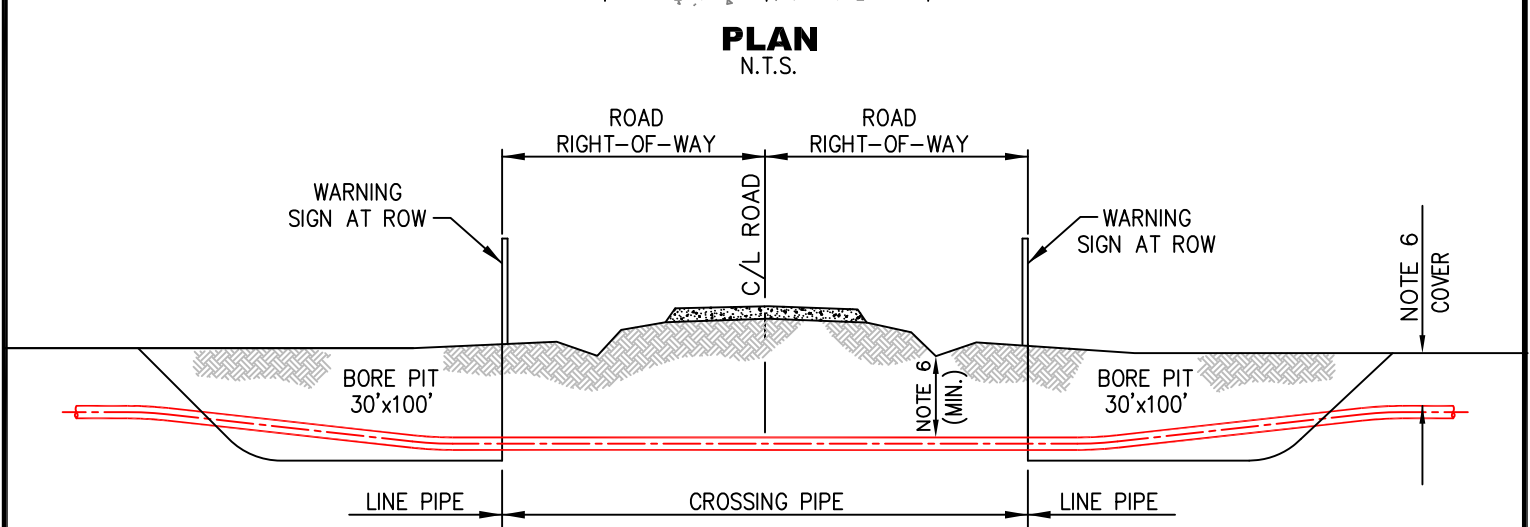
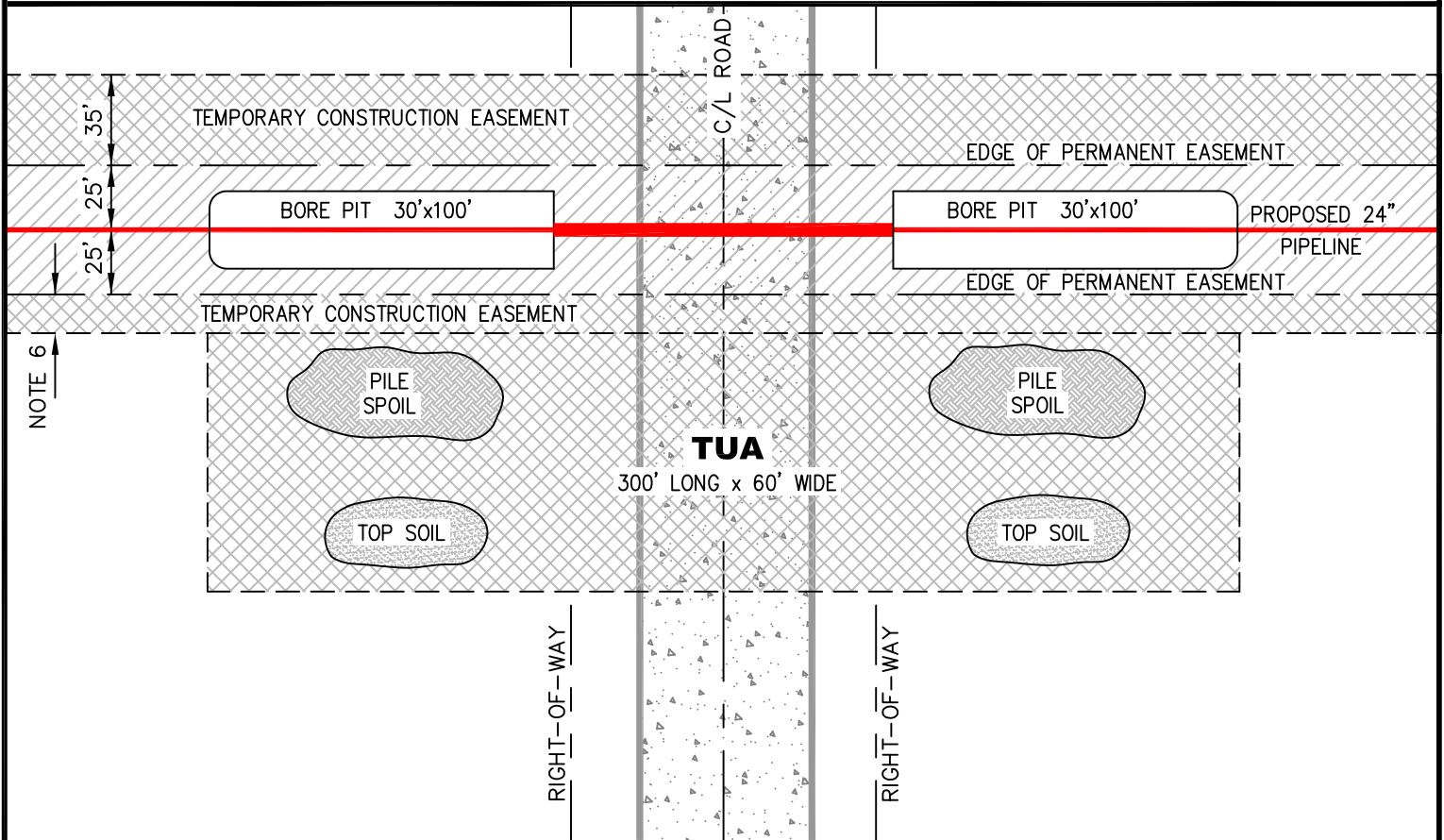
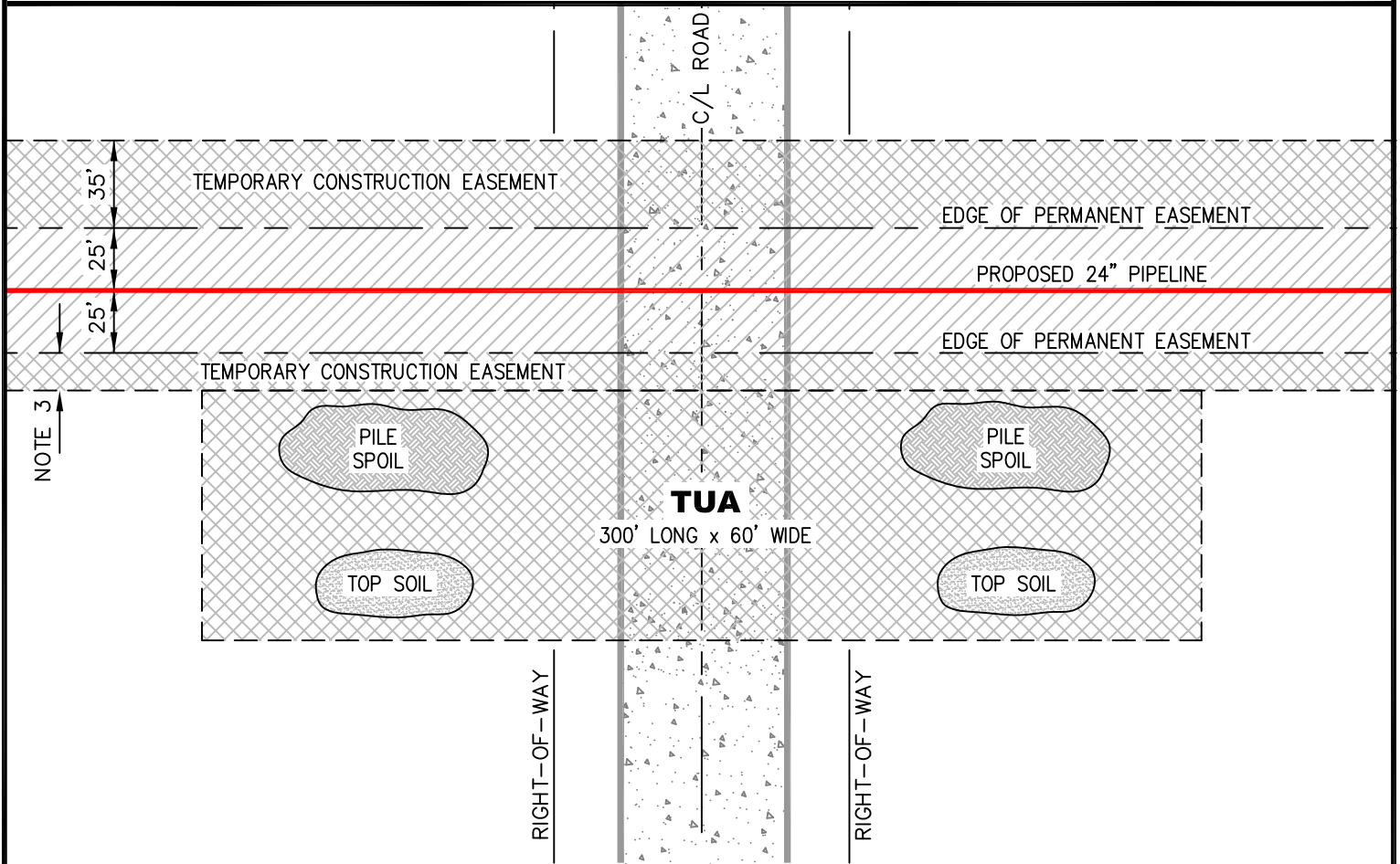


XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE

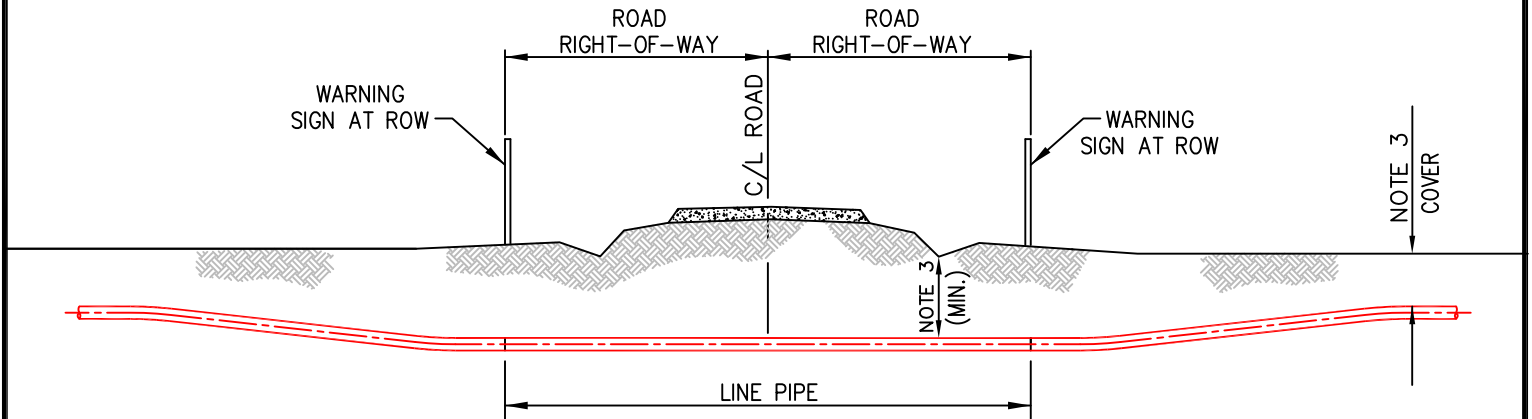


- NOTES:**
1. CROSSING SHALL BE IN ACCORDANCE WITH APPLICABLE PERMIT.
 2. ROAD CROSSING PIPE SHALL EXTEND TO A MINIMUM OF RIGHT OF WAY LINE PLUS 10' EACH SIDE.
 3. THE TYPE AND MINIMUM REQUIRED LENGTH OF PIPE FOR CROSSING OF PUBLIC ROADS SHALL BE AS SPECIFIED ON MAPS ON ALIGNMENT SHEETS.
 4. OPPOSITE HAND ORIENTATION MAY BE VALID FOR A GIVEN CROSSING.
 5. BORE PITS GENERALLY WILL START AT EDGE OF ROAD RIGHT-OF-WAY. PROFILE MAY VARY BUT PIT WILL HAVE A FLAT AREA NEAREST THE ROAD FOR THE BORE MACHINE AND WILL BE SLOPED AWAY FROM ROAD FOR ACCESS.
 6. SEE ALIGNMENT SHEET FOR EXACT DIMENSIONS.

XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE



PLAN
N.T.S.



PROFILE
N.T.S.

NOTES:

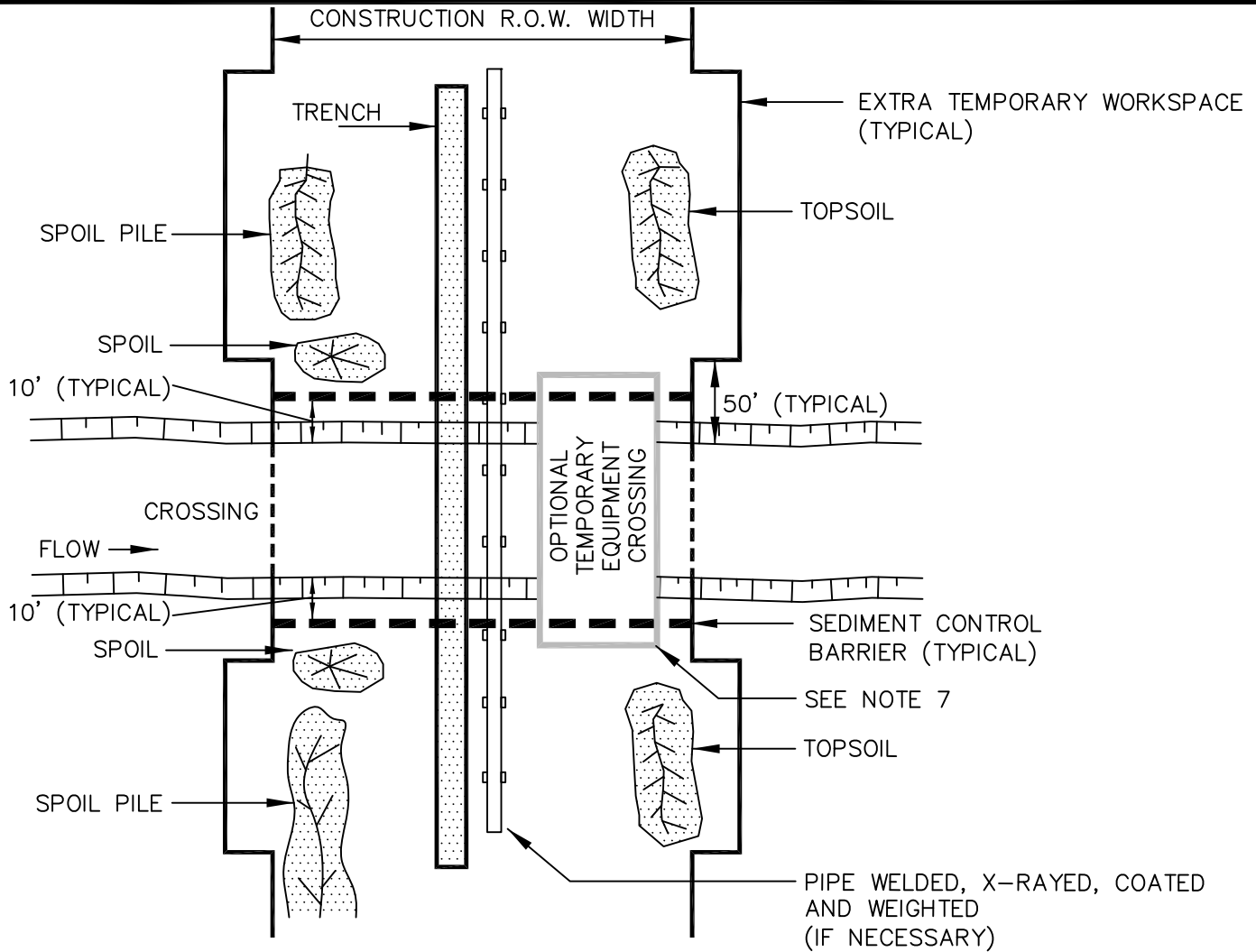
1. CROSSING SHALL BE IN ACCORDANCE WITH APPLICABLE PERMIT.
2. OPPOSITE HAND ORIENTATION MAY BE VALID FOR A GIVEN CROSSING.
3. SEE ALIGNMENT SHEET FOR EXACT DIMENSIONS.



TYPICAL OPEN CUT ROAD CROSSING

DATE: 12/19/2011 PROJECT: 8582 DWG. NO. 8582-1800-601

XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE

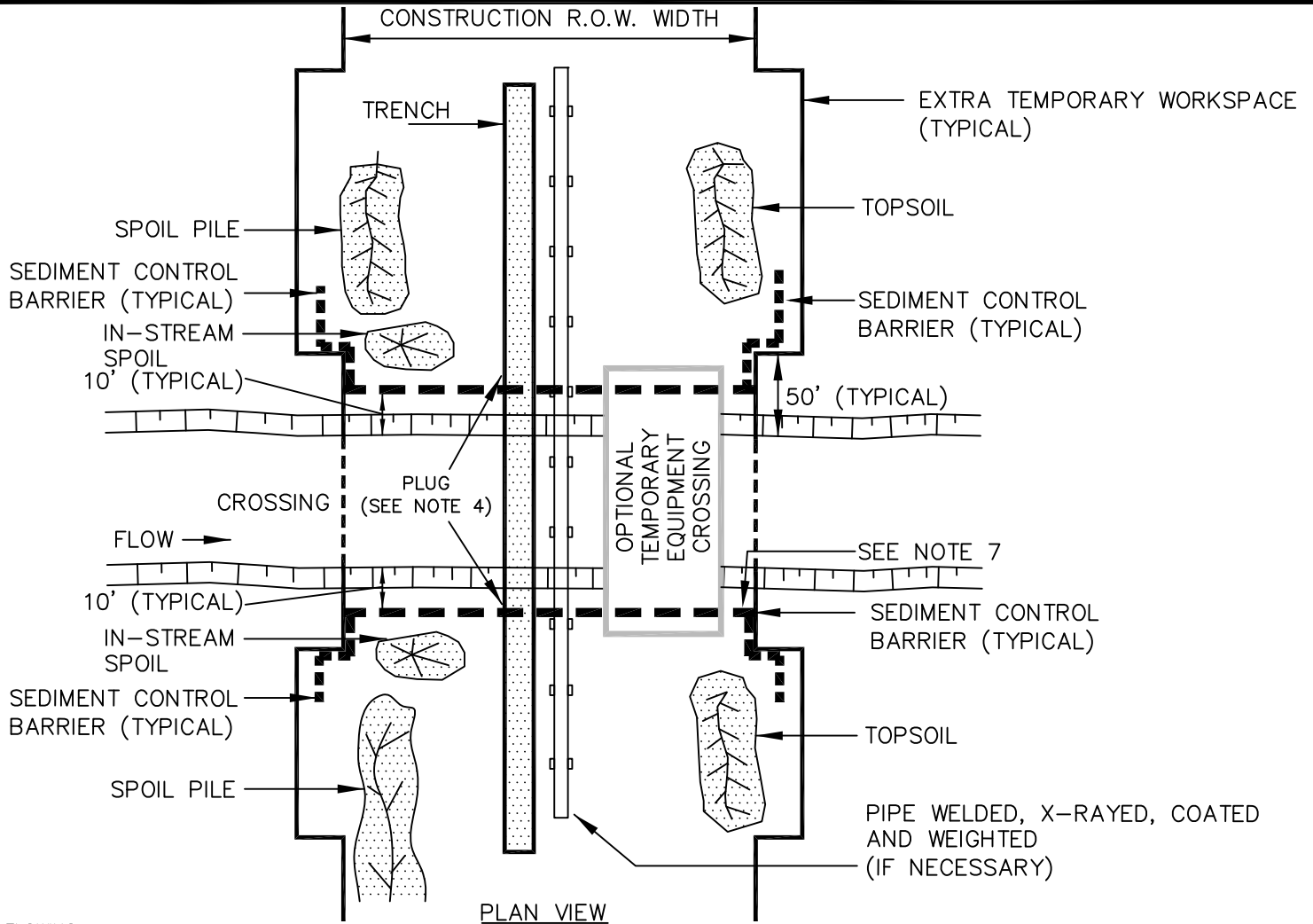


PLAN VIEW

NON-FLOWING

1. THIS METHOD APPLIES TO CROSSINGS WHERE NO FLOWING WATER IS PRESENT AT THE TIME OF CROSSING.
2. CONTRACTOR MAY MAINLINE TRENCH THROUGH THE CROSSING OR UP TO BOTH SIDES OF THE CROSSING; STRING, WELD, X-RAY, COAT AND WEIGHT (IF NECESSARY), WITH THE PIPE SKIDDED OVER THE CROSSING.
3. NO REFUELING OF MOBILE EQUIPMENT OR CONCRETE COATING ACTIVITIES WITHIN 100 FEET OF CROSSING. REFUEL STATIONARY EQUIPMENT AS PER SPCC PLAN.
4. IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA. STOCKPILE TOPSOIL AND SPOIL SEPARATELY. TOPSOIL AND SPOIL WILL NOT BE STOCKPILED IN THE CROSSING CHANNEL AND WILL BE PLACED A MINIMUM OF 10 FEET FROM CROSSING BANKS WITHIN THE CONSTRUCTION R.O.W.
5. RESTORE CROSSING CHANNEL TO PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
6. RESTORE CROSSING BANK TO ORIGINAL CONDITION AND STABILIZE AS REQUIRED. STABILIZE CROSSING BANKS; INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24 HOURS OF COMPLETING THE CROSSING.
7. EROSION CONTROL MEASURES SHALL BE INSTALLED AS DIRECTED BY THE INSPECTOR ACROSS THE R.O.W. FOLLOWING CLEARING AND GRADING AND MAINTAINED UNTIL CONSTRUCTION OF THE CROSSING. EROSION CONTROL MEASURES SHALL BE REINSTALLED IMMEDIATELY FOLLOWING BACKFILLING OF TRENCH AND STABILIZATION OF BANKS. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED AT THE END OF EACH WORK DAY.

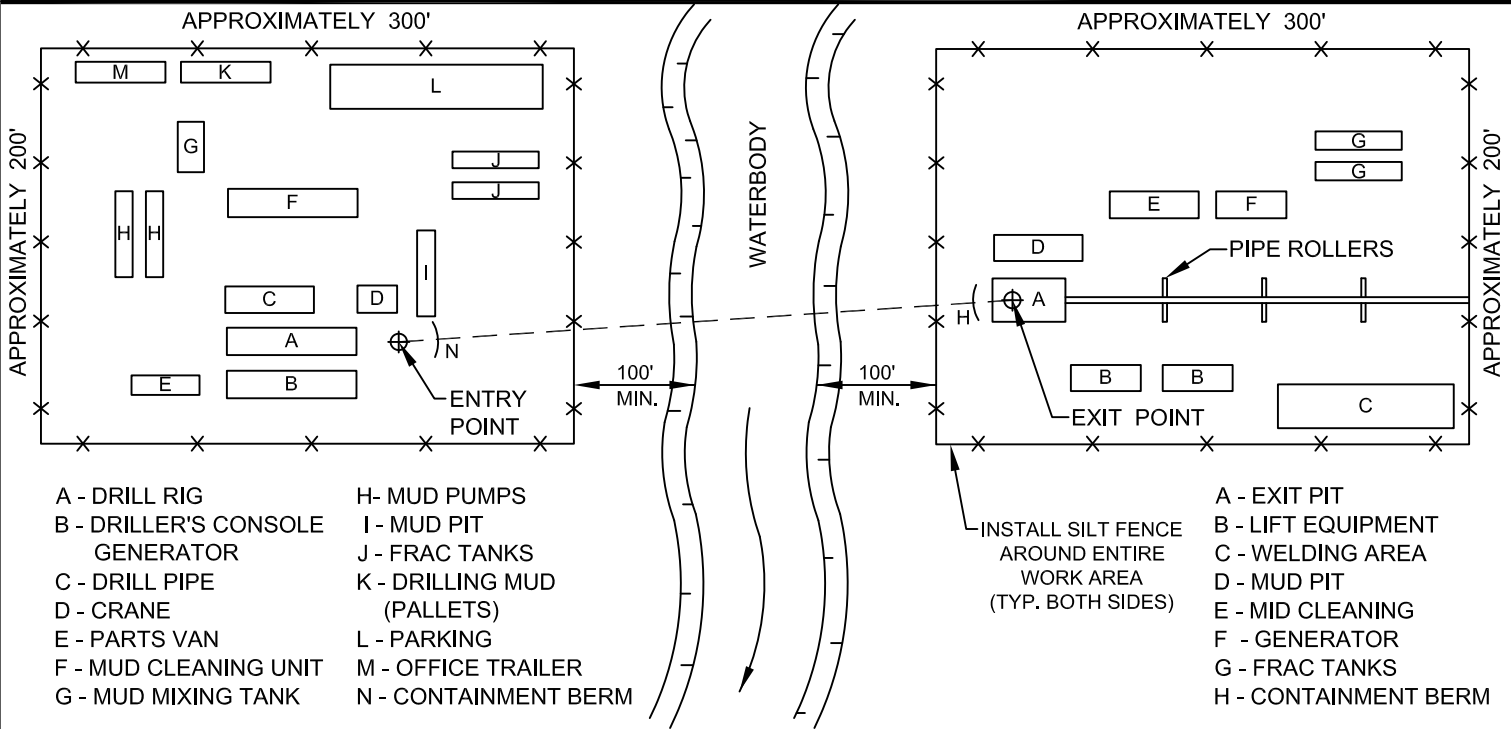
XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE



FLOWING

1. THIS METHOD APPLIES TO MINOR WATERBODIES WHERE FLUME AND/OR DAM AND PUMP METHOD IS NOT REQUIRED.
2. COMPLETE ALL INSTREAM ACTIVITIES WITHIN 24 HOURS. MAINTAIN STREAM FLOW THROUGHOUT CROSSING CONSTRUCTION.
3. WHERE FEASIBLE, CONTRACTOR MAY MAINLINE TRENCH THROUGH THE WATERBODY OR UP TO BOTH SIDES OF THE CROSSING; STRING, WELD, X-RAY, COAT AND WEIGHT (IF NECESSARY). USING THE MAINLINE CREW WITH THE PIPE SKIDDED OVER THE WATERBODY.
4. USE TRENCH PLUGS TO PREVEN DIVERSION OF WATER INTO UPLAND PORTIONS OF THE PIPELINE TRENCH AND TO KEEP ACCUMULATED TRENCH WATER OUT OF THE WATERBODY.
5. NO REFUELING OF MOBILE EQUIPMENT OR CONCRETE COATING ACTIVITIES WITHIN 100 FEET OF WATERBODY. REFUEL STATIONARY EQUIPMENT AS PER THE SPCC PLAN.
6. IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA. STOCKPILE TOPSOIL AND SPOIL SEPARATELY. TOPSOIL AND SPOIL WILL NOT BE STOCKPILED IN THE CROSSING CHANNEL AND WILL BE PLACED A MINIMUM OF 10 FEET FROM CROSSING BANKS WITHIN THE CONSTRUCTION R.O.W.
7. CONSTRUCT SEDIMENT BARRIERS ALONG THE SIDES OF SPOIL AND TOPSOIL PILES AND ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED AT THE END OF EACH WORKING DAY.
8. INSTREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL A MINIMUM OF 10 FEET FROM THE WATER'S EDGE AND WITHIN THE CONSTRUCTION R.O.W. UNLESS DEPICTED OTHERWISE IN SITE-SPECIFIC CROSSING PLANS. EXTRA TEMPORARY WORK SPACE MUST BE A MINIMUM OF 50 FEET FROM THE WATER'S EDGE UNLESS DEPICTED OTHERWISE IN THE SITE-SPECIFIC CROSSING PLANS.
9. BACKFILL WITH NATIVE MATERIAL, EXCEPT WHERE NATIVE MATERIAL FAILS THE NO. 230 SIEVE TEST.
10. RESTORE WATERBODY CHANNEL TO PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
11. RESTORE STREAM BANK TO ORIGINAL CONDITION AND STABILIZE AS REQUIRED. STABILIZE WATERBODY BANKS AND INSTALL TEMPORARY SEDIMENT BARRIERS WITHIN 24 HOURS OF COMPLETING THE CROSSING.

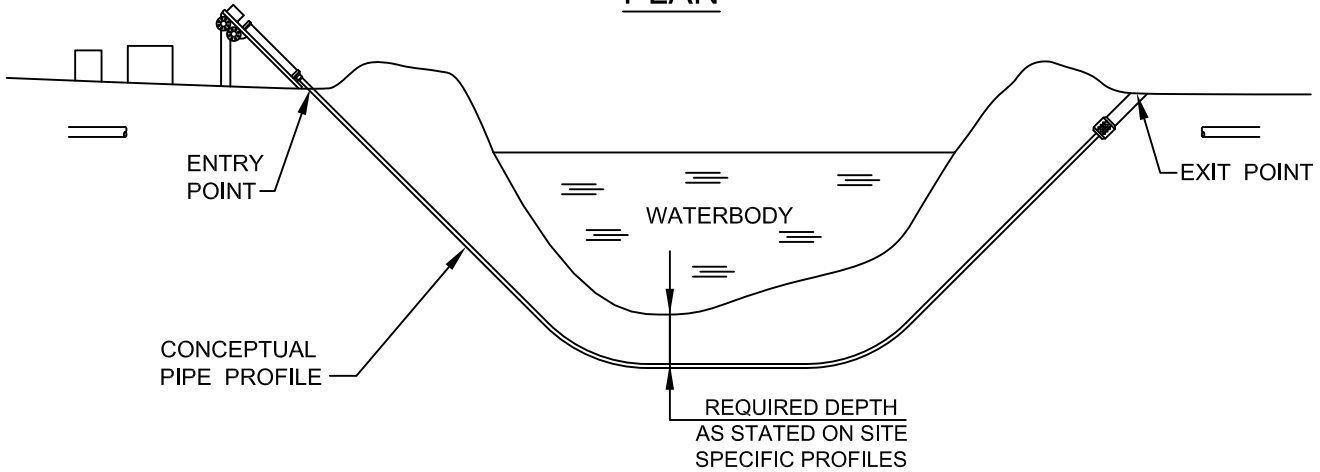
XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE



- A - DRILL RIG
- B - DRILLER'S CONSOLE GENERATOR
- C - DRILL PIPE
- D - CRANE
- E - PARTS VAN
- F - MUD CLEANING UNIT
- G - MUD MIXING TANK
- H - MUD PUMPS
- I - MUD PIT
- J - FRAC TANKS
- K - DRILLING MUD (PALLETS)
- L - PARKING
- M - OFFICE TRAILER
- N - CONTAINMENT BERM

- A - EXIT PIT
- B - LIFT EQUIPMENT
- C - WELDING AREA
- D - MUD PIT
- E - MID CLEANING
- F - GENERATOR
- G - FRAC TANKS
- H - CONTAINMENT BERM

PLAN



PROFILE

NOTES:

1. SET UP DRILLING EQUIPMENT A MINIMUM OF 100 FEET FROM THE EDGE OF THE WATERCOURSE. DO NOT CLEAR OR GRADE WITHIN THE 100 FOOT ZONE. SETBACK MAY BE ADJUSTED BASED ON ANALYSIS IN GEOTECH REPORT.
2. ENSURE THAT ONLY BENTONITE BASED DRILLING MUD IS USED. DO NOT ALLOW THE USE OF ANY ADDITIVES TO THE DRILLING MUD WITHOUT THE APPROVAL OF COMPANY'S INSPECTOR.
3. INSTALL SUITABLE DRILLING MUD TANKS OR SUMPS TO PREVENT CONTAMINATION OF WATERCOURSE.
4. INSTALL BERMS DOWNSLOPE FROM THE DRILL ENTRY AND ANTICIPATED EXIT POINT TO CONTAIN ANY RELEASE OF DRILLING MUD.
5. DISPOSE OF DRILLING MUD IN ACCORDANCE WITH THE APPROPRIATE REGULATORY AUTHORITY REQUIREMENTS.

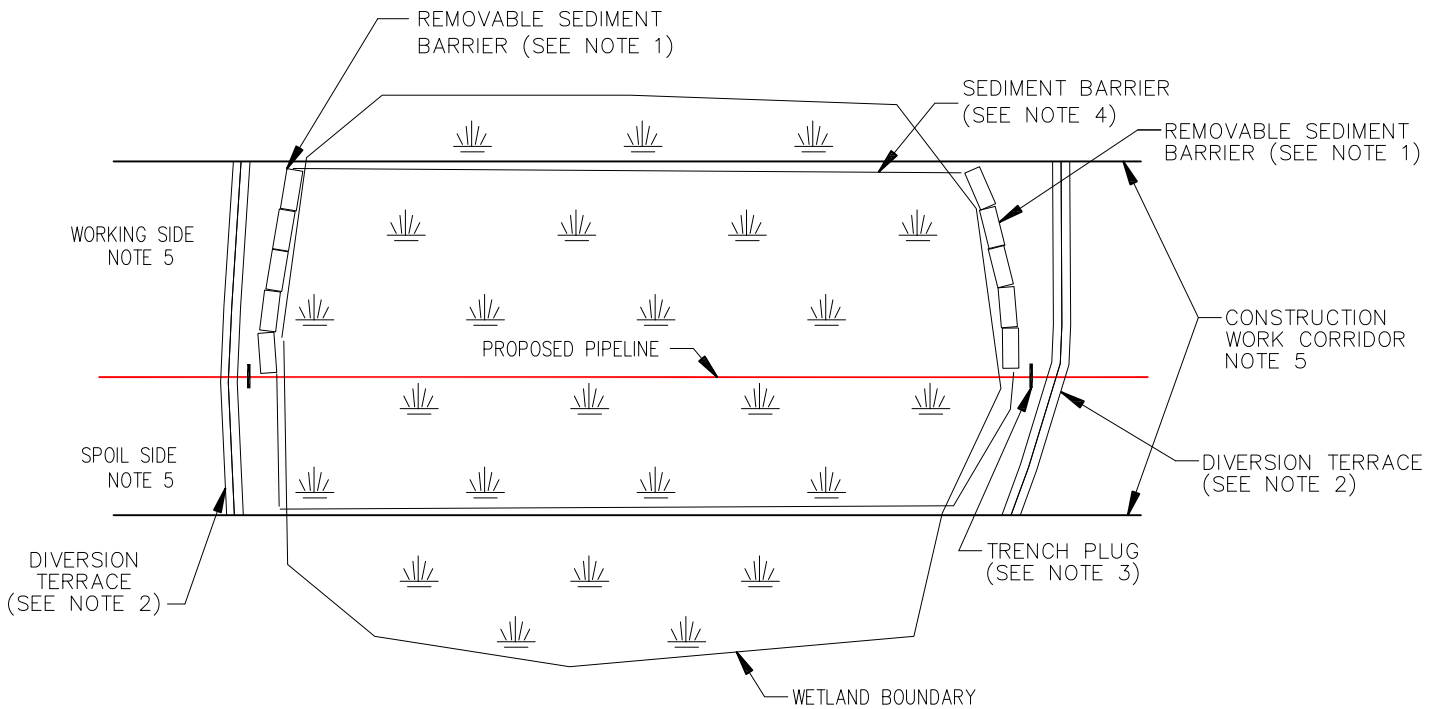
DRAWING DEPICTED IS SUPERSEDED BY WRITTEN STANDARD, SCOPE OF WORK OR LINE LIST.



TYPICAL HDD CROSSING

DATE: 12/19/2011 PROJECT: 8582 DWG. NO. 8582-1800-605

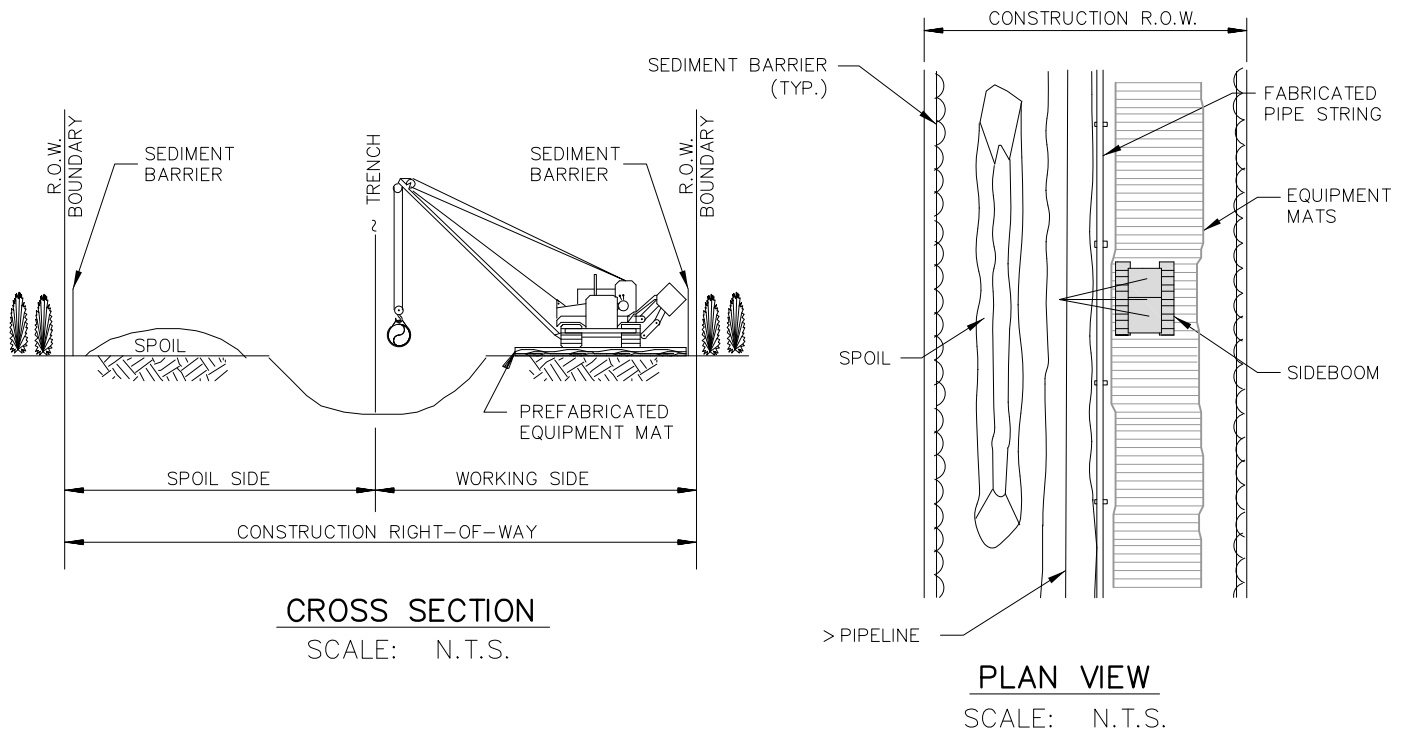
XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE



NOTES:

1. INSTALL REMOVABLE SEDIMENT BARRIERS (HAY BALES) OR DRIVEABLE BERMS ACROSS THE TRAVEL LANE AT BOTH WETLAND BOUNDARIES. THE REMOVABLE SEDIMENT BARRIERS CAN BE REMOVED DURING THE CONSTRUCTION DAY, BUT MUST BE RE-INSTALLED AFTER CONSTRUCTION HAS STOPPED FOR THE DAY AND/OR WHEN HEAVY PRECIPITATION IS IMMINENT.
2. INSTALL DIVERSION TERRACES IMMEDIATELY UPSLOPE OF BOTH WETLAND BOUNDARIES TO PREVENT SEDIMENT FROM ENTERING THE WETLAND.
3. INSTALL TRENCH PLUGS AT BOTH WETLAND BOUNDARIES TO PREVENT DIVERSION OF WATER INTO UPLAND PORTIONS OF THE PIPELINE TRENCH AND TO KEEP ANY ACCUMULATED UPLAND TRENCH WATER OUT OF WETLAND.
4. FOR TYPE II ("SATURATED") AND TYPE III ("FLOODED") WETLANDS, INSTALL SEDIMENT BARRIERS AT WETLAND BOUNDARIES AND ALONG BOTH WETLAND EDGES. FOR TYPE I ("DRY") WETLANDS, INSTALL SEDIMENT BARRIERS AT WETLAND BOUNDARIES, ALONG THE EDGE OF THE SPOIL SIDE OF THE CONSTRUCTION CORRIDOR AND ALONG THE DOWNSLOPE EDGE OF THE WETLAND. IF THE DOWNSLOPE EDGE OF THE WETLAND IS THE SPOIL SIDE, THEN SEDIMENT BARRIERS ARE NOT REQUIRED ON THE WORKING SIDE OF THE CORRIDOR UNLESS EQUIPMENT TRAVERSING THROUGH THE WETLAND CAUSES SPOIL AND SEDIMENT TO EXIT THE CONSTRUCTION CORRIDOR.
5. SEE ALIGNMENT SHEET FOR EXACT DIMENSIONS.

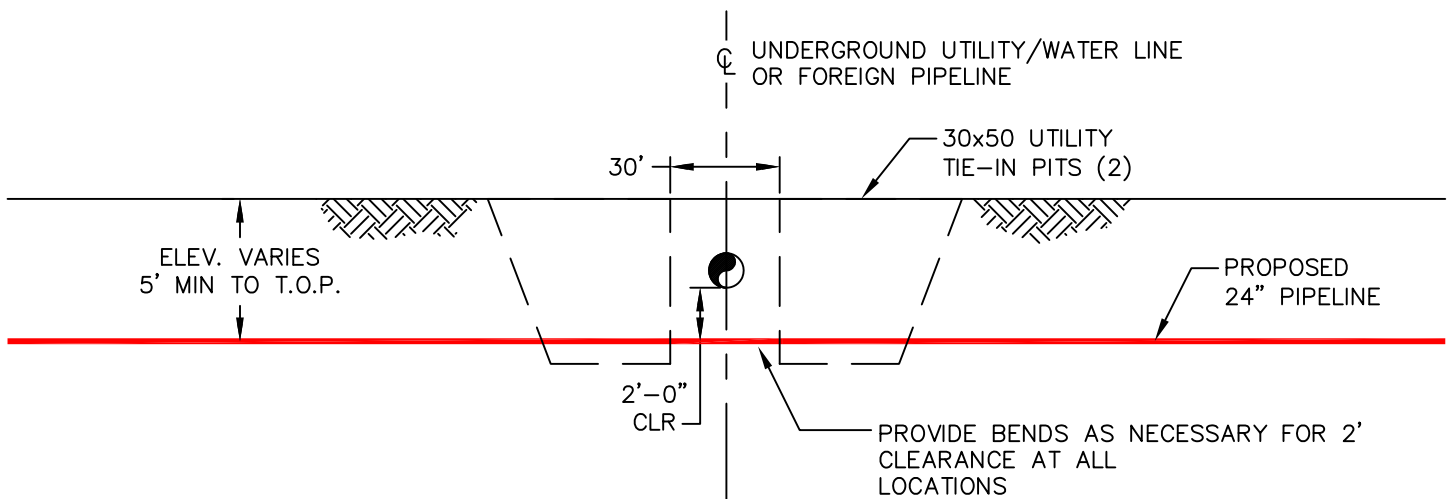
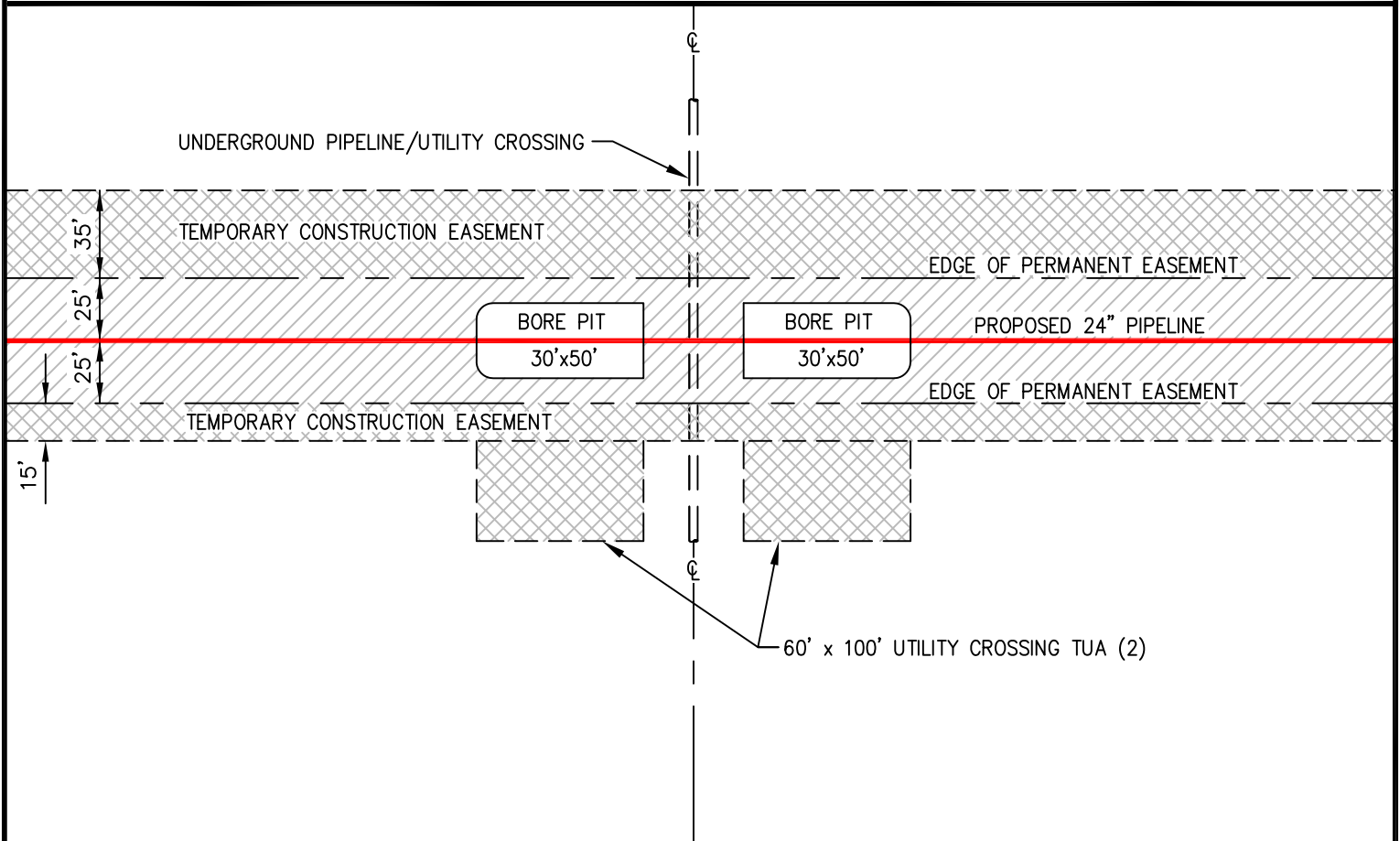
XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE



CONSTRUCTION PROCEDURE NOTES:

1. FLAG WETLAND BOUNDARIES AND INSTALL BOUNDARY SIGNS PRIOR TO CLEARING.
2. NO OVERNIGHT PARKING OR REFUELING OF MOBILE EQUIPMENT IS ALLOWED WITHIN 100 FEET OF WETLAND. PLACE "NO FUELING" SIGN POSTS 100 FEET BACK FROM WETLAND BOUNDARY.
3. INSTALL TEMPORARY SLOPE BREAKERS UP SLOPE OF WETLAND BOUNDARIES AS SHOWN ON DRAWINGS AND SPECIFICATIONS.
4. INSTALL PREFABRICATED EQUIPMENT MATS THROUGH ENTIRE WETLAND AREA ON THE WORKING SIDE OF THE CONSTRUCTION CORRIDOR.
5. AVOID ADJACENT WETLANDS. INSTALL SEDIMENT BARRIERS AT OUTER BOUNDARIES OF WETLAND AND ALONG BOTH WETLAND EDGES.
6. LIMIT PULLING OF TREE STUMPS AND GRADING ACTIVITIES TO DIRECTLY OVER THE TRENCH LINE. DO NOT GRADE OR REMOVE STUMPS OR ROOT SYSTEMS FROM THE REST OF THE RIGHT-OF-WAY IN WETLANDS UNLESS THE CHIEF INSPECTOR AND COMPANY ENVIRONMENTAL INSPECTOR DETERMINE THAT SAFETY RELATED CONSTRUCTION CONSTRAINTS REQUIRE REMOVAL OF TREE STUMPS FROM UNDER THE WORKING SIDE OF THE RIGHT-OF-WAY.
7. TOPSOIL STRIPPING SHALL BE REQUIRED UNLESS SOIL IS IN SATURATED CONDITION.
8. TRENCHING THROUGH WETLANDS MAY PROCEED WHEN THE PIPE SECTION IS FABRICATED AND READY TO LAY. ONCE TRENCHING COMMENCES, CONSTRUCTION THROUGH THE WETLAND IS TO PROCEED CONTINUOUSLY UNTIL THE CROSSING IS COMPLETED, BACK FILLED AND RESTORED IN ORDER TO MINIMIZE THE LENGTH OF TIME THE TRENCH IS OPEN.
9. PIPE SECTION MAY BE FABRICATED WITHIN THE WETLAND ADJACENT TO PIPE TRENCH, OR IN STAGING AREA OUTSIDE THE WETLAND AND WALKED IN. THERE SHOULD BE NO CONCRETE COATING ACTIVITY WITHIN 100 FEET OF WETLAND BOUNDARY UNLESS APPROVED BY COMPANY ENVIRONMENTAL INSPECTOR.
10. LOWER-IN PIPE. PRIOR TO BACKFILLING, INSTALL TRENCH PLUGS IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
11. RESTORE GRADE TO NEAR PRE-CONSTRUCTION TOPOGRAPHY AND INSTALL PERMANENT EROSION CONTROL.
12. REMOVE PREFABRICATED MATS FROM WETLANDS UPON COMPLETION.
13. SEED DISTURBED WETLAND AREA AS DETERMINED BY THE ENVIRONMENTAL INSPECTOR AND AS SHOWN ON DRAWINGS.

XCEL ENERGY PROPOSED 24" CHEROKEE PIPELINE



NOTES:

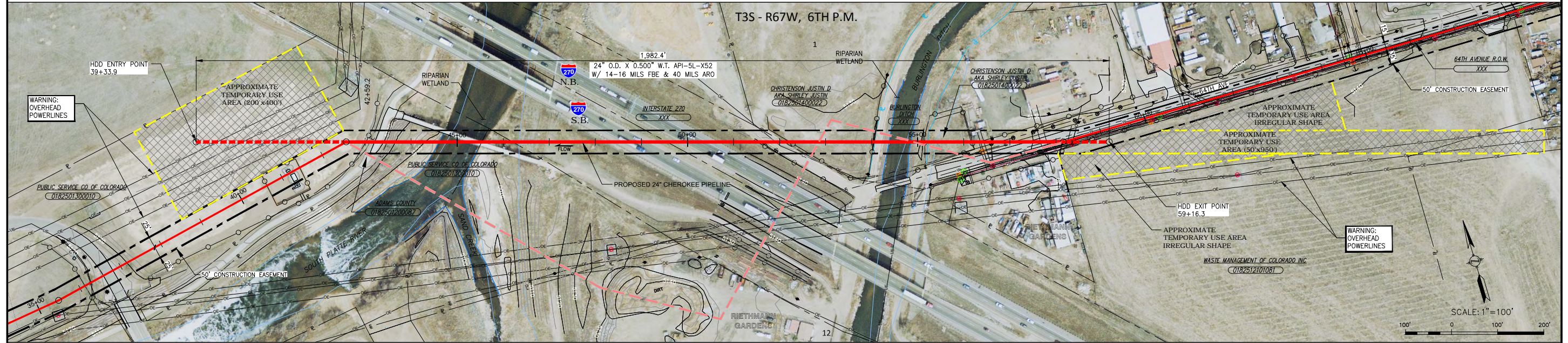
1. CATHODIC TEST STATIONS REQUIRED @ ALL STEEL PIPE CROSSINGS.
2. OPPOSITE HAND ORIENTATION MAY BE VALID FOR A GIVEN CROSSING.



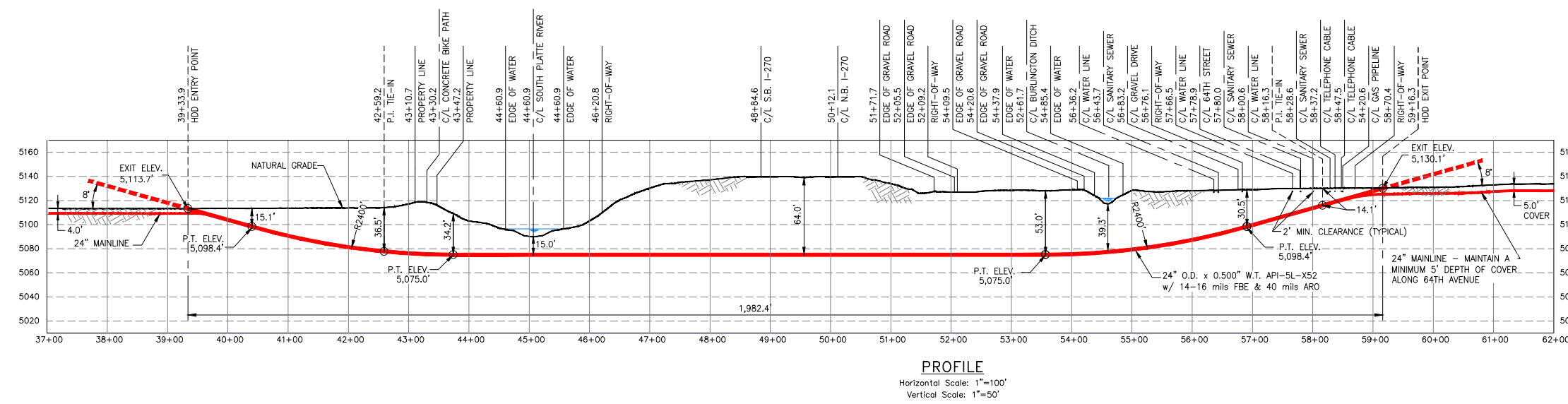
TYPICAL FOREIGN PIPELINE/UTILITY CROSSING

DATE: 12/19/2011 PROJECT: 8582 DWG. NO. 8582-1800-608

39+33.9 HDD ENTRY POINT
 39+78.8 OVERHEAD ELECTRIC
 40+35.0 OVERHEAD ELECTRIC
 40+90.8 OVERHEAD ELECTRIC
 41+47.0 OVERHEAD ELECTRIC
 42+59.2 P.I. TIE-IN
 43+02.0 FENCE
 43+10.7 PROPERTY LINE
 43+30.2 C/L CONCRETE BIKE PATH
 43+47.2 PROPERTY LINE
 44+60.9 EDGE OF WATER
 44+60.9 C/L SOUTH PLATTE RIVER
 44+60.9 EDGE OF WATER
 45+53.3 PROPERTY LINE
 46+20.8 RIGHT-OF-WAY
 48+38.4 EDGE OF PAVEMENT
 48+84.6 C/L S.B. I-270
 50+12.1 C/L N.B. I-270
 50+66.8 EDGE OF PAVEMENT
 51+51.7 FENCE
 51+71.7 EDGE OF GRAVEL ROAD
 52+05.5 EDGE OF GRAVEL ROAD
 52+09.2 RIGHT-OF-WAY
 52+22.1 FENCE
 54+04.3 FENCE
 54+09.5 EDGE OF GRAVEL ROAD
 54+20.6 EDGE OF GRAVEL ROAD
 54+37.9 EDGE OF WATER
 52+61.7 C/L BURLINGTON DITCH
 54+85.4 EDGE OF WATER
 56+15.8 FENCE
 56+18.7 PROPERTY LINE
 56+31.9 FENCE
 56+36.2 C/L WATER LINE
 56+43.7 C/L SANITARY SEWER
 56+89.4 OVERHEAD ELECTRIC
 56+85.2 C/L GRAVEL DRIVE
 56+76.1 RIGHT-OF-WAY
 57+06.5 SECTION LINE
 57+06.5 C/L WATER LINE
 57+78.9 C/L 64TH STREET
 57+80.0 C/L SANITARY SEWER
 58+00.6 C/L WATER LINE
 58+16.3 P.I. TIE-IN
 58+25.3 OVERHEAD ELECTRIC
 58+28.6 C/L SANITARY SEWER
 58+36.5 OVERHEAD ELECTRIC
 58+37.2 C/L TELEPHONE CABLE
 58+47.5 C/L TELEPHONE CABLE
 54+20.6 C/L GAS PIPELINE
 58+48.9 OVERHEAD ELECTRIC
 58+58.2 OVERHEAD ELECTRIC
 58+70.4 RIGHT-OF-WAY
 59+16.3 HDD EXIT POINT



PLAN
 Scale: 1"=100'



- NOTES:**
- EXISTING PIPELINE ELEVATIONS APPROXIMATE, BASED ON 4 FT COVER FROM GRADE.
 - PRE-INSTALLATION / POST-INSTALLATION NITROGEN TEST AND X-RAY: THE PIPELINE WILL BE NITROGEN TESTED PRIOR TO BEING PLACED IN SERVICE. THE TEST WILL BE TO CLASS 3 TEST REQUIREMENTS AS PER TITLE 49 CFR PART 192.505(E) AND ASME B31.8 2010.
 - SPILL PREVENTION: CONTRACTOR SHALL MAINTAIN AN EMERGENCY SPILL KIT IN PROXIMITY TO CONSTRUCTION AREA.
 - INSTALLATION: THE PIPE SECTION FOR HDD CROSSING TO BE MADE UP WITHIN TEMPORARY USE AREA AS SHOWN.
 - CLEAN UP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS TO BE RETURNED TO APPROXIMATE ORIGINAL CONTOURS.
- METHOD OF INSTALLATION: HORIZONTAL DIRECTIONAL DRILL
 CONTENTS TO BE HANDLED: NATURAL GAS
 OUTSIDE DIAMETER: 24"
 PIPE MATERIAL: API 5L GRADE X-52
 WALL THICKNESS: 0.500"
 MAOP: 1020 PSIG (TEST MEDIUM: NITROGEN)
 TYPE OF JOINT: WELDED
 COATING: 12-14 MILS FBE AND 40 MILS ARO
 CATHODIC PROTECTION: (INCLUDED AS PART OF THE PIPELINE SYSTEM) YES
 NON-DESTRUCTIVE TESTING: 100% X-RAY
 DESIGN COMPLIES WITH PRCI REPORT PR-227-9424,
 ASME B31.8-2010 GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, US DOT TITLE CFR PART 192 - TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS.
 MINIMUM TEST PRESSURE: 1275 PSIG
 MAXIMUM TEST PRESSURE: TBD
 DESIGN FACTOR: 0.5 CLASS 3
 TEST PRESSURE FACTOR: 1.25

REVISIONS				REFERENCE DRAWINGS			
NO.	DATE	MADE BY	DESCRIPTION	ENGR.	DATE	BY	TITLE
A	12/8	CC	ISSUED FOR CLIENT APPROVAL	URS	12/8	SR	PIPELINE ALIGNMENT

URS
 7125 W. Jefferson Ave., Ste. 400
 Lakewood, CO 80235
 303.969.0223

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Xcel Energy
 PUBLIC SERVICE COMPANY

W.O. DATE AFE: AFE #

PRELIMINARY DATE AFE: AFE #

APPROVED DATE AFE: AFE #

DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND OPTIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

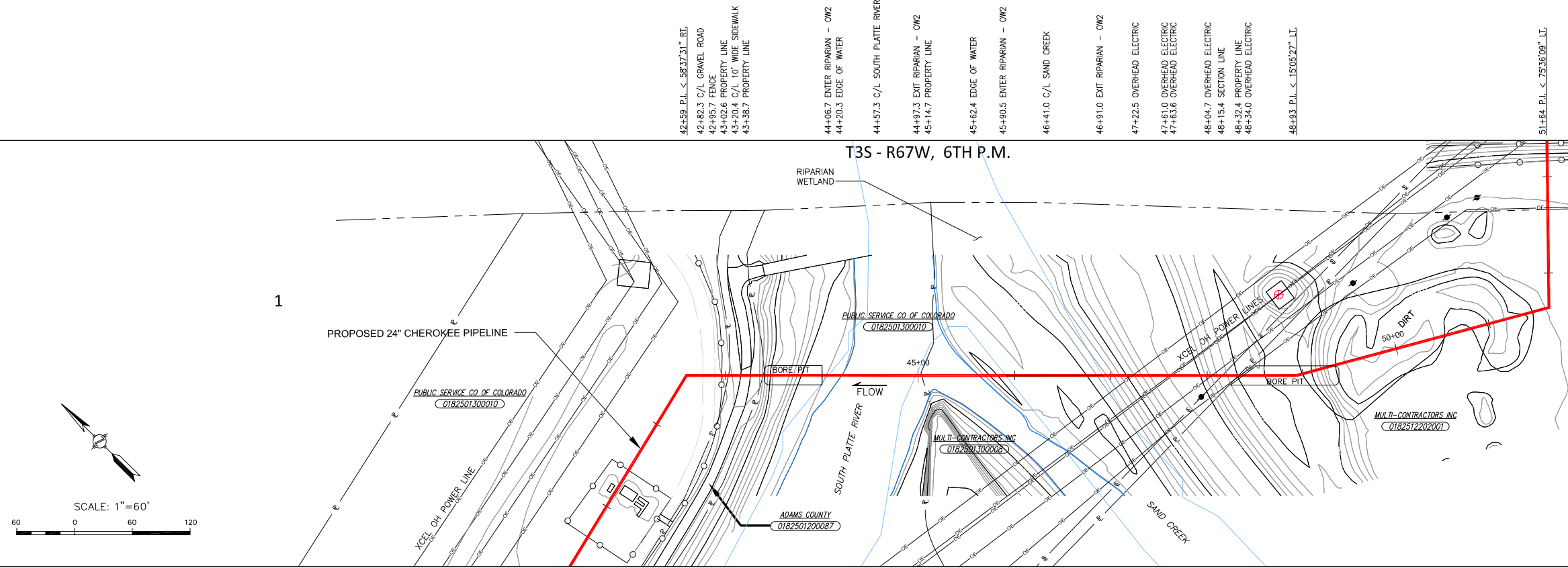
XCEL ENERGY
S. PLATTE / I-270 & BURLINGTON DITCH HDD CROSSING PLAN & PROFILE

ADAMS COUNTY COLORADO

SCALE SHOWN DATE 12/08/11

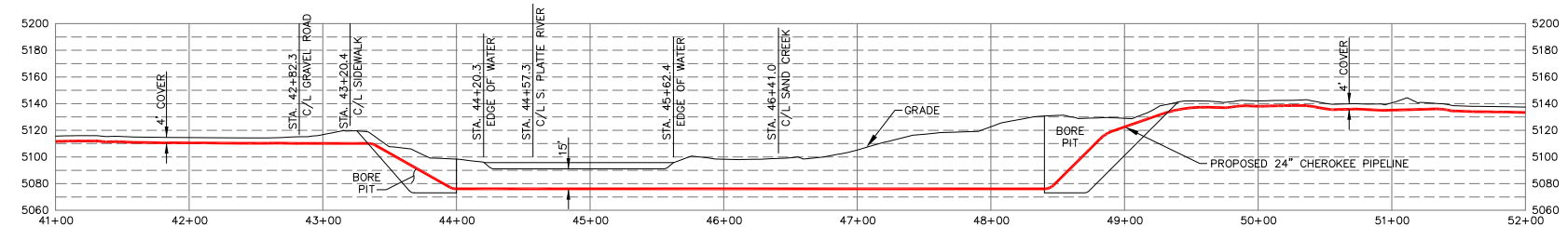
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PLAN
Scale: 1"=60'

- NOTES:**
- EXISTING PIPELINE ELEVATIONS APPROXIMATE, BASED ON 4 FT COVER FROM GRADE.
 - PRE-INSTALLATION / POST-INSTALLATION NITROGEN TEST AND X-RAY:
THE PIPELINE WILL BE NITROGEN TESTED PRIOR TO BEING PLACED IN SERVICE. THE TEST WILL BE TO CLASS 3 TEST REQUIREMENTS AS PER TITLE 49 CFR PART 192.505(E) AND ASME B31.8 2010.
 - SPILL PREVENTION: CONTRACTOR SHALL MAINTAIN AN EMERGENCY SPILL KIT IN PROXIMITY TO CONSTRUCTION AREA.
 - INSTALLATION: THE PIPE SECTION FOR CROSSING TO MADE UP WITHIN TEMPORARY USE AREA.
 - CLEAN UP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS TO BE RETURNED TO APPROXIMATE ORIGINAL CONTOURS.



PROFILE
Horizontal Scale: 1"=60'
Vertical Scale: 1"=60'

METHOD OF INSTALLATION: BORE
 CONTENTS TO BE HANDLED: NATURAL GAS
 OUTSIDE DIAMETER: 24"
 PIPE MATERIAL: API 5L GRADE X-52
 WALL THICKNESS: 0.500"
 MAOP: 1020 PSIG (TEST MEDIUM: NITROGEN)
 TYPE OF JOINT: WELDED
 COATING: 12-14 MILS FBE AND 40 MILS ARO
 CATHODIC PROTECTION: (INCLUDED AS PART OF THE PIPELINE SYSTEM) YES
 NON-DESTRUCTIVE TESTING: 100% X-RAY
 DESIGN COMPLIES WITH PRCI REPORT PR-227-0424,
 ASME B31.8-2010 GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, US DOT TITLE CFR PART 192 - TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS.
 MINIMUM TEST PRESSURE: 1275 PSIG
 MAXIMUM TEST PRESSURE: TBD
 DESIGN FACTOR: 0.6 CLASS 3
 TEST PRESSURE FACTOR: 1.25

REVISIONS				REFERENCE DRAWINGS			
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	TITLE

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 7125 W. Jefferson Ave., Ste. 400
 Lakewood, CO 80125
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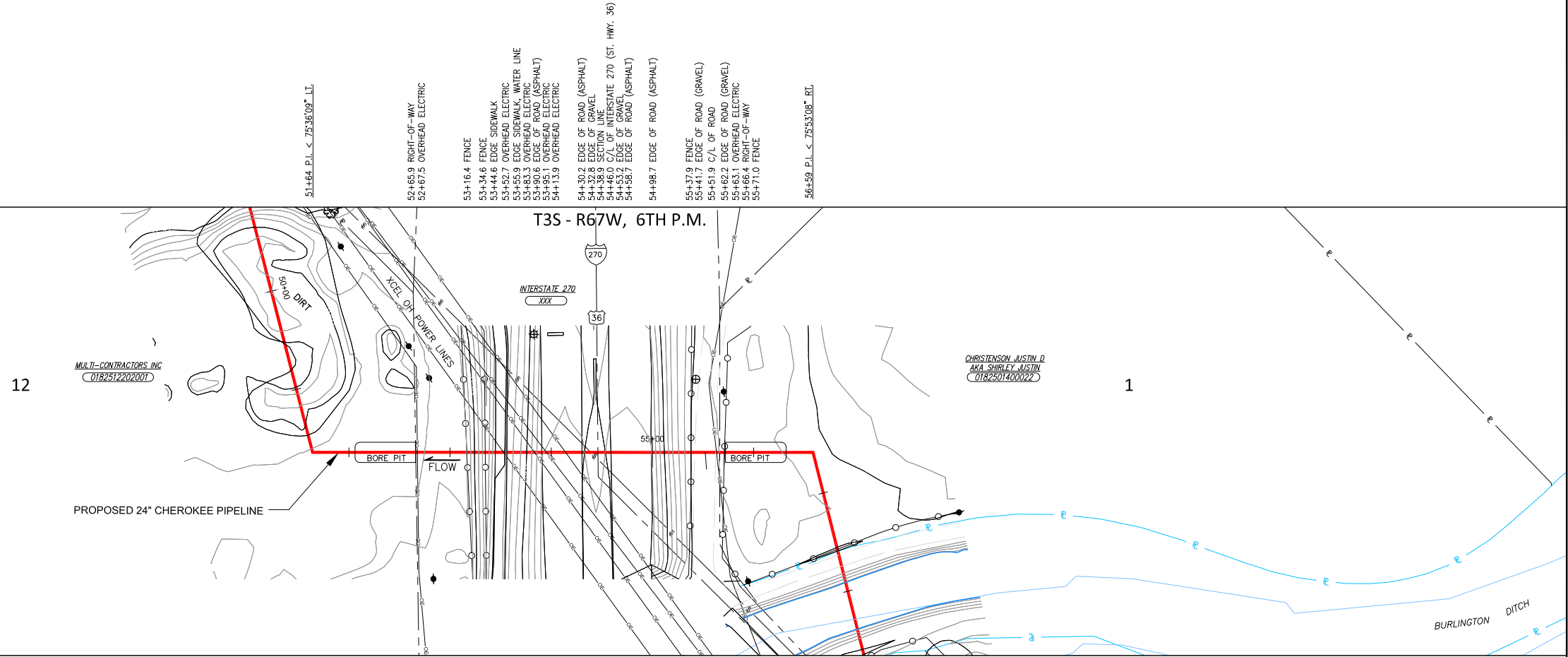
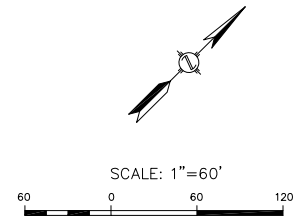
Xcel Energy
 PUBLIC SERVICE COMPANY

W.O.	DATE	AFE: AFE #
PRELIMINARY		
APPROVED		DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

XCEL ENERGY
PROPOSED 24" CHEROKEE PIPELINE
CROSSING S. PLATTE RIVER

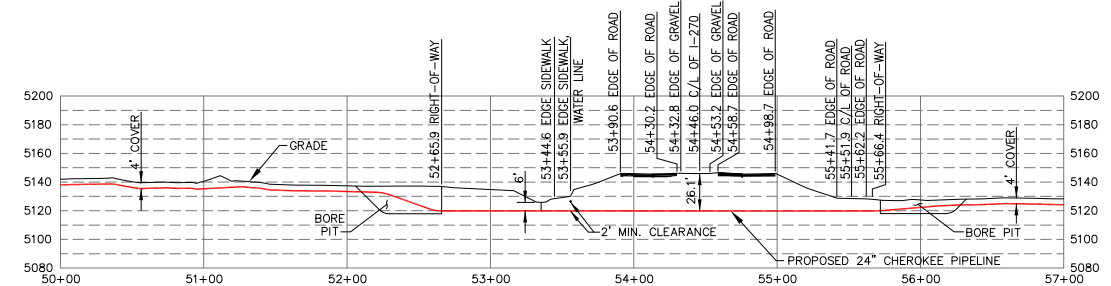
ADAMS COUNTY		COLORADO	
DRAWN	CHK. DR.	SCALE SHOWN	DATE
SL	SR		12/08/11
PROJECT ENGR. / PROJECT MGR.		FILE NO.	
MH / SR		8582-1800-100	

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PLAN
Scale: 1"=60'

- NOTES:**
- EXISTING PIPELINE ELEVATIONS APPROXIMATE, BASED ON 4 FT COVER FROM GRADE.
 - PRE-INSTALLATION / POST-INSTALLATION NITROGEN TEST AND X-RAY:
THE PIPELINE WILL BE NITROGEN TESTED PRIOR TO BEING PLACED IN SERVICE. THE TEST WILL BE TO CLASS 3 TEST REQUIREMENTS AS PER TITLE 49 CFR PART 192.505(E) AND ASME B31.8 2010.
 - SPILL PREVENTION: CONTRACTOR SHALL MAINTAIN AN EMERGENCY SPILL KIT IN PROXIMITY TO CONSTRUCTION AREA.
 - INSTALLATION: THE PIPE SECTION FOR CROSSING TO MADE UP WITHIN TEMPORARY USE AREA.
 - CLEAN UP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS TO BE RETURNED TO APPROXIMATE ORIGINAL CONTOURS.



PROFILE
Horizontal Scale: 1"=60'
Vertical Scale: 1"=60'

METHOD OF INSTALLATION: BORE
CONTENTS TO BE HANDLED: NATURAL GAS
OUTSIDE DIAMETER: 24"
PIPE MATERIAL: API 5L GRADE X-52
WALL THICKNESS: 0.500"
MAOP: 1020 PSIG (TEST MEDIUM: NITROGEN)
TYPE OF JOINT: WELDED
COATING: 12-14 MILS FBE AND 40 MILS ARO
CATHODIC PROTECTION: (INCLUDED AS PART OF THE PIPELINE SYSTEM) YES
NON-DESTRUCTIVE TESTING: 100% X-RAY
DESIGN COMPLIES WITH PRCI REPORT PR-227-0424,
ASME B31.8-2010 GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, US DOT TITLE CFR PART 192 - TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS.
MINIMUM TEST PRESSURE: 1275 PSIG
MAXIMUM TEST PRESSURE: TBD
DESIGN FACTOR: 0.6 CLASS 3
TEST PRESSURE FACTOR: 1.25

REVISIONS				REFERENCE DRAWINGS			
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	TITLE

URS
7125 W. Jefferson Ave., Ste. 400
Lakewood, CO 80025
303-969-0223

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Xcel Energy
PUBLIC SERVICE COMPANY

W.O.	DATE	AFE: AFE #
PRELIMINARY		
APPROVED		DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

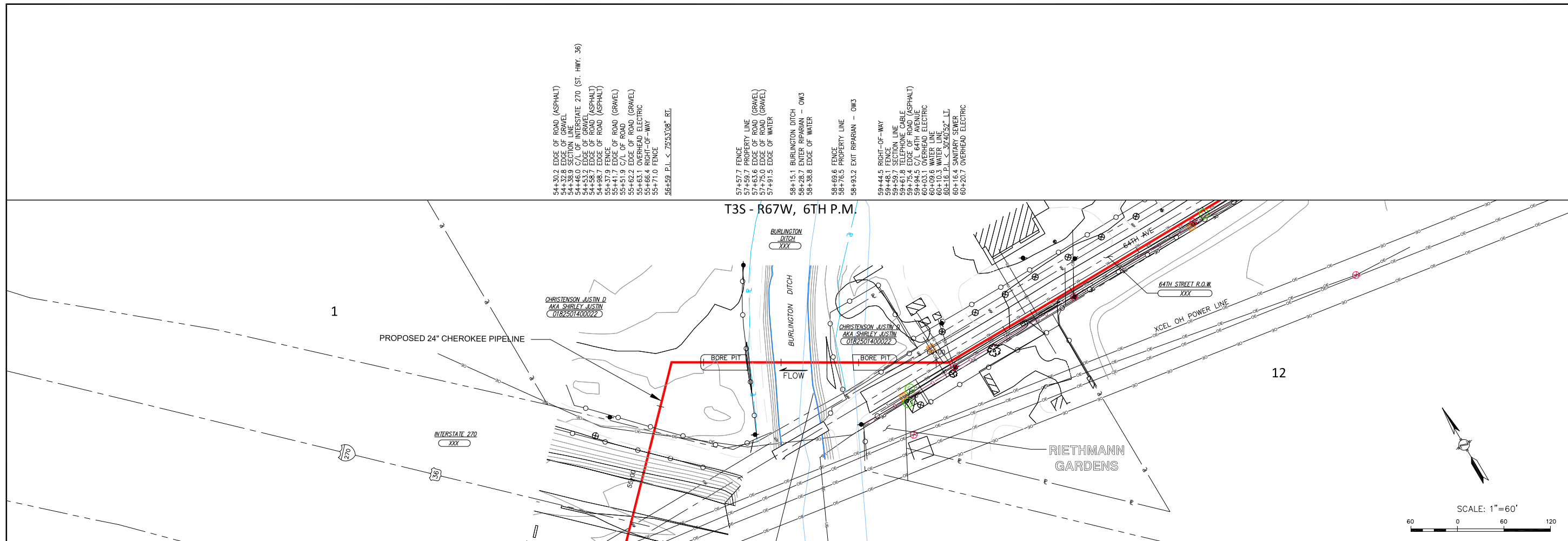
XCEL ENERGY
PROPOSED 24" CHEROKEE PIPELINE
CROSSING I-270 (ST. HWY. 36)

ADAMS COUNTY COLORADO

DRAWN: SL	CHK. DR.: SR	SCALE SHOWN	DATE: 12/08/11
PROJECT ENGR. / PROJECT MGR.: MH / SR	FILE NO.	8582-1800-101	

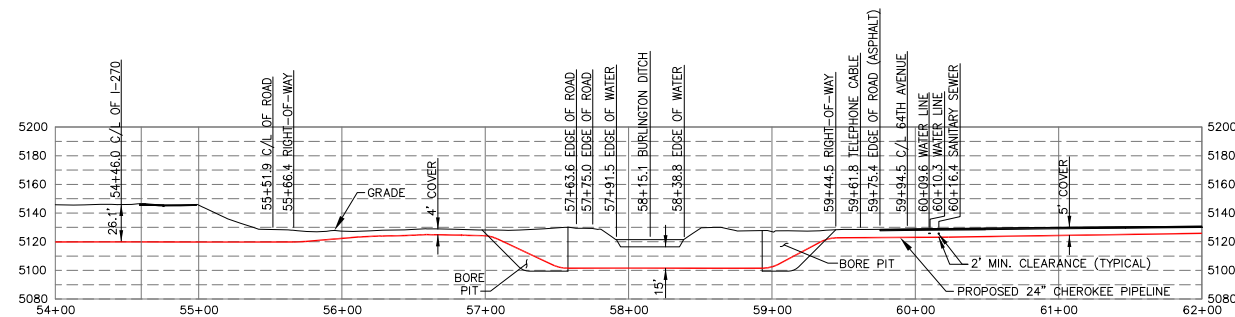
S:\Project Files\Xcel\4922582 Cherokee Pipeline Preliminary Project Plan\Mapping\Crossings_8582-1800-101.dwg

S:\Project Files\Xcel\4922582 Cherokee Pipeline Preliminary Project Plan\Mapping\Crossings_8582-1800-102.dwg



PLAN
Scale: 1"=60'

- NOTES:
- EXISTING PIPELINE ELEVATIONS APPROXIMATE, BASED ON 4 FT COVER FROM GRADE.
 - PRE-INSTALLATION / POST-INSTALLATION NITROGEN TEST AND X-RAY:
THE PIPELINE WILL BE NITROGEN TESTED PRIOR TO BEING PLACED IN SERVICE. THE TEST WILL BE TO CLASS 3 TEST REQUIREMENTS AS PER TITLE 49 CFR PART 192.505(E) AND ASME B31.8 2010.
 - SPILL PREVENTION: CONTRACTOR SHALL MAINTAIN AN EMERGENCY SPILL KIT IN PROXIMITY TO CONSTRUCTION AREA.
 - INSTALLATION: THE PIPE SECTION FOR CROSSING TO MADE UP WITHIN TEMPORARY USE AREA.
 - CLEAN UP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS TO BE RETURNED TO APPROXIMATE ORIGINAL CONTOURS.



PROFILE
Horizontal Scale: 1"=60'
Vertical Scale: 1"=60'

METHOD OF INSTALLATION: BORE
 CONTENTS TO BE HANDLED: NATURAL GAS
 OUTSIDE DIAMETER: 24"
 PIPE MATERIAL: API 5L GRADE X-52
 WALL THICKNESS: 0.500"
 MAOP: 1020 PSIG (TEST MEDIUM: NITROGEN)
 TYPE OF JOINT: WELDED
 COATING: 12-14 MILS FBE AND 40 MILS ARO
 CATHODIC PROTECTION: (INCLUDED AS PART OF THE PIPELINE SYSTEM) YES
 NON-DESTRUCTIVE TESTING: 100% X-RAY
 DESIGN COMPLIES WITH PRCI REPORT PR-227-0424,
 ASME B31.8-2010 GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, US DOT TITLE CFR PART 192 - TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS.
 MINIMUM TEST PRESSURE: 1275 PSIG
 MAXIMUM TEST PRESSURE: TBD
 DESIGN FACTOR: 0.5 CLASS 3
 TEST PRESSURE FACTOR: 1.25

REVISIONS				REFERENCE DRAWINGS			
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY	TITLE
A	12/8	SL	ISSUED FOR CLIENT APPROVAL	URS	12/8	SR	PIPELINE ALIGNMENT

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 7125 W. Jefferson Ave., Ste. 400
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XCEL ENERGY
PROPOSED 24" CHEROKEE PIPELINE CROSSING BURLINGTON DITCH

ADAMS COUNTY COLORADO

DRAWN	CHK. DR.	SCALE SHOWN	DATE
SL	SR		12/08/11
PROJECT ENGR. / PROJECT MGR.		FILE NO.	
MH / SR		8582-1800-102	