CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP). THE SOILS AND GEOTECHNICAL REPORT AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIME INCLUDING THE FOLLOWING:

3.1 EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM) 3.2 CITY OF COLORADO SPRINGS/EL PASO COUNTY ENGINEERING CRITERIA MANUAL VOLUMES 1 AND 2.

3.3 COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.

. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ACCURACY SHOW EXISTING CONDITION BOTH ONSITE AND OFFSITE ON THE CONSTRUCTION PLANS. ANY MODIFICATION NECESSARY DUE TO CONFLICT OMISSIONS OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPERS

ONCE THE ESQCP HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPS AS INDICATED ON THE GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY PCD

IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORM WATER QUALITY CONTROL PERMIT (ESQCP), US ARMY CORPS OF ENGINEER ISSUED 401 AND/OR 404 PERMITS AND COUNTY AND STATE FUGITIVE DUST PERMITS.

ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE CONSTRUCTION SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

. ANY TEMPORARY SIGNAGE AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOW AND MUTCD CRITERIA

9. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRE BY EL PASO COUNTY DOT INCLUDING WORK WITHIN THE RIGHT—OF—WAY AND SPECIAL

10. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFFSITE DISTURBANCE

STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR

NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE

A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.

ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.

CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER.

ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.

TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.

FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.

ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.

EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION, ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 ORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVE

COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF

ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF

CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP, NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER

DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.

EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.

WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND

WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE

THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A

THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.

NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.

BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS. ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.

NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT

OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8. CRS). AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.

PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.

A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM

THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC., ENTITLED GEOLOGIC HAZARD/LAND STUDY AND PRELIMINARY SUBSURFACE SOIL INVESTIGATION STERLING RANCH, DATED OCTOBER 31, 2006, AND SHALL BE CONSIDERED A PART OF THESE

AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION 4300 CHERRY CREEK DRIVE SOUTH

DENVER, CO 80246-1530

ATTN: PERMITS UNIT

PROPERLY DISPOSED OF IMMEDIATELY.

# STERLING RANCH LIFT STATION AND FORCE MAIN

COUNTY OF EL PASO, STATE OF COLORADO

# GRADING AND EROSION CONTROL PLANS

JANUARY 2020

**FORCEMAIN** 

WOODMEN RD.

COUNTY ENGINEERING: FIRE DISTRICT: GAS DEPARTMENT: COMMUNICATIONS: **BYPASS** 

## SHEET INDEX

N.T.S.

SHEET 1 TITLE SHEET SHEET 2 GRADING & EROSION CONTROL PLAN SHEET 3 GRADING & EROSION CONTROL PLAN SHEET 4 GRADING & EROSION CONTROL PLAN SHEET 5 GRADING & EROSION CONTROL PLAN GRADING & EROSION CONTROL PLAN GRADING & EROSION CONTROL PLAN SHEET 8 GRADING & EROSION CONTROL PLAN SHEET 9 GRADING & EROSION CONTROL PLAN SHEET 10 GRADING & EROSION CONTROL PLAN SHEET 11 GRADING & EROSION CONTROL PLAN SHEET 12 GRADING & EROSION CONTROL PLAN SHEET 13 GRADING & EROSION CONTROL PLAN SHEET 14 GRADING & EROSION CONTROL PLAN SHEET 15 GRADING & EROSION CONTROL DETAILS

STAGING AREA TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.

THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.

NO PORTION OF THIS PROPERTY IS LOCATED WITHIN A DESIGNATED FEMA FLOODPLAIN IN ACCORDANCE WITH FLOOD INSURANCE RATE MAPS (FIRM) 08041C0533G AND 08041C0535G, EFFECTIVE DATE MARCH 12, 2018.

CONTRACTOR SHALL MINIMIZE DISTURBANCE OF EXISTING WETLANDS AND FOLLOW ALL OF THE RECOMMENDATIONS OUTLINED IN THE WETLANDS DELINEATION REPORT FOR THE STERLING RANCH DEVELOPMENT (PREPARED BY CORE CONSULTANTS, INC., PN 15-001, DATED MAY 7TH, 2015), THE PRE-CONSTRUCTION NOTIFICATION REPORT PREPARED BY CORE CONSULTANTS, INC., AS WELL AS ALL OTHER AVAILABLE INFORMATION AND JURISDICTIONAL REQUIREMENTS. INSTALLATION OF THE FORCE MAIN SHALL BE LIMITED TO THE

DISTURBANCE AREA SHOWN ON THESE PLANS AND WETLAND

MITIGATION AS OUTLINED IN THE 404 PERMIT.

# PROJECT CONTROL

#### HORIZONTAL CONTROL:

N & CORNER, SEC 3, T13S, R65W NORTHING: 410191.1110 EASTING: 241732.9390 ELEVATION: 7010.07 DESCRIPTION: 2  $\frac{1}{2}$ " ALUM CAP W/ 2" ALUM PIPE, LS 11624 NW CORNER, SEC 3, T13S, R65W NORTHING: 410154.8270 EASTING: 239010.5240

DESCRIPTION: 2 ½" ALUM CAP W/ ¾" REBAR, LS 11624

ELEVATION: 7028.15

STERLING RANCH DEVELOPMENT BENCHMARK NORTHING: 413533.64 EASTING: 235994.01 ELEVATION: 7076.93 DESCRIPTION: 2" REBAR WITH 1" PLASTIC CAP

OWNER/DEVELOPER:

20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JIM MORLEY (719) 598-5192

CIVIL ENGINEER: M & S CIVIL CONSULTANTS, INC. 102 E PIKES PEAK AVE. 5TH FLOOR

COLORADO SPRINGS, CO 80903 VIRGIL A. SANCHEZ P.E. (719) 955-5485 EL PASO COUNTY PLANNING

AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 JEFF RICE, P.E. (719) 520-6300

TRAFFIC ENGINEERING: EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE

> COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460

WATER RESOURCES: STERLING RANCH METRO DISTRICT ENGINEERS JDS-HYDRO CONSULTANTS

> 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668-8769

BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD

COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300

COLORADO SPRINGS UTILITIES 7710 DURANT DR.

COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556 MOUNTAIN VIEW ELECTRIC

11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283

QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674

#### ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.



VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160 FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

#### **DEVELOPER'S STATEMENT:**

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JAMES F. MORLEY SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201

COLORADO SPRINGS, CO 80903 (719) 471-1742

### EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

JENNIFER IRVINE, P.E COUNTY ENGINEER/ECM ADMINISTRATOR

TELEPHON FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987

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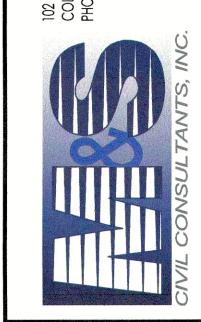
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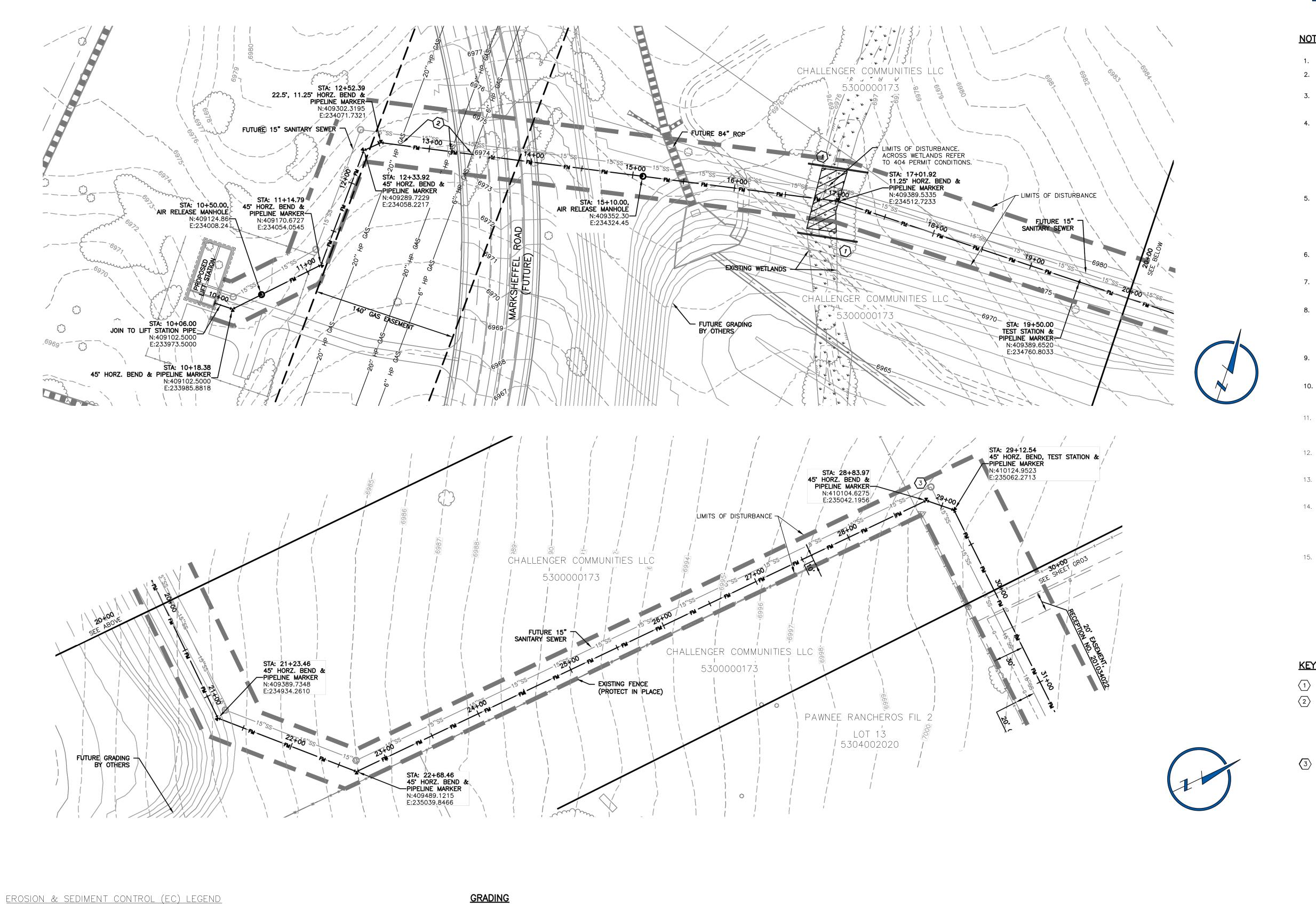
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GRADING



& MARKING ELECTRIC, WATER &



EXISTING CONTOUR

PROPOSED SWALE

WETLANDS AREA NOT TO BE DISTURBED

GRADE BREAK

SPOT ELEVATION

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×4638.00

- - 1. SEE SHEET GBQD FOR GENERAL NOTES.
  - 2. STATIONING IS BASED ON THE CENTERLINE BETWEEN THE 8" AND 10" FORCE MAINS.
  - 3. CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS PER DETAIL.
  - 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE PROJECT. REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
  - 5. CONTRACTOR SHALL BE REQUIRED TO STAY WITHIN THE CONSTRUCTION EASEMENTS AND/OR ROAD RIGHT OF WAY WHEN CONSTRUCTING THE PIPELINE. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE
    DURING CONSTRUCTION PER EL PASO COUNTY REQUIREMENTS.
- 6. CONTRACTOR SHALL PROVIDE A MINIMUM 1' OF CLEARANCE BETWEEN ALL UTILITIES UNLESS
- 7. CONTRACTOR SHALL PLACE SEDIMENT CONTROL LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
- 9. CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING ANY SOD AND/OR LANDSCAPING.
- 10. CONTRACTOR SHALL PROTECT IN PLACE OR REMOVE AND REPLACE ANY SIGNS, MAILBOXES, LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION.
- 11. CONTRACTOR SHALL PROTECT AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH CONSTRUCTION FENCING OR OTHER METHODS AS
- 12. PER THIS PLAN, NO GRADING IS PROPOSED OUTSIDE THE CONSTRUCTION LIMITS OR EASEMENT AREA.
- 13. CONTRACTOR SHALL REPLACE THE AREA OF CONSTRUCTION TO THE EXISTING, PRE-CONSTRUCTION GRADE.
- 14. CONTRACTOR SHALL USE THE CONSTRUCTION CORRIDOR FOR HEAVY EQUIPMENT ACCESS. STAGING, STORAGE OF MATERIALS, STOCKPILES, OR WASTES SHALL REMAIN ON THE STERLING RANCH PROPERTY IN LOCATIONS ALREADY BEING USED.
- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE VEGETATION AND 5% ROADWAYS.

### **KEYNOTE:**

- 1 SEDIMENT CONTROL LOG PER DETAIL SHEET GR15
- CONTRACTOR SHALL COORDINATE AND OBTAIN PERMITS WITH THE UTILITY COMPANIES PRIOR TO CONSTRUCTION AND CROSSING THE EXISTING HIGH PRESSURE GAS MAIN.
  - A. COLORADO INTERSTATE GAS (719) 520-4816 B. MAGELLAN MIDSTREAM GAS
- (918) 574-7098 REMOVE AND RE-INSTALL 50 LF OF EXISTING FENCE

48 HRS BEFORE YOU DIG

& MARKING GAS, ELECTRIC, FOR BURIED UTILITY INFORMATION

VTC

VEHICLE TRACKING CONTROL

BOUNDARY/EASEMENT

TEMPORARY SEEDING (SEE NOTE 9.)

SEDIMENT CONTROL LOG (SEE NOTE 7.)

(COMPACTED) EARTH BERM (SEE NOTE 8.)

LIMITS OF DISTURBANCE / CONSTRUCTION

WATER & TELEPHONE CALL 1-800-922-1987

FORCE

STATION

RANCH

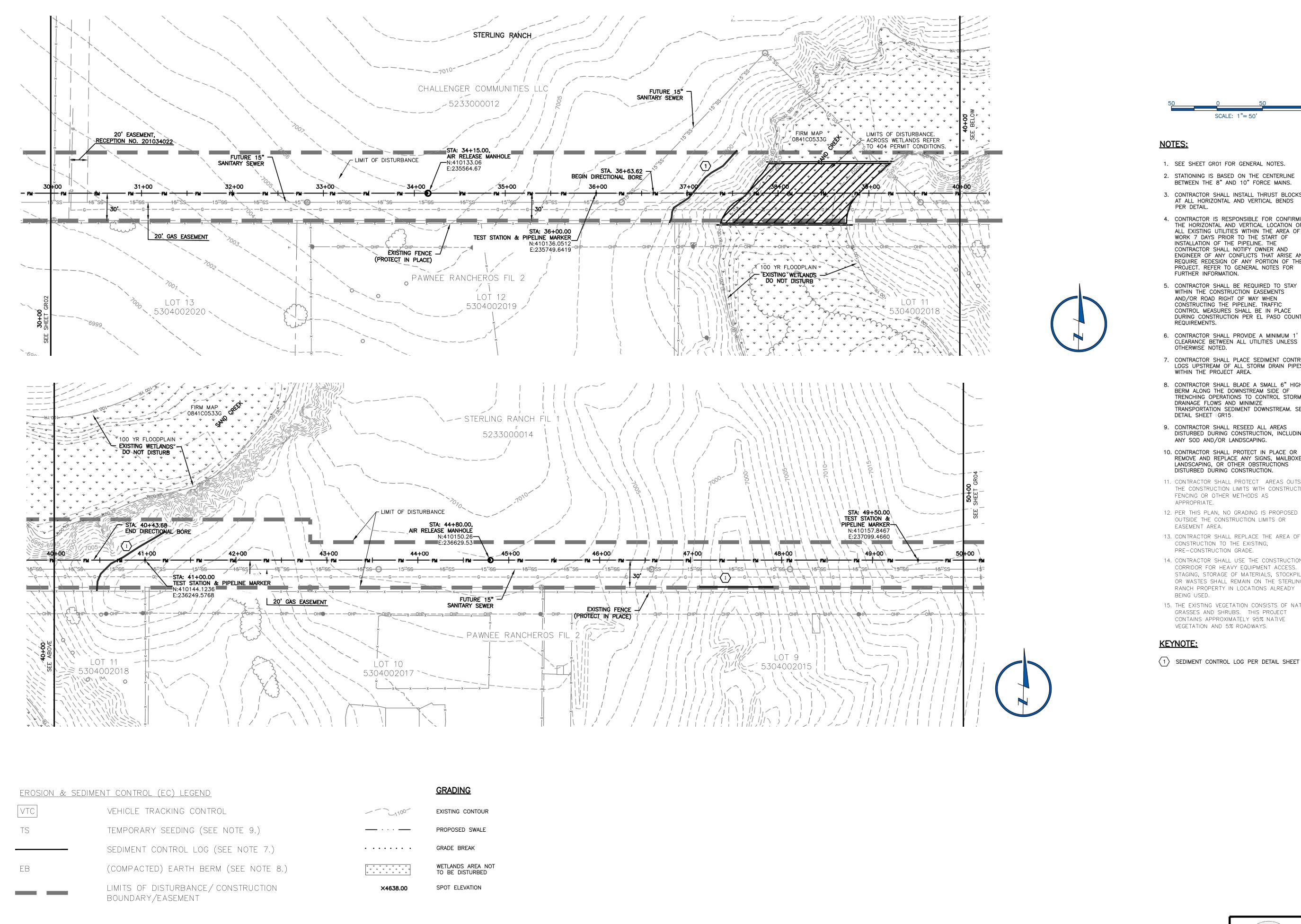
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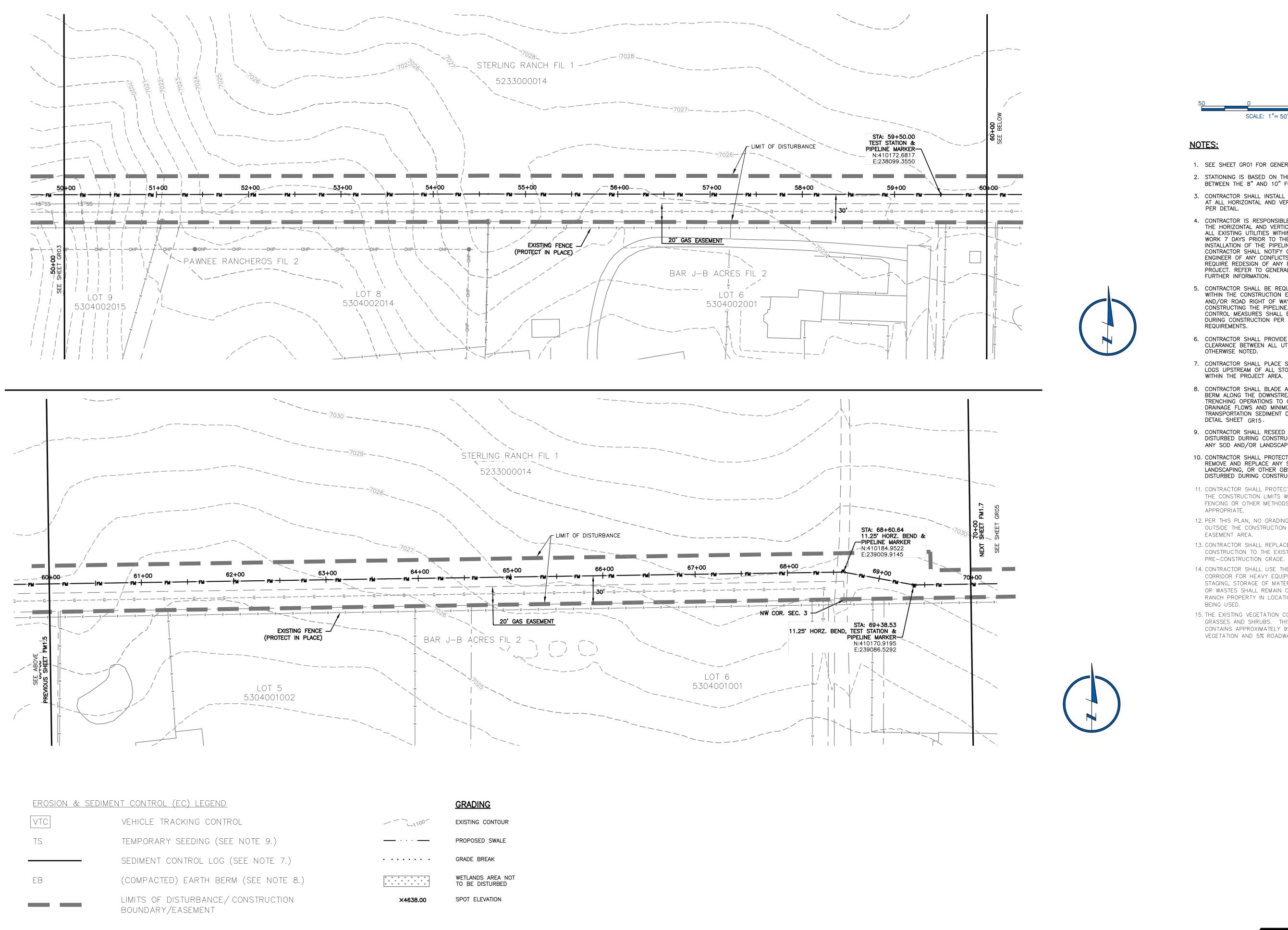
- 1. SEE SHEET GR01 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE BETWEEN THE 8" AND 10" FORCE MAINS.
- 3. CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS PER DETAIL.
- 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE PROJECT. REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
- 5. CONTRACTOR SHALL BE REQUIRED TO STAY WITHIN THE CONSTRUCTION EASEMENTS AND/OR ROAD RIGHT OF WAY WHEN CONSTRUCTING THE PIPELINE. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE DURING CONSTRUCTION PER EL PASO COUNTY
- 6. CONTRACTOR SHALL PROVIDE A MINIMUM 1' OF CLEARANCE BETWEEN ALL UTILITIES UNLESS OTHERWISE NOTED.
- 7. CONTRACTOR SHALL PLACE SEDIMENT CONTROL LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET | GR15.
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- 11. CONTRACTOR SHALL PROTECT AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH CONSTRUCTION FENCING OR OTHER METHODS AS APPROPRIATE.
- OUTSIDE THE CONSTRUCTION LIMITS OR EASEMENT AREA. 13. CONTRACTOR SHALL REPLACE THE AREA OF
- CONSTRUCTION TO THE EXISTING, PRE-CONSTRUCTION GRADE.
- 14. CONTRACTOR SHALL USE THE CONSTRUCTION CORRIDOR FOR HEAVY EQUIPMENT ACCESS. STAGING, STORAGE OF MATERIALS, STOCKPILES, OR WASTES SHALL REMAIN ON THE STERLING RANCH PROPERTY IN LOCATIONS ALREADY BEING USED.
- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE VEGETATION AND 5% ROADWAYS.

#### **KEYNOTE:**

1 SEDIMENT CONTROL LOG PER DETAIL SHEET GR15

TELEPHONE FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987

& MARKING GAS, ELECTRIC, WATER &



SCALE: 1"= 50'

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GRADING

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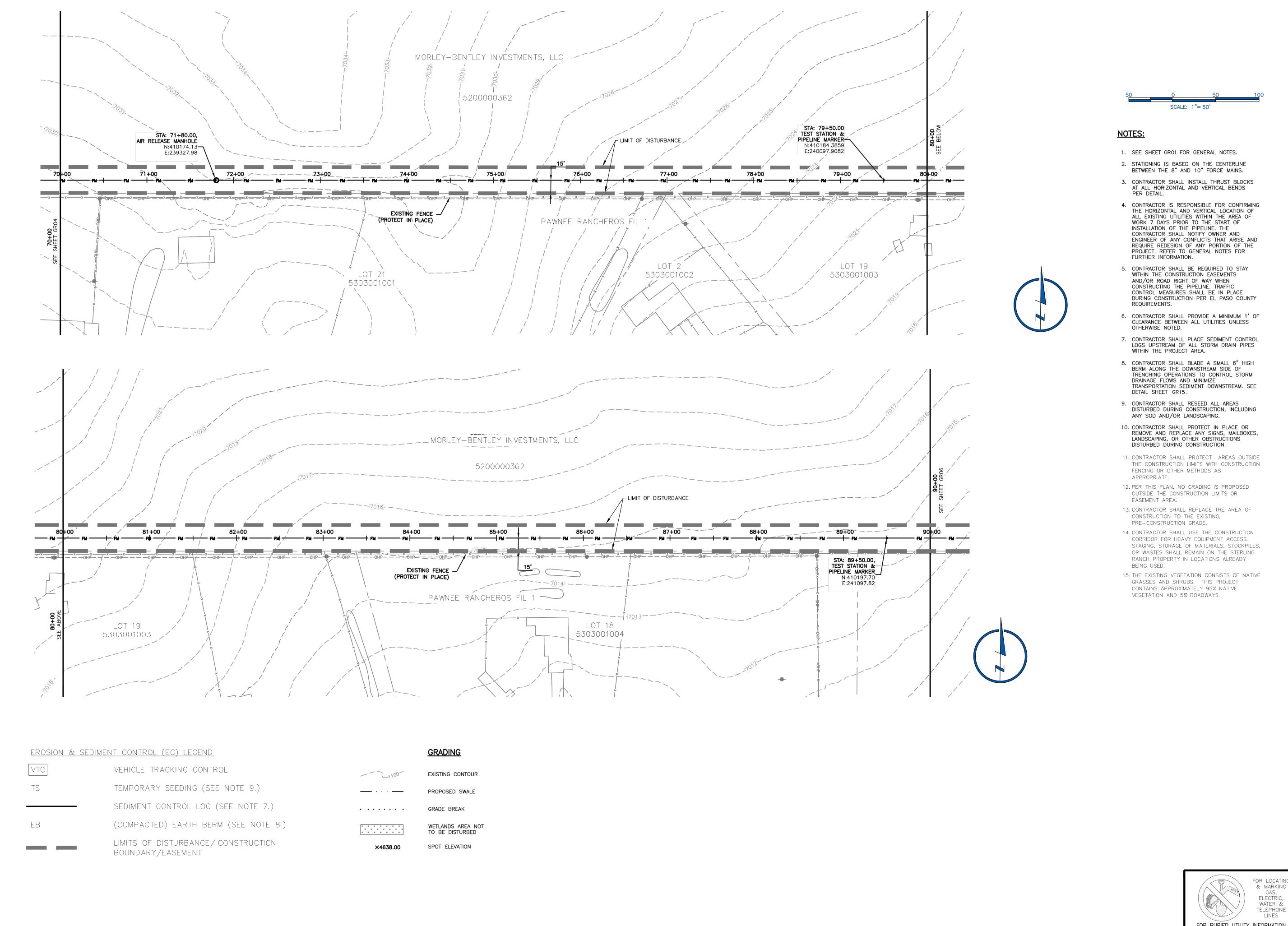
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#### NOTES:

- 1. SEE SHEET GR01 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE
- 3. CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS
- 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE
- OTHERWISE NOTED. 7. CONTRACTOR SHALL PLACE SEDIMENT CONTROL
- ANY SOD AND/OR LANDSCAPING.
- CONTRACTOR SHALL PROTECT IN PLACE OR REMOVE AND REPLACE ANY SIGNS, MAILBOXES, LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION.
- 11. CONTRACTOR SHALL PROTECT AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH CONSTRUCTION FENCING OR OTHER METHODS AS
- OUTSIDE THE CONSTRUCTION LIMITS OR EASEMENT AREA. 13. CONTRACTOR SHALL REPLACE THE AREA OF
- 14. CONTRACTOR SHALL USE THE CONSTRUCTION CORRIDOR FOR HEAVY EQUIPMENT ACCESS. STAGING, STORAGE OF MATERIALS, STOCKPILES, OR WASTES SHALL REMAIN ON THE STERLING RANCH PROPERTY IN LOCATIONS ALREADY
- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE

- BETWEEN THE 8" AND 10" FORCE MAINS.
- PER DETAIL.
- PROJECT. REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
- 5. CONTRACTOR SHALL BE REQUIRED TO STAY WITHIN THE CONSTRUCTION EASEMENTS AND/OR ROAD RIGHT OF WAY WHEN CONSTRUCTING THE PIPELINE. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE DURING CONSTRUCTION PER EL PASO COUNTY REQUIREMENTS.
- 6. CONTRACTOR SHALL PROVIDE A MINIMUM 1' OF CLEARANCE BETWEEN ALL UTILITIES UNLESS
- LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE
  TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
- CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING
- APPROPRIATE. 12. PER THIS PLAN, NO GRADING IS PROPOSED
- CONSTRUCTION TO THE EXISTING,
- BEING USED.
- VEGETATION AND 5% ROADWAYS.

& MARKING GAS, ELECTRIC, WATER & TELEPHONE FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987



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CLP VERTICAL: SHEET 5 OF N/A

GRADING
PROJECT NO. 09-010
DESIGNED BY: DM
DRAWN BY: CLP
CHECKED BY: DM

102 E. PIKES PEAK AVE., 5TH FLOO COLORADO SPRINGS, CO 8090 PHONE: 719.955.5485

FORCE

STERLING

CONTROL

EROSION

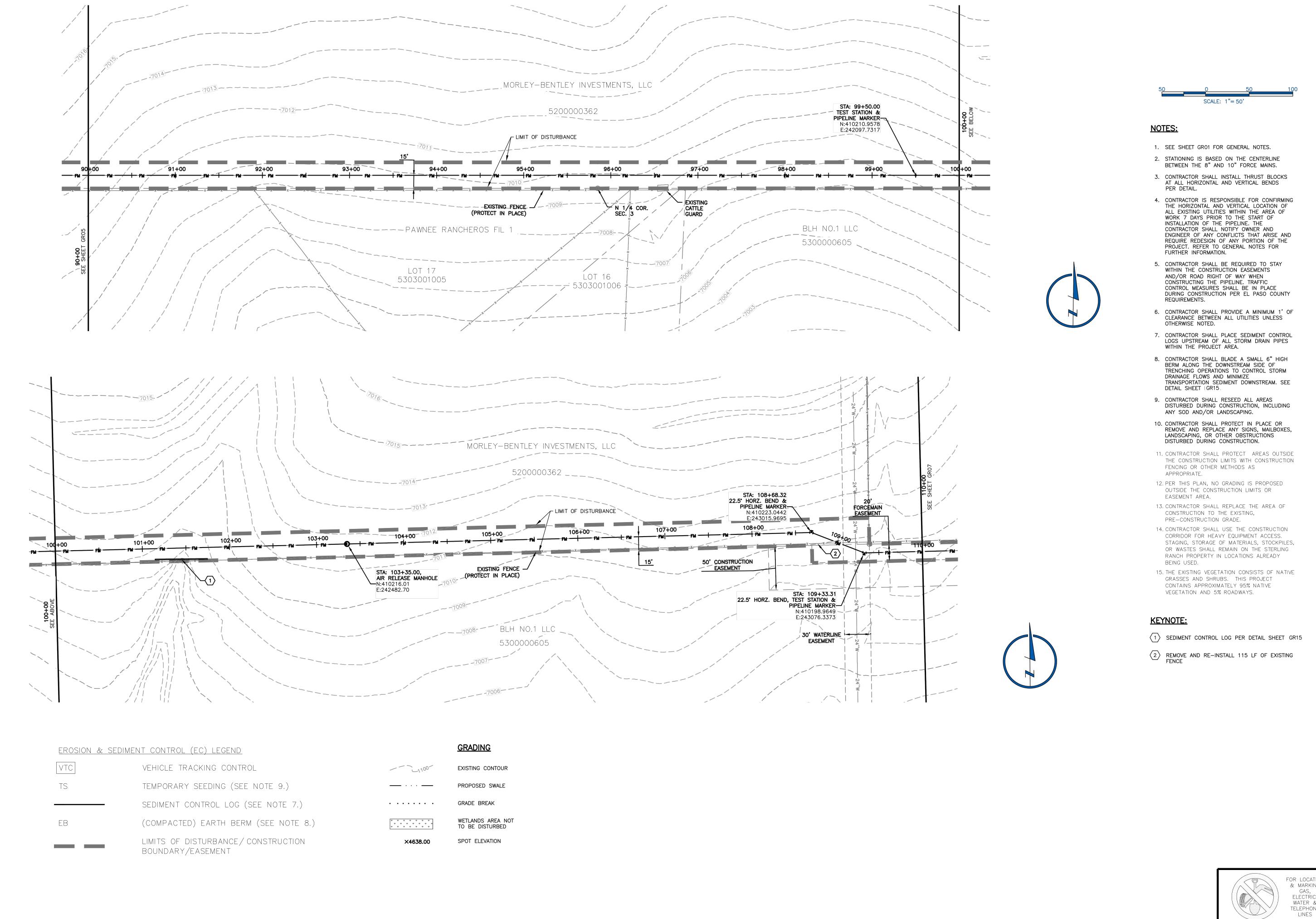
CWIL CONSULTANTS, INC

BEHALF OF M&S CIVIL CONSULTANTS, INC.

SIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR

DESCRIPTION:

FOR BURIED UTILITY INFORMATION
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CALL 1-800-922-1987



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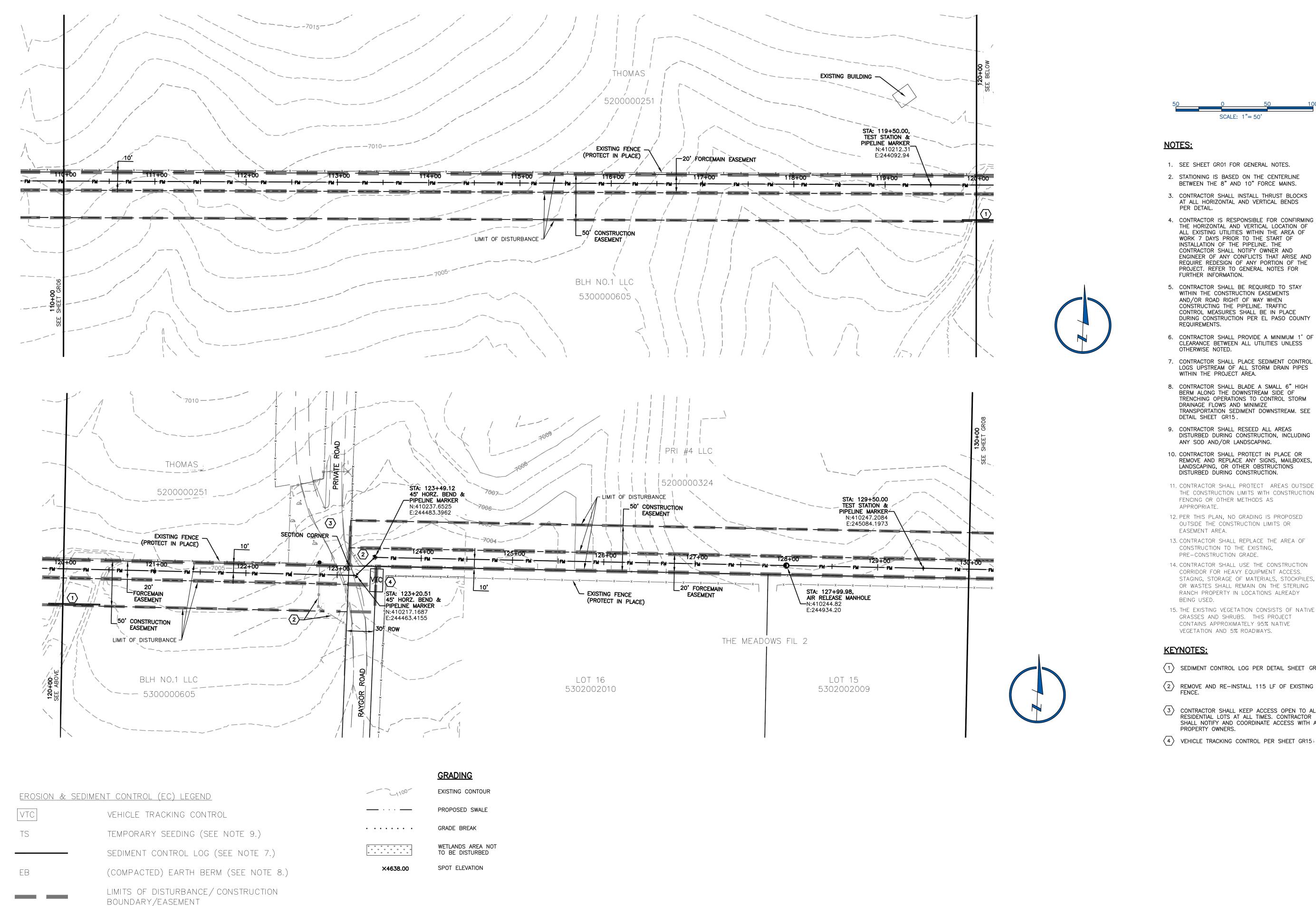
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& MARKING GAS, ELECTRIC, WATER & TELEPHONE FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987



RANCH

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GRADING

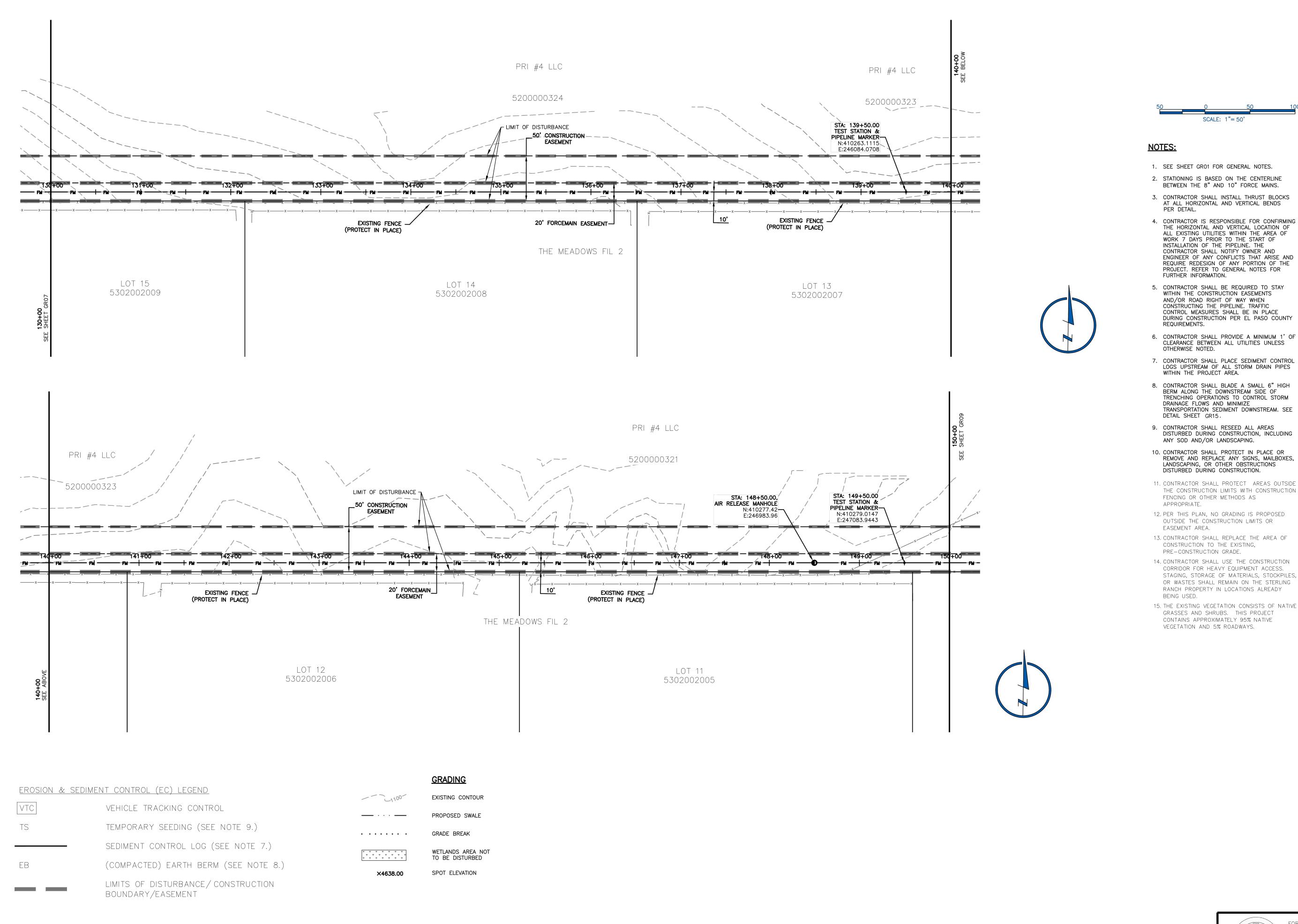
#### NOTES:

- 1. SEE SHEET GR01 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE BETWEEN THE 8" AND 10" FORCE MAINS.
- CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS PER DETAIL.
- 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE PROJECT. REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
- 5. CONTRACTOR SHALL BE REQUIRED TO STAY WITHIN THE CONSTRUCTION EASEMENTS AND/OR ROAD RIGHT OF WAY WHEN CONSTRUCTING THE PIPELINE. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE DURING CONSTRUCTION PER EL PASO COUNTY REQUIREMENTS.
- CLEARANCE BETWEEN ALL UTILITIES UNLESS OTHERWISE NOTED. 7. CONTRACTOR SHALL PLACE SEDIMENT CONTROL
- LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE
  TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
- 9. CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING ANY SOD AND/OR LANDSCAPING.
- CONTRACTOR SHALL PROTECT IN PLACE OR REMOVE AND REPLACE ANY SIGNS, MAILBOXES, LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION.
- 11. CONTRACTOR SHALL PROTECT AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH CONSTRUCTION FENCING OR OTHER METHODS AS APPROPRIATE.
- 12. PER THIS PLAN, NO GRADING IS PROPOSED OUTSIDE THE CONSTRUCTION LIMITS OR EASEMENT AREA.
- 13. CONTRACTOR SHALL REPLACE THE AREA OF CONSTRUCTION TO THE EXISTING, PRE-CONSTRUCTION GRADE.
- 14. CONTRACTOR SHALL USE THE CONSTRUCTION CORRIDOR FOR HEAVY EQUIPMENT ACCESS. STAGING, STORAGE OF MATERIALS, STOCKPILES, OR WASTES SHALL REMAIN ON THE STERLING RANCH PROPERTY IN LOCATIONS ALREADY BEING USED.
- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE VEGETATION AND 5% ROADWAYS.

#### **KEYNOTES:**

- (1) SEDIMENT CONTROL LOG PER DETAIL SHEET GR015
- 2 REMOVE AND RE-INSTALL 115 LF OF EXISTING
- CONTRACTOR SHALL KEEP ACCESS OPEN TO ALL RESIDENTIAL LOTS AT ALL TIMES. CONTRACTOR SHALL NOTIFY AND COORDINATE ACCESS WITH ALL PROPERTY OWNERS.
- 4 VEHICLE TRACKING CONTROL PER SHEET GR15





STATION

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CONTROL

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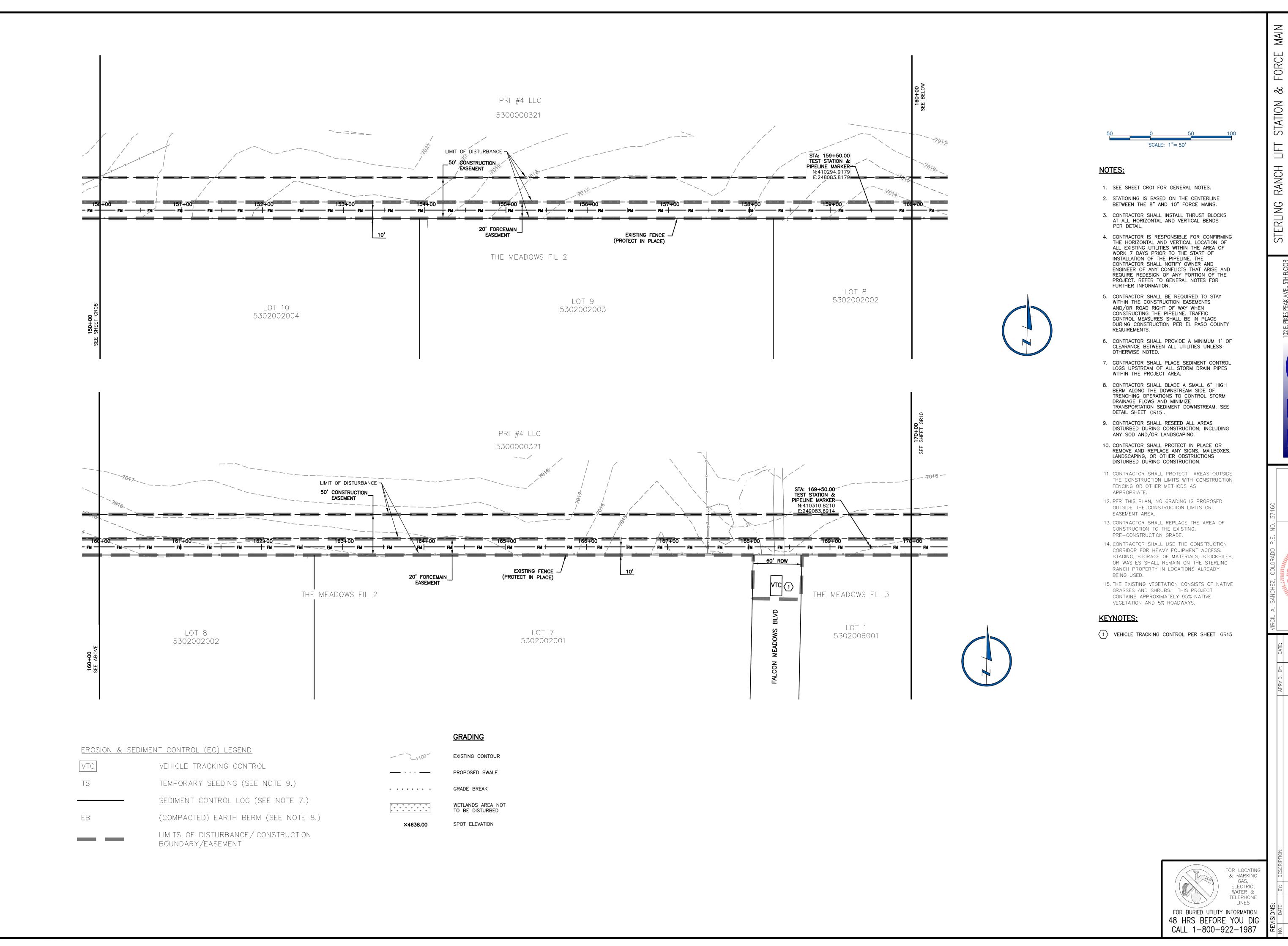
GRADING

- 1. SEE SHEET GRO1 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE
- 3. CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS
- 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND PROJECT. REFER TO GENERAL NOTES FOR
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- OTHERWISE NOTED. 7. CONTRACTOR SHALL PLACE SEDIMENT CONTROL
- LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
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NOTES:

- BETWEEN THE 8" AND 10" FORCE MAINS.
- PER DETAIL.
- THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE FURTHER INFORMATION.
- 5. CONTRACTOR SHALL BE REQUIRED TO STAY
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- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH
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& MARKING GAS, ELECTRIC, WATER & TELEPHONE FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987

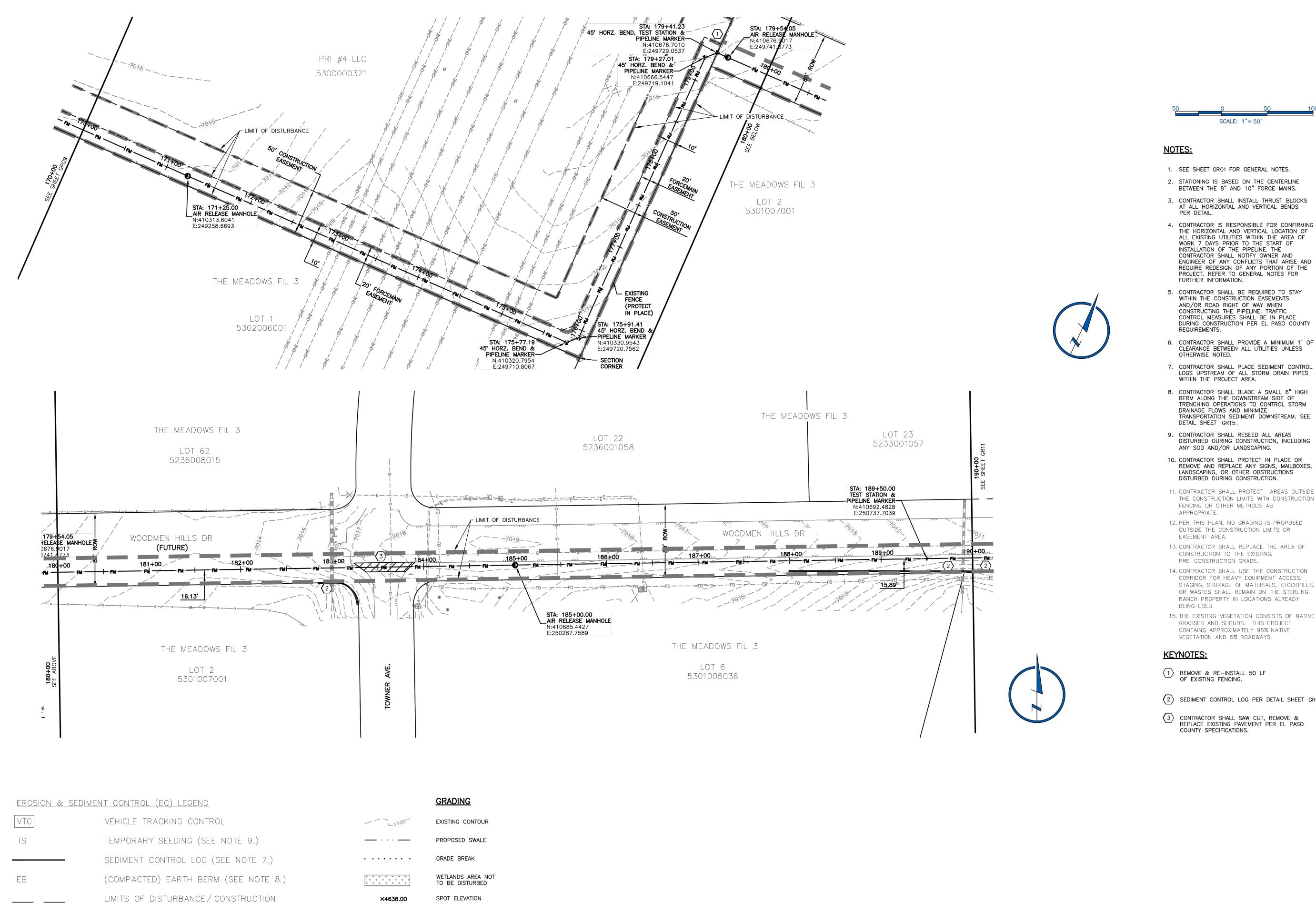


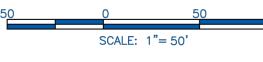
CONTROL

EROSION

GRADING

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STATION

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CONTROL

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GRADING

SECT NO. 09-010

NED BY: DM

N BY: CLP

KED BY: DM

### NOTES:

- 1. SEE SHEET GRO1 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE BETWEEN THE 8" AND 10" FORCE MAINS.
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- 5. CONTRACTOR SHALL BE REQUIRED TO STAY WITHIN THE CONSTRUCTION EASEMENTS AND/OR ROAD RIGHT OF WAY WHEN CONSTRUCTING THE PIPELINE. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE DURING CONSTRUCTION PER EL PASO COUNTY REQUIREMENTS.
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  TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15. 9. CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING

BERM ALONG THE DOWNSTREAM SIDE OF

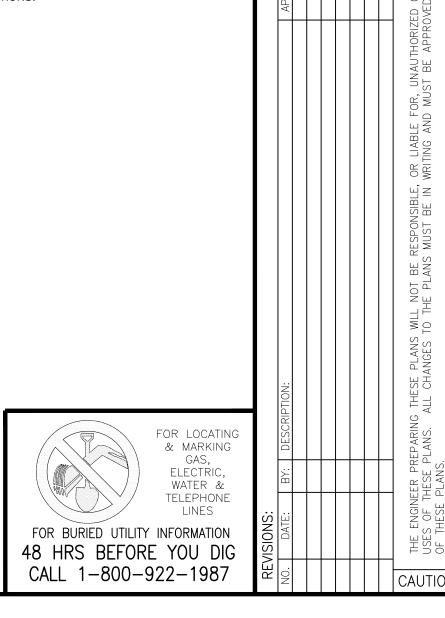
ANY SOD AND/OR LANDSCAPING. 10. CONTRACTOR SHALL PROTECT IN PLACE OR

REMOVE AND REPLACE ANY SIGNS, MAILBOXES,

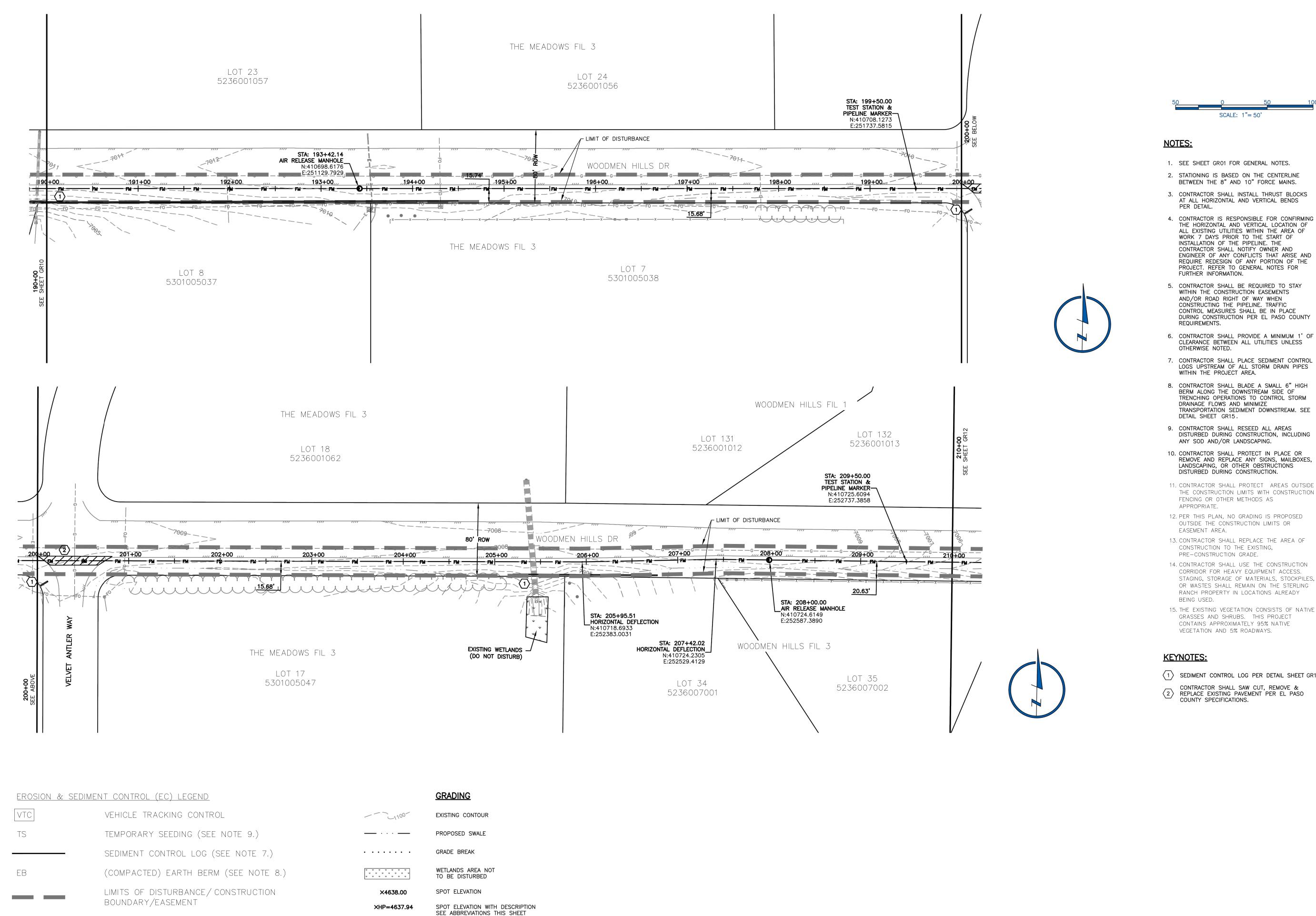
- LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION. 11. CONTRACTOR SHALL PROTECT AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH CONSTRUCTION
- FENCING OR OTHER METHODS AS APPROPRIATE. 12. PER THIS PLAN, NO GRADING IS PROPOSED OUTSIDE THE CONSTRUCTION LIMITS OR
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- 14. CONTRACTOR SHALL USE THE CONSTRUCTION CORRIDOR FOR HEAVY EQUIPMENT ACCESS. STAGING, STORAGE OF MATERIALS, STOCKPILES, OR WASTES SHALL REMAIN ON THE STERLING RANCH PROPERTY IN LOCATIONS ALREADY BEING USED.
- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE VEGETATION AND 5% ROADWAYS.

### **KEYNOTES:**

- 1 REMOVE & RE-INSTALL 50 LF OF EXISTING FENCING.
- 2 SEDIMENT CONTROL LOG PER DETAIL SHEET GR15
- CONTRACTOR SHALL SAW CUT, REMOVE & REPLACE EXISTING PAVEMENT PER EL PASO COUNTY SPECIFICATIONS.



BOUNDARY/EASEMENT



RANCH

STERLING

CONTROL

EROSION

GRADING

CCT NO. 09-010

NED BY: DM

N BY: CLP

KED BY: DM

#### NOTES:

- 1. SEE SHEET GR01 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE BETWEEN THE 8" AND 10" FORCE MAINS.
- 3. CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS PER DETAIL.
- 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE PROJECT. REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
- 5. CONTRACTOR SHALL BE REQUIRED TO STAY WITHIN THE CONSTRUCTION EASEMENTS AND/OR ROAD RIGHT OF WAY WHEN CONSTRUCTING THE PIPELINE. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE DURING CONSTRUCTION PER EL PASO COUNTY
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- LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE
  TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
- 9. CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING ANY SOD AND/OR LANDSCAPING.
- 10. CONTRACTOR SHALL PROTECT IN PLACE OR REMOVE AND REPLACE ANY SIGNS, MAILBOXES, LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION.
- THE CONSTRUCTION LIMITS WITH CONSTRUCTION FENCING OR OTHER METHODS AS APPROPRIATE. 12. PER THIS PLAN, NO GRADING IS PROPOSED

OUTSIDE THE CONSTRUCTION LIMITS OR

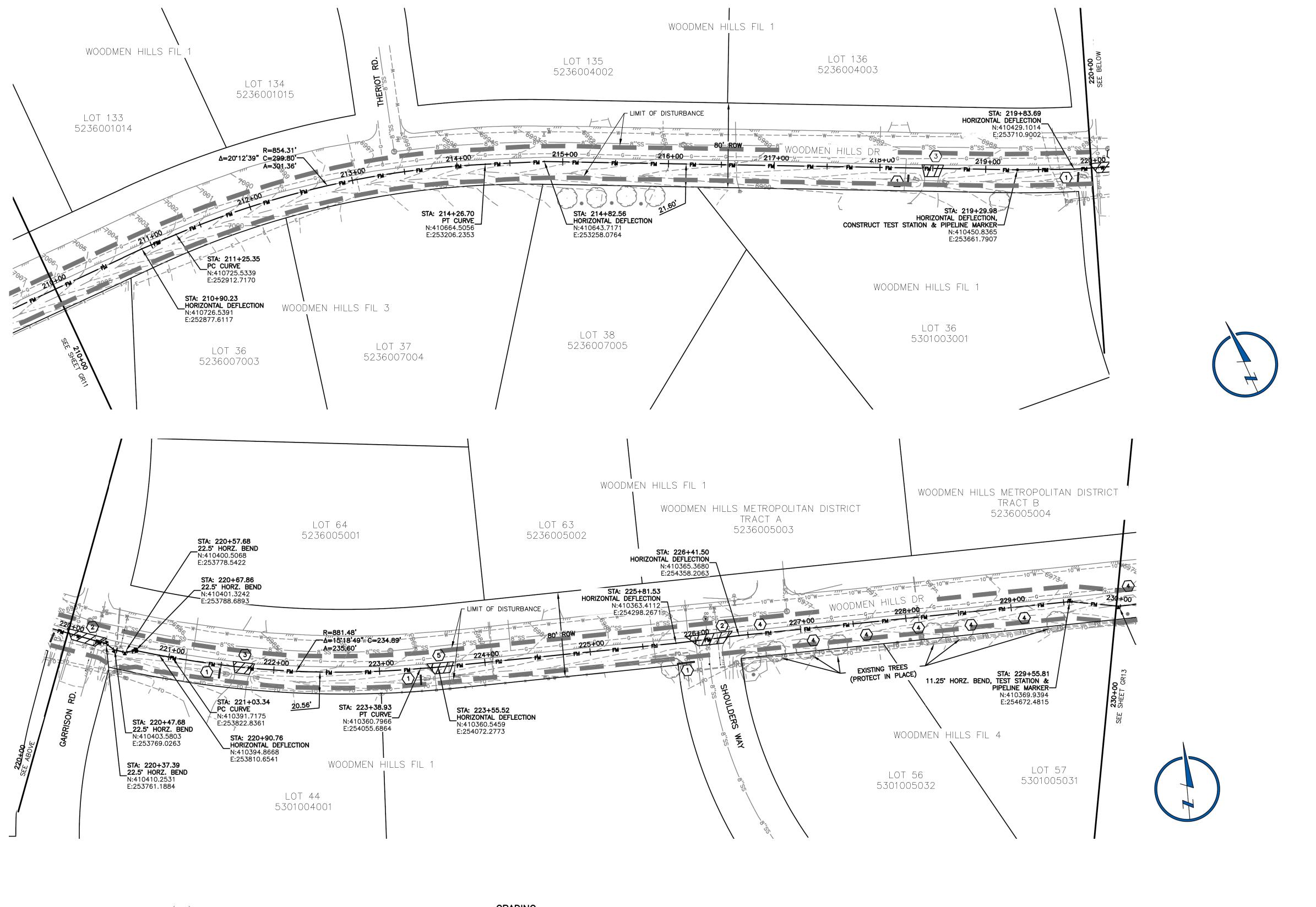
- EASEMENT AREA. 13. CONTRACTOR SHALL REPLACE THE AREA OF CONSTRUCTION TO THE EXISTING,
- PRE-CONSTRUCTION GRADE. 14. CONTRACTOR SHALL USE THE CONSTRUCTION CORRIDOR FOR HEAVY EQUIPMENT ACCESS. STAGING, STORAGE OF MATERIALS, STOCKPILES, OR WASTES SHALL REMAIN ON THE STERLING RANCH PROPERTY IN LOCATIONS ALREADY BEING USED.
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## **KEYNOTES:**

- 1 SEDIMENT CONTROL LOG PER DETAIL SHEET GR154
- CONTRACTOR SHALL SAW CUT, REMOVE & REPLACE EXISTING PAVEMENT PER EL PASO COUNTY SPECIFICATIONS.

FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG

& MARKING GAS, ELECTRIC, WATER & TELEPHONE CALL 1-800-922-1987



RANCH

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CONTROL

EROSION

GRADING

CCT NO. 09-010

NED BY: DM

N BY: CLP

KED BY: DM

#### **NOTES:**

- 1. SEE SHEET GR01 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE BETWEEN THE 8" AND 10" FORCE MAINS.
- 3. CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS PER DETAIL.
- 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE PROJECT. REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
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- CLEARANCE BETWEEN ALL UTILITIES UNLESS OTHERWISE NOTED. 7. CONTRACTOR SHALL PLACE SEDIMENT CONTROL

6. CONTRACTOR SHALL PROVIDE A MINIMUM 1' OF

- LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE
  TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
- 9. CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING ANY SOD AND/OR LANDSCAPING.
- CONTRACTOR SHALL PROTECT IN PLACE OR REMOVE AND REPLACE ANY SIGNS, MAILBOXES, LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION.
- 11. CONTRACTOR SHALL PROTECT AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH CONSTRUCTION FENCING OR OTHER METHODS AS APPROPRIATE. 12. PER THIS PLAN, NO GRADING IS PROPOSED

OUTSIDE THE CONSTRUCTION LIMITS OR

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- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE VEGETATION AND 5% ROADWAYS.

### **KEYNOTES:**

- 1 SEDIMENT CONTROL LOG PER DETAIL SHEET GR15
- CONTRACTOR SHALL SAW CUT, REMOVE & REPLACE EXISTING PAVEMENT PER EL PASO COUNTY SPECIFICATIONS.
- CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING CONCRETE DRIVEWAY. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING DECORATIVE FENCE.
- 5 CONTRACTOR SHALL REMOVE AND REPLACE EXISTING GRAVEL DRIVEWAY.



FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG

& MARKING GAS, ELECTRIC, WATER & TELEPHONE

<u>GRADING</u> EROSION & SEDIMENT CONTROL (EC) LEGEND VTC VEHICLE TRACKING CONTROL EXISTING CONTOUR TEMPORARY SEEDING (SEE NOTE 9.) PROPOSED SWALE GRADE BREAK SEDIMENT CONTROL LOG (SEE NOTE 7.) . . . . . . . WETLANDS AREA NOT (COMPACTED) EARTH BERM (SEE NOTE 8.) TO BE DISTURBED

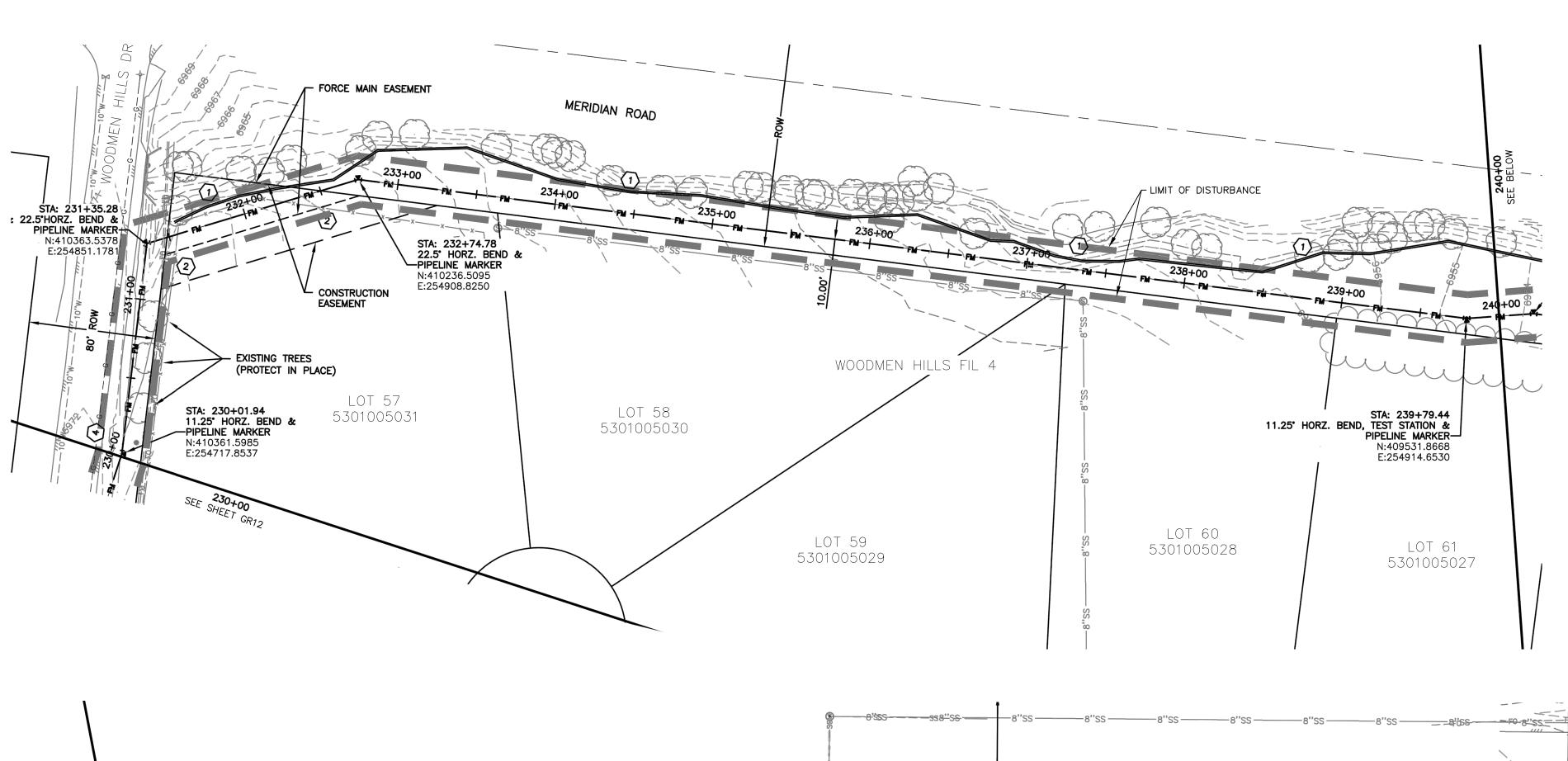
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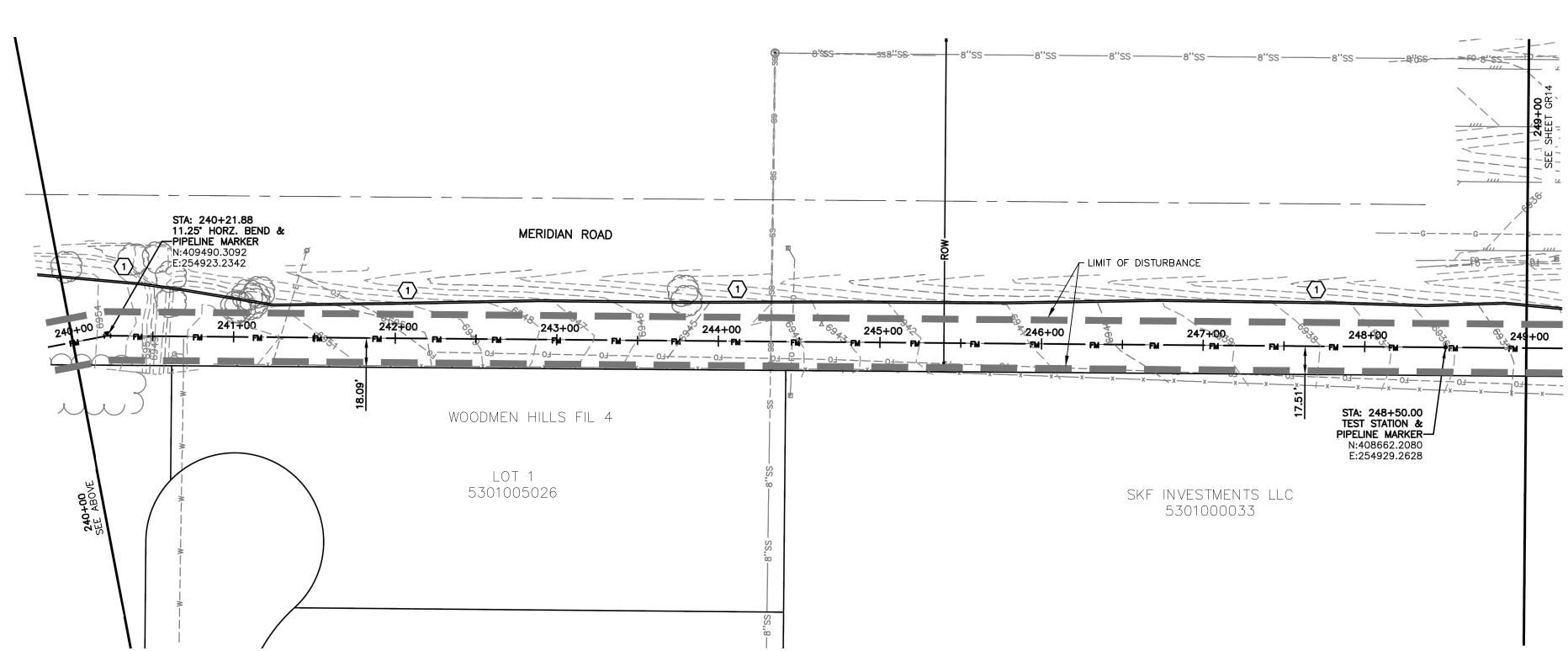
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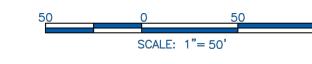
LIMITS OF DISTURBANCE / CONSTRUCTION

BOUNDARY/EASEMENT

CALL 1-800-922-1987







RANCH

STERLING

CONTROL

EROSION

GRADING

SET NO. 09-010

NED BY: DM

N BY: CLP

#### NOTES:

- 1. SEE SHEET GRO1 FOR GENERAL NOTES.
- 2. STATIONING IS BASED ON THE CENTERLINE BETWEEN THE 8" AND 10" FORCE MAINS.
- 3. CONTRACTOR SHALL INSTALL THRUST BLOCKS AT ALL HORIZONTAL AND VERTICAL BENDS PER DETAIL.
- 4. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE AREA OF WORK 7 DAYS PRIOR TO THE START OF INSTALLATION OF THE PIPELINE. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS THAT ARISE AND REQUIRE REDESIGN OF ANY PORTION OF THE PROJECT. REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
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- 6. CONTRACTOR SHALL PROVIDE A MINIMUM 1' OF CLEARANCE BETWEEN ALL UTILITIES UNLESS OTHERWISE NOTED.
- 7. CONTRACTOR SHALL PLACE SEDIMENT CONTROL LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
- 9. CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING ANY SOD AND/OR LANDSCAPING.
- 10. CONTRACTOR SHALL PROTECT IN PLACE OR REMOVE AND REPLACE ANY SIGNS, MAILBOXES, LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION.
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12. PER THIS PLAN, NO GRADING IS PROPOSED

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- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE VEGETATION AND 5% ROADWAYS.

#### **KEYNOTES:**

- 1 SEDIMENT CONTROL LOG PER DETAIL SHEET GR15.
- REMOVE AND REPLACE 180 L.F. OF EXISTING FENCE.
- $\overline{3}$  NOT USED.

BEING USED.

CONTRACTOR SHALL REMOVE AND RE-INSTALL EXISTING DECORATIVE FENCE.



& MARKING GAS, ELECTRIC, WATER & TELEPHONE

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VTC VEHICLE TRACKING CONTROL TEMPORARY SEEDING (SEE NOTE 9.) SEDIMENT CONTROL LOG (SEE NOTE 7.) (COMPACTED) EARTH BERM (SEE NOTE 8.)

> LIMITS OF DISTURBANCE / CONSTRUCTION BOUNDARY/EASEMENT

EXISTING CONTOUR PROPOSED SWALE GRADE BREAK . . . . . . .

WETLANDS AREA NOT TO BE DISTURBED SPOT ELEVATION ×4638.00

<u>GRADING</u>

SPOT ELEVATION WITH DESCRIPTION SEE ABBREVIATIONS THIS SHEET

### EROSION & SEDIMENT CONTROL (EC) LEGEND

VEHICLE TRACKING CONTROL TEMPORARY SEEDING (SEE NOTE 9.) SEDIMENT CONTROL LOG (SEE NOTE 7.) EB (COMPACTED) EARTH BERM (SEE NOTE 8.) LIMITS OF DISTURBANCE/CONSTRUCTION BOUNDARY/EASEMENT

### **GRADING**



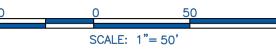
GRADE BREAK

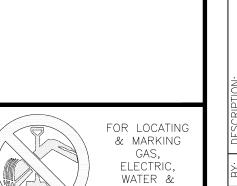
SPOT ELEVATION ×4638.00

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- 6. CONTRACTOR SHALL PROVIDE A MINIMUM 1' OF CLEARANCE BETWEEN ALL UTILITIES UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PLACE SEDIMENT CONTROL LOGS UPSTREAM OF ALL STORM DRAIN PIPES WITHIN THE PROJECT AREA.
- 8. CONTRACTOR SHALL BLADE A SMALL 6" HIGH BERM ALONG THE DOWNSTREAM SIDE OF TRENCHING OPERATIONS TO CONTROL STORM DRAINAGE FLOWS AND MINIMIZE
  TRANSPORTATION SEDIMENT DOWNSTREAM. SEE DETAIL SHEET GR15.
- 9. CONTRACTOR SHALL RESEED ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING ANY SOD AND/OR LANDSCAPING.
- 10. CONTRACTOR SHALL PROTECT IN PLACE OR REMOVE AND REPLACE ANY SIGNS, MAILBOXES, LANDSCAPING, OR OTHER OBSTRUCTIONS DISTURBED DURING CONSTRUCTION.
- 11. CONTRACTOR SHALL PROTECT AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH CONSTRUCTION FENCING OR OTHER METHODS AS APPROPRIATE.
- 12. PER THIS PLAN, NO GRADING IS PROPOSED OUTSIDE THE CONSTRUCTION LIMITS OR EASEMENT AREA.
- 13. CONTRACTOR SHALL REPLACE THE AREA OF CONSTRUCTION TO THE EXISTING, PRE-CONSTRUCTION GRADE.
- 14. CONTRACTOR SHALL USE THE CONSTRUCTION CORRIDOR FOR HEAVY EQUIPMENT ACCESS. STAGING, STORAGE OF MATERIALS, STOCKPILES, OR WASTES SHALL REMAIN ON THE STERLING RANCH PROPERTY IN LOCATIONS ALREADY BEING USED.
- 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SHRUBS. THIS PROJECT CONTAINS APPROXIMATELY 95% NATIVE VEGETATION AND 5% ROADWAYS.

# **KEYNOTES:**

- 1 SEDIMENT CONTROL LOG PER DETAIL SHEET GR15
- 2 CONTRACTOR SHALL SAW CUT, REMOVE & REPLACE EXISTING PAVEMENT PER EL PASO COUNTY SPECIFICATIONS.
- (3) VEHICLE TRACKING CONTROL PER SHEET GR15





WATER & TELEPHONE

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PLAN

CONTROL

EROSION

GRADING

STATION & FORCE

STERLING RANCH LIFT

PROPOSED SWALE

. . . . . . .

WETLANDS AREA NOT TO BE DISTURBED

#### Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species <sup>a</sup> (Common name)	Growth Season <sup>b</sup>	Pounds of Pure Live Seed (PLS)/acre <sup>c</sup>	Planting Depth (inches)
1. Oats	Cool	35 - 50	1-2
2. Spring wheat	Cool	25 - 35	1-2
3. Spring barley	Cool	25 - 35	1-2
4. Annual ryegrass	Cool	10 - 15	1/2
5. Millet	Warm	3 - 15	1/2 = 3/4
6. Sudangrass	Warm	5-10	1/2 - 3/4
7. Sorghum	Warm	5-10	1/2 = 3/4
8. Winter wheat	Cool	20–35	1-2
9. Winter barley	Cool	20–35	1-2
10. Winter rye	Cool	20–35	1-2
11. Triticale	Cool	25-40	1-2

Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months. Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

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## **Temporary and Permanent Seeding (TS/PS)**

#### Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses

Common <sup>a</sup> Name	Botanical Name	Growth Season <sup>b</sup>	Growth Form	Seeds/ Pound	Pounds of PLS/acr
Alakali Soil Seed Mix					-
Alkali sacaton	Sporobolus airoides	Cool	Bunch	1,750,000	0.25
Basin wildrye	Elymus cinereus	Cool	Bunch	165,000	2,5
Sodar streambank wheatgrass	Agropyron riparium 'Sodar'	Cool	Sod	170,000	2.5
Jose tall wheatgrass	Agropyron elongatum 'Jose'	Cool	Bunch	79,000	7.0
Arriba western wheatgrass	Agropyron smithii 'Arriba'	Cool	Sod	110,000	5.5
Total					17.75
Fertile Loamy Soil Seed Mix					
Ephriam crested wheatgrass	Agropyron cristatum 'Ephriam'	Cool	Sod	175,000	2.0
Dural hard fescue	Festuca ovina 'duriuscula'	Cool	Bunch	565,000	1.0
Lincoln smooth brome	Bromus inermis leyss 'Lincoln'	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	Agropyron riparium 'Sodar'	Cool	Sod	170,000	2.5
Arriba western wheatgrass	Agropyron smithii 'Arriba'	Cool	Sod	110,000	7.0
Total					15.5
High Water Table Soil Seed Mix					
Meadow foxtail	Alopecurus pratensis	Cool	Sod	900,000	0.5
Redtop	Agrostis alba	Warm	Open sod	5,000,000	0.25
Reed canarygrass	Phalaris arundinacea	Cool	Sod	68,000	0.5
Lincoln smooth brome	Bromus inermis leyss 'Lincoln'	Cool	Sod	130,000	3.0
Pathfinder switchgrass	Panicum virgatum 'Pathfinder'	Warm	Sod	389,000	1.0
Alkar tall wheatgrass	Agropyron elongatum 'Alkar'	Cool	Bunch	79,000	5,5
Total					10.75
Transition Turf Seed Mix <sup>c</sup>					:
Ruebens Canadian bluegrass	Poa compressa 'Ruebens'	Cool	Sod	2,500,000	0.5
Dural hard fescue	Festuca ovina 'duriuscula'	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	Lolium perenne 'Citation'	Cool	Sod	247,000	3.0
Lincoln smooth brome	Bromus inermis leyss 'Lincoln'	Cool	Sod	130,000	3.0
Total					7.5

TS/PS-4

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# Temporary and Permanent Seeding (TS/PS)

#### Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)

Common Name	Botanical Name	Growth Season <sup>b</sup>	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Sandy Soil Seed Mix					
Blue grama	Bouteloua gracilis	Warm.	Sod-forming bunchgrass	825,000	0.
Camper little bluestem	Schizachyrium scoparium 'Camper'	Warm	Bunch	240,000	1.
Prairie sandreed	Calamovilfa longifolia	Warm.	Open sod	274,000	1.
Sand dropseed	Sporobolus cryptandrus	Cool	Bunch	5,298,000	0.2
Vaughn sideoats grama	Bouteloua curtipendula 'Vaughn'	Warm.	Sod	191,000	2.
Arriba western wheatgrass	Agropyron smithii 'Arriba'	Cool	Sod	110,000	5.
Total					10.2
Heavy Clay, Rocky Foothill Seed	Mix				
Ephriam crested wheatgrass <sup>d</sup>	Agropyron cristatum 'Ephriam'	Cool	Sod	175,000	1.
Oahe Intermediate wheatgrass	Agropyron intermedium 'Oahe'	Cool	Sod	115,000	5.
Vaughn sideoats grama <sup>e</sup>	Bouteloua curtipendula 'Vaughn'	Warm	Sod	191,000	2.
Lincoln smooth brome	Bromus inermis leyss 'Lincoln'	Cool	Sod	130,000	3.
Arriba western wheatgrass	Agropyron smithii 'Arriba'	Cool	Sod	110,000	5.
Total					17.

doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

See Table TS/PS-3 for seeding dates.

If site is to be irrigated, the transition turf seed rates should be doubled.

Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

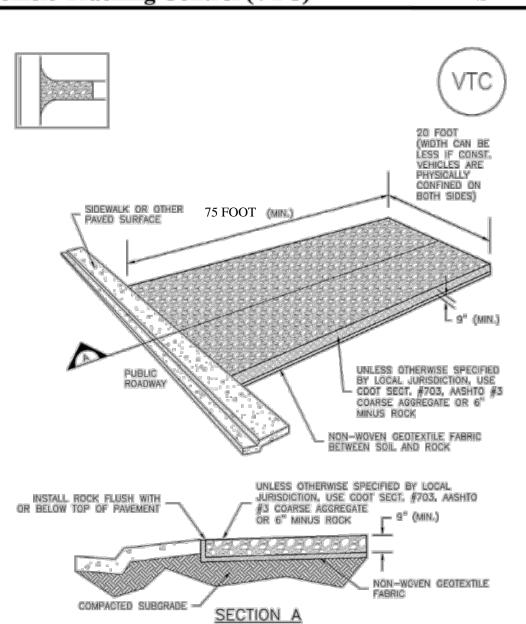
Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sideoats grama.

June 2012

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**Vehicle Tracking Control (VTC)** 

**SM-4** 



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-3

EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

1. SEE SITE PLAN FOR:
- LOCATION OF DIVERSION SWALE - TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED).
- LENGTH OF EACH SWALE.
- DEPTH, D, AND WIDTH, W DIMENSIONS.

- FOR ECB/TRM LINED DITCH, SEE ECB DETAIL.
- FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, D50.

2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2—YEAR FLOW RATE OR 10 CFS.

3. EARTH DIKES AND SWALES INDICATED ON SWMP PLAN SHALL BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES IN PROXIMITY.

4. EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698.

5. SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.

6. FOR LINEO DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE REQUIREMENTS OF THE ECB DETAIL.

7. WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

EARTH DIKE AND DRAINAGE SWALE MAINTENANCE NOTES

EROSION, AND PERFORM NECESSARY MAINTENANCE.

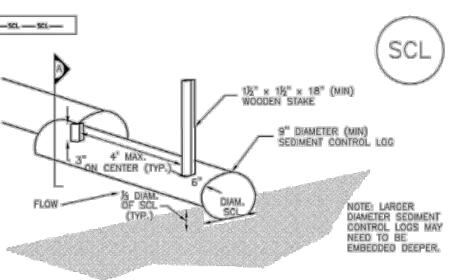
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE

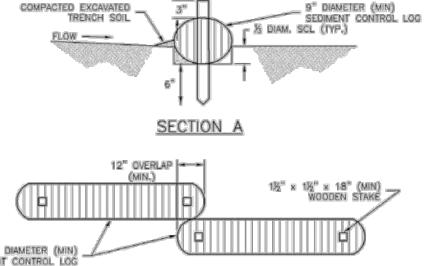
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

Sediment Control Log (SCL)

SC-2





SCL-1. SEDIMENT CONTROL LOG

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Temporary and Permanent Seeding (TS/PS)

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses

Seeding Dates	(Numbers in	Annual Grasses (Numbers in table reference species in Table TS/PS-I)		Perennial Grasses	
	Warm	Cool	Warm	Cool	
January 1-March 15			✓	1	
March 16-April 30	4	1,2,3	1	1	
May 1–May 15	4		4		
May 16–June 30	4,5,6,7				
July 1–July 15	5,6,7				
July 16–August 31					
September 1-September 30		8,9,10,11			
October 1-December 31			✓	1	

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

#### Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may

Protect seeded areas from construction equipment and vehicle access.

TS/PS-6

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Sediment Control Log (SCL)

SC-2

SEDIMENT CONTROL LOG INSTALLATION NOTES

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES. 3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSION OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGE WAYS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY & OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE.

OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER. 7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4" CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG, STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.
MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION, INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS: NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY & OF THE HEIGHT OF THE SEDIMENT CONTROL LOG. S. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD) NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SCL-5

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3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION; IF APPROVED BY LOCAL JURISDICTION, SWALES MAY BE LEFT IN PLACE. 5. WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF COLORADO SPRINGS, COLORADO, NOT AVAILABLE IN

**GRADED BERM** 

SEDIMENT CONTROL LOG CENTER STAKE IN CONTROL LOG

SEDIMENT CONTROL LOG JOINTS

SCL-3

FORCE

STATION

RANCH

STERLING

CONTROL

EROSION

GRADING