

ROVER PIPELINE PROJECT

PROPOSED 42" O.D. MARKET SEGMENT - NG PIPELINE

DEFIANCE COUNTY, OHIO TO LIVINGSTON, MICHIGAN

CONSTRUCTION SPREADS 7-8



DWG. NO.	REFERENCE DRAWING TITLE	NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D	DWG. STATUS	CHECKED	APPROVED	P.L./STA. NO.	PROJECT NO.		
								PREL.Y	BY	DATE	BY		DATE	BY
								BID			DESIGN	ROVER PIPELINE An ENERGY TRANSFER Company	PREVIOUS DWG. NO.	
								CONSTR.			DRAWN		BY	DATE
								CADDS	PLOT DATE:	FILE NAME:	ASBUILT	FILE NO.	SCALE:	SHEET 1 OF 1
														DWG. NO.
														MK-P0-0
														SHEET 1 OF 1



ROVER PIPELINE PROJECT
42" MARKET SEGMENT - NG PIPELINE
COVER SHEET
M.P. 0 TO M.P. 100.0
DEFIANCE, OHIO TO LIVINGSTON, MICHIGAN

GENERAL DRAWINGS

DRAWING NUMBER	DRAWING TITLE	REVISION
MK-P0-0	COVER SHEET	B
MK-P1-0	DRAWING INDEX	D
P2-10	NOTES AND LEGEND	A
42-1 PLOT PLAN A 42" MAINLINE VALVE TYPICAL PLOT PLAN		F

ALIGNMENT

DRAWING NUMBER	DRAWING TITLE	REVISION
SPREAD 7		
MK-P3-7001	ALIGNMENT - MP 0.0 TO MP 1.0	C
MK-P3-7002	ALIGNMENT - MP 1.0 TO MP 2.0	C
MK-P3-7003	ALIGNMENT - MP 2.0 TO MP 3.1	C
MK-P3-7004	ALIGNMENT - MP 3.1 TO MP 4.1	C
MK-P3-7005	ALIGNMENT - MP 4.1 TO MP 5.1	C
MK-P3-7006	ALIGNMENT - MP 5.1 TO MP 6.1	C
MK-P3-7007	ALIGNMENT - MP 6.1 TO MP 7.2	C
MK-P3-7008	ALIGNMENT - MP 7.2 TO MP 7.9	C
MK-P3-7009	ALIGNMENT - MP 7.9 TO MP 8.9	C
MK-P3-7010	ALIGNMENT - MP 8.9 TO MP 9.9	C
MK-P3-7011	ALIGNMENT - MP 9.9 TO MP 11.0	C
MK-P3-7012	ALIGNMENT - MP 11.0 TO MP 12.0	C
MK-P3-7013	ALIGNMENT - MP 12.0 TO MP 13.0	C
MK-P3-7014	ALIGNMENT - MP 13.0 TO MP 14.0	C
MK-P3-7015	ALIGNMENT - MP 14.0 TO MP 15.1	C
MK-P3-7016	ALIGNMENT - MP 15.1 TO MP 16.1	C
MK-P3-7017	ALIGNMENT - MP 16.1 TO MP 17.1	C
MK-P3-7018	ALIGNMENT - MP 17.1 TO MP 18.1	C
MK-P3-7019	ALIGNMENT - MP 18.1 TO MP 19.1	C
MK-P3-7020	ALIGNMENT - MP 19.1 TO MP 19.9	C
MK-P3-7020A	ALIGNMENT - MP 19.9 TO MP 20.6	B
MK-P3-7021	ALIGNMENT - MP 20.6 TO MP 21.1	C
MK-P3-7022	ALIGNMENT - MP 21.1 TO MP 22.2	C
MK-P3-7023	ALIGNMENT - MP 22.2 TO MP 23.2	C
MK-P3-7024	ALIGNMENT - MP 23.2 TO MP 24.2	C
MK-P3-7025	ALIGNMENT - MP 24.2 TO MP 25.2	C
MK-P3-7026	ALIGNMENT - MP 25.2 TO MP 26.3	C
MK-P3-7027	ALIGNMENT - MP 26.3 TO MP 27.3	C
MK-P3-7028	ALIGNMENT - MP 27.3 TO MP 28.3	C
MK-P3-7029	ALIGNMENT - MP 28.3 TO MP 29.3	C
MK-P3-7030	ALIGNMENT - MP 29.3 TO MP 30.3	C
MK-P3-7031	ALIGNMENT - MP 30.3 TO MP 31.3	C
MK-P3-7032	ALIGNMENT - MP 31.3 TO MP 32.4	C
MK-P3-7033	ALIGNMENT - MP 32.4 TO MP 33.4	C
MK-P3-7034	ALIGNMENT - MP 33.4 TO MP 34.4	C
MK-P3-7035	ALIGNMENT - MP 34.4 TO MP 35.2	C
MK-P3-7036	ALIGNMENT - MP 35.2 TO MP 36.2	C
MK-P3-7037	ALIGNMENT - MP 36.2 TO MP 37.0	C
MK-P3-7038	ALIGNMENT - MP 37.0 TO MP 38.1	C
MK-P3-7039	ALIGNMENT - MP 38.1 TO MP 38.8	C
MK-P3-7040	ALIGNMENT - MP 38.8 TO MP 39.7	D
MK-P3-7041	ALIGNMENT - MP 39.7 TO MP 40.4	D
MK-P3-7042	ALIGNMENT - MP 40.4 TO MP 41.2	C
MK-P3-7043	ALIGNMENT - MP 41.2 TO MP 42.2	C
MK-P3-7044	ALIGNMENT - MP 42.2 TO MP 43.2	C
MK-P3-7045	ALIGNMENT - MP 43.2 TO MP 44.3	C
MK-P3-7046	ALIGNMENT - MP 44.3 TO MP 45.3	C
MK-P3-7047	ALIGNMENT - MP 45.3 TO MP 46.3	C
MK-P3-7048	ALIGNMENT - MP 46.3 TO MP 47.3	C
MK-P3-7049	ALIGNMENT - MP 47.3 TO MP 48.4	C
MK-P3-7050	ALIGNMENT - MP 48.4 TO MP 49.4	C
MK-P3-7051	ALIGNMENT - MP 49.4 TO MP 50.3	C
MK-P3-7052	ALIGNMENT - MP 50.3 TO MP 51.3	C
MK-P3-7053	ALIGNMENT - MP 51.3 TO MP 52.2	C
MK-P3-7054	ALIGNMENT - MP 52.2 TO MP 53.1	C
MK-P3-7055	ALIGNMENT - MP 53.1 TO MP 54.1	C
MK-P3-7056	ALIGNMENT - MP 54.1 TO MP 55.0	C
MK-P3-7057	ALIGNMENT - MP 55.0 TO MP 55.6	C
MK-P3-7058	ALIGNMENT - MP 55.6 TO MP 56.4	C
SPREAD 8		
MK-P3-8001	ALIGNMENT - MP 56.4 TO MP 57.5	C
MK-P3-8002	ALIGNMENT - MP 57.5 TO MP 58.2	C
MK-P3-8003	ALIGNMENT - MP 58.2 TO MP 59.2	C
MK-P3-8004	ALIGNMENT - MP 59.2 TO MP 60.1	C
MK-P3-8005	ALIGNMENT - MP 60.1 TO MP 60.7	C
MK-P3-8006	ALIGNMENT - MP 60.7 TO MP 61.7	C
MK-P3-8007	ALIGNMENT - MP 61.7 TO MP 62.7	C
MK-P3-8008	ALIGNMENT - MP 62.7 TO MP 63.2	C
MK-P3-8009	ALIGNMENT - MP 63.2 TO MP 64.2	C
MK-P3-8010	ALIGNMENT - MP 64.2 TO MP 65.3	C
MK-P3-8011	ALIGNMENT - MP 65.3 TO MP 66.3	C
MK-P3-8012	ALIGNMENT - MP 66.3 TO MP 67.3	C
MK-P3-8013	ALIGNMENT - MP 67.3 TO MP 68.3	C
MK-P3-8014	ALIGNMENT - MP 68.3 TO MP 69.4	C
MK-P3-8015	ALIGNMENT - MP 69.4 TO MP 70.4	C
MK-P3-8016	ALIGNMENT - MP 70.4 TO MP 71.4	C

ALIGNMENT (CONTINUED)

DRAWING NUMBER	DRAWING TITLE	REVISION
MK-P3-8017	ALIGNMENT - MP 71.4 TO MP 72.4	C
MK-P3-8018	ALIGNMENT - MP 72.4 TO MP 73.4	C
MK-P3-8019	ALIGNMENT - MP 73.4 TO MP 74.4	C
MK-P3-8020	ALIGNMENT - MP 74.4 TO MP 75.2	C
MK-P3-8021	ALIGNMENT - MP 75.2 TO MP 76.2	C
MK-P3-8022	ALIGNMENT - MP 76.2 TO MP 77.2	C
MK-P3-8023	ALIGNMENT - MP 77.2 TO MP 78.3	C
MK-P3-8024	ALIGNMENT - MP 78.3 TO MP 79.1	C
MK-P3-8025	ALIGNMENT - MP 79.1 TO MP 80.1	C
MK-P3-8026	ALIGNMENT - MP 80.1 TO MP 81.1	C
MK-P3-8027	ALIGNMENT - MP 81.1 TO MP 82.1	C
MK-P3-8028	ALIGNMENT - MP 82.1 TO MP 82.8	C
MK-P3-8029	ALIGNMENT - MP 82.8 TO MP 83.8	C
MK-P3-8030	ALIGNMENT - MP 83.8 TO MP 84.7	C
MK-P3-8031	ALIGNMENT - MP 84.7 TO MP 85.7	C
MK-P3-8032	ALIGNMENT - MP 85.7 TO MP 86.6	C
MK-P3-8033	ALIGNMENT - MP 86.6 TO MP 87.4	C
MK-P3-8034	ALIGNMENT - MP 87.4 TO MP 88.0	C
MK-P3-8035	ALIGNMENT - MP 88.0 TO MP 88.9	C
MK-P3-8036	ALIGNMENT - MP 88.9 TO MP 89.7	C
MK-P3-8037	ALIGNMENT - MP 89.7 TO MP 90.6	C
MK-P3-8038	ALIGNMENT - MP 90.6 TO MP 91.7	C
MK-P3-8039	ALIGNMENT - MP 91.7 TO MP 92.4	C
MK-P3-8040	ALIGNMENT - MP 92.4 TO MP 93.4	C
MK-P3-8041	ALIGNMENT - MP 93.4 TO MP 94.5	C
MK-P3-8042	ALIGNMENT - MP 94.5 TO MP 95.5	C
MK-P3-8043	ALIGNMENT - MP 95.5 TO MP 96.5	C
MK-P3-8044	ALIGNMENT - MP 96.5 TO MP 97.4	C
MK-P3-8045	ALIGNMENT - MP 97.4 TO MP 98.3	C
MK-P3-8046	ALIGNMENT - MP 98.3 TO MP 99.3	C
MK-P3-8047	ALIGNMENT - MP 99.3 TO MP 100.0	C

HORIZONTAL DIRECTIONAL DRILLS

DRAWING NUMBER	DRAWING TITLE	REVISION
SPREAD 8		
MK-P4-22	HDD - EAST AUSTIN ROAD (MP 62.5)	D
MK-P4-22B	HDD - I-94 (MP 74.5)	C
MK-P4-23B	HDD - PORTAGE RIVER (MP 84.5)	E
MK-P4-27	HDD - LAKE AT VINES ROAD (MP 94.9)	E
MK-P4-28	HDD - SWAMP NEAR JEWELL RD (MP 96.9)	C

MARKET ITC ALTERNATIVE ALIGNMENT

DRAWING NUMBER	DRAWING TITLE	REVISION
MK ITC-P3-8023	ALIGNMENT - MP 77.2 TO MP 78.3	B
MK ITC-P3-8024	ALIGNMENT - MP 78.3 TO MP 79.1	D
MK ITC-P3-8025	ALIGNMENT - MP 79.1 TO MP 80.1	B
MK ITC-P3-8040	ALIGNMENT - MP 92.4 TO MP 93.4	C
MK ITC-P3-8041	ALIGNMENT - MP 93.4 TO MP 94.5	D
MK ITC-P3-8042	ALIGNMENT - MP 94.5 TO MP 95.5	D
MK ITC-P3-8043	ALIGNMENT - MP 95.5 TO MP 96.5	D
MK ITC-P3-8044	ALIGNMENT - MP 96.5 TO MP 97.4	C
MK ITC-P3-8045	ALIGNMENT - MP 97.4 TO MP 98.3	C

HORIZONTAL DIRECTIONAL DRILLS

DRAWING NUMBER	DRAWING TITLE	REVISION
SPREAD 8		
MK-P4-22	HDD - EAST AUSTIN ROAD (MP 62.5)	D
MK-P4-22B	HDD - I-94 (MP 74.5)	C
MK-P4-23B	HDD - PORTAGE RIVER (MP 84.5)	E

*NOTE THAT MK-P4-27 HDD - LAKE AT VINES ROAD (MP 94.9) AND MK-P4-28 HDD - SWAMP NEAR JEWELL RD (MP 96.9) WILL BE REMOVED FROM THE PROJECT IF THE ITC ALTERNATIVE ROUTES ARE SELECTED.

DWG. NO.	REFERENCE DRAWING TITLE	NO.	REVISION - DESCRIPTION
		D	FERC FILING UPDATE
		C	FERC FILING UPDATE
		B	FERC FILING UPDATE
		A	FERC FILING

BY	DATE	CHK'D	APP'D
PGP	6-24-15	JHR	JHR
NLM	6-3-15	JHR	JHR
NLM	4-15-15	JHR	JHR
JRM	1-15-15	JHR	JHR

DWG. STATUS	CHECKED		APPROVED			P.L./STA. NO. ACCOUNT NO.
	BY	DATE	BY	DATE	BY	
PREL'Y						
BID						
CONSTR.						
CADD						



ROVER PIPELINE PROJECT
42" MARKET SEGMENT - NG PIPELINE
DRAWING INDEX
MP 0.0 TO MP 100.0
DEFIANCE, OHIO TO LIVINGSTON, MICHIGAN

PROJECT NO.	585000000005
PREVIOUS DWG. NO.	
SHEET 1 OF 1	
DWG. NO.	MK-P1-0
SHEET 1 OF 1	

GENERAL NOTES

- GRID PROJECTION BASED UPON OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE (GRID UNITS IN FEET) GEODETIC DATUM: NAD 1983, CLARKE SPHEROID, 1866.
- THE AERIAL IMAGES WERE TAKEN IN SEPTEMBER, 2014
- CONTRACTOR SHALL COMPLY WITH ALL CONTRACT, LANDOWNER, ENVIRONMENTAL, PERMIT AND IMPLEMENTATION PLAN REQUIREMENTS EVEN IF NOT SHOWN ON DRAWINGS.
- CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL TRAFFIC CONTROL REQUIREMENTS INCLUDING THE DEVELOPMENT OF TRAFFIC CONTROL PLANS, I.E., FLAG PERSONS, WARNING SIGNS AND EMERGENCY FENCED AREAS (ORANGE PLASTIC FENCE).
- ALL PIPING AND MATERIALS AS WELL AS ALL WORK TO BE PERFORMED AS SHOWN ON ALL DRAWINGS. SHALL BE IN COMPLIANCE WITH TITLE 49 OF THE CODE OF FEDERAL REGULATIONS, PART 192 - TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINES: MINIMUM FEDERAL SAFETY STANDARDS AND THE LATEST AMENDMENTS THERETO, ISSUED BY THE DEPARTMENT OF TRANSPORTATION RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, OFFICE OF PIPELINE SAFETY. IN ADDITION, ALL FABRICATIONS SHALL COMPLY WITH ASME/ANSI B31.8 CODE.
- THE PIPELINE IS TO COMPLY WITH THE LATEST EDITION OF API 1104 AND THE LATEST EDITION OF ASME B31.8 CODE, AND WILL APPLY FOR WELDING AND PROCEDURE QUALIFICATIONS. 100% X-RAY OR AUT OF WELDS ARE REQUIRED.
- ALL PROPOSED PIPING TO BE HYDROSTATICALLY TESTED AS PER DESIGN SPECIFICATIONS OR OTHERWISE NOTED ON THE DRAWINGS AND SHALL NOT EXCEED 100% SMYS OF THE THINNEST WALL PIPE. HEAD PRESSURE FROM GROUND ELEVATION CHANGES SHALL BE TAKEN INTO ACCOUNT.
- HORIZONTAL DIRECTIONAL DRILLS (HDD) SHALL BE PRE-TESTED FOR FOUR (4) HOURS AS NOTED ON DRAWINGS.
- THE LONGITUDINAL SEAMS OF LINE PIPE SHALL BE STAGGERED TO A 10 O'CLOCK AND 2 O'CLOCK POSITION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURANCE OF SAFE WORKING CONDITIONS, WHICH WILL MEET OR EXCEED INDUSTRY STANDARDS, REGULATORY REQUIREMENTS, COMPANY SPECIFICATIONS AND ANY OTHER STANDARDS REQUIRED BY CONTRACT.
- CONTRACTOR SHALL RESTRICT ACCESS OF ALL EQUIPMENT AND WORK ACTIVITY ALONG THE PIPELINE ROUTE TO THE DESIGNATED WORK SPACE AND THE RIGHT OF WAY.
- NO DEVIATIONS FROM THESE DRAWINGS OR SUPPORTING SPECIFICATIONS MAY BE MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM COMPANY'S PROJECT MANAGER.
- CONTRACTOR SHALL SUPPLY, INSTALL AND MAINTAIN SEDIMENT CONTROL DEVICES ALONG DOWN GRADIENT SIDES OF WORK AREAS AS REQUIRED BY COMPANY.
- CONTRACTOR TO INSTALL & MAINTAIN SAFETY FENCING FOR OPEN DITCHES WITHIN 200 FT. OF A RESIDENCE UNTIL THE DITCH IS BACKFILLED.
- ROVER PIPELINE PERSONNEL WILL MAKE ARRANGEMENTS WITH THE FOREIGN PIPELINE OWNERS FOR INSTALLATION OF TEST LEAD WIRES ON THE FOREIGN PIPELINE. CONTRACTOR SHALL NOT INSTALL TEST LEAD WIRES ON FOREIGN PIPELINES.
- BURIAL DEPTH OF THE ROVER PIPELINE SHALL BE A MINIMUM OF 3' OR PER LANDOWNER REQUIREMENTS. MINIMUM DEPTH OF COVER IS 4' IN ALL AGRICULTURAL AREAS & 5' IN ALL CREEKS & BARROW DITCHES. DEPTH TO BE MEASURED TO TOP OF PIPE OR TOP OF SET-ON WEIGHT.
- CONTRACTOR TO FIELD CHECK ALL SIZES, DIMENSIONS, LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
- COMPANY HAS ATTEMPTED TO LOCATE ALL FOREIGN PIPELINES AND UNDERGROUND UTILITIES INVOLVED ON THIS PROJECT, BUT MAKES NO GUARANTEE THAT ALL SUCH LINES HAVE BEEN LOCATED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUCH PIPELINES AND MAKE ALL NECESSARY ONE CALLS PRIOR TO CROSSING.
- CONTRACTOR TO FURNISH COATING MATERIAL FOR ALL PROPOSED BELOW GRADE FIELD JOINTS AND ALL OTHER UNCOATED PIPING, VALVES, FITTINGS, FLANGES, AND APPLY PER COMPANY SPECIFICATIONS.
- ANY DAMAGE TO PIPE COATING SHALL BE REPAIRED OR REPLACED BY CONTRACTOR ACCORDING TO COMPANY SPECIFICATIONS.
- ALL EXTERNAL METAL SURFACES SHALL BE PREPARED FOR COATING BY SAND BLASTING TO SSPC-SP10 NEAR WHITE SPECIFICATION. FINISH COATING SHALL BE IN ACCORDANCE WITH COMPANY PIPELINE SPECIFICATIONS.
- ALL ABOVE GROUND AND BELOW GROUND PIPING TO BE PAINTED IN ACCORDANCE WITH COMPANY SPECIFICATIONS BEFORE PLACING IN SERVICE.
- ALL PIPING IS TO BE CERTIFIED FREE OF HAZARDOUS LEAKS PRIOR TO BEING PLACED IN SERVICE.
- ALL TUBING, TUBING VALVES, FITTINGS, ETC, SHALL BE SUPPLIED BY CONTRACTOR.
- CONTRACTOR SHALL FURNISH ALL TEMPORARY MANIFOLDS, WELD CAPS, BLIND FLANGES, VENTS, DRAWINGS, GASKETS, ETC., FOR TESTING OF PIPING.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL MATERIAL UNDER 2" NPS OR AS SHOWN ON FABRICATION DRAWINGS.
- ALL STUD BOLTS ARE TO BE TIGHTENED IN EQUAL INCREMENTS USING STANDARD BOLTING SEQUENCE, UNTIL ALL BOLTS HAVE BEEN TIGHTENED TO THE TORQUE SPECIFICATIONS LISTED IN THE COMPANY CONSTRUCTION SPECIFICATIONS BOLT TORQUE PROCEDURE.
- ALL WELDED PIPE OR FITTINGS HAVING UNEQUAL WALL THICKNESS GREATER THAN 3/8" SHALL BE INTERNALLY TRANSITIONED BY CONTRACTOR TO MATCH ADJOINING WT PER ASME B31.8.
- ALL FIELD BENDS SHALL HAVE A SMOOTH CONTOUR, WRINKLE BENDS AND METER JOINTS SHALL NOT BE INSTALLED. THE MAXIMUM AND MINIMUM DIAMETER AT ANY BEND SHALL NOT EXCEED 2 1/2% OF THE NORMAL DIAMETER OF THE PIPE, AND THE MAXIMUM DEFLECTION SHALL BE 1 1/2% PER PIPE DIAMETER. ALL ANGLES GREATER THAN MAXIMUM FIELD BEND WILL UTILIZE INDUCTION BENDS.
- CRUSHED STONE TO BE SUPPLIED BY THE CONTRACTOR, PER CONSTRUCTION SPECIFICATIONS.
- CONTRACTOR SHALL DO ALL NECESSARY GRADING, LEVELING AND FILLING, INCLUDING ROCK EXCAVATION WHERE REQUIRED. FILL DIRT SHALL BE FURNISHED BY CONTRACTOR AND MEET COMPANY SPECIFICATIONS.
- THRUST AND REST BLOCKS ARE TO HAVE 1/8" THICK PVC SHEETING BETWEEN BOTTOM OF PIPE & TOP OF CONCRETE UNLESS OTHERWISE INDICATED ON DRAWINGS. (ALL BLOCKS TO BE REINFORCED AS NOTED).
- THE THICKNESS FOR ROCK SURFACING, WHEN REQUIRED, SHOULD BE 4" OF COMPACTED CRUSHED ROCK, SOIL STERILENT SHOULD BE APPLIED TO THE EXISTING GROUND BEFORE THE CRUSHED ROCK SURFACING IS PLACED. CONTRACTOR TO FURNISH & INSTALL GEOTEXTILE FABRIC AND A 4" LAYER OF CRUSHED STONE AS INDICATED.
- CONTRACTOR TO FURNISH ALL MATERIAL FOR CONCRETE AND PIPE SUPPORTS, INCLUDING EZ-LINE PIPE SUPPORTS.
- CRUSHED STONE AND GEOTEXTILE FABRIC TO EXTEND 1'-0" OUTSIDE OF FENCE PERIMETERS.

- CONTRACTOR SHALL DISPOSE OF DRILLING MUD AT SITES PRE-APPROVED BY COMPANY.
- PRIOR TO PIPE PULL BACK AND INSTALLATION, CONTRACTOR'S ACTUAL DRILL PROFILE SHALL BE SUBMITTED TO COMPANY FOR APPROVAL.
- CONTRACTOR SHALL HANDLE AND CONTAIN INADVERTENT RELEASES OF DRILLING MUD IN ACCORDANCE WITH PROJECT SCOPE OF WORK.
- ALL ABOVE GROUND OBSTRUCTIONS WITHIN THE WORKSPACE SHALL BE SURROUNDED OR MARKED WITH ORANGE SAFETY FENCE.
- ALL OVERHEAD POWER LINES SHALL BE MARKED WITH SAFETY SIGNS.
- CONTRACTOR SHALL RETURN ALL AREAS DISTURBED DURING PROJECT ACTIVITIES TO PRECONSTRUCTION CONTOURS, REVEGETATED, AND STABILIZED PER THE PROJECT-SPECIFIC SPILL PREVENTION, CONTAINMENT, AND COUNTERMEASURE (SPCC) PLAN, AND ALL APPLICABLE PERMITS AS APPROPRIATE.
- BEFORE ANY CONSTRUCTION COMMENCES, THE LIMITS OF ACCESS ROADS TO THE EXTRA WORK SPACE (EWS) WILL BE STAKED IN THE FIELD BY THE COMPANY. IF ACCESS ROADS ARE LOCATED IN WETLANDS THEY MUST BE INSTALLED USING EQUIPMENT MATS ONLY. WHEN CONSTRUCTION ACTIVITIES ARE COMPLETED AT THE EWS, THE TEMPORARY ACCESS ROADS (EQUIPMENT MATS) MUST BE REMOVED AND THE DISTURBED AREAS, INCLUDING THE EWS, RESTORED TO PRE-CONSTRUCTION CONTOURS, STABILIZED AND RESEDED PER COMPANY REQUIREMENTS.
- ADEQUATE SPILL CONTAINMENT PROVISIONS MUST BE MAINTAINED ON ALL EQUIPMENT. EQUIPMENT SHALL BE INSPECTED DAILY OR AT SHIFT CHANGES FOR FLUID LEAKS. ANY FLUID LEAKS DETECTED SHALL BE CORRECTED IMMEDIATELY. ADEQUATE SPILL CLEANUP MATERIALS SHALL BE UTILIZED TO CONTAIN AND PREVENT THE DISPERSAL OF ANY REPORTABLE SPILL OF CONTAMINANTS.
- CONTRACTOR SHALL MAKE EFFORTS TO MINIMIZE OFF-SITE VEHICLE TRACKING OF SEDIMENTS AT A CONSTRUCTION ENTRANCE. CONTRACTOR SHALL REMOVE ANY SOIL TRACKED ONTO A PAVED ROAD USING APPROPRIATE EQUIPMENT. AT A MINIMUM, CONSTRUCTION ENTRANCES WILL BE MONITORED DAILY, GENERALLY AT THE END OF A WORKING SHIFT, TO REMOVE ANY EXCESS MUD, DIRT, OR ROCK TRACKED FROM THE SITE.
- THE ALIGNMENT AND HDD DRAWINGS REPRESENT THE DESIGN AND CONSTRUCTION DETAILS BASED UPON SURVEY INFORMATION PROVIDED BY SURVEY COMPANY, THESE DRAWINGS ARE NOT PRESENTED AS SURVEYING DOCUMENTS.

GENERAL ENVIRONMENTAL NOTES

GENERAL REQUIREMENTS

- STAY WITHIN THE APPROVED WORK AREAS. THIS INCLUDES THE STAKED RIGHT-OF-WAY (ROW), EXTRA WORKSPACE AREAS, AND APPROVED ACCESS ROADS. ALL PROJECT ACTIVITIES ARE LIMITED TO THESE APPROVED AREAS, INCLUDING PARKING, MATERIAL STOCKPILING, AND EQUIPMENT STORAGE OR MAINTENANCE.
- RESTRICTED AREAS WILL BE FENCED OFF BY CONTRACTOR TO PROTECT SENSITIVE RESOURCES AND PREVENT ACCESS. DO NOT ENTER RESTRICTIVE AREAS FOR ANY REASON.
- DO NOT LITTER.

CLEARING AND GRADING

- MINIMIZE CLEARING AND GRADING WITHIN ADDITIONAL WORKSPACE. IF YOU DON'T NEED IT, DON'T DISTURB IT.
- REFERENCE SITE-SPECIFIC DRAWINGS FOR CLEARING RESTRICTIONS.
- AS NECESSARY, CUT TREES AND VEGETATION AT GROUND LEVEL LEAVING THE ROOT SYSTEMS IN PLACE (UNLESS GRADING IS NEEDED). FELL TREES AND VEGETATION TOWARD THE ROW TO PREVENT DAMAGE TO VEGETATION OUTSIDE THE WORK AREA.
- REMOVE ALL CUT TREES, STUMPS AND BRANCHES, AS REQUIRED PER COMPANY CONSTRUCTION SPECIFICATIONS, LINE LIST, OR DRAWINGS.

EROSION CONTROL

- INSTALL EROSION CONTROL STRUCTURES AFTER CLEARING VEGETATION AND BEFORE GRADING. PLACE THESE STRUCTURES BETWEEN ALL DISTURBED AREAS AND PROTECTED RESOURCES, SUCH AS STREAMS AND WETLANDS.
- USE EROSION CONTROL STRUCTURES TO PREVENT STOCKPILED SOIL OR MUD FROM LEAVING THE WORK AREA OR ENTERING SENSITIVE RESOURCE AREAS.
- INSTALL SILT FENCE AND HAY BALES PROPERLY.
- INSPECT AND MAINTAIN EROSION CONTROL STRUCTURES DAILY IN AREAS OF ACTIVE CONSTRUCTION.
- STABILIZE TOPSOIL AND SPOIL STOCKPILES AS NEEDED, AND UNDER THE DIRECTION OF THE ENVIRONMENTAL INSPECTOR.

DRILLING MUD

- KEEP ALL DRILLING MUD CONTAINED WITHIN THE ROW.
- CONTINUOUSLY MONITOR THE DRILLING OPERATION ON A REGULAR BASIS FOR POSSIBLE FRAC-OUTS SO THAT THEY MAY BE RESPONDED TO IMMEDIATELY.
- REPORT ALL FRAC-OUTS IMMEDIATELY TO THE ENVIRONMENTAL INSPECTOR.
- IN THE EVENT OF A FRAC-OUT, IMMEDIATELY CONTAIN IT USING HAY BALES, SILT FENCE, AND/OR DIKES.
- REMOVE ANY MUD USING EITHER HAND TOOLS OR A VACUUM TRUCK.
- DISPOSE OF DRILLING MUD IN COMPANY APPROVED LOCATIONS.

HAZARDOUS MATERIAL

HAZARDOUS MATERIALS INCLUDE FUELS, PAINTS, OILS, HYDRAULIC FLUIDS, AND SOLVENTS.

- DO NOT STORE HAZARDOUS MATERIALS OR REFUEL OR SERVICE EQUIPMENT WITHIN 100 FEET OF ANY RIVER OR WETLAND, UNLESS UNDER THE DIRECT SUPERVISION OF THE ENVIRONMENTAL INSPECTOR OR APPROVED VARIANCE.
- KEEP SPILL RESPONSE EQUIPMENT ON SITE.
- IF A SPILL OCCURS, FOLLOW APPROVED PROCEDURES TO CONTAIN AND CLEAN UP THE SPILL AND ANY CONTAMINATED SOIL AND IMMEDIATELY NOTIFY COMPANY AND THE ENVIRONMENTAL INSPECTOR.

ENVIRONMENTAL INSPECTOR

THE ENVIRONMENTAL INSPECTOR WILL BE AVAILABLE TO ANSWER QUESTIONS AND PROVIDE GUIDANCE REGARDING THE ENVIRONMENTAL REQUIREMENTS.

BE AWARE: THE ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO STOP TASK AND ORDER CORRECTIVE ACTIONS IF RESOURCES ARE THREATENED OR PERMIT CONDITIONS ARE VIOLATED.

STRAW/BALE INSTALLATION

INSTALLATION REQUIREMENTS

- PLACE BALES:
 - WITH BINDINGS OFF THE GROUND TO PREVENT DETERIORATION
 - BETWEEN DISTURBED AREAS AND DOWN-SLOPE ENVIRONMENTAL RESOURCES
 - AT THE BASE OF ALL SLOPES NEXT TO WETLANDS
 - AT THE INLET AND OUTLET OF OPEN DRAINAGE STRUCTURES
 - SUFFICIENTLY BEYOND THE TOE OF THE SLOPE TO GIVE THE SEDIMENT ROOM TO POND AND COLLECT

MAINTENANCE

- INSPECT BALES:
 - DAILY IN AREAS OF ACTIVE CONSTRUCTION
 - WEEKLY IN AREAS OF NO CONSTRUCTION OR EQUIPMENT OPERATION
 - WITHIN 24 HOURS OF EACH 0.5 INCH OF RAINFALL
- REPAIR OR REPLACE BALES AS NEEDED.
- REMOVE ACCUMULATED SEDIMENTS AS NEEDED.

SILT FENCE INSTALLATION

INSTALLATION REQUIREMENTS

- PLACE SILT FENCE:
 - BETWEEN DISTURBED AREAS AND DOWN-SLOPE ENVIRONMENTAL RESOURCES
 - AT THE BASE OF ALL SLOPES NEXT TO WETLANDS
 - AT THE BASE OF ALL SLOPES NEXT TO ROAD CROSSINGS
 - AT THE INLET AND OUTLET OF OPEN DRAINAGE STRUCTURES
 - SUFFICIENTLY BEYOND THE TOE OF THE SLOPE TO GIVE THE SEDIMENT ROOM TO POND AND COLLECT
- USE SANDBAGS OR BACKFILLING TO KEY IN THE BOTTOM OF THE FENCE IN AREAS WHERE IT IS NOT FEASIBLE TO TRENCH IT IN (LEDGES, ROCKY SOIL, LARGE TREE ROOTS, ETC.)

MAINTENANCE

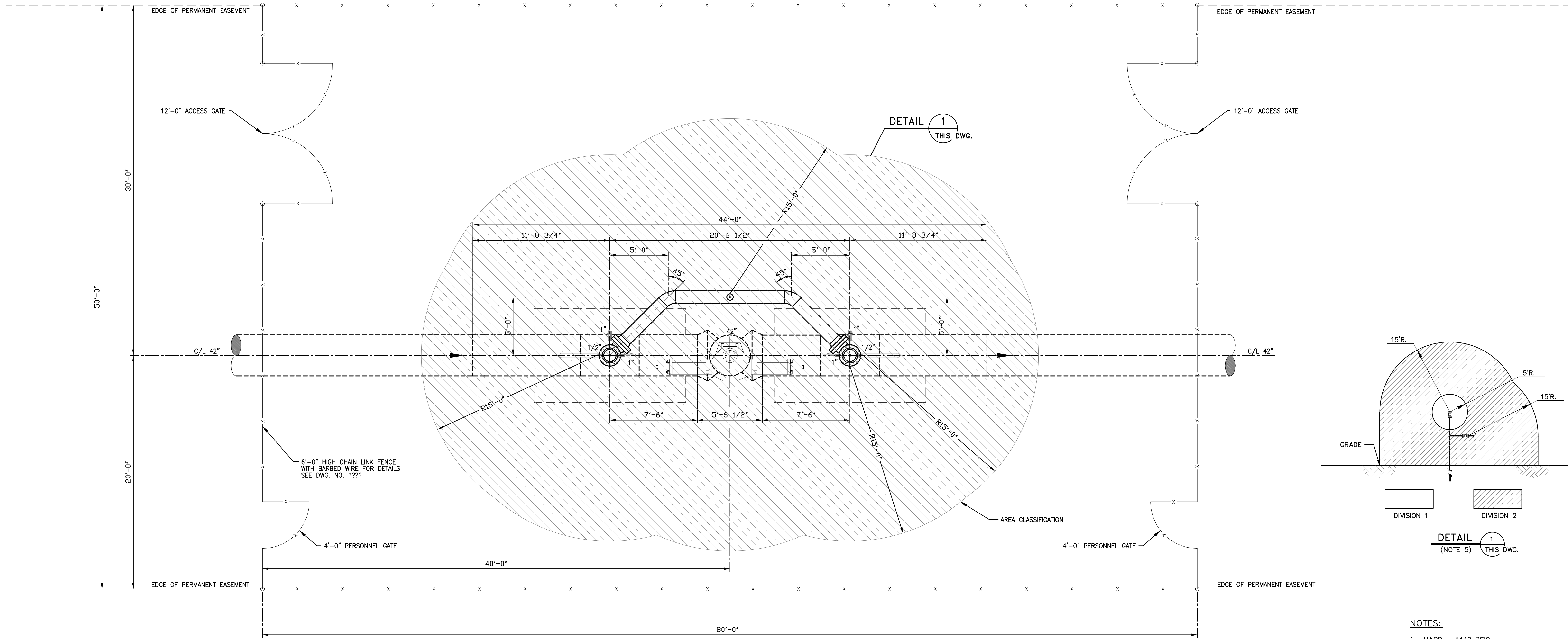
- INSPECT SILT FENCE:
 - DAILY IN AREAS OF ACTIVE CONSTRUCTION
 - WEEKLY IN AREAS OF NO CONSTRUCTION OR EQUIPMENT OPERATION
 - WITHIN 24 HOURS OF EACH 0.5 INCH OF RAINFALL
- REPAIR OR REPLACE SILT FENCE AS NEEDED.
- REMOVE ACCUMULATED SEDIMENTS AS NEEDED.

LEGEND

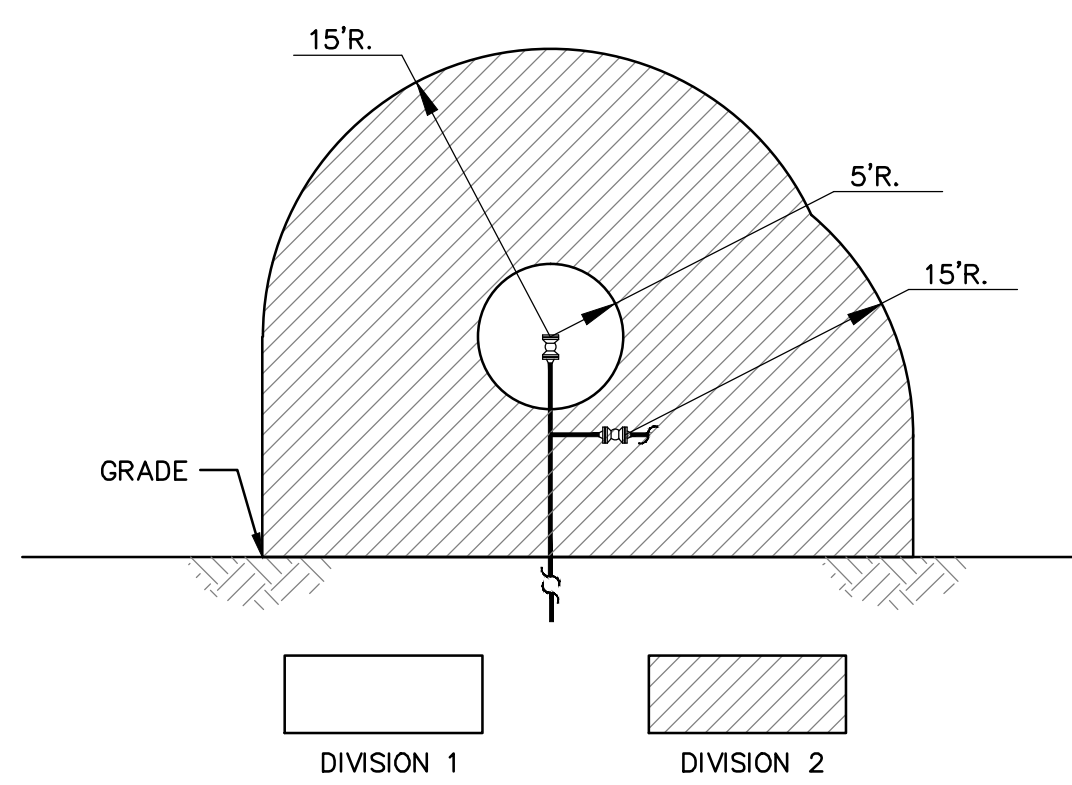
PERMANENT EASEMENT		PROPOSED PIPELINE		MLV	
TEMPORARY WORKSPACE		PROPOSED PIPELINE		MILE POST	
ADDITIONAL TEMPORARY WORKSPACE		FOREIGN PIPELINE		AERIAL MARKER	
FORESTED WETLANDS		WATERLINE		LINE LIST NUMBER	OH-CA-100.000
EMERGENT WETLANDS		POWERLINE		2 WIRE TEST STATION	
WATERBODY		TRANSMISSION LINE		SINGLE PIPELINE TEST STATION (2 TERMINAL BOX)	
UPLAND DRAINAGE		CABLE		MULTIPLE PIPELINE TEST STATION (6 TERMINAL BOX)	
PERENNIAL STREAM		FENCE		PIPELINE WARNING SIGN	
INTERMITTENT STREAM		ROAD		HDD BENCH MARK	
EPHEMERAL STREAM		RAILROAD			
NATURAL DRAINAGE		PROPERTY LINE			
TREELINE		SECTION LINE			
TOP OF SLOPE		STATE LINE			
TOE OF SLOPE		TOWNSHIP & RANGE LINE			
WATER WELL					
OIL WELL					
GAS WELL					

DWG. NO.	REFERENCE DRAWING TITLE	NO.	FERC FILING	NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D	DWG. STATUS	CHECKED	APPROVED	P.L./STA. NO. ACCOUNT NO.	CONSTRUCTION YEAR	ROVER PIPELINE An ENERGY TRANSFER Company	PROJECT NO.
										PREL'Y	BY	DATE	BY	DATE		PREVIOUS DWG. NO.
										BID	BY	DATE	BY	DATE		SHEET 1 OF 1
										CONSTR.	BY	DATE	BY	DATE		DWG. NO.
										CADDS	FILE NO.	SCALE: NONE				P2-10
																SHEET 1 OF 1

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PLOT PLAN
SCALE 1/4"=1'-0"



DETAIL 1
(NOTE 5) THIS DWG.

- NOTES:**
1. MAOP = 1440 PSIG
 2. DESIGN FACTOR = 0.5
 3. DESIGN TEMPERATURE = -34° F TO 120° F
 4. DESIGN CODE = ANSI/ASME B31.8
 5. AREA CLASSIFICATION DETERMINED USING AGA CATALOG # XL1001 FIG. 13 FOR NATURAL GAS.

DWG. NO.	REFERENCE DRAWING TITLE	NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D	DWG. STATUS	CHECKED			APPROVED			P.L./STA. NO. ACCOUNT NO.		
									BY	DATE	BY	DATE	BY	DATE	CONSTRUCTION YEAR	BY	DATE
		F	FERC FILING	AEN	1-15-15	CRF	JHR	PREL'Y									2016
		E	ISSUED FOR PROJECT USE	GJB	12-08-14	CRF	JHR	BID									
		D	PRELIMINARY, FOR REVIEW	GJB	11-25-14	CRF	JHR	CONSTR.									
		C	PRELIMINARY, FOR REVIEW	GJB	11-21-14	CRF	JHR	CADDS									
		B	FERC DRAFT FILING	DJD	11-5-14	CRF	JHR										
		A	PRELIMINARY, FOR REVIEW	DJD	10-20-14	CRF	JHR										



ROVER PIPELINE PROJECT
42" MAIN LINE VALVE
MARKET ROUTE
TYPICAL PLOT PLAN
COUNTY, STATE

PROJECT NO.
PREVIOUS DWG. NO.
SHEET 1 OF 1
DWG. NO.
42-1 PLOT PLAN A/F
SHEET 1 OF 1

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