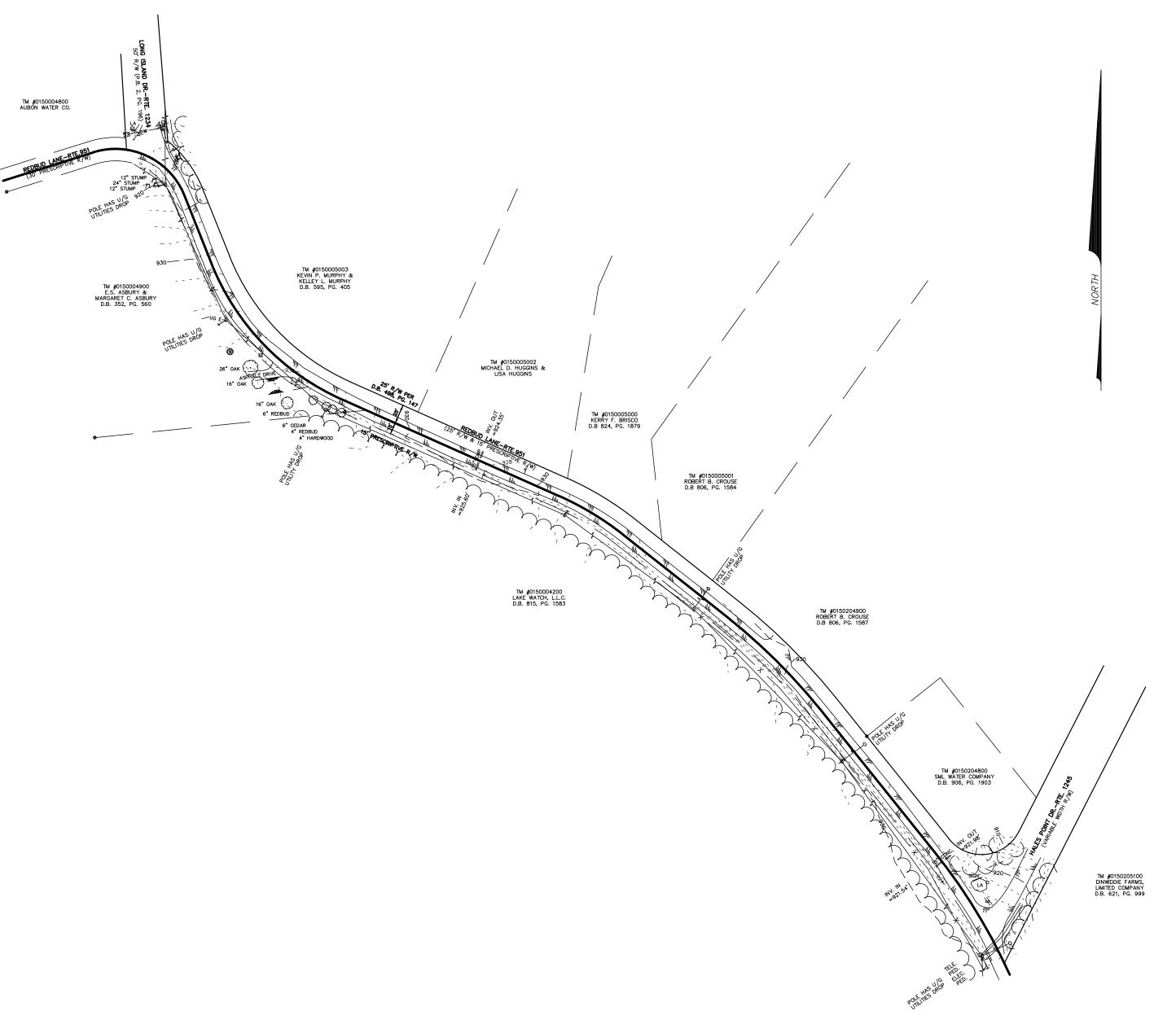
WATER LINE EXTENSION ASBUILT FOR HALES POINT WATER SYSTEM FRANKLIN COUNTY, VIRGINIA

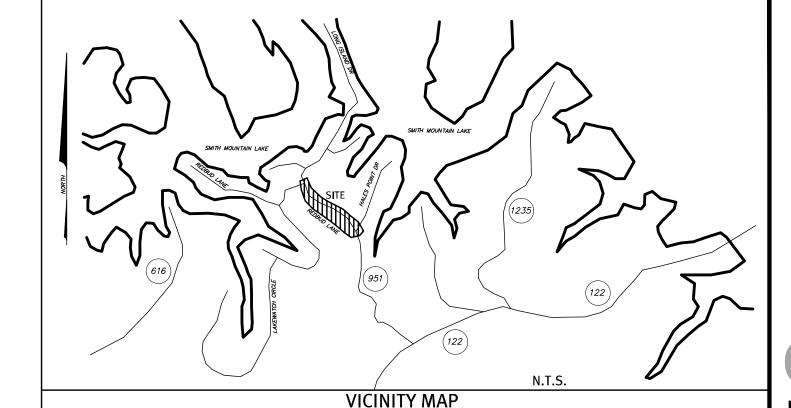


SHEET INDEX

COVER SHEET

EROSION CONTROL NOTES WL 1.0 PLAN AND PROFILE

WL 2.0 WATER SYSTEM DETAILS WATER SYSTEM DETAILS



OIPF IRON PIN FOUND WELL WELL a TELEPHONE POLE WATER METER TITE EDGE OF PAVEMENT EDGE OF GRAVEL GAS VALVE

BENCHMARK ← EDGE OF WOODS

-800 - EXISTING 10' CONTOUR

WATER METER BLOW OFF ASSEMBLY HUR.

AIR RELEASE FIRE HYDRANT CONCRETE ANCHOR

SLOPE ANCHOR END OF LINE

PAVEMENT REPLACEMENT

VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES * CHART TAKEN FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (JULY 1992)

PS PERMANENT SEEDING

TEMPORARY CONSTRUCTION

BLANKET MATTING

OUTLET PROTECTION

SML WATER COMPANY PO BOX 21173 ROANOKE, VA 24018 540-344-9800 CONTACT: DAVID PETRUS

PLAN REVISIONS			
#	DATE	DESCRIPTION OF REVISION	SHEET
3	7/14/14	<i>ASBUILT</i>	WL1.0
2	9/5/13	WVWA COMMENTS	CO.1, WL
	0/10/17		4

BRIAN L. COSSMAN Lic. No. 039637

PROJECT NO.

DATE:

DRAWN BY:

CHECKED BY:

20130063

G-13930

6/14/13

298-04-A1.3

<u> 1973 - 2013</u> YEARS OF EXCELLENCE

SHEET NO. 1 8/16/13 REVIEW AGENCY COMMENTS ALL

THE ENGINEER AND/OR SURVEYOR TAKES NO RESPONSIBILITY FOR THE LOCATION OR ACCURACY OF THE UTILITIES AS SHOWN HEREON OR ANY UTILITIES WITHIN THE PROJECT THAT MAY NOT BE SHOWN HEREON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES TO SEE IF ANY UTILITIES EXIST WITHIN THE AREA OF THE PROJECT BEFORE ANY CONSTRUCTION BEGINS. ANY COST INCURRED BY DAMAGING ANY UTILITY WITHIN THE PROJECT SHALL BE AT THE EXPENSE

RECORD DRAWINGS

THESE DRAWINGS HAVE BEEN PREPARED (BY MODIFYING WITH

ANNOTATIONS TO THE INFORMATION CONTAINED IN THEM) AS THE DRAWINGS, WHICH WERE PART OF THE CONTRACT DOCUMENTS FOR

WORK OF THIS PROJECT BY CONTRACTOR, AND ARE DESIGNATED

INFORMATION PROVIDED BY CONTRACTOR WAS REPRESENTED BY CONTRACTOR, TO OWNER AND ARCHITECT, TO VERIFY THE CONFORMANCE OF THE WORK TO THE REQUIREMENTS OF THE

RECORD DRAWINGS. THE MODIFICATIONS ARE BASED UPON

INFORMATION FURNISHED BY CONTRACTOR TO OWNER AND ARCHITECT FOR PREPARATION OF THIS RECORD DRAWING. THE

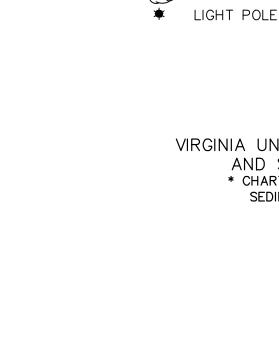
ONTRACT DOCUMENTS, INCLUDING THE CHANGES TO AND

DEVIATIONS BY CONTRACTOR FROM THOSE REQUIREMENTS. CONTRACTOR'S INFORMATION MAY NOT HAVE BEEN VERIFIED OR CONFIRMED BY EITHER OWNER OR ARCHITECT, AS OWNER AND ARCHITECT ARE ENTITLED TO RELY. AND HAVE RELIED. ON THE ACCURACY AND COMPLETENESS OF THE INFORMATION PROVIDED Y CONTRACTOR. NEITHER OWNER NOR ARCHITECT ARE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THE INFORMATION AS SO MODIFIED HEREIN, AND NEITHER OF THEM MAKES ANY REPRESENTATIONS, WARRANTY OR GUARANTY OF ANY KIND OR TYPE CONCERNING THAT MODIFIED INFORMATION. ANY PERSON WHO INTENDS TO USE ANY INFORMATION HEREIN FOR ANY PURPOSE IS WARNED AND CAUTIONED TO VERIFY AND TO CONFIRM

ANY SUCH INFORMATION BY ACTUAL OBSERVATION AND

48 WORKING HOURS PRIOR TO STARTING THE WORK, THE CONTRACTOR SHALL CALL MISS UTILITY AT PHONE NUMBER 811 AND ADVISE THE NATURE AND LOCATION OF THE WORK.





SILT FENCE TEMPORARY SEEDING

MU MULCHING

ENTRANCE CULVERT INLET PROTECTION

INLET PROTECTION

SURFACE ROUGHING

AVAILABILITY LETTER: 13-358

GENERAL NOTES:

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, CHAPTER 22 OF THE FRANKLIN COUNTY CODE. AND THE WESTERN VIRGINIA WATER AUTHORITY (WVWA). THE CONTRACTOR SHALL MAINTAIN A COPY OF THE DRAWINGS AND SPECIFICATIONS AT THE SITE AT ALL TIMES DURING CONSTRUCTION. EARTHWORK, SITE GRADING, STORM DRAINAGE, AND PAVING SPECIFICATIONS AND DETAILS NOT COVERED BY THESE DRAWINGS AND THE SPECIFICATIONS SHALL CONFORM TO THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND
- 2. THE TOPOGRAPHICAL INFORMATION SHOWN HEREON FOR HURT & PROFFITT SECTION OF PROJECT WAS PREPARED FROM AN ACTUAL FIELD SURVEY AS PER APRIL 11, 2013.
- 3. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION. CONTACT MISS UTILITY (TELEPHONE NO. 811) 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UNDERGROUND UTILITIES MARKED. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES.
- 4. MINIMUM COVER OVER WATER LINE IS TO BE 3 FEET. PIPING SHALL BE INSTALLED TO ALLOW MINIMUM 18" VERTICAL SEPARATION BETWEEN NEW UTILITIES AND EXISTING OR PROPOSED UTILITIES.
- 5. PROVIDE ALL CONNECTING PIECES AND TRANSITION PIECES REQUIRED TO MAKE FINAL PIPING CONNECTIONS. PROVIDE RESTRAINED JOINTS FOR ALL CARRIER PIPE INSTALLED IN CASING PIPE. ALL PIPING UNDER STRUCTURES SHALL BE PROVIDED WITH RETRAINED JOINTS.
- 6. EROSION AND SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE VESCH, 1992 EDITION OR LATER. THE CONTRACTOR SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY AND SHALL BE RESPONSIBLE FOR ALL ADDITIONAL MEASURES AS DETERMINED BY FRANKLIN COUNTY.
- 7. CONSTRUCTION LIMITS SHALL INCLUDE ALL DISTURBED AREAS. ALL DISTURBED AREAS SHALL BE SEEDED AND PROVIDED WITH EROSION CONTROL DURING AND AT THE END OF CONSTRUCTION.
- 8. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERFORMING ALL TESTS AND PAYING ALL FEES & BONDS AS DEEMED NECESSARY BY FRANKLIN COUNTY. VDOT AND WVWA.
- 9. CONTRACTOR RESPONSIBLE FOR COORDINATING WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION, FRANKLIN COUNTY, AND OTHER GOVERNING BODY, PERMITS AND INSPECTIONS AS REQUIRED.
- 10. VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED AND MAINTAINED FOR ALL DISTURBED AREAS IN ACCORDANCE WITH ALL LOCAL REQUIREMENTS AND THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE INSTALLED AS A FIRST STEP IN CONSTRUCTION AND BEFORE EXCAVATION BEGINS.
- 11. ALL SLOPES STEEPER THAN 2:1 SHALL BE PROTECTED WITH VDOT EC-2 EROSION CONTROL MATTING FROM TOP OF SLOPE TO TOE OF SLOPE. THE CONTRACTOR SHALL ENSURE THE PROPER INSTALLATION OF SUCH MEASURES IN ACCORDANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS AND THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- 12. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CONFINED SPACE ENTRY REGULATIONS.
- 13. MAINTAIN ALL OVERHEAD AND UNDERGROUND ELECTRICAL, TELEPHONE, WATER AND GAS SERVICES AND ALL OTHER UTILITIES DURING ENTIRE CONSTRUCTION PERIOD. UTILITY OUTAGES WILL NOT BE ALLOWED.
- 14. THE CONTRACTOR SHALL MAINTAIN SURFACE DRAINAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL PUMPS AND PIPING REQUIRED TO MAINTAIN SURFACE DRAINAGE.
- 15. CONSTRUCT EXCAVATION SUPPORT SYSTEMS AS REQUIRED BY OSHA AND U.S. ARMY CORPS OF ENGINEERS SAFETY & HEALTH REQUIREMENTS MANUAL EM 385-1-1, SECTIONS 23 A AND 23 B, AND WHERE INDICATED ON THE DRAWINGS TO ADEQUATELY SUPPORT EXISTING SOIL AND ADJACENT STRUCTURES DURING EXCAVATION ACTIVITIES. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH INSTALLATION DRAWINGS, SPECIFICATIONS, AND DESIGN CALCULATIONS STAMPED BY PROFESSIONAL ENGINEERING LICENSED BY THE COMMONWEALTH OF VIRGINIA FOR ALL EXCAVATION SUPPORT SYSTEMS.
- 16. SUBSURFACE EXPLORATION HAS NOT BEEN PERFORMED FOR THE PROJECT SITE. ALL EARTHWORK EXCAVATION SHALL BE UNCLASSIFIED AND SHALL BE PERFORMED TO THE INDICATED ELEVATIONS AT NO ADDITIONAL COST TO THE OWNER. SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION.
- 17. THE CONTRACTOR SHALL BE FULLY LIABLE FOR REPAIR OF ANY DAMAGES ON PUBLIC OR PRIVATE PROPERTY CAUSED BY HIS CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL REPLACE ALL DISTURBED SURFACES IN KIND, INCLUDING PAVEMENT, STONE, DITCHES, MAILBOXES, STORM CULVERTS, FENCING, ETC. AT NO ADDITIONAL COST TO THE OWNER.
- 18. ALL EXISTING SIGNS. CURBS. GUARDRAIL FENCING. STONE. STRUCTURES. LANDSCAPING. PLANTERS. SHRUBS. AND OTHER PHYSICAL IMPROVEMENTS TEMPORARILY REMOVED BY THE CONTRACTOR SHALL BE REPLACED TO ORIGINAL CONDITION.
- 19. ALL DRIVEWAYS, PARKING LOTS AND ROADS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE SAW CUT AND REPLACED TO ORIGINAL CONDITION. ALL ASPHALT AND GRAVEL DRIVEWAYS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED TO ORIGINAL CONDITION.
- 20. THE CONTRACTOR SHALL PROTECT EXISTING PAVED SURFACES. ANY DAMAGED PAVEMENT SHALL BE REPAIRED TO MATCH EXISTING. TRACKED EQUIPMENT WILL NOT BE ALLOWED ON PAVED SURFACES. ANY PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN KIND BY A PAVEMENT MARKING CONTRACTOR FROM THE VDOT PRE-QUALIFICATION LIST.
- 21. ALL PROPERTY PINS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA.
- 22. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EQUIPMENT, PIPING AND STRUCTURES INDICATED TO BE DEMOLISHED OFF THE OWNER'S PROPERTY IN ACCORDANCE WITH ALL FEDERAL. STATE AND LOCAL REGULATIONS. ELECTRICAL SYSTEMS ASSOCIATED WITH ALL EQUIPMENT INDICATED TO BE DEMOLISHED SHALL ALSO BE REMOVED.
- 23. DISPOSE OF SURPLUS SOIL MATERIAL OFF THE OWNER'S PROPERTY IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- 24. THE CONTRACTOR MAY USE JM EAGLE LOK 900 GASKETS OR APPROVED EQUAL WITHIN STEEL CASING PIPE WHERE CALLED FOR IN LIEU OF RESTRAINED JOINT PIPE.
- 25. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM PROPERTY OWNERS FOR USE OF ANY ACCESS POINTS OTHER THAN THOSE LOCATED WITHIN RIGHT—OF—WAYS AND OBTAINED EASEMENTS. WRITTEN PERMISSION SHALL CONTAIN CONDITIONS FOR USE AND RESTORATION AGREEMENTS BETWEEN PROPERTY OWNER AND CONTRACTOR.
- 26. TREES AND SHRUBS TO REMAIN IN PLACE SHALL BE ROPED OFF DURING GRADING OPERATIONS TO KEEP EQUIPMENT AWAY FROM ROOT SYSTEMS. THE CONTRACTOR SHALL MAKE SELECT CUTTING OF TREES, TAKING THE SMALLEST TREES FIRST, THAT ARE MANDATORY FOR CONSTRUCTION. WVWA AND PROPERTY OWNER'S DECISION SHALL BE FINAL ON DETERMINATION OF WHICH TREES SHALL BE CUT.
- 27. ANY FENCING DISTURBED BY CONSTRUCTION SHALL BE IMMEDIATELY REPLACED OR SUPPLEMENTED BY TEMPORARY FENCING SUITABLE FOR INTENDED PURPOSE OF EXISTING FENCING. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE DISTURBED FENCING TO ORIGINAL CONDITION.
- 28. ALL CLEARED MATERIALS TO BE REMOVED FROM SITE AND DISPOSED OF LEGALLY AT THE CONTRACTOR'S EXPENSE.
- 29. CONTRACTOR SHALL NOTIFY THE WVWA ENGINEERING COORDINATOR, MARK SINK, AT 540-537-3460 AT LEAST 3 DAYS PRIOR TO CONSTRUCTION.
- 30. A PRECONSTRUCTION MEETING WILL BE SCHEDULED AT LEAST ONE DAY PRIOR TO ANY CONSTRUCTION.
- 31. CONTRACTOR SHALL CONTACT MISS UTILITY AT 811 PRIOR TO DIGGING AND CONTRACTOR MUST HAVE A VALID MISS UTILITY TICKET PRIOR TO DIGGING.
- 32. CONTRACTOR SHALL PROVIDE THE WVWA AND ENGINEER AUTHORITY WITH A CORRECT SET OF AS-BUILT PLANS AT THE END OF CONSTRUCTION.
- 33. OPEN CUTTING REDBUD ROAD WILL REQUIRE A PERMIT FROM VDOT. THE VDOT CONTACT IS JAY KNIGHT, AREA LAND USE ENGINEER AT 540-526-7438.
- 34. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC AT ALL TIMES AND FOR PROVIDING TEMPORARY TRAFFIC CONTROL MEASURES IN STRICT ACCORDANCE WITH VA WORK AREA PROTECTION MANUAL.

WATER LINE NOTES:

- THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 22 OF THE FRANKLIN COUNTY CODE AND THE LATEST EDITION OF THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS.
- WATER LINE TO BE LOCATED 3' FROM THE EDGE OF PAVEMENT MINIMUM.
- 3. SEPTIC SYSTEM DRAINFIELDS SHALL BE A MINIMUM OF 30 HORIZONTAL FEET FROM THE WATER LINE.
- 4. POLYETHYLENE CASING IS REQUIRED FOR EACH SERVICE LINE THAT CROSSES UNDER PAVEMENT.
- 5. WATER LINE SHALL BE CONSTRUCTED USING PVC C900 PIPE DR14 PC305 AND DUCTILE IRON PC 350.
- 6. FERNCO COUPLINGS ARE TO BE USED AT ALL TRANSITIONS.
- 7. MAINTAIN A MINIMUM OF 18" SEPARATION BETWEEN WATER LINE AND ANY STORM STRUCTURE.
- WHERE WATER LINE IS SHOWN DEFLECTING WITHOUT FITTINGS, THE CONTRACTOR IS TO FOLLOW THE PIPE MANUFACTURERS RECOMMENDATIONS. IF THE DEFLECTION CANNOT BE MADE, THE CONTRACTOR IS TO CONTACT THE ENGINEER FOR ASSISTANCE IN DETERMINING APPROPRIATE FITTING.
- PRESSURE REDUCING VALVES (PRV'S) WILL BE INSTALLED ON ALL SERVICE CONNECTIONS TO REDUCE THE PRESSURE TO
- 10. ALL PIPE, FITTINGS, AND APPURTENANCES SHALL BE RESTRAINED AND ANCHORED IN ACCORDANCE WITH THE STANDARD DETAILS. THRUST RESTRAINTS ARE REQUIRED FOR ALL BENDS AND TEES. IF MECHANICAL JOINT RESTRAINT SYSTEMS ARE USED, INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND
- 11. WATER LINES SHALL BE TESTED AT A PRESSURE OF 210 PSI.
- 12. WATER LINES SHALL HAVE A MINIMUM COVER OF 3 FEET AND BE LAID DEEPER WHERE SHOWN ON THE PROFILES TO PROVIDE GRADES TO AIR RELEASES AND BLOW OFF VALVES, AND AS REQUIRED TO ALLOW FOR 18 INCHES OF SEPARATION BETWEEN PROPOSED WATER LINES AND EXISTING WATER OR SEWER LINES.
- 14. CONTRACTOR TO DETERMINE FIRE HYDRANT RISER LENGTH FOR EACH HYDRANT LOCATION PRIOR TO ORDERING HYDRANTS.
- WIRE TO BE INSTALLED WITH ALL PIPE FOR THIS PROJECT.

60 PSI.

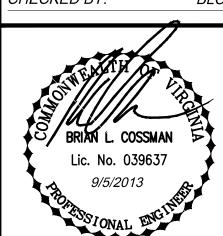
RECOMMENDATIONS RELATED TO NUMBER OF JOINTS RESTRAINED.

13. GATE VALVES AND BOXES: PROVIDE AN EXTENDED VALVE STEM WHERE DEPTH TO TOP OF NUT EXCEEDS 5 FEET.

15. TRACER WIRE TO BE INSTALLED AS SHOWN ON DETAIL FOR ALL NON—METALLIC PIPE AND IN ALL CASINGS. TRACER

16. CONTRACTOR MUST SCHEDULE A PRECONSTRUCTION MEETING WITH WVWA AT LEAST 24 HOURS PRIOR TO STARTING

PROJECT NO. 20130063 298-04-A1. G.L. NO. G-13930 DATE: 6/14/13 DRAWN BY: CHECKED BY:



1973 - 2013YEARS OF EXCELLENCE

SHEET NO.

WVWA COMMENTS 1 | 8/16/13 | REVIEW AGENCY COMMENTS EXISTING SITE CONDITIONS:
THE EXISTING SITE CONSISTS OF ROADSIDE DITCH, POWER POLE AND CULVERTS.

ADJACENT PROPERTIES:
THE SURROUNDING PROPERTY IS ZONED RESIDENTIAL. ALL MEASURES SHALL BE TAKEN TO ENSURE THAT THE SITE IS STABILIZED AND NO ADDITIONAL SEDIMENT IS DEPOSITED INTO THE DRAINAGE CHANNEL.

ALL GRADING SHALL OCCUR ON—SITE. ANY ADDITIONAL DIRT BORROWED OR WASTED FROM THE SITE WILL BE EITHER STOCKPILED OR REMOVED FROM A LOCATION CHOSEN BY THE CONTRACTOR AT A LATER DATE.

<u>CRITICAL AREAS:</u>
THERE ARE NO CRITICAL AREAS FOR THIS PROJECT.

 $\frac{1}{1}$ SOILS IN THE PROJECT AREA CONSISTS OF CLIFFORD FINE SANDY LOAM. SOIL CHARACTERISTICS, K FACTOR = 0.28, SYMBOL = 7C, AASHTO RATING = A-4, HYDROLOGIC SOIL GROUP B.

EROSION AND SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATION OF THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. THE MINIMUM STANDARDS OF THE HANDBOOK SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY VARIANCE.

SECTION 3.05- SILT FENCE

MAINTENANCE SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH

APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

<u>SECTION 3.31- TEMPORARY SEEDING</u>

ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER BY PLANTING SEED ON ROUGH-GRADED AREAS THAT WILL BE BROUGHT TO FINAL GRADE BETWEEN 6 MONTHS AND A YEAR.

SECTION 3.32- PERMANENT SEEDING MAINTENANCE

EVEN WITH CAREFUL, WELL—PLANNED SEEDING OPERATIONS, FAILURES CAN OCCUR. WHEN IT IS CLEAR THAT PLANTS HAVE NOT GERMINATED ON AN AREA OR HAVE DIED THESE AREAS MUST BE RESEEDED IMMEDIATELY TO PREVENT EROSION DAMAGE. HOWEVER, IT IS EXTREMELY IMPORTANT TO DETERMINE FOR WHAT REASON GERMINATION DID NOT TAKE PLACE AND MAKE ANY CORRECTIVE ACTION NECESSARY PRIOR TO RESEEDING THE AREA. HEALTHY VEGETATION IS THE MOST EFFECTIVE EROSION CONTROL AVAILABLE.

SECTION 3.35- MULCHING

MAINTENANCE ALL MULCHES AND SOIL COVERINGS SHOULD BE INSPECTED PERIODICALLY (PARTICULARLY AFTER RAINSTORMS) TO CHECK FOR EROSION. WHERE EROSION IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED. NETS AND MATS SHOULD BE INSPECTED AFTER RAINSTORMS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE-INSTALL NETTING OR MATTING AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. INSPECTIONS SHOULD TAKE PLACE UP UNTIL GRASSES ARE FIRMLY ESTABLISHED. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE; REPAIR AS NEEDED.

VEGETATIVE PRACTICES:

TEMPORARY SEEDING / PERMANENT STABILIZATION:

SEEDING MEASURES SHALL BE TAKEN ON DISTURBED SOIL AT CUT / FILL SLOPES, DITCH LINES, OR AREAS OUTSIDE OF ON-GOING CONSTRUCTION PRACTICES WITHIN SEVEN (7) DAYS OF COMPLETED GRADING. ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINAL GRADING.

SITE MAINTENANCE:

- 1. SILT FENCE BARRIERS SHALL BE CHECKED WEEKLY AND ESPECIALLY AFTER EACH RAINFALL EVENT, TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. IF ANY BARRIER IS DAMAGED DUE TO CONSTRUCTION ACTIVITIES, NATURAL CAUSES, OR ANY OTHER REASON, THE BARRIER SHALL BE REPAIRED OR REPLACED IMMEDIATELY. IF TRASH OR SEDIMENTATION REACHES ONE—HALF THE HEIGHT OF THE BARRIER, THE BARRIER SHALL BE CLEANED, AND RESTORED TO PROPER FUNCTIONING CONDITION.
- ALL OTHER STRUCTURAL MEASURES ARE TO BE CHECKED WEEKLY AND ESPECIALLY AFTER EACH RAINFALL EVENT TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. ANY DAMAGED OR CLOGGED MEASURE SHALL BE CLEANED OUT OR REPAIRED IMMEDIATELY.
- 3. ALL SEDIMENT REMOVED FROM THE CONTROL DEVICES SHALL BE RE-SPREAD ON THE SITE ABOVE THE CONTROL DEVICES.
- 4. VEGETATION SHALL BE CHECKED WEEKLY TO INSURE PROPER AND ADEQUATE COVERAGE. BARE OR WASHED AREAS SHALL BE SCARIFIED AND RESEEDED UNTIL PERMANENT STABILIZATION HAS BEEN ACHIEVED.
- ONCE SITE HAS ESTABLISHED AND SEDIMENT HAS CEASED TO BE CONVEYED ON THE SITE, ALL SILT FENCE BARRIERS AND INLET PROTECTION SHALL BE REMOVED FROM THE SITE.

6. OTHER CONTROLS.

- A. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, GARBAGE AND DEBRIS SHALL BE DISCHARGED TO SURFACE WATERS OF THE STATE. EXCEPT AS AUTHORIZED BY A CWA SECTION 404 PERMIT.
- B. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, MINIMIZATION OF TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ON THE PAVEMENT WILL BE PREVENTED BY PROPER USE AND MAINTENANCE OF THE CONSTRUCTION ENTRANCES AND CLEANING THE ROAD AT THE END OF EACH DAY.
- C. STORAGE OF ONSITE MATERIALS WILL BE DONE TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER AND SPILL PREVENTION AND RESPONSE.
- D. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM.

INSPECTIONS AND REPORTING:

FACILITY PERSONNEL WHO ARE FAMILIAR WITH THE CONSTRUCTION ACTIVITY, THE BMPS AND THE STORMWATER POLLUTION PREVENTION PLAN WILL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AND AREAS USED FOR STORAGE MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROLS AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. THESE INSPECTIONS SHALL BE CONDUCTED EVERY 14 DAYS OR WITHIN 48 HOURS OF THE END OF A STORM EVENT THAT IS 0.5 INCHES OR GREATER.

EROSION AND SEDIMENT CONTROL DEVICES:

PERIMETER EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITY. AS CONSTRUCTION PROCEEDS, ALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS SOON AS POSSIBLE. EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN ARE A MINIMUM AND THE PROJECT CONDITION MAY DICTATE ADDITIONAL CONTROL. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

EROSION AND SEDIMENT CONTROL MAINTENANCE:

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CHECKED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL TO INSURE THAT ALL DEVICES ARE IN PLACE AND FUNCTIONING AS REQUIRED. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. IN GENERAL, IF THE SILT BUILT UP BEHIND A BARRIER BECOMES AS DEEP AS 9 INCHES, THE SILT IS TO BE REMOVED AND THE BARRIER REPAIRED OR REPLACED. AFTER COMPLETION OF THE PROJECT, AND PERMANENT SEEDING HAS BEEN ESTABLISHED. EROSION CONTROL DEVICES AND ANY SILT BUILT UP SHALL BE REMOVED. DISTURBED AREAS DUE TO THIS CLEANUP OPERATION SHALL BE REPAIRED, RESEEDED AND REMULCHED.

SEEDING SPECIFICATIONS:

(TS) TEMPORARY SEEDING-

WINTER - 40 LBS. ANNUAL RYE/40 LBS. CEREALE RYE (PER ACRE) SUMMER - 40 LBS. ANNUAL RYE/40 LBS. FOXTAIL

MILLET (PER ACRE)

FERTILIZER - 1500 LBS. 10-18-10/ACRE LIME - 2 TONS/ACRE

(PS) PERMANENT SEEDING-

SEASONAL SPECIFICATION - PER ACRE

2/1 TO 5/15 100 LBS. TALL FESCUE 15 LBS. ANNUAL RYE 2 LBS. RED CLOVER

5/16 TO 7/31 120 LBS. TALL FESCUE 10 LBS. FOXTAIL MILLET 2 LBS. RED CLOVER

8/1 TO 9/15 100 LBS. TALL FESCUE 15 LBS. ANNUAL RYE 2 LBS. RED CLOVER

9/16 TO 1/31 120 LBS. TALL FESCUE 10 LBS. CEREALE RYE 2 LBS. RED CLOVER

REFER TO THE LANDSCAPE SPECIFICATION SECTIONS FOR AN APPROVED SOD MATERIAL.

FERTILIZER - ALL SEASONS - 1500 LBS. 10-18-10/ACRE LIME - ALL SEASONS - 2 TONS/ACRE

- * A MULCH COVER IS REQUIRED ON TEMPORARY AND FINAL SEEDING
- * STRAW AT 80 BALES PER ACRE OR AN APPROVED MANUFACTURED MULCH/STABILIZATION MATTING MATERIAL.

<u>VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS</u> MINIMUM STANDARD #1

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 (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MINIMUM STANDARD #16

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

- NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGE IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING
- STREAMS OR OFF-SITE PROPERTY. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
- APPLICABLE SAFETY CHAPTERS SHALL BE COMPLIED WITH.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

TABLE 6-1

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 VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.

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

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE

ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

MAINTAINED ON THE SITE AT ALL TIMES. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN

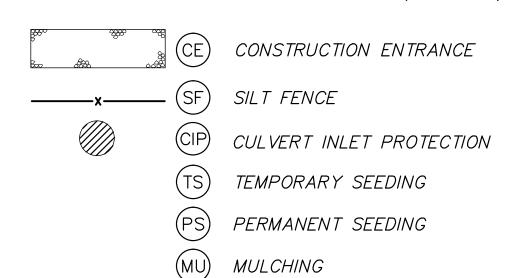
INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

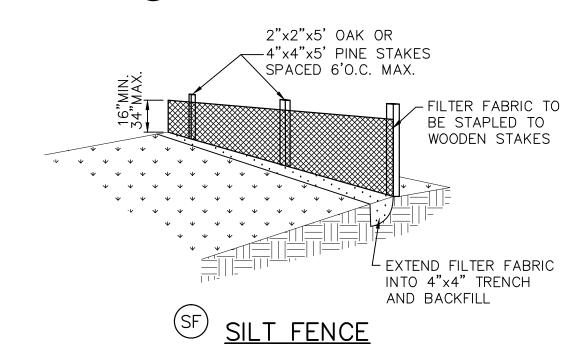
THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

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 IMMEDIATELY. AN INSPECTION REPORT MUST BE FILED WITH THE BOTETOURT COUNTY EROSION & SEDIMENT CONTROL ADMINISTRATOR ONCE EVERY TWO WEEKS, BEGINNING WITH COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, AND WITHIN 48 HOURS OF ANY RUNOFF-PRODUCING RAINFALL EVENT. FAILURE TO REPORT WILL BE GROUNDS FOR IMMEDIATE REVOCATION OF THE LAND DISTURBING PERMIT. REPORTS MUST BE POSTMARKED WITHIN 24 HOURS OF THE DEADLINE. A STANDARD INSPECTION REPORT FORM WILL BE SUPPLIED, WHICH SHOULD BE COPIED AS NECESSARY. THIS PROVISION IN NO WAY WAIVES THE RIGHT OF BOTETOURT COUNTY PERSONNEL TO CONDUCT SITE INSPECTIONS, NOR DOES IT DENY THE RIGHT OF THE PERMITTEE(S) TO ACCOMPANY THE INSPECTOR(S).

VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES * CHART TAKEN FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (JULY 1992)





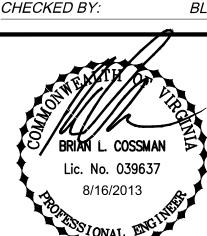
(WITHOUT WIRE SUPPORT)

N.T.S.



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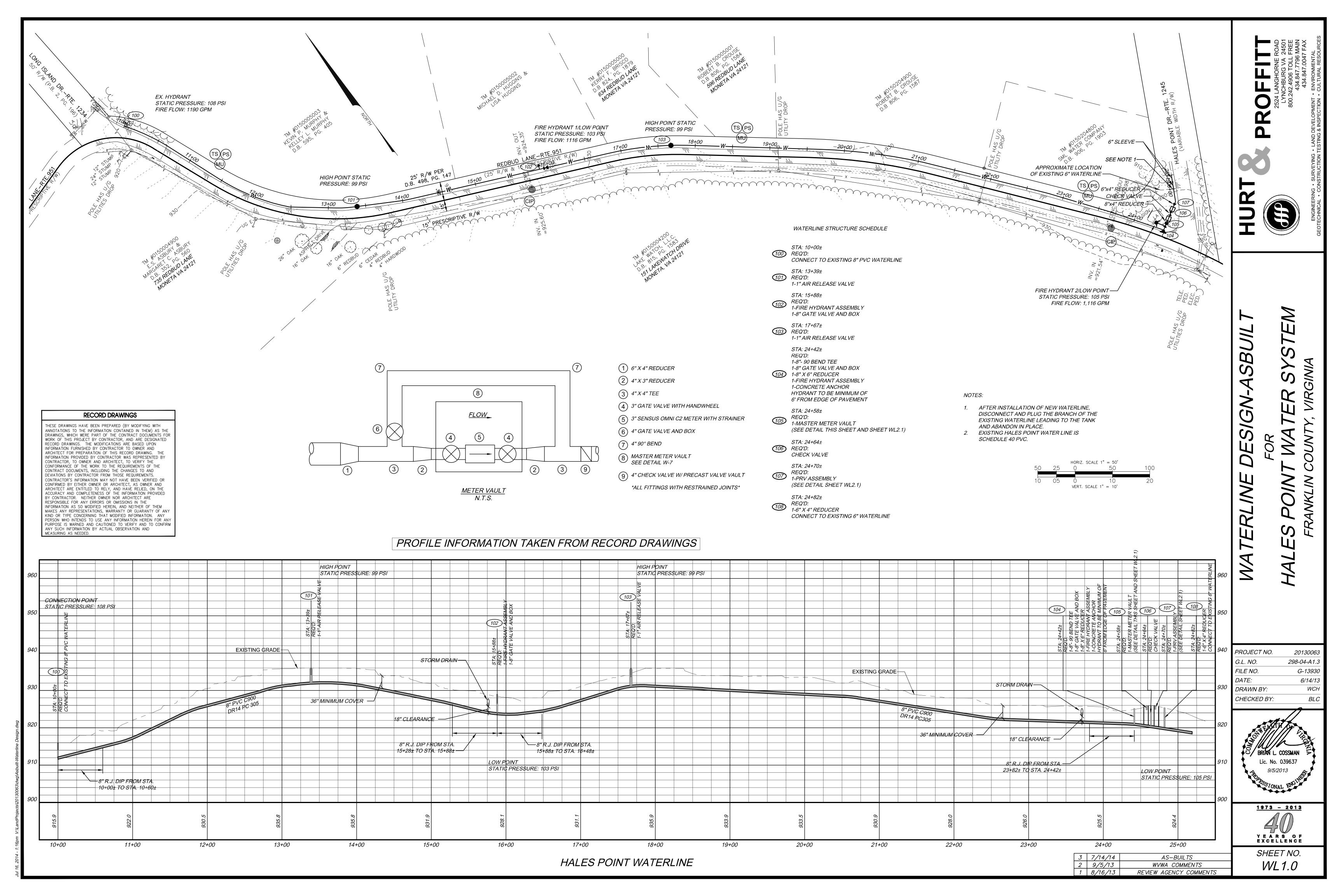
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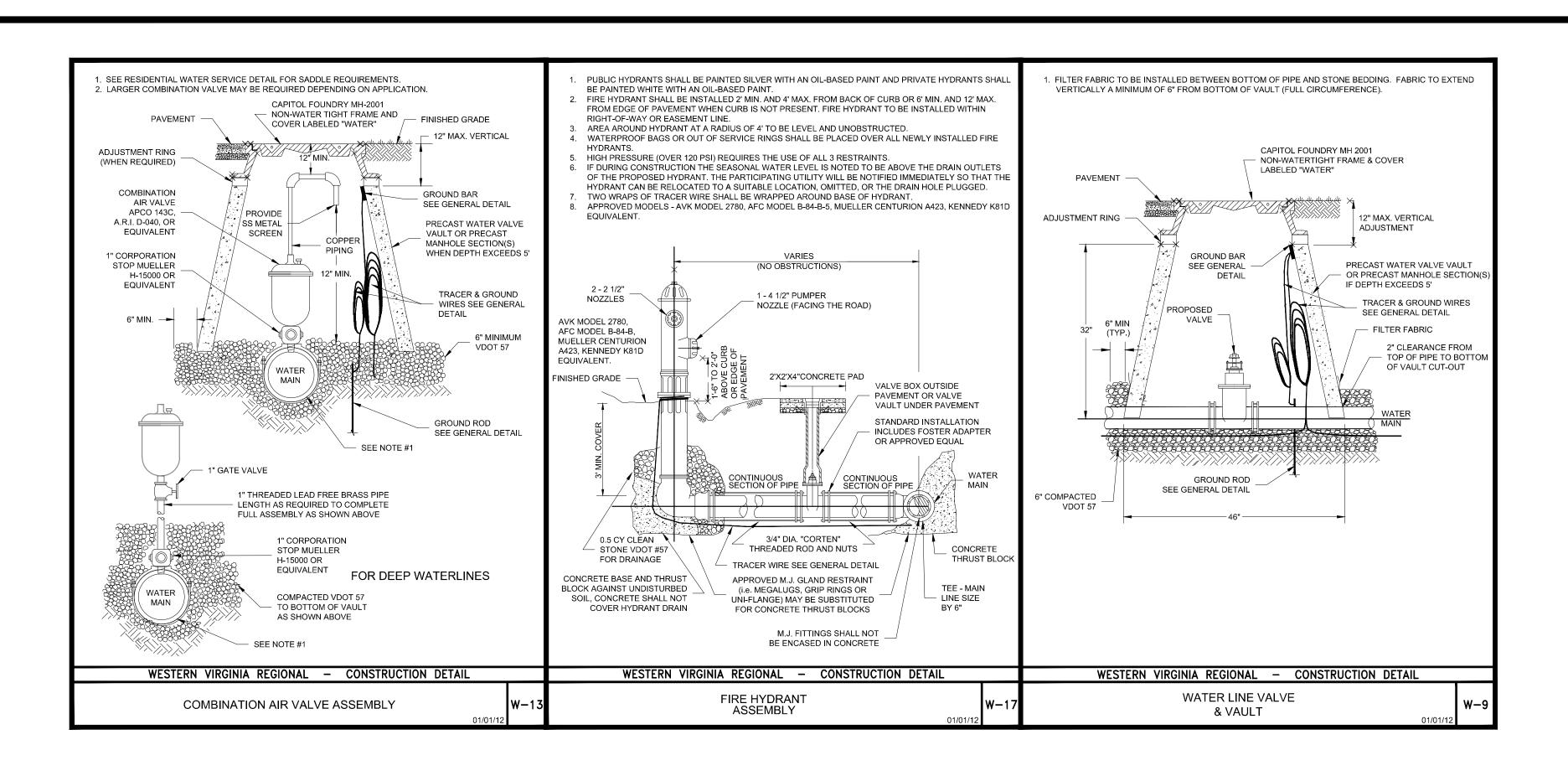


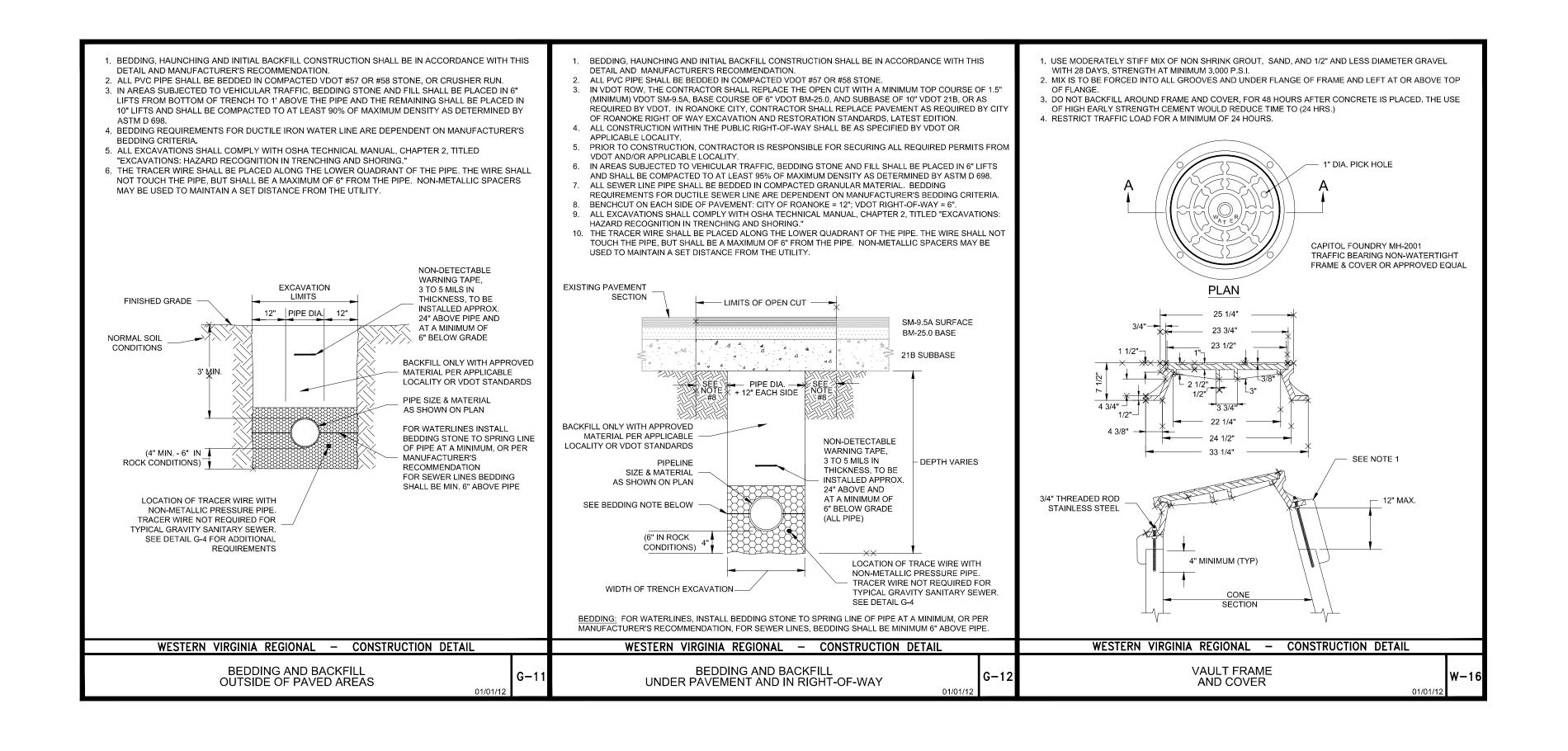
1973 - 2013YEARS OF EXCELLENCE

SHEET NO.

1 | 8/16/13 | REVIEW AGENCY COMMENTS







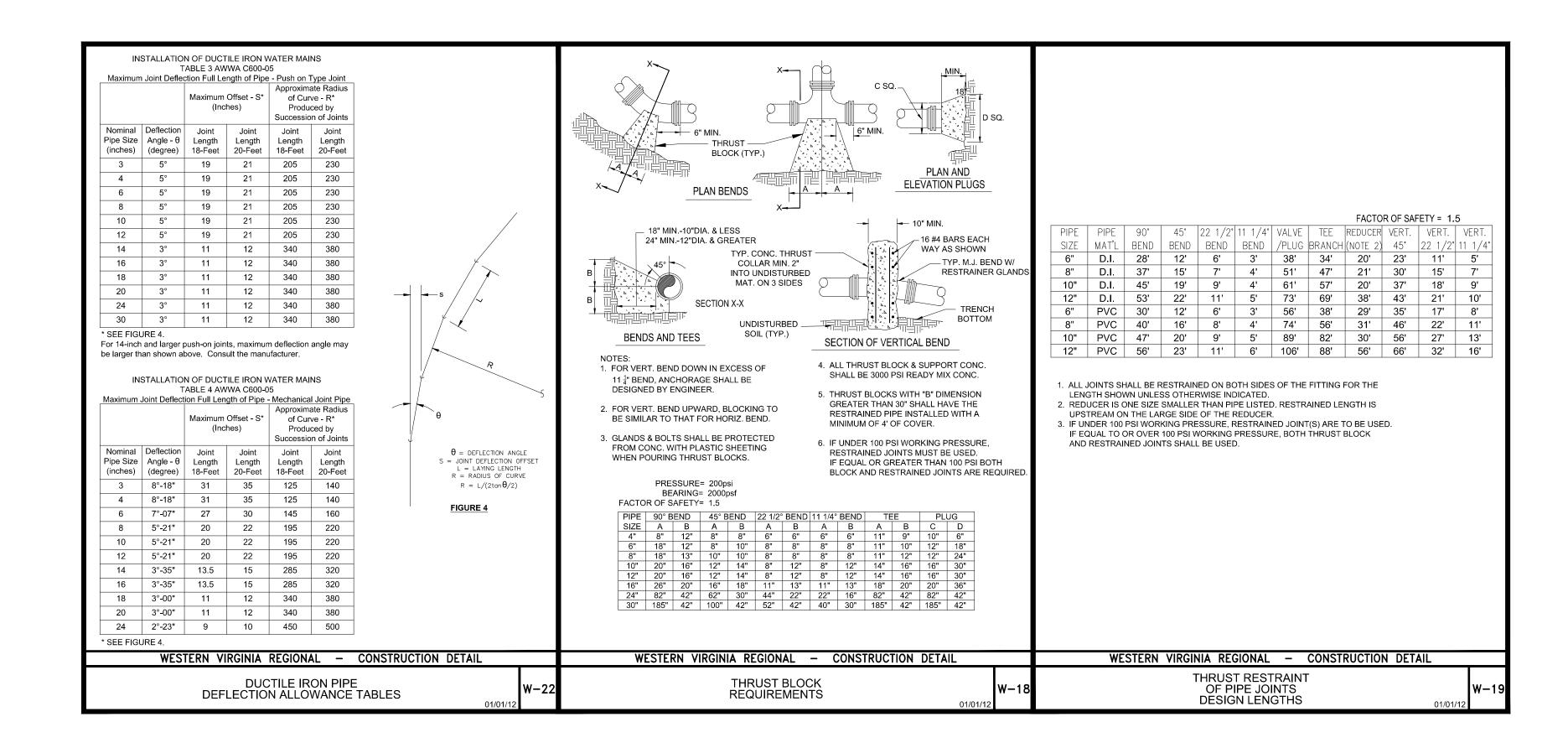


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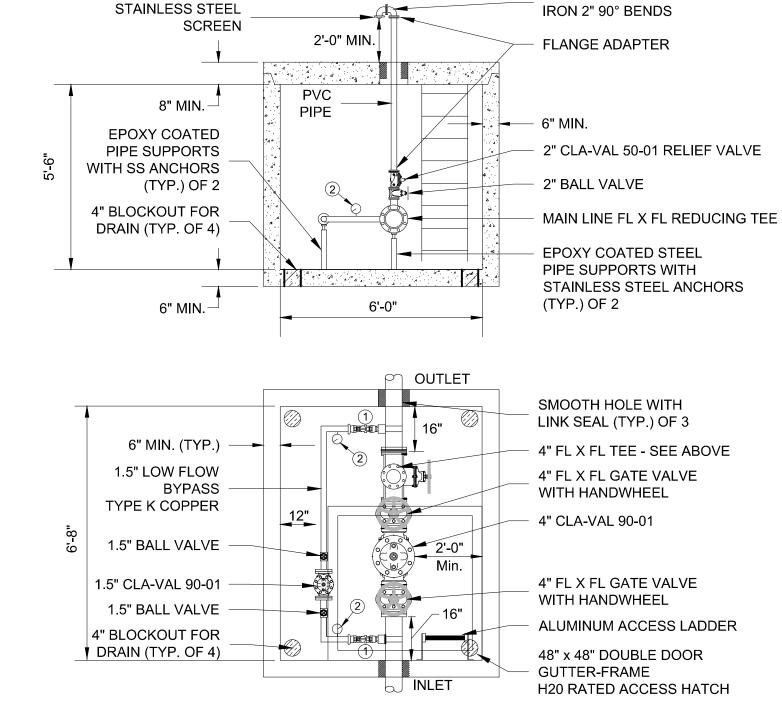
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- 1. 1.5" CORPORATION STOP, MUELLER H-15000 OR EQUIVALENT.
- LIQUID FILLED PRESSURE GAUGE.
- 3. 1.5" PRESSURE REGULATING VALVE (CLA-VAL MODEL 90-01) SET AT WORKING PRESSURE.
- 4. FLANGE x FLANGE MAIN LINE PRESSURE REGULATING VALVE (CLA-VAL MODEL 90-01) SET AT 5 psi LESS THAN #7. 690-01 MAY BE ALLOWED IN SOME INSTALLATIONS, CONFIRM WITH PARTICIPATING UTILITY.
- 5. FLANGE x FLANGE GATE VALVE, WITH HAND WHEEL. ONE SIZE LESS THAN MAIN LINE.
- 6. FLANGE x FLANGE PRESSURE RELIEF VALVE, ONE SIZE LESS THAN MAIN LINE (CLA-VAL MODEL 50-01) SET AT 5 psi GREATER THAN #4. 7. VAULT SHALL BE PRE-CAST REINFORCED CONCRETE.
- 8. MAIN LINE (INLET, OUTLET, AND INTERIOR) PIPING SHALL BE FLANGED PLAIN END, OR PLAIN END DUCTILE IRON PIPE WITH
- APPROVED FLANGE ADAPTER. MIN. PRESSURE CLASS 350 OR THICKNESS CLASS 50.
- 9. VAULT TO BE INSTALLED ON MIN. 6" COMPACTED VDOT #57 STONE WITH FILTER FABRIC PLACED BETWEEN BOTTOM OF VAULT AND STONE BEDDING. FILTER FABRIC TO EXTEND VERTICALLY A MINIMUM OF 6" ON ALL FOUR SIDES OF VAULT.

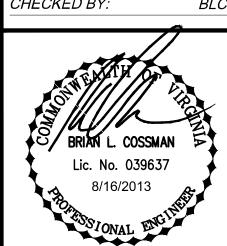
FLANGED DUCTILE



PRESSURE REDUCING VALVE ASSEMBLY N.T.S.

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