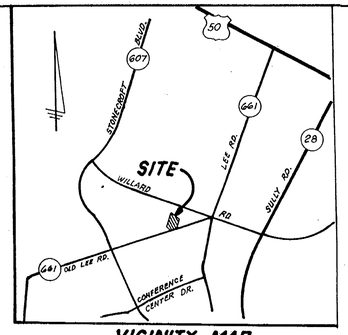
| LEGEND | EXISTING | PROPOSED |
|---|---|---|
| TOPOGRAPHY | 226 | 226 |
| SPOT ELEVATION | +73.1 | +73.1 |
| PROPERTY LINE | | |
| DEPARTING PROPERTY LINE | | |
| CENTERLINE | ℄ | ℄ |
| EDGE OF PAVEMENT | EX. EP | EP |
| CONCRETE WALK | | |
| CURB & GUTTER (C&G) | | |
| FENCE LINE | x | x |
| WATER LINE | W | W |
| GAS LINE | G | G |
| STORM SEWER & MANHOLE | | |
| SANITARY SEWER & MANHOLE | | |
| CURB INLET | | |
| OVERHEAD WIRES | | |
| GUY WIRES TO POWER POLE | | |
| TREE LINE / LIMITS OF CLEARING & GRADING / LIMITS OF CONSTRUCTION | | LC |

F.H. = FIRE HYDRANT
P.P. = POWER POLE
P.P. W/ L.T. & G.W. = POWER WITH LIGHT AND GUY WIRE
S.L. = SANITARY LATERAL
W.M. = WATER METER
W.S. = WATER SERVICE
HANDICAP PARKING SPACE
NUMBER OF PARKING SPACE
PAINTED ISLAND
ENTRANCE / EXIT
LOADING DOCK




VICINITY MAP
SCALE: 1" = 2000'

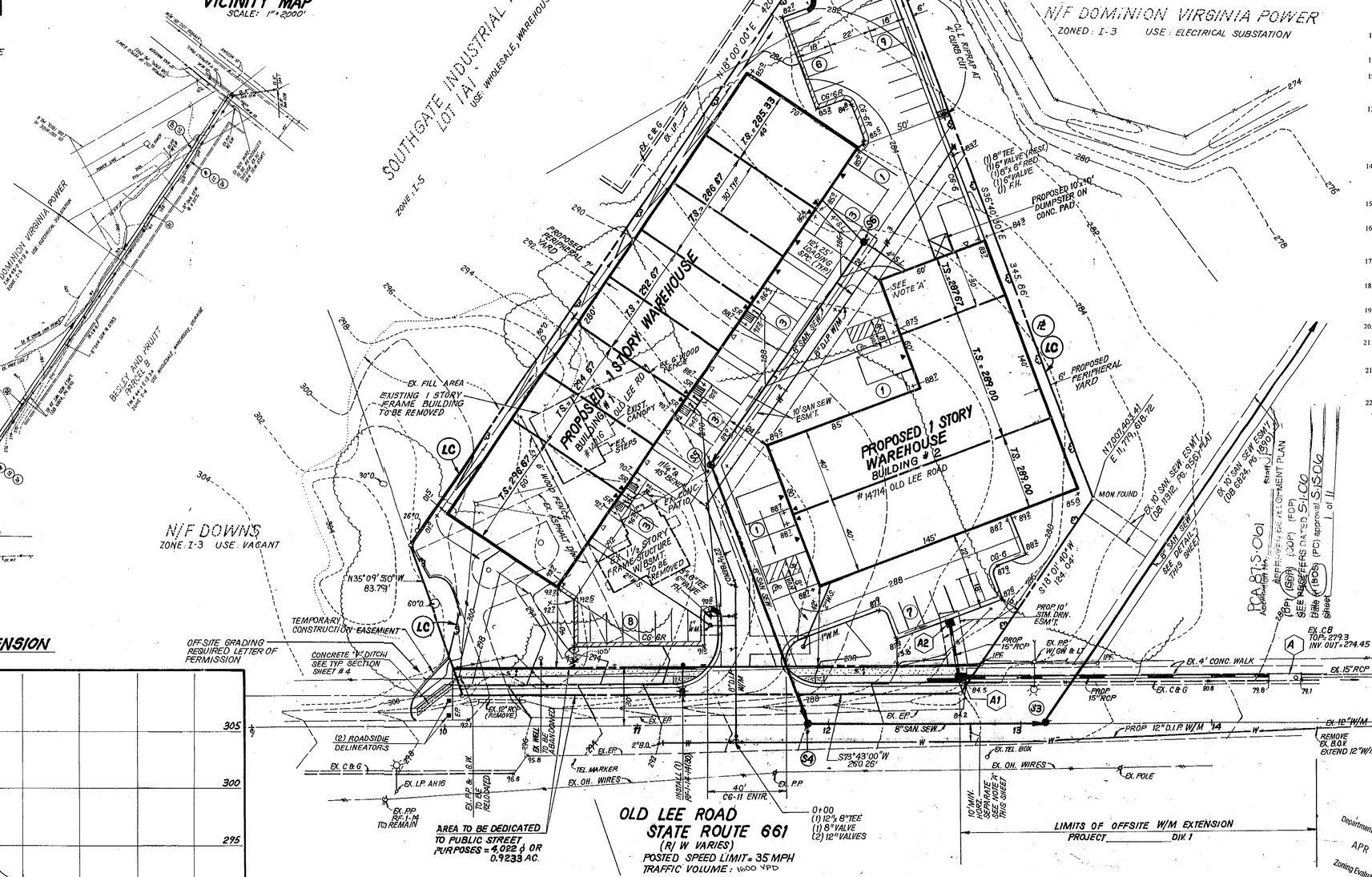
VIRGINIA STATE GRID NORTH

## ZONING REQUIREMENTS

1) ZONING I-5 (INDUSTRIAL GENERAL)
2) AVERAGE LOT AREA _____ (sq.ft. or sq.m)
3) MIN. LOT AREA 20,000 S.F. _____ (sq.ft. ~~or sq.m~~)
4) MIN. LOT WIDTH 100' _____ (ft. ~~or m~~)
5) MAX. BUILDING HEIGHT 75' _____ (ft. ~~or m~~)
6) NUMBER OF FLOORS 1 _____ (Commercial/Industrial ONLY)
7) MIN. YARD REQUIREMENTS:
FRONT 40' (ft. ~~or m~~) SIDE 0 (ft. ~~or m~~) REAR 0 (ft. ~~or m~~)
8) MAXIMUM FAR 0.50 = 43,560 ϕ _____
9) MAXIMUM DENSITY N/A _____ (D.U./Ac. ~~or D.U./ha~~)
10) OPEN SPACE REQUIRED 15 % 13,068 _____ (sq.ft. ~~or sq.m~~)
11) ANGLE OF BULK PLANE: FRONT 45° SIDE N/A REAR N/A
(DETAIL(S) ON SHEET 2 )
12) OVERLAY DISTRICT(S) N/A

## NOTES

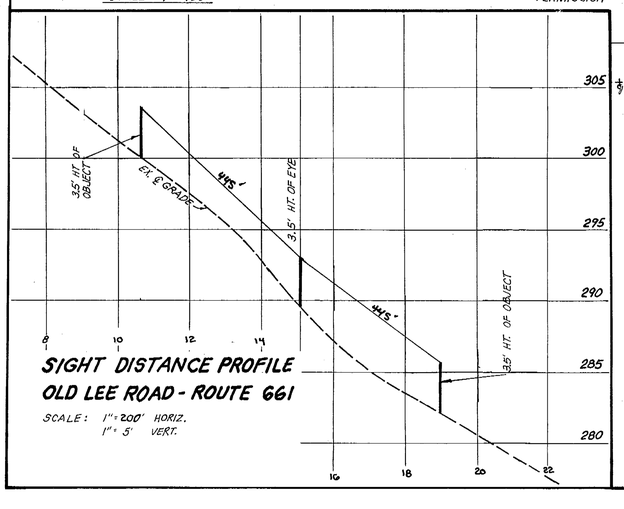
1. THIS GENERALIZED DEVELOPMENT PLAN (GDP) ACCOMPANIES A PROFFER CONDITION AMENDMENT APPLICATION TO AMEND THE PROFFERED CONDITIONS FOR THE SUBJECT PROP :RTY WHICH IS ZONED I-5
2. THE PROPERTY SHOWN HEREON IS IDENTIFIED ON THE FAIRFAX COUNTY ZONING MAP AS 43-2 ((1)) 5.
3. NO TITLE REPORT FURNISHED.
4. THE TOPOGRAPHY SHOWN HEREON IS FIELD RUN TOPO BY HAROLD A. LOGAN ASSOCIATES, P.C. AT A CONTOUR INTERVAL OF TWO (2) FEET.
5. THE BOUNDARY INFORMATION SHOWN HEREON IS FROM A SURVEY BY HAROLD A. LOGAN ASSOCIATES, P.C. WHO ASSUMES NO RESPONSIBILITY FOR DESIGN OR CONSTRUCTION CHANGES CAUSED BY INACCURACIES IN THE BOUNDARY INFORMATION.
6. ACCESS TO THE SUBJECT PROPERTY WILL BE AS SHOWN ON PLAN.
7. AT THIS TIME, IT IS ANTICIPATED THAT DEVELOPMENT OF THE PROPERTY WILL COMMENCE AS SOON AS ALL NECESSARY APPROVALS AND PERMITS HAVE BEEN OBTAINED.
8. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES LOCATED ON THE SUBJECT PROPERTY.
9. TO THE BEST OF OUR KNOWLEDGE, THE PROPOSED USE WILL NOT GENERATE, UTILIZE, STORE, TREAT OR DISPOSE OF ANY HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4 AND 355; ANY HAZARDOUS WASTE AS SET FORTH IN COMMONWEALTH OF VIRGIGINA /DEPARTMENT OF WASTE MANAGEMENT VR 672-10-1-VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND/OR ANY PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 280.
10. THE LIMITS OF CLEARING AND GRADING SHOWN HEREON ARE APPROXIMATE AND MAY CHANGE WITH FINAL ENGINEERING AND DESIGN.
11. THE SITE WILL BE SERVED BY PUBLIC WATER AND SEWER.
12. STORM WATER DETENTION/BEST MANAGEMENT PRACTICES (SWM/BMPS) HAS BEEN PROVIDED DOWNSTREAM IN THE SOUTHGATE INDUSTRIAL PARK IN ACCORDANCE WITH FAIRFAX COUNTY ORDINANCES.
13. IT IS TO BE UNDERSTOOD THAT ADDITIONAL SITE FEATURES SUCH AS CANOPIES, TRELLISES, ENTRANCE SIGNS, PLANTERS, FENCES AND/OR WALLS NOT REPRESENTED ON THE GRAPHIC MAY BE PROVIDED.
IN ADDITON, FEATURES SUCH AS PATIOS, STAIRS AND STOOPS WILL BE SPECIFIED ON THE PLANS REQUIRED TO ACCOMPANY THE APPLICATIONS FOR BUILDING PERMITS IN ACCORDANCE WITH THE ZONING ORDINANCE.
14. THERE IS NO FLOODPLAIN DESIGNATED BY THE FEDERAL INSURANCE ADMINISTRATION, UNITED STATES GEOLOGICAL SURVEY C.: FAIRFAX COUNTY, OR ANY ENVIRONMENTAL QUALITY CORRIDOR (EQC) OR RESOURCE PROTECTION AREA (RPA) LOCATED ON THE SUBJECT PROPERTY.
15. GIVEN THE SITE AND NATURE OF THE DEVELOPMENT, THERE ARE NO COMMUNITY OR PUBLIC FACILITIES OR SPECIAL AMENITIES BEING PROPOSED.
16. A STATEMENT WHICH CONFIRMS THE OWNERSHIP OF THE PROPERTY AND THE NATURE OF THE APPLICANT'S INTEREST IN THE SAME IS PROVIDED IN A SEPARATE ASSOCIATED DOCUMENT.
17. ANY REQUIRED TRAIL WILL BE CONSTRUCTED IN THE LOCATION TO BE DETERMINED BY DEM AT SITE PLAN REVIEW.
18. THERE ARE NO AREAS THAT HAVE SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION OR PRESERVATION ON THE SITE.
19. NO ADVERSE EFFECTS ON ADJACENT AND NEIGHBORING PROPERTIES ARE ANTICIPATED.
20. THERE ARE NO KNOWN EASEMENTS OTHER THAN SHOWN.
21. ~~TO THE BEST OF OUR KNOWLEDGE, THE PROPOSED DEVELOPMENT OF THE SUBJECT PROPERTY CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT~~
21. TO THE BEST OF OUR KNOWLEDGE, THE PROPOSED DEVELOPMENT OF THE SUBJECT PROPERTY CONFORMS TO ALL CURRENT APPLICABLE LAND DEVELOPMENT ORDINANCES, REGULATIONS AND ADOPTED STANDARDS.
22. ALL EXISTING STRUCTURES TO BE REMOVED. CONSTRUCTION DATE IS NOT KNOWN.




## SITE PLAN (SP) TABULATIONS

1) SITE AREA 2.00008 (Ac. ~~or ha~~) 87,123 (sq.ft. ~~or sq.m~~)
2) AREA OF STREET DEDICATION 4,022 ϕ OR 0.09233 AC (sq.ft. ~~or sq.m~~)
3) USE WAREHOUSE
4) NUMBER OF LOTS 1
5) AREA OF LOTS 83,101 ϕ OR 1.90775 AC (sq.ft. ~~or sq.m~~)
6) DENSITY N/A (D.U./Ac. or D.U./ha)
7) EXISTING BUILDING GROSS FLOOR AREA 2,300 S.F. (sq.ft. ~~or sq.m~~)
8) PROPOSED BUILDING GROSS FLOOR AREA 34,800 S.F. (sq.ft. ~~or sq.m~~)
9) EXISTING BUILDING NET FLOOR AREA 1,725 S.F. (sq.ft. ~~or sq.m~~)
10) PROPOSED BUILDING NET FLOOR AREA 26,100 S.F. (sq.ft. ~~or sq.m~~)
11) TOTAL FLOOR AREA RATIO (FAR) FOR ENTIRE SITE 0.40
12) PROPOSED BUILDING HEIGHT 24' (ft. ~~or m~~)
13) PROPOSED NUMBER OF FLOORS 1 (Commercial/Industrial ONLY)
13) TOTAL HANDICAPPED PARKING REQUIRED 2
14) TOTAL HANDICAPPED PARKING PROVIDED 2
15) TOTAL HANDICAPPED VAN SPACES REQUIRED 1
16) TOTAL HANDICAPPED VAN SPACES PROVIDED 2
17) TOTAL PARKING SPACES REQUIRED 37
18) TOTAL PARKING SPACES PROVIDED 47
19) LOADING SPACES REQUIRED 2
20) LOADING SPACES PROVIDED 12 (15' x 25')
21) OPEN SPACE PROVIDED 15 % 13,068 S.F. (sq.ft. ~~or sq.m~~)

BOA 87-S-001
AMENDMENT
RETROFITTED SITE DEVELOPMENT PLAN
(SDP) (GDP) (FDP)
SEE REFERENCE DATED 5-1-06
Date of (BOS) (PC) approval
Sheet 1 of 11



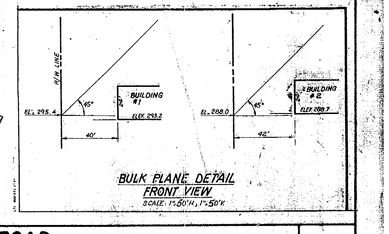

SIGHT DISTANCE PROFILE
OLD LEE ROAD - ROUTE 661
SCALE: 1" = 200' HORIZ.
1" = 5' VERT.

SANITARY SEWER EXTENSION
SCALE: 1" = 100'

NOTE "A"
The minimum horizontal separation between a water main and a sanitary sewer shall comply with the Virginia Department of Health Waterworks - Regulations, Section 12VAC 5-590-1150. Under normal conditions water mains shall be laid at least ten feet horizontally from sanitary s..wer manhole. The distance shall be measured edge to edge.

FIRE FLOW DATA
Q20 = GPM
etc.,
etc.

OWNER/DEVELOPER
ERIC T. SOHN & HAE-RI KIM
6510 RYANLYNN DRIVE
FAIRFAX STATION, VIRGINIA 22039
TEL.: 703-378-8544
FAX: 703-378-8546




BULK PLANE DETAIL
FRONT VIEW
SCALE: 1" = 20' H., 1" = 50' V.

RECEIVED
Department of Planning & Zoning
APR 12 2006
Zoning Evaluation Division

COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
LICENSED
LAND SURVEYOR

SCALE: 1" = 30'
DATE: 12-12-2005
DESIGNED: HAL
DRAFTED: MB
REVISIONS:

14714 OLD LEE ROAD
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
GENERALIZED DEVELOPMENT PLAN

HAROLD A. LOGAN ASSOCIATES P.C.
LAND SURVEYING - SITE PLANNING - SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1968 FAX 690-8132

SHEET 1 OF 11
P. 1942

| LEGEND | EXISTING | PROPOSED |
|---|---|---|
| TOPOGRAPHY | 226 | 226 |
| SPOT ELEVATION | +23.1 | +23.1 |
| PROPERTY LINE | | |
| DEPARTING PROPERTY LINE | | |
| CENTERLINE | ℄ | ℄ |
| EDGE OF PAVEMENT | EX. EP | EP |
| CONCRETE WALK | | |
| CURB & GUTTER (C&G) | | |
| FENCE LINE | x | x |
| WATER LINE | W | W |
| GAS LINE | G | G |
| STORM SEWER & MANHOLE | | |
| SANITARY SEWER & MANHOLE | | |
| CURB INLET | | |
| OVERHEAD WIRES | | |
| GUY WIRES TO POWER POLE | | |
| TREE LINE /LIMITS OF CLEARING & GRADING / LIMITS OF CONSTRUCTION | | LC |

F.H. = FIRE HYDRANT
P.P. = POWER POLE
P.P. W/ L.T. & G.W. = POWER WITH LIGHT AND GUY WIRE
S.L. = SANITARY LATERAL
W.M. = WATER METER
W.S. = WATER SERVICE
HANDICAP PARKING SPACE
(3) NUMBER OF PARKING SPACE
PAINTED ISLAND
ENTRANCE / EXIT
LOADING DOCK

## SITE PLAN (SP) TABULATIONS

1) SITE AREA 2.00008 (Ac. ~~or ha~~) 87,123 (sq.ft. ~~or sq.m~~)
2) AREA OF STREET DEDICATION 4.022 ± OR 0.09233 AC (sq.ft. ~~or sq.m~~)
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8) PROPOSED BUILDING GROSS FLOOR AREA 34,800 S.F. (sq.ft. ~~or sq.m~~)
9) EXISTING BUILDING NET FLOOR AREA 1,725 S.F. (sq.ft. ~~or sq.m~~)
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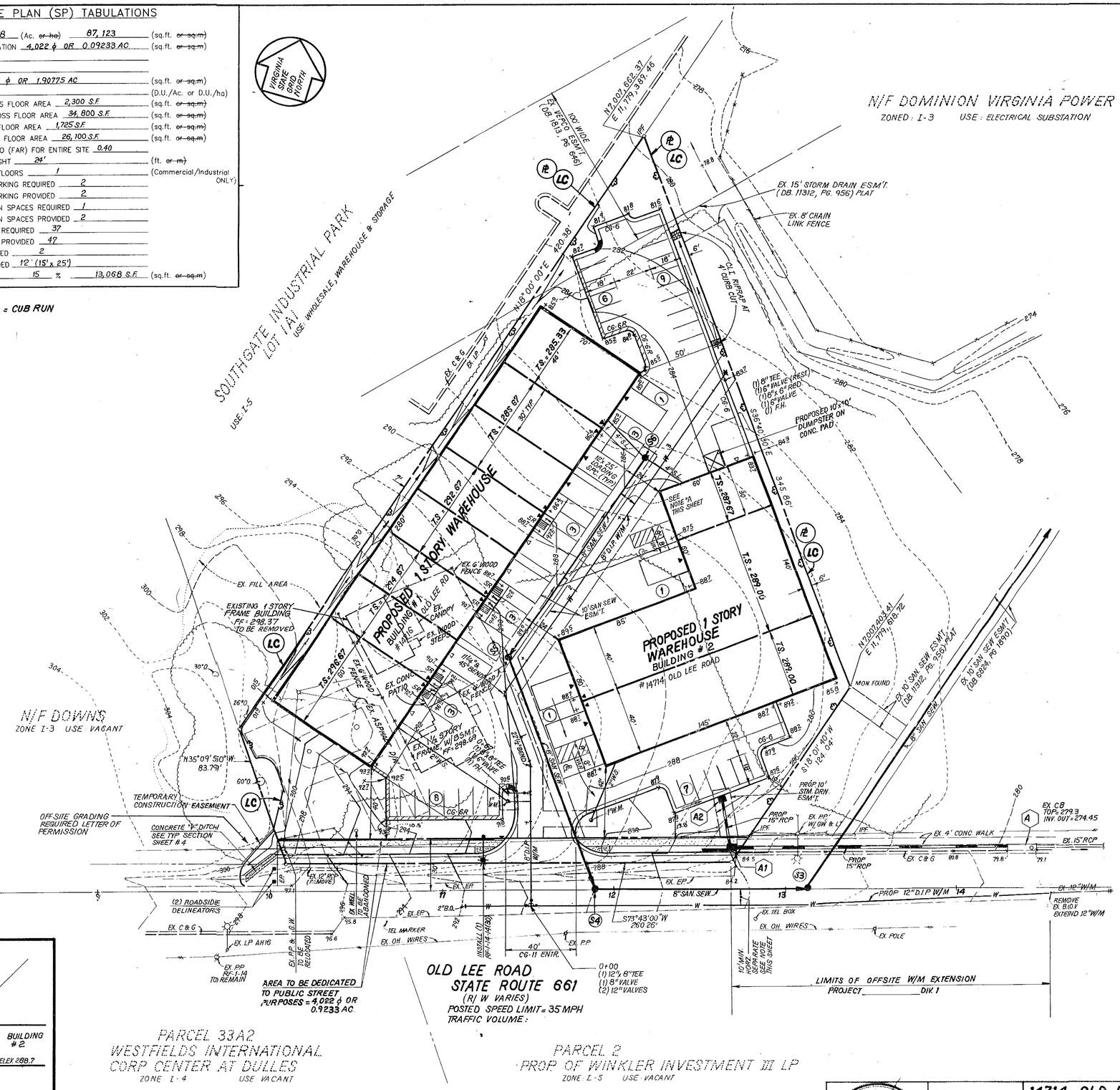
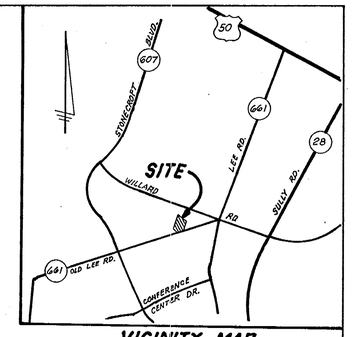
16) TOTAL HANDICAPPED VAN SPACES PROVIDED 2
17) TOTAL PARKING SPACES REQUIRED 37
18) TOTAL PARKING SPACES PROVIDED 47
19) LOADING SPACES REQUIRED 2
20) LOADING SPACES PROVIDED 12 (15' x 25')
21) OPEN SPACE PROVIDED 15 % 13,068 S.F. (sq.ft. ~~or sq.m~~)

WATERSHED = CUB RUN



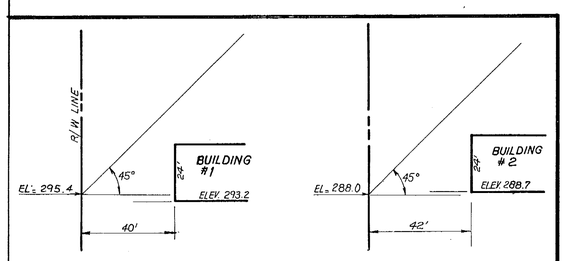

VICINITY MAP
SCALE: 1" = 2000'

## GENERAL NOTES

1. THE PROPERTY THAT IS THE SUBJECT OF THIS PROFFERED CONDITION AMENDMENT IS IDENTIFIED ON THE FAIRFAX COUNTY TAX MAP AS 43-2 ((1)) 5.ZONED I-5.
2. THE BOUNDARY INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY BY HAROLD A. LOGAN ASSOCIATES P.C.
3. THE TOPOGRAPHY SHOWN HEREON IS AT A 2 FOOT CONTOUR INTERVAL AS BASED ON A TOPOGRAPHY SURVEY PREPARED BY HAROLD A. LOGAN ASSOCIATES P.C.
4. NO TITLE REPORT FURNISHED.
5. THE DATE OF CONSTRUCTION OF THE BUILDINGS SHOWN HEREON IS NOT KNOWN.
6. TO THE BEST OF OUR KNOWLEDGE AND BELIEF THERE ARE NO GRAVES ON THE SUBJECT PROPERTY.
7. TO THE BEST OF OUR KNOWLEDGE AND BELIEF THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES ON THE SUBJECT PROPERTY, AND THE PROPOSED USE WILL NOT GENERATE, UTILIZE, STORE, TREAT OR DISPOSE OF HAZARDOUS OR TOXIC SUBSTANCES.
8. A STATEMENT CONFIRMING THE OWNERSHIP OF THE SUBJECT PROPERTY AND THE APPLICANT'S INTEREST IN SAME IS PROVIDED SEPARATELY.
10. IT IS ANTICIPATED THAT THE PROPOSED BUILDINGS WILL BE CONSTRUCTED IN A SINGLE PHASE WITH DEVELOPMENT COMMENCING UPON THE GRANTING OF ALL NECESSARY APPROVALS.
11. ALL YARD SETBACKS WILL COMPLY WITH THE I-5 ZONE.
12. PURSUANT TO PAR. 4 OF SEC. 16-403 OF THE ZONING ORDINANCE, MINOR DEVIATIONS FROM THE PLAN SHOWN HEREON MAY RESULT FROM FINAL ENGINEERING AND THE "AS-BUILT" LOCATION OF UTILITIES.
13. TREE COVER REQUIREMENTS WILL BE PROVIDED PER ARTICLE 13 OF THE ZONING ORDINANCE.
14. THIS SITE'S SWM AND BMP'S HAVE BEEN PROVIDED THROUGH WAIVER(S) 6178-WSWD-008-1 AND 6178-WBMP-002-1.
15. PUBLIC IMPROVEMENTS ARE PROPOSED.
16. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, EXCEPT AS MAY BE QUALIFIED HEREON, THE PROPOSED DEVELOPMENT CONFORMS TO ALL CURRENT AND APPLICABLE LAND DEVELOPMENT STANDARDS, REGULATIONS AND ORDINANCES.
17. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A FLOODPLAIN DESIGNATED BY FEMA, US GEOLOGICAL SURVEY, OR FAIRFAX COUNTY.
18. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A RESOURCE PROTECTION AREA AS SHOWN ON CURRENT FAIRFAX COUNTY CHESAPEAKE BAY PRESERVATION AREA MAPS.
19. THIS PROPERTY IS SERVED BY PUBLIC WATER AND SANITARY SEWER.
20. PARKING WILL BE PROVIDED IN ACCORDANCE WITH ARTICLE 11 AND APPENDIX 7 OF THE ZONING ORDINANCE. THE 47 PARKING SPACES SHOWN AS PROPOSED IS NOT A MINIMUM REQUIREMENT AND FEWER SPACES MAY BE PROVIDED SO LONG AS PARKING CONTINUES TO BE PROVIDED IN ACCORDANCE WITH THE ZONING ORDINANCE.

PCA 87-S-061
Application No. Staff JP
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 5-1-06
Date of (BOS) (PC) approval 5-15-06
Sheet 2 of 11

GRAPHIC SCALE
50 0 25 50 100 200
( IN FEET )
1 inch = 50 ft.




BULK PLANE DETAIL
FRONT VIEW
SCALE: 1" = 30' H., 1" = 30' V.

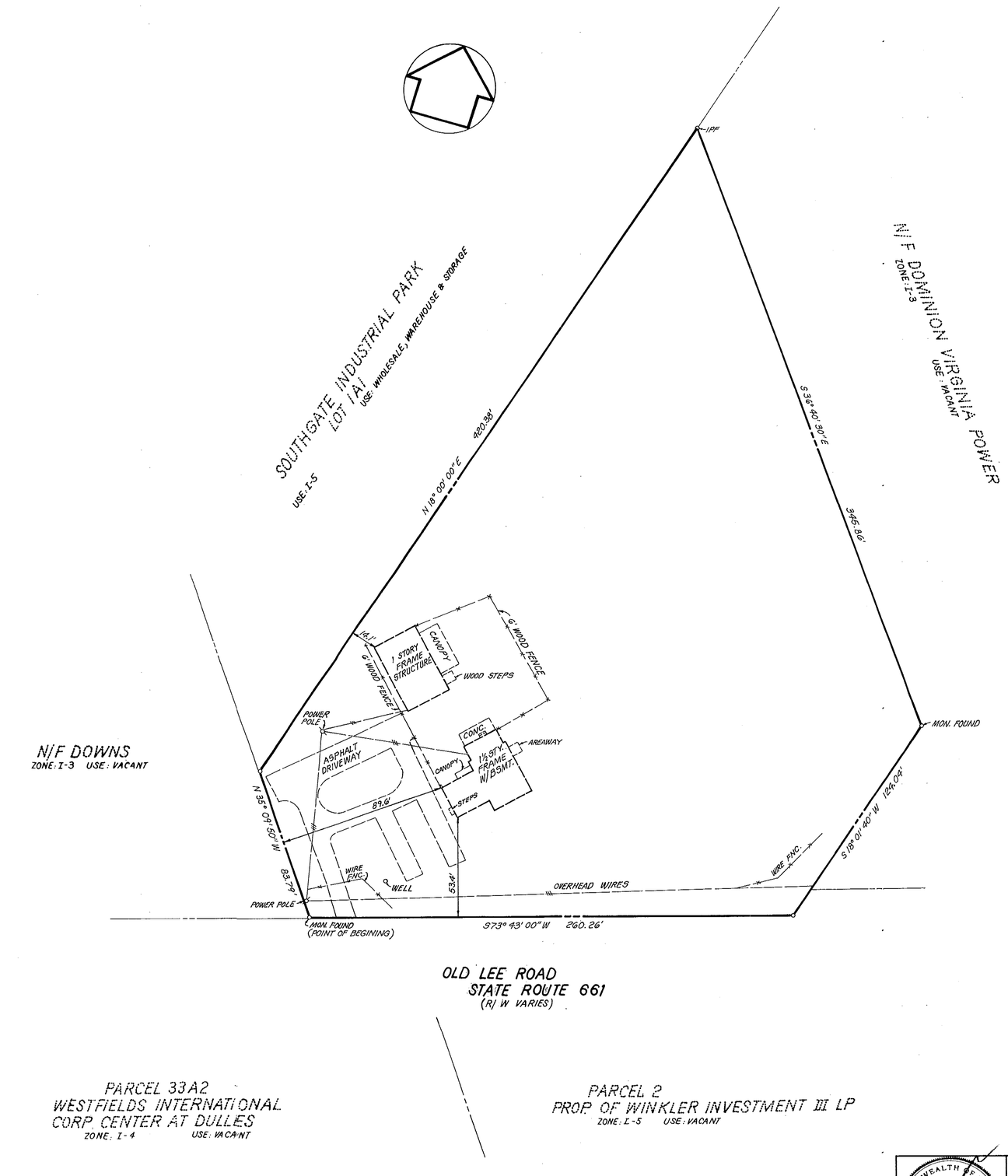
COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
CERTIFICATES No. 11 & 191
LICENSED LAND SURVEYOR

SCALE: 1" = 30'
DATE: 12-12-2005
DESIGNED: HAL
DRAFTED: MB
REVISIONS:

14714 OLD LEE ROAD
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
PROFFER CONDITION AMENDMENT PLAN

HAROLD A. LOGAN – ASSOCIATES P.C.
LAND SURVEYING - SITE PLANNING - SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132

SHEET 2 OF 11
P1942




**SITE TABULATIONS**
Site Area: 87,123 SF (2.00008 AC)
Existing Zoning: I-5 (87,123 SF)
Proposed Zoning: I-5 (87,123 SF)

THIS SITE FEATURES THE FOLLOWING ZONING OVERLAY DISTRICTS:

AIRPORT NOISE IMPACT OVERLAY DISTRICT (AN)
WATER SUPPLY PROTECTION OVERLAY DISTRICT (WS)

**LEGAL DESCRIPTION**

All that certain lot or parcel of land, with improvements thereon, lying situate and being in the County of Fairfax, Commonwealth of Virginia, more particularly described as follows:

BEGINNING at a point in the northerly right of way line of Lee Road, State Route No. 661, said point being the southeast corner of parcel 1 of the Downs, Morris & Lee Property as the same appears recorded in Deed Book 2752 at Page 192, among the land records of Fairfax County, Virginia; thence departing said point and running along a portion of the aforementioned parcel 1, N 35° 09' 50" W 83.79 feet to the southeast corner of the Howard Horton, Trustee Property; thence along a portion of said Horton property N 18° 00' E 420.38 feet to the southwest corner of parcel 2 of the Downs, Morris & Lee Property; thence along the southerly lines of Downs, Morris & Lee S 36° 04' 30" E 345.86 feet and S 18° 01' 40" W 124.04 feet to a point in the aforementioned northerly right of way line of Lee Road, State Road No. 661; thence along said northerly right of way S 73° 43' 00" W 260.26 feet to the point of beginning and containing 2.00 acres of land, more or less.

Street address: 14714 Old Lee Road
Chantilly, Virginia 22021

PCA 87-S-061
Application No. Staff JP
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 5-1-06
Date of (BOS) (PC) approval 5-15-06
Sheet 3 of 11

COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
CERTIFICATES
1911 & 191
CERTIFIED LAND SURVEYOR

SCALE: 1" = 30'
DATE: 12-28-2005
DESIGNED: HAL
DRAFTED: RES
REVISIONS:

14714 OLD LEE ROAD
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
BUILDING LOCATION SURVEY

HAROLD A. LOGAN — ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132

SHEET 3 OF 11
P1942

CTC 800-572-2137 CTC 519

## General Tree Preservation Specifications

A. All Trees to be preserved as indicated in Contract Documents and Tree Preservation Activities Schedule shall be prepared and treated to maximize their potential for survival and improve their health and condition as specified in the Tree Preservation Activities Schedule. All work will be performed to meet or exceed current industry standards. Minimum standards shall be those most recently published by the American National Standards Institute, A.N.S.I. or National Arborist Association, N.A.A. Work will be performed as required by these notes and as shown in details and schedules incorporated in plans. All work shall be performed under direct supervision of an arborist certified by the Mid-Atlantic Chapter of the International Society of Arboriculture.

B. The Project Arborist and the County Urban Forester shall walk the limits of clearing and grading and determine if additional trees should be preserved or if certain trees not designated on the Tree Preservation Plan to be preserved, should be removed. No other construction activity may occur on site until root pruning, tree preservation fencing, and silt fencing designated in conjunction with tree preservation fencing has been installed and approved.

C. All construction activity within the areas fenced off around the trees shall be prohibited unless proper steps are taken to buffer and mitigate impacts. This shall include the following activities:
   1. parking or driving of equipment, machinery or vehicles of any type.
   2. storage of any construction materials, equipment, stockpiling, excavation or fill, soil, gravel, etc.
   3. dumping of any chemicals, (i.e. paint thinner from cleaning brushes), wash-out materials from cleaning equipment, concrete or mortar remainder, trash, garbage, or debris of any kind.
   4. burning within or in proximity to protected areas.
   5. felling trees into protected areas.
   6. trenching or grading within the root zones of protected trees for any purpose without notifying project forester 10 days in advance of operation in writing. This includes utilities, lighting, irrigation, drainage etc.

D. Contractor may operate equipment within the root zone of trees to be preserved only if buffered with root protection matting with a six inch layer of wood chips underneath. Buffering material must be approved by the Project Arborist before work within any tree preservation area may begin.

E. Tree protection fence (min. 4' high) shall be installed at the limits of clearing and grading before any work is undertaken on the subject property. Fencing material will consist of 4-foot high 14 gauge welded wire. Signs prohibiting entrance shall be installed every 30 feet along fencing. Signs shall be bright yellow with red/black letters reading **"TREE PRESERVATION AREA - KEEP OUT"**.

F. Root pruning shall be performed in conjunction with fencing. Root pruning shall be performed wherever grades will be altered within the root zone of a tree to be preserved. Where cuts are proposed root pruning shall be to the depth of excavation or 24 inches, whichever is less. Where fill is to be placed within root zone, root pruning shall be to the depth of topsoil. A trencher or vibratory plow shall be used to prune roots. Roots over 2" in diameter shall have a clean cut made on the surface of the root, which is still attached to the tree. This cut shall be made with a handsaw or chain saw as soon as root is severed. Root zone shall be defined as the area around a tree with a radius of one foot for every inch of trunk diameter measured at four and one half feet above ground level.

G. Silt fencing shall be installed as necessary to prevent silt from entering preservation areas. Silt fence shall be installed wherever potential runoff may cause silt to enter preservation areas. Silt fencing will be coordinated with the erosion and sediment control plans for the project. Where silt fence and tree protection fence are installed contiguously silt fence shall be attached to the tree protection fence in such a way that the two fences function as a single unit.

H. Pruning shall conform to A.N.S.I. A300, as published June 1,1995. Trees shall be pruned as indicated in the Tree Preservation Activities Schedule. Crown cleaning (CC) shall consist of removal of all dead, damage, and weak branches one inch (1") and larger in diameter at its point of attachment. The removal of selected conflicting branches shall be included. Under no circumstances shall the interior of trees be stripped. Interior branches shall be selectively pruned to reduce conflict or where branches are damaged. Hazard reduction pruning (H) shall consist of the removal of any dead branches two inches (2") and larger in diameter and the correction of any other problems related to safety. Items not correctable by pruning shall be brought to the owner's attention in writing.

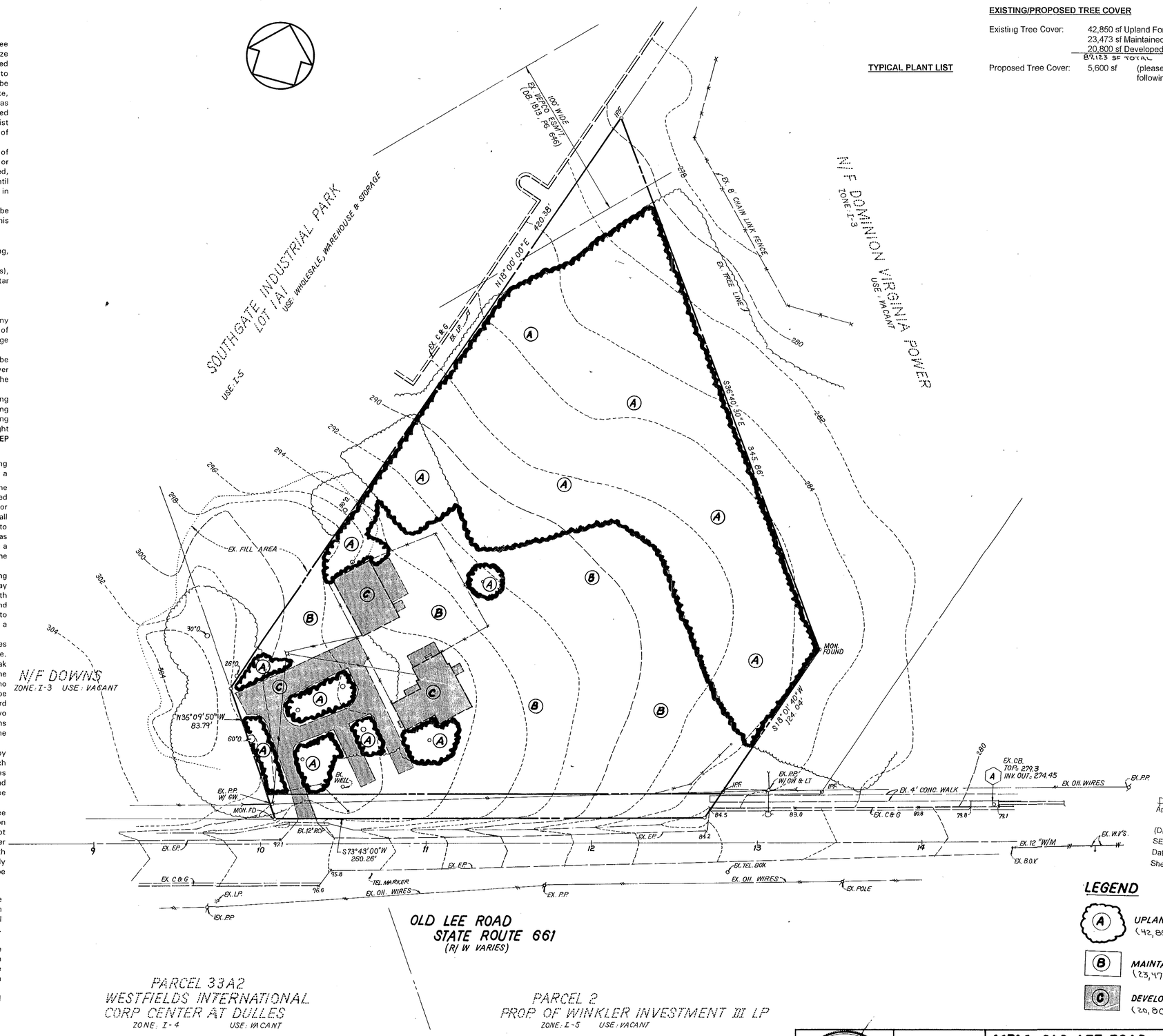
I. All trees designated to be preserved with root zones impacted by construction shall be mulched with wood chips or shredded hardwood. Mulch shall be applied four inches in depth. Mulch shall be kept at least two inches from the trunk of all trees. Wood chips generated on site during pruning and removal operations are acceptable material. Additional wood chips shall be supplied by contractor as necessary to complete this task.

J. Trees shall receive a liquid fertilization (L) as indicated in the Tree Preservation Activities Schedule. Fertilizer shall be a slow release formulation applied at a rate of 1.5 pounds of nitrogen per 1,000 square feet of root zone treated. A root stimulant shall be included in the fertilizer solution/suspension. Fertilizer shall be injected using a soil probe at a depth of six inches. Fertilizer shall be applied in a three foot grid pattern evenly distributed throughout the root zone. Alternative soil programs must be approved by the Project Arborist.

K. Trees shall receive an application of granular fertilizer as indicated in the Tree Preservation Activities Schedule. A slow release fertilizer in granular form shall be applied to surface of soil within the root zone. Application rate shall be three pounds of nitrogen per 1,000 square feet of root zone treated. Fertilizer shall be dispersed using mechanical broadcast equipment.

L. Contractors and sub-contractors are accountable for observing all tree protection requirements and for securing permission for any deviation from approved plans. Any damage resulting from failure to obtain permission is the responsibility of the contractors and sub-contractors and may result in additional cost to them.

M. Items noted in the Activities Schedule with an asterisk (*) are recommend activities but are not required by Fairfax County.




**EXISTING/PROPOSED TREE COVER**

| | | |
|---|---|---|
| Existing Tree Cover: | 42,850 sf Upland Forest (Long Term Sub-climax) | |
| | 23,473 sf Maintained Grassland | |
| | 20,800 sf Developed | |
| | 87,123 SF TOTAL | |
| Proposed Tree Cover: | 5,600 sf | (please see plant type in chart below, please see following sheet for proposed tree locations) |

**TYPICAL PLANT LIST**

PCA 87-S-061
Application No. Staff UP
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 5.1.06
Date of (BOS) (PC) approval 5.15.06
Sheet 4 of 11

**LEGEND**

- (A) UPLAND FOREST (LONG TERM SUBCLIMAX) (42,850 SF)
- (B) MAINTAINED GLASSLAND (23,473 SF)
- (C) DEVELOPED (20,800 SF)

COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
CERTIFICATES 1111 & 191
REGISTERED LAND SURVEYOR

SCALE: 1" = 30'
DATE: 12-12-2005
DESIGNED: HAL
DRAFTED: MB
REVISIONS:

**14714 OLD LEE ROAD**
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA

**EXISTING VEGETATION MAP**

HAROLD A. LOGAN — ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 590-8132

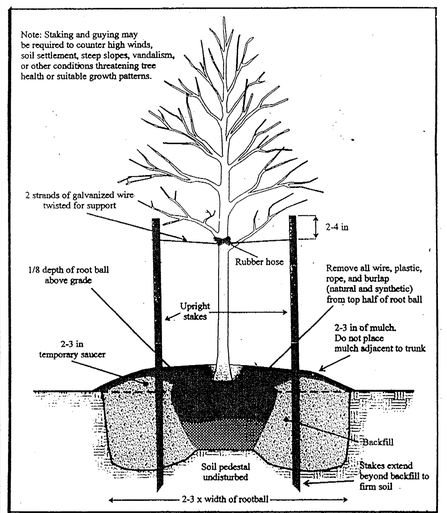
SHEET 4 OF 11
P 1942

CTC 800-972-2137 CTC 519

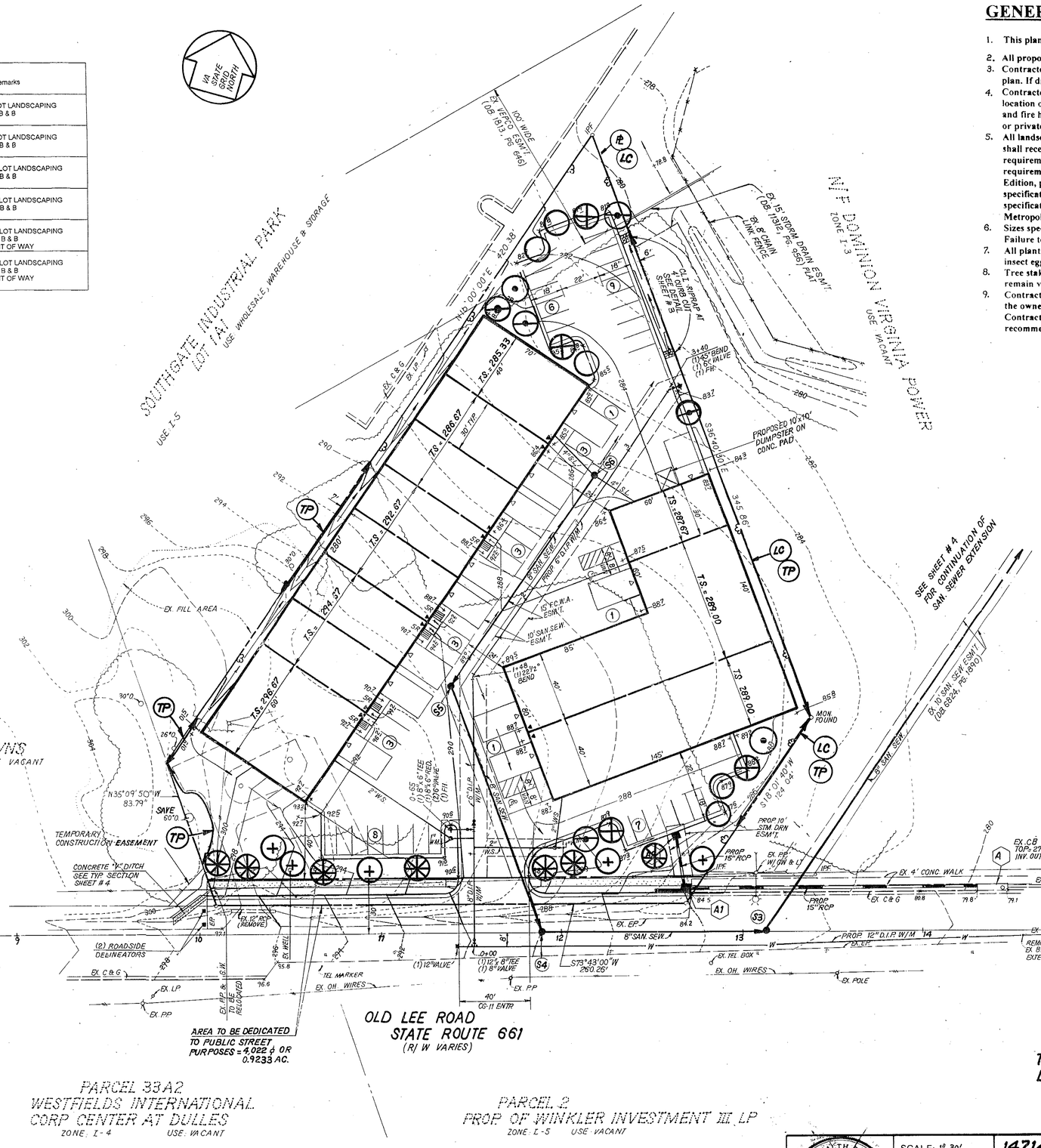
**TYPICAL PLANT LIST**

| Symbol | Botanical Name | Common Name | Quantity | Caliper | Height | Tree Cover Credit (sq. ft.) | Remarks |
|---|---|---|---|---|---|---|---|
| | Acer rubrum | Red Maple | 5 | 2" | NA | 1000 s.f. total (10 year) | INTERIOR LOT LANDSCAPING B & B |
| | Quercus rubra | Red Oak | 4 | 2" | NA | 800 s.f. total (10 year) | INTERIOR LOT LANDSCAPING B & B |
| | Carya ovata | Shagbark Hickory | 4 | 2" | NA | 800 s.f. total (10 year) | PERIPHERAL LOT LANDSCAPING B & B |
| | Carya illinoensis | Pecan | 3 | 2" | NA | 600 s.f. total (10 year) | PERIPHERAL LOT LANDSCAPING B & B |
| | Quercus alba | White Oak | 7 | 2" | NA | 1400 sf total (10 year) | PERIPHERAL LOT LANDSCAPING B & B RIGHT OF WAY |
| | Zelcova serrata | Japanese Zelkova | 5 | 2" | NA | 1000 sf total (10 year) | PERIPHERAL LOT LANDSCAPING B & B RIGHT OF WAY |

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL




| Reference: Section 12-0803.3C | TREE STAKING UPRIGHT STAKING FOR TREES LESS THAN 3 INCHES IN CALIPER WHEN REQUIRED | PLATE NO 9-12 | STD NO |
|---|---|---|---|




# GENERAL NOTES:

1. This plan is for landscape purposes only.
2. All proposed tree plantings shall be field located to avoid conflicts with existing trees.
3. Contractor shall lay out and clearly stake all proposed improvements included in this plan. If discrepancies are found contact the owner immediately.
4. Contractor is responsible for contacting Miss Utility prior to beginning construction for location of all utility lines. Trees shall be located a minimum of 5' from sewer, water and fire hydrant connections, Contractor shall be liable for damage to any and all public or private lines.
5. All landscape materials shall be subject to approval by the landscape architect. Owner shall receive tag from each plant species and a list of plant suppliers. Where any requirements are omitted from the plant list, the plants furnished shall meet the normal requirements for the variety per the American Standard for Nursery Stock, Latest Edition, published by the American Association of Nurserymen (AAN). The specification for all landscape work included in this contract shall meet the landscape specification guidelines for Landscape Contractors Association Baltimore/Washington Metropolitan Area, current edition.
6. Sizes specified in the plant list are minimum sizes to which the plants are to be judged. Failure to meet minimum size on any plant will result in rejection of that plant.
7. All plants shall be freshly dug, sound, healthy, vigorous, well branched, free of disease, insect eggs, and larvae, and shall have adequate root systems.
8. Tree staking and guying shall be done per details. Contractor shall ensure that trees remain vertical and upright for the duration of the guarantee period.
9. Contractor shall guarantee all improvements for one full year. Contractor must contact the owner at least 10 working days in advance to schedule acceptance inspection(s). Contractor must replace all dead or unacceptable plants during the following recommended planting season.

**TREE COVER REQUIREMENTS/CALCULATIONS**

SITE AREA: 87,123 SF (2.000 AC)
DEDUCTIBLE AREA: 34,800 SF
(BUILDING/EASEMENTS)

ADJUSTED GROSS AREA: 52,323 sf

TREE COVER REQUIREMENT 10%
TREE COVER REQUIRED: 5,232 SF
TREE COVER PROVIDED: 5,600 SF

**PARKING LOT LANDSCAPING:**
PARKING LOT AREA: 32,489 SF
LANDSCAPING REQUIREMENT: 5%
LANDSCAPING REQUIRED: 1625 SF
LANDSCAPING PROVIDED: 1800 SF

**PERIPHERAL LANDSCAPING:**
PERIPHERAL LANDSCAPING REQUIRED:
1 TREE PER 50' ALONG PROPERTY LINE: 220/50 = 5 TREES
1 TREE PER 40' ALONG RIGHT OF WAY 260/40 = 7 TREES
PERIPHERAL LANDSCAPING PROVIDED: 12 TREES

PCA 87-S-061 Staff JP
Application No.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDF) (FDP)
SEE PROFFERS DATED 5-1-06
Date of (BOS) (PC) approval 5-15-06
Sheet 5 of 11

***THIS SHEET TO BE USED FOR LANDSCAPING PURPOSES ONLY !!***

COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
CERTIFICATES No. 191
CERTIFIED LAND SURVEYOR

SCALE: 1"=30'
DATE: 4-5-2005
DESIGNED: HAL
DRAFTED: MB
REVISIONS:

**14714 OLD LEE ROAD**
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
LANDSCAPE PLAN


HAROLD A. LOGAN – ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132


SHEET 5 OF 11
P 1942

## I. INTRODUCTION

A soil study was conducted at 14714 Lee Road, Chantilly, Virginia at the request of the owner: J. Roberts, Inc. 2711_G Door Avenue, Fairfax, VA 22031.

### A. PROJECT INFORMATION, PURPOSE AND SCOPE OF WORK

The purpose of the study was to determine the subsurface soil, rock and groundwater conditions affecting the construction of the proposed structure and general site development.

### B. EXPLORATION METHODS

Six (6) test borings were conducted throughout the tract. The subsurface materials were described by a soil scientist familiar with the procedures of ASTM 1452, Soil Investigations by Auger Borings. The borings were taken to a maximum depth of 12 feet below the existing surface. The ground water elevation was noted at the time of excavation.

### C. LABORATORY TEST PROCEDURES AND RESULTS

No laboratory tests were conducted.

## II. SITE LOCATION AND GENERAL DESCRIPTION

The nearly level to gently sloping tract is located in Piedmont Physiographic Province and is underlain by fine and medium textured residual soils. The soils are identified as Brecknock silt loam (62) and Catlett silt loam (104) on the Fairfax County Soil Survey. They are generally well and moderately well drained, shallow to moderately deep silty and gravelly soils with slow internal drainage.

The site is mostly open with an existing slab-on-grade dwelling and outbuildings. An in-ground septic system occurs north of the dwelling and a water well is located in the southeastern part. No ponded water was observed however some minor filling has occurred.

**THICKNESS AND DEPTH TO VARIOUS STRATA**

| Test Boring No. | Station | Fill/Organics (ft.) | Suitable Subgrade (ft.) | " Rock" (ft.) |
|---|---|---|---|---|
| B-01 | | 2.5 | 2.5 | 11.0 |
| B-02 | | 0.5 | 2.0 | 7.0 |
| B-03 | | 1.0 | 3.2 | 7.0 |
| B-04 | | 1.0 | 2.0 | 7.0 |
| B-05 | | 0.5 | 2.5 | 6.5 |
| B-06 | | 0.5 | 3.0 | 5.0 |

## III. SUBSURFACE FEATURES

The area of the study consists of the following subsurface conditions:

**STRATUM I**

Brown, reddish brown, loose mixed FILL, topsoil, fine root mat, and construction debris. 0.5 to 2.5 feet thick.

**STRATUM II**

Reddish brown, strong brown stiff SILT (ML) with sand, very stiff lean CLAY (CL), with interbedded seams of elastic SILT (MH) 2.0 to 7.0 feet thick.

**STRATUM III**

Reddish brown, dense gravelly SILT (ML-GM), sandy SILT (ML), 0.0 to 3.0 + feet thick.

**STRATUM IV**

Poorly weathered bedrock, marginally rippable to non-rippable.

Ground water was not encountered. Mottled and reduced (gray) color patterns indicate short-term perched seasonal water tables and slow internal drainage.

## IV. EVALUATION

Foundations

Suitable foundation soils/geology occur below the existing topsoil and FILL. Some spots have elastic SILT (MH) and fat CLAY (CH) and may require overdig under foundations and slabs. The site will tend to be wet and dry slowly during wet periods. A licensed geotechnical/soil engineer shall provide soil bearing capacities and other structural design requirements

Subsurface Drainage (for basements only)

In order to prevent water from collecting under the slabs and to reduce the hydrostatic pressure against basement walls standard Fairfax County Drainage design should be used.

Underground Utilities and Basement Excavations

Ground water should not encountered within 6 feet during dry periods. Marginally to non-rippable bedrock was encountered at 5 to 11 feet. Trench excavations below this depth will be arduous and may require a ramhoe. The silty soils are unstable in vertical cut slopes more than 5 feet deep.

Construction Quality Control

To assure soil conditions during construction are as they are thought to be, inspection, testing and construction methods are instituted so that:

1. All footing and slab excavations should be inspected and approved for bearing and base depth locations by a Registered Professional Soils Engineer or his representative.
2. Structural fill must be placed and compacted, subgrades must be prepared, and aggregate base courses must be placed and compacted under the continuous observation and testing of an individual testing firm.
3. Soils are variable. Inclusions of other soil types will occur throughout the tract. Conditions different fromthose described may occur and shall be brought to the attention of the engineer for possible modifications to the geotechnical requirements.

COMMONWEALTH OF VIRGINIA
W.F. Sledjeski, P.G.
No. 474
CERTIFIED PROFESSIONAL GEOLOGIST

---

FAIRFAX COUNTY

VIRGINIA

DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
Land Development Services
Environmental and Site Review Division
12055 Government Center Parkway, Suite 535
Fairfax, Virginia 22035-5503
Phone 703-324-1720 • Fax 703-324-8359 • TTY 703-324-1877

JUN 27 2005

Mr. Mark D. Crain
Harold A. Logan Associates, P.C.
9114 Industry Drive
Manassas Park, Virginia 20111

Subject: 14714 Old Lee Road, Project #006178-SP-101, Tax Map #043-2-01-00-0005, Sully District

Reference: Water Quality Control Waiver #06178-WBMP-002-1

Dear Mr. Crain:

Your request to waive the requirements of water quality control for the subject site is hereby approved.

Please refer to Stormwater Detention Waiver #006178-WSWD-008-1 regarding the agreement for the offsite ponds for water quality control. In addition, onsite Low Impact Development practices should be incorporated on the plan.

There is sufficient justification to approve this waiver because water quality control / best management practices have been provided for this site.

This approval in no way relieves you of any other county drainage requirements including adequacy of outfall and pro-rata share payments. Compliance with Chesapeake Bay Preservation Ordinance and Water Supply Protection Overlay District is also required.

This waiver shall automatically expire, without notice, twenty-four (24) months after the date of this letter, unless the subject plan has been approved.

Please ensure that a copy of this letter is made a part of the subject plan.

If further assistance is desired, please contact Elfatih Salim, Stormwater Engineer, Site Review West, Environmental and Site Review Division (ESRD) at 703-324-1720 (voice), 703-324-8359 (fax), or e-mail: elfatih.salim@fairfaxcounty.gov.

Sincerely,

Qayyum Khan
Chief Stormwater Engineer
Site Review West

QK/dah

cc: Carl Bouchard, Director, Stormwater Planning Division, DPWES
Clinton Abernathy, Chief Site Review Engineer, Site Review West, ESRD, DPWES
Elfatih Salim, Stormwater Engineer, Site Review West, ESRD, DPWES
Waiver File

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FAIRFAX COUNTY

VIRGINIA

DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
Land Development Services
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JUN 27 2005

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Harold A. Logan Associates, P.C.
9114 Industry Drive
Manassas Park, Virginia 20111

Subject: 14714 Old Lee Road, Project #006178-SP-101, Tax Map #043-2-01-00-0005, Sully District

Reference: Stormwater Detention Waiver #06178-WSWD-008-1

Dear Mr. Crain:

In response to your request, a waiver of standard on-site County stormwater detention requirements for the subject site is hereby approved, conditioned upon the following:

1. Ensure that the offsite ponds contain sufficient storage capacity for detention and water quality control.
2. Because the subject project proposes to use off-site ponds at Southgate Industrial Park (005984-SD-001) and Virginia Power Walney Substation (000115-SP-002) for detention and best management practices (BMP) purposes, an agreement between the owner(s) of the ponds and the owner(s) of the subject site must be executed. The agreement shall include details such as the BMP, two- and ten-year storage capacity of the facility and its use by each existing and proposed land development projects expressed as a percentage of such capacities. It shall also define maintenance responsibilities. The agreement shall be reviewed and approved by the County Attorney and Department of Public Works and Environmental Services prior to recordation in Land Records of the County. The agreement must be recorded prior to final approval of the site plan for the subject project.
3. A detailed analysis of the outfall pipes shall be incorporated into the subject plan to ensure adequate capacity and that measures are provided to prevent downstream erosion due to the increase in runoff.
4. The applicant should employ "Better Site Design" development techniques and use Low Impact Development practices to the full extent.

There is sufficient justification to approve this waiver, as conditioned, because off-site detention ponds will provide detention and water quality control for the subject site.

This approval in no way relieves you of any other County drainage requirements including adequacy of outfall and pro-rata share payments. Compliance with the Chesapeake Bay Preservation Ordinance and Water Supply Protection Overlay District is also required.

This waiver shall automatically expire, without notice, twenty-four (24) months after the date of this letter, unless the subject plan has been approved.

Please ensure that a copy of this letter is made a part of the subject plan.

If further assistance is desired, please contact Elfatih Salim, Stormwater Engineer, Site Review West, Environmental and Site Review Division (ESRD) at 703-324-1720 (voice), 703-324-8359 (fax), or e-mail: elfatih.salim@fairfaxcounty.gov.

Sincerely,

Qayyum Khan
Chief Stormwater Engineer
Site Review West

QK/dah

cc: David P. Bobzien, County Attorney
Carl Bouchard, Director, Stormwater Planning Division, DPWES
Clinton Abernathy, Chief Site Review Engineer, Site Review West, ESRD, DPWES
Elfatih Salim, Stormwater Engineer, Site Review West, ESRD, DPWES
Waiver File

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Application No. PCA 87-S-061 Staff JP
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 5.1.06
Date of (BOS) (PC) approval 5.15.06
Sheet 6 of 11

COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
CERTIFICATES 1111 & 191
CERTIFIED LAND SURVEYOR

SCALE: N/A
DATE: 4-5-2005
DESIGNED: HAL
DRAFTED: MB.
REVISIONS: 7-6-2005 WAIVERS

**14714 OLD LEE ROAD**
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA

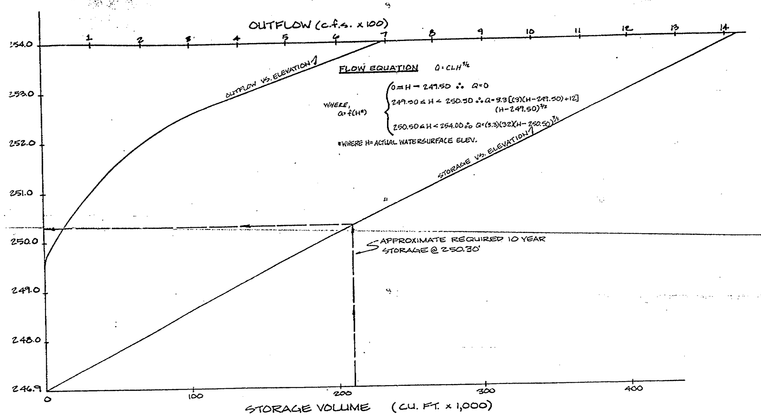
GEOTECHNICAL EVALUATION / WAIVER APPROVALS

HAROLD A. LOGAN — ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132


P 1942

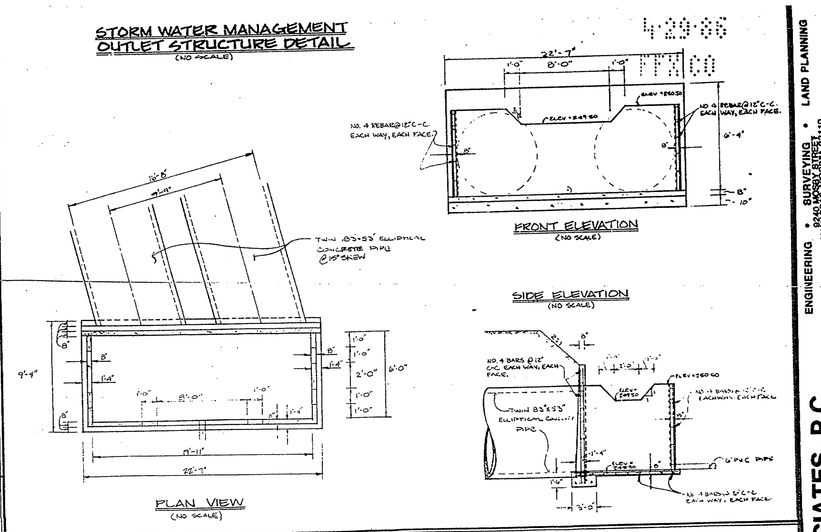
CTC 800-572-2137 CTC 519

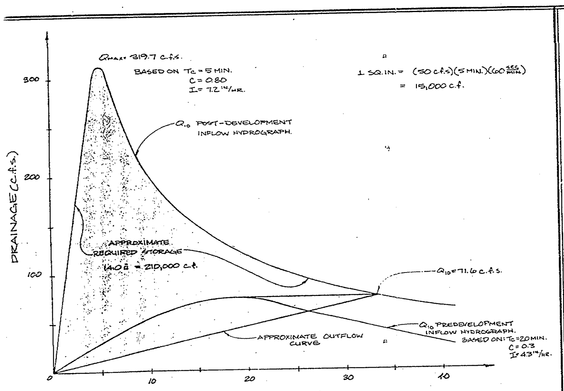
## ELEVATION V.S. STORAGE & OUTFLOW CURVE




## STORM WATER MANAGEMENT OUTLET STRUCTURE DETAIL

(NO SCALE)




## STORAGE REQUIREMENT CURVE

(BASED ON 10 YEAR STORM)

### BMP FACILITY DESIGN FORMAT

Step No. 1: (A) Area of site draining into Occoquan Watershed 54.5 acres.

(B) Area of proposed impervious cover for subject site (B/A)x100 = 39.8 acres. 73 % impervious.

(C) % of site to be impervious or general zoning value from Chart 1 FFM 79 % impervious.

or "C" Factor.

(D) Chart A value for BMP storage/acre 5300 cf/acre.

(E) Total BMP storage required [A] times [D] = 289,060 cf.

Step No. 2: (A) Measure the on-site (and offsite if credit is to be taken for it) areas draining to the proposed BMP facility. 31.0 acres.

(B) Measurement of impervious area on-site (and offsite if credit is to be taken for it) which drains to the proposed BMP facility. 20.0 acres.

(C) % of the on-site (and offsite if credit is to be taken for it) drainage area to the proposed facility. [B]/[A] x100 = 65 % impervious.

(D) Chart A value for BMP storage/acre 3100 cf/acre.

(E) Total BMP storage required for this proposed BMP facility. [A] x [D] = 96,100 cf.

(Note: Repeat Step 2 for each proposed BMP facility).

Decision Plateau:

(D)

Step No. 2 (E) 96,100 cf (C) Step No. 1 (E) 289,060 cf.

If Step No. 2 (E) ≥ No. 1 (E) Design is acceptable. (Note: even where this condition is met, designers are encouraged to proceed to Step No. 3 in order to maximize site coverage).

If Step No. 2 (E) < No. 1 (E) Proceed to Step No. 3.

Step No. 3: (A) In the uncontrolled areas, measure all open areas, sheet flow areas and impervious areas draining to pass slowly over previous areas. 10.0 acres.

(B) Multiply (A) x 50% 5.0 acres.

(C) Multiply No. 3(B) x No. 1 (D) = 1320 cf.

Step No. 4: Step No. 2(E) plus Step No. 3(C) = 97,420 cf.

Decision Plateau:

If Step No. 4 minus 70% x Step No. 1(E) 68,100 ≥ 0.

If Step No. 4 ≥ 70% x Step No. 1 (E), design is acceptable.

If Step No. 4 is less than 70% of Step No. 1(E), then add additional facilities Step No. 2 or more previous sheet flow areas Step No. 3 to the Director for partial waiver of BMP site requirements will be items for justification.

## BEST MANAGEMENT PRACTICE (B.M.P) OUTLET DEVICE & DATA

PHOSPHORUS REDUCTION DATA

DEVICE: WET DETENTION POND
EFFECTIVE PHOSPHORUS REDUCTION: 70%
REQUIRED PHOSPHORUS REDUCTION: 50%
70% > 50% ∴ PHOSPHORUS REDUCTION ADEQUATE
* EFFICIENCIES AS SHOWN IN SECTION 6-0403, PFM.

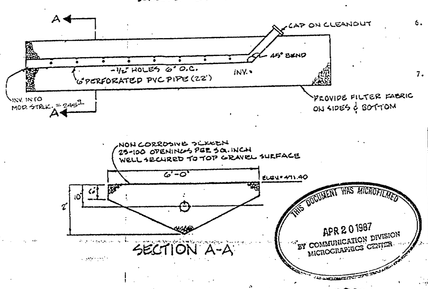
### DRAWDOWN CALCULATIONS FOR B.M.P. DEVICE

DESIGN DATA

1. Drawdown time = 40 hrs.
2. Drawdown Volume = 155,510 C.F.
3. Average Outflow
   = (155,510 C F.)/(40 Hrs.)(3600)
   = 1.08 C.F.S.
4. Average Head
   = (49.50 + 46.20)/2
   = 47.85
   47.85 -46.20 = 1.65 ft.
5. Required Flow Area
   $Q = CA(2gh)^{1/2}$
   $1.08 = (0.6)A\ (2 \times 32.2 \times 1.65)^{1/2}$
   A = 0.037 Sq. Ft.
6. Required Hours
   Area of one ½" Dia. Hole = 0.00126 sq.ft./hole
   Therefore use,
   = (0.37 sq.ft.)/(0.00126 sq.ft./hole)
   = 125 holes
7. Final Design
   22" - 6" Diameter F.V.C. Pipe with Three ½" Dia. Holes at 6" O.C. Entire Length

## DETAIL

INLET PIPE FOR BMP FACILITY
SCALE: (1" = 2')







SECTION A-A

NOTE: "ALL CONSTRUCTION SHALL CONFORM TO FAIRFAX COUNTY AND VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION STANDARDS AND SPECIFICATIONS".

NOTE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE CONSTRUCTION AREA OF THESE PLANS. THIS FIRM SHALL BE REQUESTED A MINIMUM OF 48 HOURS IN ADVANCE FOR THOSE UTILITIES REQUIRING THEM.

THIS DOCUMENT HAS BEEN MICROFILMED APR 20 1987 BY CONSOLIDATION DIVISION MICROGRAPHICS CENTER

COMMONWEALTH OF VIRGINIA JACK E. DUNKER No. 1958

| NO. | DESCRIPTION | BY | APPROVED BY | DATE |
|---|---|---|---|---|
| | | | | |

REVISIONS APPROVED BY ENVIRONMENTAL MANAGEMENT

NO SCALE — MISCELLANEOUS DETAILS & STORM WATER MANAGEMENT DETAILS

DRAFT: J.D.W. — SOUTHGATE INDUSTRIAL PARK

DESIGN: J.D.W. — SPRINGFIELD MAGISTERIAL DISTRICT

DESIGN: P.K.J. — FAIRFAX COUNTY, VIRGINIA

CHECK: P.K.J.

DATE: 1-12-87

APPROVED: 4/14/87

ENGINEERING • SURVEYING • LAND PLANNING
8200 SCHOOL STREET
MANASSAS PARK, VA. 22111
(703) 330-1988

RINKER-DETWILER AND ASSOCIATES, P.C.

## 2 YEAR ROUTING

| DA | HDN | HRM | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|
| 1 | 0000 | 1 | | 0 | 0 | 246.9 |
| 1 | 0005 | 2 | | 0 | 0 | 246.9 |
| 1 | 0010 | 3 | | 10 | 2.5 | 248.8 |
| 1 | 0015 | 4 | | 21 | 4.4 | 250.0 |
| 1 | 0020 | 5 | | 68 | 5.8 | 250.9 |
| 1 | 0025 | 6 | | 137 | 6.5 | 251.3 |
| 1 | 0030 | 7 | | 147 | 6.6 | 251.4 |
| 1 | 0035 | 8 | | 138 | 6.5 | 251.3 |
| 1 | 0040 | 9 | | 124 | 6.3 | 251.2 |
| 1 | 0045 | 10 | | 109 | 6.1 | 251.1 |
| 1 | 0050 | 11 | | 95 | 5.9 | 251.0 |
| 1 | 0055 | 12 | | 87 | 5.8 | 250.9 |
| 1 | 0100 | 13 | | 79 | 5.6 | 250.8 |
| 1 | 0105 | 14 | | 72 | 5.4 | 250.7 |
| 1 | 0110 | 15 | | 65 | 5.2 | 250.6 |
| 1 | 0115 | 16 | | 58 | 5.1 | 250.5 |
| 1 | 0120 | 17 | | 52 | 4.9 | 250.4 |
| 1 | 0125 | 18 | | 46 | 4.7 | 250.3 |
| 1 | 0130 | 19 | | 40 | 4.6 | 250.3 |
| 1 | 0135 | 20 | | 35 | 4.7 | 250.2 |
| 1 | 0140 | 21 | | 31 | 4.6 | 250.2 |
| 1 | 0145 | 22 | | 26 | 4.5 | 250.1 |
| 1 | 0150 | 23 | | 21 | 4.4 | 250.0 |
| 1 | 0155 | 24 | | 17 | 4.3 | 250.0 |
| 1 | 0200 | 25 | | 15 | 4.2 | 249.9 |

PEAK INFLOW = 278.2 CFS.
PEAK OUTFLOW = 147.0 CFS.
PEAK STORAGE = 287,479 C.F.
PEAK ELEVATION = 251.4

## 10 YEAR ROUTING

| DA | HDN | HRM | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|
| 1 | 0000 | 1 | | 0 | 0 | 246.9 |
| 1 | 0005 | 2 | | 0 | 0 | 246.9 |
| 1 | 0010 | 3 | | 11 | 2.6 | 249.5 |
| 1 | 0015 | 4 | | 94 | 5.9 | 251.0 |
| 1 | 0020 | 5 | | 181 | 7.6 | 252.0 |
| 1 | 0025 | 6 | | 249 | 8.2 | 252.3 |
| 1 | 0030 | 7 | | 286 | 8.1 | 252.3 |
| 1 | 0035 | 8 | | 292 | 7.8 | 252.1 |
| 1 | 0040 | 9 | | 278 | 7.5 | 251.9 |
| 1 | 0045 | 10 | | 269 | 7.2 | 251.7 |
| 1 | 0050 | 11 | | 258 | 6.8 | 251.5 |
| 1 | 0055 | 12 | | 230 | 6.4 | 251.3 |
| 1 | 0100 | 13 | | 198 | 5.9 | 251.1 |
| 1 | 0105 | 14 | | 179 | 5.6 | 251.0 |
| 1 | 0110 | 15 | | 89 | 5.7 | 250.9 |
| 1 | 0115 | 16 | | 78 | 5.4 | 250.8 |
| 1 | 0120 | 17 | | 73 | 5.2 | 250.7 |
| 1 | 0125 | 18 | | 64 | 5.2 | 250.6 |
| 1 | 0130 | 19 | | 58 | 5.1 | 250.5 |
| 1 | 0135 | 20 | | 50 | 4.9 | 250.4 |
| 1 | 0140 | 21 | | 43 | 4.8 | 250.3 |
| 1 | 0145 | 22 | | 37 | 4.7 | 250.2 |
| 1 | 0150 | 23 | | 32 | 4.5 | 250.1 |
| 1 | 0155 | 24 | | 24 | 4.4 | 250.1 |
| 1 | 0200 | 25 | | 25 | 4.4 | 250.1 |

PEAK INFLOW = 313.3 CFS.
PEAK OUTFLOW = 249.0 CFS.
PEAK STORAGE = 337,192 C.F.
PEAK ELEVATION = 252.3

## 100 YEAR ROUTING

| DA | HDN | HRM | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|
| 1 | 0000 | 1 | | 0 | 0 | 246.9 |
| 1 | 0005 | 2 | | 0 | 1.5 | 248.1 |
| 1 | 0010 | 3 | | 36 | 4.7 | 250.2 |
| 1 | 0015 | 4 | | 196 | 7.7 | 252.1 |
| 1 | 0020 | 5 | | 401 | 9.3 | 253.0 |
| 1 | 0025 | 6 | | 492 | 9.3 | 253.0 |
| 1 | 0030 | 7 | | 397 | 8.0 | 252.8 |
| 1 | 0035 | 8 | | 283 | 6.4 | 252.5 |
| 1 | 0040 | 9 | | 243 | 6.1 | 252.2 |
| 1 | 0045 | 10 | | 212 | 7.8 | 252.2 |
| 1 | 0050 | 11 | | 189 | 7.7 | 252.0 |
| 1 | 0055 | 12 | | 179 | 7.5 | 251.9 |
| 1 | 0100 | 13 | | 174 | 7.3 | 251.8 |
| 1 | 0105 | 14 | | 168 | 7.1 | 251.7 |
| 1 | 0110 | 15 | | 161 | 6.9 | 251.6 |
| 1 | 0115 | 16 | | 146 | 6.6 | 251.4 |
| 1 | 0120 | 17 | | 128 | 6.4 | 251.3 |
| 1 | 0125 | 18 | | 113 | 6.2 | 251.1 |
| 1 | 0130 | 19 | | 99 | 6.0 | 251.0 |
| 1 | 0135 | 20 | | 89 | 5.8 | 250.9 |
| 1 | 0140 | 21 | | 80 | 5.6 | 250.8 |
| 1 | 0145 | 22 | | 70 | 5.4 | 250.7 |
| 1 | 0150 | 23 | | 60 | 5.1 | 250.5 |
| 1 | 0155 | 24 | | 47 | 4.9 | 250.4 |
| 1 | 0200 | 25 | | 37 | 4.7 | 250.2 |

PEAK INFLOW = 582.3 CFS.
PEAK OUTFLOW = 403.0 CFS.
PEAK STORAGE = 409,110 C.F.
PEAK ELEVATION = 253.00

### COMPOSITE INFLOW HYDROGRAPH FOR ONSITE AND OFFSITE

| TIME (MIN) | $Q_2$ | $Q_{10}$ | $Q_{100}$ |
|---|---|---|---|
| 0 | 0.0 | 0.0 | 0.0 |
| 5 | 233.6 | 331.5 | 427.5 |
| 10 | 270.6 | 382.6 | 535.4 |
| 15 | 278.2 | 393.3 | 582.3 |
| 20 | 247.8 | 350.0 | 480.2 |
| 25 | 181.6 | 256.6 | 328.0 |
| 30 | 138.2 | 195.3 | 273.0 |
| 35 | 112.4 | 158.9 | 231.0 |
| 40 | 97.5 | 137.8 | 197.8 |
| 45 | 82.1 | 116.1 | 179.9 |
| 50 | 71.3 | 100.8 | 165.2 |
| 55 | 58.1 | 82.2 | 156.3 |
| 60 | 51.0 | 72.1 | 147.4 |
| 65 | 46.7 | 66.1 | 134.8 |
| 70 | 42.6 | 60.3 | 123.0 |
| 75 | 38.0 | 53.8 | 110.4 |
| 80 | 33.8 | 47.9 | 98.4 |
| 85 | 29.7 | 42.1 | 86.1 |
| 90 | 25.8 | 36.4 | 73.4 |
| 95 | 21.0 | 29.7 | 60.8 |
| 100 | 17.1 | 24.1 | 48.4 |
| 105 | 12.8 | 18.0 | 35.7 |
| 110 | 8.7 | 12.3 | 23.1 |
| 115 | 4.1 | 5.8 | 10.7 |
| 120 | 0.0 | 0.0 | 0.0 |

### STORM WATER MANAGEMENT

I. AREA BREAKDOWN ANALYSIS

OFFSITE:

76.00 Ac.*
6.89 Ac.
5.70 Ac.

88.19 Ac.

* This Figure includes 8.5 ac. from Lee Business Center

ONSITE:

6.01 Ac.
1.42 Ac.
3.17 Ac.
10.45 Ac.
1.98 Ac.

23.03 Ac.

Total Area to Pond = 111.02 Ac.

II. FLOOD PLAIN AREA

7.5 Ac. Note: Flood plain area will not be included in any runoff or storage calculations since its development state will not change and will have no impact on these calculations.

III. RUNOFF ANALYSIS

A. Offsite:

1. From Lee Business Center -

a. Predeveloped Runoff
Q(2) = (0.3)(3.4 in/hr)(8.5 Ac.) = 8.7 cfs.
Q(10) = (0.3)(4.8) in/hr)(8.5 Ac.) = 12.2 cfs.

b. Postdeveloped Runoff
Q(2) = (0.80)(5.1 in/hr)(8.5 Ac.) = 34.7 cfs.
Q(10) = (0.80)(7.3 in/hr)(8.5 Ac.) = 49.6 cfs.

2. From Remaining Area -

a. Pre and Post Developed Runoff
Q(2) = (0.8)(3.4 in/hr)(80.09 Ac.) = 217.8 cfs.
Q(10) = (0.8)(4.8 in/hr)(80.09 Ac.) = 307.6 cfs.

B. Onsite:

1. Predeveloped Runoff -
Q(2) = (.35)(4.1 in/hr)(47.0 Ac.) = 67.1 cfs.
Q(10) = (.30)(5.9 in/hr)(47.0 Ac.) = 83.2 cfs.

2. Post Developed Runoff -
Q(2) = (.60)(5.1 in/hr)(47.0 Ac.) = 191.8 cfs.
Q(10) = (.80)(7.3 in/hr)(47.0 Ac.) = 274.5 cfs.

C. Totals:

Predeveloped -
Q(2) = 8.7 + 217.8 + 48.2 = 274.7 cfs.
Q(10) = 12.2 + 307.6 + 83.2 = 403.0 cfs.

Postdeveloped -
Q(2) = 34.7 + 217.8 + 191.8 = 444.3 cfs.
Q(10) = 49.6 + 307.6 + 274.5 = 631.7 cfs.

IV. PEAK REDUCTION REQUIREMENTS

Q(2) = 444.3 - 274.7 = 169.6 cfs.
Q(10) = 631.7 - 403.0 = 228.7 cfs.

V. UNCONTROLLED RUNOFF (AREAS NOT TO POND)

3.13 Ac.
0.46 Ac.
2.54 Ac.
5.44 Ac.
9.87 Ac.
9.77 Ac.

TOTAL = 31.40 Ac.

Area Minus Flood Plain = 31.4 - 7.5 = 23.9 Ac.

Postdeveloped Q(2) = (0.8)(5.1 in/hr)(23.9 Ac.) = 97.5 cfs.
Postdeveloped Q(10) = (0.8)(7.3 in/hr)(23.9 Ac.) = 139.6 cfs.

VI. MAXIMUM OUTFLOW CALCULATIONS

Total Predeveloped Runoff
Q(2) = 274.7 cfs.
Q(10) = 403.0 cfs.

Uncontrolled Runoff
Q(2) = 97.5 cfs.
Q(10) = 139.6 cfs.

Therefore, the maximum release rate from the storm water management pond is:

Q(2) = 274.7 - 97.5 = 177.1 cfs.
Q(10) = 403.0 - 139.6 = 263.4 cfs.

### DETENTION DESIGN NARRATIVE

THIS POND WAS DESIGNED TO PROVIDE DETENTION/RETENTION OF STORMWATER RUNOFF FROM THE PROPOSED 54.5 AC SOUTHGATE INDUSTRIAL PARK. THE PROPOSED DEVELOPMENT CONTAINS APPROXIMATELY 7.5 AC OF UNDEVELOPABLE FLOOD PLAIN WHICH WAS NOT INCLUDED IN THE FACILITY DESIGN. THE FACILITY WAS DESIGNED HOWEVER TO INCLUDE THE INCREASED RUNOFF FROM THE DEVELOPMENT OF 8.5 AC ON THE CECIL PRUITT PROPERTY, OTHERWISE KNOWN AS LEE BUSINESS PARK. THUS THE TOTAL DESIGN AREA FOR THE FACILITY CONSIST OF 55.5 ACRES. THE POND WAS DESIGNED TO HONOR ALL EXISTING DRAINAGE DIVIDES AND ASSUMES THE SAME AT THE TIME OF INDIVIDUAL LOT DEVELOPMENT.

THIS DOCUMENT HAS BEEN MICROFILMED APR 20 1987 BY CONSOLIDATION DIVISION

COMMONWEALTH OF VIRGINIA JACK E. DUNKER No. 1958

NOTE: "ALL CONSTRUCTION SHALL CONFORM TO FAIRFAX COUNTY AND VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION STANDARDS AND SPECIFICATIONS".

NOTE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE CONSTRUCTION AREA OF THESE PLANS. THIS FIRM SHALL BE REQUESTED A MINIMUM OF 48 HOURS IN ADVANCE FOR THOSE UTILITIES REQUIRING THEM.

| NO. | DESCRIPTION | BY | APPROVED BY | DATE |
|---|---|---|---|---|
| | | | | |

REVISIONS APPROVED BY ENVIRONMENTAL MANAGEMENT

NO SCALE — ROUTING SCHEDULE & CALCULATIONS

DRAFT: J.D.W. — SOUTHGATE INDUSTRIAL PARK

DESIGN: P.K.J. — SPRINGFIELD MAGISTERIAL DISTRICT

DESIGN: P.K.J. — FAIRFAX COUNTY, VIRGINIA

CHECK: P.K.J.

DATE: 1-12-87

APPROVED: 4/14/87

ENGINEERING • SURVEYING • LAND PLANNING
8200 SCHOOL STREET
MANASSAS PARK, VA. 22111
(703) 330-1988

RINKER-DETWILER AND ASSOCIATES, P.C.

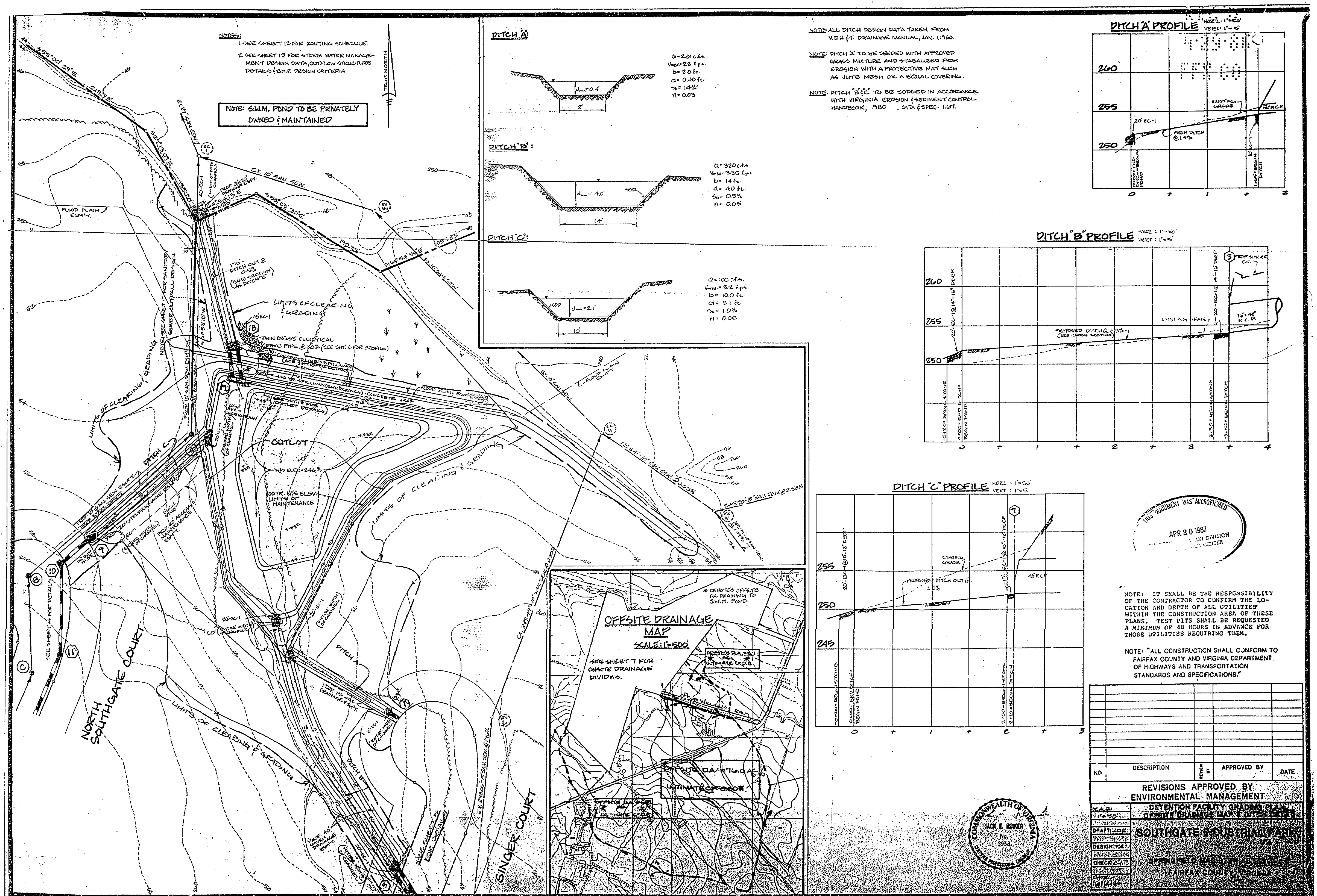
HAROLD A. LOGAN — ASSOCIATES P.C.
SITE DEVELOPMENT CONSULTANTS
9140 DEAKINS DRIVE
MANASSAS PARK, VA. 22111
(703) 330-1988 • FAX 690-8132
SITE PLANNING - SUBDIVISION DESIGN

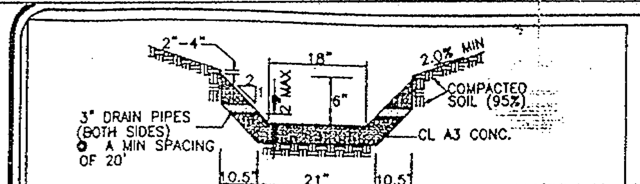
14714 OLD LEE ROAD
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
BMP & STORM WATER MANAGEMENT EXHIBIT

SHEET 7 OF 11
P7942

RCA 87-S-0161 Application No. Staff JP
APPROVED DEVELOPMENT PLAN (ODP) (FDP) (PC) approval 5-15-86 SEE PROFFERS DATED 5-11-86
Sheet 7 of 11

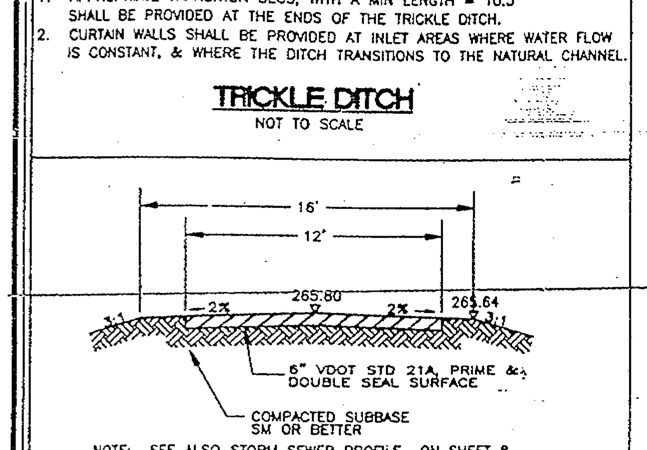
"FOR INFORMATION ONLY"



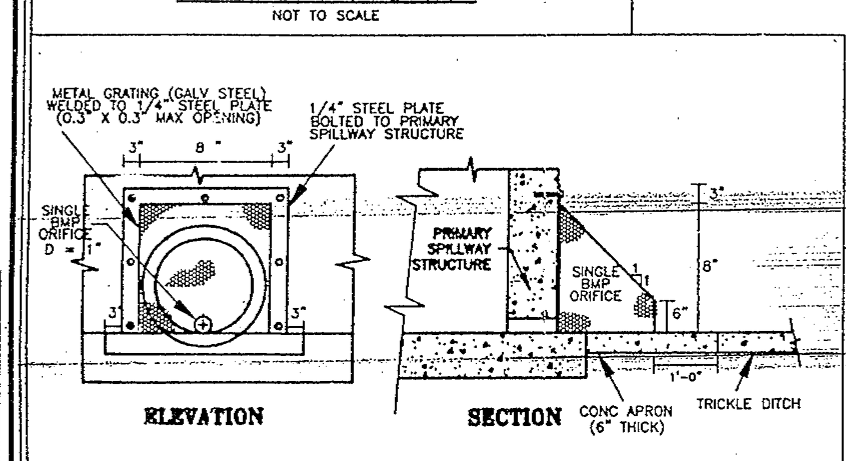

NOTES:
1. APPROPRIATE TRANSITION SECS, WITH A MIN LENGTH = 10.5' SHALL BE PROVIDED AT THE ENDS OF THE TRICKLE DITCH.
2. CURTAIN WALLS SHALL BE PROVIDED AT INLET AREAS WHERE WATER FLOW IS CONSTANT, & WHERE THE DITCH TRANSITIONS TO THE NATURAL CHANNEL.

**TRICKLE DITCH**
NOT TO SCALE

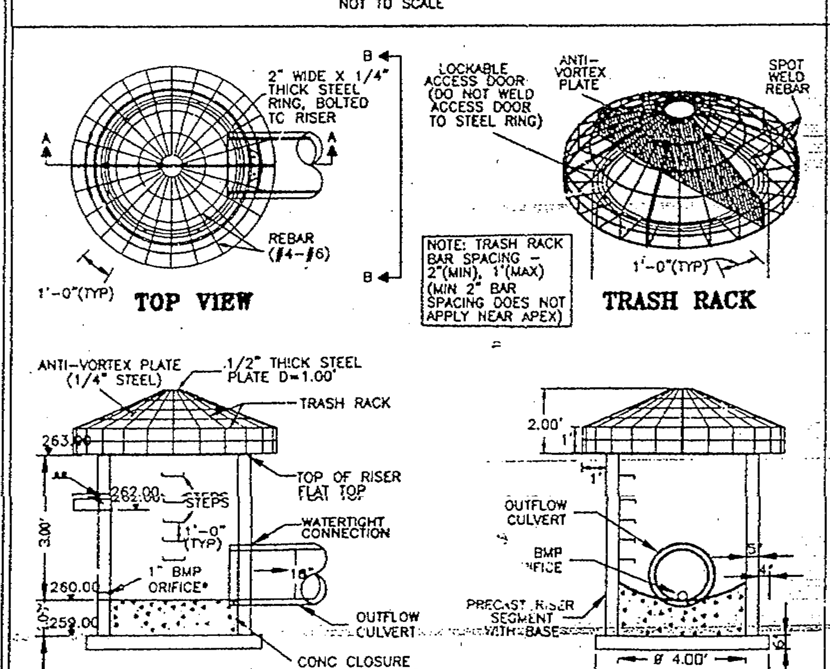



NOTE: SEE ALSO STORM SEWER PROFILE ON SHEET 8.

**DAM TYPICAL SECTION**
NOT TO SCALE




**BMP EXTENDED DRAWDOWN DEVICE**
NOT TO SCALE




* SEE DETAIL THIS SHEET
** 3" SEDIMENT BASIN DEWATERING ORIFICE. SEE DETAIL ON SHEET 7. SAW CUT AND PURGE W/GROUT AFTER SITE HAS BEEN STABILIZED.

**PRIMARY SPILLWAY**
NOT TO SCALE

## ROUTING RESULTS

AREA=4.32(on-site)+1.70(off-site)=6.02AC
WEIGHTED C=0.51

| 2 YEAR TIME | IN | OUT | ELEV | 10 YEAR TIME | IN | OUT | ELEV | 100 YEAR TIME | IN | OUT | ELEV | 1.5x100 YEAR TIME | IN | OUT | ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| min | cfs | cfs | ft | min | cfs | cfs | ft | min | cfs | cfs | ft | min | cfs | cfs | ft |
| 0 | 0.00 | 0.00 | 260.00 | 0 | 0.00 | 0.00 | 260.00 | 0 | 0.00 | 0.00 | 264.00 | 0 | 0.00 | 0.00 | 264.00 |
| 5 | 7.83 | 0.00 | 261.67 | 5 | 8.60 | 0.00 | 262.03 | 5 | 14.01 | 6.15 | 264.36 | 5 | 21.02 | 10.07 | 264.51 |
| 10 | 14.01 | 0.03 | 262.84 | 10 | 18.03 | 0.03 | 263.26 | 10 | 30.83 | 25.86 | 264.59 | 10 | 46.25 | 40.31 | 264.78 |
| 15 | 10.35 | 2.12 | 263.40 | 15 | 13.78 | 8.57 | 263.54 | 15 | 24.63 | 28.28 | 264.42 | 15 | 36.95 | 42.07 | 264.54 |
| 20 | 7.19 | 8.40 | 263.32 | 20 | 9.56 | 8.96 | 263.52 | 20 | 16.90 | 18.62 | 264.34 | 20 | 25.35 | 27.35 | 264.45 |
| 25 | 5.54 | 6.32 | 263.27 | 25 | 7.40 | 8.69 | 263.36 | 25 | 13.32 | 14.30 | 264.30 | 25 | 19.88 | 21.31 | 264.39 |
| 30 | 4.54 | 5.01 | 263.24 | 30 | 6.06 | 7.19 | 263.28 | 30 | 10.89 | 11.68 | 264.26 | 30 | 16.34 | 17.36 | 264.34 |
| 35 | 3.81 | 4.16 | 263.21 | 35 | 5.09 | 5.54 | 263.25 | 35 | 9.25 | 9.83 | 264.24 | 35 | 13.88 | 14.59 | 264.31 |
| 40 | 3.23 | 3.51 | 263.19 | 40 | 4.28 | 4.67 | 263.23 | 40 | 8.26 | 8.59 | 264.22 | 40 | 12.39 | 12.80 | 264.29 |
| 45 | 2.77 | 3.11 | 263.17 | 45 | 3.68 | 3.97 | 263.21 | 45 | 7.35 | 7.68 | 264.20 | 45 | 11.03 | 11.54 | 264.27 |
| 50 | 2.38 | 2.72 | 263.15 | 50 | 3.17 | 3.41 | 263.19 | 50 | 6.77 | 6.97 | 264.20 | 50 | 10.16 | 10.45 | 264.25 |
| 55 | 2.10 | 2.37 | 263.13 | 55 | 2.80 | 3.10 | 263.17 | 55 | 6.36 | 6.56 | 264.19 | 55 | 9.54 | 9.77 | 264.24 |
| 60 | 1.83 | 2.07 | 263.11 | 60 | 2.44 | 2.75 | 263.15 | 60 | 6.01 | 6.18 | 264.18 | 60 | 9.02 | 9.21 | 264.23 |
| 65 | 1.67 | 1.84 | 263.10 | 65 | 2.22 | 2.44 | 263.14 | 65 | 5.52 | 5.76 | 264.17 | 65 | 8.28 | 8.58 | 264.22 |
| 70 | 1.52 | 1.66 | 263.09 | 70 | 2.04 | 2.22 | 263.12 | 70 | 5.02 | 5.27 | 264.16 | 70 | 7.53 | 7.83 | 264.21 |
| 75 | 1.37 | 1.50 | 263.08 | 75 | 1.83 | 2.01 | 263.11 | 75 | 4.53 | 4.76 | 264.15 | 75 | 6.80 | 7.07 | 264.19 |
| 80 | 1.22 | 1.35 | 263.07 | 80 | 1.61 | 1.80 | 263.10 | 80 | 4.00 | 4.25 | 264.13 | 80 | 6.00 | 6.37 | 264.18 |
| 85 | 1.07 | 1.20 | 263.06 | 85 | 1.43 | 1.60 | 263.08 | 85 | 3.50 | 3.74 | 264.12 | 85 | 5.25 | 5.61 | 264.16 |
| 90 | 0.91 | 1.05 | 263.06 | 90 | 1.22 | 1.40 | 263.07 | 90 | 3.01 | 3.24 | 264.11 | 90 | 4.52 | 4.88 | 264.14 |
| 95 | 0.76 | 0.88 | 263.05 | 95 | 1.00 | 1.19 | 263.06 | 95 | 2.51 | 2.75 | 264.10 | 95 | 3.77 | 4.12 | 264.13 |
| 100 | 0.61 | 0.74 | 263.04 | 100 | 0.82 | 0.98 | 263.05 | 100 | 2.02 | 2.31 | 264.09 | 100 | 3.03 | 3.37 | 264.11 |
| 105 | 0.46 | 0.59 | 263.03 | 105 | 0.61 | 0.79 | 263.04 | 105 | 1.52 | 1.82 | 264.07 | 105 | 2.28 | 2.64 | 264.10 |
| 110 | 0.30 | 0.44 | 263.02 | 110 | 0.40 | 0.58 | 263.03 | 110 | 0.99 | 1.44 | 264.05 | 110 | 1.49 | 2.05 | 264.07 |
| 115 | 0.15 | 0.28 | 263.01 | 115 | 0.21 | 0.38 | 263.01 | 115 | 0.49 | 0.94 | 264.03 | 115 | 0.74 | 1.37 | 264.04 |
| 120 | 0.00 | 0.13 | 263.00 | 120 | 0.00 | 0.18 | 263.00 | 120 | 0.00 | 0.44 | 264.01 | 120 | 0.00 | 0.65 | 264.01 |

## STAGE/STORAGE/DISCHARGE TABLE

| STAGE FT | STORAGE CF | ELEVATION FT | OUTFLOW CULVERT CFS | BMP ORIFICE CFS | PRIMARY SPILLWAY CFS | EMERGENCY SPILLWAY CFS | DISCHARGE CFS |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 260.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 3600 | 262.00 | 5.99 | 0.02 | 0.00 | 0.00 | 0.02 |
| 4 | 12203 | 264.00 | 10.97 | 0.00 | 37.68 | 0.00 | 10.97 |
| 5 | 19692 | 265.00 | 12.75 | 0.00 | 106.58 | 78.00 | 90.75 |
| 5.5 | 23188 | 265.50 | 13.56 | 0.00 | 148.94 | 143.30 | 156.85 |

## POND DATA

### ELEVATION/STORAGE TABLE

| ELEVATION (FT) | DEPTH (FT) | CONTOUR AREA (SF) | AVG AREA (SF) | INC. STORAGE (CF) | TOTAL STORAGE (CF) |
|---|---|---|---|---|---|
| | | 0 | | | 0 |
| | | | 0 | 0 | |
| 260.00 | | 0 | | | 0 |
| | 2.00 | | 1,800 | 3,600 | |
| 262.00 | | 3,600 | | | 3,600 |
| | 2.00 | | 4,802 | 9,603 | |
| 264.00 | | 6,003 | | | 13,203 |
| | 1.00 | | 6,489 | 6,489 | |
| 265.00 | | 6,875 | | | 19,692 |
| | 0.50 | | 8,993 | 4,496 | |
| 265.50 | | 11,010 | | | 24,188 |

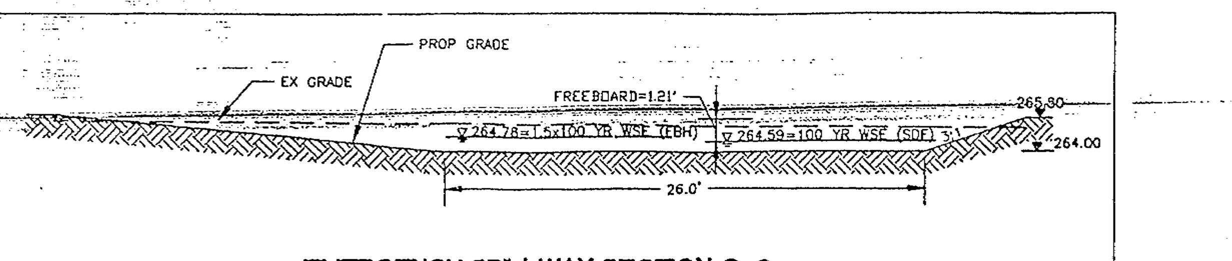
BMP STORAGE REQUIRED= 4537 CF
BMP ELEVATION= 262.20 FT

### CULVERT/ORIFICE STRUCTURES

| | | | OUTFLOW CULVERT | BMP ORIFICE |
|---|---|---|---|---|
| RISE | (IN) | = | 18 | 1 |
| SPAN | (IN) | = | 18 | 1 |
| NO. OF BARRELS | | = | 1 | 1 |
| INVERT ELEV. | (FT) | = | 260.00 | 260.00 |
| LENGTH | (FT) | = | 180.5 | 0 |
| SLOPE | (%) | = | 1.22 | 0 |
| N VALUE | | = | 0.013 | 0.013 |
| ORIF. COEFF. | | = | 0.6 | 0.6 |
| MULTI-STAGE | | = | N/A | YES |

### WEIR STRUCTURES

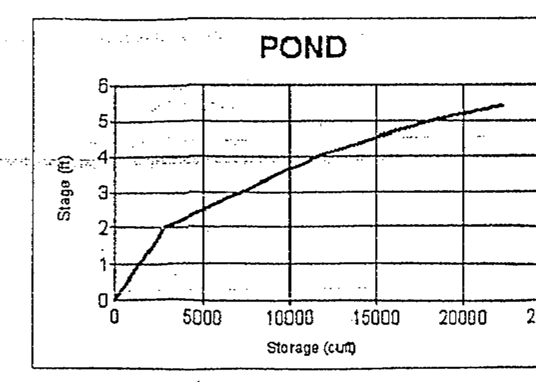
| | | | PRIMARY SPILLWAY | SECONDARY SPILLWAY |
|---|---|---|---|---|
| CREST LENGTH | (FT) | = | 12.6 | 26.0 |
| CREST ELEVATION | (FT) | = | 263.00 | 264.00 |
| WEIR COEFFICIENT | | = | 3.0 | 3.0 |
| EQN. EXP. | | = | 1.5 | 1.5 |
| MULTI-STAGE | | = | YES | NO |

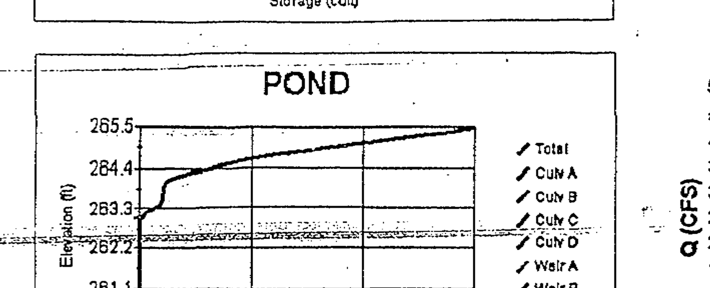



**EMERGENCY SPILLWAY SECTION C-C**
SCALE 1"=5'

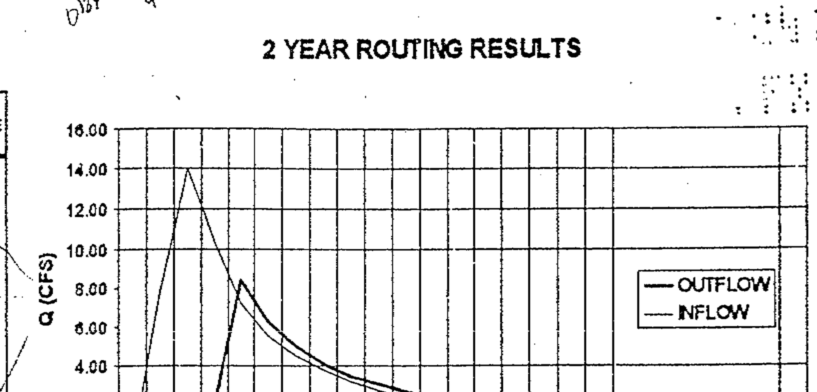
### ANTI-FLOTATION COMPUTATIONS FOR OUTLET STRUCTURE

| | | |
|---|---|---|
| CONCRETE UNIT WEIGHT= | | 150 LBS/CF |
| WATER UNIT WEIGHT= | | 62.4 LBS/CF |
| WALLS: | INSIDE DIAMETER= | 4 FT |
| | FOOTPRINT AREA= | 2.75 SF |
| | HEIGHT= | 4.00 FT |
| | VOLUME= | 11.02 CF |
| | WEIGHT= | 1653 LBS |
| BOTTOM SLAB: | DIAMETER= | 5.50 FT |
| | AREA= | 23.76 SF |
| | THICKNESS= | 0.50 FT |
| | VOLUME= | 11.88 CF |
| | WEIGHT= | 1782 LBS |
| BOTTOM FILL | AREA= | 12.57 SF |
| | HEIGHT= | 1.00 FT |
| | VOLUME= | 12.57 CF |
| | WEIGHT= | 1885 LBS |
| TOTAL WEIGHT OF STRUCTURE= | | 5319.44 LBS |
| | DISPLACED VOLUME OF SLAB= | 11.88 CF |
| | TOP OF STRUCTURE ELEVATION= | 263.00 FT |
| | TOP OF SLAB ELEVATION= | 260.00 FT |
| | HEIGHT FOR BUOYANCY= | 3.00 FT |
| | OUTSIDE AREA OF RISER= | 15.32 SF |
| | DISPLACED VOLUME OF RISER= | 45.96 CF |
| | TOTAL VOLUME DISPLACED= | 57.84 CF |
| BUOYANCY= | | 3609.30 LBS |
| SAFETY FACTOR=STUCTURE WEIGHT/BUOYANCY= | | 1.47 |

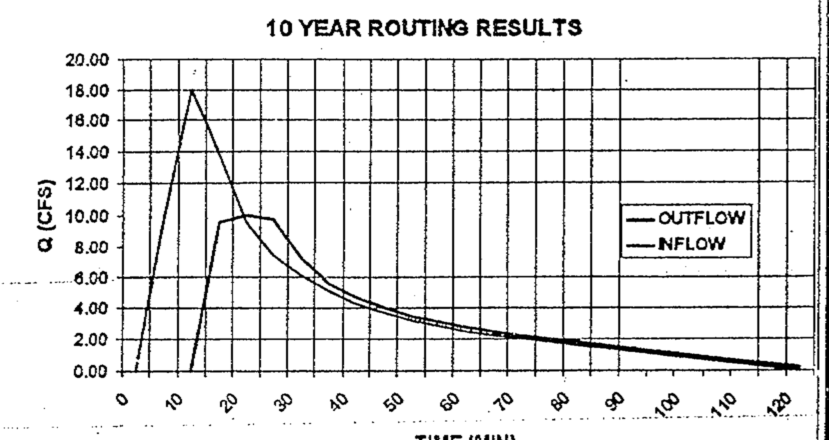


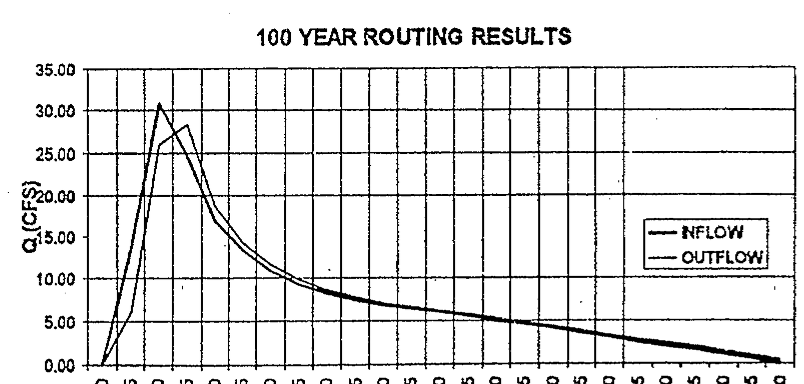

**2 YEAR ROUTING RESULTS**



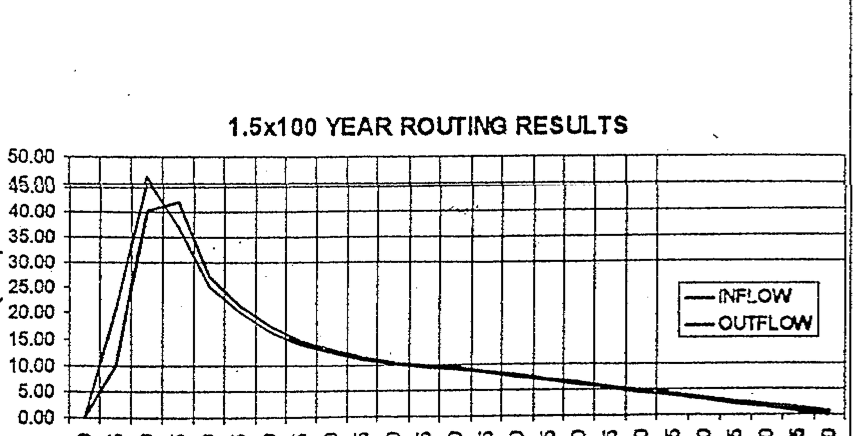

**10 YEAR ROUTING RESULTS**




**100 YEAR ROUTING RESULTS**




**1.5x100 YEAR ROUTING RESULTS**




Bengtson, DeBell & Elkin
a division of BURGESS & NIPLE
ENGINEERS ■ SURVEYORS ■ PLANNERS ■ LANDSCAPE ARCHITECTS
4160 PLEASANT VALLEY ROAD, CHANTILLY, VA 20151-1226
PH. (703) 631-9630 FAX (703) 631-6041

| REVISIONS | DATE |
|---|---|
| 2ND SUBMISSION COMMENTS | 12-02-99 |
| POND DATA REVISED (NEW DISTRIBUTION LINES ADDED) | 01-05-00 |

STORMWATER MANAGEMENT
VIRGINIA POWER
WALNEY SUBSTATION
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

DATE: AUGUST 11, 1999
SCALE: AS SHOWN
DESIGN: KIB DRAWN: MLC
CHECK: CJL CHECK: CJL
JOB NO.: 24729
P.R. NO.: 89c022
SHEET 10 OF 13
FILE NO.: C-3955

"FOR INFORMATION ONLY"

14714 OLD LEE ROAD
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
BMP & STORM WATER MANAGEMENT EXHIBIT
HAROLD A. LOGAN — ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132
SHEET 8 OF 11
P1942

PCA
Application No. 87-S-061 Staff JP
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 5.1.06
Date of (BOS) (PC) approval 5.15.06
Sheet 8 of 11

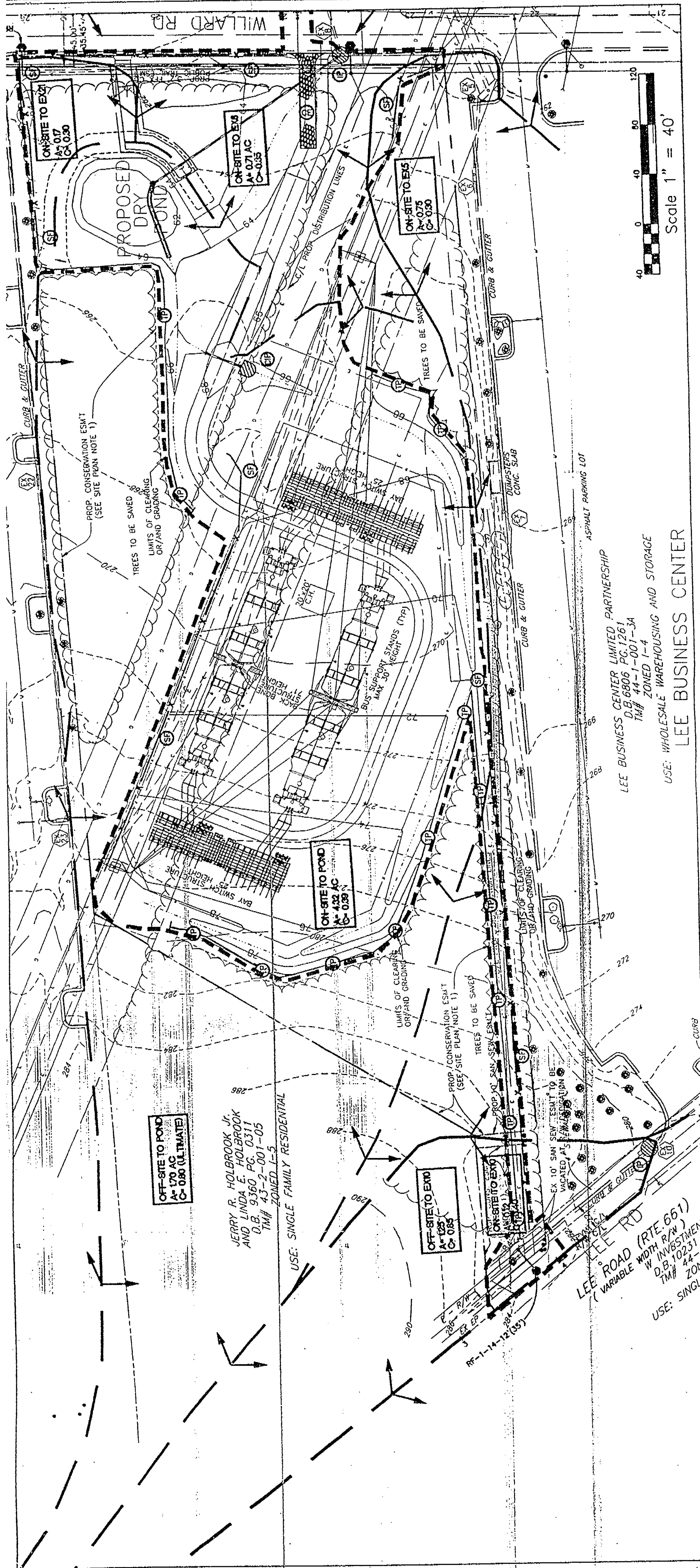
Bengtson, DeBell & Elkin
a division of BURGESS & NIPLE
ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
4160 PLEASANT VALLEY ROAD, CHANTILLY, VA 20151-1226
PH. (703) 631-9630 FAX (703) 631-6041

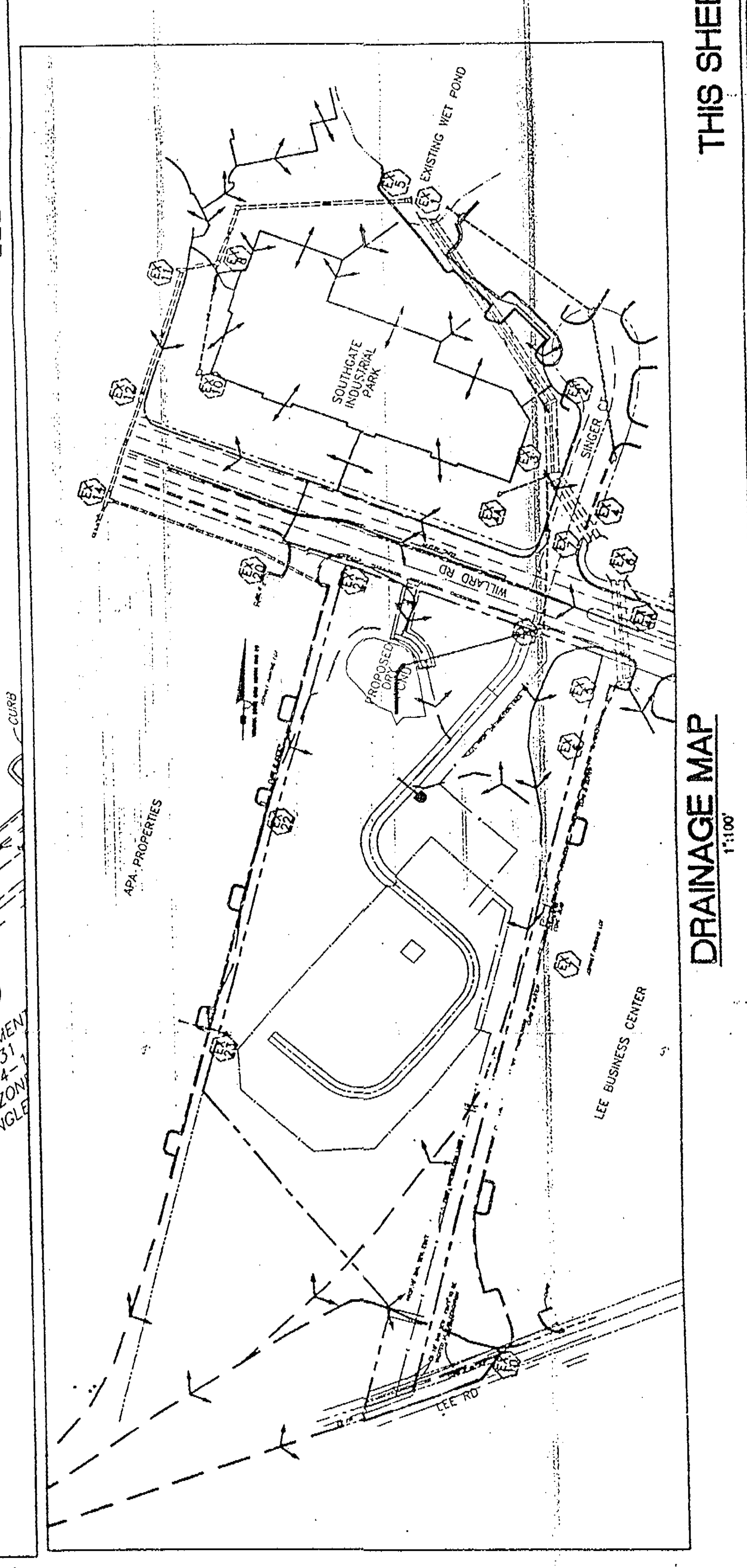
| REVISIONS | DATE |
|---|---|
| 2ND SUBMISSION COMMENTS | 11-24-99 |
| SF, TP ALONG NEW DISTR LINES | 01-05-00 |

EROSION CONTROL PHASE II AND DRAINAGE DIVIDES
VIRGINIA POWER
WALNEY SUBSTATION
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

DENNIS M. THOMAS No. 021291 PROFESSIONAL ENGINEER — COMMONWEALTH OF VIRGINIA

| | |
|---|---|
| DATE: AUGUST 11, 1999 | |
| SCALE: AS SHOWN | |
| DESIGN: KIB | DRAWN: MLC |
| CHECK: CJL | CHECK: CJL |
| JOB NO.: 24729 | |
| P.R. NO.: 89c022 | |
| SHEET 8 OF 13 | |
| FILE NO.: C-3955 | |




DRAINAGE MAP
1"=100'

THIS SHEET FOR EROSION CONTROL AND DRAINAGE MAP ONLY!!!

Bengtson, DeBell & Elkin
a division of BURGESS & NIPLE
ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
4160 PLEASANT VALLEY ROAD, CHANTILLY, VA 20151-1226
PH. (703) 631-9630 FAX (703) 631-6041

| REVISIONS | DATE |
|---|---|
| 2ND SUBMISSION COMMENTS | 11-24-99 |
| BMP MAP AND COMPS REVISED (NEW DISTRIBUTION LINES ADDED) | 01-05-00 |

SWM/BMP COMPUTATIONS
VIRGINIA POWER
WALNEY SUBSTATION
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

| | |
|---|---|
| DATE: AUGUST 11, 1999 | |
| SCALE: 1"=100' | |
| DESIGN: KIB | DRAWN: MLC |
| CHECK: CJL | CHECK: CJL |
| JOB NO.: 24729 | |
| P.R. NO.: 89c022 | |
| SHEET 9 OF 13 | |
| FILE NO.: C-3955 | |

## STORM WATER DETENTION COMPUTATIONS

**PRE-DEVELOPMENT RUNOFF**

TOTAL SITE AREA A= 6.08 AC
TIME OF CONCENTRATION Tc= 15 MIN (SEE THIS SHEET)
RAINFALL INTENSITY I(2YR)= 3.90 IN/HR; I(10YR)= 5.10 IN/HR
RUNOFF COEFFICIENT FOR 2 YEAR STORM: UNIMPROVED AREA= 4.50 AC C= 0.15; EASEMENT AREA= 1.58 AC C= 0.35; C(2YR)= 0.20
FOR 10 YEAR STORM: C(10YR)= 0.30
RUNOFF Q(2YR) = 0.20 * 3.90 * 6.08 = 4.74 CFS; Q(10YR) = 0.30 * 5.10 * 6.08 = 9.30 CFS

**POST-DEVELOPMENT RUNOFF**

UNDETAINED A= 1.76 AC, C= 0.32
ONSITE TO DETENTION A= 4.32 AC, C= 0.39
OFF-SITE TO POND A= 1.70 AC, C= 0.80 (ULTIMATE)
TIME OF CONCENTRATION Tc= 10 MIN (SEE THIS SHEET)
RAINFALL INTENSITY I(2YR)= 4.60 IN/HR; I(10YR)= 5.92 IN/HR; I(100YR)= 8.10 IN/HR

UNDETAINED ON-SITE RUNOFF
Q(2YR) = 0.32 * 4.60 * 1.76 = 2.59 CFS
Q(10YR) = 0.32 * 5.92 * 1.76 = 3.33 CFS

DETAINED ONSITE RUNOFF
Q(2YR) = 0.39 * 4.60 * 4.32 = 7.75 CFS
Q(10YR) = 0.39 * 5.92 * 4.32 = 9.97 CFS
Q(100YR)=1.25 * 0.39 * 8.10 * 4.32 = 17.06 CFS

OFF-SITE RUNOFF TO POND
Q(2YR) = 0.80 * 4.60 * 1.70 = 6.26 CFS
Q(10YR) = 0.80 * 5.92 * 1.70 = 8.05 CFS
Q(100YR)=1.25 * 0.80 * 8.10 * 1.70 = 13.77 CFS

TOTAL RUNOFF TO POND
Q(2YR) = 14.01 CFS
Q(10YR) = 18.03 CFS
Q(100YR) = 30.83 CFS

**ALLOWABLE RUNOFF**

Q(ALLOW)=Q(PRE-DEVELOPED)-Q(UNDETAINED)+Q(OFFSITE)
Q(2YR) = 4.74 - 2.59 + 6.26 = 8.41 CFS
Q(10YR) = 9.30 - 3.33 + 8.05 = 14.02 CFS

**ROUTING RESULTS (POST DEVELOPMENT OUTFLOW FROM POND)**

| 2YR | 10YR | 100YR |
|---|---|---|
| 6.40 CFS | 8.86 CFS | 28.29 CFS |

SINCE THE ROUTED 10 YEAR FLOW IS LESS THAN THE MAXIMUM ALLOWABLE 10 YEAR RUNOFF, THE REQUIRED DETENTION IS ACHIEVED.

## STORMWATER MANAGEMENT NARRATIVE

AN EXTENDED DETENTION DRY POND IS PROVIDED FOR BMP AND PEAK SHAVING.

BOTH THE 2 YEAR AND THE 10 YEAR PEAK OUTFLOW IS LESS THAN THE RESPECTIVE ALLOWABLE OUTFLOWS FOR THIS SITE. THE PRIMARY SPILLWAY CARRIES THE 2 AND 10 YEAR FLOWS. THE EMERGENCY SPILLWAY HAS BEEN PLACED ON UNDISTURBED GROUND. THE PROPOSED DAM IS CLASS D PER PFM PLATE 64.6. BOTH THE SPILLWAY DESIGN FLOOD (SDF=100 YEAR) AND THE FREEBOARD DESIGN HYDROGRAPH (FBH=1.5x100 YEAR) HAVE BEEN ROUTED WITH THE PRIMARY SPILLWAY BEING ASSUMED TO BE CLOGGED.

FOR THE DETENTION COMPUTATIONS SEE THIS SHEET. THE ROUTING RESULTS, HYDROGRAPHS, POND AND SPILLWAY INFORMATION ARE ON SHEET 11.

THE SDF (28.3 CFS) IS CONVEYED IN THE EMERGENCY SPILLWAY CHANNEL ON THE SITE. A STORM DRAINAGE EASEMENT HAS BEEN PROPOSED AROUND THE SPILLWAY DESIGN FLOOD (28.3 CFS) ELEVATION UP TO THE PROPERTY LINE. WITHIN THE RIGHT OF WAY OF WILLARD ROAD, THE EMERGENCY FLOW TRAVELS TO INLET EX8 AT THE LOW POINT OF THE ROAD. AS THE THROAT CAPACITY OF THE STORM SEWER STRUCTURE IS EXCEEDED, THE EXCESS WATER PONDS IN THE ROADWAY SUMP, UP TO THE CROWN OF THE ROAD. IT OVERTOPS THE CROWN OF WILLARD ROAD, AND FLOWS TO SINGER COURT. THIS REMAINING PART OF THE EMERGENCY FLOW REMAINS WITHIN THE RIGHT OF WAY OF SINGER COURT, AND ENTERS INTO THE EXISTING STORM DRAIN SYSTEM THROUGH THE INLET STRUCTURES ON SINGER COURT. THE EXISTING STORM DRAIN SYSTEM DISCHARGES INTO THE EXISTING WET POND. AS DESCRIBED ABOVE, THE EMERGENCY FLOW STAYS WITHIN THE PROPOSED STORM DRAIN EASEMENT AND WITHIN THE RIGHT OF WAY UNTIL IT REACHES AN ADEQUATE STORM DRAIN SYSTEM.

THE PROPOSED DRY POND IS PRIVATELY MAINTAINED BY VIRGINIA ELECTRIC AND POWER COMPANY. A PRIVATE MAINTENANCE AGREEMENT WILL BE EXECUTED BEFORE THE CONSTRUCTION PLAN IS APPROVED.

## WATER QUALITY NARRATIVE

THE SITE IS LOCATED IN THE OCCOQUAN WATERSHED AND IS SUBJECT TO 50% PHOSPHORUS REMOVAL.

IN ORDER TO ACHIEVE THE REQUIRED LEVEL OF PHOSPHORUS REMOVAL, THE FOLLOWING MEASURES HAVE BEEN USED: AN EXTENDED DETENTION DRY POND AND TWO SEPARATE OPEN SPACE AREAS. THE DRY POND PROVIDES BOTH BMP AND PEAK SHAVING. CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED ON THE SITE TO PRESERVE UNDEVELOPED AREAS AS QUALIFYING OPEN SPACE.

1.7 ACRES OF OFF-SITE AREA IS DRAINING TO THE POND. SINCE THIS AREA IS DEVELOPED WITHOUT CONTROLS, 20% OF IT WAS INCLUDED IN THE BMP COMPUTATIONS.

THE POND IS PRIVATELY MAINTAINED BY VIRGINIA ELECTRIC AND POWER COMPANY. A PRIVATE MAINTENANCE AGREEMENT WILL BE EXECUTED BEFORE THE CONSTRUCTION PLAN IS APPROVED.

## BMP FACILITY DESIGN CALCULATIONS

Part 1: LIST OF SUBAREAS AND "C" FACTORS USED

| SUBAREA DESIGNATION AND DESCRIPTION | C | ACRES |
|---|---|---|
| (1) ON-SITE TO POND MINUS (2) | 0.42 | 3.36 |
| (2) OPEN SPACE TO POND | 0.30 | 0.98 |
| (3) OPEN SPACE UNCONTROLLED | 0.30 | 0.31 |
| (4) ON-SITE UNCONTROLLED | 0.32 | 1.45 |
| (5) OFF-SITE TO POND | 0.80 | 1.70 |

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

(A) AREA OF THE SITE: 6.08 AC
(B) SUBAREA DESIGNATION

| | C | X | ACRES | = PRODUCT |
|---|---|---|---|---|
| (1) ON-SITE TO POND MINUS (2) | 0.42 | | 3.36 | 1.41 |
| (2) OPEN SPACE TO POND | 0.30 | | 0.98 | 0.29 |
| (3) OPEN SPACE UNCONTROLLED | 0.30 | | 0.31 | 0.09 |
| (4) ON-SITE UNCONTROLLED | 0.32 | | 1.45 | 0.47 |
| | | | TOTAL= 6.09 | TOTAL= 2.26 |

WEIGHTED AVERAGE "C" FACTOR FOR THE SITE= 2.26 / 6.08 = 0.37

Part 3: COMPUTE THE TOTAL PHOSPHORUS REMOVAL FOR THE SITE

| SUBAREA DESIGNATION | BMP TYPE | REMOVAL EFFICIENCY | OFF-SITE | AREA RATIO | "C" FACTOR RATIO | PRODUCT |
|---|---|---|---|---|---|---|
| (1) | DRY POND | 40 | | 3.36 / 6.08 = 0.55 | 0.42 / 0.37 = 1.13 | 24.96 |
| (2) | OPEN SPACE | 100 | | 0.98 / 6.08 = 0.16 | 1.00 | 15.79 |
| (3) | OPEN SPACE | 100 | | 0.31 / 6.08 = 0.05 | 1.00 | 5.10 |
| (4) | NONE | 0 | | 1.45 / 6.08 = 0.24 | 0.32 / 0.37 = 0.87 | 0.00 |
| (5) | DRY POND (OFF-SITE) | 40 | 0.20 | 1.70 / 6.08 = 0.28 | 0.80 / 0.37 = 2.16 | 4.82 |
| | | | | | TOTAL SITE PHOSPHORUS REMOVAL = | 50.67 |

Part 4: DETERMINE COMPLIANCE WITH PHOSPHORUS REMOVAL REQUIREMENT

REQUIREMENT FOR WATER SUPPLY OVERLAY DISTRICT (OCCOQUAN WATERSHED): 50%
SITE PHOSPHORUS REMOVAL= 50.67 % > 50.00 %
THE PHOSPHORUS REMOVAL REQUIREMENT IS SATISFIED.

Part 5: DETERMINE COMPLIANCE WITH SITE COVERAGE REQUIREMENT

| SUBAREA DESIGNATION | C | X | ACRES | = PRODUCT |
|---|---|---|---|---|
| (4) ON-SITE UNCONTROLLED | 0.32 | | 1.45 | 0.47 |

(A) TOTAL EQUIVALENT UNCONTROLLED AREA (4) TOTAL= 0.47
(B) TOTAL UNCONTROLLED AREA (B) 1.45
(C) WEIGHTED AVERAGE "C" FACTOR (A)/(B)=(C) 0.32
(D) NOT APPLICABLE

Part 6: DETERMINE THE OFF SITE AREAS FOR WHICH COVERAGE IS REQUIRED

| SUBAREA DESIGNATION | C' | X | ACRES | = PRODUCT |
|---|---|---|---|---|
| (5) OFF-SITE TO POND (SEE PART 3) | 0.80 | X | 0.20 X 1.70 | 0.27 |
| | | | (6) TOTAL= | 0.27 |

**STORAGE**

Part 7: COMPUTE THE WEIGHTED C FACTOR FOR THE PROPOSED BMP FACILITY

| SUBAREA DESIGNATION | C | | ACRES | PRODUCT |
|---|---|---|---|---|
| (1) ON-SITE TO POND MINUS (2) | 0.42 | x | 3.36 = | 1.41 |
| (2) OPEN SPACE TO POND | 0.30 | x | 0.98 = | 0.29 |
| (5) OFF-SITE TO POND | 0.80 x 0.20 | x | 1.70 = | 0.27 |
| | | | 4.66 | 1.97 |

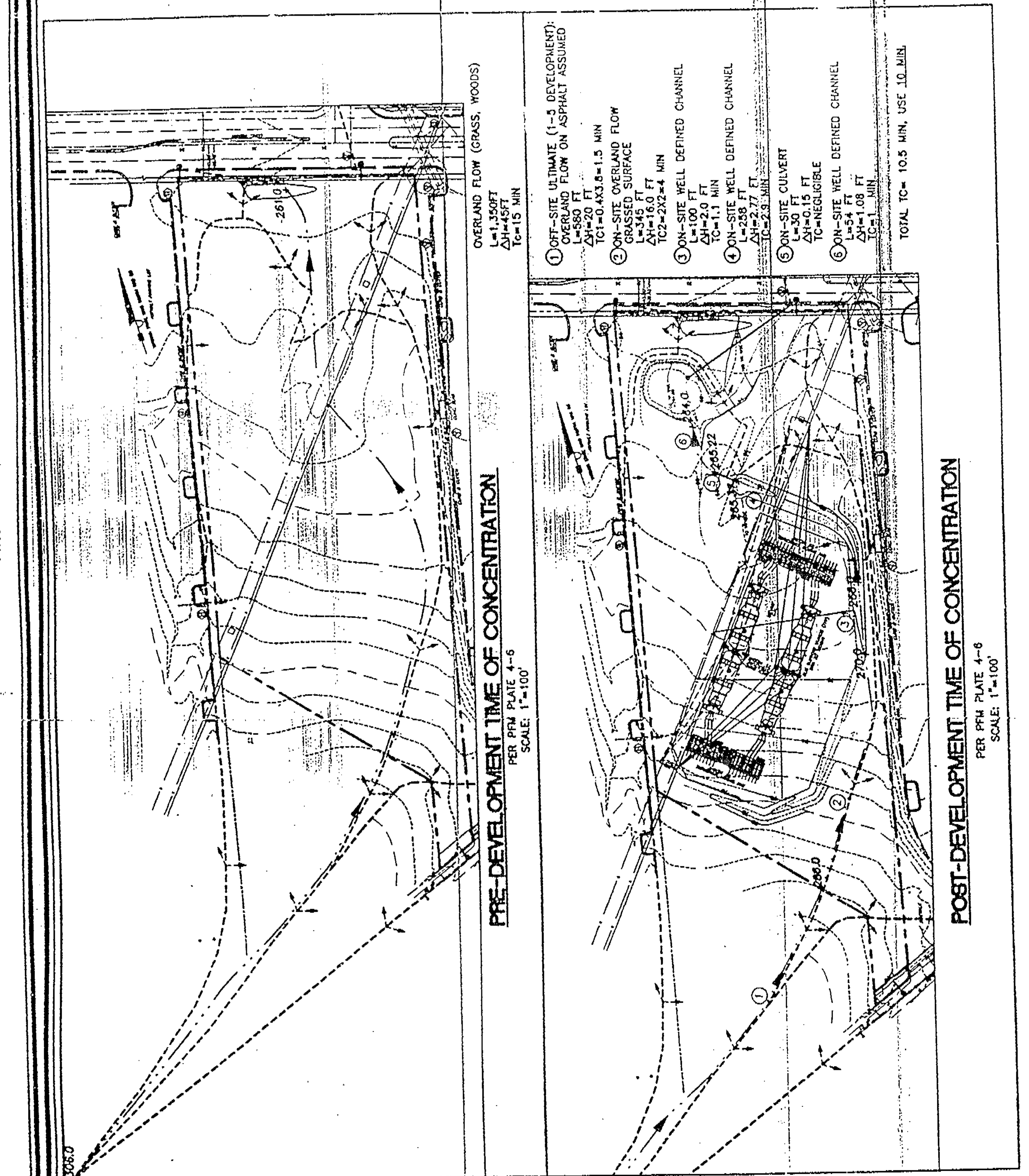
WEIGHTED AVERAGE C FACTOR= 0.42

Part 8: DETERMINE THE STORAGE REQUIRED

(A) EXTENDED DETENTION DRY POND
Chart A6-40 value for BMP storage per acre [(4375 x C) - 675]= 974 CF/AC
Design 1 (48 hour drawdown) 4.66 x 974 = 4537 CF

Part 9: DETERMINE THE REQUIRED ORIFICE SIZE

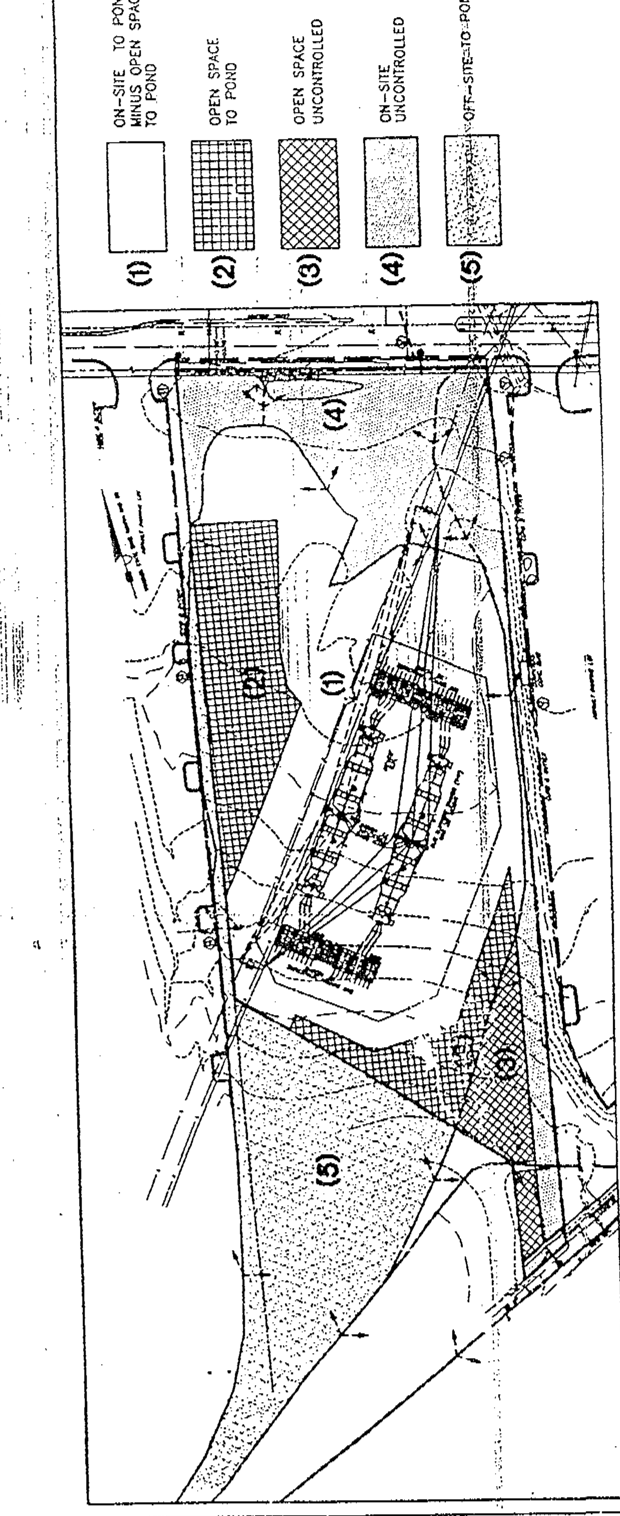
(A) BMP STORAGE REQUIREMENT S = 4537 CF
(B) MAXIMUM HEAD (h) AT THE REQUIRED BMP STORAGE FROM THE ELEVATION-STORAGE CURVE h = 2.53 FT
(C) PEAK OUTFLOW RATE (Qp) AT THE MAXIMUM HEAD FOR A DRAWDOWN TIME OF 48 HRS: Qp = S / (0.5 x 3600 x 48) = 0.053 CFS
(D) REQUIRED ORIFICE AREA (A) A = Qp / [0.6 x (64.4 x h)^0.5] = 0.0069 SF
(E) DIAMETER OF A CIRCULAR ORIFICE d = 2 x (A / 3.14)^0.5 = 0.093 FT = 1.121 IN USE 1.00 IN




PRE-DEVELOPMENT TIME OF CONCENTRATION
PER PFM PLATE 4-6
SCALE: 1"=100'

POST-DEVELOPMENT TIME OF CONCENTRATION
PER PFM PLATE 4-6
SCALE: 1"=100'

(1) ON-SITE TO POND MINUS OPEN SPACE TO POND
(2) OPEN SPACE TO POND
(3) OPEN SPACE UNCONTROLLED
(4) ON-SITE UNCONTROLLED
(5) OFF-SITE TO POND




BMP MAP
SCALE: 1"=100'

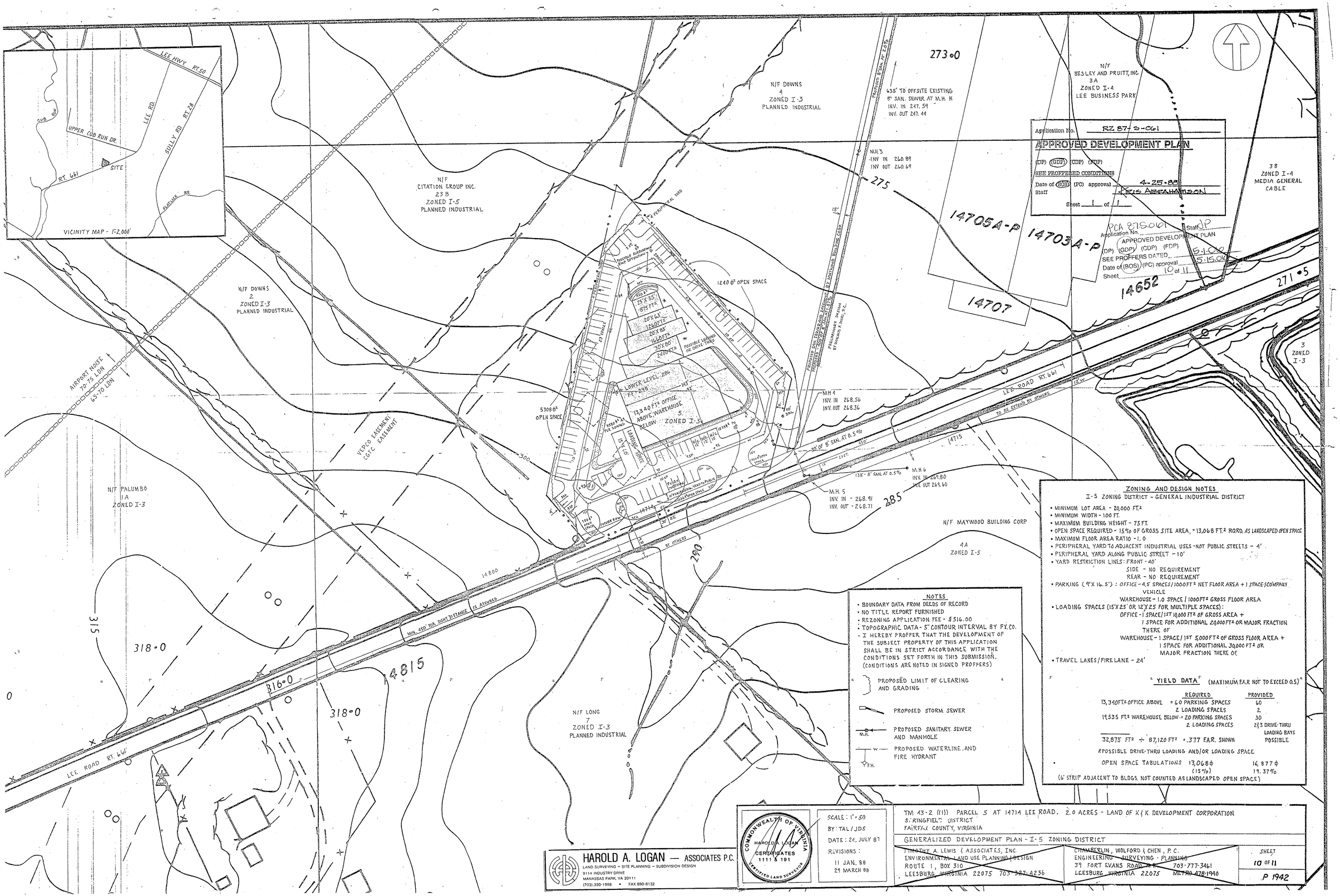
"FOR INFORMATION ONLY"

PCA 87-S-061
Application No. ___ Staff JP
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 5.1.06
Date of (BOS) (PC) approval 5.15.06
Sheet 9 of 11

14714 OLD LEE ROAD
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
BMP & STORM WATER MANAGEMENT EXHIBIT

HAROLD A. LOGAN — ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132

SHEET 9 OF 11
P1942




Application No. RZ 87-S-061
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERED CONDITIONS
Date of (BOS) (PC) approval 4-25-88
Staff KRIS ABRAHAMSON
Sheet 1 of 11

PCA 87-S-061 Staff JP
Application No.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 5.1.00
Date of (BOS) (PC) approval 5.15.00
Sheet 10 of 11

## ZONING AND DESIGN NOTES

I-5 ZONING DISTRICT - GENERAL INDUSTRIAL DISTRICT

- MINIMUM LOT AREA - 20,000 FT.²
- MINIMUM WIDTH - 100 FT.
- MAXIMUM BUILDING HEIGHT - 75 FT.
- OPEN SPACE REQUIRED - 15% OF GROSS SITE AREA, * 13,068 FT.² ROPD. AS LANDSCAPED OPEN SPACE
- MAXIMUM FLOOR AREA RATIO - 1.0
- PERIPHERAL YARD TO ADJACENT INDUSTRIAL USES - NOT PUBLIC STREETS - 4'
- PERIPHERAL YARD ALONG PUBLIC STREET - 10'
- YARD RESTRICTION LINES: FRONT - 40'
  SIDE - NO REQUIREMENT
  REAR - NO REQUIREMENT
- PARKING (9'X 16.5'): OFFICE - 4.5 SPACES / 1000 FT.² NET FLOOR AREA + 1 SPACE / COMPANY VEHICLE
  WAREHOUSE - 1.0 SPACE / 1000 FT.² GROSS FLOOR AREA
- LOADING SPACES (15'X 25' OR 12'X 25' FOR MULTIPLE SPACES):
  OFFICE - 1 SPACE / 1ST 10,000 FT.² OF GROSS AREA + 1 SPACE FOR ADDITIONAL 20,000 FT.² OR MAJOR FRACTION THERE OF
  WAREHOUSE - 1 SPACE / 1ST 5,000 FT.² OF GROSS FLOOR AREA + 1 SPACE FOR ADDITIONAL 30,000 FT.² OR MAJOR FRACTION THERE OF
- TRAVEL LANES / FIRE LANE - 24'

### YIELD DATA (MAXIMUM F.A.R NOT TO EXCEED 0.5)

| | REQUIRED | PROVIDED |
|---|---|---|
| 13,340 FT.² OFFICE ABOVE | = 40 PARKING SPACES | 60 |
| | 2 LOADING SPACES | 2 |
| 19,535 FT.² WAREHOUSE BELOW | = 20 PARKING SPACES | 30 |
| | 2 LOADING SPACES | 2 (3 DRIVE-THRU LOADING BAYS POSSIBLE |
| 32,875 FT.² ÷ 87,120 FT.² | = .377 F.A.R. SHOWN | |

*POSSIBLE DRIVE-THRU LOADING AND/OR LOADING SPACE

- OPEN SPACE TABULATIONS 13,068 ϕ (15%) 16,877 ϕ 19.37%

(6' STRIP ADJACENT TO BLDGS. NOT COUNTED AS LANDSCAPED OPEN SPACE)

## NOTES

- BOUNDARY DATA FROM DEEDS OF RECORD
- NO TITLE REPORT FURNISHED
- REZONING APPLICATION FEE - $516.00
- TOPOGRAPHIC DATA - 5' CONTOUR INTERVAL BY FX. CO.
- I HEREBY PROFFER THAT THE DEVELOPMENT OF THE SUBJECT PROPERTY OF THIS APPLICATION SHALL BE IN STRICT ACCORDANCE WITH THE CONDITIONS SET FORTH IN THIS SUBMISSION. (CONDITIONS ARE NOTED IN SIGNED PROFFERS)

PROPOSED LIMIT OF CLEARING AND GRADING

PROPOSED STORM SEWER

M.H. PROPOSED SANITARY SEWER AND MANHOLE

W PROPOSED WATERLINE, AND FIRE HYDRANT

F.H.

TM 43-2 ((1)) PARCEL 5 AT 14714 LEE ROAD. 2.0 ACRES - LAND OF K & K DEVELOPMENT CORPORATION
SPRINGFIELD DISTRICT
FAIRFAX COUNTY, VIRGINIA

GENERALIZED DEVELOPMENT PLAN - I-5 ZONING DISTRICT

TIMOTHY A. LEWIS & ASSOCIATES, INC.
ENVIRONMENTAL LAND USE PLANNING / DESIGN
ROUTE 1, BOX 310
LEESBURG, VIRGINIA 22075 703-527-4236

CHAMBERLIN, WOLFORD & CHEN, P.C.
ENGINEERING · SURVEYING · PLANNING
39 FORT EVANS ROAD, N.E. 703-777-3461
LEESBURG, VIRGINIA 22075 METRO 478-1940

SHEET 10 OF 11

P 1942

HAROLD A. LOGAN — ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132

COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
CERTIFICATES 1111 & 181
CERTIFIED LAND SURVEYOR

SCALE: 1" = 50
BY: TAL / JDS
DATE: 24. JULY 87
REVISIONS:
11 JAN. 88
29 MARCH 88

COMMONWEALTH OF VIRGINIA
COUNTY OF FAIRFAX
4100 CHAIN BRIDGE ROAD
FAIRFAX, VIRGINIA 22030

May 11, 1988

Timothy A. Lewis, Esquire
Timothy A. Lewis and Associates, Incorporated
Route 1, Box 310
Leesburg, Virginia 22075

Re: Rezoning Application
Number RZ 87-S-061

Dear Mr. Lewis:

Enclosed you will find a copy of an Ordinance adopted by the Board of Supervisors at a regular meeting held on April 25, 1988, granting, as proffered, Rezoning Application RZ 87-S-061 in the name of K and K Development Corporation, to rezone certain property in the Springfield District, subject to the executed revised proffers dated April 22, 1988, from the I-3 District, Airport Noise Impact Overlay District and Water Supply Protection Overlay District, to the I-5 District, Airport Noise Impact Overlay District and Water Supply Protection Overlay District on subject parcels 43-2 ((1)) 5 consisting of approximately 2.00 acres.

Very truly yours,

Ethel W. Register
Ethel W. Register, CMC, Agency Director
Office of the Clerk to the Board

EWR:ns
cc: Joseph T. Hix
Real Estate Division, Assessments
Gilbert R. Knowlton, Deputy
Zoning Administrator
Barbara A. Byron, Director
Zoning Evaluation Division
Fred R. Beales, Supervisor
Base Property Mapping/Overlay
Robert Moore, Transportation Planning Division,
Office of Transportation
Kathy Ichter, Transportation Road Bond Division,
Office of Transportation
Department of Environmental Management
A. V. Bailey, Resident Engineer
Virginia Department of Transportation

At a regular meeting of the Board of Supervisors of Fairfax County, Virginia, held in the Board Room in the Massey Building at Fairfax, Virginia, on the 25th day of April, 1988, the following ordinance was adopted:

AN ORDINANCE AMENDING THE ZONING ORDINANCE
PROPOSAL NO. RZ 87-S-061

WHEREAS, K and K Development Corporation, filed in the proper form, an application requesting the zoning of a certain parcel of land hereinafter described, from the I-3 District, Airport Noise Impact Overlay District and Water Supply Protection Overlay District to the I-5 District, Airport Noise Impact Overlay District and Water Supply Protection Overlay District, 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 Springfield District, and more particularly described as follows (see attached legal description):

Be, and hereby is, zoned to the I-5 District, Airport Noise Impact Overlay District and Water Supply Protection Overlay District and said property is subject to the use regulations of said I-5 District, Airport Noise Impact Overlay District and Water Supply Protection Overlay District and further restricted by the conditions proffered and accepted pursuant to Va. Code Ann., §15.1-491(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 25th day of April, 1988.

Ethel W. Register
Ethel W. Register, CMC, Agency Director
Office of the Clerk to the Board

PROFFER STATEMENTS FOR REZONING APPLICATION
RZ-87-S-061 BY
K&K DEVELOPMENT CORPORATION
FOR LAND AT 14714 LEE ROAD
TM 43-2 (1) PARCEL 5
2.0 ACRES

March 29, 1988
(Amended April 22, 1988)

Pursuant to Section 15.1-491(a) of the 1950 Code of Virginia, as amended, the undersigned hereby proffers the following conditions provided the property is rezoned to the I-5 General Industrial zoning district.

(1) Development shall be in substantial conformance with the Generalized Development Plan prepared by Timothy A. Lewis and Associates, Inc., revised March 29, 1988. For the purpose of this proffer, "Substantial conformance" shall have the meaning given in Section 18-204(3) of the Fairfax County Zoning Ordinance.

(2) The development of the subject property will be in conformance with the GDP, with the exception that the floor area ratio will not exceed .5.

(3) Any external storage shall not be visible from Lee Road.

(4) Adequate sight distance shall be accomplished for both proposed entrances onto Lee Road as per VDOT intersection and stopping-sight distance criteria. Entrance geometry will be as per VDOT standards.

(5) Full frontage improvements shall be provided along Lee Road which shall include a dedication to 30' from centerline and construction to the face of curb at 22' from the existing centerline of Lee Road. In the event that minor field variations exist in the actual existing face of curb on adjacent properties, then, subject to approval and acceptance by the VDOT, the applicant agrees to match the face of curb and pavment improvements.

(6) A minimum of 15% landscape open space shall be provided as shown on GDP. This plan is subject to the review and the approval prior to the time of site plan approval. This landscape plan shall address the need for high quality plantings adjacent to the Lee Road frontage, as well as the provision of adequate parking lot landscaping to satisfy the provisions of Article 13 of the Fairfax County Zoning Ordinance within, those areas designated as open space. The applicant will implement a replanting program utilizing native species; the County Aborist shall determine the species, number and size of the plant materials to be utilized in said program.

(7) A geotechnical soils report which satisfies the requirements of the public facilities manual will be provided to the County prior to site plan approval. The findings of the study will be implemented by the applicant subject to the approval of the Department of Environmental Management.

(8) In the event that any toxic or hazardous substances are used on the property by the applicant or successor in title, incidental to the use of the property, the applicants or successor in title agree to satisfy all pertinent state, local and federal regulations prior to the storage, use, handling or disposal of such substances. A plan to address the possibility of spilage of toxic or hazardous substances shall be submitted for a review and approval to the Fairfax County Department of Environmental Management and the Fairfax County Office of Comprehensive Planning in conjunction with the submission of the site plan.

(9) A permit shall be obtained from the Fire Prevention Division of the Fire and Rescue Department of Fairfax County prior to the installation, removal, repair or abandonment of any tanks containing flammable, combustible, and/or hazardous material in compliance with Article 29 of the BOCA Fire Code. Information shall be provided to the Fire Prevention Division of the Fire and Rescue Department, Suite 400, 4031 University Drive, Fairfax, Virginia 22030, as to the condition of any removed storage tanks and a leak detection survey of the surrounding soil shall be conducted as required by Article 29 of the BOCA Fire Code.

(10) A copy of the "Notification for Underground Storage Tanks", that is on file with the Virginia Water Control Board shall be submitted to the Fire and Rescue Department for its information.

(11) Stormwater management Best Management Practices will be provided to satisfy the requirements of the Water Supply Protection Overlay district, as set forth in the Public Facilities Manual and approved by the Department of Environmental Management.

(12) In the event that uses other than those attributable to a contractor's business are constructed on the subject property, airport noise attenuation measures, as determined by the Department of Environmental Management will be incorporated into the design and construction of any such uses.

(13) The applicant recognizes that certain permitted uses within the I-5 district are potentially incompatible with the airport noise environment of this site and/or the protection of the Occoquan Reservoir water quality. Accordingly, the applicant's proffer to exclude the following permitted I-5 uses from this property:

(a) Child care centers and nursery schools
(b) Motor freight terminals
(c) Motor vehicle storage and impoundment yard
(d) Private schools of general education
(e) Recycling center
(f) Vehicle major service establishment

(14) The maximum building height shall not exceed 45'.

(15) The applicant or successor in title agrees to cooperate with Fairfax County in the performance of a historic/archeological survey of the subject property. In the event that this survey indicates that the on-site residential structure is deemed by Fairfax County to be of historic significance and worthy of preservation, the applicant agrees to work with the County to relocate said structure. Further the County shall have 90 days prior to the commencement of construction to survey and record the site for historic/archeological features.

Signed: [signature]

Title: President of K & K Development Corporation

Date: 4/22/88

CWO
Chamberlin, Wolford & Chen
a professional corporation
ENGINEERING • SURVEYING • PLANNING
39 FT. EVANS ROAD, N.E.
P.O. BOX 301
LEESBURG, VIRGINIA 22075

WILLIAM D. CHAMBERLIN
JEFFREY H. WOLFORD, SR.
STEVEN W. CHEN
CHARLES S. FORSCH

703-777-3461
METRO 478-1940

DESCRIPTION
PROPERTY OF
K & K DEVELOPMENT CORPORATION
CENTREVILLE MAGISTERIAL DISTRICT
FAIRFAX COUNTY, VIRGINIA

Beginning at a point in the northerly right-of-way line of Lee Road, State Route No. 661, said point also marking a southeasterly corner of the property, now or formerly, of Downs, Morris and Lee; thence departing Lee Road and running a northeasterly line of the said property of Downs, et al, N.35°09'50"W. 83.79 feet to a point marking a southerly corner of the property, now or formerly, of Howard Horton, Trustee; thence departing Downs, et al, and running with an easterly line of the said property of Horton, N.18°00'E. 420.38 feet to a point marking a westerly corner of the property, now or formerly, of Downs, Morris and Lee; thence departing Horton and running with a southwesterly line of the said property of Downs, et al, S.36°40'30"E. 345.86 feet to a point; thence with a westerly line of Downs, et al, S.18°01'40"W. 124.04 feet to a point in the aforementioned northerly right-of-way line of Lee Road; thence with the said right-of-way line of Lee Road, S.73°43'00"W. 260.26 feet to the point of beginning, containing 2.0 acres of land.

July 20, 1987
Plat attached and
made a part hereof.

Jeffrey H. Wolford, Sr.
Jeffrey H. Wolford, Sr.
Certified Land Surveyor

RZA 87-S-061 Staff JP
Application No. _____ Staff _____
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FCP)
SEE PROFFERS DATED 5-1-06
Date of (BOS) (PC) approval 5-15-06
Sheet 11 of 11

COMMONWEALTH OF VIRGINIA
HAROLD A. LOGAN
CERTIFICATES
1111 & 191
CERTIFIED LAND SURVEYOR

SCALE: N/A
DATE: 4-5-2005
DESIGNED: HAL
DRAFTED: MB
REVISIONS:

14714 OLD LEE ROAD
SULLY DISTRICT FAIRFAX COUNTY, VIRGINIA
PROFFERED CONDITIONS

HAROLD A. LOGAN – ASSOCIATES P.C.
LAND SURVEYING – SITE PLANNING – SUBDIVISION DESIGN
9114 INDUSTRY DRIVE
MANASSAS PARK, VA 20111
(703) 330-1988 • FAX 690-8132

SHEET
11 OF 11
P 1942

CTC 800-372-1717 CTC 919