SUBDIVISION & SITE CONSTRUCTION PLAN GENERAL NOTES

1. All materials and construction within the public right of way shall be in accordance with current Virginia Department of Transportation's specifications and standards.

2. Land Use Permits (CE-7P) must be obtained from the Virginia Department of Transportation prior to beginning any construction within the existing state maintained right of way (including access).

3. VDOT is to receive written notification 48 hours prior to commencing with initial construction activities.

4. Prior to any construction, the contractor shall consult the engineer and verify the approval of the plans by all federal, state and local agencies.

5. Preliminary design of the pavement structure for all subdivision streets shall be in accordance with the current edition of the Pavement Design Guide for Subdivision and Secondary Roads in Virginia. The completed design worksheet (appendix IV shall be included with the initial plan submittal for each proposed pavement section utilizing the predicted soil support value shown in appendix I of The Pavement Design Guide.

6. The contractor shall verify the elevations of all points of connection or proposed work to existing curbs, sanitary lines, water lines, etc., prior to construction.

7. Upon the discovery of soils that are unsuitable for foundations, subgrades, or other roadway construction purposes, the contractor shall immediately contact a geotechnical engineer and VDOT. These areas shall be excavated below plan grade as directed by the geotechnical engineer, backfilled with suitable material and compacted in accordance with current VDOT specifications.
8. All storm sewer design and construction to be in accordance with VDOT I & LD-94 (D) 121.13.

9. All storm sewer pipe shall be reinforced tongue and groove concrete pipe in accordance with current VDOT standards and specifications

10. If pre-cast units are to be used, VDOT shall be notified and the manufacturer shall submit drawing details for review. Certification and VDOT stamp will be required on all units.

11. All concrete shall be class A3-AE (air entrained 3,000 PSI).

12. All entrances are to be designed and constructed in accordance with current VDOT standards. Residential lot access shall be provided per the following criteria:
* All driveway entrance culverts are to be 15" diameter x 20' long pipe and shall conform to pe-1 private entrance standards unless otherwise directed by the Resident Engineer. No entrance culverts are to be installed within five (5) feet of a property corner.
* VDOT standard CG-9D entrances shall be installed in curb and gutter neighborhoods. The sawcutting removal of the standing curb is unacceptable when installing an entrance on existing curb and gutter.

13. The developer is responsible for furnishing and installing stop signs at street intersections.

14. Design changes, specified materials changes and/or field changes from the approved plans need to be resubmitted to VDOT prior to proceeding with the work. A letter of explanation shall accompany the revised plans and/or drainage calculations, which must be submitted, to VDOT for review and approval by the Resident Engineer.

15. Contractor shall verify location and elevation of all underground utilities shown on plans in areas of construction prior to starting work. Contact engineer immediately if location or elevation is different from that shown on plan. If there appears to be a conflict, and/or upon discovery of any utility shown on this plan, call Miss Utility of Central Virginia at 1-800-552-7001. The developer shall be responsible for the relocation of any utility within existing and/or proppsed right of way required by the development.

16. All streetlights shall be located a minimum of 9.5' from the edge of pavement on curb and gutter streets and/or located a minimum of 5.5' behind the ditch line on open ditch streets.

17. Casing sleeves shall be placed at all road crossings for gas, power, telephone and cable TV services trunk lines.

18. The installation of sewer, water, and gas mains (including services laterals and sleeves) shall be completed prior to placement of aggregate base course.

19. All roadside ditches shown as paved on plans are to be paved in accordance with the standard typical section as shown on the plans. Generally, all ditches with slopes exceeding 5% or less than 0.75% shall be paved unless otherwise directed by the Resident Engineer. Any additional paving of the ditches, other that those shown on the road plans will be determined prior to acceptance of the roads into the VDOT secondary road system.

20. VDOT approval of construction plans does not peclude the right to require additional facilities as deemed necessary for acceptance of the roads into the VDOT Secondary Road System.

21. VDOT approval of these plans will expire three (3) years from the date of approval.

22. VDOT shall have performed the required field inspection (proof roll) prior to placement of the aggregate base course(s). Contact VDOT for subgrade inspection 48 hours prior to scheduling placement of aggregate base course(s).

23. A prime coat seal between the aggregate base and bituminous concrete will be required at a rate of 0.30 gallons per square yard (REC-250 Prime Coat) per VDOT standards and specifications

24. The scheduling of aggregate base installation and subsequent paving activities shall accommodate forecast weather conditions per Section 315 of The Road and Bridge Specifications.

25. VDOT shall have approved the aggregate base course(s) for depth, template and performed the required field inspection (proof roll) prior to placement of any surface course(s).

26. An actual copy of the complete CBR report is to be submitted to VDOT in conjunction with final pavement designs. All pavement design recommendations shall be performed in accordance with the current addition of The Pavement Design Guide for Subdivision and Secondary Roads in Virginia.

27. A geotechnical engineer is to ascertain cause and certify recommended method of repair for all pavement structural failures prior to state acceptance.

28. All vegetation and organic material is to be removed from the right of way limits prior to conditioning of the subgrade.

29. Certification and source of materials are to be submitted to VDOT for all materials and be in accordance with the Road and Bridge Specifications and Road and Bridge Standards.

30. Dry gutter is not allowed in VDOT right of way.

31. The developer will be responsible for the design cost of any traffic signal installation and/or modification under an account receivable with VDOT.

32. The necessity and locations for additional VDOT standard underdrains to be determined at time of subgrade inspection.

33. Approval of a detailed construction sequencing/maintenance of traffic narrative for the work zone is a prerequisite for issuance of a Land Use Permit allowing access to and construction within VDOT maintained right-of-way.

34. VDOT shall be provided documentation that all in-place pavements meet or exceed the approved pavement design thickness prior to state acceptance.

35. All construction methods and materials shall be in conformance with the January 1994, VDOT Road and Bridge Specifications and 1993 Road and Bridge Standards.

PAVEMENT STRIPING NOTES (FOR WORK IN R.O.W.)

1. ALL PAVEMENT STRIPING REQUIRES THE USE OF THERMOPLASTIC PAVEMENT MARKINGS.
2. CONTACT V.D.O.T. DISTRICT TRAFFIC ENGINEERING OFFICE AT (804) 524-6193, 48 HOURS PRIOR TO STRIPING FOR LAYOUT APPROVAL.

PARKING LOT STRIPING NOTES:

1. ALL PARKING SPACE STRIPING WILL BE WHITE.
2. HANDICAPPED SPACES AND HATCHED AREAS WILL BE YELLOW.
3. HANDICAPPED SYMBOL ♿ WILL BE BLUE.

EROSION CONTROL NOTES

1) THE COUNTY ENGINEER AND UTILITY DEPARTMENT WILL BE NOTIFIED 24 HOURS PRIOR TO ANY CLEARING AND GRADING

2) EROSION CONTROLS WILL BE CONSTRUCTED PRIOR TO CLEARING AND GRADING.

3) ALL ASPHALT AREAS WILL BE STABILIZED WITH BASE STONE WITHIN 30 DAYS OF FINAL GRADING.

4) PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

5) ALL CUT AND FILL SLOPES CHANNELSIDE SLOPES WHICH ARE NOT TO BE PAVED SHALL BE SEEDED UNTIL A GOOD STAND OF GRASS IS OBTAINED IN ACCORDANCE WITH.
   A. 100 LBS. PER 1,000 SQUARE FOOT GROUND LIMESTONE OR EQUIVALENT. NO SOIL TEST REQUIRED FOR INITIAL ESTABLISHMENT.
   B. 20 LBS. OF 10-10-10 FERTILIZER OR EQUIVALENT PER 1,000 SQUARE FOOT.
   C. VARIETIES TO BE SEEDED:
      1. SPRING SEEDING - MARCH 1 - APRIL 30: SPRING OATS 2.5 LBS. PER 1,000 SQUARE FOOT.
      2. SUMMER SEEDING - MAY 1 - AUGUST 1; WEEPING LOVE GRASS AT 2 OZ. PER 1,000 SQUARE FOOT MIXED WITH 1 BUSHEL SAWDUST FOR UNIFORM SEEDING.
      4. ASPHALT MULCH 6 GALLONS PER 1,000 SQUARE FOOT. ALL SEEDING WILL BE MULCHED.

6) COUNTY ENGINEER AND OTHER INTERESTED AGENCIES SHALL MAKE A CONTINUING REVIEW AND EVALUATION OF THE METHOD USED FOR THE OVERALL EFFECTIVENESS OF THE EROSION CONTROL PROGRAM. AN APPROVED EROSION AND SEDIMENT CONTROL PLAN MAY BE AMMENDED BY THE APPROVING AUTHORITY OF ON SITE INSPECTION INDICATED THAT THE APPROVED CONTROL MEASURES ARE NOT EFFECTIVE IN CONTROLLING EROSION AND SEDIMENTATION OR IF BECAUSE OF CHANGED CIRCUMSTANCES, THE APPROVED PLAN CANNOT BE CARRIED OUT.

7) CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

8) THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" BEFORE BEGINNING ANY EVACUATION OR UTILITY WORK (1-800-552-7001).

9) ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS, SPECIFICATIONS AND DETAILS OF THE LATEST EDITION OF THE VIRGINIA EROSION CONTROL HANDBOOK (THE HANDBOOK) BY THE VIRGINIA SOIL AND WATER CONSERVATION COMMISSION.

10) EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MAINTAINED, SO THAT SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.

11) PROPERTIES AND RIGHTS-OF-WAY ADJOINING THE SITE SHALL BE KEPT CLEAN OF MUD OR SILT CARRIED FROM THE SITE BY VEHICULAR TRAFFIC OR RUNOFF.

12) ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THE CONSTRUCTION ENTRANCES.

13) EXCAVATED MATERIAL FROM TRENCHES SHALL BE PLACED ON THE UPGRADE SITE OF THE TRENCH TO ALLOW MATERIAL TO ERODE INTO THE TRENCH

14) THE APPROXIMATE AREA OF THE LIMITS OF CLEARING, GRADING, AND CONSTUCTION IS 0.11 ACRES.

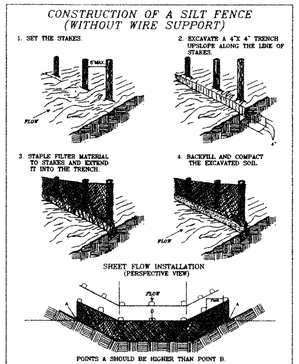
15) ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA REGULATIONS VR 635-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.

16) THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATLY.

17) ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

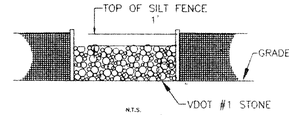
18) CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY COUNTY ENGINEERING.

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, VA. DSWC Shortened and Typed. PLATE 3.05-2

SILT FENCE OUTLET DETAIL



ISO (Insurance Service Office) Method of Calculating NFF (Needed Fire Flow)

ENGINEER: Balzer and Associates, Inc. DATE: 10-02-01

PROJECT NAME: PRINCE GEORGE COMMONS CALC. BY: MMC

TYPE OF CONSTRUCTION: 5B
Class of Construction Coef. = F: 1.5

GROUND FLOOR AREA: 1,500 # of Stories 2
Total Floor Area = A_i (effective area): 3,000

FIRE AREA CONSIDERED Construction Factor $C_i = 18(F)(A_i)$ C_i: 1,500
(Rounded to the nearest 250 GPM)

TYPE OF OCCUPANCY: C3
(Worst Case) Occupancy Factor = O_i: 1.0

EXPOSURE (X) AND COMMUNICATION (P):

N $X_1 + P_1 = 0$ $WX_4 + P_4 = 0$
S $X_2 + P_2 = 0$ $X_5 + P_5 =$
E $X_3 + P_3 = 0$ $X_6 + P_6 =$

$$(X+P)_i = 1.0 + \sum_{(n=1)}^{n} (X_i + P_i) = 1.0$$

$$[\text{Max. } (X+P)_i = 1.75]$$
(n = number of side of subject building)

NEEDED FIRE FLOW

$NFF = (C_i)(O_i)(X+P)_i$ NFF= 1,500

Automatic Sprinklers(Yes No ✓)Reduction Factor % x NFF= 0

TOTAL: 1,500

Required Fire Flow-Rounded 1500 gpm
(if<2500 nearest 250)
(if>2500 nearest 500)

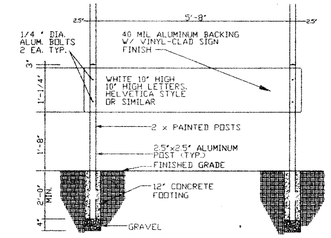
*Fire Hydrants Required: 2

I, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND CORRECT.

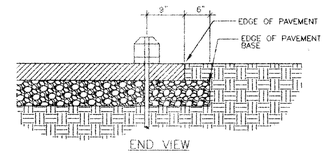
SIGNATURE: J. Balzer P.E.

*Commercial Area Requires 350ft. Maximum Hose Lay

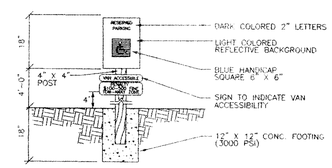
References: NFF Calculation Procedure Described in A.W.W.A M-31, I.S.O.'s 1980 Commercial Fire Rating Schedule and I.S.O.'s 1980 Fire Supression Rating Schedule



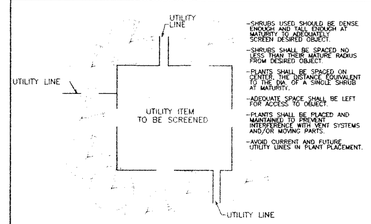
STREET ADDRESS SIGN DETAIL
N.T.S.



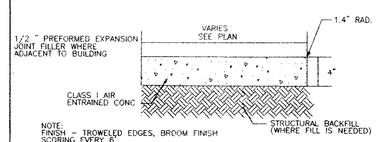
CONCRETE BUMPER BLOCK DETAIL
NTS



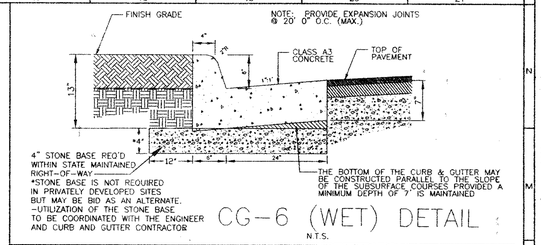
HANDICAP PARKING SIGN DETAIL
NTS



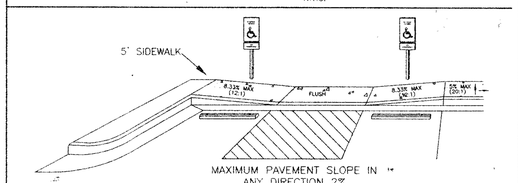
PLANT SCREENING DETAIL FOR UTILITY BOX/ MECHANICAL EQUIPMENT
NTS



SIDEWALK DETAIL
N.T.S.



CG-6 (WET) DETAIL
N.T.S.



HANDICAP ACCESS

TYPICAL HANDICAP PARKING DETAIL
N.T.S.

COMMONWEALTH OF VIRGINIA
D.J. BALZER JR.
012940
PROFESSIONAL ENGINEER

BALZER AND ASSOCIATES, INC.
REFLECTING TOMORROW
• PLANNERS • ARCHITECTS
• ENGINEERS • SURVEYORS

1208 Corporate Circle
Roanoke, Virginia 24018
Phone: 540/772-9580
FAX: 540/772-8050

501 Branchway Road
Suite 100
Richmond, Virginia 23236
Phone: 804/794-0571
FAX: 804/794-2635

880 Technology Park Drive
Suite 200
Glen Allen, Virginia 23059
Phone: 804/553-0132
FAX: 804/553-0133

PRINCE GEORGE COMMONS

NOTES AND DETAILS

BLAND DISTRICT
PRINCE GEORGE COUNTY, VIRGINIA

DRAWN BY: MMC
DESIGNED BY: MMC
CHECKED BY: AMS
DATE: 10-8-01

REVISIONS:
11-7-01
12-21-01
2-26-02

SCALE: NA

SHEET NO.
C5

JOB NO.
C0100171