



Preliminary Plan 120110180 - Parmjit & Saini Estates

KH Katherine Holt, Senior Planner, Area 3, Katherine.Holt@montgomeryplanning.org 301-495-4549

RAW Richard Weaver, Acting Supervisor, Area 3, Richard.Weaver@montgomeryplanning.org 301-495-4544

JAC John Carter, Chief, Area 3, john.carter@montgomeryplanning.org 301-495-4575

Completed: 01/03/12

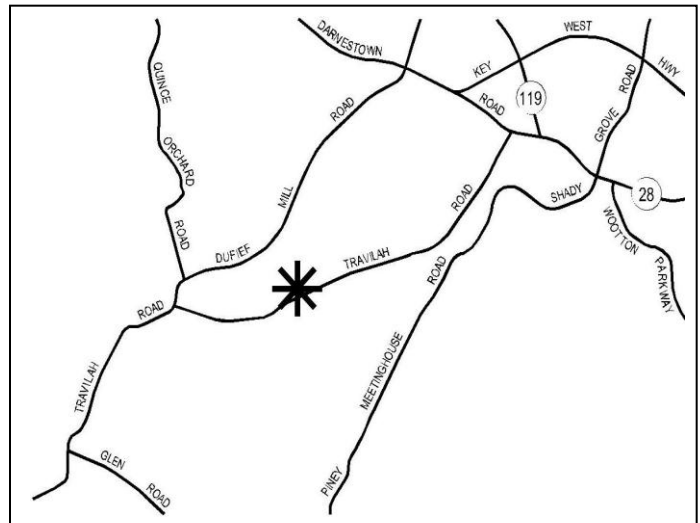
Description

Preliminary Plan 120110180 - Parmjit & Saini Estates

Four lots requested for four, one-family detached dwelling units; located on the northern side of Travilah Road abutting Patrick Avenue; R-200/TDR zone, 2.63-acres, 2002 Potomac Subregion Master Plan

Staff Recommendation: Approval with conditions and adoption of the Resolution

Review Basis: Chapter 50 and Chapter 22A
Applicant: Chattar Singh & Parmjit Singh, LLC
Date Submitted: February 22, 2011



Summary

Staff Recommendation: Approval with conditions

- The Applicant requests to create four lots for four one-family detached dwelling units using the standard method of development in the R-200/TDR zone.
- The Applicant requests a tree variance, which staff and the County Arborist support with mitigation for the trees to be removed.

RECOMMENDATION: Approval, subject to the following conditions:

1. This Preliminary Plan is limited to four lots for four one-family detached dwelling units.
2. Prior to clearing, grading, or building demolition, the Applicant must comply with the conditions of approval for the Preliminary Forest Conservation Plan, approved as part of this Preliminary Plan, subject to:
 - i. The Applicant must obtain approval of a Final Forest Conservation Plan from the Planning Department prior to the issuance of a Sediment Control Permit from the Montgomery County Department of Permitting Services (“MCDPS”). The Final Forest Conservation Plan must be consistent with the approved Preliminary Forest Conservation Plan.
 - ii. Submit the reforestation, fee-in-lieu payment to the M-NCPPC as required by the Final Forest Conservation Plan.
 - iii. The Applicant must plant nine-three inch caliper native trees as mitigation for the removal of four specimen trees. The species and locations of the mitigation trees must be identified on the Final Forest Conservation Plan.
3. The Planning Board accepts the recommendations of the Montgomery County Department of Transportation (“MCDOT”) in its letter dated October 23, 2012, and does hereby incorporate them as conditions of the Preliminary Plan approval. The Applicant must comply with each of the recommendations as set forth in the letter, which may be amended by MCDOT provided that the amendments do not conflict with other conditions of the Preliminary Plan approval.
4. The Applicant must satisfy the provisions for access and improvements as required by MCDOT prior to recordation of plat.
5. The Planning Board accepts the recommendations of the MCDPS – Water Resources Section in its letter dated August 9, 2012, and does hereby incorporate them as conditions of the Preliminary Plan approval. The Applicant must comply with each of the recommendations as set forth in the letter, which may be amended by MCDPS – Water Resources Section, provided that the amendments do not conflict with other conditions of the Preliminary Plan approval.
6. For purposes of noise attenuation, any building permits for one-family residences that are issued for Lots 1 and 4 pursuant to this Preliminary Plan must show that the buildings are to be built in substantially the same locations and orientations as shown on the certified Preliminary Plan, or prior to the issuance of the building permit the Applicant must obtain M-NCPPC staff approval of appropriate measures to mitigate unacceptable noise levels.
7. The Applicant must dedicate, and the record plat must show dedication of, 157 square feet of land for the right-of-way for Travilah Road to accommodate an existing shared use path, as shown on the Preliminary Plan.
8. The record plat must show necessary easements.
9. The record plat must reflect common ingress/egress and utility easements over all shared driveways.

10. The Subject Property is located in the Thomas S. Wootton High School Cluster. The Applicant must make a School Facilities Payment to MCDPS at the high school level at the one-family detached unit rate for all units for which a building permit is issued and a School Facilities Payment is applicable. The timing and amount of the payment will be in accordance with Chapter 52 of the Montgomery County Code.
11. The Adequate Public Facility (APF) review for the Preliminary Plan will remain valid for eighty-five (85) months from the date of mailing of the Planning Board Resolution.

SITE DESCRIPTION

Preliminary Plan No. 120110180 (“Application” or “Preliminary Plan”) is a request to subdivide a property identified as Parcels 397 and 398 on Tax Map FR12, located at 13816 Travilah Road abutting Patrick Avenue and consisting of 2.6-acres, zoned R-200/TDR (“Property” or “Subject Property”). The Property is located within the 2002 Potomac Master Plan area (“Master Plan”). The Property currently has a one-family detached dwelling unit with access provided by an existing driveway cut from Travilah Road. There are various sheds, a concrete slab, and other gravel surfaces to access previous uses on the Property. Travilah Road along the property frontage is constructed to the required standards with an eight-foot wide shared use path within the already dedicated right-of-way. There is a very small portion of the shared use path that crosses the existing line with the Subject Property.

As depicted in Figures 1 and 2 below, the Property is surrounded by one-family detached dwellings in the R-200/TDR zone¹ and it is to the south of the proposed North Potomac Recreational Center. The Property’s topography is generally flat, sloping gently from the southeast to the northwest. There are no forests, streams, wetlands, or environmental buffers on the Property.

¹ Minimum lot size in the R-200 zone is 20,000 square feet if TDR option is not exercised.



Figure 1- Vicinity Map



Figure 2- Property looking north

PROJECT DESCRIPTION²

The Preliminary Plan proposes to subdivide Parcel 398 and Parcel 397 into four lots. The existing dwelling unit and accessory structures will be removed and the existing driveway cut from Travilah Road will be used for a new shared driveway to provide access to all four lots with a fire truck turnaround. There will be a dedication for the existing eight-foot wide hiker/biker trail of 157 square feet. All lots will be served by public water and sewer as approved by WSSC.

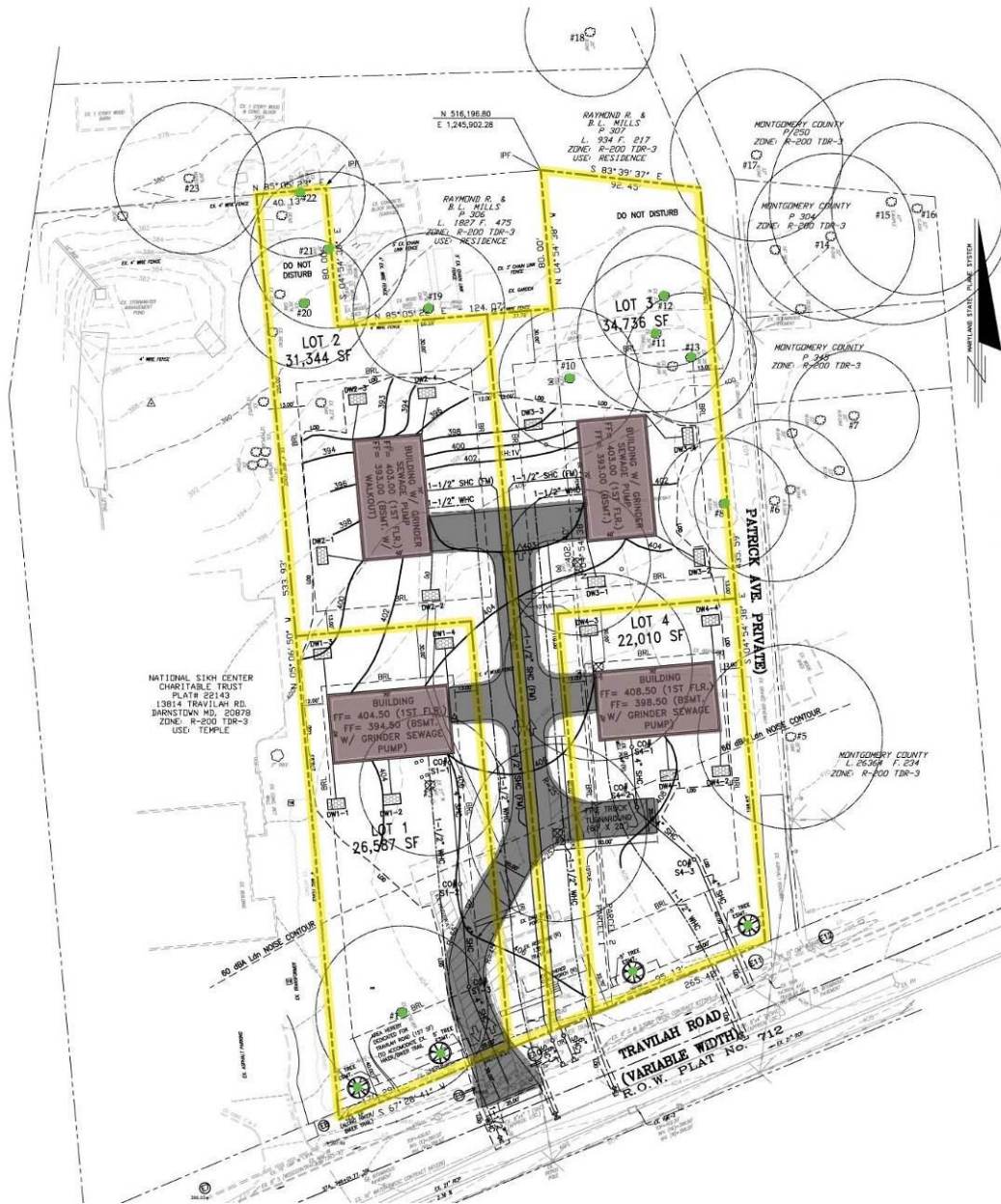


Figure 3-Colored rendering of the Preliminary Plan.

² See attached Preliminary Plan dated May 23, 2012.

ANALYSIS AND FINDINGS

Conformance to the Master Plan

The Property is located in the North Potomac Community Area, one of four Community Areas identified on page 5 of the 2002 Potomac Subregion Master Plan, (“Master Plan”). The Master Plan zoned this Property R-200/TDR. On page A-3 (Appendix) of the Master Plan, a minimum of 10 acres is required to utilize the transferable development rights (TDR-3) density. The Property will not be able to utilize the TDR option as the Property is 2.63-acres.

Travilah Road is a two lane road and is classified as a primary residential road with a minimum right-of-way width of 70-feet. The Class I (off-road bike path) (p. 125) and shared use path recommended in the Countywide Bikeways Functional Master Plan exists in front of the Property. The Preliminary Plan is accommodating the shared use path by dedicating 157 square feet of right-of-way.

The Application is in substantial conformance with the 2002 Potomac Subregion Master Plan as the Application will utilize existing infrastructure to create one-family detached residential lots in compliance with the recommended R-200 zone. As noted above, the Property is not large enough to utilize the optional method of development using TDRs.

Public Facilities

Roads and Transportation Facilities

The Local Area Transportation Review (“LATR”) guidelines require a traffic study to be performed if the development generates 30 or more peak-hour trips. The Application generated traffic volumes well below the 30-trip threshold, and therefore, no LATR is required. The Property is located in the North Potomac Policy Area where there is a 5% Policy Area Mobility Review (“PAMR”) mitigation requirement per new trip, but it is exempt from PAMR because the four lots will generate three or fewer new trips.

Access to the Property will be provided by utilizing the existing driveway cut with a new shared driveway from Travilah Road. The sight distance for the driveway is acceptable per the Sight Distance Evaluation reviewed and approved by MCDOT on October 23, 2012³. The Application was reviewed and approved by the Montgomery County Fire and Rescue Service in a letter dated July 31, 2012⁴ finding that the Property has adequate access for the largest emergency vehicles. The approved Fire Access Plan requires the Applicant to construct an emergency apparatus turnaround within the Property boundaries as shown on the Preliminary Plan. The Applicant is required to dedicate an additional 157 square feet of right-of-way for the existing shared use path that will be located within that right-of-way. The proposed vehicle and pedestrian access for the subdivision will be safe and adequate with the proposed improvements.

Other Public Facilities and Services

Public facilities and services are available and adequate to serve the proposed lots. Public water and sewer service is adequate and is proposed to serve each dwelling unit. The existing well and pump will

³ See attached letter.

⁴ See attached letter.

be removed from proposed Lot 4. Gas, electrical and telecommunications services are available to serve the proposed lots. Other public facilities and services, such as police stations and health services are operating within the standards set by the Subdivision Staging Policy currently in effect. The Application is located in the Thomas S. Wootton School Cluster which is operating at acceptable levels at the elementary and middle school levels, but at an inadequate capacity at the high school classroom level⁵. The Application is subject to a School Facilities Payment at the high school level which must be made for each dwelling unit approved under this Preliminary Plan. The timing and amount of the payment is prescribed in Chapter 52 of the County Code.

Environment

Environmental Inventory

The Natural Resource Inventory/Forest Stand Delineation (“NRI/FSD”) #420110370 for this Property was approved on October 18, 2010. The NRI/FSD identifies the environmental constraints and forest resources on the Subject Property. The Property contains no forest. There were five trees 30 inches or greater in diameter at breast height (“DBH”); however, one of these trees has been subsequently removed by the Applicant. Additionally, there are eight trees between 24 inches and 30 inches in DBH on the Property.

The Property’s topography is generally flat, sloping gently from the southeast to the northwest. There are no forests, streams, wetlands, or environmental buffers on the Property. It is within the Watts Branch watershed, which is classified as a Use I watershed by the Maryland Department of the Environment. The Montgomery County – CSPS rates streams in this watershed as having fair water quality.

Noise Analysis

Based upon current and projected traffic volumes for Travilah Road, the Applicant provided a noise study to identify the 60 decibel level day – night (dBA Ldn) noise contour⁶ and to indicate methods to attenuate interior noise of any affected homes to 45 dBA Ldn⁷ and exterior private spaces (backyard) to 60 dBA Ldn.

The Applicant provided a noise analysis prepared by Polysonics, dated June 7, 2011. The noise analysis identified the 60 dBA Ldn noise contour line (Figure 4) for the future as well as today. The Preliminary Plan shows all houses outside of the 60 dBA Ldn area to satisfy the noise recommendations and avoid providing specific mitigation measures for outdoor use area. If the actual houses on proposed Lots 1 and 4 are built in the locations reflected on the Preliminary Plan, the Application meets the recommended noise guidelines for outdoor area. The required interior noise levels can generally be attained by meeting standard building construction requirements. If the houses on proposed Lot 1 and 4 are not built in the same general location and orientation shown on the Preliminary Plan, additional noise

⁵Per the 2012-2016 Subdivision Staging Policy Appendix

http://www.montgomeryplanning.org/research/growth_policy/subdivision_staging_policy/2012/documents/SSPappendix4sc.pdf

⁶ 60dBA Ldn contour is the maximum recommended noise level for residential areas where suburban densities predominate.

⁷ 45dBA Ldn is the maximum recommended interior noise levels for residential properties. Standard construction measures generally provide sufficient abatement if exterior Ldn guidelines have been met.

studies will be required prior to issuance of the building permit, to determine an appropriate noise mitigation technique(s).

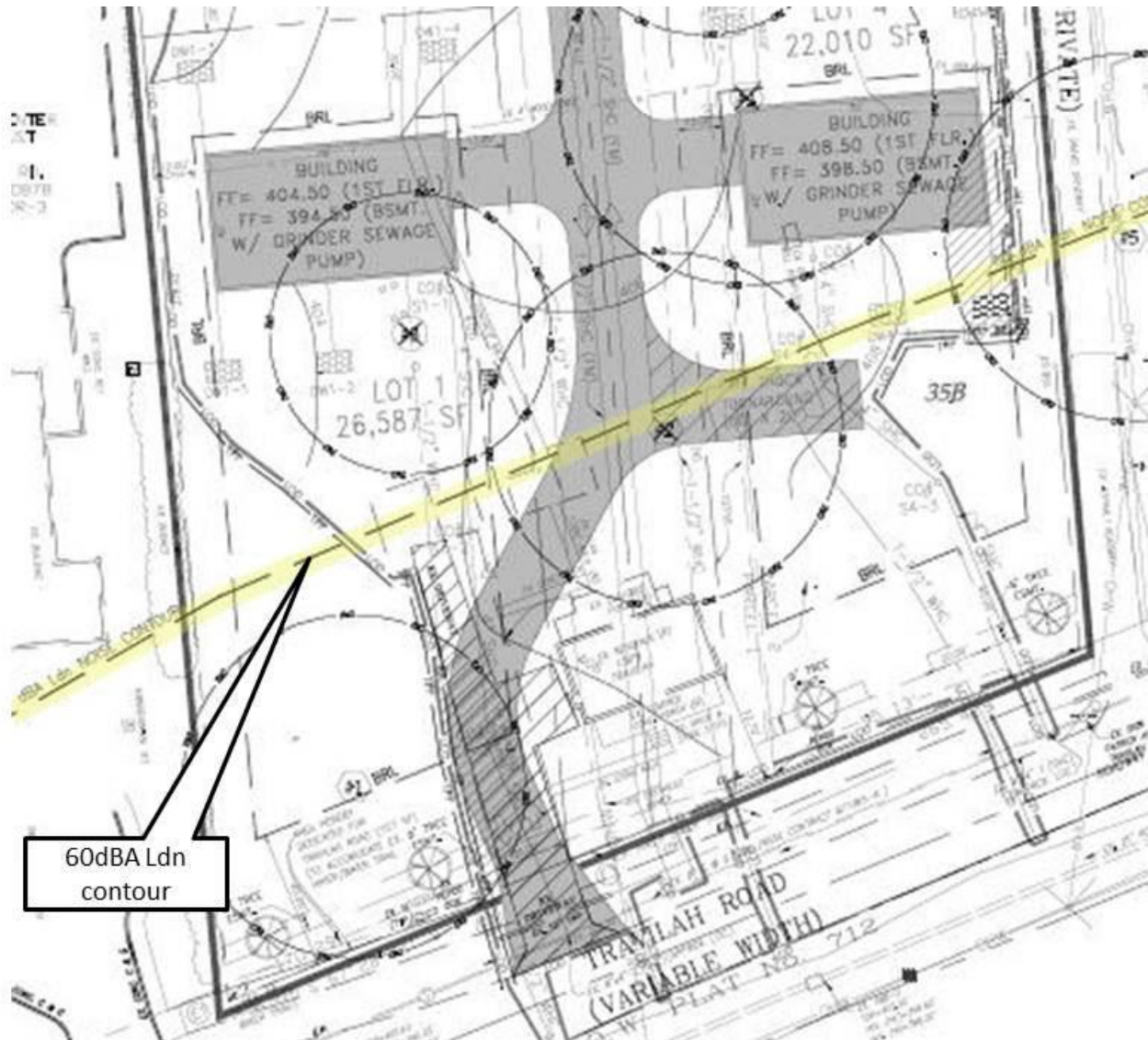


Figure 4 – 60 decibel level at day and night contour line

Forest Conservation Plan (FCP)

The Property contains no forest; however, based on Chapter 22A of the County code the Applicant has a 0.39-acre planting requirement. The Applicant proposes to meet the entire planting requirement through a Fee-In-Lieu payment. In specific development situations the Planning Board or Planning Director may allow an applicant to pay into the County Forest Conservation Fund instead of providing afforestation, reforestation, or landscaping⁸. One such situation consists of afforestation on sites with no priority planting areas. If a site has afforestation planting requirements and the Planning Board or Planning Director, as appropriate, finds that no on-site priority planting area is present and no other

⁸ Chapter 22A-12(g)(2) In lieu fee; Specific Development Situations

appropriate on-site planting area is available, the applicant may pay the fee instead of doing off-site afforestation. The in-lieu fee must be paid to the Planning Department prior to any land disturbance occurring on-site. Staff finds that for this Property, there is no acceptable on-site priority planting area and that there are no other appropriate planting area to meet the planting requirement. Staff supports the Applicant’s request to make a Fee-in-Lieu payment.

Forest Conservation Variance

Section 22A-12(b)(3) of the County Code requires applicants to identify certain trees, shrubs, plants and specific areas as priority for retention and protection and further requires those features to be left in an undisturbed condition unless a variance is obtained in accordance with Chapter 22A-21 of the County Code. A person may request in writing a variance from this Chapter, if it can be demonstrated that enforcement would result in unwarranted hardship to the person.

A variance is required since this project will require that two trees 30 inches or greater DBH (“Protected Trees”) be removed (Trees # 2 and 4) and that there will be impact to two other Protected Trees (Trees # 1 and 5) depicted in Figure 5. As stated in Table 1, Tree 1 was initially going to be impacted, but was removed without permission by the Applicant as discussed in the below section mitigation.

Table 1: Trees to be removed

Tree Number	Species	DBH	Condition/Status	Proposed Action
1	Silver Maple	33”	Good, Multi-stemmed	Removed without permission
2	White Oak	34”	Good, Terminal Dieback	To Be Removed
4	White Oak	36”	Fair, Terminal Dieback, Poison Ivy, Limb Loss	To Be Removed
5	White Oak	35”	Good, Off-site, Some Terminal Dieback	Saved

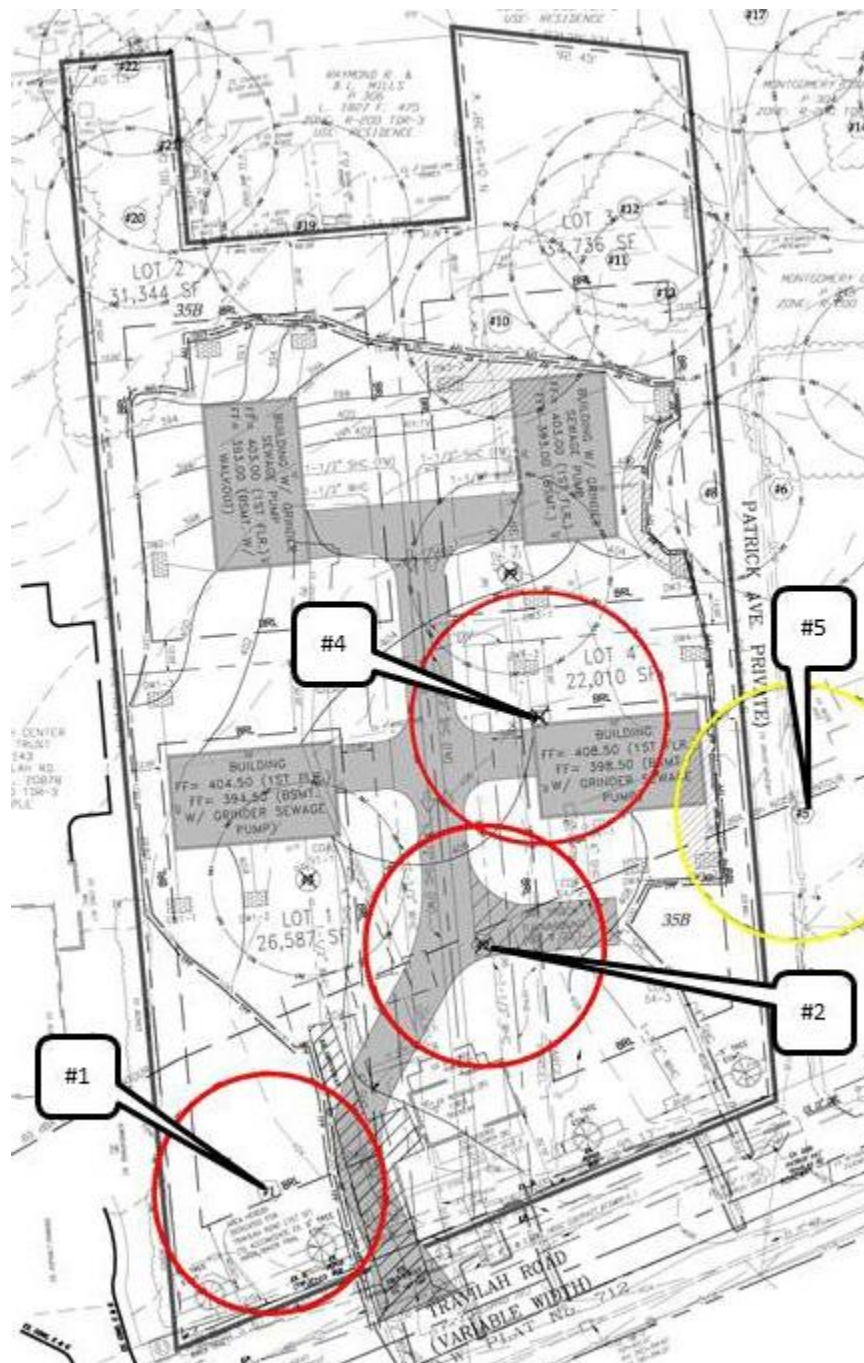


Figure 5 - Tree Variance

Unwarranted Hardship Basis

The Applicant believes that enforcement of Section 22A-12(b)(3) will create an unwarranted hardship by preventing a reasonable subdivision of the Property. The size and shape of the Property, in conjunction with the avoidance of any impact to the four remaining Protected Trees would prevent the efficient subdivision of the Property into lots that conform to zoning, the Subdivision Regulations, fire marshal requirements and storm water management regulations, thus causing an unwarranted hardship.

Staff concurs with the Applicant's justification for an unwarranted hardship. The location of the Protected Trees and their associated critical root zones would severely limit the development potential of the Property with four lots that meet all zoning and subdivision requirements.

Variance Findings

The Planning Board must make findings that the Applicant has met all requirements of this Chapter 22A-21 before granting the variance. Staff has made the following determination regarding the variance and recommends that it be granted for all four trees:

Granting the variance:

1. Will not confer on the Applicant a special privilege that would be denied to other applicants;

Granting the variance will not confer a special privilege on the Applicant as the critical root zone ("CRZ") location/distribution of the Protected Trees is in such a manner that they provide a near contiguous root zone coverage that stretches the entire width of the Property behind the existing residence. Any applicant considering development of the Property consistent with the Master Plan and the zone would require disturbance and/or removal of the Protected Trees.

2. Is not based on conditions or circumstances which are the result of actions by the Applicant;

The majority of the Property would not be developable in accordance with the Master Plan or the zoning if the CRZ of specimen trees were required to remain undisturbed.

3. Is not based on a condition relating to land or building use, either permitted or non-conforming, on a neighboring property

The requested variance is a result of the proposed development and not a result of land or building use on a neighboring property.

4. Will not violate State water quality standards or cause measurable degradation in water quality.

The Protected Trees being removed are not within a stream buffer, wetland, or a special protection area their contribution to maintaining water quality can be replaced by the planting of new trees after construction. Mitigation at a rate that approximates the form and function of the Protected Trees removed will provide some mitigation for water quality protection as the trees grow and mature. A Stormwater Management Concept Plan was approved by the MCDPS

Mitigation for Trees Subject to the Variance Provisions

Mitigation should be at a rate that approximates the form and function of the trees removed. Staff recommends that replacement occur at a ratio of approximately one inch DBH for every four inches DBH removed, using trees that are three-inches in DBH. This means that for the total 70 caliper inches of variance trees removed (Tree 2 at 34" and Tree 4 at 36" for a total of 70"), six – three inch DBH native canopy trees must be planted on the Property. While these trees will not be as large as the trees lost, the trees will provide some immediate canopy to help augment the canopy coverage that will remain.

After the Application was filed, Tree #1 (33" Silver Maple) was removed without permission from the site. Tree #1 was not included on the submitted variance request. The Applicant indicated that Tree #1 was removed due to storm damage that occurred on the Property. However, the tree was never inspected by an arborist and was already removed before M-NCPPC staff was notified. The Applicant provided an undated letter from Harjot Singh, president of CCM5-Contracting and Construction Management, indicating that they removed several broken branches from the tree and recommended removal⁹. Unfortunately, Staff had no opportunity to verify the damage and no Certified Tree Care Expert or Certified Arborist evaluations were done prior to the tree removal. Staff recommends mitigation for Tree #1 equal to the amount of mitigation that would have been required if they had requested it to be removed. This would generate an additional three – three inch DBH native canopy trees in mitigation. The total amount of variance mitigation recommend for this project would be nine – three inch DBH native canopy trees to be planted on-site.

County Arborist's Recommendation

In accordance with Montgomery County Code, Section 22A-21(c), the Planning Department is required to refer a copy of the variance request to the County Arborist in the Montgomery County Department of Environmental Protection for a recommendation prior to acting on the request. The request was forwarded to the County Arborist on May 31, 2012. On June 8, 2012, the County Arborist issued a letter recommending that the variance can be granted if mitigation is provided¹⁰.

Stormwater Management Concept

The MCDPS Stormwater Management Section conditionally approved the Stormwater Management Concept for the Application on August 9, 2012¹¹. Environmental Site Design has been integrated on-site using drywells and non-rooftop disconnect techniques.

Compliance with the Subdivision Regulations and Zoning Ordinance

The Application was reviewed for compliance with the Montgomery County Code, Chapter 50 in the Subdivision Regulations. The Application meets all applicable sections. The size, width, shape, and orientation of the proposed lots are appropriate for the location of the subdivision given the use proposed for the Property and the surrounding uses. Based on a review of the local area development map, Figure 1, the lots are comparable in size, width, shape and orientation to existing properties fronting onto Travilah Road in the general area.

The lots were reviewed for compliance with the dimensional requirements of the R-200 zone as specified in the Zoning Ordinance. The lots as proposed will meet all the dimensional requirements for area, frontage, width, and setbacks established in that zone. A summary of this review is included in attached Table 2. The Application was reviewed by other applicable county agencies, all of whom have recommended approval of the Preliminary Plan.

⁹ See attached letter.

¹⁰ See attached letter.

¹¹ See attached letter.

Table 2: Preliminary Plan Data Table for R-200 zone Standard Method

PLAN DATA	Zoning Ordinance Development Standard	Proposed for Approval by the Preliminary Plan
Minimum Lot Area	20,000 sq. ft.	22,010 sq. ft. minimum
Lot Width	100 ft.	102 ft. minimum
Lot Frontage	25 ft.	25 ft. minimum
Setbacks		
Front	40 ft. Min.	Must meet minimum ¹
Side	12 ft. Min./ 25 ft. total	Must meet minimum ¹
Rear	30 ft. Min.	Must meet minimum ¹
Height	50 ft. Max.	May not exceed maximum ¹
Maximum Residential Dwelling Units	5	4
MPDUs	N/A	N/A
TDRs	N/A	N/A
Site Plan Required	N/A	N/A

¹ As determined by MCDPS at the time of building permit.

Citizen Correspondence and Issues

The Applicant notified adjacent and confronting property owners of the pre-submission meeting held on October 12, 2010 at 7:30 p.m. at 13816 Travilah Road (Gurdwara Lobby). 17 people attended the pre-submission meeting. The plan was discussed and according to the minutes of the meeting, the Applicant answered questions regarding the Application. To date, staff has not received any further correspondence regarding the Application.

CONCLUSION

The Application meets all requirements established in the Subdivision Regulations and the Zoning Ordinance and substantially conforms to the recommendations of the 2002 Potomac Subregion Master Plan. Access and public facilities will be adequate to serve the Property, and the lots conform to all zoning and subdivision requirements. The Application was reviewed by all applicable county agencies, all of whom have recommended approval of the Preliminary Plan. Therefore, approval of the Application with the conditions specified above is recommended.

Attachments

- Attachment A – Proposed Development Plan
- Attachment B – Agency Correspondence
- Attachment C – Forest Conservation Plan
- Attachment D – June 7, 2011 Noise Analysis



DEPARTMENT OF TRANSPORTATION

Isiah Leggett
County Executive

October 23, 2012

Arthur Holmes, Jr.
Director

Ms. Katherine Holt, Senior Planner
Area Three Planning Division
The Maryland-National Capital
Park & Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

RE: Preliminary Plan No. 120118180
Parmjit & Saini Estate

Dear Ms. Holt:

We have completed our review of the amended preliminary plan dated April 20, 2012. Earlier versions of this plan were reviewed by the Development Review Committee at its meetings on April 11, 2011 and January 17, 2012. We recommend approval of the plan subject to the following comments:

All Planning Board Opinions relating to this plan or any subsequent revision, project plans or site plans should be submitted to the Department of Permitting Services in the package for record plats, storm drain, grading or paving plans, or application for access permit. Include this letter and all other correspondence from this department.

1. Dedicate additional right-of-way (at the southwestern corner of the site) on Travilah Road to accommodate the existing bikepath facility.
2. Prior to approval of the record plat by the Department of Permitting Services, submit a completed, executed and sealed MCDOT Sight Distances Evaluation certification form, for the proposed driveway, for DPS' review and approval.
3. Record plat to reflect a reciprocal ingress, egress, and public utilities easement to serve the lots accessed by each common driveway. We recommend a joint Maintenance and Liability Agreement, describing each property's rights and obligations, be prepared in advance of settlement of any of the proposed lots.
4. If the proposed development will alter any existing street lights, signing, and/or pavement markings, please contact Mr. Dan Sanayi of our Traffic Engineering Design and Operations Section at (240) 777-2190 for proper executing procedures. All costs associated with such relocations shall be the responsibility of the applicant.

Division of Traffic Engineering and Operations

100 Edison Park Drive, 4th Floor • Gaithersburg, Maryland 20878
Main Office 240-777-2190 • TTY 240-777-6013 • FAX 240-777-2080
trafficops@montgomerycountymd.gov

Ms. Katherine Holt
Preliminary Plan No. 120110180
October 23, 2012
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Thank you for the opportunity to review this preliminary plan. If you have any questions or comments regarding this letter, please contact Mr. David Adams, our Development Review Area Engineer for this project at david.adams@montgomerycountymd.gov or (240) 777-2197.

Sincerely,



Gregory M. Leck, Manager
Development Review Team

m:/corres/FY13/Traffic/Active/120110180, Parmjit & Saini, plan review comments ltr.doc

Enclosure

cc: Chattar Singh & Parmjit Singh, LLC
Pritam Arora; Design Engineering
Ki Kim; M-NCPPC Area 3
Catherine Conlon; M-NCPPC DARC
Preliminary Plan folder
Preliminary Plan letters notebook

cc-e: Atiq Panjshiri; MCDPS RWPR
Henry Emery; MCDPS RWPR
Dan Sanayi; MCDOT DTEO
David Adams; MCDOT DTEO



FIRE MARSHAL COMMENTS

DATE: 31-Jul-12
TO: Pritam Arora - parora@deius.com
Design Engineering Inc
FROM: Marie LaBaw
RE: Parmjit & Saini Estates
120110180

PLAN APPROVED

1. Review based only upon information contained on the plan submitted **22-May-12**. Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.
2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.



DEPARTMENT OF ENVIRONMENTAL PROTECTION

Isiah Leggett
County Executive

Robert G. Hoyt
Director

June 8, 2012

Françoise Carrier, Chair
Montgomery County Planning Board
Maryland National Capital Park & Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland 20910

RE: Saini Estates, DAIC 120110180, NRI/FSD application accepted on 9/3/2010

Dear Ms. Carrier:

The County Attorney's Office has advised that Montgomery County Code Section 22A-12(b)(3) applies to any application required under Chapter 22A submitted after October 1, 2009. Accordingly, given that the application for the above referenced request was submitted after that date and must comply with Chapter 22A, and the Montgomery County Planning Department ("Planning Department") has completed all review required under applicable law, I am providing the following recommendation pertaining to this request for a variance.

Section 22A-21(d) of the Forest Conservation Law states that a variance must not be granted if granting the request:

1. Will confer on the applicant a special privilege that would be denied to other applicants;
2. Is based on conditions or circumstances which are the result of the actions by the applicant;
3. Arises from a condition relating to land or building use, either permitted or nonconforming, on a neighboring property; or
4. Will violate State water quality standards or cause measurable degradation in water quality.

Applying the above conditions to the plan submitted by the applicant, I make the following findings as the result of my review:

1. The granting of a variance in this case would not confer a special privilege on this applicant that would be denied other applicants as long as the same criteria are applied in each case. Therefore, the variance can be granted under this condition.
2. Based on a discussion on March 19, 2010 between representatives of the County, the Planning Department, and the Maryland Department of Natural Resources Forest Service, the disturbance of trees, or other vegetation, is not interpreted as a condition or circumstance that is the result of the actions by the applicant. Therefore, the variance can be granted under this condition, as long as appropriate mitigation is provided for the resources disturbed.

Françoise Carrier
June 8, 2012
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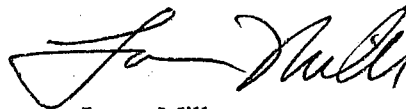
3. The disturbance of trees, or other vegetation, by the applicant does not arise from a condition relating to land or building use, either permitted or nonconforming, on a neighboring property. Therefore, the variance can be granted under this condition.
4. The disturbance of trees, or other vegetation, by the applicant will not result in a violation of State water quality standards or cause measurable degradation in water quality. Therefore, the variance can be granted under this condition.

Therefore, I recommend a finding by the Planning Board that this applicant qualifies for a variance conditioned upon the applicant mitigating for the loss of resources due to removal or disturbance to trees, and other vegetation, subject to the law based on the limits of disturbance (LOD) recommended during the review by the Planning Department. In the case of removal, the entire area of the critical root zone (CRZ) should be included in mitigation calculations regardless of the location of the CRZ (i.e., even that portion of the CRZ located on an adjacent property). When trees are disturbed, any area within the CRZ where the roots are severed, compacted, etc., such that the roots are not functioning as they were before the disturbance must be mitigated. Exceptions should not be allowed for trees in poor or hazardous condition because the loss of CRZ eliminates the future potential of the area to support a tree or provide stormwater management. Tree protection techniques implemented according to industry standards, such as trimming branches or installing temporary mulch mats to limit soil compaction during construction without permanently reducing the critical root zone, are acceptable mitigation to limit disturbance. Techniques such as root pruning should be used to improve survival rates of impacted trees but they should not be considered mitigation for the permanent loss of critical root zone. I recommend requiring mitigation based on the number of square feet of the critical root zone lost or disturbed. The mitigation can be met using any currently acceptable method under Chapter 22A of the Montgomery County Code.

In the event that revisions to the LOD are approved by the Planning Department, the mitigation requirements outlined above should apply to the removal or disturbance to the CRZ of all trees subject to the law as a result of the revised LOD.

If you have any questions, please do not hesitate to contact me directly.

Sincerely,



Laura Miller
County Arborist

cc: Robert Hoyt, Director
Walter Wilson, Associate County Attorney
Mark Pfefferle, Chief

CCM5- CONTRACTING AND CONSTRUCTION MANAGEMENT

1421 Silo Way
Silver Spring, Maryland 20905
Phone (240) 398-1514



To Whom this may Concern;

Mr. Saini called me to remove the broken branches of the tree near the parked cars and the house at 13816 Travilah Rd. Rockville, MD. We removed several broken branched and suggested the tree is going to be dangerous because it is unstable/. Unbalanced and can fall any time.

Thanks

Harjot Singh

CCM5-Contracting And Construction Management, President
Harjot Singh



DEPARTMENT OF PERMITTING SERVICES

Diane R. Schwartz Jones
*Director*Isiah Leggett
County Executive

August 9, 2012

Mr. Pritam Arora, P.E.
Design Engineering, Inc.
18229-A Flower Hill way
Gaithersburg, MD 20879Re: Stormwater Management **CONCEPT** Request
for Parmjit Saini Estates
Preliminary Plan #: 1-20110180
SM File #: 239369
Tract Size/Zone: 2.63 acres/R-200/TDR - 3
Total Concept Area: 2.63 acres
Lots/Block: NA
Parcel(s): 397
Watershed: Watts Branch

Dear Mr. Arora:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above mentioned site is **acceptable**. The stormwater management concept proposes to meet required stormwater management goals via drywells and non-rooftop disconnect.

The following **item**) will need to be addressed **during** the detailed sediment control/stormwater management plan stage:

1. Prior to permanent vegetative stabilization, all disturbed areas must be topsoiled per the latest Montgomery County Standards and Specifications for Topsoiling.
2. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
3. An engineered sediment control plan must be submitted for this development.
4. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.
5. Driveway areas that drain to the non – rooftop disconnect areas must sheet flow into those areas.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 **is not required**.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office, or additional information received during the development process; or a change in an applicable

Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact William Campbell at 240-777-6345.

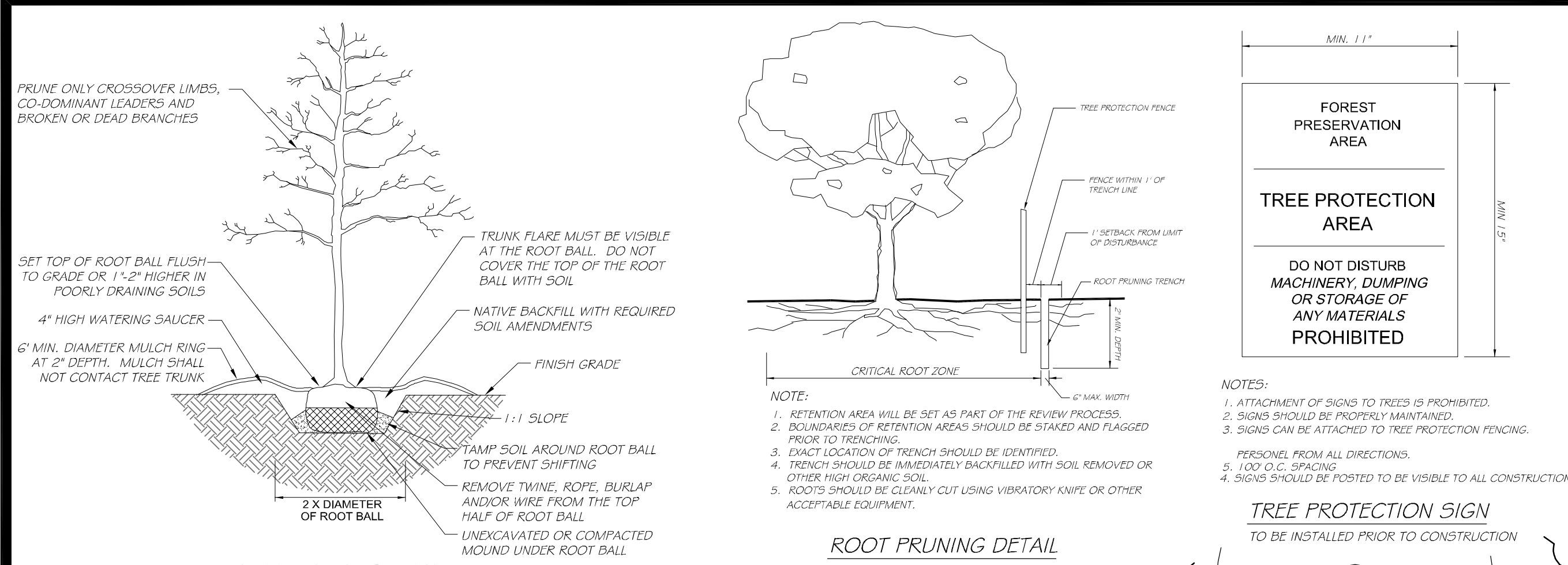
Sincerely,


Richard R. Brush, Manager
Water Resources Section
Division of Land Development Services

RRB: tla

cc: C. Conlon
SM File # 239369

ESD Acres: 2.63
STRUCTURAL Acres: 0
WAIVED Acres: 0

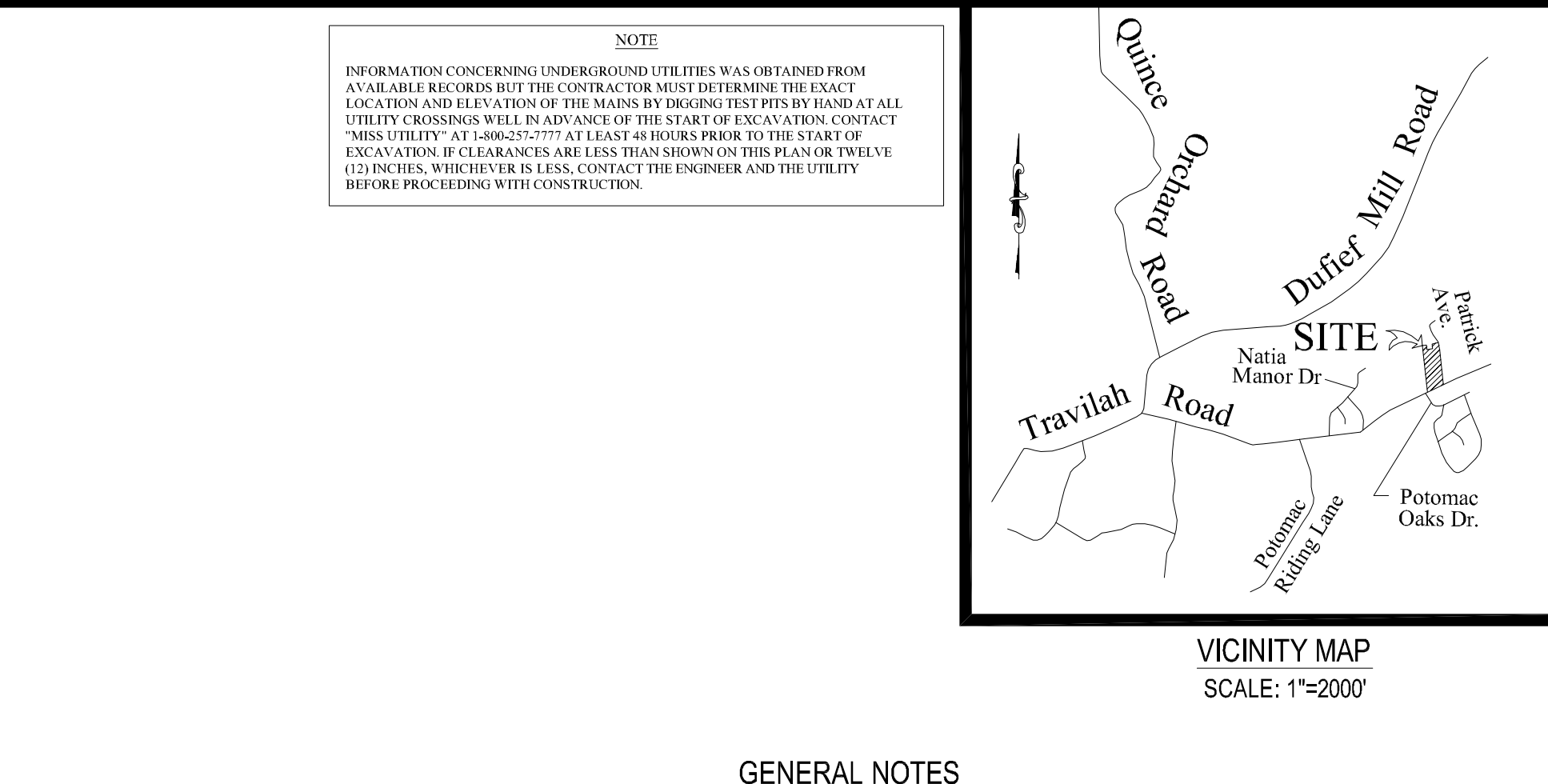


Symbol	Botanical Name/Common Name	Quantity	Size / Spacing	Remarks
	CELTIS OCCIDENTALIS 'PRAIRIE PRIDE' / 'PRAIRIE PRIDE' HACKBERRY	4	2 1/2" - 3 1/2" CAL / AS SHOWN	B & B

STREET TREE PLANT LIST

#	COMMON NAME / SCIENTIFIC NAME	TRUNK # (D.B.H.)	CONDITION	PROPOSED ACTION
1*	SILVER MAPLE / <i>Acer saccharinum</i>	3"	GOOD, MULTISTEMMED	TO BE REMOVED
2*	WHITE OAK / <i>Quercus alba</i>	3"	GOOD, TERMINAL DIEBACK	TO BE REMOVED
3*	WHITE OAK / <i>Quercus alba</i>	2"	FAR, CALLOUSED FISSURE, ORIGINAL LEADER DEAD	TO BE REMOVED
4*	WHITE OAK / <i>Quercus alba</i>	3"	FAR, TERMINAL DIEBACK, FORKING NY, LIMB LOSS	TO BE REMOVED
5*	WHITE OAK / <i>Quercus alba</i>	3"	GOOD, OFF-SITE, SOME TERMINAL DIEBACK	SAVE
6*	NORTHERN RED OAK / <i>Quercus borealis</i>	3"	POOR, OFF-SITE, SIGNIFICANT ROT, CALLOUSED FISSURE	SAVE
7*	NORTHERN RED OAK / <i>Quercus borealis</i>	2"	GOOD, OFF-SITE	SAVE
8*	WHITE OAK / <i>Quercus alba</i>	2"	GOOD, LIMB LOSS, TERMINAL DIEBACK	SAVE ROOT PRUNE (2% OF CRZ DISTURBED)
9*	WHITE OAK / <i>Quercus alba</i>	2"	FAR, LIMB LOSS, TERMINAL DIEBACK	TO BE REMOVED
10*	WHITE OAK / <i>Quercus alba</i>	2"	GOOD	TO BE REMOVED
11*	WHITE OAK / <i>Quercus alba</i>	3"	GOOD, TERMINAL DIEBACK	TO BE REMOVED
12*	WHITE OAK / <i>Quercus alba</i>	2"	GOOD, LIMB LOSS, TERMINAL DIEBACK	TO BE REMOVED
13*	WHITE OAK / <i>Quercus alba</i>	2"	GOOD	TO BE REMOVED
14*	WHITE OAK / <i>Quercus alba</i>	3"	GOOD, OFF-SITE, TERMINAL DIEBACK	SAVE
15*	SILVER MAPLE / <i>Acer saccharinum</i>	4"	FAR, OFF-SITE, LIMB LOSS, TERMINAL DIEBACK	SAVE
16*	GREEN ASH / <i>Fraxinus pennsylvanica</i>	3"	FAR, OFF-SITE, LIMB LOSS, TERMINAL DIEBACK	SAVE
17*	WHITE OAK / <i>Quercus alba</i>	3"	GOOD, OFF-SITE, TWIN LIMB LOSS, TERMINAL DIEBACK	SAVE
18*	BLACK OAK / <i>Quercus velutina</i>	2"	GOOD, OFF-SITE	SAVE
19*	WHITE OAK / <i>Quercus alba</i>	2"	GOOD, OFF-SITE, TERMINAL DIEBACK	SAVE, ROOT PRUNE (2% OF CRZ DISTURBED)
20*	WHITE OAK / <i>Quercus alba</i>	2"	GOOD	SAVE, ROOT PRUNE (1% OF CRZ DISTURBED)
21*	WHITE OAK / <i>Quercus alba</i>	3"	GOOD, SOME TERMINAL DIEBACK	SAVE
22*	WHITE OAK / <i>Quercus alba</i>	2"	GOOD, TERMINAL DIEBACK	SAVE
23*	RED MAPLE / <i>Acer rubrum</i>	2"	GOOD, OFF-SITE	SAVE

* INDICATES SPECIMEN TREE



TREES WITH DBH'S OF 24" OR GREATER

1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

2. SIGNS SHOULD BE PROPERLY MAINTAINED.

3. SIGNS CAN BE ATTACHED TO TREE PROTECTION FENCING.

4. SIGNS SHOULD BE PLACED TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL FROM ALL DIRECTIONS.

5. 100 O.C. SPACING.

6. SIGNS SHOULD BE POSTED TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL.

SITE PREPARATION
(taken from International Society of Arboriculture (ISA) Guide for Developing Planting Specifications)

A. For trees and shrubs planted in individual holes in areas of good soil that is to remain in place and/or to receive amendment in the top 6 in. layer, excavate the hole to the depth of the root ball and to widths shown on the drawing. Slope the sides of the excavation at a 45 degree angle up and away from the bottom of the excavation.

- In areas of slowly draining soils, the root ball may be set up (3 in.) or 1/8 of the depth of the root ball above the adjacent soil level.
- Save the existing soil to be used as backfill around the tree.

B. Detrimental soil conditions: The landscape architect is to be notified, in writing, of soil conditions encountered, including poor drainage, that the contractor considers detrimental to the growth of plant material. When detrimental conditions are uncovered, planting shall be discontinued until instructions to resolve the conditions are received from the landscape architect.

C. Obstructions: If rock, underground construction work, utilities, tree roots, or other obstructions are encountered in the excavation of planting areas, alternate locations for any planting shall be determined by the landscape architect.

PLANTING NOTES
(taken from International Society of Arboriculture (ISA) Guide for Developing Planting Specifications)

A. All plant names and descriptions shall be as defined in *Hortus Third*.

B. All plants shall be grown and harvested in accordance with the *American Standard for Nursery Stock*.

C. Unless specifically noted, all plants shall be of specimen quality, exceptionally heavy, symmetrical, and so trained or favored in development and appearance as to be unquestionably and outstandingly superior in form, compactness, and symmetry. They shall be sound, healthy, vigorous, well branched, and densely foliated when in leaf; free of disease and insects, eggs, or larvae; and shall have healthy, well-developed root systems. They shall be free from physical damage or other conditions that would prevent vigorous growth.

- Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over (3/4 in.) in diameter that are not completely closed will be rejected.

D. Plants shall conform to the measurements specified, except that plants larger than those specified may be used if approved by the landscape architect. Use of larger plants shall not increase the contract price. If larger plants are approved, the root ball shall be increased in proportion to the size of the plant.

E. Substitutions of plant materials will not be permitted unless authorized in writing by the M-NCPPC Inspector.

F. Balled and Burlapped (B&B) Plant Materials

- Trees designated B&B shall be properly dug with firm, natural balls of soil retaining as many fibrous roots as possible. In sizes and shapes as specified in the *American Standard for Nursery Stock*. Balls shall be firmly wrapped with non-synthetic, rottable burlap and secured with rails and heavy, non-synthetic, rottable twine. The root collar shall be apparent at surface of ball. Trees with loose, broken, processed, or manufactured root balls will not be accepted, except with special written approval before planting.
- Mulch: shall be shredded hardwood bark. Material shall be mulching grade, uniform in size, and free of foreign matter. Submit sample for approval.

H. Soil Amendments (as required) shall be horticultural-grade milled pine bark or organic leaf matter that meets ISA specifications.

MAINTENANCE NOTES
(taken from International Society of Arboriculture (ISA) Guide for Developing Planting Specifications)

A. Maintenance shall begin immediately after each plant is planted and continue for a two-year period at which time the financial security will be released by the M-NCPPC Planning Department. Up to half of the security may be released after the planting has been completed if, the forest conservation inspector has determined that the planting plan has been followed and the stock is properly planted and in good condition. After the second year, or the fifth year in a SPA, if the forest conservation inspector has determined that the survival requirements have been met, the financial security may be released upon final inspection.

B. Maintenance shall consist of pruning, watering, cultivating, weeding, mulching, tightening and repairing guys and stakes, resetting plants to proper grades or upright position, restoring of the planting saucer, and furnishing and applying such sprays or other materials as necessary to keep plantings free of insects and diseases and in vigorous condition.

C. Planting areas and plants shall be protected at all times against trespassing and damage of all kinds for the duration of the maintenance period. If a plant becomes damaged or injured, it shall be treated or replaced as directed by the owner or landscape architect at no additional cost.

D. D. Watering: Contractor shall irrigate as required to maintain vigorous and healthy tree growth. Overwatering or flooding shall not be allowed. The contractor shall monitor, adjust, and use existing irrigation facilities, if available, and furnish any additional material, equipment, or water to ensure adequate irrigation. Root balls of all trees and large shrubs shall be spot watered using handheld hoses during the first four months after planting, as required to ensure adequate water within the root ball.

E. During periods of restricted water usage, all governmental regulations (permanent and temporary) shall be followed. The contractor may have to transport water from ponds or other sources, at no additional expense to the owner when irrigation systems are unavailable.

TREE PROTECTION NOTES

- TREE PROTECTION FENCE TO BE COMBINED WITH SILT FENCE WHERE POSSIBLE.

LEGEND

	SUBJECT BOUNDARY		TREES ≥24" - <30" D.B.H.		SOILS SYMBOL		TREE PROTECTION FENCE
	TREE LINE (NOT FOREST)		TREES ≥30" D.B.H.		TREES TO BE REMOVED		ROOT PRUNE LINE
	FOREST BOUNDARY (OFF-SITE)		CRITICAL ROOT ZONE (D.B.H. x 1.5 = RADIUS)		CRITICAL ROOT ZONE TO BE REMOVED		
	EXISTING TOPOGRAPHY		PROPOSED L.O.D.				

GENERAL NOTES

- TOTAL AREA OF TRACT: 2.63 AC. ± 114693 SQ.FT.
- EXISTING ZONING: R-200 TD05
- BOUNDARY PROVIDED BY DESIGN ENGINEERING INC., JUNE 4, 2010.
- TOPOGRAPHY PROVIDED BY APEX INC & DESIGN ENGINEERING INC., JUNE 4, 2010.
- CONTOUR INTERVAL: 2 FOOT.
- NO YEAR FLOODPLAIN INFORMATION IS AVAILABLE ACCORDING TO FEMA FIRM MAP NO. 240310202D, EFFECTIVE DATE: SEPT. 20, 2006.
- NO WARE, THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITATS WERE OBSERVED OR ARE KNOWN TO EXIST ON THIS SITE ACCORDING TO AVAILABLE RECORDS. A LETTER HAS BEEN SENT TO MDNR FOR AN ENVIRONMENTAL REVIEW AND THE RESPONSE WILL BE PROVIDED ONCE RECEIVED.
- THERE ARE NO HISTORIC RESOURCES LOCATED ON THE SUBJECT PROPERTY. SOURCE: MONUMENT.
- WATERBURY: WATTS BRANCH: USE CLASS 1
- NO WETLANDS WERE OBSERVED OR ARE KNOWN TO EXIST ON THE SITE ACCORDING TO WATTS WETLAND MAPPER.
- 14 TREES WITH DBH'S OF 24" OR GREATER ARE LOCATED ON THE SUBJECT PROPERTY.
- NO TREES WITH A D.B.H. >75% OF A STATE COUNTY CHAMPION TREE ARE LOCATED ON OR ADJACENT TO THE SITE.
- THERE ARE 11 SPECIMEN TREES LOCATED ON OR ADJACENT TO THE SITE.
- NO FOREST EXISTS ON THE SITE.
- FIELD INVESTIGATION PERFORMED ON AUGUST 7, 2010 BY GEORGE WARHOLIC.
- TREE MEASUREMENT TOOL USED: DIAMETER TAPE.
- APPROVED NRIFSD #42010370.

Sequence of Events for Property Owners Required to Comply With Forest Conservation and/or Tree-Save Plans

Pre-Construction

- As an on-site pre-construction meeting is required after the final disturbance has been staked and flagged, but before any clearing or grading begins. The property owner should contact the Montgomery County Planning Department Inspector and the contractor to verify the limits of disturbance and discuss tree protection and tree care measures. The developer's representative, construction superintendent, ISA certified arborist or Montgomery County tree expert that will implement the tree protection measures, forest conservation inspector, and Department of Permitting Services (DPS) sediment control inspector should attend this pre-construction meeting.
- No clearing or grading shall begin before stress-reduction measures have been implemented. Appropriate measures may include:
 - Root pruning
 - Crown reduction or pruning
 - Watering
 - Fertilizing
 - Vertical mulching
 - Root aeration/mulch

Measures as specified on the forest conservation plan may be required as determined by the forest conservation inspector in coordination with the arborist.

A. A Maryland-licensed tree expert or an International Society of Arboriculture-certified arborist must perform all stress reduction measures. Documentation of stress reduction measures must be either observed by the forest conservation inspector or sent to the inspector at 8187 George Avenue, Silver Spring, MD 20910. The forest conservation inspector will determine the exact method to comply the stress reduction measures during the pre-construction meeting.

4. Temporary tree protection devices shall be installed per the Forest Conservation Plan/Tree Save Plan and prior to any construction activities. Tree protection fencing should be installed prior to the pre-construction meeting. The forest conservation inspector, in coordination with the DPS sediment control inspector, may make field adjustments to increase the survivability of trees and forest shown as noted on the approved plan. Temporary tree protection devices may include:

- Chain-link fence (four feet high)
- Super all fence with wire strung between support poles (minimum 4 feet high with high-visibility flagging)
- 1/4 gauge 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high with high-visibility flagging)

5. Temporary protection devices shall be maintained and treated by the contractor for the duration of construction project and must not be altered without prior approval from the forest conservation inspector. No equipment, tools, materials, or debris may be stored within the tree protection fence areas during the entire construction project. No vehicle or equipment access to the fenced area will be permitted. Tree protection shall not be removed without prior approval of forest conservation inspector.

6. Forest retention area signs shall be installed as required by the forest conservation inspector, or as shown on the approved plan.

7. Long-term protection devices will be installed per the Forest Conservation Plan/Tree Save Plan and attached details. Installation shall occur at the appropriate time during the construction project. Corrections and repairs to all tree protection devices, as determined by the forest conservation inspector, must be made within the timeframe established by the inspector.

ENVIRONMENTAL TABULATION

TRACT AREA	2.63 AC.
NET TRACT	2.63 AC.
AREA TO REMAIN IN AGRICULTURE	0 AC.
ROAD & UTILITY ROWS NOT IMPROVED	0 AC.
AS PART OF DEVELOPMENT PLAN	0 AC.
EX. FOREST	0 AC.
PROP. FOREST RETENTION	0 AC.
PROP. FOREST CLEARING	0 AC.
LAND USE CATEGORY	15% HIGH DENSITY RESIDENTIAL
AFFORESTATION THRESHOLD	15% (0.39 AC.)
CONSERVATION THRESHOLD	20% (0.53 AC.)
FOREST RETAINED WITHIN WETLANDS	0 AC.
FOREST CLEARED WITHIN WETLANDS	0 AC.
FOREST PLANTED WITHIN WETLANDS	0 AC.
FOREST RETAINED WITHIN 100-YEAR FLOODPLAIN	0 AC.
FOREST CLEARED WITHIN 100-YEAR FLOODPLAIN	0 AC.
FOREST PLANTED WITHIN 100-YEAR FLOODPLAIN	0 AC.
FOREST RETAINED WITHIN STREAM BUFFERS	0 AC.
FOREST CLEARED WITHIN STREAM BUFFERS	0 AC.
FOREST PLANTED WITHIN STREAM BUFFERS	0 AC.
FOREST RETAINED WITHIN PRIORITY AREAS	0 AC.
FOREST CLEARED WITHIN PRIORITY AREAS	0 AC.
FOREST PLANTED WITHIN PRIORITY AREAS	0 AC.

STREAM BUFFER
LINEAR FEET (LENGTH): 0'
AVERAGE WIDTH (EACH SIDE OF STREAM(S)): 0'

FOREST CONSERVATION WORKSHEET

NET TRACT AREA:

A. Total Tract Area	2.63
B. Land dedication areas (parks, county facility, etc.)	0.00
C. Land dedication for roads or utilities (not being constructed by the owner)	0.00
D. Area to remain in commercial agricultural production use	0.00
E. Other deductions (specify)	0.00

Net tract area: 2.63 AC.

LAND USE CATEGORY (from Trees Technical Manual)
Input the number "1" under the appropriate land use, limit to only one entry.

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	1	0	0

F. Afforestation Threshold: 15% x F = 0.39
G. Conservation Threshold: 20% x F = 0.53

EXISTING FOREST COVER:

H. Existing forest cover	0.00
I. Area of forest above afforestation threshold	0.00
J. Area of forest above conservation threshold	0.00

BREAK EVEN POINT:

K. Forest retention above threshold with no mitigation	0.00
L. Clearing permitted without mitigation	0.00

PROPOSED FOREST CLEARING:

M. Total area of forest to be cleared	0.00
N. Total area of forest to be retained	0.00

PLANTING REQUIREMENTS:

O. Reforestation for clearing above conservation threshold	0.00
P. Reforestation for clearing below conservation threshold	0.00
Q. Credit for retention above conservation threshold	0.00
R. Total reforestation required	0.00
S. Total afforestation required	0.39
T. Credit for landscaping (may not exceed 20% of "R")	0.00
U. Total reforestation and afforestation required	0.39

PROPOSED AFFORESTATION MITIGATION TO BE MET BY:

0.39 AC. OF REQUIREMENT TO BE MITIGATED BY PURCHASE OF OFF-SITE BANKING CREDITS OR PAYMENT OF FEE-IN-LIEU

GEORGE R. WARHOLIC Landscape Design & Environmental Planning Services 5615 Rockledge Court, Frederick, MD 21703 P: 301-468-2285	QUALIFIED PROFESSIONAL FOREST STAND DELINEATION & FOREST CONSERVATION PLANNING C0048 ON 10.19.06.01	COMBINED PRELIMINARY / FINAL FOREST CONSERVATION PLAN for PARMJI & SAINI ESTATES		Project No.: 10-003 Scale: 1" = 30' Date: NOVEMBER 2011 Drawn By: GRW															
		6th ELECTION DISTRICT TAX MAP FR12 MONTGOMERY COUNTY, MARYLAND		Project Name and Address: PARCEL 397 & 398 13816 TRAVILAH ROAD ROCKVILLE, MARYLAND 20850 Owner / Architect: CHATTAR SINGH & PARAMIT SINGH, LLC 1040 CARPER STREET McLEAN, VIRGINIA 22101															
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No.	Revision	Date																	



POLYSONICS
Acoustics & Technology Consulting

TRAFFIC NOISE IMPACT ANALYSIS:
PARCEL 397

MONTGOMERY COUNTY, MD

REPORT #5431

PREPARED FOR: DESIGN ENGINEERING INC.

PREPARED BY: DANIEL OLDAKOWSKI

JUNE 7, 2011

the sound of experience

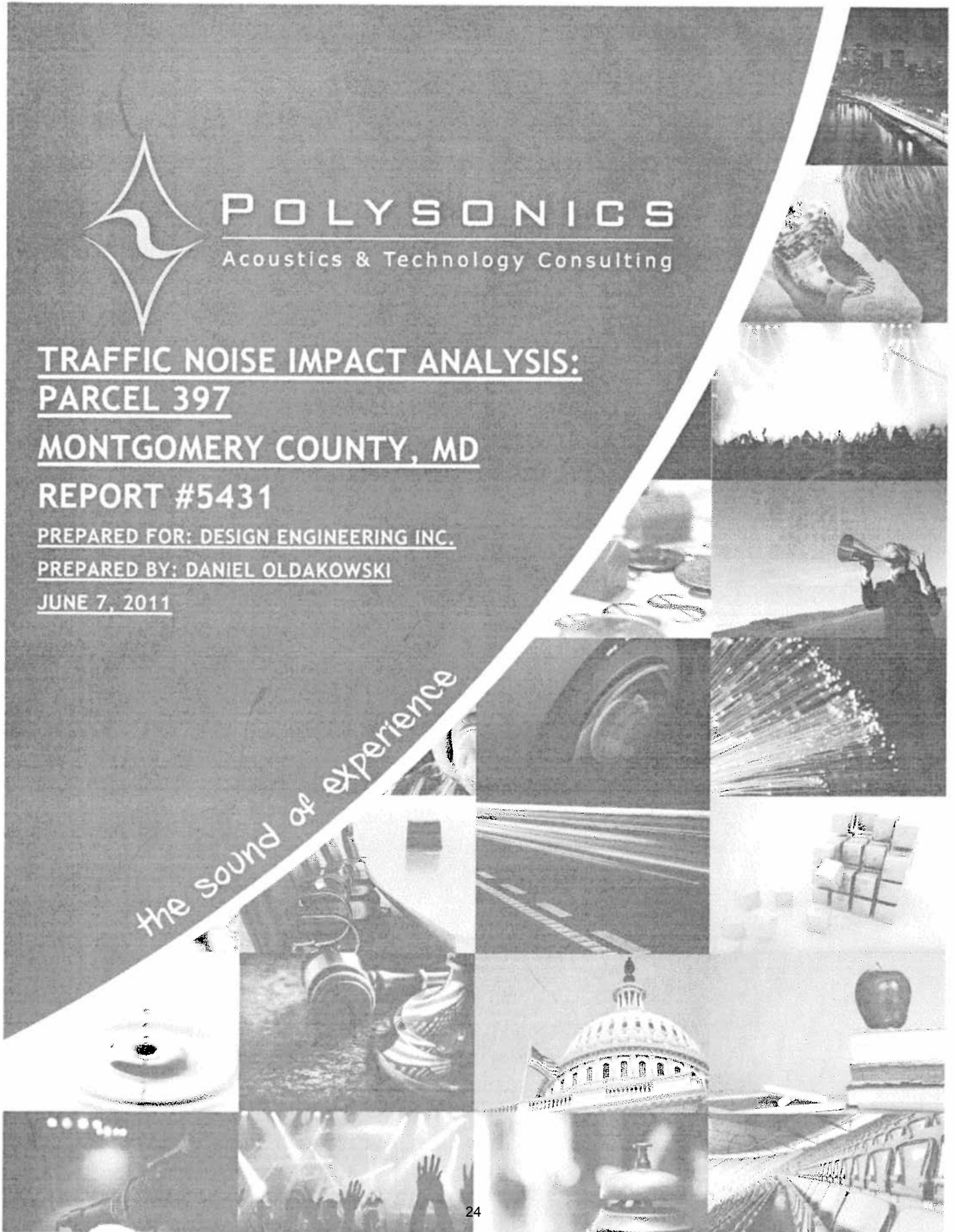


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EXECUTIVE SUMMARY

Polysonics has completed a Traffic Noise Impact Analysis for the Parcel 397 site in order to determine traffic noise impact from Travilah Road upon the property. Polysonics understands the Montgomery County noise code to be 60 dBA L_{dn} for outdoor recreational activity areas and 45 dBA L_{dn} inside residential living units.

The results of the analysis indicate that the proposed rear yards of Lots 1 and a portion of Lot 2 will be located within the future unmitigated 60 dBA L_{dn} ground level noise impact zone. The remainder of the property will be located outside of the future unmitigated 60-dBA L_{dn} ground level noise impact zone. Outdoor traffic noise levels may be mitigated by providing an appropriate barrier of the required height along the lot lines of Lots 1 and 2. The required height of the barrier will be determined during a noise barrier design.

From noise levels calculated at the upper floor facades of the residential buildings located nearest to the roadway, the proposed home on Lot 1 will be located inside of the future unmitigated 65 dBA L_{dn} upper floor noise impact zone. The highest levels, 66 dBA L_{dn} , will impact the façade of the home closest to Travilah Road. The home may require enhanced acoustical building materials, as necessary, to achieve interior noise level requirements (45 dBA L_{dn}). However, given the marginal impact, standard construction is expected to achieve indoor noise levels in compliance with Montgomery County Guidelines.

Details of this noise study are provided herein.

MONTGOMERY COUNTY TRAFFIC NOISE GUIDELINES

The Montgomery County “Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Planning and Development” regulate traffic noise impact on residential developments. The noise guidelines are shown in Table 1, taken from the Montgomery County “Staff Guidelines for the Consideration of Transportation Noise in Land Use Planning and Development.”

TABLE 1: MONTGOMERY COUNTY TRAFFIC NOISE GUIDELINES¹

Maximum Guideline Value	Area of Application
55 dBA L _{dn}	Permanent rural areas and where residential zoning is 5 or more acres.
60 dBA L _{dn}	Residential areas of the county where suburban densities predominate. Noise attenuation is recommended to allow attainment of this level.
65 dBA L _{dn}	This guideline is applied to the urban ring, freeway, and major highway corridors. Noise attenuation is strongly recommended to achieve this level.
45 dBA L _{dn}	Interior noise level guideline. Applicable if a waiver of exterior noise guidelines is granted. Exterior noise levels exceeding the applicable guideline are to be attenuated by the building shell.

The outdoor limits apply to outdoor activity areas such as rear and side yards, decks and patios, tot-lots, swimming pools, play courts, seating areas, and walking paths.

Polysonics has determined that the 60 dBA L_{dn} noise guideline is applicable to the Parcel 397 site based on the site location, based on a review of the Montgomery County Areas of Application for Exterior Noise Guidelines for Residential Areas and Other Noise Sensitive Land Uses (Figure 5).

¹ Based on Table 2-1, “Maximum Levels for Exterior Noise at the Building Line for Noise-Sensitive Land Uses.” From the Montgomery County Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Planning and Development.

A waiver of exterior noise levels can be granted when noise levels exceed 65 dBA L_{dn} and exterior attenuation cannot feasibly protect noise sensitive areas (such as bedrooms) of the upper floors of buildings².

EXISTING NOISE AND TRAFFIC CONDITIONS

On May 11-12, 2011, Polysonics conducted a 24-hour traffic noise measurement survey at the Parcel 397 site to determine current traffic noise impact from Travilah Road upon the property. Traffic noise measurements were made at two locations on the property, designated as M1 and M2 on the enclosed site plan (Figure 2). M1 and M2 were positioned approximately 350 feet and 145 feet from the edge of pavement of Travilah Road, respectively.

The instrumentation used for the survey included two Bruel & Kjaer Type 2236 Integrating Sound Level Meters. These instruments are capable of measuring noise levels and calculating statistical results over the time period measured. The units meet ANSI S1.4 standards for Type I Sound Level Meters. Each meter was calibrated prior to the measurement survey, traceable to National Institute of Standards and Technology (NIST). All measurements were made in the standard dBA metric, which best simulates human hearing and is in accordance with Montgomery County standards.

During the 24-hour survey, 1-minute L_{eq} 's were measured and logged into each instrument. The L_{eq} is the average noise level measured over some given time period; in

² Taken from Section 2.2.2&3 of the "Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Development."

this case, that time period was 1 minute. These numbers are useful in understanding the variations in noise level during the 24-hour period and used to determine the Day-Night average noise level, L_{dn} .

The L_{dn} is a 24-hour, time-averaged noise level with a 10-dBA "penalty" added during the nighttime hours of 10:00 p.m. to 7:00 a.m. to account for greater human sensitivity to noise at night. Montgomery County noise guidelines are written in terms of the L_{dn} values present at a site.

The measured values at the two measurement locations are shown in Table 2. Detailed noise survey results are shown in Figure 1

TABLE 2: 24-HOUR NOISE SURVEY MEASUREMENT LOCATIONS AND RESULTS

Measurement Location	L_{dn}
M1 (350 feet from edge of pavement of Travilah Road)	50 dBA
M2 (145 feet from edge of pavement of Travilah Road)	60 dBA

FUTURE NOISE LEVELS

Future noise levels, accounting for increased traffic volumes, were calculated using the Federal Highway Administration's Traffic Noise Prediction Model (TNM). This program is a three-dimensional computer model that determines noise levels from a roadway or combination of roadways and can be utilized to find traffic noise impact to surrounding areas of interest. The model considers topography, type of vehicle, vehicle speed, and horizontal spacing of the parameters. Given these input parameters, it calculates at selected points or "receiver locations", the average noise level. TNM is adopted by FHWA, MDOT, and Montgomery County.

An overview of the traffic information used to analyze future traffic noise levels is shown in Table 3.

TABLE 3: TNM INPUT PARAMETERS – TRAVILAH ROAD

Parameter	Travilah Road
Modeled Speed	35 MPH
Year 2011 ADT	14,281 vehicles/day
Year 2030 ADT	17,253 vehicles/day
Percent Autos	92.84%
Percent Medium Trucks	3.16%
Percent Heavy Trucks	2.87%
Percent Busses	1.13%
Percent Nighttime Traffic	15%

*ADT = Average Daily Traffic Volume

Traffic Volume Information for Travilah Road was provided by the Montgomery County Department of Transportation. Year 2011 and 2030 traffic volumes were extrapolated from year 2009 traffic volumes at a 1% annual increase. The nighttime traffic percentage is based on the industry standard. Vehicle composition percentages for Travilah Road were obtained from the MDSHA Percent of Vehicle Classifications by Functional Class for the Year 2009 (Revised May 2, 2010). Polysonics used roadway classification 19 – Urban Local as the basis of this analysis. Modeled speed limits were determined from on-site observations.

Data sheets containing specific modeling information for the models are enclosed in the appendix for reference. Plan views illustrating receiver locations are also provided. Please note that although TNM output results are labeled “LAeq1h”, all values should be taken as “L_{dn}”.

When the built-in L_{dn} algorithms for TNM are used, certain assumptions are

made. TNM assumes the traffic is distributed with 15/24ths (62.5%) during the day and 9/24ths (37.5%) during the night, with traffic distributed equally during each hour of the day. However, this is not the case for this site. The TNM Manual provides guidance on developing more accurate L_{dn} results when the above assumptions do not apply. The method recommended by the TNM manual is to calculate an equivalent hourly traffic volume and use TNM to calculate a 1-hour L_{eq} equivalent to the L_{dn} . This procedure has been used for this analysis.

This traffic noise study is based upon the latest proposed grading for the Parcel 397 site, drawings received from Design Engineering, Inc. on April 21, 2011. Information obtained from the model was used to determine future ground level and upper floor *unmitigated* 60, 65, and 70 dBA L_{dn} ground level noise contours (Figure 3) and *unmitigated* 65 and 70 dBA L_{dn} upper floor noise contours (Figure 4). Ground level noise contours were calculated at a standard height of 5 feet above grade. Upper level noise contours were calculated at 20 feet above grade.

Please note that *unmitigated* noise contours do not account for the mitigation effects of proposed buildings or other structures on the property. Therefore, the unmitigated noise contours for the purposes of this analysis reflect sound levels on the property before construction of buildings which may provide shielding to impacted sections of the site.

Also note that noise levels at ground level can fluctuate significantly throughout the site due to variations in shielding offered by localized topography and berming.

making contour delineation challenging. Acoustical phenomena associated with shielding effects also may affect the accuracy of the noise contours. The noise levels at the selected receiver points shown on the enclosed TNM plans should be taken as the actual value in all circumstances. Given this condition, the delineated noise contours should be utilized for reference purposes only.

OUTDOOR NOISE IMPACT

According to Montgomery County Noise Guidelines the proposed residential units at the Parcel 397 site must achieve 60 dBA L_{dn} in outdoor recreation areas. The results of this analysis indicate that the rear yards of the proposed homes on Lots 1 and a portion of Lot 2 will be located inside the future unmitigated 60-dBA L_{dn} traffic noise impact zone. Approximately 300 ft², of approximately 20,000 ft² of Lot 2 is inside the 60 dBA noise impact zone.

Noise mitigation measures, such as barriers, berms, or some combination of barriers and berms may be required to reduce noise levels in the impacted rear yards to at or below the Montgomery County Noise Guidelines. All other proposed rear yards will be located outside of the future unmitigated 60-dBA L_{dn} impact zone and will readily meet Montgomery County Noise Guidelines.

INDOOR NOISE IMPACT

Montgomery County "Staff Guidelines for the Consideration of Transportation Noise in Land Use Planning and Development" recommends residential interior noise

levels meet 45 dBA L_{dn} levels. A residential unit of standard construction in today's market is expected to reduce noise levels as high as 65 dBA to a level of 45 dBA without modification.

Noise levels at upper floor elevations, calculated approximately 20 feet above grade, are reflective of sound levels present at the second floor of homes. Upper floor noise levels are typically higher than those at ground level since the shielding effects of localized topography and the absorption offered by grass and vegetation are diminished with height above the ground. In general, ground attenuation effects are diminished at heights greater than 10 feet above grade.

From mitigated noise levels calculated at upper floor receiver locations, the proposed home located on Lot 1 will be impacted by future unmitigated upper floor noise levels exceeding 65 dBA L_{dn} , with the highest noise levels being 66 dBA L_{dn} . The remainder of the proposed homes are expected to be outside the 65 dBA L_{dn} noise impact zone.

When levels rise above 65 dBA, concern arises over maintaining the required interior noise level. However, given the marginal impact of 1 dBA, standard construction materials are expected to achieve indoor noise levels in compliance with Montgomery County Guidelines.

Sound Transmission Class or STC ratings are used to classify the noise reduction provided by individual building elements. A higher STC rating yields greater noise reduction. For living units impacted by noise levels between 65-70 dBA, building

elements exhibiting the acoustical ratings shown in Table 4 may be necessary.

TABLE 4: ESTIMATED STC RATINGS FOR SINGLE FAMILY HOMES INSIDE THE 65-70 dBA L_{dn} NOISE IMPACT ZONE

Building Element	Estimated* STC Rating for 65-70 dBA Impact
Walls	39-45 STC
Windows	28-32 STC
Doors	28-32 STC

*Estimates based on 20% window area of a single room exterior wall.

While the STC ratings in Table 4 are provided to allow knowledge of the types of building materials that may be generally necessary for this application, it is recommended that a Building Shell Analysis and review of architectural floor plans for proposed residential buildings be performed at time of approval of building permits to determine exactly what STC rated materials are necessary to ensure recommended interior noise levels.

RESULTS AND CONCLUSIONS

In conclusion, the following items address the major acoustical points of this project:

General Acoustical Points

- According to the Montgomery County “Staff Guidelines for the Consideration of Transportation Noise In Land Use Planning and Development”, the Parcel 397 site must achieve 60 dBA L_{dn} noise levels for outdoor activity areas.
- According to the Montgomery County “Staff Guidelines for the Consideration of Transportation Noise In Land Use Planning and Development”, the Parcel 397 site must achieve 45 dBA L_{dn} noise levels due to traffic for interior areas.
- The noise source of concern is Travilah Road.

Outdoor Noise Summary

- Traffic noise levels above 60 dBA L_{dn} will impact the proposed rear yards of Lots 1 and 2.
- Approximately 300 ft² of 20,000 ft² of Lot 2 will be inside the 60 dBA noise impact zone.
- Noise mitigation measures, such as barriers, berms or a combination thereof may be necessary to reduce noise levels to within Montgomery County guidelines.
- The remaining areas of the site will be located outside the 60 dBA L_{dn} noise impact zone.

Indoor Noise Summary

- Noise levels calculated at upper floor receiver locations indicate the proposed home on Lot 1 will be impacted by upper floor noise levels exceeding 65 dBA L_{dn} , with the highest noise levels reaching 66 dBA L_{dn} .
- A reduction in noise levels to meet the indoor noise level guideline (45 dBA L_{dn}) can be achieved with upgraded windows, doors, and exterior wall constructions as necessary.
- Given the marginal noise impact (1 dBA) standard construction is expected to achieve indoor noise levels compliant with Montgomery County Guidelines.
- It is recommended that a Building Shell Analysis be performed at time of approval of building permits to determine exactly what modifications are necessary to insure interior noise level requirements.

REFERENCES

1. Environmental Planning Division, Montgomery County Planning Board, *Staff Guidelines for the Consideration of Transportation Noise In Land Use Planning and Development*, Montgomery County Planning Board, 8787 Georgia Avenue, Silver Spring, Maryland 20907, June 1983.

APPENDIX

DEFINITION OF ENVIRONMENTAL NOISE TERMS

- * Acoustics – The science of sound.
- * Ambient Noise — A composite of all background noises.
- * A-Weighted Sound Level (dBA) – The sound level in decibels using a frequency filter similar to human hearing.
- * Decibel (dB) – A logarithmic scale of sound level.
- * Diffraction – The change in direction of a sound wave around an object.
- * Direct Sound – Sound that is emitted from the noise source, not including any reflected sound.
- * Time Average Sound Level (L_{ea}) – The average of the sound pressure levels (dBA) measured during some specified time period. In this case, the standard is one hour.
- * L_{max} – The maximum sound pressure level measured during some given time period.
- * L_{min} – The minimum sound pressure level measured during some given time period.
- * L_{90} – The noise level exceeded 90% of the time period measured. Generally considered the ambient or background noise level of a location.
- * Mitigated Noise Contour – A line of equal sound level reflecting projected traffic volume changes³ and proposed changes to an existing site.
- * Noise – Unwanted sound.
- * Peak Hour Equivalent Noise Level ($L_{ea(h)}$) – The energy equivalent A-weighted continuous sound level compared to a one-hour varying noise level.
- * Reflected Sound – Sound that has been bounced off of sound-reflecting surfaces.
- * Sound Pressure Level (SPL) or (L_p) – Ten times the common logarithm of the ration of the square of the sound pressure under consideration to the square of the standard reference pressure of 20 μ Pa. The quantity so obtained is expressed in decibels.

$$SPL = 10 \log_{10} \left(\frac{p^2}{p_{ref}^2} \right)$$
- * Sound Transmission Class (STC) – A rating system for noise reduction through partitions.
- * Unmitigated Noise Contour: – A line of equal sound level under existing site and traffic conditions.
- * Vibration – The oscillation of a medium or an object.

Where applicable the above definitions are based on the American Society for Testing and Materials standard ASTM C 634-08: *Standard Terminology Relating to Building and Environmental Acoustics*

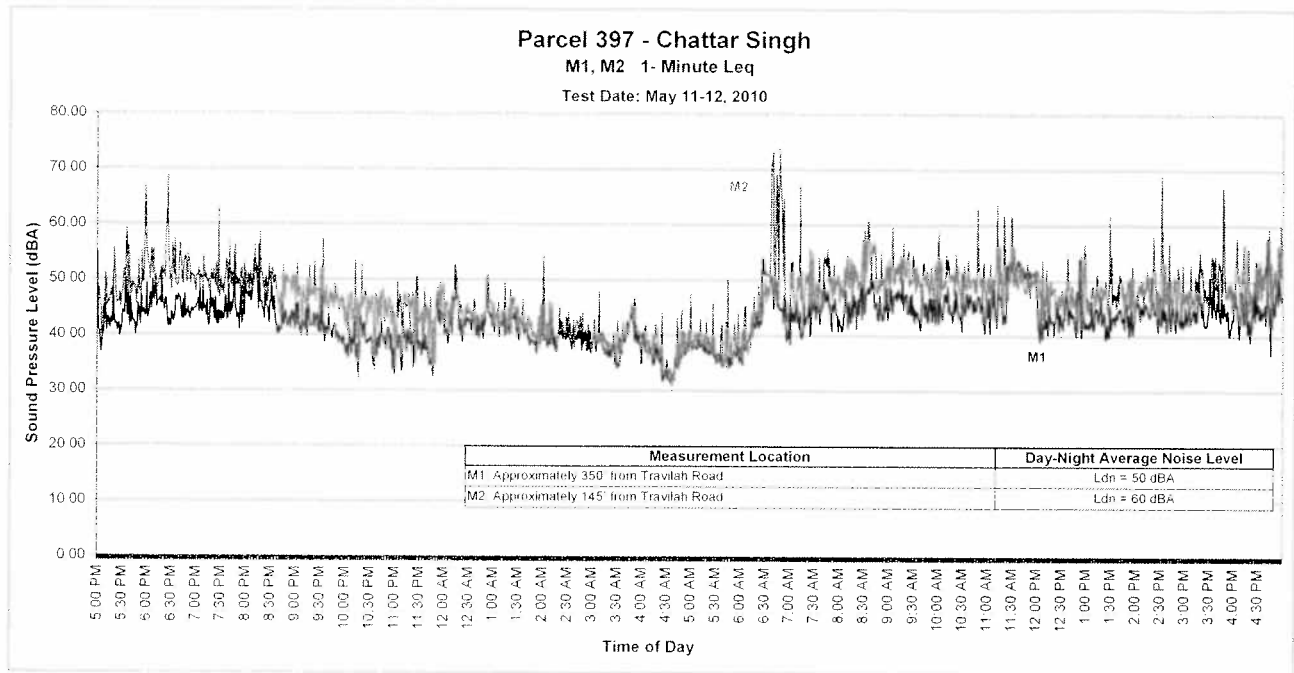


FIGURE 1: 24-HOUR NOISE SURVEY MEASUREMENT RESULTS

SITE DRAWINGS

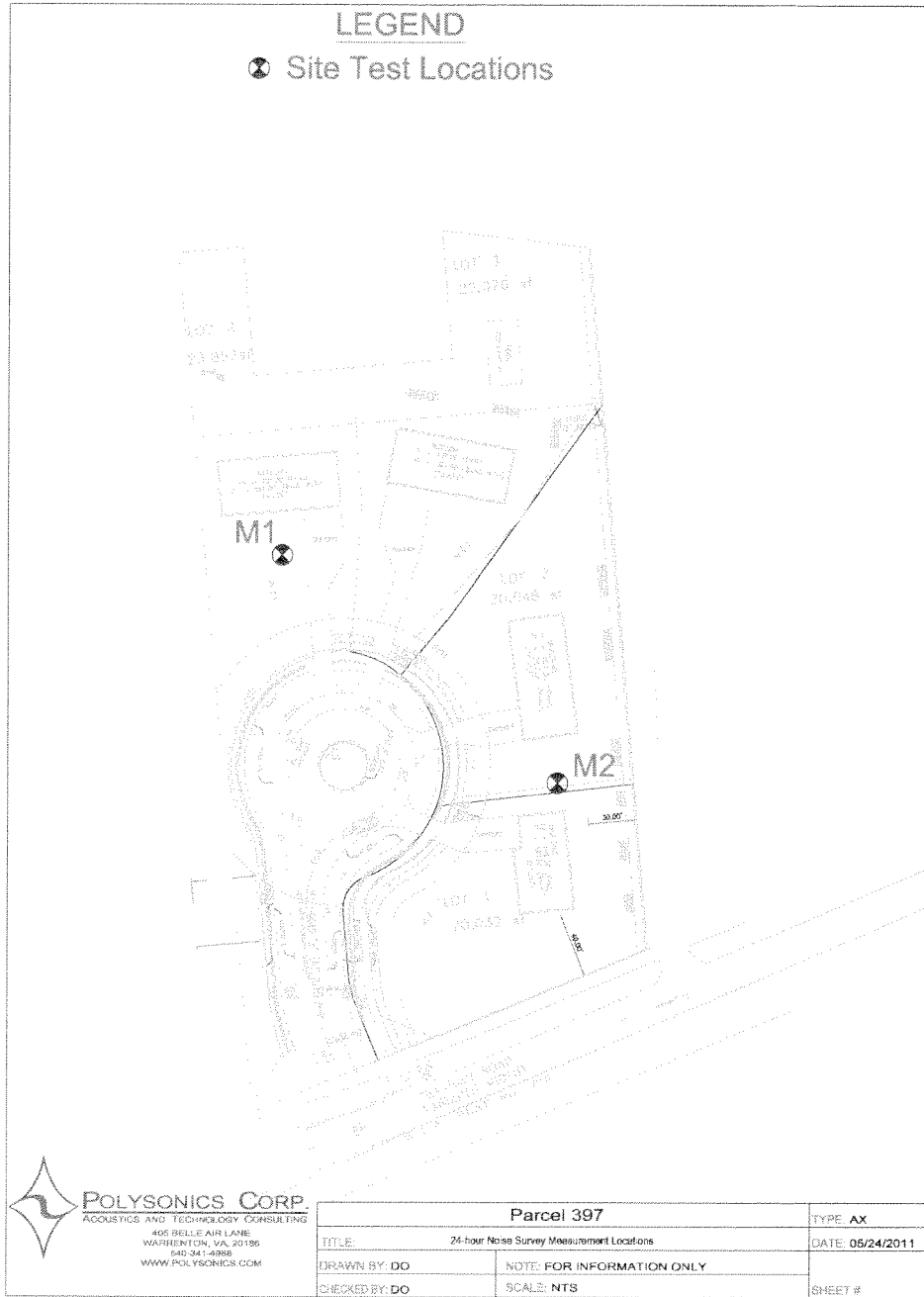


FIGURE 2: 24-HOUR NOISE SURVEY MEASUREMENT LOCATIONS

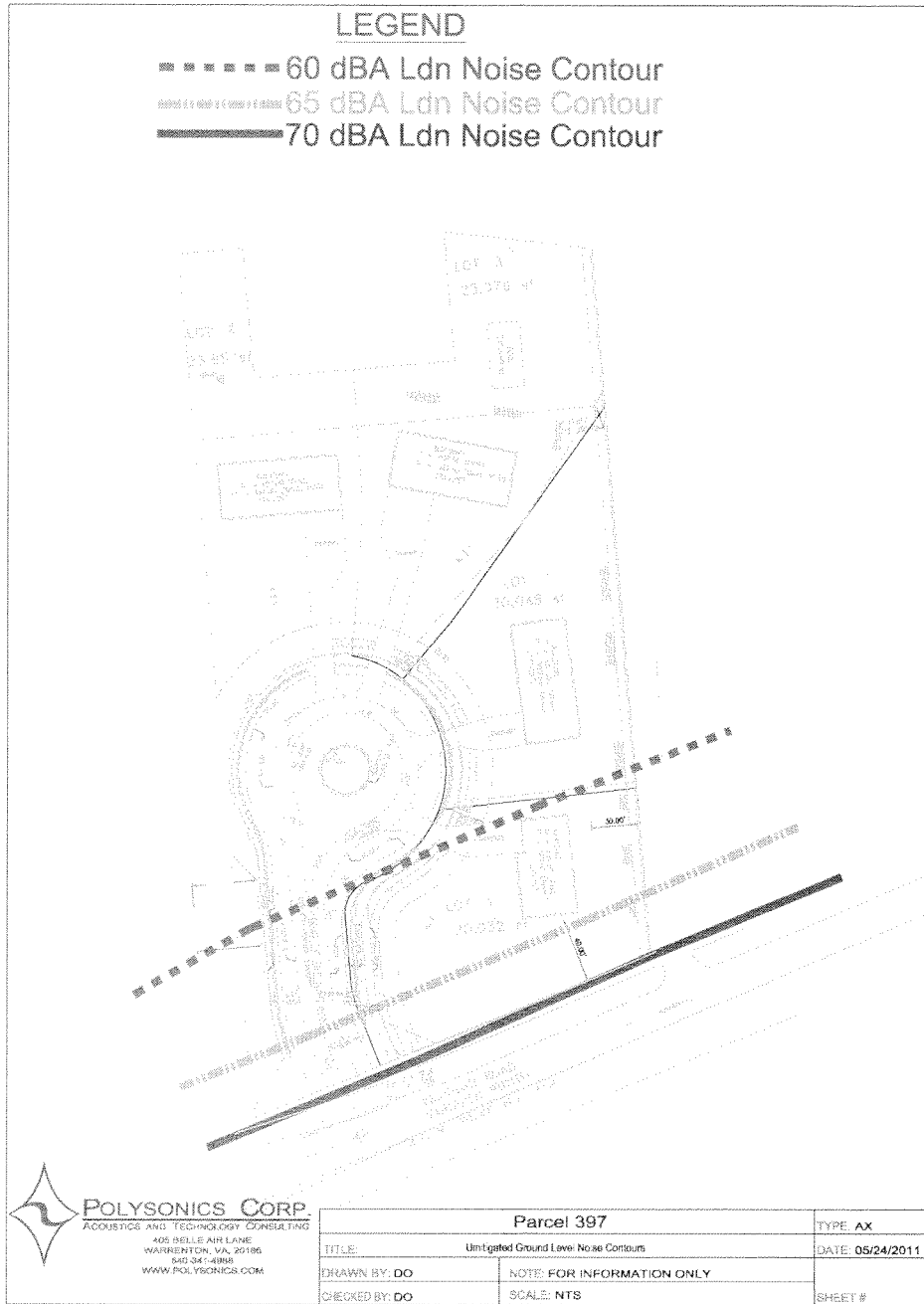


FIGURE 3: GROUND LEVEL UNMITIGATED NOISE CONTOURS

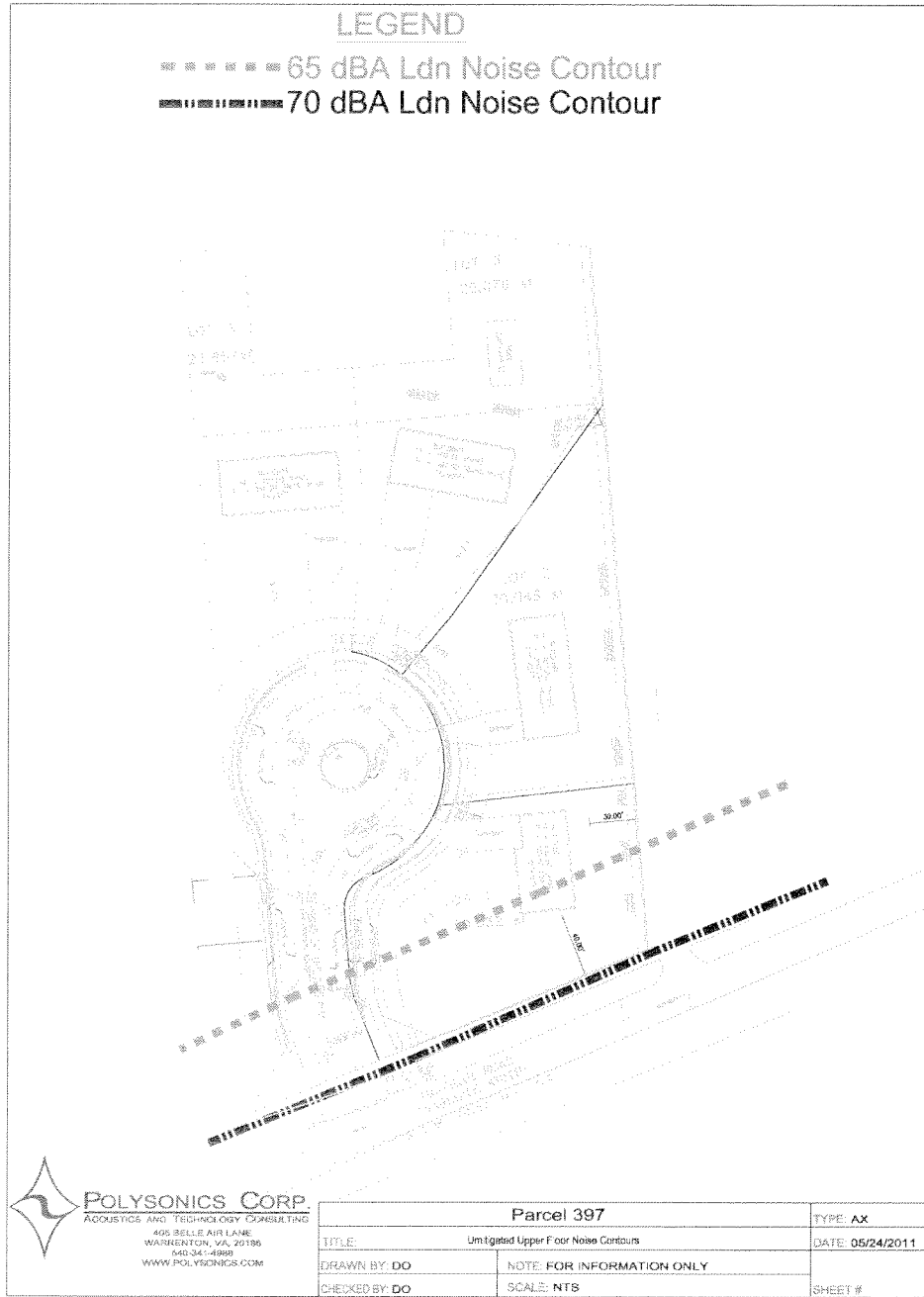


FIGURE 4: UPPER LEVEL UNMITIGATED NOISE CONTOURS

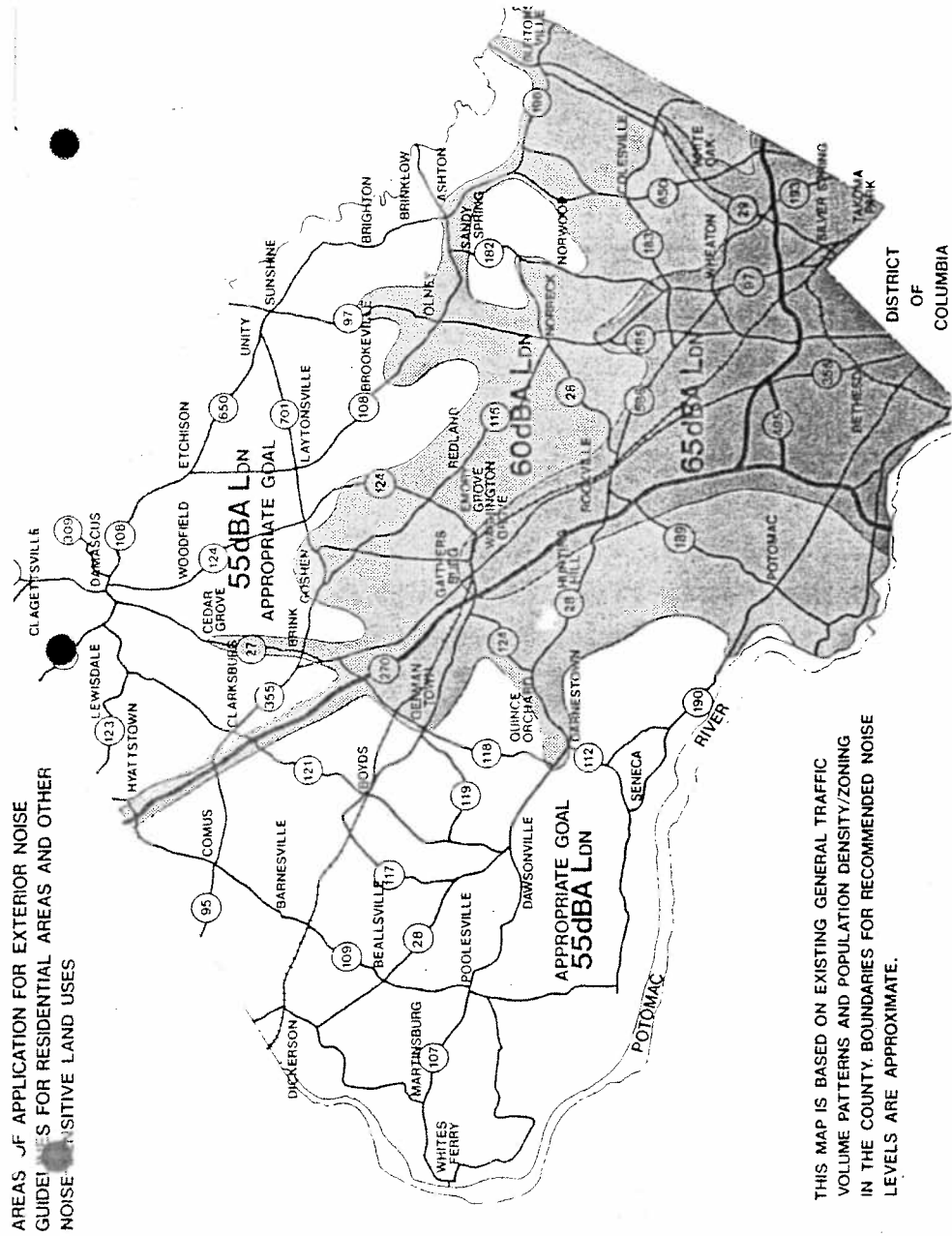


FIGURE 5: AREAS OF APPLICATION FOR EXTERIOR NOISE GUIDELINES FOR RESIDENTIAL AREAS AND OTHER NOISE SENSITIVE LAND USES

TRAFFIC NOISE PREDICTION MODEL (TNM) MODELS

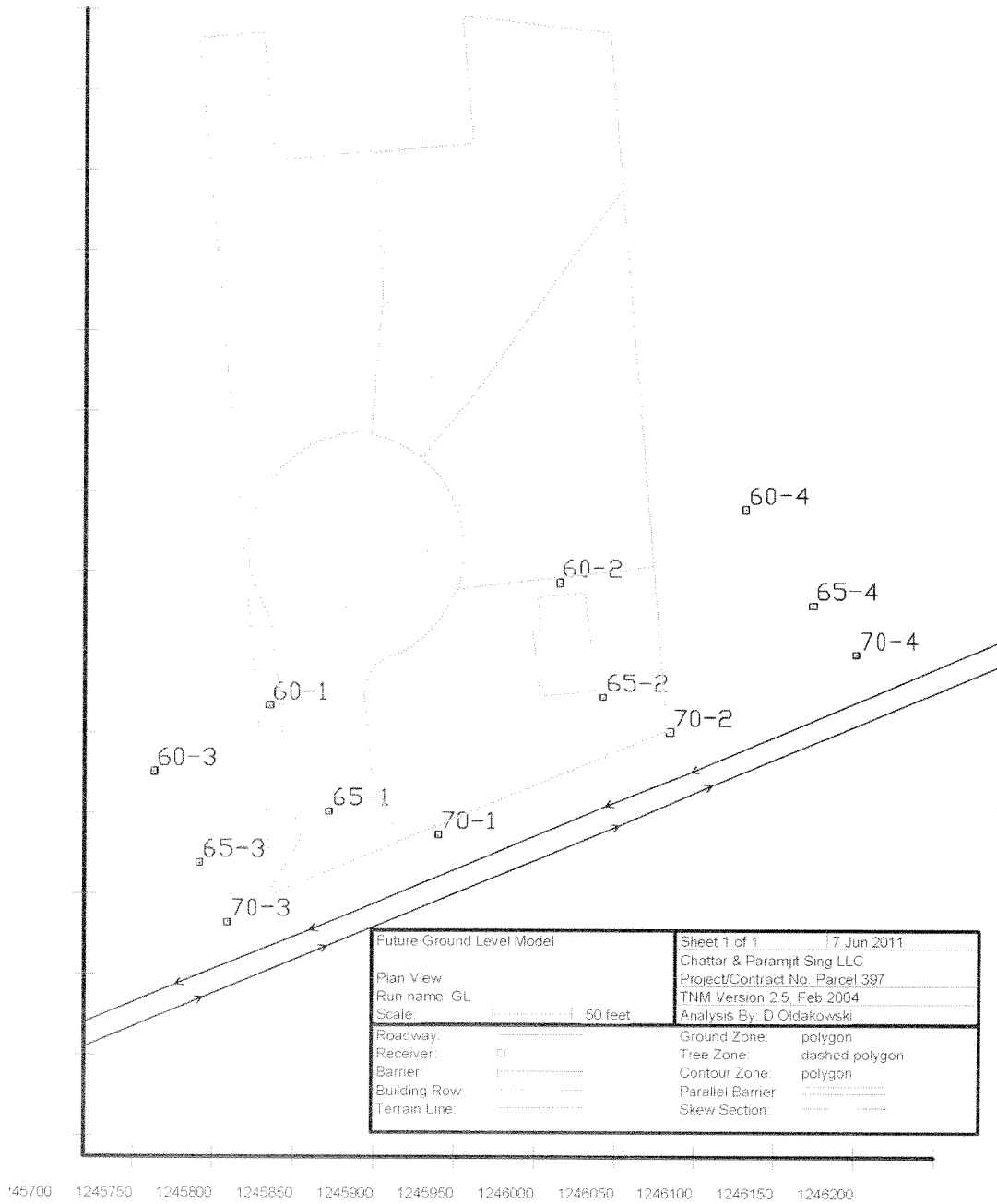


FIGURE 6: GROUND LEVEL NOISE MODEL PLAN VIEW SHOWING RECEIVER LOCATIONS

RESULTS: SOUND LEVELS													Parcel 397	
Chattar & Paramjit Sing LLC D Gidakowski										7 June 2011 TNM 2.5 Calculated with TNM 2.5				
RESULTS: SOUND LEVELS													Parcel 397	
PROJECT/CONTRACT:													Future Ground Level Model	
RUN:													INPUT HEIGHTS	
BARRIER DESIGN:													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
ATMOSPHERICS:													68 deg F, 50% RH	
Receiver														
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing	Type	With Barrier	Calculated	Noise Reduction	Goal	Calculated	minus Goal	
			dBA	dBA	dBA	dB		LAeq1h	dB	dB	dB	dB	dB	
65-1	4	1	0.0	65.1	50	65.1	10	Snd Lvl	65.1	0.0	8	65.1	-8.0	
65-2	5	1	0.0	65.3	60	65.3	10	Snd Lvl	65.3	0.0	8	65.3	-8.0	
70-1	7	1	0.0	70.3	66	70.3	10	Snd Lvl	70.3	0.0	8	70.3	-8.0	
70-2	8	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	70.1	-8.0	
60-1	10	1	0.0	60.2	66	60.2	10	---	60.2	0.0	8	60.2	-8.0	
60-2	11	1	0.0	60.1	66	60.1	10	---	60.1	0.0	8	60.1	-8.0	
70-3	13	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	70.4	-8.0	
65-3	15	1	0.0	65.0	66	65.0	10	---	65.0	0.0	8	65.0	-8.0	
60-3	16	1	0.0	60.6	66	60.6	10	---	60.6	0.0	8	60.6	-8.0	
70-4	17	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	70.1	-8.0	
65-4	18	1	0.0	65.0	66	65.0	10	---	65.0	0.0	8	65.0	-8.0	
60-4	19	1	0.0	60.1	66	60.1	10	---	60.1	0.0	8	60.1	-8.0	
Dwelling Units		# DUs	Noise Reduction											
			Min	Avg	Max									
			dB	dB	dB									
All Selected		12	0.0	0.0	0.0									
All Impacted		6	0.0	0.0	0.0									
All that meet NR Goal		0	0.0	0.0	0.0									

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7 June 2011

FIGURE 7: GROUND LEVEL NOISE MODEL RECEIVER RESULTS

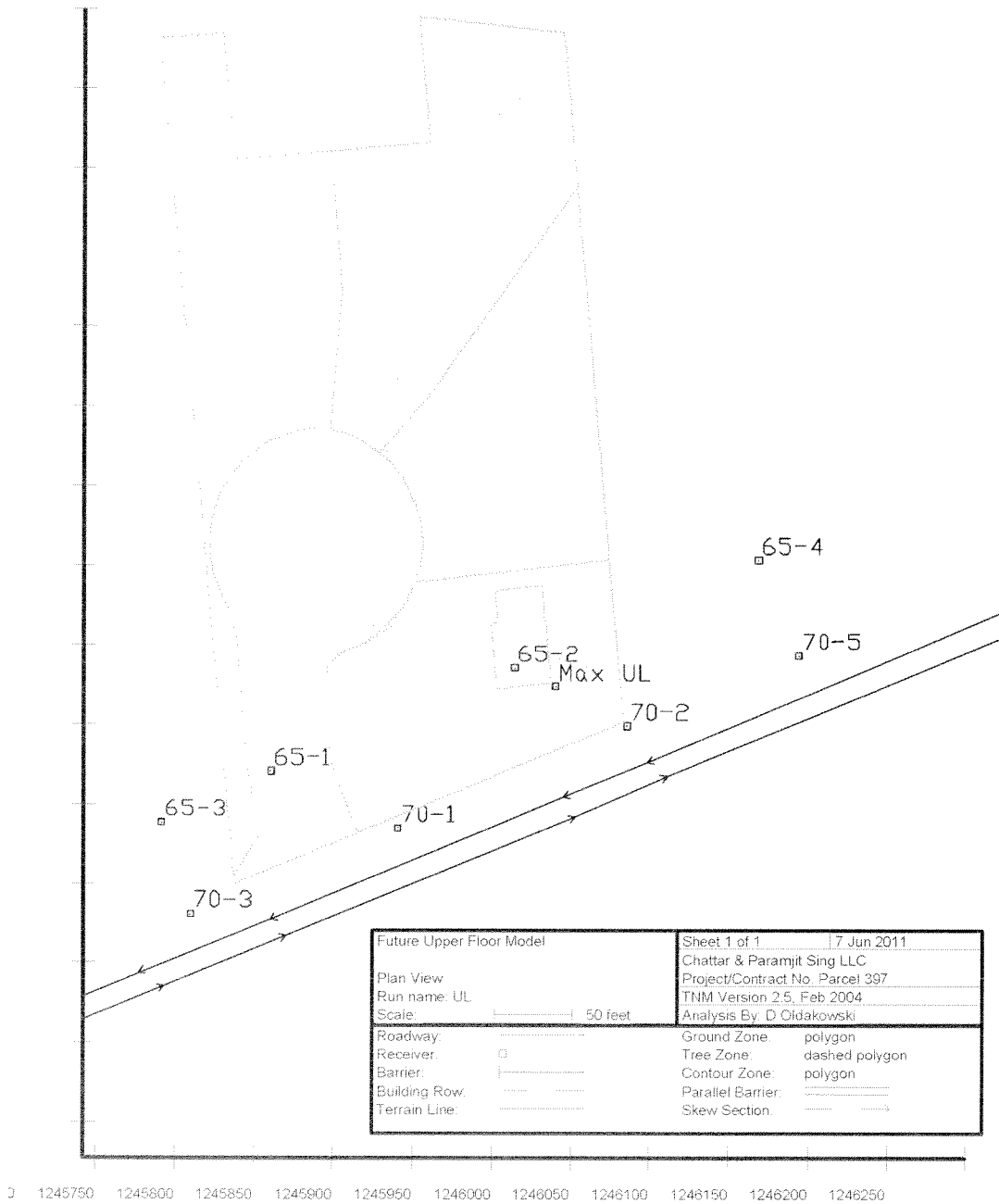


FIGURE 8: UPPER FLOOR NOISE MODEL PLAN VIEW SHOWING RECEIVER LOCATIONS

POLYSONICS CORP

RESULTS: SOUND LEVELS Parcel 397

Chattar & Paramjit Sing LLC Parcel 397
D Oidakowski 7 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Parcel 397
RUN: Future Upper Floor Model
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver													
Name	No.	#DUs	Existing LAeq1h			No Barrier LAeq1h		Increase over existing		Type	With Barrier		
			Calculated	Crit'n	dB	Calculated	Crit'n	Sub'l Inc	Calculated		Noise Reduction	Goal	Calculated minus Goal
			dB(A)	dB(A)	dB(A)	dB	dB			dB(A)	dB	dB	dB
65-1	4	1	0.0	64.8	60	64.8	10	Snd Lvl	64.8	0.0	8	-8.0	
65-2	5	1	0.0	64.9	60	64.9	10	Snd Lvl	64.9	0.0	8	-8.0	
70-1	7	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0	
70-2	8	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0	
70-3	13	1	0.0	65.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0	
65-3	15	1	0.0	64.9	66	64.9	10	Snd Lvl	64.9	0.0	8	-8.0	
70-5	17	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0	
65-4	18	1	0.0	64.8	66	64.8	10	Snd Lvl	64.8	0.0	8	-8.0	
Max UL	21	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
			dB	dB	dB								
All Selected		9	0.0	0.0	0.0								
All Impacted		7	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

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7 June 2011

FIGURE 9: UPPER FLOOR NOISE MODEL RECEIVER RESULTS