PRUDOE BAY UNIT
PUT 29 GRAVEL PIT

SEC. 22 &27, T11N, R14E, UMIAT MERIDIAN, ALASKA

PREPARED FOR:

HILCORP ALASKA, LLC
3800 CENTERPOINT DR.
STE. 1400
ANCHORAGE, AK 99503

PREPARED BY:

RECON LLC
565 W. RECON CIR.
PALMER, AK 99645

SHEET INDEX:

RECON

PROJECT: PUT 29 MATERIAL SITE
PROJECT ENGINEER: ISAAC J. ROWLAND, PE
PREPARED BY: RECON LLC 565 W. RECON CIR. PALMER, AK 99645

NO.	DESIGN/CONSTRUCTION/RECORD	DWN BY/DATE	CHKED BY/DATE
01	PRELIMINARY SITE DESIGN	ZJL/05-05-25	IJR/05-05-25

DRAFT NOT FOR CONSTRUCTION

PREPARED FOR: HILCORP ALASKA, LLC
3800 CENTERPOINT DR., STE. 1400
ANCHORAGE, AK 99503

Hilcorp Alaska

PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
TITLE SHEET

SCALE 1" = 1/2 MILE
SHEET SIZE 22" X 34"
SHEET 1 OF 9

DWG NAME: C:\5H-PUT 29\ 2025_OVERALL PLAN.dwg
PLOT DATE: 9/5/2025 9:29:51 AM

GENERAL NOTES

GENERAL DESIGN PARAMETERS

1. ROAD GRADE 2.0% MAXIMUM
2. VERTICAL CURVE LENGTH MIN. OF 100 FEET PER EACH PERCENT (1%) GRADE
3. DESIGN SPEED 35 MPH
4. MINIMUM FILL DEPTH FIVE (5) FEET OVER EXISTING GROUND ELEVATIONS.

IN THE EVENT THAT THERE IS A CONFLICT BETWEEN THE ABOVE REFERENCES AND THESE GENERAL NOTES, THE OWNER IS TO BE NOTIFIED OF ALL CONFLICTS AND THE FOLLOWING GENERAL PRIORITY SHALL BE FOLLOWED:

1. ALL PROJECT PERMIT REQUIREMENTS
2. THESE GENERAL NOTES
3. THE DESIGN DRAWINGS

PERMITS

1. THE OWNER WILL PROVIDE THE CONTRACTOR COPIES OF ALL PERMITS AND APPROVALS THAT ARE OBTAINED BY THE OWNER.
2. THE OWNER WILL TRANSMIT TO THE CONTRACTOR WRITTEN APPROVAL FOR THE COMMENCEMENT OF CONSTRUCTION.

SIGNAGE

1. PERMANENT SIGNS TO BE INSTALLED BY HILCORP

INSTALLATION

PREPARATION FOR WINTER PLACED GRAVEL

1. ALL EXCESS SNOW AND ICE TO BE REMOVED PRIOR TO GRAVEL PLACEMENT.
2. REMOVE ALL SNOW FENCES AS APPLICABLE.

GRAVEL PLACEMENT

1. GRAVEL FILL MATERIAL SHALL NOT BE PLACED OUTSIDE OF THE GRAVEL FILL FOOTPRINT SPECIFIED IN THE DESIGN DRAWINGS. GRAVEL FILL MATERIAL PLACED OUTSIDE OF THOSE LIMITS, INTENTIONALLY OR OTHERWISE, SHALL BE RECOVERED.
2. NO EQUIPMENT MAY TRAVEL OUTSIDE OF THE DESIGNATED ROUTES OR THE GRAVEL FILL FOOTPRINT SPECIFIED IN THE DESIGN DRAWINGS.
3. TRUCK TRAVEL ROUTES FROM THE MATERIAL SOURCE TO THE PROJECT SITE ARE AS SPECIFIED BY OWNER.

DELETERIOUS MATERIALS AT PLACEMENT

1. DEPTHS OF ICE GREATER THAN FOUR (4) INCHES AND SNOW GREATER THAN FOUR (4) INCHES SHALL BE REMOVED PRIOR TO PLACING GRAVEL FILL. ANY DELETERIOUS MATERIALS OBSERVED IN PLACED GRAVEL FILL MUST BE REMOVED FROM THE GRAVEL FILL MATERIAL PRIOR TO PLACING SEQUENTIAL LIFTS.
2. DELETERIOUS AND WASTE MATERIALS SHALL BE DISPOSED OF AT AN OWNER APPROVED WASTE AREA.
3. LOCATIONS OF ICE DEPTHS GREATER THAN FOUR (4) INCHES, SHALL BE IDENTIFIED AND REMOVED. KNOWN PONDED WATER LOCATIONS OF SIGNIFICANT EXTENT OR DEPTH WERE IDENTIFIED DURING THE TOPOGRAPHIC SURVEY AND ARE SHOWN ON THE PLANS DESIGNATED FOR REMOVAL OF ICE.
4. FROZEN AGGREGATIONS OF GRAVEL FILL MATERIAL GREATER THAN 12-INCHES IN ANY DIMENSION SHALL BE BROKEN UP OR REMOVED FROM THE FILL PRIOR TO PLACING SEQUENTIAL LIFTS.

WINTER PLACEMENT AND COMPACTION OF GRAVEL

1. THE FIRST LIFT OF GRAVEL FILL MATERIAL SHALL BE OF A DEPTH NO GREATER THAN TWENTY FOUR (24") INCHES PRIOR TO COMPACTION. ALL SEQUENTIAL LIFTS SHALL BE OF A DEPTH NO GREATER THAN TWELVE (12") INCHES PRIOR TO COMPACTION.
2. WINTER-PLACED GRAVEL FILL SHALL BE PLACED IN A WELL GRADED MASS, AS VOID FREE AS PRACTICABLE. FROZEN AGGREGATIONS OF GRAVEL FILL MATERIAL GREATER THAN 12-INCHES IN ANY DIMENSION SHALL BE BROKEN UP OR REMOVED FROM THE FILL PRIOR TO PLACING SEQUENTIAL LIFTS.
3. EACH LIFT OF WINTER PLACED GRAVEL FILL MATERIAL SHALL BE COMPACTED BY NO LESS THAN FIVE (5) PASSES OF A 10-TON ELLIOT GRID VIBRATORY COMPACTOR OR OTHER APPROVED EQUIVALENT OVER THE ENTIRE LIFT SURFACE.

THAWED MATERIAL - SUMMER GRADING & COMPACTION

1. THAWED GRAVEL MATERIAL SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OPTIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.

PLACEMENT GRADES AND TOLERANCES

1. GRAVEL FILL SHALL CONFORM TO THE ALIGNMENTS AND GRADES SHOWN ON THE DESIGN DRAWINGS. GRAVEL FILL SHALL BE FINISHED TO WITHIN A TOLERANCE OF MINUS 0.0FT/PLUS 0.25 FT.
2. THE FINAL LIFTS OF WINTER-PLACE GRAVEL FILL MATERIAL SHALL BE PLACED TO A WINTER PLACED GRADE ABOVE THE FINISHED GRADE PROFILE, AS INDICATED IN THE DRAWINGS, TO ALLOW FOR THAW CONSOLIDATION AND POST-THAW REWORKING OF THE FILL SURFACE.

PLACEMENT ACTIVITIES

1. AN OWNER'S REPRESENTATIVE SHALL BE PRESENT FOR ALL PLACEMENT ACTIVITIES AND SHALL BE PROVIDED SAFE AND TIMELY ACCESS TO ALL PLACEMENT PROCESSES.

REQUIRED GRAVEL FILL MATERIALS TESTING

1. MATERIALS TESTING SHALL COMPLY WITH THE ASTM SPECIFICATIONS CITED BELOW:

C136	METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES
D1557	STANDARD TEST METHODS FOR LABORATORY COMPACTION
D6938	STANDARD TEST METHODS FOR IN-PLACE DENSITY AND WATER CONTENT OF SOIL AND SOIL-AGGREGATE BY NUCLEAR METHODS (SHALLOW DEPTH)

2. MATERIAL TESTING SERVICES AND OTHER ASSOCIATED QUALITY CONTROL MEASURES SHALL BE PROVIDED BY THE OWNER.
3. THE QUALITY CONTROL TESTING PROVIDER SHALL PROVIDE DOCUMENTATION OF ALL APPROPRIATE INDUSTRY CERTIFICATIONS AND A RELEVANT WORK HISTORY PERTAINING TO THIS PROJECT.

GENERAL NOTES (CONT'D)

INSTALLATION (CONT'D)

CULVERTS

1. GRAVEL LIFTS BETWEEN THE CULVERTS AND BELOW THE CULVERT MID HEIGHT SHALL BE A DEPTH NO GREATER THAN 4 INCHES PRIOR TO COMPACTION. ALL SUBSEQUENT LIFTS SHALL BE NO GREATER THAN 6 INCHES PRIOR TO COMPACTION. ANY UNSUITABLE MATERIALS OBSERVED IN PLACED GRAVEL FILL MUST BE REMOVED IMMEDIATELY FROM GRAVEL PRIOR TO PLACING ADDITIONAL MATERIAL.

CULVERT TABLE

CULVERT NO.	TYPE	INLET INVERT ELEV. (FT)	OUTLET INVERT ELEV. (FT)	INLET NORTHING	INLET EASTING	OUTLET NORTHING	OUTLET EASTING	LENGTH (FT)	DIA. (INCH)
C1	API-5LX52	19.5	19.3	5955888	181672	5955812	181697	80.0	24

MATERIAL QUANTITIES

ITEM NO.	ITEM DESCRIPTION	ESTIMATED VOLUME OF MATERIAL (CYDS)	APPROXIMATE AREA OF DISTURBANCE (ACRES)
1	MATERIAL SITE ROAD	44,600	3.0
2	MATERIAL SITE	7,000,000	63.7
3	6' OVERBURDEN	552,000	63.7
4	NORTH OVERBURDEN STACK & THERMAL BERM	200,000	8.1
5	EAST OVERBURDEN STACK & THERMAL BERM	82,100	7.3
6	SOUTH OVERBURDEN STACK & THERMAL BERM	229,000	7.3
7	WEST OVERBURDEN STACK & THERMAL BERM	41,000	3.9
6	INTERSECTION	300	0.4

MATERIAL SPECIFICATIONS FOR ROAD CONSTRUCTION

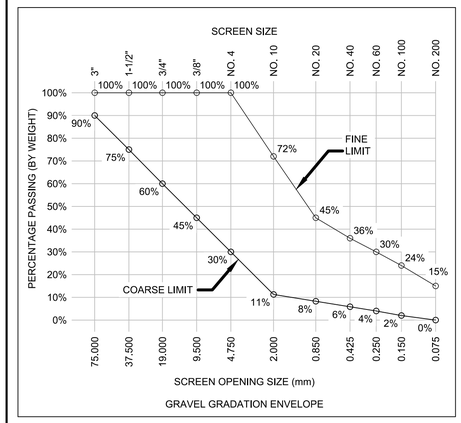
1. AGGREGATE CONTAINING NO MUCK, FROZEN MATERIAL, ROOTS, SOD OR OTHER DELETERIOUS MATTER AND MEET THE FOLLOWING GRADATION AS TESTED BY ASTM C136:

SIEVE:	PERCENT PASSING BY WEIGHT:
NO. 200	0 - 15% DETERMINED ON THE MINUS 3" PORTION OF THE SAMPLE

2. MATERIAL TO MEET THE SPECIFICATIONS LIST ABOVE AND OBTAIN ENGINEER APPROVAL PRIOR TO USE.
3. GRAVEL FILL MATERIAL SHALL CONSIST OF NON COHESIVE NATIVE GRAVELS TAKEN FROM THE OWNER SPECIFIED MATERIAL SOURCE. THE GRADATION CURVE OF THE GRAVEL FILL MATERIAL, AS DETERMINED BY SIEVE ANALYSIS, SHALL FALL WITHIN THE GRADATION ENVELOPE SPECIFIED BELOW.
4. THE FINE SOIL CONTENT (PERCENT PASSING THE NO. 200 SIEVE) OF THE GRAVEL FILL MATERIAL SHALL NOT EXCEED 15%.

MATERIAL SPECIFICATIONS (CONT'D)

5. OBSERVED DELETERIOUS MATERIALS MUST BE REMOVED FROM THE GRAVEL FILL MATERIAL PRIOR TO THE GRAVEL FILL MATERIAL LEAVING THE MATERIAL SOURCE. DELETERIOUS MATERIALS INCLUDE:
   - ICE AND SNOW OF SIGNIFICANT QUANTITY TO CAUSE SUBSTANTIAL SUBSIDENCE OF FILL UPON THAWING.
   - OVERBURDEN
   - ORGANIC MATERIAL
   - CLAY OR SILT



GRAVEL GRADATION ENVELOPE

RIPRAP

EVENLY GRADED STONES THAT ARE HARD, ANGULAR, AND HAVE NO MORE THAN 50 PERCENT WEAR AT 500 REVOLUTIONS AS DETERMINED BY AASHTO T 96. USE STONES WITH BREADTH AND THICKNESS AT LEAST ¼ OF ITS LENGTH. PERCENTAGES ARE BY TOTAL WEIGHT.

CLASS I 0-50% WEIGHING UP TO 25 POUNDS
0-10% WEIGHING MORE THAN 50 POUNDS

CULVERTS

1. ALL STEEL PIPE CULVERTS WILL CONFORM TO THE FOLLOWING SPECIFICATIONS:

   API-5LX52 OR ENGINEER APPROVED EQUIVALENT

PROJECT DATUM

1. HORIZONTAL DAUTM: NAD 1983 (2011) ALASKA STATE PLANE ZONE 4 (USFT)
2. VERTICAL DATUM: NAVD 1988 (G12B) (USFT)
3. NO FIELD SURVEY HAS BEEN CONDUCTED AT THIS TIME.

RECON

PROJECT: PUT 29 MATERIAL SITE
PROJECT ENGINEER: ISAAC J. ROWLAND, PE
PREPARED BY: RECON LLC 565 W. RECON CIR. PALMER, AK 99645

NO.	DESIGN/CONSTRUCTION/RECORD	DWN BY/DATE	CHKED BY/DATE
01	PRELIMINARY SITE DESIGN	ZJL/05-05-25	IJR/05-05-25

DRAFT NOT FOR CONSTRUCTION

PREPARED FOR: HILCORP ALASKA, LLC
3800 CENTERPOINT DR., STE. 1400
ANCHORAGE, AK 99503

Hilcorp Alaska

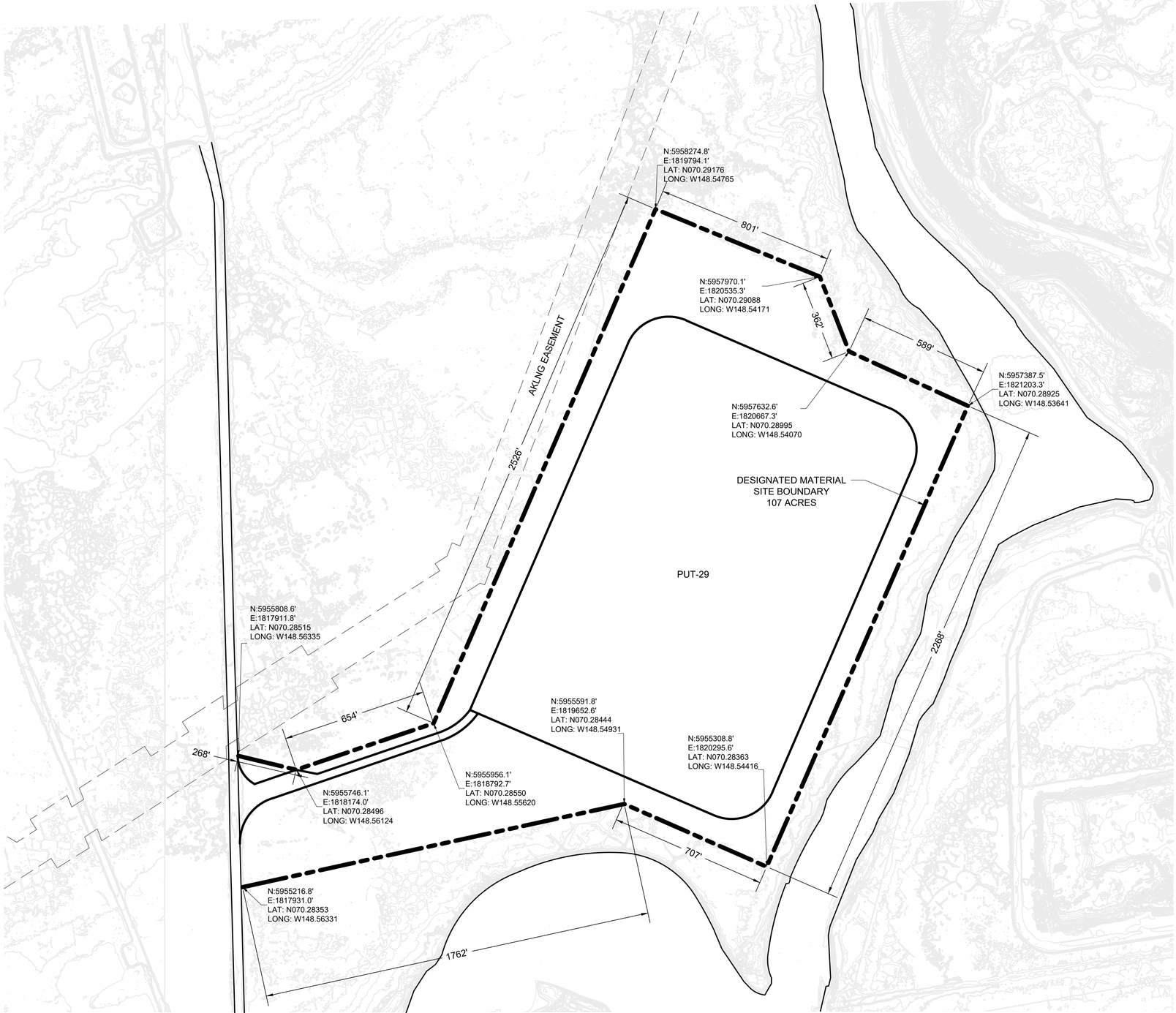
PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
NOTES

SCALE N/A
SHEET SIZE 22" X 34"
SHEET 2 OF 9

DWG NAME: C:\SHLPUT 29\ 2025_OVERALL PLAN.dwg
PLOT DATE: 9/5/2025 10:55:14 AM

GENERAL NOTES:

1. HORIZONTAL DATUM: NAD 1983 (2011) ALASKA STATE PLANE ZONE 4 (USFT)
2. VERTICAL DATUM: NAVD 1988 (G12B) (USFT)



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PREPARED BY: RECON LLC 565 W. RECON CIR. PALMER, AK 99645

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PREPARED FOR: HILCORP ALASKA, LLC
3800 CENTERPOINT DR., STE. 1400
ANCHORAGE, AK 99503

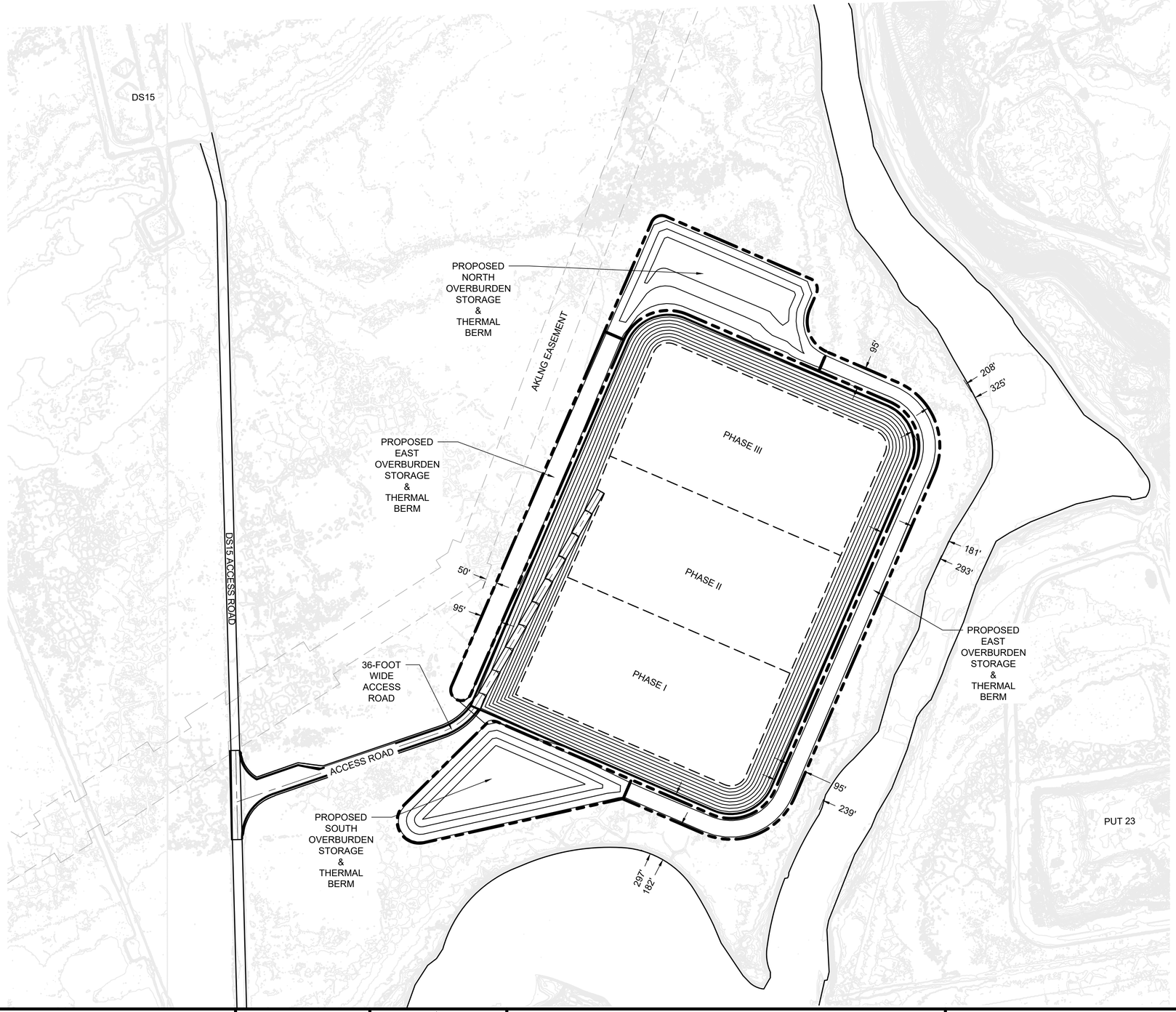
Hilcorp Alaska

PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
PROPOSED DESIGNATED MATERIAL SITE BOUNDARY

SCALE 1"=250'
SHEET SIZE 22" X 34"
SHEET 3 OF 9

GENERAL NOTES

1. OVERALL MATERIAL SITE TO BE DONE IN MULTIPLE PHASES
2. THIS OVERVIEW SHOWS THE EXTENT OF DISTURBANCE
3. ONCE MATERIAL SITE IS COMPLETED THE FINAL PRODUCT WILL HAVE THE NORTH AND SOUTH OVERBURDEN PILES SET BACK INTO THE PIT.
4. THE PIT WILL THEN HAVE A 10' THERMAL BERM SURROUNDING THE PERIMETER.



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PROJECT ENGINEER: ISAAC J. ROWLAND, PE
PREPARED BY: RECON LLC 565 W. RECON CIR. PALMER, AK 99645

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DRAFT
NOT FOR
CONSTRUCTION

PREPARED FOR: HILCORP ALASKA, LLC
3800 CENTERPOINT DR., STE. 1400
ANCHORAGE, AK 99503

Hilcorp Alaska

PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
OVERVIEW

SCALE 1" = 250'
SHEET SIZE 22" X 34"
SHEET 4 OF 9

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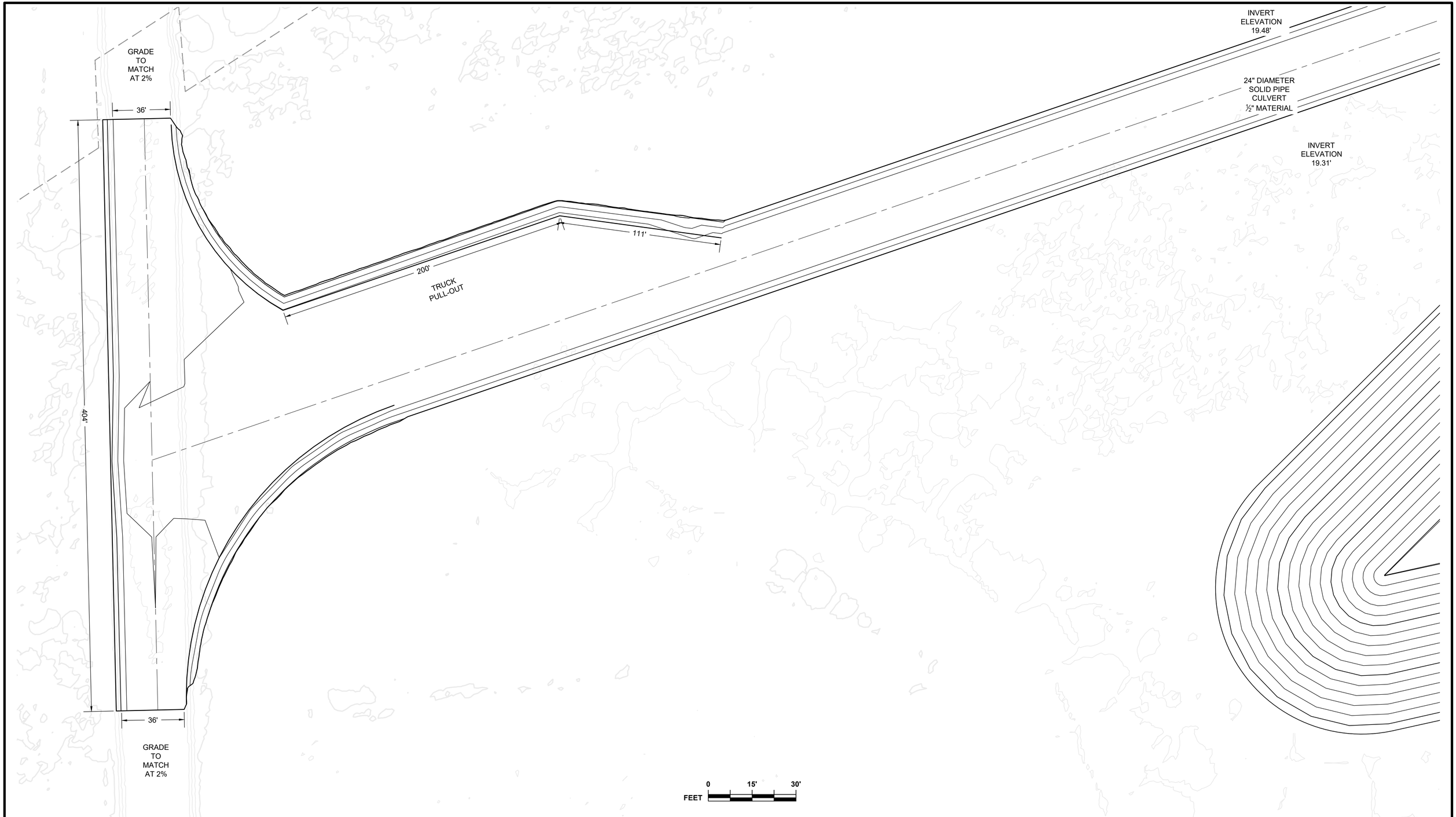

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PROJECT ENGINEER: ISAAC J. ROWLAND, PE
PREPARED BY: RECON LLC 565 W. RECON CIR. PALMER, AK 99645

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CONSTRUCTION

PREPARED FOR: HILCORP ALASKA, LLC
3800 CENTERPOINT DR., STE. 1400
ANCHORAGE, AK 99503

Hilcorp Alaska

PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
DS15 INTERSECTION
PLAN VIEW

SCALE: 1" = 30'
SHEET SIZE: 22" X 34"
SHEET 5 OF 9

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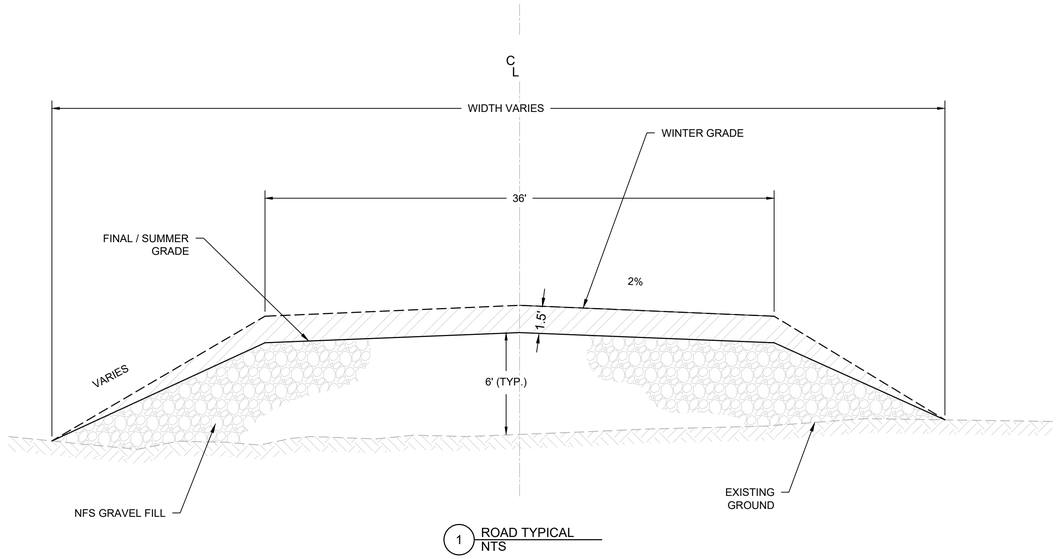
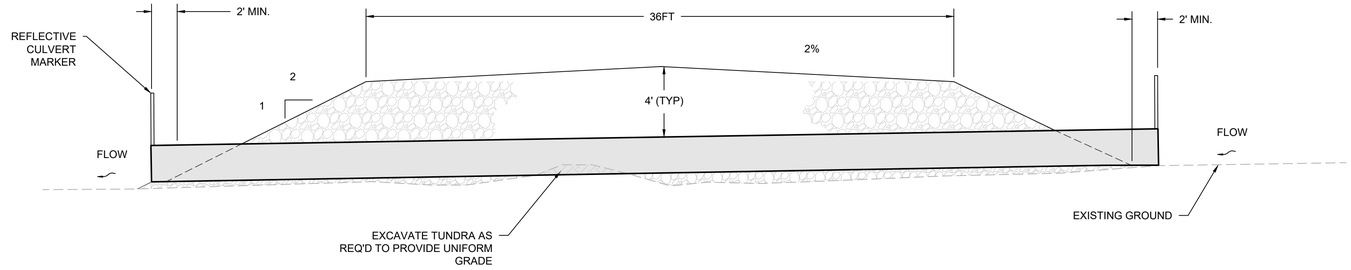


1 ROAD TYPICAL
NTS



2 TYPICAL CULVERT SECTION
NTS

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PREPARED FOR: HILCORP ALASKA, LLC
3800 CENTERPOINT DR., STE. 1400
ANCHORAGE, AK 99503

Hilcorp Alaska

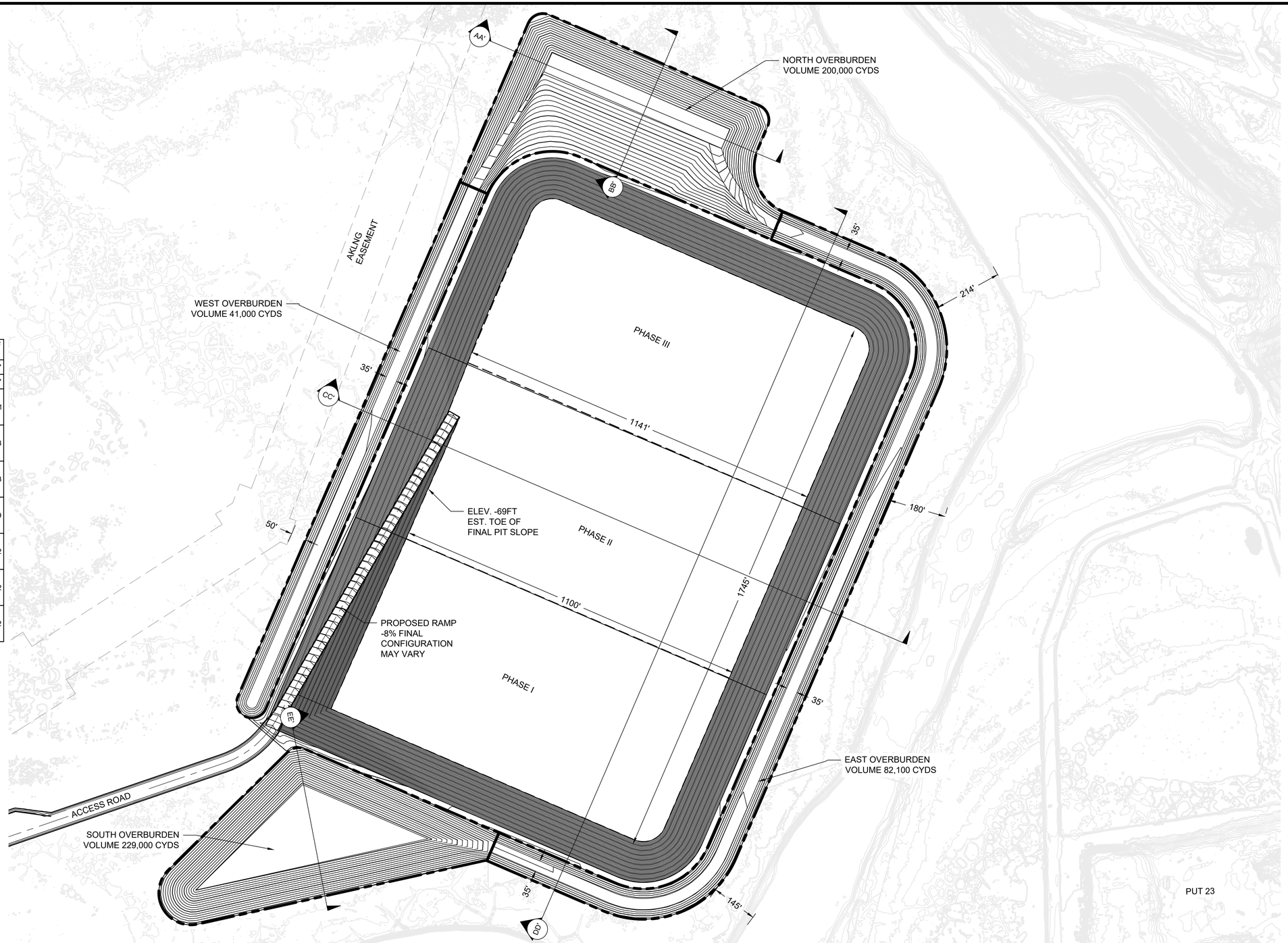
PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
PUT 29 ACCESS ROAD
ROAD TYPICALS

SCALE N/A
SHEET SIZE 22" X 34"
SHEET 6 OF 9

DWG NAME: C:\Drill\PUT 29\ 2025_OVERALL PLAN.dwg
PLOT DATE: 9/5/2025 10:55:26 AM

0 80' 160'
FEET

ITEM NO.	ITEM DESCRIPTION	ESTIMATED VOLUME OF MATERIAL (CYDS)	APPROXIMATE AREA OF DISTURBANCE (ACRES)
1	GRAVEL PIT	7,000,000	63.7
2	6' OVERBURDEN	552,000	63.7
3	NORTH OVERBURDEN STACK & THERMAL BERM	200,000	8.1
4	EAST OVERBURDEN STACK & THERMAL BERM	82,100	7.3
5	SOUTH OVERBURDEN STACK & THERMAL BERM	229,000	7.3
6	WEST OVERBURDEN STACK & THERMAL BERM	41,000	3.9
7	PHASE 1	2,333,000	21.2
8	PHASE 2	2,333,000	21.2
9	PHASE 3	2,333,000	21.2



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3800 CENTERPOINT DR., STE. 1400
ANCHORAGE, AK 99503

Hilcorp Alaska

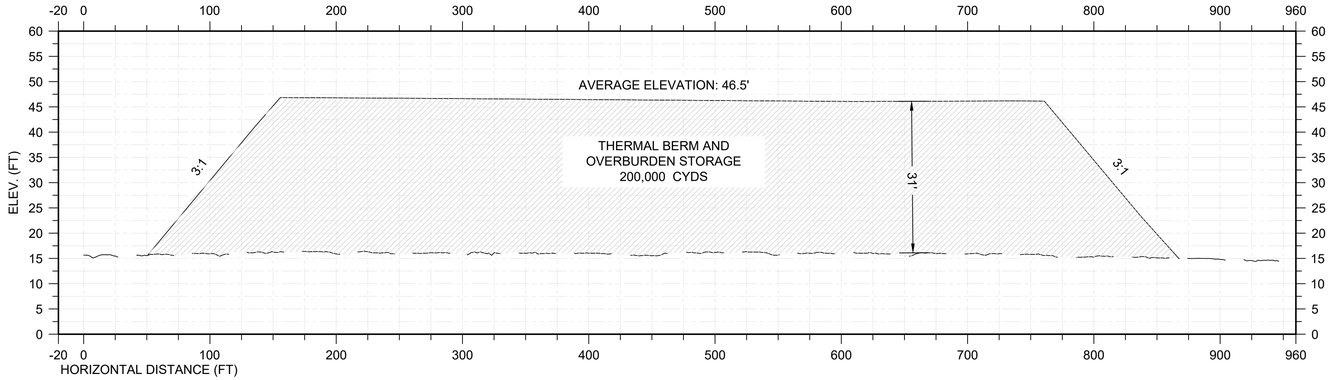
PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
MATERIAL SITE
PLAN VIEW

SCALE: 1" = 160'
SHEET SIZE: 22" X 34"
SHEET 7 OF 9

DWG NAME: C:\SHEPUT 29\ 2025_OVERALL_PLAN.dwg
PLOT DATE: 5/2/2025 10:25:41 AM

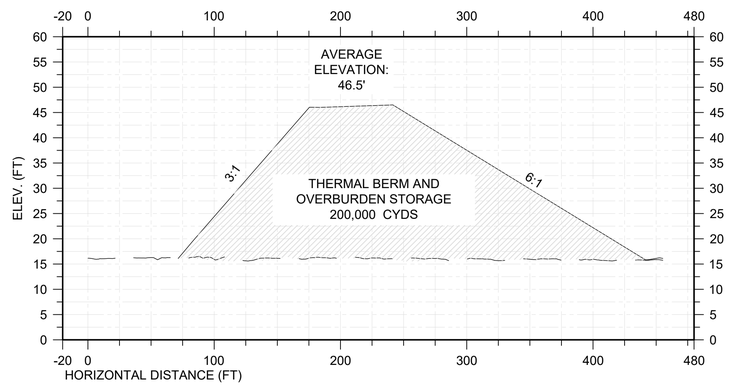
AA' NORTH OVERBURDEN STACK
1" = 60'

VERTICAL EXAGGERATION: 4X



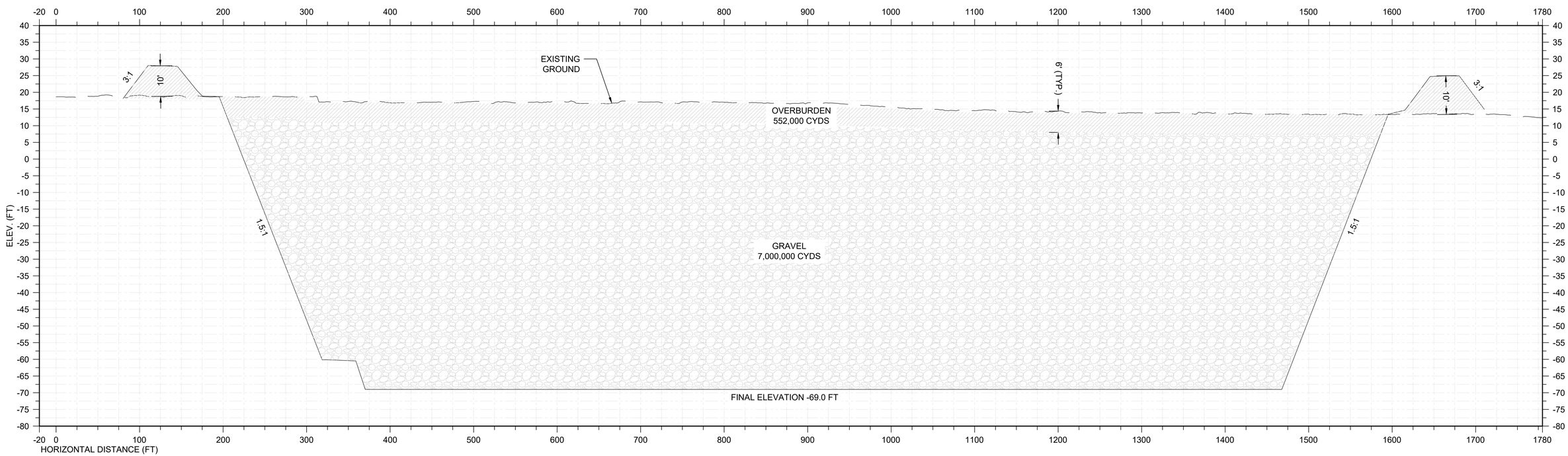
BB' NORTH OVBERBURDEN STACK
1" = 60'

VERTICAL EXAGGERATION: 4X



CC' MATERIAL SITE
1" = 60'

VERTICAL EXAGGERATION: 4X



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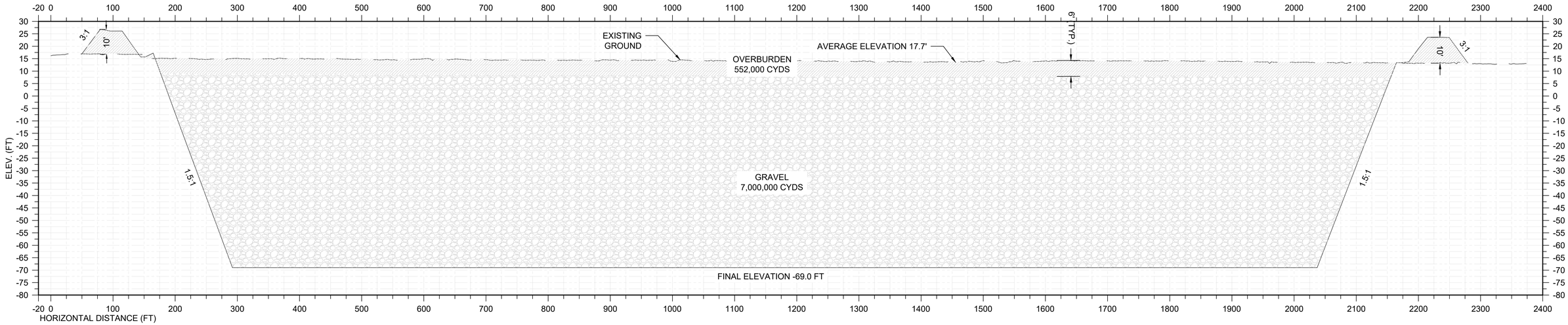
PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
MATERIAL SITE
PROFILE VIEW AA' TO CC'

SCALE: N/A
SHEET SIZE: 22" X 34"

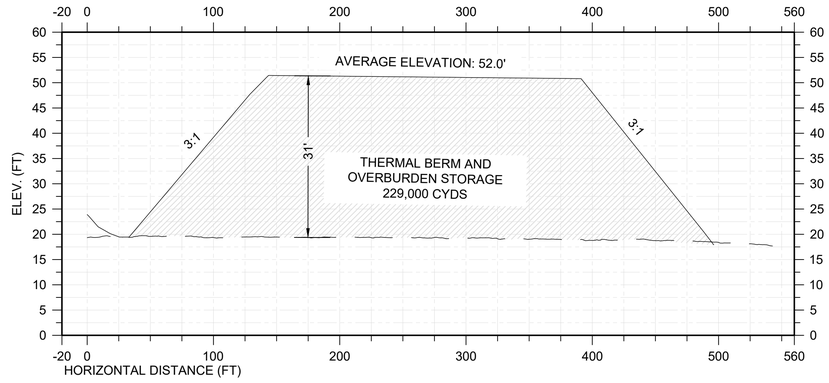
DD' GRAVEL PIT
1" = 80'

VERTICAL EXAGGERATION: 4X



EE' SOUTH OVERBURDEN STACK
1" = 60'

VERTICAL EXAGGERATION: 4X



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Hilcorp Alaska

PRUDOE BAY UNIT
PUT 29 MATERIAL SITE
MATERIAL SITE
PROFILE VIEW DD' TO EE'

SCALE N/A
SHEET SIZE 22" X 34"
SHEET 9 OF 9

DWG NAME: C:\Drill\PUT 29\ 2025_OVERALL PLAN.dwg
PLOT DATE: 9/5/2025 10:55:06 AM