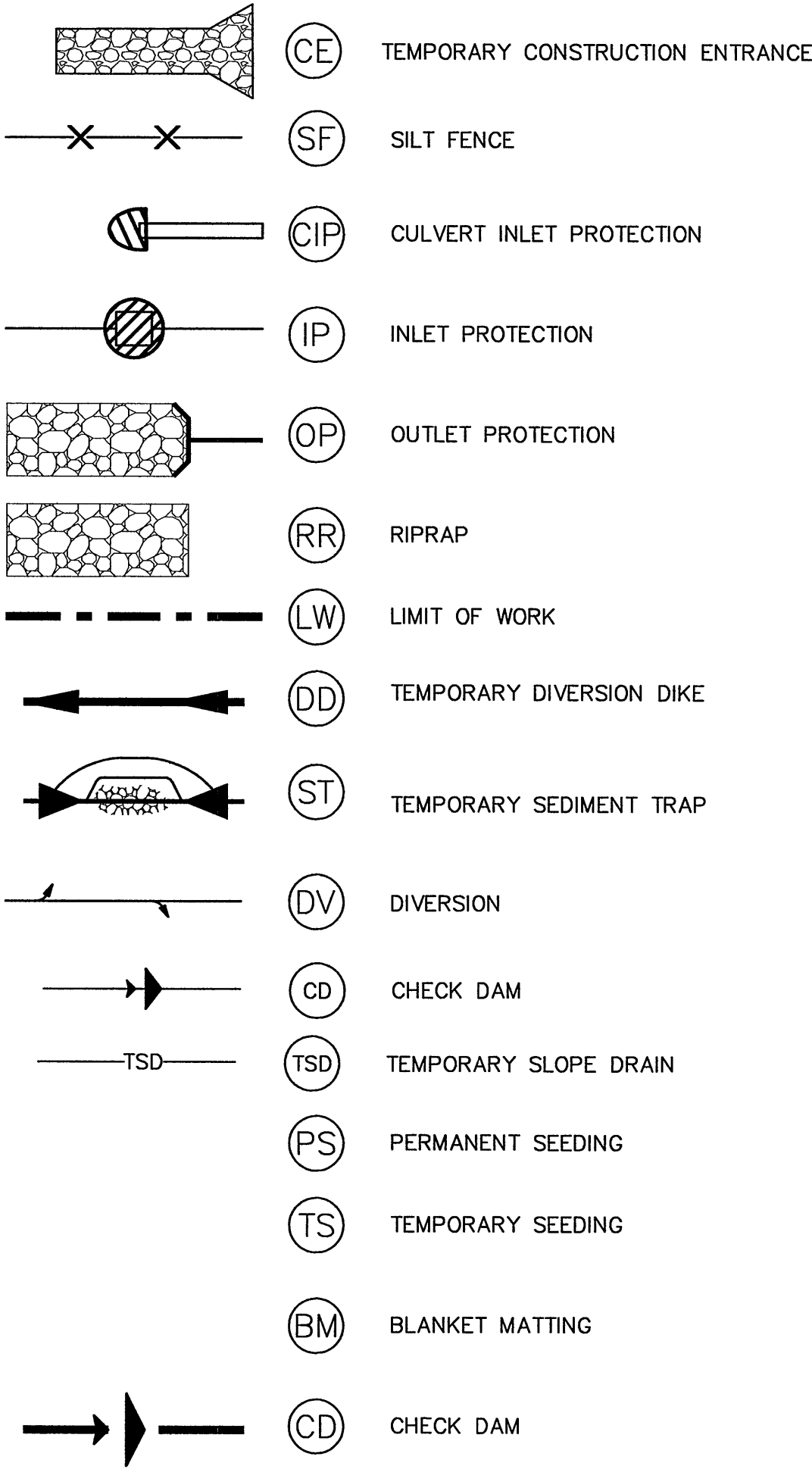


GENERAL NOTES:

1. DRAINAGE STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION DESIGN HANDBOOK.
2. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES AND PROTECT ALL UTILITIES TO REMAIN AT HIS OWN INITIATIVE AND EXPENSE.
3. THE CONTRACTOR SHALL COORDINATE FINISHED PAVEMENT GRADES WITH ELEVATIONS AND LOCATIONS OF EXISTING ROADS AND STREETS.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK". THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL APPLICABLE MEASURES CONTAINED THEREIN WHICH MAY BE PERTINENT TO THIS PROJECT. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS THE FIRST STEP IN GRADING OPERATIONS. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AFTER COMPLETION OF THE PROJECT. THE EROSION CONTROL MEASURES INDICATED ARE THE MINIMUM, OTHER MEASURES MAY BE REQUIRED BY THE EROSION CONTROL INSPECTOR. CONTRACTOR SHALL FURNISH AND INSTALL ALL MEASURES REQUIRED TO COMPLY WITH APPLICABLE REGULATIONS. REMOVE EROSION CONTROL MEASURES WHEN THE SITE HAS STABILIZED.
5. NO WORK SHALL COMMENCE ON SITE UNTIL A LAND DISTURBING PERMIT IS ISSUED BY THE COUNTY OF BEDFORD.
6. THE LAND DISTURBANCE PERMIT MUST BE KEPT ON SITE AT ALL TIMES AND SHOWN ON DEMAND.
7. THE COUNTY OF BEDFORD MUST BE NOTIFIED WHEN THE WORK COMMENCES AND WHEN THE PROJECT IS COMPLETE.
8. OTHER WORK (GRADING, EXCAVATING, AND CONSTRUCTION) ON THE PROJECT SHALL NOT COMMENCE UNTIL THE APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AS SPECIFIED ON THE PLAN.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND LICENSES REQUIRED BY THE STATE OF VIRGINIA, COUNTY OF BEDFORD, OR OTHER GOVERNING AGENCIES INVOLVED UNDER THIS CONTRACT, EXCEPT FOR THE JOINT PERMIT WHICH HAS BEEN OBTAINED BY THE OWNER.
10. COMPLY WITH THE REQUIREMENTS OF THE JOINT PERMIT. A COPY OF THE JOINT PERMIT IS INCLUDED IN THE PROJECT MANUAL.
11. LENGTHS OF LINES INDICATED ON THE DRAWING FOR UTILITY SYSTEMS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR DETERMINING THE EXACT AMOUNT OF PIPING REQUIRED TO FURNISH A COMPLETE WORKING SYSTEM IN ACCORDANCE WITH THE INTENT OF THE DRAWINGS.
12. TOP OF INLETS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY EXACT ELEVATION REQUIRED TO ASSURE STRUCTURE HEIGHT COMPLIES WITH THE PURPOSE OF THE STRUCTURE AND CONFORMS WITH ADJACENT FINISHED GRADES.
13. FINISH CONTOURS SHOWN ARE TO TOP OF TOPSOIL, TOP OF PAVEMENT, TOP OF SIDEWALK, ETC.
14. PROVIDE POSITIVE DRAINAGE AT ALL GRADED AREAS.
15. PROVIDE UNIFORM (STRAIGHT) GRADE BETWEEN SPOT ELEVATIONS, FINISH CONTOURS, TOP OF INLETS, ETC.
16. TOTAL DISTURBED AREA IS 3.90 ACRES.
17. SEE THIS SHEET FOR SITE WORK LEGEND.
18. THE OWNER WILL LOWER THE RESERVOIR WATER LEVEL TO APPROXIMATELY 1656.0 FEET PRIOR TO THE COMMENCEMENT OF ANY WORK ON THE FACE OF THE DAM. CONTRACTOR SHALL BE ALERT FOR ANY SIGNS OF SEEPS OR UNUSUAL CONDITIONS WHILE WORKING ON THE FACE OF THE DAM. IF ANY OF THESE CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK IN THE AREA AND IMMEDIATELY NOTIFY THE OWNERS REPRESENTATIVE.
19. THE FALLING CREEK WATER TREATMENT PLANT WILL REMAIN IN OPERATION DURING CONSTRUCTION EXCEPT FOR SCHEDULED OUTAGES. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO MAINTAIN ACCESS ACROSS THE DAM FOR OWNER EMPLOYEES AND ESSENTIAL DELIVERIES.
20. THE PIPING REHABILITATION AND NEW RAW WATER PIPE CONSTRUCTION SHALL BE COORDINATED IN ADVANCE WITH THE OWNER. WATER OUTAGE FOR THIS WORK SHALL BE LIMITED TO A MAXIMUM OF ONE MONTH.
21. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER. ONLY THE OWNER SHALL OPERATE VALVES.
22. DUE TO THE PROXIMITY OF RESIDENTIAL AREAS, WORK HOURS ARE LIMITED TO 7:00 AM TO 9 PM, AND AND DELIVERIES ARE LIMITED TO THE HOURS OF 7:00 AM TO 6:00 PM MONDAY THROUGH SATURDAY. NO WORK OR DELIVERIES SHALL OCCUR ON SUNDAYS OR HOLIDAYS.
23. THE CONTRACTOR NEEDS TO BE AWARE OF WEATHER CONDITIONS THAT COULD CAUSE THE RESERVOIR LEVEL TO RISE AND FLOW OUT THROUGH THE EXISTING SPILLWAY. THE RESERVOIR LEVEL COULD POTENTIALLY RISE APPROXIMATELY 15 INCHES FOR EVERY 1 INCH OF RAINFALL. IN THE EVENT THAT WEATHER CONDITIONS THREATEN TO RAISE RESERVOIR LEVELS WHILE WORK IS PROCEEDING ON THE PRINCIPAL SPILLWAY, THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NEEDED TO PROTECT THE DAM FROM DAMAGE, AND TO PROTECT HIS OWN WORK. THE OWNER IS NOT RESPONSIBLE FOR ANY DAMAGES THAT OCCUR TO THE CONTRACTOR'S WORK DUE TO FLOW OUT OF THE RESERVOIR SPILLWAY DURING CONSTRUCTION.
24. THE AREA ON SITE FOR CONTRACTOR STAGING AND LAYDOWN AREA IS VERY LIMITED. THE CONTRACTOR SHALL ACQUIRE AN OFFSITE AREA FOR STAGING, LAYDOWN, AND OTHER SPACE NEEDS, AS REQUIRED.
25. CONTRACTOR EMPLOYEES, SUBCONTRACTORS, OR SUPPLIERS SHALL NOT PARK ON THE ADJACENT RESIDENTIAL STREETS. CONTRACTOR SHALL MAKE PROVISIONS FOR OFFSITE PARKING AND TRANSPORTATION TO THE SITE AS NECESSARY.

26. CONTRACTOR IS RESPONSIBLE TO DEVELOP A DETAILED SCHEDULE AND SEQUENCE OF THE WORK. A POSSIBLE SEQUENCE OF CONSTRUCTION IS AS FOLLOWS:
- A. SITE MOBILIZATION
- SET UP OFFSITE YARD
  - PROVIDE EROSION AND SEDIMENT CONTROL (SEE SHEET CS601)
  - CLEAR THE BORROW AREA
- B. PIPE RENOVATION AND CONSTRUCTION
- COORDINATE WORK PLAN AND OUTAGES WITH THE OWNER
  - CONSTRUCT NEW PIPING, STRUCTURES, AND VALVES
  - SLIP LINE THE EXISTING RAW WATER AND DRAIN PIPES (ONE AT A TIME)
  - CONNECT NEW PIPING TO SLIP LINED RAW WATER AND DRAIN PIPES.
  - REMOVE ABANDONED PIPING FROM THE AREA THAT WILL RECEIVE FILL.
- C. EARTHWORK
- ENSURE THAT THE RESERVOIR LEVEL HAS BEEN PROPERLY LOWERED BY THE OWNER.
  - PREPARE THE SUBGRADE TO RECEIVE SUBSEQUENT WORK.
  - PLACE SAND FILTER LAYER AND SEEPAGE COLLECTION DRAIN PIPE.
  - EXCAVATE SUITABLE EMBANKMENT MATERIAL FROM THE BORROW AREA AND PLACE IT AS INDICATED.
  - GRADE THE PRINCIPAL SPILLWAY CHANNEL TO RECEIVE SUBSEQUENT WORK.
- D. ARMOR THE DAM AND PRINCIPAL SPILLWAY CHANNEL
- ENSURE SUBGRADE IS READY FOR ARTICULATED CONCRETE BLOCK, GABION, OR RIPRAP PLACEMENT.
  - PLACE FILTER FABRIC AND DRAINAGE LAYER
  - PLACE ARTICULATED CONCRETE BLOCK, GABIONS, AND RIPRAP ON THE FACE OF DAM AND PRINCIPAL SPILLWAY.
  - PLACE CONCRETE AND RIPRAP AT THE TOE OF THE DAM.
- E. MISCELLANEOUS WORK
- PROVIDE MISCELLANEOUS SYSTEMS FOR SITE DRAINAGE, SEEPAGE MEASUREMENT, LONG-TERM MONITORING, ETC.
  - RESTORE ENTRANCE ROAD SURFACE ACROSS THE DAM AND TO THE PUBLIC ROAD.
  - STABILIZE ALL DISTURBED AREAS.
  - AFTER ALL AREAS ARE STABILIZED REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
27. INSTALL WATER LINE AND APPURTENANCES IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY WATER AND SEWER DESIGN CONSTRUCTION STANDARDS, LATEST EDITION.
28. THIS PROJECT LIES IN FEMA FLOOD ZONE C, COMMUNITY PANEL NO. 510016 0025 A, DATED SEPTEMBER 29, 1978.
29. CONSTRUCTION CONTROL POINTS (BM's) ARE LOCATED WITHIN THE LIMITS OF CONSTRUCTION, PRIOR TO DISTURBING CONSTRUCTION CONTROLS POINTS HAVE A SURVEOR LICENSED IN VIRGINIA RESET THEM OUTSIDE THE LIMITS OF CONSTRUCTION.

EROSION AND SEDIMENT CONTROL LEGEND



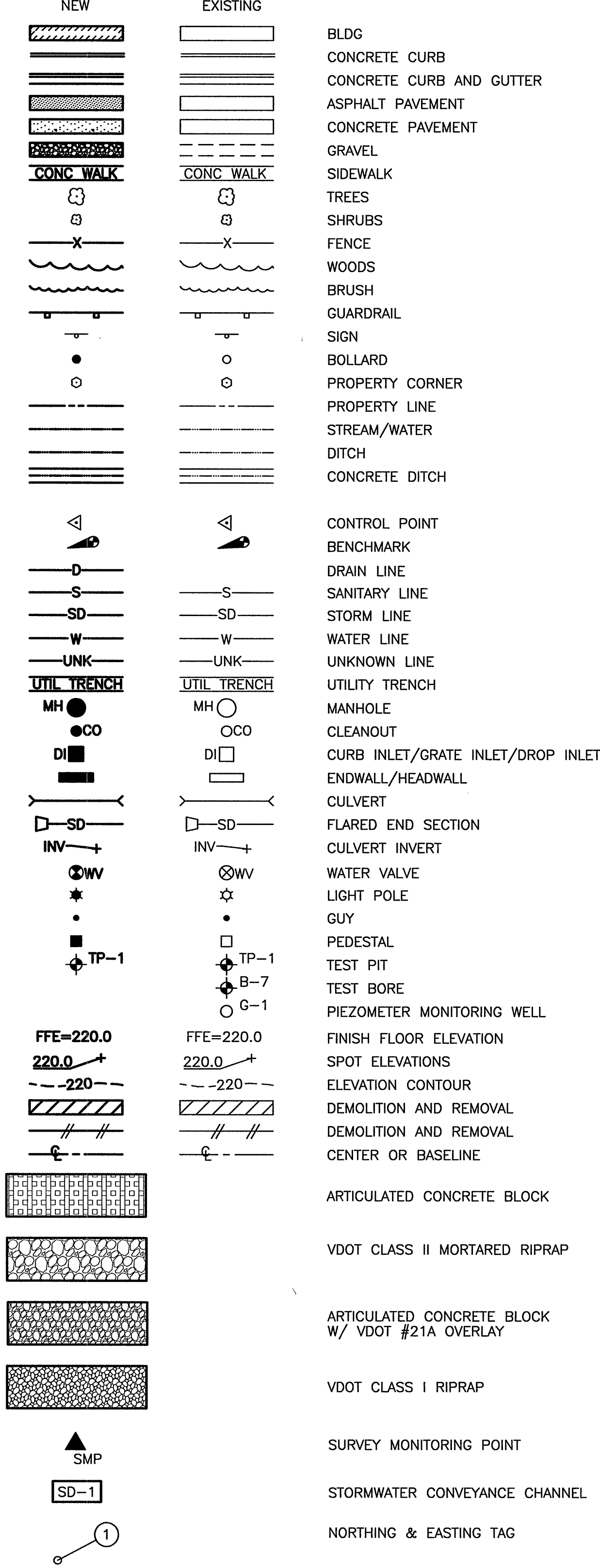
NOTE: FOR ADDITIONAL SYMBOLS SEE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK.

EROSION AND SEDIMENT CONTROL NOTES:

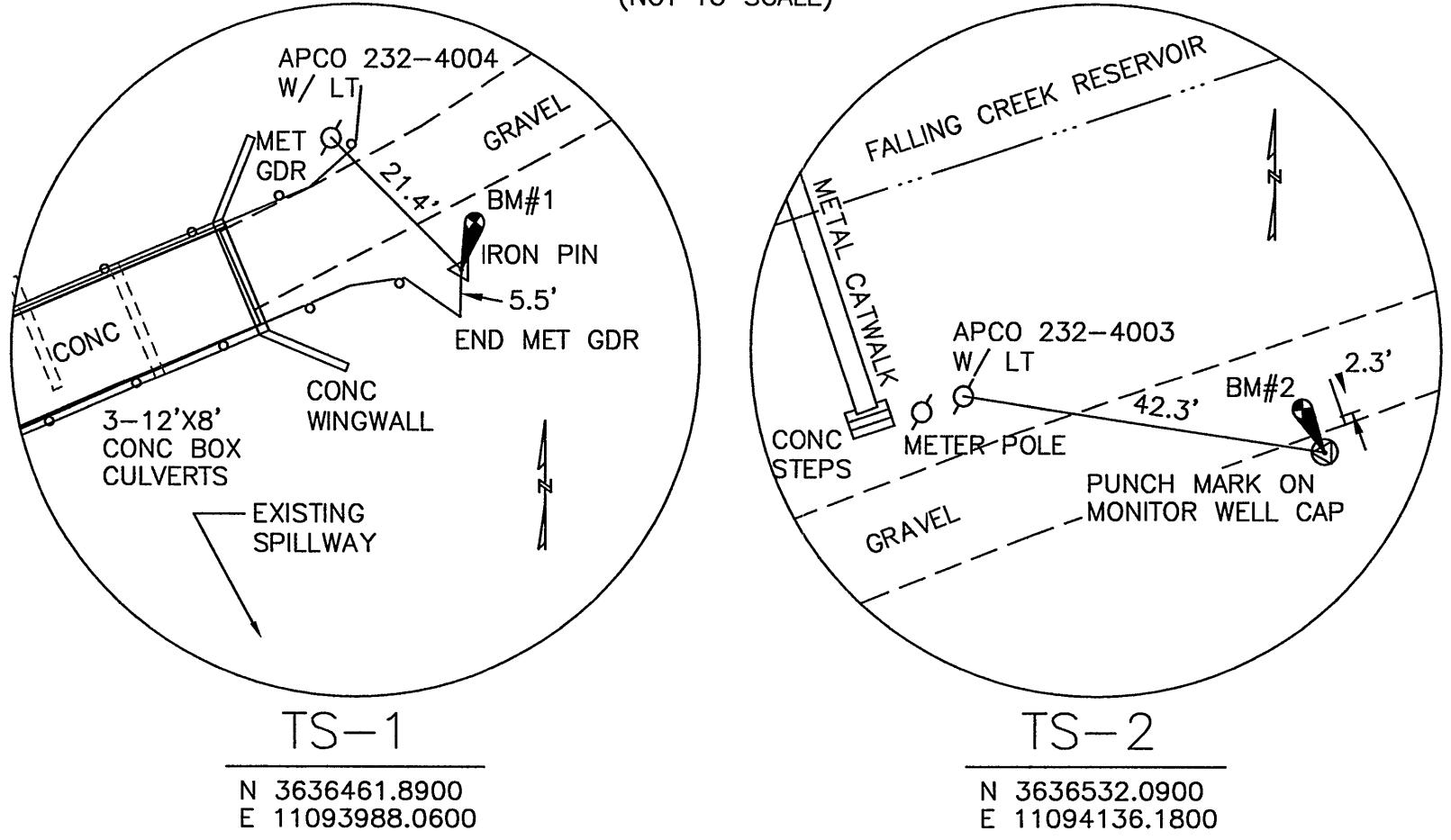
THE PURPOSE OF THE EROSION CONTROL MEASURES SHOWN ON THESE PLANS SHALL BE TO PRELUDE THE TRANSPORT OF ALL WATERBORNE SEDIMENTS RESULTING FROM CONSTRUCTION ACTIVITIES FROM ENTERING ONTO ADJACENT PROPERTIES OR STATE WATERS. IF FIELD INSPECTION REVEALS THE INADEQUACY OF THE PLAN TO CONFINE SEDIMENT TO THE PROJECT SITE, APPROPRIATE MODIFICATIONS WILL BE MADE TO CORRECT ANY PLAN DEFICIENCIES.

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PROCEDURES APPROVED BY THE STATE OF VIRGINIA. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL APPROVED PROCEDURES WHICH MAY BE PERTINENT TO THE PROJECT.
2. ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED BY A TEMPORARY CONSTRUCTION ENTRANCE TO PREVENT TRACKING OF MUD ONTO PUBLIC RIGHT-OF-WAYS. AN ENTRANCE PERMIT FROM VDOT IS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN STATE RIGHT-OF-WAYS.
3. SEDIMENT CONTROL DEVICES, SUCH AS, BUT NOT LIMITED TO, SEDIMENT TRAPS, PERIMETER DIKES, CHECK DAMS OR OTHER MEASURES NOT LOCATED IN PROPOSED FILL OR EXCAVATION AREAS, SHALL BE CONSTRUCTED PRIOR TO ALL OTHER LAND DISTURBANCE. AN ON-SITE PRE-CONSTRUCTION MEETING WILL BE HELD BETWEEN THE DEPARTMENT OF PUBLIC WORKS AND THE CONTRACTOR TO IDENTIFY THOSE MEASURES TO BE INITIALLY INSTALLED.
4. MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH PROCEDURES APPROVED BY THE STATE OF VIRGINIA. MAINTENANCE WILL INCLUDE THE REPAIR OF MEASURES DAMAGED BY ANY SUBCONTRACTOR INCLUDING THOSE OF THE PUBLIC UTILITY COMPANIES. AT THE PRECONSTRUCTION MEETING, THE CONTRACTOR WILL SUPPLY THE COUNTY OF BEDFORD WITH THE NAME OF THE INDIVIDUAL WHO WILL BE RESPONSIBLE FOR ENSURING MAINTENANCE OF INSTALLED MEASURES ON A DAILY BASIS.
5. SURFACE FLOWS OVER CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER REDIRECTING FLOWS FROM TRANSVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO SAFELY LOWER WATER DOWNSLOPE WITHOUT CAUSING EROSION.
6. SEDIMENT CONTROL MEASURES MAY REQUIRE MINOR FIELD ADJUSTMENTS AT THE TIME OF CONSTRUCTION TO INSURE THEIR INTENDED PURPOSE IS ACCOMPLISHED. APPROVAL FROM THE COUNTY OF BEDFORD WILL BE REQUIRED FOR OTHER DEVIATION FROM THE APPROVED PLANS.
7. THE CONTRACTOR SHALL STRIP AND PILE TOPSOIL AS DIRECTED BY THE OWNERS REPRESENTATIVE. SILT FENCE SHALL BE PLACED AT THE TOE OF THE STOCKPILE AFTER STRIPPING OF TOPSOIL IS COMPLETE.
8. TEMPORARY VEGETATIVE COVER SHALL BE PROVIDED IN ALL AREAS WHICH ARE NOT DESIGNATED FOR PAVING, UNDERGROUND UTILITIES OR STRUCTURAL USES. SUCH AREAS SHALL NOT BE EXPOSED FOR PERIODS EXCEEDING 30 DAYS. TEMPORARY VEGETAL COVER MAY BE ELIMINATED IN FAVOR OF FINAL VEGETAL COVER IF CONSTRUCTION AND SEASONAL CONDITIONS PERMIT.
9. ALL AREAS DESIGNATED FOR PAVING, UNDERGROUND UTILITIES, AND STRUCTURAL USE SHALL BE STABILIZED AS SOON AS POSSIBLE, BUT NOT EXCEEDING 15 DAYS FOLLOWING INSTALLATION. NO MORE THAN 300' OF SANITARY SEWER, STORM SEWER, OR WATER LINES ARE TO BE OPEN AT ONE TIME.
10. THE TERM SEEDING, FINAL VEGETATIVE COVER OR STABILIZATION, ON THIS PLAN SHALL MEAN THE SUCCESSFUL GERMINATION AND ESTABLISHMENT OF A STABLE GRASS COVER FROM A PROPERLY PREPARED SEEDED CONTAINING THE SPECIFIED AMOUNTS OF SEED, LIME, AND FERTILIZER. IRRIGATION SHALL BE REQUIRED AS NECESSARY TO ENSURE ESTABLISHMENT OF GRASS COVER.
11. ALL SLOPES STEEPER THAN 3:1 SHALL REQUIRE THE USE OF EROSION CONTROL BLANKETS SUCH AS EXCELSIOR BLANKETS TO AID IN THE ESTABLISHMENT OF A VEGETATIVE COVER. INSTALLATION SHALL BE IN ACCORDANCE WITH MULCHING AND MANUFACTURER'S INSTRUCTIONS.
12. INLET PROTECTION SHALL BE PROVIDED FOR ALL STORM DRAIN INLETS AS SOON AS PRACTICAL FOLLOWING CONSTRUCTION OF SAME.
13. TEMPORARY EROSION CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED. AFTER STABILIZATION IS COMPLETE, ALL MEASURES SHALL BE REMOVED WITHIN 30 DAYS. TRAPPED SEDIMENT SHALL BE SPREAD AND SEEDED.
14. OFF-SITE WASTE OR BORROW AREAS SHALL BE APPROVED BY THE COUNTY OF BEDFORD PRIOR TO THE IMPORT OF ANY BORROW OR EXPORT OF ANY WASTE TO OR FROM THE PROJECT SITE.
15. IMMEDIATELY SEED AND MULCH SEDIMENT TRAPS, DIVERSIONS, WATERWAYS, AND RELATED STRUCTURES.

SITE WORK LEGEND



CONSTRUCTION CONTROL POINT REFERENCE DIAGRAMS



SURVEY NOTES:

1. TOPOGRAPHIC SURVEY PERFORMED BY HSMM IN OCTOBER AND DECEMBER 2007.
2. HORIZONTAL DATUM IS NORTH AMERICAN DATUM OF 1983 (NAD 83) VIRGINIA STATE PLANE SOUTH ZONE.
3. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

BENCHMARKS:

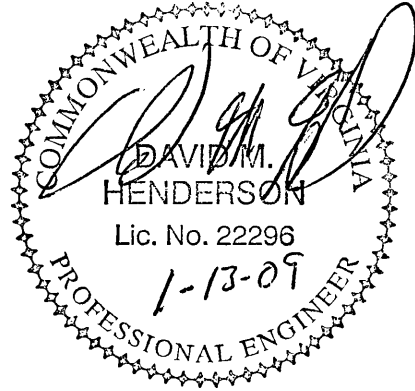
- BM#1= TOP OF IRON PIN (TS-1) SET SOUTH OF GRAVEL ROAD AND EAST OF THE 12'x8' BOX CULVERTS ELEV=1670.86 FT (NAVD88)
- BM#2= TOP OF MONITORING WELL "G-2" CAP (TS-2) LOCATED 2.3' SOUTH OF GRAVEL ROAD ACROSS TOP OF DAM AND SOUTHEAST OF METAL CATWALK ELEV=1669.70 FT (NAVD88)

HSMM | AECOM

HAYES, SEAY, MATTERN & MATTERN, INC.  
1315 FRANKLIN ROAD  
ROANOKE, VA 24016

(540) 857-3100 www.hsmm.com

SEALS



CONSULTANT



WESTERN VIRGINIA  
WATER AUTHORITY

FALLING CREEK  
DAM RENOVATION

WESTERN VIRGINIA  
WATER AUTHORITY

BEDFORD COUNTY, VIRGINIA

REV	DATE	DESCRIPTION	APP
PROJECT NO:	61034	PROJECT PH: REGULATORY REVIEW	
ISSUE DATE:	JANUARY 12, 2009		
DESIGNED BY:	DMH	DRAWN BY:	MEW
CHECKED BY:	CGH	SUBMITTED BY:	DMH

CIVIL

GENERAL NOTES  
AND LEGENDS

G002