LOTS 14 & 15
11226 & 11280 LEE HIGHWAY
GENERALIZED DEVELOPMENT PLAN

GENERAL NOTES

1. PROPOSED DEVELOPMENT CONSISTS OF REZONING LOT 14 (R-1) AND LOT 15(C-8) TO R-12 FOR THE PURPOSES OF IMPROVEMENTS AS SHOWN ON THE GDP, CONSTRUCTION CONSIST OF NINE(9) SINGLE FAMILY ATTACHED HOMES PRIVATE ROAD (MORRISONS WAY) EXTENDED, CURB & GUTTER, BITUMINOUS PAVEMENT, SANITARY SEWER PIPING, DOMESTIC WATER PIPING, MINOR GRADING, AND LANDSCAPING.

2. OWNER: SAM H. CHUNG & SONG H CHUNG
8725 BROOK ROAD
McLEAN, VIRGINIA 22102
CONTACT PERSON: SAM H. CHUNG
PHONE: (703) 288-0064

3. ENGINEER: CAD-CON CONSULTING, INC.
10706 VANDOR LANE
MANASSAS, VIRGINIA 20109
CONTACT PERSON: NEVILLE SIMON
PHONE: (703) 392-5141 X 121

4. SITE LOCATION: 11280 LEE HIGHWAY
FAIRFAX, VIRGINIA 22030

5. SITE USE: EXISTING: LOT 14: RESIDENTIAL, LOT 15: TAILORING SHOP
PROPOSED: NINE(9) SINGLE FAMILY ATTACHED UNITS (TOWN HOMES)

6. ELECTION DISTRICT: SPRINGFIELD

7. PLANNING DISTRICT: FAIRFAX PLANNING DISTRICT, AREA II
LEGATO COMMUNITY PLANNING SECTOR

8. DRAINAGE SHED: DIFFICULT RUN

9. DEED BOOK: LOT 14 - DB 02988, PG 0085
LOT 15 - DB 09513, PG 1034

10. TAX MAP NO. 056-2-03-0014 & 0015

11. ZONE: LOT 14 R-1 (RESIDENTIAL DISTRICT)
LOT 15 C-8 (HIGHWAY COMMERCIAL DISTRICT)

REQUEST REZONING LOT 14 FROM R-1 TO R-12 DISTRICT
REQUEST REZONING LOT 15 FROM C-8 TO R-12 DISTRICT

12. MINIMUM LOT AREA REQUIRED (R-12 ZONE): NONE

EXISTING SITE AREA:
LOT 14 - 22,338 SF OR 0.5128 AC
LOT 15 - 22,472 SF OR 0.5159 AC
TOTAL 44,810 SF OR 1.0287 AC

PROPOSED SITE AREA:
LOT 1 - 2,822 SF OR 0.0648 AC
LOT 2 - 1,992 SF OR 0.0457 AC
LOT 3 - 1,992 SF OR 0.0457 AC
LOT 4 - 2,822 SF OR 0.0648 AC
LOT 5 - 2,550 SF OR 0.0585 AC
LOT 6 - 1,575 SF OR 0.0362 AC
LOT 7 - 1,575 SF OR 0.0362 AC
LOT 8 - 1,575 SF OR 0.0362 AC
LOT 9 - 2,550 SF OR 0.0585 AC
TOTAL 19,453 SF OR 0.4466 AC

RIGHT-OF-WAY DEDICATION: = 4,636 FT OR 0.1064 AC +/-

13. DENSITY ALLOWED: TWELVE (12) DWELING UNITS PER ACRE
DENSITY PROPOSED: NINE (9) DWELING UNITS

14. TREE COVERAGE: TOTAL SITE AREA: 44,810 SF
- DEDICATION: 4,636 SF
ADJ. SITE AREA: 40,174 SF

TREE COVERAGE REQUIRED: 40,174 SF X 15% = 6,026 SF

TREE COVERAGE PROVIDED: 3,872 SF (EXISTING) + 7,250 SF (PROPOSED) = 11,122 SF
11,122 SF/40,174 SF = 0.28 OR 28%

15. OPEN SPACE: REQUIRED: 25% OF GROSS AREA SHALL BE LANDSCAPED OPEN SPACE

TOTAL SITE AREA: 44,810 SF
- BLDG LOTS: 19,453 SF
- PKG/DRIVEWAY: 8,438 SF
- DEDICATION: 4,636 SF
NET SITE AREA: 12,283 SF

12,283 SF/40,174 SF = 31 PERCENT

16. INTERIOR PARKING LOT LANDSCAPING REQUIREMENT: 5 PERCENT: 2,075 SF X 0.05 = 104 SF

INTERIOR PARKING LOT LANDSCAPING PROVIDED: 29 PERCENT: 600 SF/2,075 SF = 0.29

PERIPHERAL PARKING LOT LANDSCAPING REQUIRED: 1 TREE/40 LF ALONG LEE HIGHWAY = 5 TREES

PERIPHERAL PARKING LOT LANDSCAPING PROVIDED: 5 TREES

17. PARKING REQUIRED: 9 UNITS @ 2.3 SPACES PER UNIT = 21 SPACES

PARKING PROVIDED: 34 SPACES (INCLUDE 12 GARAGES AND 6 DRIVEWAYS ON LOTS 1 TO 5 AND 9; 3 GARAGES AND 3 DRIVEWAYS ON LOTS 6 TO 8)

18. LOADING SPACE REQUIRED: NO REQUIREMENT

19. MAXIMUM BUILDING HEIGHT ALLOWED: = 35 FT
PROPOSED BUILDING HEIGHT: = 35 FT

20. SETBACKS REQUIRED:
FRONT YARD: CONTROLLED BY 15 DEGREE ANGLE OF BULK PLANE BUT NOT LESS THAN 5 FEET.
SIDE YARD: CONTROLLED BY 15 DEGREE ANGLE OF BULK PLANE. BUT NOT LESS THAN 10 FEET.
REAIR YARD: CONTROLLED BY 30 DEGREE ANGLE OF BULK PLANE BUT NOT LESS THAN 20 FEET.

SETBACKS PROVIDED:
FRONT YARD: 17 TO 20 FT MORRISONS WAY (PRIVATE ROAD EXTENDED)
SIDIE YARD: 10 FT
REAIR YARD: 20 TO 24 FT

21. THE SITE IS SERVED BY PUBILC WATER.

22. THE SITE IS SERVED BY PUBILC SANITARY SEWER.

23. TOPOGRAPHY SHOWN TAKEN FRIOM FIELD SURVEYS AND EXISTING RECORD INFORMATION.

24. TO THE BEST OF OUR KNOWLEIDGE THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES TO BE GENERATEID, UTILIZED, STORED, TREATED AND/OR DISPOSED OF ON THIS SITE.

25. TO THE BEST OF OUR KNOWLEIDGE THERE IS NO GRAVE, OBJECT, OR STRUCTURE MARKING A PLACE OF BURIALON THIS SITE.

26. SITE IS NOT LOCATED IN ANIY FLOOD PLAIN.

27. SITE IS NOT LOCATED IN A IRESOURCE MANAGEMENT AREA.

28. THERE ARE NO PUBLIC UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR MORE THAT EXIST OIN THE PROPERTY.

29. REQUEST WAIVER OF MINIMUMI DISTRICT SIZE OF 4 ACRES TO PERMIT THE PROPOSED SITE CONFIGUIRATION.

30. WITH THE GRANTING OF THE IREZONING, GDP, & WAIVER OF THE MINIMUM DISTRICT SIZE THE PROPOSED DEVELOPMENT WILL CONFORM TO THE PROVISIONS OF THE APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS.

31. ALL EXISTING STRUCTURES TO BE REMOVED.

32. PRIOR TO COMMENCING OF ANIY CONSTRUCTION THAT WILL DISTURB THE SOILS AND BEDROCK OF THIS DEVELOPMENT, A COMLIANCE PLAN FOR CONTROLLING THE POTENTIAL RELEASE OF ASBESTOS FROM MINERAL DEPOSITS MUST BE SUBMITTED TO THE HEALTH DEPARTMENT FOR APPROVAL.

33. THE OUTDOOR NOISE ALONG RITE 29 AND RTE 1028 WILL BE CONTROLLED BY INSTALLING FENCE ALONG THIESE PATHS. TO THE REAR OF UNITS THAT ADJOINS K-MART, A FENCE WILL ALSO BE INSTALLED ALONG THE PROPERTY LIMITS FOR PRIVACY AND TO CONTROL NOISE.

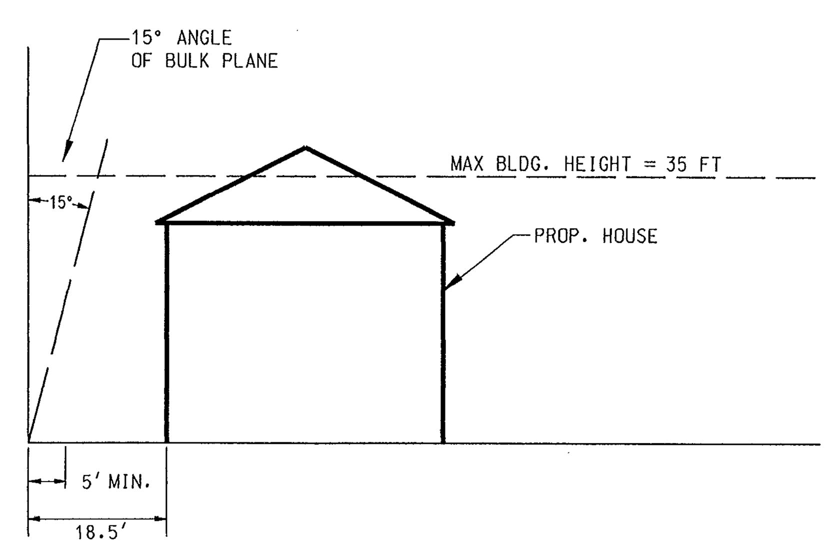
34. ALL UNITS WILL BE PROVIDED WITH ACOUSTICAL TREATMENTS MATERIALS.

ABBREVIATION LIST

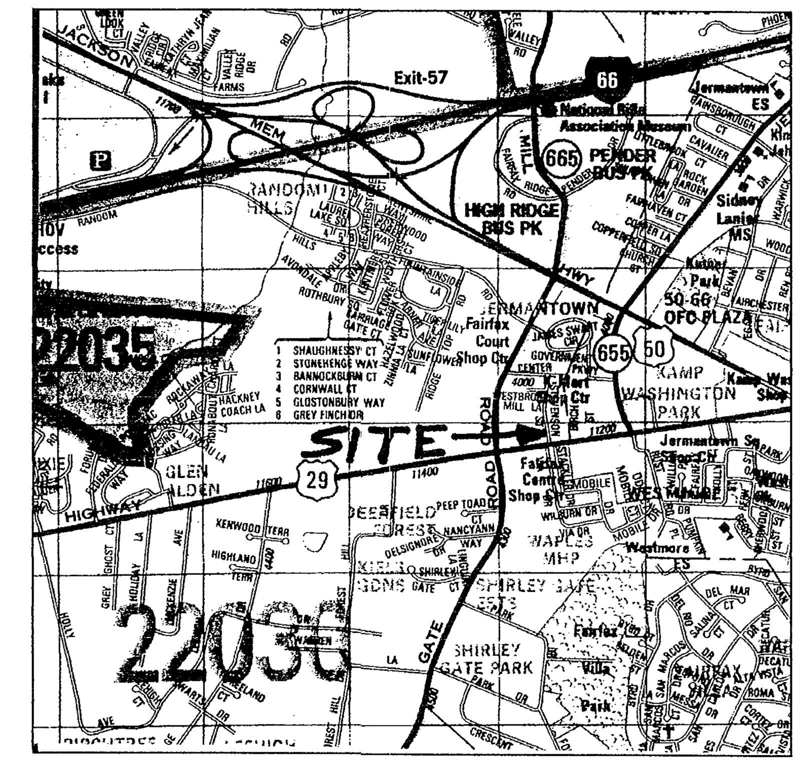
AC	ACRE	M	MAPLE
ALUM	ALUMINUM	MH	MANHOLE
APPROX.	APPROXIMATE	MS	MULTI-STEM
BBF	BOARD ON BOARD FENCE	N	NORTH
BIT	BITUMINOUS	NO	NUMBER
BLDG	BUILDING		
BO	BLOW OFF	O	OAK
BRL	BUILDING RESTRICTION LINE	OVHG	OVERHANG
C	CONCRETE		
C&G	CURB AND GUTTER	PG	PAGE
CH	CHERRY	PRCH	PORCH
CLF	CHAIN LINK FENCE	PROP	PROPOSED
CONC	CONCRETE	PVMT	PAVEMENT
CW	CONCRETE WALK	QUAD	QUADRUPLE
DB	DEED BOOK	ROW	RIGHT OF WAY
DBL	DOUBLE		
DUMP	DUMPSTER	S	SOUTH
DW	DOMESTIC WATER	SS	SANITARY SEWER
DWY	DRIVEWAY	SAN	SANITARY
		SEW	SEWER
E	EAST	SF	SQUARE FOOT/FEET
EP	EDGE OF PAVEMENT	SMH	SANITARY MAN HOLE
ESMT	EASEMENT	ST	STREET
ENC	ENCLOSURE	STM	STORM
EX	EXISTING	STY	STORY
F	FENCE	T	TREE
FAR	FLOOR AREA RATIO	TRIP	TRIPLE
FF=	FINISHED FLOOIR	TYP	TYPICAL
HC	HANDICAP	VA	VIRGINIA
HCR	HANDICAP RAMP		
HSE	HOUSE	WDN	WOODEN
HT	HEIGHT	W	WATER
LF	LINEAR FOOT	W	WEST
LIM	LIMITS	w/	WITH

LEGEND

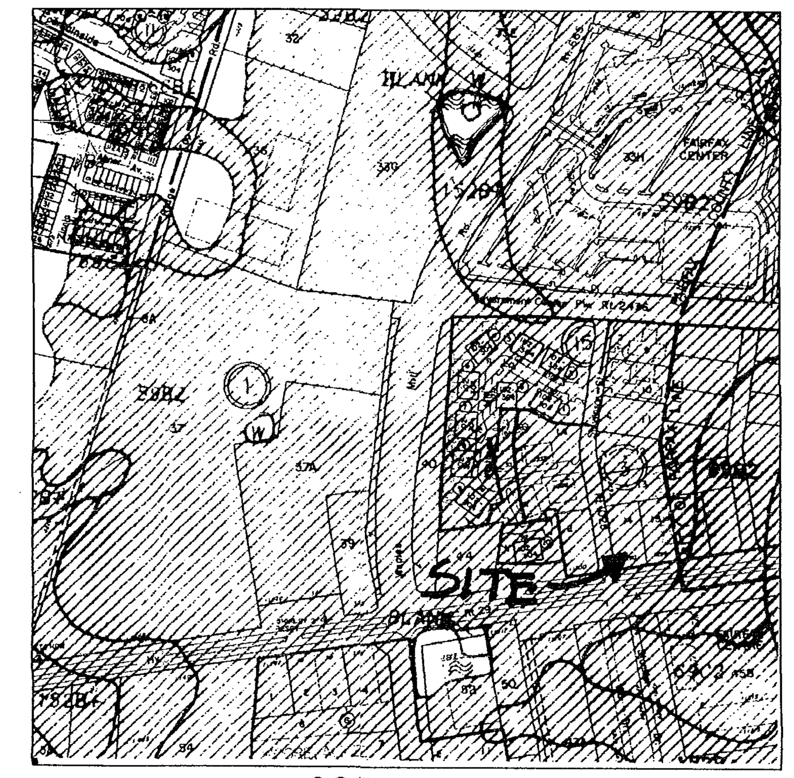
ITEM	NEW	EXISTING
PROPERTY LINE		
CONTOURS		- - - - -34- - - - -
BUILDING(S)		
BITUMINOUS PAVING		
CONCRETE PAVING & WALKS		
SANITARY SEWER (MANHOLE)		
STORM SEWER (STRUCTURE)		
WATER MAIN	W	W
TREES/SHRUBS		
WOODED AREA		
FENCE		
PROPERTY CORNER		



ANGLE OF BULK PLANE DETAIL
SCALE: 1" = 20'



VICINITY MAP
SCALE: 1" = 500'



SOILS MAP
SCALE: 1" = 500'

SOIL ID NUMBERS	SERIES NAME	FOUNDATION SUPPORT	SUBSURFACE DRAINAGE	SLOPE STABILITY	ERODABILITY	GEOTECHNICAL REPORT REQD
59B2	ORANGE	POOR	POOR	MODERATE	MODERATE	YES

SOILS WITH IDENTIFICATION NUMBERS 59, 66, 69, 141, 142, AND 152 MAY OVERLIE PARENT BEDROCK FORMATIONS WHICH HAVE BEEN FOUND TO CONTAIN NATURALLY OCCURRING ASBESTOS MINERALS, SPECIAL MINIMUM CONSTRUCTION MEASURES AND PRECAUTIONS ARE REQUIRED IN COMPLIANCE WITH HEALTH DEPARTMENT DIRECTIVES WITHIN THESE SOILS OR WITHIN FILL ORIGINATING FROM THESE SOILS.

Application No. RZ 2004-SP-002 Staff t. snyder
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 8-25-05
Date of (BOS) (PC) approval 9-12-05
Sheet 1 of 5

approved rezoning to the R-12

SHEET INDEX

C-1 COVER SHEET
C-2 GENERALIZED DEVELOPMENT PLAN
C-3 SWM CONCEPT
L-1 LANDSCAPE PLAN
A-1 ARCHITECTURAL PLANS & ELEVATIONS

RECEIVED
Department of Planning & Zoning
JUN 28 2005
Zoning Evaluation Division

CAD-CON CONSULTING INCORPORATED
STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL ENGINEERS
10706 VANDOR LANE
MANASSAS, VIRGINIA 20109
703-392-5141

Client
SAM CHUNG
8725 BROOK ROAD
McLEAN, VA 22102

Issues/Revisions

No.	Date	Remarks
	06-27-05	REV PER FX. CO.
	05-19-05	REV PER FX. CO.
	04-19-05	REV PER FX. CO.
	04-05-05	REV PER FX. CO.
	03-29-05	REV PER FX. CO.
	12-20-04	REV PER FX. CO.
	09-14-04	SUBMIT FX. CO.

Drawn: LMJ
Checked: RCM
Approved: RCM
Date: 09/01/04
Job No.: 361.0010

COMMONWEALTH OF VIRGINIA
FREDERICK D. NEAL
No 013413
PROFESSIONAL ENGINEER

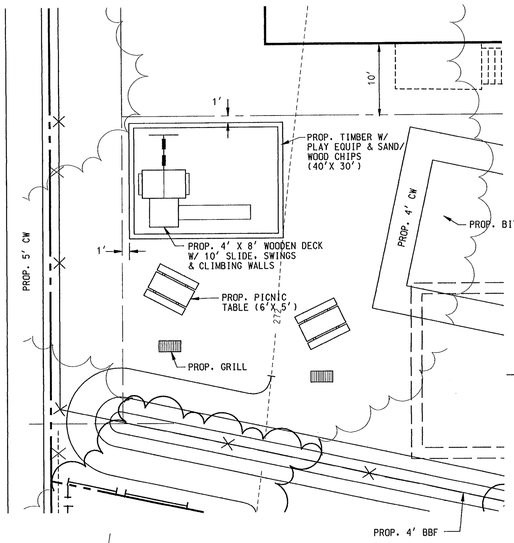
Project
LOTS 14 & 15
11226 & 11280 LEE HIGHWAY
FAIRFAX, VIRGINIA

Sheet Title
COVER SHEET

Sheet Number: C-1

p:\361\0012\dgn\leehwycvr.dgn Jun. 27, 2005 15:22:37

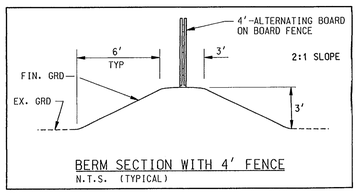
CURVE DATA TABLE						
NO.	RADIUS	DELTA	TANGENT	ARC	CHORD	C. BEARING
1	25.00'	90°00'00"	25.00'	39.27'	35.36'	N53°34'40"W



NORTH

PLAY & PICNIC AREA PARTIAL PLAN
SCALE: 1" = 10'- 0"

10 0 10 20 30
1" = 10'-0"



BERM SECTION WITH 4' FENCE
N.T.S. (TYPICAL)

LOT 2
STICKEL
ZONE: R-1
USE: VACANT

LOT 9
HABITAT FOR HUMANITY
OF NORTHERN VIRGINIA INC.
ZONE: R-12
USE: RESIDENTIAL
(UNDER CONSTRUCTION)

LOT 18
HABITAT FOR HUMANITY
OF NORTHERN VIRGINIA INC.
ZONE: R-12
USE: RESIDENTIAL
(UNDER CONSTRUCTION)

MORRISONS WAY

EX. 8" SAN SEW
EX. 8" W
EX. 15' W ESMT.
LIMITS OF EX. BBF REMOVAL
EX. 12" T (REMOVE)
EX. 2" BO (REMOVE)
EX. 5' BBF (REMAIN)
EX. 5' BBF (REMAIN)
212.00'
N 81°25'20" E
106.00'

LOT 14
LOT 15

PROP. W
PROP. SAN SEW
EX. 12" O (REMOVE)
EX. DEAD T (REMOVE)
EX. 12" ASH (REMOVE)
EX. 12" TRIP. T (REMOVE)
(REMOVE) EX. 4' CLF
EX. 5' BBF (REMOVE)
EX. 4" 8" T (REMOVE)
EX. 30" CH (REMOVE)
EX. DUMP. (REMOVE)
EX. GARAGE (8' HT) (REMOVE)
EX. TRAILER (8' HT) (REMOVE)
FF=273+/- (TYP)
FF=275+/- (TYP)
PROP. 6' BBF
PROP. PLAY & PICNIC AREA (SEE PARTIAL PLAN)
EX. ALUM OVHG (REMOVE)
EX. 14" M (REMOVE)
EX. DWY (REMOVE)
PROP. BIT CONC PVMT
PROP. C&G
EX. 1 STY HSE (15' HT) (REMOVE)
TREE SAVE AREA
EX. 12" QUAD T (TO BE RETAINED AT THIS TIME)
(REMOVE) EX. PRCH
PROP. 4' BBF
EX. 30" M (TO BE RETAINED AT THIS TIME)
EX. 24" M (TO BE RETAINED AT THIS TIME)
EX. 2" MS M (REMOVE)
EX. GRAVEL DWY (REMOVE)
PROP. 2:1 SLOPE
PROPOSED TOWNHOUSES
81.00'
S 81°25'20" W
187.00'
PROP. 8' TRAIL
EX. 8" S
(REMOVE) EX. 4" CLF
EX. 1 STY HSE (15' HT) (REMOVE)
EX. 6' CW
EX. SMH #9
EX. C&G
EX. SMH
LIM. OF CLG. & GRDG. (TYP.)
EX. EP
EX. EP (REMOVE)
PROP. C&G
PROP. 6' BBF
EX. 18" STM
PROP. SWM/BMP FACILITY (APPROX. STORAGE VOLUMES: QUANTITY VOL.: CF+/- BMP VOL.: CF+/-)
EX. 30" O (TO REMAIN)
EX. 5' BBF (REMOVE)
15"PROP. STM SEW
EX. 6' CW
PROP. SWM & WQS
LOT 26B
K-MART
EX. BLDG (K-MART)

STEVENSON STREET - RTE. 1028
R.O.W. VARIES
N 08°34'40" W
187.00'
S 08°34'40" E
212.00'

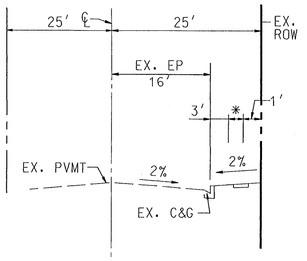
LEE HIGHWAY - RTE. 29
R.O.W. VARIES
44'
70'

PROP. ROW DEDICATION
(4,636 SF OR 0.106 AC+/-)

LOT 45B
JERMANTOWN LEE CENTER LP
ZONE: C-8
USE: RETAIL TRADE

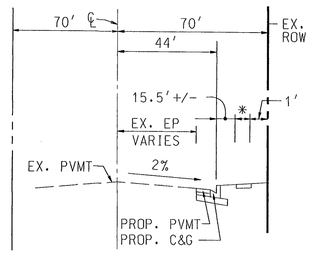
NORTH

20 0 20 40 60
1" = 20'-0"



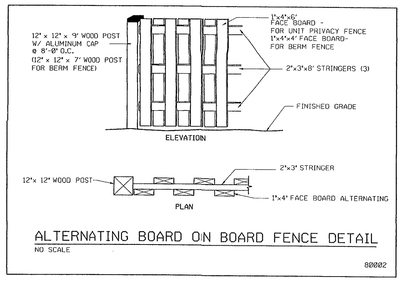
* PROP. 5' CONC. WALK

TYPICAL SECTION
STEVENSON STREET
RTE 1028
(N.T.S.)



* PROP. 8' TYPE I TRAIL

TYPICAL SECTION
LEE HIGHWAY
RTE 29
(N.T.S.)



ALTERNATING BOARD ON BOARD FENCE DETAIL
NO SCALE

80002

Application No. RZ 2004-SP-002 Staff L. Swafford
APPROVED DEVELOPMENT PLAN
(DP) (SDP) (CDP) (FDP)
SEE PROFFERS DATED 8-25-05
Date of (BOS) (PC) approval 9-12-05
Sheet 2 of 5

CAD-CON CONSULTING INCORPORATED
STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL ENGINEERS
10706 VANDOR LANE
MANASSAS, VIRGINIA 20109
703-392-5141

Client

SAM CHUNG
8725 BROOK ROAD
MCLEAN, VA 22102

Issues/Revisions

No.	Date	Remarks
	06-27-05	REV PER FX. CO.
	05-19-05	REV PER FX. CO.
	05-19-05	REV PER FX. CO.
	04-19-05	REV PER FX. CO.
	04-05-05	REV PER FX. CO.
	09-14-04	SUBMIT FX. CO.

Drawn: NAS/PMY
Checked: NAS
Approved: RCM
Date: 09-01-04
Job No.: 361.0012

COMMONWEALTH OF VIRGINIA
FREDERICK D. NEAL
No 013413
PROFESSIONAL ENGINEER

Project

LOTS 14 & 15
11226 & 11280
LEE HIGHWAY
FAIRFAX, VIRGINIA

Sheet Title

GENERALIZED DEVELOPMENT PLAN

Sheet Number: C-2

...\Dgn\tsenwygdp-rev-04-05-05.dgn Jun 27, 2005 14:50:14

STORMWATER NARRATIVE:

1. THE SITE IS APPROXIMATELY 1.0287 ACRES AND IS LOCATED WITHIN THE LIMITS OF STEVENSON STREET ON THE WEST; LOT 26B, K-MART ON THE EAST; LOTS 9 AND 18 ARE GOVERNED BY AN EXTENDED ROADWAY, MORRISONS WAY ON THE NORTH SIDE; AND ON THE SOUTH SIDE, LEE HIGHWAY.

THE LAND IS GENTLE SLOPING TO THE WEST SIDE OF THE PROPERTY WITH AN EXISTING CONTOUR INTERVAL OF TWO (2) FEET. ALONG STEVENSON STREET, THERE IS NO EXISTING STORM DRAIN SYSTEM TO COLLECT THE SURFACE RUNOFF WHILE ON LOT 26B, THERE IS AN EXISTING STORM DRAIN SYSTEM WHICH IS ADEQUATE TO HANDLE THE ADDITIONAL SURFACE RUNOFF FROM THE PROPOSED DEVELOPMENT.

THE PROPOSED DEVELOPMENT IS DIVIDED INTO FOUR (4) DISTINCT SUB-DRAINAGE AREAS(#1, #2, #3 AND #4). TO THE FRONT OF THE PROPERTY, APPROXIMATELY 0.27 ACRES(DA #1) DRAINS TO PROPOSED STORMWATER MANAGEMENT FACILITY; TO THE CENTER OF THE PROPERTY, APPROXIMATELY 0.35 ACRES (DA #2) DRAINS TO THE PROPOSED STORMWATER MANAGEMENT FACILITY; TO THE REAR OF THE PROPERTY, APPROXIMATELY 0.30 ACRES(DA # 3) DRAINS TO THE PROPOSED STORMWATER MANAGEMENT FACILITY, THAT IS, ADJACENT TO THE ADJOINING PROPERTY, LOT 26B, K-MART DEVELOPMENT AND ALONG LEE HIGHWAY, THE DEDICATED AREA OF 0.11 ACRES (DA #4) DRAINS TO LEE HIGHWAY.

THE RATIONAL METHOD WAS USED FOR THE SIZING OF THE PROPOSED STORMWATER MANAGEMENT FACILITY.

EXISTING SITE CONDITIONS:

THE DISCHARGES FOR THE 2, 10, AND 100 YEAR STORMS WERE DETERMINED BASE ON THE INTENSITY OF 5.45, 7.27, AND 9.84 INCHES PER HOUR, RESPECTIVELY AND THE TIME OF CONCENTRATION OF 5 MINUTES WITHIN A DURATION OF 24 HOURS.

FOR THE EXISTING SITE CONDITION, THE PEAK DISCHARGES DRAINS TO LEE HIGHWAY AS SHEET FLOW. THE LAND IS RELATIVELY FLAT. THE DISCHARGES ARE AS FOLLOWS:

DRAINAGE AREA (1.029 ACRES) WITH 'C' FACTOR OF 0.42.

Q2 = 2.36 CFS.
Q10 = 3.14 CFS.
Q100 = 4.25 CFS.

PROPOSED SITE CONDITIONS:

FOR THE PROPOSED SITE CONDITIONS, THE PEAK DISCHARGES WERE DIVIDED AMONG THE FOUR (4) SUB-DRAINAGE AREAS AS OUTLINED IN THE THIRD PARAGRAPH ABOVE, CALCULATION AND TABLE 1 AS SHOWN BELOW:

1. DRAINAGE AREA (0.26 ACRES) WITH 'C' FACTOR OF 0.42.
   Q2 = 0.60 CFS.
   Q10 = 0.79 CFS.
   Q100 = 1.07 CFS.

2. DRAINAGE AREA (0.35 ACRES) WITH 'C' FACTOR OF 0.85.
   Q2 = 1.62 CFS.
   Q10 = 2.16 CFS.
   Q100 = 2.93 CFS.

3. DRAINAGE AREA (0.25 ACRES) WITH 'C' FACTOR OF 0.40.
   Q2 = 0.55 CFS.
   Q10 = 0.73 CFS.
   Q100 = 0.98 CFS

4. DRAINAGE AREA (0.16 ACRES) WITH 'C' FACTOR OF 0.30.
   Q2 = 0.26 CFS.
   Q10 = 0.35 CFS.
   Q100 = 0.47 CFS.

SUMMARY OF DISCHARGES

PRE-DEVELOPMENT (CFS)					POST-DEVELOPMENT (CFS)					REMARKS
DA#	AREA(AC)	2YR	10YR	100YR	DA	AREAS (AC)	2YR	10YR	100YR	TO BMP/SWM DETENTION SYSTEM
1	1.029	2.36	3.14	4.25	1	0.26	0.60	0.79	1.07	
					2	0.35	1.62	2.16	2.93	DITTO
					3	0.25	0.55	0.73	0.98	DITTO
					4	0.16	0.26	0.35	0.47	DEDICATED (OFF-SITE) AREA

SWM/BMP EXTENDED DETENTION POND DESIGN

ALLOWABLE RELEASE RATE = EXISTING SITE + OFFSITE PASSING THROUGH - UNCONTROLLED

2YR STORM

EXISTING SITE CONDITION PEAK RUNOFF = (1.029CA) =1.029 X 0.42 X 5.45CFS. = 2.36CFS.
UNCONTROLLED PEAK RUNOFF = (0.16AC) = 0.16 X 0.30 X 5.45 = 0.26CFS.
THEREFORE ALLOWABLE RELEASE RATE = 2.36 - 0.26CFS = 2.1CFS.

10YR STORM

EXISTING SITE CONDITION PEAK RUNOFF = (1.029CA) = 1.029 X 0.42 X 7.27CFS. = 3.14CFS.
UNCONTROLLED PEAK RUNOFF = (0.16AC) = 0.16 X 0.30 X 7.27CFS. = 0.35CFS
THEREFORE ALLOWABLE RELEASE RATE = 2.79CFS.

STORMWATER MANAGEMENT POND INFLOW HYDROGRAPH (PRELIMINARY)

TOTAL DEVELOPED SITE AREA TO POND = 0.87AC.

INFLOW TO POND:

AT Tc = 5 MINUTES.
Q(2) = PEAK INFLOW = 0.59 X 5.45 X 0.87 = 2.80CFS.
Q(10) = PEAK INFLOW = 0.59 X 7.27 X 0.87 = 3.73CFS.
Q(100) = PEAK INFLOW = 0.59 X 9.84 X 0.87 = 5.05CFS. X 1.5 = 7.57CFS.

WATER QUALITY DESIGN:

REQUIRED BMP STORAGE VOLUMES IS APPROXIMATELY 1,483CF

FROM POND ELEVATION/STORAGE CURVE, 1483 CF OCCURS AT POND ELEV. 471.70 FOR A MAXIMUN HEAD OVER THE BMP DRAWDOWN ORIFICE OF 2.7 FEET
FOR 48 HOUR DRAWDOWN, PEAK BMP OUTFLOW RATE = 0.01CFS
REQUIRED TOTAL BMP ORIFICE AREA = 0.001SF.

BMP OUTLET CONTROL WILL BE ACCOMPLISHED IN ACCORDANCE WITH FAIRFAX COUNTY (PFM STANDARD 86-33) STANDARDS. A SINGLE 0.5 INCH DIAMETER HOLE WILL BE DRILLED INTO A 1/4" THICK STEEL PLATE. THE PLATE WILL BE BOLTED OVER THE POND OUTLET CONTROL STRUCTURE OPENING. A GALVANIZED SHEET METAL GRATING WILL BE WELDED TO THE STEEL PLATE (FAIRFAX COUNTY PFM STANDARD DETAIL 86-33 TO PROVIDE A "TRASH rRACK".

PRELIMINARY OUTLET CONTROL STRUCTURE DESIGN:

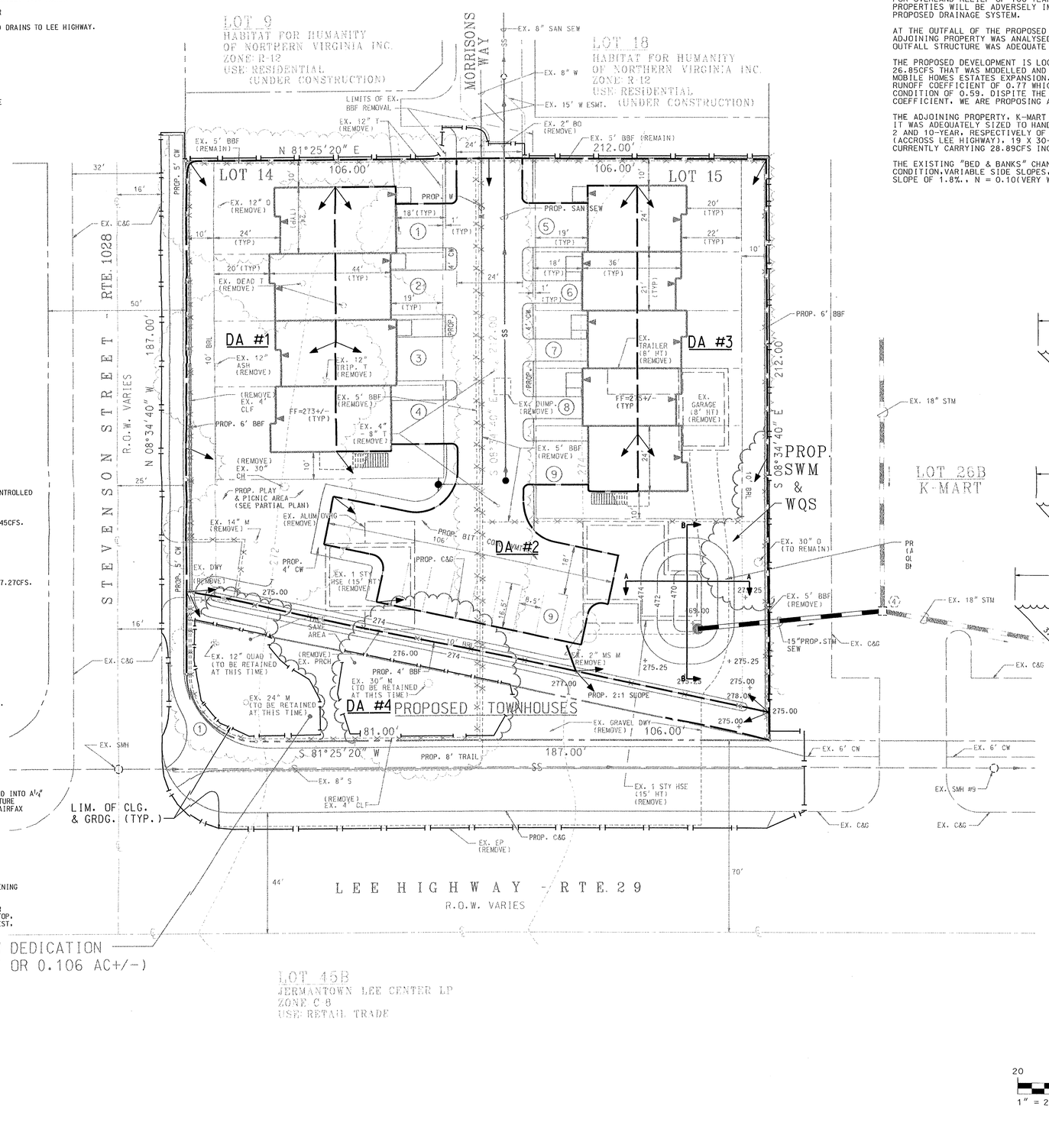
THE OUTLET CONTROL STRUCTURE WILL CONSIST OF A DRILLED COVER PLATE SET OVER THE INLET ORIFICE, TO PROVIDE BMP DISCHARGE CONTROL. THE COVER PLATE IS BOLTED DIRECTLY TO THE OUTLET CONTROL STRUCTURE. THE OUTLET CONTROL STRUCTURE IS FORMED BY A STANDARD 48" (4-FOOT) ROUND PRE-CAST MANHOLE BASE AND RISER SECTIONS, SET BACK INTO THE POND EMBANKMENT. STORMWATER MANAGEMENT QUANTITY CONTROL FOR THE 2 AND 10-YEAR STORMS IS PROVIDED BY A SINGLE BMP OPENING THE TOP OF THE STRUCTURE WILL BE SET AT THE APPROXIMATE 10-YEAR ROUTED STORMWATER SURFACE ELEVATION, AND WILL BE OPEN, WITH A STANDARD TRASH RACK, TO ACT AS THE EMERGENCY SPILLWAY PER FAIRFAX COUNTY, 100-YEAR, 2-HOUR (SDF) STORM WILL BE ROUTED THROUGH THE OPEN TOP, ASSUMING NO AVAILABLE STORAGE BELOW THE EMERGENCY SPILLWAY (STRUCTURE TOP) CREST, AND ASSUMING THAT THE BMP ORIFICE IN THE RISER IS PLUGGED. THE OUTLET CONTROL STRUCTURE DISCHARGES INTO A 15" DIAMETER LOW HEAD PRESSURE PIPE (ASTM C-361) RCP PIPE WHICH DRAINS INTO AN EXISTING INLET(#4) OFFSITE (K-MART).

SET TOP OF THE OUTLET CONTROL AT THE APPROX. 10-YR WATER SURFACE ELEV. = 472.85.

PRELIMINARY ROUTING INDICATE THAT THE ABOVE MENTIONED CONTROL STRUCTURE WILL WORK AND THE RELEASE RATE FOR THE 10-YEAR STORM WILL BE 1.08CFS WHICH IS LESS THAN THE ALLOWABLE RELEASE RATE OF 2.79CFS.

THE ROUTED SDF WSE GIVES US MORE THAN 2.0 FEET OF FREEBOARD.
THE EMBANKMENT IS CLASSIFIED AS A CLASS ' D' DAM (EXCAVATIOPN POND - NO DAM)

CURVE DATA TABLE						
NO.	RADIUS	DELTA	TANGENT	ARC	CHORD	C. BEARING
1	25.00'	90°00'00"	25.00'	39.27'	35.36'	N53°34'40"W



OUTFALL NARRATIVE

THE EXISTING SITE OF 1.0287 ACRES IS DIVIDED INTO TWO(2) MAIN AREAS UNDER THE PROPOSED DEVELOPMENT CONDITIONS; AN ONSITE AREA OF 0.87 ACRES THAT DRAINS DIRECTLY INTO THE PROPOSED EXTENDED DETENSION STORMWATER/WATER QUALITY CONTROL FACILITIES (DRY POND) AND AN OFFSITE AREA OF 0.16 ACRES THAT DRAINS AWAY FROM THE SITE. THE SURFACE RUNOFF THAT GENERATE FROM OFFSITE AREA IS UNMANAGED.

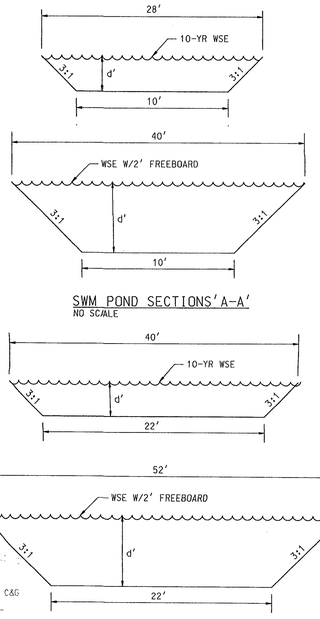
THE EXCESS SURFACE RUNOFF FOR THE 2 AND 10-YR DESIGN STORMS OF THE PROPOSED SITE ARE CONTROLLED BY THE PROPOSED EXTENDED DETENSION STORMWATER/WATER QUALITY CONTROL FACILITIES WHILE THE ALLOWABLE RELEASE RATE FOR THE 2 AND 10 YEAR STORMS OF 2.01 CFS AND 2.79 CFS, RESPECTIVELY PASSES THROUGH THE FACILITIES. IT IS FURTHER CERTIFIED THAT THE EXISTING AND DEVELOPED TOPOGRAPHY OF THE SITE ALLOWS FOR OVERLAND RELIEF OF 100-YEAR STORMS, AND THAT NO ADJACENT PROPERTIES WILL BE ADVERSELY IMPACTED BY THE DISCHARGE FROM THE PROPOSED DRAINAGE SYSTEM.

AT THE OUTFALL OF THE PROPOSED SITE, THE EXISTING STRUCTURE #4 OF THE ADJOINING PROPERTY WAS ANALYSED. IT WAS DETERMINED THAT THE EXISTING OUTFALL STRUCTURE WAS ADEQUATE TO HANDLE THE PROPOSED DESIGN STORMS.

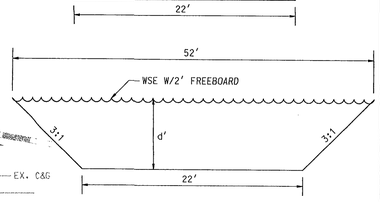
THE PROPOSED DEVELOPMENT IS LOCATED WITHIN AN OFFSITE DRAINAGE AREA OF 26.85CFS THAT WAS MODELLED AND ANALYSED UNDER PROJECT# 6148-SP-04-3, WAPLES MOBILE HOMES ESTATES EXPANSION. THE OFFSITE DRAINAGE STUDY SHOWS A WEIGHTED RUNOFF COEFFICIENT OF 0.77 WHICH IS GREATER THAN OUR SITE PROPOSED DEVELOPED CONDITION OF 0.59. DISPITE THE SIGNIFICANT DIFFERENCES IN THE RUNOFF COEFFICIENT, WE ARE PROPOSING AN ONSITE EXTENDED DETENSION FACILITY.

THE ADJOINING PROPERTY, K-MART EXISTING DRAINAGE SYSTEM WAS ANALYSED AND IT WAS ADEQUATELY SIZED TO HANDLE THE DICHARGE OF 2.01 AND 2.79CFS FOR THE 2 AND 10-YEAR, RESPECTIVELY OF OUR SITE. THE CAPACITY OF THE BOX CULVERT (ACCROSS LEE HIGHWAY), 19 X 30-INCH IS 35.11CFS (10-YEAR)-DESIGN. IT IS CURRENTLY CARRYING 28.89CFS INCLUDING OUR PROPOSED SITE.

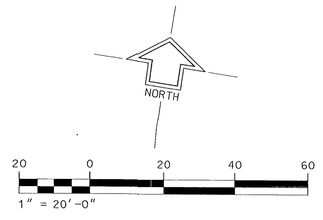
THE EXISTING "BED & BANKS" CHANNEL LINED WITH VERY WEEDY REACHES IN GOOD CONDITION, VARIABLE SIDE SLOPES, TAPERED BOTTOM WIDTH AND AN AVERAGE SIDE SLOPE OF 1.8%, , N = 0.10(VERY WEEDY REACHES ,GOOD CONDITION).



SWM POND SECTIONS 'A-A'
NO SCALE



SWM POND SECTIONS 'B-B'
NO SCALE



Application No. RZ 2004-SP-002 Staff t. swagler
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 8-25-05
Date of (BOS) (PC) approval 9-12-05
Sheet 3 of 5

CAD-CON CONSULTING INCORPORATED
STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL ENGINEERS
10706 VANDOR LANE
MANASSAS, VIRGINIA 20109
703-392-5141

Client

SAM CHUNG
8725 BROOK ROAD
MCLEAN, VA 22102

Issues/Revisions

No.	Date	Remarks
1	06-27-05	REV PER FX. CO.
2	05-19-05	REV PER FX. CO.
3	04-19-05	REV PER FX. CO.
4	04-05-05	REV PER FX. CO.
5	03-29-05	REV PER FX. CO.
6	09-14-04	SUBMIT FX. CO.

Drawn: NAS/PMY
Checked: NAS
Approved: RCM
Date: 09/01/04
Job No.: 361.0012

COMMONWEALTH OF VIRGINIA
FREDERICK D. NEAL
No 013413
PROFESSIONAL ENGINEER

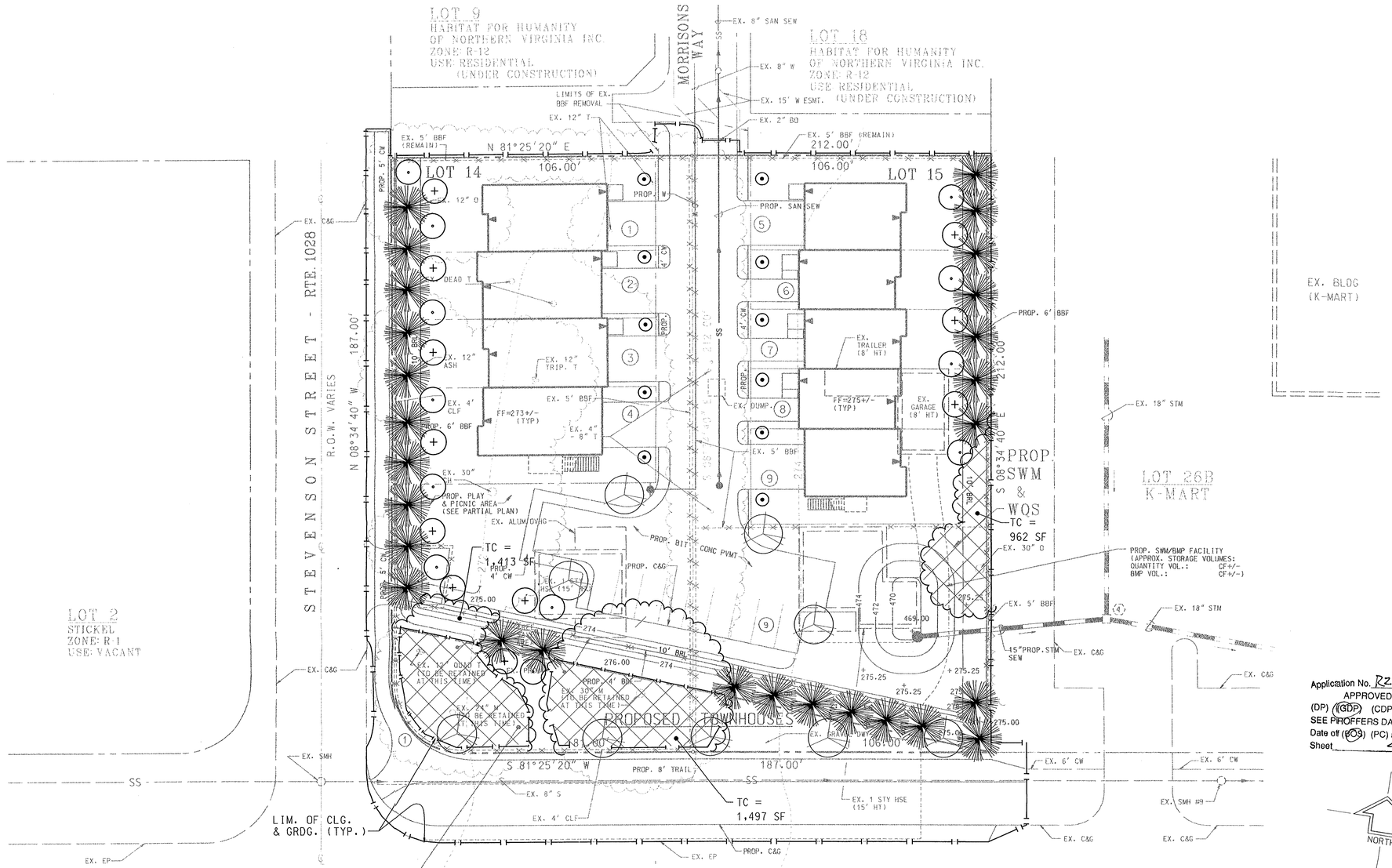
Project

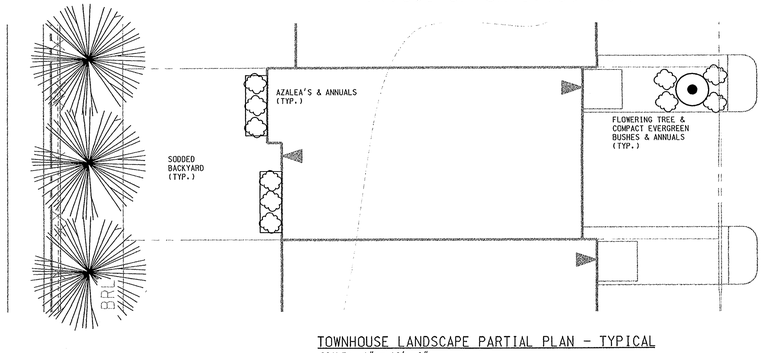
LOTS 14 & 15
11226 & 11280 LEE HIGHWAY
FAIRFAX, VIRGINIA

Sheet Title

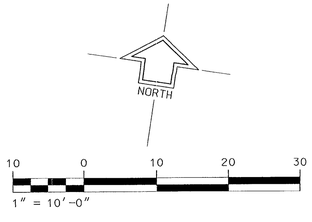
SWM CONCEPT

Sheet Number: C-3





TOWNHOUSE LANDSCAPE PARTIAL PLAN - TYPICAL
SCALE: 1" = 10'-0"



PLANT LIST

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	10-YR TREE COVER (SF)	TREE COVER SUB-TOTAL (SF)	COMMENTS
⊙	*	CORNUS FLORIDA	'CHEROKEE CHIEF' CHEROKEE CHIEF DOGWOOD	2" MIN CAL	50		B & B
+	*	ILEX X 'NELLIE R. STEVENS'	NELLIE STEVENS HOLLY	6' HT. MIN.	50		B & B
·	*	JUNIPERUS VIRGINIANA 'PRINCETON SENTRY'	EASTERN REDCEDAR	6' HT. MIN.	50		B & B
	*	GLEDITSIA TRICANTHOS VAR. INERMIS 'SKYLINE'	SKYLINE THORNLESS HONEYLOCUST	2" MIN. CAL.	150		B & B
	*	PICEA ABIES	NORWAY SPRUCE	6' HT. MIN.	150		B & B
	-	EXISTING TREE TO REMAIN					

* NOTE: QUANTITIES TO BE DETERMINED AT SITE PLAN TOTAL = *

CAD-CON CONSULTING INCORPORATED
STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL ENGINEERS
10706 VANDOR LANE
MANASSAS, VIRGINIA 20109
703-392-5141

Client

SAM CHUNG
8725 BROOK ROAD
MCLEAN, VA 22102

Application No. RZ 2004-SP-002 Staff
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 8-25-05
Date of (BOS) (PC) approval 9-12-05
Sheet 4 of 5

Issues/Revisions

No.	Date	Remarks
	06-27-05	REV PER FX. CO.
	05-19-05	REV PER FX. CO.
	04-19-05	REV PER FX. CO.
	04-05-05	REV PER FX. CO.
	03-29-05	REV PER FX. CO.
	09-14-04	SUBMIT FX. CO.

Drawn: PMY
Checked: NAS
Approved: RCM
Date: 09/01/04
Job No.: 361.0012

COMMONWEALTH OF VIRGINIA
FREDERICK D. NEAL
No 013413
PROFESSIONAL ENGINEER

Project

LOTS 14 & 15

11226 & 11280
LEE HIGHWAY

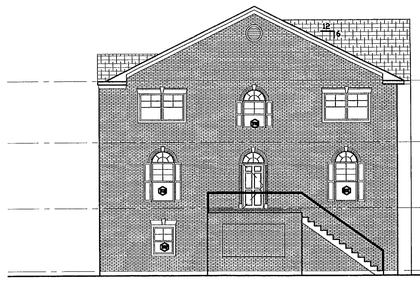
FAIRFAX, VIRGINIA

Sheet Title

LANDSCAPE PLAN

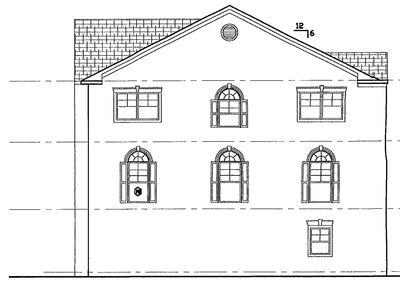
Sheet Number: L-1

p:\361\0012\dgn\landsca.dgn Jan. 27, 2005 10:21:04



1 / A-1 SOUTH ELEVATION BLDG "A"
SCALE: 3/32"=1'-0"

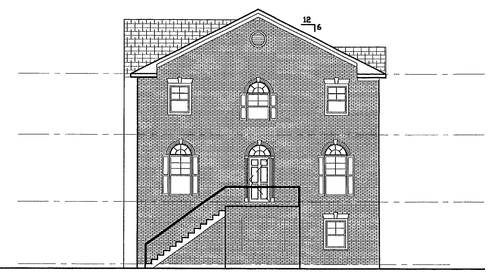
2 / A-1 FRONT ELEVATION BLDG "A"
SCALE: 3/32"=1'-0"



3 / A-1 NORTH ELEVATION BLDG "A"
SCALE: 3/32"=1'-0"

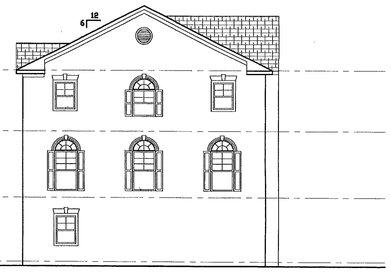
4 / A-1 REAR ELEVATION BLDG "A"
SCALE: 3/32"=1'-0"

5 / A-1 FRONT ELEVATION BLDG "B"
SCALE: 3/32"=1'-0"

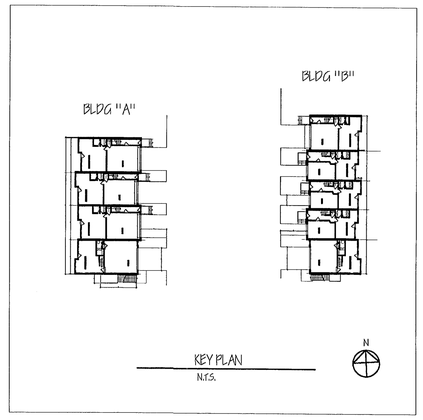


6 / A-1 SOUTH ELEVATION BLDG "B"
SCALE: 3/32"=1'-0"

7 / A-1 REAR ELEVATION BLDG "B"
SCALE: 3/32"=1'-0"



8 / A-1 NORTH ELEVATION BLDG "B"
SCALE: 3/32"=1'-0"



Application No. RZ 2004-SP-002 Staff J. Swafford
APPROVED DEVELOPMENT PLAN
(DP) (SDP) (CDP) (FDP)
SEE PROFFERS DATED 8-25-05
Date of (BOS) (PC) approval 9-12-05
Sheet 5 of 5

DP/KO

Architectural Design
Planing and
Interior Design

138 PATRICK ST
VIENNA, VA 22180

Ph. (571) 228-0050
E-MAIL DPAK121@yahoo.com

CIVIL ENGINEER
CAD-CON CONSULTING
301-645-2254

STRUCTURAL ENGINEER
DAI IL OH
703-489-0180

MEP ENGINEER
GEORGE IRA WORSLEY JR.
202-291-1666

LOTS 14 & 15
11226 & 11280 LEE HIGHWAY
FAIRFAX, VIRGINIA

REVISION

DRAWING TITLE

ARCHITECTURAL PLANS
& ELEVATIONS

DATE JUNE 27, 2005

SCALE

A-1