

LYNNHAVEN

SITE

23455

LOCATION MAP
SCALE : 1" = 2,000'

SLL
DEPARTMENT OF PLANNING
ADDRESSING OFFICE

CS101

CIVIL INSPECTION REQUIRED
CBPA BOARD APPROVAL
FOR USE BY THE CITY OF VIRGINIA BEACH FOR APPROVAL STAMPS

- C-100 TITLE SHEET
- C-101 CBPA CONDITIONS
- C-002 GENERAL NOTES
- C-003 GENERAL NOTES
- C-004 GENERAL NOTES
- C-005 MS-19 CHECKLIST
- V-101 TOPOGRAPHIC & BOUNDARY SURVEY
- D-0101 DEMOLITION, EROSION & SEDIMENT CONTROL PLAN
- CS101 DIMENSIONAL LAYOUT PLAN
- CG101 GRADING, DRAINAGE & UTILITY PLAN
- C-501 DETAILS
- C-502 DETAILS
- C-503 DETAILS
- C-504 DETAILS
- C-505 DETAILS
- LP101 LANDSCAPE PLAN
- L-501 LANDSCAPE NOTES & DETAILS

DEVELOPER:	SHORE DRIVE AREA PROPERTIES, LLC 2859 VIRGINIA BEACH BLVD, SUITE 106 VIRGINIA BEACH, VA 23452 ATTN: CHRIS WOOD PHONE: (757) 340-1251 FAX: (757) 340-1255 EMAIL: chris@mcleskey.com
ARCHITECT:	PROGRESSIVE DESIGNS 816 OLD BRIDGE LANE CHESAPEAKE, VA 23320 PHONE: (757) 547-9201

ARCHITECT: PROGRESSIVE DESIGNS
816 OLD BRIDGE LANE
CHESAPEAKE, VA 23320
PHONE: (757) 547-9201

The undersigned Consulting Firm agrees that the City of Virginia Beach and its representatives shall have the right to use these plans to complete any physical improvements the City deems necessary in the event the developer defaults in his/her obligations to complete these facilities as required by City Code. The undersigned Engineer also agrees that the City may use these plans for any purpose the City feels necessary in order to complete the project. The Design Professional Consulting Firm further agrees that the rights to use these plans shall be provided without cost to the City.

Name of entity (Consulting Firm): MSA, P.C. By: CSA
[Signature] Date: 11/04/19
 (authorized signature)
 Title: DIRECTOR OF ENGINEERING
 Signature of Design Professional: *[Signature]* Date: 11/04/19

1. AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT MISS UTILITIES OF VA AT 811 OR ONLINE TO HAVE UTILITIES MARKED.
2. THE OWNER/DEVELOPER IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY AND ALL DAMAGES TO DRIVEWAYS, SIDEWALKS, CURBS AND PUBLIC OR PRIVATE IMPROVEMENTS AND ABOVE AND BELOW GROUND UTILITIES DAMAGED DURING CONSTRUCTION. MILLING AND/OR OVERLAY OF THE STREET MAY BE REQUIRED AT THE DIRECTION OF THE CITY INSPECTOR.
3. (SPINETS) 1489-18-5462-0000
4. THIS LOT OR PARCEL WAS CREATED BY PLAT RECORDED AT: PLAT #! 202000007043
5. ZONING: R40
6. THE SITE LIES WITHIN AIRCRAFT PROTECTION ZONE "N/A" AND NOISE ZONE < 65 DB MAY BE SUBJECT TO AIRCRAFT ACCIDENTS AND/OR ABOVE AVERAGE NOISE LEVELS DUE TO ITS PROXIMITY TO AIRPORT OPERATIONS. NOISE ZONE ATTENUATION MEASURES FOR NEW CONSTRUCTION ARE REQUIRED IN ACCORDANCE WITH THE AIRPORT NOISE AND VIBRATION MITIGATION AND PREVENTION ACT (49 USC 1755) AND ANY HEIGHT RESTRICTIONS HAVE BEEN INCORPORATED IN ACCORDANCE WITH SECTION 202(b) OF THE CITY ZONING ORDINANCE.

7. VERICAL DATE (NWD) BENCH MARK DESCRIPTION: VERTICAL CONTROL STATION "0-3-3", ELEVATION: 4.54
8. SITE IS LOCATED IN THIS MAJOR WATERWAY: CHESAPEAKE BAY
9. THE PROPERTY FALLS IN FLOOD ZONE "AE (EL. 7)", "AE (EL. 8)", AND "SHADED X". BASE FLOOD ELEVATION (NWD) IS AS SHOWN ON THE FLOOD MAP FROM THE CITY OF VIRGINIA BENCH, COMMUNITY-PANEL NUMBER 16000
10. THE PROPOSED LOT IS SITED JANUARY 7, 1980
11. THE PROPOSED WEDDINGS IS LOCATED IN A SPECIAL FLOOD HAZARD AREA.
12. PROPERTY IS NOT LOCATED IN A FLOOD ZONE SUBJECT TO RESTRICTIONS* PER CITY CODE, APPENDIX K, FLOOD ZONE RESTRICTIONS
13. FOR NEW CONSTRUCTION OR SUBSTANTIAL IMPROVEMENT OF ANY RESIDENTIAL STRUCTURE OR MANUFACTURED HOME THE LOWEST PROPOSED FLOOR ELEVATION, INCLUDING BASEMENTS, OR BOTTOM OF LOWEST STRUCTURAL MEMBER SHALL BE AT LEAST TWO FEET ABOVE THE 100-YEAR BASE FLOOD ELEVATION SHOWN ON THE FIRM MAP OR 100-YEAR WATER SURFACE ELEVATION SHOWN ON THE APPROVED SUBDIVISION CONSTRUCTION PLAN.
14. THE LOT GRADING ON THIS PLAN IS IN ACCORDANCE WITH THE LATEST SUBDIVISION CONSTRUCTION PLAN SUBMITTED TO THE CITY OF VIRGINIA FOR REVIEW AND APPROVAL.
15. FOR THE APPROVED SUBDIVISION CONSTRUCTION PLAN, A 4" WIDE CONCRETE SIDEWALK IS NOT REQUIRED ALONG THE FRONTAGE OF THIS SITE PLAN.
16. MINIMUM LOT AREA: 10,000 S.F. OR 1.084 ACRES
17. LOT AREA: WATER, MARSH, AND WETLANDS: 17,933 SQ. FT. OR 0.412 ACRES
18. PROPOSED IMPERVIOUS AREA: +4,336 SQ. FT. OR 0.100 ACRES (5.0%)
19. AREA OF LAND DISTURBANCE: 24,778 SQ. FT. OR 0.565 ACRES
20. LOT COVERAGE PER CITY CODE APPENDIX A, ARTICLE 5, SECTION 502(A)(12): 3,644 SQ. FT. OR 2.4%.
21. PROPOSED BUILDING HEIGHT (MEASURE FROM THE LOWEST GRADE) FROM STRUCTURE TO HIGHEST POINT ON ROOF: 35 FEET
22. RESIDENTIAL TREE CANOPY, PER CITY CODE APPENDIX C, TREE PLANTING, PRESERVATION AND REPLACEMENT: 8,762 SQ. FT. BUTTER RESTORATION REQUIRED PER CORDEN CEMENTS, 8,800 SQ. FT. PROVIDED
23. THE CITY OF VIRGINIA DOES NOT REQUIRE A TREE SURVEY FOR THIS PROJECT. TREES CANNOT BE CUT, DAMAGED OR REMOVED WITHOUT PERMISSION FROM THE DEPARTMENT OF PARKS AND RECREATION/LANDSCAPE MANAGEMENT OFFICE, CALL (757) 385-4661 FOR ASSISTANCE. REMOVAL WITHOUT REQUIRED PERMISSION IS A PUNISHABLE CLASS VI VIOLATION OF THE CITY OF VIRGINIA CODE.
24. ALL TREES IN THE CITY OF VIRGINIA THAT ARE DEEMED TO REMAIN ARE REQUIRED TO HAVE TREE PROTECTION IN COMPLIANCE WITH THE CITY DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) REGULATIONS AND STANDARDS.
25. PROTECTION AND SEGMENT (EAS) CONTROL, AGREEMENT IN LIEU OF A PLAN: ALL LAND DISTURBANCE OF 2,500 SQ. FT. OR GREATER SHALL REQUIRE THE CITY OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) AND THE OWNER/DEVELOPER OF THIS SINGLE FAMILY RESIDENCE CHOOSES TO UTILIZE AN "AGREEMENT IN LIEU OF A PLAN" TO MEET THIS REQUIREMENT, THEREFORE ALL EAS MEASURES AND STANDARD DETAILS HAVE NOT BEEN SHOWN ON THIS PLAN. IF THE OWNER/DEVELOPER OF THIS SINGLE FAMILY RESIDENCE CHOOSES TO UTILIZE A CONSTRUCTION ENTRANCE AND INLET PROTECTION SHALL ALSO BE INSTALLED AND ANY OTHER MEASURES DEEMED NECESSARY BY THE CITY INSPECTORS). ALL EAS MEASURE AND PRACTICES SHALL COMPLY WITH THE CITY OF VIRGINIA BENCH AND THE CITY OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) REGULATIONS AND STANDARDS.
26. STORMWATER MANAGEMENT AGREEMENT IN LIEU OF A PLAN: A STORMWATER MANAGEMENT PLAN IS REQUIRED FOR THE CONSTRUCTION OF A SINGLE FAMILY RESIDENCE WITH LAND DISTURBANCE OF 2,500 SQUARE FEET OR GREATER. THE CITY OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) REGULATIONS AND STANDARDS. IF THE OWNER/DEVELOPER OF THIS SINGLE FAMILY RESIDENCE MAY CHOOSE TO UTILIZE AN "AGREEMENT IN LIEU OF A PLAN" TO MEET THIS REQUIREMENT, THEREFORE STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN ARE NOT REQUIRED.
27. ALL STORMWATER MEASURES AND PRACTICES SHALL COMPLY WITH THE CITY OF VIRGINIA BENCH AND VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) REGULATIONS, SPECIFICATIONS AND STANDARDS.
28. MINIMUM LOT AREA: 10,000 S.F. OR 1.084 ACRES
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100. MINIMUM LOT AREA: 10,000 S.F. OR 1.084 ACRES

28. CITY WATER AND SEWER IS AVAILABLE TO THIS SITE.
29. PRIVATE SEWER AND WATER CONNECTION INSTALLATIONS, RELOCATIONS AND ABANDONMENT WILL BE COMPLETED BY A PRIVATE CONTRACTOR AT THE DEVELOPER'S EXPENSE.
30. IF WATER AND/OR SEWER SERVICES ARE TO BE INSTALLED BY THE CITY, CONTACT THE CITY'S TAPS PROGRAM PROJECT MANAGER AT 385-4171 IMMEDIATELY FOLLOWING PAYMENT OF UTILITY FEES TO SCHEDULE THE INSTALLATION OF WATER AND/OR SEWER SERVICES.

31. IF WATER AND SEWER SERVICES ARE TO BE INSTALLED BY DEVELOPER'S UTILITY CONTRACTOR
A. UTILITIES TO BE INSTALLED BY THE DEVELOPER'S CONTRACTOR IN THE CITY RIGHT OF WAY OR PUBLIC EASEMENT
ARE TO BE INSTALLED WITHIN THE CITY PERMIT, AND THE CITY ENGINEER SHALL REVIEW AND APPROVE, OR BASED ON
AN APPROVED ENGINEER'S COST ESTIMATE, CONTACT THE DEVELOPMENT SERVICES CENTER (DSC) AT
(757) 385-8277 FOR ADDITIONAL INFORMATION.
B. THE DEVELOPER'S CONTRACTOR SHALL CONTACT PUBLIC UTILITIES INSPECTIONS AT (757) 385-4175 AT
LEAST 48 HOURS PRIOR TO ANY UTILITY CONSTRUCTION LOCATED IN THE CITY RIGHT OF WAY OR EASEMENTS.
C. THE OWNER/DEVELOPER/CONTRACTOR SHALL CONTACT PUBLIC UTILITIES INSPECTIONS AT (757) 385-4175
TO REQUEST INSPECTIONS TO BE CONDUCTED TO INSURE PROPER INSTALLATION OF THE UTILITY.
32. TO ORDER INSTALLATION OF A WATER METER FOR ALL PROJECTS, THE OWNER/DEVELOPER/ CONTRACTOR MUST
CONTACT PUBLIC UTILITIES INSPECTIONS AT (757) 385-4175 AFTER THE WATER AND/OR SEWER SERVICES HAVE
BEEN APPROVED.
33. THE DEPARTMENT OF PUBLIC UTILITIES REQUIRES THE INSTALLATION OF A LATERAL WYE CONNECTION TO THE
EXISTING MAIN. THE EXISTING MAIN SHALL BE EXPOSED AND THE EXISTING MAIN SHALL BE REMOVED
AND REPLACED IN CONJUNCTION WITH THE INSTALLATION OF THE WYE.

LEAD CONTENT BY WEIGHT SHALL BE USED FOR CORPORATION STOPS, METER VALVES AND SERVICE COUPLINGS.

35. EXISTING WATER (AND/OR SEWER) SERVICES TO BE ABANDONED SHALL BE ABANDONED AT THE MAIN IN ACCORDANCE WITH SECTION 3.9 (SANITARY SEWER) AND 4.9 (WATER) OF THE CITY OF VIRGINIA BEACON DEPARTMENT OF PUBLIC UTILITIES DESIGN STANDARD MANUAL. ANY LINES THAT ARE NOT IN USE THAT MAY HAVE BEEN SHOWN ON THE PLAN THAT ARE DISCOVERED DURING CONSTRUCTION SHALL BE ABANDONED PER PUBLIC UTILITIES REQUIREMENTS AND THE DEVELOPER'S EXPENSE.

36. IF A BUILDING STRUCTURE IS TO BE DEMOLISHED:

A. DEVELOPER MUST VERIFY AND STATE THE LOCATION OF THE EXISTING SANITARY SEWER CLEAFOUT OR LATRIN AT THE RIGHT OF WAY PRIOR TO DEMOLITION OF EXISTING STRUCTURE.

B. PRIOR TO DEMOLITION, DEVELOPER SHALL CONTACT PUBLIC UTILITY BUSINESS DIVISION AT (703) 386-4171 TO HAVE THE EXISTING WATER METER RELOCATED TO THE NEW BUILDING. BUSINESS DIVISION WILL BE RESPONSIBLE FOR THE NEW BUILDING A WATER METER. THE CITY AT THE DEVELOPER'S EXPENSE AS SHOWN ON THIS PLAN.

38.RURAL PROPERTY DRIVEWAY WILL BE CONSTRUCTED TO ACCOMMODATE AN 82,000 LB. FIRE TRUCK

39. ALL STRIPING IN THE PUBLIC RIGHT OF WAY MUST BE OF THERMOPLASTIC MATERIAL FOR LANE LINES, STOP BARS, CROSSWALKS, ETC. ALL LEGENDS AND ARROWS MUST BE OF VDOT APPROVED TYPE B, CLASS VI PREFORMED PAVEMENT MESSAGE MARKING MATERIAL.

40. THE CITY OF VIRGINIA BEACH, TRAFFIC ENGINEERING DIVISION IS RESPONSIBLE FOR REVIEWING AND APPROVING ALL TRAFFIC MAINTENANCE AND CONTROL PLANS AND REVIEWING THE SEQUENCE OF CONSTRUCTION PLANS ESSENTIAL TO COMPLETE THIS PROJECT.

41. ALL PRACTICE MAINTENANCE AND CONTROL DEVICES, METHODS AND APPLICATIONS WILL CONFORM TO THE FOLLOWING PUBLICATIONS INCLUDING ALL CURRENT EDITIONS AND REVISIONS:

- A. VIRGINIA DEPARTMENT OF TRANSPORTATION AND HIGHWAYS ISSUED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, (MUTCD)
- B. VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS VOL. II
- C. VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS
- D. VIRGINIA DEPARTMENT OF TRANSPORTATION WORK AREA PROTECTION MANUAL
- E. VIRGINIA BEACH, PUBLIC WORKS SPECIFICATIONS AND STANDARDS MANUAL

42. WORK HOURS IN ROADWAY OPEN TO TRAFFIC AND FEED AREA SHALL:

- A. MONDAY THROUGH SATURDAY: WORK IN SHORE DIRT WILL BE COMPLETED BETWEEN THE HOURS OF 9:00 A.M. TO 5:00 P.M. ONLY.
- B. SUNDAYS AND HOLIDAYS: NO WORK MAY BE COMPLETED IN THE ROADWAY OR PEDESTRIAN AREAS UNLESS OTHERWISE NOTED OR APPROVED IN WRITING BY THE CITY.
- C. ADDITIONAL RESTRICTIONS MAY APPLY TO SPECIALTY WORKING CONDITIONS.
- D. EXTENDED WORK HOURS AND WORKDAYS MAY BE REQUESTED WITH A WRITTEN REQUEST TO THE CITY. THIS REQUEST MUST BE SUBMITTED AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE EXTENDED WORK PERIODS. REQUESTS WILL BE GRANTED OR DENIED AT THE DISCRETION OF THE CITY. NO RESTRICTIONS APPLY FROM APRIL 1 TO OCTOBER. PLEASE CONTACT TRAFFIC ENGINEERING FOR THESE RESTRICTIONS).

4.1. TRAFFIC CONTROL PLANS:

TRAFFIC CONTROL PLANS ARE INCLUDED IN THE CONSTRUCTION PLANS FOR THE REFERENCED PROJECTS; HOWEVER IF ANY CHANGES OR MODIFICATIONS ARE REQUIRED BY THE CONTRACTOR FEELS THAT THE TRAFFIC CONTROL PLANS INCURRED WITH THIS PROJECT DOES NOT SUFFICIENT CONDITIONS AT A WORK SITE, THEN THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND MAINTAIN AN APPROVED TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL SUBMIT TRAFFIC DETAILS AND SHALL IDENTIFY THE SEQUENCE OF CONSTRUCTION. THE CONTRACTOR WILL SUBMIT THE REVISED TRAFFIC CONTROL PLANS AT MINIMUM 10 CALENDAR DAYS PRIOR TO THE START OF WORK; AS NECESSARY THE CONTRACTOR MAY REQUEST AN EXTENSION OF TIME TO PREPARE THE TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN THE TRAFFIC CONTROL PLAN. THE CITY RESERVES THE RIGHT TO MODIFY ANY TRAFFIC CONTROL PLANS, AS NECESSARY IN THE INTEREST OF PUBLIC SAFETY OR TRAFFIC EFFICIENCY. PRIOR TO BEGINNING WORK, IT IS THE CONTRACTORS' RESPONSIBILITY TO ENSURE THAT ALL TRAFFIC CONTROL DEVICES AND SIGNAGE ARE PROPERLY INSTALLED. TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED ACCORDING TO THE APPROVED TRAFFIC CONTROL PLAN(S).

4.4. THE CONTRACTOR SHALL CHECK ALL TRAFFIC MAINTENANCE AND CONTROL DEVICES AND WORK ZONES BEFORE, DURING AND AFTER EACH DAY OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING ALL NON-WORKING DAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE TRAFFIC MAINTENANCE AND

4.5. TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS TRAFFIC ENGINEERING HAS APPROVED AN ALTERNATE FOR TRAFFIC CONTROL, SUCH AS A LANE CLOSURE OR A TEMPORARY STREET

REGARDLESS IF A STREET CLOSURE IS IN EFFECT OR NOT.

46. IF ANY TRAFFIC VIOLATIONS OCCUR WHILE AN LANE CLOSURE OR TEMPORARY STREET CLOSURE, ALL VEHICLES OF TRAFFIC WILL BE REDIRECTED TO TRAFFIC THE CONCLUSION OF EACH CONSTRUCTION DAY, UNLESS A 24-HOUR STREET CLOSURE IS APPROVED AND IN EFFECT.

47. DURING THE PERIODS WHEN TRAFFIC WILL BE DISRUPTED, THE CONTRACTOR MUST NOTIFY ALL AFFECTED RESIDENTS AND/OR BUSINESSES A MINIMUM OF 48 HOURS IN ADVANCE OF THE ANTICIPATED DISRUPTION BY DISTRIBUTING DOOR-TO-DOOR NOTICES; A COPY OF THE NOTICE SHALL BE FORWARDED TO TRAFFIC ENGINEERING DIVISION, 2405 COURTHOUSE DRIVE, VIRGINIA BEACH, VA 23466-9031.

48. AT NIGHT OR DURING NON-CONSTRUCTION HOURS, ALL EXCAVATED AREAS ARE TO BE BACKFILLED OR SECURED AND PROTECTED WITH FLASHING LIGHTS AND BARRIERS.

49. ALL TRAFFIC CONTROL DEVICES INCLUDING BUT NOT LIMITED TO PAVEMENT MARKINGS, SIGNS, AND TRAFFIC CONTROL SIGNAL EQUIPMENT DAMAGED OR DESTROYED BY THE CONTRACTOR MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE.

50. FOR ANY INFORMATION ON TRAFFIC MAINTENANCE AND CONTROL REQUIREMENTS, PLEASE CONTACT TRAFFIC ENGINEERING DIVISION, 2405 COURTHOUSE DRIVE, VIRGINIA BEACH, VIRGINIA 23466-9031, (757) 385-4131 FAX: (757) 385-4132.

MSA, P.C.
Environmental Sciences • Planning • Surveying
Civil & Environmental Engineering • Landscape Architecture

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PLAN STATUS			SHORE DRIVE SINGLE FAMILY
DATE	INITIAL	DESCRIPTION	
6/11/19	CSA	1ST CITY SUBMITTAL	
8/29/19	CSA	2ND CITY SUBMITTAL	
2/26/20	CSA	3RD CITY SUBMITTAL	
3/24/20	CSA	4TH CITY SUBMITTAL	
4/22/21	CSA	5TH CITY SUBMITTAL	
5/21/21	CSA	FINAL SUBMITTAL	

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PROJ NO: 18023

SEPTEMBER 24, 2018

1. ALL PROPOSED IMPROVEMENTS, BOTH RESIDENCES AND ASSOCIATED SWIMMING POOLS, SHALL BE CONSTRUCTED CONCURRENT.
2. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CPA INSPECTOR PRIOR TO ANY LAND DISTURBANCE, INCLUDING DEMOLITION.
3. LAND DISTURBANCE SHALL BE LIMITED TO THE AREA NECESSARY TO PROVIDE FOR THE PROPOSED USE OR DEVELOPMENT. SAID AREAS OF LAND DISTURBANCE SHALL BE QUANTIFIED ON REVISED SITE PLAN SUBMITTALS.
4. THE CONSTRUCTION ACCESS WAY, STAGING AREA, STOCKPILING AREA AND CONTRACTOR PARKING SHALL BE NOTED ON THE SITE PLAN. SAID AREAS SHALL BE QUANTIFIED AS LAND DISTURBANCE IF NOT OCCURRING ON A PAVED OR GRAVELED SURFACE.
5. WHERE REINFORCED 36 INCH SILT FENCE FOR EROSION AND SEDIMENTATION CONTROL MEASURES, SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL SUCH TIME THE VEGETATIVE COVER IS ESTABLISHED. SAID SILT FENCE SHALL BE INSTALLED AS DELINEATED PER THE CPA VARIANCE EXHIBIT.
6. CONSTRUCTION LIMITS SHALL BE CONTAINED WITHIN THE LIMITS OF THE DELINEATED SILT FENCE PER THE CPA VARIANCE EXHIBIT. ANY AREAS OUTSIDE LIMITS OF CONSTRUCTION SHALL BE LEFT IN A NATURAL STATE TO INCLUDE THE FOREST FLOOR (LEAF LITTER) LEFT INTACT, SAID CONDITIONS SHALL BE SO NOTED ON THE SITE PLAN.
7. PRIOR TO CLEARING, GRADING, DEMOLITION, OR CONSTRUCTION, SUITABLE PROTECTIVE BARRIERS, SUCH AS SAFETY FENCING, SHALL BE ERECTED OUTSIDE OF THE DRAINAGE TO THE NEAREST EXISTING DRAINAGE DITCH. ALL AREAS OF VEGETATION TO BE PRESERVED THESE PROTECTIVE BARRIERS SHALL REMAIN SO ERECTED THROUGHOUT ALL PHASES OF CONSTRUCTION. THE STORAGE OF EQUIPMENT, MATERIALS, DEBRIS, OR FILL SHALL NOT BE ALLOWED WITHIN THE AREAS PROTECTED BY THE BARRIER.
8. FOR ALL TREES TO BE PRESERVED OUTBOARD OF THE LIMITS OF CONSTRUCTION THAT ARE DETERMINED TO BE PRESERVED, THE MINIMUM TREE CANOPY SHALL BE PROTECTED BY A 3:1 TO 1:1 RATIO FOR ALL UNAUTHORIZED (DAMAGED OR REMOVED) VEGETATION IMPACTS.
9. STORMWATER MANAGEMENT SHALL COMPLY WITH THE REQUIREMENTS SET FORTH WITHIN THE CODE OF ORDINANCES, APPENDIX D – STORMWATER MANAGEMENT.
10. INDIVIDUAL SITE PLANS SHALL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT, DEVELOPMENT SERVICES CENTER (DSC) FOR REVIEW AND APPROVAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
11. SUBMITTED CONCURRENT WITH THE SITE PLAN SHALL BE A SEPARATE PLANNING / BUFFER RESTORATION PLAN DETAILING LOCATION, NUMBER, AND SPECIES OF VEGETATION TO BE PRESERVED AS WELL AS THE 4 INCH TO 4 INCH TREE CANOPY AND MULCHED RESTORATION AREA. THE RESTORATION PLAN SHALL CLEARLY DELINEATE EXISTING NATURALIZED AREAS (FOREST FLOOR), PLANTING BEDS, TURF ZONES AND AREAS OF SHORLING VEGETATION TO BE MANAGED PERMITTING SUNLIGHT TO INTERFACE WITH TIDAL FRINGE MARSH.
12. 16.28H SQUARE FEET OF BUFFER RESTORATION SHALL BE INSTALLED IN SUBSTANTIAL COMPLIANCE WITH THE PROPOSED MITIGATION AREAS AS SHOWN ON SHEET 2 OF THE SUBMITTED EXHIBIT COVERED. SAID TREE CANOPY AND MULCHED RESTORATION AREA SHALL BE VEGETATION CONSISTING OF CANOPY TREES, UNDERSTORY TREES, SHRUBS AND HERBACEOUS VEGETATION. THE RESTORATION PLAN SHALL BE PREPARED IN ACCORDANCE WITH GUIDANCE MANUAL PREPARED BY VIRGINIA DEPARTMENT OF CONSERVATION & RECREATION, CHEASEBAKE MOUNTAIN LAND ASSISTANCE TO THE GREATEST EXTENT PRACTICABLE.
13. THE REQUIRED RESTORATION SHALL BE LOCATED IN THE RESOURCE PROTECTION AREA, IN AREAS CURRENTLY DEVOTED TO TURF. THE RESTORATION SHALL HAVE A MULCH LAYER OF DEBRIS AND 4 INCH TO 4 INCH TREE CANOPY AND MULCHED RESTORATION AREA SHALL BE MAINTAINED AND NOT REMOVED OR ALLOWED TO REVERT TO TURF IN THE FUTURE. SALT AND FLOOD TOLERANT SPECIES SHALL BE PLANTED BELOW THE FIVE FOOT CONTOUR OF THE OYSTER SHELF OR OTHER ELEVATION INDICATED ON THE BOARD. SHALL BE ASSIGNED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY OR RELEASE OF THE BUILDING PERMIT.
14. NO PERMETER FILL, OTHER THAN THE MINIMUM NECESSARY TO FACILITATE POSITIVE DRAINAGE AWAY FROM THE PROPOSED IMPROVEMENTS IS AUTHORIZED OUTBOARD OF SEAWARD OF THE PROPOSED IMPROVEMENTS.
15. **AS OFFERED BY THE APPLICANT, PAYMENT SHALL BE MADE TO THE LYNNHAVEN RIVER DISTRICT PRIOR TO CONSTRUCTION WITH A PLAN APPROVAL. PAYMENT SHALL BE IN AMOUNT OF \$2,237.12 AND IS BASED ON 25 PERCENT OF THE PROPOSED IMPERVIOUS COVER WITHIN THE RESOURCE PROTECTION AREA (RPA). SAID PAYMENT SHALL PROVIDE FOR AN OYSTER SHALF PLANT WITHIN THE LYNNHAVEN RIVER BASIN.
16. IT IS THE OPINION OF THE BOARD THAT THE APPROVAL GRANTED IS THE MAXIMUM IMPERVIOUS COVER THAT THE SITE CAN SUPPORT.
17. THE CONDITIONS AND APPROVAL ASSOCIATED WITH THIS VARIANCE ARE BASED ON THE EXISTING LAND USE AND PREPARED BY MR. P. J. SPOONER BY JASON W. THOMAS. THE CONDITIONS AND APPROVAL ASSOCIATED WITH THIS VARIANCE ARE BASED ON THE BOARD EXHIBIT PREPARED BY THE APPLICANT AND PRESENTED TO THE BOARD, THE APPROVAL GRANTED IS THE MAXIMUM IMPERVIOUS COVER THAT THE BOARD.
18. AS PROFFERED BY THE APPLICANT, THE POOLS WILL BE REMOVED, AND THE BEACHING WILL BE LIMITED TO 4000 SQUARE FEET INCLUDING THE WALKWAY GROUND TO THE DRIVEWAY.

CBPA CONDITIONS
OF
SHORE DRIVE SINGLE FAMILY

[illegible]

DESIGNED	RWS
DRAWN	RWS
CHECKED	DMW
APPROVED	CSA
DATE	5/21/21



MSA, P.C.
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(REV. 8-30-2013)

1. DEVELOPMENT IN THE CITY OF VIRGINIA BEACH SHALL CONFORM TO THE LATEST EDITION OF: THE CITY OF VIRGINIA BEACH, PUBLIC WORKS SPECIFICATIONS AND STANDARDS MANUAL, THE CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC UTILITIES DESIGN STANDARDS MANUAL, THE CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAILS, THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS, THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, THE AMERICAN STANDARD FOR NURSERY STOCK AND THE LANDSCAPING GUIDE CITY OF VIRGINIA BEACH, AND ALL OTHER APPLICABLE ORDINANCES AND REGULATIONS UNLESS OTHERWISE NOTED.
2. AN EROSION AND SEDIMENT CONTROL SURETY AND/OR STORMWATER MANAGEMENT SURETY WILL BE POSTED WITH THE DEVELOPMENT SERVICES CENTER (DSC) AND BEFORE THE ISSUANCE OF ANY PERMITS, FOLLOWING PLAN APPROVAL, IN THE APPROPRIATE AMOUNT TO BE DETERMINED DURING PLAN REVIEW.
3. THE OWNER/DEVELOPER/CONTRACTOR WILL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE DSC, CITY OF VIRGINIA BEACH, VIRGINIA, PRIOR TO CONSTRUCTION WITH ANY EXISTING PUBLIC RIGHT-OF-WAY OR PUBLIC EASEMENT. A COPY OF THE APPROVED TRAFFIC CONTROL PLAN MUST BE SUBMITTED WITH THE RIGHT-OF-WAY PERMIT APPLICATION.
4. THE OWNER/DEVELOPER/CONTRACTOR/RESPONSIBLE LAND DISTURBER (R/LD) WILL CONTACT EACH APPROPRIATE INSPECTIONS BUREAU TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING AND/OR INSPECTION ACTIVITY 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITY.
5. THE STORMWATER MANAGEMENT FACILITY (SWMF) SHALL NOT BE EXCAVATED BEYOND THE PHYSICAL SECTION(S) AS SHOWN ON THE APPROVED PLAN UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE DSC. SITE MATERIALS EXCAVATED BEYOND THE PHYSICAL SECTION(S) SHALL NOT BE USED OR SOLD OFF-SITE UNLESS THE OWNER/DEVELOPER/CONTRACTOR COMPLIES WITH THE CURRENT CITY ORDINANCES PERTAINING TO THE OPERATION OF BORROW PITS. EXCAVATION MATERIALS FROM THE SWMF THAT ARE PROPOSED AS BACKFILL MUST BE CERTIFIED FOR THAT PURPOSE, AND APPROVAL IS REQUIRED BY THE DSC'S ENGINEER PRIOR TO USE. BACKFILL MATERIALS MAY BE STOCKPILED AND WILL NOT INTERFERE WITH EXISTING DRAINAGE IN ACCORDANCE WITH THE PWSS SECTION 15.7.
6. HORIZONTAL DATUM: THIS (PLAN, PLAN, DRAWING, SURVEY, ETC.) IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 1983/1993 (HARN). COORDINATE VALUES SHOWN ARE EXPRESSED IN U.S. SURVEY FEET.
VERTICAL CONTROL: THIS (SURVEY, DRAWING, ETC.) IS BASED ON NAVD, 1988.
7. THE CITY OF VIRGINIA BEACH SHALL ASSUME NO RESPONSIBILITIES OR LIABILITIES FOR THE DAMAGE OR INJURY THAT MAY BE INCURRED AS A RESULT OF ANY ENCRoACHMENT INTO A PUBLIC EASEMENT OR RIGHT-OF-WAY, SINCE AN ENCRoACHMENT IS CONSIDERED TO BE TEMPORARY IN NATURE, THE CURRENT OWNER(S) ARE REQUIRED TO REMOVE THE ENCRoACHMENT AT THEIR EXPENSE WHEN DEEMED NECESSARY BY THE CITY OF VIRGINIA BEACH. AS THE EASEMENT RUNS WITH THE LAND, THE OWNER(S) WILL GIVE NOTIFICATION TO THE HEIRS, ASSIGNS, SUCCESSORS IN TITLE OR LESSEE OF THE EXISTENCE OF ANY ENCRoACHMENT AND THE RIGHTS OF THE CITY OF VIRGINIA BEACH.
8. THE OWNER/DEVELOPER/CONTRACTOR WILL BE RESPONSIBLE FOR DRIVEWAYS, WALKS, CURBS, PAVEMENT MARKINGS, ETC. WHICH MUST BE CUT, REMOVED, OR DAMAGED DURING CONSTRUCTION.
9. CAUTION: WETLANDS MAY BE INVOLVED WITHIN THE BOUNDARY OF DEVELOPMENT. THE OWNER/DEVELOPER/CONTRACTOR/R/LD MUST COMPLY WITH THE EXACT LIMITS OF CONSTRUCTION. PERMITS MAY BE REQUIRED FROM FEDERAL, STATE, AND LOCAL AGENCIES.

EROSION & SEDIMENT CONTROL & TREE PROTECTION

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (4VAC50-30 ET SEQ), CHAPTER 30 AND APPENDIX E (TREE PLANTING, PRESERVATION AND REPLACEMENT) AND ANY OTHER APPLICABLE SECTIONS OF THE CODE OF THE CITY OF VIRGINIA BEACH AND THE PLANNING DEPARTMENT'S LANDSCAPING GUIDE.
2. THE CONTRACTOR SHALL EXERCISE EVERY REASONABLE PRECAUTION, INCLUDING THE APPLICATION OF TEMPORARY AND/OR PERMANENT MEASURES DEEMED NECESSARY BEFORE, DURING, AND AFTER CONSTRUCTION TO CONTROL EROSION AND PREVENT OR MINIMIZE SEDIMENT RUNOFF AND PROTECT TREES AND VEGETATION. THE PLANNING DEPARTMENT/PERMITS AND INSPECTIONS DIVISION SHALL ENFORCE THESE REQUIREMENTS. THE CITY INSPECTOR RESERVES THE RIGHT TO REQUIRE OTHER MEASURES NOT SPECIFICALLY DESCRIBED HEREIN TO CORRECT ANY EROSION, SILTATION OR TREE PROTECTION CONDITION.
3. NON-COMPLIANCE WITH ANY ESC REGULATION OR POLICY MAY RESULT IN A NOTICE TO COMPLY, STOP WORK ORDER (SWO) OR OTHER LEGAL ACTION.
4. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVED BY PLANNING DEPARTMENT/DEVELOPMENT SERVICES CENTER (DSC) SHALL BE KEPT AT THE SITE AT ALL TIMES.

3. AFTER OBTAINING THE LAND DISTURBING PERMIT AND AT LEAST 48-HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT PLANNING/CIVIL INSPECTIONS AT (757) 385-4558 TO SCHEDULE A PRE-CONSTRUCTION MEETING. FAILURE TO CONTACT PLANNING/CIVIL INSPECTIONS PRIOR TO ANY LAND DISTURBING ACTIVITY MAY RESULT IN A NOTICE TO COMPLY, STOP WORK ORDER OR OTHER LEGAL ACTION.
 6. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE MANAGEMENT DIVISION, DEPARTMENT OF PARKS AND RECREATION AT (757) 385-4461 AT LEAST THREE (3) DAYS PRIOR TO DAMAGING, TRIMMING, PRUNING OR REMOVING TREES OR OTHER VEGETATION IN THE CITY RIGHT OF WAY OR IN CITY EASEMENTS OR ON CITY OWNED PROPERTY AND AGAIN IMMEDIATELY AFTER COMPLETION OF THE WORK.
 7. ALL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED WITH THE FIRST STAGE OF CONSTRUCTION AND WILL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THEIR REMOVAL IS DIRECTED BY THE CIVIL INSPECTOR. 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. THE MEASURES SHOWN ON THE PLAN ARE THE MINIMUM NECESSARY. THE ADDITION, DELETION OR MODIFICATION OF EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES WILL BE AT THE DIRECTION OF THE CIVIL INSPECTOR. THE CIVIL INSPECTOR MAY DETERMINE WHEN A PLAN REVISION IS TO BE SUBMITTED TO THE DSC FOR REVIEW AND APPROVAL.
 8. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES AT THE END OF CONSTRUCTION SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION. THE ORIGINAL SOIL GRADE WITHIN ANY PROTECTED TREE'S DRIP LINE SHALL BE PRESERVED AND MAINTAINED AND SHALL NOT BE DISTURBED BY REGRADEING.
 9. THE RESPONSIBLE LAND DISTURBER (RLD) SHALL INSPECT:
 - a. DURING OR IMMEDIATELY FOLLOWING INITIAL INSTALLATION OF EROSION AND SEDIMENT CONTROLS,
 - b. AT LEAST ONCE IN EVERY TWO-WEEK PERIOD,
 - c. WITHIN 48 HOURS FOLLOWING ANY RUNOFF PRODUCING STORM EVENT, AND
 - d. AT THE COMPLETION OF THE PROJECT.IN ADDITION, THE RLD SHALL MAINTAIN WRITTEN MONITORING REPORTS ON-SITE AND PROVIDE TO THE CIVIL INSPECTOR UPON REQUEST.
 10. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES DAMS, DIKES, DIVERSIONS, SIDE SLOPES OF SEDIMENT TRAPS AND BASINS IMMEDIATELY AFTER INSTALLATION.
 11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
 12. SEDIMENT BASINS SHALL BE MAINTAINED AS SPECIFIED AND NOT CONVERTED TO PERMANENT STORMWATER MANAGEMENT FACILITIES DURING LAND DISTURBANCE. CONVERSION TO A PERMANENT STORMWATER MANAGEMENT FACILITY SHOULD ONLY OCCUR AFTER PERMANENT STABILIZATION OF DISTURBED AREAS DRAINING TO THE BASIN HAS OCCURRED.
 13. ALL BORROW MATERIAL SHALL BE EXCAVATED FROM A LAWFULLY PERMITTED SITE AND ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF AT A LAWFULLY PERMITTED SITE. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS, A SEPARATE EROSION AND SEDIMENT CONTROL PLAN APPROVAL AND PERMIT WILL BE REQUIRED FOR THESE OFF-SITE AREAS, IF NOT ALREADY APPROVED AND PERMITTED.
 14. DETWATERING AND WELL POINT DISCHARGE SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE THAT PROVIDES APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES. THE MEASURES MUST BE APPROVED BY THE CIVIL INSPECTOR PRIOR TO THE COMMENCEMENT OF DISCHARGE OPERATIONS. FAILURE TO COMPLY MAY RESULT IN A NOTICE TO COMPLY, STOP WORK ORDER OR OTHER LEGAL ACTION.
 15. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A TEMPORARY CONSTRUCTION ENTRANCE AT EACH POINT OF INGRESS/EGRESS PER VESCH STD & SPEC 3.02. SITES WITH SIGNIFICANT CONSTRUCTION TRAFFIC MAY BE REQUIRED TO INSTALL A LARGER WIDTH AND/OR LONGER LENGTH CONSTRUCTION ENTRANCE AS DEEMED NECESSARY BY THE DSC ENGINEER OR THE CIVIL INSPECTOR. A WASH RACK MAY BE DEEMED NECESSARY AND REQUIRED BY THE CIVIL INSPECTOR.
 16. THE CONTRACTOR SHALL CONSTRUCT, INSTALL, AND MAINTAIN SUFFICIENT EROSION AND SEDIMENT CONTROL DEVICES TO PREVENT SOIL FROM BEING ERODED AND PLACED ON STREETS, IN DRAINAGE SYSTEMS AND WATERCOURSES. DEVICES WILL BE CLEAR OF MUD, DEBRIS, AND ERODED MATERIAL DURING ALL STAGES OF CONSTRUCTION. DEVICES ARE SUBJECT TO INSPECTIONS AFTER A STORM EVENT AND AS REQUIRED BY THE CIVIL INSPECTOR.
 17. ANY AND ALL MATERIAL OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD SURFACE SHALL BE REMOVED THOROUGHLY AT THE END OF EACH DAY OR AS DIRECTED BY THE CIVIL INSPECTOR. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A LEGALLY PERMITTED DISPOSAL FACILITY.
 18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOILS WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS, OR HARM ANIMAL OR PLANT LIFE. THE CONTRACTOR SHALL MONITOR AND TAKE PRECAUTIONS TO CONTROL DUST, BY, INCLUDING, BUT NOT LIMITED TO, THE USE OF WATER OR CHEMICAL DUST PALLIATIVE, BY LIMITING THE NUMBER OF VEHICLES ALLOWED ON-SITE, AND MINIMIZING THE OPERATING SPEED OF ALL VEHICLES.
 19. SILT FENCE FABRIC SHALL BE CONSTRUCTED OF STANDARD 36" FILTER FABRIC, STAKED WITH 2" X 2" HARDWOOD STAKES PLACED A MAXIMUM OF 6-FOOT ON CENTER AND ENTRENCHED IN ACCORDANCE WITH THE VESCH STD & SPEC 3.05.
 20. THE USE OF STRAW BALES IS PROHIBITED FOR EROSION AND SEDIMENT CONTROL IN VIRGINIA BEACH UNLESS OTHERWISE APPROVED BY THE CIVIL INSPECTOR.
 21. DUE TO LOCAL EXPERIENCE, SOME COMMERCIALY AVAILABLE MANUFACTURED ESC DEVICES HAVE BEEN DEEMED NOT APPROPRIATE OR APPROVED IN VIRGINIA BEACH. CHECK WITH THE CIVIL INSPECTOR FOR APPROVAL PRIOR TO INSTALLING MANUFACTURED DEVICES.
 22. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION, TREE PROTECTION SHALL BE PLACED AROUND ALL TREES TO BE RETAINED. THE TREE PROTECTION SHALL BE IN ACCORDANCE WITH THE VESCH STD & SPEC 3.38 AND THE PLANNING DEPARTMENT LANDSCAPING GUIDE. TREE PROTECTION SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE APPROVED PLAN.
 23. NO ITEMS, INCLUDING BUT NOT LIMITED TO, BOARDS, WIRES, OR SIGNAGE, SHALL BE NAILED OR ATTACHED TO TREES TO BE RETAINED.
 24. NO STOCKPILING, PLACEMENT OF MATERIALS OR EQUIPMENT, OR PARKING OF VEHICLES SHALL OCCUR WITHIN THE TREE PROTECTION AREA.
 25. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY ARBORIST OF DAMAGE TO TREES LOCATED IN CITY RIGHTS OF WAY AND PUBLIC EASEMENTS. DAMAGED TREE LIMBS SHALL BE CUT BACK TO THE NEXT LATERAL BRANCH OR PARENT STEM AT THE BRANCH COLLAR. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY THE CITY ARBORIST.
 26. TREES LOCATED IN CITY RIGHTS OF WAY AND PUBLIC EASEMENTS THAT ARE TO BE RETAINED, BUT ARE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED WITH SPECIES, SIZES AND QUANTITIES TO BE DETERMINED UPON TREE VALUE ASSESSMENT BY THE CITY ARBORIST. REPLACEMENT TREES SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AND PLANNING DEPARTMENT'S LANDSCAPING GUIDE.
 27. TREES ON PRIVATE PROPERTY THAT ARE TO BE RETAINED, BUT ARE DESTROYED DURING CONSTRUCTION SHALL BE REPLACED WITH SPECIES, SIZES AND QUANTITIES TO BE DETERMINED THROUGH A PLAN REVISION TO BE SUBMITTED TO, REVIEWED AND APPROVED BY THE PLANNING DEPARTMENT/DEVELOPMENT SERVICES CENTER. REPLACEMENT TREES SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AND PLANNING DEPARTMENT'S LANDSCAPING GUIDE.
- ### STORMWATER MANAGEMENT
1. AS-BUILT PLANS MUST BE PREPARED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA AND MUST BE SUBMITTED TO AND APPROVED BY THE DSC FOR ALL SWMF, PRIOR TO THE RELEASE OF EROSION AND SEDIMENT CONTROL (E&S) AND SWMF SURETY BONDS POSTED WITH THE DSC.
 2. A TEST PIT IN THE LOCATION OF THE INFILTRATION SWMF IS REQUIRED PRIOR TO THE CONSTRUCTION OF THE SWMF. CONTACT THE PLANNING CIVIL INSPECTOR FOR THE APPROPRIATE MEETING. EXPLORATION TESTS ARE REQUIRED FOR ALL VOLUME CONTROL INFILTRATION SWMF'S IN ACCORDANCE WITH PWSS. EXCAVATION VOLUMES AND LIMITS OF EXCAVATION CAN ONLY BE DETERMINED DURING THE ACTUAL FIELD CONSTRUCTION AND MUST BE APPROVED BY THE PLANNING CIVIL INSPECTOR IN THE LOCATION OF THE SWMF PRIOR TO THE CONSTRUCTION.
 3. THE OWNER/DEVELOPER/CONTRACTOR/RLD MUST CONTACT THE PLANNING CIVIL INSPECTOR AT (757-385-4558), PRIOR TO ANY CONSTRUCTION. A MINIMUM OF FIVE (5) INSPECTIONS ARE REQUIRED FOR INFILTRATION STRUCTURES. FAILURE TO CONTACT THE PLANNING CIVIL INSPECTOR, AS DIRECTED, COULD RESULT IN REMOVAL AND RECONSTRUCTION OF STRUCTURES. THE PLANNING CIVIL INSPECTOR MUST BE NOTIFIED 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
 4. IF SUBGRADE SOILS HAVE BEEN DETERMINED TO BE SUITABLE FOR INFILTRATION USE BASED ON SOIL INFORMATION/EVALUATION, THIS INFORMATION MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER AND SUBMITTED TO THE DSC'S ENGINEER FOR APPROVAL PRIOR TO THE USE FOR THE PROJECT.
 5. THE CITY OF VIRGINIA BEACH WILL NOT BE RESPONSIBLE FOR THE DESIGN, FUNCTIONING, MAINTENANCE, AND/OR REPAIR OF SWMF'S, EXCLUDING THOSE AREAS AND/OR IMPROVEMENTS LOCATED WITHIN DEDICATED CITY DRAINAGE EASEMENTS AND RIGHT-OF-WAY.
 6. THE OWNERS WILL GIVE NOTIFICATIONS TO THEIR HEIRS, ASSIGNS, SUCCESSORS IN TITLE, OR LESSEE OF THE SWMF, UTILIZED WITH THIS DEVELOPMENT AND OF THE ABOVE STATED DISCLAIMER (NOTE 5) BY THE CITY OF VIRGINIA BEACH.
 7. ALL ON-SITE SWMF'S WILL BE PROTECTED BY SILT FENCE OR OTHER APPROVED

STORMWATER MANAGEMENT CTD.

8. PUBLIC OR PRIVATE UTILITY FACILITIES WILL NOT CONFLICT WITH THE STRUCTURAL PRISM OF THE PROPOSED SWMF'S AS SHOWN ON THE APPROVED PLANS. IF A CONFLICT OCCURS, THE OWNER/DEVELOPER/CONTRACTOR/RLD MUST IMMEDIATELY CONTACT PLANNING/CIVIL INSPECTORS.
 9. EXFILTRATION TESTS FOR VOLUME CONTROL SWMF OR INFILTRATION SWMF'S WILL BE PERFORMED AT EACH TRENCH LOCATION, IN ACCORDANCE WITH PLANNING/CIVIL INSPECTIONS POLICY, PRIOR TO THE ACCEPTANCE BY THE PLANNING CIVIL INSPECTOR. TEST RESULTS MUST SHOW THAT THE EXFILTRATION TRENCH IS IN ACCORDANCE WITH THE CITY OF VIRGINIA BEACH PERFORMANCE CRITERIA AND APPROVED CERTIFIED SOIL REPORT FOR INFILTRATION SWMF'S.
 10. ALL STONE SIZES FOR SWMF'S WILL BE IN ACCORDANCE WITH CHAPTER B, "STORMWATER MANAGEMENT" OF THE PWS.
 11. ALL SWMF DRAINAGE STRUCTURES WILL BE PROTECTED WITH A MINIMUM OF FOUR FEET (4') OF SOD AROUND THE STRUCTURE AND SILT FENCING WILL BE INSTALLED SURROUNDING THE SOD AS REQUIRED UNLESS OTHERWISE APPROVED BY THE DSC'S ENGINEER AND NOTED IN THE PLAN DETAILS.
 12. ALL UNDERGROUND SWMF'S MUST BE MARKED WITH A 5" X 5" X 1/4" THICK, OR LARGER, STEEL PLATE AT EACH CORNER OR IT MUST BE MARKED WITH WHITE METALLIC MARKING TAPE THAT IS THREE INCHES (3") WIDE AND PLACED ON TOP OF THE SWMF. NOT TO EXTEND ONE FOOT (1') BELOW THE GROUND SURFACE. IN CERTAIN CASES, AT THE OPTION OF THE PLANNING CIVIL INSPECTOR, IT MAY BE APPROPRIATE TO USE BOTH.
 13. ALL PIPE JOINTS AND CONNECTIONS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER, ASTM AND VDOT PROVISIONS, SPECIFICATIONS AND STANDARDS SO AS TO BE SOIL TIGHT AND LEAK RESISTANT.
 14. ALL HOPE, PE OR PIPE SPECIFIED ON THE PLANS AND DELIVERED TO THE SITE SHALL BE TYPE S PIPE IN NO LENGTHS LESS THAN TEN (10) FEET LONG AND SHALL CONFORM TO AASHTO M252 AND AASHTO M294 AND ASTM F2306, FOR MATERIALS AND INSTALLATION WITH SOIL TIGHT CONNECTIONS AND/OR GASKETS CONFORMING TO ASTM F477. PVC RIBBED PIPE SHALL ADHERE TO AASHTO M304 OR ASTM F949.
 15. ALL THERMOPLASTIC, HOPE, PE AND NON-CONCRETE PIPE MUST HAVE MINIMUM 2'-FEET OF COVER DURING ALL PHASES OF CONSTRUCTION.
 16. FLEXIBLE CONNECTORS MUST BE INSTALLED WHEN CONNECTING HOPE PIPE TO CONCRETE OR BRICK STRUCTURES.
- ## UTILITIES
1. PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA OF CONSTRUCTION. "MISS UTILITY" OF VIRGINIA MUST BE CONTACTED A MINIMUM OF 72 HOURS PRIOR TO EXCAVATING AT "811" OR (1-800-552-7001). THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY EXISTING UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION, AT HIS OWN EXPENSE.
 2. THE RELOCATION OF ANY UTILITIES (PUBLIC OR PRIVATE) LOCATED WITHIN THE CITY'S RIGHT-OF-WAY, WILL BE AT THE DEVELOPER'S EXPENSE, AND COMPLETED PRIOR TO THE PLACEMENT OF ANY PROPOSED ROADWAY BASE MATERIAL OR PAVEMENT IN CONJUNCTION WITH THE SITE WORK. ALL NEW UTILITY LINE INSTALLATIONS MUST BE UNDERGROUND (SUCH AS TELEPHONE, POWER, CABLE TELEVISION, ETC.).
 3. WATER METERS AND SEWER CLEANSOUTS MUST BE PLACED AT THE RIGHT-OF-WAY OR AT THE PUBLIC UTILITY EASEMENT LINE, (WITHIN THE RIGHT-OF-WAY/EASEMENT), OUTSIDE OF ENTRANCES AND SIDEWALKS.
 4. DEFLECTING, OFFSETTING, OR RELOCATING EXISTING UTILITY MAINS WILL NOT BE ALLOWED EXCEPT UNDER EXTREME CIRCUMSTANCES, SUCH EXEMPTIONS WILL BE SUBMITTED TO THE DSC'S PUBLIC UTILITIES ENGINEER FOR APPROVAL.
 5. TYPE "K" SOFT DRAIN COPPER WILL BE USED FOR OFF-SITE WATER SERVICE LINES, TWO-INCH (2") LINES AND UNDER, IN RIGHT-OF-WAYS AND PUBLIC UTILITY EASEMENTS.
 6. THE OWNER/DEVELOPER/CONTRACTOR MUST CONTACT PUBLIC UTILITY/INSPECTIONS AT (757-385-4175) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION (PUBLIC OR PRIVATE) LOCATED WITHIN THE CITY'S RIGHT-OF-WAY OR EASEMENT.

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (4VAC50-30 ET SEQ), CHAPTER 30 AND APPENDIX E (TREE PLANTING, PRESERVATION, REPLACEMENT, REPLACEMENT AND ANY OTHER APPLICABLE SECTIONS OF THE CODE OF THE CITY OF VIRGINIA BEACH AND THE PLANNING DEPARTMENT'S LANDSCAPING GUIDE).
2. THE CONTRACTOR SHALL EXERCISE EVERY REASONABLE PRECAUTION, INCLUDING THE APPLICATION OF TEMPORARY AND/OR PERMANENT MEASURES DEEMED NECESSARY BEFORE, DURING, AND AFTER CONSTRUCTION TO CONTROL EROSION AND PREVENT OR MINIMIZE SEDIMENT RUNOFF AND PROTECT TREES AND VEGETATION. THE PLANNING DEPARTMENT/PERMITS AND INSPECTIONS DIVISION SHALL ENFORCE THESE REQUIREMENTS. THE CITY INSPECTOR RESERVES THE RIGHT TO REQUIRE OTHER MEASURES NOT SPECIFICALLY DESCRIBED HEREIN TO CORRECT ANY EROSION, SILTATION OR TREE PROTECTION CONDITION.
3. NON-COMPLIANCE WITH ANY ESC REGULATION OR POLICY MAY RESULT IN A NOTICE TO COMPLY, STOP WORK ORDER (SWO) OR OTHER LEGAL ACTION.
4. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVED BY PLANNING DEPARTMENT/DEVELOPMENT SERVICES CENTER (DSC) SHALL BE KEPT AT THE SITE AT ALL TIMES.

[illegible]

SHORE DRIVE SINGLE FAMILY

HEET
C-002

3 of 17 Sheet

9	01	17	00000
CALF: NONE			

ROJ. NO.: 18023

(REV. 8-30-2013)

1. TEMPORARY DRAINAGE DURING CONSTRUCTION WILL BE PROVIDED BY THE OWNER/DEVELOPER/CONTRACTOR TO RELIEVE AREAS THAT MAY CAUSE DAMAGE TO ROADWAYS AND/OR ADJACENT PROPERTIES AS DIRECTED BY PLANNING/CIVIL INSPECTIONS.
2. THE PLANNING/CIVIL INSPECTOR WILL PERFORM AN ON-SITE INSPECTION OF STORM SEWER PIPE INSTALLATION PRIOR TO ANY BACKFILLING OF THE INSTALLED PIPE.
3. IF PRECAST DRAINAGE STRUCTURES ARE USED, SHOP DRAWINGS WILL BE SUBMITTED TO THE ENGINEER BY THE OWNER/DEVELOPER/CONTRACTOR'S DESIGN CONSULTANT, ALONG WITH THE PROPER CERTIFICATIONS, UNLESS PREVIOUSLY APPROVED BY THE CITY ENGINEER'S OFFICE.
4. ALL PROPOSED PUBLIC STORM DRAINAGE STRUCTURES SHALL UTILIZE INLET SHAPING WITH PAVED INVERTS, UNLESS OTHERWISE NOTED, ON THE PLANS FOR EACH STRUCTURE.
5. MINIMUM FINAL HEIGHT OF COVER, FOR ALL STORM SEWER PIPES, SHALL BE TWO FEET (2') OR MANUFACTURER'S RECOMMENDATION. SEE THE PWSS, SECTION 2.2.7 PIPE COVER; FOR FURTHER REQUIREMENTS.
6. ALL CONCRETE STORM SEWER PIPES IN THE CITY RIGHT-OF-WAYS AND EASEMENTS WILL BE TONGUE AND GROOVE. PIPES SUBJECT TO TRAFFIC LOADING WILL BE REINFORCED CONCRETE PIPE AND CONFORM TO THE SPECIFICATIONS FOR CONCRETE STORM SEWER PIPE, AASHTO DESIGNATION N-170, WITH THE MODIFICATION THAT ALL PIPES WILL BE MANUFACTURED WITH 4,000-PSI CONCRETE. ALL PIPE JOINTS WILL BE SEALED IN ACCORDANCE WITH SECTION 302.03 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
7. ALL STORM SEWER PIPE JOINTS WILL BE INSTALLED, SLT FREE, OR WILL BE COMPLETELY WRAPPED WITH TWO FEET (2') WIDE APPROVED FILTER FABRIC, SECURED IN PLACE PRIOR TO BACKFILLING.
8. ALL PIPE CULVERTS (WATER, SEWER, AND STORM SEWER), LOCATED WITHIN RIGHT-OF-WAY EXCAVATION AREAS THAT ARE SUBJECT TO TRAFFIC LOADS WILL BE BACKFILLED WITH SELECT OR GRANULAR MATERIALS AND PLACED IN SIX-INCH (6") LAYERS AND COMPACTED TO 95 PERCENT THEORETICAL AASHTO DENSITY IN ACCORDANCE WITH SECTION 302.03 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
9. ALL METAL PIPE CULVERTS AND STORM SEWERS WILL BE INSTALLED IN ACCORDANCE WITH DRAWINGS PB-1 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS.
10. IF METAL PIPE IS USED, THE OWNER/DEVELOPER/CONTRACTOR WILL FURNISH PH CERTIFICATIONS OF THE BACKFILL MATERIAL IF THE BACKFILL MATERIAL HAS NOT BEEN PREVIOUSLY TESTED.
11. ALL NON-CONCRETE STORM SEWER PIPES PLACED IN THE CITY RIGHT-OF-WAY OR IN CITY DRAINAGE EASEMENTS WILL INCORPORATE THE USE AND INSTALLATION OF LOCATOR TAPE/WIRE TO AID IN FUTURE DETECTION.

1. ALL CONCRETE WILL BE CLASS "A-3" AIR ENTRAINED (3,000 PSI) IN ACCORDANCE WITH SECTION 217 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
2. BOTH CURB AND GUTTER WILL BE CONSTRUCTED IN SECTIONS OF UNIFORM LENGTHS APPROXIMATELY TEN FEET (10') WITH NO SECTIONS WILL BE LESS THAN SIX FEET (6'). EXPANSION JOINTS WILL BE FORMED AT INTERVALS OF 100 FEET USING 1/2" PREMOLED BITUMINOUS FIBER JOINT FILLER. CONSTRUCTION JOINTS ARE REQUIRED AS FOLLOWS:

a. CURB & GUTTER	100'
b. FIVE FEET (5') WIDE SIDEWALK	50'
c. TEN FEET (10') MULTI-USE PATH	50'
3. ALL ENTRANCES WILL BE MADE OF A MINIMUM OF SEVEN INCHES (7") THICK CONCRETE FROM THE EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE. THE CONTRACTOR SHALL PROVIDE EXPANSION MATERIAL WHERE NEW CONCRETE MEETS EXISTING CONCRETE.
4. ALL CONCRETE WORK PERFORMED IN THE RIGHT-OF-WAY WILL BE INSPECTED BY THE PLANNING CLERK INSPECTOR.

1. NO OPEN CUTS OF A PUBLIC ROADWAY WILL BE ALLOWED EXCEPT UNDER EXTREME CIRCUMSTANCES. OPEN CUTTING OF PUBLIC ROADWAYS WILL BE PERMITTED WITH PRIOR WRITTEN PERMISSION BY THE DSC'S ENGINEER.
2. MINIMUM ON-SITE (PRIVATE PROPERTY) PAVEMENT REPLACEMENT AND DESIGN WILL BE 2-INCHES, SM-9.5A BITUMINOUS CONCRETE SURFACE, OVER A SIX-INCH (6") TYPE I OR II AGGREGATE BASE.

- FIRE PROTECTION NOTES:

1. A PERMIT FOR ANY SIGN OR SIGN POLE MUST BE OBTAINED FROM PLANNING/PERMITS AND INSPECTIONS.
2. ONLY FLOOD RESISTANT MATERIAL MAY BE USED BELOW THE 100-YEAR FLOOD ELEVATION.
3. ALL STRUCTURES MUST BE PROPERLY ANCHORED WITH ADEQUATE FOOTING BELOW THE 100-YEAR FLOOD ELEVATION.
4. NO MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, OR ELECTRICAL LINES WILL BE INSTALLED OR LOCATED BELOW ONE FOOT (1") ABOVE THE 100-YEAR FLOOD ELEVATION, EXCEPT UNDERGROUND WIRING OR SIMILAR MATERIALS.
5. ALL BUILDINGS WILL BE ACCESSIBLE IN ACCORDANCE WITH THE AMERICAN FOR DISABILITIES ACT (ADA), (LATEST EDITION) STANDARDS.
6. PARKING, RAMPS, AND BUILDING ACCESS ROUTES MUST BE IN ACCORDANCE WITH THE AMERICAN FOR DISABILITIES ACT (ADA), (LATEST EDITION) STANDARDS.
7. THERE WILL BE NO MORE THAN 1/2-INCH DIFFERENCE BETWEEN THE FINISHED FLOOR AND THE EXTERIOR SURFACE AT THE ENTRANCE DOOR.
8. A PERMIT TO DEMOLISH ANY EXISTING STRUCTURE WILL BE OBTAINED FROM PLANNING/PERMITS AND INSPECTIONS, PRIOR TO ANY DEMOLITION.

1. CITY WATER AND SEWER IS AVAILABLE TO THIS SITE.
2. SEWER AND WATER CONNECTION INSTALLATIONS, RELOCATIONS AND ABANDONMENTS WILL BE COMPLETED BY THE DEVELOPER'S CONTRACTOR AT THE DEVELOPER'S EXPENSE.
3. UTILITIES TO BE INSTALLED BY THE DEVELOPER'S CONTRACTOR IN THE CITY RIGHT OF WAY OR PUBLIC EASEMENT REQUIRE A RIGHT OF WAY PERMIT, AND POSTING OF A SURETY (CHECK, LETTER OF CREDIT OR BOND) BASED ON AN APPROVED ENGINEER'S COST ESTIMATE. CONTACT THE DEVELOPMENT SERVICES CENTER (DSC) AT (757) 385-8277 FOR ADDITIONAL INFORMATION.
4. THE OWNER/DEVELOPER/CONTRACTOR MUST CONTACT PUBLIC UTILITIES INSPECTIONS AT (757) 385-4175 AT LEAST 48 HOURS PRIOR TO ANY UTILITY CONSTRUCTION.

LOCATED IN THE CITY RIGHT OF WAY OR EASEMENTS.

5. THE OWNER/DEVELOPER/CONTRACTOR MUST CONTACT PUBLIC UTILITIES INSPECTIONS AT (757) 385-4175 TO SCHEDULE AN INSPECTIONS PRIOR TO PLACING BACKFILL OVER THE SERVICE LINE(S).
6. THE DEPARTMENT OF PUBLIC UTILITIES REQUIRES THE INSTALLATION OF A LATERAL WYE CONNECTION TO THE SANITARY SEWER GRAVITY MAIN. IN ADDITION, A MINIMUM OF 10 FEET OF THE EXISTING MAIN MUST BE REMOVED AND REPLACED IN CONJUNCTION WITH THE INSTALLATION OF THE WYE.
7. BRASS FITTINGS TO MEET CDA NO. C89520, WITH NO MORE THAN ONE QUARTER OF ONE PERCENT (0.25%) TOTAL LEAD CONTENT BY WEIGHT SHALL BE USED FOR CORPORATION STOPS, METER VALVES AND SERVICE COUPLINGS.
8. EXISTING WATER AND/OR SEWER SERVICES TO BE ABANDONED SHALL BE ABANDONED AT THE MAIN IN ACCORDANCE WITH SECTION 3.9 (SANITARY SEWER) AND 4.9 (WATER) OF THE CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC UTILITIES DESIGN STANDARD MANUAL. ANY LINES NOT SHOWN ON THE PLAN THAT ARE LOCATED DURING CONSTRUCTION SHALL BE ABANDONED PER PUBLIC UTILITIES REQUIREMENTS AT THE DEVELOPER'S EXPENSE.
9. EXISTING WATER AND/OR SEWER SERVICES TO BE ABANDONED SHALL BE ABANDONED AT THE CITY MAIN IN ACCORDANCE WITH SECTION 3.9 (SANITARY SEWER) AND 4.9 (WATER) OF THE CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC UTILITIES DESIGN STANDARD MANUAL. ANY LINES NOT SHOWN ON THE PLAN THAT ARE LOCATED DURING CONSTRUCTION SHALL BE ABANDONED PER PUBLIC UTILITIES REQUIREMENTS AT THE DEVELOPER'S EXPENSE.
10. CONTRACTOR MUST NOTIFY PUBLIC UTILITIES CONSTRUCTION REPRESENTATIVE SEVEN (7) CALENDAR DAYS PRIOR TO ANY NIGHT TIME SHUTDOWN OF THE WATER MAIN.
11. DEVELOPER MUST VERIFY AND STAKE THE LOCATION OF THE EXISTING SANITARY SEWER CLEANOUP OR LATERAL AT THE RIGHT-OF-WAY PRIOR TO DEMOLITION OF EXISTING STRUCTURE.
12. PRIOR TO DEMOLITION, DEVELOPER SHALL CONTACT PUBLIC UTILITIES OPERATIONS AT (757) 385-1400 TO REMOVE EXISTING WATER METER. A NEW WATER METER SHALL BE INSTALLED BY THE CITY AT THE DEVELOPER'S EXPENSE.

[illegible]

GENERAL NOTES
OF
SHORE DRIVE SINGLE FAMILY

SHEET
C-003
4 of 17 Sheets
SCALE: NONE
PROJ. NO.: 18023



MSA, P.C.
Environmental Sciences • Planning • Surveying
Civil & Environmental Engineering • Landscape Architecture

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EROSION & SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE PURPOSE OF THIS PROJECT IS FOR THE DEVELOPMENT OF A 3.486-ACRE PROPERTY LOCATED ON SHORE DRIVE IN VIRGINIA BEACH, VA, INTO TWO SINGLE FAMILY CONDOMINIUMS. THE PROPOSED PROJECT CONSISTS OF EROSION AND SEDIMENT CONTROL INSTALLATION, DEMOLITION, PAVING, UTILITY INSTALLATION, AND BUILDING CONSTRUCTION. APPROXIMATELY 0.59 ACRES WILL BE DISTURBED DURING CONSTRUCTION.

EXISTING SITE CONDITIONS:

THE SITE IS CURRENTLY UNDEVELOPED WITH NO WATER OR SEWER SERVICE CONNECTIONS. IN ITS CURRENT STATE, THE SITE HAS NEITHER WATER QUALITY OR WATER QUANTITY MEASURES TO TREAT STORMWATER RUNOFF. THE EXISTING SITE GRADING HAS THE MAJORITY OF THE STORMWATER RUNOFF REMAIN ON SITE, WITH A DROP OF ELEVATION TOWARDS THE REAR OF THE PROPERTY.

ADJACENT AREAS:

UNDEVELOPED LOTS BIND THE SITE TO THE EAST AND WEST, PLEASURE HOUSE CREEK TO THE SOUTH, AND SHORE DRIVE RIGHT-OF-WAY TO THE NORTH.

SOILS:

ACCORDING TO THE UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATIVE SERVICE SOIL SURVEY OF CITY OF VIRGINIA BEACH, VIRGINIA, AND 43.7% IS BUAJAC FINE SANDY LOAM, 40.5% IS RUMFORD FINE SANDY LOAM.

CRITICAL AREAS:

THERE ARE CRITICAL AREAS ON SITE IS THE CBPA RMA AND RPA. HOWEVER CRITICAL AREAS SHALL BE MAINTAINED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESC), LATEST EDITION.

EROSION AND SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE V&SC HANDBOOK. THE MINIMUM STANDARDS OF THE V&SC SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

STRUCTURAL PRACTICES:

SAFETY FENCE - VESC STD. 3.01 A PROTECTIVE BARRIER INSTALLED TO PREVENT ACCESS TO AN EROSION CONTROL MEASURE TO PROHIBIT THE UNDESIRABLE USE OF EROSION CONTROL MEASURE BY THE PUBLIC.

TEMPORARY CONSTRUCTION ENTRANCE - VESC STD. 3.02 A STONE PAD, LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE, TO REDUCE THE SOIL TRANSPORTED ONTO PUBLIC ROADS AND OTHER PAVED AREAS.

SILT FENCE BARRIER - VESC STD. 3.05 A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS, FILTER FABRIC AND, IN SOME CASES, A WIRE SUPPORT FENCE, PLACED ACROSS OR AT THE TOE OF A SLOPE OR IN A MINOR DRAINAGE WAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE; APPLICABLE WHERE SHEET AND RILL EROSION OR SMALL CONCENTRATED FLOWS MAY BE A PROBLEM. MAXIMUM EFFECTIVE LIFE OF 6 MONTHS.

VEGETATIVE PRACTICES:

TOPSOILING - VESC STD. 3.30 PRESERVING AND USING TOPSOIL TO PROVIDE A SUITABLE GROWTH MEDIUM FOR VEGETATION USED TO STABILIZE DISTURBED AREAS. APPLICABLE WHERE PRESERVATION OR IMPORTATION OF TOPSOIL IS MOST COST-EFFECTIVE METHOD OF PROVIDING A SUITABLE GROWTH MEDIUM; NOT RECOMMENDED FOR SLOPES STEEPER THAN 2:1 UNLESS ADDITIONAL MEASURES ARE TAKEN TO PREVENT SLOUGHING AND EROSION.

TEMPORARY SEEDING - VESC STD. 3.31 ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR PERIODS OF 30 DAYS TO ONE YEAR BY SEEDING WITH APPROPRIATE RAPIDLY-GROWING PLANTS.

PERMANENT SEEDING - VESC STD. 3.32 ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER BY PLANTING SEED ON ROUGH-GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE OR WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED ON FINE-GRADED AREAS.

MULCHING - VESC STD. 3.35 APPLICATION OF PLANT RESIDUES OR OTHER SUITABLE MATERIALS TO DISTURBED SURFACES TO PREVENT EROSION AND REDUCE OVERHEAD FLOW VELOCITIES. FOSTERS PLANT GROWTH BY INCREASING AVAILABLE MOISTURE, AND PROVIDING INSULATION AGAINST EXTREME HEAT OR COLD. SHOULD BE APPLIED TO ALL SEEDING OPERATIONS. OTHER PLANT MATERIALS WHICH DO NOT PROVIDE ADEQUATE SOIL PROTECTION BY THEMSELVES, AND BARE AREAS WHICH CANNOT BE SEEDING DUE TO THE SEASON BUT WHICH STILL NEED PROTECTION TO PREVENT SOIL LOSS.

SOIL STABILIZATION BLANKETS AND MATTING - VESC STD. 3.36 THE INSTALLATION OF A PROTECTIVE BLANKET/TREATMENT 1) OR A SOIL STABILIZATION MAT/TREATMENT 2) ON A PREPARED PLANTING OF A STEEP SLOPE, CHANNEL OR SHORELINE.

TREES, SHRUBS, VINES, AND GROUND COVERS - VESC STD. 3.37 STABILIZING DISTURBED AREAS BY PLANTING TREES, SHRUBS, VINES AND GROUND COVERS WHERE TURF IS NOT PREFERRED. THESE PLANT MATERIALS ALSO PROVIDE FOOD AND SHELTER FOR WILDLIFE AS WELL AS MANY OTHER ENVIRONMENTAL BENEFITS. ESPECIALLY EFFECTIVE WHERE ORNAMENTAL PLANTS ARE DESIRABLE AND TURF MAINTENANCE IS DIFFICULT.

DUST CONTROL - VESC STD. 3.38 REDUCING SURFACE AND AIR MOVEMENT OF DUST DURING LAND DISTURBANCE, DEMOLITION OR CONSTRUCTION ACTIVITIES IN AREAS SUBJECT TO DUST PROBLEMS IN ORDER TO PREVENT SOIL LOSS AND REDUCE THE PRESENCE OF POTENTIALLY HARMFUL AIRBORNE SUBSTANCE.

MANAGEMENT STRATEGIES:

1. CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
2. SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING AND WILL BE SEEDING AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
3. TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER ROUGH GRADING.
4. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
5. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.

6. DEVELOPMENT OF THE SITE WILL INCLUDE THE FOLLOWING:

- SILT FENCE TO BE INSTALLED AS SHOWN.
- DEMOLITION AND REMOVAL OF EXISTING STRUCTURES AND PAVEMENT.
- ROUGH GRADING OF THE SITE AREA.
- INSTALL BASE STONE AND ASPHALT PAVEMENT.
- SEED AREAS NOT TO BE PAVED.

7. WITHIN 30 DAYS AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E&S CONTROLS WILL BE CLEANED UP AND REMOVED.

PERMANENT STABILIZATION: ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER AND LIME WILL BE APPLIED RIGHT TO MULCHING.

STORMWATER RUNOFF CONSIDERATIONS:

THE PROJECT SITE FALLS UNDER THE JURISDICTION OF THE CITY OF VIRGINIA BEACH REGARDING STORMWATER QUANTITY AND QUALITY MANAGEMENT. STORMWATER RUNOFF WILL BE CONTAINED WITH SILT FENCE.

MAINTENANCE:

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- THE TEMPORARY CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. ALL MATERIAL TRACKED ONTO A PUBLIC OR PRIVATE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A SEDIMENT CONTROLLED DISPOSAL AREA.
- THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
- THE SEEDING AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDING AS NEEDED.

SEQUENCE OF CONSTRUCTION:

1. ACQUIRE NECESSARY PERMITS. THE CONTRACTOR MUST CONTACT THE PLANNING/CIVIL INSPECTIONS OFFICE 48-HOURS IN ADVANCE AT 385-4555 TO SCHEDULE A PRE-CONSTRUCTION MEETING BEFORE ANY CONSTRUCTION ACTIVITY BEGINS.
2. INSTALL EROSION AND SEDIMENT CONTROL DEVICES IN ACCORDANCE WITH V&SC STANDARDS. E&S CONTROLS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBANCE AND SHALL BE MAINTAINED UNTIL SUCH TIME AS VEGETATIVE COVER IS ESTABLISHED.
3. CLEAR AND GRUB ROUGH GRADE SITE.
4. BEGIN CONSTRUCTION OF BUILDING, DRIVEWAY AND UTILITIES. DIRECTIONAL DRILLING AND INSTALLATION OF SANITARY SEWER FORCE MAIN.
5. GRADE ALL DISTURBED AREAS.
6. DRESS AND OVERSEED ALL DISTURBED AREAS AND IMMEDIATELY ESTABLISH PERMANENT VEGETATIVE COVER. MAINTAIN VEGETATIVE COVER THROUGHOUT DURATION OF PROJECT.
7. INSTALL INFILTRATION BASINS. DO NOT INSTALL INFILTRATION BASINS UNTIL REMAINDER OF THE SITE IS STABILIZED.
8. REPAIR ANY INADVERTENT EROSION AND REMOVE ANY INADVERTENT SEDIMENTATION.
9. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION OR AS DIRECTED BY THE CIVIL INSPECTOR.

LAND USE	SEED ¹	
	SPECIES	APPLICATION RATES
Minimum Core Lawn (Commercial or Residential)	Tall Fescue ¹	175-200 lbs.
	Bermudagrass	75 lbs.
High-Maintenance Lawn	Tall Fescue ¹	200-250 lbs.
	Bermudagrass (seed)	40 lbs. (unhulled)
	Bermudagrass (by other vegetative establishment method, see Std. & Spec. 3.34)	30 lbs. (hulled)
General Slope (3:1 or less)	Tall Fescue ¹	128 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ²	20 lbs.
	TOTAL:	150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue ¹	93-108 lbs.
	Bermudagrass	0-15 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ²	20 lbs.
	Setaria Lespedeza ³	20 lbs.
	TOTAL:	150 lbs.

1. When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCI) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCI. A current turfgrass variety list is available at the local County Extension office or through VCI at 804-746-4894 or at <http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html>.
2. Use seasonal nurse crop in accordance with seeding dates as stated below:
February, March-April.....Annual Rye
May 1st-August.....Foxtail Millet
September, October-November 15th.....Annual Rye
November 16th-January.....Winter Rye
3. May through October, use hulled seed. All other seeding periods, use unhulled seed. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods increase to 30-40 lbs./acre.

FERTILIZER & LIME

Apply 10-20-10 fertilizer at a rate of 500 lbs. / acre (or 12 lbs. / 1,000 sq. ft.). Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.).

NOTE:

- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4-6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in *Erosion & Sediment Control Techniques Bulletin # 4, 2003 Nutrient Management for Development Sites* at <http://www.dor.state.vt.us/sw/eds.htm#pubs>

SEEDING SCHEDULE

V&SC STD & SPEC 3.32

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	2000 Mix of Annual Ryegrass (Colum multi-tarum) & Cereal (Winter) Rye (Secale cereale)	50-100 (lb/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (Colum multi-tarum)	50-100 (lb/acre)
May 1 - Aug. 31	German Millet	50 (lb/acre)
FERTILIZER & LIME		
Apply 10-10-10 fertilizer at a rate of 500 lbs. / acre (or 12 lbs. / 1,000 sq. ft.). Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.).		
NOTE:		
1. A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site. 2. Incorporate the lime and fertilizer into the top 4-6 inches of the soil by disking or by other means. 3. When applying Slowly Available Nitrogen, use rates available in <i>Erosion & Sediment Control Techniques Bulletin # 4, 2003 Nutrient Management for Development Sites</i> at http://www.dor.state.vt.us/sw/eds.htm#pubs		

DOMINION VIRGINIA POWER NOTES:

1. THE CUSTOMER/DEVELOPER IS RESPONSIBLE FOR CALLING THE CUSTOMER SERVICE CENTER OF DOMINION VIRGINIA POWER AT 1-888-667-3000 TO ESTABLISH A WORK REQUEST BEFORE SITE WORK IS TO BEGIN.
2. THE CUSTOMER/DEVELOPER WILL BE RESPONSIBLE FOR ANY CONSTRUCTION COST ASSOCIATED WITH THE RELOCATION OF ANY DOMINION VIRGINIA POWER FACILITIES.
3. THE CUSTOMER/DEVELOPER WILL BE RESPONSIBLE FOR ANY CONSTRUCTION COST ASSOCIATED WITH THE INSTALLATION OF PERMANENT POWER.
4. DOMINION VIRGINIA POWER WILL REQUIRE RIGHT-OF-WAY FROM THE OWNER BEFORE ANY LOTS ARE SOLD.
5. DOMINION POWER WILL REQUIRE RIGHT-OF-WAY FOR ALL LINE EXTENSIONS.
6. THE CUSTOMER/DEVELOPER WILL BE RESPONSIBLE FOR CLEARING THE RIGHT-OF-WAY BEFORE DOMINION VIRGINIA POWER FACILITIES WILL BE INSTALLED.
7. THE CUSTOMER/DEVELOPER WILL BE RESPONSIBLE FOR INSTALLATION OF DOMINION VIRGINIA POWER REQUIRED CONDUITS.
8. THE CUSTOMER/DEVELOPER WILL BE RESPONSIBLE FOR ANY CONSTRUCTION COSTS ASSOCIATED WITH THE INSTALLATION OF PERMANENT POWER FOR THE PTOPOSED PUMP STATION.
9. ALL DOMINION VIRGINIA POWER FACILITIES WILL BE LOCATED IN THE FRONT OF THE PROPOSED LOTS.
10. ANY WORK IN A DOMINION VIRGINIA POWER TRANSMISSION RIGHT-OF-WAY WILL REQUIRE APPROVAL BEFORE THE WORK IS STARTED.

Virginia Erosion and Sediment Control Minimum Standards (MS Checklist August 30, 2013)			
Yes	N/A	4VAC50-30-40 Minimum Standards	Describe how MS is addressed on plan
✓		MS1: Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.	The stabilization practices and limits of clearing and grading are shown on the Demolition, Erosion & Sediment Control Plan and Site Plan. The seeding specifications are provided on the Detail Sheets.
✓		MS2: During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.	Silt fence will be used at the toe of all stockpile slopes. Intermediate or temporary (Perennial) seeding will be used for long term (14 days to one year) temporary stockpile areas.
✓		MS3: A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.	The requirements for establishing the permanent vegetation are provided on the Details Sheets and on the Site Plan.
✓		MS4: Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.	All measures intended to trap sediment are shown on the Demolition, Erosion & Sediment Control Plans. All of these measures will be constructed as a first step in any land-disturbing activity and will be made functional before upslope land disturbing takes place.
	✓	MS5: Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.	There are no earthen structures as part of the proposed development.
	✓	MS6: Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin. a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres. b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.	There are no sediment trap or sediment basin as part of the proposed development.
✓		MS7: Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.	All cuts and fill slopes are designed in a manner that will minimize erosion as indicated on the Site Plan. Slopes found to be eroding excessively within one year of permanent stabilization will be provided with additional slope stabilizing measures until the problem is corrected.
✓		MS8: Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.	Concentrated runoff will be contained in an adequate permanent channel.
✓		MS9: Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.	The potential for water seeping from slope faces has been addressed by providing adequate drainage as shown on the Grading plans.
✓		MS10: All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.	There are no proposed storm sewer inlets associated with this project.
✓		MS11: Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.	There are no stormwater conveyance channels associated with this project.
✓		MS12: When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.	There is no live watercourse within the proposed development. The adjacent watercourse will be protected with a double row of silt fence.
✓		MS13: When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.	There is no live watercourse within the proposed development.
✓		MS14: All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met.	There is no live watercourse within the proposed development. The adjacent watercourse will be protected with a double row of silt fence.
✓		MS15: The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.	There is no watercourse within the proposed development.
✓		MS16: Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria: a. No more than 500 linear feet of trench may be opened at one time. b. Excavated material shall be placed on the uphill side of trenches. c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property. d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization. e. Restoration shall be accomplished in accordance with this chapter. f. Applicable safety chapters shall be complied with.	Installation of the underground utility lines has been designed in accordance with the MS16 standards in addition to other applicable criteria.
✓		MS17: Where construction vehicle access roads intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.	A temporary construction entrance located at the point of vehicular ingress and egress on the construction site will be provided to reduce the soil transport onto the public roads and other paved areas. Any and all material or debris tracked onto a public road and private road surface will be cleaned thoroughly. Sediment will be removed from roads by shoveling and sweeping and it will be transported to a sediment controlled disposal area.
✓		MS18: All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the VESCP authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.	The timely removal of temporary control structures and stabilization of trapped sediment and disturbed soil has been addressed in the Demolition, Erosion and Sediment Control Plans.
✓		MS19: Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria. Stream restoration and relocation projects that incorporate natural channel design concepts are not man-made channels and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels: a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed. b. Adequacy of all channels and pipes shall be verified in the following manner: (1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or (2) (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks. (b) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and (c) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system. c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall: (1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to the channel bed or banks; or (2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances; or (3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or (4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion. d. The applicant shall provide evidence of permission to make the improvements. e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development of the subject project. f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESCP of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance. g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel. h. All on-site channels must be verified to be adequate. i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility. j. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations. k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state. l. Any plan approved prior July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to: i. detain the water quality volume and to release it over 48 hours; ii. detain and release over a 24-hour period the expected rainfall resulting from the one-year, 24-hour storm; and iii. reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to § 10.1-562 or 10.1-570 of the Act. m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of § 10.1-561 A of the Act and this subsection shall be satisfied by compliance with water quality requirements in the Stormwater Management Act (§ 10.1-603.2 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities are in accordance with 4VAC50-60-48 of the Virginia Stormwater Management Program (VSMP) Permit Regulations. n. Compliance with the water quality minimum standards set out in 4VAC-50-60-66 of the Stormwater Management Program (VSMP) Permit Regulations shall be deemed to satisfy the requirements of Minimum Standard 19.	a. There will be no concentrated runoff leaving this site. b. Calculations have been provided which show natural channels have been analyzed for a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks. c. The existing watercourse to which this site drains is currently adequate. d. By having the lot owner request us to provide a site plan for construction, permission has been granted to alter this site. e. The narrative has considered both pre and post development conditions. f. Stormwater detention has not been proposed for this site, so no additional stormwater analysis is required than is provided in this narrative. g. The ultimate outfall of this site is into the Lynnhaven Bay, energy dissipators prior to the outfall are provided off site and are not the responsibility of this site's owner. h. There are no on-site channels being constructed as part of this project. i. Erosion and sedimentation control measures have been provided on the site plan to ensure there are no off-site issues. j. This site is considered its own entity, and thus was only analyzed within its property lines. k. The erosion and sediment control devices have been designed to minimize permanent impact upon the site. l. The site grading has been designed to satisfy the flow rate capacity and velocity requirements. m. The site grading has been designed to satisfy the flow rate capacity and velocity requirements. n. The project is in conformance with the water quality minimum standards.

MS-19 CHECKLIST OF SHORE DRIVE SINGLE FAMILY

DESIGNED
DRAWN
CHECKED
APPROVED

DATE
DATE
DATE
DATE

PROJ. NO.: 18023

SHEET C-005

6 of 17 Sheets

SCALE: NONE

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STATE OF VIRGINIA
J. SCOTT MEYER
Lic. No. 02302
Professional Engineer

VERIFIED
DATE 5/27/21

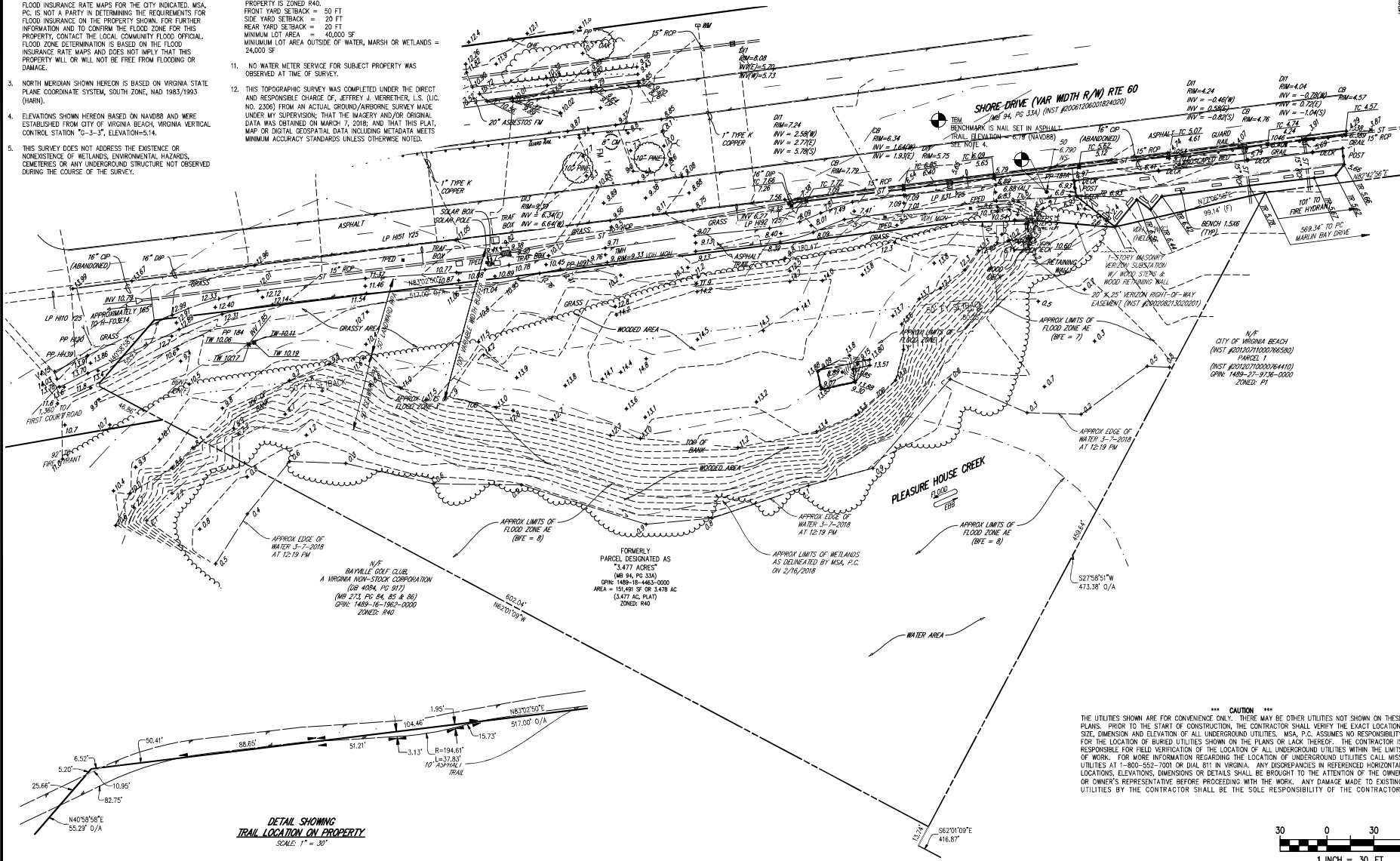
VERGINIA BEACH

SHORE DRIVE SINGLE FAMILY

MS-19 CHECKLIST OF

1. NOTES:
THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND THEREFORE MAY NOT SHOW ANY/ALL EASEMENTS OR RESTRICTIONS THAT MAY AFFECT THE PROPERTY AS SHOWN. PROPERTY IS SUBJECT TO RIGHTS-OF-WAY, EASEMENTS, COVENANTS AND ALL MATTERS OF PUBLIC RECORDS.
2. THIS PROPERTY APPEARS TO FALL IN FLOOD ZONE "X", AE (BFE=7, NAVD88) AND AE (BFE=8, NAVD88) AS SHOWN ON PANEL D006 OF THE FLOOD INSURANCE RATE MAPS FOR THE CITY OF VIRGINIA BEACH, COMMUNITY NO.: 515531, DATED 1-16-2015. FLOOD ZONE INFORMATION SHOWN HEREON IS NOT GUARANTEED AND WAS APPROXIMATELY SOLEDED FROM THE FLOOD INSURANCE RATE MAPS FOR THE CITY INDICATED. MSA, P.C. IS NOT A PARTY IN DETERMINING THE REQUIREMENTS FOR FLOOD INSURANCE ON THE PROPERTY SHOWN. FOR FURTHER INFORMATION AND TO CONFIRM THE FLOOD ZONE FOR THIS PROPERTY, CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL. FLOOD ZONE DETERMINATION IS BASED ON THE FLOOD INSURANCE RATE MAPS AND DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE FREE FROM FLOODING OR DAMAGE.
3. NORTH MERIDIAN SHOWN HEREON IS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 1983/1993 (HARN).
4. ELEVATIONS SHOWN HEREON BASED ON NAVD88 AND WERE ESTABLISHED FROM CITY OF VIRGINIA BEACH, VIRGINIA VERTICAL CONTROL STATION "G-3-3", ELEVATION=114.
5. THIS SURVEY DOES NOT ADDRESS THE EXISTENCE OR NONEXISTENCE OF WETLANDS, ENVIRONMENTAL HAZARDOUS, CEMETERIES OR ANY UNDERGROUND STRUCTURE NOT OBSERVED DURING THE COURSE OF THE SURVEY.

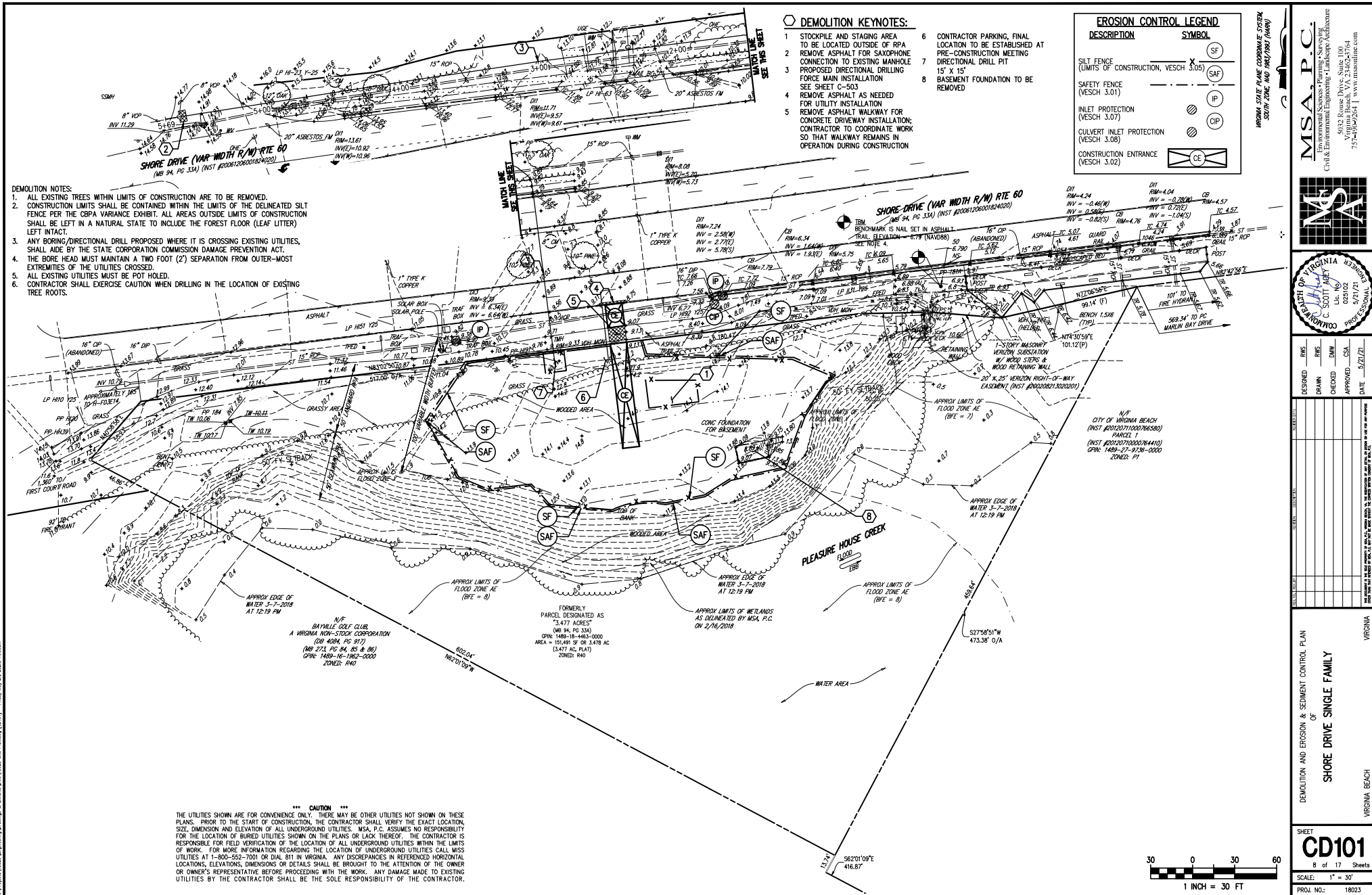
6. LOCATION OF UNDERGROUND NON-GRAVITY UTILITIES SHOWN ON THIS SURVEY ARE BASED ON SURFACE INDICATIONS OF SUBTERRANEAN USE. THIS SURVEY DOES NOT GUARANTEE THE EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES.
7. ADDRESS FOR SITE IS: 3925 SHORE DRIVE, VIRGINIA BEACH, VA 23455.
8. OWNER OF PARCEL DESIGNATED AS "3.477 ACRES" ON MAP BOOK 94 AT PAGE 33A IS SHORE DRIVE AREA PROPERTIES, LLC, A VIRGINIA LIMITED LIABILITY COMPANY. SOURCE OF TITLE IS INSTRUMENT #20080818000976300.
10. PER CITY OF VIRGINIA BEACH PROPERTY DETAIL, SUBJECT PROPERTY IS ZONED R40.
FRONT YARD SETBACK = 50 FT
SIDE YARD SETBACK = 20 FT
REAR YARD SETBACK = 20 FT
MINIMUM LOT AREA = 40,000 SF
MINIMUM LOT AREA OUTSIDE OF WATER, MARSH OR WETLANDS = 24,000 SF
11. NO WATER METER SERVICE FOR SUBJECT PROPERTY WAS OBSERVED AT TIME OF SURVEY.
12. THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF, JEFFREY J. WERRETH, L.S. (LIC. NO. 2306) FROM AN ACTUAL, SOUNDING/ABSORBING SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON MARCH 7, 2018; AND THAT THIS PLAT, MAP OR DIGITAL GEOGRAPHICAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.



*** CAUTION ***
THE UTILITIES SHOWN ARE FOR CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, SIZE, DIMENSION AND ELEVATION OF ALL UNDERGROUND UTILITIES. MSA, P.C. ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF BURIED UTILITIES SHOWN ON THE PLANS OR LACK THEREOF. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE LIMITS OF WORK. FOR MORE INFORMATION REGARDING THE LOCATION OF UNDERGROUND UTILITIES CALL MISS UTILITIES AT 1-800-552-7001 OR DIAL 811 IN VIRGINIA. ANY DISCREPANCIES IN REFERENCED HORIZONTAL LOCATIONS, ELEVATIONS, DIMENSIONS OR DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER OR OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK. ANY DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

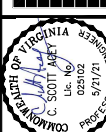


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VIRGINIA STATE PLANE COORDINATE SYSTEM
SOUTH ZONE, NAD 1983/1982 (NAD83)

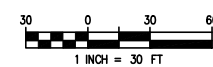
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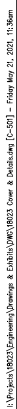


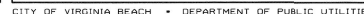
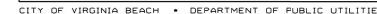
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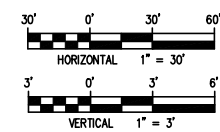
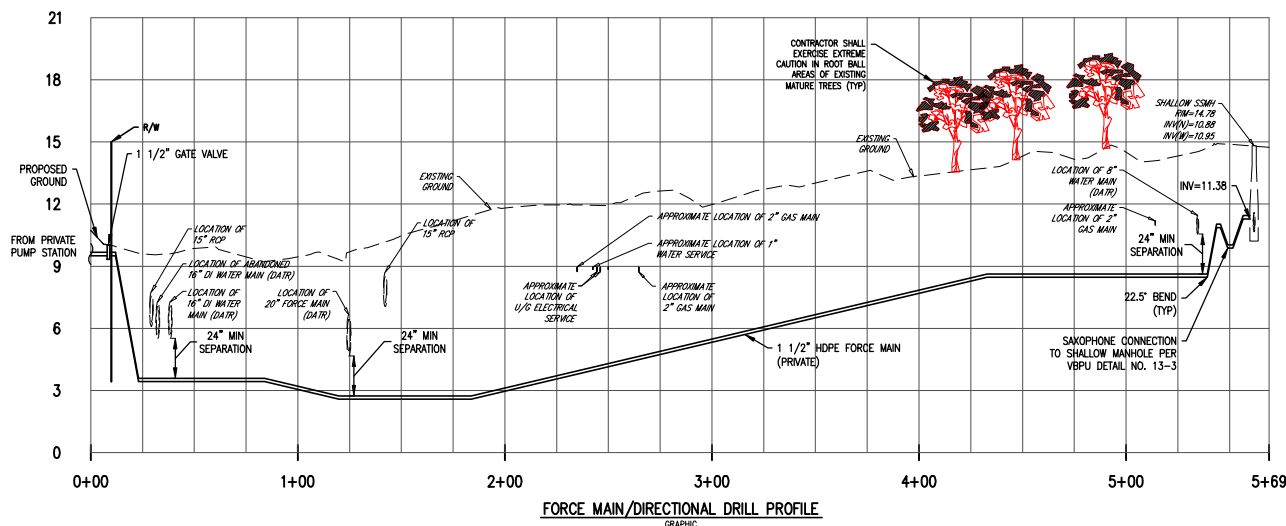
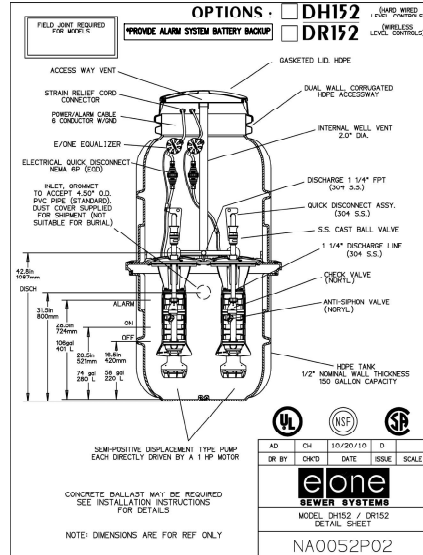
DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN
OF
SHORE DRIVE SINGLE FAMILY
VIRGINIA BEACH

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CD101
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SCALE: 1" = 30'
PROJ. NO.: 18023

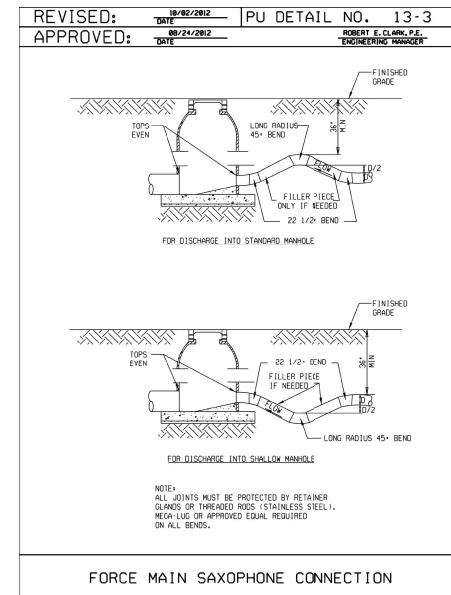
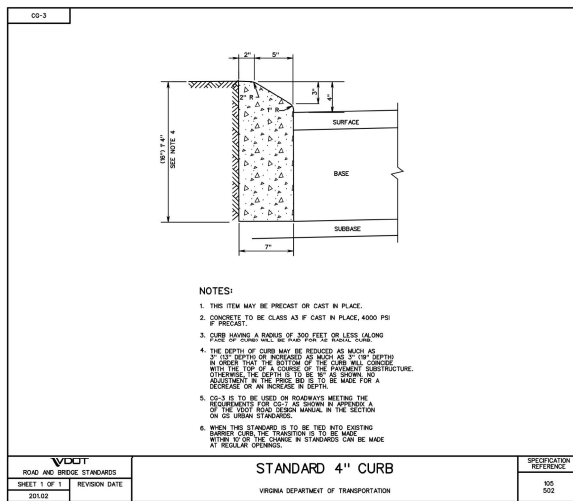
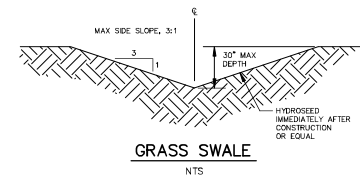
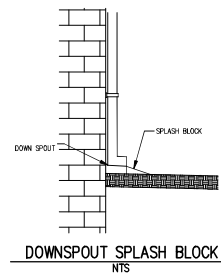
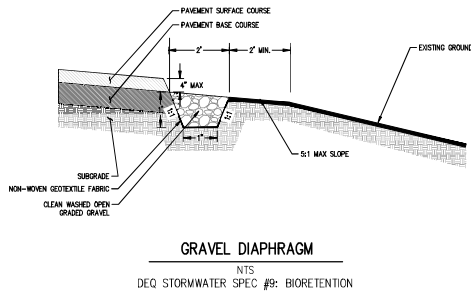








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APPROVED	CSA
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REVISION	DATE	BY	DESCRIPTION

DETAILS OF SHORE DRIVE SINGLE FAMILY
VIRGINIA BEACH

SHEET C-505
15 of 17 Sheets
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