GENERALIZED DEVELOPMENT PLAN/ SPECIAL EXCEPTION PLAT

J. K. INVESTMENTS, INC.

PROPERTY

MT. VERNON DISTRICT

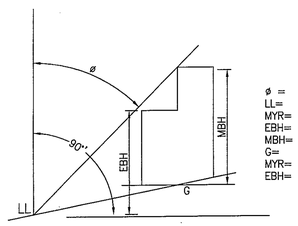
FAIRFAX COUNTY, VIRGINIA

GDP/SE 2007-0412

SEPTEMBER 2007

GENERAL NOTES:

1. THE PROPERTY SUBJECT TO SPECIAL EXCEPTION AMENDMENT APPLICATION CONSISTS OF 384,025 SF OR 8.8160 ACRES AND IS SHOWN ON FAIRFAX COUNTY TAX MAP #109-2((01)) PARCEL13A, OF WHICH 342,918.45 SF IS ZONED C-8 AND 41,108.55 SF IS ZONED R-2. THE PROPERTY IS ALSO WITHIN THE ROUTE 1 HIGHWAY CORRIDOR OVERLAY DISTRICT AND WOODLAWN PLANTATION HISTORIC OVERLAY DISTRICT AND RICHMOND COMMERCIAL REVITALIZATION DISTRICT.
2. A SPECIAL EXCEPTION HAS BEEN GRANTED PRIOR AT THE SUBJECT PROPERTY FOR A MAJOR FILL WITHIN THE FLOODPLAIN: SE 85L-137.
3. THE SUBJECT PROPERTY IS LOCATED ALONG RICHMOND HIGHWAY-US ROUTE 1 NEAR THE INTERSECTION WITH OLD MILL ROAD AND IS OWNED BY JK INVESTMENTS INC.
4. THE SUBJECT PROPERTY IS LOCATED WITHIN THE WOODLAWN HISTORIC OVERLAY DISTRICT.THE APPLICANT IS APPLYING FOR REZONING OF THE ENTIRE PROPERTY FROM C-8 AND R-2 TO C-8.
5. THE APPLICANT IS ALSO APPLYING FOR AN AMENDMENT TO SE 85-L-137 AND IS APPLYING UNDER SECTION 9-014 OF THE ZONING ORDINANCE FOR MODIFICATION OF THE CURRENTLY VALID SPECIAL EXCEPTION, TO BUILD TWO HOTELS TECHNICALLY BY RIGHT IN C-8 ZONING.
6. THE COMPREHENSIVE PLAN FOR THE PROPERTY CALLS FOR OFFICE, RETAIL OR HOTEL/CONFERENCE CENTER AT UP TO 0.50 F.A.R. THE PROPERTY IS ALSO LOCATED WITHIN THE REVITALIZATION DISTRICT.
7. IN ACCORDANCE WITH CHESAPEAKE BAY PRESERVATION ORDINANCE AMENDMENTS ADOPTED ON JULY 7, 2003 AND THE CHESAPEAKE BAY PRESERVATION MAPS ADOPTED IN NOVEMBER 17, 2003, THERE IS A 100-YEAR FLOOD PLAIN LIMITS WITHIN THE PROPERTY. THE FLOODPLAIN LIMITS ARE BASED UPON THE FAIRFAX COUNTY FLOODPLAIN STUDY 9895-FP-01-3 FOR THE DOGUE CREEK WATERSHED. PORTION OF THE SITE IS ALSO WITHIN THE RPA LIMITS.
8. ALL EXISTING STRUCTURES ON THE SITE WILL REMAIN.
9. A BOUNDARY AND TOPOGRAPHIC SURVEY WAS PREPARED BY HUNTLEY NYCE, BASED ON A FIELD SURVEY. THE CONTOUR INTERVAL IS 1 FOOT.
10. THERE ARE EASEMENTS 25 FEET WIDE OR GREATER ON THE SITE, AND DEPICTED ON PLANS.
11. SITE ACCESS SHALL BE PROVIDED BY THE EXISTING ENTRANCE ON OLD MILL ROAD AND THE PROPOSED ENTRANCE ON RICHMOND HIGHWAY. PROPOSED IMPROVEMENTS ARE SUBJECT TO FINAL ENGINEERING DESIGN AND VDOT APPROVAL.
12. RIGHT-OF-WAY DEDICATION IS PROVIDED ALONG RICHMOND HIGHWAY (US ROUTE 1). OLD MILL ROAD RIGHT-OF-WAY IS EXISTING.
    NO RIGHT OF WAY DEDICATION IS REQUIRED ALONG OLD MILL ROAD.
13. LIMITS OF CLEARING AND GRADING ARE BASED UPON A PRELIMINARY GRADING STUDY AND MAY BE ADJUSTED AT THE TIME OF FINAL ENGINEERING. NECESSARY UTILITIES SHALL BE INSTALLED IN THE LEAST DISRUPTIVE MANNER AS POSSIBLE.
14. THE APPLICANT IS PROPOSING TO CONSTRUCT 5-FOOT WIDE CONCRETE WALK ALONG OLD MILL ROAD AND 6-FOOT WIDE CONC. WALK ALONG RICHMOND HIGHWAY.
15. STORM WATER MANAGEMENT AND THE BEST MANAGEMENT PRACTICES (BMP) REQUIREMENTS (40% PHOSPHOROUS REMOVAL) WILL BE MET BY A PROPOSED STORMWATER DETENTION FACILITY LOCATED UNDERGROUND ON THE SOUTHEASTERLY PORTION OF THE PROPERTY AND THE USE OF TREE BOX FILTERS AND OPEN SPACE (FLOOD PLAIN AREA) FOR WATER QUALITY PURPOSES.
16. SEE TABULATIONS THIS SHEET REGARDING PROPOSED FAR AND PARKING PROVIDED.
17. THE SITE WILL BE SERVED BY PUBLIC WATER AND PUBLIC SEWER.
18. ALL WETLAND PERMITS REQUIRED BY LAW PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES WILL BE OBTAINED.
19. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THERE ARE NO GRAVES ON THE SITE.
20. THE BUILDING FOOTPRINT SIZE AND LOCATION, THE NUMBER AND CONFIGURATION OF PARKING SPACES, AND THE AMOUNT AND CONFIGURATION OF OPEN SPACE AS SHOWN ON THIS PLAN AND SUMMARIZED IN THE SITE TABULATIONS MAY HAVE A MINOR MODIFICATION BASED UPON FINAL ARCHITECTURAL AND ENGINEERING DESIGN.
21. THERE ARE NO KNOWN HAZARDOUS OR TOXIC SUBSTANCES, HAZARDOUS PETROLEUM PRODUCTS, STORAGE TANKS OR CONTAINERS ON THE SITE.
22. A STATEMENT CONFIRMING OWNERSHIP OF THE PROPERTY AND THE APPLICANT'S RELATIONSHIP INTEREST IN THE SAME IS CONTAINED ON THE AFFIDAVIT SUBMITTED SEPARATELY.
23. SITE LIGHTING WILL HAVE A MAXIMUM OF HEIGHT OF 18 FEET WITH FULL CUT-OFF FIXTURES.
24. THIS DEVELOPMENT WILL CONFORM TO THE PROVISIONS OF ALL APPLICABLE ORDINANCE, REGULATIONS AND ADOPTED STANDARDS, OR IF ANY WAIVER, EXCEPTION OR VARIANCES IS SOUGHT BY THE APPLICANT, SUCH SHALL BE SPECIFICALLY NOTED WITH THE JUSTIFICATION FOR SUCH MODIFICATION. ALTHOUGH NOT SHOWN ON THIS PLAN, THE OWNER RESERVES THE RIGHT TO STALL ONE OR MORE SIGNS AS PERMITTED BY THE ZONING ORDINANCE.
25. THE DEVELOPER RESERVES THE RIGHT TO LOCATE TEMPORARY CONSTRUCTION TRAILERS ON THE SITE IN ACCORDANCE WITH FAIRFAX COUNTY REQUIREMENTS.
26. THE PROPERTY IS LOCATED IN MT. VERNON DISTRICT AND IS PLANNED FOR LOW RISE OFFICE (MAX. 4 STORIES).
27. EMERGENCY INGRESS/EGRESS IS PROVIDED AS SHOWN ON PLAN.
28. THE SITE IS LOCATED WITHIN THE DOGUE CREEK WATERSHED.
29. FLOOD PLAIN EASEMENT DEPICTED ON PLAN TAKEN FROM COUNTY RECORDS.
30. NO STRUCTURE CURRENTLY EXISTS, NOR IS PROPOSED WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN.
31. THE 100-YEAR WATER SURFACE ELEVATION (W.S.E.) VARIES FROM AN ELEVATION OF 17.5 TO 18.0 WITHIN THE SUBJECT PROPERTY. DUE TO THE PARKING GARAGES LOCATED AT THE LOWEST FLOOR ELEVATION OF BOTH PROPOSED BUILDINGS BEING LOWER THAN THE 100-YEAR W.S.E., ALL FEDERAL AND STATE REQUIREMENTS IN REGARDS TO FLOOD PROOFING SHALL BE INCORPORATED IN THE STRUCTURE AT THE TIME OF FINAL ENGINEERING. AT THE TIME OF FINAL ENGINEERING ALL FLOOD PROOFING MEASURES WILL BE DEPICTED TO SHOW COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS WITH CONSIDERATION TO STRUCTURAL, ELECTRICAL, PLUMBING, MECHANICAL, WATER AND SANITARY SYSTEMS.
32. ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS WILL BE PROVIDED PRIOR TO CONSTRUCTION.
33. PORTION OF THE PROPOSED LAND DISTURBANCE ENCROACHES INTO THE RPA LIMITS. MOST OF IT IS DUE TO THE ROAD FRONTAGE IMPROVEMENT OF RICHMOND HIGHWAY, AND THE OTHER ENCROACHMENTS ARE AT THE EXISTING PARKING AREA AND EXISTING CHANNEL FOR OUTFALL.
34. FLOOD PLAIN DISTURBANCE:MOST OF THE LAND DISTURBANCES WITHIN THE FLOOD PLAIN IS FOR THE ROAD FRONTAGE IMPROVEMENT OF RICHMOND HIGHWAY.
    THE ON-SITE DISTURBANCE IS AS FOLLOWS:
    DISTURBED AREA= 2,380 SF
    VOLUME OF CUT = 714 CF= 26.4 CY
35. PERMISSION FROM THE ELECTRIC POWER COMPANIES SHALL BE ACQUIRED TO PLANT SMALL TREES IN THE 7 FOOT WIDE PLANTING AREA WITHIN THE OVERHEAD ELECTRIC WIRE EASEMENT ALONG RICHMOND HIGHWAY.
36. TRANSITIONAL SCREENING PLANTING TO INCLUDE TREES AND SHRUBBERIES IN ACCORDANCE WITH THE ZONING ORDINANCE SHALL BE PROVIDED PRIOR TO SITE PLAN APPROVAL.
37. A DETAILED LANDSCAPE PLAN SHALL BE SUBMITTED AS PART OF THE FIRST SITE PLAN SUBMISSION, AND SHALL BE REVIEWED AND APPROVED BY THE URBAN FOREST MANAGEMENT DIVISION. THE LANDSCAPE PLAN SHALL ALSO REFERENCE AND INCLUDE ALL REQUIRED LANDSCAPING REFORESTATION AND TREE PRESERVATION REQUIREMENTS AS PART OF THE COUNTY'S LATEST TREE CONSERVATION ORDINANCE.



ø = ANGLE OF BULK PLANE
LL= LOT LINE
MYR= MINIMUM YARD REQUIREMENT
EBH= EFFECTIVE BUILDING HEIGHT
MBH= MAXIMUM BUILDING HEIGHT
G= GRADE
MYR= EBH TAN ø
EBH= MYR / TAN ø

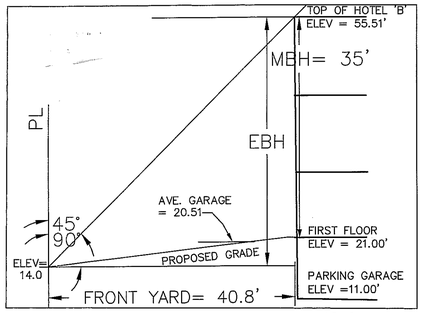
MAXIMUM BUILDING HEIGHT:
PERMITTED: 35 FT*
PROVIDED: 35 +/- FT

ANGLE OF BULK PLANE
FRONT: MIN. 40'
SIDE: NO REQUIREMENT
REAR: MIN.25'

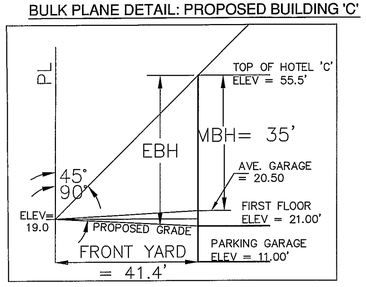
* THE ZONING DISTRICT C-8 ALLOWS A MAXIMUM BUILDING HEIGHT OF 40'; HOWEVER, THE WOODLAND HISTORIC OVERLAY DISTRICT FURTHER RESTRICTS THE MAXIMUM BUILDING HEIGHT TO 35'.

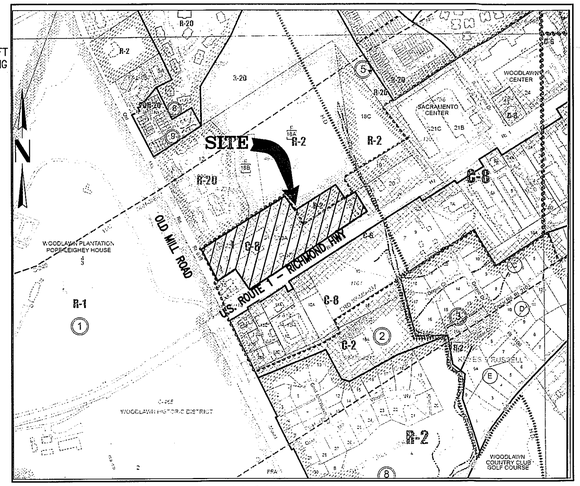
	REQUIRED/PERMITTED	MIN. YARD REQUIREMENT	PROVIDED
FRONT	ANGLE OF BULK PLANE (40'MIN.)	40 FT MIN.	40 FT

BULK PLANE DETAIL: PROPOSED BUILDING 'B'



BULK PLANE DETAIL: PROPOSED BUILDING 'C'





VICINITY MAP
SCALE: 1" = 500'

OWNER :

J.K. INVESTMENTS INC.

1340 OLD CHAIN BRIDGE ROAD,
McLean, Virginia 22101
(703) 591-5838
TAX MAP 1092 01 0013A

ENGINEER :

EMSI ENGINEERING INC.
9720 Capital Court, Suite 400
Manassas, Virginia 20101
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Fax (703) 361-3798
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PARKING TABULATION

BLDG #	BUILDING GFA (SF)	USE	HOTEL/ ROOMS	REGULAR PARKING REQUIREMENT	TOTAL PARKING REQ'D	HANDICAP PARKING REQ'D	HANDICAP PARKING PROVIDED	SURFACE REG. PARKING PROVIDED	UNDERGROUND REG.PARKING PROVIDED	TOTAL PARKING PROVIDED	LOADING SPACES REQUIREMENT	LOADING PARKING REQ'D	LOADING PARKING PROVIDED	Remarks
A	64,448	OFFICES	0	3 SPACES PER 1000 SF	194	4.0	4.0	146.0	0.0	150.0	1 PER FIRST 10,000 SF GFA+ 1 PER ADD'L 20,000SF	3.7	4.0	Existing Bldg
B	80,899.0	HOTEL - BLDG B	88	1PER RENTAL ROOM +4 PER 50 ROOMS	95	2.0	2.0	39.0	73.0	114.0	1 PER FIRST 10,000 SF GFA+ 1 PER ADD'L 100,000SF	1.7	2.0	
C	46,328	HOTEL- BLDG C	78	1PER RENTAL ROOM +4 PER 50 ROOMS	85	2.0	2.0	2.0	43.0	47.0	1 PER FIRST 10,000 SF GFA+ 1 PER ADD'L 100,000SF	1.4	2.0	
	0	FLOOD PLAIN/OPEN SPACE	0	0	0	0			-	-				
	191,675				374	8.0	8.0	187.0	116.0	311.0		6.8	8.0	
						20% DISCOUNT REVITALIZATION DISTRICT								
					75	CREDIT DUE TO REVITALIZATION								
					299	ULTIMATE TOTAL REQUIRED								

SITE TABULATION AFTER REZONING R-2 ZONE TO C-8

TOTAL SITE AREA: 384,025 SF = 8.816 Ac.
MIN. SITE AREA REQUIRED: 40,000 SF

MINUMUM LOT WIDTH:
REQUIRED: 200.00 FT
PROVIDED: 484.98 FT

AREA OF STREET DEDICATION: 28,105 SF

ZONING: C-8
ALLOWABLE G.F.A WITHIN C-8= 192,012.50 SF
USE: HOTELS IN ADDITION TO EXISTING OFFICE BUILDING

	G.F.A. (SF)	USE	# STORY	FOOT PRINT (SF)
EXISTING BLDG A	64,448	EXISTING office building	3	22,200.00
PROPOSED BLDG C	46,328	small footprint hotel	3	15,443.00
PROPOSED BLDG. B G	80,899	bigger footprint hotel	3	24,919.00
TOTAL	191,675			

MAXIMUM F.A.R.:
PERMITTED: 0.50
PROVIDED: 0.50 (TOTAL PROP. GFA DIVIDED BY total AREA)

OPEN SPACE:
REQUIRED: 15.00% = 57,603.75 SF
PROVIDED: 50.59% = 194,267.13 SF

SETBACKS
FRONT 40' MIN. BULK PLANE CONTROLLED
REAR 25'
SIDE NO REQUIREMENT

TOTAL FLOODPLAIN AREA ON SITE = 120,707.00 SF
% OF FLOODPLAIN AREA WITHIN SITE 31.43%

Application No. RZ 2008-MV-007 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED May 17, 2010
Date of (BOS) (PC) May 25, 2010
Sheet 1 of 14
***Concurrent w/ SEA 85-L-137 ***
See Dev Conditions dated May 5, 2010

RECEIVED
Department of Planning & Zoning
SEP 02 2009
Zoning Evaluation Division

SHEET INDEX

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2. REZONING PLAT
3. EXISTING CONDITIONS
4. EXISTING CONDITIONS & MISCELLANEOUS DETAILS
5. INTERIM IMPROVEMENT PROPOSED CONDITIONS
5A ULTIMATE IMPROVEMENT PROPOSED CONDITIONS
6. PROPOSED CONDITIONS & STORM PROFILES
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8. DRAINAGE DIVIDES & CROSS-SECTIONS
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10. LANDSCAPE PLAN
11. LANDSCAPE PLAN
12. RICHMOND HIGHWAY PLAN & PROFILE
13. OLD MILL ROAD PLAN & PROFILE
14. ARCHITECTURAL EXHIBIT

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PROJECT COORDINATOR
CHARLIE FRONDA

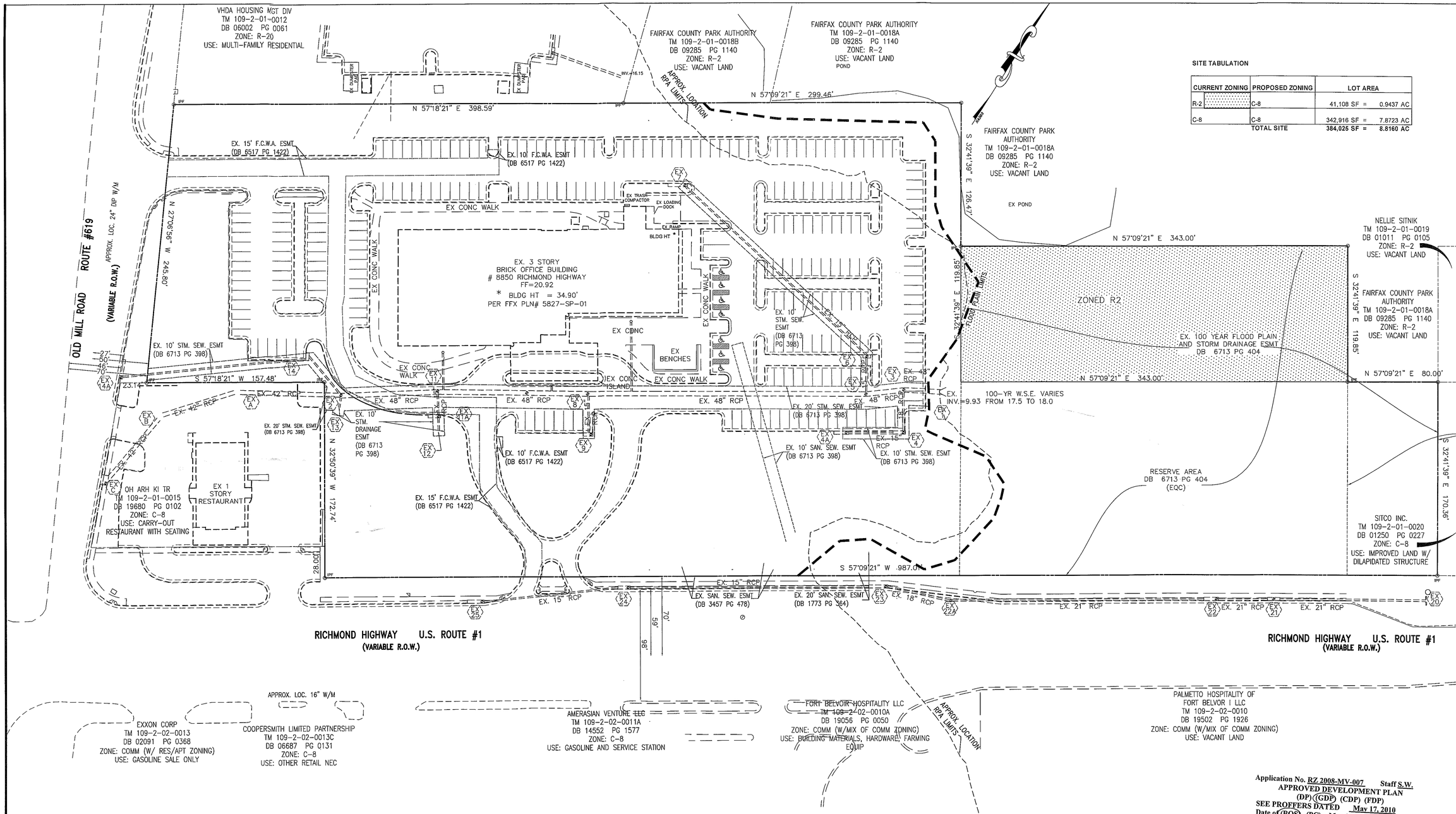
COVER SHEET
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
FAIZAL A. HASSAN
LIC. No.025527
3/13/2009
PROFESSIONAL ENGINEER

PLAN STATUS	
02-22-08	LAWYER'S COMMENT
08-04-08	LAYOUT CHANGES
11-29-08	county comments
4-21-09	county comments
09-01-09	county comments

DATE	DESCRIPTION	
CF/DM DESIGN	TMD/DM DRAWN	CF CHKD
SCALE	H: AS NOTED V:	
JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	1 OF 14	



SITE TABULATION

CURRENT ZONING	PROPOSED ZONING	LOT AREA
R-2	C-8	41,108 SF = 0.9437 AC
C-8	C-8	342,916 SF = 7.8723 AC
	TOTAL SITE	384,025 SF = 8.8160 AC

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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Sheet 2 of 14
***Concurrent w/ SEA 85-L-137 ***
See Dev Conditions dated May 5, 2010

THE SUBMITTING ENGINEER CERTIFIES THAT NO OTHER CHANGES HAVE BEEN MADE ON THE PLAN OR PROFILE EXCEPT THOSE PREVIOUSLY APPROVED

REVISIONS APPROVED BY DIVISION OF DESIGN REVIEW

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE

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REZONING PLAT
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
PAUL A. HASSAN
LIC. No.025527
3/19/2009
PROFESSIONAL ENGINEER

PLAN STATUS	
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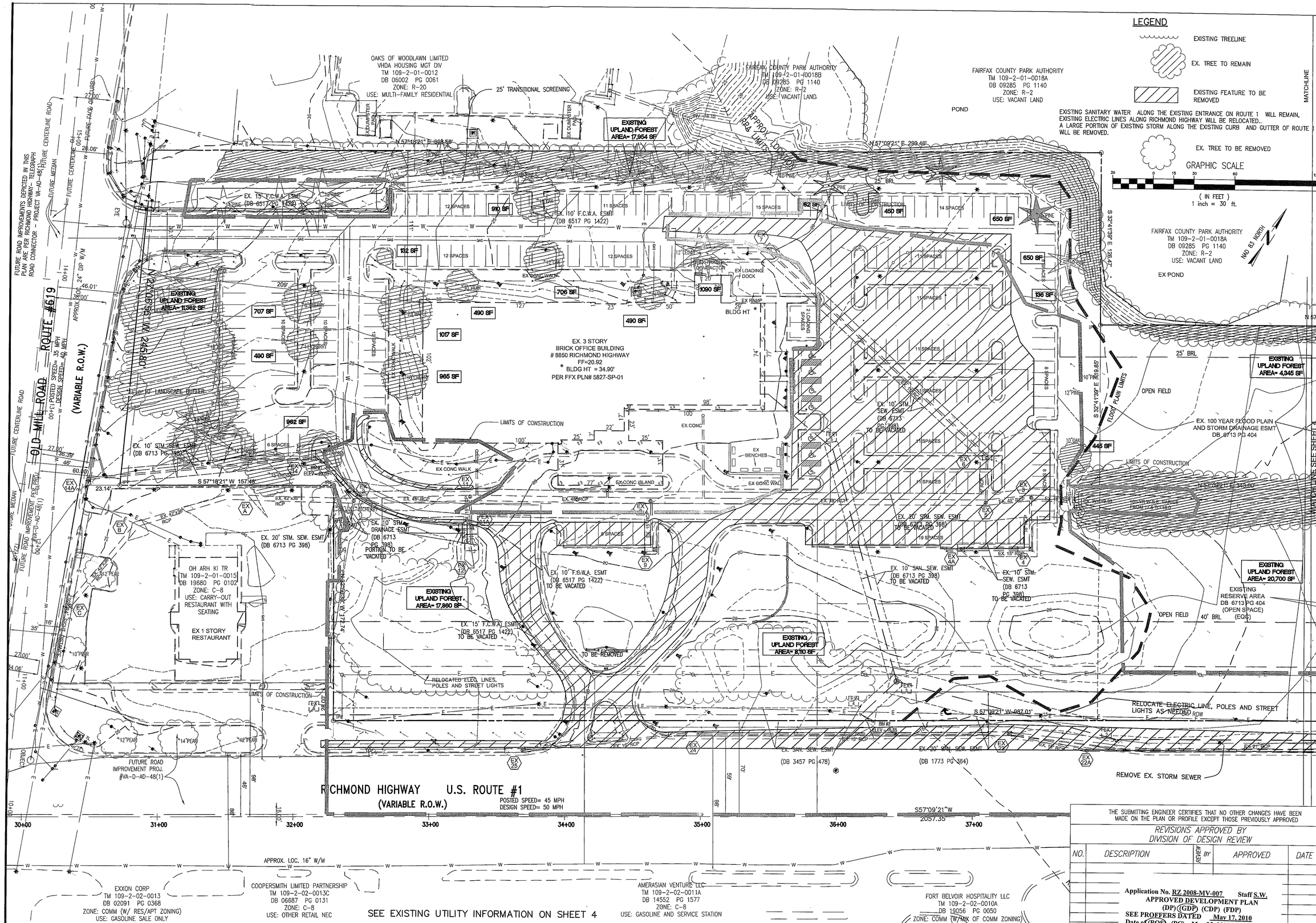

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CHARLIE FRONDA

EXISTING CONDITIONS
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
TALAL A. HASSAN
LIC. No.025527
3/19/2009
PROFESSIONAL ENGINEER

PLAN STATUS

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JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	3 OF 14	

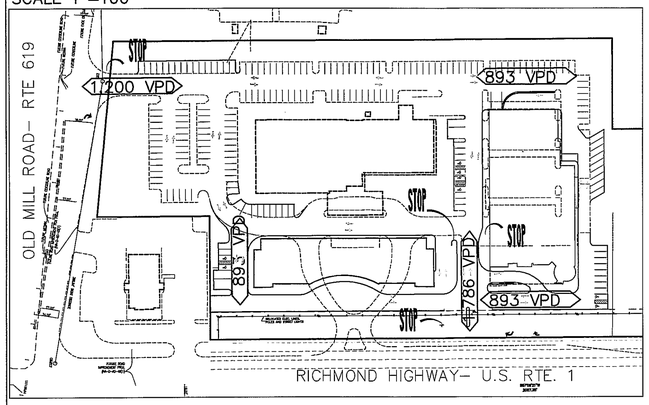
C-1042

LEGEND

EXISTING	DESCRIPTION	PROPOSED
350	INDEX CONTOUR	350
352	INTERMEDIATE CONTOUR	352
EX. E.P.	EDGE OF PAVEMENT	PROP. E.P.
EX. C & G	CURB AND GUTTER	CG-6
	TRANSITION FROM CG-6R TO CG-6	CG-6R CG-6
	PROPOSED HEADER CURB	
	PROPERTY LINE	
	DEPARTING PROPERTY LINE	
	LOT LINE	
	RIGHT-OF-WAY	
	CENTERLINE	
	FLOOD PLAIN	
	CLEARING AND GRADING	
	TREE LINE	
	FLOW LINE OF SWALE	
	STREAM	
	OVERLAND RELIEF PATHWAY	
	FENCE LINE	
	EASEMENT	
EX 8" W/M	WATER LINE	8" DIP W/M
EX. W/V	WATER VALVE	
	REDUCER	
EX 8" SAN	SANITARY SEWER	8" SAN
EX 18" RCP	STORM SEWER	18" RCP
	CABLE TV	CATV
	ELECTRIC SERVICE	
	TELEPHONE SERVICE	
	GAS LINE	
+ 25.32	SPOT ELEVATION	+25.32
	ASPHALT TRAIL	
	CONCRETE SIDEWALK	
	END WALLS	
	END SECTIONS	
	STOP SIGN	
	STREET SIGN	
OHE	OVERHEAD ELECTRIC	OHE
OHT	OVERHEAD TELEPHONE	OHT
VAN	HANDICAP PARKING SPACE (VAN)	VAN
	RIP RAP	
F.F. =	DENOTES FIRST FLOOR ELEVATION	
BENCHMARK	BM #1 TRV #1 ELEV=101.62	
	UTILITY POLE	
	SIGN	
EX 2	SANITARY SEWER IDENTIFIER	8
S 2	STORM DRAIN IDENTIFIER	2
W	EASEMENT IDENTIFIER	W
	WATER METER	
	FIRE HYDRANT	
	PARKING INDICATOR INDICATES THE NUMBER OF TYPICAL PARKING SPACES	25
	DENOTES ENTRANCE/EXIT	
	STREET LIGHT	
	VEHICLES PER DAY (TRAFFIC COUNT)	255 VPD
	TEST PIT LOCATION RECOMMENDED/REQUIRED	TP
	CRITICAL SLOPE SLOPES TO BE STABILIZED PURSUANT TO VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK	
	HANDICAP RAMP (CG-12) DENOTES LOCATION OF STD VDOT CG-12 AND/OR JURISDICTIONAL STANDARD RAMP CONSTRUCTION	
EX 5" PINE	15" OAK TREE	

TRAFFIC DISTRIBUTION/CIRCULATION PLAN

SCALE 1"=100'



AVERAGE DAILY TRIPS IN+OUT

TRIP GENERATOR	RATIO	BUILDING A Existing Offices	BUILDING B Hotel	BUILDING C Hotel	VPD
HOTEL EMPLOYEE	11.3		25	20	46
ROOM	10.5		1018.5	808.5	1,827
GENERAL OFFICE PER 1,000 GFA	12.3	861			861
OFFICE EMPLOYEE PER 1,000 GFA	3.6	252			252
TOTALS					2,986

Source: Trip Generation Supplement No. 1 , Institute of Transportation Engineers, Washington D.C.
Ratio in this chart is the average daily trip.
a traffic study analysis will be done at the time of site plan.

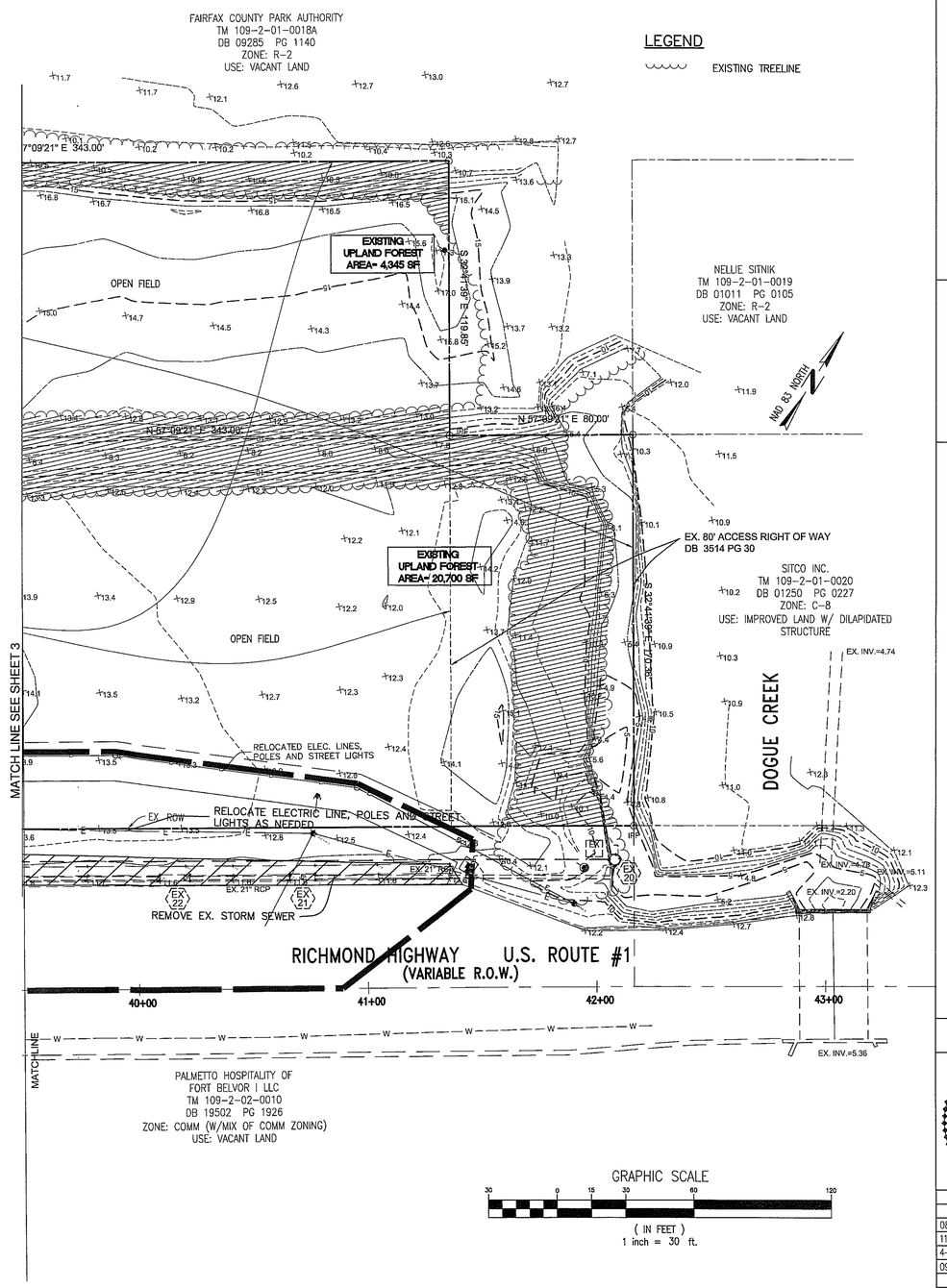
EXISTING STORM SEWER LEGEND

EX. STORM STR. #	TYPE OF STRUCTURE	TOP ELEV.	INVERT IN ELEV.	INVERT OUT ELEV.	REMARKS
EX A	GRID INLET	23.37	17.08	17.02	
EX B	GRID INLET	23.82	18.32	18.22	
EX C	DI-3B	25.66	19.26	19.06	
EX 2	MH-1	22.41	17.24	12.83	FROM 13
			15.12		FROM EX A
			15.25		FROM 14
EX 3	MH-1	16.71	10.95	10.01	TO BE REMOVED
			10.43		
EX 4	DI-3B	16.66	11.97	11.78	TO BE REMOVED
EX 4A	DI-3B	16.94		12.70	TO BE REMOVED
EX 5	MH-1	16.59			FULL OF WATER, TO BE REMOVED
EX 6	DI-3B	17.29	12.89	12.75	TO BE REMOVED
EX 7	DI-3B	20.67		16.38	TO BE RE-ROUTED TO STR 6
EX 8	MH-1	19.04	13.27	11.55	FROM STR 9
			11.61		FROM STR 11
EX 9	DI-3B	8.83		14.37	TO STR 8
EX 11	MH-1	20.52	14.83	12.45	FROM ROOF DRAIN
			12.49		FROM STR 2
EX 11A	DI-3B	20.68	15.66	15.49	INLET TO BE REPLACED WITH STR 9
EX 12	ES-1			15.88	TO BE REMOVED
EX 13	ES-1			18.22	
EX 14	DI-3B	23.05	18.39	18.27	
EX 14A	DI-3B	27.11		22.51	
EX 20	EW-1			4.03	
EX 21	DI-3C	11.63	5.38	5.29	
EX 22	DI-3B	11.65	5.96	5.93	
EX 22A	MH-1	12.28	7.78	7.48	
EX 23	DI-3B	13.20	9.65	9.37	
EX 24	DI-3B	18.61	14.50	14.15	
EX 25	DI-3B	21.08		16.68	

EXISTING SANITARY SEWER LEGEND

EX. SAN STR. #	TOP ELEV.	INVERT IN	INVERT OUT	REMARKS
1	14.28	3.60	3.40	
2	12.51	5.56	5.45	
3	16.24	7.31	6.89	FROM STR 4
		7.21		FROM STR 5
4	16.65	8.30	8.21	
5	18.18	8.73	8.54	
6	23.29		16.42	

FROM	TO	DISTANCE	BEARINGS	SLOPE
6	4	396'	N57°09'34"E	2.05%
5	3	177'	S48°21'22"E	0.75%
4	3	34'	N14°20'28"E	2.65%
3	2	167'	N71°56'10"E	0.80%
2	1	398'	N57°15'35"E	0.46%



Application No. RZ 2008-MV-007 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED May 17, 2010
Date of (BOS) (PC) May 25, 2010
Sheet 4 of 14
***Concurrent w/ SEA 85-L-137 ***
See Dev Conditions dated May 5, 2010

THE SUBMITTING ENGINEER CERTIFIES THAT NO OTHER CHANGES HAVE BEEN MADE ON THE PLAN OR PROFILE EXCEPT THOSE PREVIOUSLY APPROVED

REVISIONS APPROVED BY DIVISION OF DESIGN REVIEW

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE

emsi ENGINEERING
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PROJECT COORDINATOR
CHARLIE FRONDA

EXISTING CONDITIONS & MISCELLANEOUS DETAILS
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT — FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
FAISAL A. HASSAN
LIC. No.025527
3/13/2009
PROFESSIONAL ENGINEER

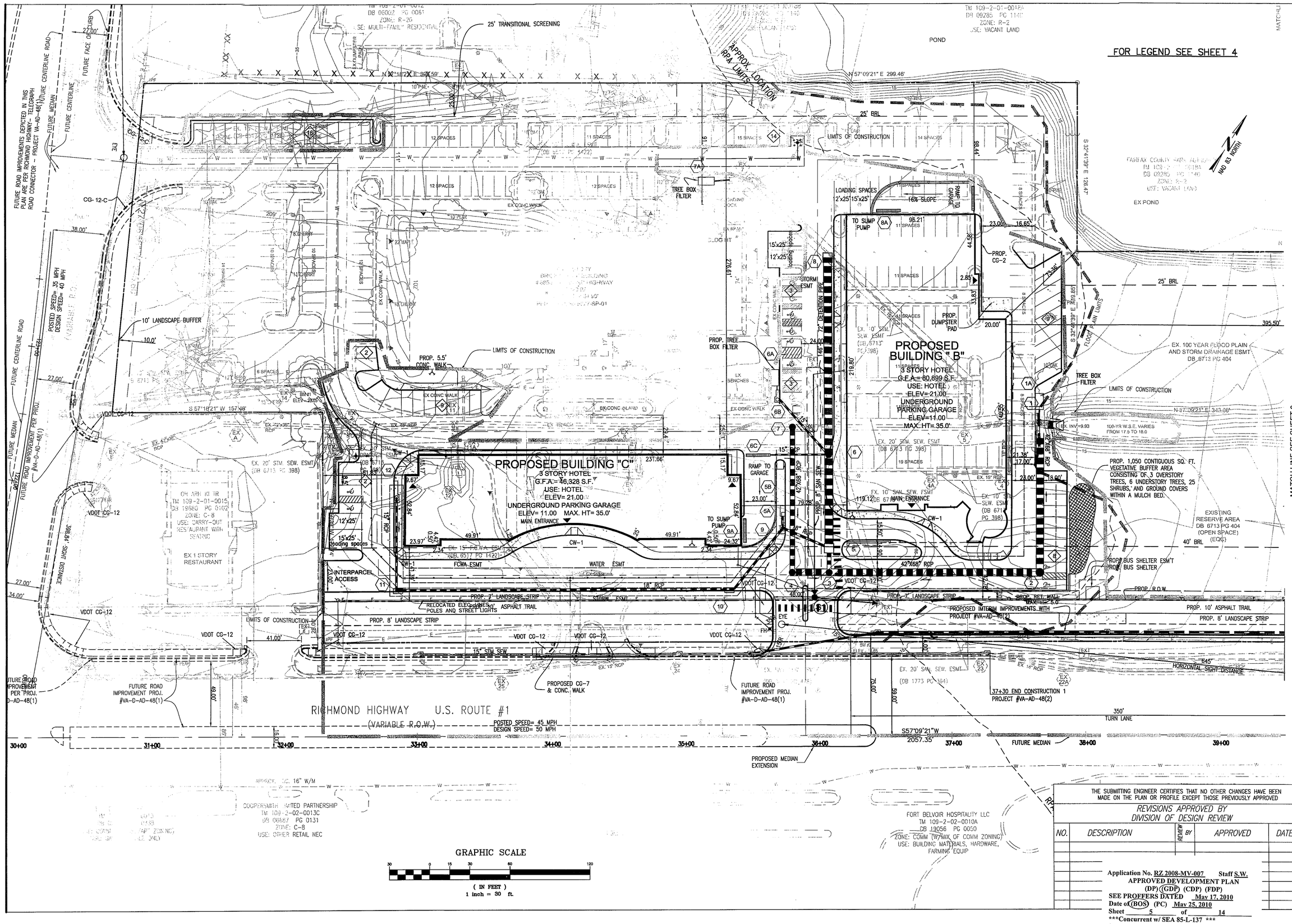
PLAN STATUS

08-04-08	LAYOUT CHANGES
11-29-08	county comments
4-21-09	county comments
09-01-09	county comments

DATE	DESCRIPTION

CF/DM DESIGN	TMD/DM DRAWN	CF CHKD
SCALE	H: 1" = 30' V:	
JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	4 OF 14	

C-1042



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INTERIM IMPROVEMENT PROPOSED CONDITIONS
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

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3/13/2009
PROFESSIONAL ENGINEER

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09-01-09	COUNTY COMMENTS

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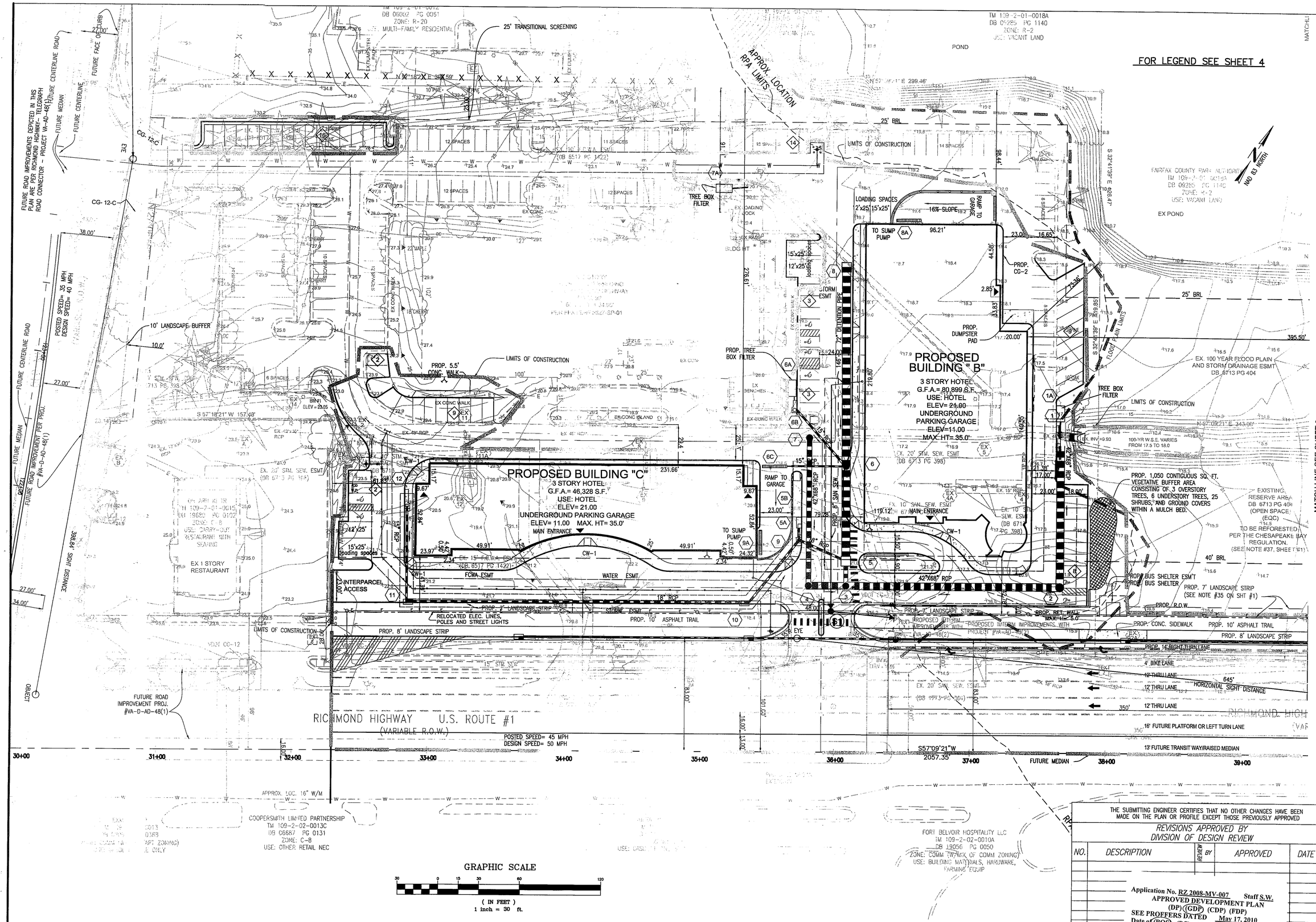
CF/DM DESIGN	TMD/DM DRAWN
CF CHKD	
SCALE	H: 1" = 30' V:
JOB No.	VA-07-16
DATE :	FEB, 2008
FILE No.	C-1042
SHEET	5 OF 14

C-1042



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PROJECT COORDINATOR
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ULTIMATE IMPROVEMENT
PROPOSED CONDITIONS
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
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MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

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LIC. No.025527
3/19/2009
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09-01-09	county comments

CF/DM DESIGN	TMD/DM DRAWN	CF CHKD
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JOB No.	VA-07-16
DATE :	FEB, 2008
FILE No.	C-1042
SHEET	5A OF 14

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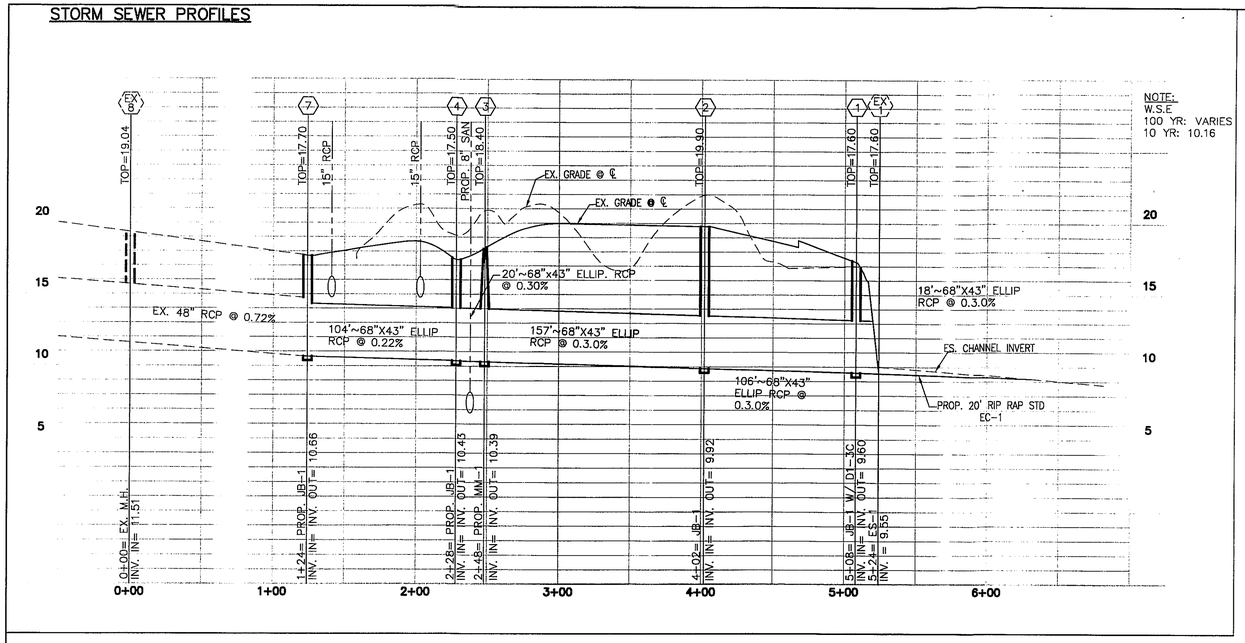
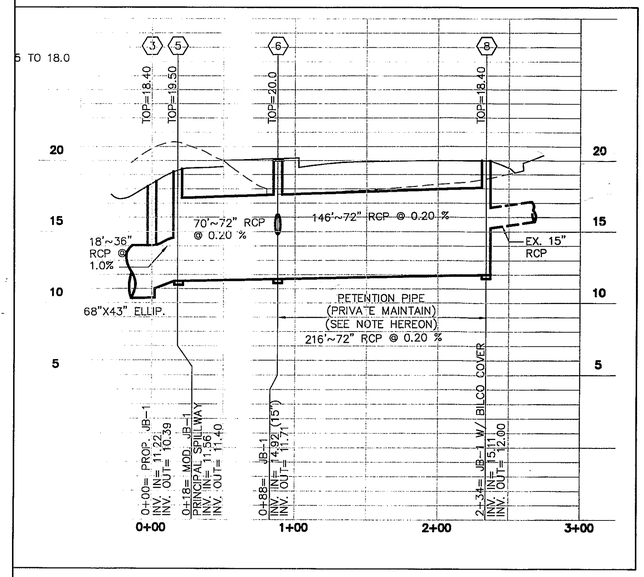
C-1042

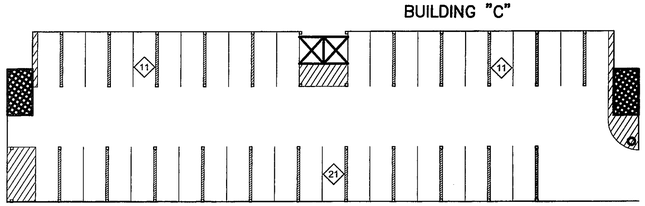
STORM SEWER PROFILES

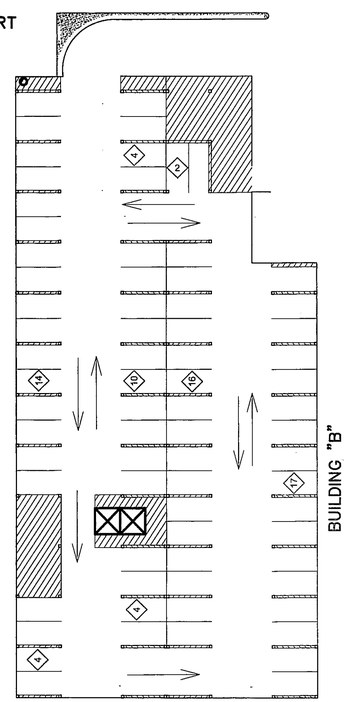




NOTE:
DUE TO THE EXISTING SITE CONDITION THE INVERT OF THE UNDERGROUND STORMWATER RETENTION PIPE IS SET TO IT'S HIGHEST POSSIBLE INVERT ELEVATION.

BUILDING "C"



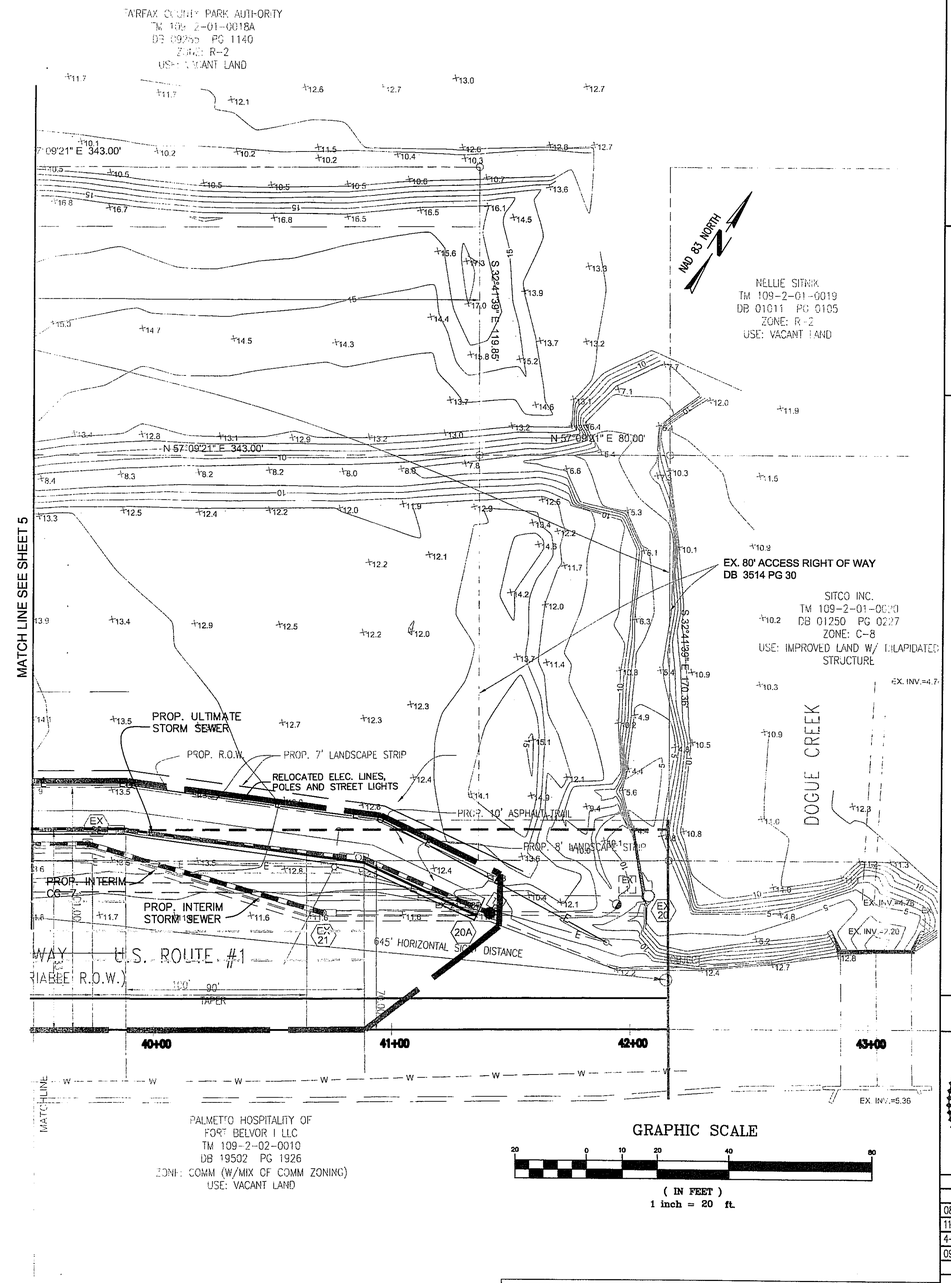


BUILDING "B"

UNDERGROUND LEVEL

DENOTES STAIRCASE AND OR ELEVATORS AREA

DENOTES STAIRCASE AND OR ELEVATORS AREA



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Application No. RZ 2008-MV-007 Staff S.W.
APPROVED DEVELOPMENT PLAN
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PROJECT COORDINATOR
CHARLIE FRONDA

PROPOSED CONDITIONS & STORM PROFILES
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

PROJECT NO

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FATAL A. HASSAN
LIC. No.025527
3/19/2009
PROFESSIONAL ENGINEER

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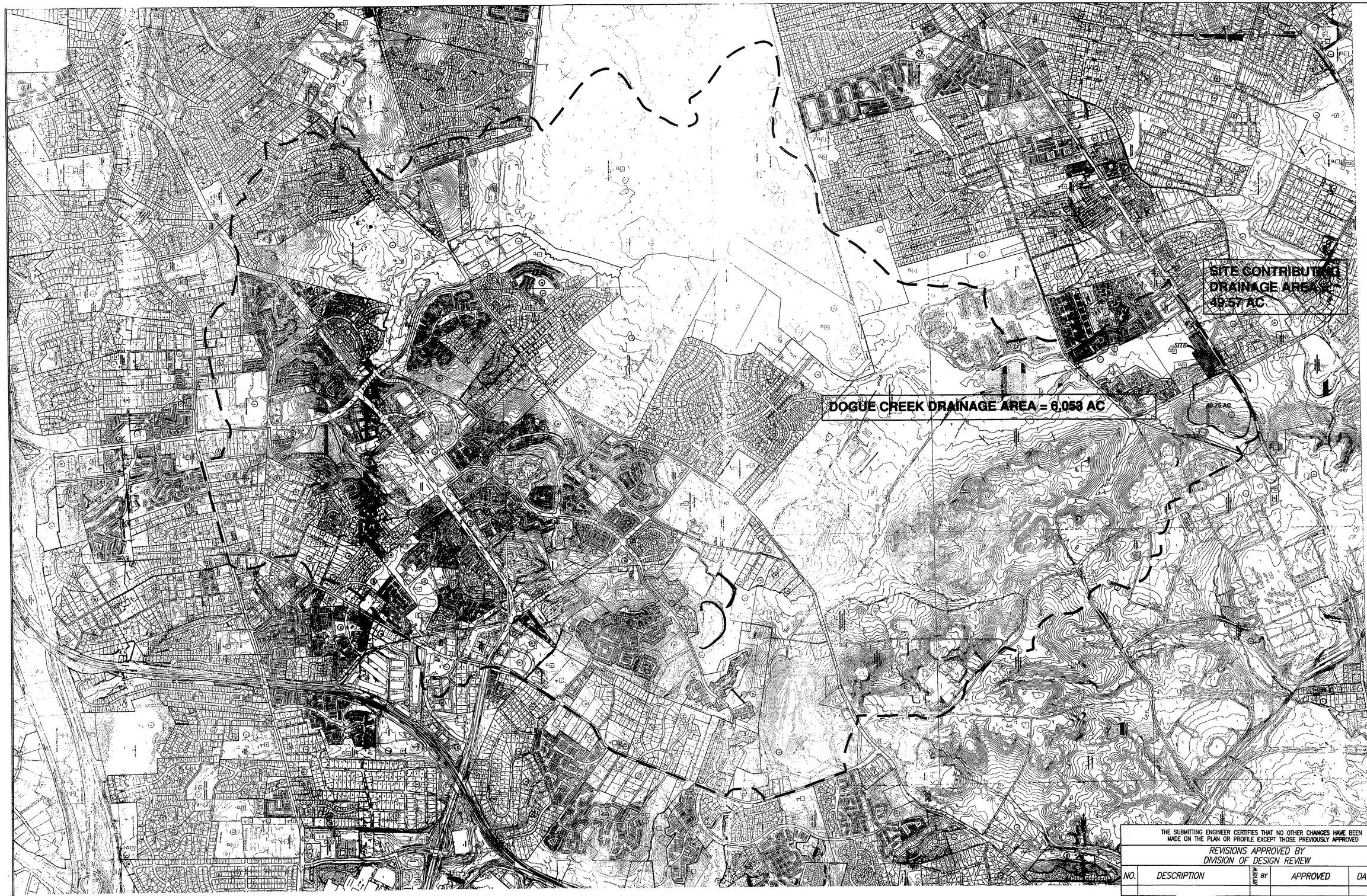
4-21-09	county comments
09-01-09	county comments

CF/DM DESIGN	TMD/DM DRAWN	CF CHKD
SCALE	H: 1" = 30' V:	
JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	6 OF 14	

C-1042



NOTES:

1. SEE SHEET 8 FOR ANDERSON FORMULA DRAINAGE ANALYSIS OF THE DOGUE CREEK WATERSHED.
2. SEE SHEET 8 FOR CROSS SECTION ANALYSIS RESULTS.

GRAPHIC SCALE

1000 0 500 1000 2000 4000

(IN FEET)
1 inch = 1000ft.

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CHARLIE FRONDA

OVERALL DRAINAGE MAP

GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT

J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

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DATE	DESCRIPTION

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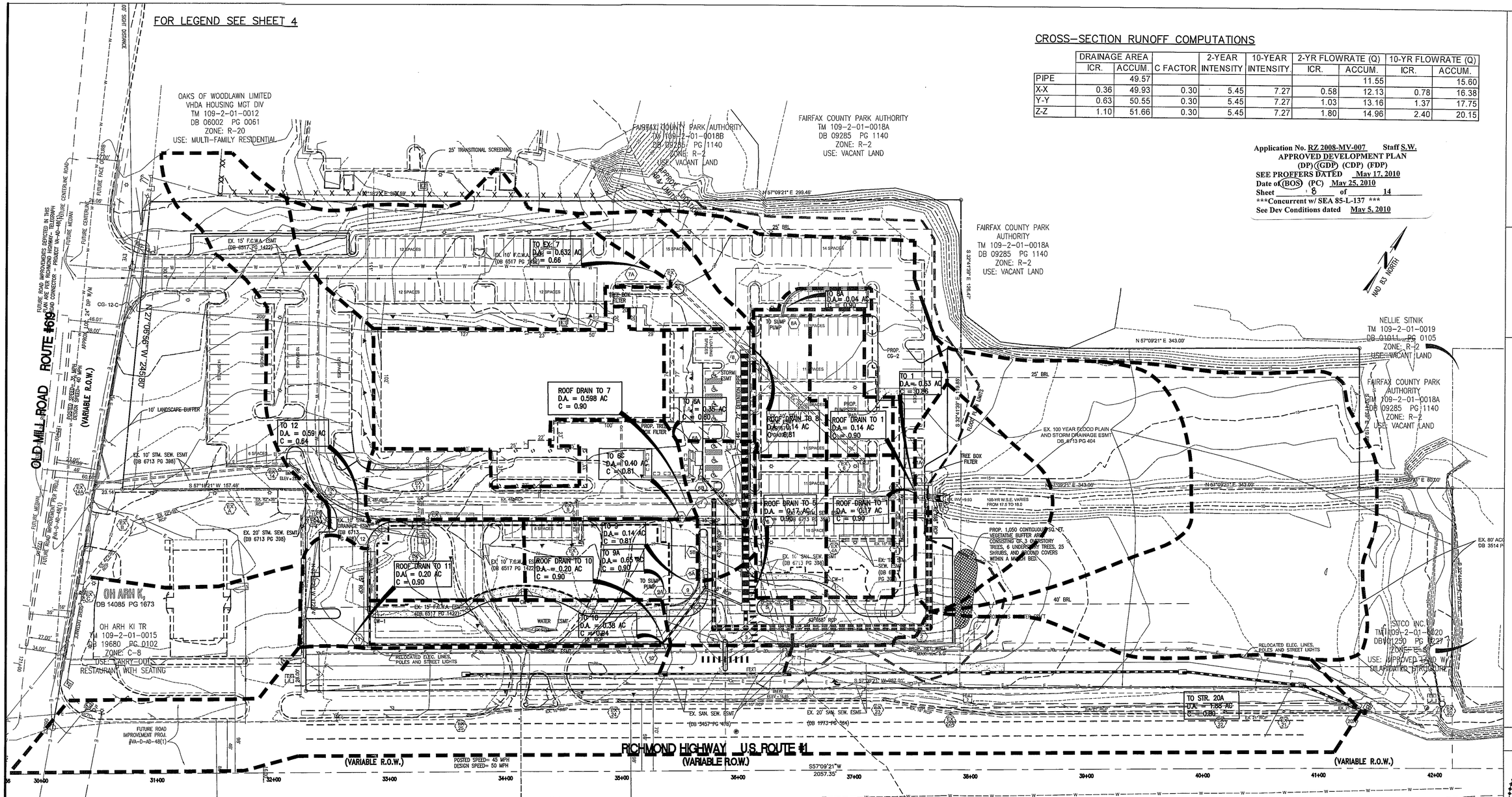
SCALE	H: 1" = 1000' V:	
JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	7 OF 14	

C-1042

FOR LEGEND SEE SHEET 4



CROSS-SECTION RUNOFF COMPUTATIONS

	DRAINAGE AREA			2-YEAR	10-YEAR	2-YR FLOWRATE (Q)		10-YR FLOWRATE (Q)	
	ICR.	ACCUM.	C FACTOR	INTENSITY	INTENSITY	ICR.	ACCUM.	ICR.	ACCUM.
PIPE		49.57					11.55		15.60
X-X	0.36	49.93	0.30	5.45	7.27	0.58	12.13	0.78	16.38
Y-Y	0.63	50.55	0.30	5.45	7.27	1.03	13.16	1.37	17.75
Z-Z	1.10	51.66	0.30	5.45	7.27	1.80	14.96	2.40	20.15

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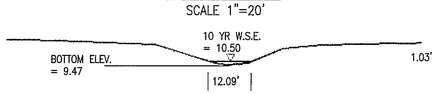
CROSS-SECTION X-X
SCALE 1"=20'



Cross Section X-X
(See This Sheet for location)

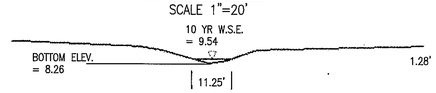
Project Description
Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data
Channel Slope: 0.0033 ft/ft
Discharge: Q2 = 12.13 cfs
Q10 = 16.38 cfs

Results
Roughness Coefficient: 0.030
Water Surface Elevation: 10.50 ft
Elevation Range: 9.47 to 16.32 ft
Flow Area: 7.81 ft²
Wetted Perimeter: 12.34 ft
Top Width: 12.09 ft
Normal Depth: 1.03 ft
Critical Depth: 0.73 ft
Critical Slope: 0.01776 ft/ft
Velocity: v2 =1.90 ft/s
v10 =2.10 ft/s
Velocity Head: 0.07 ft
Specific Energy: 1.09 ft
Froude Number: 0.46
Flow Type: Subcritical

Options
Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

CROSS-SECTION Y-Y
SCALE 1"=20'



Cross Section Y-Y
(See This Sheet for location)

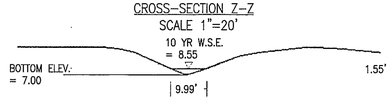
Project Description
Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data
Channel Slope: 0.0033 ft/ft
Discharge: Q2 = 13.16 cfs
Q10 = 17.75 cfs

Results
Roughness Coefficient: 0.030
Water Surface Elevation: 9.54 ft
Elevation Range: 8.26 to 14.56 ft
Flow Area: 7.99 ft²
Wetted Perimeter: 11.57 ft
Top Width: 11.25 ft
Normal Depth: 1.28 ft
Critical Depth: 0.93 ft
Critical Slope: 0.01710 ft/ft
Velocity: v2 =2.04 ft/s
v10 =2.22 ft/s
Velocity Head: 0.08 ft
Specific Energy: 1.35 ft
Froude Number: 0.46
Flow Type: Subcritical

Options
Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

CROSS-SECTION Z-Z
SCALE 1"=20'



Cross Section Z-Z
(See This Sheet for location)

Project Description
Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data
Channel Slope: 0.0033 ft/ft
Discharge: Q2 = 14.96 cfs
Q10 = 20.15 cfs

Results
Roughness Coefficient: 0.030
Water Surface Elevation: 8.55 ft
Elevation Range: 7.00 to 14.50 ft
Flow Area: 9.11 ft²
Wetted Perimeter: 10.55 ft
Top Width: 9.99 ft
Normal Depth: 1.55 ft
Critical Depth: 1.02 ft
Critical Slope: 0.02234 ft/ft
Velocity: v2 =2.04 ft/s
v10 =2.21 ft/s
Velocity Head: 0.08 ft
Specific Energy: 1.62 ft
Froude Number: 0.41
Flow Type: Subcritical

Options
Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

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DRAINAGE DIVIDES & CROSS-SECTIONS
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

PROJECT NO

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9/19/2009
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SCALE	H: 1" = 40' V:	
JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	8 OF 14	

C-1042

UNDERGROUND STORAGE PIPE
STORMWATER DETENTION CALCULATION

FAIRFAX COUNTY INFLOW HYDROGRAPH

FAIRFAX COUNTY HYDROGRAPH PARAMETERS

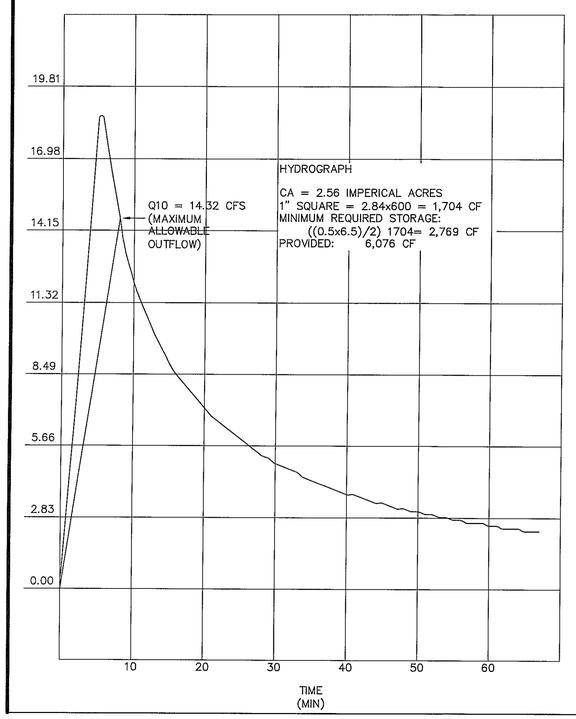
C-COEFFICIENT: 0.750
WATERSHED AREA: 3.380 AC
TIME OF CONCENTRATION (T_c): 5 MIN

INFLOW - OUTFLOW HYDROGRAPHS - STANDARD FLOOD ROUTING METHOD
10 YEAR STORM

TIME (MIN)	FLOW (CFS)	TIME (MIN)	FLOW (CFS)	TIME (MIN)	FLOW (CFS)
0	0.0	41	3.7	82	1.6
1	5.9	42	3.5	83	1.5
2	11.0	43	3.5	84	1.5
3	14.9	44	3.4	85	1.5
4	17.5	45	3.3	86	1.4
5	18.4	46	3.2	87	1.4
6	17.8	47	3.2	88	1.3
7	16.1	48	3.1	89	1.3
8	14.5	49	3.0	90	1.3
9	13.1	50	3.0	91	1.2
10	11.9	51	2.9	92	1.2
11	11.2	52	2.9	93	1.1
12	10.5	53	2.8	94	1.1
13	9.9	54	2.8	95	1.0
14	9.3	55	2.7	96	1.0
15	8.8	56	2.7	97	1.0
16	8.4	57	2.6	98	0.9
17	8.0	58	2.6	99	0.9
18	7.7	59	2.6	100	0.8
19	7.4	60	2.5	101	0.8
20	7.0	61	2.5	102	0.8
21	6.8	62	2.4	103	0.7
22	6.5	63	2.4	104	0.7
23	6.3	64	2.3	105	0.6
24	6.0	65	2.3	106	0.6
25	5.8	66	2.3	107	0.5
26	5.6	67	2.2	108	0.5
27	5.4	68	2.2	109	0.5
28	5.2	69	2.2	110	0.4
29	5.1	70	2.1	111	0.4
30	4.9	71	2.1	112	0.3
31	4.8	72	2.0	113	0.3
32	4.6	73	2.0	114	0.2
33	4.5	74	1.9	115	0.2
34	4.4	75	1.9	116	0.2
35	4.3	76	1.8	117	0.1
36	4.2	77	1.8	118	0.1
37	4.0	78	1.7	119	0.1
38	3.9	79	1.7	120	0.0
39	3.8	80	1.7		
40	3.7	81	1.6		

STAGE STORAGE FOR 72" DIAMETER PIPE		
PIPE LENGTH IN FT.=		215
STAGE (FT)	ELEVATION (FT)	VOLUME (CF)
0.00	11.56	0
0.44	12.00	223
2.44	14.00	2,246
4.44	16.00	4,273
6.00	17.56	6,076

10 YEAR HYDROGRAPH



Structure FROM	Structure TO	Drainage Area (acre) Incr.	Drainage Area (acre) Accum.	C	CA Incr.	CA Accum.	I (in/hr)	Q (cfs)	Slope (%) (min)	Slope (%) (actual)	n	Diameter (mm)	Diameter (in)	VEL F.F. FPS	VEL ACT FPS	LENGTH m	LENGTH FEET	TIME IN PIPE MIN-SEC	Q CAPACITY CFS	Remarks
EX 8	7	42.16	42.16	0.36	15.18	15.18	5.92	89.87	0.40	0.72	0.013		48	9.70	10.60		124.00	0.19	122.00	D.A. PER PLN # 5827-SP-01
1	EX 1	0.94	43.70	0.87	0.82	16.51	5.92	109.57		0.30	0.013		54	6.67	7.72		16.00	0.03	109.00	
2	1	-	-	-	-	17.69	5.92	104.72	0.28	0.30	0.013		54	6.77	7.71		106.00	0.23	109.00	
3	2	-	-	-	-	17.69	5.92	104.72	0.28	0.30	0.013		54	6.77	7.71		157.00	0.34	109.00	
4	3	-	-	-	-	15.72	5.92	93.10	0.28	0.22	0.013		54	5.80	6.61		20.00	0.05	94.00	
5	3	-	-	-	-	1.97	7.27	14.32	0.04	0.30	0.013		36	5.17	4.84		18.00	0.06	109.00	FLOW PER STORM DETENTION COMPS
7	4	0.60	42.76	0.90	0.54	15.72	5.92	93.10	0.22	0.22	0.013		54	5.80	2.43		104.00	0.71	94.00	
20A	EX.20	1.880	1.880	0.800	1.500	1.500	7.270	10.930	0.440	0.930	0.013		EX.21*		6.70		55.00	0.14	15.00	EX.21* IS ADEQUATE

*NOTE: 54" IS REFERENCED AS THE EQUIVILENT FOR THE PROPOSED 68"x43" ELLIPTICAL PIPE.

CLASSIFICATION	AREA (SF)	AREA (AC)	AREA SQ. MI.	RUNOFF COEFF.	% IMP.	INLET TIME	K	R FROM TABLE 6-6
COMMERCIAL	8,697,958.62	199.68	0.31	0.85	90	5	2.35	1.57
INDUSTRIAL	1,461,303.03	33.55	0.05	0.85	90	5	2.35	1.57
APARTMENTS & TOWNHOUSES	29,912,063.19	686.69	1.07	0.70	75	5-10	2.13	1.65
SCHOOLS & CHURCHES	5,353,487.69	122.90	0.19	0.55	50	10-15	1.75	1.75
SINGLE FAMILY DETACHED	138,655,738.71	3,183.10	4.97	0.45	30	10-15	1.45	1.85
PARKS, CEMETERIES & UNIMPROVED AREAS	58,199,293.57	1,336.07	2.09	0.30	15	TO BE COMPUTED	1.23	1.97
ROADS	21,423,659.77	491.82	0.77	0.90	100	BY ZONE	2.50	1.53
TOTAL DRAINAGE AREA	263,703,504.58	6,053.80	9.46				1.60	1.81

$Q = 230\ KRA^{*}\ T^{(-0.48)}$

$T\ (\text{lag time}) = Y(L/S^{1/2})^{Z}$

L = 23,766.50 FT = 4.50 MI
85%L = 20,201.53 FT = 3.83 MI ELEV = 185.20
75%L = 17,824.88 FT = 3.38 MI
10%L = 2,376.65 FT = 0.45 MI ELEV = 25.00

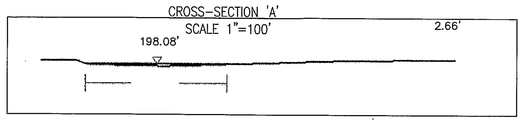
$S = \frac{(ELEV@85\%L)-(ELEV@10\%L)}{(75\%L)} = 0.009$

Y = 0.90
Z = 0.50

T = 6.20

Q = 1,759.04

CROSS-SECTION 'A'
SCALE 1"=100'



Cross Section 'A'
(See Overall Drainage Map, Sheet 7 for location)

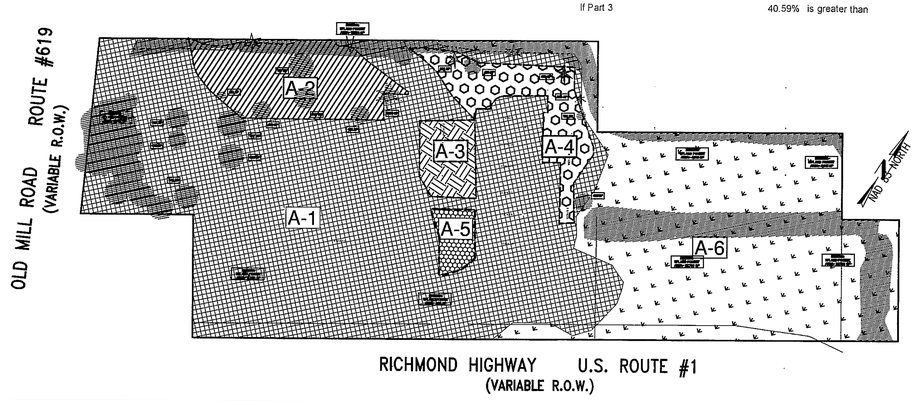
Project Description
Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data
Channel Slope: 0.01100 ft/ft
Discharge: Q = 1,759.04 cfs
See this sheet for Anderson Formula Computations

Options
Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

Results
Roughness Coefficient: 0.035
Water Surface Elevation: 10.16 ft
Elevation Range: 7.50 to 17.30 ft
Flow Area: 299.82 ft?
Wetted Perimeter: 198.18 ft
Top Width: 198.08 ft
Normal Depth: 2.66 ft
Critical Depth: 2.48 ft
Critical Slope: 0.01604 ft/ft
Velocity: v =5.87 ft/s
ft/s
Velocity Head: 0.53 ft
Specific Energy: 3.20 ft
Froude Number: 0.84
Flow Type: Subcritical

BMP MAP
SCALE: 1" = 100'



STORM WATER DETENTION COMPUTATIONS

RETURN PERIOD (YEARS)	PRE-DEVELOPMENT RUN-OFF AREA (AC)	C	IMP. AC.	POST-DEVELOPMENT RUN-OFF AREA (AC)	C	IMP. AC.	INCREASE IN RUN-OFF POST DEVELOPMENT RUN-OFF (CFS)	PRE DEVELOPMENT RUN-OFF (CFS)	FLOW TO BE DETAINED (CFS)
	8.82	0.52	4.59	8.82	0.58	5.12			
	IMP. AC.	INT. (IN/HR)	Q (CFS)	TOTAL IMP. AC.	INT. (IN/HR)	Q (CFS)			
10	4.59	7.27	33.34	5.12	7.27	37.19	37.19	33.34	3.85

RETURN PERIOD (YEARS)	BMP 11B AREA (AC)	C	IMP. AC.	TOTAL IMP. AC.	TOTAL INFLOW (CFS)	UNCONTROLLED FLOW TOTAL AREA FLOW (POST-DEVELOPMENT RUN-OFF)	ON-SITE	UNCONTROLLED FLOW	ALLOWABLE OUTFLOW PRE-DEVELOPMENT RUN-OFF	OFF-SITE	UNCONTROLLED FLOW	MAXIMUM ALLOWABLE OUTFLOW
	3.29	0.77	2.53	2.53								
	0.09	0.7	0.03									
	INTENSITY (IN/HR)		TOTAL IMP. AC.									
10	7.27		2.56		18.64	37.19	18.64	18.56	33.34	-	18.56	14.79

BMP FACILITY DESIGN CALCULATIONS

J.K. INVESTMENTS PROPERTY AT WOODLAWN
Plan Name: PLANTATION Date: September 2, 2009
Plan Number: Engineer: TMD

PART I: SUBAREA DESIGNATION AND DESCRIPTION.

		"C"	ACRES
A1	COMMERCIAL DEVELOPMENT, DEVELOPED WITHOUT CONTROLS	0.66	5.03
A2	TREE BOX FILTER STRUCTURE 7A, DEVELOPED W/ CONTROLS	0.67	0.60
A3	TREE BOX FILTER STRUCTURE 6B, DEVELOPED W/ CONTROLS	0.80	0.32
A4	TREE BOX FILTER STRUCTURE 1A, DEVELOPED W/ CONTROLS	0.85	0.44
A5	TREE BOX FILTER STRUCTURE 9B, DEVELOPED W/ CONTROLS	0.81	0.13
A6	FLOODPLAIN AREA, OPEN SPACE	0.30	2.30
		TOTAL	8.82

PART 2: COMPUTE THE WEIGHTED AVERAGE "C" FACTOR FOR THE SITE
(A) AREA OF SITE (a) 8.82 Ac

Subarea	Description	"C"	ACRES	C X A
A1	COMMERCIAL DEVELOPMENT, DEVELOPED WITHOUT CONTROLS	0.66	5.03	3.32
A2	TREE BOX FILTER STRUCTURE 7A, DEVELOPED W/ CONTROLS	0.67	0.60	0.40
A3	TREE BOX FILTER STRUCTURE 6B, DEVELOPED W/ CONTROLS	0.80	0.32	0.26
A4	TREE BOX FILTER STRUCTURE 1A, DEVELOPED W/ CONTROLS	0.85	0.44	0.37
A5	TREE BOX FILTER STRUCTURE 9B, DEVELOPED W/ CONTROLS	0.81	0.13	0.11
A6	FLOODPLAIN AREA, OPEN SPACE	0.30	2.30	0.69
			TOTAL =	5.15
		WT."C" =		0.58

PART 3: Calculate Total Phosphorous Removal for Site.

Subarea	BMP Type	Removal EFF. (%)	Area Ratio	C"Factor Ratio	Product
A2	TREE BOX FILTER STRUCTURE 7A	65	0.068	1.155	5.12
A3	TREE BOX FILTER STRUCTURE 6B	65	0.036	1.379	3.25
A4	TREE BOX FILTER STRUCTURE 11A	65	0.050	1.466	4.75
A5	TREE BOX FILTER STRUCTURE 9B	65	0.015	1.400	1.37
A6	OPEN SPACE	100	0.261	1.000	26.10
				TOTAL =	40.59 Percent (%)

PART 4: Determine compliance with requirements.

Water Supply Overlay District
(Occoquan Watershed) Req'd Removal: 40%

If Part 3 40.59% is greater than 40% ;

A-1 COMMERCIAL DEVELOPMENT, UNCONTROLLED = 5.03 AC
A-2 TREE BOX FILTER STRUCTURE 7A, DEVELOPED WITH CONTROLS = 0.60 AC
A-3 TREE BOX FILTER STRUCTURE 6B, DEVELOPED WITH CONTROLS = 0.32 AC
A-4 TREE BOX FILTER STRUCTURE 1A, DEVELOPED WITH CONTROLS = 0.44 AC
A-5 TREE BOX FILTER STRUCTURE 9B, DEVELOPED WITH CONTROLS = 0.13 AC
A-6 FLOODPLAIN AREA, OPEN SPACE, UNDISTURBED = 2.30 AC

OUTFALL NARRATIVE

THE SUBJECT DEVELOPMENT PROPOSES TO COLLECT AS MUCH RUN-OFF AS POSSIBLE AND DETAINS THE COLLECTED RUNOFF WITHIN THE PROPOSED 72" DIAMETER DETENTION PIPE. THE PEAK OUTFLOW FROM THIS FACILITY WILL BE REDUCED TO BELOW THE PRE-DEVELOPMENT CONDITION. THE OUTFLOW PIPE WILL BE CONNECTED TO THE PROPOSED 68"x43" ELLIPTICAL RCP THAT IS PROVIDED WITH RIPRAP AT DAYLIGHT AND OUTFALL INTO THE EXISTING CHANNEL THAT OUTFALLS INTO DOGUE CREEK FLOOD PLAIN.

THE EXTENT OF REVIEW OF THE DOWNSTREAM CHANNEL IS TO A POINT AT WHICH THE TOTAL DRAINAGE AREA IS 100 TIMES GREATER THAN THE SITE CONTRIBUTING DRAINAGE AREA (49.57 AC). THE FLOOD PLAIN WATERSHED AREA IS 6,053 AC.

COMPUTATIONS FOR THE OUTFALL PIPES AND THREE CROSS-SECTIONS OF THE CHANNEL ARE PROVIDED AND INDICATE THAT THE OUTFALL IS ADEQUATE.

DUE TO THE REDUCTION IN THE AMOUNT OF RUNOFF BEING RELEASED FROM THE SUBJECT PROPERTY NO ADDITIONAL FLOODING IS ANTICIPATED DOWNSTREAM OF THE SUBJECT PROPERTY. IN ADDITION, DUE TO THE LOWEST FLOOR ELEVATION OF BOTH PROPOSED HOTELS BEING BELOW THE 100-YEAR WATER SURFACE ELEVATION FLOODPROOFING MEASURES WILL BE TAKEN IN ORDER TO PROTECT THE UNDERGROUND PARKING GARAGE.

STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES NARRATIVE

AN UNDERGROUND STORMWATER DETENTION FACILITY, USING A 72" DIAMETER PIPE IS PROVIDED BETWEEN BUILDING "A" AND "B", TO SATISFY THE STORMWATER DETENTION REQUIREMENTS. IN ADDITION TO THE OPEN SPACE (FLOOD PLAIN AREA), FOUR TREE BOX FILTERS STRUCTURES ARE PROVIDED AROUND BUILDING "A" AND "B" TO SATISFY WATER QUALITY REQUIREMENTS.

THE DETENTION PIPE IS DESIGNED TO PROVIDE MORE THAN THE REQUIRED STORAGE VOLUME OF 2,759 CF. A TOTAL OF 6,076 CF OF STORAGE IS PROVIDED. DUE TO THE SITE EXISTING TOPOGRAPHY, BEING JUST 2 FEET ABOVE THE FLOOD PLAIN ELEVATION THE INVERT ELEVATION OF THE DETENTION PIPE IS SET BELOW THE FLOOD PLAIN ELEVATION. THE DETENTION PIPE IS DESIGN TO IT'S HIGHEST POSSIBLE INVERT ELEVATION AND ABOVE THE 10-YEAR STORM.

THE OPEN SPACE AND FOUR TREE BOX FILTERS STRUCTURES WILL PROVIDE 40.57% PHOSPHORUS REMOVAL; 40.0% OF PHOSPHORUS REMOVAL IS REQUIRED.

WATER QUALITY NARRATIVE

THE SITE CONSISTS OF 8.82 ACRES OF LAND WITH TWO ZONING DESIGNATIONS, R-2 AND C-8; HOWEVER, THE APPLICANT IS REQUESTING THAT THE SITE BE REZONED SO THAT THE ENTIRE SITE HAVE THE ZONING DESIGNATION OF C-8. THIS PROPOSED DEVELOPMENT WILL CONSIST OF 5.03 AC OF UNCONTROLLED DEVELOPED AREA, 1.49 AC OF CONTROLLED DEVELOPED AREA DRAINING TO THE FOUR TREE BOX FILTERS STRUCTURES PROPOSED, AND 2.30 AC OF UNCONTROLLED UNDISTURBED FLOODPLAIN AREA. THE BMP FACILITIES WILL BE PRIVATELY MAINTAINED BY THE PROPERTY OWNER. THE SITE IS WITHIN THE CHESAPEAKE BAY PRESERVATION AREA AND REQUIRES THE PHOSPHORUS LOAD FROM THE SITE, AFTER DEVELOPMENT, BE REDUCED BY 40.00%, 40.57% IS PROVIDED.

Application No. RZ 2008-MV-007 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED May 17, 2010
Date of (BOS) (PC) May 25, 2010
Sheet 9 of 14
***Concurrent w/ SEA 85-L-137 ***
See Dev Conditions dated May 5, 2010

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PROJECT COORDINATOR
CHARLIE FRONDA

BMP & STORM COMPUTATIONS
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
BILAL A. HASSAN
LIC. No.025527
9/9/2009
PROFESSIONAL ENGINEER

PLAN STATUS

08-04-08	LAYOUT CHANGES
11-29-08	county comments
4-21-09	county comments
09-01-09	county comments

THE SUBMITTING ENGINEER CERTIFIES THAT NO OTHER CHANGES HAVE BEEN MADE ON THE PLAN OR PROFILE EXCEPT THOSE PREVIOUSLY APPROVED

REVISIONS APPROVED BY DIVISION OF DESIGN REVIEW

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE

DATE	DESCRIPTION
CF/DM DESIGN	TMD/DM DRAWN / CF CHKD
SCALE	H: AS NOTED V:
JOB No.	VA-07-16
DATE :	FEB, 2008
FILE No.	C-1042
SHEET	9 OF 14

Application No. RZ 2008-MV-007 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED May 17, 2010
Date of (BOS) (PC) May 25, 2010
Sheet 10 of 14
***Concurrent w/ SEA 85-L-137 ***
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LANDSCAPE PLAN LEGEND

- EX. TREE LINE
- EX. DECIDUOUS TREE TO BE REMAIN
- EX. DECIDUOUS TREE FOR TREE CREDIT
- EX. EVERGREEN TREE FOR TREE CREDIT
- PROP. LARGE DECIDUOUS TREE
- PROP. SMALL DECIDUOUS TREE
- PROP. LARGE EVERGREEN TREE
- PROP. MEDIUM EVERGREEN TREE
- PROP. HEDGE/SRUBS
- TREE: COUNTED FOR PARKING LOT LANDSCAPING

NAD 83 NORTH

PROPOSED BUILDING "C"
3 STORY HOTEL
G.F.A.= 46,328 S.F.
USE: HOTEL
ELEV= 21.00
UNDERGROUND PARKING GARAGE
ELEV= 11.00 MAX. HT= 35.0'

PROPOSED BUILDING " B"
3 STORY HOTEL
G.F.A.= 80,899 S.F.
USE: HOTEL
ELEV= 21.00
UNDERGROUND PARKING GARAGE
ELEV=11.00
MAX. HT= 35.0'

EX. 3 STORY
BRICK OFFICE BUILDING
# 8850 RICHMOND HIGHWAY
FF=20.92
* BLDG HT = 34.90'
PER FFX PLN# 5827-SP-01

RICHMOND HIGHWAY U.S. ROUTE #1
(VARIABLE R.O.W.)

OLD MILL ROAD ROUTE #619
(VARIABLE R.O.W.)

PROP. 1,050 CONTIGUOUS SQ. FT. VEGETATIVE BUFFER AREA CONSISTING OF 3 OVERSTORY TREES, 6 UNDERSTORY TREES, 25 SHRUBS, AND GROUND COVERS WITHIN A MULCH BED.

EXISTING RESERVE AREA DB 6713 PG 404 (OPEN SPACE) (EQC) TO BE REFORESTED PER THE CHESAPEAKE BAY REGULATION. (SEE NOTE #37, SHEET #1)

EX. 100 YEAR FLOOD PLAIN AND STORM DRAINAGE ESMT DB 6713 PG 404

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

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PROJECT COORDINATOR
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LANDSCAPE PLAN
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY

MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
FEISAL A. HASSAN
LIC. No.025527
3/19/2009
PROFESSIONAL ENGINEER

PLAN STATUS

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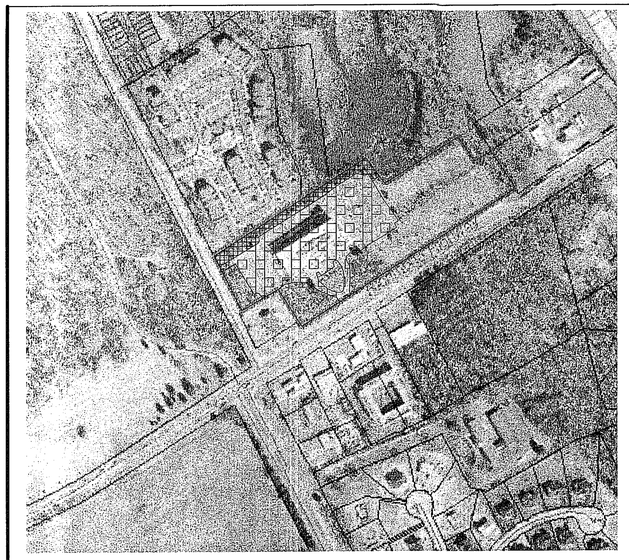
REVISIONS APPROVED BY DIVISION OF DESIGN REVIEW

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE

DATE	DESCRIPTION	
CF/DM DESIGN	TMD/DM DRAWN	CF CHKD
SCALE	H: 1" = 40' V:	
JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	10 OF 14	

C-1042



PARKING LOT LANDSCAPING

PARKING LOT AREA	22,985 SF
REQUIRED (5% OF PARKING AREA)	1,149 SF
landscape existing	SF
landscape proposed 8 @ 200	3,400 SF
LANDSCAPING PROVIDED	3,400 SF

PARKING LOT LANDSCAPING

A) PERIPHERAL PARKING LOT LANDSCAPING

a) ABUTTING EXISTING PARCEL TM 109-2-01-0018A &0018B, TOTAL LENGTH= 425 LF

REQUIRED: 4 FEET STRIP PLANTED W/AT LEAST ONE TREE/ 50 F
= 425/50+1
= 6.4, SAY 7 TREES

PROVIDED: 4 FEET ± STRIP WITH EXISTING 7 TREES

b) ABUTTING MURDOCK STREET, LENGTH= 250 FEET

REQUIRED: 10 FEET STRIP PLANTED WITH AT LEAST ONE TREE PER 40 L.F.= 250/40 + 1 = 7.25 TREES- SAY 8 TREES

PROVIDED: 10.5 FEET MIN. STRIP w/ 8 TREES

c) ABUTTING STONECROFT BLVD, LENGTH = 65 FEET

REQUIRED: 10 FEET STRIP PLANTED WITH AT LEAST ONE TREE PER 40 L.F.= 65/40 + 1 =2.6 TREES- SAY 3 TREES

PROVIDED: 10.5 FEET MIN. STRIP w/ 3 TREES

TREE PLANTING FOR 10YEAR CANOPY (D17)

SHADE TREES @ 200 SF X 29	= 5,800 SF
EVERGREEN TREES @ 150 X 9	= 1,350 SF
FLOWERING TREES @ 100 X 18	= 1,800 SF
TOTAL	= 8,950 SF

12-0510.1J (1) Table 12.12 is provided as a template to facilitate calculating 10-year Tree Canopy Requirements and presenting the calculations in Tree Conservation Plans.

Table 12.12 10-year Tree Canopy Calculation Worksheet

Step		Totals	Reference
A. Tree Preservation Target and Statement			
A 1	Place the Tree Preservation Target calculations and statement here preceding the 10-year tree canopy calculations	84,099 (21.90%)	see § 12-0507.2 for list of required elements and worksheet
B. Tree Canopy Requirement			
B1	Identify gross site area =	384,025	§ 12-0510.1A
B2	Subtract area dedicated to parks, road frontage, and	15,500	§ 12-0510.1B
B3	Subtract area of exemptions =	120,707	§ 12-0510.1C(1) through § 12-0510.1C(6)
B4	Adjusted gross site area (B1 – B2) =	120,818	
B5	Identify site's zoning and/or use	C-8	
B6	Percentage of 10-year tree canopy required =	10%	§ 12-509.1 and Table 12.4
B7	Area of 10-year tree canopy required (B4 x B5) =	24,782	
B8	Modification of 10-year Tree Canopy Requirements requested?	NO	Yes or No
B9	If B8 is yes, then list plan sheet where modification request is located	N.A.	Sheet number
C. Tree Preservation			
C1	Tree Preservation Target Area =	84,099	
C2	Total canopy area meeting standards of § 12-0200 =	24,930	
C3	C2 x 1.25 =	31,163	§ 12-0509.5B
C4	Total canopy area provided by unique or valuable forest or woodland communities =		
C5	C4 x 1.5 =	0	§ 12-0509.3B(1)
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" trees =		
C7	C6 x 1.5 to 3.0 =	0	§ 12-0509.3B(2)
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains =	29,780	
C9	C8 x 1.0 =	29,780	§ 12-0509.5C(1)
C10	Total of C3, C5, C7 and C9 =	60,943	If area of C10 is less than B7 remainder of requirement must be met through tree planting - go to D
D. Tree Planting			
D1	Area of canopy to be met through tree planting (B7-C10) =	0	
D2	Area of canopy Planted for air quality benefits =	9,600	

D3	x 1.5 =		§ 12-0509.4B(1)
D4	Area of canopy planted for energy conservation =	0	
D5	x 1.5 =		§ 12-0509.4B(2)
D6	Area of canopy planted for water quality benefits =	1,050	
D7	x 1.25 =		§ 12-0509.4B(3
D8	Area of canopy planted for wildlife benefits =	1,313	
D9	x 1.5 =		§ 12-0509.4B(4)
D10	Area of canopy provide by native trees =	0	
D11	x 1.5 =		§ 12-0509.4B(5)
D12	Area of canopy provided by improved cultivars and varieties =	0	
D13	X1.25		§ 12-0509.4B(6)
D14	Area of canopy provided through tree seedlings =	0	§ 12-0509.4D(1)
	x1.0		
D15	Area of canopy provided through native shrubs or woody seed mix =	0	§ 12-0509.4D(1)(a)
	x1.0		§ 12-0509.4D(1)(a)
D16	Percentage of D14 represented by D15=		Must not exceed 33% of D14
D17	Total of canopy area provided through tree planting =	10,913	
D18	Is an offsite planting relief requested?	NO	Yes or No
D19	Tree Bank or Tree Fund?	NO	§ 12-0511
D20	Canopy area requested to be provided through offsite banking or tree fund	NO	
D21	Amount to be deposited into the Tree Preservation and Planting Fund	N.A.	
E. Total of 10-year Tree Canopy Provided			
E1	Total of canopy area provided through tree preservation (C10) =	60,943	
E2	Total of canopy area provided through tree planting (D17) =	10,913	
E3	Total of canopy area provided through offsite mechanism (D19) =	0	
E4	Total of 10-year Tree Canopy Provided =	71,856	Total of E1 through E3. Area should meet or exceed area in B6

12-0510.2 For subdivision plans showing only the construction of public improvements, tree canopy shall be calculated on the development shown plus an estimate of the clearing necessary for the lot development. The estimated final clearing for all activities shall be shown on the plan. A graphic representation of the estimated tree canopy to be preserved after lot clearing may be requested by the Director if deemed necessary. If the area to be provided by preserved vegetation does not meet or exceed the total percentage of 10-year tree canopy required, then the deficiency shall be provided on the subdivision plan by planting acceptable landscape trees.

12-0510.3 Public Improvement and Linear Projects. For projects where only public improvements are to be constructed, such as road or other linear projects, the requirements for 10-year tree canopy shall be deferred until such time as the developments for which the linear

12-0507.1B Tree canopy that the Director determines does not or will not meet the pre- and post-development condition standards for trees and forested areas as provided in § 12-0403 shall not be included in areas counting towards meeting the Tree Preservation Target.

12-0507.2 Tree Preservation Target Calculations and Statement. The calculations and statements shall be provided along with the 10-year tree canopy calculations as shown in Table 12.3.

Table 12.3 Tree Preservation Target Calculations and Statement

A	Pre-development area of existing tree canopy (from Existing Vegetation Map) =	84,099 SF
B	Percentage of gross site area covered by existing tree canopy = 84,099 / 384,025 (GSA)	21.90%
C	Percentage of 10-year tree canopy required for site (see Table 12.4) =	10.0%
D	Percentage of the 10-year tree canopy requirement that should be met through tree preservation = 10% x 21.90	2.19%
E	Proposed percentage of canopy requirement that will be met through tree preservation =	21.90%
F	Has the Tree Pre-ervation Target minimum been met?	Provide Yes or No
G	If No for line F, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in § 12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be met. Provide sheet number where deviation request is located.	
H	If step G requires a narrative, it shall be prepared in accordance with § 12-0507.4	
I	Place this information prior to the 10-year Tree Canopy Calculations as per instructions in Table 12.12.	

12-0507.3 Allowable Deviations to Tree Preservation Target

12-0507.3A Deviations on whole or part from the site's Tree Preservation Target may be requested under the following conditions:

12-0507.3A(1) Meeting the Tree Preservation Target would preclude the development of uses or densities otherwise allowed by the Zoning Ordinance;

12-0507.3A(2) Meeting the tree preservation target would require the preservation of trees that do not meet standards for health and structural condition and other vegetation and risk management requirements of § 12-0400 *et seq.*

EXISTING VEGETATION MAP

SCALE 1"=300'

VEGETATIVE COVER SUMMARY TABLE

COVER TYPE	PRIMARY SPECIES	SUCCESSIONAL STAGE	CONDITION	AREA (AC.)	COMMENTS
UPLAND FOREST	UPLAND HARDWOODS: MAINLY PINES	OLD FIELD EARLY SERIAL	GOOD	84,099 SF 1.93 AC	SEE SHEETS 3 & 4
MAINTAINED GRASS	MIXTURE OF RYE GRASS AND KENTUCKY GRASS	N/A	GOOD	3.9584 AC	NON DEVELOPED AREA–OPEN–INCLUDES FLOODPLAIN
DEVELOPED AREA	N/A	N/A	GOOD	2.9276 AC	OFFICE BUILDING W/ PARKING LOT
TOTAL LOT AREA = 8.8160 AC					

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

Application No. RZ 2008-MV-007 Staff S.W.
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
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Date of (BOS) (PC) approval May 25, 2010
Sheet 11 of 14
* concurrent w/ SEA 85-L-137
see dev. conditions dated May 5, 2010

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REVISIONS APPROVED BY DIVISION OF DESIGN REVIEW

NO.	DESCRIPTION	REVIEW BY	APPROVED	DATE

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LANDSCAPE PLAN

GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT

J. K. INVESTMENTS, INC.

PROPERTY

M.T. VERNON DISTRICT

FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
TALAL A. HASSAN
LIC. No.025527
3/13/2009
PROFESSIONAL ENGINEER

PLAN STATUS

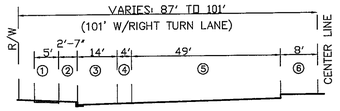
08-04-08	LAYOUT CHANGES
11-29-08	county comments
4-21-09	county comments
09-01-09	county comments

DATE	DESCRIPTION

CF/DM DESIGN	TMD/DM DRAWN	CF CHKD
SCALE	H: 1" = 30' V:	
JOB No.	VA-07-16	
DATE :	FEB, 2008	
FILE No.	C-1042	
SHEET	11 OF 14	

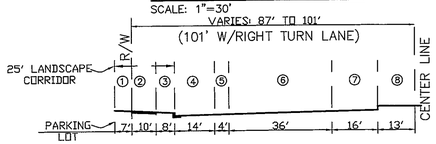
C-1042

INTERIM IMPROVEMENT
RICHMOND HIGHWAY SECTION
SCALE: 1"=30'



DESCRIPTION:
① 5'–0" ASPHALT MULTIPURPOSE
② 2'–7" LANDSCAPE STRIP INCLUDING CURB
③ 14'–0" RIGHT TURN LANE INCLUDING 2'–0"GUTTER
④ 4'–0" BIKE LANE
⑤ 49'–0" 3 LANES
⑥ 8'–0" FUTURE TRANSITWAY/RAISED MEDIAN (PLANTED)

ULTIMATE IMPROVEMENT
RICHMOND HIGHWAY SECTION
SCALE: 1"=30'



DESCRIPTION:
① 7'–0" PLANTING STRIP (SEE NOTE #35, SHT #1)
② 10'–0" ASPHALT MULTIPURPOSE TRAIL
③ 8'–0" LANDSCAPE STRIP INCLUDING CURB
④ 14'–0" RIGHT TURN LANE INCLUDING 2'–0"GUTTER
⑤ 4'–0" BIKE LANE
⑥ 36'–0" 3 LANES
⑦ 16'–0" FUTURE PLATFORM OR LEFT TURN LANE
⑧ 13'–0" FUTURE TRANSITWAY/RAISED MEDIAN (PLANTED)

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Sheet 12 of 14
***Concurrent w/ SEA 85-L-137 ***
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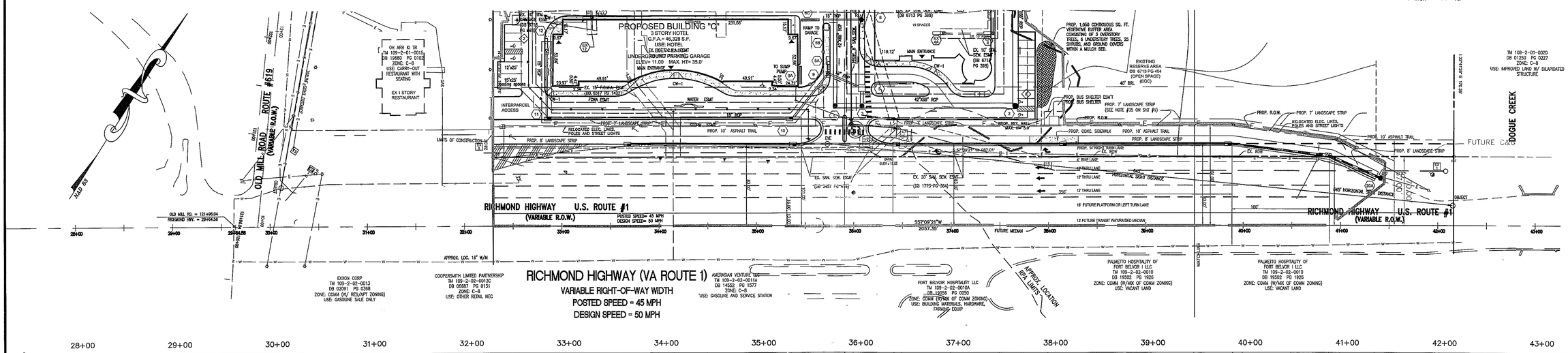
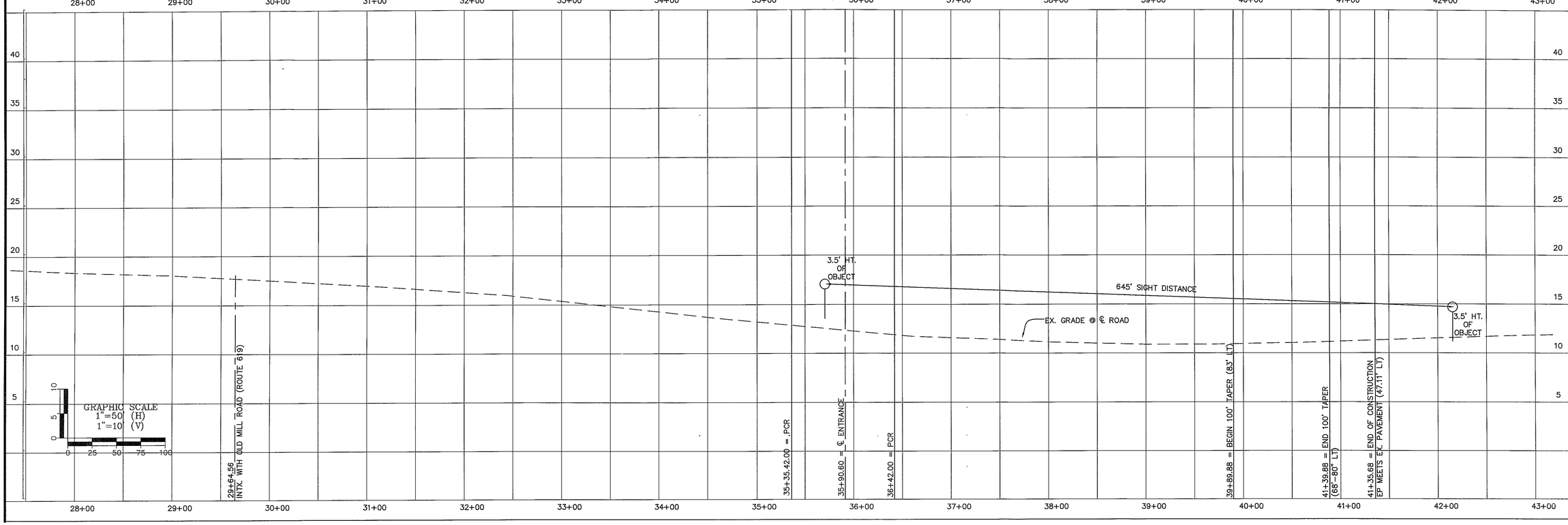
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.





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CHARLIE FRONDA

RICHMOND HIGHWAY PLAN & PROFILE
GENERALIZED DEVELOPMENT PLAN/SPECIAL EXCEPTION PLAT
J. K. INVESTMENTS, INC. PROPERTY
MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

PROJECT NO

COMMONWEALTH OF VIRGINIA
FAISAL A. HASSAN
LIC. No.025527
9/9/2009
PROFESSIONAL ENGINEER

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09-01-09	county comments

DATE	DESCRIPTION	
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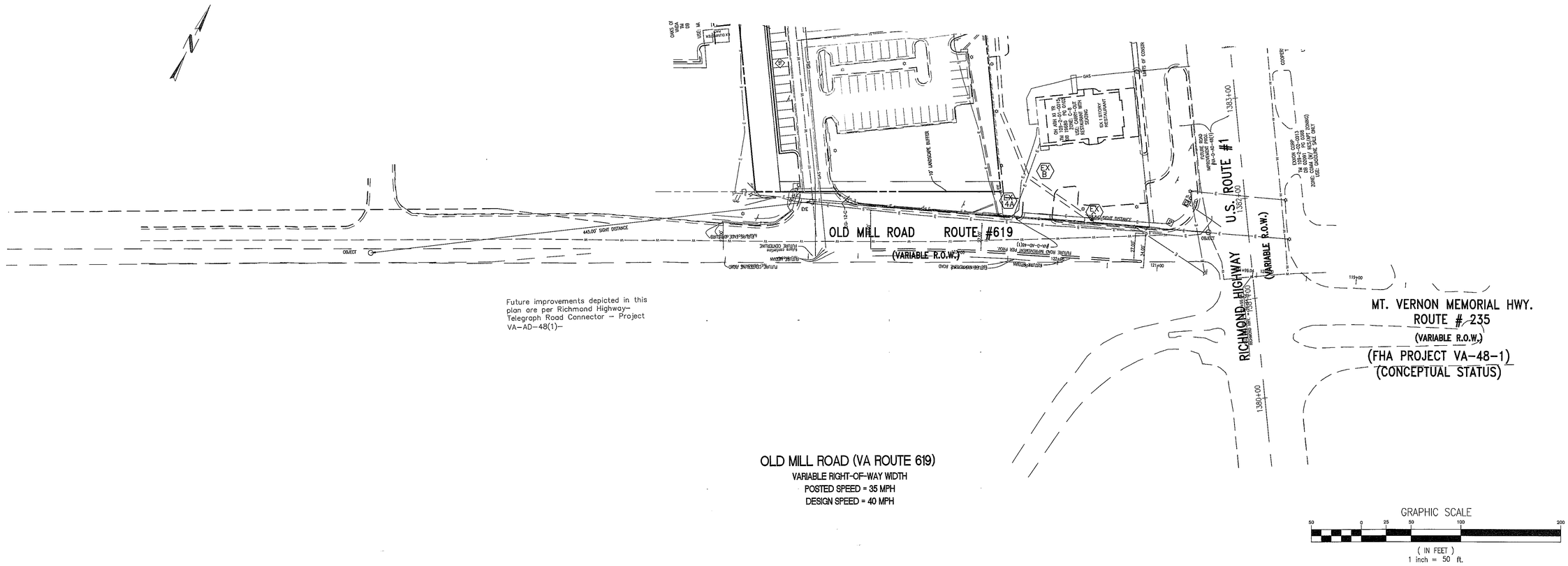
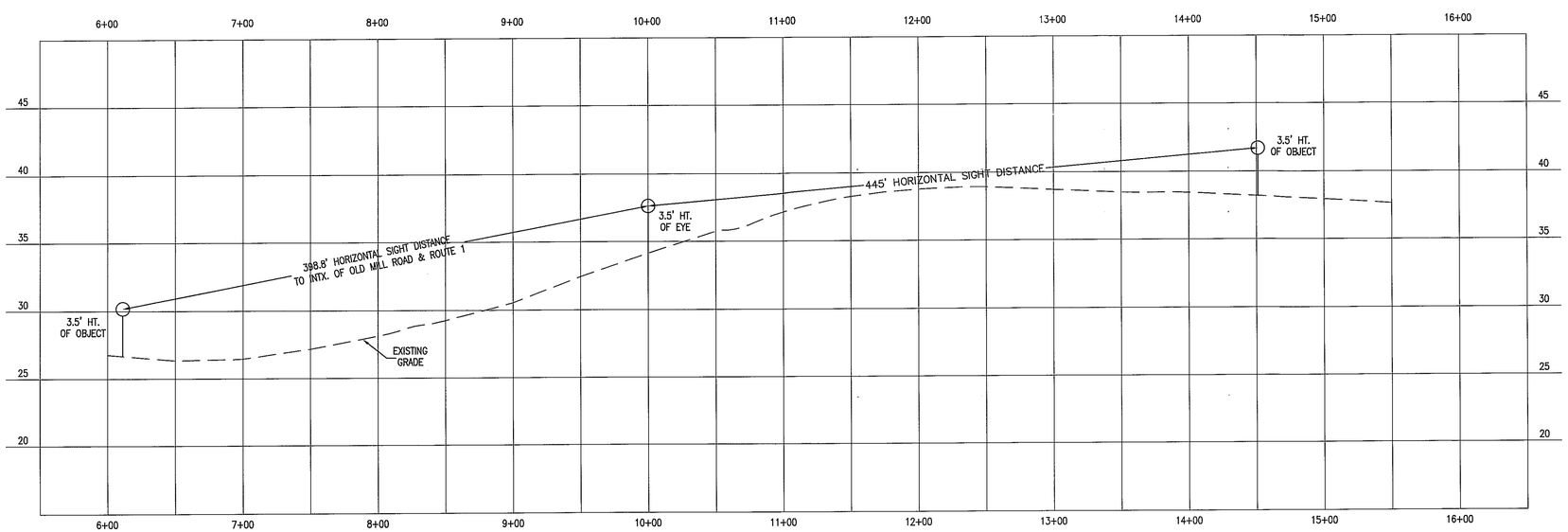
SCALE	H: AS SHOWN V: 1" = 5'	
JOB No.	VA-07-16	
DATE :	FEB. 2008	
FILE No.	C-1042	
SHEET	12 OF 14	

C-1042



OLD MILL ROAD (VA ROUTE 619)
VARIABLE RIGHT-OF-WAY WIDTH
POSTED SPEED = 35 MPH
DESIGN SPEED = 40 MPH

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



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GRAPHIC SCALE
1"=50' (H)
1"=5' (V)
0 2.5 5
0 25 50 75 100

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OLD MILL ROAD PLAN & PROFILE

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MT. VERNON DISTRICT
FAIRFAX COUNTY, VIRGINIA

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DATE :	FEB, 2008	
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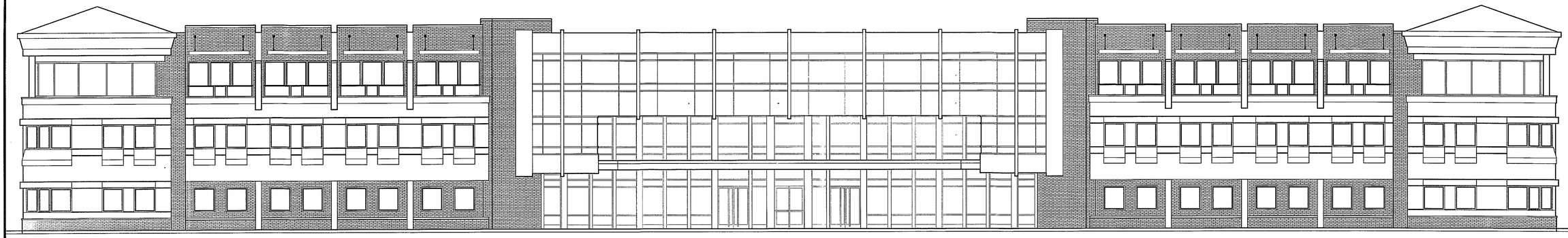
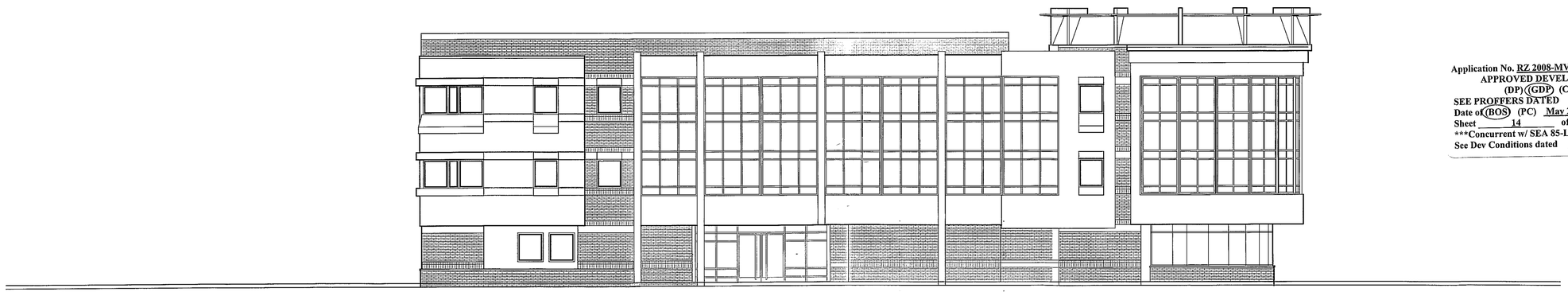
SHEET	13 OF 14	



1
14

FRONT ELEVATION-BUILDING C

1/8"



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2
14

FRONT ELEVATION- BUILDING B

1/8"

3
14

SIDE ELEVATION-BUILDING B

1/8"

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SHEET 14 OF 14		

C-1042