### RESPONSIBLE LAND DISTURBER DESIGNATION

THE PERSON IDENTIFIED BELOW IS DESIGNATED AS THE RESPONSIBLE LAND DISTURBER WHO WILL BE IN CHARGE OF AND RESPONSIBLE FOR CARRYING OUT THE LAND DISTURBING ACTIVITY ASSOCIATED WITH THIS PROJECT. THE PERSON MEETS THE APPLICABLE REQUIREMENTS OF VIRGINIA CODE SECTION 10.1-563 AND 10.1-566 BY VIRTUE OF THE FOLLOWING:

RESPONSIBLE LAND DISTURBER CERTIFICATE DCR CERTIFICATION FOR COMBINED ADMINISTRATOR, ADMINISTRATOR, PLAN REVIEWER,

INSPECTOR OR CONTRACTOR X VIRGINIA PROFESSIONAL ENGINEER LAND SURVEYOR LANDSCAPE ARCHITECT OR ARCHITECT

		, = 11.5 00.11.2.01, = 11.500.11 = 7.11.01.11.201, 01.71	•
RESPONSIBLE LAND	DISTURBER CONTAC	7	
NAME (SIGNATURE):	Chrisp	I. Oill	
NAME (PRINT):		CHRIS AEBEL, PE	
CERTIFICATION/REG	ISTRATION NUMBER:	32137	
COMPANY:		TIMMONS GROUP	
MAILING ADDRESS:		2901 S. LYNNHAVEN RD, SUITE 200 VIRGINIA BEACH, VA 23452	
TELEPHONE:		757-217-4872	

CHRIS.AEBEL@TIMMONS.COM THIS DESIGNATION MAY ONLY BE CHANGED BY A PLAN COVER SHEET REVISION THAT MUST BE SUBMITTED TO THE CITY FOR VERIFICATION AND APPROVAL.

#### SITE STATISTICAL DATA PROPERTY ADDRESS MARLIN BAY DR AFFECTED GPINs 14894768080000 INSTR. # 20080818000976300 3. INSTRUMENT NUMBERS MAP BOOK AND PAGE M.B. 005, M.P. 0197 PD-H1 4. ZONING EXISTING USE **RESIDENTIAL - UNDEVELOPED** RESIDENTIAL 6. PROPOSED USE STORMWATER CRITERIA CITY OF VIRGINIA BEACH 8. UTILITIES 9. FLOOD PLAIN (F.I.R.M.) INFORMATION ZONE X, ZONE AE (EL. 7, EL. 8) MAP 5155310138G JANUARY 16th, 2015 NORTH: R5D RESIDENTIAL 10. ADJACENT PROPERTY INFORMATION SOUTH: P1 PRESERVATION EAST: WINSTON PLACE WEST: R5D RESIDENTIAL WATERSHED/HUC-12 CODE LYNHAVEN RIVER / 020801080201 12. TOPOGRAPHIC SURVEY SOURCE TIMMONS GROUP 13. BENCH MARK CITY OF VIRGINIA BEACH CONTROL STATION G-4-6, H-2-1, PS 301 HORIZONTAL DATUM NAD 1983 / 1993 HARN 15. VERTICAL DATUM NAVD 1988 PSAMMENTS (~41% OF SITE) (USDA WEB SOIL SURVEY) COROLLA FINE SANDS (~59% OF SITE) 17. TOTAL SITE AREA 88,384 SF = 2.03 AC 18. TOTAL DISTURBED AREA 136,446 SF = 3,13 AC TOTAL DISTURBED LOT AREAS 86,846 SF = 1.99 AC MARLIN BAY DR. R/W DISTURBED AREA 43,534 SF = 0.99 AC OFFSITE (WITHIN R/W) 6,066 SF = 0.14 AC 19. PROPOSED RESIDENTIAL LOTS/UNITS 14 LOTS / 26 UNITS 4,613 SF = 0.11 AC 20. EXISTING IMPERVIOUS AREA (WITHIN DISTURBED AREA) 21. PROPOSED IMPERVIOUS AREAS (WITHIN DISTURBED AREA) WINSTON PLACE R/W 2,734 SF = 0.06 AC CHESTERFIELD AVE. R/W 0 SF = 0.00 ACMYSTIC COVE DR. R/W 610 SF = 0.01 AC 27.991 SF = 0.64 AC MARLIN BAY DR. R/W MAXIMUM LOT IMPERVIOUS AREA 65,134 SF = 1.49 AC (75% MAX. IMPERVIOUS PER LOT) TOTAL PROPOSED IMPERVIOUS 96,469 SF = 2.21 AC

BMP INFORMATION TABLE					
TYPE OF BMP	UNDERGROUND STONE RESERVOIR BMP (4)				
GEOGRAPHIC COORDINATES	N: 36.904961 E: -76.100338				
POLLUTANT REMOVAL PROVIDED BY BMP	0 LB/YR				
TOTAL POLLUTANT REMOVAL PROVIDED	0 LB/YR				
TOTAL POLLUTANT REMOVAL REQUIRED	1.41 LB/YR				
OFFSITE NUTRIENT CREDITS PURCHASED	1.41 LB/YR				
BMP OWNER	PRIVATE				
MAINTENANCE RESPONSIBILITY	PRIVATE				

14 (1 ERU PER SINGLE-FAMILY RESIDENTIAL LOT)

22. BUILDING SETBACKS

FRONT

REAR

SIDE

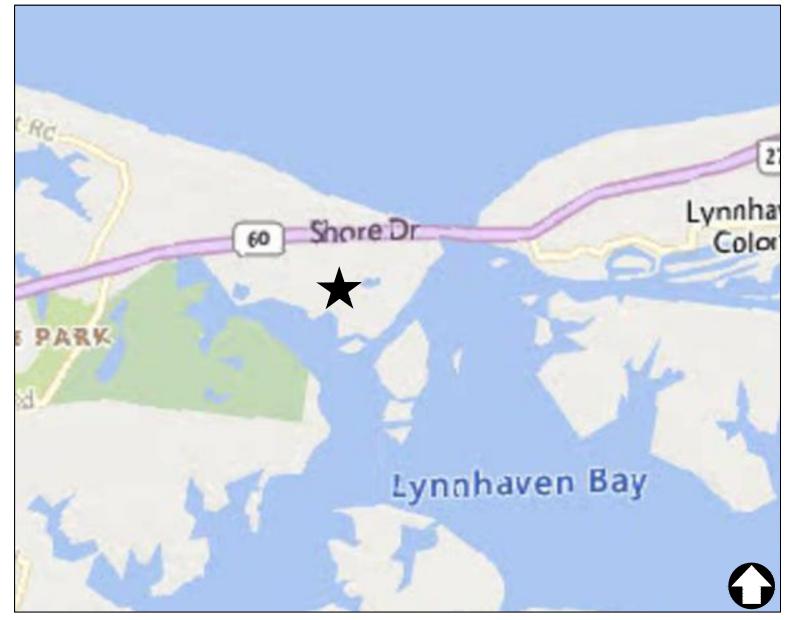
ERU'S

EXISTING

PROPOSED

# SUBDIVISION CONSTRUCTION PLANS FOR OCEAN PARK

VIRGINIA BEACH, VIRGINIA DSC FILE # JULY 03, 2025



**VICINITY MAP SCALE: 1" = 2,000'** 

# **ADVISORY NOTES**

THE CONTRACTOR SHALL CALL "MISS UTILITY" 48 HOURS PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF THE LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN, IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLAN. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITY WITHIN THE EXISTING AND/OR RIGHT-OF-WAY REQUIRED BY THE DEVELOPMENT. CONTACT MISS UTILITY OF VIRGINIA: 1-800-552-7001 (TOLL FREE) OR DIAL 811.

# RESPONSIBLE LAND DISTURBER NOTE

THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR THE PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO THE ISSUANCE OF THE LAND DISTURBING PERMIT, THE OWNER OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE OWNER OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.

### DEVELOPER

MCLESKEY & ASSOCIATES 2859 VIRGINIA BEACH BOULEVARD #106 VIRGINIA BEACH, VIRGINIA 23452 CONTACT: MARK ROSENFIELD (757) 544-2451 MARK@MCLESKEY.COM

MISS UTILITY OF VIRGINIA

### SURVEYOR

TIMMONS GROUP 2901 S. LYNNHAVEN ROAD, SUITE 200 VIRGINIA BEACH, VA 23452 CONTACT: TODD FRENCH, LS (757) 217-4871 TODD.FRENCH@TIMMONS.COM

# SITE CIVIL ENGINEER

TIMMONS GROUP 2901 S. LYNNHAVEN ROAD, SUITE 200 VIRGINIA BEACH, VA 23452 CONTACT: CHRIS AEBEL, PE (757) 635-2061 CHRIS.AEBEL@TIMMONS.COM

#### /IRGINIA BEACH DEPT. OF PLANNING 2875 SABRE STREET, SUITE 500 VIRGINIA BEACH, VA 23452 CONTACT: MARCHELLE COLEMAN PHONE: (757) 385-8557 EMAIL: MCOLEMAN@VBGOV.COM

**PLANNING** 

FIRE MARSHAL VIRGINIA BEACH FIRE DEPT 2408 COURTHOUSE DRIVE, BLDG. 21 VIRGINIA BEACH, VA 23456 CONTACT: DEIDRA PETERSON PHONE: (757) 385-1085 EMAIL: DRKPETER@VBGOV.COM

### **CURRENT OWNER** SHORE DRIVE AREA PROPERTIES, LLC 2859 VIRGINIA BEACH BOULEVARD, SUITE 106 VIRGINIA BEACH, VA 23452

PUBLIC UTILITIES VIRGINIA BEACH PUBLIC UTILITIES ENGINEERING 3500 DAM NECK ROAD VIRGINIA BEACH, VA 23453 CONTACT: ART FELTON PHONE: (757) 385-4335

EMAIL: AFELTON@VBGOV.COM

EMAIL: EMILY.D.DEARMOND@DOMINIONENERGY.COM

### STORMWATER VIRGINIA BEACH DEPT. OF PLANNING 2875 SABRE STREET, SUITE 500 VIRGINIA BEACH, VA 23453

CONTACT: JANELLE LOGAN

EMAIL: JLOGAN@VBGOV.COM

PHONE: (757) 385-8623

**ELECTRIC** 

DOMINION ENERGY

NORFOLK, VA 23509

2700 CROMWELL DRIVE

CONTACT: EMILY DEARMOND

PHONE: (757) 857-2166

### APPROVALS

TIMMONS GROUP IS NOT RESPONSIBLE OR LIABLE FOR ANY CONSTRUCTION OR DAMAGES TO THIS PROJECT PRIOR TO ALL FINAL PLAN APPROVALS.

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 385-4558 TO SCHEDULE A PRE-CONSTRUCTION MEETING. FAILURE TO CONTACT PLANNING/CIVIL INSPECTIONS PRIOR TO ANY LAND DISTURBING ACTIVITY MAY RESULT IN A STOP WORK ORDER OR OTHER LEGAL ACTION.

LAND DISTURBANCE NOTE

#### SEDIMENT CONTROL **RESPONSIBLE LAND DISTURBER**

THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR THE PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO THE ISSUANCE OF THE LAND DISTURBING PERMIT. THE OWNER OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALI ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT THE OWNER OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.

#### RECORD DRAWING AND CONSTRUCTION **CERTIFICATION NOTE**

THE STORMWATER MANAGEMENT/BMP FACILITY AND ASSOCIATED STORMWATER CONVEYANCE SYSTEM(S) AS PROPOSED FOR THIS PROJECT WILL REQUIRE THE SUBMISSION, REVIEW, APPROVAL OF A RECORD DRAWING (AS BUILT), AND CONSTRUCTION CERTIFICATION PRIOR TO RELEASE OF THE CERTIFICATE OF OCCUPANCY. RECORD DRAWING AND CONSTRUCTION CERTIFICATION IS REQUIRE' TO BE RECORDED AND CHECKED BY A LICENSED SURVEYOR.

### ADJACENT PROPERTY OWNERS NOTE

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

385-4558 TO SCHEDULE A PRE-CONSTRUCTION MEETING. FAILURE TO CONTACT PLANNING/CIVIL

INSPECTIONS PRIOR TO ANY LAND DISTURBING ACTIVITY MAY RESULT IN A STOP WORK ORDER

2. THE VIRGINIA BEACH CITY COUNCIL APPROVED A CONDITIONAL REZONING FOR THIS PROJECT ON

THE PROPERTY IS IN A "FLOODPLAIN SUBJECT TO SPECIAL RESTRICTIONS" (REFER TO APPENDIX K.

4. THE PROPERTY DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON THE FEMA NFIP

5. THE LOWEST FLOOR ELEVATION SHOWN IS AT LEAST TWO FEET ABOVE THE MAXIMUM HYDRAULIC

24-HOUR STORM. REFER TO VIRGINIA BEACH PUBLIC WORKS DESIGN STANDARDS §8.3D(5)(C)(II)

FIRM FOR THE CITY OF VIRGINIA BEACH, MAP NUMBER 5155310136G, DATED JANUARY 16, 2015. THE

PROPERTY FALLS IN FLOOD ZONES AE (EL 7, EL 8) WITHIN THE 1% ANNUAL CHANCE FLOODPLAIN

GRADE LINE IN THE PROPOSED STORMWATER MANAGEMENT FACILITY DURING THE 100-YEAR,

HORIZONTAL DATUM: THIS PLAN IS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM,

SOUTH ZONE, NORTH AMERICAN DATUM 1983/1993 HARN (US SURVEY FEET). CITY OF VIRGINIA

(NAVD88). THE CITY OF VIRGINIA BEACH BENCHMARK USED FOR THE SURVEY AND DESIGN OF THIS

PLAN IS G-3-3, ELEVATION = 5.14. NEAR THE SOUTHWEST CORNER OF WINSTON PLACE AND

ANY AND ALL MATERIALS OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD SURFACE WILL

BE REMOVED AT THE END OF EACH DAY. SEDIMENT WILL BE REMOVED FROM THE ROADS BY

SHOVELING OR SWEEPING AND WILL BE TRANSPORTED TO A SEDIMENT CONTROLLED DISPOSAL

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ALL OWNERS AND RESIDENTS OF THE PROPERTY ADJACENT TO THE DEVELOPMENT OR OFF-SITE IMPROVEMENTS 30 DAYS PRIOR

10. THE CONTRACTOR MUST NOTIFY PUBLIC UTILITIES CONSTRUCTION REPRESENTATIVE SEVEN (7)

11. ANY MILLING AND OVERLAYING REQUIRED IN AREAS OF OPEN CUTTING OF CITY RIGHT-OF-WAY

12. THE CONTRACTOR SHALL FIELD-VERIFY THE LOCATION, DEPTH, AND SIZE OF EXISTING UNDERGROUND UTILITIES. THE LOCATIONS SHOWN ARE APPROXIMATE AND NOT GUARANTEED BY

13. THE CONTRACTOR IS RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS FOR THIS PROJECT

TIMMONS GROUP. THE CONTRACTOR SHALL ALERT THE CIVIL ENGINEER OF ANY DISCREPANCIES

7. VERTICAL CONTROL: THIS PLAN IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988

CHESTERFIELD STREET, A CHISELED SQUARE IN CONCRETE CURB, ELEVATION 6.78.

TO THE COMMENCEMENT OF WORK UNLESS OTHERWISE DIRECTED BY THE CITY.

CALENDAR DAYS PRIOR TO ANY NIGHT TIME SHUT DOWN OF ANY WATER MAINS.

SHALL BE AT THE DIRECTION AND DISCRETION OF THE PLANNING/CIVIL INSPECTOR.

JUNE 14, 1994 AND RECORDED PROFFER MODIFICATION ON SEPTEMBER 26, 2022.

OR OTHER LEGAL ACTION.

SECTION 4.10 OF THE CITY CODE).

AND "X" OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

BEACH STATIONS USED: G-4-6, H-2-1, PS 301.

PRIOR TO COMMENCING CONSTRUCTION.

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ALL PROPERTY OWNERS AND RESIDENTS OF PROPERTIES ADJACENT TO THE DEVELOPMENT OR OFFSITE IMPROVEMENTS, 30 DAYS PRIOR TO THE COMMENCEMENT OF WORK, UNLESS OTHERWISE DIRECTED BY THE CITY. CONSTRUCTION WITHIN EASEMENTS OR IN PUBLIC RIGHT-OF-WAY NECESSITATES NOTICE WHETHER ADJACENT TO OR LOCATED ON THE ADJOINING PROPERTY. FAILURE TO PROVIDE THE MINIMUM NOTIFICATION TIME WILL RESULT IN A SUSPENSION OF WORK.

Sheet List Table				
Sheet Number	Sheet Title			
C-0.0	COVER PAGE			
C-0.1	GENERAL NOTES			
C-1.0	EXISTING CONDITIONS			
C-2.0	DEMOLITION PLAN			
C-3.0	EROSION AND SEDIMENT CONTROL PLAN PHASE I			
C-3.1	EROSION AND SEDIMENT CONTROL PLAN PHASE II			
C-3.2	EROSION AND SEDIMENT CONTROL NARRATIVE			
C-3.3	EROSION AND SEDIMENT CONTROL DETAILS			
C-4.0	SITE AND UTILITY PLAN			
C-5.0	GRADING PLAN			
C-6.0	DRAINAGE PLAN			
C-7.0	PROFILES			
C-7.1	PROFILES			
C-7.2	PROFILES			
C-8.0	SITE DETAILS			
C-9.0	BMP DRAINAGE DETAIL			
C-9.1	DRAINAGE DETAILS			
C-10.0	UTILITY DETAILS			
C-10.1	UTILITY DETAILS			
L-1.0	LANDSCAPE PLAN			
L-2.0	PLANT SCHEDULE			
P-1.0	PHOTOMETRIC PLAN			

# FIRE PROTECTION DATA

PER 2021 INTERNATIONAL FIRE CODE (IFC)

EXTERNAL NEEDED FIRE FLOW:

AVAILABLE FLOW FROM CITY:

@ 34 PSI RES.

### **SEWER SERVICE DATA** PER VB DESIGN STANDARDS MANUAL TABLE 4-3

TOTAL UNITS: AVERAGE FLOW: 6.03 GGM PEAKING FACTOR: 2.5

PEAK DOMESTIC DEMAND: 15.07 GPM SANITARY SEWER CLEANOUT SIZE:

# WATER SERVICE DATA

PUBLIC SANITARY SEWER LINE SIZE:

PER VB DESIGN STANDARDS MANUAL	. 8.3.B
TOTAL UNITS: AVERAGE DAY DEMAND / UNIT: RESIDENTIAL PEAK HOUR DEMAND: (Q=11.4 x (UNITS)^0.544)	28 UNITS 225 GPD 23 GPM

DOMESTIC METER SIZE: DOMESTIC SERVICE LATERAL SIZE:

PUBLIC WATER LINE SIZE:

# STORMWATER MANAGEMENT CERTIFICATION STATEMENT

ALL LOT CLEARING, CONSTRUCTION, DEVELOPMENT AND DRAINAGE SHALL BE PERFORMED IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN.

BY:	Chiffund all	DATE: 07/03/2025
	(AUTHORIZED SIGNATURE)	<del>_</del>
	CHRIS AEBEL, PE	
	SENIOR PROJECT MANAGER	

### **CONSTRUCTION PLAN AGREEMENT**

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 DESIGN PROFESSIONAL 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 CONSULTING FIRM: TIMMONS GROUP

BY:	Chyfund ald	DATE: 07/03/2025
_	(AUTHORIZED SIGNATURE)	_
	CHRIS AEBEL, PE	
	SENIOR PROJECT MANAGER	

### SIGNATURE BLOCK FOR CITY USE

07/03/2025

07/03/2025 DRAWN BY KΒ

DESIGNED BY CHECKED BY CA

SCALE AS SHOWN

JOB NO. 50568 SHEET NO.

C-0.0

OTHERWISE NOTED. 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

THE OWNER/DEVELOPER/CONTRACTOR WILL OBTAIN A RIGHT-OF-WAY PERMIT FROM THE DSC, CITY OF VIRGINIA BEACH, VIRGINIA, PRIOR TO CONSTRUCTION WITHIN 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

THE OWNER/DEVELOPER/CONTRACTOR/RESPONSIBLE LAND DISTURBER (RLD) 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

THE STORMWATER MANAGEMENT FACILITY (SWMF) SHALL NOT BE EXCAVATED BEYOND THE TYPICAL SECTION(S) AS SHOWN ON THE APPROVED PLAN UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE DSC. SITE MATERIALS EXCAVATED BEYOND THE TYPICAL 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

HORIZONTAL DATUM: THIS (PLAT, 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.

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, THEOWNER(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.

THE OWNER/DEVELOPER/CONTRACTOR WILL BE RESPONSIBLE FOR DRIVEWAYS, WALKS, CURBS, PAVEMENT MARKINGS, ETC., THAT MUST BE CUT, REMOVED, OR DAMAGED DURING CONSTRUCTION.

9. CAUTION: WETLANDS MAY BE INVOLVED WITHIN THE BOUNDARY OF DEVELOPMENT. THE OWNER/DEVELOPER/CONTRACTOR/RLD MUST COMPLY WITH THE EXACT LIMITS OF CONSTRUCTION. PERMITS MAY BE REQUIRED FROM FEDERAL, STATE, AND LOCAL AGENCIES. **EROSION & SEDIMENT CONTROL (ESC) AND TREE PROTECTION NOTES** 

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 STORMWATER MANAGEMENT HANDBOOK (VSMH) 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

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.

NON-COMPLIANCE WITH ANY ESC REGULATION OR POLICY MAY RESULT IN A NOTICE TO COMPLY, STOP WORK ORDER (SWO) OR OTHER LEGAL ACTION. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVED BY PLANNING DEPARTMENT/DEVELOPMENT SERVICES CENTER (DSC) SHALL BE KEPT

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. 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.

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.

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 REGRADING.

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 14. DEWATERING 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 VSMH STD &

SPEC C-SCM-03. 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

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 VSMH STD & SPEC C-PCM-04. 20. THE USE OF STRAW BALES IS PROHIBITED FOR EROSION AND SEDIMENT CONTROL IN VIRGINIA BEACH UNLESS OTHERWISE APPROVED BY THE CIVIL

21. DUE TO LOCAL EXPERIENCE, SOME COMMERCIALLY 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 VSMH STD & SPEC C-SSM-01 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.

TORMWATER MANAGEMEN AS-BUILT PLANS MUST BE PREPARED BE A PROFESSIONAL ENGINEER OR LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA AND MUST BE

LEGALLY PERMITTED DISPOSAL FACILITY.

SUBMITTED TO AND APPROVED BY THE DSC FOR ALL SWMF, PRIOR TO THE RELEASE OF EROSION AND SEDIMENT CONTROL (E&S) AND SWMF SURETY 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. EXFILTRATION 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.

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.

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. 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.

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 DEVICES AT THE DIRECTION OF THE CIVIL INSPECTOR DURING ALL STAGES OF CONSTRUCTION TO ENSURE OPTIMUM EFFICIENCY UPON COMPLETION AND TO MINIMIZE EROSION AND SEDIMENT FROM ENTERING INTO THE STRUCTURE DURING CONSTRUCTION.

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 INSPECTIONS. 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 8, "STORMWATER MANAGEMENT" OF THE PWSS. 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. 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 HDPE & PE 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, HDPE, 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 HDPE PIPE TO CONCRETE OR BRICK STRUCTURES.

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. 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 CLEANOUTS 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 DRAWN COPPER WILL BE USED FOR OFF-SITE WATER SERVICE LINES, TWO-INCH (2") LINES AND UNDER, IN RIGHT-OF-WAYS AND PUBLIC 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 INCIDENTAL DRAINAGE

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 DSC'S ENGINEER BY THE

OWNER/DEVELOPER/CONTRACTOR'S DESIGN CONSULTANT, ALONG WITH THE PROPER CERTIFICATIONS, UNLESS PREVIOUSLY APPROVED BY THE CITY **FNGINEER'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. 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.

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 M-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. ALL STORM SEWER PIPE JOINTS WILL BE INSTALLED, SILT 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. ALL METAL PIPE CULVERTS AND STORM SEWERS WILL BE INSTALLED IN ACCORDANCE WITH DRAWINGS PB-1 OF THE VIRGINIA DEPARTMENT OF

10. IF METAL PIPE IS USED, THE OWNER/DEVELOPER/CONTACTOR 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. **INCIDENTAL CONCRETE** 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. 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-INCH PREMOLDED BITUMINOUS FIBER JOINT FILLER. CONSTRUCTION JOINTS ARE REQUIRED AS FOLLOWS:

B. FIVE FEET (5') WIDE SIDEWALK 50' C. TEN FEET (10') WIDE MULI-USE PATH 50

A. CURB & GUTTER 100'

TRANSPORTATION ROAD AND BRIDGE STANDARDS.

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 CIVIL INSPECTOR

PAVEMENT AND OPEN CUTS 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.

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.

3. PAVEMENT REPLACEMENT AND DESIGN IN CITY RIGHT-OF-WAYS WILL BE IN ACCORDANCE WITH SECTION 5.13 "PAVEMENT REPLACEMENT AND PATCHING

4 THE MINIMUM PAVEMENT DESIGN WITH THE RIGHT OF WAY OR FASEMENT WILL BE 1 1/2-INCHES SM-9.5A BITUMINOUS CONCRETE SURFACE ASPHALT. ONCRETE. OVER 3-INCHES BM-25.0A BASE MIX ASPHALT CONCRETE, UVER A 6-INCHES PETNO. 21A AGGREGATE BASE MATERIAL, OVERCOMPACTED SUBGRADE IN ACCORDANCE WITH SECTION 5.13 OF THE PUBLIC WORKS SPECIFICATIONS AND STANDARDS.

5. MATERIALS THAT ARE DETERMINED UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR OTHER ROADWAY PURPOSES WITHIN THE LIMITS OF CONSTRUCTION, WILL BE EXCAVATED BY THE CONTRACTOR, AT HIS OWN EXPENSE, BELOW THE GRADE SHOWN ON THE PLANS. EXCAVATED AREAS WILL BE BACKFILLED WITH APPROVED SUITABLE MATERIALS. EXCAVATED MATERIALS SUITABLE FOR BACKFILL WILL BE STOCKPILED SO AS NOT TO INTERFERE WITH DRAINAGE. UNSUITABLE MATERIAL WILL BE REMOVED FROM THE SITE AND SHALL BE DISPOSED OF IN A LAWFUL MANNER.

6. THE REPLACEMENT OF PAVEMENT WILL BE IN ACCORDANCE WITH STANDARD PAVEMENT PATCHING DETAIL STANDARDS DRAWINGS C-3A. "FLEXIBLE PAVEMENT PATCH FOR LOCAL & COLLECTOR STREETS"; OR C-3B, "FLEXIBLE PAVEMENT PATCH FOR MAJOR & MINOR ARTERIALS"; OR C-4, "RIGID PAVEMENT PATCHING" AND SECTION 5.13 OF THE PWSS.

7. CERTIFICATION OF MATERIALS AND THE TEST RESULTS (E.G., CBR AND PROCTOR, ETC.) FROM EACH SOURCE OF SUPPLY FOR SELECT BORROW AND SELECT MATERIAL WILL BE SUBMITTED TO PLANNING/CIVIL INSPECTIONS BY THE CONTRACTOR PRIOR TO INSTALLATION.

CERTIFICATION OF MATERIALS AND TEST RESULTS ON THE FOLLOWING ITEMS WILL BE SUBMITTED TO PLANNING/CIVIL INSPECTIONS BY THE CONTRACTOR BEFORE ANY ROAD CONSTRUCTION IS PERFORMED:

A. THE PROCTOR TEST ON THE NATIVE SUBGRADE MATERIALS. B. THE OPTIMUM MOISTURE CONTENT OF THE AGGREGATE.

C. THE THEORETICAL MAXIMUM DENSITY OF THE AGGREGATE ALL CITY INFRASTRUCTURE TO BE REMOVED, I.E. BRICK PAVERS, LIGHT POLES, PLANTERS, ETC., MUST BE DELIVERED TO THE CITY, OR ARRANGEMENTS MUST BE MADE FOR PICK-UP BY THE PROPER DEPARTMENT.

10. NO CONSTRUCTION IS ALLOWED WITHIN THE RIGHTS OF WAY OF ATLANTIC AND PACIFIC AVENUES AND CONNECTING NUMBERED STREETS BETWEEN ATLANTIC AND PACIFIC AVENUES FROM RUDEE INLET TO 44TH STREET BETWEEN MAY 1 AND OCTOBER 1 VIRGINIA BEACH TEMPORARY TRAFFIC CONTROL NOTES (FROM APPENDIX E OF PUBLIC WORKS DESIGN STANDARDS MANUAL - JUNE 2020)

THE CITY OF VIRGINIA BEACH, TRAFFIC ENGINEERING DIVISION IS RESPONSIBLE FOR REVIEWING AND APPROVING ALL TEMPORARY TRAFFIC CONTROL PLANS AND REVIEWING THE SEQUENCE OF CONSTRUCTION PLANS ESSENTIAL TO COMPLETE THIS PROJECT. 2. ALL TEMPORARY TRAFFIC CONTROL DEVICES, METHODS AND APPLICATIONS WILL CONFORM TO THE FOLLOWING PUBLICATIONS INCLUDING ALL CURRENT EDITIONS AND REVISIONS:

a. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET 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. CITY OF VIRGINIA BEACH, PUBLIC WORKS DESIGN STANDARDS MANUAL

WORK HOURS IN ROADWAY OPEN TO TRAFFIC AND/OR PEDESTRIAN AREA:

a. MONDAY THROUGH FRIDAY: WORK SHALL BE COMPLETED BETWEEN 9:00 AM AND 3:00 PM, WITH NO CLOSURES NOVEMBER 15 TO JANUARY 2. b. WEEKENDS AND HOLIDAYS: NO WORK MAY BE COMPLETED IN THE ROADWAY OR PEDESTRIAN AREAS UNLESS OTHERWISE NOTED OR APPROVED IN WRITING BY THE OWNER.

c. ADDITIONAL RESTRICTIONS MAY APPLY BASED ON TRAFFIC CONDITIONS. d. EXTENDED WORK HOURS AND WORKDAYS MAY BE REQUESTED WITH A WRITTEN REQUEST TO THE OWNER. THIS REQUEST MUST BE SUBMITTED AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE EXTENDED WORK PERIODS. (PLEASE NOTE THAT IF WORK IS TO BE CONDUCTED IN THE RESORT

AREA, CERTAIN RESTRICTIONS APPLY FROM MAY THROUGH SEPTEMBER. PLEASE CONTACT TRAFFIC ENGINEERING FOR THESE RESTRICTIONS TRAFFIC CONTROL PLANS: TRAFFIC CONTROL PLANS ARE INCLUDED IN THE CONSTRUCTION PLANS FOR THE REFERENCED PROJECT; HOWEVER, FIELD CONDITIONS MAY REQUIRE MODIFICATIONS. IF THE CONTRACTOR FEELS THAT THE TRAFFIC CONTROL PLAN(S) INCLUDED WITH THIS PROJECT DOES NOT SUIT CONDITIONS AT A WORK SITE, THEN THE CONTRACTOR SHALL SUBMIT TO THE OWNER A REVISED PLAN TO MAINTAIN TRAFFIC. THE REVISED PLAN SHALL INCLUDE SITE-SPECIFIC TRAFFIC DETAILS AND SHALL IDENTIFY THE SEQUENCE OF CONSTRUCTION. THE CONTRACTOR WILL SUBMIT THE REVISED TRAFFIC CONTROL PLAN(S) A MINIMUM 10 CALENDAR DAYS PRIOR TO THE START OF WORK. THE CONTRACTOR WILL NOT DISRUPT TRAFFIC PATTERNS UNTIL THE OWNER HAS APPROVED THE REVISED TRAFFIC CONTROL PLAN. THE OWNER RESERVES THE RIGHT TO MODIFY ANY TRAFFIC CONTROL PLAN(S) AS NECESSARY IN THE INTEREST OF PUBLIC SAFETY OR TRAFFIC EFFICIENCY. PRIOR TO BEGINNING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL REQUIREMENTS HAVE BEEN MET AND THAT ALL TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED ACCORDING TO THE APPROVED TRAFFIC CONTROL PLAN(S).

THE CONTRACTOR SHALL CHECK ALL TEMPORARY TRAFFIC CONTROL DEVICES AND WORK ZONES BEFORE, DURING, AND AFTER EACH WORKDAY TO ENSURE PROPER OPERATION. ON WEEKENDS, HOLIDAYS, OR ANY NON-WORKING DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE TEMPORARY TRAFFIC CONTROL DEVICES DAILY FOR PROPER OPERATION.

6. TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS TRAFFIC ENGINEERING HAS APPROVED ANOTHER

ALTERNATIVE FOR TRAFFIC CONTROL, SUCH AS A LANE CLOSURE OR A TEMPORARY STREET CLOSURE. RESIDENT AND EMERGENCY ACCESS WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION REGARDLESS IF A STREET CLOSURE IS IN EFFECT OR NOT. IF THERE IS AN APPROVAL FROM TRAFFIC ENGINEERING FOR A LANE CLOSURE OR A TEMPORARY STREET CLOSURE, ALL LANES OF TRAFFIC WILL BE

REOPENED TO TRAFFIC AT THE CONCLUSION OF EACH CONSTRUCTION DAY, <u>UNLESS</u> A 24-HOUR TEMPORARY STREET CLOSURE IS APPROVED AND IN IN ALL CASES IN WHICH EXISTING OR ESTABLISHED TRAFFIC PATTERNS WILL BE DISRUPTED, THE CONTRACTOR WILL NOTIFY <u>ALL</u> 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 FOR REVIEW AND APPROVAL PRIOR TO BEGINNING WORK. 9. AT NIGHT OR DURING NON-CONSTRUCTION HOURS, ALL EXCAVATED AREAS ARE TO BE BACKFILLED OR SECURED AND PROTECTED BY USING APPROVED SAFETY DEVICES OR MATERIALS. 10. FOR CONSTRUCTION OPERATIONS LASTING MORE THAN 14 DAYS, THE CONTRACTOR WILL INSTALL "ROAD WORK AHEAD" (W21-4, 48" X 48") AND "END

ROAD WORK" (G20-2A, 48" X 24") WARNING SIGNS ON 4" X 4" WOODEN GROUND MOUNTED POSTS. THESE SIGNS MUST BE INSTALLED PRIOR TO BEGINNING CONSTRUCTION WORK AND WILL BE REMOVED AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES. 11. FOR ALL APPROVED CONSTRUCTION/TRUCK ENTRANCES, THE CONTRACTOR WILL INSTALL "TRUCKS ENTERING HIGHWAY" (48" X 48" ORANGE AND BLACK) WARNING SIGNS ON 4" X 4" WOODEN GROUND MOUNTED POSTS. THESE SIGNS WILL BE INSTALLED 500 FEET IN ADVANCE OF ALL APPROVED

CONSTRUCTION ACCESS/ENTRANCE POINTS. 12. ANY 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 UNLESS THEIR REMOVAL OR DESTRUCTION IS CALLED FOR BY THE PLANS

13. NO CONSTRUCTION MATERIALS SHALL BE STOCKPILED WITHIN THE "CLEAR ZONE" AS DEFINED IN THE FEDERAL HIGHWAY ADMINISTRATION EARTHWORK NOTES (FHWA) "ROADSIDE DESIGN GUIDE". ALSO, NO EQUIPMENT OR MACHINERY SHALL BE LEFT PARKED OR UNATTENDED WITHIN THE CLEAR

ZONE WHILE WORK IS NOT BEING PERFORMED. 14. FOR ANY FURTHER INFORMATION ON TEMPORARY TRAFFIC CONTROL REQUIREMENTS, PLEASE CONTACT THE TRAFFIC ENGINEERING DIVISION, 2405 COURTHOUSE DRIVE, VIRGINIA BEACH, VIRGINIA 23456-9031, (757) 385-4131 FAX: (757) 385-4913.

A PERMIT FOR ANY SIGN OR SIGN POLE MUST BE OBTAINED FROM PLANNING/PERMITS AND INSPECTIONS. ONLY FLOOD RESISTANT MATERIAL MAY BE USED BELOW THE 100-YEAR FLOOD ELEVATION

ALL STRUCTURES MUST BE PROPERLY ANCHORED WITH ADEQUATE FOOTING BELOW THE 100-YEAR FLOOD FLEVATION NO MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, OR ELECTRICAL LINES WILL BE INSTALLED OR LOCATED BELOW ONE FOOT (1') ABOVE THE

100-YEAR FLOOD FLEVATION, EXCEPT UNDERGROUND WIRING OR SIMILAR MATERIALS ALL BUILDINGS WILL BE ACCESSIBLE IN ACCORDANCE WITH THE AMERICAN FOR DISABILITIES ACT(ADA). (LATEST EDITION) STANDARDS. PARKING, RAMPS, AND BUILDING ACCESS ROUTES MUST BE IN ACCORDANCE WITH THE AMERICAN FOR DISABILITIES ACT (ADA), (LATEST EDITION)

THERE WILL BE NO MORE THAN 1/2-INCH DIFFERENCE BETWEEN THE FINISHED FLOOR AND THE EXTERIOR SURFACE AT THE ENTRANCE DOOR. A PERMIT TO DEMOLISH ANY EXISTING STRUCTURE WILL BE OBTAINED FROM PLANNING/PERMITS AND INSPECTIONS, PRIOR TO ANY DEMOLITION.

**CIVIL PROJECT GENERAL NOTES** 

1. THIS SITE PLAN SHALL BE PREPARED AND SUBMITTED IN ACCORDANCE WITH THE <u>SITE PLAN ORDINANCE</u> OF THE VIRGINIA BEACH CITY CODE AND ALL APPLICABLE SECTIONS OF THE ZONING ORDINANCE.

2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT TO THE ENGINEER FOR APPROVAL PRIOR TO

3. ALL ERRORS OR DISCREPANCIES WITH THE PLANS OR EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER OR SURVEYOR OF RECORD BEFORE PROCEEDING WITH THE WORK

4. ALL CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY WITH THESE CIVIL SITE PLANS. MANUFACTURER SPECIFICATIONS. AND WITH ALL CURRENT APPLICABLE CODES AND THE LATEST REVISIONS OF THE FOLLOWING REFERENCE DOCUMENTS:

 HAMPTON ROADS PLANNING DISTRICT COMMISSION (HRPDC) REGIONAL CONSTRUCTION STANDARDS VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

VIRGINIA WORK AREA PROTECTION MANUAL

 VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH) VIRGINIA BEACH PUBLIC WORKS DESIGN STANDARDS MANUAL (PWDSM)

THROUGHOUT THE COURSE OF CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION EFFORTS WITH DOMINION ENERGY, VIRGINIA NATURAL GAS, VERIZON, COX

COMMUNICATIONS, VIRGINIA BEACH PUBLIC UTILITIES, VIRGINIA BEACH PUBLIC WORKS, THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), AND OTHER ENTITIES AS REQUIRED.

THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS AND REQUIREMENTS OF THE OVERHEAD HIGH VOLTAGE LINES SAFETY ACT (SECTION 59.1-406, ET. SEQ. OF THE CODE OF VIRGINIA) IN PERFORMING WORK ON THIS PROJECT. AS A MINIMUM:

 CONTACT THE ELECTRICAL UTILITY 48 HOURS PRIOR TO COMMENCING WORK IF THE CONTRACTOR'S TOOLS OR MATERIALS WILL INTRUDE TO WITHIN TEN (10) FEET OF AN OVERHEAD POWER LINE. • CONTACT THE ELECTRICAL UTILITY 48 HOURS PRIOR TO COMMENCING WORK IF COVERED EQUIPMENT SUCH AS CRANES OR DERRICKS

WILL BE OPERATED WITHIN TEN (10) FEET OF AN OVERHEAD POWER LINE. POST AND MAINTAIN WARNING SIGNS WITHIN AND ON THE OUTSIDE OF EQUIPMENT OPERATING NEAR AN OVERHEAD HIGH VOLTAGE LINE. COORDINATE WITH THE UTILITY OWNER SHOULD THE CONTRACTOR'S EXCAVATION ACTIVITIES REQUIRE SHORING AND BRACING OF EXISTING UTILITY POLES. DOMINION ENERGY SHALL BE NOTIFIED TEN (10) WORKING DAYS BEFORE ANTICIPATED SHORING AND BRACING

CONTRACTOR'S EXPENSE. 7. THE CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF THE APPROVED PLANS AT THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION. 8. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND LICENSES AND KEEP COPIES OF THE SAME ON SITE DURING CONSTRUCTION.

ACTIVITIES COMMENCE. ALL SHORING AND BRACING ACTIVITIES SHALL BE ACCOMPLISHED BY DOMINION ENERGY PERSONNEL AT THE

9. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO ALL SITE CONDITIONS PRIOR TO CONSTRUCTION. 10. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CLEAN WORK SITE AND REMOVING DEBRIS, TRASH, AND LEFTOVER MATERIALS

11. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS ON THIS PROJECT. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK.

12. ALL STAGING OF CONSTRUCTION VEHICLES AND EQUIPMENT SHALL BE ONSITE. NO VEHICLES WILL BE ALLOWED TO PARK WITHIN THE RIGHT-OF-WAY OF ANY PUBLIC STREET UNLESS THE VEHICLE IS BEING USED AS PART OF AN ACTIVE CONSTRUCTION ZONE WITHIN THE

13. THE CONTRACTOR'S LAYDOWN & STORAGE AREA SHALL NOT ENCROACH INTO THE PUBLIC RIGHT-OF-WAY.

14. MATERIALS, EQUIPMENT, PRODUCTS, AND METHODS OTHER THAN THOSE INDICATED IN THE DRAWINGS SHALL NOT BE CONSIDERED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE OWNER'S REPRESENTATIVE, DESIGN ENGINEER, AND THE APPLICABLE GOVERNING CODE AUTHORITY

15. ALL DISTURBED AREAS, INCLUDING BUT NOT LIMITED TO PAVEMENT, SHOULDERS, DITCHES, HEADWALLS, ENDWALLS, CULVERT PIPES, FENCES, LIGHT POLES, COMMUNICATIONS BOXES, CURB AND GUTTER, UTILITIES, DRIVEWAYS, SIGNS, MAILBOXES, ETC., SHALL BE REPAIRED TO A CONDITION EQUAL TO OR BETTER THAN THOSE EXISTING PRIOR TO CONSTRUCTION, OR AS SHOWN ON THE DRAWINGS.

ADDITIONAL COST TO THE DEVELOPER. 17. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS TO UTILITY BOXES, JUNCTION BOXES, METER BOXES, VALVE BOXES,

ELECTRICAL SPLICE BOXES, MANHOLES, CLEANOUTS, AND OTHER ITEMS TO MATCH FINISHED GRADE. 18. THIS SITE SHALL COMPLY WITH THE SLOPE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT, SPECIFICALLY:

16. THE CONTRACTOR SHALL REESTABLISH ALL EXISTING PROPERTY PINS AND MONUMENTS DISTURBED DURING CONSTRUCTION AT NO

 THE CROSS SLOPE OF SIDEWALKS, CURB RAMPS, GUTTERS, AND CROSSWALKS SHALL NOT EXCEED 2%. THE RUNNING SLOPE OF SIDEWALKS AND CROSSWALKS SHALL NOT EXCEED 5%

 THE RUNNING SLOPE OF RAMPS SHALL NOT EXCEED 8.33%. THE RUNNING SLOPE OF CURB RAMPS SHALL NOT EXCEED 8.33%.

 WHERE CURB RAMPS INTERSECT GUTTERS. THE COUNTER SLOPE OF THE GUTTER SHALL NOT EXCEED 5%. THE SLOPE OF CURB RAMP FLARES (WHERE PROVIDED) SHALL NOT EXCEED 10%. THE SLOPE OF SIDEWALK INTERSECTIONS, PLAZAS, AND POOL DECKS, SHALL NOT EXCEED 2% IN ANY DIRECTION.

 THE SLOPE OF MANEUVERING CLEARANCES AT DOORS SHALL NOT EXCEED 2% IN ANY DIRECTION. THE SLOPE OF ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION. LEVEL CHANGES SHALL NOT EXCEED 1/4-INCH AT ACCESSIBLE DOOR THRESHOLDS.

19. ON-SITE EXTERIOR CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI WITH 5% TO 7% AIR ENTRAINMENT, UNLESS OTHERWISE NOTED.

20. ALL UNPAVED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE GRADED TO DRAIN, TOPSOILED, SEEDED, MULCHED, AND 21. THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL CONSTRUCTION SURVEYING REQUIRED. THE SURVEYOR SHALL BE LICENSED IN THE

COMMONWEALTH OF VIRGINIA 22. THE CONTRACTOR SHALL COMPLY WITH ALL STATE SAFETY ORDERS AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

23. DIMENSIONS TAKE PRECEDENCE OVER SCALE.

# UTILITY NOTES

1. EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD-VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. IF EXISTING UTILITIES ARE FOUND TO BE IN CONFLICT WITH PROPOSED SITE IMPROVEMENTS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER, OWNER, AND THE UTILITY COMPANY TO EITHER REDESIGN THE PROPOSED IMPROVEMENTS OR RELOCATE THE EXISTING UTILITIES. ANY UTILITIES TO BE RELOCATED SHALL BE RELOCATED AT THE OWNER/DEVELOPER'S EXPENSE, INCLUDING UTILITIES WITHIN THE

2. THE EXISTING UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. OTHER EXISTING UTILITIES MAY BE PRESENT. SURVEYED

UTILITY DATA SHOWN ON THE DRAWINGS HAVE BEEN PROVIDED BY TIMMONS GROUP. INFORMATION HAS BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES AT THE TIME OF PLAN PREPARATION BUT IS NOT REPRESENTED AS BEING COMPLETE AND ACCURATE. TIMMONS GROUP ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN. 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT EXISTING UTILITIES AND UNDERGROUND STRUCTURES. THE CONTRACTOR

SHALL CALL MISS UTILITY (811) FOR EXISTING UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION. 4. DAMAGE TO EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE 5. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.

6. ALL COMPONENTS OF THE WATER AND SANITARY SEWER SYSTEMS SHALL BE INSTALLED AND TESTED IN COMPLIANCE WITH THE MOST RECENTLY APPROVED EDITION OF THE <u>VIRGINIA BEACH PUBLIC UTILITY DESIGN STANDARDS MANUAL</u>. 7. THE CONTRACTOR SHALL INSTALL PIPES, FITTINGS, AND VALVES IN DRY TRENCH CONDITIONS. THE CONTRACTOR SHALL PROVIDE ALL DE-WATERING, WELL POINTING, SHEETING, TRENCH BOXES, AND TRENCH STABILIZATION AS REQUIRED AT NO ADDITIONAL COST TO THE

8. THE CONTRACTOR SHALL PROVIDE PIPE BEDDING FOR ALL PROPOSED WATER AND SEWER PIPES IN COMPLIANCE WITH THE HAMPTON ROADS

REGIONAL CONSTRUCTION STANDARDS, DETAIL 'EW\_01', TYPE III. 9. THE CONTRACTOR SHALL PROVIDE SUFFICIENT COVER OVER ALL WATER AND SEWER PIPES IN COMPLIANCE WITH APPLICABLE REGULATIONS AND TO PREVENT FREEZING. MINIMUM COVER IS 36-INCHES UNLESS OTHERWISE NOTED, WATER AND SEWER LINES WITH LESS THAN 36-INCHES

OF COVER OR MORE THAN 10-FEET OF COVER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE. 10. THE CONTRACTOR SHALL PROVIDE ADEQUATE SEPARATION BETWEEN PIPES IN COMPLIANCE WITH APPLICABLE REGULATIONS AND AS SHOWN ON THE PLANS AND PROFILES. WATER AND SEWER MAINS SHALL BE SEPARATED IN COMPLIANCE WITH SECTION 3.3.10 OF THE VIRGINIA BEACH PUBLIC UTILITY DESIGN STANDARDS MANUAL.

11. WATER AND SEWER SERVICE LINES SHALL BE INSTALLED IN COMPLIANCE WITH THE VIRGINIA PLUMBING CODE 12. BRASS FITTINGS FOR WATER SERVICE LINES 2" AND SMALLER SHALL MEET CDA NO. C89520, WITH NO MORE THAN ONE-FOURTH OF ONE

PERCENT (0.25% OR LESS) TOTAL LEAD CONTENT BY WEIGHT FOR CORPORATION STOPS, METER VALVES, AND SERVICE COUPLINGS. 13. TRACER WIRE SHALL BE INSTALLED OVER ALL PLASTIC WATER AND SEWER PIPES.

14. MECHANICAL JOINT PIPE AND FITTINGS SHALL BE RESTRAINED WITH MEGALUG® JOINT RESTRAINTS OR APPROVED EQUAL. 15. SANITARY SEWER MAINS, LATERALS, AND FITTINGS SHALL BE SDR 26 PVC UNLESS OTHERWISE NOTED.

16. SANITARY SEWER CLEANOUTS AND MANHOLE RIMS SHALL BE SET FLUSH WITH FINISHED GRADE. CLEANOUTS LOCATED IN TRAFFIC AREAS SHALL BE PROVIDED WITH A HEAVY-DUTY FRAME AND COVER.

17. THE CONTRACTOR SHALL USE PIPE AND/OR JOINT DEFLECTION AS NECESSARY TO OBTAIN THE REQUIRED HORIZONTAL AND VERTICAL ALIGNMENT OF THE PROPOSED WATER AND SEWER LINES. JOINT DEFLECTION SHALL NOT EXCEED 80% OF THE MANUFACTURER'S

RECOMMENDED MAXIMUM OR AWWA MAXIMUM, WHICHEVER IS LESS. 18. THE CONTRACTOR SHALL COORDINATE UTILITY WORK WITH ONSITE ELECTRICAL WORK. REFER TO THE ELECTRICAL PLANS. 19. THE CONTRACTOR SHALL INSTALL UNDERGROUND UTILITIES IN COMPLIANCE WITH MINIMUM STANDARD #16 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL PROGRAM.

- THE CONTRACTOR SHALL HIRE A REPUTABLE AND QUALIFIED GEOTECHNICAL ENGINEERING FIRM TO PROVIDE SOIL INSPECTIONS, TESTING AND RECOMMENDATIONS THROUGHOUT CONSTRUCTION
- 2. THE CONTRACTOR SHALL COMPLY WITH THE STANDARDS, PROCEDURES, AND RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND GEOTECHNICAL ENGINEER OF RECORD. REFER TO THE SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT

PREPARED BY ECS MID ATLANTIC, LLC, DATED 11/23/2022 (ECS PROJECT #04:12065). 3. ACCEPTABLE FILL MATERIALS ARE DESCRIBED IN THE GEOTECHNICAL REPORT. FILL SHALL BE VOID OF ORGANICS AND DEBRIS AND PLACED IN UNIFORM LIFTS AS SPECIFIED IN THE GEOTECHNICAL REPORT.

SITE PREPARATION, INCLUDING FILL PLACEMENT AND COMPACTION, SHALL BE OBSERVED BY A QUALIFIED SOILS TECHNICIAN WORKING UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. DURING FILL PLACEMENT, A SUFFICIENT AMOUNT OF IN-PLACE DENSITY TESTS SHOULD BE CONDUCTED TO CONFIRM THAT COMPACTION AND FILL MOISTURE ARE IN COMPLIANCE WITH THE

THIS PROJECT MAY REQUIRE DYNAMIC COMPACTION TO STRENGTHEN EXISTING SOIL CONDITIONS. CONSULT THE GEOTECHNICAL REPORT FOR MORE INFORMATION.

6. THE CONTRACTOR SHALL PROVIDE COMPACTION TEST RESULTS BY THE GEOTECHNICAL ENGINEER TO THE OWNER FOR VERIFICATION OF PROPER COMPACTION.

7. ALL SUBGRADE SOILS SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR THEORETICAL MAXIMUM DRY DENSITY (ASTM D-698).

8. WHEN MATERIAL UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR OTHER PURPOSES OCCURS WITHIN THE LIMITS OF CONSTRUCTION THE CONTRACTOR SHALL EXCAVATE SUCH MATERIAL AND BACKFILL WITH APPROVED SUITABLE MATERIAL. THE EXTENT OF UNDERCUTTING AND BACKEILLING SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER. THE USE OF OPEN-GRADED STONE AND/OR GEOGRID REINFORCEMENT MATERIALS IS OFTEN RECOMMENDED BASED ON OBSERVATIONS OF THE GEOTECHNICAL

9. ALL OBJECTIONABLE AND DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED IN A STATE-APPROVED CONTROLLED FACILITY MEETING THE REQUIREMENTS OF ALL APPLICABLE LOCAL. STATE, AND FEDERAL REGULATIONS.

### **GRADING AND DRAINAGE NOTES**

ENGINEER AT THE TIME OF CONSTRUCTION.

1. GRADING SHALL BE PERFORMED IN COMPLIANCE WITH VDOT STANDARDS AND SPECIFICATIONS.

2. ALL AREAS SHALL BE GRADED TO ACHIEVE POSITIVE DRAINAGE.

3. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION. THE STORMWATER SYSTEM SHALL BE PHASED TO ENSURE THAT RUNOFF COLLECTED IN THE CLOSED SYSTEM HAS AN OUTFALL LOCATION, OR PUMP AROUND MAY BE REQUIRED.

4. THE CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE DURING CONSTRUCTION TO RELIEVE AREAS THAT MAY CAUSE DAMAGE TO ROADWAYS AND SURROUNDING PROPERTIES. 5. ALL CUT AND FILL SLOPES 4H:1V OR GREATER SHALL BE PROPERLY ROUGHENED OR SCARIFIED PRIOR TO THE PLACEMENT OF THE

NEXT LIFT OF FILL. SOIL SURFACES SHALL BE ROUGHENED IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, STD. & SPEC. C-SSM-03: SURFACE ROUGHENING. 6. ALL CUT AND FILL SLOPES 4H:1V OR GREATER SHALL BE LINED WITH VDOT EC-2 SOIL STABILIZATION MATTING TO PROTECT AGAINST

7. STORM DRAINAGE SYSTEMS SHALL BE INSTALLED AS SOON AS FEASIBLE IN THE CONSTRUCTION SCHEDULE 8. STORM DRAINAGE SYSTEMS SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS AND SPECIFICATIONS. AND THE VIRGINIA BEACH PUBLIC WORKS DESIGN STANDARDS MANUAL (PWDSM).

9. THE CONTRACTOR SHALL INSTALL PIPES, FITTINGS, AND OTHER STORM DRAINAGE COMPONENTS IN DRY TRENCH CONDITIONS. THE

AND VDOT REQUIREMENTS TO ELIMINATE THE POTENTIAL FOR SHEAR FAILURE, TO BE SOIL TIGHT, AND LEAK RESISTANT (FLEXIBLE

CONTRACTOR SHALL PROVIDE ALL DE-WATERING, WELL POINTING, SHEETING, TRENCH BOXES, AND TRENCH STABILIZATION AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER/DEVELOPER. 10. ALL THERMOPLASTIC, HDPE, PE, AND NON-CONCRETE PIPE JOINTS AND CONNECTIONS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE DETAILS SUPPLIED BY THE MANUFACTURER AND SHOWN ON THE PLAN. WHEN CONNECTING TO DRAINAGE STRUCTURES (PRE-CAST, CAST-IN-PLACE, CONCRETE BLOCK, BRICK, ETC.) ALL PIPES MUST BE INSTALLED IN ACCORDANCE WITH ASTM

11. CONCRETE DRAINAGE STRUCTURES SHALL INCLUDE INLET SHAPING (VDOT IS-1) AND STRUCTURES DEEPER THAN 4-FEET SHALL HAVE

12. PIPE BEDDING SHALL BE PROVIDED IN COMPLIANCE WITH VDOT STANDARD "PB-1" OR THE MANUFACTURER'S SPECIFICATIONS,

WHICHEVER IS MORE STRINGENT. 13. STRUCTURE BEDDING SHALL BE PROVIDED IN COMPLIANCE WITH VDOT STANDARD "DSB-1" OR THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

14. CONCRETE STORM SEWER JOINTS SHALL BE FITTED WITH RUBBER GASKETS IN COMPLIANCE WITH ASTM C-443. 15. CONCRETE STORM SEWER JOINTS SHALL BE WRAPPED WITH FILTER FABRIC, CENTERED ON THE JOINT WITH 12" MINIMUM ON EITHER

SIDE OF THE JOINT. THE FABRIC SHALL BE WRAPPED AROUND THE OUTER DIAMETER OF THE PIPE AT LEAST 1-1/2 TIMES. 16. PRECAST CONCRETE DRAINAGE STRUCTURES SHALL BE CONSTRUCTED AND ASSEMBLED IN COMPLIANCE WITH VDOT STANDARD 103.01 AND 103.02 AND OTHER APPLICABLE STANDARDS.

17. CATCH BASINS SHALL ALIGN BOTH HORIZONTALLY AND VERTICALLY WITH THE PROPOSED CURB. 18. CATCH BASINS SHALL BE FITTED WITH TYPE 'B' NOSES.

19. ALL DRAINAGE STRUCTURES AND PIPES WITHIN THE PROJECT LIMITS SHALL BE VACUUMED CLEAN AFTER THE SITE HAS BEEN PERMANENTLY STABILIZED. THE CONTRACTOR SHALL DISPOSE OF SEDIMENT, TRASH, AND DEBRIS IN A LAWFUL MANNER.

# **DEMOLITION NOTES**

1. THE CONTRACTOR SHALL STRICTLY ADHERE TO THE LIMITS OF DISTURBANCE AS SHOWN ON THE APPROVED PLANS. IF IT IS NECESSARY TO ENCROACH BEYOND THE LIMITS OF DISTURBANCE, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER AND COORDINATE THE WORK PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.

3. WHEN STORMWATER PIPES ARE REPLACED, THE CONNECTING DRAINAGE STRUCTURES SHALL BE PATCHED AND SEALED TO BE

2. PIPE DEMOLITION SHALL BE PERFORMED TO THE POINTS WHERE NEW CONNECTIONS ARE TO BE MADE.

4. SAWCUTTING SHALL BE PERFORMED ON EDGES OF PAVEMENT AND CONCRETE DEMOLITION. THE CONTRACTOR SHALL: COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

 KEEP SAWCUT LINES NEAT AND STRAIGHT. KEEP DUST TO A MINIMUM.

 REPAIR OR REPLACE ADJACENT MATERIALS AND FINISHES THAT ARE DAMAGED. 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING (WITH MATCHING MATERIALS) PAVEMENT, DRIVEWAYS, SIDEWALKS, SIGNS, PAVEMENT MARKINGS, LIGHT POLES, CURBS, CONCRETE, FENCES, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION. CONCRETE SIDEWALKS, CURBS, OR ENTRANCES THAT ARE DAMAGED SHALL BE REPLACED TO THE NEAREST UNDISTURBED JOINT.

# **FIRE PROTECTION NOTES**

1. PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES SHALL BE INSTALLED PER THE VIRGINIA STATEWIDE FIRE PREVENTION

CODE AND NFPA 24. 2. A MINIMUM OF 48 HOURS PRIOR TO THE INSTALLATION OF FIRE LANES, THE CONTRACTOR SHALL SCHEDULE AN APPOINTMENT WITH THE FIRE PREVENTION BUREAU FOR AN ON-SITE INSPECTION. CONTACT NUMBER IS 757-385-8555. FINAL APPROVAL IS SUBJECT TO A

3. NO LANDSCAPING OF ANY TYPE SHALL BE PLACED WITHIN A THREE FOOT RADIUS OF ANY FIRE HYDRANT, FIRE PUMP TEST HEADER, FIRE DEPARTMENT SPRINKLER SYSTEM CONNECTION. FIRE DEPARTMENT STANDPIPE CONNECTION. OR FIRE SUPPRESSION CONTROL VALVE. LANDSCAPING IN THE AREA OF FIRE HYDRANTS, FIRE PUMP TEST HEADERS, FIRE DEPARTMENT SPRINKLER CONNECTIONS, OR FIRE DEPARTMENT STANDPIPE CONNECTIONS SHALL BE OF THE TYPE THAT WILL NOT ENCROACH ON THE REQUIRED THREE-FOOT CLEAR RADIUS ON MATURITY OF THE LANDSCAPING.

A. AN APPROVED WATER SUPPLY CAPABLE OF PROVIDING THE NEEDED FIRE FLOW SHALL BE AVAILABLE PRIOR TO ANY COMBUSTIBLE MATERIAL STORED ONSITE AND BE LOCATED NO MORE THAN 400' AWAY FROM BUILDINGS UNDER

WEATHER CONDITIONS SHALL BE INSTALLED TO WITHIN 150' OF ALL BUILDINGS UNDER CONSTRUCTION.

4. FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL BE ADHERED TO PER THE STATEWIDE FIRE PREVENTION CODE,

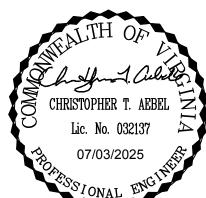
5. A KNOX BOX KEY REPOSITORY IS REQUIRED AT THE EXTERIOR ENTRANCE DOOR TO THE FIRE SPRINKLER CONTROL ROOM FOR EACH BUILDING. CONTACT THE FIRE PREVENTION BUREAU AT 757-385-4228 TO COORDINATE THE ORDERING AND APPROVAL PROCESS. THEY MAY BE ORDERED AT WWW.KNOXBOX.COM.

6. FIRE DEPARTMENT CONNECTIONS SHALL CLEARLY IDENTIFY THE BUILDINGS, ZONES, ETC. THEY SERVE. THE OPERATING PRESSURE

FOR THE FIRE SPRINKLER SYSTEM SHALL ALSO BE POSTED ON THIS SIGN IF GREATER THAN 150 PSI. SIGN SUBJECT TO APPROVAL BY

B. AN APPROVED FIRE APPARATUS ACCESS ROADWAY CAPABLE OF SUPPORTING 82,000 POUNDS OF VEHICLE LOADING IN ALL

7. TO SCHEDULE UNDERGROUND INSPECTIONS OF PRIVATE FIRE MAIN AND ANY APPLICABLE APPURTENANCE, CALL THE FIRE PREVENTION BUREAU AT 757-385-8555 BEFORE 9 AM THE DAY OF THE DESIRED INSPECTION AND TESTING IS TO BE PERFORMED. HAVE THE PERMIT NUMBER AVAILABLE. ALL INSPECTIONS AND OTHER REQUIREMENTS SHALL PASS FOR THE PERMIT TO BE FINALIZED. INSTALLATION PERMITS ARE OBTAINED THROUGH THE PERMITS AND INSPECTIONS OFFICE AT 2875 SABRE STREET, SUITE #500, VIRGINIA BEACH, 757-385-4211



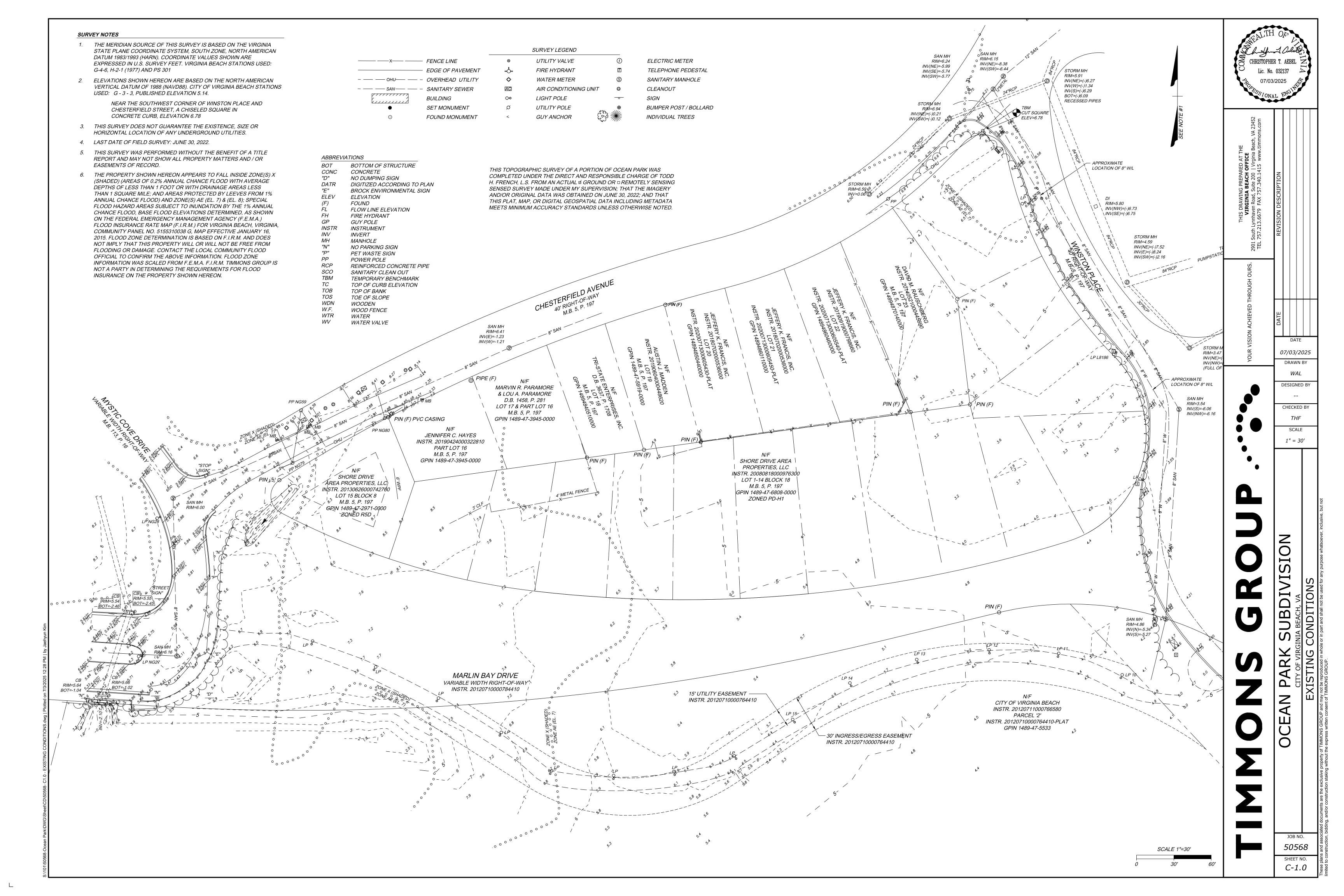
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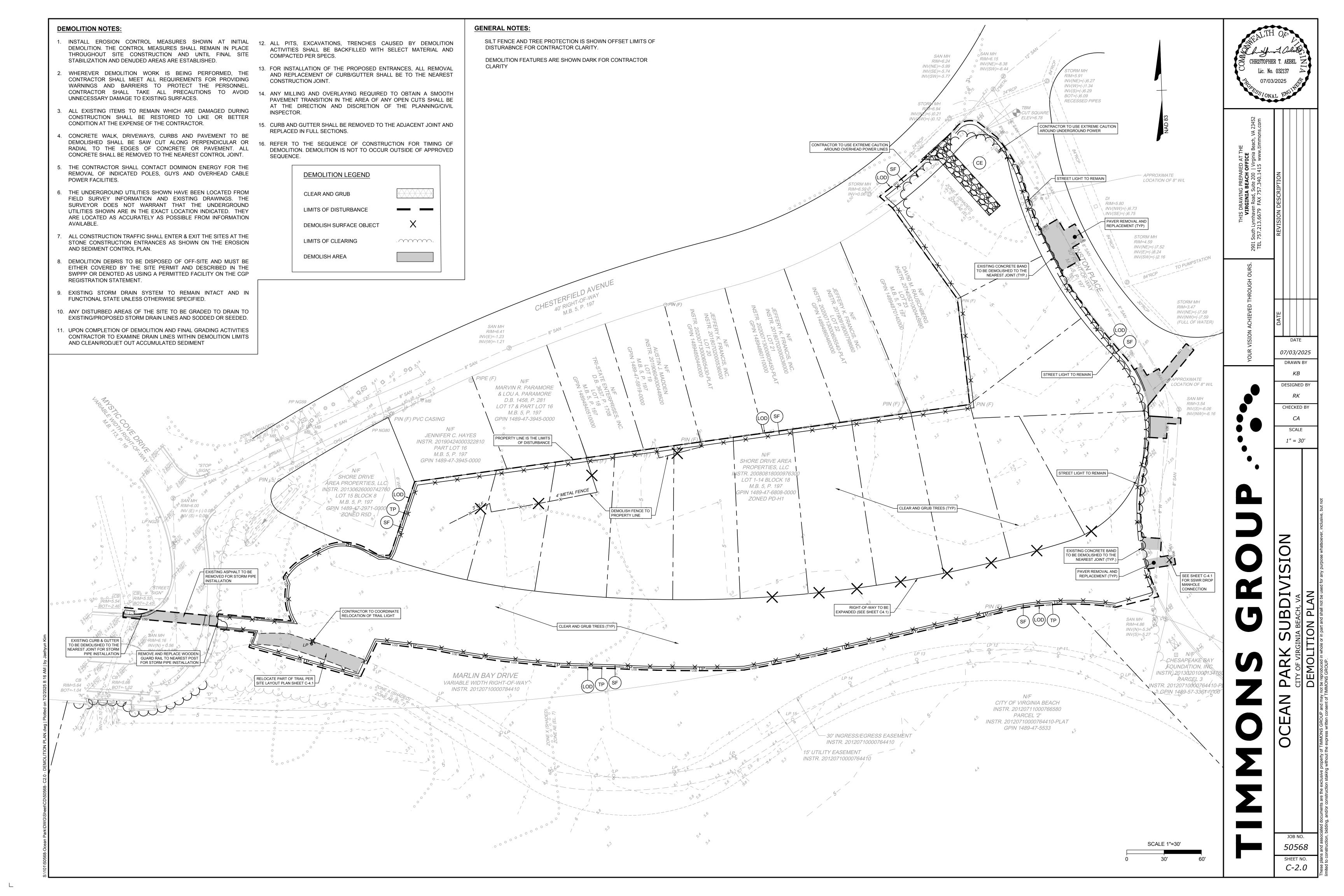
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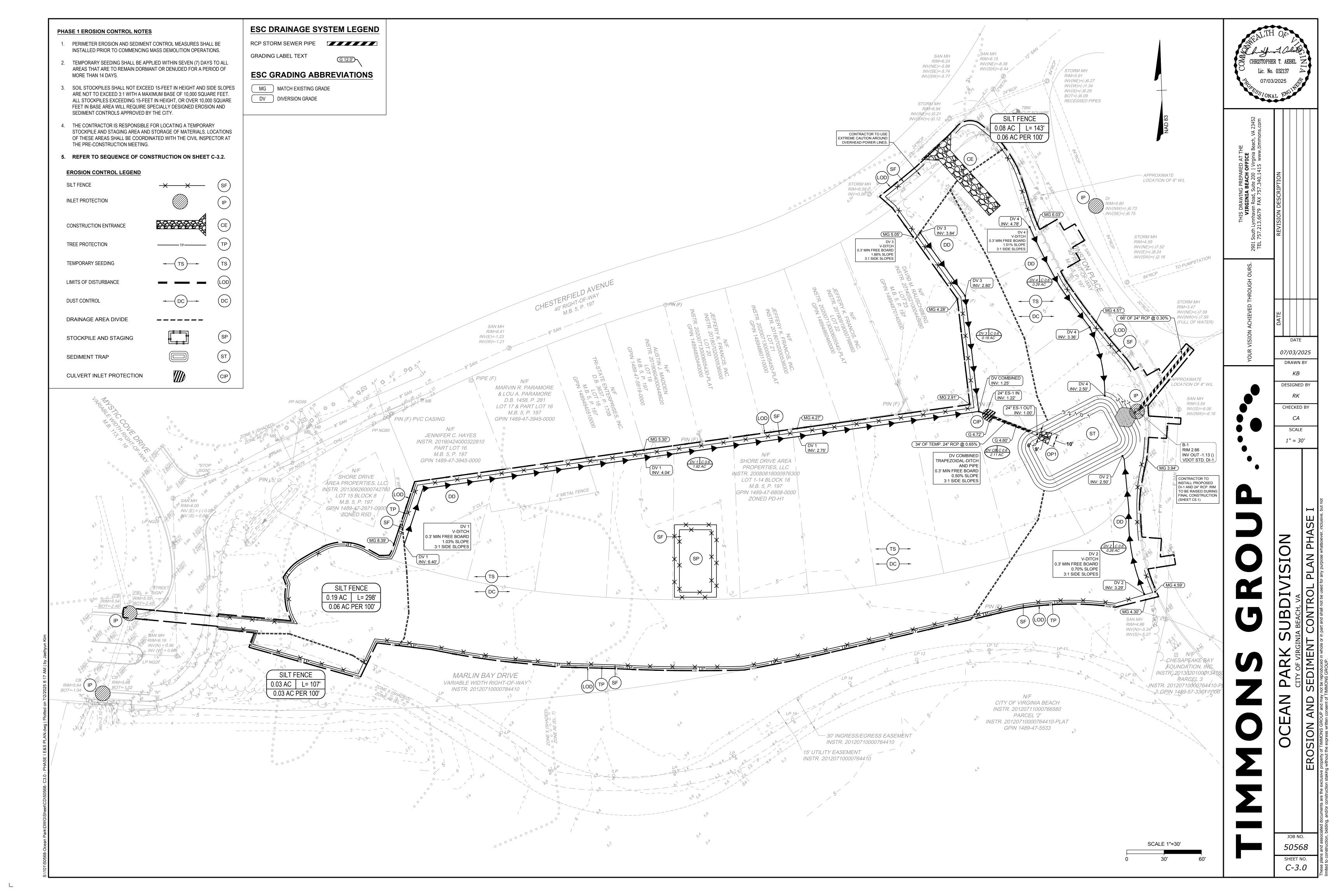
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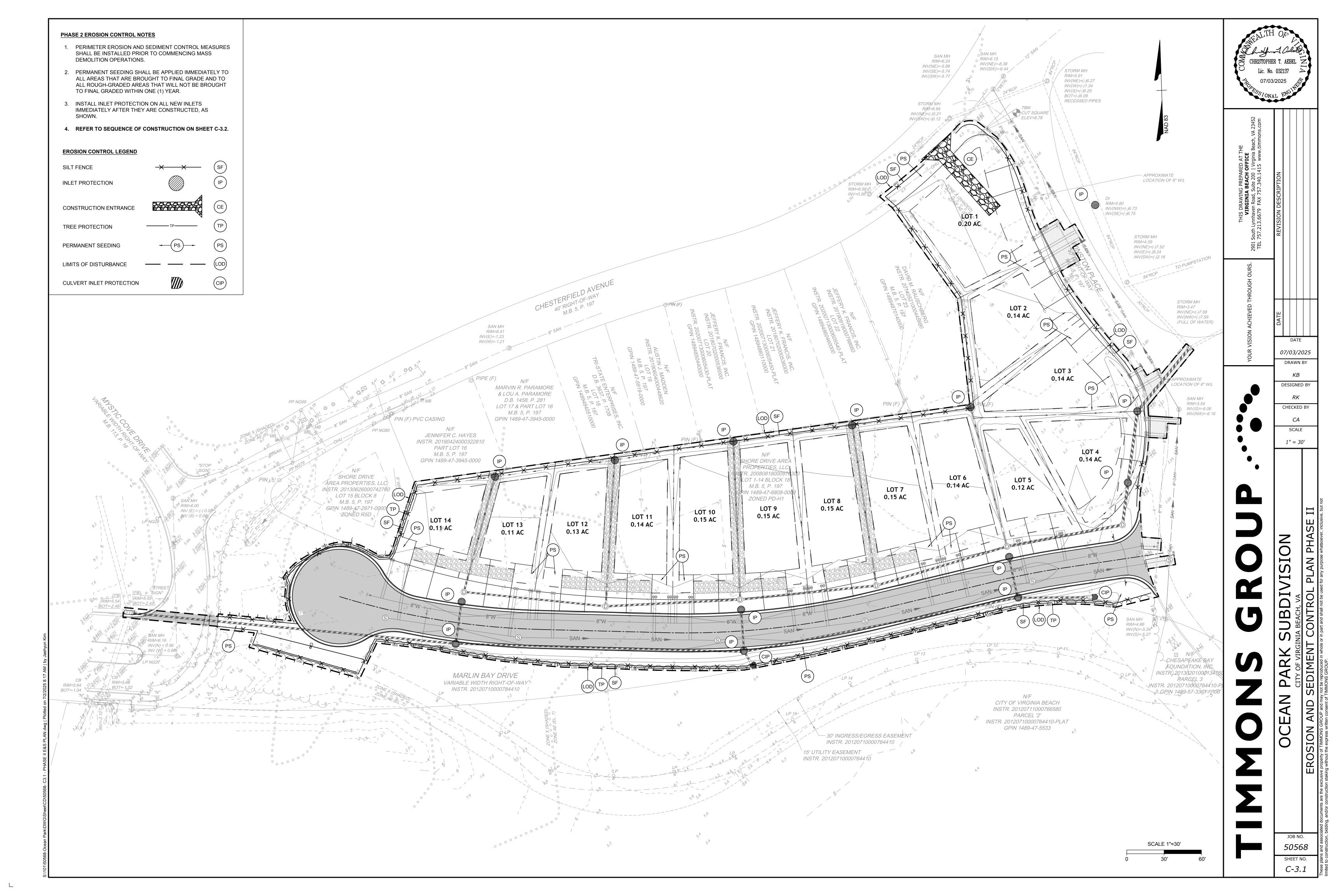
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### **EROSION AND SEDIMENTATION CONTROL NARRATIVE:**

MARLIN BAY TO THE WEST; AND P1-PRESERVATION AREA TO THE SOUTH.

THE PROPOSED PROJECT IS THE DEVELOPMENT OF A NEW RESIDENTIAL SUBDIVISION ON MARLIN BAY DRIVE JUST WEST OF WINSTON PLACE. DURING THIS DEVELOPMENT, THESE EXISTING PROPERTIES WILL BE MODIFIED TO PROVIDE THE NECESSARY PUBLIC RIGHT OF WAY FOR THE CONSTRUCTION OF NEW SINGLE-FAMILY HOMES AND DUPLEX HOMES. MARLIN BAY DRIVE ROAD WILL BE IMPROVED TO PROVIDE A CUL-DE-SAC WITH NEW CURB AND GUTTER AND A STORM DRAINAGE SYSTEM.

THE WATER MAIN AND SANITARY SEWER WILL BE EXTENDED FROM WINSTON PLACE DOWN THE PROPOSED CUL-DE-SAC TO SERVICE THE LOTS.

#### **EXISTING CONDITIONS:**

THE EXISTING PARCELS TO BE DEVELOPED ARE DENSELY WOODED AND ARE ALREADY SUBDIVIDED INTO THE 14 LOTS. DEVELOPMENT OF THIS SITE PROPOSES DISTURBING APPROXIMATELY 2.9 ACRES.

**ADJACENT AND OFFSITE AREAS:** THE SITE IS BOUNDED BY WINSTON PLACE TO THE EAST; R5 RESIDENTIAL PROPERTIES TO THE NORTH;

NO ADJACENT PRIVATE PROPERTY SHALL BE DISTURBED WITHOUT THE WRITTEN CONSENT OF THE PROPERTY OWNER. FURTHERMORE, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED DURING CONSTRUCTION IN ORDER TO PROTECT DOWNSTREAM PROPERTY AND INFRASTRUCTURE FROM SEDIMENT DEPOSITION AS A RESULT OF THIS DEVELOPMENT.

A GEOTECHNICAL STUDY HAS BEEN COMPLETED ON THIS SITE AND HAS BEEN PROVIDED WITH THE SUBMITTAL PACKAGE. THE REPORT HAS BEEN PREPARED BY ENGINEERING AND TESTING SERVICES, INC. DATED DECEMBER 24<sup>TH</sup>, 2019. THIS REPORT GOES INTO FURTHER DETAILS CONCERNING EXISTING SOILS AND CHARACTERISTICS.

#### CRITICAL AREAS:

THE MAJORITY OF THE SITE IS IN THE AE EL.7 FLOOD ZONE

### STRUCTURAL PRACTICES

SAFETY FENCE: (C-PCM-01) TEMPORARY SAFETY FENCE WILL BE INSTALLED AROUND THE PERIMETER OF PROTECTED AREAS OF 2260 SALEM ROAD, 2264 SALEM ROAD, AND THE EXISTING GRAVEYARD FOR THE DURATION OF CONSTRUCTION AS A PROTECTIVE BARRIER TO PROHIBIT THE UNDESIRABLE USE OF EROSION CONTROL MEASURE TO THAT AREA.

#### CONSTRUCTION ENTRANCE: (C-SCM-03) TEMPORARY STONE CONSTRUCTION ENTRANCES WILL BE INSTALLED AT THE ENTRANCES TO THE SITE ALONG SALEM

ROAD WHERE THE ACCESS AREA INTERSECTS WITH EXISTING PAVED ROADWAYS TO AVOID TRANSPORTING MUD AND SEDIMENT ONTO EXISTING PAVED ROADS. SILT FENCE: (C-PCM-04)

TEMPORARY SILT FENCE SEDIMENT BARRIERS WILL BE INSTALLED AROUND THE PERIMETER OF THE SITE'S DISTURBED AREAS TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE SITE.

STORM DRAIN INLET PROTECTION: (C-SCM-04) ALL NEW AND EXISTING DOWNSTREAM STORM DRAIN INLETS SHALL BE PROTECTED FROM SEDIMENT LADEN RUNOFF DURING CONSTRUCTION

### TEMPORARY DIVERSION DIKE: (C-ECM-04)

TEMPORARY DIVERSION DIKES WILL BE USED TO DIVERT STORM RUNOFF AWAY FROM SENSITIVE AREAS (WETLANDS) OR FROM UPSTREAM AREAS INTO SEDIMENT BASINS OR TRAPS.

TEMPORARY DIVERSION: (C-ECM-05) TEMPORARY DIVERSION SWALES AND DITCHES WILL BE INSTALLED AS SHOWN ON THE PHASE I EROSION AND SEDIMENT CONTROL PLANS TO CONVEY RUNOFF TO A PROPOSED SEDIMENT CONTROL MEASURE.

TEMPORARY SEDIMENT TRAP: (C-SCM-11) A TEMPORARY SEDIMENT TRAP WILL BE FORMED BY CONSTRUCTING AN EARTHEN EMBANKMENT WITH A STONE OUTLET. SEDIMENT-LADEN WATER WILL BE DETAINED IN THE SEDIMENT TRAP LONG ENOUGH TO ALLOW THE MAJORITY OF THE SEDIMENT TO SETTLE OUT.

OUTLET PROTECTION: (C-ECM-15) OUTLET PROTECTION WILL BE INSTALLED AT ALL PIPE OUTLETS AND CONCENTRATED FLOW OUTLETS TO PREVENT SCOUR AND TO MINIMIZE DOWNSTREAM EROSION.

### **VEGETATIVE PRACTICES**

### SURFACE ROUGHENING: (C-SSM-03)

SURFACE ROUGHENING SHALL BE IMPLEMENTED FOR ALL CUT AND FILL SLOPES 4H:1V OR GREATER PRIOR TO THE PLACEMENT OF THE NEXT LIFT OF FILL, ALL CUT AND FILL SLOPES 4H:1V OR GREATER PRIOR TO SEEDING, AND AREAS WHICH HAVE BEEN GRADED AND NOT STABILIZED IMMEDIATELY.

ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING ACTIVITIES. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.

#### PERMANENT SEEDING: (C-SSM-10) PERMANENT SEEDING WILL BE ESTABLISHED ON ALL NON-PAVED DISTURBED AREAS.

12. <u>MULCHING:</u> (C-SSM-11)

MULCH WILL BE APPLIED TO ALL SEEDED AREAS TO PREVENT EROSION AND FOSTER THE GROWTH OF VEGETATION. 3. <u>SOIL STABILIZATION BLANKETS AND MATTING:</u> (C-SSM-05)

SOIL STABILIZATION BLANKETS AND MATTING WILL BE INSTALLED TO AID IN CONTROLLING EROSION ON CRITICAL AREAS OF A STEEP SLOPE.

### 4. TREE PRESERVATION AND PROTECTION: (C-SSM-01)

ALL TREES THAT ARE TO BE SAVED WILL BE PROTECTED WITH TREE PROTECTION DURING CONSTRUCTION.

AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST SHALL BE STABILIZED DURING CONSTRUCTION TO MINIMIZE DUST RELEASE. METHODS INCLUDE BUT ARE NOT LIMITED TO VEGETATIVE COVER, MULCH, OR IRRIGATION.

THE FOLLOWING SEQUENCE OF EVENTS AND EROSION CONTROL MEASURES SHALL BE INCORPORATED INTO THE CONSTRUCTION SCHEDULE FOR THIS PROJECT AND SHALL APPLY TO ALL CONSTRUCTION ACTIVITIES WITHIN THE PROJECT

1. SOIL STABILIZATION: a. 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. b. 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, BUT LESS THAN ONE YEAR.

c. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE 2. SOIL STOCKPILE STABILIZATION: DURING CONSTRUCTION, SOIL STOCKPILES AND BORROW AREAS SHALL BE

STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. TEMPORARY PROTECTION AND PERMANENT STABILIZATION SHALL BE APPLIED TO ALL SOIL STOCKPILES ON SITE AND BORROW AREAS OR SOIL INTENTIONALLY TRANSFERRED OFF SITE.

B. **SEDIMENT BASIN:** SEDIMENT BASIN, SEDIMENT TRAP, 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.

. PERMANENT STABILIZATION: 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 WILL INHIBIT EROSION

5. CUT AND FILL SLOPES DESIGN & CONSTRUCTION: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE

6. CONCENTRATED RUNOFF DOWN SLOPES: CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN

7. SLOPE MAINTENANCE: WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

8. STORM SEWER INLET PROTECTION: ALL STORM SEWER INLETS MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE STORMWATER CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED/TREATED TO REMOVE SEDIMENT

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 THE RECEIVING CHANNEL. 10. UNDERGROUND UTILITY LINE INSTALLATION: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE

9. STORMWATER CONVEYANCE PROTECTION: BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS

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 TO MINIMIZE EROSION AND PROMOTE STABILIZATION

e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS f. COMPLY WITH APPLICABLE SAFETY REGULATIONS

11. VEHICULAR SEDIMENT TRACKING: WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC

a. PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE

b. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY c. 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

12. REMOVAL OF TEMPORARY MEASURES: 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 LINEESS OTHERWISE AUTHORIZED BY THE PROGRAM 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.

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED AFTER EACH RAINFALL OR WEEKLY, WHICHEVER IS MOST FREQUENT, AND SHOULD BE CLEANED AND REPAIRED ACCORDING TO THE FOLLOWING SCHEDULE.

CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MUD ONTO PAVED SURFACES AND PUBLIC RIGHTS-OF-WAY. MAINTAIN CONSTRUCTION ENTRANCES IN ACCORDANCE WITH

SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IMMEDIATELY, AS REQUIRED. MAINTAIN SILT FENCE IN ACCORDANCE WITH C-PCM-04 OF THE VSMH. THE INLET PROTECTION WILL BE CHECKED REGULARLY FOR SEDIMENT CLEANOUT. MAINTAIN INLET PROTECTION IN

ACCORDANCE WITH C-SCM-04 OF THE VSMH. 4. OUTLET PROTECTION SHALL BE CHECKED REGULARLY AND SHALL BE CLEANED AND/OR REPLACED IF EXCESSIVE SEDIMENT BUILDUP IS PRESENT

5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION AND BUILDUP OR CLOGGING WITH SEDIMENT. CORRECTIVE ACTION SHALL BE TAKEN IMMEDIATELY. TEMPORARY SEDIMENT BASIN AND TEMPORARY SEDIMENT TRAPS SHALL BE CLEANED TO REMOVE SEDIMENT BUILDUP WHEN SEDIMENT ACCUMULATION REACHES THE ELEVATION SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS. MAINTAIN TEMPORARY OUTFALL TO ENSURE PROPER SEDIMENT FILTRATION AND TRASH INTERCEPTION.

7. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED 8. ALL TEMPORARY EROSION AND SEDIMENT MEASURES SHALL BE DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED AND VEGETATION IS ESTABLISHED. FINAL SITE STABILIZATION SHALL BE APPROVED BY

### PERMANENT STABILIZATION

AFTER FINAL GRADE IS ACHIEVED THE SITE SHALL BE PERMANENTLY STABILIZED. SEED SHALL BE APPLIED TO ALL GRASS AREAS PER THE LANDSCAPE PLANS INCLUDED WITH THE SITE PLAN. OTHER AREAS, TO BE SHOWN IN THE FULL CONSTRUCTION PLAN SET, WILL BE PAVED, CONTAIN BUILDINGS, SIDEWALKS, ETC. SOME AREAS WILL BE ENHANCED WITH TREES, SHRUBS, MULCH, ETC.

### VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY MINIMUM STANDARDS

THE DESIGN OF THIS DEVELOPMENT SHALL CONFORM TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMP). INCLUDED IN THE CIVIL SITE PLANS IS THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) CHECKLIST FOR COMPLIANCE (MS-1 THRU MS-19 CHECKLIST). INFORMATION IS PROVIDED IN THE CIVIL SITE PLANS AS TO HOW EACH APPLICABLE MINIMUM STANDARD IS SPECIFICALLY SATISFIED.

### **EROSION CONTROL (ONLY) SEEDING & FERTILIZING**

1. SEEDING SHALL BE DONE IN CONFORMANCE WITH SECTION 604.03 THROUGH 604.06 OF V.D.O.T SPECIFICATIONS.

2. THE AREA TO BE SEEDED SHALL FIRST BE FERTILIZED WITH COMMERCIAL 10-10-10 FERTILIZER AT THE RATE OF 450 LBS. PER ACRE AND TREATED WITH AGRICULTURAL LIME AT THE RATE OF 2 TONS PER ACRE. THESE SHALL BE UNIFORMLY WORKED INTO SURFACE TO A MINIMUM DEPTH OF ONE INCH.

3. SEEDING SHALL BE DONE ONLY AS SPECIFIED IN TABLE 3.31-B OF THE VIRGINIA DEQ ESC TECHNICAL BULLETIN NO. 4 (ABOVE).

4. SURFACE SHALL BE RAKED AND SMOOTHED TO ELIMINATE RIDGES AND DEPRESSIONS. 5. AFTER PRELIMINARY RAKING. THE SEED SHALL BE SOWN AT THE RATE OF FOUR LBS. PER

THOUSAND SQUARE FEET AS FOLLOWS: 20% PERENNIAL RYE 35% KENTUCKY 31 FESCUE 30% CREEPING RED FESCUE 15% REDTOP (ALL PERCENTAGES ARE BY WEIGHT) 6. SURFACE SHALL THEN BE LIGHTLY RAKED IN ORDER TO COVER SEED NO DEEPER THAN 1/4 INCH AND THEN SPRINKLE WITH WATER. THE SEEDED SURFACE SHALL BE COVERED WITH

STRAW OR HAY TO PREVENT EROSION AND TO PROTECT SEEDING. THE ENTIRE SEEDED SURFACE SHALL BE ROLLED WITH A CORRUGATED ROLLER AFTER SEEDING AND BEFORE COVERING WITH STRAW. CONTRACTOR SHALL PROTECT SEEDED SURFACES UNTIL A GOOD STAND OF GRASS IS OBTAINED. 7. THE "HYDRO-SEEDING" METHOD OF SEED APPLICATION MAY BE USED, PROVIDED THE SEED

RATE PER SQUARE FOOT IS THE SAME AS HEREIN BEFORE SPECIFIED. THE MULCH RATE SHALL BE SUCH AS TO PROVIDE PROPER SEED PROTECTION AND PREVENT EROSION. IF. IN THE OPINION OF THE INSPECTOR OR ENGINEER, THE MULCH RATE USED (AS EVIDENCED BY SLOPES AFTER SPRAYING) IS NOT SUFFICIENT. THE CONTRACTOR SHALL BE REQUIRED TO IN-CREASE THE AMOUNT OF MULCH IN THE MIX. NO EXTRA WILL BE ALLOWED FOR ANY REQUESTED

### SEQUENCE OF SITE CONSTRUCTION

### PHASE I - INITIAL PREPARATION AND DEMOLITION

1. SUBMIT AND OBTAIN ALL APPLICABLE PERMITS. CONTACT APPLICABLE UTILITY COMPANIES AND COORDINATE UTILITY RELOCATION/REMOVAL.

2. SECURE TREE DEMOLITION PERMIT FROM CITY FORESTER, IF REQUIRED.

DO NOT INITIATE ANY LAND DISTURBING ACTIVITY UNTIL AUTHORIZED TO PROCEED BY OWNER.

4. COORDINATE MOBILIZATION AND JOB SITE ACCESS WITH OWNER AND CITY OF VIRGINIA BEACH DEPARTMENT OF

THE CONTRACTOR SHALL CONTACT PUBLIC WORKS SO THAT A PRE-CONSTRUCTION CONFERENCE CAN BE

CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING PAVEMENT, EXISTING PAVERS, UNPAVED RIGHT OF WAY,

EXISTING STRUCTURES TO REMAIN DUE TO TRUCK TRAFFIC, AND FOR KEEPING THE ROADWAY CLEAN.

INSTALL CONSTRUCTION ENTRANCES, PERIMETER SILT FENCE, AND TREE PROTECTION. LIMITED DEMOLITION IS ALLOWED TO ESTABLISH PERIMETER SILT FENCE.

INSTALL ALL INLET AND OUTLET PROTECTION. EXISTING STORM SEWER SYSTEM SHALL BE MAINTAINED AND REMAIN OPERATIONAL.

BEGIN TREE DEMOLITION AND REMOVAL.

10. INSTALL ALL STRUCTURE B-1 & CONNECTION TO EXISTING MANHOLE. AFTER B-1 IS INSTALLED, CONTRACTOR CAN BEGIN SEDIMENT TRAP & SITE DIVERSION GRADING. 11. BEGIN DEMOLITION OF CURB, PAVEMENT, PAVERS AND ALL DEMOLITION ITEMS AS SHOWN ON SHEET C-2.0.

12. CONTRACTOR TO PROVIDE DUST CONTROL & TEMPORARY SEEDING DURING DEMOLITION.

### PHASE II - SITE CONSTRUCTION AND FINAL STABILIZATION

1. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUPS TO MAINTAIN EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY IN ACCORDANCE WITH MS-5, MEANING THEY WILL BE RE-STABILIZED

2. COMMENCE UNDERGROUND UTILITY INSTALLATION.

3. COMMENCE INSTALLATION OF PROPOSED STORMWATER STRUCTURES, PIPES, AND BMPS

4. COMMENCE SITE FINAL GRADING.

5. CONSTRUCT, SITE ENTRANCE AND OTHER HARD SURFACES INCLUDING PAVEMENT.

6. PROMPTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE. APPLY TOPSOIL, SEED, SOD, AND MULCH TO THE LIMITS OF DISTURBANCE. INSTALL LANDSCAPING.

7. INSTALL PAVEMENT MARKINGS AND SIGNAGE.

8. REPAIR ANY INADVERTENT EROSION AND REMOVE ANY INADVERTENT SEDIMENTATION FROM THE SITE.

9. REMOVE ALL TEMPORARY EQUIPMENT, TRASH CONSTRUCTION MATERIALS, AND DEBRIS FROM THE SITE.

10. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WITHIN 30 DAYS AFTER FINAL STABILIZATION OF THE SITE AND APPROVAL FROM THE CITY CONSTRUCTION INSPECTOR.

11. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE INSPECTOR.

TABLE 6-1

## **GENERAL EROSION AND SEDIMENT CONTROL NOTES**

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE. ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE

FIRST STEP IN CLEARING. ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY. ES-7: 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. ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE

ES-9: 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

#### VIRGINIA BEACH EROSION & SEDIMENT CONTROL & TREE PROTECTION NOTES:

 THE CONTRACTOR/RLD WILL COMPLY WITH THE APPLICABLE REGULATIONS OF THE CITY OF VIRGINIA BEACH AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS, LATEST EDITION, AS DEEMED NECESSARY BEFORE, DURING, AND AFTER CONSTRUCTION.

• ALL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED WITH THE FIRST STAGE OF CONSTRUCTION AND WILL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED. EROSION AND SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHOWN ON THE PLAN ARE THE MINIMUM NECESSARY AND SHALL REMAIN IN PLACE UNTIL THE RELEASE OF THE EROSION AND SEDIMENT CONTROL BOND. THE ADDITION OR DELETION OF EROSION AND SEDIMENT CONTROL AND TREE PROTECTION DEVICES WILL BE AT THE DIRECTION OF THE PLANNING CIVIL INSPECTOR.

ALL LAND DISTURBING ACTIVITIES MUST CONFORM WITH THE APPLICABLE REGULATIONS OF THE CITY OF VIRGINIA BEACH CODES, ORDINANCES, AND PWSS AND THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION EROSION AND SEDIMENT CONTROL HANDBOOK. 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. 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 OR SILTATION CONDITION.

THE CONTRACTOR/RLD WILL CONSTRUCT AND MAINTAIN A TEMPORARY CONSTRUCTION ENTRANCE AT EACH POINT OF INGRESS/EGRESS USING FILTER FABRIC UNDERLINER WITH TWO-INCH (2") STONE OR GREATER WITH A MINIMUM THICKNESS OF SIX INCHES (6"). THE CONSTRUCTION ENTRANCE SHALL HAVE A MINIMUM WIDTH OF 12 FEET AND MINIMUM LENGTH OF 70 FEET. 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'S ENGINEER OR THE PLANNING CIVIL INSPECTOR. A WASH RACK MAY BE DEEMED NECESSARY AND REQUIRED BY THE PLANNING CIVIL INSPECTOR.

THE OWNER/DEVELOPER/CONTRACTOR/RLD WILL CONSTRUCT, INSTALL, AND MAINTAIN SUFFICIENT EROSION AND SEDIMENT CONTROL DEVICES TO PREVENT SOIL FROM BEING ERODED AND PLACED ON ADJACENT STREETS, 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/OR AS REQUIRED BY THE PLANNING CIVIL INSPECTOR.

ALL DISTURBED AREAS WILL IMMEDIATELY BE STABILIZED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND WILL NOT EXCEED A MAXIMUM HORIZONTAL TO VERTICAL SLOPE OF THREE (3) TO ONE (1). TEMPORARY SEEDING IS REQUIRED IMMEDIATELY AFTER DISTURBANCE DURING ALL PHASES OF CONSTRUCTION

THE CONTRACTOR/RLD WILL MONITOR AND TAKE PRECAUTIONS TO CONTROL DUST.

(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. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION, TREE PROTECTION WILL BE PLACED AROUND ALL TREES TO BE RETAINED. THE TREE PROTECTION WILL BE IN ACCORDANCE WITH THE <u>VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK</u>, SPECIFICATION 3.38 "TREE

SPECIFIED IN CHAPTER 5 OF THE PWSS) WITH MATCHING MATERIALS, SUCH AS" AND SHALL BE LOCATED IN A CIRCULAR PATTERN AROUND THE TREE WITH A MINIMUM DISTANCE EQUAL TO THE DRIPLINE OF THE TREE, OR A MINIMUM OF FIVE FEET (5'), WHICHEVER IS GREATER. ITEMS INCLUDING, BUT NOT LIMITED TO, BOARDS, WIRES, OR SIGNAGE WILL NOT BE NAILED OR

PRESERVATION AND PROTECTION REPLACING ANY PAVEMENT (WITH THE MINIMUM AS

ATTACHED TO TREES TO BE RETAINED. DAMAGED TREE LIMBS WILL 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. TREES TO BE RETAINED, THAT ARE DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY TREES OF AT LEAST 2 1/2-INCH CALIPER, OF THE SAME SPECIES AND QUALITY OR AS SPECIFIED BY THE CITY ARBORIST. REPLACEMENT TREES WILL CONFORM TO THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AND LANDSCAPING GUIDE CITY

OF VIRGINIA BEACH (2002) 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

STOP WORK ORDER OR OTHER LEGAL ACTION. • SILT FENCE FABRIC SHALL BE 36" TALL, STAKED WITH 2" X 2" HARDWOOD STAKES, 6-FOOT ON

"TRUCKS ENTERING HIGHWAY" SIGNS MUST BE PLACED BEFORE THE CONSTRUCTION

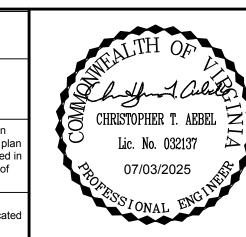
ENTRANCE IN EACH DIRECTION. ANY AND ALL MATERIAL OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD SURFACE WILL BE REMOVED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A SEDIMENT

> CONTROLLED DISPOSAL AREA. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN A LAWFUL MANNER.

n. Compliance with the water quantity minimum standards set out in 4VAC50-60-66 of the Virginia Stormwater

Management Program (VSMP) Permit Regulations shall be deemed to satisfy the requirements of Minimum

		Virginia Erosion and Sediment Control Plan Minimum Standards (MS) Checklist August 30, 2013		MITH
YES	N/A	4VAC50-30-40 Minimum Standards	Describe how MS is addressed on plan	CHRISTOPHER
х		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.	Permanent and temporary seeding have been shown on the Erosion and Sediment Control plan sheets. These items have also been discussed in the Erosion Control narrative and Sequence of Construction.	CHRISTOPHER  Lic. No. 0  07/03/20
х		MS2: During construction of the project, soil stock piles 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.	Soil stockpile and staging areas are to be located onsite with the proper E&SC measures.	ESSIONAL
x		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.	Permanent seeding has been shown on the Ph. II Erosion and Sediment Control plan. Permanent seeding schedules have been provided in the plan set.	/A 23452 ins.com
x		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.	Silt fence and Sediment trap has been shown on the Ph. I & Ph. II Erosion and Sediment Control plan.	RED AT THE <b>OFFICE</b>   Virginia Beach, VA 23452 415 www.timmons.com
	х	MS5: Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.	Earthen structures shall be stabilized.	π 4
х		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.	A sediment trap has been proposed and meets these requirements.	THIS DRAWING  VIRGINIA B th Lynnhaven Road, Su  '.213.6679 FAX 757.
x		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.	Cut and fill slopes have been designed to be 3:1 or flatter to minimize the potential for erosion.  Notes have been added to the Management Strategies section of the Erosion Control Narrative.	2901 Sou
x	х	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.  MS9: Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.  MS10: All storm sewer inlets that are made operable during construction shall be protected so that	Concentrated runoff down cut or fill slopes are not anticipated with this project.  Notes have been added to the Management Strategies section of the Erosion Control Narrative stating this requirement.  Inlet protection has been shown at all storm	YOUR VISION ACHIEVED THROUGH OURS.
х		sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.	sewer inlets on both the Ph. I & II Erosion and Sediment Control plans.	/ED THI
х		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.	Outlet protection provided to ESC Ph.1 plan.	ACHIEV
	х	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.  MS13: When a live watercourse must be crossed by construction vehicles more than twice in any six-month	No work in live watercourses will occur.	UR VISION
	X	period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.  MS14: All applicable federal, state and local chapters pertaining to working in or crossing live watercourses shall	No work in live watercourses will occur.  No work in live watercourses will occur.	O,
	x	be met.  MS15: The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.	No work in live watercourses will occur.	
x		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. Restabilization shall be accomplished in accordance with this chapter.  f. Applicable safety chapters shall be complied with.	Underground utilities will be installed in accordance to MS16.	
x		MS17: Where construction vehicle access routes 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, the 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.	Construction Entrances in accordance with the Virginia Erosion and Sediment Control Spec. 3.02 have been indicated on the Ph. I & II Erosion and Sediment Control plans.	
х		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.	This requirement is discussed in the Erosion Control narrative and Sequence of Construction.	<b>A</b>
x		MS19: Properties and watenways 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 critieris. 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; and shall be exempt from any flow rate capacity and velocity requirements for alternator or man-made channels; and shall be exempt from any flow rate capacity and velocity requirements for alternator man-made channels; and shall be exempt from any flow rate to a storm sever 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 (3) Alturated thannels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel benks nor cause erosion of channels 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 will not cause erosin or channels or channel the greater storm will not cause the predevelopment peak runoff rate from a twoyear storm to increase when runoff outfalls into a manmade channels or pipes are not adequate, the applicant shall p	The stormwater management plan for this project meets non-erosive velocities. All systems will contain the 10-year storm.	DOWD SXON



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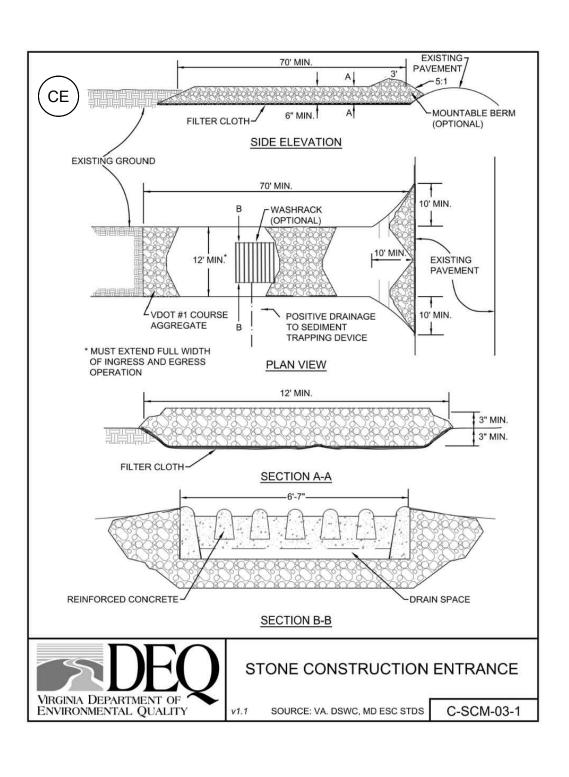
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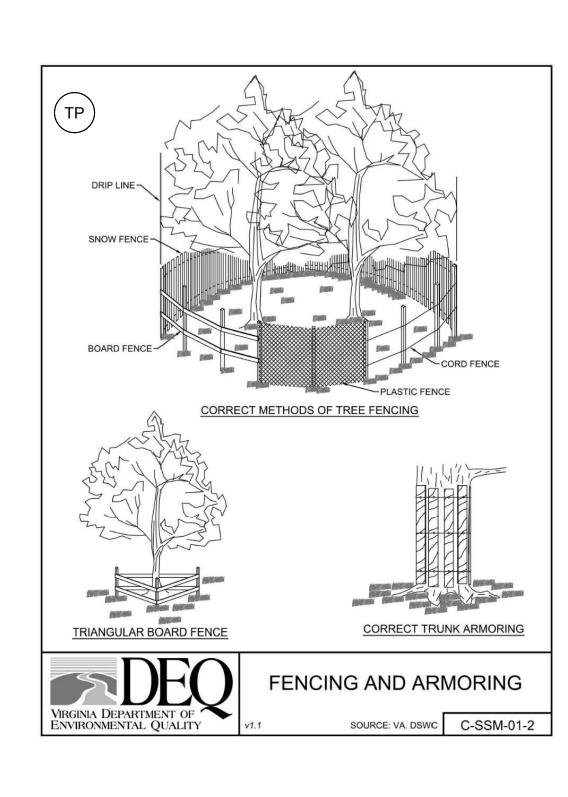
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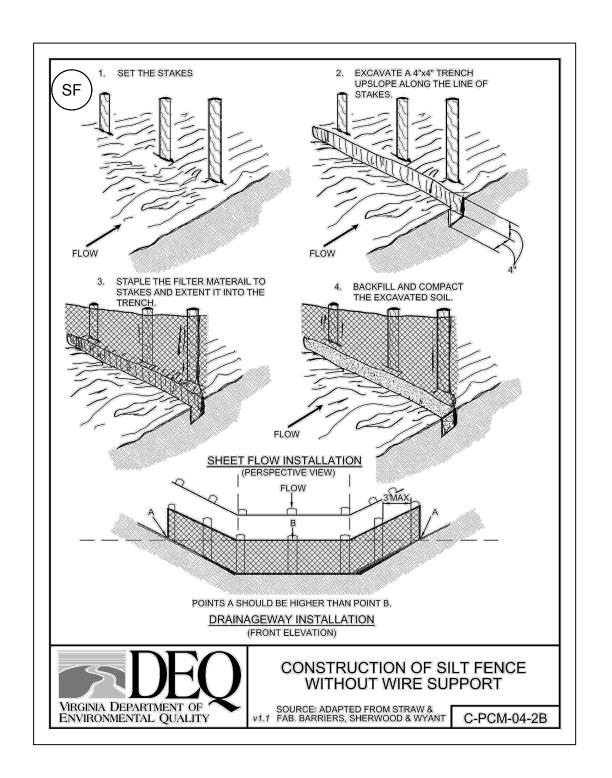
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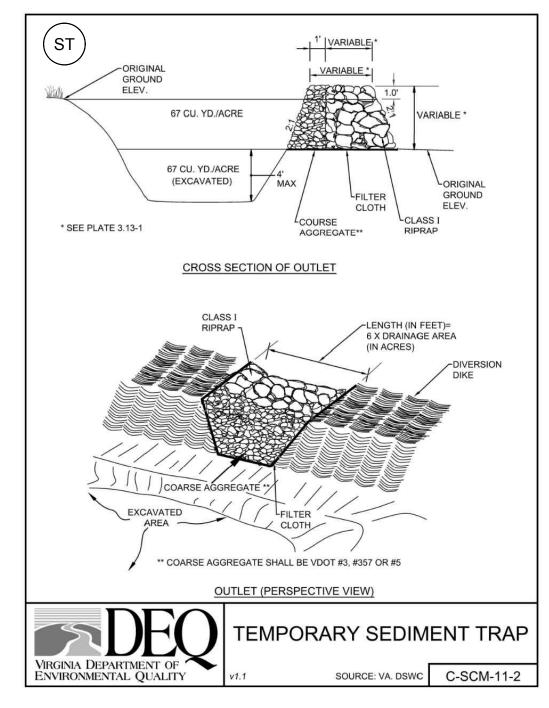
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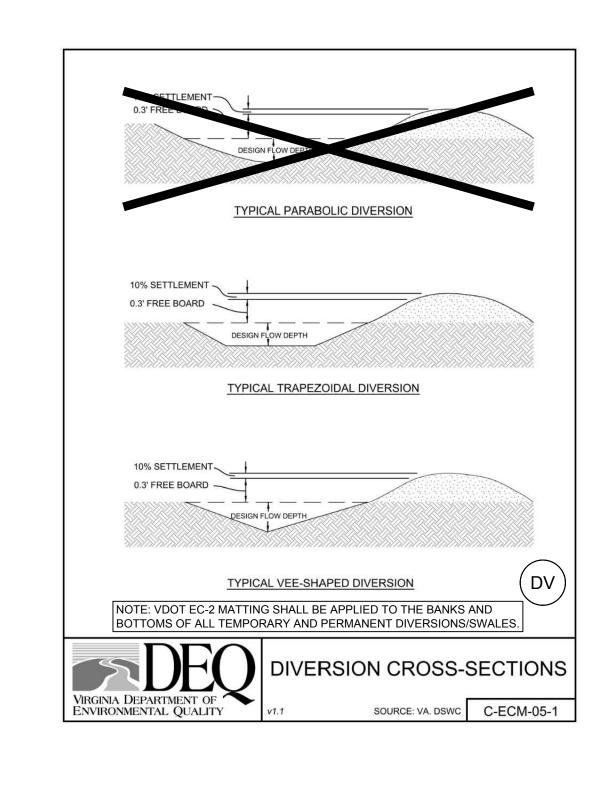
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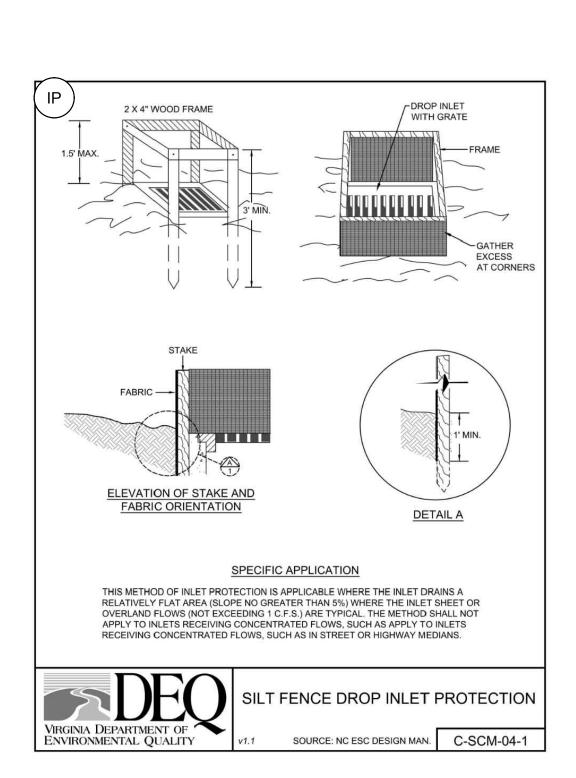


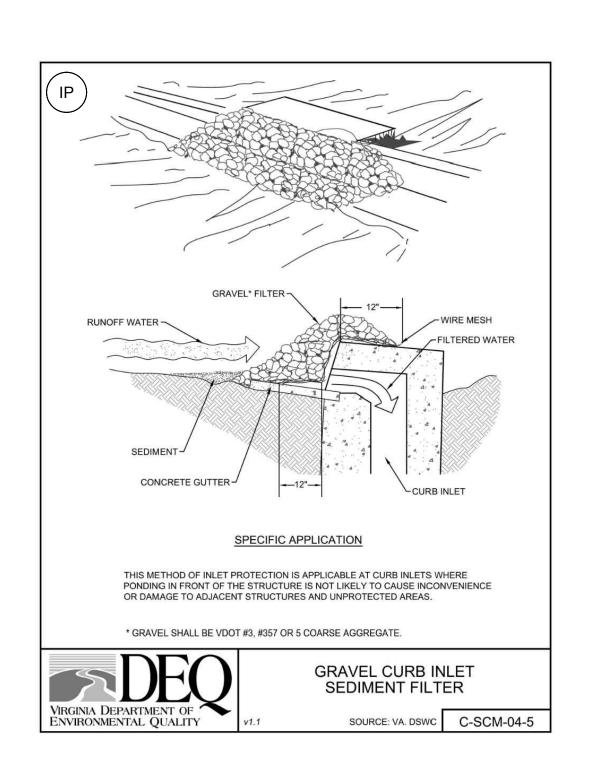


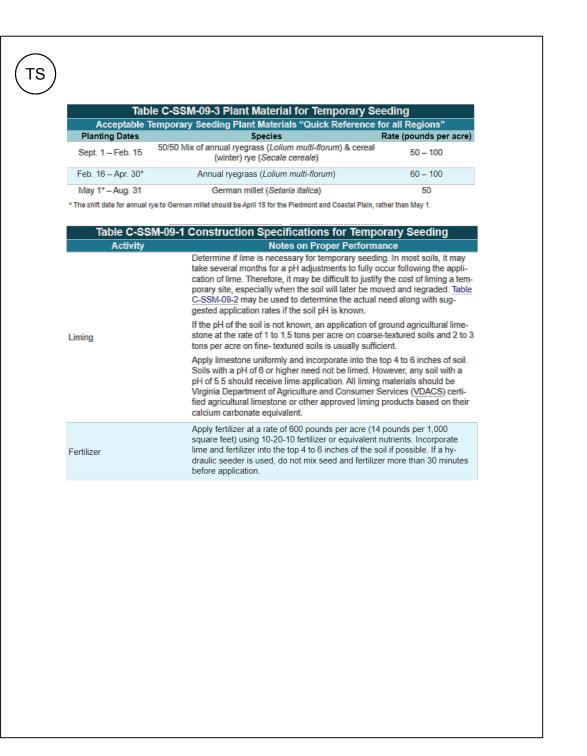


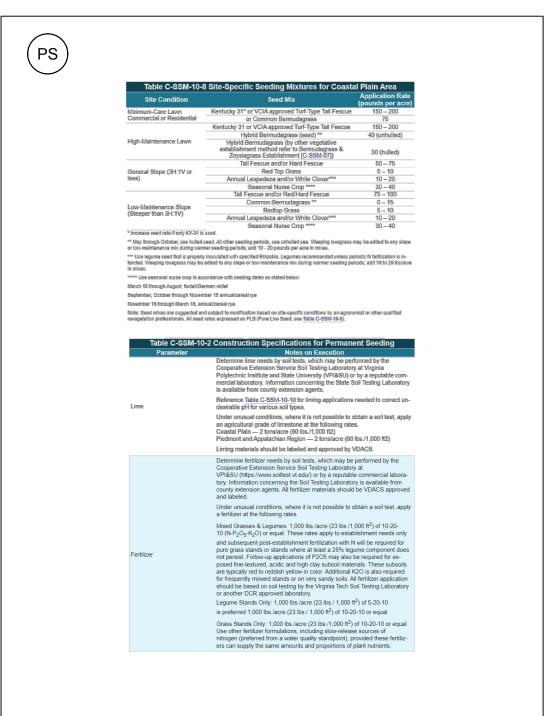


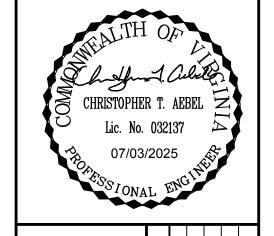












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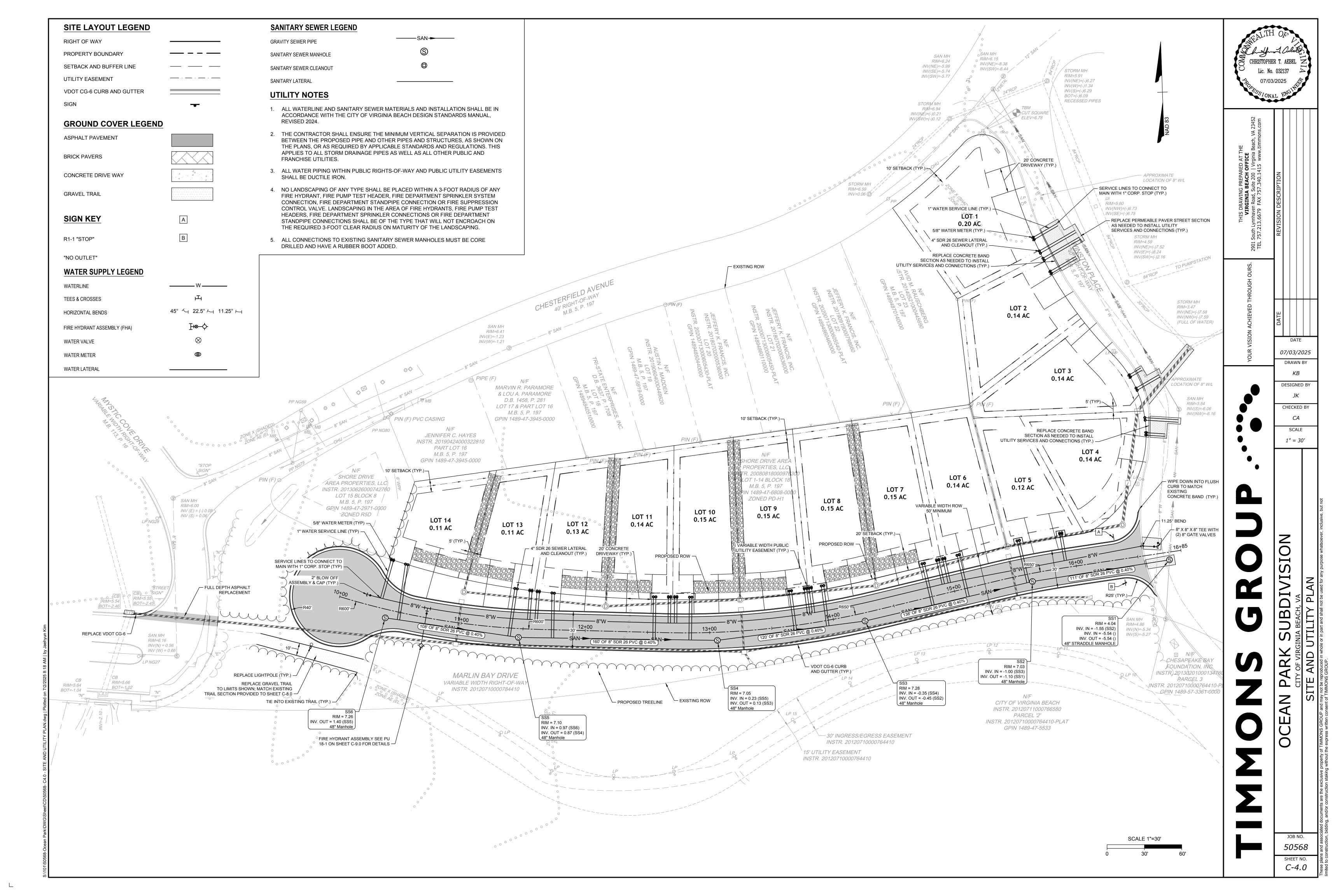
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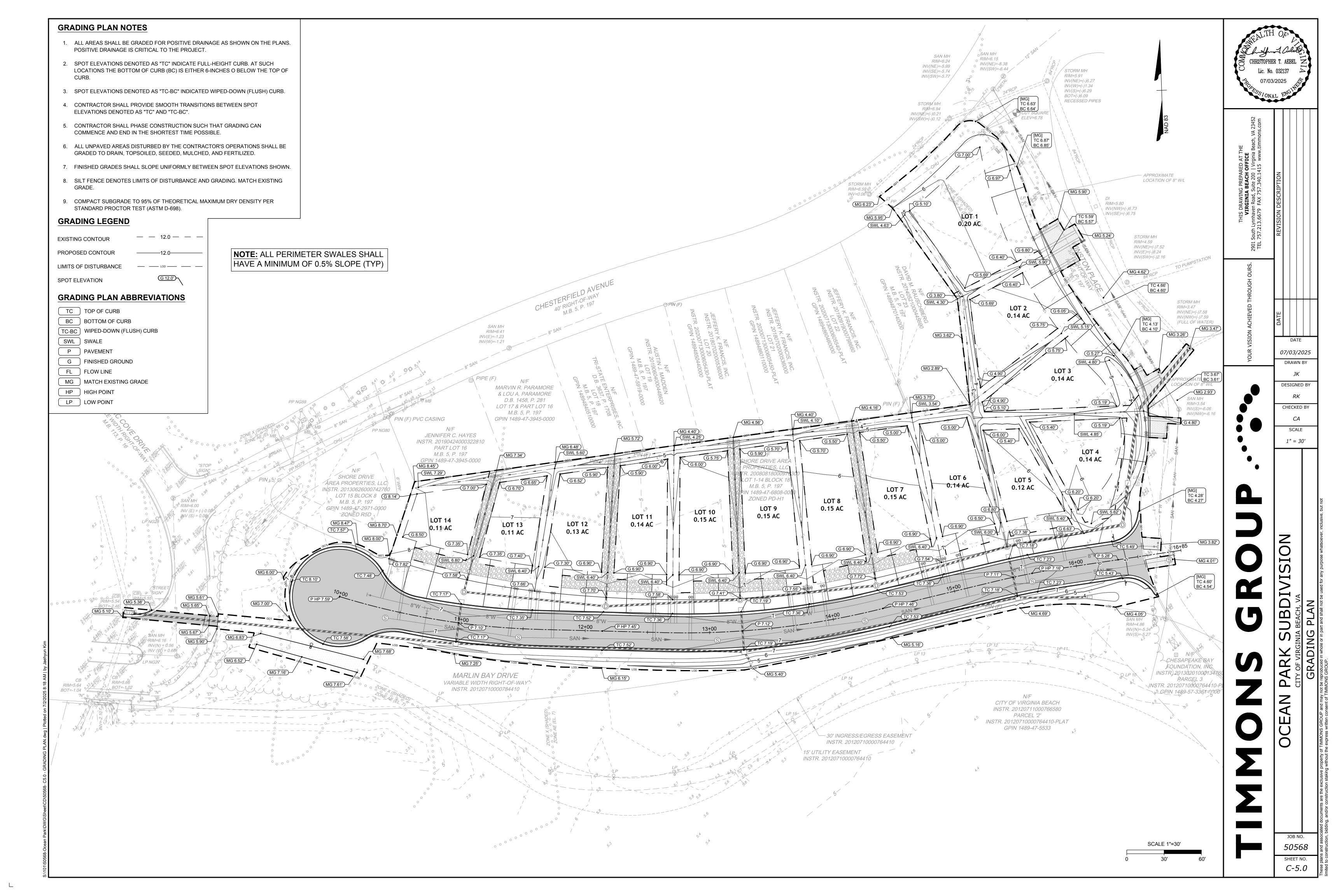
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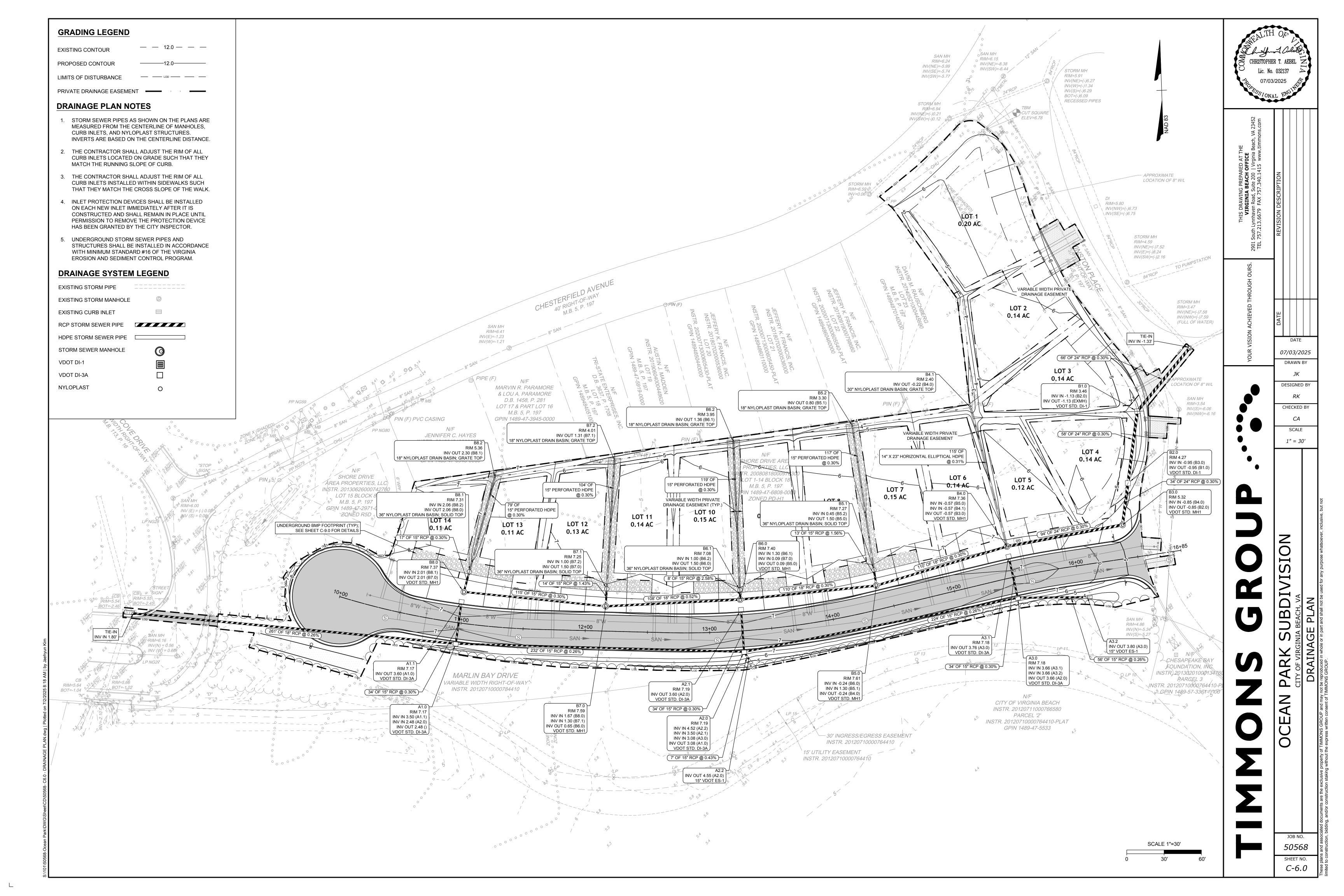
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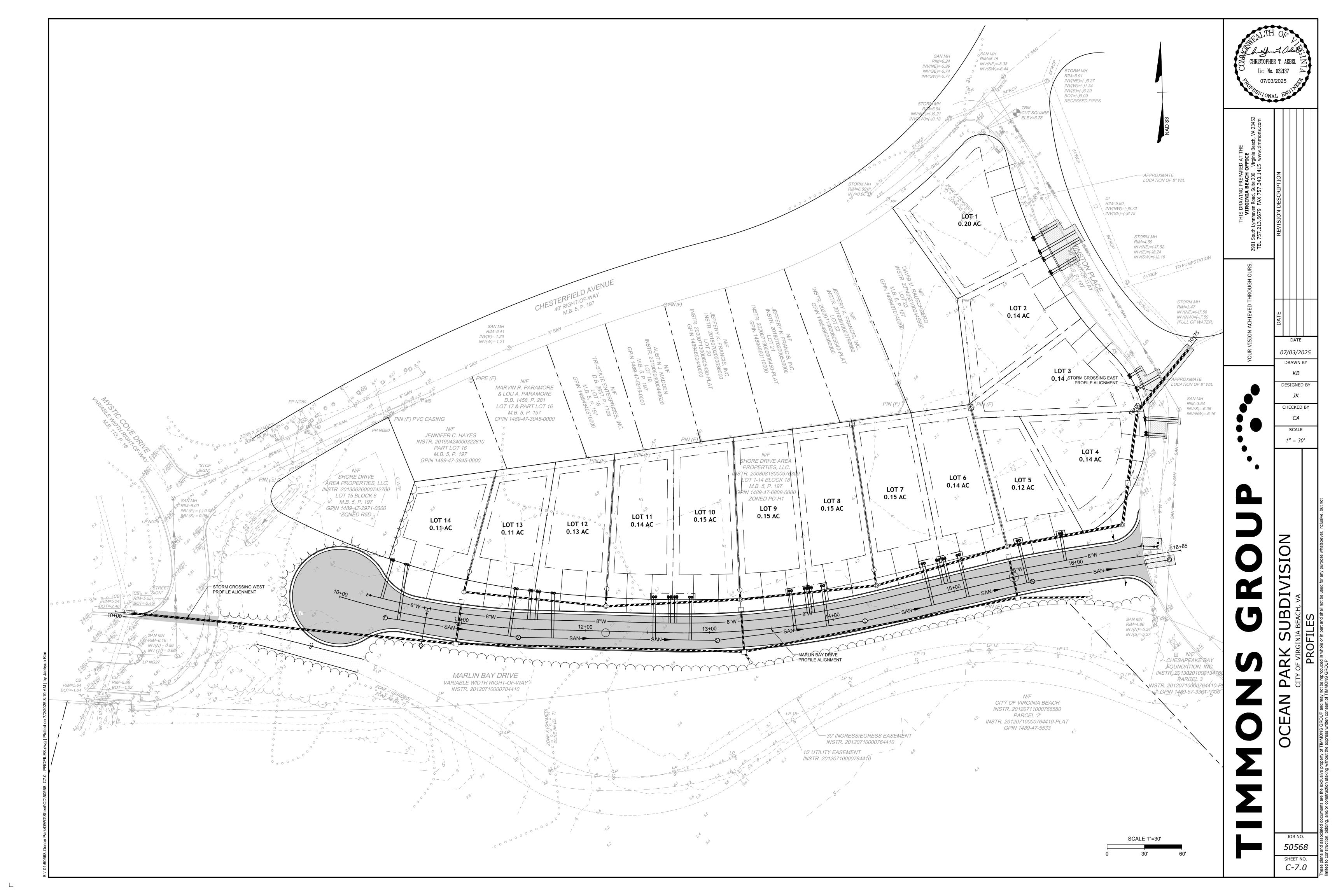
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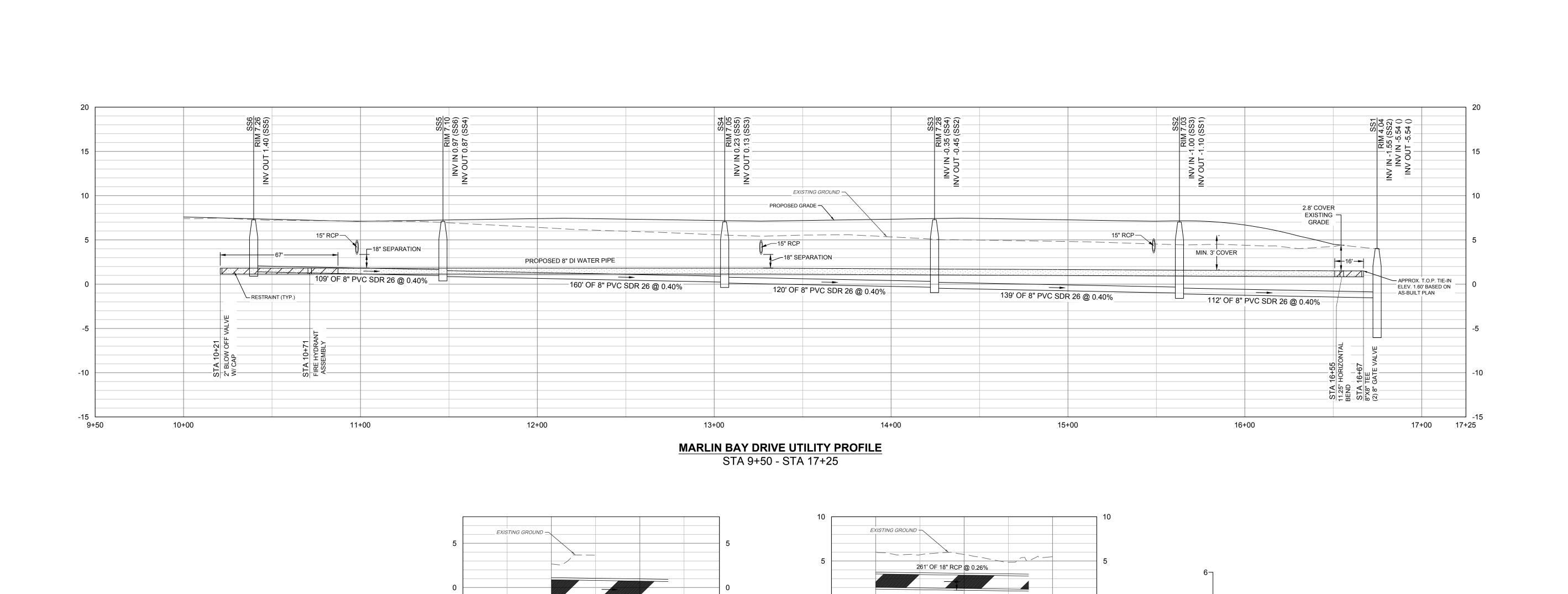
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7" NEOPRENE PAD

STORM CROSSING WEST ROUTE PROFILE
STA 8+75 - STA 10+25

PROFILE SCALE

66' OF 24" RCP @ 0.30%

STORM CROSSING EAST ROUTE PROFILE
STA 9+50 - STA 10+95

10+50



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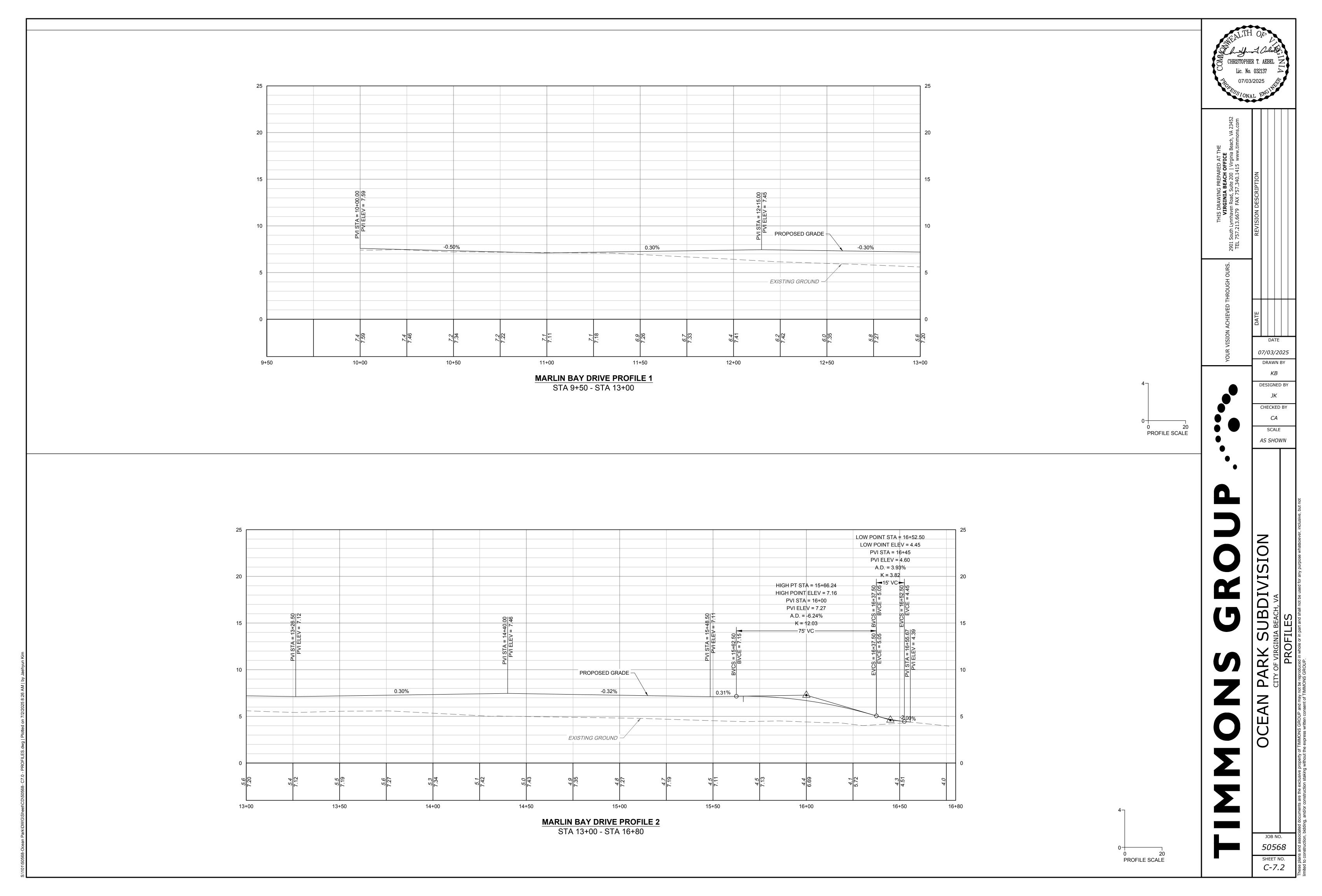
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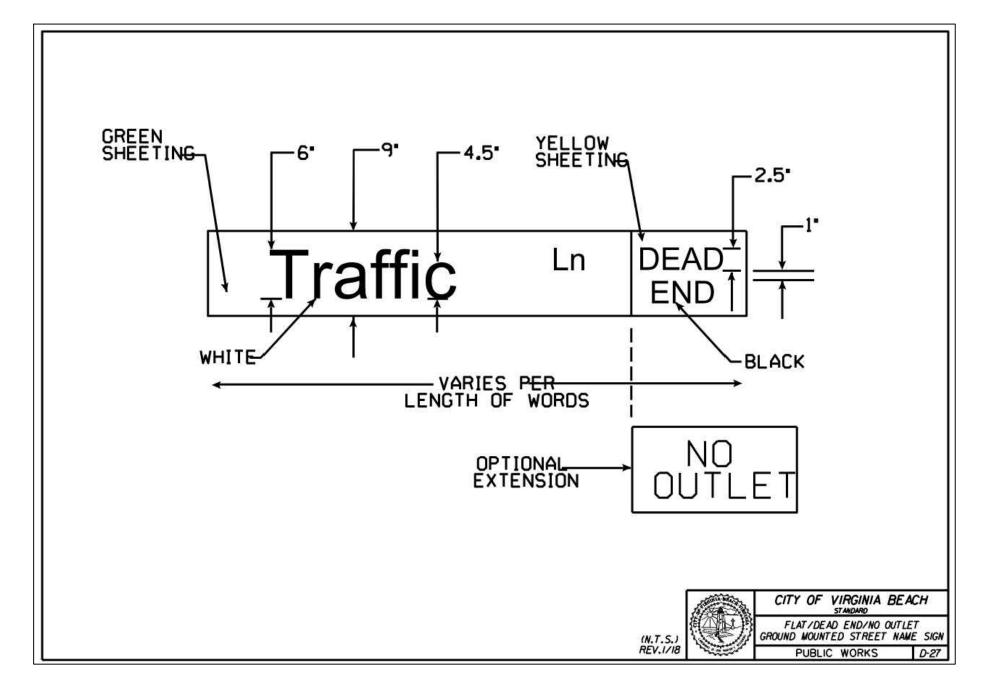
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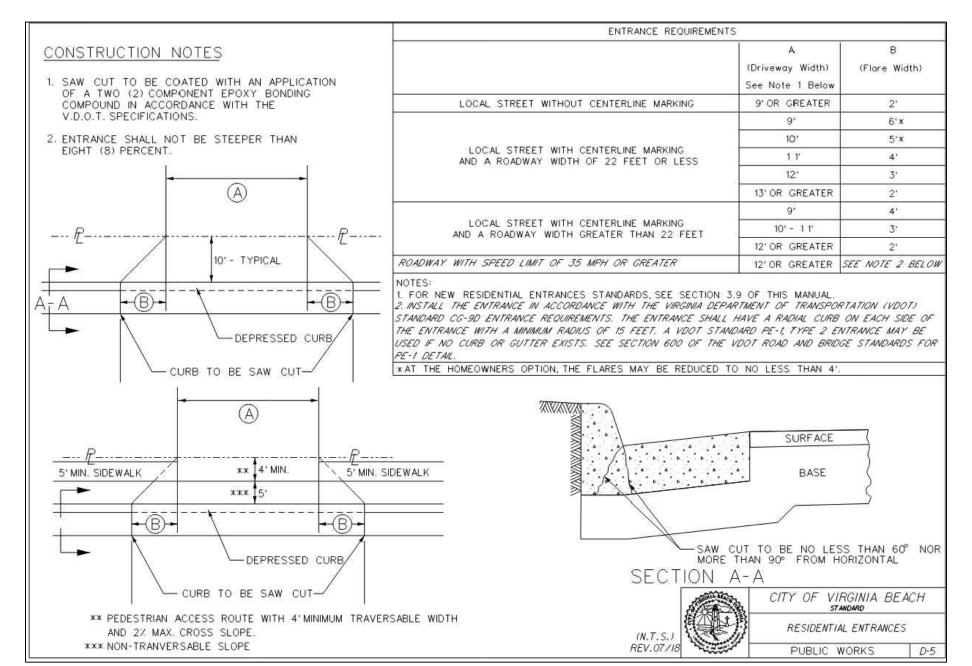
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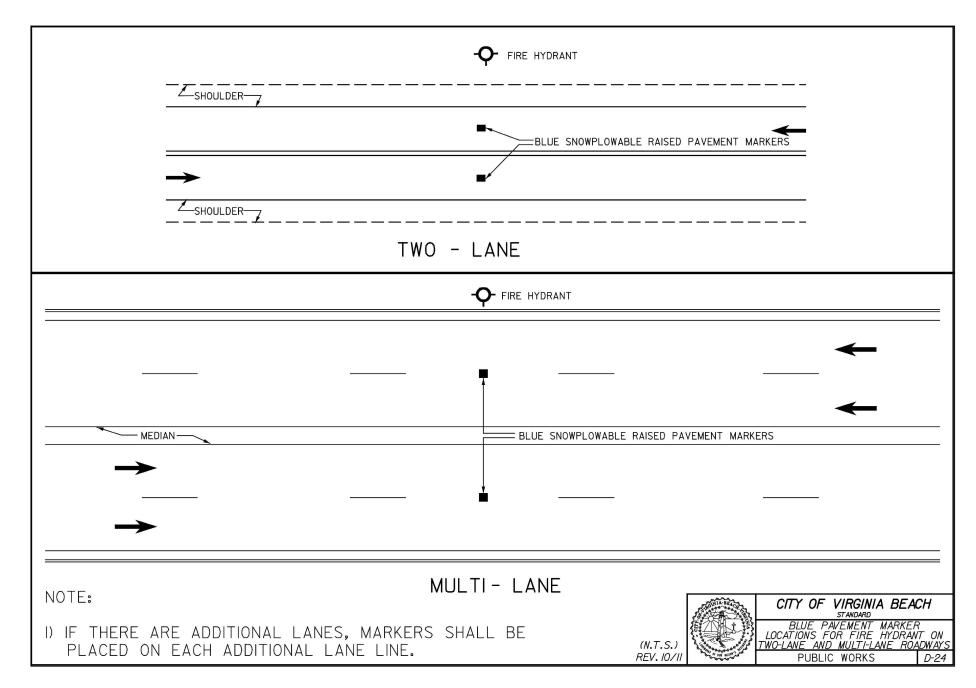
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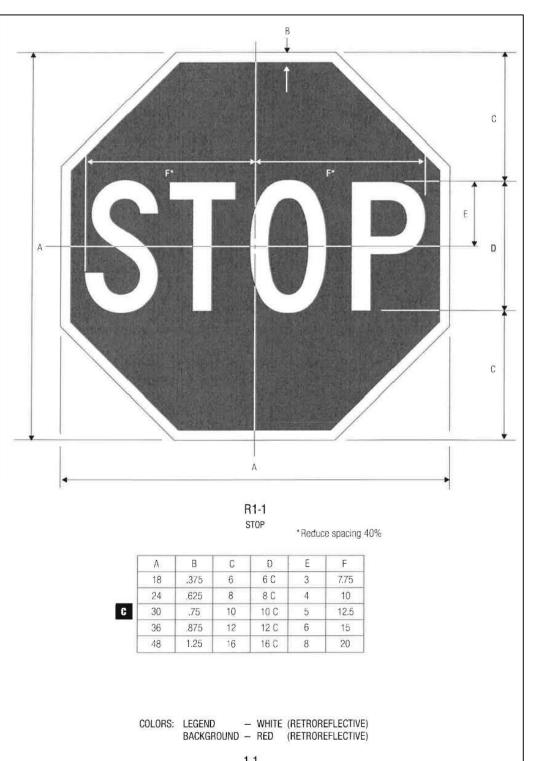


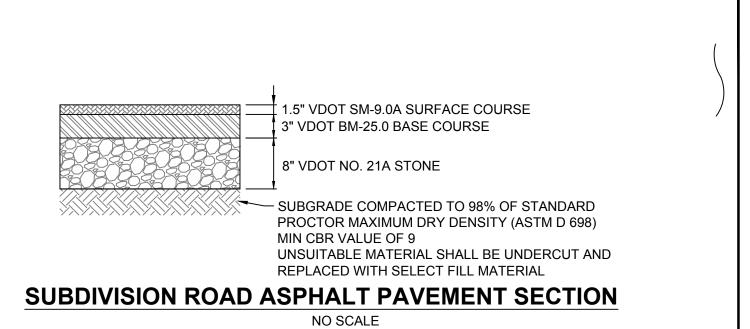
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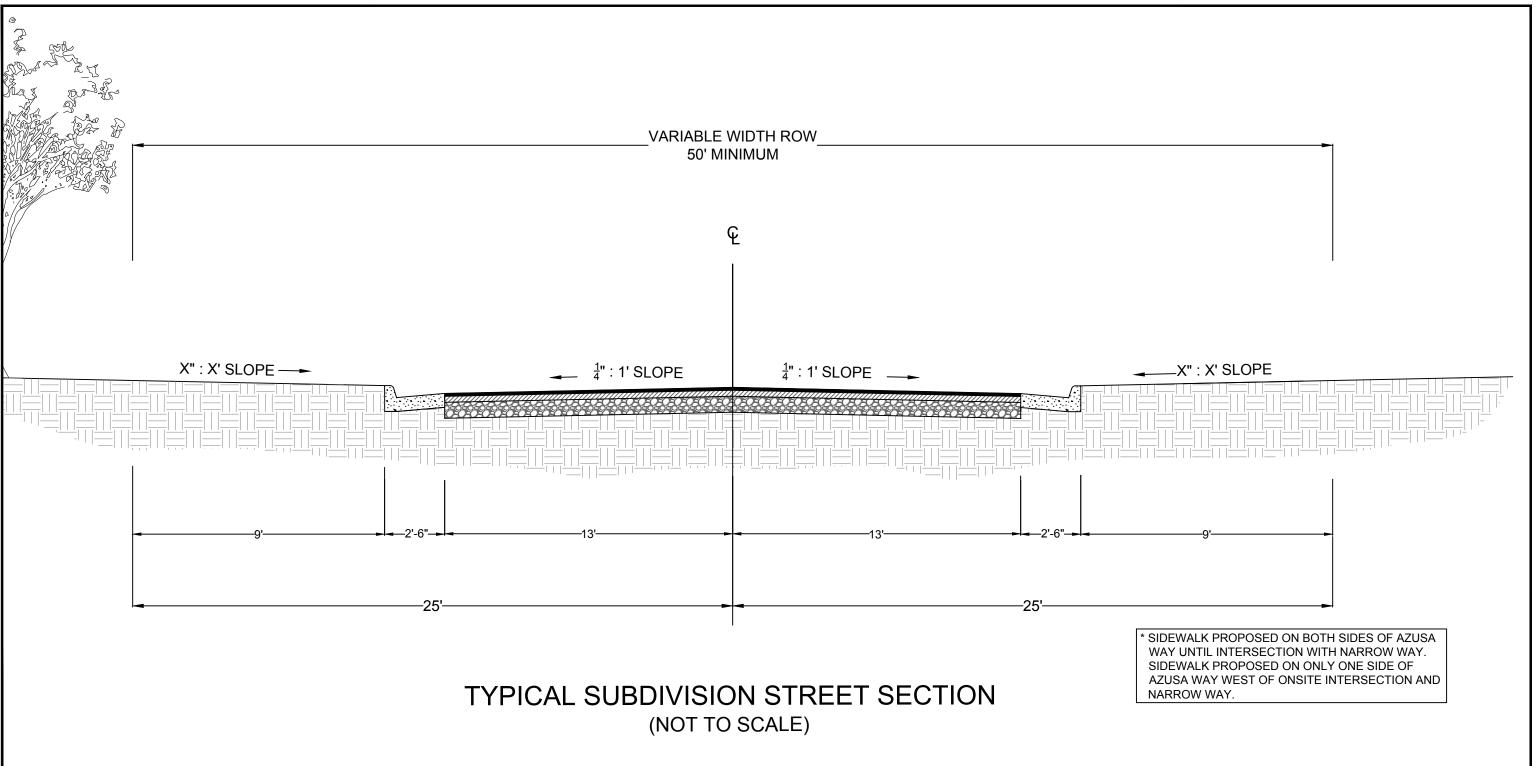


### PAVING NOTES:

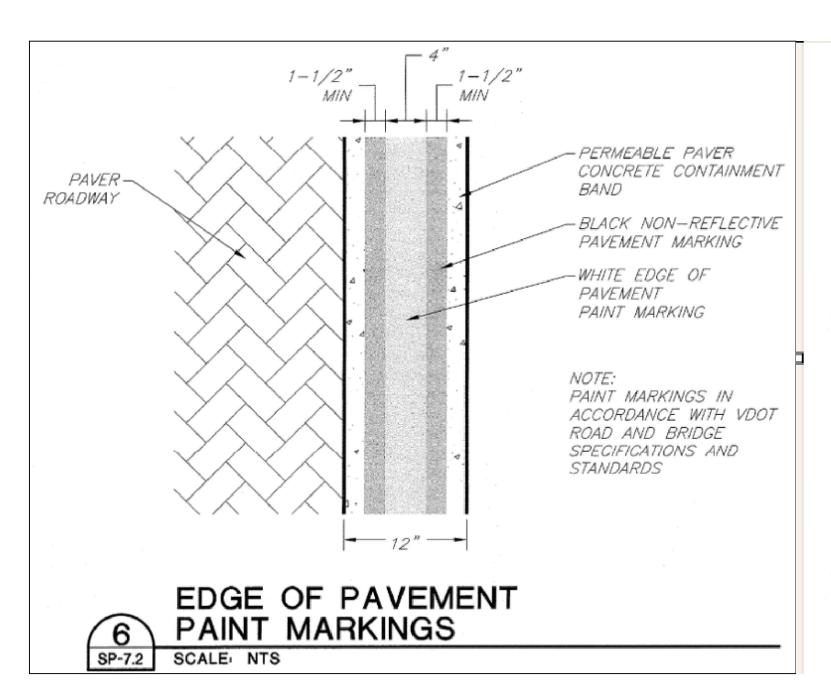
IF DURING TESTING UNSTABLE CLAYEY SUBGRADE SOILS BECOME EVIDENT, OVER-EXCAVATION TO STABILE SOILS IS REQUIRED. DEPTH OF OVER-EXCAVATION WILL BE DEPENDENT ON THE SOIL CONDITIONS AT THE FOLLOWING PAVEMENT ROUGH GRADING OPERATIONS, THE EXPOSED SUBGRADE SOILS SHOULD B PROOFROLLED UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER. THIS PROOFROLLING SHOULD BE ACCOMPLISHED WITH A FULLY LOADED DUMP TRUCK OR 7 TO 10-TON DRUM ROLLER TO CHECK FOR POCKETS OF SOFT MATERIAL HIDDEN BENEATH A THIN CRUST OF BETTER SOIL. ANY UNSUITABLE MATERIALS THUS EXPOSED SHOULD BE REMOVED AND REPLACED WITH A WELL-COMPACTED STRUCTURAL FILL MATERIAL. THE INSPECTION OF THESE PHASES SHOULD BE PERFORMED BY THE GEOTECHNICAL

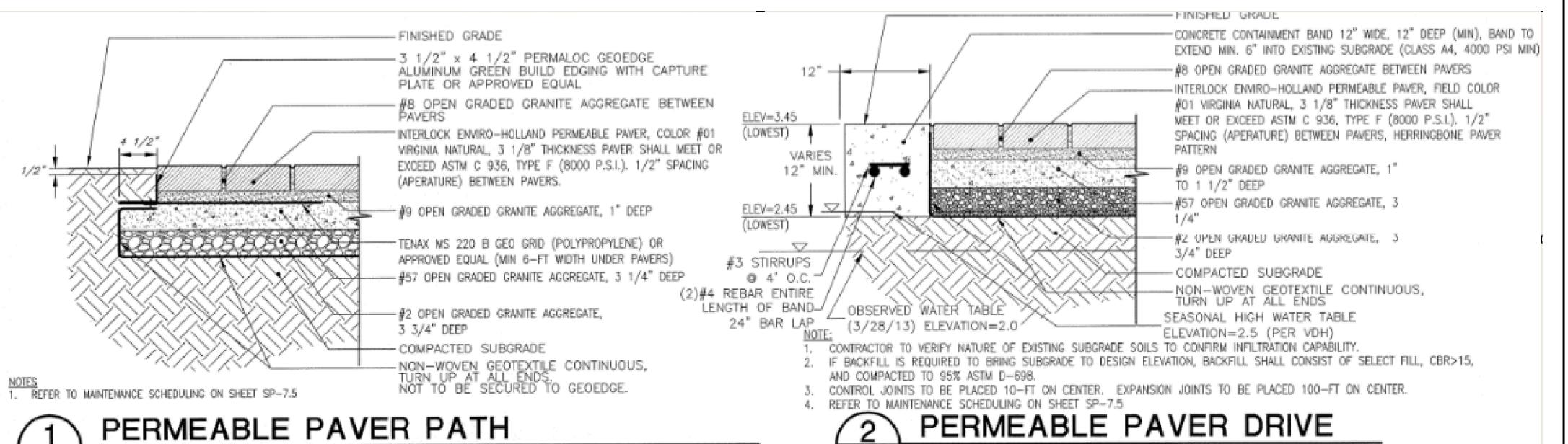
IF EXCESSIVELY UNSTABLE SUBGRADE SOILS ARE OBSERVED DURING PROOFROLLING AND/OR FILL PLACEMENT, IT IS EXPECTED THAT THESE WEAK AREAS CAN BE STABILIZED BY MEANS OF THICKENING THE BASE COURSE LAYER AND/OR THE USE OF A GEOTEXTILE FABRIC (SUCH AS MIRAFI 500X OR EQUIVALENT). THESE ALTERNATIVES ARE TO BE ADDRESSED BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION, IF NECESSARY, WHO WILL RECOMMEND THE MOST ECONOMICAL APPROACH AT THE TIME.

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### **BMP NOTES**

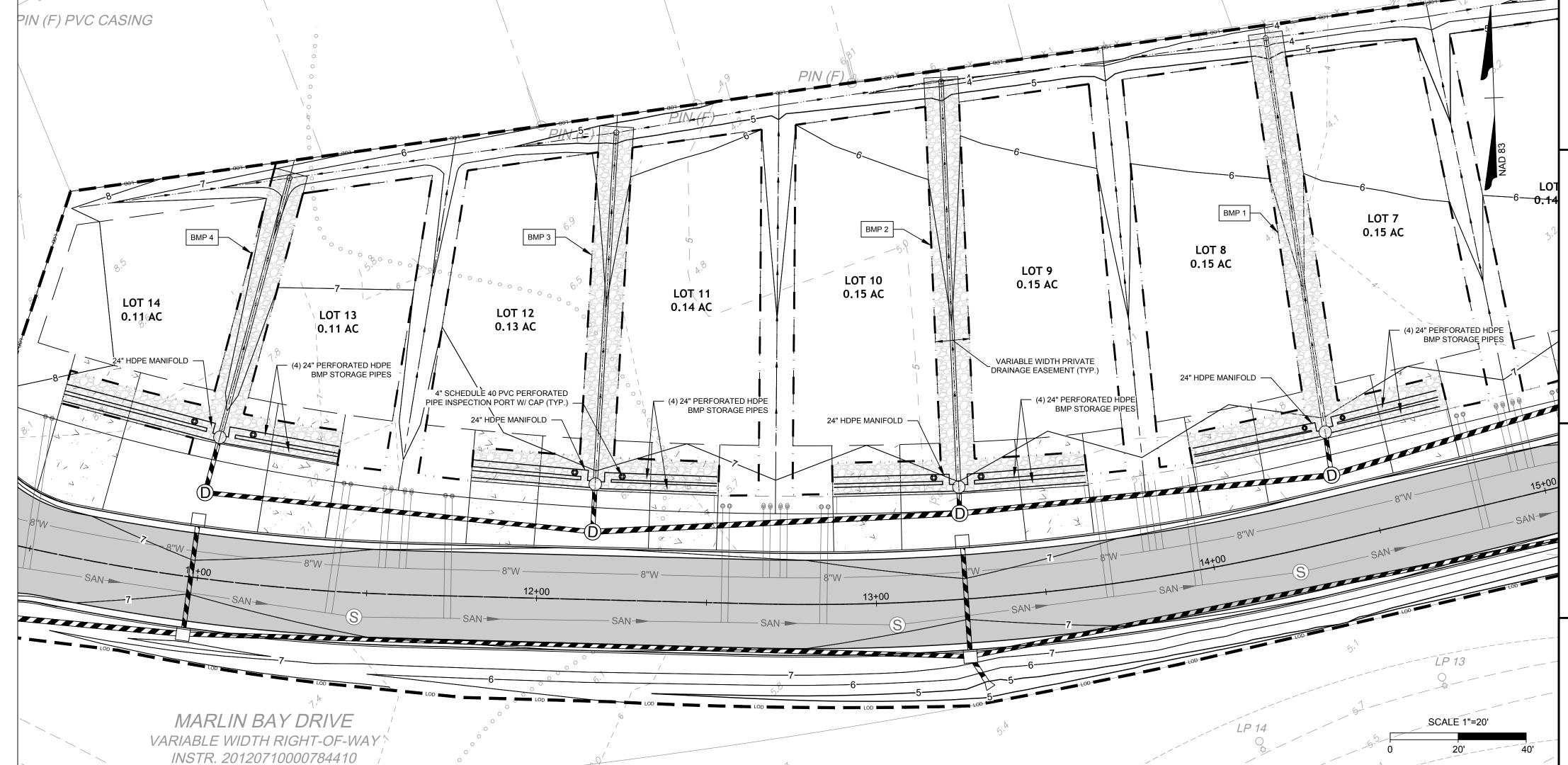
- 1. FILTER FABRIC SHALL BE NON-WOLVEN POLYPROPYLENE GEOTEXILE W/FLOW RATE > 100 GAL/MIN/SF.
- 2. PROVIDE 2 FEET MINIMUM OF OVERLAP OF FILTER FABRIC.

### BMP MAINTENANCE SCHEDULE

- 1. INSPECT EVERY 6 MONTHS DURING FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PERVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS REQUIRED.

### UG STONE RESERVOIR BMP HGL RISE SUMMARY TABLE

STORM EVENT	BMP1	BMP2	BMP3	BMP4
STRC.	B5.1	B6.1	B7.1	B8.1
10YR	2.79'	2.85'	2.88'	2.90'
100YR	4.24'	4.45'	4.57'	4.72'



### 5' +/- SEPARATION FROM BUILDING -ADDITIONAL STONE SETBACK STORAGE AREA —FRENCH DRAIN AREA— \_\_5 +/- SEPARATION\_\_\_ FROM ROW - PROPERTY 20' BUILDING SETBACK -LINE PROPERTY SWALE LINE BMP CONTROL STRUCTURE; GRADE +/- 1%; SEE SHEET C5.0 \ SEE SHEET C-6.0 - ROW LINE FILL SOIL TO GRADE (TYP.) PERMANENT SEEDING (TYP.) ~ - REAR LOT DRAIN BASIN W/GRATE; SEE SHEET C6.0 - 3:1 MAX ⊢MIN. 1' COVER GEOTEX 351 FILTER FABRIC OR EQUIVALENT VDOT #1 STONE RESERVOIR - PERFORATED OR EQUIVALENT HDPE STORAGE **PIPES** - OUTGOING SEASONAL HIGH 15" RCP 15" PERFORATED HDPE **GROUND WATER** PIPE 1.5' INV. TABLE ELEV. +/-1.5' -4" OF #8 STONE BEDDING -

### **SUMMARY TABLE** BMP3 BMP4 CATEGORY BMP 1 BMP2 RIM 3.95' 3.30' 4.01' 5.36' 7.08' 7.25' 7.31' 7.27' STONE 2.8' 3.45' 3.50' 4.86' ELEV. STONE 3.30' 3.95' 4.00' 5.36' ELEV. PIPE 1.36' 0.80' 1.31' 2.30' INV. 1.00' 1.00' PIPE 2.06' 0.45' INV. PIPE 1.5' 1.5' 1.5' 2.06' INV.

UG STONE RESERVOIR BMP

UG STONE RESERVOIR BMP TYPICAL
DETAIL
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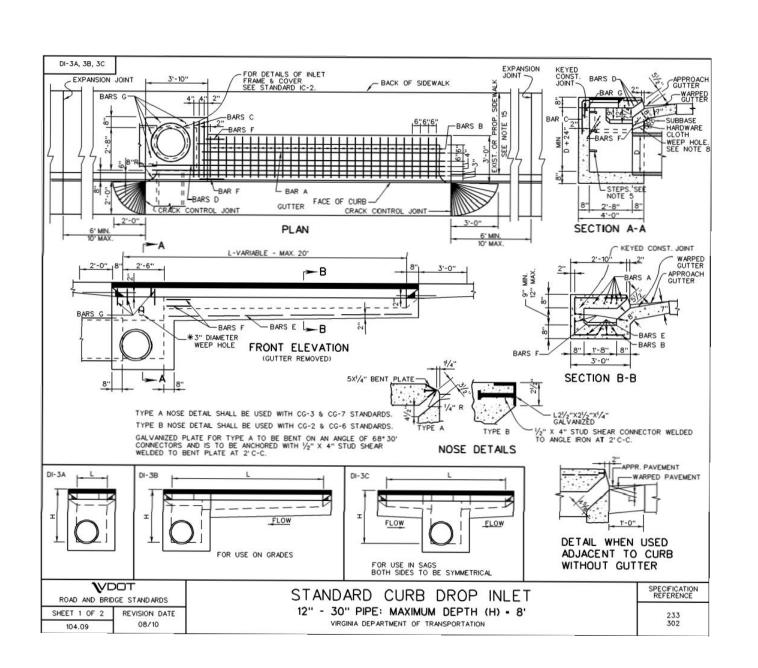
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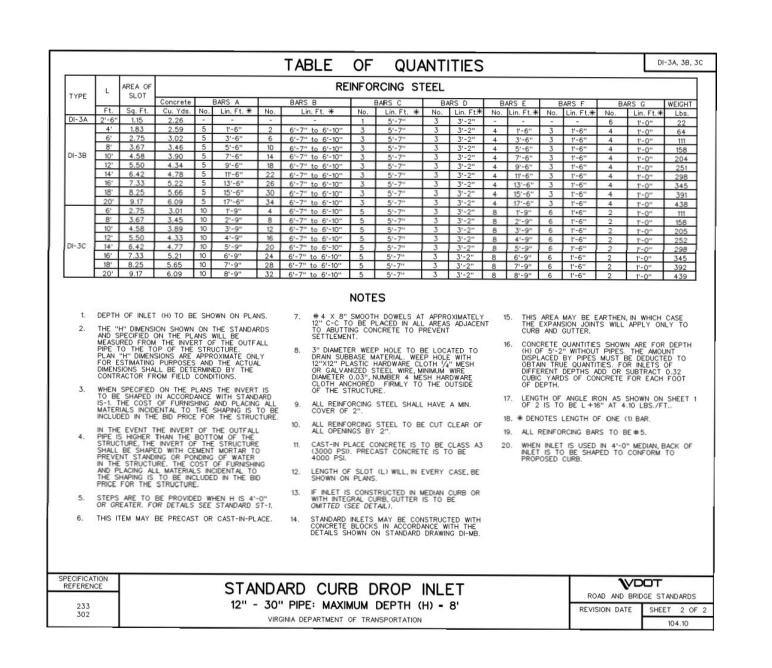
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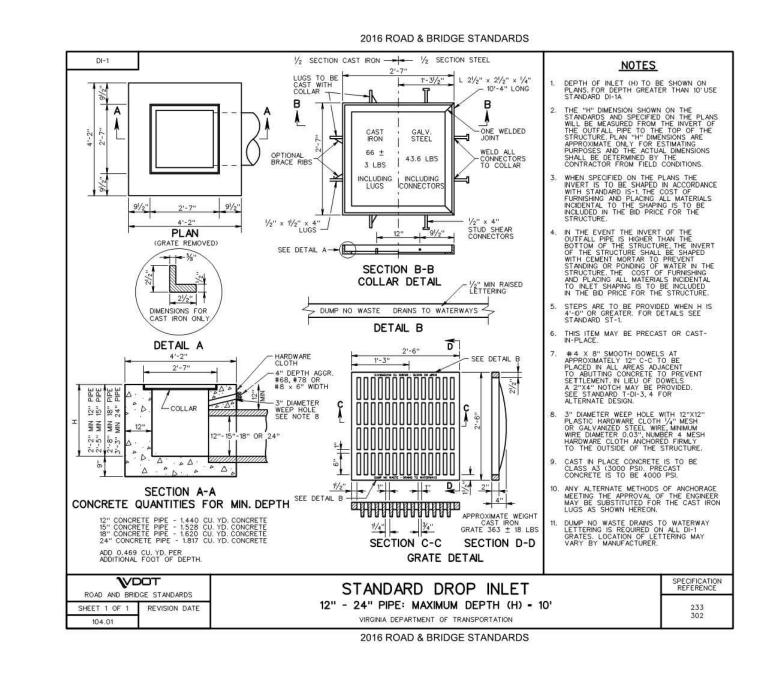
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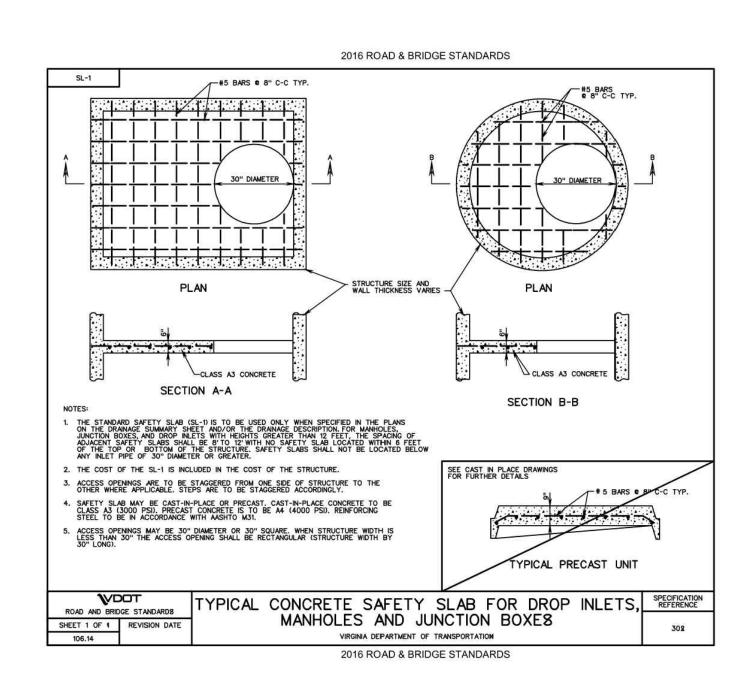
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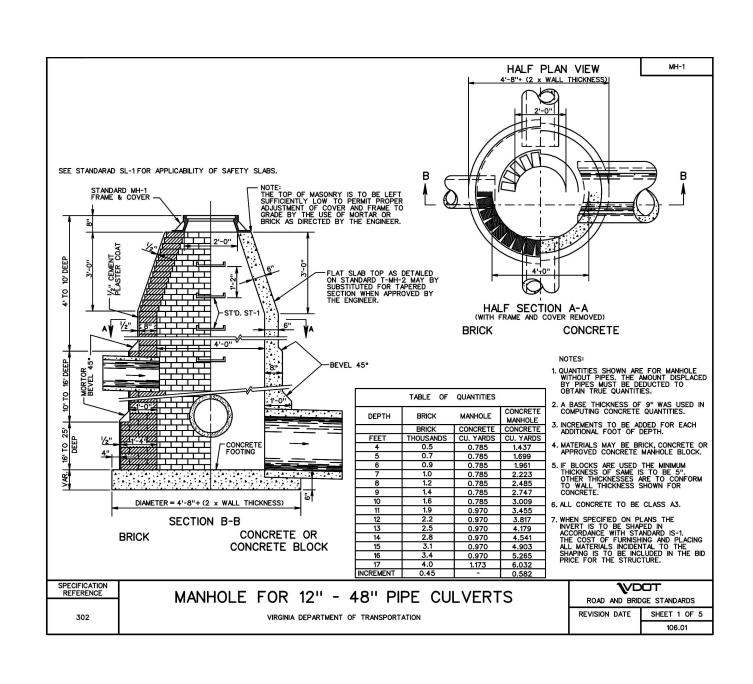
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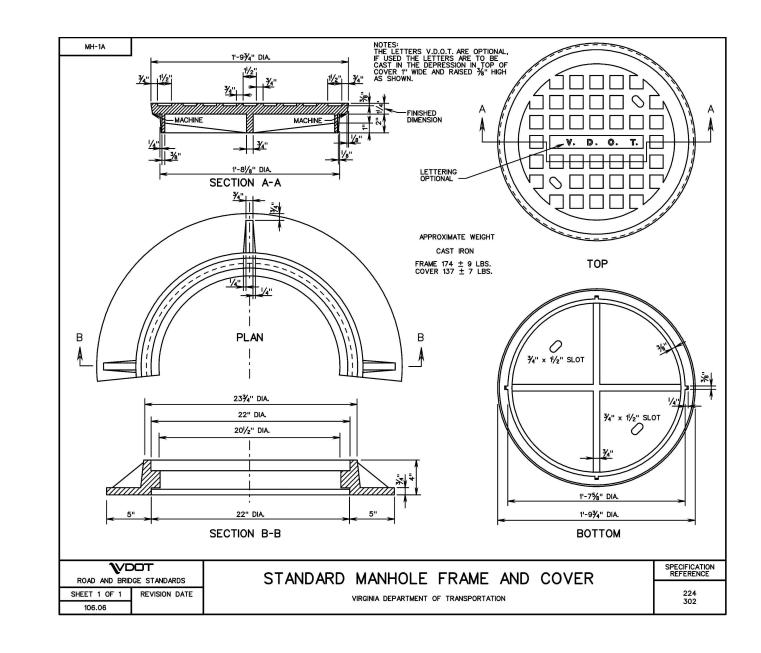


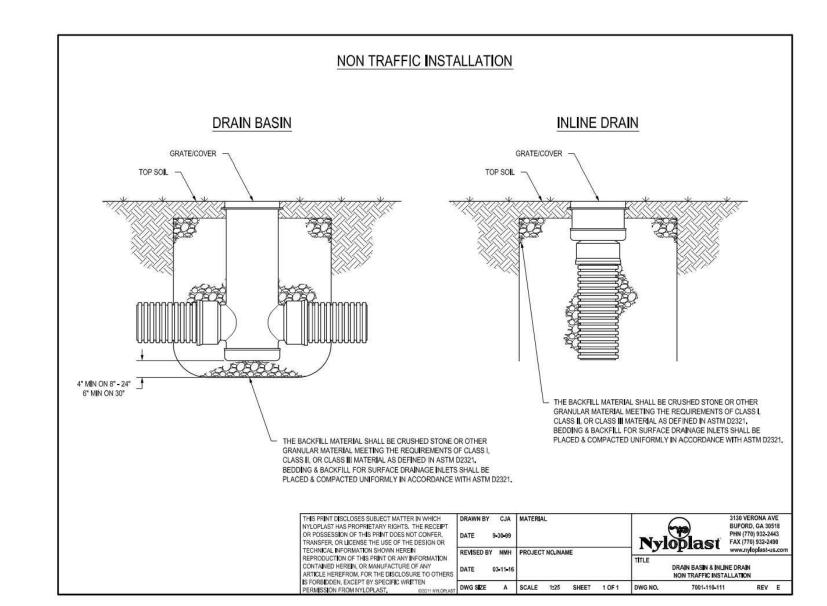


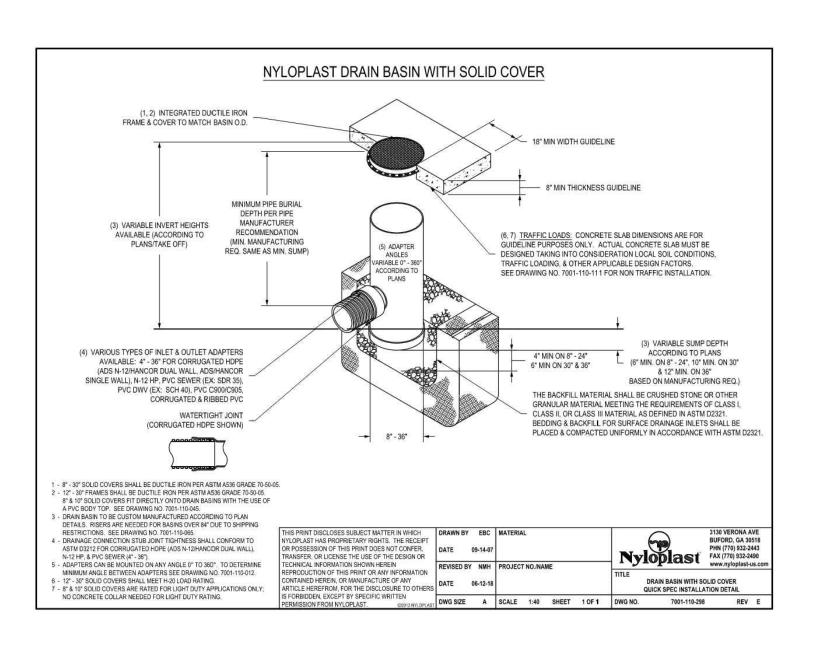


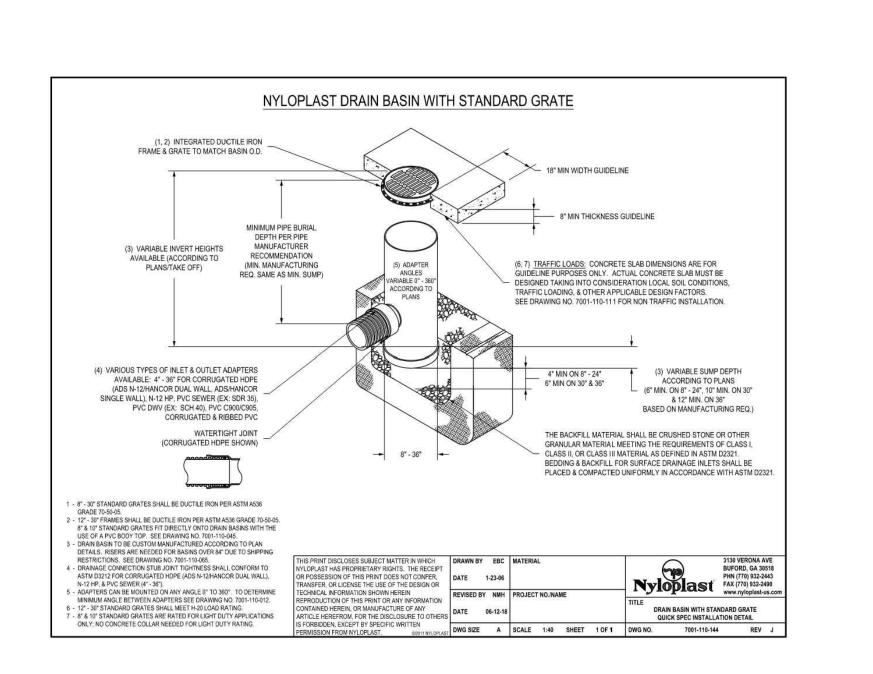


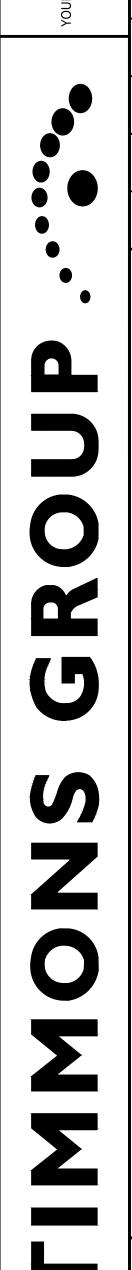










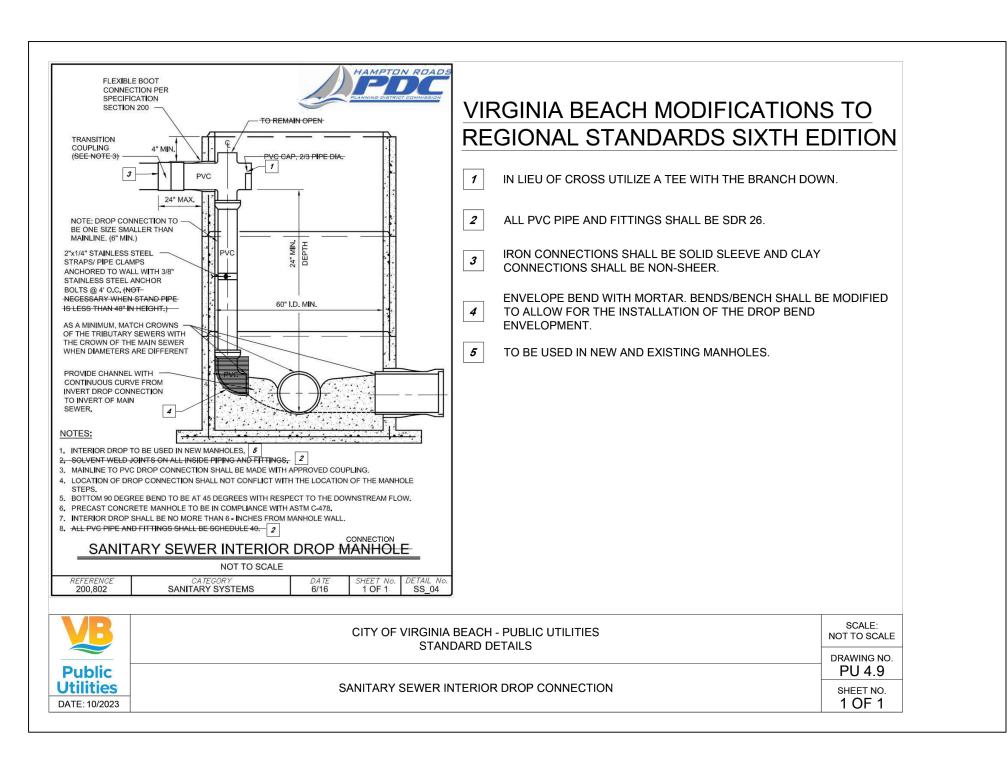


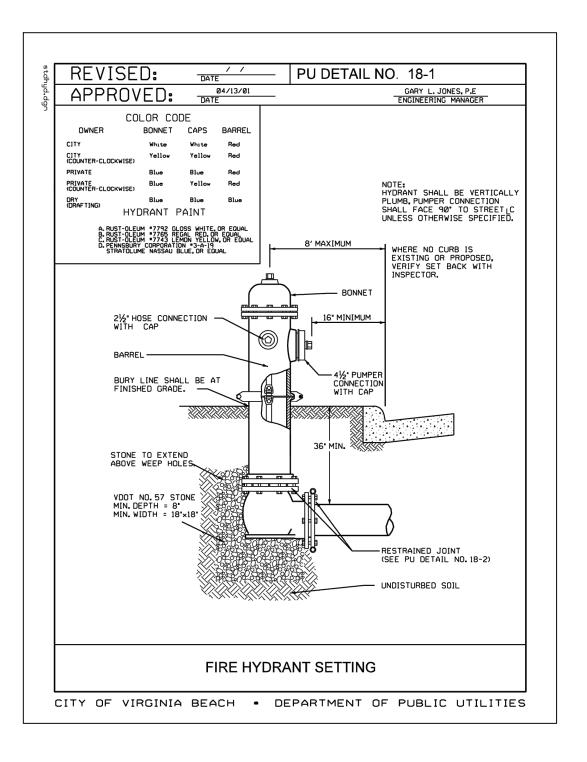
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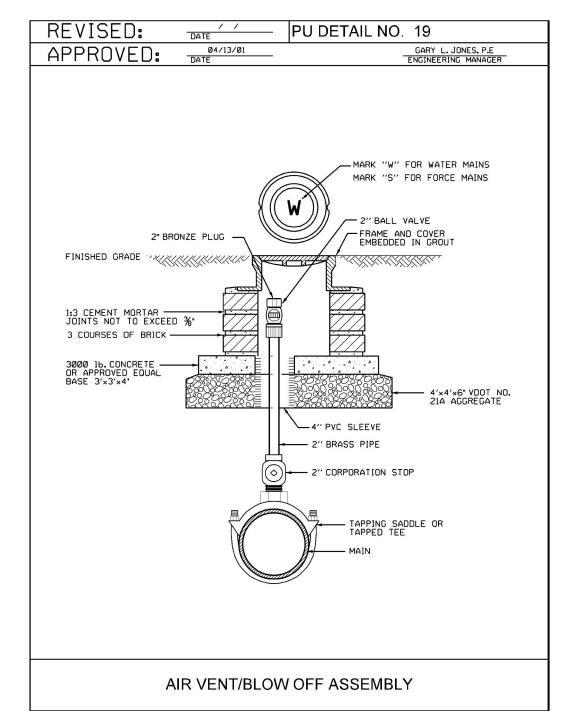
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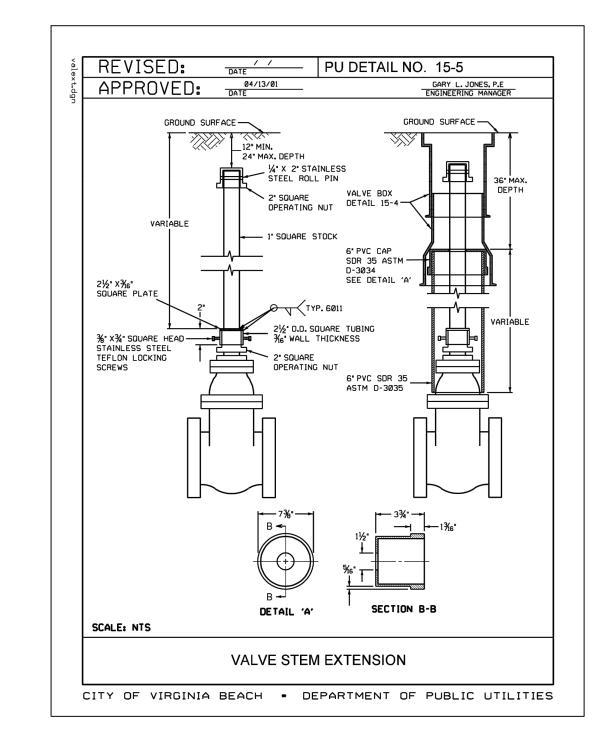
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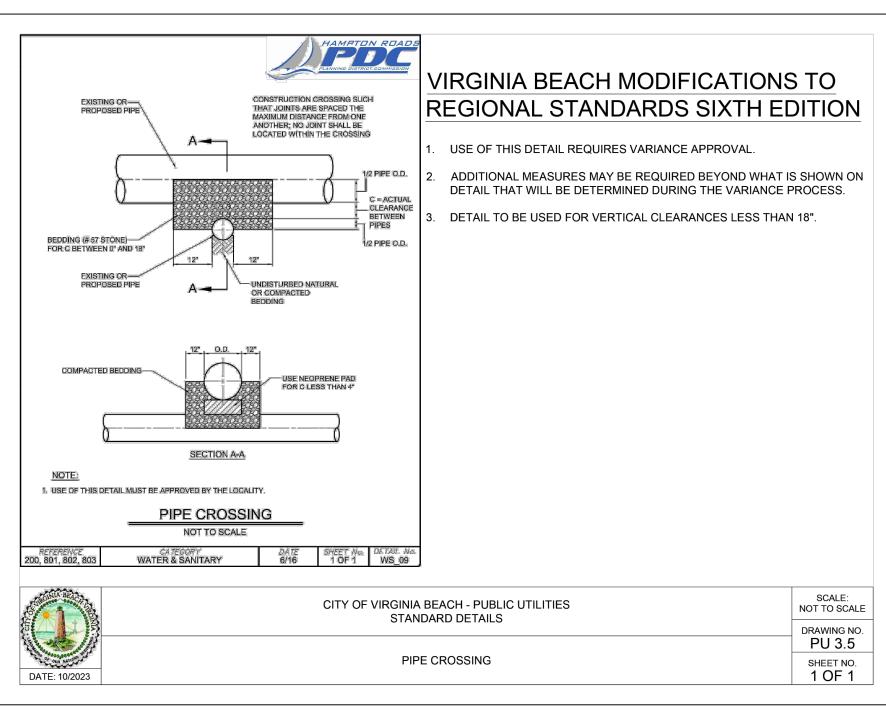
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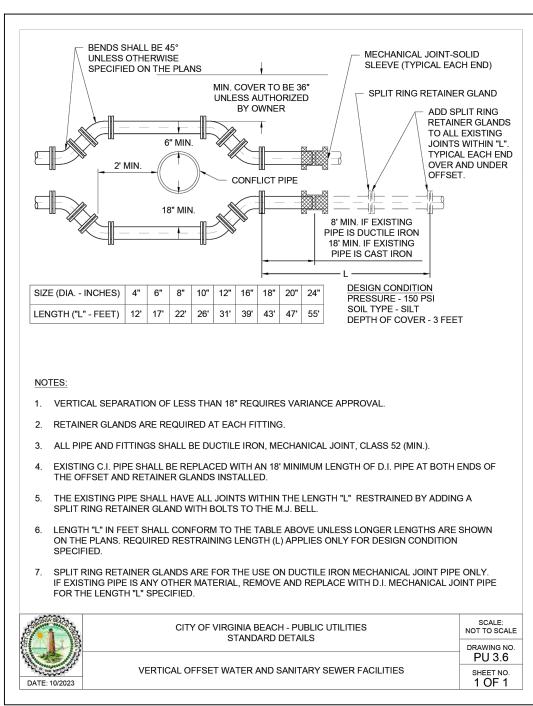


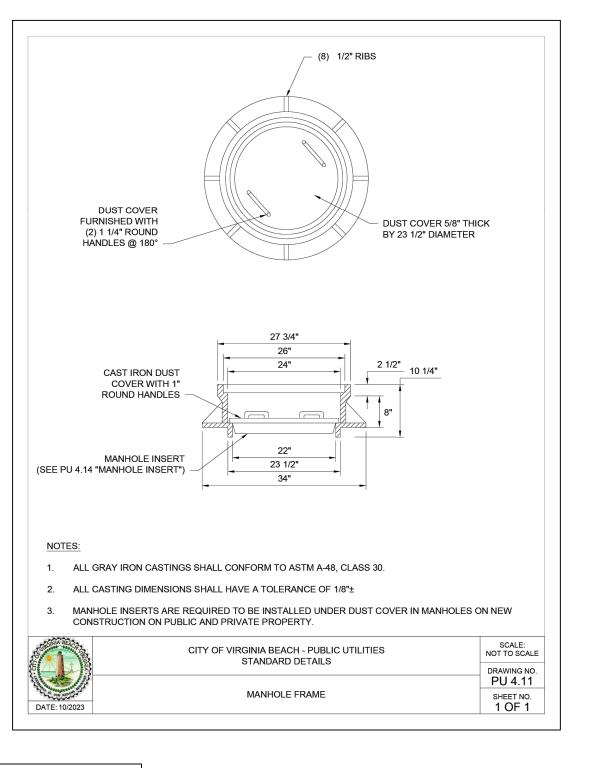


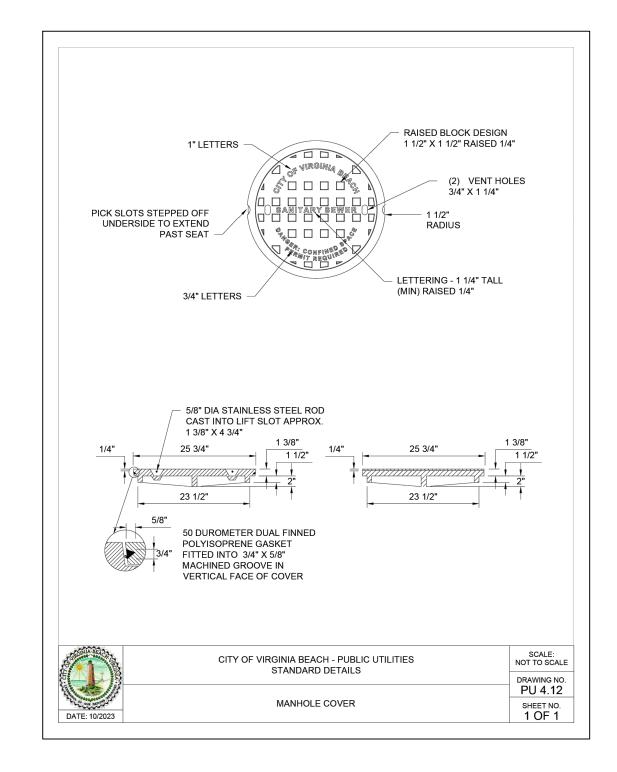


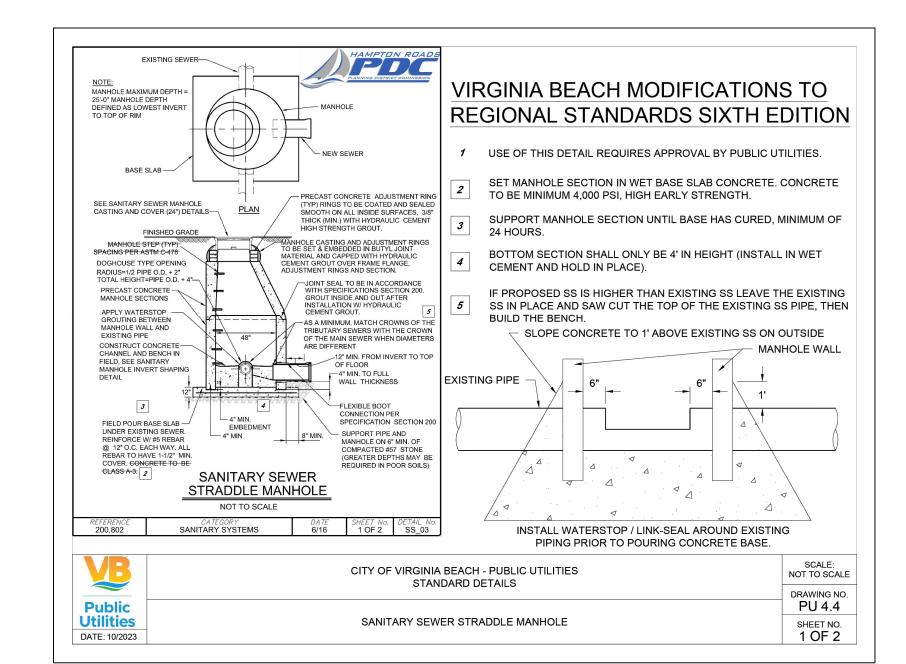


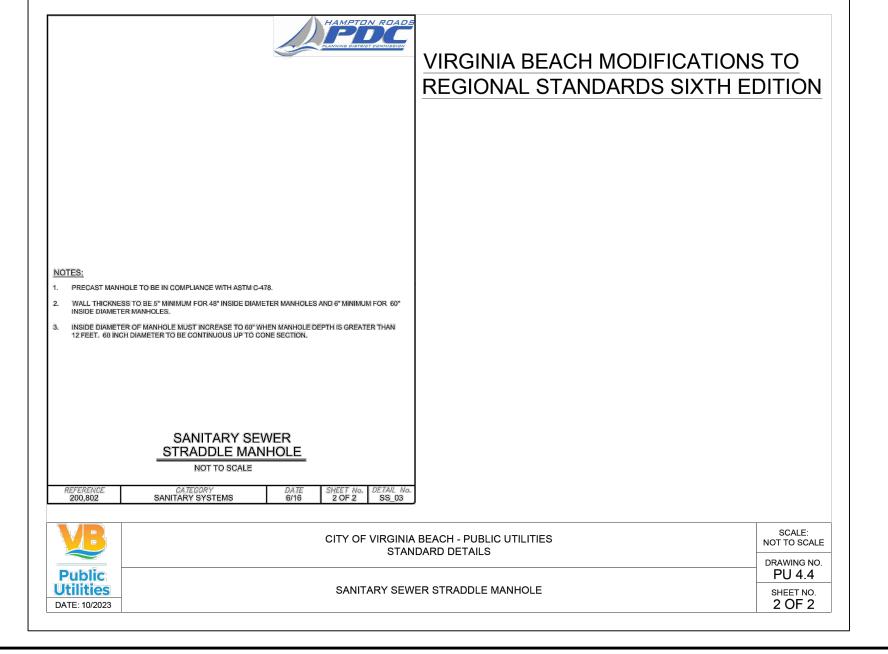




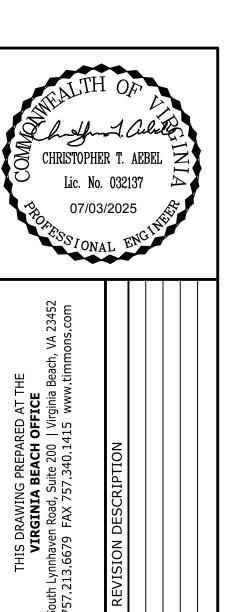






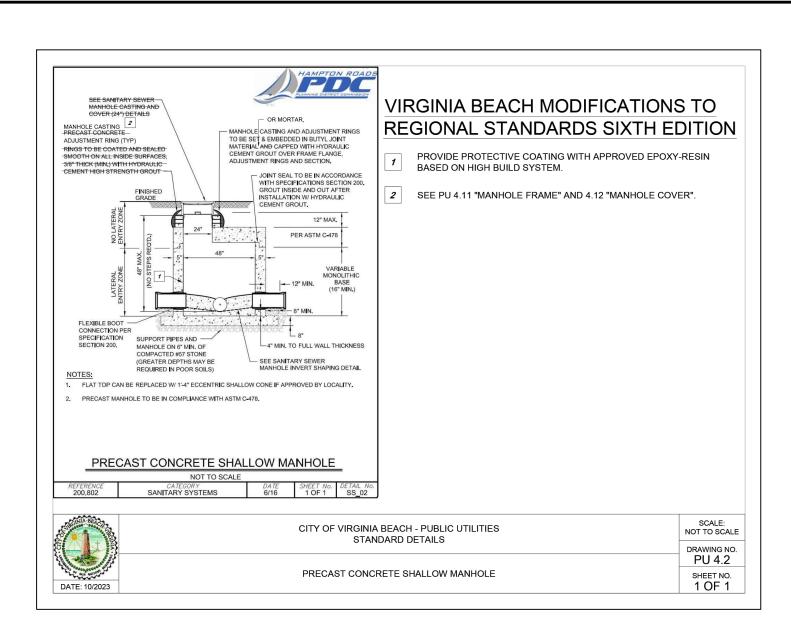


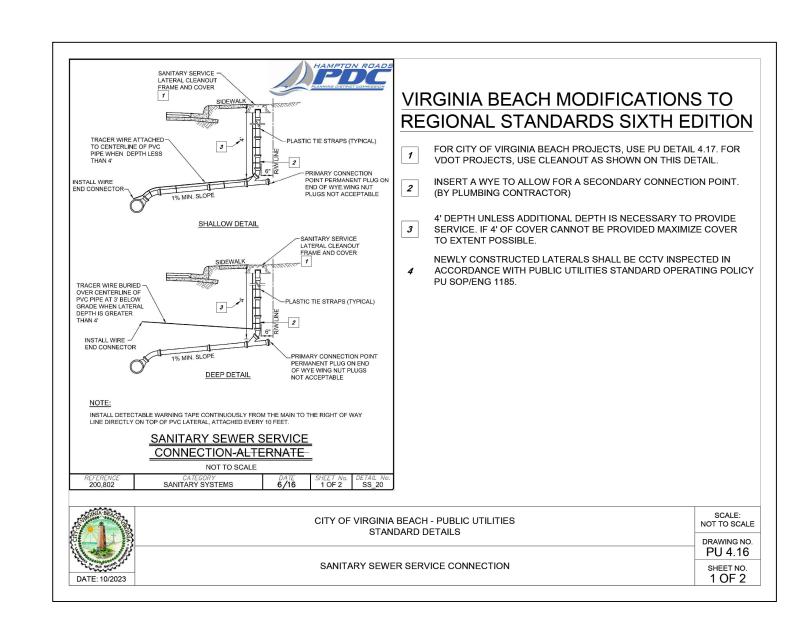
	90° HORIZ.	45° HORIZ.	   22.5° HORIZ.	   11.25° HORIZ.	TEES	VERTICAL OFFSETS	
SIZE	BEND	BEND	BEND	BEND	12" X 10" TEE: 17' 12" X 8" TEE: 1'		TOP BOTTOM
12"	43'	18'	9'	5'	10" X 8" TEE: 8'	45°, 10"	30' 12'
10"	36'	15'	8'	4'	8" X 8" TEE: 15'	22.5°, 10"	
8"	30'	13'	6'	3'	* ASSUMES MIN. 10' OF PIPE IS	11.25°, 10"	7' 3'
6"	23'	10'	5'	3'	RESTRAINED ALONG RUN		TOP BOTTOM
SAFETY DEPTH	TRENCH TYPE: 3  TH OF BURY: 3.0'  TRENCH TYPE: CL  10" 8" X				REDUCERS 10" X 8" REDUCER: 17' 8" X 6" REDUCER: 17'	45°, 8" 22.5°, 8" 11.25°, 8"	TOP BOTTOM 25' 10' 12' 5' 6' 3'
IEST P	RESSURE: 150 F	PSI			DEAD ENDS 12" DEAD END: 59' 10" DEAD END: 49' 8" DEAD END: 41' 6" DEAD END: 31'	45°, 6" 22.5°, 6" 11.25°, 6"	TOP BOTTOM 19' 8' 9' 4' 5 2'

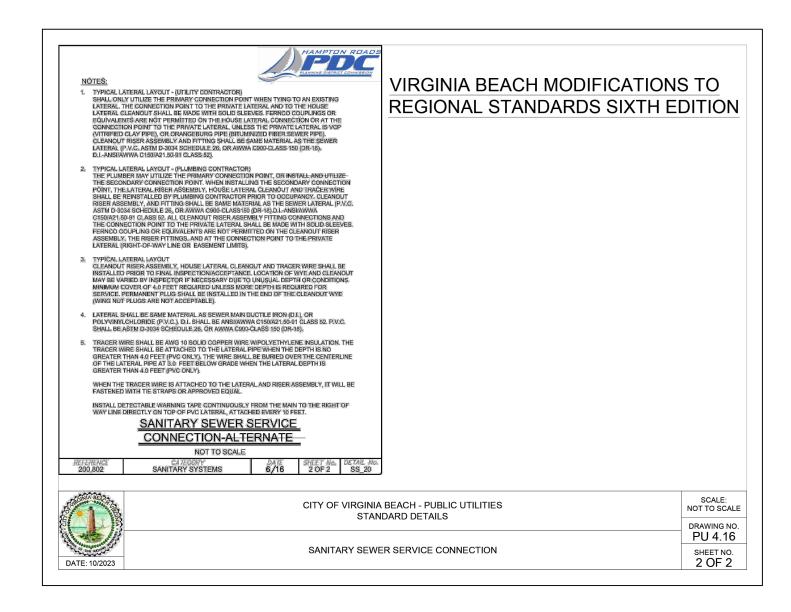


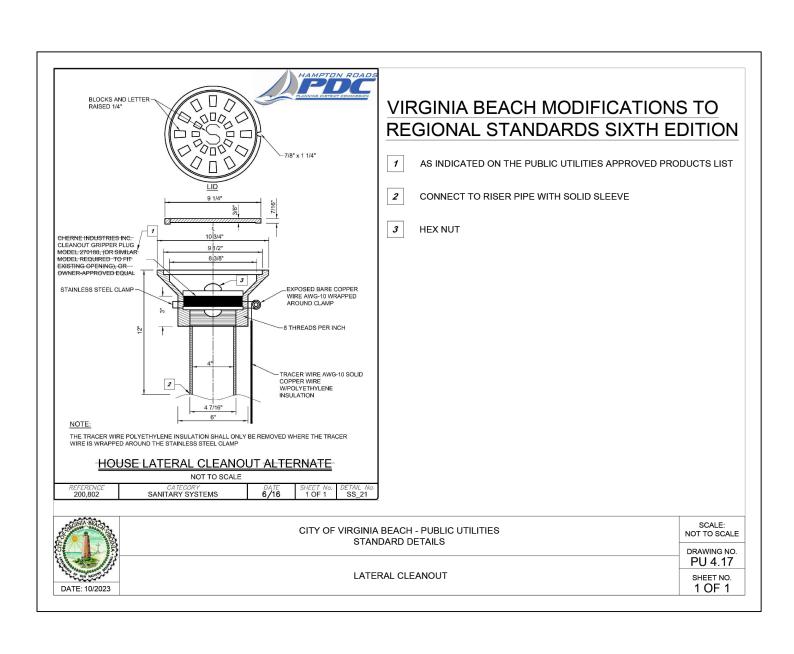
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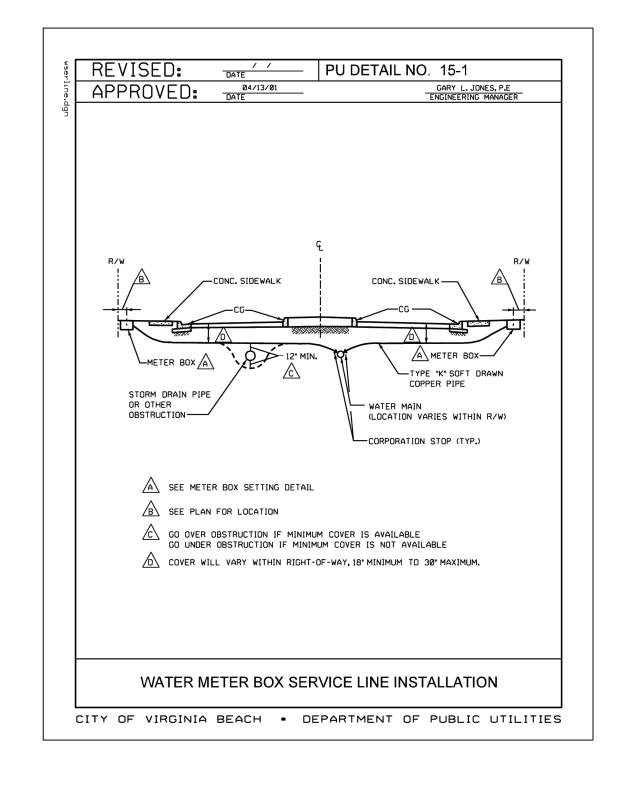
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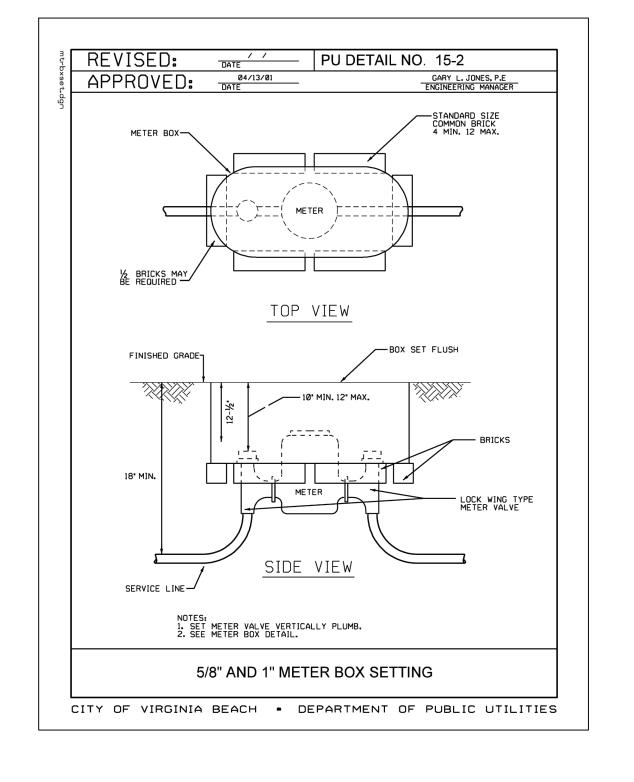


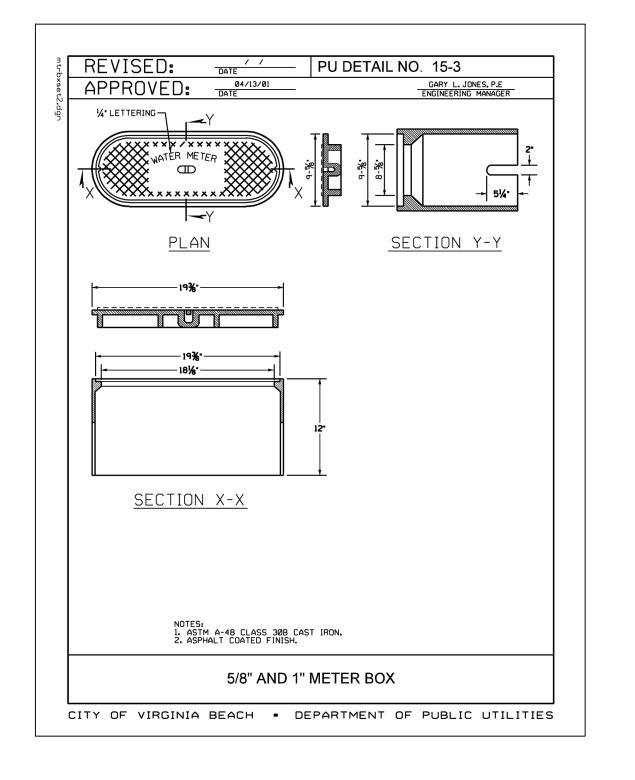














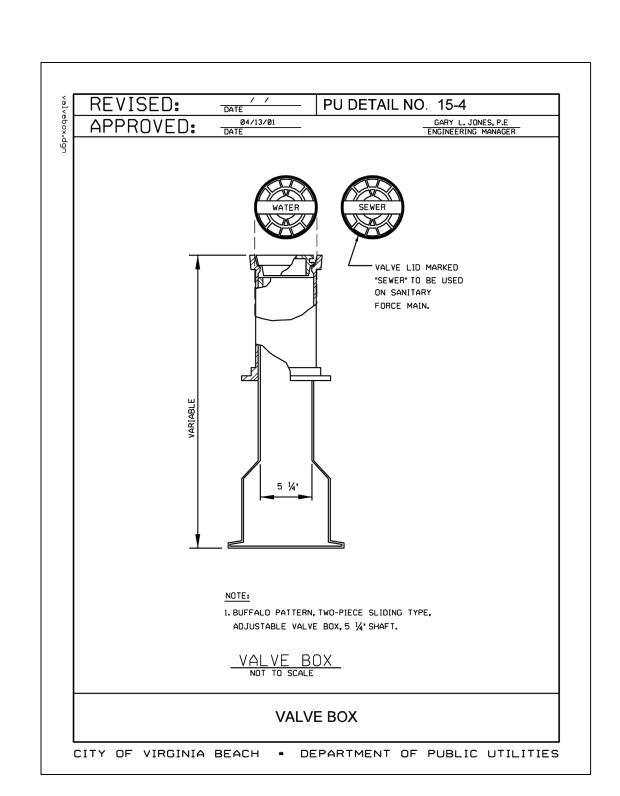
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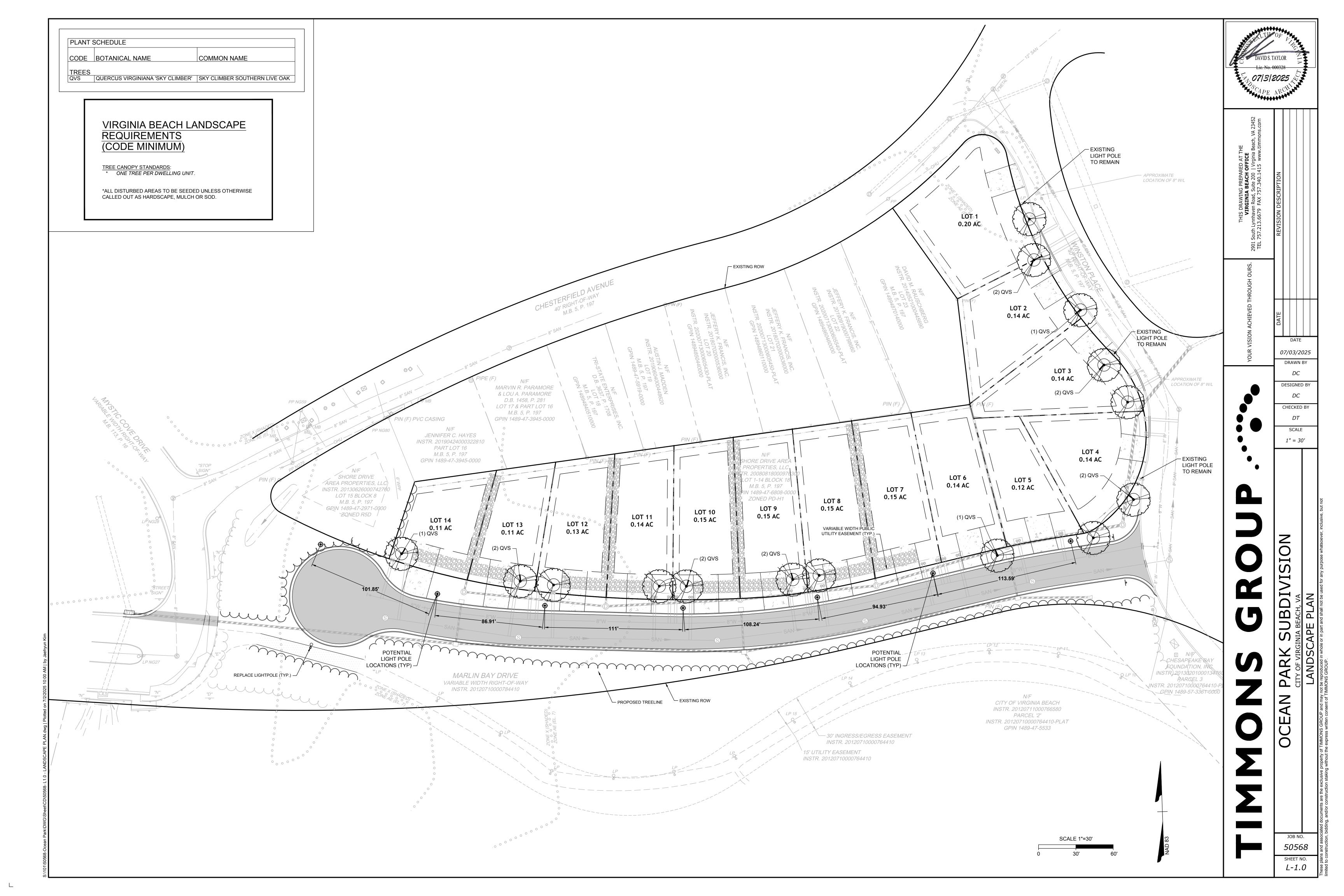
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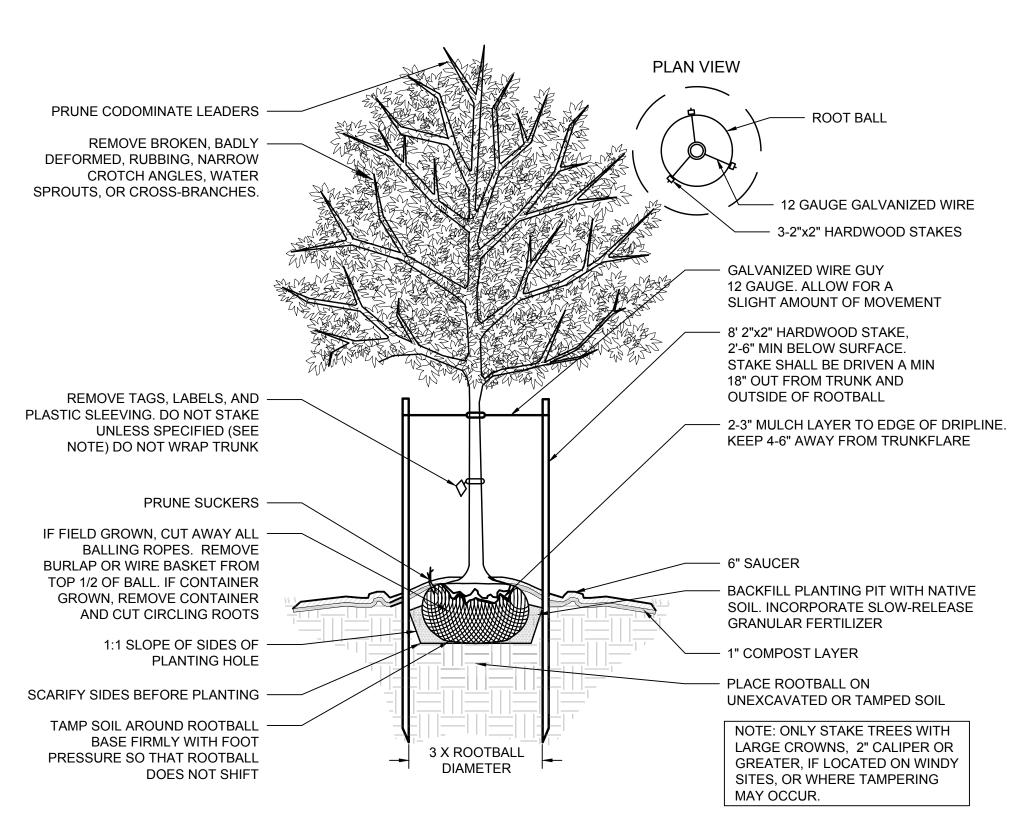


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PLANT SUBSTITUTIONS REQUIRE A WRITTEN REQUEST FROM THE PROPERTY OWNER AND WRITTEN APPROVAL FROM CITY OF VIRGINIA BEACH, DEVELOPMENT SERVICES CENTER LANDSCAPE ARCHITECT.











**Outdoor Lighting Pole Specifications** 

### **Smooth Round Tapered Composite for Post Top Luminaires**

Smooth round tapered composite poles constructed of heavy duty fiberglass reinforced pigmented polyester resin for single pole top luminaires. Poles are directly embedded for use with underground supplied conductors only.

Light fixtures that match well with this pole include:

- All LED Acorn styles
- All LED Colonial styles
- Premium LED Cutoff styles
- · Premium LED Lantern styles

### **POLE SPECIFICATIONS**

	TOLE OF LOW TOTAL							
XTURE UNTING GHT (ft)	TOTAL POLE LENGTH (ft)	BUTT DIAMETER (in)	GROUNDLINE DIAMETER (in)	EMBED or ANCHOR BASE	FINISH COLOR	WMIS CU	POLE ONLY STOCK #	
8.0	11.0	5.2	4.7	Embed	Black RAL-9017	PF11	50499800	
10.0	13.0	5.6	5.0	Embed	Black RAL-9017	PF13	50500000	
12.0	16.0	6.3	5.4	Embed	Black RAL-9017	PF16	42124132	
14.0	18.0	6.7	5.8	Embed	Black RAL-9017	PF18	50501000	

Many localities have restrictions on light distribution and placement of outdoor lighting equipment. Consult with your local government before selecting outdoor lighting equipment.

• CONTRACTOR IS RESPONSIBLE FOR CONTACTING "MISS UTILITY" AT 1.800.552.7001 FOR LOCATION OF ALL UTILITY LINES.TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT OF CONFLICTS.

VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR TO BIDDING, PLANT LIST TOTALS ARE FOR CONVENIENCE ONLY AND SHALL BE VERIFIED PRIOR TO BIDDING PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY INDICATED ON PLANS. ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". IF SPECIFIED PLANT MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON AVAILABILITY TO THE ARCHITECTS, TOGETHER WITH PROPOSAL FOR USE

OF EQUIVALENT MATERIAL PROVIDE AND INSTALL ALL PLANTS AS IN ACCORDANCE WITH DETAILS AND CONTRACT SPECIFICATIONS

SOIL TESTS SHALL BE PERFORMED TO DETERMINE SOIL CHARACTER AND QUALITY. NECESSARY SOIL AMENDMENTS SHALL BE PERFORMED

PER TEST RESULTS TO ENSURE PLANT HEALTH.

CONSTRUCTION/INSTALLATION LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK"

LABEL AT LEAST ONE TREE AND ONE SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING THE DESIGNATION OF BOTANICAL AND COMMON NAME. INSTALL LANDSCAPE PLANTINGS AT ENTRANCES/EXITS AND PARKING AREAS ACCORDING TO PLANS SO THAT MATERIALS WILL NOT INTERFERE WITH SIGHT DISTANCES.

CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. CONTRACTOR SHALL NOTIFY OWNER OF CONDITIONS

• UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD

PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE LANDSCAPE ARCHITECT. ALL EXTERIOR PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR AFTER DATE OF FINAL INSPECTION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. DEFECTS RESULTING FROM NEGLECT BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND THE CONTRACTORS CONTROL ARE NOT THE RESPONSIBILITY OF THE

PLANT MATERIAL QUANTITIES AND SIZES WILL BE INSPECTED FOR COMPLIANCE WITH APPROVED PLANS BY A SITE PLAN REVIEW AGENT OF THE PLANNING DEPARTMENT PRIOR TO THE RELEASE OF THE

CERTIFICATE OF OCCUPANCY. REMOVE ALL GUY WIRES AND STAKES 12 MONTHS AFTER INSTALLATION.

. A PLANTING PLAN SHOWING THE REQUIRED TREE CANOPY WILL BE INCLUDED WITH THE INDIVIDUAL SITE PLANS FOR EACH LOT.

TREES ARE DRAWN TO REFLECT A 20 YEAR PROJECTION. STREET TREES HAVE BEEN SHOWN BASED UPON A 50' O.C. SPACING WHERE APPLICABLE. THE TOTAL NUMBER OF STREET TREES IN THE PLANT SCHEDULE HAS BEEN CALCULATED BASED ON THE 50' O.C.

SPACING. FINAL TREE LOCATIONS SHALL BE ESTABLISHED IN THE FIELD TO AVOID CONFLICTS WITH STREET LIGHTS, UTILITY SERVICE LINES, DRIVEWAYS, STORM WATER PIPES, ETC.

### **LIGHT POLE NOTE:**

EVERY EFFORT HAS BEEN MADE TO DEVELOP THE LIGHTING SHOWN ON THESE PLANS SO ROADWAY LIGHTS ARE LOCATED ON OR NEAR AS PRACTICAL TO PROPERTY LINES. HOWEVER, AS A RESULT OF THE SUBDIVISION LAYOUT, LOT SIZE, ROADWAY LIGHT FIXTURE CHOSEN BY THE DEVELOPER AND THE SPACING REQUIRED BETWEEN THE LIGHTS TO ACHIEVE THE REQUIRED LIGHTING LEVELS, NOT ALL ROADWAY LIGHTS MAY FALL ON LOT LINES. REQUESTS BY BUILDERS, PROPERTY OWNERS OR OTHERS TO ADJUST THE LOCATION OF THESE LIGHTS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS/TRAFFIC ENGINEERING. ALL COSTS ASSOCIATED WITH THE RELOCATION MUST BE BORNE BY EITHER THE DEVELOPER OR THE PARTY REQUESTING THE ROADWAY LIGHT RELOCATION.

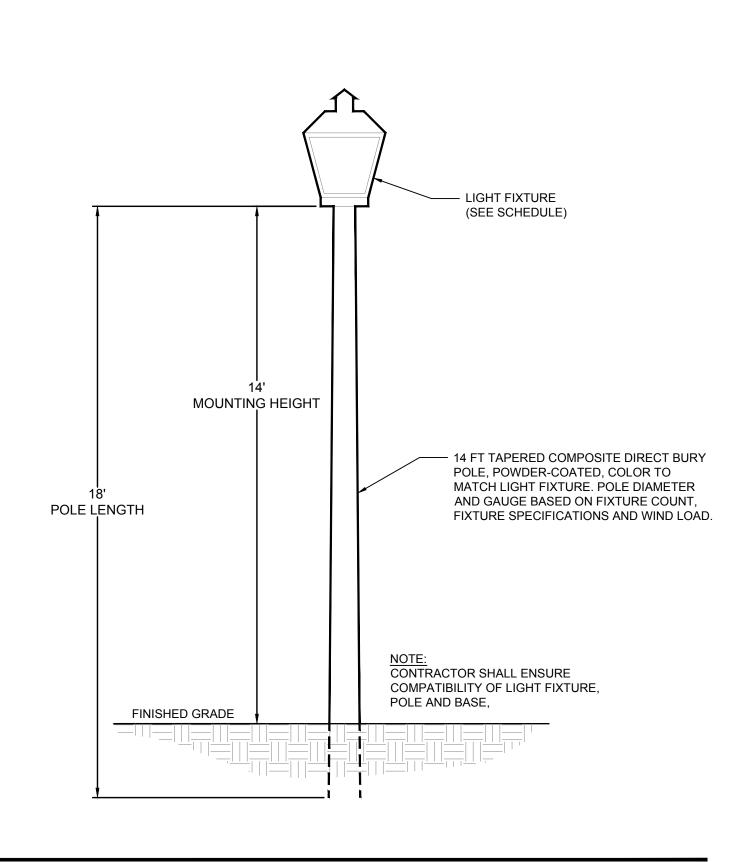
> THE COLONIAL LIGHT FIXTURE AND POLE ARE SELECTED FROM THE VIRGINIA DOMINION ENERGY PRODUCT LIST.

CONTRACTOR TO CONFIRM THE RESPONSIBLE PARTY FOR INSTALLATION OF THESE LIGHT FIXTURES AND POLES.

SHOULD RESPONSIBILITY FALL UNDER CONTRACTOR, AN ALTERNATIVE FIXTURE AND POLE MAY BE CONSIDERED.

ALTERNATIVES MUST BE EQUIVALENT TO THE SPECIFIED FIXTURE AND POLE.

CONTRACTOR TO SUBMIT ALTERNATIVES TO THE ENGINEER FOR APPROVAL



**DOMINION LIGHT POLE SPECIFICATION** 

,07|3|2025

07/03/2025

**DESIGNED BY** 

CHECKED BY SCALE

1'' = 30'

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SHEET NO. L-2.0