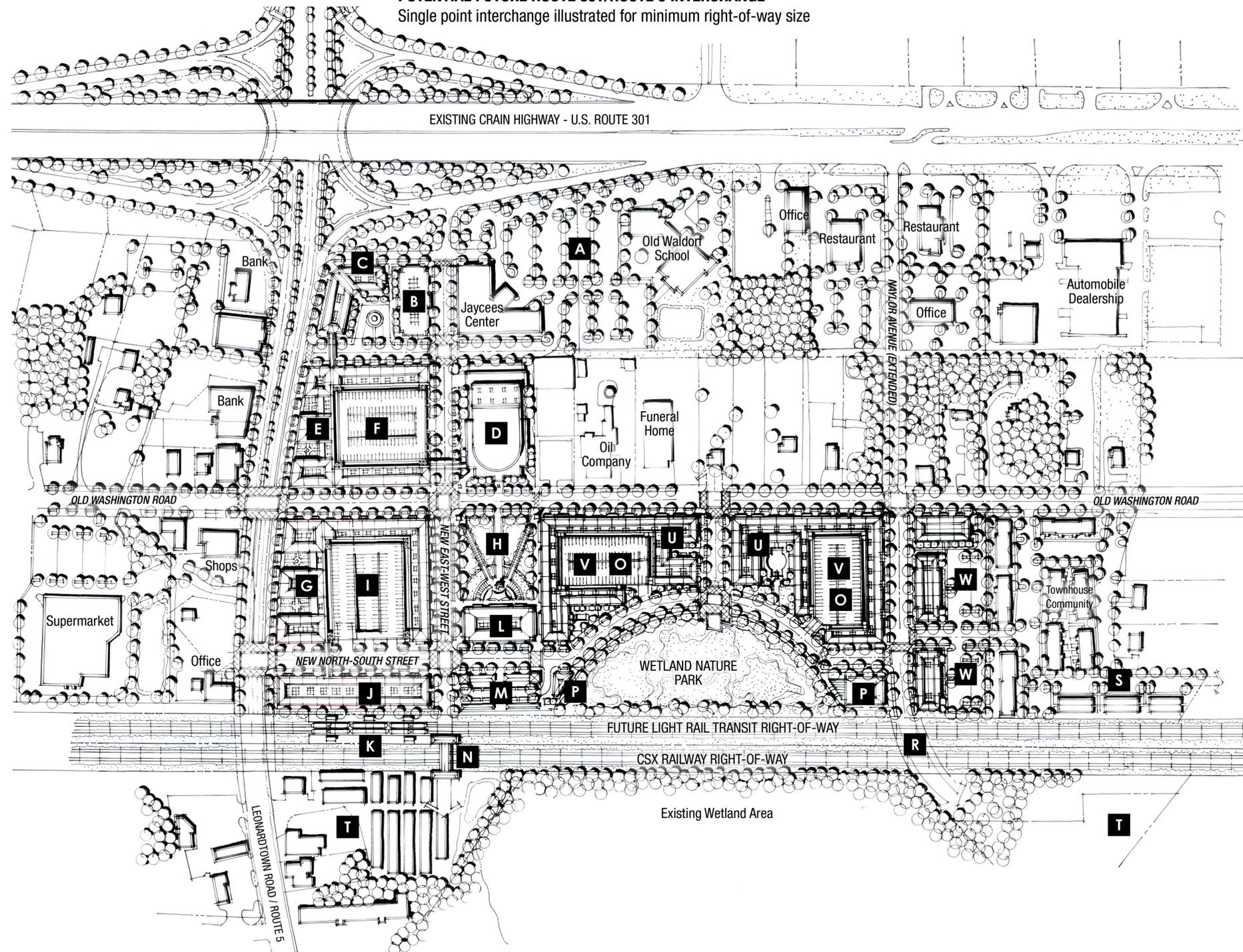
**U PHASE 2 MIXED-USE DEVELOPMENT**  
Each additional north and south building is five stories with +30,000 - 35,000 SF of ground floor commercial space, +140 upper floor apartments and 14 to 16 additional ground floor residential units

**V PHASE 2 PARKING STRUCTURES**  
Each north and south parking structure has the potential for +500 spaces on six levels with commercial loading and service locations included within the ground level

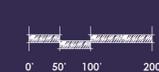
**W PHASE 2 RESIDENTIAL APARTMENTS**  
Three-story garden apartments on the north side of Naylor Avenue extended

## POTENTIAL FUTURE ROUTE 301/ROUTE 5 INTERCHANGE

Single point interchange illustrated for minimum right-of-way size



# WALDORF CENTER - FUTURE DEVELOPMENT PLAN WITH POTENTIAL INTERCHANGE



JANUARY 29, 2013

Prepared for:  
Department of  
Planning and Growth  
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**“WALDORF CENTER” – TRANSIT ORIENTED DEVELOPMENT & CONTEXT SENSITIVE DESIGN**

The project team reviewed the *Waldorf Urban Design Study* and adopted *Downtown Waldorf Vision Plan*, and the *Southern Maryland Transit Corridor Preservation Study*, for opportunities to integrate the goals of both in the Waldorf Center Phase One Development Plan. Team member Regional Policy Advisors also conducted a fact-finding visit to study three new Light Rail Transit systems in Phoenix, Arizona, Norfolk, Virginia, and Charlotte, North Carolina to take a closer look at their efforts to integrate land use and transit. The results of these efforts are reflected in the recommendations presented in this report.

The formal process of planning, engineering and building a light rail transit system is a lengthy one, especially the pursuit of construction funding when state and federal budgets are constrained in the aftermath of a national recession and new communities are entering the competition for resources to start new projects. Charles County’s transit strategy builds upon the concurrent *Waldorf Urban Design Study* and MTA transit studies, both completed in 2010. This integrated land use and transit approach confers distinct advantages, since the best way to transform downtown Waldorf into a vibrant new urban center is in combination with an effective strategy to link Charles County with high-capacity, fixed-route mass transit service.

The designation of the 300-acre WUDS area, now the Waldorf Urban Redevelopment Corridor (WURC), was predicated on the location of the transit alignment recommended in the MTA study, and the location of two of the County’s five proposed light rail transit stations—at Leonardtown Road and Acton Lane. The WURC is now zoned for higher density mixed-use, transit-oriented development.

A realistic timetable for bringing light rail transit service to Waldorf and White Plains from the Branch Avenue Metrorail Station in Prince George’s County is 12 to 15 years—to plan, engineer and construct the 18.8 mile alignment—two thirds of which is in Prince George’s County and one-third in Charles County—connecting all 11 proposed transit stations. The route would be constructed from Branch Avenue south, delivering earlier transit service to population centers closer to Washington, and giving transit-oriented development near the proposed stations in Charles County time to establish a foothold and thrive. This evolution of TOD in the WURC and in the County’s transit development corridor will add potential new transit users to the ridership counts that will make this regional LRT project competitive with others seeking federal assistance. The Phase One development plan presented in this report would set in motion the next stage of the integrated land use and transit strategy that the County launched in 2008 with the WUDS and MTA studies.

It should be noted that the Charles County segment of the adopted light rail alignment has an advantage over many other light rail projects, in that its location adjacent to an existing railroad right-of-way offers a “path of least resistance” with fewer obstacles and no “show-stoppers,” according to the environmental study conducted by the MTA’s consultants. It has another advantage. Construction of the light rail line in a new 70-foot right-of-way adjacent to the CSX tracks will not gridlock local highways, streets and intersections in Waldorf, unlike similar projects in other cities where motorists must co-exist for months or years with transit construction on already congested streets. In Waldorf, the creation of a new urban community and light rail transit can be coordinated to mutual advantage, with minimal impact on existing traffic patterns and business activity.

## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

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After the Waldorf Center Phase One project gains traction, the next step in this evolutionary process would be for similar implementation strategies to be prepared to guide public and private investment in transit-oriented development in each of Charles County’s other four proposed transit stations, starting with the Acton Lane station which is also in the WURC. Success at Waldorf Center may encourage new investment and redevelopment activity in other areas of the WURC, to the south across Leonardtown Road, and to the north toward Acton Lane.

Commuter bus ridership in Southern Maryland is the fastest growing in the State. This growth has outpaced all projections and lends added weight to the argument for passenger rail service. New commuter buses and park and ride lots are filled as fast as they can be brought on line. Until State and federal commitments can be secured for construction of the light rail system, expanded MTA commuter bus and VanGo (locally operated shuttle bus transit service) service will need to be integrated into the Phase One development plan. The plan for Waldorf Center provides for this transition by including a new 540-space State commuter bus park and ride facility and transit station, adjacent to the future light rail transit station, within convenient walking distance of the entire Phase One development. In this way, the plan for Waldorf Center has been conceived from the outset as a transit hub, initially on rubber tires instead of steel rails. In Phase Two, this park and ride lot will transition to multi-story mixed-use buildings with structured parking, and the commuter bus/VanGo station will be joined by an adjacent transit station for LRT passengers. Future transit-oriented development on the east side of the CSX tracks could also be connected to the LRT station by an elevated pedestrian crossover.

The “Waldorf Central (WC)” zone calls for 2-5 story buildings, in contrast to the “Acton Urban Center (AUC)” zone of 3-10 stories. The Waldorf Center Phase One development plan maximizes the potential contribution of the WC zone to population and employment densities that will help meet federal targets for capital investment in high-capacity transit projects.

The transportation needs of the Waldorf area must be addressed comprehensively. Traffic congestion in Waldorf is the result of a combination of factors (besides the economic activity and growth of the area): truck and automobile traffic passing through the County from Virginia and points south through Charles County on the way to destinations in the Washington, D. C. and Baltimore areas; 40,000 commuters a day making the round trip from Charles County to their jobs in the Washington area, and local trips by area residents. Major improvements are needed in the U. S. 301 highway corridor. Most important in facilitating the redevelopment of downtown Waldorf would be a grade-separated interchange at the intersection of U.S. 301, MD 5 Business (Leonardtown Road), and MD 228. This would improve access to the Waldorf Center project. Although it is high on the County’s priority list, this is an expensive project for which there is no State funding committed at the present time. Also useful would be safer pedestrian crossings on U.S. 301 at MD 5 Business/MD 228 intersection, which are being scheduled for study by the State. The entire west side of U. S. 301 is within the half-mile walking distance of the future Waldorf Center light rail transit station. Therefore, safe and convenient highway crossings for pedestrians will expand the reach of the Phase One development.

The County has made a deliberate effort to improve the “urban mobility network” by building alternative connector roads around Waldorf and parallel to U.S. 301. This “local road program” has created time-saving alternate routes for County residents. The reconstruction of Old Washington Road is in the County’s adopted Capital Improvement Program (CIP), beginning with the design and engineering phase. This project should be initiated in

## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

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FY 2014, and coordinated with sanitary sewer, water and other utility infrastructure that needs to be installed in the roadway.

The “*Waldorf Urban Transportation Improvement Plan*” [Martin/Alexiou/Bryson, P.C., June, 2010] provided a number of specific recommendations on what infrastructure will be necessary to catalyze redevelopment in downtown Waldorf. The report identified 8.7 miles of improved and new roadways that will need to be built, including improvements to urban major and minor collector roadway projects, urban local roads, and alley and service street projects. The study identified three key projects to help catalyze development: Leonardtown Road, Old Washington Road and Acton Lane. State highway improvements are scheduled on Leonardtown Road (MD 5 Business), but a much greater investment by the State will be needed to complete the improvements that are necessary in the commercial area of this road west to the U.S. 301 intersection. In its 2012 “Tour Letter” to the Secretary of the Maryland Department of Transportation, the County identified roadway improvements along MD 5 Business and MD 925 (Old Washington Road) as a priority for reconstruction as urban arterials with bicycle and pedestrian accommodations to assist the County in creating a planned walkable, transit-oriented community. The project would include intersection improvements at MD 5 Business, MD 925 and Old Washington Road, including ADA compliant crosswalks and sidewalks, roadway widening, capacity enhancements, turn lanes, signal reconstruction, and stormwater management improvements.

The Waldorf Center Phase One plan recognizes the need to begin establishing an urban street grid in downtown Waldorf. In addition to the reconstruction of Old Washington Road, beginning at Leonardtown Road and proceeding north through the Phase One and Two development areas, the plan contemplates new east-west and north-south streets that will facilitate access to the commuter bus park and ride lot and transit station, and later the light rail transit station, and internal mobility within the compact Waldorf Center development. These new urban streets will be important to the efficient management of traffic generated by the Phase One plan. With the availability of a major commuter bus park and ride facility within walking distance, ample structured parking physically connected and integrated with mixed-use residential buildings, and on-street parking, it may be possible for Waldorf Center to achieve much greater efficiencies in the management of traffic, and lower vehicle miles of travel (VMT), than in a more conventional development plan.

While there are many challenges ahead in securing significant improvements to State highways and roads in Waldorf, particularly in the absence of a State and federal government commitment to fund major new investments in transportation infrastructure, Waldorf remains an important center of business and economic activity, even if it is a congested one. In spite of limited support from the State and federal levels, the Charles County government continues to program local road improvements that could have a major impact on the implementation of the Phase One plan.

A fundamental ingredient of success in creating a new urban center in Waldorf will be its “livability benefits.” Richard Florida, urban planner and author of the bestseller, “*The Rise of the Creative Class*”, talks about how places that support transit-oriented development are much more likely to gain a competitive edge as they attract “the creative class,” including those in the computer science, technology, finance, legal and design professions. In addition to the convenience of transit service within a five to ten-minute walk from any part of Waldorf Center, the plan includes the concept of a new civic center/fine arts/performing arts center on a “public square” urban park, a public market, a wetland nature park, restaurants, a specialty grocer, fitness center, and other amenities

## WURC – “PHASE ONE” PROJECT DEVELOPMENT PLAN FOR “WALDORF CENTER”

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that will help establish a community, not just another residential development project isolated and disconnected from other quality of life activities and services. The Waldorf Center plan is a “design for living” combining all dimensions of a satisfying lifestyle choice.

The process of securing commitments from elected, civic and business leaders, the public and private sectors, and community stakeholders will require significant outreach and communication efforts, initially by the consultant team when it presents its recommendations, and later by County government leaders and the management entity they create to implement the plan. The Phase One plan for Waldorf Center that is presented in this report is a compelling one. The vision it offers for the future of Waldorf and Charles County is unprecedented in its scope and potential economic impact. The achievement of the dual objectives of transforming downtown Waldorf into a vibrant new urban center and establishing a passenger rail connection between Charles County and the Nation’s Capital would be one of the most significant economic development projects in the history of Southern Maryland, equivalent in its impact to the establishment of the Patuxent Naval Air Station or the Calvert Cliffs Nuclear Power Plant.

The realization of this vision will take an effective communications strategy, emphasizing the “livability benefits” of the plan, not only to the new residents of Waldorf Center, but the citizens of the County as a whole. Taking a few central features of the plan as examples, the “Public Market House” which anchors the east end of the “Public Square Urban Park,” organized like the Pennsylvania Dutch Farmer’s Market in Annapolis or the Reading Terminal Market in Philadelphia, could be a major regional attraction. A new Fine Arts/Performing Arts/Civic Center anchoring the west end of the Public Square, could offer a major indoor venue for local and regional events that does not exist today in Charles County or Southern Maryland. The potential for both indoor and outdoor festivals in this new civic space would be virtually limitless, potentially accommodating attendance in the thousands. Relationships would need to be forged with the Waldorf Jaycees and the Friends of Old Waldorf School to realize these plans, as well as the development of the Multi-Generational/Senior Center on the “Waldorf Civic Campus,” a project already in the County’s CIP.

Because financing required for the public improvements that are necessary to implement the Phase One development plan will become significant after the first year, it will be in the County’s interest to establish a special taxing district for the WURC. To do this the support of local landowners will be essential. In making the case for their support, the corresponding benefits of the project must be tangible and real. A significant early step for the management entity will be to begin this community relations and consensus building process. A marketing program that informs the entire County of the goals and the plan for achieving them will need to be developed. Generations ago the “Waldorf Center” site was the original heart of Waldorf (Old Washington Road was the original highway from Charles County to Washington, D. C. before U.S. 301 was constructed—the first “Waldorf Bypass,”) so perhaps a market slogan like, “Downtown Waldorf—the Heart of Charles County,” would be appropriate.

The challenge ahead is whether downtown Waldorf can be transformed from an automobile-dependent suburb into a vibrant, transit-oriented, walkable, new urban center. The Phase One development plan for Waldorf Center that is presented on the following pages is the consultant team’s response to this challenge.



**F. MARKET ANALYSIS AND DEVELOPMENT PROGRAM**

For market analysis and development program, please see **Appendix, Section 4** to this report.

**G. INFRASTRUCTURE REQUIRED TO IMPLEMENT THE “PHASE ONE” PROJECT AND THE WALDORF DOWNTOWN VISION PLAN – INFRASTRUCTURE INVESTMENT PRIORITIES**

**TASK A.1 – PUBLIC WATER SYSTEM ASSESSMENT**

**Synopsis:**

The purpose of this assessment is to evaluate the potential impacts of developing the Waldorf Urban Redevelopment Corridor (WURC), and its proposed densities, on the existing public water system. The WURC Design Team shall provide sound engineering recommendations to Charles County for any improvements necessary to ensure that the Charles County water system could adequately accommodate the future development of the WURC area.

The evaluation will compare the existing land use densities/water demands within the limits of the WURC corridor to the ultimate land use densities/water demands proposed by the *Downtown Waldorf Vision Plan* as part of the *April 29, 2010 Waldorf Urban Design Study*. The WURC is located within the heart of downtown Waldorf, which is bounded by Lue Ellen Road to the North, Terrace Drive to the South, U.S. Route 301 to the West, and the CSX Railroad tracks to the East. The WURC area currently has two land use zones. South of Holly Lane the zone is classified as Waldorf Central (WC), which allows for 2 to 5 story buildings composed of mixed uses. To the North of Holly Lane the zone is classified as the Acton Urban Center (AUC), which allows for 3 to 10 story buildings with a mix of permitted uses within each building. In addition to the mixed use buildings, this zone will also allow for larger employment facilities.

Currently, the existing land uses within the area of study is mixed between residential, commercial, and retail. In addition, the majority of the properties within the WURC are currently developed. There are few parcels located within the WURC which have not been developed. These undeveloped parcels currently consist of either forest or open space/grassed areas.

**Existing Water System within WURC:**

The existing water system within the WURC consists of a 10-inch main within the east side of US Route 301, a 6-inch water main within Old Washington Road between Maryland Route 5 (Leonardtown Road) and just north of Acton Lane. In addition to the 6-inch line within Old Washington Road, there also is an 8-inch line from MD Route 5 South towards the Food Lion Supermarket. Within the existing system there are numerous 8-inch leads to existing businesses which stem off the 10-inch line within US-301. The majority of the water system, within and around Old Washington Road, consists of older 6-inch cast iron pipes (CIP), some exceeding 50 years, which are known to be brittle and notoriously susceptible to frequent breaks due to ground temperature changes.. The hydraulic gradient within the existing system is dependent upon five existing water towers spread throughout Waldorf. The three towers within close proximity of the WURC’s area are Pinefield, St. Charles, and McDaniel Road water towers. The Pinefield tower located to the North, has a capacity of one-million gallons and to the south of the WURC area is the St. Charles Tower, which has a capacity of two-million gallons. To the West of the WURC area is the McDaniel Tower, which has a two-million gallon capacity. The overflow elevation established

## WURC – INFRASTRUCTURE REQUIRED TO IMPLEMENT THE “PHASE ONE” PROJECT AND THE WALDORF DOWNTOWN VISION PLAN – INFRASTRUCTURE INVESTMENT PRIORITIES

within each water tower in the Waldorf water system is set at 371.00’, while the lowest elevation within the operating Waldorf system is 336.00’. For purposes of this water analysis, the water towers were set at the median elevation of 353.50’ as a baseline, due to the fluctuation of the system which correlates with daily demands being serviced by the system. (See **Appendix, Exhibit W.1 and W.2**, Watermain Analysis)

### Proposed Water System within the WURC:

The proposed water system will require that all existing pipes within the WURC area to be replaced to minimize impacts from ongoing repairs and multiple tie-ins to future pavement and sidewalks. Additional looping will be required between the existing 10-inch main within US-301 and the existing 6-inch line within Old Washington Road. Any proposed water main to be placed within this area shall be at a minimum of an 8-inch ductile iron pipe. The Watermain Analysis exhibit, (See **Appendix, Exhibit W.1 and W.2**, Watermain Analysis) of this report shows all existing service lines and the proposed connections to the existing system and their proposed locations through the WURC area.

### Water System Modeling:

The water system analysis contained within this report is based on County provided water utility information which included some as-built construction drawings and digital .PDF files noting “general” locations and sizing of known water system utilities within the WURC corridor. In addition, fire hydrant flow test results were provided to LSA by Mr. Dan Shannon, PE from the Charles County Department of Public Facilities. The hydrant test locations were selected by County staff to better isolate the WURC area, allowing LSA to determine the impact associated with ultimate build-out on the existing water system. These hydrant tests were performed on April 6<sup>th</sup>, 2012. The following is a breakdown of the hydrant tests. Locations for each hydrant tested can be found within (See **Appendix, Exhibit W.3**, Fire Hydrant Test Locator).

**Table W.1: Fire Hydrant Test Results**

Hydrant	Hydrant #	Static Pressure (PSI)	Flow Pressure (PSI)	Flow (GPM)	Residual Pressure (PSI)	20 PSI Flow Rate (GPM)
VP-1	2242	66	45	1126	60	3382
VP-2	507	65	52	1211	62	5226
VP-3	484	64	52	1211	60	4420
VP-4	2183	66	50	1187	60	3565
VP-5	471	65	55	1245	64	9725
VP-6	262	65	54	1234	64	9639
VP-7	398	70	55	1245	64	3912
VP-8	468	74	56	1257	70	5125
VP-9	365	72	55	1245	65	3676

- The figure above was provided by Charles County, as submitted and tested by ESG Hydrant Services, LLC

The WURC water system model, prepared for this report, is a steady state analysis of the public water system. LSA utilized KYPIPE software to perform the model. KYPIPE was developed by civil engineering professors from the University of Kentucky and has been utilized by the civil engineering community for over 40 years. KYPIPE is the water modeling software utilized by the Charles County Department of Planning and Growth Management for its own public water system.

For the existing conditions analysis, LSA inputted the location of known water distribution utilities (information provided by Charles County staff) onto an overall property map. From this composite map, LSA assigned nodes (i.e.: study points) at critical locations along the utility skeleton layout. These nodes are utilized to assess pressures and capacities of the system.

For the proposed/developed conditions, LSA utilized a conceptual layout from the County's *Waldorf Vision Plan* as a background map to input new conceptual layouts of the future water distribution system improvements. The improvements associated within the system include looping of 8-inch watermain between the existing 10-inch watermain within US Route 301 and the existing 6-inch watermain Old Washington Road. Identifiable “blocks” (or smaller areas) were determined within the WURC area based off the previously mentioned *Waldorf Vision Plan* and a proposed density worksheet, as provided to LSA by Charles County Staff. The density worksheet took into consideration retail/commercial space, residential areas, and civic properties. In addition to the established uses, building area estimates were provided within the County provided worksheet. Based off the building areas and their given uses, water demands were calculated for each block area. Given this information, establishment and location of the proposed 8-inch watermain loops within the system were determined. When providing for additional loops within an existing system as presented, service flows and pressures within the system will increase allowing the area to meet both fire suppression and service demands.

In accordance with the *Charles County Water and Sewer Ordinance*; Average Daily (ADF), Maximum Daily (MDF), and Peak Hourly Flows (PHF) for ultimate development were calculated and entered into the water model analysis in order to determine their effects on the existing system. The MDF and PHF flow multipliers used for this analysis area 2.5 and 3.0 respectively, which is based off *Appendix ‘O’* within the *Charles County Water and Sewer Ordinance*. *Appendix ‘O’* of the *Water and Sewer Ordinance* dictates using a peaking factor of 2.0 for MDF based upon the water system containing greater than 2,000 EDU's, when more than 10% is non-residential. However, 2.5 was used as a conservative approach. Additionally, the flow factors of 173 GPD/du and 202 GPD/du were used for apartments and townhouse units respectively. The EDUs for the apartment portion of the study was determined using 1500 square foot units divided into the total gross floor area as provided on the *Waldorf Vision Plan* and density worksheets, where the Townhouse units have already been predetermined. Commercial demand calculations such as Office Space (0.09 GPD\*sf) and Retail Space (0.05 GPD\*sf) were calculated using a flow projection from *Appendix ‘U’* of the *Water and Sewer Ordinance*. An average of the commercial demand projections therefore is (0.07 GPD\*sf), which was used as the multiplier for the total gross floor area for these two uses. In addition, the Food Lion supermarket within Block B2 (See **Appendix, Exhibit W.1**, Watermain Analysis) utilized a flow projection of (0.20 GPD\*sf) for its total gross floor area. The design flow projections can be found within **Table W.3** (See **Appendix, Table W.3**, Demand Calculations for Water Analysis).

### **Methodology:**

The methodology used for the Maximum Daily Flow plus Fire Flow analysis is as follows. The Maximum Daily Flow is calculated by multiplying each Average Daily Flow demand by the model peaking factor (2.50). Next, a Fire Flow/Hydrant Report (See **Appendix, Table W.5**, WURC Maximum Daily Flow (MDF) Plus Fire Flow) is generated using the fire flow analysis within KYPIPE's water system modeling software. The network of study

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nodes within the model were then evaluated in the fire flow analysis. KYPIPE’s fire flow analysis runs each test node at 20 psi, and generates the maximum amount of flow that can be supplied to that node. The residual pressure of 20 psi is the minimum allowable pressure sustainable for providing the required demands associated with fire protection while still meeting the domestic flows demands for water service within the system. In review of the Fire Flow/Hydrant report (See **Appendix, Table W.6**, WURC Maximum Daily Flow (MDF) Plus 2000 GPM Fire Flow), node WUD-K2 appears to be the critical node within the report. WUD-K2 will produce 3,413 GPM which exceeds the required 2,000 GPM at 20 psi per the *Charles County Water and Sewer Ordinance*. Next, LSA placed the 2,000 gpm flow on the lowest producing (critical) node WUD-K2, in addition to its MDF of 6.00 gpm giving a total of 2,006.00 GPM. After running the KYPIPE analysis for this scenario, the results yielded a minimum residual pressure of 50.20 psi which is greater than the minimum design criteria of 20 psi established by Charles County, therefore meeting the Maximum Daily Flow plus Fire Flow Criteria.

The methodology used for analysis of the Peak Hourly Flow is straight forward. The Maximum Daily Flow for each node was multiplied by 3.0 to give the Peak Hourly Flow Demand. As such, the Peak Hourly analysis is in keeping with the approved peaking factors used in the County’s Waldorf Water Model and with the *Charles County Water and Sewer Ordinance, Appendix ‘R’*. Note that a selection of nodes surrounding the site is shown for the Peak Hourly Flow. None of these node’s pressures drop below 57 psi, which is significantly greater than the 20 psi minimum requirement. As such the Peak Hourly Flow requirement is met.

**Table W.2: Design Flow Characteristics**

	Design Flow (GPD)	Definition
Average Daily Flow (ADF)	(Total EDU’s) x (Flow Factor)	The average number of gallons used by each use per day
Maximum Daily Flow (MDF)	(ADF) x 2.5	ADF multiplied by 2.5 to account for increase in demand on system which varies with the time of day for each use.
Peak Hourly Flow (PHF)	(MDF) x 3.0	MDF multiplied by 3.0 to account of the highest demand draw on the system during any given hour within a day.

**Conclusions & Recommendations:**

- a. Existing Conditions within the WURC  
 The existing water system as it currently stands today would not be sufficient to accommodate the demands associated with the ultimate development of the WURC area, without provisions for additional proposed looping (8-inch diameter) of the water main between the existing 10-inch water main within US Route 301 and the existing 6-inch water main within Old Washington Road. Currently, the water system does not provide for enough flow to meet this projected demand, nor supply adequate fire suppression in accordance with the *Charles County Water and Sewer Ordinance*, for ultimate build-out of the WURC area.
- b. Ultimate Development of the WURC  
 By incorporating several future proposed 8-inch water lines spread throughout the WURC area, connecting the existing watermain within US-301 (10-inch) and Old Washington Road (6-inch), there would be sufficient operating pressure and required flow demands within the water system to

accommodate the entire WURC zoned area while still meeting the requirements set forth within the *Charles County Water and Sewer Ordinance*. The proposed grid-pattern style layout within the WURC provides substantial benefits to adequately supply volumes and operating pressures through the creation of these additional loops throughout the WURC development. These proposed 8-inch loops provide consistent pressure within each block area (See **Appendix, Exhibits W.1 and W.2**, Watermain Analysis) while pulling most of the design flow from the 10-inch (U.S. 301) line rather than the 6-inch line (Old Washington Road). Without the future hydraulic 8-inch connections between these two existing mains, there would not be adequate looping to help maintain these necessary minimum operating pressures. The existing 6-inch line within Old Washington Road alone is not sufficient for the projected demands associated with the WURC development. It should be noted that this study does not take into account the physical conditions and service life of the existing 6” CIP water main. The majority of the existing 6-inch water pipe within Old Washington Road is over 50 years old and has been the subject of routine County maintenance and repair. The County had initiated a CIP project for a new 10-inch water main replacement along Old Washington Road in 2006, however since that time, the County’s contracted engineer has closed their business and the design was never completed. Since WURC improvements are being proposed with regards to both the sanitary sewer system and roadway improvements along the Old Washington Road corridor, combined with the diminishing service life of the existing water mains within this corridor, it may be beneficial that the existing 6-inch water main along Old Washington Road (from MD Route 5 to Acton Lane) be upgraded to a new 10-inch diameter ductile iron pipe concurrently with the other utility and roadway improvements. This would provide a cost savings to the County, particularly with respect to minimizing routine maintenance. This improvement would ensure adequate operating pressures and flow volumes for fire suppression, while limiting the County’s capital costs from numerous future repairs to both the existing 6-inch water main and the Old Washington Road roadway itself. An analysis of the WURC area with a new 10-inch water main within Old Washington Road has been provided within this report as part of (See **Appendix, Exhibit W.4**, Public Water System Schematic).

c. Recommendation

The WURC Design Team recommends the installation of several 8-inch diameter waterline connections between US Route 301 and Old Washington Road throughout the WURC region in order to maintain adequate operating pressures within the water system. These proposed 8-inch waterline connections would be phased as the development within the WURC progresses. In addition, the WURC Design Team recommends that the County consider replacing the old existing 6-inch cast iron waterline within Old Washington Road (from MD Route 5 to Acton Lane) with a new 10-inch ductile iron water main. Included with the new 10-inch water main would be the replacement of the water stubs and/or water house connections along the 10-inch pipe alignment. Replacement of the 6-inch water main with the new 10-inch water main (including service connections) will avoid decades of disturbances from on-going repairs and multiple future tie-ins, thus disrupting any new roadway, pavement, or sidewalk improvements planned.

The next logical step by Charles County would be to issue a Request for Proposal (RFP) for a detailed engineering design for a new 10-inch water main along Old Washington Road, and require developers to evaluate their impacts to the current water system as the growth and density levels increase. It would be

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envisioned that the 10-inch waterline upgrade be a County CIP project and any proposed 8-inch ‘loop’ connections between US Route 301 and Old Washington Road be at the developer’s expense.

Finally, the WURC Design Team would like to identify that multi-story buildings may require internal booster pumps to provide minimum operating pressures for buildings exceeding two stories in height.

## **TASK A.2 – PUBLIC SANITARY SEWER SYSTEM ASSESSMENT**

### **Introduction:**

Charles County has contracted the services of the WURC Design Team to perform a wastewater analysis for a portion of the Waldorf sanitary sewer service area in conjunction with the Waldorf Urban Redevelopment Corridor (WURC). Team member Loiederman Soltesz Associates, Inc. (LSA) has been assigned with performing TASK A.2 of the RFP. This report will perform the following scope of work:

Analyze the wastewater flows generated by the ultimate development of the WURC, and evaluate these flows on the existing capacity of the County’s sanitary sewer system. If improvements to the sewage system are warranted to serve the ultimate development of the WURC, the LSA team shall identify suggested improvements. This analysis will be based upon ultimate WURC densities which were provided to the LSA design team by Charles County Planning and Growth Management staff. The LSA design team will assess the impacts to the existing sanitary sewer system based upon 70%, 80%, and 100% of the ultimate development potential for the WURC. For impacts based on 70% to 80% and 100% of total build out for the WURC, please see S.1, S.2, S.3 located in this report’s Appendix.

Analyze the capacity of each of the WURC sewer service areas (3 total) and their outfalls pipes. LSA will provide an analysis of each outfall pipe against proposed design flows from the ultimate development of the WURC. Perform a generalized evaluation of the County’s Zekiah Pump Station facility which serves portions of the WURC and various off-site drainage areas.

Perform a generalized evaluation of downstream gravity sanitary sewer interceptors. Although, this task was not included in the contracted scope of work, the LSA team believed that the County should be informed of the downstream sanitary sewer conditions.

Based upon a determination for the location of a proposed Phase One development within the WURC area, the LSA team will evaluate the minimum sanitary sewer improvements necessary, if any, to implement the Phase One Development.

### **Background:**

The WURC is located within the heart of downtown Waldorf, which is located between Lue Ellen Road to the North, Terrace Drive to the South, US Route 301 to the West and the CSX Railroad tracks to the East. The WURC area is currently dual Zoned; South of Holly Lane the zone is classified as Waldorf Central (WC), allows for 2 to 5 story buildings composed of mix-uses. To the North of Holly Lane the zone is classified as the Acton Urban Center (AUC), which allows for 3 to 10 story buildings with a mix of permitted uses within each building. In addition to the mixed use buildings, this zone will also allow for larger employment facilities.

### **Existing WURC Sewer Service Areas:**

The WURC is divided into 3 sewer service areas. Service Area 1 is located south of MD Route 5 (Leonardtown Road) and runs north where flows discharge into an existing 8" gravity main, and ultimately discharges into Service Area 2. Service Area 2 is located north of MD Route 5 (Leonardtown Road) and south of Acton Lane. This service area discharges into an existing 12" gravity main (PGM # 71-501) that ultimately feeds into the

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Zekiah pump station. Service Area 3 is located north of Acton Lane and south of VFW Road. Service Area 3 discharges into an existing 8" gravity main (PGM 80-125) that runs west under US Route 301 and feeds into an existing 18" gravity main interceptor system (PGM 80-125) which becomes the Lynbrook Outfall to the County's Mattawoman Interceptor. Please see **Exhibit S.4** Conceptual Internal Sanitary Sewer Network for locations of each service area.

### Overall Analysis of WURC Densities on Sewer System:

With an existing sewer network in place, this analysis shall focus on evaluating the existing system to determine the future level of service. A preliminary layout for the WURC was performed by EDSA and ERM during the original Waldorf Urban Development Study (WUDS) in 2010. Using the latest *Charles County Water and Sewer Ordinance (2011)*, the average daily flows (ADF) were calculated for each service area. See **Table S.1: Wastewater Demand Analysis** for additional details. The ADF was then peaked based on future land use, see **Table S.2: Peak Flow Analysis**. The peak daily flow (PDF) was used to determine if the existing sewer network could handle the increase in flow generated by the WURC. See **Tables S.3 and S.4** for Inflow/infiltration (I/I) and a summary of peak flows by service area, respectively.

The outfall for each service area was evaluated first. The existing outfall for Service Areas 1 and 3 had sufficient capacity for the future development proposed by the WURC, see **Tables S.5 and S.8**. Service Area 2's existing outfall will need to be upgraded prior to the full build out implementation of the WURC, see **Table S.6: Evaluation of pipe capacity for Service Area 1 & 2**. This would require replacing the existing 12" gravity main (PGM 71-501) and installing a 16" gravity main at approximately the same slope, see **Table S.7: Required pipe capacity to serve Service Area 1 & 2**. Installation of a new sewer pipe is recommended as the existing gravity pipe is asbestos cement pipe (ACP) which are known to be brittle and notorious for contributing to I/I problems. Further, the ACP is over 40 years old and has reached their useful design life expectancy. Replacement will alleviate the County Utilities Department from extensive rehabilitation efforts over the coming years.

### Zekiah Pump Station and Sewer Shed:

Since it was determined that the outfall for Service Area 2 required constructed improvements, an analysis was performed for the infrastructure further downstream. The existing 12" gravity main (PGM 71-501), from Service Area 2, connects to an existing 16" pipe (PGM 71-501), which ultimately discharges into the existing Zekiah Pump Station. Additional service areas were delineated in order to evaluate this existing 16" gravity main and the Zekiah pump station itself. Service Area 4 is located west of the CSX-T railroad tracks and east of Post Office Road. Service Area 5 is located east of Piney Church Road and west of Post Office Road. Both of these service areas outfall to an existing 12" gravity main (PGM 71-501) that discharges into the existing 16" gravity main (PGM 71-501) just upstream of the Zekiah pump station. See **Exhibit S.3** Conceptual Overall Sanitary Sewer Network for location of service areas beyond the WURC.

Using the latest *Charles County Water and Sewer Ordinance (2011)*, a proposed condition average daily flow (ADF) was calculated based on the existing zoning. Peak flows were then used to evaluate the existing sanitary network, see **Tables S.9 and S.10** for additional details. It was determined that the existing 16" gravity main that serves service areas 1, 2, 4, and 5 would need to be upgraded to a 20" gravity main prior to 70% build out of the

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WURC see **Table S.11** for additional details. However, due to the other sanitary system improvements both upstream and downstream of this location, it is recommended that the upgrade to a 20” gravity main occur initially.

Service Areas 1, 2, 4, and 5 ultimately discharge into the Zekiah pump station. The Zekiah pump station is located at the convergence of three (3) gravity outfalls; a 15” gravity main from White Oak Subdivision; the 16” gravity main from the Leonardtown Road, Business Route 5 area; and a 8” gravity main from the John Hanson/J.P. Ryon schools. A County approved capacity study was performed for the Zekiah pump station recently by Lorenzi, Dodds, & Gunnill, Inc. (PGM# VR 09-0080) in 2010. The study evaluated the existing system and determined the maximum operating conditions for the Zekiah pump station and its discharge forcemain. LSA has determined that the flow generated by the full build out of the WURC would exceed the maximum operating conditions for the current Zekiah Pump Station and its existing 12” forcemain. The existing 12” forcemain operates at a capacity of 2.59 MGD at a velocity of 5.11 feet per second. The existing velocity in the forcemain exceeds the maximum allowable velocity of 5 fps as established by Charles County. The 12” forcemain will need to be upgraded prior to the commencement of any development within the sewershed. See **Table S.14** Zekiah Pump Station Analysis for a complete generalized analysis for the pump station.

The Zekiah Pump Station Analysis is based on existing conditions for the sewer shed, and the future build out of undeveloped areas within the sewer shed per existing zoning. According to a previous County approved sewer capacity study performed by Ben Dyer Associates, Inc. (PGM 01-0038) the Zekiah sewershed could generate up to an additional 10.02 MGD once all undeveloped areas have been developed based upon current zoning. These projected flows mentioned in that capacity study have been included in this Zekiah pump station and forcemain analysis.

The 12” existing discharge forcemain from the Zekiah Pump Station and a separate 8” gravity pipe from Service Area 3 discharges into an existing 18” gravity interceptor pipe (PGM 80-125) just west of US Route 301, part of the Lynbrook Outfall. The proposed flow expected to be generated by the WURC, and future build out of undeveloped areas exceeds the design capacity of this existing 18” gravity interceptor pipe, see **Table S.12**: Evaluation of Existing Pipe Capacity in 18” pipe North of 301 (Lynn Brook Outfall). This interceptor would need to be upgraded to a 36” pipe prior to the 100% build out of the WURC, see **Table S.13**: Required Pipe Capacity for future development of the WURC (Lynn Brook Outfall). This interceptor system on the west side of US Route 301 ultimately discharges into the existing Mattawoman Interceptor sewer main at existing Manhole #117.

### Generalized Analysis of the Mattawoman Interceptor Sewer:

Although this study does not fully analyze the Lynbrook Outfall Interceptor and Mattawoman Interceptor Sewer, the LSA design team wanted to bring some issues to the attention of County staff. The County’s 2008 Mattawoman Interceptor Phase 1 & 2 Capacity Study (VCI 06-0082), found that under existing peak flow with I/I (Inflow and infiltration) conditions, there was no surcharging of manholes on the system. However, per the current *Charles County Water and Sewer Ordinance*, sewer interceptors shall be designed to not exceed 2/3 capacity. This 2008 study showed that segments of the Mattawoman Interceptor did slightly exceed the 2/3 capacity design threshold, specifically between manholes 118 and 117, and 52 and 42. The current outfall for the largest portion of the WURC sewer service area, which includes the Zekiah Pump Station, is located at Manhole #117 along the Mattawoman Interceptor. As a result of increased density from the ultimate future development of

the WURC, these segments of the Mattawoman Interceptor will exceed the 2/3 capacity requirement along several segments of the utility. Interceptor systems that exceed 2/3 capacity will develop hydrogen sulfide which is very corrosive to concrete and hazardous to the County’s maintenance crews. The County may desire to conduct a future detailed Mattawoman Interceptor study to account for the increased densities associated with the WURC, and the balance of the overall contributing sewer service area. It should be noted that any future capacity study undertaken on the Mattawoman Interceptor consider an October 22, 1980 WSSC sewer agreement with the County which allocates certain capacities within the Mattawoman Interceptor.

**Analysis of Impacts of Phase One Development onto Sewer System:**

Through several meetings with the WURC Design Team, County staff has elected to proceed with the “Waldorf Center” site for its Phase One Development. This initial phase within the WURC will require the County to replace the existing 8” gravity main with a new 10” and 12” gravity main along Old Washington Road from the Phase One Development to the outfall for Service Area 2, please see **Exhibit S.5** Public Sanitary Sewer Schematic. Service connections and stub-outs for all current and expected future connections shall be installed to minimize future impacts to the future roadway, pavement, and sidewalk improvements. The proposed 12” gravity main along Old Washington Road is based on maintaining the existing slopes of the 8” gravity main which was below current design standards. The County, during a later final engineering phase, may elect to install these sewer main at a greater slope to reduce the pipe sizes.

The flows generated by the Phase One Development will exceed the capacity of the existing 12” gravity outfall from Service Areas 1 and 2. Prior to the Phase One Development the existing 12” gravity main (PGM 71-501) will need to be replaced with a 16” gravity main at approximately the same slope. The 16” gravity main will provide sufficient capacity for the ultimate development of the WURC.

While the existing 16” gravity main that serves Service Areas 1, 2, 4, and 5 does not exceed true capacity, it does exceed the design capacity (2/3 full). In order to prevent the formation of hydrogen sulfide it is recommended that the existing 16” gravity main (PGM 71-501) be replaced with a new 20” gravity main at approximately the same slope. The 20” gravity main will provide sufficient capacity for the ultimate development of the WURC.

The sewershed which comprises of Service Areas 1, 2, 4, 5, and 6 discharges into the Zekiah pump station. See **Exhibit S.3** Conceptual Overall Sanitary Sewer Network. The Zekiah pump station discharges into an existing 12” forcemain that runs west under US 301 and discharges into the Lynnbrook Sewer Outfall. The Zekiah pump station and forcemain are currently operating at maximum conditions. The pump station and forcemain will be required to be upgraded prior to Phase One Development. This will not only allow for the Phase One Development project to commence, but allows for ultimate development of the surrounding service areas that the Zekiah pump station serves. A larger wetwell will have to be constructed based on the ultimate densities of the sewershed prior to the Phase One Development. Additionally, larger pumps will have to be installed to account for the increase of flow generated by the sewershed. Prior to any development the existing 12” forcemain from the Zekiah pump station will need to be upgraded. The existing 12” forcemain will need to be replaced with a new 30” forcemain, as required for the ultimate development of the sewershed.

The Zekiah pump station discharges into the LynnBrook Sewer Gravity Outfall. This existing 18” gravity main runs

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west where it ultimately discharges into the Mattawoman Interceptor (MH# 117). Prior to the Phase One Development, the existing 18” gravity main will need to be upgraded. This can be accomplished by replacing the existing 18” gravity main with a new 36” gravity main. Based on current flows from the Zekiah pump station, a new 36” gravity sewer main would have sufficient flows to achieve a “self-cleaning” velocity of 2.5 fps. It is expected that the existing 18” gravity main could ultimately be abandoned and all current sewer connections be reconnected to the 36” gravity main once the new 36” gravity main has been installed.

### Conclusion:

The existing County sanitary sewer system is currently operating at or exceeding maximum conditions. As discussed in the previous section, most of the gravity mains that discharge into the Zekiah pump station will be required to be upgraded prior to the initiation of the Phase One Development. The Zekiah pump station and forcemain is currently operating at maximum conditions, and also needs to be addressed prior to any development. The Zekiah pump station and forcemain discharges into the LynnBrook Outfall, which will need to be upgraded prior to any development. It is recommended that the County replace the existing sanitary system piping to not only accommodate the increase of flows generated by the WURC but to replace the problematic asbestos cement pipe (ACP) which are known to be brittle and notorious for contributing to I/I. The ACP within this area of the County is over 40 years old and has reached their useful design life expectancy. Further, many of the utility lines were installed at pipe slopes less than current standards. Replacement will alleviate the County Utilities Department from extensive rehabilitation efforts over the coming years. It may be suggested that costs for sewer replacement could be funded by a “User Fee” which may help to keep the County “Connection Fee” lower.

Finally, this sanitary system analysis performed in this study has taken into account both the initial development of a Phase One and the ultimate development of the sewershed and WURC, based upon current zoning. This study does not account for properties within the sewershed which may later “upzone” to higher densities. It is envisioned that if any properties within the sewershed were to upzone in the future, the County would require these developments to mitigate their density impacts onto the County sewer system.

### **TASK A.3 – STORMWATER MANAGEMENT ASSESSMENT**

#### **Synopsis:**

The following conceptual stormwater management study will analyze a geographic area of Waldorf known as the Waldorf Urban Redevelopment Corridor (WURC). This analysis will compare the existing land use conditions of the WURC area against the proposed land use condition based upon the downtown *Waldorf Vision Plan* which was a component of the *April 29, 2010 Waldorf Urban Design Study (WUDS)*. The WURC is located within the heart of downtown Waldorf, between Lue Ellen Road to the North, Terrace Drive to the South, US Route 301 to the West and the CSX Railroad tracks to the East. The WURC area is currently dual Zoned; South of Holly Lane the zone is classified as Waldorf Central (WC), which allows for 2 to 5 story buildings composed of mixed uses. To the North of Holly Lane the zone is classified as the Acton Urban Center (AUC), which allows for 3 to 10 story buildings with a mix of permitted uses within each building. In addition to the mix use buildings, this zone will also allow for larger employment facilities.

Currently, the existing land use of the area within the study area is mixed between residential, commercial, and retail with the area being predominantly developed. There are a few parcels located within the WURC which have not been developed. These undeveloped parcels are currently made up of mostly trees and some open space areas. Of the remaining developed parcels within the WURC, approximately 70% to 80% of their respective surface areas are impervious. The current hydrologic soil groups (HSG) within this area are both type “C” and type “D” soils. This information was taken from the *Natural Resources Conservation Services (NRCS) Web Soil Survey*. The most prevalent hydrologic soil group within The WURC is type “D”, which makes up approximately 75% of the study area. Hydrologic soil groups range from type “A” through type “D”, where type “A” soils have the most infiltration characteristics and type “D” soils the least.

With the existing WURC area already consisting of developed parcels and having an impervious surface area greater than 40 percent of the total site boundary, this analysis shall focus on the Redevelopment Criteria for Stormwater Management as part of the *Maryland Stormwater Management Act of 2007*. In addition to the Maryland Stormwater Management Act, the following analysis will also be in compliance with the *Charles County Stormwater Management Ordinance*.

As part of the *Maryland Stormwater Management Act of 2007*, the WURC area will utilize small-scale stormwater management practices and non-structural techniques in a manner which will mimic the natural runoff characteristics of the study area in order to minimize the impact of development to the environment. Considering Environmental Site Design (ESD) techniques to the Maximum Extent Possible (MEP) is the premises behind the *Maryland Stormwater Management Act of 2007*. The idea is to provide for “at source” treatment of stormwater runoff for new and existing impervious surfaces. Because this site currently is already developed, the Redevelopment portions of the State and County Design Manual shall be used while analyzing the site for stormwater compliance.

**Redevelopment:**

Redevelopment is defined as any construction, alteration, or improvement performed on sites where the existing land has been already developed with a site impervious area greater than 40%. When a site falls within the requirements of the redevelopment criteria, stormwater management shall be addressed based off the following conditions:

1. Reduce existing impervious area within the Limits of Disturbance (LOD) by at least 50%; or
2. Implement ESD practices to the MEP to provide water quality treatment for at least 50% of existing impervious area within the LOD; or
3. Use a combination of impervious area reduction and ESD implementation for at least 50% of existing impervious area.

In addition to treating at least 50% of the existing impervious area through the use of approved ESD techniques, stormwater management shall also be addressed for 100% of any net increase in impervious area when compared to the existing site conditions.

Environmental Site Design techniques to be used within the WURC analysis include Permeable Pavement (Soils with HSG-C), Disconnection of Rooftop and Non-Rooftop Runoff, Landscape Infiltration, Micro-Bioretenion, Swales, and Enhanced Filters. All ESD technique used within this study will help optimize the conservation of the natural features of the proposed layout while minimizing the impervious footprint of the site. These techniques will also help reduce runoff rates in order to increase infiltration of stormwater runoff within the study area. The main principle behind ESD practices is based on capturing and retaining enough rainfall so that the runoff leaving each drainage area is reduced to a level equivalent to a wooded site in good condition.

With each ESD measure implemented on site, a design rainfall target ( $P_E$ ) in inches is determined. This rainfall target can then be used in order to calculate the required runoff volume ( $ESD_V$ ) provided for each ESD technique. When a given drainage area meets its target  $P_E$  value, the site is considered woods in good condition. The target  $P_E$  value is determined for each drainage area prior to implementing any ESD technique. The first step for determining the WURC Environmental Site Design Criteria is to break down the site into two categories, the first being the overall proposed developed drainage areas and second, individual block, areas which make up the overall site drainage areas (See **Appendix, Exhibit SWM.1**, Stormwater Management Drainage Exhibit). Once these categories are delineated, the proposed impervious area by Hydrologic Soil Group is then calculated. Using this impervious area calculation by soil group, an impervious area percentage was determined. After the site has been broken down and the impervious area percentage calculated, **Table 5.3** within the Maryland Stormwater Management Design Manual (See **Appendix, Table SWM.1**, Rainfall Targets/Runoff Curve Number Reductions) was used in order to determine the rainfall target ( $P_E$ ) for each block/drainage area. Upon completion of determining the Target  $P_E$  value for each Block area, the proposed ESD devices within each block area were outlined.

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Certain assumptions were used in determining placement of each ESD device within their respective Block Areas. The assumptions made within the analysis error towards the conservative side given the conceptual layout nature of The Waldorf Vision Plan. When determining the surface area of each stormwater management facility, a percentage of each block’s impervious area was factored into the overall equation. In all cases the factor for the stormwater management facility surface area used was around 10%. Multiple trials were run in order to determine this percentage amount based off depth of filter media and ponding, where applicable. The assumptions used for each ESD device can be found within the computations within (See **Appendix, Table SWM.2**, WURC//ESD to MEP Worksheet (Redevelopment)).

### ESD Devices to be implemented within the WURC:

Permeable Pavement (A-2) has been proposed within the WURC limits of study; however it was not included within each Block. This is directly related to the current soil composition the WURC area. Permeable pavement, per the Maryland Stormwater Management Design Manual, cannot be placed within Hydrologic Type “D” soils which 75% of the WURC resides in. The Blocks which best suit this type of ESD practice are Blocks Y and Z. These two designated areas reside within Type “C” soils. Due to the nature of these existing soils, an under drain will be required including a 12-inch sub base in an attempt to meet the target rainfall requirement for woods in good condition.

Disconnection of Rooftop Runoff (N-1) has been used throughout the stormwater design study for the WURC area. This technique is considered a non-structural practice and involves directing flow from rooftop downspouts onto vegetated areas where it can filter over the ground and into the soil. The disconnection of rooftop runoff attenuates the impervious rooftop surfaces from the storm drain systems and reduces both runoff volumes and pollutants to regional facilities. The assumptions used when determining these locations, based upon The Waldorf Vision Plan conceptual layout, was a distance of 45-linear feet of disconnection for each building which provided a  $P_E$  value of 0.60-inch of rainfall treatment towards the target  $P_E$  goal. In most cases the disconnection length will increase once the project goes to the final engineering stages of development and one can determine final outfall points.

Disconnection of Non-Rooftop Runoff (N-2) has also been used within the Block areas. This ESD technique is similar to the Disconnection of Rooftop Runoff (N-1) technique previously discussed and is also a non-structural practice. The difference between the N-2 and N-1 devices is that N-2 allows for parking areas to be disconnected across grassed areas. This is used for smaller or narrower impervious areas like driveways, open section roads, and small parking lots. The length of disconnection shall be at least 10-feet wide and shall not accept more than 150-linear feet of impervious surface runoff to each device.

Landscape Infiltration (M-3) can be found within each Block area within the WURC. This is considered a structural practice; however it may be incorporated within the landscaped islands of a parking lot. This practice utilizes the landscaped islands to capture, store, and treat stormwater runoff prior to discharging into the storm drain system. Storage may be provided in constructed planters made of stone, brick, concrete, or in natural areas excavated and backfilled with washed stone and topsoil. When determining the surface area for each of these practices within the designated Block areas within the WURC, a percentage of the impervious area was used. The 10% assumption previously mentioned accounts for the filter media, voids within the sand, and additional

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ponding of 6-inches within each island. When factoring in the length of each island based off The Waldorf Vision Plan conceptual layout, there should be adequate surface area to treat each parking lot with this ESD measure. Upon completion of the final engineering design plans for various projects within the WURC area, the design engineer may find additional volume within these parking areas for treatment against the  $P_E$  target.

Micro-Bioretenion / Bioretention (M-6) areas have also been delineated within some of the proposed Block areas. This practice is quite similar to the Landscape Infiltration practice, however at a larger scale. Similar to the M-3 technique, Micro-Bioretenion practices are versatile and can be adapted for use anywhere there is landscaping proposed. The same assumptions for the M-3 device was used for the Micro-Bioretenion areas, however the 10% factor is a more conservative number for this device.

Rain Gardens (M-7) may be proposed throughout the WURC area where small landscaped areas are located within building courtyards and atriums. A Rain Garden is a shallow, excavated landscaped feature which temporarily holds stormwater runoff for the surrounding area. Typically, these practices consist of an absorbent-planted soil bed, a mulch layer, and planting materials such as shrubs, grasses, and flowers. In cases where stormwater runoff exceeds the area provided within each rain garden, an overflow storm drain structure is placed within the planted area to convey additional runoff to a regional stormwater management facility. Runoff can enter a rain garden through roof drains, pipes, swales, and or curb openings. Rain Gardens are very similar in nature to the Micro-Bioretenion (M-6) facilities mentioned previously.

Swales (M-8) have been proposed on-site within the given Block areas as well in order to attain the target  $P_E$  values for each given Block area. The swales are just that, open channels which convey runoff at a maximum velocity of 1.0 fps in order to allow for stormwater runoff to filter into the existing soil. The bottom width of the proposed swales shall be between two and eight feet. The proposed swales would be located along roadways or drive aisles in lieu of providing curb and gutter. There are three types of swales proposed within the *Maryland Stormwater Management Design Manual*; they are grass swales, wet swales, and bio-swales. Of the three, this analysis used the grass swale ESD device for determining the  $P_E$  for each given Block area. It should be noted that once a project goes into the final engineering design stage, the design engineer may find additional areas where a wet-swale and bio-swale may be used. The use of grass swales within this analysis lean towards the conservative side of the design spectrum.

Enhanced Filters (M-9) are located within each proposed Block area. These devices provide a modification to the Micro-Bioretenion facilities in order to provide for water quality treatment and groundwater recharge within a single facility. The difference between the two is a stone reservoir under the conventional filtering device which collects runoff. These devices are subject to the same design criteria as the Micro-Bioretenion facility. The same assumptions used for landscape infiltration and Micro-Bioretenion areas were used for this ESD device.

### **Regional Stormwater Management Facility:**

The WURC area is broken down into six (6) drainage areas with five (5) existing/proposed regional stormwater management facilities. The proposed locations for each regional facility correlate with the current existing drainage divides within each drainage area. Considering approximately 80% of this existing area has already been developed, and with the WURC area falling under the redevelopment criteria as part of the *Maryland Stormwater Management Act of 2007*, the existing regional Best Management Practice (BMP) facilities will need

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to be retrofitted in order to accommodate the additional impervious runoff to each regional BMP. The Waldorf Vision Plan considered these outfall points within the WURC boundary; however park areas have been incorporated in and around these facilities to help attenuate stormwater runoff. It is envisioned that these regional facilities will also serve as park/open space amenities.

Retrofitting of the existing stormwater management facilities shall include, however not be limited to, dredging out the existing facilities of sediment which has accumulated over years of use. While the facilities are being dredged, it is envisioned that they will be reshaped to accommodate the Waldorf Vision Plan conceptual layout, while increasing the proposed volume within each area. This will allow for the facilities to be incorporated within any park/open space amenities for the WURC area. In addition to dredging the facility to accommodate additional impervious runoff, the overgrowth in and around the pond areas shall be maintained so that the facility embankments are free of trees and overgrowth.

In addition to retrofitting the existing structural facilities, Bioretention filters may be placed upstream of each facility in order to provide for additional water quality and recharge requirements within the proposed drainage areas. Integrating a Bioretention facility within each regional facility will allow for meeting the target PE shortfall by treated runoff prior to discharging into the regional facility. This will ultimately help meet the requirement of *the Stormwater Management Act of 2007*. These facilities shall also be heavily landscaped in order to blend in with the park/open space amenities as shown within The Waldorf Vision Plan.

### Conclusion/Evaluation of Computations:

The proposed ESD calculations from this report will show that the majority of the Block areas will meet the target  $P_E$  value using ESD techniques. Of the 26 Blocks analyzed, only 4 did not meet their respective Target Rainfall Values (Blocks D, H, K, and R), however these 4 areas did meet the ESD volume to the MEP given their current design constraints which factors in layout and soil compositions. For the 22 block areas which did meet the  $P_E$  target, the additional treatment above the minimum requirement, will help offset the shortfall of the 4 areas which did not. Because the site has met its initial PE target,  $WQ_v$ , Rev, and  $CP_v$  have been addressed per the requirements outlined within both the *Stormwater Management Act of 2007* and the *Charles County Stormwater Management Ordinance*.

The Impervious area tabulation worksheet is the initial step when determining the Target PE requirement for the WURC project. This worksheet can be found within the Appendix (See **Appendix, Table SWM.3: WURC// Impervious Area Tabulation/ESD Requirement Worksheet (Redevelopment)**) and shows each Block within the Waldorf Urban Redevelopment Corridor, while comparing it to the existing conditions found on-site today. This is where the redevelopment portion of the computations is factored in. Only 50% of the existing impervious area is required for treatment of the ESD volume, while 100% of any proposed new impervious area is required for treatment. When factoring in a reduction of impervious area, Block L and X actually reduce their impervious footprint by more than 50% exempting these two Blocks from providing any ESD measure. The  $ESD_v$  column within this worksheet quantifies each Block area with its respective treatment volume for any given Block area. This column will be used when comparing the ESD to MEP worksheet in order to determine whether or not a Block area meets the ESD to MEP criteria.

The ESD to MEP worksheet, also found within **Appendix SWM.3**, further breaks down the Blocks by ESD device and quantifies their respective runoff volume treated. Once the runoff volume has been calculated a Reduced Curve Number (RCN) is calculated using the tables found in **Appendix SWM.2**. This RCN will be used in order to calculate the shortfall in stormwater runoff and will provide the required additional volume needed within each facility.

The final worksheet within Appendix, **Table SWM.4**, WURC//CPv Requirement Worksheet (Redevelopment) is the CPv Requirement Worksheet. This chart shows a general break down of each Block area, outlining the process to determining the addition CPv requirement for each Block area and Proposed Drainage Area. In addition, this chart also distinguishes which Block has to meet the ESD volume to the MEP.

### **Proposed Phase 1 Development Area**

For the proposed Phase 1 Development area “Waldorf Center” located with the Waldorf Urban Redevelopment Corridor, four Environmental Site Design techniques were used. The four ESD practices are, Submerged Gravel Wetlands, Landscape Infiltration, Micro-Bioretenion, and Rain Gardens. Utilizing these four ESD devices as shown within Appendix, **Exhibit SWM.2**, Stormwater Management Schematic, accounts for treatment of the new and existing impervious runoff as outlined within the *Stormwater Management Act of 2007* and the *Charles County Stormwater Management Ordinance* for redevelopment.

With the redevelopment of Old Washington Road and surrounding streets, the proposed roadways shall be treated through the use of Landscape Infiltration. This practice can be as simple as installing trees along the roadway within concrete vaults with absorbent soil allowing for filtering of the stormwater runoff or by incorporating landscaped islands between the curb and gutter within the roadway and the adjacent sidewalks. The Landscape Infiltration devices would then discharge into a conventional storm drain system which ultimately would be conveyed to the Wetland Nature Park as shown within Appendix, **Exhibit SWM.2**, Stormwater Management Schematic.

Micro-Bioretenion facilities are proposed within the large parking areas. Utilizing the landscaped islands within the parking lot adjacent to the Wetland Nature Park, would provide for treatment of the impervious area within the proposed parking lot. Ultimately, these landscaped islands would filter the stormwater runoff in similar fashion to the Landscape Infiltration device. Once runoff has been filtered through the device, it would then be conveyed through a conventional storm drain system to the regional stormwater management facility (Submerged Gravel Wetland).

Rain Gardens shall be incorporated within building courtyards and atriums in order to help facilitate treatment of the buildings stormwater runoff. The building shall discharge their rooftop downspouts into each device for treatment. For heavy storm events, control structures shall be placed within each facility in order to help alleviate runoff by allowing excessive runoff to flow into a conventional storm drain system to a regional stormwater facility. These devices are equally landscaped similar to both the Micro-Bioretenion and Landscape Infiltration facilities. The use of absorbent soil within each Rain Garden allows for filtering of the stormwater runoff.

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The remaining portion of the site may be treated within Submerged Wetlands. Runoff can enter these facilities through the use of a storm drain system. The ESD volume treated within each facility shall be measured above the required stone reservoir located at the bottom of each device. These devices thrive within Hydrologic Type ‘D’ soils. Approximately all of Phase 1 is located within Type ‘D’ soil. The regional Wetland Nature Park shall be designed as a multi-staged wetland system allowing filtering and infiltration of stormwater runoff for the area associated with Phase 1.

Overall, the Phase One Development site is capable of treating the proposed and existing impervious area utilizing the ESD devices as outlined within the *Maryland Stormwater Management Design Manual* (See Appendix, **Table SWM.5**, WURC//Impervious Area Tabulation/ESD Requirement Worksheet (Redevelopment)). The four practices shown within Appendix, **Exhibit SWM.2**, Stormwater Management Schematic, shall be used as an outline for incorporating these devices. Additional devices maybe used or substituted within this area to the design engineer’s satisfaction. Given the overall design constraints within the Phase One Development area, storm drain systems will be required for conveying most of the stormwater runoff to each ESD device. Utilizing the existing wetland area found within the east side of the Phase One Development and retrofitting it into a park setting is an excellent example where these stormwater management devices can be incorporated into daily life.

Finally it should be noted that the WURC offers a unique opportunity to Charles County for addressing both their NPDES MS-4 permit requirements and their Watershed Implementation Plan (WIP) requirements, the latter being a component of the Chesapeake Bay TMDL. The removal and/or stormwater management treatment of existing impervious surfaces, in conjunction with development within the WURC, is a cost-effective means for addressing both programs.

**TASK A.4 – PARKING INFRASTRUCTURE**

**Waldorf Urban District Study and Parking**

**Overview:**

The following summarizes the parking findings and recommendations developed for the Waldorf Urban Redevelopment Corridor (WURC) Phase I Workshop conducted on June 12<sup>th</sup>-14<sup>th</sup> and includes an assessment of parking demand under a full build-out scenario, a determination of surface and structure parking potential, estimates of parking infrastructure construction costs, and a brief overview of parking financing strategies. The Waldorf Urban District is subdivided into the Waldorf Center, South Acton Lane, and North Acton Lane sectors and the parking analysis follows that division. It must be noted that given the nature of the assignment all demand estimates, space capacities, and construction costs must be considered conceptual.

**Estimate of Parking Demand:**

Using estimates of total acreage by sector and subsector, floor area ratios (FAR) of 1.6 for the Waldorf Center and 2.0 for the Acton South and North sectors, and assumptions regarding the loss of developable land due to new roadways and vehicular access points, **Table 1** was prepared to estimate development density under a full build-out scenario. The Waldorf Center sector, for example, has approximately 29.7 acres which could support as much as 1.86 million square feet of commercial, residential, or institutional development.

**Table 1: FAR Development Density**

	Total Acreage	Less 10% for Roads	Total SF	FAR <sup>(1)</sup>
<b>Waldorf</b>				
Track Side	13.1	11.8	514,000	822,400
301 Side	16.6	14.9	651,000	1,041,600
<b>Total</b>	<b>29.7</b>	<b>26.73</b>	<b>1,165,000</b>	<b>1,864,000</b>
<b>Acton South</b>				
Track Side	11.3	10.2	443,000	886,000
West Side	8.1	7.3	318,000	636,000
<b>Total</b>	<b>19.4</b>	<b>17.46</b>	<b>761,000</b>	<b>1,522,000</b>
<b>Acton North</b>				
East Side	14.1	12.7	553,000	1,106,000
West Side	14.8	13.3	580,000	1,160,000
<b>Total</b>	<b>28.9</b>	<b>26.01</b>	<b>1,133,000</b>	<b>2,266,000</b>

**Note:**

(1) Waldorf FAR based on 1.6 while Acton South and Acton North based on 2.0.

As parking demand calculations are based on the amount of square feet for different land use types, i.e., office, retail, residential, etc., the FAR densities in **Table 1** needed to be more clearly defined. The analysis of full build-out for each of the sectors presumes that 40% of development would be residential, 40% would be office, and 20% would be ground floor commercial. The ground floor commercial was further defined by retail (14% of the 20%) and restaurant (6%).

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Peak weekday parking demand ratios for each of the four general land use types were then applied to estimate need. As parking demand for residential land use is based on dwelling units the residential analysis assumed that each unit occupies on average 1,000 square feet. It is also presumed that residents would desire reserved parking and the number of spaces developed for residents could not be shared by office tenants or shop/restaurant employees or visitors. Based on the nature of these mixed use developments parking ratios of 2.5 spaces per 1,000 sq. ft. for office, 1.8 per dwelling unit, 2.5 per 1,000 sq. ft. for retail, and 15 per 1,000 sq. ft. for restaurant has been utilized with the results illustrated on **Table 2**. Note that as the retail and restaurant uses are dependent to a great degree on the foot traffic generated by the more dominant office and residential uses, the peak parking demand generated by retail and restaurant is reduced by 60%. That is to say that 60% of retail/restaurant patrons are, in fact, employees/residents to the adjacent buildings and whose parking demand is reflected in the office and residential numbers. Under this analysis the Waldorf Center would generate a peak parking demand for 4,138 spaces, Acton South would generate a demand for 6,758 spaces, and Acton North would generate a demand for 5,031 spaces. Note that the land use and parking analysis does contain estimates by block and sub-sector and those figures will be used to determine block by block parking facility space requirements. Also note that these are overly generalized estimates of land use activity and associated parking demand and as such they are used as generalized parking supply/capacity goals.

**Table 2: Land Use Based Development Density and Estimates of Peak Parking Demand**

	FAR Density by Use (Sq.Ft.)	Peak Parking Demand (Spaces)
<b>Waldorf Center</b>		
Office	745,600	1,864
Residential	745,600	1,342
Retail	260,960	261
Restaurant	111,840	671
Subtotal	1,864,000	4,138
<b>Acton South</b>		
Office	1,217,600	3,044
Residential	1,217,600	2,192
Retail	426,160	426
Restaurant	182,640	1,096
Subtotal	3,044,000	6,758
<b>Acton North</b>		
Office	906,400	2,266
Residential	906,400	1,632
Retail	317,240	317
Restaurant	135,960	816
Subtotal	2,266,000	5,031

**Surface and Structured Parking Potential/Cost:**

With a knowledge of potential development density and estimates of parking demand by sector, block, and land use, the WURC Team created conceptual diagrams illustrating the location of existing and new roadways, development blocks, commercial/residential building footprints, and structured and surface parking areas of

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opportunity. Surface and structured parking design is quite demanding with regards to the dimension of a lot or garage’s footprint. Parking stalls are typically 9 ft. by 18 ft. and the drive aisle in a typical parking bay with two-way traffic is typically 24 ft. Therefore, the overall parking bay with parking spaces on both sides of the drive aisle requires a minimum of 60 ft. As a result, parking lots and structures’ width are typically calculated in 60 ft. segments. Using this as a baseline, the concepts developed and the space calculations referenced in **Tables 3a** (Waldorf Center), **3b** (Acton South), and **3c** (Acton North) identify the required parking footprints length and width for each of the parking development sites. Under ideal conditions, the average square feet required to provide a structured and surface parking spaces equals 310 and 330 sq. ft. respectively. The parking structure space calculations are further defined by the number levels. Based on FAR and anticipated commercial/residential building heights the parking structures are limited to six levels. Note that the presence of parking ramps to/from the roof level of the structure limits the number of roof level parking spaces in comparison to the other levels and as such the space calculation for the six level structure (6.0) is reduced to 5.8.

**Table 3a: Waldorf Center Structured and Surface Capacity and Construction Cost**

Lot/Garage Code	Length (Feet)	Width (Feet)	Footprint (Sq. Ft.)	Parking Levels	Total Sq.Ft.	Design Efficiency	# of Spaces	Parking Demand	Construction Cost
A - Garage	300	180/100	94,000	5.8	545,200	310	1,760	---	\$ 29,040,000
B - Garage	180	400	72,000	5.8	417,600	310	1,350	---	\$ 22,275,000
C - Garage	180	400	72,000	5.8	417,600	310	1,350	---	\$ 22,275,000
D - Surface	180	200	36,000	1.0	36,000	330	110	---	\$ 605,000
E - Surface	200	60	12,000	1.0	12,000	330	40	---	\$ 220,000
F - Surface	240	60	14,400	1.0	14,400	330	40	---	\$ 220,000
On-Street	---	---	---	---	---	---	140	---	NA
---	---	---	---	---	---	---	4,790	4,138	\$ 74,635,000

**Table 3b: Acton South Structured and Surface Capacity and Construction Cost**

Lot/Garage Code	Length (Feet)	Width (Feet)	Footprint (Sq. Ft.)	Parking Levels	Total Sq.Ft.	Design Efficiency	# of Spaces	Parking Demand	Construction Cost
A- Garage	160	350	56,000	5.8	324,800	310	1,050	---	\$ 17,325,000
B- Garage	180	340	61,200	5.8	354,960	310	1,150	---	\$ 18,975,000
C- Garage	180	320	57,600	5.8	334,080	310	1,080	---	\$ 17,820,000
D - Garage	460	120	55,200	5.8	320,160	310	1,030	---	\$ 16,995,000
E - Garage	240	320	76,800	5.8	445,440	310	1,440	---	\$ 23,760,000
F - Surface	600	120	72,000	1.0	72,000	330	220	---	\$ 1,210,000
On-street	---	---	---	---	---	---	180	---	NA
---	---	---	---	---	---	---	6,150	6,758	\$ 96,085,000

**Table 3c: Acton North Structured and Surface Capacity and Construction Cost**

Lot/Garage Code	Length (Feet)	Width (Feet)	Footprint (Sq. Ft.)	Parking Levels	Total Sq.Ft.	Design Efficiency	# of Spaces	Parking Demand	Construction Cost
A- Garage	220	340	74,800	5.8	433,840	320	1,360	---	\$ 22,440,000
B- Garage	220	300	66,000	5.8	382,800	320	1,200	---	\$ 19,800,000
C- Garage	220	300	66,000	5.8	382,800	320	1,200	---	\$ 19,800,000
D - Garage	220	240	52,800	5.8	306,240	320	960	---	\$ 15,840,000
E - Surface	600	400	240,000	1.0	240,000	330	730	---	\$ 12,045,000
F - Surface	100	120	12,000	1.0	12,000	330	40	---	\$ 220,000
G - Surface	100	120	12,000	1.0	12,000	330	40	---	\$ 220,000
H - Surface	100	120	12,000	1.0	12,000	330	40	---	\$ 220,000
On-street	---	---	---	---	---	---	220	---	---
---	---	---	---	---	---	---	5,790	5,031	\$ 90,585,000

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Therefore, in order to satisfy the parking demand generated by Waldorf Center under a full build-out scenario of 1.8 million sq. ft. then that sector of Waldorf would require three large parking structures, three surface lots, and a substantial number of on-street, curbside spaces. Total parking infrastructure construction costs under this Waldorf Center scenario would cost \$74.6 million using current per space construction costs figures of \$16,500 for structures and \$5,500 for surface lots.

### **Method of Financing Parking Facilities:**

There are numerous methods of public sector involvement in the financing of parking facilities. In opposed to the more traditional methods of selling general obligation or parking revenue bonds, which are noted discussed in this section, other methods that will be discussed include tax abatements, joint ventures involving land acquisition, certificates of participation, fees-in-lieu of parking, special assessment or benefit districts, tax incremental financing, joint ventures using capital contributions, and bond anticipation notes.

Tax Abatement - At the local level, tax abatement can take the form of reduced property or sales taxes. The approaches used by municipalities vary widely and can include a partial, variable or a complete abatement. Tax abatement can also take the form of a stabilization arrangement if taxes have been rising rapidly in Charles County, as they have been in other major metropolitan areas throughout the United States. In general, tax abatement alone is not a major inducement to development.

Joint Ventures (Land Acquisition) - In order to develop certain parking facilities, multiple parcels of land would need to be assembled. Private developers are often unsuccessful in acquiring the parcels needed for the larger and/or mixed-use facilities. Charles County can use its powers of eminent domain to acquire land for public use. The County could also explore land exchanges between the public and private sectors. Land owned by the County could also be passed on to a private developer at a reduced cost in order to encourage development. The debt service coverage may then become high enough to finance new parking facilities.

Certificates of Participation (COP) - This is one of only a few tax-exempt financing routes that lend itself to a public-private partnership. COP financing can be used to provide all funds for the construction of parking facilities. Briefly, a development company (the lessor) would build a facility, financed through the distribution of COP by a bank trustee, and the municipality leases the facility back from the developer. Payments, raised through user fees, are made to the lessor by the lessee. The lessee would assume all costs in connection with operations and maintenance.

To be eligible for tax-exempt status, the final owner of the facility must be the municipality and the garage must be for public use. The primary advantage of this program is that the government entity can raise funds in most cases outside the legal definition of debt. This can be achieved if the lease rental payment is subject to annual appropriation by the governing body. Because of this, this type of financing is used where governments are constrained by limitations regarding the issuance of debt or limitations on bonding capacity.

Fees-in-Lieu of Parking - This technique is not an inducement to development but rather a method to provide parking in growth areas within cities. A few cities have provisions in their zoning ordinances requiring payments in lieu of parking in business districts. This program allows them to finance and build centrally located parking

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facilities. The developer of a building, instead of providing all the on-site parking required, is allowed to make a payment in lieu of parking that is put into a pool to fund nearby facilities that are available to customers and employees of the contributing businesses.

Because of potential problems with the program it has seen only limited use. It could prove difficult to convince developers (businesses) that the parking will be provided in a timely manner. Also, participating businesses have concerns about the convenience of the parking; that is, will the central location be close enough to their businesses to conveniently service them.

This program has been most successful in communities where there is an active public construction program dedicated to the provision of needed public facilities. Because of the very nature of the program, it would be most successful where there is a rapid rate of development proposed in a concentrated area.

Special Assessment or Benefit District - These districts have been established in many municipalities across the country, with Montgomery County, Maryland being one the closest and most successful. Primarily, a zone of “benefit” is established for a particular parking facility or cluster of on-street spaces. Generally speaking, the primary criteria for establishing the boundaries of the district are based upon acceptable patron walking distance. In some instances, a gradation of contribution into two or more radial zones can be devised. Several formulas exist for the determination of the rate of payment or subsidy for a specific facility or facilities. These include: type of land use, building/space area, or street frontage. Regardless of the basis for contribution, an equitable arrangement that requires those benefited by parking to pay their advalorem share of needed subsidies may be appropriate.

Tax Increment Financing (TIF) - In the most simplistic terms, Tax Incremental Financing (TIF) can be described as created residual property tax. Once an area of influence can be identified (not necessarily the same as a special benefit district), the current tax base and associated revenue stream for that area can be frozen at its present level, with the assumption that tax revenues are sufficient to meet the cost of publicly supported systems. Under the assumption that new development will take place (after the freeze), all new or incremental tax revenues are designated to a special TIF account. The proceeds of this process are then utilized to amortize the capital expenditure of the municipality to provide needed infrastructure placed to support or encourage the new development.

Joint Ventures and Contributions - Various public, non-profit and private interests can participate in the financing of a structured parking facility. Capital contributions and in-kind contributions (such as land) can “write down” the cost of development. Joint ventures can effectively write down capital costs to the extent that revenue bond financing and/or conventional financing may be procured.

The method of financing often dictates the means of operating and maintaining the facility. Financing, operations, and maintenance responsibilities must be carefully balanced to ensure operational efficiency, quality control, and an equitable distribution of benefits to the various parties involved in the project.

Bond Anticipation Notes (BAN) - In the event that a bond issue is used to finance the facility, serious consideration should be given by the municipality to issue bond anticipation notes as a method of interim

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financing during the construction period. These notes would be of a short-term duration issued only after the longer-term bonds have been approved and validated. The advantages of the bond anticipation notes are: the short-term rate is lower, notes will give officials the ability to pick and choose just when they are going to sell the permanent bond issue, and investment bankers will have the benefit of the parking facility’s actual operating experience, and not just projections, as a basis on which to sell parking revenue bonds.

## **TASK A.5 – GEOTHERMAL HEAT PUMP EXCHANGE SYSTEMS**

### **Assignment & Disclaimer**

The WURC Design Team was assigned the task of reviewing the County’s geothermal study (*RFP 11-08, Community Geothermal Energy Study, Charles County Maryland, January 2012*) prepared by Golder Associates, and evaluate opportunities for the inclusion and placement of potential geothermal infrastructure within County and/or State rights-of-way. Further, the WURC Design Team as assigned with identifying various opportunities, constraints, and provide general cost estimates for utilizing a geothermal system within the WURC area.

It should be noted that the County assigned task, under this RFP, required that the WURC Design Team coordinate directly with the County’s geothermal consultant, Golder Associates, to assist the WURC Design Team in identifying opportunities, constraints, and providing general cost estimates for such a system. WURC Design Team member, Loiederman Soltesz Associates (LSA), did have numerous discussions with the County’s geothermal consultant to obtain information and explore further geothermal opportunities/constraints/costs. However, it was suggested by the County’s geothermal consultant that to address such questions for the WURC, a geothermal system feasibility study, at a project scale, be performed to fully address the technical nature of such an evaluation. However due to limited funding by the County for additional geothermal consulting fees, the County’s geothermal consultant was unable to continue consulting services with the County and thus was unable to provide LSA with this “next step” detailed assessment of such a system for the WURC. As geothermal exchange systems are not an area of expertise of LSA, or any other member of the WURC Design Team, this report can only make an opinion of assessment for geothermal exchanges systems based upon our review of the County’s previous geothermal study and our knowledge of the local area. It is recommended by the WURC Design Team that if the County still desires the possibility of implementing geothermal energy systems within the WURC corridor, it may want to consider taking the next step in having a detailed geothermal site feasibility study performed.

### **Evaluation of the County’s Geothermal Study & Possible System Alternatives**

#### **a. Centralized District Energy System**

The County’s geothermal consultant identifies the Waldorf Urban Redevelopment Corridor (approx. 313 acres) within their report under Section 7.1 entitled, *Waldorf Geothermal District Energy System*. Section 7.1 of this report makes an assumption of full build-out for the WURC with an estimated 10% total surface coverage of buildings (approx. 31 acres) with heights of 2 stories. This equated to approximately 2.7 million sq. ft. of occupied building space. The County’s study further suggests that at an energy intensity of 500 sq. ft. of occupied building space per ton of geothermal energy, the capacity of a geothermal district energy system to serve the WURC would be approximately 5,400 tons.

Assuming that a centralized district energy system were to be installed for the WURC where multiple borefields (vertical closed-loop) and central energy stations (suggested 3 of each respectively) are distributed at several key locations throughout the WURC area and linked with a series of HDPE distribution pipes with pipe diameter sizes ranging from 6-inch through 12-inch, costs of such a

geothermal energy system was estimated at \$40 to \$50 million. Although, there are opportunities for the County to apply for Maryland State Tax incentives, these capital costs are substantial when considering other potential public capital costs required to initiate the County’s Phase One Development within the WURC.

For geothermal systems to be effective, the internal HVAC building systems need to be designed for geothermal, as opposed to conventional HVAC systems. Although this may not be a concern for new building construction within the WURC, it would be dependent that Developers participate by including geothermal HVAC systems in their architectural designs. Geothermal HVAC systems are more expensive than conventional HVAC systems and thus this may be of concern with Developers. Further, a centralized geothermal energy system could pose problems with existing structures, particularly older, less energy efficient buildings within the WURC where their current HVAC building systems would require extensive retrofitting to make geothermal exchange beneficial. Therefore, it is not known how willing existing property owners would be to participate in connecting to a centralized geothermal energy system. Assuming the County owned and instituted a utility fee for such a centralized geothermal system, it could be many years for a return on investment to be achieved if property owner participation was not sufficient.

For a centralized geothermal system to function, there would be the need for extensive distribution piping within the public right-of-ways (i.e.: Old Washington Road and other side streets) to serve the WURC. Due to the extensive amount of existing utilities (County owned and other independent utilities such as natural gas, fiber optic, CATV, and electric) and projected future utility improvements located within these right-of-ways, physical space limitations may be problematic for all necessary utilities to co-exist.

Although centralized geothermal systems have been beneficial in other communities and locations, it is for these reasons noted above; the WURC Design team would recommend that a centralized geothermal system not be considered for the WURC at this time.

b. Individual (Stand Alone) Geothermal Energy Systems

Another option for geothermal exchange systems within the WURC is through individual implementation. This type of decentralized system would be owned by an individual property or may serve several properties with appropriate use agreements between participating parties. Individual geothermal systems are essentially self-contained on-site and would not require extensive distribution piping within the County’s public rights-of-way. These geothermal systems would be closed-loop systems and most likely in a vertical borehole configuration due to limited space within a dense urban development setting.

Geothermal systems should be designed from the building (or buildings) outward for both reasons of performance and cost. The fact that a large in-ground infrastructure is required, governs the economics of the system, therefore “right sizing” becomes very important to project economics. The cost of piping to connect the borefield to the building needs to be minimized, thus the borefield is usually installed as close to the end use structure as possible, perhaps even underneath it. Vertical boreholes could be installed beneath new building footprints, under the building’s parking lots, or green space. These boreholes are typically drilled to a depth of 600 with HDPE diameter pipe (less than 2-inch diameter) and grouted.

Modern building construction through energy efficient architectural design is usually more cost effective than installing geothermal systems. The borefield infrastructure which accounts for approximately 80% of the capital cost of the system is considered to have a service life of 50 years and beyond. Typical internal geothermal building heat pump systems have a service life of approximately 25 years. For a mixed use or say a residential apartment building, there would be opportunities for a return on investment of perhaps 8 to 10 years through the institution of utility fees placed on the users of the system.

It would seem that individual geothermal systems may have more opportunities within the WURC through voluntary participation from Developers rather than a centralized district system. The decision for a Developer to utilize a geothermal system for a building(s) is clearly an economic one. Considerations of initial capital costs, building/property ownership length, return on investment, and maintenance costs are critical factors which influence a “go or no go” decision on geothermal systems.

As the County has expressed an interest in geothermal within the WURC, a possible pilot program could be the installation of an individual stand-alone system for a civic use located within the proposed Phase One Development. Through the use of sustainable energy tax incentives and other funding sources, costs could be reduced, and a return on initial investment may be achieved within 10 years through savings on utility costs. Assuming a 60,000 sq. ft. civic-use multi-story facility, an individual geothermal system for the building may range from \$400K to \$500K not including incentives and grants. Information regarding state and local incentives are described in Section 9.3 of Report One within the County’s Geothermal Report dated, January 2012.

c. Phased Geothermal Energy Systems

Geothermal exchange systems have the ability to be scalable. It is possible for several individual systems (borefields) for individual buildings to be later interconnected through geothermal distribution piping or a “thermal grid” as a development grows. Where higher densities exist with close proximity between buildings, lengths of interconnected distribution piping can be minimized and make small scale phased systems economically feasible. The geothermal system, with the exception of the internal building heat pumps and HVAC systems, could be owned by one entity whether that is Charles County or a WURC redevelopment authority. Essentially, the County or redevelopment authority could supply a geothermal energy supply utility service, similar to the example outlined in above for the individual (stand-alone) system for multi-use or multi-residential buildings.

This type of phased system may offer some advantages in allowing initial costs to be minimized and only allow expansion of the geothermal system as growth and densities dictate due to market conditions. In this scenario, it is possible that some geothermal distribution piping may be required to be located within the County’s public right-of-way, if physical area constraints allow. Geothermal distribution piping is typically installed about four (4) feet below the surface and may range in sizes (i.e.: 4 to 8 inch diameter) dependent on the demand. Geothermal distribution piping with regard to construction and clearances from other utilities are very similar to public water systems, with the exception that clearances between geothermal piping and sanitary sewer may be less than typical codes, due to the fact that the heat transfer fluid (a mixture of water and an anti-freeze agents) is not potable like public water systems, so

possibility of cross contamination from sanitary sewer is avoided.

### **Next Steps**

The next step in proceeding forward with a geothermal system application within the WURC would be to have a formal feasibility study performed by a professional geothermal consultant. This analysis would be more specific to the proposed development’s demand and site conditions. The components of such a detailed feasibility study would include:

- Review scaled site drawings, for space and distances, existing utilities, improvements, etc.
- Create a list of existing buildings, including footprint area, number of floors, use of the building, age, existing HVAC system, etc.
- Refine the loads of the existing buildings, from utility bills, architectural drawings, etc.
- Identify land ownership and availability, with respect to placement of borefields, connection pipe networks, central plant locations, etc.
- Create a refined concept plan, based on real information and data
- Specify pipe diameters, lengths, depths and other physical system components to determine Rights of Way allocations, and other land use requirements
- Obtain pricing for various components of the system, from potential local suppliers
- Construct a financial model that will allow input of variables to determine comparative results
- Identify potential ownership and financing models to determine potential sources of revenue
- Estimate potential revenues
- Analyse costs
- Determine with input from federal and state government representatives, the actual rebates that would apply to this specific project and the process required to access funds.
- Prepare a Life-cycle-cost based business case and investment plan
- Prepare a financial risk analysis

## **TASK A.6 – FIBER OPTIC VOICE & DATA INFRASTRUCTURE**

### **Existing and Planned Infrastructure**

The WURC Design Team conducted several inquiries and had a meeting with staff from Verizon to have the utility company evaluate their existing fiber optic and data infrastructure and discuss any possible future planned improvements to their system within the WURC corridor. Verizon reviewed the proposed increased densities for the WURC and stated that the majority of their existing voice & data infrastructure, in situ within current utility easements, would have capacity to serve the ultimate development build out of the WURC corridor. There are currently no major planned improvements by Verizon within the WURC corridor at this time. Verizon has stated that they would provide additional services as the development progresses within the WURC.

### **Utility Layout Considerations – WURC Corridor and Phase One Development**

Verizon has familiarity with providing fiber optic and data services for other regional redevelopment projects such as Annapolis Towne Center, Downtown Bethesda, and Downtown Wheaton. Verizon notes that due to limited space and hardscaping which is prevalent with these types of developments, fiber optic infrastructure would be required to be installed in a manhole and conduit system to allow for ease of access. Conduit systems may be an individual conduit (typically 4-inch PVC diameter), or a multiple conduit “bank” system which may include up to 12 to 16 lines, depending on the projected demand. Further, Verizon typically requires a 10-foot public utility easement or PUE for their infrastructure. Although Verizon prefers their utilities to be located within a 10-foot PUE outside of public rights-of-way, they would allow their infrastructure within public rights-of-way, if no other options were available. If fiber optic utilities are required to be installed in a manhole and conduit system due to physical site constraints, the costs of installing the concrete manholes/vaults (typically 12’x12’x6’depth) and PVC conduit (Schedule 40) are borne by the project Developer.

Fiber Optic utilities may share residency in public utility easements with other dry utilities, such as CATV and electric service, and in fact, can be located in the same trenches. Verizon prefers to have their fiber optic infrastructure established with a minimum clearance of 5 to 6 feet from natural gas utilities. With regard to other County utilities (water, sewer, storm drainage), fiber optic utilities would be required to be placed a minimum clearance of 5 feet. Considering that Charles County typically locates their utilities within the public streets/rights-of-way, it would appear that this minimum clearance could be achieved within the WURC. Fiber optic utilities are typically installed at a depth of 24 to 36 inches. Verizon can provide all of the design/engineering services for their fiber optic utility systems.

### **Verizon Waldorf Central Office – Light Rail Transit (LRT) Right-of-Way**

As conjunction with the original Waldorf Urban Development Study (WUDS), the Downtown Waldorf Vision Plan, and the Waldorf Urban Transportation Improvement Plan, it is envisioned that the WURC, a transit oriented development (TOD) would be served by regional light rail transit or LRT. These previous studies examined providing LRT from Waldorf to the Branch Avenue Washington Metropolitan Area rapid transit Metro station. A LRT alignment through the WURC was established through previous studies to be a 70-foot right-of-way to be located on the west side, parallel, and abutting the existing 66-foot CSX-T rail right-of-way. To reach this goal of

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securing the right-of-way for LRT, property acquisitions, some partial, will be required along the proposed 70-foot LRT right-of-way.

The current Verizon Waldorf Central Office (VWCO) building is located within this proposed 70-foot planned LRT alignment corridor. The VWCO is the main ‘hub’ or centerpiece for all fiber optic infrastructure services for the Waldorf area. All fiber optic (voice and data) utilities serving Waldorf originate from this physical location. If a planned LRT, along the established alignment, were to come to fruition, the VWCO building would need to be demolished and relocated. Through informal discussions with Verizon, it was undetermined what costs would be associated with such a relocation of their VWCO building. It was explained by Verizon that they have performed such other similar relocations of their central hubs in the past within the Mid-Atlantic region; however any relocation may need to be in very close proximity to its original location to avoid major relocations of their fiber optic distribution lines.

Basically, the fiber optic infrastructure system is much like a bicycle wheel where the center is the central hub and the wheel spokes are the distribution lines/conduits. Fiber optic utilities originate from the hub through multiple larger distribution line sizes and consistently decrease in size and frequency the further distance away from the central hub. Therefore, to minimize major relocation of the fiber optic distribution network utilities, it may appear that a logical location for the relocated VWCO would be directly on either the west side or east side of the LRT & CSX-T rail right-of-ways. On the west side of the LRT tracks, it could be envisioned that the VWCO may be located within a first floor of a building, such as the type outlined at ‘Building J or G’ on the Phase One Development Plan. Another option would be to relocate the VWCO on the east side of the CSX-T which is currently occupied by a mini-storage facility business.

Future discussions and negotiations with Verizon would be necessary to secure the property associated with their current VWCO. Any relocation would need to have minimal disruption to fiber optic service for the Waldorf area. For this to be achieved a new VWCO facility would need to be constructed and existing fiber optic infrastructure in the immediate vicinity of the current VWCO rerouted, prior to demolition of the present VWCO. Again, Verizon could not provide estimated costs associated with such a relocation effort.

For the initial stages of the WURC Phase One Development, development could occur without the relocation of the VWCO. It should be in Charles County’s best interest to keep open lines of communication with Verizon if LRT becomes successful.

**TASK A.7 – KEY INFRASTRUCTURE PROJECTS AND PRIORITIES**

**Items 2, 3 and 4: KEY INFRASTRUCTURE PROJECTS**

While the development of the WURC will be a long term process, in order to help initiate a successful Phase One Development, key infrastructure projects are needed in the earliest of development stages to realize overall goals. These projects primarily are associated with sanitary sewer service, water service, and transportation improvements. **Table KI.1** lists the key infrastructure projects which are recommended to achieve a successful “kick-off” of the designated Phase One Development. The table includes priorities, funding suggestions, estimated costs, and recommended dates of implementation assuming funding has been allocated accordingly. It is recommended that these projects be pursued by Charles County as catalyzing projects to further redevelopment in the WURC. The WURC Design Team again notes that our suggested key infrastructure improvements are not final detailed descriptions of the required needs. Our analysis, which includes suggested pipe sizes for water and sewer, etc., is based upon a conceptual layout and projected densities for the WURC. It is strongly suggested that as development of the WURC progresses, the County re-evaluate infrastructure needs in correlation to growth expansion within the WURC.

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Task #	Priority	Project	From	To	Likely Funding Source	Estimated Cost	Implementation	Notes
1	Very High	Sanitary Sewer Detailed Engineering Design (RFP) - Old Washington Rd	Leonardtown Rd	Mattawoman Interceptor MH#117	Charles County	\$500,000	2013-2014	Includes Old Washington Rd, Outfall to Zekiah Pump Station, Pump Station, Discharge Forcemain, Lynnbrook Outfall
2	Very High	Public Water & Roadway Detailed Engineering Design (RFP) - Old Washington Rd	Leonardtown Rd	Acton Lane	Charles County	\$200,000	2013-2014	County to revisit previous RFP from 2006 to design 10-inch waterline on Old Washington Rd. Design includes roadway improvements per Waldorf Vision Plan roadway templates
3	Very High	Roadway Old Washington Rd Reconstruction Engineering Design (RFP)	Leonardtown Rd	Limits of Phase One Development	Charles County/MDOT	\$400,000	2013-2014	Improvements only for Phase One Development frontage along Old Washington Rd
4	Very High	Parcel Assembly Phase One Development Transit Park & Ride	See Parcel Assembly Exhibit	See Parcel Assembly Exhibit	Charles County	\$2,800,000	2013-2014	For purchase of parcels/easements required to initiate Phase One Development, WURC Transit Park and Ride
5	High	Parcel Assembly Phase One Development Transit Park & Ride	See Parcel Assembly Exhibit	See Parcel Assembly Exhibit	Charles County/MTA	\$10,350,900	2014-2015	Continuation of purchase of parcels/easements required for Phase One Development, WURC Transit Park and Ride
6	High	Sanitary Sewer Construction per RFP	Old Washington Rd (at Leonardtown Rd intx.)	Mattawoman Interceptor MH#117	Charles County or Public/Private Partnership	\$7,139,000	2016-2017	Includes only necessary sewer improvements to initiate Phase One Development project and sewer upgrades within Old Washington Road from Leonardtown Rd. to Acton Lane
7	High	Public Water Old Washington Rd Construction	Leonardtown Rd	Acton Lane	Charles County or Public/Private Partnership	\$488,000	2016-2017	10-inch Water Main within Old Washington Rd
8	High	Roadway Old Washington Rd Reconstruction	Leonardtown Rd	Limits of Phase One Development	Charles County or Public/Private Partnership	\$2,118,000	2016-2017	Improvements only for Phase One Development frontage along Old Washington Rd

### Sanitary Sewer Improvements

Sanitary sewer service within the WURC is essential for the success of a Phase One Development and the balance of the WURC. It is recommended that the County proceed forward with detailed engineering design and ultimately construction for sanitary sewer improvements for Old Washington Road and the necessary infrastructure improvements to initiate the Phase One Development. These sanitary sewer improvements are depicted in the Appendix, under Infrastructure, **Exhibits S.1 through S.5**:

- Construction of 10-inch gravity sewer along Old Washington Rd. from Leonardtown Road to approximately the center of the Phase One Development Site. (Based upon the Phase One Development Plan-*Public Sanitary Sewer Schematic Drawing*, this length is approximately 400 linear feet).
- Construction of 12-inch gravity sewer along Old Washington Rd. from center of Phase One Development north to a new 16-inch gravity sewer which outfalls the WURC drainage area towards the Zekiah Pump

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Station. (Based upon the Phase One Development Plan – *Public Sanitary Sewer Schematic Drawing*, this length is approximately 2,100 linear feet).

- Construction of 20-inch gravity sewer that runs parallel to the existing 16-inch gravity sewer. (This utility would be 2,735 linear feet, and replace the existing 16-inch gravity sewer.)
- Construction of a new Zekiah Pump Station sized for both the WURC’s ultimate development and the existing zoning of lands which drain to the pump station
- Construction of a new 24-inch discharge forcemain from the Zekiah Pump Station which would run parallel to the existing 12-inch forcemain, a new bore and jack across US 301 for the 24-inch forcemain, and a connection into a new gravity manhole (36-inch gravity sewer) on the west side of US 301. The approximately length of 5,390 linear feet.
- Construction of a new 36-inch gravity sewer from US 301 to MH #117 of the Mattawoman Interceptor. (This utility would be 3,530 linear feet, paralleling the existing Lynnbrook outfall interceptor which discharges at MH #117)

### Public Water Improvements

The WURC Design Team noted that the inclusion of numerous 8-inch waterline ‘loops’ within the WURC to connect the 10-inch waterline (US 301) to the 6-inch waterline (Old Washington Road) would assist in providing the necessary operating pressures and fire flow capacities. Most of these loops would be installed by private developers at such time that development progresses. However, it is suggested that the County upgrade the existing 6-inch waterline within Old Washington Road to a 10-inch from Leonardtown Road to Acton Lane. The existing 6-inch waterline is approximately 50 years old, is below the minimum acceptable diameter requirements based upon current County code, and is a maintenance liability for the County. If Old Washington Road is to have its sanitary sewer upgraded, it may be economically beneficial to upgrade the waterline concurrently. Therefore, it is recommended that the County proceed forward with detailed engineering design and ultimately construction for the waterline improvements as noted below:

- Construction of 10-inch waterline along Old Washington Road from Leonardtown Rd. to Acton Lane. (Approximately 5,470 linear feet).

### Parcel Acquisition (Right-of-Way and/or Easements)

Based upon the detailed engineering plans prepared for the sanitary sewer and public water improvements noted above, the next logical step would be for the County to begin to secure adequate right-of-way to locate and construct the necessary infrastructure. It is recommended that this task begin as early as possible as this may pose to be the critical path to accomplishing the Phase One Development in a reasonable timeframe. It is anticipated that the majority of water, sanitary sewer, and storm drainage improvements required within the WURC would be located within the public right-of-ways.

To fulfill the transportation goal for the WURC, acquisition of right-of-way along both sides of Old Washington Road will be necessary to meet the proposed typical roadway sections (Waldorf Urban Major Collector, Type B1

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& B2) as outlined in the *Downtown Vision Plan (April, 2010)*. This additional right-of-way will allow for the addition of new infrastructure, including utilities such as natural gas, electric, CATV, fiber optic, and the addition of geothermal conduits (if pursued by Charles County). Right-of-way acquisition to reconstruct Old Washington Road with a Waldorf Urban Major Collector-Type B1 (from Leonardtown Road to approximately 1,400 north and from approximately 700 feet south of Acton Lane to Acton Lane) would range from approximately 17 to 22 feet on either side of the existing right-of-way. The remaining portion of Old Washington Road, between these two segments mentioned would be reconstructed as a Waldorf Urban Major Collector - Type B2 where additional right-of-way acquisition would range from 11 to 16 feet on either side of the existing Old Washington Road right-of-way. Final right-of-way acquisition needs (widths) would be determined during the final engineering design phase for Old Washington Road. (See Appendix, Infrastructure Layout/Spacing Needs Analysis, **Exhibit LS.01**) The WURC team, in accordance with the proposed sanitary sewer improvements outlined above, has also identified areas where acquisition of sanitary sewer easements would be required to construct parallel sanitary sewer utilities. These easement areas are shown on **Exhibits S.1 through S.4** located within this report's Appendix, under the Infrastructure section.

### Roadway Improvements – Old Washington Road & Leonardtown Road

#### a. Old Washington Road

Although the WURC Design Team is recommending water and sewer infrastructure improvements along Old Washington Road from Leonardtown Road to Acton Lane, it is recommended to only construct the new roadway improvements along Old Washington Road and Leonardtown Road along the Phase One Development's frontage. The County may elect to perform additional roadway improvements to the balance of Old Washington Road in the future to minimize capital funds at this time. If the County desires to construct the entire length of Old Washington Road, between Leonardtown Road and Acton Lane at this time, additional right-of-way as noted in the section above entitled *Parcel Acquisition (Right-of-Way and/or Easements)* would be required. As development progresses in the WURC over time, it is envisioned that the developers would be responsible for construction of many of the secondary and tertiary roadways within the WURC. Therefore, it is recommended that the County proceed forward with detailed engineering design and ultimately construction for the minimum roadway improvements as noted below:

- Construction 84-foot right-of-way *Waldorf Urban Major Collector Type B1* (Source: *Downtown Vision Plan, April 2010*) roadway for Old Washington Road from Leonardtown Road to approximately 1,550 feet north of Leonardtown Road. (Total Length = +/- 1,550 linear feet)

#### b. Leonardtown Road (Maryland Route 5 - Business)

From a visibility standpoint, Leonardtown Road (MD Route 5 Business) serves as a primary gateway to the Phase One Development located within the Waldorf Central Zone (WC). Leonardtown Road serves as a through route within downtown Waldorf with high volumes of traffic on a daily basis. These volumes combined with high visibility make the Phase One Development a centerpiece for development of the WURC. Leonardtown Road's frontage along the south side of the proposed Phase One Development is approximately 1,400 linear feet. It is anticipated that roadway improvements, including streetscape, to this segment of Leonardtown Road would be estimated at approximately \$3.5 million.

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For the success of the proposed Phase One Development site, it is recommended that these improvements occur early in the process. Currently, Maryland State Highway Administration (MSHA) has prepared improvement plans and allocated funding for some improvements along the westbound lanes of Leonardtown Road, immediately east of Old Washington Road to include a dedicated right-turn lane and bicycle lanes. It is also recommended that the Charles County Commissioners continue their discussions with the Maryland Department of Transportation (MDOT) to provide available funding for improvements to this segment of Leonardtown Road (+/-1,400 linear feet) and the portion of Maryland Route 925 which resides within the WC Zone (+/- 1,000 linear feet south of MD Route 5 – Business) a high priority. Assuming Charles County will coordinate with MSHA on acquisition of the necessary right-of-way to allow for the designated Waldorf Urban Major Collector-Type A1, as outlined in the *Downtown Vision Plan* and the *Waldorf Urban Transportation Plan*, improvements requested from MDOT would include road widening, capacity enhancements, dedicated turn lanes, ADA compliant crosswalks and sidewalks, and traffic signal modifications. Such roadway improvements along Leonardtown Road will help to ease traffic congestion while providing an essential “Gateway” into the proposed WURC Phase One Development.

Therefore, it is recommended that the County proceed forward with coordination with MDOT for detailed engineering design and ultimately construction for the minimum roadway improvements as noted below:

- Construction of a minimum 72-foot right-of-way *Waldorf Urban Major Collector Type A1* (Source: *Downtown Vision Plan, April 2010*) roadway for Leonardtown Road from Leonardtown Road to the CSX-T railroad tracks. (Total Length = +/- 1,400 linear feet)

## H. LAND REQUIREMENTS – PARCEL ASSEMBLY AND PROPERTY ACQUISITION

The project team evaluated three potential sites for the Phase One Development. For the reasons presented in “Selection of Phase One Development Site” of this report, Site 1, Waldorf Center, was selected as the Phase One Development location. Site 1 is located north of Leonardtown Road (MD 5 Business) between U. S. 301 and the CSX Railroad Right-of-Way and is bisected by Old Washington Road. Two other sites were considered. Site 2, Acton South, is located south of Acton Lane, between U S 301 and the CSX Railroad, and Site 3, Acton North, is located north of Acton Lane, also between U S 301 and the CSX Railroad.

The land requirements for a Phase One Development at each of the three candidate sites are presented as **Exhibits P.1, P.2 and P.3** within the Parcel Acquisition section of this report’s Appendix. Site 2 would require the acquisition of 16 parcels, at an estimated total cost of \$22,276,500. Site 3 would require the acquisition of 25 parcels, at an estimated total cost of \$15,388,500, not including the key parcel owned by Wal-Mart at the intersection of Acton Lane and U. S. 301.

Site 1, Waldorf Center, is comprised of 17 parcels with an estimated total cost of \$9,967,376, and 6 additional properties that would be required to construct a 540-space Transit Park and Ride facility, which in a future Phase Two development program would be transitioned to mixed-use development and structured parking. The estimated cost of these 6 properties is \$2,683,500. In addition, it is estimated an additional \$500,000 in cost for off-site sanitary sewer easements would be needed to support the Phase One development at Site 1.

The two other candidate sites and the estimated cost of acquiring the land needed for a Phase One Development are summarized below:

Site 1	Waldorf Center	23 Parcels	\$13,150,876
Site 2	Acton South	16 Parcels	\$22,276,500
Site 3	Acton North	25 Parcels	\$15,388,500 (Excluding Wal-Mart)

The business of estimating the cost of land is not an exact science. In this analysis, the most current State assessments were used. The assessed value of improvements on each of the properties was included in the estimates. All of the properties were re-assessed by the State in 2012, so they are a more accurate reflection of current market value. In an economic climate of slow recovery from the recession, the assessed value of property in Charles County is still declining. Many variables determine the final purchase price of individual parcels, but the aggregate total estimated cost of parcel assembly for Site 1, Waldorf Center, is the best estimate available for planning purposes, until an appraisal is performed.

Other factors that influence the cost of properties are the presence of wetlands, topography, streams, soil contamination, the condition of buildings, lead paint, issues of structure or foundation, code violations, and the value of business activity.

There are a number of active real estate listings for properties within the Site 1 area, so there are property owners in this area who are interested in selling.

## WURC – LAND REQUIREMENTS – PARCEL ASSEMBLY AND PROPERTY ACQUISITION

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The cost of acquiring a few parcels may be affected by the activities of the Maryland Department of Transportation's State Highway Administration. SHA is currently planning improvements on MD 5 Business that will facilitate right turns onto Old Washington Road. The State's purchase of right-of-way for this project may reduce the cost of acquiring property for the Phase One development south of this intersection. In addition, the Phase One development plan includes the possibility that an interchange would be constructed by the State at the intersection of U. S. 301 and MD 5 Business. If such plans are realized in the future, the State may need to acquire property on the northeast corner of the intersection.

The Waldorf Center-Phase One Development plan will also include a future light rail transit station just north of Leonardtown Road, on a new 70-foot wide, 5.9-mile long transitway in Charles County parallel and adjacent to the western edge of the CSX Railroad right-of-way. The properties acquired for the Phase One development will include this light rail right-of-way. Additional right-of-way for the transit line will be needed north of the Waldorf Center project, through the Waldorf Urban Redevelopment Corridor to Prince George's County, where the alignment will cross the U. S. 301 bridge and continue north in the U. S. 301/MD 5 highway corridor to the Branch Avenue Metrorail Station. Additional transit right-of-way will also be needed south of the Waldorf Center project along the same alignment adjacent to the CSX Railroad to MD 227 in White Plains.

Verizon owns two properties located in the Waldorf Center-Phase One development site on Leonardtown Road just west of the CSX Railroad tracks. Verizon's Waldorf central hub building is located directly in the path of the future 70-foot light rail transit right-of-way. Discussion will be needed with Verizon executives regarding their future plans for the facility and the possibility of acquiring some of their property at this location. When funding commitments are secured for the construction of the light rail line, arrangements will need to be made to relocate the Verizon hub facility, at significant cost. Whether this cost could be mitigated by a public-private partnership with Verizon to participate in the Phase One development project should be explored.

It is anticipated that the County would need to take the lead role in purchasing these properties or easements, and assemble the land required for the Phase One Development. The County has funding in its current FY 2013 Capital Improvement Program (CIP) for "Various Land Acquisitions" related to the implementation of the County's Light Rail Transit Initiative. The funding could be applied to the early acquisition of key parcels. Assembling all the properties needed to implement the Phase One Development Plan could take several years. There is an understandable reluctance to purchase land before a commitment is secured from a private developer, but the drivers of the land acquisition process are the availability of the land at the right location for the right price, and the urgent need to prevent new development activity that could impede the implementation of the plan. It would be difficult for the County to refrain from buying a property at a location critical to the future success of the Phase One plan when it becomes available, even if it cannot be developed immediately. It is important for the process of land assembly to begin as soon as a policy commitment is made to implement the Phase One Development Plan.

## I. COST BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

### Summary of Costs and Benefits to Charles County

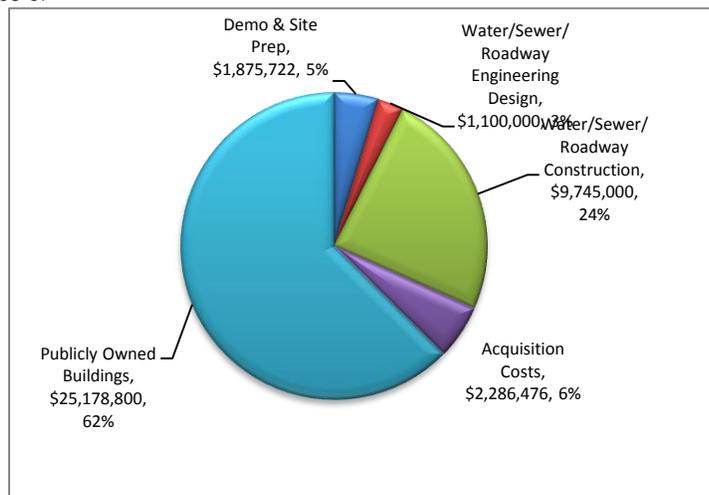
In determining the level of investment that Charles County could potentially make toward the development of Phase 1 of the Waldorf Urban Redevelopment Corridor (WURC) project, the analysis on the following pages provides estimates of (1) the costs of various project components over an expected 13-year construction period; (2) the effects of the project on Charles County’s economy; (3) the changes in property values as build-out of the project occurs; and (4) the increase in income tax associated with the new households that will reside in the residential portion of the development. Below is a summary of the costs and benefits of the project to Charles County, with supporting detailed analyses presented in the following pages of this section of the report.

The total cost of the Phase 1 WURC development is estimated to be approximately \$130,101,998. Of that total, around \$40,685,998 is expected to require public investment. This public investment is expected to leverage over \$89.4 million in private investment.

### Summary of Potential Costs and Potential Funding Stream Assumptions

As noted above, \$40,685,999 of the project costs will likely be funded through public sources. Table CB.2 below outlines these costs and the portion of which would likely require investment from Charles County. Note that the funding programs identified below represent programs that are currently available, and are therefore subject to change.

Figure CB.1 – Distribution of Estimated Public Investment



## WURC – COST-BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

Table CB.1 – Potential Funding Sources for Public Components of Project Costs

Public Components of Project Costs	Total Cost	Funding Strategy
Parking Structures (2)	\$23,320,800	Because the project is intermodal, the parking structures can be very attractive for public funding. A complete list of funding sources can be found in the parking section of this report. In addition, the Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides long-term loans at a very low interest rate that can be used for parking facilities. Loan terms could be structured to pay interest only until revenue from parking fees are realized. At that point, the revenue from parking fees could be used to cover debt service. For estimating purposes, we will assume that 20% of the cost would be offset with other sources of public funding (e.g., federal and state funding programs), with the balance financed through the TIFIA program and the total debt service covered through parking fees.
Phase 1 Transit Stop	\$58,000	For estimating purposes, we have assumed that half of these costs will be funded through federal and state funding programs and half would be financed through a loan program such as TIFIA.
Urban Park Square		For estimating purposes, we have assumed that these costs will be covered through TIF funding.
Public Market House	\$1,800,000	For estimating purposes, we have assumed that these costs will be covered through TIF funding. Fees from the public market can be used to offset operating and maintenance costs.
Demo & Site Prep Site #1	\$1,875,722	For estimating purposes, we have assumed that these costs will be covered through TIF funding
Water/Sewer/Roadway Engineering Design	\$1,100,000	For estimating purposes, we have assumed that these costs will be covered through TIF funding
Water/Sewer/Roadway Construction	\$9,745,000	For estimating purposes, we have assumed that these costs will be covered through TIF funding
Acquisition Costs	\$12,286,476	As shown in the implementation schedule below, the property acquisition could potentially be private sector transactions with the County coordinating agreements between a developer and property owners and negotiating an agreement between the County and the developer that stipulate the developer’s responsibilities and the County’s responsibilities. For estimating purposes, we will assume that \$10 million of the acquisition costs will be funded through private transactions, with the County covering the remaining costs.

Based on the funding sources outlined in Table CB.1, Table CB.2 below shows a potential breakout of how each component could be funded/financed. With an initial outlay of \$2,286,476 from Charles County, the County’s remaining responsibility would consist of \$15,020,722 potentially funded through a TIF, and \$14,021,480 financed through TIFIA (or other loan program). Fees from the parking garage and the public market facility could potentially be used to cover the debt service for this financing.

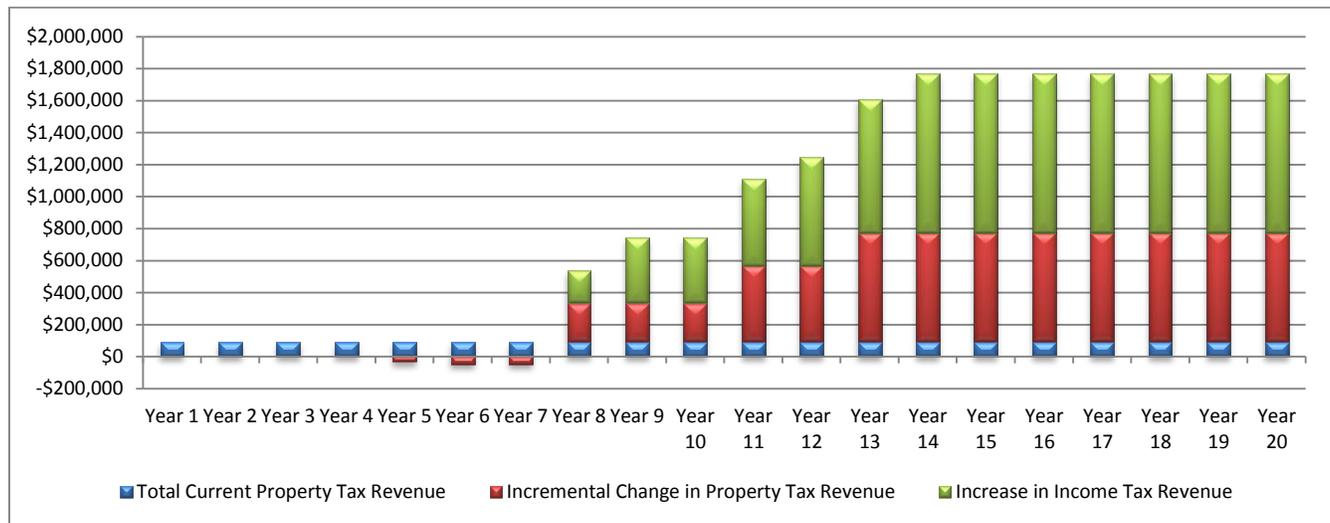
Table CB.2 – Funding/Financing Strategy by Type (Excludes mixed-use components funded by private developer)

Phase 1 Components	Total Cost	Charles County Portion	Private Investment	Cash Outlay by County	Funded Through Federal and State Sources	Funded Through TIF	Financed by County through Bond or Other Programs	Financed by Loan	Expected Amount Recouped from Fees (Used for Debt Service)
Parking Structures (2)	\$23,320,800	\$18,656,640			\$4,664,160		\$13,992,480		\$13,992,480
Phase 1 Transit Stop	\$58,000	\$29,000			\$29,000		\$29,000		\$29,000
Urban Park Square	\$500,000	\$500,000				\$500,000			
Public Market House	\$1,800,000	\$1,800,000				\$1,800,000			
Demo & Site Prep Site #1	\$1,875,722	\$1,875,722				\$1,875,722			
Water/Sewer/Roadway Engineering Design	\$1,100,000	\$1,100,000				\$1,100,000			
Water/Sewer/Roadway Construction	\$9,745,000	\$9,745,000				\$9,745,000			
Acquisition Costs	\$12,286,476	\$2,286,476	\$10,000,000	\$2,286,476					
<b>Total</b>	<b>\$50,685,998</b>	<b>\$35,992,838</b>	<b>\$10,000,000</b>	<b>\$2,286,476</b>	<b>\$4,693,160</b>	<b>\$15,020,722</b>	<b>\$14,021,480</b>		<b>\$14,021,480</b>

## WURC – COST-BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

As shown in Figure CB.2 below, at the end of the 13-year construction period, the annual incremental increase in Charles County property and income taxes is expected to be over \$1.6 million. The total potential incremental increase in income tax revenues associated with new households that occupy the residential portion of the development could be as much as \$10 million over a 20-year period. The total potential incremental increase in property tax revenue over a 20-year period is estimated to be as much as \$7 million.

**Figure CB.2 – Incremental Changes in Charles County Property and Income Tax Revenues**



### Suggested Implementation Steps

1. Identify and engage individual to serve as implementation manager. The operating budget for implementation should be an estimated \$250,000 to \$275,000 annually to cover the cost of salaries and benefits, supplies, and consultant fees as needed.
2. Secure sales agreements with property owners – this secures the properties and limits the initial outlay and financial risk for the County. Each sales agreement would stipulate the time period the County would have to secure a developer, and other requirements set forth by the property owner. At worst, the County might be a pass-through for the sales transaction once a developer is on board. The sales agreements will allow the County to understand the minimum purchase amount to be included within the RFQS. The Developer may ask to purchase the properties at a reduced rate; TIF funds can be used to fill the gap.
3. Seek TOD designation from the State. In addition to its Sustainable Communities designation, if the County obtains designation of the development area as a Transit Oriented Development (TOD) project, the project will receive priority consideration for state funding programs, and could be eligible to use the incremental increase in any local tax revenues through Maryland’s Tax Increment Financing (TIF) program to cover debt service for the project for a period of up to 20 years.
4. Develop RFQS (See Appendix, Exhibit 9), send to select developers (we should provide them with the developer list to ensure that they are working with experienced TOD developers).
5. Develop project message statement and begin outreach/communications to advocate project support
6. Review RFQS responses, conduct interviews with selected respondents, and select and negotiate with developer. Develop a sources and uses of funds matrix based on the development costs provided by the developer’s proposal. This will provide information on what types of funding sources can be secured for each phase of the project (e.g., acquisition, infrastructure, transit stops, parking, etc.)
7. Negotiate and enter into an agreement with Developer. The agreement would stipulate the developer’s responsibilities and the County’s responsibilities. (e.g., parking garage, etc.)
8. Engage TIF consultant to coordinate and implement TIF (Use TIF for infrastructure, site prep, and acquisition assistance if necessary)

## WURC – COST-BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

9. Designate TIF boundaries and develop the TIF Plan based on the development costs. Initial TIF funds can be used to pay for acquisition costs if the developer’s proposed purchase price is lower than the minimum purchase price set by the sales agreements. TIF funds should also be used to prepare the pad for development. (e.g. infrastructure, demolition and grading)
10. Purchase properties using TIF funds (if required).
11. If TIF will not be sufficient to cover costs for infrastructure, meet with funding agencies and submit applications for infrastructure and site prep
12. Meet with MDOT, MTA, and other funding agencies to advance funding requests for parking structures and transit related amenities
13. Secure environmental clearance (federal funding requirement)
14. Begin infrastructure development process
  - a. Engineering & Design
  - b. Construction
15. Monitor funding agencies for new programs
16. Submit applications for funding for parking structures and transit related amenities
17. Submit applications for funding for open space development
18. Submit applications on behalf of developer for funds available for capital projects

### Economic Impacts of the Project

The benefits to Charles County summarized above are only one component of the economic benefits of the Phase 1 WURC project to Charles County. During the 13-year construction phase of the project, over \$117.3 million will be injected in Charles County’s economy from construction activity, resulting in over \$56 million in “ripple effect” spending in the County. Construction activity and its ripple effects are expected to generate over \$7 million in state and local tax revenue during the 13-year construction phase, to include taxes such as corporate, sales, and income taxes, and other revenue such as motor vehicle licenses, etc. At full-build-out of the project, the businesses that will occupy the commercial spaces in the project will employ around 730 people, and their operations will inject over \$52 million *each year* into Charles County’s economy and will create over 200 ripple effect jobs. This new spending will result in ripple-effect spending of over \$23 million *each year*. These business operations and their associated ripple effects are expected to generate as much as \$7 million in state and local tax revenue *each year*.

### How are Economic Impacts Measured?

The economy is shaped by complex interactions among businesses, workers, and households. This dynamic exchange among **producers, workers, and consumers** defines our economy. Economic impact analysis replicates this multifaceted relationship and captures the flow of spending from producer to consumer. Due to the dynamic nature of our economy, it is difficult to conceptualize these economic interdependencies. Computer impact modeling helps simplify these relationships – adding new jobs, improving industry output, or downsizing an industry sector – enabling the cumulative effects of these changes on industries and households to be measured.

The IMPLAN model was used to measure the impacts of Phase 1 of the Waldorf Urban Redevelopment Corridor project and was constructed using Charles County data to capture the impacts of the project to the County. With the national Input-Output (I-O) account as its foundation, IMPLAN is an input/output modeling system that estimates the effects of economic change. When new spending is injected into the economy, industries and households will respond by altering their spending habits. IMPLAN seeks to replicate real-world interdependencies that exist between producers, workers, and consumers. The analysis differentiates between economic impacts that are temporary, such as impacts during the **construction phase**, and those that are more permanent, such as impacts during the **operational phase**.

IMPLAN captures basic economic variables, such as industry output, employee compensation, and employment. It also estimates fiscal impacts that reflect the estimated change in state and local government revenue. IMPLAN is a nationally recognized and widely used modeling tool for its affordability and ease of use.

With national I-O account linkages established, IMPLAN uses labor force and commuting pattern data to develop descriptive models that become the foundation for examining impacts at state or county level.

## WURC – COST-BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

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The construction phase of a project results in a wide range of temporary benefits. The personnel hired to manage the job and work the construction site are often transplants from other communities. Contracted for a specific project, they spend a portion of their wages on local goods and services (e.g., lodging, food, clothes), but their resource contribution does not represent a sustained contribution.

In contrast, the operational phase of a project results in permanent new jobs that attract people from the local labor market. As these new hires increase their earnings, their discretionary spending activity creates demand for goods and services. Changes in demand *drive* the IMPLAN model. Because the operational phase of a project results in sustained economic change, IMPLAN estimates these impacts separately from the construction phase. Both project phases have a “ripple effect” on the economy. To capture these ripple effects, IMPLAN recognizes three types of impacts (or effects): direct, indirect, and induced.

The I-O accounting framework establishes interdependencies among the industry sectors. The **direct effect** – be it a new business opening, plant closure, or construction project – creates new opportunities for industries in the supply chain. As this impact trickles throughout the I-O framework, other industries are affected by the change – the **indirect effect**. As these supplier industries modify their behavior, their workforce follows suit, making different decisions about how to spend or invest their new earnings – the **induced effect**. (See Table CB.2 and its associated notes for additional information.)

### Positioning the Project for Maximum State and Federal Investment

The Phase 1 WURC project should be strategically positioned to maximize its competitive advantage for state and federal funding. The first step in positioning the project is to develop a strategy for funding that links specific project components with funding opportunities that most closely align with the component costs, and are the most cost-effective to pursue. The next step in positioning the project is to develop a communication strategy for meeting with funding agencies and legislators, and developing a clear, concise outline of (1) the specific programs that you want the project to be considered for, and the specific amount of funding you’re seeking; (2) the priority outcomes and scoring criteria for each program; (3) the merits of the project for priority consideration for specific funding programs; (4) evidence of support for the project from key local government officials and local stakeholders (letters of support); (5) qualitative and quantitative descriptions of the public benefits of the project, including the level of private investment that will be leveraged; and (6) a clear statement of the specific actions and/or outcomes you are looking for as a result of each meeting. Building on this information, a project “message” document should be developed that tells the project’s “story” in a compelling way that identifies how the project will achieve the priority outcomes and clearly describes and quantifies its public benefits. This document can serve as the talking points for meetings with funding agencies and legislators, as well as a leave-behind document that provides the key project information at a glance for their reference. With advanced introductions to the project, the funding agencies and legislators will be familiar with the project when funding applications are submitted. Follow-up meetings can be scheduled with the agencies and legislators as needed to continue the advance of the project.

## WURC – COST-BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

### Project Costs

Table CB.3 presents a summary of the estimated project costs for the Phase 1 WURC project over the expected construction timeline. The costs below are rough estimates that are based on conceptual plans. These estimates should be used for preliminary planning purposes only and do not represent final costs for financing consideration. The estimates are calculated over a 20-year period to provide a basis for estimating the potential tax revenue that could be used for debt service should the County decide to use Tax Increment Financing to support the Phase 1 development.

Overview of key elements:

- **Component/Description/S.F./Units** – These components and their related descriptions and sizes are based on the information presented in **Appendix 2** - the Waldorf Center – Overall Development Plan.
- **Total Construction Costs** – Construction costs for buildings were calculated based on an estimated cost per square foot of \$120. The cost per square foot was estimated utilizing estimates from RSMeans and the U.S. Census Bureau's Construction Cost Index and represents a blend between union and non-union labor costs. It is assumed that construction components with public investment would be subject to the Davis-Bacon Act and would require prevailing wage for construction workers. The cost for parking structures is based on the Parking Infrastructure Analysis presented in **Section G, Task A.4**. Demolition and site prep costs and design and construction of water, sewer and roadway infrastructure costs are based on cost estimates presented in **Appendix 7**. Acquisition costs are based on estimates presented in **Section H**, which were derived from parcel information obtained from the Maryland Department of Assessments and Taxation Real Property Data Search web site.
- **Source of Funding** – A public/private partnership in project funding will be essential to the financial feasibility of the Phase 1 WURC project development. As presented in **Section J**, a number of funding programs are available that represent options for public investment for the project. While the majority of the building construction will likely be private investment, the acquisition, infrastructure, and site costs will require public investment. **The “public funding source” identification below will require a strategic mix of local, state, and federal funding sources, with a carefully designed implementation strategy based on windows of opportunity for application submissions.** The designation of the Waldorf Center site as a “Sustainable Community” gives the project priority for a number of state funding programs. The County should also pursue a Transit Oriented Development (TOD) designation (2009 Executive Order by Governor O'Malley's and 2009 and the 2008 Maryland General Assembly TOD legislation) that would give the project priority for state funding, tax credits, and priority consideration for the location of new state facilities. This designation could also allow the County to use the incremental increase in local taxes, such as the Hotel Tax, Income Tax, or Entertainment & Amusement Tax to repay Tax Increment Financing bonds (TIF) bonds used for TOD development. The designation process can be found at [http://www.mdot.maryland.gov/Office\\_of\\_Planning\\_and\\_Capital\\_Programming/TOD/TOD\\_Projects.html](http://www.mdot.maryland.gov/Office_of_Planning_and_Capital_Programming/TOD/TOD_Projects.html).
- **Construction Period** – The timing of job creation and changes in tax revenue associated with the properties included in the Phase 1 development plan are critical to estimating the costs of the project compared to the corresponding benefits. To estimate the costs and benefits as accurately as possible at this stage in planning, the consultant team assumed time frames for each component, and distributed the component costs accordingly over a 13-year time period. The annual construction costs were used as the basis for estimating construction jobs in Table CB.4 and for estimating the value of improvements for property tax purposes in Table CB.7.

Table CB.3 - Estimated Construction Costs by Year and by Source

Component	Description	S.F.	Units	Total Construction Cost	Source of Funding	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	
G	Mixed Use	Grocery	60,000		\$7,200,000	Private					\$1,800,000	\$2,700,000	\$2,700,000						
G	Mixed Use	Retail/Commercial	25,200		\$3,024,000	Private					\$756,000	\$1,134,000	\$1,134,000						
G	Mixed Use	Residential Apartments	171,600	156	\$20,592,000	Private					\$5,148,000	\$7,722,000	\$7,722,000						
G	Mixed Use	Residential Apartments	8,800	8	\$1,056,000	Private					\$264,000	\$396,000	\$396,000						
I	Parking Structure	Parking Spaces		756	\$12,398,400	Public					\$3,099,600	\$4,649,400	\$4,649,400						
C	Gateway Hotel	Hotel	40,000		\$4,800,000	Private								\$1,200,000	\$3,600,000				
M	Phase 1 Transit Stop	Bus Station - VAN GO			\$58,000	Public					\$58,000								
J	Residential Building	Residential Apartments	121,000	110	\$14,520,000	Private								\$3,630,000	\$10,890,000				
H	Urban Park Square	Park Space		1 acre	\$500,000	Public		\$250,000	\$250,000					\$0	\$0				
L	Public Market House	Public Market House	15,000		\$1,800,000	Public								\$450,000	\$1,350,000				
B	Gateway Office Building	Office	50,000		\$6,000,000	Private								\$1,500,000	\$4,500,000				
F	Parking Structure 1	Parking Spaces		666	\$10,922,400	Public											\$6,068,000	\$4,854,400	
E	Mixed Use	Athletic Center	20,000		\$2,400,000	Private											\$1,333,333	\$1,066,667	
E	Mixed Use	Ground Floor Retail/Commercial	24,400		\$2,928,000	Private											\$1,626,667	\$1,301,333	
E	Mixed Use	Residential Apartments	140,800	128	\$16,896,000	Private											\$9,386,667	\$7,509,333	
	Demo & Site Prep				\$1,875,722	Public	\$1,087,919			\$262,601			\$196,951	\$65,650		\$225,087	\$37,514		
	Water/Sewer/Roadway Engineering Design				\$1,100,000	Public	\$550,000	\$550,000											
	Water/Sewer/Roadway Construction				\$9,745,000	Public			\$4,872,500	\$4,872,500									
	Acquisition Costs				\$12,286,476	Public/Private	\$2,286,476	\$3,333,333	\$3,333,333	\$3,333,333									
	<b>Total</b>		<b>676,800</b>		<b>\$127,282,898</b>	<b>\$130,101,998</b>	<b>\$4,129,763</b>	<b>\$4,133,333</b>	<b>\$3,583,333</b>	<b>\$8,205,833</b>	<b>\$16,260,701</b>	<b>\$16,601,400</b>	<b>\$16,601,400</b>	<b>\$196,951</b>	<b>\$6,845,650</b>	<b>\$20,340,000</b>	<b>\$225,087</b>	<b>\$18,452,181</b>	<b>\$14,731,733</b>

## WURC – COST-BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

### Economic Impacts – New Jobs, Household Income, and Potential County Income Tax Revenue

Tables CB.4, CB.5, and CB.6 present a summary of the estimated impacts to Charles County’s economy related to the development of the development of the Phase 1 WURC project and are based on the development program as presented in **Appendix 2** - the Waldorf Center – Overall Development Plan. The estimates are calculated over a 20-year period to provide an overview of potential tax revenue that could be used for debt service should the County decide to use Tax Increment Financing to support the Phase 1 development.

Overview of key elements:

- **Construction Impacts** – Construction activities associated with the WURC Phase 1 development are expected to take place over a 13-year period. The job estimates **Table CB.4** were calculated using the IMPLAN model as described in the Cost-Benefit Summary section of this report. Unlike the permanent jobs that will be associated with new businesses that occupy space in the development, construction jobs are temporary and their impacts are experienced only during the specific timeframe of the construction activity.
- **Business Operations Impacts** – The impacts of business operations are related to the activity associated with the operations of the new businesses that occupy space in the development. The jobs associated with business operations are permanent jobs, and therefore, their effects on Charles County’s economy will be ongoing. The direct jobs (as described below) were calculated based on industry standards for calculating employment per square foot for various types of uses. These new direct jobs were used to “drive” the IMPLAN model, which in turn calculated the “ripple effect” jobs (indirect and induced jobs).
- **New Housing Units, Household Income, and Estimated Income Tax Revenue** – Beyond the construction of the new housing units, the household spending of the residents in the new units will also impact Charles County’s economy. The IMPLAN model estimates job creation based on the new household income that is being added to the local economy. The new household income was based on the minimum annual income that would be required for a household to lease one of the new housing units if (1) the lease rates are consistent with lease rates of similar quality apartments in the local market; and (2) if 25% of the annual household income is spent for housing. The IMPLAN model estimates annual consumer spending based on the estimated household income, and calculates the jobs that would be created or supported in the County by the new consumer spending. The estimated income tax revenue was calculated by applying the local income tax rate for 2013 of .029 to the estimated household incomes and assumes that all households occupying the new units are new to the County. The timing of the new household income assumes a lease-up period of two years after construction completion.
- **Direct Effects** represent the immediate change to the economy. The direct effects reflect any spending associated with on-site construction activity and the operating expenses (including wages) associated with the project at build-out. Direct impacts look at the combined value of the jobs, wages, and output associated with development.
- **Indirect Effects** examine how other industries respond to the direct industry investment. As an example, if Company X maintains close ties with key suppliers, these business-to-business relationships often grow as Company X grows. Supplier industries may likewise expand, hiring new employees and increasing production. Both the construction phase and the operational phase will inject new money into the economy. The direct purchase of building materials, business services, and employees will stimulate other industries to do the same.
- **Induced Effects** are often referred to as “consumer impacts” because they measure how household spending responds to changes in industry production. When new jobs are created, individuals have greater spending power. A portion of their disposable income is recirculated through the economy when they purchase goods and services. These induced impacts are part of the “ripple effect” that is modeled by IMPLAN.



### Estimated Change in Parcel Values

To estimate the potential change in property tax revenues that the County could expect to see when the Phase 1 WURC development is completed, it is necessary to (1) quantify the current land value of the parcels required for the development and the value of existing buildings and improvements that are currently associated with the properties; and (2) estimate the land value of the parcels and the building improvement at build-out. These values will provide the basis for estimating the incremental increase in property tax revenues associated with the development. Table CB.7 presents the current values and the values at build-out for each component of the development.

Overview of key elements:

- **Component/Description** – These columns represent the components and descriptions (based on components in **Appendix 2- the Waldorf Center – Overall Development Plan**) associated with each parcel required for the development.
- **Year of Build-out** – Represents the year construction is expected to be completed as presented in Table CB.3.
- **Estimated Taxable % at Build-out** – Some of the Phase 1 development components will be public uses and the associated parcels will likely become tax-exempt upon acquisition. This column estimates the portion of the parcel that will be taxable at build-out.
- **Map/Parcel/Acres** – These are parcel identifiers and parcel size (in acres) obtained from the Maryland Department of Assessments and Taxation Real Property Data Search web site. In some cases the parcel sizes were stated in the database as square feet, in which case the square feet were converted to acres.
- **Base Year / Build-out Year** - the base year for these calculations is 2013 and represents the current value of the parcels. The build-out year represents the year construction is scheduled to be completed as presented in Table CB.3. The values for the base year and build-out years provide the basis for estimating income tax revenue as presented in Table CB.7. All values are stated in 2013 dollars.
- **Taxable Land Value** – is the value of taxable land separate from any buildings or improvements. For purposes of the estimates below, it was assumed that land values remained constant after build-out and did not increase with infrastructure improvements; therefore, the estimated land values at build-out are likely conservative.

**Taxable Improvements Value** – is the value of the taxable newly constructed buildings associated with the development components. The values were estimated by blending the results of two estimating approaches: (1) a value estimated by applying the most recent and most conservative weighted ratio as published by the Maryland Department of Assessments and Taxation’s 2011 Ratio Report to the cost of construction for each building component; and (2) a review of tax information for comparable developments in the surrounding area and their associated value per square foot as obtained from the Maryland Department of Assessments and Taxation Real Property Data Search web site. The estimated improvements value is also likely conservative

Table CB.6 - Land and Improvement Values by Parcel by Estimated Build-out Year

Component Description		Year of Build out	Estimated Taxable % at Build-out	Map	Parcel	Acres	Base Year Taxable Land Value	Base Year Taxable Improvements Value	Total Base Year Value	Taxable Land Value at Build out Year	Taxable Improvements Value at Build-out Year	Total Value at Build-out Year
E,F,D	Arts/Civic Center	Future	0%	8	162	0.71	\$152,300	\$21,700	\$174,000	\$0		\$0
E,F,D	Arts/Civic Center	Future	0%	8	162	0.76	\$258,500	\$72,700	\$331,200	\$0		\$0
M	Transit Stop	5	0%	8	538	0.70	\$0	\$0	\$0	\$0		\$0
G	Mixed Use	8	100%	8	535	0.84	\$265,100	\$1,700	\$266,800	\$265,100		\$265,100
G	Mixed Use	8	100%	8	320	0.59	\$384,600	\$128,900	\$513,500	\$384,600		\$384,600
G	Mixed Use	8	100%	8	319	0.26	\$203,800	\$96,900	\$300,700	\$203,800		\$203,800
I	Parking	8	0%	8	302	2.41	\$374,200	\$0	\$374,200	\$0		\$0
G	Mixed Use	8	100%								\$26,294,400	\$26,294,400
B,C	Office & Hotel	11	100%	8	553	2.25	\$764,400	\$25,500	\$789,900	\$764,400		\$764,400
B,C	Office & Hotel	11	100%	8	553	0.52	\$601,200	\$137,800	\$739,000	\$601,200		\$601,200
H	Public Square	11	0%	8	317	1.49	\$420,000	\$518,000	\$938,000	\$0		\$0
L	Public Market	11	0%	8	316	3.04	\$101,700	\$77,800	\$179,500	\$0		\$0
J	Residential	11	100%	8	536	1.35	\$281,500	\$145,400	\$426,900	\$281,500		\$281,500
J	Residential	11	100%	8	537	0.46	\$0	\$0	\$0	\$128,053		\$128,053
BC	Office, Hotel, Residential	11	100%								\$20,889,000	\$20,889,000
E,F,D	Mixed Use	13	100%	8	552	0.69	\$475,600	\$605,800	\$1,081,400	\$475,600		\$475,600
E,F,D	Mixed Use/Parking	13	30%	8	551	0.75	\$337,100	\$24,700	\$361,800	\$101,130		\$101,130
E,F,D	Mixed Use	13	100%	8	550	0.76	\$219,900	\$143,000	\$362,900	\$219,900		\$219,900
E,F,D	Mixed Use/Parking	13	30%	8	549	0.67	\$250,300	\$549,600	\$799,900	\$75,090		\$75,090
E,F,D	Mixed Use/Parking	13	30%	8	548	0.74	\$179,500	\$24,700	\$204,200	\$53,850		\$53,850
E,F,D	Parking	13	0%	8	547	0.67	\$250,200	\$54,100	\$304,300	\$0		\$0
E,F,D	Mixed Use	13	100%								\$18,334,800	\$18,334,800
<b>Totals</b>						<b>19.66</b>	<b>\$5,519,900</b>	<b>\$2,628,300</b>	<b>\$8,148,200</b>	<b>\$3,554,223</b>	<b>\$65,518,200</b>	<b>\$69,072,423</b>

## WURC – COST-BENEFIT ANALYSIS AND REVENUE POTENTIAL OF “PHASE ONE” PROJECT

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### Estimated Potential Change in Property Tax Revenues

The increase in Charles County property tax revenue associated with the Phase 1 WURC development is a primary measure of the benefits of the project to the County, and can be measured against the cost of the County’s investment in the project. Table CB.7 below presents the estimated incremental change by year in Charles County’s Property Tax revenues that can be associated with the Phase 1 WURC development. The estimates are calculated over a 20-year period to provide an overview of potential tax revenue that could be used for debt service should the County decide to use Tax Increment Financing to support the Phase 1 development.

- **Base Year Values** – are the cumulative land and improvement values by year, based on the base year values and as presented in Table CB.7. These values represent the net effect of the changes in the taxable status of parcels in the WURC development area.
- **Future Year Values** – are the cumulative land and improvement values by year, based on the values at build-out year as presented in Table CB.7. These values represent the net effect of the changes in the taxable status of the parcels in the WURC development.
- **Tax** – Tax calculations in Table CB.7 below represents the total land and improvement values multiplied by the Charles County property tax rate of 1.21 per \$100/value.
- **Incremental Change in Taxes** – is the difference in Charles County’s current tax revenue each year and the expected tax revenue each year each year as build-out of the project progresses. These estimates take into consideration the timeframe for acquisitions and the demolition of buildings and improvements that produce current tax revenues, and the tax revenues associated with new construction.

**Table CB.7 – Estimated Incremental Change in Charles County Property Tax Revenues (Cumulative)**

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	20-Year Total	
Base Year																						
Land Value	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	
Improvements Value	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	
Total Value	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	
Total Tax	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$91,341	\$1,826,826
Future Year #																						
Land Value	\$5,519,900	\$5,519,900	\$5,519,900	\$5,519,900	\$5,109,100	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	\$3,554,223	
Improvements Value	\$2,628,300	\$2,628,300	\$2,628,300	\$2,628,300	\$0	\$0	\$0	\$26,294,400	\$26,294,400	\$26,294,400	\$47,183,400	\$47,183,400	\$65,518,200	\$65,518,200	\$65,518,200	\$65,518,200	\$65,518,200	\$65,518,200	\$65,518,200	\$65,518,200	\$65,518,200	
Total Value	\$8,148,200	\$8,148,200	\$8,148,200	\$8,148,200	\$5,109,100	\$3,554,223	\$3,554,223	\$29,848,623	\$29,848,623	\$29,848,623	\$50,737,623	\$50,737,623	\$69,072,423	\$69,072,423	\$69,072,423	\$69,072,423	\$69,072,423	\$69,072,423	\$69,072,423	\$69,072,423	\$69,072,423	
Total Tax	\$91,341	\$91,341	\$91,341	\$91,341	\$57,273	\$39,843	\$39,843	\$334,603	\$334,603	\$334,603	\$568,769	\$568,769	\$774,302	\$774,302	\$774,302	\$774,302	\$774,302	\$774,302	\$774,302	\$774,302	\$774,302	\$8,838,086
Incremental Change in Tax	\$0	\$0	\$0	\$0	-\$34,068	-\$51,498	-\$51,498	\$243,262	\$243,262	\$243,262	\$477,427	\$477,427	\$682,961	\$682,961	\$682,961	\$682,961	\$682,961	\$682,961	\$682,961	\$682,961	\$682,961	\$7,011,259

**Assumptions:**

1. All amounts stated in 2013 dollars.
2. Land value assessments do not increase with infrastructure improvements and acquisition costs.
3. New Improvements valued at \$99/s.f. (estimated using cost/s.f. at blended union and non-union labor, normalized by most recent statewide weighted ratio, and a review of comparable property values per square foot)
4. Tax Rate 1.21 per \$100 value

## J. FUNDING STRATEGY AND POTENTIAL SOURCES OF STATE AND FEDERAL ASSISTANCE

The “*Waldorf Urban Transportation Improvement Plan*,” completed in June of 2010 by the firm of Martin/Alexiou/Bryson, P.C. provided insight regarding the future funding strategy for infrastructure improvements within the Waldorf Urban Redevelopment Corridor: “Financing these improvements particularly in the short term and in the current economic climate, will likely require a mix of solutions. Creating a tax increment financing (TIF) district prior to substantial redevelopment will maximize the potential future revenue available for district improvements. While the funds will likely be insufficient in the short term for all of the identified improvements, it would represent a sizable potential revenue stream to cover high-dollar future investments such as structured parking or transit stations. A TIF would likely be supplemented by a special assessment district and/or general obligation bonds to meet the public component of the investment. It is anticipated that many of the improvements identified in the WUDS will be completed as public-private partnerships or wholly by private entities.

“Going forward, it will be important for the County to secure financing for the publicly funded improvements as well as to ensure that a management entity and other support structures are in place to oversee and promote development within the district. With careful planning and targeted improvements, it should be possible to transform the *Downtown Waldorf Vision Plan* into reality.”

In the initial stages of implementation, the County will be an indispensable, key player in funding the most critical, high-priority implementation steps, including key public infrastructure needed to begin the Phase One development project at Waldorf Center. Because of the slow recovery from the economic recession, property values within Waldorf are still flat or declining. This essentially renders a Tax Increment Financing (TIF) strategy incapable of delivering substantial revenue for the project, even as this becomes the right time to establish the TIF development district and set the amount of the original assessable base, upon which future incremental increases in property value will be calculated. The subject of TIFs and special taxing districts is covered in more detail in the next chapter of the report.

This brief introduction will provide an overview of some of the public and private sources of funding that could contribute to the success of the Phase One project and WURC redevelopment strategy. A funding strategy matrix presenting potential local, state and federal funding sources is provided later in this section of the report.

At the County level, there are three primary funding sources relevant to this project, the County’s operating budget, capital budget or Capital Improvement Program (CIP), and the County’s Enterprise Fund for water and sewer infrastructure projects. In the initial stages of project implementation, funding from these sources will be crucial. The next section, Institutional Capacity and Implementation, addresses the need to stand up a small new agency focused on implementing the Phase One Waldorf Center project and laying the groundwork for the larger task of redeveloping the WURC. This agency office will need access to expert advice on transit-oriented development, real estate, finance and law. An early source of funding, before a TIF or special taxing district can be established and more favorable economic conditions start delivering new revenue, is the County’s operating budget. The Charles County Commissioners will be engaged in the budget process for Fiscal Year 2014 as this report is finalized and presented. The CIP is also a potential source of funding for key infrastructure

## WURC – FUNDING STRATEGY AND POTENTIAL SOURCES OF STATE AND FEDERAL ASSISTANCE

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improvements and public facilities essential to future private sector investment in the Phase One project and the WURC. Examples of County projects in the CIP are the Reconstruction of Old Washington Road, beginning with the design and engineering phase of that project, funding to begin the formal planning process for Light Rail Transit, and a fund for various land acquisitions within a half-mile of proposed transit stations. The CIP also includes plans for a multi-generational senior center and an urban park, both of which would complement the recommended Phase One development plan. The County's Enterprise Fund for water and sewer projects is supported with a separate fee structure paid by the users of the system. The sewer infrastructure capacity issues in this part of the County are well documented in an earlier chapter of this report. They are part of a larger issue of the aging and undersized sewage treatment system that serves the Waldorf area. The WURC urban redevelopment program and the information presented in this report convey an urgent need to program investments in infrastructure that are essential to achieving the County's vision for downtown Waldorf, "state of the art" mass transit service, and high-quality economic growth.

There are several areas in which the State of Maryland can be a major contributor to the success of this initiative. In addition to the grant programs displayed on the funding matrix in this report, the role of the Maryland Department of Transportation and its modal administrations deserve special attention. As has been noted, the future of TOD in Waldorf and the future of the County's mass transit vision are inextricably connected. The County's transportation priorities, expressed in the annual "tour letter" which is presented by the County Commissioners to Maryland's Secretary of Transportation, provides the State with Charles County's inventory of top priority projects. Projects that are relevant to the implementation of the Phase One project include the construction and equipping of a new 540-space transit park and ride lot and the completion of planned improvements on MD 5 Business (Leonardtown Road) that will help relieve traffic congestion by facilitating right turns onto Old Washington Road (MD 925).

The Maryland Transit Administration has requested federal funds for "*Southern Maryland Transit Corridor Alternatives Analysis*," to begin the formal planning process for Charles County's top transportation priority. As this project advances, the State may ultimately be engaged in building and maintaining the transit stations at Waldorf Center and Acton Lane, and the other stations and facilities along the Charles County Transit Development Corridor, from the Prince George's County line to MD 227 in White Plains. While the implementation of mass transit in the corridor will take years to accomplish, public sector commitments by the State, the federal government, and the counties (Charles and Prince George's) can create a tangible sense of inevitability and expectation. Credible and urgent advocacy and formal planning can make transit a "force-multiplier" in securing the public and private investment needed for the Phase One project and WURC implementation, which in turn will bring high-capacity, fixed-route transit service closer to reality by delivering future ridership that will support capital investment decisions.

The State can help in other ways, some of which are highlighted in the funding matrix. The WURC is a tangible example of "smart growth." The County's commitment to the downtown Waldorf vision is a commitment to effective growth management, by planning a walkable, transit-oriented, mixed-use new urban center as a focal point for the future growth that is projected for Charles County in the coming decades. In August of 2012, Charles County's "*Waldorf Sustainable Community Area*," which includes the Waldorf Urban Redevelopment Corridor, was designated by the State as a *Sustainable Community* (**See DHCD letter to Commissioner Kelly dated August 10, 2012 located at the end of this section**). There will be opportunities for agencies like the Maryland

## WURC – FUNDING STRATEGY AND POTENTIAL SOURCES OF STATE AND FEDERAL ASSISTANCE

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Department of Planning (MDP), the Maryland Department of the Environment (MDE), Maryland Department of Housing and Community Development (DHCD), and the Maryland Department of Natural Resources (DNR) to lend their support to initiatives in Waldorf that contribute to the implementation of the Phase One plan. For example, the WURC project team has proposed a “wetland nature park” that meets a dual purpose of protecting wetlands and creating a natural amenity in an urban setting. As these agencies have done in other areas of the State, MDP, MDE, DHCD and DNR could play an important role—with financial and technical assistance—in helping to design and integrate this asset into the Phase One plan. The Strategic Demolition and Smart Growth Impact Fund is another State program that could assist the County’s implementation efforts on Phase One, if sufficient funds are appropriated for the program by the Maryland General Assembly for FY 2014 and beyond. The Maryland Sustainable Growth Commission has been studying the issue of “Financing Smart Growth” and issued a report in September of 2012 providing recommendations on how the State can enhance incentives and resources, and listing the current programs and tools.

At the federal level, there are few programs that Charles County can access directly, independent of the State. As a suburban County with a population of 150,000, Charles County is at a disadvantage in the competition for federal funding with larger jurisdictions. There are also federal programs which are administered at the regional level, such as transportation programs administered by the Metropolitan Planning Organization (MPO), the National Capital Region Transportation Planning Board, which tend to favor the priorities of larger urban counties and cities. The funding matrix includes several federal programs which can be accessed through the County’s Congressional Delegation.

On the private side, two concepts have been receiving considerable attention since the recession forced draconian cuts in public investment—Public-Private Partnerships (P3) and “Value Capture.” The potential of P3s to deliver significant results was greatly enhanced by the State’s use of a P3 to expand facilities at the Port of Baltimore to handle the larger container ships, and enhance the Port’s competitive position, when the widening of the Panama Canal is completed. The State can enter into a long-term agreement with a private entity to design, build, finance, operate, and maintain a transit line through availability payments. Availability payments are the annual payments to the private contractor for the operating and capital costs of the project. “Value Capture” refers to the idea of using the increase in land value due to the construction of a transit project to pay for the construction of that project. This could be accomplished through special taxing districts, developer fees, etc. to support Tax Increment Financing bonds. When efforts get underway to implement the Phase One Waldorf Center project, resources are invested in land assembly and infrastructure, and formal transit planning is initiated, there will be opportunities to engage the private sector in discussions about partnerships that advance the transformation of Waldorf and have the potential to create profitable new ventures. The leaders of the County management entity created to direct the Phase One project will need to remain alert to such P3 opportunities and pursue them aggressively. As the economy recovers and the prospects for creating new wealth in downtown Waldorf become more favorable, the private sector development community in the metropolitan Washington area will begin to take notice and consider their opportunities to participate.

In addition to the funding matrix, this report includes two examples (**See Appendix: Section 9**) of a Request for Proposals (RFP) or a Request for Qualifications (RFQ), inviting private developers to participate in the redevelopment of a publicly-owned site. One is an RFQ developed by the Maryland Department of Transportation in partnership with the Washington Metropolitan Area Transit Authority (WMATA) for the “New

## WURC – FUNDING STRATEGY AND POTENTIAL SOURCES OF STATE AND FEDERAL ASSISTANCE

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Carrollton Metro Station & Adjoining State of Maryland Property.” The other example is a Request for Qualified Submissions (RFQS) for the “Madison Parking Lot Redevelopment Project” issued by the Lansdale Parking Authority in the Borough of Lansdale, Pennsylvania. The Madison Parking Lot site is located in the heart of downtown Lansdale, near a SEPTA transit station, and is a key target for redevelopment.

The acquisition of property in the Phase One project area of downtown Waldorf, and new investment in urban infrastructure, could present a similar opportunity to issue an RFP or RFQ to developers in the mid-Atlantic area and market the downtown Waldorf project as a public-private venture with potential benefits for the community and the developer. Negotiations could include private sector investment in the cost of developing the Phase One site.

## Program Overview

State	Program	Administering Agency	Type	Eligible Applicants	Uses	Funds Available	Window of Opportunity	Notes
	Significant Strategic Economic Development Opportunities	Maryland Economic Development Assistance Authority and Fund (MEDAAF)	Loan	Applicants are restricted to businesses located within a priority funding area and an eligible industry sector.  Eligible industry sectors include agriculture and forestry; aerospace; biotechnology; transportation, distribution, and warehousing; environmental technology; financial services; healthcare technology and services; telecommunications; manufacturing; information technology and businesses with U.S. or regional headquarters located or to be relocated in Maryland	Land acquisition, infrastructure improvements, buildings, fixed assets, leasehold improvements, and working capital	Maximum assistance cannot exceed the lesser of \$10 million or 20 percent of the current fund balance	N/A	For businesses with projects that provide eligible industries with a significant economic development opportunity on a statewide or regional level
	Local Economic Development Opportunity	Maryland Economic Development Assistance Authority and Fund (MEDAAF)	Loan/Grant	Must be sponsored by the governing body of the jurisdiction in which the project is located  For a business that provides a valuable economic development opportunity to the jurisdiction in which the business is located and is a priority for the governing body of that jurisdiction	Land acquisition, infrastructure improvements, building, fixed assets, and leasehold improvements	Loans may be up to \$5 million, while conditional loans and grants may be up to \$2 million	N/A	The local jurisdiction must sponsor the business and must participate in the form of a guarantee, a direct loan, or a grant in an amount equal to at least 10 percent of the State's financial assistance
	Direct Assistance to Local Jurisdictions or MEDCO	Maryland Economic Development Assistance Authority and Fund (MEDAAF)	Loan/Grant	Local jurisdictions	Land acquisition, infrastructure improvements, acquisition of fixed assets, leasehold improvements  Up to 70 percent of the cost of a feasibility study and up to 50 percent of the cost of preparing a local economic development strategic plan	Assistance cannot exceed \$3 million	N/A	
	Regional or Local Revolving Loan Fund	Maryland Economic Development Assistance Authority and Fund (MEDAAF)	Grant	Eligible applicants include a county or regional economic development agency, whether public or private. A jurisdiction may transfer all or a portion of its allocation to a regional revolving loan fund	To help capitalize local revolving loan funds  The approved use of funds and respective terms of the assistance are set by the local revolving-loan fund programs	Each jurisdiction may receive a grant of \$250,000 annually	N/A	To qualify for a grant, the local government must provide a matching grant of funds to the local revolving loan fund
	Tax Increment Financing	Local Jurisdiction	TIF	Counties and municipalities  Eligible projects include: <ul style="list-style-type: none"> <li>• Revitalization of areas designated by the county</li> <li>• Redevelopment of blighted areas</li> <li>• Mixed-use centers</li> <li>• Redevelopment of the Development Tier, growth corridors, and growth centers as defined by the county General Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure – roads, utilities, lighting, parks, etc.</li> <li>• Government buildings</li> <li>• Public parking garages</li> <li>• Land acquisition, site removal, relocation</li> <li>• Convention, conference and visitors centers in Prince George's County</li> <li>• Capital and operating costs of infrastructure supporting Transit-Oriented Development in certain counties</li> <li>• Affordable housing in the City of Baltimore</li> </ul>	Funding is dependent upon the incremental increase in taxes (see "notes" section for eligible TIF taxes)	N/A	<p>Eligible taxes include:</p> <ul style="list-style-type: none"> <li>• Real property taxes in all jurisdictions</li> <li>• Hotel taxes in Prince George's County</li> <li>• Any local tax in support of designated Transit-Oriented Developments in authorized counties</li> <li>• A portion or all of the incremental taxes generated</li> </ul> <p>2009 legislation expanded a local government's TIF authority at designated TODs:</p> <ul style="list-style-type: none"> <li>• Local government can use MEDCO to issue the TIF bonds instead of issuing bonds itself</li> <li>• Local government can dedicate any local tax to the TIF, not just property tax</li> <li>• A Special Taxing District can be used as a security for repayment of a TIF bond used to finance state-owned public infrastructure</li> </ul>
	Maryland Sustainable Communities Rehabilitation Tax Credit Program	Maryland Department of Planning/Maryland Historical Trust	Tax Credit	Non-historic commercial and non-historic income producing residential projects located within state-designated TODs  Eligible historic structures across State	Rehabilitation projects	The amount of tax credits distributed each year is based upon an annual appropriation in the State's operating budget. The amount varies from year to year.	Applications for State Commercial Sustainable Communities Tax Credits are accepted once annually and are competitively reviewed and ranked. Awards are made to the extent appropriations are available.	<ul style="list-style-type: none"> <li>• 20% credit for "certified historic structures"</li> <li>• 25% credit for "certified historic structures" that are high-performance buildings (LEED Gold certified or the equivalent)</li> <li>• 10% credit for non-historic, "qualified rehabilitated structures"</li> </ul>

## Program Overview

State	Program	Administering Agency	Type	Eligible Applicants	Uses	Funds Available	Window of Opportunity	Notes
Maryland	Capital Grants/Bond Bills	Maryland Department of General Services	Grant	Any group may request funding from the General Assembly for a capital project	<p>A project must be capital in nature to be eligible for bond bill consideration (land and/or structures)</p> <p>A project must have a useful life of 15 years</p> <p>A project must not be used for religious purposes</p>	Varies	<p>Organizations seeking funding must contact a senator and a delegate to sponsor a bond bill that requests funding for their project. Bond bills must be introduced in both the House and the Senate, so organizations must arrange for a sponsor in each house.</p> <p>Organizations must complete a Bond Bill Project Request Form." The organization should ensure that their sponsors have the required information when their sponsors request that a bond bill be drafted.</p> <p>Bond Bills move through the General Assembly under the following schedule:</p> <ul style="list-style-type: none"> <li>• July 1 -Legislators may begin to prefile bond bills</li> <li>• Mid-November - Deadline to request that bills be drafted in time to meet the prefile deadline</li> <li>• Mid-January - Deadline for bond bills to be requested to guarantee bills are drafted by the filing deadline (known as the guarantee date)</li> <li>• Early February - Deadline for bond bills to be introduced and not assigned to the Rules Committee (filing deadline)</li> <li>• March - Senate Budget and Taxation Committee and House Committee on Appropriations hold hearings on bond bills</li> <li>• Early April - Each chamber votes on bond bills</li> <li>• Mid-April - Both chambers vote on final packages of bond bills</li> <li>• June 1 - Effective date for bond bills</li> </ul>	<p>Matching funds are required. A matching fund may be greater than, equal to, or less than the State contribution, though at least an equal match is preferred. Match can be hard or soft costs from any resource other than state funds.</p> <p>Projects must be shovel ready (ready to proceed with design/construction within 18 months)</p>
	Local Government Infrastructure Financing	Maryland Department of Housing & Community Development	Tax Exempt Bonds	<p>All Maryland counties, municipalities and/or their agencies are eligible, provided they have legal authority necessary for:</p> <ul style="list-style-type: none"> <li>• Constructing, operating and maintaining the proposed project,</li> <li>• Pledging security for and repaying the proposed loan, and</li> <li>• Pledging income tax payments and various other shared revenue from the State.</li> </ul>	<p>Projects must support an essential physical element of a municipality's public service system and meet federal tax law requirements. A project must be undertaken by or on behalf of a local government, including its agencies. Projects may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Street lighting, landscaping, sidewalks and public space improvements</li> <li>• Public safety vehicles and equipment</li> <li>• Water production, treatment, storage and distribution systems</li> <li>• Storm water control and sewer collection and treatment facilities</li> <li>• Government office and meeting facilities</li> <li>• Police, fire, transportation, education, health, recreation, maintenance and other service related facilities</li> </ul>	N/A	N/A	The term of the loan is set at the option of the local government, but cannot exceed the useful life of the project or thirty years, whichever is less
	Maryland Affordable Housing Trust	Maryland Department of Housing & Community Development	Grant	<ul style="list-style-type: none"> <li>• Nonprofit organizations</li> <li>• Public housing authorities</li> <li>• Government agencies</li> <li>• Profit-motivated entities</li> </ul>	<p>MAHT promotes affordable housing for households earning less than 50% of area or Statewide median income by:</p> <ul style="list-style-type: none"> <li>• Funding capital costs of rental and ownership housing;</li> <li>• Providing financial assistance for nonprofit-developer capacity building;</li> <li>• Funding supportive services for occupants of affordable housing; and</li> <li>• Funding operating expenses of affordable housing developments.</li> </ul>	The maximum award amount is \$150,000.	MAHT holds two funding rounds per year, generally in January and August.	<p>While all activities funded by MAHT generally serve residents with incomes of less than 50% of statewide or area median, whichever is higher, preference is given to projects that serve households with incomes of less than 30% of median. Projects that meet the following criteria will be most competitive:</p> <ul style="list-style-type: none"> <li>• Target very low-income persons</li> <li>• Provide housing for families with minor children and/or single adults in Single Room Occupancy units;</li> <li>• Demonstrate project readiness and feasibility;</li> <li>• Project long-term affordability (for capital projects);</li> <li>• Demonstrate need /demand for housing in geographic area and helps achieve equitable geographic distribution of MAHT funds;</li> <li>• Leverage other funds and/or provide the final piece in a financing package; and</li> <li>• Provide self-sufficiency services.</li> </ul>

## Program Overview

State	Program	Administering Agency	Type	Eligible Applicants	Uses	Funds Available	Window of Opportunity	Notes
	Multi-Family Bond Program	Maryland Department of Housing & Community Development	Loan	For-profit and nonprofit developers may apply for Multi-Family Bond loans.  A sponsor of a project funded with tax-exempt bonds has a choice of making 20 percent of the units available to households earning 50 percent or less of the area median income, or making 40 percent of the units available to households earning 60 percent or less of the area median income. In addition, a total of 51 percent of the units must be occupied by limited-income families whose annual income does not exceed 85 percent of the statewide median income, which is adjusted for family size. For projects funded with taxable bonds, 20 percent of the units must be occupied by families whose annual income does not exceed 85 percent of the statewide median income.	Rental housing financed through the program may be new construction, acquisition, and rehabilitation of existing housing, and must contain a minimum of five units. Loans may be provided to refinance existing high interest rate private loans if the refinance is in conjunction with rehabilitation of the housing. Projects using tax-exempt bond financing must contain complete independent dwelling units. Single-room occupancy units (SRO's) and shared housing may be financed only with taxable bonds or 501(c)(3) bonds if owned by an eligible nonprofit corporation. Projects financed with tax-exempt bonds must comply with the Maryland qualified Allocation Plan in order to receive unallocated 4% Low Income Housing Tax Credits.	N/A	Applications are accepted at any time.	Interest rates are based upon CDA's bond rate. Interest rates for tax-exempt bonds are generally about 1.5 to 2.0 percentage points below market rates, and for taxable bonds, they are generally 1.5 percent above 30-year Treasury bonds. Loan terms are generally 30 years. A first lien position is required for all loans. All loans funded with tax-exempt bonds must comply with federal requirements established for tax-exempt revenue bonds.
	Strategic Demolition and Smart Growth Impact Fund (SGIF)	Maryland Department of Housing & Community Development	Grant/Loan	Lead applicants will be local governments or nonprofit community development organizations  SGIF projects must be located in a State-designated Sustainable Community (which includes Transit Oriented Developments)	<ul style="list-style-type: none"> <li>• Site acquisition and assembly</li> <li>• Demolition</li> <li>• Site development, including public infrastructure improvements</li> <li>• Construction-level architectural and engineering designs</li> </ul>	\$2.5 million available for grants/loans in FY2013.	Both a notification of intent to apply and a full application are being requested of all SGIF applicants.  In FY2013, notification of intent to apply was due September 24, 2012 and the full SGIF application was due October 12, 2012.	The new Strategic Demolition and Smart Growth Impact Fund (SGIF) is seeking to catalyze activities that accelerate economic development, job production and smart growth in existing Maryland communities. The SGIF aims to improve the economic viability of "grey field development" which often faces more barriers than sprawling "green field development." Since funds are limited, awards will focus on those smart growth projects that can have a high economic and revitalization impact in their existing communities.
	Community Legacy Program	Maryland Department of Housing & Community Development	Grant/Loan	The following entities may apply for Community Legacy funding for projects located in Sustainable Communities: <ul style="list-style-type: none"> <li>• Local governments</li> <li>• Community development organizations (for example: county councils, community development corporations, main street organizations, downtown partnerships)</li> <li>• Groups of local governments sharing a common purpose or goal</li> </ul>	Projects should capitalize on the strengths of a community and be part of a larger revitalization strategy to revitalize a declining area. Projects/activities typically include, but are not limited to: <ul style="list-style-type: none"> <li>• Mixed-use development consisting of residential, commercial and/or open space</li> <li>• Business retention, expansion and attraction initiatives</li> <li>• Streetscape improvements</li> <li>• Increasing homeownership and home rehabilitation among residents</li> <li>• Residential and commercial façade improvement programs</li> <li>• Real estate acquisition, including land banking, and strategic demolition</li> <li>• Establishing funds to provide loan guarantees and credit enhancement to leverage other public or private financing</li> </ul>	In FY 2013, the Community Legacy (CL) Program has \$6 million in Capital funds.	The FY 2013 Community Legacy Application Round is now open. A mandatory training session will be held on February 27, 2013.	As a result of the Sustainable Communities Act of 2010. Community Legacy Areas are now known as Sustainable Communities. Funding, in the form of grants and loans, is available for projects located in these Sustainable Communities, formerly known as Community Legacy Areas, and is meant to compliment and supplement other State funding programs.  <b>Mandatory Training:</b> Community Legacy Application training is mandatory for those who have not previously applied electronically to the Community Legacy program. The Program requests that the individual responsible for completing/actually filling out the electronic application participate in one of these trainings.
	Neighborhood BusinessWorks Program	Maryland Department of Housing & Community Development	Loan	Maryland-based small businesses, local development corporations and nonprofit organizations whose activities contribute to a broader revitalization effort, and whose projects are intended to promote investment in commercial districts or town centers.  Local governments are NOT eligible applicants.	<ul style="list-style-type: none"> <li>• Market/planning/feasibility studies</li> <li>• Real estate acquisition</li> <li>• New construction or rehabilitation</li> <li>• Leasehold improvements</li> <li>• Machinery and equipment</li> <li>• Working capital (when part of total project cost)</li> <li>• Certain other costs associated with opening or expanding a small business</li> </ul> <p>Priority is given to projects that strengthen neighborhood commercial districts and are part of a greater revitalization strategy.</p>	Loan amounts up to \$500,000 or 50% of the total project costs, whichever is less  Minimum loan of \$25,000	Applications are accepted at any time.	The Neighborhood BusinessWorks loan program provides gap financing, i.e. subordinate financing, to new or expanding small businesses and nonprofit organizations in Sustainable Communities throughout the State.  The following types of projects and activities will not be considered for NBW financing: <ul style="list-style-type: none"> <li>• Speculative developments (All properties must be pre-leased for a minimum of 51% of the leasable space prior to loan closing.)</li> <li>• Refinancing</li> <li>• Residential or transient living facilities (other than mixed-use projects), e.g., multifamily or single-family housing developments, nursing homes, assisted living facilities, crisis care centers, group homes, transitional housing, and homeless shelters</li> <li>• Facilities such as community halls, fire stations, hospitals, colleges, or universities</li> <li>• Adult entertainment facilities/stores, gambling facilities, gun shops, liquor stores, massage parlors, pawn shops, tanning</li> </ul>

## Program Overview

State	Program	Administering Agency	Type	Eligible Applicants	Uses	Funds Available	Window of Opportunity	Notes
	Job Creation Tax Credits	Maryland Department of Business & Economic Development (DBED)	Tax Credit	<p><b>Declaration of Intent</b> – A business may not claim any employees hired prior to the business notifying DBED of its intent to seek certification for the Job Creation Tax Credit.</p> <p><b>Certification</b> – A business must be certified as a qualified business entity eligible for the tax credit.</p> <p><b>Job Creation Minimums</b> – The business must create 60 new, full-time jobs at the expanding or new facility during a 24-month period. In designated "Priority Funding Areas" the minimum is 25. Outside "Priority Funding Areas" the requirement may be reduced to as few as 30 new jobs if the aggregate annual salary of the new employees exceeds 60 multiplied by the State's average annual salary (\$2.85 million for 2009). The positions must be filled for 12 months.</p>	<p><b>Eligible Business Activities:</b></p> <ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Transportation or communications</li> <li>• Agriculture, forestry, fishing or mining</li> <li>• A public utility</li> <li>• Warehousing</li> <li>• Research, development, or testing</li> <li>• Biotechnology</li> <li>• Computer programming, data processing or other computer related services</li> <li>• Central financial, real estate or insurance services</li> <li>• The operation of central administrative offices or a company headquarters</li> <li>• Business services firms (only located in a "Priority Funding Area")</li> </ul> <p>A business may also be engaged in the operation of entertainment, recreation, cultural or tourism related activities in a multi-use facility located within a revitalization area if the facility generates a minimum of 1,000 new full-time equivalent filled positions in a</p>	Maryland provides a \$1,000 tax credit to businesses that create new jobs to encourage businesses expanding or relocating to Maryland.	The Job Creation Tax Credit remains in effect until January 1, 2020, subject to extension by the Maryland General Assembly.	<p>The credit is 2.5% of aggregate annual wages for all newly created, full-time jobs - \$1,000 per new job. In a revitalization area, increased to five percent of annual wages, up to \$1,500 per new job. Credits can not exceed \$1 million per credit year. If the credit is more than the tax liability the unused credit may be carried forward for five years.</p> <p>Priority Funding Areas are defined as:</p> <ul style="list-style-type: none"> <li>• State Enterprise Zone</li> <li>• Federal Empowerment Zone</li> <li>• DHCD Designated Neighborhood</li> <li>• Incorporated Municipality</li> <li>• Areas inside the I-495 and I-695 beltways</li> <li>• County designated growth area</li> </ul>
	Sidewalk Retrofit Program	Maryland Department of Transportation/State Highway Administration	Grant	Local jurisdictions	<ul style="list-style-type: none"> <li>• Planning</li> <li>• Design</li> <li>• Construction</li> </ul> <p>For this program, a "retrofit sidewalk" means a sidewalk that is constructed along a State route (Maryland &amp; U.S. routes other than expressways). The reconstruction or replacement of sidewalks, for the purpose of repair or maintenance, is covered under this program only if it is an essential part of a revitalization effort in an officially designated revitalization area. Only retrofit sidewalk projects along State highways are eligible for funding. Amenities beyond the scope of a basic sidewalk may be eligible for consideration for transportation enhancement funding if the location is in an historic district or a revitalization area.</p>	\$10 million between FY 2013 and FY 2018		The State makes funds available through the Consolidated Transportation Plan that may be allocated to local jurisdictions to construct sidewalks along State highways. Half of the monies are divided equally among the counties and the balance is distributed based on urban population statistics. In accordance with State law, the cost for retrofit sidewalks shall be shared equally between the State Highway Administration (SHA) and the local government. Within revitalization areas or designated neighborhoods the County may request reimbursement for up to 100% of the construction costs.
Federal	Bus and Bus Facilities Livability Initiative	Federal Transit Administration (FTA)	Grant	State, county, or township governments; Federally recognized Native American governments	The Livability Bus Program makes funds available to public transit providers to finance capital projects to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities, including programs of bus and bus-related projects for assistance to subrecipients that are public agencies, private companies engaged in public transportation, or private non-profit organizations.	In FY2012, \$125 million was available	In FY2012, applications were due during the first quarter of 2012 calendar year.	Direct Recipients under the Section 5307 Urbanized Area Formula program, States, and Indian Tribes. Proposals for funding eligible projects in rural (nonurbanized) areas must be submitted as part of a consolidated State proposal with the exception of nonurbanized projects to Federally Recognized Tribes. States, Direct Recipients, and Tribes may also submit consolidated proposals for projects in urbanized areas. Proposals shall contain projects to be implemented by the Recipient or its subrecipients. Eligible subrecipients include public agencies, private non-profit organizations, and private providers engaged in public transportation.
	Economic Development Initiative (EDI) Federal Appropriations	U.S. Department of Housing and Urban Development	Grant	Units of local government, housing authorities, colleges or universities, or other nonprofits	EDI funds are earmarked in the annual VA/HUD appropriations bill and can be utilized for a wide range of "bricks and mortar" projects. EDI funds cannot be used for reimbursement of expenses incurred prior to the enactment of the appropriations bill in which the earmark appears.	A two-year earmark moratorium effectively preclude any member of Congress from submitting earmark requests in FY 2012 and FY 2013. It is unclear whether Congressional members will submit earmark requests in FY 2014.	If members of Congress are able to submit earmark requests for FY 2014, applications for FY 2014 funding would be due between January and March 2013.	<p>Requests must be submitted through the sponsors' respective congressional offices.</p> <p>There is no match requirement, but applicants should demonstrate non-federal contributions.</p>
	Surface Transportation Program (STP) Federal Appropriations	Federal Highway Administration (FHWA)	Grant	Public entities such as local units of government, counties, and special-purpose districts.	Flexible funding may be used by states and localities for projects on any federal-aid highway, including the National Highway System (NHS), bridge projects on any public road, transit capital projects, and intra-city and intercity bus terminals and facilities.	A two-year earmark moratorium effectively preclude any member of Congress from submitting earmark requests in FY 2012 and FY 2013. It is unclear whether Congressional members will submit earmark requests in FY 2014.	If members of Congress are able to submit earmark requests for FY 2014, applications for FY 2014 funding would be due between January and March 2013.	<p>Requests must be submitted through the sponsors' respective congressional offices.</p> <p>Projects must be incorporated into Transportation Improvement Plan (TIP).</p> <p>Projects must demonstrate 20% minimum matching funds.</p>



MARTIN O'MALLEY  
Governor  
ANTHONY G. BROWN  
Lt. Governor  
RAYMOND A. SKINNER  
Secretary  
CLARENCE J. SNUGGS  
Deputy Secretary

August 10, 2012

The Honorable Candice Quinn Kelly  
President  
Charles County Commissioners  
P.O. Box 2150  
La Plata, MD 20646

Dear Commissioner Kelly:

It is a pleasure to inform you that the application for a *Sustainable Community* Designation for the Waldorf Sustainable Community Area has been approved by the Smart Growth Subcabinet and will be effective for five years beginning May 18, 2012. Included with this letter is a map of the approved Sustainable Community boundary.

As a result of this new designation, the Charles County Government will be eligible to apply for the following resources from the Department of Housing and Community Development (DHCD) to revitalize and attract growth and development within Waldorf's Sustainable Community Area:

- **Community Legacy Program** – This program provides local governments and community development organizations with funding for essential projects aimed at strengthening communities through activities such as business retention and attraction, encouraging homeownership and commercial revitalization.
- **Neighborhood BusinessWorks Program** – This program provides loans through gap financing, i.e. subordinate financing, to new or expanding small businesses and nonprofit organizations.

Designated Sustainable Communities are also automatically recognized as areas targeted for growth and revitalization in PlanMaryland, the State's first comprehensive plan for sustainable growth and development. Information regarding other state programs and incentives available to Sustainable Communities can be found in the Sustainable Communities Application located on DHCD's website at [www.mdhousing.org](http://www.mdhousing.org).

Should you have any questions regarding the Sustainable Communities designation, please contact Ms. Mary Kendall at 410-209-5810 or [Kendall@mdhousing.org](mailto:Kendall@mdhousing.org). Again, congratulations on your application. Best wishes for success with your future revitalization efforts.

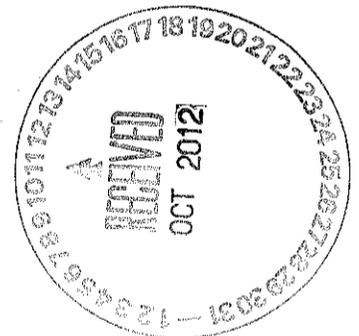
Sincerely,

Raymond A. Skinner  
Secretary

cc: Mr. Richard Hall, Secretary, Department of Planning  
Ms. Carol Gilbert, Assistant Secretary, Neighborhood Revitalization, DHCD  
Mr. Steven Ball, Director of Planning, Charles County Government  
Ms. Beth Groth, Planner II, Charles County Government

Enclosure

RAS/kb



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100 Community Place ■ Crownsville, MD 21032 ■ [www.mdhousing.org](http://www.mdhousing.org)  
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**Town of Waldorf**  
**Charles County, Maryland**  
**2012 Approved Sustainable Community Boundary**



- Legend**
- Streets
  - Parcels
  - ▨ Sustainable Community Boundary



Sheet No.  
1

<b>FINAL</b>	
Drawn By: Brad Wolters	
Round: 3	
Pub. Date: 7/31/2012	

### K. INSTITUTIONAL CAPACITY AND IMPLEMENTATION STRATEGY

Operating on the premise that “form follows function,” the WURC project team developed the Phase One project concept for Waldorf Center, and focusing on the mission to transform downtown Waldorf into a transit-oriented, mixed-use, walkable new urban center, began to explore the organizational models, potential authority and powers, and financing tools available to Charles County in State law. The focus of this section of the report is the consideration of these options and the recommendation of the most effective management entity to begin leading the implementation of Phase One and the transformation of the Waldorf Urban Redevelopment Corridor (WURC).

Issues of financial, economic and market feasibility of the Phase One project were evaluated in previous chapters of this report. The estimated cost, priority and phasing of infrastructure improvements, land assembly cost, a matrix of potential state and federal funding sources and programs, and the revenue potential of the proposed Phase One development plan have been presented.

In order to evaluate the County’s existing authority to exercise powers that would facilitate redevelopment, including transit-oriented development, and identify statewide models of local redevelopment authorities with potential application to Charles County, the WURC project team enlisted the assistance of State Senator Thomas Mac Middleton in requesting an analysis from the Department of Legislative Services (DLS) of the Maryland General Assembly. [A copy of the complete text of the DLS response is provided as **See Appendix: Appendix 10**.

In its report, the DLS identified the County’s existing authority under State law to facilitate redevelopment:

- Exercise Eminent Domain
- Undertake Commercial or Industrial Redevelopment Projects
- Create Commercial District Management Authorities
- Create Industrial Development Authorities
- Utilize Tax Increment Financing
- Issue Redevelopment Bonds
- Conduct Redevelopment through the Housing Authority
- Create Special Taxing Districts and Issue Revenue Bonds
- Create Business Improvement Districts
- Finance Infrastructure Improvements Supporting Transit-Oriented Development

The authority to exercise eminent domain, which currently rests exclusively with the Charles County Commissioners, will be considered later in this section. Among the remaining examples in State law of the County’s authority to facilitate redevelopment, the ability to utilize tax increment financing (TIF), create special taxing districts and issue revenue bonds, and finance infrastructure improvements supporting transit-oriented development, appeared to offer the most promise as elements of the WURC implementation and financing strategy.

## WURC – INSTITUTIONAL CAPACITY AND IMPLEMENTATION STRATEGY

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Regarding tax increment financing (or TIF), the County may establish a district, such as the 300-acre downtown WURC area, and use the additional property tax revenue generated by new development or redevelopment projects in the district to secure bonds. The proceeds of the bonds may be used to buy, lease, or condemn property, complete surveys and studies, relocate businesses, install utilities, construct parks, roads, parking, lighting, or construct or rehabilitate buildings for governmental use.

Summarizing a memorandum by Mr. Steven Ball, Charles County Planning Director, dated September 16, 2011 **See Appendix: Appendix 10** TIFs enable the incremental increase in property tax revenues to be targeted to a particular development district. The process works by establishing the taxable values of all the properties within a district boundary at specific point in time. After that, as investments in redevelopment occur, property values rise, and the revenue produced by the incremental increase in value over time is used to fund additional redevelopment projects in the TIF district. The County's current policy caps the amount of TIF revenue that can be reinvested in the district at 50 percent. Under the current policy, existing property tax revenues go into the County's general fund, but 50 percent of the incremental increases in revenues in the TIF district would be used to finance development efforts. TIFs can be implemented for single development projects with one owner, or in a strategy to redevelop an area with multiple property owners.

The tax increment can be used to secure bonds for projects in the TIF district, or the increment can be accumulated over time or used to fund the operating costs of the redevelopment entity that is created to implement and manage the program. Bonds for TIF projects can be guaranteed by a special taxing district on some or all of the properties in the district, or backed by the "full faith and credit" of the County. However TIF bonds are usually "Special Obligation Bonds with no "full faith and credit" pledge. For this reason, considerable due diligence and third party revenue projections are required. And financial institutions may require a special taxing district to guarantee the bonds.

The primary vehicle used in Maryland to buttress TIFs is special taxing districts. Their use is probably essential to any major use of a TIF. They ensure a stream of revenue to cover debt service for the first few years of a project until enough tax increment is generated. Charles County has the authority to create special taxing districts and issue revenue bonds. The County may create special taxing districts for any public purpose, including redevelopment, and may issue bonds secured partially or exclusively by revenue raised within a special taxing district. Taxes imposed may be *ad valorem* property taxes or assessed on a per parcel, front foot, or other basis. However, Charles County may only exercise this authority "in commercial or light industrial zones." [Article 24, Section 9-1301, Maryland Annotated Code)

And the County has special authority to finance infrastructure supporting transit-oriented development (TOD). Chapter 182 of the 2009 Maryland General Assembly (House Bill 300, approved by Governor O'Malley on May 7, 2009) allows the County to use special taxing district revenue to pay for TOD infrastructure capital costs, use any local tax, not just property taxes, to secure a TOD tax increment financing bond, and use special taxing district revenue for operating and maintenance costs of TOD infrastructure.

Based on a careful analysis of the details, it is clear that for the County to maximize the potential effectiveness of these financing tools, it would be necessary for an amendment to *Article 24, Section 9-1301(c)(4), Maryland Annotated Code*, to be enacted that broadens the County's authority to create a special taxing district in the

## WURC – INSTITUTIONAL CAPACITY AND IMPLEMENTATION STRATEGY

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Waldorf Central (WC) and Acton Urban Center (AUC) zones comprising the WURC, which are now zoned for mixed-use, transit-oriented development.

This issue should be researched by the County Attorney and the County's bond counsel, and appropriate legislation prepared to amend this provision of the statute, for the consideration of the Charles County Commissioners and the Charles County Delegation to the General Assembly. In order for an amendment to be considered during the 2013 session, it will need to be introduced soon after this report is submitted for consideration.

*Article 24, Section 9-1301(d)(1)* also states that before the County can create a special taxing district, the owners of at least two-thirds of the assessed valuation of the real property located in the special taxing district, and two-thirds of the owners of real property located in the district must request it. The property owners must come forward to support the proposal. The impact of establishing a special taxing district on owners of single family homes may be a consideration in determining what should be included in the district. However, to be effective in the future, mixed-used development that includes residential units should be included. Initially, existing single family residential properties in the district could be excluded, and only commercial properties included, except that if new residential property is developed in the WURC, it would be subject to the special tax.

Current trends with regard to real property assessments by the Maryland State Department of Assessments and Taxation will have a bearing on the effectiveness of the TIF as a source of revenue to implement the Phase One Waldorf Center project and the redevelopment of the WURC in the short term. During the severe economic recession and the slow recovery that has spanned the last five years, property values in Charles County have not yet recovered. In the 300-acre WURC area, assessments have declined during the past several years. Establishing the TIF at the current assessed value of properties in the WURC would therefore to ensure that more revenue becomes available to reinvest in the area, as the economy recovers and property values increase. However, while waiting for property values to increase and new tax assessments to deliver TIF revenue, establishing a special taxing district would get revenue flowing to the project.

The appropriate boundaries of the TIF or special taxing district were considered. Options included the entire six square-mile Charles County Transit Development Corridor, from the Prince George's County line to MD 227 in White Plains, encompassing all five of the proposed half-mile transit station areas. Another option was to cover the half-mile impact area around each proposed transit station. A third option was to cover selected stations that were more likely candidates for early TOD. A fourth option was to include only the proposed Phase One project area. A fifth option was to cover the entire WURC area, and add land east of the CSX Railroad alignment where transit-oriented development may occur in the future, and commercial development along MD 5 Business (Leonardtwn Road).

A sixth option was to focus on the already established and zoned Waldorf Urban Redevelopment Corridor, as the basis for delineating the boundary of a special taxing district. As there is already a policy foundation for this option, it is the recommended approach. The *Vision Plan*, design regulations and zoning for this area have been adopted by the County. A Phase One development project has been designed. This detailed implementation study has been completed. Adopting this area as the focal point of the special taxing district does not eliminate the possibility of amending the boundaries of the district in the future. The implementing ordinance can include a

provision stating that the boundaries can be changed under certain circumstances, subject to meeting the two-thirds test cited previously. Success in igniting private sector investment in the Phase One project, and redevelopment in the WURC, will provide “lessons learned” that can be applied throughout the transit corridor. The new private sector investment in the Phase One project will hopefully spread across MD 5 Business and into the rest of the WURC, which could become a “test bed” or laboratory for redevelopment strategies and techniques. When there is clear evidence of progress, it may be the right time focus on another proposed transit station area in the corridor and apply these lessons.

In addition to financing tools available to Charles County, the Department of Legislative Services provided examples of the structure and powers of “Local Economic Development Entities” that could offer insights into the options available for establishing a redevelopment authority or management entity to implement the Waldorf downtown redevelopment strategy and the Waldorf Center Phase One project. The specific examples highlighted in their report were the:

- Howard County Economic Development Authority
- Prince George’s County Redevelopment Authority
- Anne Arundel County Economic Development Corporation
- Baltimore Development Corporation

The purpose of this report is not to recommend a new economic development agency for Charles County, which already has a newly established Department of Economic Development. There is no need to duplicate this agency. The purpose of this study is to consider the specific kind of management entity that is needed to lead the Waldorf downtown redevelopment effort and implement the Phase One project. Related to consideration of the type of organization that is best suited for this role and mission is the question of what skills it needs, what resources it should have and what powers and authority it should possess.

This project began with a few assumptions that needed to be tested. One assumption was that a formal new redevelopment authority needed to be created to undertake this task. A second assumption was that this authority needed to have powers of eminent domain and bonding authority delegated to it—powers which are currently reserved for the use of the County Commissioners. Deeper analysis of the role and mission to be carried out clarified these issues, and suggested the creation of an appropriate management entity that could initiate the implementation of the Phase One project and begin the evolutionary process of transforming downtown Waldorf.

There are three basic organizational models to consider. The first is the Baltimore Development Corporation (BDC), to which the City of Baltimore has delegated redevelopment authority. The BDC is a non-profit corporation which has a reputation for independent action. The BDC has a large staff, and is empowered to acquire property, including by eminent domain, and dispose of property for purposes of redevelopment. It has a 15-member board of directors composed primary of business people, appointed by the Mayor of Baltimore.

The second model is the Prince George’s County Redevelopment Authority, appointed by the County Executive with the approval of the County Council. The Authority is a County agency, which has the power to acquire property, including by eminent domain (with the approval of the County Executive and Council), own, lease,

develop or redevelop property, and dispose of property. The Authority may issue revenue bonds and general obligation bonds. The outstanding feature of this model is its accountability to the County's elected officials.

The third model is the Downtown Columbia Partnership. Howard County does not have a redevelopment authority. The Director of Downtown Redevelopment, who is appointed by the Howard County Executive, works with other departments of County government and private sector stakeholders to coordinate and facilitate the redevelopment process. He is also director of the County's revenue authority. The idea for this position in County government was borrowed from Montgomery County's downtown Silver Spring redevelopment. Both Columbia and Silver Spring redevelopment efforts needed a county leader to facilitate and coordinate. The Howard County Council adopted the downtown Columbia plan in 2010. The Partnership will collect an annual fee from commercial property owners of 25 cents per square foot, covering 390 acres of downtown property. The Partnership is managed by a 7-member board of directors, with a mixture of public and private representatives.

The DLS expressed uncertainty regarding Charles County's authority to delegate its redevelopment powers to another, separate entity, where no express statutory authorization exists to do so, and suggested that Senator Middleton request advice from the Attorney General on this question, if that is the goal. The County could create an agency in County government to oversee redevelopment, although depending on the specific statutory language, some powers might have to be exercised by the Board of County Commissioners. In conclusion, DLS commented that the question of delegating redevelopment powers is only relevant if for some reason the County needs an independent entity to exercise all of the County's current redevelopment powers.

The recommended organizational approach is to appoint a small, lean, hard-hitting staff of experts: on transit-oriented development, finance, real estate, and law, and stand up a *Downtown Waldorf Development Authority* (initially with the name but without the formal authorizing statute) as an agency of County government. The capabilities of a small core staff of professionals could be augmented by contract services for more specialized expert advice needed on a case-by-case or project-by-project basis.

The option of hiring one individual to direct the program by interfacing with key County staff who are already consumed with other assignments was ruled out. This would not deliver the required intensity of sustained, focused attention. It has been pointed out that the County has experienced success by using existing staff to advance this initiative in the past; however no staff person is solely responsible for the downtown Waldorf redevelopment work. Nevertheless, the approach recommended here would require ongoing coordination with all other County departments—Planning and Growth Management, Economic Development, Fiscal and Administrative Services, Utilities, County Attorney, and others.

It is imperative that the director who is selected and appointed to lead this project have access to the County Commissioners, so that time-sensitive opportunities and challenges can be resolved quickly, and this agency not be buried in an existing County department, where it would become invisible. Therefore, it is recommended that this new agency and its executive leader report directly to the County Administrator. It is not envisioned that this new organization would be launched initially as a legislatively mandated formal redevelopment authority or as a non-profit corporation, but rather as a separate County agency, albeit a small one. Consequently, this new agency will not be burdened with the avalanche of time consuming details that typically accompany the creation of a new non-profit organization, for example, such as appointing a board of directors, scheduling and convening

monthly meetings, writing bylaws, filing articles of incorporation, applying for IRS tax-exempt status, writing meeting agendas and minutes, etc. To the degree that funding eligibility for some grants may require an organizational entity other than the County to act as sponsor or applicant, this issue may need to be addressed in the future. Local governments are eligible for most state and federal grants either directly or as a pass through recipient. Until then, this management entity would operate under the County's authority and rely upon the County's eminent domain and bond authority. The power of eminent domain has rarely been used in Charles County, and this redevelopment management entity should endeavor to recommend that it be used rarely in the future and only in special circumstances. Regarding the agency's location, ideally a small office could be found in leased commercial space in the WURC area. If not, an office like the former economic development office on MD 5 Business would be an excellent location, convenient to the WURC and highly accessible to the citizens and businesses that are located there.

Just as the redevelopment process in downtown Waldorf will be "evolutionary," so will the design of the management entity most suited to the task. Initially, the office will need to focus on the key infrastructure projects that must be undertaken before the Phase One project or any other redevelopment of the area can occur. These are itemized in an earlier chapter of this report. A TIF will need to be established for the WURC. The State law will need to be amended to allow Charles County to establish a special taxing district for mixed-use transit-oriented zones like the WC and AUC zones in the WURC. Community relations and outreach to the landowners in the WURC will need to begin. These steps are essential to creating a revenue stream that can help fund the program and the infrastructure. The land needed for the Phase One project will need to be assembled. Engaging in these priority tasks will help to clarify the management entity's need for additional structure and authority.

The downtown Waldorf redevelopment effort will need to be coordinated with the Light Rail Transit Initiative so that these two synergistic efforts continue moving forward concurrently and are integrated and mutually supportive. The power of the transit plan to energize the implementation of the Phase One project and the general redevelopment effort is dependent on both the reality and perception that concrete plans to bring high-capacity, fixed-route transit to Waldorf are underway. By the same token, success in bringing light rail transit service to Waldorf is dependent on achieving transit-supportive density in areas like Waldorf Center that are close to proposed transit stations. So the success of each of these two initiatives is dependent on the success of the other.

The authors of a significant paper entitled, "*Aligning Transit and Real Estate—An Integrated Financial Strategy*" (See Appendix: Appendix 10) contend that the tendency to put TOD and transit on separate tracks, or let the transit side of the equation direct the TOD side, has made "*TOD a less attractive investment alternative for private equity and bank debt when compared with suburban or other infill sites.*" The authors advocate the involvement of the "*TOD implementation advocate for existing and future TOD districts in early stages of the process—addressing the time lag between transit planning and real estate development.*" The TOD coordinator needs to be able to "speak all the technical languages of the various parties involved in the TOD implementation" on the real estate side and the transit side, to bridge the market-based and government-based forces driving the process. Fortunately, the Waldorf Urban Design Study and the Southern Maryland Transit Corridor Preservation Study were conceived and executed simultaneously, and both studies were completed and their results adopted in 2010. This laid the groundwork for a rare collaboration between the two initiatives at the outset, which must be maintained. The other central point of the paper is that successful TOD programs focus on the positive

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community impacts of concentrating development and services along a transit system, which they call “livability benefits—the ultimate goal of transit and TOD.” Fortunately, the goal of achieving livability benefits is reflected in all the features of the Waldorf Center Phase One Development Plan.

## L. ADDENDUM – TRANSITIONAL ZONING PROVISIONS

### Proposed Revisions to Waldorf Central and Acton Urban Center Zoning Districts

#### Goals of Revisions

Following are the goals of proposed revisions to the WC and AUC Zoning Districts:

1. Eliminate conflicts that make it impractical to build under current requirements without variances unless structured parking is provided, as shown by the sample site studies completed in early 2012.
2. Provide transitional provisions that would apply for five (5) years to modify certain standards that could require a property owner to build a larger building than desired. These include requirements for minimum floor area ratio, minimum height, minimum building façade coverage along the street frontage and minimum open space.
3. Retain requirements that ensure that new improvements will contribute to the desired character of the Waldorf Urban Revitalization Center WURC. These include requirements for architectural design elements, build-to lines, parking location, landscaping, streetscape, and land reservation for public improvements shown in the Waldorf Urban Design Plan.
4. Retain the prohibition on automotive sales and repair in the WC and AUC zones. Existing uses could be expanded through the nonconforming use process.

#### Summary of Proposed Zoning Revisions

The zoning regulations on the following pages show proposed revisions to the WC and AUC Zones in track changes. Proposed deletions are shown with ~~strike through~~; proposed new text is **underlined and bold**. The revisions are:

1. During a transitional period that would last for five (5) years from the effective date of the text amendments:
  - a. The minimum floor area ratio requirements would not apply. Instead, a minimum 0.30 floor area ratio would apply to construction of new principal structures.
  - b. The minimum 2-story height requirements would not apply to proposed buildings with less than 10,000 square feet of floor area.
  - c. Minimum building façade coverage along street frontage would be reduced to 50 percent for construction of new principal structures. No façade requirement would apply to additions.
  - d. The minimum 15 percent open space requirement for nonresidential uses would not apply.
2. Eliminate the requirement limiting parking to 80 percent of the minimum required parking in other districts. Instead, limit parking to 100 percent of minimum required parking in other districts.

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3. Revise Table VI-8, Thresholds and Applicability of Standards, to clarify and raise the threshold at which the new zoning standards must be applied to an entire site when a building is enlarged.

### §297-96 Activity Center Zones [Added 4-23-2010 by Bill No. 2010-02]

#### A. Objectives.

- (1) The Activity Center Zones are established to promote and require forms of development that create cohesive communities through the integration of residential, retail, business, office, and civic uses into a network of streets, pedestrian ways and open space. Activity Center Zones are intended to achieve the following objectives:
  - (a) Range of uses. Permit residential, office, retail, commercial service and institutional uses. Restrict highway-oriented commercial uses.
  - (b) Range of housing. Permit a range of housing types, including mixed-use buildings, attached, and multi-family dwellings.
  - (c) Street network. Create a grid street network that provides multiple means of getting to destinations.
  - (d) Streetscape character. Create attractive streetscapes with a lively, pedestrian-oriented character.
  - (e) Modes of transportation. Provide pedestrian, bicycle and transit linkages.
  - (f) Open space. Provide parks, plazas and greenways as community gathering spaces and natural areas.
  - (g) Building form. Promote building forms that respect and improve the integrity of streets, open spaces and other public areas.
  - (h) Visual harmony. Promote harmony in the visual relationships and transitions between buildings.
  - (i) Transition to other districts. Provide transitions or buffers so that new development is compatible with or protective of surrounding residential uses.
- (2) Waldorf Central Zone (WC). This zone provides for moderate-to-high-density development in the pattern of the downtown core of a traditional town, with a mix and intensity of uses supportive of rail transit. Development is to be consistent with the Downtown Waldorf Vision Plan and Design Guidelines adopted by the County Commissioners.
- (3) Acton Urban Center Zone (AUC). This zone provides for high density, urban-scaled development with a mix and intensity of uses supportive of rail transit. Development is to be consistent with the Downtown Waldorf Vision Plan and Design Guidelines adopted by the County Commissioners.

#### B. Uses Permitted.

- (1) Permitted uses shall be in conformance with the Table of Permissible Uses (Figure IV-2).
- (2) The following additional requirements apply to the permitted uses of land within the Waldorf Central and Acton Urban Center Zones:
  - (a) Mixed use buildings are encouraged.
  - (b) Buildings abutting an arterial highway (U.S. 301 and MD Business Route 5) or a Waldorf Urban Major Collector, as identified in the Downtown Waldorf Vision Plan and Design Guidelines, shall be developed for mixed use or non-residential use. No solely residential buildings are permitted in these locations.

- (c) Residential uses in mixed use buildings shall be above the ground floor.
- (d) The retail component of mixed use buildings shall be primarily on the ground floor of the building and oriented towards a public street.

### C. Density – WC and AC Zones.

The following requirements apply in the Waldorf Central and Acton Urban Center Zones:

- (1) Attached residences (Townhouse and Multiplex) shall be built at a minimum density of 12 dwelling units per acre and a maximum density of 36 dwelling units per acre.
- (2) Garden apartment, mid-rise and high-rise dwellings in residential-only buildings shall be subject to a minimum density of 15 dwelling units per acre. There is no minimum density for apartments within mixed-use buildings.
- (3) There are no maximum density requirements for apartments. The floor area ratio and building height requirements in the Schedule of Zone Regulations determine the allowed scale and intensity of apartment and mixed use development.
- (4) Transferrable Development Rights (TDRs) are required at the following rates:
  - (a) No TDRs are required for the first 12 dwelling units per acre.
  - (b) For attached residences, one TDR is required per dwelling unit in excess of 12 units per acre.
  - (c) For garden apartment, mid-rise or high-rise residences in residential-only buildings, one TDR is required per two dwelling units or fraction thereof in excess of 12 units per acre.
  - (d) In mixed-use buildings, one TDR is required per three dwelling units or fraction thereof in excess of 12 units per acre.

### D. Building and Lot Requirements.

- (1) General. The layout and design of lots, structures and other improvements shall contribute to the following goals:
  - (a) Primary building facades shall be oriented toward the street and public realm.
  - (b) Public and private space shall be clearly defined as public with open views and surveillance, or as private and protected.
  - (c) Service areas and mechanical equipment shall be located away from the street.
  - (d) Off-street parking areas shall be located away from the streets and shared by multiple owners/uses whenever possible.
- (2) The requirements in the Schedule of Zone Regulations, Figure VI-9, shall apply subject to other requirements of this Chapter.
- (3) The following requirements apply in addition to the height requirements established in the Schedule of Zone Regulations:
  - (a) Maximum floor-to-ceiling height for the ground floor: 16 feet.
  - (b) Maximum floor-to-ceiling height for each story above the ground story: 12 feet.
  - (c) An upper story required to satisfy minimum story requirements shall have at least 70 percent of the floor area of the story below.
  - (d) Transition in building height. Where a lot in an Activity Center Zone is within 40 feet of a single-family detached home outside the Activity Center Zones, the maximum top plate height for any

structure on the lot shall not exceed 36 feet.

- (4) The following requirements apply in addition to the required front setbacks established in the Schedule of Zone Regulations:
  - (a) Front building facades shall be located between the required minimum and maximum front setbacks.
  - (b) Porches, steps and covered entries shall not project more than eight feet from the building façade. They may be extended into the minimum front setback area but shall not extend into the public street right-of-way.
  - (c) Awnings and canopies may extend into a public street right-of-way, up to five feet beyond the minimum front setback. They shall maintain a minimum clearance height of eight feet above the ground.
  - (d) Storefront display windows may extend into a public street right-of-way, up to two feet beyond the minimum front setback.
- (5) Minimum building façade along street frontage, **except as modified by §297-96.O, Transitional Provisions:**
  - (a) For lots with street frontage of 100 feet or less, the building façade must occupy at least 75 percent of the street frontage.
  - (b) For lots with street frontage of 100 to 200 feet, the building façade must occupy at least 80 percent of the street frontage.
  - (c) For lots with street frontage of 200 feet or greater, the building façade shall occupy at least 85 percent of the street frontage.

**E. General Architectural Requirements.**

- (1) Intent. Buildings in the Activity Center Zones shall use high-quality materials and pedestrian-scaled detailing to enhance the visual appeal of development.
- (2) Exterior Facades.
  - (a) Facades greater than 40 feet in length shall be articulated with discernible architectural elements, such as windows, recessed entrances and windows, display windows, arcades, balconies, plane projections and recesses, and other architectural details.
  - (b) All facades visible to the public (from a street, public or private open space, or parking area located interior to a block) shall provide quality architectural materials and detailing. Blank building walls/facades are not permitted.
  - (c) Buildings on corner lots shall be architecturally treated as having frontage on all facades along a street.
  - (d) The streetscape and front building façade shall be the primary focus of the development.
- (3) Mechanical Equipment. Mechanical equipment (such as air compressors, pumps, transformers, meters, boxes, and HVAC units) shall be visually screened from public streets and public open spaces. Screening methods may include locating equipment upon a roof behind a parapet wall or to the rear of the building, fencing, or appropriate landscaping.
- (4) Design Guidelines. Within the Waldorf Central and the Acton Urban Center Zones:
  - (a) Buildings shall conform to the Architectural Guidelines of the Downtown Waldorf Vision Plan and Design Guidelines.
  - (b) Trademark buildings with franchise architecture shall conform in full to the Design Guidelines.

Departures for the purpose of conforming to corporate design and architectural standards are not permitted.

### F. Road Classification and Layout.

- (1) Intent. All development proposals shall contribute towards the creation of an inter-connected grid street network.
- (2) Standards. Roads shall conform to the Waldorf Urban Road Standards of the Downtown Waldorf Vision Plan and the Charles County Road Ordinance.
- (3) Subdivisions and site plans in the Waldorf Central Zone and Acton Urban Center Zone shall conform to the following provisions.
  - (a) Dedication and construction of new roads and widening of existing roads within and abutting a subdivision shall implement the road network shown in the Downtown Waldorf Vision Plan and Design Guidelines.
  - (b) The Planning Commission may approve a subdivision plan that does not fully implement the road recommendations of the Downtown Waldorf Vision Plan and Design Guidelines if the size and configuration of the property makes implementation through the subdivision process infeasible.
  - (c) If the Planning Commission or Planning Director determines that full construction of proposed roads is not necessary at the time of subdivision, rights-of-ways for proposed roads shall be dedicated as provided in Section 278-83 of the Subdivision Regulations.
  - (d) Site plans. If the property shown on a proposed site plan contains or abuts a road shown on the Downtown Waldorf Vision Plan and Design Guidelines, to the extent possible improvements shall be located to reserve the full road right-of-way for future road construction.
- (4) Alleys. The construction of alleys is encouraged to provide access routes to parking and service areas located behind buildings that front the street.

### G. Streetscape Requirements.

- (1) Intent. Development shall contribute to creation of a walkable community through the following design standards:
  - (a) Provide a comprehensive, continuous system of sidewalks and paths to enhance connections and pedestrian safety.
  - (b) Orient buildings to the street and utilize every opportunity to create open, inviting storefronts, outdoor café seating, and interesting visual accents such as public art.
  - (c) Provide streetscape amenities and street furniture to encourage pedestrian activity.
  - (d) Enhance safety and visual appearance through the provision of street trees and planting strips located between streets and sidewalks (whenever possible) to provide shade and buffer pedestrians from traffic.
- (2) Installation / Bonding of Streetscape Improvements.
  - (a) Streetscape elements (including but not limited to sidewalks, streetlights, street trees, street furniture, bicycle racks, landscaping and planters, decorative paving, sculpture/artwork, and bus shelters) shall be required for development approved through a site plan or subdivision plan. See 297-96.M., Figure VI-8, for thresholds and applicability of streetscape requirements.
  - (b) All streetscape improvements shown on an approved subdivision plan or site plan shall be bonded.

- (c) Proposed streetscape elements shall be indicated on plan submittals and shall include information on location, spacing, quantity, construction details, and method of illumination.
- (3) Streetscape Design Consistency. The design of streetscape elements shall be consistent within a development project and throughout each zone. Streetscape elements shall be consistent with the Downtown Waldorf Design Guidelines.
- (4) Use of Front Setback Area. For non-residential or mixed-use buildings, the front setback area between the street right-of-way and the building façade shall be used for sidewalks, landscaping, public seating areas or other pedestrian-oriented features that enhance and contribute to the streetscape.
- (5) Constrained Sites. Where existing conditions make the streetscape elements difficult to implement, development shall make every effort to meet these streetscape standards in full.
  - (a) If required streetscape elements cannot be provided within the street right-of-way due to right-of-way constraints, the elements shall be provided partially on the development site between the building façade and the right-of-way.
  - (b) If provision of all streetscape elements is not possible due to right-of-way constraints and the location of existing buildings or infrastructure, the priorities for streetscape improvements shall be (i) sidewalks, (ii) streetlights, (iii) street trees (if sufficient room is not available for the survival of street trees, seasonal displays in above-ground planter boxes should be substituted) and (iv) landscape strips.
  - (c) The final determination of required streetscape elements on constrained sites shall be determined by the Planning Director.
- (6) Sidewalks.
  - (a) For development activity requiring a subdivision plan or site plan, sidewalks shall be installed along streets within and abutting the development site where appropriate, based upon the road standards established by the Downtown Waldorf Vision Plan, Section 5.3 and Figures 4 through 8.
  - (b) Sidewalks shall also be provided to connect building entrances and parking areas with the sidewalks along the streets.
  - (c) Sidewalks may be located partially within the street right-of-way and partially within the front setback area of the abutting property.
  - (d) Where sufficient right-of-way is available, sidewalks shall be separated from streets by landscape strips to allow for street trees and to buffer pedestrians from street traffic.
  - (e) The width and design of sidewalks and planting strips shall be guided by the Downtown Waldorf Vision Plan and Sections 4.1 and 4.3 of the Downtown Waldorf Design Guidelines.
- (7) Street Trees. Street trees shall be provided along all streets at the time of development.
  - (a) Spacing. At least one large shade tree shall be planted per 40 linear foot of frontage along all public streets and major private streets. Street trees may be spaced between 35 and 45 feet apart on center.
  - (b) Planting Standards. Street trees shall be planted using either underground planters with minimum dimensions of 6 feet by 8 feet and structural soil amendments or the planting site shall be prepared with a minimum of 120 cubic feet of rootable soil with structural soil amendments.
- (8) Streetlights. Pedestrian-scaled, County-approved street lighting fixtures shall be installed on both sides of all streets at no more than 60 foot intervals measured parallel to the street. The developer is responsible for the installation of streetlights only on the side of the street being developed.
- (9) Other Streetscape Elements. All types of streetscape furniture (including but not limited to benches, bike

racks, movable seating, game tables, trash receptacles, and public mailboxes) may be considered in public spaces and along streets with mixed- use, commercial or office development. Streets limited to residential uses should have more limited street furniture such as trash receptacles and benches.

- (10) Curb bump-outs and bus turn-outs may be incorporated into streetscape design to provide physical separations, to mitigate the visual impact of on-street parking areas and to serve as additional tree planting areas or locations for streetscape amenities.

#### **H. Signage.**

- (1) Intent. Site and building signs should complement the architectural composition and design of the building and the surrounding environment. Durable, attractive, and well-maintained signs attract potential customers, provide directional orientation, and contribute to the look and feel of the community.
- (2) Signs shall be constructed of high-quality materials such as brick, cut stone, stainless steel, or other similar materials.
- (3) The requirements of Article XIX, Signs, shall apply within the Activity Center Zones, with the following additional requirements.
  - (a) Freestanding, pole-mounted commercial signs are not permitted.
  - (b) Signs located above or projecting from the roofline or parapet wall are not permitted.
  - (c) Illuminated signs shall be lit externally. External lighting fixtures used to illuminate signage shall provide full cut-off fixtures to reduce sky glow and glare.
  - (d) Common sign plans shall be provided for all new non-residential and mixed- use buildings.

#### **I. Lighting**

- (1) Intent. Lighting should be a cohesive element of architectural and environmental design to strengthen the appearance and functionality of structures and their surroundings, while providing adequate safety and visibility. Light fixtures should be constructed of attractive, high-quality materials, be incorporated into the design of the project, direct glare away from adjoining properties and public rights-of-way, and reduce light pollution.
- (2) The requirements of §297-306, “Lighting Standards”, apply. In addition, the following requirements are applicable.
  - (a) Comprehensive lighting plans shall be provided with site plan submittals for new institutional, office, mixed-use and retail/commercial buildings. These lighting plans shall be accompanied by plans, sketches, or photographs indicating the design, size, methods of lighting fixture attachment and shielding.
  - (b) Illumination shall be provided for main entrances, parking lots, service entrances, alleys, pathways, open space, and plazas.

#### **J. Landscaping, Buffering, and Screening Standards.**

- (1) Intent. Attractive landscaping provides a wealth of benefits for a community, including adding beauty, stabilizing soil, cooling the environment, filtering pollutants, providing buffers between uses and increasing property values. Trees, flowering plants, shrubs, and high-quality walls and fencing should

be used on lots and within street rights-of-ways to create a pleasant and comfortable environment and to screen unattractive uses, parking areas, and mechanical equipment.

- (2) Public Spaces and On-Site Open Space. Public spaces and on-site open space shall be planted with shade trees, evergreen shrubs, and other appropriate landscaping to provide shade, increase air quality, and treat storm water, as well to as add interest, visual appeal, and year round greenery and color. Other devices, such as trellises, covered walkways, pavilions, and gazebos are also encouraged in public spaces.
- (3) The bufferyard requirements established in Articles XXII and XXIII do not apply between land uses or along roads within the Activity Center Zones. Bufferyard requirements apply along the boundaries of the Activity Center Zones as required between zoning districts and along principal arterial highways.

#### K. Parking and Circulation.

- (1) Intent. Parking areas are a necessary accessory use but should not dominate the streetscape, obscure building frontages, or overwhelm the visual environment. The parking requirements in this section reduce on-site parking requirements while encouraging shared parking facilities to ensure that sufficient parking is available to support a mix of land uses. Shared parking areas reduce paved areas and provide increased opportunities for landscaping, buildings, and open space, contributing to the quality of the visual environment.
- (2) The requirements of Article XX, Parking Facilities, apply except as modified in this Section.
- (3) Required Number of Parking Spaces.
  - (a) Minimum Requirements:
    - i. At least two parking spaces shall be provided per dwelling unit for townhouse or multiplex units.
    - ii. For all other land uses, the minimum number of off-street surface parking spaces shall be equal to 50 percent of the minimum number of required off-street parking spaces required by Article XX, Figure XX-1.
  - (b) Maximum Requirement: The maximum number of off-street surface parking spaces permitted for each land use type **shall be equal to 100 percent of the minimum number of spaces required by Figure XX-1.**
    - ~~i. 100 percent of the minimum number of required off-street parking spaces required by Figure XX-1 for residential land uses; and~~
    - ~~ii. 80 percent of the minimum required off-street parking spaces required by Figure XX-1 for all other land uses.~~
    - iii. **(c).** If shared parking is used or structured parking is provided, this maximum **number of parking spaces** may be increased.
- (4) Required parking may be provided in the following locations:
  - (a) On-site;
  - (b) Off-site under the provisions for satellite parking in §297-341; or,
  - (c) On-street. For parking parallel to the curb, twenty-two feet of linear frontage on a street where parking is allowed shall be counted as one parking space. On-street parking spaces must be on the same side of the street as the use being served by the spaces.
- (5) Shared parking is permitted as provided in §297-341(B). The maximum number of parking spaces

required above does not apply to shared parking.

(6) Location of Parking Areas.

(a) Parking shall be located to the side or rear of buildings and, whenever possible, in shared parking areas.

(b) Structured parking may be integrated within a mixed use, non-residential or multifamily structure. Whenever possible, locate retail or commercial use on the first floor street façade.

(c) Freestanding parking structures are permitted. These shall be located on the interior of the block or at the rear of the property, and shall be accessed from a side street, alley, or entrance drive-aisle. Freestanding parking structures located adjacent to a public street right-of-way other than an alley shall be set back a minimum of 10 feet from the right-of-way.

(d) Parking pads and garages for townhouse and multiplex buildings shall be accessed from the rear of the dwelling. Garages may be a separate accessory structure or within the principal structure.

(7) Perimeter Landscaping for Parking Areas.

The perimeter landscaping requirements of §297-358 shall not apply within the Activity Center Zones. The following requirements apply instead.

(a) Generally, parking areas will be screened from streets by buildings. Where parking areas are located to the side of a building, or along an alley, a landscape area with a minimum width of 6 feet shall be provided between the street right-of-way and the parking area.

(b) Screening within the landscape area shall be provided by an evergreen hedge with or without an ornamental fence or wall. The maximum height of evergreen hedges and solid walls shall be 36 inches.

(c) Additional landscape materials within the landscape area may consist of shade trees, low shrubs and ground cover. A minimum of one shade tree shall be provided per 35 linear feet of parking lot frontage on a public street, excluding driveway openings.

(d) Walls and hedges shall provide openings for pedestrians when the wall is adjacent to open space, a pedestrian path, public plaza, or other pedestrian-oriented space.

(8) Loading and service areas shall not be visible from streets. They shall be screened with landscape plantings and/or a 6-foot high opaque wood fence or masonry wall.

(9) Parking, loading, and service area screening walls and fences shall be made of high quality materials such as brick, stone, finished decorative concrete, wrought iron, and wood.

(10) Bicycle Parking Requirements.

(a) Bicycle parking shall be provided at appropriate locations to encourage bicycle use.

(b) On-site bicycle parking spaces shall be provided for the following uses: multifamily residential; parks and plazas; office and commercial uses; recreational or cultural uses; and institutional uses.

(c) Bicycle parking areas shall be convenient to the entrances of buildings and shall not obstruct sidewalks or walkways.

(11) Drive-In and Drive-Through Windows. Drive-in or drive-through windows shall not be permitted for any new use except banks. Drive-through windows for banks shall be located to the rear of the lot and shall not front the street.

**L. Open Space.**

- (1) Intent. Subdivision plans and site plans within the Activity Center Zones shall provide open space in accordance with the requirements in the Schedule of Zone Regulations, **except as provided by §297-96.O, Transitional Provisions**. The open space shall contribute to the creation of a comprehensive system of parks, pathways and open space; provide pocket parks, greens, plazas and other public amenities; and provide for protection of sensitive environmental features.
- (2) Open space required by the Schedule of Zone Regulations may be provided on-site, by creating a common open space lot for dedication to the County or a property owners association, by providing common open space off-site within the same activity center, or by payment of a fee-in-lieu as provided below.
- (3) For subdivision plans within the Activity Center Zones, dedication of open space may be used to meet the requirements for community open space given in Chapter 278, Subdivision Regulations, §278-60 and 61.
- (4) Fee in Lieu of Establishment of Open Space.
  - (a) The Planning Director may approve payment of a fee in lieu of the required open space based upon findings that the purpose and intent of the Activity Center District would be met better through contribution to funding for common open space rather than through the establishment of the required open space on the particular site.
  - (b) The fee shall be as established in a fee schedule approved by the County Commissioners.
  - (c) The County shall use the fees to purchase land within the same Activity Center Zone for parks, greenways, pedestrian pathways or stormwater management.
- (52) If a proposed development in the Waldorf Central Zone or Acton Urban Center Zone is on a site for which the Downtown Waldorf Vision Plan and Design Guidelines show proposed greenways, parks, pathways and other community open space areas:
  - (a) Subdivision proposals shall reserve these areas to the extent possible as provided in §278-83.
  - (b) Site plans shall be designed to locate improvements away from proposed open space areas to the extent possible. Reserved areas may be used as on-site common space.
- (6) Common open space areas may be used for regional stormwater management.

**M. Reservation.**

If the property shown on a proposed site plan contains or abuts a public infrastructure improvement (including but not limited to transit facilities and stormwater facilities) shown on the Downtown Waldorf Vision Plan and Design Guidelines, to the extent possible other improvements shall be located to reserve the full right-of-way for future construction of said public infrastructure improvement.

**N. Administration.**

- (1) A site plan shall be required for all development within the Activity Center Zones.
- (2) Site plans shall be reviewed for compliance with the requirements of this District as well as the Design Guidelines adopted by County Commissioners for the specific area.
- (3) Limits of Applicability.  
The Activity Center Zones will be applied to areas with existing residences, businesses and industries.

## WURC – ADDENDUM – TRANSITIONAL ZONING PROVISIONS

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The Activity Center Zones are intended to allow for existing uses to continue, while the goals of the zones are gradually realized through infill, redevelopment and major expansion. Figure VI-8 establishes thresholds at which the requirements of this Section shall be applied to proposed development in the WC and AUC Zones. Any request for expansion or extension of a nonconforming use shall first comply with the provisions and processes established in Article XXVIII (Nonconforming Uses) of this Chapter.

### O. Transitional Provisions

**The following provisions apply within the WC and AUC zones for a period of five (5) years from the effective date of the ordinance adopting this section 297-96.O.**

**During the five (5) year transition period:**

- (1) **The minimum requirements for building façade along street frontages in §297-96.D(5) shall not apply. During the transition period:**
  - a. **For new principal structures, the building façade must occupy at least 50 percent of the street frontage.**
  - b. **No frontage requirement shall apply for additions to existing buildings.**
- (2) **The minimum building height required by Figure VI-9, Schedule of Zone Regulations, shall not apply to new buildings or building additions of 10,000 square feet or smaller.**
- (3) **In lieu of the minimum floor area ratio required by Figure VI-9, Schedule of Zone Regulations, a minimum floor area ratio of 0.30 shall apply to construction of new principal structures. No floor area ratio shall apply to additions to existing buildings.**
- (4) **The minimum 15% open space requirement for nonresidential development shall not apply.**

**Figure VI-8  
Threshold and Applicability of Standards  
[Added 4-23-2010 by Bill No. 2010-02]**

Type of Development	Applicable Requirements								
	Building & Lot Standards	Architectural	Road Classification and Layout	Streetscape	Signs	Lighting	Landscape	Parking	Open Space
1. New Principal Dwelling	√	√	√	√	√	√	√	√	√
2. Additions to Single-Family Detached Dwellings									
3. Additions to Non-Residential or Multi-Family Building- Less than 20% of existing GFA or 1,000 square feet GFA, whichever is less – Apply standards <b>only</b> to new construction and areas affected by new site improvements		√	√		√	√	√		
4. Additions to Non-Residential or Multi-Family Building – <del>20% or greater</del> <b>exceeding the threshold in Row 3 above,</b> but not more than 100% of existing GFA or 1,000 square feet GFA, whichever is less – Apply standards <b>only</b> to new construction and areas affected by new site improvements <b>(except for parking see below).</b>	√	√	√		√	√	√	√	√
5. Additions to Non-Residential or MF Building– Increase in existing GFA by more than 100% - Apply standards to entire site to the extent possible	√	√	√	√	√	√	√	√	√
6. New parking areas that add 1-10 spaces			√			√	√		
7. New Parking Areas – 11+ Spaces			√			√	√	√	√

**GFA = Gross Floor Area**

**Figure VI-9**  
**Schedule of Zone Regulations: Activity Center Zones**  
**Charles County, Maryland**  
**[Added 4-23-2010 by Bill No. 2010-02]**

Uses: Waldorf Central (WC) Zone	Minimum Lot Criteria				Front Setback Requirements		Minimum Yard Requirements (Feet)		Min. and Max Height (Stories) <sup>1</sup>	Min. and Max. Floor Area Ratio (FAR) <sup>2</sup>	Maximum Lot Coverage	Minimum Open Space <sup>3</sup>
	Area (Sq. Ft.)	Width (Feet)	Depth (Feet)	Frontage (Feet)	Minimum	Maximum	Side	Rear				
Townhouse 3.02.200		18	50	18	6	15	0	0	2-3		70%	20%
Multiplex 3.02.300	10,000	18	50		6	15	0	0	2-3		70%	20%
Garden Apartment 3.03.100	10,000	50	80	50	0	12	0	0	2-3	0.5-1.6	90%	20%
Mid-Rise 3.03.200	10,000	50	80	50	0	12	0	0	4-5	0.5-1.6	90%	15%
Commercial Apartment 3.03.400	10,000	50	80	50	0	12	0	0	2-5	0.5-1.6	90%	15%
Inst./Utility/ Recreation 4.00.000	10,000	50	80	50	0	12	0	0	2-5	0.5-1.6	90%	15%
Service Commercial 5.00.000	10,000	50	80	50	0	12	0	0	2-5	0.5-1.6	90%	15%
Commercial 6.00.000	10,000	50	80	50	0	12	0	0	2-5	0.5-1.6	90%	15%

<sup>1</sup> Except as modified by §297-96.O, Transitional Provisions.

<sup>2</sup> Except as modified by §297-96.O, Transitional Provisions

<sup>3</sup> Except as modified by §297-96.O, Transitional Provisions.

**Figure VI-9 Continued**  
**Schedule of Zoning Regulations: Activity Center Zones**  
**Charles County, Maryland [Added 4-23-2010 by Bill No. 2010-02]**

Uses: Acton Urban Center (AUC) Zone	Minimum Lot Criteria				Front Setback Requirements		Minimum Yard Requirements (Feet)		Min. and Max Height (Stories) <sup>4</sup>	Min. and Max. Floor Area Ratio (FAR) <sup>5</sup>	Maximum Lot Coverage	Minimum Open Space <sup>6</sup>
	Area (Sq. Ft.)	Width (Feet)	Depth (Feet)	Frontage (Feet)	Minimum	Maximum	Side	Rear				
Townhouse 3.02.200		18	50	18	6	15	0	0	2-4		70%	20%
Multiplex 3.02.300	10,000	18	50		6	15	0	0	2-4		70%	20%
Garden Apartment 3.03.100	10,000	50	80	50	0	12	0	0	2-3	0.7-2.0 <sup>1</sup>	90%	20%
Mid-Rise 3.03.200	10,000	50	80	50	0	12	0	0	4-5	0.7-2.0 <sup>1</sup>	90%	15%
High-Rise 3.03.300	20,000	100	200	100	0	12			6-10	0.7-2.0 <sup>1</sup>	90%	15%
Commercial Apartment 3.03.400	10,000	50	80	50	0	12	0	0	3-10	0.7-2.0 <sup>1</sup>	90%	15%
Inst./Utility/Recreation 4.00.000	10,000	50	80	50	0	12	0	0	3-10	0.7-2.0 <sup>1</sup>	90%	15%
Service Commercial 5.00.000	10,000	50	80	50	0	12	0	0	3-10	0.7-2.0 <sup>1</sup>	90%	15%
Commercial 6.00.000	10,000	50	80	50	0	12	0	0	3-10	0.7-2.0 <sup>1</sup>	90%	15%

**Notes:** <sup>1</sup> Maximum FAR may be increased under the following circumstances:

<sup>4</sup> **Except as modified by §297-96.O, Transitional Provisions.**

<sup>5</sup> **Except as modified by §297-96.O, Transitional Provisions.**

<sup>6</sup> **Except as modified by §297-96.O, Transitional Provisions.**

- a. An FAR up to 2.5 shall be permitted for buildings within ¼ mile of an existing or planned light rail station.
- b. An FAR up to 6.0 shall be permitted within the AUC Zone, provided that structured parking shall be required if the FAR exceeds 2.5, and a traffic study and trip management plan are submitted demonstrating that the available road, pedestrian and transit facilities are adequate to handle projected trips.

