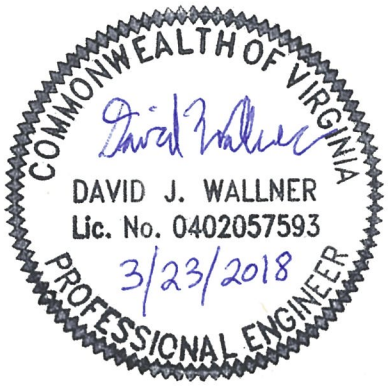
By virtue of this seal and signature, all supporting documents included in this package are accurate and support the design presented herein.



MVP PIPELINE PROJECT
SPREAD 11
VARIANCE AND EXEMPTION REQUESTS

PURSUANT OF VIRGINIA CODE 9VAC25–840–40 ET SEQ, MVP RESPECTFULLY REQUESTS VARIANCES AS OUTLINED BELOW:

THESE VARIANCE REQUESTS HAVE BEEN PREPARED IN ACCORDANCE WITH VADEQ AND VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (VADCR) GUIDANCE DOCUMENTS. INFORMATION INCLUDED IN THESE VARIANCE REQUESTS IS INTENDED TO SUPPLY VADEQ WITH PROJECT INFORMATION, PERTINENT TO ESC, INCLUDING BUT NOT LIMITED TO: SITE CHARACTERIZATION, SOIL TYPES, CRITICAL AREAS, SOIL ERODIBILITY, AND WATERBODY/WETLAND IDENTIFICATION.

MVP IS REQUESTING THESE VARIANCES DUE TO THE LENGTH OF THE PROJECT, THE DIAMETER OF THE PIPE INVOLVED, THE EQUIPMENT REQUIRED, CONSTRUCTION TECHNIQUES UTILIZED AND THE DESIRE TO CREATE SAFE WORKING CONDITIONS FOR ALL EMPLOYEES INVOLVED IN THE PROJECT. THE VARIANCES RELATED TO THE LENGTH OF TRENCH OPEN DURING PIPELINE INSTALLATION AND THE USE OF SILT FENCE TO PREVENT "RUN–ON" OF STORMWATER FROM UPGRADIENT UNDISTURBED AREAS WHERE STEEP SIDE SLOPES ARE PRESENT AND ARE DESCRIBED BELOW.

IN ORDER TO ENSURE ALL VARIANCE STIPULATIONS ARE MET, MVP WILL HAVE ONE VADEQ CERTIFIED ESC INSPECTOR PER SPREAD (TOTAL OF FOUR) ON DUTY DURING DAYS OF ACTIVE CONSTRUCTION. ALL OTHER MVP ENVIRONMENTAL INSPECTORS WILL HAVE A VADEQ RESPONSIBLE LAND DISTURBER (RLD) CERTIFICATION.

MVP ENVIRONMENTAL INSPECTORS WILL SUBMIT REPORTS DOCUMENTING ESC–RELATED ACTIVITIES ON A WEEKLY BASIS VIA VADEQ'S E–REPORTING SYSTEM. EDUCATING CONTRACTORS ON VARIANCE AND OTHER PERMIT REQUIREMENTS WILL BE ACCOMPLISHED BY ASSIMILATING ALL RELEVANT INFORMATION INTO MVP'S PRE–CONSTRUCTION WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP) TRAINING.

THE DESIGNATION OF MVP'S VADEQ–CERTIFIED INSPECTORS FOR THE PROJECT IS PENDING, AND WILL BE PROVIDED TO VADEQ WHEN AVAILABLE. MVP WILL BE UTILIZING TWO FERC 3RD PARTY MONITORS DURING CONSTRUCTION IN ADDITION TO THE VADEQ CERTIFIED INSPECTORS AND RLDS.

VARIANCE REQUEST MS-16-A LENGTH OF TRENCH

THIS VARIANCE IS REQUESTED DUE TO THE LENGTH OF THE PROJECT, THE DIAMETER OF THE PIPE INVOLVED, THE EQUIPMENT REQUIRED TO FACILITATE INSTALLATION, CONSTRUCTION TECHNIQUES UTILIZED AND THE DESIRE TO CREATE SAFE WORKING CONDITIONS FOR ALL EMPLOYEES INVOLVED IN THE PROJECT. A PROJECT OF THIS TYPE REQUIRES MULTIPLE OVERLAPPING AND SEQUENTIAL ACTIVITIES SUCH AS TREE FELLING, CLEARING, INSTALLATION OF ESC DEVICES, GRUBBING, GRADING, TRENCH EXCAVATION, PIPE STRINGING, PIPE BENDING, PIPE WELDING, PIPE INSPECTION, PIPE INSTALLATION IN THE TRENCH, TRENCH BREAKER INSTALLATION, BACKFILLING OF THE TRENCH, HYDROSTATIC TESTING OF THE PIPELINE AND RECLAMATION/FINAL CLEANUP. SINCE ALL OF THESE TASKS ARE DEPENDENT ON THE TASK BEFORE IT, A SIGNIFICANT LENGTH OF WORK AREA IS REQUIRED TO ELIMINATE THE CONFLICTS THAT OCCUR WITH WORKING IN CLOSE PROXIMITY IN ORDER TO ENSURE THE SAFE AND TIMELY COMPLETION OF THE WORK.

THE PHASE OF CONSTRUCTION THAT BEGINS THE HEART OF THE CONSTRUCTION ACTIVITIES IS THE TRENCHING PHASE. IN ORDER TO MAINTAIN THE PRODUCTION LEVELS NECESSARY TO COMPLETE THE PROJECT IN A SAFE AND TIMELY MANNER, TRENCHING NEEDS TO BE A NON–STOP ACTIVITY. ONCE TRENCHING STARTS, THE CONTRACTOR WILL FOLLOW DIRECTLY BEHIND THE EXCAVATIONS TO BEGIN THE STRINGING AND BENDING (ENGINEERING) THE PIPE. THE NEXT PHASE, WELDING, IS THE KEY COMPONENT TO THE ENTIRE CONSTRUCTION PROCESS TO MEET TIMELY COMPLETION OF THE PROJECT. THE CONTRACTORS CAN WELD UP TO 1800 FEET PER DAY. THEREFORE, IT IS NECESSARY TO HAVE ENOUGH TRENCH OPEN TO BE ABLE TO CONTINUE TO STRING, BEND AND WELD PIPE WITHOUT ANY DELAYS OR DOWN TIME TO FACILITATE IMPLEMENTATION OF THE PROJECT IN AN EFFICIENT AND SAFE MANNER. MVP PROPOSES TO HAVE A MAXIMUM OF FIVE MILES OF TRENCH OPEN AT ANY TIME DURING SPREAD 11 CONSTRUCTION. MVP WOULD ALIGN THE TRENCH EXCAVATION TO MEET THE CONDITIONS OUTLINED BELOW. THIS WILL NOT INCLUDE AREAS OF ROW PREPARATION INCLUDING CLEARING, GRUBBING, TOP–SOILING, STRINGING OF PIPE, BACKFILLING OR OTHER RESTORATION ACTIVITIES THAT ARE ONGOING ONCE THE PIPE HAS BEEN PLACED IN THE TRENCH.

SPECIALIZED CONSTRUCTION ACTIVITIES / CREWS WILL BE UTILIZED TO INSTALL THE PIPELINE AT SPECIFIC LOCATIONS SUCH AS WATERBODIES AND WETLANDS, PUBLIC ROADS, RAILROADS AND STEEP SLOPE AREAS (I.E. TYPICALLY INCLUDES SLOPES APPROACHING 30 DEGREES OR MORE AND WOULD REQUIRE WINCH TRACTORS). INSTALLATION OF THE PIPELINE AT THESE SPECIFIC LOCATIONS WILL BE CONDUCTED AS A SEPARATE AND COMPLETE CROSSING ACTIVITY AND ARE NOT INCLUDED AS PART OF THE CONSTRUCTION DISCUSSED ABOVE. THIS IS NECESSARY TO FACILITATE USE OF SPECIALIZED CONSTRUCTION METHODS REQUIRED TO COMPLETE INSTALLATION AT THESE LOCATIONS OR TO COMPLY WITH PERMITTING RESTRICTIONS THAT APPLY TO THESE CROSSINGS (I.E. TIMING RESTRICTIONS, ETC.).

MVP PROPOSES A TOTAL LENGTH OF TRENCH OPEN AT ANY ONE TIME FOR SPREAD 11 WOULD BE FIVE (5) MILES (CUMULATIVE) FOR MAINLINE CONSTRUCTION AND ONE (1) ADDITIONAL MILE (CUMULATIVE) OF TRENCH OPEN ASSOCIATED WITH AREAS OF SPECIALIZED CONSTRUCTION ACTIVITIES. AREAS OF SPECIALIZED CONSTRUCTION ACTIVITIES INCLUDE:

- ROAD CROSSINGS – CONVENTIONAL BORE METHODS,
- STREAM/WETLAND CROSSINGS
- EXISTING BURIED UTILITY CROSSINGS
- STEEP SLOPE (WINCH HILL) CONSTRUCTION
- OTHER AREAS DETERMINED BY MVP AS REQUIRING SPECIALIZED CONSTRUCTION ACTIVITIES (BIOLOGICAL OR CULTURAL RESOURCE MONITORS, ETC.).

IN ADDITION, MVP PROPOSES TO IMPLEMENT THIS VARIANCE REQUEST BASED ON A TIERED APPROACH THAT WILL LIMIT CONTIGUOUS TRENCH LENGTH BASED ON SLOPE CONDITIONS. MVP PROPOSES TO LIMIT THE CONTIGUOUS LENGTH OF TRENCH OPEN WITHIN THE CUMULATIVE 5 MILE SPREAD LIMIT BASED ON A THREE–TIER SYSTEM , SO THAT AS THE STEEPNESS OF THE SLOPE INCREASES, THE ALLOWABLE LENGTH OF CONTINUOUS TRENCH OPEN DECREASES. MVP PROPOSES THE FOLLOWING:

MVP Proposed Tier Structure	Slope Conditions[1]	Continuous trench length not to exceed (ft)[2,3]
Tier I	0 to <10%	7,000
Tier II	10% to <33%	5,000
Tier III	>33%	2,500

1. SLOPE PERCENT IS DETERMINED BASED ON THE PRE-EXISTING SITE CONDITIONS.
2. ANY BREAK IN CONTINUOUS TRENCH LENGTH WILL CONSTITUTE RESET OF THE CONTINUOUS TRENCH FOOTAGE.
3. CONTINUOUS TRENCH LENGTH MAY BE EXCEEDED WHERE SAFETY CONCERNS ARE IDENTIFIED FOLLOWING CONSULTATION WITH THE ONSITE DEQ, FERC AND MVP (ENVIRONMENTAL AND SAFETY) INSPECTORS.

ACTIVITIES THAT WILL BE CONSIDERED AS A BREAK IN CONTINUOUS TRENCH LENGTH INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

- ROAD CROSSINGS (CONVENTIONAL BORE METHODS)
- STREAM AND/OR WETLAND CROSSINGS
- STOVEPIPE CONSTRUCTION ACTIVITIES
- NATIVE (UNDISTURBED) SOIL PLUG TO REMAIN IN PLACE UNTIL IMMEDIATELY BEFORE PIPE INSTALLATION
- EXISTING UTILITY LINE CROSSINGS THAT WILL UTILIZE SPECIALIZED CONSTRUCTION CREW OR BE CONDUCTED SEPARATE FROM THE MAIN CONSTRUCTION EFFORT
- WINCH HILL CONSTRUCTION (I.E. WHERE EQUIPMENT IS REQUIRED TO BE ANCHORED TO ANOTHER STATIONARY OBJECT DUE TO STEEPNESS OF SLOPE)
- BREAK IN SLOPE CATEGORIES IDENTIFIED IN THIS REQUEST
- TRANSITION OF TRENCH LINE ACROSS RIDGELINES BREAKING THE DIRECTION OF CONTINUOUS FLOW

MVP WILL ADHERE TO THE TIERS IDENTIFIED ABOVE. IN THE EVENT DURING CONSTRUCTION SAFETY CONCERNS ARISE DUE TO SITE CONDITIONS (SLOPE, ADJACENT RESOURCES OR OTHER UTILITY INFRASTRUCTURE) THAT WOULD BE ALLEVIATED BY A MINOR EXCEEDANCE OF THE TRENCH LIMITATIONS, MVP WOULD COORDINATE ANY EXCEEDANCE WITH THE APPLICABLE AGENCY REPRESENTATIVES. INSTANCES WHERE THIS CONDITION MAY APPLY WOULD BE BUT NOT LIMITED TO THE FOLLOWING:

- AREAS OF WINCH HILL CONSTRUCTION
- AREAS THAT WOULD REQUIRE PIPELINE TO BE DEAD MANNED (ANCHORED) DURING WELDING OF PIPE SEGMENTS ON STEEP SLOPE AREAS PRIOR TO BACKFILLING OF THE TRENCH. EXCEEDING THE TRENCH LENGTH IN THESE CONDITIONS WOULD ALLEVIATE THE NEED FOR PERSONNEL TO BE WORKING IN THE DITCH AND RESULT IN REDUCED SAFETY CONCERN FOR WORKERS.

EXCEEDANCE OF THE TRENCH LENGTH IN THESE CONDITIONS WILL BE DISCUSSED WITH APPROPRIATE ONSITE REPRESENTATIVES FROM DEQ, FERC AND MVP (I.E. CONSTRUCTION, ENVIRONMENTAL AND SAFETY STAFF) PRIOR TO IMPLEMENTING ANY INCREASE IN THE TIER TO THE TRENCH LENGTH. EACH INSTANCE WILL BE REVIEWED ON A CASE BY CASE BASIS AND REPORTED IN THE WEEKLY INSPECTION REPORT.

FOLLOWING INSTALLATION OF THE PIPELINE WITHIN THE TRENCH AND ONCE PERSONNEL CAN SAFELY ENTER THE TRENCH, MVP CONTRACTORS WILL INSTALL PERMANENT TRENCH BREAKERS IN ACCORDANCE WITH MVP TYPICAL CONSTRUCTION DETAIL MVP–20 (TYPICAL TRENCH BREAKER DETAIL). FOLLOWING INSTALLATION OF THE PERMANENT TRENCH BREAKERS, A SEPARATE CONSTRUCTION CREW WILL BEGIN PADDING AND BACKFILLING OF THE PIPELINE. TRENCH EXCAVATION WILL CONTINUE AS BACKFILLING ACTIVITIES PROGRESS. AT NO TIME, SHALL TOTAL TRENCH EXCAVATION EXCEED 5 CUMULATIVE MILES FOR MAIN CONSTRUCTION ACTIVITIES ON SPREAD 11.

DEVIATION REQUEST 24-IN SLOPE DRAIN PIPE SIZE FOR CLEAN WATER DIVERSIONS

THIS DEVIATION REQUEST IS REQUIRED FOR THE USE OF 24–INCH CLEAN WATER DIVERSION PIPE FOR DRAINAGE AREAS UP TO 5 ACRES WHERE TABLE 3.15–A IN VESCH STD & SPEC 3.15 SPECIFIES A 30–INCH DIAMETER. MVP COMPLETED PEAK FLOW CALCULATIONS FOR THE 10–YEAR EVENT USING THE RATIONAL METHOD ASSUMING A DRAINAGE AREA OF 5–ACRES (I.E., THE MAXIMUM ALLOWABLE DRAINAGE AREA FOR TEMPORARY DIVERSION DIKES PER VESCH STD & SPEC 3.09) AND A CONSERVATIVE RUNOFF COEFFICIENT (C=0.35 FOR 'LAWNS, HILLY' LAND USE CONDITION). RAINFALL INTENSITIES CORRESPONDING TO TRAVEL TIMES FOR SLOPES RANGING FROM 10–40% WERE USED TO CALCULATE A RANGE OF PEAK FLOWS REPRESENTATIVE OF THE VARIABLE SLOPES ACROSS THE PIPELINE. TO DETERMINE THE MOST CONSERVATIVE RANGE OF PEAK FLOWS, THE I–D–F CURVE FOR PITTSYLVANIA COUNTY FROM THE VA SWM HANDBOOK VOLUME II HAS BEEN APPLIED ACROSS THE PROJECT. PIPE FLOW CAPACITY WAS THEN EVALUATED FOR THE SAME RANGE OF SLOPES. ASSUMING A PIPE FLOW CAPACITY OF 0.5 TIMES THE CAPACITY CALCULATED WHEN FLOWING HALF–FULL, TO ENSURE NO BUILDUP OF WATER BEHIND THE DIVERSION DIKE, IT WAS DETERMINED THAT ONE (1) 24–IN DIAMETER PIPE COULD PASS THE 10–YEAR PEAK FLOW FOR THE SLOPE CONDITIONS. THE SUMMARY TABLE SPECIFYING NUMBER OF SIZED PIPES REQUIRED TO PASS THE DESIGN STORM PER 5 ACRE AREA IS INCLUDED BELOW.

	12" PIPE	18" PIPE	24" PIPE
10%	4	2	1
20%	3	1	1
30%	3	1	1
40%	2	1	1

[1] MAXIMUM ALLOWABLE DRAINAGE AREA OF 5–ACRES ASSUMED FOR SIZING PURPOSES PER VESCH STD & SPEC 3.15 – TEMPORARY SLOPE DRAIN.

[2] TEMPORARY SLOPE DRAINS DESIGNED FOR THE 10–YR STORM USING THE RATIONAL METHOD IN LIEU OF THE VESCH STD & SPEC 3.15 SLOPE DRAIN SIZING TABLE (TABLE 3.15–A).

[3] PIPE FLOW CAPACITY TAKEN AS 1/2 OF THE CAPACITY WHEN FLOWING HALF FULL TO ENSURE NO BUILDUP OF WATER WITHIN DIVERSION DIKE.

DEVIATION REQUEST CLEAN WATER PIPE PLUNGE POOL OUTLET DESIGN

THIS DEVIATION REQUEST IS TO REQUEST USE OF COMBINED TECHNIQUES TO PROVIDE ADEQUATE ENERGY MANAGEMENT OF STORMWATER EXITING THE CLEAN WATER DIVERSION. THIS DEVIATION REQUEST IS PRESENTED DUE TO THE LIMITED AREA AVAILABLE AND STEEP SLOPE CONDITIONS AT THE OUTLET THAT INHIBIT THE ABILITY TO UTILIZE TYPICAL TECHNIQUES (I.E. RIPRAP OUTLET PROTECTION). MVP CALCULATED THE MAXIMUM 10–YEAR PEAK FLOW DURING DESIGN OF THE CLEAN WATER PIPES, USING THE METHODS DESCRIBED IN THE SLOPE DRAIN PIPE SIZE FOR CLEAN WATER DIVERSIONS DEVIATION REQUEST, AND ASSUMED A CONSERVATIVE PIPE SIZE OF 24–IN. USING THESE PARAMETERS, A STANDARD PLUNGE POOL OUTLET WAS DESIGNED IN ACCORDANCE WITH NRCS DESIGN GUIDE MD #6. A STANDARD SPREADSHEET DEVELOPED BY THE NRCS THAT IS AVAILABLE FOR DOWNLOAD ONLINE (HTTPS://WWW.NRCS.USDA.GOV/INTERNET/FSE_DOCUMENTS/NRCS142P2_007673.XLS) WAS USED TO SIZE THE PLUNGE POOL APPROPRIATELY BASED ON THE DESIGN DISCHARGE (I.E., THE MAXIMUM 10–YEAR PEAK FLOW), PIPE DIAMETER (24–IN), AND SLOPE OF THE PIPE OUTLET (AGAIN, SLOPES RANGING FROM 10–40% WERE EVALUATED). ADDITIONAL CALCULATIONS WERE ALSO COMPLETED TO SUPPORT THAT DISCHARGE FROM THE PLUNGE POOL WEIR OUTLET IS NON–EROSIVE WITH A 0.1–FOOT HEAD ON THE WEIR AT THE OUTLET OF THE PLUNGE POOL. MVP PLANS TO UTILIZE THE SINGLE PLUNGE POOL OUTLET DESIGN FOR ALL PIPE SIZES, WHICH IS DESIGNED FOR THE CONSERVATIVE CONDITIONS OF 40% SLOPE, MAXIMUM OF 5 ACRES AND 24–INCH CLEAN WATER DIVERSION PIPE DIAMETER. THE PLUNGE POOL OUTLET DIMENSIONS ARE SHOWN ON GENERAL DETAILS MVP–ES51 AND MVP–ES51.1.

DEVIATION REQUEST STD & SPEC 3.11 TEMPORARY RIGHT-OF-WAY DIVERSIONS

MVP PROPOSES TO UTILIZE BOTH TEMPORARY AND PERMANENT RIGHT–OF–WAY DIVERSIONS (ROW DIVERSIONS) ON THIS PROJECT. AS THE VESCH DOES NOT HAVE A STANDARD FOR PERMANENT RIGHT–OF–WAY DIVERSIONS (ROW DIVERSIONS), MVP REQUESTS APPROVAL TO IMPLEMENT THE MVP STANDARD SPECIFICATIONS FOR BOTH TEMPORARY AND PERMANENT ROW DIVERSIONS INSTALLATIONS. MVP DEVELOPED THE DIVERSION SPECIFICATIONS (PRESENTED ON MVP TYPICAL CONSTRUCTION DETAIL MVP–17 INCLUDED IN APPENDIX B OF THE PSS&S) BASED ON EXPERIENCE FROM CONSTRUCTING AND OPERATING PROJECTS IN SIMILAR TERRAIN IN NEIGHBORING STATES IN THE APPALACHIAN MOUNTAINS REGION. WHILE THE SPACING AND SLOPE REQUIREMENTS DIFFER FROM THE VESCH STANDARD 3.11, TEMPORARY ROW DIVERSIONS WILL BE SUPPLEMENTED WITH ADDITIONAL BMPS (I.E. TEMPORARY DIVERSION DIKES, TEMPORARY CLEAN WATER SLOPE DRAINS, ETC.) DURING CONSTRUCTION IN ORDER TO INCREASE SEDIMENT REMOVAL EFFICIENCY. ROW DIVERSIONS WILL BE CONSTRUCTED WITH A MAXIMUM CROSS–SLOPE NOT TO EXCEED 5% TO MINIMIZE POTENTIAL FOR EROSIVE VELOCITIES AS RUNOFF LEAVES THE ROW. DURING TRENCH EXCAVATION, TOPSOIL AND SUBSOIL SPOIL PILES WILL BE LOCATED ALONG THE ROW TO SLOW RUNOFF VELOCITY FROM ADJACENT AREAS. SPOIL PILES WILL BE TEMPORARILY SEEDED AND MULCHED IN ACCORDANCE WITH MS–1. TRENCH BREAKERS WILL BE INSTALLED TO SLOW RUNOFF FROM THE TRENCH. PERIMETER (DOWNSLOPE) ESC MEASURES (I.E. TEMPORARY SEED AND MULCH, SILT FENCE, SUPER SILT FENCE, COMPOST FILTER SOCK, BELTED SILT RETENTION FENCE, ETC.,) WILL BE INSTALLED TO COLLECT AND FILTER RUNOFF AS NECESSARY. THE MVP SPACING WILL FUNCTION AS INTENDED BY VESCH STANDARD 3.11 AND WILL PROVIDE ADEQUATE PROTECTION TO ADJACENT AREAS DURING CONSTRUCTION. MVP WILL MONITOR THE INSTALLATION OF ALL ESC BMPS IN ACCORDANCE WITH MVP'S APPROVED PSS&S INSPECTION FREQUENCIES FOR NON–TMDL AND TMDL WATERSHEDS.

IF DURING CONSTRUCTION MVP'S LEI/EI OR AN AGENCY REPRESENTATIVE DETERMINES THE TEMPORARY ROW DIVERSION SPACING IS NOT FUNCTIONING AS INTENDED AT A SPECIFIC LOCATION, INSTALLATIONS WILL BE FIELD ADJUSTED AS NECESSARY TO ADDRESS SITE–SPECIFIC CONDITIONS AND CONCERNS. ALL CHANGES WILL BE NOTED ON THE SPREAD 11 RED–LINE ESC PLAN SET AND ASSOCIATED RED–LINE LOG DESCRIBED IN THE PSS&S (PAGE 6).

RECOMMENDED MINIMUM SPACING FOR PERMANENT SLOPE BREAKERS	
PIPELINE GRADE	DISTANCE (FEET)
<2%	- [1,2]
2-5%	400
6-15%	200
16-30%	100
>31%	50 [3]

[1] PERMANENT SLOPE BREAKERS WILL BE INSTALLED AS NEEDED BASED ON FIELD CONDITIONS.

[2] PERMANENT SLOPE BREAKERS WILL BE INSTALLED 25 FEET FROM EACH WATERBODY BOUNDARY REGARDLESS OF SLOPE CONDITIONS.

[3] SLOPES GREATER THAN 65% MAY REQUIRE SITE SPECIFIC STABILIZATION MEASURES BASED ON FIELD CONDITIONS AS APPROVED BY MVP DESIGN ENGINEERING AND MVP ENVIRONMENTAL INSPECTOR.

AS NOTED ABOVE, ALL OTHER SPECIFICATIONS FOR STD & SPEC 3.11 WILL BE IMPLEMENTED IN ACCORDANCE WITH THIS VADEQ STANDARD.

DEVIATION TO STD AND SPEC 3.31 TEMPORARY SEEDING AND 3.32 PERMANENT SEEDING

THIS DEVIATION IS NECESSARY TO COMPLY WITH PROJECT MITIGATION ACTIVITIES THAT ARE BEING PREPARED IN COORDINATION WITH THE US FISH AND WILDLIFE SERVICE, US FOREST SERVICE AND WILDLIFE HABITAT COUNCIL, TO MINIMIZE PROJECT IMPACTS TO SENSITIVE SPECIES. THIS WILL INCLUDE USE OF POLLINATOR SEED MIXES FOR THE PERMANENT ROW AREAS AND WOODLAND HABITAT SEED MIXES / PLANTINGS IN DESIGNATED AREAS. MVP WILL IMPLEMENT THE SEED MIXES SPECIFIED IN THE USFWS MITIGATION PLAN FOR ALL AREAS OF THE PROJECT UNLESS OTHER REQUIREMENTS ARE SPECIFIED BY THE AFFECTED LANDOWNER. MVP REQUESTS A DEVIATION IN REGARD TO STD & SPEC 3.31 (TEMPORARY SEEDING) AND 3.32 (PERMANENT SEEDING) TO ALIGN THESE REQUIREMENTS WITH THE PROJECT'S VEGETATION AND HABITAT MITIGATION PLAN.

AS NOTED IN THE APPROVED PSS&S, MVP DEVELOPED THE PROJECT–SPECIFIC SEED MIXES IN COORDINATION WITH THE US FISH AND WILDLIFE SERVICE (USFWS), US FOREST SERVICE, VA DEPARTMENT OF CONSERVATION AND RECREATION, WILDLIFE HABITAT COUNCIL AND MVP'S THREATENED AND ENDANGERED SPECIES CONSULTANT. MVP DEVELOPED SEED MIXES PROPOSED FOR PERMANENT STABILIZATION TO INCLUDE NATIVE SPECIES. SEED MIXES ARE PRESENTED IN THE PSS&S APPENDIX B, MVP TYPICAL CONSTRUCTION DETAILS MVP–ES11.1 THROUGH MVP–ES11.9. MVP REVIEWED THE DCR'S VIRGINIA INVASIVE PLANT SPECIES LIST DURING DEVELOPMENT OF THE PROJECT SPECIFIC PERMANENT STABILIZATION SEED MIXES. NO SPECIES LISTED ON THE DCR'S VIRGINIA INVASIVE PLANT SPECIES LIST ARE INCLUDED IN MVP'S PROPOSED PERMANENT STABILIZATION MIXES TO BE USED DURING PROJECT ACTIVITIES IN VIRGINIA.

MVP ALSO REVIEWED THE DCR'S NATIVE PLANTS FOR CONSERVATION, RESTORATION AND LANDSCAPING BROCHURES (MOUNTAIN NATIVE PLANTS AND RIPARIAN NATIVE PLANTS) DURING DEVELOPMENT OF THE PERMANENT STABILIZATION MIXES. MVP INCORPORATED MANY OF THE SPECIES INCLUDED IN THE DCR BROCHURES NOTED ABOVE TO THE PROJECT SPECIFIC PERMANENT STABILIZATION SEED MIXES.

FOR PROJECT ACTIVITIES ON JNF LANDS, THE USFS DEVELOPED SPECIFIC SEED MIXES FOR ACTIVITIES OCCURRING ON JNF AND GEORGE WASHINGTON NATIONAL FOREST LANDS. THESE MIXES ARE PRESENTED IN THE PSS&S APPENDIX B, MVP TYPICAL CONSTRUCTION DETAIL MVP–ES12.1 THROUGH ES12.4 AND INCLUDES THE TEMPORARY AND PERMANENT SEED MIXES SPECIFIED BY THE USFS GUIDANCE.

MVP PROPOSES TO UTILIZE THE VESCH STANDARD 3.31 TEMPORARY SEEDING MIX DURING PROJECT ACTIVITIES WITH THE ADDITION OF BROWNTOP MILLET (PANICUM RAMOSUM) TO MATCH THE TEMPORARY SEED MIX REQUIRED BY THE USFS FOR USE ON JEFFERSON NATIONAL FOREST LANDS. WHILE THESE ARE NON–NATIVE ANNUAL SPECIES, THEY ARE NOT LISTED ON THE DCR'S INVASIVE SPECIES LIST REFERENCED ABOVE. MVP PROPOSES TO UTILIZE NON–NATIVE, NON–INVASIVE SPECIES FOR TEMPORARY EROSION CONTROL BASED ON RECOMMENDATIONS OF THE USFS AND DEQ PROVIDED IN VARIOUS GUIDANCE DOCUMENTS. NATIVE PLANTS THAT PROVIDE DIVERSE WILDLIFE BENEFITS AND STRUCTURAL DIVERSITY ON THE LANDSCAPE OFTEN DO NOT GERMINATE OR GROW FAST ENOUGH TO PROVIDE INITIAL EROSION CONTROL. THEREFORE, FAST–GERMINATING, NON–INVASIVE, ANNUAL COVER CROPS ARE RECOMMENDED FOR THE FIRST ROUND OF SEEDING TO STABILIZE EXPOSED SOIL. THE TEMPORARY SEEDING PROPOSED FOR USE ON THE PROJECT ARE PRESENTED IN PSS&S APPENDIX B, MVP TYPICAL CONSTRUCTION DETAIL MVP–ES11.10 AND PROVIDED ON THE GENERAL DETAIL PLAN DRAWINGS INCLUDED WITH THE SPREAD 11 SUBMISSION.

DEVIATION REQUEST STD AND SPEC 3.05 SILT FENCE

DUE TO THE NATURE OF CONSTRUCTION AND THE STEEP SLOPES EXPECTED ON THE PROJECT, MVP IS REQUESTING A DEVIATION TO INCLUDE SUPER SILT FENCE AS A BEST MANAGEMENT PRACTICE FOR EROSION AND SEDIMENT CONTROL. FOLLOWING DISCUSSIONS WITH THE VADEQ, MVP PROPOSES TO ADOPT THE E–3 STANDARDS AND SPECIFICATIONS FOR SUPER SILT FENCE INCLUDED IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. THE MATERIAL SPECIFICATIONS AND CONSTRUCTION SEQUENCE FROM THIS SPECIFICATION HAS BEEN INCLUDED IN THE SPREAD 11 GENERAL DETAILS AS DETAIL MVP–ES9.2 AND MVP–ES9.2A.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

VARIANCE AND EXEMPTION REQUESTS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN AND PITTSYLVANIA COUNTY, VIRGINIA

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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	LJK
CHECKED BY:	JDO
APPROVED BY:	DJW
DATE:	03/04/2018
SCALE:	AS SHOWN

SHT. NO. 15.00A OF 15.98

MVP PIPELINE PROJECT
SPREAD 11
VARIANCE AND EXEMPTION REQUESTS

STEEP SLOPE EROSION CONTROL PRODUCTS

FOLLOWING RESTORATION OF THE ROW TO PRE–EXISTING CONTOURS AND CONDITIONS, MVP WILL UTILIZE SOIL STABILIZATION BLANKETS (OR THEIR EQUIVALENT) TO STABILIZE SLOPES EXCEEDING 33% TO PREVENT EROSION OF THE DISTURBED SOILS. THERE ARE SEVERAL VARIATIONS OF THESE PRODUCTS INCLUDING: ROLLED EROSION CONTROL BLANKET, AND HYDRAULICALLY APPLIED EROSION CONTROL PRODUCT.

ROLLED EROSION CONTROL BLANKET

ROLLED EROSION CONTROL BLANKET (ECB) IS A WOVEN MAT CONSISTING OF A MONOFILAMENT NETTING (OR SIMILAR) BACKED STRAW MAT THAT IS MECHANICALLY ANCHORED TO THE SOIL. PRIOR TO INSTALLATION, THE SOIL IS SCARIFIED AND SMOOTHED PRIOR TO APPLICATION OF SEEDING AND SOIL AMENDMENTS. ROLLED ECB IS THEN INSTALLED BY HAND OVER THE SEEDING/SOIL AMENDMENTS AND MECHANICALLY ANCHORED TO THE SOIL USING DEGRADABLE METAL ANCHORS.

BONDED FIBER MATRIX

BONDED FIBER MATRIX (BFM) IS A HYDRAULICALLY APPLIED SOIL STABILIZER THAT IS EFFECTIVE IN STABILIZING STEEP SLOPES. AS PER MANUFACTURER SPECIFICATIONS, BFM APPLICATION RATES VARY DEPENDING ON SLOPE AND SOIL CONDITIONS, BUT APPLICATION RATES ARE TYPICALLY BETWEEN 1,500 TO 4,000 LBS/ACRE. SOME MANUFACTURERS OFFER BFM PRODUCTS IN PELLETIZED FORM FOR APPLICATION VIA BROADCAST SPREADER AND INTENDED FOR USE IN REMOTE AREAS WHERE WATER SUPPLIES ARE LIMITED, WHERE ACCESS VIA HYDROSEEDER IS DIFFICULT OR WHERE SMALL AREA COVERAGE IS NECESSARY. ONCE APPLIED, THE PELLETIZED BFM IS ACTIVATED BY PRECIPITATION EVENT FOLLOWING APPLICATION. BFM SHOULD NOT BE APPLIED WHEN RAIN IS FORECAST WITHIN 24 – 48 HOURS OF APPLICATION. APPLICATION OF BFM IS TYPICALLY 90% EFFECTIVE IN PREVENTING ACCELERATED EROSION FROM OCCURRING WITHIN THE AREA OF APPLICATION. WHEN APPLICATION OF THESE PRODUCTS INCLUDES A POLYMER (ANIONIC) STABILIZER, BFM CAN BE UP TO 99% EFFECTIVE IN REDUCING TURBIDITY AND SEDIMENT RUNOFF FROM DISTURBED AREAS. INFORMATION ON THE USE OF BFM IS PROVIDED UNDER TYPICAL CONSTRUCTION DETAIL MVP–ES40 (BONDED FIBER MATRIX).

HYDRAULIC EROSION CONTROL PRODUCTS

HYDRAULIC EROSION CONTROL PRODUCTS (HECP) ARE TYPICALLY INSTALLED USING A HYDROSEEDER TO APPLY A LIQUID SOLUTION OF SEED, SOIL AMENDMENTS, MULCH (WOOD FIBER, WOOD CHIPS OR SIMILAR WOOD MATERIALS OR NEWSPRINT) AND MULCH TACKIFIER TO STABILIZE THE SOIL. UNLIKE ROLLED ECB PRODUCTS, HECP MAKES SOLID CONTACT WITH THE SOIL REGARDLESS OF SOIL SURFACE CONDITIONS AND A ROUGHENED SURFACE IS PREFERRED. REMOVAL OF LARGE ROCKS AND EXISTING RILLS SHOULD BE UNDERTAKEN PRIOR TO APPLICATION. TRACKING OF SLOPES SHOULD BE CONSIDERED TO SLOW RUNOFF DURING A STORM EVENT.

HECP TYPE 4

HECP TYPE 4 IS A PRODUCT APPROVED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD BRIDGE SPECIFICATIONS FOR USE ON SEVERE SLOPES UP TO 100% (1V:1H), AND MEETS THE CRITERIA SPECIFIED BY IN TABLE II–22A BELOW. MVP WILL UTILIZE HECP TYPE 4 IN AREAS OF SIDE HILL CONSTRUCTION THAT EXCEED 33% CROSS SLOPE DURING PROJECT RESTORATION ACTIVITIES. THE SPECIFIC MANUFACTURER AND PRODUCT HAVE NOT BEEN DETERMINED AT THIS TIME, BUT MVP INTENDS TO USE PRODUCTS CONTAINED IN THE VDOT MATERIALS DIVISION APPROVED MATERIALS LIST, LIST NO. 79, (79) MULCHES (HECP TYPES 1–4) – (MAINTENANCE DIVISION), (OR THEIR EQUIVALENT) THAT MEET THE MINIMUM REQUIREMENTS DEFINED IN TABLE II–22A AND THE VDOT SPECIAL PROVISION FOR ROADSIDE DEVELOPMENT AND SOIL STABILIZATION, DATED JULY 12, 2016, AND UPDATED JUNE 1, 2017, PERTAINING TO WOOD CELLULOSE FIBER MULCH FOR HYDRAULIC SEEDING MANUFACTURER CERTIFICATIONS.

THE HECP WILL BE APPLIED TO DISTURBED AREAS WHERE UPSLOPE FLOW LENGTH HAS POTENTIAL TO RESULT IN CHANNELIZED EROSION. WHEN APPLIED TO SLOPES OF GREATER THAN 33%, PROFILE PRODUCTS (THE MANUFACTURER OF FLEXTERRA HP–FGM WHICH IS ON LIST 79 AS AN APPROVED MANUFACTURER OF HECP TYPE IV) RECOMMENDED A MAXIMUM SLOPE LENGTH OF 125–FEET WHICH IS EQUAL THE LIMIT OF DISTURBANCE TO BE RECLAIMED ALONG THE PIPELINE RIGHT–OF–WAY. IN LOCATIONS WHERE EXPANDED WORKSPACE AREAS, OR DIAGONAL CROSS SLOPES RESULT IN FLOW LENGTHS EXCEEDING 125–FEET OF DISTURBED AREA, MVP WILL INSTALL AN ADDITIONAL TEMPORARY MEASURE (I.E. COMPOST FILTER SOCK) TO SERVE AS A SLOPE BREAK. COMPOST FILTER SOCK INSTALLATIONS WILL BE IMPLEMENTED IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.SIZING WILL BE IN ACCORDANCE WITH THE FLOW LENGTHS OCCURRING WITHIN THE LIMIT OF DISTURBANCE.

FOLLOWING TREATMENT OF DISTURBED STEEP SLOPE SIDE HILL AREAS WITH TYPE 4 HECP, THE DISTURBED AREA WOULD BE CONSIDERED STABILIZED. UPGRADIENT CLEAN WATER DIVERSIONS MAY BE REMOVED IMMEDIATELY PRIOR TO HECP TYPE IV APPLICATION OR LEFT IN PLACE AT THE DISCRETION OF THE MVP LEI/EI DETERMINED ON A CASE BY CASE BASIS. MONITORING AND INSPECTION ACTIVITIES WILL CONTINUE UNTIL THE AREAS ARE PERMANENTLY STABILIZED WITH VEGETATION AS OUTLINED IN THE PROJECT SPECIFIC STANDARDS AND SPECIFICATIONS (APPROVED JUNE 20, 2017).

TABLE II-22A

HECP PROPERTY	TEST METHOD[1]	HECP TYPE 1	HECP TYPE 2	HECP TYPE 3	HECP TYPE 4
PHYSICAL	**REQUIREMENT**				
COLOR	VISUALLY OBSERVED	COLORED TO PROVIDE CONTRAST UPON APPLICATION, SHALL BE STABLE AND NOT STAIN CONCRETE OR PAINTED SURFACES			
ORGANIC MATTER	ASTM D2974	90% MINIMUM			
WATER HOLDING CAPACITY	ASTM D7367	400% MINIMUM	500% MINIMUM	600% MINIMUM	700% MINIMUM
ACUTE TOXICITY	ASTM 7101 EPA 2021.0-1	NON TOXIC			
ENDURANCE	**REQUIREMENT**				
FUNCTIONAL LONGEVITY	VDOT APPROVED TESTING METHODS[3]	UP TO 2 MONTHS	UP TO 3 MONTHS	UP TO 6 MONTHS	UP TO 12 MONTHS
PERFORMANCE	**REQUIREMENT**				
MAXIMUM SLOPE APPLICATION	OBSERVED	4.0 H:1V	3.0 H:1V	2.0 H:1V	1.0 H:1V
RAINFALL EVENT (R-FACTOR)	ASTM D6459[2]	N/A	75 < R	140 < R	175 < R
COVER FACTOR	ASTM D6459[2]	C $\leq$ 0.50	C $\leq$ 0.10	C $\leq$ 0.05	C<0.01
VEGETATION ESTABLISHMENT	ASTM D7322[2]	200% MINIMUM	300% MINIMUM	400% MINIMUM	500% MINIMUM

1 ALL PRODUCTS MUST MEET THE REQUIREMENTS OF THIS SPECIFICATION TO BE LISTED ON THE MATERIALS DIVISION'S APPROVED LIST FOR HECPS.

2 ASTM TEST METHODS DEVELOPED FOR ROLLED EROSION CONTROL PRODUCTS (RECPS) THAT HAVE BEEN MODIFIED TO ACCOMMODATE HYDRAULIC EROSION CONTROL PRODUCTS (HECPS).

3 FUNCTIONAL LONGEWTY PERFORMED AT A VDOT TEST FACILITY OR TEST FACILITY APPROVED BY VDOT.

WOOD CELLULOSE FIBER MULCH FOR HYDRAULIC SEEDING MANUFACTURER'S CERTIFICATIONS

PROPERTY	VALUE
FIBER OR PARTICLE SIZE	
LENGTH	TO APPROXIMATELY 0.39 INCH (10 MM)
THICKNESS OR DIAMETER	APPROXIMATELY 0.04 INCH (1 MM)
NET DRY WEIGHT CONTENT (VTM–47)	MINIMUM STATED ON BAG
PH RANGE (TAPPI T509 OR ASTM D 778)	4.0 TO 8.5
ASH CONTENT (TAPPI T413 OR ASTM D 586)	MAXIMUM 7.0%
WATER–HOLDING CAPACITY (VTM–46)	MINIMUM 90%

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Mountain Valley PIPELINE

VARIANCE AND EXEMPTION REQUESTS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN AND PITTSYLVANIA COUNTY, VIRGINIA

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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
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Lic. No. 0402057593
PROFESSIONAL ENGINEER

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EXISTING PERMANENT ACCESS ROAD MVP-FR-309.05

EXISTING TEMPORARY ACCESS ROAD MVP-FR-309.06

EXISTING TEMPORARY ACCESS ROAD MVP-FR-310

EXISTING TEMPORARY ACCESS ROAD MVP-FR-309

EXISTING TEMPORARY ACCESS ROAD MVP-FR-311

EXISTING PERMANENT ACCESS ROAD MVP-MLV-AR-31

EXISTING PERMANENT ACCESS ROAD MVP-MVL-AR-32

EXISTING TEMPORARY ACCESS ROAD MVP-FR-306.04

MATCHLINE SHEET 14.57ES

EXISTING TEMPORARY ACCESS ROAD MVP-FR-306.03

EXISTING PERMANENT ACCESS ROAD MVP-FR-306.02

START SPREAD 11

EXISTING TEMPORARY ACCESS ROAD MVP-FR-313

EXISTING TEMPORARY ACCESS ROAD MVP-FR-314

EXISTING TEMPORARY ACCESS ROAD MVP-FR-316

EXISTING PERMANENT ACCESS ROAD MVP-FR-315

EXISTING TEMPORARY ACCESS ROAD MVP-FR-317.01

EXISTING TEMPORARY ACCESS ROAD MVP-FR-317

EXISTING TEMPORARY ACCESS ROAD MVP-FR-318

EXISTING TEMPORARY ACCESS ROAD MVP-FR-319.01

EXISTING TEMPORARY ACCESS ROAD MVP-FR-319

EXISTING TEMPORARY ACCESS ROAD MVP-FR-320

MATCHLINE SHEET 15.02ES

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Mountain Valley PIPELINE

KEY PLAN

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
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Lic. No. 0402057593
PROFESSIONAL ENGINEER

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MATCHLINE SHEET 15.01ES

15.84

EXISTING TEMPORARY ACCESS ROAD MVP-FR-321

15.85

EXISTING PERMANENT ACCESS ROAD MVP-FR-322

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EXISTING TEMPORARY ACCESS ROAD MVP-FR-323

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PROPOSED TEMPORARY ACCESS ROAD MVP-FR-321.01

PROPOSED PERMANENT ACCESS ROAD MVP-MLV-AR-33

EXISTING TEMPORARY ACCESS ROAD MVP-FR-324

EXISTING PERMANENT ACCESS ROAD MVP-PI-325

EXISTING TEMPORARY ACCESS ROAD MVP-PI-326

EXISTING TEMPORARY ACCESS ROAD MVP-PI-328

PROPOSED TEMPORARY ACCESS ROAD MVP-PI-329

EXISTING TEMPORARY ACCESS ROAD MVP-PI-331

EXISTING TEMPORARY ACCESS ROAD MVP-PI-330

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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

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Mountain Valley PIPELINE

KEY PLAN

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

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EROSION AND SEDIMENT CONTROL PLANS

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MATCHLINE SHEET 15.02ES

EXISTING TEMPORARY ACCESS ROAD MVP-PI-332

PROPOSED TEMPORARY ACCESS ROAD MVP-PI-332.01

PROPOSED PERMANENT ACCESS ROAD MVP-MLV-AR-34

EXISTING TEMPORARY ACCESS ROAD MVP-PI-336.01

EXISTING PERMANENT ACCESS ROAD MVP-PI-337

EXISTING PERMANENT ACCESS ROAD MVP-PI-338

EXISTING PERMANENT ACCESS ROAD MVP-PI-338.01

PROPOSED PERMANENT ACCESS ROAD MVP-MLV-AR-35

EXISTING TEMPORARY ACCESS ROAD MVP-PI-339

EXISTING PERMANENT ACCESS ROAD MVP-PI-340

TBD PERMANENT ACCESS ROAD MVP-PI-344

PROPOSED PERMANENT ACCESS ROAD MVP-PI-343.01

END SPREAD 11

PROPOSED PERMANENT ACCESS ROAD MVP-PI-343

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Calvaston
Whitethorn
Vadens Mill
Smothers
Gretna Rolling Mill
Whittles
Climax
Walkers Well
Green Pond
Hollywood
Rondo
Chatham
Teamsco Village
Sheva
Selfe Lake
Falls Lake
Cherrystone
Poor Bridge
Rocky Fork
Hemp Fork
Bearpen
Poplar Branch
Whitethorn Branch
Mill Creek
Southern Creek

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EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

EROSION AND SEDIMENT CONTROL PLANS

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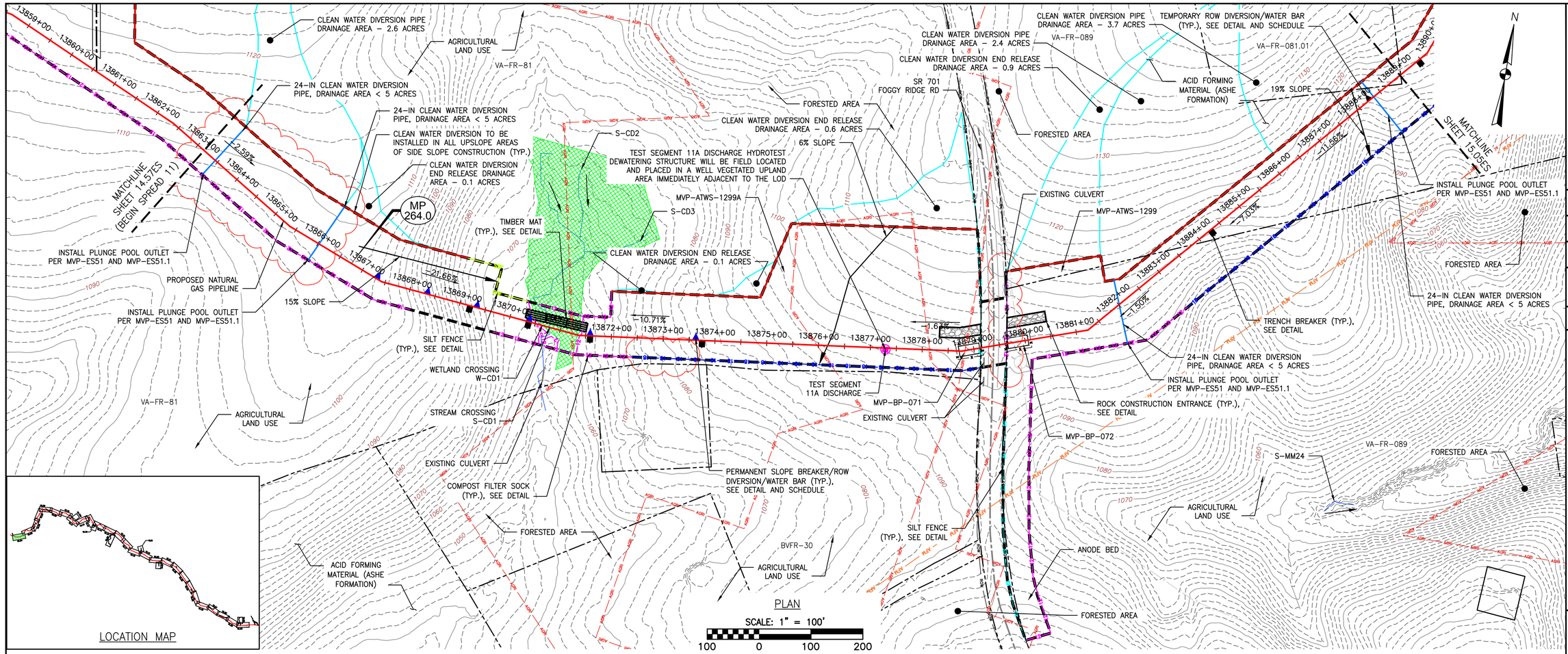
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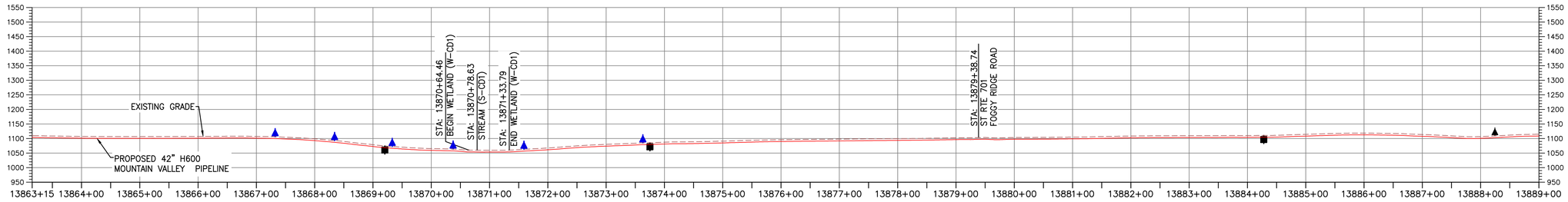


LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

100 0 100 200 | 200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — ACID FORMING MATERIAL
- AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP–ES9.2)
- RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP–ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- 24 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- GRASS–LINED CHANNEL (SEE DETAIL MVP–ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP–ES50 AND MVP–ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP–ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP–20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP–17, ES38, AND SCHEDULE)

NOTES:

1. TOPSOIL SEGREGATION TO BE CONDUCTED THROUGHOUT THE JEFFERSON NATIONAL FOREST.
2. FLEXTERRA, EARTHGUARD OR EQUIVALENT MAY BE USED AS A SUBSTITUTE TO EROSION CONTROL BLANKET AS DIRECTED BY MVP.
3. CONTRACTOR IS RESPONSIBLE TO IDENTIFY ALL UTILITIES. THE UTILITY LINES SHOWN ON THE PLAN ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT REPRESENT SURVEYED LINE INFORMATION.
4. SLOPES OF 30" OR GREATER EXIST. CONSTRUCTION FOR STEEP SLOPES TO BE PERFORMED USING STEEP SLOPE TECHNIQUES IDENTIFIED IN THE DETAIL SHEETS. ALSO REFER TO THE SITE–SPECIFIC DESIGN OF STABILIZATION MEASURES IN SELECTED HIGH–HAZARD PORTIONS OF THE ROUTE OF THE PROPOSED MOUNTAIN VALLEY PIPELINE PROJECT.
5. WHERE CONSTRUCTION CONDITIONS PRECLUDE THE USE OF DIVERSION DITCHES DUE TO SITE CONDITIONS THE CONTRACTOR WILL INSTALL SILT FENCE AT THE DIRECTION OF MVP.
6. DRAINAGE FEATURE CROSSINGS TO BE PERFORMED PER DETAIL MVP–ES49.
7. TEMPORARY ACCESS ROAD CROSSING OF STREAMS AND WETLANDS WILL UTILIZE TIMBERMATS. ANY PERMANENT ROAD CROSSINGS WILL BE CONDUCTED VIA CULVERTS. NO UNPERMITTED IMPACT TO STREAMS WILL OCCUR AS A RESULT OF ROAD OR PIPELINE CROSSINGS AND ALL ESC BMP'S WILL BE INSTALLED TO CONTINUE THE STREAM FLOW.
8. ALL NON VWRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP–ES49.

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EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

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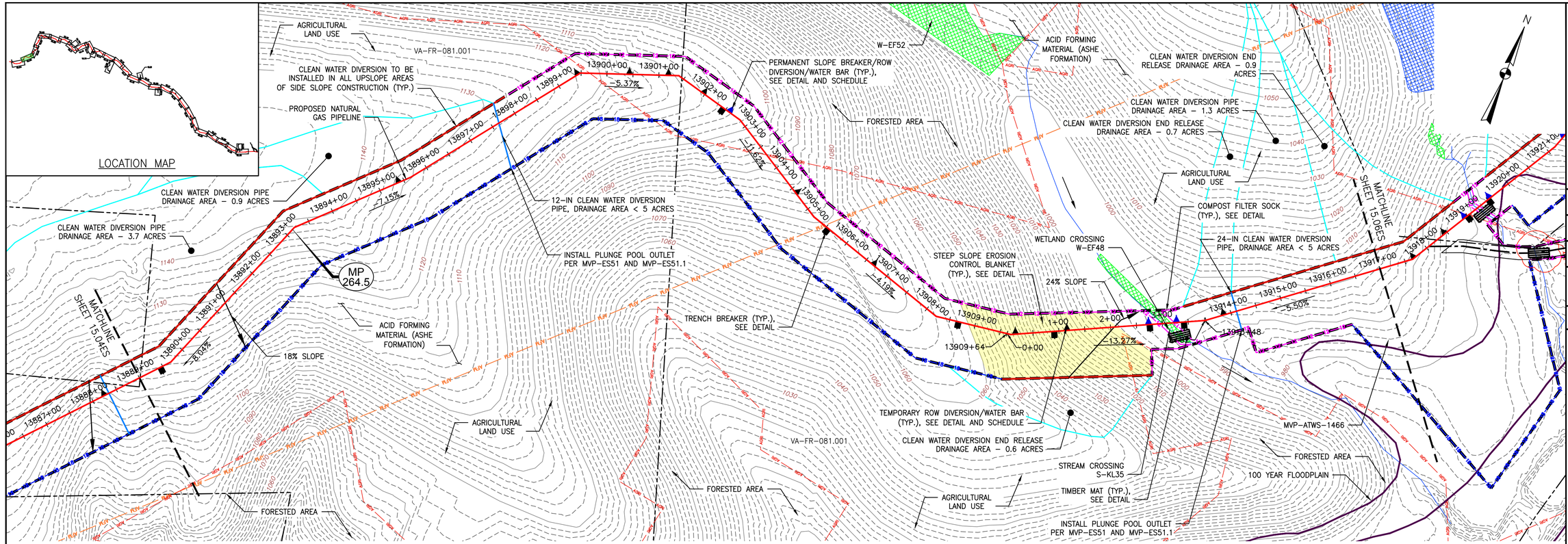
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
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Lic. No. 0402057593
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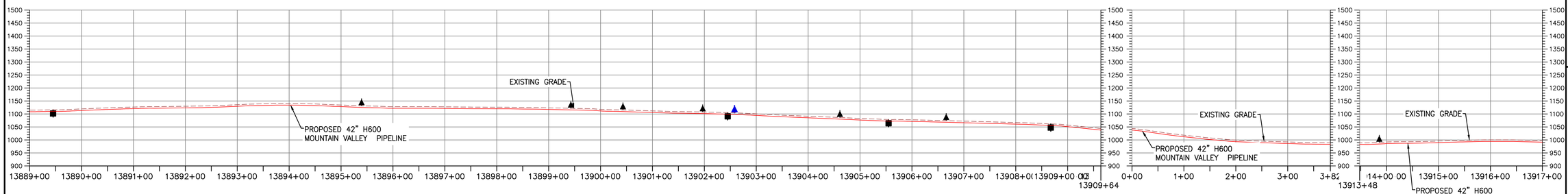
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- ORANGE CONSTRUCTION SAFETY FENCE
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- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
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- STEEP SLOPE AREAS (SEE NOTE 4)
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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

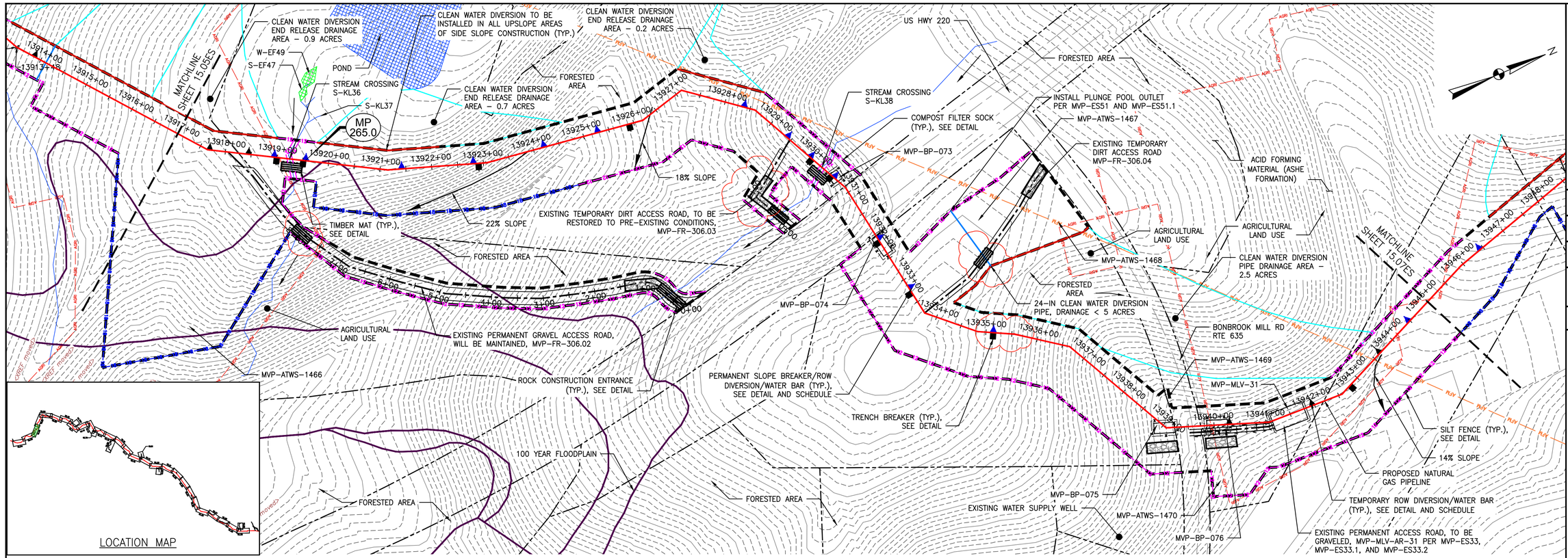
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661 ANDERSEN DRIVE
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PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.05ES OF 15.99ES

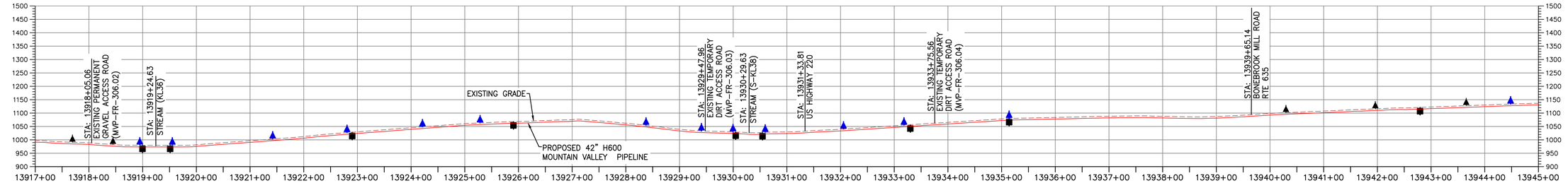
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

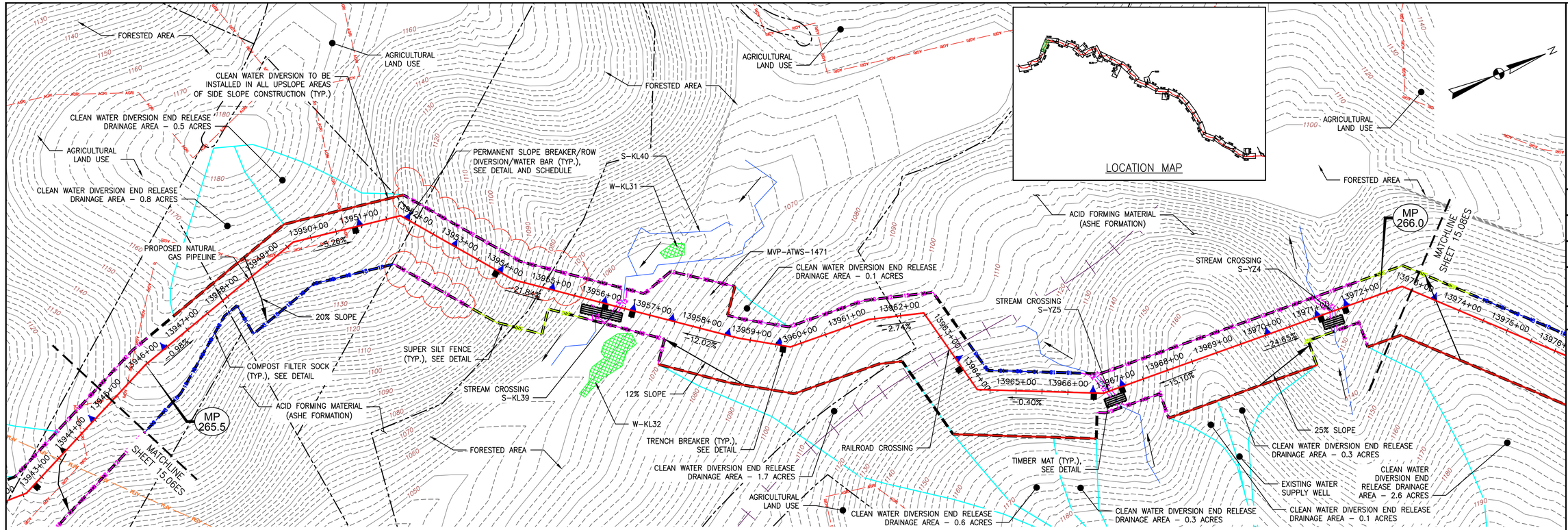
MOUNTAIN VALLEY PIPELINE, LLC
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.06ES OF 15.99ES

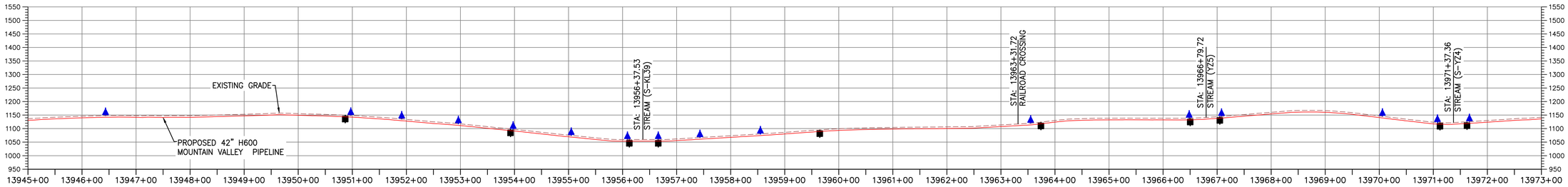


LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

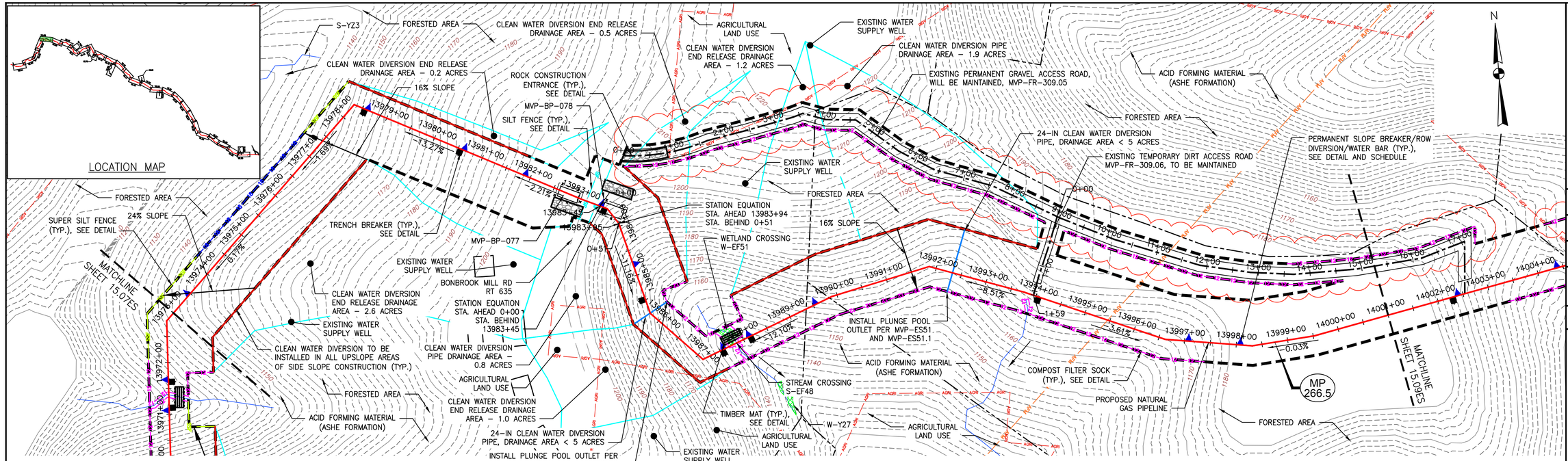
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.07ES OF 15.99ES

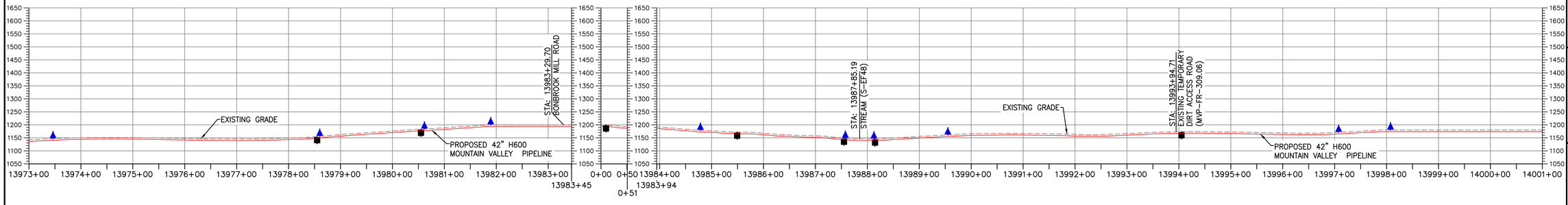
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGRI — AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
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- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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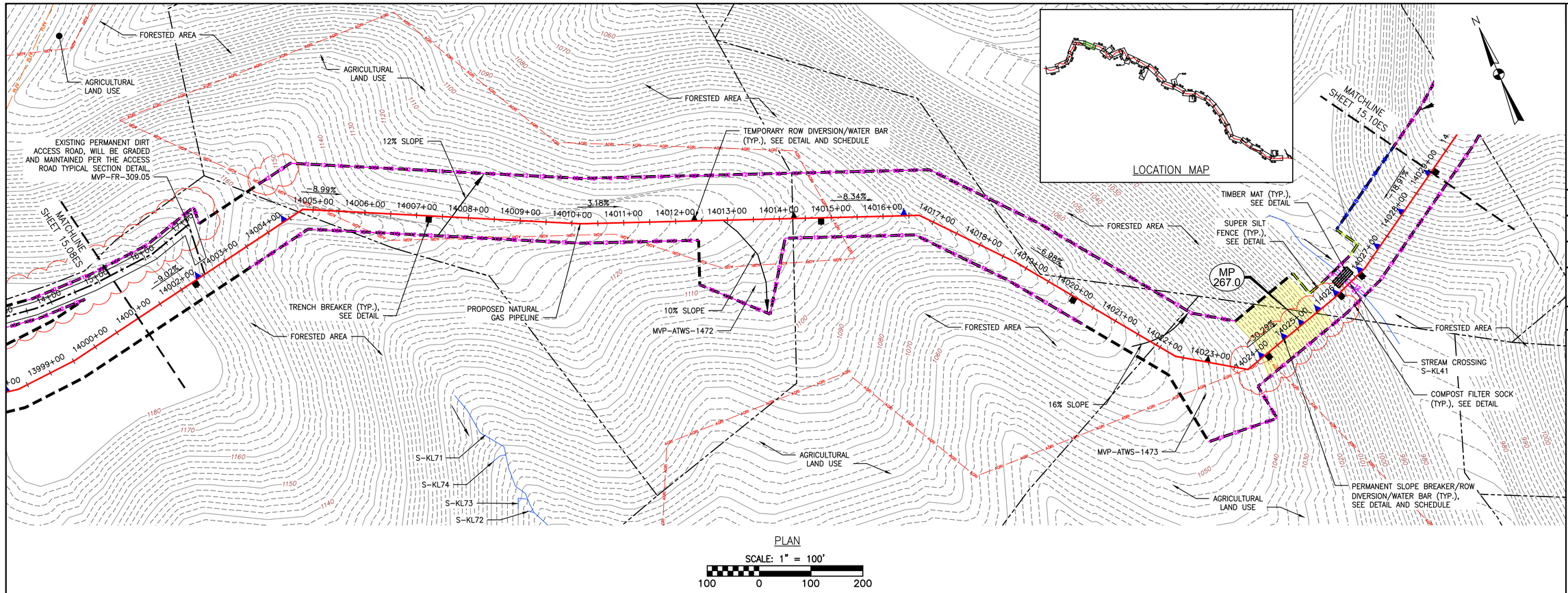
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DRAWN BY:	KAL
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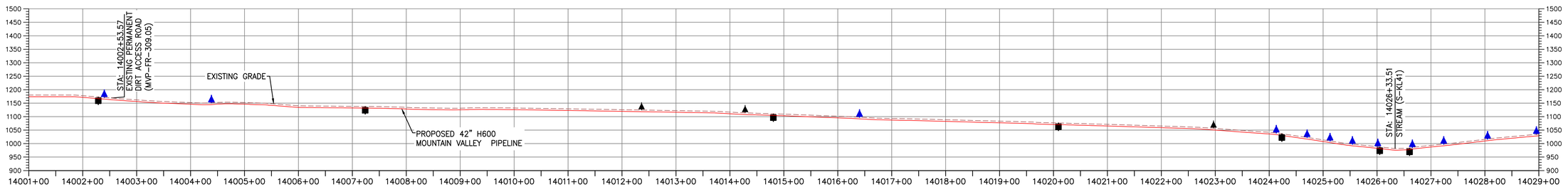
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

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200 0 200 400

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TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 - MVP\15 - Franklin\E&S\ES Version 5.0.0\7157ES15.09(S11).dwg PLOTTED ON: 3/2/2018 4:42 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb

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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

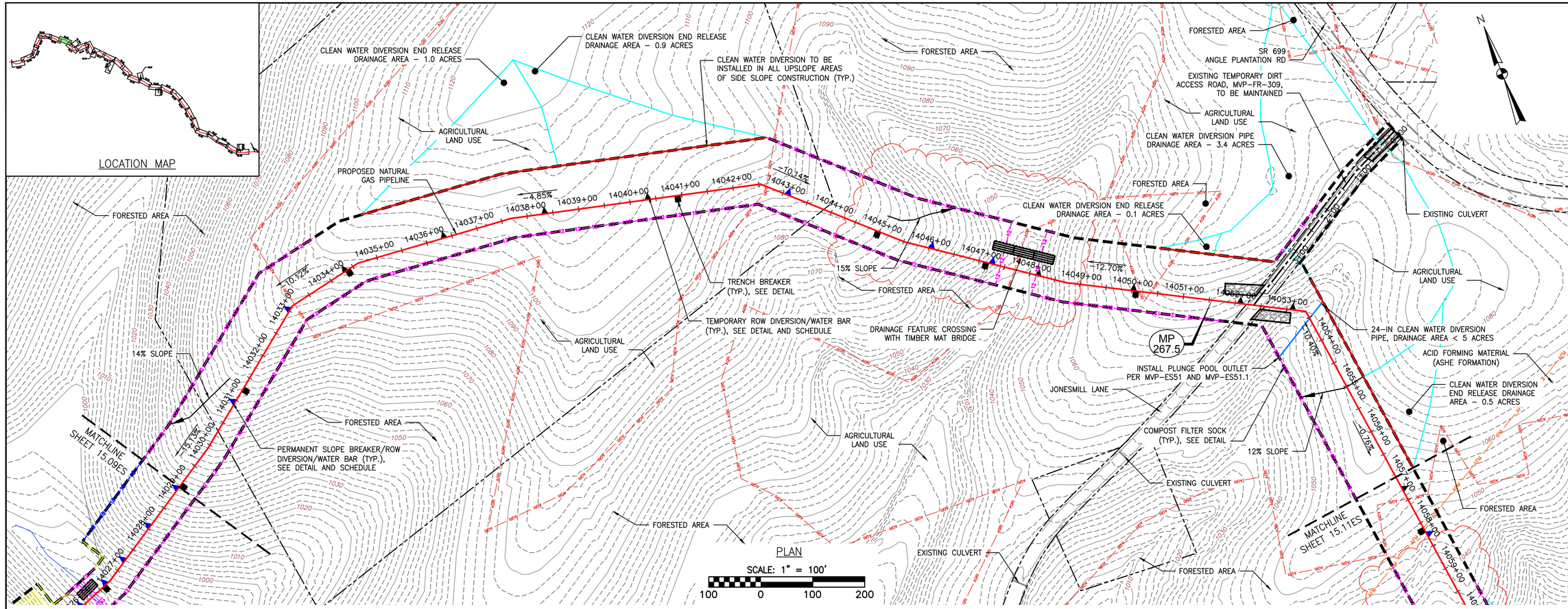
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.09ES OF 15.99ES

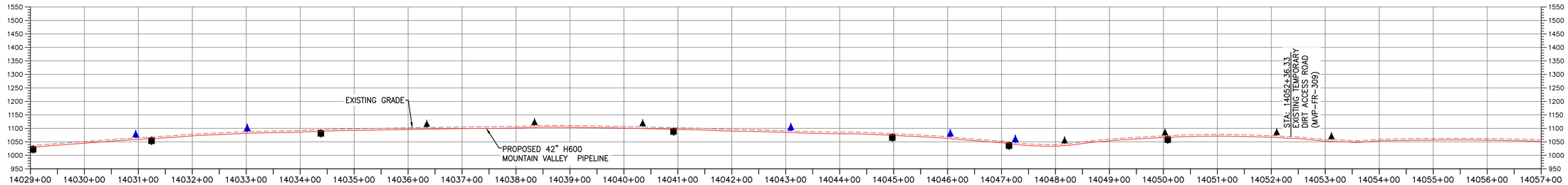
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
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- APPALACHIAN NATIONAL SCENIC TRAIL
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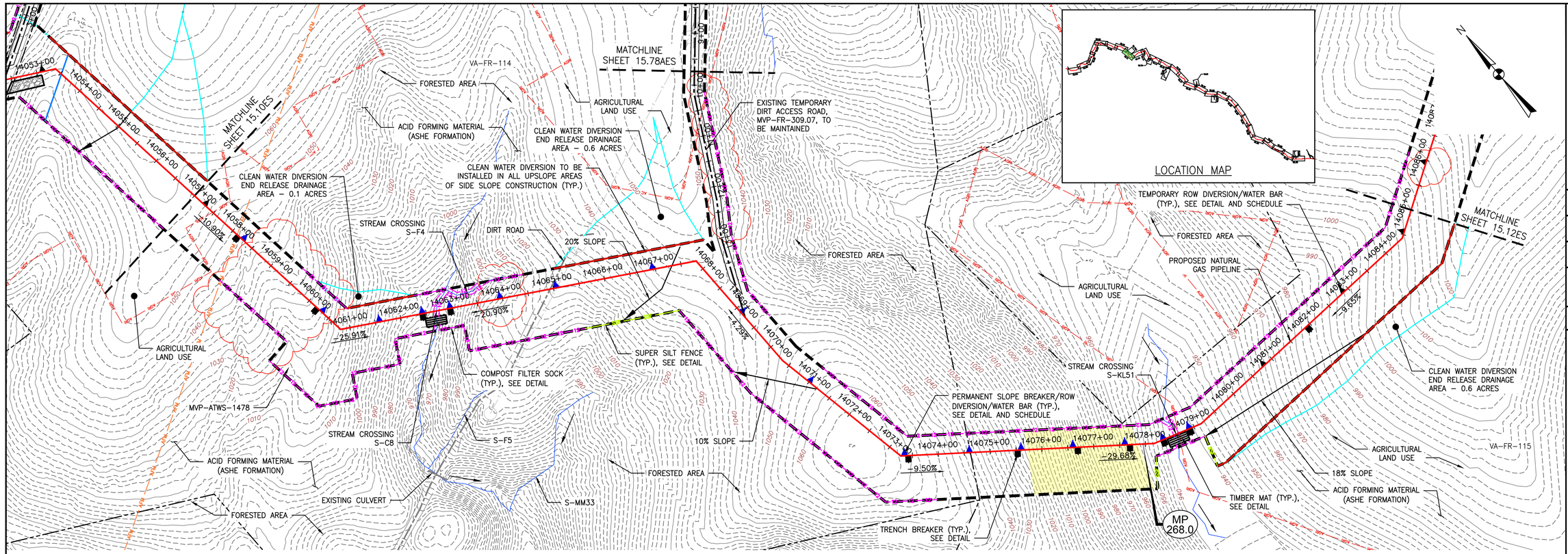
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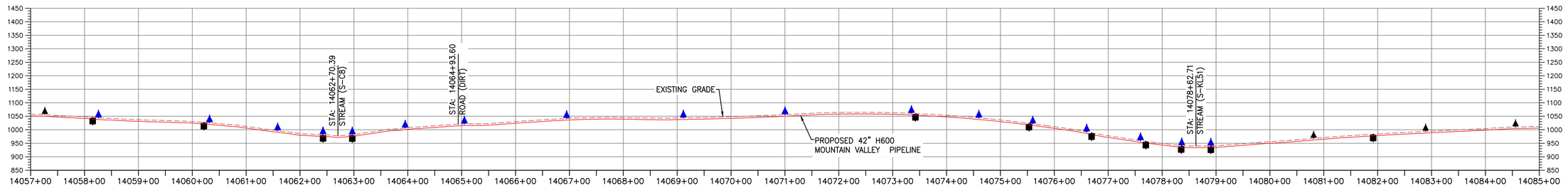
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100 0 100 200



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100 0 100 200

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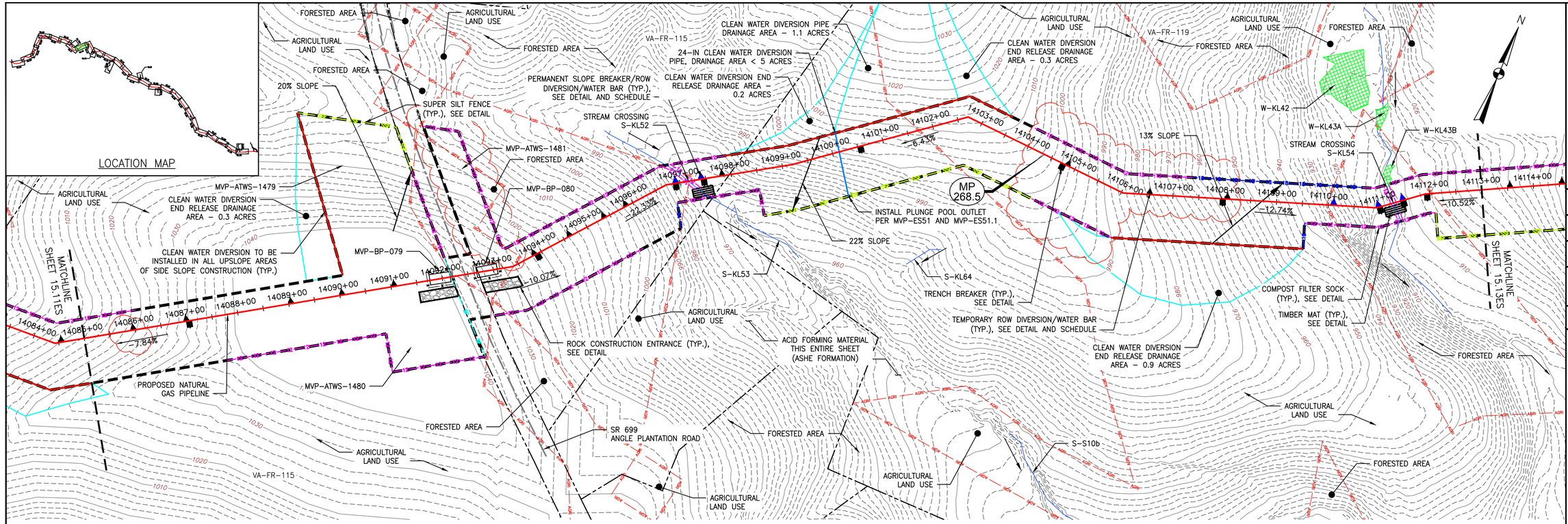
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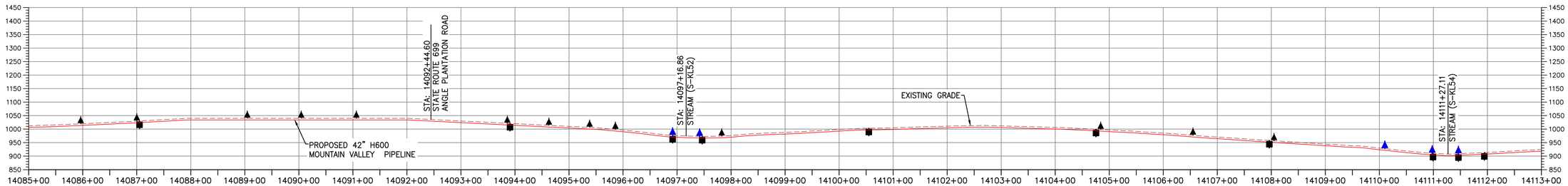
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CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 1.2 ACRES
CLEAN WATER DIVERSION TO BE INSTALLED IN ALL UPSLOPE AREAS OF SIDE SLOPE CONSTRUCTION (TYP.)
CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 1.5 ACRES
TRENCH BREAKER (TYP.), SEE DETAIL
PROPOSED NATURAL GAS PIPELINE
24-IN CLEAN WATER DIVERSION PIPE, DRAINAGE AREA < 5 ACRES
VA-FR-119
AGRICULTURAL LAND USE
FEMA FLOODPLAIN
ACID FORMING MATERIAL THIS ENTIRE SHEET (ASHE FORMATION)
SILT FENCE (TYP.), SEE DETAIL
STEEP SLOPE AREAS (TYP.)
MVP-ATWS-523
ROCK CONSTRUCTION ENTRANCE (TYP.), SEE DETAIL
COMPOST FILTER SOCK (TYP.), SEE DETAIL
FORESTED AREA
SR 644 FLINT HILL RD
STREAM CROSSING S-F8
STREAM CROSSING S-HH4
MATCHLINE SHEET 15.14ES
MP 269.0
INSTALL PLUNGE POOL OUTLET PER MVP-ES51 AND MVP-ES51.1
MVP-ATWS-521A
8% SLOPE
STEEP SLOPE EROSION CONTROL (TYP.), SEE DETAIL
S-KL67
S-KL68
TIMBER MAT (TYP.), SEE DETAIL
SUPER SILT FENCE (TYP.), SEE DETAIL
PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE
TEMPORARY ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE
AGRICULTURAL LAND USE
MVP-ATWS-521
16% SLOPE
EXISTING PERMANENT GRAVEL/DIRT ACCESS ROAD, TO BE MAINTAINED, MVP-FR-310
EXISTING CULVERT
S-S11
STATE HIGHWAY 122 BOOKER T. WASHINGTON HWY
S-KL66
VA-FR-119.02
MVP-ATWS-1265
EXISTING CULVERT
VA-FR-119.01
MATCHLINE SHEET 15.12ES
FORESTED AREA
AGRICULTURAL LAND USE
S-S10
FORESTED AREA
MVP-ATWS-1266

PLAN
SCALE: 1" = 100'
100 0 100 200

LOCATION MAP

STA: 14117+97.73 EXISTING PERMANENT GRAVEL/DIRT ACCESS ROAD (MVP-FR-310)
PROPOSED 42" H600 MOUNTAIN VALLEY PIPELINE
STA: 14129+94.61 STREAM (S-F8)
STA: 14130+82.64 STATE HIGHWAY 122 BOOKER T. WASHINGTON HWY
STA: 14134+82.64 STREAM (S-HH4)
EXISTING GRADE

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3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

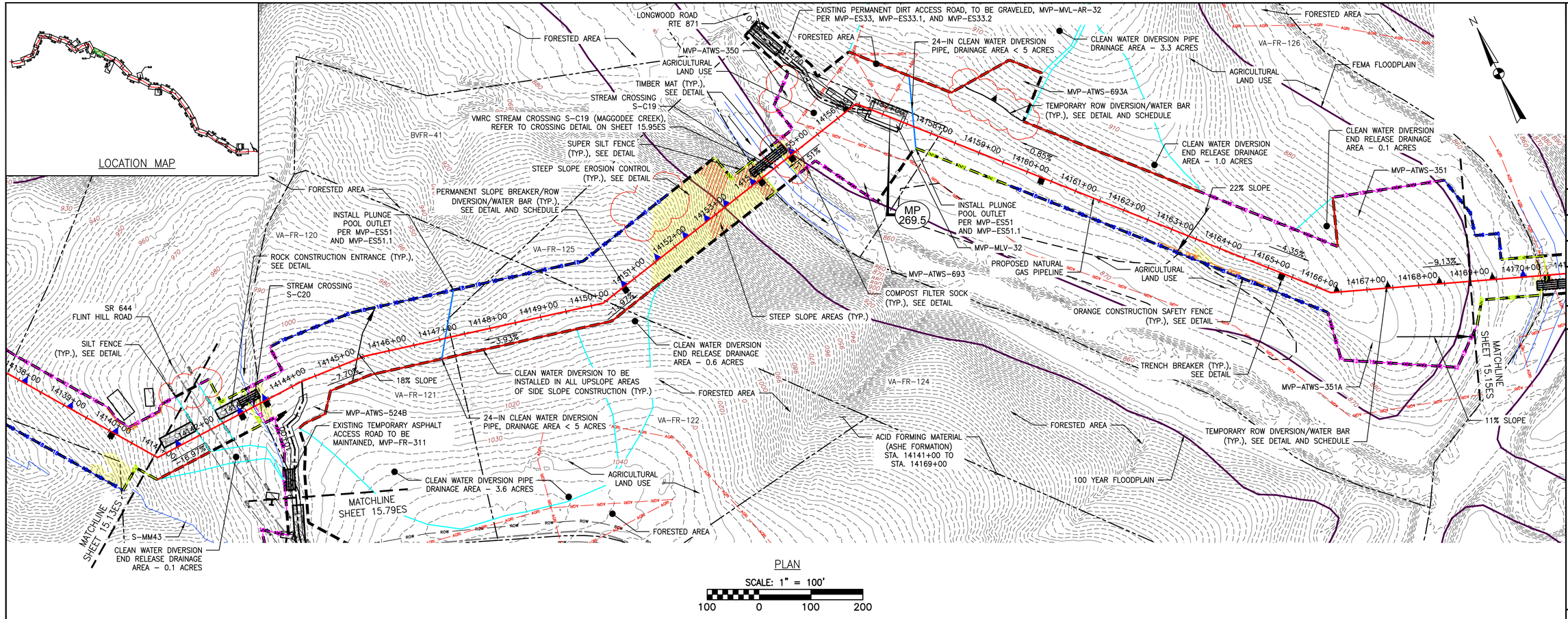
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.13ES OF 15.99ES

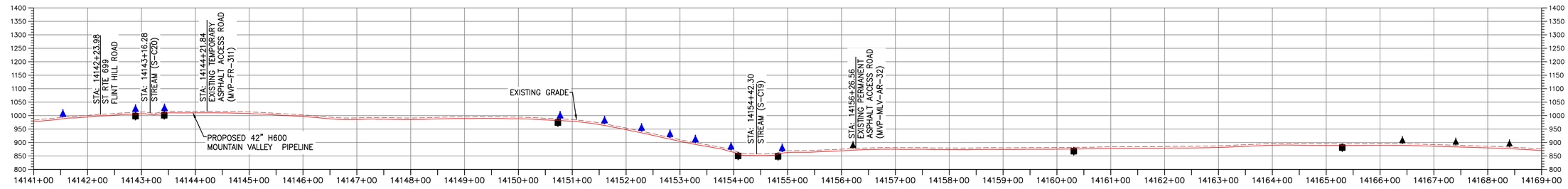
REVISION



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
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- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
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- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
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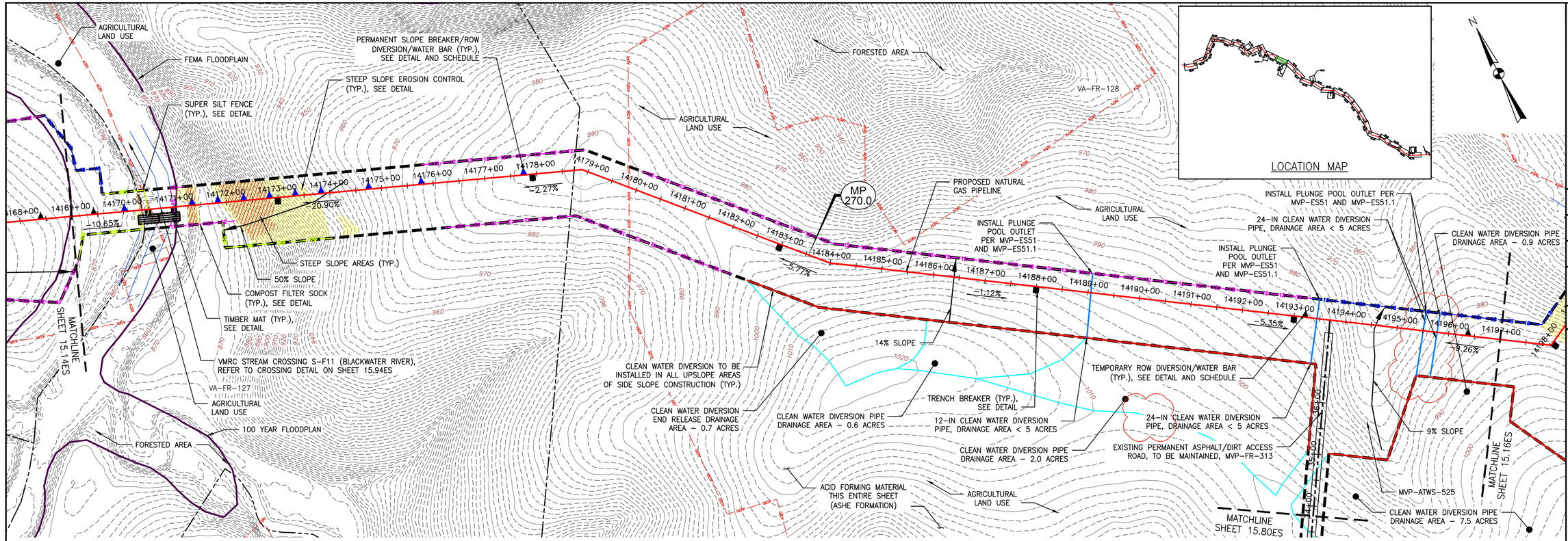
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.14ES OF 15.99ES

REVISION

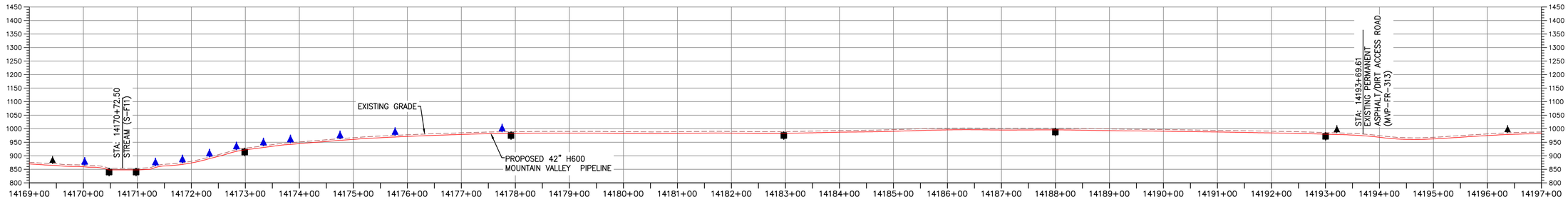
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 11 - FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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EROSION AND SEDIMENT CONTROL PLANS

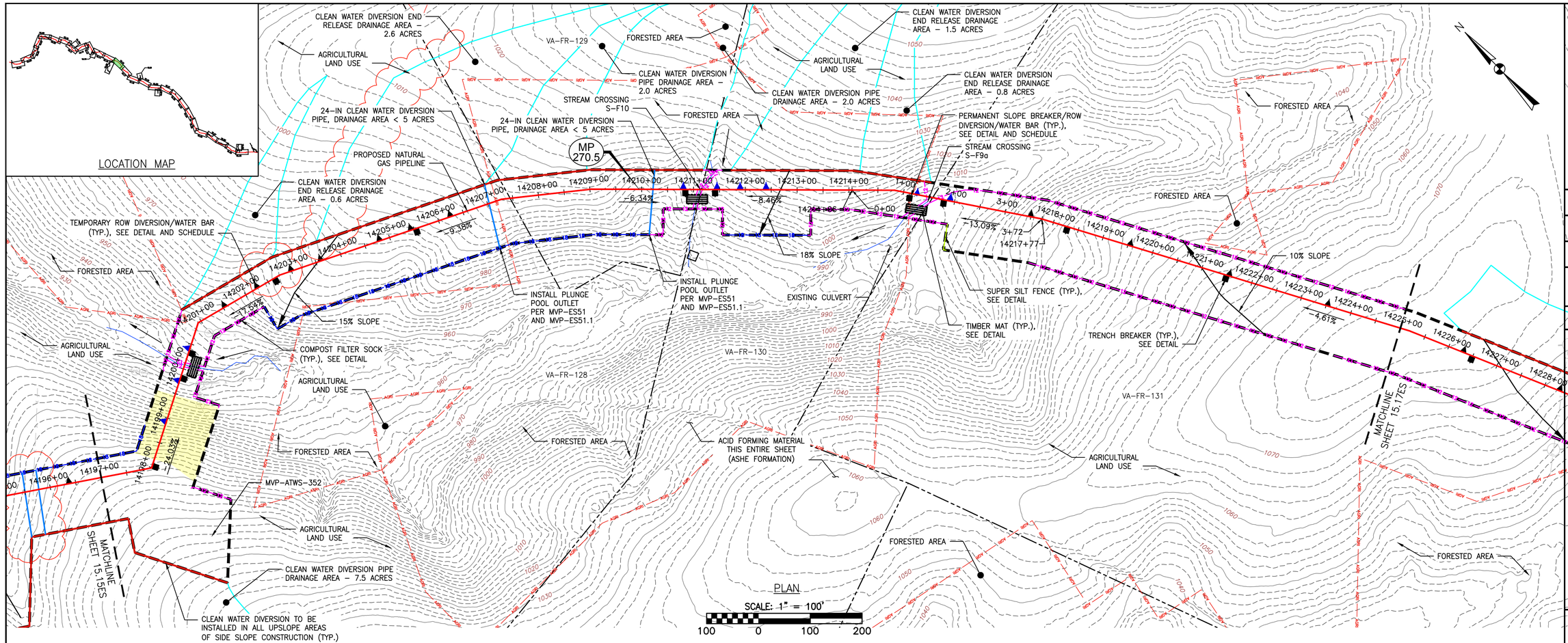
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

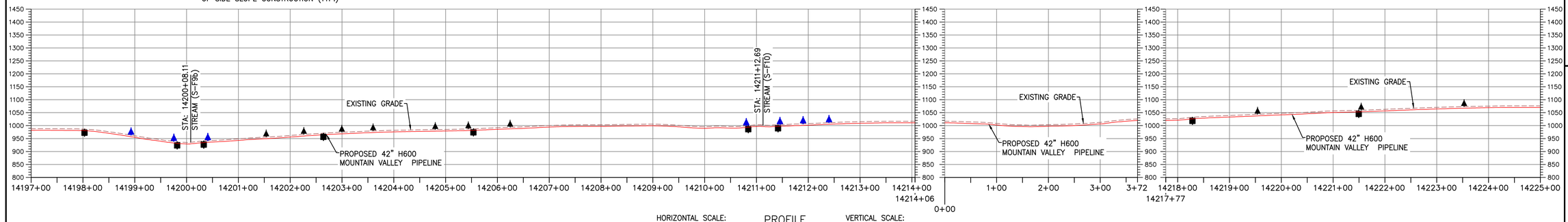
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CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN

REVISION

SHT. NO. 15.15ES OF 15.99ES

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LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
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- PROPOSED PIPELINE
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- FEMA 100 YEAR FLOODPLAIN
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
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661 ANDERSEN DRIVE
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EROSION AND SEDIMENT CONTROL PLANS

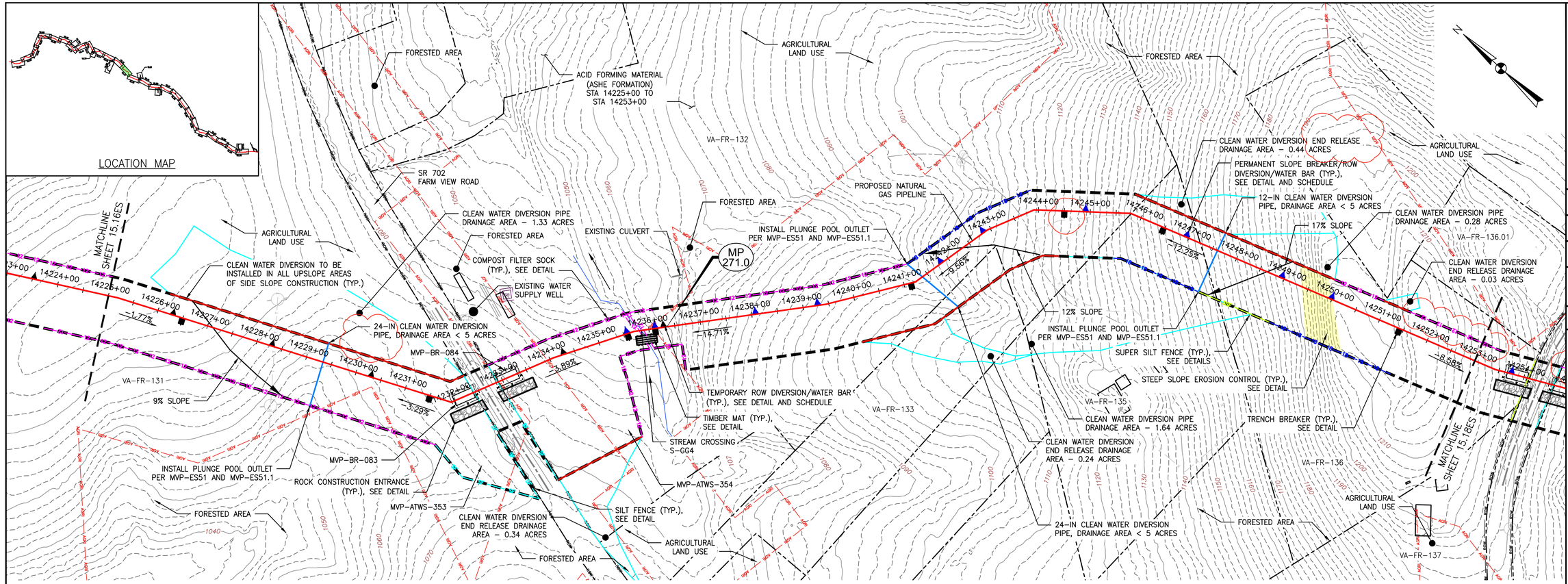
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
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SHT. NO.	15.16ES OF 15.99ES

REVISION

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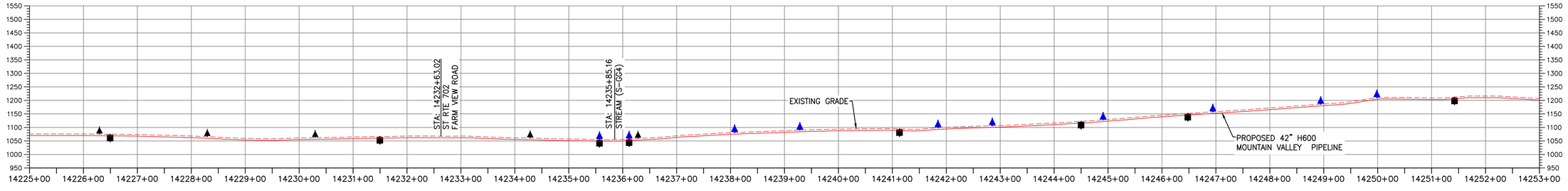
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
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- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGR — AGR — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
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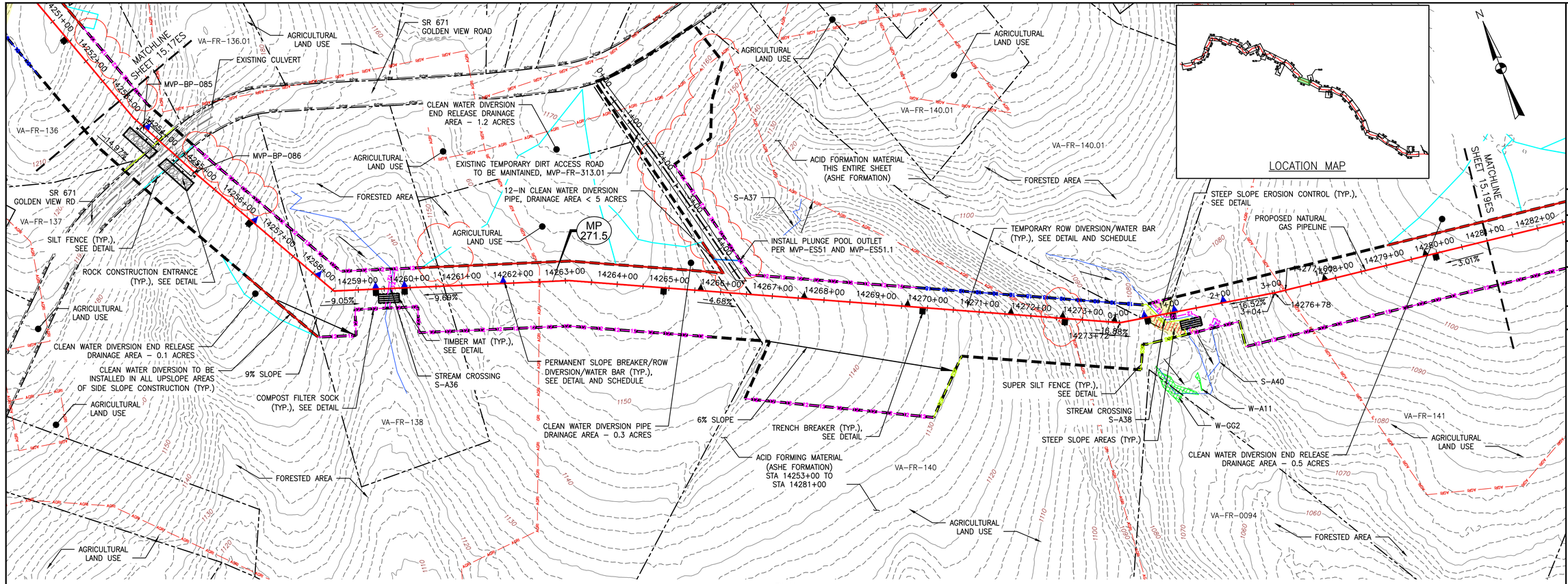
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.17ES OF 15.99ES

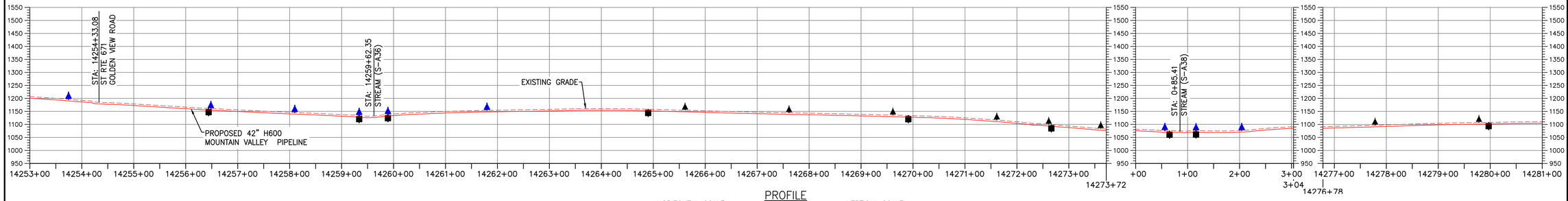
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGR — AGR — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP–ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP–ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- 24 — 24 — 24 — 24 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- GRASS–LINED CHANNEL (SEE DETAIL MVP–ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP–ES50 AND MVP–ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP–ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP–20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP–17, ES38, AND SCHEDULE)

NOTES:

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

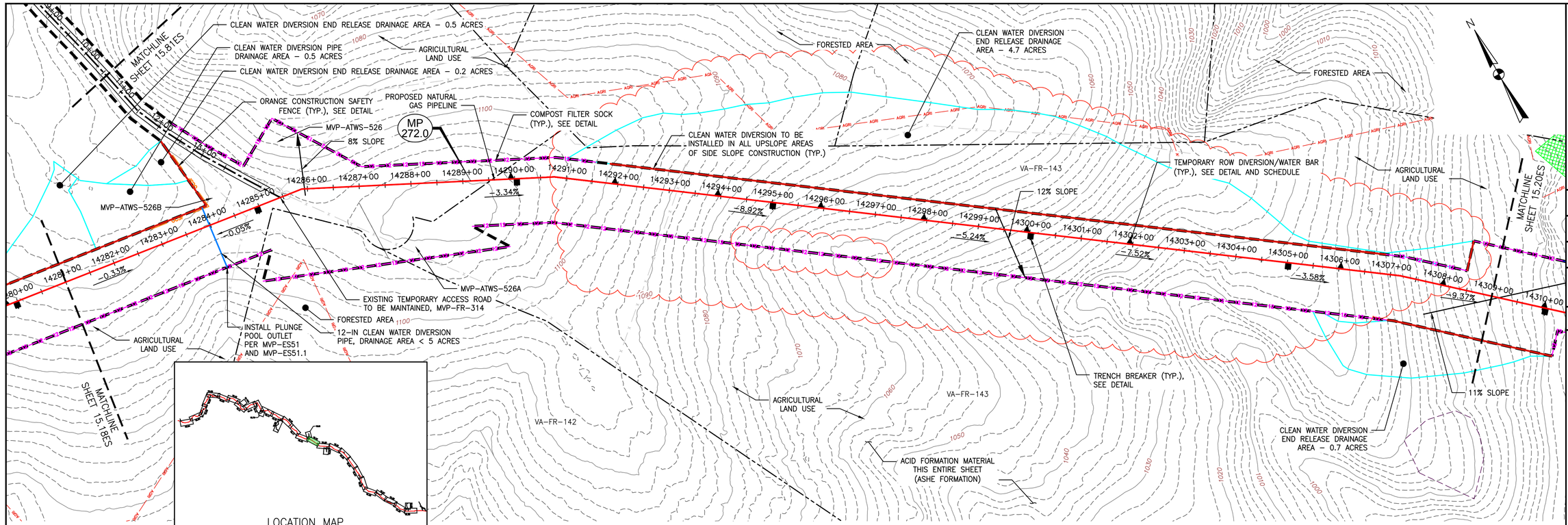
MOUNTAIN VALLEY PIPELINE, LLC
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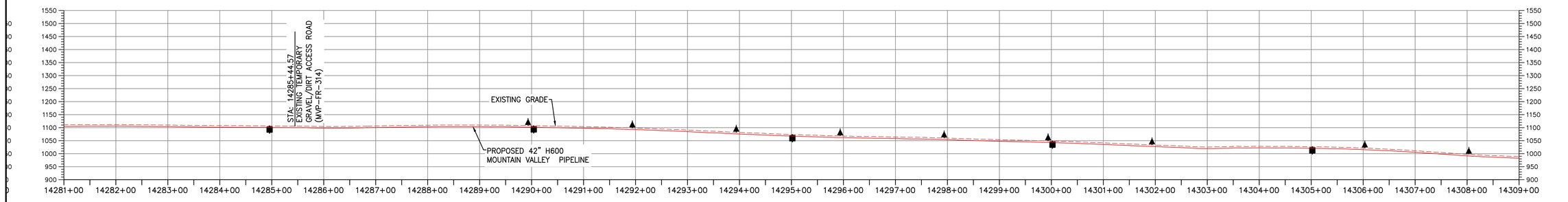
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REVISION	
SHT. NO.	15.18ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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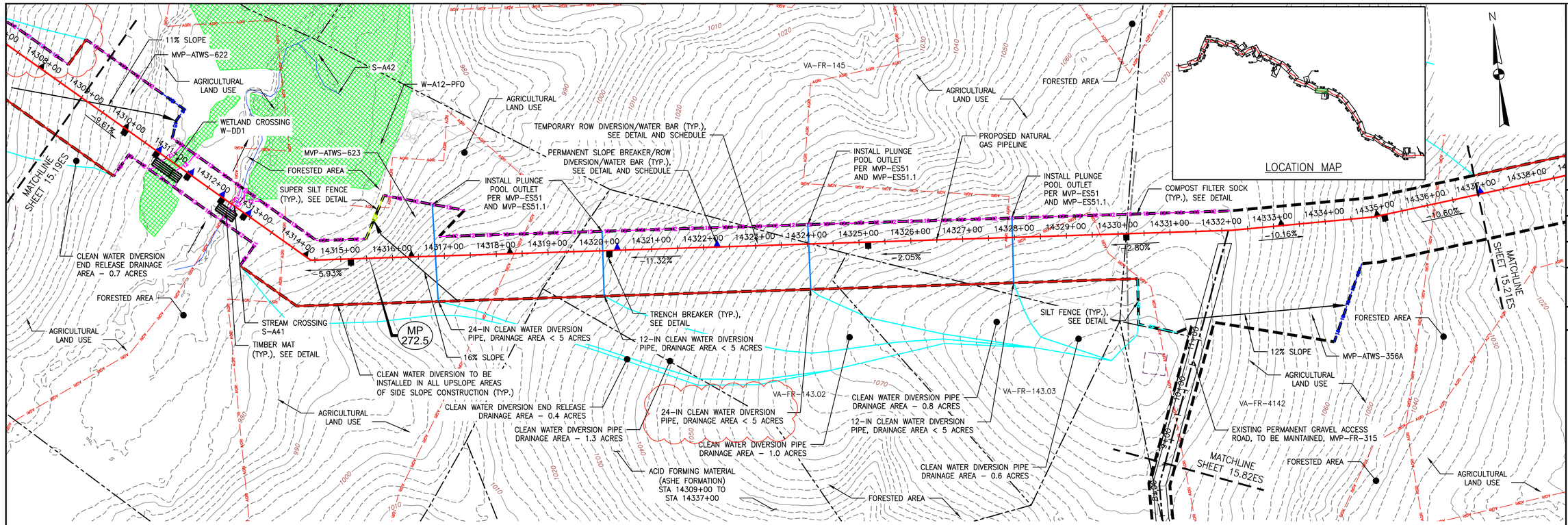
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
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SCALE:	AS SHOWN

REVISION

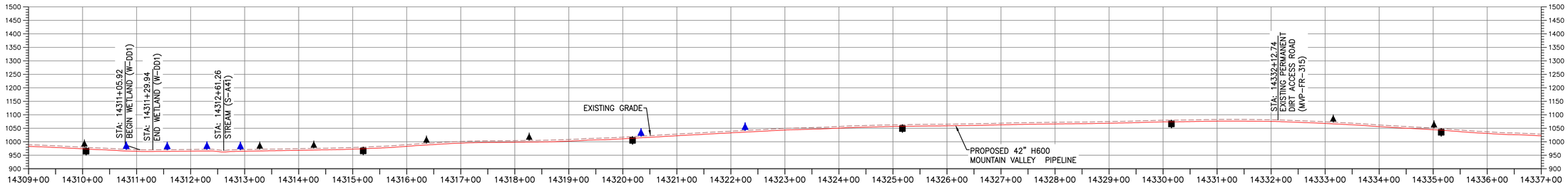
SHT. NO. 15.19ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

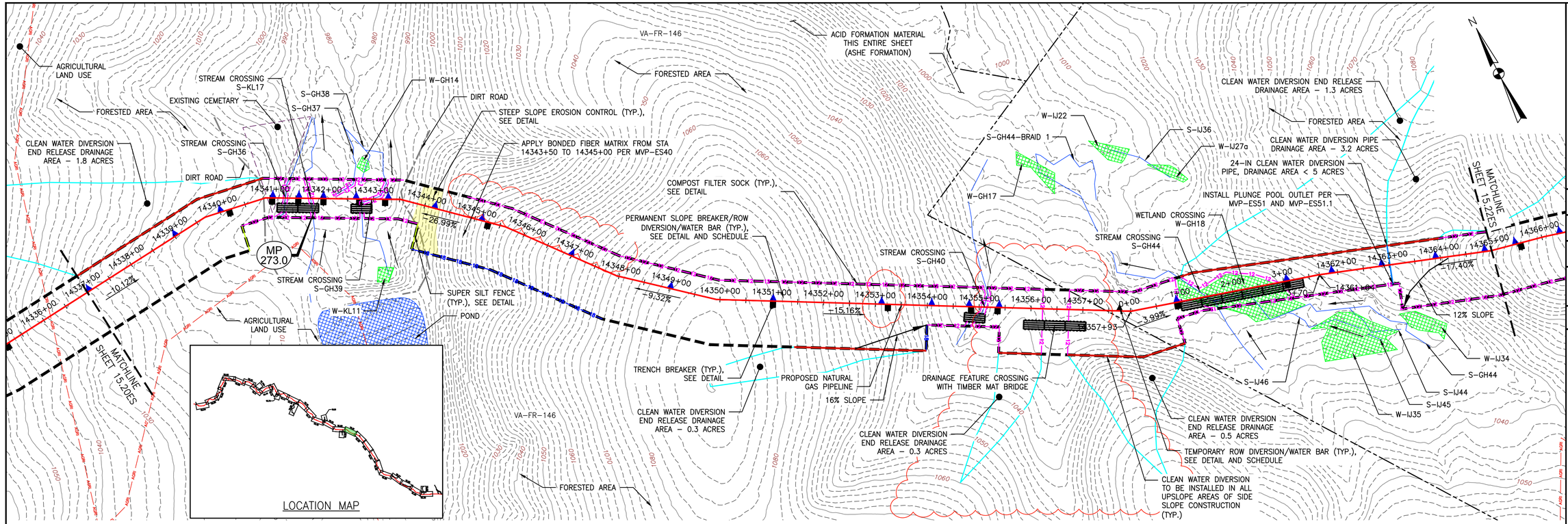
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
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DRAWN BY:	KAL
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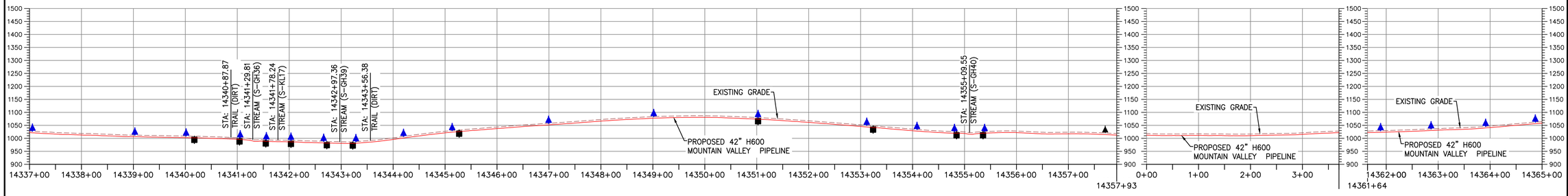
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

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100 0 100 200

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200 0 200 400

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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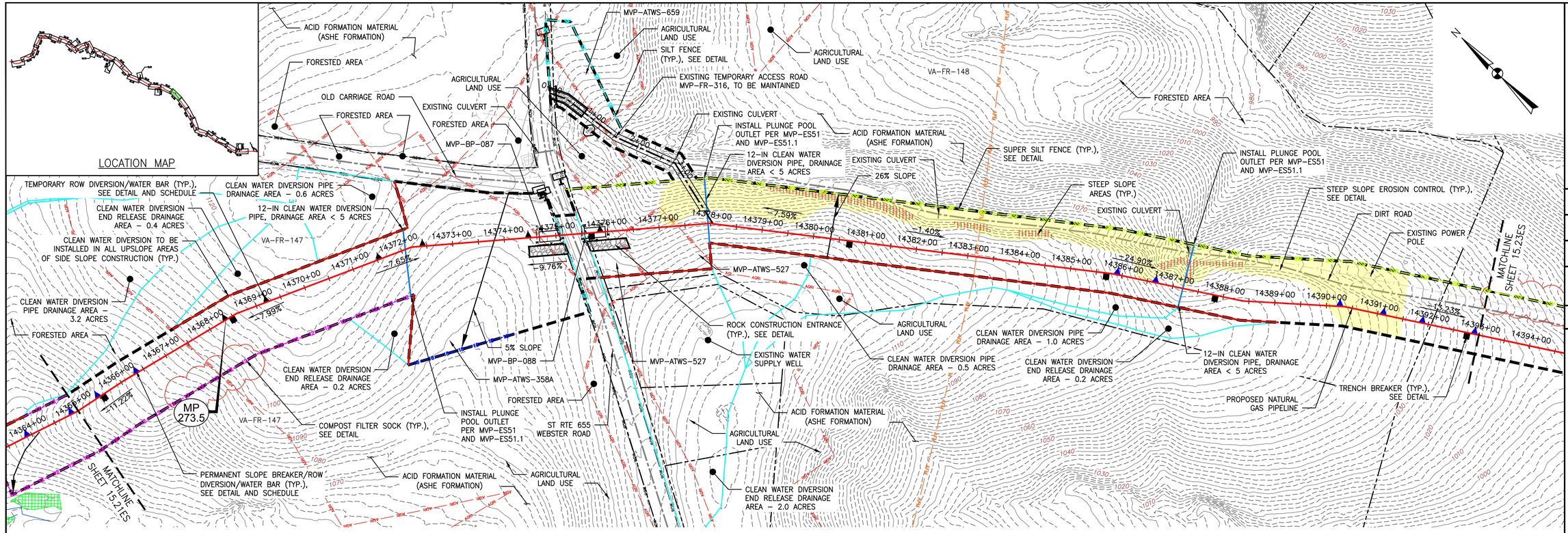
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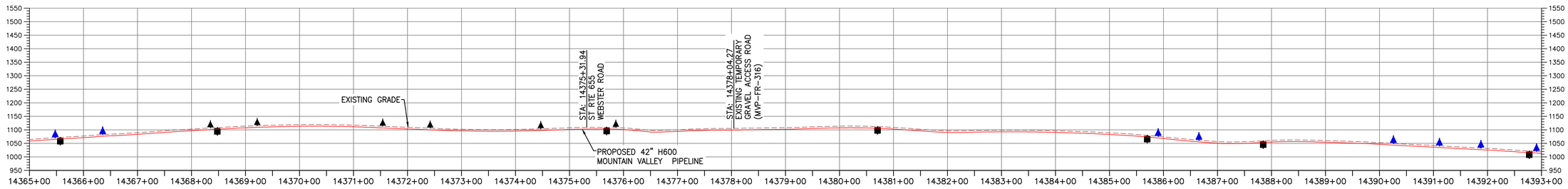
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PLAN

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100 0 100 200



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- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
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8. ALL NON VWRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP-ES49.

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5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 11 - FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

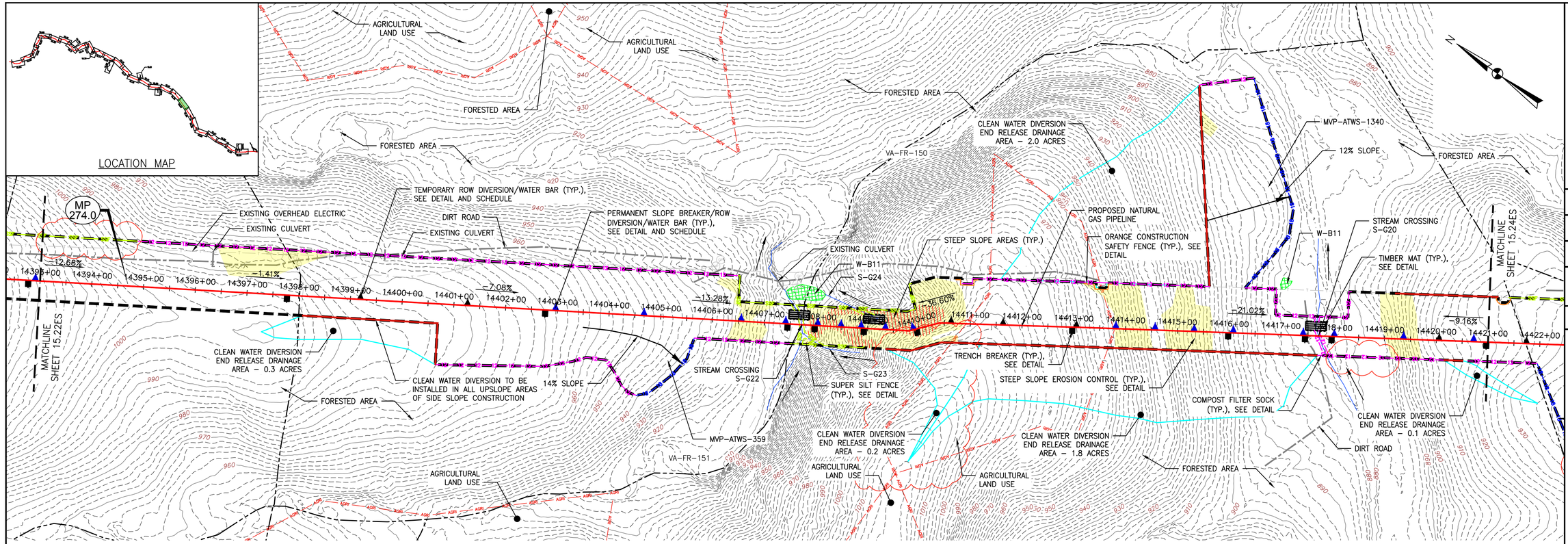
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.22ES OF 15.99ES

REVISION

TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 - MVP\15 - Franklin\E&S\ES Version 5.0.0\7157ES15.22(S11).dwg PLOTTED ON: 3/13/2018 8:43 AM PLOTTED BY: Rickabaugh, Greg PLOT FILE: ENVIRONMENTAL_COLOR.ctb

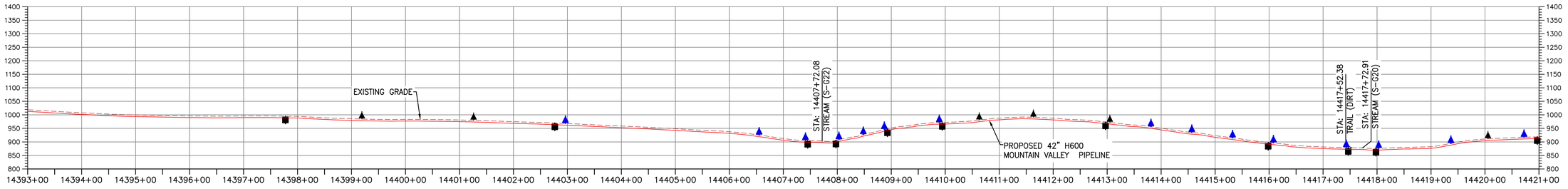
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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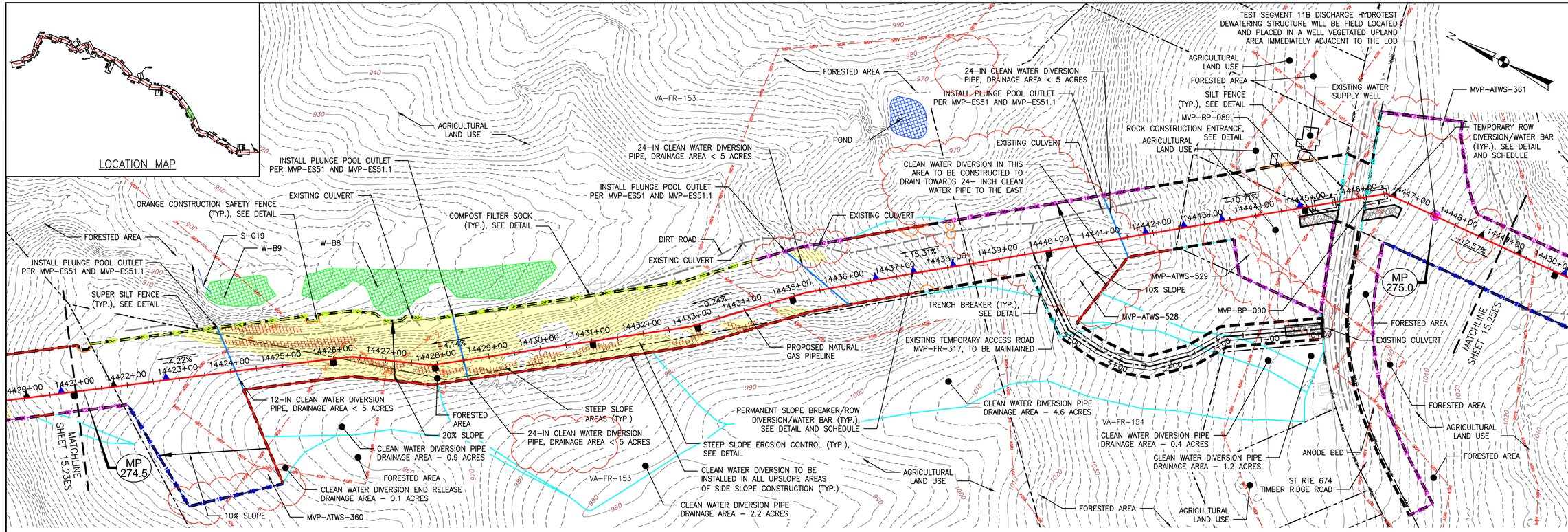
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.23ES OF 15.99ES

REVISION

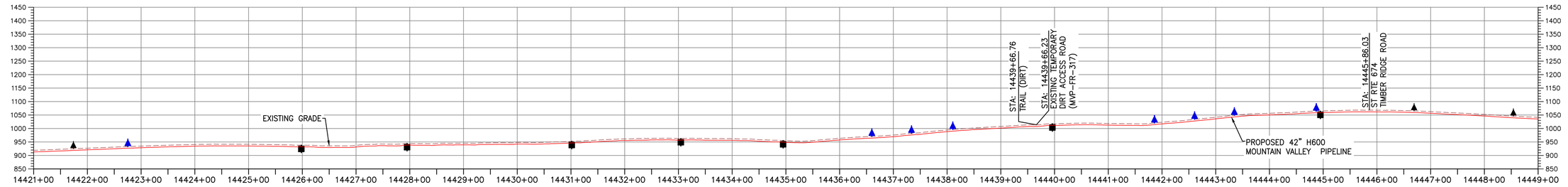
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

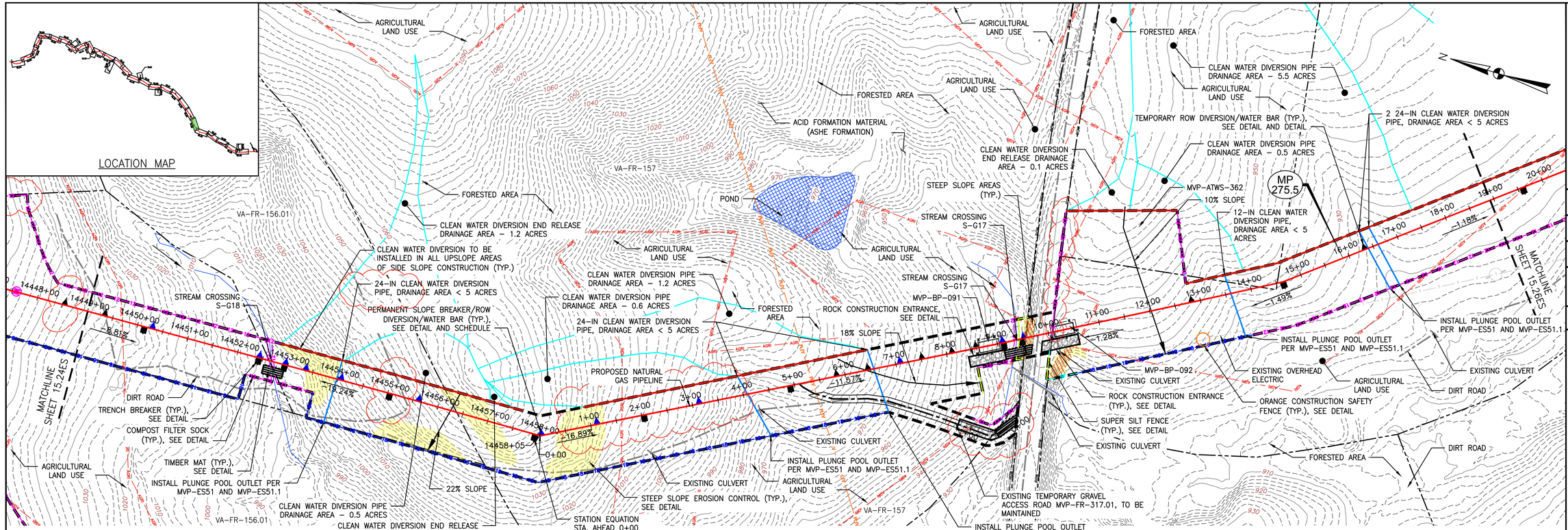
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

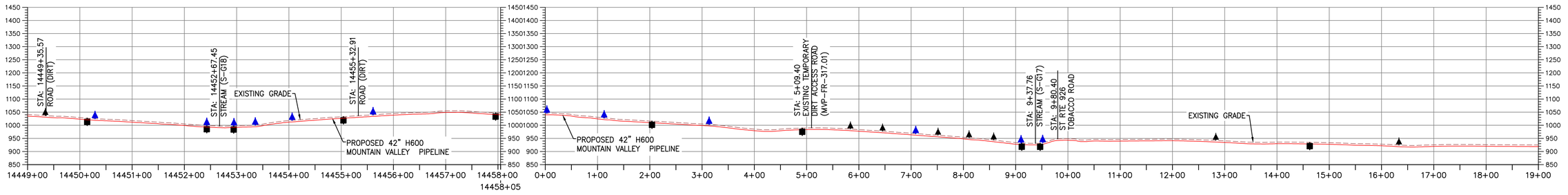
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CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.24ES OF 15.99ES

REVISION



PLAN

SCALE: 1" = 100'



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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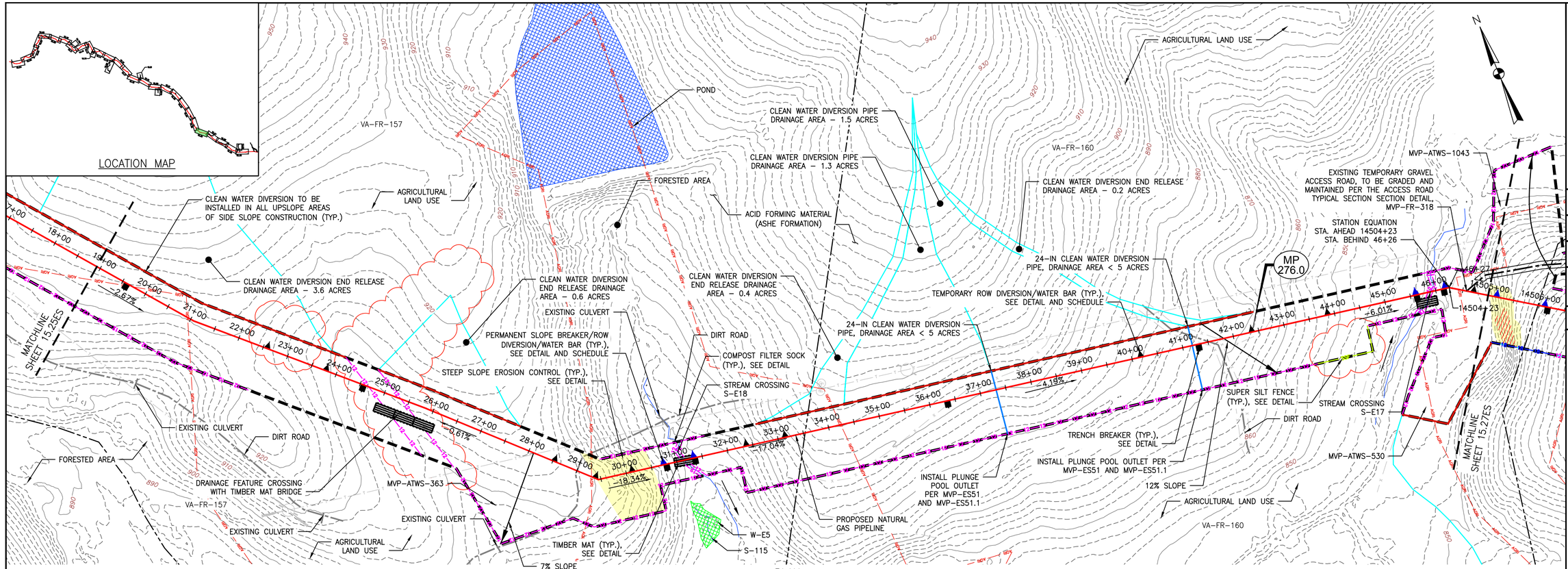
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
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DRAWN BY:	KAL
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APPROVED BY:	DW
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REVISION

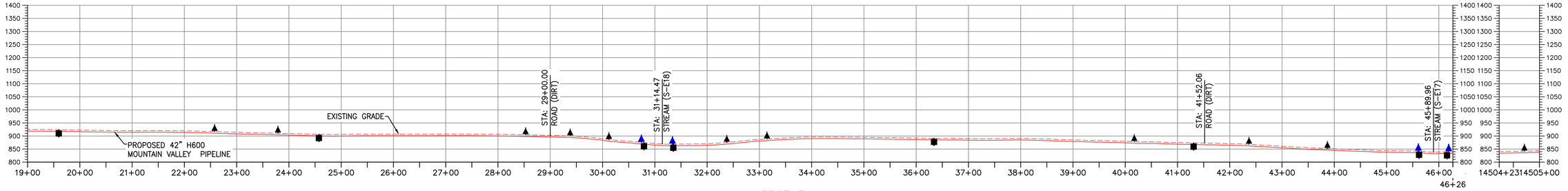
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

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100 0 100 200

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200 0 200 400

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TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\15 – Franklin\E&S\ES Version 5.0.0\7157ES15.26(S11).dwg PLOTTED ON: 3/2/2018 5:59 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb

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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

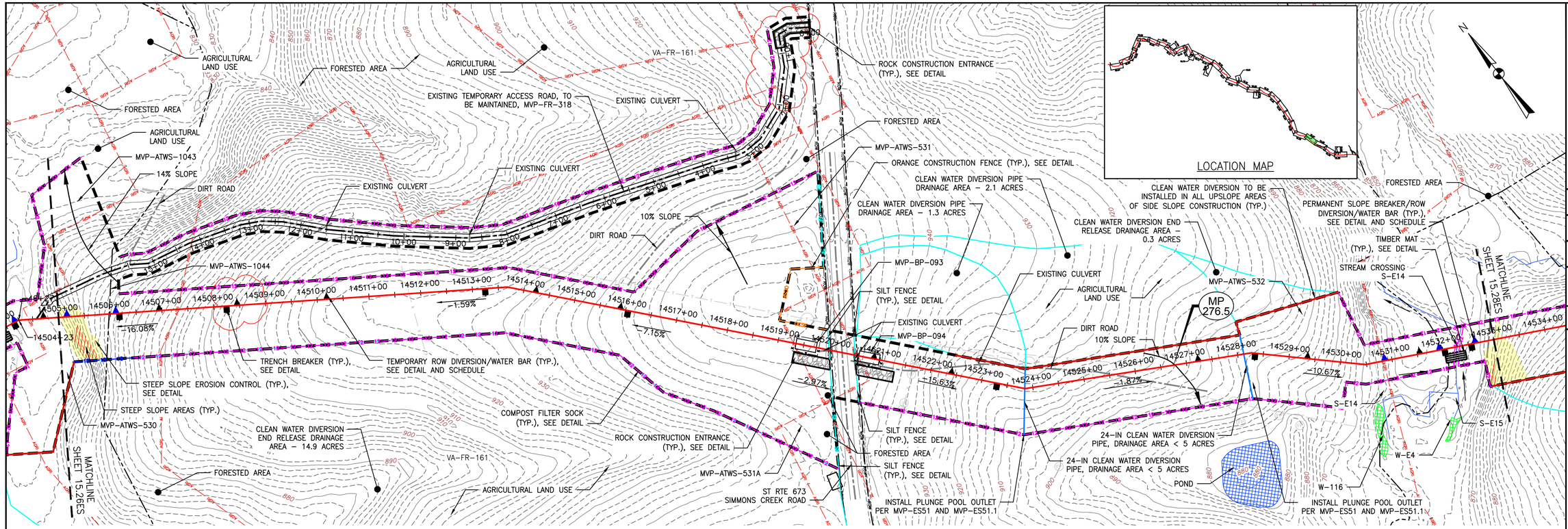
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5

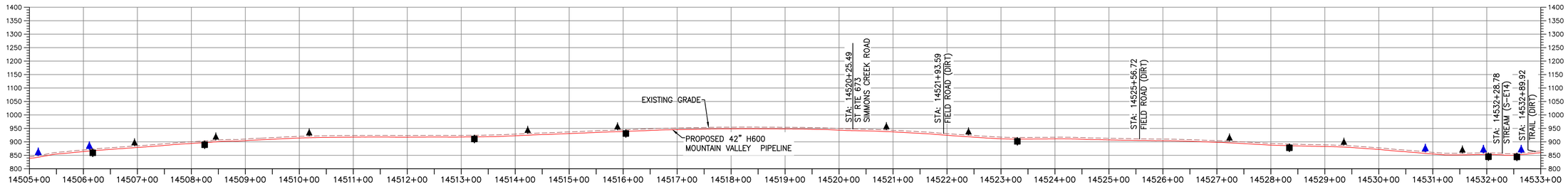
SHT. NO. 15.26ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
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- PROPOSED SILT FENCE (SEE NOTE 5)
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- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
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- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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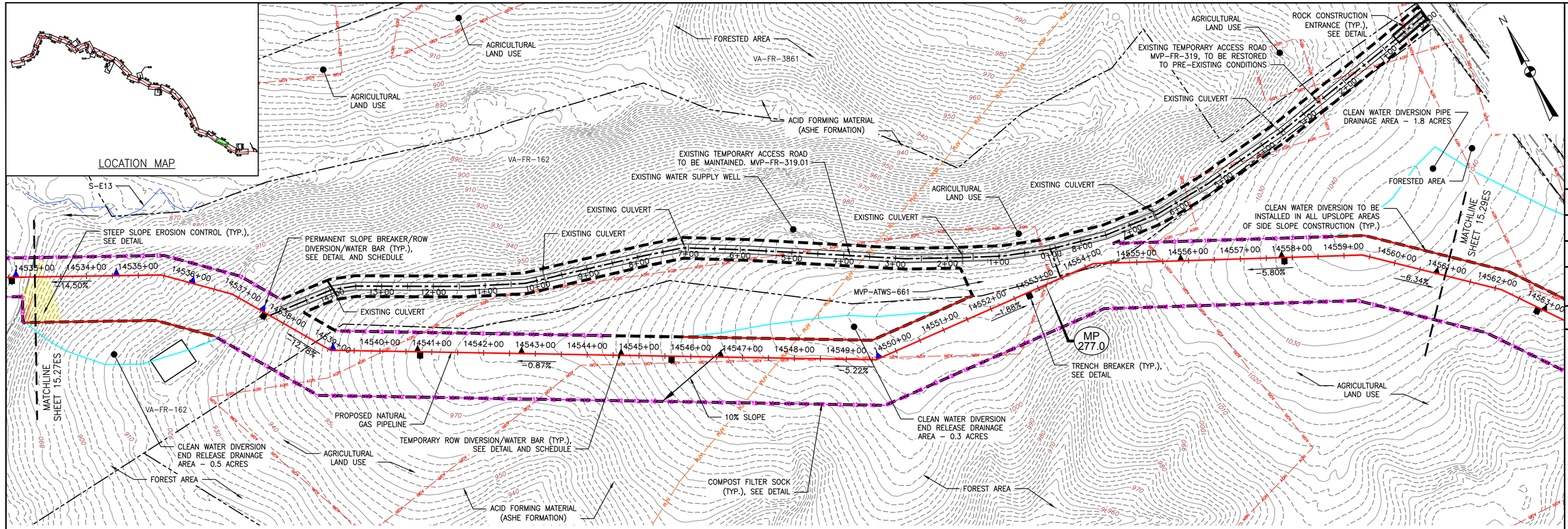
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.27ES OF 15.99ES

REVISION

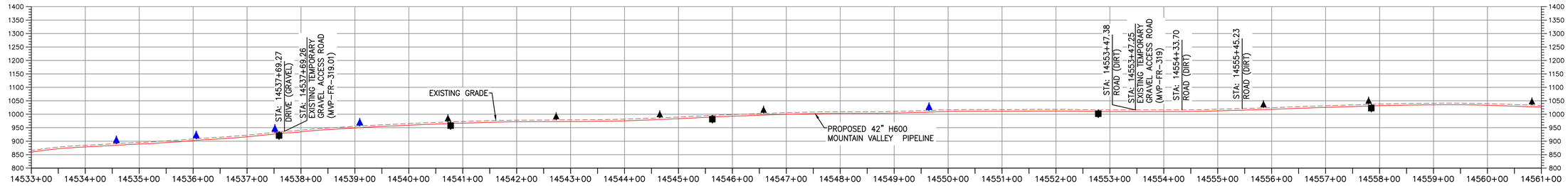
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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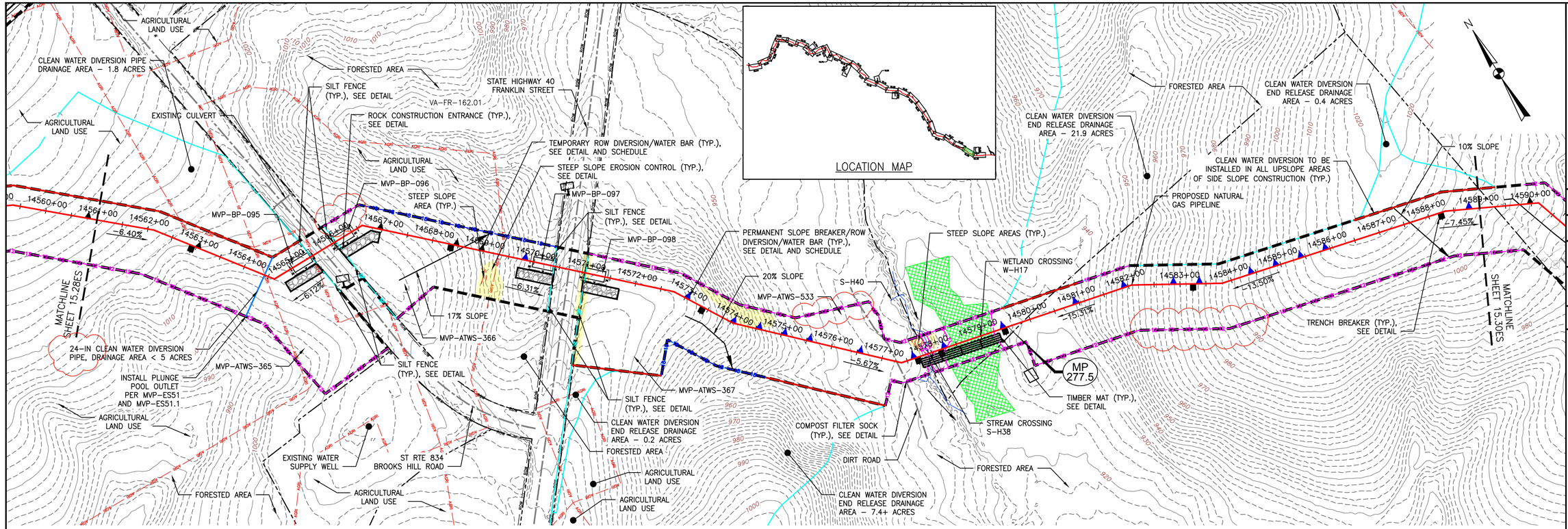
EROSION AND SEDIMENT CONTROL PLANS

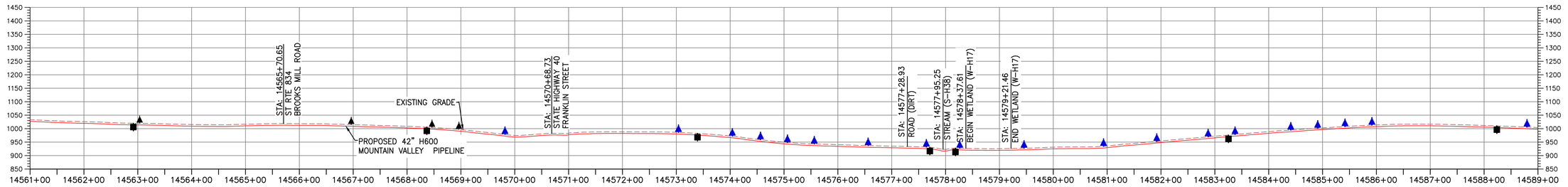
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.28ES OF 15.99ES

REVISION

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LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
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- EXISTING STATE LINE
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- POND
- WETLAND
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- AGRICULTURAL LAND USE BOUNDARY
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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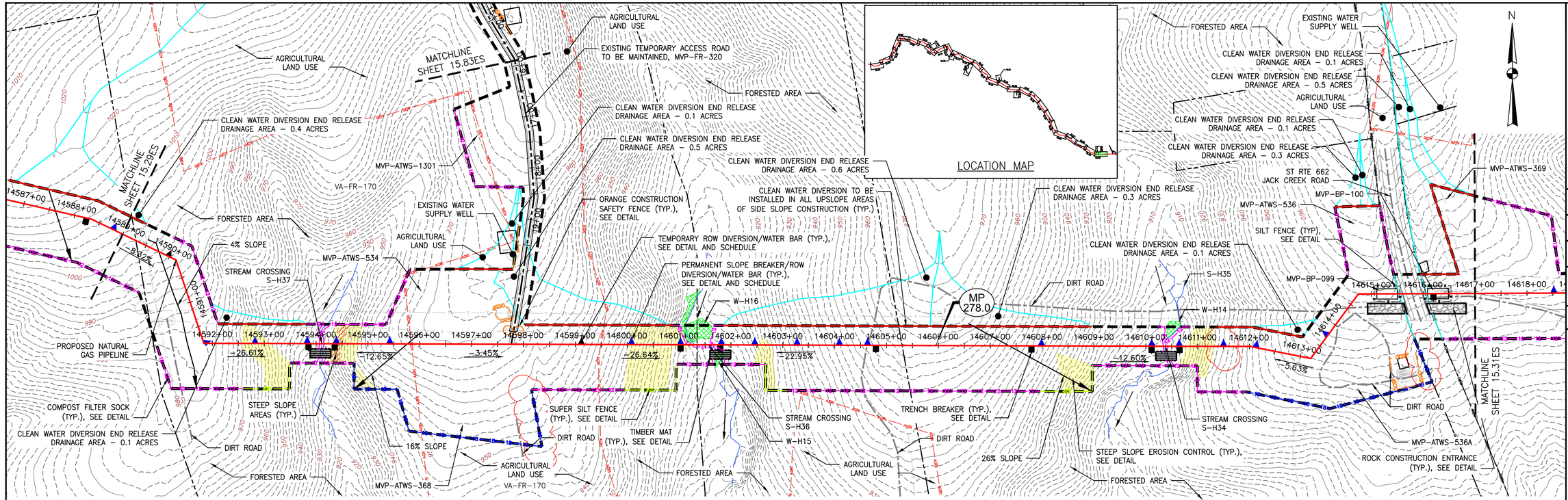
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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SHT. NO.	15.29ES OF 15.99ES

REVISION

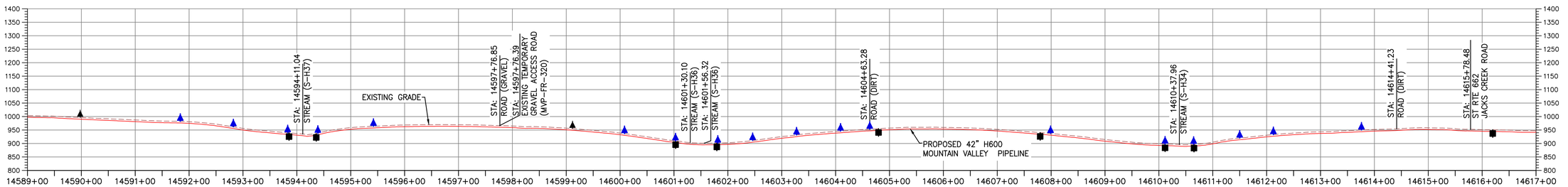
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

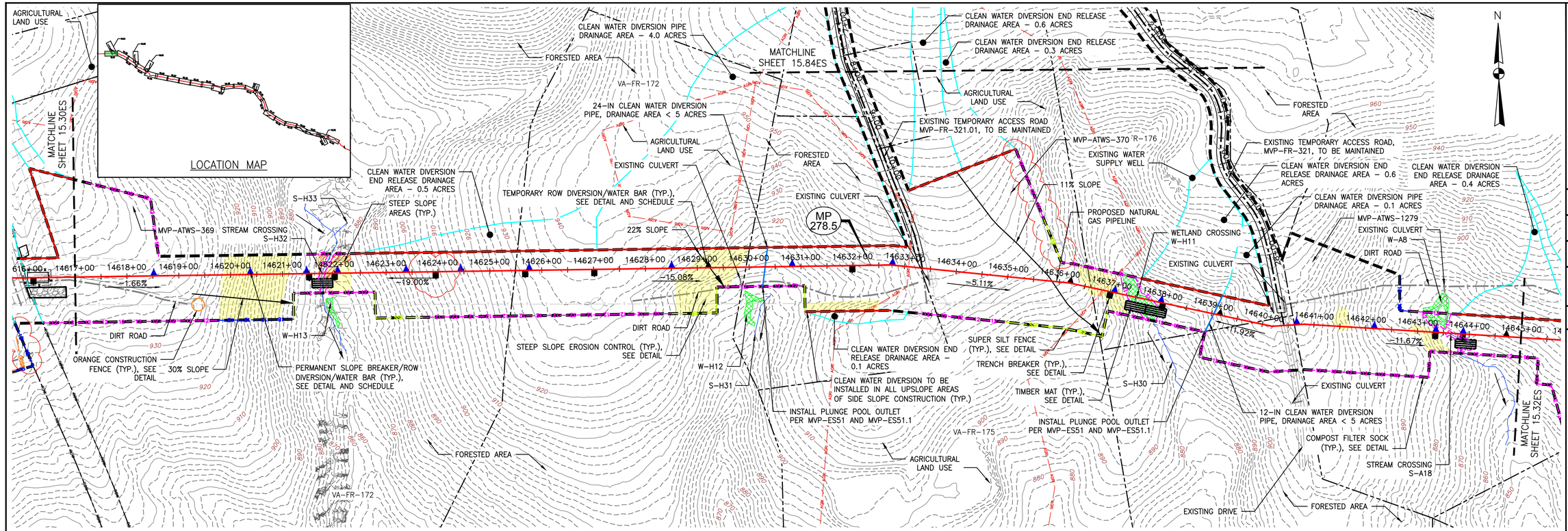
MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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661 ANDERSEN DRIVE
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PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

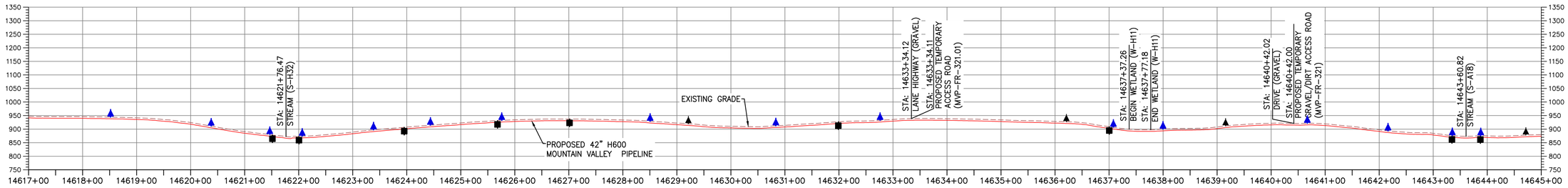
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CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.30ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGRI — AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 24 — 24 — 24 — 24 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

NOTES:

1. TOPSOIL SEGREGATION TO BE CONDUCTED THROUGHOUT THE JEFFERSON NATIONAL FOREST.
2. FLEXTERRA, EARTHGUARD OR EQUIVALENT MAY BE USED AS A SUBSTITUTE TO EROSION CONTROL BLANKET AS DIRECTED BY MVP.
3. CONTRACTOR IS RESPONSIBLE TO IDENTIFY ALL UTILITIES. THE UTILITY LINES SHOWN ON THE PLAN ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT REPRESENT SURVEYED LINE INFORMATION.
4. SLOPES OF 30' OR GREATER EXIST. CONSTRUCTION FOR STEEP SLOPES TO BE PERFORMED USING STEEP SLOPE TECHNIQUES IDENTIFIED IN THE DETAIL SHEETS. ALSO REFER TO THE SITE-SPECIFIC DESIGN OF STABILIZATION MEASURES IN SELECTED HIGH-HAZARD PORTIONS OF THE ROUTE OF THE PROPOSED MOUNTAIN VALLEY PIPELINE PROJECT.
5. WHERE CONSTRUCTION CONDITIONS PRECLUDE THE USE OF DIVERSION DITCHES DUE TO SITE CONDITIONS THE CONTRACTOR WILL INSTALL SILT FENCE AT THE DIRECTION OF MVP.
6. DRAINAGE FEATURE CROSSINGS TO BE PERFORMED PER DETAIL MVP-ES49.
7. TEMPORARY ACCESS ROAD CROSSING OF STREAMS AND WETLANDS WILL UTILIZE TIMBERMATS. ANY PERMANENT ROAD CROSSINGS WILL BE CONDUCTED VIA CULVERTS. NO UNPERMITTED IMPACT TO STREAMS WILL OCCUR AS A RESULT OF ROAD OR PIPELINE CROSSINGS AND ALL ESC BMP'S WILL BE INSTALLED TO CONTINUE THE STREAM FLOW.
8. ALL NON VWRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP-ES49.

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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

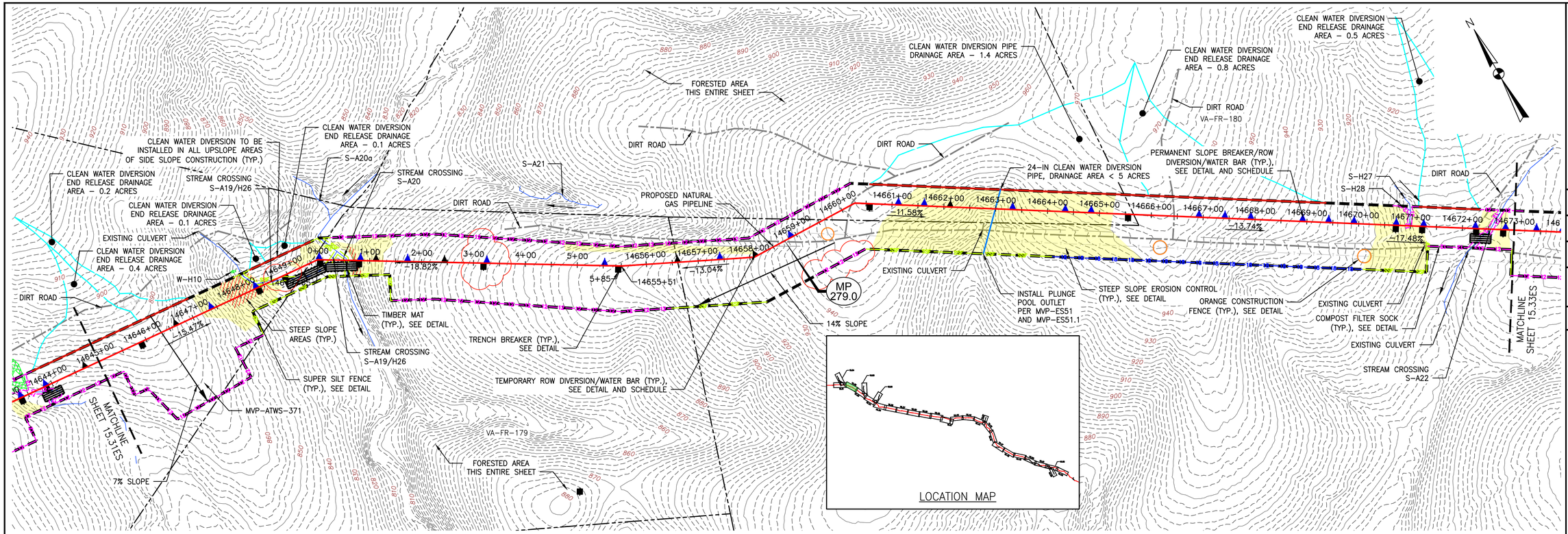
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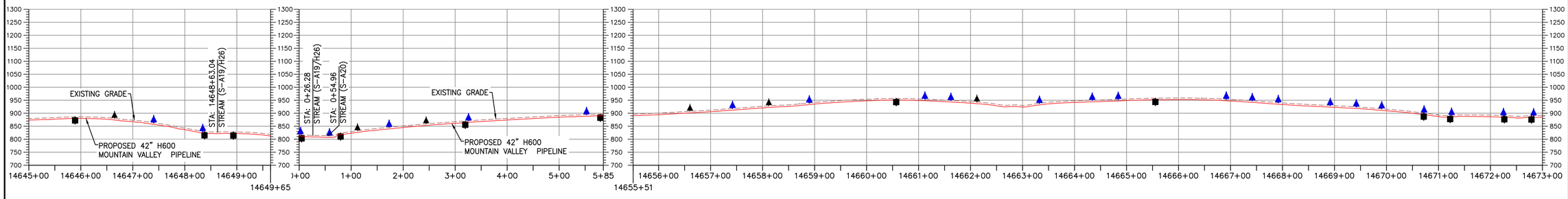
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SHT. NO.	15.31ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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REVISIONS:

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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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EROSION AND SEDIMENT CONTROL PLANS

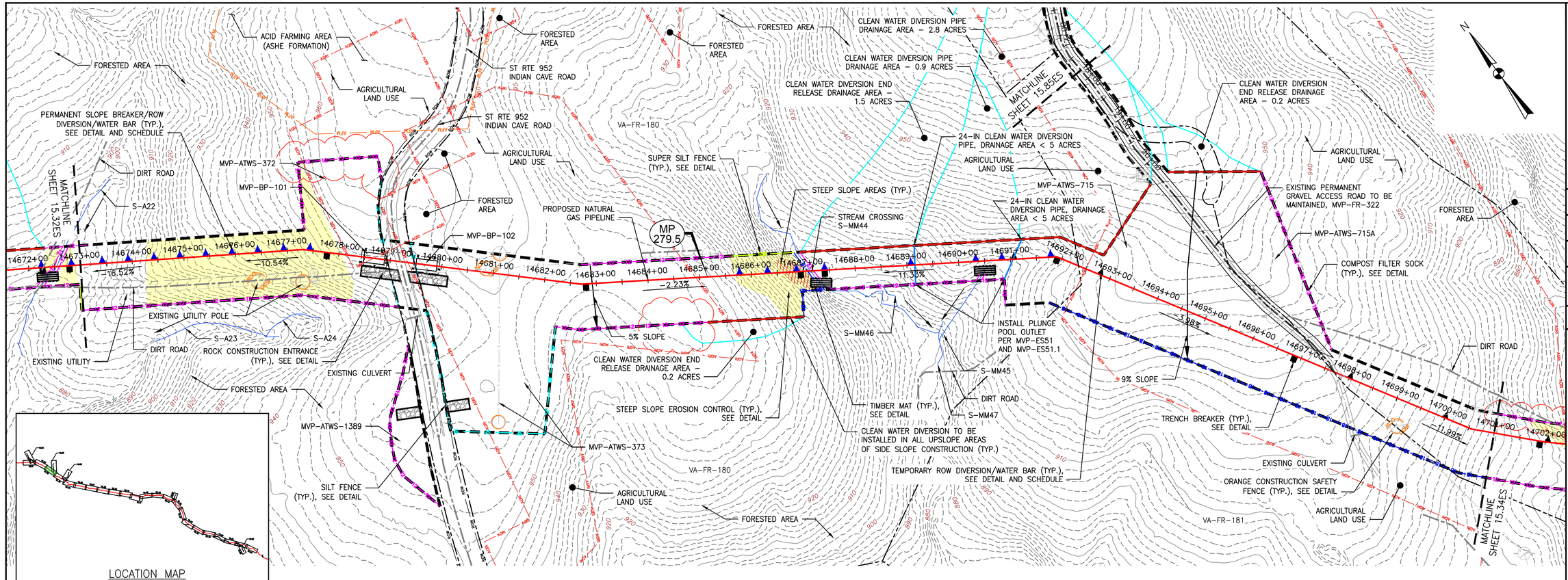
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DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN

REVISION

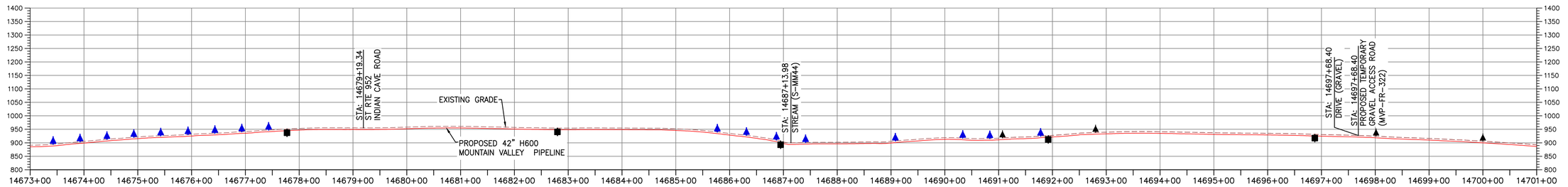
SHT. NO. 15.32ES OF 15.99ES

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317



LOCATION MAP

PLAN
SCALE: 1" = 100'



PROFILE
HORIZONTAL SCALE: SCALE: 1" = 100'
VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
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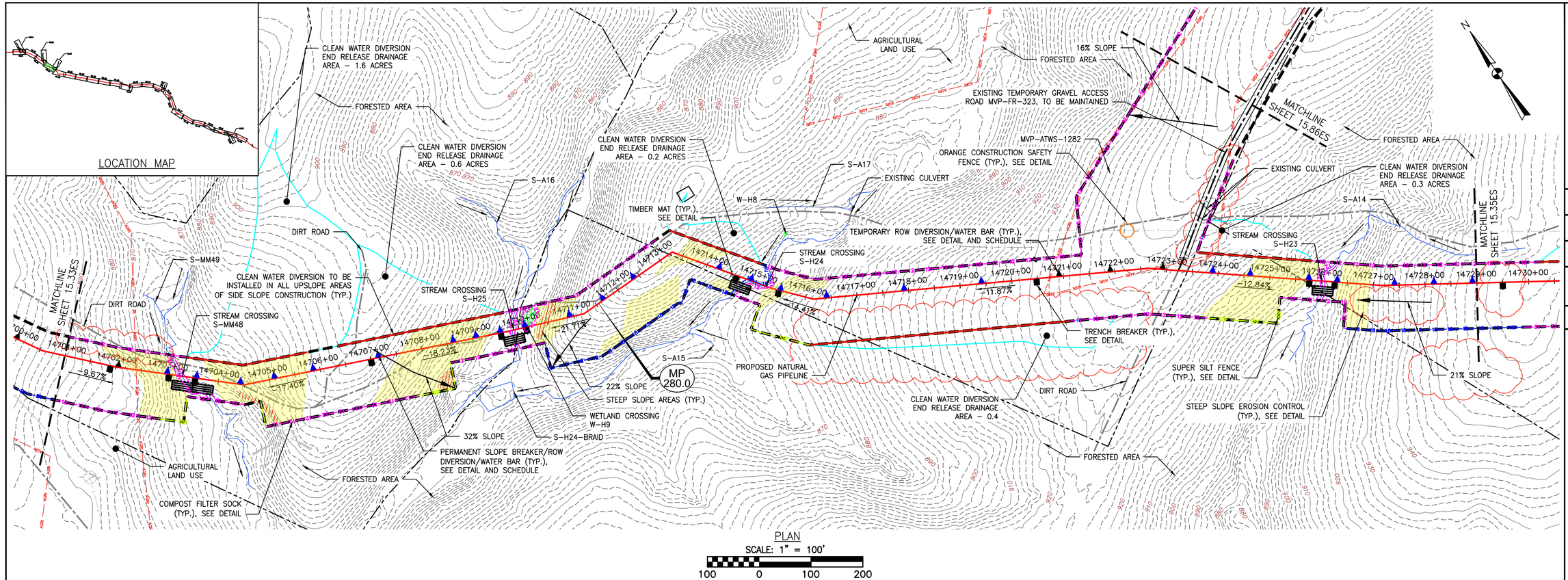
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EROSION AND SEDIMENT CONTROL PLANS

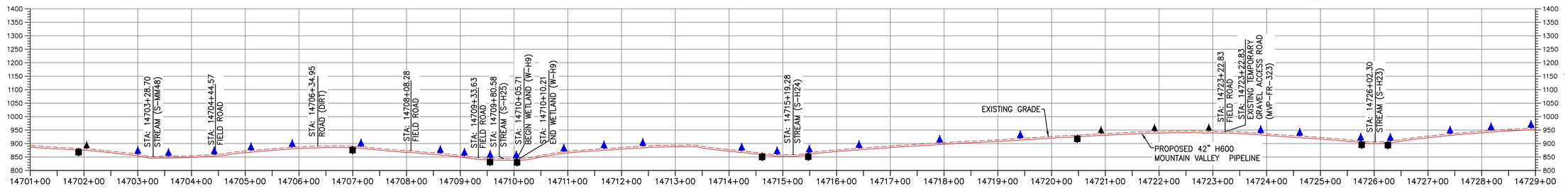
COMMONWEALTH OF VIRGINIA
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Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
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APPROVED BY:	DW
DATE:	03/04/2018
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REVISION	5
SHT. NO.	15.33ES OF 15.99ES

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PLAN
SCALE: 1" = 100'
100 0 100 200



PROFILE

HORIZONTAL SCALE:
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100 0 100 200

VERTICAL SCALE:
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200 0 200 400

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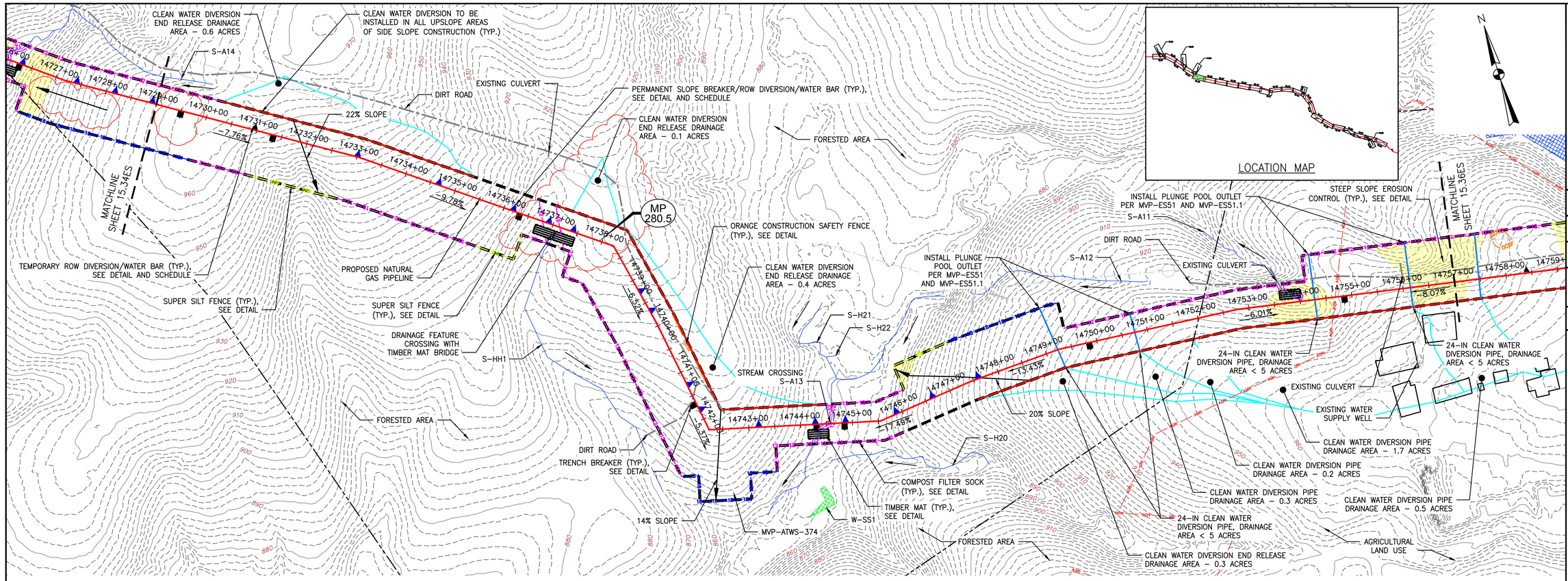
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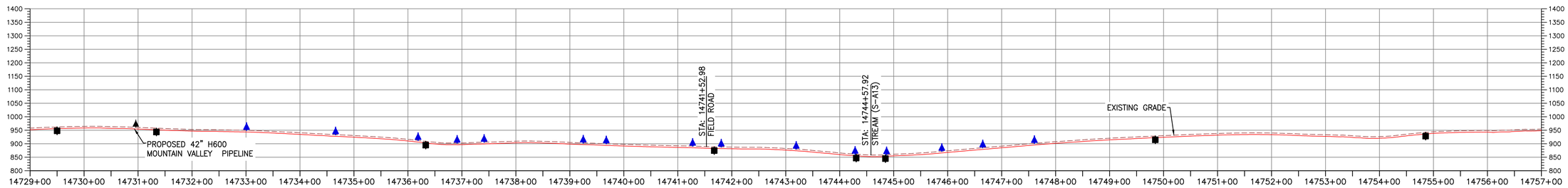
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PLAN

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100 0 100 200



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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

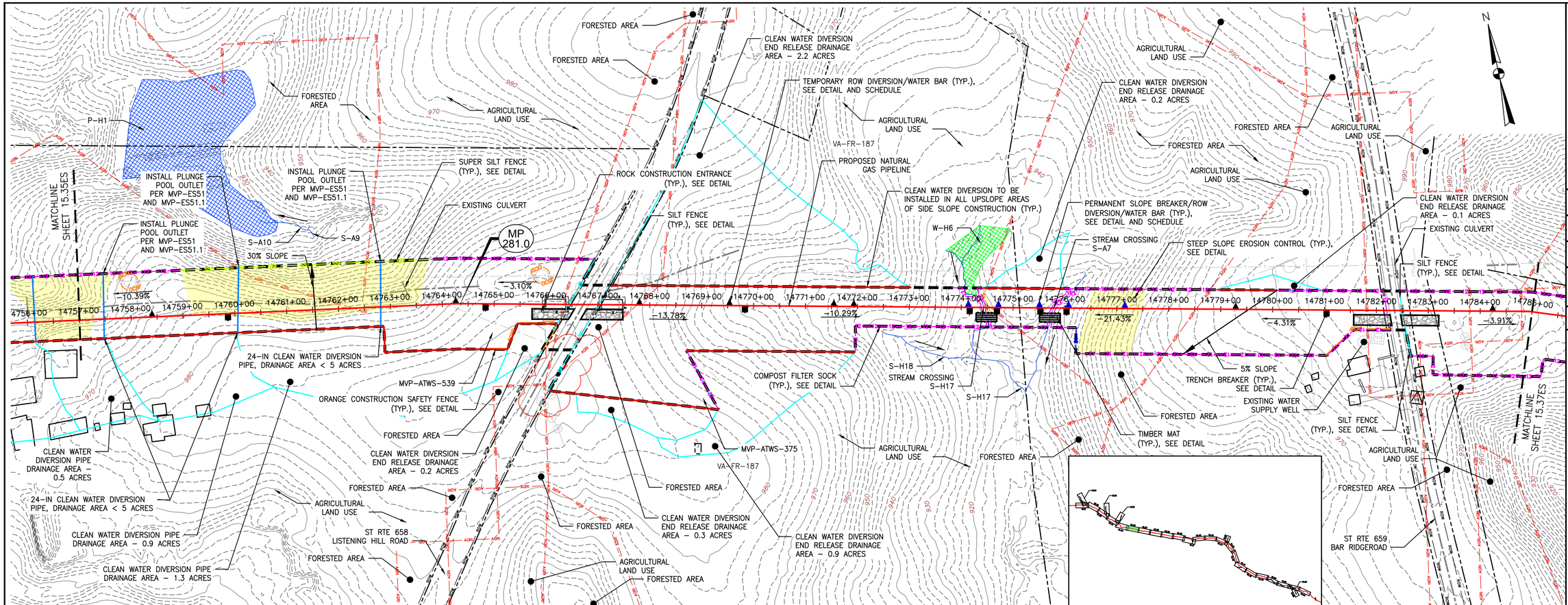
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

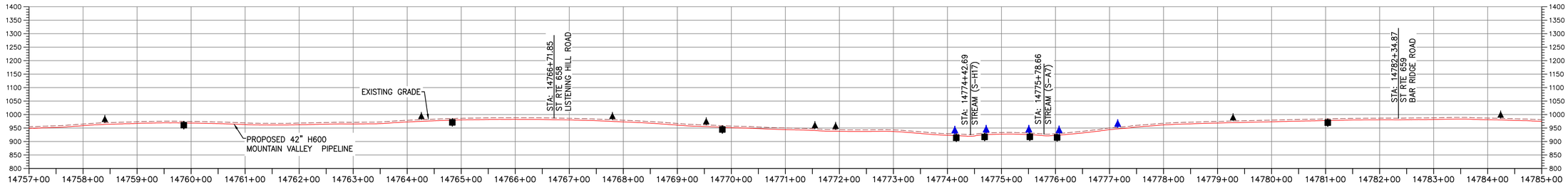
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.35ES OF 15.99ES

TETRA TECH CAD FILE PATH: X:\CAD0_Pittsburgh\EQT\7157 – MVP\15 – Franklin\E&S\ES Version 5.0.0\7157ES15.35(S11).dwg PLOTTED ON: 3/2/2018 6:56 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb



PLAN
SCALE: 1" = 100'



PROFILE
HORIZONTAL SCALE: SCALE: 1" = 100'
VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
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- POND
- WETLAND
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
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EROSION AND SEDIMENT CONTROL PLANS

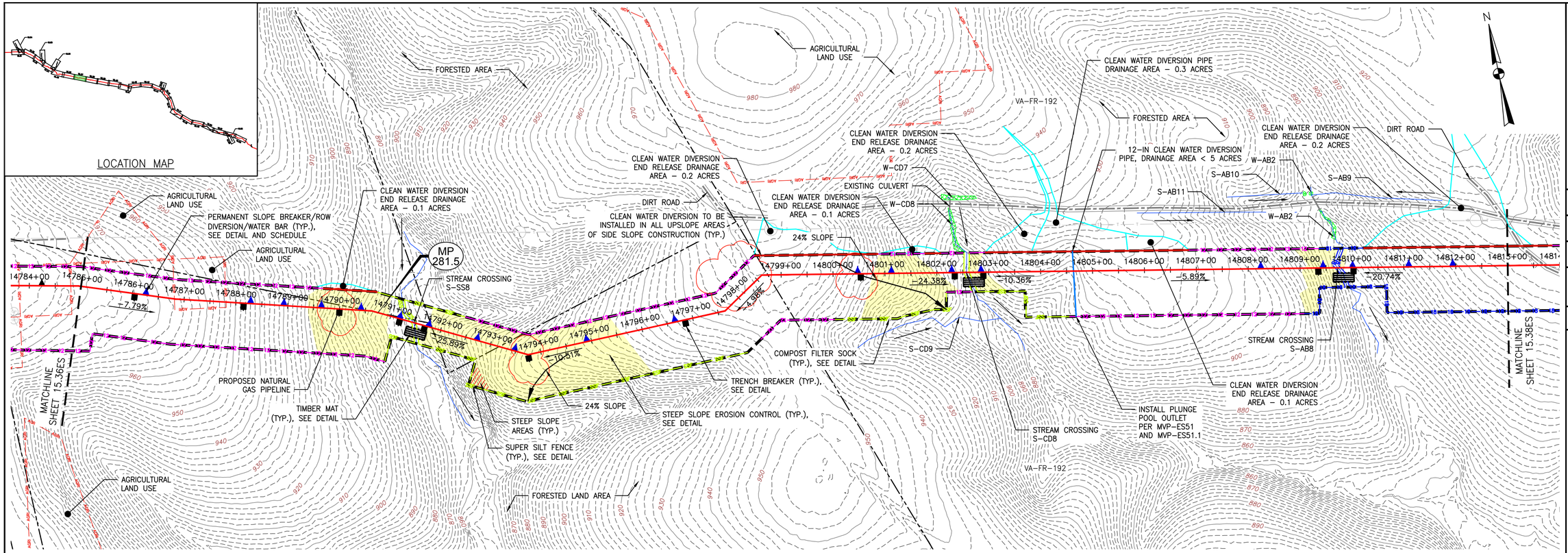
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.36ES OF 15.99ES

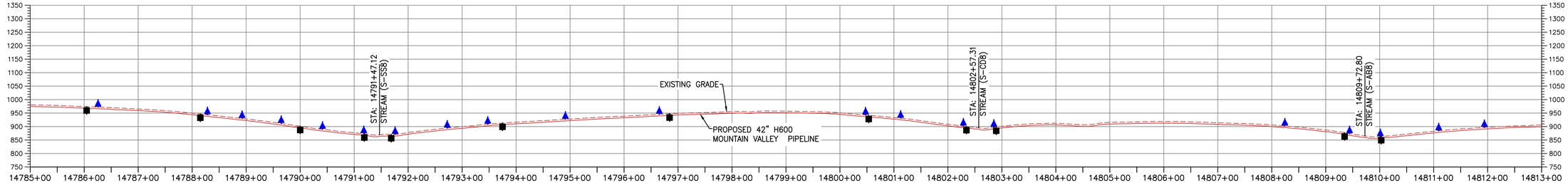
REVISION

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LOCATION MAP



PLAN
SCALE: 1" = 100'
100 0 100 200



PROFILE
HORIZONTAL SCALE: SCALE: 1" = 100'
100 0 100 200
VERTICAL SCALE: SCALE: 1" = 200'
200 0 200 400

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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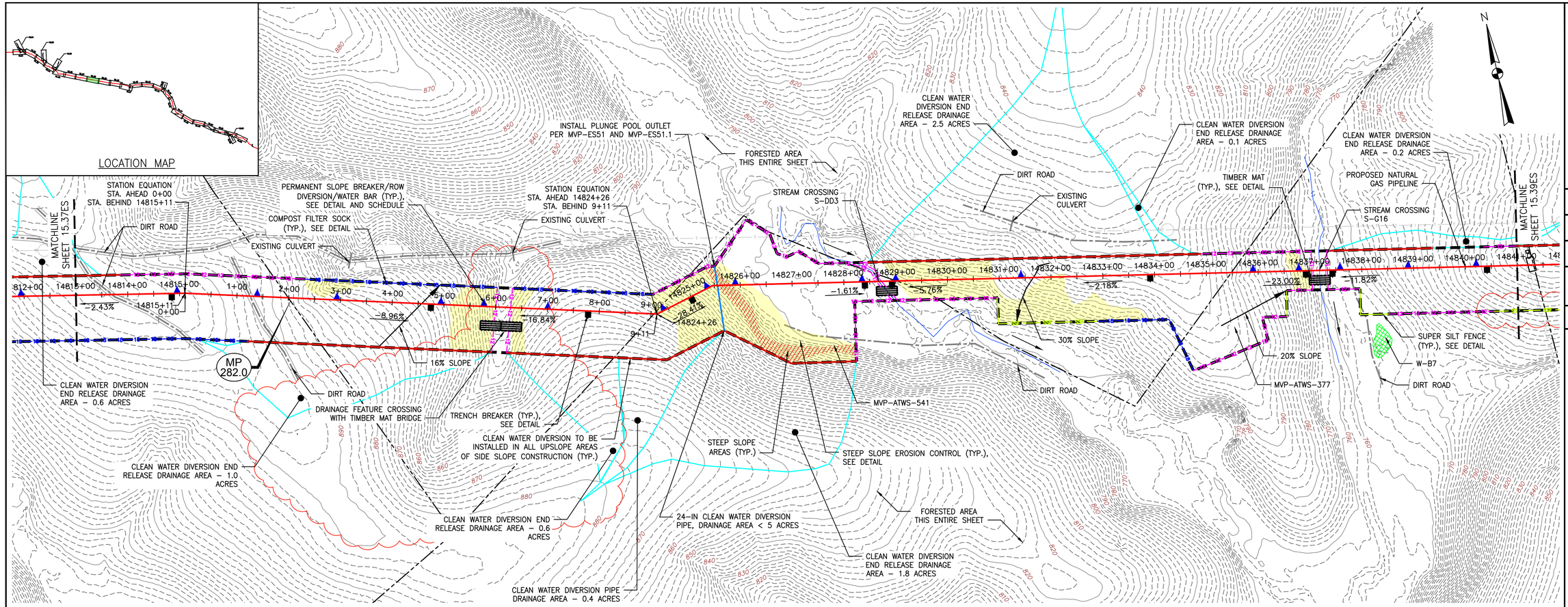
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.37ES OF 15.99ES

REVISION

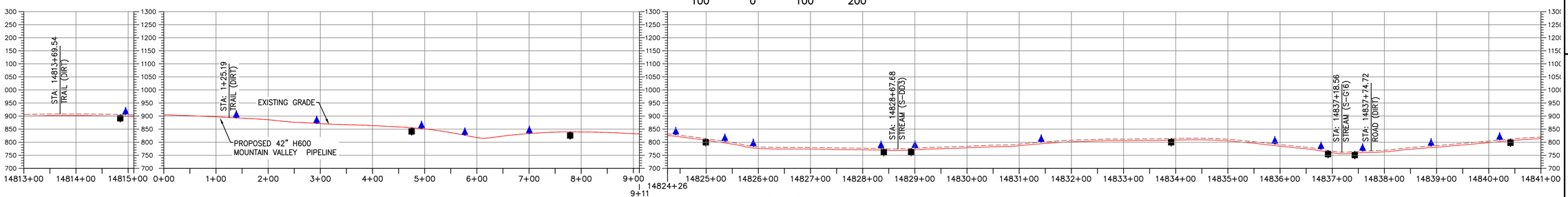
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

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200 0 200 400

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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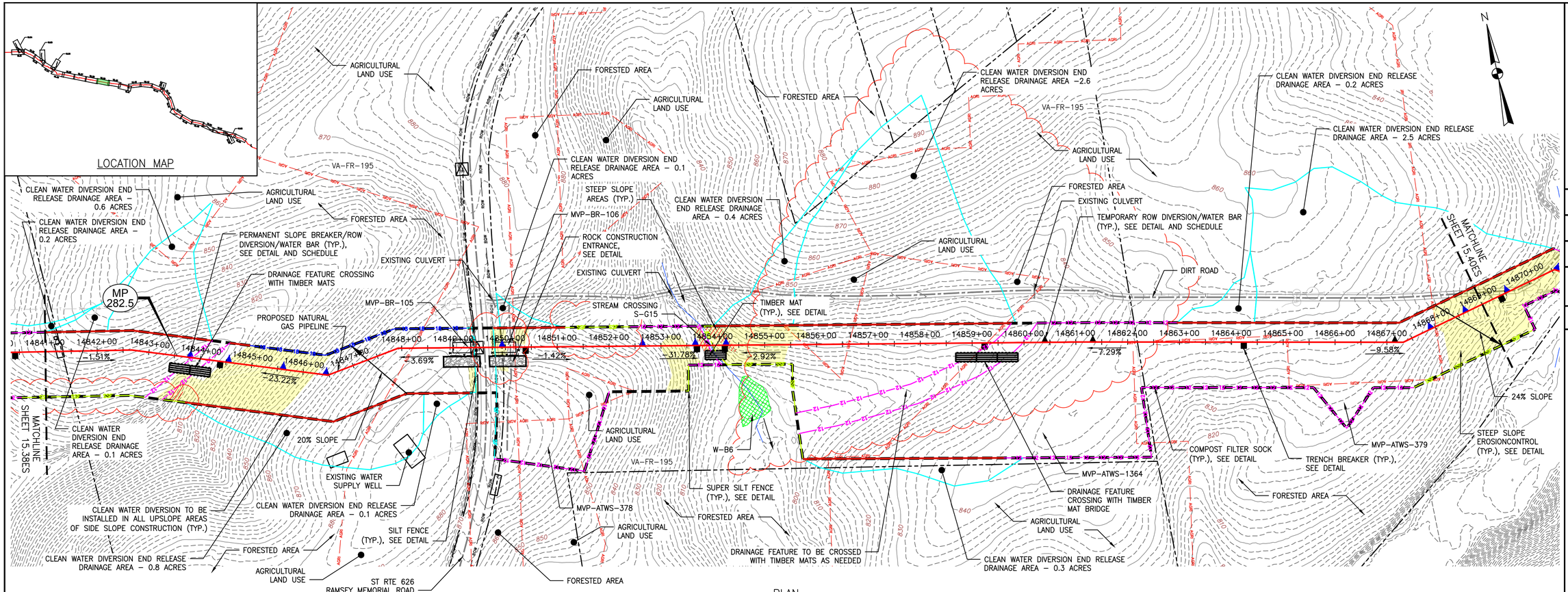
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REVISION	5
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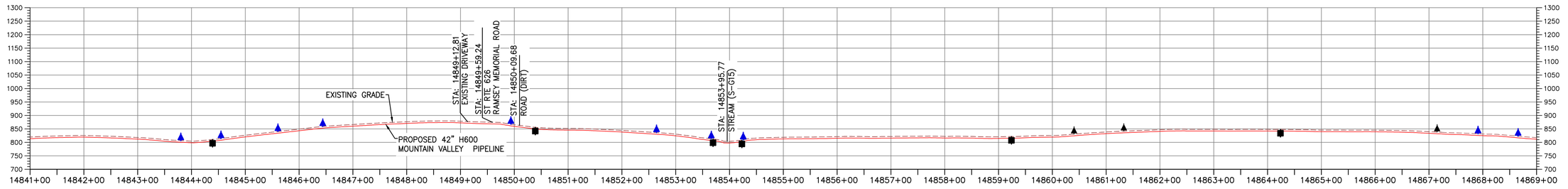
LOCATION MAP



PLAN

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100 0 100 200



PROFILE

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TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 - MVP\15 - Franklin\E&S\ES Version 5.0.0\7157ES15.39(S11).dwg PLOTTED ON: 3/13/2018 9:38 AM PLOTTED BY: Rickabaugh, Greg PLOT FILE: ENVIRONMENTAL_COLOR.ctb

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 11 - FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

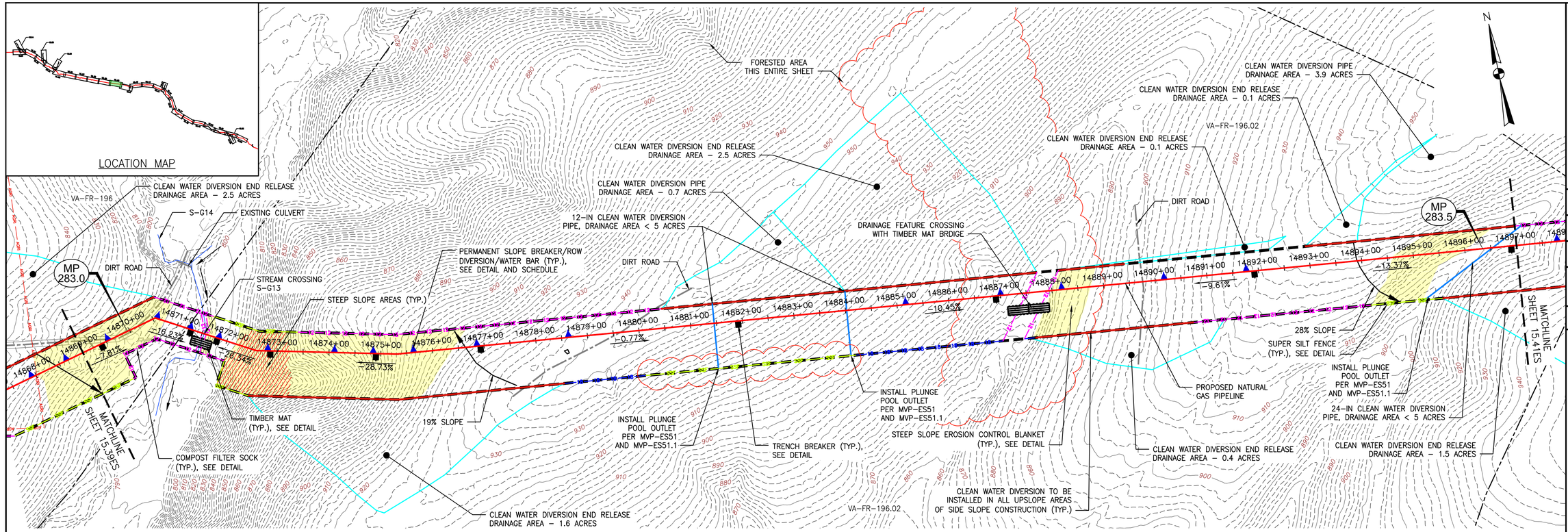
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PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.39ES OF 15.99ES

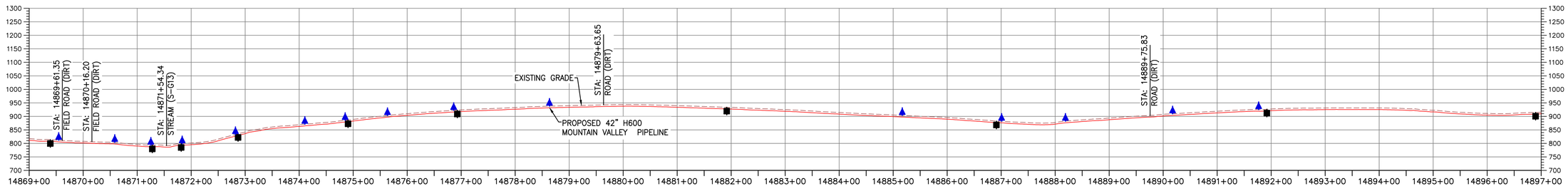
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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- APPALACHIAN NATIONAL SCENIC TRAIL
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DAVID J. WALLNER
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DRAWN BY:	KAL
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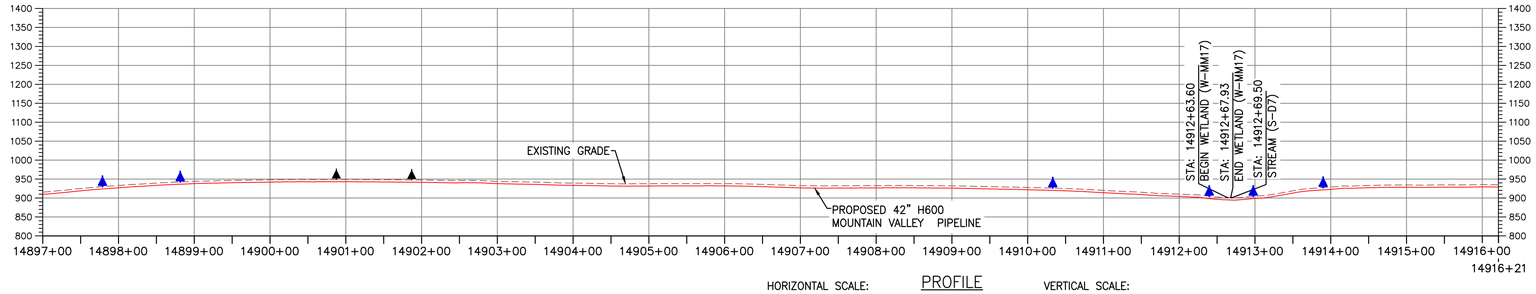
REVISION

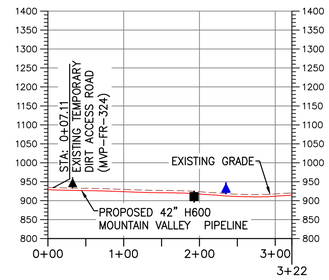
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PROPOSED PERMANENT ACCESS ROAD, WILL BE GRAVELED, MVP-MLV-AR-33 PER MVP-ES33, MVP-ES33.1, AND MVP-ES33.2
MVP-MLV-33
MVP-ATWS-380
MVP-BP-107
ROCK CONSTRUCTION ENTRANCE (TYP.), SEE DETAIL
EXISTING CULVERT
EXISTING ROAD SIGN
MATCHLINE SHEET 15.40ES
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 3.9 ACRES
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 1.5 ACRES
FORESTED AREA
SILT FENCE (TYP.), SEE DETAIL
MVP-BP-108
INSTALL PLUNGE POOL OUTLET PER MVP-ES51 AND MVP-ES51.1
12-IN CLEAN WATER DIVERSION PIPE PER DRAINAGE AREA < 5 ACRES
CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 0.3 ACRES
CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 0.7 ACRES
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 2.0 ACRES
SR 890 SNOW CREEK ROAD
TRENCH BREAKER (TYP.), SEE DETAIL
AGRICULTURAL LAND USE
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 0.1 ACRES
STREAM CROSSING S-D7
TIMBER MAT (TYP.), SEE DETAIL
WETLAND CROSSING W-MM17
CLEAN WATER DIVERSION TO BE INSTALLED IN ALL UPSLOPE AREAS OF SIDE SLOPE CONSTRUCTION
SR 782 ASHWORTH ROAD
TEMPORARY ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE
EQUATION STATION STA. AHEAD: 0+00 STA. BEHIND: 14916+21.30
14916+21
0+00
PROPOSED NATURAL GAS PIPELINE
MATCHLINE SHEET 15.42ES
S-D6
PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE
MVP-ATWS-1284
FRANKLIN COUNTY
PITTSYLVANIA COUNTY
COMPOST FILTER SOCK (TYP.), SEE DETAIL
MVP-ATWS-1283
EXISTING TEMPORARY DIRT ACCESS ROAD MVP-FR-324, TO BE RESTORED TO PRE-EXISTING CONDITIONS.
CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 2.2 ACRES
MVP-ATWS-650
ROCK CONSTRUCTION ENTRANCE, SEE DETAIL
N

LOCATION MAP

PLAN
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100 0 100 200





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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

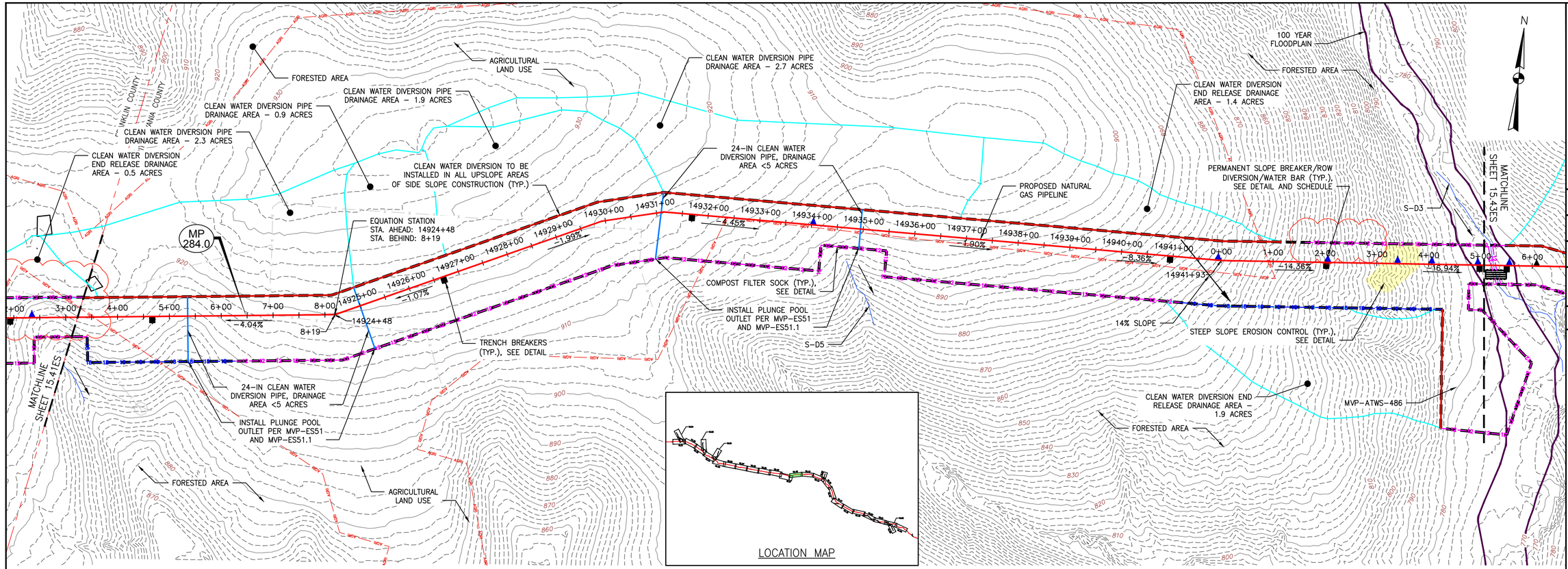
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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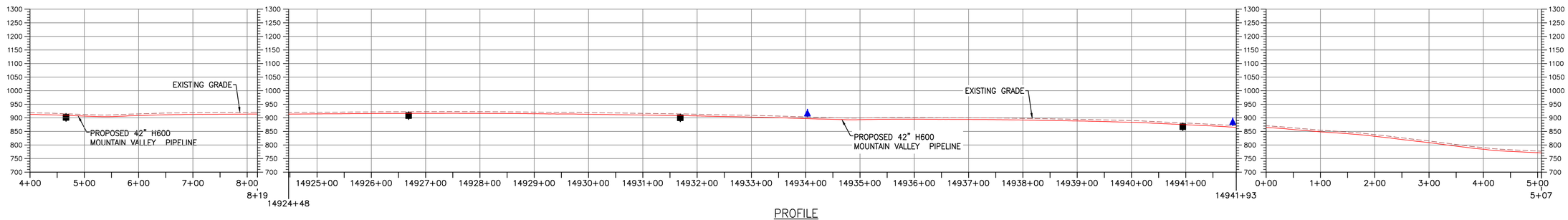
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PLAN

SCALE: 1" = 100'

100 0 100 200



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100 0 100 200

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

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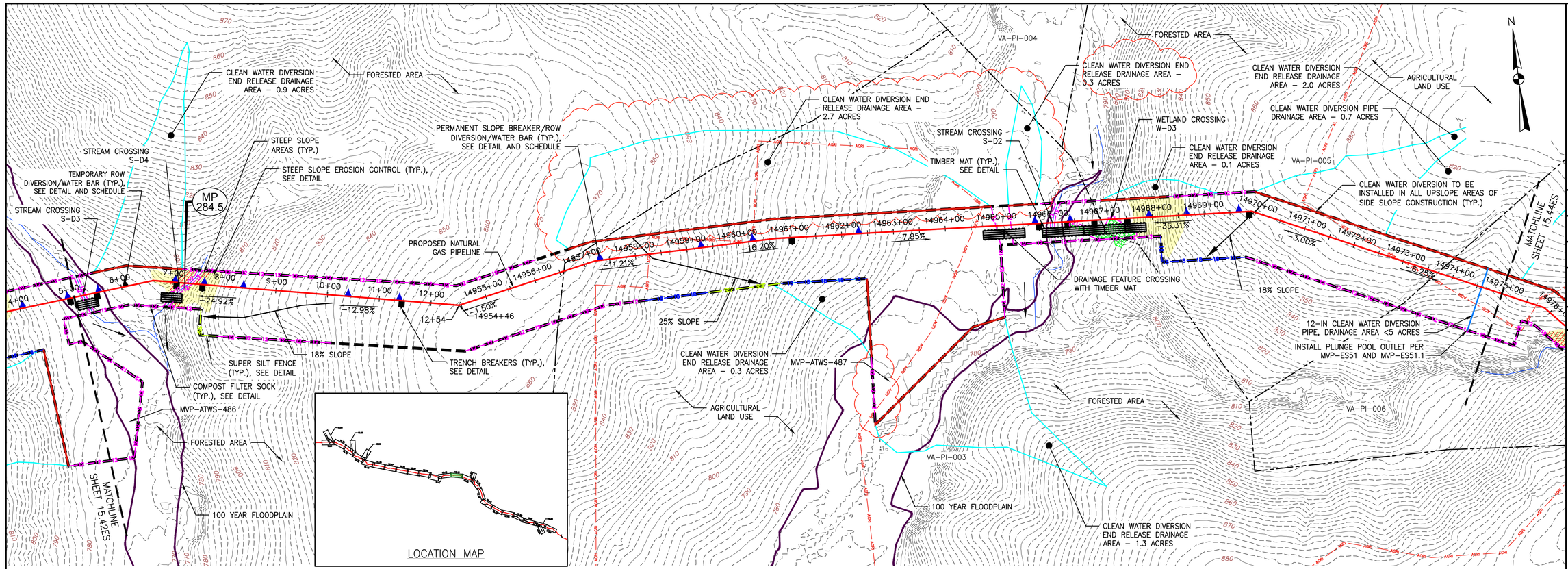
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DRAWN BY:	KAL
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REVISION

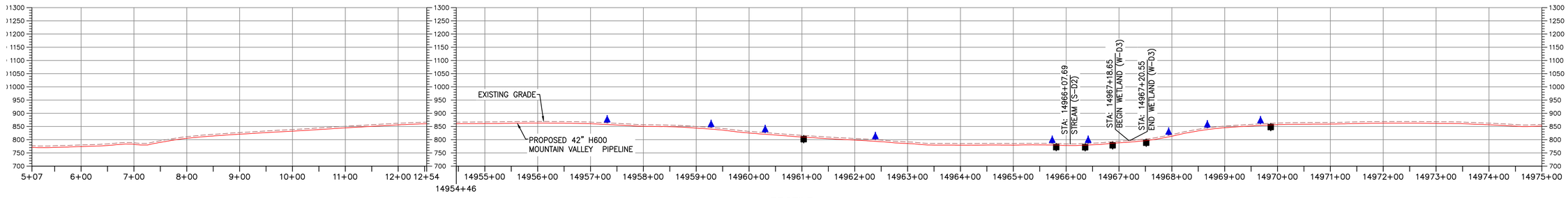
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PLAN

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100 0 100 200



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5. WHERE CONSTRUCTION CONDITIONS PRECLUDE THE USE OF DIVERSION DITCHES DUE TO SITE CONDITIONS THE CONTRACTOR WILL INSTALL SILT FENCE AT THE DIRECTION OF MVP.
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8. ALL NON VMRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP-ES49.

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5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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PITTSBURGH, PA 15220

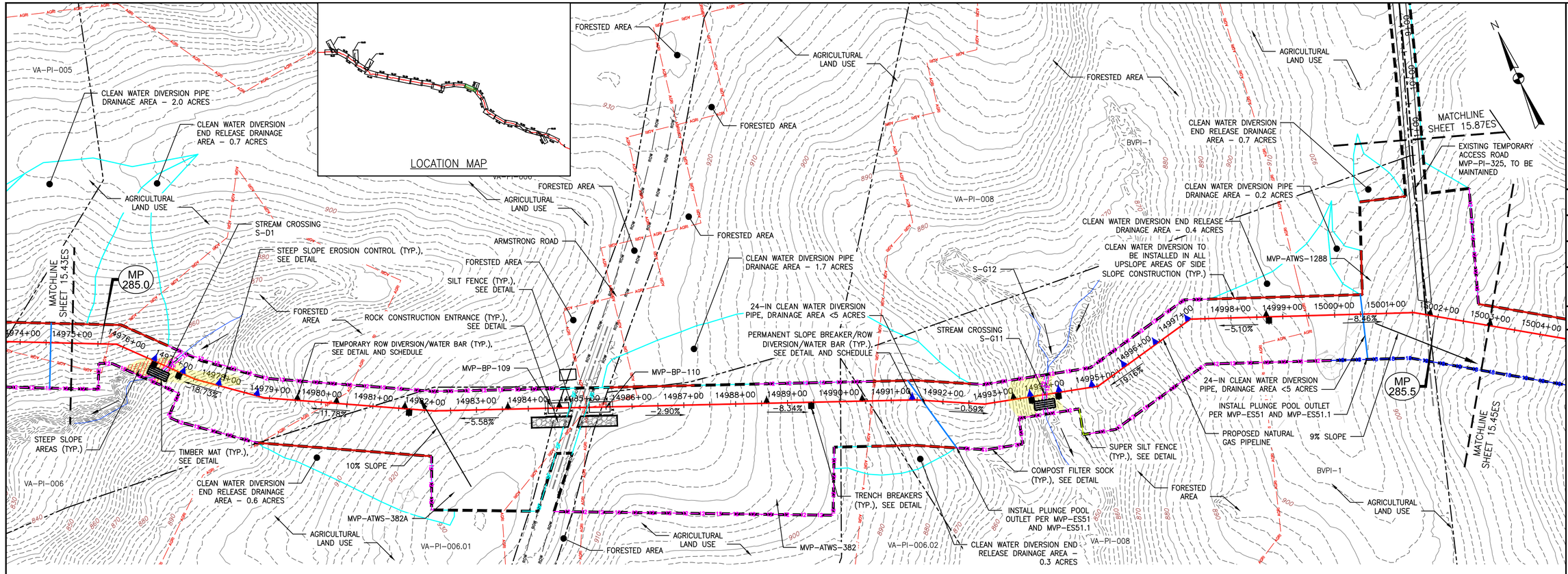
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.43ES OF 15.99ES

REVISION

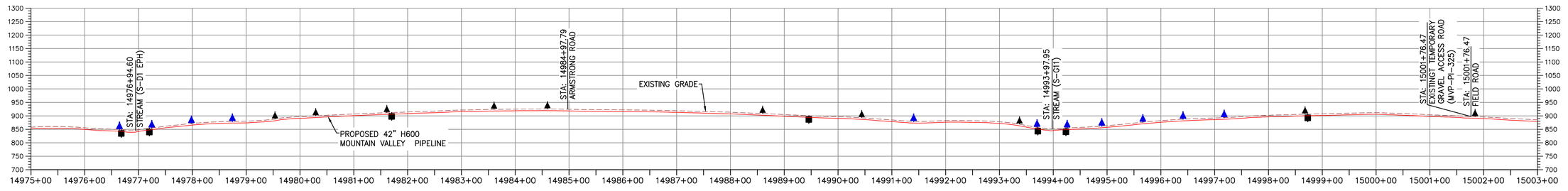
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- ORANGE CONSTRUCTION SAFETY FENCE
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

NOTES:

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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

555 SOUTHPOINTE BOULEVARD, SUITE 200

CANONSBURG, PA 15317

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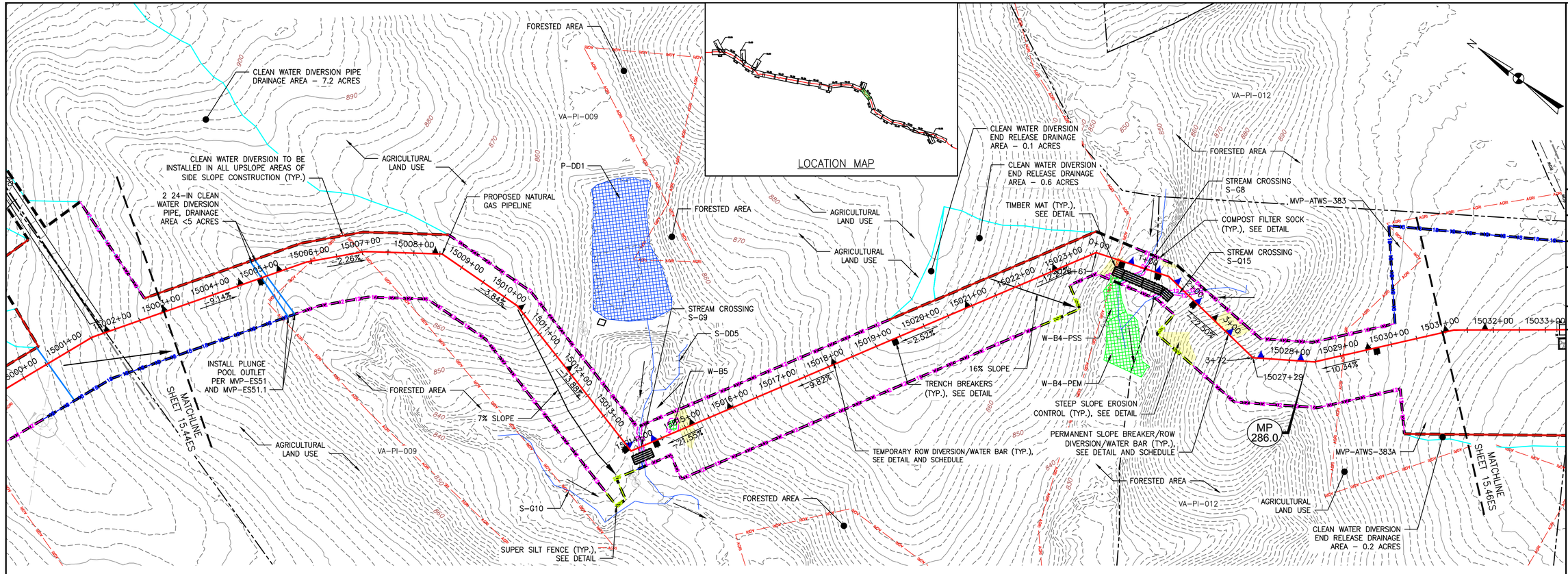
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.44ES OF 15.99ES

REVISION

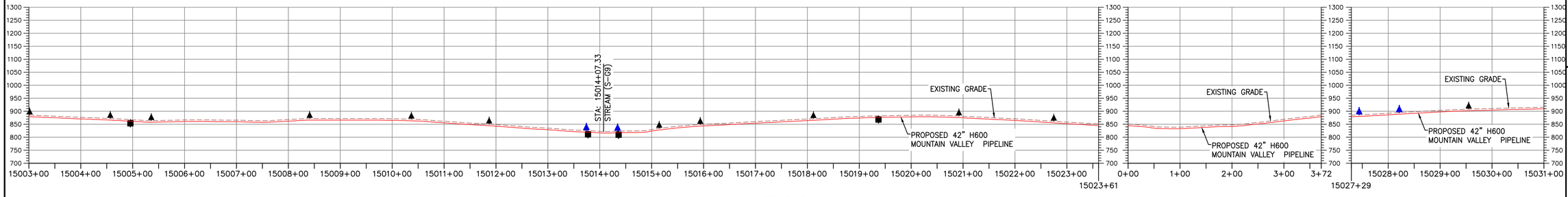
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

100 0 100 200 200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — ACID FORMING MATERIAL
- AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 24 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

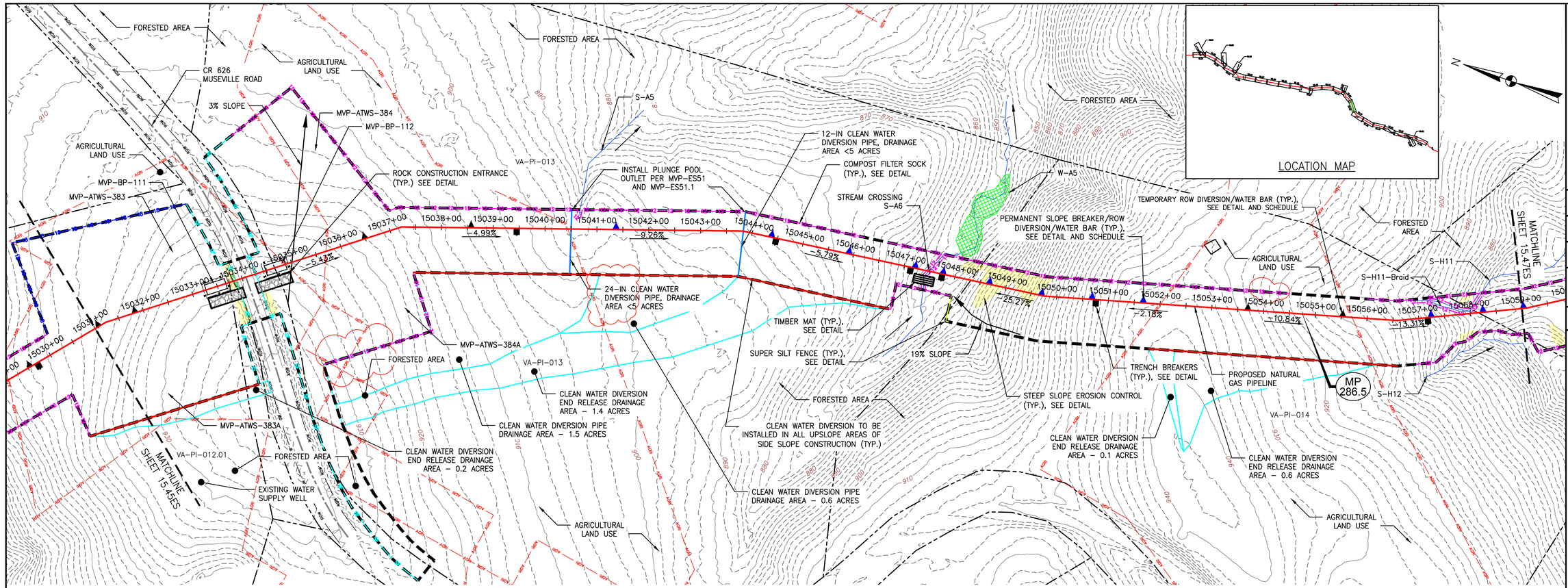
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.45ES OF 15.99ES

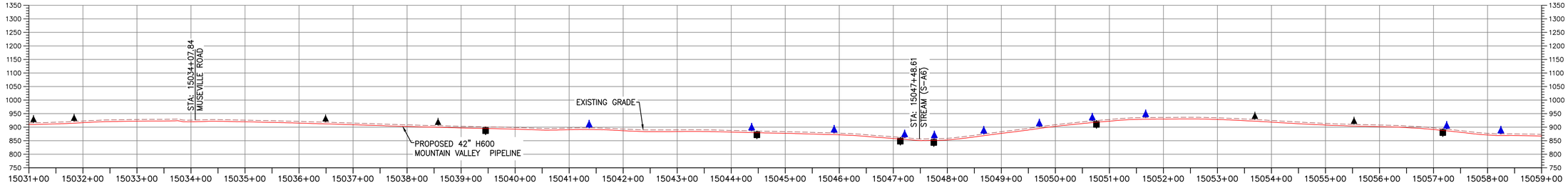
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
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- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP–ES37)
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- PROPOSED TRENCH BREAKER (SEE DETAIL MVP–20)
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NOTES:

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4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

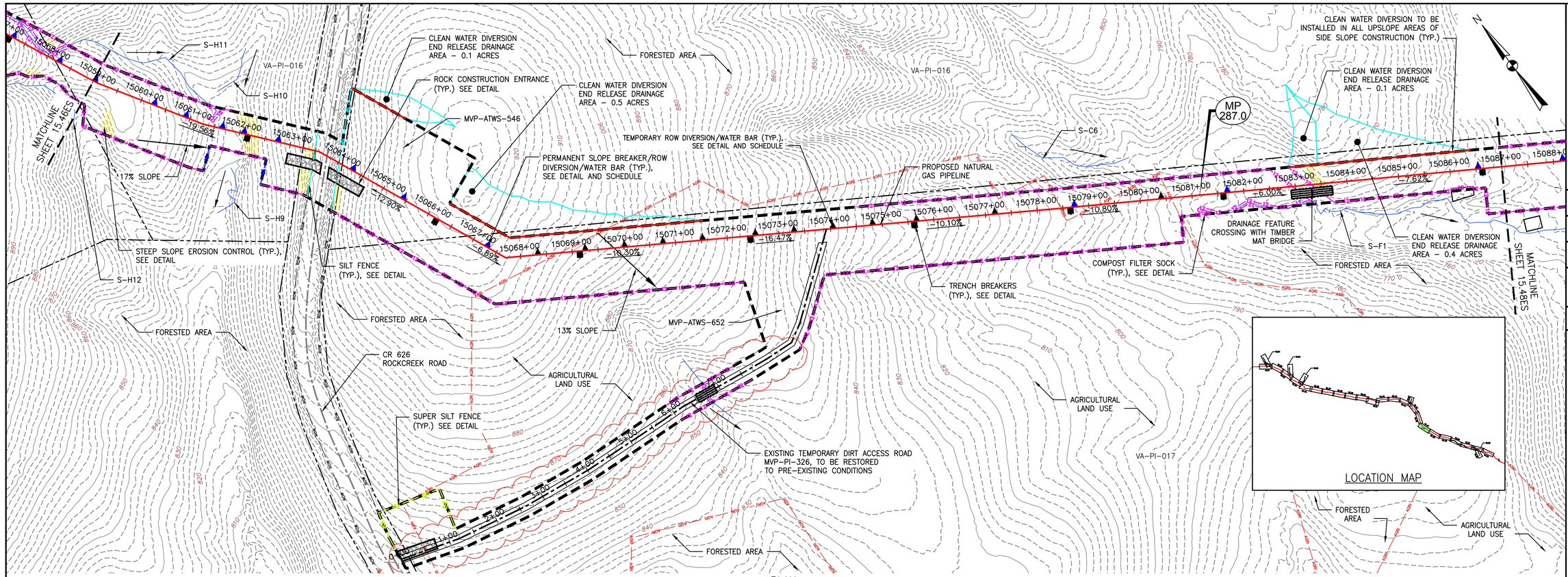
MOUNTAIN VALLEY PIPELINE, LLC
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
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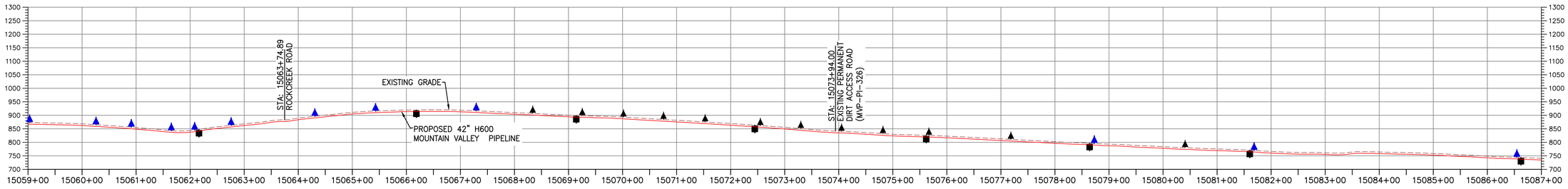
DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.46ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

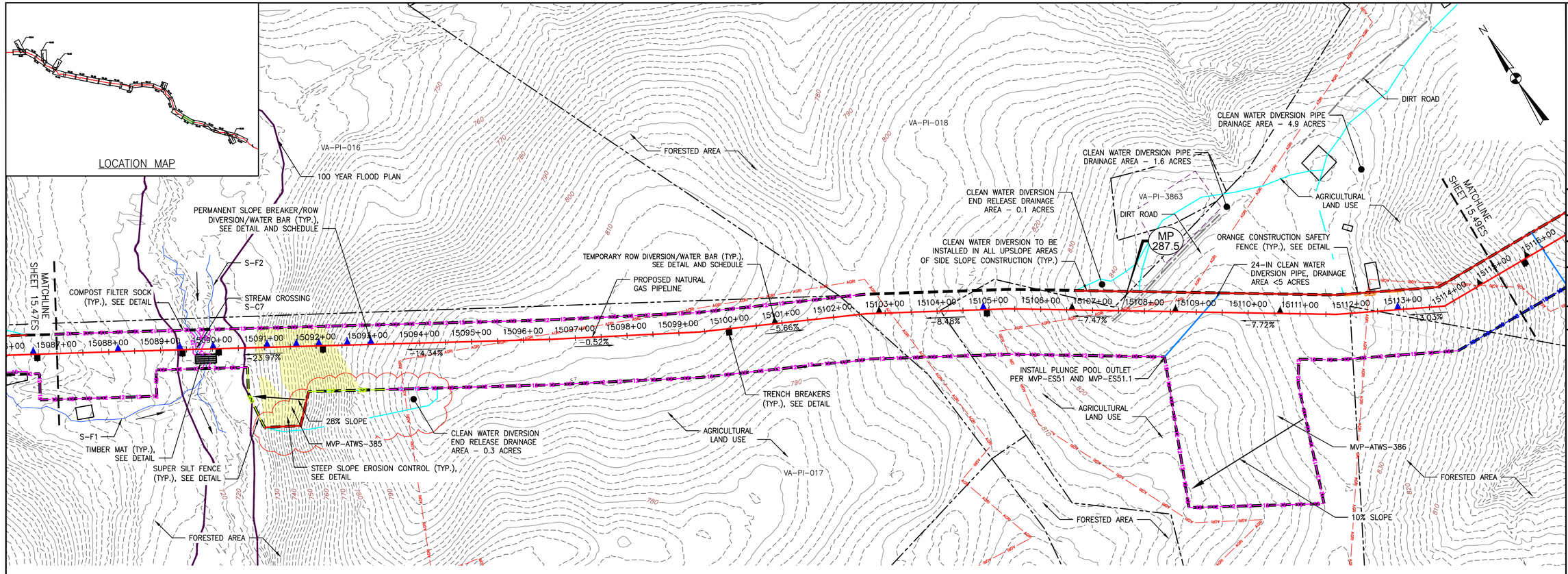
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057503
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5

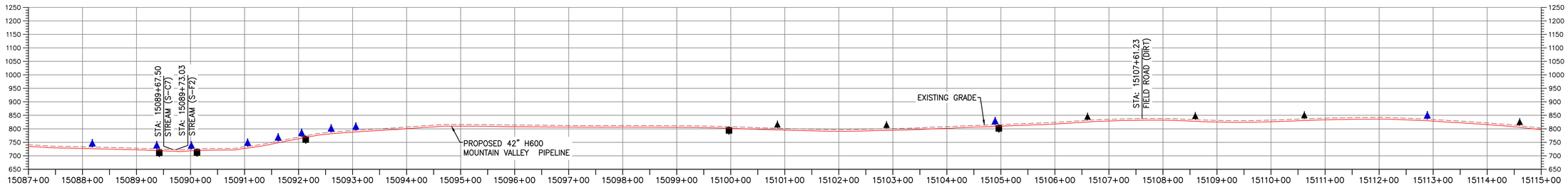
SHT. NO. 15.47ES OF 15.99ES

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PLAN

SCALE: 1" = 100'



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- ORANGE CONSTRUCTION SAFETY FENCE
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM CROSSING CONSTRUCTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

NOTES:

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6. DRAINAGE FEATURE CROSSINGS TO BE PERFORMED PER DETAIL MVP-ES49.
7. TEMPORARY ACCESS ROAD CROSSING OF STREAMS AND WETLANDS WILL UTILIZE TIMBERMATS. ANY PERMANENT ROAD CROSSINGS WILL BE CONDUCTED VIA CULVERTS. NO UNPERMITTED IMPACT TO STREAMS WILL OCCUR AS A RESULT OF ROAD OR PIPELINE CROSSINGS AND ALL ESC BMP'S WILL BE INSTALLED TO CONTINUE THE STREAM FLOW.
8. ALL NON VMRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP-ES49.

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Mountain Valley PIPELINE

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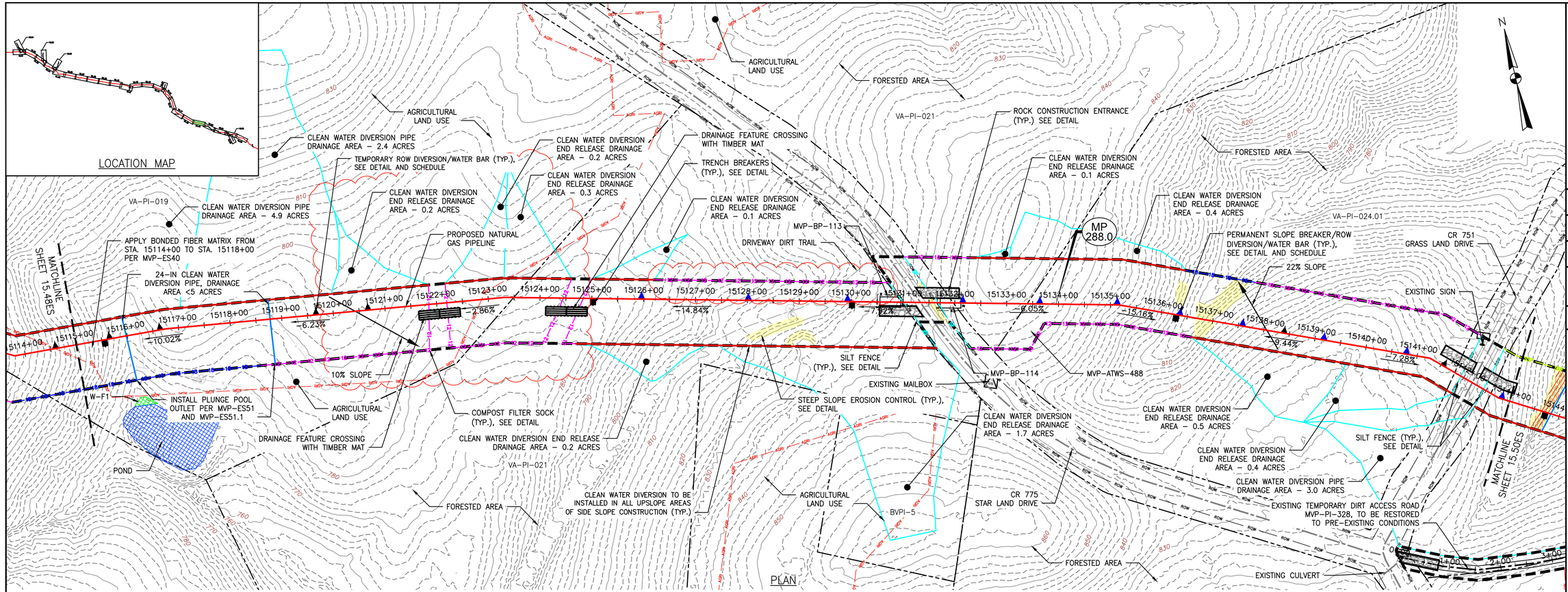
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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REVISION

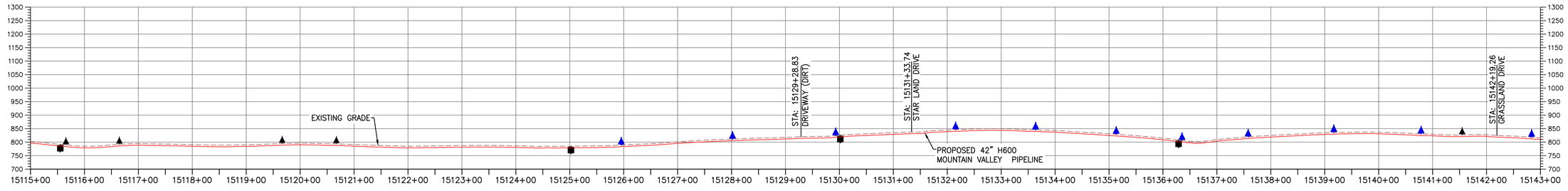
LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

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Mountain Valley PIPELINE

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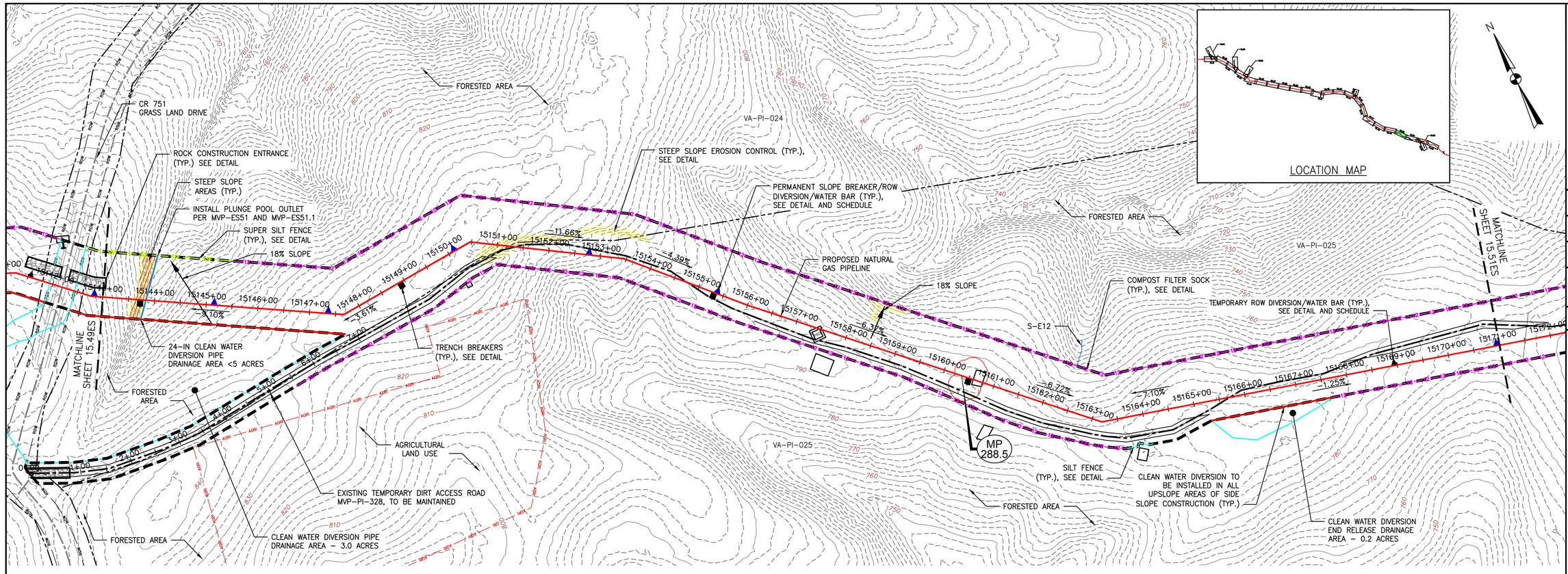
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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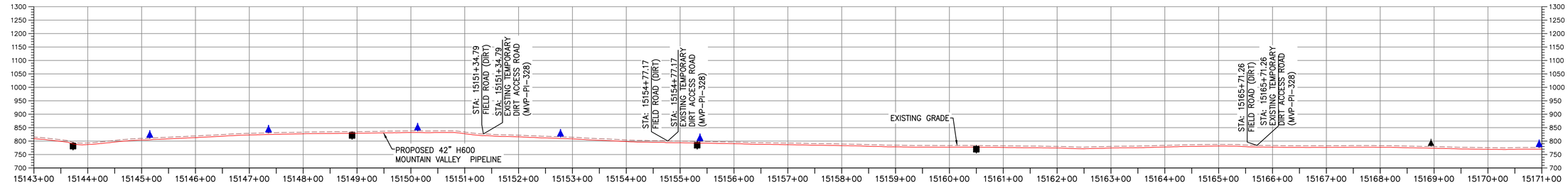
REVISION



PLAN

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100 0 100 200



PROFILE

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100 0 100 200

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200 0 200 400

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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

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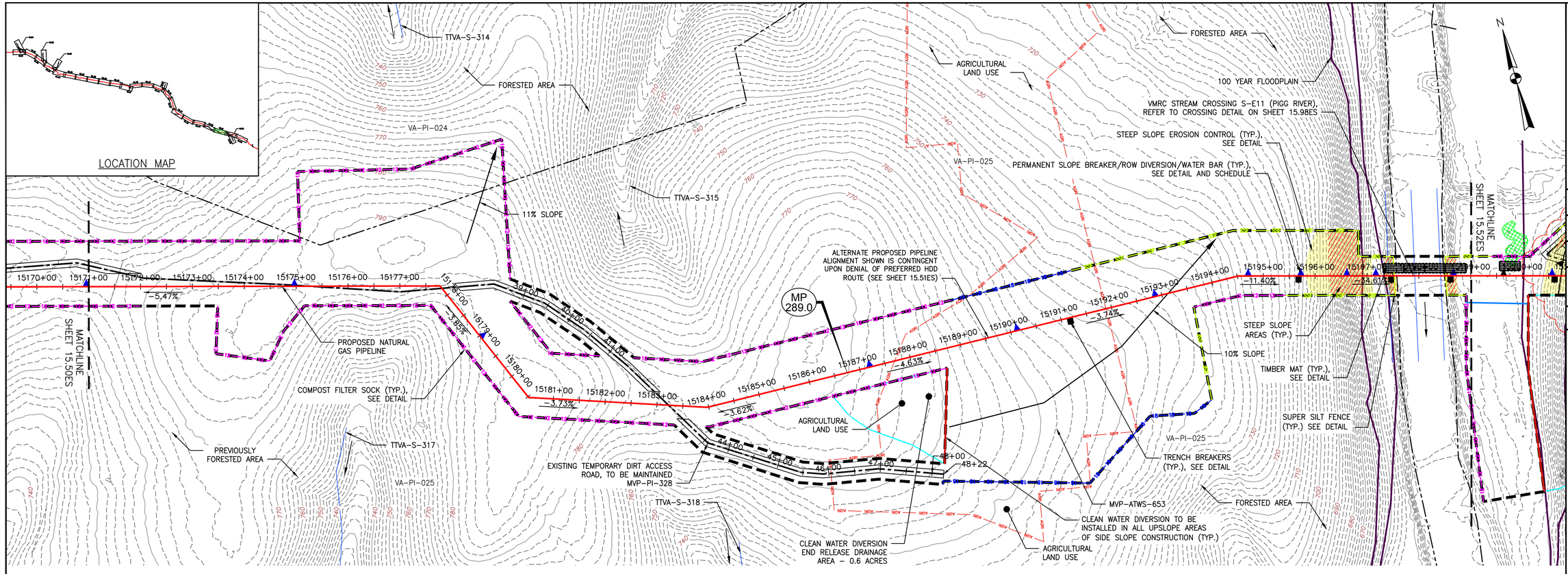
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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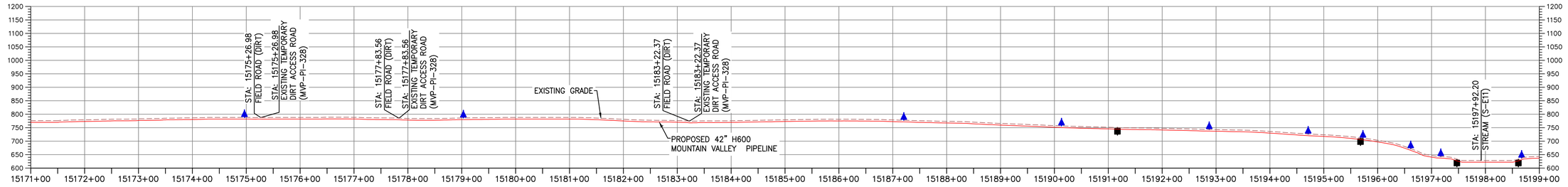
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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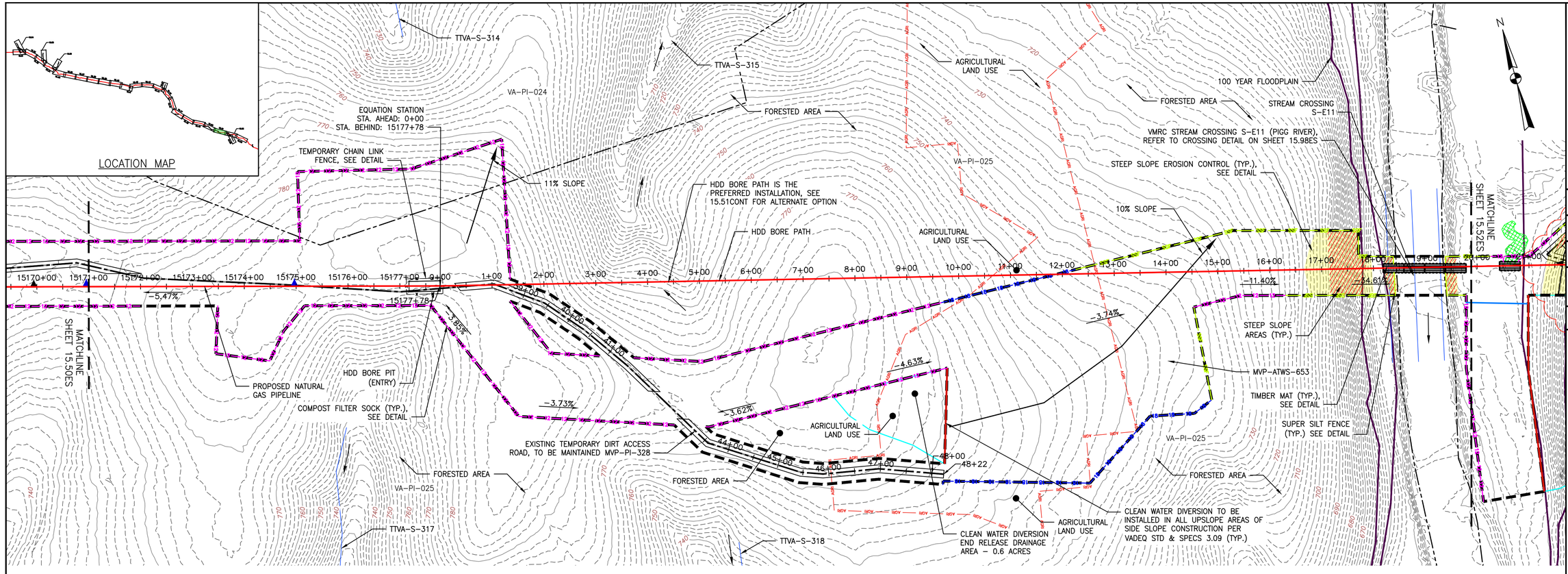
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REVISION

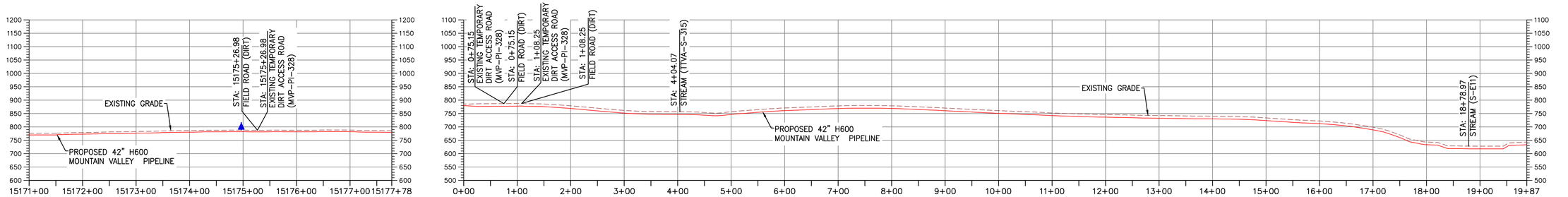
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PLAN

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100 0 100 200



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- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- ORANGE CONSTRUCTION SAFETY FENCE
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
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- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
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5. WHERE CONSTRUCTION CONDITIONS PRECLUDE THE USE OF DIVERSION DITCHES DUE TO SITE CONDITIONS THE CONTRACTOR WILL INSTALL SILT FENCE AT THE DIRECTION OF MVP.
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7. TEMPORARY ACCESS ROAD CROSSING OF STREAMS AND WETLANDS WILL UTILIZE TIMBERMATS. ANY PERMANENT ROAD CROSSINGS WILL BE CONDUCTED VIA CULVERTS. NO UNPERMITTED IMPACT TO STREAMS WILL OCCUR AS A RESULT OF ROAD OR PIPELINE CROSSINGS AND ALL ESC BMP'S WILL BE INSTALLED TO CONTINUE THE STREAM FLOW.
8. ALL NON VMRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP-ES49.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
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3	01/07/18	KAL	RE	DW	ADDRES VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

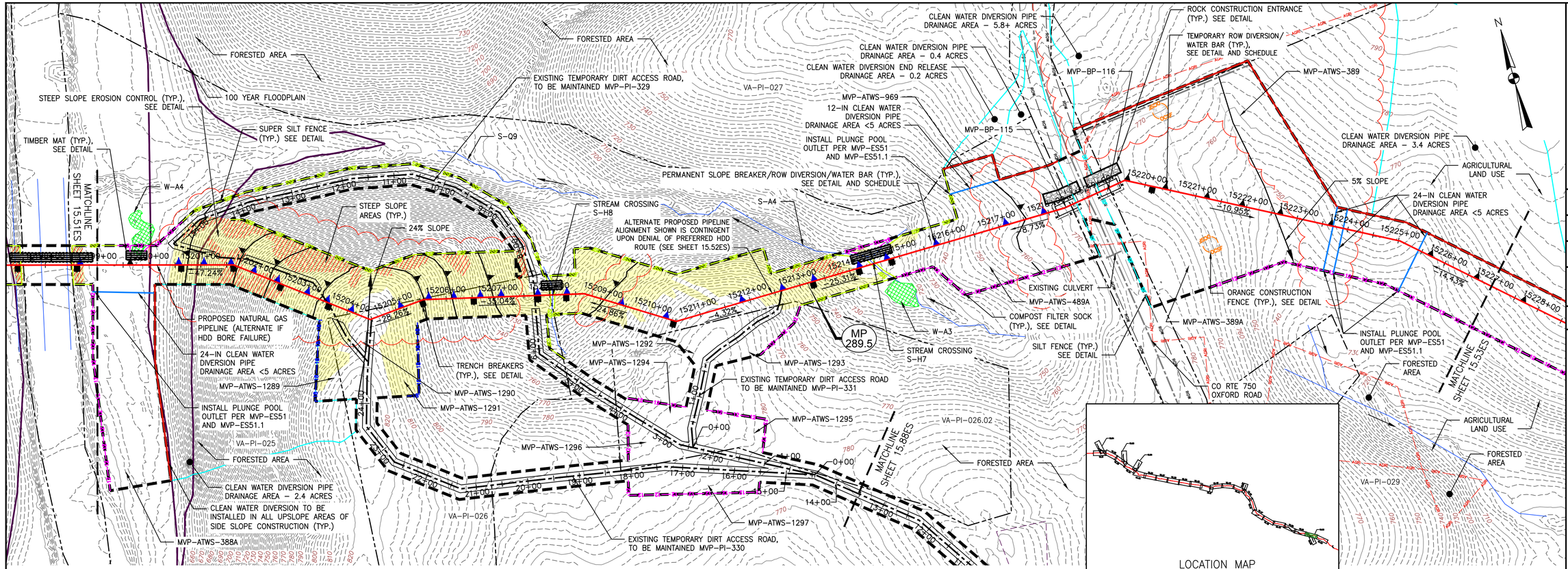
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.51ES OF 15.99ES

REVISION

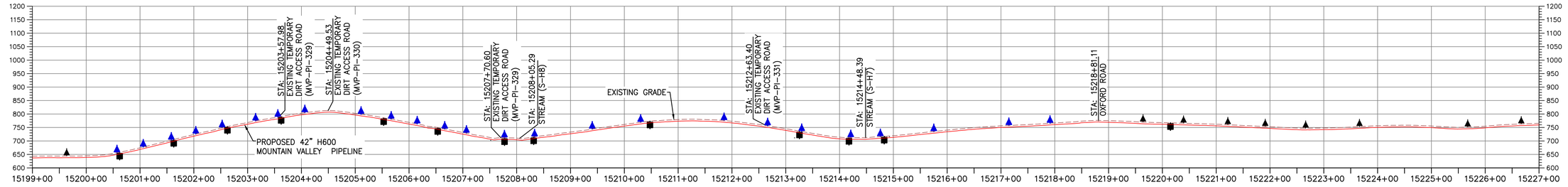
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

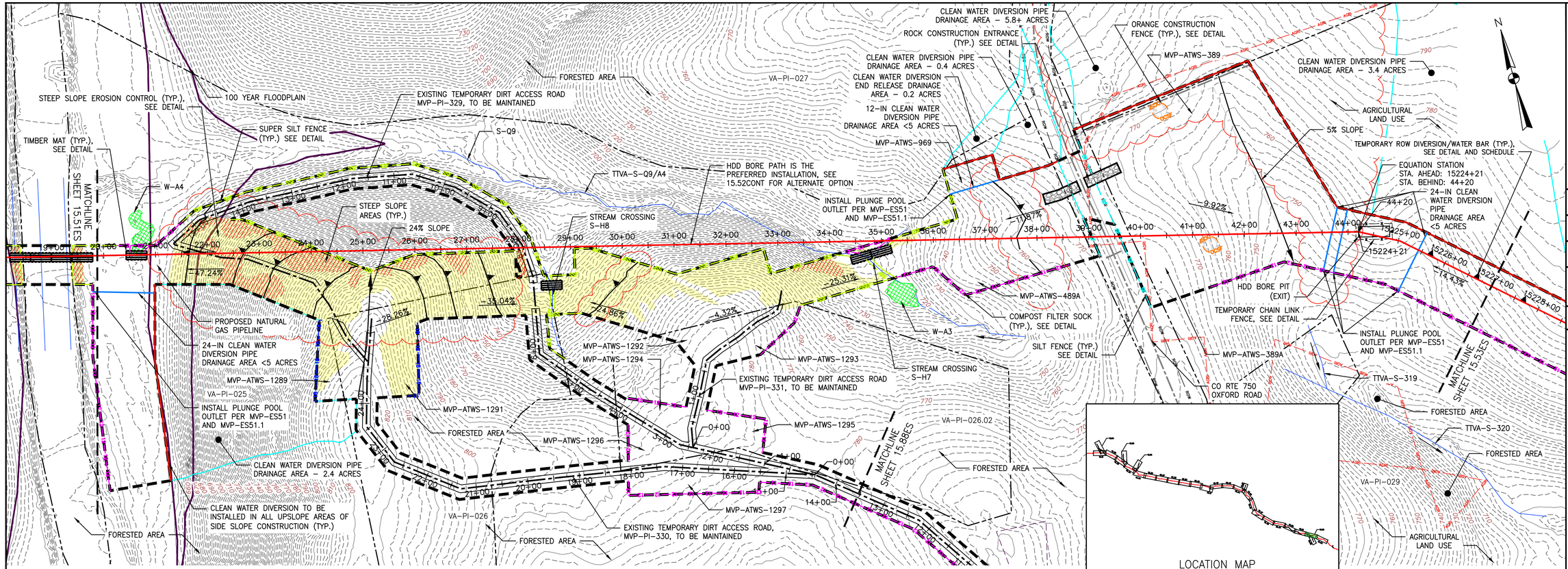
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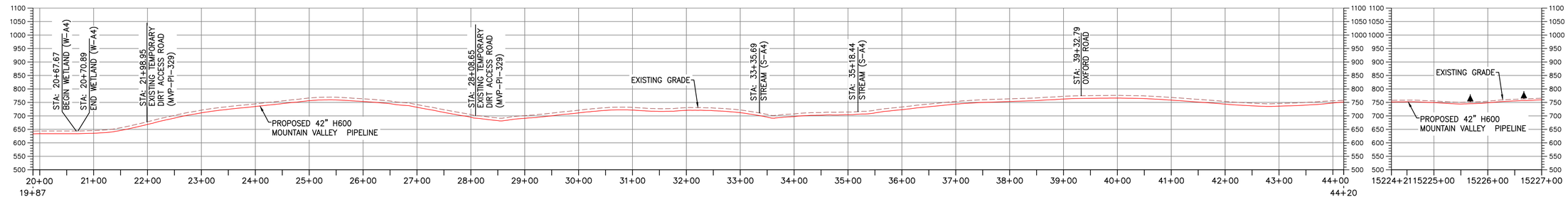
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO. 15.52ESCONT OF	15.99ES

REVISION





PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'
100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'
200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
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- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
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- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
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- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
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- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 11 - PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

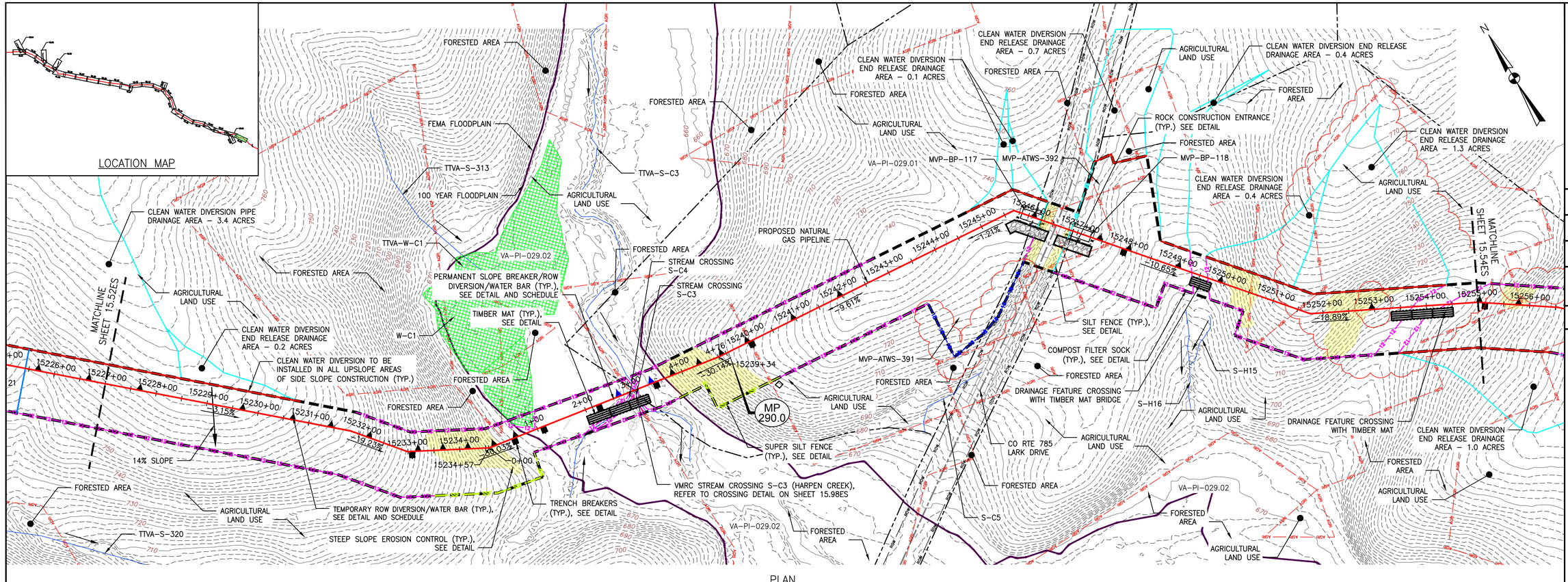
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.52ES OF 15.99ES

REVISION

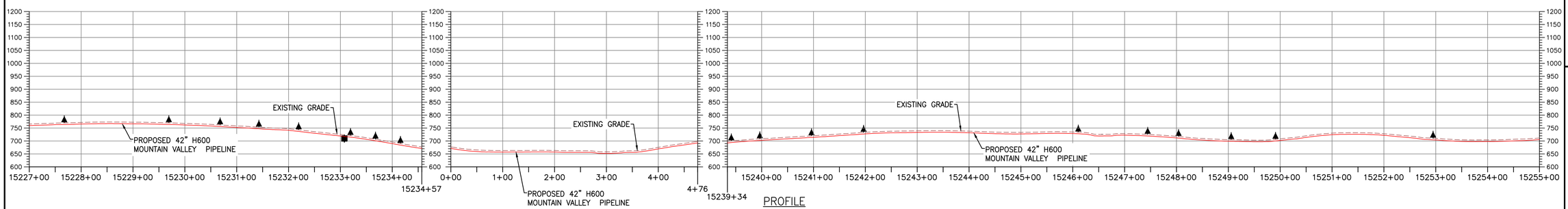
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
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- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

555 SOUTHPOINTE BOULEVARD, SUITE 200

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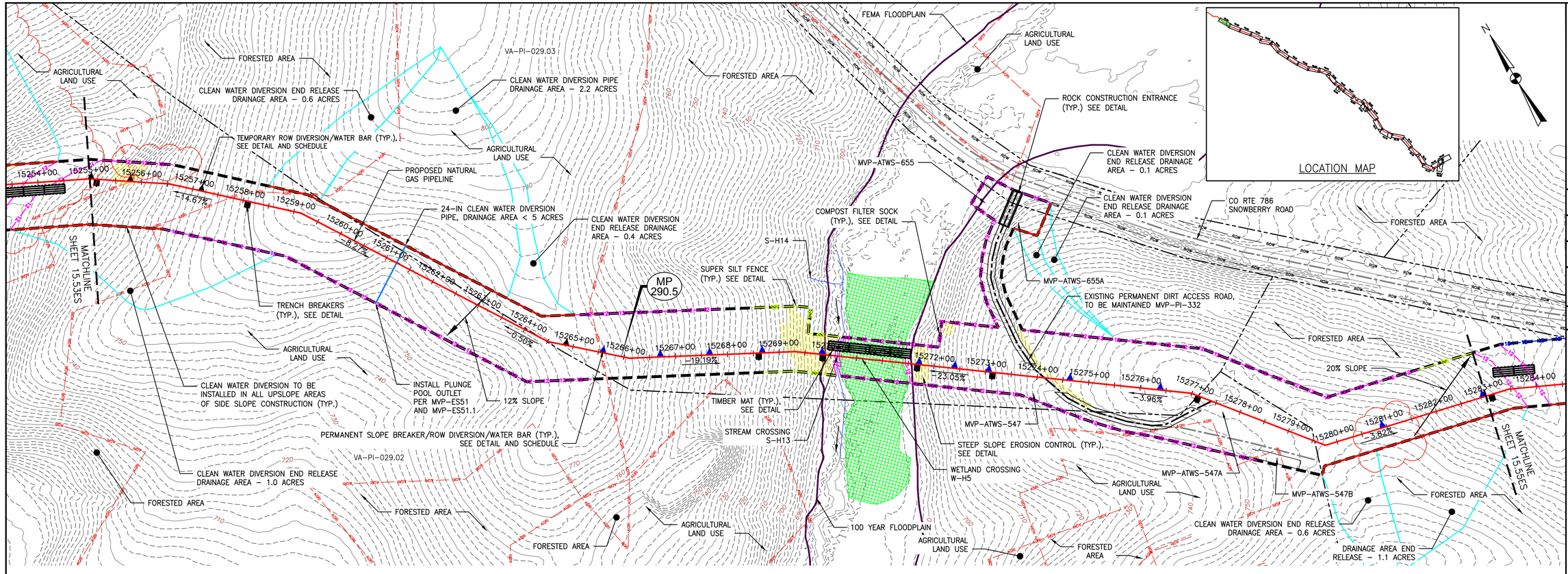
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
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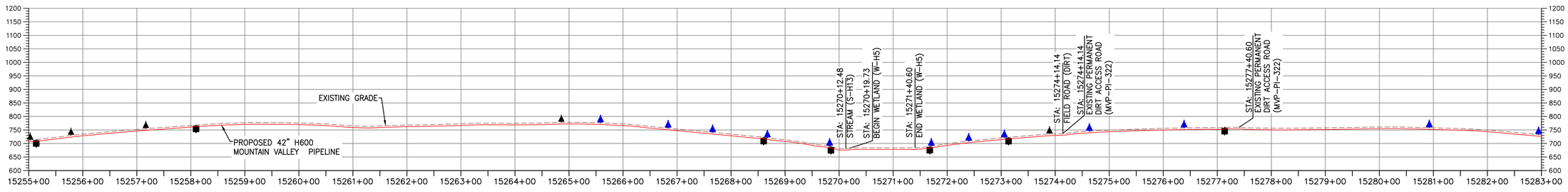
REVISION



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL (ANST)
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
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- ACID FORMING MATERIAL (AFM)
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- PROPOSED SILT FENCE (SF) (SEE NOTE 5)
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8. ALL NON VMRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP–ES49.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	ADDRES VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.54ES OF 15.99ES

REVISION

TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\16 – Pittsylvania\E&S\ES Version 5.0.0\7157ES15.54(S11).dwg PLOTTED ON: 3/13/2018 10:43 AM PLOTTED BY: Rickabaugh, Greg PLOT FILE: ENVIRONMENTAL_COLOR.ctb

LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200

PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGRI — AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 24 — 24 — 24 — 24 PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

555 SOUTHPOINTE BOULEVARD, SUITE 200

CANONSBURG, PA 15317

TETRA TECH

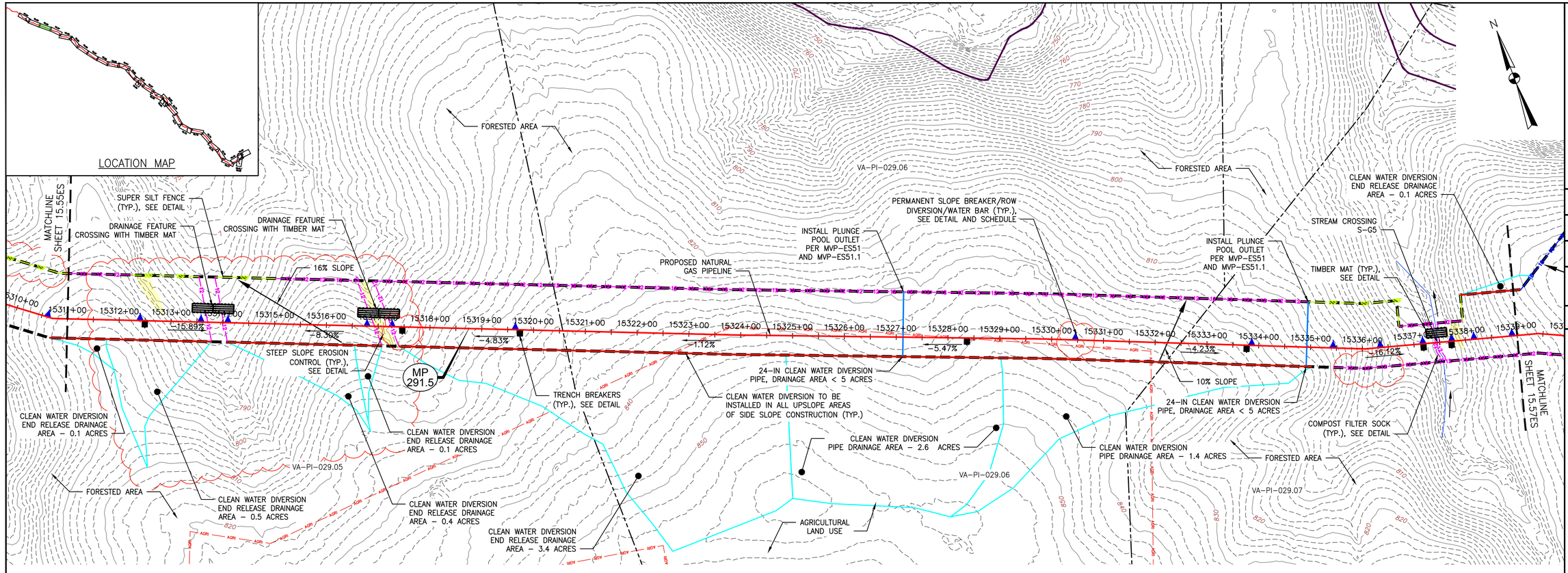
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

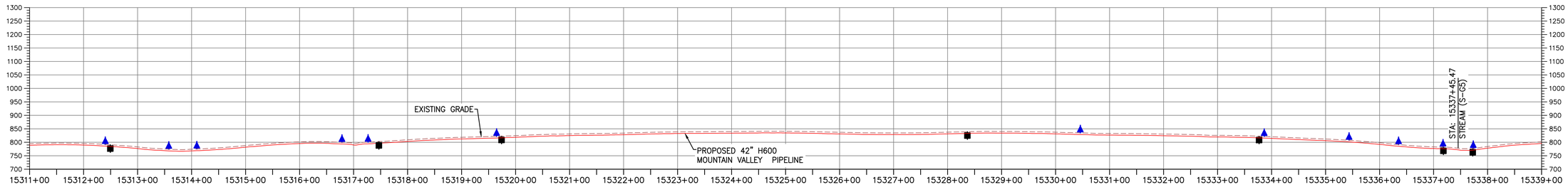
DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.55ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

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- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 11 - PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

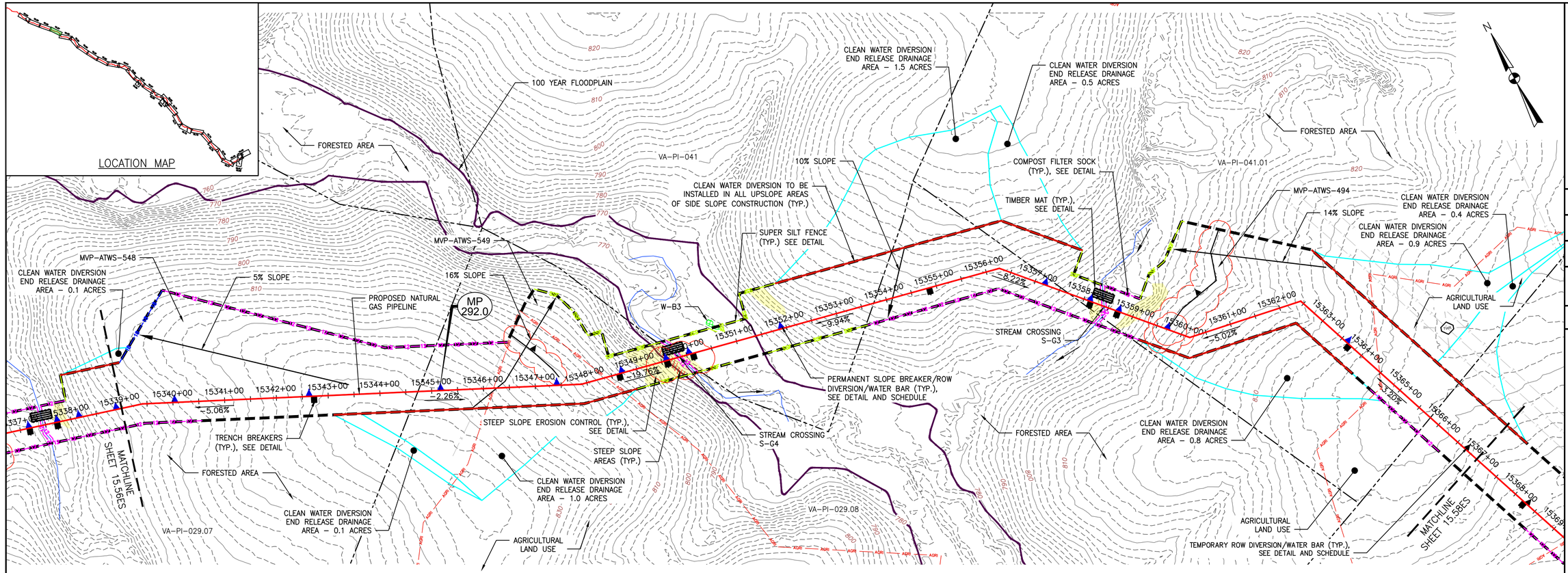
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.56ES OF 15.99ES

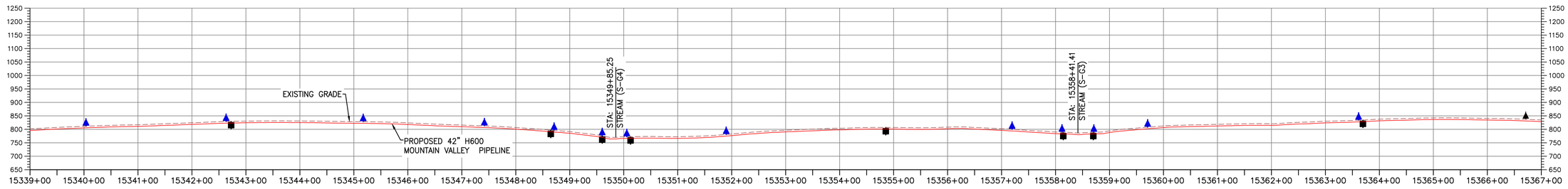
REVISION



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

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TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\16 – Pittsylvania\E&S\ES Version 5.0.0\7157ES15.57(S11).dwg PLOTTED ON: 3/13/2018 11:08 AM PLOTTED BY: Rickabaugh, Greg PLOT FILE: ENVIRONMENTAL_COLOR.ctb

REVISIONS:

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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.57ES OF 15.99ES

LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200

PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

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MOUNTAIN VALLEY PIPELINE, LLC
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CANONSBURG, PA 15317

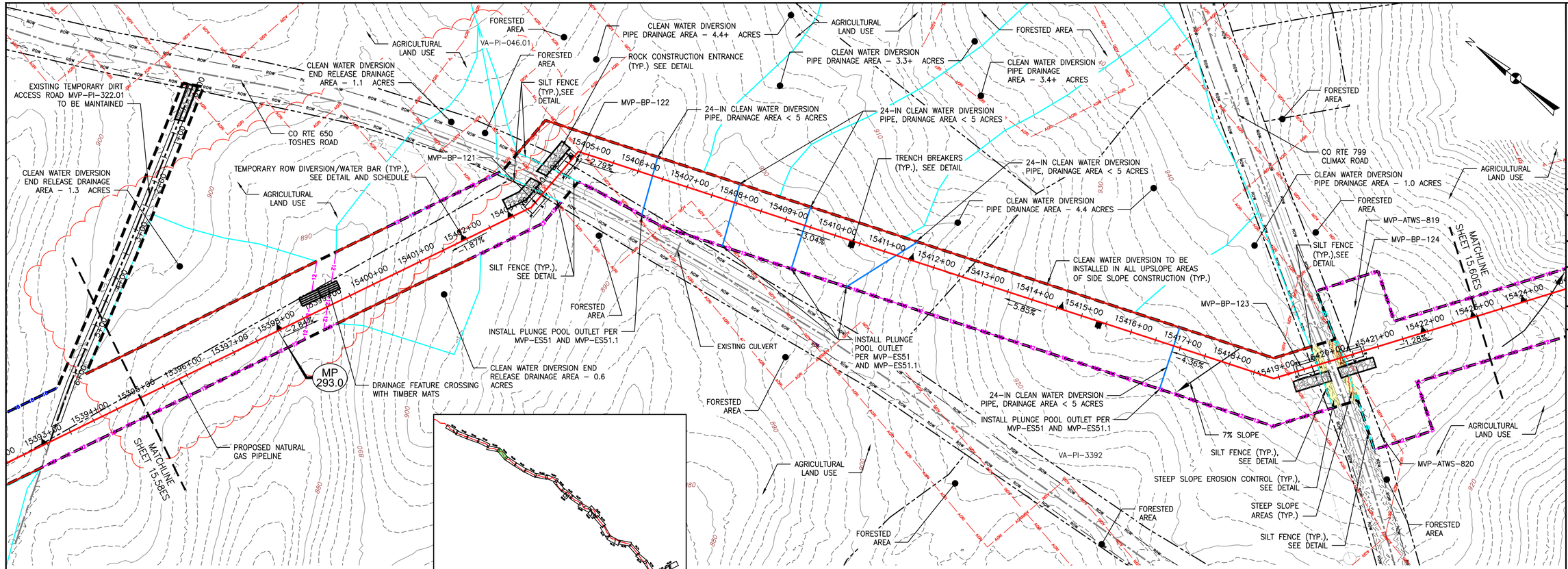
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
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PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.58ES OF 15.99ES

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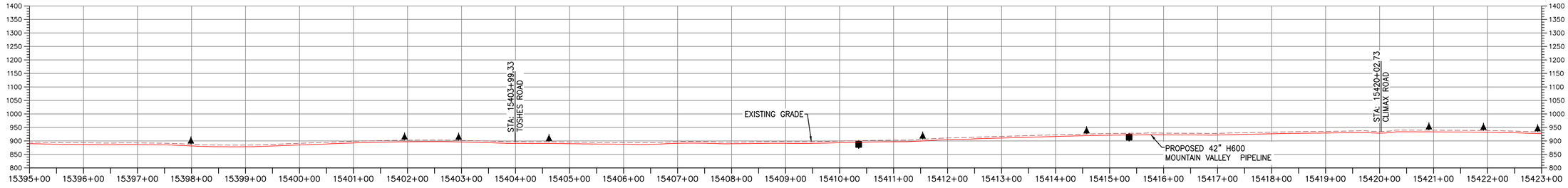


LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

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100 0 100 200

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200 0 200 400

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NOTES:

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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

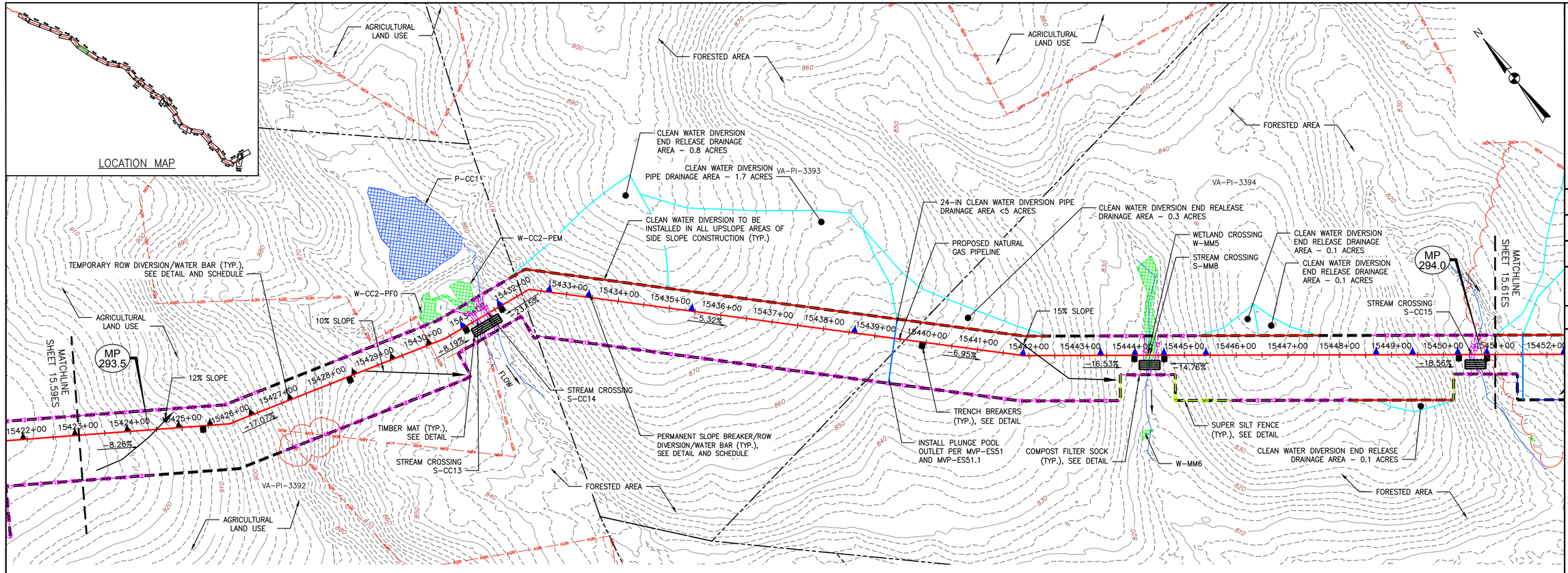
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.59ES OF 15.99ES

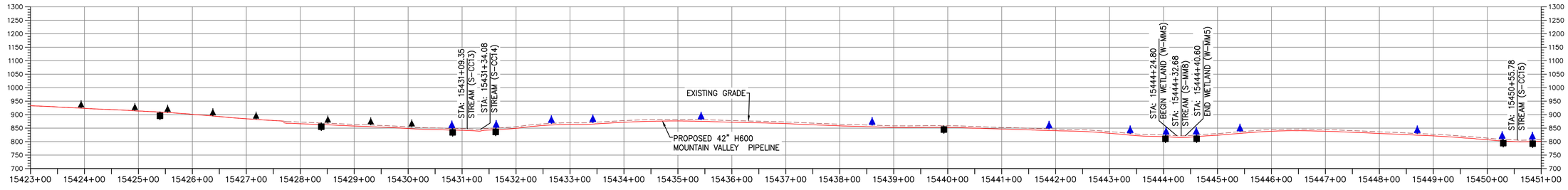
REVISION



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
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- POND
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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.60ES OF 15.99ES

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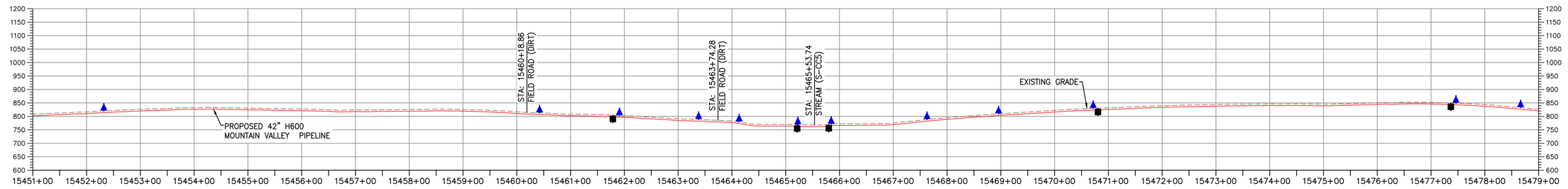
LOCATION MAP

AGRICULTURAL LAND USE
VA-PI-3394
CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 4.4 ACRES
CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 1.0 ACRES
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 3.8+ ACRES
CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 2.5 ACRES
24-IN CLEAN WATER DIVERSION PIPE DRAINAGE AREA < 5 ACRES
PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE
15% SLOPE
EXISTING DIRT FIELD ROAD
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 0.4 ACRES
24-IN CLEAN WATER DIVERSION PIPE PER DRAINAGE AREA < 5 ACRES
24-IN CLEAN WATER DIVERSION PIPE DRAINAGE AREA < 5 ACRES
100 YEAR FLOODPLAIN
STREAM CROSSING S-CC5
TIMBER MAT (TYP.), SEE DETAIL
SUPER SILT FENCE (TYP.), SEE DETAIL
FORESTED AREA
VA-PI-3396
COMPOST FILTER SOCK (TYP.), SEE DETAIL
MP 294.5
MATCHLINE SHEET 15.60ES
MATCHLINE SHEET 15.62ES
450+00 15451+00 15452+00 15453+00 15454+00 15455+00 15456+00 15457+00 15458+00 15459+00 15460+00 15461+00 15462+00 15463+00 15464+00 15465+00 15466+00 15467+00 15468+00 15469+00 15470+00 15471+00 15472+00 15473+00 15474+00 15475+00 15476+00 15477+00 15478+00 15479+00
-9.69%
-6.39%
-10.68%
-3.72%
12.04%
-3.59%
-2.31%
INSTALL PLUNGE POOL OUTLET PER MVP-ES51 AND MVP-ES51.1
W-MM7
PROPOSED NATURAL GAS PIPELINE
INSTALL PLUNGE POOL OUTLET PER MVP-ES51 AND MVP-ES51.1
INSTALL PLUNGE POOL OUTLET PER MVP-ES51 AND MVP-ES51.1
S-CC8
S-CC7
W-CC1
EXISTING DIRT FIELD ROAD
VA-PI-3394
STEEP SLOPE EROSION CONTROL (TYP.), SEE DETAIL
S-CC6
FORESTED AREA
TRENCH BREAKERS (TYP.), SEE DETAIL
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 1.2 ACRES
VA-PI-3396
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 0.2 ACRES
CLEAN WATER DIVERSION TO BE INSTALLED IN ALL UPSLOPE AREAS OF SIDE SLOPE CONSTRUCTION (TYP.)

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE:

SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE:

SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
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- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGRI — AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
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SHT. NO.	15.61ES OF 15.99ES

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LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200

PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
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APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.62ES OF 15.99ES

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LOCATION MAP

PLAN

SCALE: 1" = 100'

PROFILE

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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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PITTSBURGH, PA 15220

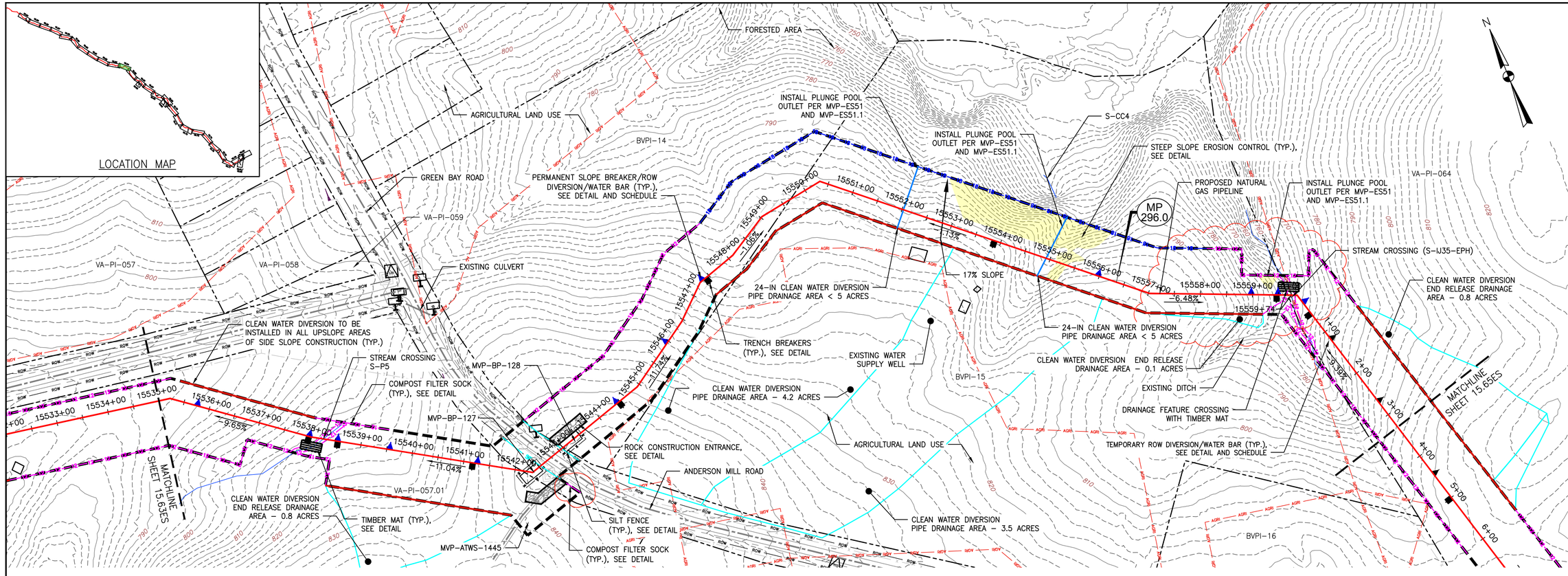
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	

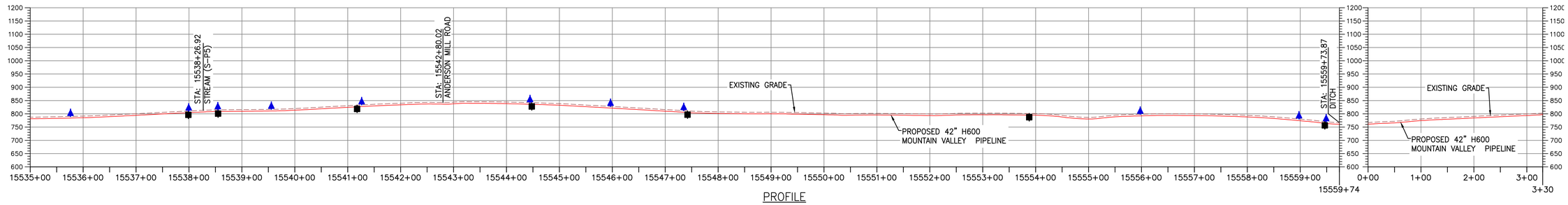
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PLAN

SCALE: 1" = 100'



PROFILE

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
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- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 11 - PITTSYLVANIA COUNTY, VIRGINIA

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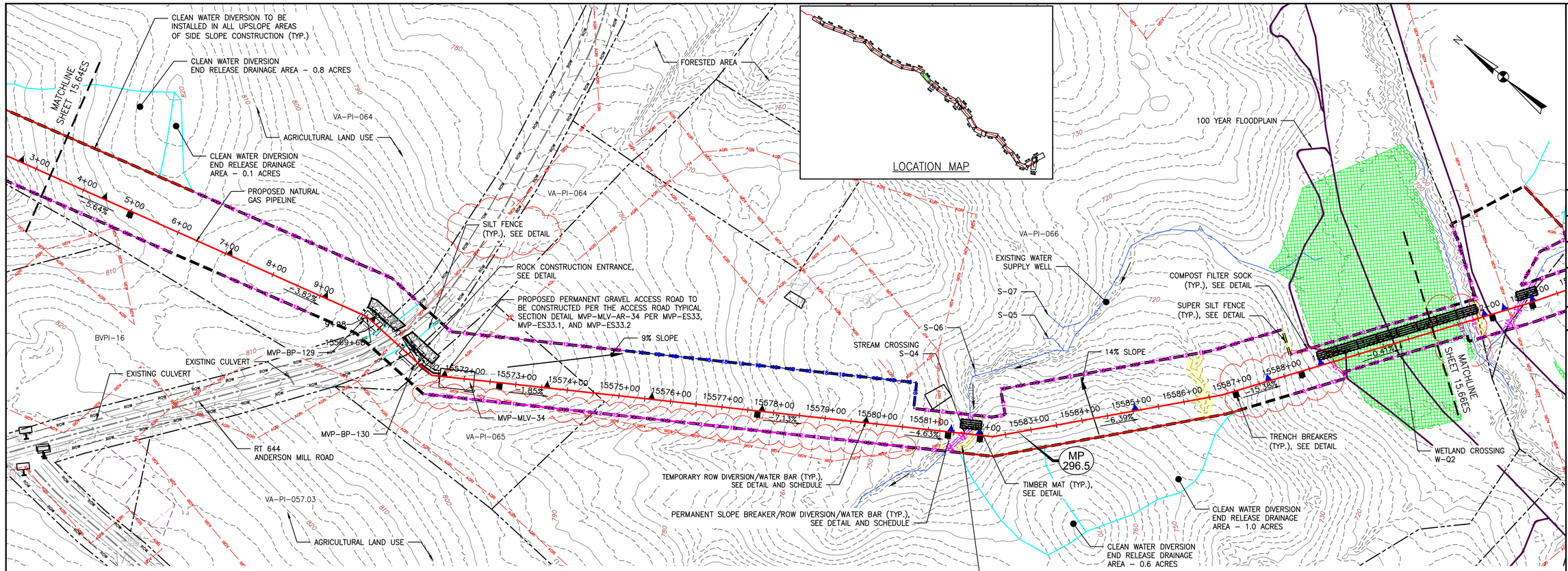
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
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APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.64ES OF 15.99ES

REVISION

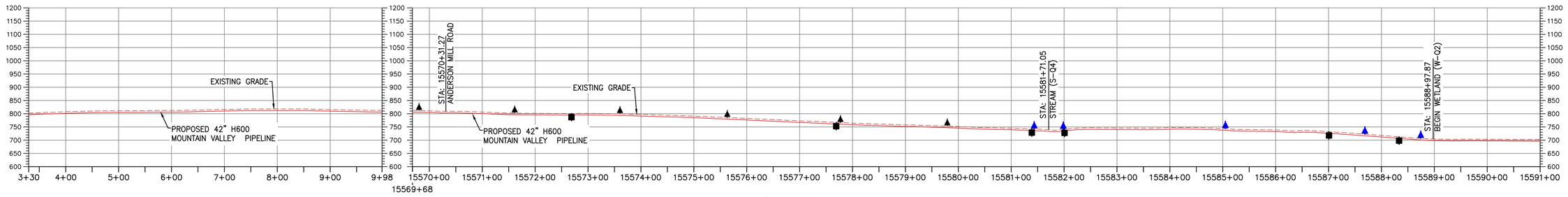
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
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- APPALACHIAN NATIONAL SCENIC TRAIL
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

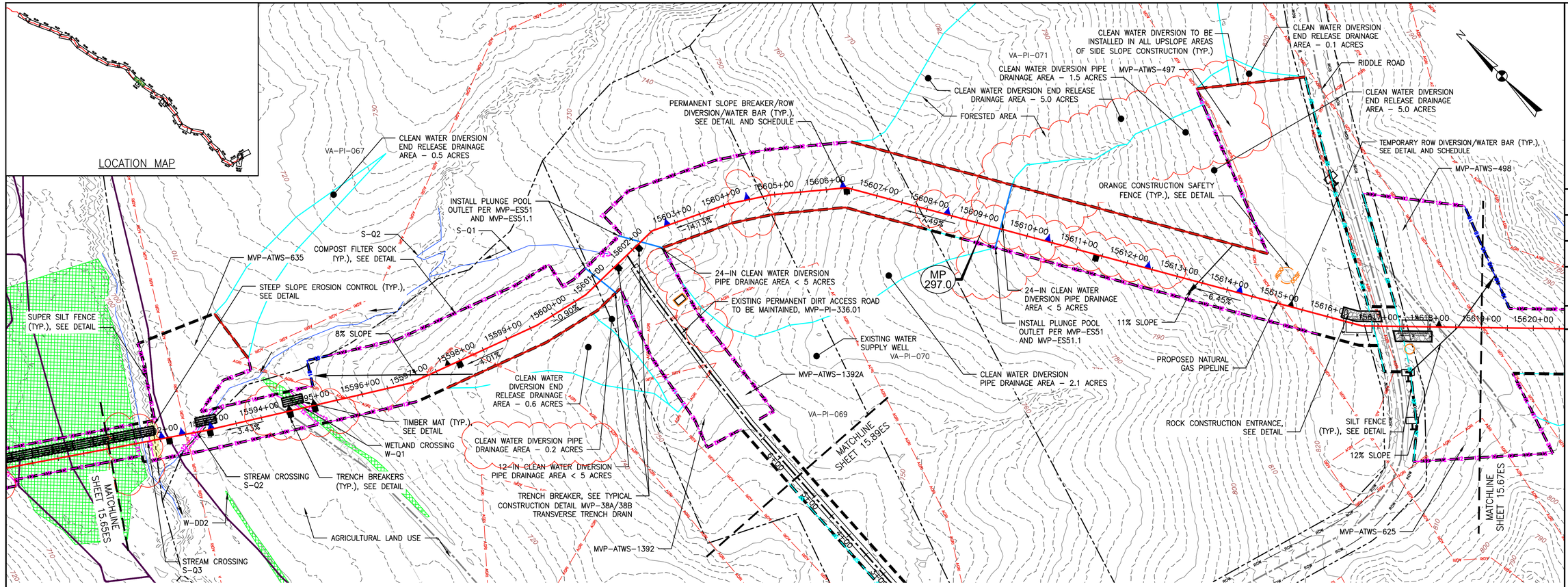
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
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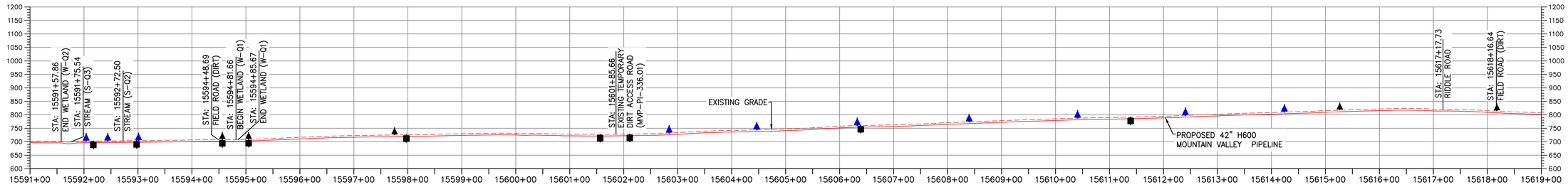
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CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.65ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

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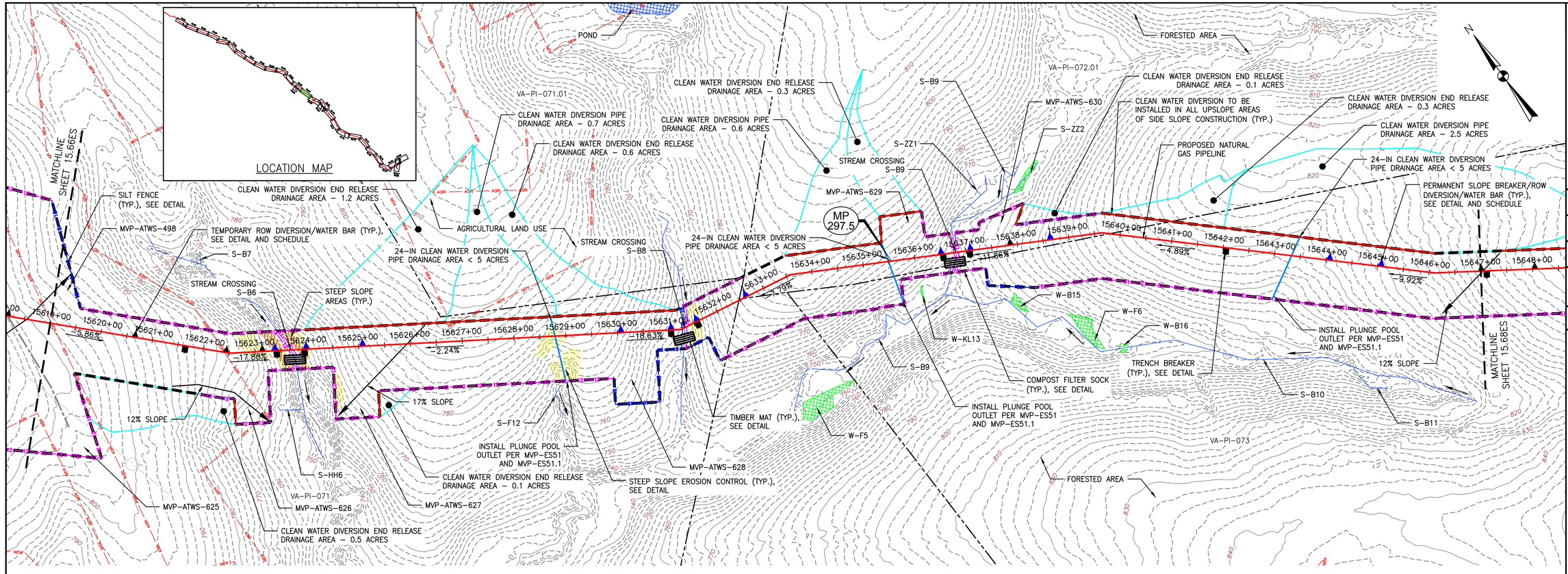
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
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REVISION

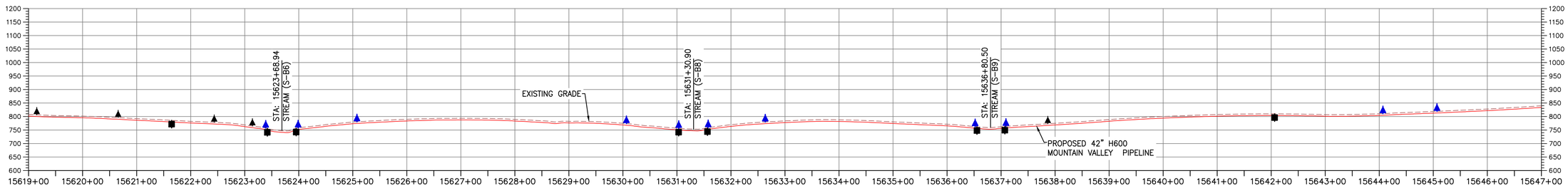
SHT. NO. 15.66ES OF 15.99ES



PLAN

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100 0 100 200



PROFILE

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100 0 100 200

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200 0 200 400

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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

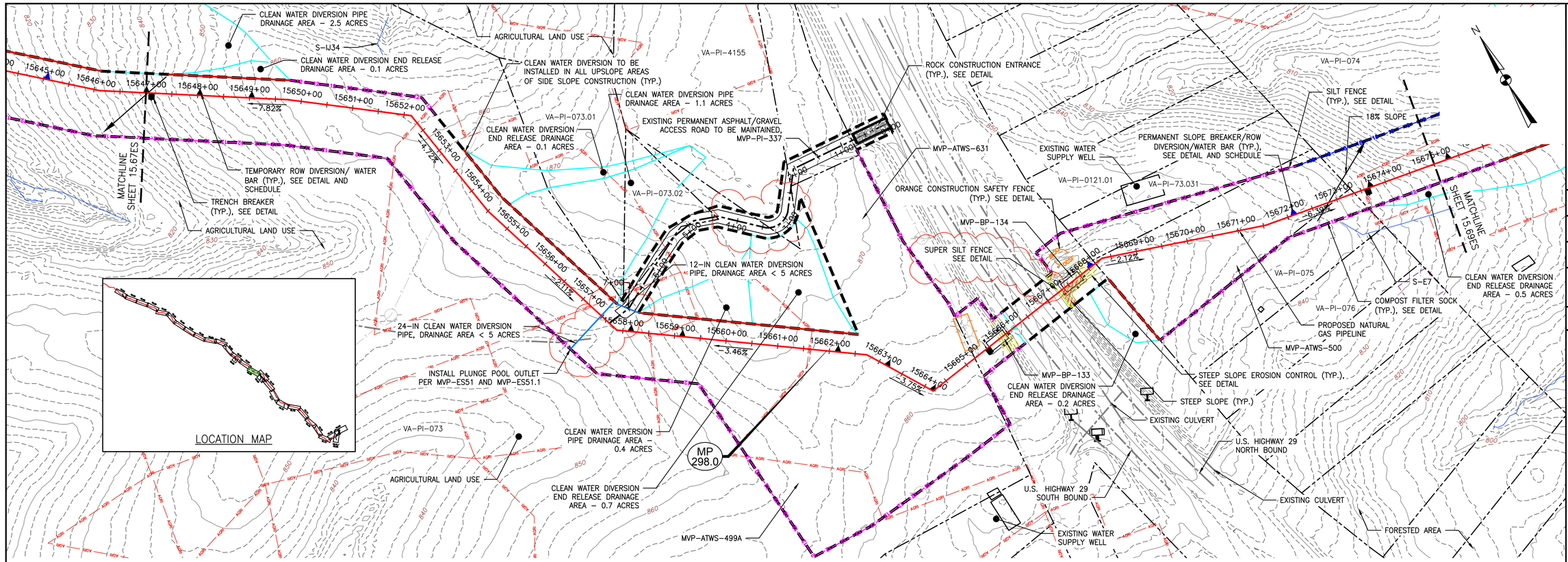
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	

SHT. NO. 15.67ES OF 15.99ES

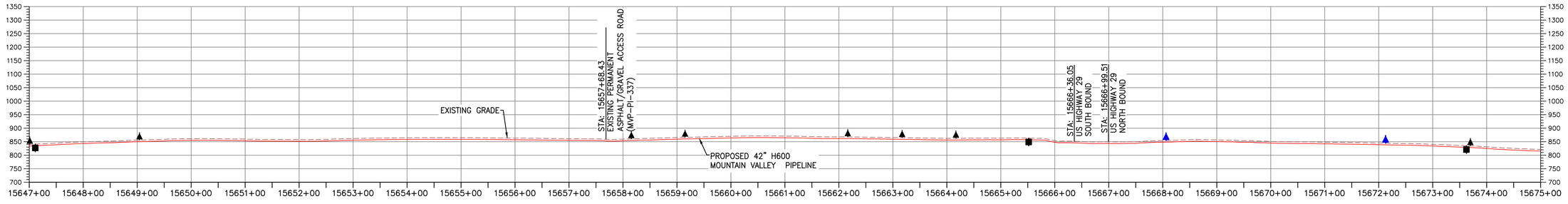
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
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- FEMA 100 YEAR FLOODPLAIN
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- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
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- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

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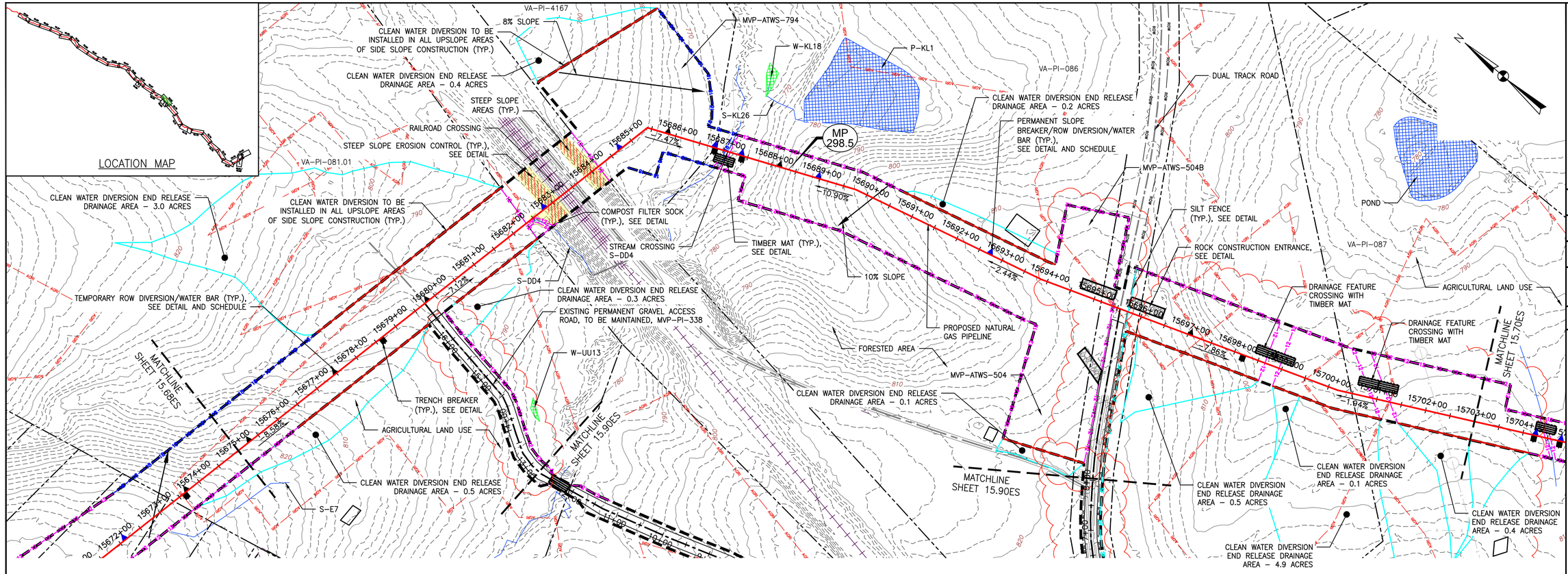
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SHT. NO. 15.68ES OF 15.99ES

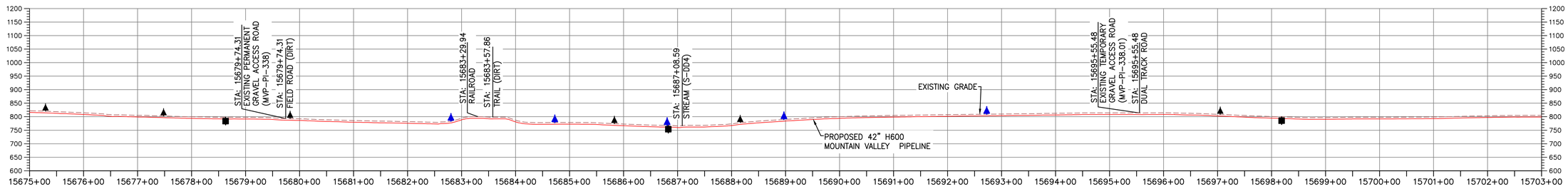
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LOCATION MAP



PLAN

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

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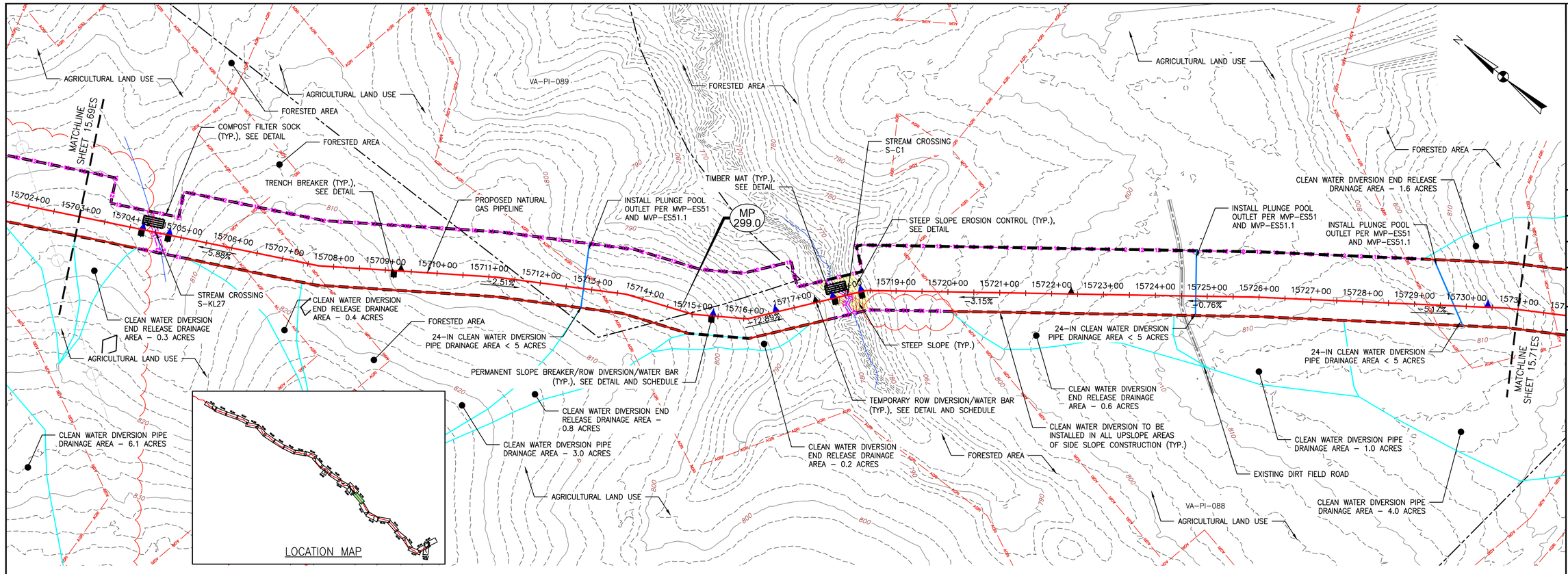
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EROSION AND SEDIMENT CONTROL PLANS

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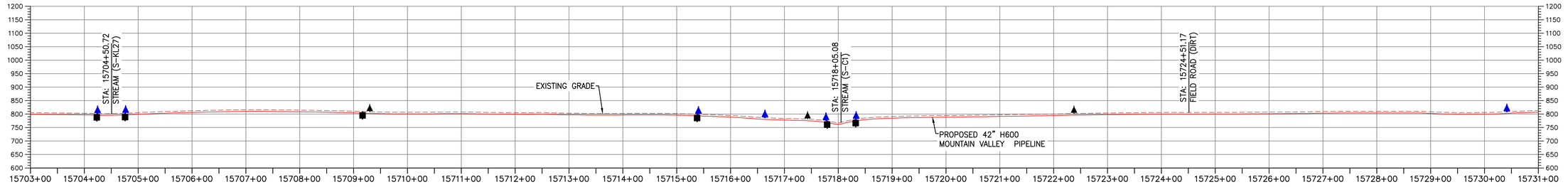
SHT. NO. 15.69ES OF 15.99ES



PLAN

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100 0 100 200



PROFILE

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100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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Mountain Valley PIPELINE

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REVISION

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CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 1.6 ACRES

CLEAN WATER DIVERSION TO BE INSTALLED IN ALL UPSLOPE AREAS OF SIDE SLOPE CONSTRUCTION (TYP.)

EQUATION STATION
STA. AHEAD: 0+00
STA. BEHIND: 15733+24

EXISTING DIRT FIELD ROAD

COMPOST FILTER SOCK (TYP.), SEE DETAIL

MVP-ATWS-399

INSTALL PLUNGE POOL OUTLET PER MVP-ES51 AND MVP-ES51.1

MVP-BP-135

MVP-MLV-AR-35

CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 5.0 ACRES

EQUATION STATION
STA. AHEAD: 15749+71
STA. BEHIND: 16+46

MVP-ATWS-400

SILT FENCE (TYP.), SEE DETAIL

VA-PI-092

MATCHLINE SHEET 15.70ES

TRENCH BREAKER (TYP.), SEE DETAIL

PROPOSED NATURAL GAS PIPELINE

MP 299.5

5% SLOPE

MVP-BR-136

MVP-ATWS-505

MVP-ATWS-400A

ROCK CONSTRUCTION ENTRANCE, SEE DETAIL

MATCHLINE SHEET 15.72ES

AGRICULTURAL LAND USE

PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE

CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 4.0 ACRES

VA-PI-090

VA-PI-091

RT. 691 MILL CREEK ROAD

MVP-ATWS-505A

24-IN CLEAN WATER DIVERSION PIPE DRAINAGE AREA < 5 ACRES

CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 1.6 ACRES

EXISTING TEMPORARY DIRT ACCESS ROAD TO BE MAINTAINED, MVP-PI-339

PROPOSED PERMANENT GRAVEL ACCESS ROAD MVP-MLV-35 PER MVP-ES33, MVP-ES33.1, AND MVP-ES33.2

CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 0.3 ACRES

CLEAN WATER DIVERSION PIPE DRAINAGE AREA – 4.5 ACRES

EXISTING WATER SUPPLY WELL

MVP-ATWS-399A

FORESTED AREA

AGRICULTURAL LAND USE

MVP-ATWS-1312

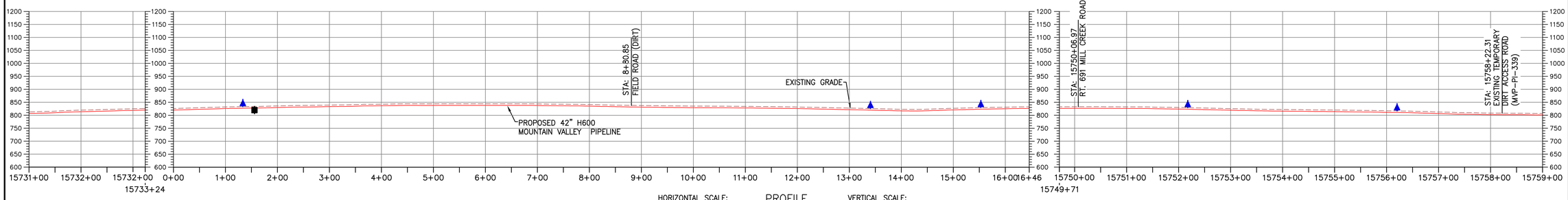
MVP-ATWS-1313

LOCATION MAP

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100 0 100 200



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CANONSBURG, PA 15317

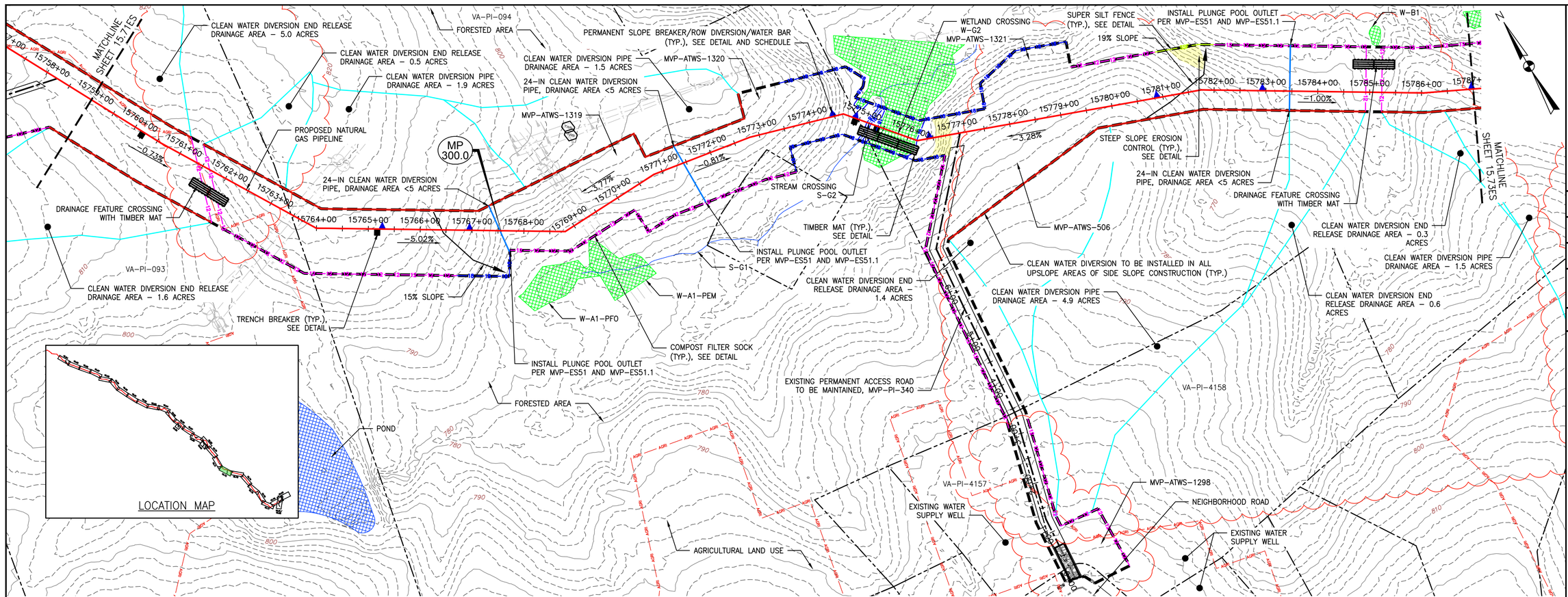
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PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5

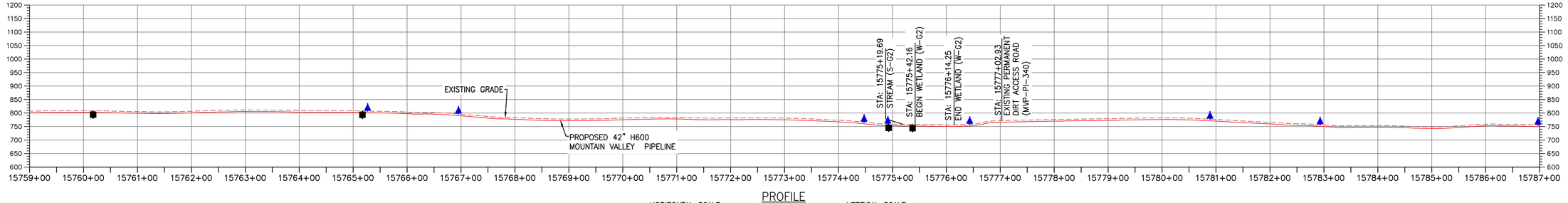
SHT. NO. 15.71ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGR — AGR — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP–ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP–ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- 24 — 24 — 24 — 24 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP–ES3, 3.1, 3.2)
- GRASS–LINED CHANNEL (SEE DETAIL MVP–ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP–ES50 AND MVP–ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP–ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP–20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP–17, ES38, AND SCHEDULE)

NOTES:

1. TOPSOIL SEGREGATION TO BE CONDUCTED THROUGHOUT THE JEFFERSON NATIONAL FOREST.
2. FLEXTERRA, EARTHGUARD OR EQUIVALENT MAY BE USED AS A SUBSTITUTE TO EROSION CONTROL BLANKET AS DIRECTED BY MVP.
3. CONTRACTOR IS RESPONSIBLE TO IDENTIFY ALL UTILITIES. THE UTILITY LINES SHOWN ON THE PLAN ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT REPRESENT SURVEYED LINE INFORMATION.
4. SLOPES OF 30° OR GREATER EXIST. CONSTRUCTION FOR STEEP SLOPES TO BE PERFORMED USING STEEP SLOPE TECHNIQUES IDENTIFIED IN THE DETAIL SHEETS. ALSO REFER TO THE SITE–SPECIFIC DESIGN OF STABILIZATION MEASURES IN SELECTED HIGH–HAZARD PORTIONS OF THE ROUTE OF THE PROPOSED MOUNTAIN VALLEY PIPELINE PROJECT.
5. WHERE CONSTRUCTION CONDITIONS PRECLUDE THE USE OF DIVERSION DITCHES DUE TO SITE CONDITIONS THE CONTRACTOR WILL INSTALL SILT FENCE AT THE DIRECTION OF MVP.
6. DRAINAGE FEATURE CROSSINGS TO BE PERFORMED PER DETAIL MVP–ES49.
7. TEMPORARY ACCESS ROAD CROSSING OF STREAMS AND WETLANDS WILL UTILIZE TIMBERMATS. ANY PERMANENT ROAD CROSSINGS WILL BE CONDUCTED VIA CULVERTS. NO UNPERMITTED IMPACT TO STREAMS WILL OCCUR AS A RESULT OF ROAD OR PIPELINE CROSSINGS AND ALL ESC BMP'S WILL BE INSTALLED TO CONTINUE THE STREAM FLOW.
8. ALL NON VMRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP–ES49.

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

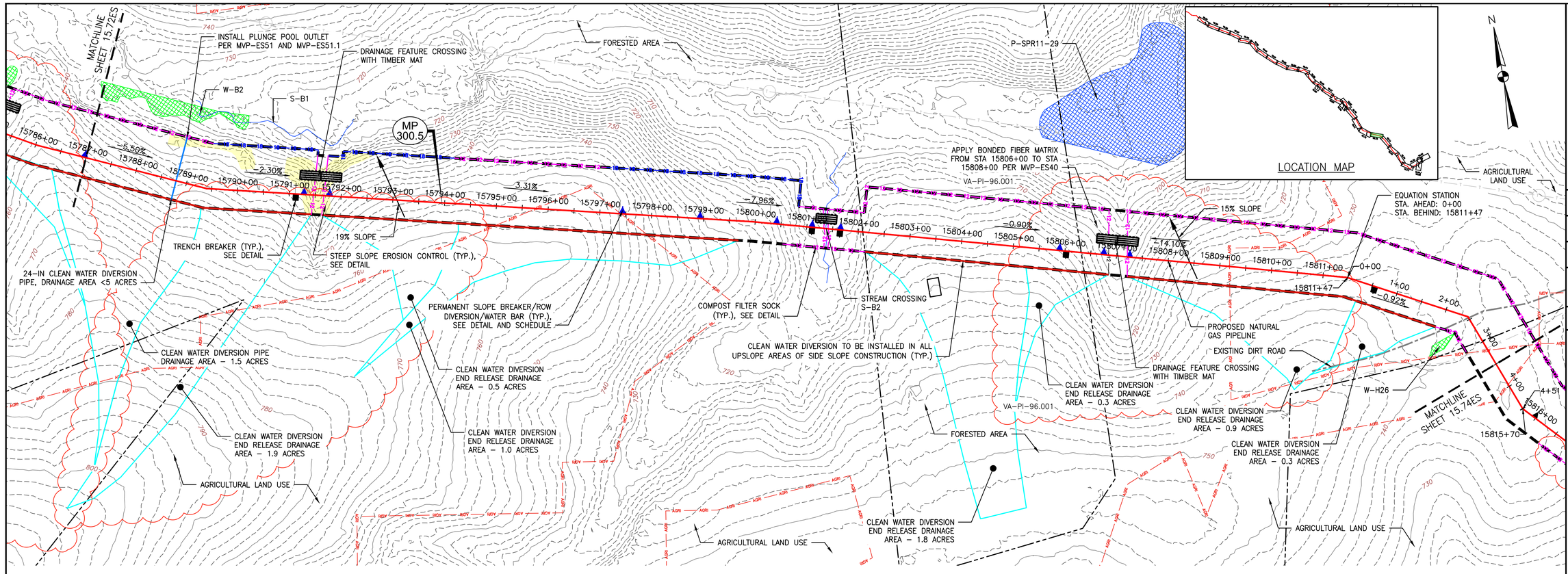
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

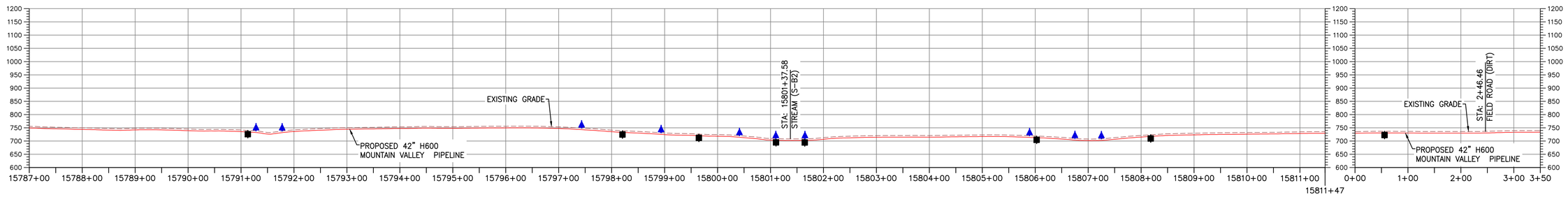
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CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.72ES OF 15.99ES

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PLAN

SCALE: 1" = 100'



PROFILE

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
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- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
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- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
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- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

NOTES:

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REVISIONS:

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.73ES OF 15.99ES

TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\16 – Pittsylvania\E&S\ES Version 5.0.0\7157ES15.73(S11).dwg PLOTTED ON: 3/2/2018 9:54 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb

LOCATION MAP

PLAN

SCALE: 1" = 100'

PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
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- PROPOSED PIPELINE
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- DRAINAGE AREA BOUNDARY
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REVISIONS:

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
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4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	ADDRES VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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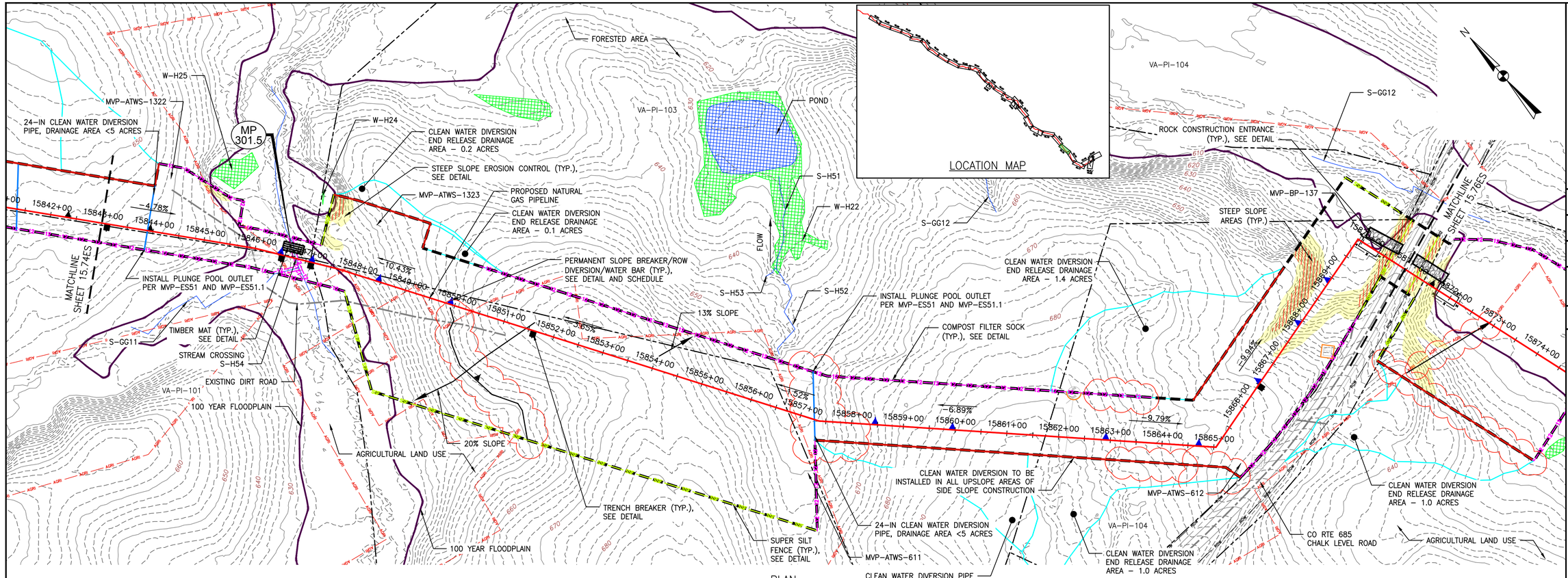
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	

SHT. NO. 15.74ES OF 15.99ES

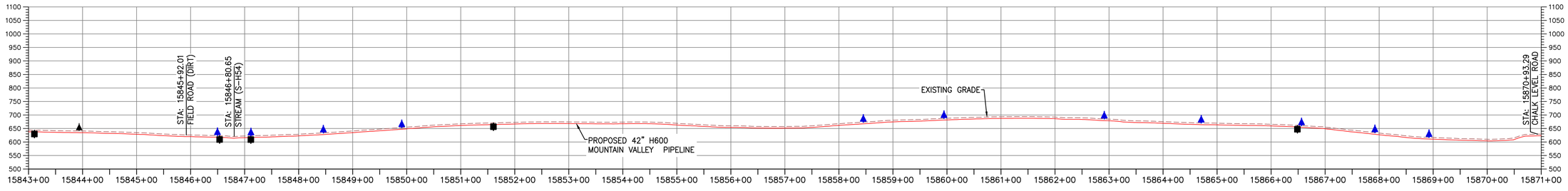
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
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3	01/07/18	KAL	RE	DW	ADDRES VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

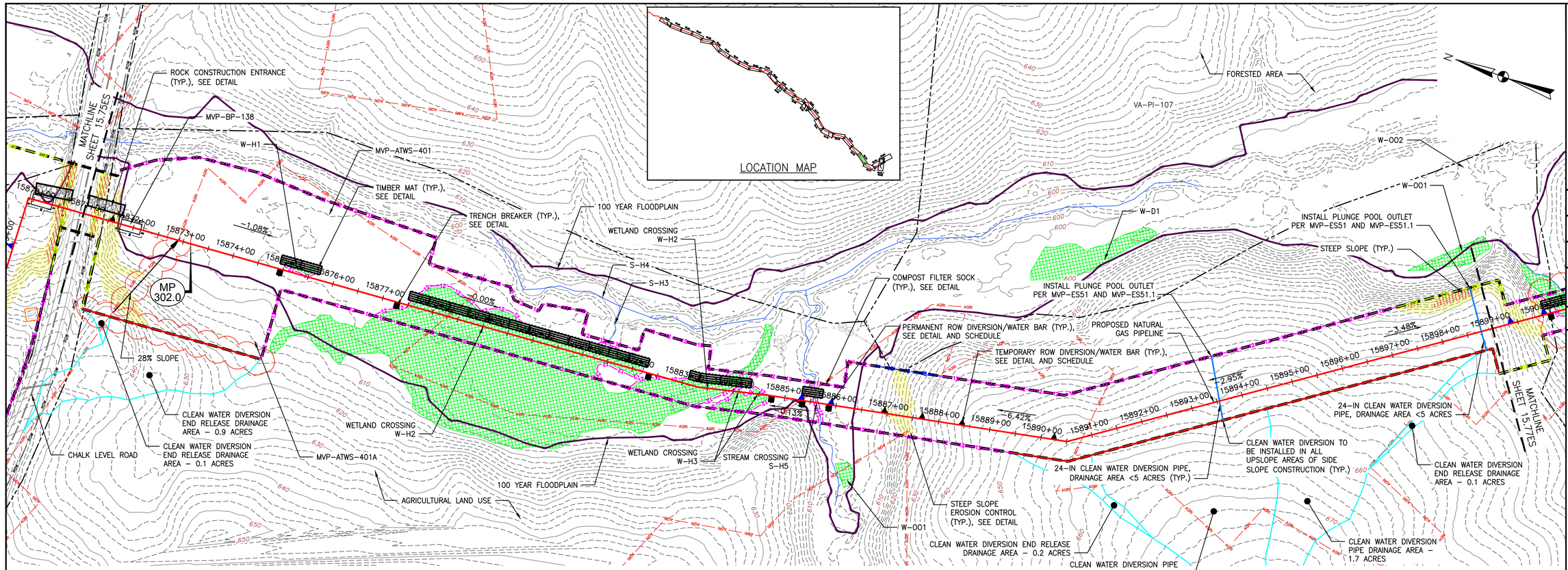
MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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EROSION AND SEDIMENT CONTROL PLANS

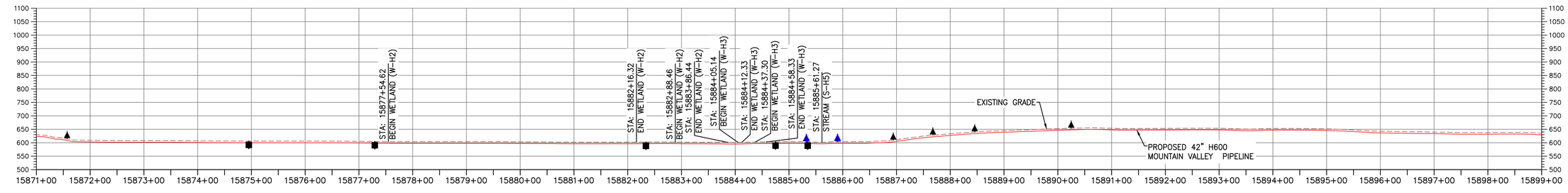
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.75ES OF 15.99ES



PLAN

SCALE: 1" = 100'



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

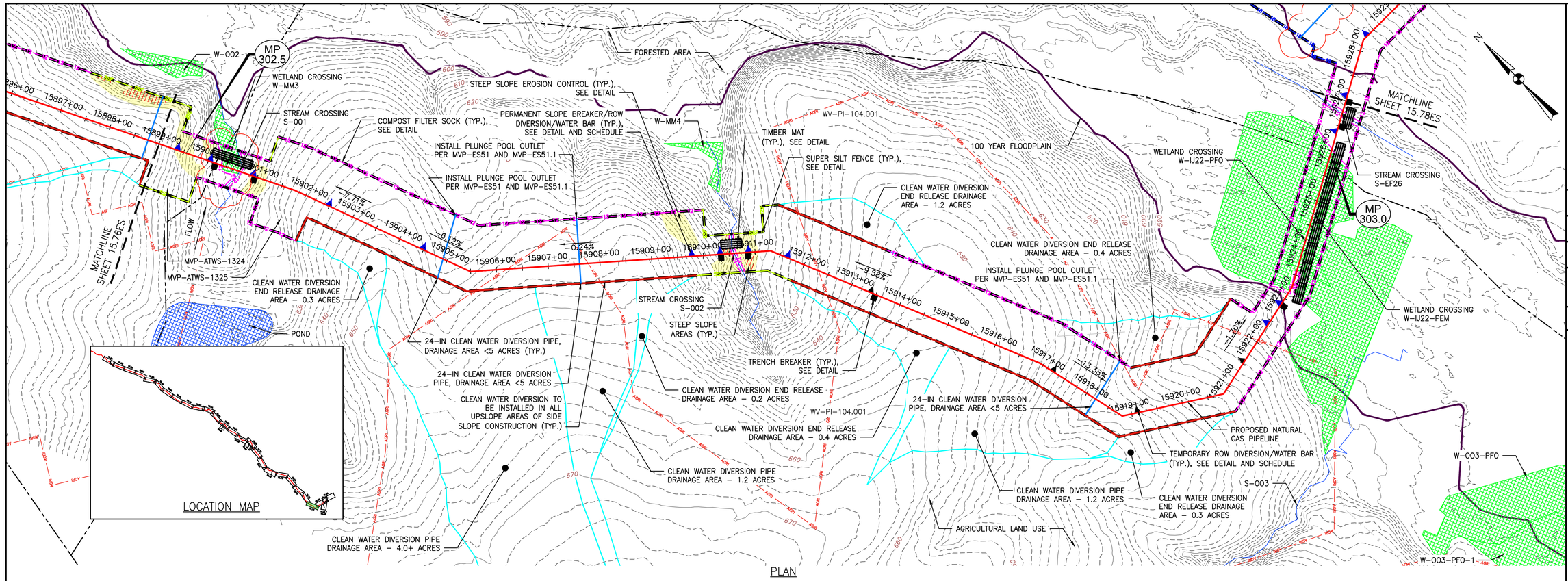
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.76ES OF 15.99ES

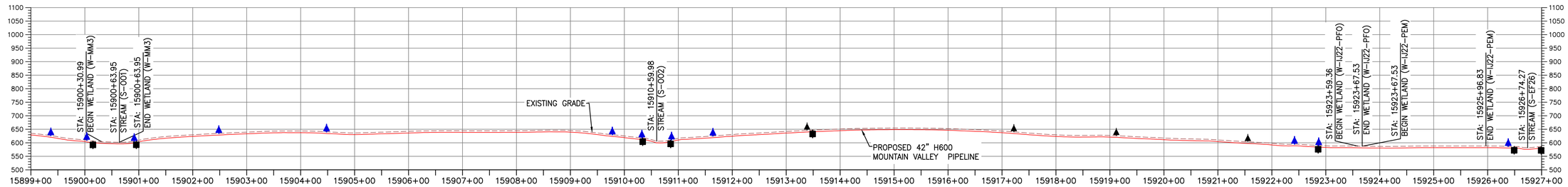
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PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H600 LINE

SPREAD 11 - PITTSYLVANIA COUNTY, VIRGINIA

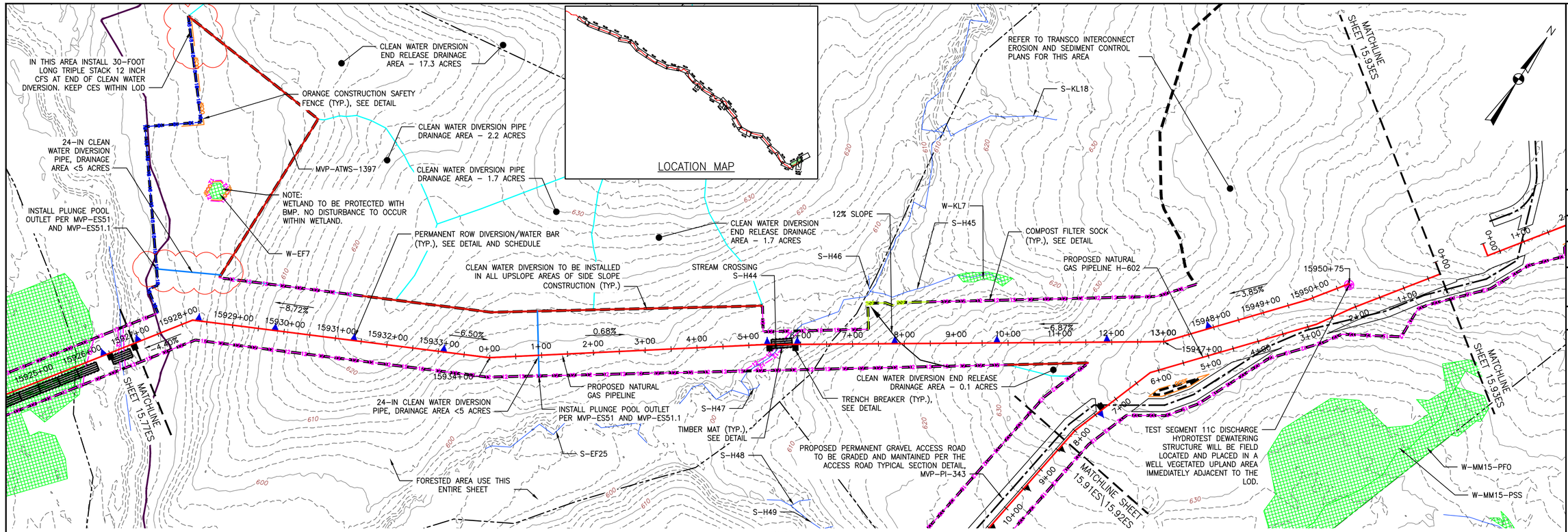
MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

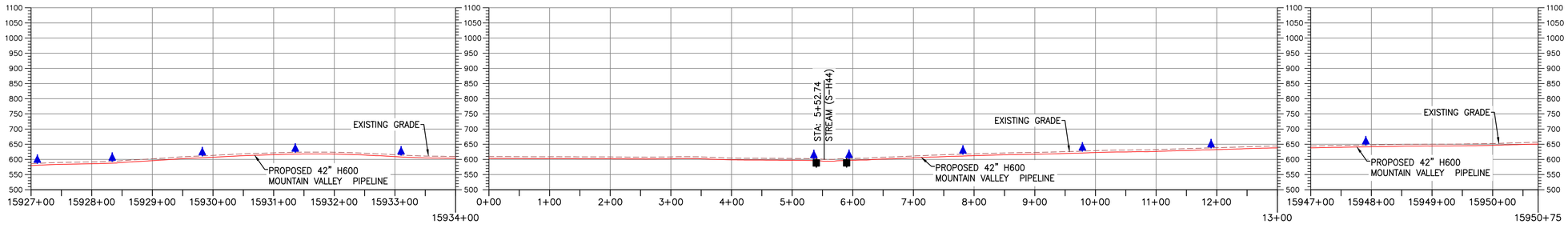
DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.77ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

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200 0 200 400

LEGEND

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REVISIONS:

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Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

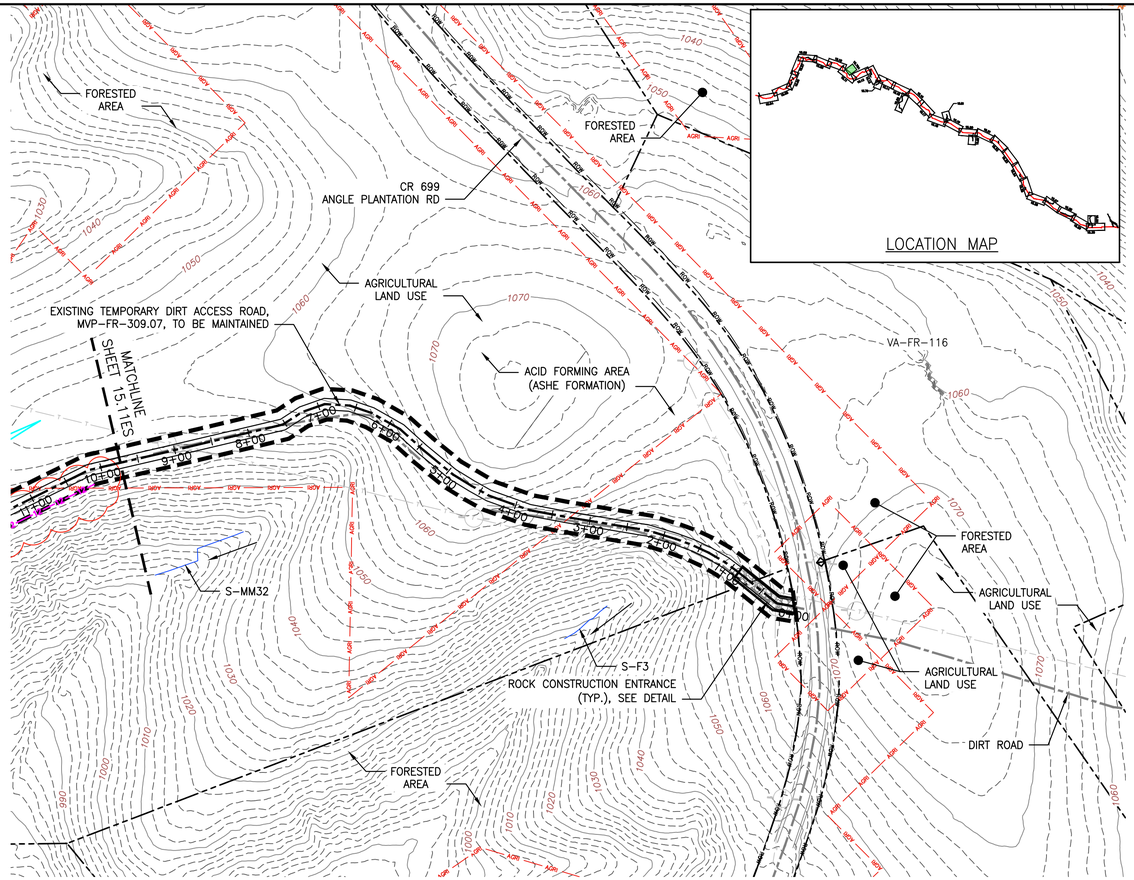
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FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	

SHT. NO. 15.78ES OF 15.99ES



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
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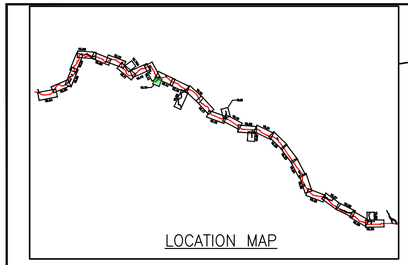
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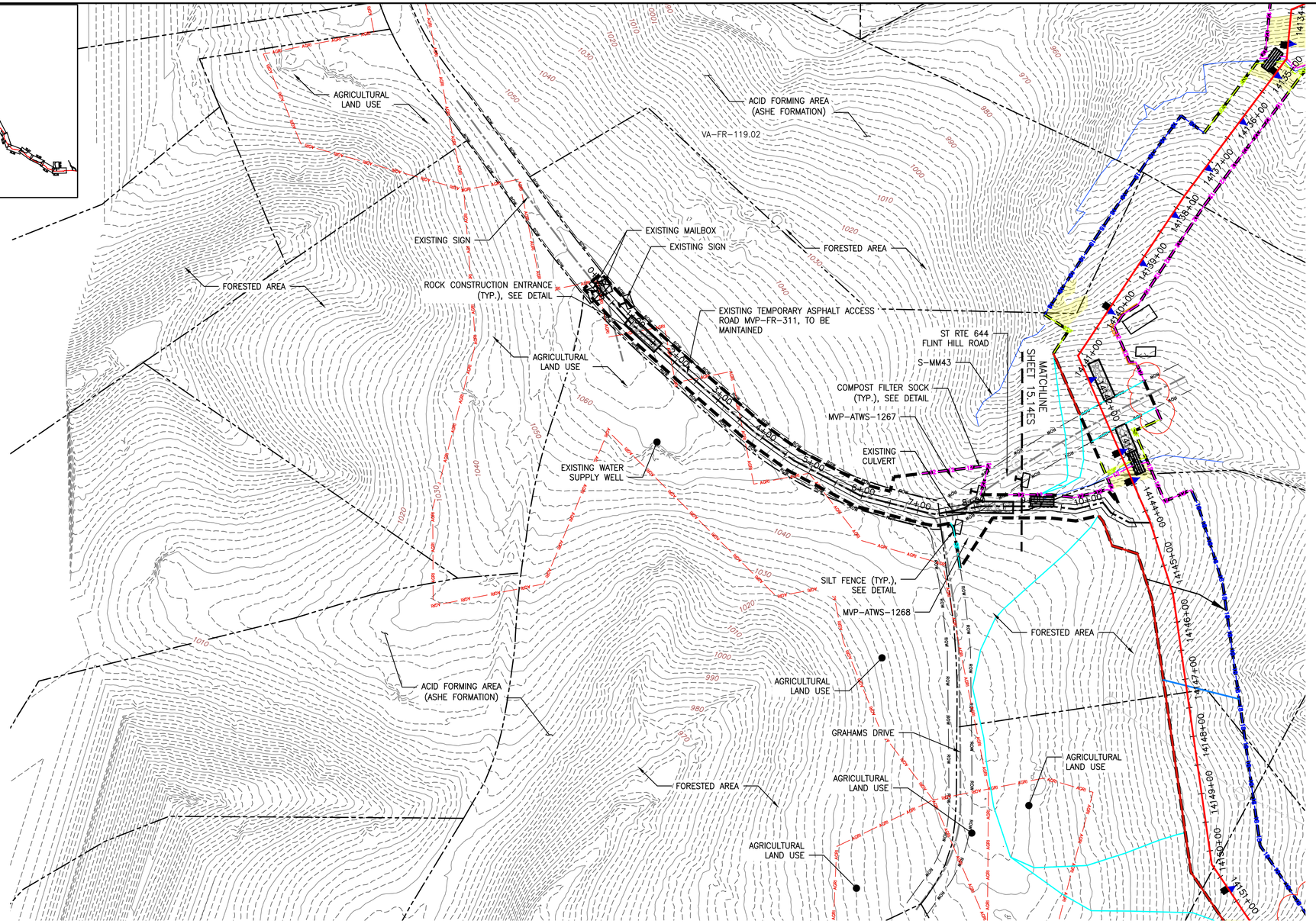
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REVISION

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PLAN

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100 0 100 200

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TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\15 – Franklin\E&S\ES Version 5.0.0\7157ES15.79(S11).dwg PLOTTED ON: 3/2/2018 10:19 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb

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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

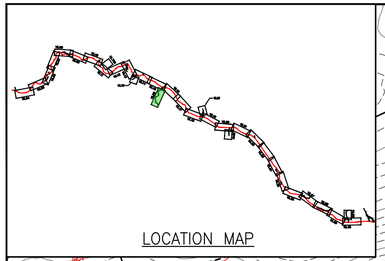
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PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.79ES OF 15.99ES

REVISION



FORESTED AREA
AGRICULTURAL LAND USE
VA-FR-4278
TIMBER MAT (TYP.), SEE DETAIL
S-MM23
S-MM29
EXISTING BRIDGE
EXISTING TEMPORARY ASPHALT ACCESS ROAD MVP-FR-313, TO BE MAINTAINED
ACID FORMING AREA THIS ENTIRE SHEET (ASHE FORMATION)
SHEET MODIFIED TO INCLUDE ROAD STATIONING FOR THE ENTIRE SHEET
VA-FR-4141
EXISTING WATER SUPPLY WELL
ROCK CONSTRUCTION ENTRANCE (TYP.), SEE DETAIL
RCE TO BE PLACED AT GRAVEL/ASPHALT CHANGE
MATCHLINE SHEET 15.15ES
COMPOST FILTER SOCK (TYP.), SEE DETAIL
MVP-ATWS-1269
VA-FR-4277
VA-FR-4279
CR 704 GREENWAY ROAD
N

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- ORANGE CONSTRUCTION SAFETY FENCE
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)

PLAN

SCALE: 1" = 100'

100 0 100 200

- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

NOTES:

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2. FLEXTERRA, EARTHGUARD OR EQUIVALENT MAY BE USED AS A SUBSTITUTE TO EROSION CONTROL BLANKET AS DIRECTED BY MVP.
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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EROSION AND SEDIMENT CONTROL PLANS

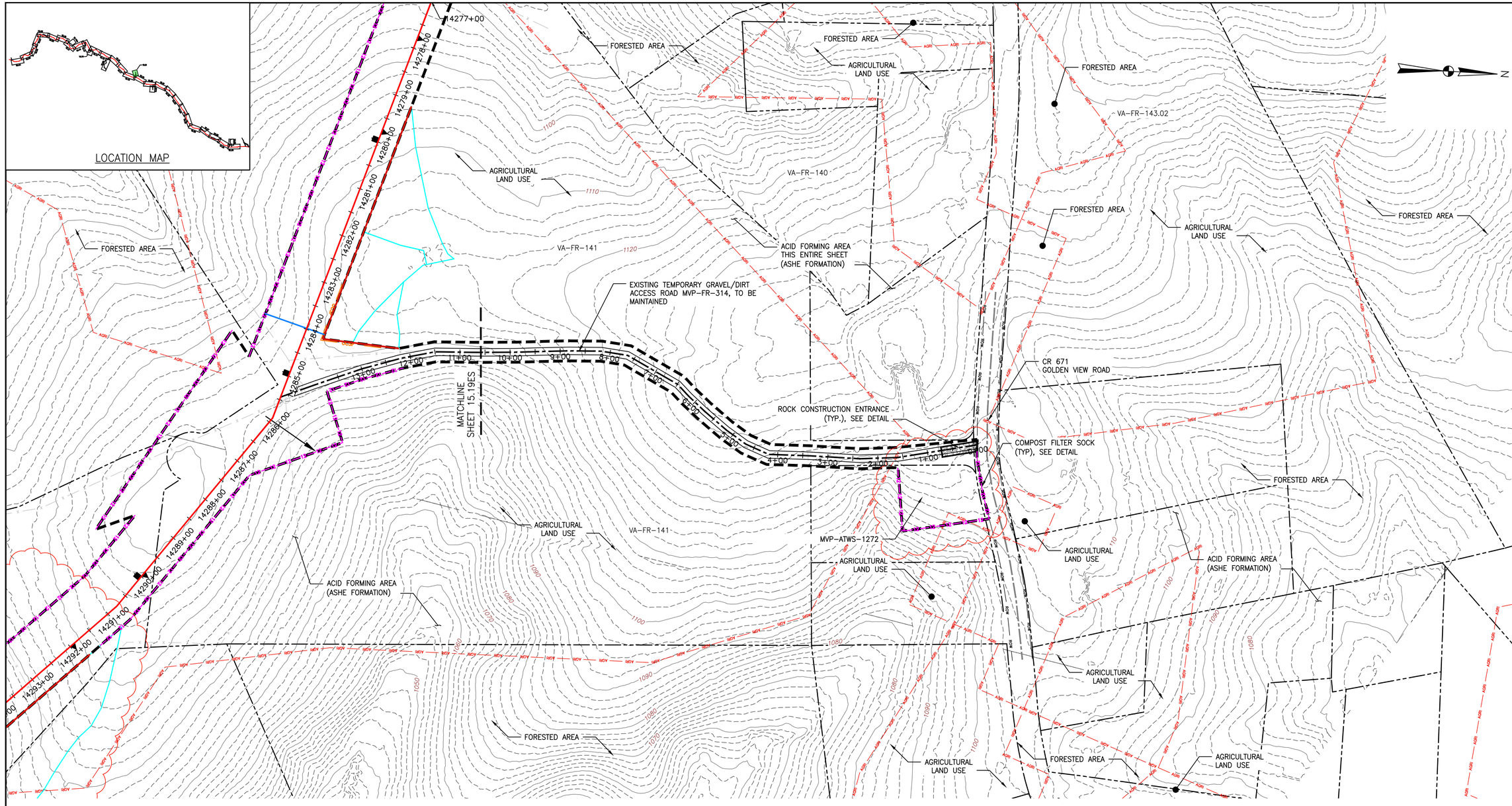
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN

REVISION

SHT. NO. 15.80ES OF 15.99ES

LOCATION MAP



LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
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- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)

PLAN

SCALE: 1" = 100'

100 0 100 200

- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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EROSION AND SEDIMENT CONTROL PLANS

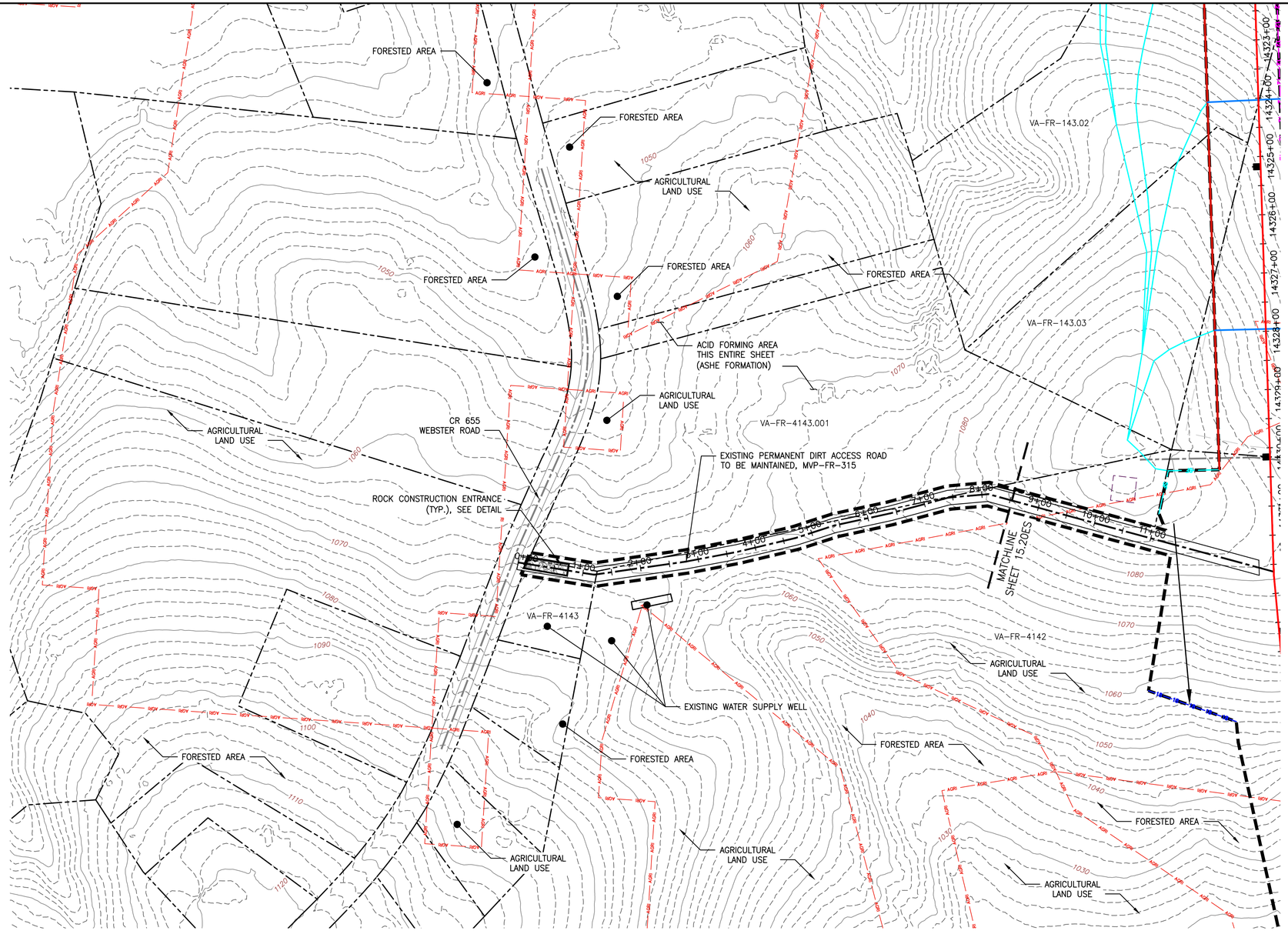
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5

SHT. NO. 15.81ES OF 15.99ES

LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
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- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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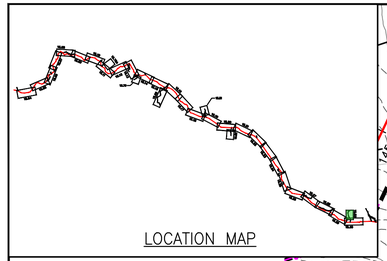
EROSION AND SEDIMENT CONTROL PLANS

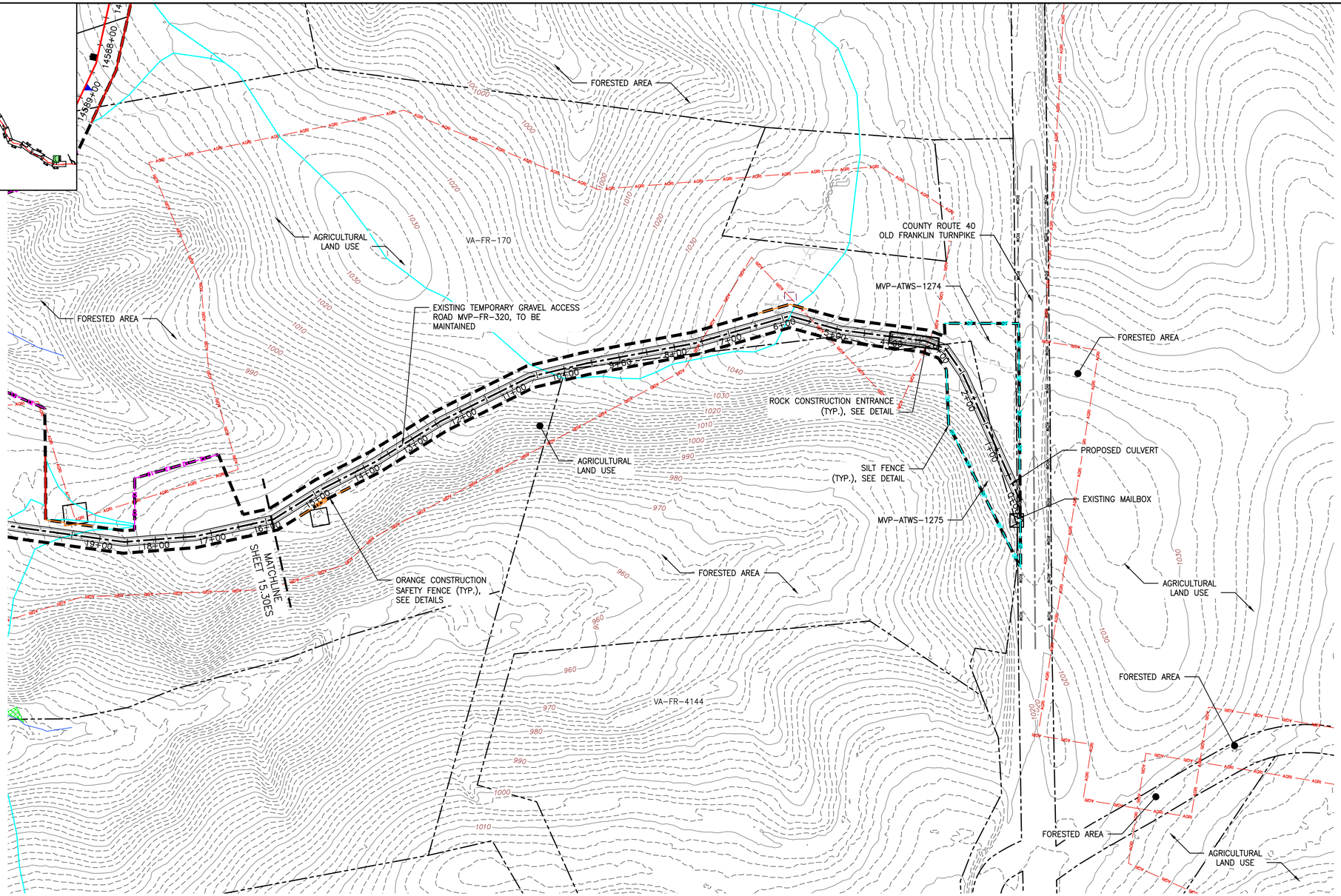
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.82ES OF 15.99ES

REVISION

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PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGRI — AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 24 — 24 — 24 — 24 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

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555 SOUTHPOINTE BOULEVARD, SUITE 200
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
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PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.83ES OF 15.99ES

REVISION

LOCATION MAP

AGRICULTURAL LAND USE
FORESTED AREA
ORANGE CONSTRUCTION SAFETY FENCE (TYP.), SEE DETAILS
EXISTING TEMPORARY GRAVEL ACCESS ROAD TO BE MAINTAINED, MVP-FR-321.01
EXISTING PERMANENT GRAVEL ACCESS ROAD TO BE MAINTAINED, MVP-FR-321
ROCK CONSTRUCTION ENTRANCE (TYP.), SEE DETAIL
MATCHLINE SHEET 15.31ES
MATCHLINE SHEET 15.33ES
MVP-ATWS-1276
S-AB7
VA-FR-176
VA-FR-4145
EXISTING WATER SUPPLY WELL
BVFR-54
ST RTE 40
OLD FRANKLIN TURNPIKE

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
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- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- ORANGE CONSTRUCTION SAFETY FENCE
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)

PLAN

SCALE: 1" = 100'

100 0 100 200

- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

NOTES:

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5. WHERE CONSTRUCTION CONDITIONS PRECLUDE THE USE OF DIVERSION DITCHES DUE TO SITE CONDITIONS THE CONTRACTOR WILL INSTALL SILT FENCE, AT THE DIRECTION OF MVP.
6. DRAINAGE FEATURE CROSSINGS TO BE PERFORMED PER DETAIL MVP-ES49.
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8. ALL NON VMRC STREAM CROSSINGS WILL BE PERFORMED AS DESCRIBED IN THE STREAM CROSSING TABLE INCLUDED IN THIS PACKAGE AND PER DETAIL MVP-ES49.

REVISIONS:

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3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

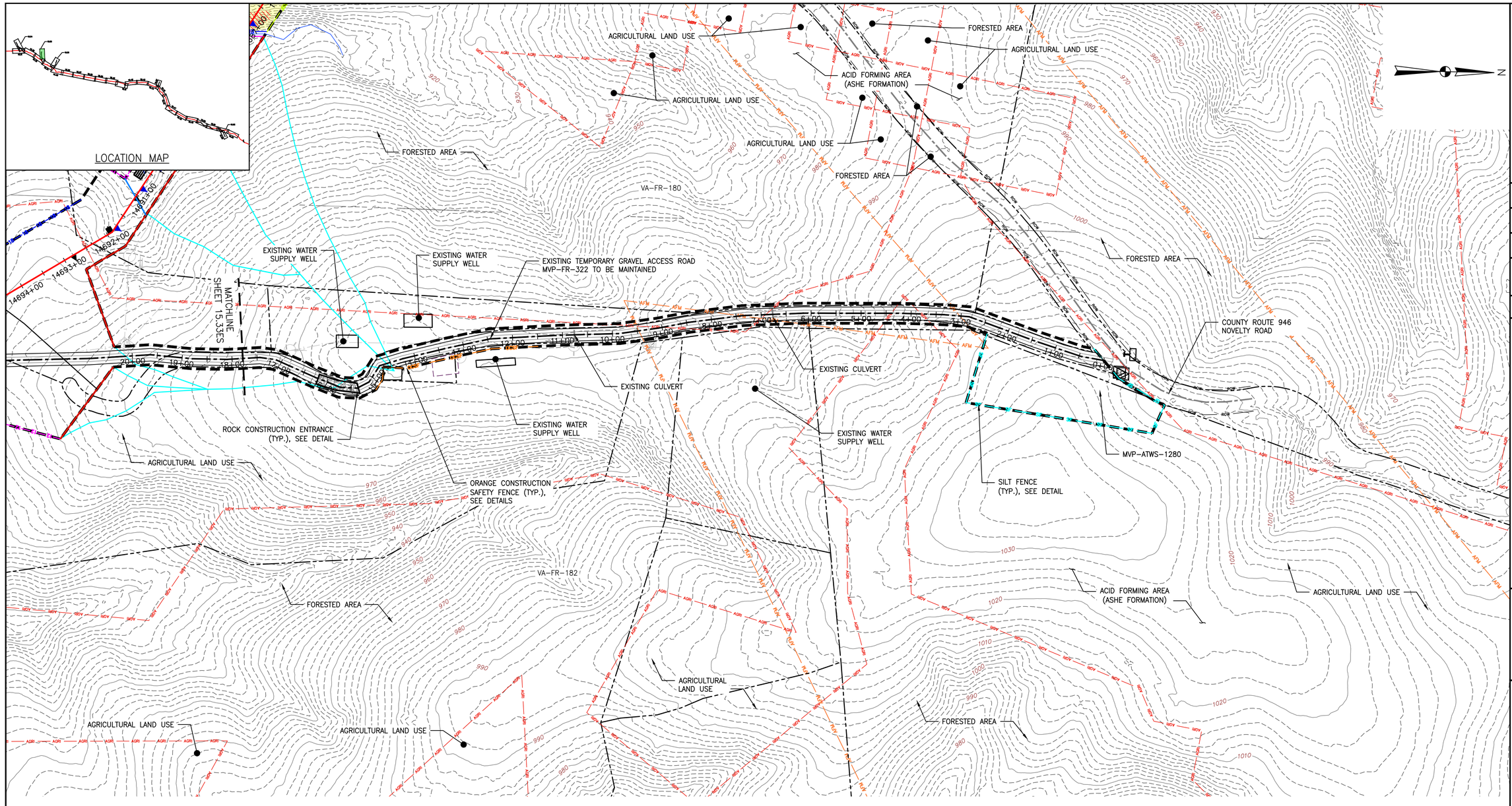
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.84ES OF 15.99ES

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LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
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PLAN

SCALE: 1" = 100'

100 0 100 200

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- FEMA 100 YEAR FLOODPLAIN
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2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – FRANKLIN COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

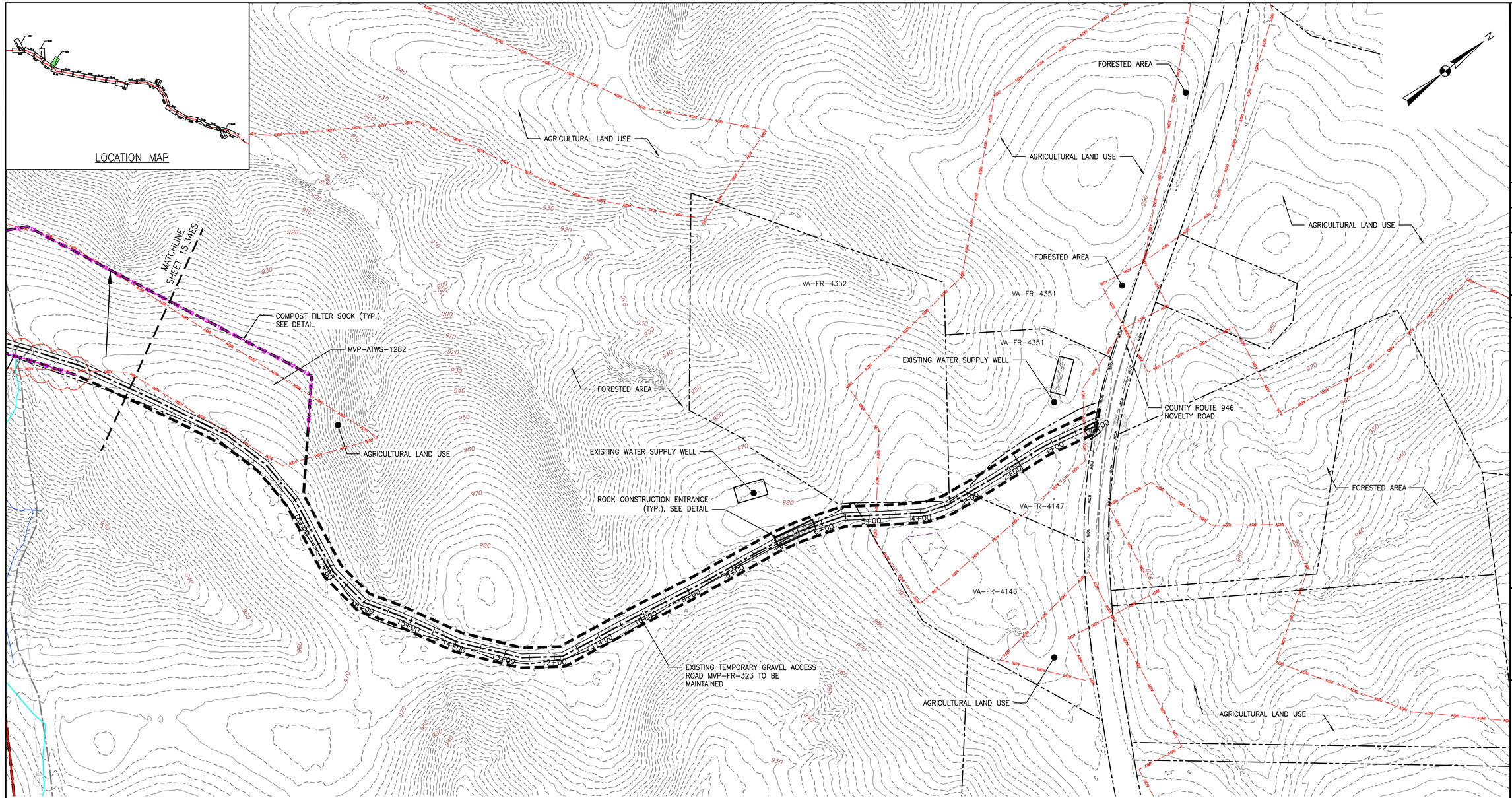
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

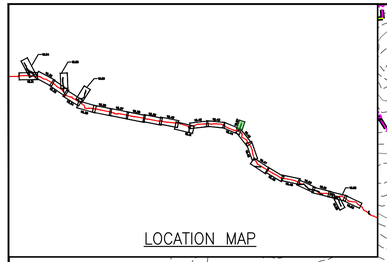
DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.85ES OF 15.99ES

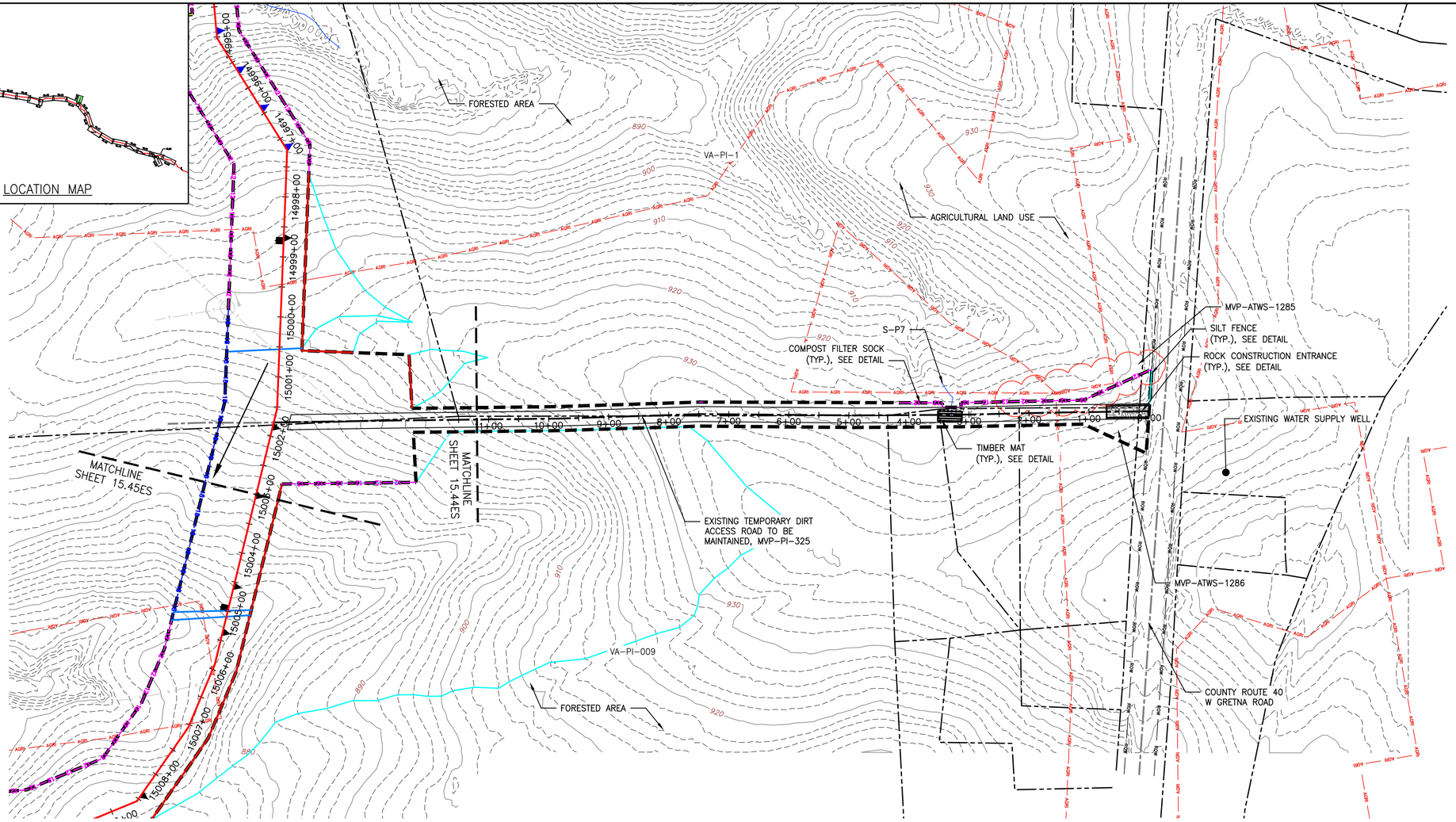
REVISION

LOCATION MAP



LOCATION MAP





PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- ANST — ANST — APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- AFM — AFM — ACID FORMING MATERIAL
- AGRI — AGRI — AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- SF — SF — PROPOSED SILT FENCE (SEE NOTE 5)
- SSF — SSF — PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- RFD — RFD — PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- OCSF — ORANGE CONSTRUCTION SAFETY FENCE
- 12 — 12 — 12 — 12 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 18 — 18 — 18 — 18 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- 24 — 24 — 24 — 24 — PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
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TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 - MVP\16 - Pittsylvainia\E&S\ES Version 5.0.0\7157ES15.87(S11).dwg PLOTTED ON: 3/2/2018 10:29 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb

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3	01/07/18	KAL	RE	DW	ADDRES VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

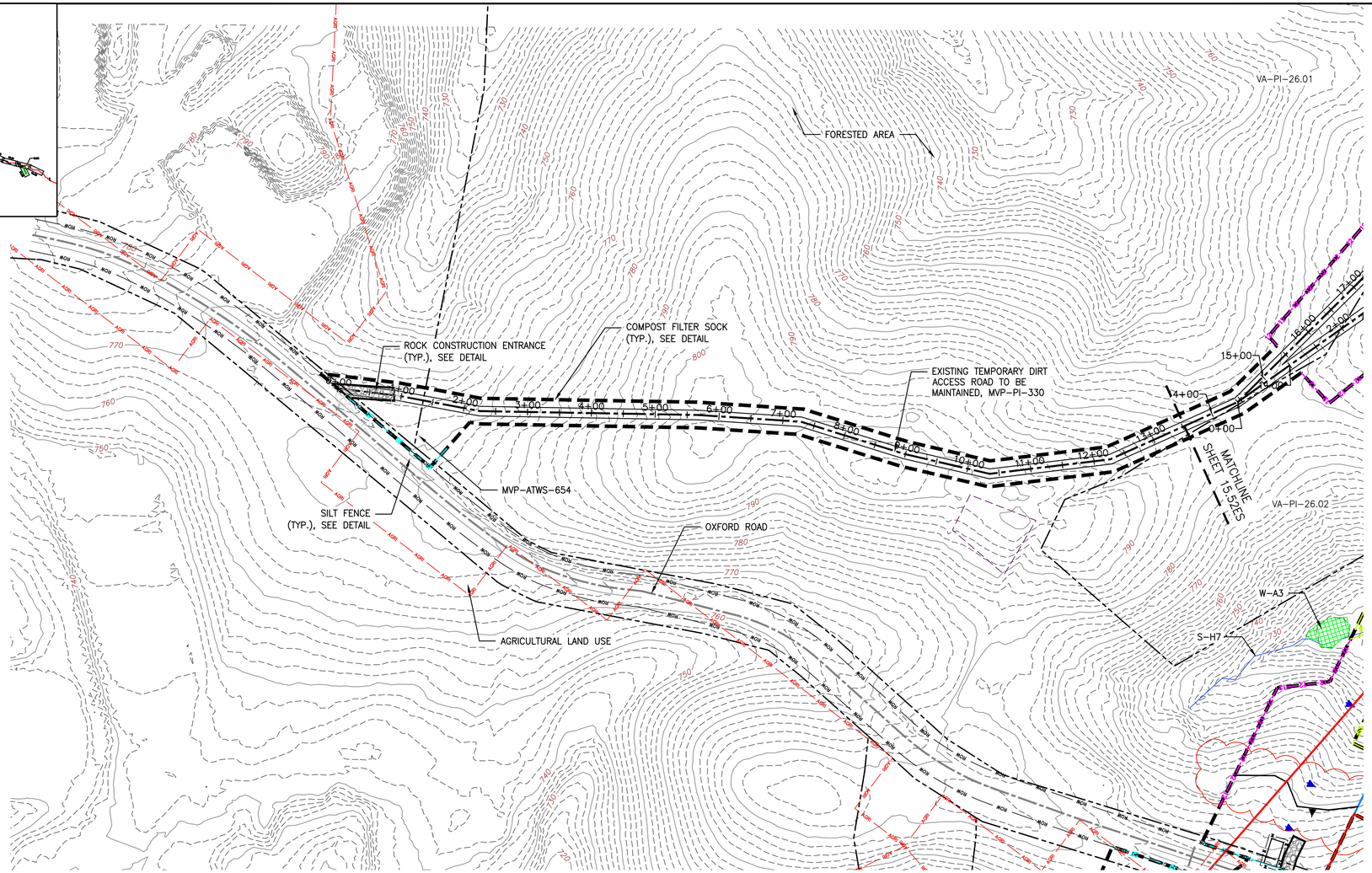
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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.87ES OF 15.99ES

LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
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- EXISTING COUNTY LINE
- POND
- WETLAND
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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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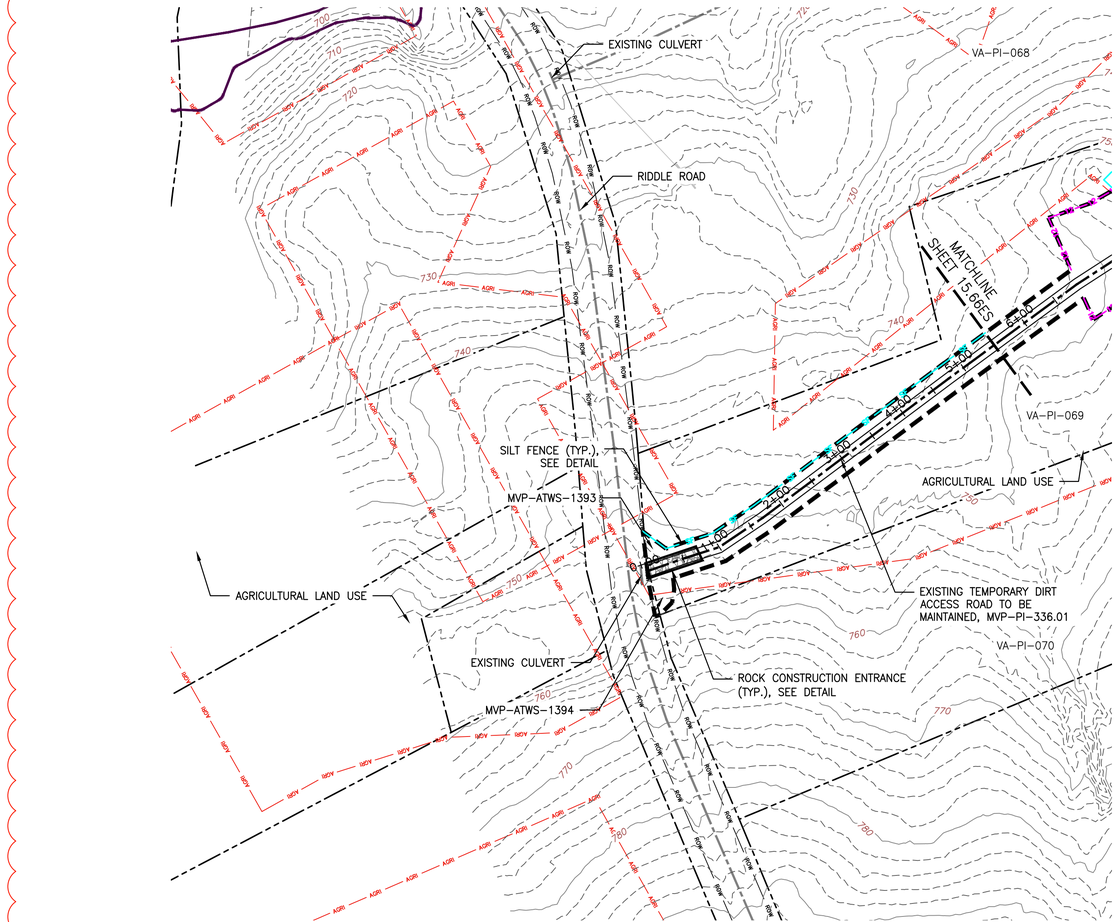
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.88ES OF 15.99ES

TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\16 – Pittsylvania\E&S\ES Version 5.0.0\7157ES15.88(S11).dwg PLOTTED ON: 3/2/2018 10:30 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb

LOCATION MAP



PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
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1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

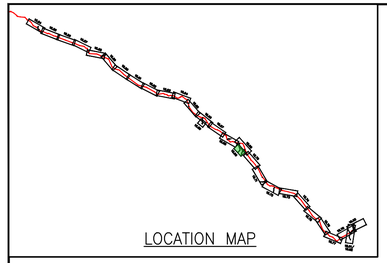
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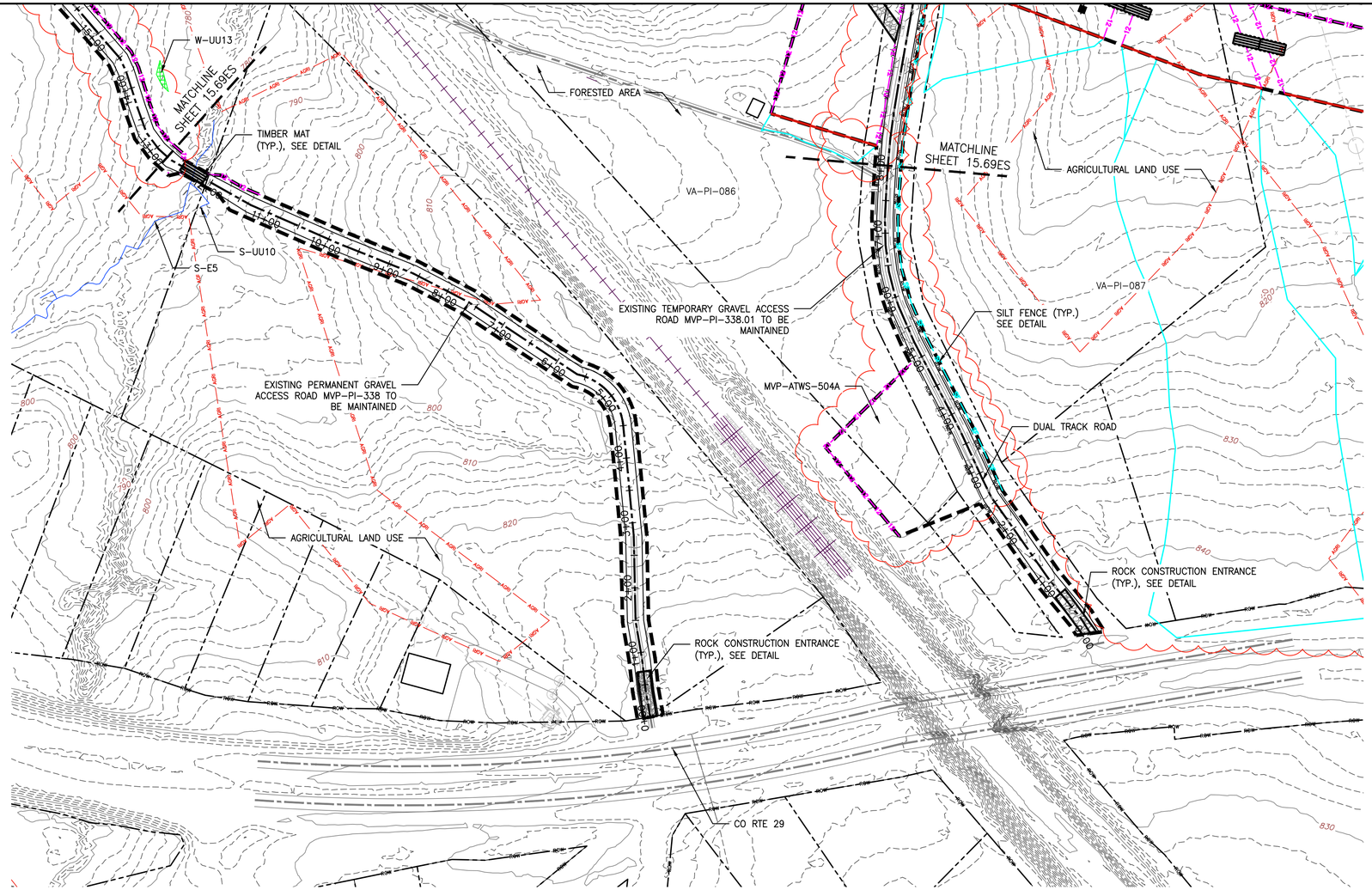
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.89ES OF 15.99ES

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PLAN

SCALE: 1" = 100'

100 0 100 200

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- STREAM
- USDA FOREST SERVICE (NATIONAL FOREST) LANDS
- APPALACHIAN NATIONAL SCENIC TRAIL
- EXISTING ROAD/TRAIL
- EXISTING PROPERTY LINE
- EXISTING STATE LINE
- EXISTING COUNTY LINE
- POND
- WETLAND
- ACID FORMING MATERIAL
- AGRICULTURAL LAND USE BOUNDARY
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED SILT FENCE (SEE NOTE 5)
- PROPOSED SUPER SILT FENCE (SEE DETAIL MVP-ES9.2)
- PROPOSED REINFORCED FILTRATION DEVICE (SEE DETAILS MVP-ES9, 9.1, 9.2, 9.3)
- ORANGE CONSTRUCTION SAFETY FENCE
- PROPOSED COMPOST FILTER SOCK (SEE DETAILS MVP-ES3, 3.1, 3.2)
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- GRASS-LINED CHANNEL (SEE DETAIL MVP-ES39)
- CLEAN WATER DIVERSION PIPE
- CLEAN WATER DIVERSION DIKE (SEE DETAIL MVP-ES50 AND MVP-ES51)
- STREAM FLOW DIRECTION
- FEMA 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- TIMBER MAT (SEE DETAIL MVP-ES37)
- STEEP SLOPE EROSION CONTROL (SEE NOTE 2)
- STEEP SLOPE AREAS (SEE NOTE 4)
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED TRENCH BREAKER (SEE DETAIL MVP-20)
- TEMPORARY ROW DIVERSION/WATER BAR (VADEQ STD & SPEC 3.11)
- PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (SEE DETAILS MVP-17, ES38, AND SCHEDULE)

NOTES:

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SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

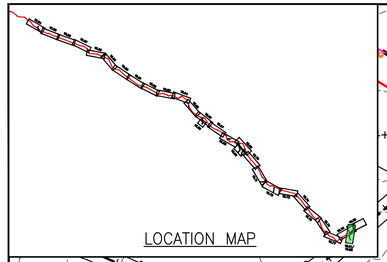
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

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PLAN

SCALE: 1" = 100'

100 0 100 200

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11 – PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057503
PROFESSIONAL ENGINEER

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LOCATION MAP

VA-PI-113

W-H18-PEM

W-H19

MATCHLINE SHEET 15.93ES

MATCHLINE SHEET 15.78ES

MATCHLINE SHEET 15.93ES

ORANGE CONSTRUCTION SAFETY FENCE (TYP.), SEE DETAIL

SEE SHEET 15.91ES FOR ACCESS ROAD MVP-PI-343 STATIONING

W-H18-PSS

S-KL15

S-KL16

S-H42

S-H41

CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA - 3.4 ACRES

CLEAN WATER DIVERSION TO BE INSTALLED IN ALL UPSLOPE AREAS OF SIDE SLOPE CONSTRUCTION (TYP.)

CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA - 0.1 ACRES

PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE

TEMPORARY ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE

MVP-ATWS-1463

TRENCH BREAKER (TYP.), SEE DETAIL

STREAM CROSSING S-H42

TEST SEGMENT 11C DISCHARGE HYDROTEST DEWATERING STRUCTURE WILL BE FIELD LOCATED AND PLACED IN A WELL VEGETATED UPLAND AREA IMMEDIATELY ADJACENT TO THE LOD

REFER TO TRANSCO INTERCONNECT EROSION AND SEDIMENT CONTROL PLANS FOR THIS AREA

COMPOST FILTER SOCK (TYP.), SEE DETAIL

PROPOSED H600 NATURAL GAS PIPELINE

PROPOSED H602 NATURAL GAS PIPELINE

W-H20

W-H21

S-H43

S-H49

TIMBER MAT (TYP.), SEE DETAIL

CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA - 0.4 ACRES

CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA - 0.2 ACRES

VA-PI-112.01

FORESTED AREA USE THIS ENTIRE SHEET

N

PLAN

SCALE: 1" = 100'

100 0 100 200

PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

VERTICAL SCALE: SCALE: 1" = 200'

100 0 100 200 0 200 400

STA: 12+64.78
STREAM (S-EF42)

19+19.96

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REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT - H602 LINE

SPREAD 11 - PITTSYLVANIA COUNTY, VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
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EROSION AND SEDIMENT CONTROL PLANS

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PROFESSIONAL ENGINEER

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EXISTING PERMANENT ACCESS ROAD TO BE MAINTAINED, MVP-PI-343.01

REFER TO TRANSCO INTERCONNECT EROSION AND SEDIMENT CONTROL PLANS FOR THIS AREA

MATCHLINE SHEET 15.78ES

FORESTED AREA

TEST SEGMENT 11C DISCHARGE HYDROTEST DEWATERING STRUCTURE WILL BE FIELD LOCATED AND PLACED IN A WELL VEGETATED UPLAND AREA IMMEDIATELY ADJACENT TO THE LOD

PERMANENT SLOPE BREAKER/ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE

PROPOSED H603 NATURAL GAS PIPELINE

TRENCH BREAKER (TYP.), SEE DETAIL

ORANGE CONSTRUCTION SAFETY FENCE (TYP.), SEE DETAIL

COMPOST FILTER SOCK (TYP.), SEE DETAIL

PROPOSED PERMANENT GRAVEL ACCESS ROAD TO BE MAINTAINED, MVP-PI-343

W-MM15-PFO

WETLAND CROSSING W-EF6

S-IJ26

S-IJ25

W-IJ21

TRANSCO ROAD

TIMBER MAT (TYP.), SEE DETAIL

COMPOST FILTER SOCK (TYP.), SEE DETAIL

TEMPORARY ROW DIVERSION/WATER BAR (TYP.), SEE DETAIL AND SCHEDULE

MVP-ATWS-1462

AGRICULTURAL LAND USE

PROPOSED PERMANENT ACCESS ROAD, TO BE MAINTAINED, MVP-PI-344

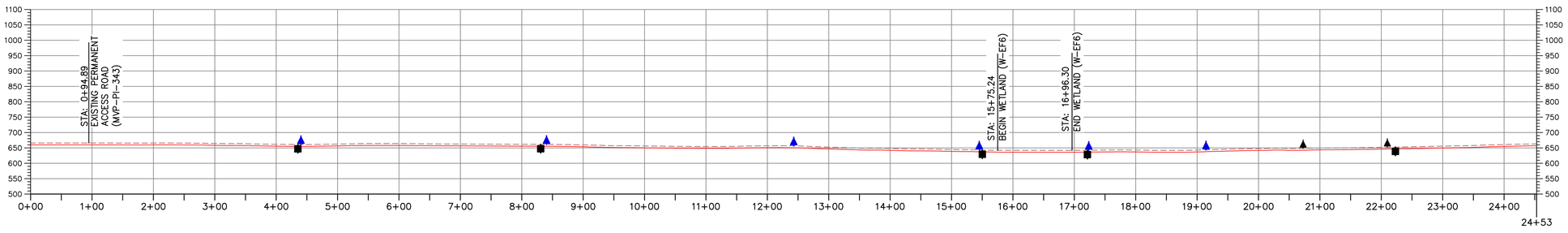
CLEAN WATER DIVERSION END RELEASE DRAINAGE AREA – 1.0 ACRES

LOCATION MAP

PLAN

SCALE: 1" = 100'

100 0 100 200



PROFILE

HORIZONTAL SCALE: SCALE: 1" = 100'

100 0 100 200

VERTICAL SCALE: SCALE: 1" = 200'

200 0 200 400

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REVISION	5
SHT. NO.	15.93ES OF 15.99ES

CROSSINGS S-C14 AND S-C17 REMOVED FROM THIS SHEET



Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

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661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

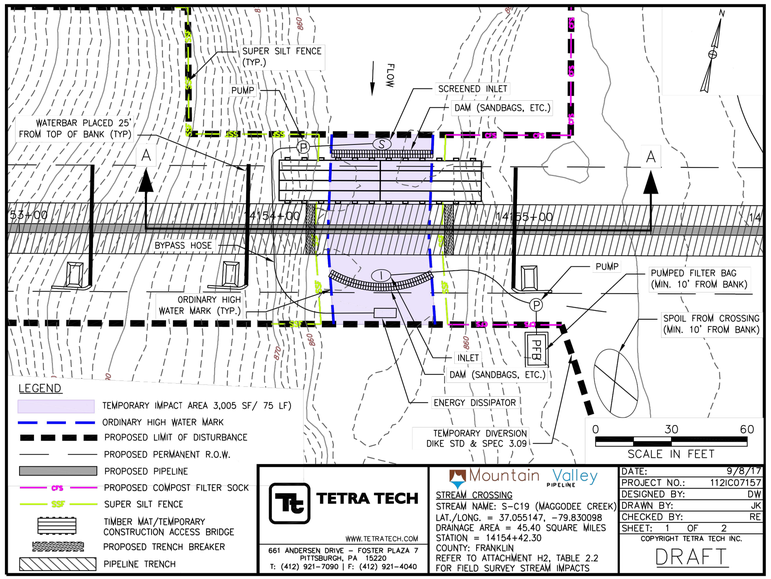
COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN

REVISION

SHT. NO. 15.94ES OF 15.99ES

TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\15 – Franklin\E&S\ES Version 5.0.0\7157ES15.94(S11).dwg PLOTTED ON: 3/2/2018 10:44 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb



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Mountain Valley PIPELINE

STREAM CROSSING
STREAM NAME: S-C19 (MAGGODEE CREEK)
LAT./LONG. = 37.055147, -79.830098
DRAINAGE AREA = 45.40 SQUARE MILES
STATION = 14154+42.30
COUNTY: FRANKLIN
REFER TO ATTACHMENT H2, TABLE 2.2 FOR FIELD SURVEY STREAM IMPACTS

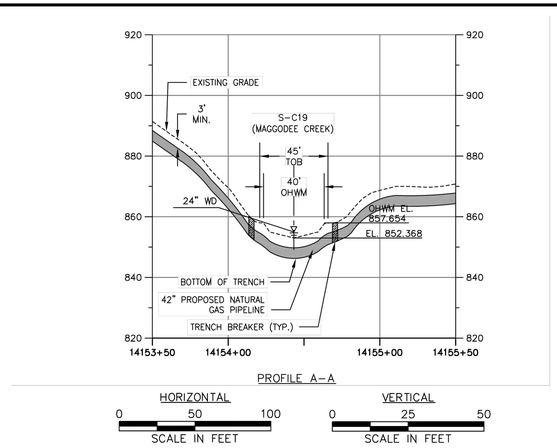
DATE:	9/8/17
PROJECT NO.:	112IC07157
DESIGNED BY:	DW
DRAWN BY:	JK
CHECKED BY:	RE
SHEET:	1 OF 2

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VMRC STREAM CROSSING S-C19
MAGGODEE CREEK
PLAN VIEW

CROSSING S-CD6 REMOVED FROM THIS SHEET



NOTE:
1. MINIMUM 3' OF COVER BETWEEN STREAM AND TOP OF PIPELINE.
2. PROPOSED FILL WILL BE IN TRENCH AND WILL BE RESTORED TO PRECONSTRUCTION ELEVATIONS.
3. WATER DEPTH SHOWN ON PROFILE IS NOT TO SCALE.
4. E&SC BMPS HAVE BEEN REMOVED FOR CLARITY AND ARE DISPLAYED ON PLAN VIEW.

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Mountain Valley PIPELINE

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STATION = 14154+42.30
COUNTY: FRANKLIN
REFER TO ATTACHMENT H2, TABLE 2.2 FOR FIELD SURVEY STREAM IMPACTS

DATE:	9/8/17
PROJECT NO.:	112IC07157
DESIGNED BY:	DW
DRAWN BY:	JK
CHECKED BY:	RE
SHEET:	2 OF 2

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VMRC STREAM CROSSING S-C19
MAGGODEE CREEK
PLAN VIEW

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.95ES OF 15.99ES

REVISION

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CROSSINGD S-D8 AND S-D23 REMOVED FROM THIS SHEET

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

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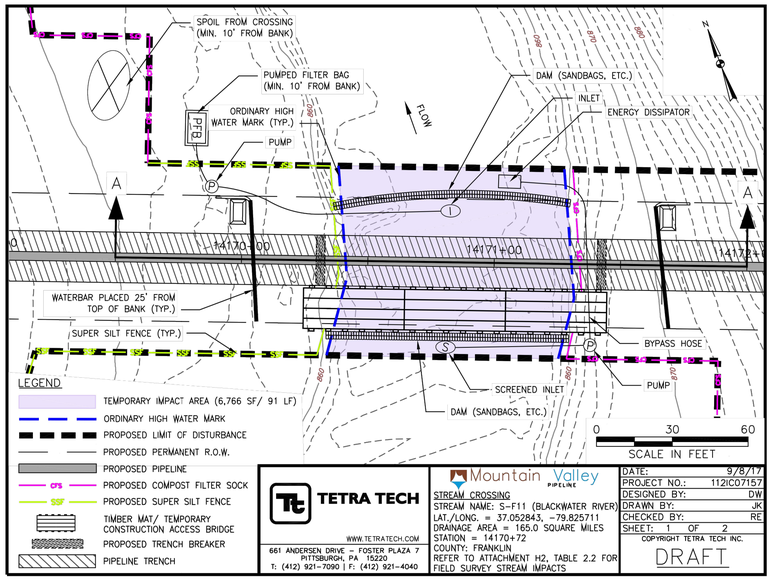
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.96ES OF 15.99ES

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Mountain Valley PIPELINE

STREAM CROSSING
STREAM NAME: S-F11 (BLACKWATER RIVER)
LAT./LONG. = 37.052843, -79.825711
DRAINAGE AREA = 165.0 SQUARE MILES
STATION = 14170+72
COUNTY: FRANKLIN
REFER TO ATTACHMENT H2, TABLE 2.2 FOR FIELD SURVEY STREAM IMPACTS

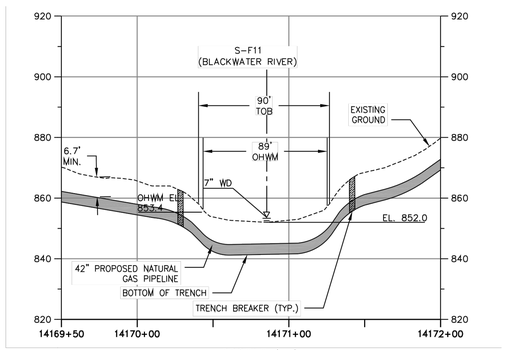
DATE:	9/8/17
PROJECT NO.:	112IC07157
DESIGNED BY:	DW
DRAWN BY:	JK
CHECKED BY:	RE
SHEET:	1 OF 2

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VMRC STREAM CROSSING S-F11
BLACKWATER RIVER
PLAN VIEW

CROSSING S-I12 REMOVED FROM THIS SHEET



PROFILE A-A

HORIZONTAL
0 50 100
SCALE IN FEET

VERTICAL
0 25 50
SCALE IN FEET

NOTE:
1. MINIMUM 6.7' OF COVER BETWEEN STREAM AND TOP OF PIPELINE.
2. PROPOSED FILL WILL BE IN TRENCH AND WILL BE RESTORED TO PRECONSTRUCTION ELEVATIONS.
3. WATER DEPTH SHOWN ON PROFILE IS NOT TO SCALE.
4. E&SC BMPS HAVE BEEN REMOVED FOR CLARITY AND ARE DISPLAYED ON PLAN VIEW.

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LAT./LONG. = 37.052843, -79.825711
DRAINAGE AREA = 165.0 SQUARE MILES
STATION = 14170+72
COUNTY: FRANKLIN
REFER TO ATTACHMENT H2, TABLE 2.2 FOR FIELD SURVEY STREAM IMPACTS

DATE:	9/8/17
PROJECT NO.:	112IC07157
DESIGNED BY:	DW
DRAWN BY:	JK
CHECKED BY:	RE
SHEET:	2 OF 2

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VMRC STREAM CROSSING S-F11
BLACKWATER RIVER
PLAN VIEW

NO.	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
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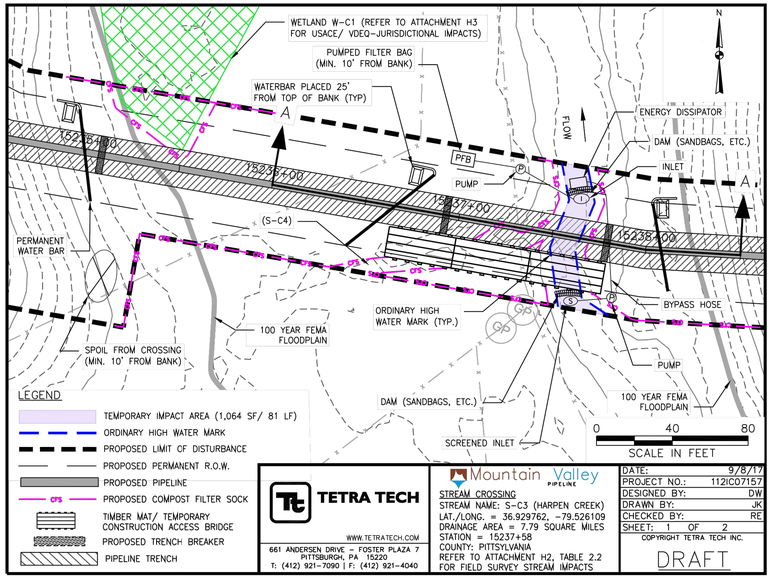
EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
SHT. NO.	15.97ES OF 15.99ES

REVISION

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Mountain Valley PIPELINE

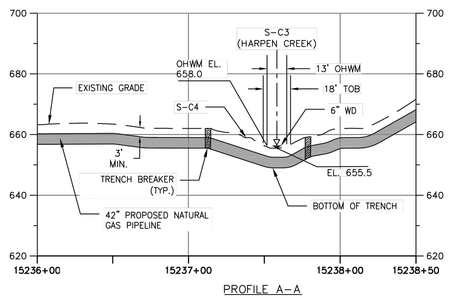
STREAM CROSSING
STREAM NAME: S-C3 (HARPEN CREEK)
LAT./LONG. = 36.929762, -79.526109
DRAINAGE AREA = 7.79 SQUARE MILES
STATION = 15237+58
COUNTY: PITTSYLVANIA
REFER TO ATTACHMENT H2, TABLE 2.2 FOR FIELD SURVEY STREAM IMPACTS

DATE:	9/8/17
PROJECT NO.:	112IC07157
DESIGNED BY:	DW
DRAWN BY:	JK
CHECKED BY:	RE
SHEET:	1 OF 2

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VMRC STREAM CROSSING S-C3
HARPEN CREEK
PLAN VIEW



PROFILE A-A

HORIZONTAL
0 50 100
SCALE IN FEET

VERTICAL
0 25 50
SCALE IN FEET

NOTE:
1. MINIMUM 3' OF COVER BETWEEN STREAM AND TOP OF PIPELINE.
2. PROPOSED FILL WILL BE IN TRENCH AND WILL BE RESTORED TO PRECONSTRUCTION ELEVATIONS.
3. WATER DEPTH SHOWN ON PROFILE IS NOT TO SCALE.
4. E&SC BMPS HAVE BEEN REMOVED FOR CLARITY AND ARE DISPLAYED ON PLAN VIEW.

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Mountain Valley PIPELINE

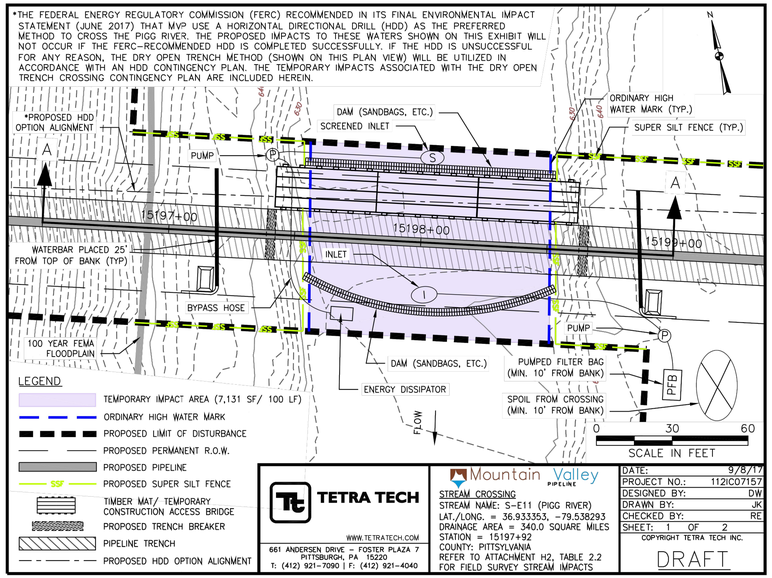
STREAM CROSSING
STREAM NAME: S-C3 (HARPEN CREEK)
LAT./LONG. = 36.929762, -79.526109
DRAINAGE AREA = 7.79 SQUARE MILES
STATION = 15237+58
COUNTY: PITTSYLVANIA
REFER TO ATTACHMENT H2, TABLE 2.2 FOR FIELD SURVEY STREAM IMPACTS

DATE: 9/8/17
PROJECT NO.: 112IC07157
DESIGNED BY: DW
DRAWN BY: JK
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SHEET: 2 OF 2

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VMRC STREAM CROSSING S-C3
HARPEN CREEK
PLAN VIEW



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Mountain Valley PIPELINE

STREAM CROSSING
STREAM NAME: S-E11 (PIGG RIVER)
LAT./LONG. = 36.933353, -79.538293
DRAINAGE AREA = 340.0 SQUARE MILES
STATION = 15197+92
COUNTY: PITTSYLVANIA
REFER TO ATTACHMENT H2, TABLE 2.2 FOR FIELD SURVEY STREAM IMPACTS

DATE: 9/8/17
PROJECT NO.: 112IC07157
DESIGNED BY: DW
DRAWN BY: JK
CHECKED BY: RE
SHEET: 1 OF 2

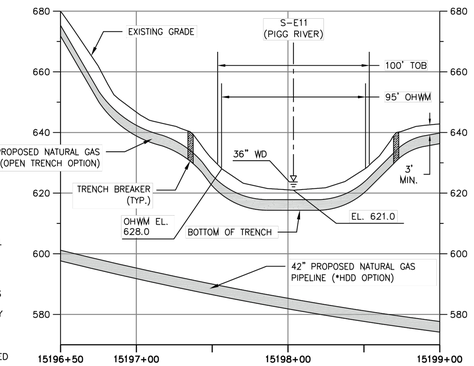
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VMRC STREAM CROSSING S-E11
PIGG RIVER
PLAN VIEW

HORIZONTAL
0 50 100
SCALE IN FEET

VERTICAL
0 25 50
SCALE IN FEET



PROFILE A-A

*THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) RECOMMENDED IN ITS FINAL ENVIRONMENTAL IMPACT STATEMENT (JUNE 2017) THAT MVP USE A HORIZONTAL DIRECTIONAL DRILL (HDD) AS THE PREFERRED METHOD TO CROSS THE PIGG RIVER. THE PROPOSED IMPACTS TO THESE WATERS SHOWN ON THIS EXHIBIT WILL NOT OCCUR IF THE FERC-RECOMMENDED HDD IS COMPLETED SUCCESSFULLY. IF THE HDD IS UNSUCCESSFUL FOR ANY REASON, THE DRY OPEN TRENCH CROSSING CONTINGENCY PLAN ARE INCLUDED HEREIN. BOTH THE DRY OPEN TRENCH AND THE HDD METHOD ARE SHOWN ON THIS EXHIBIT FOR REVIEW PURPOSES.

DRY OPEN TRENCH NOTES:
1. MINIMUM 3' OF COVER BETWEEN STREAM AND TOP OF PIPELINE.
2. PROPOSED FILL WILL BE IN TRENCH AND WILL BE RESTORED TO PRECONSTRUCTION ELEVATIONS.
3. WATER DEPTH SHOWN ON PROFILE IS NOT TO SCALE.
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DATE: 9/8/17
PROJECT NO.: 112IC07157
DESIGNED BY: DW
DRAWN BY: JK
CHECKED BY: RE
SHEET: 2 OF 2

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VMRC STREAM CROSSING S-E11
PIGG RIVER
PLAN VIEW

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS
MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE
SPREAD 11

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
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EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF VIRGINIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	5
SHT. NO.	15.98ES OF 15.99ES

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Construction Spread Number	Stream ID	NHD Stream Name	County	Latitude	Longitude	Top of Bank Width (ft)	Selected Crossing Method	Selected Crossing BMP No.
Spread 11	S-EF48	UNT to Blackwater River	Franklin	37.064748	-79.87442	2	Dam and Pump	MVP-ES8
Spread 11	S-YZ4	UNT to Blackwater River	Franklin	37.064723	-79.87819	3	Dam and Pump	MVP-ES8
Spread 11	S-YZ5	UNT to Blackwater River	Franklin	37.063464	-79.878281	4	Dam and Pump	MVP-ES8
Spread 11	S-KL41	UNT to Blackwater River	Franklin	37.062262	-79.862639	12	Dam and Pump	MVP-ES8
Spread 11	S-KL39	UNT to Blackwater River	Franklin	37.061193	-79.880018	6.5	Dam and Pump	MVP-ES8
Spread 11	S-KL54	UNT to Maggodee Creek	Franklin	37.059535	-79.840624	10	Dam and Pump	MVP-ES8
Spread 11	S-C8	UNT to Blackwater River	Franklin	37.059098	-79.853595	5	Dam and Pump	MVP-ES8
Spread 11	S-F4	UNT to Blackwater River	Franklin	37.05906	-79.853379	10	Dam and Pump	MVP-ES8
Spread 11	S-KL52	UNT to Maggodee Creek	Franklin	37.058165	-79.844877	1	Dam and Pump	MVP-ES8
Spread 11	S-KL53	UNT to Maggodee Creek	Franklin	37.058136	-79.844603	7	Dam and Pump	MVP-ES8
Spread 11	S-F8	UNT to Maggodee Creek	Franklin	37.057724	-79.836406	30	Dam and Pump	MVP-ES8
Spread 11	S-HH4	UNT to Maggodee Creek	Franklin	37.056594	-79.835785	9	Dam and Pump	MVP-ES8
Spread 11	S-KL51	UNT to Blackwater River	Franklin	37.056084	-79.850384	5.5	Dam and Pump	MVP-ES8
Spread 11	S-KL38	UNT to Blackwater River	Franklin	37.055912	-79.883177	7	Dam and Pump	MVP-ES8
Spread 11	S-C20	UNT to Maggodee Creek	Franklin	37.055193	-79.833881	4	Dam and Pump	MVP-ES8
Spread 11	S-C19	Maggodee Creek	Franklin	37.055147	-79.830098	45	See VMRC Crossing Detail	Per VMRC Crossing Detail
Spread 11	S-KL36	UNT to Blackwater River	Franklin	37.053336	-79.884604	7.5	Dam and Pump	MVP-ES8
Spread 11	S-F11	Blackwater River	Franklin	37.052843	-79.825711	90	See VMRC Crossing Detail	Per VMRC Crossing Detail
Spread 11	S-KL35	UNT to Blackwater River	Franklin	37.052125	-79.886182	2.5	Dam and Pump	MVP-ES8
Spread 11	S-F9b	UNT to Blackwater River	Franklin	37.049238	-79.817223	15	Dam and Pump	MVP-ES8
Spread 11	S-F10	UNT to Blackwater River	Franklin	37.048037	-79.813934	9	Dam and Pump	MVP-ES8
Spread 11	S-CD1	UNT to Blackwater River	Franklin	37.047765	-79.897636	3.5	Dam and Pump	MVP-ES8
Spread 11	S-F9a	UNT to Blackwater River	Franklin	37.047172	-79.813	15	Dam and Pump	MVP-ES8
Spread 11	S-GG4	UNT to Blackwater River	Franklin	37.042742	-79.809015	5	Dam and Pump	MVP-ES8
Spread 11	S-A36	UNT to Foul Ground Creek	Franklin	37.037916	-79.804237	4	Dam and Pump	MVP-ES8
Spread 11	S-A38	UNT to Foul Ground Creek	Franklin	37.036271	-79.799442	9	Dam and Pump	MVP-ES8
Spread 11	S-A40	UNT to Foul Ground Creek	Franklin	37.036173	-79.79924	5.8	Dam and Pump	MVP-ES8
Spread 11	S-A41	Foul Ground Creek	Franklin	37.031714	-79.788213	12	Dam and Pump	MVP-ES8
Spread 11	S-GH36	UNT to Foul Ground Creek	Franklin	37.031063	-79.778588	3	Dam and Pump	MVP-ES8
Spread 11	S-KL17	UNT to Foul Ground Creek	Franklin	37.031011	-79.778435	5	Dam and Pump	MVP-ES8
Spread 11	S-GH37	UNT to Foul Ground Creek	Franklin	37.030974	-79.77819	3	Dam and Pump	MVP-ES8
Spread 11	S-GH38	UNT to Foul Ground Creek	Franklin	37.030972	-79.778083	3	Dam and Pump	MVP-ES8
Spread 11	S-GH39	UNT to Foul Ground Creek	Franklin	37.030861	-79.778069	4	Dam and Pump	MVP-ES8
Spread 11	S-GH40	UNT to Foul Ground Creek	Franklin	37.028893	-79.774785	3	Dam and Pump	MVP-ES8
Spread 11	S-GH44	UNT to Foul Ground Creek	Franklin	37.028392	-79.773359	6	Dam and Pump	MVP-ES8
Spread 11	S-IJ47	UNT to Foul Ground Creek	Roanoke	37.028373	-79.773383	2	Dam and Pump	MVP-ES8
Spread 11	S-G22	UNT to Poplar Camp Creek	Franklin	37.019612	-79.761958	12	Dam and Pump	MVP-ES8
Spread 11	S-G23	UNT to Poplar Camp Creek	Franklin	37.019526	-79.762002	3	Dam and Pump	MVP-ES8
Spread 11	S-G21	UNT to Poplar Camp Creek	Franklin	37.019359	-79.761643	3	Dam and Pump	MVP-ES8
Spread 11	S-G20	Poplar Camp Creek	Franklin	37.017364	-79.76	10	Dam and Pump	MVP-ES8
Spread 11	S-G18	UNT to Blackwater River	Franklin	37.009236	-79.754238	2	Dam and Pump	MVP-ES8
Spread 11	S-G17	UNT to Blackwater River	Franklin	37.005496	-79.752655	5	Dam and Pump	MVP-ES8
Spread 11	S-E18	UNT to Blackwater River	Franklin	37.001271	-79.747749	7	Dam and Pump	MVP-ES8
Spread 11	S-E17	UNT to Blackwater River	Franklin	37.000529	-79.74276	8	Dam and Pump	MVP-ES8
Spread 11	S-E14	UNT to Blackwater River	Franklin	36.995814	-79.735144	20	Dam and Pump	MVP-ES8
Spread 11	S-H38	UNT to Jacks Creek	Franklin	36.98943	-79.722366	12	Dam and Pump	MVP-ES8
Spread 11	S-H32	UNT to Jacks Creek	Franklin	36.988273	-79.708199	10	Dam and Pump	MVP-ES8
Spread 11	S-H37	UNT to Jacks Creek	Franklin	36.988031	-79.71745	6	Dam and Pump	MVP-ES8
Spread 11	S-H34	UNT to Jacks Creek	Franklin	36.988009	-79.711881	3	Dam and Pump	MVP-ES8
Spread 11	S-H36	UNT to Jacks Creek	Franklin	36.988008	-79.714922	3	Dam and Pump	MVP-ES8
Spread 11	S-H30	UNT to Jacks Creek	Franklin	36.987961	-79.702711	1	Dam and Pump	MVP-ES8
Spread 11	S-A18	UNT to Jacks Creek	Franklin	36.987818	-79.700634	2.6	Dam and Pump	MVP-ES8
Spread 11	S-A19/H26	UNT to Jacks Creek	Franklin	36.987719	-79.698901	7	Dam and Pump	MVP-ES8
Spread 11	S-A20	UNT to Jacks Creek	Franklin	36.987715	-79.698555	7	Dam and Pump	MVP-ES8
Spread 11	S-H28	UNT to Jacks Creek	Franklin	36.985174	-79.692272	6	Dam and Pump	MVP-ES8
Spread 11	S-H27	UNT to Jacks Creek	Franklin	36.985124	-79.692272	10	Dam and Pump	MVP-ES8
Spread 11	S-A22	UNT to Jacks Creek	Franklin	36.984846	-79.69187	8	Dam and Pump	MVP-ES8
Spread 11	S-MM44	UNT to Little Jacks Creek	Franklin	36.982507	-79.687818	4	Dam and Pump	MVP-ES8
Spread 11	S-MM46	UNT to Little Jacks Creek	Franklin	36.98224	-79.6875	3	Dam and Pump	MVP-ES8
Spread 11	S-MM45	UNT to Little Jacks Creek	Franklin	36.981971	-79.686901	4	Dam and Pump	MVP-ES8
Spread 11	S-MM48	UNT to Little Jacks Creek	Franklin	36.979223	-79.684192	7	Dam and Pump	MVP-ES8
Spread 11	S-H25	Little Jacks Creek	Franklin	36.978529	-79.682186	7	Dam and Pump	MVP-ES8
Spread 11	S-H24	UNT to Little Jacks Creek	Franklin	36.978025	-79.680682	10	Dam and Pump	MVP-ES8
Spread 11	S-H23	UNT to Turkey Creek	Franklin	36.976421	-79.677525	5	Dam and Pump	MVP-ES8
Spread 11	S-HH1	UNT to Turkey Creek	Franklin	36.974647	-79.674453	5	Dam and Pump	MVP-ES8
Spread 11	S-A13	Turkey Creek	Franklin	36.973282	-79.673075	8	Dam and Pump	MVP-ES8
Spread 11	S-A11	UNT to Turkey Creek	Franklin	36.973237	-79.669898	3	Dam and Pump	MVP-ES8
Spread 11	S-H17	Dinner Creek	Franklin	36.972125	-79.662987	8	Dam and Pump	MVP-ES8
Spread 11	S-A7	UNT to Dinner Creek	Franklin	36.972032	-79.662504	6	Dam and Pump	MVP-ES8
Spread 11	S-SS8	Polecat Creek	Franklin	36.970904	-79.65737	8	Dam and Pump	MVP-ES8

SPREAD 11– STREAM CROSSING INFORMATION

Construction Spread Number	Stream ID	NHD Stream Name	County	Latitude	Longitude	Top of Bank Width (ft)	Selected Crossing Method	Selected Crossing BMP No.
Spread 11	S-CD8	UNT to Owens Creek	Franklin	36.970522	-79.653726	4.5	Dam and Pump	MVP-ES8
Spread 11	S-AB8	UNT to Owens Creek	Franklin	36.970133	-79.651328	4	Dam and Pump	MVP-ES8
Spread 11	S-DD3	Owens Creek	Franklin	36.969118	-79.645042	15	Dam and Pump	MVP-ES8
Spread 11	S-G16	Strawfield Creek	Franklin	36.96864	-79.642174	30	Dam and Pump	MVP-ES8
Spread 11	S-G15	UNT to Parrot Branch	Franklin	36.967711	-79.63659	9	Dam and Pump	MVP-ES8
Spread 11	S-G13	Parrot Branch	Franklin	36.967025	-79.630747	8	Dam and Pump	MVP-ES8
Spread 11	S-D3	UNT to Jonnikin Creek	Pittsylvania	36.965631	-79.605542	10	Dam and Pump	MVP-ES8
Spread 11	S-D4	UNT to Jonnikin Creek	Pittsylvania	36.9656	-79.604894	6	dam and Pump	MVP-ES8
Spread 11	S-D2	Jonnikin Creek	Pittsylvania	36.965405	-79.59913	18	Dam and Pump	MVP-ES8
Spread 11	S-D7	UNT to Jonnikin Creek	Franklin	36.964763	-79.617043	8	Dam and Pump	MVP-ES8
Spread 11	S-D1	UNT to Jonnikin Creek	Pittsylvania	36.96443	-79.595691	10	Dam and Pump	MVP-ES8
Spread 11	S-G11	UNT to Jonnikin Creek	Pittsylvania	36.96242	-79.5905	6	Dam and Pump	MVP-ES8
Spread 11	S-G9	UNT to Jonnikin Creek	Pittsylvania	36.959361	-79.586437	4	Dam and Pump	MVP-ES8
Spread 11	S-G8	UNT to Jonnikin Creek	Pittsylvania	36.957805	-79.583545	4	Dam and Pump	MVP-ES8
Spread 11	S-Q15	UNT to Jonnikin Creek	Pittsylvania	36.95758	-79.583492	5	Dam and Pump	MVP-ES8
Spread 11	S-A5	UNT to Rocky Creek	Pittsylvania	36.954125	-79.58087	8	Dam and Pump	MVP-ES8
Spread 11	S-A6	UNT to Rocky Creek	Pittsylvania	36.952275	-79.58046	5	Dam and Pump	MVP-ES8
Spread 11	S-H11	UNT to Rocky Creek	Pittsylvania	36.949582	-79.579537	3	Dam and Pump	MVP-ES8
Spread 11	S-F1	UNT to Rocky Creek	Pittsylvania	36.945162	-79.57402	8	Dam and Pump	MVP-ES8
Spread 11	S-F2	UNT to Rocky Creek	Pittsylvania	36.944049	-79.571442	7	Dam and Pump	MVP-ES8
Spread 11	S-C7	UNT to Rocky Creek	Pittsylvania	36.944016	-79.571517	20	Dam and Pump	MVP-ES8
Spread 11	S-E12	UNT to Pigg River	Pittsylvania	36.935998	-79.549329	3	Dam and Pump	MVP-ES8
Spread 11	S-E11	Pigg River	Pittsylvania	36.933353	-79.538293	100	See VMRC Crossing Detail	Per VMRC Crossing Detail
Spread 11	S-H8	UNT to Pigg River	Pittsylvania	36.932497	-79.535087	6	Dam and Pump	MVP-ES8
Spread 11	S-A4	UNT to Pigg River	Pittsylvania	36.932251	-79.532989	8	Dam and Pump	MVP-ES8
Spread 11	S-H7	UNT to Pigg River	Pittsylvania	36.932182	-79.532963	5	Dam and Pump	MVP-ES8
Spread 11	S-C3	Harpen Creek	Pittsylvania	36.929762	-79.526109	18	See VMRC Crossing Detail	Per VMRC Crossing Detail
Spread 11	S-H13	Harpen Creek	Pittsylvania	36.925105	-79.51735	20	Dam and Pump	MVP-ES8
Spread 11	S-G4	Harpen Creek	Pittsylvania	36.916463	-79.492669	30	Dam and Pump	MVP-ES8
Spread 11	S-C4	UNT to Harpen Creek	Pittsylvania	36.929745	-79.52629	4	Dam and Pump	MVP-ES8
Spread 11	S-G6	UNT to Harpen Creek	Pittsylvania	36.920737	-79.505898	6	Dam and Pump	MVP-ES8
Spread 11	S-G5	UNT to Harpen Creek	Pittsylvania	36.917694	-79.496604	6	Dam and Pump	MVP-ES8
Spread 11	S-G3	UNT to Harpen Creek	Pittsylvania	36.915658	-79.490029	9	Dam and Pump	MVP-ES8
Spread 11	S-CC16	UNT to Harpen Creek	Pittsylvania	36.913003	-79.487838	11	Dam and Pump	MVP-ES8
Spread 11	S-CC14	UNT to Cherrystone Creek	Pittsylvania	36.905329	-79.471492	8	Dam and Pump	MVP-ES8
Spread 11	S-CC13	UNT to Cherrystone Creek	Pittsylvania	36.905307	-79.471574	7	Dam and Pump	MVP-ES8
Spread 11	S-MM8	UNT to Cherrystone Creek	Pittsylvania	36.902991	-79.46822	6	Dam and Pump	MVP-ES8
Spread 11	S-CC15	UNT to Cherrystone Creek	Pittsylvania	36.901941	-79.466535	6	Dam and Pump	MVP-ES8
Spread 11	S-CC8	UNT to Cherrystone Creek	Pittsylvania	36.899437	-79.462685	8	Dam and Pump	MVP-ES8
Spread 11	S-CC5	UNT to Cherrystone Creek	Pittsylvania	36.899411	-79.462483	12	Dam and Pump	MVP-ES8
Spread 11	S-CC9	UNT to Cherrystone Creek	Pittsylvania	36.89774	-79.458046	5.5	Dam and Pump	MVP-ES8
Spread 11	S-CC10	UNT to Cherrystone Creek	Pittsylvania	36.897315	-79.456119	9	Dam and Pump	MVP-ES8
Spread 11	S-MM10	UNT to Cherrystone Creek	Pittsylvania	36.895915	-79.45296	7	Dam and Pump	MVP-ES8
Spread 11	S-CC11	UNT to Cherrystone Creek	Pittsylvania	36.895808	-79.45292	8	Dam and Pump	MVP-ES8
Spread 11	S-CC1	Cherrystone Creek	Pittsylvania	36.894043	-79.445744	15	Dam and Pump	MVP-ES8
Spread 11	S-CC3	UNT to Cherrystone Creek	Pittsylvania	36.893727	-79.444763	8	Dam and Pump	MVP-ES8
Spread 11	S-P5	UNT to Cherrystone Creek	Pittsylvania	36.892751	-79.440053	5	Dam and Pump	MVP-ES8
Spread 11	S-IJ35-EPH	UNT to Pole Bridge Branch	Pittsylvania	36.891451	-79.433781	4	Dam and Pump	MVP-ES8
Spread 11	S-Q4	UNT to Pole Bridge Branch	Pittsylvania	36.886114	-79.430914	5	Dam and Pump	MVP-ES8
Spread 11	S-Q3	Pole Bridge Branch	Pittsylvania	36.884444	-79.42822	25	Dam and Pump	MVP-ES8
Spread 11	S-Q2	UNT to Pole Bridge Branch	Pittsylvania	36.884284	-79.427914	7	Dam and Pump	MVP-ES8
Spread 11	S-Q1	UNT to Pole Bridge Branch	Pittsylvania	36.883448	-79.425169	4	Dam and Pump	MVP-ES8
Spread 11	S-B6	UNT to Pole Bridge Branch	Pittsylvania	36.879063	-79.420189	10	Dam and Pump	MVP-ES8
Spread 11	S-B8	UNT to Pole Bridge Branch	Pittsylvania	36.877937	-79.417992	4	Dam and Pump	MVP-ES8
Spread 11	S-B9	UNT to Pole Bridge Branch	Pittsylvania	36.877416	-79.416255	7	Dam and Pump	MVP-ES8
Spread 11	S-DD4	UNT to Mill Creek	Pittsylvania	36.871478	-79.403907	6	Dam and Pump	MVP-ES8
Spread 11	S-KL27	UNT to Mill Creek	Pittsylvania	36.866534	-79.400511	1	Dam and Pump	MVP-ES8
Spread 11	S-C1	Mill Creek	Pittsylvania	36.863513	-79.397914	6	Dam and Pump	MVP-ES8
Spread 11	S-G2	Little Cherrystone Creek	Pittsylvania	36.851931	-79.386051	7	Dam and Pump	MVP-ES8
Spread 11	S-B2	UNT to Little Cherrystone Creek	Pittsylvania	36.849394	-79.37778	5	Dam and Pump	MVP-ES8
Spread 11	S-H55	UNT to Little Cherrystone Creek	Pittsylvania	36.843486	-79.369222	3	Dam and Pump	MVP-ES8
Spread 11	S-H54	UNT to Little Cherrystone Creek	Pittsylvania	36.841112	-79.366848	12	Dam and Pump	MVP-ES8
Spread 11	S-GG11	UNT to Little Cherrystone Creek	Pittsylvania	36.841093	-79.366942	8	Dam and Pump	MVP-ES8
Spread 11	S-H3	UNT to Little Cherrystone Creek	Pittsylvania	36.834501	-79.360244	6	Dam and Pump	MVP-ES8
Spread 11	S-H5	UNT to Little Cherrystone Creek	Pittsylvania	36.833412	-79.359823	8	Dam and Pump	MVP-ES8
Spread 11	S-OO1	UNT to Little Cherrystone Creek	Pittsylvania	36.830285	-79.356618	5	Dam and Pump	MVP-ES8
Spread 11	S-H44	UNT to Little Cherrystone Creek	Pittsylvania	36.829823	-79.346016	8	Dam and Pump	MVP-ES8
Spread 11	S-H42	UNT to Little Cherrystone Creek	Pittsylvania	36.829008	-79.344496	5	Dam and Pump	MVP-ES8
Spread 11	S-OO2	UNT to Little Cherrystone Creek	Pittsylvania	36.828831	-79.353849	5	Dam and Pump	MVP-ES8
Spread 11	S-EF26	Little Cherrystone Creek	Pittsylvania	36.828207	-79.349814	20	Dam and Pump	MVP-ES8

SPREAD 11– STREAM CROSSING INFORMATION

NO.:	DATE:	DWN.:	CHKD.:	APPD.:	DESCRIPTION:
5	03/04/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
4	02/27/18	KAL	RE	DW	ADDRESS VADEQ COMMENTS
3	01/07/18	KAL	RE	DW	ADDRES VADEQ COMMENTS
2	11/21/17	KAL	RE	DW	ADDRESS VADEQ COMMENTS
1	09/11/17	KAL	RE	DW	PLAN SUBMISSION

REVISIONS:

Mountain Valley PIPELINE

EROSION AND SEDIMENT CONTROL PLANS

MOUNTAIN VALLEY PIPELINE PROJECT – H600 LINE

SPREAD 11

MOUNTAIN VALLEY PIPELINE, LLC
555 SOUTHPOINTE BOULEVARD, SUITE 200
CANONSBURG, PA 15317

TETRA TECH
complex world | CLEAR SOLUTIONS™
661 ANDERSEN DRIVE
FOSTER PLAZA 7
PITTSBURGH, PA 15220

EROSION AND SEDIMENT CONTROL PLANS

COMMONWEALTH OF PENNSYLVANIA
DAVID J. WALLNER
Lic. No. 0402057593
PROFESSIONAL ENGINEER

DRAWN BY:	KAL
CHECKED BY:	RE
APPROVED BY:	DW
DATE:	03/04/2018
SCALE:	AS SHOWN
REVISION	
SHT. NO.	15.99ES OF 15.99ES

TETRA TECH CAD FILE PATH: X:\CADD_Pittsburgh\EQT\7157 – MVP\16 – Pittsylvainia\E&S\ES Version 5.0.0\7157ES15.99(S11).dwg PLOTTED ON: 3/2/2018 10:45 PM PLOTTED BY: Zeigler, Justin PLOT FILE: ENVIRONMENTAL_COLOR.ctb