County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

May 11, 2011

Scott E. Adams
McGuire Woods LLP
1750 Tysons Boulevard, Suite 1800
McLean, VA 22102

RE: Proffered Condition Amendment Application PCA-B-993

Dear. Mr. Adams:

Enclosed you will find a copy of an Ordinance adopted by the Board of Supervisors at a regular meeting held on May 10, 2011, approving Proffered Condition Amendment Application PCA-B-993 in the name of United Dominion Realty, L.P. Circle D Towers, LLC. The Board's action amends the proffers for Rezoning Application RZ-B-993to permit building additions, site modifications and a maximum density of 727 units on site including ADU and WDU bonus density. The subject property is located on the south side of Lee Highway, east of Blake Lane on approximately 16.03 acres of land zoned PDH-12 and HC [Tax Map 48-3 ((1)) 53; 48-4 ((1)) 3, 3A1, 3B and 3B1], in the Providence District.

Please note that on April 6, 2011, the Planning Commission approved Final Development Plan Amendment Application FDPA B-993-02.

The Board also:

- Modified the transitional screening and the waiver of the barrier requirements along the project site's north property line in favor of the treatments depicted on the Final Development Plan Amendment (FDPA).

Office of the Clerk to the Board of Supervisors
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- Modified the transitional screening and the waiver of the barrier requirements between on-site residential and non-residential uses in favor of the treatments depicted on the FDPA.

- Waived the 4-foot peripheral parking lot landscaping requirement for the southerly and easterly property lines.

- Approved the waiver for underground stormwater management facilities in a residential development subject to Waiver Number 8496-WPFM-001-1.

- Approved the encroachment into the resource protection area subject to Resource Protection Area Encroachment Exception Number 8496-WRPA-001-1.

- Waived of the service drive along the Lee Highway frontage.

Sincerely,

Nancy Vehrs

Nancy Vehrs
Clerk to the Board of Supervisors
NV/ph

Cc: Chairman Sharon Bulova
Supervisor Lynda Smyth, Providence District
Janet Coldsmith, Director, Real Estate Division Dept. of Tax Administration
Barbara C. Berlin, Director, Zoning Evaluation Division, DPZ
Diane Johnson-Quinn, Deputy Zoning Administrator, Dept. of Planning and Zoning
Angela K. Rodeheaver, Section Chief, Transportation. Planning Division
Ellen Gallagher, Capital Projects and Operations Div., Dept. of Transportation
Ken Williams, Plans & Document Control, ESRD, DPWES
Department of Highways-VDOT
Sandy Stallman, Park Planning Branch Manager, FCPA
Charlene Fuhrman-Schulz, Development Officer, DHCD/Design Development Division
District Planning Commissioner
Denise James, Office of Capital Facilities/Fairfax County Public Schools
Karyn Moreland, Chief Capital Projects Sections, Dept. of Transportation

At a regular meeting of the Board of Supervisors of Fairfax County, Virginia, held in the Board Auditorium in the Government Center at Fairfax, Virginia, on the 10th day of May, 2011, the following ordinance was adopted.

AN ORDINANCE AMENDING THE ZONING ORDINANCE
PROFFERED CONDITION AMENDMENT PCA-B-993

WHEREAS, the Board of Supervisors, filed in the proper form an application to amend the proffers for RZ-B-993 hereinafter described, by amending conditions proffered and accepted pursuant to Virginia Code Ann. 15.2-2303(a), and

WHEREAS, at a duly called public hearing the Planning Commission considered the application and the propriety of amending the Zoning Ordinance in accordance therewith, and thereafter did submit to this Board its recommendation, and

WHEREAS, this Board has today held a duly called public hearing and after due consideration of the reports, recommendation, testimony and facts pertinent to the proposed amendment, the Board is of the opinion that the Ordinance should be amended,

NOW, THEREFORE, BE IT ORDAINED, that that certain parcel of land situated in the Providence District, and more particularly described as follows (see attached legal description):

Be, and hereby is further restricted by the amended conditions proffered and accepted pursuant to Virginia Code Ann., 15.2-2303(a), which conditions are incorporated into the Zoning Ordinance as it affects said parcel, and

BE IT FURTHER ENACTED, that the boundaries of the Zoning Map heretofore adopted as a part of the Zoning Ordinance be, and they hereby are, amended in accordance with this enactment, and that said zoning map shall annotate and incorporate by reference the additional conditions governing said parcels.

GIVEN under my hand this 10th day of May, 2011.

Nancy Vehrs

Nancy Vehrs
Clerk to the Board of Supervisors

PROFFERED CONDITIONS
Circle Towers Apartments
Circle Towers, LLC and United Dominion Realty, L.P.

PCA-B-993 / FDPA-B-993-02
April 25, 2011

Pursuant to Section 15.2-2303(a) of the Code of Virginia, 1950, as amended, the property owners (the "Owners") and Applicant (the "Applicant") in this rezoning proffer that the development of the parcel under consideration and shown on the Fairfax County as Tax Map Reference 48-3-((1))-53 and 48-4-((1))-3, 3A1, 3B, 3B1 (hereinafter referred to as the "Property") will be in accordance with the following proffered conditions (the "Proffers") if, and only if, said Proffered Condition Amendment and Final Development Plan Amendment request is granted. In the event said application request is denied, these Proffered Conditions shall be null and void. The Owners and the Applicant, for themselves, their successors and assigns, agree that these Proffered Conditions shall be binding on the future development of the Property unless modified, waived or rescinded in the future by the Board of Supervisors of Fairfax County, Virginia, in accordance with applicable County and State statutory procedures. The Proffered Conditions are:

I. GENERAL

1. Substantial Conformance. Subject to the Proffered Conditions and the provisions of Article 16-403 and Article 18-204 of the Zoning Ordinance, under which minor modifications to an approved development plan are permitted, the development shall be in substantial conformance with the Proffered Condition Amendment/Final Development Plan (the "PCA/FDPA"), prepared by BC Consultants dated June 2009 and revised through March 16, 2011.

2. Minor Modifications. Minor modifications from what is shown on the PCA/FDPA and these Proffers, which may become occasioned as a part of final architectural and/or engineering design,

may be permitted as determined by the Zoning Administrator in accordance with the provisions set forth in Section 16-403 of the Zoning Ordinance.

3. Uses. The uses on the subject property shall be limited to: 727 dwelling units, and accessory residential uses including but not limited to maintenance areas, leasing center, amenity areas, resident storage, and up to 183,300 sq. ft. for non-residential uses to include:

1. Accessory uses, accessory service uses and home occupations as permitted by Article 10.
2. Automated teller machines, located within a multiple family dwelling.
3. Business service and supply service establishments.
4. Automobile-oriented uses.
5. Quick-service food stores.*+
6. Billiard and pool halls.
7. Bowling alleys.
8. Health clubs.
9. Eating establishments. +
10. Financial institutions.*
11. Garment cleaning establishments.
12. Institutional uses (Group 3).
13. Interment uses (Group 2).
14. Kennels, limited by the provisions of Sect. 106 of the Zoning Ordinance.
15. Offices.
16. Personal service establishments.
17. Retail sales establishments.+
18. Fast food restaurants (with Special Exception).*+

Those areas labeled on the PCA/FDPA as Proposed Retail and Possible Retail may include any mix of non-residential uses permitted under this Proffer.

* These uses may not be located in a stand alone building and may not include new drive-through services.

+ Each individual retail use shall not occupy more than 20,000 square feet of gross floor area, exclusive of any loading areas. Individual retail uses occupying between 10,000 and 20,000 square of gross floor area shall only be located in Proposed Building A as identified on the PCA/FDPA. Quick-service food stores, eating establishments, and fast food restaurants shall only be located in Proposed

Building A and the Existing Office Building as identified on the PCA/FDPA. Notwithstanding these restrictions, a coffee house shall be permitted in Tower I, Proposed Building A, or the Existing Office Building.

4. Density Credit. The Applicant reserves density credit in accordance with provisions of paragraph 4 of Section 2-308 of the Zoning Ordinance.

5. Final Development Plan Amendment (FDPA). The Applicant reserves the right to request a Final Development Plan Amendment (FDPA) for elements other than Conceptual Development Plan (CDP) elements from the Planning Commission for all or a portion of the FDP in accordance with Section 16-402 of the Zoning Ordinance if such an amendment is in accordance with these Proffers. CDP elements are limited to the ultimate points of access at the periphery of the Property; the general location of proposed building footprints, use, and parking areas; maximum building heights; and the amount and location of common open space areas.

II. DESIGN

6. Architecture. The architectural design of the residential and non-residential project components shall be complimentary to each other in terms of the general type and quality of materials. In addition, subject to compliance with the design elements in these Proffers and the general footprint and overall height and gross floor area limitations on the PCA/FDPA, Building modification to the design and configuration of the approved structure may be made at the time of site plan and/or building permit review.

7. Building Materials. Buildings shall consist of high quality materials, a combination thereof including, but not limited to stone, cast stone, masonry, glass, precast materials, metal, cementitious fiber board, asphalt shingles, clay tiles, slate, wood, coatings EIFS or other comparable materials.

8. Unifying Elements. All street furniture, including garbage cans, benches and lamps, shall be consistent, both in terms of materials and design, throughout the development. Such street furniture shall be consistent in quality and character with the illustrative examples included in the PCA/FDPA.

9. Phasing. Build-out of the Property may proceed incrementally, subject to the additional timing provisions contained in these Proffered Conditions. The FAR, Dwelling Units and/or GFA constructed within a respective portion of the project may exceed the maximum density limitations set forth in these Proffers so long as such maximum density limitations are not exceeded over the entirety of the Property. If the existing development is destroyed or damaged by any casualty that is not intentionally caused by the owner prior to approval of a final site plan, it may, in the Owner's sole discretion, be reconstructed as it currently exists or may be developed in accordance with the PCA/FDPA and Proffers.

III. TRANSPORTATION

10. Blake Lane. The Applicant shall dedicate and then construct and convey in fee simple a taper lane at the proposed right-in/right-out site entrance on Blake Lane as shown on the PCA/FDPA subject to VDOT's review and approval. Additionally, the Applicant shall construct the new entrance from the Property to Blake Lane as shown on Sheet 2 of the PCA/FDPA and labeled thereon as "Proposed Bridge". Such improvements shall be substantially completed prior to issuance of the 660th Residential Use Permit (RUP). For purposes of this proffer, the term "substantially completed" is defined as constructed and available for use by the public but not necessarily accepted for maintenance by the Virginia Department of Transportation (VDOT).

11. Bus Shelters. The Applicant shall install two concrete bus shelter pads, one on the North side of U.S. Route 50 and one on the South side of U.S. Route 50, in the general locations shown on the PCA/FDPA. Final location and sizes of the bus shelter pads shall be determined in consultation

with FCDOT and VDOT at the time of site plan review. The bus shelter pads shall be installed prior to issuance of the first RUP; provided, however, that the Zoning Administrator may approve a later date for completion of the improvements without requiring a PCA upon demonstration by the Applicant that despite diligent efforts and due to factors beyond the Applicant's control, the required improvements have been delayed.

12. Right-of-Way Dedication. At the time of site plan approval for either of the proposed buildings identified on the PCA/FDPA as Proposed Building A and Proposed Building B or upon demand by Fairfax County, the Applicant shall dedicate right-of-way along Lee Highway/U.S. Route 29 as depicted on the PCA/FDPA. Upon request by Fairfax County, the Applicant will provide temporary and permanent construction easements that are reasonably necessary to facilitate the Route 29 construction so long as these easements do not require removal of parking or materially impact the use of the Property by the Applicant. Additionally, the Applicant shall not be responsible for any costs associated with these easements and the County shall restore any disturbed areas to their original condition.

IV. TRANSPORTATION DEMAND MANAGEMENT PROGRAM

13. Transportation Demand Management Program. This Proffer sets forth a program for a Transportation Demand Management plan (the "TDM Plan") that shall be implemented by the Applicant to encourage the use of transit (Metrorail and bus), other high-occupancy vehicle commuting modes, walking and biking all in order to reduce automobile trips generated by the residential uses on the Property by 25% and office uses (subject to the limitation in this Proffer) on the Property by 20% consistent with those traffic studies completed by the Applicant. Office areas that are leased prior to the effective date of these Proffers shall not be included in the TDM Plan. Any office area initially

leased or subject to an existing lease that is renewed after the effective date of these Proffers, whether in an existing or new office building, shall be included in the TDM Plan.

a. Program Manager. No later than thirty (30) days after the approval of the Site Plan for the Property, the Applicant shall designate an individual to act as the Program Manager ("PM") for the Property, whose responsibility will be to implement the TDM strategies. The duties of the PM may be part of other duties assigned to the individual(s). The Applicant shall provide written notice to the Fairfax County Department of Transportation (FCDOT) of the appointment of the PM within fourteen (14) days after such appointment and thereafter shall do the same within fourteen (14) days of any change in such appointment. Following the initial appointment of the PM, the Applicant shall continuously employ a PM for the Property. The Applicant may change the person designated at any time, at its sole option, provided written notice given to FCDOT per this paragraph.

b. TDM Plan. Ninety (90) days after the appointment of the PM, the PM shall submit to FCDOT for review and approval the TDM Plan to be implemented for the Property. The TDM Plan and any amendments thereto shall include, but not be limited to, provisions for the following with respect to the Property:

i. Information Dissemination. The Applicant will make available to the residents and tenants electronic information about transit, ridesharing, and other TMP elements and such information shall be displayed for resident use on electronic monitors. The information shall include transit schedules, rideshare applications and incentive information, parking information, etc. This information shall be kept current. Electronic monitors shall be placed in a prominent locations in the residential buildings and include a web site with this information. Appropriate links to transit providers will be provided and updated on the aforementioned website.

ii. Ride Matching. The PM shall coordinate and assist employees and residents with vanpool and carpool formation programs, ride matching services and established MWCOG (Metropolitan Washington Council of Governments) guaranteed ride home programs for employees and residents.

iii. Internet Access. All residential units shall be prewired to provide internet access to permit residents to work from home. However, the Applicant shall not be responsible for providing such internet access.

iv. Car Sharing Information. The PM shall make information available regarding the existence of local car sharing programs (such as ZipCar) at the Vienna-Fairfax-GMU metrorail station to tenants, residents, visitors and guests.

v. Preferential Parking. Applicant shall provide preferential parking for car/van pools in all parking facilities within the Property.

vi. Coordination. The PM shall work with FCDOT, and any other transportation management entities established in the local area of the development, to promote alternatives to single-occupant automobile commute trips.

vii. Bicycle Facilities. The Applicant shall provide bicycle racks of a type, amount, and in locations as determined by the Applicant and FCDOT.

viii. Pedestrian Connections. The Applicant shall provide an integrated system of on-site sidewalks and trails within the property as reflected on the PCA/FDPA. The PM shall provide information to residents and office tenants as to the best pedestrian and/or bicycle routes to take to and from the Vienna-Fairfax-GMU metrorail station.

ix. Shuttle. The Applicant will endeavor to provide a shuttle van for transportation of residents and employees to the nearest Metrorail station. This provision will be provided based on a cost/benefit analysis and at the Applicant's discretion.

c. FCDOT Response. If FCDOT has not responded with any comments to the PM within ninety (90) days of receipt of the TDM Plan, the TDM Plan shall be deemed to be approved and the Applicant, through the PM, shall implement the TDM Plan.

d. Vehicle Trip Objectives.

i. Residential. The residential goal of the TDM Plan shall be to reduce the number of residential vehicle trips generated by the Property's residents, visitors and guests by twenty-five percent (25%) during the PM peak hour of the adjacent street as projected by using methods based on ITE's, 8th edition, Trip Generation rates and/or equations (the "ITE Trip Generation Rate") for Land Use Code 220, Multifamily Apartments and based on a total of 727 dwelling units.

ii. Office. The office goal of the TDM Plan shall be to reduce the number of office vehicle trips generated by the Property's tenants by twenty percent (20%) during the PM peak hour of the adjacent street as projected by using methods based on ITE's, 8th edition, Trip Generation rates and/or equations (the "ITE Trip Generation Rate") for Land Use Code 710, General Office and based on the total gross square footage of office uses subject to this Proffer.

e. Annual Surveys & Coordination with FCDOT. One (1) year following approval of the TDM program by FCDOT for the Property, the PM shall conduct an annual survey (the "Annual Survey") completed in September of each year and provided to FCDOT. The Annual Survey shall be conducted during a week without any holidays and when Fairfax County Public Schools are in session. The Annual Survey shall gather information on the effectiveness of the TDM Plan and shall be used by the PM to determine whether changes to the TDM Plan are needed to insure that the vehicle trips are within the Vehicle Trip Objectives targeted goal. If the Annual Survey reveals that changes to the TDM Plan are needed, the Applicant, through the PM shall coordinate such changes with FCDOT and implement and adjust the TDM Plan accordingly. The PM shall coordinate the preparation of the Annual Survey materials and the methodology for validating survey results with FCDOT at least thirty (30) days prior to completing each year's Annual Survey, and shall collect and analyze the results. Such analysis shall include at a minimum:

i. A description of the TDM measures in effect for the survey period and a description of how such measures have been implemented;

ii. The number of people surveyed and the number of people who responded on the Property;

iii. The results of any surveys taken during the survey period;

iv. The number of residents and tenants participating in the TDM programs displayed by category of participants and by mode of use;

v. An evaluation of the effectiveness of the TDM Plan and its program elements and, if necessary, proposed modifications to the plan and program elements; and

vi. Annual surveys shall be conducted unless and until the Applicant has demonstrated to FCDOT that it is meeting or exceeding the 25% trip reduction goal for residential and 20% trip reduction goal for office. After the goal has been met for three (3) consecutive years, the Applicant will reduce the surveys to bi-annually. If the Applicant demonstrates the goal has been met for two (2) consecutive bi-annual surveys, the Applicant may terminate the surveys, although it will continue this proffered TDM program.

If an annual survey shows that the Applicant is not meeting the residential and office reduction goals, then the Applicant shall convene a meeting with FCDOT to review the TDM Plan then in place and to develop modifications to the TDM Plan to address the extent of the shortfall. Within thirty (30) days following such meeting, the Applicant shall submit an updated TDM Plan to FCDOT for its review and approval. If FCDOT has not responded with any comments to the PM

within forty-five (45) days of receipt of the TDM Plan, the TDM Plan shall be deemed to be approved and the Applicant, through the PM, shall implement the TDM Plan.

In the event the trip reduction goals for residential and or office use are not met for two (2) consecutive surveys, the Applicant shall provide a contribution in the amount of one thousand two hundred and fifty dollars ($1,250.00) for each one percent (1%) of the residential and or office goal that is not obtained, up to a maximum of five thousand dollars ($5,000.00) for the survey period. The contribution is to be used for transportation incentives for the property to directly reduce trips. Following such initial contribution, additional contributions shall be made for any annual survey where the trip reduction goal is not met up to a total of five surveys. If the trip reduction goals for residential and or office use are not met for two (2) consecutive surveys, the Applicant and FCDOT may agree to readjust the trip reduction goal for future trip reduction goals.

f. SmarTrip Cards. The Applicant shall distribute one SmarTrip card or its equivalent for each dwelling unit at the time of initial lease execution by a new tenant. Each card shall be for a minimum of Twenty-Five Dollars ($25.00) and distributed to encourage and incentivize the use of Metrorail or bus. The PM shall maintain records and ensure that each card has a minimum value of Twenty-Five Dollars ($25.00).

14. Parking Reduction

a. In addition to the TDM Plan, the Applicant shall reduce parking demand for residential uses on the property in accordance with this Proffer. As described in the parking reduction request submitted by the Applicant and approved on the same date as these Proffers (the "Parking Reduction"), the Applicant anticipates that parking demand generated by the residential uses on the Property will be reduced by 15% below the Zoning Ordinance requirement for Multiple Family Dwellings due to the site's proximity to transit enhanced by the TDM Plan (the "Parking Reduction Goal"). A 13.1% reduction due to the site's proximity to mass transit is achievable based on a parking utilization study of the existing residential uses on the property submitted in support of the request for a reduction in required parking. The Applicant shall therefore monitor the reduction in residential parking demand in accordance with this proffer and shall provide additional parking spaces up to the 1.9% difference between the Fairfax County calculated reduction level and the Parking Reduction Goal

for the residential component of the site, totaling up to 23 parking spaces. Nothing in this proffer shall prohibit the Applicant from adding additional parking spaces in accordance with Proffer 38.

b. One year after the final RUP for the Property, the Applicant shall perform a parking utilization study (the "Parking Utilization Study") showing the actual parking demand for residential uses on the Property. The Parking Utilization Study may be submitted in conjunction with the Annual Survey performed under the TDM Plan. The number of residential parking permits issued, along with information on the number of residential units occupied shall be included in the annual TDM Report. If the Parking Utilization Study finds that the Parking Reduction Goal is being met, then the Applicant shall not be required to perform a second Parking Utilization Study.

If the Parking Utilization Study shows that the Applicant is not meeting the Parking Reduction Goal, then the Applicant shall convene a meeting with FCDOT to review the TDM Plan then in place and to develop modifications to the TDM Plan to address the extent of the parking reduction shortfall. Within thirty (30) days following such meeting, the Applicant shall submit an updated TDM Plan to FCDOT for its review and approval. If FCDOT has not responded with any comments to the PM within forty-five (45) days of receipt of the TDM Plan, the TDM Plan shall be deemed to be approved and the Applicant, through the PM, shall implement the TDM Plan. In the alternative, the Applicant may cause portions of those areas shown on the PCA/FDPA and labeled thereon as "Resident Storage and Building Service Area" to be converted to parking spaces such that the number of new parking spaces created equals the percentage by which the Parking Reduction Goal is not being met up to a maximum of 23 additional parking spaces. If the Applicant exercises this alternative then it shall be relieved of the obligation to perform a second Parking Utilization Study.

Subject to the preceding paragraph, two years after the final RUP for the Property the Applicant shall perform a second Parking Utilization Study to determine if the Parking Reduction Goal is being met. If the Parking Utilization Study finds that the Parking Reduction Goal is being met, then the Applicant shall have no further obligations under this Proffer. If the second Parking Utilization Study finds that the Parking Reduction Goal is not being met, the Applicant shall cause portions of those areas shown on the PCA/FDPA and labeled thereon as "Resident Storage and Building Service Area" to be converted to parking spaces such that the number of new parking spaces created equals the percentage by which the Parking Reduction Goal is not being met up to a maximum of 23 additional parking spaces.

Nothing in this proffer shall be deemed to prohibit the County from enforcing the conditions of any approved Parking Reduction for this property.

15. Service Drive Waiver. Upon request by Fairfax County, the Applicant shall provide temporary and permanent easements that are reasonably necessary to facilitate a service drive connection in the location shown on the PCA/FDPA so long as the easements do not require removal of parking or materially impact the use of the Property by the Applicant. Additionally, the Applicant shall not be responsible for any costs associated with these easements and the County shall restore any disturbed areas to their original condition.

V. ENVIRONMENTAL

16. Stormwater Management Facilities and Best Management Practices. The Applicant shall implement stormwater management techniques to control the quantity and quality of stormwater runoff from the Property, as determined by DPWES. Stormwater Management Facilities/Best Management Practices ("BMPs") shall be provided as generally depicted and described on the PCA/FDPA Plan. The Applicant reserves the right to pursue additional stormwater management measures provided the

same is in substantial conformance with the PCA/FDPA Plan including a waiver to allow underground detention facilities.

17. Landscaping. Landscaping shall be provided in substantial conformance with the landscaping concepts shown on the PCA/FDPA Plan. If, during the process of site plan review, any new landscaping shown on the PCA/FDPA Plan cannot be installed due to utility lines, trails, etc., then an area of additional landscaping consisting of trees and/or plant material of a type and size generally consistent with that displaced, shall be substituted at an alternate location on the Property, subject to approval by the Urban Forest Management (UFM) Division, DPWES. The Applicant shall only use native, non-invasive species on the perimeter of the Property. The Applicant shall incorporate limited planting of native and non-invasive species with the planting material utilized for its interior landscaping. Proposed landscaping shall exclude any plant species identified as invasive by the Virginia Department of Conservation and Recreation.

18. Lighting. All outdoor lighting fixtures shall be in accordance with the Performance Standards contained in Part 9 (Outdoor Lighting Standards) of Article 14 of the Zoning Ordinance.

19. RPA/EQC

a. The vicinity of the RPA/EQC shall be restored in the general location shown on the sheets entitled *RPA Exception Plan* and *RPA Planting View and Sections* accompanying the PCA/FDPA, subject to review and approval by DPWES and review by the Northern Virginia Soil and Water Conservation District (NVSWCD). Hydrology calculations in accordance with the PFM shall be used to determine velocities from the design flow rates in the swale/channel bed . Plant materials for the swale/channel shall be specified based on these results. Non-erosive velocities of the substrate material in the swale/channel during the 2-year storm event shall be demonstrated in the design

calculations. Allowable velocities shall be based on requirement of the Public Facilities Manual (PFM) or by other accepted engineering methods as approved by DPWES.

b. Once the swale/channel work is complete, stable and has passed inspection by DPWES ("Completion Date"), the Applicant shall post a performance bond with Fairfax County in the amount of at least $112,500.00 (the "Maintenance Bond") to guarantee maintenance of the swale/channel and associated riparian plantings for a five-year period. The amount of the Maintenance Bond shall be adjusted annually based on changes to the Construction Cost Index, published by the Engineering News Record, from the date of approval of the PCA/FDPA to the actual date of payment.

c. Within 45 days of the Completion Date of the swale/channel, representatives of the Applicant, DPWES and NVSWCD shall meet on site and select three (3) locations for the survey cross sections of the swale/channel, at least fifty (50) feet from one another, between the proposed outfall and the southern property line. For each cross section, the locations of two (2) photographic monuments shall be chosen. Within 45 days of the date of this meeting, the Applicant shall prepare and submit to DPWES and NVSWCD for review and approval, the initial baseline swale/channel monitoring report ("Monitoring Report"). The Monitoring Report shall be sealed by a licensed, professional engineer ("Engineer") retained by the Applicant.

d. The Monitoring Report shall include:

i. The locations of the cross sections;

ii. Cross sections survey data, consisting of a graphic section drawing including the coordinates of survey points (with average spacing of two (2) feet or less) for the area of the swale / channel below the plane formed by the section monument;

iii. Photographs of the stream from each photo monument;

iv. Analysis of the plant material condition relative to an 85% survival rate and plant density specified on the construction plans approved by DPWES; and

v. A narrative statement describing the status of the swale/channel.

e. On or about the date one (1) year after the Completion Date and on or about each anniversary thereafter for the next four (4) years, the Applicant shall prepare and submit to DPWES and NVSWCD for review and approval an annual Monitoring Report sealed by the Engineer. All survey data shall be compared graphically and numerically to the initial Monitoring Report. The narrative statement shall address whether correction action is required under the Repair Criteria, as defined in paragraph f of this Proffer. The Applicant shall complete corrective actions recommended in the annual Monitoring Report, as approved by DPWES and NVSWCD.

f. Repair Criteria shall be based on the changed shape in the cross-sectional area of the swale/channel and the location of any swale/channel's thalweg at each cross-section, and the plan material analysis. No repairs shall be required provided that the changes at each cross-section, when compared to the pre-construction survey:

i. the cross-sectional area has not changed by more than an average of 5% as measured vertically from a plane formed by the survey monuments or

ii. the thalweg has not moved more than 3 feet or 25% of the swale/channel width (original top-of-bank to top-of-bank), whichever is greater.

g. Upon submission of the final annual Monitoring Report on the fifth anniversary date, the Applicant shall complete required corrective actions, if any. If no corrective action is required, or upon approval of required corrective actions by DPWES and NVSWCD, Fairfax County shall release the balance of the Maintenance Bond.

VI. GREEN BUILDING PRACTICES

20. Vegetated Roof. The Applicant shall construct a vegetated roof in conformance with the PFM over the retail portion of Proposed Building A as shown on the sheet entitled Stormwater Management Plan and further identified as Post-Development C-Factor as found on sheet 24 of the PCA/FDPA.

21. LEED Certification.

a. At a minimum, U.S. Green Building Council ("USGBC") Leadership in Energy and Environmental Design ("LEED") certification at the Certified level under LEED New Construction ("LEED Certification") shall be achieved for Proposed Building A ("Proposed Building A") and Proposed Building B ("Proposed Building B"), as labeled and shown on the PCA/FDPA. The existing buildings to remain on site will not be part of the LEED Certification and are not subject to these LEED proffers. LEED Certification shall be evaluated separately for Proposed Building A and Proposed Building B. This LEED Certification requirement shall not preclude the Applicant from obtaining site and development approvals and permits, including but not limited to site plans, grading plans, building permits, non-RUP's, and RUP's, for any element of the project.

b. The Applicant shall include a LEED accredited professional as a member of the design team for Proposed Building A and Proposed Building B. The LEED accredited professional shall work with the team to incorporate LEED design elements into the project. Prior to the issuance of a building permit for Proposed Building A and Proposed Building B, the Applicant shall provide documentation to the Environment and Development Review Branch of DPZ demonstrating compliance with the commitment to engage such a professional.

c. Prior to the issuance of the building permit for Proposed Building A and Proposed Building B individually, the Applicant shall provide a LEED Certification Checklist (the "Checklist")

to the Environment and Development Review Branch of DPZ that lists the anticipated credits within the applicable version of LEED New Construction. The Checklist shall meet, at least, the minimum number of credits necessary to attain LEED Certification of Proposed Building A and Proposed Building B as applicable.

d. Prior to the issuance of the first demolition permit for Proposed Building A, the Applicant shall execute a separate agreement and post a "Building A LEED Escrow," in the form of cash or a Letter of Credit, at the determination of the Applicant, from a financial institute acceptable to DPWES as defined in the Public Facilities Manual, in the amount of $2.00 per gross square foot of Proposed Building A. This Building A LEED Escrow shall be in addition to and separate from other bond or escrow requirements and shall be released in full to the Applicant upon demonstration to DPWES of attainment of certification by the USGBC for Proposed Building A.

If, within one (1) year of issuance of the final non-RUP for Proposed Building A, but in no case later than five (5) years after the final RUP for Proposed Building A, the Applicant fails to provide evidence demonstrating attainment of LEED Certification, or otherwise provides evidence that Proposed Building A has fallen short of LEED Certification by four points or more, the entirety of the Building A LEED Escrow shall be contributed to Fairfax County and shall be posted to a fund within the County's budget supporting implementation of environmental initiatives.

However, if within one (1) year of issuance of the final non-RUP for Proposed Building A, but in no case later than five (5) years after the final RUP for Proposed Building A, the Applicant provides evidence to DPWES demonstrating that Proposed Building A has been determined by the USGBC to fall within three points or less of attainment of LEED Certification, then 50% of the Building A LEED Escrow shall be released to the Applicant and the other 50% of the escrow shall be contributed to

Fairfax County and shall be posted to a fund within the County's budget supporting implementation of environmental initiatives.

If the Applicant provides evidence that LEED Certification for Building A has been delayed through no fault of the Applicant, this proffered time-frame shall be extended until such time as LEED Certification is attained or two (2) years from issuance of the final non-RUP for Proposed Building A, but in no case later than six (6) years after the final RUP for Proposed Building A, and no release of escrowed funds shall be made to the Applicant or the County during this extended time-frame.

e. Prior to the issuance of the first building permit for Proposed Building B, the Applicant shall execute a separate agreement and post a "Building B LEED Escrow," in the form of cash or a Letter of Credit, at the determination of the Applicant, from a financial institute acceptable to DPWES as defined in the Public Facilities Manual, in the amount of $2.00 per gross square foot of Proposed Building B. This Building B LEED Escrow shall be in addition to and separate from other bond or escrow requirements and shall be released in full to the Applicant upon demonstration to DPWES of attainment of certification by the USGBC for Proposed Building B.

If, within one (1) year of issuance of the final RUP for Proposed Building B the Applicant fails to provide evidence demonstrating attainment of LEED Certification, or otherwise provides evidence that Proposed Building B has fallen short of LEED Certification by four points or more, the entirety of the Building B LEED Escrow shall be contributed to Fairfax County and shall be posted to a fund within the County's budget supporting implementation of environmental initiatives.

However, if within one (1) year of issuance of the final RUP for Proposed Building B the Applicant provides evidence to DPWES demonstrating that Proposed Building B has been determined by the USGBC to fall within three points or less of attainment of LEED Certification, then 50% of the Building B LEED Escrow shall be released to the Applicant and the other 50% of the escrow shall be

contributed to Fairfax County and shall be posted to a fund within the County's budget supporting implementation of environmental initiatives.

If the Applicant provides evidence that LEED Certification for Building B has been delayed through no fault of the Applicant, this proffered time-frame shall be extended until such time as LEED Certification is attained or two (2) years from issuance of the final RUP for Proposed Building B, and no release of escrowed funds shall be made to the Applicant or the County during this extended time-frame.

f. Within one (1) year of the issuance of the final non-RUP for Proposed Building A or the final RUP for Proposed Building B, as applicable, the Applicant shall provide to the Environment and Development Review Branch of DPZ a letter from a LEED-accredited professional stating that: a LEED building maintenance reference manual (the "Manual") has been prepared for use by future building owner's and/or tenants; the Manual has been written by a LEED-accredited professional; an electronic copy of the Manual shall be available to all future building occupants on a website to be maintained by the Applicant and/or future common owners association; and, the Manual, at a minimum, provides the following:

i. A narrative description of LEED components, including a description of the environmental benefits of that component and information regarding the importance of maintenance and operation in retaining the attributes of Proposed Building A and Proposed Building B;

ii. Product manufacturer's manuals or other instructions, where applicable, regarding operations and maintenance needs for applicable LEED components, including operational practices that can enhance energy and water conservation;

iii. A maintenance staff notification process for improperly functioning equipment to assure proper performance of LEED building-related equipment and the submitted building; and,

iv. Contact information that the Buildings occupants can use to obtain further guidance on each LEED component that is applicable to the submitted building. Submission of this letter, as described above, shall satisfy this proffer.

v. In addition to the letter specified above, and also within one (1) year of the issuance of a RUP for Proposed Building A and / or Proposed Building B as applicable, the Applicant shall provide an electronic copy of the Manual in PDF format (or other electronic format as determined acceptable by the County) to the Environment and Development Review Branch of the DPZ. This electronic version of the manual shall be edited to exclude information pertaining to security systems or maintenance of systems in classified and secure areas.

g. All references to the U.S. Green Building Council shall apply to similar certifying agencies that are created subsequent to approval of this rezoning application, provided that the alternative certifying agency is acceptable to Fairfax County and the Applicant.

h. One year after issuance of the final RUP or non-RUP, whichever occurs later, and every year on or around that date for the subsequent five years, the Applicant shall provide non-proprietary energy and water consumption data, as practicable, for both the entire site, and the two new buildings. The data shall be aggregated by building and site, and performance of individual units and tenants will not be reported. The data will be in the format of gallons of water used and kWh used per building for proposed building A and B, and gallons of water used and kWh used for the entire site. The data shall be provided to the Chief of the Environment and Development Review Branch of DPZ.

This data will not be shared in dis-aggregated form with non-DPZ staff or Planning Commissioners without the written consent of the Applicant. The information obtained shall be for information purposes only and provision of the information will not result in any negative consequences to the Applicant.

This Proffer 21(h) may be modified related to the amount, type, format, frequency, and scope of data provided and the duration of the data provision requirement upon the mutual agreement of DPZ and the Applicant without requiring a PCA. Additionally, if the required data cannot be obtained by the Applicant from utility providers or tenants because of applicable law, the utility provider's policy, privacy issues, legal precedence or collection of the data is administratively burdensome to the Applicant or the County, then the Applicant or the County, as applicable, shall provide written notice to the Chief of the Environment and Development Review Branch of DPZ or the Applicant, as applicable, describing why the data cannot be obtained and/or why provision of that data is administratively burdensome. The Applicant and DPZ shall thereafter meet to discuss possible modifications to this Proffer 21(h). If, after the meeting between the Applicant and DPZ, the Applicant or DPZ determines that provision of the data, as provided herein or as modified, is not practicable, then they shall provide notice of the same and the Applicant shall be relieved of the obligation to provide the data required under this Proffer 21(h).

22. Energy Conservation. All new appliances for use in the residential dwelling units, limited to dishwashers, refrigerators, and clothes washers, shall be Energy Star Qualified.

VII. AFFORDABLE HOUSING/WORKFORCE HOUSING

23. Affordable Dwelling Units (ADU's). The Applicant shall provide ADUs in accordance with Part 8 of Article 2 of the Zoning Ordinance (the "ADU Ordinance"). The ADU's shall be

provided and administered as either for-sale or rental units consistent with market rate units in the same building in accordance with the requirements of the ADU Ordinance.

24. Workforce Dwelling Units (WDU's). In addition, the Applicant shall provide one hundred eleven (111) WDUs that will be leased and/or sold to households with a household income of not more than 120% of the Area Median Income (AMI). All WDUs shall be provided and administered in accordance with the Board of Supervisors' Workforce Dwelling Unit Administrative Policy Guidelines dated October 15, 2007. One hundred four (104) of the WDU's attributable to Tower 1, Tower 2 and Tower 3 will be leased and/or sold such that they are evenly divided among the following income tiers: up to 80% of AMI, up to 100% of AMI and up to 120% of AMI. The seven (7) WDUs attributable to Building A and Building B will be leased and/or sold such that four (4) units are provided for the income tier of up to 80% of AMI and three (3) units are provided for the income tier of up to 100% of AMI. If at the time of site plan less than 727 total dwelling units are proposed, the number of WDUs, and the distribution of the WDUs between income tiers, shall be modified in accordance with the Board of Supervisors' Workforce Dwelling Unit Administrative Policy Guidelines dated October 15, 2007.

25. Dispersion of WDUs. The Applicant shall locate the proffered WDUs in the building identified as "Existing Tower 3" on the PCA/FDPA, however, the Applicant may at its' election place the WDUs in any of the buildings identified as "Existing Tower 1", "Existing Tower 2", or "Existing Tower 3" on the PCA/FDPA. The WDUs shall have equal access to all amenities on the Property.

26. Alternative Administration of WDU's. The Applicant reserves the right to enter into a separate binding written agreement with the appropriate Fairfax County agency as to the terms and conditions of the administration of the WDU's. Such an agreement shall be on terms mutually acceptable to both the Applicant and Fairfax County and may occur after the approval of these

Proffers. Neither the Board of Supervisors nor Fairfax County shall be obligated to execute such an agreement. If such an agreement is executed by all applicable parties, then the WDU's shall be administered in accordance with such an agreement, and the administrative requirements of the preceding Proffer shall become null and void. Such an agreement and any modifications thereto, shall be recorded in the land records of Fairfax County.

VIII. TREE PRESERVATION

27. Tree Preservation: The applicant shall submit a Tree Preservation Plan and Narrative as part of the first and all subsequent site plan submissions. The preservation plan and narrative shall be prepared by a Certified Arborist or a Registered Consulting Arborist, and shall be subject to the review and approval of the Urban Forest Management Division, DPWES.

The tree preservation plan shall include a tree inventory that identifies the location, species, critical root zone, size, crown spread and condition analysis percentage rating for all individual trees to be preserved, as well as all on and off-site trees, living or dead with trunks 8 inches in diameter and greater (measured at 4 ½ -feet from the base of the trunk or as otherwise allowed in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture) located within 25 feet to either side of the limits of clearing and grading. The tree preservation plan shall provide for the preservation of those areas shown for tree preservation, those areas outside of the limits of clearing and grading shown on the PCA/FDPA and those additional areas in which trees can be preserved as a result of final engineering. The tree preservation plan and narrative shall include all items specified in PFM 12-0507 and 12-0509. Specific tree preservation activities that will maximize the survivability of any tree identified to be preserved, such as: crown pruning, root pruning, mulching, fertilization, and others as necessary, shall be included in the plan. Minor modifications may be permitted by UFMD,

DPWES to the extent that these do not change the designations of individual trees, or result in significant physical impacts to the areas designated to be left undisturbed.

28. Tree Preservation Walk-Through. The Applicant shall retain the services of a certified arborist or registered consulting aborist, and shall have the limits of clearing and grading marked with a continuous line of flagging prior to the walk-through meeting. During the tree-preservation walk-through meeting, the Applicant's Certified Arborist or a Registered Consulting Arborist shall walk the limits of clearing and grading with an UFMD, DPWES, representative to determine where adjustments to the clearing limits can be made to increase the area of tree preservation and/or to increase the survivability of trees at the edge of the limits of clearing and grading, and such adjustment shall be implemented. Trees that are identified as dead or dying may be removed as part of the clearing operation. Any tree that is so designated shall be removed using a chain saw and such removal shall be accomplished in a manner that avoids damage to surrounding trees and associated understory vegetation. If a stump must be removed, this shall be done using a stump-grinding machine in a manner causing as little disturbance as possible to adjacent trees and associated understory vegetation and soil conditions.

29. Limits of Clearing and Grading. The Applicant shall conform strictly to the limits of clearing and grading as shown on the PCA/FDPA, subject to allowances specified in these proffered conditions and for the installation of utilities and/or trails as determined necessary by UFMD, as described herein. If it is determined necessary to install utilities and/or trails in areas protected by the limits of clearing and grading as shown on the PCA/FDPA, they shall be located in the least disruptive manner necessary as determined by the UFMD, DPWES. A replanting plan shall be developed and implemented, subject to approval by the UFMD, DPWES, for any areas protected by the limits of clearing and grading that must be disturbed for such trails or utilities. The Applicant shall not be

responsible for replanting areas that are disturbed by existing easement holders, when such disturbance is not directly related to development under the PCA/FDPA.

30. Tree Preservation Fencing: All trees shown to be preserved on the tree preservation plan shall be protected by tree protection fence. Tree protection fencing in the form of four (4) foot high, fourteen (14) gauge welded wire attached to six (6) foot steel posts driven eighteen (18) inches into the ground and placed no further than ten (10) feet apart or, super silt fence to the extent that required trenching for super silt fence does not sever or wound compression roots which can lead to structural failure and/or uprooting of trees shall be erected at the limits of clearing and grading as shown on the demolition, and phase I & II erosion and sediment control sheets, as may be modified by the "Root Pruning" proffer below.

All tree protection fencing shall be installed after the tree preservation walk-through meeting but prior to any clearing and grading activities, including the demolition of any existing structures. The installation of all tree protection fencing shall be performed under the supervision of a certified arborist or registered consulting arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Three (3) days prior to the commencement of any clearing, grading or demolition activities, but subsequent to the installation of the tree protection devices, the UFMD, DPWES, and the Providence District Supervisor shall be notified and given the opportunity to inspect the site to ensure that all tree protection devices have been correctly installed. If it is determined that the fencing has not been installed correctly, no grading or construction activities shall occur until the fencing is installed correctly, as determined by the UFMD, DPWES.

31. Tree Appraisal: The Applicant shall retain a Certified Arborist or a Registered Consulting Arborist with experience in plant appraisal, to determine the replacement value of all trees 8 inches in diameter or greater located on the Application Property that are shown to be saved on the Tree

Preservation Plan. These trees and their value shall be identified on the Tree Preservation Plan at the time of the first submission of the respective site plan(s). The replacement value shall take into consideration the age, size and condition of these trees and shall be determined by the so-called "Trunk Formula Method" contained in the latest edition of the Guide for Plan Appraisal published by the International Society of Arboriculture, subject to review and approval by UFM.

At the time of the respective site plan approvals, the Applicant shall post a cash bond or a letter of credit as determined by the Applicant payable to the County of Fairfax to ensure preservation and/or replacement of the trees for which a tree value has been determined in accordance with the paragraph above (the "Bonded Trees") that die or are dying due to unauthorized construction activities. The letter of credit or cash deposit shall be equal to 50% of the replacement value of the Bonded Trees. At any time prior to final bond release for the improvements on the Application Property constructed adjacent to the respective tree save areas, should any Bonded Trees die, be removed, or are determined to be dying by UFMD due to unauthorized construction activities, the Applicant shall replace such trees at its expense. The replacement trees, as reasonably possible, shall be of equivalent size, species and/or canopy cover as approved by UFMD. In addition to this replacement obligation, the Applicant shall also make a payment equal to the value of any Bonded Tree that is dead or dying or improperly removed due to unauthorized construction activity. This payment shall be determined based on the Trunk Formula Method and paid to a fund established by the County for furtherance of tree preservation objectives. Upon release of the bond for the improvements on the Application Property constructed adjacent to the respective tree save areas, any amount remaining in the tree bonds required by this proffer shall be returned/released to the Applicant.

32. Root Pruning. The Applicant shall root prune, as needed to comply with the tree preservation requirements of these proffers. All treatments shall be clearly identified, labeled, and

detailed on the erosion and sediment control sheets of the subdivision plan submission. The details for these treatments shall be reviewed and approved by the UFMD, DPWES, accomplished in a manner that protects affected and adjacent vegetation to be preserved, and may include, but not be limited to the following:

- Root pruning shall be done with a trencher or vibratory plow to a depth of 18 inches.
- Root pruning shall take place prior to any clearing and grading, or demolition of structures.
- Root pruning shall be conducted with the supervision of a certified arborist.
- An UFMD, DPWES, representative shall be informed when all root pruning and tree protection fence installation is complete.

33. Site Monitoring. During any clearing or tree/vegetation/structure removal on the Applicant Property, a representative of the Applicant shall be present to monitor the process and ensure that the activities are conducted as proffered and as approved by the UFMD. The Applicant shall retain the services of a Certified Arborist or a Registered Consulting Arborist to monitor all construction and demolition work and tree preservation efforts in order to ensure conformance with all tree preservation proffers, and UFMD approvals. The monitoring schedule shall be described and detailed in the Landscaping and Tree Preservation Plan, and reviewed and approved by the UFMD, DPWES

IX. RECREATION

34. Recreation Contribution. Pursuant to Sect. 6-409 of the Zoning Ordinance, regarding developed recreational facilities, the Applicant shall provide recreational facilities to serve the Property. Per Sect. 6-409, recreational facilities such as tot lots, fitness center, gazebos, multi-purpose room, lap pool, recreational trails, walking paths and similar features may be used to fulfill this requirement. In the event it is demonstrated that the proposed facilities do not have sufficient value, at the time of the issuance of the first Residential Use Permit, the Applicant shall contribute funds in the amount needed to achieve the overall proffered amount of $8,000.00 to the Fairfax County Park

Authority for off-site recreational facilities intended to serve the future residents, as determined by the Supervisor for the Providence District.

In addition, at the time of the first RUP, the Applicant shall contribute $15,000.00 to the Fairfax County Park Authority for off-site recreational facilities as determined by the Supervisor for the Providence District.

35. Route 50 Pedestrian Access. The Applicant shall provide a pedestrian connection to the existing bus stop located on the north side of Route 50 as shown on the PCA/FDPA prior to the issuance of the final RUP. The final location shall of the pedestrian connection shall be field located in consultation with the Fairfax County Park Authority trails coordinator and constructed to all applicable park authority trail standards. If the required easements for the construction of such access are not granted at no cost (excluding associated processing fees) to the Applicant by the Park Authority, within ninety (90) days of a written request, the Applicant shall escrow funds equivalent to that required for construction based on the Unit Price Schedule in effect at the time of the written request and as approved by DPWES and shall be relieved of the obligation to construct such access.

36. Pedestrian Connection to Tax Map 48-3-((1))-35A. The Applicant shall provide a pedestrian connection to Tax Map 48-3-((1))-35A to match the width of the existing pedestrian walkway located along the north end of the property, as shown on Sheet 12 of the PCA/FDPA as "REFER TO PROFFER FOR SIDEWALK CONNECTION". This pedestrian connection shall be subject to VDOT's and/or FCDOT's review and approval. Should sufficient right-of-way not exist to construct this pedestrian connection, if VDOT and/or FCDOT approval cannot be obtained in the location shown, or if any easements are required from the owner of Tax Map 48-3-((1))-35A, the Applicant shall escrow money equivalent to that required for construction based on the Unit Price Schedule in effect at the time of the written request and as approved by DPWES for these

improvements to be constructed by others in the future and shall be relieved of the obligation to construct such access.

37. Nottaway Nights. Prior to the issuance of the first RUP, the Applicant shall contribute $2,000 to the Nottaway Nights program.

X. PARKING

38. Parking. The Applicant shall provide minimum parking at the level approved pursuant to the Parking Reduction for the Property approved by the Board of Supervisors on the same date as these Proffers, and as shown as Parking Space Tabulations in the tabulations on Sheet 3 of the PCA/FDPA. The Applicant reserves the right to pursue future parking reductions for the Property as may be permitted by the Fairfax County Zoning Ordinance without the need for an amendment to these Proffers or the PCA/FDPA.

The Applicant reserves the right to provide parking in excess of the minimum requirements shown in the tabulations on Sheet 3 of the PCA/FDPA if such additional parking is in substantial conformance with the future and alternative parking locations shown on the PCA/FDPA.

If the Applicant allocates or assigns parking permits to specific dwelling units, it shall treat ADUs and WDUs in a similar manner. However, where parking permits are sold to individual residents, one (1) parking pass shall be assigned at no charge to each ADU.

The Applicant shall reserve parking spaces for those uses identified on the PCA/FDPA as Proposed Retail and Potential Retail in an amount determined after consultation with DPWES and the Providence District Supervisor during the hours of 8:00 a.m. and 7:00 p.m., however, in no case shall the number of reserved parking spaces exceed ninety (90) parking spaces. The Applicant may also reserve up to twenty-five (25) 2-hour time limited parking spaces for office/retail uses in a location

determined after consultation with DPWES and the Providence District Supervisor during the hours of 8:00 a.m. and 7:00 p.m.

X. CONSTRUCTION

39. Construction. At the time of site plan submission, the Applicant shall provide to FCDOT and DPWES for their review and approval a plan identifying anticipated construction entrances, construction vehicle routes and a plan to coordinate with FCDOT and/or VDOT concerning construction vehicle routes and to coordinate with the Fairfax County Park Authority regarding activities at Towers Park. However, no construction vehicles shall use Nutley Avenue between Route 29 and Route 50 on their way to or from the Property.

XI. OTHER

40. Signs. The signage used throughout the plan including the entrance sign shall conform to Article 12 of the Zoning Ordinance.

41. Universal Design. The following is a list of universal design features that the Applicant will endeavor, at its sole option and subject to compliance with all Federal and State Fair Housing laws and regulations, to incorporate into the new development:

- Lever handles for opening doors rather than twisting knobs;
- Buttons on elevator control panels that can be distinguished by touch;
- Use of meaningful icons as well as text labels;
- Install lighting near outside walkways, stairs, and entrances.

42. Successors and Assigns. These proffers shall bind and inure to the benefit of the Applicant and its successors and assigns. Each reference to the "Applicant" in these proffers shall include and be binding upon the Applicant's successor(s) in interest and/or developer(s) of any portion of the Property.

43. Counterparts. These proffers may be executed in one or more counterparts, each of which when so executed shall be deemed an original document and all when taken together shall constitute but one and the same instrument.

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By: UNITED DOMINION REALTY, L.P.
a Delaware limited partnership, its Sole Member
Title Owner of Tax Map No. 48-3-((1))-53

By: UDR, INC.,
a Maryland corporation, its General Partner

By: _____
Name: Richard A. Giannotti
Title: Executive Vice President

CIRCLE TOWERS LLC,
a Delaware limited liability company
Title Owner of Tax Map No. 48-4-((1))-3, 3B, 3B1, 3A1

By: UNITED DOMINION REALTY, L.P.,
a Delaware limited partnership, its Sole Member

By: UDR, INC.,
a Maryland corporation, its General Partner

By: _____
Name: Richard A. Giannotti
Title: Executive Vice President

\10025890.21

CIRCLE TOWERS APARTMENTS

PROFFERED CONDITION AMENDMENT PCA-B-993

FINAL DEVELOPMENT PLAN AMENDMENT FDPA-B-993-02

PROVIDENCE DISTRICT,FAIRFAX COUNTY, VIRGINIA

JUNE 2009

REVISION DATES 10-28-2009
REVISION DATES 08-19-2010
REVISION DATES 09-17-2010
REVISION DATES 10-06-2010
REVISION DATES 12-21-2010
REVISION DATES 01-13-2011
REVISION DATES 02-07-2011
REVISION DATES 03-16-2011

OWNERS/APPLICANTS

CIRCLE TOWERS, LLC
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GLEN ALLEN, VA 23060
TELEPHONE: 804.290.4763
FAX: 804.965.1407

and

UNITED DOMINION REALTY, LP
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TELEPHONE: 804.290.4763
FAX: 804.965.1407

ATTORNEY/AGENT

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1750 TYSONS BOULEVARD
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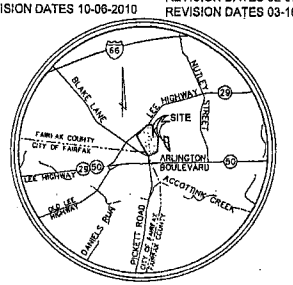
FAX: 703.712.5297



VICINITY MAP
SCALE: 1" = 2,000'

ENGINEERS/LANDSCAPE ARCHITECTS

THE BC CONSULTANTS
12600 FAIR LAKES CIRCLE
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BC Consultants
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COMMONWEALTH OF VIRGINIA
PETER L. BIRK
No. 388
03-16-2011
REGISTERED LANDSCAPE ARCHITECT

PROJECT # 08085.01.00
DATE: JUNE 2009

ALTERNATIVE BUILDING LAYOUT

POSSIBLE RETAIL

PROPOSED RETAIL

MATCHLINE

MATCHLINE - SEE SHEET 3

PROPOSED AREA OF FUTURE DEDICATION

N27°16'52"E 112.30'

134'-0"±

BUILDING LIMITS PROPOSED RETAIL

67'-0"±

EXISTING TOWER 1

2 LOADING

EXISTING TOWNHOUSES

FINAL LAYOUT OF PLANTERS TO BE DETERMINED

120'±

88'-6"±

PROPOSED RETAIL

POSSIBLE RETAIL

110'-7"

142'-6"

204'±

PROPOSED BUILDING A RESIDENTIAL, RETAIL, LEASING OFFICE AND AMENITIES

RECONSTRUCTED PLAZA DECK

EXISTING TOWER 3

FINAL LAYOUT OF PLANTERS TO BE DETERMINED

BUILDING LIMITS

70'±

60'± VARIES

S33°37'23"E 5.55'

EXISTING OFFICE BUILDING

271'±

EXISTING TOWNHOUSES (TO BE REMOVED)

FINAL LAYOUT OF PLANTERS TO BE DETERMINED

PLAZA

70'±

99'-6"±

168'-8"

EXISTING TOWER 2

BUILDING LIMITS

PROPOSED OFFICE

PROPOSED BUILDING B RESIDENTIAL BUILDING

RPA

64'-8" VARIES

54'-11" VARIES

PROPOSED BRIDGE

WESTERN GARAGE

N26°09'48"W 177.09'

LEE HIGHWAY US ROUTE # 29 (VARIABLE WIDTH PUBLIC R.O.W.)

BLAKE LANE ROUTE # 655 (90' PUBLIC R.O.W.)

EX. FACE OF CURB

SEE SHEET 3 FOR TABULATIONS

SCALE: 1" = 40'

LEGEND

- AREA OF OPTIONAL RETAIL
- AREA OF PROPOSED RETAIL
- AREA OF PROPOSED RESIDENTIAL
- AREA OF EXISTING EASEMENTS
- PROPOSED OFFICE

lessard URDAY ARCHITECT

BC Consultants

Planners · Engineers · Surveyors · Landscape Architects

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PETER L. RIVER No. 3251 05-18-2011 COMMONWEALTH OF VIRGINIA LICENSED PROFESSIONAL ENGINEER

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

PCA-FDPA PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED: 10-28-09	DATE: 1-13-11
REVISED: 8-18-10	DATE: 2-7-11
REVISED: 9-17-10	REVISED: 3-16-11
REVISED: 10-05-10	
REVISED: 10-27-10	
APPLICANT:	

DESIGNED BY: PLR

DRAFTED BY: CAD

CHECKED BY: PLR

DATE: JUNE 2009

SCALE: HOR. 1" = 40' VERT. 1" = 40'

SHEET 2 OF 33

CO. NO.

CAD NAME: C8085PCA

LAYOUT: PCA

FILE NO. 08085.01-00

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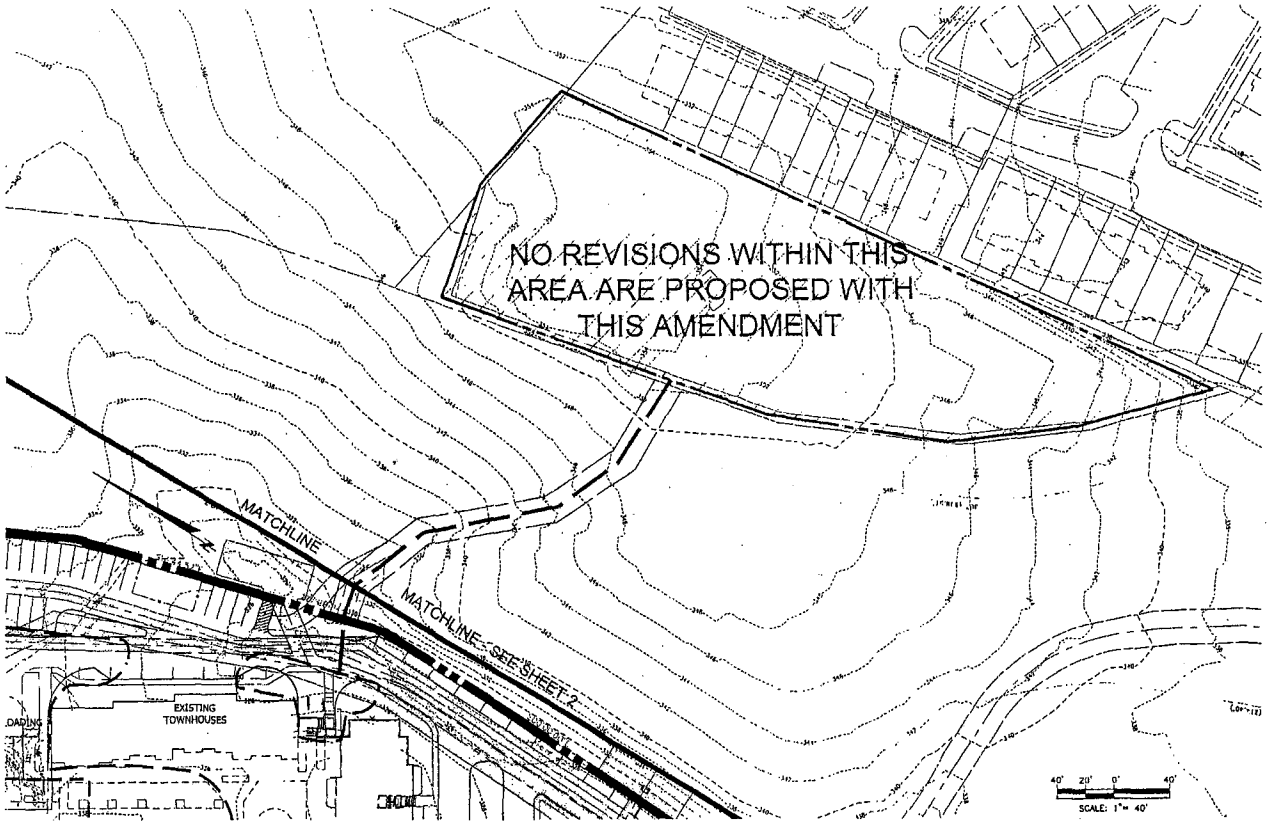


UNIT TABULATIONS:

EXISTING UNITS (PREVIOUSLY APPROVED):

APARTMENTS	554	UNITS
TOWNHOUSE APARTMENTS	52	UNITS
TOTAL UNITS	606	UNITS

PROPOSED UNITS:

APARTMENTS	719	UNITS
TOWNHOUSE APARTMENTS	8	UNITS
* TOTAL UNITS	727	UNITS

Maximum number of units stated. We reserve the right to distribute the units among the existing and proposed residential buildings.

* The total units proposed include 5 ADU's and 111 Workforce units. The final number of ADU's and Workforce units will be determined at site plan, as provided in the proffers.

EXISTING OFFICE (CORRECTING PRIOR APPROVED AMOUNT):	44,700 S.F.
PROPOSED OFFICE:	74,700 S.F.
EXISTING COMMERCIAL/RETAIL:	22,000 S.F.
PROPOSED COMMERCIAL/RETAIL: (SEE PROFFERS)	26,000 S.F.

** EX. BUILDING HEIGHT (# OF FLOORS OVER PARKING):

BUILDING 1	13 STORIES - 135'
BUILDING 2	14 STORIES - 145'
BUILDING 3	12 STORIES - 120'
TOWNHOUSES	2 STORIES - 35'
OFFICE BUILDING	4 STORIES - 55'

** PROPOSED BUILDING HEIGHT (# OF FLOORS OVER PLAZA LEVEL):

BUILDING A	4 STORIES - 55'
BUILDING B	5 STORIES - 60'

** NOTE: Building height does not include mechanical equipment enclosures.

(If entire project new construction)

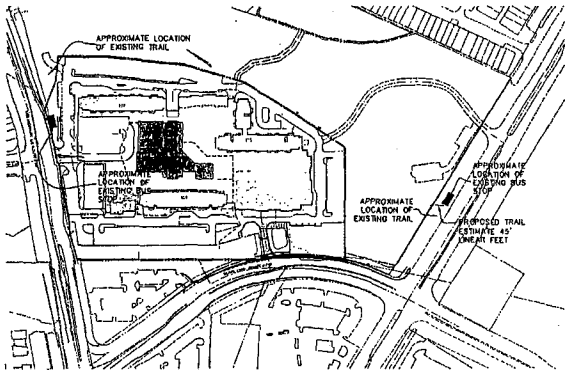
OPEN SPACE REQUIRED:	4.8	AC. (30% of G.S.A.)
OPEN SPACE PROVIDED:	7.0	AC. (43% of G.S.A.)

PARKING SPACE TABULATIONS:

TOTAL APPROVED FDP PARKING (Existing Construction)		1,011
RESIDENTIAL		
606 UNITS	770	
NON RESIDENTIAL	241	
TOTAL PROPOSED PARKING REQUIRED FOR NEW CONSTRUCTION AREA INCREASES		
NEW RESIDENTIAL		
RESIDENTIAL 121 UNITS @ 1.6/UNITS	194	
NEW NON RESIDENTIAL		
OFFICE 30,000 ADDITIONAL SPACE @ 3/1000	90	
RETAIL 4,000 ADDITIONAL SPACE @ 4.3/1000	18	
(SEE PREFERS FOR USES)		
TOTAL PARKING REQUIRED:		1,313
PARKING PROVIDED WITH REDUCTIONS (SHARED PARKING & TDM)		1,128

AREA TABULATIONS:

ZONE	PDH-12, HC
AREA OF PRIOR APPROVED FDP:	52.565 AC.
AREA PREVIOUSLY DEDICATED FOR PUBLIC USE, STREET RIGHT-OF-WAY AND PARTIAL SCHOOL SITE:	36.534 AC. (DENSITY RESERVED)
NET SITE AREA (AREA OF PCA) (PARCELS 3, 3A1, 3B, 3B1, AND 53):	16.031 AC.
MAXIMUM AREA FOR COMMERCIAL USES: PER Z.O. ARTICLE 6-106(4)(2) (300 S.F. COMMERCIAL X 606 DWELLING UNITS)	181,800 S.F
MAXIMUM RESIDENTIAL DENSITY PURSUANT TO CDPA B-993/SE 95-P-003 APPROVED IN 1995 =	606 RESIDENTIAL UNITS



ENTRANCE LOCATION EXHIBIT

BC Consultants
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12600 Fair Lakes Circle, Suite 100, Fairfax, VA 22033
(703)449-8100 (703)449-8108 (Fax)
www.bcconsl.com

COMMONWEALTH OF VIRGINIA — PETER L. BERK — No. 388 — 03-16-2011 — LICENSED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

PCA - FDPA PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED: 10-28-08 REVISED: 1-11-11
REVISED: 09-17-10 DATE: 2-7-11
REVISED: 10-08-10 REVISED: 3-18-11
REVISED: 12-21-10
APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR 1"=40' VERT. 1"=4'
SHEET 3 OF 33
CO. NO.
CAD NAME: C8085PCA
LAYOUT: PCA - FDPA
FILE NO 08085.01-00

GENERAL NOTES:

1. PROPERTIES DELINEATED ON THIS PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT (PCA/FDPA) APPLICATION ARE IDENTIFIED ON FAIRFAX COUNTY TAX ASSESSMENT MAPS NO. 48-3-((1)) PARCEL 53 AND 48-4-((1)) PARCELS 3A1 AND 3B1. ALL ARE ZONED PDH-12, HC.

2. THE TOPOGRAPHIC INFORMATION SHOWN FOR THIS PCA/FDPA IS INTERPOLATED FROM HIGH FLIGHT AERIAL TOPOGRAPHY TAKEN FROM THE FAIRFAX COUNTY GIS TOPOGRAPHIC MAPS AND INFORMATION OF RECORD. THE TOPOGRAPHY IS SHOWN AT TWO (2) FEET CONTOUR INTERVALS.

3. THE BOUNDARY INFORMATION FOR THIS PCA/FDPA IS FROM DEEDS AND INFORMATION OF RECORD AND SHOULD NOT BE CONSIDERED A BOUNDARY SURVEY. NO TITLE REPORT WAS PROVIDED.

4. THE PCA/FDPA APPLICATION AREAS ARE LOCATED IN THE PROVIDENCE MAGISTERIAL DISTRICT.

5. THIS PCA/FDPA APPLICATION IS IN CONFORMANCE WITH THE FAIRFAX COUNTY COMPREHENSIVE PLAN AND CONFORMS TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS AND CONDITIONS AS PREVIOUSLY APPROVED, MODIFIED OR WAIVED AND AS REQUESTED HEREON:

   * WAIVER OF THE REQUIREMENT FOR PERIPHERAL PARKING LOT LANDSCAPING FOR PROPERTY THAT ABUTS LAND NOT IN THE RIGHT-OF-WAY OF A STREET IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 13, PART 2, SECT 13-203, PARAGRAPH 3.

   * MODIFICATION OF THE TRANSITIONAL SCREENING AND BARRIER REQUIREMENTS TO THAT AS SHOWN ON THE PLANS.

   * WAIVER OF THE ONSITE STORMWATER DETENTION REQUIREMENTS AS STATED IN SECTION 101-2-2-(12) OF THE FAIRFAX COUNTY CODE/SUBDIVISION ORDINANCE AND SECTION 6-0301.3 OF THE PFM, OR IF DENIED, WAIVER OF SECTION 6-0303.8 OF THE PFM TO PERMIT UNDERGROUND (STORMWATER) DETENTION IN A RESIDENTIAL DEVELOPMENT. SEE SHEET 26 FOR ADDITIONAL INFORMATION.

   * WAVIER OF THE SERVICE DRIVE REQUIREMENT ALONG ROUTE 29.

6. TRAILS, WHERE REQUIRED BY THE COUNTY WIDE TRAILS PLAN DATED 2002, ARE AS SHOWN ON THE PLANS.

7. THE COUNTY OF FAIRFAX IS THE PUBLIC WATER AND SANITARY SEWER SUPPLY AGENCY FOR THE AREAS COVERED UNDER THIS PCA/FDPA APPLICATION.

8. STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES (SWM/BMP) WILL BE PROVIDED IN ACCORDANCE WITH FAIRFAX COUNTY ORDINANCES AS APPROVED BY THE FAIRFAX COUNTY DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES EXCEPT AS WAIVED OR MODIFIED (SEE NOTE 5 ABOVE). SEE SHEET 24, 25, 26 AND 27 FOR ADDITIONAL INFORMATION.

9. ALL KNOWN (WITHOUT THE BENEFIT OF A TITLE REPORT) EXISTING UNDERGROUND OR ABOVE GROUND UTILITY EASEMENTS HAVING A 25' WIDTH OR MORE ARE AS SHOWN ON THE PLANS.

10. THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES WITHIN THE PCA/FDPA APPLICATION AREAS. IF ANY SUBSTANCES ARE FOUND, THE METHODS FOR DISPOSAL SHALL ADHERE TO COUNTY, STATE OR FEDERAL LAWS.

11. THERE ARE NO CEMETERIES OR BURIAL SITES WITHIN THE PCA/FDPA APPLICATION AREAS.

12. IN ACCORDANCE WITH ARTICLE 16, PART 4, SECTION 16-403, PARAGRAPH 4 OF THE FAIRFAX COUNTY ZONING ORDINANCE, MINOR MODIFICATIONS TO AN APPROVED FINAL DEVELOPMENT PLAN (FDP) MAY BE PERMITTED WHEN IT IS DETERMINED THAT SUCH ARE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED FDP AND THAT SUCH ARE IN RESPONSE TO ISSUES OF TOPOGRAPHY, DRAINAGE, UNDERGROUND UTILITIES, STRUCTURAL SAFETY, LAYOUT, DESIGN, VEHICULAR CIRCULATION OR REQUIREMENTS OF VDOT AND FAIRFAX COUNTY.

13. THE APPROXIMATE LIMITS OF CLEARING AND GRADING ARE SHOWN ON THE PLANS. THESE LIMITS MAY CHANGE WITH FINAL ENGINEERING AND ARCHITECTURAL DESIGN.

14. MAXIMUM NUMBER OF UNITS ARE STATED IN THE TABULATIONS. WE RESERVE THE RIGHT TO DISTRIBUTE THE UNITS AMONG THE RESIDENTIAL BUILDINGS.

16-502 FINAL DEVELOPMENT PLAN COMMENTS:

1. A. VICINITY MAPS AS SHOWN ON THE PLANS.

   B. PROPERTY LINE INFORMATION AS SHOWN ON THE PLANS.

   C. REFER TO THE SITE TABULATIONS ON SHEET 3 FOR OVERALL PCA/FDPA APPLICATION AREA.

   D. SCALE AND NORTH ARROW AS SHOWN ON THE PLANS.

   E. EXISTING STREET INFORMATION AS SHOWN ON THE PLANS. NO IMPROVEMENTS TO THE PUBLIC RIGHT-OF-WAY ARE PROPOSED FOR LEE HIGHWAY. IMPROVEMENTS TO THE PUBLIC RIGHT-OF WAY FOR BLAKE LANE ARE AS SHOWN ON THE PLANS. REQUIRED DIMENSIONS ARE AS SHOWN ON THE PLANS.

   F. TOPOGRAPHY AS SHOWN ON THE PLANS. SEE GENERAL NOTE 2 FOR ADDITIONAL INFORMATION.

   G. THE APPROXIMATE LOCATION AND ARRANGEMENT OF ALL EXISTING AND PROPOSED USES ARE AS SHOWN ON THE PLANS.

   H. BUILDING HEIGHT AS SHOWN IN THE SITE TABULATIONS ON SHEET 3.

   I. REQUIRED DIMENSIONS FOR THE EXISTING AND PROPOSED STRUCTURES ARE AS SHOWN ON THE PLANS.

   J. BULK PLANE AS SHOWN BELOW.

   K. THE TRAFFIC AND PEDESTRIAN CIRCULATION SYSTEMS (WITH DIMENSIONS WHERE REQUIRED) ARE AS SHOWN ON THE PLANS. SEE GENERAL NOTE 6 FOR COMPREHENSIVE PLAN TRAILS REQUIREMENTS.

   L. PARKING AND LOADING SPACE REQUIREMENTS ARE AS SHOWN IN THE SITE TABULATIONS ON SHEET 3.

   M. OPEN SPACE AS SHOWN ON THE PLANS AND IN THE SITE TABULATIONS ON SHEET 3.

   N. THE APPROXIMATE LIMITS OF CLEARING AND GRADING ARE AS SHOWN ON THE PLANS. EXISTING AND PROPOSED VEGETATION AND LANDSCAPING ARE AS SHOWN ON SHEETS 5 AND 6, THE EXISTING VEGETATION MAP AND SHEET 7, 8 AND 9, THE LANDSCAPE PLANS.

   O. THERE ARE NO CEMETERIES OR BURIAL SITES WITHIN THE PCA APPLICATION AREAS.

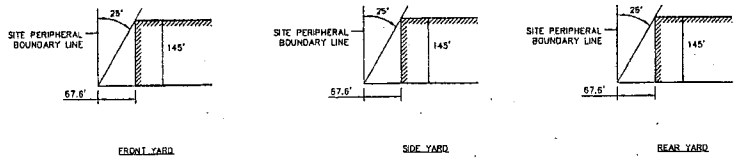
   P. EXISTING PUBLIC UTILITIES ARE IN PLACE AND CURRENTLY SERVE ALL THE PCA/FDPA APPLICATION AREAS.

   Q. REFER TO GENERAL NOTE 8 FOR STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES INFORMATION. SEE SHEETS 24, 25, 26 AND 27 FOR ADDITIONAL INFORMATION.

   R. EXISTING UTILITY EASEMENT INFORMATION AS SHOWN ON THE PLANS OR REFER TO GENERAL NOTE 9.

   S. THE COUNTY MAPPED RESOURCE PROTECTION AREA (RPA), THE APPROXIMATE LOCATION OF THE 100 FLOODPLAIN AND THE APPROXIMATE LOCATION OF THE ENVIRONMENTAL QUALITY CORRIDOR (EQC) ARE SHOWN ON THE PLANS. THE 100 YEAR FLOODPLAIN, RPA AND THE EQC WERE OBTAINED FROM INFORMATION OF RECORD OR FROM PREVIOUSLY APPROVED PLANS. ALL AREAS OUTSIDE OF THE RPA ARE CONSIDERED RESOURCE MANAGEMENT AREAS.

   T. DEVELOPMENT SCHEDULE AS ECONOMIC CONDITIONS ALLOW.



ANGLE OF BULK PLANE*

NO SCALE

* BULK PLANE INFORMATION TAKEN FROM THE R-12 ZONE.

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COMMONWEALTH OF VIRGINIA
PETER L. BNICK
No. 02-16-2011
COMPUTER GENERATED

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
GENERAL NOTES AND COMMENTS

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
10-28-08	03-16-2011
08-19-10	
REVISED 10-06-10	
DATE: 1-13-11	
DATE: 2-7-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. NA
VERT. NA

SHEET 4 OF 33

CO. NO.
CAD NAME: C08SNOTE
LAYOUT: NOTES
FILE NO. 08093.01-00

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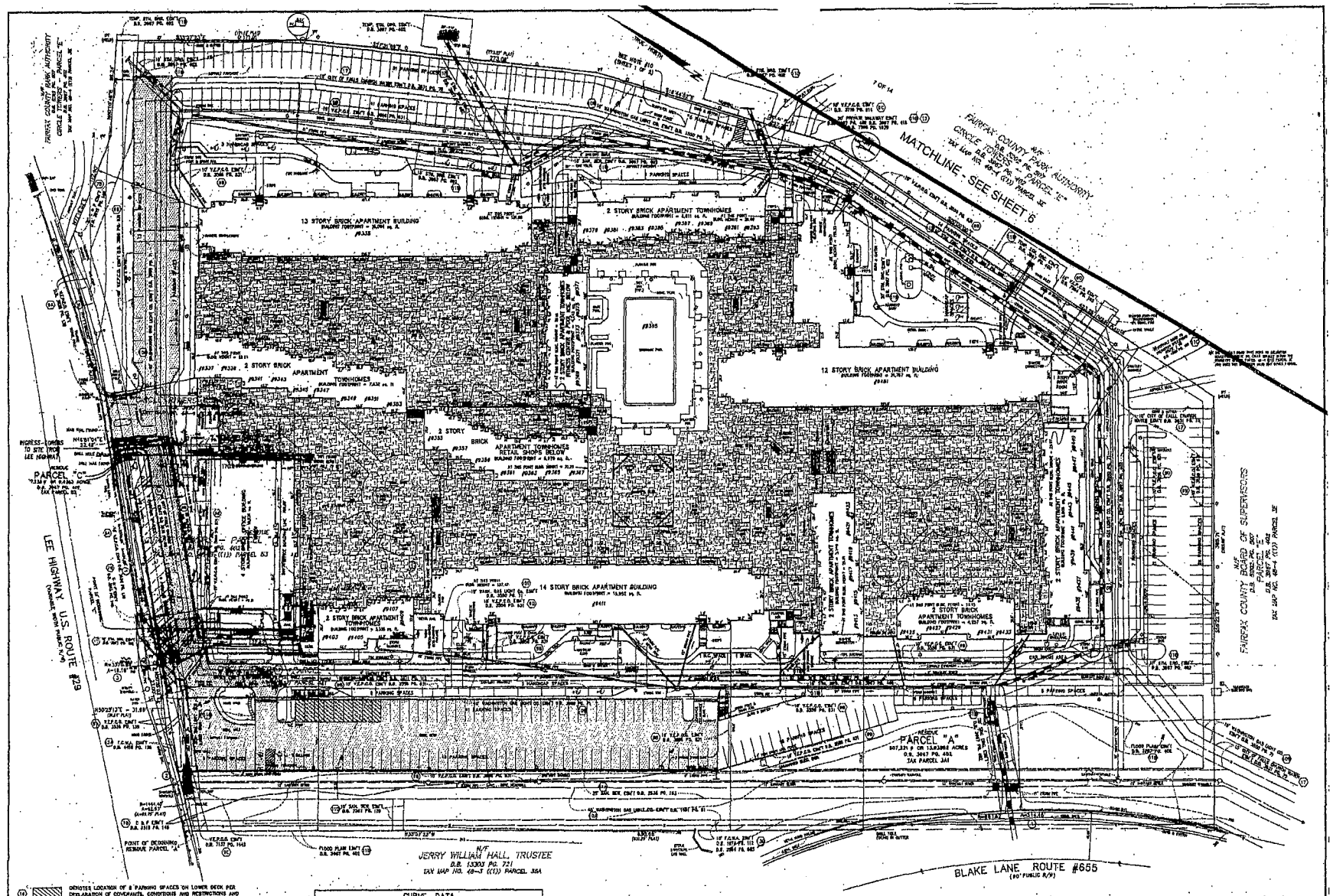

CURVE DATA						
No.	RADIUS	DELTA	ARC	TANGENT	CHORD	CH. BEARING
1	691.62'	24°28'07"	314.46'	160.06'	311.87'	N33°53'36"W
2	1444.40'	07°40'14"	92.63'	46.38'	92.61'	N41°18'08"E
3	3370.91'	00°18'22"	18.16'	9.58'	18.16'	N44°32'23"E
4	1106.00'	09°22'41"	173.44'	86.87'	173.26'	N42°39'43"E

DENOTES LOCATION OF 8 PARKING SPACES ON LOWER DECK PER DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS AND GRANT OF EASEMENTS AS RECORDED IN D.B. 18902 AT PG. 567.

DENOTES AREA OF INGRESS-EGRESS & PARKING EASEMENT PER DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS AND GRANT OF EASEMENTS AS RECORDED IN D.B. 18902 AT PG. 567.

DENOTES LOCATION OF PLAZA WALKWAY EASEMENT PER DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS AND GRANT OF EASEMENTS AS RECORDED IN D.B. 18902 AT PG. 567.

SEE SHEETS 10 AND 11 FOR EXISTING VEGETATION.

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COMMONWEALTH OF VIRGINIA
PAUL L. RICE
No. 326
03-16-2011
LICENSED PROFESSIONAL ENGINEER

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

EXISTING CONDITIONS PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
10-28-08	03-16-11
08-19-10	
10-15-10	
01-13-11	
02-07-11	
APPLICANT	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. 1"= 40' VERT.
SHEET 5 OF 33
CO. NO.
CAD NAME: C8085EXT
LAYOUT: EX-COND PLAN 1
FILE NO. 08085.01-00

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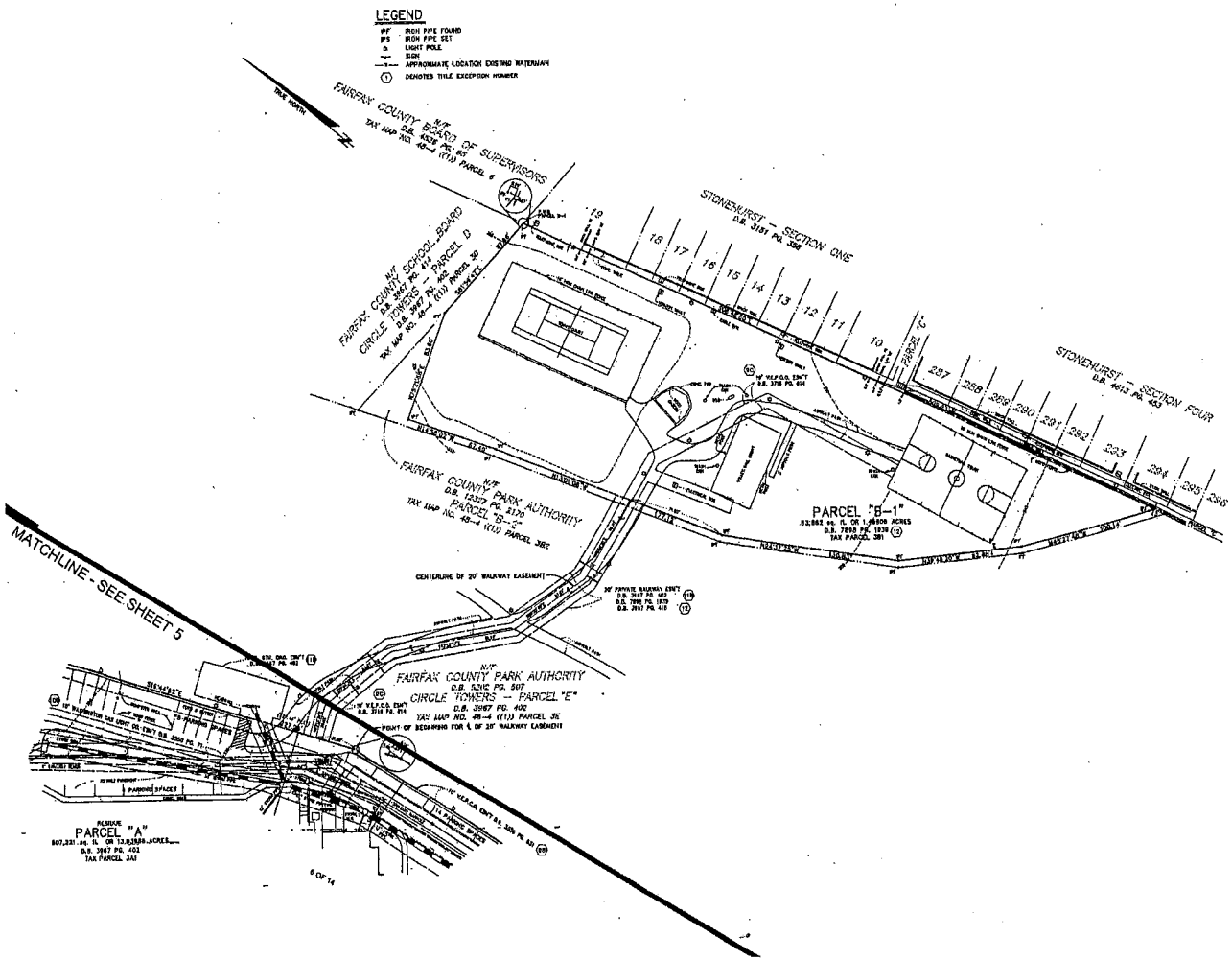

SEE SHEETS 10 AND 11 FOR EXISTING VEGETATION.

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COMMONWEALTH OF VIRGINIA — PETER L. BRICK — 3836 — 03-16-2011

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

EXISTING CONDITIONS PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
10-28-09	03-16-11
08-19-10	
10-06-10	
01-13-11	
03-03-11	
FOR PLANNING	

DESIGNED BY: PLR

DRAFTED BY: CAD

CHECKED BY: PLR

DATE: JUNE 2009

SCALE: HOR. 1" = 40' VERT.

SHEET 6 OF 33

CO. NO.

CAD NAME: C8085EXT

LAYOUT: EX-CONDPLAN 2

FILE NO. 08085.01-00

NOTE: SEE SHEET 8 FOR 10 YEAR TREE CANOPY/CALCULATIONS

SCALE: 1" = 40'

MATCHLINE

MATCHLINE - SEE SHEET 8

TO PARCEL 3B1 (NOT SHOWN). PARCEL 3B1 IS PART OF THE PCA/TDPA BUT NO DISTURBANCES ARE PROPOSED FOR THIS AREA. SEE SHEET 11 FOR ADDITIONAL INFORMATION ABOUT THIS AREA.

PROPOSED RETAIL

EXISTING TOWER 1

PROPOSED GREENROOF

LOADING

EXISTING TOWNHOUSES

FINAL LAYOUT OF PLANTERS TO BE DETERMINED

RECONSTRUCTED PLAZA DECK

PROPOSED RETAIL

POSSIBLE RETAIL

PROPOSED BUILDING A RESIDENTIAL, RETAIL, LEASING OFFICE AND AMENITIES

EXISTING TOWER 3

FINAL LAYOUT OF PLANTERS TO BE DETERMINED

EXISTING OFFICE BUILDING

FINAL LAYOUT OF PLANTERS TO BE DETERMINED

EXISTING TOWNHOUSES (TO BE REMOVED)

EXISTING TOWER 2

PROPOSED OFFICE

PROPOSED BUILDING B RESIDENTIAL BUILDING

PARKING AND PAVEMENT TO BE REMOVED

S33°37'25"E 5.55'

EE HIGHWAY US ROUTE # 29

N20°09'19"W 173.09'

WETLAND DRAINAGE

TOTAL SAVE AREA (NO TREE CANOPY CREDIT TAKEN, AREA TO BE ALLOWABLE DEDUCT AREA OR OTHER EASEMENTS)

SEE 1/9 ON SHEET 9 FOR RPA RESTORATION PLAN

NOTE: SEE SHEET 13 FOR INDIVIDUAL TREES TO BE REMOVED IN THIS AREA

LEGEND:

- PROPOSED TREELINE
- EXISTING TREELINE
- INDIVIDUAL TREE OR SMALL GROUP OF TREES
- EXISTING TREE TO BE REMOVED
- PROPOSED GREENROOF/PLANTER
- AREA DEDUCTED FROM THE GROSS SITE AREA**
- AREA OF EXISTING UTILITY EASEMENTS
- POST DEVELOPMENT 10 YEAR TREE CANOPY CREDIT AREA (73,037 s.f. ±)
- EXISTING INTERIOR PARKING LOT LANDSCAPING TREE CANOPY CREDIT AREA (TREES TO REMAIN 14,375 s.f.±)
- INTERIOR PARKING LOT AREA (214,838 s.f.±)
- PERIPHERAL PARKING LOT SHADE TREE ADJACENT TO R.O.W. (CATEGORY IV DECIDUOUS TREE)
- 3" CATEGORY IV DECIDUOUS TREE
- 2" CATEGORY III DECIDUOUS TREE
- 2" CATEGORY II DECIDUOUS TREE
- 2" CATEGORY IV EVERGREEN TREE
- 2" CATEGORY III EVERGREEN TREE
- 2" CATEGORY II EVERGREEN TREE

N IDENTIFIES PROPOSED NATIVE TREE

W IDENTIFIES PROPOSED TREE PLANTED FOR WILDLIFE BENEFIT

EC IDENTIFIES PROPOSED TREE PLANTED FOR ENERGY CONSERVATION

WQ IDENTIFIES PROPOSED TREE PLANTED FOR WATER QUALITY

NC IDENTIFIES PROPOSED TREE WHERE NO CANOPY CREDIT IS TAKEN. THIS TREE IS A SUPPLEMENTAL TREE TO BE PLANTED IN A PROPOSED PRESERVATION AREA OR RPA. CANOPY CREDIT HAS ALREADY BEEN RESERVED WITHIN THIS AREA.

LIMITS OF CLEARING AND GRADING

LIMITS OF FILL ONLY FOR MICRO-POOL EMBANKMENTS

** ALLOWABLE AREA TO BE DEDUCTED FROM THE GROSS SITE AREA. THIS AREA CONTAINS A 40' WASHINGTON GAS LIGHT EASEMENT, A 25' SANITARY SEWER EASEMENT AND PROPOSED DEDICATION FOR BLAKE LANE.

SEE SHEETS 30 AND 33 FOR RPA RESTORATION INFORMATION.

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PETER L. BECK No. 3201 06-16-2011 COMMONWEALTH OF VIRGINIA

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

LANDSCAPE PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 10-26-09 REVISED 01-13-11
REVISED 08-19-10 DATE 2-7-11
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SHEET 7 OF 33

CO. NO.

CAD NAME: C8085LSC

LAYOUT: LSC

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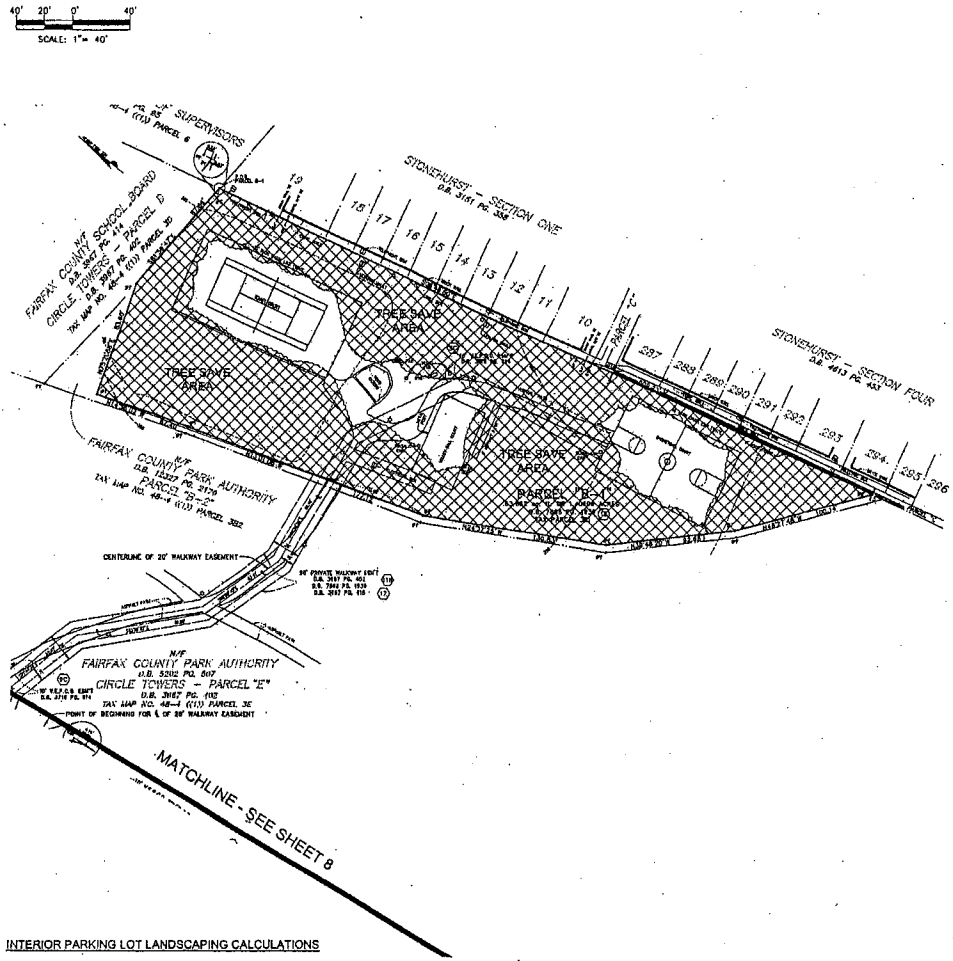

INTERIOR PARKING LOT LANDSCAPING CALCULATIONS

INTERIOR PARKING LOT AREA:	214,836 s.f.±
AREA REQUIRED FOR INTERIOR PARKING LOT LANDSCAPING:	0.05 X 214,836 s.f. = 10,742 s.f.±
INTERIOR PARKING LOT AREA PROVIDED BY EXISTING PARKING LOT TREES TO BE PRESERVED:	14,375 s.f.±
INTERIOR PARKING LOT AREA TO BE PROVIDED BY ADDITIONAL TREE PLANTINGS:	NONE REQUIRED

PERIPHERAL PARKING LOT LANDSCAPING CALCULATIONS

PERIPHERAL PARKING LOT FRONTAGE ALONG R.O.W.:	238 l.f.±
NUMBER OF SHADE TREES REQUIRED AT ONE TREE PER 40 l.f.:	5.95 OR 6 TREES
NUMBER OF SHADE TREES PROVIDED ALONG R.O.W. FRONTAGE:	6 TREES
PERIPHERAL PARKING LOT FRONTAGE ALONG ADJACENT PROPERTY:	1,239 l.f.±

A WAIVER OF THE PERIPHERAL PARKING LOT LANDSCAPING ADJACENT TO A PROPERTY HAS BEEN REQUESTED. SEE GENERAL NOTE 5 ON SHEET 4 FOR ADDITIONAL INFORMATION.

LEGEND:

- PROPOSED TREELINE
- EXISTING TREELINE
- INDIVIDUAL TREE OR SMALL GROUP OF TREES
- EXISTING TREE TO BE REMOVED
- PROPOSED GREENROOF/PLANTER
- AREA DEDUCTED FROM THE GROSS SITE AREA**
- AREA OF EXISTING UTILITY EASEMENTS
- POST DEVELOPMENT 10 YEAR TREE CANOPY CREDIT AREA (73,037 s.f. ±)
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NC IDENTIFIES PROPOSED TREE WHERE NO CANOPY CREDIT IS TAKEN. THIS TREE IS A SUPPLEMENTAL TREE TO BE PLANTED IN A PROPOSED PRESERVATION AREA OR RPA. CANOPY CREDIT HAS ALREADY BEEN RESERVED WITHIN THIS AREA.

LIMITS OF CLEARING AND GRADING

** ALLOWABLE AREA TO BE DEDUCTED FROM THE GROSS SITE AREA. THIS AREA CONTAINS A 40' WASHINGTON GAS LIGHT EASEMENT, A 25' SANITARY SEWER EASEMENT AND PROPOSED DEDICATION FOR BLAKE LANE.

SEE SHEETS 30 AND 33 FOR RPA RESTORATION INFORMATION.

TREE PRESERVATION TARGET AND STATEMENT: (10 YEAR TREE CANOPY CALCULATIONS)

A.	TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT	Totals (s.f.)
A1	Pre-development Area of Existing Tree Canopy	199,958
A2	Percentage of Gross Site Area Covered by Existing Tree Canopy (A1/B1)	27.2%
A3	Percentage of 10-year Tree Canopy Required for the Site (See Note 1 Below)	15%
A4	Percentage of the 10-Year Tree Canopy Requirement That Should be Met Through Tree Preservation	27.2%
A5	Proposed Percentage of Canopy Requirement That Will be Met Through Tree Preservation (C10/B7)	87.4%
A6	Has the Tree Preservation Target Minimum Been Met?	Yes
A7	If A6 is no, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in §12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be met. Provide sheet number where deviation request is located. The narrative shall be prepared in accordance with §12-0507.4.	N/A
B.	TREE CANOPY REQUIREMENT	
B1	Identify Gross Area	698,321
B2	Subtract Areas Dedicated to Parks, and Road Frontage	1,017
B3	Subtract Area of Exemption	47,253
B4	Adjusted Gross Site Area B1- (B2+B3)	650,051
B5	Identify Site's Zoning and/or Use	PDH-12
B6	Percentage of 10-Year Tree Canopy Required	15%
B7	Area of 10 Year Tree Canopy Required (B4xB6)	97,508
B8	Modifications of 10-Year Tree Canopy Requirements Requested	No
B9	If B8 is Yes, Then List Plan Sheets Where Modification Request is Located	N/A
C.	TREE CANOPY PRESERVATION	
C1	Tree Preservation Target Area (B7 x A4)	26,524
C2	Total Canopy Area Meeting Standards of §12-0200	48,724
C3	C2 x 1.25	60,905
C3.1	Total Canopy Area Meeting Standards of §12-0200 But Does Not Qualify for Bonus Multiplier	11,460
C3.2	C3.1 x 1.00	11,460
C4	Total Canopy Area Provided by Unique or Valuable Forest or Woodland Community	0
C5	C4 x 1.5	0
C6	Total Canopy Area Provided by "Heritage," Memorial," Specimen," or "Street Tree"	0
C7	C6 x 1.5 to 3.0	0
C8	Canopy Area of Trees Within Resource Protection Areas and 100-Year Floodplains	12,827
C9	C8 x 1.0	12,827
C10	Totals of C3, C3.1, C5, C7 and C9	85,216
D.	TREE PLANTING	
D1	Area of Canopy to be Met Through Tree Planting (B7-C10)	12,290
D2	Area of Canopy Planted for Air Quality Benefits	0
D3	D2 x 1.5	0
D4	Area of Canopy Planted for Energy Conservation	1,500
D5	D4 x 1.5	2,250
D6	Area of Canopy Planted for Water Quality Benefits	500
D7	D6 x 1.25	750
D8	Area of Canopy Planted for Wildlife Benefits	2,250
D9	D8 x 1.5	3,375
D10	Area of Canopy Provided by Native Species	7,250
D11	D10 x 1.5	10,875
D12	Area of Canopy Provided by Improved Cultivars and Varieties	0
D13	D12 x 1.25	0
D14	Area of Canopy Provided Through Tree Seeding	0
D14.1	D14 x 1.0	0
D15	Area of Canopy Provided Through Native Shrubs or Wood Seed Mix	0
D15.1	D15 x 1.5	0
D16	Percentage of D14 Represented by D15 (D15/D14) Must not exceed 33% of D14	-
D16.1	Area of Canopy Planted With No Multiplier (See Note 2 Below)	1,850
D17	Total Canopy Area Provided Through Tree Planting (Totals of D3, D5, D7, D9, D11, D13, D14.1, D15.1 and D16.1)	18,900
D18	Is an Offsite Planting Relief Requested?	No
D19	Tree Bank or Tree Fund	N/A
D20	Canopy Area Requested to be Provided Through Offsite Banking or Tree Fund	0
D21	Amount to be Deposited Into the Tree Preservation and Planting Fund	0
E.	TOTAL OF 10-YEAR TREE CANOPY PROVIDED	
E1	Total of Canopy Area Provided Through Tree Preservation (C10)	85,216
E2	Total of Canopy Area Provided Through Tree Planting (D17)	18,900
E3	Total of Canopy Area Provide Through Offsite Mechanism (D20)	0
E4	Total of 10-Year Tree Canopy Provided (Totals of E1, E2 and E3)	104,116

NOTE: NUMBERS REPORTED ABOVE ARE APPROXIMATE AND MAY CHANGE WITH FINAL ENGINEERING.

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COMMONWEALTH OF VIRGINIA
PETER L. RHEE
No. 3361
03-16-2011
PROFESSIONAL ENGINEER

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
LANDSCAPE PLAN
CIRCLE TOWERS APARTMENTS
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
ORIGINAL: OCTOBER 28, 2009	
REVISED: 06-19-10	DATE: 01-13-11
REVISED: 10-06-10	DATE: 2-7-11
	03-16-11
	APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. 1" = 40' VERT. 1" = 40'
SHEET 8 OF 33
CO. NO.
CAD NAME: C8085LSC2
LAYOUT: LSC-2
FILE NO. 08085.01-00

LEGEND:

- PROPOSED TREELINE
- EXISTING TREELINE
- INDIVIDUAL TREE OR SMALL GROUP OF TREES
- EXISTING TREE TO BE REMOVED
- PROPOSED GREENROOF/PLANTER
- AREA DEDUCTED FROM THE GROSS SITE AREA**
- AREA OF EXISTING UTILITY EASEMENTS
- POST DEVELOPMENT 10 YEAR TREE CANOPY CREDIT AREA (73,037 s.f. ±)
- EXISTING INTERIOR PARKING LOT LANDSCAPING TREE CANOPY CREDIT AREA (TREES TO REMAIN 14,375 s.f.±)
- INTERIOR PARKING LOT AREA (214,836 s.f.±)
- PERIPHERAL PARKING LOT SHADE TREE ADJACENT TO R.O.W. (CATEGORY IV DECIDUOUS TREE)
- 3" CATEGORY IV DECIDUOUS TREE
- 2" CATEGORY III DECIDUOUS TREE
- 2" CATEGORY II DECIDUOUS TREE
- 2" CATEGORY IV EVERGREEN TREE
- 2" CATEGORY III EVERGREEN TREE
- 2" CATEGORY II EVERGREEN TREE

N IDENTIFIES PROPOSED NATIVE TREE

W IDENTIFIES PROPOSED TREE PLANTED FOR WILDLIFE BENEFIT

EC IDENTIFIES PROPOSED TREE PLANTED FOR ENERGY CONSERVATION

WQ IDENTIFIES PROPOSED TREE PLANTED FOR WATER QUALITY

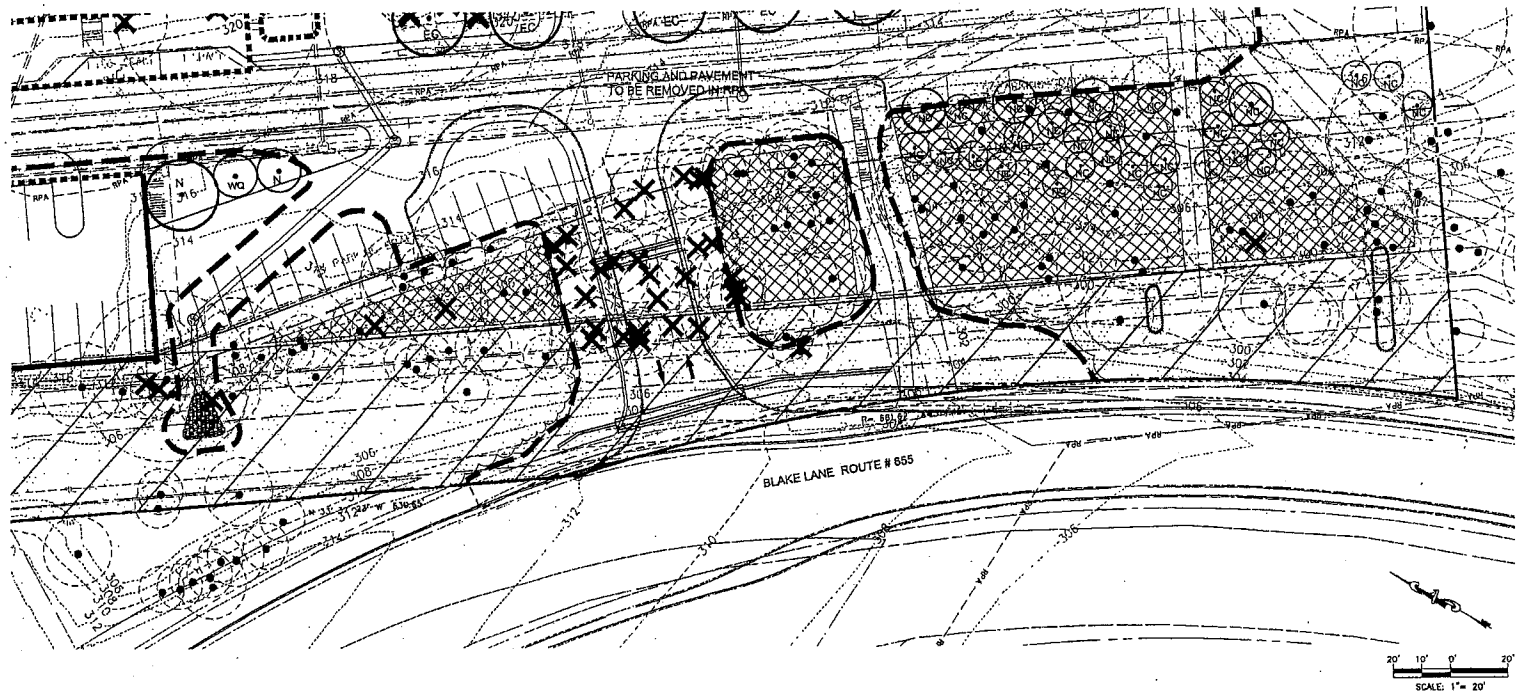
NC IDENTIFIES PROPOSED TREE WHERE NO CANOPY CREDIT IS TAKEN. THIS TREE IS A SUPPLEMENTAL TREE TO BE PLANTED IN A PROPOSED PRESERVATION AREA OR RPA. CANOPY CREDIT HAS ALREADY BEEN RESERVED WITHIN THIS AREA.

LIMITS OF CLEARING AND GRADING

** ALLOWABLE AREA TO BE DEDUCTED FROM THE GROSS SITE AREA. THIS AREA CONTAINS A 40' WASHINGTON GAS LIGHT EASEMENT, A 25' SANITARY SEWER EASEMENT AND PROPOSED DEDICATION FOR BLAKE LANE.

SEE SHEETS 30 AND 33 FOR RPA RESTORATION INFORMATION.

NOTE: SEE SHEET 8 FOR 10 YEAR TREE CANOPY CALCULATIONS



1/9 RPA PLAN (SEE SHEET ## FOR RPA RESTORATION/ ENHANCEMENT PLAN)

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PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

LANDSCAPE PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
SHEET ADDED OCTOBER 28, 2009
REVISED: 08-19-10 DATE: 2-7-11
12-09-10
REVISED: 02-08-10 02-18-11
REVISED: 01-13-11
APPLICANT

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. 1" = 20'
VERT. 1" = 20'
SHEET 9 OF 33
CO. NO.
CAD NAME: C8085LSC3
LAYOUT: LSC3
FILE NO. 08005.01-00

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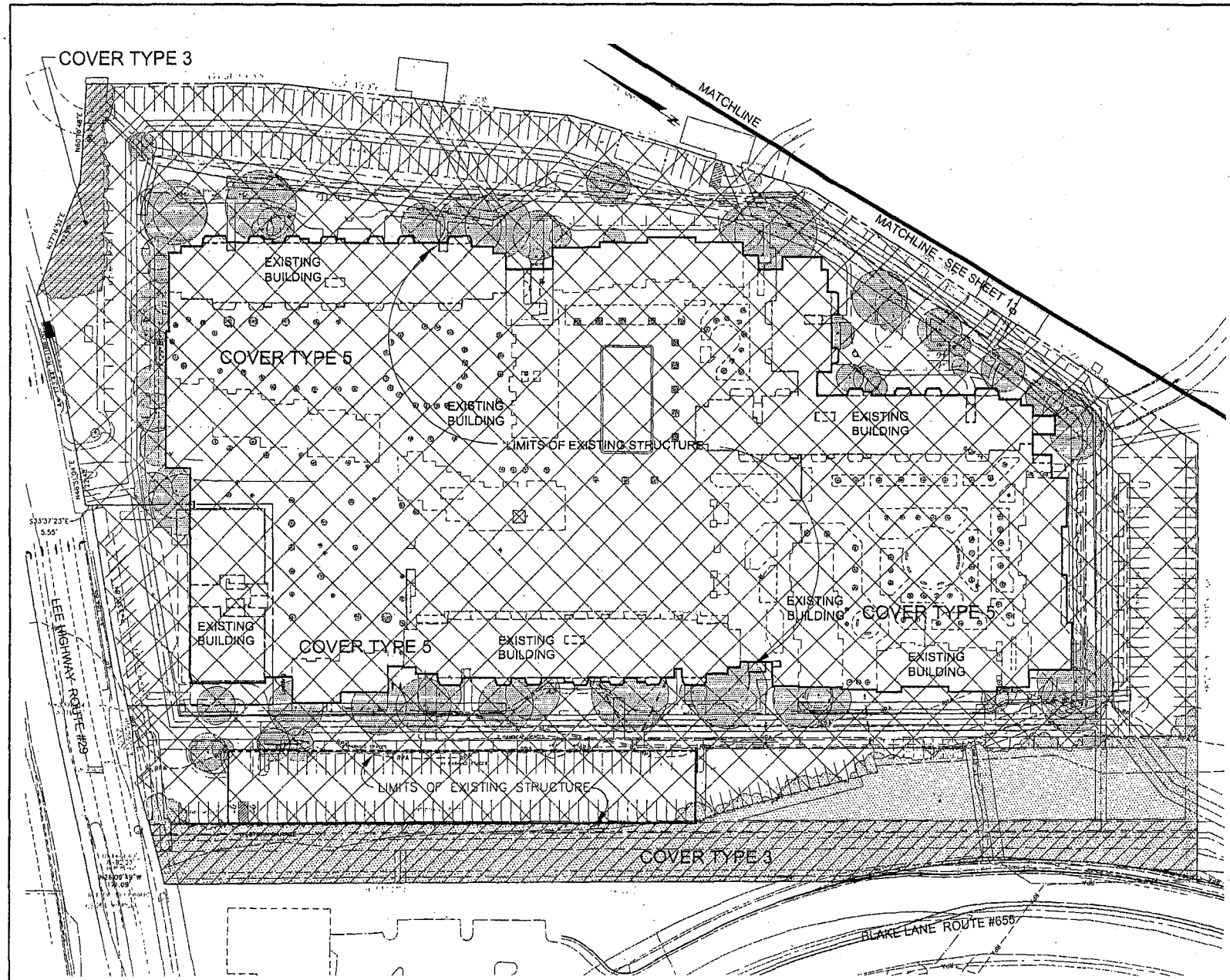

EXISTING VEGETATION MAP LEGEND:

- COVER TYPE 5
- COVER TYPE 3
- EXISTING PRE-DEVELOPMENT TREE CANOPY AREA* (189,956 s.f.±)
- EXISTING TREELINE (FIELD VERIFIED)

* DEFINES EXISTING TREE CANOPY COVER AREA (ON-SITE) IN ACCORDANCE WITH THE PROVISIONS OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, SECTION 12-0505.1A.

SEE SHEET 11 FOR THE EXISTING VEGETATION MAP SUMMARY TABLE AND NARRATIVE.

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PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

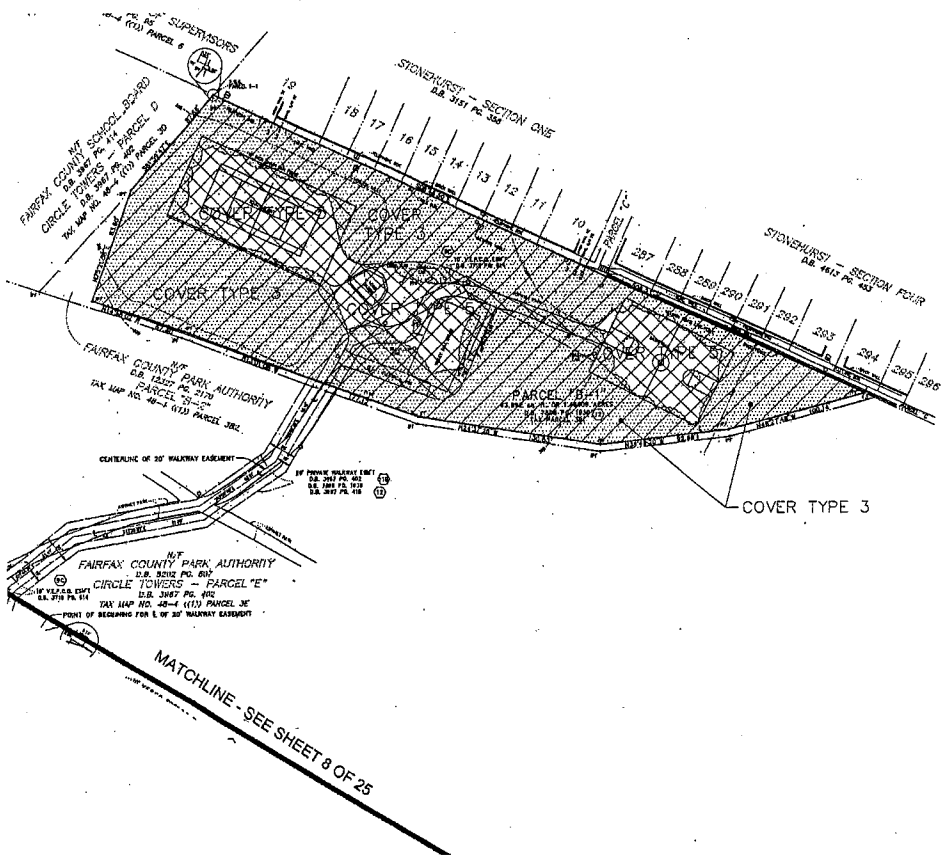
EXISTING VEGETATION MAP

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	DATE
REVISED: 10-28-08	2-7-11
08-19-10	03-16-11
10-04-10	
12-30-10	
01-13-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. 1"= 40' VERT.
SHEET 10 OF 33
CO. NO.
CAD NAME: C8085EVM
LAYOUT: EVM
FILE NO. 08085.01-00



SEE SHEET 8 FOR THE TREE PRESERVATION TARGET AND STATEMENT.

EXISTING VEGETATION MAP SUMMARY TABLE AND NARRATIVE:

KEY	COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	AREA (Ac)	NARRATIVE
3	EARLY SUCCESSIONAL FOREST COMMUNITY AREA	BLACK LOCUST, BLACK WILLOW, OAK, MAPLE AND TULIP POPLAR	MATURE	FAIR TO GOOD	2.69 Ac.±	THIS AREA IS DOMINATED BY BLACK LOCUST, BLACK WILLOW, MAPLE AND TULIP POPLAR. TREES IN THIS COVER TYPE RANGE FROM 8" TO 36" dbh. THIS STAND CONTAINS PATCHES OF BRIERS, VINES AND MULTIFLORA ROSE SCATTERED THROUGHOUT; HAVING A DIRECT IMPACT ON SOME OF THE TREES. THE OVERALL QUALITY OF THE TREES IS GOOD TO FAIR, HOWEVER, THERE ARE SEVERAL TREES THAT ARE IN VERY POOR HEALTH OR ARE POTENTIALLY HAZARDOUS.
	DEVELOPED AREA	ZELKOVA, PINE AND CRYPTOMERIA	N/A	N/A	13.34 Ac.±	AREAS OF CONSTRUCTED FEATURES INCLUDING BUILDINGS, PARKING AND ROADWAYS.
				TOTAL	16.03 Ac.±	

EXISTING VEGETATION MAP LEGEND:

- COVER TYPE 5
- COVER TYPE 3
- EXISTING PRE-DEVELOPMENT TREE CANOPY AREA* (189,956 s.f.±)
- EXISTING TREELINE (FIELD VERIFIED)

* DEFINES EXISTING TREE CANOPY COVER AREA (ON-SITE) IN ACCORDANCE WITH THE PROVISIONS OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, SECTION 12-0505.1A.

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PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

EXISTING VEGETATION MAP

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED: 10-28-09	03-16-11
08-19-10	
10-04-10	
01-13-11	
02-24-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2008
SCALE: HOR. 1" = 40' VERT.
SHEET 11 OF 33
CO. NO.
CAD NAME: C8085EVM2
LAYOUT: EVM-2
FILE NO. 08085.01-00

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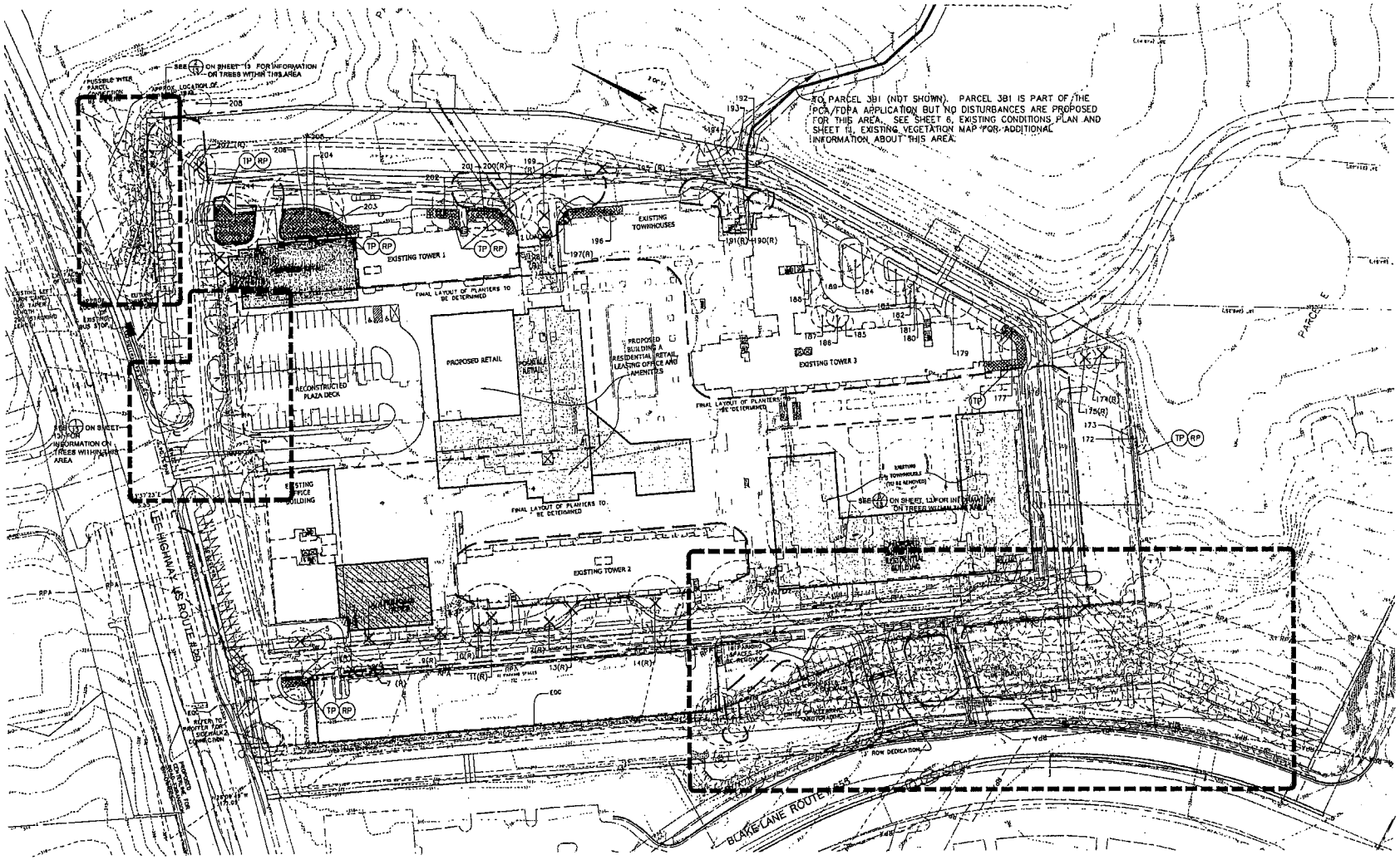
LEGEND:

- LIMITS OF CRITICAL ROOT ZONE (CRZ)
- (CRZ) EXISTING TREE TO BE PRESERVED
- (CRZ) EXISTING TREE TO BE REMOVED
- MULCH AREA (TP)
- LIMITS OF CLEARING AND GRADING
- (TP) (RP) TREE PROTECTION FENCE AND/OR ROOT PRUNE (TP) (RP)
- (R) TREE IDENTIFIED AS 'TO BE REMOVED'
- (RWP) TREE IDENTIFIED AS 'TO BE REMOVED WITH PERMISSION' (OUTSIDE LIMITS OF CLEARING AND GRADING)
- (D) TREE IDENTIFIED AS 'DEAD-TO BE REMOVED'
- (HZ) TREE IDENTIFIED AS 'POTENTIAL HAZARD-TO BE CONSIDERED FOR REMOVAL'
- (PC) TREE IDENTIFIED AS 'POOR CONDITION' (LESS THAN 40% CONDITION RATING)

SEE SHEETS 14, 15, 16, 17 AND 18 FOR TREE INVENTORY AND CONDITION ANALYSIS. SEE SHEET 19 FOR IHLL PRESERVATION NARRATIVE AND DETAILS.



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PETER L. BNER 381 03-16-2011

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

TREE PRESERVATION PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED: 10-28-09	DATE: 2-7-11
REVISED: 06-15-10	03-16-11
REVISED: 10-06-10	
REVISED: 10-13-10	
03-3-11	
APPLICANT	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR 1" = 50' VERT.
SHEET 12 OF 33
CO. NO.
CAD NAME: C8085TTP
LAYOUT: TTP
FILE NO. 08085.01-00

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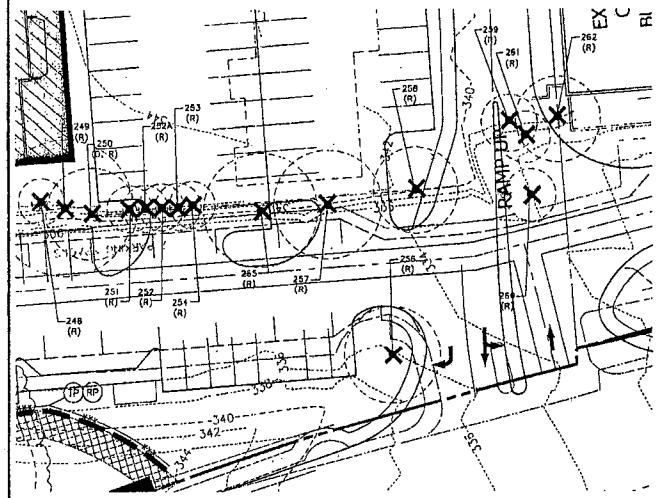
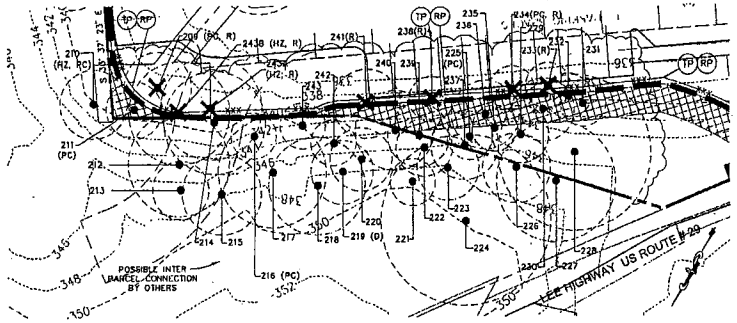


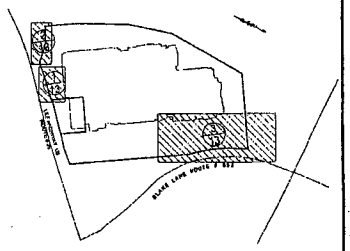
1/13 TREE PRESERVATION ALONG LEE HIGHWAY (ADJACENT TO OFFICE BLDG)

SCALE: 1"= 20'



2/13 TREE PRESERVATION AT LEE HIGHWAY

SCALE: 1"= 20'



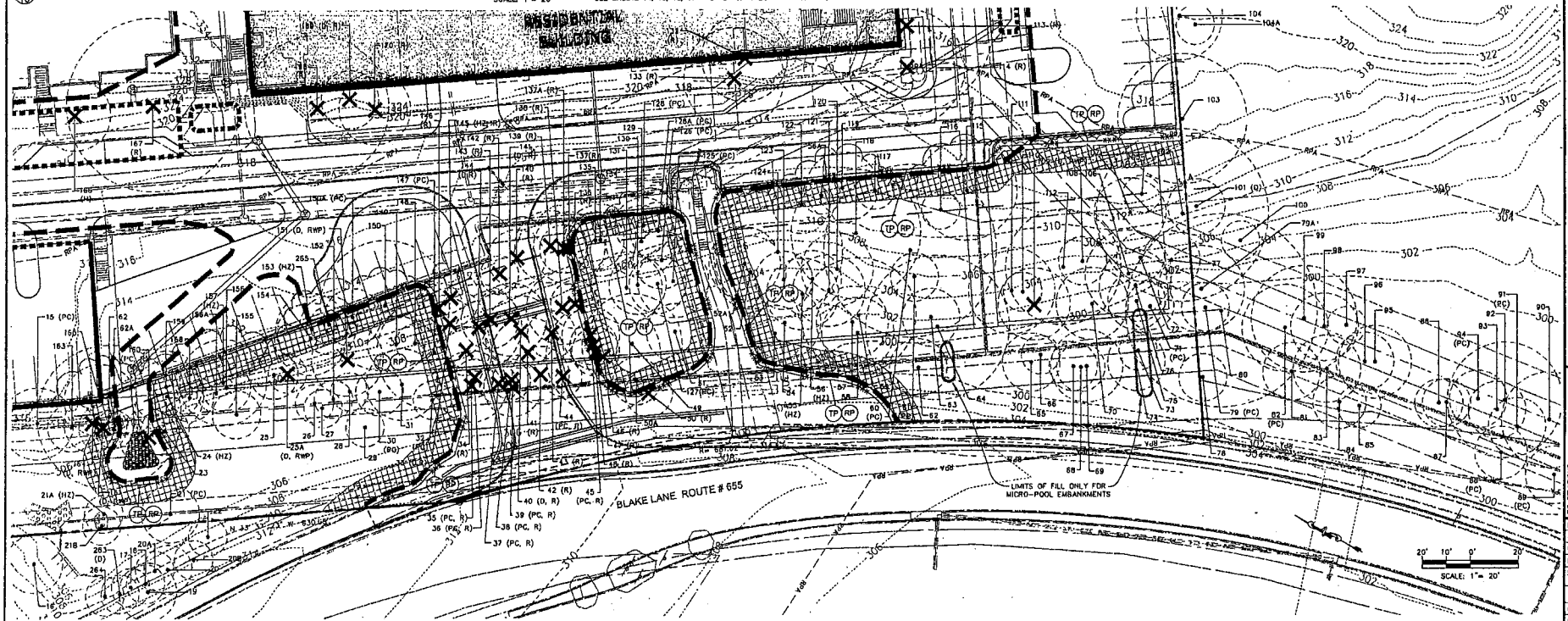
KEY MAP

SCALE: 1"= 300'

LEGEND:

- LIMITS OF CRITICAL ROOT ZONE (CRZ)
- (CRZ) EXISTING TREE TO BE PRESERVED
- (CRZ) EXISTING TREE TO BE REMOVED
- LIMITS OF CLEARING AND GRADING
- MULCH AREA
- TP TREE PROTECTION FENCE AND/OR RP ROOT PRUNE
- (R) TREE IDENTIFIED AS 'TO BE REMOVED'
- (RWP) TREE IDENTIFIED AS 'TO BE REMOVED WITH PERMISSION' (OUTSIDE LIMITS OF CLEARING AND GRADING)
- (D) TREE IDENTIFIED AS 'DEAD-TO BE REMOVED'
- (HZ) TREE IDENTIFIED AS 'POTENTIAL HAZARD-TO BE CONSIDERED FOR REMOVAL'
- (PC) TREE IDENTIFIED AS 'POOR CONDITION' (LESS THAN 40% CONDITION RATING)

SEE SHEETS 14, 15, 16, 17 AND 18 FOR TREE INVENTORY AND CONDITION ANALYSIS. SEE SHEET 19 FOR TREE PRESERVATION NARRATIVE AND DETAILS.



3/13 TREE PRESERVATION AT BLAKE LANE

SCALE: 1"= 20'

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COMMONWEALTH OF VIRGINIA — PETER L. BEE — No. 3111 — 03-14-2011

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

TREE PRESERVATION PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	DATE
1	3-7-11
2	03-16-11
3	
4	
5	
6	

09/25/2009	
REMSED:	10-06-10
	12-09-10
	01-13-11
APPLICANT:	

DESIGNED BY: PLR

DRAFTED BY: CAD

CHECKED BY: PLR

DATE: JUNE 2009

SCALE: HOR. 1"= 20' VERT. 1"= 20'

SHEET 13 OF 33

CO. NO.

CAD NAME: C08SSTTP2

LAYOUT: DETAILS TTP

FILE NO. 08085.01-00

TREE INVENTORY AND CONDITION ANALYSIS

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE	**CRZ	CONDITION	CANOPY POSITION	CROWN DENSITY	AVERAGE CROWN SPREAD	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS	
		*DBH (In)	R (ft)	% ***		%	D (ft)										
1	Quercus ssp./Oak	21"	21'	59	Codominant	55%	40'	P							On an incline; heavily pruned; branch damage; one sided.	A, B	
2	Liriodendron tulipifera/Tulip Poplar	19"	19'	66	Codominant	50%	30'	P							Branches dead/damaged; on an incline; one sided; leaning.	A, B	
3	Ilex opaca/American Holly	8"	8'	72	Suppressed	55%	20'	P	X	X	X				One sided; heavily limbed up.	Twin-Stem A, B	
4	Quercus spp./Oak	30"	30'	94	Dominant	98%	35'	P	X	X	X				Pruning scars; minor branch damage.	A, B	
5	Prunus spp./Cherry	12"	12'	97	Dominant	100%	35'	R							No visible problems.	A	
6	Zelkova serrata/Japanese Zelkova	12"	12'	72	Codominant	80%	30'	R							Branches rubbing.	A, B	
7	Zelkova serrata/Japanese Zelkova	12"	12'	91	Codominant	75%	30'	R							No visible damaged.	A, B, E	
8	Zelkova serrata/Japanese Zelkova	24"	24'	72	Dominant	60%	50'	R							Heavily pruned; dead/rubbing branches; one sided; fungus at base.	A, B, E	
9	Zelkova serrata/Japanese Zelkova	24"	24'	72	Dominant	65%	50'	R							Flaking bark; pruning scars; damaged branches; exposed/girdling roots; trunk fungus.	A, B, E	
10	Zelkova serrata/Japanese Zelkova	21"	21'	75	Codominant	70%	50'	R							Girdling roots; trunk fungus; heavily pruned; branch decay; pruning scars.	A, B, E	
11	Zelkova serrata/Japanese Zelkova	36"	36'	75	Dominant	75%	40'	R							Heavily pruned; pruning scars; roots exposed; branches rubbing.	E	
12	Zelkova serrata/Japanese Zelkova	24"	24'	72	Codominant	65%	50'	R							Heavily pruned; girdling; leaning; major roots exposed; branch damaged; pruning scars.	A, B, E	
13	Zelkova serrata/Japanese Zelkova	27"	27'	72	Codominant	60%	50'	R							Heavily pruned; one sided; leaning; root girdling; pruning scars; roots exposed.	A, E	
14	Zelkova serrata/Japanese Zelkova	30"	30'	72	Dominant	60%	70'	R							On slight incline; roots exposed; leaning; one sided; girdling; heavily pruned; pruning scars.	A	
15	Liriodendron tulipifera/Tulip Poplar	15"	15'	38	Dominant	75%	20'	P							Dead/rotting trunk at base; top branching only; insect infestation; branch damage; pruning scars.	Poor Condition A, B, C, E	
16	Robinia pseudoacacia/Black Locust	12"	12'	50	Dominant	75%	50'	POS							Dead/rotting/broken branches; insect infestation; 15' from culvert.	Multi-Stem Off-Site	
17	Cedrus spp./Cedar	8"	8'	78	Codominant	95%	10'	POS							Limbed up; steep slope; erosion; exposed roots; dead branches.	Off-Site	
18	Cedrus spp./Cedar	8"	8'	66	Codominant	95%	10'	POS							Limbed up; on bank; erosion; exposed roots; dead branches.	Off-Site	
19	Pinus spp./Pine	12"	12'	66	Codominant	80%	15'	POS							Erosion; exposed roots; growing into Cedar at left side.	Off-Site	
20	Cedrus spp./Cedar	10"	10'	69	Codominant	95%	15'	POS							Exposed roots; dead branches; vine covered; bank erosion.	Off-Site	
20A	Acer spp./Maple	8"	8'	72	Dominant	85%	18'	POS							On an incline; erosion; exposed roots; rubbing branches.	Off-Site	
20B	Cedrus spp./Cedar	8"	8'	70	Suppressed	90%	12'	POS							On an incline; erosion; exposed roots.	Off-Site	
21	Salix nigra/Black Willow	12"	12'	34	Dominant	40%	30'	P		X					Dying; vine covered; dead/decaying branches; trunk rot;	Poor Condition B, C	
21A	Robinia pseudoacacia/Black Locust	10"	10'	66	Codominant	60%	35'	TBD		X					Leaning; vine covered; broken/dead branches; in middle of stream.	Hazardous B, C	
21B	Salix nigra/Black Willow	8"	8'	72	Codominant	50%	15'	P		X					Vine covered; growing in middle of stream.	B, C	
22	Acer spp./Maple	8"	8'	72	Codominant	70%	15'	POS							Vine growth; rubbing branches.	Off-Site	
23	Salix nigra/Black Willow	10"	10'	59	Codominant	60%	35'	P	X	X	X				Dead/damaged branches.	B, C, Multi-Stem	●
24	Acer spp./Maple	15"	15'	69	Codominant	40%	35'	TBD	X	X	X				On an incline; leaning; missing/dead branches.	Hazardous A, B, C	●
25	Acer spp./Maple	10"	10'	66	Codominant	60%	35'	P		X					Growing on bank; trunk fungus; broken branches.	C Multi-Stem	
25A	Felled Tree	30"	–	–	–	–	–	RWP							–	Dead C	
26	Robinia pseudoacacia/Black Locust	8"	8'	53	Codominant	35%	20'	P							Dead/decaying/rotting/broken branches.	B, C	
27	Robinia pseudoacacia/Black Locust	8"	8'	53	Dominant	35%	15'	P							Dead/damaged/rotting/broken branches.	B, C	
28	Robinia pseudoacacia/Black Locust	8"	8'	56	Codominant	50%	10'	P							Dead/damaged/rotting/broken branches.	B, C	
29	Robinia pseudoacacia/Black Locust	8"	8'	44	Dominant	20%	10'	P							Leaning; exposed roots; vine covered; broken/dead branches; growing at the edge of the stream.	B, C	
30	Robinia pseudoacacia/Black Locust	10"	10'	38	Codominant	30%	15'	P							Trunk damage; damaged/rotting/broken branches:	Poor Condition B, C	
31	Robinia pseudoacacia/Black Locust	15"	15'	69	Codominant	50%	35'	P		X					Dead/damaged/broken branches; lateral branches.	B, C	
32	Salix nigra/Black Willow	8"	8'	31	Codominant	20%	15'	P	X	X	X				Leaning; damaged branches; trunk damage; insect infestation; erratic branching.	Poor Condition B, C	

TREE INVENTORY AND CONDITION ANALYSIS (Continuation 2)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE	**CRZ	CONDITION	CANOPY POSITION	CROWN DENSITY	AVERAGE CROWN SPREAD	STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS	
		*DBH (In)	R (ft)	% ***		%	D (ft)										
33	Dead	15"	–	–	–	–	–	R							–	Dead C	
34	Quercus spp./Oak	10"	10'	72	Codominant	60%	25'	R							Dead/damaged/broken branches; 2 major stems.	C, E	
35	Salix nigra/Black Willow	15"	15'	38	Codominant	65%	40'	R							Exposed roots; leaning; base decay; insect infestation; vine covered.	Poor Condition B, C	
36	Robinia pseudoacacia/Black Locust	8"	8'	31	Codominant	50%	12'	R							Dying; in decline; dead/decaying/broken branches; root girdling.	Poor Condition B, C	
37	Robinia pseudoacacia/Black Locust	8"	8'	38	Codominant	40%	12'	R							Dead/damaged/rotting/broken branches; insect infestation.	Poor Condition B, C	
38	Robinia pseudoacacia/Black Locust	8"	8'	31	Codominant	30%	15'	R							Dying; base rot; damaged/rotting/broken branches; leaning.	Poor Condition B, C	
39	Salix nigra/Black Willow	12"	12'	28	Dominant	20%	10'	R							Leaning; vine covered; dead/damaged/broken branches; poor condition..	Poor Condition B, C	
40	Dead	15"	–	–	–	–		R							–	Dead C	
41	Quercus spp./Oak	15"	15'	66	Codominant	65%	40'	R							Leaning; dead/damaged/broken branches.	C	
42	Quercus spp./Oak	12"	12'	66	Dominant	70%	35'	R							In standing water; exposed roots; leaning.	B, C	
43	Quercus spp./Oak	10"	10'	63	Codominant	45%	25'	R							Leaning; broken branches.	C	
44	Quercus spp./Oak	8"	8'	38	Codominant	35%	25'	R							In standing water; bark decay; leaning; damaged branches.	Poor Condition B, C	
45	Acer spp./Maple	12"	12'	31	Dominant	40%	30'	R							Major stem dead; 2 small stems alive; dead/decaying/broken branches.	Poor Condition C Multi-Stem	●
46	Acer spp./Maple	24"	24'	69	Codominant	70%	55'	R							Leaning; damaged branches.	B, C	●
47	Acer spp./Maple	10"	10'	72	Codominant	40%	35'	R							Vine covered; leaning; broken branches.	C	●
48	Acer spp./Maple	10"	10'	81	Dominant	40%	25'	R							Broken branches.	C	●
49	Acer spp./Maple	21"	21'	53	Codominant	70%	35'	P	X	X	X				In standing water; exposed/girdling roots; vine covered; broken branches.	C	
50	Salix nigra/Black Willow	10"	10'	72	Suppressed	20%	15'	R							Leaning; vine covered; in standing water; broken branches.	B, C	●
50A	Salix nigra/Black Willow	10"	10'	66	Suppressed	20%	10'	P	X	X	X				Leaning; vine covered; in standing water; broken branches.	B, C	●
51	Platanus spp./Sycamore	12"	12'	56	Dominant	50%	45'	P	X	X	X				In standing water; base decay; damaged branches.	C	
52	Acer spp./Maple	15"	15'	63	Codominant	80%	50'	P	X	X	X				Growing at base of another tree; root girdling.	C, E	
52A	Quercus spp./Oak	15"	15'	47	Codominant	55%	35'	P	X	X	X				Growing at base of another tree; dead/broken/pruned branches; leaning.	C	
53	Acer spp./Maple	12"	12'	89	Codominant	40%	30'	P	X	X	X				Stem rot; damaged branches.	C Multi-Stem	
54	Acer spp./Maple	15"	15'	63	Codominant	50%	55'	P	X	X	X				Stem rot.	C Multi-Stem	
55	Acer spp./Maple	15"	15'	72	Codominant	40%	50'	TBD		X					Leaning; vine covered; broken branches.	Hazardous C	
56	Acer spp./Maple	12"	12'	66	Dominant	60%	50'	TBD		X					Leaning; crooked/damaged branches.	Hazardous C	
56A	Liriodendron tulipifera/Tulip Poplar	8"	8'	70	Codominant	70%	35'	P	X	X	X				On an incline; broken branches.	C	●
57	Acer spp./Maple	15"	15'	50	Dominant	65%	40'	P							Exposed roots; vine covered; branch decay; leaning.	C	
58	Acer spp./Maple	15"	15'	63	Dominant	65%	45'	P		X					Damaged/decaying branches; leaning.	C	
59	Acer spp./Maple	24"	24'	56	Codominant	60%	40'	P		X					Dead/broken branches; trunk damage; insect infestation.	C	
60	Liriodendron tulipifera/Tulip Poplar	36"	36'	38	Codominant	70%	50'	P	X	X	X				Hollow/interior trunk rot; base rot; insect infestation.	Poor Condition C, E	

● ON OR NEAR THE LIMITS OF CLEARING AND GRADING. FINAL STATUS TO BE EVALUATED IN FIELD WITH UFMD

A :LESS THAN 10' FROM STRUCTURE, CURB, SIDEWALK, TRAIL, OR PAVING.
B :WITHIN PUBLIC UTILITY EASEMENT
C :WITHIN FLOODPLAIN EASEMENT
TBD :POTENTIAL HAZARD. STATUS TO BE DETERMINED IN CONSULTATION WITH THE URBAN FOREST MANAGEMENT DIVISION (UFMD).
E :MAJOR CODOMINATE STEMS
P :PRESERVE
R :REMOVE
POS :PRESERVE OFF-SITE
RWP :REMOVE WITH PERMISSION FROM THE UFMD. TREE IS WITHIN UNDISTURBED AREA BUT CONDITIONS WARRANT ITS REMOVAL.
X :CONDUCT ACTIVITY INDICATED
* :DBH/DIAMETER BREAST HEIGHT AS MEASURED 4.5 FEET ABOVE GROUND.
** :CRZ/CRITICAL ROOT ZONE (ONE FOOT OF RADIUS FOR EVERY INCH OF TREE DIAMETER. CRZ FOR TREES WITH MULTIPLE STEMS ARE CALCULATED BASED ON THE DIAMETER OF A TREE WITH A BASAL AREA EQUIVALENT TO THE SUM OF THE BASAL AREAS FOR ALL STEMS MEASURED.
*** :CONDITION RATINGS ARE PROVIDED AS PERCENTAGES BASED ON METHODS OUTLINED IN THE LATEST EDITION OF THE GUIDE FOR PLANT APPRAISAL PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.

SEE SHEETS 12 AND 13 FOR TREE PRESERVATION PLANS. SEE SHEET 19 FOR TREE PRESERVATION NARRATIVE AND DETAILS.

CERTIFIED ARBORIST

International Society of Arboriculture
CERTIFIED ARBORIST
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COMMONWEALTH OF VIRGINIA — PETER L. MINEK — No. 388 — 03-16-2011 — CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
TREE INVENTORY AND CONDITION ANALYSIS
CIRCLE TOWERS APARTMENTS
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED 10/28/09
REVISED: 08-19-10
10-06-10
01-13-11
02-07-11
03-16-11
APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. N/A VERT. N/A

CO. NO.
CAD NAME C8085TTP-INV1
LAYOUT: INVENTORY 1 & 2
FILE NO. 08085.01-00

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TREE INVENTORY AND CONDITION ANALYSIS (Continuation 3)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE	**CRZ	CONDITION	CANOPY POSITION	CROWN DENSITY	AVERAGE CROWN SPREAD	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS
		*DBH (In)	R (ft)	% ***		%	D (ft)									
61	Salix nigra/Black Willow	10"	10'	25	Codominant	10%	15'	P							Dying; leaning; rubbing/ broken branches.	Poor Condition C
62	Platanus spp./Sycamore	12"	12'	69	Codominant	70%	30'	P		X					In standing water; leaning; decaying branches.	A, B
63	Robinia pseudoacacia/Black Locust	12"	12'	56	Dominant	70%	10'	P		X					Broken branches, bottom regrowth.	C
64	Acer spp./Maple	30"	30'	60	Dominant	65%	35'	P		X					Dead/decaying branches.	C Multi-Stem
65	Acer spp./Maple	12"	12'	69	Dominant	70%	25'	P							In standing water; broken/decaying branches; vine covered.	B, C Multi-Stem
66	Prunus spp./Cherry	8"	8'	72	Codominant	75%	20'	P							On an incline; dead/decaying branches; leaning.	B
67	Acer spp./Maple	10"	10'	69	Dominant	40%	25'	P							On stream bank; base rot; vine covered.	B, C Twin-Stem
68	Acer spp./Maple	10"	15'	66	Codominant	70%	25'	P							On stream bank; damaged branches.	B, C Multi-Stem
69	Ulmus spp./Elm	15"	15'	63	Codominant	80%	45'	P							On stream bank; leaning; vine covered; dead/broken branches.	B, C
70	Acer spp./Maple	15"	15'	72	Codominant	70%	50'	P							Exposed roots; dead branches.	C, E
71	Liriodendron tulipifera/Tulip Poplar	10"	10'	38	Codominant	40%	20'	P							Dead tree resting on branches.	Poor Condition C
72	Acer spp./Maple	10"	10'	84	Codominant	70%	25'	P							No visible problems.	B, C
73	Quercus spp./Oak	8"	8'	75	Codominant	45%	20'	P							Dead branches.	B, C
74	Acer spp./Maple	12"	12'	63	Codominant	80%	35'	P							On stream bank; leaning; trunk decay; broken branches.	B, C
75	Robinia pseudoacacia/Black Locust	12"	12'	53	Codominant	25%	15'	P							Trunk decay; girdling; damaged/broken branches; vine covered.	C
76	Acer spp./Maple	15"	15'	69	Codominant	60%	30'	P							Exposed roots; girdling; damage/broken branches; vine covered.	C
77	Platanus spp./Sycamore	12"	12'	72	Codominant	45%	20'	P							Broken/damaged branches.	B, C
78	Salix nigra/Black Willow	10"	10'	63	Codominant	30%	15'	POS							In standing water; girdling; vine covered; curved base.	B, C Off-Site
79	Robinia pseudoacacia/Black Locust	10"	10'	25	Dominant	5%	10'	POS							Decaying/damaged branches; almost dead.	Poor Condition B, C Off-Site
79A	Acer spp./Maple	18"	18'	59	Dominant	45%	20'	POS							New growth at bottom; broken/decaying branches; insect infestation.	B, C Off-Site
80	Liriodendron tulipifera/Tulip Poplar	40"	40'	69	Codominant	80%	50'	POS							Exposed roots; girdling vines; broken/ dead branches.	B, C Off-Site
81	Acer spp./Maple	12"	12'	75	Codominant	50%	25'	POS							In standing water; leaning.	B, C Off-Site
82	Quercus spp./Oak	18"	18'	18	Dominant	45%	25'	POS							Damaged/decaying branches; vine covered; possibly dead.	Poor Condition B, C Off-Site
83	Quercus spp./Oak	14"	14'	72	Codominant	45%	26'	POS							In standing water.	B, C Off-Site
84	Acer spp./Maple	11"	11'	75	Dominant	70%	25'	POS							In standing water.	B, C, Off-Site
85	Acer spp./Maple	9"	9'	72	Dominant	40%	15'	POS							In standing water; leaning; vine covered.	B, C Off-Site
86	Acer spp./Maple	10"	10'	56	Dominant	55%	25'	POS							In standing water; leaning; vine covered; decaying branches.	B, C, Multi-Stem Off-Site
87	Acer spp./Maple	10"	10'	59	Dominant	30%	20'	POS							In standing water; leaning; vine covered; decaying branches.	B, C Off-Site
88	Robinia pseudoacacia/Black Locust	11"	11'	38	Dominant	20%	5'	POS							In standing water; top growth; partially felled with some regrowth; leaning; vine covered.	Poor Condition B, C Off-Site
89	Robinia pseudoacacia/Black Locust	12"	12'	31	Dominant	20%	10'	POS							Leaning; in standing water; decaying/damaged branches; vine covered; possibly dead.	Poor Condition B, C Off-Site
90	Robinia pseudoacacia/Black Locust	20"	20'	53	Dominant	25%	20'	POS							Leaning; vine covered; exposed roots; dead/damaged branches; vine covered; poor condition.	B, C Off-Site
91	Robinia pseudoacacia/Black Locust	12"	12'	28	Dominant	10%	10'	POS							Vine covered; decaying/damaged branches; leaning; possibly dead.	Poor Condition B, C Off-Site
92	Liriodendron tulipifera/Tulip Poplar	24"	24'	72	Dominant	65%	30'	POS							Vine covered; vine girdling.	B, C Off-Site
93	Robinia pseudoacacia/Black Locust	12"	12'	75	Dominant	20%	10'	POS							Leaning; vine covered.	B, C Off-Site

TREE INVENTORY AND CONDITION ANALYSIS (Continuation 4)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE	**CRZ	CONDITION	CANOPY POSITION	CROWN DENSITY	AVERAGE CROWN SPREAD	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS	
		*DBH (In)	R (ft)	% ***		%	D (ft)										
94	Robinia pseudoacacia/Black Locust	12"	12'	28	Dominant	15%	10'	POS							Leaning; dead/damaged branches; very poor condition.	Poor Condition B, C Off-Site	
95	Robinia pseudoacacia/Black Locust	15"	15'	68	Dominant	45%	25'	POS							On stream bank; leaning; vine covered; decaying/dead branches.	B, C Off-Site	
96	Robinia pseudoacacia/Black Locust	12"	12'	63	Codominant	10%	15'	POS							On stream bank; vine covered; decaying/broken branches; poor condition.	B, C Off-Site	
97	Quercus spp./Oak	8'	8'	91	Dominant	55%	15'	POS							No visible problems.	B, C Off-Site	
98	Pinus spp./Pine	14"	14'	72	Codominant	50%	20'	POS							On stream bank; vine covered; damaged branches.	B, C Off-Site	
99	Liriodendron tulipifera/Tulip Poplar	22"	22'	72	Codominant	60%	25'	POS							Vine covers; damaged branches.	B, C Off-Site	
100	Liriodendron tulipifera/Tulip Poplar	8"	8'	56	Codominant	20%	15'	POS							Damaged/broken branches; vine covered; poor condition.	C Off-Site	
101	Dead	12"	–	–	–	–	–	–							Off-site dead tree that should be removed by others.	Dead C Off-Site	
102	Liriodendron tulipifera/Tulip Poplar	36"	36'	72	Dominant	70%	45'	P	X	X	X				Damaged branches; vine covered.	B, C	
103	Robinia pseudoacacia/Black Locust	27"	27'	72	Dominant	65%	50'	POS	X						Pruned; erosion around base.	A Off-Site	
104	Fagus spp./Beech	18"	18'	69	Codominant	60%	40'	POS	X						On an incline; exposed root system; leaning; heavily pruned.	A Off-Site	
104A	Liriodendron tulipifera/Tulip Poplar	30"	30'	69	Dominant	65%	40'	POS	X						Damaged/broken branches; erosion; growing adjacent to the Beech.	A Off-Site	
105	Ilex opaca/American Holly	8"	8'	84	Codominant	95%	15'	P							On an incline, vine covered.		
106	Prunus spp./Cherry	18"	18'	53	Codominant	45%	30'	P							Leaning; exposed/girdling roots; trunk decay; insect infestation; vine covered.	C	
107	Liriodendron tulipifera/Tulip Poplar	15"	15'	72	Dominant	50%	25'	P							On slight incline; broken branches; vine covered.	B, C	
108	Quercus spp./Oak	10"	10'	72	Codominant	30%	35'	P							Exposed roots; vine covered.	C	
109	Dead	15"	–	–	–	–	–	RWP							–	Dead C	
110	Liriodendron tulipifera/Tulip Poplar	8"	8'	69	Suppressed	40%	20'	P							Broken/dead branches, poor condition.	C	
111	Liriodendron tulipifera/Tulip Poplar	18"	18'	72	Dominant	65%	50'	P							Vine covered; atypical.	C	
112	Acer spp./Maple	24"	24'	75	Codominant	80%	55'	P							Broken branches; vine covered.	C	
113	Zelkova serrata/Japanese Zelkova	36"	36'	72	Codominant	75%	70'	R							Moderately pruned; branches rubbing.	A, B	
114	Pinus spp./Pine	24"	24'	72	Codominant	70%	60'	R							Moderately pruned; pruning scars; exposed roots; fungus on trunk; branches rubbing.	A, B, E	
115	Liriodendron tulipifera/Tulip Poplar	21"	21'	88	Codominant	75%	50'	P	X	X	X				On an incline; no visible problems.	A, B	
116	Liriodendron tulipifera/Tulip Poplar	8"	8'	56	Dominant	35%	20'	P		X					On an incline; broken branches; leaning; poor condition.		
117	Robinia pseudoacacia/Black Locust	8"	8'	72	Codominant	35%	15'	P	X	X	X				On an incline; thin canopy.	A	●
118	Quercus spp./Oak	27"	27'	66	Codominant	70%	55'	P	X	X	X				Decaying/damaged branches.	C Multi-Stem	
119	Robinia pseudoacacia/Black Locust	15"	15'	84	Codominant	85%	40'	P	X	X	X				Damaged branches.	A	●

● ON OR NEAR THE LIMITS OF CLEARING AND GRADING. FINAL STATUS TO BE EVALUATED IN FIELD WITH UFMD

SEE SHEETS 12 AND 13 FOR TREE PRESERVATION PLANS. SEE SHEET 19 FOR TREE PRESERVATION NARRATIVE AND DETAILS.

A :LESS THAN 10' FROM STRUCTURE, CURB, SIDEWALK, TRAIL, OR PAVING.
B :WITHIN PUBLIC UTILITY EASEMENT
C :WITHIN FLOODPLAIN EASEMENT
TBD :POTENTIAL HAZARD. STATUS TO BE DETERMINED IN CONSULTATION WITH THE URBAN FOREST MANAGEMENT DIVISION (UFMD).
E :MAJOR CODOMINATE STEMS
P :PRESERVE
R :REMOVE
POS :PRESERVE OFF-SITE
RWP :REMOVE WITH PERMISSION FROM THE UFMD. TREE IS WITHIN UNDISTURBED AREA BUT CONDITIONS WARRANT ITS REMOVAL.
X :CONDUCT ACTIVITY INDICATED
* :DBH/DIAMETER BREAST HEIGHT AS MEASURED 4.5 FEET ABOVE GROUND.
** :CRZ/CRITICAL ROOT ZONE (ONE FOOT OF RADIUS FOR EVERY INCH OF TREE DIAMETER. CRZ FOR TREES WITH MULTIPLE STEMS ARE CALCULATED BASED ON THE DIAMETER OF A TREE WITH A BASAL AREA EQUIVALENT TO THE SUM OF THE BASAL AREAS FOR ALL STEMS MEASURED.
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CERTIFIED ARBORIST

International Society of Arboriculture
CERTIFIED ARBORIST
Dennis Dale Dixon
Certificate Number: MA-4013A
Expiration Date: Dec 31, 2011

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COMMONWEALTH OF VIRGINIA — PETER L. RIEK — No. 388 — 03-16-2011 — CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
TREE INVENTORY AND CONDITION ANAYLSIS
CIRCLE TOWERS APARTMENTS
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS: REVISED: 10-28-09; REVISED: 08-19-10; 10-06-10; 01-13-11; 02-07-11; 03-16-11
APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. N/A VERT. N/A
SHEET 15 OF 33
CO. NO.
CAD NAME: C8085TTP-INV2
LAYOUT: INVENTORY 3 & 4
FILE NO. 08085.01-00

TREE PRESERVATION INVENTORY (Continuation 4)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE *DBH (in)	**CRZ R (ft)	CONDITION % ***	CANOPY POSITION	CROWN DENSITY %	AVERAGE CROWN SPREAD D (ft)	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS	
120	Acer rubrum/Red Maple	15"	15'	72	Codominant	50%	30'	P							Dead/broken branches; vine covered.	C	
121	Quercus spp./Oak	15"	15'	75	Codominant	80%	20'	P							Vine covered.	C	
122	Liriodendron tulipfera/Tulip Poplar	12"	12'	81	Codominant	65%	30'	P	X	X	X				On an incline; pruned; broken branches.	C	
123	Liriodendron tulipifera/Tulip Poplar	27"	27'	73	Codominant	50%	20'	P		X					Base decay.	C	
124	Liriodendron tulipifera/Tulip Poplar	15"	15'	84	Codominant	65%	35'	P	X	X	X				Broken branches.	C	
125	Quercus spp./Oak	15"	15'	28	Codominant	55%	45'	P	X	X	X				Peeling bark; trunk decay; insect infestation; fungus; dead/broken branches.	Poor Condition C	
126	Liriodendron tulipifera/Tulip Poplar	12"	12'	38	Codominant	40%	45'	P	X	X	X				On an incline; dead/decaying/damaged branches; vine covered; poor condition.	Poor Condition C	
126A	Robinia pseudoacacia/Black Locust	12"	12'	38	Codominant	40%	25'	P	X	X	X				On an incline; trunk damage/decay; insect infestation; leaning.	Poor Condition A, C	
127	Platanus spp./Sycamore	12"	12'	25	Codominant	40%	25'	P	X	X	X				Trunk damage; insect infestation; very poor condition.	Poor Condition C	
128	Robinia pseudoacacia/Black Locust	12"	12'	38	Codominant	35%	30'	P	X	X	X				On an incline; trunk damage/decay; leaning; insect infestation.	Poor Condition A, C	
129	Liriodendron tulipifera/Tulip Poplar	15"	15'	53	Codominant	55%	35'	P	X	X	X				On steep incline; branch damage; exposed roots.	C	●
130	Liriodendron tulipifera/Tulip Poplar	12"	12'	59	Codominant	50%	25'	P							Decaying/damaged branches.	C	
131	Robinia pseudoacacia/Black Locust	15"	15'	53	Codominant	60%	15'	P		X					Dead branches; exposed roots; base damage.	C	
132	Pinus spp./Pine	18"	18'	50	Dominant	30%	30'	R							In decline; limbed up; dead branches; browning needles; growing next to parking garage.	A	
133	Pinus spp./Pine	21"	21'	59	Codominant	50%	25'	R							One sided; leaning; broken/thinning branches.	A, B	
134	Liriodendron tulipifera/Tulip Poplar	15"	15'	47	Codominant	40%	20'	P	X	X	X				Trunk damage; exposed roots/erosion; broken branches; poor condition.	A, C	
135	Liriodendron tulipifera/Tulip Poplar	12"	12'	44	Codominant	15%	20'	P	X	X	X				Trunk damage; exposed roots/erosion; broken branches; poor condition.	A, C	
136	Acer spp./Maple	10"	10'	69	Codominant	65%	25'	R							On an incline; trunk damage; leaning; vines covered.	C	
137	Liriodendron tulipifera/Tulip Poplar	15"	15'	86	Codominant	45%	20'	R							On an incline; trunk damage; broken branches.	C	
137A	Liriodendron tulipifera/Tulip Poplar	10"	10'	50	Codominant	30%	15'	R							On an incline; trunk damage; thinning canopy.	C	
138	Quercus spp./Oak	15"	15'	72	Codominant	55%	50'	R							Broken branches; 2 dead trees leaning on it.	C	
139	Liriodendron tulipifera/Tulip Poplar	15"	15'	66	Dominant	25%	25'	R							On an incline ;broken branches; exposed roots; vines covered.	C	
140	Liriodendron tulipifera/Tulip Poplar	12"	12'	59	Codominant	40%	30'	R							On an incline; broken branches; erosion; exposed roots.	C	
141	Dead	15"	–	–	–	–	–	R							–	Dead C	
142	Salix nigra/Black Willow	18"	18'	59	Codominant	75%	55'	R							On a steep incline; erosion; exposed roots; branch overhang parking lot.	A, C	
143	Fagus spp./Beech	12"	12'	75	Codominant	60%	50'	R							Growing at bottom of the bank; broken branches.	C	
144	Dead (Semi Felled Tree)	18"	–	–	–	–	–	R							Dead tree resting on main branch of adjacent tree.	Dead C	
145	Robinia pseudoacacia/Black Locust	12"	12'	66	Codominant	25%	20'	R							Growing on top of steep bank; vine covered; damaged branches; leaning to parking lot.	Hazardous A, B, C	
146	Quercus spp./Oak	10"	10'	69	Codominant	40%	12'	R							On an incline; branch damage.	C	
147	Liriodendron tulipifera/Tulip Poplar	24"	24'	31	Dominant	30%	20'	P	X	X	X				Dying; branch decay; base rot.	Poor Condition C	●
148	Fagus spp./Beech	8"	8'	59	Intermediate	35%	15'	P		X					Growing at bottom of the bank; one sided; broken branches.	C	
149	Acer rubrum/Red Maple	12"	12'	63	Codominant	55%	35'	P		X					Growing at bottom of bank; branch damage.	C, E	

TREE PRESERVATION INVENTORY (Continuation 5)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE *DBH (in)	**CRZ R (ft)	CONDITION % ***	CANOPY POSITION	CROWN DENSITY %	AVERAGE CROWN SPREAD D (ft)	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS	
150	Robinia pseudoacacia/Black Locust	27"	27'	47	Dominant	45%	35'	P	X	X	X				Base rot; dead/decaying/missing branches; lateral branch.	A, B, C	●
150A	Robinia pseudoacacia/Black Locust	12"	12'	31	Dominant	20%	20'	P	X	X	X				Vine covered; insect infestation; leaning; damaged/broken/rotting branches.	Poor Condition A, B, C	●
151	Dead	15"	–	–	–	–	–	RWP							–	Dead C	
152	Salix nigra/Black Willow	8"	8'	59	Codominant	40%	25'	P							Trunk rot; leaning; dead/broken branches.	B, C	
153	Robinia pseudoacacia/Black Locust	15"	15'	63	Codominant	30%	15'	TBD	X	X	X				On top of bank; trunk decay; vine covered; leaning; missing branches.	Hazardous A, B, C	●
154	Liriodendron tulipifera/Tulip Poplar	15"	15'	69	Codominant	50%	20'	P	X	X	X				On top of bank; Pruned/broken/dead/decaying barnches.	A, B, C	●
155	Salix nigra/Black Willow	10"	10'	69	Codominant	35%	40'	P		X					Leaning; vine covered; one sided; small tree parallel to trunk.	B, C	
156	Acer rubrum/Red Maple	10"	10'	63	Codominant	35%	25'	P		X					On steep incline; dead/decaying branches; thin crown.	B, C	
156A	Acer rubrum/Red Maple	10"	10'	44	Codominant	30%	20'	P		X					On an incline; scars; insect infestation; damaged/decaying/dead branches.	B, C, E	
157	Quercus spp./Oak	18"	18'	59	Codominant	60%	50'	TBD		X					Vine covered; growing on bank; base rot; leaning toward parking lot.	Hazardous C	
158	Salix nigra/Black Willow	10"	10'	63	Codominant	40%	35'	P		X					On an incline; leaning; missing/rotting branches; trunk rot.	B, C, E	
159	Acer spp./Maple	15"	15'	63	Codominant	55%	30'	P	X	X	X				Base rot; scars; decaying branches.	A, B, C Multi-Stem	●
160	Salix nigra/Black Willow	12"	12'	28	Codominant	40%	35'	R							Dead/decaying branches; insect infestation.	Poor Condition B, C Multi-Stem	
161	Dead	10"	–	–	–	–	–	RWP							–	Dead B, C	
162	Salix nigra/Black Willow	10"	10'	75	Codominant	35%	40'	P	X	X	X				Damaged/rubbing branches.	A, B, C, E	●
162A	Salix nigra/Black Willow	10"	10'	72	Slightly Supressed	25%	25'	P	X	X	X				Leaning; branching at top.	B, C	●
163	Fraxinus spp./Ash	10"	10'	69	Codominant	30%	25'	P		X					Growing at bottom of bank; vine covered; base damage; broken/dead/missing branches; leaning.	B, C	
164	Dead	12"	–	–	–	–	–	RWP							–	Dead B, C	
165	Fraxinus spp./Ash	15"	15'	72	Dominant	70%	40'	P	X	X	X				Growing next to parking garage column.	A, B, C, E	●
166	Prunus spp./Cherry	15"	15'	63	Dominant	50%	25'	R							Pruned; pruning scars; broken branches; one sided; on an incline.	A	
167	Zelkova serrata/Japanese Zelkova	36"	36'	72	Dominant	80%	70'	R							Pruned/broken lower branches; exposed roots; nice upper branching.	A	
168	Zelkova serrata/Japanese Zelkova	30"	30'	75	Codominant	75%	55'	R							Branches touching pole light; pruned branches; little branch growth.	A	
169	Dead	12"	–	–	–	–	–	R							–	Dead A	
170	Pinus spp./Pine	15"	15'	63	Codominant	45%	40'	R							Dead branches at bottom; thinning canopy.		
171	Robinia pseudoacacia/Black Locust	15"	15'	47	Dominant	20%	20'	POS	X						In decline; pruned/dead branches; little canopy, on steep incline.	A Off-Site	
172	Robinia pseudoacacia/Black Locust	15"	15'	50	Codominant	10%	15'	POS	X						Trunk decay, cut roots; dead/decayed branches.	A Off-Site	

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B :WITHIN PUBLIC UTILITY EASEMENT
C :WITHIN FLOODPLAIN EASEMENT
TBD :POTENTIAL HAZARD. STATUS TO BE DETERMINED IN CONSULTATION WITH THE URBAN FOREST MANAGEMENT DIVISION (UFMD).
E :MAJOR CODOMINATE STEMS
P :PRESERVE
R :REMOVE
POS :PRESERVE OFF-SITE
RWP :REMOVE WITH PERMISSION FROM THE UFMD. TREE IS WITHIN UNDISTURBED AREA BUT CONDITIONS WARRANT ITS REMOVAL.
X :CONDUCT ACTIVITY INDICATED
* :DBH/DIAMETER BREAST HEIGHT AS MEASURED 4.5 FEET ABOVE GROUND.
** :CRZ/CRITICAL ROOT ZONE (ONE FOOT OF RADIUS FOR EVERY INCH OF TREE DIAMETER. CRZ FOR TREES WITH MULTIPLE STEMS ARE CALCULATED BASED ON THE DIAMETER OF A TREE WITH A BASAL AREA EQUIVALENT TO THE SUM OF THE BASAL AREAS FOR ALL STEMS MEASURED.
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03-16-2011

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
TREE INVENTORY AND CONDITION ANALYSIS
CIRCLE TOWERS APARTMENTS
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
REVISED: 10-28-09 | 03-16-11
REVISED: 08-19-10
REVISED: 10-06-10
01-13-11
02-07-11
APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. N/A VERT. N/A
SHEET 16 OF 33
CO. NO.
CAD NAME: C8085TTP-INV3
LAYOUT: INVENTORY 5 & 6
FILE NO. 08085.01-00
XREFS

TREE PRESERVATION INVENTORY (Continuation 6)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE	**CRZ	CONDITION	CANOPY POSITION	CROWN DENSITY	AVERAGE CROWN SPREAD	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS
		*DBH (in)	R (ft)	% ***		%	D (ft)									
173	Robinia pseudoacacia/Black Locust	12"	12'	47	Suppressed	15%	25'	POS	X						Limbed up; base erosion; rotting/dead branches.	A, Off-Site Multi-Stem
174	Pinus spp./Pine	21"	21'	84	Dominant	100%	30'	R							Base erosion; on an incline.	
175	Pinus spp./Pine	12"	12'	53	Codominant	50%	20'	R							In decline; dead branches; needle loss; mounded at base.	A Two Main Upper Stems
176	Quercus spp./Oak	24"	24'	81	Codominant	70%	50'	P	X	X					Broken branches; one sided; pruned on one side. nice upper branching.	A, B
177	Quercus spp./Oak	18"	18'	59	Codominant	50%	45'	P		X					Fungus on trunk; one sided; broken/dead branches.	A, B
178	Quercus spp./Oak	15"	15'	66	Codominant	55%	35'	P							Heavily limbed up; dead/decaying branches; fungus on trunk.	A, B
179	Quercus spp./Oak	21"	21'	66	Dominant	80%	40'	P							Broken/dead branches; fungus on trunk; roots exposed.	A, B
180	Ilex opaca/American Holly	10"	10'	63	Codominant	55%	15'	P							Major trunk damage/decay; pruning damage.	A
181	Ilex opaca/American Holly	8"	8'	75	Codominant	50%	20'	P							Major trunk damage; pruning scars.	A, B Multi-Stem (2' above ground)
182	Ilex opaca/American Holly	8"	8'	81	Codiminant	50%	20'	P							Pruning scars; pruning damage.	A
183	Quercus spp./Oak	24"	24'	72	Dominant	90%	40'	P							Exposed roots; heavily limbed up.	A, B
184	Zelkova serrata/Japanese Zelkova	18"	18'	72	Codominant	55%	30'	P							Very thin canopy.	A
185	Betula spp./Birch	8'	8'	69	Codominant	75%	20'	P							Leaning; heavily pruned.	A Twin Stem
186	Betula spp./Birch	12'	12'	69	Codominant	65%	25'	P							Leaning; minimal lower branches.	A
187	Betula spp./Birch	12"	12'	75	Dominant	65%	25'	P							Leaning; new lower branch growth.	A
188	Betula spp./Birch	12'	12'	72	Dominant	70%	30'	P							Exposed roots; leaning; no lower branches.	A
189	Zelkova serrata/Japanese Zelkova	27"	27'	72	Dominant	75%	50'	P							Moderately pruned; pruning scars.	A
190	Pinus spp./Pine	21"	21'	69	Codominant	70%	75'	R							Limbed up; thinning canopy, broken branches; browning needles.	A, B
191	Zelkova serrata/Japanese Zelkova	21"	21'	75	Codominant	80%	40'	R							Moderately pruned; pruning scars; new lower branch growth.	A, B
192	Pinus spp./Pine	15"	15'	72	Slightly Suppressed	75%	30'	POS							Thin lower branches.	B Off-Site
193	Pinus spp./Pine	15"	15'	75	Slightly Suppressed	80%	25'	POS							Thin lower branches.	B Off-Site
194	Picea spp./ Spruce	8"	8'	63	Slightly Suppressed	95%	12'	P							One sided; thinning lower branches; interior needle loss.	A, B
195	Pyrus calleryana/Bradford Pear	18"	18'	56	Dominant	65%	40'	R							Major trunk damage; damaged/decaying branches; trunk fungus.	A, B
196	Tsuga canadensis/Canadian Hemlock	8"	8'	72	Dominant	80%	20'	P		X					Limbed up; slightly thinning.	A
197	Crataegus spp./Hawthorn	10"	10'	56	Codominant	65%	20'	R							Limbed up; broken branches; some fungus on trunk.	A, B
198	Cryptomeria japonica/Japanese Cryptomeria	8"	8'	69	Codominant	50%	15'	R							Dead/broken branches; dead/thinning needles.	A
199	Zelkova serrata/Japanese Zelkova	24"	24'	66	Dominant	80%	45'	R							Limbed up; pruning scars; root girdling; upper branches rubbing.	A, B, E
200	Zelkova serrata/Japanese Zelkova	24"	24'	88	Codominant	85%	60'	R							Moderately pruned; pruning scars; one sided; rubbing upper branches.	A, E
201	Zelkova serrata/Japanese Zelkova	24"	24'	75	Dominant	85%	60'	P	X	X	X				Heavily pruned; root girdling; one sided; rubbing/broken branches.	A, E ●
202	Acer spp./Maple	15"	15'	72	Dominant	65%	40'	P	X	X	X				Heavily pruned; pruning scars; broken/split branches; root rot.	A

TREE PRESERVATION INVENTORY (Continuation 7)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE	**CRZ	CONDITION	CANOPY POSITION	CROWN DENSITY	AVERAGE CROWN SPREAD	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS
		*DBH (in)	R (ft)	% ***		%	D (ft)									
203	Pinus spp./Pine	18"	18'	75	Codominant	70%	25'	P	X	X	X				Limbed up; yellowing/thinning needles; broken branches.	A
204	Pinus spp./Pine	15"	15'	78	Codominant	55%	25'	P	X	X	X				Limbed up; thinning; dead branches.	
205	Pinus spp./Pine	12"	12'	72	Dominant	50%	20"	P	X	X	X				Limbed up; thin branching; broken/dead branches.	A
206	Zelkova serrata/Japanese Zelkova	42"	42'	59	Dominant	75%	65'	P	X	X	X				Rubbing branches; pruning damage; root girdling.	A
207	Pyrus calleryana/Bradford Pear	18"	18'	84	Dominant	90%	25'	R							Rubbing/pruned/broken branches; pruning scars.	A, B 2 Major Stems
208	Robinia pseudoacacia/Black Locust	15"	15'	47	Suppressed	20%	20'	POS							Pruned/dead/decaying/split branches; on an incline.	Off-Site
209	Liriodendron tulipifera/Tulip Poplar	12"	12'	28	Suppressed	40%	25'	R							Pruned/broken/decaying/damaged branches; rot; insect infestation.	Poor Condition B
210	Robinia pseudoacacia/Black Locust	12"	12'	25	Dominant	10%	15'	POS	X	X					Leaning 45°; vine cover; one main stem; few branches; dying/decaying/broken branches.	Hazardous Poor Condition Off-Site
211	Robinia pseudoacacia/Black Locust	10"	10'	31	Dominant	10%	10'	P	X	X	X				On an inclined; leaning; few branches; some decay; vines.	Poor Condition B ●
212	Acer spp./Maple	18"	18'	63	Codominant	55%	40'	POS	X						Flared/exposed roots; on an incline; dead/broken/decaying branches; thin canopy.	Off-Site
213	Fagus spp./Beech	10"	10'	72	Codominant	50%	15'	POS							Broken/rubbing branches; one main stem straight up.	Off-Site
214	Robinia pseudoacacia/Black Locust	18"	18'	41	Dominant	30%	25'	POS	X	X	X				On an incline; fungus; dead/rotten/broken/decaying branches.	Off-Site ●
215	Acer spp./Maple	14'	14'	47	Dominant	20%	25'	POS							No lower branches; exposed roots; compacted soil; little or no canopy.	Off-Site
216	Robinia pseudoacacia/Black Locust	8"	8'	25	Dominant	50%	12'	POS	X						Almost dead/few branches; exposed roots; leaning; on an incline; little or no canopy.	Poor Condition Off-Site
217	Acer spp./Maple	19"	19'	59	Codominant	55%	40'	POS	X						Dead/decaying/broken/rubbing branches; one sided; on an incline.	Off-Site
218	Acer spp./Maple	17"	17'	75	Codominant	45%	20'	POS							Broken/pruned branches.	Off-Site
219	Dead	11"	–	–	–	–	–	–							Off-site dead tree that should be removed by others.	Dead Off-Site
220	Robinia pseudoacacia/Black Locust	11"	11'	59	Dominant	25%	20'	POS							Leaning; damaged/rubbing/missing branches.	Off-Site
221	Prunus spp./Cherry	8"	8'	44	Codominant	30%	20'	POS							Leaning; growing at stump of dead tree; trunk rot; damaged/missing branches.	A Off-Site
222	Pinus spp./Pine	10"	10'	53	Codominant	30%	17'	POS		X					Leaning; dead/decaying branches; trunk rot; thin crown.	Off-Site
223	Fagus spp./Beech	11"	11'	86	Dominant	40%	25'	POS		X					Damaged/dead/broken branches.	A Off-Site
224	Quercus spp./Oak	30"	30'	41	Dominant	70%	50'	POS		X					Major branch loss; decaying/dead branches; exposed roots; compacted soil.	A Off-site

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* :DBH/DIAMETER BREAST HEIGHT AS MEASURED 4.5 FEET ABOVE GROUND.
** :CRZ/CRITICAL ROOT ZONE (ONE FOOT OF RADIUS FOR EVERY INCH OF TREE DIAMETER. CRZ FOR TREES WITH MULTIPLE STEMS ARE CALCULATED BASED ON THE DIAMETER OF A TREE WITH A BASAL AREA EQUIVALENT TO THE SUM OF THE BASAL AREAS FOR ALL STEMS MEASURED.
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BC REVISIONS: REVISED: 10-28-09; REVISED: 06-15-10; REVISED: 10-05-10; 01-13-11; 02-07-11; 03-16-11
APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. N/A VERT. N/A
SHEET 17 OF 33
CO. NO.
CAD NAME: C8085TTP-INV4
LAYOUT: INVENTORY 7 & 8
FILE NO. 08085.01-00

TREE PRESERVATION INVENTORY (Continuation 8)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE *DBH (in)	**CRZ R (ft)	CONDITION % ***	CANOPY POSITION	CROWN DENSITY %	AVERAGE CROWN SPREAD D (ft)	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS
225	Pine spp./Pine	8"	8'	31	Codominant	15%	25'	P		X	X				Broken/dead branches; thin crown; very poor condition.	Poor Condition B
226	Acer spp./Maple	12"	12'	47	Codominant	55%	25'	POS		X					Trunk damage; dead/missing/ rotting/split branches.	Off-Site
227	Quercus spp./Oak	21"	21'	58	Codominant	55%	35'	POS		X					2 trees growing together; at top of a bank; broken/decaying branches; one sided.	A Off-Site Twin Stem
228	Quercus spp./Oak	27"	27'	63	Dominant	75%	50'	P	X	X	X				Dead/decaying/broken branches; vine covered; one sided.	B
229	Pine spp./Pine	10"	10'	59	Codominant	30%	15'	P		X					On an incline; one sided; dead/decaying branches; leaning; thinning crown.	B
230	Pine spp./Pine	11"	11'	53	Codominant	40%	25'	P	X	X	X				On an incline; dead/ decaying branches; leaning; thinning crown.	
231	Pine spp./Pine	8"	8'	47	Suppressed	35%	20'	P	X	X	X				On an incline; damaged branches; leaning; vine covered; one sided.	
232	Pine spp./Pine	8"	8'	53	Suppressed	25%	20'	P	X	X	X				Leaning; dead branches.	
233	Pine spp./Pine	8"	8'	69	Suppressed	20%	15'	R							On an incline; dead branches; one sided.	
234	Pine spp./Pine	8"	8'	34	Codominant	35%	15'	R							On an incline; dead branches; leaning; vine covered; one sided; brown needles; poor condition.	Poor Condition
235	Pine spp./Pine	8"	8'	59	Codominant	25%	15'	P		X					Dead/broken branches; thin trunk/canopy.	B
236	Pine spp./Pine	12"	12'	66	Codominant	40%	25'	P	X	X	X				On an incline; dead branches; thin crown.	B
237	Acer spp./Maple	12"	12'	41	Codominant	30%	25'	P		X					Thin crown; split/ broken branches.	B, E
238	Prunus spp./Cherry	8"	8'	59	Codominant	55%	25'	R							On an incline; leaning; one sided; broken branches.	B
239	Pine spp./Pine	11"	11'	63	Codominant	45%	30'	POS	X	X	X				On an incline; dead/ damaged branches; thin crown.	B Off-Site
240	Pine spp./Pine	14"	14'	78	Codominant	50%	30'	POS	X	X	X				On an incline; leaning; damaged/thinning branches.	Off-Site
241	Prunus spp./Cherry	12"	12'	72	Codominant	55%	25'	R							On an incline; leaning; no lower branches.	B
242	Acer spp./Maple	8"	8'	72	Codominant	30%	25'	POS		X					On incline; leaning; broken branches.	Off-Site
243	Robinia pseudoacacia/Black Locust	8"	8'	47	Dominant	35%	15'	POS		X					Leaning; on an incline; damaged/dead branches; one sided.	Off-Site
243A	Robinia pseudoacacia/Black Locust	18"	18'	44	Dominant	25%	20'	R							On an incline; broken/ dead/rotting branches; leaning.	Hazardous B
243B	Robinia pseudoacacia/Black Locust	18"	18'	41	Dominant	30%	25'	R							On an incline; leaning; pruned/broken/decaying branches.	Hazardous B
244	Zelkova serrata/Japanese Zelkova	30"	30'	59	Codominant	70%	50'	P	X	X	X				Root girdling; exposed roots; compacted soil; pruning scars.	A
245	Zelkova serrata/Japanese Zelkova	27"	27'	53	Codominant	70%	60'	P	X	X	X				Exposed roots; heavily pruned with pruning scars; fungus on trunk; rubbing branches.	A
246	Pine spp./Pine	32"	32'	63	Codominant	55%	30'	R							Leaning; thinning/dead/decaying /broken branches.	Hazardous A, B
247	Pine spp./Pine	20"	20'	50	Codominant	45%	25'	R							Leaning; thinning; dead/decaying/broken branches; browning needles.	Hazardous A, B
248	Pine spp./Pine	8"	8'	53	Suppressed	20%	20'	R							Thin canopy; broken/dead branches.	A, B; Multi-Stem (Possibly 2 Trees)
249	Pine spp./Pine	24"	24'	69	Dominant	60%	60'	R							Dead branches; limbed up; thinning branches.	A, B
250	Dead	16"	–	–	–	–	–	R							–	Dead A, B
251	Cryptomeria japonica/Japanese Cryptomeria	8"	8'	50	Codominant	30%	10'	R							Limbed up; thin at bottom; dead/broken branches; browning needles.	A, B

TREE PRESERVATION INVENTORY (Continuation 9)

TREE KEY	BOTANICAL NAME / COMMON NAME	SIZE *DBH (in)	**CRZ R (ft)	CONDITION % ***	CANOPY POSITION	CROWN DENSITY %	AVERAGE CROWN SPREAD D (ft)	FINAL STATUS	ACTIVITIES: ROOT PRUNE	MULCH	FERTILIZE	PRUNE	TREAT PESTS	OTHER	PROBLEMS	COMMENTS
252	Cryptomeria japonica/Japanese Cryptomeria	8"	8'	66	Codominant	40%	8'	R							Dead branches; thinning canopy; browning needles.	A, B
252A	Cryptomeria japonica/Japanese Cryptomeria	8"	8'	86	Suppressed	10%	5'	R							In decline; dead branches; browning needles;	A, B
253	Cryptomeria japonica/Japanese Cryptomeria	8"	8'	66	Codominant	40%	8'	R							Dead branches; thinning canopy; browning needles;	C
254	Cryptomeria japonica/Japanese Cryptomeria	8"	8'	66	Codominant	40%	8'	R							Dead branches; thinning canopy; browning needles.	A, B
255	Sophora japonica/Japanese Pagodatree	20"	20'	44	Dominant	45%	40'	R							Heavily pruned; pruning scars; trunk decay; insect infestation; fungus on trunk.	A, B
256	Malus spp./Crabapple	17"	17'	72	Dominant	75%	20'	R							Exposed roots.	A
257	Sophora japonica/Japanese Pagodatree	19"	19'	53	Codominant	45%	35'	R							Heavily pruned; trunk rot/fungus; pruning scars; insect damage; leaning.	A, B
258	Sophora japonica/Japanese Pagodatree	15"	15'	75	Dominant	60%	35'	R							Pruning scars; broken branches; trunk fungus.	A, B
259	Pine spp./Pine	10"	10'	78	Slightly Suppressed	80%	20'	R							Thinning; one sided.	A
260	Sophora japonica/Japanese Pagodatree	9"	9'	66	Codominant	50%	35'	R							Damaged/split/pruned branches; fungus growth.	A
261	Sophora japonica/Japanese Pagodatree	15"	15'	69	Slightly Suppressed	40%	50'	R							Pruning scars; thinning/one sided; trunk fungus.	A 2 Main Upper Branches
262	Pine spp./Pine	15"	15'	69	Codominant	65%	55'	R							Dead branches; limbed up; thinning branches	A
263	Dead	8"	–	–	–	–	–	–							Off-site dead tree that should be removed by others.	Dead Off-Site
264	Cedrus sp./Cedar	8"	8'	72	Codominant	95%	8'	POS							On an incline; erosion/exposed roots; branches limbed up.	B Off-Site
265	Prunus spp./Cherry	8"	8'	65	Slightly Suppressed	45%	25'	P	X	X	X				Top of the bank; erratic/broken/dead branches.	A, B, C

● ON OR NEAR THE LIMITS OF CLEARING AND GRADING. FINAL STATUS TO BE EVALUATED IN FIELD WITH UFMD

A :LESS THAN 10' FROM STRUCTURE, CURB, SIDEWALK, TRAIL, OR PAVING.
B :WITHIN PUBLIC UTILITY EASEMENT
C :WITHIN FLOODPLAIN EASEMENT
TBD :POTENTIAL HAZARD. STATUS TO BE DETERMINED IN CONSULTATION WITH THE URBAN FOREST MANAGEMENT DIVISION (UFMD).
E :MAJOR CODOMINATE STEMS
P :PRESERVE
R :REMOVE
POS :PRESERVE OFF-SITE
RMP :REMOVE WITH PERMISSION FROM THE UFMD. TREE IS WITHIN UNDISTURBED AREA BUT CONDITIONS WARRANT ITS REMOVAL.
X :CONDUCT ACTIVITY INDICATED
* :DBH/DIAMETER BREAST HEIGHT AS MEASURED 4.5 FEET ABOVE GROUND.
** :CRZ/CRITICAL ROOT ZONE (ONE FOOT OF RADIUS FOR EVERY INCH OF TREE DIAMETER. CRZ FOR TREES WITH MULTIPLE STEMS ARE CALCULATED BASED ON THE DIAMETER OF A TREE WITH A BASAL AREA EQUIVALENT TO THE SUM OF THE BASAL AREAS FOR ALL STEMS MEASURED.
*** :CONDITION RATINGS ARE PROVIDED AS PERCENTAGES BASED ON METHODS OUTLINED IN THE LATEST EDITION OF THE GUIDE FOR PLANT APPRAISAL PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.

SEE SHEETS 12 AND 13 FOR TREE PRESERVATION PLANS. SEE SHEET 19 FOR TREE PRESERVATION NARRATIVE AND DETAILS.

CERTIFIED ARBORIST

International Society of Arboriculture
CERTIFIED ARBORIST
Dennis Dale Dixon
Certificate Number: MA-4913A
Expiration Date: Dec 31, 2011

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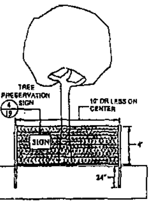
COMMONWEALTH OF VIRGINIA
PETER L. BUCK
No. 03-16-2011
CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
TREE INVENTORY AND CONDITION ANALYSIS
CIRCLE TOWERS APARTMENTS
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED: 10-28-09	03-16-11
REVISED: 08-13-10	
10-06-10	
11-17-10	
02-07-11	
APPLICANT:	

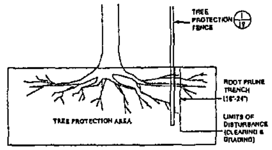
DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. N/A VERT N/A
SHEET 18 OF 33
CD. NO.
CAD NAME: C8085TTP-INV9
LAYOUT: INVENTORY 9 & 10
FILE NO. 08085.01-00

- PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL INDIVIDUAL AND GROUPS OF TREES MARKED FOR PRESERVATION SHALL BE PROTECTED WITH TREE PROTECTION FENCING.
- TREE PROTECTION FENCE SHALL BE POSITIONED DIRECTLY IN THE ROOT PRUNING TRENCH AND BACKFILLED FOR STABILITY OR JUST OUTSIDE THE TRENCH WITHIN THE DISTURBED AREA.
- TREE PROTECTION FENCING SHALL CONSIST OF FOUR FOOT 14-GUAGE WELDED WIRE FENCE ATTACHED TO SIX FOOT TALL T-POSTS DRIVEN 18 INCHES INTO THE GROUND. POSTS SHALL BE NO FURTHER THAN 10 FEET APART. SNOW FENCE MAY BE SUBSTITUTED WITH THE APPROVAL OF FAIRFAX COUNTY.
- WHERE APPROPRIATE, BASED ON EROSION AND SEDIMENT CONTROL PLANS, SUPER SILT FENCE MAY BE USED AS TREE PROTECTION FENCING.



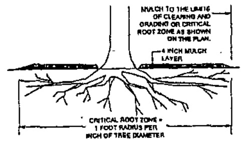
- TREE PROTECTION FENCING SHALL BE MADE CLEARLY VISIBLE TO ALL CONSTRUCTION PERSONNEL. SIGNS, IN ENGLISH AND SPANISH, WHICH STATES "TREE PRESERVATION AREA - KEEP OUT" SHALL BE INSTALLED ON TREE PROTECTION FENCING EVERY 30 FEET.
- A CERTIFIED ARBORIST SHALL MONITOR THE INSTALLATION OF TREE PROTECTION FENCING.

1/19 TREE PROTECTION FENCE — NOT TO SCALE



- PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL TREES MARKED FOR PRESERVATION ALONG THE LIMITS OF CLEARING AND GRADING SHALL BE ROOT PRUNED WHERE SHOWN ON THE PLAN.
- ROOT PRUNING SHALL BE CONDUCTED USING A TRENCHER OR VIBRATORY PLOW.
- THE ROOT PRUNING TRENCH SHALL BE A MAXIMUM OF 8 INCHES WIDE AND 18-24 INCHES DEEP. ONCE COMPLETED, THE ROOT PRUNING TRENCH SHALL BE IMMEDIATELY BACK FILLED.
- ROOT PRUNING SHALL BE CONDUCTED UNDER THE SUPERVISION OF A CERTIFIED ARBORIST.

2/19 ROOT PRUNING — NOT TO SCALE



- SPREAD MULCH BY HAND TO A UNIFORM THICKNESS OF 4 INCHES.
- MULCH SHALL COVER AS MUCH OF THE ENTIRE CRITICAL ROOT ZONE AS POSSIBLE UP TO 10' FROM THE LIMITS OF CLEARING AND GRADING.
- MULCH SHALL CONSIST OF A WOODY MATERIAL THAT HAS BEEN CHIPPED OR SHREDDED OR OTHER APPROVED MATERIAL.
- MULCH SHALL NOT TOUCH THE BASE OF THE TREE.

3/19 PROTECTIVE MULCHING — NOT TO SCALE

TREE PRESERVATION AREA

KEEP OUT

NO EQUIPMENT OR MATERIALS ARE TO BE STORED OR DEPOSITED WITHIN THIS AREA. TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL IS PROHIBITED.

(CONSTRUCTION COMPANY NAME)
(COMPANY CONTACT PERSON & TELEPHONE NUMBER)

PENALTY FOR VIOLATIONS
STRICTLY ENFORCED

SPECIFICATIONS:

DIMENSIONS: WIDTH: 17 INCHES MINIMUM
HEIGHT: 11 INCHES MINIMUM
BACKGROUND COLOR: WHITE
LETTER COLOR: BLACK
LETTER SIZE:
LETTER 1: 1.5 INCH MINIMUM (LARGEST)
LETTER 2: 0.75 INCH MINIMUM
LETTER 3: 0.5 INCH MINIMUM
LETTER 4: 0.375 INCH MINIMUM (SMALLEST)
LANGUAGE: ENGLISH AND SPANISH (SEPARATE SIGNS)

NOTE: ALTERNATE SIGNAGE MAY BE SUBMITTED TO FAIRFAX COUNTY FOR APPROVAL

4/19 TREE PRESERVATION SIGN — NOT TO SCALE

TREE PRESERVATION NARRATIVE:

1. ALL WORK PERFORMED IN ASSOCIATION WITH THIS PLAN SHALL MEET OR EXCEED CURRENT INDUSTRY STANDARDS AS PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), OR THE TREE CARE INDUSTRY ASSOCIATION (TCIA). IN THE EVENT TREATMENTS PRESCRIBED ARE NOT COVERED BY AN EXISTING STANDARD, WORK SHALL MEET OR EXCEED STANDARDS APPROVED BY FAIRFAX COUNTY'S URBAN FOREST MANAGEMENT DIVISION (UFMD).

2. THE DEVELOPER SHALL RETAIN A CERTIFIED ARBORIST ("THE ARBORIST") TO ENSURE THE PROPER IMPLEMENTATION OF THE TREE PRESERVATION PLAN ("THIS PLAN"). ALL WORK REQUIRED BY THIS PLAN SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE ARBORIST AS SPECIFIED IN THE SITE MONITORING SCHEDULE AND TO ENSURE THAT ALL ACTIVITIES ARE CONDUCTED IN ACCORDANCE WITH THIS PLAN, ANY APPLICABLE DEVELOPMENT CONDITIONS AND/OR AS APPROVED BY UFMD. MONITORING SHALL OCCUR AT ALL TIMES DURING THE INSTALLATION OF TREE PROTECTION FENCING AND, DURING ANY CLEARING OR GRADING, REMOVAL OF TREES, VEGETATION, OR STRUCTURES OR, THE TRANSPLANTING OF TREES OR VEGETATION OR, ANY OTHER SIMILAR ACTIVITIES ON THE SITE WITHIN 25 FEET OF THE LIMITS OF CLEARING AND GRADING.

3. PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL INDIVIDUAL TREES AND GROUPS OF TREES SHOWN TO BE PRESERVED ON THIS PLAN SHALL BE PROTECTED BY FENCING AS SPECIFIED ON THIS PLAN. THE PROTECTIVE FENCE INSTALLATION SHALL BE MONITORIED AS NOTED IN THE SITE MONITORING SCHEDULE. THE FENCING SHALL BE MADE CLEARLY VISIBLE TO ALL CONSTRUCTION PERSONNEL. THE FENCING SHALL BE INSTALLED PRIOR TO ANY WORK BEING CONDUCTED ON THE SITE, INCLUDING THE DEMOLITION OF ANY EXISTING STRUCTURES OR FENCES. THE ARBORIST MUST VERIFY IN WRITING THAT THE FENCING HAS BEEN INSTALLED PRIOR TO ANY WORK OR DEMOLITION ACTIVITIES AND IN ACCORDANCE WITH THE STANDARDS SET FORTH BY THIS PLAN.

4. THE ARBORIST SHALL WALK THE LIMITS OF CLEARING AND GRADING WITH AN URBAN FORESTER FROM UFMD AS NOTED IN THE SITE MONITORING SCHEDULE. ANY ADJUSTMENTS AGREED TO BY THE ARBORIST AND UFMD SHALL BE MEMORIALIZED IN WRITING BY BOTH PARTIES BEFORE ANY SUCH ADJUSTMENTS ARE IMPLEMENTED. TREES TO BE REMOVED SHALL BE TAGGED IN THE FIELD. TREES THAT ARE IDENTIFIED IN WRITING BY UFMD AS DEAD OR DYING WITHIN THE UNDISTURBED AREA MAY BE REMOVED AS PART OF THE CLEARING OPERATION. ANY TREE THAT IS SO IDENTIFIED SHALL BE REMOVED USING A CHAIN SAW AND SUCH REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT AVOIDS DAMAGE TO SURROUNDING TREES AND ASSOCIATED UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE USING A STUMP GRINDING MACHINE IN A MANNER CAUSING AS LITTLE DISTURBANCE AS POSSIBLE TO THE ADJACENT TREES AND ASSOCIATED UNDERSTORY VEGETATION AND SOIL CONDITIONS.

5. ALL TREE PRESERVATION RELATED WORK OCCURRING IN OR ADJACENT TO TREE PRESERVATION AREAS SHALL BE ACCOMPLISHED IN A MANNER THAT MINIMIZES DAMAGE TO VEGETATION TO BE PRESERVED, INCLUDING ANY WOODY AND/OR HERBACEOUS VEGETATION OCCURRING IN THE UNDERSTORY. TREES DESIGNATED FOR REMOVAL ALONG THE LIMITS OF DISTURBANCE SHALL BE REMOVED USING A CHAINSAW SO AS TO AVOID DAMAGE TO SURROUNDING TREES TO BE PRESERVED AND UNDERSTORY VEGETATION. THE USE OF POWER EQUIPMENT IN THESE AREAS SHALL BE LIMITED TO SMALL HAND-OPERATED EQUIPMENT SUCH AS CHAINSAWS. ANY WORK THAT REQUIRES THE USE OF LARGER MOTORIZED EQUIPMENT SUCH AS, BUT NOT LIMITED TO, TREE TRANSPLANTING SPADES, SKID LOADERS, TRACTORS, OR ANY ACCESSORY OR ATTACHMENT CONNECTED TO SUCH EQUIPMENT SHALL NOT OCCUR UNLESS REVIEWED AND APPROVED IN WRITING BY UFMD.

6. AS PART OF THE IMPLEMENTATION OF THIS PLAN AND THE SITE PLAN, MANAGEMENT PRACTICES SHALL PROVIDE FOR THE PROTECTION OF UNDERSTORY PLANT MATERIALS, LEAF LITTER AND SOIL CONDITIONS FOUND IN AREAS TO BE LEFT UNDISTURBED, SUBJECT TO THE APPROVAL OF UFMD. THE APPLICANT SHALL ACTIVELY MONITOR THE SITE TO ENSURE THAT INAPPROPRIATE ACTIVITIES SUCH AS THE STORAGE OF CONSTRUCTION MATERIALS, DUMPING OF CONSTRUCTION DEBRIS, AND TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL DO NOT OCCUR WITHIN THESE AREAS. THE UNDERSTORY PLANT MATERIALS, LEAF LITTER AND SOIL CONDITIONS SHALL BE RESTORED BY THE APPLICANT TO THE SATISFACTION OF UFMD IF THESE ARE FOUND TO BE DAMAGED, REMOVED OR ALTERED IN A MANNER NOT ALLOWED IN WRITING BY UFMD.

7. PRIOR TO THE SITE PRE-CONSTRUCTION MEETING AND SITE WALK WITH AN URBAN FORESTER FROM UFMD AND THE ARBORIST, THE APPLICANT SHALL HAVE THE LIMITS OF CLEARING AND GRADING MARKED WITH A CONTINUOUS LINE OF FLAGGING.

8. AT LEAST THREE DAYS PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRADING, OR DEMOLITION ACTIVITIES AND PRIOR TO THE INSTALLATION OF TREE PROTECTION FENCING, UFMD SHALL BE NOTIFIED IN WRITING AND GIVEN THE OPPORTUNITY TO INSPECT THE SITE TO ASSURE THAT ALL INDIVIDUAL TREES TO BE PRESERVED AND ALL AREAS TO BE LEFT UNDISTURBED HAVE BEEN CORRECTLY DELINEATED. UFMD SHALL PROVIDE WRITTEN NOTICE TO THE APPLICANT AS TO WHETHER OR NOT THE AREAS HAVE BEEN DELINEATED CORRECTLY. IF IT IS DETERMINED BY UFMD THAT THE AREAS ARE NOT DELINEATED CORRECTLY, NO GRADING OR CONSTRUCTION ACTIVITIES SHALL OCCUR ON THE SUBJECT PROPERTY UNTIL THE DELINEATION IS CORRECTED AND FIELD VERIFIED BY THE UFMD.

9. ROOT PRUNING: ROOT PRUNING SHALL BE PERFORMED WHEREVER GRADES WILL BE ALTERED WITHIN THE CRITICAL ROOT ZONE OF A TREE TO BE PRESERVED AND SHALL BE CONDUCTED WHERE SHOWN ON THE PLAN OR AS MOST PRACTICAL GIVEN SITE CONSTRAINTS. A VIBRATING PLOW, TRENCHER, STUMP CUTTER OR ARBORIST APPROVED EQUAL SHALL BE USED TO A DEPTH OF 18 INCHES. IF A TRENCHER IS USED THE TRENCH SHALL BE BACKFILLED IMMEDIATELY TO PREVENT ROOT DEHYDRATION. IF SILT FENCE IS TO BE INSTALLED AT THE LIMITS, THE ROOT PRUNING TRENCH MAY BE USED FOR THE INSTALLATION OF SILT FENCE. WHEREVER POSSIBLE, ROOT PRUNING TRENCHES SHOULD BE MULCHED WITH WOOD CHIPS OR MULCH FOUR INCHES DEEP.

10. WOOD CHIPS OR MULCH: WOOD CHIPS OR LEAF AND BRANCH MULCH SHALL BE PLACED AROUND THE LIMITS OF CLEARING AND GRADING IN AREAS WHERE TREES ARE WITHIN 20' OF THE LIMITS OF CLEARING AND GRADING AS SHOWN ON THIS PLAN. CHIPS OR MULCH THAT ARE PRODUCED AS A RESULT OF CLEARING OPERATIONS ON-SITE MAY BE USED FOR THIS PURPOSE AND SHALL BE PLACED BY HAND WITHOUT THE USE OF ENGINE-DRIVEN MACHINERY. CHIPS OR MULCH ARE NOT TO BE PLACED MORE THAN TEN FEET BEYOND THE LIMITS OF CLEARING AND GRADING AND SHALL NOT BE PLACED AT A DEPTH OF NO MORE THAN FOUR INCHES WITHIN THE PRESERVATION AREAS. OUTSIDE THE PRESERVATION AREAS, (WITHIN THE DISTURBED AREA), CHIPS OR LEAF AND BRANCH MULCH MAY BE PLACED AT A DEPTH NOT TO EXCEED TEN INCHES.

CERTIFIED ARBORIST

International Society of Arboriculture
CERTIFIED ARBORIST
Dennis Dale Dixon
Certificate Number: MA-4913A
Expiration Date: Dec 31, 2011

SEE SHEETS 12 AND 13 FOR TREE PRESERVATION PLANS. SEE SHEETS 14, 15, 16, 17 AND 18 FOR TREE INVENTORY AND CONDITION ANALYSIS.

SITE MONITORING SCHEDULE

LIST OF DUTIES	DATE	DESCRIPTION OF DUTIES
PRE-CONSTRUCTION MEETING IN FIELD TO WALK LIMITS OF CLEARING AND GRADING	SPECIFIED BY UFMD	PRIOR TO THE PRE-CONSTRUCTION MEETING AND BEFORE ANY CLEARING, GRADING OR DEMOLITION ACTIVITIES HAVE OCCURED, A CERTIFIED ARBORIST SHALL WALK THE LIMITS OF CLEARING AND GRADING WITH A REPRESENTATIVE FROM FAIRFAX COUNTY'S URBAN FOREST MANAGEMENT DIVISION (UFMD) TO DETERMINE WHERE ADJUSTMENTS TO THE CLEARING LIMITS CAN BE MADE TO INCREASE THE SURVIVABILITY OF TREES TO BE PRESERVED THAT OCCUR ALONG THE EDGE OF THE LIMITS OF CLEARING AND GRADING, AND/OR TO IDENTIFY HAZARDOUS, DAMAGED OR DISEASED TREES THAT NEED TO BE REMOVED.
INSTALLATION OF TREE PROTECTION FENCE	AFTER UFMD'S APPROVAL OF LOCATION	THE INSTALLATION OF ALL TREE PROTECTION FENCING SHALL BE PERFORMED UNDER THE SUPERVISION OF A CERTIFIED ARBORIST AND ACCOMPLISHED IN A MANNER THAT DOES NOT HARM EXISTING VEGETATION THAT IS REQUIRED TO BE PRESERVED. AT LEAST THREE DAYS PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRADING OR DEMOLITION ACTIVITIES AND PRIOR TO THE INSTALLATION OF TREE PROTECTION FENCING, UFMD SHALL BE NOTIFIED IN WRITING AND GIVEN THE OPPORTUNITY TO INSPECT THE SITE TO ASSURE THAT ALL INDIVIDUAL TREES TO BE PRESERVED AND ALL AREAS TO BE LEFT UNDISTURBED HAVE BEEN CORRECTLY DELINEATED.
CONSTRUCTION/ SITE ANALYSIS	MONTHLY ANALYSIS OF SITE OR AS SPECIFIED BY UFMD	THE APPLICANT SHALL ACTIVELY MONITOR THE SITE TO ENSURE THAT INAPPROPRIATE ACTIVITIES SUCH AS THE STORAGE OF CONSTRUCTION MATERIALS, DUMPING OF CONSTRUCTION DEBRIS, AND TRAFFIC BY CONSTRUCTION EQUIPMENT AND PERSONNEL DO NOT OCCUR WITHIN THESE AREAS

BC Consultants
Planners • Engineers • Surveyors • Landscape Architects
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(703)449-8100 (703)449-8108 (Fax)
www.bccon.com

COMMONWEALTH OF VIRGINIA — PETER L. RINEK — No. 388 — 03-16-2011 — CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

TREE PRESERVATION NARRATIVE AND DETAILS

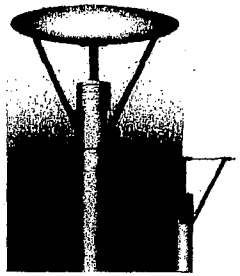
CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

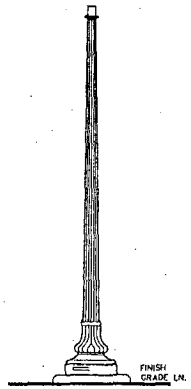
BC REVISIONS	
10-28-09	03-16-11
08-19-10	
10-06-10	
01-13-11	
02-07-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. N/A, VERT N/A

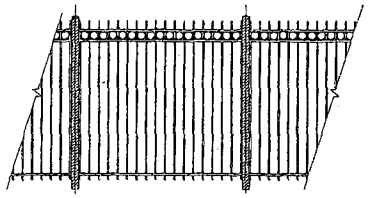
CO NO.
CAD NAME: C0005TTP-DET
LAYOUT: TTP DET
FILE NO. 08085.01-00



1/20 POLE LIGHT FIXTURE
NO SCALE
LIGHTING SPECIFICATIONS ARE TO BE PROVIDED PER SECTION 7-1000 OF THE FAIRFAX COUNTY PFM. OR EQUAL



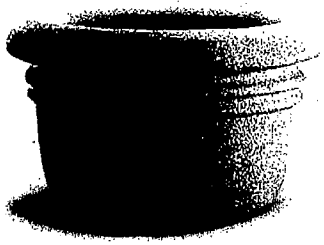
2/20 POLE LIGHT DETAIL
NO SCALE
LIGHTING SPECIFICATIONS ARE TO BE PROVIDED PER SECTION 7-1000 OF THE FAIRFAX COUNTY PFM. OR EQUAL



3/20 METAL FENCE
OR EQUAL
NO SCALE

4/20 BENCH
OR EQUAL
NO SCALE

5/20 TRASH RECEPTACLE
OR EQUAL
NO SCALE



6/20 PLANTER
OR EQUAL
NO SCALE

THE IMAGES ON THIS SHEET ARE TO CERTIFY THE QUALITY OF THE PROPOSED DEVELOPMENT AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
THE DEVELOPER RESERVES THE RIGHT TO CHANGE THE DESIGN, QUANTITIES, AND/OR LOCATION DUE TO FINAL ENGINEERING REQUIREMENTS.

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COMMONWEALTH OF VIRGINIA
PETER L. RINEK
No. 383
03-15-2011
CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

SITE DETAILS

CIRCLE TOWERS APARTMENTS

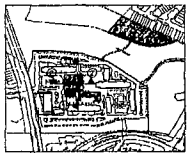
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
03-26-09	03-16-11
08-19-10	
10-06-10	
01-13-11	
02-10-11	
03-15-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. AS SHOWN VERT.
SHEET 20 OF 33
CD. NO.
CAD NAME: CBUBSDET
LAYOUT: DETAILS
FILE NO. 08085.01-00

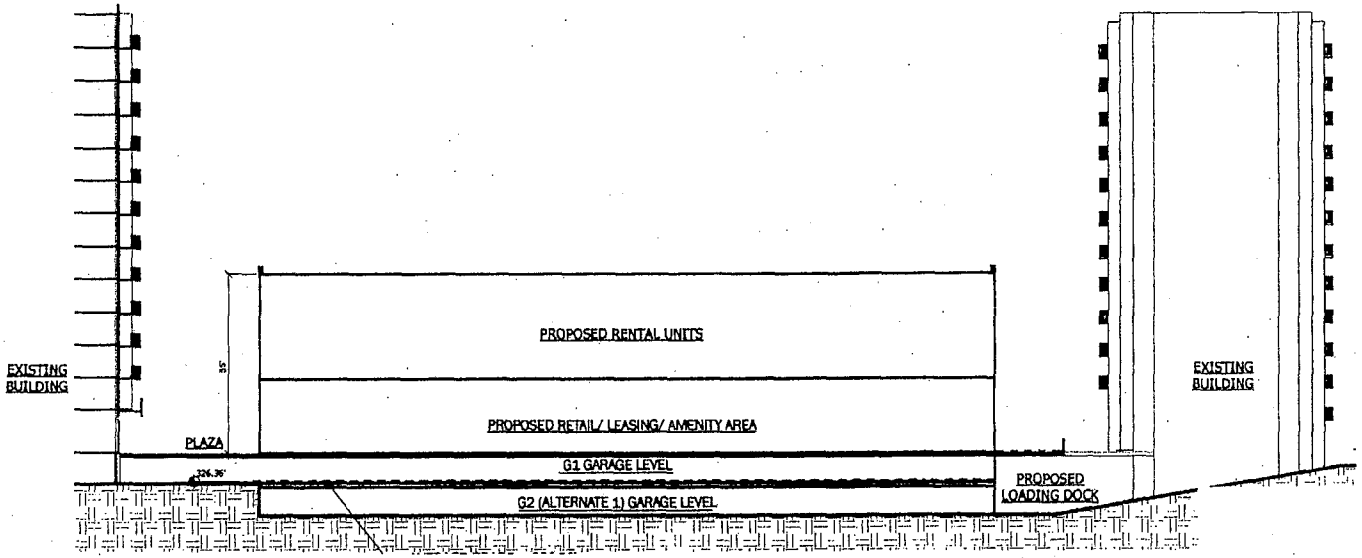
V:\projects_2008\08085\Plan\Cadfiles\PCA\C8085ELE.dwg, ELEVATIONS, 3/15/2011 3:24:38 PM

lessard URBAN



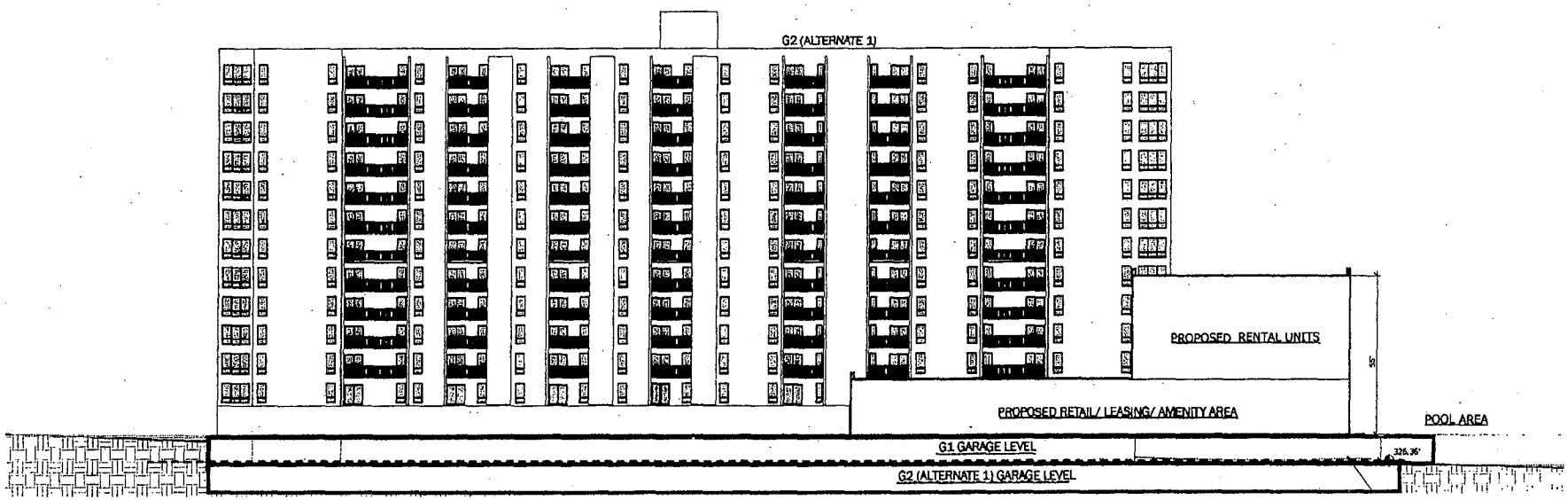
KEY MAP

SCALE: 1"=500'



1/21 SECTION 1

SCALE: 1/16"=1'



1/21 SECTION 2

SCALE: 1/16"=1'

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COMMONWEALTH OF VIRGINIA — NICK L. BIAS — 3386 — 03-16-2011 — CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

ELEVATIONS

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	REVISED: 03-16-11
10-28-09	
06-18-10	
REVISED: 10-06-10	
02-07-11	
APPLICANT:	

DESIGNED BY: PLR

DRAFTED BY: CAD

CHECKED BY: PLR

DATE: JUNE 2009

SCALE: HOR. AS SHOWN VERT.

SHEET 21 OF 33

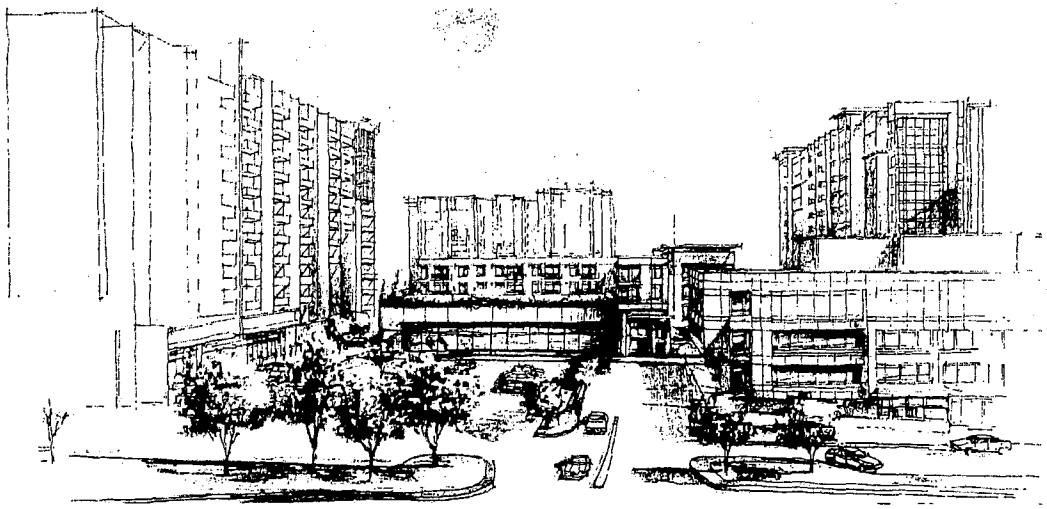
CO. NO

CAD NAME: C8085ELE

LAYOUT: ELEVATIONS

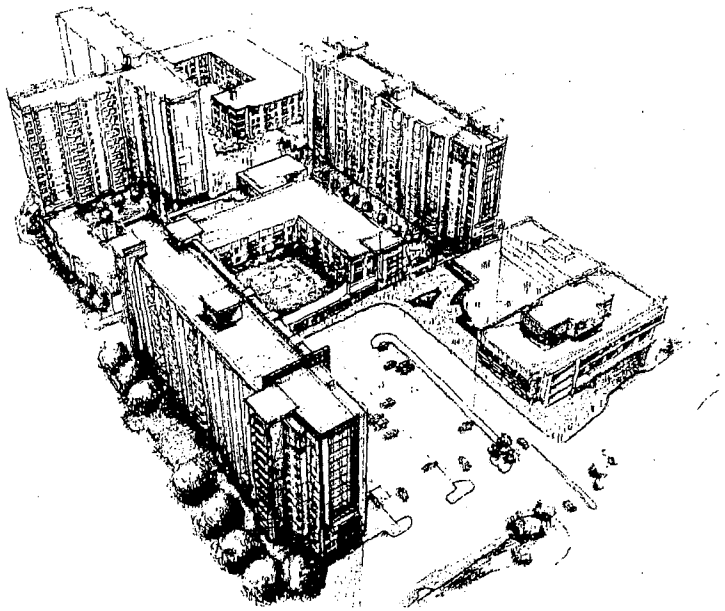
FILE NO. 08085.01-00

lessard URBAN



FRONT VIEW

NO SCALE



PERSPECTIVE

NO SCALE

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PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

PERSPECTIVE VIEWS

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET 08082-10-06-10	
01-13-11	
02-07-11	
03-16-11	
APPLICANT:	

DESIGNED BY: PLR

DRAFTED BY: CAD

CHECKED BY: PLR

DATE: JUNE 2009

SCALE: HOR. N/A VERT.

SHEET 22 OF 33

CO. NO.

CAD NAME: CB085ELE

LAYOUT: VIEWS

FILE NO. 08085.01-00

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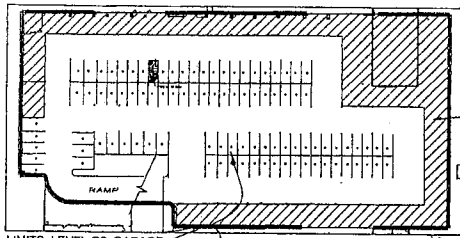
ALTERNATE 1 GARAGE



RESIDENT STORAGE AND BUILDING SERVICE AREA. NOTE: AREA CAN BE CONVERTED TO ADDITIONAL PARKING OR RELOCATED WITHIN PARKING DECKS IF DETERMINED BY APPLICANT

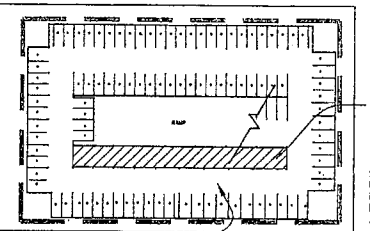
PARKING SPACE TABULATIONS:

PARKING SPACES PROVIDED:	
SURFACE SPACES:	338
WESTERN GARAGE SPACES:	183
GARAGE SPACES:	607
LEVEL G1 GARAGE SPACES:	512
LEVEL G2 GARAGE SPACES:	95
TOTAL SPACES:	1,128

ALTERNATE 2 GARAGE

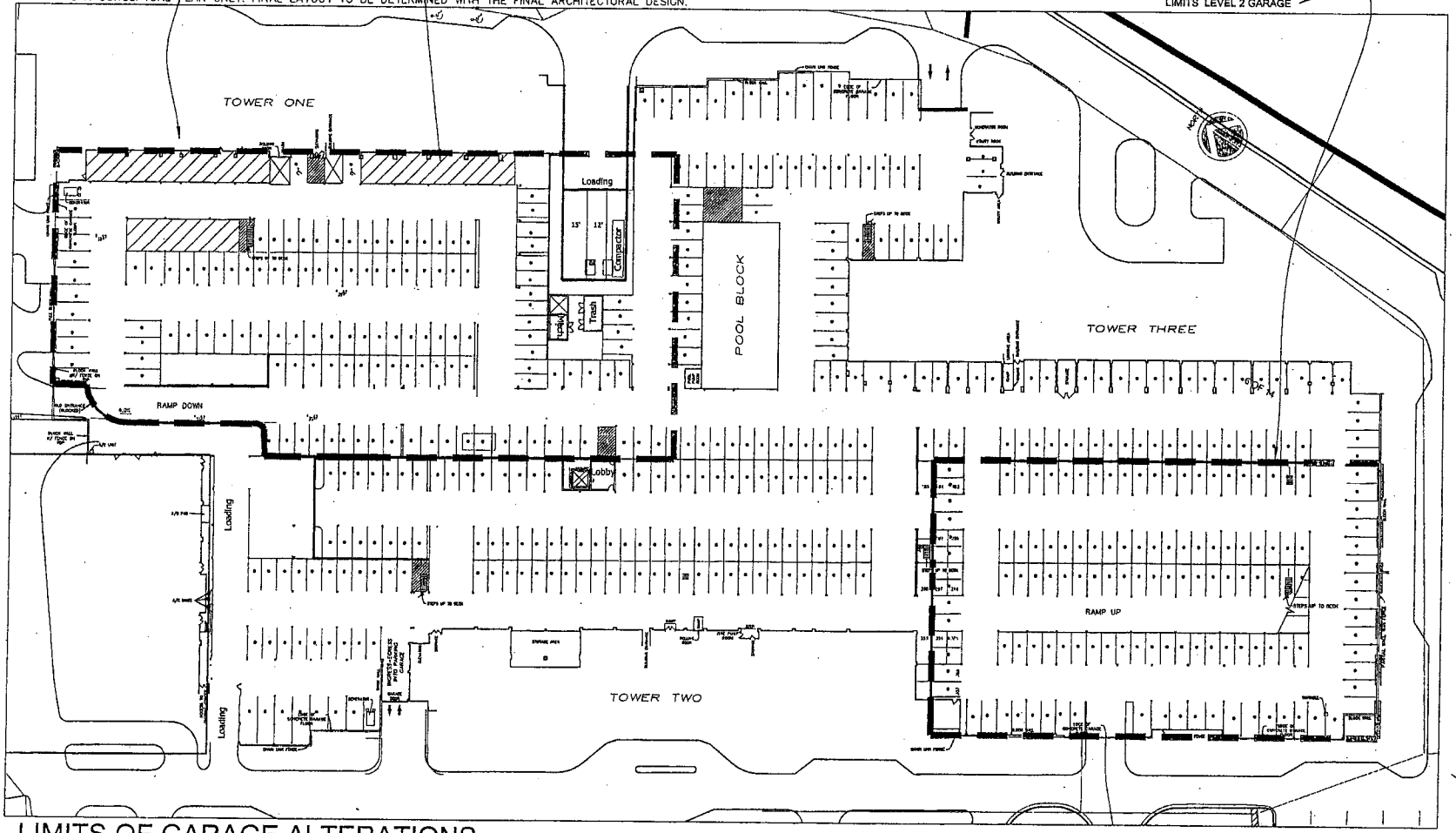
PARKING SPACE TABULATIONS:

PARKING SPACES PROVIDED:	
SURFACE SPACES:	337
WESTERN GARAGE SPACES:	183
GARAGE SPACES:	608
LEVEL G1 GARAGE SPACES:	528
LEVEL 2 GARAGE SPACES:	80
TOTAL SPACES:	1,128



RESIDENT STORAGE AND BUILDING SERVICE AREA. NOTE: AREA CAN BE CONVERTED TO ADDITIONAL PARKING OR RELOCATED WITHIN PARKING DECKS IF DETERMINED BY APPLICANT

NOTE: THIS IS A CONCEPTUAL PLAN ONLY. FINAL LAYOUT TO BE DETERMINED WITH THE FINAL ARCHITECTURAL DESIGN.



LIMITS OF GARAGE ALTERATIONS

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COMMONWEALTH OF VIRGINIA
PETER L. BRIDE
No. 0401
03-16-2011
CERTIFIED COMPUTER

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
PROPOSED GARAGE PLANS

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
SHEET ADDED: 10-06-10
12-03-10
02-07-11
REVISED: 03-16-11
APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2008
SCALE: HOR AS SHOWN
VERT. NA
SHEET 23 OF 33
CO. NO.
CAD NAME: CB085GARAGE
LAYOUT: GARAGE
FILE NO. 08085.01-00

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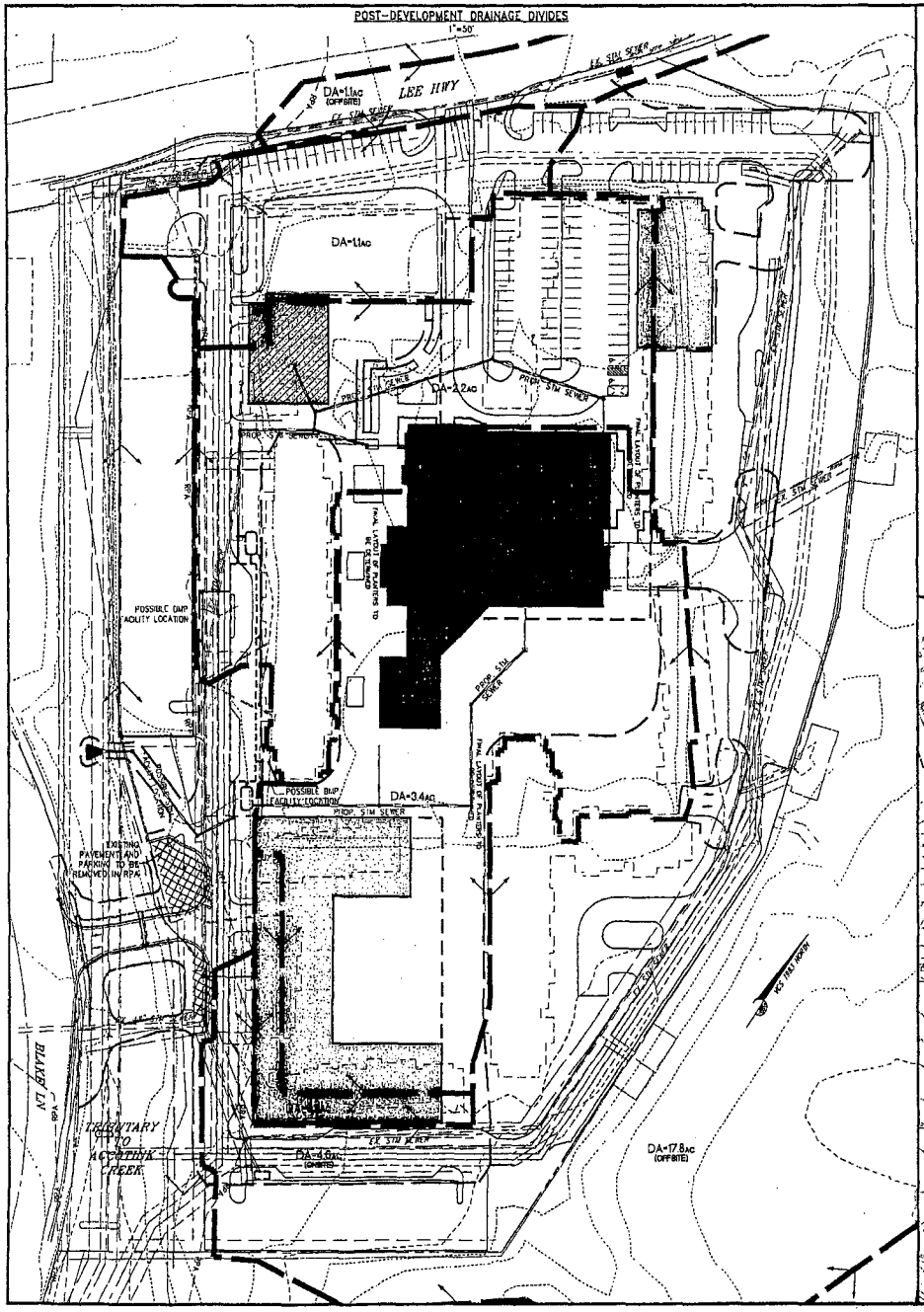


STORMWATER MANAGEMENT NARRATIVE

AN UNDERGROUND STORMWATER MANAGEMENT FACILITY IS PROPOSED TO REDUCE THE 2- AND 10-YEAR STORM RUNOFFS TO BELOW EXISTING CONDITIONS. THE FACILITY IS LOCATED UNDER PAVEMENT AND OUTSIDE OF THE RPA. THUS, MEETING STORMWATER MANANAGEMENT REQUIREMENTS SET FORTH IN SECTION §6-0300 OF THE FAIRFAX COUNTY PFM.

OUTFALL NARRATIVE

A MAJORITY OF THE SITE IS COVERED BY IMPERVIOUS SURFACES INCLUDING SEVERAL MULTI-STORY BUILDINGS WITH BOTH RESIDENTIAL AND COMMERCIAL USES, PARKING LOTS, AND WALKWAYS. ALL ONSITE RUNOFF IS COLLECTED INTO TWO EXISTING STORM DRAINAGE SYSTEMS AND EACH OUTFALL AT SEPARATE LOCATIONS.

OUTFALL A

APPROXIMATELY 2.2-ACRES OF RUNOFF AT THE LEE HIGHWAY ENTRANCE ARE COLLECTED INTO A STORM DRAINAGE SYSTEM AT POINT A1. THE RUNOFF IS CONVEYED IN AN ADEQUATE STORM DRAINAGE SYSTEM TO POINT A2 WHERE IT DISCHARGES INTO A FLOODPLAIN, WHICH IS A TRIBUTARY OF ACCOTINK CREEK. FLOW WILL CONTINUE IN THE CHANNEL UNTIL IS PASSES UNDER THE PROPOSED ENTRANCE FROM BLAKE LANE AT POINT A3 WITH A TOTAL CHANNEL DRAINAGE AREA OF 5.5-ACRES. ADDITIONALLY, 5.8 ACRES OF SITE AREA WILL BE PIPED TO THIS POINT FROM THE STORMWATER MANAGEMENT VAULT. SINCE 5.5 ACRES IS GREATER THAN 80% OF 5.8 ACRES, PER PFM SECTION §6-0203.2A, EXTENT OF REVIEW WILL BEGIN HERE AND EXTEND 150' DOWNSTREAM. THE RUNOFF WILL CONTINUE DOWN THE TRIBUTARY OF ACCOTINK CREEK, PARALLELING BLAKE LANE. THE OUTFLOW FROM THE SWM VAULT WILL BE LIMITED TO A NON-EROSIVE VELOCITY AND THE EXISTING CHANNEL WILL BE ADEQUATE. THUS OUTFALL A WILL BE ADEQUATE.

OUTFALL B

APPROXIMATELY 22.4-ACRES OF RUNOFF, INCLUDING 4.6 ACRES ON ONSITE AREA, ARE COLLECTED IN AN EXISTING MANHOLE AT POINT B1. THE RUNOFF IS PIPED THROUGH A 48" PIPE UNDER THE EXISTING CHANNEL TO THE DOUBLE BOX CULVERTS UNDER BLAKE LANE AT POINT B2. SINCE THE DRAINAGE AREA IN THE DOUBLE BOX CULVERTS GREATLY EXCEEDS THE DRAINAGE AREA IN THE 48" PIPE, PER PFM SECTION §6-0203.2A, EXTENT OF REVIEW WILL BEGIN HERE AND EXTEND 150' DOWNSTREAM. THE BOX CULVERTS ARE ADEQUATE TO CARRY THE FLOW IN A 10-YEAR STORM, THUS OUTFALL B IS ADEQUATE.

THE DUAL 6'X6' BOX CULVERTS UNDER BLAKE LANE CONTINUE SOUTH CROSSING UNDER BOTH ARLINGTON BOULEVARD AND PICKETT ROAD. THE BOX CULVERTS OUTFALL AT POINT C1. THE TOTAL DRAINAGE AREA AT C1 IS GREATER THAN 377-ACRES PER FAIRFAX COUNTY FLOODPLAIN STUDY FP-215. THE FLOW CONTINUES TO FOLLOW PICKETT ROAD UNTIL IT CONVERGES WITH ACCOTINK CREEK AT POINT C2. THE DRAINAGE AREA OF ACCOTINK CREEK IS GREATER THAT ONE (1) SQUARE MILE, THUS THE DESCRIPTION OF EXISTING OUTFALL CONDITIONS CAN END HERE.

MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS

The following information is required to be shown or provided in all zoning applications, or a written request of the submission requirement with justification shall be attached. Waiver requests will be acted upon separately. Failure to adequately address the required submission information may result in a delay in processing the application.

This information is required under the following Zoning Ordinance paragraphs:

Special Permits (9-011 2J & 2L)	Special Exceptions (9-011 2J & 2L)
Cluster Subdivision (9 618 1G & 1N)	Commercial Revitalization Districts (9-623 2A (12) & (14))
Development Plans PRC District (18-302 3 & 4L)	PRC Plan (18-303 1E & 1G)
FDP P Districts (except PRC) (18-502 1F & 1G)	Amendments (18-202 10F & 10P)

☒ 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').

☒ 2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outlets, energy dissipation devices, and stream stabilization measures as shown on Sheet 24.

☒ 3. Provide:

Facility Name/ Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
U.G. VAULT	5.8	0	5.8	4425	33000	N/A
Totals						

☒ 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 24. Pond inlet and outlet pipe systems are shown on Sheet N/A.

☒ 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet N/A. Type of maintenance access road surface noted on the plat is N/A (asphalt, gravel, grass, etc.).

☒ 6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet N/A.

☒ 7. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 24.

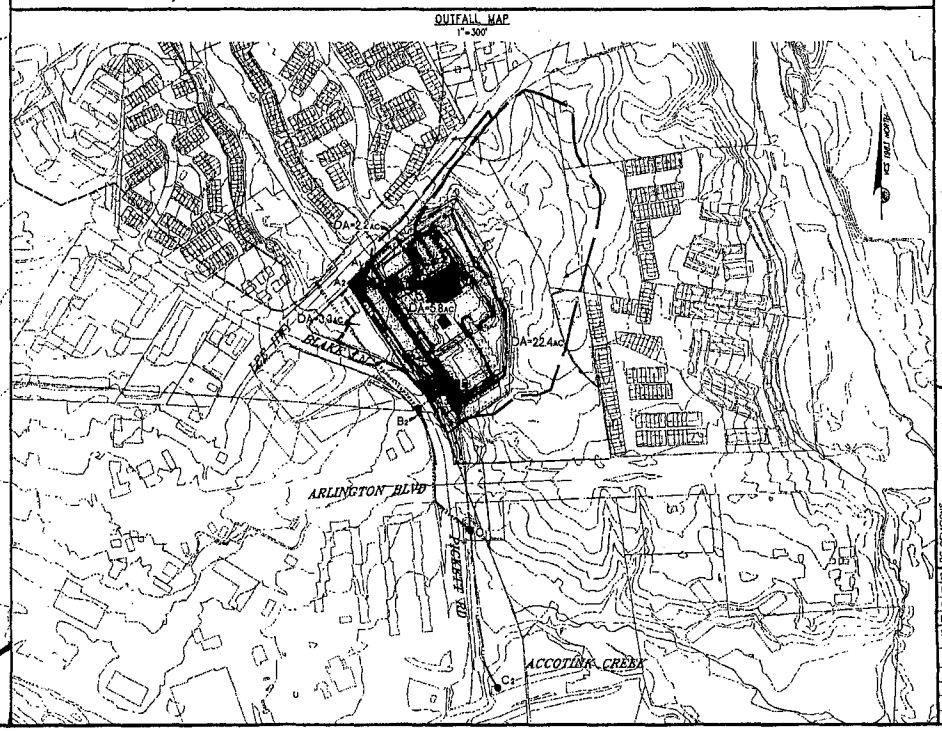
☒ 8. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 24.

☒ 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 24.

☒ 10. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 2.

☒ 11. A submission waiver is requested for UNDERGROUND DETENTION IN RESIDENTIAL DEVELOPMENT.

☒ 12. Stormwater management is not required because N/A



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COMMONWEALTH OF VIRGINIA
PETER L. NINEX
No. 022-000
03-16-2011
CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

STORMWATER MANAGEMENT PLAN

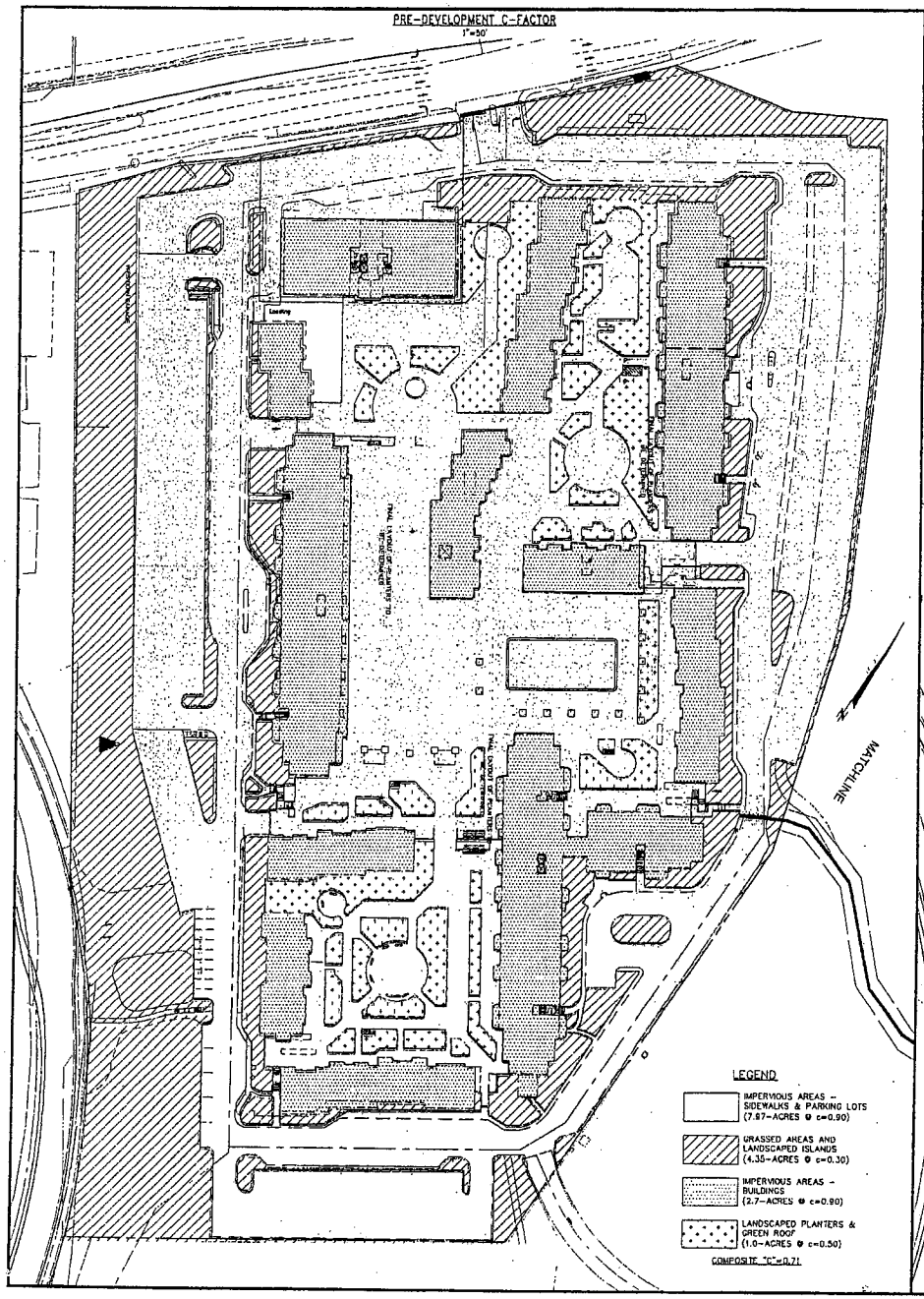
CIRCLE TOWERS APARTMENTS

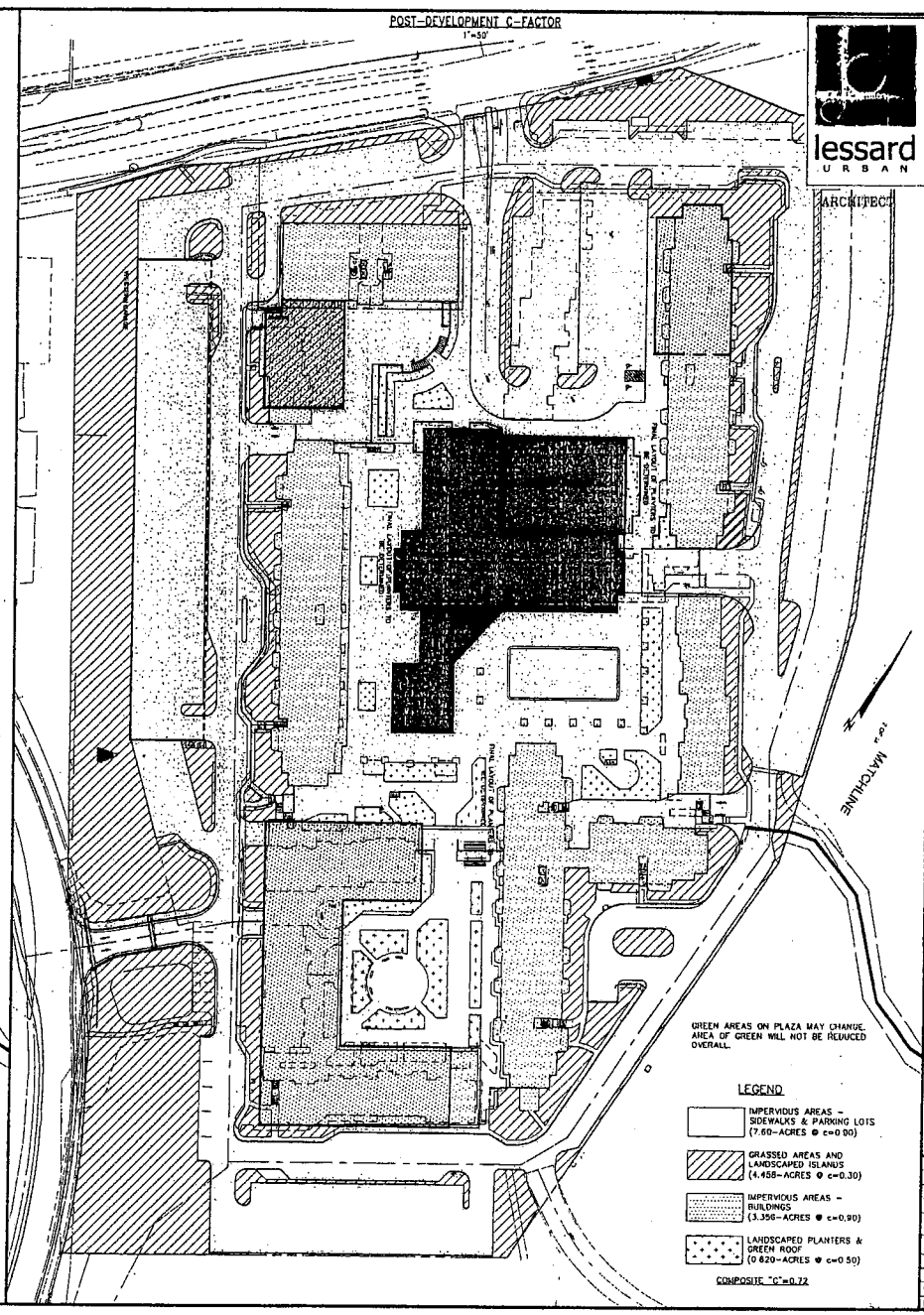
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

REVISIONS	
REVISED: 10-28-08	02-07-11
REVISED: 08-19-10	03-16-11
REVISED: 10-06-10	
REVISED: 12-21-10	
01-13-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAU
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. AS SHOWN VERT.
SHEET 24 OF 33
CO. NO.
CAD NAME: C08085SWM
LAYOUT: SWM-1
FILE NO. 08085.01-00

WHEN CONFIRMED BORDER IS 30X40-GR





lessard URBAN ARCHITECTS

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COMMONWEALTH OF VIRGINIA
PETER L. RUNK
No. 326
03-16-2011
CERTIFIED PROFESSIONAL ENGINEER

STORMWATER MANAGEMENT PLAN

CIRCLE TOWERS APARTMENTS

FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED OCTOBER 28, 2009	
REVISED: 06-19-10	3-16-11
REVISED: 10-06-10	
02-03-11	
03-16-11 APPLICANT	
DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: PLR	
DATE: APRIL 31, 2009	
SCALE: HOR. N/A VERT. AS NOTED	
SHEET 25 OF 34	
CO. NO.	
CAD NAME: 08065SWM	
LAYOUT: SWM2	
FILE NO. 08065.01-00	

WRITE, SIGNATURE, SEARCHED: 8/25-05

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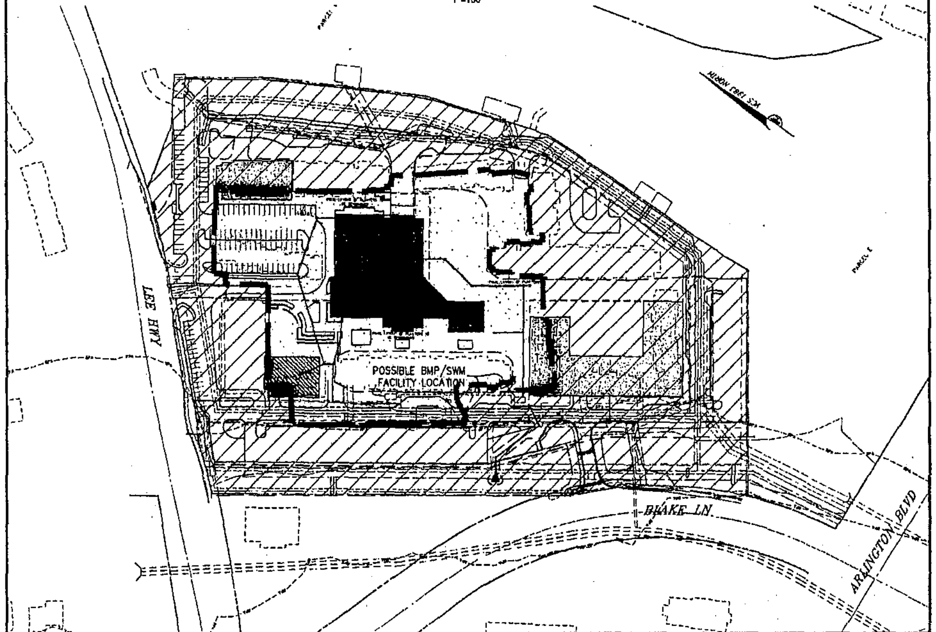
WATER QUALITY MAP

1"=100'



MAP LEGEND

(blank box)	B1 ONSITE - STRUCTURAL BMP
(hatched box)	B2 ONSITE - UNTREATED

WATER QUALITY NARRATIVE

THIS PROJECT IS A 16.03 ACRES SITE PROPOSED FOR REDEVELOPMENT. BECAUSE THE IMPERVIOUS AREA WITHIN THE RPA IS NOT PROPOSED TO BE INCREASED, THE DEVELOPMENT WITHIN THE RPA IS ALSO CONSIDERED REDEVELOPMENT. THE REDEVELOPMENT REQUIRES A 11.8% PHOSPHORUS REMOVAL EFFICIENCY PER SECTION §118-3-2(F)(3). (SEE COMPUTATIONS ON THIS SHEET.)

AS ILLUSTRATED, THE COLLECTION OF 3.50-ACRES, AT A C-FACTOR OF 0.83 WILL PROVIDE THE PHOSPHORUS REMOVAL REQUIRED FOR REDEVELOPMENT. THIS WILL MEET BMP REQUIREMENTS FOR THE SITE PER FAIRFAX COUNTY CODE SECTION §118-3-2(F)(3).

WATER QUALITY WILL BE PROTECTED BY THE PROVISIONS OF THE ON-SITE STORMWATER MANAGEMENT/BEST MANAGEMENT PRACTICES (SWM/BMP) FACILITY. THE PROPOSED SWM/BMP VAULT WILL DIVERT CONTROLLED STORMWATER RUNOFF INTO THE RESOURCE PROTECTION AREA (RPA) ALLOWING THE WATER TO INFILTRATE INTO THE SOIL THEREBY REDUCING RUNOFF BEFORE REACHING DOWNSTREAM SYSTEMS. THE DIVERTED RUNOFF WILL HELP TO SUSTAIN PROPOSED MICRO-POOLS WITHIN THE RPA TO PROMOTE THE ESTABLISHMENT OF WETLAND AREAS. RPA ENHANCEMENT AND RESTORATION PLANTINGS WILL FURTHER ADVANCE THE WATER QUALITY BENEFITS OF THE MICRO-POOLS. TO ENCOURAGE CONTINUED WETLAND GROWTH, THE VAULT WILL PROVIDE EXTENDED DETENTION OF 4,425 CUBIC FEET OF STORMWATER. OVER A PERIOD OF 36 HOURS, THE DETAINED VOLUME WILL BE SLOWLY RELEASED TO INFILTRATE INTO SUPPORTING SOILS.

PHOSPHORUS REMOVAL CALCULATIONS FOR REDEVELOPMENT SITES

Per PFM 6-0401 2B, the Redevelopment of any property not currently served by one or more BMP's, the required reduction in phosphorus loads will be computed for each site based on the formula:

[1 - 0.9(*Ipre/*Ipost)] x 100 = % P removal   *I = Impervious Area

Site Area = 16.03 Acres

Pre "C" factor = 0.71   *Ipre = 68.8
Post "C" factor = 0.72   *Ipost = 70

% P Removal = required for site   (1 - 0.9 (68.8 / 70)) x 100 = 11.8 %

BMP FACILITY DESIGN CALCULATIONS

II. WATERSHED INFORMATION

PART 1: LIST ALL OF THE SUBAREAS AND "C" FACTORS USED IN THE BMP COMPUTATIONS

SUBAREA DESIGNATION & DESCRIPTION (1)		"C" (2)	AREA (AC.) (3)
B1	Onsite - Structural BMP	0.83	3.50
B2	Onsite - Untreated	0.75	12.53

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE

(A) AREA OF THE SITE (a) 16.03 ACRES

(B) SUBAREA DESIGNATION

SUBAREA DESIGNATION (1)		"C" (2)		AREA (AC.) (3)		PRODUCT (4)
B1	Onsite - Structural BMP	0.83	X	3.50	=	2.91
B2	Onsite - Untreated	0.75	X	12.53	=	9.40
				(b) TOTAL	=	12.31

(C) WEIGHTED AVERAGE "C" FACTOR (b) / (a) = (c) 0.77

PART 3: COMPUTE THE TOTAL PHOSPHORUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION (1)	BMP TYPE (2)	REMOVAL EFF. (%) (3)		AREA RATIO (4)		"C" FACTOR RATIO (5)		PRODUCT (6)
B1	Onsite - Structural BMP	50	X	0.22	X	1.08	=	11.88
B2	Onsite - Untreated	0	X	0.78	X	0.97	=	0.00
	20% Credit for Offsite Areas.							
						(e) TOTAL	=	11.88

PART 4: DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

(A) SELECT REQUIREMENT: (e) 11.8 %
(FAIRFAX COUNTY REDEVELOPMENT REQUIREMENTS - 10%)

(B) IF LINE 3 (e) 11.88 % > LINE 4(e) 11.8 %
THEN PHOSPHORUS REMOVAL REQUIREMENT IS SATISFIED.

UNDERGROUND DETENTION MODIFICATION

BC Consultants
Planners • Engineers • Surveyors • Landscape Architects

December 3, 2010

Mr. James Patteson, Director
Office of Land Development Services
Fairfax County DPWES
12055 Government Center Parkway
Fairfax, Virginia 22035-5503

Re: Circle Towers
County No.: PCA-B-993/FDP-B-993-02
Tax Map No.: 48-3 ((1)) 53,
48-4 ((1)) 2, 3A1, 3B, & 3B1
BC Project No.: 08085.01

Dear Mr. Patteson,

On behalf of our client, UDR, we hereby request a waiver of the Fairfax County Public Facilities Manual (PFM) section 6-0303.8, to permit underground detention in a residential development for the above-referenced project. This ±16.03-acre site, currently zoned PDH-12, is located at the intersection of Lee Highway and Blake Lane within the Providence District. The proposed project is the demolition of existing buildings and construction of a mixed-use facility and townhouses with parking and associated infrastructure. The adjacent parcels are zoned for residential and commercial uses. The following is the statement of justification that outlines the reasons for this request as well as the accompanying justification in accordance with the instructions outlined in the Department of Public Works and Environmental Services (DPWES) letter to industry #05-19 dated October 29, 2004.

Statement of Justification

This waiver is being requested because the effective utilization of the site does not leave sufficient space for an above ground facility. Additionally, this is a redevelopment project and a substantial portion of the site is currently occupied by buildings, parking lots, walkways, and a flood plain.

Type of Facilities

The underground storm water management facilities proposed with this project will be a concrete vault to address quantity control requirements. Two (2) Stormfilter or equal Best Management Practices (BMP) vaults will be used to address quality control requirements.

The BC Consultants, Inc.
12600 Fair Lakes Circle, Suite 100, Fairfax, Virginia 22033
Phone: (703) 449-8100 Fax: (703) 449-8108

Circle Towers — December 3, 2010
PCA-B-993/FDPA-B-993-02 — Page 2 of 3

Materials

The proposed storm water detention vault and BMP vaults will be constructed out of cast-in-place or precast concrete. Both are utilized in order to maximize the life of the facility as well as minimize any maintenance requirements.

Size

The proposed storm water detention vault will have a volume of approximately 33,000-cubic feet in order to address quantity control requirements. The vault will be approximately 193-feet (length) x 23-feet (width) x 7.5-feet (depth).

The BMP facilities are cartridge systems that will have 55 cartridges combined. The dimensions of each vault will be 18-feet (length) x 8-feet (width) x 8-feet (depth). These dimensions are based upon the manufacturer's standards.

Location

The facility will be located underneath the southwestern parking lot, north of the existing 48" outfall pipe as depicted on the Proffered Condition Amendment/Final Development Plan (PCA/FDP) and shown on Attachment "C". The exact location and configuration will be subject to change with final design as necessary to accommodate access requirements.

Safety

Due to the fact that the facility will be located underground there should be no safety issues for the residents as there will be no access to the system other than for maintenance personnel.

Environment

This site was previously developed as high-rise apartment rentals and commercial buildings with parking. The areas surrounding the site are developed with residential apartments to the north, vacant recreational & parkland to the east and south, and a restaurant to the west. The proposed stormwater management system will provide both quantity and quality control for the storm water runoff generated by this project. In addition, the discharge from the system will tie directly into an existing storm sewer system. Because both quantity and quality controls are being provided and the only concentrated storm water discharge will be directed into existing adequate outfall, there should be no adverse environmental impacts.

Circle Towers — December 3, 2010
PCA-B-993/FDPA-B-993-02 — Page 3 of 3

Maintenance

Because this entire facility will be owned, operated, maintained, and funded by the property owner, there will be no homeowners or condominium owners association. However, if we assume that all residents of the facility will, in some way, share the annual maintenance costs of the storm water management facilities equally, the annual cost would be $6,000 or $10 per unit based on a total of 630 residential units (see Attachment "B").

Conclusion

Based on the information presented above, it is our opinion that the use of underground detention is an appropriate and reasonable option to address storm water management requirements for this project. This option should provide an environmentally sensitive solution without imposing an undue cost burden upon the individual unit owners.

Enclosed with this letter are copies of the PCA/FDP as well as the Landscape plan to assist you with your evaluation of this waiver request. Should you have any questions or need additional information, please let us know.

Sincerely,

[signature]

The BC Consultants, Inc.
Dennis Cashwer
Project Engineer

JHM

Attachments: Attachment A - Construction Cost Estimate
Attachment B - Maintenance Cost Estimate
Attachment C - Schematic of the Facility
Attachment D - Draft Proffer Conditions

Enclosures: Proffered Condition Amendment/Final Development Plan

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PETER L. RINEK No. 388 03-16-11 CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
STORMWATER QUALITY PLAN
CIRCLE TOWERS APARTMENTS
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
REVISED: 10-28-09	02-07-11
REVISED: 08-19-10	03-16-11
REVISED: 10-06-10	
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01-13-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. N/A VERT. AS NOTED
SHEET 26 OF 33
CO. NO.
CAD NAME: C8085SWM
LAYOUT: SWM-2
FILE NO. 08085.01-00

XREFS: C8085BASE C8085XREF 8085-GS

Water Quality Impact Assessment
Circle Towers Apartments
Fairfax County Tax Map No. 048-4-((01))-0003
July 19, 2010

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BC Job # 08085

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Objective

This Water Quality Impact Assessment (WQIA) has been developed to identify the water quality impacts associated with the construction of an entrance from Blake Lane into the Circle Towers development proposed within the limits of a Resource Protection Area. It is intended to meet the requirements set forth by Section §118 of the Fairfax County Code. This assessment will also portray that the improvements to this parcel are proposed in a manner and location that are least disruptive to the RPA.

Applicability

Pursuant to Section §118-6-9 of the Chesapeake Bay Preservation Ordinance (CBPO), encroachment into the RPA may be granted subject to compliance with the Required Findings contained within Section §118-6-6. Further, per Section §118-6-9, the justification must show that the water quality benefits resulting from the proposed improvement exceed the associated water quality detriments.

In addition to the Required Findings under Section §118-6-6, Section §118-3-3 sets forth Additional Performance Criteria that require a Water Quality Impact Assessment (WQIA) for any proposed land disturbance within an RPA that is not exempt pursuant to Article 5 or for which an exception waiving this criteria is not approved pursuant to Article 6. Given the construction of an entrance from Blake Lane will disturb the RPA and is not exempt from the requirements, the Director requires a WQIA be developed in accordance with the requirements of Section §118-4-3 of the CBPO. This WQIA serves to meet those requirements, which are as follows:

Required Elements of the Water Quality Impact Assessment

This Water Quality Impact Assessment shall do the following:

(a) Display the boundaries of the RPA

The RPA is associated with a floodplain running adjacent to Blake Lane. The approximate boundary of the RPA is shown per the Fairfax County Chesapeake Bay Preservation Area Maps. Please see sheet 1 of the included Circle Towers Apartments – Existing Conditions Plan. (refer to Appendix A)

(b) Display and describe the location and nature of the proposed encroachment into and/or impacts to the RPA, including any clearing and grading, impervious surfaces, structures, utilities, and sewage disposal systems

Encroachment into the RPA occurs at the southwest corner of the site, between the existing parking lot and Blake Lane. The proposed encroachment includes a private road with a bridge spanning the existing channel, a sidewalk adjacent to the road, a storm sewer outfall, removal of existing parking lot, stone weirs to create micro-pools, landscaping, the removal of an existing trail and the associated clearing and grading. The Impact Location Map (refer to Appendix B) illustrates the relationship between the proposed conditions and approximate location of the RPA. It also depicts the location of the disturbance including the limits of clearing and grading and the improvements. The encroachment is the least amount necessary to clear and grade for the improvements. A bridge span with abutments and retaining walls adjacent to the road are proposed to lessen the disturbance in the RPA. The construction of the improvements, including the redevelopment of the property and the frontage improvements to Blake Lane, results in approximately 0.66 acres of disturbance in the RPA. However, much of this area was previously disturbed with the construction of Circle Towers prior to the enactment of the Chesapeake Bay Preservation Ordinance. Also, there is an overall decrease in impervious area within the RPA that is discussed in section (e).

(c) Provide justification for the proposed encroachment into and / or impacts to the RPA

A third site access into the Circle Towers development is proposed on Blake Lane to help alleviate some of the current circulation problems on the site, as well as minimize access concerns associated with the primary access at Lee Highway.

The primary access to the Property is on Lee Highway. Subsequent to development of the Property, Lee Highway was widened on several occasions, negatively impacting the Lee Highway access and resulting in limited on-site stacking options. The limited stacking creates circulation problems for the Property that the Blake Lane entrance will help solve. These problems are present under the current development and are not caused or necessitated by the proposed redevelopment. In addition, as we discuss in more detail below, improving the secondary access to Route 50 is not a possible mitigation measure.

Based on the foregoing, we determined that a third entrance was necessary, even without the proposed redevelopment. In response, we studied the Property to determine where a proposed entrance could be most appropriately located. However, the myriad of pre-existing conditions severely limit the potential location of a proposed entrance and its current Blake Lane location is in the only feasible location.

The Property is bound on the north by Lee Highway. There is an existing full movement signalized entrance on Lee Highway. VDOT access management regulations require signalized intersections to be located 2,640 feet from one another along principal arterials. The distance between the intersection of Blake Lane/Lee Highway and the existing entrance is only 825 feet. These VDOT spacing requirements effectively prevent the placement of a second entrance on Lee Highway because there is not adequate distance from the existing intersections.

It should also be noted that the rezoning will require the filing of an access management exception with VDOT for the existing Lee Highway entrance. The proposed entrance on Blake Lane has been identified as way to address the impacts associated with the substandard spacing. The Lee Highway entrance cannot be relocated due to the distance requirement between signals and because of the alignment opposite Circle Woods Drive (constructed after the existing entrance) and the distance to Fairlee Drive (future Vaden Drive) located approximately 830 feet to the east on Lee Highway.

The Property is bound on the east and south by Park Authority property. The property was dedicated to the Park Authority in the 1960's as part of the initial development approvals for the Property. Absent that dedication, the Property would have adequate frontage on Arlington Boulevard and no additional entrance on Blake Lane would be required. However, as currently developed providing an additional entrance through the east or south of the Property is not a reasonable alternative.

Additionally, the entrance on Route 50 is served by substandard turn lanes and via a narrow 25' easement running through the Park Authority property. We have no ability to widen this entrance road because the width is limited by the scope of the easement granted by the Park Authority to cross its property. In addition, there is not enough area within the existing easement to correct the roadway layout and design. However, even without these shortcomings, Route 50 is not readily able to address a change of traffic distribution.

The only other road frontage accessible to the site is Blake Lane, located along the west side of the Property. However, the western portion of the Property is separated from Blake Lane by an RPA. As we have shown, there is no reasonable alternative to crossing the RPA.

We are committed to constructing the new entrance in an environmentally sensitive manner that we anticipate will improve the quality of the existing RPA. The proposed crossing is in an area that does not contain a perennial stream. Improvements and development along Route 50 and Blake Lane redirected the natural flow of water away from the location of our proposed crossing through the installation of a box culvert system begining north of Lee Highway that catches and pipes the water before it reaches the area of our proposed crossing.

We have worked closely with FCDOT and VDOT to ensure that our proposed entrance is designed appropriately. We have narrowed the entrance as much as possible while remaining acceptable to VDOT and FCDOT, including reducing the radii. As currently proposed, Blake Lane will have a 100' taper to access the proposed entrance in lieu of a full-turn lane. This will minimize the intrusion into the RPA and eliminate the need to acquire Park Authority property. Additionally, we anticipate using a bridge with a span of approximately 55 feet to cross the RPA. We believe this is the optimal solution from an environmental standpoint. The Impact Location Map shows the proposed bridge in Exhibit "B".

(d) Describe the nature and extent of any proposed disturbance or disruption of wetlands

Approximately 1,250 square feet of wetlands will be disturbed. Some of the wetlands will be filled in when the Blake Lane embankment is shifted over for the turn lane taper. The remaining wetlands will be disturbed with the private road construction. However, the wetlands are man-induced and may not fall under the jurisdiction of the Corps of Engineers. (refer to Appendix C).

(e) Display and discuss the type and location of proposed best management practices to mitigate the proposed RPA encroachment and/or adverse impacts

Per Section §118-3-2(f)(3), for redevelopment of any property not currently served by one or more BMPs, the total phosphorus runoff pollution load from the property shall be reduced by at least ten percent from the phosphorus runoff pollution load prior to redevelopment. As shown on the Impact Location Map (refer to Appendix B), BMP's are provided by the use of a StormFilter or equivalent system. As shown with the computations on the Impact Location Map, the phosphorus load leaving the site after redevelopment is reduced by over 10% from the phosphorus load leaving the site prior to redevelopment.

Improvements to the RPA are also provided to offset the proposed encroachments.

1) *Additional flow will be added to the RPA.* This RPA normally has a relatively small drainage area. During most storm events, the total drainage area to the RPA is approximately 6 acres. The only time this channel receives significant amounts of runoff is during very large storm events when the box culverts under Blake Lane are full and hydraulic pressure pushes water into the relief culvert. Therefore, a storm sewer outfall is proposed to direct more runoff into the RPA. This will allow more water to infiltrate into the soil rather than being piped downstream by box culverts. (Refer to Appendix B)

2) *Impervious area will be removed from the RPA.* Some of the existing parking lot that sits within the RPA will be removed and restored. The construction of the entrance and Blake Lane frontage improvements will result in an additional 4,130 square feet of impervious surface within the RPA. To account for the additional impervious surface, 4,260 square feet of existing parking lot and trail will be removed from the RPA. This is an overall decrease of 130 square feet. This decrease in impervious area within the RPA will help provide water quality benefits. (Refer to Appendix B)

3) *Water quality improvement will be made in the RPA.* Additional water quality benefits will be provided by the creation of micro-pools within the existing channel to promote the establishment of wetland areas. Also, RPA enhancement plantings will be provided to further advance the water quality benefits of the micro-pools. (Refer to Appendix B)

4) *The RPA will be protected.* The use of super silt fence during construction will serve in protecting against the potential sedimentation of the channel and degradation of the water quality within the RPA.

(f) Demonstrate the extent to which the proposed activity will comply with all applicable performance criteria of this Chapter

The proposed construction of the private road meets the general performance criteria set forth in Section §118-3-(2) of the Chesapeake Bay Preservation Ordinance.

a) No more land shall be disturbed than is necessary to provide for the proposed use, development, or redevelopment

The Impact Location Map (Appendix B) illustrates the intended limits of clearing and grading. The encroachment is the least amount necessary to clear and grade for the improvements. A bridge span with abutments and retaining walls adjacent to the road are proposed to lessen the disturbance in the RPA.

b) Indigenous vegetation shall be preserved to the maximum extent practicable consistent with the use, development, or redevelopment proposed.

As shown on the RPA Restoration Plan (Appendix B), the indigenous vegetation coupled with the proposed landscaping will serve as a buffer area to maximize water quality protection and mitigate the effects of the RPA encroachment.

Where the best management practices utilized require regular or periodic maintenance in order to continue their functions, such maintenance shall be

a) ensured through a maintenance agreement with the owner or through some other mechanism or agreement that achieves an equivalent objective.

A maintenance agreement that is acceptable to Fairfax County will be provided for the StormFilter.

b) Impervious cover shall be minimized consistent with the use, development, or redevelopment proposed.

The width of the private road will be 24 feet wide with a 5 foot wide sidewalk against the back of curb. That width is the minimum necessary to provide safe access into the site. Also, the construction of the entrance will result in an additional 4,130 square feet of impervious surface within the RPA. To account for the additional impervious surface, 4,260 square feet of existing parking lot and trail will be removed from the RPA. This is an overall decrease of 130 square feet.

c) Any land-disturbing activity that exceeds an area of twenty-five hundred (2,500) square feet shall comply with the requirements of Chapter 104 of the Fairfax County Code. The construction of single-family dwellings, septic tanks and drainfields shall not be exempt from this requirement.

Erosion and sediment control will be provided in accordance with the Fairfax County Code, the Public Facilities Manual and the Virginia Erosion and Sediment Control Handbook. Super silt fence will be provided to protect the RPA against sedimentation and water quality degradation.

d) For any development or redevelopment, stormwater runoff shall be controlled by the use of best management practices (BMP's)

The total phosphorus runoff load from the property will be reduced by at least ten percent from the phosphorus runoff load prior to redevelopment by the use of a StormFilter or equivalent system.

e) The Director shall require certification on all plans of development that all wetlands permits required by law will be obtained prior to commencement of land-disturbing activities in any area subject to the plan of development review. No land-disturbing activity on the land subject to the plan of development shall commence until all such permits have been obtained by the applicant and evidence of such permits has been provided to the Director

A certification will be provided with the site plan that all wetlands permits required by law will be obtained prior to commencing land disturbing activities. If required, no land disturbance shall take place until evidence of these permits has been provided to the Director. A wetlands delineation has been performed, but it has not been determined if a permit is required because the wetlands are man-induced and therefore may not fall under the jurisdiction of the Corps of Engineers. (refer to Appendix C).

n) All on-site sewage disposal systems requiring a Virginia Pollutant Discharge Elimination System (VPDES) permit shall be subject to the restrictions imposed by the State Water Control Board or the Virginia Department of Health. All on-site sewage disposal systems not requiring a VPDES permit shall be administered by the Director of the Department of Health and shall comply with the following provisions:

No on-site sewage disposal is proposed.

b) Land upon which agricultural activities are being conducted, including but not limited to crop production, pasture, and dairy and feedlot operations, or lands otherwise defined as agricultural land by the local government, shall have a soil and water quality conservation assessment conducted that evaluates the effectiveness of existing practices pertaining to soil erosion and sediment control, nutrient management, and management of pesticides, and where necessary, results in a plan that outlines additional practices needed to ensure that water quality protection is being accomplished consistent with the Chesapeake Bay Preservation Act and this chapter.

This site does not consist of any proposed agricultural land or agricultural activities.

The proposed construction of the private road also meets the additional performance criteria set forth in Section §118-3-(3) of the Chesapeake Bay Preservation Ordinance

a) A Water Quality Impact Assessment shall be required for any proposed land disturbance, development, or redevelopment within an RPA that is not exempt pursuant to Article 5 of this Chapter or for which an exception waiving this criteria is not approved pursuant to Article 6 of this Chapter.

Given that the construction of an entrance from Blake Lane will disturb the RPA and is not exempt from the requirements, this WQIA is provided in accordance with the requirements of Section §118-4-3 of the CBPO

b) Allowable Development: Development is allowed within RPAs if it is water-dependent.

This development is not water-dependent.

c) Redevelopment, outside of IDAs, is allowed within RPAs only if there is no increase in the amount of impervious area within the RPA and no further encroachment within the RPA and shall conform to the criteria set forth in this Chapter.

There is no increase in the amount of impervious area within the RPA. The construction of the entrance will result in an additional 4,130 square feet of impervious surface within the RPA. To account for the additional impervious surface, 4,260 square feet of existing parking lot and trail will be removed from the RPA. This is an overall decrease of 130 square feet. The additional encroachment requires an exception in accordance with the requirements of Section §118-6-9 of the CBPO.

a) Buffer area requirements: To minimize the adverse effects of human activities on the other components of the RPA, state waters, and aquatic life, a buffer area that is effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff shall be retained, if present, and established where it does not exist. Notwithstanding permitted uses, encroachments, and vegetation clearing, authorized by this Chapter, the buffer area is not reduced in width. Where land uses such as agriculture or silviculture within the area of the buffer cease and the lands are proposed to be converted to other uses, the full buffer shall be reestablished in accordance with Section 118-3-3(f).

As shown on the RPA Restoration Plan (refer to Appendix B), the indigenous vegetation coupled with the proposed landscaping will serve as a buffer area to maximize water quality protection and mitigate the effects of the RPA encroachment.

b) On agricultural lands, the buffer area shall be managed to prevent concentrated flows of surface water from breaching the buffer area and appropriate measures, as recommended by the Northern Virginia Soil and Water Conservation District, may be taken to prevent noxious weeds from invading the buffer area.

This site does not contain any proposed agricultural land or agricultural activities.

c) Buffer area establishment: Where buffer areas are to be established, they shall consist of a mixture of overstory trees, understory trees, shrubs and groundcovers. The density of overstory trees shall be a minimum of 100 trees per acre. The density of understory trees shall be a minimum of 200 trees per acre. The density of shrubs shall be a minimum of 1089 plants per acre. If seedlings are used instead of container plants, the density of trees shall be doubled. Large caliper trees shall not be planted on slopes steeper than 2:1. Plant materials shall be randomly placed to achieve a relatively even spacing throughout the buffer. The Director may approve the use of a seed mixture as a supplement to or in lieu of individual plants for shrubs and groundcovers. Plants shall be native to the degree practical and adaptable to site conditions. Wetland plantings (including herbaceous plantings) and/or wetland seed mix shall be used where site conditions warrant. Plant materials and planting techniques shall be as specified in the Public Facilities Manual. (37-03-118; 16-07-118.)

In the area from which the parking lot will be removed, an RPA restoration planting plan that meets the buffer area establishment density requirements will be provided. See the RPA Restoration Plan (Appendix B). Also, RPA enhancement plantings will be provided to provide additional water quality benefits.

(g) Provide any other information deemed by the Director to be necessary to evaluate potential water quality impacts of the proposed activity. (32-03-118.)

No further information has been requested. Should any other information be deemed necessary to evaluate the potential water quality impacts of the proposed activity, the applicant can provide that information at the time of the request

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WATER QUALITY IMPACT ASSESSMENT
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BC REVISIONS	
SHEET ADDED 08-19-10	03-16-11
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APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. NA VERT. NA

CO. NO.
CAD NAME: C8085WQIA
LAYOUT: WQIA
FILE NO 08085.01-00

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Resource Protection Area Encroachment Exception Request
Circle Towers Apartments
Fairfax County Tax Map No. 048-4-((01))-0003

July 19, 2010

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BC Job # 08085

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Water Quality Impact Assessment

Photographs

Soils Map

Statement of Justification

List of Property Owners to be Notified

Resource Protection Area Encroachment Exception Request
Statement of Justification

This Exception Request will show that the following are met:

(a) The requested exception to the criteria is the minimum necessary to afford relief.

Access to Blake Lane cannot be achieved without crossing the RPA. Justification for the Blake Lane entrance is provided in section (d) below. The plan proposes the minimum land disturbance necessary to construct the road, the storm sewer outfall and the RPA restoration. A bridge span and retaining walls are provided to minimize the impacts to the RPA.

(b) Granting the exception will not confer upon the applicant any special privileges that are denied by this part to other property owners who are subject to its provisions and who are similarly situated.

The exception will not confer any special privileges to the landowner. The request complies with all requirements of Section §118-6. Also, this situation is unique to this site as discussed in part (d) below.

(c) The exception is in harmony with the purpose and intent of this Chapter and is not of substantial detriment to water quality.

The exception meets the intent of the Chapter as follows:

1) The protection of existing high quality state waters. The proposed encroachment will not disturb any existing watercourses. Downstream watercourses are protected by
- a) the provision of onsite BMP controls,
- b) a net reduction in the amount of impervious area within the RPA,
- c) the diversion of runoff into the RPA and away from the pipe system to allow for infiltration into the soils and to slow the runoff in reaching downstream systems,
- d) the creation of micro-pools within the existing channel to promote the establishment of wetland areas,
- e) the provision of RPA enhancement plantings to further advance the water quality benefits of the micro-pools.

(2) The restoration of all other state waters to a condition or quality that will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them. The adjacent watercourses will be protected as discussed above. The creation of micro-pools will support aquatic life.

(3) The safeguarding of the clean waters of the Commonwealth from pollution. BMP's will be provided onsite by the use of a StormFilter or equivalent system. The phosphorus load leaving the site after redevelopment will be reduced by over 10% from the phosphorus load leaving the site prior to redevelopment.

(4) The prevention of any increase in pollution. As discussed above, there will be a net reduction in phosphorus load from the property of over 10%.

(5) The reduction of existing pollution. As discussed above, there will be a net reduction in phosphorus load from the property of over 10%.

(6) Water resource conservation in order to provide for the health, safety and welfare of the present and future citizens of Fairfax County and the Commonwealth of Virginia. The encroachment protects the water resources of Fairfax County and the Commonwealth of Virginia by the mitigating the impacts as discussed above.

(d) The exception request is not based on conditions or circumstances that are self-created or self-imposed.

A third site access into the Circle Towers development is proposed on Blake Lane to help alleviate some of the current circulation problems on the site, as well as minimize access concerns associated with the primary access at Lee Highway

The primary access to the Property is on Lee Highway. Subsequent to development of the Property, Lee Highway was widened on several occasions; negatively impacting the Lee Highway access and resulting in limited on-site stacking options. The limited stacking creates circulation problems for the Property that the Blake Lane entrance will help solve. These problems are present under the current development and are not caused or necessitated by the proposed redevelopment. In addition, as we discuss in more detail below, improving the secondary access to Route 50 is not a possible mitigation measure.

Based on the foregoing, we determined that a third entrance was necessary, even without the proposed redevelopment. In response, we studied the Property to determine where a proposed entrance could be most appropriately located. However, the myriad of pre-existing conditions severely limit the potential location of a proposed entrance and its current Blake Lane location is in the only feasible location.

The Property is bound on the north by Lee Highway. There is an existing full movement signalized entrance on Lee Highway. VDOT access management regulations require signalized intersections to be located 2,640 feet from one another along principal arterials. The distance between the intersection of Blake Lane/Lee Highway and the existing entrance is only 825 feet. These VDOT spacing requirements effectively prevent the placement of a second entrance on Lee Highway because there is not adequate distance from the existing intersections.

It should also be noted that the rezoning will require the filing of an access management exception with VDOT for the existing Lee Highway entrance. The proposed entrance on Blake Lane has been identified as way to address the impacts associated with the substandard spacing. The Lee Highway entrance cannot be relocated due to the distance requirement between signals and because of the alignment opposite Circle Woods Drive (constructed after the existing entrance) and the distance to Fairlee Drive (future Vaden Drive) located approximately 830 feet to the east on Lee Highway

The Property is bound on the east and south by Park Authority property. The property was dedicated to the Park Authority in the 1960's as part of the initial development approvals for the Property. Absent that dedication, the Property would have adequate frontage on Arlington Boulevard and no additional entrance on Blake Lane would be required. However, as currently developed providing an additional entrance through the east or south of the Property is not a reasonable alternative.

Additionally, the entrance on Route 50 is served by substandard turn lanes and via a narrow 25' easement running through the Park Authority property. We have no ability to widen this entrance road because the width is limited by the scope of the easement granted by the Park Authority to cross its property. In addition, there is not enough area within the existing easement to correct the roadway layout and design. However, even without these shortcomings, Route 50 is not readily able to address a change of traffic distribution.

The only other road frontage accessible to the site is Blake Lane, located along the west side of the Property. However, the western portion of the Property is separated from Blake Lane by an RPA. As we have shown, there is no reasonable alternative to crossing the RPA.

We are committed to constructing the new entrance in an environmentally sensitive manner that we anticipate will improve the quality of the existing RPA. The proposed crossing is in an area that does not contain a perennial stream. Improvements and development along Route 50 and Blake Lane redirected the natural flow of water away from the location of our proposed crossing through the installation of a box culvert system beginning north of Lee Highway that catches and pipes the water before it reaches the area of our proposed crossing.

We have worked closely with FCDOT and VDOT to ensure that our proposed entrance is designed appropriately. We have narrowed the entrance as much as possible while remaining acceptable to VDOT and FCDOT, including reducing the radii. As currently proposed, Blake Lane will have a 100' taper to access the proposed entrance in lieu of a full-turn lane. This will minimize the intrusion into the RPA and eliminate the need to acquire Park Authority property. Additionally, we anticipate using a bridge with a span of approximately 55 feet to cross the RPA. We believe this is the optimal solution from an environmental standpoint. The proposed bridge is shown on the plat.

(e) Reasonable and appropriate conditions are imposed, as warranted, that will prevent the allowed activity from causing a degradation of water quality

Protection of the water quality is discussed above in part c(1). Further conditions that will prevent a degradation of water quality are:

1) The amount of runoff directed towards the RPA will be limited to the maximum amount permissible before the velocity in the channel becomes erosive in a two-year storm event.

2) Super silt fence will be provided during construction along the limits of clearing and grading adjacent to the RPA. This will serve in protecting against the potential sedimentation of the channel and degradation of the water quality within the RPA.

(f) Other findings, as appropriate and required herein, are met.

The exception meets the other required findings of the Chapter as follows:

The water quality benefits resulting from the improvements will exceed the associated water quality detriments. Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of the buffer encroachment, and is equal to the area of encroachment into the buffer area shall be established elsewhere on the lot or parcel. The phosphorus load leaving the site after redevelopment will be reduced by over 10% from the phosphorus load leaving the site prior to redevelopment. Also, the will be a net reduction in the amount of impervious area within the RPA. The construction of the entrance will result in an additional 4,130 square feet of impervious surface within the RPA. To account for the additional impervious surface, 4,260 square feet of existing parking lot and trail will be removed from the RPA. This is an overall decrease of 130 square feet. The portion of the existing parking lot that is located in the RPA and that will be removed will be replanted in accordance with Section §118-3-3(f), Buffer Area Establishment.

Photograph #1:
Looking north towards the RPA encroachment area from the existing trail crossing.

Photograph #2.
Looking at the RPA encroachment area from the south.

Photograph #3:
Detailed view of the channel bottom in the RPA encroachment area.

Photograph #4:
Looking north away from the encroachment area.

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PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
RPA EXCEPTION NOTES

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED 08-19-10	03-16-11
10-06-10	
12-21-10	
01-13-11	
02-07-11	
APPLICANT:	

DESIGNED BY: PLR	
DRAFTED BY: CAD	
CHECKED BY: PLR	
DATE: JUNE 2009	
SCALE:	HOR. NA VERT. NA
SHEET 28 OF 33	
CO. NO.	
CAD NAME: C8085WQIA	
LAYOUT: EXCPT NOTE	
FILE NO. 08085.01-00	

XREFS

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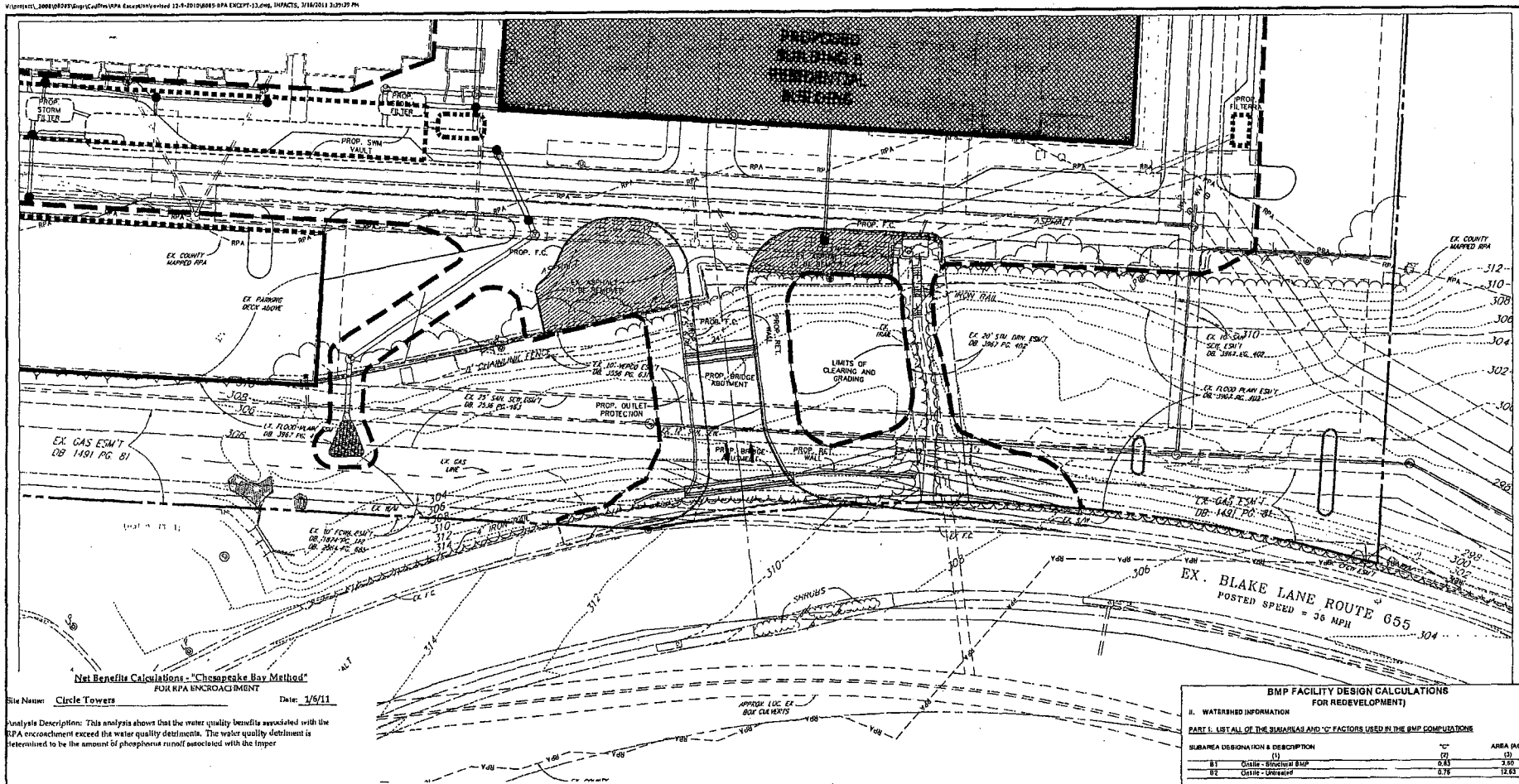

Net Benefits Calculations - "Chesapeake Bay Method"
FOR RPA ENCROACHMENT

Site Name: Circle Towers Date: 1/6/11

Analysis Description: This analysis shows that the water quality benefits associated with the RPA encroachment exceed the water quality detriments. The water quality detriment is determined to be the amount of phosphorus runoff associated with the impervious

1) Calculate Existing Impervious Area in RPA to be Removed

(1A) Pavement Area (include roads, driveways, sidewalks, paved trails, etc.)	428.00	S.F.
(1B) Structures Area (include houses, sheds, patios, etc.)	0.00	S.F.
Total area (1C) =	428.00	S.F.
/ 43,560 =	0.0098	acres

2) Calculate Proposed Impervious Area in RPA

(2A) Pavement Area (include roads, driveways, sidewalks, paved trails, etc.)	3,379.00	S.F.
(2B) Structures Area (include houses, sheds, patios, etc.)	0.00	S.F.
Total area (2C) =	3,379.00	S.F.
/ 43,560 =	0.0776	acres

3) Net Increase in Impervious Area in RPA

Total area (4A) =2C-1C 2,951.00 S.F.
/ 43,560 = 0.0677 acres

4) Phosphorus Loading

(A) Phosphorus Loading Proposed by Additional Impervious Area in RPA:

Phosphorus from Additional Impervious Surface:
L(new)= 36 x [0.05 + 0.009(I)] x (C) x (A) x 2.72/12
= 36 x [0.05 + 0.009(54)] x (1.08) x 0.0677 x 2.72/12 = 0.567 lbs/yr

(B) Reduction in Phosphorus Loading by Adding Filterra:
Drainage Area= 0.42 ac.
Imperviousness= 54.0 %

Phosphorus Draining to Filterra:
L(filterra)= 36 x [0.05 + 0.009(I)] x (C) x (A) x 2.72/12
= 36 x [0.05 + 0.009(54)] x (1.08) x 0.4200 x 2.72/12 = 1.984 lbs/yr

Phosphorus Captured by Filterra:
L(cap)= 0.55 x L(filterra) = 1.091 lbs/yr

5) Net Water Quality Benefit

(A) Total Phosphorus Loading Removed:
L(net)= L(cap) - L(new) = 0.524 lbs/yr

Net benefit is a reduction of 0.52 pounds of phosphorus per year.

BMP FACILITY DESIGN CALCULATIONS

II. WATERSHED INFORMATION

PART 1: LIST ALL OF THE SUBAREAS AND "C" FACTORS USED IN THE BMP COMPUTATIONS

SUBAREA DESIGNATION & DESCRIPTION (1)		"C" (2)	AREA (AC.) (3)
B1	Onsite - Structural BMP	0.63	3.50
B2	Onsite - Unbreated	0.75	12.53

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE

(A) AREA OF THE SITE (a) 16.03 ACRES

(B) SUBAREA DESIGNATION (1)		"C" (2)		AREA (AC.) (3)		PRODUCT (4)
B1	Onsite - Structural BMP	0.63	X	3.50	=	2.21
B2	Onsite - Unbreated	0.75	X	12.53	=	9.40
				(b) TOTAL	=	12.30

(C) WEIGHTED AVERAGE "C" FACTOR (b) / (a) = (c) 0.77

PART 3: COMPUTE THE TOTAL PHOSPHORUS REMOVAL FOR THE SITE

SUBAREA DESIGNATION (1)	BMP TYPE (2)	REMOVAL EFF. (%) (3)		AREA RATIO (4)		"C" FACTOR RATIO (5)		PRODUCT (6)
B1	Onsite - Structural BMP	50	X	0.22	X	1.08	=	11.81
B2	Onsite - Unbreated	0	X	0.78	X	0.98	=	0.00
20% Credit for Offsite Areas								
						(e) TOTAL	=	11.81

PART 4: DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

(A) SELECT REQUIREMENT: (e) 11.8 %
(FAIRFAX COUNTY REDEVELOPMENT REQUIREMENTS - 10%)

(B) IF LINE 3 (e) 11.81 % > LINE 4(a) 11.8 %
THEN PHOSPHORUS REMOVAL REQUIREMENT IS SATISFIED.

BMP FACILITY DESIGN CALCULATIONS

II. WATERSHED INFORMATION

PART 1: LIST ALL OF THE SUBAREAS AND "C" FACTORS USED IN THE BMP COMPUTATIONS

SUBAREA DESIGNATION & DESCRIPTION (1)		"C" (2)
B1	Onsite - Structural BMP	0.63
B2	Onsite - Unbreated	0.75

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE

(A) AREA OF THE SITE (a) 16.03

(B) SUBAREA DESIGNATION "C" AREA (AC.)

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PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
RPA-IMPACTS LOCATION PLAN

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED	2-7-11
	03-16-11
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. NA
VERT. NA
SHEET 29 OF 33
CO. NO.
CAD NAME: 8085-RPA EXCEPT-11
LAYOUT: IMPACTS
FILE NO. 08085.01-00

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LEGEND:

- 3" CATEGORY IV DECIDUOUS TREE *
- 2" CATEGORY III DECIDUOUS TREE *
- 2" CATEGORY II DECIDUOUS TREE *
- LIMITS OF CLEARING AND GRADING
- LIMITS OF FILL ONLY FOR MICRO-POOL EMBANKMENTS
- RPA RESTORATION AREAS PLANTED TO CHESAPEAKE BAY ORDINANCE STANDARDS (11,487 s.f.) (RA#)
- RPA RESTORATION AREAS WITHIN UTILITY EASEMENTS OR OTHER ENCUMBRANCES (PLANTED WITH SHRUBS ONLY) (RS#)
- RPA ENHANCEMENT AREAS (E#)
- WETLAND ENHANCEMENT AREAS (W#)
- WETLAND RESTORATION AREAS (W#)
- SWALE RESTORATION AREAS (CB#)
- MICRO-POOL AREAS
- RA# AREA LABEL
- X LOCATION OF EXISTING TREE TO BE REMOVED
- • LOCATION OF EXISTING TREE TO BE PRESERVED

N IDENTIFIES PROPOSED NATIVE TREE
W IDENTIFIES PROPOSED TREE PLANTED FOR WILDLIFE BENEFIT

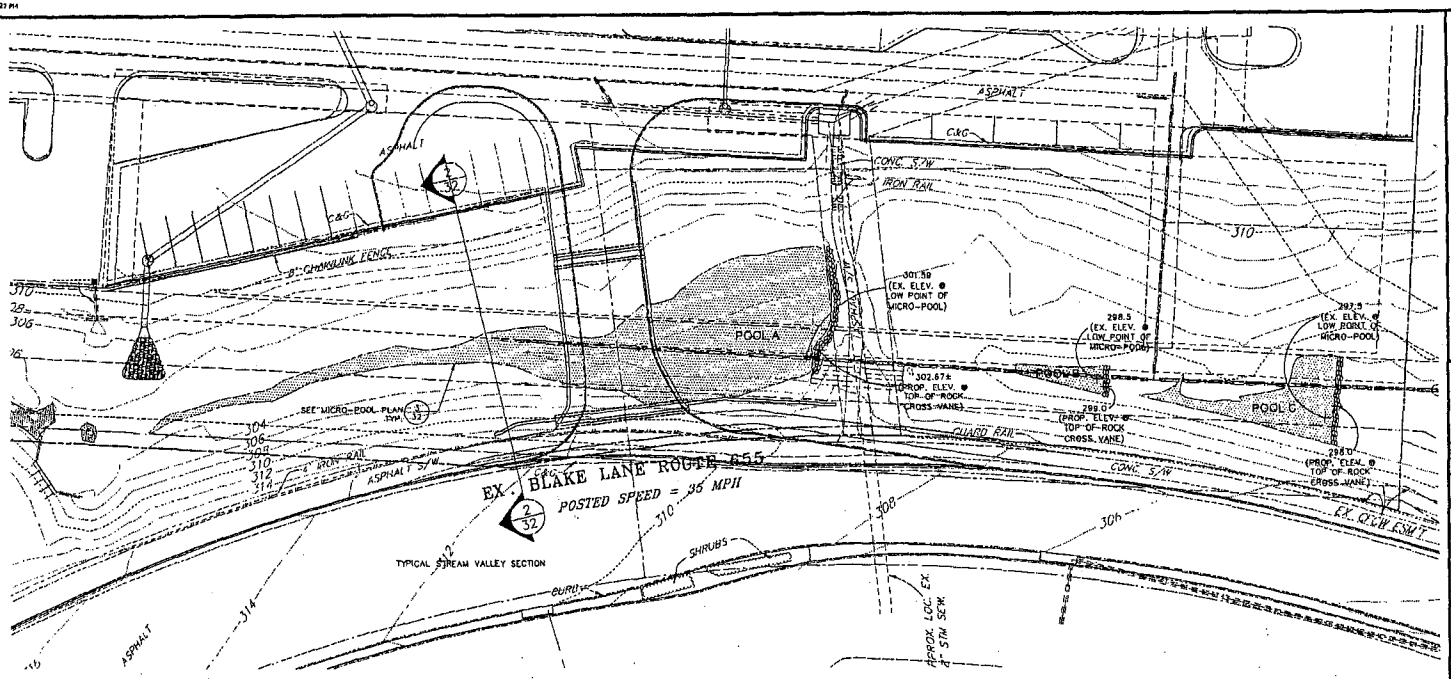
EC IDENTIFIES PROPOSED TREE PLANTED FOR ENERGY CONSERVATION

WQ IDENTIFIES PROPOSED TREE PLANTED FOR WATER QUALITY

NC IDENTIFIES PROPOSED TREE WHERE NO CANOPY CREDIT IS TAKEN. THIS TREE IS A SUPPLEMENTAL TREE TO BE PLANTED IN A PROPOSED PRESERVATION AREA OR RPA. CANOPY CREDIT HAS ALREADY BEEN RESERVED WITHIN THIS AREA.

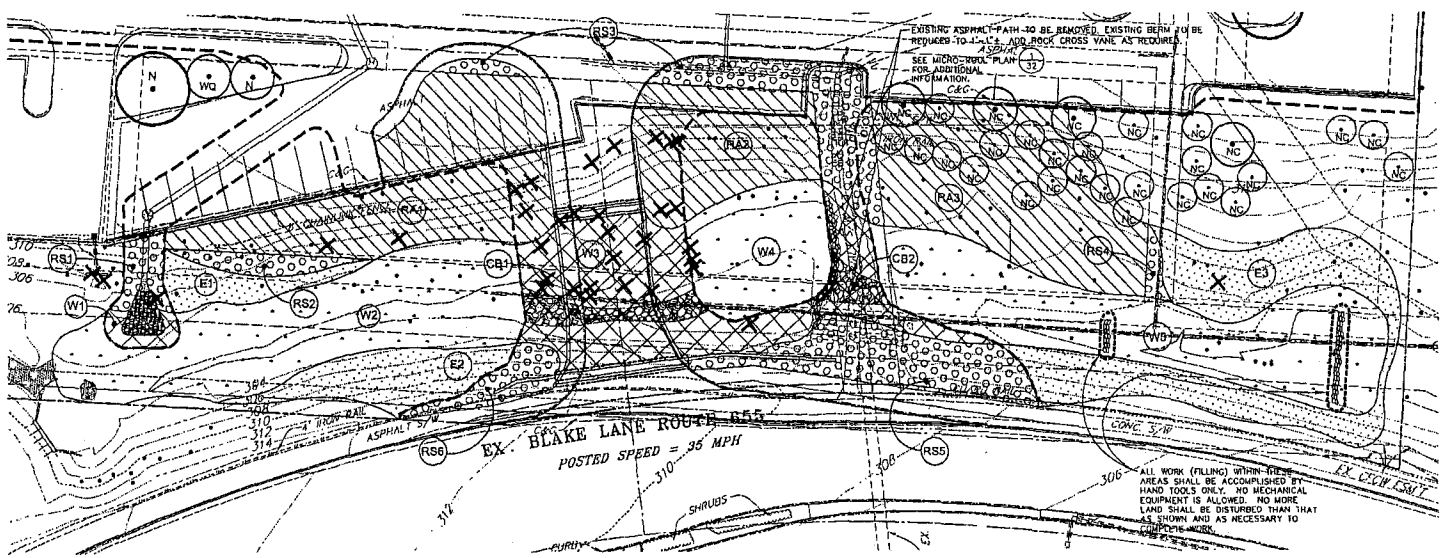
SEE SHEET 33 FOR RPA RESTORATION AND ENHANCEMENT PLANT LIST AND CALCULATIONS AND, WETLAND ENHANCEMENT/RESTORATION PLANT LIST.

* TREE PLANTED IN ADDITION TO THOSE LISTED IN THE PLANT LIST SHOWN ON SHEET 33 AS REQUESTED BY UFMD.



MICRO-POOL LOCATION PLAN

SCALE: 1"=20'



RPA RESTORATION AND ENHANCE PLAN

SCALE: 1"=20'

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COMMONWEALTH OF VIRGINIA
PETER L. BRICK
No. 03-16-2011
LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
RPA EXCEPTION PLAN

CIRCLE TOWERS APARTMENTS

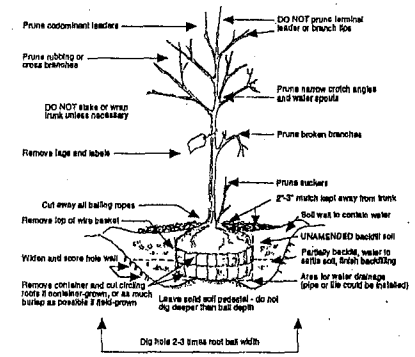
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED OCTOBER 28, 2009	
REVISED: 10-06-10	03-16-11
REVISED: 12-21-10	
REVISED: 1-13-11	
REVISED: 2-7-11	
APPLICANT:	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. 1"=20' VERT. NA

SHEET 30 OF 33

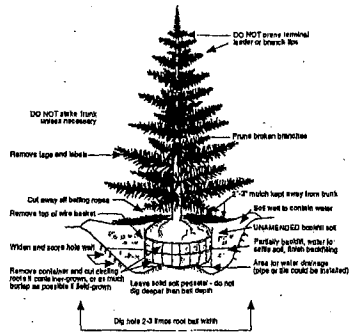
CO. NO.
CAD NAME: RPA-8085EXCEPT
LAYOUT: EXCEPTION
FILE NO. 08085.01-00



1/31 TREE PLANTING GUIDELINE

NOT TO SCALE

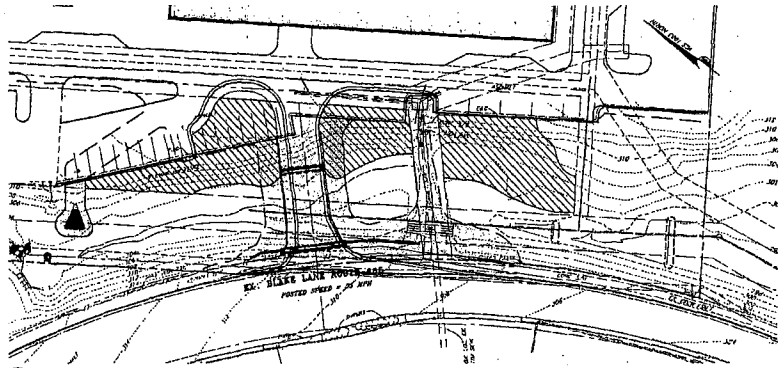
12A-Tree Planting-PA



2/31 EVERGREEN PLANTING GUIDELINE

NOT TO SCALE

12A-Tree Planting-PA



3/31 RESOURCE PROTECTION AREA - DISTURBED AND RESTORED AREAS

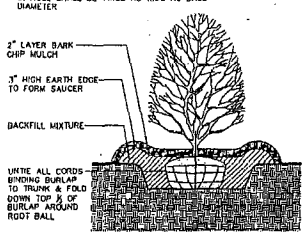
SCALE: 1"=40'

DISTURBED RPA 11,437 s.f.±

RESTORED RPA 11,448 s.f.±

NOTES:

1. ALL PRUNING SHALL BE DONE AFTER PLANTING.
2. IN SOIL CONDITION WHERE CLAY CONTENT EXCEEDS 50% LOOSEN EARTH IN BOTTOM OF PIT BEFORE ADDING BACKFILL.
3. HOLE SHALL BE TWICE AS WIDE AS BALL DIAMETER



4/31 TYPICAL SHRUB PLANTING

SECTION 12A-TYP-SHRB SCALE 1/2"= 1'-0"

LEGEND:

RESTORATION/TREE PLANTING AREAS (11,467 s.f.)

NC — SUPPLEMENTAL TREES AS REQUESTED BY UMD. NO TREE CANOPY CREDIT WILL BE TAKEN FOR ANY OF THESE TREES.

AR — 2" Cal. Acer rubrum/Red Maple

LT — 2" Cal. Liriodendron tulipifera/Tulip Poplar

QP — 2" Cal. Quercus phellos/Willow Oak

QR — 2" Cal. Quercus rubra/Red Oak

AS — 1" Cal. Amelanchier lavvis/Allegheny Serviceberry

CC — 1" Cal. Carpinus caroliniana/American Hornbeam

CS — 1" Cal. Cercis canadensis/Eastern Redbud

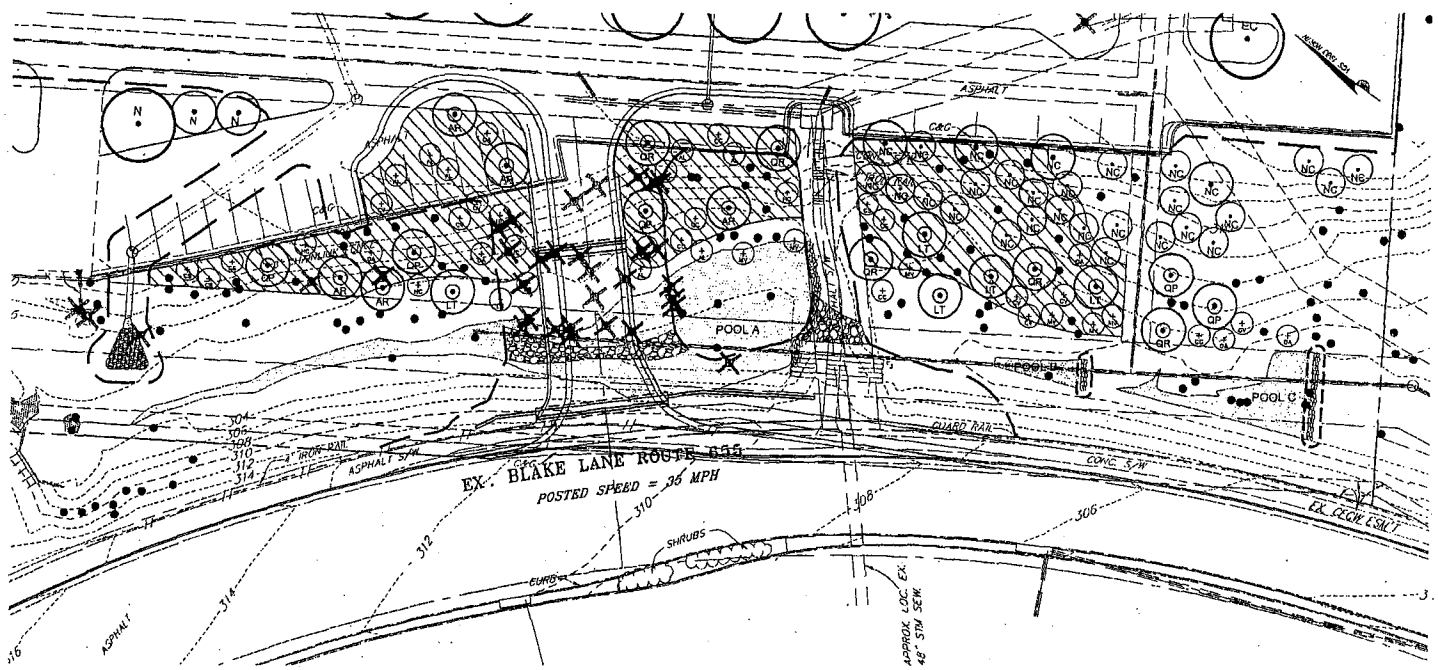
CV — 1" Cal. Chionanthus virginicus/Fringetree

HC — 1" Cal. Halesia carolina/Carolina Silverbell

MV — 1" Cal. Magnolia virginiana/Sweetbay Magnolia

OA — 1" Cal. Oxydendrum arboreum/Sourwood

NOTE: PROPOSED TREES SHOWN OUTSIDE OF THE TREE PLANTING AREAS ARE THE TREES REQUIRED FOR THE RPA ENHANCED AREAS.



5/31 TREE PLANTING PLAN

SCALE: 1"=20'

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COMMONWEALTH OF VIRGINIA — PAUL L. RICE No. 325 — 03-18-2011

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

RPA- PLANTING DETAILS

CIRCLE TOWERS APARTMENTS

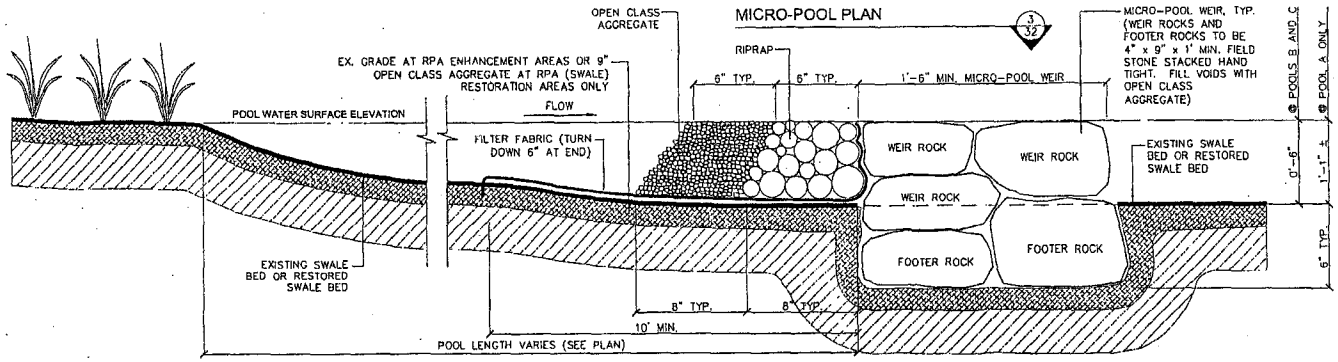
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED	OCTOBER 28, 2009
REVISED:	03-19-10
REVISED:	2-7-11
	10-06-10
	03-18-11
	12-09-10
	12-13-10
	APPLICANT

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. 1" = 40' VERT. NA

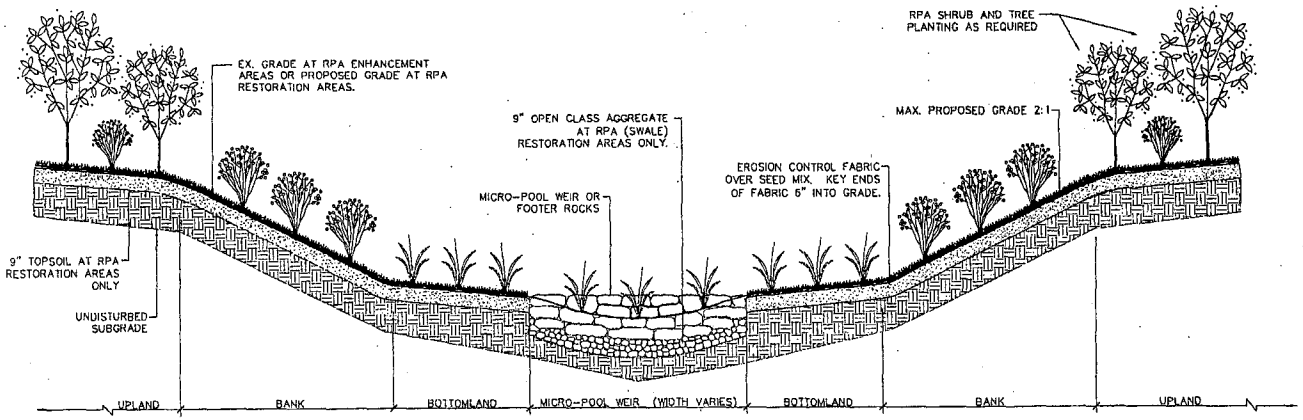
SHEET 31 OF 33

CO. NO.
CAD NAME: RPA-08085DET
LAYOUT: DETAILS
FILE NO. 08085.01-00



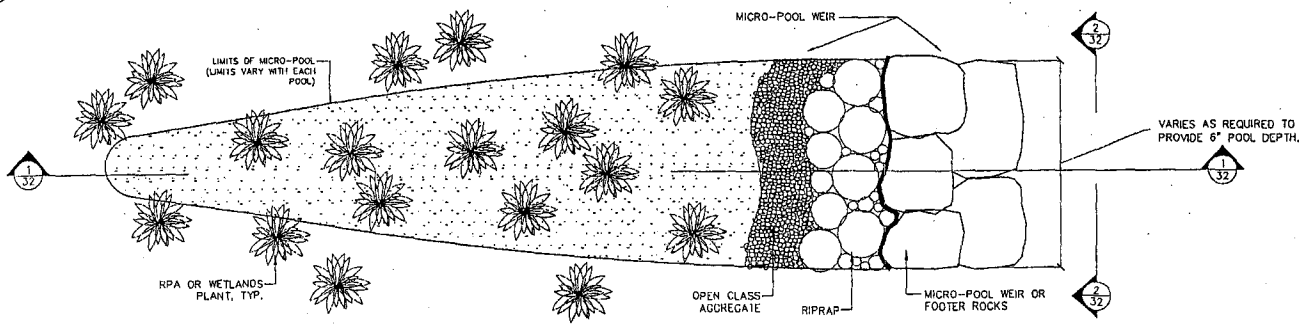
1/32 MICRO-POOL CROSS SECTION

NOT TO SCALE



2/32 SWALE BED SECTION

NOT TO SCALE



3/32 MICRO-POOL PLAN

NOT TO SCALE

MATERIAL SPECIFICATIONS:

ROCK:
FOOTER AND WEIR ROCKS MUST BE LARGE ENOUGH TO ACHIEVE THE DESIGN HEIGHT AND APPROPRIATELY SIZED TO RESIST MOVEMENT DUE TO SWALE FLOW CHARACTERISTICS. ROCK SHALL BE RELATIVELY RECTANGULAR IN SHAPE, UNIFORM IN SIZE, AND HAVE A MINIMUM WIDTH GREATER THAN 1.5 FEET.

RIPRAP:
RIPRAP PER STANDARD AND SPECIFICATION 3.19: RIPRAP OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK FOR SILL ROCKS, BANK ARMORING, AND TOE PROTECTION.

OPEN CLASS AGGREGATE:
OPEN CLASS AGGREGATE SHOULD BE PROPERLY SIZED TO BE MINIMALLY MOBILIZED OR DISPLACED IN SUPERCRITICAL FLOW EVENTS. SALVAGED ALLUVIAL CHANNEL MATERIAL CAN BE SUBSTITUTED FOR AGGREGATE IF PROPERLY SIZED.

FILTER FABRIC:
FILTER FABRIC SHALL CONSIST OF A MATERIAL MEETING THE REQUIREMENT FOR FILTER FABRIC USED WITH RIPRAP AS DETAILED IN TABLE 3.19 D IN SECTION 3.19 OF THE THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK THIRD EDITION, 1992, PAGE III-171. A GRANULAR FILTER MAY BE SUBSTITUTED FOR OR USED WITH FILTER FABRIC. SEE STANDARD AND SPECIFICATION 3.19: RIPRAP FOR GRANULAR FILTER MATERIAL SPECIFICATIONS.

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COMMONWEALTH OF VIRGINIA
PETER L. BENIK
No. 389
03-16-2011
CERTIFIED LANDSCAPE ARCHITECT

PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT

RPA-PLANTING VIEW AND SECTIONS

CIRCLE TOWERS APARTMENTS

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS	
SHEET ADDED 06-19-10	03-16-11
REVISED: 10-06-10	
REVISED: 12-21-10	
REVISED: 2-7-11 APPLICANT	

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. NA VERT. NA
SHEET 32 OF 33
CD. NO.
CAD NAME: RPA-BOBSDET
LAYOUT: SECTIONS
FILE NO. 08085.01-00

RESOURCE PROTECTION AREA - RESTORATION AREA 'A' CALCULATIONS:

AREA WITHIN THE RESOURCE PROTECTION AREA TO BE RESTORED;	11,467 s.f. or 0.26 Ac.
UNDERSTORY TREES REQUIRED (200 TREES/Ac. x 0.26 Ac.):	52
OVERSTORY TREES REQUIRED (100 TREES/Ac. x 0.26 Ac.):	26
SHRUBS REQUIRED (11,467 s.f. x 1,089 SHRUBS/43,560 s.f.):	287
SEED MIX REQUIRED (11,467 s.f. X 1.0 POUNDS/1,000 s.f.):	12.0 (11.5) POUNDS

NOTE: RESTORATION AREAS ARE NOT WITHIN ANY UTILITY EASEMENTS OR OTHER ENCUMBRANCES.

RESOURCE PROTECTION AREA - ENHANCEMENT AREA CALCULATIONS:

AREA WITHIN THE RESOURCE PROTECTION AREA TO BE RESTORED;	5,411 s.f. or 0.12 Ac.
UNDERSTORY TREES REQUIRED (100 TREES/Ac. x 0.12 Ac.):	12
OVERSTORY TREES REQUIRED (50 TREES/Ac. x 0.12 Ac.):	6
SHRUBS REQUIRED (5,411 s.f. x 545 SHRUBS/43,560 s.f.):	68

RESOURCE PROTECTION AREA RESTORATION AND ENHANCEMENT PLANT LIST:

Key	Required Quantity of Trees	Credit for Existing Trees to Remain	Final Quantity Provided	AREA RA1	AREA RA2	AREA RA3	AREA RS1	AREA RS2	AREA RS3	AREA RS4	AREA RS5	AREA RS6	AREA E1	AREA E2	AREA E3	Botanical Name	Common Name	Container	Caliper
DECIDUOUS OVERSTORY TREES																			
AR	8	3	5	3	1								1 ★			Acer rubrum	Red Maple	B & B	2" Cal
LT	8	3	5			3								1 ★	1 ★	Liriodendron tulipifera	Tulip Poplar	B & B	2" Cal
QP	8	3	5	2	1										2 ★	Quercus phellos	Willow Oak	B & B	2" Cal
QR	8	3	5		2	2									1 ★	Quercus rubra	Red Oak	B & B	2" Cal
Subtotal	32	12	20	5	4	6	0	0	0	0	0	0	1 ★	1 ★	4 ★	Total Overstory Trees			
DECIDUOUS UNDERSTORY TREES																			
AL	10	3	7	3	2								2 ★			Amelanchier laevis	Allegheny Serviceberry	B & B	1" Cal
CC	9	3	6		4									2 ★		Carpinus caroliniana	American Hornbeam	B & B	1" Cal
CS	9	2	7	3		2									2 ★	Cercis canadensis	Eastern Redbud	B & B	1" Cal
CV	9	2	7	3		3									1 ★	Chionanthus virginicus	Fringetree	B & B	1" Cal
HC	9	3	6	3	2										1 ★	Halesia carolina	Carolina Silverbell	B & B	1" Cal
MV	9	3	6			4									2 ★	Magnolia virginiana	Sweetbay Magnolia	B & B	1" Cal
OA	9	3	6	3		1									2 ★	Oxydendrum arboreum	Sourwood	B & B	1" Cal
Subtotal	64	19	45	15	8	10	0	0	0	0	0	0	2 ★	2 ★	8 ★	Total Understory Trees			
Total	96	31	65	20	12	15	0	0	0	0	0	0	3	3	12	Total Trees			
SHRUBS																			
-	-	-	40	15		17								8	-	Aronia arbutifolia	Red Chokeberry	#1	
-	-	-	45		12	16					10				8	Cephalanthus occidentalis	Buttonbush	#1	
-	-	-	45	19		17	9									Clethra alnifolia	Sweet Pepperbush	#1	
-	-	-	49	18	12				10		11					Cornus amomum	Silky Dogwood	#1	
-	-	-	40			16		9							15	Hamamelis vernalis	Vernal Witchhazel	#1	
-	-	-	40	15		15			10							Ilex verticillata	Winterberry	#1	
-	-	-	44	15	12						11	6				Itea virginica	Virginia Sweetspire	#1	
-	-	-	40	15		16			9							Lindera benzoin	Spicebush	#1	
-	-	-	44	15		16						7			6	Salix sericea	Silky Willow	#1	
-	-	-	43		12					4	11			8	8	Sambucus canadensis	Common Elderberry	#1	
-	-	-	40		16				9				8		7	Viburnum dentatum	Arrowwood Viburnum	#1	
Total	-	-	471	110	64	113	9	9	38	4	43	13	8	16	44	Total Shrubs			
SEED MIX (lbs.)																			
-	-	-	Total Pounds																
Total			12.0	4.5	3.0	4.5	-	-	-	-	-	-	-	-	-	Seed Mix A	Seed Mix as Shown on this Sheet		

★ THE TREE QUANTITIES SHOWN ARE THE NUMBER OF TREES REQUIRED FOR THE ENCHANCMENT AREAS. DUE TO UTILITY EASEMENTS SOME OF THESE TREES CANNOT BE PLANTED IN THEIR SPECIFIED AREAS AND HAVE BEEN MOVED TO OTHER AREAS OUTSIDE OF ANY EASMENTS. SEE SHEET 31 FOR ADDITIONAL INFORMATION.

FAIRFAX COUNTY LANDSCAPE IMPLEMENTATION POLICY:

URBAN FOREST MANAGEMENT
POLICY ON LANDSCAPE IMPLEMENTATION
November 17, 2010

This compilation of selected portions of the Public Facilities Manual is intended to summarize and clarify regulations pertaining to the implementation of landscape plans on development sites subject to review and inspection by the County. Included are regulations governing the most common areas of noncompliance experienced by staff in the course of conducting landscape inspections, and a brief summary of the policy regarding seasonal landscape deferrals.

__Tree Species and Size__
1. Trees and shrubs that are planted shall be of the species and size specified on the approved plans. There shall be no deviations from the approved sizes specified except as approved by Fairfax County Urban Forest Management (UFMD). (PFM 12-0705.1A)

2. All trees and shrubs shall meet the standards for sizes and quality specified in the American Association of Nurserymen's __American Standard for Nursery Stock__ (ANSI Z60.1-1996). See attachment #1. (PFM 12-0705.1B)

__Species Substitutions__
3. Species substitutions within the tree categories listed in Table 12.17 are generally accepted unless otherwise specified by proffered conditions, development conditions, special exceptions, or special permits. Any tree substitution shall also be in conformance with the following. (PFM 12-0705.1C)
   a. *Plant Diversity* - The use of substitutions shall not result in any species making up more than 10 percent, and shall not result in any one genus making up more than 33 percent, of the total number of trees required to be planted on the site. (PFM 12-0515.11)
   b. *Authorization* - A letter signed by the permitee shall be provided to UFMD acknowledging any proposed substitutions to trees and shrubs shown on the approved plans. (PFM 12-0705.1C(2))
   c. *Substitutions Outside of Tree Category* - Substitution of a tree shown on the approved plan from one tree category, as listed in PFM Table 12.17, with a tree from a different category shall require a revision to the approved plan. (PFM 12-0705.1C(3))
   d. *Species Suitability* - Substituted species must be suited to the post-development conditions of the planting location for which it is intended. (PFM 12-0601.1E)
   e. *Additional Tree Cover Credit* - In cases where additional tree cover credit has been given, no tree substitutions shall be made except as approved by the Urban Forest Management. Examples of additional credit include the following:
      Air Quality, PFM 12-0510.4B(1)
      Energy Conservation, PFM 12-0510.4B(2)
      Water Quality, PFM 12-0510.4B(3)
      Wildlife Benefits, PFM 12-0510.4B(4)
      Native Trees, PFM 12-0510.4B(5)

__Planting Locations__
4. Planting locations of all trees on the site shall be in substantial conformance with the approved plan. UFMD acknowledges that not all trees may be optimally located, as shown on the plan, and encourage input from Permittees and their landscape professionals regarding proposed improvements that might be implemented. Any substantive deviations from the approved plan that are made in the field must be approved by UFMD and shall be in conformance with the following:
   a. *Planting Area* - At least the minimum size planting area shall be provided for each tree according to its projected 10-year tree cover area as found in Table 12.7 (PFM 12-0601.1G)
   b. *Environmental Conditions* - Light, moisture, and other conditions affecting the health and viability of the tree at the field location shall be suitable for the species. (PFM 12-0601.1E)
   c. *Compacted Soil* - If planting in areas that have been previously compacted, the soil shall be properly prepared (tilled and amended as needed based on soil samples) to a depth of 12 inches, prior to installation of landscape material. Soil within individual planting holes shall not be amended. (PFM 12-0705.3B)
   d. *Restrictive Barriers* - Trees shall be planted no closer than four feet from any restrictive barrier. (PFM 12-0510.4E(5))
   e. *Spacing* - Trees shall be spaced so that the outer limit of their projected 10-year tree cover area, as indicated in Table 12.19, does not significantly overlap; or as determined appropriate by UFMD for site conditions and to promote long-term survival. (PFM 12-0510.4E(6))
   f. *Easements* - Trees for tree cover credit shall not be planted within any existing or proposed public utility easement or within five feet of storm drainage easements that contain pipes. In addition, trees shall not be planted in an area that will interfere with existing or proposed utilities or with maintenance of the utility, as determined by the Director of DPWES. (PFM 12-0515.6D)

__Staking and Guying__
5. Staking and guying should only be implemented where site conditions warrant their use. Planted trees should be assessed individually and staking and guying installed only as required. Conditions where staking and guying may be necessary to ensure stability include: windy locations, steep slopes, or where vandalism may be a concern. All staking and guying material must be removed within one year of plant installation. (PFM 12-0705.3C)

__Seasonal Landscape Deferrals__
6. A Seasonal Landscape Deferral may be granted when seasonal or weather-related conditions, such as excessively wet soil, extended periods of drought, or frozen ground, substantially reduce the survivability of the plant material, as determined by the Urban Forest Management. A request for a landscape deferral will not be granted for landscaping required prior to the issuance of a RUP or Non-RUP when seasonal or weather-related conditions on the site plan do not preclude planting. Lack of species availability may justify the approval of a Seasonal Landscape Deferral when specific plant species are required by proffers or conditions.

7. The party responsible for the placement of the performance bond and conservation deposit for the project shall act as the Applicant for this seasonal deferral. Seasonal Landscape Deferral request forms can be obtained from the Environmental and Facilities Inspections Division or the Urban Forest Management.

8. At the time of final inspection for release of performance bond and conservation deposit, all of the plant material is inspected. Plant material previously inspected, as part of the process to release any deferral deposit that may have existed, is not exempt from this final inspection. All plant material must be healthy and in good condition.

__Requirements Prior to Approval of RUP/Non-RUP__
9. The landscaping and screening requirements of Article 13 or of any approved proffered condition, special permit, special exception or variance must be completed prior to approval of any Residential or Non-Residential Use Permit; provided, however, that completion of the requirements may be delayed when justification satisfactory to the Director is provided; such justification shall include an agreement and bond with surety satisfactory to the Director for completion in accordance with a firm schedule for timely completion. (ZO 13-701.3) See Seasonal Landscape Deferrals above.

WETLAND ENHANCEMENT/RESTORATION AREAS PLANT LIST:

Total Quantity	AREA W1	AREA W2	AREA W3	AREA W4	AREA W5	Botanical Name	Common Name	Size	Spacing at W2, W4 and W5 Only	Spacing at W1 and W3 Only
FORBES										
3,107		1,555			1,612	Angelica atropurpurea	Great Angelica	38 Count Plug	8" o.c.	6" o.c.
2,609	113		2,496			Asclepias incarnata	Swamp Milkweed	38 Count Plug	8" o.c.	6" o.c.
1,725	113				1,612	Aster novae-angliae	New England Aster	38 Count Plug	8" o.c.	6" o.c.
2,190		1,555		635		Caltha palustris	Marsh Marigold	38 Count Plug	8" o.c.	6" o.c.
2,496			2,496			Chelone glabra	Turtlehead	38 Count Plug	8" o.c.	6" o.c.
2,496			2,496			Hibiscus moscheutos (palustris)	Swamp Rose Mallow	38 Count Plug	8" o.c.	6" o.c.
2,360	113			635	1,612	Penthorum sedoides	Ditch Stonecrop	38 Count Plug	8" o.c.	6" o.c.
2,190		1,555		635		Solidago patula	Swamp Goldenrod	38 Count Plug	8" o.c.	6" o.c.
GRASSES										
2,609	113		2,496			Eleocharis ovata (obtusa)	Blunt Spike Rush	38 Count Plug	8" o.c.	6" o.c.
3,167		1,555			1,612	Juncus effusus	Common Rush	38 Count Plug	8" o.c.	6" o.c.
2,609	113		2,496			Leersia oryzoides	Rice Cut Grass	38 Count Plug	8" o.c.	6" o.c.
2,190		1,555		635		Panicum virgatum	Switch Grass	38 Count Plug	8" o.c.	6" o.c.
2,247				635	1,612	Scirpus atrovirens	Dark Green Rush	38 Count Plug	8" o.c.	6" o.c.
SEDGES										
2,304	113	1,556		635		Carex comosa	Bristly Sedge	38 Count Plug	8" o.c.	6" o.c.
2,496			2,496			Carex frankii	Bristly Cattail Sedge	38 Count Plug	8" o.c.	6" o.c.
3,169		1,556			1,613	Carex lurida	Bottlebrush Sedge	38 Count Plug	8" o.c.	6" o.c.
2,610	114		2,496			Carex stricta	Common Tussock Sedge	38 Count Plug	8" o.c.	6" o.c.
2,247				634	1,613	Carex vulpinoidea	Brown Fox Sedge	38 Count Plug	8" o.c.	6" o.c.

SEED MIX 'A':

Riparian Buffer Mix
ERNMX-178

16.00%	Carex vulpinoidea	Fox Sedge
[illegible]	Panicum clandestinum	Deer Tongue, 'Tioga'
[illegible]	Schizachyrium scoparium	Little Bluestem
[illegible]	Chamaecrista fasciculata	Partridge Pea
[illegible]	Elymus riparius	Riverbank Wild Rye
[illegible]	Elymus virginicus	Virginia Wild Rye
[illegible]	Verbena hastata	Blue Vervain
[illegible]	Andropogon gerardii	Big Bluestem, 'Niagara'
[illegible]	Heliopsis helianthoides	Ox Eye Sunflower
[illegible]	[illegible]	[illegible]
[illegible]	Cornus amomum	Silky Dogwood
[illegible]	Panicum virgatum	Switchgrass, 'Shelter'
[illegible]	Sorghastrum nutans	Indiangrass
[illegible]	Asclepias syriaca	Common Milkweed
[illegible]	Desmodium canadense	Showy Tick Trefoil
[illegible]	Eupatorium fistulosum	Joe Pye Weed
[illegible]	Eupatorium maculatum	Spotted Joe Pye Weed
[illegible]	Eupatorium perfoliatum	Boneset
[illegible]	Juncus effusus	Soft Rush
[illegible]	Monarda fistulosa	Wild Bergamot
[illegible]	Penstemon digitalis	Tall White Beard Tongue
[illegible]	Rhus typhina	Staghorn Sumac
[illegible]	Rudbeckia hirta	Black Eyed Susan
[illegible]	Baptisia australis	Blue False Indigo
[illegible]	Euthamia graminifolia	Grass Leaved Goldenrod
[illegible]	Vernonia gigantea	Giant Ironweed

Seeding Rate: 1lb per 1,000 sq ft

Establishes in 2-3 years, and develops into a biodiverse cover that can replicate our native vegetation.

RESOURCE PROTECTION AREA PLANTING SPECIFICATIONS:

1. TREES AND SHRUBS SHALL BE PLANTED ACCORDING TO THE URBAN FOREST MANAGEMENT (DIVISION) POLICY ON LANDSCAPE IMPLEMEMTATION SHOWN ELSEWHERE ON THIS SHEET.
2. THE PLANTING OF TREES AND SHRUBS-OUTSIDE THE LIMITS OF CLEARING AND GRADING (UNDISTURBED AREA) SHALL BE DONE IN A MANNER THAT CAUSES THE LEAST AMOUNT OF DISTURBANCE TO THE UNDERSTORY. ONLY NON-MOTORIZED HAND TOOLS SHALL BE USED.
3. ALL PLANTS SHALL BE RANDOMLY PLACED TO ACHIEVE A RELATIVELY EVEN SPACING THROUGHOUT THE PLANTING AREA.
4. NO MORE LAND SHALL BE DISTURBED THAN IS NECESSARY TO PROVIDE FOR ALL PLANTING ACTIVITIES.
5. INVASIVE PLANTS (INCLUDING VINES) WITHIN THE UNDISTURBED ARES SHALL BE REMOVED USING A NON-TOXIC HERBICIDE BEFORE ANY PLANTING ACTIVITIES ARE STARTED. THE PLANTING AREAS SHOULD BE MONITORED TO CONTROL THE RE-ESTABLISHMENT OF INVASIVE PLANTS UNTIL THE TREES AND SHRUBS HAVE HAD A CHANCE TO ESTABLISH THEMSELVES.
6. IN THE DISTURBED AREAS, TOPSOIL SHOULD BE CULTIVATED TO A DEPTH OF NO LESS THAN THREE INCHES. LIMESTONE SHOULD BE APPLIED AT A RATE TO ADJUST Ph OF TOPSOIL TO NO LESS THAT 5.5 NOR MORE THAN 6.8. GRADE TOPSOIL TO A SMOOTH, FREE-DRAINING, EVEN SURFACE WITH A LOOSE, MODERATELY COARSE TEXTURE.
7. SIGNS (NO LESS THAN 11 INCHES X 17 INCHES) WITH THE WORDS 'KEEP OUT, REFORESTATION ESTABLISHMENT AREA' PRINTED BOLDLY ON THE SIGN SHALL BE STAKED AT 10 FEET INTERVALS AROUND THE LIMITS OF THE RESOURCE PROTECTION AREA PLANTING AREAS. SIGNS SHALL BE WEATHERPROOF AND ATTACHED SECURELY TO WOODEN STAKES NO LESS THAT 24 INCHES.
8. SEEDING METHOD SHALL BE BROADCAST HAND SEEDING. SEED SHALL BE APPLIED TO ACHIEVE AN EVEN DISTRIBUTION. BROADCAST THE SEED IN TWO DIRECTIONS. FOLLOW SEEDING WITH A LIGHT RAKING OR ROLLING TO ENSURE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF THE SOIL IS WET.
9. A STRAW MULCH SHALL BE SPREAD BY HAND OVER THE ENTIRE SEEDED AREA. STRAW SHALL PROVIDE FULL COVERAGE OVER THE SEEDED AREA.
10. SEED MIX SHOULD BE APPLIED IN THE FIRST SPRING OR FALL IMMEDIATELY FOLLOWING CONSTRUCTION. SPRING SEEDING SHOULD BE DONE IN THE MONTHS OF MARCH AND APRIL. FALL SEEDING SHOULD BE DONE BETWEEN AUGUST 15TH AND SEPTEMBER 15TH. SEEDING TIMES MAY BE ADJUSTED DEPENDING ON ENVIRONMENTAL CONDITIONS.
11. SEED SHALL BE APPLIED AT A RATE OF ONE (1) POUNDS PER 1,000 SQUARE FEET.

RESOURCE PROTECTION AREA AND WETLANDS ENHANCEMENT/RESTORATION PLANT NARRATIVE:

DUE TO VARIOUS ENVIRONMENTAL CONDITIONS, THE NATURAL HABITAT WITHIN THE ON-SITE RESOURCE PROTECTION AREA (RPA) AND WETLANDS HAS NOT FLOURISHED OR DIVERSIFIED. THE NATURAL CYCLES OF THE SITE'S ECOLOGICAL SYSTEM HAVE BEEN DISRUPTED COMPROMISING ITS ABILITY TO ADAPT TO CHANGE. CREATING, ENHANCING AND MAINTAINING A NATIVE AND DIVERSE PLANT COMMUNITY IS AN IMPORTANT COMPONENT OF THIS OR ANY SITE'S ABILITY TO MANAGE CHANGE AND PROVIDE A PATH TO LONG-TERM SUSTAINABLE GROWTH.

INSIGHTFUL PLANT SELECTION IS CRITICAL IN IMPROVING THE NATURAL RESTORATIVE PROCESSES OF A DEGRADED LANDSCAPE. VEGETATION THAT IS NATIVE AND NON-INVASIVE WILL NATURALLY REQUIRE LESS INPUTS AND MAINTENANCE. NATIVE VEGETATION PROVIDES ECOLOGICAL SERVICES THAT HELP REDUCE SOIL EROSION, IMPROVE WATER AND AIR QUALITY, FACILITATE WATER CONSERVATION, HELP MITIGATE FLOODING, HELP MANAGE STORMWATER RUNOFF AND INCREASE THE BIODIVERSITY OF PLANT AND ANIMAL HABITATS.

A SITE'S UNIQUE ATTRIBUTES OR ITS INTENDED GOAL OFTEN DETERMINE WHAT TO PLANT AND WHERE TO PLANT IT. AN ASSESSMENT OF A SITE'S ATTRIBUTES SHOULD INCLUDE AN ANALYSIS OF SOILS, HYDROLOGICAL CHARACTERISTICS, TOPOGRAPHY AND VEGETATIVE COVER. PLANT SELECT IS ALSO INFLUENCED BY THE INTENDED USES OF THE SITE. WILL THE SITE BE USED FOR STORWATER MANAGEMENT, WATERSHED RESTORATION, MITIGATING IMPACTS TO WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS, LAND RECLAMATION, SOIL CONSERVATION OR RECREATIONAL ACTIVITIES.

THE PLANTS SELECTED FOR THIS PROJECT HAVE BEEN CHOSEN BASED ON THEIR NATIVE CHARACTERISTICS AND ADAPTIVE QUALITIES THAT ARE BEST SUITED FOR THE SITE AND, THEIR ABILITY TO IMPROVE OR ENHANCE FAVORABLE ENVIRONMENTAL CONDITIONS (SERVICES) SUCH AS THOSE LISTED ABOVE. THE WETLANDS RESTORATION AND ENHANCEMENT PLANTS INCLUDE A VARIETY OF NATIVE FORBES, GRASSES AND SEDGES THAT ARE OBLIGATE OR FACULTATIVE WETLANDS SPECIES. THEY EXHIBIT ABILITIES TO MITIGATE SOIL EROSION AND IMPROVE WATER QUALITY. RPA RESTORATION AND ENHANCEMENT PLANTS INCLUDE A MIX OF NATIVE FACULTATIVE WETLAND AND UPLAND SPECIES OF UNDERSTORY AND OVERSTORY TREES AND SHRUBS. A SEED MIX OF NATIVE WILDFLOWERS, FORBES AND SHRUBS WILL ALSO BE PROVIDED IN THE RESTORATION AREAS. THESE PLANTS WILL INCREASE THE BIODIVERSITY OF THE SITE, MITIGATE SOIL EROSION AND PROVIDE SLOPE STABILITATION.

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PROFFERED CONDITION AMENDMENT/FINAL DEVELOPMENT PLAN AMENDMENT
RPA-PLANTING SPECIFICATION
CIRCLE TOWERS APARTMENTS
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

BC REVISIONS
SHEET ADDED OCTOBER 28, 2009
08-19-10 | REVISED 2-07-11
REVISED: 10-06-10 | 03-16-11
REVISED: 12-21-10
REVISED: 1-13-11
APPLICANT:

DESIGNED BY: PLR
DRAFTED BY: CAD
CHECKED BY: PLR
DATE: JUNE 2009
SCALE: HOR. NA / VERT. NA

SHEET 33 OF 33

CO. NO.
CAD NAME: RPA-80855PE
LAYOUT: SPECIFICATION
FILE NO. 08085.01-00