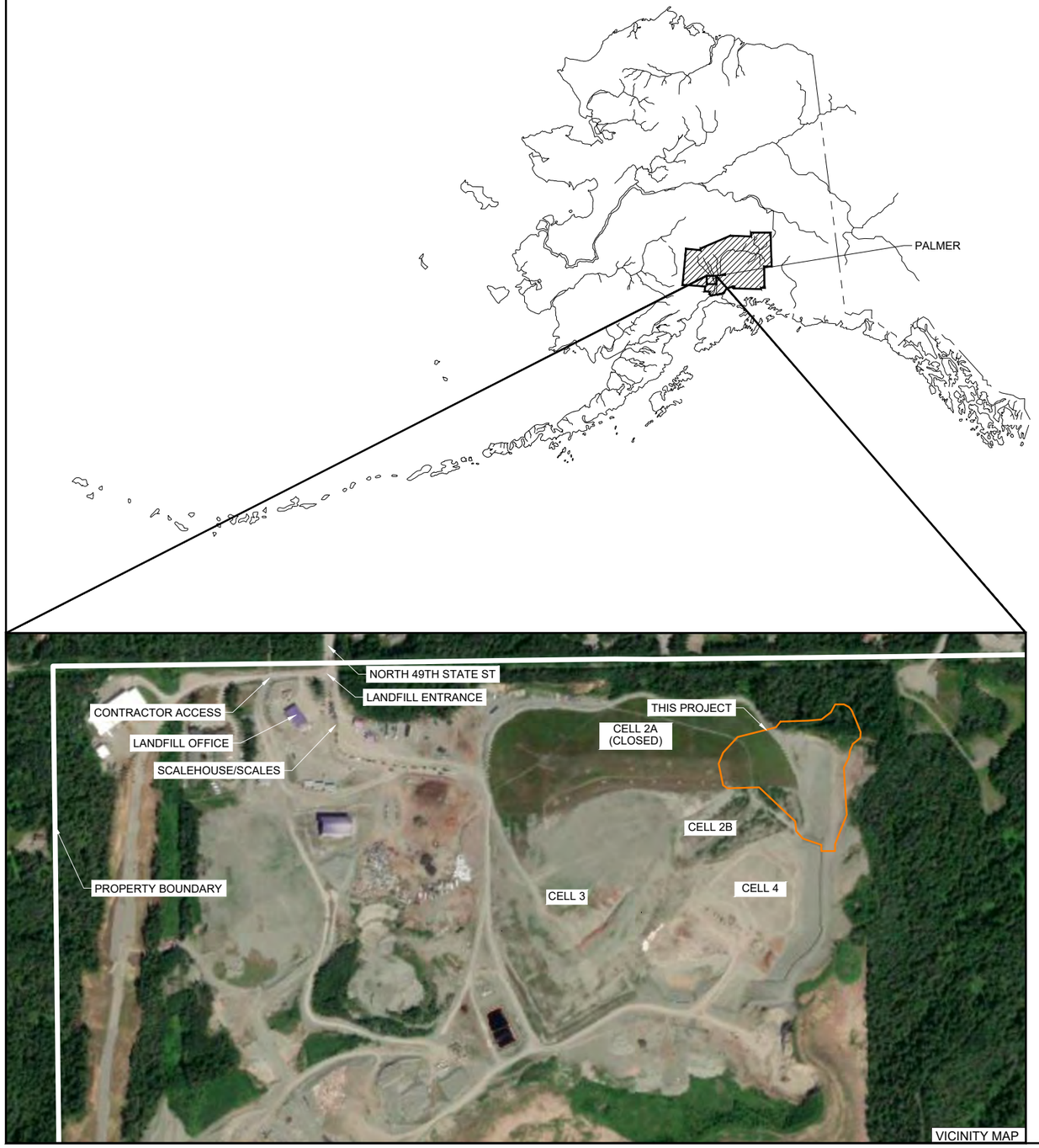
APPENDIX A – CONFORMING TO CONSTRUCTION RECORDS DRAWINGS

MATANUSKA-SUSITNA BOROUGH
PUBLIC WORKS DEPARTMENT

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	11/15/25	RCH	FJD	CtCR



VICINITY MAP

CENTRAL LANDFILL
CELL 4 EXPANSION CONSTRUCTION
⚠1 CONFORMING TO CONSTRUCTION RECORDS
APRIL 2025

PROJECT NUMBER: 167550

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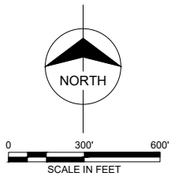

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REVIEWED BY:

BOROUGH ENGINEER

GENERAL NOTES

1. THE CENTRAL LANDFILL IS LOCATED AT 1201 N 49TH STATE STREET, PALMER, ALASKA 99645.
2. CONTRACTOR SHALL CONTRACT WITH MATANUSKA-SUSITNA (MAT-SU) BOROUGH (OWNER) DIRECTLY TO PERFORM WORK.
3. CONTRACTOR SHALL PROVIDE LIABILITY INSURANCE NAMING OWNER, OPERATOR, BURNS & MCDONNELL ENGINEERING COMPANY (ENGINEER), AND ENGINEER'S SUBCONTRACTORS AS AN ADDITIONAL INSURED.
4. THE LOCATIONS OF EXISTING UTILITIES AND EASEMENTS HAVE BEEN DETERMINED FROM AVAILABLE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES AND EASEMENTS WHETHER OR NOT SHOWN TO PROTECT THEM FROM DAMAGE. WHERE A UTILITY OR EASEMENT IS ABANDONED OR REQUIRES TO BE PROTECTED, THE CONTRACTOR SHALL PROVIDE PROTECTION THAT AT MINIMUM MEETS THE REQUIREMENTS OF THE UTILITY OR EASEMENT OWNER. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR, REPLACEMENT, OR ANY OTHER CHARGES RELATED TO EXISTING UTILITIES OR EASEMENTS IN CONJUNCTION WITH THE EXECUTION OF THIS WORK. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL ALASKA DIGLINE, INC AT 1-800-478-3121 OR 811.
5. THE WORK UNDER THIS CONTRACT SHALL INCLUDE FURNISHING ALL SUPERVISION, LABOR, TOOLS, EQUIPMENT, TRANSPORTATION, STORAGE FACILITIES, SERVICES, AND SUPPLIES REQUIRED TO COMPLETE THE FOLLOWING AS INDICATED ON THE CONSTRUCTION DRAWINGS:
   A. CONSTRUCTION OF CELL 4 EXPANSION, INCLUDING STRIPPING AND STOCKPILING TOPSOIL AND COVER SOILS FROM PHASE 2A FINAL COVER AND AREA OF CELL 4 EXPANSION, COMPLETING EARTHWORK NECESSARY TO ESTABLISH CELL 4 EXPANSION SUBGRADE, INSTALLING GEOSYNTHETIC CLAY LINER, GEOMEMBRANE LINER, GEOTEXTILE, LEACHATE COLLECTION PIPING, GAS COLLECTION LATERAL PIPING, GRANULAR DRAINAGE LAYER, AND RELATED ITEMS.
   B. RELOCATION OF EXISTING LANDFILL GAS COLLECTION AND CONTROL SYSTEM PIPING.
   C. ANY OTHER WORK NOT SPECIFIED ABOVE REQUIRED IN THE CONSTRUCTION DRAWINGS.
6. THE CONSTRUCTION DRAWINGS REPRESENT THE FINISHED WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION. CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIALS, AND TOOLS NECESSARY TO COMPLETELY PERFORM THE WORK IN SAFE, EXPEDITIOUS, AND WORKMAN LIKE MANNER. COORDINATE SCHEDULE OF THE WORK WITH THE OWNER. CONTRACTOR SHALL INSTALL EQUIPMENT AND MATERIALS PER MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OTHERWISE. THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR PROPER HANDLING AND INSTALLATION OF EQUIPMENT AND MATERIALS.
7. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH ANY SHOP DRAWINGS PROVIDED BY SUPPLIERS. ALL SHOP DRAWINGS PROVIDED BY OTHERS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE FABRICATION OF MATERIAL OR THE PURCHASE OF NON-RETURNABLE STOCK. DIMENSIONAL REVIEW IS THE CONTRACTOR'S RESPONSIBILITY.
8. LANDFILL CONSTRUCTION EQUIPMENT OPERATIONS WILL BE LIMITED TO THE FOLLOWING TIMES: MONDAY THROUGH SATURDAY FROM 8 AM - 5 PM. NON-EQUIPMENT HOURS WILL BE LIMITED TO 7 AM - 6 PM MONDAY THROUGH SATURDAY. FURTHER, NO WORK SHALL BE COVERED PRIOR TO COMPLETION OF REQUIRED TESTING, SURVEYING AND ENGINEER'S INSPECTION. UNAPPROVED WORK SHALL BE UNCOVERED AT CONTRACTOR'S EXPENSE.
9. SITE TOPOGRAPHY MAY VARY DUE TO OWNER'S CONSTRUCTION, DAILY COVER MATERIAL STOCKPILING, AND WASTE DISPOSAL.
10. EXISTING ROADS, STRUCTURES, FACILITIES AND LANDFILL OPERATIONS SHALL NOT BE INTERFERED WITH BY CONTRACTOR'S ACTIVITIES. NORMAL LANDFILL OPERATIONAL HOURS ARE 8 AM - 5 PM MONDAY THROUGH SUNDAY. COORDINATE ACTIVITIES WITH LANDFILL OWNER/OPERATOR IF OPERATION DISRUPTION IS EXPECTED. UNLESS REQUIRED BY THE PROJECT, ANY DISTURBANCE TO EXISTING FEATURES SHALL BE REPAIRED AT NO COST TO OWNER.
11. CONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO ENSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLAIMS RESULTING FROM HIS/HER ACTIONS AND ACTIVITIES. VISITS TO THE SITE BY OWNER, ENGINEER OR ENGINEER'S SUBCONTRACTORS SHALL NOT RELIEVE THE CONTRACTOR OF SUCH RESPONSIBILITY.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SAFEGUARDING OF THE INSTALLATION AND MATERIALS AND EQUIPMENT STORED ON THE SITE TO PREVENT THEFT, VANDALISM, OR DAMAGE. THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR EQUIPMENT AND MATERIALS THROUGH PROJECT COMPLETION. CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS IN A SECURE LOCATION (ON OR OFF-SITE).
13. CONTRACTOR SHALL PROTECT THE WORK AREAS WITH THE APPROPRIATE FENCING, BARRICADES, AND SIGNAGE. CONTRACTOR SHALL COORDINATE WORK PROTECTION AREA REQUIREMENTS CONTROL WITH OWNER.
14. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA AND IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
15. UNKNOWN SITUATIONS OR CONDITIONS NOT COVERED IN THESE INSTRUCTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ENGINEER AND MANUFACTURER'S SPECIALISTS MAY BE AVAILABLE FOR CONSULTATION. THE PRESENCE OF THE ENGINEER OR THE MANUFACTURER'S REPRESENTATIVE AT THE PROJECT SITE DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR A PROPER INSTALLATION.
16. ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR, AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF WORK.
17. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE CONSTRUCTION DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR, SUBJECT TO THE APPROVAL OF THE ENGINEER.
18. ALL WORK SHALL BE DONE TO THE LINES, SLOPES, THICKNESS, AND GRADES INDICATED IN THE CONSTRUCTION DRAWINGS. ALL ESTABLISHED MONUMENTS, BENCHMARKS, REFERENCE POINTS, STAKES, AND OTHER CENTRAL POINTS SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IN WRITING OF BENCHMARKS, REFERENCE LINES, OR OTHER CONTROL POINTS WHICH MAY HAVE BEEN DISTURBED OR WHICH APPEAR TO BE OFF LINE OR GRADE. CONTRACTOR SHALL UTILIZE GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY FOR COMPLETION OF WORK TO ENSURE ACCURACY IN GRADING AND ALIGNMENTS.
19. CONTRACTOR SHALL MAINTAIN CONTROL OF DEBRIS GENERATED BY CONTRACTOR'S ACTIVITIES SUCH TO PREVENT THE INADVERTENT MOVEMENT OF DEBRIS OUTSIDE THE CONSTRUCTION BOUNDARIES. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL, MANAGEMENT, STORAGE, LOADING, AND DISPOSAL OF CONSTRUCTION DEBRIS. CONTRACTOR SHALL DISPOSE OF DEBRIS PER APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING POTABLE WATER AND TEMPORARY SANITARY FACILITIES FOR HIS/HER PERSONNEL. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR INSTALLING AND REMOVING ANY REQUIRED TEMPORARY UTILITY CONNECTIONS.
21. SUBMITTALS: SUBMIT MATERIAL AND PRODUCT DATA, WARRANTIES, INSTALLATION, AND AS-BUILT CONSTRUCTION DOCUMENTS TO THE OWNER AND ENGINEER FOR REVIEW PER SPECIFICATION 01 33 00. CONTRACTOR SHALL FORWARD MATERIAL MANIFESTS TO THE ENGINEER AND OWNER. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS WITH NOTES IDENTIFYING MODIFICATIONS TO THE CONSTRUCTION DRAWINGS.
22. CONTRACTOR SHALL HAVE PROPER EQUIPMENT AND MANPOWER NECESSARY TO UNLOAD ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND THE CONTRACT DOCUMENTS.
23. CONTRACTOR SHALL PROTECT ALL EXISTING CONTROL POINTS AND PROMPTLY REPLACE IF DAMAGED AT CONTRACTOR'S COST. ADDITIONAL HORIZONTAL AND VERTICAL CONTROL POINTS SHALL BE ADDED BY CONTRACTOR AS NECESSARY TO COMPLETE WORK. NEW CONTROL POINTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE OWNER. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURE ELEVATIONS DURING CONSTRUCTION STAKING, COMPARE THESE ELEVATIONS TO THOSE INDICATED AND REVIEW WITH ENGINEER.
24. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING MONITORING WELLS, GAS PROBES,GAS WELLS, UTILITIES, AND STRUCTURES, ETC. ANY DAMAGES TO EXISTING SYSTEMS SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
25. THESE NOTES AND OTHER DRAWING NOTES CONTAINED HEREWITH ARE PROVIDED TO MEET SPECIFIC REQUIREMENTS AND TO SUPPLEMENT THE CONTRACT DOCUMENTS. THESE NOTES NEITHER REPLACE NOR OVERRIDE THE PROVISIONS AND REQUIREMENTS OF THE CONTRACT DOCUMENTS.

EROSION CONTROL NOTES

1. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE CONSTRUCTION DRAWINGS. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY THE SITE CONDITIONS THROUGHOUT ALL PHASES OF CONSTRUCTION.
2. TEMPORARY EROSION AND SEDIMENT CONTROLS: FURNISH, INSTALL, CONSTRUCT, AND MAINTAIN TEMPORARY MEASURES TO CONTROL EROSION AND MINIMIZE THE SILTATION OF CONVEYANCE FEATURES AND THE POLLUTION OF PRIVATE PROPERTIES. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL COMPLETION OF THE WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL SEDIMENT CONTROL PRACTICES REQUIRED AS A RESULT OF HIS/HER ACTIVITIES. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, UNLESS NOTED OTHERWISE. THE SEDIMENT CONTROL PRACTICES INDICATED IN THE CONTRACT DRAWINGS ARE NOT INTENDED TO BE INCLUSIVE OF ALL SEDIMENT CONTROL PRACTICES REQUIRED TO BE COMPLETED FOR THIS PROJECT.
4. PROVIDE AND MAINTAIN ALL EROSION CONTROL FEATURES NECESSARY TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL, AND JURISDICTIONAL AGENCY'S EROSION CONTROL-RELATED REGULATIONS THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL REMOVE EROSION CONTROL FEATURES IF SAID FEATURES ARE NOT BIODEGRADABLE.
5. BMP'S AND CONTROLS SHALL CONFORM TO THE REQUIREMENTS OF THE ALASKA DEPARTMENT OF TRANSPORTATION. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
6. CONTRACTOR IS REQUIRED TO COMPLY WITH THE TERMS AND CONDITIONS CONTAINED WITHIN THE CONSTRUCTION STORMWATER GENERAL PERMIT.
7. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
8. ALL WASH WATER (VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
10. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. THESE SUCH MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM DISCHARGE INTO CONVEYANCE FEATURES OR WATERS OF THE STATE. DISPOSAL OF SOLID WASTE SHALL BE COORDINATED WITH OWNER.
12. ALL STORMWATER POLLUTION PREVENTION MEASURES PRESENTED IN THE CONSTRUCTION DRAWINGS SHALL BE INITIATED AS SOON AS PRACTICABLE.
13. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
14. CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE SEDIMENTATION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORMWATER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
15. SOIL STOCKPILE AND BORROW AREAS RESULTANT FROM CONTRACTOR'S ACTIVITIES SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S AND SEEDING.
16. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
17. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES IN ORDER TO PREVENT EROSION.
18. THE PERIMETER OF ANY STOCKPILE AREAS SHALL BE LINED WITH SEDIMENT FENCE.
19. THE INTEGRITY OF WETTED PERIMETER FOR PERIMETER AND DIVERSION DITCHES SHALL BE MAINTAINED AT ALL TIMES.
20. FUELING OF CONTRACTOR EQUIPMENT SHALL BE CONDUCTED IN A CONTAINED AREA.
21. STORAGE OF FUELS AND HAZARDOUS MATERIALS SHALL BE DONE IN SUCH A WAY AS TO MINIMIZE THE POTENTIAL OF SPILLS. CONTRACTOR SHALL PROVIDE AND INSTALL THEIR OWN SPILL CONTAINMENT DEVICES OR STRUCTURES.
22. SPILLS OF TOXIC OR HAZARDOUS MATERIAL, INCLUDING DIESEL FUEL FOR CONTRACTOR EQUIPMENT USE ONSITE, SHALL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, AS REQUIRED. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
23. CONCRETE WASHOUT SHALL BE COORDINATED WITH THE OWNER.
24. ALL DISTURBED AREAS SHALL BE RETURNED TO PRE-EXISTING CONDITIONS INCLUDING GRADING AND DRAINAGE AREAS.

CONFORMING TO CONSTRUCTION RECORDS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
GENERAL NOTES

project	contract
167550	AUTHORIZATION #14

drawing **G001** — rev. **0**

sheet of sheets

file G001 GENERAL NOTES.DWG

Millimeters / Inches — Scale For Microfilming

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LEGEND

PLAN:

- CLF-9 — ACTIVE MONITORING WELL
- CLF-1 — INACTIVE MONITORING WELL
- CP — SURVEY CONTROL POINT
- CLFP-1 — LANDFILL GAS MONITORING PROBE
- GV-1 — LANDFILL GAS VENT
- GW-1 — LANDFILL GAS WELL
- RW 3-1 — VERTICAL RECIRCULATION WELL
- POWER POLE
- LIGHT FIXTURE
- BUILDING/STRUCTURE
- EXISTING 2 FOOT CONTOURS
- 160 — EXISTING 10 FOOT CONTOURS
- DESIGN 2 FOOT CONTOURS
- 310 — DESIGN 10 FOOT CONTOURS
- EXISTING FENCE
- PROPERTY BOUNDARY
- CONSTRUCTION LIMITS
- PAVED ROAD
- UNPAVED ROAD
- OHE — OVERHEAD ELECTRIC
- UE — UNDERGROUND ELECTRIC
- GCCS — EXISTING GAS COLLECTION AND CONTROL SYSTEM PIPING
- GCCS — GAS COLLECTION AND CONTROL SYSTEM PIPING
- GL — EXISTING GAS LATERAL PIPING
- GL — GAS LATERAL PIPING
- 4 IN — 4" CONDENSATE FORCE MAIN
- LCP — EXISTING LEACHATE COLLECTION PIPING
- LCP — LEACHATE COLLECTION PIPING
- RL RL — EXISTING LEACAHTE RECIRCULATION LATERAL
- EL EL — EXISTING EDGE OF LINER
- EL EL — EDGE OF LINER
- CELL BOUNDARY
- CHANNEL DRAIN
- EDGE OF ROAD
- SILT FENCE
- EXISTING CELL 2A SUBDRAIN PIPE
- TRAILS
- BURIED CULVERT
- TREE LINE
- FINAL COVER
- WETLANDS

SECTION:

- ALUMINUM
- CONCRETE
- GRAVEL / AGGREGATE
- TOP SOIL
- GENERAL FILL
- EXISTING REFUSE AND DAILY COVER
- INTERMEDIATE COVER
- EXISTING COVER SOIL
- GRANULAR DRAINAGE MATERIAL
- CUSHION / SAND
- PIPE INSULATION
- NATIVE SOIL
- REMOVE AND/OR SALVAGE EXISTING FEATURE
- GRASS / NATIVE VEGETATION
- EXISTING GROUND SURFACE
- GEOMEMBRANE LINER
- GEOTEXTILE FILTER / CUSHION
- GEOCOMPOSITE DRAINAGE NET
- GCL (GEOSYNTHETIC CLAY LINER)
- PLYWOOD
- EROSION CONTROL MATTING

CELL 4 EXPANSION CONSTRUCTION QUANTITIES		
MATERIAL	UNIT	EST. QUANTITY
FINAL COVER STRIPPING AND STOCKPILING	AC	1.3
REMOVE EXISTING DRAINAGE PIPES WITHIN LINER AREA	LF	1446
CORRUGATED PLASTIC 6" PERF. DRAINAGE PIPE W/ GEOTEXTILE SOCK	LF	150
UNCLASSIFIED EXCAVATION (TO ESTABLISH CELL 4 AND ROAD SUBGRADE)	CY	15,584
EMBANKMENT FILL (TO ESTABLISH CELL 4 AND ROAD SUBGRADE)	CY	4,280
GRADING AND SUBGRADE PREPARATION	AC	2.0
SAND LEVELING COURSE	CY	1,592
GEOSYNTHETIC CLAY LINER (GCL)	SF	140,817
60-MIL TEXTURED HDPE GEOMEMBRANE LINER	SF	85,980
60-MIL TEXTURED LLDPE GEOMEMBRANE LINER	SF	54,837
GEOTEXTILE CUSHION - 16 OZ/SY NON-WOVEN	SF	140,817
GEOTEXTILE FILTER - 4 OZ/SY NON-WOVEN	SF	10,783
HDPE 8" SDR 11 PERFORATED PIPING	LF	859
HDPE 8" SDR 11 SOLID PIPING	LF	304
HPDE 6" SDR 11 PERFORATED PIPING	LF	578
HDPE 6" SDR 11 SOLID PIPING	LF	723
HDPE 4" SDR 11 SOLID PIPING	LF	657
7' LONG, 4" DIA., SCH 40 GALV. STEEL BOLLARD FILLED W/ CONCRETE	EA	8
REMOVE AND REINSTALL EXSTING LFG WELLHEADS/CLEANOUTS	EA	4
PIPE TRENCHING AND BACKFILL UP TO 6-FT DEPTH	LF	128
LLDPE PIPE BOOT	EA	1
DISCONNECT AND REMOVE 4" HDPE SDR 17 ARTIC SURFACE PIPE (EXISTING LATERAL PIPING FROM HEADER TO GW-12 AND GW-17)	LF	110
DISCONNECT AND REMOVE EXISTING 8" ARTIC HDPE SURFACE PIPING	LF	600
INSTALL REUSED 8" ARTIC HDPE SURFACE PIPING	LF	432
NEW LANDFILL GAS WELLHEAD/CLEANOUT	EA	1
CONNECT GW-12 AND GW-17 TO REUSED 8" ARTIC PIPE	EA	2
CUT, CAP, AND ABANDON GAS VENT	EA	1
GRANULAR DRAINAGE MATERIAL (INSTALL ONLY, OWNER FURNISHED MATERIAL)	CY	7,823
LEAK LOCATION SURVEY	LS	1
LANDFILL LIMIT MARKERS	EA	12
TOPSOIL, SEED, AND MULCH DISTURBED AREAS	AC	0.17

ABBREVIATIONS

ADEC	ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AkDOT	ALASKA DEPARTMENT OF TRANSPORTATION
APPROX, ~	APPROXIMATE, APPROXIMATELY
BMP	BEST MANAGEMENT PRACTICE
C&D	CONSTRUCTION AND DEMOLITION
CCO	CONDENSATE CLEANOUT
CL	CENTER LINE
CLF	CENTRAL LANDFILL
CP	CONTROL POINT
CS	CONDENSATE SUMP
DEG, °	DEGREE
DIA. OR Ø	DIAMETER
DWG	DRAWING
E	EASTING
EL	EDGE OF LINER
ESMT	EASEMENT
EW	EACH WAY
FT	FEET
GALV	GALVANIZED
GCCS	LANDFILL GAS COLLECTION & CONTROL SYSTEM
GCL	GEOSYNTHETIC CLAY LINER
GCO	GAS CLEANOUT
GDN	GEOCOMPOSITE DRAINAGE NET
GL	GAS LATERAL
GV	GAS VENT
GW	GAS WELL
HDPE	HIGH DENSITY POLYETHYLENE
IPS	IRON PIPE SIZE
LCO	LEACHATE CLEANOUT
LCP	LEACHATE COLLECTION PIPE
L.F., LF	LINEAR FEET
LFG	LANDFILL GAS
LLDPE	LINEAR LOW DENSITY POLYETHYLENE
MAX	MAXIMUM
MIL	MILLI-INCH
MAX. MSB	MINIMUM MATANUSKA-SUSITNA BOROUGH
N	NORTHING
NO.	NUMBER
NPT	NATIONAL PIPE THREAD
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OZ	OUNCE
PCF	POUNDS PER CUBIC FOOT
PERF	PERFORATED
PVC	POLYVINYL CHLORIDE
RGW	REMOTE GAS WELL
RL	RECIRCULATION LATERAL
RW	RECIRCULATION WELL
SCH	SCHEDULE
SDR	STANDARD DIMENSION RATIO
SST / S.S.	STAINLESS STEEL
ST.	STREET
SUBD	SUBDIVISION
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TYP.	TYPICAL
UE	UNDERGROUND ELECTRIC
W/	WITH

NOTES:

1. ESTIMATED VALUES INCLUDED IN TABLES REPRESENT FINISHED, IN-PLACE QUANTITIES. PRESENTED QUANTITIES DO NOT INCLUDE ANY ADDITIONAL MATERIAL REQUIRED FOR REPAIRS, QA/QC TESTING, COMPACTION REQUIREMENTS OR ANY OTHER ELEMENTS OF CONSTRUCTION THAT WARRANT ADDITIONAL MATERIAL NECESSARY FOR PROJECT CONSTRUCTION STANDARDS.
2. ENGINEER HAS PERFORMED THESE TWO-DIMENSIONAL MATERIAL QUANTITY ESTIMATES USING THE DESIGN PRESENTED IN THE PLANS AND SPECIFICATIONS AND ONSITE CONDITIONS TO THE BEST OF THEIR KNOWLEDGE. CONTRACTOR IS REQUIRED TO PERFORM THEIR OWN MATERIAL QUANTITY ESTIMATES, AND TO USE THESE VALUES ONLY AS A QUALITY ASSURANCE CONFIRMATION.
3. QUANTITIES ARE NOT GUARANTEED AND FINAL PAYMENT WILL BE BASED ON ACTUAL QUANTITIES DETERMINED AS PROVIDED IN THE CONTRACT DOCUMENTS. ELECTRONIC CAD FILES OF THE PLANS ARE AVAILABLE UPON REQUEST.
4. EARTHWORK QUANTITIES DO NOT ACCOUNT FOR ADDITIONAL MATERIAL NEEDED TO MEET COMPACTION STANDARDS DETAILED IN SECTION 31 20 00, TESTING REQUIREMENTS, REPAIRS, ETC.
5. ESTIMATED GEOSYNTHETIC MATERIAL QUANTITY REPRESENTS FINISHED, IN-PLACE QUANTITY. THIS AREA IS REPRESENTED BY TWO-DIMENSIONAL SURFACE AREA WITHIN THE EDGE OF LINER ("EL") BOUNDARY SHOWN ON THE CIVIL PLAN SHEETS.
6. GEOSYNTHETIC QUANTITY DOES NOT INCLUDE ADDITIONAL MATERIAL REQUIRED FOR LINER TERMINATION, QA/QC TESTING, WELDING, REPAIRS, SCRAP MATERIAL FROM PLACEMENT LAYOUT, POTENTIAL SLACK MATERIAL REQUIRED FOR THERMAL EXPANSION/CONTRACTION OR ANY OTHER ELEMENTS OF CONSTRUCTION THAT WARRANT ADDITIONAL MATERIAL NECESSARY FOR PROJECT CONSTRUCTION STANDARDS.
7. QUANTITIES PROVIDED FOR SAND LEVELING COURSE WERE CALCULATED BY MULTIPLYING THE TWO-DIMENSIONAL SURFACE AREA WITHIN THE CELL 4 EXPANSION LINEAR AREA (OUTSIDE OF CELL 2A FINAL COVER OVERLAY) BOUNDARY BY THE 6" SAND LEVELING COURSE THICKNESS.
8. QUANTITIES PROVIDED FOR GRANULAR DRAINAGE MATERIAL (GDM) WERE CALCULATED BY MULTIPLYING THE TWO-DIMENSIONAL SURFACE AREA WITHIN THE EDGE OF LINER BOUNDARY BY THE 18" GDM THICKNESS, THIS QUANTITY DOES NOT INCLUDE ADDITIONAL GRANULAR DRAINAGE MATERIAL REQUIRED FOR MOUNDING OVER PIPES AS SHOWN ON DETAILS 2, 4, & 6, SHEET C006.
9. MATERIALS INCLUDED IN TABLES ARE NOT INCLUSIVE OF ALL MATERIALS REQUIRED TO CONSTRUCT THE PROJECT AS DETAILED IN THE PLANS AND SPECIFICATIONS. REVIEW PLANS AND SPECIFICATIONS TO INCORPORATE ALL NECESSARY MATERIALS AND QUANTITIES FOR PROJECT CONSTRUCTION.

CONFORMING TO CONSTRUCTION RECORDS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
LEGEND, ABBREVIATIONS, & QUANTITIES

project	contract
167550	AUTHORIZATION #14

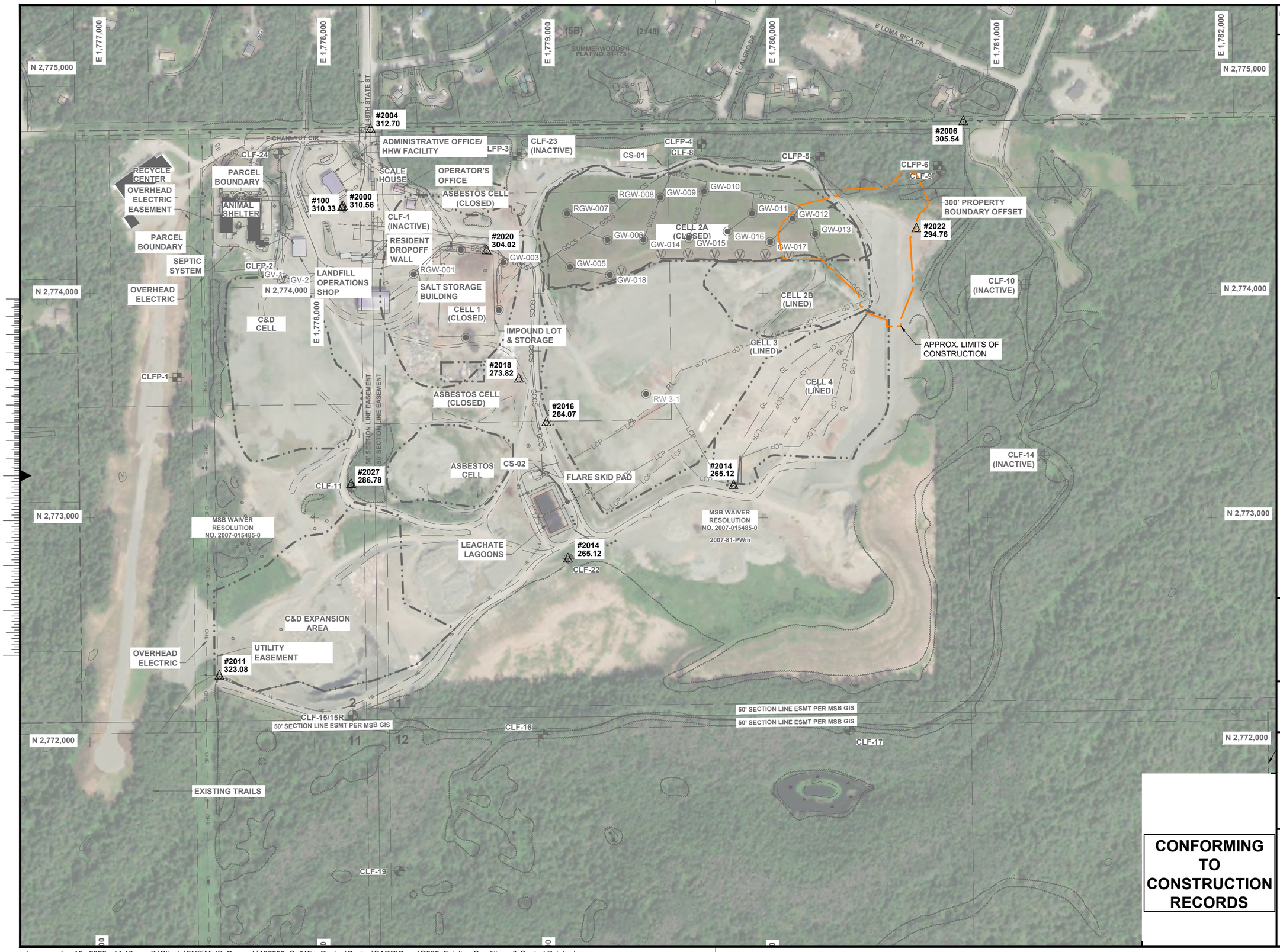
drawing **G002** rev. **0**

sheet of sheets

file G002 LEGEND & ABBREVIATIONS.DWG

Scale For Microfilming
Millimeters
Inches

rcheaman Jan 15, 2026 - 11:08am - Z:\Clients\ENS\MatSuBorough\167550_Cell4ExpDesign\Design\CADD\Dwgs\G002 Legend & Abbreviations.dwg



no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. HORIZONTAL DATUM AND VERTICAL DATUM IS ALASKA STATE PLANE COORDINATE SYSTEM ZONE 4, NAD83(2011). VERTICAL DATUM IS NAVD88 DERIVED FROM NAD83 AND GEOID12B BASED ON OPUS PROCESSING OF CONTROL POINT #100, VERIFIED WITH ADDITIONAL OPUS SOLUTION ON MISCELLANEOUS CONTROL.
3. CONTROL POINTS PROVIDED BY MSB. ENGINEER OF RECORD HAS NOT VERIFIED PROVIDED SURVEY POINTS AND IS NOT CERTIFYING SURVEY ACCURACY.
4. IMAGERY RETRIEVED FROM ESRI SERVICES ON JULY 4, 2024.

NORTH

0 200' 400'

SCALE IN FEET

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CONFORMING TO CONSTRUCTION RECORDS

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
EXISTING CONDITIONS & CONTROL POINTS

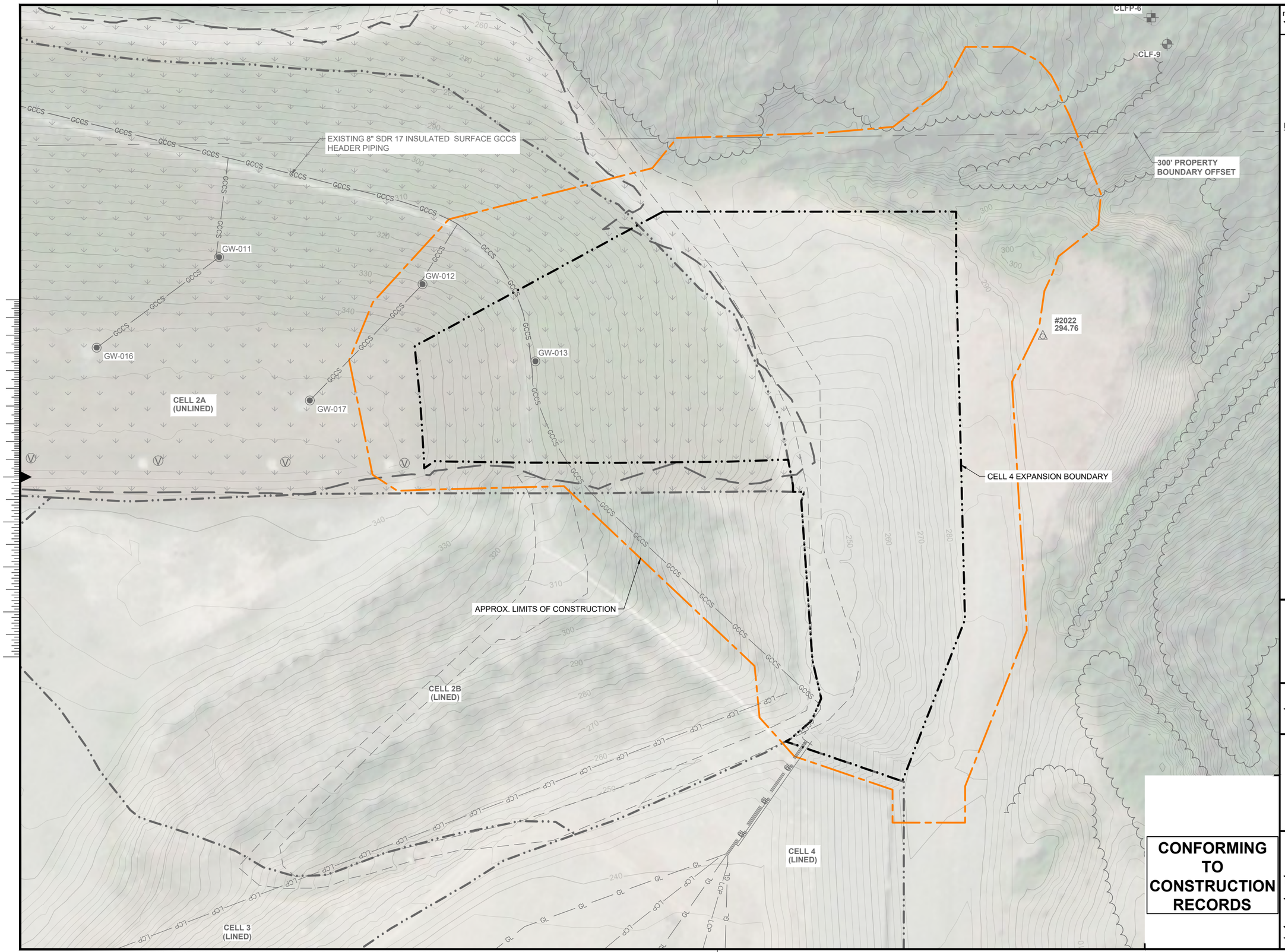
project	contract
167550	AUTHORIZATION #14

drawing **G003** rev. **0**

sheet of sheets

file G003 EXISTING CONDITIONS & CONTROL POINTS.DWG

rcheaman Jan 15, 2026 - 11:10am - Z:\Clients\ENS\MatSuBorough\167550_Cell4ExpDesign\Design\CADD\Dwgs\G003 Existing Conditions & Control Points.dwg



no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. EXISTING SITE TOPOGRAPHY CREATED FROM VARIOUS SURVEYS. MOST RECENT SURVEY OF THE CELL 4 EXPANSION AREA CREATED FROM DRAFT LIDAR DATA FLOWN IN THE FALL OF 2019 BY MSB, THE ACCURACY OF THE DATA IS NOT GUARANTEED.
3. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH LANDFILL OPERATIONS.
4. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF EXISTING SITE FEATURES.
5. CONSTRUCTION LIMITS SHOWN ARE APPROXIMATE. CONTRACTOR TO LIMIT ACTIVITIES TO AREAS NECESSARY TO COMPLETE THE WORK.
6. CONTRACTOR STAGING AREA TO BE COORDINATED WITH OWNER.

NORTH

0 20' 40' 80'
SCALE IN FEET

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

Matanuska-Susitna Borough, Alaska

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
GENERAL ARRANGEMENT

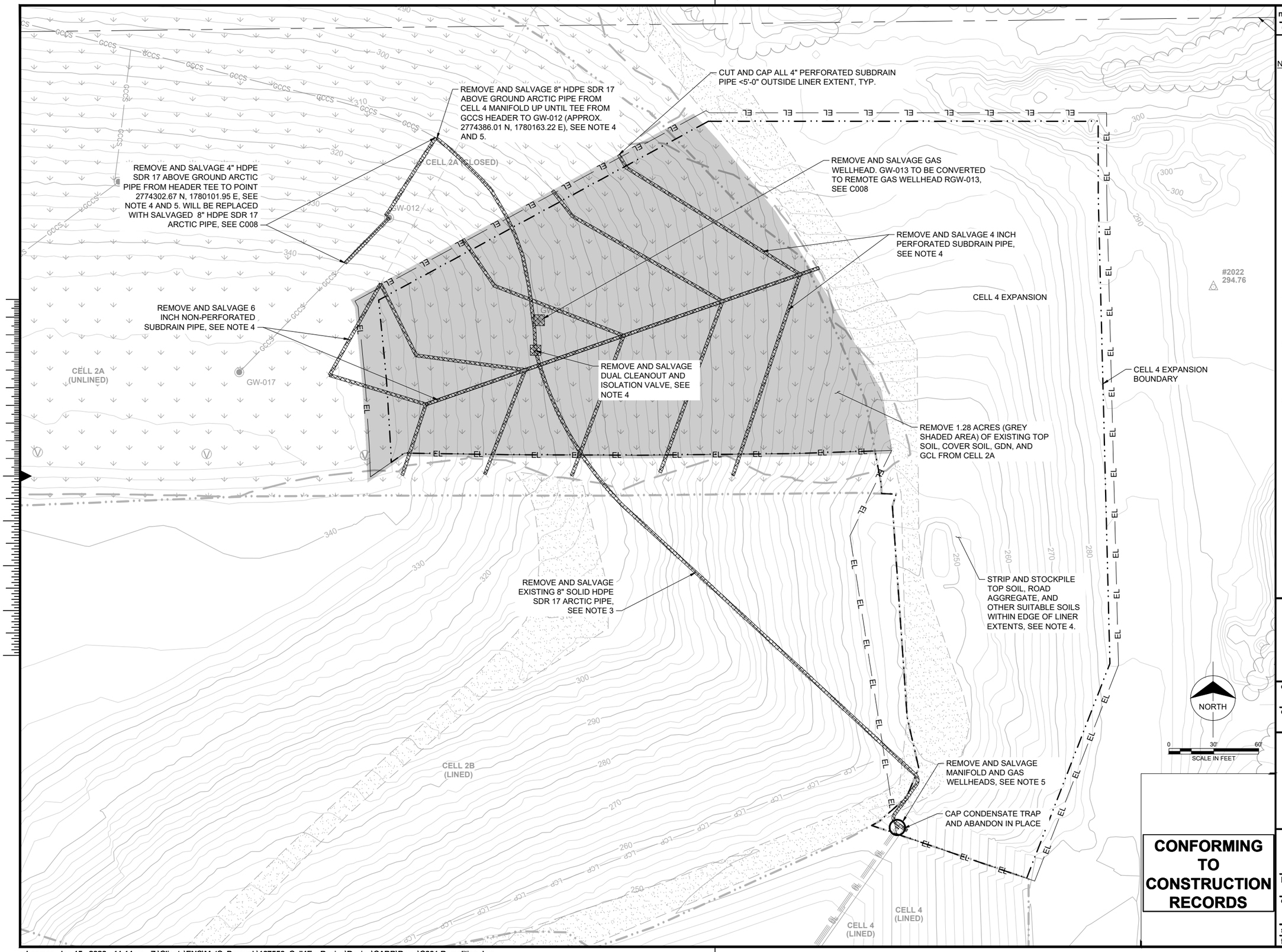
project	contract
167550	AUTHORIZATION #14

drawing **G004** rev. **0**

sheet of sheets

file G004 GENERAL ARRANGEMENT.DWG

Scale For Microfilming
Millimeters
Inches



no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. EXISTING SITE TOPOGRAPHY CREATED FROM VARIOUS SURVEYS. MOST RECENT SURVEY OF THE CELL 4 EXPANSION AREA CREATED FROM DRAFT LIDAR DATA FLOWN IN THE FALL OF 2019 BY MSB, THE ACCURACY OF THE DATA IS NOT GUARANTEED.
3. APPROXIMATELY 600-FT OF 8" SOLID ARCTIC PIPE TO BE REMOVED. APPROXIMATELY 480-FT TO BE REUSED TO CONNECT CELL 4 GAS LATERALS, SEE SHEET C008. THE REMAINING REMOVED 8" ARCTIC PIPE SHALL BE RELOCATED TO AN ON-SITE STORAGE LOCATION BY CONTRACTOR, COORDINATE WITH OWNER.
4. ALL OTHER SALVAGED MATERIAL SHALL BE RELOCATED TO AN ON-SITE STORAGE LOCATION, COORDINATE WITH OWNER.
5. ALL PIPE ENDS SHALL BE CAPPED UNTIL PERMANENT GCCS COMPONENTS CAN BE CONSTRUCTED. MAXIMUM SHUT DOWN OF GCCS IS 8 HOURS.
6. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE UNKNOWN (SHOWN AT APPROXIMATE LOCATIONS) AND SHALL BE FIELD VERIFIED BY CONTRACTOR. UTILITIES MAY INCLUDE ELECTRIC, LEACHATE GRAVITY PIPING, LEACHATE FORCEMAINS, LANDFILL GAS PIPING, STORMWATER SUBDRAIN PIPE, ETC.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	**checked**
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION DEMOLITION PLAN

project	contract
167550	AUTHORIZATION #14
drawing	**rev.**
C001	**0**
sheet	**of** **sheets**
file C001 DEMOLITION.DWG	

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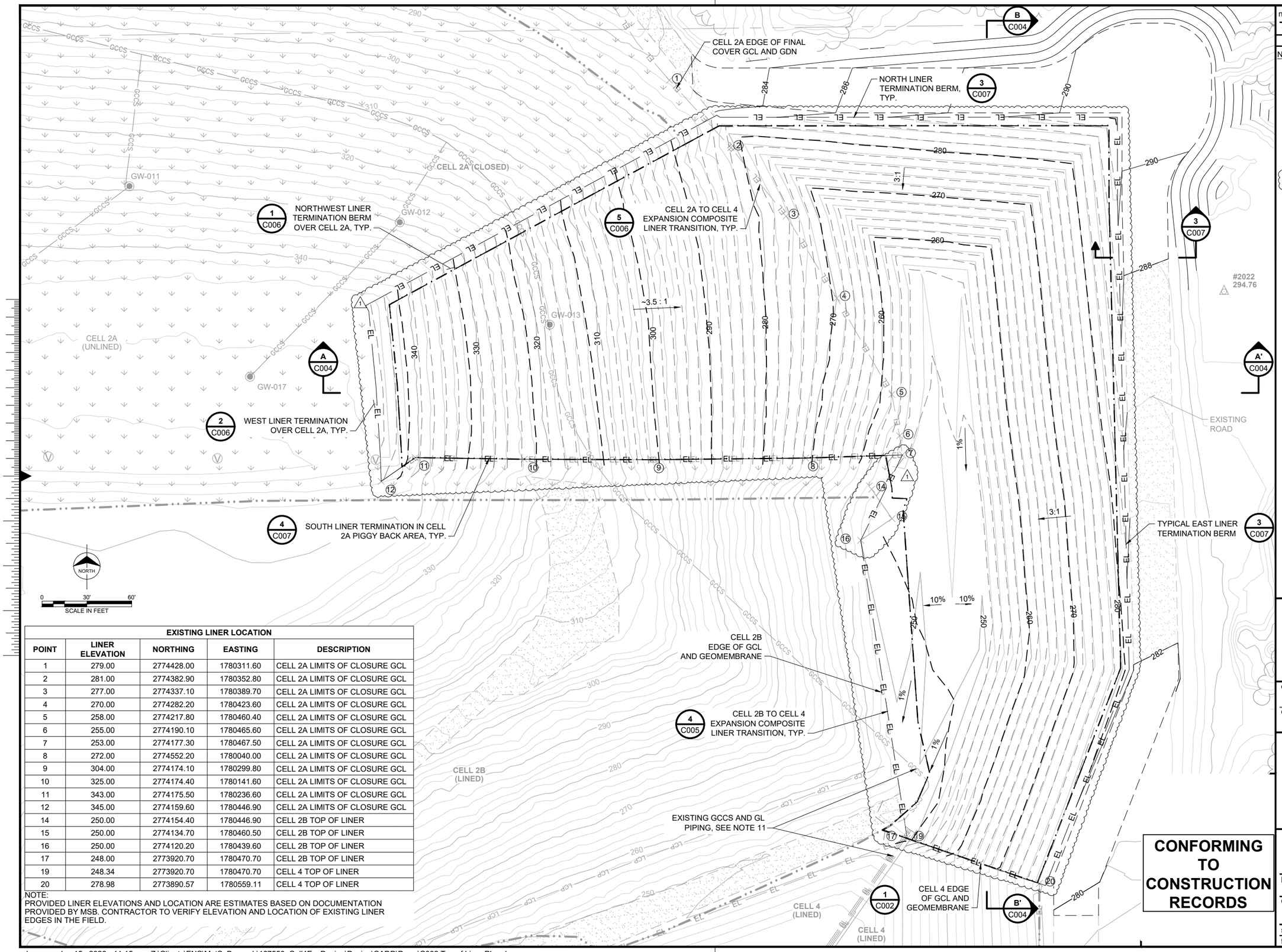


EXISTING LINER LOCATION				
POINT	LINER ELEVATION	NORTHING	EASTING	DESCRIPTION
1	279.00	2774428.00	1780311.60	CELL 2A LIMITS OF CLOSURE GCL
2	281.00	2774382.90	1780352.80	CELL 2A LIMITS OF CLOSURE GCL
3	277.00	2774337.10	1780389.70	CELL 2A LIMITS OF CLOSURE GCL
4	270.00	2774282.20	1780423.60	CELL 2A LIMITS OF CLOSURE GCL
5	258.00	2774217.80	1780460.40	CELL 2A LIMITS OF CLOSURE GCL
6	255.00	2774190.10	1780465.60	CELL 2A LIMITS OF CLOSURE GCL
7	253.00	2774177.30	1780467.50	CELL 2A LIMITS OF CLOSURE GCL
8	272.00	2774552.20	1780040.00	CELL 2A LIMITS OF CLOSURE GCL
9	304.00	2774174.10	1780299.80	CELL 2A LIMITS OF CLOSURE GCL
10	325.00	2774174.40	1780141.60	CELL 2A LIMITS OF CLOSURE GCL
11	343.00	2774175.50	1780236.60	CELL 2A LIMITS OF CLOSURE GCL
12	345.00	2774159.60	1780446.90	CELL 2A LIMITS OF CLOSURE GCL
14	250.00	2774154.40	1780446.90	CELL 2B TOP OF LINER
15	250.00	2774134.70	1780460.50	CELL 2B TOP OF LINER
16	250.00	2774120.20	1780439.60	CELL 2B TOP OF LINER
17	248.00	2773920.70	1780470.70	CELL 2B TOP OF LINER
19	248.34	2773920.70	1780470.70	CELL 4 TOP OF LINER
20	278.98	2773890.57	1780559.11	CELL 4 TOP OF LINER

NOTE:
PROVIDED LINER ELEVATIONS AND LOCATION ARE ESTIMATES BASED ON DOCUMENTATION PROVIDED BY MSB. CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF EXISTING LINER EDGES IN THE FIELD.

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/14/26	RCH	FJD	CtCR

NOTES:
1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. EXISTING SITE TOPOGRAPHY CREATED FROM VARIOUS SURVEYS. MOST RECENT SURVEY OF THE CELL 4 EXPANSION AREA CREATED FROM DRAFT LIDAR DATA FLOWN IN THE FALL OF 2019 BY MSB, THE ACCURACY OF THE DATA IS NOT GUARANTEED.
3. DESIGN CONTOURS REPRESENT TOP OF LINER AND HAUL ROAD GRADES.
   1. DASHED CONTOURS REPRESENT AS-BUILT SURVEY OF THE LINER.
4. CONTOUR INTERVAL IS TWO FEET.
5. CELL 4 EXPANSION DESIGN GRADES ARE INTENDED TO TIE-IN TO EXISTING CELL 2A, 2B, AND 4 COMPOSITE LINER SYSTEM BASED ON BEST AVAILABLE INFORMATION. FIELD ADJUSTMENTS MAY BE REQUIRED.
6. TOP OF LINER ELEVATIONS IN CELL 2A BASED ON EXISTING GRADES LOWERED 2 FEET TO ESTIMATED LOCATION OF EXISTING GCL. FIELD ADJUSTMENTS MAY BE REQUIRED.
7. LLDPE GEOMEMBRANE LINER SHALL BE PLACED ON TOP OF NEW GCL IN CELL 2A WITHIN THE EDGE OF LINER BOUNDARY.
8. TIE-IN FOR TOP OF LINER GRADES NOT SHOWN BEYOND GEOMEMBRANE LINER EXTENTS. SEE RELEVANT DETAILS FOR EXTENT OF GEOMEMBRANE LINER TIE-IN TO SURROUNDING EXISTING GRADES.
9. CONTRACTOR IS RESPONSIBLE FOR MANAGING LEACHATE ENCOUNTERED DURING GRADING AND LINER TIE-IN FOR ENTIRE DURATION OF THE PROJECT.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL DAMAGED GEOMEMBRANE LINER REGARDLESS IF DAMAGE WAS EXISTING OR CAUSED BY CONTRACTOR ACTIVITIES.
11. CONTRACTOR MAY ENCOUNTER WASTE-CONTAMINATED SOIL DURING GRADING ACTIVITIES. COORDINATE WITH OWNER FOR DISPOSAL. WASTE ENCOUNTERED DURING GRADING ACTIVITIES SHALL NOT BE CAUSE FOR A CHANGE ORDER.
12. GCCS MODIFICATIONS SHOWN ON C001 AND C008.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
TOP OF LINER PLAN

project	contract
167550	AUTHORIZATION #14

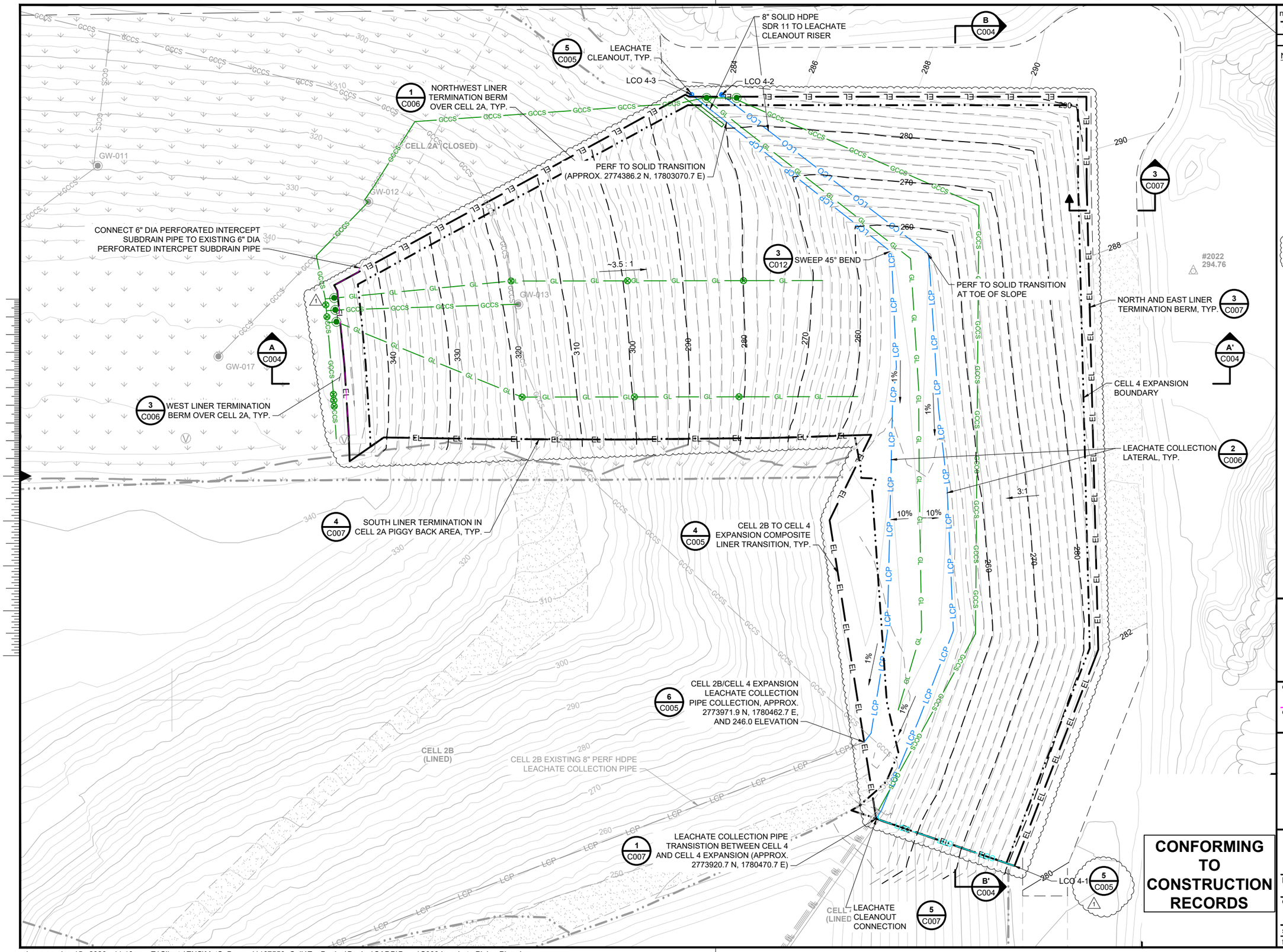
drawing **C002** rev. **1**

sheet of sheets

file C002 TOP OF LINER PLAN.DWG

Scale For Microfilming: Millimeters / Inches

rcheaman Jan 15, 2026 - 11:15am - Z:\Clients\ENS\MatSuBorough\167550_Cell4ExpDesign\Design\CADD\Dwgs\C002 Top of Liner Plan.dwg



no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:

1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. EXISTING SITE TOPOGRAPHY CREATED FROM VARIOUS SURVEYS. MOST RECENT SURVEY OF THE CELL 4 EXPANSION AREA CREATED FROM DRAFT LIDAR DATA FLOWN IN THE FALL OF 2019 BY MSB, THE ACCURACY OF THE DATA IS NOT GUARANTEED.
3. GDM SHALL BE A MINIMUM THICKNESS OF 1'-6". DESIGN CONTOURS SHOWN REPRESENT 1'-6" OF GDM ABOVE DESIGNED TOP OF LINER GRADES. REFER TO C006 FOR DETAILED GRADING INFORMATION.
   1 DASHED CONTOURS REPRESENT AS-BUILT SURVEY ELEVATIONS OF TOP OF GDM.
4. CONTOUR INTERVAL IS TWO FEET.
5. EACH NEW CLEANOUT SHALL BE LABELED WITH THE NUMBER SHOWN IN THE DRAWINGS. ACCEPTABLE LABELS INCLUDE ALUMINUM SIGNS OR OUTDOOR-RATED STICKERS IN LEGIBLE FONT AT AN APPROPRIATE SIZE.
6. CONTRACTOR SHALL PROTECT EXISTING LEACHATE COLLECTION PIPING AND TIE-IN POINTS.
7. FOR LOCATION OF GCCS PIPING, REFER TO C008.

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

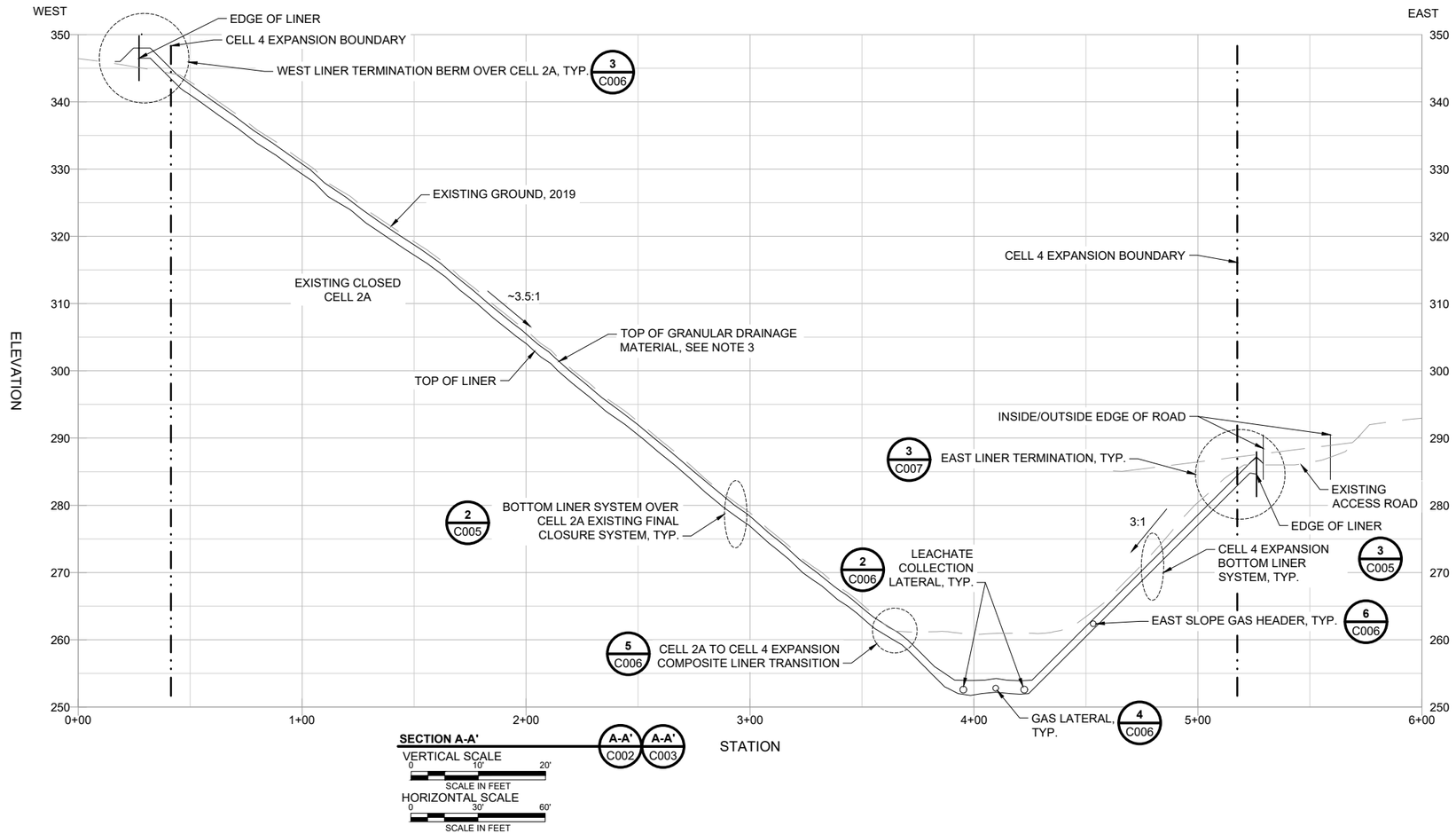
CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
LEACHATE PIPING PLAN

project	contract
167550	AUTHORIZATION #14

drawing **C003** rev. **1**

sheet of sheets

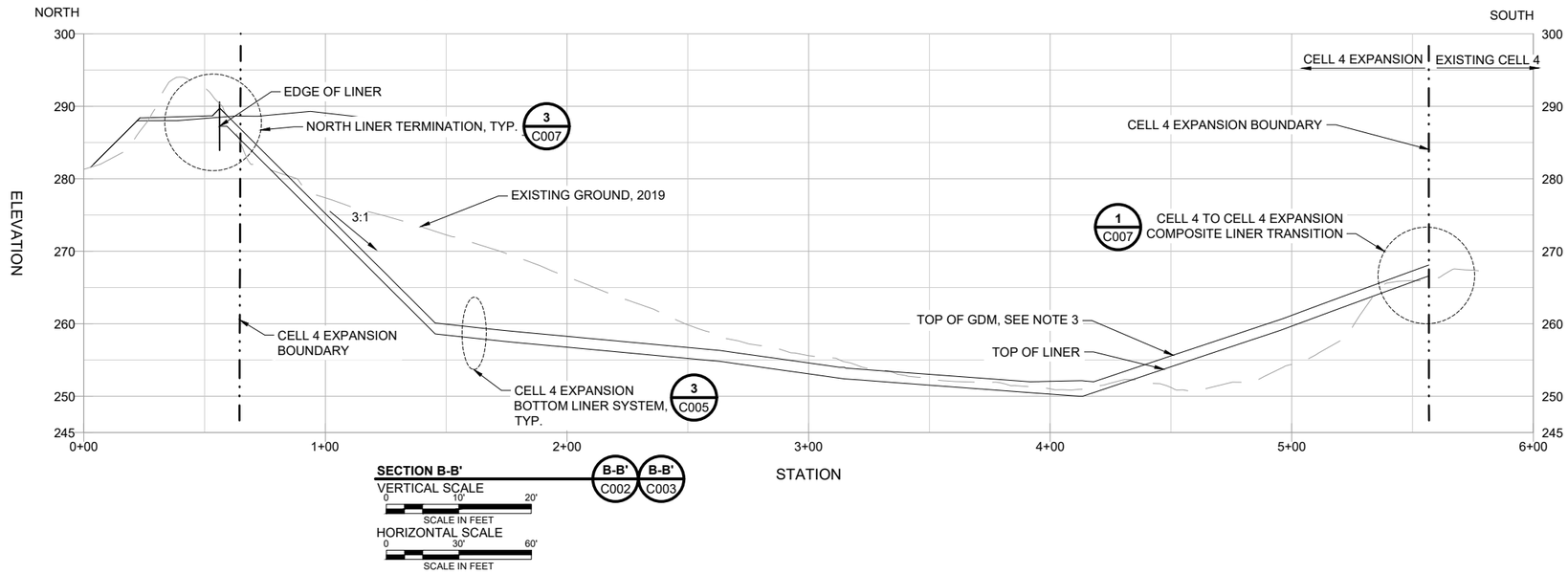
file C003 LEACHATE PIPING PLAN.DWG



SECTION A-A' A-A' C002 A-A' C003

VERTICAL SCALE 0 10' 20' SCALE IN FEET

HORIZONTAL SCALE 0 30' 60' SCALE IN FEET



SECTION B-B' B-B' C002 B-B' C003

VERTICAL SCALE 0 10' 20' SCALE IN FEET

HORIZONTAL SCALE 0 30' 60' SCALE IN FEET

Millimeters

Scale For Microfilming

Inches

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. EXISTING SITE TOPOGRAPHY CREATED FROM VARIOUS SURVEYS. MOST RECENT SURVEY OF THE CELL 4 EXPANSION AREA CREATED FROM DRAFT LIDAR DATA FLOWN IN THE FALL OF 2019 BY MSB, THE ACCURACY OF THE DATA IS NOT GUARANTEED.
3. GDM SHALL BE MINIMUM THICKNESS OF 1'-6". DESIGN CONTOURS SHOWN REPRESENT 1'-6" OF GDM ABOVE DESIGNED TOP OF LINER GRADES. REFER TO C006 FOR DETAIL GRADING INFORMATION.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

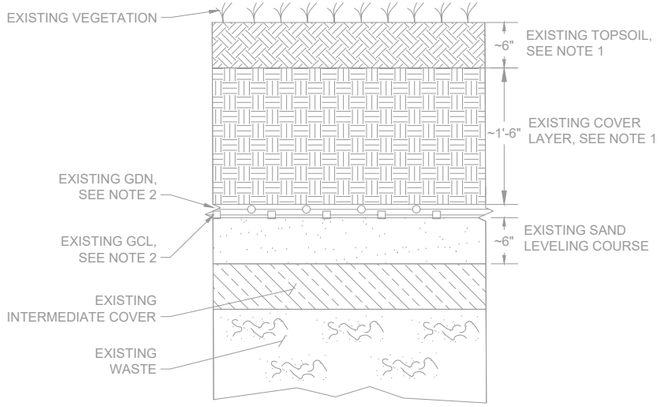
CENTRAL LANDFILL (SW-1A007-26)
CELL 4 EXPANSION CONSTRUCTION
CROSS SECTIONS

project	contract
167550	AUTHORIZATION #14

drawing **C004** – rev. **0**

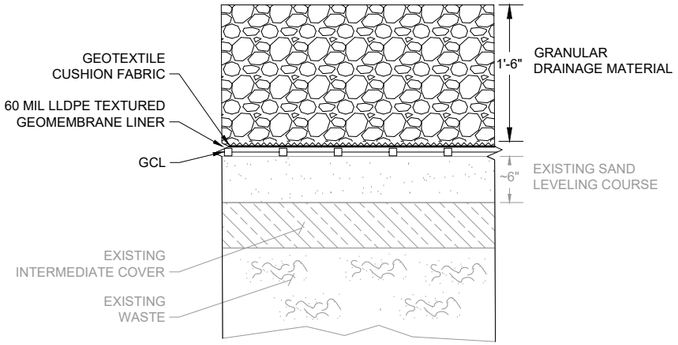
sheet of sheets

file C004 CROSS SECTIONS.DWG



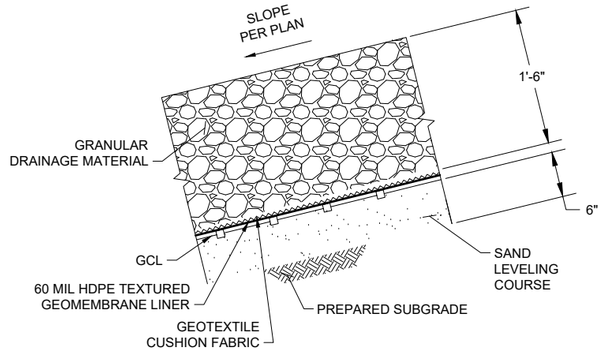
TYPICAL CELL 2A EXISTING FINAL CLOSURE SYSTEM
SCALE: NTS

1 C004 | 1 C006 | 1 C010



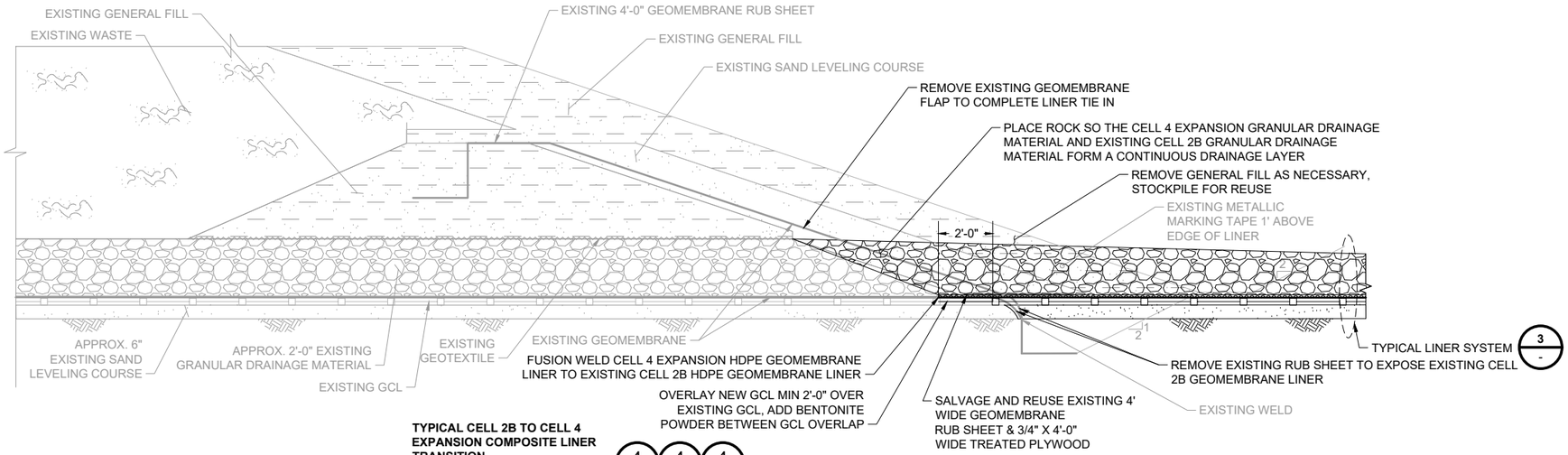
TYPICAL BOTTOM LINER SYSTEM OVER CELL 2A EXISTING FINAL CLOSURE SYSTEM
SCALE: NTS

2 C004 | 2 C006 | 2 C007 | 2 C009



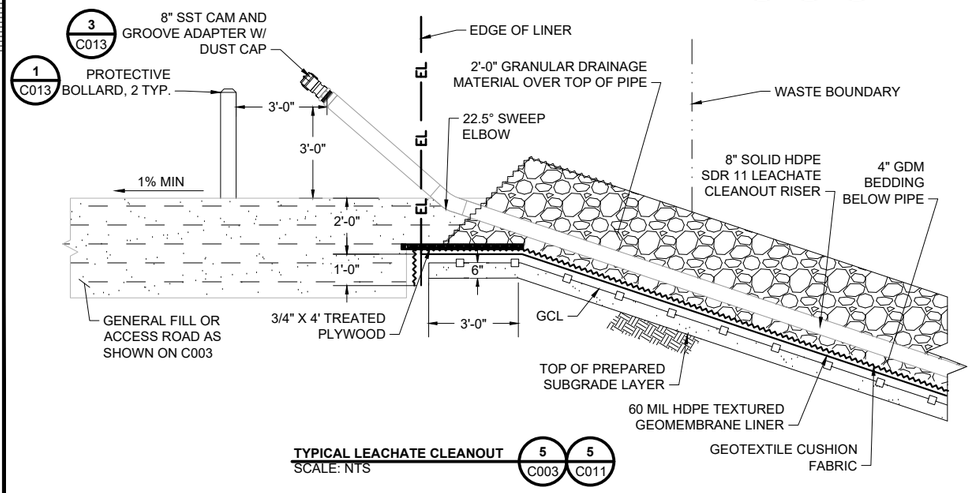
TYPICAL CELL 4 EXPANSION BOTTOM LINER SYSTEM
SCALE: NTS

3 - | 3 C004 | 3 C006 | 3 C007



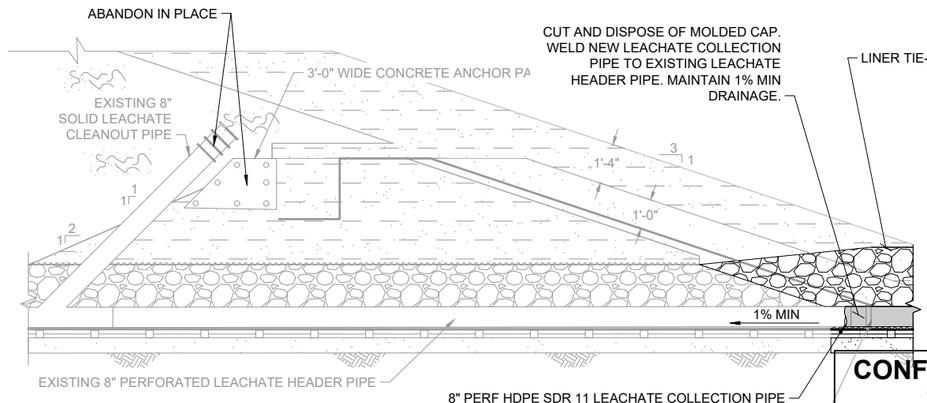
TYPICAL CELL 2B TO CELL 4 EXPANSION COMPOSITE LINER TRANSITION
SCALE: NTS

4 - | 4 C002 | 4 C003



TYPICAL LEACHATE CLEANOUT
SCALE: NTS

5 C003 | 5 C011



CELL 2B/CELL 4 EXPANSION LEACHATE COLLECTION PIPE CONNECTION
SCALE: NTS

6 C003

CONFORMING TO CONSTRUCTION RECORDS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. EXISTING TOP SOIL AND COVER SOIL TO BE REMOVED AND STOCKPILED IN COORDINATION WITH THE OWNER. THESE SOILS MAY BE REUSED FOR THIS PROJECT AS NEEDED.
2. EXISTING GCL AND GDN TO BE REMOVED WITH THE CELL 2A FINAL COVER OVERLAY AREA.

BURNS McDONNELL
Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

Matanuska-Susitna Borough, Alaska

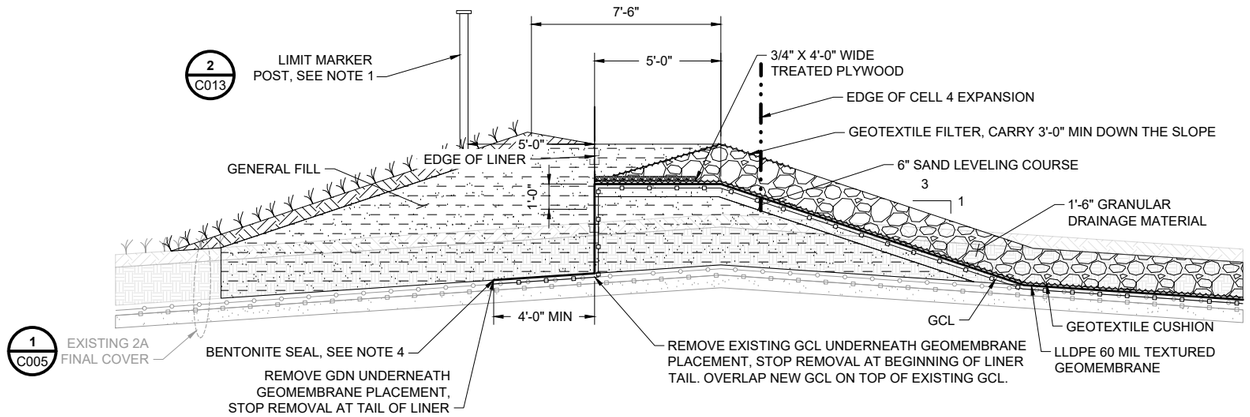
CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
CONSTRUCTION DETAILS, 1 OF 3

project	contract
167550	AUTHORIZATION #14

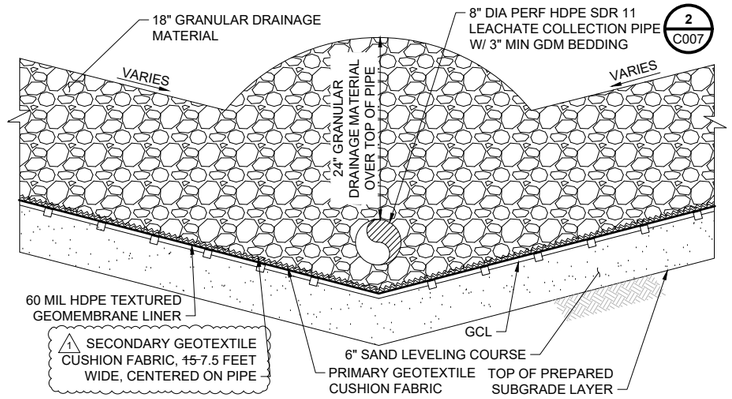
drawing **C005** rev. **0**

sheet of sheets
file C005 CONSTRUCTION DETAILS, 1 OF 3.DWG

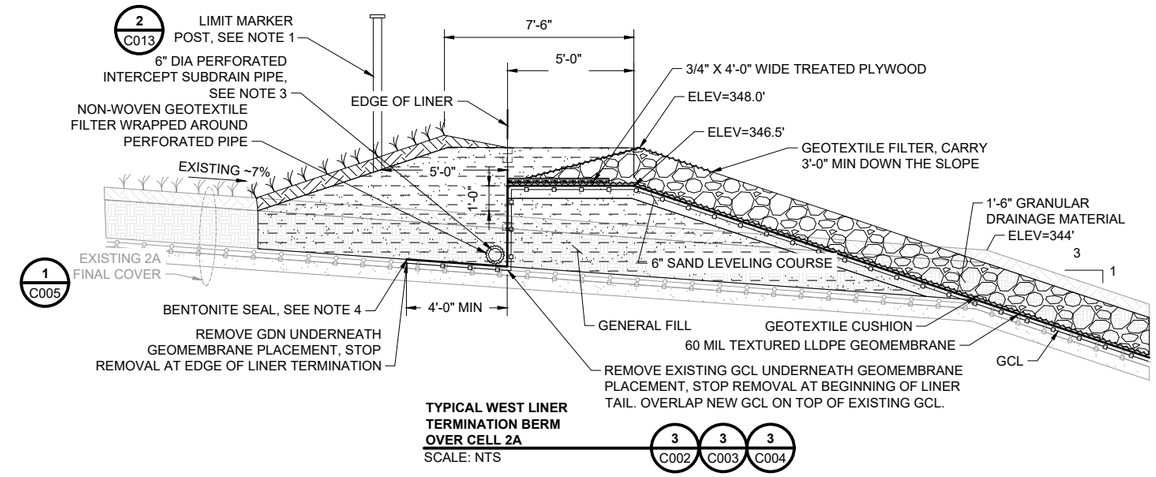
Scale For Microfilming
Millimeters
Inches



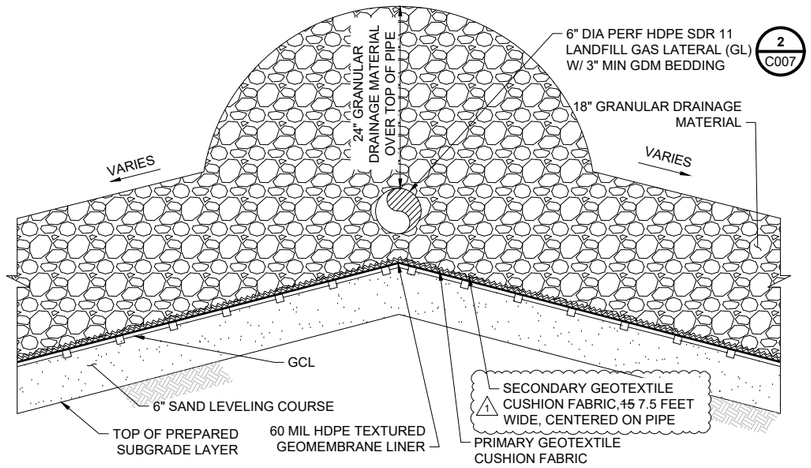
TYPICAL NORTHWEST LINER TERMINATION BERM OVER CELL 2A
SCALE: NTS — 1 C002 / 1 C003



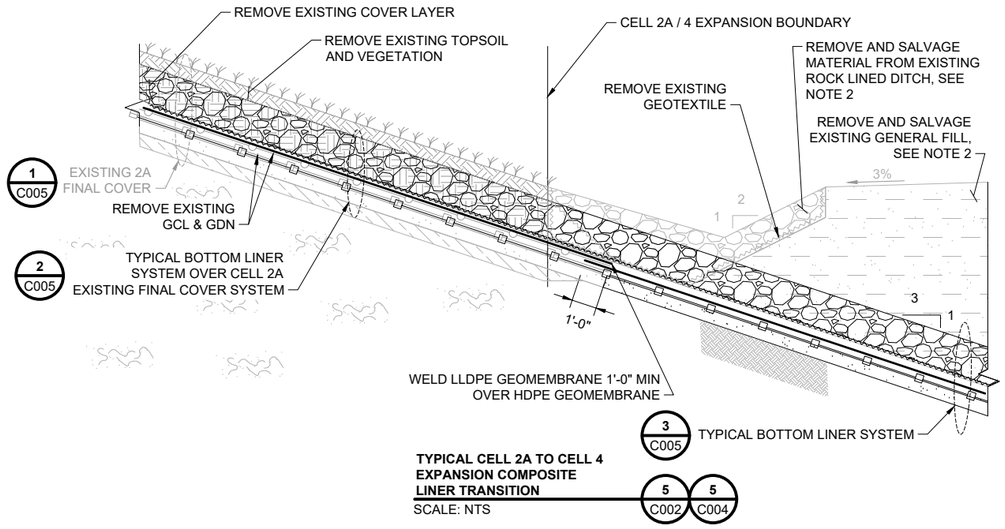
TYPICAL LEACHATE COLLECTION LATERAL
SCALE: NTS — 2 C003 / 2 C004



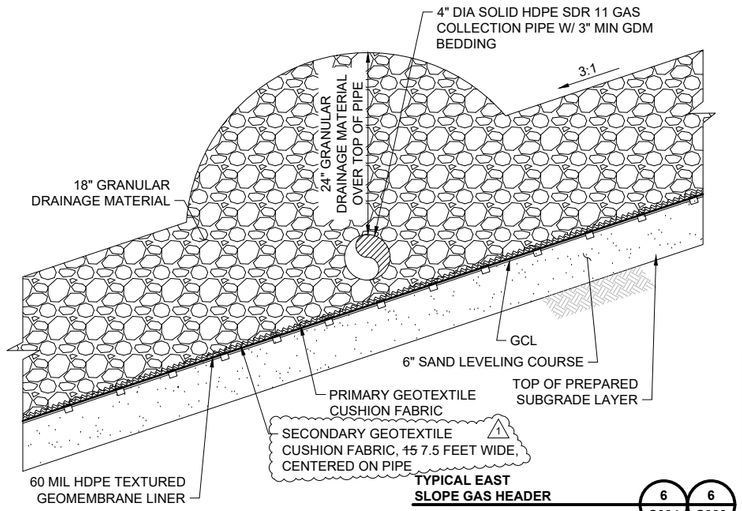
TYPICAL WEST LINER TERMINATION BERM OVER CELL 2A
SCALE: NTS — 3 C002 / 3 C003 / 3 C004



TYPICAL GAS LATERAL
SCALE: NTS — 4 C004 / 4 C008



TYPICAL CELL 2A TO CELL 4 EXPANSION COMPOSITE LINER TRANSITION
SCALE: NTS — 5 C002 / 5 C004



TYPICAL EAST SLOPE GAS HEADER
SCALE: NTS — 6 C004 / 6 C008

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:

1. LIMIT MARKER POSTS SHALL BE PLACED EVERY 100-FEET ALONG THE CELL BOUNDARY. LIMIT MARKERS SHALL BE OFFSET 5 FEET TO THE OUTSIDE OF THE EDGE OF LINER ON TOP OF THE 2A PIGGYBACK. LIMIT MARKERS SHALL BE PLACED 1 FOOT OUTSIDE THE EDGE OF LINER BOUNDARY ON THE ACCESS ROAD PERIMETER.
2. SALVAGE ROCK AND GENERAL FILL, COORDINATE WITH OWNER.
3. CONNECT 6" DIA. PERFORATED INTERCEPT SUBDRAIN PIPE INTO EXISTING 6" DIA. NON-PERFORATED INTERCEPT SUBDRAIN PIPE, SEE C003 FOR INTERCEPT SUBDRAIN PIPE AND CONNECTION LOCATIONS.
4. SPREAD BENTONITE ON TOP OF LLDPE GEOMEMBRANE 12" WIDE, 1" DEEP, CENTERED ALONG EDGE OF LINER.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL
Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

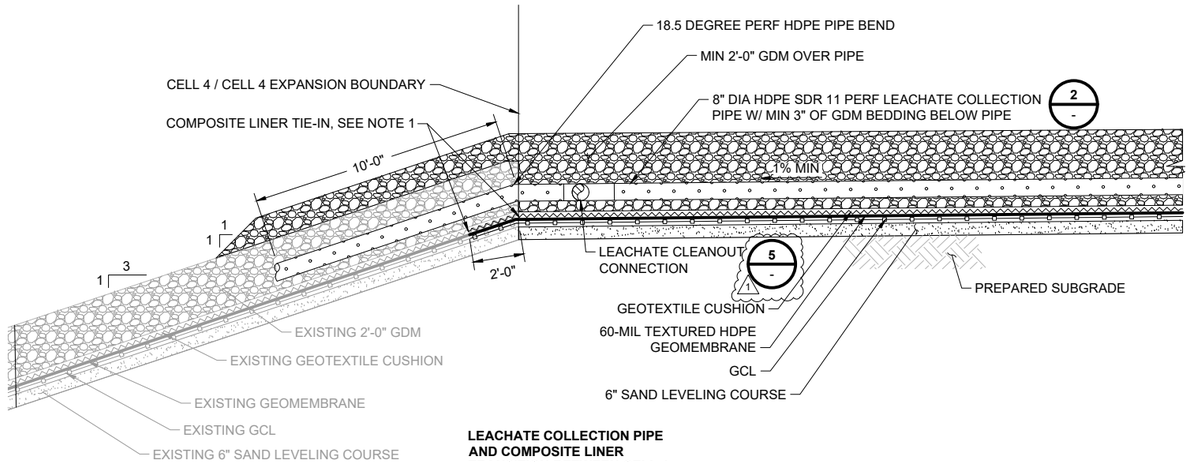
date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

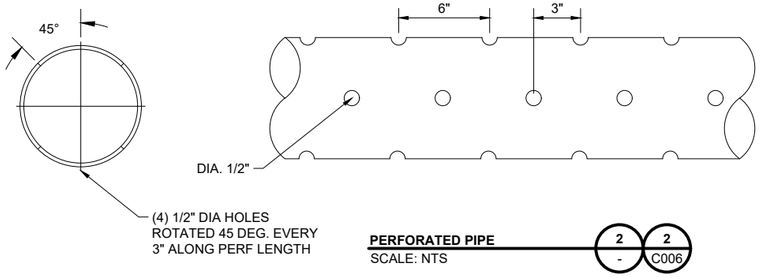
CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
CONSTRUCTION DETAILS, 2 OF 3

project	contract
167550	AUTHORIZATION #14

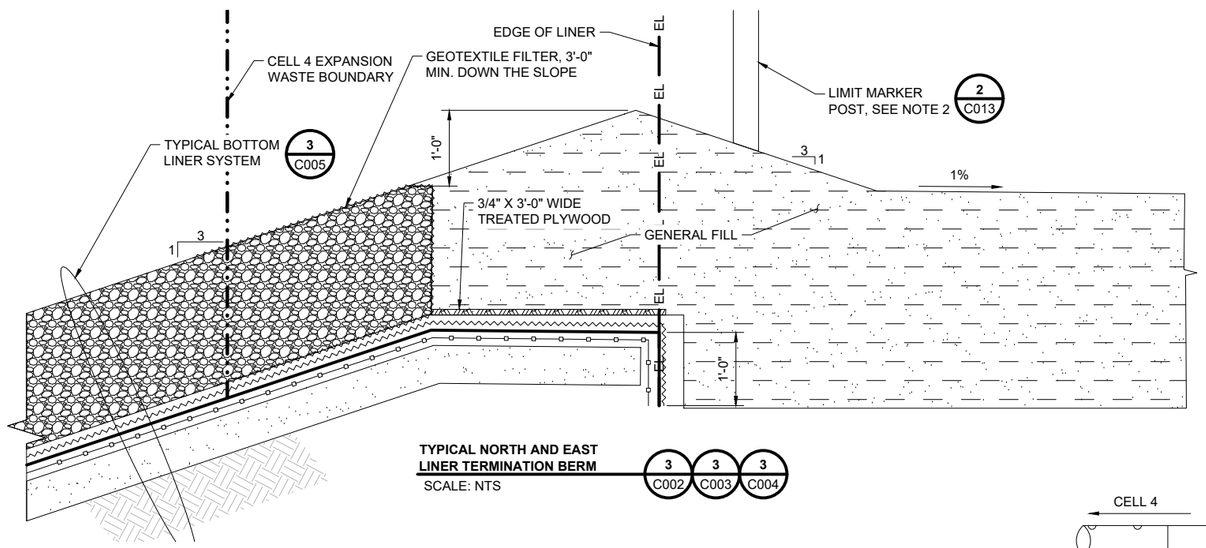
drawing **C006** rev. **1**
sheet of sheets
file C006 CONSTRUCTION DETAILS, 2 OF 3.DWG



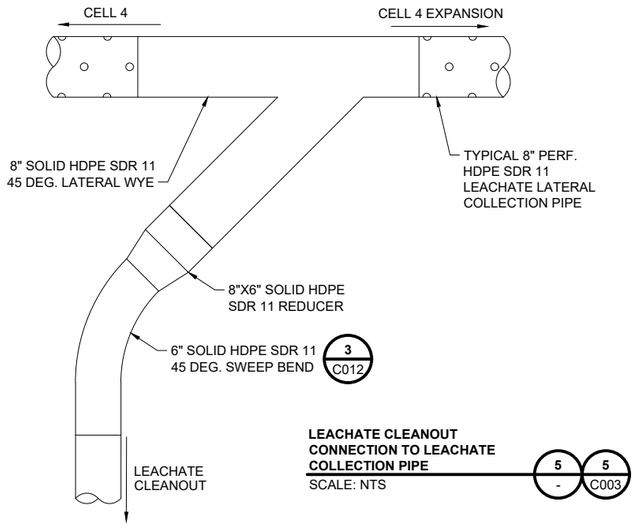
LEACHATE COLLECTION PIPE AND COMPOSITE LINER TRANSITION BETWEEN CELL 4 AND CELL 4 EXPANSION
SCALE: NTS — 1 C002 | 1 C003 | 1 C004



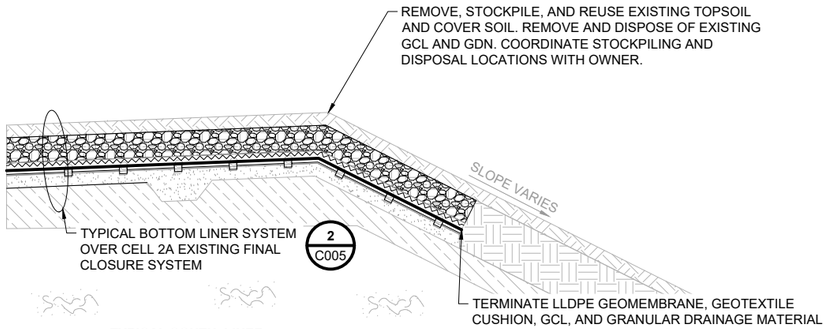
PERFORATED PIPE
SCALE: NTS — 2 - | 2 C006



TYPICAL NORTH AND EAST LINER TERMINATION BERM
SCALE: NTS — 3 C002 | 3 C003 | 3 C004



LEACHATE CLEANOUT CONNECTION TO LEACHATE COLLECTION PIPE
SCALE: NTS — 5 - | 5 C003



TYPICAL SOUTH LINER TERMINATION IN CELL 2A PIGGY BACK AREA
SCALE: NTS — 4 C002 | 4 C003

CONFORMING TO CONSTRUCTION RECORDS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:

1. UNCOVER EXISTING NORTHERN EDGE OF CELL 4 GEOMEMBRANE. EXPOSE A MINIMUM OF 2'-0" OF EXISTING GCL. OVERLAY NEW GCL ON TOP OF EXISTING GCL WITH A MINIMUM OF 2'-0" OVERLAP. PLACE POWERED BENTONITE BETWEEN GCL OVERLAP. FUSION WELD EXISTING GEOMEMBRANE AND NEW GEOMEMBRANE TOGETHER.
2. LIMIT MARKER POSTS SHALL BE PLACED EVERY 100-FEET ALONG THE CELL BOUNDARY. LIMIT MARKERS SHALL BE OFFSET 5 FEET TO THE OUTSIDE OF THE EDGE OF LINER ON TOP OF THE 2A PIGGYBACK. LIMIT MARKERS SHALL BE PLACED 1 FOOT OUTSIDE THE EDGE OF LINER BOUNDARY ON THE ACCESS ROAD PERIMETER.

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Burns & McDonnell Engineering Co, Inc.
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date	detailed
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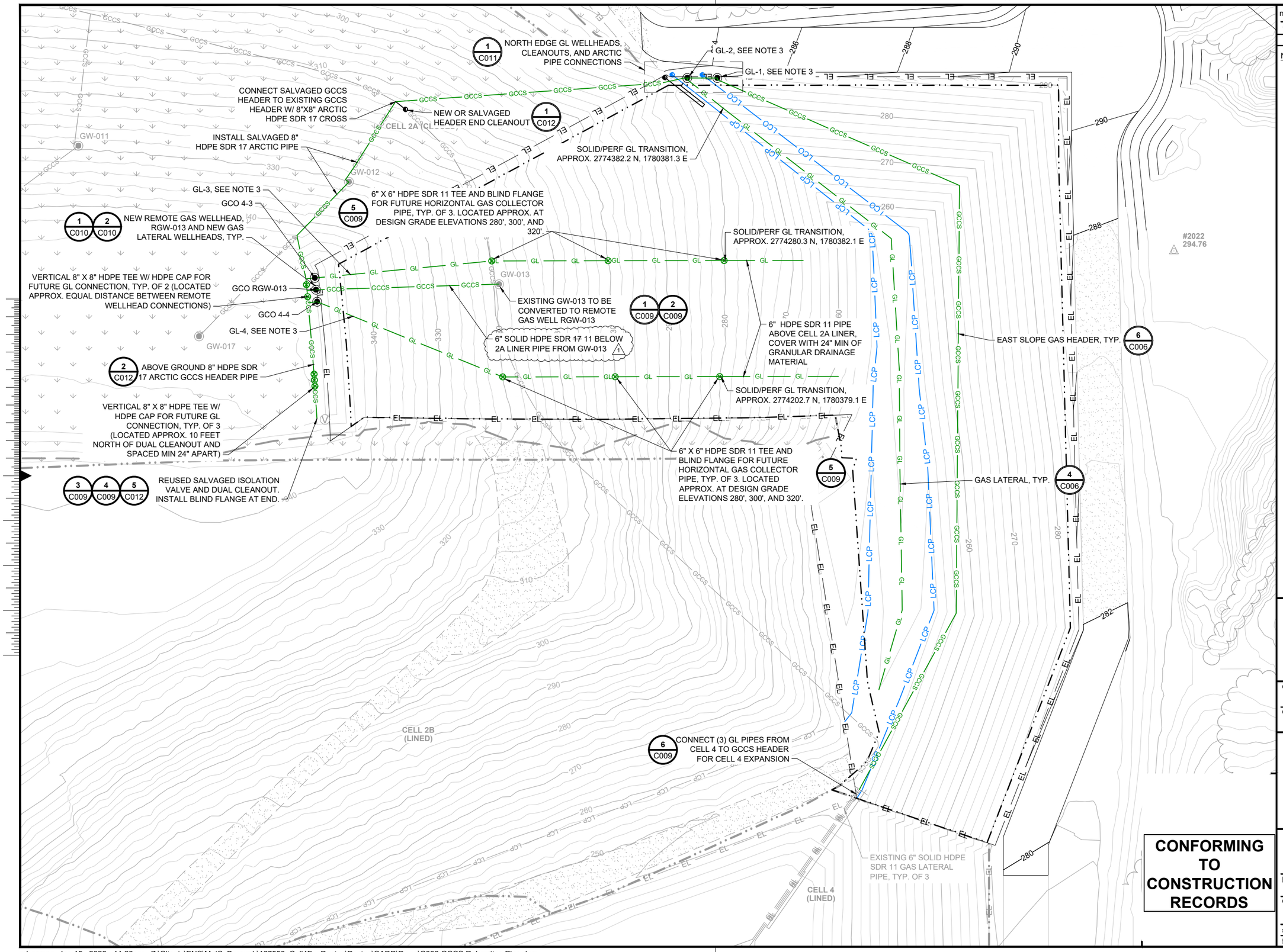
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
CONSTRUCTION DETAILS, 3 OF 3

project	contract
167550	AUTHORIZATION #14

drawing **C007** rev. **1**
sheet of sheets
file C007 CONSTRUCTION DETAILS, 3 OF 3.DWG



no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:

1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. EXISTING SITE TOPOGRAPHY CREATED FROM VARIOUS SURVEYS. MOST RECENT SURVEY OF THE CELL 4 EXPANSION AREA CREATED FROM DRAFT LIDAR DATA FLOWN IN THE FALL OF 2019 BY MSB, THE ACCURACY OF THE DATA IS NOT GUARANTEED.
3. EACH NEW CLEANOUT, GAS WELL, AND GAS LATERAL SHALL BE LABELED WITH THE NUMBER SHOWN IN THE DRAWINGS. ACCEPTABLE LABELS INCLUDE ALUMINUM SIGNS OR OUTDOOR-RATED STICKERS IN LEGIBLE FONT AT AN APPROPRIATE SIZE.

NORTH

0 30' 60'
SCALE IN FEET

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
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MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
GCCS RELOCATION PLAN

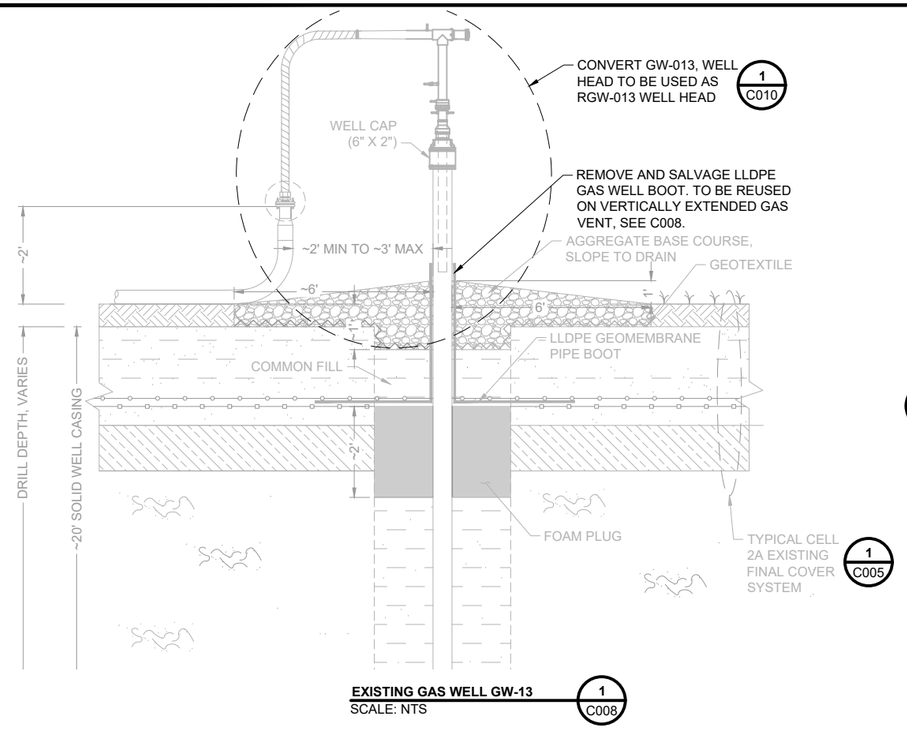
project	contract
167550	AUTHORIZATION #14

drawing **C008** rev. **1**

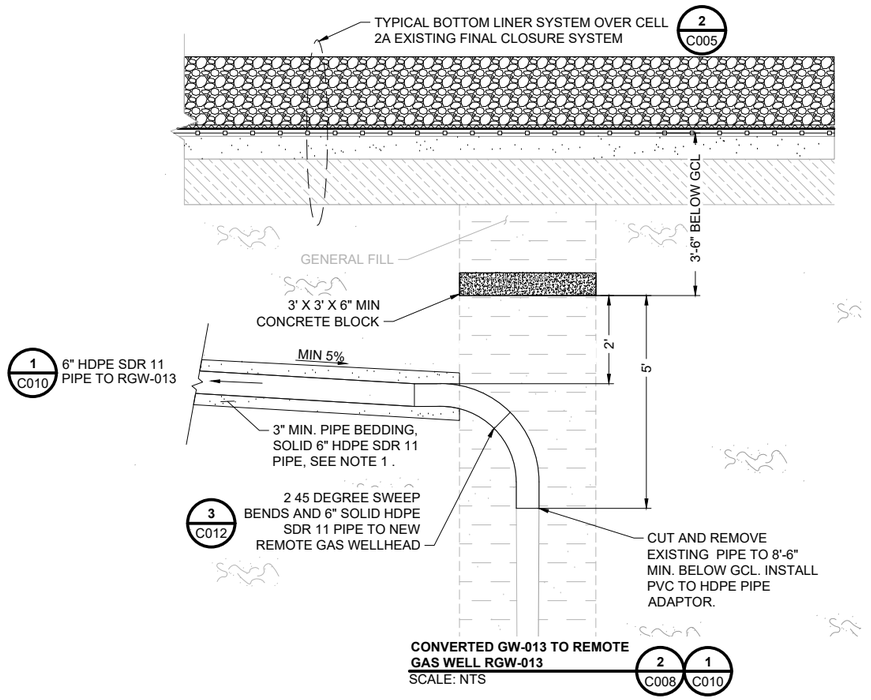
sheet of sheets

file C008 GCCS RELOCATION PLAN.DWG

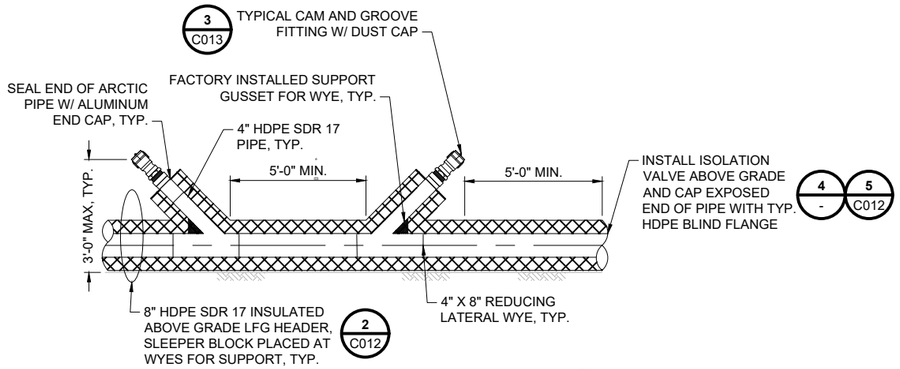
Millimeters
Inches
Scale For Microfilming



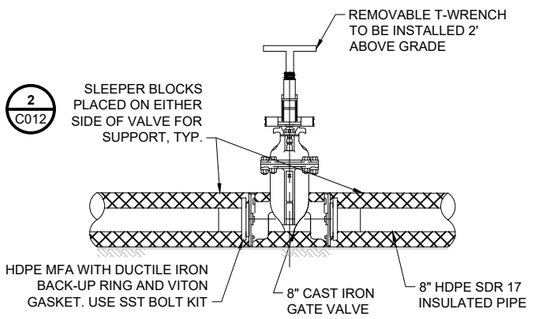
EXISTING GAS WELL GW-13 1 C008
SCALE: NTS



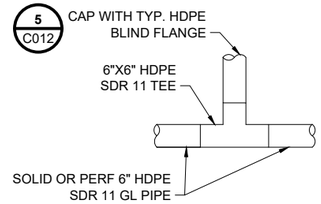
CONVERTED GW-013 TO REMOTE GAS WELL RGW-013 2 C008 1 C010
SCALE: NTS



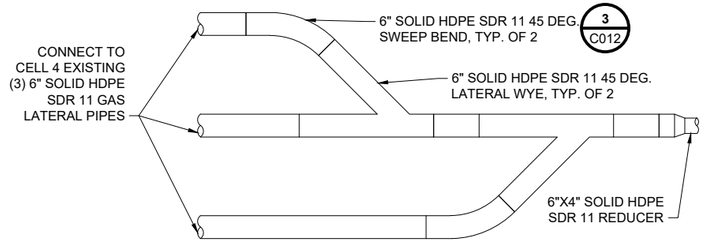
GCCS HEADER DUAL CLEANOUT 3 C008
SCALE: NTS



ISOLATION VALVE ABOVE GRADE 4 - 4 C008
SCALE: NTS



TEE FOR FUTURE HORIZONTAL GAS COLLECTION PIPE 5 C008
SCALE: NTS



CELL 4 GL PIPE CONNECTION TO GCCS HEADER 6 C008
SCALE: NTS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. WASTE EXCAVATED DURING INSTALLATION OF REMOTE GAS WELL PIPE MAY BE BACKFILLED IN REMOTE GAS WELL TRENCH AFTER PLACEMENT OF PIPE AND BEDDING MATERIAL. WASTE BACKFILL SHALL EXTEND FROM THE TOP OF PIPE BEDDING MATERIAL TO NO MORE THAN TWO FEET BELOW THE GCL. FROM 24" TO 6" BELOW THE GCL, BACKFILL WITH GENERAL FILL. THE FINAL 6" BELOW THE GCL SHALL BE BACKFILLED WITH SAND LEVELING COURSE MATERIAL.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL
Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
GCCS RELOCATION DETAILS, 1 OF 4

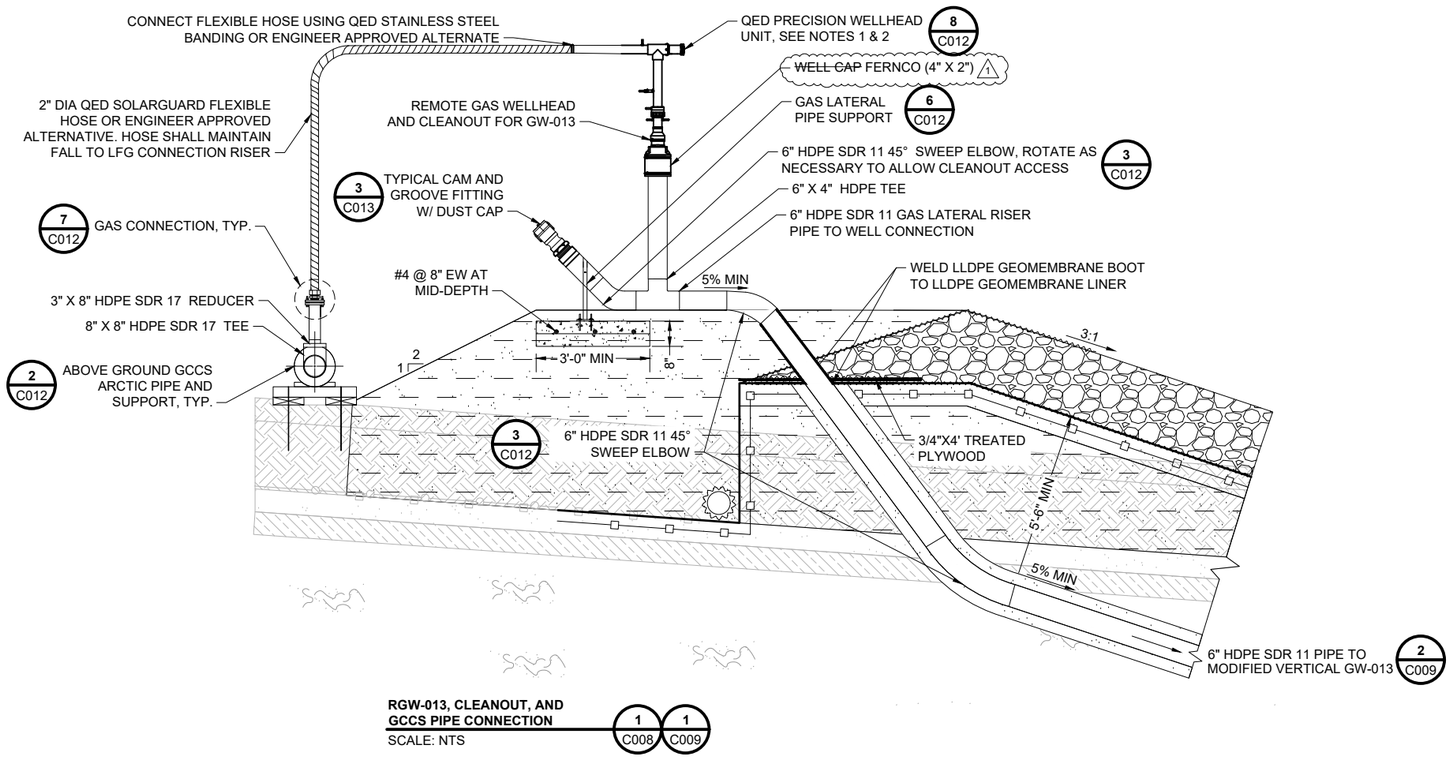
project	contract
167550	AUTHORIZATION #14

drawing C009 – rev. 0

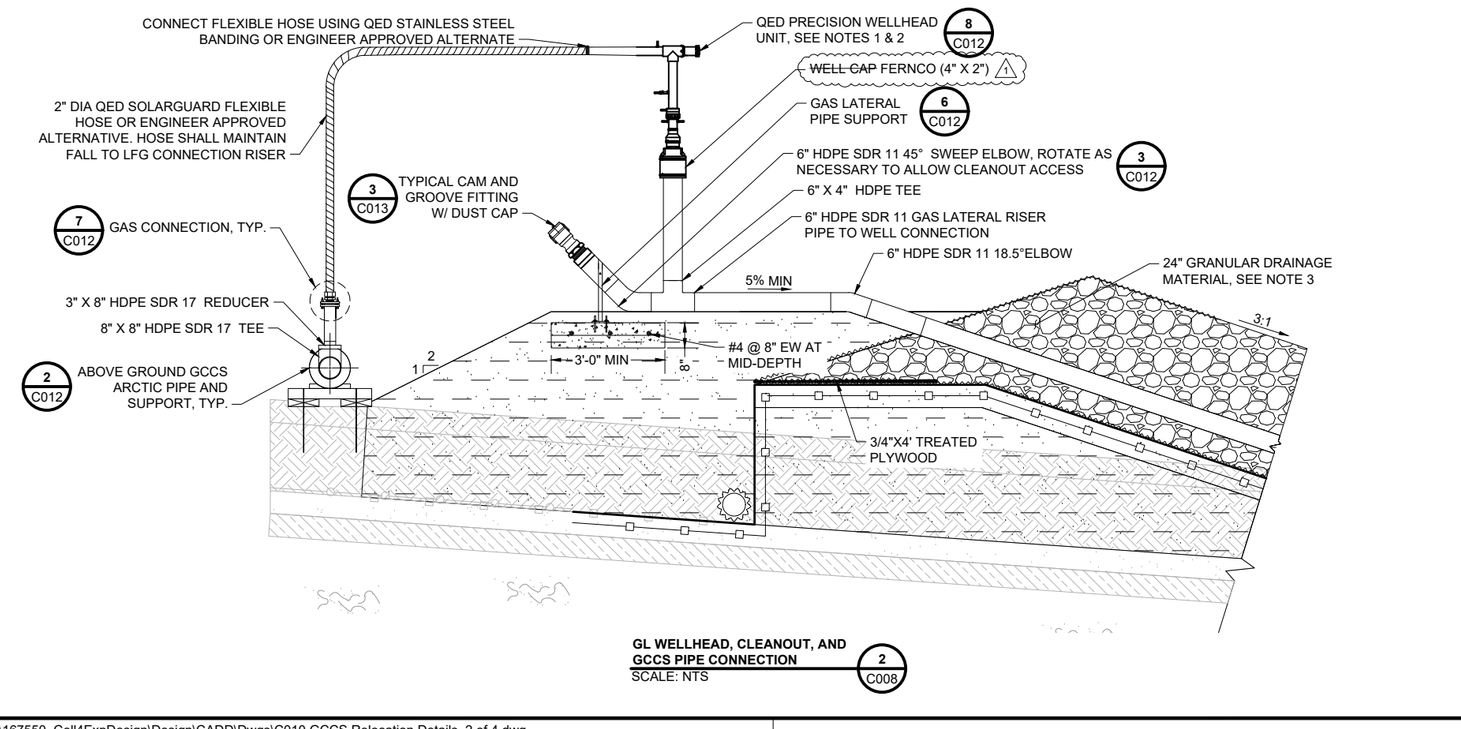
sheet of sheets

file C009 GCCS RELOCATION DETAILS, 1 OF 4.DWG

Scale For Microfilming
Millimeters
Inches



RGW-013, CLEANOUT, AND GCCS PIPE CONNECTION 1 C008 1 C009
SCALE: NTS



GL WELLHEAD, CLEANOUT, AND GCCS PIPE CONNECTION 2 C008
SCALE: NTS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:

1. THE WELLHEAD ASSEMBLY SHALL BE SUPPLIED AS A COMPLETE MANUFACTURED QED PRECISION WELLHEAD UNIT OR ENGINEER-APPROVED ALTERNATE. CONTRACTOR TO SUPPORT WELLHEAD WITH T-POSTS AND SLEEPER BLOCKS. CONTRACTOR SHALL MAINTAIN LINER INTEGRITY WHEN INSTALLING T-POSTS AND SLEEPER BLOCKS.
2. INSTALL QED POLAR GUARD INSULATING WELLHEAD COVER, OR ENGINEER-APPROVED ALTERNATE, ON ALL WELLHEADS.
3. CONTRACTOR SHALL MOUND 24" OF UNCOMPACTED GRANULAR DRAINAGE MATERIAL OVER ALL GAS LATERAL AND CONDENSATE DRAIN PIPING UNLESS OTHERWISE NOTED.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
GCCS RELOCATION DETAILS, 2 OF 4

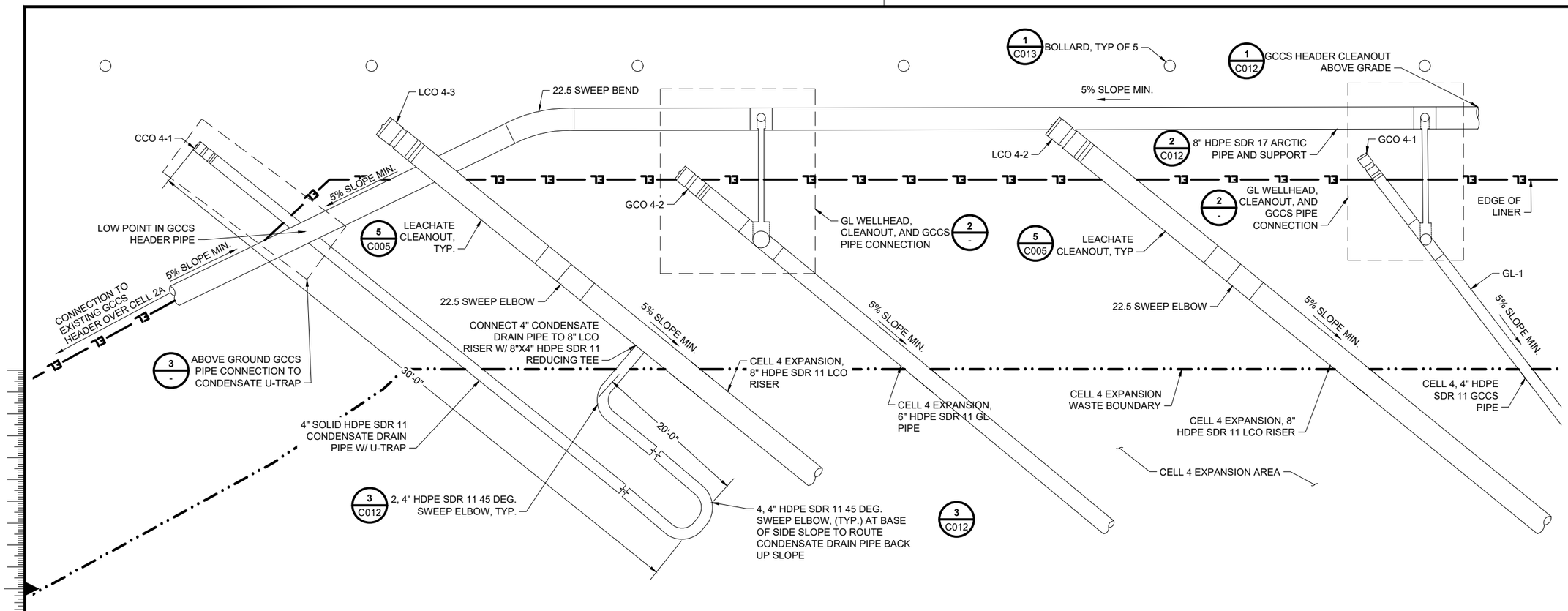
project	contract
167550	AUTHORIZATION #14

drawing **C010** – rev. **1**

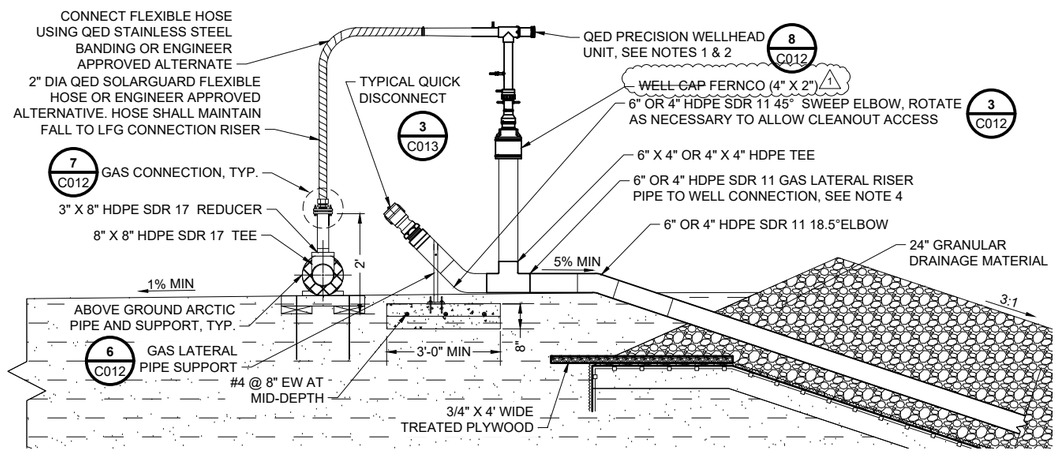
sheet of sheets

file C010 GCCS RELOCATION DETAILS, 2 OF 4.DWG

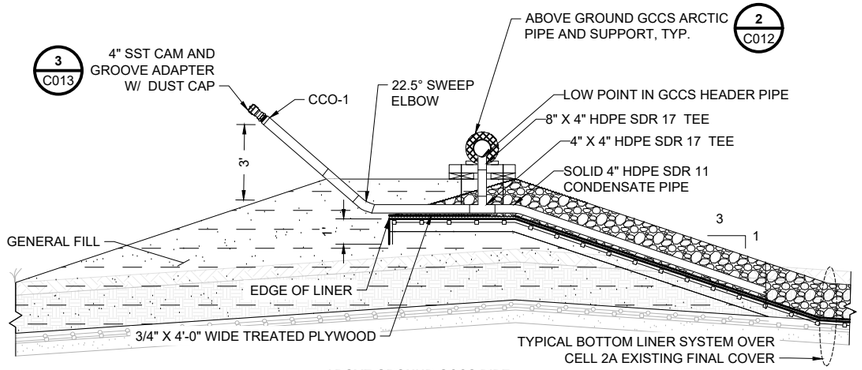
Scale For Microfilming: Millimeters / Inches



GL WELLHEAD, CLEANOUT, AND ARCTIC PIPE CONNECTION 1 C008
SCALE: NTS



GL WELLHEAD, CLEANOUT, AND GCCS PIPE CONNECTION 2 -
SCALE: NTS



ABOVE GROUND GCCS PIPE CONNECTION TO CONDENSATE U-TRAP AND CONDENSATE U-TRAP CLEANOUT 3 -
SCALE: NTS

CONFORMING TO CONSTRUCTION RECORDS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:

1. THE WELLHEAD ASSEMBLY SHALL BE SUPPLIED AS A COMPLETE MANUFACTURED QED PRECISION WELLHEAD UNIT OR ENGINEER-APPROVED ALTERNATE. CONTRACTOR TO SUPPORT WELLHEAD WITH T-POSTS AND SLEEPER BLOCKS. CONTRACTOR SHALL ENSURE NOT TO PENETRATE EXISTING GCL LINER.
2. INSTALL QED POLAR GUARD INSULATING WELLHEAD COVER, OR ENGINEER-APPROVED ALTERNATE, ON ALL WELLHEADS.
3. CONTRACTOR SHALL MOUND 24" OF UNCOMPACTED GRANULAR DRAINAGE MATERIAL OVER ALL GAS LATERAL AND CONDENSATE DRAIN PIPING UNLESS OTHERWISE NOTED.
4. AFTER PROJECT IS COMPLETED, BOROUGH WILL COVER GAS LATERAL RISER PIPE TO WELL CONNECTION AND CLEANOUT WITH COMPOST FOR INSULATION.
5. WASTE EXCAVATED DURING INSTALLATION OF REMOTE GAS LATERAL PIPE MAY BE BACKFILLED IN REMOTE GAS LATERAL TRENCH AFTER PLACEMENT OF PIPE AND BEDDING MATERIAL. WASTE BACKFILL SHALL EXTEND FROM THE TOP OF PIPE BEDDING MATERIAL TO NO MORE THAN TWO FEET BELOW EXISTING GCL. THE FINAL 6 INCHES TO TWO FEET OF BACKFILL BELOW EXISTING GCL SHALL CONSIST OF GENERAL FILL. THE FINAL 6 INCHES SHALL CONSIST OF CUSHION LAYER MATERIAL.
6. COORDINATE WITH OWNER FOR DISPOSAL OF EXCESS EXCAVATED WASTE.
7. CONTRACTOR SHALL MAINTAIN LINER INTEGRITY WHEN INSTALLING T-POSTS AND SLEEPER BLOCKS.

BURNS McDONNELL
Burns & McDonnell Engineering Co, Inc.
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APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
GCCS RELOCATION DETAILS, 3 OF 4

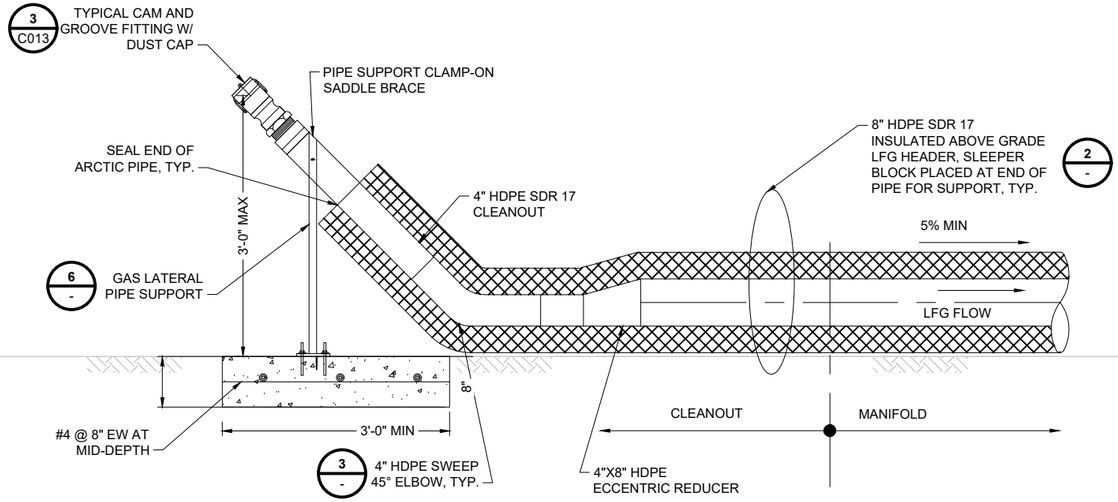
project	contract
167550	AUTHORIZATION #14

drawing **C011** rev. **1**

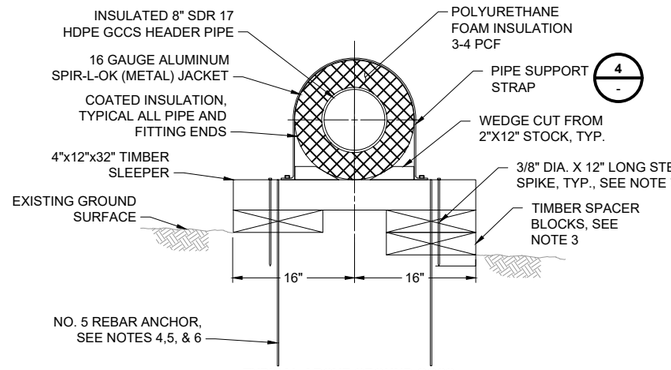
sheet of sheets

file C011 GCCS RELOCATION DETAILS, 3 OF 4.DWG

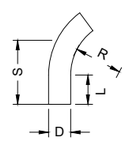
Millimeters
Inches
Scale For Microfilming



TYPICAL HEADER END CLEANOUT ABOVE GRADE (1 - C008 / 1 - C011)
SCALE: NTS



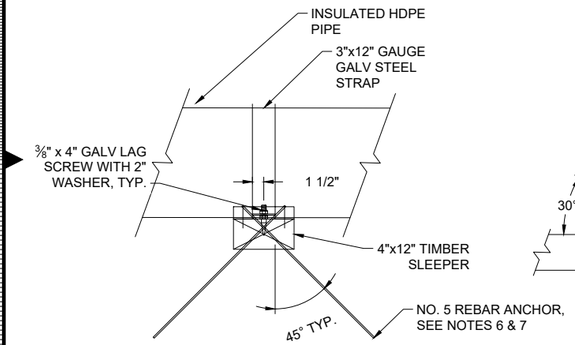
TYPICAL ABOVE GROUND GCCS ARCTIC PIPE AND SUPPORT (2 - / 2 C008 / 2 C009 / 2 C010 / 2 C011)
SCALE: NTS



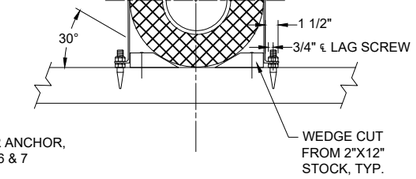
TYPICAL 45° ELBOW DIMENSIONS				
IPS SIZE	D	L	R	S
2"	2.375	6	7.13	9
3"	3.5	6	10.5	10.3
4"	4.5	6	13.5	11.6
6"	6.6	7	19.9	15.2
8"	8.6	10	24.5	20.1
10"	10.8	11	32.25	24.3
12"	12.8	13	38.3	28.7
14"	14	13	38.9	29.1

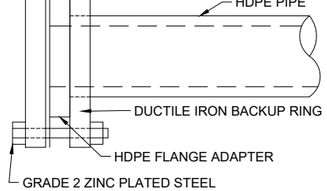
NOTES:
1. IPS SWEEP 45° ELBOW.
2. MANUFACTURER SHALL BEVEL OUT ALL INTERIOR PIPE BEEDS.
3. CONTRACTOR SHALL MAKE ALL PIPE CONNECTIONS WITH SWEEP ELBOWS NO GREATER THAN 45-DEGREES

TYPICAL HDPE PIPE BEND (3 - / 3 C003 / 3 C007 / 3 C009 / 3 C010 / 3 C011)
SCALE: NTS

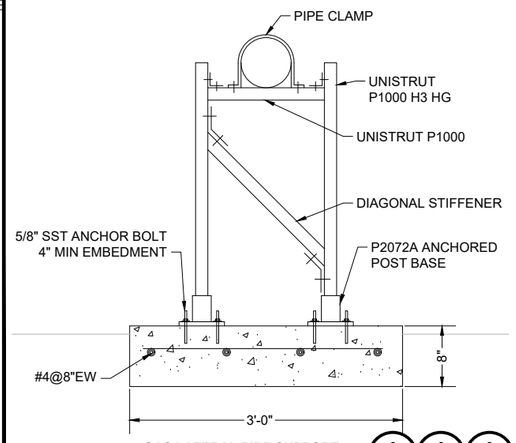


PIPE SUPPORT STRAP (4 -)
SCALE: NTS

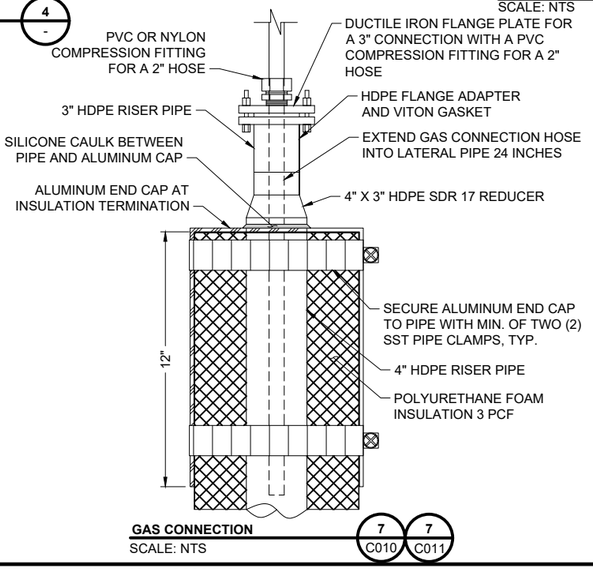




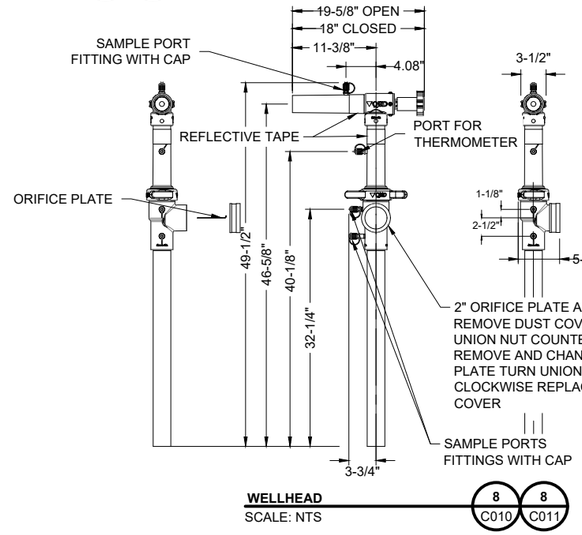
TYPICAL HDPE BLIND FLANGE (5 - / 5 C008 / 5 C009)
SCALE: NTS



GAS LATERAL PIPE SUPPORT (6 - / 6 C010 / 6 C011)
SCALE: NTS



GAS CONNECTION (7 C010 / 7 C011)
SCALE: NTS



WELLHEAD (8 C010 / 8 C011)
SCALE: NTS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:
1. SLEEPERS TO BE LOCATED EVERY 10 FEET, AT HIGH POINTS IN VERTICAL ELEVATION, AT CHANGES IN HORIZONTAL DIRECTION, AT PIPE JOINTS, AND AT VALVE LOCATIONS.
2. NAILS TO BE HOT DIPPED GALVANIZED.
3. TIMBER MUST BE PRESSURE TREATED FOR GROUND CONTACT.
4. AT CELL LINER CROSSINGS, PLACE REBAR SOIL ANCHORS TO NOT PENETRATE LINER MATERIAL.
5. CONTRACTOR SHALL DRILL PILOT HOLE THROUGH TIMBER SLEEPER AND SPACERS BEFORE DRIVING NO. 5 REBAR ANCHORS. ANCHORS SHALL BE DRIVEN THROUGH SLEEPER AND SPACERS AT A 45° ANGLE.
6. REBAR ANCHORS SHALL BE HAVE A MINIMUM BURIAL DEPTH OF 12". CONTRACTOR SHALL USE CAUTION TO NOT PENETRATE EXISTING LINER. ANY DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED IN A TIMELY MANNER AT NO COST TO OWNER.
7. STEEL SPIKES SHALL BE USED TO SECURE TIMBER SLEEPERS TO TIMBER SPACER BLOCKS.

CONFORMING TO CONSTRUCTION RECORDS

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M. AULT	F. DORAN

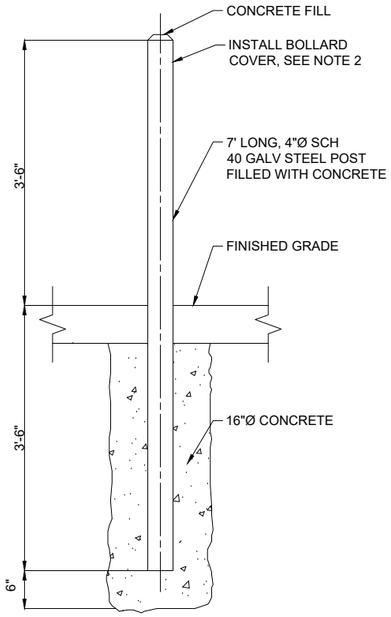
MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
GCCS RELOCATION DETAILS, 4 OF 4

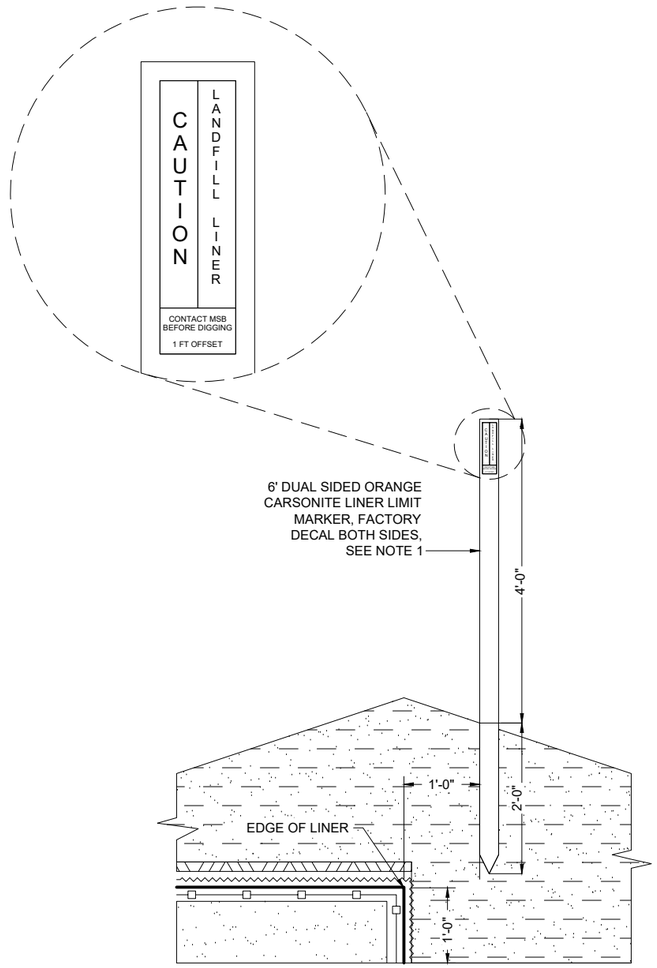
project	contract
167550	AUTHORIZATION #14

drawing **C012** rev. **1**

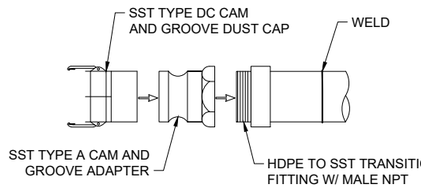
sheet of sheets
file C012 GCCS RELOCATION DETAILS, 4 OF 4.DWG



TYPICAL BOLLARD — 1 C005 / 1 C011
SCALE: NTS



TYPICAL LANDFILL LIMIT MARKER POST — 2 C006 / 2 C007
SCALE: NTS



TYPICAL CAM AND GROOVE FITTING W/ DUST CAP — 3 C005 / 3 C009 / 3 C010 / 3 C011 / 3 C012
SCALE: NTS

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. LIMIT MARKER POSTS SHALL BE PLACED EVERY 100-FEET ALONG THE CELL BOUNDARY. LIMIT MARKERS SHALL BE 1 FOOT OUTSIDE THE EDGE OF LINER BOUNDARY ON THE ACCESS ROAD PERIMETER AND 5 FEET OUTSIDE THE EDGE OF LINER BOUNDARY ON THE NORTH AND WEST SIDE OF THE CELL 2A PIGGYBACK PERIMETER.
2. PROVIDE YELLOW GUARD POST COVERS MOLDED FROM A DURABLE POLYETHYLENE WITH ULTRA-VIOLET STABILIZERS TO ENSURE PRODUCT LIFE AND COLOR FASTNESS. SECURE THE POLYETHYLENE GUARD POST AND COVER OR SLEEVE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDED CARSONITE SAV-T SLEEVE, THE GUARD POST COVER OR SLEEVE, OR APPROVED EQUAL.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL
Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

MATANUSKA-SUSITNA BOROUGH, ALASKA

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
MISCELLANEOUS CIVIL DETAILS

project	contract
167550	AUTHORIZATION #14

drawing C013 — rev. 0
sheet of sheets
file C013 MISCELLANEOUS CIVIL DETAILS.DWG

Scale For Microfilming: Millimeters / Inches

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID
1	1/15/26	RCH	FJD	CtCR

NOTES:

1. EXISTING SITE FEATURES SHOWN PROVIDED BY MSB.
2. EXISTING SITE TOPOGRAPHY CREATED FROM VARIOUS SURVEYS. MOST RECENT SURVEY OF THE CELL 4 EXPANSION AREA CREATED FROM DRAFT LIDAR DATA FLOWN IN THE FALL OF 2019 BY MSB, THE ACCURACY OF THE DATA IS NOT GUARANTEED.
3. DESIGN CONTOURS REPRESENT TOP OF GRANULAR DRAINAGE MATERIAL AND ACCESS ROAD GRADES. DASHED CONTOURS REPRESENT AS-BUILT SURVEY OF TOP OF GRANULAR DRAINAGE MATERIAL.

NORTH

0 20' 40' 80'
SCALE IN FEET

CONFORMING TO CONSTRUCTION RECORDS

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

Matanuska-Susitna Borough, Alaska

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION EROSION CONTROL PLAN

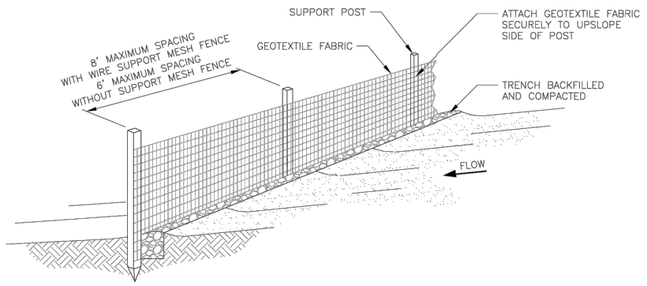
project	contract
167550	AUTHORIZATION #14

drawing C014 – rev. 1

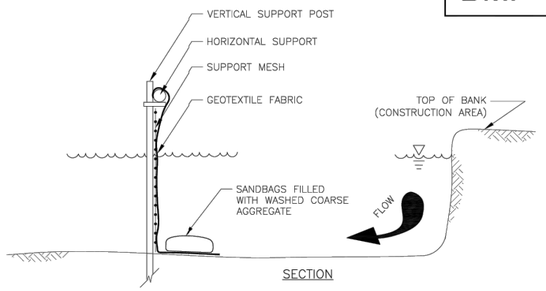
sheet of sheets

file C014 EROSION CONTROL PLAN.DWG

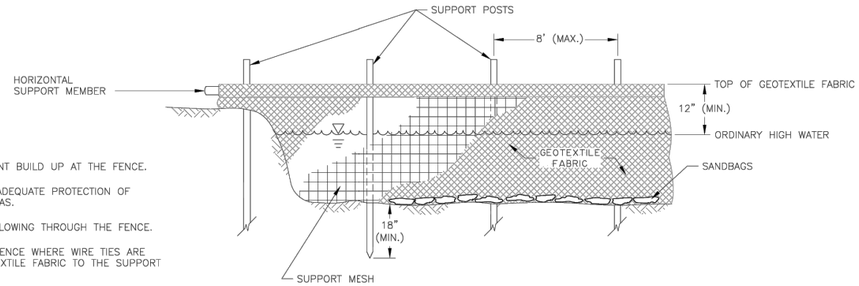
Scale For Microfilming
Millimeters
Inches



GENERAL INSTALLATION
NOT TO SCALE



SECTION



PROFILE

STANDING WATER INSTALLATION
NOT TO SCALE

SILT FENCE GENERAL NOTES:

MATERIALS

SILT FENCE: SEE SPECIFICATION SECTION 633, SILT FENCE.

INSTALLATION

1. INSTALL FENCELINE ALONG A LEVEL CONTOUR AND PERPENDICULAR TO ANTICIPATED SHEET FLOW DRAINAGE PATH(S).
2. ORIENT END SECTIONS UPHILL SLIGHTLY IN A J-HOOK TO PREVENT WATER FROM GOING AROUND THE SILT FENCE.
3. DO NOT EXCEED 100 FEET FOR EACH 1/4-ACRE OF DRAINAGE AREA AND DO NOT EXCEED 500 FEET REGARDLESS OF DRAINAGE AREA.
4. THE DIFFERENCE IN ELEVATION BETWEEN THE HIGHEST AND LOWEST POINT ALONG THE TOP OF THE SEDIMENT FENCE SHALL NOT EXCEED ONE-THIRD THE FENCE HEIGHT.
5. WHERE GROUND SURFACES ARE UNEVEN, INSTALL SHORTER FENCES FOLLOWING CONTOURS (RATHER THAN INSTALLING ONE LONG, CONTOUR-CROSSING FENCE THAT DIRECTS DRAINAGE TO ACCUMULATE IN LOW SPOTS).
6. LOCATE FENCE 3 TO 10 FEET BEYOND TOE OF FILL TO LEAVE ROOM FOR A BROAD, SHALLOW SEDIMENTATION POOL AND FOR EQUIPMENT ACCESS DURING FENCE MAINTENANCE AND REMOVAL.
7. IF FEASIBLE, LEAVE A MINIMUM OF 3.5-FOOT BUFFER BETWEEN FENCING AND SENSITIVE RECEIVING AREAS.
8. PLACE GEOTEXTILE ON THE UPSLOPE SIDE OF POSTS OR, WHEN USING SILT FENCE WITH SEWN-IN POCKETS, PLACE POCKETS ON THE UPSLOPE SIDE OF THE FENCE.
9. EXCAVATE TRENCHES NOT WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION OF THE SILT FENCE. DO NOT EXCAVATE TRENCHES IN PERMAFROST.
10. AT JOINTS, ROLL ENOUGH OF THE ENDS OF SECTIONS TOGETHER AT SUPPORT POST SUCH THAT THE JOINT PREVENTS SILT-LADEN WATER FROM ESCAPING THROUGH THE FENCE.
11. IF USING THE FRONT WHEEL OF A TRACTOR OR ROLLER, COMPACT THE UPSTREAM SIDE FIRST, THEN EACH SIDE TWICE (A TOTAL OF FOUR TRIPS).
12. KEEP FENCE FABRIC TAUT.
13. WHEN USING SUPPORT MESH, ATTACH GEOTEXTILE TO THE SUPPORT MESH WITH FASTENERS SPACED EVERY 24 INCHES AT THE TOP AND MIDSECTION.

MACHINE SLICE INSTALLATION (NOT IN PERMAFROST)

1. USE A SILT FENCE INSTALLATION MACHINE OR ATTACHMENT TO PLOW OR SLICE THE FABRIC DIRECTLY INTO THE SOIL.
2. BACKFILL SOIL LOOSENED BY THE BLADE INTO THE SLICE AND USE THE TRACTOR TO MECHANICALLY COMPACT THE SOIL.
3. TUCK FABRIC DEEPER INTO THE GROUND WHERE NECESSARY.
4. INSTALL SUPPORT POSTS ALONG THE LENGTH OF THE FENCE FOLLOWING SIMILAR PROCEDURES FOR THE TRENCH METHOD.

WINTER INSTALLATION (NOT IN PERMAFROST)

1. DIG A TRENCH.
2. BACKFILL TRENCH WITH THE LOOSENED SOIL AND COMPACT SOIL PRIOR TO POST INSTALLATION.
3. MOISTEN THE BACKFILLED SOIL SO IT WILL FREEZE UP AND GRIP THE SILT FENCE FABRIC IN PLACE.
4. DO NOT LEAVE LARGE FROST CHUNKS AS THE BACKFILL.

INSPECTION

1. INSPECT FENCELINE FOR CONTINUITY, COLLAPSE, UNDERMINED AREAS, AND DAMAGE. DO NOT EXCAVATE TRENCHES IN PERMAFROST.
2. INSPECT FABRIC FOR TEARS, PUNCTURES, FRAYING, WEATHERING, AND COMPROMISED INTEGRITY.
3. CONFIRM THAT THE FENCE POSTS ARE SECURE.
4. ENSURE THE FENCE IS KEYED IN AND THAT THERE IS NO UNDERCUTTING.
5. LOOK FOR EVIDENCE OF SEDIMENT OR EROSION FLOW LEADING OFF THE DOWNHILL EDGE OF THE FENCE. (THIS MAY BE AN INDICATOR OF DRAINAGE BYPASS OR FENCE UNDERMINE.)
6. NOTE DEPTH OF SEDIMENT BUILD UP AT THE FENCE.
7. LOOK FOR SIGNS OF INADEQUATE PROTECTION OF OFF-SITE SENSITIVE AREAS.
8. CHECK FOR SEDIMENT FLOWING THROUGH THE FENCE.
9. CHECK FOR HOLES IN FENCE WHERE WIRE TIES ARE USED TO SECURE GEOTEXTILE FABRIC TO THE SUPPORT POST.

MAINTENANCE

1. INSTALL ALTERNATE OR ADDITIONAL BMPS AS NEEDED TO PREVENT UNDESIRABLE SEDIMENTATION OF SENSITIVE AREAS.
2. REPLACE DAMAGED FABRIC.
3. REMEDY FENCE SAGS AS NEEDED.
4. REMOVE ACCUMULATED SEDIMENT BEFORE IT ACCUMULATES TO ONE-HALF THE CAPACITY, OR ONE-THIRD OF THE AVAILABLE STORAGE IF PROTECTING A WATER BODY OR STORM DRAIN INLET.
5. DISPOSE OF SILT WASTE IN APPROVED MANNER/LOCATION (TYPICALLY IN A NON-EROSION AREA).
6. IF THERE IS EVIDENCE OF EXCESSIVE SEDIMENTATION AGAINST THE SILT FENCE, PROVIDE INCREASED EROSION CONTROL UPSLOPE.

REMOVAL

1. WHEN DISTURBED AREAS ARE PERMANENTLY STABILIZED OR SEDIMENT PROTECTION IS NO LONGER NEEDED, COLLECT AND PROPERLY DISPOSE OF ACCUMULATED SEDIMENT OR SEED IN PLACE.
2. CUT FABRIC AT GROUND LEVEL AND REMOVE SUPPORTS.
3. DISCARD FILTER FENCE AS APPROVED. AVOID DAMAGE TO SENSITIVE AREAS (E.G. WETLAND OR SURFACE WATER).

STANDING WATER NOTES:

INSTALLATION

1. DRIVE SUPPORT POSTS INTO THE GROUND AND ATTACH A HORIZONTAL SUPPORT MEMBER.
2. ATTACH SUPPORT MESH AND GEOTEXTILE ON THE UPSLOPE SIDE OF THE STAKES, EXTEND GEOTEXTILE ON THE GROUND UPSLOPE OF THE FENCE, AND ANCHOR THE GEOTEXTILE WITH SANDBAGS OR EQUIVALENT TO PREVENT GAPS.
3. SPACE SUPPORT POSTS A MAXIMUM OF 8 FEET APART.
4. KEEP FENCE FABRIC TAUT.

REVISIONS		
Date	Description	By

State of Alaska DOT&PF

SILT FENCE
(NOTES, GENERAL INSTALLATION, & STANDING WATER INSTALLATION)

APPROVED

Date 12/2015 x/xx/xx

BMP-20.00

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. DETAILS RETRIEVED APRIL 2024 FROM ALASKA SWPPP GUIDE, APPENDIX B - ALASKA DOT&PF BMPS DATED MARCH 2021.

CONFORMING TO CONSTRUCTION RECORDS

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

Matanuska-Susitna Borough, Alaska

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
EROSION CONTROL DETAILS,
SILT FENCE 1 OF 2

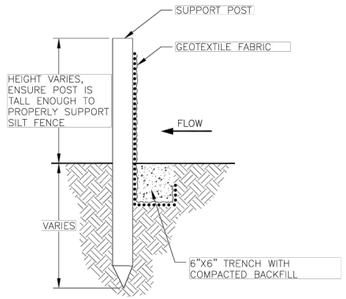
project	contract
167550	AUTHORIZATION #14

drawing C015 – rev. 0

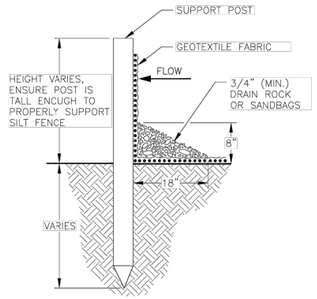
sheet of sheets

file C015 EROSION CONTROL DETAILS, SILT FENCE 1 OF 2.DWG

Scale For Microfilming: Millimeters / Inches



TRENCH DETAIL
NOT TO SCALE



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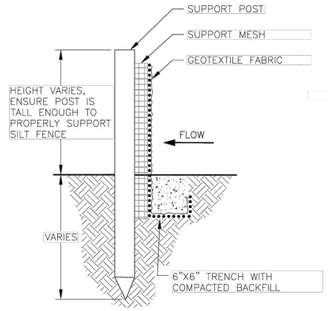

SUPPORT MESH REINFORCED FABRIC DETAIL
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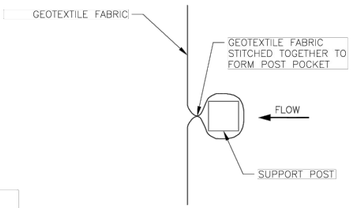

SEWN-IN POCKET DETAIL
NOT TO SCALE

TRENCH NOTES:
INSTALLATION
1. DRIVE SUPPORT POSTS INTO THE GROUND.
2. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR POST BURIAL DEPTH.
3. EXCAVATE A TRENCH ON THE UPHILL SIDE ALONG THE LINE OF THE STAKES.
4. ATTACH GEOTEXTILE TO STAKES AND BURY GEOTEXTILE BOTTOM.
5. BACKFILL TRENCH AND COMPACT TO SECURE FENCE BOTTOM.

TRENCHLESS NOTES:
MATERIALS
CLEAN ROCK OR SANDBAGS.

INSTALLATION
1. DRIVE SUPPORT POSTS INTO THE GROUND.
2. ATTACH GEOTEXTILE ON THE UPHILL SIDE ALONG THE LINE OF THE STAKES.
3. EXTEND GEOTEXTILE ON THE GROUND UPHILL OF THE FENCE.
4. PLACE DRAIN ROCK ON GEOTEXTILE.

REMOVAL
1. WHEN SILT FENCE IS LOCATED IN WETLANDS OR SENSITIVE AREAS, REMOVE CLEAN ROCK OR SANDBAGS WHEN THE SILT FENCE IS REMOVED.

SUPPORT MESH REINFORCED FABRIC NOTES:
INSTALLATION
1. DRIVE SUPPORT POSTS INTO THE GROUND.
2. EXCAVATE A TRENCH ON THE UPHILL SIDE ALONG THE LINE OF THE STAKES. DO NOT EXCAVATE TRENCHES IN PERMAFROST.
3. EXTEND SUPPORT MESH A MINIMUM OF 3 INCHES INTO THE TRENCH.
4. ATTACH GEOTEXTILE TO STAKES AND BURY GEOTEXTILE BOTTOM.
5. BACKFILL TRENCH AND COMPACT TO SECURE FENCE BOTTOM.

REVISIONS		
Date	Description	By

State of Alaska DOT&PF

SILT FENCE
(DETAILS)

APPROVED

Date X/XX/XX

BMP-20.00

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. DETAILS RETRIEVED APRIL 2024 FROM ALASKA SWPPP GUIDE, APPENDIX B - ALASKA DOT&PF BMPS DATED MARCH 2021.

CONFORMING TO CONSTRUCTION RECORDS

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

Matanuska-Susitna Borough, Alaska

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
EROSION CONTROL DETAILS,
SILT FENCE 2 OF 2

project	contract
167550	AUTHORIZATION #14

drawing **C016** – rev. **0**

sheet of sheets

file C016 EROSION CONTROL DETAILS SILT FENCE 2 OF 2.DWG

Scale For Microfilming: Millimeters / Inches

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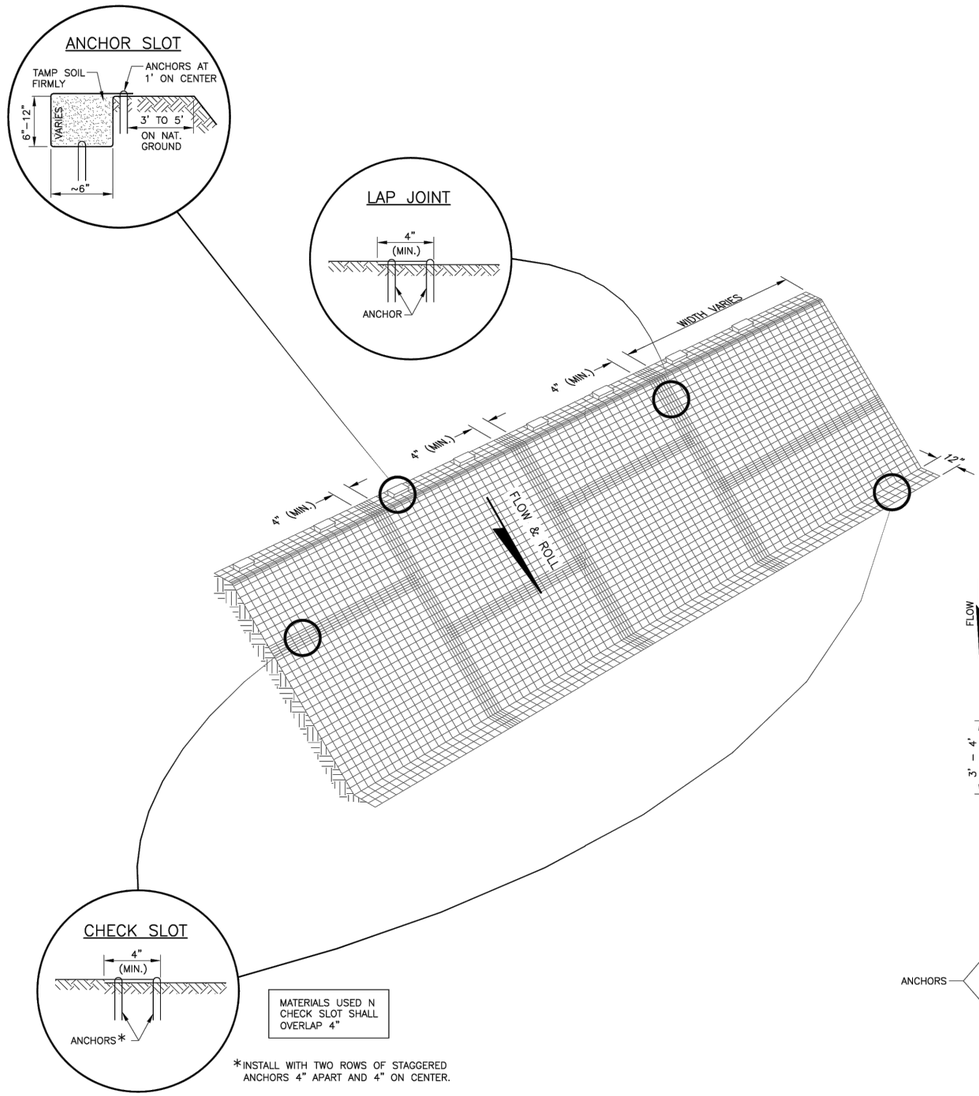
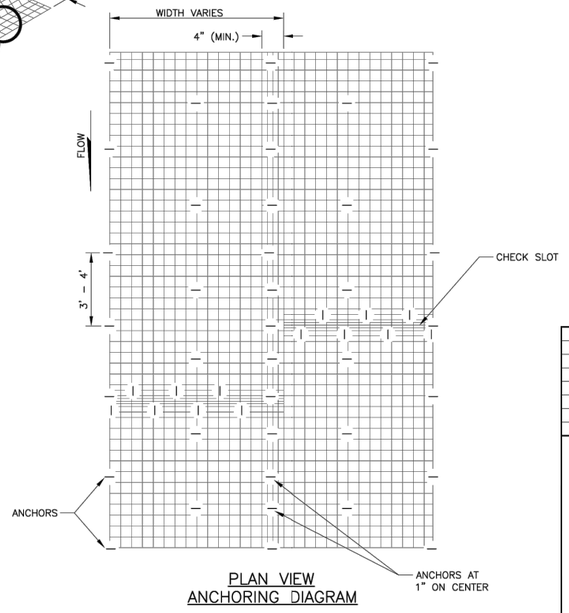


NOTES

1. INSTALL AND ANCHOR IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OR AS APPROVED BY THE ENGINEER.
2. SMOOTH SOIL UNDER RECP AS MUCH AS POSSIBLE TO ENSURE INTIMATE CONTACT BETWEEN THE RECP AND THE SOIL.
3. INSTALL TO ENSURE THE RECP MAKES INTIMATE, CONTINUOUS CONTACT WITH THE GROUND SURFACE.

CHECK SLOT SPACINGS	
SLOPE	SPACING
LESS THAN 4%	75'
4% OR MORE	50'



PLAN VIEW
ANCHORING DIAGRAM

NOT TO SCALE

REVISIONS		
Date	Description	By

State of Alaska
Department of Transportation
& Public Facilities

ROLLED EROSION CONTROL FOR SLOPES

APPROVED
Date 12/2015 XXXXXX

BMP-18.00

NOTES:

1. DETAILS RETRIEVED APRIL 2024 FROM ALASKA SWPPP GUIDE, APPENDIX B - ALASKA DOT&PF BMPS DATED MARCH 2021.

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

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Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

Matanuska-Susitna Borough, Alaska

CENTRAL LANDFILL (SW1A007-26)
CELL 4 EXPANSION CONSTRUCTION
EROSION CONTROL DETAILS,
EROSION CONTROL BLANKET

project	contract
167550	AUTHORIZATION #14

drawing C017 – rev. 0

sheet of sheets

file C017 EROSION CONTROL DETAILS, EROSION CONTROL BLANKET.DWG

Scale For Microfilming: Millimeters / Inches

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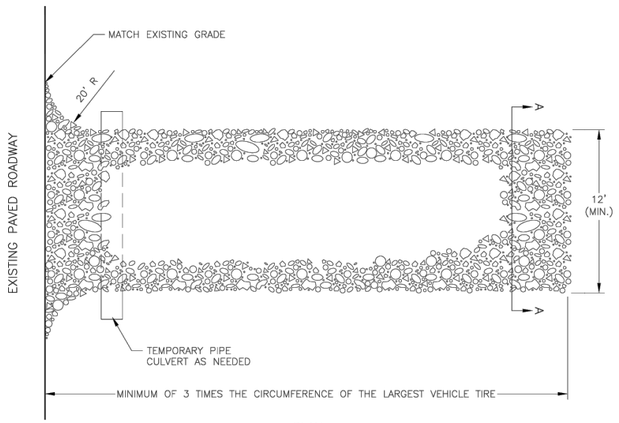
SHEET 1 of 2

SECTION A–A



PLAN

ROCK CONSTRUCTION EXIT

NOT TO SCALE

ROCK CONSTRUCTION EXIT NOTES:

MATERIALS

ROCK: 2– TO 3–INCH COARSE AGGREGATE OR 3– TO 6–INCH QUARRY SPALL OR ANGULAR ROCK, WHICHEVER IS APPROPRIATE TO THE PROJECT FLEET.

INSTALLATION

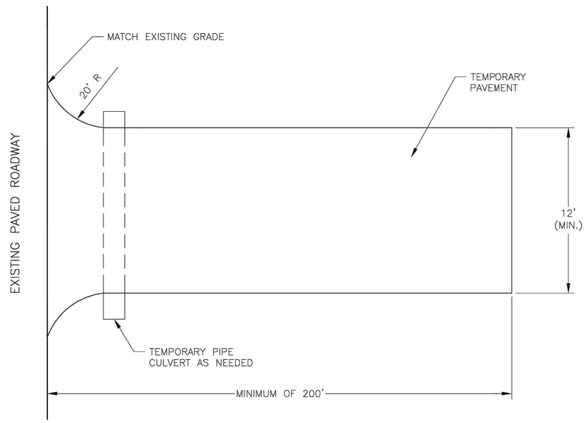
1. PLACE THE FILTER FABRIC AND ROCK TO THE SPECIFIC GRADE SHOWN ON THE PLANS.

MAINTENANCE

1. REMOVE ACCUMULATED SEDIMENT OR MUD.
2. REPLACE ROCK MATERIAL WHEN SURFACE VOIDS ARE FILLED WITH SEDIMENT. REPLACE FABRIC AS NEEDED.
3. TOP DRESS WITH 2 TO 3 INCHES OF COARSE AGGREGATE OR 3– TO 6–INCH COARSE ROCK WHEN THE PAD BECOMES LADEN WITH SEDIMENT.

INSPECTION

1. INSPECT FOR ROCK THAT HAS BEEN DISPLACED FROM THE PAD.



PLAN

TEMPORARY PAVEMENT CONSTRUCTION EXIT

NOT TO SCALE

TEMPORARY PAVEMENT CONSTRUCTION EXIT NOTES:

INSPECTION

1. INSPECT TEMPORARY PAVEMENT FOR DAMAGE.

MAINTENANCE

1. SWEEP DESIGNATED PAVED EXIT TO PREVENT SEDIMENT TRACK–OUT.
2. REPAIR DAMAGED TEMPORARY PAVEMENT.

STABILIZED CONSTRUCTION EXIT GENERAL NOTES:

INSTALLATION

1. INSTALL STABILIZED CONSTRUCTION EXIT PRIOR TO EARTH WORK.
2. CLEAR THE EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER MATERIAL.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP, VEGETATIVE SEDIMENT FILTER OR OTHER PROTECTED OUTLET.
4. EXCAVATE AND GRADE THE AREA FOR ROCK PLACEMENT.
5. INSTALL SIGNS, FENCING OR BARRICADES TO CHANNEL OUTGOING TRAFFIC TO THE STABILIZED CONSTRUCTION EXIT.

INSPECTION

1. INSPECT STABILIZED CONSTRUCTION EXIT FOR SEDIMENT ACCUMULATION AND MATERIAL DISPLACEMENT.
2. INSPECT ROADWAY FOR SEDIMENT TRACK–OUT.
3. INSPECT DITCHES TO ENSURE NO SEDIMENT ACCUMULATION.

MAINTENANCE

1. MAINTAIN EACH EXIT IN A CONDITION THAT WILL PREVENT TRACKING OF MUD OR SEDIMENT ONTO PUBLIC RIGHT–OF–WAY.
2. REPAIR AND/OR CLEAN OUT ANY STRUCTURES USED TO TRAP SEDIMENT.
3. REMOVE ALL MUD AND SEDIMENT DEPOSITED ON PAVED ROADWAYS.
4. ADD MORE SIGNS, FENCING OR BARRICADES WHEN VEHICLES ARE EXITING THE PROJECT WITHOUT USING THE STABILIZED CONSTRUCTION EXIT. INSTALL ADDITIONAL STABILIZED CONSTRUCTION EXITS IF NEEDED, YET USE SIGNS AND BARRICADES TO MINIMIZE THE NUMBER OF STABILIZED CONSTRUCTION EXITS.
5. PREVENT TRACK–OUT BY USING ADDITIONAL BMPs, SUCH AS A TIRE WASH.

REMOVAL

1. REMOVE THE STABILIZED CONSTRUCTION EXIT AND ANY SEDIMENT TRAPPING STRUCTURES AFTER THEY ARE NO LONGER NEEDED, OR WITH FINAL SITE STABILIZATION.
2. REGRADE AND PERMANENTLY STABILIZE THE REMAINING DISTURBED AREAS ACCORDING TO THE PLANS.

REVISIONS		
Date	Description	By

State of Alaska DOT&PF

STABILIZED CONSTRUCTION EXIT (NOTES, ROCK & TEMPORARY PAVEMENT)

APPROVED

Date 12/2015 XXXXXX

BMP–23.00

no.	date	by	ckd	description
0	4/17/25	RCH	FJD	ISSUED FOR BID

NOTES:

1. DETAILS RETRIEVED APRIL 2024 FROM ALASKA SWPPP GUIDE, APPENDIX B - ALASKA DOT&PF BMPS DATED MARCH 2021.

CONFORMING TO CONSTRUCTION RECORDS

Burns & McDonnell Engineering Co, Inc.
LICENSE NO. AECC322

date	detailed
APRIL 2025	R. HEAMAN
designed	checked
M. AULT	F. DORAN

Matanuska-Susitna Borough, Alaska

CENTRAL LANDFILL (SW1A007-26)

CELL 4 EXPANSION CONSTRUCTION EROSION CONTROL DETAILS, STABILIZED CONSTRUCTION EXIT

project	contract
167550	AUTHORIZATION #14

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sheet of sheets

file C018 EROSION CONTROL DETAILS, STAB. CONST. EXIT.DWG

Scale For Microfilming: Millimeters / Inches

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