CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE

ROAD DESIGN PLANS
FOR
TEMPORARY AND PERMANENT ACCESS ROADS

BROOME COUNTY - TOWN OF SANFORD
CHENANGO COUNTY - TOWN OF AFTON
DELAWARE COUNTY -TOWNS OF MASONVILLE, SIDNEY, FRANKLIN, DAVENPORT, & HARPERSFIELD
SCHOHARIE COUNTY- TOWNS OF SUMMIT, RICHMONDVILLE & COBLESKILL

NEW YORK

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PAR-66 PERMANENT	91	26-26-85/PAR-66.1	ACCESS ROADS - ROAD DESIGN PLAN
	92	26-26-85/PAR-66.2	ACCESS ROADS - ROAD DESIGN PLAN
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PAR-74D PERMANENT	102	26-26-85/PAR-74D	ACCESS ROADS - ROAD DESIGN PLAN

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN

COVER SHEET

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/CV	SHEET 1 OF 102
WO:			

SEQUENCE OF BMP INSTALLATION AND REMOVAL NOTES

CONSTRUCTION MUST BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE. THIS SCHEDULE IS DESIGNED TO MINIMIZE SOIL EROSION AND SEDIMENTATION. THE CONTRACTOR MAY DEVIATE SLIGHTLY FROM THE STAGING OF PERMANENT SITE IMPROVEMENTS, BUT NO DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM SUSQUEHANNA COUNTY CONSERVATION DISTRICT OR NYSDEC.

FACILITIES TO CONTROL THE TRANSPORT OF SOIL MATERIAL FROM THE CONSTRUCTION AREA SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE.

NOTE: THE STAGING OF EARTHMOVING ACTIVITIES FOR THIS PROJECT IS A GENERAL DESCRIPTION OF THE WORK REQUIRED. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH PROJECT OWNER STANDARDS, THE NYSDEC REGULATIONS, AND ALL OTHER APPLICABLE FEDERAL, STATE OR LOCAL REQUIREMENTS.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED (EXCEPT AS INDICATED BELOW). DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE SUSQUEHANNA COUNTY CONSERVATION DISTRICT (SCCD)/NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC). CLEARING & GRUBBING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE.

1. SCHEDULE WORK TO MINIMIZE THE LENGTH OF TIME THAT BARE SOIL WILL BE EXPOSED TO THE ELEMENTS.
2. FOLLOW THE CONSTRUCTION/EROSION CONTROL IMPLEMENTATION PLAN AS OUTLINED ON THE DRAWINGS.
3. IMPLEMENT CONTROL MEASURES AS SPECIFIED; HOWEVER, THE CONTRACTOR MAY INSERT ADDITIONAL CONSTRUCTION PHASES IN ORDER TO EXPEDITE HIS WORK.
4. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BMPS TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE SCCD/NYSDEC.
5. ALL OFF–SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT OR NYSDEC FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND TO DEVELOP A PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102, NPDES PERMIT CONDITIONS, AND/OR OTHER STATE AND FEDERAL REGULATIONS.
6. ALL DISTURBED AREAS WITHIN 50' OF A STREAM CROSSING (WHERE THE STREAM WIDTH IS LESS THAN OR EQUAL 10') SHALL BE STABILIZED WITHIN 24 HOURS OF COMPLETING CONSTRUCTION AT THE CROSSING.
7. ALL DISTURBED AREAS WITHIN 50' OF A STREAM CROSSING (WHERE THE STREAM WIDTH > 10') SHALL BE STABILIZED WITHIN 48 HOURS OF COMPLETING CONSTRUCTION AT THE CROSSING.
8. CONSTRUCTION SEQUENCE IS AS FOLLOWS:
9. PRE–CONSTRUCTION MEETING TO BE HELD BY PROJECT OWNER/OPERATOR, ALL CONTRACTORS INVOLVED IN EARTH DISTURBANCE ACTIVITIES, AND THE OPERATOR'S ENGINEER PRIOR TO LAND DISTURBING ACTIVITIES. PROVIDE THE REQUIRED 7 DAY NOTICE FOR SCHEDULING OF THE PRE–CONSTRUCTION MEETING. ALL PARTIES LISTED ARE REQUIRED TO ATTEND.
10. INSTALL TEMPORARY CONSTRUCTION FENCE, TEMPORARY CONSTRUCTION ENTRANCE, PERIMETER COMPOST FILTER SOCKS, WATER BARS*, DIVERSION SWALES, BROAD BASED DIPS, AND CROSS TRENCHES.
11. INSTALL ROADSIDE SWALE AND CHECK DAMS PER PLAN.*
12. INSTALL BEDDING MATERIAL AND PIPELINES.
13. INSTALL STREAM AND WETLAND CROSSINGS AS NEEDED.
14. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE LONGER THAN 4 DAYS IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS.
15. DURING NON–GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE NY ECP. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
16. FINISH GRADING; PLACE 4" MINIMUM TOPSOIL ON SLOPES AFTER FINAL GRADING IS COMPLETED. FERTILIZE SEED AND MULCH. SEED MIXTURE TO BE INSTALLED APRIL 1– JUNE 1 OR SEPTEMBER 1 – NOVEMBER 30. FOR TEMPORARY STABILIZATION BEYOND SEEDING DATES USE ANNUAL RYE AT 10.0 LBS./1,000 S.Y. FERTILIZE WITH 5–5–5 AT 1000 LBS. OF NITROGEN PER ACRE AND LIME AT ONE TON PER ACRE (MAX.).
17. ALL AREAS THAT HAVE BEEN DISTURBED WHICH HAVE REACHED FINAL GRADE SHALL BE PERMANENTLY STABILIZED.
18. REMOVE SILT SOCKS AND/OR FENCE ONLY AFTER ALL PIPELINE HAS BEEN INSTALLED AND EXPOSED SURFACES ARE STABILIZED. REMOVE TEMPORARY CONSTRUCTION FENCING, WATER BARS, DIVERSION SWALES, CROSS TRENCHES, TIMBER MATS AND ANY PIPES AND STONE ASSOCIATED WITH STREAM CROSSINGS.
19. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 80% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON–VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

STANDARD EROSION & SEDIMENTATION CONTROL PLAN NOTES

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

2. AT LEAST 7 DAYS PRIOR TO THE PRE–CONSTRUCTION MEETING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE DEC TO AN ON–SITE PRE–CONSTRUCTION MEETING.

3. AT LEAST 72 HOURS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1–800–962–7962) FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE NYSDEC PRIOR TO IMPLEMENTATION.

5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.

6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.

8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.

9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE DEC.

10. ALL OFF–SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL AUTHORITY AND FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

STANDARD EROSION & SEDIMENTATION CONTROL PLAN NOTES (CONT.)

11. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL.

12. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN NY ECP, OVER UNDISTURBED VEGETATED AREAS.

13. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

14. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

15. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THE NY ECP. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

16. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.

17. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES –– 6 TO 12 INCHES ON COMPACTED SOILS –– PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.

18. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

19. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

20. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

21. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

22. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

23. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE NY ECP STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

24. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 15 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THE NY ECP.

25. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON–GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

26. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 80% VEGETATIVE COVER OR OTHER PERMANENT NON–VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.

27. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

28. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

29. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT–LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES.

30. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.

31. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS–SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THE NY ECP UNTIL SUCH RESTORATION IS COMPLETE.

32. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 15 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

NOTICES TO CONTRACTOR

1. THE CONTRACTOR SHALL VERIFY AND ADHERE TO ALL REQUIRED PERMITS PRIOR TO STARTING WORK.

2. THE CONTRACTOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

3. CONTRACTOR SHALL VERIFY ACTIVE AGRICULTURAL/FARM FIELDS DURING CONSTRUCTION. IF AN ACTIVE AGRICULTURAL/FARM FIELD IS IDENTIFIED, EROSION CONTROL MATTING CAN BE LIMITED/REDUCED TO AVOID THE AGRICULTURAL/FARM FIELD.

4. WATERBARS IN AGRICULTURAL/FARM FIELDS MAY BE TEMPORARY AT THE REQUEST OF THE SURFACE LANDOWNER AND BE REMOVED AND RESTABILIZED UPON ESTABLISHMENT OF 80 PERCENT PERMANENT VEGETATIVE COVER WITHIN THE UPSLOPE TRIBUTARY DRAINAGE AREA.

5. ALL WORK WITHIN THE PUBLIC RIGHT–OF–WAY SHALL BE COORDINATED WITH THE AGENCY HAVING JURISDICTION.

6. FURNISH & INSTALL SWALES WHENEVER CONCENTRATED FLOWS HAVE THE POTENTIAL TO RUN ONTO OR THROUGH THE CONSTRUCTION AREA. DIRECT THE SWALE DISCHARGE TO A RIP RAP ENERGY DISSIPATER AND VEGETATED AREA.

THERMAL IMPACT ANALYSIS

THERMAL IMPACTS WERE AVOIDED FOR THE CURRENT PROJECT BY INITIALLY ENGAGING IN ROUTING STUDIES TO SPECIFICALLY AVOID IMPACTS TO FORESTED STREAM CORRIDORS. WHEN AVOIDANCE WAS NOT POSSIBLE, THE APPLICANT CONSIDERED THE FEASIBILITY OF CROSSING THESE FEATURES VIA CONVENTIONAL BORE OR HORIZONTAL DIRECTIONAL DRILLING (HDD). WHEN CROSSING VIA BORE/HDD WERE NOT PRACTICABLE, THE PROJECT LIMIT OF DISTURBANCE WAS MINIMIZED AT EACH CROSSING. DURING CONSTRUCTION, THE DURATION OF EXPOSED SOIL IN THESE AREAS WILL BE MINIMIZED AND THE AREAS WILL BE RESTORED TO A MEADOW–LIKE CONDITION.

THE BMPS USED TO MITIGATE ANY THERMAL IMPACTS ARE A VEGETATED SWALE AND ASSOCIATED CHECK DAMS WHICH WILL BE USED IN CONJUNCTION WITH THE PERMANENT ROAD WILL SERVE TO POOL STORMWATER FOR A PERIOD OF TIME, ALLOWING THE HEAT FROM THESE AREAS TO DISSIPATE PRIOR TO ENTERING DOWNSTREAM RESOURCES. ADDITIONALLY, PERMANENT WATERBARS WILL SLOW DOWN THE RATE OF RUNOFF TO FORESTED STREAM CORRIDORS.

GENERAL EROSION & SEDIMENT CONTROL NOTES

1. INSPECT SNOW PLACEMENT AREAS DURING THE THAW CYCLE. INSTALL EROSION & SEDIMENT CONTROL BMPs DURING QUICK THAWS AND WHEN SNOW MELT RUNOFF IS CONCENTRATED OR IS CAUSING EROSION.

2. DISCHARGING SEDIMENT LADEN WATER WHICH WILL CAUSE OR CONTRIBUTE TO THE DEGRADATION OF A BENEFICIAL USE OF A WATER OF THE STATE FROM THE CONSTRUCTION SITE, A DEWATERING SITE, OR SEDIMENT BASIN/TRAP INTO ANY WATER BODY OR STORM DRAIN WITHOUT FILTRATION OR EQUIVALENT TREATMENT IS PROHIBITED.

3. DISCHARGES ORIGINATING FROM OFF–SITE SOURCES, WHICH FLOW THROUGH OR ACROSS THE AREAS DISTURBED BY CONSTRUCTION, SHALL BE DIVERTED AROUND THE ACTIVE CONSTRUCTION AREA WHENEVER POSSIBLE.

4. STAGING AREAS, ASSEMBLY AREAS, TEMPORARY EQUIPMENT AND NON–HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED OUTSIDE THE 100–YR FLOOD ZONE. HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM SURFACE WATER BODIES.

5. ALL EXCAVATED MATERIALS THAT WILL NOT BE USED ON THE SITE CANNOT BE STORED IN THE FLOODPLAIN AND MUST BE HAULED TO A DISPOSAL SITE LOCATED OUTSIDE OF THE FLOODPLAIN.

6. CONSTRUCTION ADDITIONAL TEMPORARY WORK SPACE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM THE EDGE OF A WETLAND.

7. MEASURES SHALL BE TAKEN TO PREVENT TRENCHES FROM DRAINING A WETLAND OR CHANGING ITS HYDROLOGY, INCLUDING INSTALLATION OF PERMANENT TRENCH PLUGS. SEE NY ECP FOR FURTHER DETAIL AND SPECIFICATIONS FOR CONSTRUCTION IN WETLANDS.

8. IT IS DESIRED THAT THE AMOUNT AND DURATION OF OPEN TRENCH BE MINIMIZED DURING THE PROJECT.

9. IF TOPSOIL PILES ARE EXPOSED FOR GREATER THAN 4 DAYS, THEY SHALL BE SEEDED WITH AN ANNUAL SEED MIXTURE AND MULCHED WITH STRAW AS SPECIFIED BY THE NY ECP.

INTERIM AND PERMANENT STABILIZATION

1. INTERIM STABILIZATION

TEMPORARY SEEDING WITH MULCH COVER FOR INTERIM STABILIZATION IS A TYPE OF BMP THAT CAN USUALLY BE PROVIDED WHERE THE EARTH DISTURBANCE ACTIVITY TEMPORARILY CEASES (I.E. 4 DAYS OR MORE) UNLESS DIRECTED BY THE PROJECT OWNER. INTERIM STABILIZATION MUST PCCUR WHERE AN ACTIVITY CEASES FOR 14 OR MORE CALENDER DAYS OR LOCATINS THAT HAVE NOT BEEN PERMANENTLY STABILIZED BY OCTOBER 15.

THE INSTALLATION OF AN EROSION CONTROL BLANKET OR APPLICATION OF MULCH UPON SEEDED AREAS ARE BOTH CONSIDERED TO BE INTERIM STABILIZATION BMPs TO PROTECT THE SEEDBED UNTIL VEGETATION IS ESTABLISHED.

2. PERMANENT STABILIZATION

UPON COMPLETION OF ANY EARTH DISTURBANCE ACTIVITY, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION.

THE INSTALLATION OF PAVEMENT, ROCK RIP RAP, OR GABIONS ARE SOME EXAMPLES OF STABILIZATION. THE STANDARD FOR VEGETATIVE COVER AS STABILIZATION IS PERENNIAL VEGETATION THAT IS ESTABLISHED WITH A UNIFORM COVERAGE DENSITY OF 80% ACROSS THE DISTURBED AREA. THE APPLICATION OF LIME, FERTILIZERS, SEED, AND MULCH IS USUALLY DONE TO ACHIEVE PERMANENT STABILIZATION. THE MULCH IS CONSIDERED TO BE AN INTERIM STABILIZATION MEASURE TO ASSIST IN THE ESTABLISHMENT OF THE PERMANENT VEGETATIVE COVER.

3. STABILIZATION DURING NON–GROWING SEASONS

WHEN UTILITY CONSTRUCTION MUST BE DONE AND IS COMPLETED DURING A NON–GROWING SEASON, INTERIM STABILIZATION BMPs MUST BE IMPLEMENTED AND ADEQUATELY MAINTAINED. THE APPLICATION OF STRAW MULCH AT THE RATE OF 2.0 TONS PER ACRE IS RECOMMENDED. THE BMPs SHOULD BE INSPECTED WEEKLY (UNLESS SNOW COVERED) TO IDENTIFY AREAS THAT BECOME BARE.

BARE AREAS SHOULD BE COVERED WITH A PROPERLY INSTALLED EROSION CONTROL BLANKET. ALL TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROLS MUST BE MAINTAINED UNTIL PERENNIAL VEGETATION IS ESTABLISHED.

4. WHERE REQUIRED, HAY OR STRAW MULCH MUST BE APPLIED AT A MINIMUM OF 2.0 TONS PER ACRE.

5. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT FINELY CHOPPED OR BROKEN.

6. PRIOR TO ANY SEEDING, LIME, OR FERTILIZATION APPLICATION, A SOIL TEST SHALL BE PERFORMED TO DETERMINE THE pH FACTOR. ADDITIONAL LIME AND FERTILIZER MAY BE REQUIRED. NO LIME OR FERTILIZERS SHALL BE USED IN WETLAND AREAS.

7. LIME, FERTILIZE, SEED, AND MULCH DISTURBED AREAS PER THE EROSION AND SEDIMENT CONTROL PLANS. IN AREAS OF STEEP SLOPES OR OBVIOUS AREAS WHERE POTENTIAL EROSION MAY OCCUR, AND EROSION CONTROL MAT OR FLEXIBLE GROWTH MEDIUM (FGM) SHALL BE USED. FGM SHALL BE APPLIED PER MANUFACTURER SPECIFICATIONS. NO LIME OR FERTILIZERS SHALL BE USED IN WETLAND OR STREAM AREAS.

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CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN

GENERAL NOTES 1 OF 3

CONSTITUTION PIPELINE

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GENERAL SEEDING NOTES

1. IN NON-AGRICULTURAL AREAS, PREPARE A FIRM SEEDBED IN DISTURBED AREAS TO A DEPTH OF THREE (3) TO FOUR (4) INCHES USING APPROPRIATE EQUIPMENT. THE SEEDBED SHALL BE SCARIFIED IN AREAS TO BE HYDRO SEEDED TO FACILITATE LODGING AND GERMINATION OF SEED.
2. SEED DISTURBED AREAS IN ACCORDANCE WITH WRITTEN RECOMMENDATIONS FOR SEED MIXES, RATES, AND DATES AS DETAILED IN THE NY ECP ATTACHMENT 7 – SEEDING, FERTILIZER AND LIME RECOMMENDATIONS OR THE REVEGETATION/SEED MIXTURES PLAN UNLESS A SPECIFIC WRITTEN REQUEST IS MADE BY A LANDOWNER, LAND MANAGEMENT AGENCY OR APPLICABLE PERMITTING AGENCY FOR AGRICULTURAL LANDS ONLY. SEEDING SHALL NOT BE CONDUCTED IN ACTIVELY CULTIVATED CROPLANDS UNLESS REQUESTED IN WRITING BY THE LANDOWNER. PERMANENT SEEDING, CONSISTENT WITH THE IMPACTED FIELD'S SPECIFIC REQUIREMENTS, SHALL BE APPLIED IN LONG-TERM AND ROTATION HAYFIELDS AND PASTURES, AS WELL AS AGRICULTURAL CONSERVATION RESERVE PROGRAM (CRP) LANDS.
3. CONSTITUTION HAS PREPARED A WINTER CONSTRUCTION PLAN IN ANTICIPATION OF CONSTRUCTION ACTIVITIES PROGRESSING DURING THE LATE AUTUMN AND WINTER SEASONS. THE WINTER CONSTRUCTION PLAN IS INCLUDED AS ATTACHMENT 12 TO THE NY ECP.
4. PERFORM SEEDING OF PERMANENT VEGETATION WITHIN THE RECOMMENDED SEEDING DATES NOTED BELOW OR AS DETERMINED IN THE FIELD BY THE EI OR AI. IF SEEDING CANNOT BE DONE WITHIN THOSE DATES, USE APPROPRIATE TEMPORARY EROSION CONTROL MEASURES AND PERFORM SEEDING OF PERMANENT VEGETATION AT THE APPROPRIATE TIME WITHIN THE NEXT RECOMMENDED SEEDING SEASON BASED ON ROW SOIL.
5. DISTURBED SOILS SHALL BE SEEDED WITHIN SIX (6) WORKING DAYS OF FINAL GRADING, WEATHER AND SOIL CONDITIONS PERMITTING, UNLESS OTHERWISE REQUIRED BY THE APPLICABLE REGULATORY AGENCY, LANDOWNER OR LAND MANAGEMENT AGENCY.
6. SEEDING RATES SHALL BE BASED ON PURE LIVE SEED (PLS) RATE APPLICATIONS.
7. ALL SEED SHALL BE USED WITHIN 12 MONTHS OF THE SEED TESTING DATE AS NOTED BY THE MANUFACTURER.
8. LEGUME SEED SHALL BE TREATED WITH AN INOCULANT SPECIFIC TO THE SPECIES USING THE MANUFACTURER'S RECOMMENDED RATE OF INOCULANT APPROPRIATE FOR THE SEEDING METHOD (BROADCAST, DRILL, OR HYDRO).
9. A SEED DRILL EQUIPPED WITH A CULTIPACKER SHALL BE THE PREFERRED SEED APPLICATION APPARATUS UNLESS WRITTEN RECOMMENDATIONS FROM AN APPLICABLE REGULATORY AUTHORITY SPECIFIES OTHERWISE.
10. ALL BROADCAST OR HYDRO SEEDING PERFORMED IN LIEU OF DRILLING SHALL BE PLACED AT DOUBLE THE RECOMMENDED SEEDING RATE. THE SEEDBED SHALL BE FIRMED WITH A CULTIPACKER OR ROLLER IN AREAS WHERE SEEDING IS PACED WITH THE BROADCAST METHOD. IN ROCKY SOILS OR WHERE SITE CONDITIONS MAY LIMIT THE EFFECTIVENESS OF THIS EQUIPMENT, OTHER ALTERNATIVES MAY BE APPROPRIATE (E.G., USE OF A CHAIN DRAG) TO LIGHTLY COVER THE SEED AFTER APPLICATION, AS APPROVED BY THE EI.
11. SEED SLOPES STEEPER THAN 30% IMMEDIATELY AFTER ROUGH GRADING IF FINAL GRADING WILL NOT OCCUR IMMEDIATELY, WEATHER PERMITTING.
12. ANY SEEDING CONDUCTED AFTER OCTOBER 15TH (LATE SEASON ROW STABILIZATION ACTIVITIES) WILL BE CONSIDERED "TEMPORARY", OR AS AN "INTERIM STABILIZATION MEASURE", AS IT MAY RESULT IN POOR SEED GERMINATION AND HIGH MORTALITY. TEMPORARY AND PERMANENT SEEDING OF AGRICULTURAL LANDS SHALL BE CONDUCTED IN ACCORDANCE WITH NYSDAM SEEDING, FERTILIZER AND LIME RECOMMENDATIONS. TEMPORARY AND PERMANENT SEED AND MULCH RATES CAN BE FOUND IN SECTION 10.4 OF THIS ECP.

TEMPORARY REVEGETATION

Table 10.4-1 - Temporary Seeding and Mulching

Mix	Type	Components	Rates	Dates
A	Temporary Cover for Upland and Wetland Areas	Annual or Perennial Ryegrass Fertilizer (5-10-10) Pulverized Agricultural Lime	1 lb / 1000 sq.ft. Not Required Not Required	Spring, Summer or Early Fall
B	Temporary Cover for Upland and Wetland Areas	'Aroostook' winter rye (cereal rye) Fertilizer (5-10-10) Pulverized Agricultural Lime	1 lb / 1000 sq.ft. Not Required Not Required	Late Fall or Winter
	Mulch (Straw Only in Wetlands)	Hay/Straw	2 Tons per Acre	

TEMPORARY VEGETATION NOTES

AFTER GRADING AND EXCAVATION IS COMPLETED WITHIN AN AREA, VEGETATION WILL BE SOWN PROMPTLY AFTER CEASING EARTHWORK IN THOSE AREAS. HAY, STRAW MULCH, OR OTHER SIMILAR MATERIAL SHALL BE APPLIED TO NEWLY SEEDED AREAS TO PROTECT AGAINST EROSION UNTIL THE VEGETATION IS ESTABLISHED. HAY, STRAW MULCH, OR OTHER SIMILAR MATERIAL SHALL BE APPLIED AT A RATE OF AT LEAST TWO (2) TONS PER ACRE. THE SEED MIXES NOTED IN TABLE 10.4-1 ARE QUICK GERMINATING SEEDS THAT CAN BE APPLIED ANY TIME OF THE YEAR. ANY SEEDING COMPLETED AFTER OCTOBER 15TH WILL BE CONSIDERED "TEMPORARY", OR AS AN "INTERIM STABILIZATION MEASURE", AS IT MAY RESULT IN POOR SEED GERMINATION AND HIGH MORTALITY. DISTURBED AREAS THAT ARE FINAL GRADED BETWEEN JUNE 1ST & AUGUST 1ST AND OCTOBER 15TH & MARCH 15TH (OF THE FOLLOWING YEAR) SHALL BE SEEDED WITH THE TEMPORARY SEED MIXES NOTED IN TABLE 10.4-1 TO ENSURE QUICK ESTABLISHMENT. LOCATIONS THAT ARE SEEDED WITH TEMPORARY SEED MIXES SHALL BE SUPPLEMENTED WITH THE APPROPRIATE PERMANENT SEED MIX DURING THE DATE WINDOWS OF MARCH 15TH TO JUNE 1ST AND AUGUST 1ST TO OCTOBER 15TH.

PERMANENT REVEGETATION

PERMANENT REVEGETATION NOTES

TOPSOIL WILL BE REPLACED PRIOR TO PERMANENT STABILIZATION IN APPLICABLE LOCATIONS ALONG THE PROJECT ROW. DISTURBED AREAS SHALL BE SEEDED WITH THE APPROPRIATE SEED MIXTURE AS OUTLINED IN TABLE 10.4-2. LIME AND FERTILIZER SHALL BE APPLIED IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS. HAY, STRAW MULCH, OR OTHER SIMILAR MATERIAL SHALL BE APPLIED AT A RATE OF AT LEAST TWO (2) TONS PER ACRE, UNLESS OTHERWISE REQUIRED BY APPLICABLE REGULATORY AGENCIES. THE PERMANENT SEED MIXES NOTED IN TABLE 10.4-2 SHALL BE APPLIED BETWEEN MARCH 15TH TO JUNE 1ST AND AUGUST 1ST TO OCTOBER 15TH, INCLUDING AREAS WHERE ONLY TEMPORARY SEED MIXES HAVE BEEN APPLIED. TEMPORARY SEED MIXES NOTED IN TABLE 10.4-1 WILL BE APPLIED TO ALL DISTURBED AREAS OUTSIDE OF THE NOTED PERMANENT SEED MIX WINDOWS. THE SEED MIXES NOTED IN TABLES 10.4-2 AND 10.4-3 WERE DEVELOPED FROM THE NEW YORK DEC BLUEBOOK (AUGUST 2005).

TABLE 10.4-2 - PERMANENT SEEDING

Seed Mixture	Variety	Rates in lbs. per acre	Rate in lbs. per 1000 sq. ft.
Mix #1			
Creeping Red Fescue	Ensylva, Pennlawn, Boreal	10	.25
Perennial Ryegrass	Pennfine, Linn	10	.25
*This mix is used extensively for Shaded Areas			
Mix #2			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	20	.5
* This rate is in pure live seed, this would be an excellent choice along the upland edge of a wetland to filter runoff and provide wildlife benefits. In areas where erosion may be a problem, a companion seeding of sand lovegrass should be added to provide quick cover at a rate of 2 lbs. per acre (0.05 lbs. per 1000 sq. ft.).			
Mix #3			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	4	.1
Big Bluestem	Niagara	4	.1
Little Bluestem	Alodous or Camper	2	.05
Indiangrass	Rumsey	4	.1
Coastal Panicgrass	Atlantic	2	.05
Sideoats Grama	El Reno or Trailway	2	.05
Wildflower Mix		.5	.01
*This mix has been successful on sand and gravel plantings. It is very difficult to seed without a warm season grass seeder such as a Truax seed drill. Broadcasting this seed is very difficult due to the fluffy nature of some of the seed, such as bluestems and indiangrass.			
Mix #6			
Creeping Red Fescue	Ensylva, Pennlawn, Boreal	20	.45
Tall Fescue	KY 31, Rebel	20	.45
Perennial Ryegrass	Pennfine, Linn	5	.10
Birdsfoot Trefoil	Empire, Pardee	10	.45
*General purpose erosion control mix. Not to be used for a turf planting or play grounds.			

TABLE 10.4-3 - PERMANENT SEEDING FOR RECREATION AND RESIDENTIAL AREAS

Site	Use Species (% by weight)	lbs/1,000 sq. ft.	lbs./acre
1. Sunny sites (well, moderately well, and somewhat poorly drained soils) b. General recreation areas and lawns (Medium to high maintenance)			
	65% Kentucky bluegrass blend	2.0-2.6	85-114
	20% perennial ryegrass	0.6-0.8	26-35
	15% fine fescue	0.4-0.6	19-2
	OR	3.0-4.0	130-175
	100% Tall fescue, Turf-type, fine leaf	3.4-4.6	150-200
2. Sunny droughty sites - general recreation areas and lawns, low maintenance (somewhat excessively to excessively drained soils). Excluding Long Island			
	65% fine fescue	2.6-3.3	114-143
	15% perennial ryegrass	0.6-0.7	26-33
	20% Kentucky bluegrass blend	0.8-1.0	35-44
	OR	4.0-5.0	175-220
	100% Tall fescue, Turf-type, fine lea	3.4-4.6	150-200
3. Shady dry sites (well to somewhat poorly drained soils).			
	65% fine fescue	2.6-3.3	114-143
	15% perennial ryegrass	0.6-0.7	26-33
	20% Kentucky bluegrass blend	0.8-1.0	35-44
	OR	4.0-5.0	174-220
	80% blend of shade-tolerant Kentucky bluegrass	2.4-3.2	105-138
	20% perennial ryegrass	0.6-0.8	25-37
	OR	3.0-4.0	130-175
	100% Tall fescue, Turf-type, fine leaf	.4-4.6	150-200
4. Shady wet sites (somewhat poor to poorly drained soils).			
	70% rough bluegrass	1.4-2.1	60-91
	30% blend of shade-tolerant Kentucky bluegrass	0.6-0.9	25-39
	OR	2.0-3.0	85-130
	100% Tall fescue, Turf-type, fine leaf	3.4-4.6	150-200

NOTES

MULCH – MULCHING FOR ALL SEED MIXTURES SHALL BE AT A RATE OF TWO (2) TONS PER ACRE, AND ANCHORED WITH A NETTING OR TACKIFIER.

SOIL AMENDMENTS – SOIL AMENDMENTS SHOULD BE INCORPORATED INTO THE UPPER 2 INCHES OF SOIL WHEN FEASIBLE. THE SOIL SHOULD BE TESTED TO DETERMINE THE AMOUNTS OF AMENDMENTS NEEDED. APPLY GROUND AGRICULTURAL LIMESTONE TO ATTAIN A PH OF 6.0 IN THE UPPER 2 INCHES OF SOIL. IF SOIL MUST BE FERTILIZED BEFORE RESULTS OF A SOIL TEST CAN BE OBTAINED TO DETERMINE FERTILIZER NEEDS, APPLY COMMERCIAL FERTILIZER AT 600 LBS. PER ACRE OF 5-10-10 OR EQUIVALENT. IF MANURE IS USED, APPLY A QUANTITY TO MEET THE NUTRIENTS OF THE ABOVE FERTILIZER. THIS REQUIRES AN APPROPRIATE MANURE ANALYSIS PRIOR TO APPLYING TO THE SITE. MANURE WILL NOT BE USED ON SITES PLANTED WITH BIRDSFOOT TREFOIL OR IN THE PATH OF CONCENTRATED WATER FLOW.

THE ABOVE NOTED SEED MIXES ARE SUBJECT TO CHANGE.

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CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN

GENERAL NOTES 2 OF 3

CONSTITUTION PIPELINE

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RECYCLING AND DISPOSAL METHODS

CONTRACTORS ARE REQUIRED TO INVENTORY AND MANAGE THEIR CONSTRUCTION SITE MATERIALS. THE GOAL IS TO BE AWARE OF THE MATERIALS ON–SITE, ENSURE THEY ARE PROPERLY MAINTAINED, USED, AND DISPOSED OF, AND TO MAKE SURE THE MATERIALS ARE NOT EXPOSED TO STORMWATER.

MATERIALS COVERED

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON–SITE DURING CONSTRUCTION (NOTE: THIS LIST IS NOT AN ALL–INCLUSIVE LIST AND THE MATERIALS MANAGEMENT PLAN CAN BE MODIFIED TO ADDRESS ADDITIONAL MATERIALS USED ON–SITE):

- ACIDS
- DETERGENTS
- FERTILIZERS (NITROGEN/PHOSPHORUS)
- HYDROSEEDING MIXTURES
- PETROLEUM BASED PRODUCTS
- SANITARY WASTES
- SOIL STABILIZATION ADDITIVES
- SOLDER
- SOLVENTS
- OTHER (LIST HERE): ____

THESE MATERIALS MUST BE STORED AS APPROPRIATE AND SHALL NOT CONTACT STORM OR NON–STORMWATER DISCHARGES. CONTRACTOR SHALL PROVIDE A WEATHER PROOF CONTAINER TO STORE CHEMICALS OR ERODIBLE SUBSTANCES THAT MUST BE KEPT ON THE SITE. CONTRACTOR IS RESPONSIBLE FOR READING, MAINTAINING, AND MAKING EMPLOYEES AND SUBCONTRACTORS AWARE OF MATERIAL SAFETY DATA SHEETS (MSDSs).

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.

1. GOOD HOUSEKEEPING PRACTICES

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON SITE DURING CONSTRUCTION:

- STORE ONLY ENOUGH MATERIAL REQUIRED TO DO THE JOB.
- STORE MATERIALS IN A NEAT, ORDERLY MANNER.
- STORE CHEMICALS IN WATERTIGHT CONTAINERS OR IN A STORAGE SHED, UNDER A ROOF, COMPLETELY ENCLOSED, WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT SPILL OR LEAKAGE. DRIP PANS SHALL BE PROVIDED UNDER DISPENSERS.
- SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
- MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
- INSPECTIONS WILL BE PERFORMED TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
- COVER AND BERM LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, ETC.).
- MINIMIZE EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION.
- MINIMIZE THE POTENTIAL FOR OFF–SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS.

2. HAZARDOUS PRODUCTS

THESE PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS. MSDSS FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE(S) WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. A MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN A FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

- PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS WITH THE ORIGINAL LABELS IN LEGIBLE CONDITION.
- ORIGINAL LABELS AND MSDSS WILL BE PRODUCED AND USED FOR EACH MATERIAL.
- IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL/STATE/FEDERAL RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

3. HAZARDOUS WASTES

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF BY THE CONTRACTOR IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. SITE PERSONNEL WILL BE INSTRUCTED.

4. CONCRETE AND OTHER WASH WATERS

PREVENT DISPOSAL OF RINSE, WASH WATERS, OR MATERIALS ON IMPERVIOUS OR PERVIOUS SURFACES, INTO STREAMS, WETLANDS OR OTHER WATER BODIES.

CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE, BUT ONLY IN EITHER (1) SPECIFICALLY DESIGNATED DIKED AREAS WHICH HAVE BEEN PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASHOUT AND SOIL AND STORMWATER HAVING THE POTENTIAL TO BE DISCHARGED FROM THE SITE OR (2) IN LOCATIONS WHERE WASTE CONCRETE CAN BE POURED INTO FORMS TO MAKE RIPRAP OR OTHER USEFUL CONCRETE PRODUCTS.

THE HARDENED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS WILL BE DISPOSED OF IN THE SAME MANNER AS OTHER NON–HAZARDOUS CONSTRUCTION WASTE MATERIALS OR MAY BE BROKEN UP AND USED ON THE SITE AS DEEMED APPROPRIATE BY THE CONTRACTOR AND GEOTECHNICAL ENGINEER. THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

ALL CONCRETE WASHOUT AREAS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE AREA CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. IF REQUIRED, ADDITIONAL BMPS MUST BE IMPLEMENTED TO PREVENT CONCRETE WASTES FROM CONTRIBUTING TO STORMWATER DISCHARGES. THE LOCATION OF THE CONCRETE WASHOUT AREA(S) MUST BE IDENTIFIED, BY THE CONTRACTOR/JOB SITE SUPERINTENDENT, ON THE JOB SITE COPY OF THE EROSION AND SEDIMENT CONTROL PLAN(S) IN THIS ESCP.

5. SANITARY WASTES

ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGES IS NEGLIGIBLE. ADDITIONAL BMPS MUST BE IMPLEMENTED, SUCH AS CONTAINMENT TRAYS (PROVIDED BY THE RENTAL COMPANY) OR SPECIAL CONTAINMENT CREATED WITH 2"X4" LUMBER, IMPERVIOUS PLASTIC, AND GRAVEL. THE LOCATION OF THE SANITARY WASTE UNITS MUST BE IDENTIFIED ON THE JOB SITE COPY OF THE EROSION AND SEDIMENT CONTROL PLAN(S), IN THIS ESCP, BY THE CONTRACTOR/JOB SITE SUPERINTENDENT.

6. SOLID AND CONSTRUCTION WASTES

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL COMPLY WITH ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER/CONTAINER LIDS SHALL BE CLOSED AT THE END OF EVERY BUSINESS DAY AND DURING RAIN EVENTS. APPROPRIATE MEASURES SHALL BE TAKEN TO PREVENT DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE RECEIVING WATER.

7. CONSTRUCTION ACCESS

A STABILIZED CONSTRUCTION EXIT WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED ROADS ADJACENT TO THE SITE ENTRANCE WILL BE INSPECTED DAILY AND SWEPT AS NECESSARY TO REMOVE ANY EXCESS MUD, DIRT, OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN AS NECESSARY.

8. PETROLEUM PRODUCTS

ON–SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. PETROLEUM STORAGE TANKS ON SITE WILL HAVE A DIKE OR BERM CONTAINMENT STRUCTURE CONSTRUCTED AROUND IT TO CONTAIN SPILLS WHICH MAY OCCUR (CONTAINMENT VOLUME TO BE 110% OF VOLUME STORED). THE DIKE OR BERMED AREA SHALL BE LINED WITH AN IMPERVIOUS MATERIAL SUCH AS A HEAVY DUTY PLASTIC SHEET. DRIP PANS SHALL BE PROVIDED FOR ALL DISPENSERS. ANY ASPHALT SUBSTANCES USED ON THE SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

9. FERTILIZERS AND LANDSCAPE MATERIALS

FERTILIZERS WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO MINIMIZE THE POTENTIAL FOR EXPOSURE TO STORMWATER. STORAGE WILL BE UNDER COVER. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO MINIMIZE THE POTENTIAL FOR SPILLS. THE BIN SHALL BE LABELED APPROPRIATELY.

CONTAIN STOCKPILED MATERIALS, SUCH AS BUT NOT LIMITED TO, MULCHES, TOP SOIL, ROCKS AND GRAVEL, AND DECOMPOSED GRANITE, WHEN THEY ARE NOT ACTIVELY BEING USED.

APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURER RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED FIELD PERSONNEL. DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN TWO DAYS PRIOR TO A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION.

10. PAINTS, PAINT SOLVENTS AND CLEANING SOLVENTS

CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT AND SOLVENTS WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR LOCAL/STATE/FEDERAL REGULATIONS.

11. CONTAMINATED SOILS

ANY CONTAMINATED SOILS (RESULTING FROM SPILLS OF MATERIALS WITH HAZARDOUS PROPERTIES) WHICH MAY RESULT FROM CONSTRUCTION ACTIVITIES WILL BE CONTAINED AND CLEANED UP IMMEDIATELY IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

MAINTENANCE PROGRAM

THE FOLLOWING INSPECTION AND MAINTENANCE PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS AND STABILIZATION MEASURES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS OF EACH 0.5 INCH OR GREATER RAINFALL EVENT.
- ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF REPAIRS OR ADDITIONAL MEASURES ARE FOUND TO BE NECESSARY, THEY WILL BE INITIATED WITHIN 24 HOURS OF THE INSPECTION REPORT.
- BUILT UP SEDIMENT WILL BE REMOVED FROM PERIMETER BMPS WHEN IT HAS REACHED ONE–HALF THE HEIGHT OF THE FENCE.
- PERIMETER BMPS WILL BE INSPECTED FOR DEPTH OF SEDIMENT, DAMAGE, ETC., TO ENSURE THE MEASURE IS IN PROPER WORKING ORDER, AND THAT ANY POSTS/WOOD STAKES ARE SECURELY IN THE GROUND.
- TEMPORARY SEDIMENT TRAPS, IF PRESENT, WILL BE INSPECTED FOR DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 33–50% THE DESIGN DEPTH.
- TEMPORARY AND PERMANENT SEEDING, AND OTHER STABILIZATION MEASURES, WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
- A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. COPIES OF THE REPORT FORMS TO BE COMPLETED BY THE INSPECTOR ARE INCLUDED IN THE NY SWPPP.
- THE INSPECTOR WILL IMPLEMENT INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS THAT ARE USED ON THE SITE IN GOOD WORKING ORDER. THE INSPECTOR WILL ALSO BE TRAINED IN THE COMPLETION OF, INITIATION OF ACTIONS REQUIRED BY, AND THE FILING OF THE INSPECTION FORMS.
- DISTURBED AREAS AND MATERIALS STORAGE AREAS WILL BE INSPECTED FOR EVIDENCE OF OR POTENTIAL FOR POLLUTANTS ENTERING THE STORMWATER.

A COPY OF THE NY SWPPP AND ECP WILL BE AVAILABLE ON THE SITE AT ALL TIMES.

ONCE ANY EROSION CONTROL MEASURES ARE INSTALLED, THE MAINTENANCE AND INSPECTION PROCEDURES ABOVE SHALL BEGIN. THE CONTRACTOR SHOULD BE AWARE THAT THE INSPECTION FORMS BECOME AN INTEGRAL PART OF THE ESCP AND SHALL BE MADE READILY AVAILABLE TO THE GOVERNMENT INSPECTION OFFICIALS, THE PROJECT OWNER'S ENGINEER, AND THE PROJECT OWNER FOR REVIEW UPON REQUEST DURING VISITS TO THE PROJECT SITE.

INSPECTORS SHOULD BE KNOWLEDGEABLE IN THE PRINCIPLES AND PRACTICE OF EROSION AND SEDIMENT CONTROLS AND POSSESS THE SKILLS TO ASSESS CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORMWATER QUALITY AND TO ASSESS THE EFFECTIVENESS OF ANY SEDIMENT AND EROSION CONTROL MEASURES SELECTED TO CONTROL THE QUALITY OF STORMWATER DISCHARGES FROM THE CONSTRUCTION SITE. THEY SHOULD ALSO HAVE READ AND UNDERSTOOD ALL PORTIONS OF THE NY SWPPP INCLUDING THE NY ECP..

THE INDIVIDUAL(S) RESPONSIBLE FOR POST–STORM AND STORM EVENT BMP INSPECTIONS, AND THE QUALIFIED PERSON(S) ASSIGNED RESPONSIBILITY TO ENSURE FULL COMPLIANCE WITH THE PERMIT AND IMPLEMENTATION OF ALL ELEMENTS OF THE ESCP, INCLUDING THE PREPARATION OF THE ANNUAL COMPLIANCE EVALUATION AND THE ELIMINATION OF ALL UNAUTHORIZED DISCHARGES ARE:

LEGEND

EXISTING FEATURES

- PROPERTY BOUNDARY LINE (APPROXIMATE)
- EASEMENT LINE (APPROXIMATE)
- MAJOR CONTOUR (10' INTERVAL) (1460)
- MINOR CONTOUR (2' INTERVAL)
- FENCE
- STONE ROW
- TREELINE
- CENTERLINE STREAM/EDGE WATERBODY
- DELINEATED WETLANDS
- SPOT ELEVATION (× 1353.0)
- TREE OR BUSH
- UTILITY POLE
- GUY POLE
- GUY POLE OR ANCHOR
- POST
- SIGN
- WATER WELL
- UTILITY BOX
- MONUMENT (PROPERTY BOUNDARY MARKER)
- IRON PIPE OR PIN (PROPERTY BOUNDARY MARKER)

PROPOSED FEATURES

- MAJOR CONTOUR (10' INTERVAL) (1460)
- MINOR CONTOUR (2' INTERVAL)
- LIMIT OF DISTURBANCE (LOD)
- SILT FENCE AND SEDIMENT BARRIER (SB)
- SWALE
- LIMIT OF PERMANENT RIGHT–OF–WAY (APPROXIMATE, BY OTHERS)
- LIMIIT OF TEMPORARY WORKSPACE (APPROXIMATE, BY OTHERS)
- CENTERLINE CONSTITUTION PIPELINE (APPROXIMATE, BY OTHERS)
- STONE LEVEL SPREADER
- STONE CHECK DAM

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE ENGINEERING ENVIRONMENTAL LAND SURVEYING — BL Companies

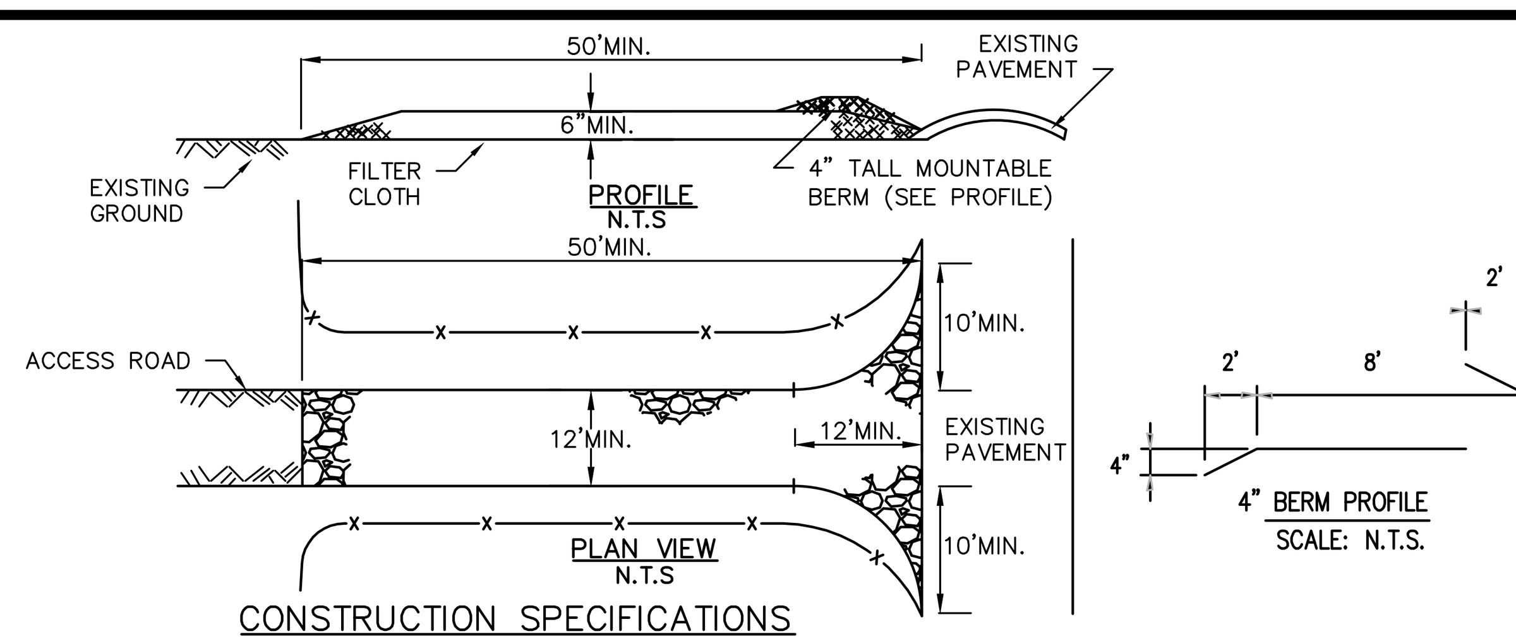
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN

GENERAL NOTES 3 OF 3

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/GN.3	SHEET 4 OF 102
WO:			



CONSTRUCTION SPECIFICATIONS

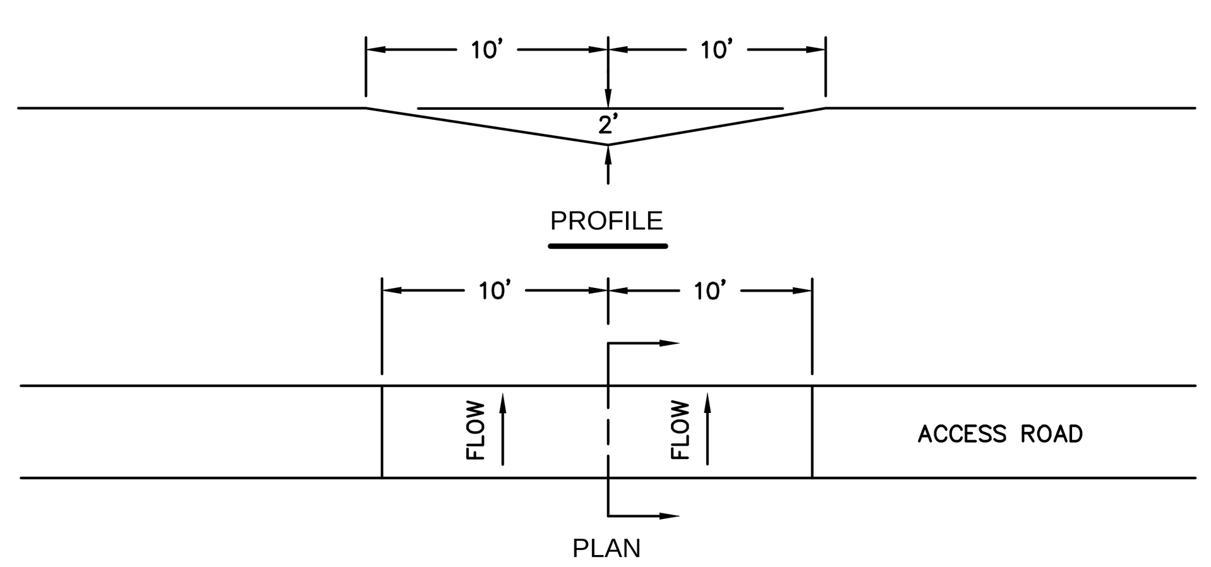
1. STONE SIZE – 1–4" STONE PERMITTED FOR USE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY–FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. GEOTEXTILE MUST MEET CRITERIA IN TABLE BELOW.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

TABLE: CRITERIA FOR GEOTEXTILE

FABRIC PROPERTIES	LIGHT DUTY ROADS GRADE SUBGRADE	HEAVY DUTY HAUL ROADS ROUGH GRADED	TEST METHOD
GRAB TENSILE STRENGTH (LBS)	200	220	ASTM D1682
ELONGATION AT FAILURE (%)	50	60	ASTM D1682
MULLEN BRUST STRENGTH (LBS)	190	430	ASTM D3786
PUNCTURE STRENGTH (LBS)	40	125	ASTM D3786 MODIFIED
EQUIVALENT	40–80	40–80	US STD SIEVE
OPENING SIZE			CW–02215
AGGREGATE DEPTH	6	10	

STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S NYSDEC–15



BROAD–BASED DIPS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN AND AT THE LOCATIONS SHOWN ON THE PLAN DRAWINGS.

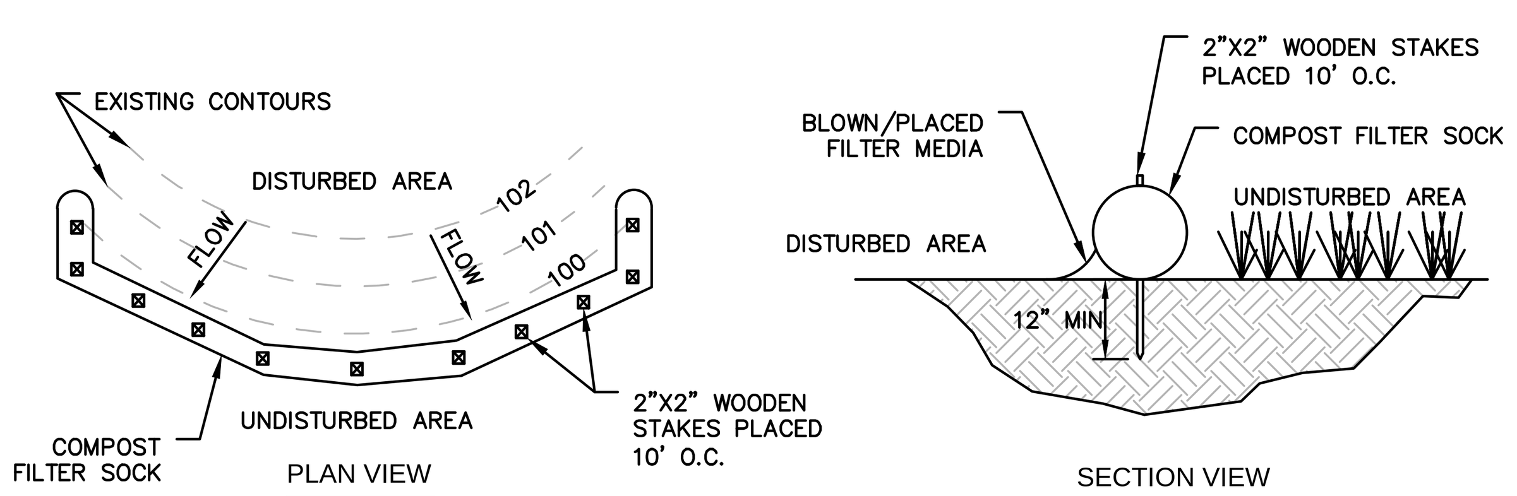
DIPS SHALL BE ORIENTED SO AS TO DISCHARGE TO THE LOW SIDE OF THE ROADWAY.

DIPS SHALL BE INSPECTED DAILY. DAMAGED OR NON–FUNCTIONING DIPS SHALL BE REPAIRED BY THE END OF THE WORKDAY.

MAXIMUM SPACING OF BROAD–BASED DIPS SHALL BE AS SHOWN IN TABLE 3.2 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

BROAD-BASED DIP FOR LOW GRADIENT (≤5%) ROADWAYS DETAIL

N.T.S PADEP–3–6



SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 FOUND IN NYSDEC EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

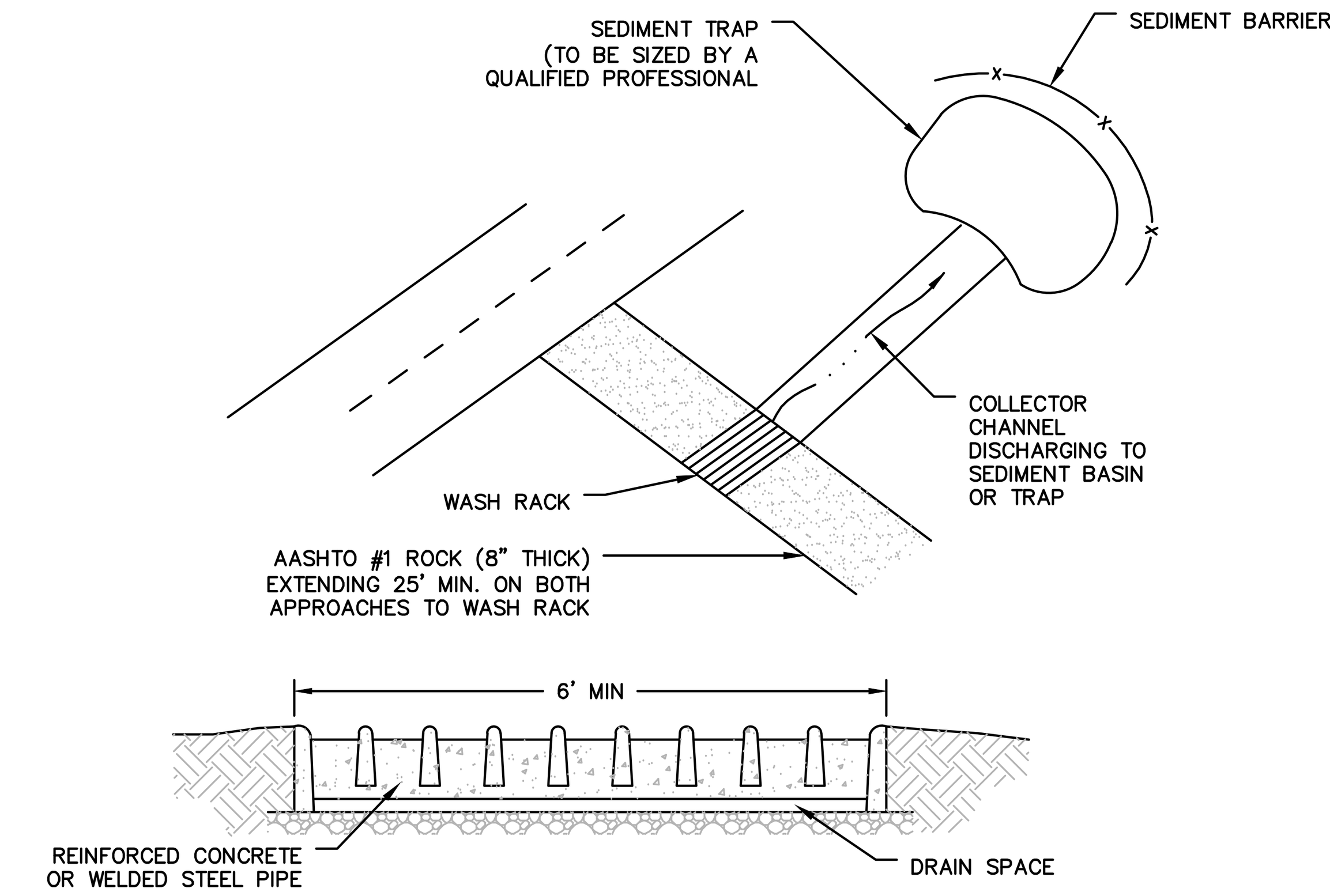
SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK DETAIL

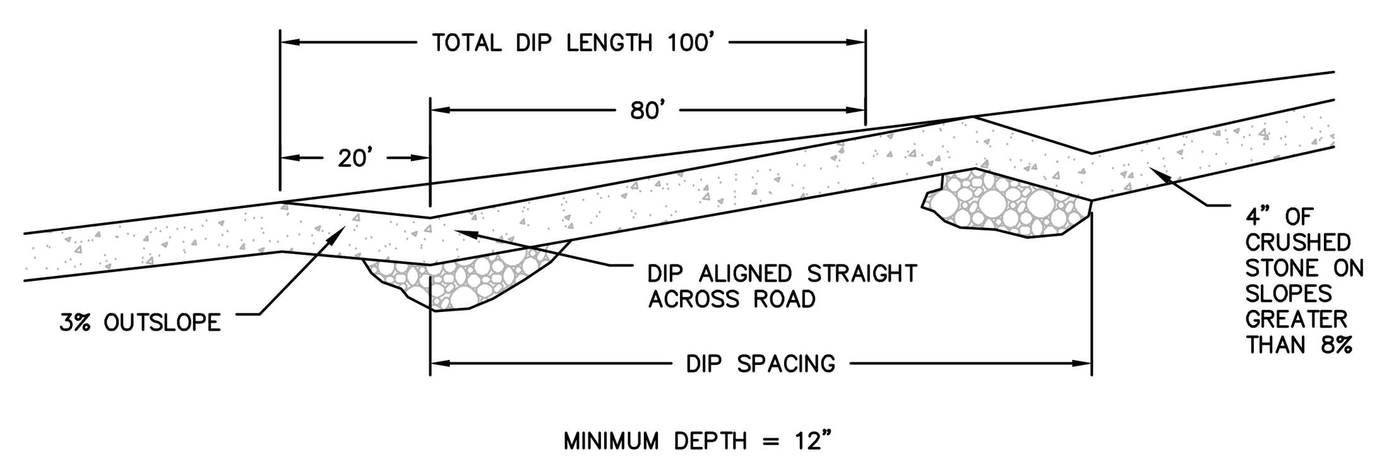
N.T.S



NOTES:
1. WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.
2. WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.
3. A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.
4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ROCK CONSTRUCTION ENTRANCE WITH OPTIONAL WASH RACK DETAIL

N.T.S NYSDEC–15B



MINIMUM DEPTH = 12"

BROAD–BASED DIPS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN AND AT THE LOCATIONS SHOWN ON THE PLAN DRAWINGS.

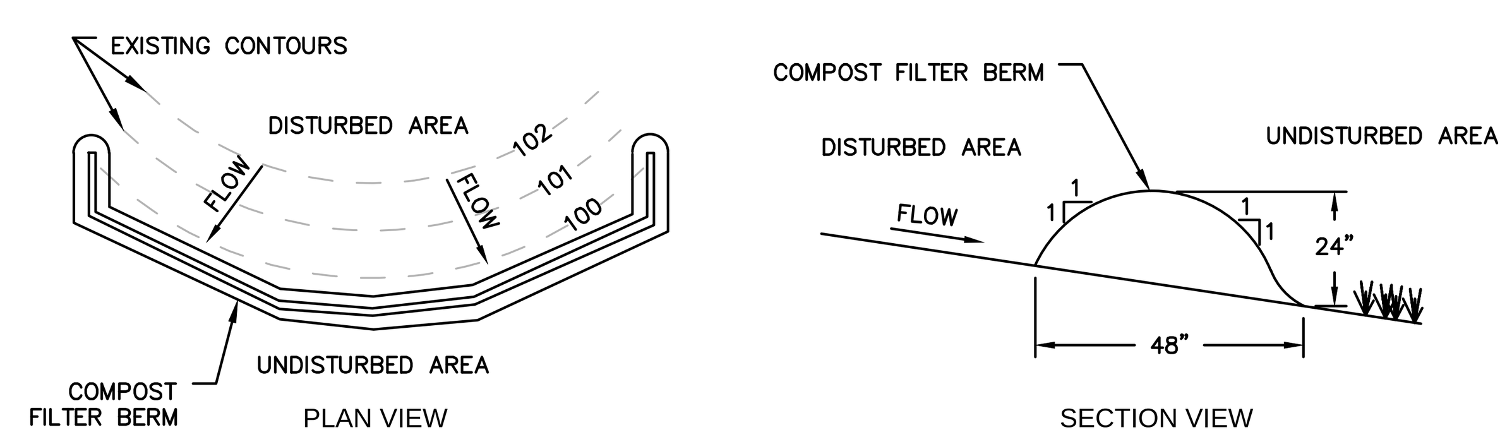
DIPS SHALL BE ORIENTED SO AS TO DISCHARGE TO THE LOW SIDE OF THE ROADWAY.

DIPS SHALL BE INSPECTED DAILY. DAMAGED OR NON–FUNCTIONING DIPS SHALL BE REPAIRED BY THE END OF THE WORKDAY.

MAXIMUM SPACING OF BROAD–BASED DIPS SHALL BE AS SHOWN IN TABLE 3.2 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

BROAD-BASED DIP FOR LOW GRADIENT (5% - 10%) ROADWAYS DETAIL

N.T.S PADEP–3–7



COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 FOUND IN NYSDEC EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

COMPOST FILTER BERMS SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT (SEE FIGURE 4.1 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL).

THE MAXIMUM SLOPE LENGTH ABOVE A COMPOST FILTER BERM SHALL NOT EXCEED THAT SHOWN IN TABLE 4.4 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL FOR THE STANDARD SILT FENCE (18" HIGH FENCE).

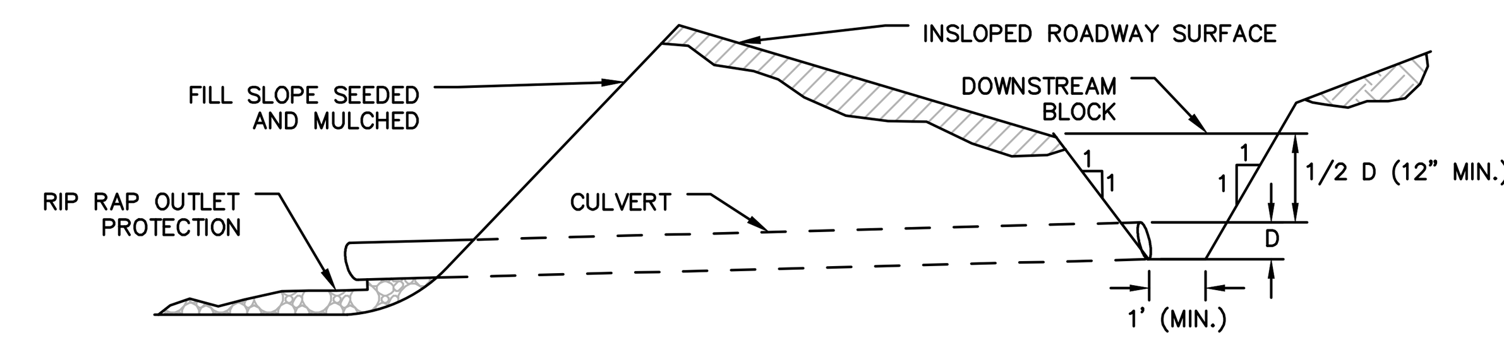
TALL GRASS SHALL BE CUT PRIOR TO INSTALLATION TO MINIMIZE POTENTIAL FOR UNDERCUTTING. BERM SHALL BE NETTED OR OTHERWISE ANCHORED AFTER INSTALLATION.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVEGROUND HEIGHT OF THE BERM.

ANY SECTION COMPOST FILTER BERM WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED. CONCENTRATED FLOWS SHALL NOT BE DIRECTED TOWARD ANY COMPOST FILTER BERM.

COMPOST FILTER BERM DETAIL

N.T.S



CUT AND FILL SLOPES SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROADWAY GRADING. THESE AREAS SHALL BE BLANKETED WHEREVER THEY ARE LOCATED WITHIN 50 FEET OF A SURFACE WATER OR WITHIN 100 FEET OF AN HQ OR EV SURFACE WATER OR WHERE A SUITABLE VEGETATIVE FILTER STRIP DOES NOT EXIST.

A TOP DRESSING COMPOSED OF HARD, DURABLE STONE SHALL BE PROVIDED FOR SOILS HAVING LOW STRENGTH.

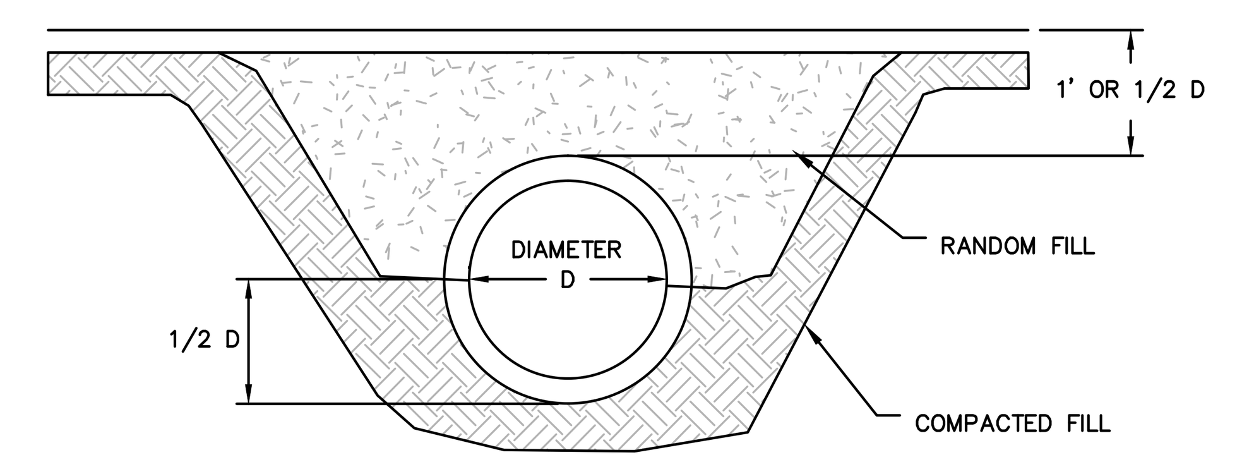
ROADSIDE DITCHES SHALL BE PROVIDED WITH ADEQUATE PROTECTIVE LINING.

ADEQUATELY SIZED CULVERTS OR OTHER SUITABLE CROSS DRAINS SHALL BE PROVIDED AT ALL SEEPS, SPRINGS, AND DRAINAGE COURSES. DITCH RELIEF CULVERTS SHALL BE PROVIDED AT THE INTERVALS INDICATED ON TABLE 3.3 OR TABLE 3.4 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. RIPRAP OUTLET PROTECTION TO BE SIZED ACCORDING TO ANTICIPATED DISCHARGE VELOCITY.

ROADWAY SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED ROADWAYS, DITCHES, OR CROSS DRAINS SHALL BE REPAIRED IMMEDIATELY.

INSLOPED ROADWAY DETAIL

N.T.S PADEP–3–4



MINIMUM DIAMETER FOR ANY CULVERT IS 12"; OTHERWISE CULVERT SHALL BE SIZED FOR ANTICIPATED PEAK FLOW. PLACE CULVERT SO BOTTOM IS AT SAME LEVEL AS BOTTOM OF DITCH OR ADJOINING SLOPE. CULVERTS SHALL BE PLACED WITH A SLOPE OF 2 TO 4%. LOWER END SHALL BE AT LEAST 2" BELOW UPPER END.

EXTEND CULVERT 12" BEYOND BASE OF ROAD FILL ON BOTH SIDES. FIRMLY PACK FILL AROUND CULVERT, ESPECIALLY THE BOTTOM HALF.

PROVIDE SUITABLE OUTLET PROTECTION* AND, WHERE APPROPRIATE, INLET PROTECTION.

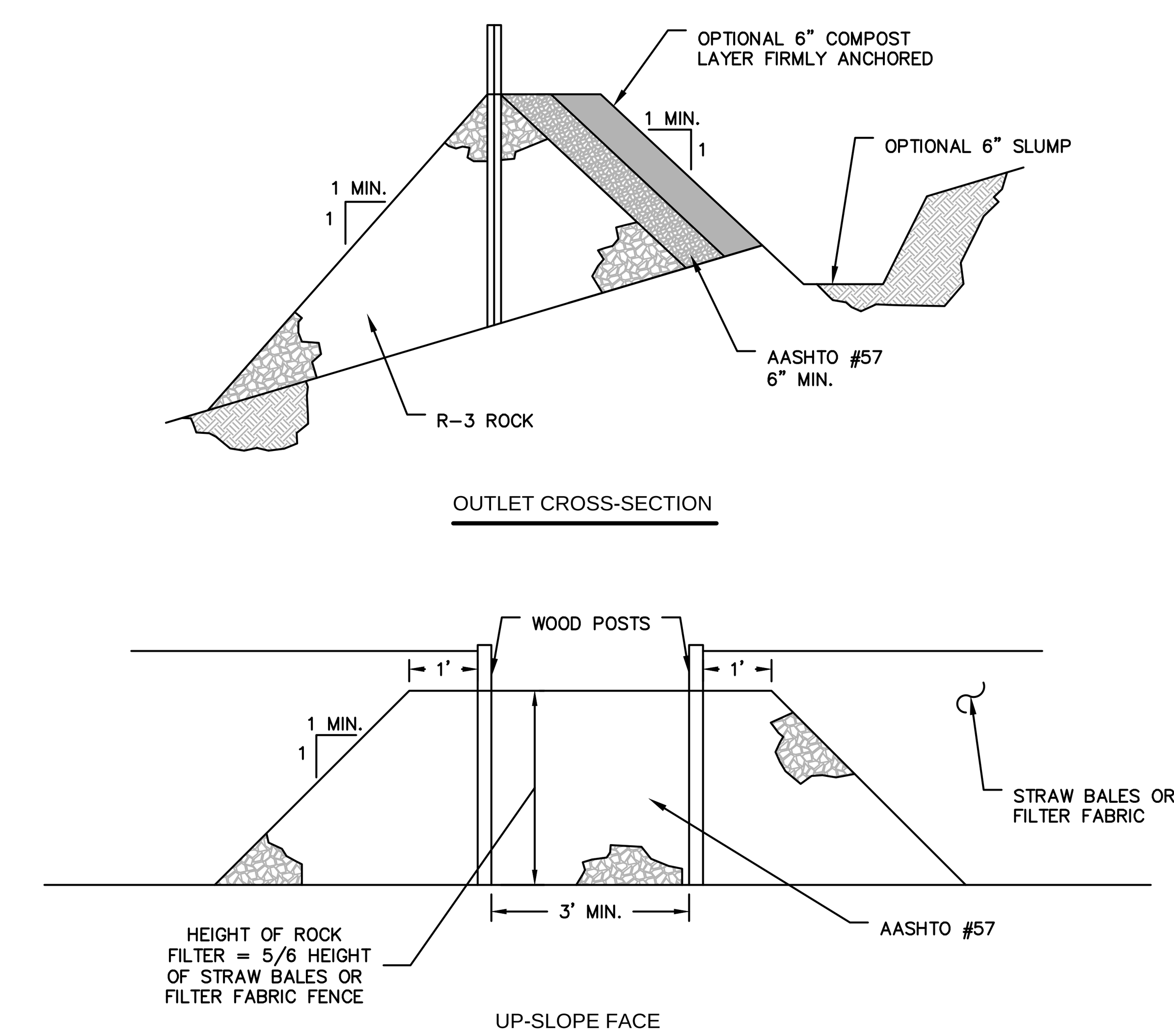
INSPECT CULVERT WEEKLY: REMOVE ANY FLOW OBSTRUCTIONS AND MAKE NECESSARY REPAIRS IMMEDIATELY.

NOTE: THIS DETAIL MAY BE USED FOR DITCH RELIEF CULVERTS AND FOR CROSSINGS OF ROADSIDE DITCHES. IT IS NOT APPROPRIATE FOR STREAM CROSSINGS.

*FOR STEEP SLOPE (GREATER THAN OR EQUAL TO 2H:1V) OUTFALLS, A MINIMUM 20 FOOT LONG R–5 APRON IS RECOMMENDED FOR TEMPORARY ACCESS ROADS WHERE THE RECOMMENDED CULVERT SPACING IS USED. FOR PERMANENT ACCESS ROADS, A MINIMUM R–6 ROCK SIZE IS RECOMMENDED.

DITCH RELIEF CULVERT DETAIL

N.T.S PADEP–3–10

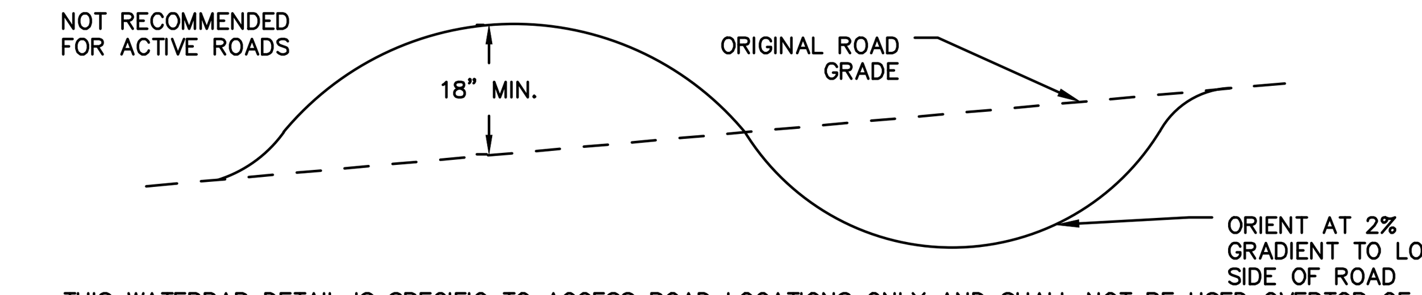


A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

ROCK FILTER OUTLET DETAIL

N.T.S NYSDEC–23



THIS WATERBAR DETAIL IS SPECIFIC TO ACCESS ROAD LOCATIONS ONLY AND SHALL NOT BE USED OVERTOP OF THE PIPLINE.

WATERBARS SHALL DISCHARGE TO A STABLE AREA.

WATERBARS SHALL BE INSPECTED WEEKLY (DAILY ON ACTIVE ROADS) AND AFTER EACH RUNOFF EVENT. DAMAGED OR ERODED WATERBARS SHALL BE RESTORED TO ORIGINAL DIMENSIONS WITHIN 24 HOURS OF INSPECTION.

MAINTENANCE OF WATERBARS SHALL BE PROVIDED UNTIL ROADWAY, SKIDTRAIL, OR RIGHT–OF–WAY HAS ACHIEVED PERMANENT STABILIZATION.

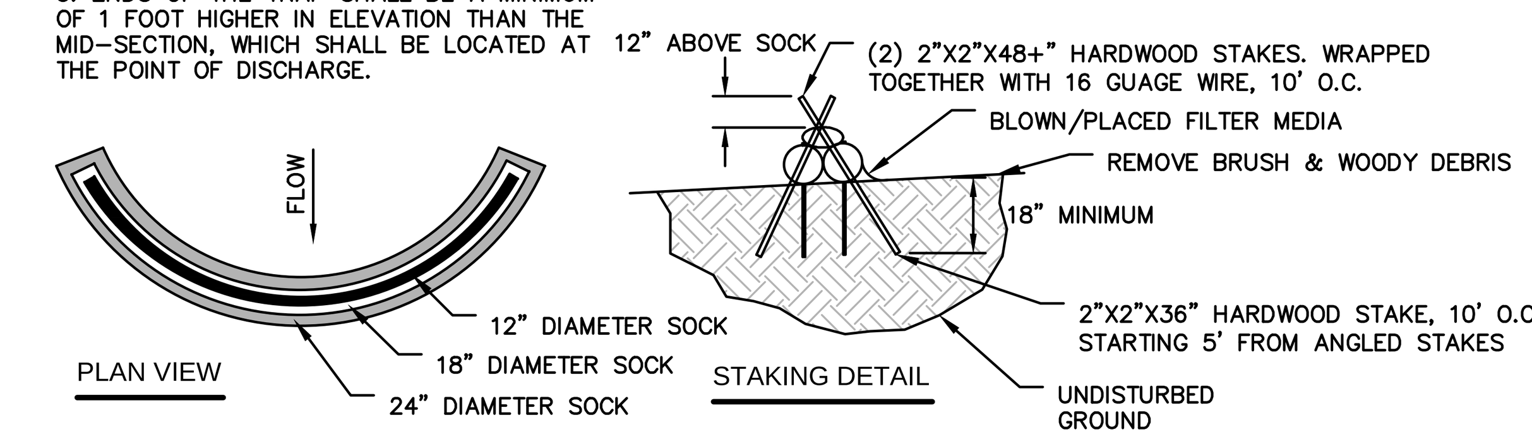
WATERBARS ON RETIRED ROADWAYS, SKIDTRAILS, AND RIGHT–OF–WAYS SHALL BE LEFT IN PLACE AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED.

PERCENT SLOPE	SPACING (FT)
<5	250
5–15	150
15–30	100
>30	50

WATERBAR DETAIL

N.T.S PADEP–3–5

1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2,000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUIVALENT TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS INDICATED TO THE LEFT.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID–SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.



SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN ESCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW–THROUGH," NO SPILLWAY IS REQUIRED.

COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.

PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

COMPOST SOCK SEDIMENT TRAP DETAIL

N.T.S PADEP–3–11

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

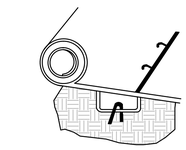
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

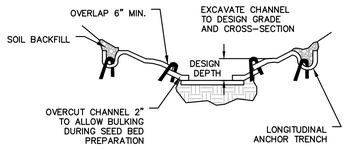
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN

CONSTRUCTION DETAILS 1 OF 2

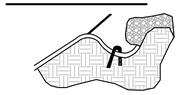
CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/DN.1	SHEET 5 OF 102
WO:			

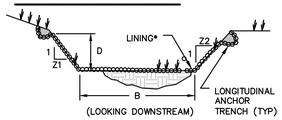




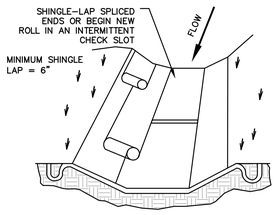
INTERMITTENT CHECK SLOT



LONGITUDINAL ANCHOR TRENCH



CHANNEL CROSS-SECTION



ISOMETRIC VIEW

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS, OR OTHER TEMPORARY CHANNEL LINER SYSTEM

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, AND VEGETATIVE STABILIZATION SPECIFICATIONS FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION.

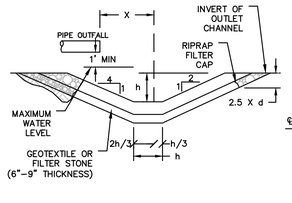
VEGETATED CHANNEL DETAIL

N.T.S PADEP-6-1

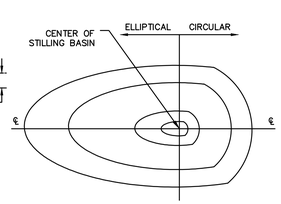
ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.



SECTION ALONG CENTERLINE



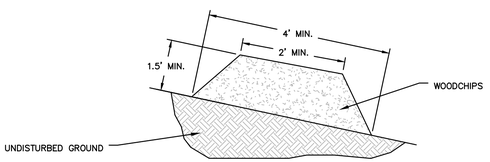
PLAN VIEW

OUTLET NO.	X (FT)	h (FT)	RIPRAP SIZE (R_)	D50 STONE SIZE d (IN)
TYP.	6' (MIN.)	3	6	12

RIPRAP THICKNESS SHALL BE 1.5 TIMES THE MAXIMUM STONE SIZE.

STILLING BASIN DETAIL

N.T.S PADEP-9-4



PRIOR TO PLACEMENT OF THE BERM, OBSTRUCTIONS SUCH AS TREE LIMBS, LARGE ROCKS, ETC. SHALL BE REMOVED.

WOOD CHIP FILTER BERM SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT (FIGURE 4.1 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL MANUAL). WOOD CHIP BERMS SHALL NOT BE LOCATED IN AREAS OF CONCENTRATED FLOW OR USED TO CONSTRUCT SEDIMENT TRAPS OR OTHER IMPOUNDMENTS.

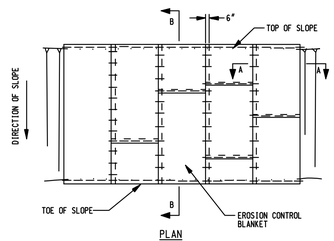
A 6" THICK LAYER OF COMPOST SHALL BE ADDED TO THE UPSLOPE SIDE OF ANY WOOD CHIP FILTER BERM LOCATED IN AN HQ WATERSHED. THIS BMP SHALL NOT BE ROUTINELY USED IN EV WATERSHEDS.

BERMS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE HEIGHT OF THE BERM. DAMAGED OR DETERIORATED PORTIONS OF THE BERM SHALL BE REPLACED IMMEDIATELY UPON INSPECTION.

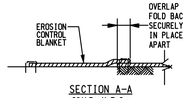
BERMS MAY BE LEVELED WHEN THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED OR LEFT IN PLACE.

WOOD CHIP FILTER BERM DETAIL

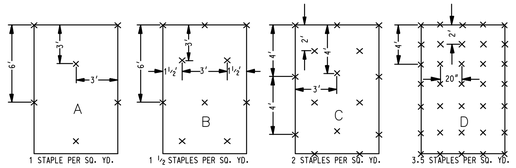
N.T.S PADEP-4-12

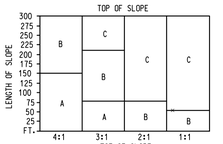


PLAN
SCALE: N.T.S.



SECTION A-A
SCALE: N.T.S.



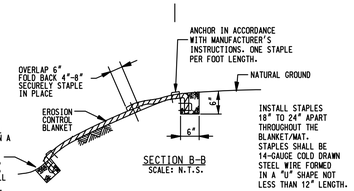


EMBANKMENT INSTALLATION - STAPLE PATTERN TABLE
(SEE STAPLE PATTERN GUIDE)

STAPLE PATTERN GUIDE

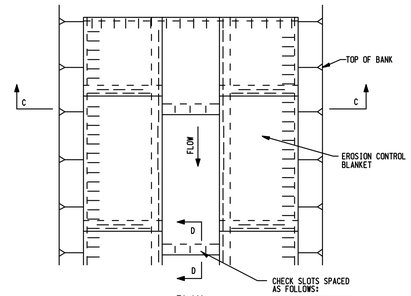
NOTES:

1. EROSION CONTROL BLANKETS SHALL EXTEND COMPLETELY ACROSS DISTURBED AREA TO PROTECT ERODIBLE SURFACES. THE SOIL SHALL BE PROPERLY PREPARED, SEEDED AND MULCHED PRIOR TO INSTALLATION.
2. INSTALL EROSION CONTROL BLANKETS ON FRESHLY GRADED EMBANKMENTS ON SLOPES IN EXCESS OF 3:1 (H:V) TO SUPPORT VEGETATION.
3. INSTALL BLANKETS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. BLANKET SHALL BE LOOSELY INSTALLED AND TAMPED OR ROLLED IN PLACE AFTER INSTALLATION. STAPLES SHALL BE DRIVEN FLUSH WITH THE GROUND.



SECTION B-B
SCALE: N.T.S.

EMBANKMENT INSTALLATION

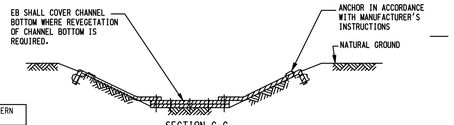


SLOPE	SPACING
0-3%	50'
> 3%	25'

PLAN
SCALE: N.T.S.

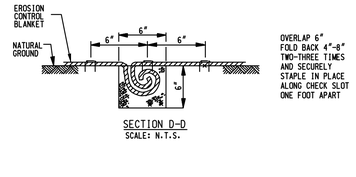
FLOW	STAPLE PATTERN TYPE
LOW VELOCITY	C
MED. TO HIGH VELOCITY	D

CHANNEL INSTALLATION - STAPLE PATTERN TABLE
(SEE STAPLE PATTERN GUIDE)



SECTION C-C
SCALE: N.T.S.

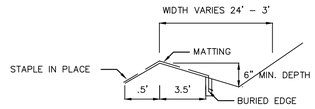
CHANNEL INSTALLATION



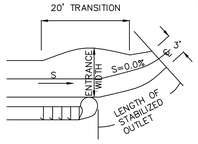
SECTION D-D
SCALE: N.T.S.

EROSION CONTROL BLANKET INSTALLATION DETAIL

N.T.S NYSDEC-37



CROSS SECTION
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

Q(cfs)	E.W.(FT)	D(FT)	END WIDTH(FT)	LENGTH(FT)
0-10	10	0.5	3	10
10-20	16	0.6	3	20
20-30	24	0.7	3	30

CONSTRUCTION SPECIFICATIONS

1. THE MATTING SHOULD BE A MINIMUM OF 4FT. WIDE EXTENDING 6 INCHES OVER THE LIP AND BURIED 6 INCHES DEEP IN A VERTICAL TRENCH ON THE LOWER EDGE. THE UPPER EDGE SHOULD BUTT AGAINST SMOOTHLY CUT SOD AND BE SECURELY HELD IN PLACE WITH CLOSELY SPACED HEAVY DUTY WIRE STAPLES AT LEAST 12 INCHES IN LENGTH.
2. ENSURE THAT THE LIP IS LEVEL TO UNIFORMLY SPREAD DISCHARGE.
3. THE LIP SHALL BE CONSTRUCTED ON UNDISTURBED SOIL NOT FILL.
4. A 20 FOOT TRANSITION SECTION WILL BE CONSTRUCTED FROM THE DIVERSION CHANNEL TO THE SPREADER TO SMOOTHLY BLEND THE DIFFERENT DIMENSION AND GRADES.
5. THE RUNOFF DISCHARGE WILL BE OUTLETED ONTO A STABILIZED VEGETATED SLOPE NOT EXCEEDING 10%.
6. SEED AND MULCH THE DISTURBED AREA IMMEDIATELY AFTER CONSTRUCTION.

EARTHEN LEVEL SPREADER

N.T.S NYSDEC-27

ISSUED FOR BID
NOT FOR CONSTRUCTION

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS - ROAD DESIGN PLAN

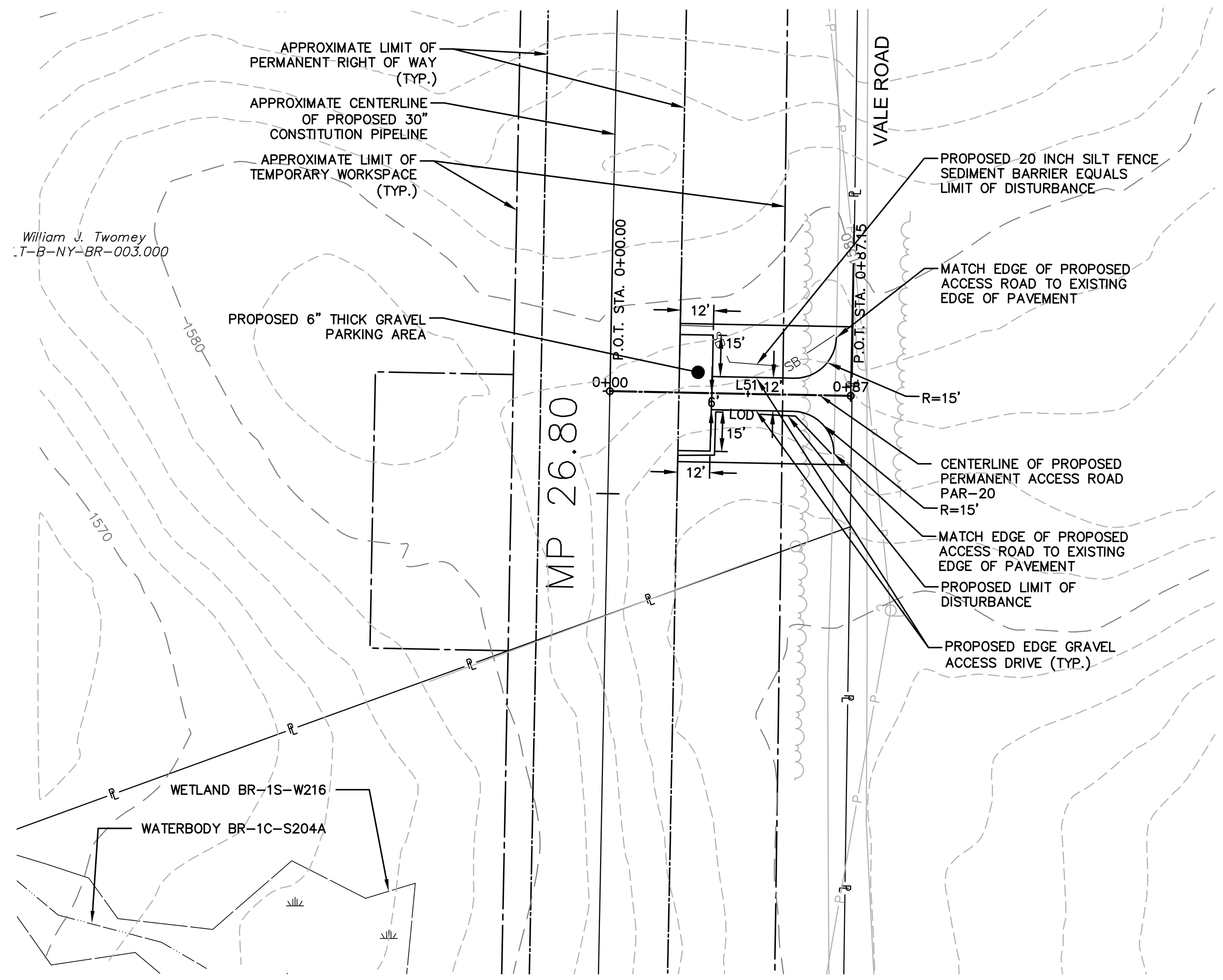
CONSTRUCTION DETAILS 2 OF 2

CONSTITUTION PIPELINE

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/DN.2	SHEET 6 OF 102
W/O:			

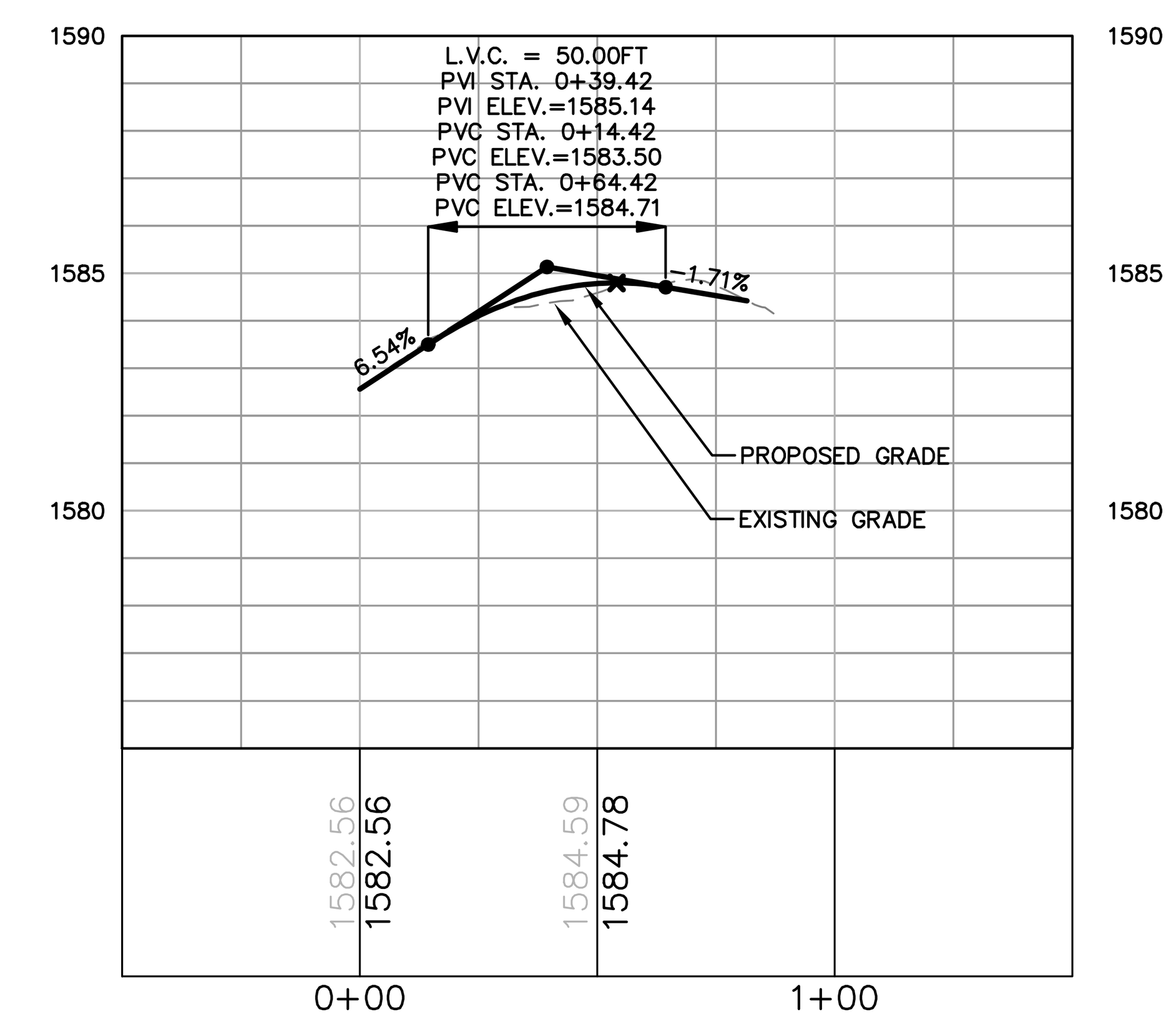


GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
3. PROPOSED TRUCK PULL OFF ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION. THE PULL OFF AREA SHALL BE REGRADED TO MATCH PRE CONSTRUCTION CONTOURS WHERE PRACTICAL. ALL PROPOSED PERMANENT SWALES AND ASSOCIATED CHECK DAMS SHALL BE REMOVED AND REINSTALLED ALONG THE PROPOSED EDGE OF ROAD.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

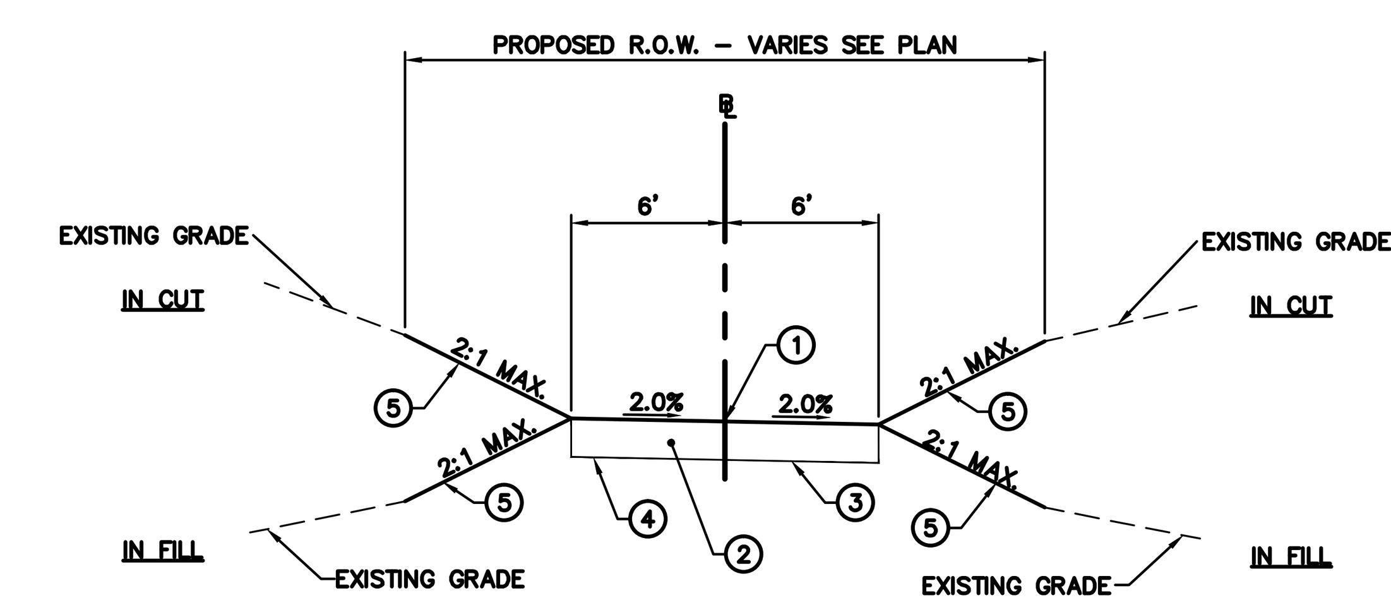
PAR-20

No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L51	B 15260620.63 E 15260618.93	B 1496969.83 E 1497056.97	S88°52'47.36"E		87.15'		



TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED



TYPICAL SECTION STA. 0+00 TO 0+62.42

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS - ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-20 @ M.P. 26.77
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-20.1	SHEET 7 OF 102
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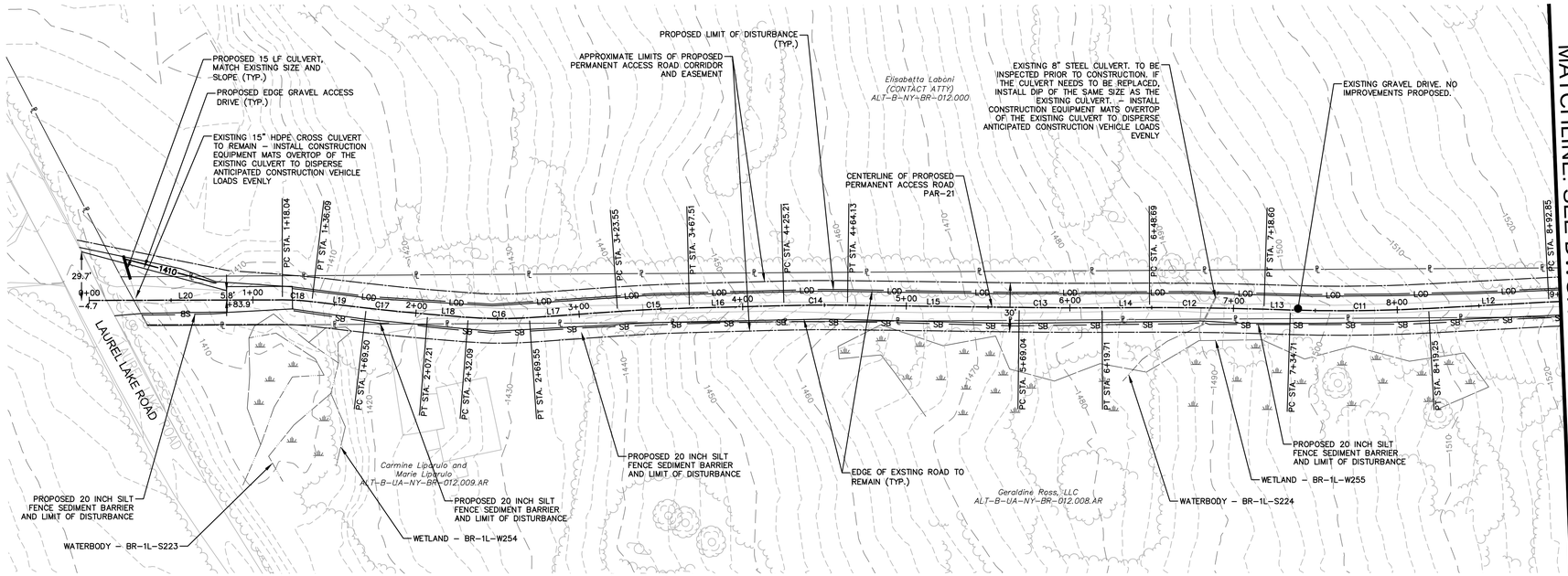
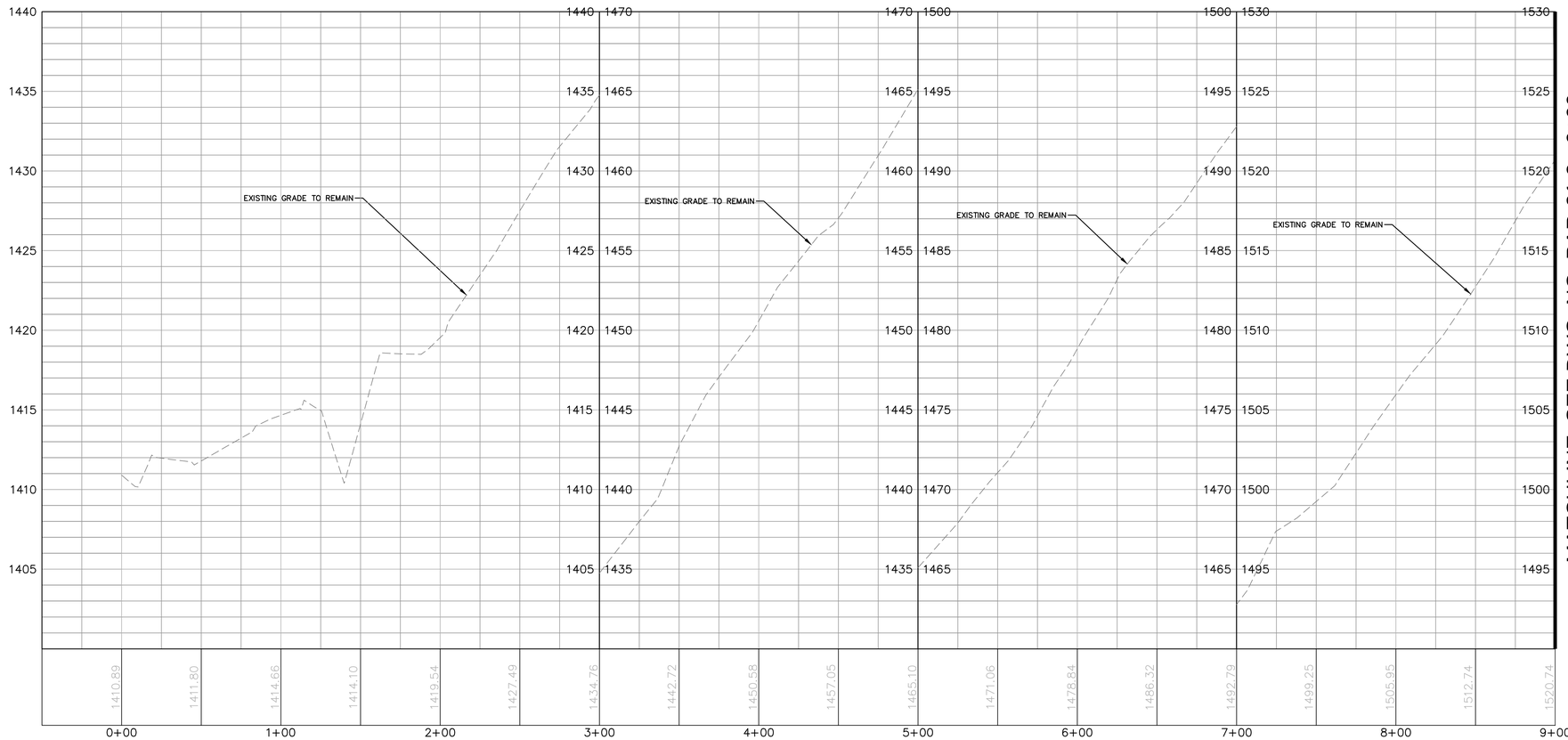




GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
3. PROPOSED TRUCK PULL OFF ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION. THE PULL OFF AREA SHALL BE REGRADED TO MATCH PRE CONSTRUCTION CONTOURS WHERE PRACTICAL. ALL PROPOSED PERMANENT SWALES AND ASSOCIATED CHECK DAMS SHALL BE REMOVED AND REINSTALLED ALONG THE PROPOSED EDGE OF ROAD.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1–800–962–7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

PAR–21

No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L20	B 15262956.66 E 15263074.69	B 1499439.84 E 1499439.52	N0°09'09.98"W		118.04'		
C18	PC 15263074.69 PI 15263083.73 PT 15263092.70	PC 1499439.52 PI 1499439.50 PT 1499440.56		6°53'38"	18.05'	9.04'	150.0'
L19	B 15263092.70 E 15263125.88	B 1499440.56 E 1499444.48	N6°44'28.19"E		33.41'		
C17	PC 15263125.88 PI 15263144.61 PT 15263163.41	PC 1499444.48 PI 1499446.70 PT 1499448.20		2°09'39"	37.71'	18.86'	1000.0'
L18	B 15263163.41 E 15263188.21	B 1499448.20 E 1499450.19	N4°34'49.04"E		24.88'		
C16	PC 15263188.21 PI 15263206.91 PT 15263225.63	PC 1499450.19 PI 1499451.69 PT 1499450.38		8°35'03"	37.46'	18.76'	250.0'
L17	B 15263225.63 E 15263279.50	B 1499450.38 E 1499446.61	N4°00'13.88"W		54.00'		
C15	PC 15263279.50 PI 15263301.43 PT 15263323.40	PC 1499446.61 PI 1499445.07 PT 1499444.50		2°31'07"	43.96'	21.98'	1000.0'
L16	B 15263323.40 E 15263381.09	B 1499444.50 E 1499443.01	N1°29'06.71"W		57.71'		
C14	PC 15263381.09 PI 15263400.54 PT 15263420.00	PC 1499443.01 PI 1499442.50 PT 1499442.75		2°13'47"	38.91'	19.46'	1000.0'
L15	B 15263420.00 E 15263524.90	B 1499442.75 E 1499444.12	N0°44'40.03"E		104.91'		
C13	PC 15263524.90 PI 15263550.24 PT 15263575.57	PC 1499444.12 PI 1499444.45 PT 1499444.35		0°58'04"	50.67'	25.34'	3000.0'
L14	B 15263575.57 E 15263604.56	B 1499444.35 E 1499444.24	N0°13'23.74"W		28.98'		
C12	PC 15263604.56 PI 15263639.51 PT 15263674.45	PC 1499444.24 PI 1499444.10 PT 1499445.18		2°00'10"	69.91'	34.96'	2000.0'
L13	B 15263674.45 E 15263690.55	B 1499445.18 E 1499445.68	N1°46'45.76"E		16.11'		
C11	PC 15263690.55 PI 15263732.83 PT 15263775.06	PC 1499445.68 PI 1499447.00 PT 1499444.74		4°50'37"	84.54'	42.29'	1000.0'
L12	B 15263775.06 E 15263848.56	B 1499444.74 E 1499440.80	N3°03'51.48"W		73.61'		
C10	PC 15263848.56 PI 15263860.93 PT 15263873.31	PC 1499440.80 PI 1499440.14 PT 1499440.09		2°50'13"	24.76'	12.38'	500.0'
L11	B 15263873.31 E 15264096.11	B 1499440.09 E 1499439.21	N0°13'38.11"W		222.81'		
C9	PC 15264096.11 PI 15264114.43 PT 15264132.74	PC 1499439.21 PI 1499439.14 PT 1499438.73		1°02'58"	36.63'	18.32'	2000.0'
L10	B 15264132.74 E 15264310.37	B 1499438.73 E 1499434.77	N1°16'36.19"W		177.67'		
C8	PC 15264310.37 PI 15264335.80 PT 15264361.24	PC 1499434.77 PI 1499434.20 PT 1499434.28		1°27'26"	50.87'	25.44'	2000.0'
L9	B 15264361.24 E 15264575.15	B 1499434.28 E 1499434.96	N0°10'50.13"E		213.91'		
C7	PC 15264575.15 PI 15264598.17 PT 15264621.19	PC 1499434.96 PI 1499435.03 PT 1499434.89		0°31'40"	46.05'	23.02'	5000.0'
L8	B 15264621.19 E 15264879.70	B 1499434.89 E 1499433.32	N0°20'49.50"W		258.51'		
C6	PC 15264879.70 PI 15264900.45 PT 15264918.18	PC 1499433.32 PI 1499433.20 PT 1499422.42		30°55'50"	40.49'	20.75'	75.0'
L7	B 15264918.18 E 15264964.08	B 1499422.42 E 1499394.54	N31°16'39.07"W		53.71'		

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR–21 @ M.P. 27.81
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

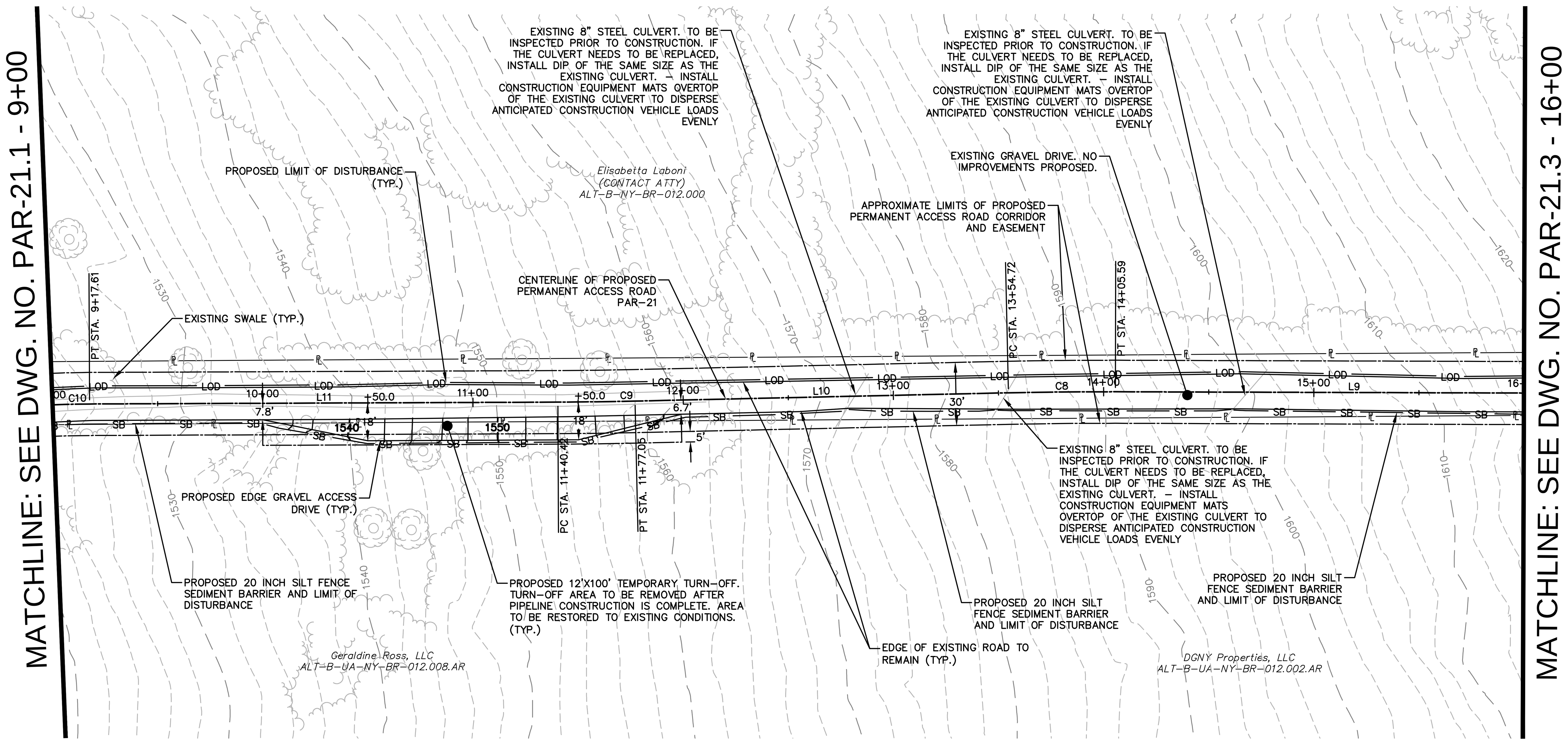
CONSTITUTION PIPELINE

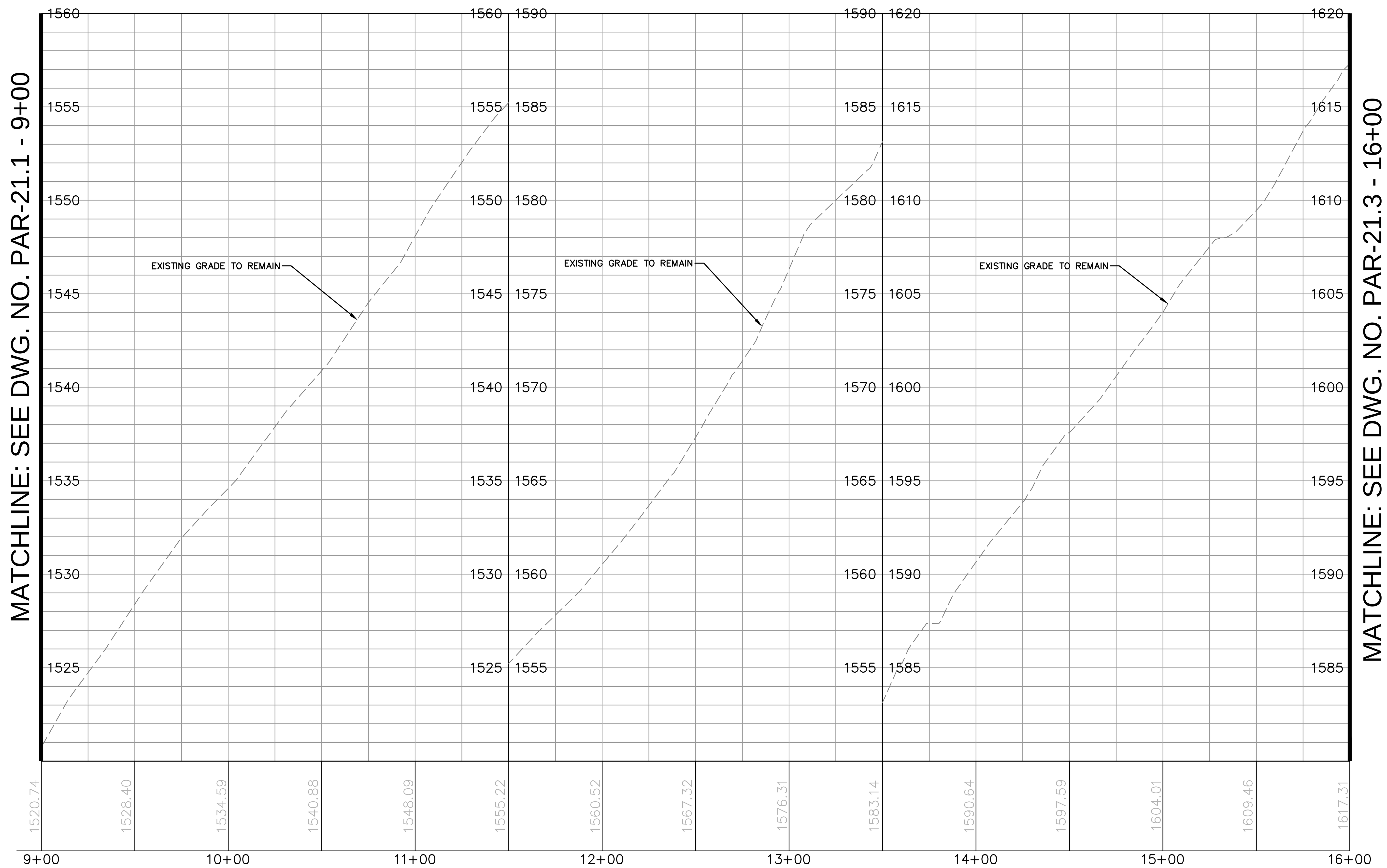
ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/PAR–21.1	SHEET 8 OF 102
W.O.:			





HORIZONTAL SCALE 1"=40'

GRAPHIC SCALE

40 20 0 40

SCALE IN FEET

VERTICAL SCALE 1"=4'

GRAPHIC SCALE

4 2 0 4

SCALE IN FEET

ISSUED FOR BID
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ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

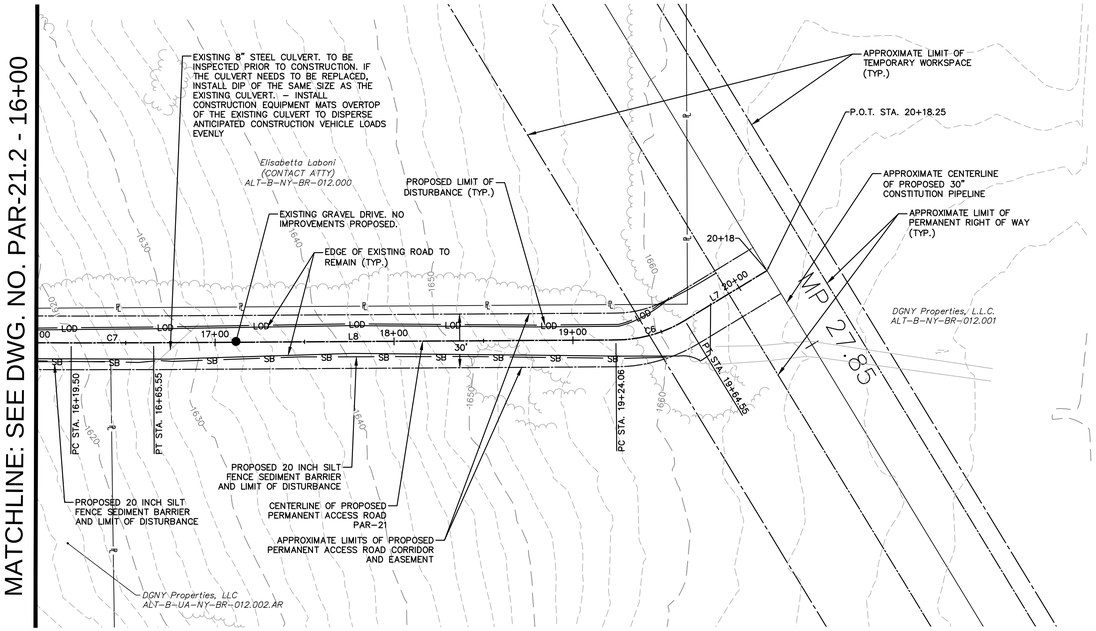
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN

PROPOSED PERMANENT ACCESS ROAD
PAR–21 @ M.P. 27.81
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

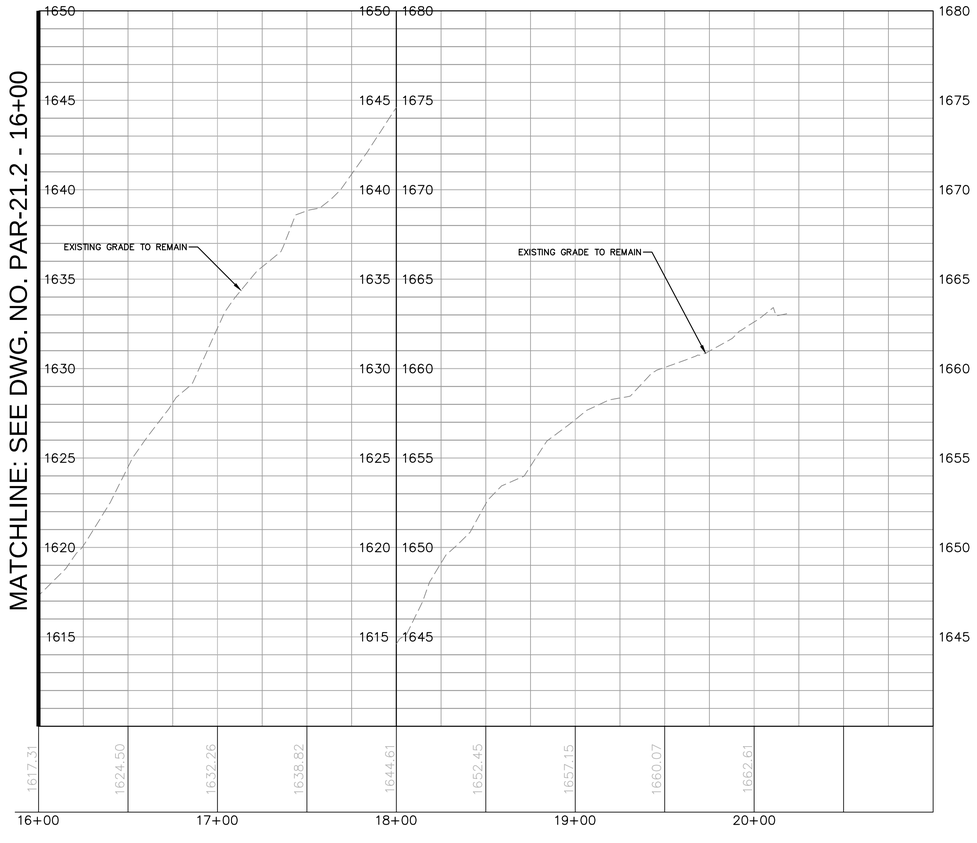
CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/PAR–21.2	SHEET 9 OF 102
W.O.:			

MATCHLINE: SEE DWG. NO. PAR-21.2 - 16+00



MATCHLINE: SEE DWG. NO. PAR-21.2 - 16+00



HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

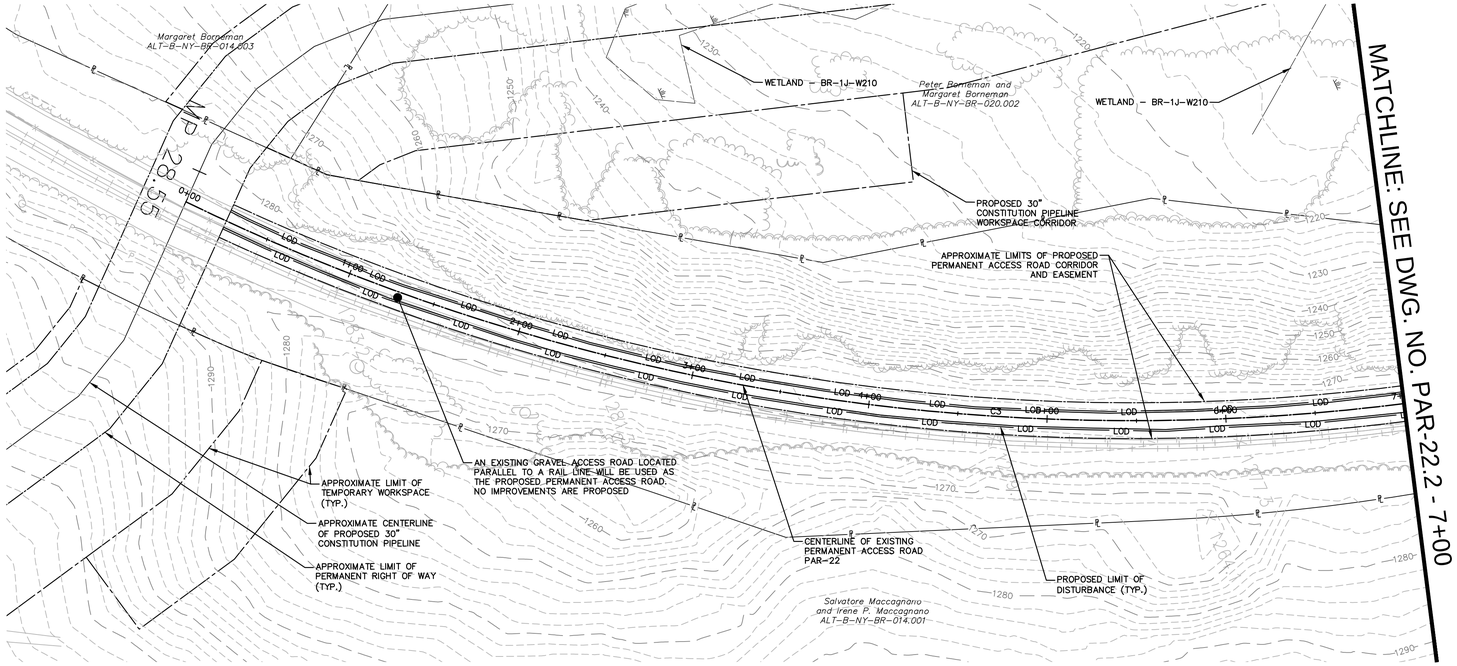
ISSUED FOR BID
NOT FOR CONSTRUCTION

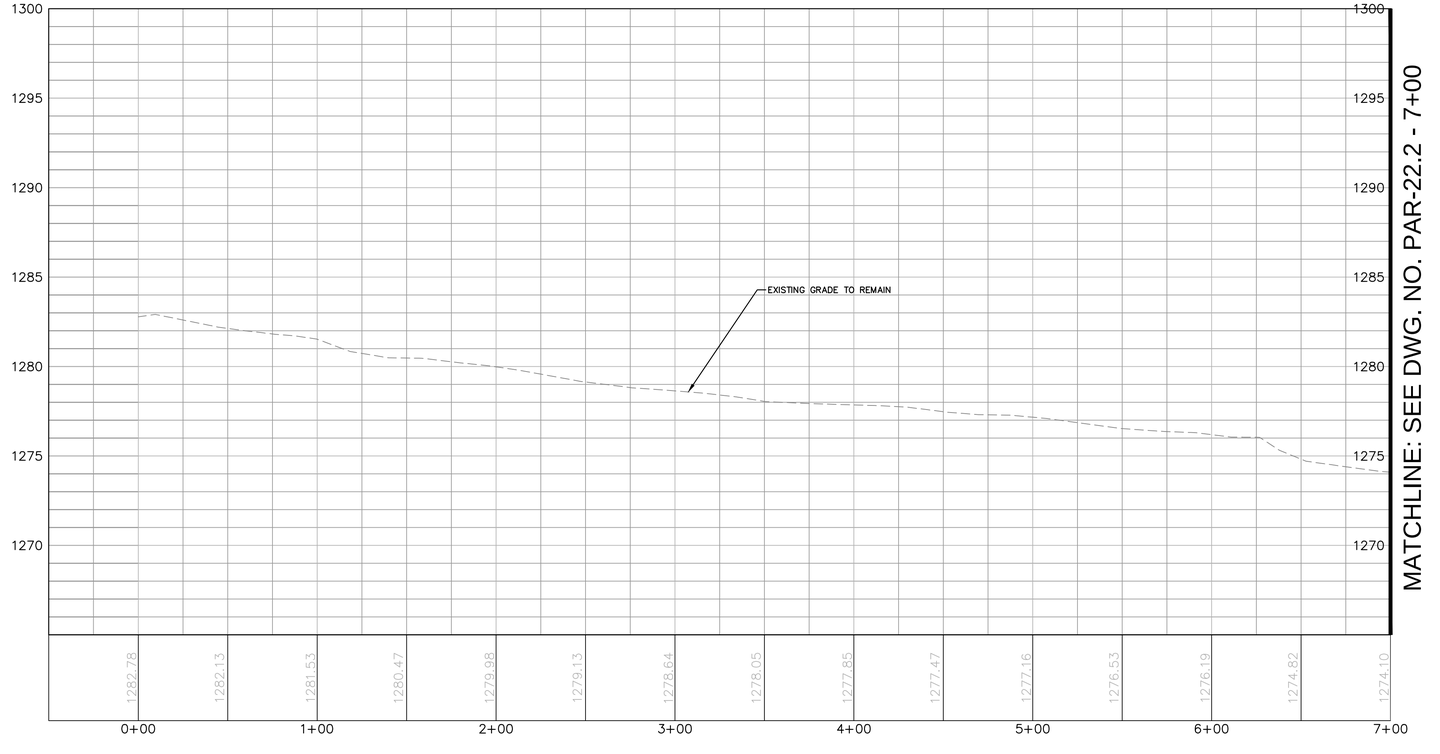
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-21 @ M.P. 27.81
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-21.2	SHEET 10 OF 102
W.O:			





PAR-22							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
C3	PC 15268064.31 PI 15268367.38 PT 15268836.91	PC 1500174.67 PI 1500538.33 PT 1500598.72		42°51'48"	902.21'	473.39'	1206.0'
L4	B 15268836.91 E 15269314.41	B 1500598.72 E 1500660.14	N7°19'46.73"E		481.43'		
C4	PC 15269314.41 PI 15269605.01 PT 15269868.62	PC 1500660.14 PI 1500697.52 PT 1500825.42		18°33'06"	580.87'	293.00'	1794.0'
L5	B 15269868.62 E 15270764.40	B 1500825.42 E 1501260.03	N25°52'52.32"E		995.64'		
C5	PC 15270764.40 PI 15271235.21 PT 15271386.34	PC 1501260.03 PI 1501488.45 PT 1501989.45		47°19'58"	986.38'	523.30'	1194.0'
L6	B 15271386.34 E 15271608.87	B 1501989.45 E 1502727.17	N73°12'50.67"E		770.55'		

GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
3. PROPOSED TRUCK PULL OFF ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION. THE PULL OFF AREA SHALL BE REGRADED TO MATCH PRE CONSTRUCTION CONTOURS WHERE PRACTICAL. ALL PROPOSED PERMANENT SWALES AND ASSOCIATED CHECK DAMS SHALL BE REMOVED AND REINSTALLED ALONG THE PROPOSED EDGE OF ROAD.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

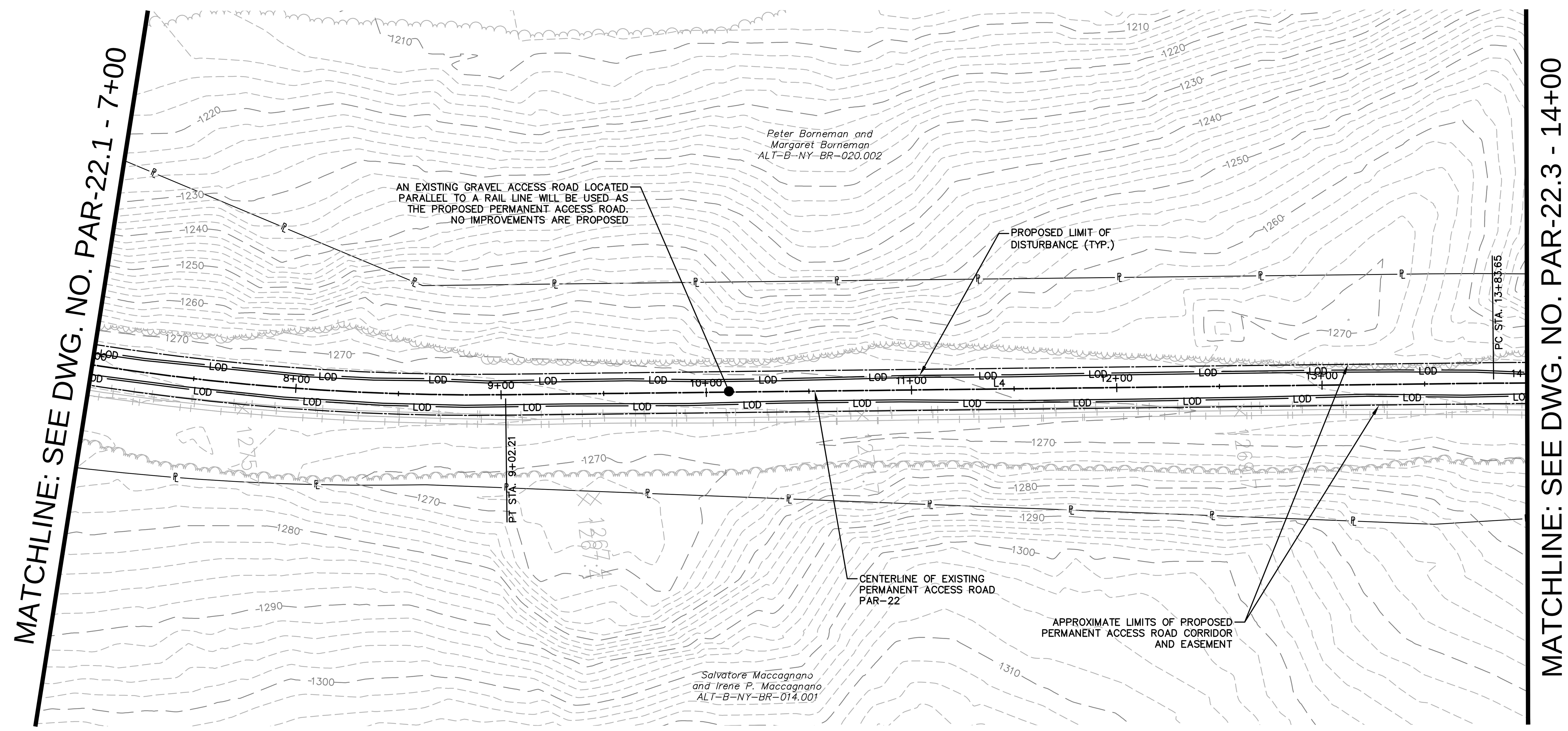
ISSUED FOR BID
NOT FOR CONSTRUCTION

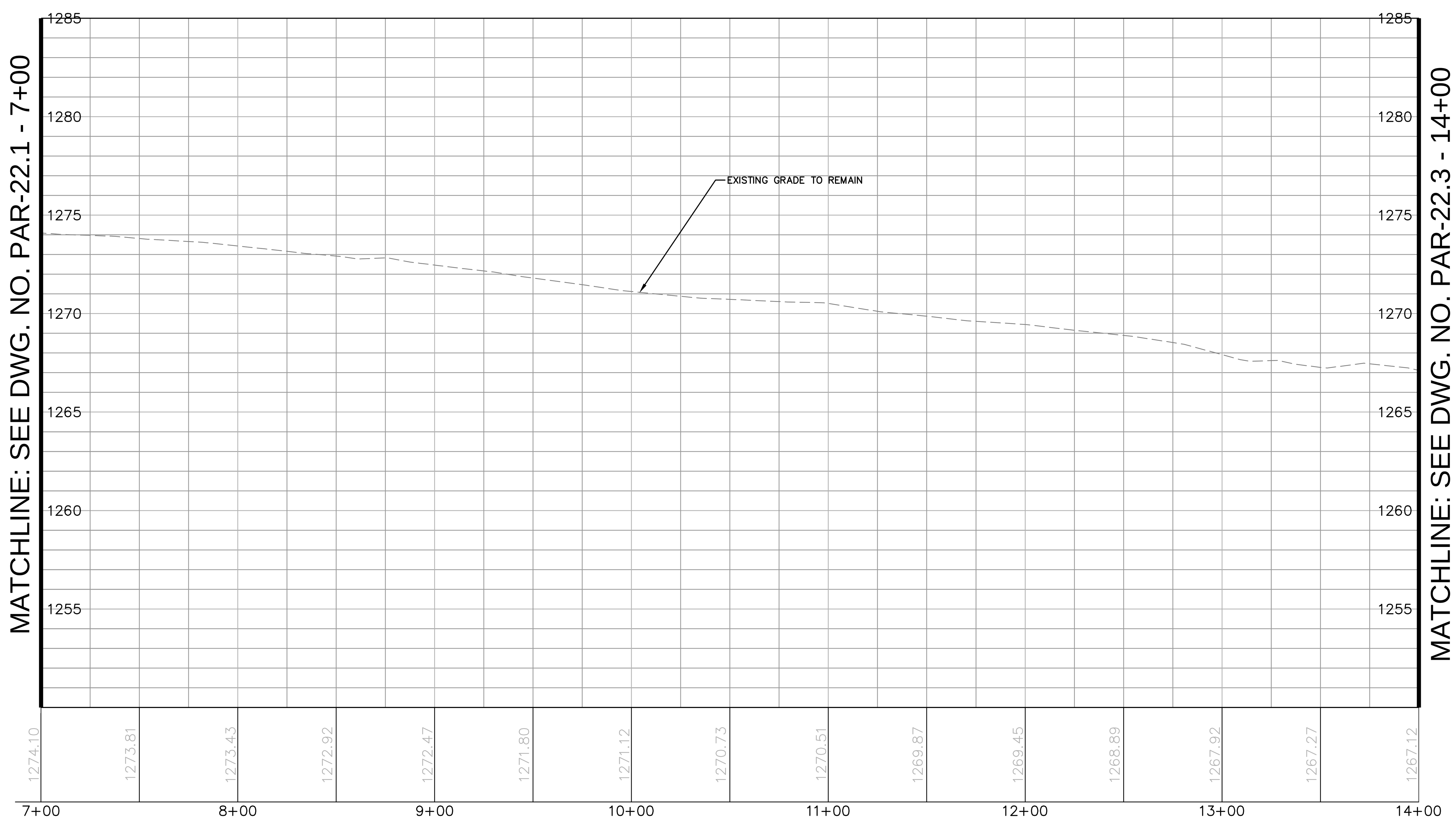
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-22 @ M.P. 28.52
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-22.1	SHEET 11 OF 102
W.O.:			





HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
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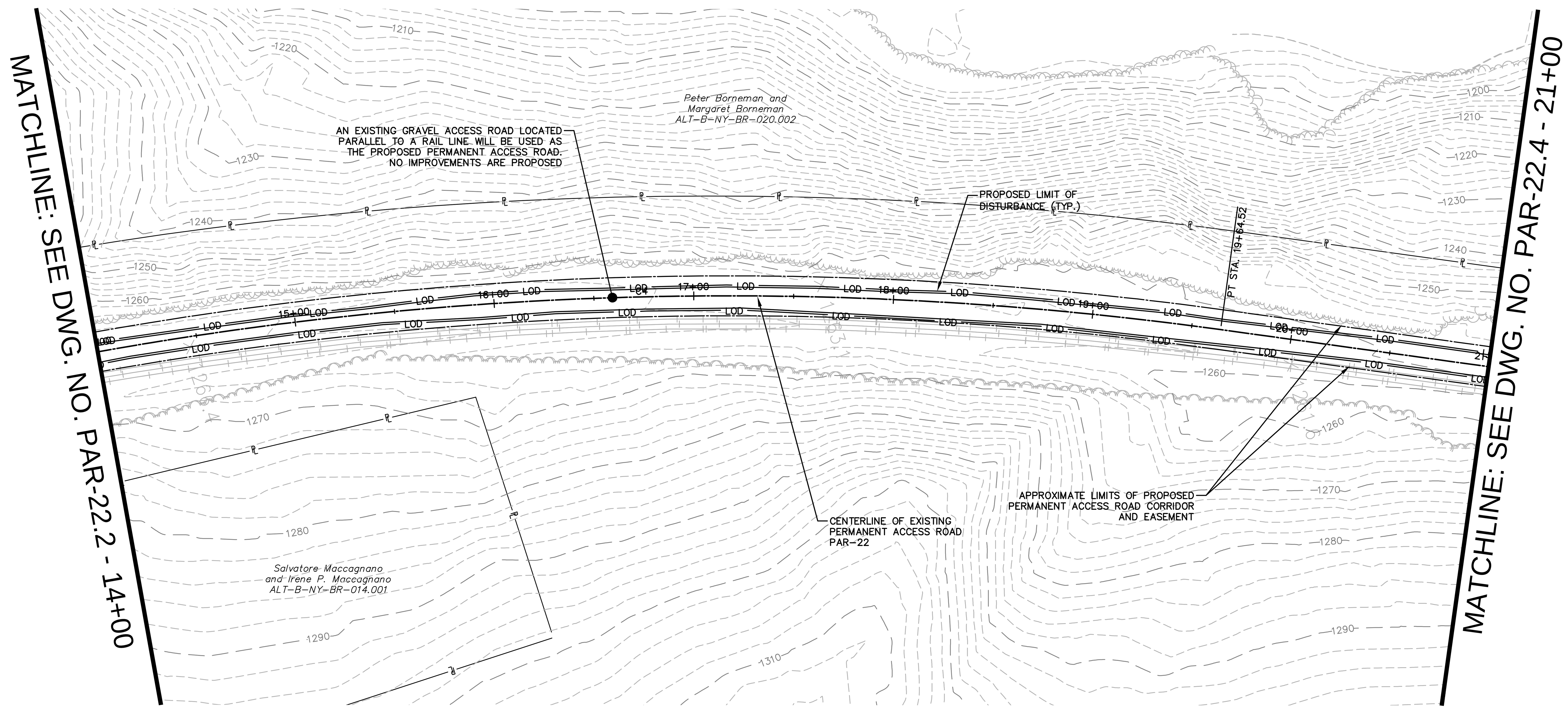
ENVIRONMENTAL
LAND SURVEYING
BL Companies

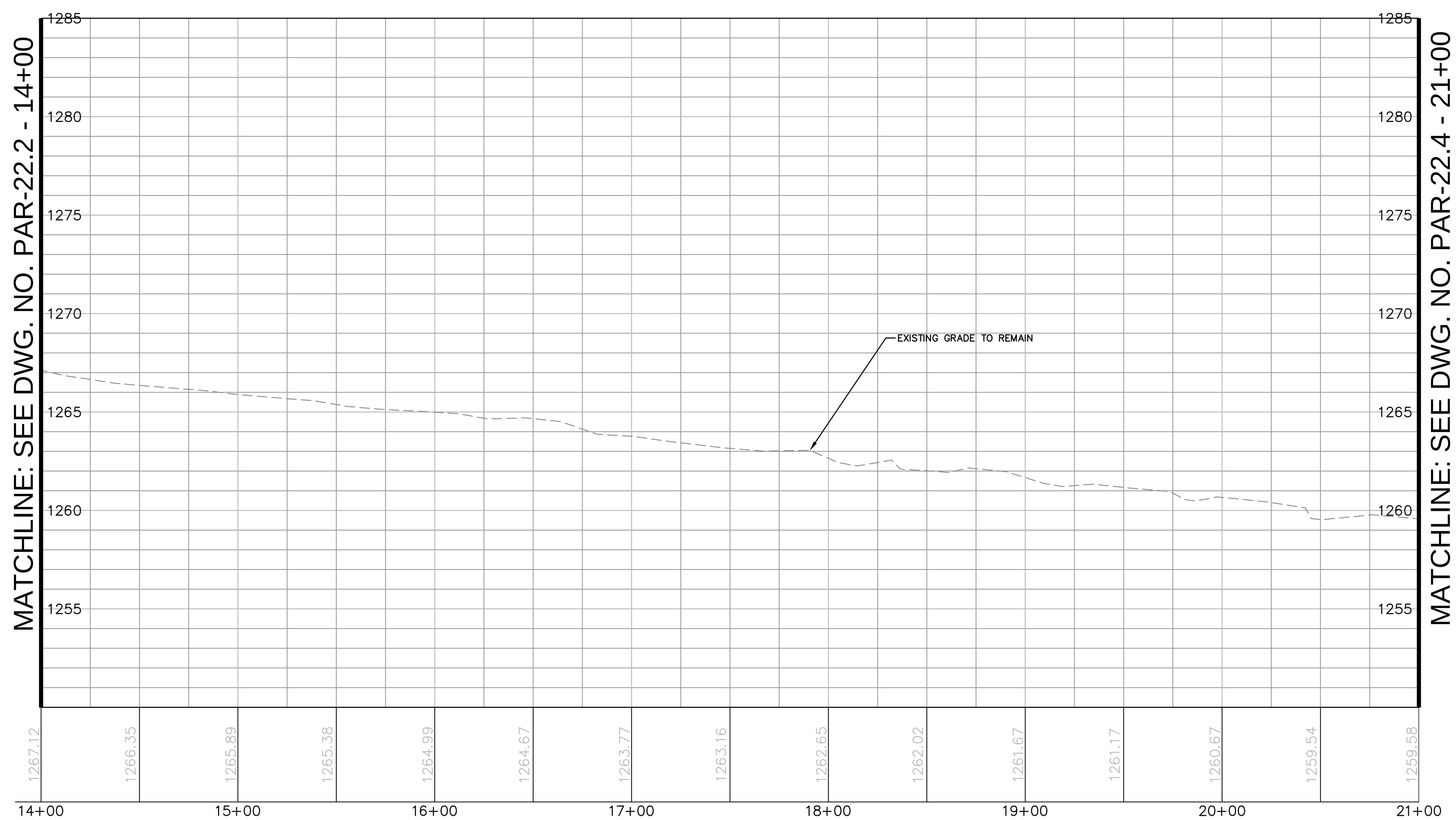
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-22 @ M.P. 28.52
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-22.2	SHEET 12 OF 102
WO:			





HORIZONTAL SCALE 1"=40'

GRAPHIC SCALE

40 20 0 40

SCALE IN FEET

VERTICAL SCALE 1"=4'

GRAPHIC SCALE

4 2 0 4

SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
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ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR–22 @ M.P. 28.52
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-22.3	SHEET 13 OF 102
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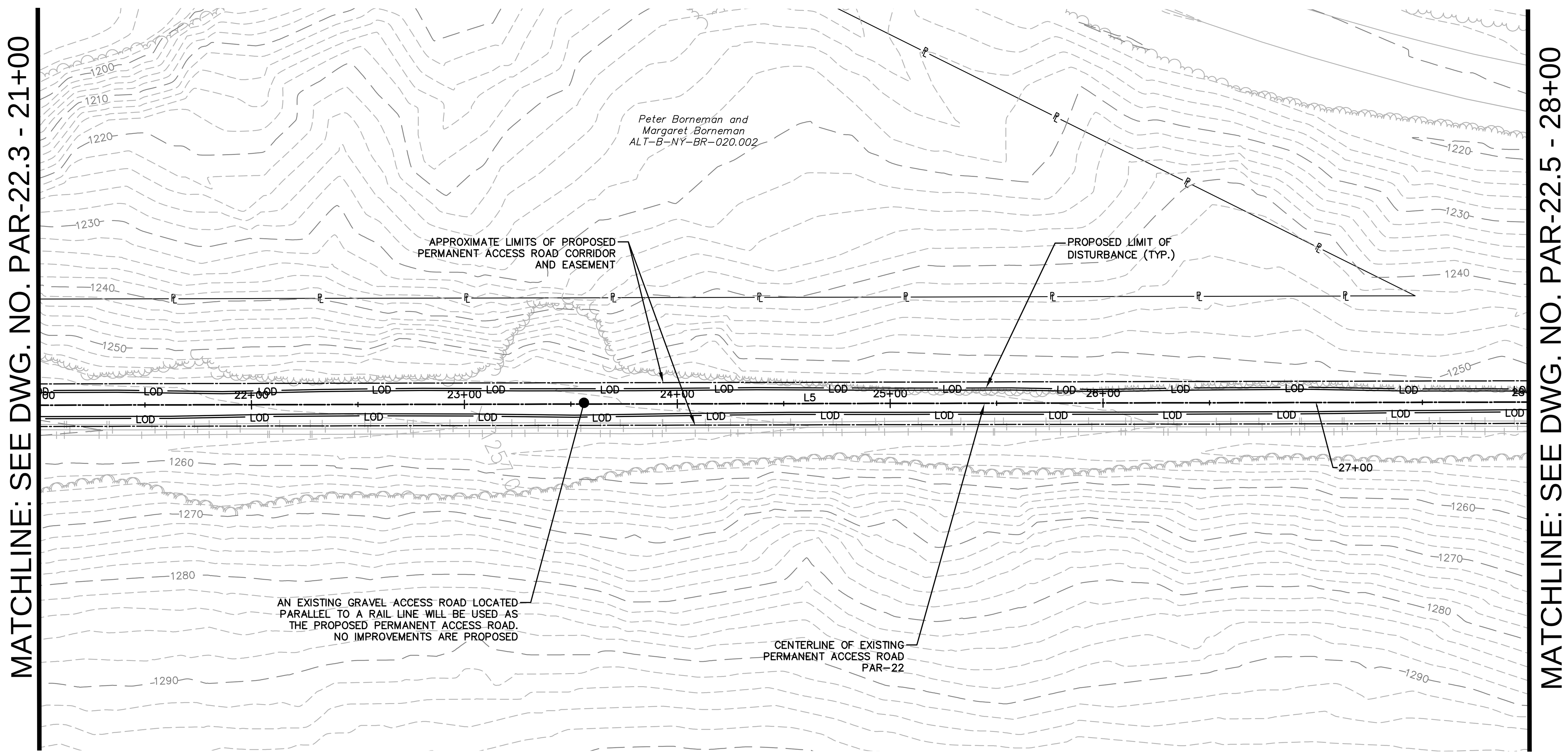

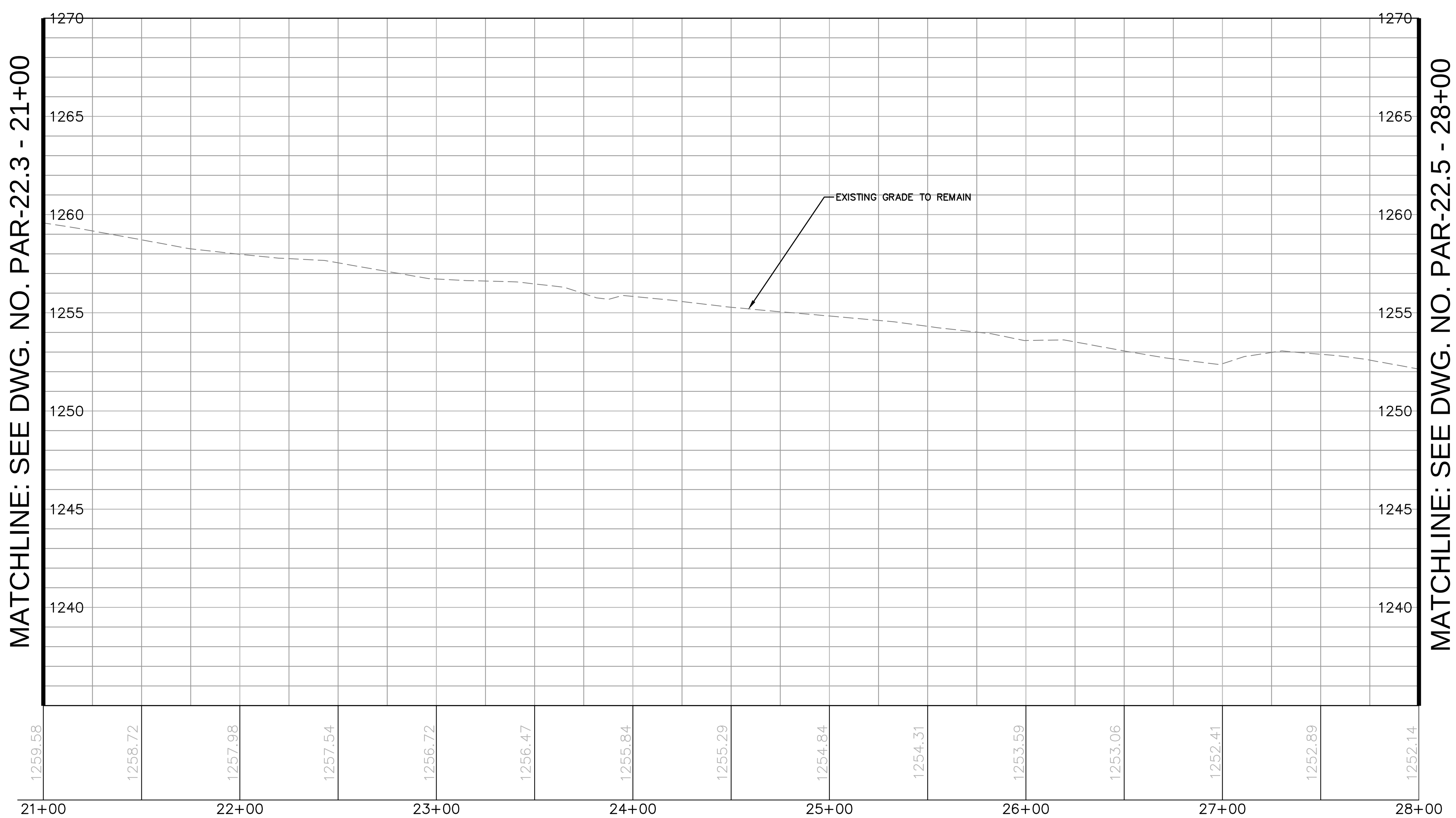

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
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ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR–22 @ M.P. 28.52
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/PAR–22.4	SHEET 14 OF 102
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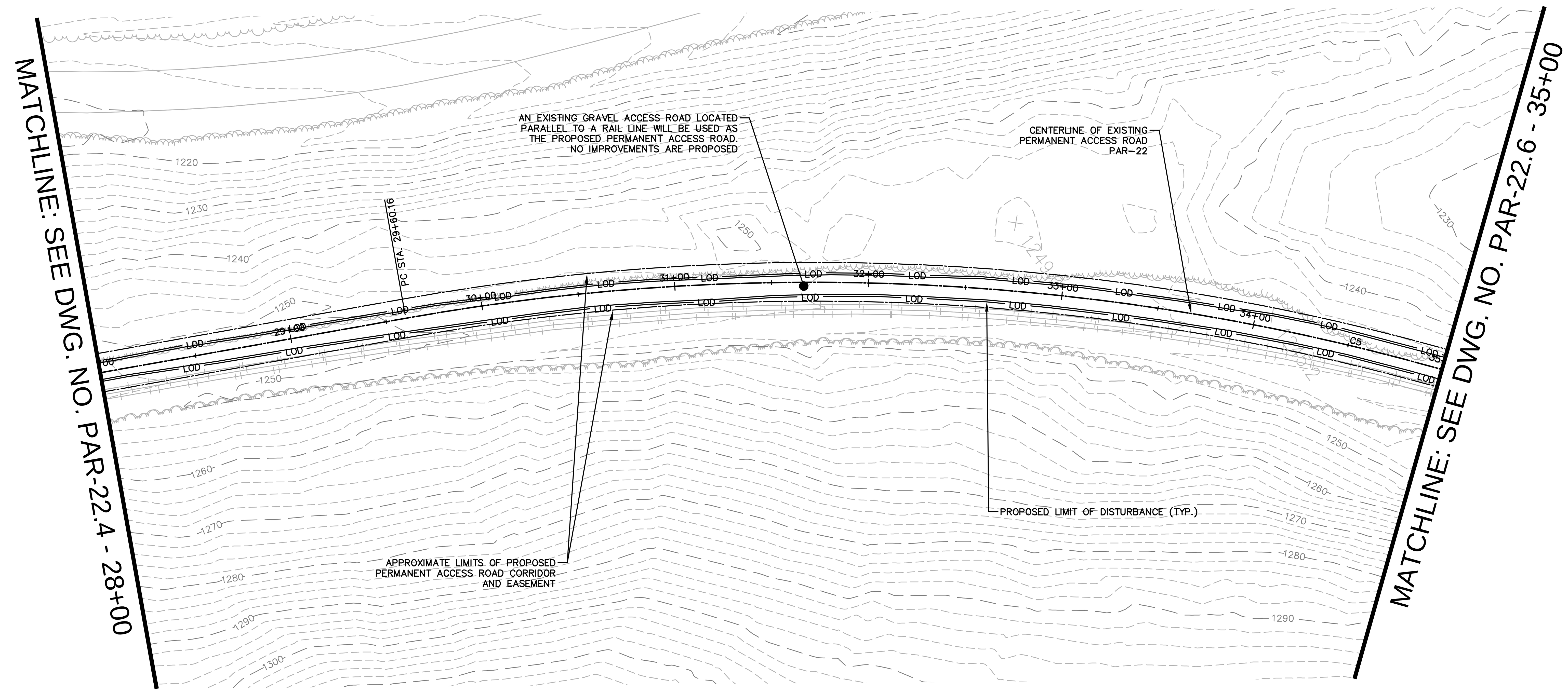

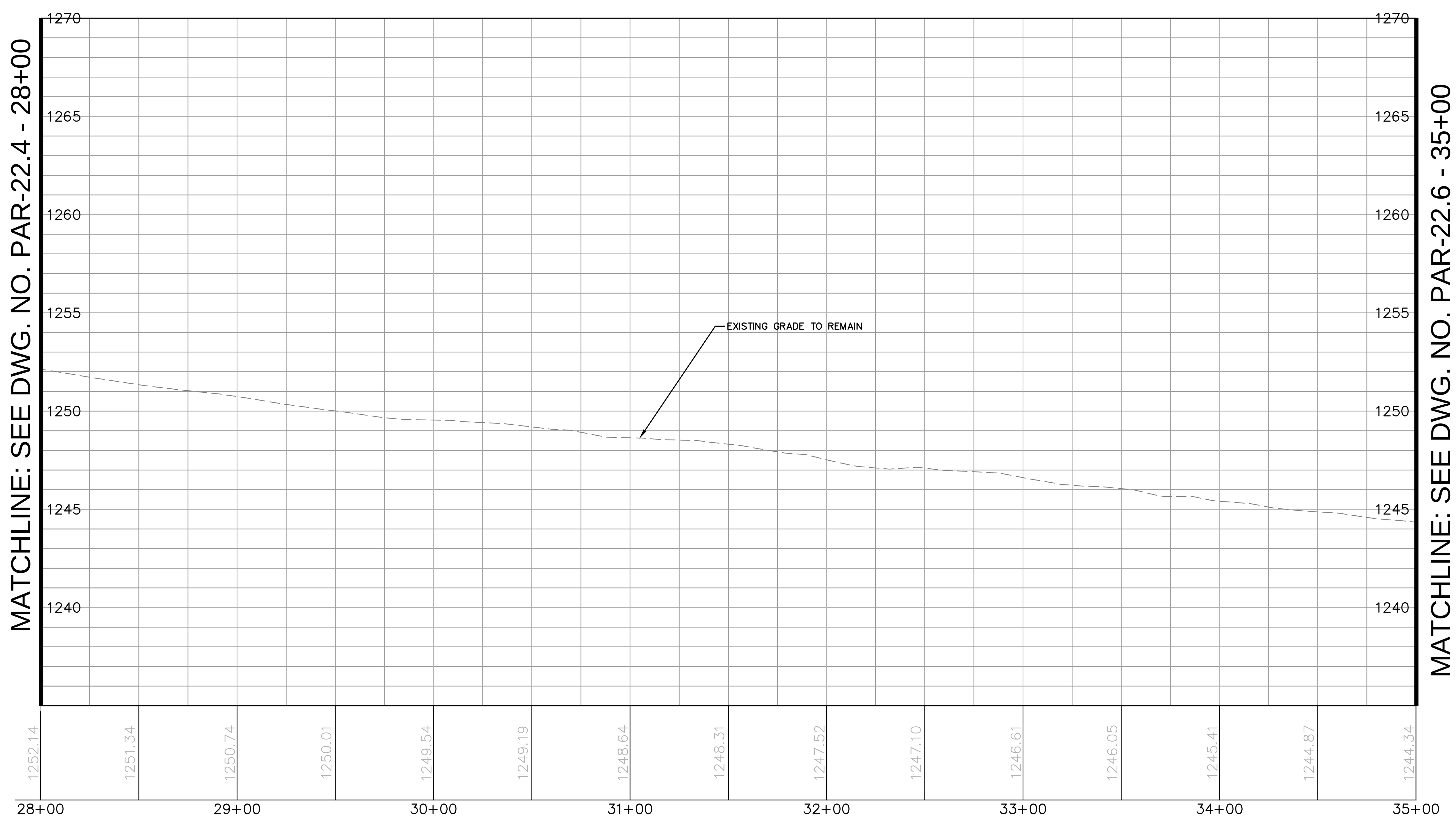

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
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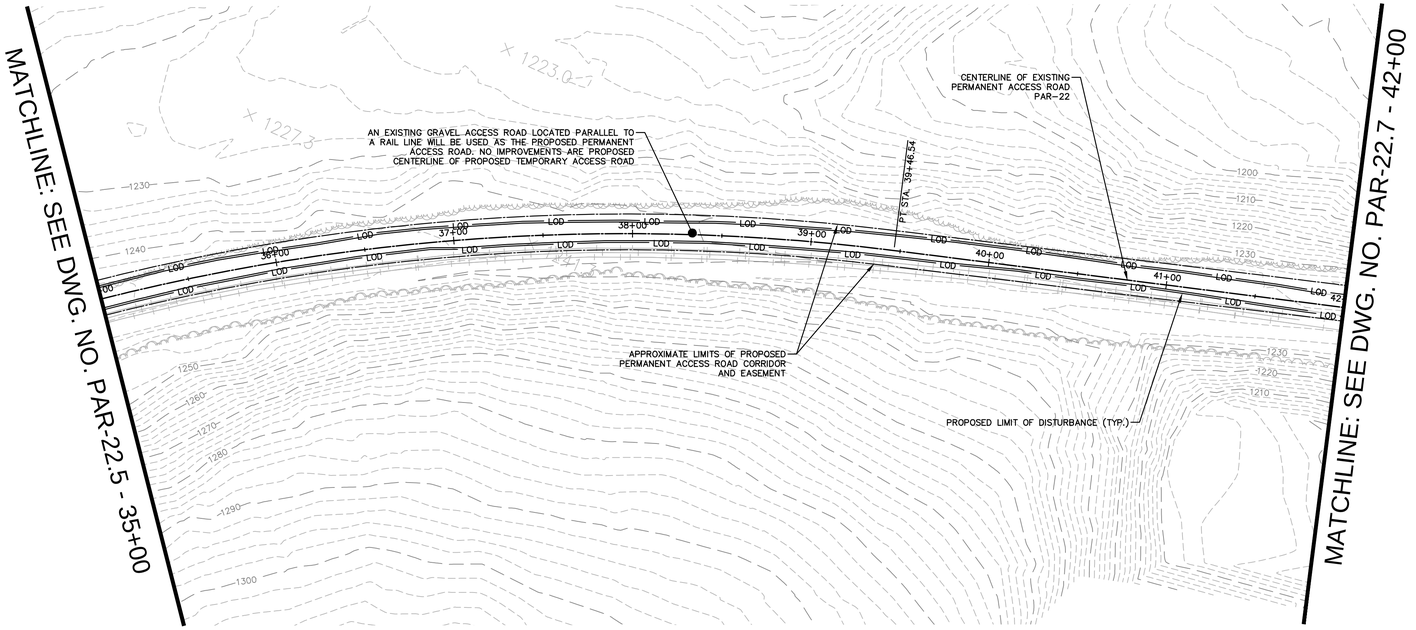
BL Companies

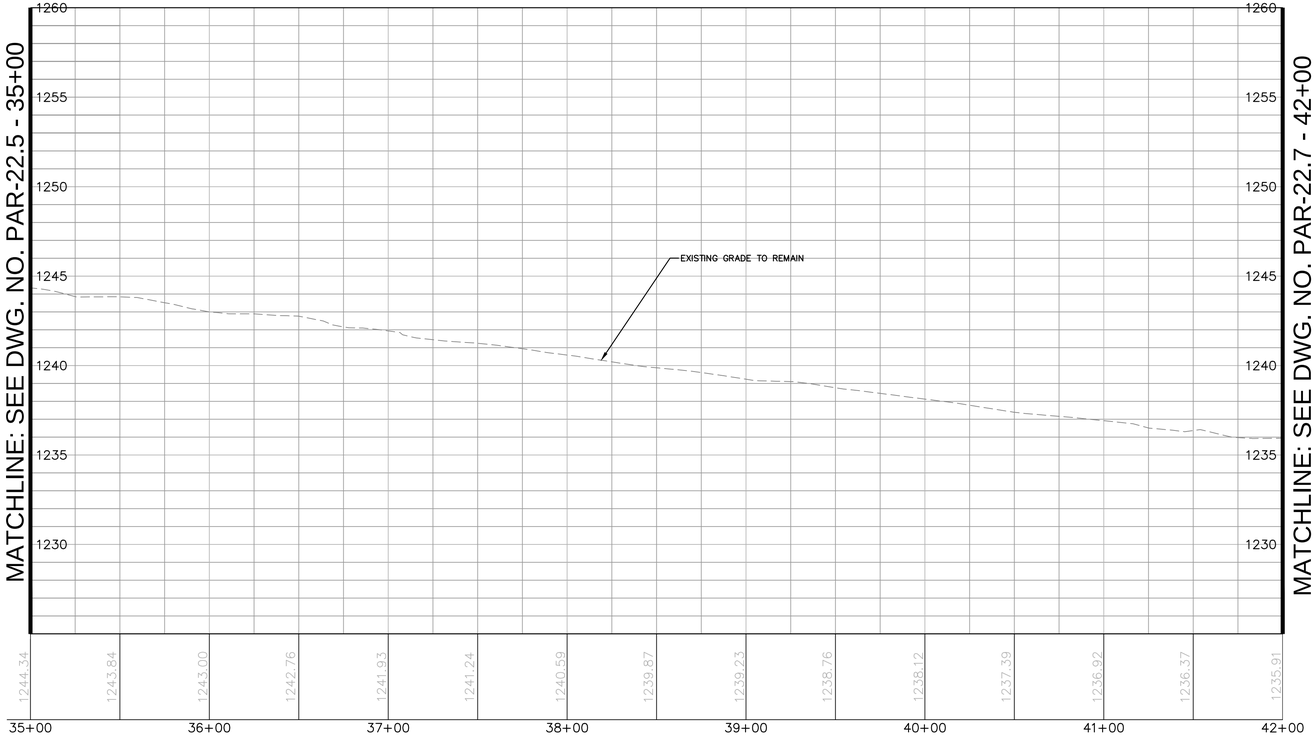
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR–22 @ M.P. 28.52
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/PAR–22.5	SHEET 15 OF 102
WO:			





HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-22 @ M.P. 28.52
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

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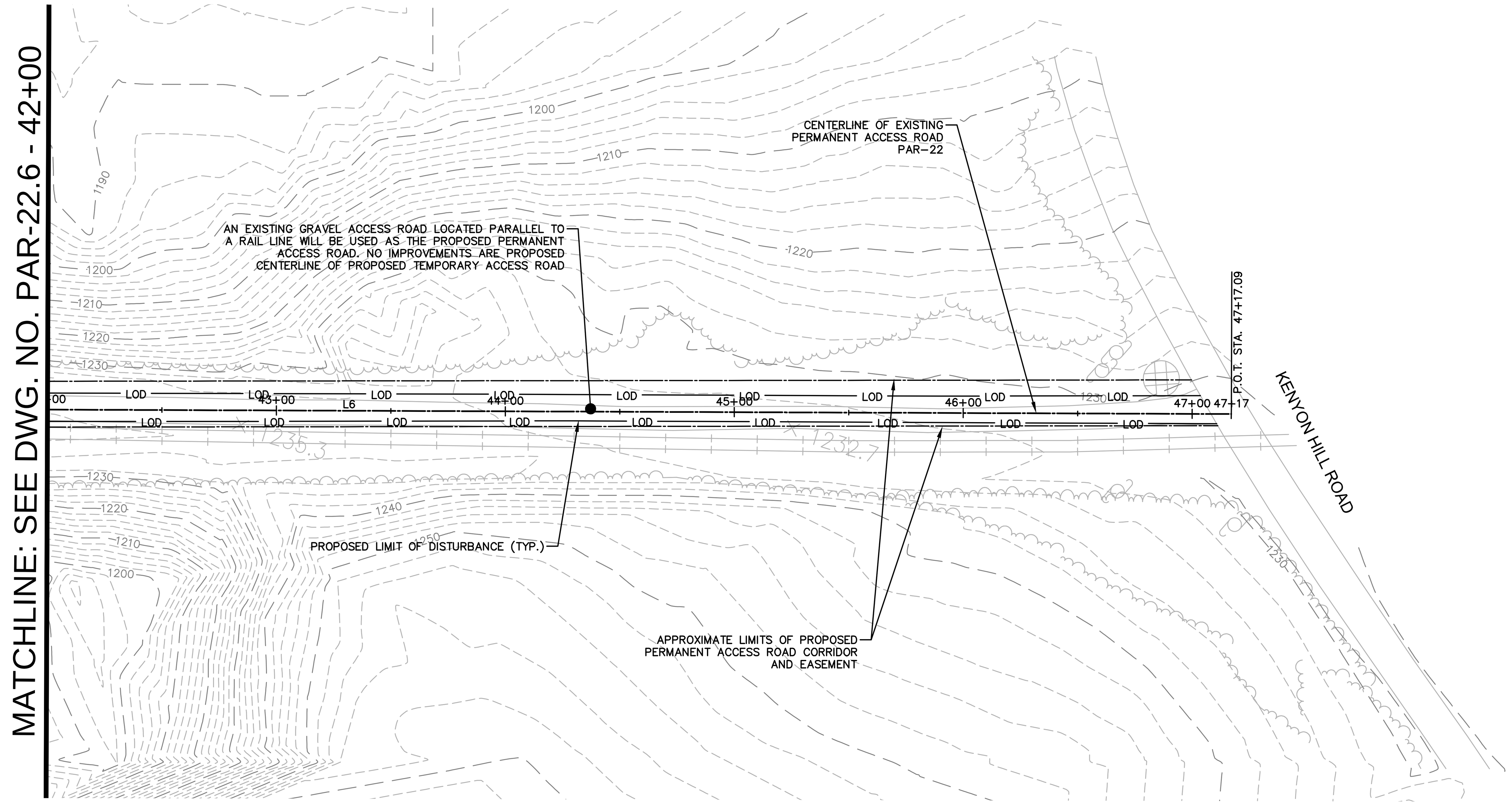
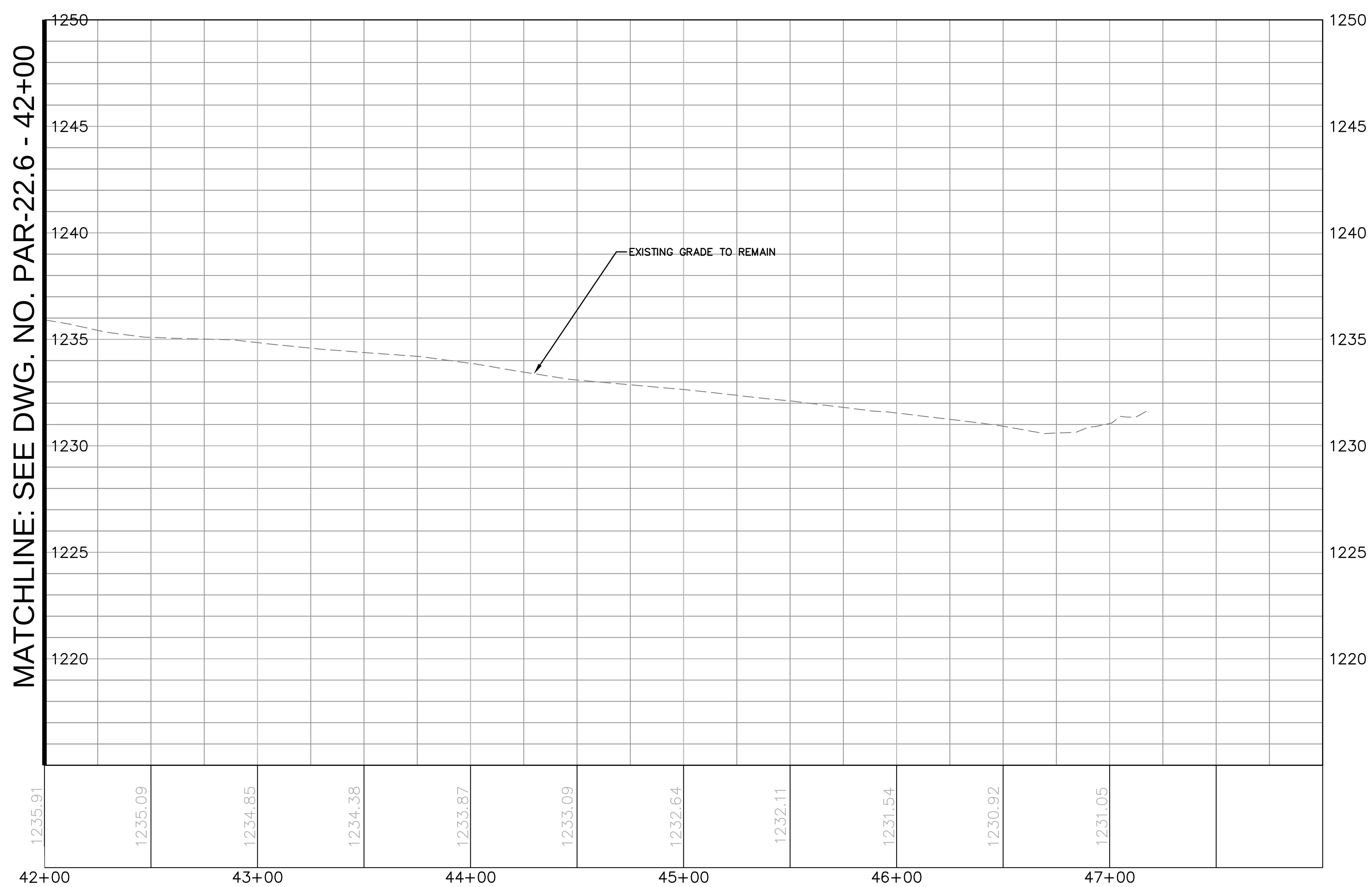
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-22.6	SHEET 16 OF 102
W.O.:			





HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
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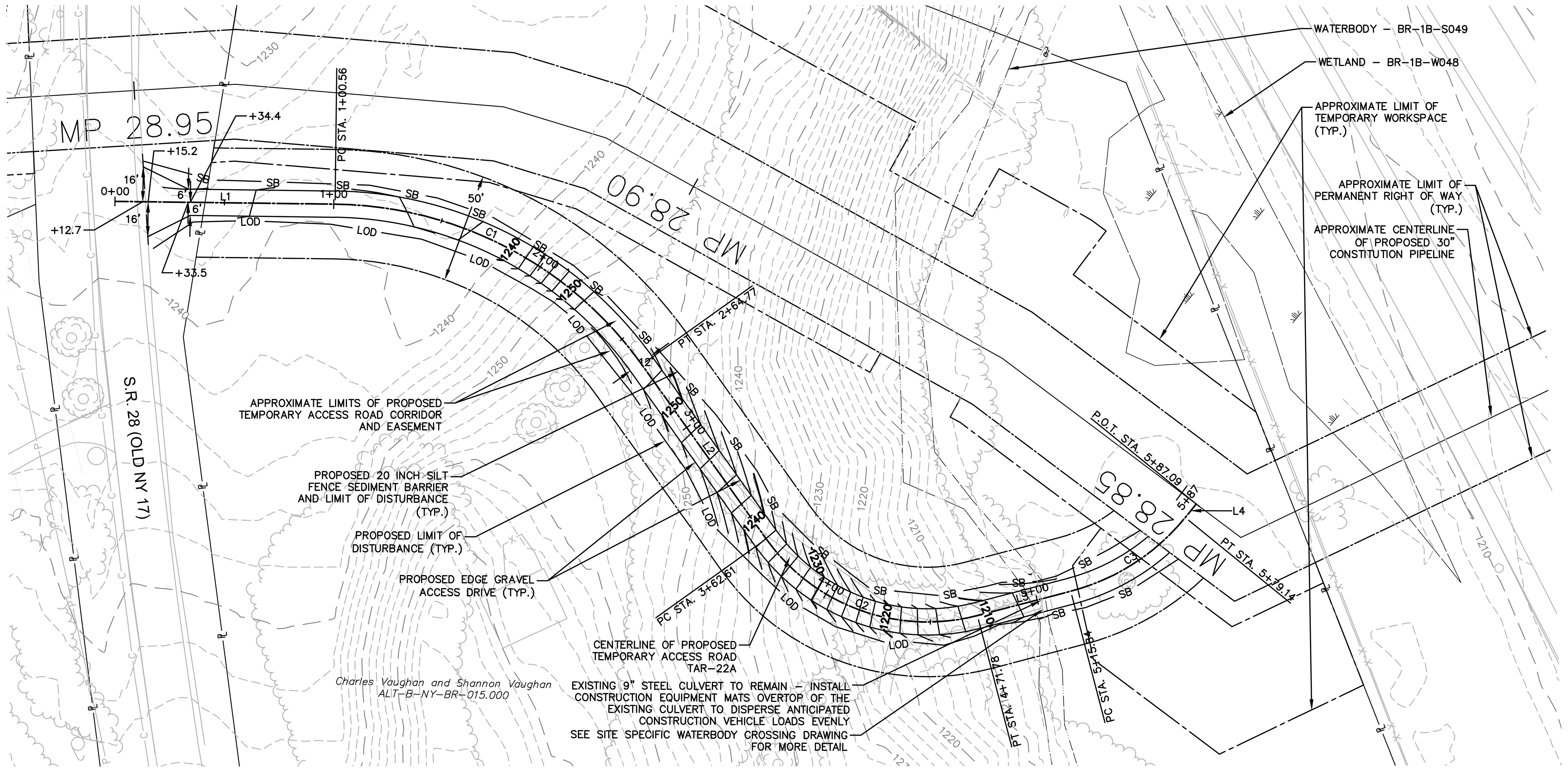
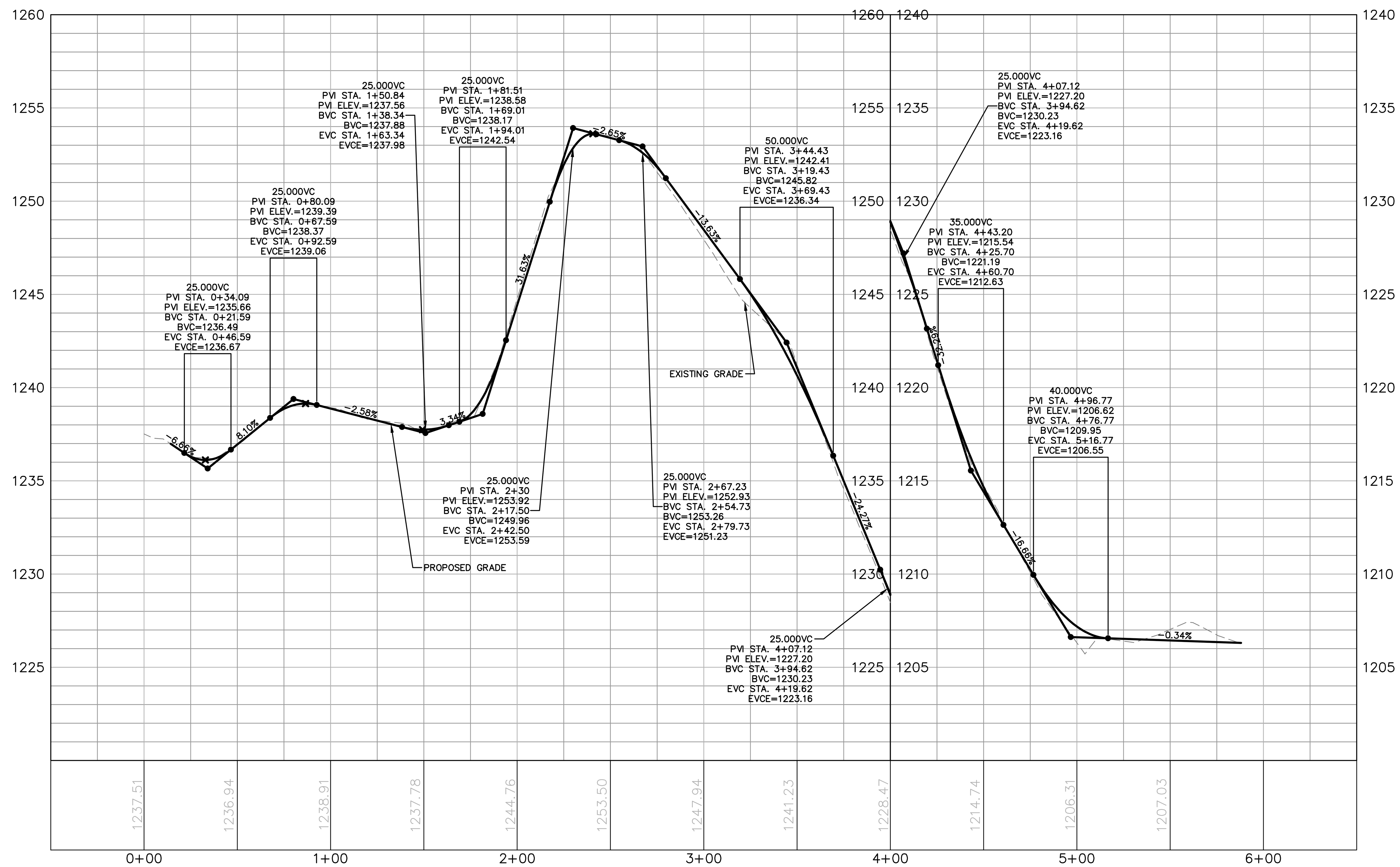
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR–22 @ M.P. 28.52
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-22.7	SHEET 17 OF 102
W.O.:			



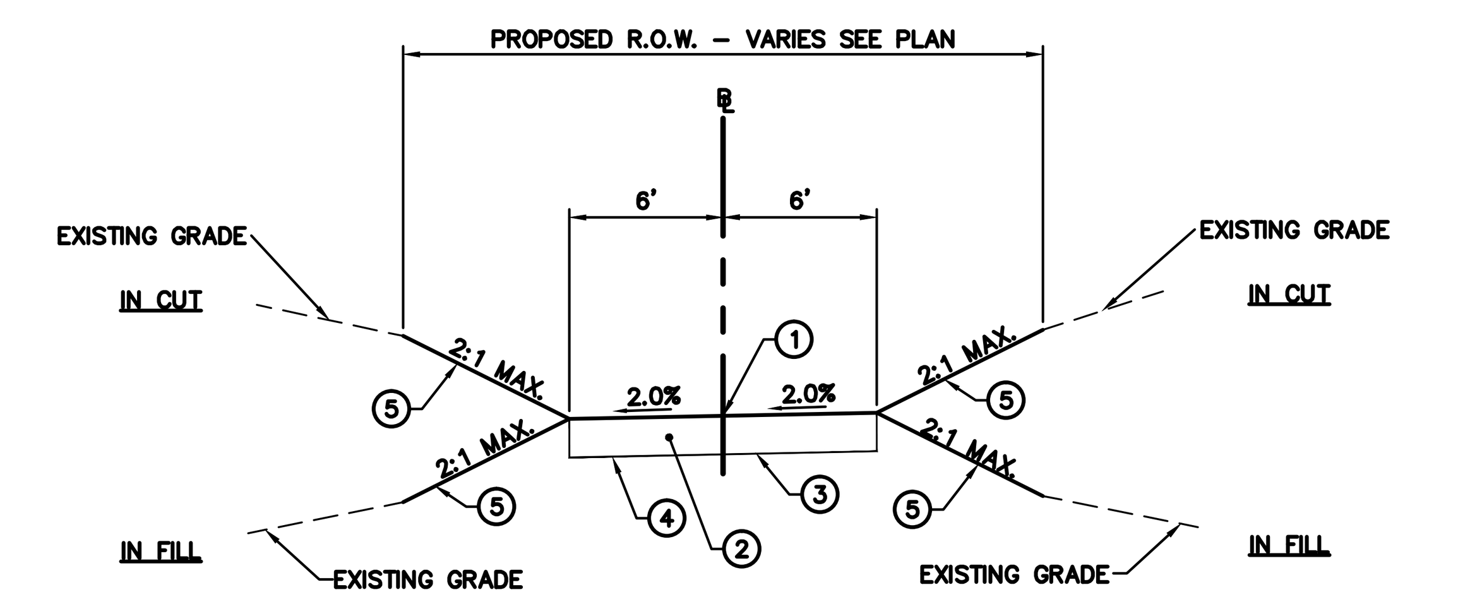


GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
3. PROPOSED TRUCK PULL OFF ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION. THE PULL OFF AREA SHALL BE REGRADED TO MATCH PRE CONSTRUCTION CONTOURS WHERE PRACTICAL. ALL PROPOSED PERMANENT SWALES AND ASSOCIATED CHECK DAMS SHALL BE REMOVED AND REINSTALLED ALONG THE PROPOSED EDGE OF ROAD.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

TAR-22a

No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L1	B 15269818.21 E 15269740.37	B 1499671.48 E 1499735.15	S39°16'39.40"E		100.56'		
C1	PC 15269740.37 PI 15269671.70 PT 15269585.81	PC 1499735.15 PI 1499791.30 PT 1499769.12		53°45'41"	164.20'	88.71'	175.0'
L2	B 15269585.81 E 15269491.08	B 1499769.12 E 1499744.65	S14°29'01.72"W		97.84'		
C2	PC 15269491.08 PI 15269430.73 PT 15269394.64	PC 1499744.65 PI 1499729.06 PT 1499779.89		69°06'38"	109.18'	62.34'	90.5'
L3	B 15269394.64 E 15269369.14	B 1499779.89 E 1499815.81	S54°37'35.86"E		44.05'		
C3	PC 15269369.14 PI 15269350.18 PT 15269350.69	PC 1499815.81 PI 1499842.51 PT 1499875.27		36°16'19"	63.31'	32.75'	100.0'
L4	B 15269350.69 E 15269350.82	B 1499875.27 E 1499883.21	N89°06'04.76"E		7.94'		



TYPICAL SECTION STA. 0+15 TO 5+87.09

TYPICAL SECTION LEGEND

(1) CENTERLINE OF ACCESS ROAD
(2) 12" LAYER CRUSHER RUN GRAVEL
(3) FILTER FABRIC
(4) UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
(5) EROSION CONTROL BLANKET, TOPSOIL AND SEED

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

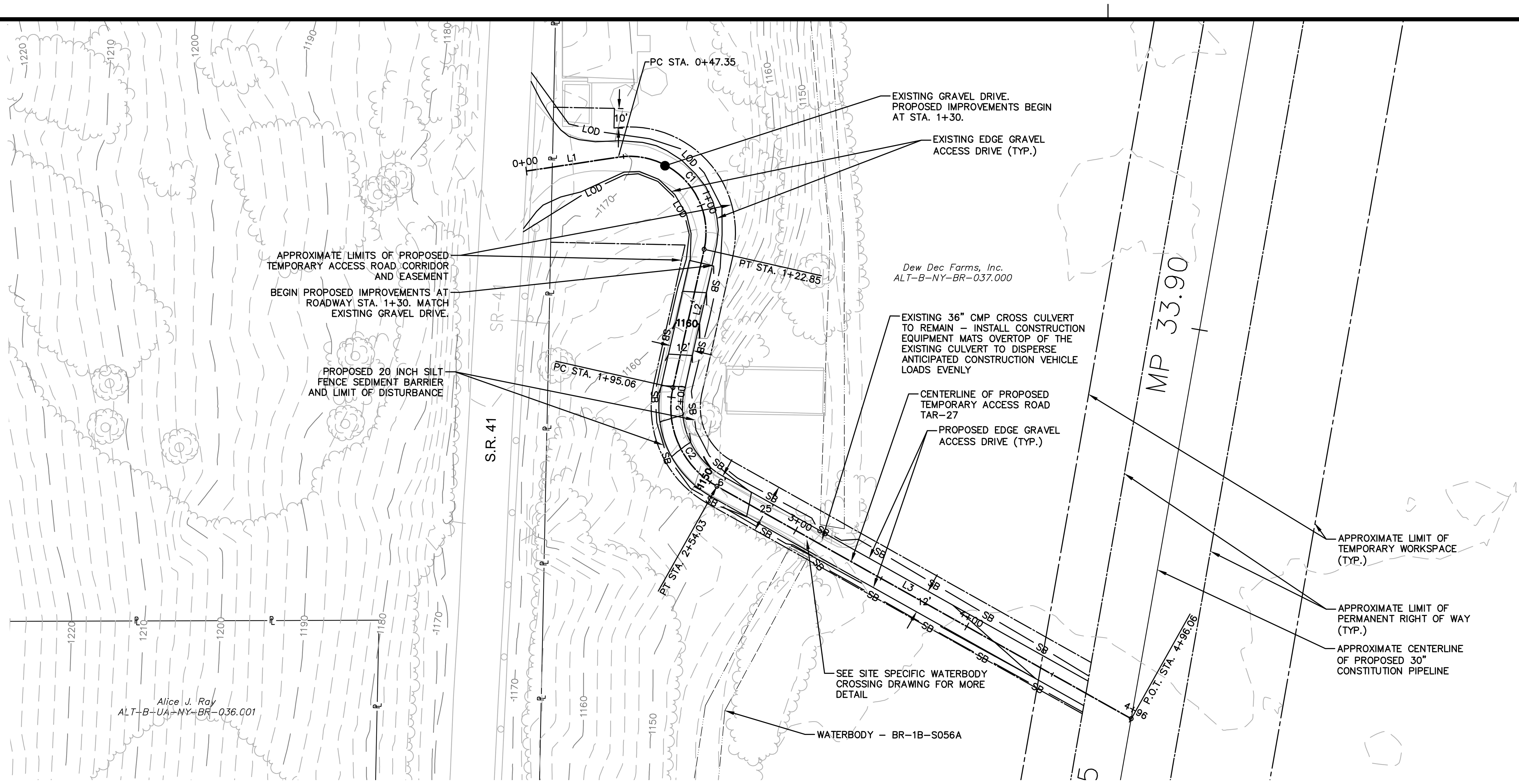
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

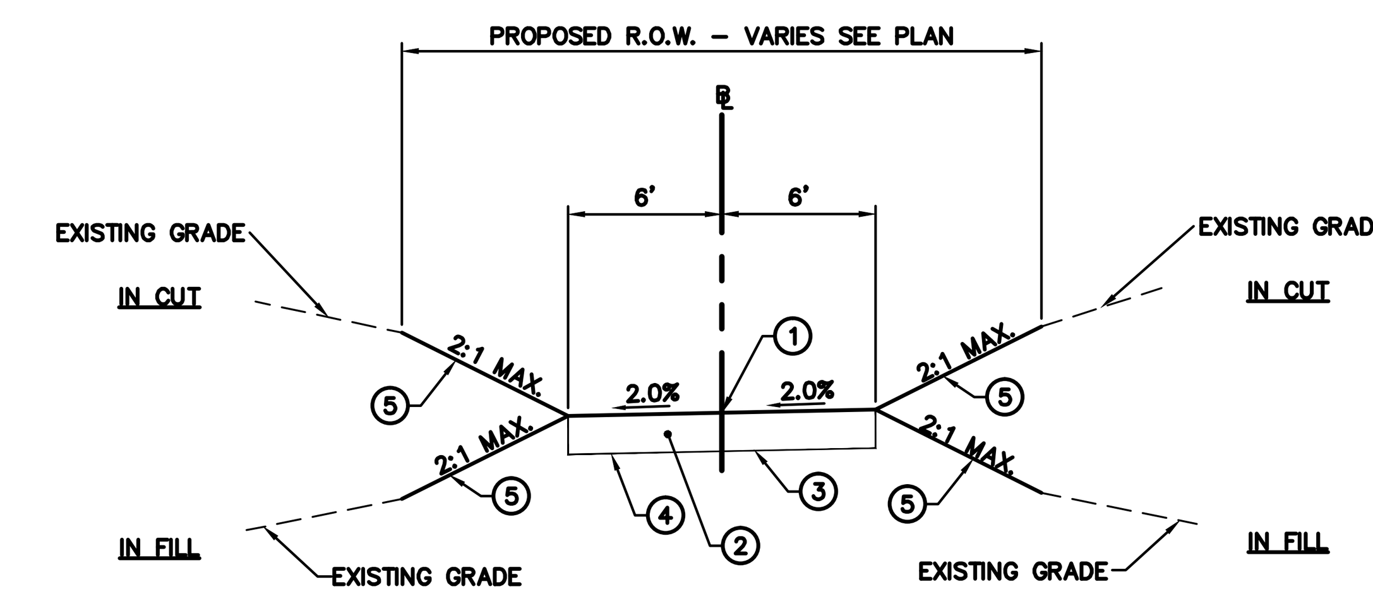
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-22A @ M.P. 28.85
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

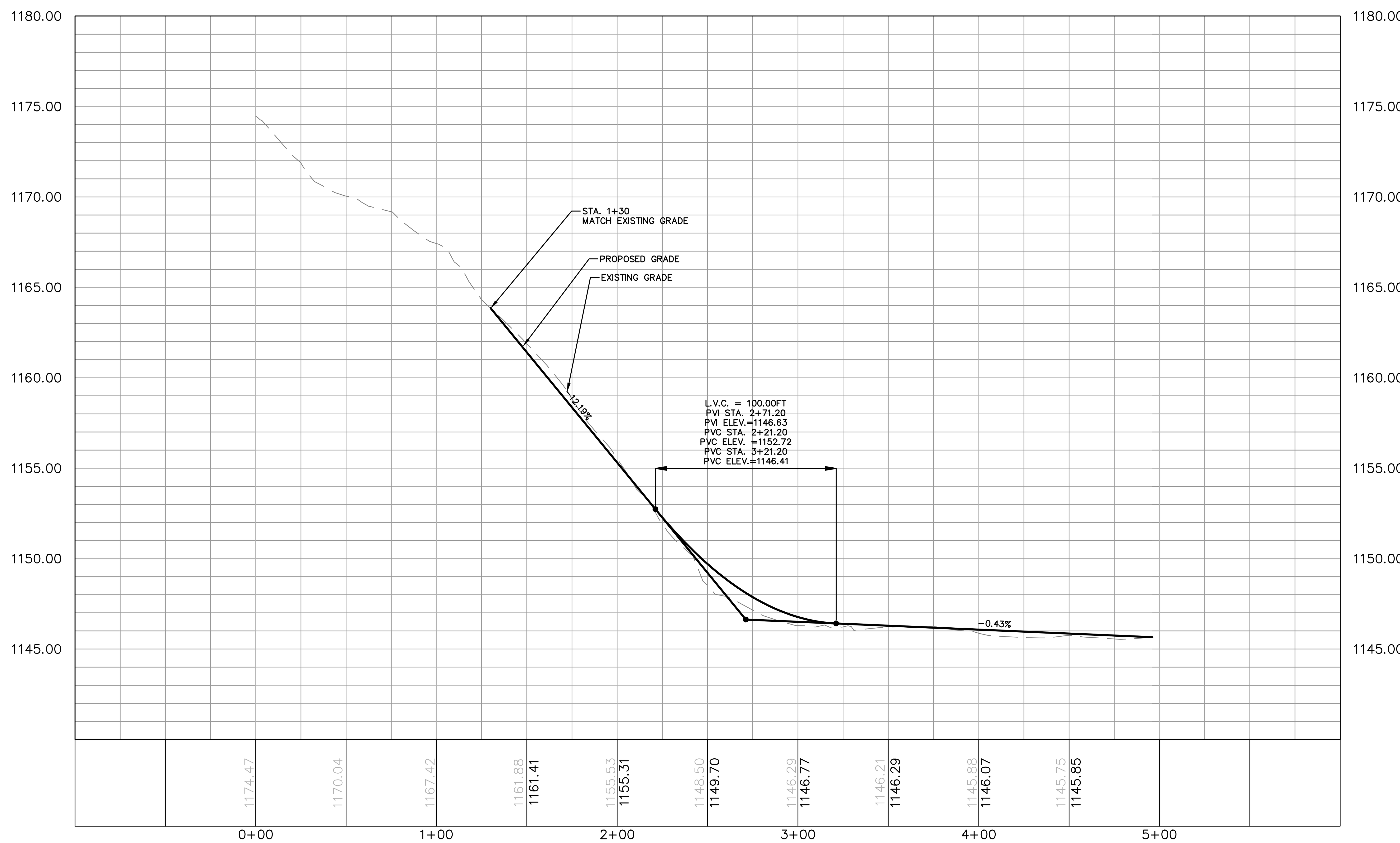
DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/TAR-22A	SHEET 18 OF 102
W.O:			



PAR-27							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L1	B 15290456.79 E 15290463.87	B 1509680.16 E 1509726.98	N81°24'05.40"E		47.35'		
C1	PC 15290463.87 PI 15290472.37 PT 15290416.90	PC 1509726.98 PI 1509783.20 PT 1509770.70		111°17'42"	75.50'	56.86'	38.9'
L2	B 15290416.90 E 15290346.45	B 1509770.70 E 1509754.83	S12°41'47.48"W		72.21'		
C2	PC 15290346.45 PI 15290312.98 PT 15290296.19	PC 1509754.83 PI 1509747.29 PT 1509777.22		73°24'20"	58.97'	34.31'	46.0'
L3	B 15290296.19 E 15290177.78	B 1509777.22 E 1509988.30	S60°42'32.53"E		242.03'		



TYPICAL SECTION STA. 0+00 TO 4+43



TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED

GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
3. PROPOSED TRUCK PULL OFF ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION. THE PULL OFF AREA SHALL BE REGRADED TO MATCH PRE CONSTRUCTION CONTOURS WHERE PRACTICAL. ALL PROPOSED PERMANENT SWALES AND ASSOCIATED CHECK DAMS SHALL BE REMOVED AND REINSTALLED ALONG THE PROPOSED EDGE OF ROAD.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-27 @ M.P. 33.84
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

ARCHITECTURE ENGINEERING ENVIRONMENTAL LAND SURVEYING — BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY: | DATE: 10/29/2013 | ISSUED FOR BID: | SCALE: AS NOTED
CHECKED BY: | DATE: | ISSUED FOR CONSTRUCTION:
APPROVED BY: | DATE: | DRAWING NUMBER: 26-26-85/TAR-27 | SHEET 19 OF 102
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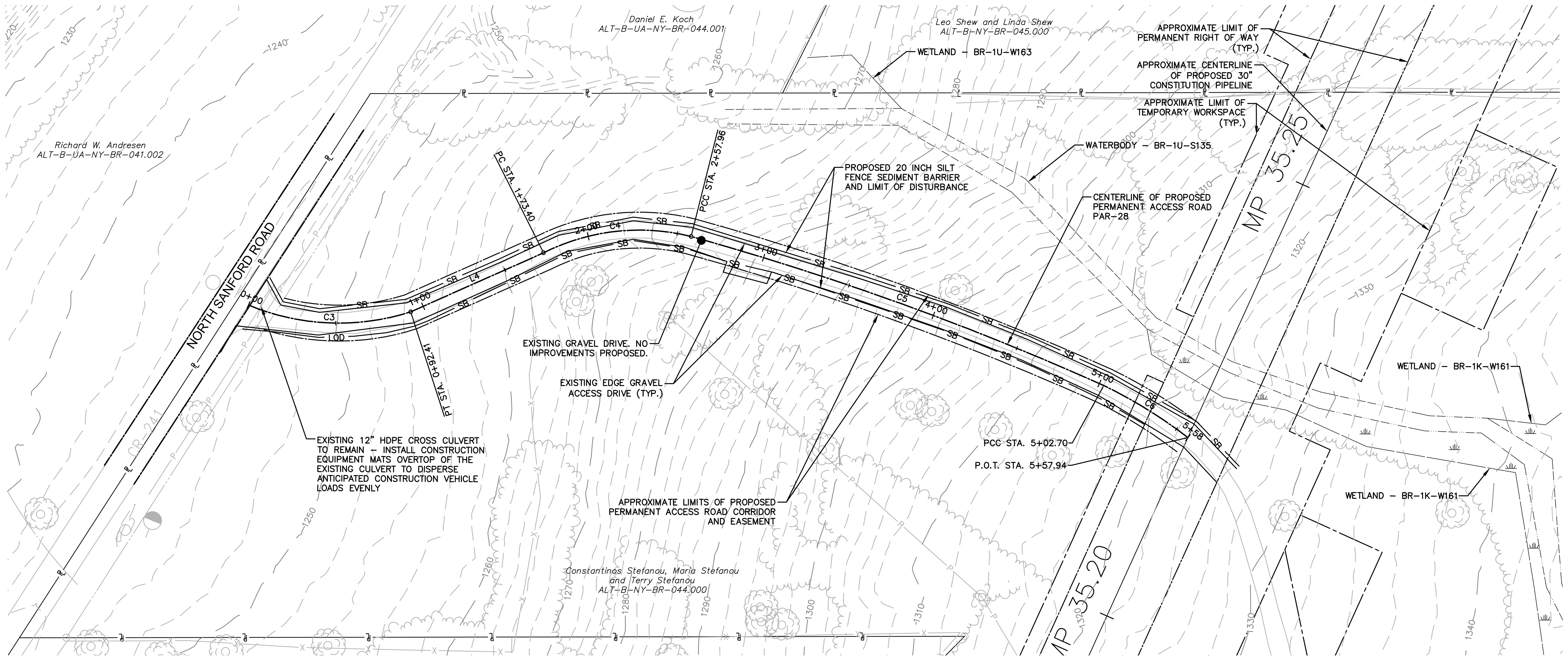
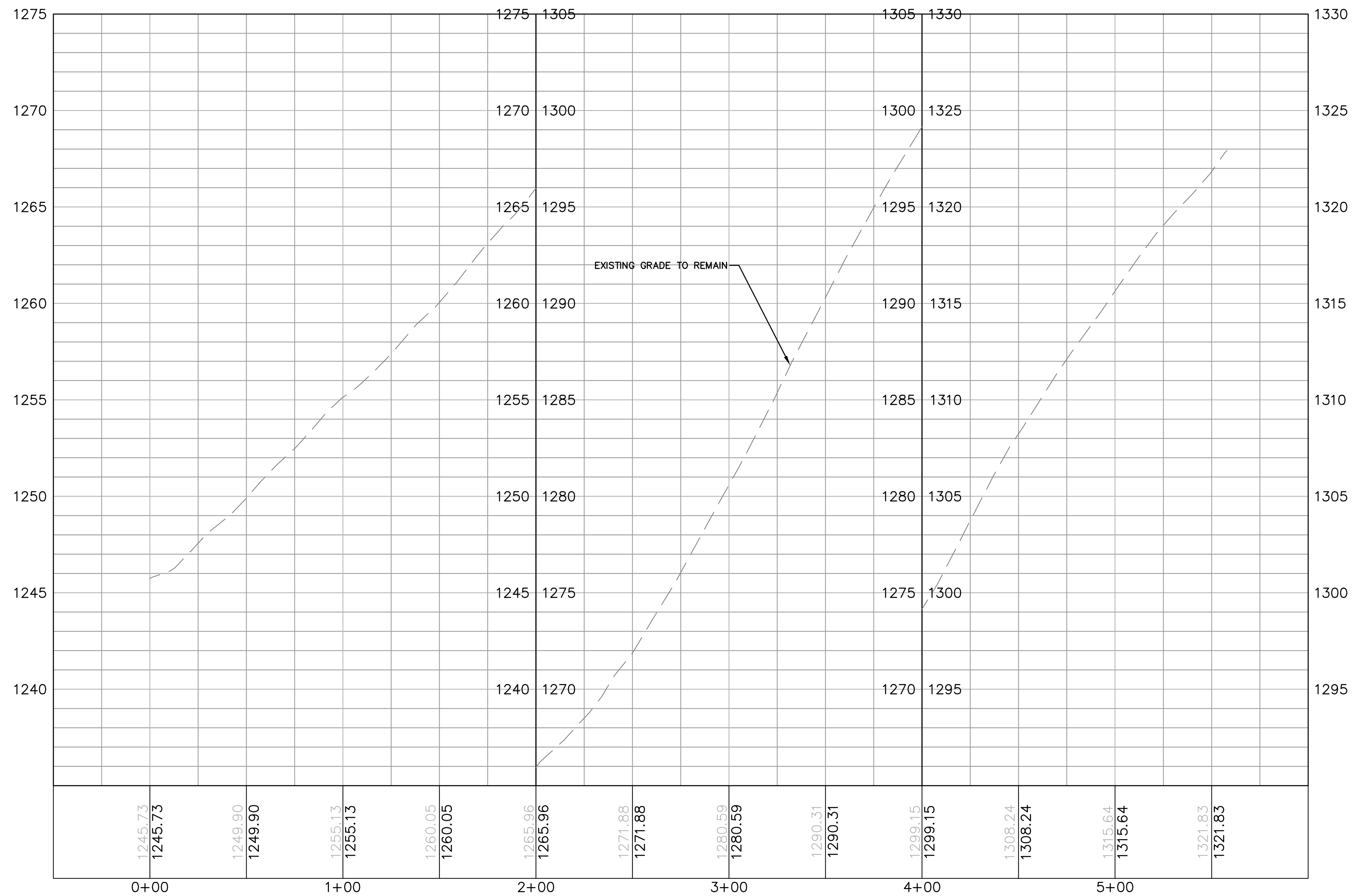


PAR-28							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
C3	PC 15296529.26 PI 15296510.70 PT 15296525.46	PC 1512013.19 PI 1512057.70 PT 1512103.61		40°27'51"	92.41'	48.23'	130.8'
L4	B 15296525.46 E 15296558.36	B 1512103.61 E 1512177.62	N66°01'53.33"E		80.99'		
C4	PC 15296558.36 PI 15296578.21 PT 15296567.48	PC 1512177.62 PI 1512217.06 PT 1512259.90		40°47'04"	84.56'	44.16'	118.8'
C5	PC 15296567.48 PI 15296534.52 PT 15296484.41	PC 1512259.90 PI 1512377.98 PT 1512489.87		8°31'56"	244.74'	122.60'	1643.5'
C6	PC 15296484.41 PI 15296472.33 PT 15296455.38	PC 1512489.87 PI 1512514.82 PT 1512536.74		11°52'22"	55.23'	27.72'	266.5'



GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
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4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-28 @ M.P. 35.20
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-28	SHEET 20 OF 102
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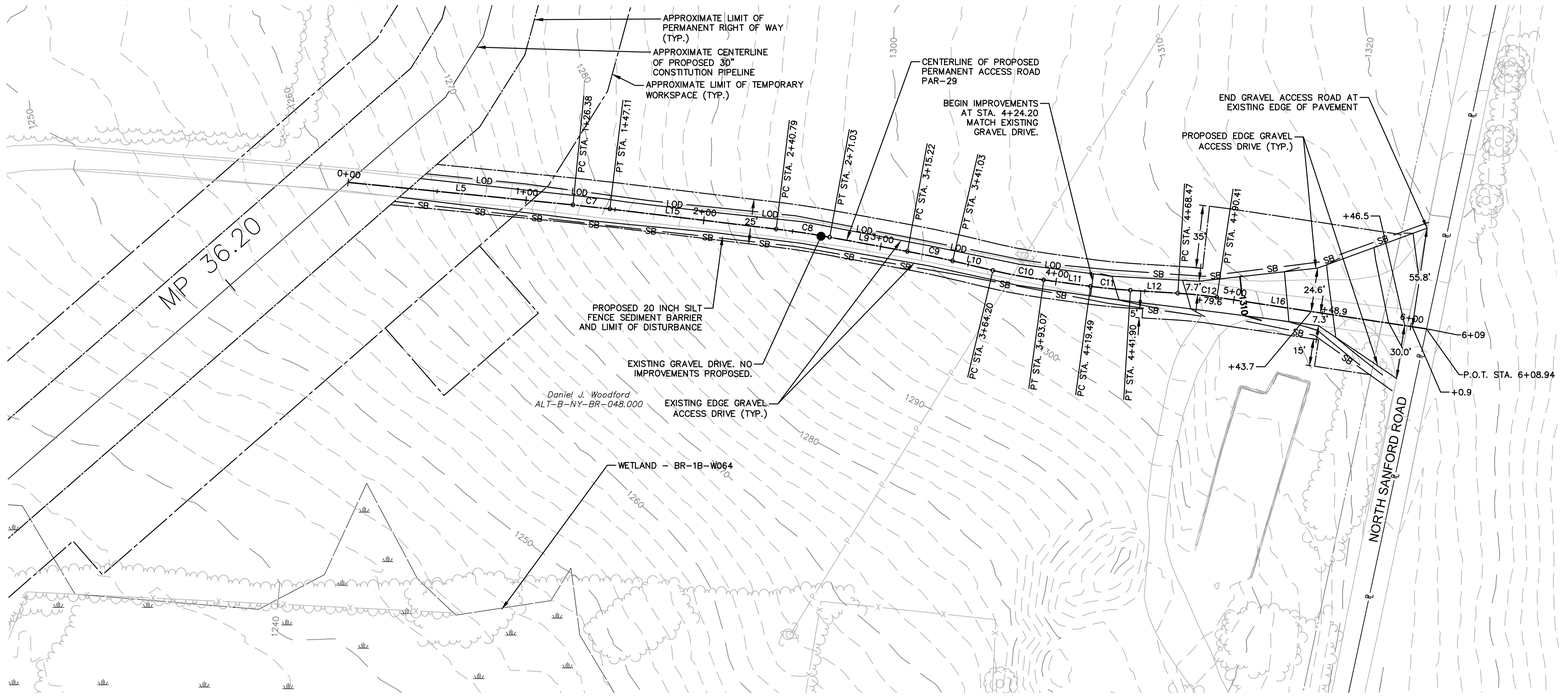
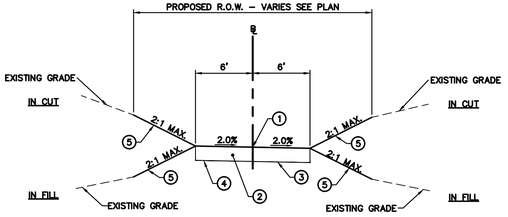
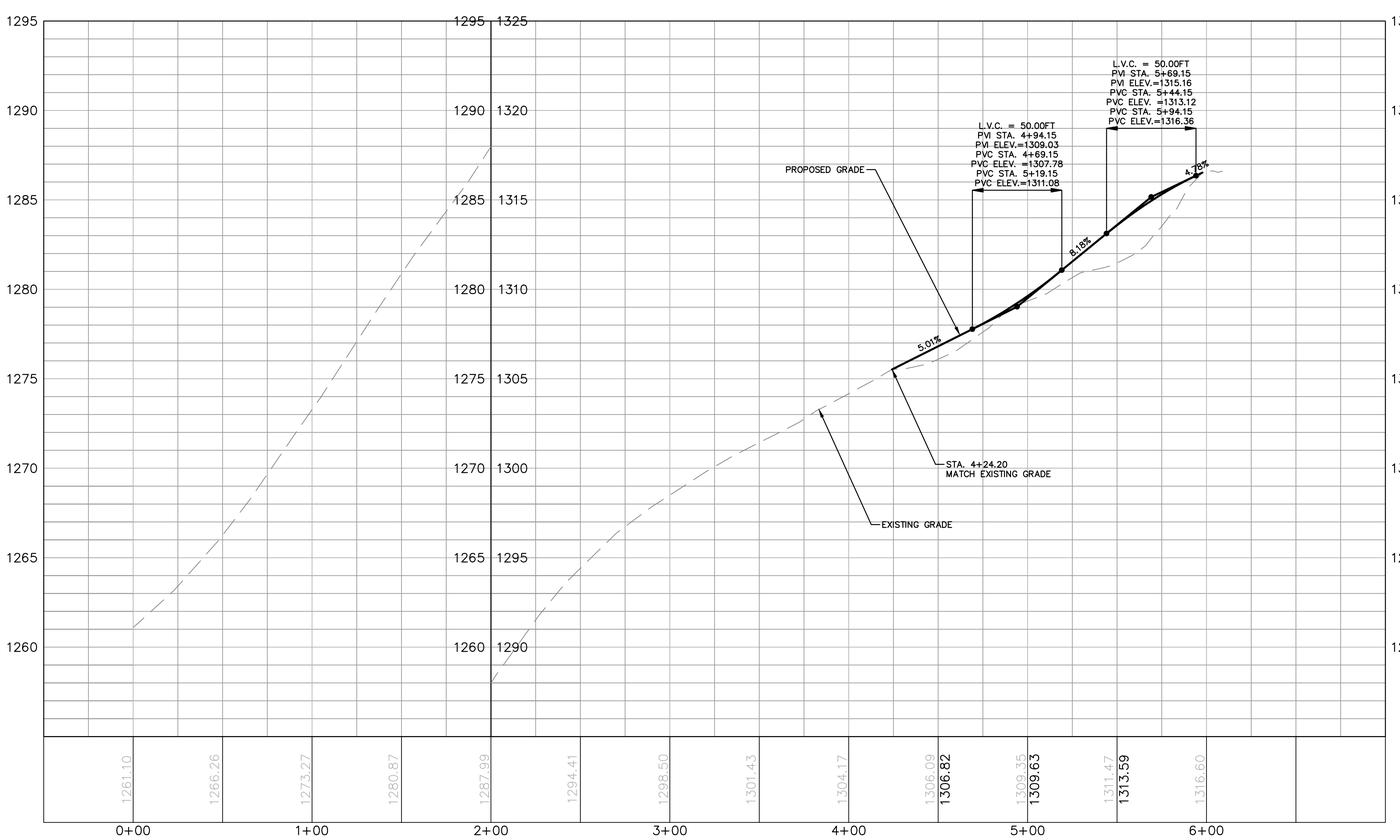


PAR-29							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L5	B 15301044.50 E 15301031.93	B 1514440.09 E 1514565.85	S84°17'25.76"E		126.38'		
C7	PC 15301031.93 PI 15301030.90 PT 15301029.66	PC 1514565.85 PI 1514576.16 PT 1514586.45		1°11'15"	20.73'	10.36'	1000.0'
L15	B 15301029.66 E 15301018.41	B 1514586.45 E 1514679.45	S83°06'10.70"E		93.68'		
C8	PC 15301018.41 PI 15301016.59 PT 15301013.87	PC 1514679.45 PI 1514694.46 PT 1514709.34		3°27'53"	30.24'	15.12'	500.0'
L9	B 15301013.87 E 15301005.92	B 1514709.34 E 1514752.81	S79°38'17.85"E		44.19'		
C9	PC 15301005.92 PI 15301003.60 PT 15301000.63	PC 1514752.81 PI 1514765.51 PT 1514778.07		2°57'27"	25.81'	12.91'	500.0'
L10	B 15301000.63 E 15300995.29	B 1514778.07 E 1514800.62	S76°40'51.13"E		23.17'		
C10	PC 15300995.29 PI 15300991.96 PT 15300990.00	PC 1514800.62 PI 1514814.68 PT 1514828.99		5°30'53"	28.87'	14.45'	300.0'
L11	B 15300990.00 E 15300986.41	B 1514828.99 E 1514855.17	S82°11'43.74"E		26.42'		
C11	PC 15300986.41 PI 15300984.89 PT 15300984.20	PC 1514855.17 PI 1514866.27 PT 1514877.46		4°16'46"	22.41'	11.21'	300.0'
L12	B 15300984.20 E 15300982.56	B 1514877.46 E 1514903.98	S86°28'29.35"E		26.57'		
C12	PC 15300982.56 PI 15300981.89 PT 15300980.26	PC 1514903.98 PI 1514914.94 PT 1514925.79		5°01'40"	21.94'	10.98'	250.0'
L16	B 15300980.26 E 15300962.63	B 1514925.79 E 1515043.00	S81°26'49.73"E		118.53'		



TYPICAL SECTION STA. 4+24 TO 5+96



TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED

GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
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HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS - ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-29 @ M.P. 36.16
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY: DATE: 10/29/2013 ISSUED FOR BID: SCALE: AS NOTED
CHECKED BY: DATE: ISSUED FOR CONSTRUCTION:
APPROVED BY: DATE: DRAWING NUMBER: 26-26-85/PAR-29 SHEET 21 OF 102
W.O.:

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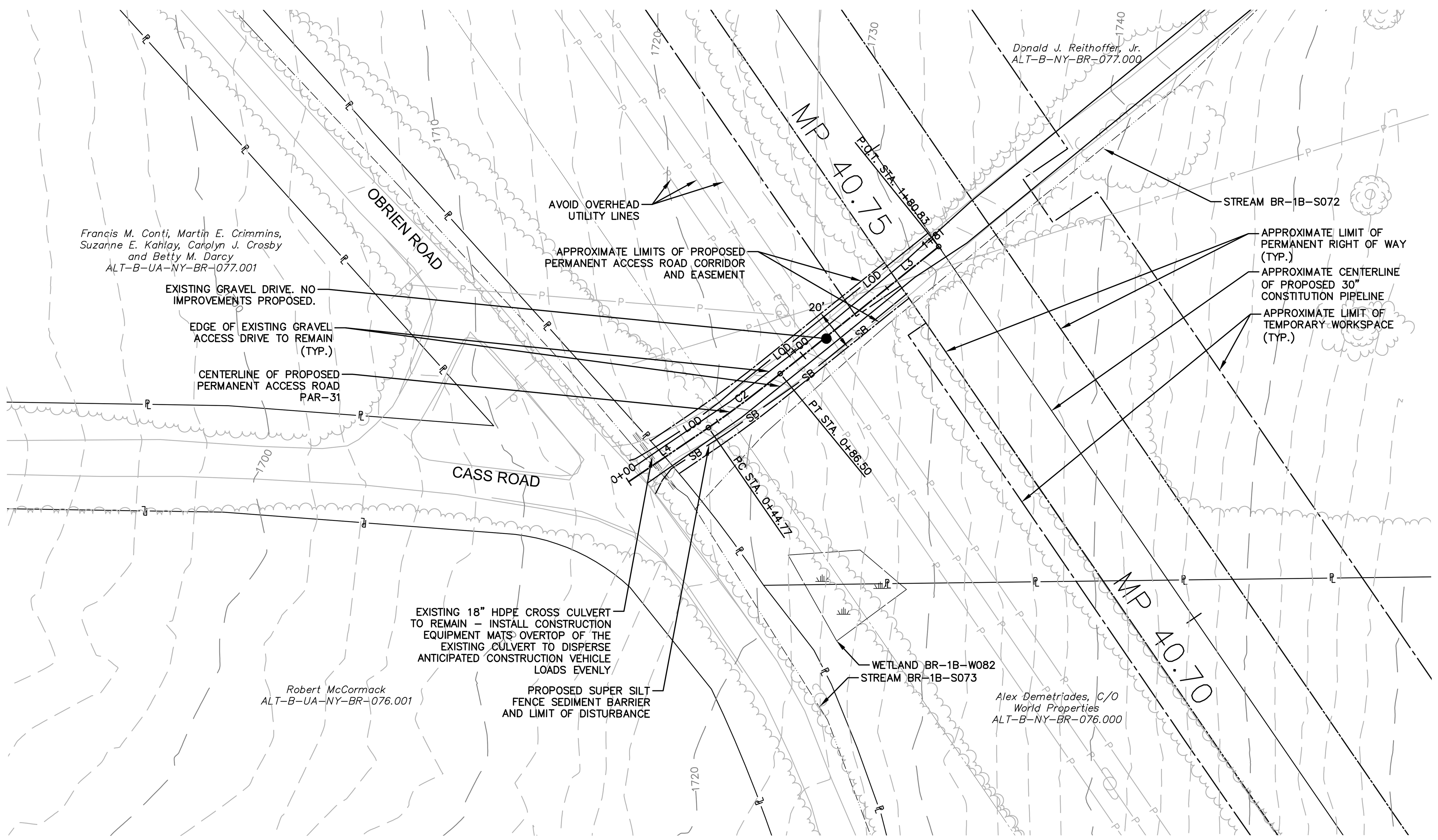
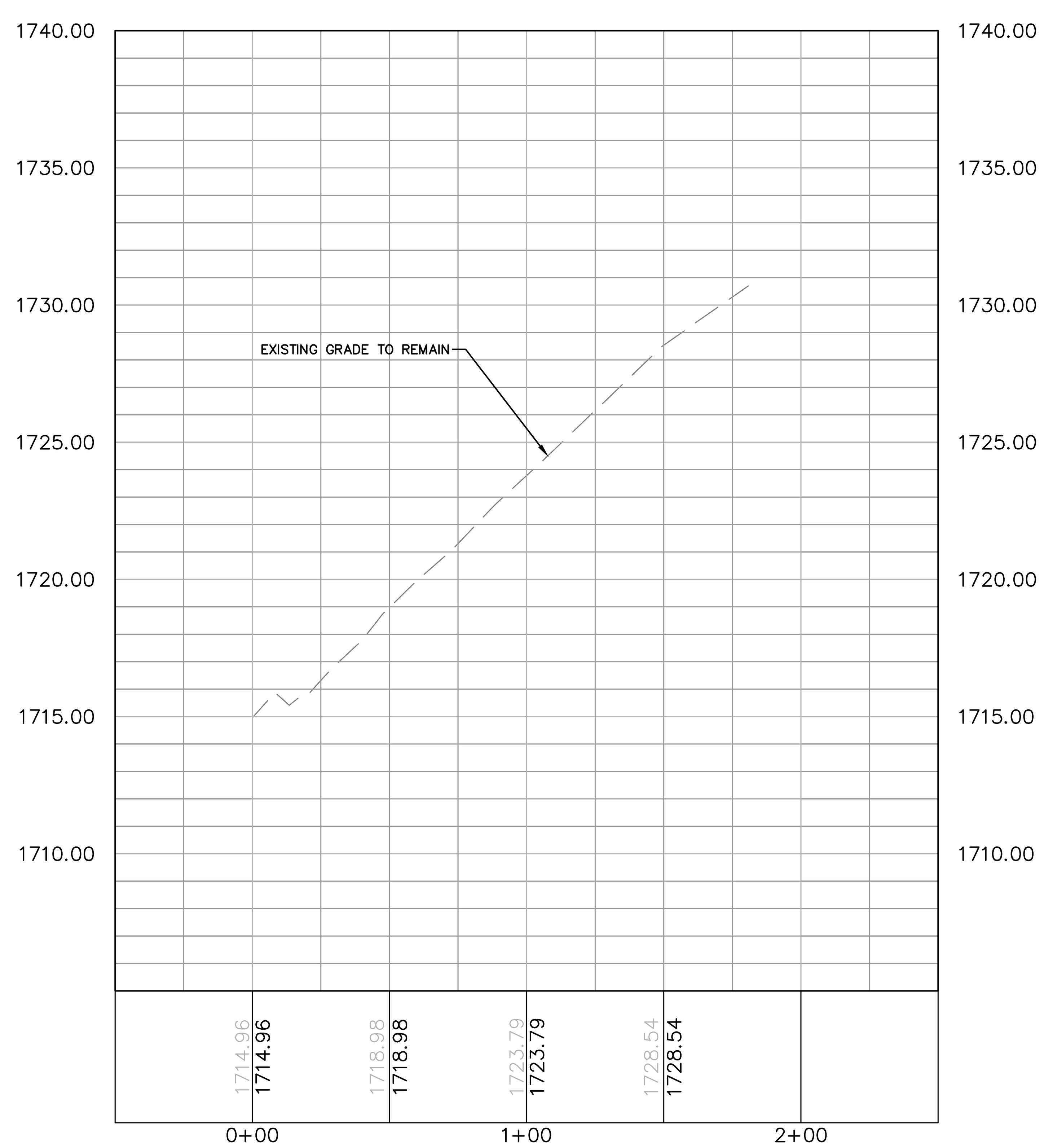


PAR-31							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L4	B 15320337.94 E 15320363.06	B 1503026.14 E 1503063.19	N55°51'23.19"E		44.77'		
C2	PC 15320363.06 PI 15320374.91 PT 15320388.15	PC 1503063.19 PI 1503080.38 PT 1503096.52		4°46'55"	41.73'	20.88'	500.0'
L3	B 15320388.15 E 15320447.16	B 1503096.52 E 1503170.12	N51°16'34.50"E		94.33'		



GENERAL NOTES

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7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

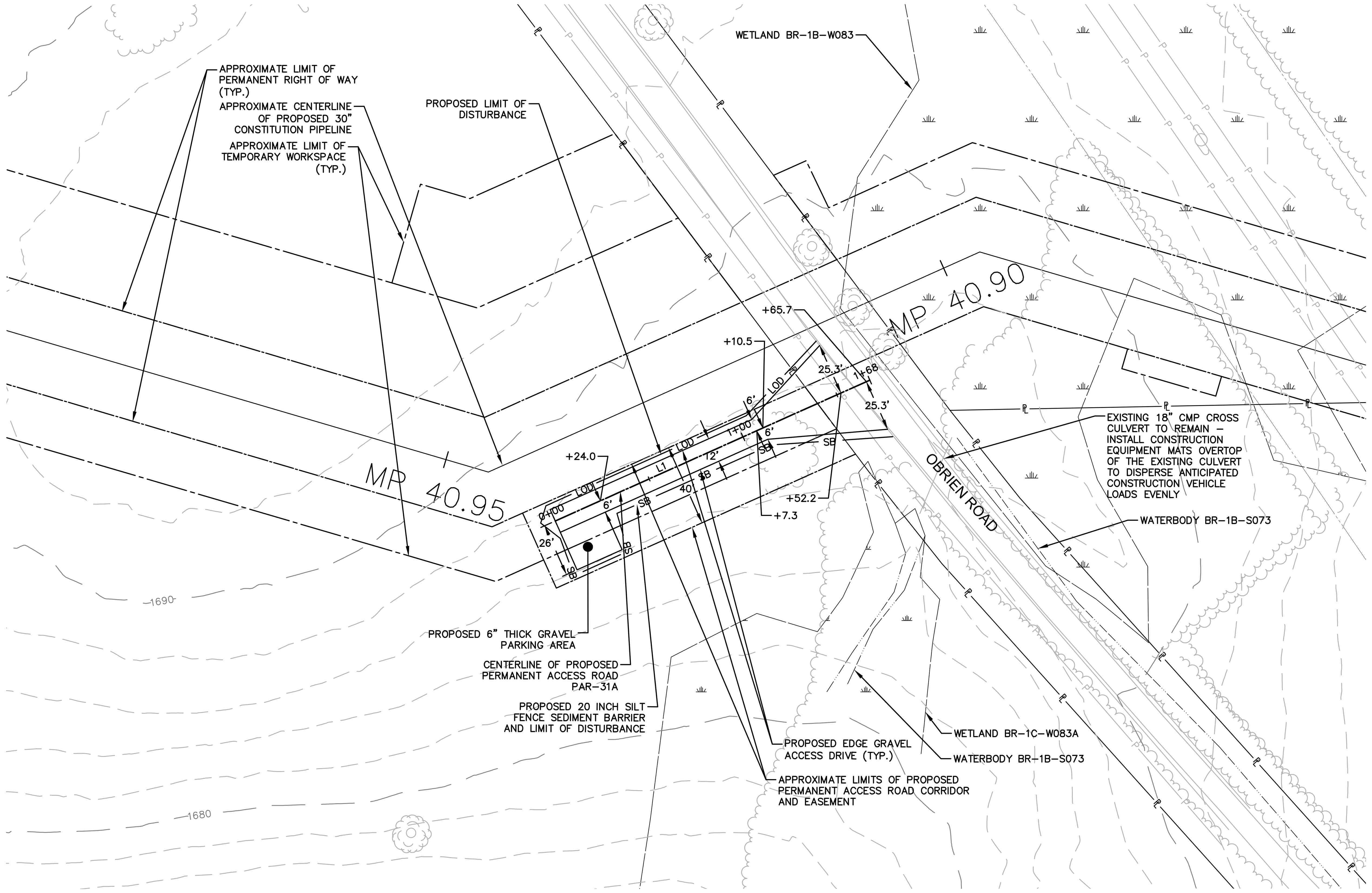
ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-31 @ M.P. 40.69
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

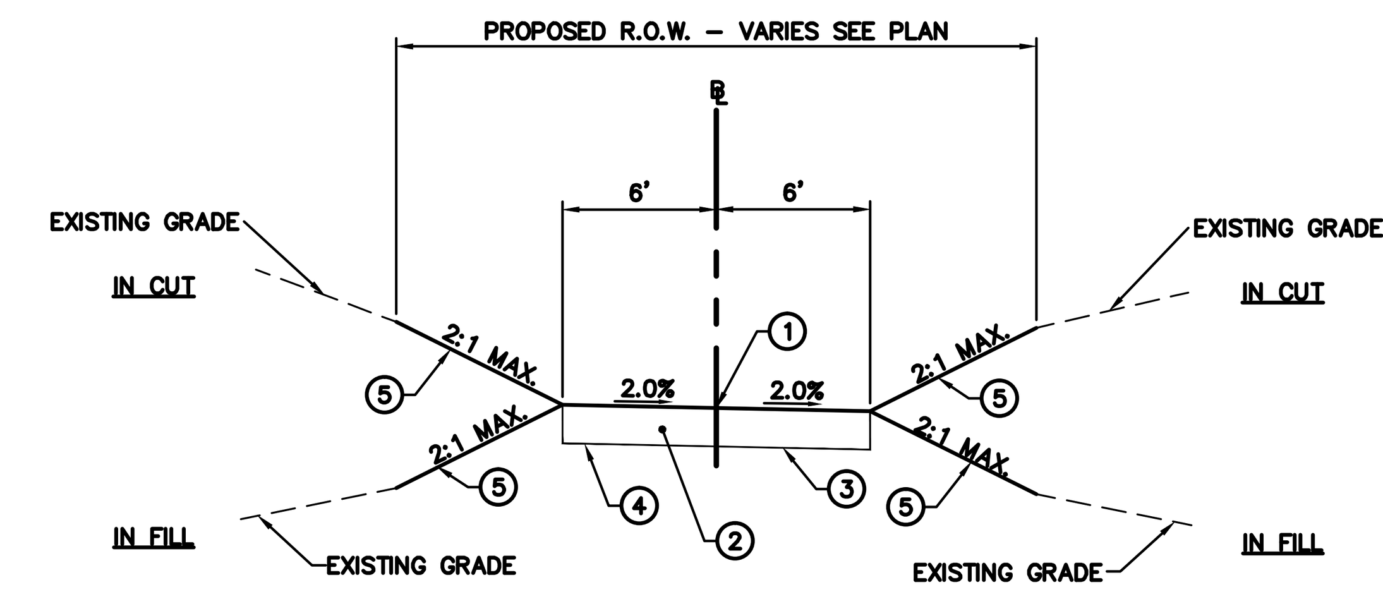
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-31	SHEET 22 OF 102
W.O:			



TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED



TYPICAL SECTION STA. 0+00 TO 1+59

PAR–31A							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L1	B 15320834.55 E 15320903.01	B 1502371.53 E 1502524.44	N65°52'58.71"E		167.52'		

GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
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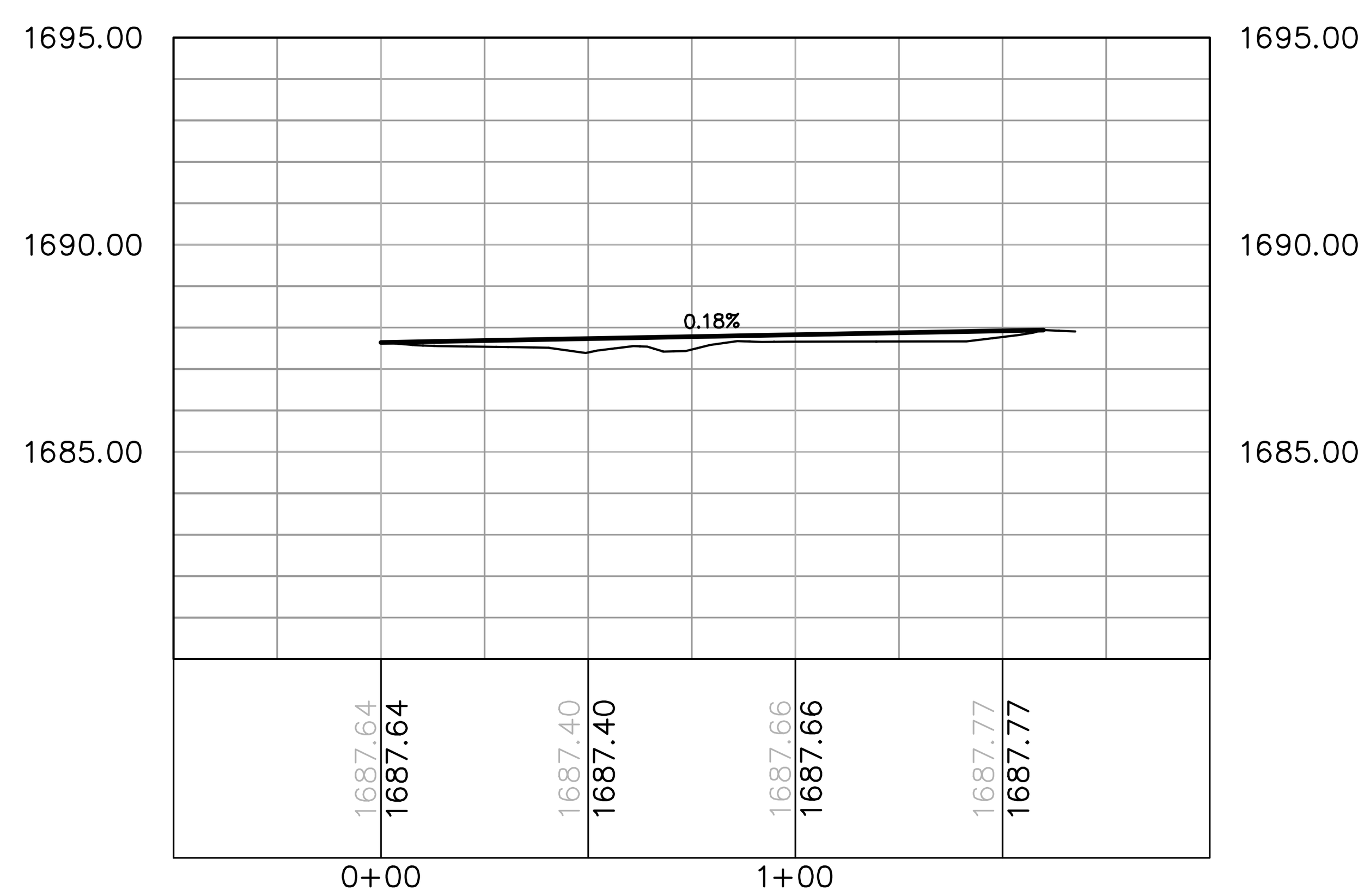


HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

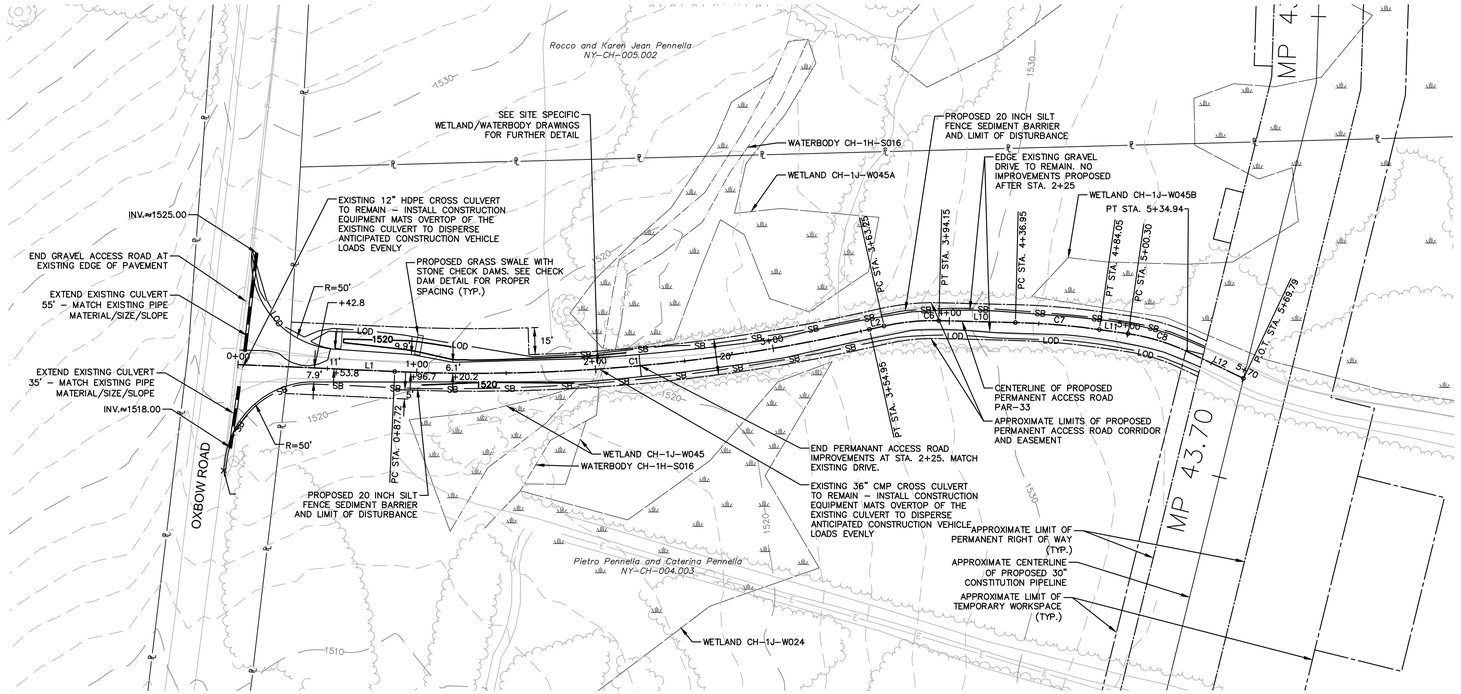
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

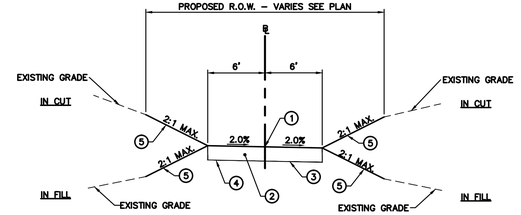
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR–31A @ M.P. 40.87
TOWN OF SANFORD
BROOME COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/PAR–31A	SHEET 23 OF 102
WO:			



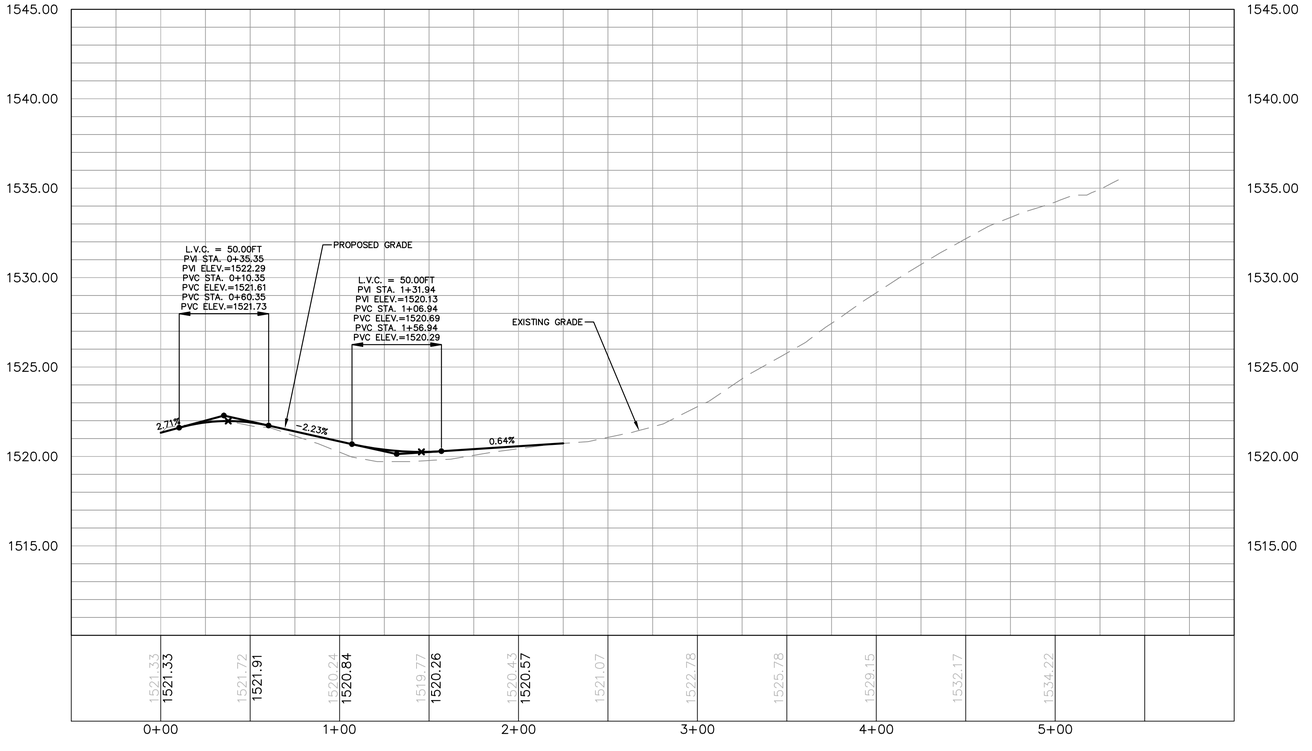
PAR-33							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L1	B 15333301.58 E 15333297.64	B 1504311.44 E 1504399.07	S87°25'30.78"E		87.72'		
C1	PC 15333297.64 PI 15333291.60 PT 15333321.23	PC 1504399.07 PI 1504533.35 PT 1504664.46		15°18'41"	267.23'	134.42'	1000.0'
L2	B 15333321.23 E 15333323.06	B 1504664.46 E 1504672.55	N77°15'48.11"E		8.29'		
C6	PC 15333323.06 PI 15333326.48 PT 15333326.10	PC 1504672.55 PI 1504687.70 PT 1504703.23		14°09'52"	30.90'	15.53'	125.0'
L10	B 15333326.10 E 15333325.03	B 1504703.23 E 1504746.01	S88°34'19.93"E		42.80'		
C7	PC 15333325.03 PI 15333324.44 PT 15333321.09	PC 1504746.01 PI 1504769.58 PT 1504792.92		6°44'46"	47.10'	23.58'	400.0'
L11	B 15333321.09 E 15333318.78	B 1504792.92 E 1504809.01	S81°49'33.66"E		16.25'		
C8	PC 15333318.78 PI 15333316.30 PT 15333308.80	PC 1504809.01 PI 1504826.28 PT 1504842.04		17°15'31"	34.64'	17.45'	115.0'
L12	B 15333308.80 E 15333293.84	B 1504842.04 E 1504873.51	S64°34'02.20"E		34.85'		

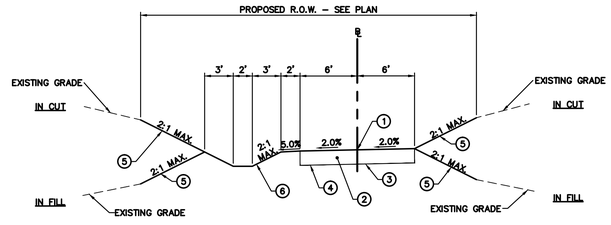


TYPICAL SECTION STA. 0+00 TO 0+50 AND 1+25 TO 2+25

TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED
6. GRASS LINED SWALE (SEE ACCESS ROAD CALCULATIONS FOR EROSION CONTROL MATTING TYPE)





TYPICAL SECTION STA. 0+50 TO 1+25

GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
3. PROPOSED TRUCK PULL OFF ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION. THE PULL OFF AREA SHALL BE REGRADED TO MATCH PRE CONSTRUCTION CONTOURS WHERE PRACTICAL. ALL PROPOSED PERMANENT SWALES AND ASSOCIATED CHECK DAMS SHALL BE REMOVED AND REINSTALLED ALONG THE PROPOSED EDGE OF ROAD.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

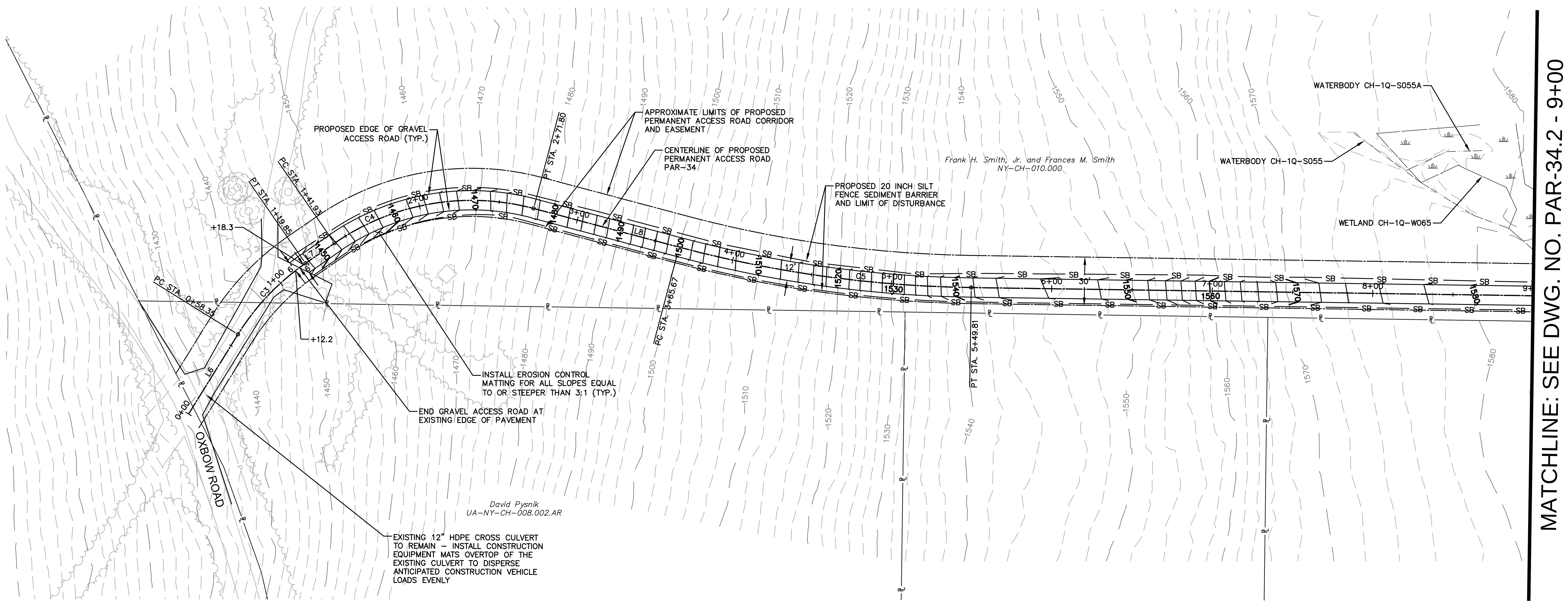
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

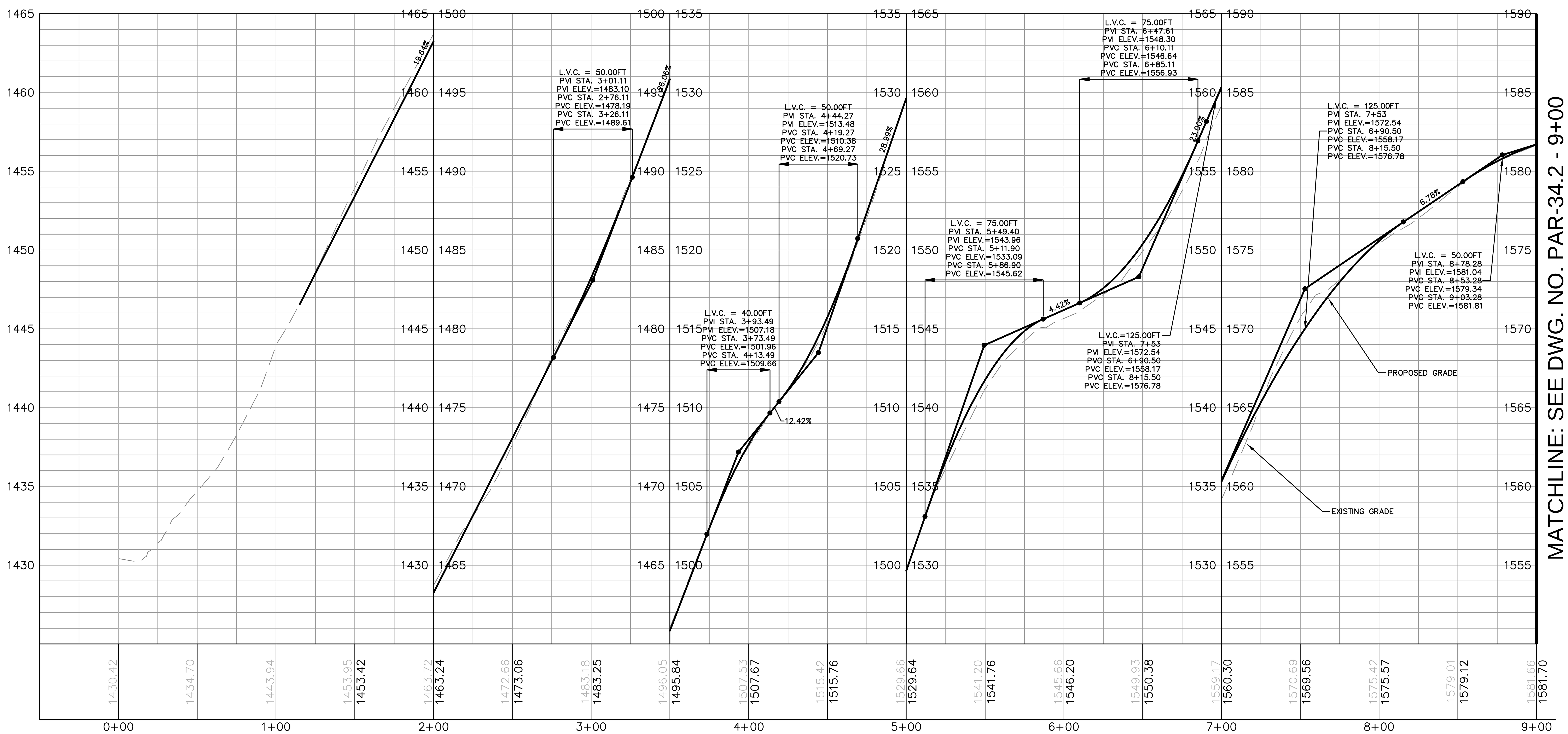
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-33 @ M.P. 43.69
TOWN OF AFTON
CHENANGO COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-33	SHEET 24 OF 102
W/O:			



Par–34							
No.	Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L6	B 15336235.63 E 15336285.22	B 1503716.88 E 1503747.63	N31°48'22.35"E		58.35'		
C3	PC 15336285.22 PI 15336311.72 PT 15336329.48	PC 1503747.63 PI 1503764.07 PT 1503789.71		23°29'27"	61.50'	31.19'	150.0'
L7	B 15336329.48 E 15336342.05	B 1503789.71 E 1503807.86	N55°17'49.70"E		22.08'		
C4	PC 15336342.05 PI 15336381.51 PT 15336363.68	PC 1503807.86 PI 1503864.85 PT 1503931.84		49°36'27"	129.87'	69.32'	150.0'
L8	B 15336363.68 E 15336339.54	B 1503931.84 E 1504022.55	S75°05'43.78"E		93.87'		
C5	PC 15336339.54 PI 15336315.74 PT 15336314.39	PC 1504022.55 PI 1504111.97 PT 1504204.49		14°04'01"	184.14'	92.53'	750.0'
L9	B 15336314.39 E 15336297.25	B 1504204.49 E 1505376.43	S89°09'44.84"E		1172.06'		



GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
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4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1–800–962–7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

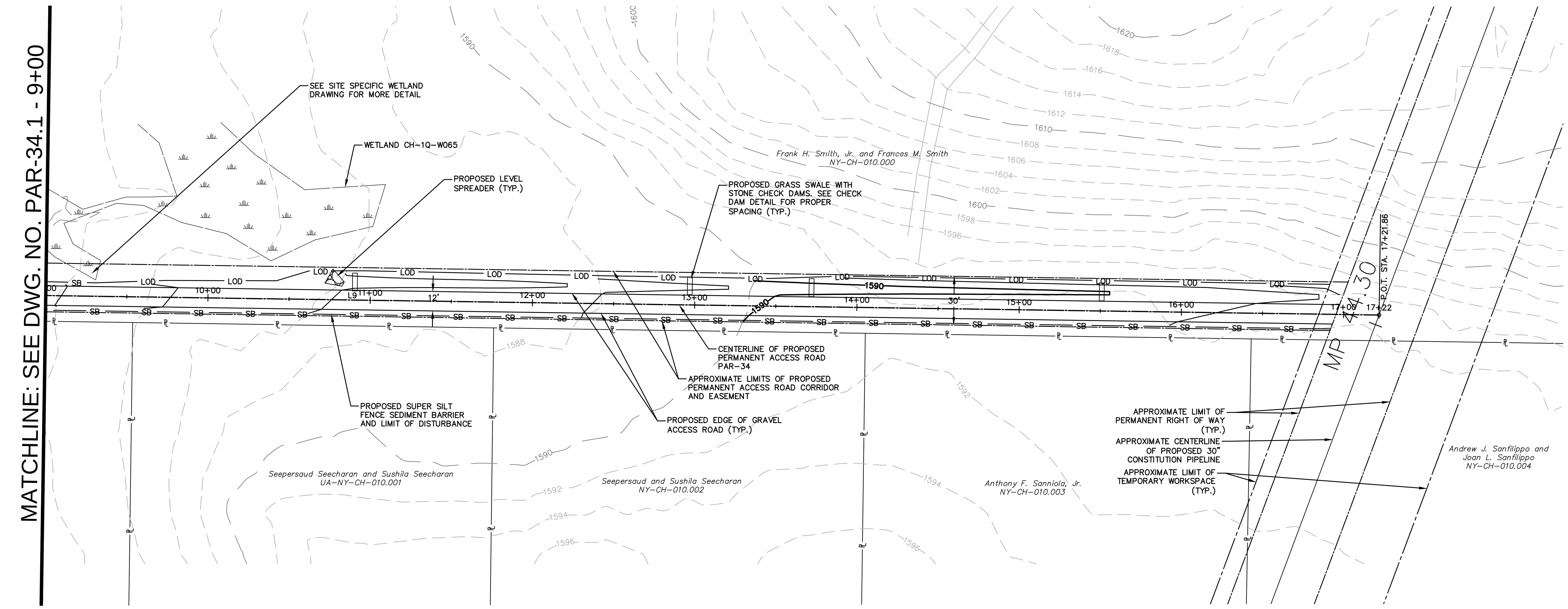
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

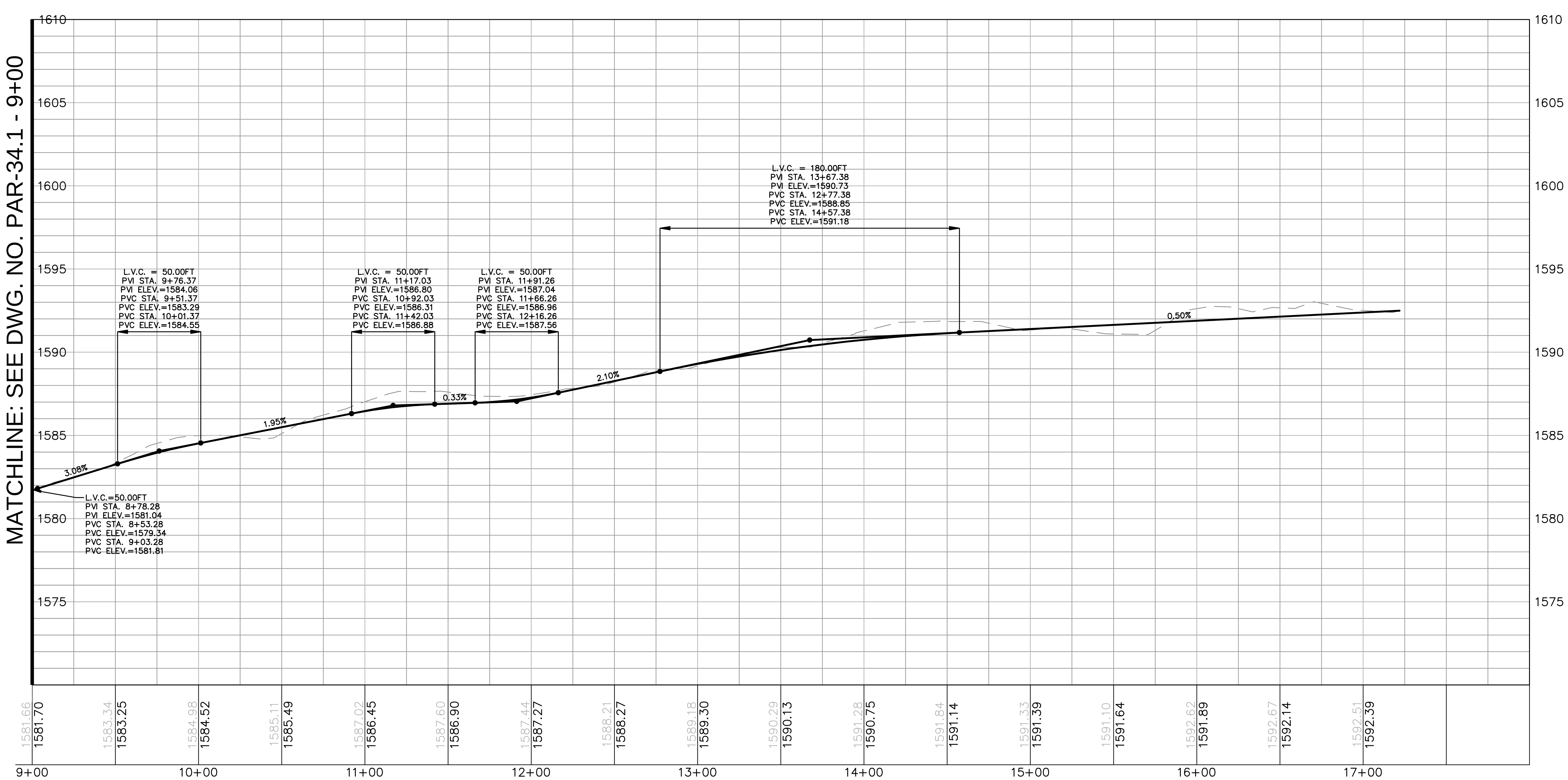
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

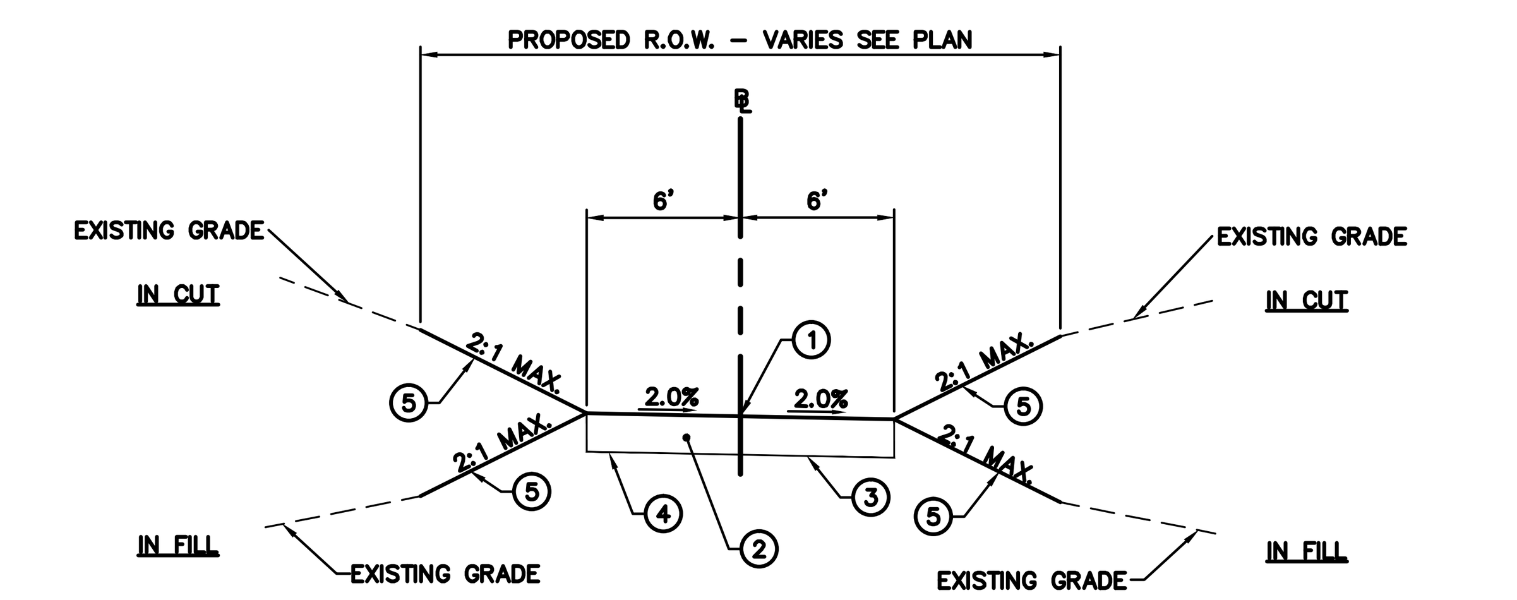
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR–34 @ M.P. 44.28
TOWN OF AFTON
CHENANGO COUNTY, NEW YORK

CONSTITUTION PIPELINE

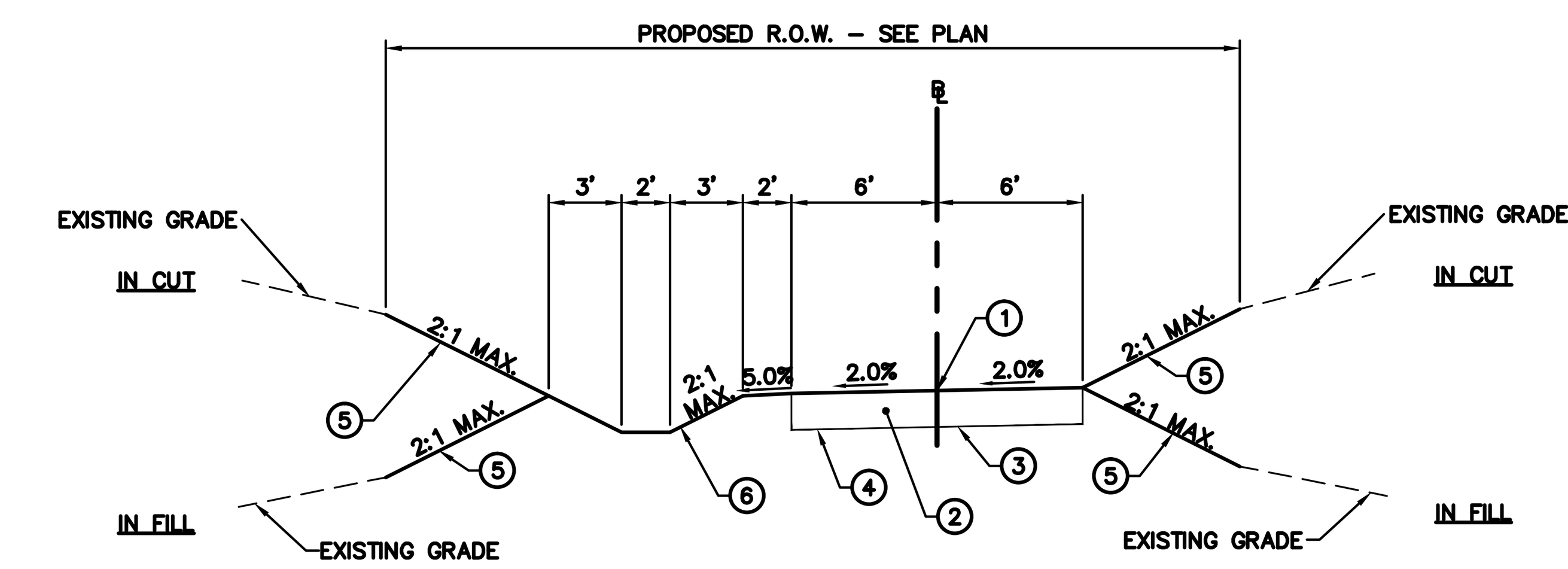
DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26–26–85/PAR–34.1	SHEET 25 OF 102
WO:			



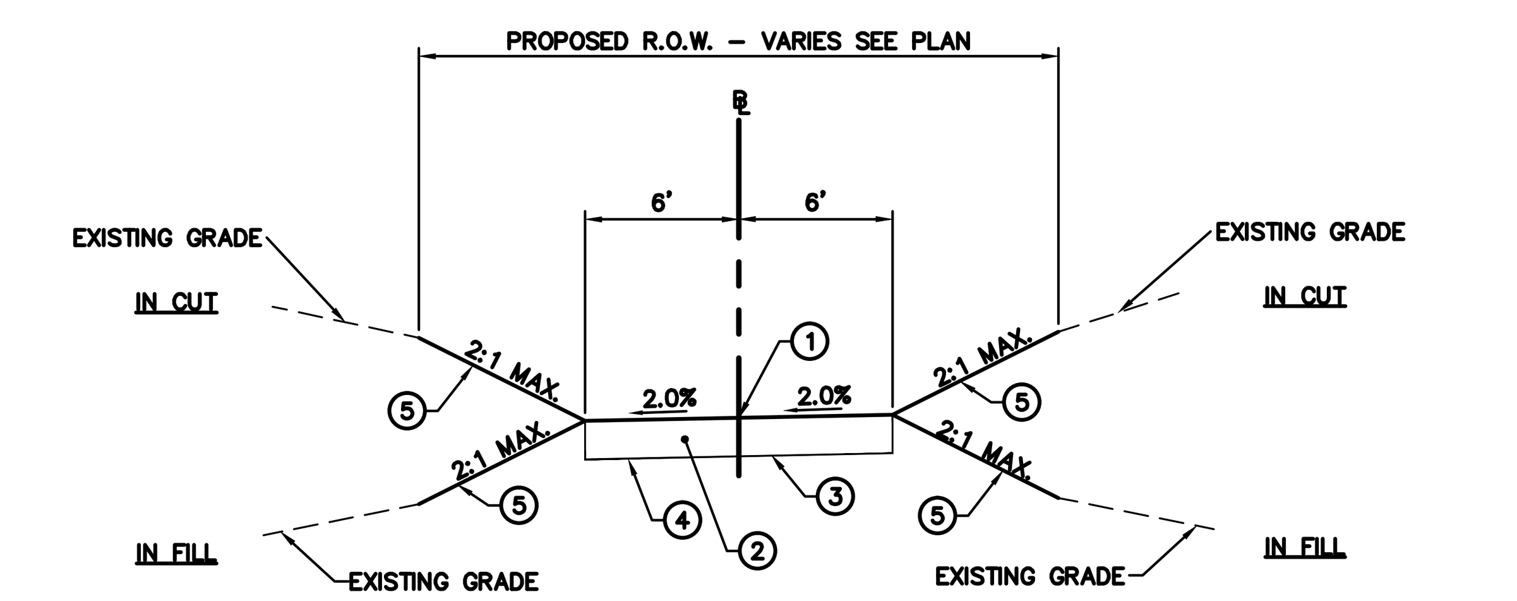




TYPICAL SECTION STA. 0+00 TO 9+00



TYPICAL SECTION STA. 10+85 TO 16+85



TYPICAL SECTION STA. 9+00 TO 10+85 AND 16+85 TO 17+21.86

TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED
6. GRASS LINED SWALE (SEE ACCESS ROAD CALCULATIONS FOR EROSION CONTROL MATTING TYPE)

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

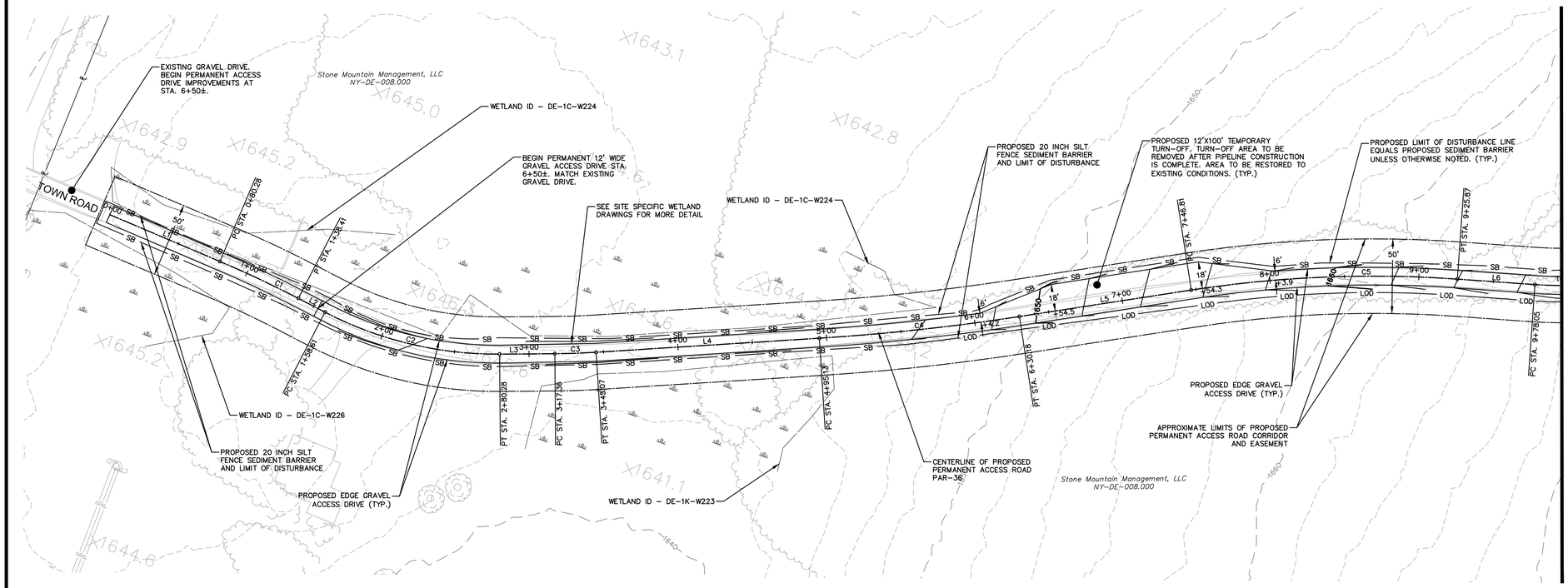
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

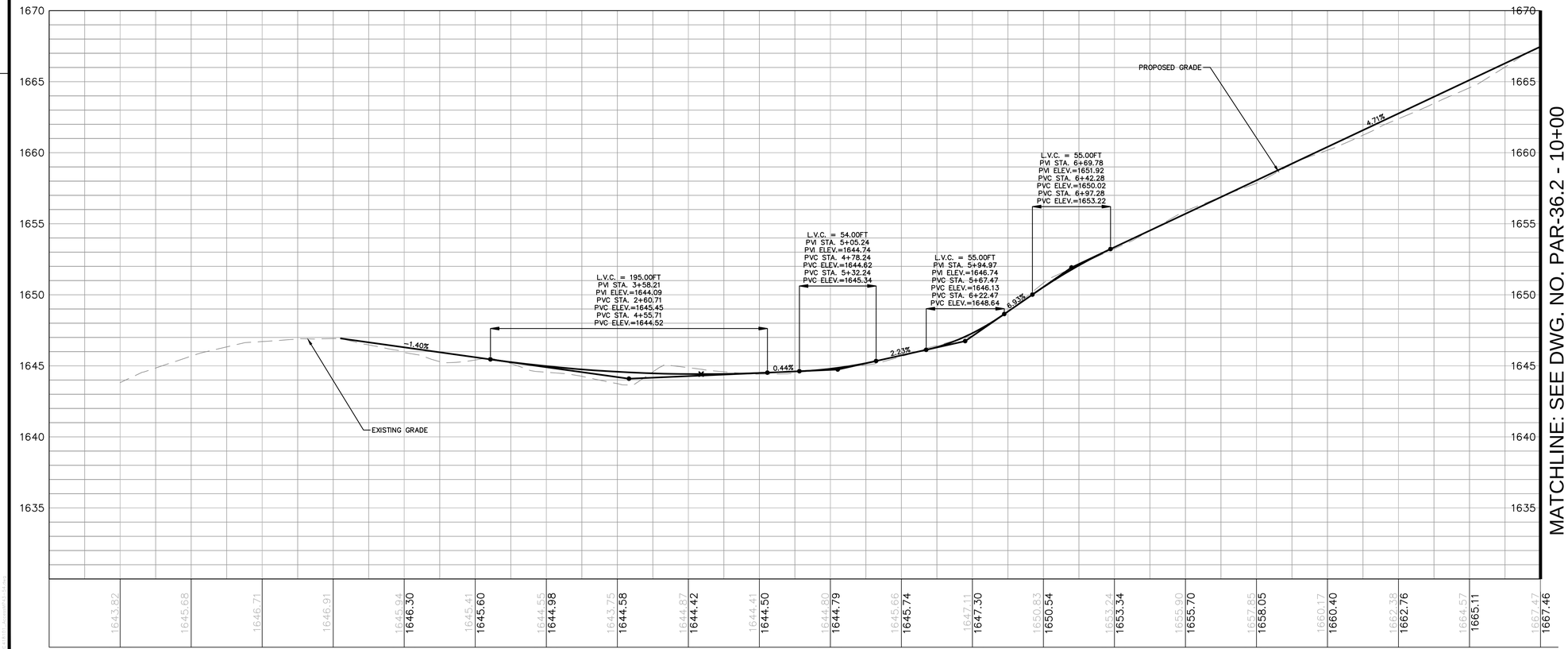
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS - ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-34 @ M.P. 44.28
TOWN OF AFTON
CHENANGO COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-34.2	SHEET 26 OF 102
WO:			



MATCHLINE: SEE DWG. NO. PAR-36.2 - 10+00



MATCHLINE: SEE DWG. NO. PAR-36.2 - 10+00

PAR-36								
No.		Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L1	PC PI PT	15357531.85 15357529.04	1534119.56 1534199.79	S87°59'24.18"E		80.28'		
C1	PC PI PT	15357529.04 15357528.02 15357524.75	1534199.79 1534228.86 1534257.75		4°26'27"	58.13'	29.08'	750.0'
L2	PC PI PT	15357524.75 15357522.48	1534257.75 1534277.83	S83°32'57.06"E		20.20'		
C2	PC PI PT	15357522.48 15357515.51 15357538.19	1534277.83 1534339.50 1534397.27		27°53'03"	121.67'	62.06'	250.0'
L3	PC PI PT	15357538.19 15357551.74	1534397.27 1534431.79	N68°34'00.38"E		37.08'		
C3	PC PI PT	15357551.74 15357556.80 15357562.57	1534431.79 1534444.69 1534457.29		3°10'32"	27.71'	13.86'	500.0'
L4	PC PI PT	15357562.57 15357625.06	1534457.29 1534593.71	N65°23'28.51"E		150.05'		
C4	PC PI PT	15357625.06 15357653.19 15357686.74	1534593.71 1534655.15 1534713.80		5°09'30"	135.05'	67.57'	1500.0'
L5	PC PI PT	15357686.74 15357744.65	1534713.80 1534815.04	N60°13'58.10"E		116.63'		
C5	PC PI PT	15357744.65 15357789.28 15357815.48	1534815.04 1534893.09 1534979.09		12°49'29"	179.07'	89.91'	800.0'
L6	PC PI PT	15357815.48 15357830.69	1534979.09 1535029.00	N73°03'27.51"E		52.17'		
C6	PC PI PT	15357830.69 15357842.12 15357864.49	1535029.00 1535066.53 1535098.74		17°50'02"	77.82'	39.22'	250.0'
L7	PC PI PT	15357864.49 15357940.73	1535098.74 1535208.53	N55°13'25.45"E		133.66'		
C7	PC PI PT	15357940.73 15357993.56 15358059.47	1535208.53 1535284.62 1535349.70		10°35'04"	184.73'	92.63'	1000.0'
L8	PC PI PT	15358059.47 15358112.62	1535349.70 1535402.19	N44°38'21.28"E		74.70'		
C8	PC PI PT	15358112.62 15358126.18 15358127.39	1535402.19 1535415.57 1535434.58		41°42'41"	36.40'	19.05'	50.0'
L9	PC PI PT	15358127.39 15358129.96	1535434.58 1535474.91	N86°21'02.62"E		40.41'		
C9	PC PI PT	15358129.96 15358131.18 15358137.16	1535474.91 1535494.02 1535512.22		14°33'03"	38.09'	19.15'	150.0'
L10	PC PI PT	15358137.16 15358182.16	1535512.22 1535649.08	N71°47'59.91"E		144.08'		
C10	PC PI PT	15358182.16 15358194.94 15358186.22	1535649.08 1535687.94 1535727.91		30°30'31"	79.87'	40.91'	150.0'
L11	PC PI PT	15358186.22 15358148.25	1535727.91 1535901.92	S77°41'28.88"E		178.11'		

GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
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4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

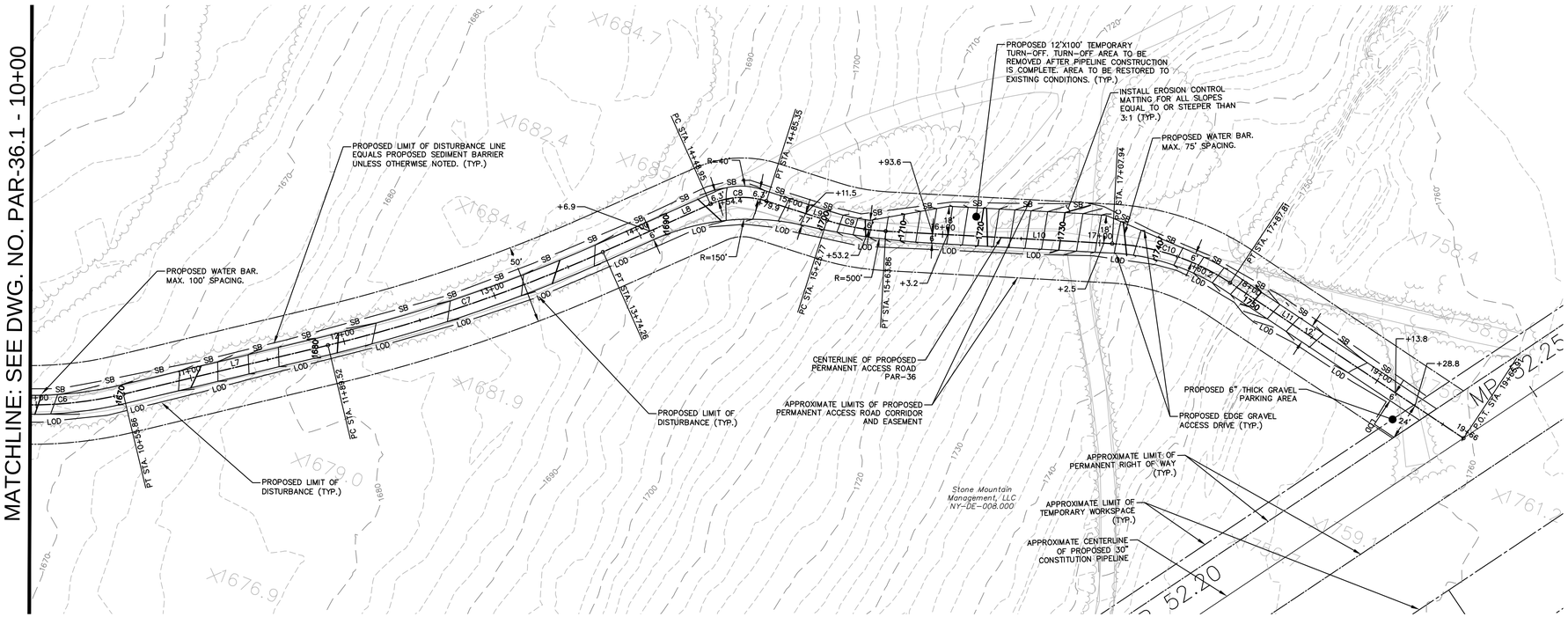
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-36 @ M.P. 52.22
TOWN OF MASONVILLE
DELAWARE COUNTY, NEW YORK

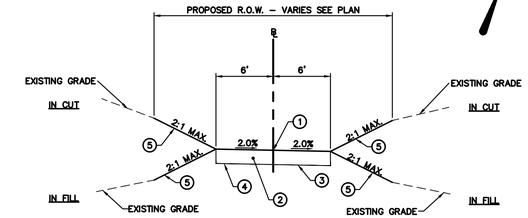
CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-36.1	SHEET 27 OF 102
W.O:			

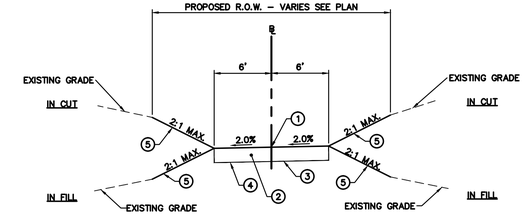
PAR-36.dwg 7/21/2014

MATCHLINE: SEE DWG. NO. PAR-36.1 - 10+00





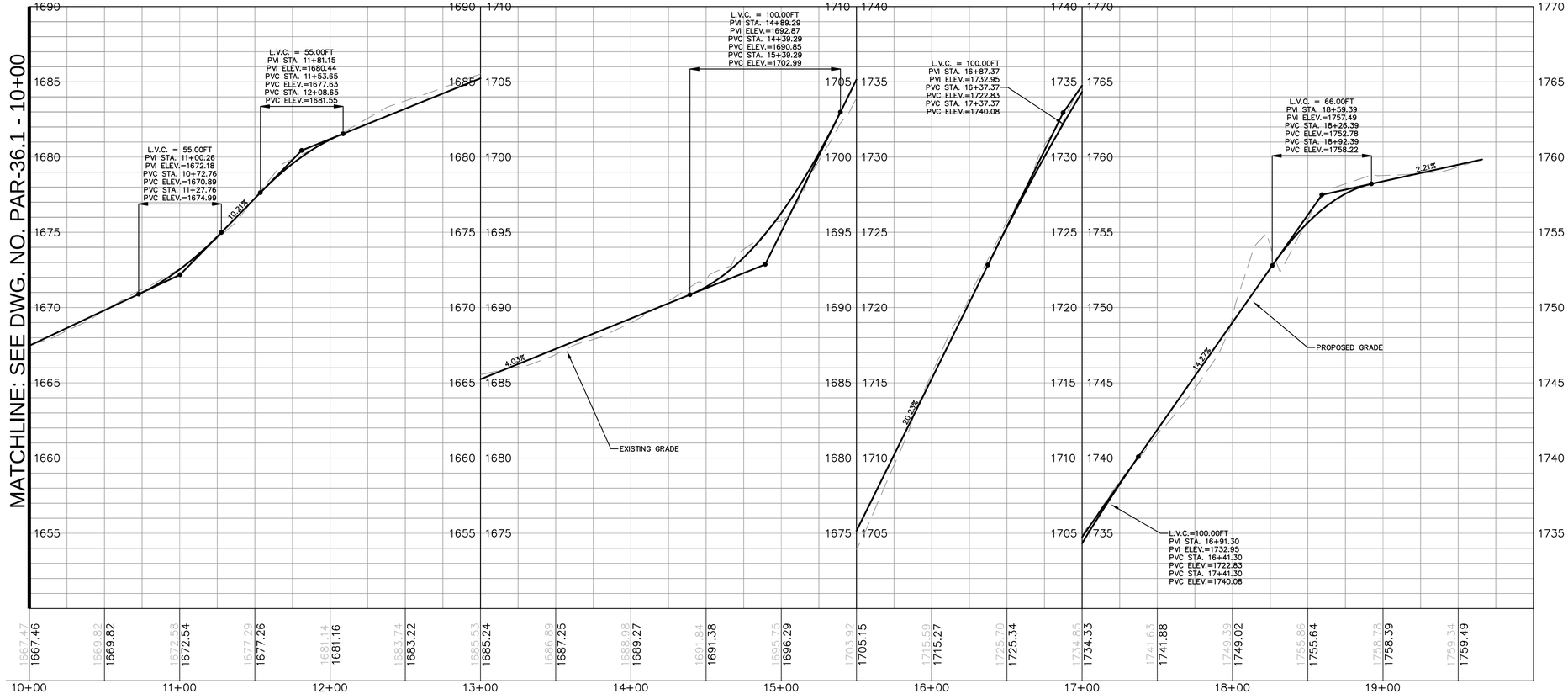
TYPICAL SECTION STA. 5+00 TO 10+00



TYPICAL SECTION STA. 10+00 TO 19+70

TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED
6. GRASS LINED SWALE (SEE ACCESS ROAD CALCULATIONS FOR EROSION CONTROL MATTING TYPE)



HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

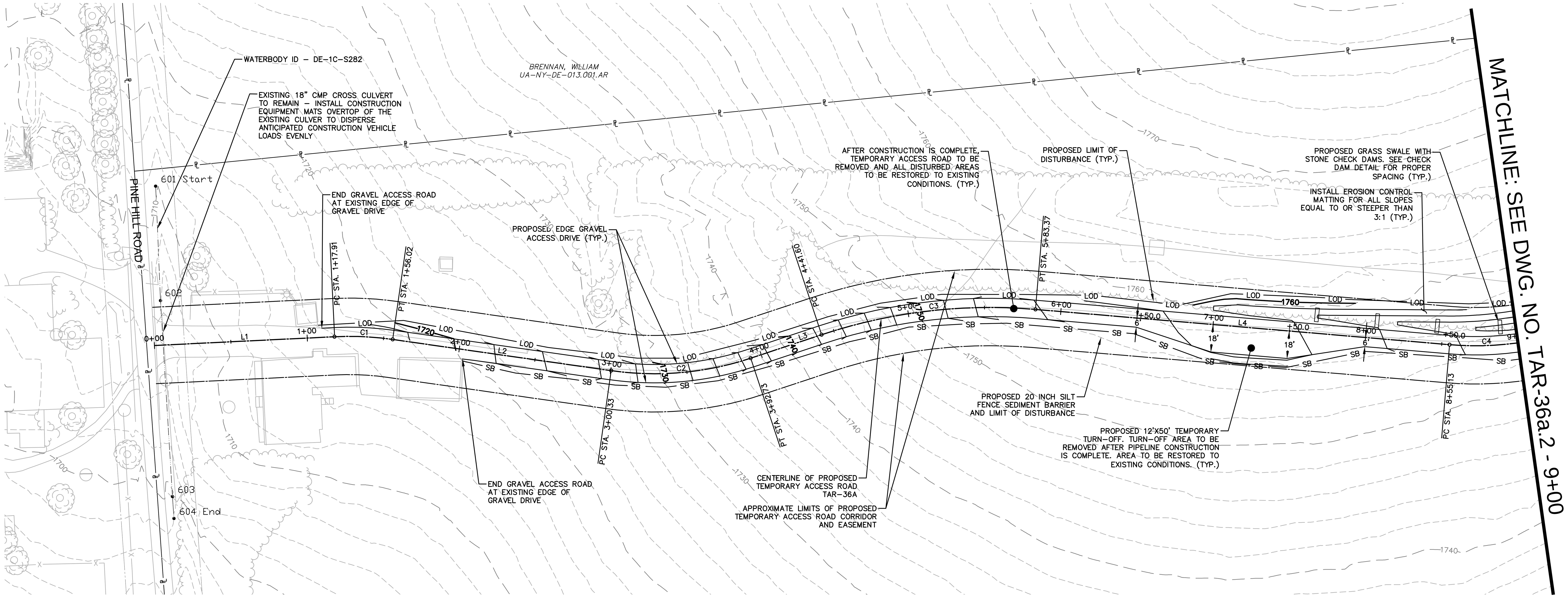
ISSUED FOR BID
NOT FOR CONSTRUCTION

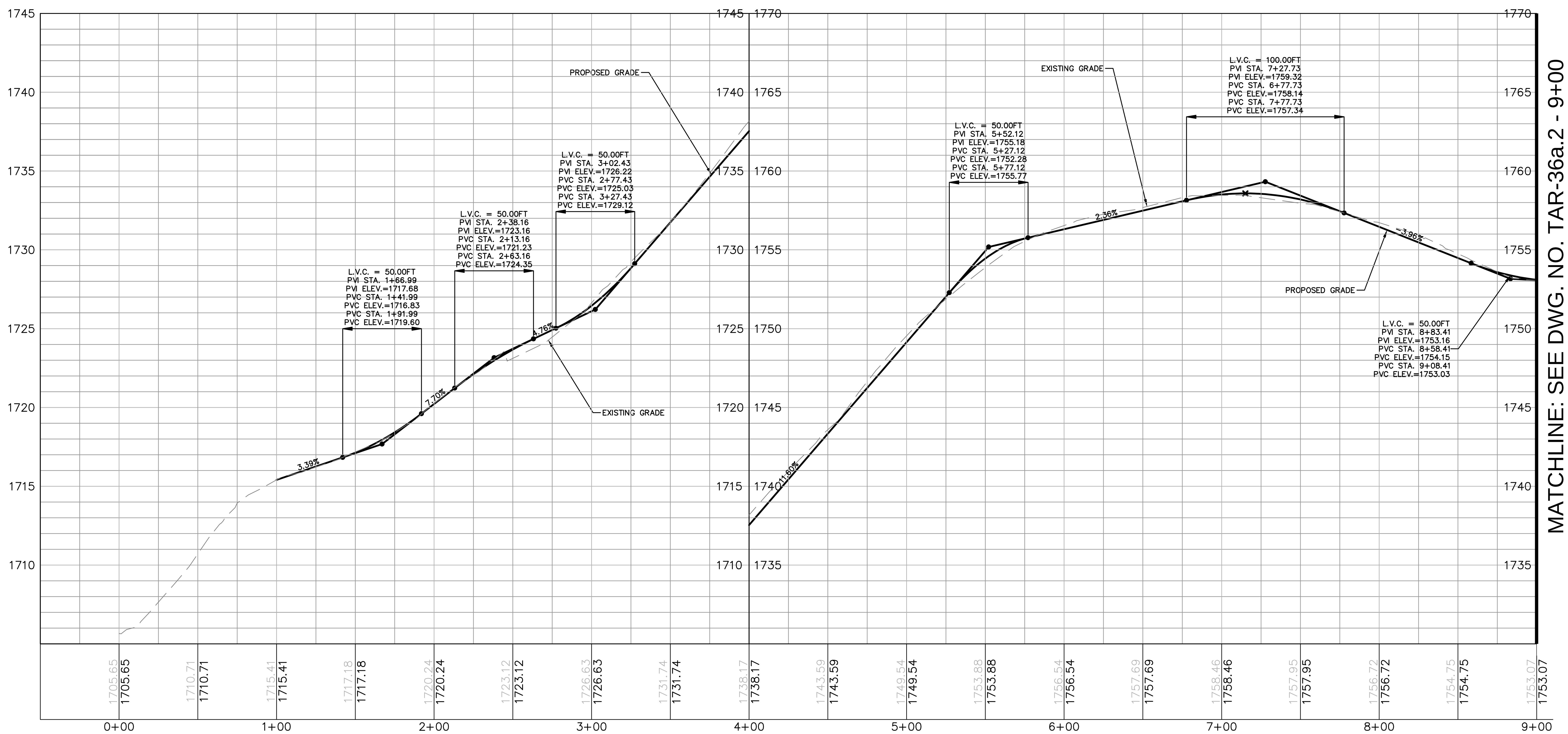
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED PERMANENT ACCESS ROAD
PAR-36 @ M.P. 52.22
TOWN OF MASONVILLE
DELAWARE COUNTY, NEW YORK

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/PAR-36.2	SHEET 28 OF 102
WO:			





GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
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HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-36a @ M.P. 54.14
TOWN OF SIDNEY
DELAWARE COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/TAR-36a.1	SHEET 29 OF 102
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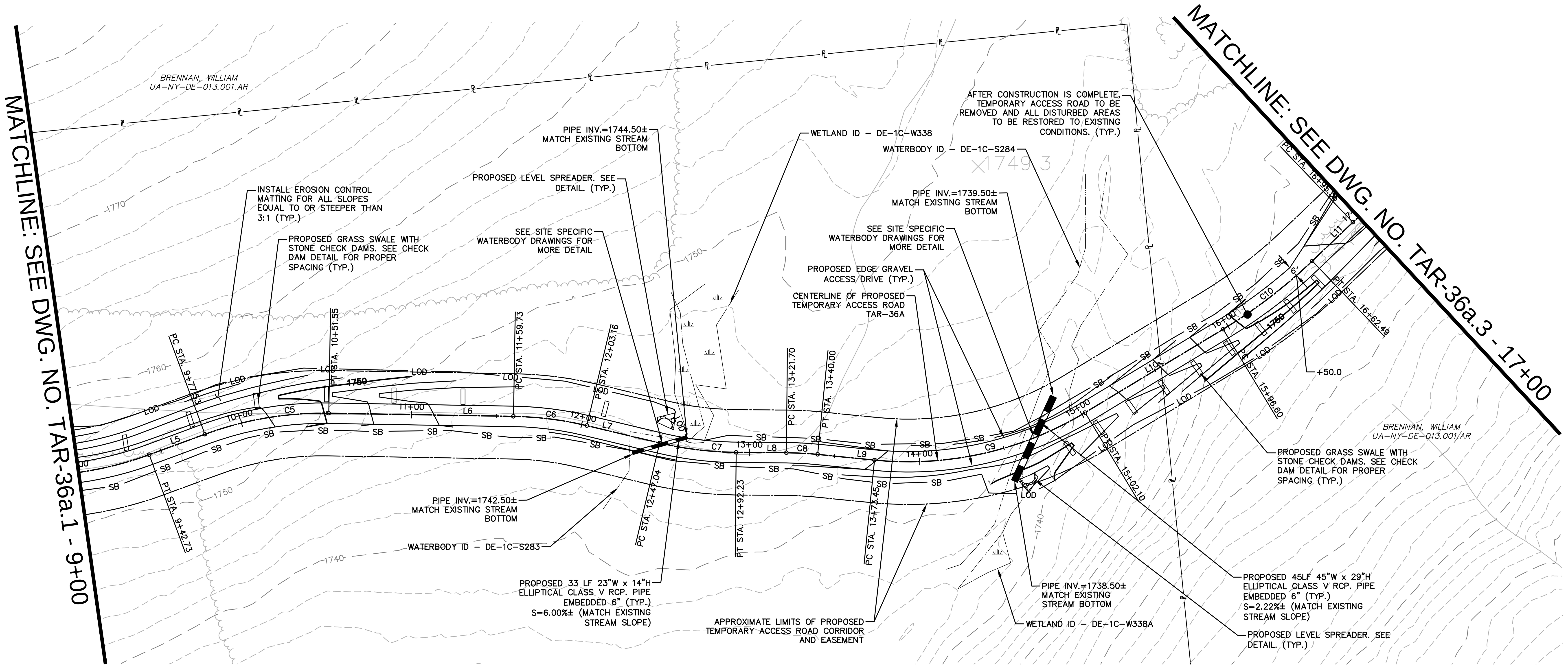
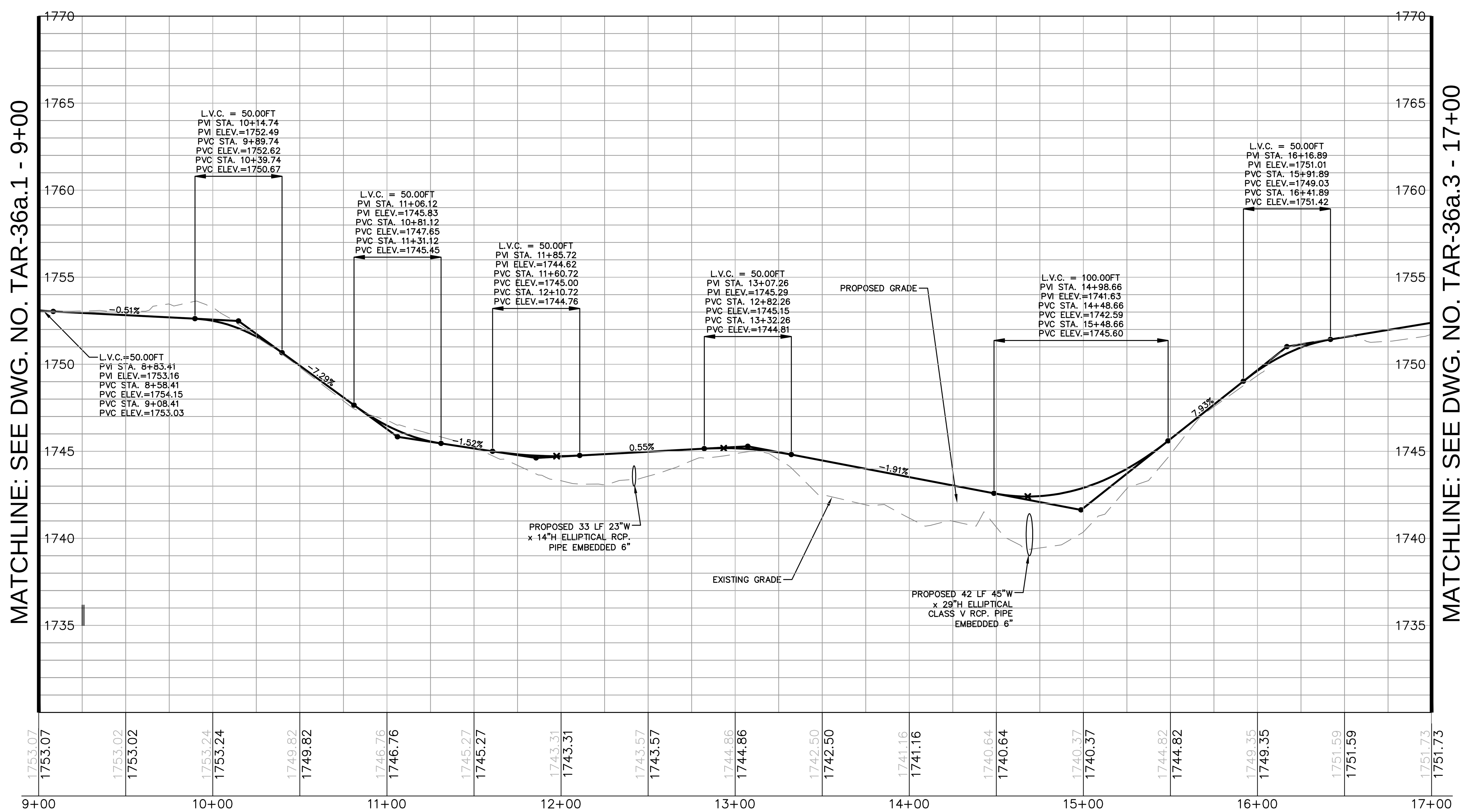




TAR-36A								
No.		Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L1	PC PI PT	15359542.18 15359547.92	1542188.01 1542305.78	N87°12'41.43"E		117.91'		
C1	PC PI PT	15359547.92 15359548.85 15359546.14	1542305.78 1542324.87 1542343.79		10°55'06"	38.11'	19.11'	200.0'
L2	PC PI PT	15359546.14 15359525.74	1542343.79 1542486.65	S81°52'12.19"E		144.31'		
C2	PC PI PT	15359525.74 15359519.08 15359533.89	1542486.65 1542533.22 1542577.87		26°28'17"	92.40'	47.04'	200.0'
L3	PC PI PT	15359533.89 15359549.26	1542577.87 1542624.25	N71°39'30.48"E		48.87'		
C3	PC PI PT	15359549.26 15359571.88 15359565.78	1542624.25 1542692.48 1542764.09		23°12'32"	141.77'	71.87'	350.0'
L4	PC PI PT	15359565.78 15359542.72	1542764.09 1543034.87	S85°07'57.92"E		271.76'		
C4	PC PI PT	15359542.72 15359538.95 15359554.34	1543034.87 1543079.22 1543120.99		25°05'42"	87.60'	44.51'	200.0'
L5	PC PI PT	15359554.34 15359566.37	1543120.99 1543153.64	N69°46'20.38"E		34.80'		
C5	PC PI PT	15359566.37 15359579.31 15359578.68	1543153.64 1543188.77 1543226.21		21°12'20"	74.02'	37.44'	200.0'
L6	PC PI PT	15359578.68 15359576.83	1543226.21 1543334.37	S89°01'19.79"E		108.18'		
C6	PC PI PT	15359576.83 15359576.46 15359571.40	1543334.37 1543356.17 1543377.37		12°26'26"	43.43'	21.80'	200.0'
L7	PC PI PT	15359571.40 15359561.21	1543377.37 1543420.06	S76°34'53.37"E		43.88'		
C7	PC PI PT	15359561.21 15359555.95 15359555.76	1543420.06 1543442.12 1543464.81		12°56'40"	45.18'	22.69'	200.0'
L8	PC PI PT	15359555.76 15359555.52	1543464.81 1543494.28	S89°31'33.26"E		29.47'		
C8	PC PI PT	15359555.52 15359555.44 15359554.53	1543494.28 1543503.44 1543512.55		5°14'32"	18.30'	9.16'	200.0'
L9	PC PI PT	15359554.53 15359551.20	1543512.55 1543545.83	S84°17'01.34"E		33.45'		
C9	PC PI PT	15359551.20 15359544.56 15359579.02	1543545.83 1543612.14 1543669.18		36°51'20"	128.65'	66.64'	200.0'
L10	PC PI PT	15359579.02 15359627.89	1543669.18 1543750.06	N58°51'38.89"E		94.50'		
C10	PC PI PT	15359627.89 15359644.99 15359667.86	1543750.06 1543778.37 1543802.28		12°35'03"	65.89'	33.08'	300.0'
L11	PC PI PT	15359667.86 15359690.58	1543802.28 1543826.03	N46°16'35.98"E		32.87'		
C11	PC PI PT	15359690.58 15359718.00 15359737.02	1543826.03 1543854.70 1543889.52		15°04'01"	78.89'	39.67'	300.0'
L12	PC PI PT	15359737.02 15359740.11	1543889.52 1543895.17	N61°20'37.25"E		6.44'		
C12	PC PI PT	15359740.11 15359753.59 15359773.33	1543895.17 1543919.82 1543939.81		15°59'30"	55.82'	28.09'	200.0'
L13	PC PI PT	15359773.33 15359840.54	1543939.81 1544007.85	N45°21'07.74"E		95.64'		

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

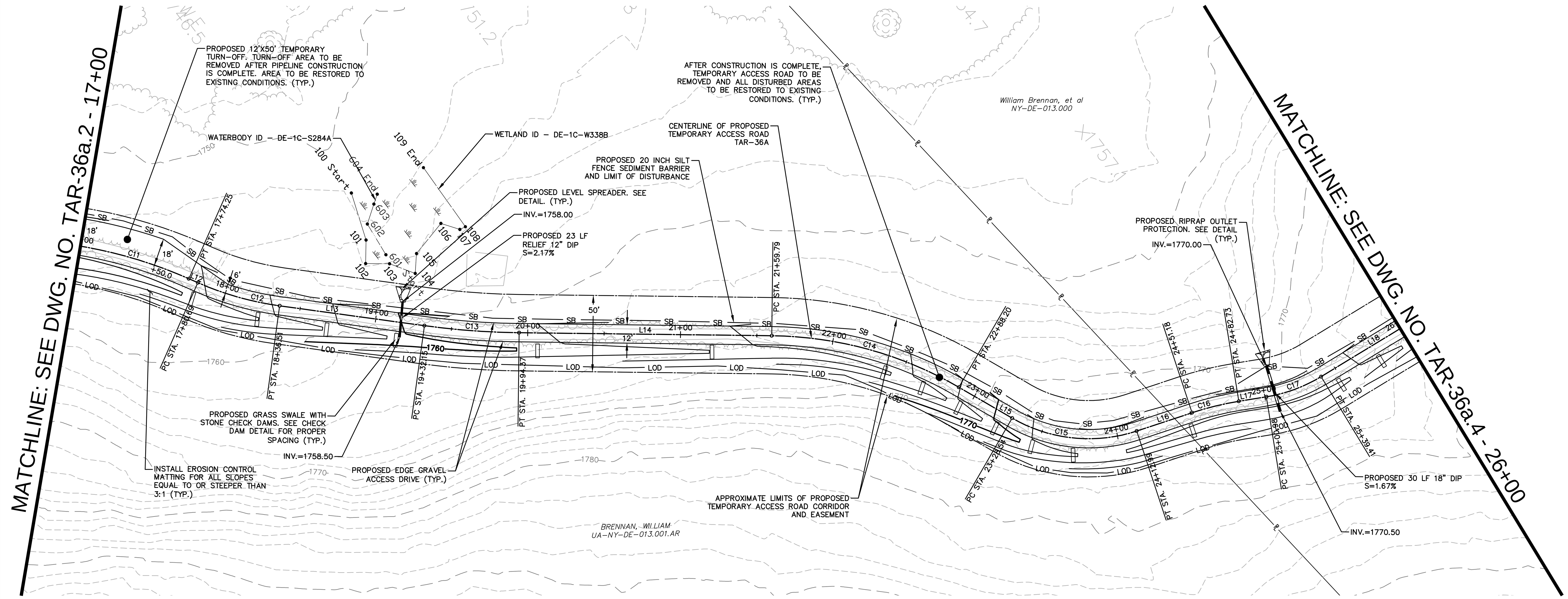
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

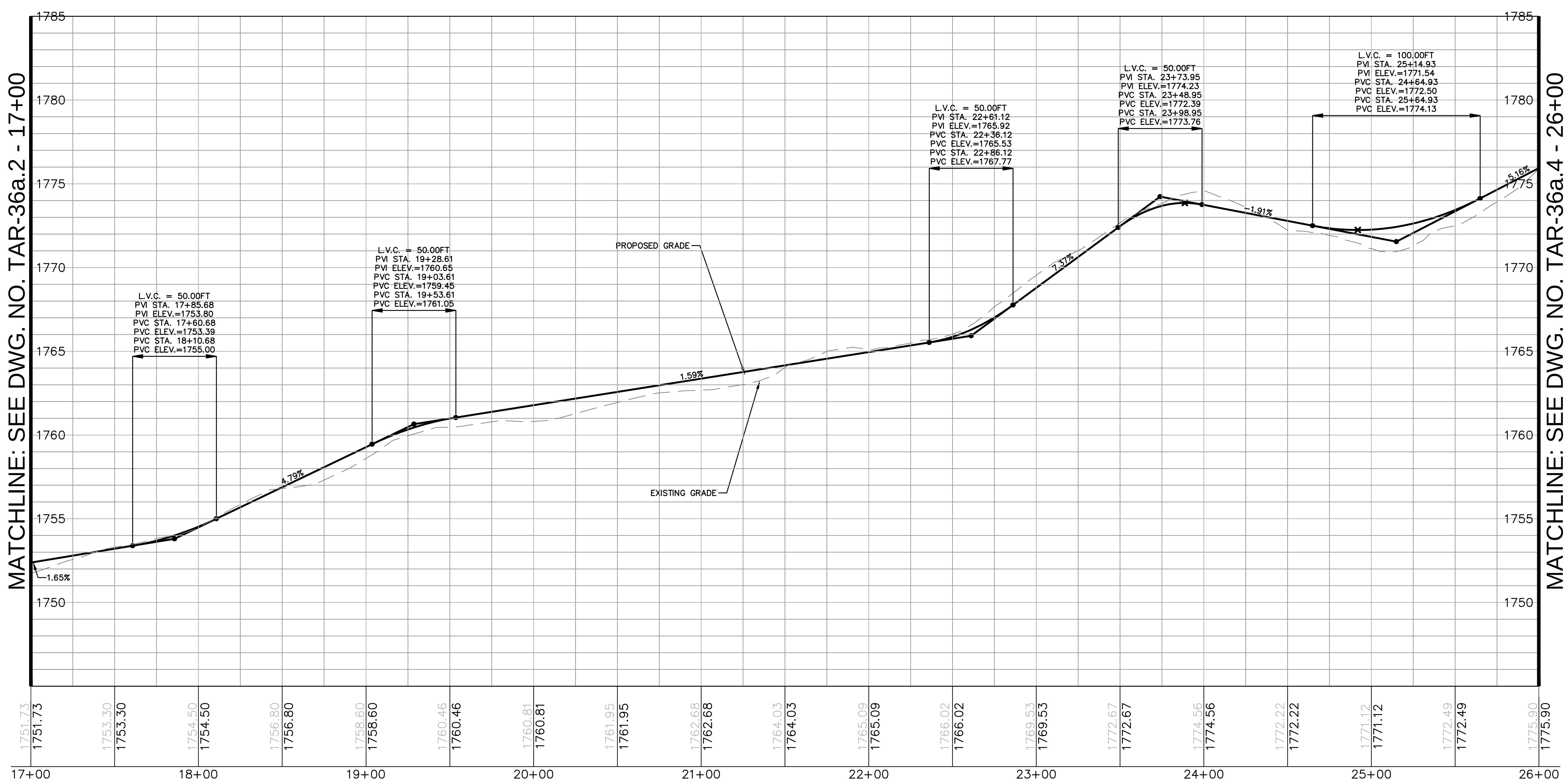
NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-36a @ M.P. 54.14
TOWN OF SIDNEY
DELAWARE COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/TAR-36a.2	SHEET 30 OF 102
WO:			





TAR-36A								
No.		Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
C13	PC PI PT	15359840.54 15359862.43 15359886.91	1544007.85 1544030.01 1544049.29		7°07'50"	62.23'	31.15'	500.0'
L14	PC PI PT	15359886.91 15360016.86	1544049.29 1544151.63	N38°13'17.35"E		165.41'		
C14	PC PI PT	15360016.86 15360068.44 15360093.40	1544151.63 1544192.25 1544252.97		29°25'46"	128.41'	65.66'	250.0'
L15	PC PI PT	15360093.40 15360108.74	1544252.97 1544290.28	N67°39'03.49"E		40.34'		
C15	PC PI PT	15360108.74 15360125.83 15360168.24	1544290.28 1544331.84 1544346.66		48°23'22"	84.46'	44.93'	100.0'
L16	PC PI PT	15360168.24 15360204.30	1544346.66 1544359.26	N19°15'40.99"E		38.19'		
C16	PC PI PT	15360204.30 15360219.22 15360233.13	1544359.26 1544364.47 1544371.97		9°02'12"	31.54'	15.80'	200.0'
L17	PC PI PT	15360233.13 15360249.21	1544371.97 1544380.62	N28°17'52.88"E		18.26'		
C17	PC PI PT	15360249.21 15360266.33 15360285.67	1544380.62 1544389.84 1544391.97		22°00'56"	38.42'	19.45'	100.0'
L18	PC PI PT	15360285.67 15360346.00	1544391.97 1544398.61	N6°16'56.74"E		60.70'		
C18	PC PI PT	15360346.00 15360368.34 15360390.43	1544398.61 1544401.07 1544405.20		4°17'23"	44.92'	22.47'	600.0'
L19	PC PI PT	15360390.43 15360449.23	1544405.20 1544416.17	N10°34'20.01"E		59.82'		
C19	PC PI PT	15360449.23 15360465.42 15360481.89	1544416.17 1544419.19 1544419.52		9°24'54"	32.86'	16.47'	200.0'
L20	PC PI PT	15360481.89 15360493.57	1544419.52 1544419.76	N1°09'26.01"E		11.68'		
C20	PC PI PT	15360493.57 15360530.72 15360558.37	1544419.76 1544420.51 1544445.34		40°46'22"	71.16'	37.16'	100.0'
L21	PC PI PT	15360558.37 15360585.14	1544445.34 1544469.39	N41°55'48.13"E		35.98'		
C21	PC PI PT	15360585.14 15360611.46 15360638.87	1544469.39 1544493.03 1544515.41		2°42'09"	70.75'	35.38'	1500.0'
L22	PC PI PT	15360638.87 15360737.25	1544515.41 1544595.72	N39°13'39.25"E		127.00'		
C22	PC PI PT	15360737.25 15360748.67 15360758.61	1544595.72 1544605.05 1544615.95		8°26'10"	29.45'	14.75'	200.0'
L23	PC PI PT	15360758.61 15360763.59	1544615.95 1544621.43	N47°39'49.54"E		7.41'		
C23	PC PI PT	15360763.59 15360783.11 15360811.39	1544621.43 1544642.84 1544636.56		60°10'50"	52.52'	28.97'	50.0'
L24	PC PI PT	15360811.39 15360831.65	1544636.56 1544632.07	N12°31'00.71"W		20.75'		

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

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ENGINEERING
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BL Companies

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CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-36a @ M.P. 54.14
TOWN OF SIDNEY
DELAWARE COUNTY, NEW YORK

CONSTITUTION PIPELINE

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
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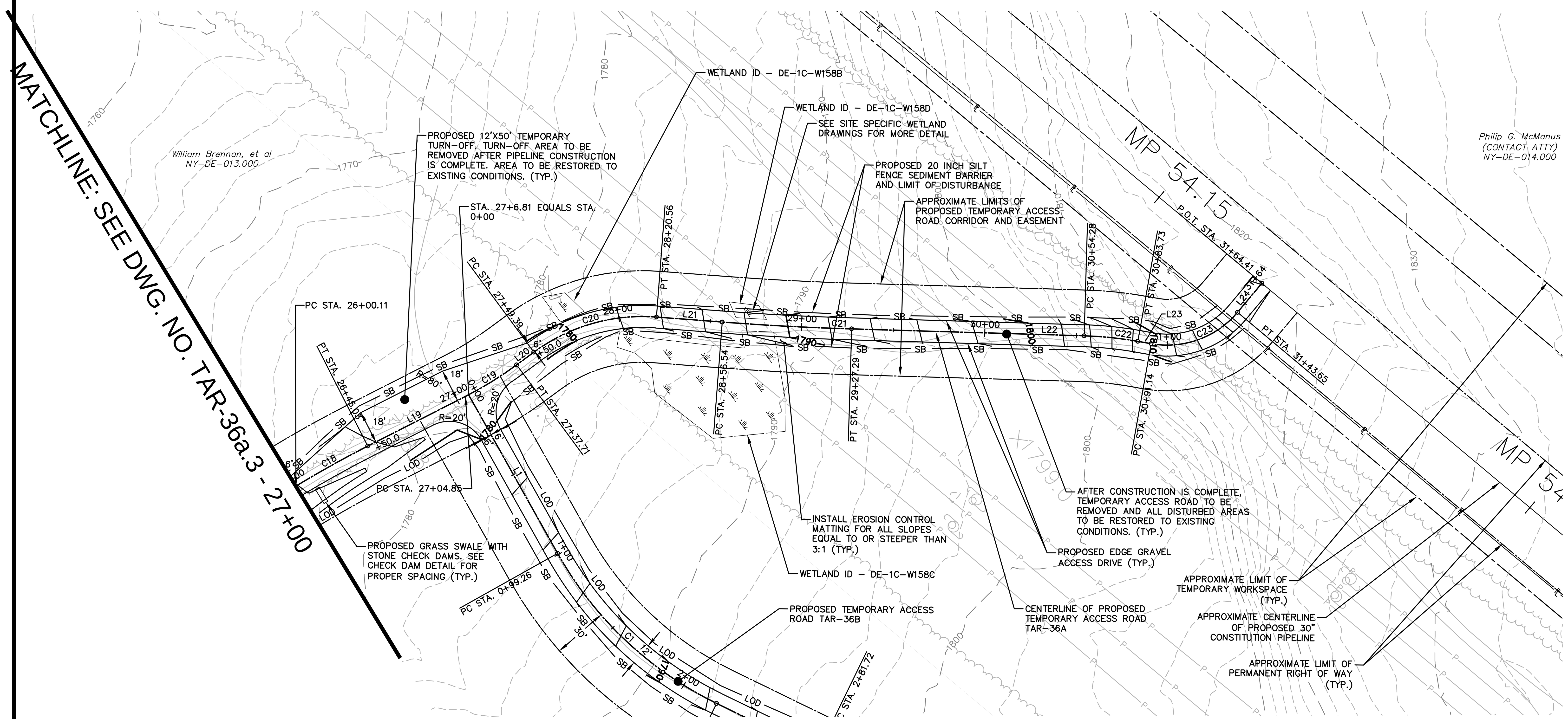
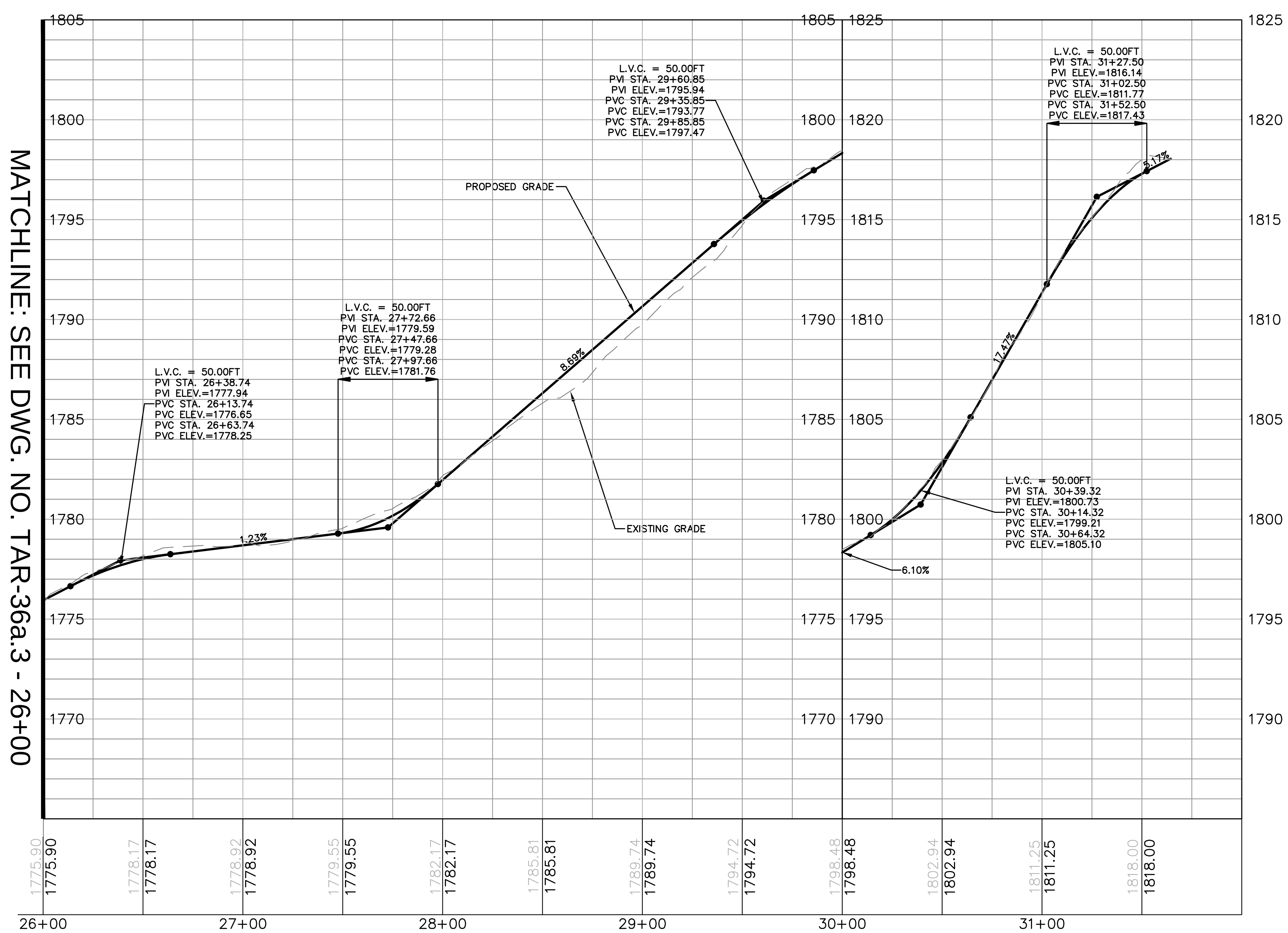
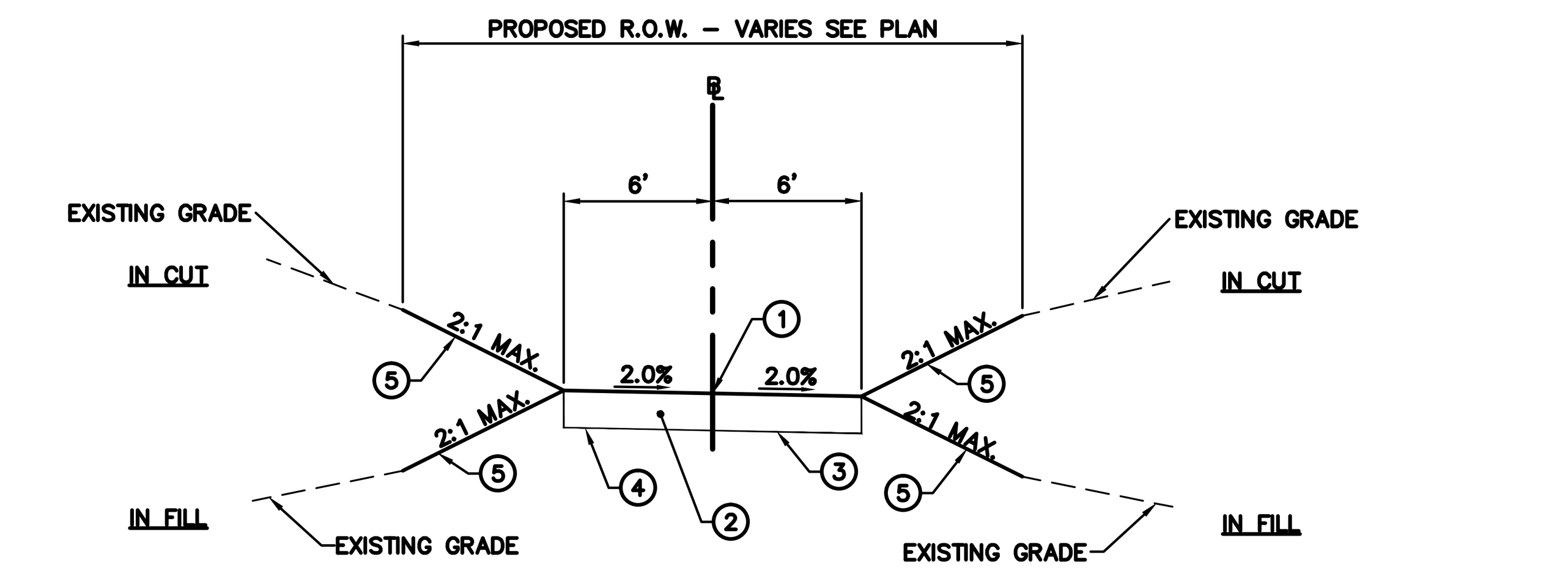
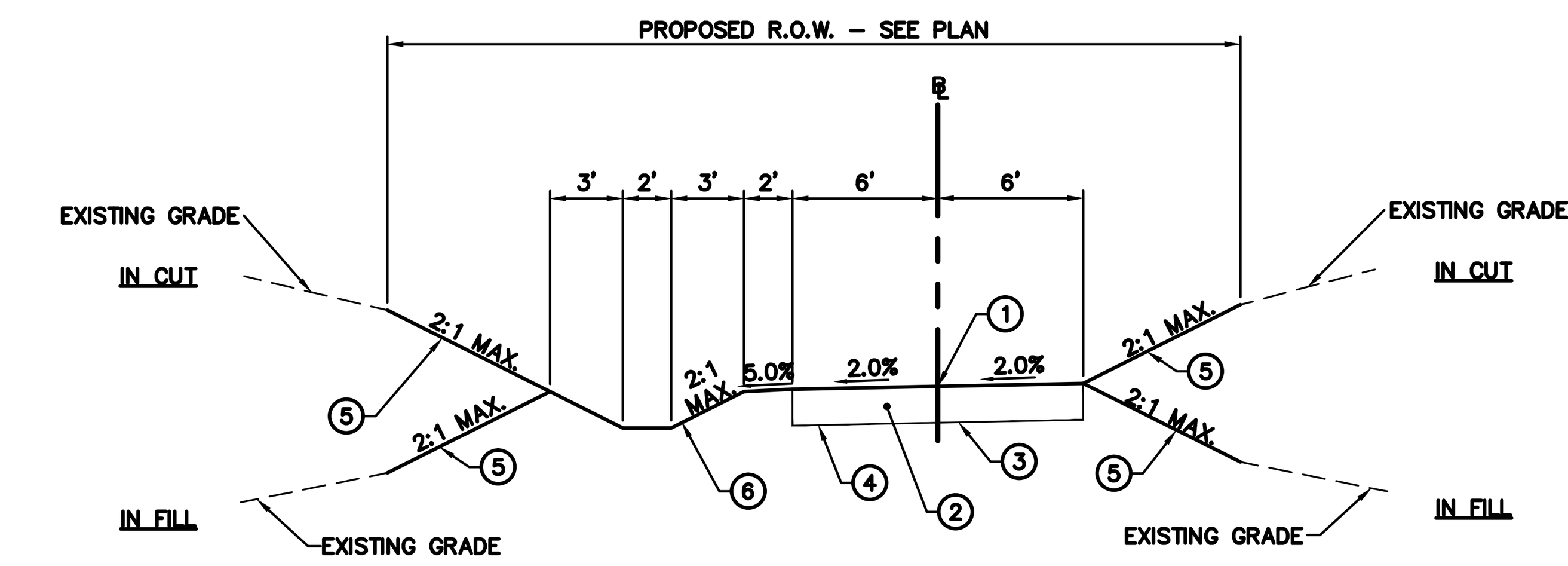
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/TAR-36a.3	SHEET 31 OF 102
WO:			







TYPICAL SECTION STA. 1+00 TO 7+00, 12+50 TO 14+85 AND 26+75 TO 31+64.41



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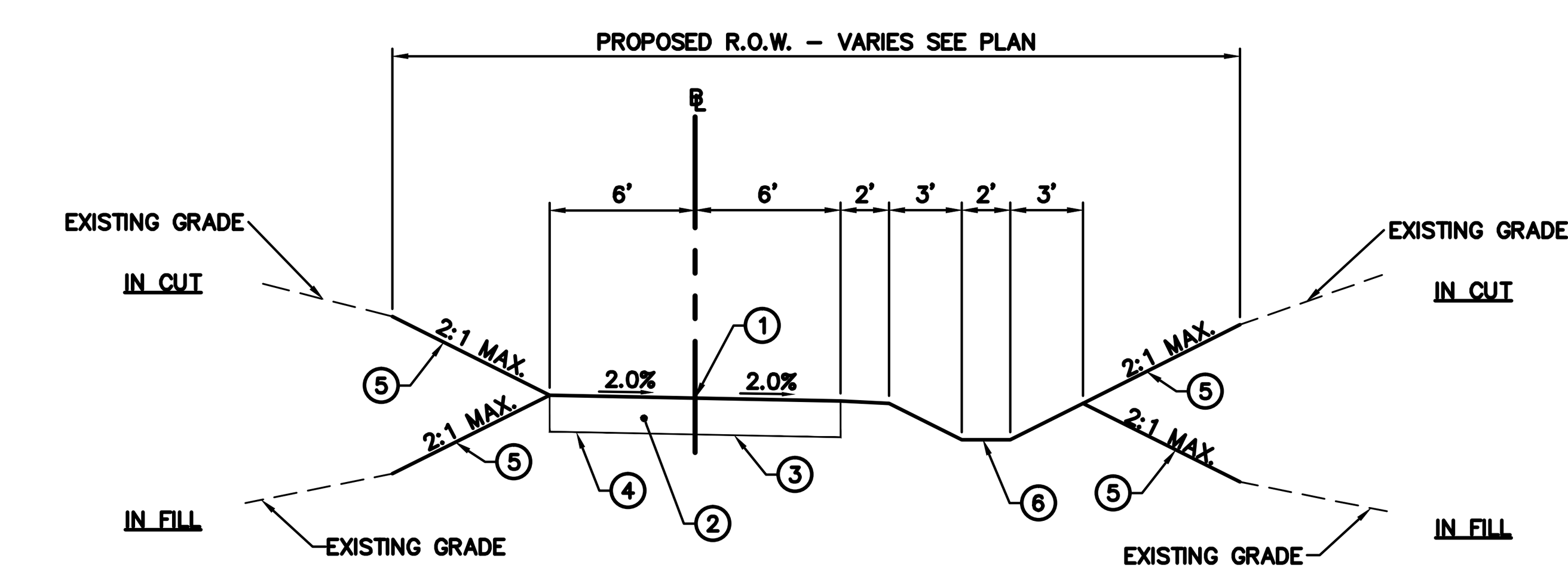


TYPICAL SECTION STA. 14+85 TO 26+75

TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED
6. GRASS LINED SWALE (SEE ACCESS ROAD CALCULATIONS FOR EROSION CONTROL MATTING TYPE)

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

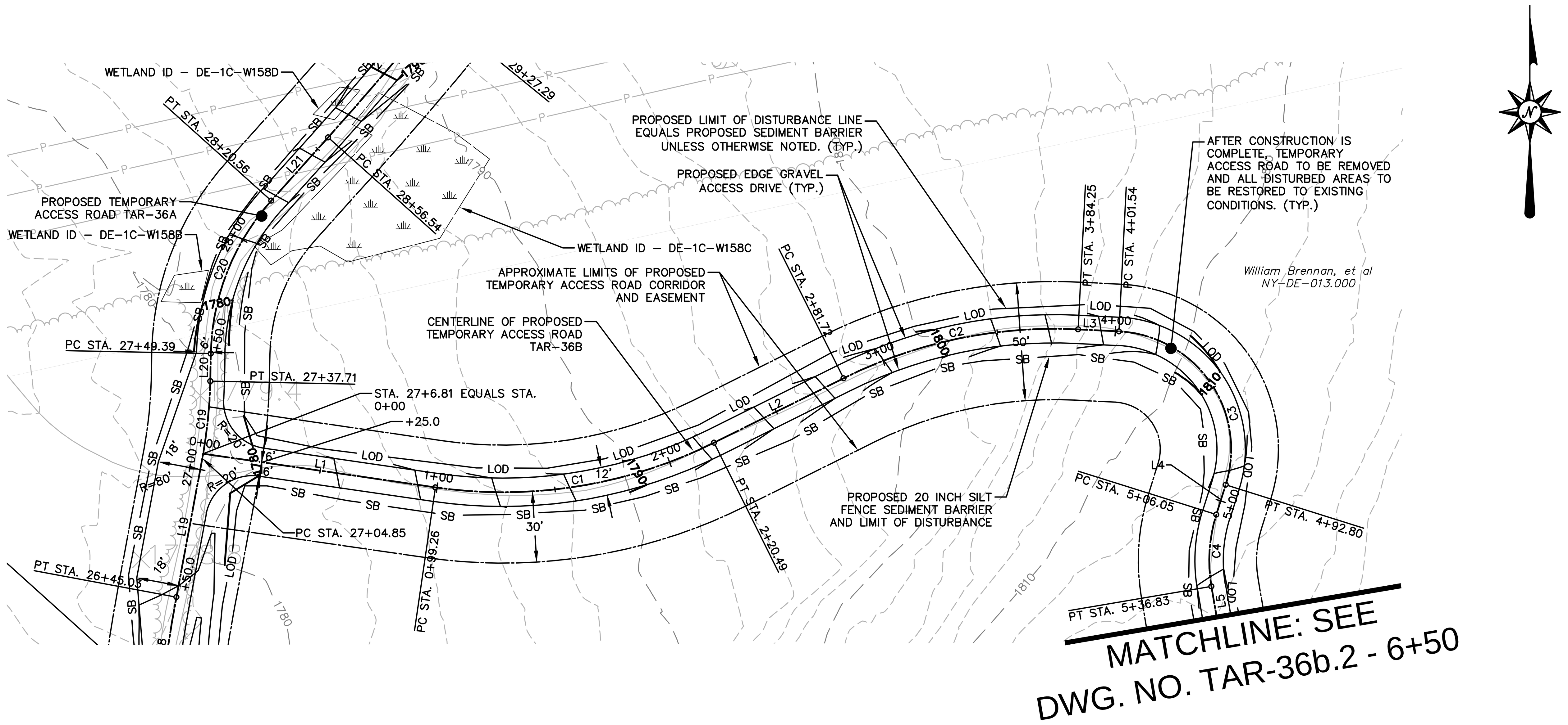
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

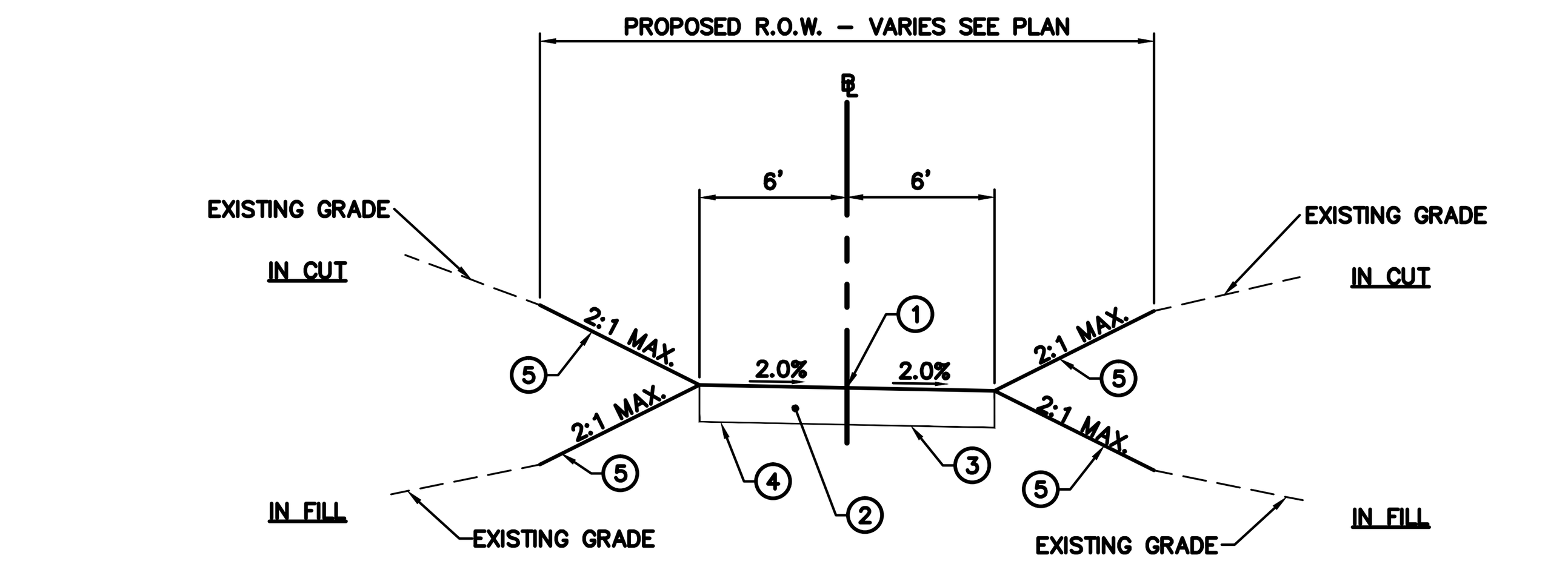
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS - ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-36a @ M.P. 54.14
TOWN OF SIDNEY
DELAWARE COUNTY, NEW YORK

CONSTITUTION PIPELINE

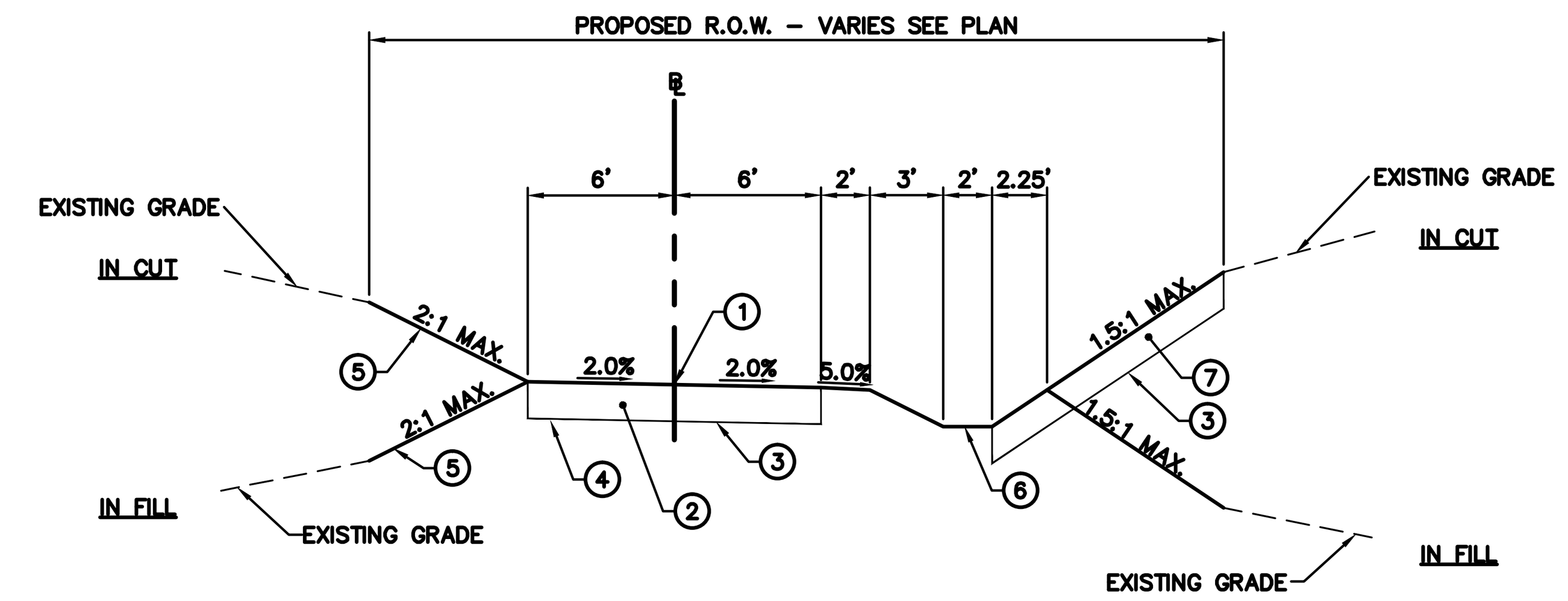
DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/TAR-36a.4	SHEET 32 OF 102
W.O.:			



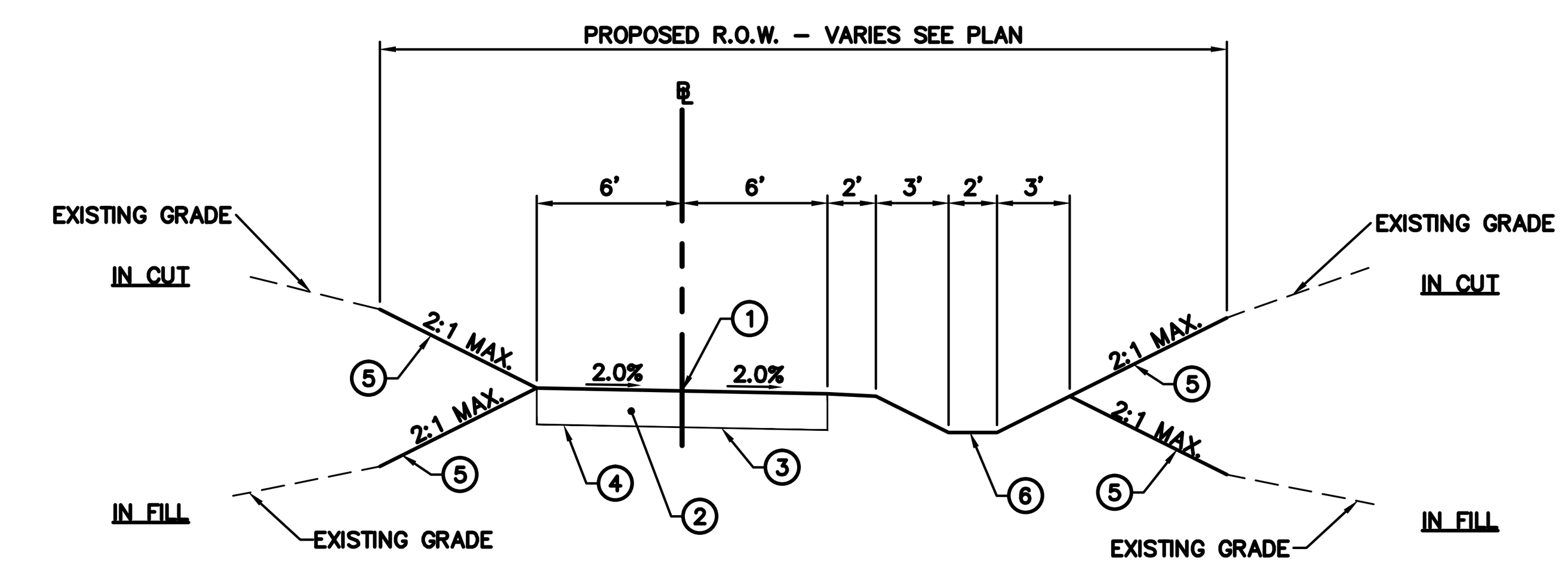
TYPICAL SECTION STA. 0+00 TO 12+50 AND 20+75 TO 29+76.19



TYPICAL SECTION STA. 12+50 TO 17+50

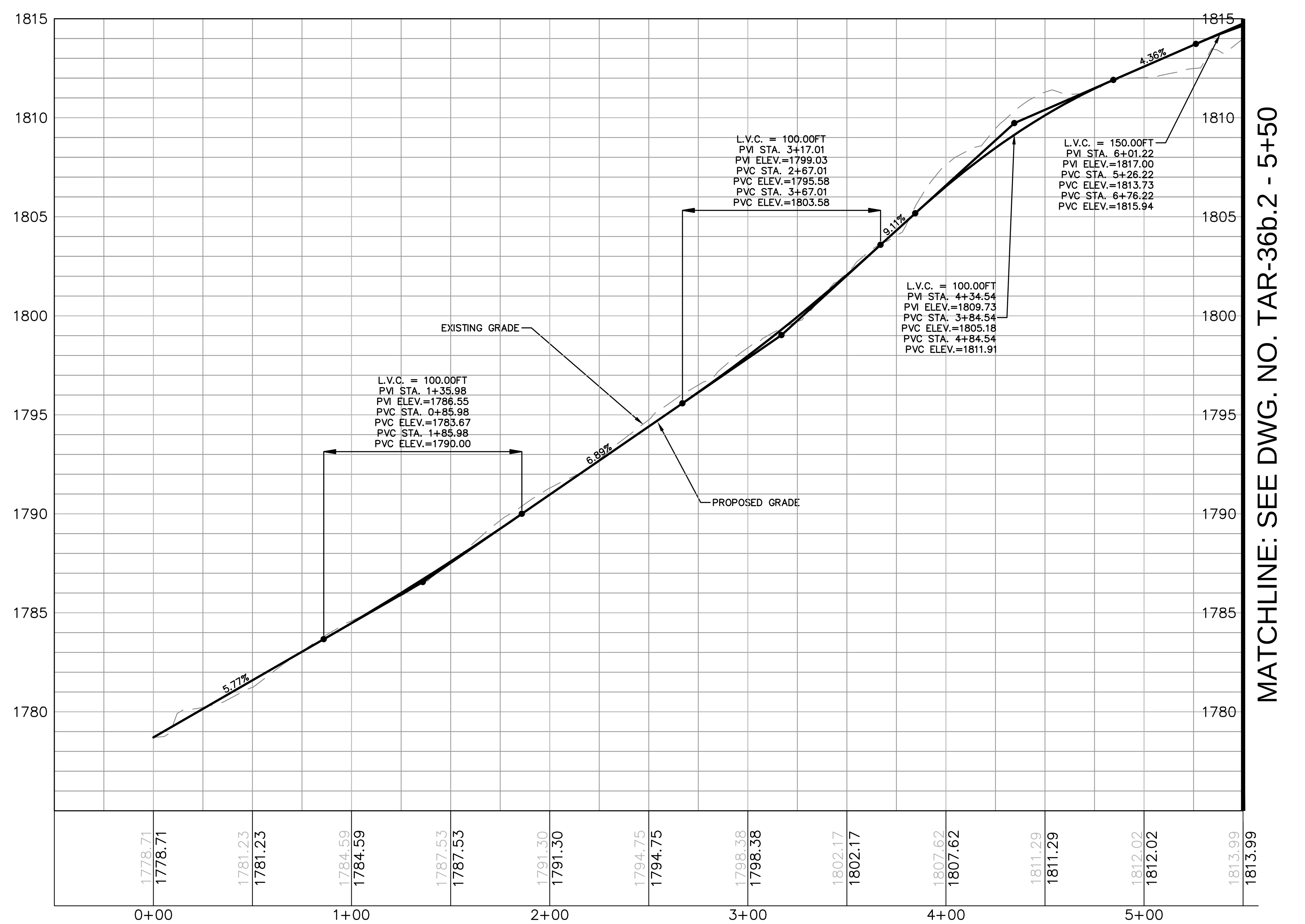


TYPICAL SECTION STA. 17+50 TO 20+75



TYPICAL SECTION LEGEND

1. CENTERLINE OF ACCESS ROAD
2. 12" LAYER CRUSHER RUN GRAVEL
3. FILTER FABRIC
4. UNDISTURBED GROUND IN CUTS/SUBBASE IN FILLS
5. EROSION CONTROL BLANKET, TOPSOIL AND SEED
6. GRASS LINED SWALE (SEE ACCESS ROAD CALCULATIONS FOR EROSION CONTROL MATTING TYPE)
7. 12" LAYER MODIFIED RIPRAP



TAR-36b								
No.		**Northing**	**Easting**	**Bearing**	**Delta(Δ)**	**Length**	**Tangent**	**Radius**
L1	PC PI PT	15360451.16 15360436.91	1544416.52 1544514.75	S81°44'44.78"E		99.26'		
C1	PC PI PT	15360436.91 15360427.94 15360455.82	1544514.75 1544576.65 1544632.63		34°43'54"	121.24'	62.55'	200.0'
L2	PC PI PT	15360455.82 15360483.12	1544632.63 1544687.44	N63°31'21.46"E		61.22'		
C2	PC PI PT	15360483.12 15360506.49 15360503.84	1544687.44 1544734.35 1544786.70		29°22'19"	102.53'	52.42'	200.0'
L3	PC PI PT	15360503.84 15360502.97	1544786.70 1544803.98	S87°06'19.99"E		17.29'		
C3	PC PI PT	15360502.97 15360499.70 15360438.02	1544803.98 1544868.56 1544849.14		104°34'42"	91.26'	64.67'	50.0'
L4	PC PI PT	15360438.02 15360425.38	1544849.14 1544845.17	S17°28'21.89"W		13.25'		
C4	PC PI PT	15360425.38 15360410.42 15360394.96	1544845.17 1544840.46 1544843.09		27°08'06"	30.78'	15.69'	65.0'
L5	PC PI PT	15360394.96 15360368.71	1544843.09 1544847.56	S9°39'44.16"E		26.63'		
C5	PC PI PT	15360368.71 15360325.00 15360312.38	1544847.56 1544855.00 1544812.50		83°07'43"	72.54'	44.34'	50.0'
L6	PC PI PT	15360312.38 15360305.41	1544812.50 1544789.02	S73°27'58.81"W		24.49'		
C6	PC PI PT	15360305.41 15360298.35 15360280.96	1544789.02 1544765.21 1544747.47		27°53'40"	48.69'	24.84'	100.0'
L7	PC PI PT	15360280.96 15360258.78	1544747.47 1544724.84	S45°34'18.64"W		31.69'		
C7	PC PI PT	15360258.78 15360244.94 15360228.61	1544724.84 1544710.73 1544699.60		11°17'14"	39.40'	19.76'	200.0'
L8	PC PI PT	15360228.61 15360206.28	1544699.60 1544684.37	S34°17'04.78"W		27.03'		
C8	PC PI PT	15360206.28 15360186.92 15360163.72	1544684.37 1544671.17 1544667.95		26°22'09"	46.02'	23.43'	100.0'
L9	PC PI PT	15360163.72 15360118.65	1544667.95 1544661.68	S7°54'55.30"W		45.50'		
C9	PC PI PT	15360118.65 15360098.44 15360080.95	1544661.68 1544658.87 1544648.37		23°03'39"	40.25'	20.40'	100.0'
L10	PC PI PT	15360080.95 15360020.63	1544648.37 1544612.16	S30°58'34.50"W		70.35'		
C10	PC PI PT	15360020.63 15359976.00 15359935.29	1544612.16 1544585.37 1544617.81		69°31'51"	91.02'	52.06'	75.0'

GENERAL NOTES

1. CHECK DAMS SHALL BE INSTALLED WITHIN ALL SWALES IN ACCORDANCE WITH THE CHECK DAM BEST MANAGEMENT PRACTICE DETAIL.
2. REFER TO THE ACCESS ROAD GENERAL NOTES FOR SPECIFIC INSTALLATION AND MAINTENANCE SPECIFICATIONS, ACCESS ROAD LEGEND AND MISCELLANEOUS GENERAL NOTES.
3. PROPOSED TRUCK PULL OFF ARE TEMPORARY AND SHALL BE REMOVED AFTER CONSTRUCTION. THE PULL OFF AREA SHALL BE REGRADED TO MATCH PRE CONSTRUCTION CONTOURS WHERE PRACTICAL. ALL PROPOSED PERMANENT SWALES AND ASSOCIATED CHECK DAMS SHALL BE REMOVED AND REINSTALLED ALONG THE PROPOSED EDGE OF ROAD.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CONSTITUTION AND/OR ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.
5. THE CONTRACTOR SHALL CONTACT 811 DIG SAFELY NEW YORK (1-800-962-7962) A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. ALL SLOPES THAT ARE EQUAL TO OR STEEPER THAN 1(V):3(H) SHALL BE SEEDED AND THEN COVERED WITH EROSION CONTROL MATTING. THE MATTING SHALL BE OR APPROVED EQUAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
7. ALL SLOPES THAT ARE STEEPER THAN 1(V):2(H) SHALL BE COVERED WITH RIPRAP SLOPE PROTECTION. SEE SLOPE PROTECTION DETAIL FOR INSTALLATION GUIDELINES.

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

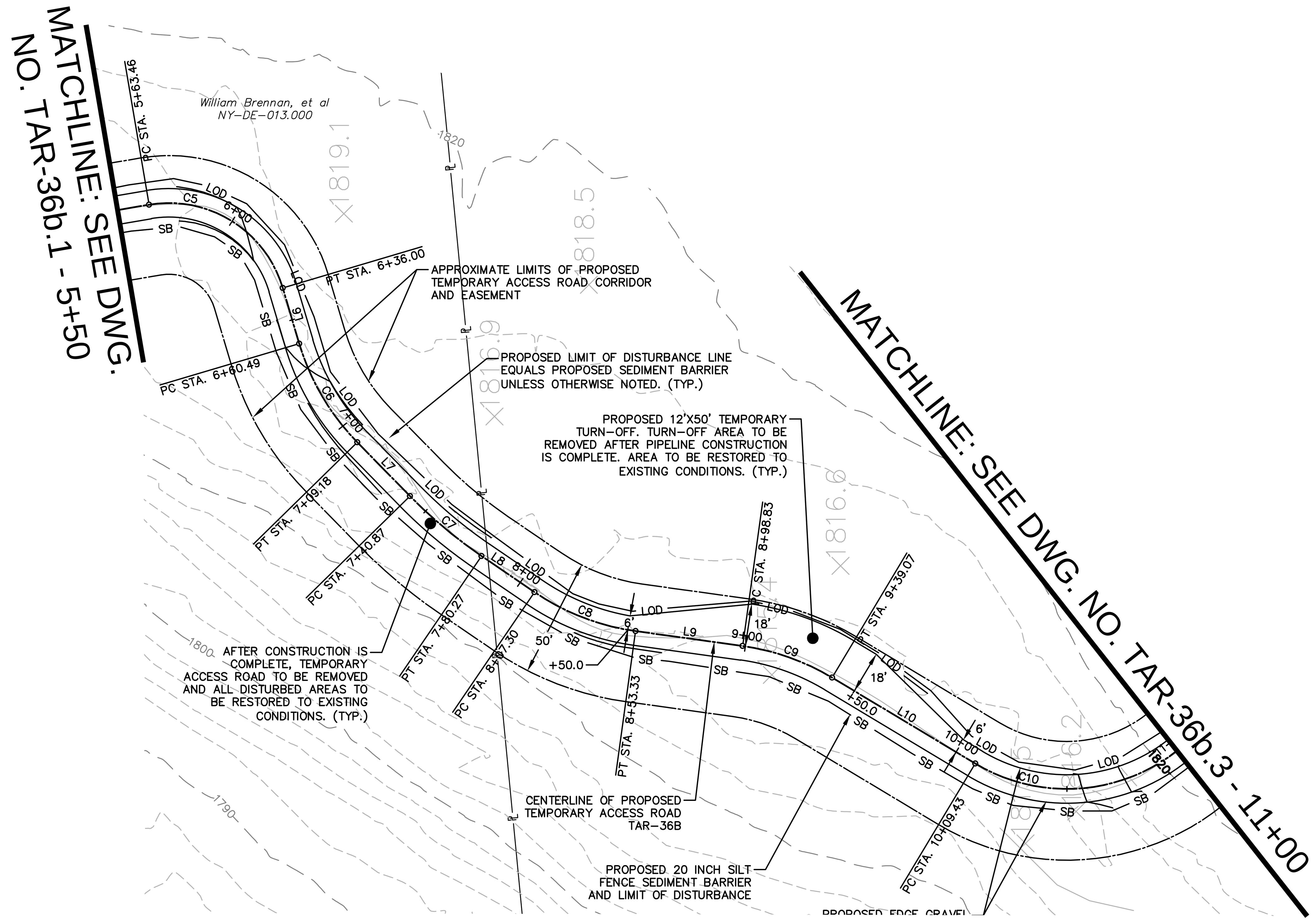
ISSUED FOR BID
NOT FOR CONSTRUCTION

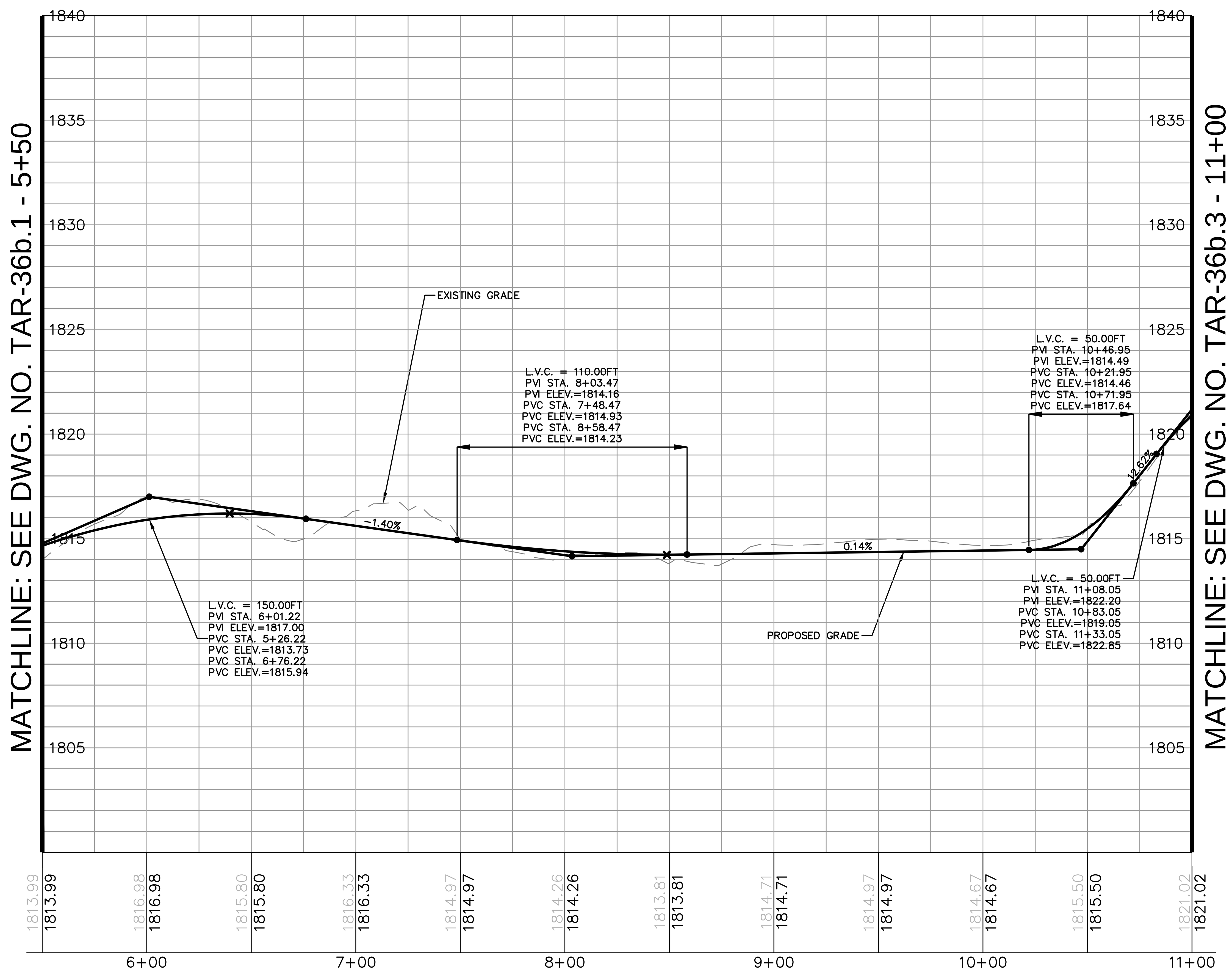
CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-36b @ M.P. 54.37
TOWN OF SIDNEY
DELAWARE COUNTY, NEW YORK

ARCHITECTURE ENGINEERING ENVIRONMENTAL LAND SURVEYING — BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/TAR-36b.1	SHEET 33 OF 102
WO:			





TAR-36b								
No.		Northing	Easting	Bearing	Delta(Δ)	Length	Tangent	Radius
L11	PC PI PT	15359935.29 15359876.33	1544617.81 1544664.80	S38°33'16.38"E		75.39'		
C11	PC PI PT	15359876.33 15359819.81 15359881.90	1544664.80 1544709.85 1544746.85		110°39'02"	96.56'	72.28'	50.0'
L12	PC PI PT	15359881.90 15359926.02	1544746.85 1544773.15	N30°47'41.75"E		51.36'		
C12	PC PI PT	15359926.02 15360034.69 15360099.48	1544773.15 1544837.91 1544946.56		28°23'47"	247.81'	126.50'	500.0'
L13	PC PI PT	15360099.48 15360237.80	1544946.56 1545178.51	N59°11'29.01"E		270.06'		
C13	PC PI PT	15360237.80 15360264.88 15360281.87	1545178.51 1545223.94 1545274.02		12°04'31"	105.38'	52.88'	500.0'
L14	PC PI PT	15360281.87 15360306.88	1545274.02 1545347.77	N71°16'00.28"E		77.87'		
C14	PC PI PT	15360306.88 15360319.53 15360354.23	1545347.77 1545385.08 1545403.73		43°00'28"	75.06'	39.40'	100.0'
L15	PC PI PT	15360354.23 15360481.84	1545403.73 1545472.32	N28°15'32.64"E		144.87'		
C15	PC PI PT	15360481.84 15360551.66 15360628.44	1545472.32 1545509.85 1545529.50		13°54'18"	157.75'	79.26'	650.0'
L16	PC PI PT	15360628.44 15360644.37	1545529.50 1545533.58	N14°21'14.15"E		16.44'		
C16	PC PI PT	15360644.37 15360732.00 15360792.63	1545533.58 1545556.00 1545623.12		33°33'25"	175.70'	90.45'	300.0'
L17	PC PI PT	15360792.63 15360814.88	1545623.12 1545647.76	N47°54'39.02"E		33.19'		
C17	PC PI PT	15360814.88 15360844.00 15360879.37	1545647.76 1545680.00 1545705.24		12°23'54"	86.56'	43.45'	400.0'
L18	PC PI PT	15360879.37 15361048.26	1545705.24 1545825.77	N35°30'45.49"E		207.49'		
C18	PC PI PT	15361048.26 15361060.50 15361075.53	1545825.77 1545834.50 1545835.03		33°28'33"	29.21'	15.04'	50.0'
L19	PC PI PT	15361075.53 15361100.55	1545835.03 1545835.92	N2°02'12.82"E		25.04'		

HORIZONTAL SCALE 1"=40'
GRAPHIC SCALE
40 20 0 40
SCALE IN FEET

VERTICAL SCALE 1"=4'
GRAPHIC SCALE
4 2 0 4
SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
1.	07/21/14		ISSUED FOR BID			

CONSTITUTION PIPELINE COMPANY, LLC
PROPOSED 30" NATURAL GAS PIPELINE
ACCESS ROADS – ROAD DESIGN PLAN
PROPOSED TEMPORARY ACCESS ROAD
TAR-36b @ M.P. 54.37
TOWN OF SIDNEY
DELAWARE COUNTY, NEW YORK

DRAWN BY:	DATE: 10/29/2013	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 26-26-85/TAR-36b.2	SHEET 34 OF 102
W.O.:			