GENERALIZED DEVELOPMENT PLAN

RACHEL CARSON MIDDLE SCHOOL

PROFFERED CONDITION AMENDMENT (PCA) 82-C-016

RECEIVED
Department of Planning & Zoning
OCT 12 2011
Zoning Evaluation Division

NOTES:

1. THE PROPERTY THAT IS THE SUBJECT OF THIS GENERALIZED DEVELOPMENT PLAN (GDP) IS IDENTIFIED ON THE FAIRFAX COUNTY TAX MAPS AS PARCEL 24-4((1))11A AND IS OWNED BY THE FAIRFAX COUNTY SCHOOL BOARD. THE PARCEL CONTAINS APPROXIMATELY 32.94 ACRES OF LAND AREA. THE PARCEL IS ZONED TO THE GENERAL INDUSTRIAL (I-5) DISTRICT.

   THE PROPERTY IS DEVELOPED WITH A PUBLIC USE. RACHEL CARSON MIDDLE SCHOOL IS LOCATED ON THE PROPERTY AND WILL BE RETAINED. ACCORDING TO THE THE FAIRFAX COUNTY REAL ESTATE ASSESSMENT RECORDS, THE SCHOOL WAS CONSTRUCTED IN 1998.

   THE PURPOSE OF THE PROFFERED CONDITION AMENDMENT APPLICATION IS TO AMEND THE APPROVED PROFFERS TO PERMIT AN ADDITIONAL ACCESS ONTO MCLEAREN ROAD WHICH WILL BE PRIMARILY FOR BUS TRAFFIC ONLY. THERE ARE NO OTHER CHANGES PROPOSED ON THE PROPERTY. THE GDP ADDRESSES THE SUBMISSION REQUIREMENTS AS SET FORTH IN PARAGRAPH 10 OF SECTION 18-202 OF THE ZONING ORDINANCE FOR THAT PORTION OF THE PROPERTY THAT IS IMPACTED BY THE PROPOSED BUS ENTRANCE. GIVEN THE LIMITED CHANGES PROPOSED WITH THE PCA, A MODIFICATION OF THE SUBMISSION REQUIREMENTS FOR THE REMAINING PORTION OF THE PROPERTY HAS BEEN REQUESTED. IN LIEU OF INCLUDING THE REMAINING PORTION OF THE PROPERTY ON THE GDP, AN APPROVED AS-BUILT SITE PLAN FOR THE SCHOOL HAS BEEN PROVIDED AS SHOWN ON SHEET 6 OF 13 FOR INFORMATIONAL PURPOSES ONLY.

2. THE BOUNDARY INFORMATION SHOWN HEREON IS FROM EXISTING RECORDS.

3. THE TOPOGRAPHY SHOWN IS LIMITED TO THE AREA OF THE PROPOSED BUS ENTRANCE. THIS PROPOSED ENTRANCE WILL NOT IMPACT THE REMAINING PORTION OF THE PROPERTY. THE TOPOGRAPHY SHOWN IS AT A CONTOUR INTERVAL OF TWO FEET FROM A FIELD RUN SURVEY.

4. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) FEET OR MORE OR MAJOR UNDERGROUND UTILITY EASEMENTS LOCATED ON THE SUBJECT PROPERTY.

5. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO GRAVES LOCATED ON THE SUBJECT PROPERTY.

6. PUBLIC WATER AND SEWER ARE CURRENTLY AVAILABLE ON THE SITE.

7. THERE IS NO FLOODPLAIN DESIGNATED BY THE FEDERAL INSURANCE ADMINISTRATION, UNTIED STATES GEOLOGICAL SURVEY OR FAIRFAX COUNTY ON THE SITE. THERE IS NO ENVIRONMENTAL QUALITY CORRIDOR (EQC) OR RESOURCE PROTECTION AREA (RPA) ON THE SITE.

8. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE EXISTING BUILDINGS DO NOT GENERATE, UTILIZE, STORE, TREAT OR DISPOSE 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 VIRGINIA/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. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, THE SUBSTANCES THAT MAY BE UTILIZED, STORED AND DISPOSED OF IN CONJUNCTION WITH THE EXISTING BUILDING AND/OR THE MAINTENANCE OF THE BUILDING AND GROUNDS WILL BE IN ACCORDANCE WITH SAID REGULATIONS.

9. THE STORMWATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICE (BMP) REQUIREMENTS FOR THE PROPERTY HAVE BEEN PROVIDED IN ACCORDANCE WITH SITE PLAN 9329-SP-001-2. THE EXISTING STORMWATER MANAGEMENT FACILITY WILL BE ADEQUATE TO SATISFY ADDITIONAL REQUIREMENTS THAT MAY BE NECESSARY FOR THE PROPOSED BUS ENTRANCE.

10. THE PROPOSED LIMITS OF CLEARING AND GRADING WILL BE CONFINED TO THE IMMEDIATE AREA OF THE PROPOSED BUS ENTRANCE. THE PROPOSED LIMITS OF CLEARING AND GRADING ARE APPROXIMATE AND SUBJECT TO CHANGE WITH FINAL ENGINEERING AND DESIGN.

11. THERE ARE NO ADDITIONAL COMMUNITY OR PUBLIC FACILITIES PROPOSED WITH THE APPLICATION.

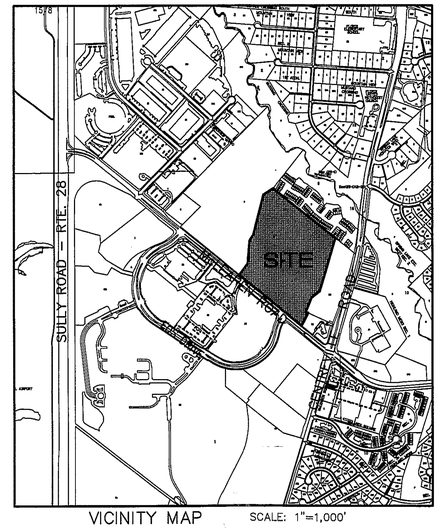
    IN ADDITION, OTHER THAN THE EXISTING VEGETATION ON THE SUBJECT PROPERTY, THERE ARE NO SCENIC ASSETS LOCATED ON THE SITE. LASTLY, OTHER THAN THE VEGETATION, THERE ARE NO NATURAL FEATURES DESERVING OF PROTECTION OR PRESERVATION LOCATED ON THE SUBJECT PROPERTY. GIVEN THE LOCATION AND NATURE OF THE PROPOSED BUS ENTRANCE, THERE WILL BE NO ADVERSE EFFECTS ON ADJACENT OR NEIGHBORING PROPERTIES.

12. LANDSCAPING AND SCREENING HAS BEEN PROVIDED IN ACCORDANCE WITH THE APPROVED SITE PLAN 9329-SP-001-2. THERE IS NO ADDITIONAL TRANSITIONAL SCREENING YARD OR BARRIER REQUIREMENT REQUIRED FOR THIS APPLICATION.

13. IT IS CURRENTLY ANTICIPATED THAT CONSTRUCTION OF THE PROPOSED BUS ENTRANCE WILL COMMENCE AS SOON AS REQUISITE PLANS AND PERMITS ARE APPROVED.

14. 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, AND IS IN COMPLIANCE WITH THE ADOPTED COMPREHENSIVE PLAN.

15. MINOR MODIFICATIONS TO THE EXACT LOCATION AND DESIGN OF THE PROPOSED ENTRANCE MAY OCCUR AT TIME FINAL ENGINEERING AND DESIGN.



VICINITY MAP SCALE: 1"=1,000'

APPLICANT/OWNER

FAIRFAX COUNTY SCHOOL BOARD
8115 GATEHOUSE ROAD
FALLS CHURCH, VIRGINIA 22042
PHONE: 571-423-2219

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Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 1 of 17

COMMONWEALTH OF VIRGINIA
10/12/11
HAMID MATIN
No. 017321
PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION	BY
3	10/12/11	WIDTH OF EXIT LANE & GATE LOC.	HM
2	9/30/11	SIGNAGE, FAR & MISC. NOTES	HM
1	9/15/11	SIGNAGE AND WIDTH OF ISLE	HM

REVISION BLOCK

PROFESSIONAL DESIGN GROUP, INC.
14301-B SULLYFIELD CIRCLE, SUITE 203
CHANTILLY, VIRGINIA 20151
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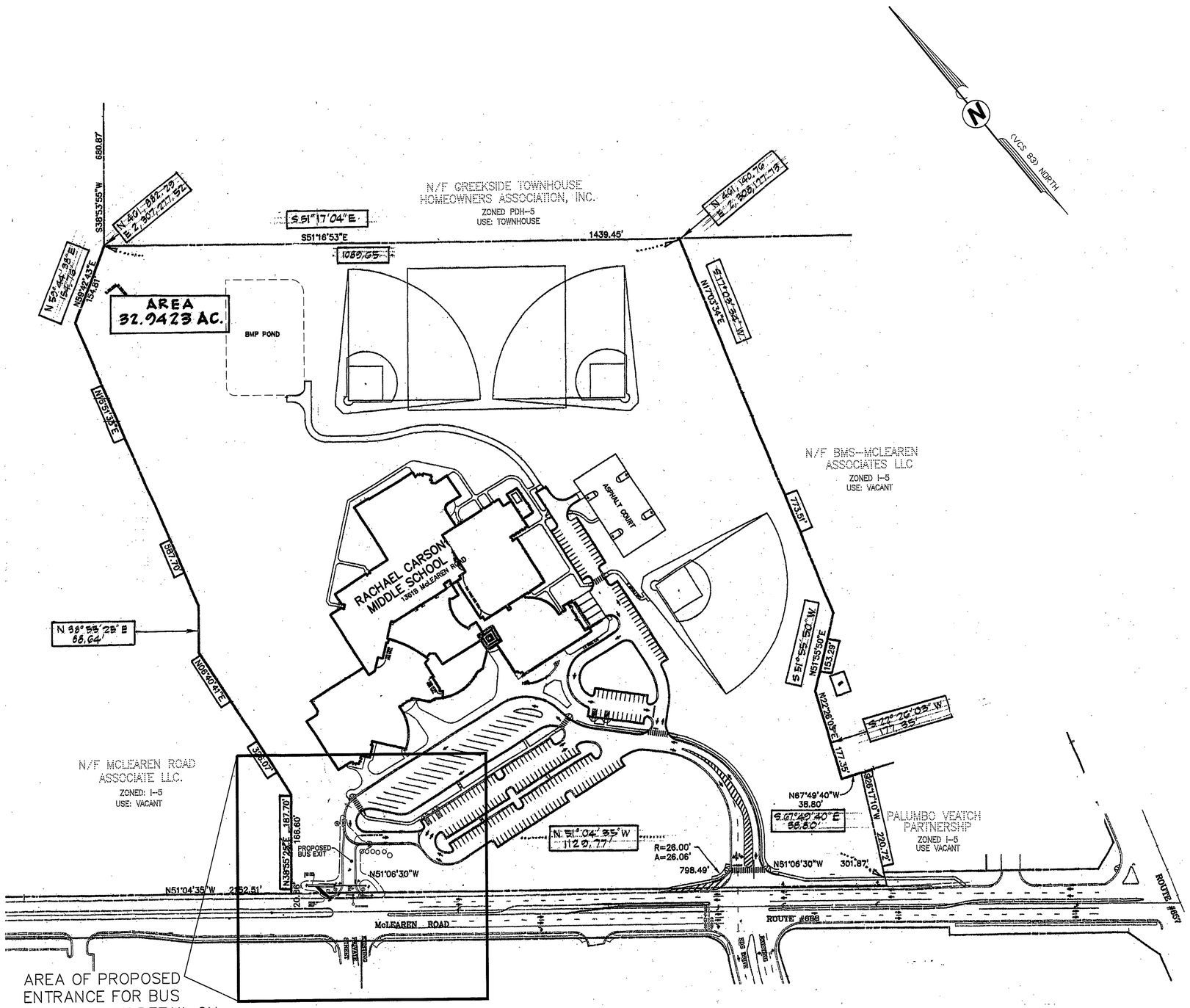
FAX. (703) 378-2102
ENGINEERS, SURVEYORS, CONSULTANT

COVER SHEET
GENERALIZED DEVELOPMENT PLAN
RACHEL CARSON MIDDLE SCHOOL
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

DESIGN BY: MC	SCALE: AS NOTED
DRAWN BY: JO	DATE: MAY 6, 2011
CHECKED BY: HM	DRAWING NO.: 702
JOB NO.: 00178	SHEET 1 OF 17



(VCS 83) NORTH

SITE PLAN (SP) TABULATION

EXISTING ZONING	I-5
LAND AREA	32.94 AC.
EXSTING GROSS FLOOR AREA	178,723 S.F.
EXISTING FLOOR AREA RATIO (FAR)	0.12
EXISTING BUILDING HEIGHT	40 FT.
PARKING SPACES	
REQUIRED	150 SPACES
PROVIDED	202 SPACES
OPEN SPACE	
REQUIRED (15%)	4.9+- AC.
PROVIDED (78%)	26.0+- AC.

SETBACK REQUIREMENTS :
ZONED : I-5
FRONT : 45 DEGREE ANGLE OF BULK PLANE, NOT LESS THAN 40 FT
SIDE : NOT REQUIRED
REAR : NOT REQUIRED
MAX. BUILDING HEIGHT ALLOWED : 75 FT

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APPROVED DEVELOPMENT PLAN
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Sheet 2 of 17

COMMONWEALTH OF VIRGINIA
10/12/11
HAMID MATIN
No 017821
PROFESSIONAL ENGINEER

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3	10/12/11	WIDTH OF EXIT LANE & GATE LOC.	HM
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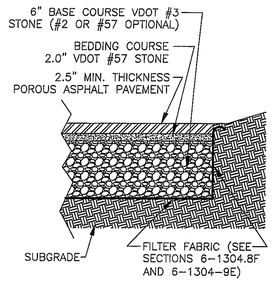
OVERALL PLAN
GENERALIZED DEVELOPMENT PLAN
RACHEL CARSON MIDDLE SCHOOL
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

DESIGN BY: MC	SCALE: 1"= 100'
DRAWN BY: JO	DATE: MAY 6, 2011
CHECKED BY: HM	DRAWING NO.: 702
JOB NO.: 00178	SHEET 2 OF 17



NOTES:
1. THE DIRECTOR MAY APPROVE VARIATIONS OF THIS DESIGN PROVIDED THE FACILITY MEETS THE REQUIREMENTS OF SECTION 6-1304 ET. SEQ.
2. ALL PIPE SHALL BE IN ACCORDANCE WITH 6-1304.8E.

CROSS SECTION (NTS)

Ref. Sec. 6-1304 et. seq.	POROUS ASPHALT PAVEMENT EXTENDED AGGREGATE BASE	PLATE NO.	STD. NO.
Rev. 3-07		78-6	

LEGEND

- EXISTING STORM GRATE
- STORM MANHOLE
- SANITARY MANHOLE
- EXISTING LAMP
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING POWER POLE
- GUY WIRE
- EXISTING SIGN
- EXISTING STREET LIGHT
- EXISTING TREES
- TEST PIT
- CURB & GUTTER
- EDGE OF PAVEMENT
- EDGE OF CONCRETE
- EDGE OF GRAVEL
- CHAIN LINK FENCE
- BOARD FENCE
- EXISTING BUILDING
- GAS METER
- IPF — IRON PIPE FOUND
- OE — OVERHEAD ELECTRIC LINE
- W — WATER LINE
- G — GAS LINE
- E — ELECTRIC LINE
- T — TELEPHONE LINE
- LOC — LIMITS OF CLEEARING GRADING
- POROUS PAVEMENT

TOTAL QUALITY CONTROL DESIGN (POROUS ASPHALT PAVEMENT)

REQUIRED WATER QUALITY VOLUME FOR 1 INCH IS 3,630 C.F. PER ACRE OF IMPERVIOUS AREA.

IMPERVIOUS AREA DRAINING TO PROPOSED POROUS PAVEMENT = 2,241 SF

AREA OF PROPOSED POROUS PAVEMENT = 2,328 SF

2,241 + 2,328 = 4,769 SF or 0.11 Ac.

WATER QUALITY VOLUME REQ. = 0.11 x 3,630 = 399.00 CF

MINIMUM SURFACE AREA REQ. PER 0.67' THICKNESS OF THE POROUS PAVEMENT = 596.00 SF

AREA PROVIDED = 2,328.00 SF

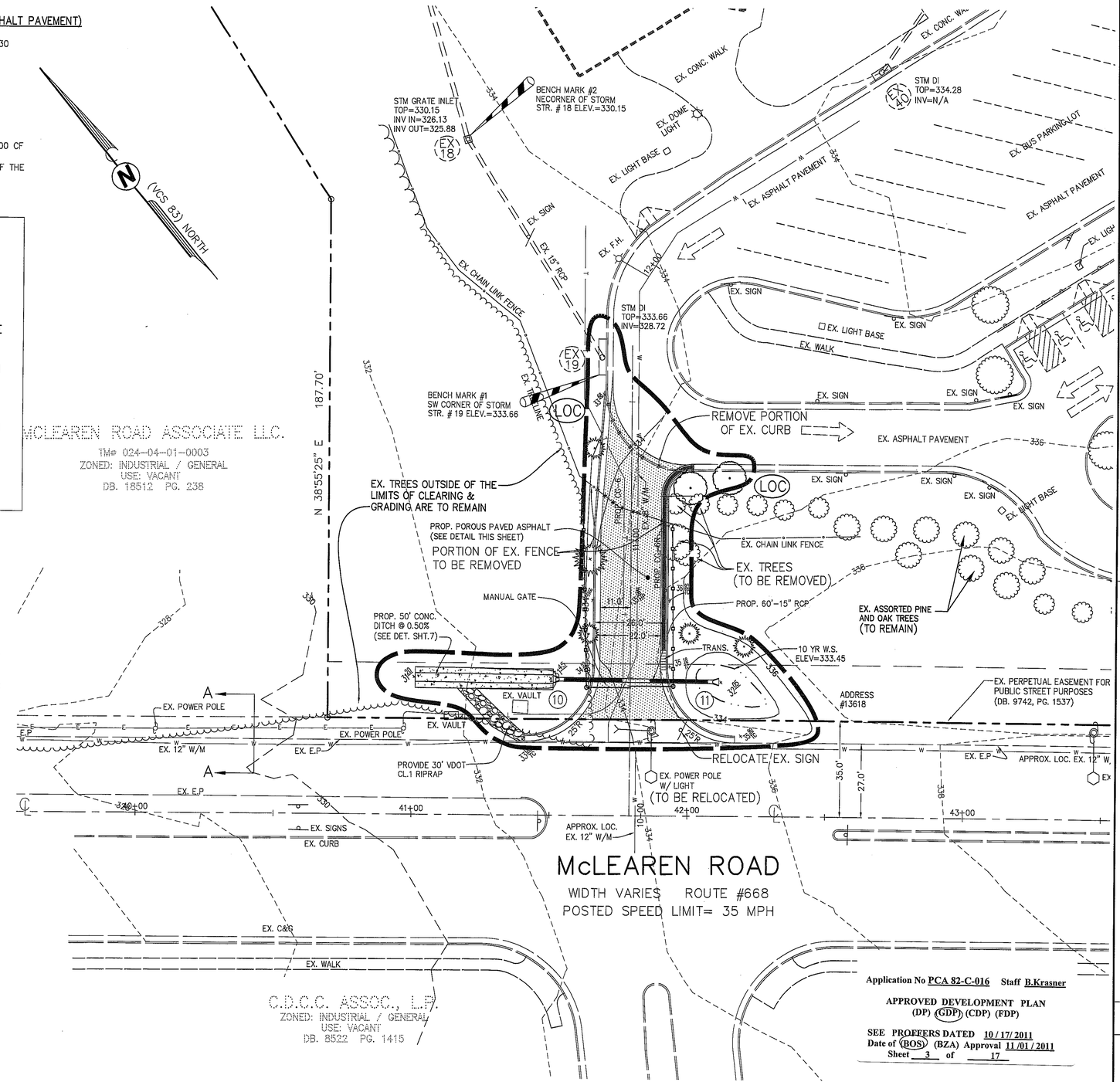
- EXISTING TREE
- NEW ORNAMENTAL TREE
- NEW LARGE EVERGREEN TREE
- NEW SMALL EVERGREEN TREE

OUT FALL NARRATIVE:

BY PROVIDING POROUS PAVEMENT THE INCREASE IN RUNOFF DUE TO CONSTRUCTION OF THE PROPOSED ENTRANCE IS 0.0 CFS. MAJORITY OF THE PROPOSED IMPERVIOUSE AREA IS DRAINING INTO THE EXISTING STRUCTURE #19 WICH FLOWS INTO EXISTING POND. THE PIPE IS PROVIDED TO CARRY THE FLOW FROM THE EXISTING ROADSIDE DITCH TO THE PROPOSED CONCRETE TRICKLE DITCH WHICH IS BEING INSTALLED DUE TO LACK OF TWO PERCENT FALL. THE RUNOFF WILL THEN BE CARRIED THROUGH THE ROAD SIDE DITCH (SEE SECTION A-A) TO THE CHANNEL ON SMITH PROPERTY. FOR MORE DETAIL SEE SITE PLAN FOR WEST COUNTY MIDDLE SCHOOL (FFX CO. PLAN NUMBER 9329-SP-01-2). IN OUR PROFESSIONAL OPENION THE OUTFALL IS ADEQUATE.

BMP AND SWM NARRATIVE:

WITH THIS PROJECT WE ARE PROPOSING POROUS PAVEMENT WHICH WILL NOT AFFECT THE RUNOFF ON THIS PROJECT. THE PURPOSE OF THE POROUS PAVEMENT IS TO REDUCE THE RUNOFF DRAINING INTO THE RIGHT OF WAY. SWM AND BMP HAS BEEN PROVIDED FOR THIS PROJECT UNDER WEST COUNTY MIDDLE SCHOOL SITE PLAN APPROVAL. PLEASE SEE PLAN NUMBER 9329-SP-01-2 SHEET 36 AND 37 AS ATTACHED. THE PROPOSED IMPROVEMENTS HAS NOT EFFECT ON EXISTING POND.
THE 2 AND 10 YEAR RUNOFF IS DETAINED TO LESS THAN EISISTING CONDTIONS.
2 YEAR RUNOFF EXISTING = 19.42 CFS,2 YEAR RUNOFF AFTER DETENTION IS 11.33 CFS
10 YEAR RUNOFF EXISTING = 50.91 CFS, 10 YEAR RUNOFF AFTER DETENTION IS 46.29 CFS
AREA DRAINIGN INTO THE POND = 0.04 SQUARE MILE
POND STORAGE IS 3.18 AC. FEET
FOR STROM WATER MANGEMENT DETAILS AND DARINAGE AREA MAPS PLEASE SEE PLAN NUMBER 9329-SP-01-2



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(DP) (GDP) (CDP) (FDP)

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Sheet 3 of 17

COMMONWEALTH OF VIRGINIA
10/12/11
HAMID MATIN
No. 017921
PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION	BY
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1	9/15/11	SIGNAGE AND WIDTH OF ISLE	HM

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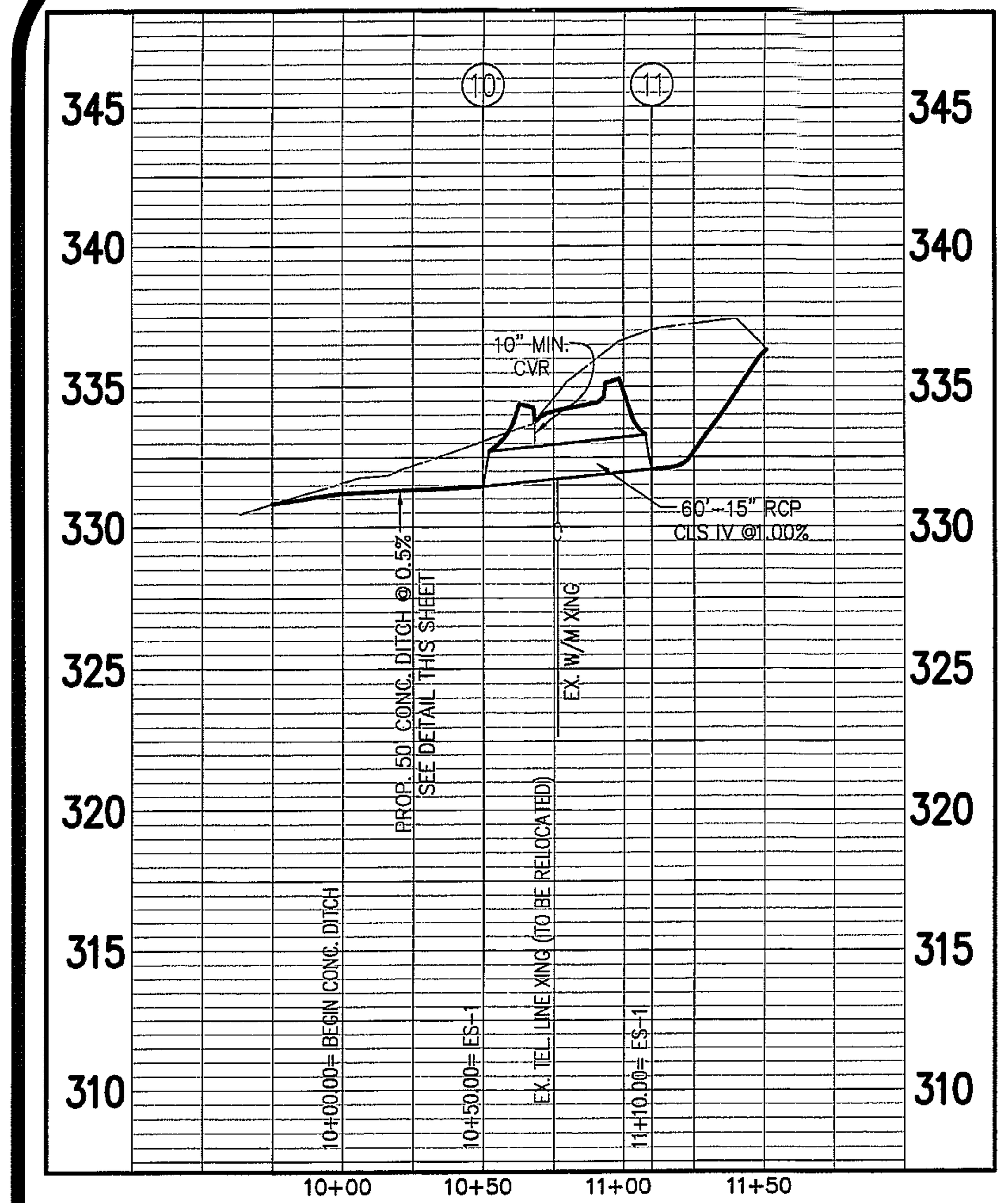
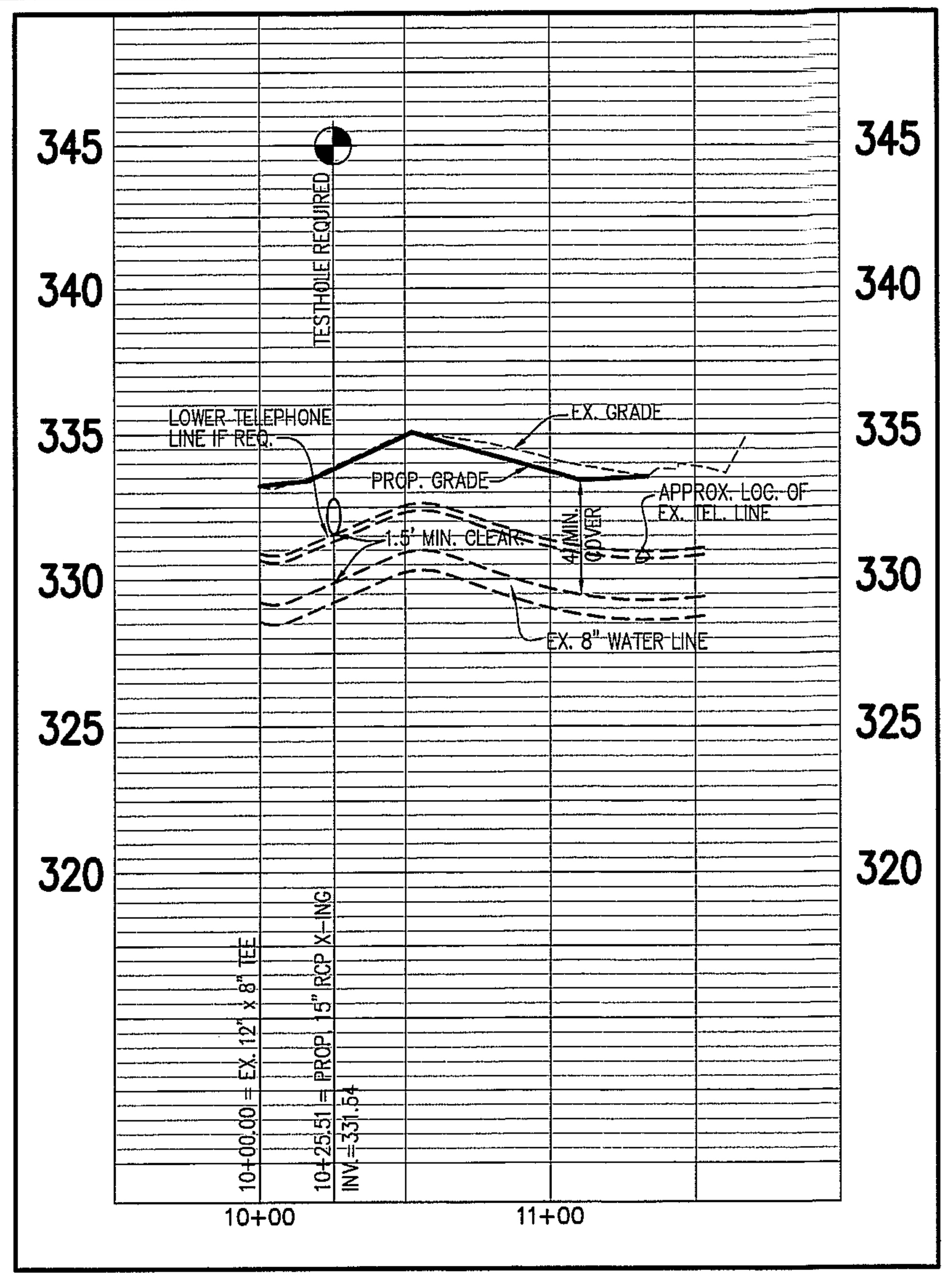
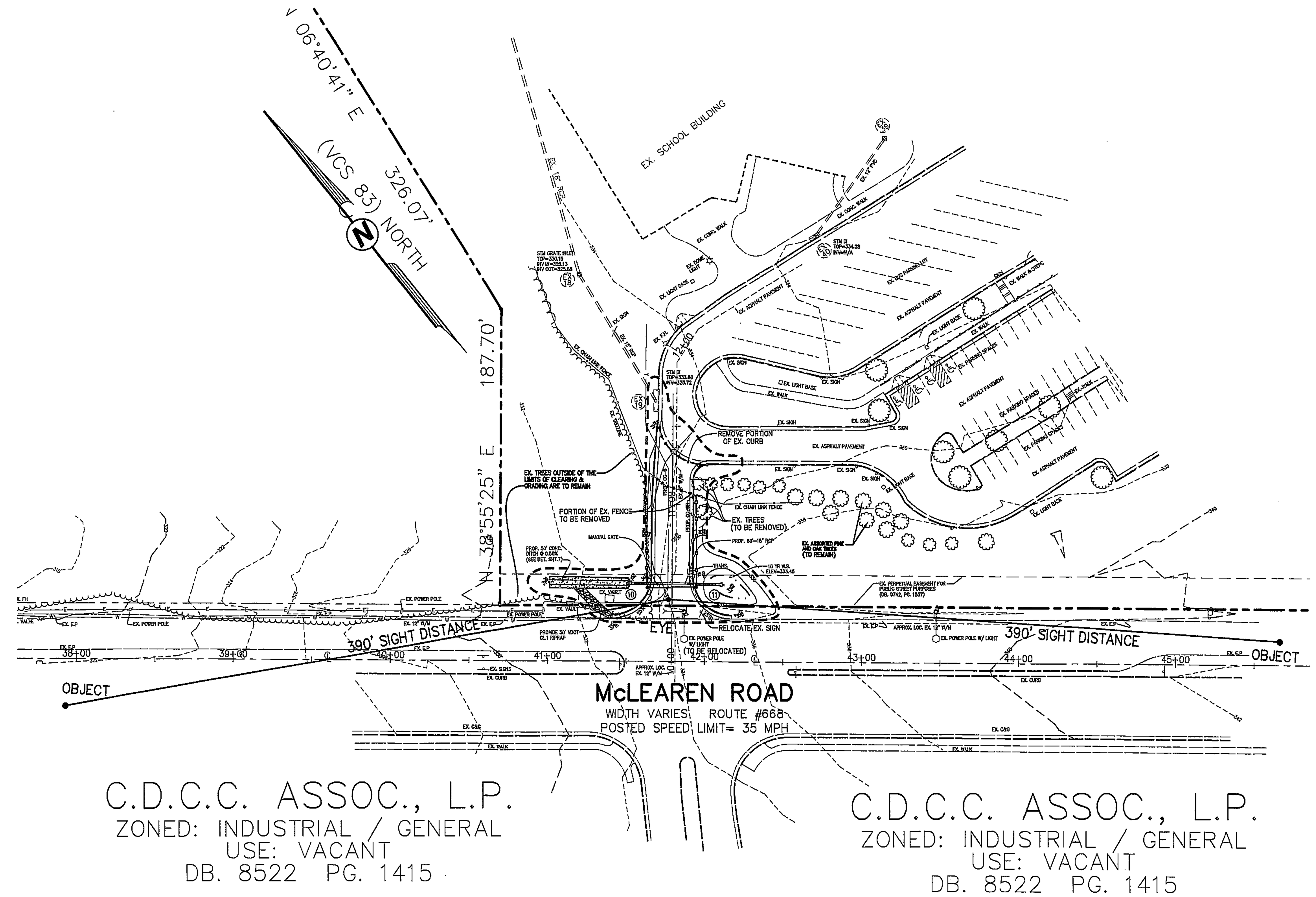
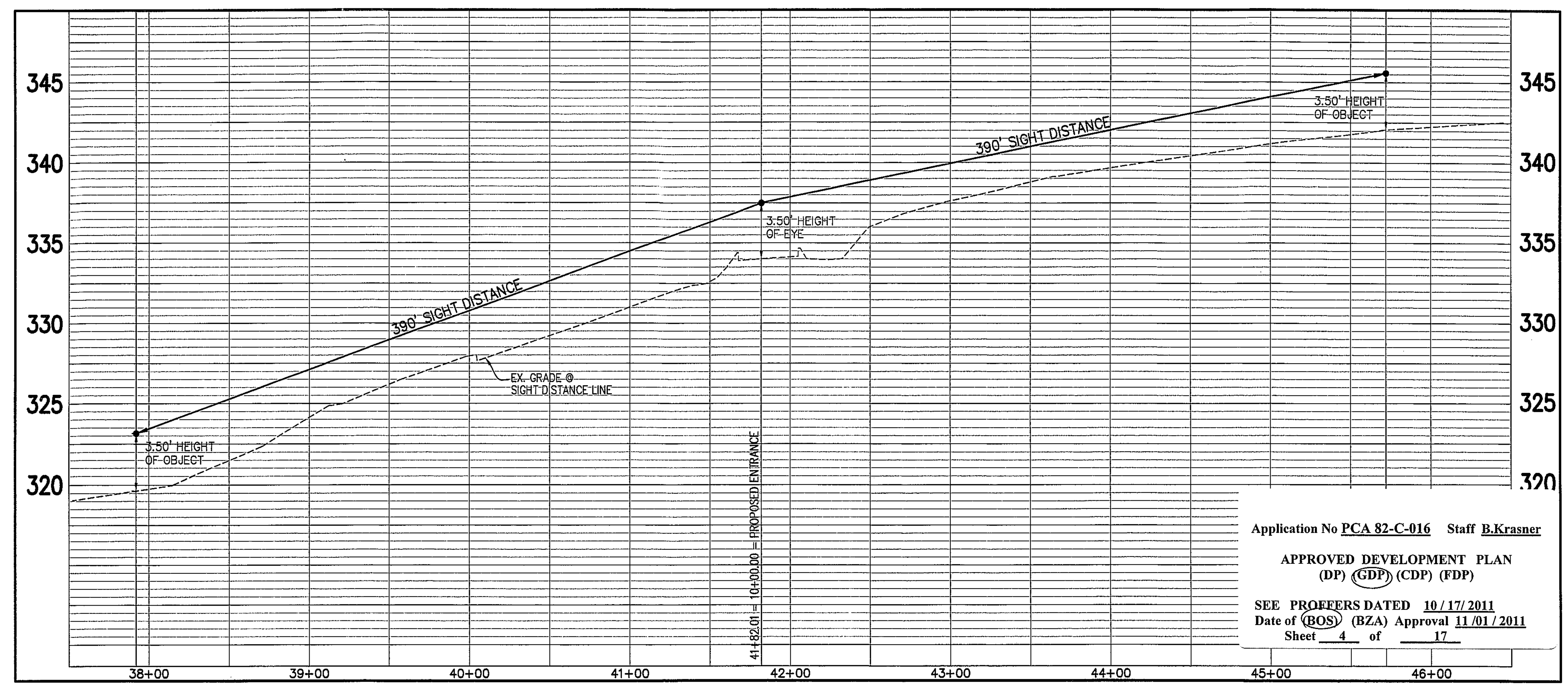
BUS ENTRANCE DETAIL
GENERALIZED DEVELOPMENT PLAN
RACHEL CARSON MIDDLE SCHOOL
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE:	1" = 20'
DATE:	MAY 6, 2011
DRAWING NO.:	702
SHEET	3 OF 17
DESIGN BY:	MC
DRAWN BY:	JO
CHECKED BY:	HM
JOB NO.:	00178









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APPROVED DEVELOPMENT PLAN
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Sheet 4 of 17

CHANNEL CALCULATOR

Given Input Data:

Shape	Trapezoidal
Solving for	Depth of Flow
Flowrate	4.6100 cfs
Slope	0.0050 ft/ft
Manning's n	0.0130
Height	12.0000 in
Bottom width	36.0000 in
Left slope	1.0000 ft/ft (V/H)
Right slope	1.0000 ft/ft (V/H)

Computed Results:

Depth	4.4470 in
Velocity	3.6907 fps
Full Flowrate	25.1551 cfs
Flow area	1.2491 ft2
Flow perimeter	48.5779 in
Hydraulic radius	3.7026 in
Top width	44.8939 in
Area	4.0000 ft2
Perimeter	69.9411 in
Percent full	37.0581 %

Critical Information

Critical depth	4.7967 in
Critical slope	0.0039 ft/ft
Critical velocity	3.3923 fps
Critical area	1.3590 ft2
Critical perimeter	49.5671 in
Critical hydraulic radius	3.9480 in
Critical top width	45.5934 in
Specific energy	0.5823 ft
Minimum energy	0.5996 ft
Froude number	1.1261
Flow condition	Supercritical

CULVERT COMPUTATION

Entered Data:

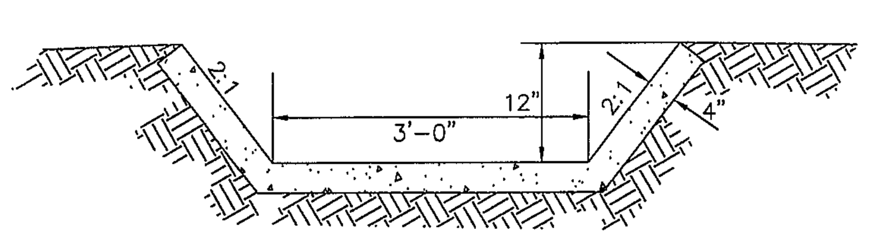
Shape	Circular
Number of Barrels	1
Solving for	Headwater
Chart Number	1
Scale Number	1
Chart Description	CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
Scale Decsription	SQUARE EDGE ENTRANCE WITH HEADWALL
Overtopping	Off
Flowrate	4.61 cfs
Manning's n	0.0130
Roadway Elevation	335.18 ft
Inlet Elevation	332.05 ft
Outlet Elevation	331.45 ft
Diameter	15 in
Length	60.00 ft
Entrance Loss	0.0000
Tailwater	0.50 ft

Computed Results:

Headwater	333.45 ft Inlet Control
Slope	0.0100 ft/ft
Velocity	5.72 fps

Messages:

Inlet head > Outlet head.
Computing Inlet Control headwater.
Solving Inlet Equation 26.
Solving Inlet Equation 28.
Headwater: 333.45 ft



ES-1 DETAIL
NTS

COMMONWEALTH OF VIRGINIA
10/12/11
HAMID MATIN
No. 017821
PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION	BY
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2	9/30/11	SIGNAGE, FAR & MISC. NOTES	HM
1	9/15/11	SIGNAGE AND WIDTH OF ISLE	HM

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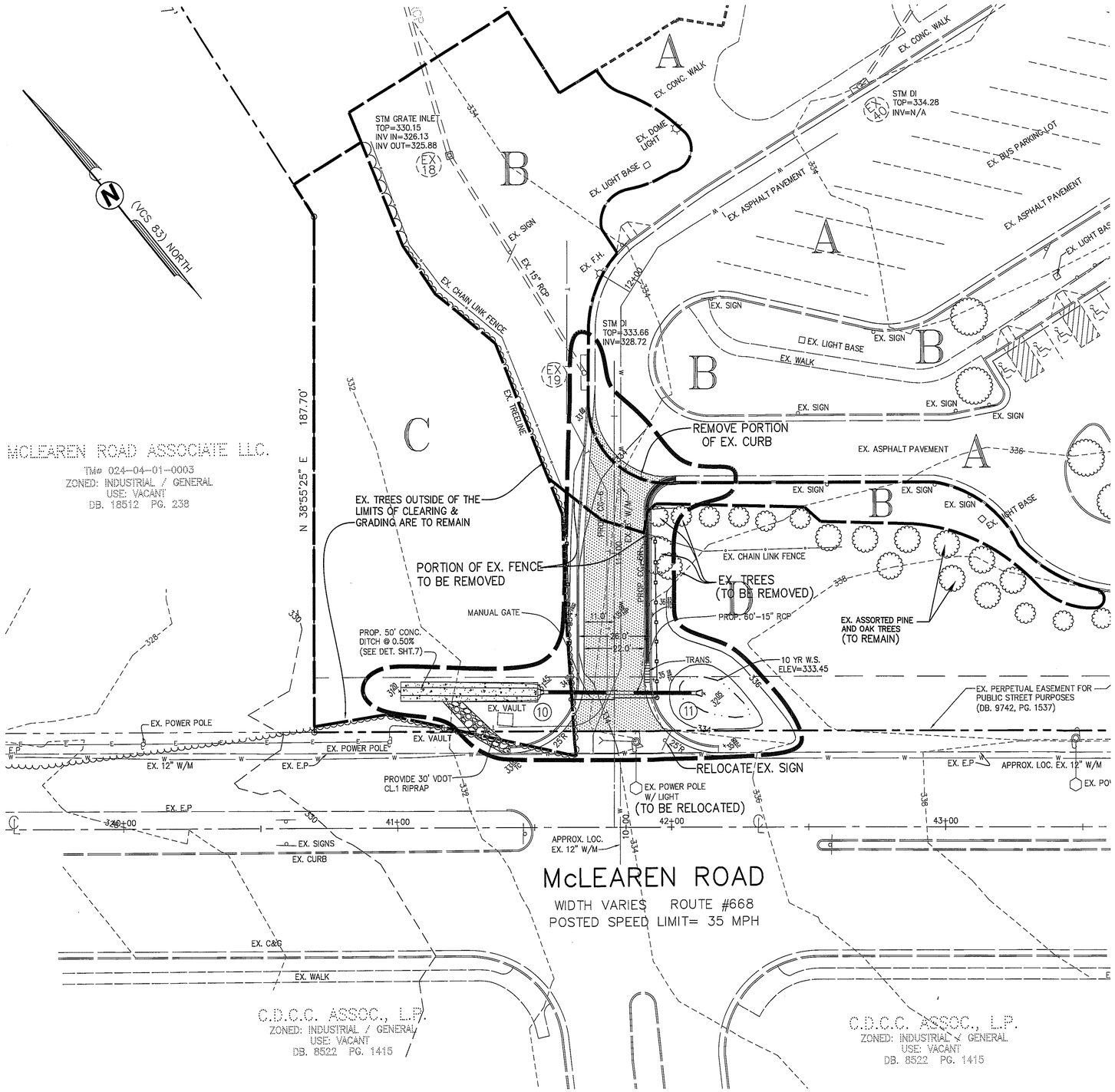
STORM SEWER COMPUTATIONS, PROFILES AND SIGHT DISTANCE PLAN & PROFILE
GENERALIZED DEVELOPMENT PLAN
RACHEL CARSON MIDDLE SCHOOL
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

DESIGN BY:	MC
DRAWN BY:	JO
CHECKED BY:	HM
JOB NO.:	00178
SCALE:	HORZ: 1"=50' VERT: 1"=5'
DATE:	MAY 6, 2011
DRAWING NO.:	702
SHEET	4 OF 17



EXISTING VEGETATION MAP SUMMARY TABLE		
COVER SYMBOL	COVER TYPE	GENERAL CONDITION
A	DEVELOPED LAND	N/A
B	MAINTAINED GRASSLAND	GOOD
C	UPLAND FOREST (OAK-PINE)	GOOD
D	BOTTOMLAND FOREST	FAIR

FOREST STAND SUMMARY TABLE	FOREST STAND C
SUCCESSIONAL STAGE	EARLY CLIMAX
DOMINANT TREE SIZE	8-36" DBH
ESTIMATED AGE	40
DOMINANT TREE SPECIES	OAK AND ASSORTED PINE
OTHER DOMINANT VEGETATION	JAPANESE HONEYSUCLE
INVASIVE EXOTIC COMPONENT	LOW
GENERAL ECOLOGICAL CONDITION	GOOD
COMMENTS	DOMINATED WITH PINE

FOREST STAND SUMMARY TABLE	FOREST STAND D
SUCCESSIONAL STAGE	EARLY CLIMAX
DOMINANT TREE SIZE	3'-10' TALL
ESTIMATED AGE	10
DOMINANT TREE SPECIES	OAK, ASSORTED PINE, SYCAMORE, SUMAC AND ASH
OTHER DOMINANT VEGETATION	JAPANESE HONEYSUCLE
INVASIVE EXOTIC COMPONENT	HIGH
GENERAL ECOLOGICAL CONDITION	GOOD
COMMENTS	UNMAINTAINED OPEN AREA

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(DP) (GDP) (CDP) (FDP)

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Sheet 5 of 17

COMMONWEALTH OF VIRGINIA
10/12/11
HAMID MATIN
No. 017824
PROFESSIONAL ENGINEER

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EXISTING VEGETATION MAP
FOR AREA OF PROPOSED ENTRANCE ONLY
GENERALIZED DEVELOPMENT PLAN
RACHEL CARSON MIDDLE SCHOOL
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

DESIGN BY:	MC
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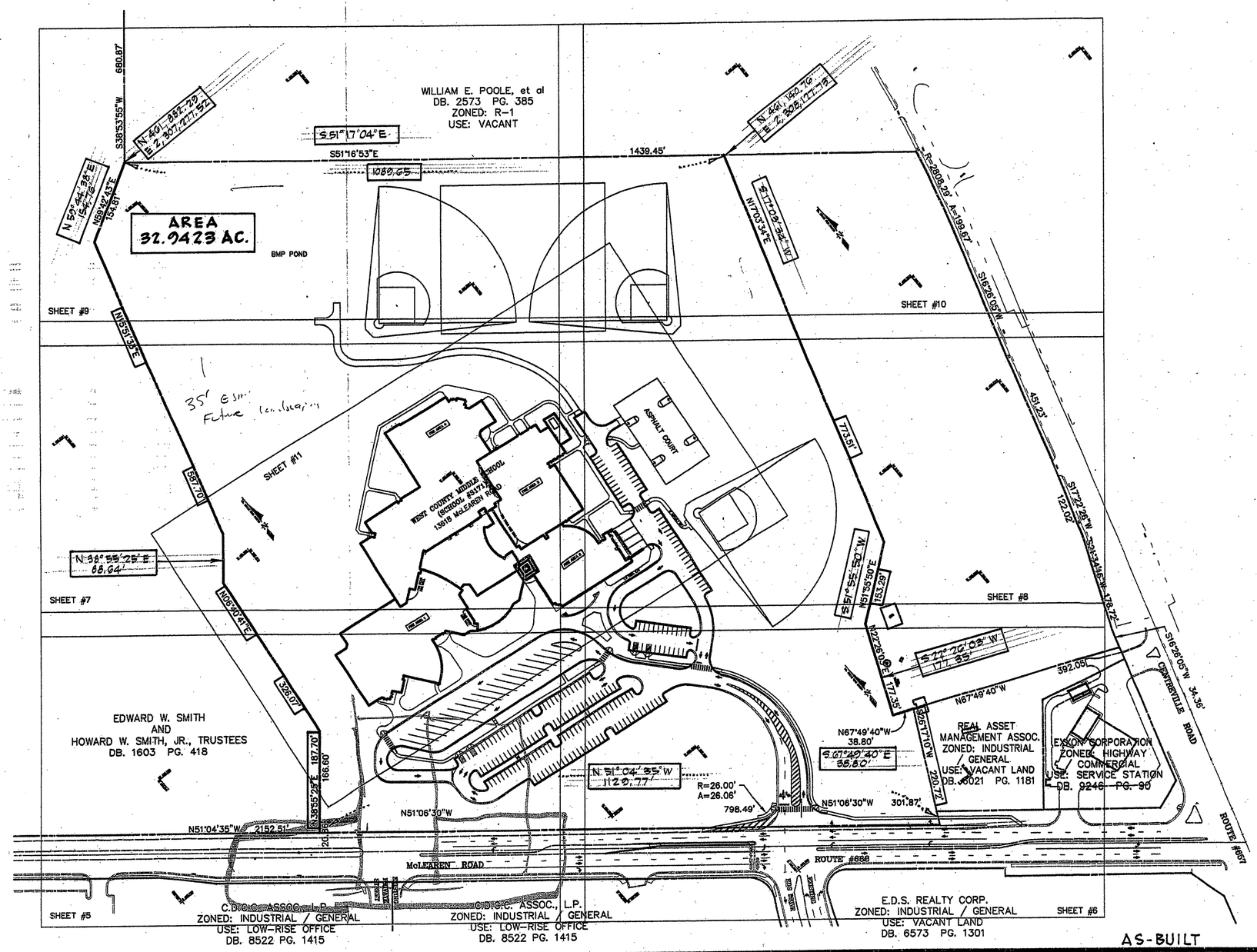
SHEET	5 OF 17

V.D.O.T. NOTES

1. ALL EXISTING UTILITIES, INCLUDING ALL POLES, ARE TO BE RELOCATED AT THE OWNER'S EXPENSE, WITH THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE DURING CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO EXISTING RIGHT-OF-WAY.
3. FINISHED GRADES SHOWN IN PROFILE FOR FINISHED TOP OF CURB GRADES ON EXISTING STATE HIGHWAYS SHALL BE FIELD ADJUSTED AS REQUIRED TO CONFORM TO THE INTENT OF THE TYPICAL SECTION USING THE EXISTING CENTERLINE OF PAVEMENT AS THE CONTROL POINT.
4. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROP. EDGE OF PVM'T. TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL PAVEMENT MARKINGS. THE CONTRACTOR SHALL OBTAIN VDOT APPROVAL, AS PART OF THE PERMIT PROCESS AND ACCEPTANCE BY VDOT PRIOR TO THE APPLICATION OF PAVEMENT MARKING.
6. ALL RIGHT-OF-WAY (R/W) DEDICATED TO PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED. TO ASSURE THE UNENCUMBERED DEDICATION OF THE R/W, EASEMENTS OR OTHER INTRESTS WITHIN THE PLATTED R/W SHALL BE QUIT CLAIMED OF ANY PRIOR RIGHTS THEREIN.
7. SURFACE FLOW MUST BE RETAINED WITHIN THE SITE.



AS-BUILT

SITE DATA

AREA DATA:

GROSS SCHOOL PARCEL	= 1,434,954 SQ. FT. OR 32.94201 AC.
PUBLIC STREET DEDICATION	= 29,346 SQ. FT. OR 0.67368 AC.
NET SCHOOL SITE AREA	= 1,464,300 SQ. FT. OR 33.61569 AC.

ZONING: I-5

PROPOSED USE: PUBLIC MIDDLE SCHOOL (1200 STUDENTS)

BUILDING DATA:
GROSS BUILDING AREA = 178,596 SQ. FT.
BUILDING FOOTPRINT AREA = 134,366 SQ. FT.
NUMBER OF STORIES = 2
BUILDING HEIGHT = 40 FT.
CONSTRUCTION TYPE = 2C WITH AUTOMATIC SPRINKER SYSTEM
NUMBER OF EMPLOYEES = 130
FOR FIRE CODE ANALYSIS SEE SHEET #28.

PARKING DATA:

REQUIRED:

130 FULL TIME EMPLOYEES @ 1 SP. EA.	= 130 SPACES
20 SPACES FOR VISITORS	= 20 SPACES
TOTAL REQUIRED	= 150 SPACES

PROVIDED:

STANDARD SPACES	= 194 SPACES
ACCESSIBLE SPACES	= 8 SPACES
TOTAL PROVIDED	= 202 SPACES

LOADING SPACES:

REQUIRED:
1 SPACE PER 1st 10,000 G.F.A. PLUS
1 SPACE FOR EACH ADDITIONAL 100,000 G.F.A. = 3 SPACES

PROVIDED: 4 SPACES

Application No PCA 82-C-016 Staff B.Krasner
APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)
SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/07/2011
Sheet 9 of 17

GENERAL NOTES

1. FOR SITE DATA SEE THIS SHEET; FOR SITE GEOMETRY SEE SHEETS #3 & #4.
2. TOPOGRAPHIC SURVEY PROVIDED BY "AIR SURVEY CORPORATION"; BOUNDARY SURVEY PROVIDED BY URBAN ENGINEERING & ASSOCIATES, INC.
3. FOR GRADING PLANS, SEE SHEETS #5 – #11.
4. ALL CURB AND GUTTER TO BE CG-6, CG-6R, CG-2, OR MC-1.
5. THIS SITE IS SERVED BY PUBLIC SEWER AND WATER.
6. FIRE PROTECTION IS TO BE PROVIDED ON SITE BY PROPOSED HYDRANTS AND AUTOMATIC BUILDING SPRINKLER SYSTEM.
7. FOR TREE COVERAGE CALCULATIONS AND LANDSCAPE PLAN SEE SHEETS #31 – #39.
8. FOR PROFILES & DETAILS OF STORM SEWER SEE SHEETS #15 – #17.
9. FOR EROSION AND SEDIMENT CONTROL SEE SHEETS #19 – #23.
10. FOR S.W.M. DETAILS & B.M.P. DETAILS SEE SHEET #28.
11. FOR GEOTECHNICAL NOTES AND RECOMMENDATIONS, SEE SHEET #34.
12. ALL ROADS, PARKING, WALKWAYS, STORM DRAINAGE AND SANITARY (WITH THE EXCEPTION OF 8" SANITARY SEWER MAINS) ARE TO BE MAINTAINED BY FAIRFAX COUNTY PUBLIC SCHOOLS.
13. THE TOTAL TRAFFIC/TRIP GENERATION FOR AN INTERMEDIATE SITE= 750 VEHICLES PER DAY (AS PER FFX. CO. PRM 7-0202).
14. ALL CONSTRUCTION SHALL CONFORM TO COUNTY OF FAIRFAX AND V.D.O.T. STANDARDS & SPECIFICATIONS AND A.D.A. STANDARDS & SPECIFICATIONS.
15. THESE UTILITY PLANS SHOW THE APPROXIMATE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UNDERGROUND OR AERIAL UTILITIES BY CALLING "MISS UTILITY" 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION OR CONSTRUCTION. IF THERE IS A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHOULD BE CONTACTED IMMEDIATELY SO AS NOT TO IMPEDE CONSTRUCTION.
16. ⊗ DENOTES TEST HOLE REQUIRED TO DETERMINE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF ALL TEST HOLES PRIOR TO BEGINNING ANY CONSTRUCTION OF THE PROJECT. IF CONFLICTS ARE DISCOVERED AS A RESULT OF THE TEST HOLE FINDINGS, NOTIFY URBAN ENGINEERING & ASSOC. IMMEDIATELY.
17. ALL HANDICAPPED SPACES TO HAVE AN ABOVE GRADE SIGN (DETAIL SHT. #25).
18. ALL RETAINING WALLS 2' AND HIGHER REQUIRE SEPARATE PERMIT BY THE OWNER.
19. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PERCLUDE THE PONDING OF WATER PN THE SITE, PARTICULARY ADJACENT TO BUILDINGS AND STORM INLETS.
20. HANDRAILS REQUIRED FOR MORE THAN TWO RISERS. SEE ARCHITECTURAL PLANS.
21. ALL DISTURBED AREAS NOT PAVED OR BUILT UPON ARE TO BE SEEDED, WITH THE EXCEPTION OF THE AREA IN FRONT OF THE BUILDING BETWEEN THE CURB & FACE OF BLDG. AND THE AREA DELINEATED AS THE BALLFIELDS THAT IS TO BE SODDED.
22. ALL CONSTR. INVOLVING PROBLEM SOIL MUST BE PERFORMED UNDER THE FULL TIME INSPECTION OF THE GEOTECHNICAL ENGINEER.
23. THE GEOTECHNICAL ENGINEER SHALL FURNISH A WRITTEN OPINION TO THE COUNTY AS TO WHETHER OR NOT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS PRIOR TO THE ISSUANCE OF A NON-RESIDENTIAL USE PERMIT.
24. REVIEW AND APPROVAL OF PLANS, SPECIFICATIONS, AND REPORTS BY THE COUNTY, WITH OR WITHOUT RECOMMENDATIONS BY THE GEOTECHNICAL REVIEW BOARD, SHALL IN NO WAY RELIEVE THE DEVELOPER OF THE RESPONSIBILITY FOR THE DESIGN, CONSTRUCTION AND PERFORMANCE OF THE STRUCTURES, PAVEMENT AND SLOPES ON THE PROJECT AND DAMAGE TO SURROUNDING PROPERTIES.
25. AFTER THE DENSE TREES ARE REMOVED FROM WITHIN THE LIMITS OF CLEARING, THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD CHECK THE EXISTING TOPOGRAPHY AND NOTIFY FAIRFAX. COUNTY SCHOOLS OF ANY NEED TO REDESIGN IN ORDER TO BALANCE EARTHWORK.
26. FOR DETAILS NOT SHOWN HEREIN, REFER TO THE ARCHITECTURAL PLANS AND SPECIFICATIONS.
27. ONSITE SIDEWALK UNDERDRAIN LOCATIONS TO BE SPECIFIED DURING CONSTRUCTION BY GEOTECHNICAL ENGINEER; THIS ENGINEER WILL ALSO SPECIFY THE LOCATION AND DETAILS OF OTHER UNDERDRAINS PRIOR TO AND DURING CONSTRUCTION.
28. ALL CHAIN LINK FENCE TO BE GALVINIZED, COATED (PER FFX. CO. PUBLIC SCHOOL SPECIFICATIONS).
29. BMP / SWM FACILITY TO BE MAINTAINED BY FFX. CO. PUBLIC SCHOOLS.
30. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING BURIAL SITES.
31. STANDARD GUARDRAILS AND HANDRAILS SHALL BE INSTALLED AT HAZARDOUS LOCATIONS AS DESIGNATED DURING FINAL FIELD INSPECTION BY FAIRFAX COUNTY.
32. STORM SEWER CONVEYED UNDER BUILDING SLABS, AS DIRECTED BY FAIRFAX COUNTY PUBLIC SCHOOLS, IS SUBJECT TO AN APPROVAL LETTER. SEE WAIVER REQUEST LETTER ON SHEET #35.
33. WHERE NOTED ON PROFILES, STORM DRAINAGE PIPE SHALL HAVE WATERTIGHT JOINTS (PER ASTM C-443).

PLAN DATE
12-15-95
2-2-96
2-14-96
3-8-96
5-27-96
6-25-96
7-12-96

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
RICHARD P. HUDSON
No. 001602
6/13/02
LAND SURVEYOR

OVERVIEW SHEET

WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SCALE: 1"= 100' C.I. 1' DATE: DEC., 1995

SHEET 2 OF 39

FILE No. SP-906

AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.

222.22 DENOTES AS-BUILT

GDP SHEET 6 OF 17 – FOR INFORMATION PURPOSES ONLY

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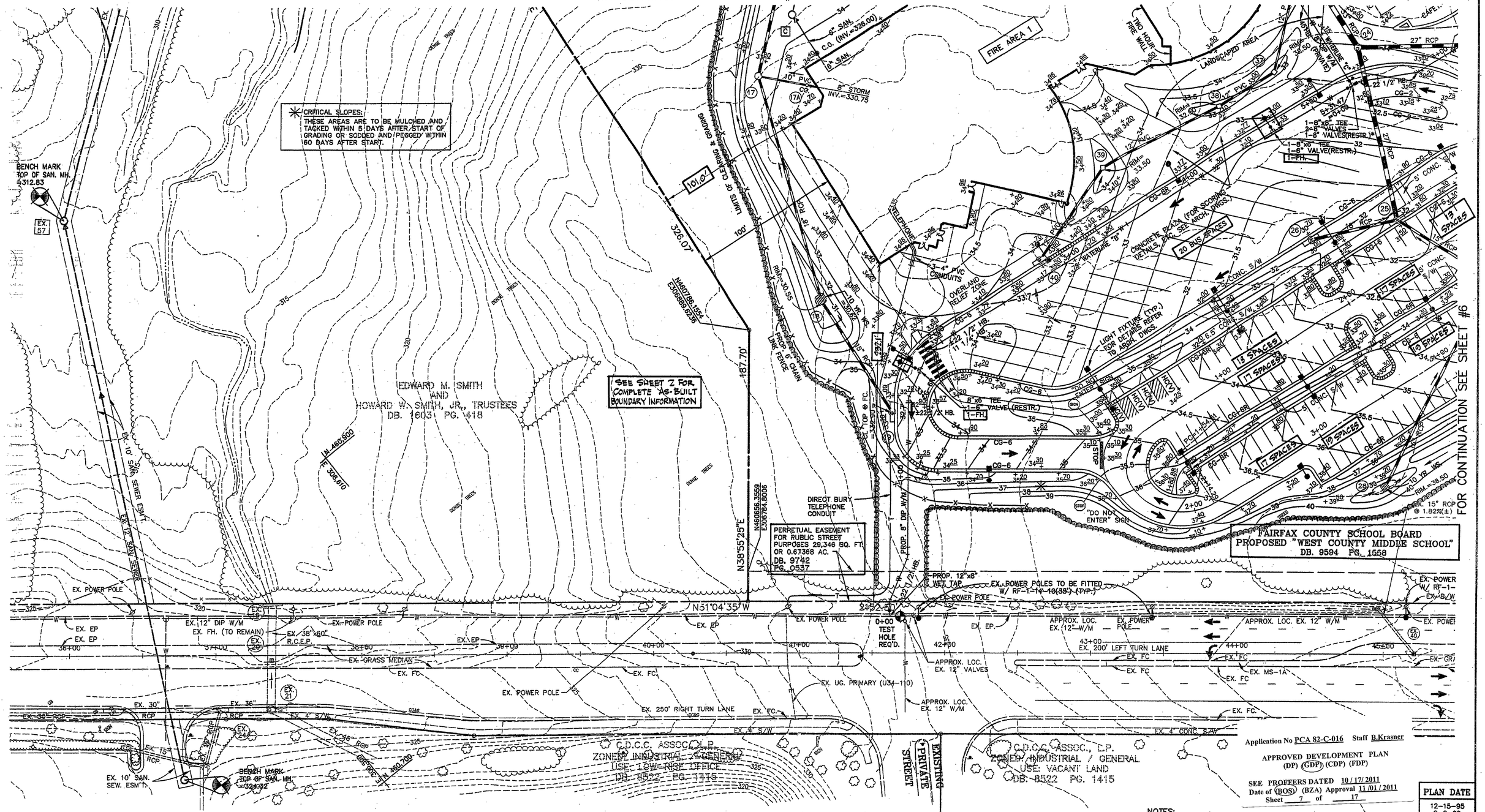
FOR CONTINUATION SEE SHEET #7



Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 7 of 17

PLAN DATE
12-15-95
2-2-96
3-21-96
6-25-96

NOTES:

1. FOR GENERAL NOTES SEE SHEET #2.
2. SEE NOTE #24, SHEET #2.
3. ✳ DENOTES CRITICAL SLOPE.

AS-BUILT

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.

CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS

7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
RICHARD P. HUDSON
No. 001602
6/13/02
LAND SURVEYOR

GRADING PLAN

WEST COUNTY MIDDLE SCHOOL #3171

SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SCALE: 1"= 30' C.I. 1' DATE: DEC., 1995

SHEET 5 OF 39

FILE No. SP-906

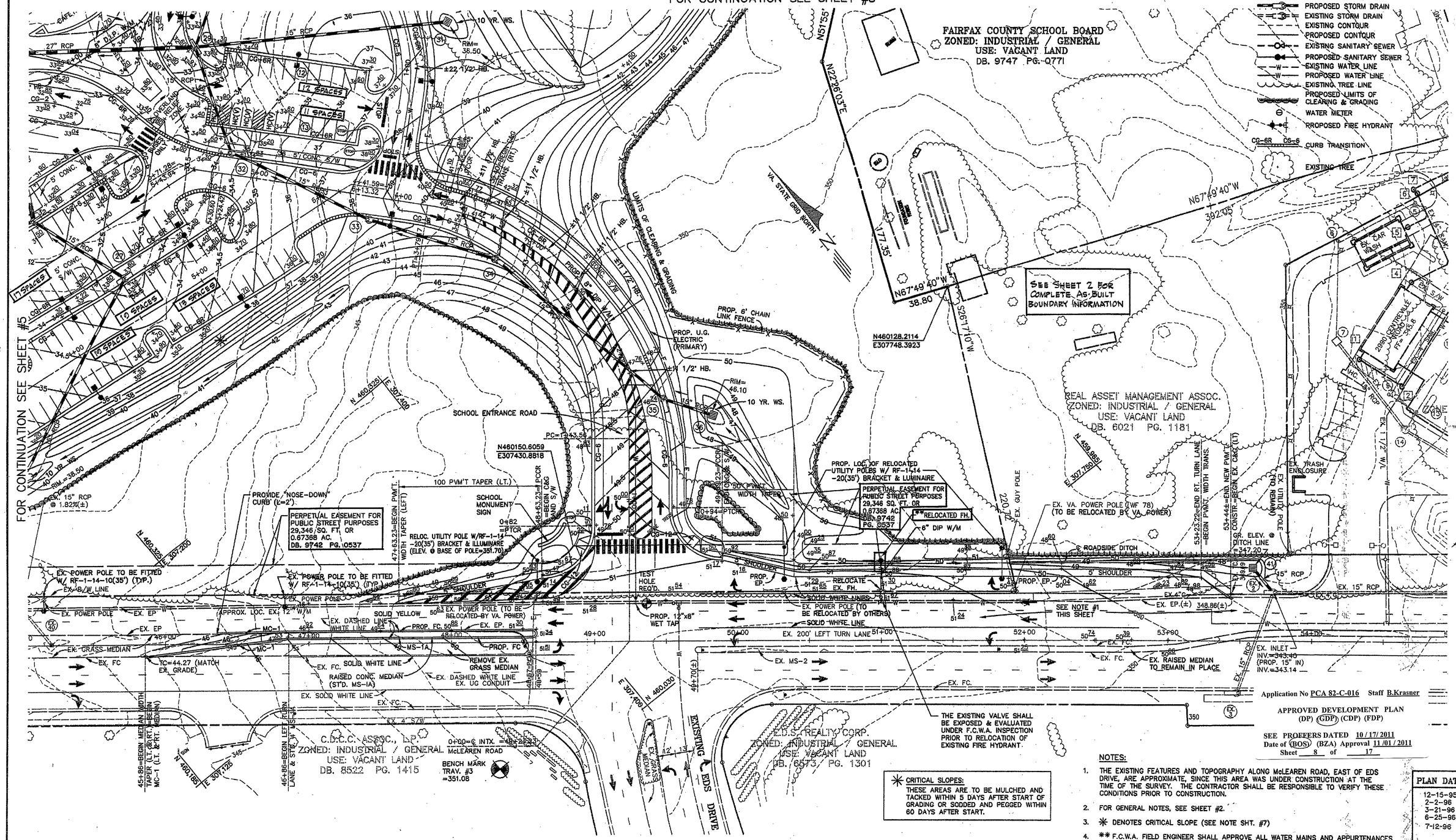
AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.

222.22 DENOTES AS-BUILT

C:\DRAWINGS\TEMP\SITEPLAN

FOR CONTINUATION SEE SHEET #8

FOR CONTINUATION SEE SHEET #5



LEGEND:

- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING TREE LINE
- PROPOSED LIMITS OF CLEARING & GRADING
- WATER METER
- PROPOSED FIRE HYDRANT
- CG-6R CG-6 CURB TRANSITION
- EXISTING TREE

Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 8 of 17

✳ CRITICAL SLOPES:
THESE AREAS ARE TO BE MULCHED AND TACKED WITHIN 5 DAYS AFTER START OF GRADING OR SODDED AND PEGGED WITHIN 60 DAYS AFTER START.

NOTES:

1. THE EXISTING FEATURES AND TOPOGRAPHY ALONG McLEAREN ROAD, EAST OF EDS DRIVE, ARE APPROXIMATE, SINCE THIS AREA WAS UNDER CONSTRUCTION AT THE TIME OF THE SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THESE CONDITIONS PRIOR TO CONSTRUCTION.
2. FOR GENERAL NOTES, SEE SHEET #2.
3. ✳ DENOTES CRITICAL SLOPE (SEE NOTE SHT. #7)
4. ** F.C.W.A. FIELD ENGINEER SHALL APPROVE ALL WATER MAINS AND APPURTENANCES FOR RELOCATION.

PLAN DATE
12-15-95
2-2-96
3-21-96
6-25-96
7-12-96

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

AS-BUILT

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS · LANDSCAPE ARCHITECTS · LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
RICHARD P. HUDSON
No. 001602
6/13/02
LAND SURVEYOR

GRADING PLAN
WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SCALE: 1"= 30' C.I. 1' DATE: DEC., 1995

SHEET 6 OF 39

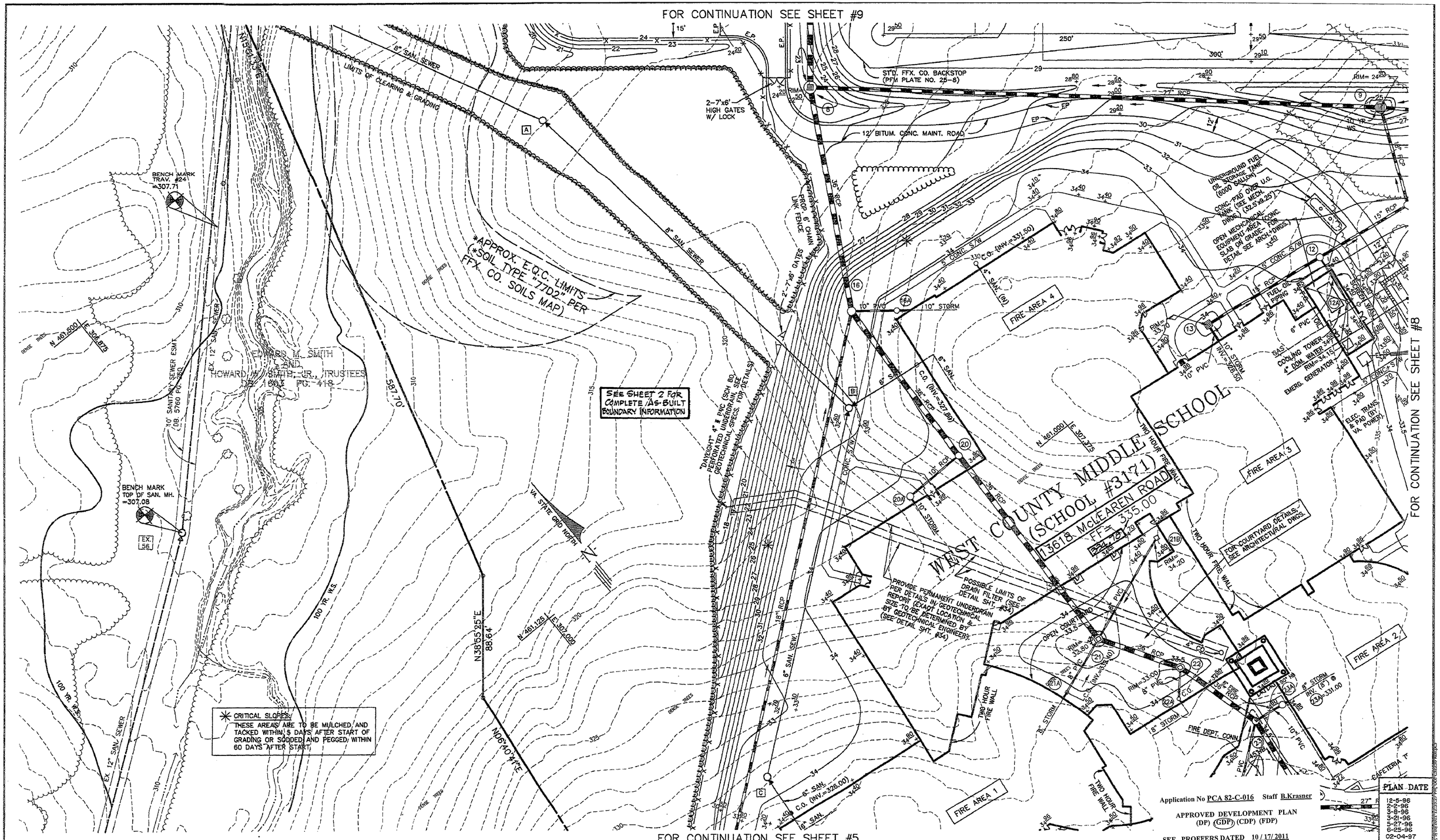
FILE No. SP-906

AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.
JANUARY 1, 2002

222.22 DENOTES AS-BUILT

C:\DRAWINGS\TEMP\SITEPLAN

PROPERTY OF FCPS D & C



PLAN DATE
12-5-96
2-2-96
3-8-96
5-21-96
5-27-96
6-25-96
02-04-97

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE
1	2-4-97	REV. ON WATERLINE "C"			

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS · LANDSCAPE ARCHITECTS · LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
RICHARD P. HUDSON
No. 001602
6/13/02
LAND SURVEYOR

GRADING PLAN
WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SCALE: 1"= 30' C.I. 1' DATE: DEC., 1995

SHEET 7 OF 39

FILE No. SP-906

AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.
JANUARY 1, 2002

222.22 DENOTES AS BUILT

Property of FCPS

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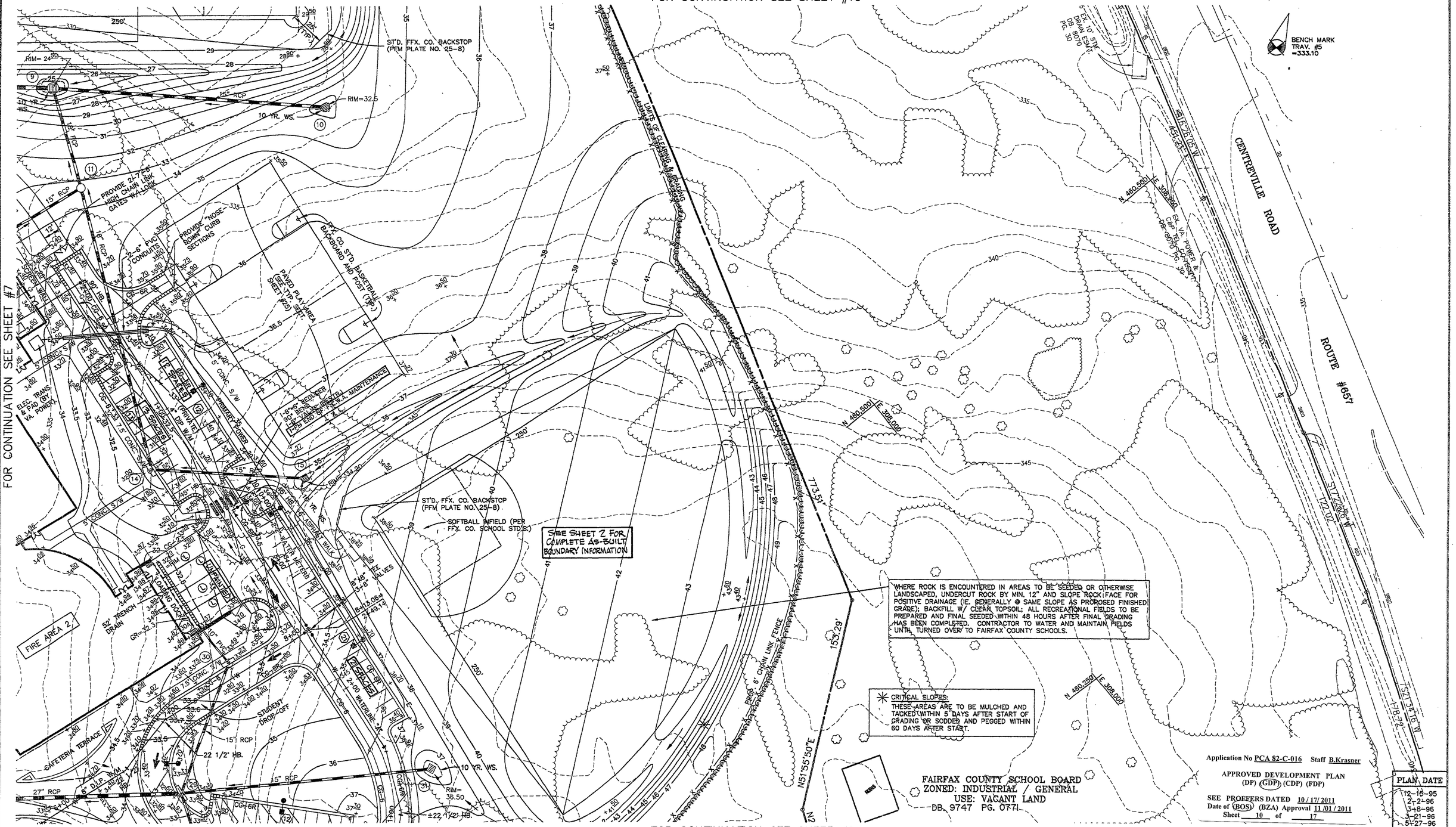
VIEWED BY USER : wspurling

PROPERTY OF FCPS D & C

FOR CONTINUATION SEE SHEET #10

FOR CONTINUATION SEE SHEET #7



FOR CONTINUATION SEE SHEET #6

PLAN DATE
12-18-95
2-2-96
3-8-96
3-21-96
5-27-96
6-25-96
02-04-97

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE
1	02-04-97	REV. ON 4" DIP W/M			

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
RICHARD P. HUDSON
No. 001602
6/13/02
LAND SURVEYOR

GRADING PLAN
WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SCALE: 1"= 30' C.I. 1' DATE: DEC., 1995

SHEET 8 OF 39

FILE No. SP-906

AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.
JANUARY 1, 2002

222.22 DENOTES AS-BUILT

Property of FCPS

VIEWED BY USER : wspurling

C:\DRAWINGS\TEMP\SITEPLAN

PROPERTY OF FCPS D & C

AS-BUILT

Site Volume Table: Unadjusted

Site	Stratum	Surf1	Surf2	Cut cuyds	Fill cuyds	Net cuyds	Method
CARSON							
	pond1	pg1	318.5				
				1	2818	2817 (F)	Grid
				6	2853	2848 (F)	Composite
				3	2854	2850 (F)	End area

SEE SHEET 2 FOR COMPLETE AS-BUILT BOUNDARY INFORMATION

* TYPICAL SLOPES: THESE AREAS ARE TO BE MULCHED AND TACKED WITHIN 5 DAYS AFTER START OF GRADING OR SODDED AND PEGGED WITHIN 90 DAYS AFTER START.

WILLIAM E. POOLE, et al
DB. 2373 PG. 385
ZONED: R-1

N481823.2855
E307277.5153

AS-BUILT SPILLWAY
ELEV.- 318.50'

SPILLWAY OUTLET CHANNEL TO BE PROVIDED WITH CLASS 1 RIP-RAP (SEE DETAIL SHEET #28

S51°17'X04"E

LIMITS OF CLEARING & GRADING

PROP. 4' CHAIN LINK FENCE

4' HIGH CHAIN LINK FENCE

21" RCP

30" RCP

20'x30' SPILLWAY ELEV.=319.00

LOW FLOW CHANNEL (SEE DETAIL SHT. #24)

SPILLWAY OUTLET (DETAIL SHT. #24)

O.F. DRAINAGE

SOFTBALL INFIELD (PER FFX. CO. SCHOOL STD'S

STD. FFX. CO. BACKSTOP (PER PLATE NO. 25-8)

8" SAN. SEWER

LIMITS OF CLEAR...

FOR CONTINUATION SEE SHEET #7

FOR CONTINUATION SEE SHEET #10

Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 11 of 17

PLAN DATE
12-15-95
2-2-96
5-8-96
8-25-96

AS-BUILT

NO	DATE	DESCRIPTION	REV. BY	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS · LANDSCAPE ARCHITECTS · LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
RICHARD P. HUDSON
No. 001602
6/28/02
LAND SURVEYOR

GRADING PLAN
WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SHEET 9 OF 39

SCALE: 1" = 30' C.I. 1' DATE: DEC., 1995

FILE No. SP-906

AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.
JANUARY 1, 2002

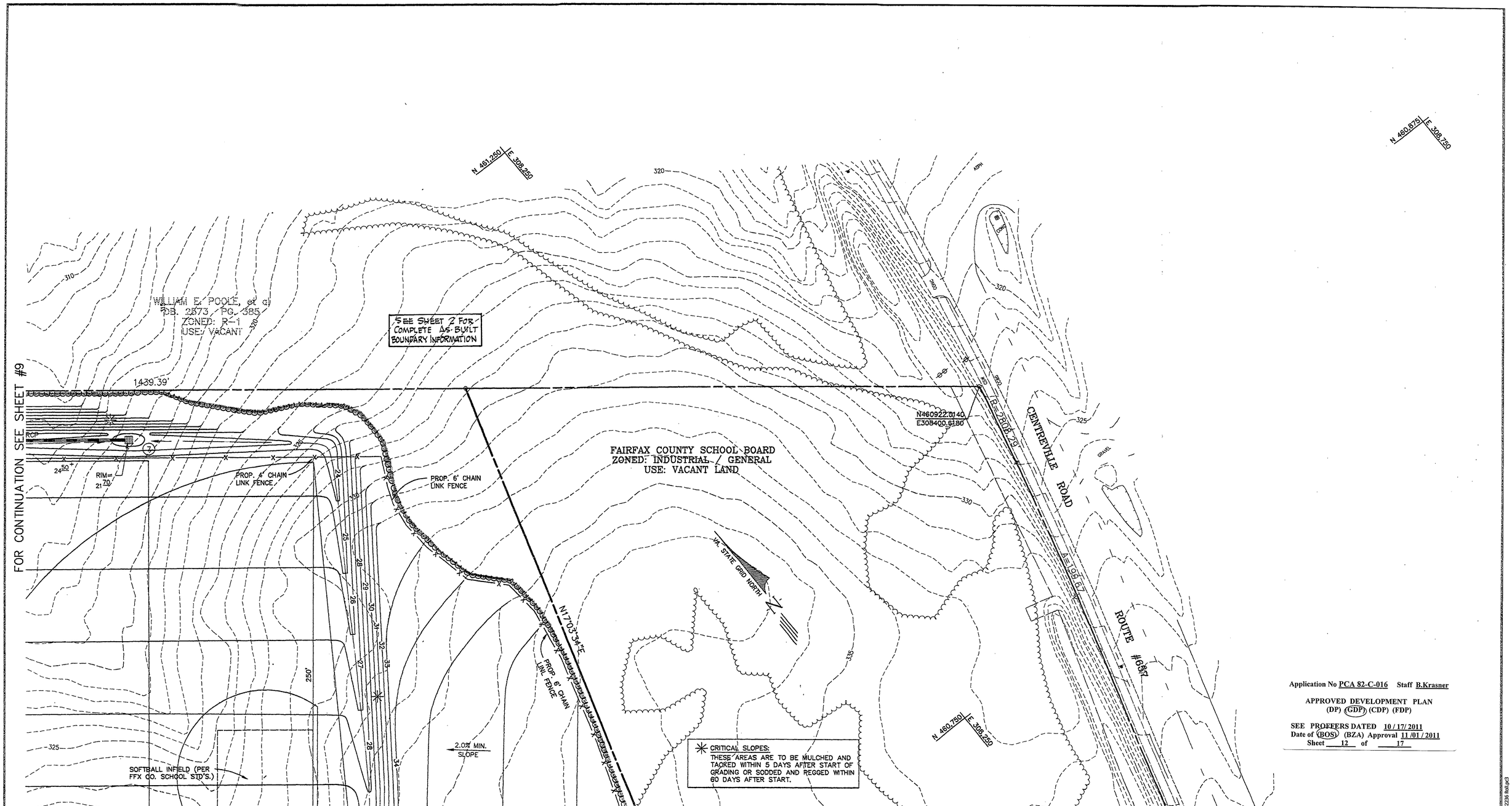
222.22 DENOTES AS-BUILT

GDP SHEET 11 OF 17 – FOR INFORMATION PURPOSES ONLY

VIEWED BY USER : wspurling

Property of FCPS

PROPERTY OF FCPS D & C



Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 12 of 17

PLAN DATE
12-15-95
2-2-96
3-8-96
6-25-95

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
RICHARD P. HUDSON
No. 001602
6/13/02
LAND SURVEYOR

GRADING PLAN
WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SCALE: 1"= 30' C.I. 1' DATE: DEC., 1995

SHEET 10 OF 39

FILE No. SP-906

AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.
JANUARY 1, 2002

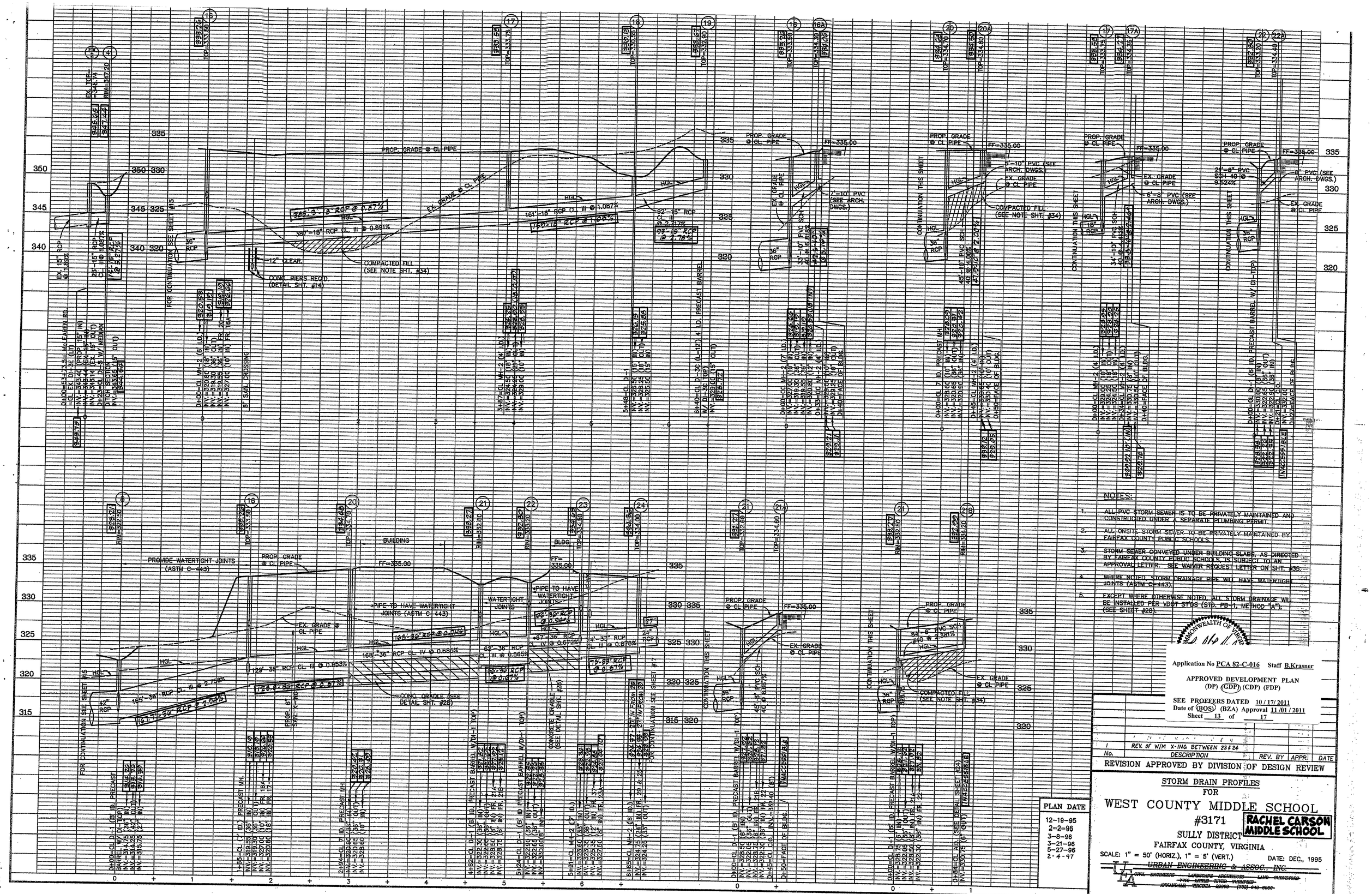
222.22 DENOTES AS-BUILT

Property of FCPS

VIEWED BY-USER : wspurling

C:\DRAWINGS\TEMP\SITEPLAN

\\Rachel Carson MS - 00170\Entrance Plan\RC 06-17 AS-BUILT.dwg, SH-12, 9/16/2011 12:34:32 PM, Oce CS2206 PostScript3



NOTES:

1. ALL PVC STORM SEWER IS TO BE PRIVATELY MAINTAINED AND CONSTRUCTED UNDER A SEPARATE PLUMBING PERMIT.
2. ALL ONSITE STORM SEWER TO BE PRIVATELY MAINTAINED BY FAIRFAX COUNTY PUBLIC SCHOOLS.
3. STORM SEWER CONVEYED UNDER BUILDING SLABS, AS DIRECTED BY FAIRFAX COUNTY PUBLIC SCHOOLS, IS SUBJECT TO AN APPROVAL LETTER. SEE WAIVER REQUEST LETTER ON SHT. #35.
4. WHERE NOTED, STORM DRAINAGE PIPE WILL HAVE WATERTIGHT JOINTS (ASTM C-443).
5. EXCEPT WHERE OTHERWISE NOTED, ALL STORM DRAINAGE WILL BE INSTALLED PER VDOT STDS (STD. PB-1, METHOD "A"). (SEE SHEET #28).

COMMONWEALTH OF VIRGINIA

Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 13 of 17

No.	DESCRIPTION	REV. BY	APPR.	DATE
1	REV. OF W/M X-ING BETWEEN 23 & 24			

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

PLAN DATE
12-19-95
2-2-96
3-8-96
3-21-96
5-27-96
2-4-97

STORM DRAIN PROFILES
FOR
WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

RACHEL CARSON MIDDLE SCHOOL

SCALE: 1" = 50' (HORIZ.), 1" = 5' (VERT.) DATE: DEC., 1995

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS
7715 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

SP-906 SHEET 16 OF 39

AS-BUILT
BY CHAIN BRIDGE ASSOCIATES, INC.
LAND SURVEYING
WARRENTON VA

GDP SHEET 13 OF 17 FOR INFORMATION

RUNOFF CURVE NUMBER CALCULATIONS

PROJECT: WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 1 — CHECKED: — DATE:
POST DEVELOPMENT CONDITIONS

SOIL NAME	HYDROLOGIC GROUP	COVER DESCRIPTION	CN TABLE 2-2	AREA	PRODUCT OF CN * AREA
MANASSAS	B	WOODS, GOOD	55	0.12	6.60
MANASSAS	B	OPEN SP. LAWN, GOOD	70	1.36	95.20
MANASSAS	B	IMP. AREA, PKNGLOT, ROOFS, ROAD	98	2.50	245.00
PENN, REDDINGTON	C	WOODS, GOOD	70	1.18	82.60
PENN, REDDINGTON	C	OPEN SP. LAWN, GOOD	74	14.02	1037.48
PENN, REDDINGTON	C	IMP. AREA, PKNGLOT, ROOFS, ROAD	98	7 31	716.38
			TOTAL	26.49	2183.26

CN (WEIGHTED) = TOTAL PRODUCT/TOTAL AREA = 82.42
USE CN = 82

PROJECT: WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 2 — CHECKED: — DATE:
PRE DEVELOPMENT CONDITIONS

SOIL NAME	HYDROLOGIC GROUP	COVER DESCRIPTION	CN TABLE 2-2	AREA	PRODUCT OF CN * AREA
MANASSAS	B	WOODS, GOOD	55	0.94	51.70
MANASSAS	B	OPEN SP. LAWN, GOOD	70	0.51	35.70
PENN, CALVERTON	C	WOODS, GOOD	70	4.05	283.50
PENN	C	OPEN SP. LAWN, GOOD	74	3.63	268.62
			TOTAL	9.13	639.52

CN (WEIGHTED) = TOTAL PRODUCT/TOTAL AREA = 70.05
USE CN = 70

PROJECT: WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 1 — CHECKED: — DATE:
PRE DEVELOPMENT CONDITIONS

SOIL NAME	HYDROLOGIC GROUP	COVER DESCRIPTION	CN TABLE 2-2	AREA	PRODUCT OF CN * AREA
MANASSAS	B	WOODS, GOOD	55	3.96	217.80
PENN, REDDINGTON	C	WOODS, GOOD	70	17.09	1196.30
PENN, REDDINGTON	C	BRUSH, GOOD	65	4.73	307.45
PENN, REDDINGTON	C	ROAD PAVED WITH DITCH	92	0.71	65.32
			TOTAL	26.49	1786.87

CN (WEIGHTED) = TOTAL PRODUCT/TOTAL AREA = 67.45
USE CN = 68

PROJECT: WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 2 — CHECKED: — DATE:
PRE DEVELOPMENT CONDITIONS

SOIL NAME	HYDROLOGIC GROUP	COVER DESCRIPTION	CN TABLE 2-2	AREA	PRODUCT OF CN * AREA
MANASSAS	B	WOODS, GOOD	55	1.72	94.60
PENN, REDDINGTON CALVERTON	C	WOODS, GOOD	70	7.47	522.90
			TOTAL	9.19	617.50

CN (WEIGHTED) = TOTAL PRODUCT/TOTAL AREA = 67.19
USE CN = 67

TIME OF CONCENTRATION CALCULATIONS

PROJECT: WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 1 — CHECKED: — DATE:
PRE DEVELOPMENT CONDITIONS

SHEET FLOW	SEGEMENT ID		C-D-1
1 SURFACE DESCRIPTION (TABLE 3-1)			DENSE GRASS
2 MANNING'S ROUGHNESS COEFF., n (TABLE 3-1)			0.24
3 FLOW LENGTH, L (TOTAL L < 300 ft)		ft	150.00
4 TWO-YR 24-HR RAINFALL, P		in	3.20
5 LAND SLOPE, s		ft/ft	0.02
6 T = .0007(nL)^.8/P^.5s^.4	COMPUTE T	hr	0.33
SHALLOW CONCENTRATED FLOW	SEGMENT ID		B-C-1
7 SURFACE DESCRIPTION (PAVED OR UNPAVED)			UNPAVED
8 FLOW LENGTH, L		ft	1010.00
9 WATERCOURSE SLOPE, s		ft/ft	0.03
10 AVERAGE VELOCITY, V (FIGURE 3-1)		ft/s	2.80
11 T = L/(3600*V)	COMPUTE T	hr	0.10
CHANNEL FLOW	SEGMENT ID		A-B
12 CROSS SECTIONAL FLOW AREA, a		ft^2	22
13 WETTED PERIMETER, pw		ft	20
14 HYDRAULIC RADIUS, r = a/pw	COMPUTE r	ft	1.1
15 CHANNEL SLOPE, s		ft/ft	0.032
16 MANNING'S ROUGHNESS COEFF., n			0.05
17 V = (1.49*r^(2/3)*s^(1/2))/n	COMPUTE V	ft/s	5.68
18 FLOW LENGTH, L		ft	170
19 T = L/(3600*V)	COMPUTE T	hr	0.01
20 WATERSHED OR SUBAREA, T	TOTAL T	hr	0.44

PROJECT: WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 1 — CHECKED: — DATE:
POST DEVELOPMENT CONDITIONS

SHEET FLOW	SEGEMENT ID		C-D-1
1 SURFACE DESCRIPTION (TABLE 3-1)			DENSE GRASS
2 MANNING'S ROUGHNESS COEFF., n (TABLE 3-1)			0.24
3 FLOW LENGTH, L (TOTAL L < 300 ft)		ft	150.00
4 TWO-YR 24-HR RAINFALL, P		in	3.20
5 LAND SLOPE, s		ft/ft	0.02
6 T = .0007(nL)^.8/P^.5s^.4	COMPUTE T	hr	0.33
SHALLOW CONCENTRATED FLOW	SEGMENT ID		C-C-1
7 SURFACE DESCRIPTION (PAVED OR UNPAVED)			UNPAVED
8 FLOW LENGTH, L		ft	190.00
9 WATERCOURSE SLOPE, s		ft/ft	0.01
10 AVERAGE VELOCITY, V (FIGURE 3-1)		ft/s	1.60
11 T = L/(3600*V)	COMPUTE T	hr	0.03
CHANNEL FLOW	SEGMENT ID		POND-C
12 CROSS SECTIONAL FLOW AREA, a		ft^2	STM PIPE
13 WETTED PERIMETER, pw		ft	0
14 HYDRAULIC RADIUS, r = a/pw	COMPUTE r	ft	0
15 CHANNEL SLOPE, s		ft/ft	0
16 MANNING'S ROUGHNESS COEFF., n			0
17 V = (1.49*r^(2/3)*s^(1/2))/n	COMPUTE V	ft/s	ASSUME 14 f/s
18 FLOW LENGTH, L		ft	1600
19 T = L/(3600*V)	COMPUTE T	hr	0.03
20 WATERSHED OR SUBAREA, T	TOTAL T	hr	0.39

TIME OF CONCENTRATION CALCULATIONS

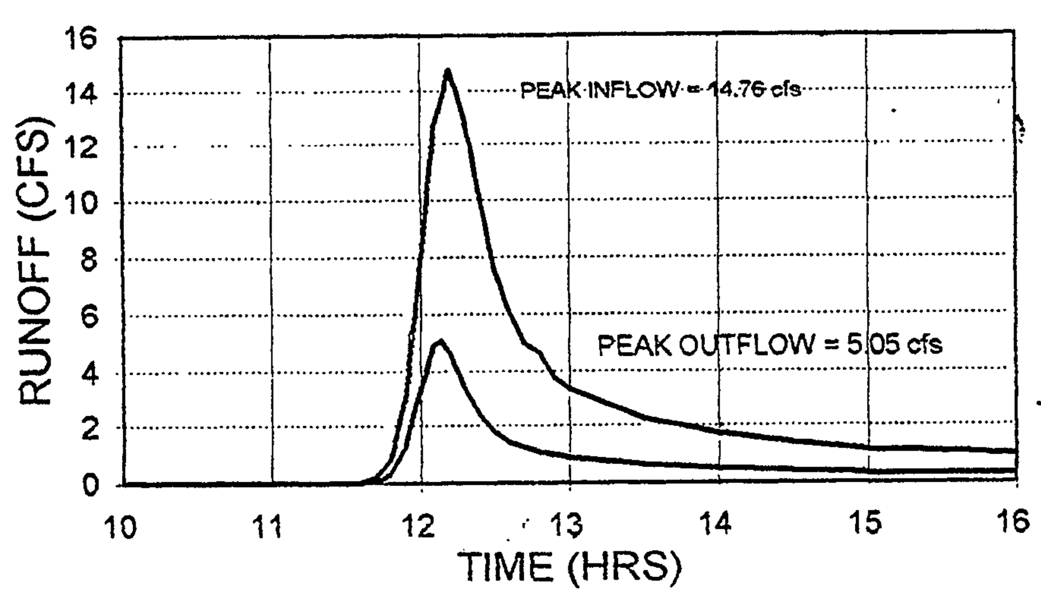
PROJECT: WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 2 — CHECKED: — DATE:
PRE DEVELOPMENT CONDITIONS

SHEET FLOW	SEGEMENT ID		C-D
1 SURFACE DESCRIPTION (TABLE 3-1)			WOODS
2 MANNING'S ROUGHNESS COEFF., n (TABLE 3-1)			0.40
3 FLOW LENGTH, L (TOTAL L < 300 ft)		ft	150.00
4 TWO-YR 24-HR RAINFALL, P		in	3.20
5 LAND SLOPE, s		ft/ft	0.06
6 T = .0007(nL)^.8/P^.5s^.4	COMPUTE T	hr	0.32
SHALLOW CONCENTRATED FLOW	SEGMENT ID		B-C
7 SURFACE DESCRIPTION (PAVED OR UNPAVED)			UNPAVED
8 FLOW LENGTH, L		ft	140.00
9 WATERCOURSE SLOPE, s		ft/ft	0.57
10 AVERAGE VELOCITY, V (FIGURE 3-1)		ft/s	3.80
11 T = L/(3600*V)	COMPUTE T	hr	0.01
CHANNEL FLOW	SEGMENT ID		A-B
12 CROSS SECTIONAL FLOW AREA, a		ft^2	22
13 WETTED PERIMETER, pw		ft	20
14 HYDRAULIC RADIUS, r = a/pw	COMPUTE r	ft	1.1
15 CHANNEL SLOPE, s		ft/ft	0.034
16 MANNING'S ROUGHNESS COEFF., n			0.05
17 V = (1.49*r^(2/3)*s^(1/2))/n	COMPUTE V	ft/s	5.60
18 FLOW LENGTH, L		ft	220
19 T = L/(3600*V)	COMPUTE T	hr	0.01
20 WATERSHED OR SUBAREA, T	TOTAL T	hr	0.34

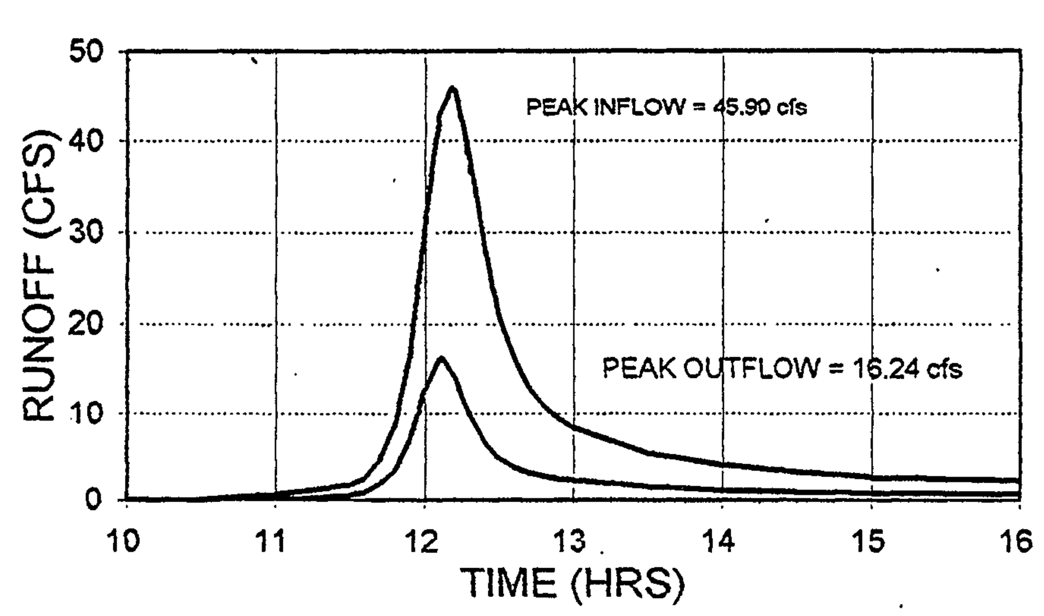
PROJECT. WEST COUNTY MIDDLE SCHOOL — BY: STF — DATE: 12-11-95
LOCATION: CROSS SECTION 2 — CHECKED: — DATE:
POST DEVELOPMENT CONDITIONS

SHEET FLOW	SEGEMENT ID		B-1-C-1
1 SURFACE DESCRIPTION (TABLE 3-1)			DENSE GRASS
2 MANNING'S ROUGHNESS COEFF., n (TABLE 3-1)			0.24
3 FLOW LENGTH, L (TOTAL L < 300 ft)		ft	115.00
4 TWO-YR 24-HR RAINFALL, P		in	3.20
5 LAND SLOPE, s		ft/ft	0.03
6 T = .0007(nL)^.8/P^.5s^.4	COMPUTE T	hr	0.23
SHALLOW CONCENTRATED FLOW	SEGMENT ID		B-B-1
7 SURFACE DESCRIPTION (PAVED OR UNPAVED)			UNPAVED
8 FLOW LENGTH, L		ft	175.00
9 WATERCOURSE SLOPE, s		ft/ft	0.05
10 AVERAGE VELOCITY, V (FIGURE 3-1)		ft/s	3.60
11 T = L/(3600*V)	COMPUTE T	hr	0.01
CHANNEL FLOW	SEGMENT ID		A-B
12 CROSS SECTIONAL FLOW AREA, a		ft^2	22
13 WETTED PERIMETER, pw		ft	20
14 HYDRAULIC RADIUS, r = a/pw	COMPUTE r	ft	1.1
15 CHANNEL SLOPE, s		ft/ft	0.034
16 MANNING'S ROUGHNESS COEFF., n			0.05
17 V = (1.49*r^(2/3)*s^(1/2))/n	COMPUTE V	ft/s	5.60
18 FLOW LENGTH, L		ft	220
19 T = L/(3600*V)	COMPUTE T	hr	0.01
20 WATERSHED OR SUBAREA, T	TOTAL T	hr	0.25

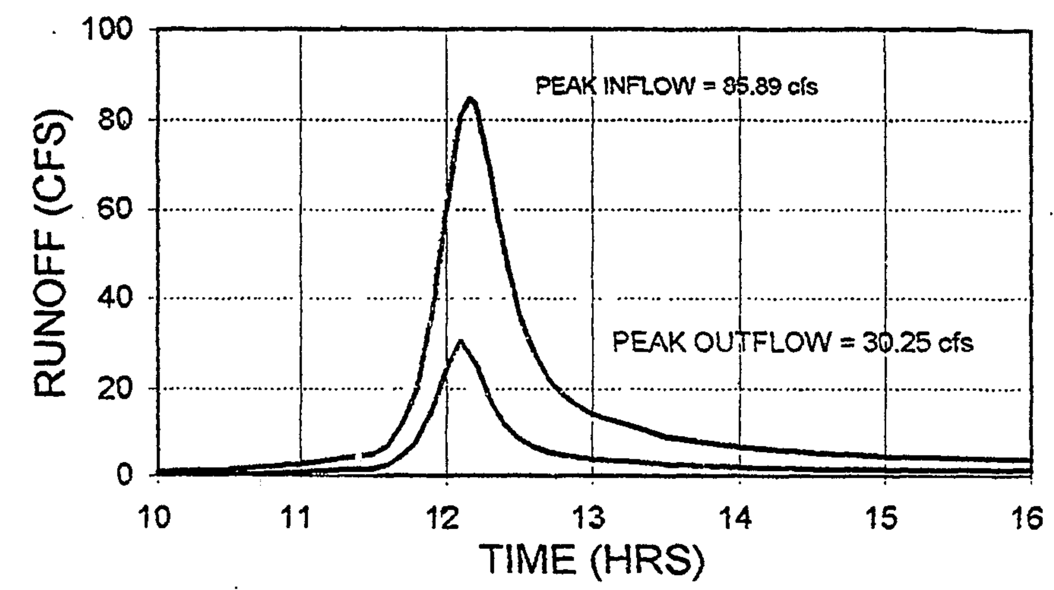
INFLOW-OUTFLOW HYDROGRAPH
2 YEAR STORM - PRE DEVELOPMENT



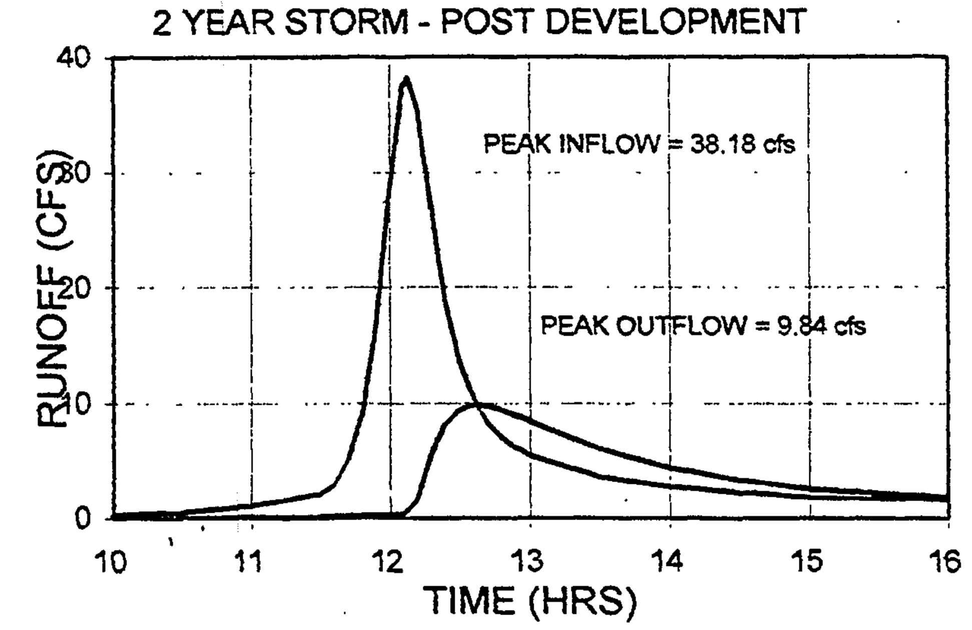
INFLOW-OUTFLOW HYDROGRAPH
10 YEAR STORM - PRE DEVELOPMENT



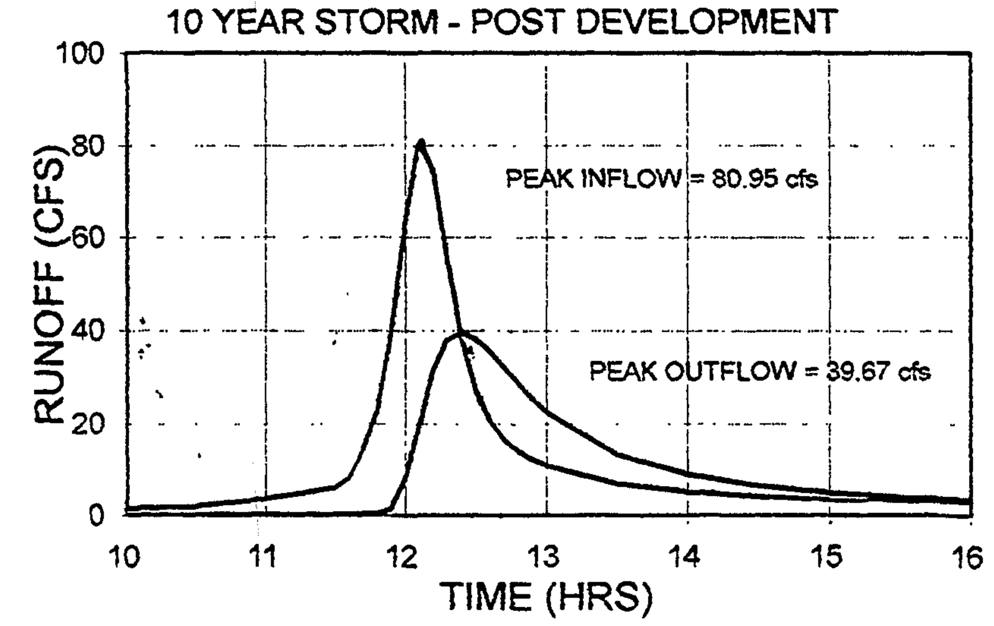
INFLOW-OUTFLOW HYDROGRAPH
100 YR STORM - PRE DEVELOPMENT



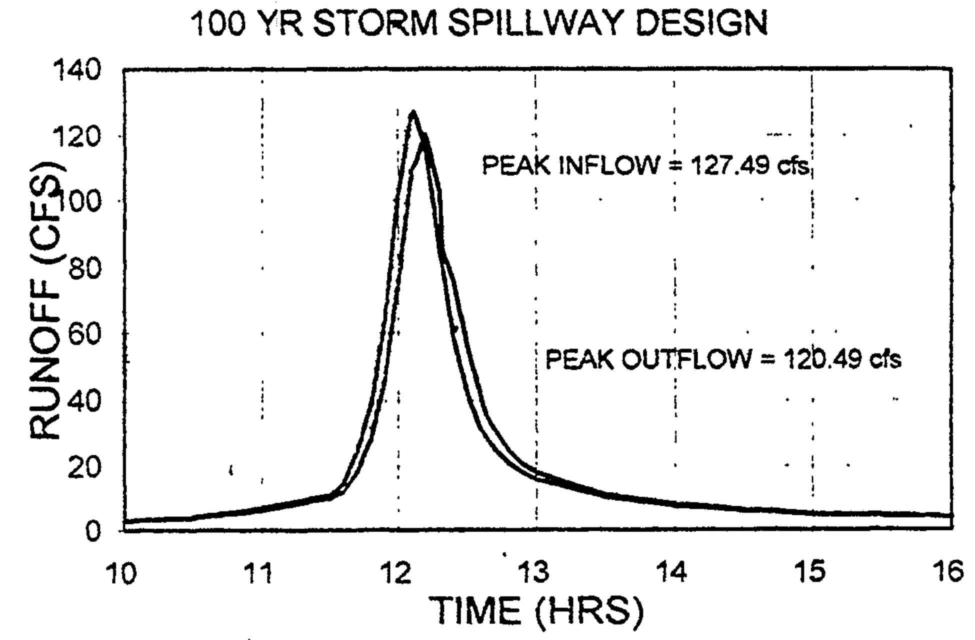
INFLOW-OUTFLOW HYDROGRAPH
2 YEAR STORM - POST DEVELOPMENT



INFLOW-OUTFLOW HYDROGRAPH
10 YEAR STORM - POST DEVELOPMENT



INFLOW-OUTFLOW HYDROGRAPH
100 YR STORM SPILLWAY DESIGN



PRE-DEVELOPED (2, 10, & 100 YR. STORMS)

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********************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

JOB TR-20                    FULLPRINT            SUMMARY   NOPLOTS
TITLE 001 WEST COUNTY MIDDLE SCHOOL               9-11-95
TITLE 002 PRE-Development  2. 10 & 100 Yr Storms
 6 RUNOFF 1 001       1 0.041      68.0       0.44       1 1  1  1
 6 RUNOFF 1 002       2 0.013      67.0       0.34       1 1  1  1
 6 ADDHYD 4 002   1 2 3
   ENDATA
 7 INCREM 6           0.10
 7 COMPUT 7 001   002              3.20       1.0        2 2  01  02
   ENDCMP 1
 7 COMPUT 7 001   002              5.20       1.0        2 2  01  10
   ENDCMP 1
 7 COMPUT 7 001   002              7.30       1.0        2 2  01  99
   ENDCMP 1
   ENDJOB 2

*********************************END OF 80-80 LIST*********************************

TR20 XEQ 09-13-95  07:57      WEST COUNTY MIDDLE SCHOOL          9-11-95          JOB  1   PASS  1
    REV PC 09/83(.2)          PRE-Development  2. 10 & 100 Yr Storms                       PAGE  1

EXECUTIVE CONTROL OPERATION INCREM     MAIN TIME INCREMENT =   .10 HOURS                  RECORD ID

EXECUTIVE CONTROL OPERATION COMPUT     FROM XSECTION   1  TO XSECTION   2                 RECORD ID
      STARTING TIME =   .00   RAIN DEPTH =  3.20   RAIN DURATION=  1.00   RAIN TABLE NO.= 2   ANT. MOIST. COND= 2
      ALTERNATE NO.= 1        STORM NO.= 2    MAIN TIME INCREMENT =   .10 HOURS

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
          (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
           A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/   STANDARD              RAIN  ANTEC  MAIN        PRECIPITATION               PEAK DISCHARGE
STRUCTURE  CONTROL   DRAINAGE   TABLE  MOIST  TIME   ----------------------  RUNOFF  ---------------------------------
   ID      OPERATION   AREA       #    COND  INCREM  BEGIN  AMOUNT  DURATION  AMOUNT  ELEVATION  TIME    RATE     RATE
                      (SQ MI)                 (HR)   (HR)    (IN)    (HR)     (IN)     (FT)     (HR)    (CFS)    (CSM)

  ALTERNATE ...1...STORM....2
XSECTION  1 RUNOFF     .04      2     2      .10     .0     3.20    24.00     .73      ---     12.20    14.76    360.1
XSECTION  2 RUNOFF     .01      2     2      .10     .0     3.20    24.00     .69      ---     12.14     5.05    388.3
XSECTION  2 ADDHYD     .05      2     2      .10     .0     3.20    24.00     .72      ---     12.19    19.42    359.7

  ALTERNATE... 1  .STORM.. 10
XSECTION  1 RUNOFF     .04      2     2      .10     .0     5.20    24.00    2.02      ---     12.10    45.90   1119.6
XSECTION  2 RUNOFF     .01      2     2      .10     .0     5.20    24.00    1.94      ---     12.11    16.24   1249.5
XSECTION  2 ADDHYD     .05      2     2      .10     .0     5.20    24.00    2.00      ---     12.16    60.91   1128.0

  ALTERNATE....1....STORM...99
XSECTION  1 RUNOFF     .04      2     2      .10     .0     7.30    24.00    3.65      ---     12.17    84.59   2063.2
XSECTION  2 RUNOFF     .01      2     2      .10     .0     7.30    24.00    3.55      ---     12.11    30.25   2327.2
XSECTION  2 ADDHYD     .05      2     2      .10     .0     7.30    24.00    3.63      ---     12.15   113.57   2103.1

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/         DRAINAGE
STRUCTURE           AREA       STORM NUMBERS..........
  ID              (SQ MI)        2        10        99

 XSECTION  1..........04
   ALTERNATE  1                14.76     45.90     84.59

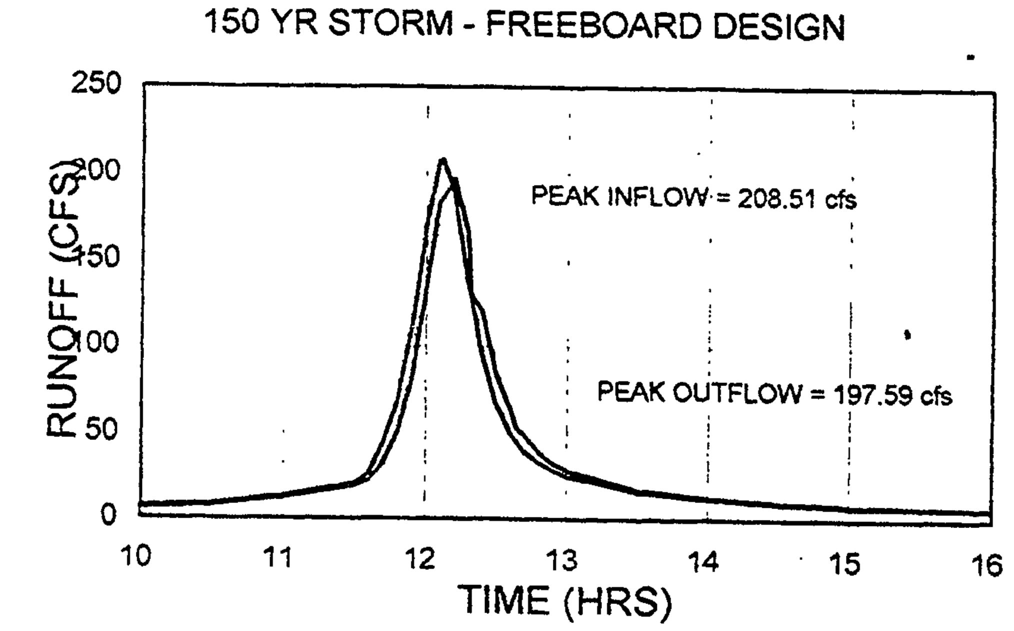
 XSECTION  2..........05
   ALTERNATE  1                19.42     60.91    113.57
```

Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 14 of 17

INFLOW-OUTFLOW HYDROGRAPH
150 YR STORM - FREEBOARD DESIGN



PLAN DATE
12-13-95
5-27-96
6-26-96

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA — ERIC S. SIEGEL — No. 023416 — PROFESSIONAL ENGINEER

STORM POND COMPUTATIONS

WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: N/A — C.I. N/A — DATE: DEC., 1995

SHEET 36 OF 39

FILE No. SP-906

POST-DEVELOPED (2 & 10 YR. STORMS)

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*****************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

JOB TR-20                    FULLPRINT          SUMMARY   NOPLOTS
TITLE 000 WEST COUNTY MIDDLE SCHOOL
TITLE 000 POST-DEVELOPMENT 2' X 2' RECT CULVERT
  3 STRUCT     01
  8                    9.60       0.        0.
  8                   11.         .18       .13
  8                   12.         .23       .25
  8                   13.         .28       .52
  8                   14.         .32       .79
  8                   14.5        .33       .96
  8                   15.        1.94      1.13
  8                   16.        8.65      1.47
  8                   16.5      13.13      1.68
  8                   17.       18.20      1.89
  8                   18.       29.90      2.31
  8                   19.       43.42      2.81
  9 ENDTBL
  6 RUNOFF 1    01    2 .041     82.       .39        1 1    1 1
  6 RESVOR 2    01 2  3 9.95                          1 1 1 1  1
  6 RUNOFF 1 002      1 .014     70.       .25        1 1    1 1
  6 ADDHYD 4 002    1 3 4
    ENDATA
  7 INCREM 6              .1
  7 COMPUT 7    01 002           3.2       1.         2 2  01  02
    ENDCMP 1
  7 COMPUT 7    01 002           5.2       1.         2 2  01  10
    ENDCMP 1
    ENDJOB 2

*******************************END OF 80-80 LIST********************************


TR20 XEQ 03-06-96  11:28        WEST COUNTY MIDDLE SCHOOL                          JOB  1   SUMMARY
     REV PC 09/83(.2)           POST-DEVELOPMENT 2' X 2' RECT CULVERT                       PAGE   9


 SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
                   (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
                    A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

 SECTION/   STANDARD                RAIN  ARTEC  MAIN        PRECIPITATION                          PEAK DISCHARGE
 STRUCTURE  CONTROL   DRAINAGE      TABLE MOIST  TIME   ------------------------  RUNOFF   ------------------------------------
   ID       OPERATION  AREA          #     COND  INCREM BEGIN  AMOUNT  DURATION  AMOUNT  ELEVATION  TIME    RATE    RATE
                       (SQ MI)                  (HR)   (HR)   (IN)    (HR)      (IN)    (FT)       (HR)    (CFS)   (CSM)

   ALTERNATE    1   STORM   2
 STRUCTURE  1  RUNOFF     .04   2     2     .10    .0    3.20    24.00     1.54    ---       12.13   38.18   931.1
 STRUCTURE  1  RESVOR     .04   2     2     .10    .0    3.20    24.00     1.17   16.13      12.64    9.84   239.9
 XSECTION   2  RUNOFF     .01   2     2     .10    .0    3.20    24.00      .83    ---       12.08    8.13   580.8
 XSECTION   2  ADDHYD     .05   2     2     .10    .0    3.20    24.00     1.08    ---       12.59   11.33   206.1

   ALTERNATE    1   STORM  10
 STRUCTURE  1  RUNOFF     .04   2     2     .10    .0    5.20    24.00     3.26    ---       12.12   80.95  1974.5
 STRUCTURE  1  RESVOR     .04   2     2     .10    .0    5.20    24.00     2.88   18.72      12.40   39.67   967.5
 XSECTION   2  RUNOFF     .01   2     2     .10    .0    5.20    24.00     2.19    ---       12.07   22.68  1619.7
 XSECTION   2  ADDHYD     .05   2     2     .10    .0    5.20    24.00     2.70    ---       12.31   46.29   841.6

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/        DRAINAGE
STRUCTURE          AREA       STORM NUMBERS.........
  ID             (SQ MI)          2       10

 STRUCTURE  1          .04
   ALTERNATE  1                   9.84    39.67

 XSECTION   2          .05
   ALTERNATE  1                  11.33    46.29
```

SPILLWAY DESIGN FLOOD (100 YR. STORM)

```
*****************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

JOB TR-20                    FULLPRINT          SUMMARY   NOPLOTS
TITLE 000 WEST COUNTY MIDDLE SCHOOL
TITLE 000 POST-DEVELOPMENT SPILLWAY DESIGN
  3 STRUCT     01
  8                   19.        0.00      0.00
  8                   20.       83.85       .55
  8                   21.      202.50      1.14
  8                   22.      351.54      1.77
  8                   23.      525.70      2.45
  8                   24.      721.76      3.18
  9 ENDTBL
  6 RUNOFF 1    01    2 .041     82.       .39        1 1    1 1
  6 RESVOR 2    01 2  3 19.0                          1 1 1 1  1
  6 RUNOFF 1 002      1 .014     70.       .25        1 1    1 1
  6 ADDHYD 4 002    1 3 4
    ENDATA
  7 INCREM 6              .1
  7 COMPUT 7    01 002           7.3       1.         2 2  01  99
    ENDCMP 1
  7 COMPUT 7    01 002          10.95      1.         2 2  01  15
    ENDCMP 1
    ENDJOB 2

*******************************END OF 80-80 LIST********************************


TR20 XEQ 06-06-96  15:46        WEST COUNTY MIDDLE SCHOOL                          JOB  1   SUMMARY
     REV PC 09/83(.2)           POST-DEVELOPMENT SPILLWAY DESIGN                            PAGE   8


SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
                   (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
                    A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

 SECTION/   STANDARD                RAIN  ARTEC  MAIN        PRECIPITATION                          PEAK DISCHARGE
 STRUCTURE  CONTROL   DRAINAGE      TABLE MOIST  TIME   ------------------------  RUNOFF   ------------------------------------
   ID       OPERATION  AREA          #     COND  INCREM BEGIN  AMOUNT  DURATION  AMOUNT  ELEVATION  TIME    RATE    RATE
                       (SQ MI)                  (HR)   (HR)   (IN)    (HR)      (IN)    (FT)       (HR)    (CFS)   (CSM)

   ALTERNATE    1   STORM  99
 STRUCTURE  1  RUNOFF     .04   2     2     .10    .0    7.30    24.00     5.19    ---       12.12  127.49  3109.6
 STRUCTURE  1  RESVOR     .04   2     2     .10    .0    7.30    24.00     5.19   20.31      12.19  120.49  2938.8
 XSECTION   2  RUNOFF     .01   2     2     .10    .0    7.30    24.00     3.88    ---       12.06   40.17  2869.5
 XSECTION   2  ADDHYD     .05   2     2     .10    .0    7.30    24.00     4.86    ---       12.14  151.13  2747.8

   ALTERNATE    1   STORM  15
 STRUCTURE  1  RUNOFF     .04   2     2     .10    .0   10.95    24.00     8.69    ---       12.12  208.51  5085.6
 STRUCTURE  1  RESVOR     .04   2     2     .10    .0   10.95    24.00     8.68   20.96      12.18  197.59  4819.4
 XSECTION   2  RUNOFF     .01   2     2     .10    .0   10.95    24.00     7.10    ---       12.05   72.43  5173.7
 XSECTION   2  ADDHYD     .05   2     2     .10    .0   10.95    24.00     8.28    ---       12.13  255.30  4541.9

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/        DRAINAGE
STRUCTURE          AREA       STORM NUMBERS.........
  ID             (SQ MI)          15      99

 STRUCTURE  1          .04
   ALTERNATE  1                 197.59   120.49

 XSECTION   2          .05
   ALTERNATE  1                 255.30   151.13
```

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

ATTACHMENT 3

August 3, 1982,

Mr. Charles Henry Smith
120 North Asaph Street
Alexandria, Virginia 22314

Re: Rezoning Application
Number RZ 82-C-016

Dear Mr. Smith:

Enclosed you will find a copy of the Ordinance adopted by the Board of Supervisors at a regular meeting held on July 26, 1982, granting, as proffered, RZ 82-C-016 in the name of Edward M. Smith, Trustee, et al, to rezone certain land in Centreville District from R-1 District to I-5 District on subject parcels 24-4 ((1)) 3 consisting of approximately 82.0011 acres.

Very truly yours,

Ethel W. Register, cmc

Ethel Wilcox Register
Clerk to the Board

EWR/mg

cc: Mr. Patteson
Mr. Knowlton
Mr. Steele
Mr. Beales

Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 15 of 17

WEST COUNTY MIDDLE SCHOOL SWM/BMP POND

Elevation - Outflow Table

Elev. (ft)	Low Flow Dia. (in) 2.4	Principal Spillway Weir Length (ft) 1.5	Emergency Spillway Weir Length (ft) 20	Pond Outflow cfs	Storage Ac-ft	SDF Pond Outflow cfs	SDF Storage Ac-ft
9.60	0.00			0.00	0.00		
11.00	0.18			0.18	0.13		
12.00	0.23			0.23	0.25		
13.00	0.28			0.28	0.52		
14.00	0.32			0.32	0.79		
14.50	0.33	0.00		0.33	0.96		
15.00	0.35	1.59		1.94	1.13		
16.00	0.38	8.27		8.65	1.47		
16.50	0.40	12.73		13.13	1.68		
17.00	0.41	17.79		18.20	1.89		
18.00	0.44	29.47		29.90	2.31		
19.00	0.46	42.96	0.00	43.42	2.81	0.00	0.00
20.00			83.85	83.85	3.31	83.85	0.55
21.00			202.50	202.50	3.90	202.50	1.14
22.00			351.54	351.54	4.48	351.54	1.77
23.00			525.70	525.70	5.16	525.70	2.45
24.00			721.76	721.76	5.83	721.76	3.18

No.	DATE	DESCRIPTION	REV. BY	APPROVED	DATE

REVISION APPROVED BY DIVISION OF DESIGN REVIEW

URBAN ENGINEERING & ASSOC., INC.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS • LAND SURVEYORS
7712 LITTLE RIVER TURNPIKE
ANNANDALE, VIRGINIA 22003 (703) 642-8080

COMMONWEALTH OF VIRGINIA
ERIC S. SIEGEL
No. 023416
3/25/96
PROFESSIONAL ENGINEER

SWM / BMP POND COMPUTATIONS

WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE : N/A C.I. N/A DATE : DEC., 1995

PLAN DATE
12-13-95
5-27-96
6-26-96

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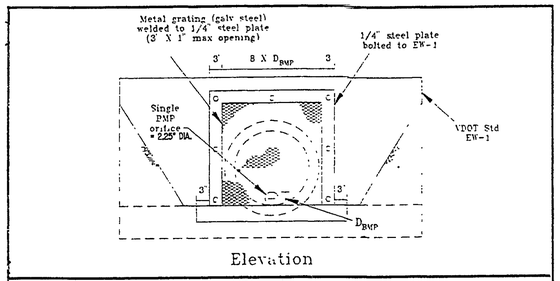
FILE No. SP-906

GDP SHEET 15 OF 17 – FOR INFORMATION PURPOSES ONLY

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Notes:
1) Alternative cage configurations are acceptable as long as the flow velocity thru the cage at the max BMP pool elev is less than 0.15 FPS.
2) This detail (metal grating and steel plate) may be applied directly against rectangular risers.
3) For larger cages (height > 5') a 3' X 2' hinged gate with locking mechanism shall be installed on the front face of the cage.

		PLATE NO	STD NO
Ref Sec 6-1604.4C 6-1604	BMP EXTENDED DRAWDOWN DEVICE (EXAMPLE DETAIL)	61-6	

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL

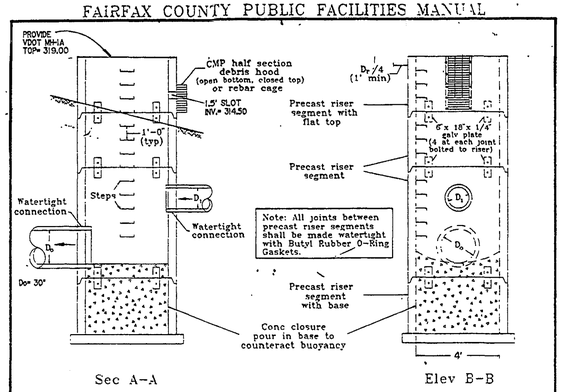
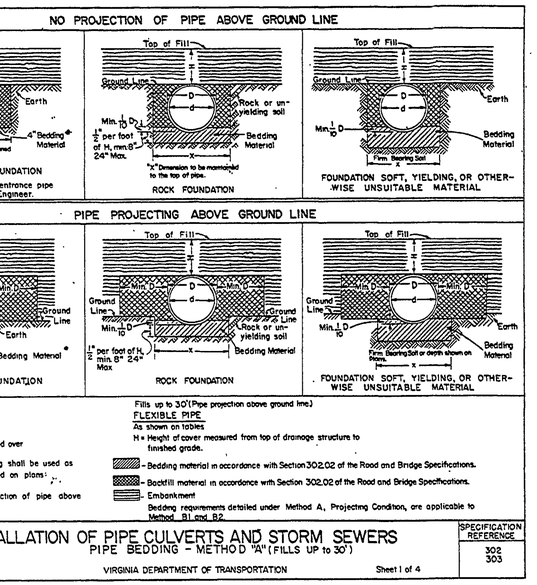


		PLATE NO	STD NO
Ref Sec 6-1604.4 6-1604.8A 6-1604.8E 6-1604.3 3-4-94 Rev 9-8-94	SCHEMATIC DETAIL OF PRE-CAST CIRCULAR RISER AND TRASH RACK FOR USE WITH DRY OR EXTENDED DRY DETENTION PONDS	53-6	

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



Culverts less than d = 36"
x = D + 24"

Culverts where d = 36" and over
x = D + 36"

Method "A" Pipe Bedding shall be used as follows unless otherwise noted on plans:
RIGID PIPE
Fills up to 30' (No projection of pipe above ground line.)

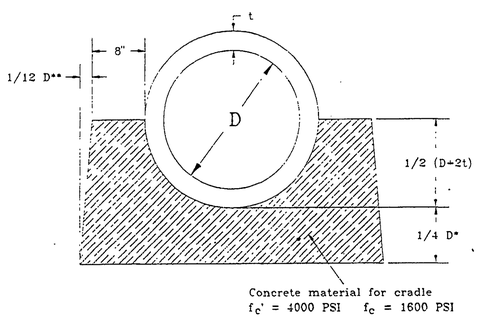
Fills up to 30' (Pipe projection above ground line.)
FLEXIBLE PIPE
As shown on tables
H = Height of cover measured from top of drainage structure to finished grade.

- Bedding material in accordance with Section 302.02 of the Road and Bridge Specifications.
- Backfill material in accordance with Section 302.02 of the Road and Bridge Specifications.
- Embankment

Bedding requirements detailed under Method A, Projecting Condition, are applicable to Method B1 and B2.

INSTALLATION OF PIPE CULVERTS AND STORM SEWERS
PIPE BEDDING - METHOD "A" (FILLS UP TO 30')
VIRGINIA DEPARTMENT OF TRANSPORTATION
Sheet 1 of 4
107.01
SPECIFICATION REFERENCE 302 303

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



* But not less than 6"

** If the pipe is laid in an excavated trench, then the side walls may conform to the trench shape (ie the trench may become the cradle form)

Source: SCS; ES-154, A2 Cradle

		PLATE NO	STD NO
Ref Sec 6-1605 Sect 11 3-4-94	STANDARD CONCRETE CRADLE DETAILS FOR CIRCULAR CONDUITS EXTENDING THROUGH DAM EMBANKMENTS	67-6	

FIRE CODE ANALYSIS
BY SAMAHA ASSOCIATES, P.C.
(703) 691-3311

BUILDING CODES
1993 BOCA
ADA ACCESSIBILITY GUIDELINES

BUILDING DATA
USE GROUPS

BOCA - "E" - EDUCATIONAL
"A3" - ASSEMBLY

CONSTRUCTION TYPE 2C - NONCOMBUSTIBLE / UNPROTECTED
BUILDING IS FULLY SPRINKLERED

BUILDING AREAS (GROSS)

FIRST FLOOR	134,493 SF.
SECOND FLOOR	44,230 SF.
TOTAL	178,723 SF.

ALLOWABLE AREAS (PER BOCA TABLE 503)

USE GROUP E -

SPRINKLER INCREASE (200%)
PERIMETER INCREASE AS NOTED BELOW AT INDIVIDUAL FIRE AREAS

TOTAL	43,200 SF.

USE GROUP A3 -

SPRINKLER INCREASE (200%)
PERIMETER INCREASE AS NOTED BELOW AT INDIVIDUAL FIRE AREAS

TOTAL	25,200 SF.

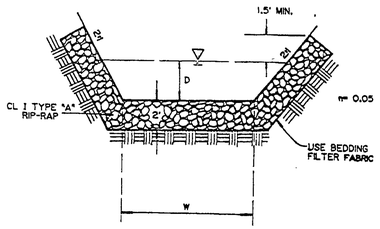
FIRE AREAS

FIRST FLOOR	
FIRE AREA #1 - USE GROUP "A3"	32,708 SF.
ALLOWABLE AREA (INCLUDING 7,560 SF. OF PERIMETER INCREASE)	32,760 SF.
FIRE AREA #2 - USE GROUP "A3"	28,318 SF.
ALLOWABLE AREA (INCLUDING 3,360 SF. PERIMETER INCREASE)	28,560 SF.
FIRE AREA #3 - USE GROUP "A3"	24,793 SF.
ALLOWABLE AREA	25,200 SF.
FIRE AREA #4 - USE GROUP "E"	48,674 SF.
ALLOWABLE AREA (INCLUDING 10,330 SF. PERIMETER INCREASE)	53,530 SF.
SECOND FLOOR	
FIRE AREA #1 - USE GROUP "A3"	15,655 SF.
ALLOWABLE AREA	25,200 SF.
FIRE AREA #4 - USE GROUP "E"	28,555 SF.
ALLOWABLE AREA	43,200 SF.

OCCUPANCY DATA

FIRST FLOOR -	FIRE AREA #1	617
	FIRE AREA #2	977
	FIRE AREA #3	1861
	FIRE AREA #4	1213
	TOTAL	4668
SECOND FLOOR -	FIRE AREA #1:	365
	FIRE AREA #4	628
	TOTAL	993

EMERGENCY SPILLWAY OUTLET CHANNEL DETAIL
NOT TO SCALE



POND	SLOPE (%)	W (FT)	Q100 (CFS)	D (FT)	V (FPS)
1	2-16	20	151.13	.75-1.0	6.7-4.32

Application No PCA 82-C-016 Staff B.Krasner

APPROVED DEVELOPMENT PLAN
(DP) (GDP) (CDP) (FDP)

SEE PROFFERS DATED 10/17/2011
Date of (BOS) (BZA) Approval 11/01/2011
Sheet 16 of 17

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2-14-96
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COMMONWEALTH OF VIRGINIA
ERIC S. SIEGEL
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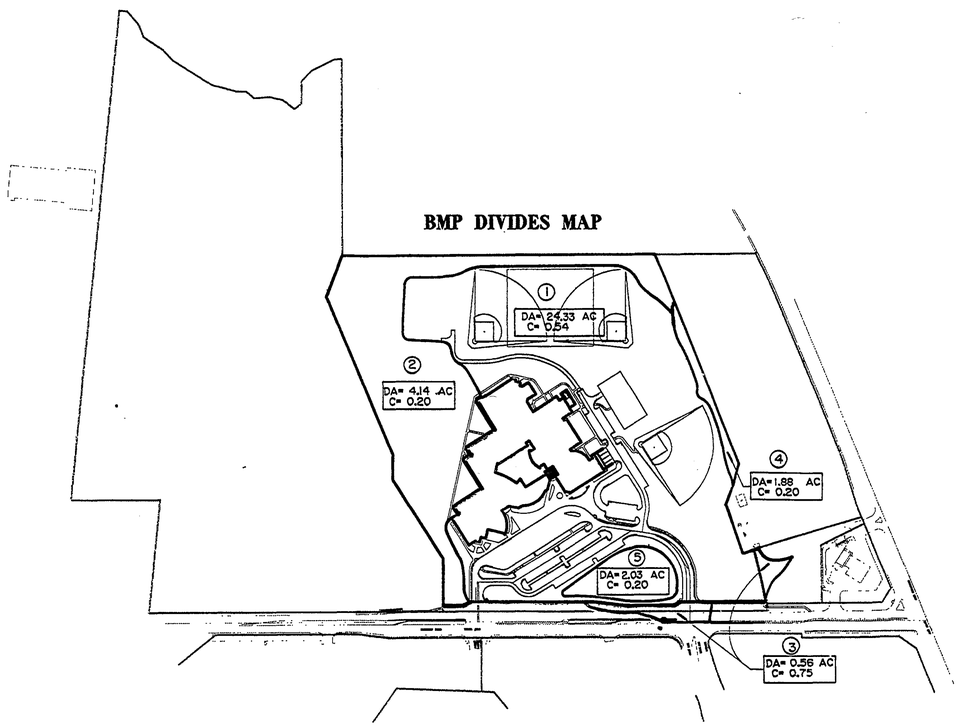
2/5/96
PROFESSIONAL ENGINEER

SWM / BMP POND DETAILS AND FIRE CODE ANALYSIS
WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE - N/A | C.I. N/A | DATE - DEC. 1995

SHEET 28 OF 39

FILE No. GP-006



BMP FACILITY DESIGN CALCULATIONS

PLAN NAME: West County Middle School
PLAN NUMBER:

DATE: 06-24-96
ENGINEER: Shawn T. Frost

I. WATER QUALITY NARRATIVE

II. Watershed Information

PART 1: List all of the Subareas and "C" Factors used in the BMP Computations

Subarea Designation and Description	"C"	Acres
(1)	(2)	(3)
1 ONSITE CONTROLLED	0.54	24.33
2 ONSITE OPENSPACE UNCONTROLLED	0.20	4.14
3 OFFSITE CONTROLLED	0.75	0.56
4 ONSITE UNCONTROLLED	0.20	1.88
5 ONSITE OPENSPACE CONTROLLED	0.20	2.03

III. PHOSPHORUS REMOVAL - GENERAL

Extended Detention Dry Pond 40.00%

IIIa. Phosphorus Removal - "Occoquan Method"

PART 2: Compute the Total Phosphorus Removal for the Site

(A) Area of the Site (a) 32.94 Acres

(B) Subarea Designation	"C"	Acres	Product
(1)	(2)	(3)	(4)
1 ONSITE CONTROLLED	0.54	24.53	13.14
2 ONSITE OPENSPACE UNCONTROLLED	0.20	4.14	0.83
4 ONSITE UNCONTROLLED	0.20	1.88	0.38
5 ONSITE OPENSPACE CONTROLLED	0.20	2.03	0.41
		(b) Total	14.76
(C) Weighted average "C" factor		(b)/(a)=(c)	45%

PART 3: Compute the Total Phosphorus Removal for the Site

Subarea Designation	BMP Type	Removal Eff. (%)	Area Ratio	"C" Factor Ratio	Product
(1)	(2)	(3)	(4)	(5)	(6)
1	DRY POND	40%	0.739	1.21	0.36
2	OPEN SPACE	100%	0.129	0.45	0.06
3	DRY POND (20%	40%	0.003	1.68	0.00
4	UNCONTROLLED	0%	0.058	0.45	0.00
5	OPEN SPACE	100%	0.063	0.45	0.03
				(a) Total	44%

PART 4: Determine Compliance with Phosphorus Removal Requirement
(A) Select Requirement (a) 40%

(B) If line 3(a) 44% > Line 4(a 40% then Phosphorus removal requirement is satisfied.

IV. Site Coverage

PART 5: Determine Compliance with Site Coverage Requirement

Subarea Designation	"C"	Acres	Product
(1)	(2)	(3)	(4)
4 ONSITE UNCONTROLLED	0.20	1.88	0.38

(A) Total equivalent uncontrolled area (a) Total 0.376

(B) Total uncontrolled area (b) 1.88

(C) Weighted average "C" factor (a)/(b)=(c) 0.20

(D) If Line 5(b)<20% of Line 2(a), then the site coverage requirement is satisfied. Line 5(a) is the equivalent offsite area for which coverage may be required.

100xline5(b) 1.88 / Line 2(a) 32.17 = (d) 6%

PART 6: Determine the Offsite Areas for wich Coverage is Required

Subarea Designation	"C"	Acres	Product
(1)	(2)	(3)	(4)
3 OFFSITE CONTROLLED (20%)	0.75	0.56	0.42
		(a) Total	0.42

V. Storage

PART 7: Compute The Weighted Average "C" Factor for Each Proposed BMP Facility

(A) List the areas to be controlled by the proposed BMP.

Subarea Designation	"C"	Acres	Product
(1)	(2)	(3)	(4)
1 ONSITE CONTROLLED	0.54	24.33	13.14
3 OFFSITE CONTROLLED (20%)	0.75	0.56	0.08
5 ONSITE OPENSPACE CONTROLLE	0.20	2.03	0.41
(a)		26.92	
(B) (b)			13.63
(C) Weighted average "C" factor (b)/(a)=(c)			51%

PART 8: Determine the Storage Required for Each Proposed Facility

(A) Extended Detention Dry Pond
Chart A6-40 value (Appendix 4-3) for BMP storage per acre
[(4375x"C")-875] or [31 25x%imp.] (a) 1356.26 cf/ac

Design 1 (48 hour drawdown)
Line 7(a) 26.15 xLine 8(a) 1356.26 = 35,466.20 cf

VI. Outlet Computation

PART 9: Determine The Required Orifice Size for Each Extended Detention Facility

(A) BMP storage Requirement (S) from Part 8 (a) 35,466.20

(B) Maximum Head (h) at the required BMP storage from the elevation-storage curve for the facility (b) 6.50

(C) Peak outflow rate (Qp) at the maximum head for a drawdown time of 48 hrs [Qp=S/(.5x3600x48)].
0.0000116 XLINE 9(A 35,466.20 (c) 0.411

(D) Required orifice area (A) [a=qp/(.6x(64.4xh)to the .5)]
Line 9(c) 0.41 /[.6x(64.4xline 9(b) 6.50)to the .5]= (d) 0.03

(E) Diameter of a circular orifice.
12x2.0x(Line 9(c 0.03 /3.1415927)to the .5= (e) 2.40

Application No PCA 82-C-016 Staff B.Krasner

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COMMONWEALTH OF VIRGINIA
ERIC S. SIEGEL
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PROFESSIONAL ENGINEER

BMP DIVIDES MAP AND COMPUTATIONS

WEST COUNTY MIDDLE SCHOOL
#3171
SULLY DISTRICT
FAIRFAX COUNTY, VIRGINIA

SCALE: 1"= 250' C.I. 1' DATE: DEC., 1995

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FILE No. SP-906

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