AGENDA

MATANUSKA-SUSITNA BOROUGH

350 East Dahlia Avenue, Palmer, Alaska 99645 – 907-861-7874

PLATTING OFFICER
Fred Wagner

PLATTING CLERK
Kayla Smith

PLATTING TECHNICIANS
Matthew Goddard
Chris Curlin

PLATTING BOARD
Chris Chiavetta, District 1
Michael Liebing, District 2
Vacant, District 3
Vice Chair Amanda Salmon, District 4
Chair Michelle Traxler, District 5
Sandra Kreger, District 6
Sidney Bertz, District 7
Karla McBride, Alternate A
Robert Hallford, Alternate B

PLATTING BOARD AGENDA
ASSEMBLY CHAMBERS
350 E DAHLIA AVENUE PALMER

PLATTING BOARD MEETING 1:00 P.M. June 19, 2025

Ways you can participate in Platting Board meetings:

IN PERSON

IN WRITING: You can submit written comments by email to platting@matsugov.us or by mail to Matanuska-Susitna Borough, Platting Division, 350 E. Dahlia Avenue, Palmer, AK 99645

TELEPHONIC TESTIMONY: (Audio only)
(We are having intermittent technical difficulties with our software; if you would like to submit comments, please submit comments to the email address above by the Wednesday before the meeting.)

- Dial 1-855-290-3803; you will hear "Joining conference" when you are admitted to the meeting.
- You will be automatically muted and able to listen to the meeting.
- When the Chair announces audience participation or a public hearing you would like to speak to, press *3; you will hear "Your hand has been raised."
- When it is your turn to testify you will hear "Your line has been unmuted."
- State your name for the record, spell your last name, and provide your testimony.

OBSERVE: You can observe the meeting via the live stream video at:

- https://www.facebook.com/MatSuBorough
- Matanuska-Susitna Borough – YouTube

1. CALL TO ORDER

A. Roll Call and Determination of Quorum (by Secretary)
B. Pledge of Allegiance
C. Approval of Agenda

2. APPROVAL OF MINUTES

A. June 5, 2025

3. AUDIENCE PARTICIPATION & PRESENTATIONS

A. **PERSONS TO BE HEARD (**Three minutes per person for Items not scheduled for public hearing)

4. UNFINISHED BUSINESS

(None)

5. RECONSIDERATIONS/APPEALS

(None)

6. PUBLIC HEARINGS

A. **FOREST SONG ACRES:** The request is to create 7 lots from the NW ¼ NW1/4 NE1/4, Bradley Lake Subdivision, Plat #63-7, to be known as **FOREST SONG ACRES,** containing 10.0 acres +/-. The property is located north and west of the S. Glenn Highway, south of Canoe Lake, and directly north of E. Bradley Lake Avenue (Tax ID #3004-400000); within the NE ¼ Section 24, Township 17 North, Range 01 East, Seward Meridian, Alaska. In the Gateway Community Council and in Assembly District #2. *(Petitioner/Owner: Andrew Raymond / Estate of Henry M. Raynmond Jr, Staff: Matthew Goddard, Case # 2025-054)*

B. **BEAR STREET AGAPE:** The request is to vacate the Right of Way for E. Bear Cub Circle, eliminate the common lot lines between lots 17A, 17B, 16A, & 16B, and eliminate the screening easement between Lots 16A & 16B, of LOTS 16A, 16B, 17A, & 17B, BLOCK 2 BARRY'S ACRES NO.2 SUBDIVISION (Plat#84-142)(Tax ID #'s 2776B02L016A, 2776B02L016B, 2776B02L017A, 2776B02L017B), to be known as **BEAR STREET AGAPE**, containing 4.10 acres +/-. The property is located directly east of N. Bear Street and directly north of E. Bogard Road; within the SW ¼ Section 28, Township 18 North, Range 01 East, Seward Meridian, Alaska. In the North Lakes Community Council and in Assembly District #6. *(Petitioner/Owner: Agape Fellowship, Staff: Chris Curlin, Case # 2025-056)*

C. **UTOPIA VIEW II:** The request is to create 42 lots and internal roads from Tract A, Utopia View Subdivision, Plat 2023-129, (8415000T00A) to be known as **UTOPIA VIEW II**, containing 62.05 acres +/-. The plat is located directly West of N. Utopia View Circle, North of W. Wintergreen Drive, West of Church Road, and South of W. Spruce Avenue, located within the NW ¼ Section 6, Township 17 North, Range 01 West, Seward Meridian, Alaska; and in Assembly District #007. *(Petitioner/Owner: Foxglove, LLC, Staff: Matthew Goddard, Case # 2025-061)*

7. ITEMS OF BUSINESS & MISCELLANEOUS

(None)

8. PLATTING STAFF & OFFICER COMMENTS

A. Adjudicatory *(If needed)*
   - *Definition: Law. To hear and settle an issue or a question regarding code.*

B. Upcoming Platting Board Agenda *Items (Staff: Fred Wagner & Clerk: Kayla Kinneen)*
   - July 3, 2025, Platting Board Meeting, we have 2 cases to be heard:

- Smith Subdivision
- Wolverine Woods

9. BOARD COMMENTS

10. ADJOURNMENT

MINUTES

MATANUSKA-SUSITNA BOROUGH **REGULAR MEETING**
PLATTING BOARD MINUTES **June 5, 2025**

The regular meeting of the Matanuska-Susitna Borough Platting Board was held on June 5, 2025, at the Matanuska-Susitna Borough 350 E Dahlia Ave, Palmer, Alaska. Chair Traxler called the Meeting to order at 1:01 p.m.

1. CALL TO ORDER

A. ROLL CALL AND DETERMINATION OF QUORUM (by Administrative Specialist)

Platting Board members present and establishing a quorum:

Ms. Amanda Salmon, District Seat #4
Ms. Michelle Traxler, District Seat #5
Mr. Sidney Bertz, District seat #7
Ms. Karla McBride, Alternate A
Mr. Robert Hallford, Alternate B

Platting Board members absent and excused were:

Mr. Chris Chiavetta, District Seat #1
Mr. Michael Liebing, District Seat #2
District Seat #3, Vacant

Platting Board members absent were:

Ms. Sandra Kreger, District seat #6

Staff in attendance:

Mr. Fred Wagner, Platting Officer
Ms. Kayla Smith, Platting Board Clerk
Mr. Matthew Goddard, Platting Technician
Mr. Chris Curlin, Platting Technician

B. THE PLEDGE OF ALLEGIANCE

Platting Member McBride led the pledge of allegiance.

C. APPROVAL OF THE AGENDA

Chair Traxler inquired if there were any changes to the agenda.

MOTION: Platting Member Salmon made motion to approve the amended Agenda. Platting Member McBride seconded.

VOTE: The Agenda was changed unanimously.

2. APPROVAL OF MINUTES

- May 1, 2025.

MOTION: Platting Member Salmon made motion to approve May 1, 2025 Minutes. Platting Member McBride seconded.

VOTE: The Minutes were approved unanimously.

3. AUDIENCE PARTICIPATION & PRESENTATIONS
PERSONS TO BE HEARD (Three minutes per person for items not scheduled for public hearing)
(None)

4. UNFINISHED BUSINESS

A. SECON PUE: The request is to create a 60' X 3138'+/- Public Use Easement on Tax Parcel D1, containing 188,280 sf (4.32 acres +/-), to be known as Secon PUE The proposed Public Use Easement is located south of S. Glenn Highway and directly south of E. Grandview Road; (Tax ID 17N01E24D001); located within the S ½ Section 24, Township 17 North, Range 01 East, Seward Meridian, Alaska. In the Gateway Community Council and in Assembly District #2. **This case was continued from the June 6, 2024 meeting.**.
(Petitioner/Owner: Secon Inc, Staff: Chris Curlin, Case #2024-055)

Chair Traxler read the statement regarding Ex-Parte & Interest on quasi-judicial action into the record.

Kayla Smith provided the mailing report:
- Stating that 30 public hearing notices were mailed out on May 13, 2025.

Staff gave an overview of the case:
- Staff recommends approval with 6 conditions and 4 findings of facts.

Chair Traxler invited the petitioner/petitioner's representative to give an overview.

The petitioner/petitioner's representative was not present.

Chair Traxler opened the public hearing for public testimony.
The following persons spoke:
- Susan Edge
- John Stuart
- Daniel Payne
-

There being no one else to be heard Chair Traxler closed the public hearing and invited the petitioner and/or the petitioner's representative to further discuss and answer any questions from the Board.

The petitioner/petitioner's representative was not present.

MOTION: Platting Member Salmon made a motion to approve the preliminary plat of Secon PUE. Platting Member McBride seconded the motion.

Discussion ensued.

VOTE: The motion passed without objection.

5. RECONSIDERATIONS/APPEALS

(None)

6. PUBLIC HEARINGS

B. **ERMINE LAKE TRACT C**: The request is to create 2 lots from Tract C, Waver Resolution No. 76-13, of US Survey 5519, recorded as 79-25W, (Tax ID#U05519-30L00T), to be known as Ermine Lake Tract C, containing 21.77 acres +/-. The proposed Lot 2 will have water access. The property is directly east of Jean Lake, directly east of N. Parks Highway at MP 156 +/- and on the eastern shore of Ermine Lake; within the N ½ Section 31, T32 North, Range 3 West, Seward Meridian, Alaska. In Assembly District #7. *(Petitioner/Owner: Lynda Klaes, Staff: Chris Curlin, Case #2025-045)*

Chair Traxler read the statement regarding Ex-Parte & Interest on quasi-judicial action into the record.

Kayla Smith provided the mailing report:

- Stating that 6 public hearing notices were mailed out on May 13, 2025.

Staff gave an overview of the case:

- Staff recommends approval with 8 conditions and 6 findings of facts.

Chair Traxler invited the petitioner/petitioner's representative to give an overview.

The petitioner's representative, Paul Pilch spoke.

Chair Traxler opened the public hearing for public testimony.

There being no one to be heard Chair Traxler closed the public hearing and invited the petitioner and/or the petitioner's representative to further discuss and answer any questions from the Board.

The petitioner's representative spoke.

Discussion ensued.

MOTION: Platting Member Salmon made a motion to approve the preliminary plat of Ermine Lake Tract C. Platting Member McBride seconded the motion.

VOTE: The motion passed without objection.

C. **COOPER WOODS PHASE II LOT 16B BLOCK 1**: The request is to vacate a portion (2.23' by 32.44') of R.O.W, on Lot 16A, Cooper Woods PH II Lots 16A, Block 1 & 8A, Block 2, (Plat #2022-134), (Tax ID 8334B01L016A), to be known as Cooper Woods PH.II Lot 16B, Block 1. The property is located directly south of E. Gemini Lane and directly west of N. Cavanaugh Circle; within the NE ¼ Section 09, Township 18 North, Range 01 East, Seward Meridian, Alaska. In the North Lakes Community Council and in Assembly District #6. *(Petitioner/Owner: Marylu Lavine, Staff: Chris Curlin, Case #2025-051)*

Chair Traxler read the statement regarding Ex-Parte & Interest on quasi-judicial action into the record.

Kayla Smith provided the mailing report:
- Stating that 102 public hearing notices were mailed out on May 13, 2025.

Staff gave an overview of the case:
- Staff recommends continuation to the July 17, 2025 Platting Bord meeting.

Chair Traxler invited the petitioner/petitioner's representative to give an overview.

The petitioner/petitioner's representative was not present.

Chair Traxler opened the public hearing for public testimony.
The following persons spoke:
- Randy Hixson

There being no one to be heard Chair Traxler left the public hearing open and invited the petitioner and/or the petitioner's representative to further discuss and answer any questions from the Board.

The petitioner/petitioner's representative was not present.

Discussion ensued.

MOTION: Platting Member Salmon made a motion to continue the preliminary plat of Cooper Woods Phase II Lot 16B Block 1 to the July 17th Platting Board meeting. Platting Member McBride seconded the motion.

VOTE: The motion passed without objection

7. ITEMS OF BUSINESS & MISCELLANEOUS

(None)

8. PLATTING STAFF & OFFICER COMMENTS

A. Adjudicatory (*if needed*)

B. Upcoming Platting Board Agenda Items

Platting Officer, Fred Wagner informed the board of upcoming items:

- There are 3 cases scheduled for June 19, 2025 Platting Board.
  - Forest Song Acres
  - Bear Street Agape
  - UtopiaView II

9. BOARD COMMENTS.

- Member Salmon – Mentioned that she likes the discussion period and be able to answer some of the questions.
- Member Traxler – Mentioned that one of the questions from the public may have been answered by telling him that the troopers may be able to help with speeding in his neighborhood.

10. ADJOURNMENT

With no further business to come before the Platting Board, Chair Traxler adjourned the meeting at **1:56** PM.

MICHELLE TRAXLER
Platting Board Chair

ATTEST:

KAYLA SMITH
Platting Board Clerk

6A

STAFF REVIEW AND RECOMMENDATIONS
PUBLIC HEARING
JUNE 19, 2025

PRELIMINARY PLAT: FOREST SONG ACRES

LEGAL DESCRIPTION: SEC 24, T17N, R01E, SEWARD MERIDIAN AK

PETITIONERS: ANDREW RAYMOND

SURVEYOR/ENGINEER: KEYSTONE SURVEYING & MAPPING

ACRES: 10.00 ± PARCELS: 7

REVIEWED BY: MATTHEW GODDARD CASE #: 2025-054

REQUEST: The request is to create 7 lots from the NW ¼ NW1/4 NE1/4, Bradley Lake Subdivision, Plat #63-7, to be known as **FOREST SONG ACRES,** containing 10.0 acres +/-. The property is located north and west of the S. Glenn Highway, south of Canoe Lake, and directly north of E. Bradley Lake Avenue (Tax ID #3004-400000); within the NE ¼ Section 24, Township 17 North, Range 01 East, Seward Meridian, Alaska. In the Gateway Community Council and in Assembly District #2.

EXHIBITS:

SUPPORTING DOCUMETATION:

Vicinity Map and Aerial Photos	**PAGES - 1-5**
As-Built	**PAGE - 6**
Geotechnical Report	**PAGES - 7-12**
Average Daily Traffic (ADT) Calculations	**PAGE - 13**
Section Line Easement Determination	**PAGES - 14-20**

AGENCY COMMENTS

Department of Public Works Operations & Maintenance	**PAGES - 21-42**
Development Services	**PAGES - 43-44**
Public Comments	**PAGE - 45**
Utilities	**PAGES - 46-49**

DISCUSSION: The proposed subdivision is creating seven lots ranging in size between one to two acres. Access for the proposed subdivision is from S. Killarney Drive, S. Green Jade Place, and E. Bradley Lake Avenue. Based on the submitted Average Daily Traffic calculation (**Exhibit Page 13**) and the proposed design, no road improvements will be required as a part of this action. Per the submitted As-Built (**Exhibit Page 6**), there are three setback violations/encroachments that exist or will be created by this platting action. All structures in violation of setback requirements as seen in MSB 17.55 will need to be removed/relocated and proof that no violations exist or will be created by the proposed platting action will be required prior to recordation (**Recommendation #4**).

Access: Legal and physical access to the proposed lots are required pursuant to MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. All proposed lots meet the access requirements pursuant to code.

Geotechnical Report: A geotechnical report was submitted (**Exhibit Pages 7-12**), pursuant to MSB 43.20.281(A). Curtis Holler, Registered Professional Engineer, notes that a soils review was performed at the request of the project owners. The soils evaluation included logging 3 new testholes on the parent parcel, review of the provided topography information, review of aerial imagery, and other observations at the site. The parent parcel has higher ground over the southern third and along the north border, with a substantial drop to a low area just west of the middle of the western border. Drainage generally is directed eastward or westward from the approximate center, with two smaller low areas along the east border. There are substantial areas with steep slopes over 25% as delineated on the attached map (**Exhibit Page 9**). The elevation differential indicated from the provided topographical map is around 80'.
Near surface soils encountered included a thin organic mat over a thicker layer of silty loess topsoils which extended down between 2' and 3'. Receiving soils under the topsoils were consistently sands and gravels. Soils encountered were typical for the area based on prior experiences on nearby properies.
Groundwater was not encountered in any of the new testholes, dug to depths of 12' and 15'.
Based on the available soils and water table information, topography, MSB Title 43 Code definitions, and observations at the site, "The proposed 7 new lots will each contain over 10,000 square feet of contiguous useable septic area, and an additional 10,000 square feet of useable building area".

As-Built: An as-built was submitted (**Exhibit Page 6**) pursuant to code. Per the submitted as-built there are two existing violations and one that would be created by the proposed action. Proposed Lot 1 has an encroachment on the western boundary, Proposed Lot 7 has a conex within 25 feet of E. Bradley Lake Avenue right of way, and the proposed lot line between Lot 7 and Lot 6 shows a structure 2.4 from the boundary. Each of these structures will need to be moved/removed and proof that no violations exist or will be created by the recordation of Forest Song Acres will need to be provided to platting staff prior to recording (**Recommendation #4**).

Section Line Easement Determination: A Section line easement determination was provided and can be seen at **Exhibit Pages14-20**.

Average Daily Traffic Calculation (ADT): An ADT was submitted (**Exhibit Page 13**) pursuant to code. Based on the supplied ADT, no road improvements will be required to meet Borough access requirements.

Comments:

Department of Public Works Operations & Maintenance (**Exhibit Pages 21-42)** initial comments noted that the supplied ADT did not include the Matanuska Lakes State Recreation Area and Canoe Lake, as they are accessed off of Killarney Drive. An update was requested. Since that comment was received the petitioner provided a revised ADT as seen at **Exhibit Page 13**. Upon receipt of the revised ADT, DPW had no further comments.

Development Services (**Exhibit Pages 43-44**) notes that Proposed Lot 7 will have setback violations if the shed and conex remain where they currently are. The shed will be within the 10 foot side lot line setback

by 6+ feet causing a violation of MSB 17.55.010(B). The conex is currently in violation (no open/active case with code compliance); it will need to be moved as it is within the 25 foot setback requirement per MSB 17.55.010(A).

Public Comments: (**Exhibit Page 45**) John Giyer, a property owner to the south, has objections and concerns about the impact on the water table, local ecology and wildlife, and increased dust due to clearing the land.

Utilities: (**Exhibit Pages 46-49**) ENSTAR has no comments or recommendations. GCI has no comments or objections. MEA did not respond. MTA did not respond.

At the time of staff report write-up, there were no responses to the Request for Comments from ADF&G; US Army Corps of Engineers; Community Council #22 Gateway; Fire Service Area #132 Greater Palmer Consolidated; Road Service Area #16 South Colony; MSB Emergency Services, Community Development, Assessments or Planning; MEA or MTA.

CONCLUSION: The preliminary plat of Forest Song Acres is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There were no objections to the plat from the public in response to the Notice of Public Hearing. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

FINDINGS OF FACT

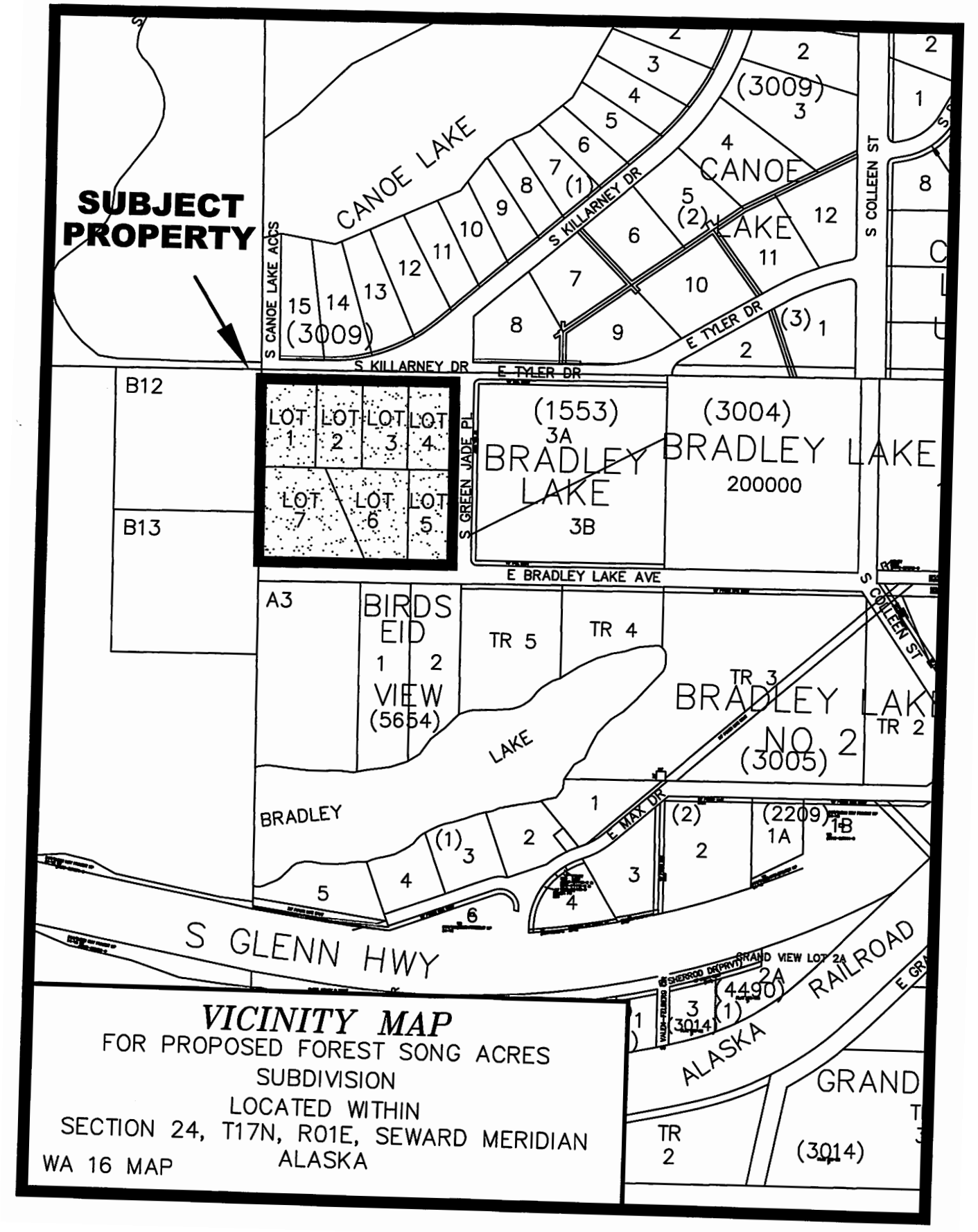
1. The plat of Forest Song Acres is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
2. A soils report was submitted, pursuant to MSB 43.20.281(A)(1)
3. The lot has the required frontage pursuant to MSB 43.20.320.
4. At the time of staff report write-up, there were no responses to the Request for Comments from ADF&G; US Army Corps of Engineers; Community Council #22 Gateway; Fire Service Area #132 Greater Palmer Consolidated; Road Service Area #16 South Colony; MSB Emergency Services, Community Development, Assessments or Planning; MEA or MTA.
5. There were no objections from any federal or state agencies, Borough departments, or utilities.
6. There was one objection/concern from the public in response to the Notice of Public Hearing.

RECOMMENDATIONS OF CONDITIONS OF APPROVAL

Suggested motion: I move to approve the preliminary plat of Forest Song Acres, Section 24, Township 17 North, Range 01 East, Seward Meridian, Alaska, contingent on staff recommendations

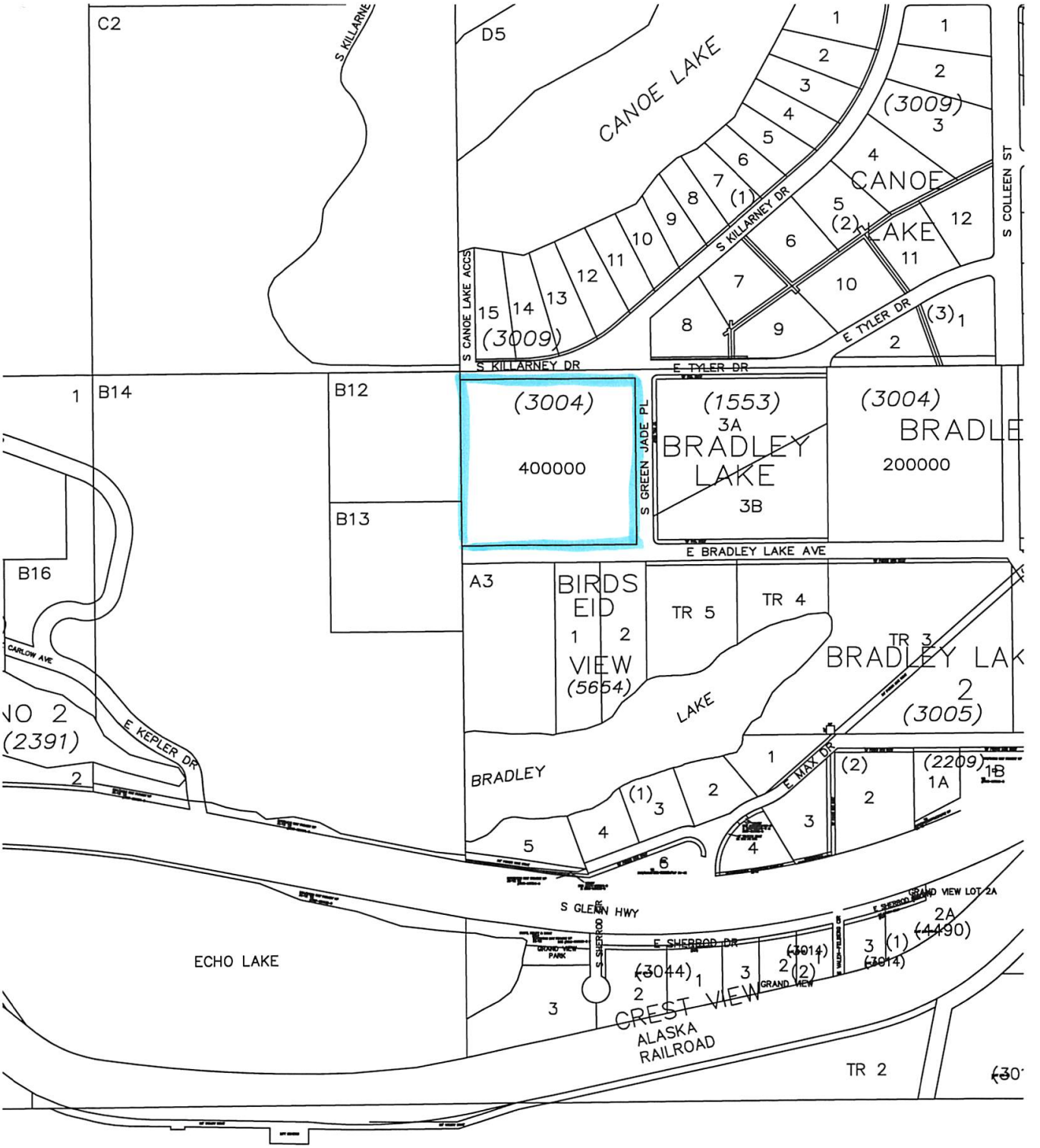
1. Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
2. Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
3. Pay postage and advertising fees.

4. Move/remove all structures currently in violation of MSB 17.20 Setbacks. Provide platting staff proof that all violations have been eliminated and that no violations will be created by the proposed Forest Song Acres subdivision.
5. Show all easements of record on final plat.
6. Submit recording fees, payable to Department of Natural Resources (DNR).
7. Submit plat in full compliance with Title 43.



VICINITY MAP

FOR PROPOSED FOREST SONG ACRES SUBDIVISION
LOCATED WITHIN
SECTION 24, T17N, R01E, SEWARD MERIDIAN
WA 16 MAP ALASKA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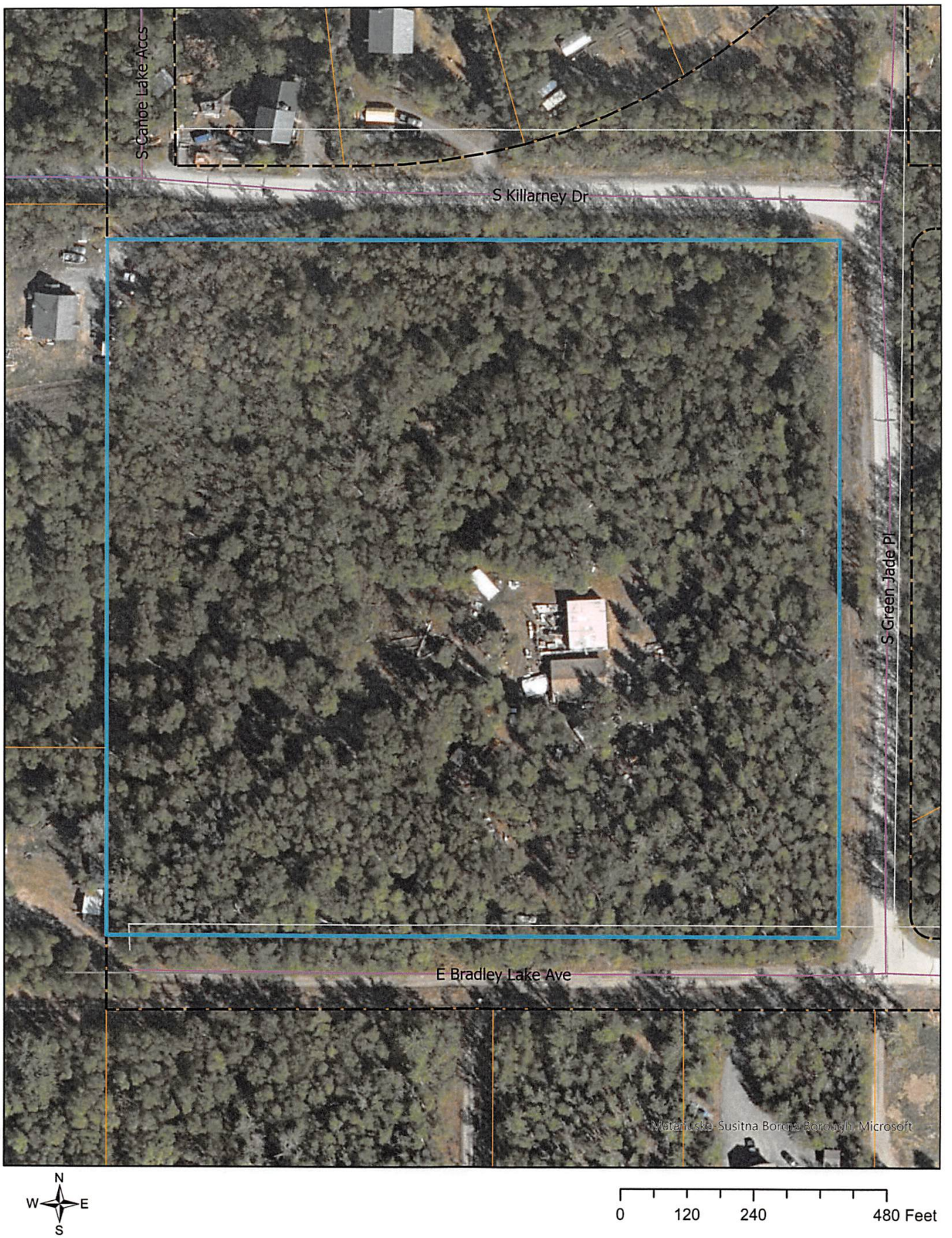
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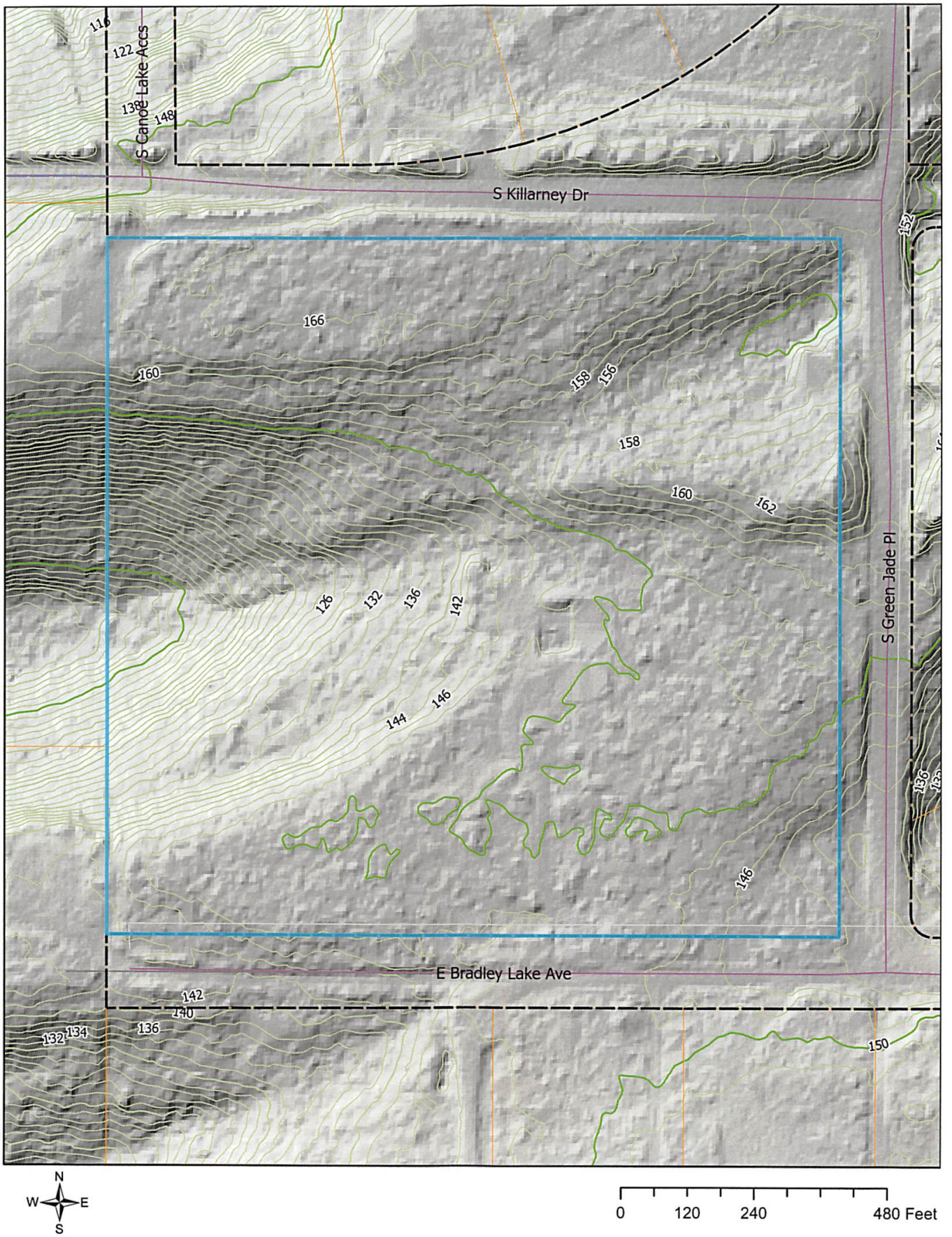
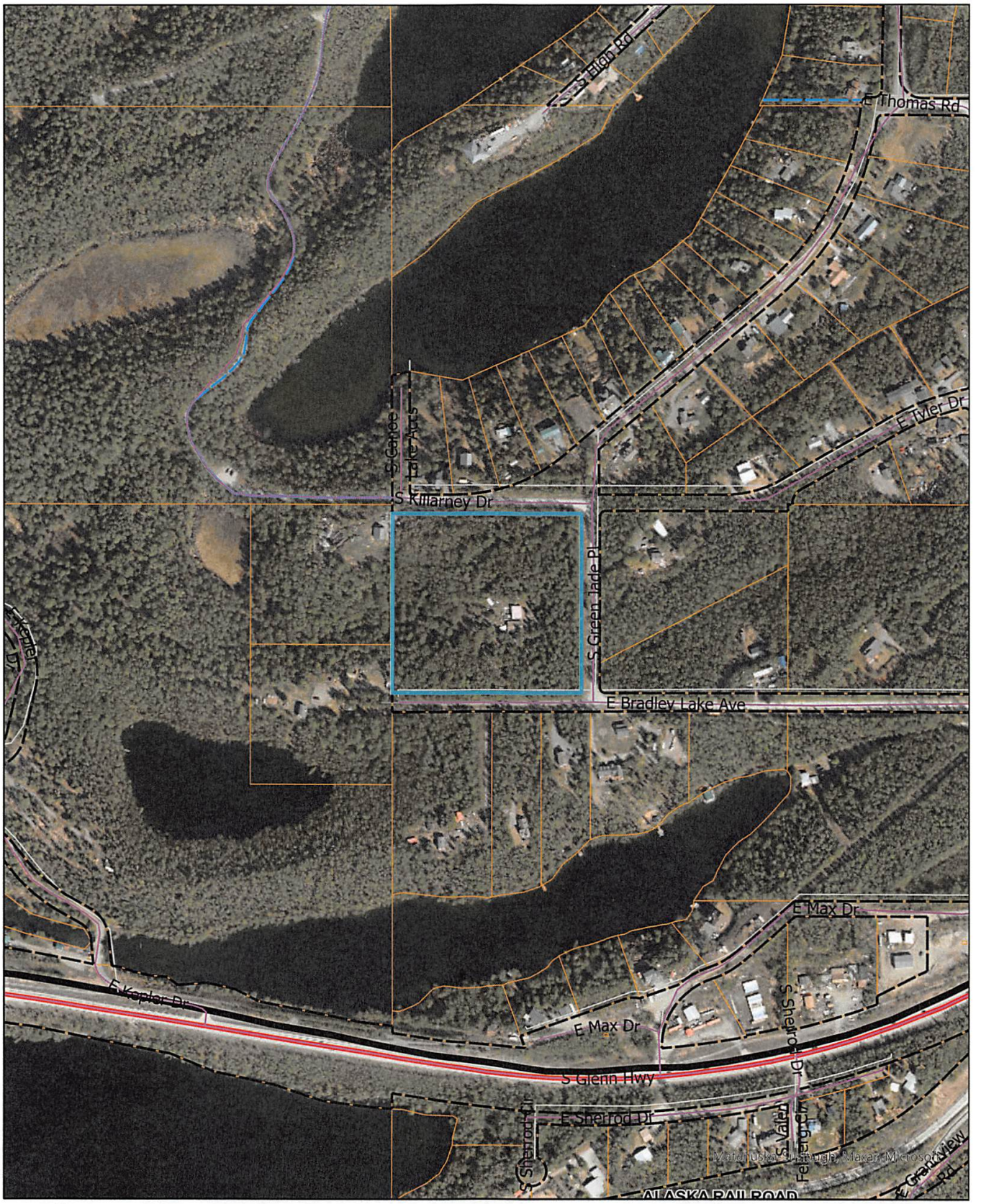


EXHIBIT PAGE 4 of 49
FOREST SONG ACRES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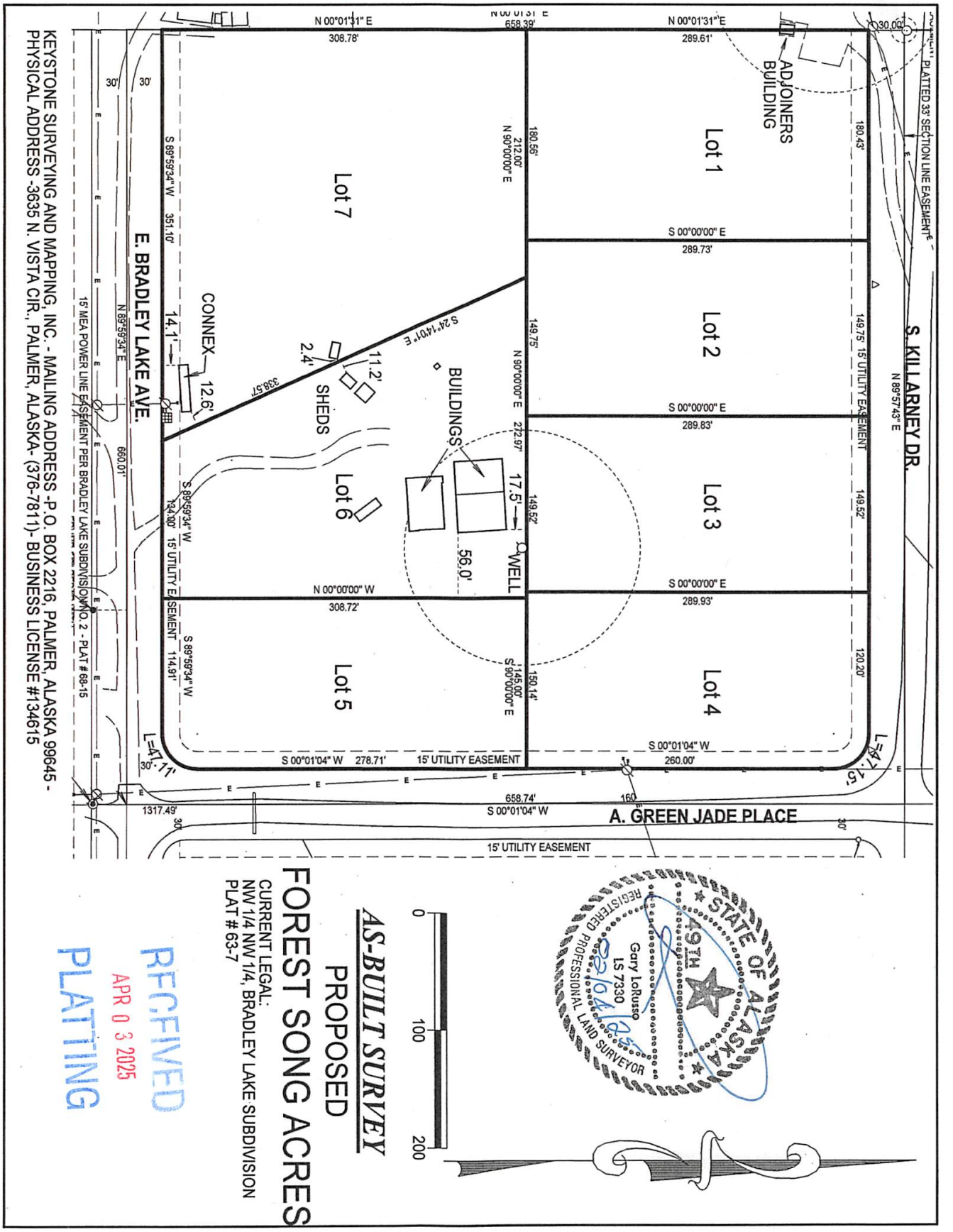


KEYSTONE SURVEYING AND MAPPING, INC. - MAILING ADDRESS -P.O. BOX 2216, PALMER, ALASKA 99645 -
PHYSICAL ADDRESS -3635 N. VISTA CIR., PALMER, ALASKA- (376-7811)- BUSINESS LICENSE #134615

AS-BUILT SURVEY
PROPOSED
FOREST SONG ACRES

CURRENT LEGAL:
NW 1/4 NW 1/4, BRADLEY LAKE SUBDIVISION
PLAT # 63-7

STATE OF ALASKA
49TH
REGISTERED PROFESSIONAL LAND SURVEYOR
Gary LoRusso
LS 7330

RECEIVED
APR 03 2025
PLATTING

HOLLER ENGINEERING
Water, Wastewater & Soils Consulting 3375 N Sams Dr. Wasilla, Alaska 99654 • 376-0410

March 24, 2025

Fred Wagner
MSB Platting Officer
350 East Dahlia Avenue
Palmer, Alaska 99645

Re: *Forest Song Acres;* Useable Areas and Drainage
HE #25003

Dear Mr. Wagner:

At the request of the project owners, we have performed a soils review and related preliminary design work for the referenced proposed subdivision. The project will create 7 new lots from one existing parcel; the project has a total area of around 10 acres. Our soils evaluation included logging 3 new testholes on the parent parcel, review of the provided topography information, review of aerial imagery, and our other observations at the site. See the attached testhole location and topography map for details.

Topography. The project site forms a square shape, lying north of E. Bradley Lake Avenue, south of S. Killarney Drive, and west of S. Green Jade Place. The parent parcel has higher ground over the southern third and along the north border, with a substantial drop to a low area just west of the middle of the western border. Drainage generally is directed eastward or westward from the approximate center, with two smaller low areas along the east border. There are substantial areas with steep slopes over 25%, as delineated on the attached map. The total elevation differential indicated from the provided topographical map is around 80'.

Soils & Vegetation. The parent parcel contains one developed residence, shop, several outbuildings, driveway and well which will remain on one of the new lots. The remaining areas appear to remain in a native or near native state. Existing vegetation in the wooded portion primarily consists of mature growth birch, cottonwood and spruce trees. Lesser brush, grasses and some rose thorns are also present. Three new testholes were dug on 3/11/25 where shown on the attached map. Near surface soils encountered included a thin organic mat over a thicker layer of silty loess topsoils which extended down to between 2'and 3'. Receiving soils under the topsoils were consistently sands and gravels. Soils encountered were typical for the area, based on our prior experiences on nearby properties.

Groundwater. Groundwater was not encountered in any of the new testholes, dug to depths of 12' and 15'. Groundwater is not expected to be a limiting factor for any of the proposed lots, with the possible exception of the very lowest areas.

Useable Areas. The proposed lots have a few limitations on areas defined by MSB code as *useable septic area* or *useable building area.* Useable septic areas will be primarily limited by setbacks to water wells, steep areas and related setbacks, easements and lot lines. For useable building area, lotlines and setbacks, utility easements, and ROW/PUE setbacks will be limiting factors. For all of the proposed lots, adequate unencumbered area exists to meet the code requirements. Based on the available soils and water table information, topography, MSB Title 43 Code definitions, and our observations at the site, ***the proposed 7 new lots will each contain over 10,000 square feet of contiguous useable septic area, and an additional 10,000 square feet of useable building area.***

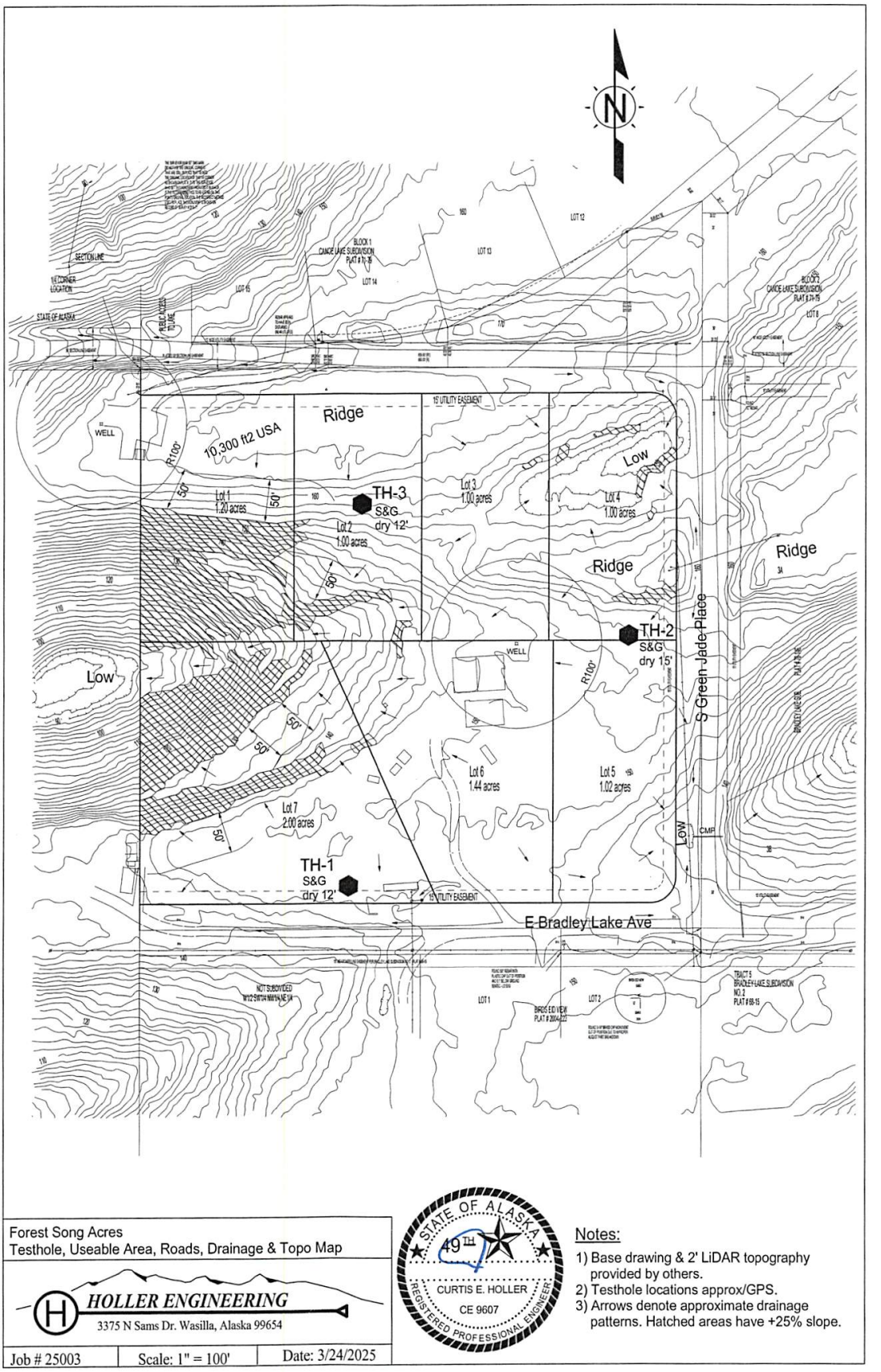
Roads and Drainage. The proposed new lots will be accessed from existing roads along its north, south and east borders. As no road construction is required, no formal drainage plan is needed. Existing drainage patterns are shown on the attached map.

Please do not hesitate to call with any questions you may have.

Sincerely,

Curtis Holler, PE

c: A. Raymond, w/attachments



Forest Song Acres
Testhole, Useable Area, Roads, Drainage & Topo Map

HOLLER ENGINEERING
3375 N Sams Dr. Wasilla, Alaska 99654

Job # 25003	Scale: 1" = 100'	Date: 3/24/2025

Notes:

1) Base drawing & 2' LiDAR topography provided by others.
2) Testhole locations approx/GPS.
3) Arrows denote approximate drainage patterns. Hatched areas have +25% slope.

HOLLER ENGINEERING
3375 N Sams Dr. Wasilla, Alaska 99654 376-0410

Seal

STATE OF ALASKA
49TH
CURTIS E. HOLLER
CE 9607
3-24-25
REGISTERED PROFESSIONAL ENGINEER

SOILS LOG / PERCOLATION TEST

TEST HOLE # 1 of 3
Performed For: ESTATE OF HENRY RAYMOND
Legal Description: FOREST SONG ACRES

Depth, feet | Soil Type

1–2: OL
2–5: ML
5–8: SP-GP, DENSE, ROUND ROCKS TO 6" MEDIUM SANDS, REL. CLEAN
8–12: SP TO SP W/GRAVEL DENSE, MEDIUM
12–22: NO GWT / NO STAINS

Slope

Site Plan

N

(SEE ATTACHED MAP & CONTOURS)

WAS GROUNDWATER ENCOUNTERED? NO
IF YES, AT WHAT DEPTH? N/A
DEPTH AFTER MONITORING?

Slope

PERCOLATION TEST

Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop

PERCOLATION RATE _____ (min/inch) PERC HOLE DIAMETER _____

TEST RUN BETWEEN 4 FT AND _____ FT DEPTH

COMMENTS: _____

PERFORMED BY: C. HOLLER DATE: 3-11-25

THLOGregnew 4/28/2014

HOLLER ENGINEERING
3375 N Sams Dr. Wasilla, Alaska 99654 376-0410

Seal

STATE OF ALASKA
49TH
CURTIS E. HOLLER
CE 9607
3-24-25
REGISTERED PROFESSIONAL ENGINEER

SOILS LOG / PERCOLATION TEST

TEST HOLE # 2 of 3
Performed For: ESTATE OF HENRY RAYMOND
Legal Description: FOREST SONG ACRES

Depth, feet | Soil Type

1: OL, ROOT MAT
2: ML
3:
4: SP to SP W/GRAVEL
5: DIVE CAVE
6:
7:
8:
9:
10: SP-GP
11: ROCK to 6"
12:
13:
14: NO GWT/NO STAINS
15:
16:
17:
18:
19:
20:
21:
22:

Slope

Site Plan

N

(SEE ATTACHED MAP & CONTOURS)

WAS GROUNDWATER ENCOUNTERED? NO
IF YES, AT WHAT DEPTH? N/A
DEPTH AFTER MONITORING?

Slope

PERCOLATION TEST

Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop

PERCOLATION RATE _____ (min/inch) PERC HOLE DIAMETER _____

TEST RUN BETWEEN 2 FT AND _____ FT DEPTH

COMMENTS: _____

PERFORMED BY: C. HOLLER DATE: 3-11-25

THLOGregnew 4/28/2014

HOLLER ENGINEERING
3375 N Sams Dr. Wasilla, Alaska 99654 376-0410

Seal

STATE OF ALASKA
49TH
CURTIS E. HOLLER
CE 9607
3-24-25
REGISTERED PROFESSIONAL ENGINEER

SOILS LOG / PERCOLATION TEST

TEST HOLE # 3 of 3
Performed For: ESTATE OF HELEN RAYMOND
Legal Description: FOREST SONG ACRES

Depth, feet	Soil Type
1	OL
2	ML
3	GP TO GP-SP
4	ROCK TO 6", OLIVE,
5	SCOUGHS
6	
7	
8	
9	
10	
11	
12	NO GWT/NO STAINS
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	

Slope

Site Plan

N

(SEE ATTACHED MAP & CONTOURS)

WAS GROUNDWATER ENCOUNTERED? NO
IF YES, AT WHAT DEPTH? N/A
DEPTH AFTER MONITORING?

Slope

PERCOLATION TEST

Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop

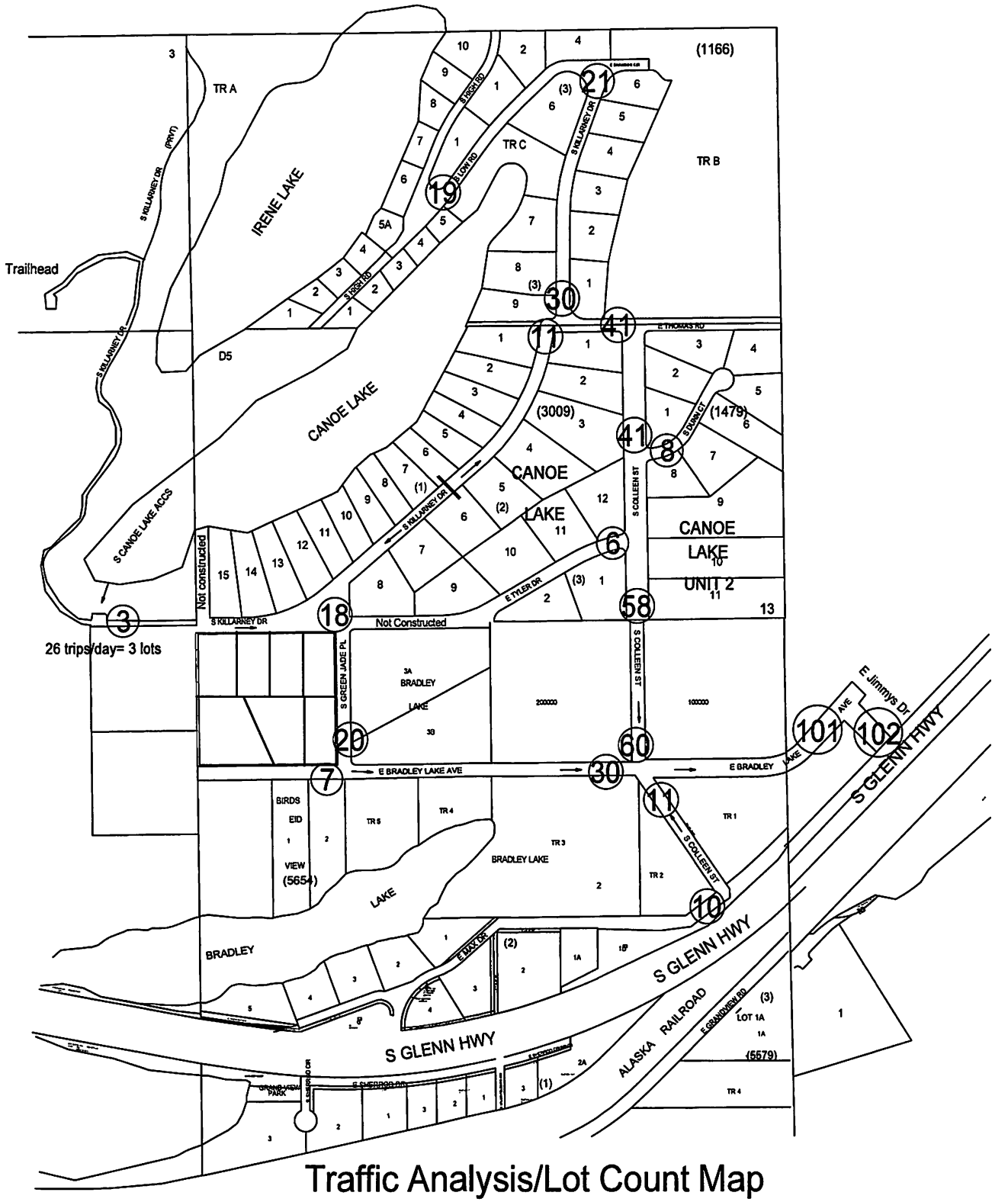
PERCOLATION RATE _____ (min/inch) PERC HOLE DIAMETER _____

TEST RUN BETWEEN 4 FT AND _____ FT DEPTH

COMMENTS: _____

PERFORMED BY: C. HOLLER DATE: 3-11-25

THLOGregnew 4/28/2014



Traffic Analysis/Lot Count Map

May 2025

(For ADT Multiply x 10)

GARY LORUSSO

KEYSTONE SURVEYING AND MAPPING
P.O. Box 2216, Palmer, Alaska
99645
Email: garyl@mtaonline.net
Phone: (907) 376-7811

SECTION LINE EASEMENT RESEARCH

FOREST SONG ACRES

TOWNSHIP 17 NORTH, RANGE 01 EAST

PORTIONS OF SECTIONS 13 and 24

The section line between the above Sections were surveyed and the survey approved by the U.S. Surveyor General's Office on January 28, 1915.

The subject parcel in Section 24 was patented to Julia Etta by Federal Patent # 831481. Entry date was May 11, 1917. There is not a Section Line easement on this parcel.

To the west of the subject parcel in Section 24, the land was patented to Maylon W. Thompson by Federal Patent # 831481. Entry date was Jine 21, 1918. There is not a Section Line easement on this parcel.

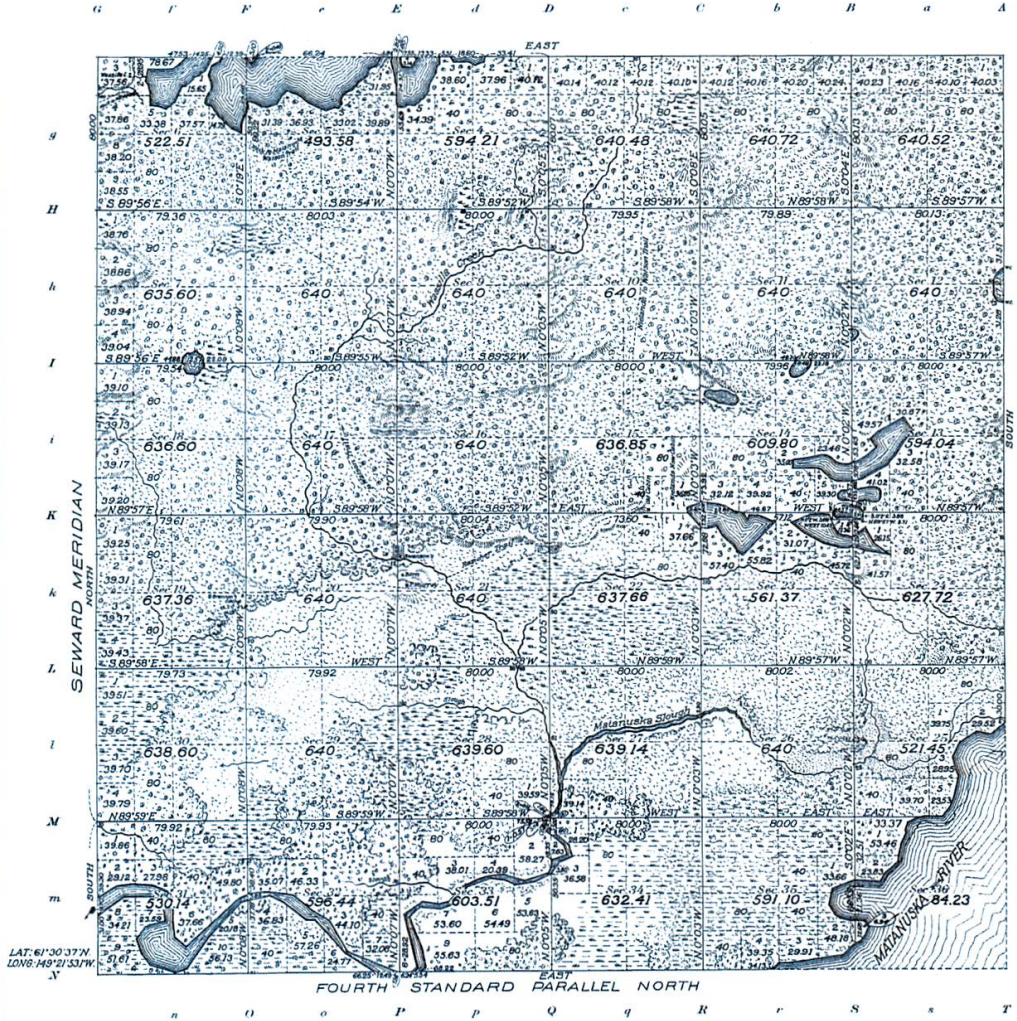
To the northwest of the subject parcel in Section 13, the land was patented to Victor Johnson by Federal Patent # 1122065. Entry date was October 17, 1940. There is a 33' Section Line easement on this parcel. In addition, this parcel was deeded to the State of Alaska by deed recorded on February 24, 1982 in Book 256 at page 147. As such there is also a 50' Section Line easement on this parcel.

To the north of the subject parcel in Section 13, the land was patented to Eugean B. White by Federal Patent # 831482. Entry date was January 21, 1920. There is not a Section Line easement on this parcel.

Gary LoRusso
Keystone Surveying & Mapping, Inc.
P.O. Box 2216, Palmer, Alaska 99645
(907) 376-7811
Email: garyl@mtaonline.net

(4-675 a)

Township Nº 17 North, Range Nº 1 East of the Seward Meridian, Alaska.



See Executive Order No. 6957 withdrawing for classification purposes

T. 17 N., Rs. 1, 2 and 3 E.
T. 18 N., Rs. 1, 2 and 3 E.
T. 19 N., Rs. 1 and 2 E.
T. 17 N., Rs. 1 and 2 W.
T. 18 N., R. 1 W.

Amended by Executive Orders Nos. 7047, 7416, 8372 and 9022 and Public Land Orders Nos. 79, 149 and 272.

Shore space restoration No. 3, dated March 21, 1921, restored to entry lands surrounding or abutting on lakes in this township.

It does not, however, affect creeks, estuaries or waterways connecting said lakes with the sea, where such connections are or may be runways for sea going fish to and from spawning grounds

Areas in Acres	
Public Land	21,625.64
Indian Reservation	
Indian Allotments	
Mineral Claims	
Water Surface	674.85
Total Area	22,300.49

Scale 40 Chains to an inch

Mean Magnetic Declination 26°20'E

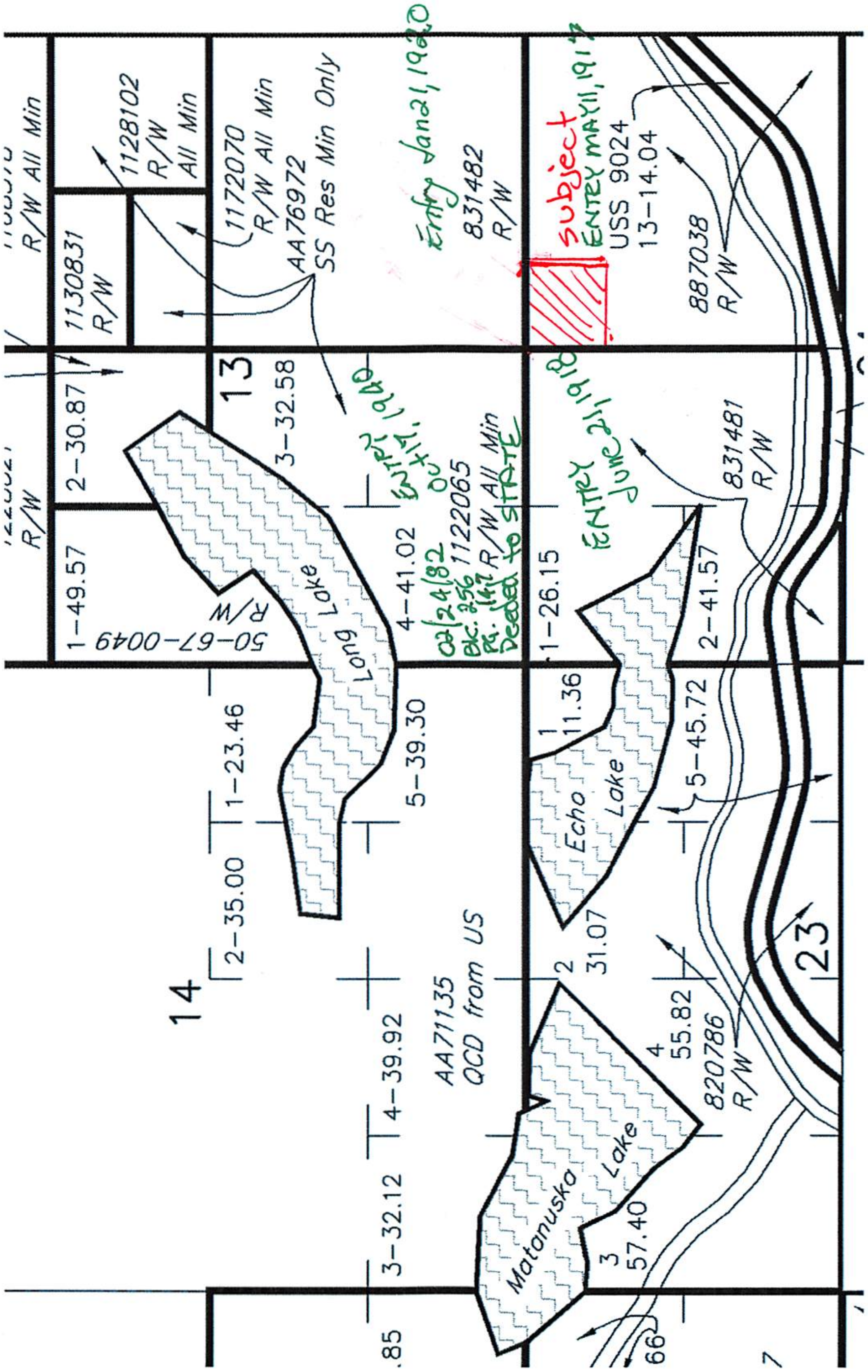
Surveys Designated	By Whom Surveyed	Contract No.	Contract Date	Amount of Surveys Mls.	Amount of Surveys chs.	Amount of Surveys lks.	When Surveyed Begun	When Surveyed Completed
Subdivision	F.W. Williamson, U.S.S. (2d Inst.)	-	May 31, 1913	58	44	73	July 15, 1913	Sept. 1, 1913
Meanders	T.W. Bates, U.S.T.	-	- - -	22	28	88	- - -	- - -
Township line North		-	- - -	5	78	67	- - -	July 23, -
" South	F.W. Williamson, U.S.S.	-	- - -	4	34	13	- - -	" 19, -
" East	T.W. Bates, U.S.T. / F. Hinkley, U.S.S.	"	April 11, 1911	4	30		Aug 8, 1911	Aug 11, 1911
" West	J. Frank Warren, U.S.S. / F. Williamson, U.S.S.	"	May 15, 1912	6	00		July 20, 1912	July 23, 1912

The above map of Township No. 17 NORTH, Range No. 1 EAST of the SEWARD Meridian ALASKA is strictly conformable to the field notes of the survey thereof on file in this office, which have been examined and approved

U. S. Surveyor General's Office.
JUNEAU, ALASKA, January 26, 1915

Charles E. Davidson
Surveyor General.

EXHIBIT PAGE 15 of 49
FOREST SONG ACRES


1130831 R/W
1128102 R/W All Min
1172070 R/W All Min
AA76972 SS Res Min Only
Entry Jan 21, 1920
831482 R/W
subject
ENTRY MAY 11, 1917
USS 9024
13-14.04
887038 R/W
13
2-30.87
1-49.57
50-67-0049 R/W
3-32.58
4-41.02
ENTRY Oct 17, 1920
1122065 R/W All Min
02/24/82 Bk. 256 Pg. 147
Deeded to STATE
1-26.15
ENTRY June 21, 1918
831481 R/W
2-41.57
Long Lake
1-23.46
5-39.30
1 11.36
5-45.72
Echo Lake
2-35.00
14
2 31.07
23
4-39.92
AA71135 QCD from US
4 55.82
820786 R/W
3-32.12
Matanuska Lake
3 57.40
.85
66

U.S. DEPARTMENT OF THE INTERIOR
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(https://www.blm.gov/)

SDMS ALASKA +

SPATIAL DATA MANAGEMENT SYSTEM SUBJECT

Alaska Case Retrieval Enterprise System (ACRES)

Case Abstract for: AKJ 003613

CASE DATA

Case Serial Num:	AKJ 003613	FRC Site Code:	SEA
Case Type:	256700 He Alaska	Accession Num:	–
Case Status:	Closed	Box Num:	– (of) –
Case Status Actn:	Case Closed	Disp Date:	–
Case Status Date:	17-NOV-1922	Location Code:	–
SM Acres:	0.0000	Abnd Yr:	–
Claim Name:	–		

CUSTOMER DATA

Cust ID:	000011421		
Customer Name:	ETTA JULIA	Interest Relationship:	Applicant
Customer Address:	Withheld	Percent Interest:	0.0000

ADMINISTRATIVE/STATUS ACTION DATA

Date	Code Description:	Remarks	Doc ID	Ofc	Emp	Doc Img *
11-MAY-1917	001 Application Filed	–	–	964	ED	--
10-NOV-1922	879 Patent Issued	–	PA0000887038	964	ED	Not Available
17-NOV-1922	970 Case Closed	–	–	964	ED	--
27-AUG-1992	996 Converted To Prime	–	–	940	BKM	--

FINANCIAL ACTION DATA

Date	Code/Description	Ofc	Emp	Money Amt	Acct Adv	Asmt Yr
NO FINANCIAL ACTIONS FOUND						

GENERAL REMARKS

No Case Remarks found

GEOGRAPHIC NAMES

No Geonames found

LAND DESCRIPTION

Mr	Twp	Rng	Sec	Aliquot	Survey ID	Tr	Blk	Lot	Di	Bor	NR	LS	Acres	
28	017 N	001 E	024	NE	–	–	–	–	AA	170	07	PA	160.0000	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl

Doc ID: PA0000887038 10-Nov-1922 USR: 754

Total Case Acres: 160.0000

Report Information/Help

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data. Refer to specific BLM case files for official land status information.
For case data information/help, contact the BLM Alaska Public Information Center at (907) 271-5960.

BLM WASHINGTON OFFICE
1849 C STREET NW RM. 5665
WASHINGTON DC 20240
FAX: 202-208-5242
PHONE: 202-208-3801
BLM_WO_NEWMEDIA@BLM.GOV (MAILTO:BLM_WO_NEWMEDIA@BLM.GOV)

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
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TO THE WEST

SDMS ALASKA +

SPATIAL DATA MANAGEMENT SYSTEM

Alaska Case Retrieval Enterprise System (ACRES)

Case Abstract for: AKJ 003919

CASE DATA

Case Serial Num:	AKJ 003919	FRC Site Code:	SEA
Case Type:	256700 He Alaska	Accession Num:	--
Case Status:	Closed	Box Num:	-- (of) --
Case Status Actn:	Case Closed	Disp Date:	--
Case Status Date:	15-NOV-1921	Location Code:	--
SM Acres:	0.0000	Abnd Yr:	--
Claim Name:	--		

CUSTOMER DATA

Cust ID:	000010443		
Customer Name:	THOMPSON MAHLON W	Interest Relationship:	Applicant
Customer Address:	Withheld	Percent Interest:	0.0000

ADMINISTRATIVE/STATUS ACTION DATA

Date	Code Description:	Remarks	Doc ID	Ofc	Emp	Doc Img *
21-JUN-1918	001 Application Filed	--	--	964	ED	--
08-NOV-1921	879 Patent Issued	--	PA0000831481	964	ED	Not Available
15-NOV-1921	970 Case Closed	--	--	964	ED	--
27-AUG-1992	996 Converted To Prime	--	--	940	BKM	--

FINANCIAL ACTION DATA

Date	Code/Description	Ofc	Emp	Money Amt	Acct Adv	Asmt Yr
NO FINANCIAL ACTIONS FOUND						

GENERAL REMARKS

No Case Remarks found

GEOGRAPHIC NAMES

No Geonames found

LAND DESCRIPTION

Mr	Twp	Rng	Sec	Aliquot	Survey ID	Tr	Blk	Lot	Di	Bor	NR	LS	Acres	
28	017 N	001 E	024	--	--	--	--	1	AA	170	07	PA	26.1500	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl
Doc ID: PA0000831481 08-Nov-1921					USR: 145 754									
28	017 N	001 E	024	--	--	--	--	2	AA	170	07	PA	41.5700	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl
Doc ID: PA0000831481 08-Nov-1921					USR: 145 754									
28	017 N	001 E	024	E2NW	--	--	--	--	AA	170	07	PA	80.0000	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl
Doc ID: PA0000831481 08-Nov-1921					USR: 145 754									
													Total Case Acres:	147.7200

Report Information/Help

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data. Refer to specific BLM case files for official land status information.
For case data information/help, contact the BLM Alaska Public Information Center at (907) 271-5960.

BLM WASHINGTON OFFICE
1849 C STREET NW RM. 5665
WASHINGTON DC 20240
FAX: 202-208-5242
PHONE: 202-208-3801
BLM_WO_NEWMEDIA@BLM.GOV (MAILTO:BLM_WO_NEWMEDIA@BLM.GOV)

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(HTTP[redacted]TOS/BLMALASKA)

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TO THE NORTHWEST

SDMS ALASKA +

SPATIAL DATA MANAGEMENT SYSTEM

Alaska Case Retrieval Enterprise System (ACRES)

Case Abstract for: AKA 010411

CASE DATA

Case Serial Num:	AKA 010411	FRC Site Code:	SEA
Case Type:	260010 Gt-Specific Public Laws	Accession Num:	–
Case Status:	Closed	Box Num:	– (of) –
Case Status Actn:	Case Closed	Disp Date:	–
Case Status Date:	23-NOV-1976	Location Code:	–
SM Acres:	0.0000	Abnd Yr:	–
Claim Name:	–		

CUSTOMER DATA

Cust ID:	000008935		
Customer Name:	JOHNSON VICTOR	Interest Relationship:	Applicant
Customer Address:	Withheld	Percent Interest:	0.0000

ADMINISTRATIVE/STATUS ACTION DATA

Date	Code Description:	Remarks	Doc ID	Ofc	Emp	Doc Img *
17-OCT-1940	254 Legislation Enacted	54STAT1191	–	941	RHF	--
05-MAY-1944	001 Apln Recvd/Case Estbls	APPLICATION RECEIVED	–	PSA	JM	--
09-APR-1947	879 Patent Issued	–	PA0001122065	PSA	JM	Not Available
23-NOV-1976	970 Case Closed	TITLE TRSF	–	PSA	JM	--
27-AUG-1992	996 Converted To Prime	–	–	940	BKM	--

FINANCIAL ACTION DATA

Date	Code/Description	Ofc	Emp	Money Amt	Acct Adv	Asmt Yr
NO FINANCIAL ACTIONS FOUND						

GENERAL REMARKS

No Case Remarks found

GEOGRAPHIC NAMES

No Geonames found

LAND DESCRIPTION

Mr	Twp	Rng	Sec	Aliquot	Survey ID	Tr	Blk	Lot	Di	Bor	NR	LS	Acres	
28	017 N	001 E	013	–	–	–	–	3	AA	170	07	PA	32.5800	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl
Doc ID: PA0001122065 09-Apr-1947 USR: 026														
28	017 N	001 E	013	–	–	–	–	4	AA	170	07	PA	41.0200	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl
Doc ID: PA0001122065 09-Apr-1947 USR: 026 754														
28	017 N	001 E	013	SESW	–	–	–	–	AA	170	07	PA	40.0000	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl
Doc ID: PA0001122065 09-Apr-1947 USR: 026														
					Total Case Acres:								113.6000	

Report Information/Help

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data. Refer to specific BLM case files for official land status information.
For case data information/help, contact the BLM Alaska Public Information Center at (907) 271-5960.

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WASHINGTON DC 20240
FAX: 202-208-5242
PHONE: 202-208-3801
BLM_WO_NEWMEDIA@BLM.GOV (MAILTO:BLM_WO_NEWMEDIA@BLM.GOV)

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SDMS ALASKA +

SPATIAL DATA MANAGEMENT SYSTEM

TO THE NORTH

Alaska Case Retrieval Enterprise System (ACRES)

Case Abstract for: AKJ 004164

CASE DATA

Case Serial Num:	AKJ 004164	FRC Site Code:	SEA
Case Type:	251101 He Original	Accession Num:	--
Case Status:	Closed	Box Num:	-- (of) --
Case Status Actn:	Case Closed	Disp Date:	--
Case Status Date:	23-NOV-1921	Location Code:	--
SM Acres:	0.0000	Abnd Yr:	--
Claim Name:	--		

CUSTOMER DATA

Cust ID:	000037536		
Customer Name:	WHITE EUGEAN B	Interest Relationship:	Applicant
Customer Address:	Withheld	Percent Interest:	0.0000

ADMINISTRATIVE/STATUS ACTION DATA

Date	Code Description:	Remarks	Doc ID	Ofc	Emp	Doc Img *
21-JAN-1920	001 Application Filed	APPLICATION RECEIVED	--	PSA	STA	--
08-NOV-1921	879 Patent Issued	--	PA000831482	AJA	STA	Not Available
23-NOV-1921	970 Case Closed	TITLE TRSF	--	AJA	STA	--
27-AUG-1992	996 Converted To Prime	--	--	940	BKM	--

FINANCIAL ACTION DATA

Date	Code/Description	Ofc	Emp	Money Amt	Acct Adv	Asmt Yr
NO FINANCIAL ACTIONS FOUND						

GENERAL REMARKS

No Case Remarks found

GEOGRAPHIC NAMES

No Geonames found

LAND DESCRIPTION

Mr	Twp	Rng	Sec	Aliquot	Survey ID	Tr	Blk	Lot	DI	Bor	NR	LS	Acres	
28	017 N	001 E	013	SE	--	--	--	--	AA	170	07	PA	160.0000	MTP (/perl-bin/scanned_images/mtp/disp_image_pdf.pl?mtr=S017N001E) TWPLAT (/perl-bin/scanned_images/surveys/disp_survey_abstr1.pl

Doc ID: PA000831482 08-Nov-1921 USR: 754

Total Case Acres: 160.0000

Report Information/Help

BLM WASHINGTON OFFICE
1849 C STREET NW RM. 5665
WASHINGTON DC 20240
FAX: 202-208-5242
PHONE: 202-208-3801
BLM_WO_NEWMEDIA@BLM.GOV (MAILTO:BLM_WO_NEWMEDIA@BLM.GOV)

Matthew Goddard

From: Tammy Simmons
Sent: Tuesday, May 27, 2025 2:05 PM
To: Matthew Goddard
Cc: Brad Sworts; Jamie Taylor; Daniel Dahms; Tammy Simmons
Subject: RE: Forest Song Acres ADT - Update

Hello,

Thank you for the revised ADT estimate. PD&E has no further comments.

Thank you.

PD&E Review Team

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Thursday, May 22, 2025 2:15 PM
To: Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>
Subject: FW: Forest Song Acres ADT - Update
Importance: High

Hello,

I received the attached updated for the Forest Song Acres ADT. If you could review and let me know how this affects your comments I would appreciate it.

Have a great day,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

From: Curt Holler <holler@mtaonline.net>
Sent: Thursday, May 22, 2025 12:31 PM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>; 'Gary LoRusso' <garyl@keystonesurveyak.com>
Subject: RE: Forest Song Acres ADT - Update

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
Hello Matthew-

After looking at the information Jamie provided, and based on my own observations, it is clear the trailhead and lake access have minimal use. The Placer.ai info appears to be based on app data, likely meaning it is based on cell phone use or presence at a given location. While I myself have attended the trailhead area in question several times, it was

always on a bicycle or on foot - never with a vehicle. It is not clear if the data would account for persons walking or biking to the location from the east side neighborhoods, cell phone in a pocket. Nonetheless, this data may be the best available and ultimately has a minimal effect. Adding 26 trips/day is equivalent to having an additional 2.6 lots (at 10 trips/day/lot), so I updated the map to show the location of the 2 parking areas and added a more conservative value of 3 lots.

While working on this, our project surveyor asked ADOT about their plans for Colleen Street. ADOT was kind enough to supply their plans for the ongoing active Glenn Highway update project. This is important as the present beginning point of Colleen Street will soon be disconnected from the highway, and instead traffic on Colleen will be re-routed down a newly constructed portion of S. Bradley Lake Drive, which becomes a bit of a frontage road. Bradley will be connected to a substantial intersection by a short road to be named E Jimmys Drive; based on information ADOT supplied and which is attached to this email, both new roads will meet MSB Collector road standards. The approximate new layout is shown on the attached updated traffic map.

Based on either of the layouts, the traffic routed to the Glenn Highway will be around a 101 or 102 lot equivalent, right at the upper limit of residential sub-collector road standards. When the construction of Bradley Lake and Jimmys Drive is complete, all road sections should be constructed to an adequate level. Bradley Lake should be capable of handling up to 300 lots. The highest lot count on the other streets is 60 on Colleen, which should provide room for any future growth from the north. The proposed 7 lot subdivision will not add any traffic to Colleen Street.

Please let me know of any questions that may come up. Thanks,

Curt Holler PE
Holler Engineering
3375 N Sams Drive
Wasilla AK 99654
(907) 376-0410
(907) 232-0510

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Wednesday, May 14, 2025 9:46 AM
To: Gary LoRusso <garyl@keystonesurveyak.com>; Holler Engineering <holler@mtaonline.net>
Subject: Forest Song Acres ADT

Good morning Gary & Curt,

I received the attached emails from PD&E regarding the submitted ADT for Forest Song Acres.
Based on Daniel's comment it looks like the state rec area was not included in the ADT.
An updated ADT would be needed if that is the case reflecting the addition of any missed parcels.

Have a great day,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

Matthew Goddard

From: Curt Holler <holler@mtaonline.net>
Sent: Thursday, May 22, 2025 12:31 PM
To: Matthew Goddard; 'Gary LoRusso'
Subject: RE: Forest Song Acres ADT - Update
Attachments: Traffic Map updated May 2025.pdf; Pages B7, F9, F10, F33 from Plan V1_Glenn Highway MP 34-42 PH II Cert Set.pdf; Pages 21-23 from 58104 Glenn Hwy MP 34-42 Recon PH II SIGNED CERT SET 11.12.2021.pdf; Pages from Plan V1_Glenn Highway MP 34-42 PH II Cert Set.pdf

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hello Matthew-

After looking at the information Jamie provided, and based on my own observations, it is clear the trailhead and lake access have minimal use. The Placer.ai info appears to be based on app data, likely meaning it is based on cell phone use or presence at a given location. While I myself have attended the trailhead area in question several times, it was always on a bicycle or on foot - never with a vehicle. It is not clear if the data would account for persons walking or biking to the location from the east side neighborhoods, cell phone in a pocket. Nonetheless, this data may be the best available and ultimately has a minimal effect. Adding 26 trips/day is equivalent to having an additional 2.6 lots (at 10 trips/day/lot), so I updated the map to show the location of the 2 parking areas and added a more conservative value of 3 lots.

While working on this, our project surveyor asked ADOT about their plans for Colleen Street. ADOT was kind enough to supply their plans for the ongoing active Glenn Highway update project. This is important as the present beginning point of Colleen Street will soon be disconnected from the highway, and instead traffic on Colleen will be re-routed down a newly constructed portion of S. Bradley Lake Drive, which becomes a bit of a frontage road. Bradley will be connected to a substantial intersection by a short road to be named E Jimmys Drive; based on information ADOT supplied and which is attached to this email, both new roads will meet MSB Collector road standards. The approximate new layout is shown on the attached updated traffic map.

Based on either of the layouts, the traffic routed to the Glenn Highway will be around a 101 or 102 lot equivalent, right at the upper limit of residential sub-collector road standards. When the construction of Bradley Lake and Jimmys Drive is complete, all road sections should be constructed to an adequate level. Bradley Lake should be capable of handling up to 300 lots. The highest lot count on the other streets is 60 on Colleen, which should provide room for any future growth from the north. The proposed 7 lot subdivision will not add any traffic to Colleen Street.

Please let me know of any questions that may come up. Thanks,

Curt Holler PE
Holler Engineering
3375 N Sams Drive
Wasilla AK 99654
(907) 376-0410
(907) 232-0510

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Wednesday, May 14, 2025 9:46 AM
To: Gary LoRusso <garyl@keystonesurveyak.com>; Holler Engineering <holler@mtaonline.net>
Subject: Forest Song Acres ADT

Good morning Gary & Curt,

I received the attached emails from PD&E regarding the submitted ADT for Forest Song Acres.
Based on Daniel's comment it looks like the state rec area was not included in the ADT.
An updated ADT would be needed if that is the case reflecting the addition of any missed parcels.

Have a great day,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

Matthew Goddard

From: Matthew Goddard
Sent: Wednesday, May 14, 2025 9:46 AM
To: Gary LoRusso; Holler Engineering
Subject: Forest Song Acres ADT
Attachments: Re: RFC Forest Song Acres (MG); RE: RFC Forest Song Acres (MG)

Good morning Gary & Curt,

I received the attached emails from PD&E regarding the submitted ADT for Forest Song Acres.
Based on Daniel's comment it looks like the state rec area was not included in the ADT.
An updated ADT would be needed if that is the case reflecting the addition of any missed parcels.

Have a great day,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

Matthew Goddard

From: Pre-Design & Engineering
Sent: Tuesday, May 13, 2025 4:25 PM
To: Matthew Goddard
Cc: Brad Sworts; Jamie Taylor; Tammy Simmons; Daniel Dahms
Subject: RE: RFC Forest Song Acres (MG)

Matthew,

As the Matanuska Lakes State Recreation Area and Canoe Lake are accessed off of Killarney Drive, the ADT estimate should be updated to include traffic estimate from these areas.

Pre-Design & Engineering
Department of Public Works

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Monday, April 28, 2025 4:51 PM
To: Myers, Sarah E E (DFG) <sarah.myers@alaska.gov>; Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; gatewaycommunitycouncil@gmail.com; Chad Cameron Contact <ccameron@palmerak.org>; jprevost@palmerak.org; Brian Davis <Brian.Davis@matsugov.us>; APP <stark@mtaonline.net>; Stephanie Nowers <stephanienowersdistrict2@gmail.com>; Land Management <Land.Management@matsugov.us>; Jillian Morrissey <Jillian.Morrissey@matsugov.us>; Tom Adams <Tom.Adams@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Code Compliance <Code.Compliance@matsugov.us>; Kendra Johnson <Kendra.Johnson@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Taunnie Boothby <Taunnie.Boothby@matsugov.us>; msbaddressing <msbaddressing@matsugov.us>; eric.r.schuler@usps.gov; Shannon Bodolay <Shannon.Bodolay@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; ROW <row@enstarnaturalgas.com>; Right of Way Dept. <row@mtasolutions.com>; OSP Design Group <ospdesign@gci.com>; mearow@mea.coop
Subject: RFC Forest Song Acres (MG)

Hello,

The following link is a request for comments for the proposed Forest Song Acres.
Please ensure all comments have been submitted by May 19, 2025, so they can be incorporated into the staff report packet.

Forest Song Acres

Feel free to contact me if you have any questions.

Thank you,

Matthew Goddard
Platting Technician

Matthew Goddard

From: Jamie Taylor
Sent: Wednesday, May 14, 2025 9:13 AM
To: Matthew Goddard
Cc: Daniel Dahms; Tammy Simmons
Subject: Re: RFC Forest Song Acres (MG)
Attachments: Property Overview - Canoe Lake Access - May 1, 2024 - Apr 30, 2025.pdf; Property Overview - Matanuska Lakes State Recreation Area - Killarney - May 1, 2024 - Apr 30, 2025.pdf

Hi Matthew -

I pulled reports from Placer.ai for the two parking areas off of Killarney Drive. For the Canoe Lake parking area, in 2023 there were 2.9k visitors for an average of 8 visitors per day. For the Matanuska Lakes SRA parking area, in 2022 there were 1.8k visitors for an average of 5 visitors per day. Assuming each visitor drove their own vehicle (overly conservative) and two trips per visitor (one entering, one exiting), the two parking areas would, on average, add 26 trips per day.

Please pass this info along to Curt for use in his ADT estimate, and feel free to share with Ms. Nowers.

Thanks!

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Thursday, May 1, 2025 8:08 AM
To: Pre-Design & Engineering <pde@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Gary LoRusso <garyl@keystonesurveyak.com>
Subject: FW: RFC Forest Song Acres (MG)

Good morning all,

I received an inquiry regarding the ADT estimate for Forest Song Acres from Stephanie Nowers (see below). She is wanting to know how the state park traffic affects the ADT estimate for this area.

Thank you,

Matthew Goddard
Platting Technician

907-861-7881
Matthew.Goddard@matsugov.us

From: Stephanie Nowers <stephanienowersdistrict2@gmail.com>
Sent: Thursday, May 1, 2025 8:00 AM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>
Subject: Re: RFC Forest Song Acres (MG)

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hi Matt, The state park maintains facilities that are accessed through the neighborhood so is there a method for accounting for that traffic?

Thanks,
Stephanie

On Tue, Apr 29, 2025 at 1:20 PM Stephanie Nowers <stephanienowersdistrict2@gmail.com> wrote:

> Oh! Ok so almost a 1,000 trips a day at the intersection of the Glenn and Colleen. That would make more sense. Might be worth noting that on the traffic analysis count page just to clarify for the general public. I know I tripped over it. Even though it does say lot count, it doesn't note the 10 trip a day average so you have to know that piece to understand it fully. One other note is that the state park maintains facilities that are accessed through the neighborhood so is there a method for accounting for things like traffic to public recreational sites.
>
> Thanks for answering my questions,
>
> - Stephanie
>
> On Tue, Apr 29, 2025 at 12:50 PM Matthew Goddard <Matthew.Goddard@matsugov.us> wrote:
>
> > Hello Stephanie,
> >
> > The count shown is the lot count not the trip count. You would need to multiply the number shown on the ADT by 10 to get the trip total.
> > In this case the submitted ADT lists a total of 98 lots for a total estimated trip count of 980.
> >
> > Matthew Goddard
> > Platting Technician
> > 907-861-7881
> > Matthew.Goddard@matsugov.us
>
> ---
>
> **From:** Stephanie Nowers <stephanienowersdistrict2@gmail.com>
> **Sent:** Tuesday, April 29, 2025 12:30 PM
> **To:** Matthew Goddard <Matthew.Goddard@matsugov.us>
> **Subject:** Re: RFC Forest Song Acres (MG)
>
> [**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

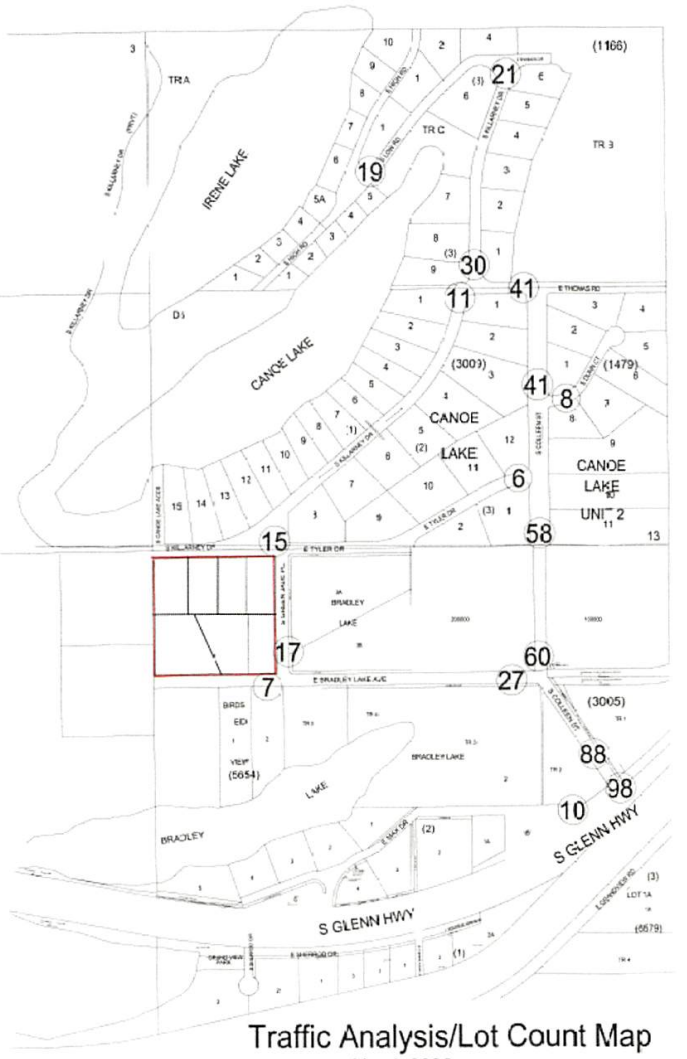
Thanks. I count over 60 lots in the neighborhood. If the total is 10 trips per lot, how do you get a total count of 98 at the intersection with the Glenn which is the only way in or out?

- S

On Tue, Apr 29, 2025 at 12:14 PM Matthew Goddard <Matthew.Goddard@matsugov.us> wrote:

Hello Stephanie,

The traffic estimate is based on a 10 trip per lot calculation. This includes existing and proposed lots.
The engineer that performs the calculation also determines the expected split when there are multiple routes out of the same area.
The calculation shows the number of lots as counted at each intersection and indicates the expected traffic flow based on how it splits.



Traffic Analysis/Lot Count Map
March 2025

Have a great day,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

From: Stephanie Nowers <stephanienowersdistrict2@gmail.com>
Sent: Tuesday, April 29, 2025 11:17 AM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>
Subject: Re: RFC Forest Song Acres (MG)

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hi Matt,

Sorry I should have been more specific, I wondered how the traffic calculations were made. Based on the number of houses and expected trips, or an actual count.

Thanks,
Stephanie

On Tue, Apr 29, 2025 at 8:23 AM Matthew Goddard <Matthew.Goddard@matsugov.us> wrote:

> Good morning Stephanie,
>
> In answer to your questions:
> **traffic analysis**
> An average daily traffic calculation was submitted and is part of the soils report found in the RFC link. Based on the current road classifications and the submitted traffic estimate, I do not believe road upgrades will be required. That being said, I have not yet received comments from our public works department as the RFC was just sent out.
> **public comment**
> Mailing and advertising is generally sent out approximately 21 days prior to the hearing date.
> **Website**
> The staff report is posted to the MSB website approximately 10 days prior to the hearing. This can be found at https://matsugov.us/agendas?board=19.
>
> Hope this answers your questions and if not feel free to reach out again and I will answer what I can.
>
> Matthew Goddard
> Platting Technician
> 907-861-7881
> Matthew.Goddard@matsugov.us

From: Stephanie Nowers <stephanienowersdistrict2@gmail.com>
Sent: Tuesday, April 29, 2025 8:00 AM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>
Subject: Re: RFC Forest Song Acres (MG)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
HI Matt, Have some questions on this when you have a moment. On traffic analysis and when it will go out for public comment and where on the website that is posted.

Thanks,
stephanie

On Mon, Apr 28, 2025 at 4:51 PM Matthew Goddard <Matthew.Goddard@matsugov.us> wrote:

> Hello,
>
> The following link is a request for comments for the proposed Forest Song Acres.
> Please ensure all comments have been submitted by May 19, 2025, so they can be incorporated into the staff report packet.
>
> Forest Song Acres
>
> Feel free to contact me if you have any questions.
>
> Thank you,
>
> Matthew Goddard
> Platting Technician
> 907-861-7881
> Matthew.Goddard@matsugov.us

--
Stephanie Nowers
District 2, Mat-Su Borough Assemblymember
907.831.6299

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Stephanie Nowers
District 2, Mat-Su Borough Assemblymember
907.831.6299

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District 2, Mat-Su Borough Assemblymember
907.831.6299

--
Stephanie Nowers
District 2, Mat-Su Borough Assemblymember
907.831.6299

Placer.ai

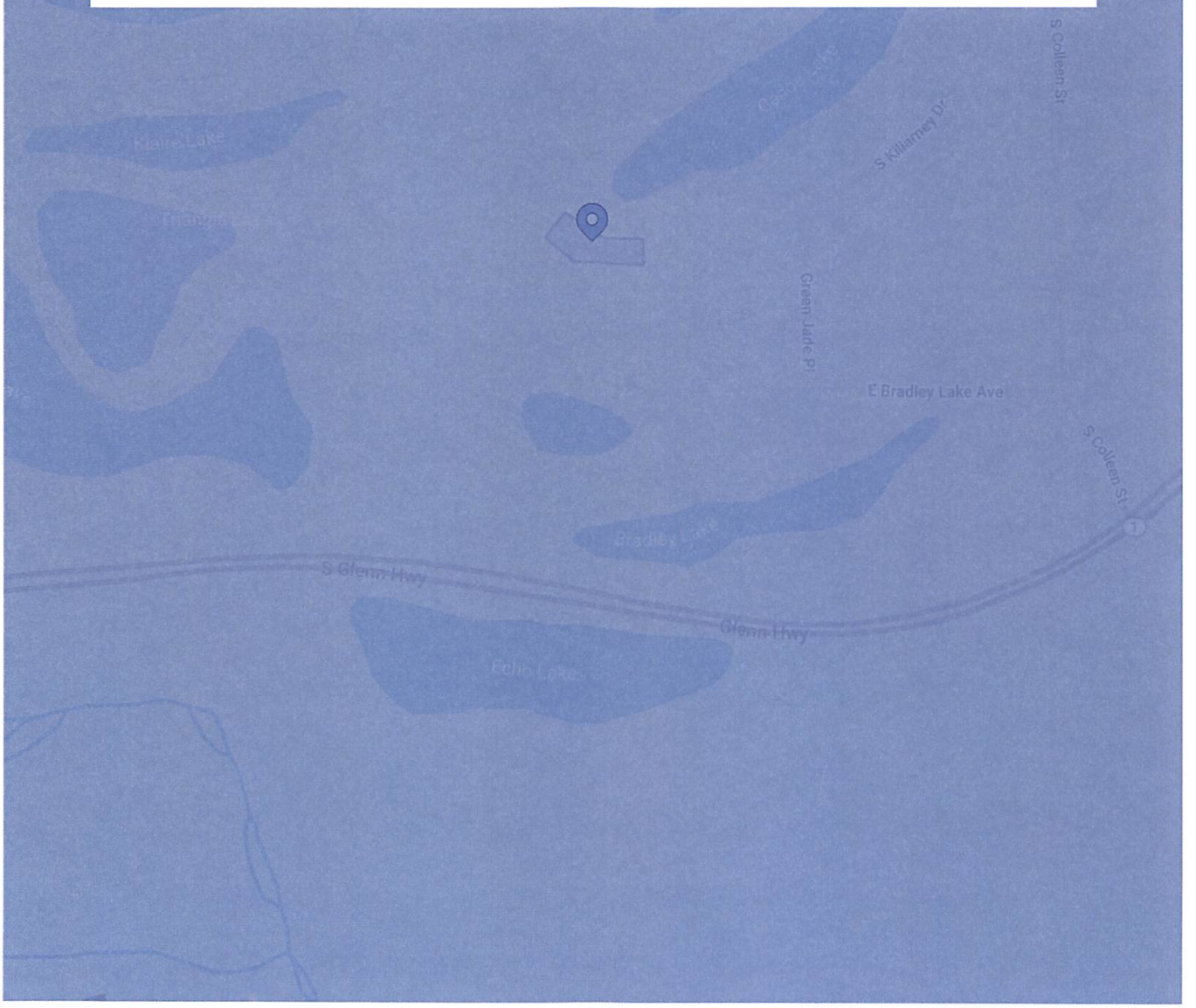
Property Overview

May 1, 2024 - Apr 30, 2025

Property:

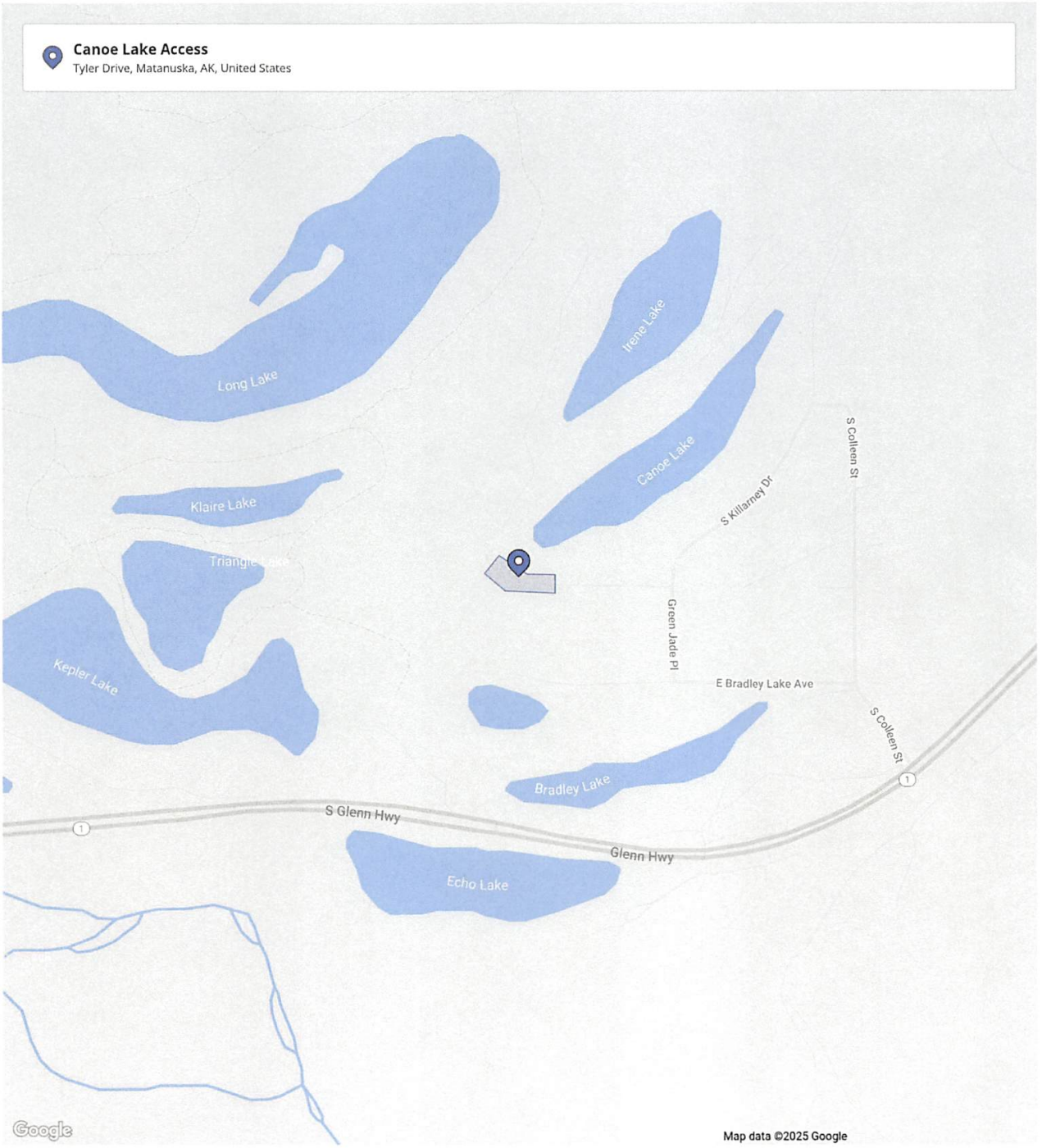
CL **Canoe Lake Access**
Killarney Drive, Matanuska, AK

Scan to view on placer.ai platform



Property Overview

May 1, 2024 - Apr 30, 2025



Property Overview

May 1, 2024 - Apr 30, 2025

Metrics

Canoe Lake Access
Killarney Drive, Matanuska, AK

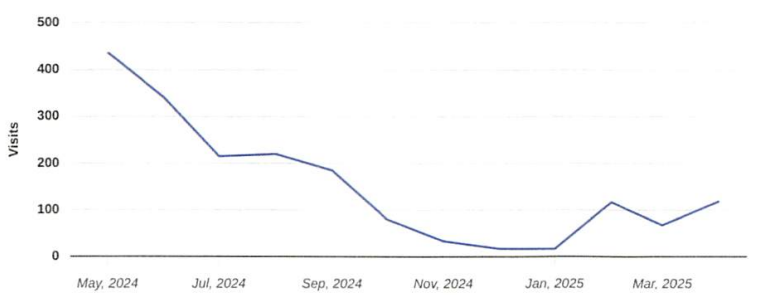
Visits	1.8K	Avg. Dwell Time	46 min
Visits / sq ft	0.02	Panel Visits	92
Size - sq ft	74.4K	Visits YoY	-33.3%
Visitors	1.2K	Visits Yo2Y	-27.8%
Visit Frequency	1.52	Visits Yo3Y	-15.8%

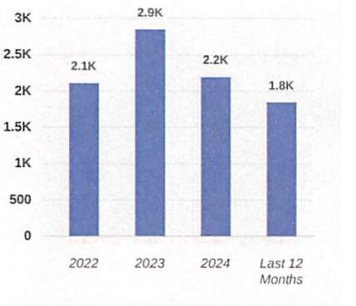
May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Visits Trend

Canoe Lake Access
Killarney Drive, Matanuska, AK





Monthly | Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

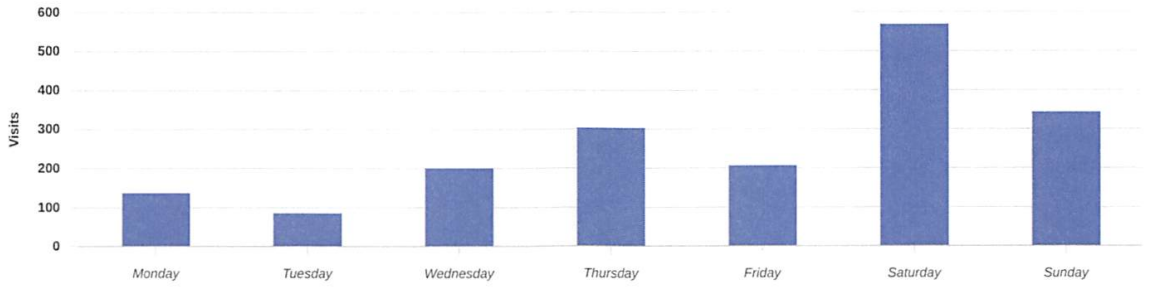
Placer.ai

Property Overview

May 1, 2024 - Apr 30, 2025

Daily Visits

Canoe Lake Access
Killarney Drive, Matanuska, AK

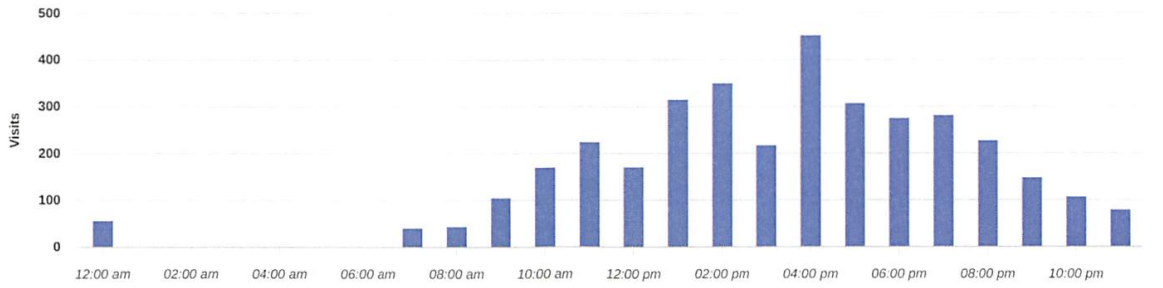


Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Hourly Visits

Canoe Lake Access
Killarney Drive, Matanuska, AK



Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

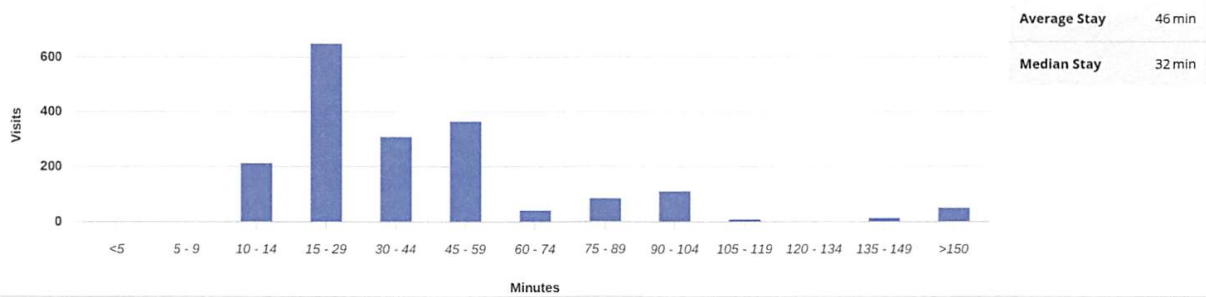
Placer.ai

Property Overview

May 1, 2024 - Apr 30, 2025

Visit Duration

Canoe Lake Access
Killarney Drive, Matanuska, AK



Average Stay	46 min
Median Stay	32 min

Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Visitor Journey - Routes

To protect individual privacy, the beginning points shown for each route are approximations and do not represent actual home locations.

Journey Direction: To Property | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Placer.ai

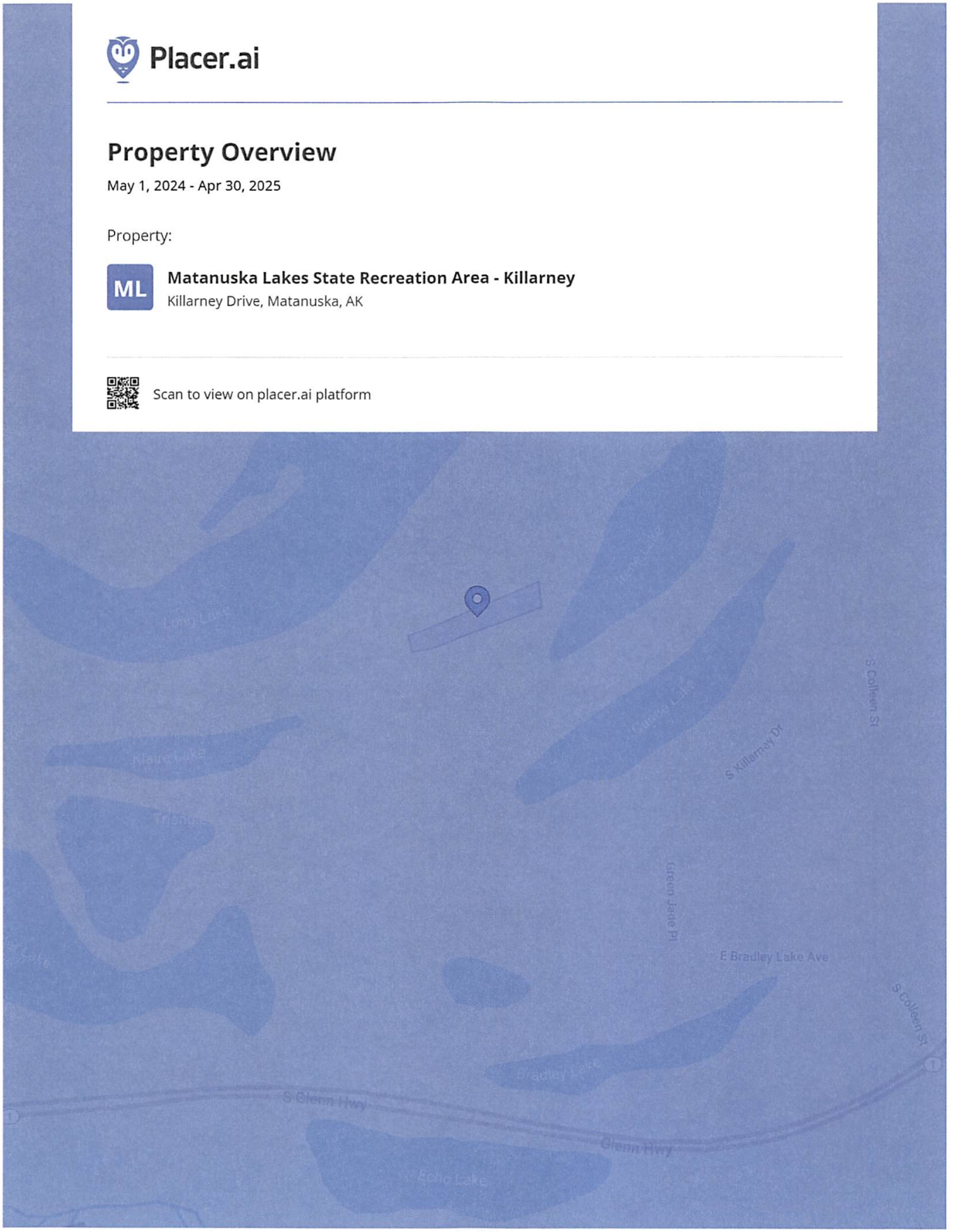
Property Overview

May 1, 2024 - Apr 30, 2025

Property:

ML **Matanuska Lakes State Recreation Area - Killarney**
Killarney Drive, Matanuska, AK

Scan to view on placer.ai platform



Property Overview

May 1, 2024 - Apr 30, 2025

Property Overview

May 1, 2024 - Apr 30, 2025

Metrics

Matanuska Lakes State Recreat...
Killarney Drive, Matanuska, AK

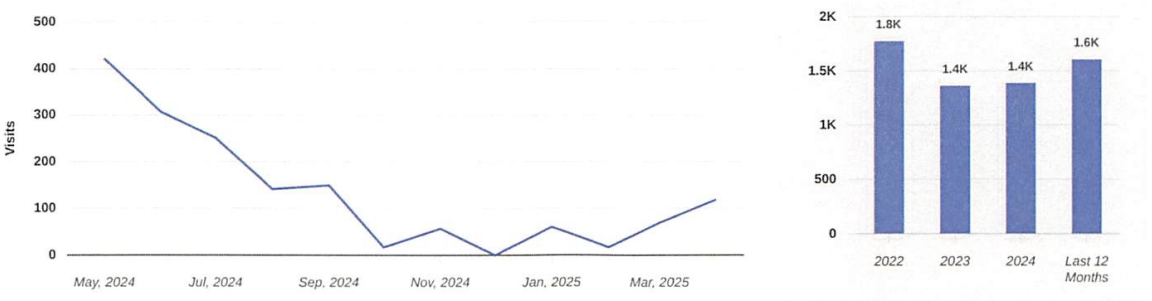
Visits	1.6K	Avg. Dwell Time	46 min
Visits / sq ft	0.01	Panel Visits	78
Size - sq ft	122.6K	Visits YoY	+14%
Visitors	1.1K	Visits Yo2Y	+2%
Visit Frequency	1.47	Visits Yo3Y	-26.2%

May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Visits Trend

Matanuska Lakes State Recre...
Killarney Drive, Matanuska, AK



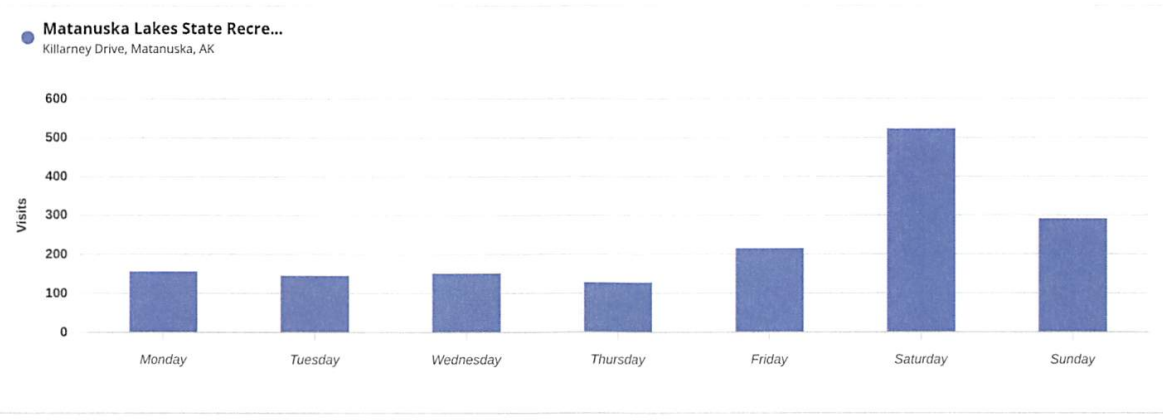
Monthly | Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Property Overview

May 1, 2024 - Apr 30, 2025

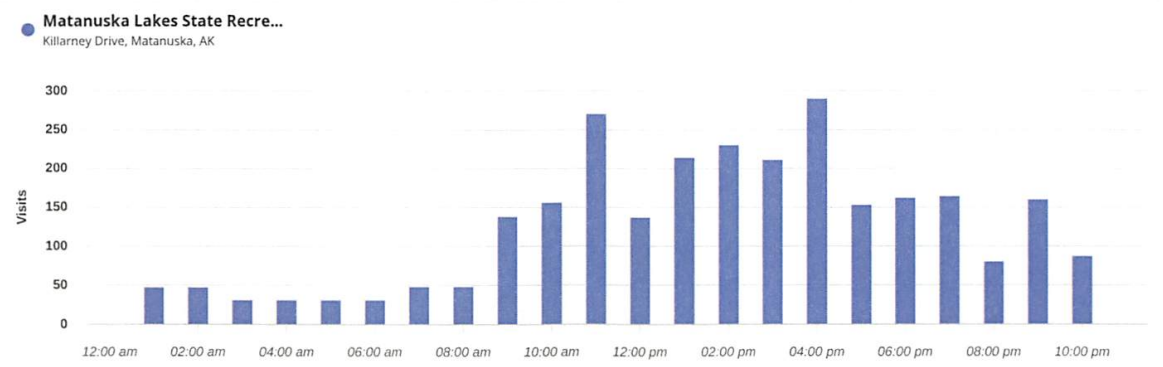
Daily Visits



Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Hourly Visits



Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

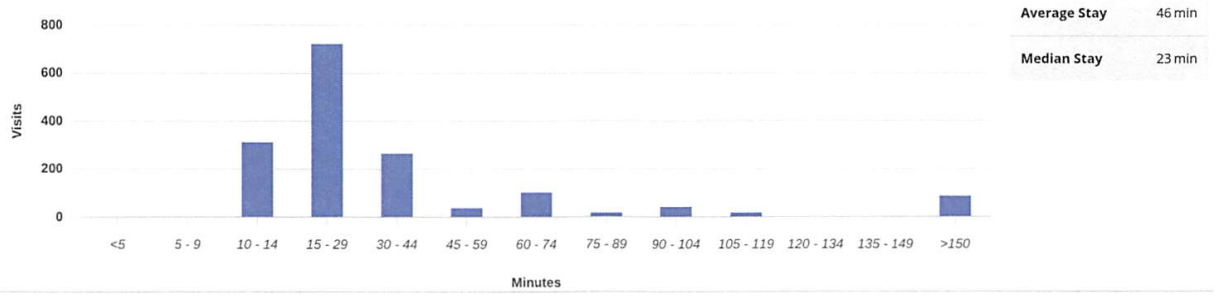
Placer.ai

Property Overview

May 1, 2024 - Apr 30, 2025

Visit Duration

Matanuska Lakes State Recreat...
Killarney Drive, Matanuska, AK

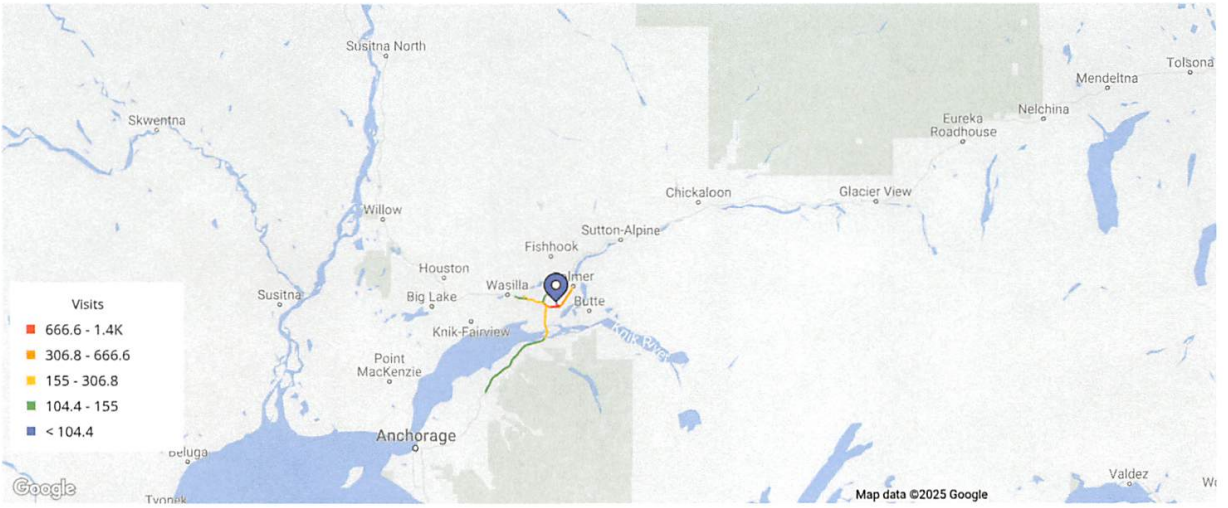


Average Stay	46 min
Median Stay	23 min

Visits | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

Visitor Journey - Routes



To protect individual privacy, the beginning points shown for each route are approximations and do not represent actual home locations.

Journey Direction: To Property | May 1st, 2024 - Apr 30th, 2025
Data provided by Placer Labs Inc. (www.placer.ai)

Placer.ai

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Code Compliance Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 745-9876
E-mail: code.compliance@matsugov.us

MEMORANDUM

DATE: April 30, 2025

TO: Matthew Goddard, Platting Tech

FROM: Kendra Johnson, CFM
Senior Code Compliance Officer

SUBJECT: Forest Song Acres

Comments regarding the Preliminary Plat for Forest Song Acres (subdividing parcel #3004-400000 into 7 lots).

Proposed lot 7 will have setback violations if the shed & Conex remain where they currently are. The shed will be within the 10ft side lot line setback by 6+ feet causing a violation of MSB 17.55.010(B).

The Conex is currently in violation (no open/active case with Code Compliance); it will need to be moved as it is within the 25ft setback requirement per MSB 17.55.010(A).

Matthew Goddard

From: Permit Center
Sent: Tuesday, April 29, 2025 8:20 AM
To: Matthew Goddard
Subject: RE: RFC Forest Song Acres (MG)

No comments from the Permit Center.

Brandon Tucker
Permit Technician
Matanuska-Susitna Borough Permit Center
350 E Dahlia Ave
Palmer AK 99645
P (907) 861-7871
F (907) 861-8158

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Monday, April 28, 2025 4:51 PM
To: Myers, Sarah E E (DFG) <sarah.myers@alaska.gov>; Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; gatewaycommunitycouncil@gmail.com; Chad Cameron Contact <ccameron@palmerak.org>; jprevost@palmerak.org; Brian Davis <Brian.Davis@matsugov.us>; APP <stark@mtaonline.net>; Stephanie Nowers <stephanienowersdistrict2@gmail.com>; Land Management <Land.Management@matsugov.us>; Jillian Morrissey <Jillian.Morrissey@matsugov.us>; Tom Adams <Tom.Adams@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Code Compliance <Code.Compliance@matsugov.us>; Kendra Johnson <Kendra.Johnson@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Taunnie Boothby <Taunnie.Boothby@matsugov.us>; msbaddressing <msbaddressing@matsugov.us>; eric.r.schuler@usps.gov; Shannon Bodolay <Shannon.Bodolay@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; ROW <row@enstarnaturalgas.com>; Right of Way Dept. <row@mtasolutions.com>; OSP Design Group <ospdesign@gci.com>; mearow@mea.coop
Subject: RFC Forest Song Acres (MG)

Hello,

The following link is a request for comments for the proposed Forest Song Acres.
Please ensure all comments have been submitted by May 19, 2025, so they can be incorporated into the staff report packet.

Forest Song Acres

Feel free to contact me if you have any questions.

Thank you,

Matthew Goddard

MATANUSKA-SUSITNA BOROUGH
PLATTING DIVISION
350 EAST DAHLIA AVENUE
PALMER, ALASKA 99645

17N01E24A003 44
GIYER JOHN O & JESSIE K
PO BOX 97
PALMER, AK 99645

NOTIFICATION OF PUBLIC HEARING

The Matanuska-Susitna Borough **Platting Board** will consider the following:

PETITIONER/OWNER: ANDREW RAYMOND / ESTATE OF HENRY M. RAYMOND, JR.

REQUEST: The request is to create 7 lots from the NW ¼ NW1/4 NE1/4, Bradley Lake Subdivision, Plat #63-7, to be known as **FOREST SONG ACRES,** containing 10.0 acres +/-. The property is located north and west of the S. Glenn Highway, south of Canoe Lake, and directly north of E. Bradley Lake Avenue (Tax ID #3004-400000); within the NE ¼ Section 24, Township 17 North, Range 01 East, Seward Meridian, Alaska. In the Gateway Community Council and in Assembly District #2.

The Matanuska-Susitna Borough **Platting Board** will hold a public hearing in the **Assembly Chambers** at the **Dorothy Swanda Jones Building**, 350 E. Dahlia Avenue, Palmer, Alaska on the proposed **Subdivision.** The public hearing is scheduled for **June 19, 2025,** starting at 1:00 p.m. We are sending you this notice as required by State Law and Borough Ordinances.

For comments regarding the proposed action, this form may be used for your convenience by filling in the information below and mail this notice to the MSB Platting Division, 350 E. Dahlia Avenue, Palmer, Alaska 99645 or e-mail: platting@matsugov.us. Comments received from the public after the platting packet has been written will be given to the Platting Board in a "Hand-Out" the day of the meeting. **All public comments are due one (1) day prior, by 12:00 p.m.** To request additional information please contact the Platting Technician, ***Matthew Goddard*** at (907) 861-7881.
To view the agenda or meeting packet please go to the following link: www.matsugov.us/boards/platting.

[ ] No Objection [X] Objection [X] Concern

Name: John Giyer *Address:* 10200 E Bradley Lake Ave.

Comments: We have been here our whole life, Considering the recent expansions of the nearby gravel pits, the water table has dropped significantly. the local ecology and wildlife (and their offspring) have been dwindling as a result of the aforementioned issues, however we feel that subdividing would further devastate what remains of our wildlife. Over the years, as deforestation has cleared much of our local wood, further the dust has, as things are, been unbearable. My parents bought this property in the '60s as a safehaven, and left it to my wife & I for refuge & sight

Case # 2025-054 MG *Note: Vicinity map Located on Reverse Side*

Please reconsider your position & please consider our Protest. Thank you for your time,

ENSTAR Natural Gas Company, LLC
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

May 5, 2025

Matanuska-Susitna Borough, Platting Division
350 East Dahlia Avenue
Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company, LLC has reviewed the following preliminary plat and has no comments or recommendations.

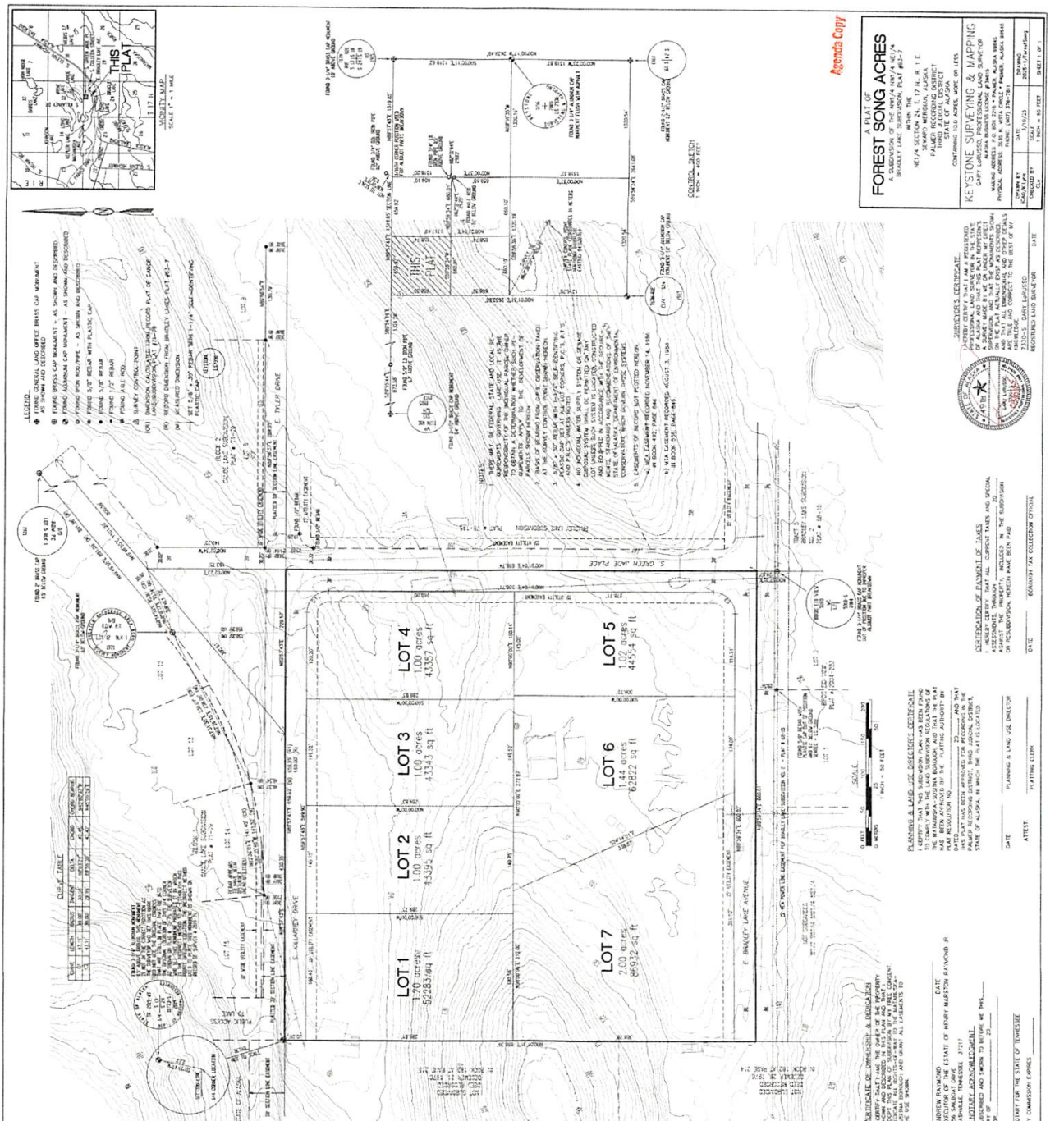
- **FOREST SONG ACRES**
  (MSB Case # 2025-054)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

James Christopher
Right of Way & Permitting Agent
ENSTAR Natural Gas Company, LLC


Agenda Copy
A PLAT OF
FOREST SONG ACRES
KEYSTONE SURVEYING & MAPPING
LOT 1
1.20 acres
52283 sq ft
LOT 2
1.00 acres
43395 sq ft
LOT 3
1.00 acres
43343 sq ft
LOT 4
1.00 acres
43357 sq ft
LOT 5
1.02 acres
44454 sq ft
LOT 6
1.44 acres
62822 sq ft
LOT 7
2.00 acres
86932 sq ft
THIS PLAT
S. GREEN JADE PLACE
E. BRADLEY LAKE AVENUE
S. KALGHATGI DRIVE
E. TYLER DRIVE
VICINITY MAP
SURVEYOR'S CERTIFICATE
PLANNING & LAND USE DIRECTOR'S CERTIFICATE
CERTIFICATE OF OWNERSHIP & DEDICATION
CERTIFICATION OF PAYMENT OF TAXES

Matthew Goddard

From: OSP Design Group <ospdesign@gci.com>
Sent: Monday, May 19, 2025 5:16 PM
To: Matthew Goddard
Cc: OSP Design Group
Subject: RE: RFC Forest Song Acres (MG)
Attachments: Agenda Plat (34).pdf

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Matthew,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,
GCI | OSP Design
1001 Northway Dr., 1st Floor, Anchorage, AK 99508
e: OSPDesign@gci.com | **w:** www.gci.com

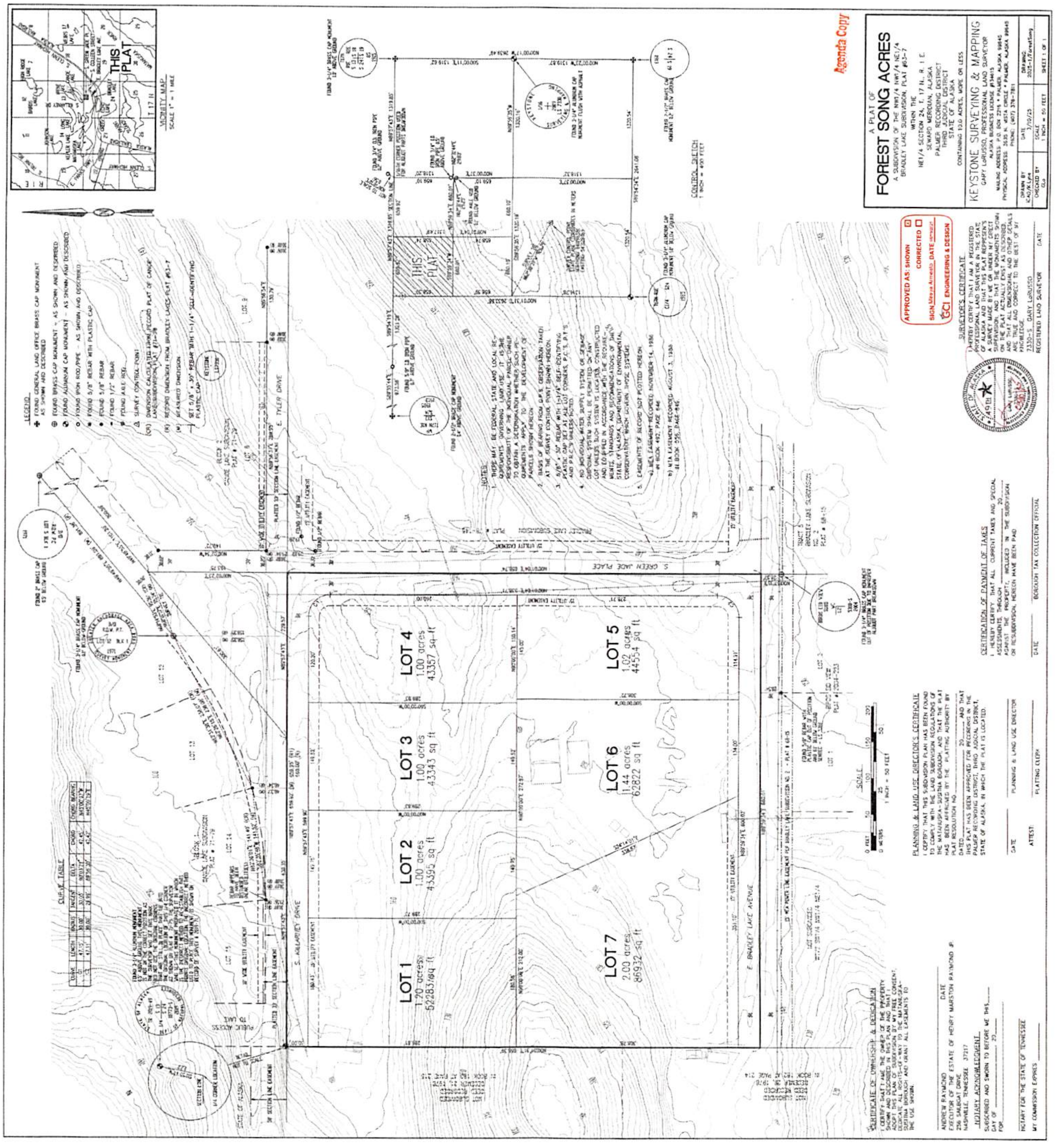
From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Monday, April 28, 2025 4:51 PM
To: Myers, Sarah E E (DFG) <sarah.myers@alaska.gov>; Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; gatewaycommunitycouncil@gmail.com; Chad Cameron Contact <ccameron@palmerak.org>; jprevost@palmerak.org; Brian Davis <Brian.Davis@matsugov.us>; APP <stark@mtaonline.net>; Stephanie Nowers <stephanienowersdistrict2@gmail.com>; Land Management <Land.Management@matsugov.us>; Jillian Morrissey <Jillian.Morrissey@matsugov.us>; Tom Adams <Tom.Adams@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Code Compliance <Code.Compliance@matsugov.us>; Kendra Johnson <Kendra.Johnson@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Taunnie Boothby <Taunnie.Boothby@matsugov.us>; msbaddressing <msbaddressing@matsugov.us>; eric.r.schuler@usps.gov; Shannon Bodolay <Shannon.Bodolay@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; ROW <row@enstarnaturalgas.com>; Right of Way Dept. <row@mtasolutions.com>; OSP Design Group <ospdesign@gci.com>; mearow@mea.coop
Subject: RFC Forest Song Acres (MG)

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

Hello,

The following link is a request for comments for the proposed Forest Song Acres.
Please ensure all comments have been submitted by May 19, 2025, so they can be incorporated into the staff report packet.

Forest Song Acres


A PLAT OF
FOREST SONG ACRES
LOT 1
1.20 acres
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1.00 acres
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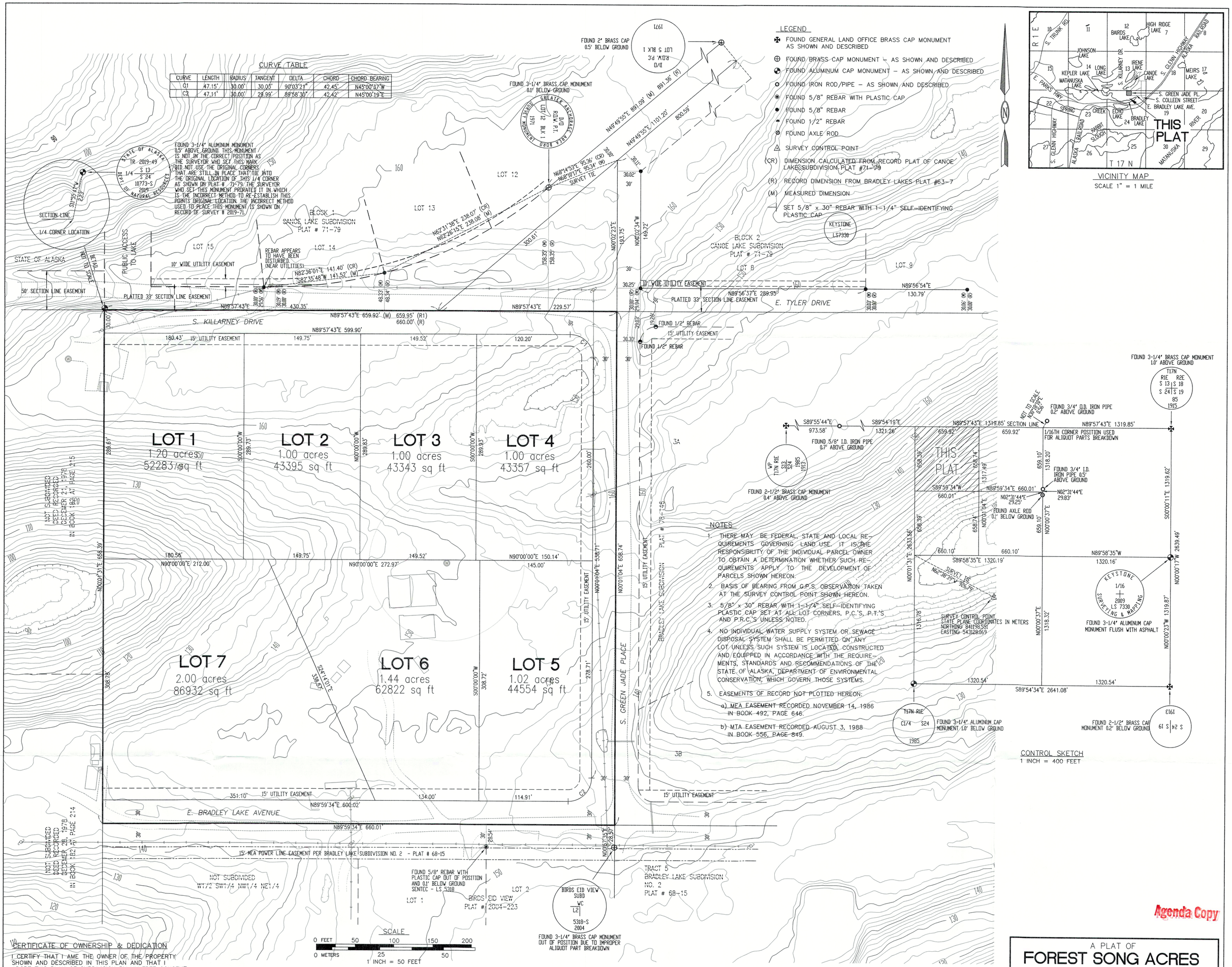
2.00 acres
THIS PLAT
VICINITY MAP
Agenda Copy
KEYSTONE SURVEYING & MAPPING



CERTIFICATE OF OWNERSHIP & DEDICATION

I CERTIFY THAT I AME THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT I ADOPT THIS PLAN OF SUBDIVISION BY MY FREE CONSENT, DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH AND GRANT ALL EASEMENTS TO THE USE SHOWN.

ANDREW RAYMOND DATE
EXECUTOR OF THE ESTATE OF HENRY MARSTON RAYMOND JR.
256 SAILBOAT DRIVE
NASHVILLE, TENNESSEE 37217

NOTARY ACKNOWLEDGMENT

SUBSCRIBED AND SWORN TO BEFORE ME THIS_____
DAY OF _____, 20_____
FOR_____.

NOTARY FOR THE STATE OF TENNESSEE

MY COMMISSION EXPIRES _____

PLANNING & LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THIS SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY PLAT RESOLUTION NO._____,
DATED_____, 20_____, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA, IN WHICH THE PLAT IS LOCATED.

DATE PLANNING & LAND USE DIRECTOR

ATTEST: PLATTING CLERK

CERTIFICATION OF PAYMENT OF TAXES

I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH _____, 20_____, AGAINST THE PROPERTY, INCLUDED IN THE SUBDIVISION OR RESUBDIVISION, HEREON HAVE BEEN PAID.

DATE BOROUGH TAX COLLECTION OFFICIAL

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

7330-S GARY LoRUSSO
REGISTERED LAND SURVEYOR DATE

STATE OF ALASKA 49TH GARY LoRUSSO 7330-S REGISTERED PROFESSIONAL LAND SURVEYOR 03/10/25

A PLAT OF
FOREST SONG ACRES
A SUBDIVISION OF THE NW1/4 NW1/4 NE1/4
BRADLEY LAKE SUBDIVISION, PLAT #63-7
WITHIN THE
NE1/4 SECTION 24, T. 17 N., R. 1 E.
SEWARD MERIDIAN, ALASKA
PALMER RECORDING DISTRICT
THIRD JUDICIAL DISTRICT
STATE OF ALASKA
CONTAINING 10.0 ACRES, MORE OR LESS

KEYSTONE SURVEYING & MAPPING
GARY LoRUSSO, PROFESSIONAL LAND SURVEYOR
ALASKA BUSINESS LICENSE #134615
MAILING ADDRESS: P.O. BOX 2216 * PALMER, ALASKA 99645
PHYSICAL ADDRESS: 3635 N. VISTA CIRCLE * PALMER, ALASKA 99645
PHONE: (907) 376-7811

DRAWN BY	DATE	DRAWING:
ICAD/K.Lyne	3/10/25	2025-1/ForestSong
CHECKED BY GLo	SCALE 1 INCH = 50 FEET	SHEET 1 OF 1

B

STAFF REVIEW AND RECOMMENDATIONS
PUBLIC HEARING
JUNE 19, 2025

PROJECT NAME:	BEAR STREET AGAPE PUBLIC USE EASEMENT VACATION
LEGAL DESCRIPTION:	SECTIONS 28, T18N, R01E, SEWARD MERIDIAN, AK
PETITIONER:	AGAPE FELLOWSHIP
SURVEYOR:	HANSON LAND SOLUTIONS
REVIEWED BY:	CHRIS CURLIN CASE #: 2025-056

REQUEST: The request is to vacate the Right of Way for E. Bear Cub Court, eliminate the common lot lines between lots 17A, 17B, 16A, & 16B, and eliminate the screening easement between Lots 16A & 16B, of LOTS 16A, 16B, 17A, & 17B, BLOCK 2 BARRY'S ACRES NO.2 SUBDIVISION (Plat#84-142)to be known as BEAR STREET AGAPE, containing 4.10 acres +/-. The property is located directly east of N. Bear Street and directly north of E. Bogard Road; within the SW ¼ Section 28, Township 18 North, Range 01 East, Seward Meridian, Alaska. In the North Lakes Community Council and Assembly District #6.

EXHIBITS

Vicinity Map and Aerial Photos	**EXHIBIT A** – 4 pgs
Petition for Vacation of Right of Way	**EXHIBIT B** – 2 pgs
Posting Photos	**EXHIBIT C** – 1 pg
AGENCY COMMENTS	
ADOT&PF	**EXHIBIT D** – 3 pgs
MSB DPW Pre-Design & Engineering	**EXHIBIT E** – 2 pgs
MSB Permit Center	**EXHIBIT F** – 1 pg
Utilities	**EXHIBIT G** – 4 pgs

DISCUSSION: N. Bear Cub Court is no longer needed as designed. The petitioner owns all lots around the cul-de-sac. The petitioner has proposed granting a R.O.W. along the north border of Lots 16A & 17A.
Pursuant to MSB 43.15.035(B) A dedication to public use of land or interests in land may be vacated if the dedication is no longer necessary for present or future public use. The platting board shall review applications for vacations as follows: (1) The platting board shall ordinarily approve vacations of public rights-of-way if: (c) the right of way is not being used, a road is impossible or impractical to construct, and alternative access has been provided.
Pursuant to MSB 43.15.035(B)(2)(d) No objections to the vacation are made by persons with an interest in land adjacent to or affected by the vacation, or by any government agency or department which has a responsibility to the public which may be affected by the vacation.

SOILS: A soils report was not required, pursuant to MSB 43.15.035.

Comments:
ADOT&PF (Exhibit D) No objection to the proposed lot consolidation.
Add plat note "No direct access to Bogard Road."
This plat falls within the boundary of the Mat-Su Borough's Bogard/Seldon Corridor Access Management Plan (CAMP), which is currently scheduled for review by the Borough Assembly on June 3rd, 2025.
DOT&PF supports the Mat-Su Borough's planning efforts through the CAMP to utilize Bear Cub Court as a frontage or backage road. If the public right of way established through Bear Cub Court is removed, provide alternate right of way to replace the public's interest in Bear Cub Court.
This plat is within the boundary of an active DOT&PF construction project: Bogard Road Pavement Preservation Trunk Road to Wasilla-Fishhook Road. For further information contact project manager Ericka Moore at ericka.moore@alaska.gov or (907) 269-0450.
This plat is within the boundary of an active DOT&PF design project: Bogard Road Safety & Capacity Improvements. For further information contact project manager Chris Bentz at chris.bentz@alaska.gov or (907) 707-1912.
Platting staff notes this is Recommendation #3.

MSB DPW Pre-Design and Engineering **(Exhibit E)** PD&E recommends a condition of approval that Bear Cub Ct. be decertified and removed from the RSA maintenance contract.
Platting staff notes this is Recommendation # 6.
PD&E comments the plat provided dedicates a 50' public use easement.
PD&E would support a 60' public use easement dedication.
Platting staff notes this is Recommendation # 5.

MSB Permit Center **(Exhibit F)** Each access or encroachment constructed during subdivision road development shall be reported to the Permit Center for documentation. Cluster box pullout locations should be designed using the MSB Standard Drawing – Mailbox Pullouts, and in alignment with lot lines as shown on the plat layout.
No other comments from the Permit Center.

Utilities: **(Exhibit G)** ENSTAR has no comments. GCI will maintain their easements. MTA and MEA did not respond.

At the time of staff report write-up, there were no responses to the Request for Comments from ADF&G, Community Council North Lakes; Fire Service Area #130 Central Mat-Su; Road Service Area #25 Bogard, MSB Community Development, Capital Projects, Assessments, Planning, Development Services; MTA , MEA; or the public.

CONCLUSION: A dedication to public use of land or interests in land may be vacated if the dedication is no longer necessary for present or future public use. The right of way is not being used and alternative access has been provided. Approval from the Assembly will be required prior to recording.

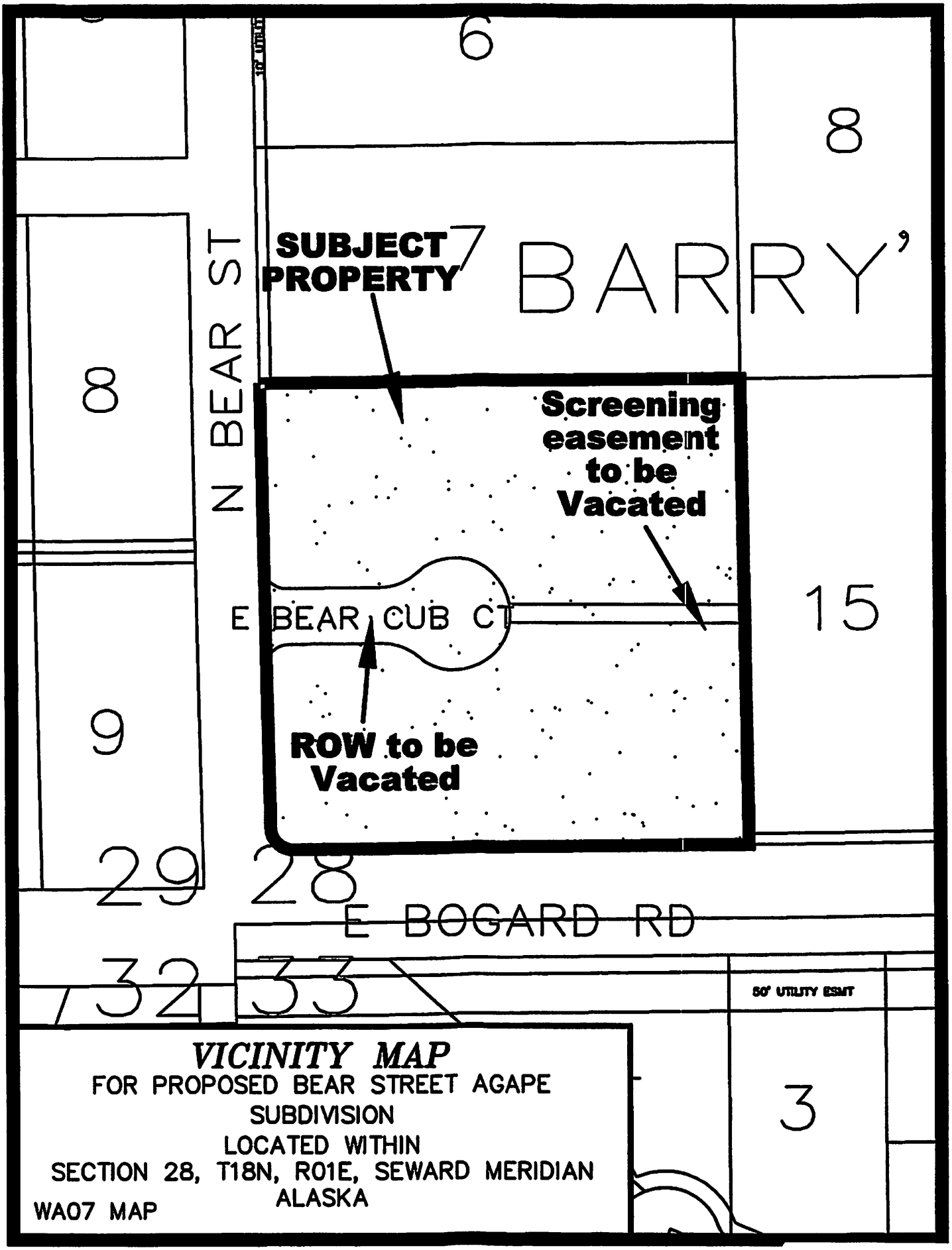
FINDINGS OF FACT for PRELIMINARY PLAT
1. The vacation of portions of the Easement is consistent with MSB 43.15.035 Vacations.
2. Pursuant to MSB 43.10.065(G), petitioner will provide an Affidavit of Posting of the Public Notice of Vacation of the Easement after the 30-day requirement has been met.
3. Approval from the Assembly will be required prior to recording, pursuant to MSB 43.15.035(D).

4. At the time of staff report write-up, there were no responses to the Request for Comments from ADF&G, Community Council North Lakes; Fire Service Area #130 Central Mat-Su; Road Service Area #25 Bogard, MSB Community Development, Capital Projects, Assessments, Planning, Development Services; MTA, MEA; or the public.
5. There were no objections from any federal or state agencies, or Borough departments.
6. There were no objections from the public in response to the Notice of Public Hearing.

RECOMMENDATION FOR APPROVAL OF PRELIMINARY PLAT

Suggested motion: I move to approve the vacation of the ROW for E. Bear Cub Court in Section 28, Township 17 North, Range 01 East, Seward Meridian, Alaska, contingent on staff recommendations:

1. Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
2. Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
3. Add plat note "No direct access to Bogard Road."
4. Obtain Assembly Approval of the vacation within 30 days of Platting Board approval.
5. Provide Plat granting a 60' Right of Way along the north boundary of Lots 16A & 17A.
6. Decertify N. Bear Cub Court and remove from RSA.
7. Pay postage and advertising fees.
8. Submit recording fees, payable to Department of Natural Resources (DNR).
9. Submit final plat in full compliance with Title 43 and State of Alaska requirements.



VICINITY MAP

FOR PROPOSED BEAR STREET AGAPE SUBDIVISION
LOCATED WITHIN
SECTION 28, T18N, R01E, SEWARD MERIDIAN
ALASKA
WA07 MAP

EXHIBIT A-1


WA07
E Bear Cub Ct
N Bear St
E Bogard Rd
MatSuBoroug
60 30 0 60 Feet

EXHIBIT A-2

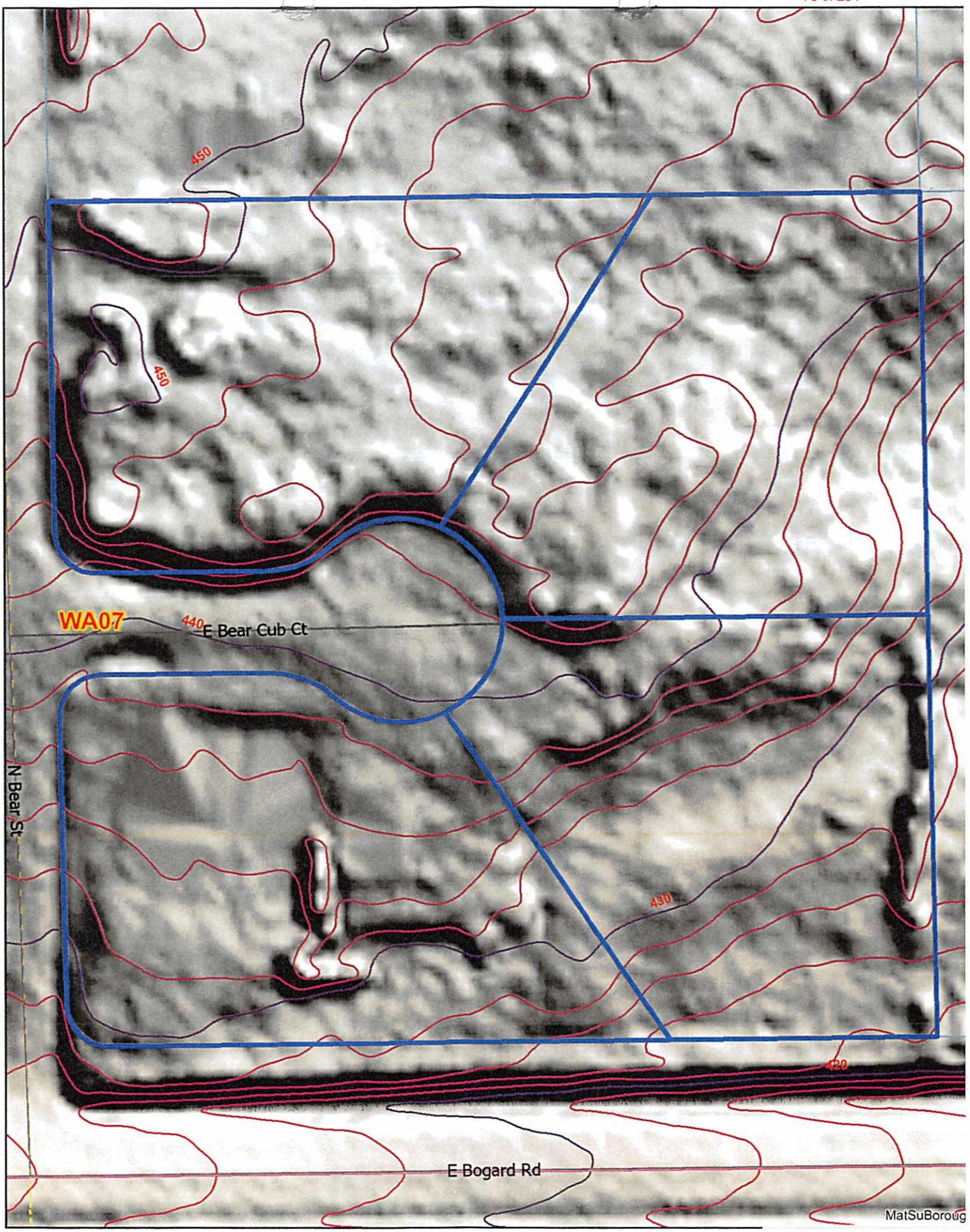

450
450
WA07
440
E Bear Cub Ct
N Bear St
430
420
E Bogard Rd
MatSuBorough
60 30 0 60 Feet

EXHIBIT A -3

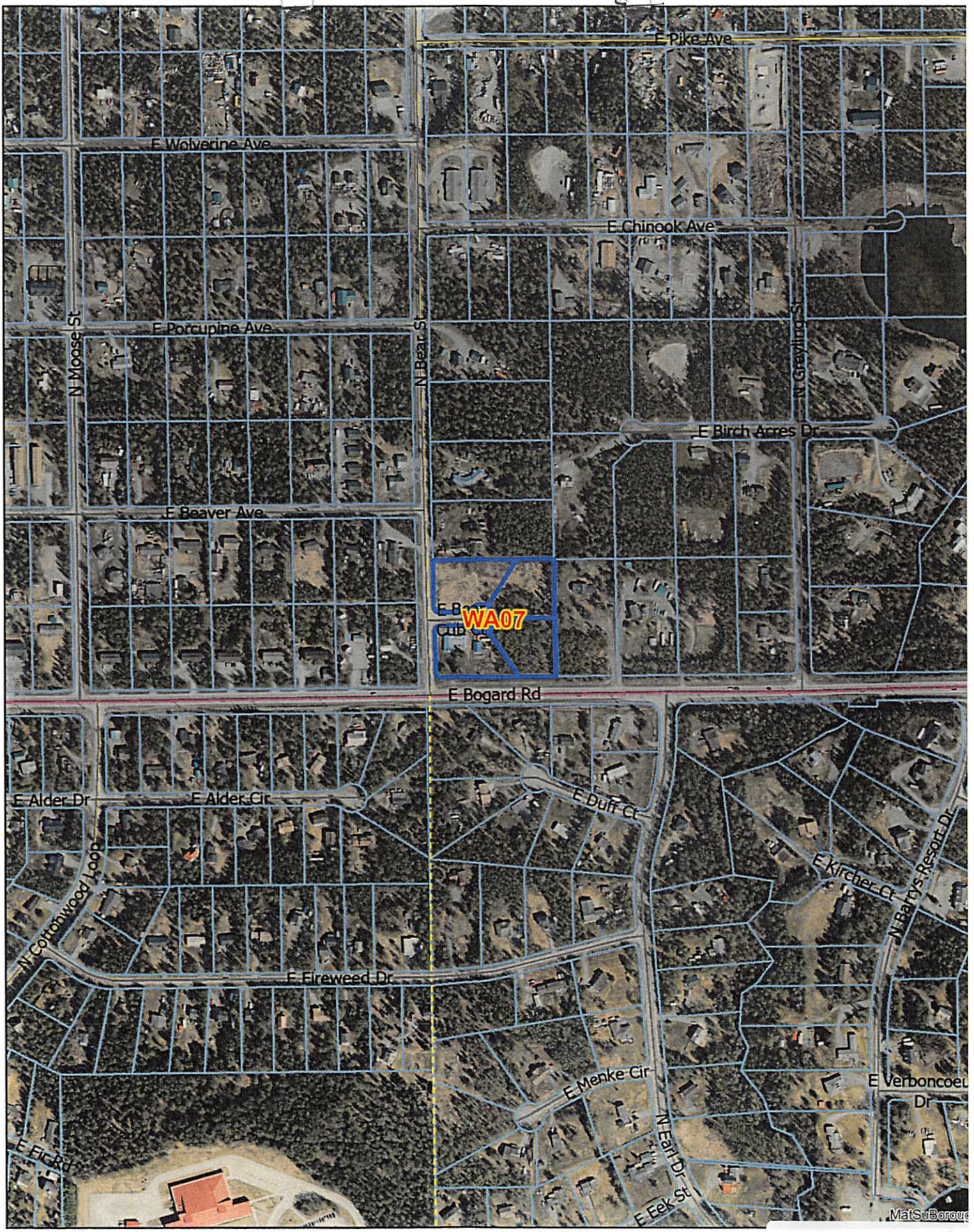

E Pike Ave
E Wolverine Ave
E Chinook Ave
N Moose St
E Porcupine Ave
N Bear St
N Grayling St
E Birch Acres Dr
E Beaver Ave
WA07
E Bogard Rd
E Alder Dr
E Alder Cir
E Duff Ct
E Kircher Ct
N Barys Resort Dr
N Cottonwood Loop
E Fireweed Dr
E Menke Cir
N Earl Dr
E Eek St
E Fir Rd
425 212.5 0 425 Feet

EXHIBIT A-4

Matanuska-Susitna Borough
Telephone (907) 861-7874

350 East Dahlia Avenue
Palmer, Alaska 99645-6488

PETITION FOR VACATION OF RIGHT-OF-WAY

Comes now the undersigned, Craig Hanson, and petitions the Matanuska-Susitna Borough to vacate the right-of-way lying within the following described property, to-wit:

ROW IN Barry's Acres #2

Said right-of-way being more fully described as: a short Road + Culdesac cutting into the existing Barrys Acres #2 Sub

(ATTACH SUPPLEMENTAL SHEET IF APPLICABLE)

Submitted herewith are the following:

1. A copy of the plat showing the right-of-way to be vacated; or
2. A recorded public easement creating the public right-of-way; and
3. **$250.00** Right-of-Way Vacation Fee with Regular Plat; or
4. **$500.00** for Stand Alone Vacation.

The action sought by this petition is for the following reason(s): ***(ATTACH PAGES, IF NEEDED)***

INCREASE USABILITY of Land

APPLICANT Name: Agape Fellowship Email:

OR Mailing Address: 6000 Bear Cub Ct Zip: 99654

OWNER Contact Person: Nathaniel Buck Phone:

SURVEYOR Name (FIRM): Hanson Land Solution Email: ceh@HLS.com

EXHIBIT B-1

Mailing Address: 305 E. Fireweed Ave Palmer, AK Zip: 99654

Contact Person: Craig Hanson Phone: (907) 746-7738

SIGNATURES OF PETITIONER(S):

Craig Hanson

NOTE: In accordance with MSB 43.15.035(D), vacations of public rights-of-way are subject to consent of the City Council or Borough Assembly. The City Council or Borough Assembly has 30 days from the date of Platting Board written decision in which to veto the action.

THIS AREA TO BE COMPLETED BY THE MATANUSKA-SUSITNA BOROUGH

THE APPLICATION HAS BEEN REVIEWED AND FOUND TO MEET SUBMITTAL STANDARDS AS NOTED ABOVE.

6/11/2025
DATE

PLATTING DIVISION REPRESENTATIVE

SCHEDULED FOR PLATTING BOARD MEETING OF: June 19, 2025


MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Platting Division
350 East Dahlia Avenue • Palmer AK 99645
Phone (907) 861-7874 • Fax (907) 861-8407
PUBLIC NOTICE OF VACATION OF A PUBLIC RIGHT-OF-WAY
LEGAL DESCRIPTION: E. Bear Cub Ct.
POSTING DATE: 5/19/25
MSB Platting Division Case # 2025-056
Applicant: Apex Fellowship / Stevenson Subdivision
Mailing Address:
PO Box 865 Palmer, AK 99645 / 335 E. Fireweed Ave. Palmer, AK 99645
To Whom It May Concern:
THE PLATTING BOARD WILL CONVENE AT 1:00 PM. 6/17/25 , in the Assembly Chambers of the Dorothy Swanda Jones Building, 350 E. Dahlia Avenue, Palmer, Alaska.

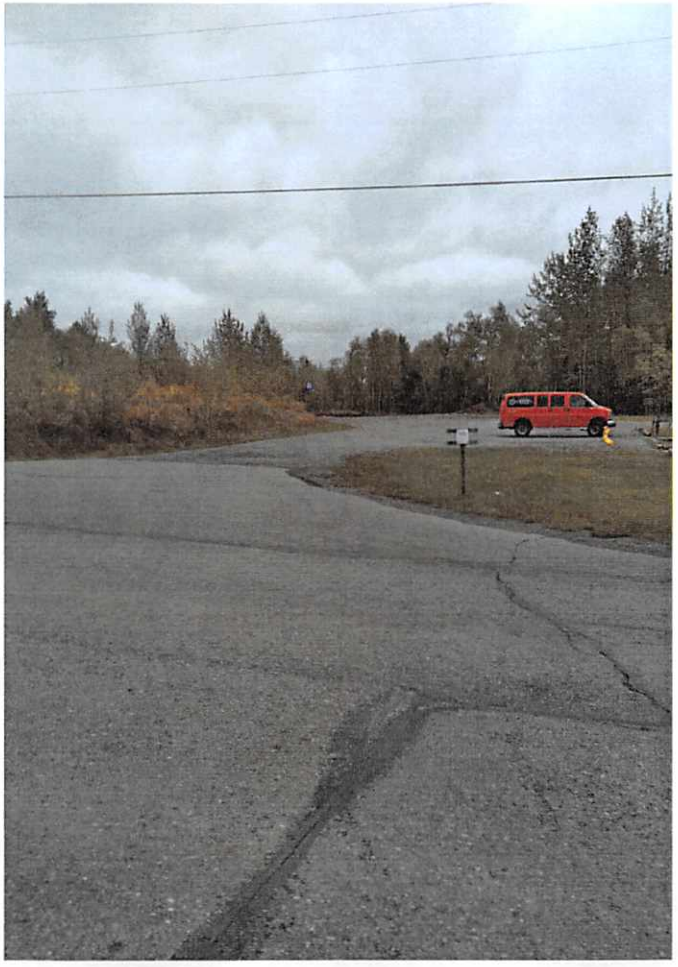


EXHIBIT C

THE STATE of ALASKA
GOVERNOR MICHAEL J. DUNLEAVY

Department of Transportation and Public Facilities

4111 Aviation Avenue
P.O. Box 196900
Anchorage, AK 99519-6900
Main: 907-269-0520
Fax: 907-269-0521
dot.alaska.gov

May 12, 2025

Fred Wagner, Platting Officer
Matanuska-Susitna Borough
350 East Dahlia Avenue
Palmer, AK 99645

[Sent Electronically]

Re: Plat Review

Dear Mr. Wagner:

The Alaska Department of Transportation and Public Facilities (DOT&PF) Central Region has reviewed the following plats and have the following comments:

- **Cottini Lots 1 & 3 RSB Pre-Application; Plat #2025-5; Cottini Farm (Palmer-Fishhook Road)**
  - No direct access to Palmer-Fishhook Road for Lot 3A. Add as plat note.
  - Shared access via common access easement for Lots 3A and 1A to Palmer-Fishhook Road. Add as plat note.
  - Recommend reviewing common access easement to ensure that it meets platting regulation requirements, MSB code, and allows for sufficient queuing and geometry for access to Palmer-Fishhook Road for both lots that it is accommodating.
  - Platting actions invalidate existing access permits. Apply for shared driveway permit for lot 3A and 1A. Driveway permits and Approach Road Review can be applied for at DOT&PF's online ePermits website: https://dot.alaska.gov/row/Login.po. Please contact DOT&PF's ROW division at 1-800-770-5263 to speak with a regional permit officer if you have any questions.
  - All new utility connects and access through Tex-Al Drive.
  - Further development of all lots should focus internal circulation through Tex-Al Road.
  - Please be advised of future traffic changes at the Trunk Road and Palmer-Fishhook Road intersection, which will become a roundabout. For further information contact project manager Galen Jones at galen.jones@alaska.gov or 907-269-0550.
  - Please be advised that these lots are within the boundary of the Palmer-Fishhook Separated Pathway project. For further information contact project manager Aaron Hunting at aaron.hunting@alaska.gov of 907-269-0546.

- **KGB Rd Recon Ph 2 Right of Way Acquisition Plat (Knik-Goose Bay Road)**
  - DOT&PF supports this Right of Way acquisition package in support of the DOT&PF Knik-Goose Bay Road Reconstruction Phase 2 project.

EXHIBIT D - 1

- **KG 06 Hester Pre-Application; KG 06 North Star Law Group; Plat #99-125 & Plat #79-231 (Knik River Road)**
  - No objection to changing lot lines or retainment of easement for access from Lot 2 to Dock Circle.
  - Shared access to Knik River Road is required as shown through shared access easement. If not recorded already, record shared access easement.
  - Required plat note that says the following or similar: "Single access for both lots to Knik River Road."
  - Subsequent development of either lot will require continued access through shared access easement or through Dock Circle.
  - Platting actions invalidate existing access permits. Apply for shared driveway permit. Driveway permits and Approach Road Review can be applied for at DOT&PF's online ePermits website: https://dot.alaska.gov/row/Login.po. Please contact DOT&PF's ROW division at 1-800-770-5263 to speak with a regional permit officer if you have any questions.

- **Bear Street Agape Preliminary Plat; Plat #84-142; WA 07 Hall (Bogard Road)**
  - No objection to the proposed lot consolidation.
  - Add plat note "No direct access to Bogard Road."
  - This plat falls within the boundary of the Mat-Su Borough's Bogard/Seldon Corridor Access Management Plan (CAMP), which is currently scheduled for review by the Borough Assembly on June 3rd, 2025.
  - DOT&PF supports the Mat-Su Borough's planning efforts through the CAMP to utilize Bear Cub Court as a frontage or backage road. If the public right of way established through Bear Cub Court is removed, provide alternate right of way to replace the public's interest in Bear Cub Court.
  - This plat is within the boundary of an active DOT&PF construction project: Bogard Road Pavement Preservation Trunk Road to Wasilla-Fishhook Road. For further information contact project manager Ericka Moore at ericka.moore@alaska.gov or (907) 269-0450.
  - This plat is within the boundary of an active DOT&PF design project: Bogard Road Safety & Capacity Improvements. For further information contact project manager Chris Bentz at chris.bentz@alaska.gov or (907) 707-1912.

All properties accessing DOT&PF roads must apply to Right of Way for a driveway permit and/or approach road review, subject to provisions listed in 17 AAC 10.020. Any previously issued access permits become invalid once the property undergoes a platting action and must be reissued.

We recommend the petitioner verify all section line easements and DOT&PF road rights-of-way adjacent to their property. For assistance, the petitioner may contact the Engineering group within the Right of Way section in DOT&PF at (907) 269-0700. The petitioner is liable to remove any improvements within the easements and rights-of-way that impede the operation and maintenance of those facilities even if they are not shown on the plat, so it is in the petitioner's best interest to identify the exact locations and widths of any such easements or rights-of-way before they improve the property.

If any section line easements or road rights-of-way exist within the bounds of their plat, we recommend the petitioner dedicate them. If there is an existing right-of-way or easement, the petitioner is unable to develop that portion of the property yet continues to pay property taxes on it; dedicating will remove that cost to the petitioner.

If there are any questions regarding these comments please feel free to contact me at (907) 269-0509 or kristina.huling@alaska.gov.

Sincerely,

Kristina Huling
Mat-Su Area Planner, DOT&PF

cc: Sean Baski, Highway Design Chief, DOT&PF
Matt Walsh, Property Management Supervisor, Right of Way, DOT&PF
Devki Rearden, Engineering Associate, DOT&PF
Morris Beckwith, Right of Way, DOT&PF
Brad Sworts, Pre-Design & Engineering Div. Manager, MSB
Anna Bosin, Traffic & Safety Engineer, DOT&PF

Chris Curlin

From: Tammy Simmons
Sent: Monday, June 9, 2025 4:00 PM
To: Chris Curlin; Brad Sworts; Jamie Taylor; Tammy Simmons
Subject: RE: 24-239 BEAR ST. AGAPE

Hello,

PD&E comments the plat provided dedicates a 50' public use easement. PD&E would support a 60' public use easement dedication.

Thank you.

PD&E Review Team

-----Original Message-----
From: Chris Curlin <Chris.Curlin@matsugov.us>
Sent: Monday, June 9, 2025 2:27 PM
To: Brad Sworts <Brad.Sworts@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>
Subject: FW: 24-239 BEAR ST. AGAPE

Hello,

A 60' public use easement has been added to the agenda plat.
The staff report is due today so there's not much time for comments.
If adding the easement is an issue, please let me know.

Sincerely,

Chris Curlin
Platting Technician
Matanuska-Susitna Borough
(907) 861-7873

-----Original Message-----
From: HLS PLATTING <platting@hlsalaska.com>
Sent: Monday, June 9, 2025 1:37 PM
To: Chris Curlin <Jesse.Curlin@matsugov.us>
Subject: 24-239 BEAR ST. AGAPE

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

EXHIBIT E - 1

Chris Curlin

From: Tammy Simmons
Sent: Tuesday, May 20, 2025 2:57 PM
To: Chris Curlin
Cc: Brad Sworts; Jamie Taylor; Daniel Dahms; Tammy Simmons
Subject: RE: RFC Bear Street Agape (CC)

Hello,

PD&E recommends a condition of approval that Bear Cub Ct. be decertified and removed from the RSA maintenance contract.

Thank you.

PD&E Review Team

From: Chris Curlin <Chris.Curlin@matsugov.us>
Sent: Monday, May 5, 2025 3:36 PM
To: Alex Strawn <Alex.Strawn@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Brian Davis <Brian.Davis@matsugov.us>; Christina Sands <Christina.Sands@matsugov.us>; Colton Percy <colton.percy@alaska.gov>; Daniel Dahms <Daniel.Dahms@matsugov.us>; DNR <dnr.scro@alaska.gov>; Fred Wagner <Frederic.Wagner@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; Land Management <Land.Management@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Sarah Myers <sarah.myers@alaska.gov>; Tammy Simmons <Tammy.Simmons@matsugov.us>; The Postmaster <eric.r.schuler@usps.gov>; Tom Adams <Tom.Adams@matsugov.us>; USACE <regpagemaster@usace.army.mil>; Fonov <Fonov@matsugov.us>; North Lakes Community Council (board@nlakes.cc) <board@nlakes.cc>; Michael Keenan <Michael.Keenan@matsugov.us>; Jeffrey Anderson <Jeffrey.Anderson@matsugov.us>; Fire Code <Fire.Code@matsugov.us>; hessmer@mtaonline.net; Bob Keiner <bob.keiner@alaska.gov>; David Post <david.post@alaska.gov>; Kristina Huling <kristina.huling@alaska.gov>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; mearow@mea.coop; OSP Design Group <ospdesign@gci.com>; Right of Way Dept. <row@mtasolutions.com>; ROW <row@enstarnaturalgas.com>
Subject: RFC Bear Street Agape (CC)

Hello,

The following link is a request for comments for the proposed Bear Street Agape Subdivision.
Please ensure all comments have been submitted by May 23, 2025, so they can be incorporated into the staff report that will be presented to the Platting Board.

Bear Street Agape

Sincerely,

EXHIBIT E-2

Chris Curlin

From: Permit Center
Sent: Tuesday, May 6, 2025 11:03 AM
To: Chris Curlin
Subject: RE: RFC Bear Street Agape (CC)

Each access or encroachment constructed during subdivision road development shall be reported to the Permit Center for documentation. Cluster box pullout locations should be designed using the MSB Standard Drawing – Mailbox Pullouts, and in alignment with lot lines as shown on the plat layout.

No other comments from the Permit Center.

Brandon Tucker
Permit Technician
Matanuska-Susitna Borough Permit Center
350 E Dahlia Ave
Palmer AK 99645
P (907) 861-7871
F (907) 861-8158

From: Chris Curlin <Chris.Curlin@matsugov.us>
Sent: Monday, May 5, 2025 3:36 PM
To: Alex Strawn <Alex.Strawn@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Brian Davis <Brian.Davis@matsugov.us>; Christina Sands <Christina.Sands@matsugov.us>; Colton Percy <colton.percy@alaska.gov>; Daniel Dahms <Daniel.Dahms@matsugov.us>; DNR <dnr.scro@alaska.gov>; Fred Wagner <Frederic.Wagner@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; Land Management <Land.Management@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Sarah Myers <sarah.myers@alaska.gov>; Tammy Simmons <Tammy.Simmons@matsugov.us>; The Postmaster <eric.r.schuler@usps.gov>; Tom Adams <Tom.Adams@matsugov.us>; USACE <regpagemaster@usace.army.mil>; Fonov <Fonov@matsugov.us>; North Lakes Community Council (board@nlakes.cc) <board@nlakes.cc>; Michael Keenan <Michael.Keenan@matsugov.us>; Jeffrey Anderson <Jeffrey.Anderson@matsugov.us>; Fire Code <Fire.Code@matsugov.us>; hessmer@mtaonline.net; Bob Keiner <bob.keiner@alaska.gov>; David Post <david.post@alaska.gov>; Kristina Huling <kristina.huling@alaska.gov>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; mearow@mea.coop; OSP Design Group <ospdesign@gci.com>; Right of Way Dept. <row@mtasolutions.com>; ROW <row@enstarnaturalgas.com>
Subject: RFC Bear Street Agape (CC)

Hello,

The following link is a request for comments for the proposed Bear Street Agape Subdivision.
Please ensure all comments have been submitted by May 23, 2025, so they can be incorporated into the staff report that will be presented to the Platting Board.

Bear Street Agape

EXHIBIT F

ENSTAR Natural Gas Company, LLC
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

May 6, 2025

Matanuska-Susitna Borough, Platting Division
350 East Dahlia Avenue
Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company, LLC has reviewed the following preliminary plat and has no comments or recommendations.

- **BEAR STREET AGAPE**
  (MSB Case # 2025-056)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

James Christopher
Right of Way & Permitting Agent
ENSTAR Natural Gas Company, LLC

EXHIBIT G - 1

PLANNING & LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THIS SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY PLAT RESOLUTION NUMBER _____ DATED _____, 20__, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE RECORDER IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA, IN WHICH THE PLAT IS LOCATED

_____
PLANNING AND LAND USE DIRECTOR DATE

ATTEST: _____
(PLATTING CLERK)

CURVE TABLE						
CURVE #	LENGTH	RADIUS	DELTA	CHORD LENGTH	CHORD BEARING	TANGENT
C1	31.40	20.00	89°56'57"	28.28	S44° 57' 54"E	19.99
(C1)	(31.40)	(20.00)	(89°56'40")	(28.27)		(19.98)

CERTIFICATE OF OWNERSHIP

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE ADOPT THIS PLAN OF SUBDIVISION BY OUR FREE CONSENT.

_____
NATHANIEL BUCK(AUTHORIZED SIGNER) DATE
AGAPE FELLOWSHIP
P.O. BOX 865
PALMER, AK 99645

NOTARY ACKNOWLEDGEMENT

SUBSCRIBED AND SWORN TO BEFORE ME THIS

_____ DAY OF _____, 20___,

FOR _____

_____
NOTARY FOR THE STATE OF ALASKA

MY COMMISSION EXPIRES:_____

NOTES

1. ALL DISTANCES SHOWN ARE GROUND DISTANCES.
2. THE BASIS OF BEARING ON THIS PLAT IS TRUE NORTH WITH RESPECT TO THE LONGITUDINAL MERIDIAN THROUGH THE SOUTHEAST CORNER OF LOT 1, A RECOVERED PLASTIC CAP ON REBAR WITH A NETWORK GNSS GEODETIC POSITION OF 61°36'50.73"N 149°17'49.11"W
3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED, AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS, AND RECOMMENDATIONS OF THE STATE OF ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERNS THOSE SYSTEMS.
4. THERE MAY BE FEDERAL, STATE, AND LOCAL REQUIREMENTS GOVERNING LAND USE. THE INDIVIDUAL PARCEL OWNER SHALL OBTAIN A DETERMINATION WHETHER THESE REQUIREMENTS APPLY TO THE DEVELOPMENT OF PARCELS SHOWN ON THE PLAT TO BE RECORDED.
5. THIS SUBDIVISION IS ENCUMBERED BY A M.E.A. BLANKET EASEMENT RECORDED ON APRIL 20, 1958 IN BOOK 25, PAGE 282.

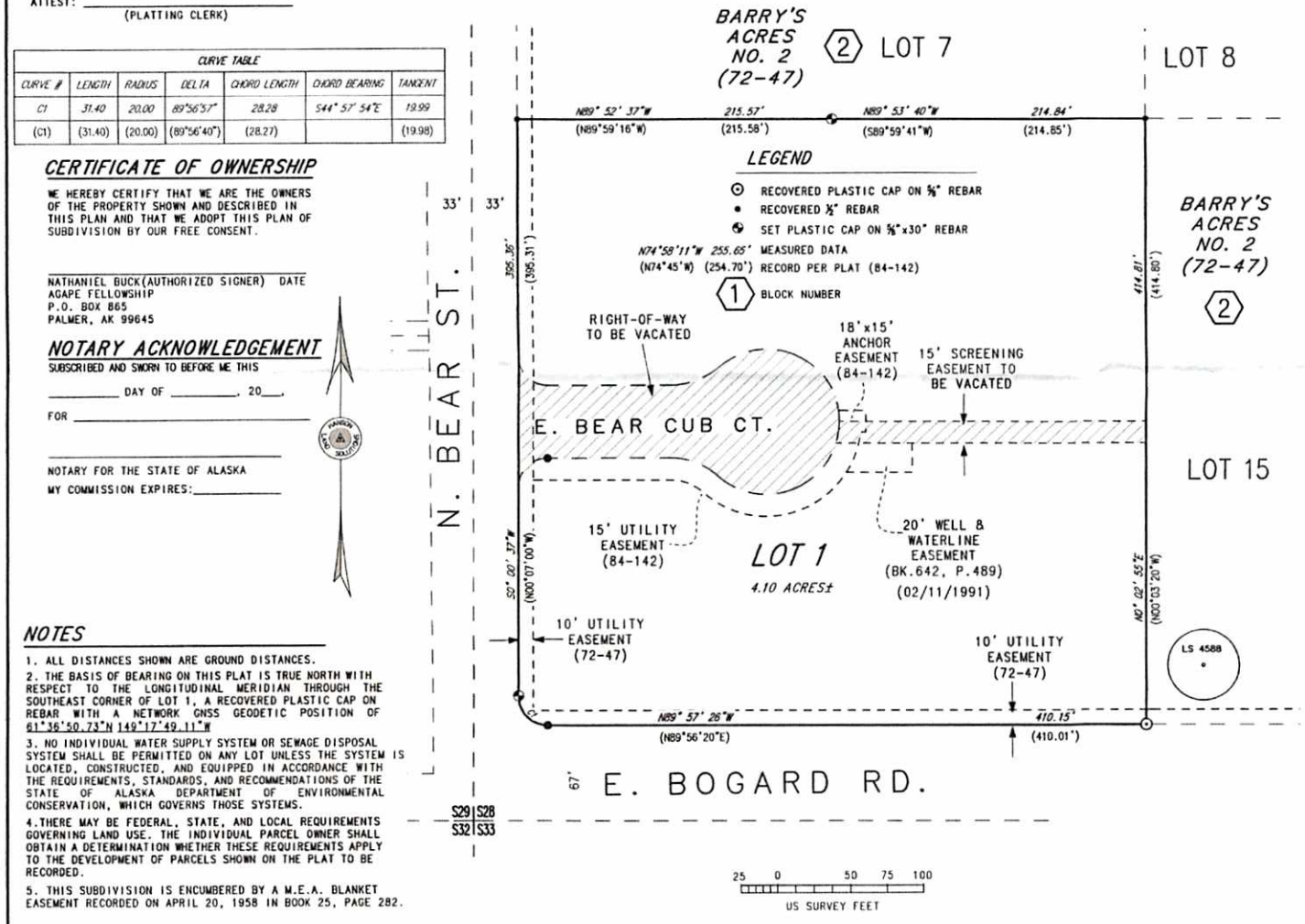
SDN

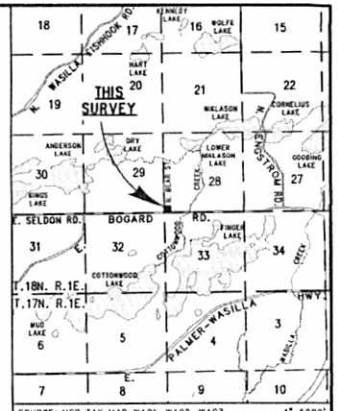
CERTIFICATE OF PAYMENT OF TAXES

I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH_____, 20___, AGAINST THE PROPERTY, INCLUDED IN THE SUBDIVISION OR RESUBDIVISION, HEREON HAVE BEEN PAID.

_____
TAX COLLECTION OFFICIAL DATE
(MATANUSKA-SUSITNA BOROUGH)

HANSON LAND SOLUTIONS SURVEY MARKER 2025 LS 12312
TYPICAL SET 1¾" PLASTIC CAP





SOURCE: MSB TAX MAP WA01, WA02, WA07, WA08, WA09, & WA10 1"=5280'

SURVEYOR'S CERTIFICATE

STATE OF ALASKA 49TH CRAIG E. HANSON LS 12312 REGISTERED PROFESSIONAL LAND SURVEYOR

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

_____
REGISTERED LAND SURVEYOR

Agenda Copy

RECEIVED
APR 2 1 2025
PLATTING

A PLAT OF
BEAR STREET AGAPE
A REPLAT OF
LOTS 16A, 16B, 17A, & 17B, BLOCK 2
BARRYS ACRES No. 2 LOTS 16 & 17, BLOCK 2
(PLAT 84-142)
AND VACATING E. BEAR CUB CT.
PALMER RECORDING DISTRICT
THIRD JUDICIAL DISTRICT
STATE OF ALASKA
LOCATED WITHIN
SW¼ SEC. 28, T.18N. R.1E. SM, AK
CONTAINING 4.10 ACRES MORE OR LESS

HANSON
LAND SOLUTIONS
ALASKA BUSINESS LICENSE #1525
305 EAST FIREWEED AVENUE
PALMER, ALASKA, 99645
(907)746-7738

FILE: FB24-239 | CK: CEH | SCALE:1"=50' | 01/27/25 | 1 OF 1

EXHIBIT G - 2

Chris Curlin

From: OSP Design Group <ospdesign@gci.com>
Sent: Tuesday, May 20, 2025 5:34 PM
To: Chris Curlin
Cc: OSP Design Group
Subject: RE: RFC Bear Street Agape (CC)
Attachments: Agenda Plat (35).pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
Chris,

In review GCI will maintain our easements for Bear Street Agape Lot 1 as designated on the attached signed plat.

Thanks,
GCI | OSP Design
1001 Northway Dr., 1st Floor, Anchorage, AK 99508
e: OSPDesign@gci.com | w: www.gci.com

From: Chris Curlin <Chris.Curlin@matsugov.us>
Sent: Monday, May 5, 2025 3:36 PM
To: Alex Strawn <Alex.Strawn@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Brian Davis <Brian.Davis@matsugov.us>; Christina Sands <Christina.Sands@matsugov.us>; Colton Percy <colton.percy@alaska.gov>; Daniel Dahms <Daniel.Dahms@matsugov.us>; DNR <dnr.scro@alaska.gov>; Fred Wagner <Frederic.Wagner@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; Land Management <Land.Management@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Sarah Myers <sarah.myers@alaska.gov>; Tammy Simmons <Tammy.Simmons@matsugov.us>; The Postmaster <eric.r.schuler@usps.gov>; Tom Adams <Tom.Adams@matsugov.us>; USACE <regpagemaster@usace.army.mil>; Fonov <Fonov@matsugov.us>; North Lakes Community Council (board@nlakes.cc) <board@nlakes.cc>; Michael Keenan <Michael.Keenan@matsugov.us>; Jeffrey Anderson <Jeffrey.Anderson@matsugov.us>; Fire Code <Fire.Code@matsugov.us>; hessmer@mtaonline.net; Bob Keiner <bob.keiner@alaska.gov>; David Post <david.post@alaska.gov>; Kristina Huling <kristina.huling@alaska.gov>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; mearow@mea.coop; OSP Design Group <ospdesign@gci.com>; Right of Way Dept. <row@mtasolutions.com>; ROW <row@enstarnaturalgas.com>
Subject: RFC Bear Street Agape (CC)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hello,

The following link is a request for comments for the proposed Bear Street Agape Subdivision.
Please ensure all comments have been submitted by May 23, 2025, so they can be incorporated into the staff report that will be presented to the Platting Board.

EXHIBIT G-3

EXHIBIT G-4

PLANNING & LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THIS SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY PLAT RESOLUTION NUMBER _____ DATED _____,20___, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE RECORDER IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA, IN WHICH THE PLAT IS LOCATED

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PLANNING AND LAND USE DIRECTOR DATE

ATTEST: _____
(PLATTING CLERK)

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(C1)	(31.40)	(20.00)	(89°56'40")	(28.27)		(19.98)

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AGAPE FELLOWSHIP
P.O. BOX 865
PALMER, AK 99645

NOTARY ACKNOWLEDGEMENT

SUBSCRIBED AND SWORN TO BEFORE ME THIS

_____ DAY OF _____, 20___,

FOR _____

_____
NOTARY FOR THE STATE OF ALASKA
MY COMMISSION EXPIRES:_____

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3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED, AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS, AND RECOMMENDATIONS OF THE STATE OF ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERNS THOSE SYSTEMS.
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SDN

HANSON LAND SOLUTIONS PALMER ALASKA 2025 LS 12312
TYPICAL SET 1¾" PLASTIC CAP

CERTIFICATE OF PAYMENT OF TAXES

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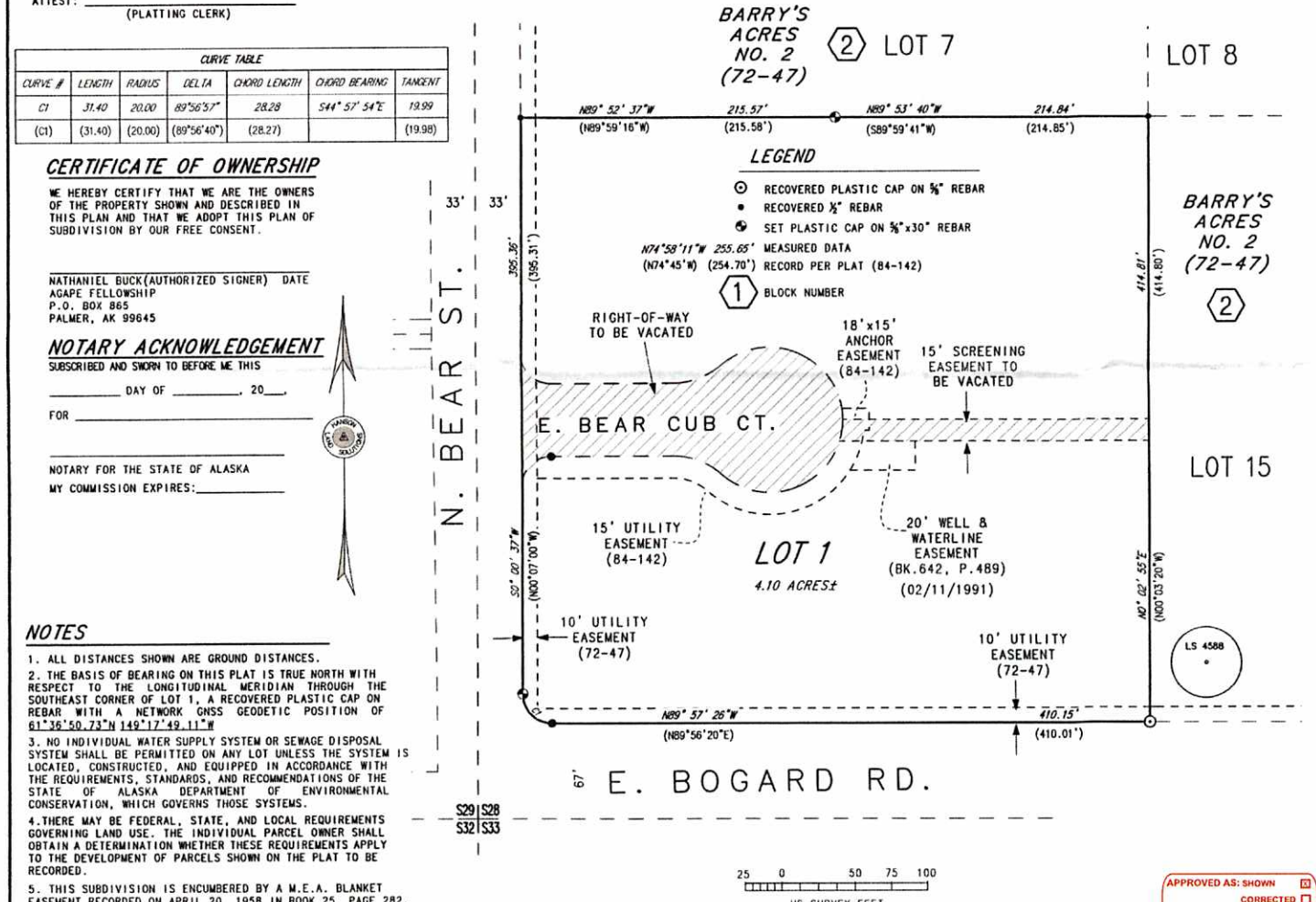

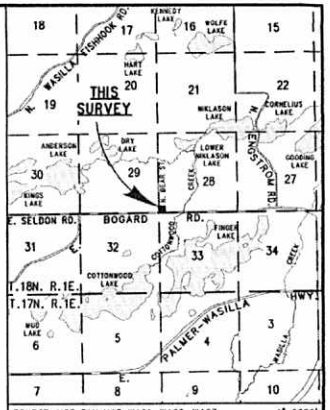

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REGISTERED LAND SURVEYOR

RECEIVED APR 21 2025 PLATTING
Agenda Copy

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A REPLAT OF
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PALMER RECORDING DISTRICT
THIRD JUDICIAL DISTRICT
STATE OF ALASKA
LOCATED WITHIN
SW¼ SEC. 28, T.18N. R.1E. SM, AK
CONTAINING 4.10 ACRES MORE OR LESS

APPROVED AS: SHOWN ☒ CORRECTED ☐
SIGN Mireya Armenta DATE 05/09/2025
GCI ENGINEERING & DESIGN

HANSON LAND SOLUTIONS
ALASKA BUSINESS LICENSE #1525
305 EAST FIREWEED AVENUE
PALMER, ALASKA, 99645
(907)746-7738

FILE: FB24-239 | CK: CEH | SCALE:1"=50' | 01/27/25 | 1 OF 1

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(C1)	(31.40)	(20.00)	(89°56'40")	(28.27)		(19.98)

CERTIFICATE OF OWNERSHIP

WE HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE ADOPT THIS PLAN OF SUBDIVISION BY OUR FREE CONSENT.

_____

NATHANIEL BUCK(AUTHORIZED SIGNER) DATE
AGAPE FELLOWSHIP
P.O. BOX 865
PALMER, AK 99645

NOTARY ACKNOWLEDGEMENT

SUBSCRIBED AND SWORN TO BEFORE ME THIS

_____ DAY OF _____, 20___,

FOR _____

_____

NOTARY FOR THE STATE OF ALASKA

MY COMMISSION EXPIRES:_____

NOTES

1. ALL DISTANCES SHOWN ARE GROUND DISTANCES.
2. THE BASIS OF BEARING ON THIS PLAT IS TRUE NORTH WITH RESPECT TO THE LONGITUDINAL MERIDIAN THROUGH THE SOUTHEAST CORNER OF LOT 1, A RECOVERED PLASTIC CAP ON REBAR WITH A NETWORK GNSS GEODETIC POSITION OF 61°36'50.73"N 149°17'49.11"W
3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED, AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS, AND RECOMMENDATIONS OF THE STATE OF ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERNS THOSE SYSTEMS.
4. THERE MAY BE FEDERAL, STATE, AND LOCAL REQUIREMENTS GOVERNING LAND USE. THE INDIVIDUAL PARCEL OWNER SHALL OBTAIN A DETERMINATION WHETHER THESE REQUIREMENTS APPLY TO THE DEVELOPMENT OF PARCELS SHOWN ON THE PLAT TO BE RECORDED.
5. THIS SUBDIVISION IS ENCUMBERED BY A M.E.A. BLANKET EASEMENT RECORDED ON APRIL 20, 1958 IN BOOK 25, PAGE 282.

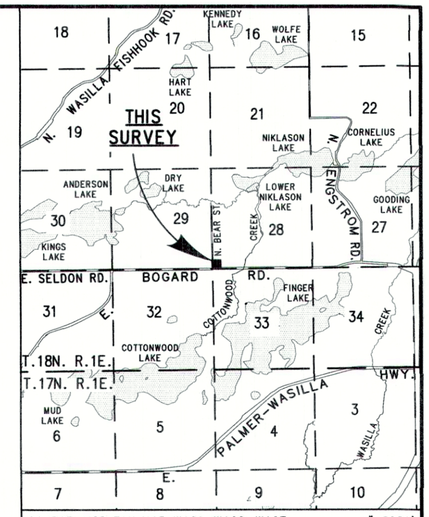
HANSON LAND SOLUTIONS BOUNDARY MARKER 2025 LS 12312
TYPICAL SET 1¾" PLASTIC CAP

CERTIFICATE OF PAYMENT OF TAXES

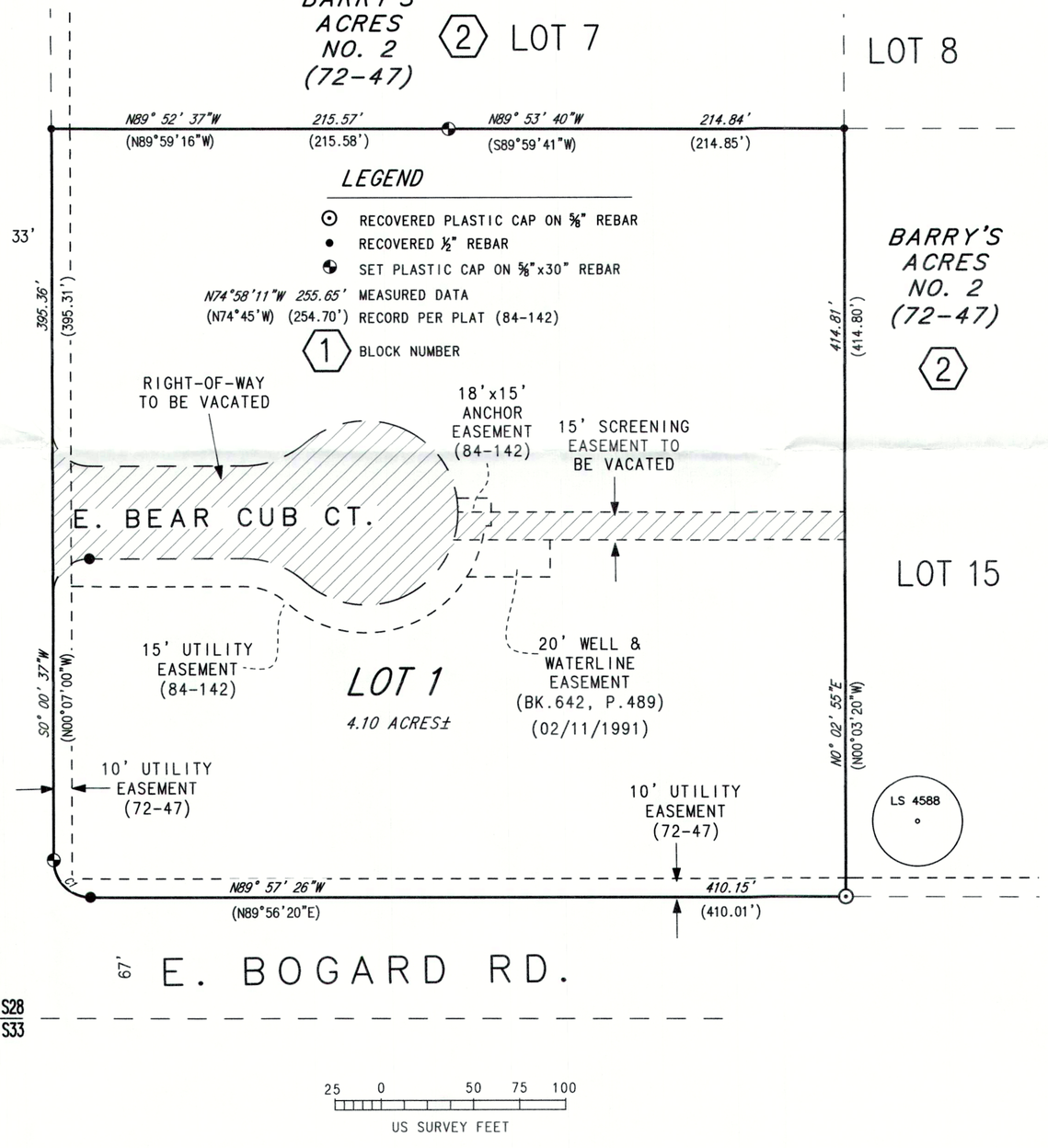
I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH_____, 20___, AGAINST THE PROPERTY, INCLUDED IN THE SUBDIVISION OR RESUBDIVISION, HEREON HAVE BEEN PAID.

_____

TAX COLLECTION OFFICIAL DATE
(MATANUSKA-SUSITNA BOROUGH)



SOURCE: MSB TAX MAP WA01, WA02, WA07, WA08, WA09, & WA10 1"=5280'



SURVEYOR'S CERTIFICATE

STATE OF ALASKA 49TH CRAIG E. HANSON LS 12312 REGISTERED PROFESSIONAL LAND SURVEYOR

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

_____
REGISTERED LAND SURVEYOR

RECEIVED APR 21 2025 PLATTING
Agenda Copy

A PLAT OF
BEAR STREET AGAPE
A REPLAT OF
LOTS 16A, 16B, 17A, & 17B, BLOCK 2 BARRYS ACRES No. 2 LOTS 16 & 17, BLOCK 2 (PLAT 84-142) AND VACATING E. BEAR CUB CT.

PALMER RECORDING DISTRICT
THIRD JUDICIAL DISTRICT
STATE OF ALASKA
LOCATED WITHIN
SW¼ SEC. 28, T.18N. R.1E. SM, AK
CONTAINING 4.10 ACRES MORE OR LESS

HANSON LAND SOLUTIONS
ALASKA BUSINESS LICENSE #1525
305 EAST FIREWEED AVENUE
PALMER, ALASKA, 99645
(907)746-7738

FILE: FB24-239	CK: CEH	SCALE:1"=50'	01/27/25	1 OF 1

SDN

C

STAFF REVIEW AND RECOMMENDATIONS
PUBLIC HEARING
JUNE 19, 2025

PRELIMINARY PLAT: UTOPIA VIEW II

LEGAL DESCRIPTION: SEC 06, T17N, R01W, SEWARD MERIDIAN AK

PETITIONERS: FOXGLOVE, LLC.

SURVEYOR/ENGINEER: ACUTEK GEOMATICS

ACRES: 62.049 ± PARCELS: 42

REVIEWED BY: MATTHEW GODDARD CASE #: 2025-061

REQUEST: The request is to create 42 lots and internal roads from Tract A, Utopia View Subdivision, Plat 2023-129, (8415000T00A) to be known as **UTOPIA VIEW II**, containing 62.05 acres +/-. The plat is located directly West of N. Utopia View Circle, North of W. Wintergreen Drive, West of Church Road, and South of W. Spruce Avenue, located within the NW ¼ Section 6, Township 17 North, Range 01 West, Seward Meridian, Alaska; and in Assembly District #007.

EXHIBITS:

SUPPORTING DOCUMETATION:

Vicinity Map and Aerial Photos	**PAGES** – 1-5
Geotechnical Report	**PAGES** – 6-65
Drainage Plan	**PAGES** – 66-153
Average Daily Traffic (ADT) Calculations	**PAGES** – 154-155

AGENCY COMMENTS

USACE	**PAGE** – 156
MSB DPW Pre-Design and Engineering Division	**PAGES** – 157-160
City of Wasilla	**PAGES** – 161-166
MSB Development Services	**PAGES** – 167-168
RSA #27 Meadow Lakes	**PAGES** – 169
Meadow Lakes Community Council	**PAGES** – 170
Public Comments	**PAGES** – 171
Utilities	**PAGES** – 172-179

DISCUSSION: The proposed subdivision is creating 42 lots and one tract. Access for the proposed subdivision is from N. Utopia View Circle and N. Jack Nicklaus Drive. N. Utopia View Circle is a privately maintained road. N. Jack Nicklaus Drive is owned and maintained by the City of Wasilla. The petitioner is proposing the dedication and construction of internal streets to serve as access for all proposed lots. Based on the provided ADT, the City of Wasilla has stated that upgrades will be required for N. Jack Nicklaus

Drive. Approval of Jack Nicklaus Drive will need to be obtained from the City of Wasilla certifying that it meets City of Wasilla Street standards prior to recordation (**Recommendation #5**).

Access: Legal and physical access to the proposed lots are required pursuant to MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Access requirements will be met once interior street is constructed, and upgrades of existing access streets are completed.

Soils Report: A geotechnical report was submitted (**Exhibit Pages 6-65**), pursuant to MSB 43.20.281(A). Robert Walden, Registered Professional Engineer, notes that on the Topography Map Block 1, Lot 11, 12, 13, & 14 were adjusted to just 11 & 12. Block 3, Lot 29, 30, & 31 were adjusted to just 29 & 30. The rough new lines were drawn in red. 10 of the proposed lots need regrading to meet the 10,000 square feet of usable area 50 feet away from a slope steeper than 25%. Block 2, Lots 24, 29, 31 and 32, Block 3, Lots 3, 7, 8, 9, 10, and 11 will be regraded this spring to contain 10,000 square feet or more of usable area. Recommended re-grading of three other lots due to access and the results of the usable areas in kettle low areas, will be regraded, Block 2, Lot 26, Block 3, Lots 2 and 5. Re-survey will be provided as continued roads are being constructed and an updated report will show usable area achieved with the 10,000 square feet of useable building area and 10,000 square feet of contiguous useable septic area. Block 1, Lot 11, a section approximately bound by elevation 395 have been classified as freshwater emergent wetlands. Tract B has water issues over the entire middle of the 9.2 acres and is classified as a freshwater forested / shrub wetland. It has been deemed not economically developable at this time. All other lots in Phase II meet the usable area of 10,000 square feet of usable building area and 10,000 square feet of contiguous useable septic area. *Platting staff notes that an updated geotechnical report will be required once all regrading has been completed certifying that all lots being created meet the minimum code requirements of 10,000 square feet of usable building area and an additional 10,000 square feet of contiguous usable septic area pursuant to MSB 43.20.281 Area (**Recommendation #6**). Platting staff further notes that the supplied report notes only 38 lots being created, per conversation with the surveyor 42 lots are being proposed by this platting action. The revised soils report will need to certify all 42 lots meet the usable area requirements.*

Drainage Report: A drainage report was submitted (**Exhibit Pages 66-153**) pursuant to the 2022 Subdivision Construction Manual Section D submittal requirements.

Average Daily Traffic Calculation (ADT): An ADT was submitted (**Exhibit Pages 154-155**) pursuant to the 2022 Subdivision Construction Manual Section A15. Based on the supplied ADT and comments received from the City of Wasilla, N. Jack Nicklaus Drive will require improvements to meet City of Wasilla Street standards. The petitioner will need to work with the City of Wasilla to perform the required upgrades and obtain certification that the access roads are constructed to City of Wasilla Street Standards (**Recommendation #5**).

Comments:

US Army Corps of Engineers (**Exhibit Page 156)** Notes that Department of the Army authorization from USACE is required for placement of dredged and/or fill material into waters of the U.S., including wetlands and/or performing work in waters protected by the Rivers and Harbors Act.
The parcel where the development would occur contains two areas mapped by the Mat-Su Borough as wetlands- the entirety of a .07-acre wetland and a portion of a 2.93 acre wetland. Upon review of the Borough's data, other information and recent aerial imagery, neither of these mapped wetlands appear to

have a continuous surface connection with a relative permanent water such as a tributary or a navigable water. Hence, it appears that even if wetlands are present at the property (presuming that the mapping is accurate), the wetlands would not be considered waters of the U.S. subject to regulation under the Clean Water Act. Please note that this assessment is unofficial and does not serve as an approved or preliminary jurisdictional determination.

Department of Public Works Operations & Maintenance (**Exhibit Pages 57-60**) has the following comments:

1. Soils: (**Recommendation #6**)
   The soils report appears to be incomplete:
   - Of the test holes shown on the test hole location map, sieve analysis results were not provided for test holes 2, 11, 14, 23, 24, and 41.
     - It was noted on the test hole logs for test holes 23 and 24 that samples were not taken but the soils types reported require sieve analysis or percolation tests per 43.20.281(A)(1)(f).
   - Of the test holes shown on the test hole location map, test hole logs were not provided for test holes 1, 12, 26, 28, 31, 36, and 40.
   - According to the test hole log for test hole 35, ground water seeps were found at 7 feet below ground on 4/28/2021 – per 43.20.281(A)(1)(a) "where water is encountered at ten feet or less below the surface, the seasonal subsurface water is to be determined between May 1st and October 30th".

   PD&E recommends a condition of approval to submit a complete soils report containing all necessary and pertinent information, including test hole logs, sieve analysises, and ground water monitoring results, as well as updated soils and useable area information post regrading. Soils information outside the boundary of the subdivision should not be included in the report.
2. Jack Nicklaus Drive: (**Recommendation #5**)
   ADT estimate shows potential traffic volumes as high as 1300 on Jack Nicklaus Drive. This is over the allowed traffic volume for a local road per the 2022 Subdivision Construction Manual. Since Jack Nicklaus Drive is a City of Wasilla owned and maintained road, the developer should coordinate with the City to determine if this is allowable and/or what upgrades or traffic impact mitigation measures will be required.
   PD&E recommends the developer coordinate with the City of Wasilla to determine if a permanent turnaround is needed where jack Nicklaus Drive exits the City of Wasilla and enters RSA 27. The existing cul-de-sac is located within a temporary turnaround easement which will automatically terminate when the road is extended.
3. Internal Subdivision Roads: (**Recommendation #4**)
   PD&E recommends the extension of Jack Nicklaus Drive, the extension of Utopia View Circle, Joseb Drive,and Jimmys Way be constructed to Residential Subcollector standard and the remaining cul-de-sac roads be constructed to Residential standard.
   Access must be constructed to Proposed Tract B. The temporary cul-de-sac on Jimmys Way should be relocated to give Tract B constructed frontage.
   A Permanent turnaround is needed at the north end of Utopia View Circle within the RSA 27 boundary.

City of Wasilla (**Exhibit Pages 61-66**) has the following comments:

- The drainage report is important to the city and the system should be built to the report to prevent drainage issues within the city.
- It does not appear that the impacts to the existing neighborhood have been adequately addressed, and the applicant did not identify the new traffic forecast at W. Ben Hogan Avenue.
  Platting staff notes that W. Ben Hogan Avenue is classified as a Minor Collector/Residential Collector. Per the 2022 SCM A15(C)(2) an ADT needs to extend until it intersects with a Residential Collector or higher, as W. Ben Hogan Avenue is classified as a Residential Collector, the intersection of W. Ben Hogan Avenue and Church Road was not required.
- N. Jack Nicklaus Drive will need to be upgraded due to the increase in traffic. The current traffic load from just the contractors has forced the city to make the intersection of N. Jack Nicklaus and N. Arnold Palmer a 3-way stop (which is often ignored).
- This is important due to a lack of connection to W. Youngtree Drive.
- For N. Jack Nicklaus Drive, the City will require the certification to Residential Collector to match Ben Hogan Avenue. If certification to Residential Collector is not possible due to ROW width or geometry, then the applicant may propose other traffic mitigation measures, to be approved by the City of Wasilla Public Works (**Recommendation #5)**.

Development Services (**Exhibit Pages 67-68**) has no objections to the proposed design.

RSA 27 Meadow Lakes(**Exhibit Pages 69**) has the following comments:

- Suggest altering the design to allow connectivity to adjacent parcels for future connectivity. Road maintenance costs are lower when equipment can flow thru from one subdivision to the next without backtracking.
- Cul-de-sacs are more difficult (expensive) to maintain than strait roads.
- Suggest requiring snow storage pocket on each in the best location for drainage.
- Include drainage easement to prevent water accumulation in ditches resulting in damage to the roadbed.
  Platting staff notes that any drainage concerns will be addressed during the pre-construction conference with MSB DPW Pre-Design and Engineering Division.

Community Council #1 Meadow Lakes (**Exhibit Pages 70**) has the following comments:

- We would like to see additional roads with temporary turnarounds to the north and south sides for future development and connectivity.
- Key concerns were:
  - We are aware of future development in the area.
  - Emergency vehicle access.
  - Snow plowing efficiency.

Public Comments: (**Exhibit Page 71**) Ardie Buechner, a homeowner in Mission Hills Phase I, objects to the proposed subdivision. Ardie's objection is due to a lack of additional roadway outlet for the subdivision.

Utilities: (**Exhibit Pages 72-79**) ENSTAR notes that there is an existing 15FT wide natural gas easement located within Utopia View II and requests the addition of a plat note which refers to the ENSTAR 15FT wide natural gas easement, said easement can be found under recording number 2022-011389-0.

*Platting staff notes that all recorded easements will be shown/noted on the final plat (**Recommendation #7**).*

GCI has no comments or objections to the plat.

MEA did not respond.

MTA did not respond.

At the time of staff report write-up, there were no responses to the Request for Comments from ADF&G; MSB Community Development, Assessments, or Planning; MEA or MTA.

CONCLUSION: The preliminary plat of Utopia View II is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There was one objection to the plat from the public in response to the Notice of Public Hearing. Legal and physical access will exist to the proposed lots once all construction/certification has been completed, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1), a revised report will be required once all regrading has been completed.

FINDINGS OF FACT

1. The plat of Utopia View II is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
2. A soils report was submitted, pursuant to MSB 43.20.281(A)(1)
3. The lot has the required frontage pursuant to MSB 43.20.320.
4. At the time of staff report write-up, there were no responses to the Request for Comments from ADF&G; MSB Community Development, Assessments, or Planning; MEA or MTA.
5. There were no objections from any federal or state agencies, Borough departments, or utilities.
6. There were no objections from the public in response to the Notice of Public Hearing.

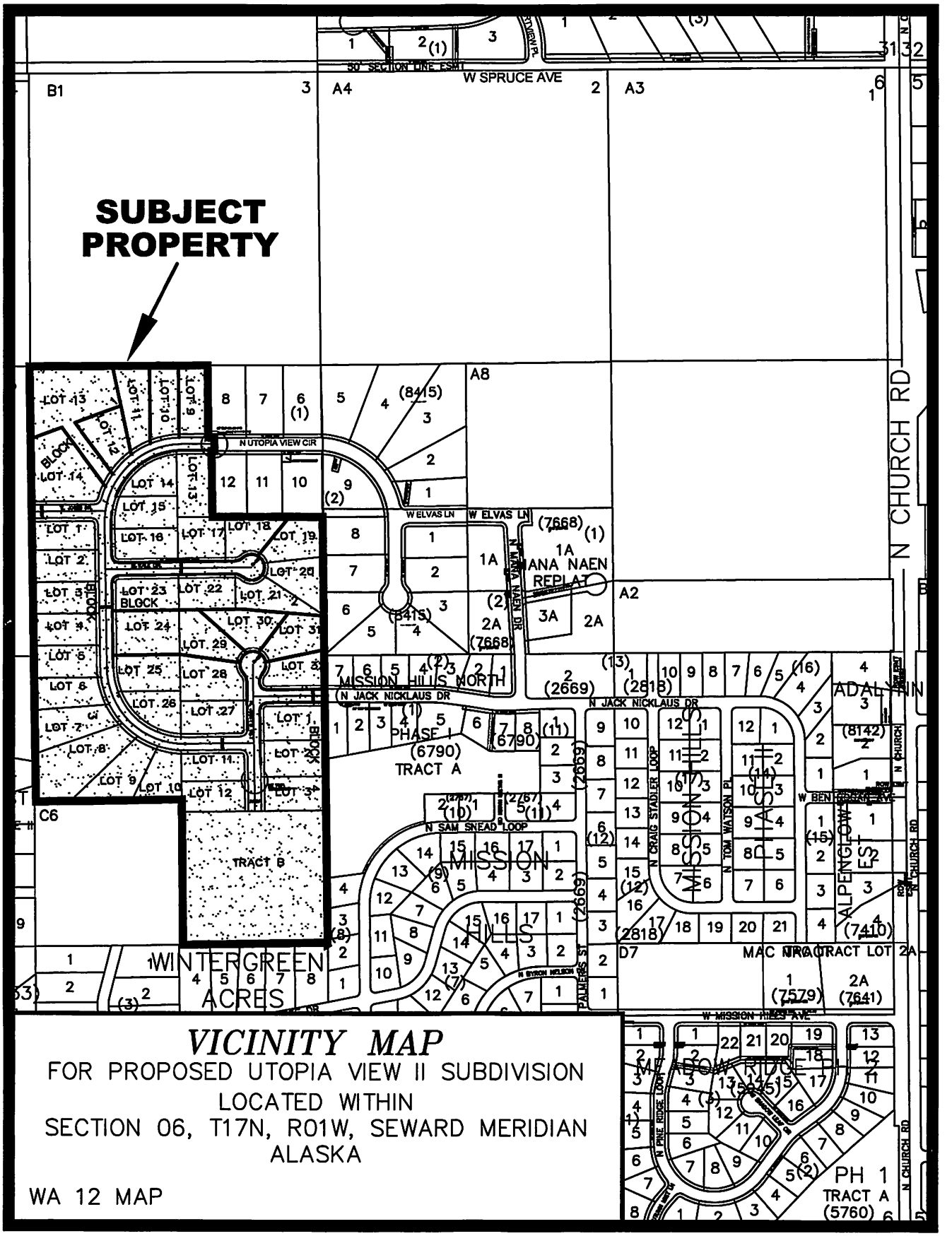
RECOMMENDATIONS OF CONDITIONS OF APPROVAL

Suggested motion: I move to approve the preliminary plat of Utopia View II, Section 06, Township 17 North, Range 01 West, Seward Meridian, Alaska, contingent on staff recommendations

1. Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
2. Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
3. Pay postage and advertising fees.
4. Construct internal streets and cul-de-sacs to Borough Street Standards according to the 2022 Subdivision Construction Manual (SCM):
   a) Construct the extension of N. Jack Nicklaus Drive, the extension of N. Utopia View Circle, E. Joseb Drive and N. Jimmys Way to Residential Subcollector standards per the 2022 SCM.
   b) Construct remaining cul-de-sac roads to Residential Street Standards per the 2022 SCM.
   c) Move the 60’ temporary turnaround south to provide frontage for Tract B.

d) Dedicate and construct a cul-de-sac at the north end of Utopia View Circle within the RSA 27 Boundary.
e) Submit drainage report and other construction plans to Department of Public Works (DPW) per SCM F01.2;
f) Arrange preconstruction conference with DPW per SCM F01.3, sign Subdivision Construction Plan, pay inspection fee, and obtain Notice to Proceed from Platting staff;
g) Arrange Pre-Final and Final Inspections with DPW per SCM F01.6 and F01.7 and submit Final Report to Platting per F01.8;
h) Obtain Certificate of Construction Acceptance from DPW per F01.9.
i) Submit as-built of streets and drainage improvements to Platting staff once construction is complete.
j) Obtain approval of street names from Platting Assistant.

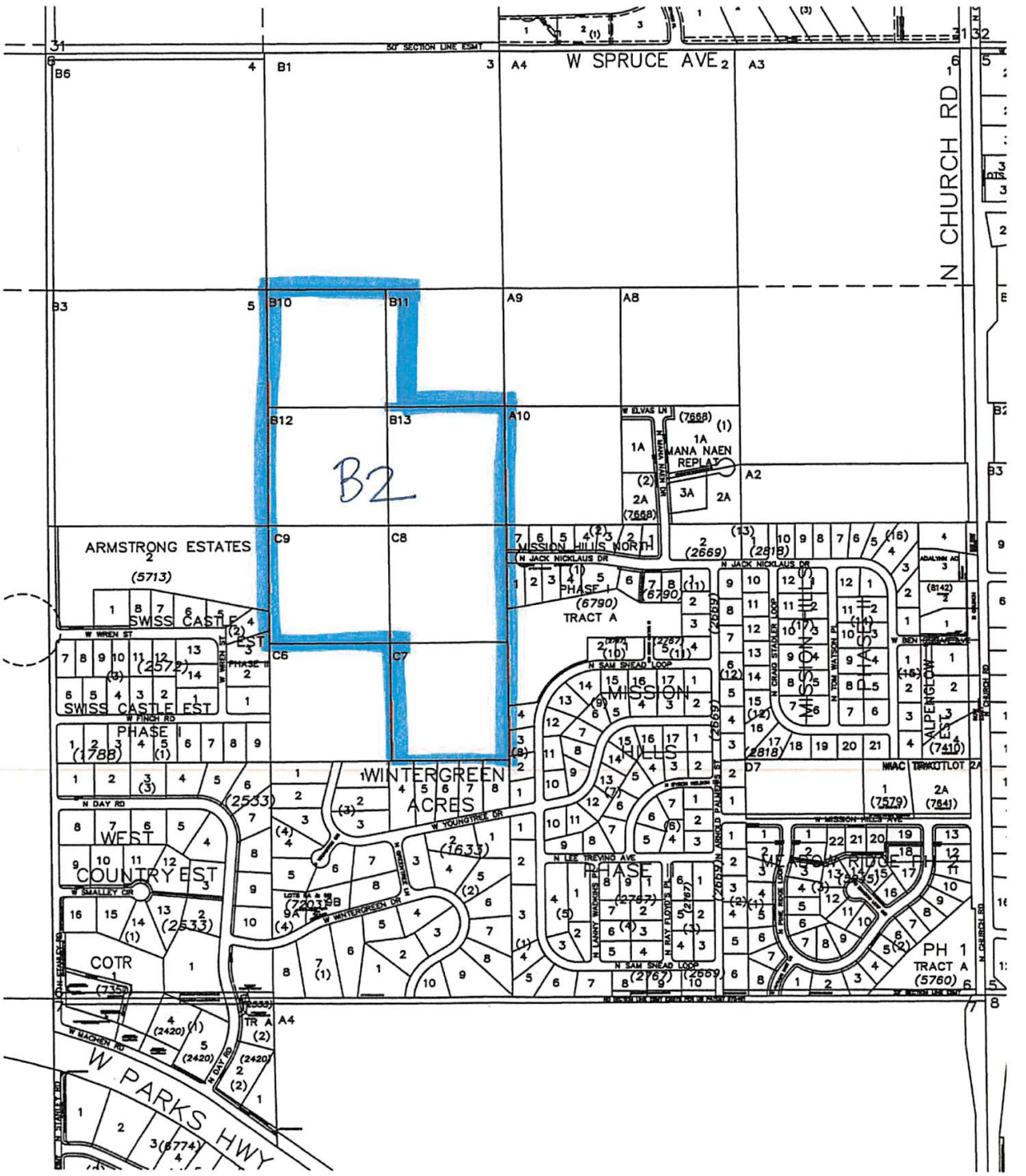
5. Coordinate with the City of Wasilla to upgrade/certify that N. Jack Nicklaus Drive meets City of Wasilla Residential Collector Street standards. Should traffic mitigation be required to utilize a lower standard, provide proposed traffic mitigation measures to the City of Wasilla for their approval prior to commencement of upgrades/alterations. Provide platting staff certificate from the City of Wasilla that all City of Wasilla roads used to access the subdivision meet City of Wasilla Street standards for the anticipated traffic volume.
6. Submit a revised soils report once all regrading has been completed certifying all lots being created meet the minimum useable area requirements of MSB Title 43.20.281 Area. Include all applicable supporting information in the revised soils report, i.e. test hole logs, sieve analysis for test holes containing GM and SM soils, ground water monitoring results (where applicable), as well as updated soils and useable area information post-regrading.
7. Show all easements of record on final plat.
8. Submit recording fees, payable to Department of Natural Resources (DNR).
9. Submit plat in full compliance with Title 43.



VICINITY MAP

FOR PROPOSED UTOPIA VIEW II SUBDIVISION
LOCATED WITHIN
SECTION 06, T17N, R01W, SEWARD MERIDIAN
ALASKA

WA 12 MAP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ARMSTRONG ESTATES
(5713)
SWISS CASTLE EST
(2572)
SWISS CASTLE EST
PHASE I
(178B)
WINTERGREEN ACRES
(2533)
WEST COUNTRY EST
(2533)
COTR
(7350)
W PARKS HWY
MISSION HILLS NORTH
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(6790)
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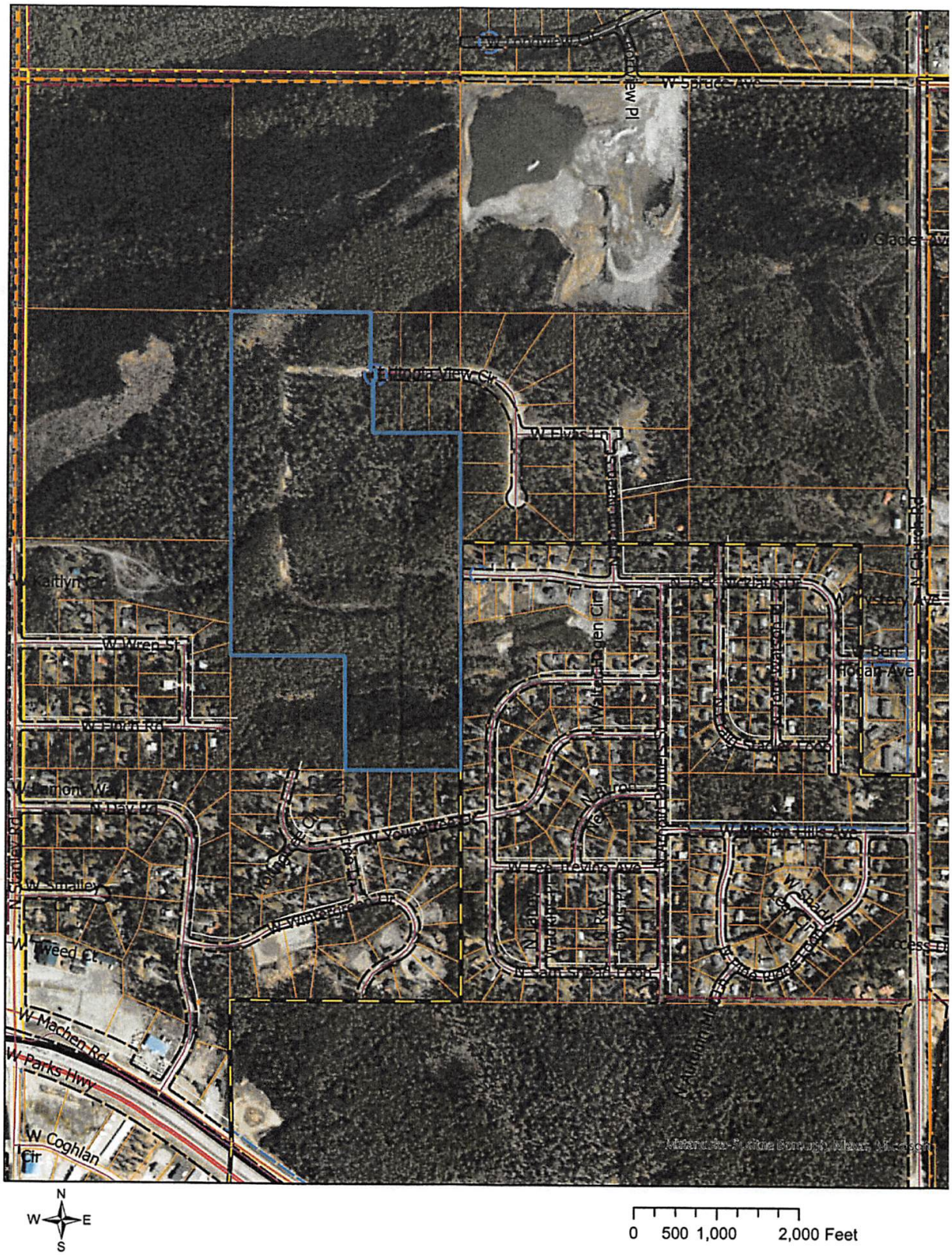
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W Machen Rd
W Parks Hwy
W Coghlan Cir
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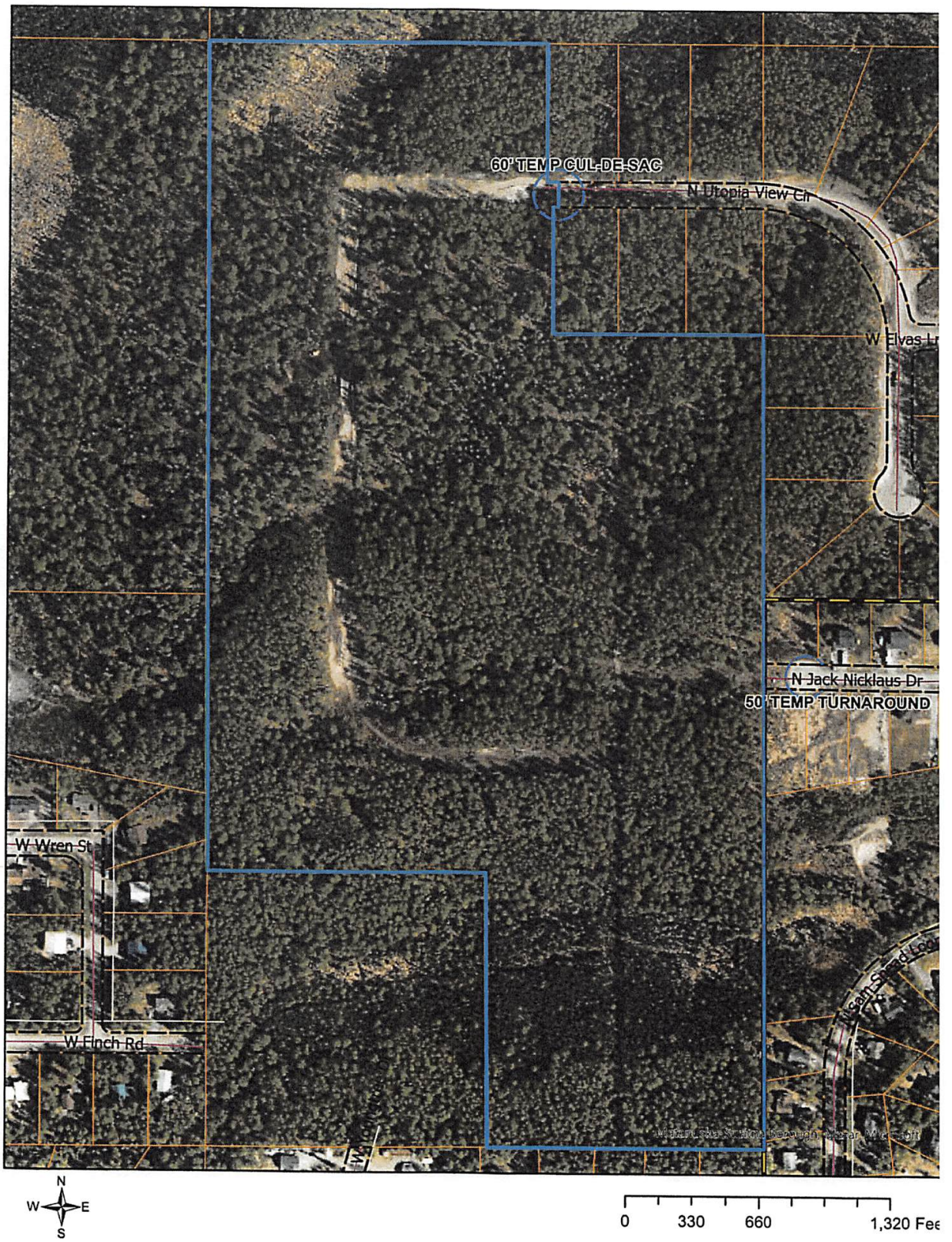
60' TEMP CUL-DE-SAC
N Utopia View Cir
W Elvas Ln
N Jack Nicklaus Dr
50' TEMP TURNAROUND
W Wren St
W Finch Rd
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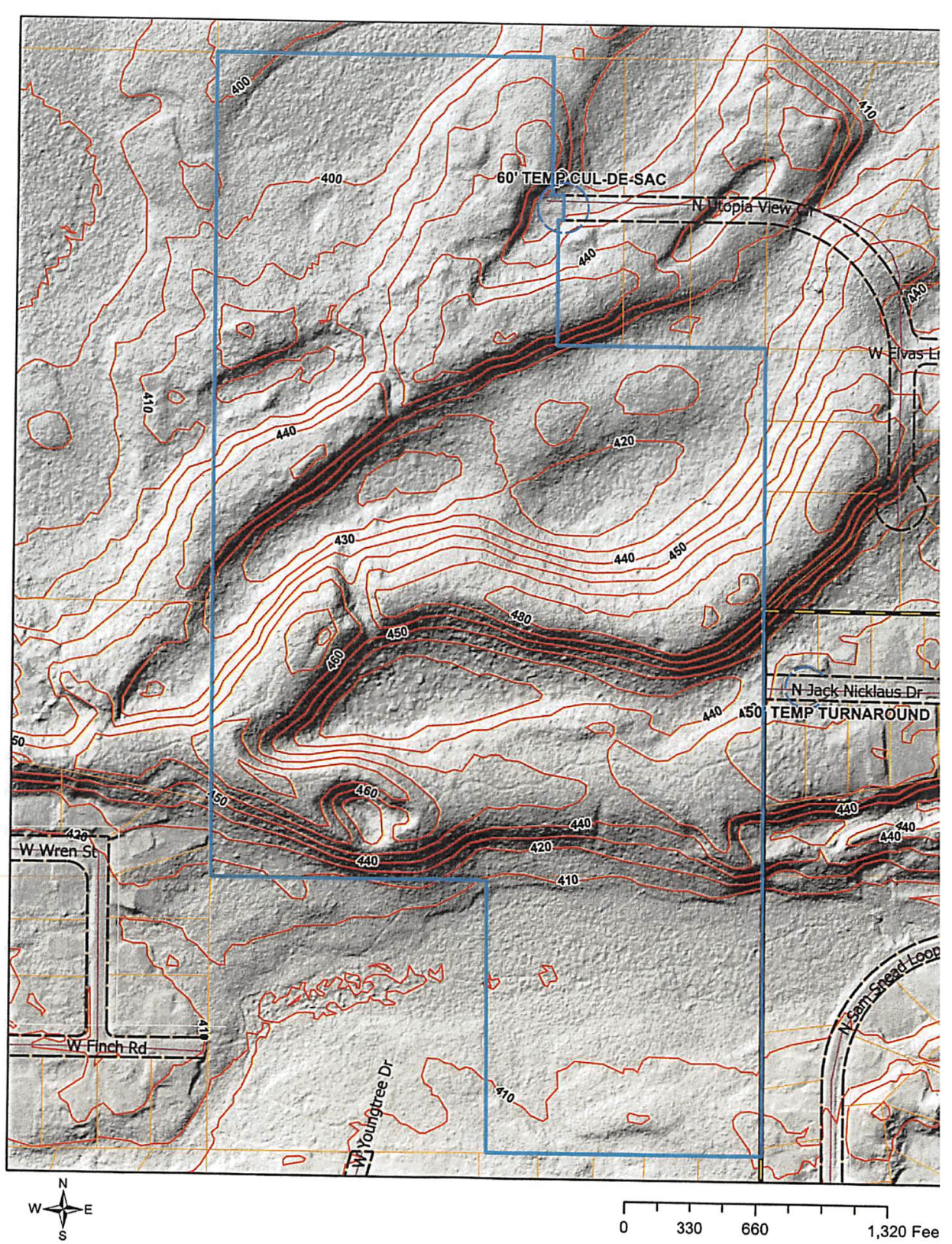
660
1,320 Fee


60' TEMP CUL-DE-SAC
N Utopia View Ct
W Elvas Ln
N Jack Nicklaus Dr
TEMP TURNAROUND
W Wren St
W Finch Rd
W Youngtree Dr
N Sam Snead Loop
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WALDEN Construction Consulting and Engineering, LLC
2422 W James T Cir, Wasilla, AK 99654

6/2/2025 Utopia View Subdivision Phase II, Wasilla, AK

Platting, Wyatt Anderson
Matanuska-Susitna Borough
350 E. Dahlia Avenue
Palmer, Alaska 99645

Per the original Phase I studies and addition of 20 each lots with access off N Mana Naen from the Mission Hills subdivision, this Phase II will be added 38 lots with a loop connection to N Jack Nicklaus Drive. The topography would be called hilly with elevations ranging from 395 up to 490. With this topography variation there will be some very nice view lots produced and some areas of kettle lows with trapped surface water during high rain events and freeze thaw times of the year. Also taking those conditions into development I have added some conservative notes on some of those kettle low areas for septic leach field and foundation development. Attached one page charted summary by lot of findings due to slopes greater than twenty five percent, ground water table, and potential seasonal runoff.

Usable area topography map with test holes plotted is attached. Note this map was from early March and three lots were removed due to early findings. On the Topography map Block 1 Lot 11, 12, 13, 14 were adjusted to just 11, 12. Block 3 Lot 29, 30, 31 were adjusted to just 29 and 30. Rough new lines drawn in red. 10 of the new 38 lots need re-grading to meet the 10,000 sft of usable area 50 feet away from a slope steeper than 25%. Blk 2 Lots 24, 29, 31, and 32; Block 3 Lot 3, 7, 8, 9, 10, and 11 will be regraded this spring to contain 10,000 square feet or more of usable area. Recommended re-grading of 3 other lots due to access and the results of the usable areas in kettle low areas, will be regraded, Block 2 Lot 26, Block 3 Lot 2 and 5. Re-survey will be provided as continued roads are being constructed and an updated report will show usable area achieved with the 10,000 square feet of useable building area and 10,000 square feet of contiguous useable septic area.

Block 1 Lot 11 a section approximately bound by elevation 395 have been classified as freshwater emergent wetlands. I added a recommended septic leach field and foundation elevation be constructed above the 402 elevation. There are a few other lots that are in kettle pond surface low areas and recommended elevations have been noted on the attached usable area summary chart for developers as a guide. Tract B has water issues over the entire middle of the 9.2 acres and classified as a freshwater forested/shrub wetland. It has been deemed not economically developable at this time. No other water table issues are present per the attached test holes and gradations.

ADT map on the interior intersections of Utopia View and northern part of Mission Hills. Upgrades were already done in 2023 to W Elvas Lane and N Mana Naen to Residential sub collector street standards and W Ben Hogan Ave to Residential Collector, signed off by Public Works, Jamie Taylor.

All other lots in Phase II meet the usable area criteria (10,000 square feet of useable building area and 10,000 square feet of contiguous useable septic area) for this preliminary plat to proceed.

Sincerely,

Robert L Walden

Robert L Walden, PE
Cell #907-354-6661
robertwcce@gmail.com

Attached: Topo-Test Hole Map 3/4/25, Usable area summary chart, Test holes, gradations, ADT PH II Map 2

WALDEN Construction Consulting and Engineering, LLC
2422 W James T Cir, Wasilla, AK 99654

4/17/2025 Utopia View Subdivision Phase II, Wasilla, AK

RECEIVED
APR 18 2025
PLATTING

Platting, Wyatt Anderson
Matanuska-Susitna Borough
350 E. Dahlia Avenue
Palmer, Alaska 99645

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Usable area topography map with test holes plotted is attached. Note this map was from early March and three lots were removed due to early findings. On the Topography map Block 1 Lot 11, 12, 13, 14 were adjusted to just 11, 12. Block 3 Lot 29, 30, 31 were adjusted to just 29 and 30. Rough new lines drawn in red. 10 of the new 38 lots need re-grading to meet the 10,000 sft of usable area 50 feet away from a slope steeper than 25%. Blk 2 Lots 24, 29, 31, and 32; Block 3 Lot 3, 7, 8, 9, 10, and 11 will be regraded this spring to contain 10,000 square feet or more of usable area. Recommended re-grading of 3 other lots due to access and the results of the usable areas in kettle low areas, will be regraded, Block 2 Lot 26, Block 3 Lot 2 and 5. Re-survey will be provided as continued roads are being constructed and an updated report will show usable area achieved with the 10,000 square feet of useable building area and 10,000 square feet of contiguous useable septic area.

Block 1 Lot 11 a section approximately bound by elevation 395 have been classified as freshwater emergent wetlands. I added a recommended septic leach field and foundation elevation be constructed above the 402 elevation. There are a few other lots that are in kettle pond surface low areas and recommended elevations have been noted on the attached usable area summary chart for developers as a guide. Tract B has water issues over the entire middle of the 9.2 acres and classified as a freshwater forested/shrub wetland. It has been deemed not economically developable at this time. No other water table issues are present per the attached test holes and gradations.

Revised ADT map only changed by 30 ADT from the original submittal from the first phase with a total of 560 to now 590 ADT. Upgrades were already done prior to W Elvas Lane and N Mana Naen to Residential subcollector street standards and signed off by Public Works, Jamie Taylor.

All other lots in Phase II meet the usable area criteria (10,000 square feet of useable building area and 10,000 square feet of contiguous useable septic area) for this preliminary plat to proceed.

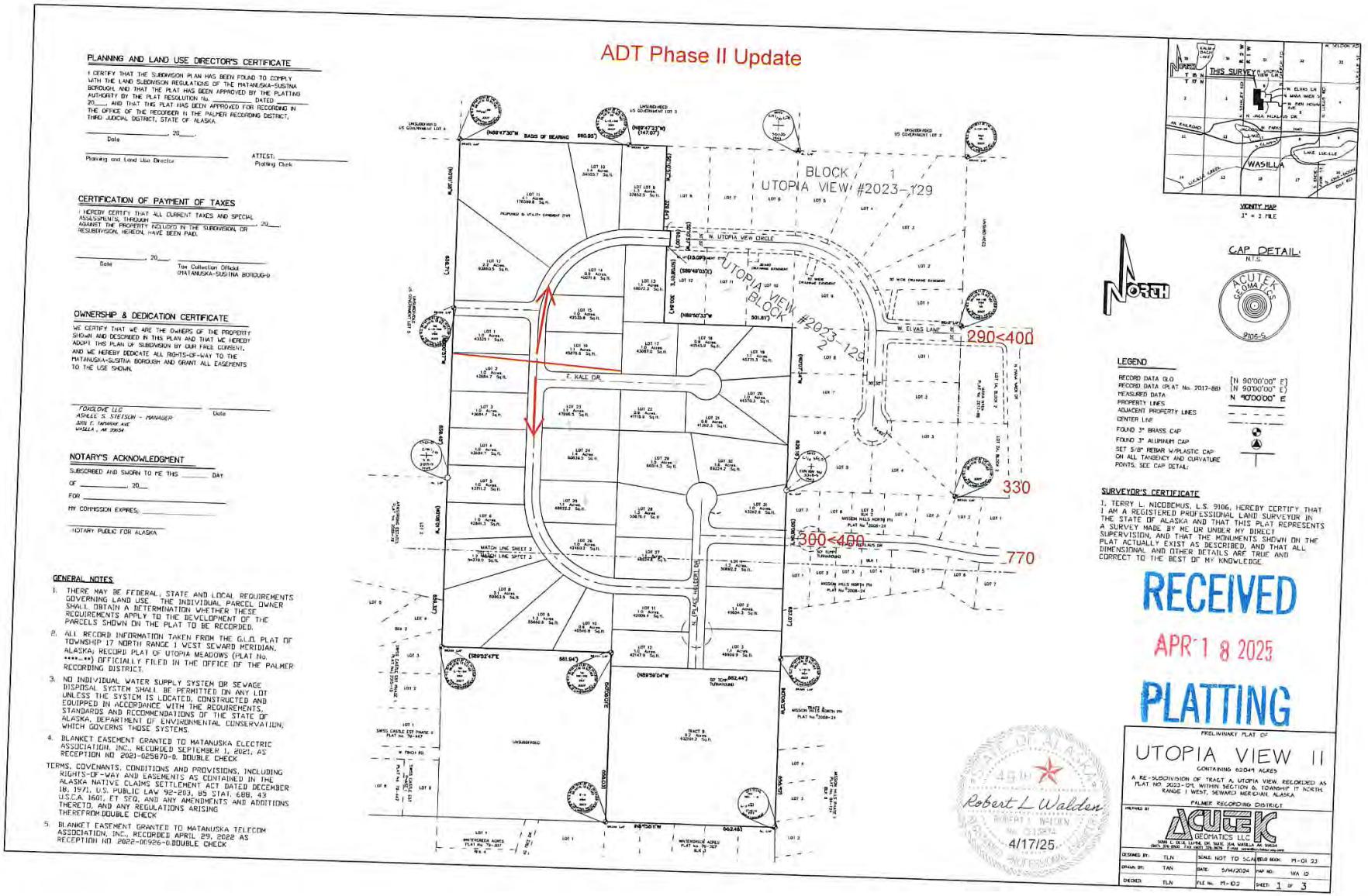
Sincerely,

Robert L Walden

Robert L Walden, PE
Cell #907-354-6661
robertwcce@gmail.com

Robert L Walden
4/17/25

Attached: Topo-Test Hole Map 3/4/25, Usable area summary chart, Test holes, gradations, ADT PH II Map


ADT Phase II Update
PLANNING AND LAND USE DIRECTOR'S CERTIFICATE
I CERTIFY THAT THE SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY THE PLAT RESOLUTION No. _____ DATED _____ 20____, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE RECORDER IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA.
Date
Planning and Land Use Director
ATTEST: Platting Clerk
CERTIFICATION OF PAYMENT OF TAXES
I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH _____ 20____ AGAINST THE PROPERTY INCLUDED IN THE SUBDIVISION OR RESUBDIVISION, HEREON, HAVE BEEN PAID.
Date
Tax Collection Official (MATANUSKA-SUSITNA BOROUGH)
OWNERSHIP & DEDICATION CERTIFICATE
WE CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE HEREBY ADOPT THIS PLAN OF SUBDIVISION BY OUR FREE CONSENT, AND WE HEREBY DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH AND GRANT ALL EASEMENTS TO THE USE SHOWN.
FOXGLOVE LLC
ASHLEE S. STETSON - MANAGER
3810 E. TAMARAK AVE
WASILLA, AK 99654
Date
NOTARY'S ACKNOWLEDGMENT
SUBSCRIBED AND SWORN TO ME THIS _____ DAY OF _____, 20____
FOR _____
MY COMMISSION EXPIRES: _____
NOTARY PUBLIC FOR ALASKA
GENERAL NOTES
1. THERE MAY BE FEDERAL, STATE AND LOCAL REQUIREMENTS GOVERNING LAND USE. THE INDIVIDUAL PARCEL OWNER SHALL OBTAIN A DETERMINATION WHETHER THESE REQUIREMENTS APPLY TO THE DEVELOPMENT OF THE PARCELS SHOWN ON THE PLAT TO BE RECORDED.
2. ALL RECORD INFORMATION TAKEN FROM THE G.L.O. PLAT OF TOWNSHIP 17 NORTH RANGE 1 WEST SEWARD MERIDIAN, ALASKA; RECORD PLAT OF UTOPIA MEADOWS (PLAT No. ****-**) OFFICIALLY FILED IN THE OFFICE OF THE PALMER RECORDING DISTRICT.
3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS AND RECOMMENDATIONS OF THE STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERNS THOSE SYSTEMS.
4. BLANKET EASEMENT GRANTED TO MATANUSKA ELECTRIC ASSOCIATION, INC., RECORDED SEPTEMBER 1, 2021, AS RECEPTION NO 2021-025870-0. DOUBLE CHECK
TERMS, COVENANTS, CONDITIONS AND PROVISIONS, INCLUDING RIGHTS-OF-WAY AND EASEMENTS AS CONTAINED IN THE ALASKA NATIVE CLAIMS SETTLEMENT ACT DATED DECEMBER 18, 1971; U.S. PUBLIC LAW 92-203, 85 STAT. 688, 43 U.S.C.A. 1601, ET SEQ, AND ANY AMENDMENTS AND ADDITIONS THERETO, AND ANY REGULATIONS ARISING THEREFROM. DOUBLE CHECK
5. BLANKET EASEMENT GRANTED TO MATANUSKA TELECOM ASSOCIATION, INC., RECORDED APRIL 29, 2022 AS RECEPTION NO 2022-001926-0. DOUBLE CHECK
BLOCK 1
UTOPIA VIEW #2023-129
E. N. UTOPIA VIEW CIRCLE
UTOPIA VIEW BLOCK 2 #2023-129
E. KALL DR.
W. ELYAS LANE
290<400
330
300<400
770
BASIS OF BEARING
VICINITY MAP
1" = 1 MILE
THIS SURVEY
WASILLA
CAP DETAIL
N.T.S.
ACUTEK GEOMATICS
9106-S
NORTH
LEGEND
RECORD DATA GLO
RECORD DATA (PLAT No. 2017-88)
MEASURED DATA
PROPERTY LINES
ADJACENT PROPERTY LINES
CENTER LINE
FOUND 3" BRASS CAP
FOUND 3" ALUMINUM CAP
SET 5/8" REBAR W/PLASTIC CAP ON ALL TANGENCY AND CURVATURE POINTS, SEE CAP DETAIL
[N 90°00'00" E]
(N 90°00'00" E)
N 90°00'00" E
SURVEYOR'S CERTIFICATE
I, TERRY L. NICODEMUS, L.S. 9106, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
RECEIVED
APR 18 2025
PLATTING
Robert L Walden
4/17/25
PRELIMINARY PLAT OF
UTOPIA VIEW II
CONTAINING 6.02AC ACRES
A RE-SUBDIVISION OF TRACT A, UTOPIA VIEW, RECORDED AS PLAT NO. 2023-129, WITHIN SECTION 6, TOWNSHIP 17 NORTH, RANGE 1 WEST, SEWARD MERIDIAN, ALASKA.
PALMER RECORDING DISTRICT
PREPARED BY
ACUTEK GEOMATICS LLC
DESIGNED BY: TLN
DRAWN BY: TAN
CHECKED: TLN
SCALE: NOT TO SCALE
DATE: 5/14/2024
FILE No.: 19-102
FIELD BOOK: 19-01 23
MAP NO.: WA 10
SHEET: 1 OF 3

WALDEN Construction Consulting and Engineering, LLC
2422 W James T Cir, Wasilla, AK 99654

4/6/2025 **Utopia View Subdivision Phase II, Wasilla, AK**

Fred Wagner
Platting
Matanuska-Susitna Borough
350 E. Dahlia Avenue
Palmer, Alaska 99645

To whom this may concern,

Per the original Phase I studies and addition of 20 each lots with access off N Mana Naen from the Mission Hills subdivision, this Phase II will be added 38 lots with a loop connection to N Jack Nicklaus Drive. The topography would be called hilly with elevations ranging from 395 up to 490. With this topography variation there will be some very nice view lots produced and some areas of kettle lows with trapped surface water during high rain events and freeze thaw times of the year. Also taking those conditions into development I have added some conservative notes on some of those kettle low areas for septic leach field and foundation development. Attached one page charted summary by lot of findings due to slopes greater than twenty five percent, ground water table, and potential seasonal runoff.

Usable area topography map with test holes plotted is attached. Note this map was from early March and three lots were removed due to early findings. On the Topography map Block 1 Lot 11, 12, 13, 14 were adjusted to just 11, 12. Block 3 Lot 29, 30, 31 were adjusted to just 29 and 30. Rough new lines drawn in red. 10 of the new 38 lots need re-grading to meet the 10,000 sft of usable area 50 feet away from a slope steeper than 25%. Blk 2 Lots 24, 29, 31, and 32; Block 3 Lot 3, 7, 8, 9, 10, and 11 will be regraded this spring to contain 10,000 square feet or more of usable area. Recommended re-grading of 3 other lots due to access and the results of the usable areas in kettle low areas, will be regraded, Block 2 Lot 26, Block 3 Lot 2 and 5. Re-survey will be provided and an updated report will show usable area achieved.

Block 1 Lot 11 a section approximately bound by elevation 395 have been classified as freshwater emergent wetlands. I added a recommended septic leach field and foundation elevation be constructed above the 402 elevation. There are a few other lots that are in kettle pond surface low areas and recommended elevations have been noted on the attached usable area summary chart for developers as a guide. Tract B has water issues over the entire middle of the 9.2 acres and classified as a freshwater forested/shrub wetland. It has been deemed not economically developable at this time. No other water table issues are present per the attached test holes and gradations.

All other lots in Phase II meet the usable area criteria to continue certification of this preliminary platting process.

Please contact me for any additional information as needed.

4/6/2025

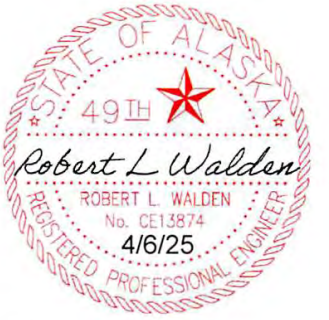
Sincerely,

Robert L Walden

Robert L Walden, PE

Cell #907-354-6661

robertwcce@gmail.com



Attached:
Topography-Test Hole Map 3/4/25, Usable area summary chart, Test holes, gradation.

Utopia Subdivision Phase II soils, drainage, slope evaluation

Block 1 all okay
Block 2 regrade 24, 29,31,32
Block 3 regrade 3,7,8,9,10,11
Block 4 all okay

Suggest re-grade due to access and Kettle low area Block 3 Lot 1, 3, 5

Drawing by Curt Holler, PLS, PE 3-4-2025
Reviewed and noted by Robert L Walden, PE on 4-5-2025.

Phase II Utopia Lots usable area chart with Test hole data & building recommendation

Block	Lot	Test hole	TH Elev	Lot EL range	Water Elev	Slopes>25%	Usable Elev	Usable area Building notes
1	9	3	425	435-410	N/A	OK	Drains N	Build on S View N
1	10	2, 3	408, 425	435-397	393.5	OK	Drains NW	Build on S View N
1	11	1, 41	394, 403	415-395	393.5	OK	Above 402 Elev	Build on S
1	12	41, 13	403, 419	420-398	393.5	OK	Above 402 Elev	Build on S View N
2	13	10	430	455-420	N/A	OK	Drains N	Build on S View 360
2	14	11	442	450-430	N/A	OK	Drains NW	Build on SE View 360
2	15	11,39	442, 417	457-420	N/A	OK	Drains W	Build on E View 360
2	16	39, 15	417, 427	452-420	N/A	OK	Drains SE	Build on SW View S
2	17	15, 16	427, 420	455-418	407	OK	Above 419 Elev	Build on SW
2	18	16, 17	420, 425	427-418	407	OK	Above 419 Elev	Build on NW
2	19	16, 17	420, 425	428-418	Kettle Low	OK	Above 419 Elev	Build on SE
2	20	40, 17	417, 425	475-418	407	OK	Above 419 Elev	Build middle
2	21	40	417	475-413	Kettle Low	OK	Above 419 Elev	Build on W
2	22	40	417	430-413	Kettle Low	OK	Above 419 Elev	Build on W
2	23	15, 40	427, 417	430-413	Kettle Low	OK	Above 419 Elev	Build on E
2	24	24	450	477-420	N/A	Re-grade	Drains N	Build on SE View 360
2	25	24, 27	450, 425	475-427	N/A	OK	Drains S	Build on SE
2	26	27	425	445-423	Kettle Low	Re-grade	Above 428 Elev	Build on SE
2	27	28	433	450-427	N/A	OK	Drains NW	Build on S
2	28	28	433	480-427	N/A	OK	Drains SW	Build on SE
2	29	23	438	480-420	N/A	OK	Drains N	Build on S View 360
2	30	22	460	490-450	N/A	Re-grade	Drains NW	Build on SE View 360
2	31	30	440	485-450	N/A	Re-grade	Drains SE	Build on N View 360
3	1	13, 39	419, 417	425-409	Kettle Low	OK	Above 415 Elev	Build on W
3	2	14	440	450-414	N/A	Re-grade	Drains NW	Build on SE
3	3	14	440	450-414	N/A	Re-grade	Drains SE	Build on W View 360
3	4	25	418	455-414	Kettle Low	OK	Above 420 Elev	Build on SW
3	5	25	418	470-425	N/A	Re-grade	Drains NW	Build on E View 360
3	6	47	437	470-430	N/A	OK	Drains NW-SE	Build middle View 360
3	7	47	437	480-425	N/A	Re-grade	Drains E	Build on W View 360
3	8	34	450	475-420	N/A	Re-grade	Drains N-SW	Build middle View 360
3	9	34	450	465-420	N/A	Re-grade	Drains NE-SW	Build middle View 360
3	10	33	438	460-410	N/A	Re-grade	Drains S	Build on N View S
3	11	33	438	455-425	N/A	Re-grade	Drains S	Build on N View S
3	12	35	403	425-403	396	OK	Above 408 Elev	Build on NE
4	1	30, 45	440, 447	465-440	N/A	OK	Drians NW	Build on SE View S
4	2	45, 32	447, 445	460-435	N/A	OK	Drians S	Build middle View S
4	3	32, 35	445, 403	430-405	396	OK	Above 408 Elev	Build on NW

TESTHOLE LOG #2

Legal Description: T17N R1E Sec 6 B10 Date: 4/22/2021

Inspected By: Robert L Walden, PE

Ground level EL408

1ft	ML
2ft	
3ft	GW-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GW-GM; Well graded gravel w/Silt & Sand
#200-9.4%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y [N] At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y [N] At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CO13874
REGISTERED PROFESSIONAL ENGINEER
3/22/25

Form revised 2/2016

TESTHOLE LOG #3

Legal Description: T17N R1E Sec 6 B11 Date: 4/22/2021

Inspected By: Robert L Walden, PE

Ground level EL425

1ft	ML
2ft	
3ft	
4ft	
5ft	
6ft	
7ft	
8ft	GP-GM
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GP-GM; Poorly graded gravel w/Silt & sand
#200-5.7%
Great area for road sub base and to blend with TH area 4, Goal #200 0-10%.

Total Depth of Testhole 13 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CR13834
2/12/22
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/24/2021
PROJECT NO.:	20-401	**DATE TESTED:**	4/30/2021
CLIENT:	WCC&E	**TESTED BY:**	NP
SAMPLE NO.:	21P94	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 3-2

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	97
1"	25.4	81
3/4"	19.0	70
1/2"	12.7	58
3/8"	9.5	51
#4	4.75	34
#10	2.00	22
#20	0.85	16
#40	0.425	11
#60	0.25	8
#100	0.15	7
#200	0.075	5.7

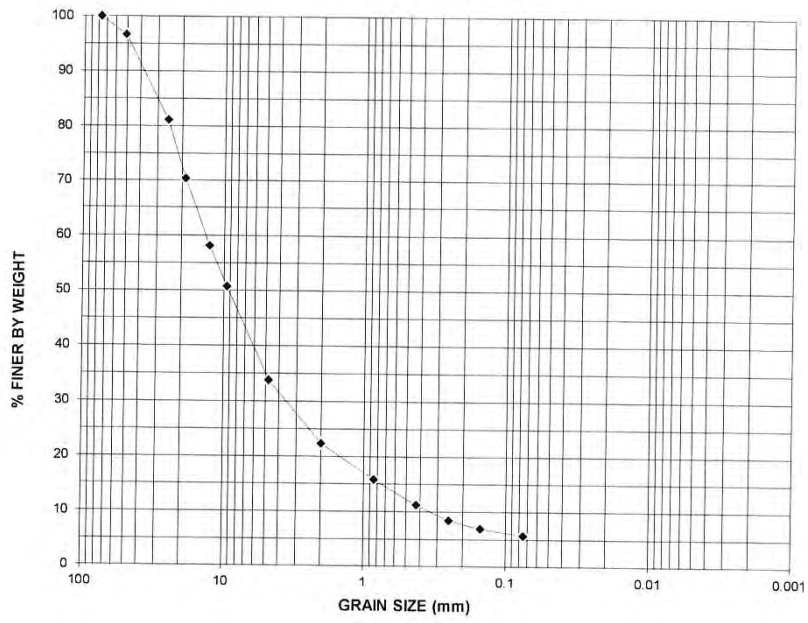
HYDROMETER TEST

(ASTM D422)

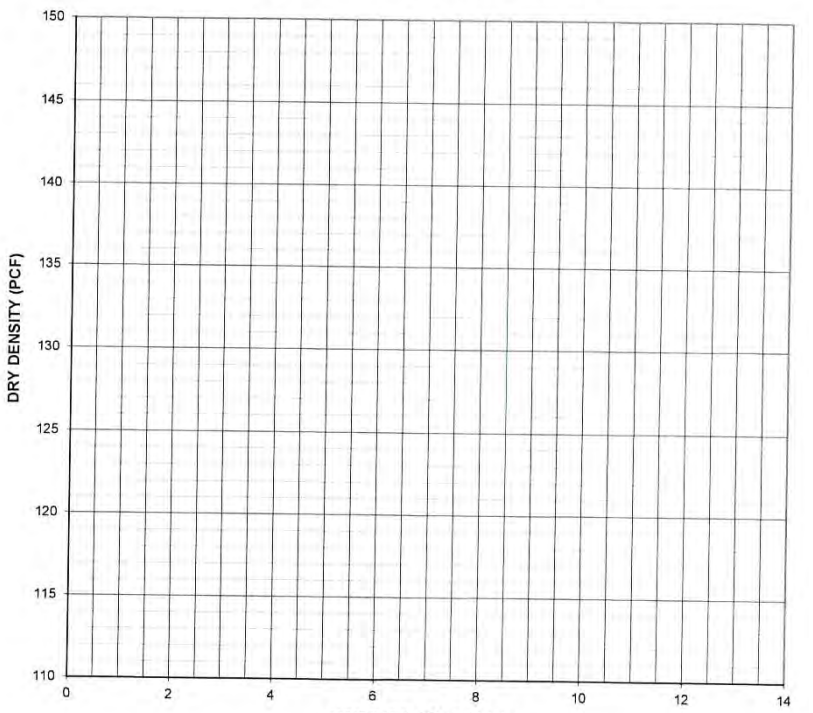
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

% Gravel:	66.2
%Sand:	28.1
% Fines:	5.7
D60:	13.65
D30:	3.83
D10:	0.35
Cu:	39.5
Cc:	3.1
% .02 mm:	
% Moisture:	2.0
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

FROST CLASS:

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L. WALDEN No. CE13974 2/12/22 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/3/2021

3335 Arctic Blvd, Suite 100
Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #10

Legal Description: T17N R1E Sec 6 B11 Date: 4/22/2021

Inspected By: _____

Ground level EL430

1ft	ML
2ft	
3ft	GW-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

GW-GM; Well graded gravel w/Silt & Sand
#200-9.6%
Good area to blend with TH 42
Goal #200 gradation 0-10%

Total Depth of Testhole 13 ft.

Groundwater/Seeps Encountered? Y [N] At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y [N] At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
REGISTERED PROFESSIONAL ENGINEER
2/12/22

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD
PROJECT NO.:	20-401
CLIENT:	WCC&E
SAMPLE NO.:	21P101
LOCATION:	UKN

DATE TAKEN:	4/24/2021
DATE TESTED:	4/30/2021
TESTED BY:	NP
REVIEWED BY:	JAB
DESCRIPTION:	TH 10-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	96
1"	25.4	75
3/4"	19.0	68
1/2"	12.7	60
3/8"	9.5	55
#4	4.75	43
#10	2.00	33
#20	0.85	24
#40	0.425	18
#60	0.25	14
#100	0.15	12
#200	0.075	9.6

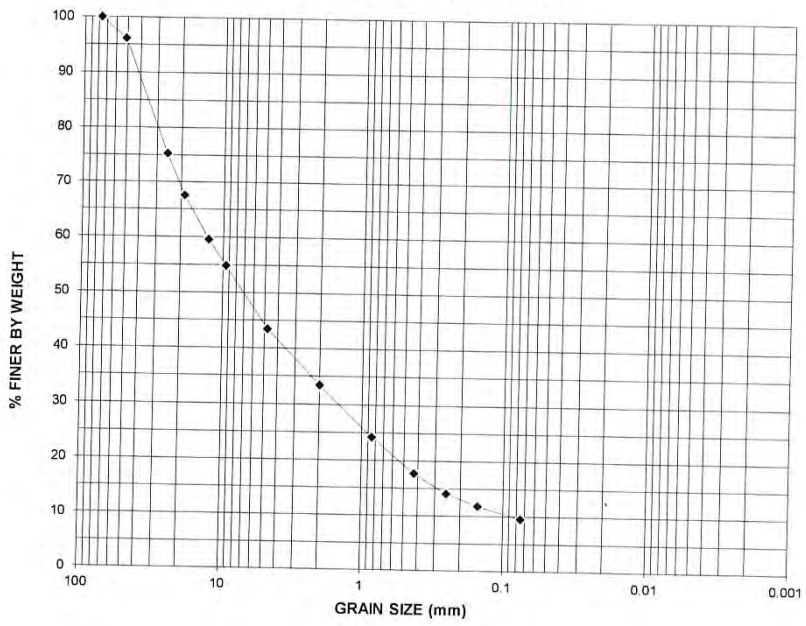
HYDROMETER TEST

(ASTM D422)

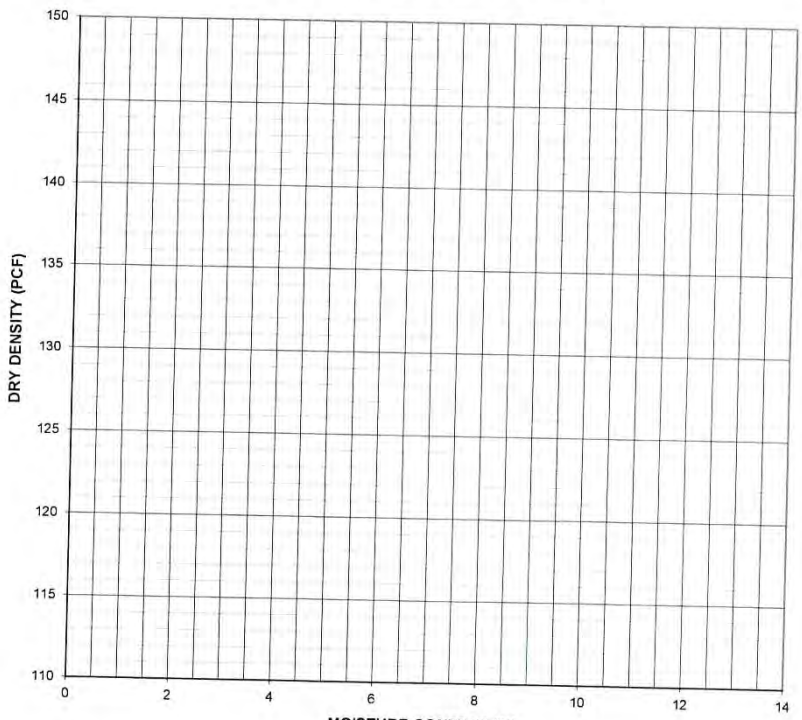
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

% Gravel:	56.6
%Sand:	33.8
% Fines:	9.6
D60:	13.04
D30:	1.57
D10:	0.09
Cu:	147.4
Cc:	2.1
% .02 mm:	
% Moisture:	3.4
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Well Graded Gravel w/Silt & Sand
USC:	GW-GM
FROST CLASS:	

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L WALDEN No. CE13874 2/12/22 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/3/2021

3335 Arctic Blvd, Suite 100
Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #11

Legal Description: T17N R1E Sec 6 B10 Date: 4/22/2021

Inspected By: Robert L Walden, PE

Ground level EL442

1ft	ML
2ft	
3ft	SM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
SM; Silty sand w/gravel
#200 13.9%

Total Depth of Testhole 12 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

TESTHOLE LOG #13

Legal Description: T17N R1E Sec 6 B10 Date: 4/23/2021

Inspected By: Robert L Walden, PE

Ground level EL419

1ft	ML
2ft	
3ft	GW
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

GW; Well graded Gravel w/sand

#200 3.8%

Total Depth of Testhole 12 ft.

Groundwater/Seeps Encountered? Y [N] At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y [N] At _____ ft.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CDL5874
REGISTERED PROFESSIONAL ENGINEER
3/22/25

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TESTHOLE LOG #14

Legal Description: T17N R1E Sec 6 B12 Date: 4/23/2021

Inspected By: Robert L Walden, PE

Ground level EL437

1ft	ML
2ft	
3ft	GP-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GP-GM; Poorly graded gravel w/Silt & sand
#200-8.9%

Total Depth of Testhole 12 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

TESTHOLE LOG #15

Legal Description: T17N R1E Sec 6 B12 Date: 4/26/2021

Inspected By: Robert L Walden, PE

Ground level EL427

1ft	ML
2ft	
3ft	SP-SM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	GW
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
SP-SM; Poorly graded sand w/Silt & gravel
#200-6.3%
9.5-14; GW Well graded gravel with sand

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
REGISTERED PROFESSIONAL ENGINEER
3/22/25

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P127	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 15-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	97
1"	25.4	85
3/4"	19.0	81
1/2"	12.7	74
3/8"	9.5	69
#4	4.75	57
#10	2.00	44
#20	0.85	31
#40	0.425	21
#60	0.25	14
#100	0.15	9
#200	0.075	6.3

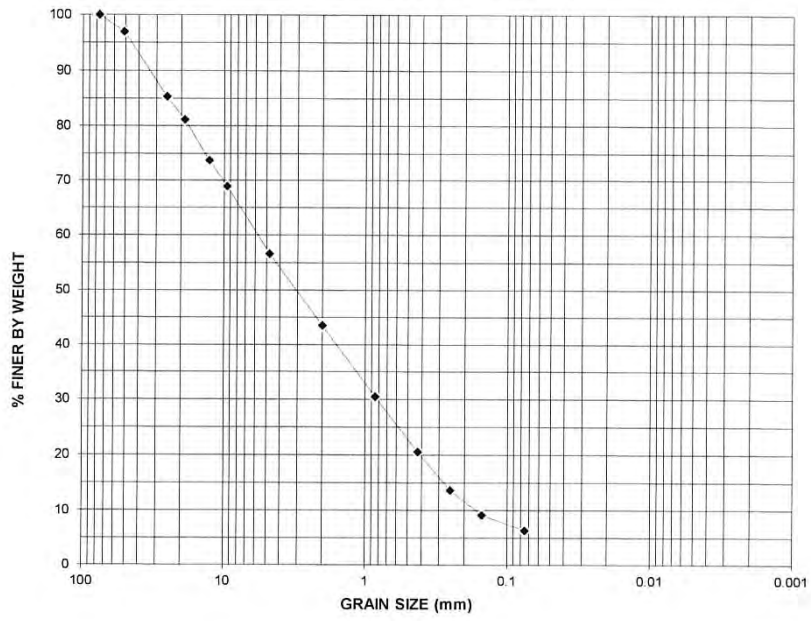
HYDROMETER TEST

(ASTM D422)

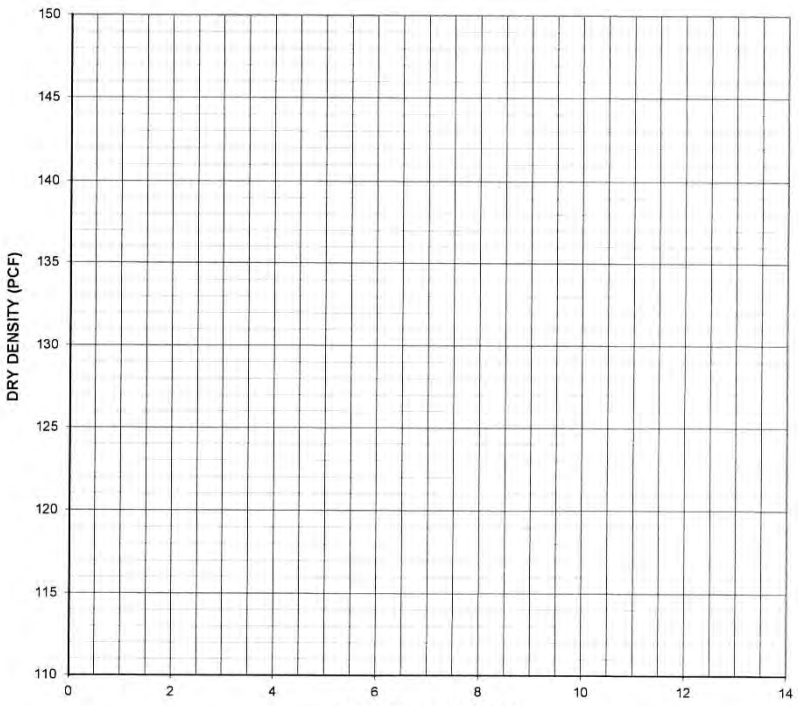
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	43.4
%Sand:	50.3
% Fines:	6.3
D60:	6.06
D30:	0.83
D10:	0.17
Cu:	35.8
Cc:	0.7
% .02 mm:	
% Moisture:	1.9
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Poorly Graded Sand w/Silt & Gravel
USC:	SP-SM
FROST CLASS:	

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L. WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #16

Legal Description: T17N R1E Sec 6 B13 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL419

1ft	ML
2ft	
3ft	GW-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	SW-SM
10ft	
11ft	
12ft	
13ft	V
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GW-GM; Well graded gravel w/Silt & Sand
#200 10.4%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? (Y) N At 13 ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA 19TH Robert L Walden ROBERT L. WALDEN No. CE13874 REGISTERED PROFESSIONAL ENGINEER 3/22/25

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD
PROJECT NO.:	20-401
CLIENT:	WCC&E
SAMPLE NO.:	21P133
LOCATION:	UKN

DATE TAKEN:	4/29/2021
DATE TESTED:	5/4/2021
TESTED BY:	DEM
REVIEWED BY:	JAB
DESCRIPTION:	TH 16-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	86
1"	25.4	80
3/4"	19.0	71
1/2"	12.7	65
3/8"	9.5	53
#4	4.75	47
#10	2.00	38
#20	0.85	29
#40	0.425	21
#60	0.25	17
#100	0.15	14
#200	0.075	10.4

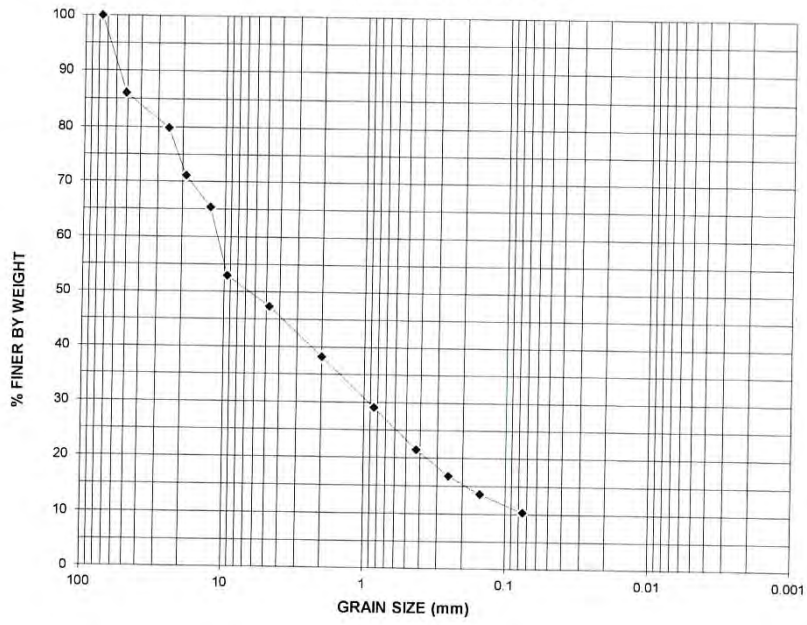
HYDROMETER TEST

(ASTM D422)

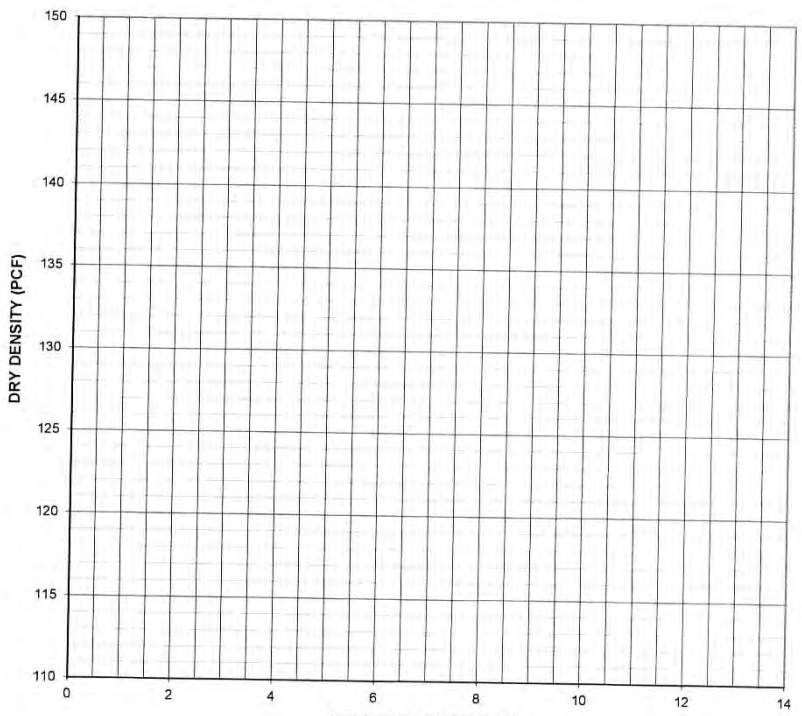
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	52.7
%Sand:	37.0
% Fines:	10.4
D60:	11.32
D30:	0.96
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	5.6
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Well Graded Gravel w/Silt & Sand
USC:	GW-GM
FROST CLASS:	

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L. WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Phone: (907) 564-2120

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REV 1-29-20

TESTHOLE LOG #17

Legal Description: T17N R1E Sec 6 B13 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL425

1ft	ML
2ft	
3ft	GP
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GP; Poorly graded Gravels
#200 1.6%

Total Depth of Testhole 13 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P128	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 17-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	96
1"	25.4	79
3/4"	19.0	71
1/2"	12.7	59
3/8"	9.5	53
#4	4.75	40
#10	2.00	30
#20	0.85	21
#40	0.425	11
#60	0.25	5
#100	0.15	2
#200	0.075	1.6

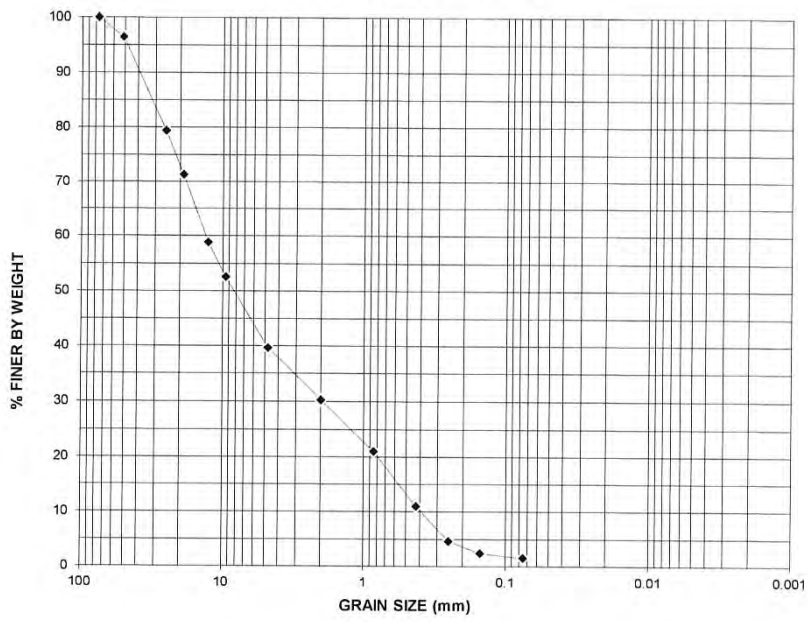
HYDROMETER TEST

(ASTM D422)

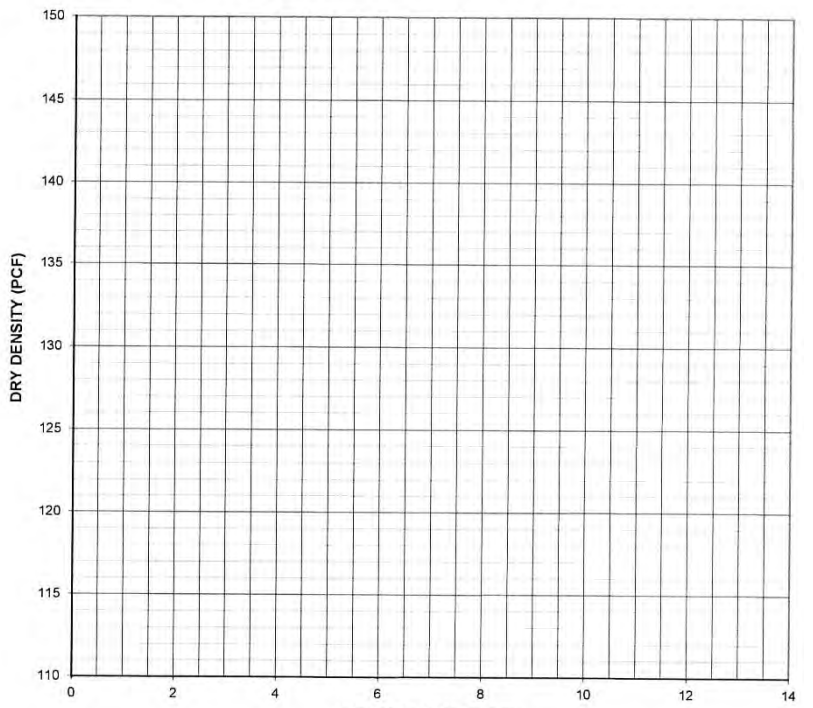
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	60.3
%Sand:	38.1
% Fines:	1.6
D60:	13.31
D30:	1.96
D10:	0.40
Cu:	33.5
Cc:	0.7
% .02 mm:	
% Moisture:	2.7
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

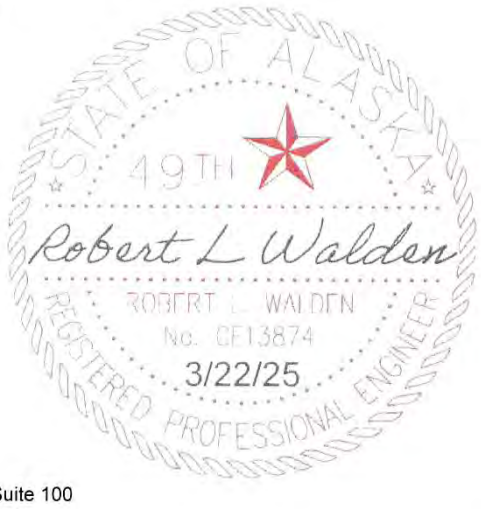


MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Poorly Graded Gravel w/Sand
USC:	GP
FROST CLASS:	

Remarks:



JOHN A. BUZDOR, P.E. 5/10/2021

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Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P123	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 18-1

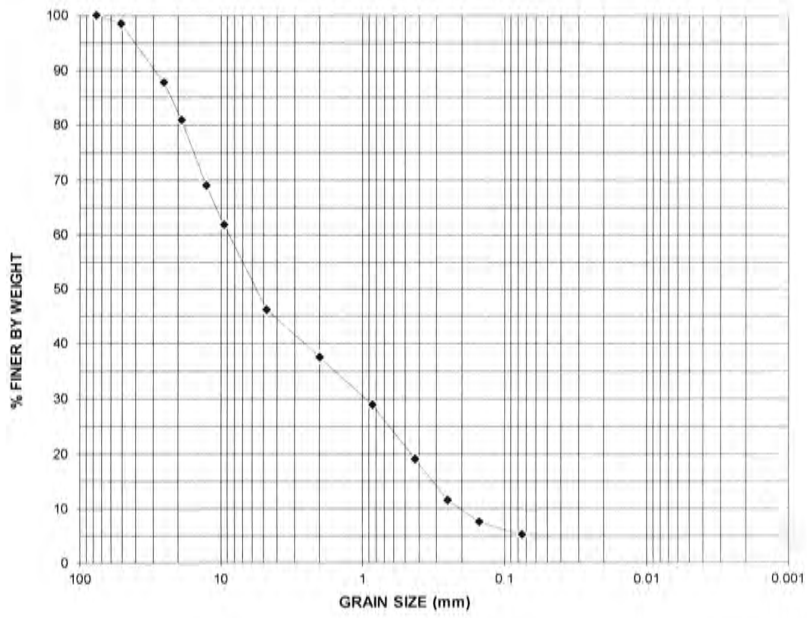
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	98
1"	25.4	88
3/4"	19.0	81
1/2"	12.7	69
3/8"	9.5	62
#4	4.75	46
#10	2.00	38
#20	0.85	29
#40	0.425	19
#60	0.25	12
#100	0.15	8
#200	0.075	5.2

% Gravel:	53.9
%Sand:	40.9
% Fines:	5.2
D60:	8.92
D30:	1.00
D10:	0.21
Cu:	42.3
Cc:	0.5
% .02 mm:	
% Moisture:	2.0
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

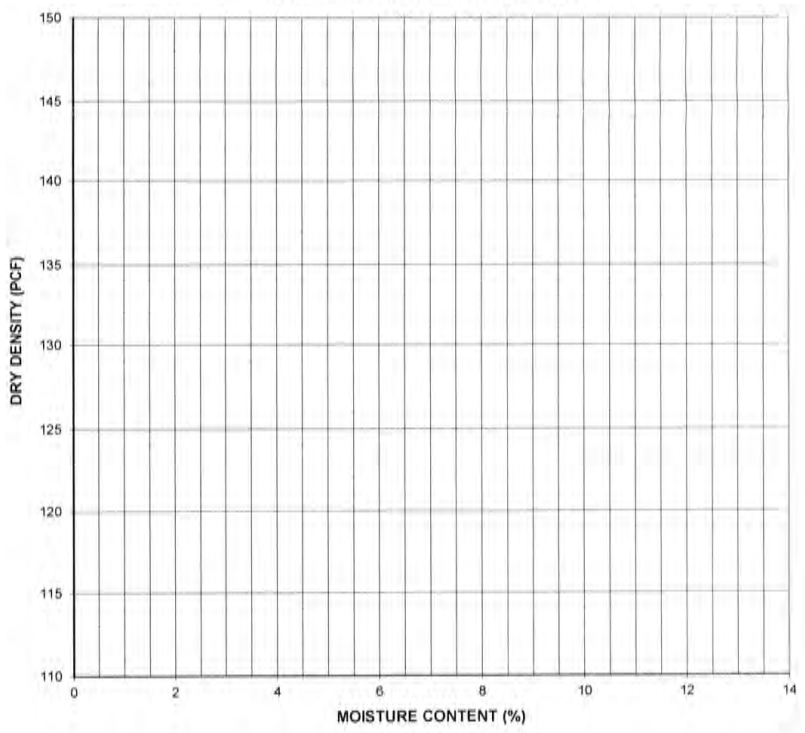


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

FROST CLASS:

Remarks:

STATE OF ALASKA 19TH Robert L Walden ROBERT L WALDEN No. CL13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P141	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 21-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	95
1"	25.4	73
3/4"	19.0	65
1/2"	12.7	54
3/8"	9.5	49
#4	4.75	38
#10	2.00	31
#20	0.85	22
#40	0.425	13
#60	0.25	7
#100	0.15	4
#200	0.075	2.7

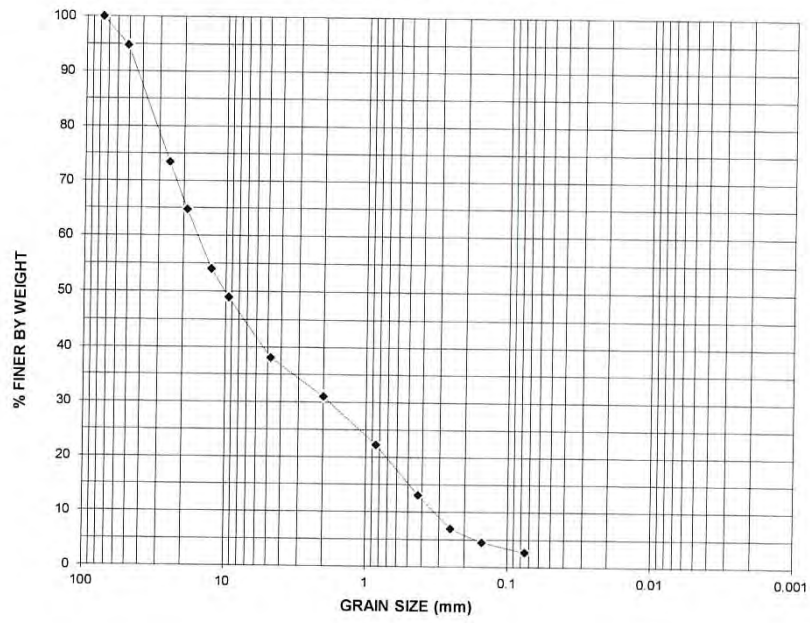
HYDROMETER TEST

(ASTM D422)

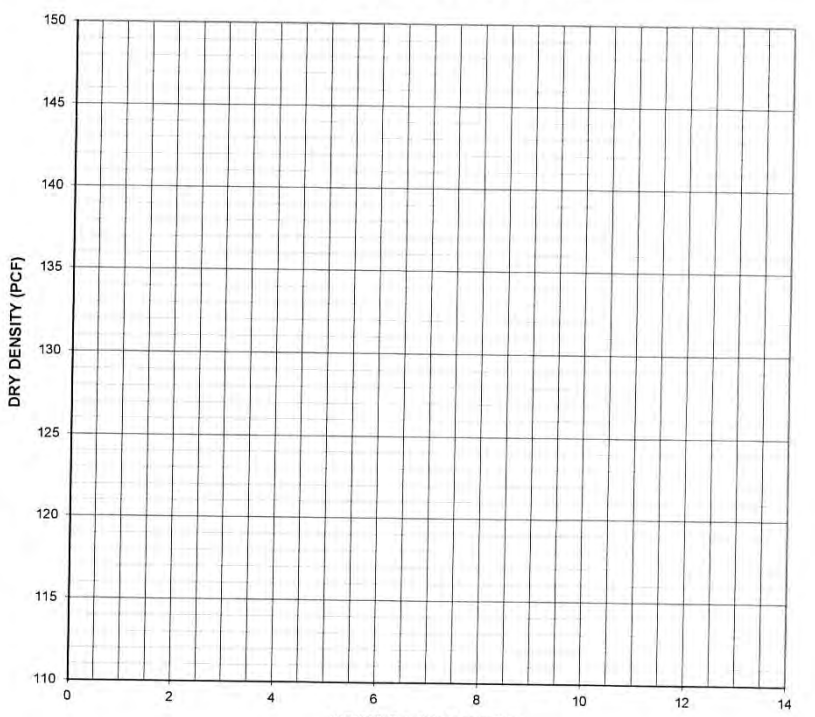
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	61.9
%Sand:	35.4
% Fines:	2.7
D60:	16.23
D30:	1.86
D10:	0.34
Cu:	48.2
Cc:	0.6
% .02 mm:	
% Moisture:	0.8
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Poorly Graded Gravel w/Sand
USC:	GP
FROST CLASS:	

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L. WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #22

Legal Description: T17N R1E Sec 6 B13 Date: 4/26/2021

Inspected By: Robert L Walden, PE

Ground level EL460

1ft	ML
2ft	
3ft	SP-SM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
SP-SM; Poorly graded sand w/Silt & gravel
#200-9.3%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
REGISTERED PROFESSIONAL ENGINEER
3/22/25

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P130	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 22-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	
2"	50.8	100
1"	25.4	87
3/4"	19.0	80
1/2"	12.7	72
3/8"	9.5	67
#4	4.75	57
#10	2.00	44
#20	0.85	33
#40	0.425	24
#60	0.25	17
#100	0.15	13
#200	0.075	9.3

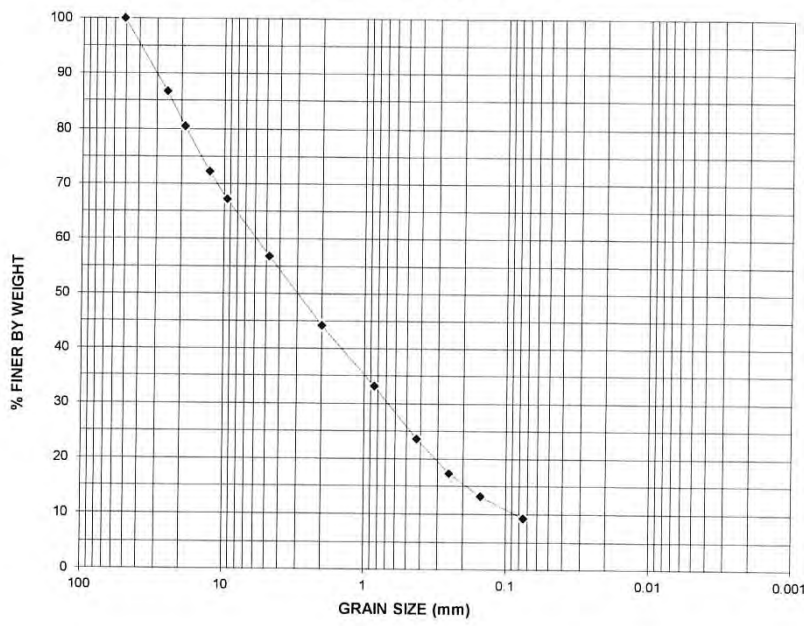
HYDROMETER TEST

(ASTM D422)

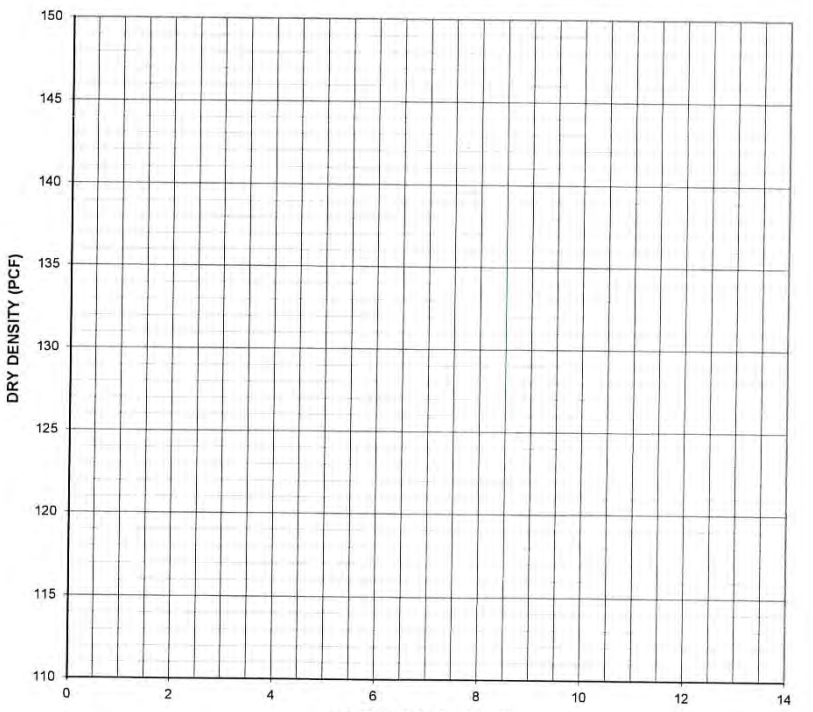
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	43.2
%Sand:	47.5
% Fines:	9.3
D60:	6.21
D30:	0.71
D10:	0.09
Cu:	69.7
Cc:	0.9
% .02 mm:	
% Moisture:	4.4
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Sand w/Silt & Gravel

USC: SP-SM

FROST CLASS:

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L. WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #23

Legal Description: T17N R1E Sec 6 B13 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL438

1ft	ML
2ft	
3ft	SP-SM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

SP-SM; Poorly graded sand w/Silt & gravel

No sample, on side hill 1:1.

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
19TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

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TESTHOLE LOG #24

Legal Description: T17N R1E Sec 6 B12 Date: 4/23/2021

Inspected By: Robert L Walden, PE

Ground level EL450

1ft	ML
2ft	
3ft	GP-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	SP
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GP-GM; Poorly graded gravel w/Silt & sand
No sample, on side hill 1:1.

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CL13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

TESTHOLE LOG #25

Legal Description: T17N R1E Sec 6 B12 Date: 4/23/2021

Inspected By: Robert L Walden, PE

Ground level EL418

1ft	ML
2ft	
3ft	
4ft	GW
5ft	
6ft	SP-SM
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
SP-SM; Poorly graded sand w/Silt & gravel
#200-5.6%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CS13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P126	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 25-1

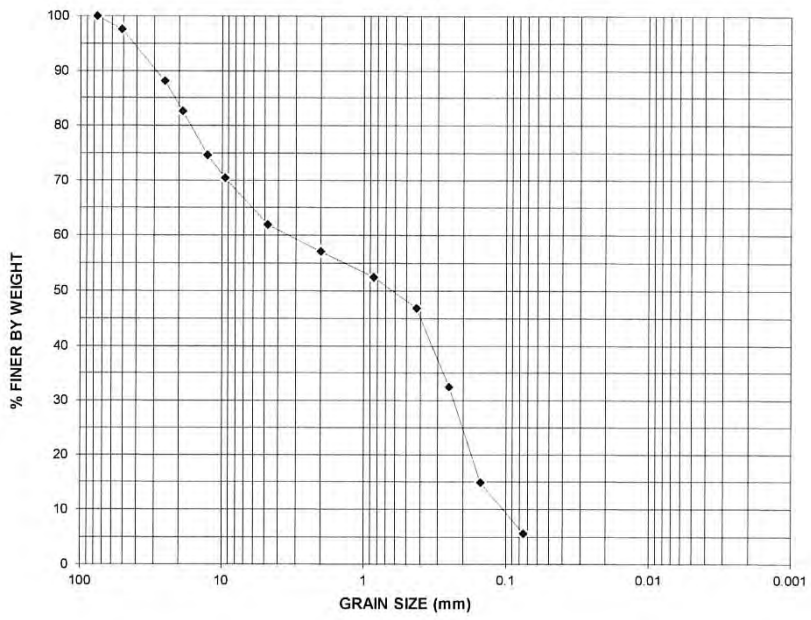
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	98
1"	25.4	88
3/4"	19.0	83
1/2"	12.7	75
3/8"	9.5	70
#4	4.75	62
#10	2.00	57
#20	0.85	53
#40	0.425	47
#60	0.25	32
#100	0.15	15
#200	0.075	5.6

% Gravel:	38.1
%Sand:	56.3
% Fines:	5.6
D60:	3.66
D30:	0.24
D10:	0.11
Cu:	33.1
Cc:	0.1
% .02 mm:	
% Moisture:	3.8
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

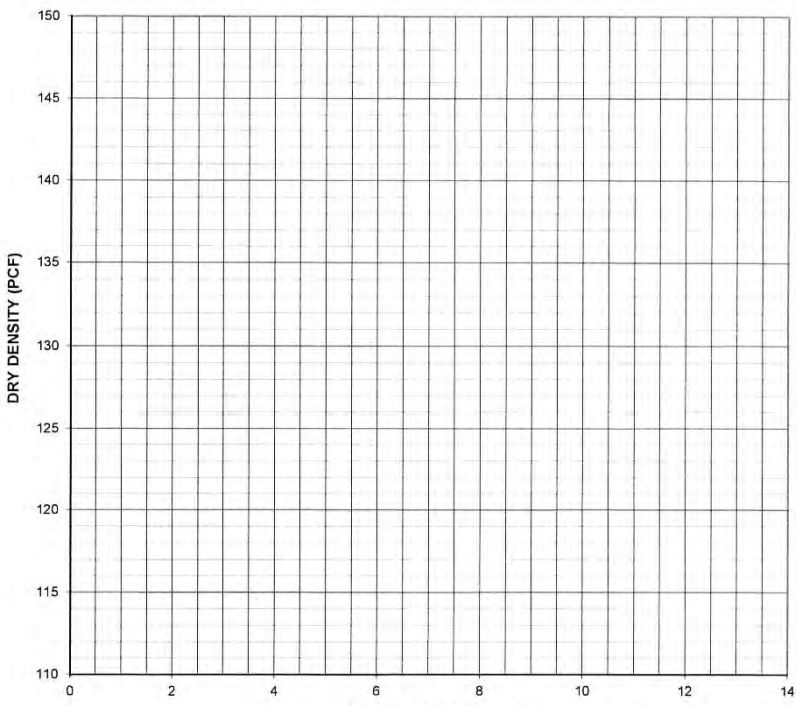


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Sand w/Silt & Gravel

USC: SP-SM

FROST CLASS:

Remarks:

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/24/2021
PROJECT NO.:	20-401	**DATE TESTED:**	4/30/2021
CLIENT:	WCC&E	**TESTED BY:**	NP
SAMPLE NO.:	21P107	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 26-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	99
1"	25.4	81
3/4"	19.0	76
1/2"	12.7	67
3/8"	9.5	62
#4	4.75	50
#10	2.00	40
#20	0.85	30
#40	0.425	18
#60	0.25	10
#100	0.15	7
#200	0.075	5.4

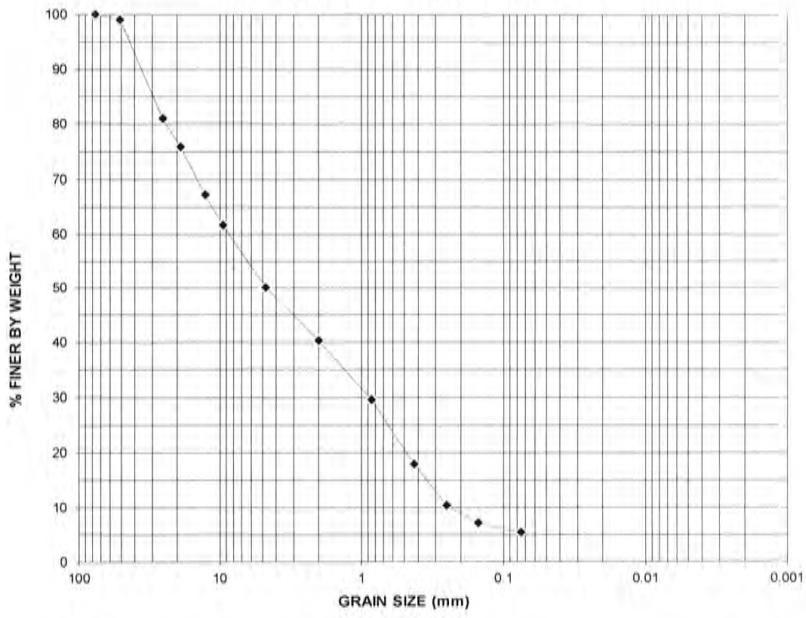
HYDROMETER TEST

(ASTM D422)

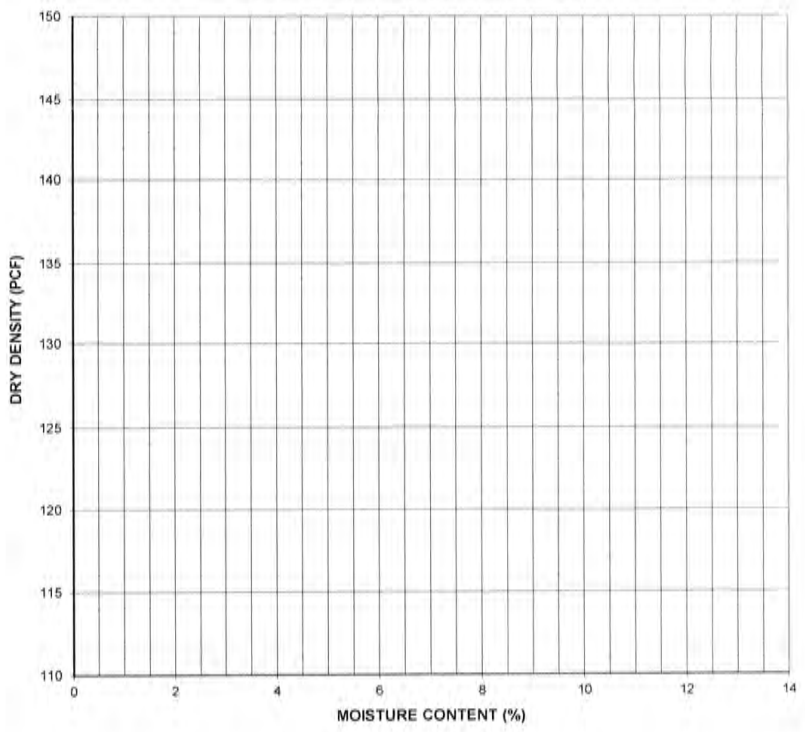
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

% Gravel:	50.0
%Sand:	44.6
% Fines:	5.4
D60:	8.82
D30:	0.89
D10:	0.24
Cu:	36.9
Cc:	0.4
% .02 mm:	
% Moisture:	3.5
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

FROST CLASS:

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L. WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/12/2021

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Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #27

Legal Description: T17N R1E Sec 6 C9 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL425

1ft	ML
2ft	
3ft	SP
4ft	
5ft	GP-GM
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

2-4;SP; Poorly graded sand

4-14;GP-GM; Poorly graded gravel w/Silt & sand

#200 10.2%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y [N] At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y [N] At _____ ft.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P124	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 27-1

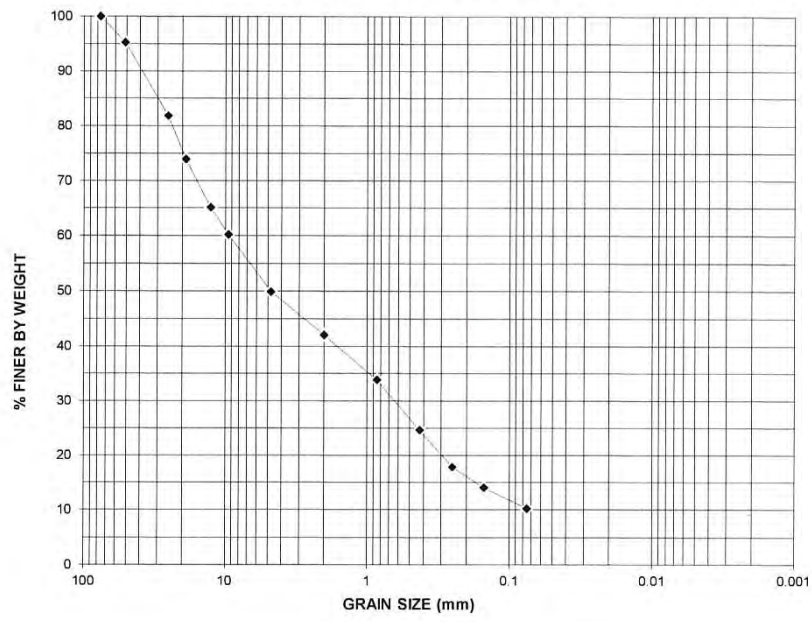
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	95
1"	25.4	82
3/4"	19.0	74
1/2"	12.7	65
3/8"	9.5	60
#4	4.75	50
#10	2.00	42
#20	0.85	34
#40	0.425	25
#60	0.25	18
#100	0.15	14
#200	0.075	10.2

% Gravel:	50.1
%Sand:	39.6
% Fines:	10.2
D60:	9.42
D30:	0.67
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	5.4
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

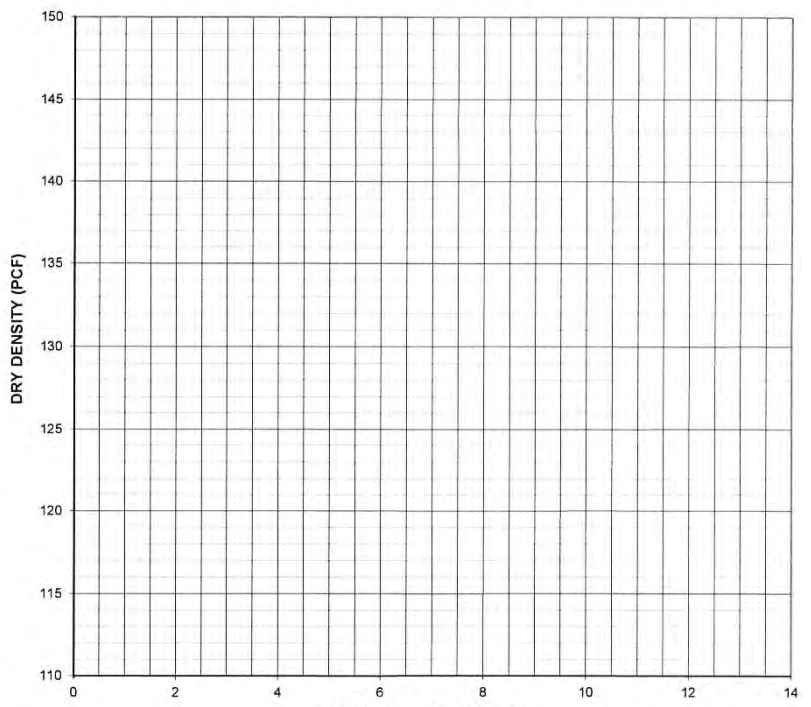


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

FROST CLASS:

Remarks:

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #28

Legal Description: T17N R1E Sec 6 C8 Date: 4/28/2021

Inspected By: Robert L Walden, PE

Ground level EL433

1ft	ML
2ft	
3ft	
4ft	GW
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GW; Well graded Gravel w/sand
#200-4.9%

Total Depth of Testhole 12 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P135	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 28-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	99
1"	25.4	82
3/4"	19.0	74
1/2"	12.7	63
3/8"	9.5	57
#4	4.75	43
#10	2.00	31
#20	0.85	25
#40	0.425	16
#60	0.25	9
#100	0.15	6
#200	0.075	4.9

% Gravel:	57.2
%Sand:	37.9
% Fines:	4.9
D60:	11.06
D30:	1.78
D10:	0.27
Cu:	41.4
Cc:	1.1
% .02 mm:	
% Moisture:	4.5
Fine Modulus:	

(ASTM D4318)

Liquid Limit:	
Plastic Limit:	
Plastic Index:	

(ASTM C127)

Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	

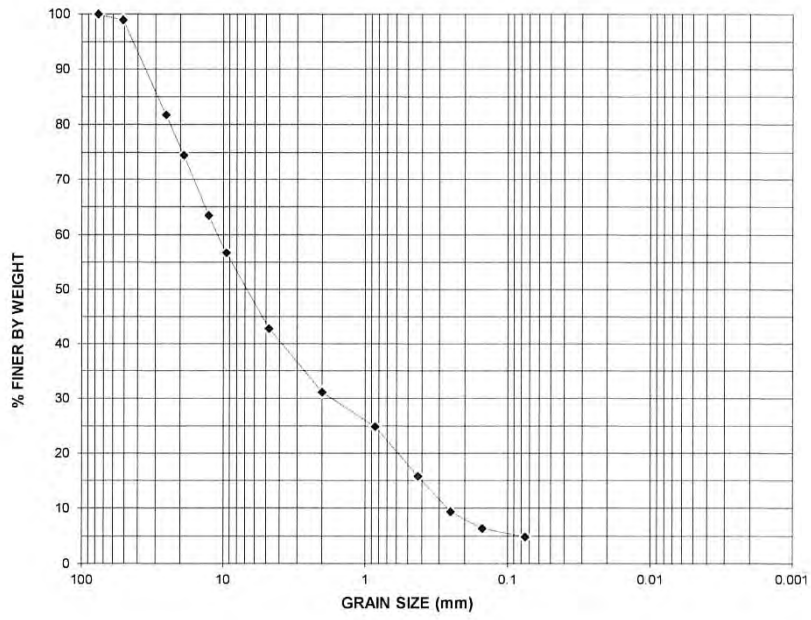
(ASTM C128)

Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	

(ASTM D1557)

Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

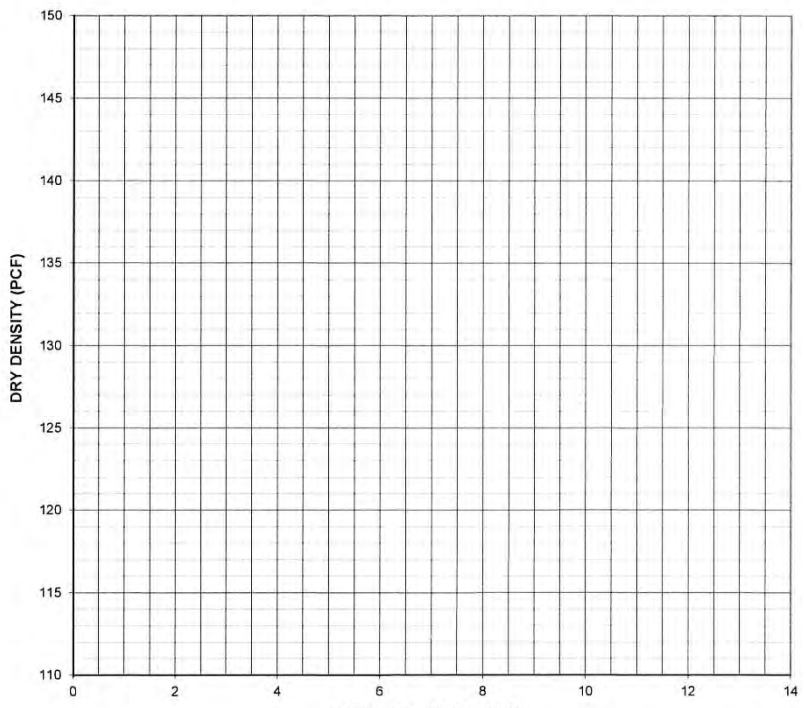


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Well Graded Gravel w/Sand

USC: GW

FROST CLASS:

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #30

Legal Description: T17N R1E Sec 6 C8 Date: 4/28/2021

Inspected By: Robert L Walden, PE

Ground level EL440

1ft	ML
2ft	
3ft	GW
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GW; Well graded Gravel w/sand
#200-4.3%

Total Depth of Testhole 18 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P122	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 30-1

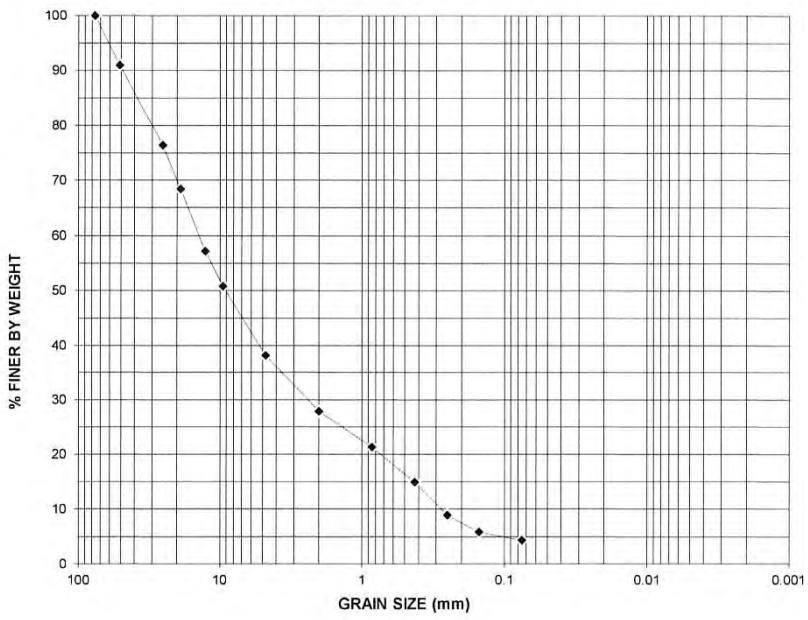
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	91
1"	25.4	76
3/4"	19.0	68
1/2"	12.7	57
3/8"	9.5	51
#4	4.75	38
#10	2.00	28
#20	0.85	21
#40	0.425	15
#60	0.25	9
#100	0.15	6
#200	0.075	4.3

% Gravel:	61.9
%Sand:	33.8
% Fines:	4.3
D60:	14.27
D30:	2.56
D10:	0.28
Cu:	50.6
Cc:	1.6
% .02 mm:	
% Moisture:	4.3
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

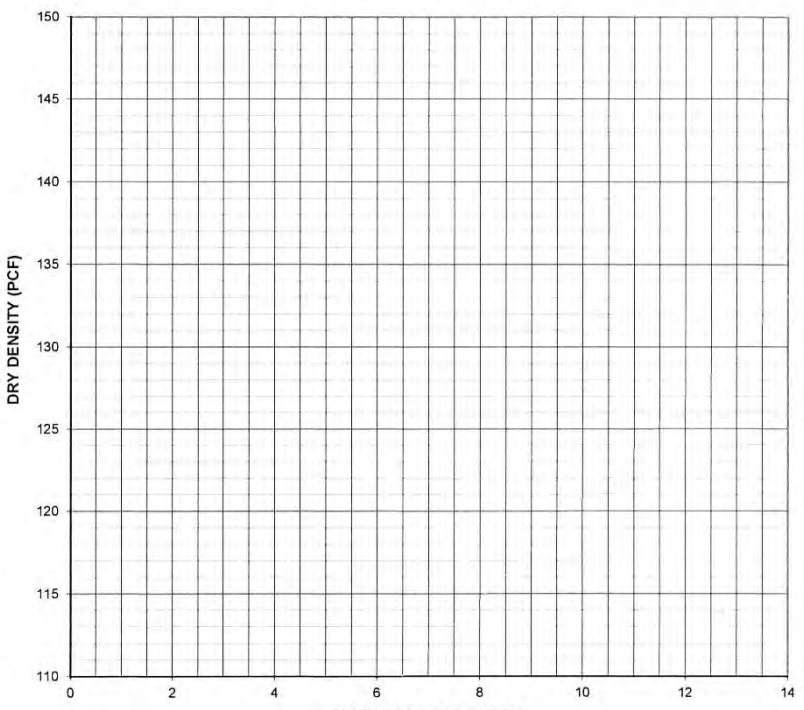


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Well Graded Gravel w/Sand

USC: GW

FROST CLASS:

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #32

Legal Description: T17N R1E Sec 6 B12 Date: 4/28/2021

Inspected By: Robert L Walden, PE

Ground level EL445

1ft	ML
2ft	
3ft	
4ft	
5ft	
6ft	SM
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
SM; Silty sand w/gravel
#200-13.2%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P139	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 32-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	91
1"	25.4	80
3/4"	19.0	77
1/2"	12.7	71
3/8"	9.5	68
#4	4.75	61
#10	2.00	55
#20	0.85	48
#40	0.425	38
#60	0.25	27
#100	0.15	19
#200	0.075	13.2

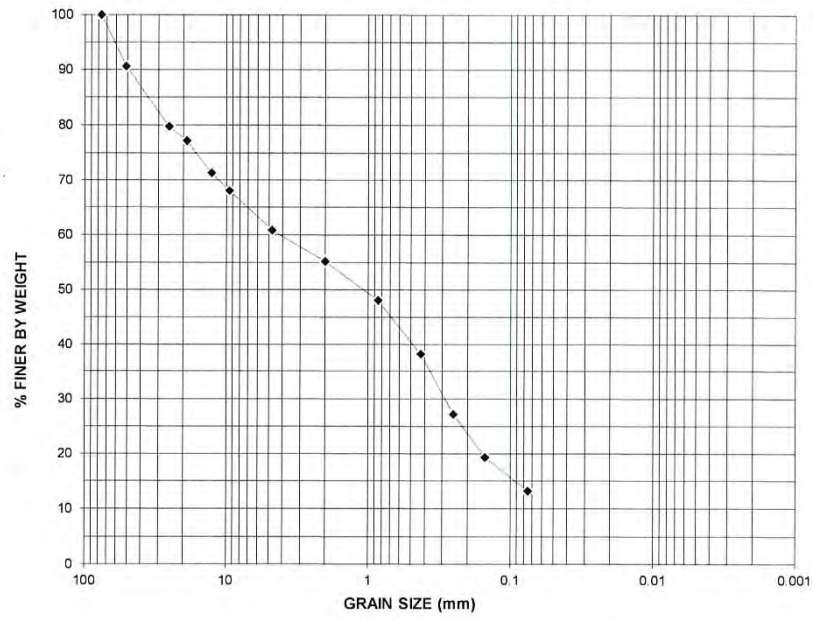
HYDROMETER TEST

(ASTM D422)

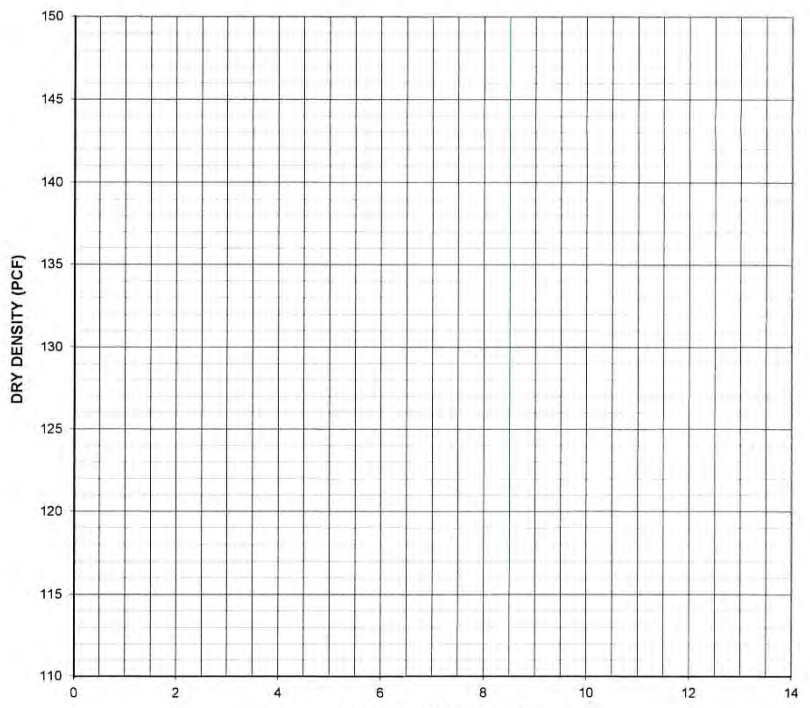
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	39.2
%Sand:	47.6
% Fines:	13.2
D60:	4.35
D30:	0.29
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	7.8
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Silty Sand w/Gravel
USC:	SM
FROST CLASS:	

Remarks:

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #33

Legal Description: T17N R1E Sec 6 C8 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL438

1ft	ML
2ft	
3ft	GW-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

GW-GM; Well graded gravel w/Silt & Sand

#200 5.5%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
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Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P120	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 33-1

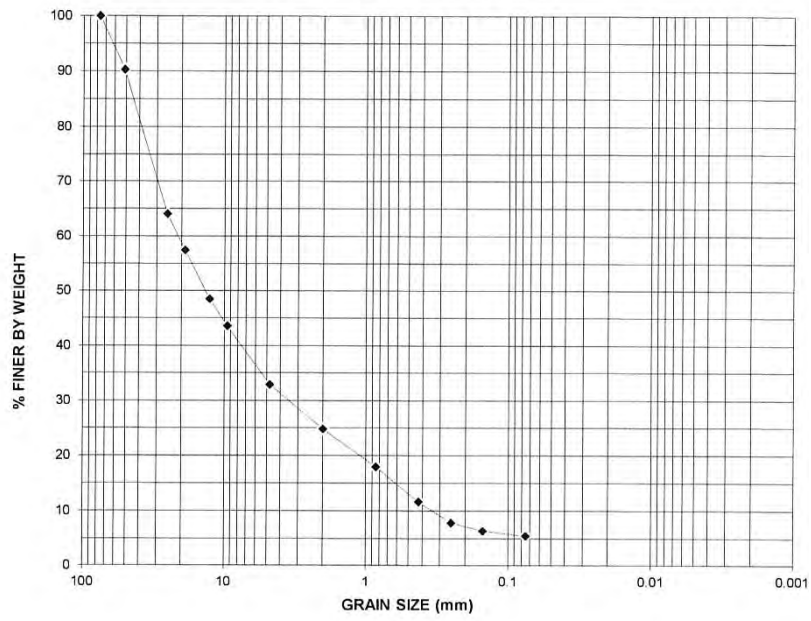
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	90
1"	25.4	64
3/4"	19.0	57
1/2"	12.7	48
3/8"	9.5	43
#4	4.75	33
#10	2.00	25
#20	0.85	18
#40	0.425	12
#60	0.25	8
#100	0.15	6
#200	0.075	5.5

% Gravel:	67.1
%Sand:	27.4
% Fines:	5.5
D60:	21.49
D30:	3.76
D10:	0.35
Cu:	61.4
Cc:	1.9
% .02 mm:	
% Moisture:	3.5
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

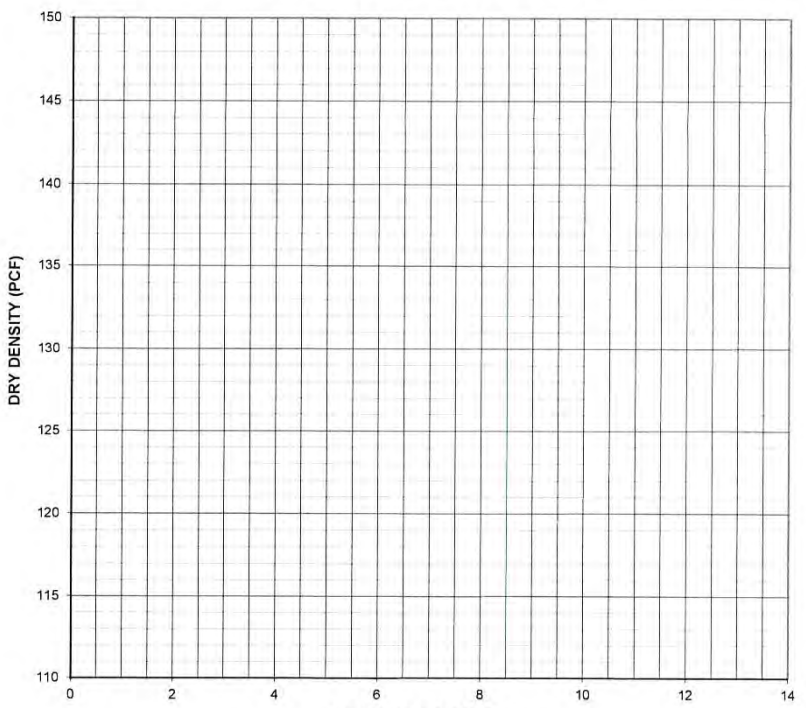


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Well Graded Gravel w/Silt & Sand

USC: GW-GM

FROST CLASS:

Remarks:

JOHN A. BUZDOR, P.E. 5/11/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #34

Legal Description: T17N R1E Sec 6 C9 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL458

1ft	ML
2ft	GP-GM
3ft	
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	SW
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:
GP-GM; Poorly graded gravel w/Silt & sand
#200 6.5%

Total Depth of Testhole 13 ft.

Groundwater/Seeps Encountered? Y [N] At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y [N] At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P131	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 34-1

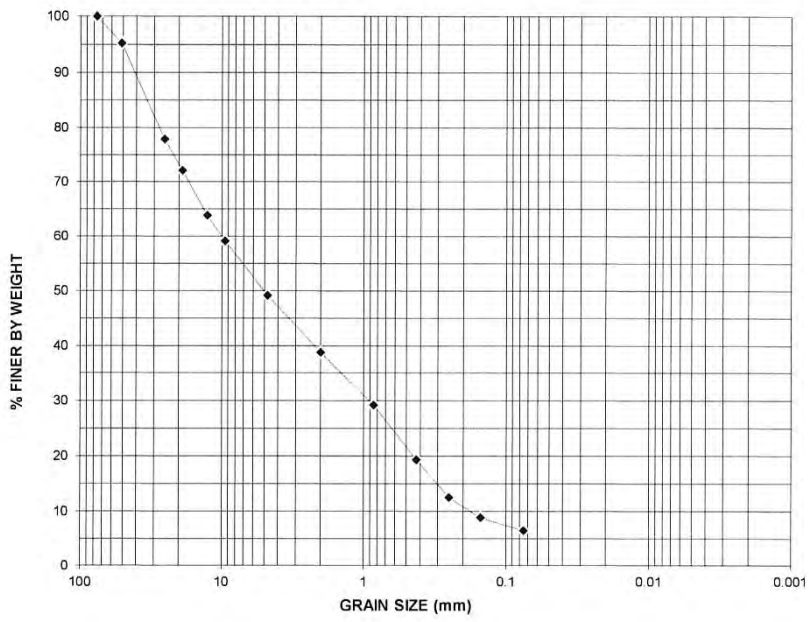
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	95
1"	25.4	78
3/4"	19.0	72
1/2"	12.7	64
3/8"	9.5	59
#4	4.75	49
#10	2.00	39
#20	0.85	29
#40	0.425	19
#60	0.25	13
#100	0.15	9
#200	0.075	6.5

% Gravel:	50.9
%Sand:	42.7
% Fines:	6.5
D60:	10.09
D30:	0.94
D10:	0.18
Cu:	55.7
Cc:	0.5
% .02 mm:	
% Moisture:	3.0
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

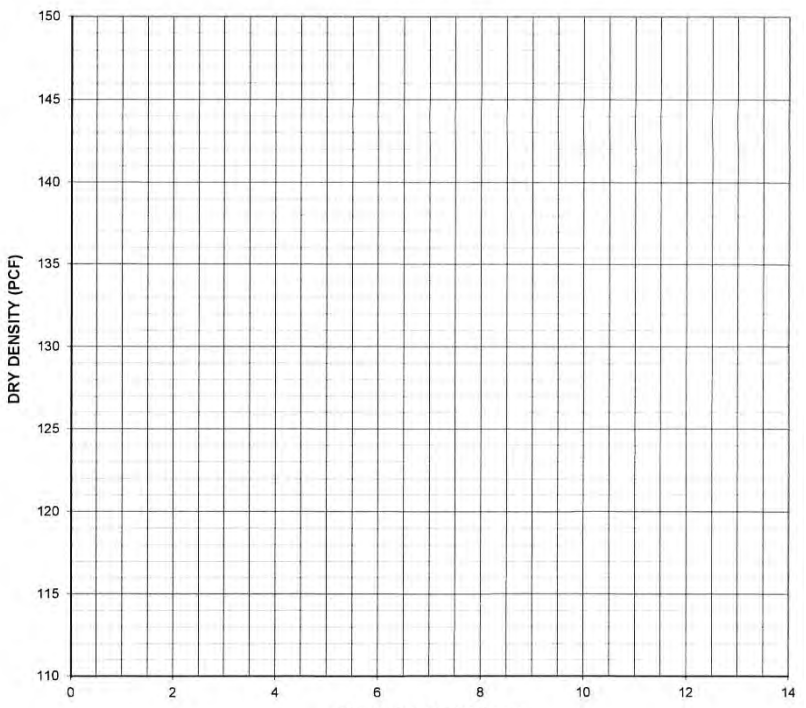


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

FROST CLASS:

Remarks:

STATE OF ALASKA 49TH Robert L Walden ROBERT L. WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #35

Legal Description: T17N R1E Sec 6 C7 Date: 4/28/2021

Inspected By: Robert L Walden, PE

Ground level EL403

1ft	ML
2ft	
3ft	GP-GM
4ft	
5ft	
6ft	
7ft	V
8ft	SP-SM
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

2-7;GP-GM; Poorly graded Gravel w/Silt & sands
#200-8.5%
7-10;SP-SM; Poorly graded Sand w/Silt & gravels
#200-9.9%

Seeps at 7' water elevation in hole 8'

Total Depth of Testhole 10 ft.

Groundwater/Seeps Encountered? [Y] N At 7 ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y [N] At _____ ft.

STATE OF ALASKA
19
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P137	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 35-1

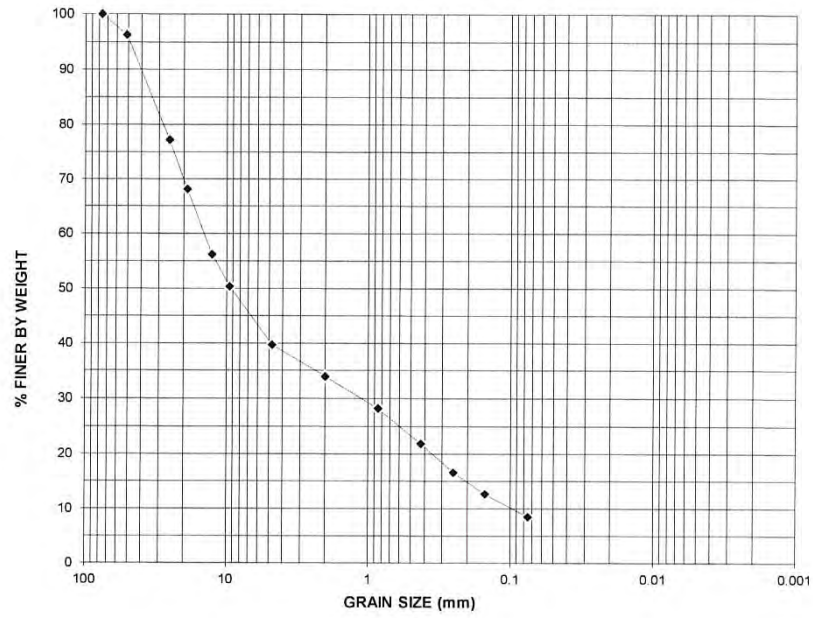
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	96
1"	25.4	77
3/4"	19.0	68
1/2"	12.7	56
3/8"	9.5	50
#4	4.75	40
#10	2.00	34
#20	0.85	28
#40	0.425	22
#60	0.25	17
#100	0.15	13
#200	0.075	8.5

% Gravel:	60.3
%Sand:	31.2
% Fines:	8.5
D60:	14.73
D30:	1.20
D10:	0.10
Cu:	144.7
Cc:	1.0
% .02 mm:	
% Moisture:	3.7
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

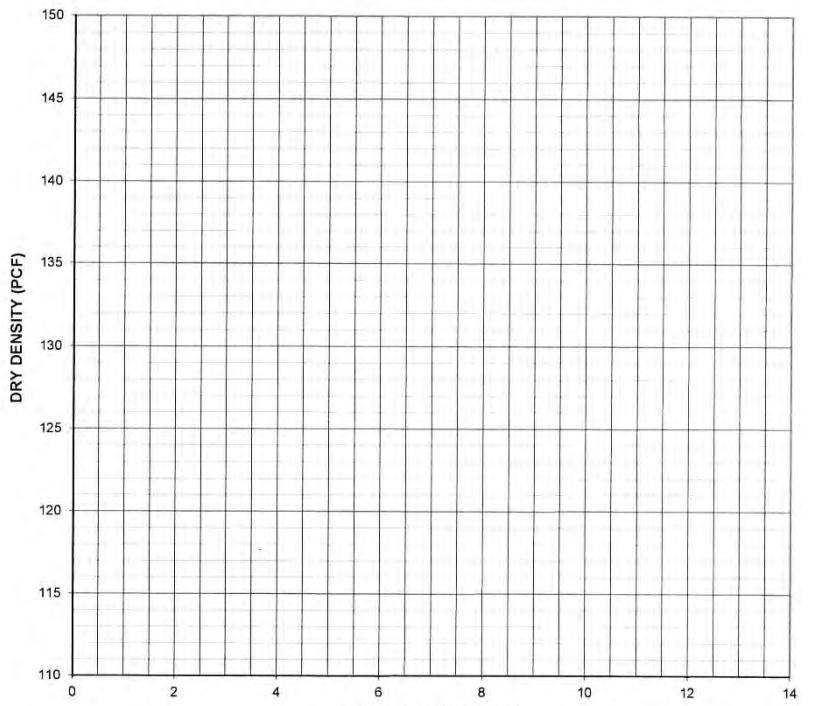


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

FROST CLASS:

Remarks:

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P121	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 37-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	99
1"	25.4	89
3/4"	19.0	84
1/2"	12.7	72
3/8"	9.5	65
#4	4.75	50
#10	2.00	40
#20	0.85	33
#40	0.425	27
#60	0.25	22
#100	0.15	17
#200	0.075	11.9

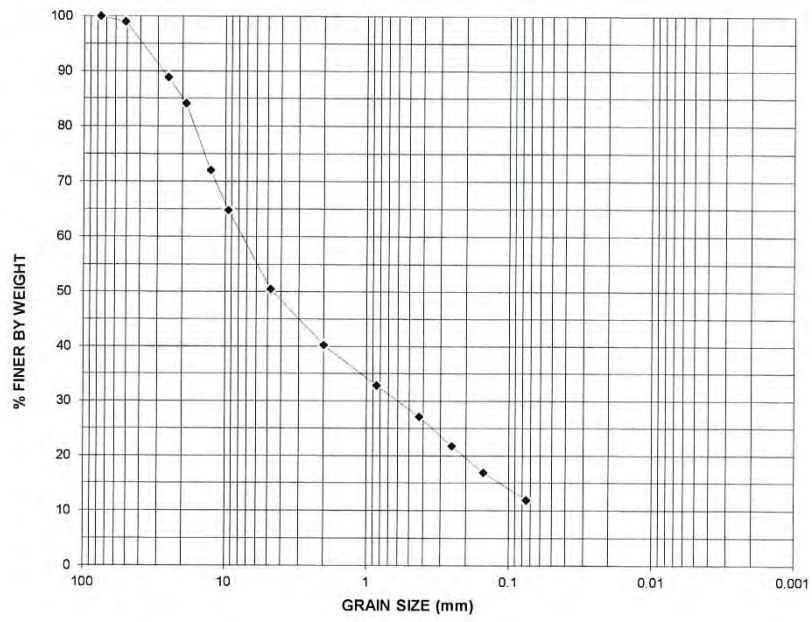
HYDROMETER TEST

(ASTM D422)

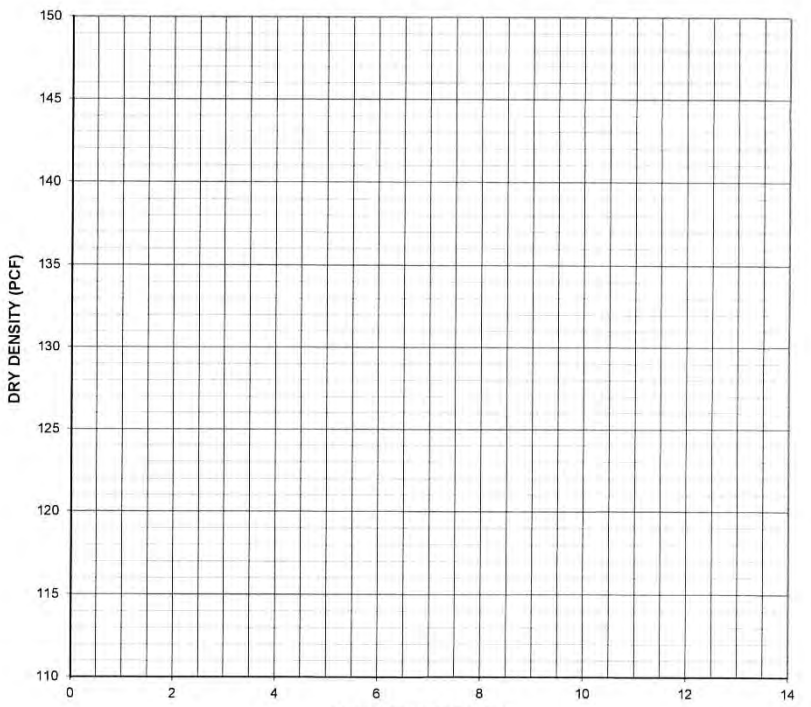
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	49.6
%Sand:	38.5
% Fines:	11.9
D60:	7.91
D30:	0.64
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	4.8
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP

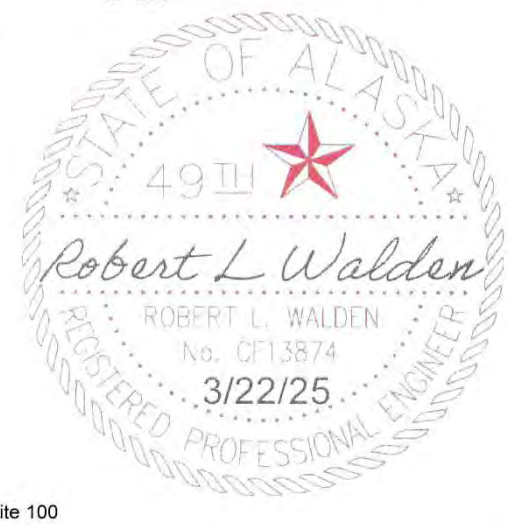


CLASSIFICATION: Poorly Graded Gravel w/Silt &Sand

USC: GP-GM

FROST CLASS:

Remarks:



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REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P138	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 38-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	
2"	50.8	100
1"	25.4	84
3/4"	19.0	76
1/2"	12.7	71
3/8"	9.5	67
#4	4.75	60
#10	2.00	55
#20	0.85	50
#40	0.425	43
#60	0.25	34
#100	0.15	25
#200	0.075	14.5

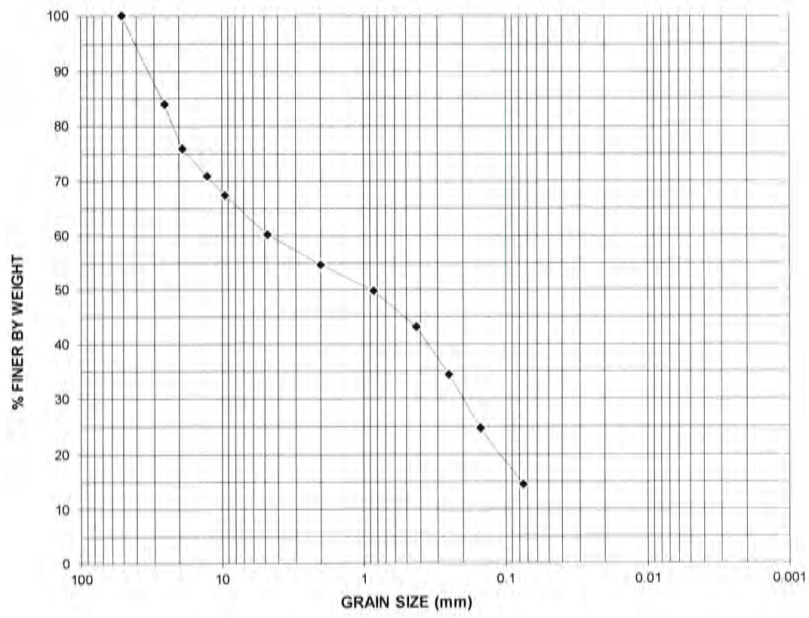
HYDROMETER TEST

(ASTM D422)

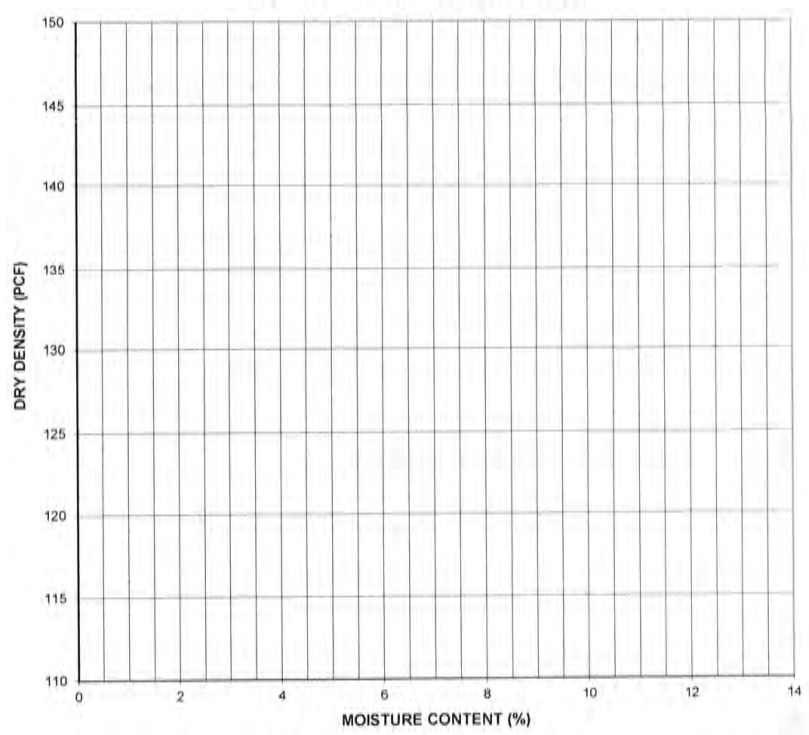
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	39.8
%Sand:	45.7
% Fines:	14.5
D60:	4.65
D30:	0.20
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	5.5
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Silty Sand w/Gravel
USC:	SM
FROST CLASS:	

Remarks:

STATE OF ALASKA 19TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

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Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P140	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 35-3

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	
2"	50.8	100
1"	25.4	96
3/4"	19.0	91
1/2"	12.7	82
3/8"	9.5	75
#4	4.75	61
#10	2.00	51
#20	0.85	43
#40	0.425	31
#60	0.25	19
#100	0.15	13
#200	0.075	9.9

% Gravel:	38.9
%Sand:	51.2
% Fines:	9.9
D60:	4.44
D30:	0.41
D10:	0.08
Cu:	57.0
Cc:	0.5
% .02 mm:	
% Moisture:	9.5
Fine Modulus:	

(ASTM D4318)

Liquid Limit:	
Plastic Limit:	
Plastic Index:	

(ASTM C127)

Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	

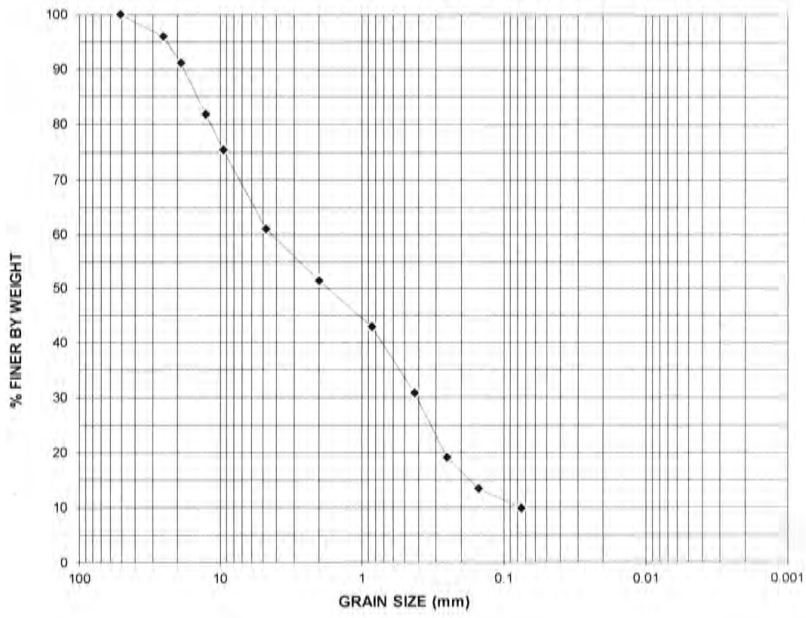
(ASTM C128)

Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	

(ASTM D1557)

Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

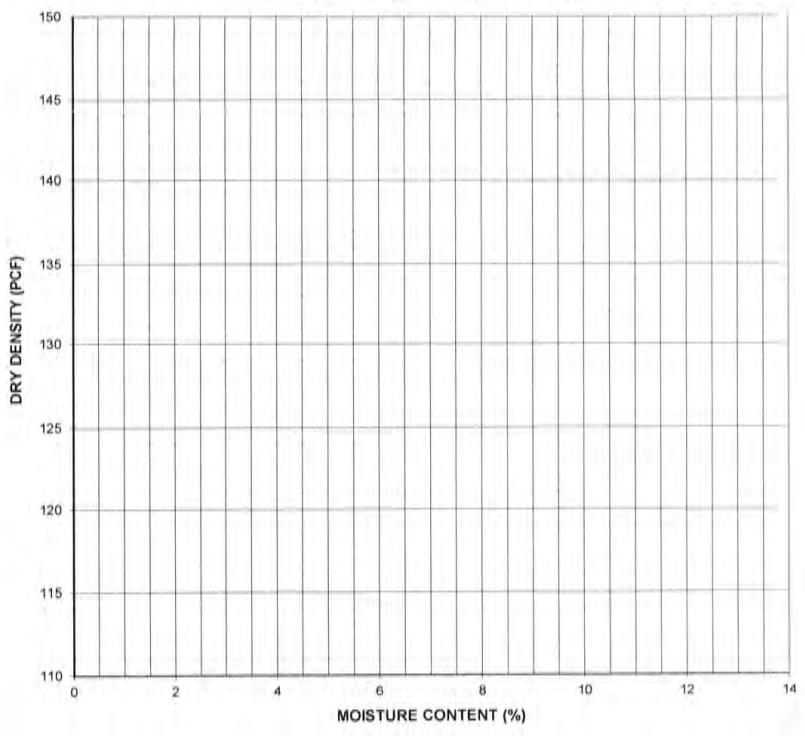


HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Sand w/Silt & Gravel

USC: SP-SM

FROST CLASS:

Remarks:

STATE OF ALASKA 19TH Robert L Walden ROBERT L. WALDEN No. CE13874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

3335 Arctic Blvd, Suite 100
Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #39

Legal Description: T17N R1E Sec 6 C9 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL417

1ft	ML
2ft	
3ft	SP
4ft	
5ft	GP-GM
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

2-4;SP; Poorly graded sand

4-14;GP-GM; Poorly graded gravel w/Silt & sand
#200 10.2%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P134	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 39-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	96
1"	25.4	82
3/4"	19.0	76
1/2"	12.7	69
3/8"	9.5	65
#4	4.75	57
#10	2.00	52
#20	0.85	45
#40	0.425	37
#60	0.25	29
#100	0.15	21
#200	0.075	13.0

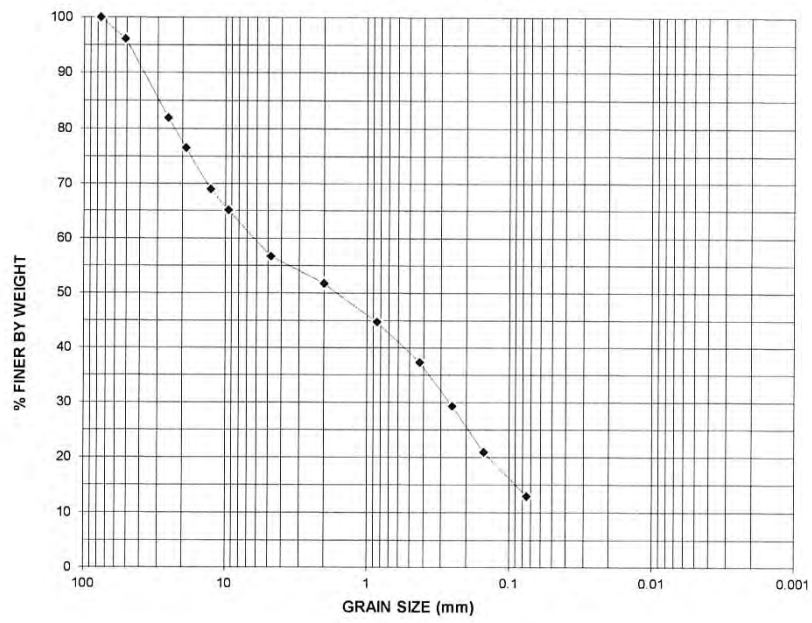
HYDROMETER TEST

(ASTM D422)

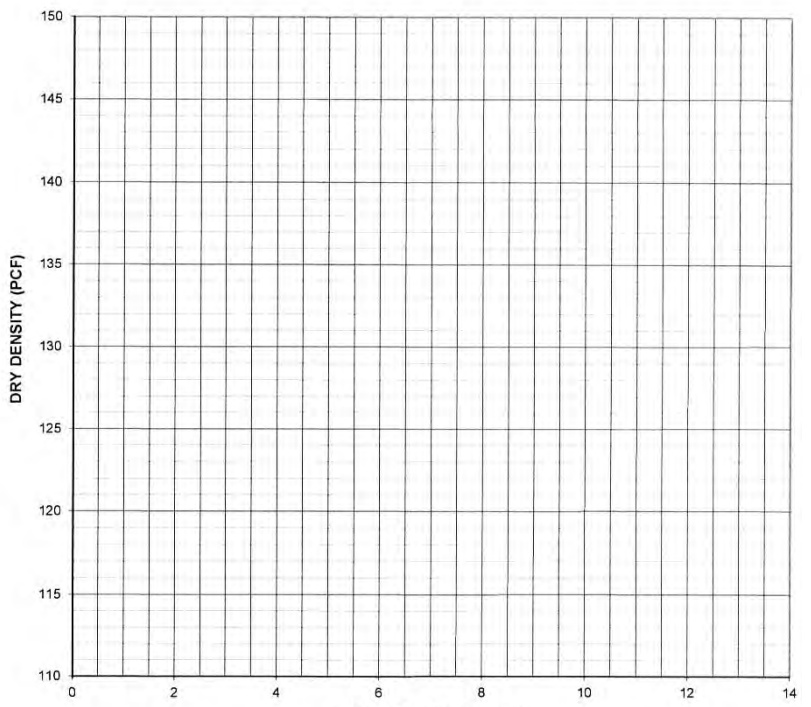
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	43.3
%Sand:	43.7
% Fines:	13.0
D60:	6.64
D30:	0.27
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	4.8
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

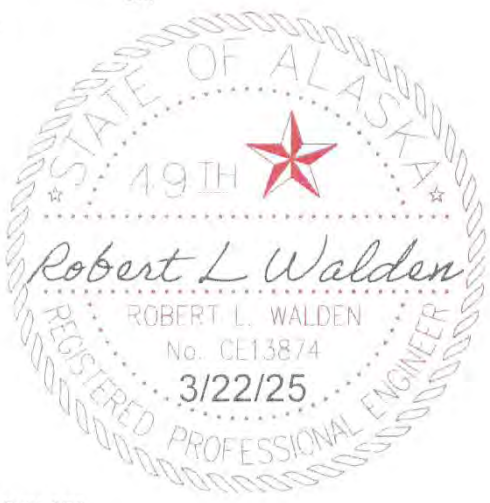


MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Silty Sand w/Gravel
USC:	SM
FROST CLASS:	

Remarks:



JOHN A. BUZDOR, P.E. 5/10/2021

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Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #41

Legal Description: T17N R1E Sec 6 B10 Date: 4/22/2021

Inspected By: Robert L Walden, PE

Ground level EL 403

1ft	ML
2ft	
3ft	GP-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	V
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

GP-GM; Poorly graded gravel w/Silt & sand

#200-5.6%

Total Depth of Testhole 13.5 ft.

Groundwater/Seeps Encountered? (Y) N At 11.5 ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE1384
REGISTERED PROFESSIONAL ENGINEER
3/22/25

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P136	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 42-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	
2"	50.8	100
1"	25.4	87
3/4"	19.0	83
1/2"	12.7	73
3/8"	9.5	67
#4	4.75	53
#10	2.00	41
#20	0.85	31
#40	0.425	24
#60	0.25	20
#100	0.15	16
#200	0.075	12.9

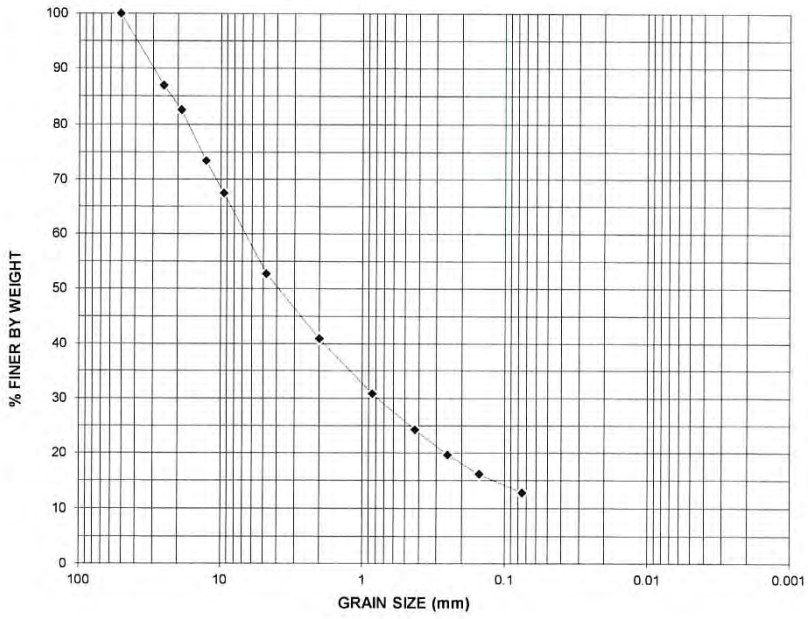
HYDROMETER TEST

(ASTM D422)

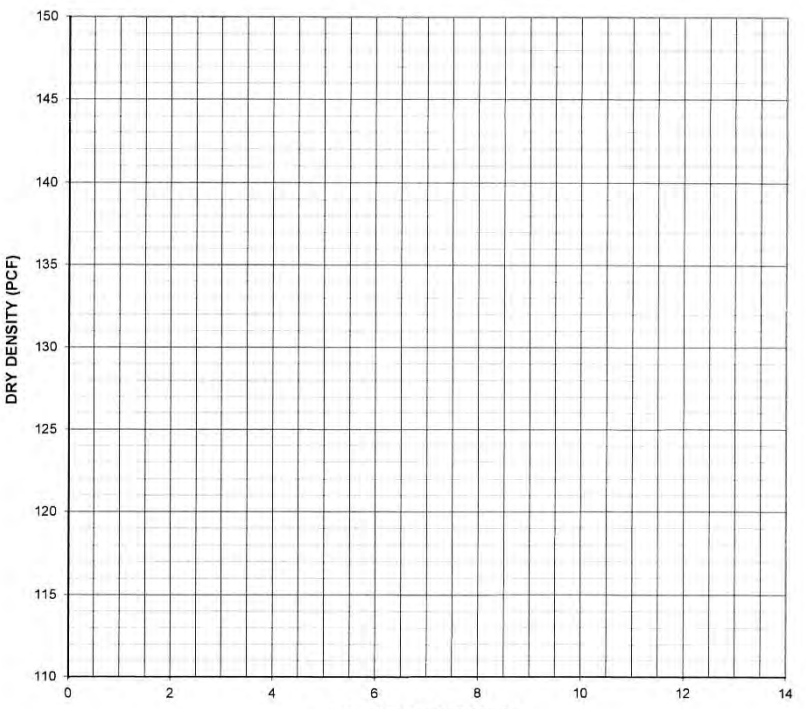
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	47.3
%Sand:	39.9
% Fines:	12.9
D60:	7.09
D30:	0.79
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	3.8
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Silty Gravel w/Sand

USC: GM

FROST CLASS:

Remarks:

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P125	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 43-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	99
1"	25.4	84
3/4"	19.0	79
1/2"	12.7	69
3/8"	9.5	63
#4	4.75	49
#10	2.00	39
#20	0.85	30
#40	0.425	21
#60	0.25	13
#100	0.15	8
#200	0.075	5.6

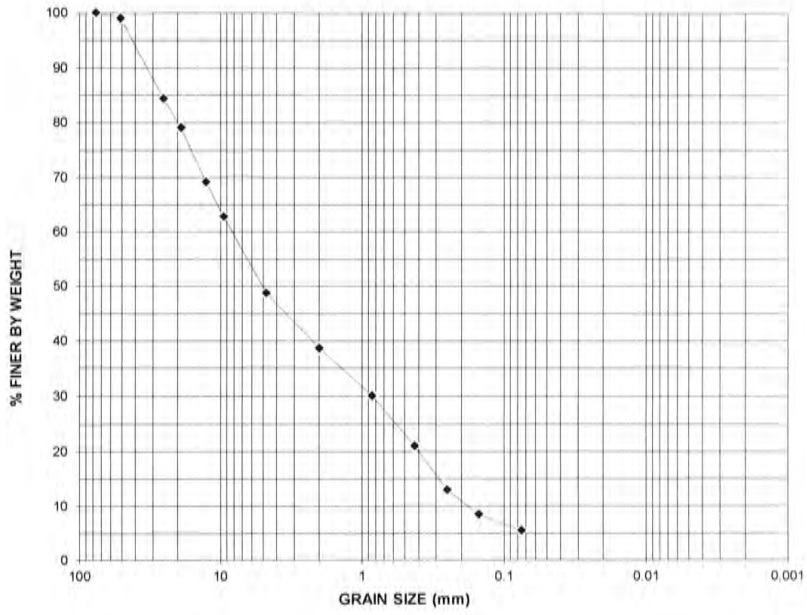
HYDROMETER TEST

(ASTM D422)

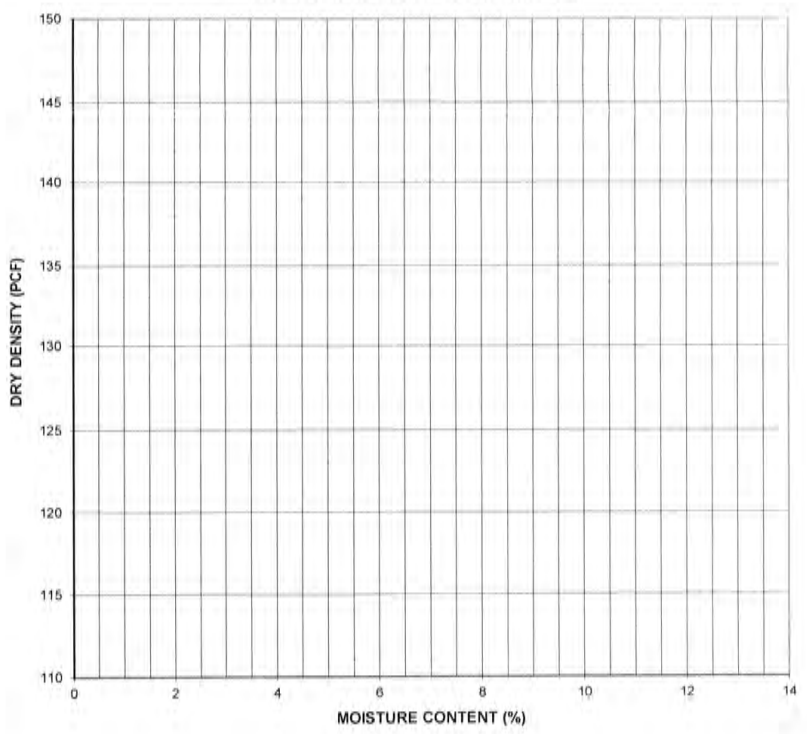
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	51.3
%Sand:	43.1
% Fines:	5.6
D60:	8.52
D30:	0.84
D10:	0.18
Cu:	46.2
Cc:	0.5
% .02 mm:	
% Moisture:	3.5
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

FROST CLASS:

Remarks:

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L WALDEN
No. CL13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #45

Legal Description: T17N R1E Sec 6 C8 Date: 4/28/2021

Inspected By: Robert L Walden, PE

Ground level EL447

1ft	ML
2ft	GP-GM
3ft	GP-GM
4ft	GP-GM
5ft	GP-GM
6ft	GP-GM
7ft	GP-GM
8ft	GP-GM
9ft	GP-GM
10ft	GP-GM
11ft	GP-GM
12ft	GP-GM
13ft	GP-GM
14ft	GP-GM
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

1.5-14;GP-GM; Poorly graded Gravel w/Silts & gravels #200-11.7%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y (N) At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ ft.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P143	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 45-1

SIEVE ANALYSIS TEST

(ASTM D422)

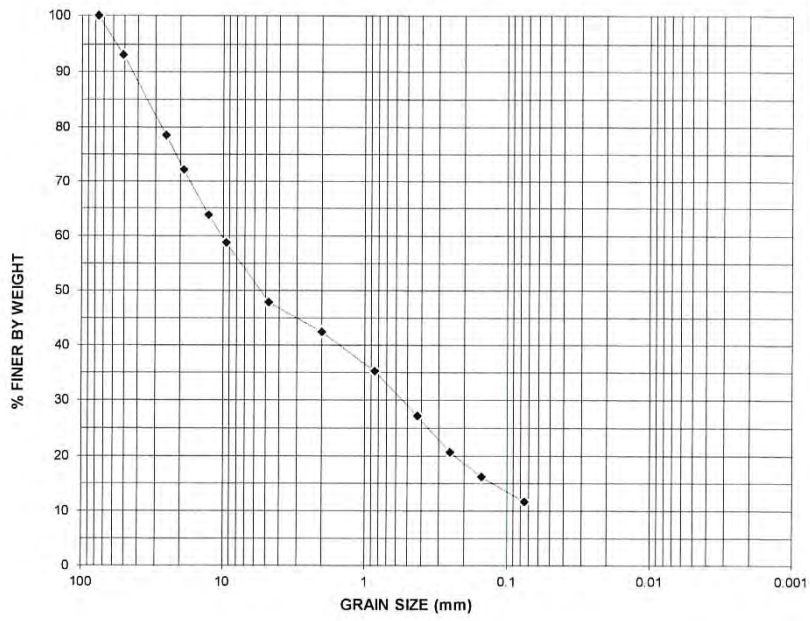
Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	93
1"	25.4	79
3/4"	19.0	72
1/2"	12.7	64
3/8"	9.5	59
#4	4.75	48
#10	2.00	42
#20	0.85	35
#40	0.425	27
#60	0.25	21
#100	0.15	16
#200	0.075	11.7

% Gravel:	52.1
%Sand:	36.2
% Fines:	11.7
D60:	10.28
D30:	0.57
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	5.8
Fine Modulus:	

(ASTM D4318)

Liquid Limit:	
Plastic Limit:	
Plastic Index:	

GRAIN SIZE DISTRIBUTION



HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

(ASTM C127)

Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	

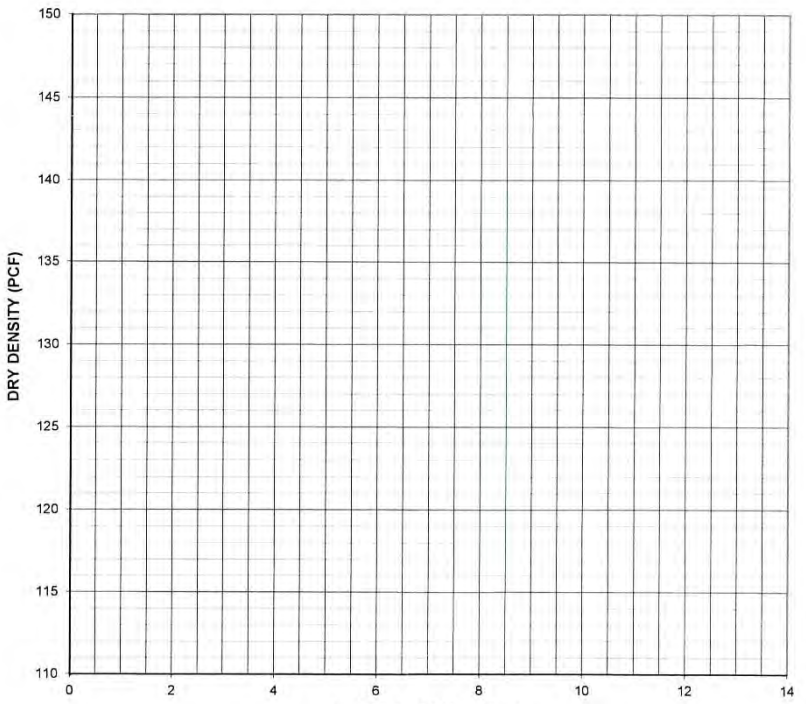
(ASTM C128)

Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	

(ASTM D1557)

Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Poorly Graded Gravel w/Silt & Sand
USC:	GP-GM
FROST CLASS:	

Remarks:

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P129	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 46-3

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	99
1"	25.4	79
3/4"	19.0	72
1/2"	12.7	63
3/8"	9.5	57
#4	4.75	47
#10	2.00	40
#20	0.85	32
#40	0.425	25
#60	0.25	20
#100	0.15	16
#200	0.075	12.4

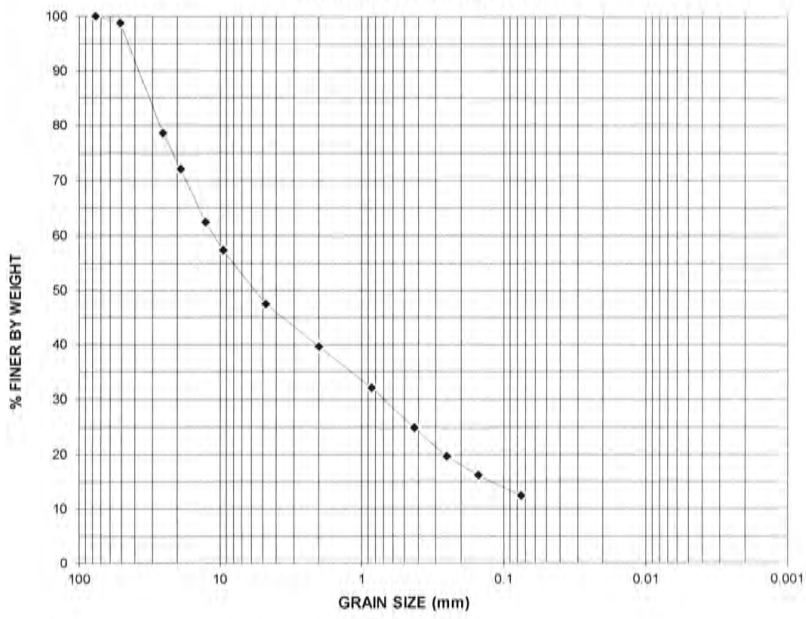
HYDROMETER TEST

(ASTM D422)

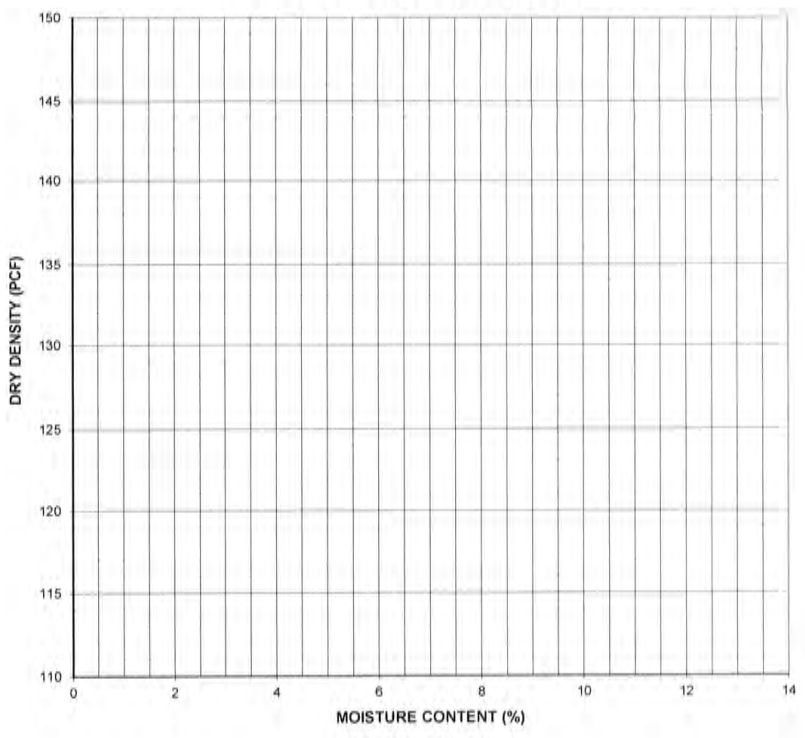
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	52.6
%Sand:	35.0
% Fines:	12.4
D60:	11.13
D30:	0.73
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	9.1
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION: Silty Gravel w/Sand

USC: GM

FROST CLASS:

Remarks:

STATE OF ALASKA 1911 Robert L Walden ROBERT L. WALDEN No. CE15874 3/22/25 REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/10/2021

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Subject to review by our Materials Engineer

REV 1-29-20

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P132	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 46-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	92
1"	25.4	80
3/4"	19.0	77
1/2"	12.7	74
3/8"	9.5	72
#4	4.75	69
#10	2.00	66
#20	0.85	63
#40	0.425	60
#60	0.25	57
#100	0.15	51
#200	0.075	34.3

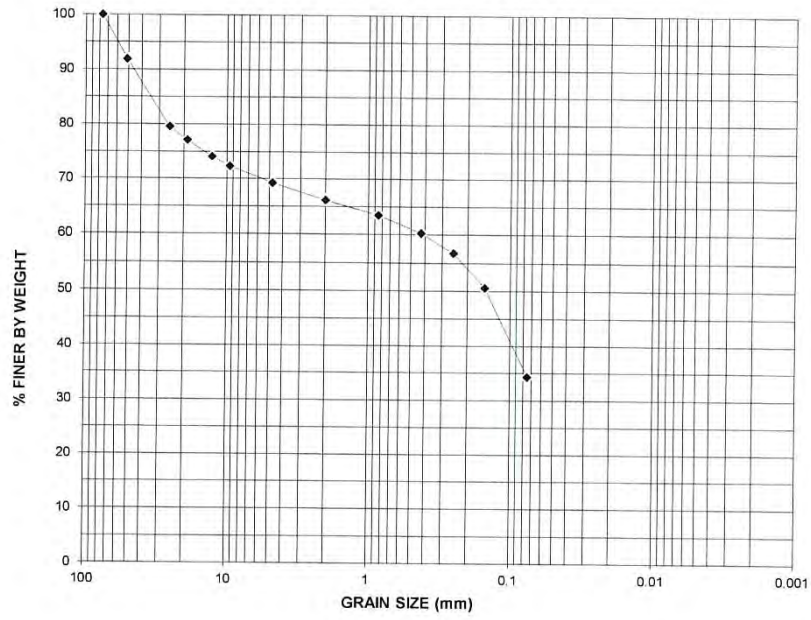
HYDROMETER TEST

(ASTM D422)

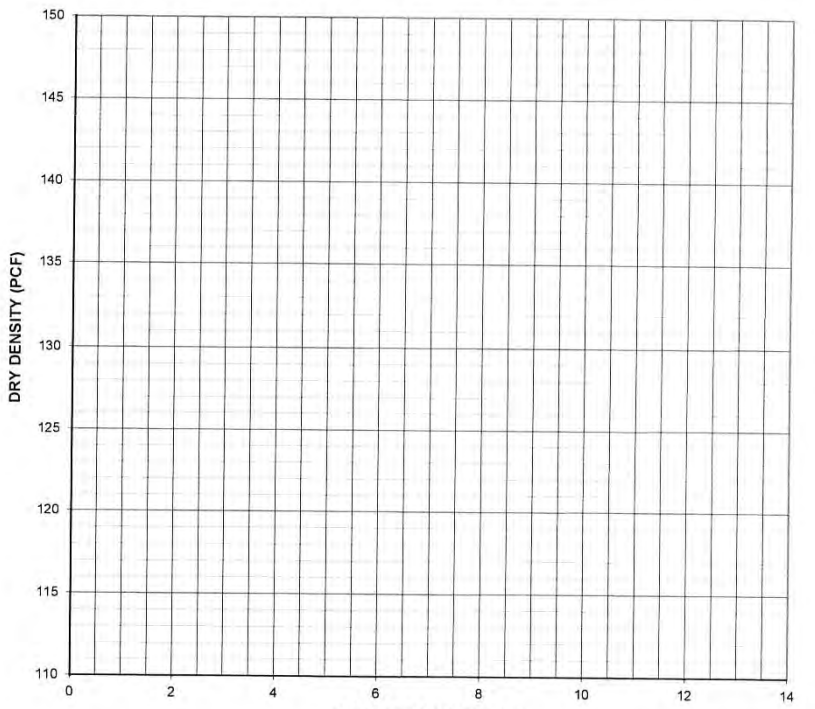
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	30.8
%Sand:	34.9
% Fines:	34.3
D60:	0.41
D30:	#N/A
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	10.2
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION

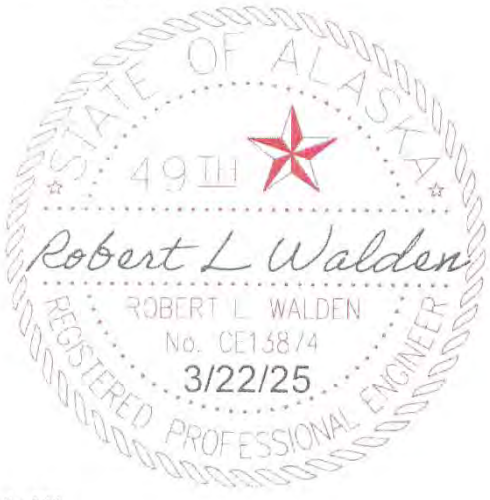


MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Silty Sand w/Gravel
USC:	SM
FROST CLASS:	

Remarks:



JOHN A. BUZDOR, P.E. 5/10/2021

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Anchorage, AK 99503
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20

TESTHOLE LOG #47

Legal Description: T17N R1E Sec 6 C9 Date: 4/30/2021

Inspected By: Robert L Walden, PE

Ground level EL437

1ft	ML
2ft	
3ft	GP-GM
4ft	
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map

Comments:

GP-GM; Poorly graded gravel w/Silt & sand

#200 5.8%

Total Depth of Testhole 14 ft.

Groundwater/Seeps Encountered? Y [N] At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y [N] At _____ ft.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L WALDEN
No. CE15874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

Form revised 2/2016

HDL ENGINEERING Consultants LLC

AGGREGATE/SOILS TEST REPORT

PROJECT:	CHURCH RD SD	**DATE TAKEN:**	4/29/2021
PROJECT NO.:	20-401	**DATE TESTED:**	5/4/2021
CLIENT:	WCC&E	**TESTED BY:**	DEM
SAMPLE NO.:	21P142	**REVIEWED BY:**	JAB
LOCATION:	UKN	**DESCRIPTION:**	TH 47-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve Size	Diameter (mm)	Total % Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	98
1"	25.4	79
3/4"	19.0	71
1/2"	12.7	58
3/8"	9.5	51
#4	4.75	41
#10	2.00	35
#20	0.85	30
#40	0.425	21
#60	0.25	14
#100	0.15	11
#200	0.075	5.8

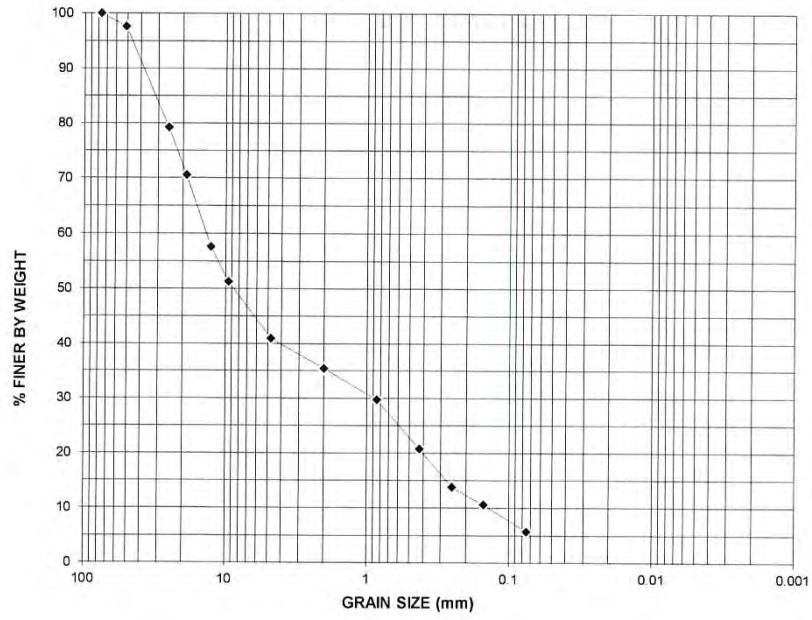
HYDROMETER TEST

(ASTM D422)

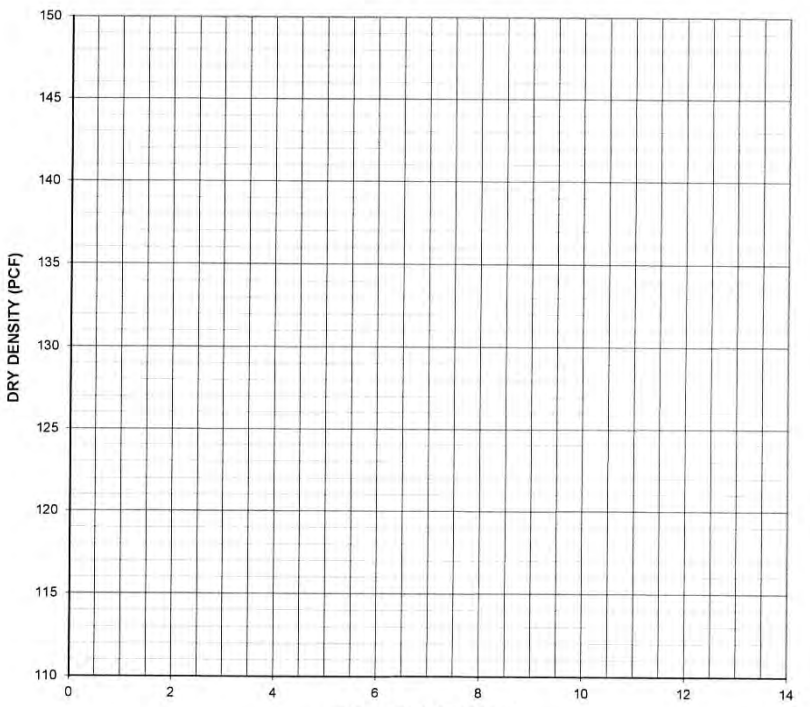
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

% Gravel:	59.0
%Sand:	35.2
% Fines:	5.8
D60:	13.86
D30:	0.91
D10:	0.14
Cu:	98.8
Cc:	0.4
% .02 mm:	
% Moisture:	3.0
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	
(ASTM C127)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM C128)	
Bulk SpG:	
SSD SpG:	
Apparent SpG:	
% Absorption:	
(ASTM D1557)	
Dry Den (U):	
Dry Den (C):	
M% (U):	
M% (C):	
SpG (assumed):	
M-D Test Method:	

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



CLASSIFICATION:	Poorly Graded Gravel w/Silt & Sand
USC:	GP-GM
FROST CLASS:	

Remarks:

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L WALDEN
No. CE13874
3/22/25
REGISTERED PROFESSIONAL ENGINEER

JOHN A. BUZDOR, P.E. 5/12/2021

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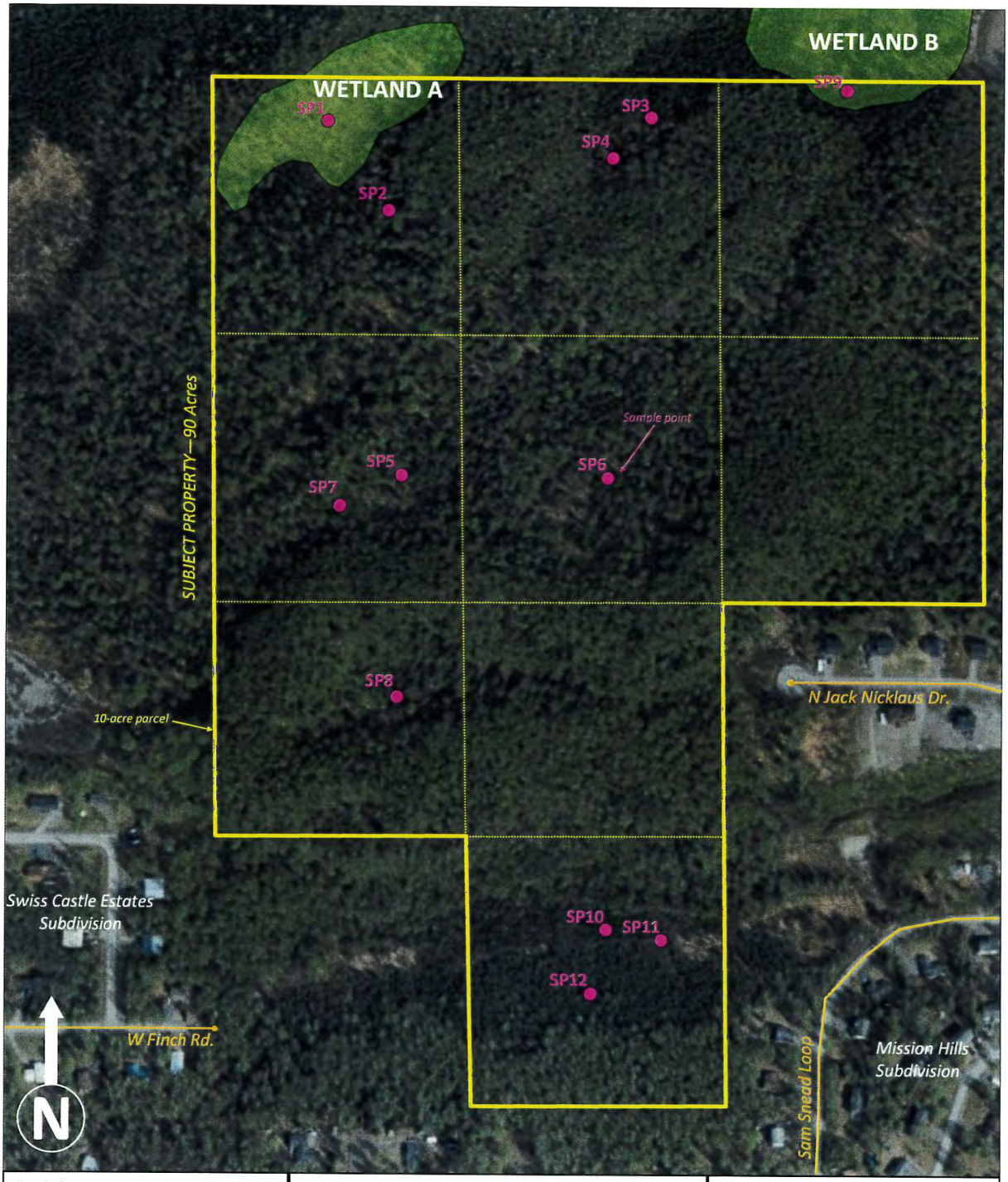
Phone: (907) 564-2120

Subject to review by our Materials Engineer

REV 1-29-20



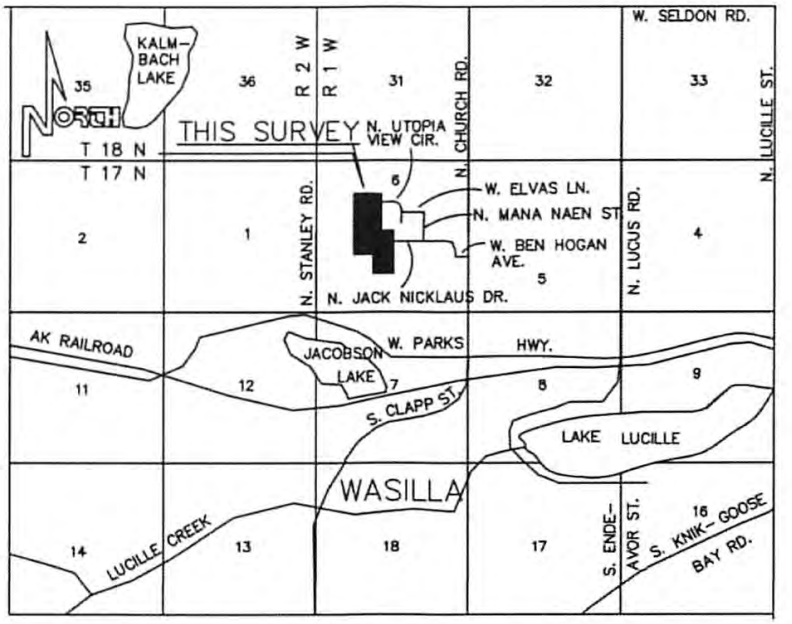
Travis/Peterson Environmental Consulting, Inc. 3305 Arctic Boulevard, Suite 102 Anchorage, AK 99503	**Proposed Utopia View Subdivision** Meadow Lakes, Alaska	**Fig. 3—Wetland Map**

Project No: 1669-02	File: Projects/Wolverine Supply/Church Road Jurisdictional Determination	6/24/2020	Scale: 1" = 350'

U.S. Fish and Wildlife Service
National Wetlands Inventory
UTOPIA VIEW SUBDIVISION
Bumpus Formation Area
Commercial Gravel Pit
Mission Hills Subdivision
Swiss Castle Estates Subdivision
SUBJECT PROPERTY—90 Acres
PEM1/SS1C
PEM1/SS4B
PSS4/1B
PFO4B
PSS4/1B
PFO4/SS1C
PSS4B
PSS1/4B
0 0.25 0.5 1 mi
0 0.375 0.75 1.5 km
1:28,871
June 17, 2020
Wetlands
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

UTOPIA VIEW II SUBDIVISION

DRAINAGE REPORT



SECTION 6, TOWNSHIP 17N RANGE 01W (90.08-ACRES)

Seward Meridian, Alaska, Palmer Recording District

Lat61.59298° N Lon: 149.52829° W

Civil Resources, LLC

3001 W Stonebridge Dr.

Wasilla, AK 99654

CRLLC Job No. 10102022

April 2025

UTOPIA VIEW II SUBDIVISION

DRAINAGE REPORT

Table of Contents

Introduction

This report is for Utopia View II having 41 Lots and one Tract on 62 acres. Utopia View (Phase I) with 20 Lots on 30 acres has been developed and recorded (Plat #2023-129)[1]. Owner proposes to develop complete road, drainage, and home improvements in the Matanuska-Susitna Borough (MSB). The site is located on undeveloped land 0.5 miles west of W. Mystery Ave and N. Church Road. New road connects to W Elvas Dr. and N. Jack Nicklaus Dr. Access is from W. Mission Hills Ave at N. Church Road. The contributing water shed has a total drainage area of 253.8 Acres.

The site contains five large, isolated wetland depressions. The south portion consists of potential wetland waters of the United States. Offsite run-on from Drainage Area-1 enters the site at one place at the east boundary and travels to Outfall 1 at the southwest boundary. Onsite runoff exits site at three outfall locations. Outfall 2 exits on the north side and Outfall 3 on the northwest side. There is no increase for the 10-year 24-hour post development peak flow for Outfalls 2 and 3. There is a slight increase in flow for Outfall 1 with no significant downstream impact.

Natural depressions should be protected where possible to provide storage for runoff from the 100-year 24-hour storm event. Drainage easements should be created in these depressions to prevent them being filled by property owners. Easement dimensions are based on an equivalent detention basin designed to store the required runoff for that depression. If the developer desires to fill these depressions, an equivalent detention basin must be constructed in its place. Easements should be 10-feet minimum outside the top of the detention basin. There is no storage allowed in the utility easement. Storage must be below the bottom of the road ditch or utility easement bench.

Ten detention basins are required to manage post-development runoff. Detention Basins 1 – 3 are developed in Phase I. Detention Basins 4 – 10 are developed in Phase II. Five culverts are required. Culverts 1 and 2 were constructed with Utopia View. Culverts 3, 4, and 5 will be constructed with Utopia View II.

Land development activities increase runoff and require responsible stormwater management facilities consisting of treatment, retention, detention, infiltration, and conveyance of stormwater to avoid adverse impact of adjoining, nearby, and downstream properties receiving water. In practice, if the natural flow is diverted, concentrated, blocked, or existing storage removed then some form of mitigation is required to improve the drainage condition. Mitigation includes ditches, culverts, detention basins, and engineered fill material. The purpose of this report is to document that mitigation will follow the criteria in Table D-1[2]:

1. Conveyance: Drainage ditches and non-regulated streams shall be designed for the 10-year storm 24-hour storm event. Regulated streams shall be designed for the 100-year 24-hour storm event.

[1] Utopia View Subdivision, Drainage Report, Civil Resources, LLC, Bruce J. Friedhoff P.E., November 2, 2022.
[2] Matanuska-Susitna Borough, Public Works Department, Subdivision Construction Manual, July 19, 2022.

   a. All ditches and culverts must convey the peak flow from the 10-Year Storm Event with a minimum of 12-Inches (1-foot) freeboard below the top of fore slope (structural section hinge point) or maximum flow depth of 18" in a 30" deep ditch.
   b. Flow capacity must be a minimum of 10% greater than the design flow.
2. Wetlands. Preserve the pre-development function of wetlands. For jurisdictional wetland areas, comply with United States Army Corps of Engineers wetlands development retention requirements.
3. Water Quality. Treat runoff generated by a 0.50 inch of rainfall in a 24-hour period.
4. Erosion and Sediment Control. Control flows in conveyance channels so that transport of particles sized D50 and greater will not occur for the post-development peak flow.
5. Extended Detention. Provide 12 to 24 hours of detention for the post-development project runoff in excess of pre-development volume for the 1-year, 24-hour storm.
6. Flood Hazard. Control peak flow to minimize downstream impacts.
   a. Maintain the post-development project runoff peak flows from the 10-year, 24-hour storm to less than or equal to pre-development runoff peak flow at all project discharge points. Or,
   b. Maintain the post-development project runoff peak flows to less than 1.10 times pre-development runoff peak flow at all project discharge points. Evaluate downstream until the project site area is less than 10% of the total upstream basin area and mitigate adverse impacts.
7. Flood Bypass. Compute post-development peak flow and delineate an unobstructed, overland flow path for runoff to overtop or bypass project conveyance routes for the post-development 100-year, 24-hour storm.
8. Drainage Easements. Easements are required for drainage facilities located outside of dedication right-of-way. Easements shall connect to right-of-way and be a minimum of 20' wide and 20' long. Easement for detention basins shall be 5' outside top of basin.
9. Utility Easements. Avoid locating drainage facilities in adjacent utility easements. Obtain approval from utilities when co-location is required.
10. Other Agency Requirement may include the following:
    a. Floodplain Use Permit from MSB;
    b. 404 Permit from U.S. Army Corps of Engineers;
    c. Alaska Department of Fish and Game (ADFG) for fish/stream crossings; or
    d. Storm Water Pollution Prevention Permit (SWPPP) from the Alaska Department of Environmental Control.

Maps and calculations supporting the findings and recommendations can be found in Appendices A and B. All storm events referenced herein have a 24-hour duration except those used in the Rational Method.

Site Conditions

FEMA Flood Zone

Flood Insurance DFIRM ID 02170C8060F (09/27/2019) Website Date 09/24/2022 designates the project site is outside the 100-Year Flood Zone. A Floodplain Use Permit is NOT needed.

Waters of the United States

There are isolated wetlands on the site. A 404 Permit is not required from the United States Army Corps of Engineers prior to performing any disturbance or development in this area.

Figure 1 – Wetlands

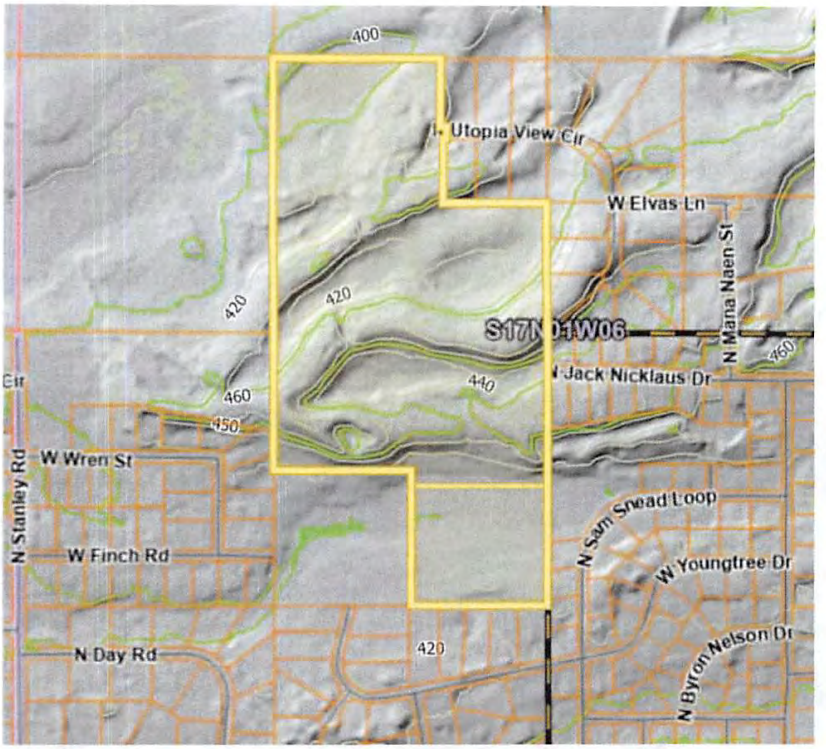


Figure 2 – Hillside Topography

Storm Water Pollution Prevention Plan (SWPPP)

Runoff from the site travels north and west to isolated wetlands with no surface water connection to traditional navigable waters of the United States. A storm water pollution prevention plan and notice of intent are NOT REQUIRED.

Alaska Department of Fish and Game

There are no active streams or fish crossings for this site.

Hydrology

Drainage Areas

Drainage areas and streams were delineated using HEC-HMS GIS tools[3] and the MSB 2019 Digital Elevation Model (DEM)[4]. Areas and streams were then adjusted based on review of contour maps and field observation.

Rainfall

Rainfall depths and intensities were taken from NOAA 14 Data Server[5] and are summarized in the following table. No aerial reduction is applied. SCS Type I Rainfall Distribution is recommended by NOAA 14, TR-55, and MOA for use in this area of Alaska.

NOAA14 uses a regional influence approach for a variety of probability distribution functions and durations that is most suitable for the region. Distribution parameters and precipitation frequency estimates were analyzed for each duration based on the mean of the annual maximum series at each station and then regionally smoothed across durations to ensure consistency in precipitation frequency estimates.

Storms vary spatially having differing effects within the same region. One storm could produce a 2-inch rainfall in Palmer and 1-inch at the project site. But the next storm could reverse having 2-inches at the project site and 1-inch in Palmer. Both sites within the same region have similar probabilities even though the effects could be different for any one event. The precipitation frequency duration data published by NOAA is the best available information available for this site.

Table 1

Wasilla							
24-Hour Depths in Inches				10-YR Intensity in Inches per Hour			
Frequency	1	10	100	5	10	15	30
Inches	1.09	1.98	3.02	2.11	1.42	1.10	0.73

[3] Hydrologic Modeling System (HEC-HMS) Version 4.7.1, January 14, 2021.
[4] 2019 LiDAR & Imagery Project, Matanuska-Susitna Borough.
[5] NOAA Atlas 14 Volume 7 Version 2.0, Precipitation-Frequency Atlas of the United States, Alaska. NOAA, National Weather Service, Silver Spring, MD.

Losses

Hydrologic Soil Groups (HSG) were given by the USDA/NRCS Data Server[6]. SCS Curve Numbers (CN) were taken from TR-55[7] Tables 2-2a and 2c and MOA[8] Table 4.4-3 and adjusted for non-connected impervious area. The following tables summarize CN'S by hydrologic soil group and weighted CN'S for each type of land use.

Runoff is based on maximum future development for current zoning. It is reasonable to expect future runoff events to be greater than those in the past. For example, commercial properties could replace pervious gravel with impervious pavement having significantly greater runoff. Likewise, residential properties can replace forest with grass having greater runoff. Initial abstraction of rainfall and small depression storage are incorporated into calculations.

Table 2

Rural SCS Runoff Curve Numbers (CN) (Imp Not Connected)						
HSG	IMP	A	B	C	D	TR-55
Infiltration (in/hr)		1.42	0.57	0.06	0.00	NRCS, Part 630 Tbl 7-2
Forrest		30	55	70	77	MOA Tbl 4.4-3
Grass/Pasture		39	61	74	80	Table 2-2c
R1 (1DU/AC)	20%	45	65	77	82	(1) and (4)
R2 (2DU/AC)	25%	47	66	77	82	(1) and (4)
R3 (3DU/AC)	30%	49	67	78	83	(1) and (4)
R4 (4DU/AC)	42%	53	70	80	84	(1) and (4)
COM	85%	89	92	94	95	(1)
IND	72%	81	88	91	93	(1)
Bare Ground		77	86	91	94	MOA Tbl 4.4-3
Pavement/IMP		98	98	98	98	MOA Tbl 4.4-3
Gravel		76	85	89	91	MOA Tbl 4.4-3
ROW	33%	50	68	78	83	(2)

Note: Hydrologic Soil Group 'C' is not found in this watershed/site.

[6] Custom Soil Resource Report for Matanuska-Susitna Valley Area, Alaska, USDA/NRCS, February 2, 2021.
[7] Urban Hydrology for Small Watersheds, USDA/NRCS, Technical Release 55 (TR-55), June 1986, Update January 1999.
[8] Anchorage Stormwater Manual, Volume 1, Chapter 4, December 2017.

Table 3

PRE LOSS SUMMARY						
HSG	A	B	C	D	TOTAL	CN
DA	ACRES					
1A	0.0	49.9	0.0	0.0	49.9	63.6
1B	0.0	11.8	0.0	0.0	11.8	56.3
1C	0.0	24.4	0.0	0.0	24.4	56.8
1D	0.0	47.4	0.0	5.2	52.6	65.5
1E	0.0	12.2	0.0	4.1	16.3	60.5
2A	0.0	18.8	0.0	0.0	18.8	55.0
2B	0.0	4.3	0.0	0.0	4.3	56.2
2C	0.0	4.9	0.0	0.0	4.9	55.0
2D	0.0	9.0	0.0	2.0	11.0	59.0
2E	0.0	6.8	0.0	0.0	6.8	55.0
2F	0.0	14.2	0.0	3.0	17.2	58.8
3A	0.0	14.1	0.0	0.0	14.1	55.0
3B	0.0	21.3	0.0	0.4	21.7	55.4
Total	**0.0**	**239.1**	**0.0**	**14.7**	**253.8**	**59.9**

POST LOSS SUMMARY						
HSG	A	B	C	D	TOTAL	CN
DA	ACRES					
1A	0.0	49.9	0.0	0.0	49.9	63.6
1B	0.0	11.8	0.0	0.0	11.8	56.3
1C	0.0	22.7	0.0	0.0	22.7	65.1
1D	0.0	48.5	0.0	5.2	53.7	65.5
1E	0.0	12.5	0.0	4.1	16.6	62.9
2A	0.0	19.1	0.0	0.0	19.1	64.1
2B	0.0	3.7	0.0	0.0	3.7	64.0
2C	0.0	4.9	0.0	0.0	4.9	55.0
2D	0.0	9.0	0.0	2.0	11.0	65.6
2E	0.0	7.4	0.0	0.0	7.4	65.1
2F	0.0	14.2	0.0	3.0	17.2	62.3
3A	0.0	14.1	0.0	0.0	14.1	62.6
3B	0.0	21.3	0.0	0.4	21.7	57.2
Total	**0.0**	**239.1**	**0.0**	**14.7**	**253.8**	**63.1**

Time of Concentration

Time of concentration was computed using four different methods (Kirpich, NRCS Upland, NRCS Lag, and Manning's Equation). Manning's, Upland, and Kirpich all give comparable results. NRCS Lag gives a much higher travel time than the other three and will not be used. Kirpich gives a slightly shorter time than the other two and produces realistic, slightly conservative results. Kirpich Equation is given as,

$$Tc = 0.0078\ L^{0.77}\ S^{-0.385}\ \text{in Minutes} \qquad EQ.\ 1$$

Where:

L = Stream Length in feet;

S = Watercourse Slope in feet/feet.

Table 4 – Pre-Development Input Data

DA	Pre Acres	Length	Slope	Tc	V	CN	
						PRE	POST
1A	49.9	1,779	0.0100	14.6	2.0	63.6	63.6
1B	11.8	1,187	0.1000	5.0	4.0	56.3	56.3
1C	24.4	1,000	0.1000	5.0	3.3	56.8	65.1
1D	52.6	2,078	0.0100	16.5	2.1	65.5	65.5
1E	16.3	1,000	0.0100	9.4	1.8	60.5	62.9
2A	18.8	500	0.1000	5.0	1.7	55.0	64.1
2B	4.3	250	0.1000	5.0	0.8	56.2	64.0
2C	4.9	250	0.0130	5.0	0.8	55.0	55.0
2D	11.0	500	0.0130	5.0	1.7	59.0	65.6
2E	7.4	500	0.0130	5.0	1.7	55.0	65.1
2F	17.2	500	0.0130	5.0	1.7	58.8	62.3
3A	14.1	750	0.0190	5.9	2.1	55.0	62.6
3B	21.7	750	0.0190	5.9	2.1	55.4	57.2
Total	254.4						
Max	52.6		0.1000	16.5	4.0	65.5	65.6
Min	4.3		0.0100	5.0	0.8	55.0	55.0
Note: Minimum Tc is 5 minutes.							

Table 5. Post-Development Road Hydrology (Sample)

Road Hydrology Using Rational Method (Q = CIA)										
From Node	To Node	Feature	Length	Grade	A	C	Tc	I	Q10	Qd
21	22	CUL4	SHORT	STEEP	13.2	0.17	5.0	2.12	4.8	5.2
22	23	Ditch1	SHORT	STEEP	15.2	0.17	5.0	2.12	5.5	6.0
23	24	CUL5	SHORT	STEEP	15.2	0.17	5.0	2.12	5.5	6.0
24	25	Ditch2	SHORT	STEEP	17.3	0.17	5.0	2.12	6.2	6.9
41	11	CUL3	SHORT	STEEP	2.8	0.17	5.0	2.12	1.0	1.1
52	4	CUL1	SHORT	STEEP	1.6	0.17	5.0	2.12	0.6	0.6
42.2	9	CUL2	SHORT	STEEP	2.1	0.17	5.0	2.12	0.8	0.8
Min			SHORT	STEEP	0.1	0.2	5.0	2.1	0.0	0.0
Avg			SHORT	STEEP	2.5	0.2	5.0	2.1	0.9	1.0
Max			SHORT	STEEP	19.1	0.2	5.0	2.1	6.9	7.6
NODE COUNT			52	See Appendix for detail calculations.						

Transformation - Routing

Autodesk Hydraflow[9] model is used to transform Type I Hyetograph into runoff using the SCS Method. Basin area, curve number (CN), and time of concentration are entered for each area and routed to their respective outfalls. Results are summarized in the following figures and table.

[9] Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 is an application for urban hydro systems engineering. It creates hyetographs from rainfall data, computes losses, and creates runoff hydrographs that can be added together at junctions, routed through channels, diverted at junctions, and routed through ponds. Pond sizing and routing is interactive within the application.

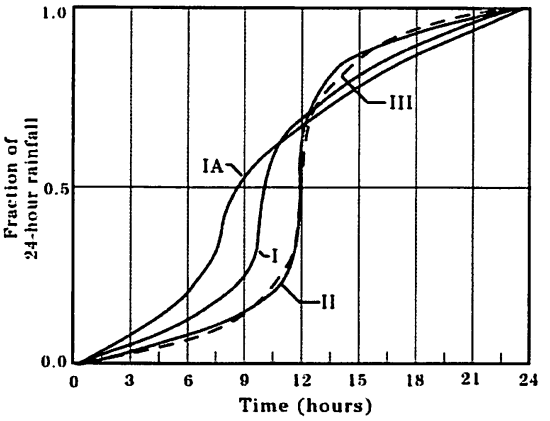


Figure 3. SCS 24-Hour Rainfall Distributions

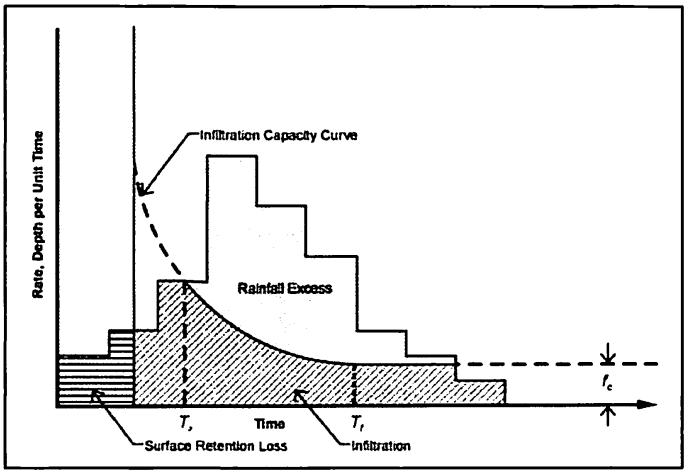


Figure 4. Rainfall – Runoff - Infiltration Relationship

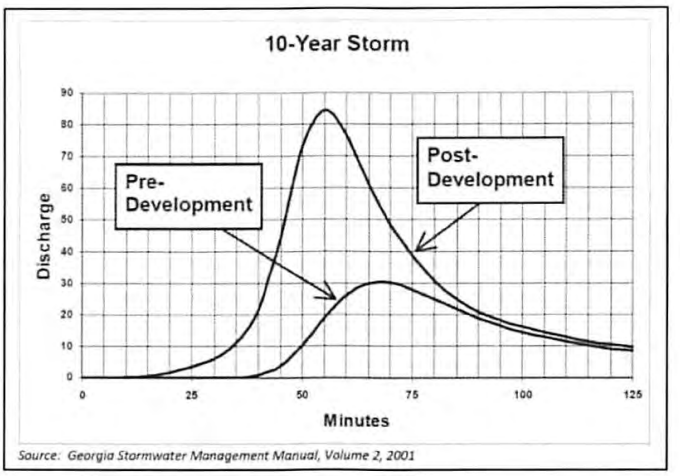


Figure 5. Comparison of Pre- and Post-Development Runoff Hydrographs (Example)

Table 6

Pre- and Post- Development Flows and Volumes

PRE FLOW IN CFS				
OUTFALL	BASINS	1YR	10YR	100YR
1	1	0.0	0.7	9.9
2	2	0.0	0.1	0.6
3	3	0.0	0.1	0.6

PRE VOLUME IN CU-FT			
OUTFALL	1YR	10YR	100YR
1	49	30,531	124,445
1	0	3,195	24,652
1	0	2,051	27,632

POST FLOW IN CFS				
OUTFALL	BASINS	1YR	10YR	100YR
1	1	0.0	0.8	10.9
2	2	0.0	0.1	2.3
3	3	0.0	0.1	1.0

POST VOLUME IN CU-FT			
OUTFALL	1YR	10YR	100YR
1	0	33,120	131,889
1	0	5,593	26,825
1	0	1,944	33,803

POST FLOW INCREASE IN CFS				
OUTFALL	BASINS	1YR	10YR	100YR
1	1	0.0	**0.1**	**1.0**
2	2	0.0	0.0	**1.7**
3	3	0.0	0.0	**0.4**

POST VOLUME INCREASE CU-FT			
OUTFALL	1YR	10YR	100YR
1	-49	2,589	7,444
1	0	2,398	2,173
1	0	-107	6,171

Note: Downstream evaluation is required when Post Flow increase exceeds 0 for 10-YR storm event

Snow Melt

Spring snow melt is an event that occurs every year with a daily runoff volume that could exceed the 10-year 24-hour rainfall volume when "ice-sealing" occurs. Ice sealing takes place when snow melts at a rate exceeding soil infiltrate causing a saturated soil condition. The saturated soil then freezes at night forming an impervious ice layer that reduces the amount of snowmelt that can infiltrate into the ground. The phenomenon could last a few hours to two days until night freezing temperature hours are less than daytime warming hours. Even if it only occurs for one or two days, there is a real risk of property damage and traffic interruption if not properly addressed. The Municipality of Anchorage estimates this type of event occurs every five years and design for the 10-Year storm event is adequate to address snow melt[10]. The estimated snow melt during spring break-up is 0.5 inches per day[11]. The project has 10- and 100-year daily runoff amounts of 0.05 and 0.3 inches. In other words, it is likely the site will experience a greater and more frequent amount of runoff from snowmelt than rainfall. Providing stormwater detention basins will help mitigate snow melt runoff.

[10] Anchorage Stormwater Manual, Volume 1, December 2017, Section 8.1.
[11] NEH Part 630, Chapter 630.1103, Eq. 11-5 for mean daily temperature of 40 Degree-F. Assumes minimum of 2' depth of snow. MOA has recorded 0.9 inches in 40 hours (Appendix D-6).

Hydraulic and Stability Analyses

Ditches

Ditches were analyzed using Manning's Equation for a 30" deep V-Ditch having 3:1 gravel fore slope and 2:1 turf back slope. Results of detailed calculations for the 100-Year design flow are summarized in the following table.

Manning's Equation is,

$V = (1.486R^{2/3}S^{1/2})/N$ *EQ. 3*

$Q = VA$

Where;

V = Velocity, ft/s

A =area of flow, ft^2

Q= quantity of flow, ft^3/s

N = Manning friction coefficient

R = Hydraulic Radius, feet

S = Energy Slope (ft/ft)

Standard ditch consists of turf and Class II sub-base fill (D_{50} = 1.5-inches). Ditches with D_{50}-Incipient Motion diameters greater than 1.5-inches risk erosion. These were designed for stabilized gravel/rock lining using the Isbash Equation[12] for channel banks on straight reach. Rock stabilization with diameters and gradation is shown in the following table. Turf Reinforcement Matt (TRM) is an acceptable alternative if approved by the Borough for use in right-of-way.

The Isbash Equation for critical incipient motion is,

$D_{50} = 0.0191\ Va^2\ [\gamma w/(\gamma s-\gamma w)]/\cos\varphi$ *EQ. 5*

Where:

Va = Average velocity in feet per second,

γw = Specific weight of water in pounds per cubic feet = 62.4,

γs = Specific weight of stone in pound per cubic feet = 156, and

Φ = Bank Angle with horizontal

[12] Drainage Design Manual for Maricopa County, Hydraulic Open Channels, Pg. 6-51, EQ 6.34, December 14, 2018.

Table 7 – Hydraulic Design Results Summary for Ditches that require rock Rip-Rap on Steep Grades. Type 'A' lining is acceptable for all grades for remaining ditches.

FROM NODE	TO NODE	FEATURE	FLOW	MILD GRADE 0.5%<GRADE<5%			MEDIUM GRADE 5%<GRADE<10%			STEEP GRADE 10%<GRADE<50%		
				DEPTH	VELOCITY	LINER	DEPTH	VELOCITY	LINER	DEPTH	VELOCITY	LINER
			CFS	FEET	FPS		FEET	FPS		FEET	FPS	
21	22	CUL4	5.2	0.7	4.4	B	0.6	5.8	B	0.4	10.5	E
22	23	Ditch1	6.0	0.7	4.6	B	0.6	6.0	B	0.5	10.9	F
23	24	CUL5	6.0	0.7	4.6	B	0.6	6.0	B	0.5	10.9	F
24	25	Ditch2	6.9	0.8	4.9	B	0.7	6.4	C	0.5	11.7	F
25	29	NA	7.6	0.9	5.1	B	0.8	6.6	C	0.6	12.0	F
36	37	Ditch	2.3	0.5	3.6	A	0.4	4.7	B	0.3	8.6	D
37	40	Ditch	2.3	0.5	3.6	A	0.4	4.7	B	0.3	8.6	D
MAX			7.6	0.9	5.1	B	0.8	6.6	C	0.6	12.0	F
SAMPLE. See appendix for detailed calculations.												
Number of channels = 52												

Table 8. Ditch and Channel Lining Material

DITCH / CHANNEL LINING STABILIZATION					
TYPE	D50	DMAX	DMIN	T	MATERIAL
UNITS	INCHES				
A	NATIVE GRASS/TURF/GRAVEL				
B	3.0	4.5	1.5	6.0	RIPRAP
C	6.0	9.0	3.0	12.0	RIPRAP
D	9.0	13.5	4.5	18.0	RIPRAP
E	12.0	18.0	6.0	24.0	RIPRAP

Culverts

Culvert crossings were analyzed using Autodesk Hydraflow[13] for HW/D = 1.0, a minimum grade of 1.0%, and are summarized in the following table.

Table 9

Minimum Culvert Diameters								
CULVERT NO.	YEAR	FLOW (CFS)	Number	FLOW/PIPE (CFS)	HW/D	DIAMETER CALC	DIAMETER USE	TYPE RIPRAP
1	10	0.6	1	0.6	1.0	12	**18**	B
2	10	0.8	1	0.8	1.0	12	**18**	B
3	10	1.1	1	1.1	1.0	12	**18**	B
4	10	5.2	1	5.2	1.0	24	**24**	B
5	10	6.0	1	6.0	1.0	24	**24**	B
Note: Use 18" diameter when less than 18" for MSB and 24" for DOT.								

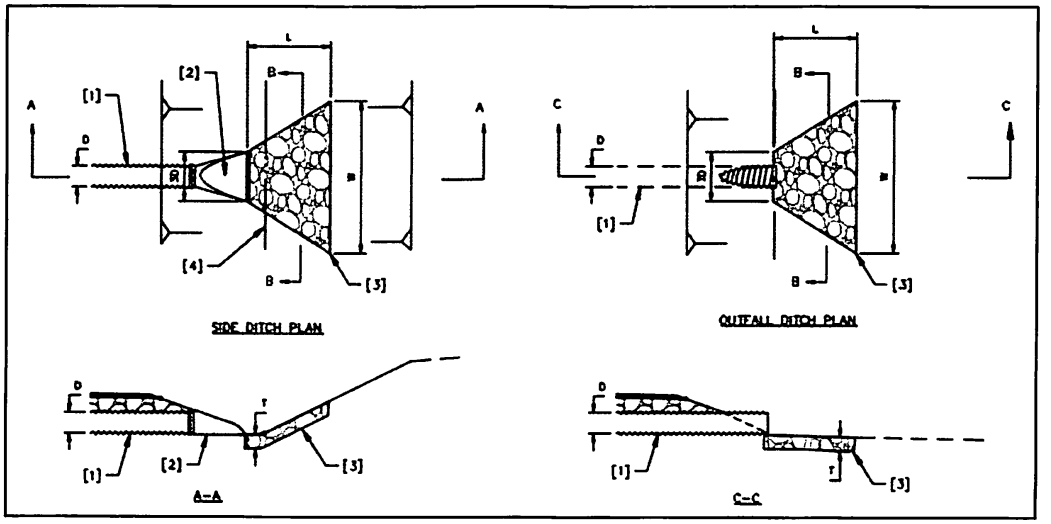


Figure 6

[13] Hydraflow Express Extension for Autodesk Civil 3D Version 12 by Autodesk, Inc. Http://www.autodesk.com/civil3d-stormwater.

First Flush Treatment

The term "first flush" has become common nomenclature in the stormwater management field. The concept behind this term is that pollutants that have collected on impervious surfaces will wash off during the first part of a storm event. The first portion of a given rain event will "flush" the impervious surface of its pollutants, resulting in stormwater runoff that contains more pollutants than runoff produced later in the storm. If the 24-hour 90th percentile historic rainfall event is selected, then capturing/treating the runoff associated with this amount for every rainfall event will prevent 90% of all pollutants from leaving the site. The first flush rainfall amount is 0.52-inches. Treating the runoff from this event by filtering or trapping will prevent 90% of all pollutants from entering Waters of the United States or public water supplies. All polluted runoff from impervious roads, roof tops, patios, walks, and drives will be filtered when flowing through turf and native vegetation before soaking into ground. There is no runoff from the first-flush rainfall event. Therefore, water quality treatment facilities are not needed. All runoffs including the first 0.25" of the 1-, 10-, and 100-year rainfall events are treated by turf filtration/soil infiltration prior to entering storage basins or leaving the site.

Stormwater Detention Basins

Detention basins are designed to meet the following requirements.

1. Store and infiltrate runoff from First Flush (90th Percentile) rainfall event;
2. Maintain Post-Development Flow less than Pre-Development for the 10-Year 24-Hour storm event;
3. Detain/Keep the excess volume from the Post-Development 1-Year 24-Hour storm for 12 to 24 Hours; and
4. By-Pass the Post-Development 100-Year 24-Hour peak flow.

Similar to a forebay, natural depressions and detention basins can intercept and store a significant amount of runoff upstream from detention basins. Detention basins typically use storage, piped outlet, and emergency spillway to control incoming volumes and flows through the basin. Piped outlets are not applicable for shallow basins. Shallow basins use a surface spillway to regulate outflow and infiltration to remove stored water.

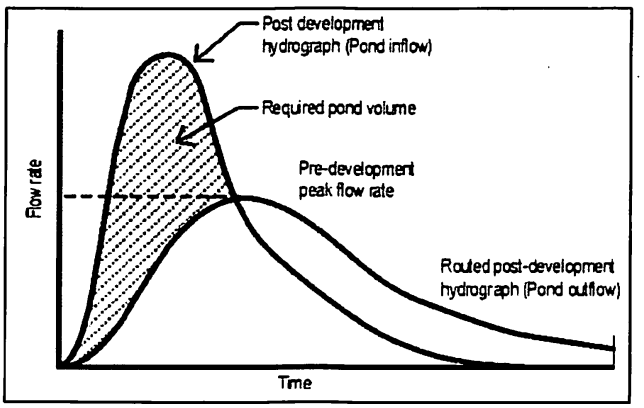


Figure 7. Flood Routing Inflow and Outflow Hydrographs and Storage

Table 10

STORMWATER DETENTION BASIN DESIGN SUMMARY						
DET	W	L	D	Y	Z	V
	FEET	FEET	FEET	FEET		CU-FT
4	30	40	0	3.0	3	5,850
5	45	45	0	3.0	3	8,800
6	20	340	0	4.0	2	46,000
7	15	100	0	4.0	2	13,275
8	30	40	0	3.0	3	5,850
9	40	120	0	3.0	3	19,100
10	30	40	0	3.0	3	5,850
TOTALS						**104,725**
W = Bottom width of basins			*L = Bottom length of basin*			
D = Depth of infiltration pit			*Y = Depth of storage above ground*			
Water storage must be at or below bottom of road ditch and utility bench.						

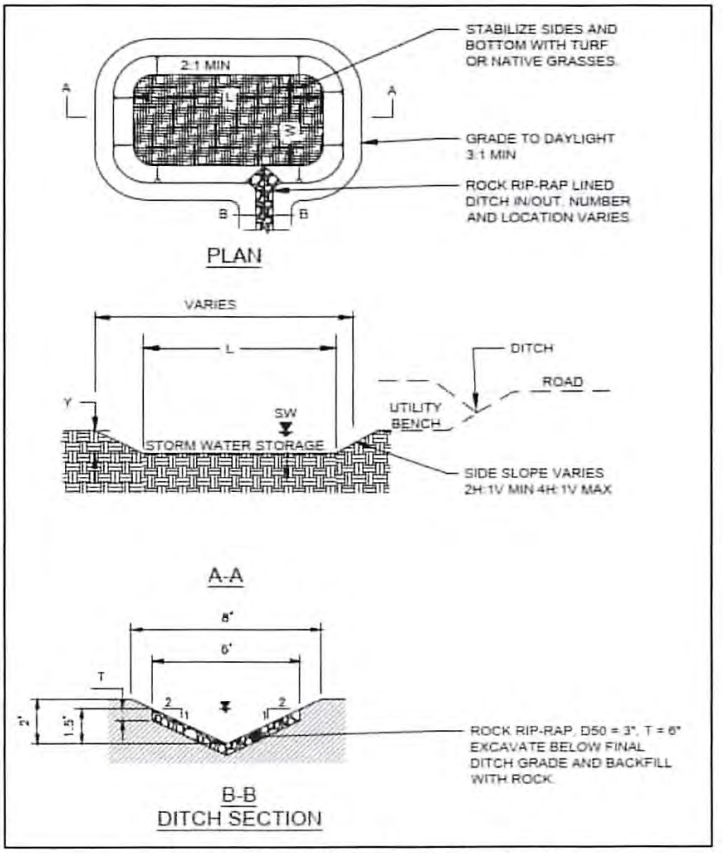


Figure 8. Stormwater Detention Basin

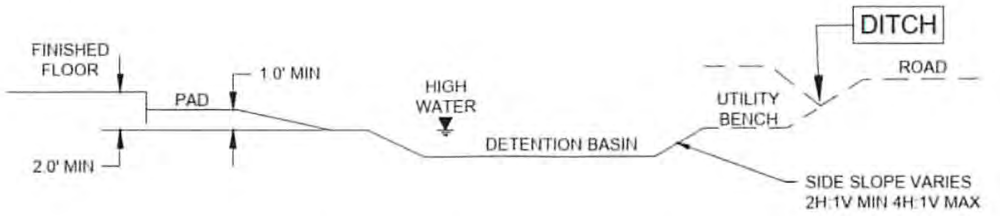


Figure 9. Building PAD and Finished Floor Elevation

Down Stream Impact Analysis

A downstream impact analysis is needed when the net increase in Post Development flow leaving the site is between 0 and 10 percent. The net increase at the outfall is less than 10%. Therefore, a water surface analysis was performed using the HEC-RAS (U.S. Army Corps of Engineers, Hydrologic Engineering Center, 2021) application for 20 cross sections from Utopia Road 3 to N Stanley Road. Results are found in the appendix and summarized below. There is no negative impact at River Station 1742 (W Finch Rd). Road elevation is 11+ feet above the high-water surface elevations for the 10- and 100-year storm events.

Table 11

PRE-POST INCREASE FOR 10-YEAR STORM EVENT							
Reach	River Sta	Increase	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
			CFS	FEET	FPS	FEET	FEET
1	4035	6%	0.04	0.0	0.1	0.0	0.0
1	3816	6%	0.04	0.0	0.0	0.4	0.0
1	3614	6%	0.04	0.0	0.0	0.0	0.0
1	3379	6%	0.04	0.0	0.0	0.3	0.0
1	3171	6%	0.04	0.0	0.0	2.8	0.0
1	2937	6%	0.04	0.0	0.0	2.6	0.1
1	2702	9%	0.06	0.0	0.0	1.2	0.0
1	2264	9%	0.06	0.0	0.1	0.4	0.0
1	1976	9%	0.06	0.0	0.0	0.1	0.0
1	**1742**	**9%**	**0.06**	**0.1**	**-0.1**	**0.4**	**0.0**
1	1553	9%	0.06	0.0	0.0	0.1	0.0
1	1480	9%	0.06	0.0	0.1	0.0	0.0
1	1369	9%	0.06	0.0	0.0	0.9	0.0
1	1243	9%	0.06	0.0	0.0	0.1	0.0
1	1060	9%	0.06	0.0	0.0	0.2	0.0
1	851	9%	0.06	0.0	0.0	0.2	0.0
1	622	9%	0.06	0.0	0.0	0.6	0.0
1	472	9%	0.06	0.0	0.0	0.2	0.0
1	337	9%	0.06	0.0	0.1	0.1	0.0
1	147	9%	0.06	0.0	0.0	0.4	0.0
MIN			0.04	0.0	-0.1	0.0	0.0
AVG			0.05	0.0	0.0	0.6	0.0
MAX			0.06	0.1	0.1	2.8	0.1

Erosion and Sediment Control

With the results of the 2020 Census coming in less than a year, it is expected that the Borough will reach the threshold that will qualify parts of the Borough and Cities of Wasilla and Palmer to apply for an MS4 permit.

- The MS4 permit is a 5-year National Pollutant Discharge Elimination System (NPDES) permit that is renewed every fifth year,
- The permit is governed by the EPA - Through the Alaska Department of Environmental Conservation (ADEC),
- The permit will have defined boundaries set up around Census Designated *"Urbanized Areas,"*
- The permit itself is a Best Management Practices Based Program, and
- The permit is an unfunded mandate by the Federal Government.

Given that clearing and grading over a site and constructing impervious surfaces causes increased runoff, property owners need to ensure that their individual activities do not injure their property, downstream neighbors, or pollute local waterways or ground water. Runoff controls aim to reduce the total amount of water that runs off and to reduce the pollutants in the runoff. Runoff controls include temporary measures during construction and permanent measures to improve water quality and control drainage. Groundwater recharges wells in the region, which could introduce above-ground pollutants into groundwater. Construct stormwater systems so contaminants are removed before they pollute surface waters or groundwater.

Stormwater runoff from construction activities can have a significant impact on water quality. As stormwater flows over a construction site, it can pick up pollutants such as sediment, debris, and chemicals and transport these to a nearby storm sewer system or directly to a water body. Polluted stormwater runoff and sedimentation can harm or kill fish and other wildlife, destroy aquatic habitat, and cause stream bank erosion. It is the responsibility of the project owner, Homeowner's Association, or the Matanuska-Susitna Borough to keep and service all temporary and permanent erosion and sediment control facilities.

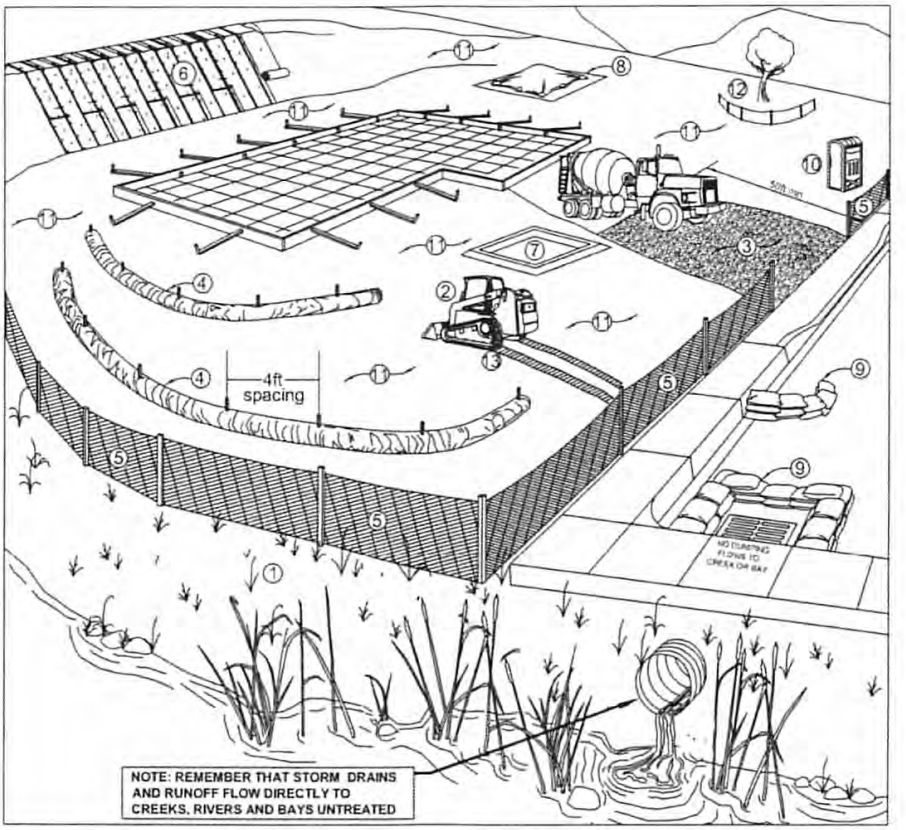


Figure 10. Best Management Practices

(1) Check with your local planning and public works departments for creek setback requirements. Grading and/or building may be limited to Creekside buffers.

(2) During grading phase, track-walk up and down slopes (not parallel to them).

(3) Stabilize site entrance and temporary driveway – use 3-4" crushed rock for a minimum of 50' (or as far as possible) to prevent tracking soil offsite. This can be used in conjunction with a tire wash or rumble plates.

(4) Use straw wattles along contours of short slopes or slopes 3:1 or flatter, keyed into ground at least 3" deep (typically 25' apart).

(5) Install silt fences along contours as secondary measure to keep sediment onsite and to minimize vehicle and foot traffic beyond limits of site disturbance. Silt fencing must be keyed in.

(6) Install erosion control blankets (or equivalent) on any disturbed site with 3:1 slope or steeper, keyed into the ground at least 3".

(7) Construct a concrete washout site next to stabilized entrance. Clean as needed and remove at end of project.

(8) Cover all stockpiles and landscape material and berm properly with straw wattles or sandbags. Keep behind silt fence, away from water bodies. Hazardous materials and refuse must be kept in closed containers that are covered and use secondary containment, not directly on soil.

(9) Use pea-gravel bags, (or similar product) around drain inlets found both onsite and in gutter as a last line of defense.

(10) Place port-a-potty with secondary containment near stabilized site entrance, behind the curb and away from gutters, storm drain inlets, and water bodies.

(11) Cover all exposed soil with straw mulch and tackifier (or equivalent).

(12) Existing vegetation should be preserved as much as possible. Areas of disturbed soil/vegetation should be revegetated as soon as practical.

(13) Prevent equipment fluid leaks onto ground by placing drip pans or plastic tarps under equipment. Repair equipment, as necessary.

(14) Maintain all landscaping to ensure that vegetation is healthy and working as designed to prevent erosion and provide treatment to runoff.

(15) Keep the site clear of debris and trash to prevent these items from entering roadside ditches.

(16) Maintain channel/trail to facilitate drainage and access.

(17) Clear all ditches, culverts, and down-chutes of ice prior to Spring break-up.

Conclusions and Recommendations

1. All ditches and culverts will convey the peak flow plus 10% from the 10-Year Storm Event with a minimum of 12-Inches (1-foot) freeboard below the top of fore slope (structural section hinge point) or maximum flow depth of 18" in a 30" deep ditch.
2. The site discharges to Waters of the United States. SWPPP/NOI are required. Any work in wetlands requires a 404 Permit from the U.S. Army Corps of Engineers.
3. All runoff from the first-flush storm soaks into ground. There is no need for water quality treatment facilities.
4. All ditches are stable when using liner materials recommended in this report. All culvert outlets require rock riprap. Spillways into and out of detention basins (if needed) require riprap.
5. The post runoff from the 1-year 24-hour storm infiltrates into the ground. No detention storage is needed for this storm event.
6. Outfalls 1, 2, and 3. Post runoff from the 10-Year 24-Hour storm event is less than or equal to pre-development. Detention basins are required.
7. All runoff from the 100-Year 24-Hour storm event will pass unobstructed through the site. Lot improvements shall not block or divert water flow.
8. Other Agency Requirements:
   a. Floodplain Use Permit is not needed.
   b. 404 Permit from U.S. Army Corps of Engineers is not required.
   c. Verification from the Alaska Department of Fish and Game is not needed.
   d. A Storm Water Pollution Prevention Plan is not required for this project.
9. Ditches will require periodic removal of sediment and vegetation. It is recommended they be inspected every five years and following major storm events.
10. All rock ripraps shall be lain on graded filter material or filter fabric to prevent erosion of underlying soils. Filter is not needed for gravel mulch.
11. Detention basin storage should be at or below the bottom of the adjacent roadside ditch or the utility bench, whichever is lower. No standing water is allowed in ditch or utility easement. See Figures 8 and 9.
12. Easements should be dedicated for maintenance access from public right-of-way to ditches and detention basins. No detention basins are allowed in utility easements.
13. Finished floor elevations and all openings shall be a minimum of 18" above highest adjacent grade within 10' of building and 24" above adjacent 100-year high water level (flowing or standing) in adjacent streams, swales, ditches, ponds, or detention basins. See Figures 8 and 9.
14. Finished floor and all openings shall be a minimum of 12" above building pad.
15. Wetland areas where applicable should be delineated and protected from removing any vegetation.
16. As-Built drawings and certification are recommended for all drainage improvements (ditches, basins, culverts, riprap, etc.) prior to final acceptance by Borough.

APPENDIX A – MAPS

MAP 1

UTOPIA VIEW II SUBDIVISION

WATERSHED AERIAL

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
WASILLA, AK 99654
BFRIEDHOFF@MTAONLINE.NET
PHONE: (907) 354-3021
JOB#: 10102022

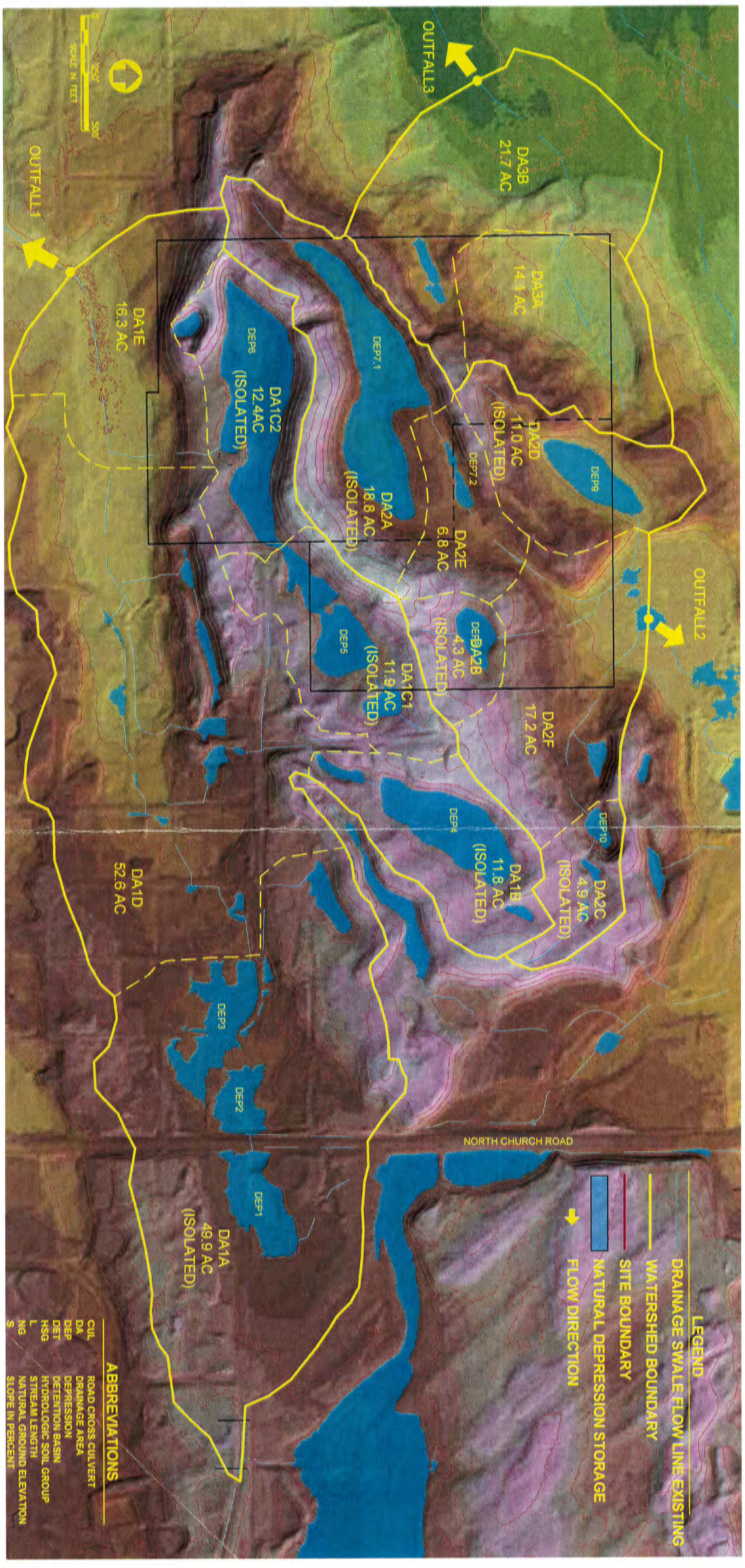


EXHIBIT IS FOR PLANNING AND COORDINATION NOT FOR CONSTRUCTION

UTOPIA VIEW II SUBDIVISION

WATERSHED TERRAIN

MAP 2.1

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
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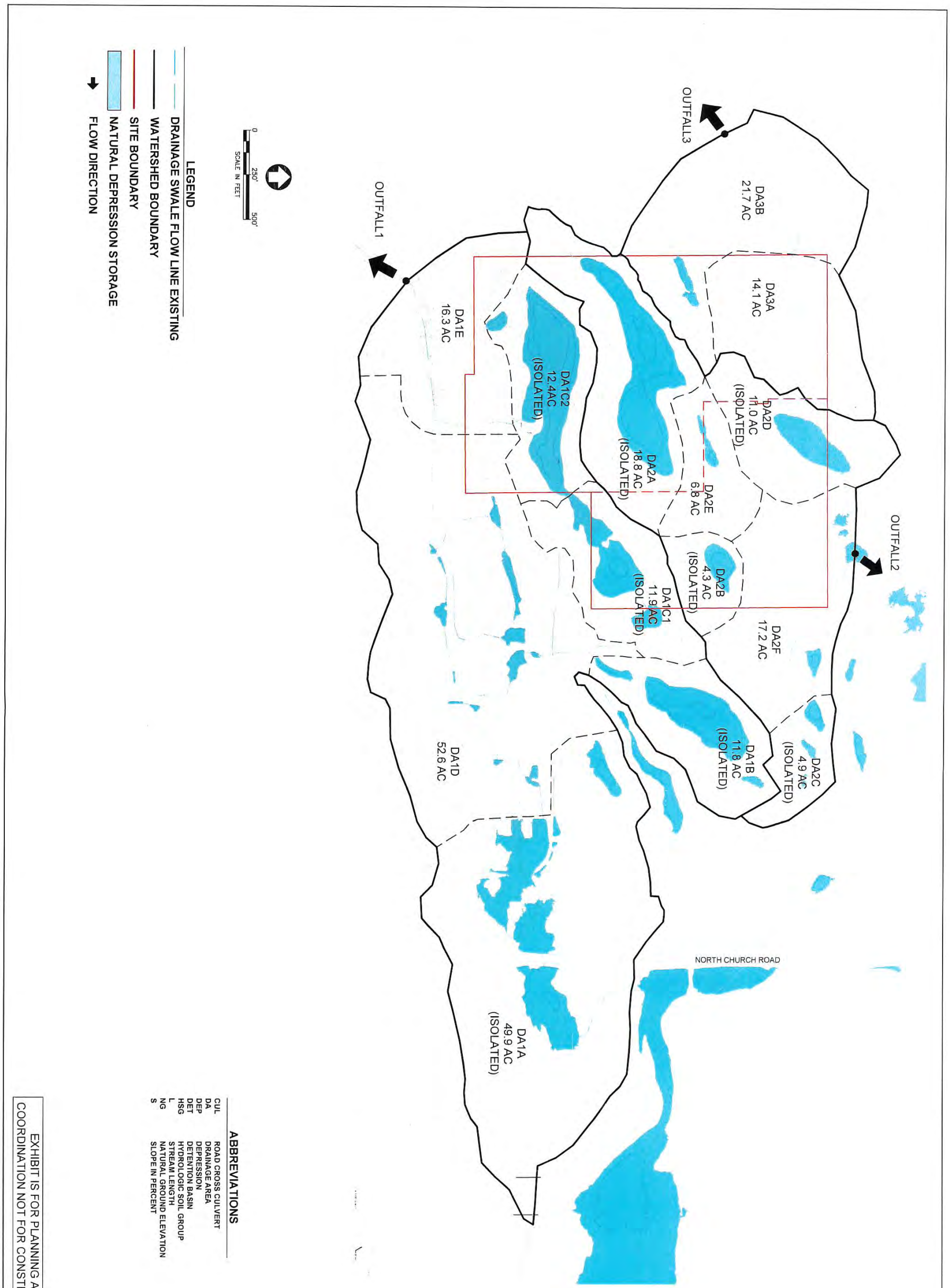

MAP **2.2**

UTOPIA VIEW II SUBDIVISION

WATERSHED CONTOURS

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
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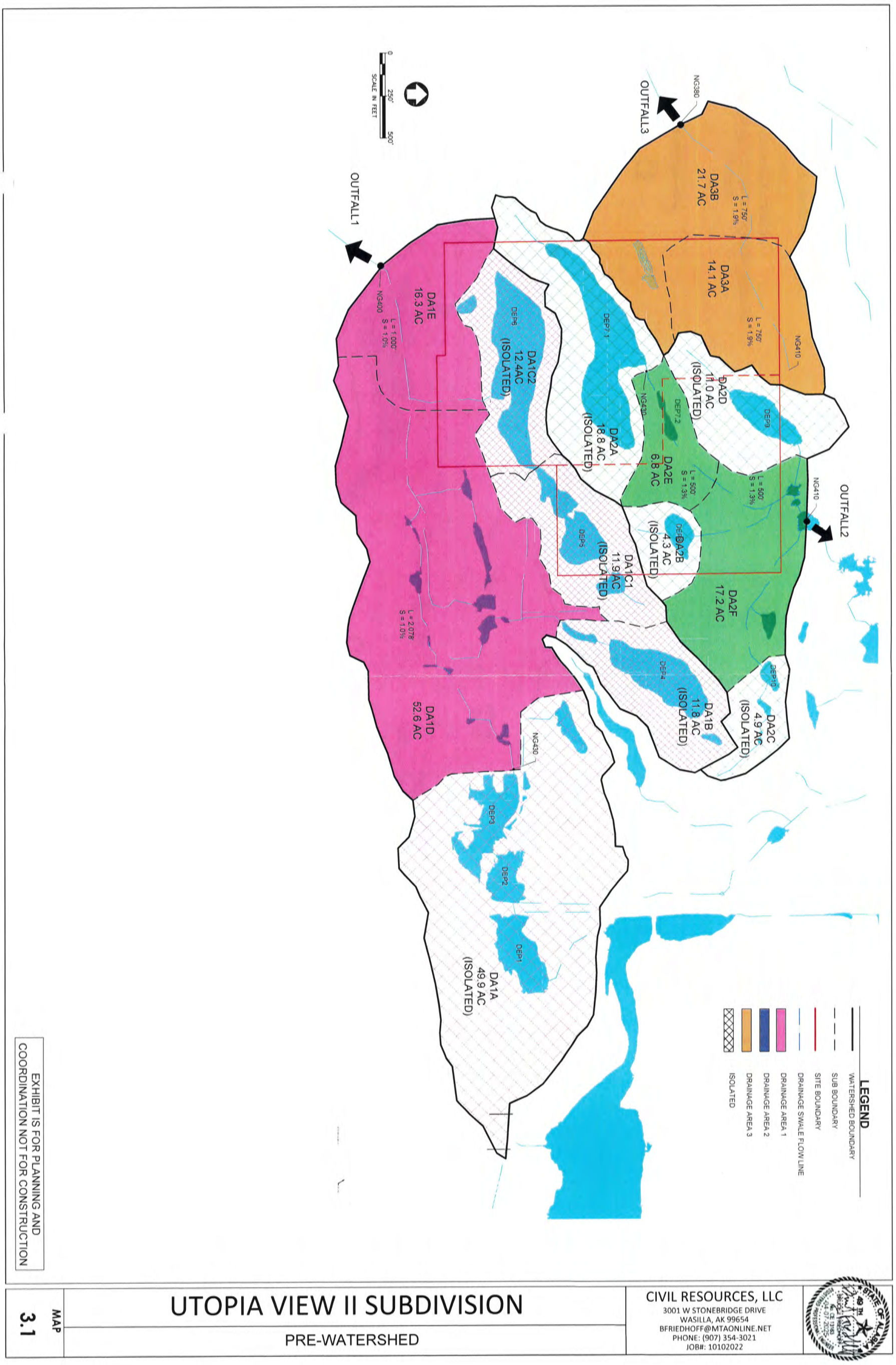

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MAP 3.1

UTOPIA VIEW II SUBDIVISION

PRE-WATERSHED

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3001 W STONEBRIDGE DRIVE
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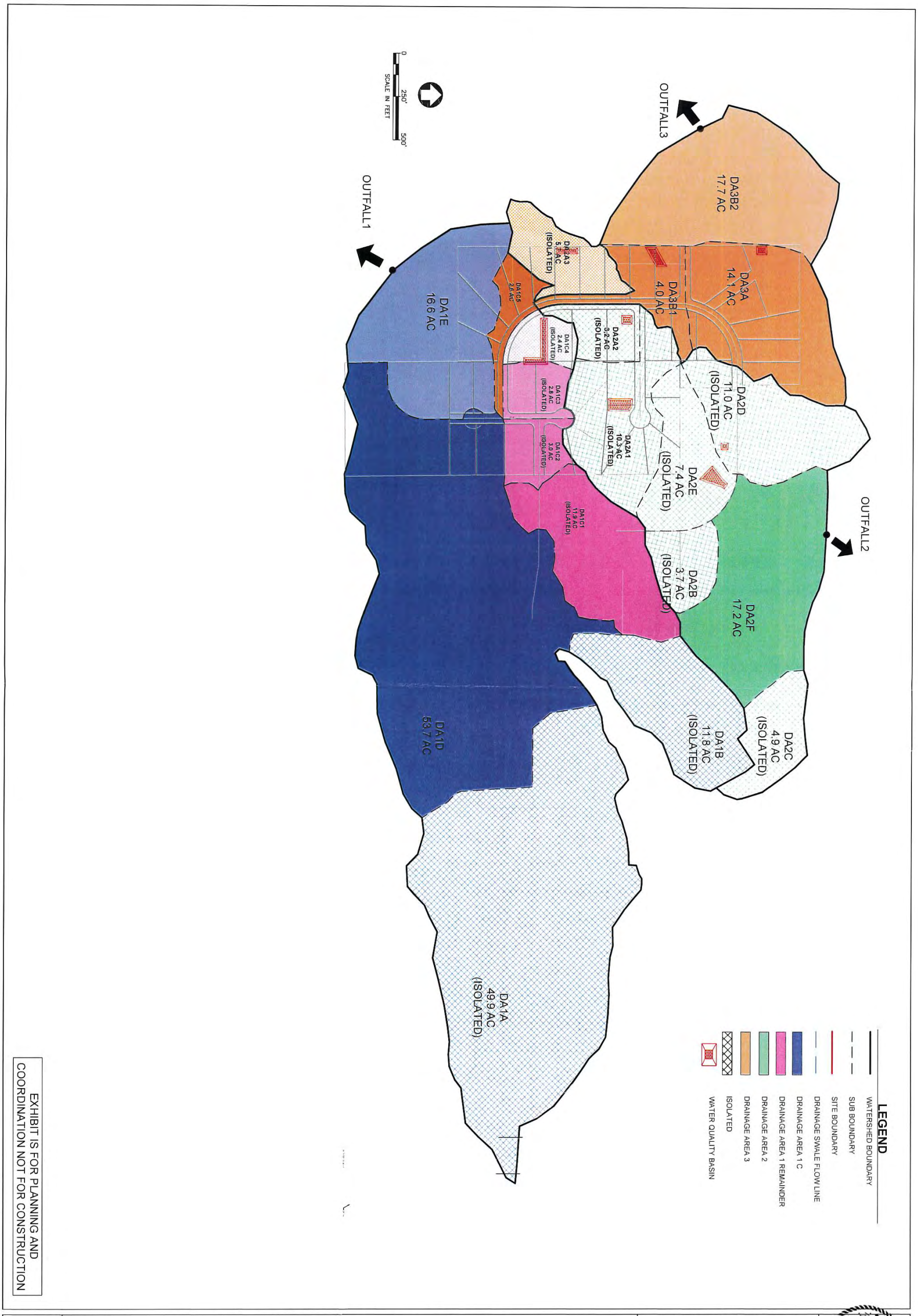

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MAP 3.2

UTOPIA VIEW II SUBDIVISION

POST-WATERSHED

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
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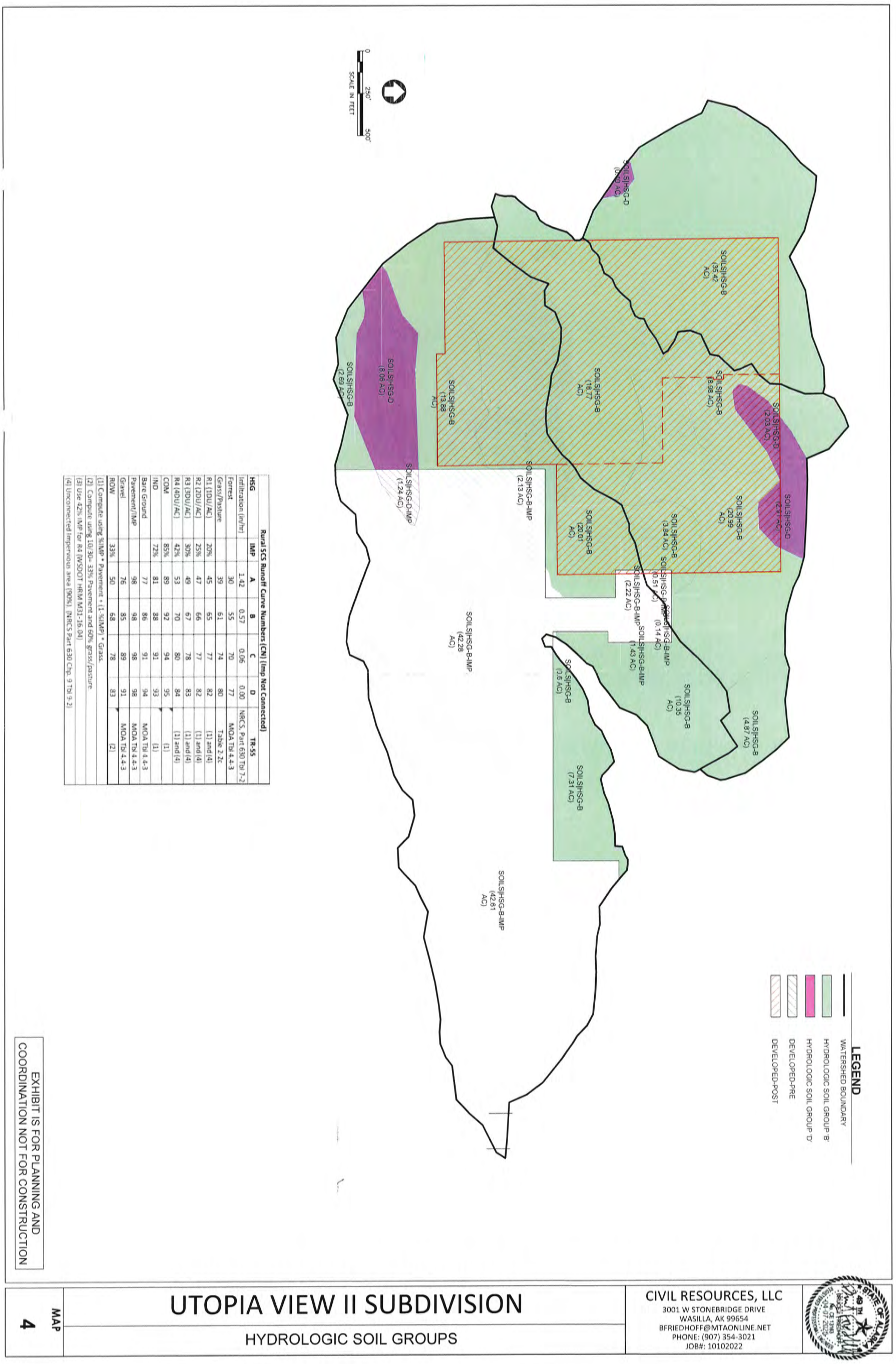

Rural SCS Runoff Curve Numbers (CN) [Imp Not Connected]

HSG						TR-55
Infiltration (in/hr)	IMP	A	B	C	D	
Forrest		1.42	0.57	0.06	0.00	NRCS, Part 630 Tbl 7-2
Grass/Pasture		30	55	70	77	MDA Tbl 4.4-3
R1 (1DU/AC)	20%	39	61	74	80	Table 2-2c
R2 (2DU/AC)	25%	45	65	77	82	(1) and (4)
R3 (3DU/AC)	30%	47	66	77	82	(1) and (4)
R4 (4DU/AC)	42%	49	67	78	83	(1) and (4)
COM	85%	53	70	80	84	(1) and (4)
IND	72%	89	92	94	95	(1)
Bare Ground		81	88	91	93	(1)
Pavement/IMP		77	86	91	94	MDA Tbl 4.4-3
Gravel		98	98	98	98	MDA Tbl 4.4-3
ROW	33%	76	85	89	91	MDA Tbl 4.4-3
		50	68	78	83	(2)

(1) Compute using %IMP * Pavement + (1-%IMP) * Grass.
(2) Compute using 1/3= 33% Pavement and 67% grass/pasture.
(3) Use 42% IMP for R4 (WSDOT HRM M31-16.04)
(4) Unconnected impervious area (90%) (NRCS Part 630 Chp. 9 Tbl 9-2)

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MAP 4

UTOPIA VIEW II SUBDIVISION

HYDROLOGIC SOIL GROUPS

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
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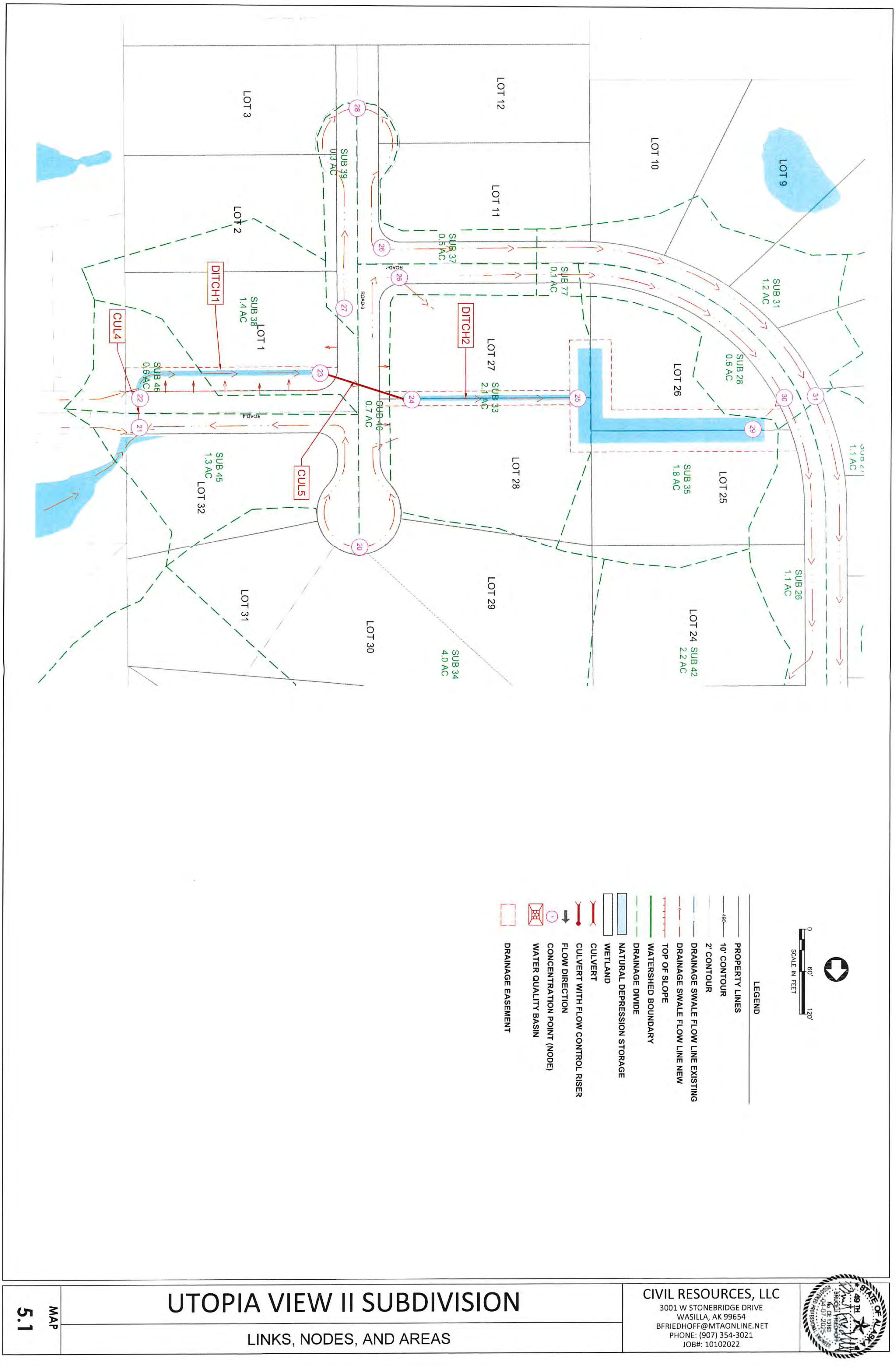

UTOPIA VIEW II SUBDIVISION

LINKS, NODES, AND AREAS

MAP 5.1

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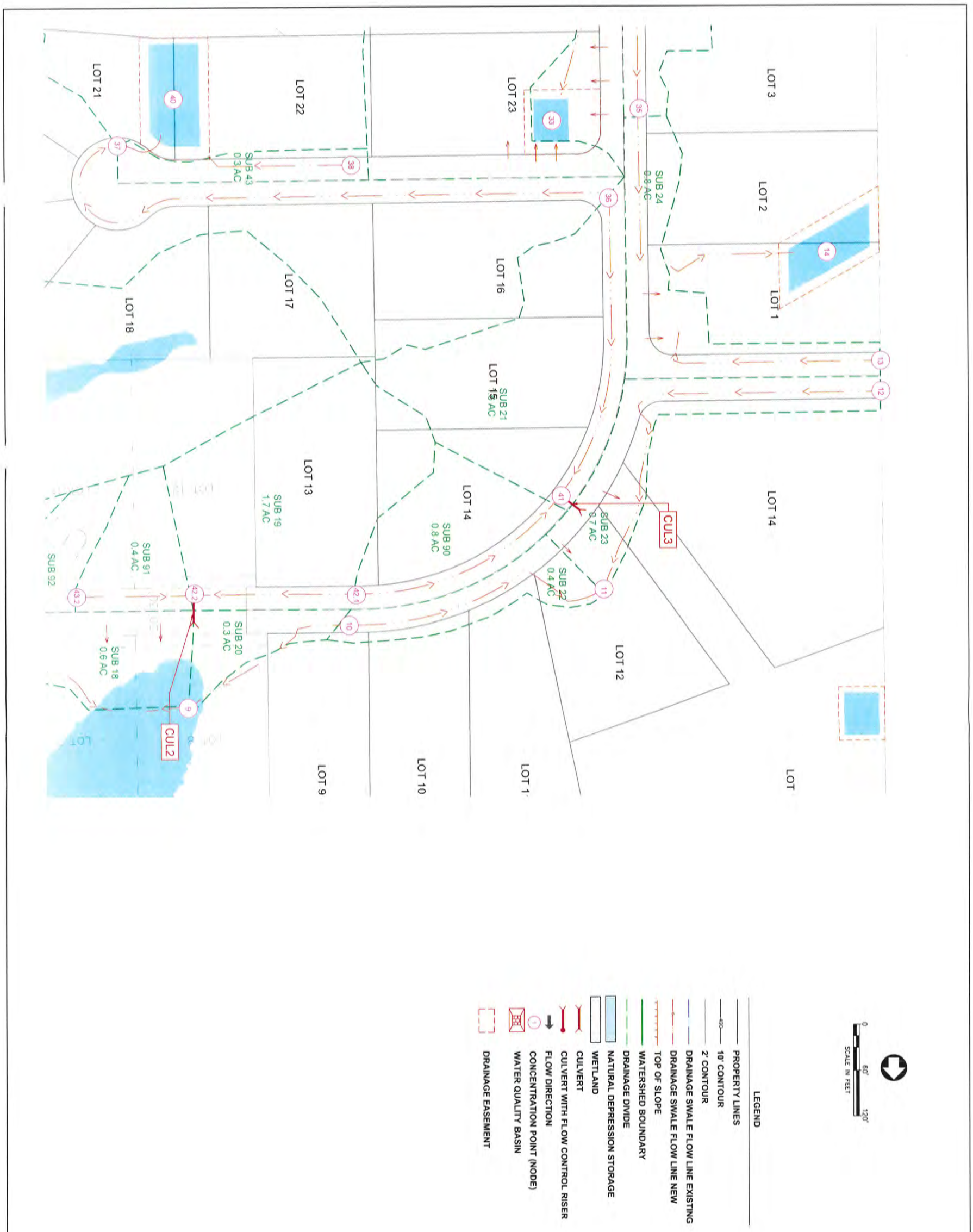

UTOPIA VIEW II SUBDIVISION

LINKS, NODES, AND AREAS

MAP 5.2

CIVIL RESOURCES, LLC
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UTOPIA VIEW II SUBDIVISION

PRELIMINARY DRAINAGE DESIGN

MAP 6.1

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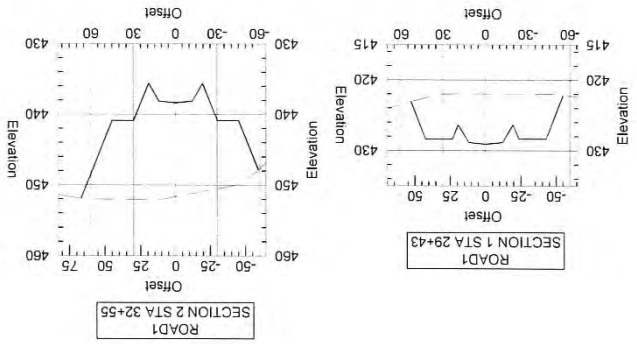
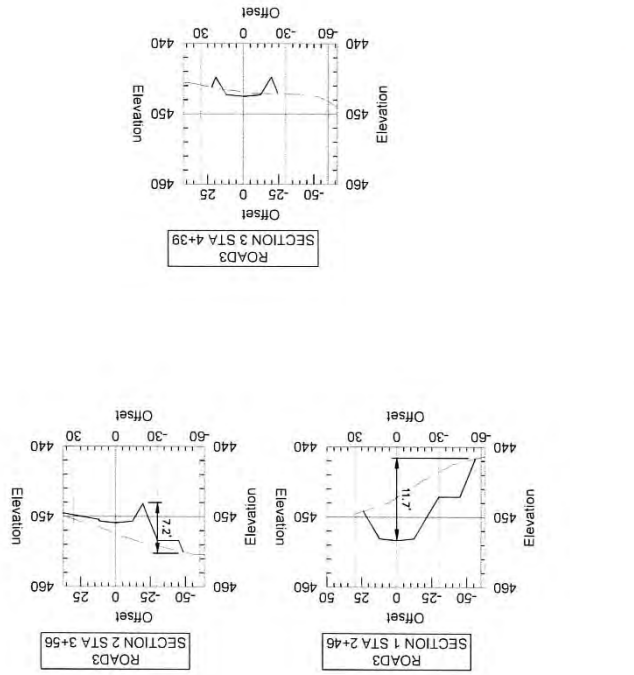
JOB#: 10102022

NOTE

DESIGN AND DETAILS ARE SCHEMATIC AND REQUIRE FIELD ADJUSTMENT BY CONTRACTOR AND ENGINEER DURING CONSTRUCTION.





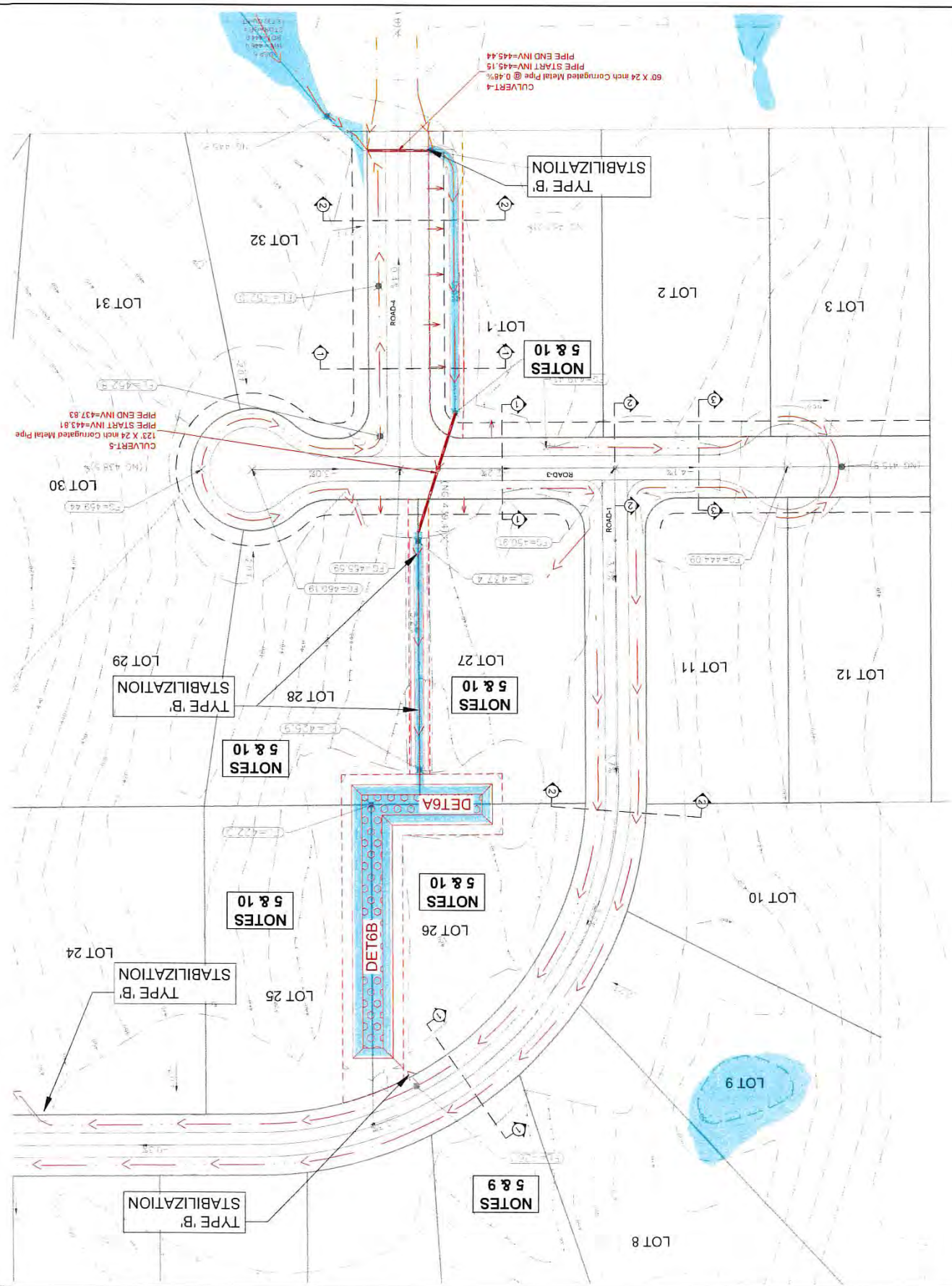
NOTES

1. DITCHES AND CULVERT ARE DESIGNED FOR 10-YEAR PEAK FLOW PLUS 10%.
2. USE RIPRAP ENERGY DISSIPATERS AT BASIN OUTLETS, AND BASIN INLETS.
3. ALL CULVERTS ARE A MINIMUM OF 18" DIAMETER CORRUGATED METAL PIPE.
4. SEE REPORT FOR DETENTION BASIN VOLUME CONFIGURATION TO BE DETERMINED DURING FINAL DESIGN.
5. BUILDING AND DRIVEWAY IMPROVEMENTS SHALL NOT BLOCK FLOWING WATER IN DRAINAGE SWALE THROUGH FRONT OF LOT.
6. FINISHED FLOOR ELEVATIONS AND OPENINGS SHALL BE A MINIMUM OF 18" ABOVE HIGHEST ADJACENT GRADE WITHIN 10' OF BUILDING AND 24" ABOVE ADJACENT 100-YEAR HIGH WATER LEVEL IN ADJACENT WASHES, DITCHES, OR DETENTION BASINS.
7. USE TYPE 'A' STABILIZATION FOR ALL DITCHES UNLESS NOTED OTHERWISE (MAP 6.4 DETAILS).
8. NO FILL ALLOWED IN DRAINAGE EASEMENTS.
9. FILL LOT AND GRADE TO DRAIN TO ROAD.
10. FILL LOT AND GRADE TO DRAIN TO DETENTION BASIN DRAINAGE EASEMENT.

LEGEND

PROPERTY LINES
10' CONTOUR
2' CONTOUR
DRAINAGE SWALE FLOW LINE EXISTING
DRAINAGE SWALE FLOW LINE NEW
TOP OF SLOPE
WATERSHED BOUNDARY
DRAINAGE DIVIDE
NATURAL DEPRESSION STORAGE
WETLAND
CULVERT
CULVERT WITH FLOW CONTROL RISER
FLOW DIRECTION
CONCENTRATION POINT (NODE)
WATER QUALITY BASIN
DRAINAGE EASEMENT

SCALE IN FEET
0 60' 120'

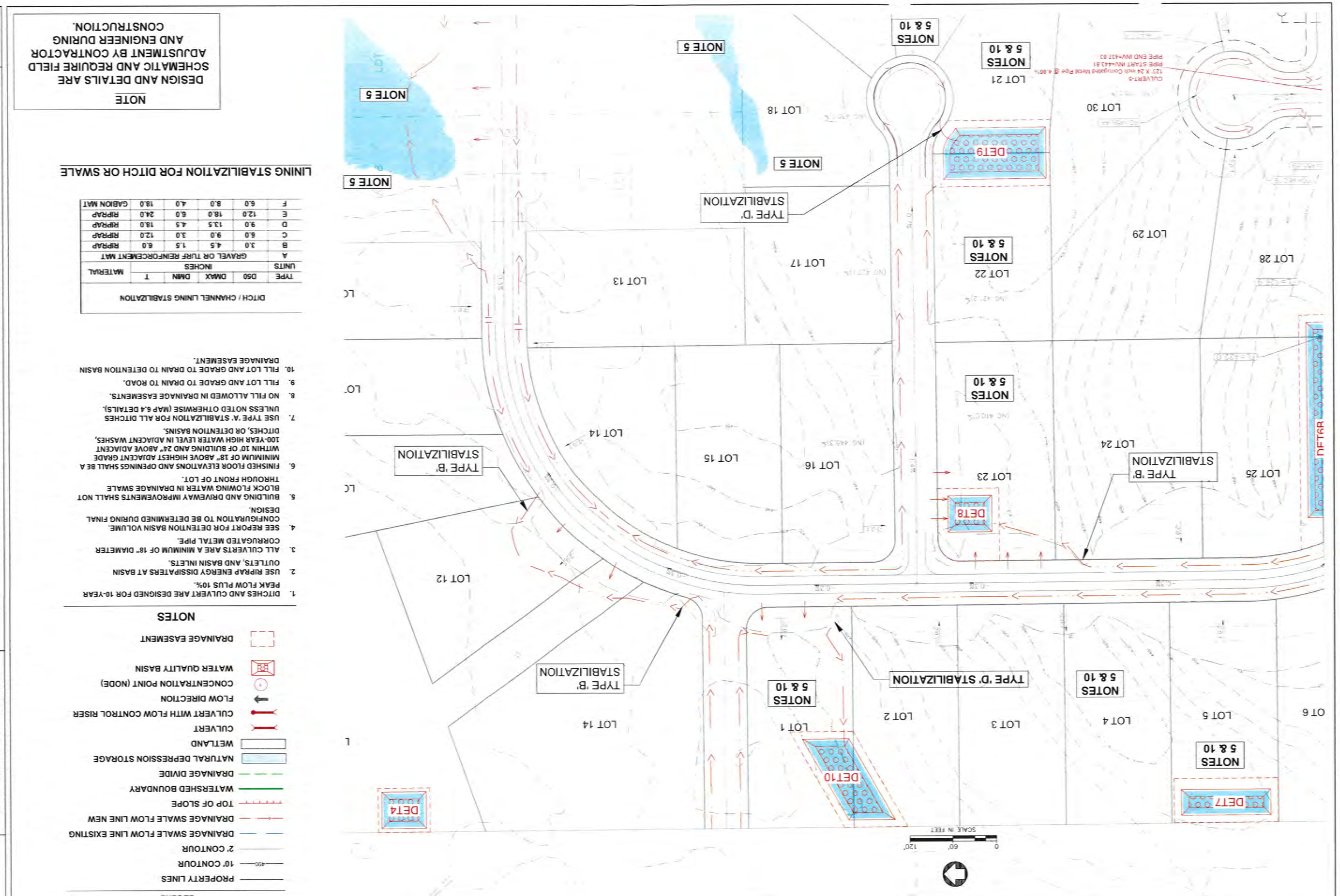


UTOPIA VIEW II SUBDIVISION

PRELIMINARY DRAINAGE DESIGN

MAP **6.2**

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
WASILLA, AK 99654
BFRIEDHOFF@MTAONLINE.NET
PHONE: (907) 354-3021
JOB#: 10102022



NOTE

DESIGN AND DETAILS ARE SCHEMATIC AND REQUIRE FIELD ADJUSTMENT BY CONTRACTOR AND ENGINEER DURING CONSTRUCTION.

LINING STABILIZATION FOR DITCH OR SWALE

DITCH / CHANNEL LINING STABILIZATION						
TYPE	D50	DMAX	DMIN	INCHES T		MATERIAL
A	GRAVEL OR TURF REINFORCEMENT MAT					
B	3.0	4.5	1.5	6.0		RIPRAP
C	6.0	9.0	3.0	12.0		RIPRAP
D	9.0	13.5	4.5	18.0		RIPRAP
E	12.0	18.0	6.0	24.0		RIPRAP
F	6.0	8.0	4.0	18.0		GABION MAT

LEGEND

- PROPERTY LINES
- 490 — 10' CONTOUR
- 2' CONTOUR
- DRAINAGE SWALE FLOW LINE EXISTING
- DRAINAGE SWALE FLOW LINE NEW
- TOP OF SLOPE
- WATERSHED BOUNDARY
- DRAINAGE DIVIDE
- NATURAL DEPRESSION STORAGE
- WETLAND
- CULVERT
- CULVERT WITH FLOW CONTROL RISER
- FLOW DIRECTION
- CONCENTRATION POINT (NODE)
- WATER QUALITY BASIN
- DRAINAGE EASEMENT

NOTES

1. DITCHES AND CULVERT ARE DESIGNED FOR 10-YEAR PEAK FLOW PLUS 10%.
2. USE RIPRAP ENERGY DISSIPATERS AT BASIN OUTLETS, AND BASIN INLETS.
3. ALL CULVERTS ARE A MINIMUM OF 18" DIAMETER CORRUGATED METAL PIPE.
4. SEE REPORT FOR DETENTION BASIN VOLUME. CONFIGURATION TO BE DETERMINED DURING FINAL DESIGN.
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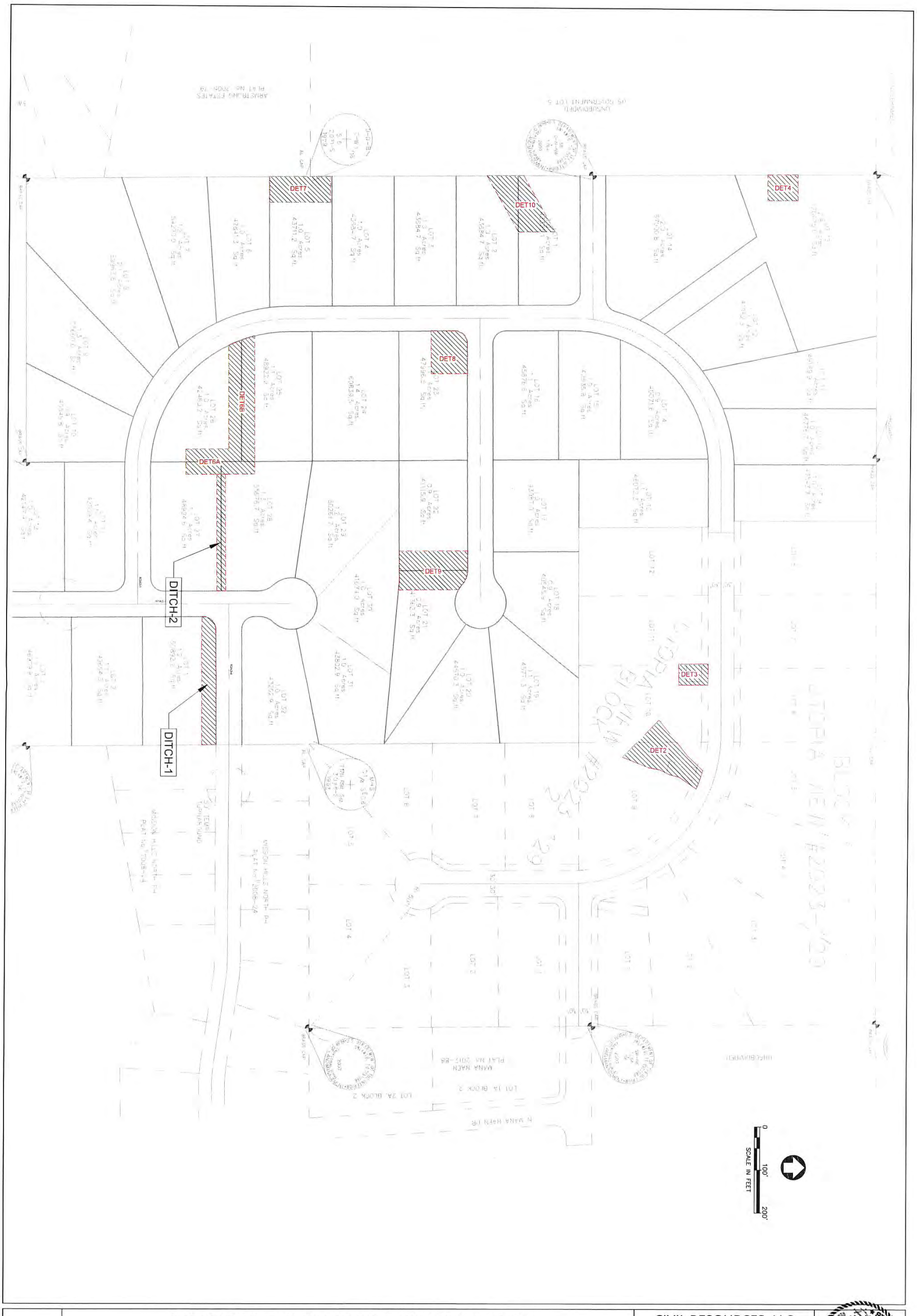
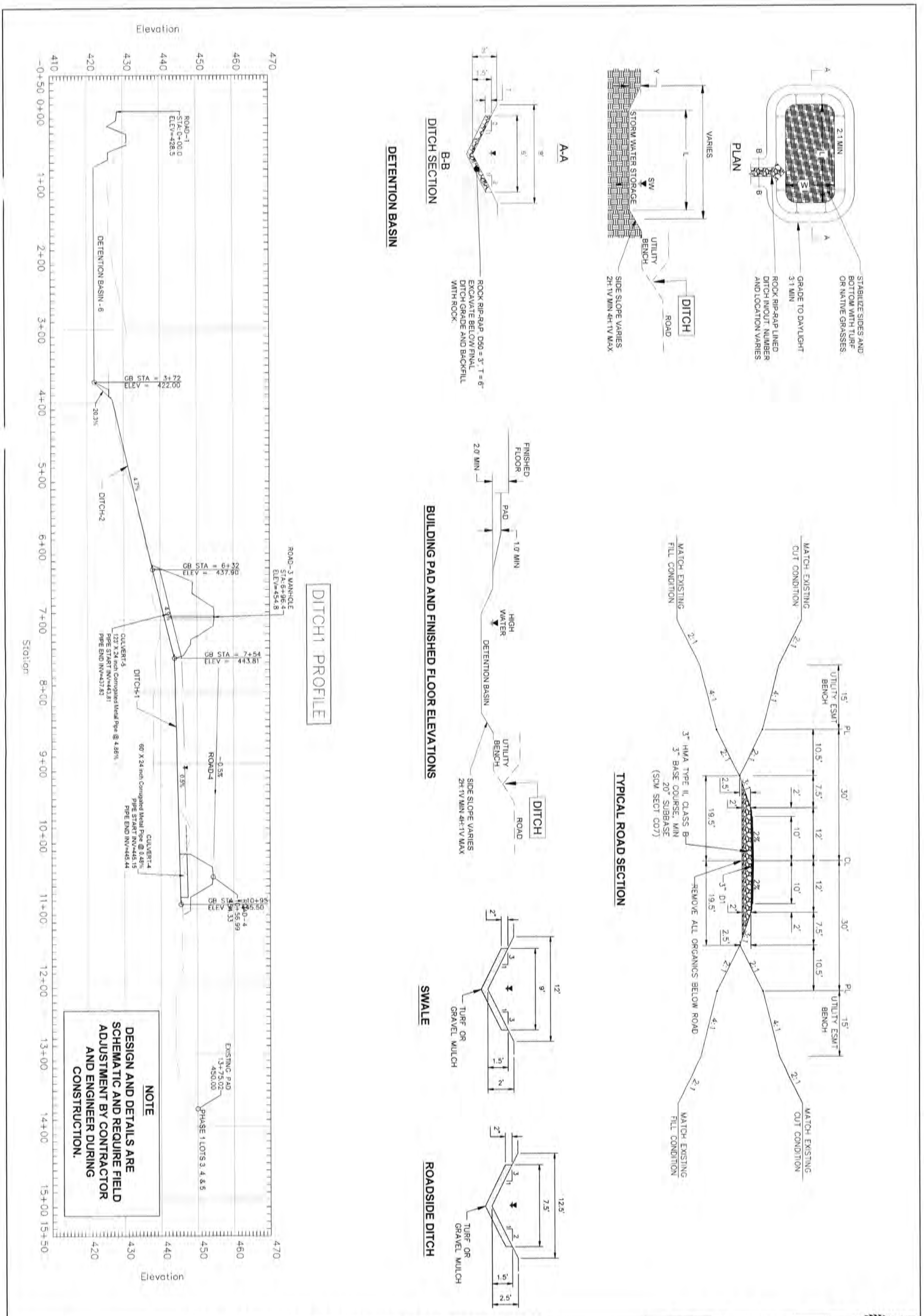
6. FINISHED FLOOR ELEVATIONS AND OPENINGS SHALL BE A MINIMUM OF 18" ABOVE HIGHEST ADJACENT GRADE WITHIN 10' OF BUILDING AND 24" ABOVE ADJACENT 100-YEAR HIGH WATER LEVEL IN ADJACENT WASHES, DITCHES, OR DETENTION BASINS.
7. USE TYPE 'A' STABILIZATION FOR ALL DITCHES UNLESS NOTED OTHERWISE (MAP 6.4 DETAILS).
8. NO FILL ALLOWED IN DRAINAGE EASEMENTS.
9. FILL LOT AND GRADE TO DRAIN TO ROAD.
10. FILL LOT AND GRADE TO DRAIN TO DETENTION BASIN DRAINAGE EASEMENT.



MAP 6.3	UTOPIA VIEW II SUBDIVISION DRAINAGE EASEMENTS	CIVIL RESOURCES, LLC 3001 W STONEBRIDGE DRIVE WASILLA, AK 99654 BFRIEDHOFF@MTAONLINE.NET PHONE: (907) 354-3021 JOB#: 10102022	STATE OF ALASKA 49TH BRUCE J. FRIEDHOFF 10 CE 3165 10-07-2025 REGISTERED PROFESSIONAL ENGINEER

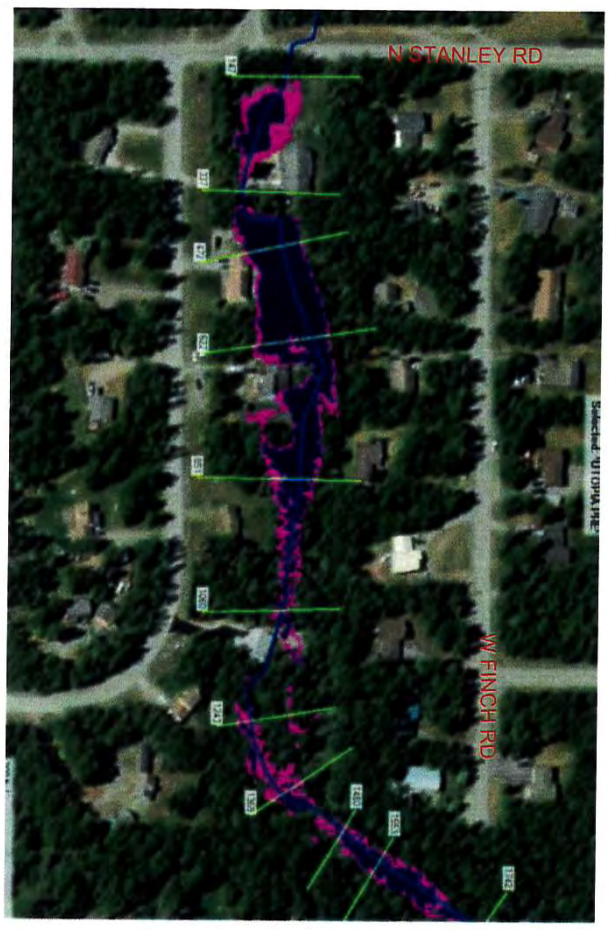


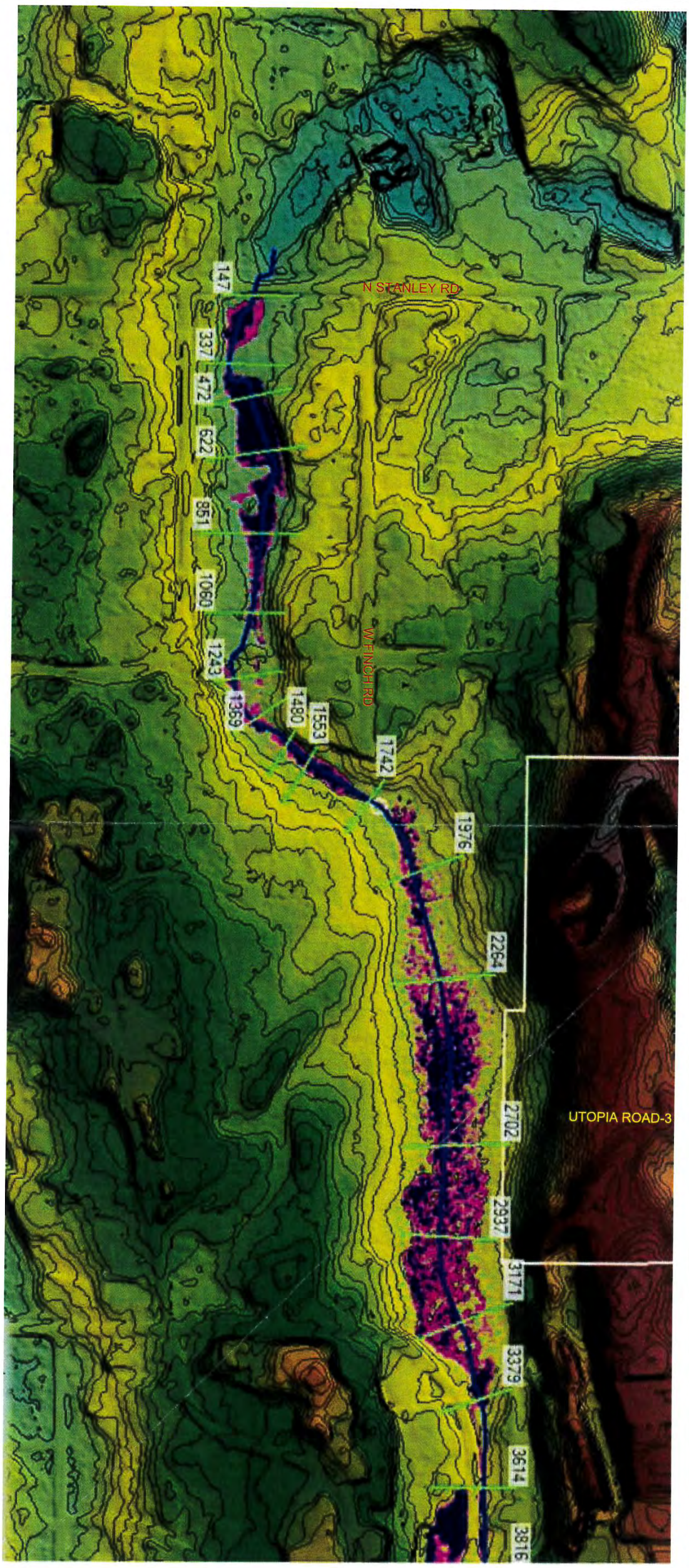
UTOPIA VIEW II SUBDIVISION

SECTIONS AND DETAILS

MAP 6.4

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
WASILLA, AK 99654
BFRIEDHOFF@MTAONLINE.NET
PHONE: (907) 354-3021
JOB#: 10102022



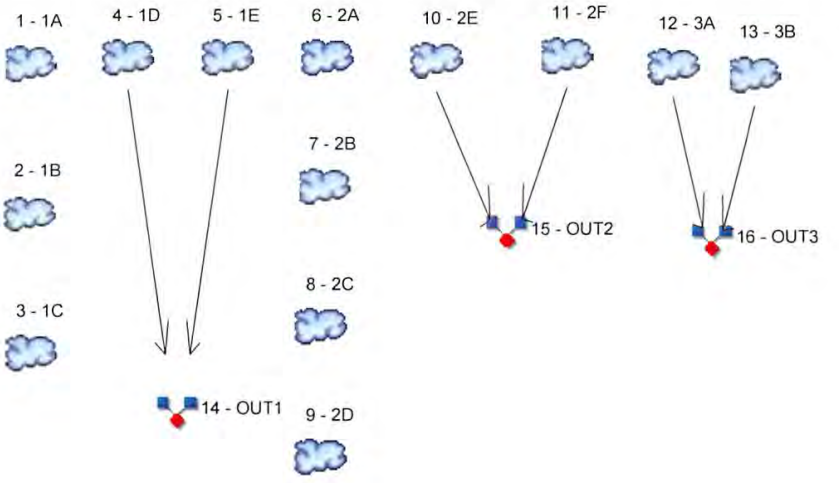


MAP 7	UTOPIA VIEW II SUBDIVISION HECRAS WATER SURFACE PROFILE PLAN	CIVIL RESOURCES, LLC 3001 W STONEBRIDGE DRIVE WASILLA, AK 99654 BFRIEDHOFF@MTAONLINE.NET PHONE: (907) 354-3021 JOB#: 10102022

APPENDIX B - CALCULATIONS

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Legend

Hyd.	Origin	Description
1	SCS Runoff	1A
2	SCS Runoff	1B
3	SCS Runoff	1C
4	SCS Runoff	1D
5	SCS Runoff	1E
6	SCS Runoff	2A
7	SCS Runoff	2B
8	SCS Runoff	2C
9	SCS Runoff	2D
10	SCS Runoff	2E
11	SCS Runoff	2F
12	SCS Runoff	3A
13	SCS Runoff	3B
14	Combine	OUT1
15	Combine	OUT2
16	Combine	OUT3

Project: PRE.gpw | Tuesday, 02 / 25 / 2025

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	0.000	-------	-------	-------	0.458	-------	-------	6.101	1A
2	SCS Runoff	------	0.000	-------	-------	-------	0.037	-------	-------	0.242	1B
3	SCS Runoff	------	0.000	-------	-------	-------	0.085	-------	-------	0.534	1C
4	SCS Runoff	------	0.010	-------	-------	-------	0.620	-------	-------	8.954	1D
5	SCS Runoff	------	0.000	-------	-------	-------	0.102	-------	-------	0.990	1E
6	SCS Runoff	------	0.000	-------	-------	-------	0.043	-------	-------	0.323	2A
7	SCS Runoff	------	0.000	-------	-------	-------	0.013	-------	-------	0.087	2B
8	SCS Runoff	------	0.000	-------	-------	-------	0.011	-------	-------	0.084	2C
9	SCS Runoff	------	0.000	-------	-------	-------	0.057	-------	-------	0.405	2D
10	SCS Runoff	------	0.000	-------	-------	-------	0.016	-------	-------	0.117	2E
11	SCS Runoff	------	0.000	-------	-------	-------	0.086	-------	-------	0.558	2F
12	SCS Runoff	------	0.000	-------	-------	-------	0.033	-------	-------	0.242	3A
13	SCS Runoff	------	0.000	-------	-------	-------	0.056	-------	-------	0.395	3B
14	Combine	4, 5,	0.010	-------	-------	-------	0.694	-------	-------	9.899	OUT1
15	Combine	10, 11,	0.000	-------	-------	-------	0.101	-------	-------	0.590	OUT2
16	Combine	12, 13,	0.000	-------	-------	-------	0.088	-------	-------	0.637	OUT3

Proj. file: PRE.gpw

Tuesday, 02 / 25 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.000	1	n/a	0	------	------	------	1A
2	SCS Runoff	0.000	1	n/a	0	------	------	------	1B
3	SCS Runoff	0.000	1	n/a	0	------	------	------	1C
4	SCS Runoff	0.010	1	1440	49	------	------	------	1D
5	SCS Runoff	0.000	1	n/a	0	------	------	------	1E
6	SCS Runoff	0.000	1	n/a	0	------	------	------	2A
7	SCS Runoff	0.000	1	n/a	0	------	------	------	2B
8	SCS Runoff	0.000	1	n/a	0	------	------	------	2C
9	SCS Runoff	0.000	1	n/a	0	------	------	------	2D
10	SCS Runoff	0.000	1	n/a	0	------	------	------	2E
11	SCS Runoff	0.000	1	n/a	0	------	------	------	2F
12	SCS Runoff	0.000	1	n/a	0	------	------	------	3A
13	SCS Runoff	0.000	1	n/a	0	------	------	------	3B
14	Combine	0.010	1	1440	49	4, 5,	------	------	OUT1
15	Combine	0.000	1	n/a	0	10, 11,	------	------	OUT2
16	Combine	0.000	1	n/a	0	12, 13,	------	------	OUT3

PRE.gpw	Return Period: 1 Year	Tuesday, 02 / 25 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.458	1	1058	19,272	------	------	------	1A
2	SCS Runoff	0.037	1	1266	986	------	------	------	1B
3	SCS Runoff	0.085	1	1248	2,385	------	------	------	1C
4	SCS Runoff	0.620	1	776	26,797	------	------	------	1D
5	SCS Runoff	0.102	1	1134	3,734	------	------	------	1E
6	SCS Runoff	0.043	1	1318	975	------	------	------	2A
7	SCS Runoff	0.013	1	1270	348	------	------	------	2B
8	SCS Runoff	0.011	1	1318	254	------	------	------	2C
9	SCS Runoff	0.057	1	1176	1,902	------	------	------	2D
10	SCS Runoff	0.016	1	1318	353	------	------	------	2E
11	SCS Runoff	0.086	1	1182	2,842	------	------	------	2F
12	SCS Runoff	0.033	1	1318	731	------	------	------	3A
13	SCS Runoff	0.056	1	1300	1,320	------	------	------	3B
14	Combine	0.694	1	1039	30,531	4, 5,	------	------	OUT1
15	Combine	0.101	1	1215	3,195	10, 11,	------	------	OUT2
16	Combine	0.088	1	1306	2,051	12, 13,	------	------	OUT3

PRE.gpw | Return Period: 10 Year | Tuesday, 02 / 25 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	6.101	1	606	83,837	------	------	------	1A
2	SCS Runoff	0.242	1	759	10,308	------	------	------	1B
3	SCS Runoff	0.534	1	754	22,538	------	------	------	1C
4	SCS Runoff	8.954	1	606	103,356	------	------	------	1D
5	SCS Runoff	0.990	1	604	21,089	------	------	------	1E
6	SCS Runoff	0.323	1	774	14,085	------	------	------	2A
7	SCS Runoff	0.087	1	760	3,714	------	------	------	2B
8	SCS Runoff	0.084	1	774	3,671	------	------	------	2C
9	SCS Runoff	0.405	1	602	12,755	------	------	------	2D
10	SCS Runoff	0.117	1	774	5,095	------	------	------	2E
11	SCS Runoff	0.558	1	602	19,557	------	------	------	2F
12	SCS Runoff	0.242	1	774	10,564	------	------	------	3A
13	SCS Runoff	0.395	1	769	17,068	------	------	------	3B
14	Combine	9.899	1	606	124,445	4, 5,	------	------	OUT1
15	Combine	0.590	1	708	24,652	10, 11,	------	------	OUT2
16	Combine	0.637	1	771	27,632	12, 13,	------	------	OUT3

PRE.gpw | Return Period: 100 Year | Tuesday, 02 / 25 / 2025

Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 02 / 25 / 2025

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	2.6203	0.1000	0.5477	--------
2	3.2439	0.1000	0.5492	--------
3	0.0000	0.0000	0.0000	--------
5	0.0000	0.0000	0.0000	--------
10	4.6883	0.1000	0.5455	--------
25	5.6755	0.1000	0.5482	--------
50	6.3839	0.1000	0.5475	--------
100	7.0165	0.1000	0.5443	--------

File name: WASILLA.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	1.07	0.74	0.59	0.51	0.45	0.41	0.37	0.35	0.33	0.31	0.29	0.28
2	1.33	0.91	0.73	0.62	0.55	0.50	0.46	0.43	0.40	0.38	0.36	0.34
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	1.93	1.33	1.07	0.91	0.81	0.73	0.67	0.63	0.59	0.55	0.53	0.50
25	2.32	1.60	1.28	1.10	0.97	0.88	0.81	0.75	0.70	0.66	0.63	0.60
50	2.62	1.80	1.44	1.23	1.09	0.99	0.91	0.85	0.79	0.75	0.71	0.68
100	2.89	1.99	1.60	1.37	1.21	1.10	1.01	0.94	0.88	0.83	0.79	0.75

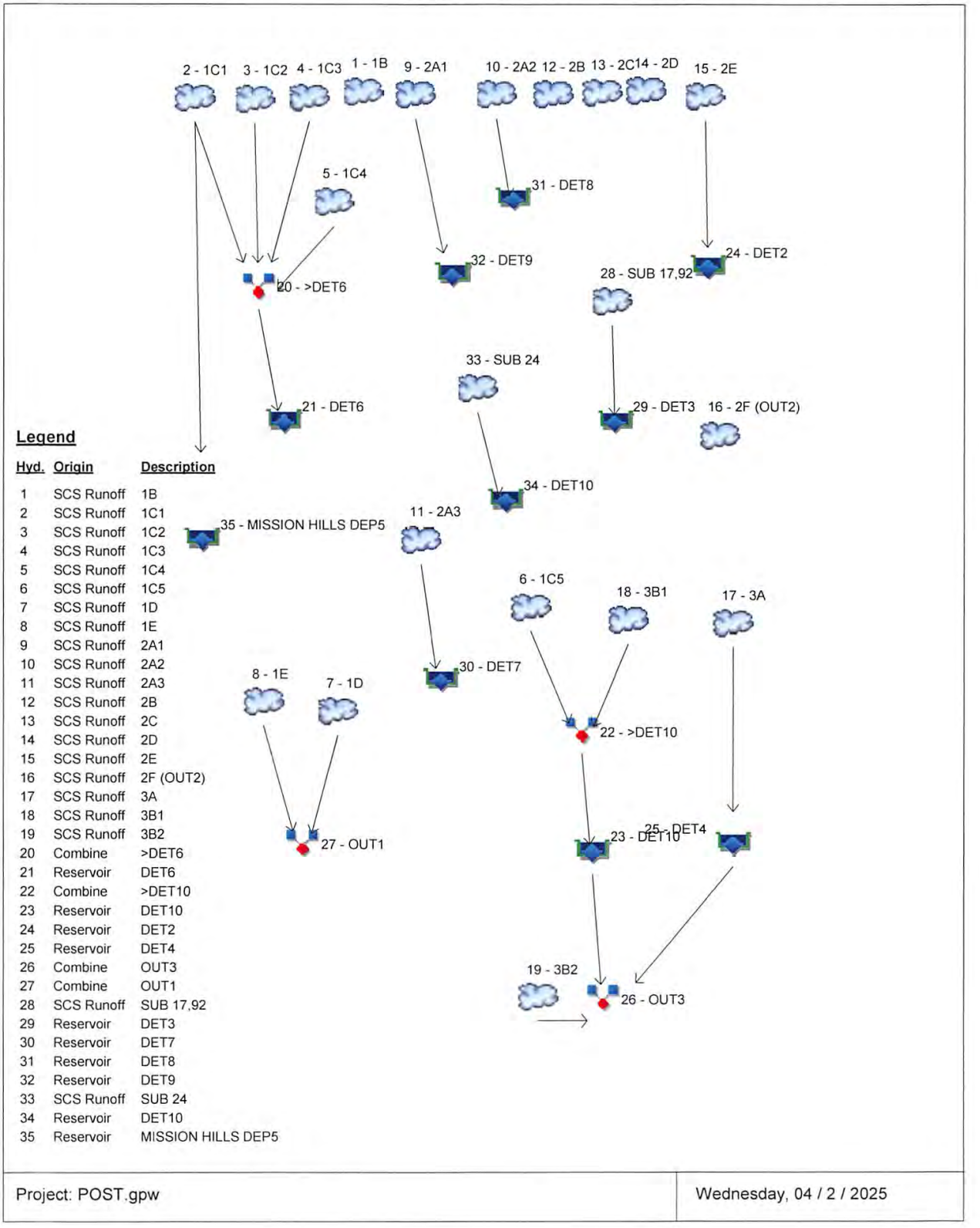
Tc = time in minutes. Values may exceed 60.

Precip. file name: C:\Users\bfrie\CRLLC\Projects_Support\PCP\WASILLA.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	1.09	1.36	1.54	1.71	1.98	2.37	2.67	3.02
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Legend

Hyd.	Origin	Description
1	SCS Runoff	1B
2	SCS Runoff	1C1
3	SCS Runoff	1C2
4	SCS Runoff	1C3
5	SCS Runoff	1C4
6	SCS Runoff	1C5
7	SCS Runoff	1D
8	SCS Runoff	1E
9	SCS Runoff	2A1
10	SCS Runoff	2A2
11	SCS Runoff	2A3
12	SCS Runoff	2B
13	SCS Runoff	2C
14	SCS Runoff	2D
15	SCS Runoff	2E
16	SCS Runoff	2F (OUT2)
17	SCS Runoff	3A
18	SCS Runoff	3B1
19	SCS Runoff	3B2
20	Combine	>DET6
21	Reservoir	DET6
22	Combine	>DET10
23	Reservoir	DET10
24	Reservoir	DET2
25	Reservoir	DET4
26	Combine	OUT3
27	Combine	OUT1
28	SCS Runoff	SUB 17,92
29	Reservoir	DET3
30	Reservoir	DET7
31	Reservoir	DET8
32	Reservoir	DET9
33	SCS Runoff	SUB 24
34	Reservoir	DET10
35	Reservoir	MISSION HILLS DEP5

Project: POST.gpw | Wednesday, 04 / 2 / 2025

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	0.000	------	------	------	0.037	------	------	0.242	1B
2	SCS Runoff	------	0.001	------	------	------	0.134	------	------	2.887	1C1
3	SCS Runoff	------	0.000	------	------	------	0.034	------	------	0.728	1C2
4	SCS Runoff	------	0.000	------	------	------	0.032	------	------	0.679	1C3
5	SCS Runoff	------	0.000	------	------	------	0.027	------	------	0.582	1C4
6	SCS Runoff	------	0.000	------	------	------	0.029	------	------	0.631	1C5
7	SCS Runoff	------	0.010	------	------	------	0.633	------	------	9.141	1D
8	SCS Runoff	------	0.000	------	------	------	0.141	------	------	2.134	1E
9	SCS Runoff	------	0.000	------	------	------	0.103	------	------	2.077	2A1
10	SCS Runoff	------	0.000	------	------	------	0.032	------	------	0.645	2A2
11	SCS Runoff	------	0.000	------	------	------	0.057	------	------	1.149	2A3
12	SCS Runoff	------	0.000	------	------	------	0.037	------	------	0.746	2B
13	SCS Runoff	------	0.000	------	------	------	0.011	------	------	0.084	2C
14	SCS Runoff	------	0.002	------	------	------	0.134	------	------	2.898	2D
15	SCS Runoff	------	0.001	------	------	------	0.084	------	------	1.795	2E
16	SCS Runoff	------	0.000	------	------	------	0.140	------	------	2.321	2F (OUT2)
17	SCS Runoff	------	0.000	------	------	------	0.119	------	------	2.053	3A
18	SCS Runoff	------	0.000	------	------	------	0.040	------	------	0.807	3B1
19	SCS Runoff	------	0.000	------	------	------	0.067	------	------	0.407	3B2
20	Combine	2, 3, 4, 5,	0.002	------	------	------	0.227	------	------	4.876	>DET6
21	Reservoir	20	0.000	------	------	------	0.000	------	------	0.000	DET6
22	Combine	6, 18,	0.000	------	------	------	0.069	------	------	1.437	>DET10
23	Reservoir	22	0.000	------	------	------	0.000	------	------	0.000	DET10
24	Reservoir	15	0.000	------	------	------	0.000	------	------	0.000	DET2
25	Reservoir	17	0.000	------	------	------	0.000	------	------	0.548	DET4
26	Combine	19, 23, 25	0.000	------	------	------	0.067	------	------	0.955	OUT3
27	Combine	7, 8,	0.010	------	------	------	0.753	------	------	10.91	OUT1
28	SCS Runoff	------	0.000	------	------	------	0.010	------	------	0.211	SUB 17,92
29	Reservoir	28	0.000	------	------	------	0.000	------	------	0.000	DET3
30	Reservoir	11	0.000	------	------	------	0.000	------	------	0.000	DET7
31	Reservoir	10	0.000	------	------	------	0.000	------	------	0.000	DET8
32	Reservoir	9	0.000	------	------	------	0.000	------	------	0.000	DET9
33	SCS Runoff	------	0.000	------	------	------	0.010	------	------	0.211	SUB 24
34	Reservoir	33	0.000	------	------	------	0.000	------	------	0.000	DET10

Proj. file: POST.gpw

Wednesday, 04 / 2 / 2025

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
35	Reservoir	2	0.000	-------	-------	-------	0.000	-------	-------	0.288	MISSION HILLS DEP5

Proj. file: POST.gpw

Wednesday, 04 / 2 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.000	1	n/a	0	------	------	------	1B
2	SCS Runoff	0.001	1	1440	3	------	------	------	1C1
3	SCS Runoff	0.000	1	1440	1	------	------	------	1C2
4	SCS Runoff	0.000	1	1440	1	------	------	------	1C3
5	SCS Runoff	0.000	1	1440	1	------	------	------	1C4
6	SCS Runoff	0.000	1	1440	1	------	------	------	1C5
7	SCS Runoff	0.010	1	1440	50	------	------	------	1D
8	SCS Runoff	0.000	1	n/a	0	------	------	------	1E
9	SCS Runoff	0.000	1	n/a	0	------	------	------	2A1
10	SCS Runoff	0.000	1	n/a	0	------	------	------	2A2
11	SCS Runoff	0.000	1	n/a	0	------	------	------	2A3
12	SCS Runoff	0.000	1	n/a	0	------	------	------	2B
13	SCS Runoff	0.000	1	n/a	0	------	------	------	2C
14	SCS Runoff	0.002	1	1440	13	------	------	------	2D
15	SCS Runoff	0.001	1	1440	2	------	------	------	2E
16	SCS Runoff	0.000	1	n/a	0	------	------	------	2F (OUT2)
17	SCS Runoff	0.000	1	n/a	0	------	------	------	3A
18	SCS Runoff	0.000	1	n/a	0	------	------	------	3B1
19	SCS Runoff	0.000	1	n/a	0	------	------	------	3B2
20	Combine	0.002	1	1440	4	2, 3, 4, 5,	------	------	>DET6
21	Reservoir	0.000	1	n/a	0	20	422.00	4.43	DET6
22	Combine	0.000	1	1440	1	6, 18,	------	------	>DET10
23	Reservoir	0.000	1	n/a	0	22	399.00	0.574	DET10
24	Reservoir	0.000	1	n/a	0	15	424.00	1.63	DET2
25	Reservoir	0.000	1	n/a	0	17	421.00	0.000	DET4
26	Combine	0.000	1	n/a	0	19, 23, 25	------	------	OUT3
27	Combine	0.010	1	1440	50	7, 8,	------	------	OUT1
28	SCS Runoff	0.000	1	1440	1	------	------	------	SUB 17,92
29	Reservoir	0.000	1	n/a	0	28	421.00	0.963	DET3
30	Reservoir	0.000	1	n/a	0	11	96.00	0.000	DET7
31	Reservoir	0.000	1	n/a	0	10	97.00	0.000	DET8
32	Reservoir	0.000	1	n/a	0	9	97.00	0.000	DET9
33	SCS Runoff	0.000	1	1440	1	------	------	------	SUB 24
34	Reservoir	0.000	1	n/a	0	33	97.00	0.963	DET10

POST.gpw	Return Period: 1 Year	Wednesday, 04 / 2 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	0.000	1	n/a	0	2	444.00	2.62	MISSION HILLS DEP5

POST.gpw	Return Period: 1 Year	Wednesday, 04 / 2 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.037	1	1266	986	------	------	------	1B
2	SCS Runoff	0.134	1	774	5,856	------	------	------	1C1
3	SCS Runoff	0.034	1	774	1,476	------	------	------	1C2
4	SCS Runoff	0.032	1	774	1,378	------	------	------	1C3
5	SCS Runoff	0.027	1	774	1,181	------	------	------	1C4
6	SCS Runoff	0.029	1	774	1,280	------	------	------	1C5
7	SCS Runoff	0.633	1	776	27,357	------	------	------	1D
8	SCS Runoff	0.141	1	1071	5,762	------	------	------	1E
9	SCS Runoff	0.103	1	1041	4,413	------	------	------	2A1
10	SCS Runoff	0.032	1	1041	1,371	------	------	------	2A2
11	SCS Runoff	0.057	1	1041	2,442	------	------	------	2A3
12	SCS Runoff	0.037	1	1041	1,585	------	------	------	2B
13	SCS Runoff	0.011	1	1318	254	------	------	------	2C
14	SCS Runoff	0.134	1	768	5,783	------	------	------	2D
15	SCS Runoff	0.084	1	774	3,642	------	------	------	2E
16	SCS Runoff	0.140	1	1083	5,593	------	------	------	2F (OUT2)
17	SCS Runoff	0.119	1	1077	4,813	------	------	------	3A
18	SCS Runoff	0.040	1	1041	1,714	------	------	------	3B1
19	SCS Runoff	0.067	1	1234	1,944	------	------	------	3B2
20	Combine	0.227	1	774	9,892	2, 3, 4, 5,	------	------	>DET6
21	Reservoir	0.000	1	n/a	0	20	423.22	9,892	DET6
22	Combine	0.069	1	1029	2,993	6, 18,	------	------	>DET10
23	Reservoir	0.000	1	n/a	0	22	400.83	2,993	DET10
24	Reservoir	0.000	1	n/a	0	15	424.49	3,642	DET2
25	Reservoir	0.000	1	n/a	0	17	423.62	4,813	DET4
26	Combine	0.067	1	1234	1,944	19, 23, 25	------	------	OUT3
27	Combine	0.753	1	782	33,120	7, 8,	------	------	OUT1
28	SCS Runoff	0.010	1	768	421	------	------	------	SUB 17,92
29	Reservoir	0.000	1	n/a	0	28	421.82	421	DET3
30	Reservoir	0.000	1	n/a	0	11	97.25	2,442	DET7
31	Reservoir	0.000	1	n/a	0	10	97.97	1,371	DET8
32	Reservoir	0.000	1	n/a	0	9	97.84	4,413	DET9
33	SCS Runoff	0.010	1	768	421	------	------	------	SUB 24
34	Reservoir	0.000	1	n/a	0	33	97.11	421	DET10

POST.gpw | Return Period: 10 Year | Wednesday, 04 / 2 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	0.000	1	n/a	0	2	444.85	5,856	MISSION HILLS DEP5

POST.gpw	Return Period: 10 Year	Wednesday, 04 / 2 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.242	1	759	10,308	------	------	------	1B
2	SCS Runoff	2.887	1	599	23,124	------	------	------	1C1
3	SCS Runoff	0.728	1	599	5,830	------	------	------	1C2
4	SCS Runoff	0.679	1	599	5,441	------	------	------	1C3
5	SCS Runoff	0.582	1	599	4,664	------	------	------	1C4
6	SCS Runoff	0.631	1	599	5,052	------	------	------	1C5
7	SCS Runoff	9.141	1	606	105,518	------	------	------	1D
8	SCS Runoff	2.134	1	602	26,371	------	------	------	1E
9	SCS Runoff	2.077	1	599	18,555	------	------	------	2A1
10	SCS Runoff	0.645	1	599	5,765	------	------	------	2A2
11	SCS Runoff	1.149	1	599	10,268	------	------	------	2A3
12	SCS Runoff	0.746	1	599	6,665	------	------	------	2B
13	SCS Runoff	0.084	1	774	3,671	------	------	------	2C
14	SCS Runoff	2.898	1	599	22,176	------	------	------	2D
15	SCS Runoff	1.795	1	599	14,380	------	------	------	2E
16	SCS Runoff	2.321	1	600	26,825	------	------	------	2F (OUT2)
17	SCS Runoff	2.053	1	600	22,542	------	------	------	3A
18	SCS Runoff	0.807	1	599	7,206	------	------	------	3B1
19	SCS Runoff	0.407	1	750	17,076	------	------	------	3B2
20	Combine	4.876	1	599	39,058	2, 3, 4, 5,	------	------	>DET6
21	Reservoir	0.000	1	n/a	0	20	425.60	39,058	DET6
22	Combine	1.437	1	599	12,258	6, 18,	------	------	>DET10
23	Reservoir	0.000	1	n/a	0	22	403.88	12,258	DET10
24	Reservoir	0.000	1	n/a	0	15	425.92	14,380	DET2
25	Reservoir	0.548	1	746	16,727	17	424.05	5,953	DET4
26	Combine	0.955	1	747	33,803	19, 23, 25	------	------	OUT3
27	Combine	10.91	1	605	131,889	7, 8,	------	------	OUT1
28	SCS Runoff	0.211	1	599	1,613	------	------	------	SUB 17,92
29	Reservoir	0.000	1	n/a	0	28	423.22	1,613	DET3
30	Reservoir	0.000	1	n/a	0	11	99.56	10,268	DET7
31	Reservoir	0.000	1	n/a	0	10	99.98	5,765	DET8
32	Reservoir	0.000	1	n/a	0	9	99.94	18,555	DET9
33	SCS Runoff	0.211	1	599	1,613	------	------	------	SUB 24
34	Reservoir	0.000	1	n/a	0	33	97.42	1,613	DET10

POST.gpw | Return Period: 100 Year | Wednesday, 04 / 2 / 2025

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
35	Reservoir	0.288	1	1318	9,324	2	446.24	17,573	MISSION HILLS DEP5

POST.gpw	Return Period: 100 Year	Wednesday, 04 / 2 / 2025

Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 — Wednesday, 04 / 2 / 2025

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	2.6203	0.1000	0.5477	--------
2	3.2439	0.1000	0.5492	--------
3	0.0000	0.0000	0.0000	--------
5	0.0000	0.0000	0.0000	--------
10	4.6883	0.1000	0.5455	--------
25	5.6755	0.1000	0.5482	--------
50	6.3839	0.1000	0.5475	--------
100	7.0165	0.1000	0.5443	--------

File name: WASILLA.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	1.07	0.74	0.59	0.51	0.45	0.41	0.37	0.35	0.33	0.31	0.29	0.28
2	1.33	0.91	0.73	0.62	0.55	0.50	0.46	0.43	0.40	0.38	0.36	0.34
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	1.93	1.33	1.07	0.91	0.81	0.73	0.67	0.63	0.59	0.55	0.53	0.50
25	2.32	1.60	1.28	1.10	0.97	0.88	0.81	0.75	0.70	0.66	0.63	0.60
50	2.62	1.80	1.44	1.23	1.09	0.99	0.91	0.85	0.79	0.75	0.71	0.68
100	2.89	1.99	1.60	1.37	1.21	1.10	1.01	0.94	0.88	0.83	0.79	0.75

Tc = time in minutes. Values may exceed 60.

Precip. file name: C:\Users\bfrie\CRLLC\Projects_Support\PCP\WASILLA.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	1.09	1.36	1.54	1.71	1.98	2.37	2.67	3.02
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Road Hydrology Using Rational Method (Q = CiA)										
From Node	To Node	Feature	Length	Grade	A	C	Tc	i	Q10	Qd
1	2	Ditch	SHORT	STEEP	0.7	0.17	5.0	2.12	0.3	0.3
3	4	Ditch	SHORT	STEEP	0.5	0.17	5.0	2.12	0.2	0.2
5.1	4	Ditch	SHORT	STEEP	0.2	0.17	5.0	2.12	0.1	0.1
5.1	5.2	Ditch	SHORT	STEEP	0.3	0.17	5.0	2.12	0.1	0.1
6	5.2	Ditch	SHORT	STEEP	0.2	0.17	5.0	2.12	0.1	0.1
6	7	Ditch	SHORT	STEEP	0.2	0.17	5.0	2.12	0.1	0.1
8	7	Ditch	SHORT	STEEP	0.2	0.17	5.0	2.12	0.1	0.1
8	9	Ditch	SHORT	STEEP	0.6	0.17	5.0	2.12	0.2	0.2
10	9	Ditch	SHORT	STEEP	0.3	0.17	5.0	2.12	0.1	0.1
10	11	Ditch	SHORT	STEEP	0.4	0.17	5.0	2.12	0.1	0.2
12	11	Ditch	SHORT	STEEP	0.7	0.17	5.0	2.12	0.3	0.3
13	14	Ditch	SHORT	STEEP	0.8	0.17	5.0	2.12	0.3	0.3
15	14	Ditch	SHORT	STEEP	0.4	0.17	5.0	2.12	0.1	0.2
15	16	Ditch	SHORT	STEEP	0.4	0.17	5.0	2.12	0.1	0.2
17	16	Ditch	SHORT	STEEP	0.9	0.17	5.0	2.12	0.3	0.4
17	18	Ditch	SHORT	STEEP	0.4	0.17	5.0	2.12	0.1	0.2
19	18	Ditch	SHORT	STEEP	1.0	0.17	5.0	2.12	0.4	0.4
19	20	Ditch	SHORT	STEEP	0.6	0.17	5.0	2.12	0.2	0.2
20	24	Ditch	SHORT	STEEP	0.7	0.17	5.0	2.12	0.3	0.3
20	21	Ditch	SHORT	STEEP	1.3	0.17	5.0	2.12	0.5	0.5
21	22	CUL4	SHORT	STEEP	13.2	0.17	5.0	2.12	4.8	5.2
22	23	Ditch1	SHORT	STEEP	15.2	0.17	5.0	2.12	5.5	6.0
27	28	Ditch	SHORT	STEEP	0.3	0.17	5.0	2.12	0.1	0.1
23	24	CUL5	SHORT	STEEP	15.2	0.17	5.0	2.12	5.5	6.0
24	25	Ditch2	SHORT	STEEP	17.3	0.17	5.0	2.12	6.2	6.9
26	28	Ditch	SHORT	STEEP	0.5	0.17	5.0	2.12	0.2	0.2
26	31	Ditch	SHORT	STEEP	1.7	0.17	5.0	2.12	0.6	0.7
25	29	NA	SHORT	STEEP	19.1	0.17	5.0	2.12	6.9	7.6

Road Hydrology Using Rational Method (Q = CiA)										
From Node	To Node	Feature	Length	Grade	A	C	Tc	i	Q10	Qd
30	33	Ditch	SHORT	STEEP	1.1	0.17	5.0	2.12	0.4	0.4
31	35	Ditch	SHORT	STEEP	3.4	0.17	5.0	2.12	1.2	1.3
35	14	Ditch	SHORT	STEEP	4.2	0.17	5.0	2.12	1.5	1.7
36	37	Ditch	SHORT	STEEP	5.9	0.17	5.0	2.12	2.1	2.3
37	40	Ditch	SHORT	STEEP	5.9	0.17	5.0	2.12	2.1	2.3
38	40	Ditch	SHORT	STEEP	0.3	0.17	5.0	2.12	0.1	0.1
44	43.1	Ditch	SHORT	STEEP	0.4	0.17	5.0	2.12	0.1	0.2
42.1	41	Ditch	SHORT	STEEP	0.8	0.17	5.0	2.12	0.3	0.3
41	11	CUL3	SHORT	STEEP	2.8	0.17	5.0	2.12	1.0	1.1
43.2	42.2	Ditch	SHORT	STEEP	0.4	0.17	5.0	2.12	0.1	0.2
43.2	43.1	Ditch	SHORT	STEEP	0.4	0.17	5.0	2.12	0.1	0.2
44	45	Ditch	SHORT	STEEP	0.1	0.17	5.0	2.12	0.0	0.0
46	45	Ditch	SHORT	STEEP	0.1	0.17	5.0	2.12	0.0	0.0
42.1	42.2	Ditch	SHORT	STEEP	1.7	0.17	5.0	2.12	0.6	0.7
48	46	Ditch	SHORT	STEEP	0.8	0.17	5.0	2.12	0.3	0.3
44	43.1	Ditch	SHORT	STEEP	0.7	0.17	5.0	2.12	0.3	0.3
48	49	Ditch	SHORT	STEEP	0.6	0.17	5.0	2.12	0.2	0.2
50	49	Ditch	SHORT	STEEP	0.3	0.17	5.0	2.12	0.1	0.1
50	52	Ditch	SHORT	STEEP	0.2	0.17	5.0	2.12	0.1	0.1
53	52	Ditch	SHORT	STEEP	1.4	0.17	5.0	2.12	0.5	0.6
52	4	CUL1	SHORT	STEEP	1.6	0.17	5.0	2.12	0.6	0.6
53	54	Ditch	SHORT	STEEP	0.1	0.17	5.0	2.12	0.0	0.0
55	54	Ditch	SHORT	STEEP	0.3	0.17	5.0	2.12	0.1	0.1
42.2	9	CUL2	SHORT	STEEP	2.1	0.17	5.0	2.12	0.8	0.8
Min			SHORT	STEEP	0.1	0.2	5.0	2.1	0.0	0.0
Avg			SHORT	STEEP	2.5	0.2	5.0	2.1	0.9	1.0
Max			SHORT	STEEP	19.1	0.2	5.0	2.1	6.9	7.6
NODE COUNT			52	See Appendix for detail calculations.						

Civil Resources, LLC *CHANNEL SUMMARY* *Utopia View II Subdivision*
4/2/2025

FROM NODE	TO NODE	FEATURE	FLOW	FLAT GRADE GRADE<0.5%			MILD GRADE 0.5%<GRADE<5%			MEDIUM GRADE 5%<GRADE<10%			STEEP GRADE 10%<GRADE<50%		
				DEPTH	VELOCITY	LINER	DEPTH	VELOCITY	LINER	DEPTH	VELOCITY	LINER	DEPTH	VELOCITY	LINER
			CFS	FEET	FPS		FEET	FPS		FEET	FPS		FEET	FPS	
1	2	Ditch	0.3	0.4	0.9	A	0.2	2.1	A	0.2	2.8	A	0.1	5.0	B
3	4	Ditch	0.2	0.3	0.8	A	0.2	2.0	A	0.2	2.5	A	0.1	4.6	B
5.1	4	Ditch	0.1	0.2	0.7	A	0.1	1.6	A	0.1	2.0	A	0.1	3.7	A
5.1	5.2	Ditch	0.1	0.3	0.7	A	0.2	1.7	A	0.1	2.2	A	0.1	4.1	A
6	5.2	Ditch	0.1	0.2	0.7	A	0.1	1.6	A	0.1	2.0	A	0.1	3.7	A
6	7	Ditch	0.1	0.2	0.7	A	0.1	1.6	A	0.1	2.0	A	0.1	3.7	A
8	7	Ditch	0.1	0.2	0.7	A	0.1	1.6	A	0.1	2.0	A	0.1	3.7	A
8	9	Ditch	0.2	0.3	0.9	A	0.2	2.0	A	0.2	2.7	A	0.1	4.9	B
10	9	Ditch	0.1	0.3	0.7	A	0.2	1.7	A	0.1	2.2	A	0.1	4.1	A
10	11	Ditch	0.2	0.3	0.8	A	0.2	1.9	A	0.2	2.4	A	0.1	4.4	A
12	11	Ditch	0.3	0.4	0.9	A	0.2	2.1	A	0.2	2.8	A	0.1	5.0	B
13	14	Ditch	0.3	0.4	0.9	A	0.2	2.2	A	0.2	2.9	A	0.2	5.2	B
15	14	Ditch	0.2	0.3	0.8	A	0.2	1.9	A	0.2	2.4	A	0.1	4.4	A
15	16	Ditch	0.2	0.3	0.8	A	0.2	1.9	A	0.2	2.4	A	0.1	4.4	A
17	16	Ditch	0.4	0.4	1.0	A	0.3	2.3	A	0.2	2.9	A	0.2	5.4	B
17	18	Ditch	0.2	0.3	0.8	A	0.2	1.9	A	0.2	2.4	A	0.1	4.4	A
19	18	Ditch	0.4	0.4	1.0	A	0.3	2.3	A	0.2	3.0	A	0.2	5.5	B
19	20	Ditch	0.2	0.3	0.9	A	0.2	2.0	A	0.2	2.7	A	0.1	4.9	B
20	24	Ditch	0.3	0.4	0.9	A	0.2	2.1	A	0.2	2.8	A	0.1	5.0	B
20	21	Ditch	0.5	0.4	1.0	A	0.3	2.5	A	0.3	3.2	A	0.2	5.9	B
21	22	CUL4	5.2	1.1	1.9	A	0.7	4.4	B	0.6	5.8	B	0.4	10.5	E
22	23	Ditch1	6.0	1.1	1.9	A	0.7	4.6	B	0.6	6.0	B	0.5	10.9	F
27	28	Ditch	0.1	0.3	0.8	A	0.2	1.8	A	0.2	2.3	A	0.1	4.2	A
23	24	CUL5	6.0	1.1	1.9	A	0.7	4.6	B	0.6	6.0	B	0.5	10.9	F
24	25	Ditch2	6.9	1.3	2.1	A	0.8	4.9	B	0.7	6.4	C	0.5	11.7	F
26	28	Ditch	0.2	0.3	0.8	A	0.2	2.0	A	0.2	2.5	A	0.1	4.6	B
26	31	Ditch	0.7	0.5	1.1	A	0.3	2.7	A	0.3	3.4	A	0.2	6.3	C
25	29	NA	7.6	1.3	2.1	A	0.9	5.1	B	0.8	6.6	C	0.6	12.0	F
30	33	Ditch	0.4	0.4	1.0	A	0.3	2.4	A	0.2	3.1	A	0.2	5.6	B
31	35	Ditch	1.3	0.6	1.3	A	0.4	3.2	A	0.4	4.1	A	0.3	7.5	C
35	14	Ditch	1.7	0.7	1.4	A	0.4	3.3	A	0.4	4.3	A	0.3	7.9	D
36	37	Ditch	2.3	0.8	1.5	A	0.5	3.6	A	0.4	4.7	B	0.3	8.6	D
37	40	Ditch	2.3	0.8	1.5	A	0.5	3.6	A	0.4	4.7	B	0.3	8.6	D
38	40	Ditch	0.1	0.3	0.7	A	0.2	1.7	A	0.1	2.2	A	0.1	4.1	A
44	43.1	Ditch	0.2	0.3	0.8	A	0.2	1.9	A	0.2	2.4	A	0.1	4.4	A
42.1	41	Ditch	0.3	0.4	0.9	A	0.2	2.2	A	0.2	2.9	A	0.2	5.2	B
41	11	CUL3	1.1	0.6	1.3	A	0.4	3.0	A	0.3	3.9	A	0.2	7.1	C
43.2	42.2	Ditch	0.2	0.3	0.8	A	0.2	1.9	A	0.2	2.4	A	0.1	4.4	A
43.2	43.1	Ditch	0.2	0.3	0.8	A	0.2	1.9	A	0.2	2.4	A	0.1	4.4	A
44	45	Ditch	0.0	0.2	0.6	A	0.1	1.3	A	0.1	1.7	A	0.1	3.1	A
46	45	Ditch	0.0	0.2	0.6	A	0.1	1.3	A	0.1	1.7	A	0.1	3.1	A
42.1	42.2	Ditch	0.7	0.5	1.1	A	0.3	2.7	A	0.3	3.4	A	0.2	6.3	C
48	46	Ditch	0.3	0.4	0.9	A	0.2	2.2	A	0.2	2.9	A	0.2	5.2	B
44	43.1	Ditch	0.3	0.4	0.9	A	0.2	2.1	A	0.2	2.8	A	0.1	5.0	B
48	49	Ditch	0.2	0.3	0.9	A	0.2	2.0	A	0.2	2.7	A	0.1	4.9	B
50	49	Ditch	0.1	0.3	0.7	A	0.2	1.7	A	0.1	2.2	A	0.1	4.1	A
50	52	Ditch	0.1	0.2	0.7	A	0.1	1.6	A	0.1	2.0	A	0.1	3.7	A
53	52	Ditch	0.6	0.5	1.1	A	0.3	2.5	A	0.3	3.3	A	0.2	6.0	B
52	4	CUL1	0.6	0.5	1.1	A	0.3	2.6	A	0.3	3.4	A	0.2	6.2	B
53	54	Ditch	0.0	0.2	0.6	A	0.1	1.3	A	0.1	1.7	A	0.1	3.1	A
55	54	Ditch	0.1	0.3	0.7	A	0.2	1.7	A	0.1	2.2	A	0.1	4.1	A
42.2	9	CUL2	0.8	0.5	1.2	A	0.3	2.8	A	0.3	3.6	A	0.2	6.6	C
MAX			7.6	1.3	2.1	A	0.9	5.1	B	0.8	6.6	C	0.6	12.0	F
MIN			0.0	0.2	0.6	A	0.1	1.3	A	0.1	1.7	A	0.1	3.1	A
AVG			1.0	0.4	1.0	A	0.3	2.4	A	0.2	3.1	A	0.2	5.6	B
SAMPLE. See appendix for detailed calculations.															
Number of channels = 52															

Civil Resources, LLC *FLAT CHANNEL TABLE* *Utopia View II Subdivision*
4/2/2025

FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
1	2	Ditch	10	0.3	0.5	0.4	0	3	2	2.5	2.1	0.035	0.9	0.1	A
3	4	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
5.1	4	Ditch	10	0.1	0.5	0.2	0	3	2	2.5	2.3	0.035	0.7	0.1	A
5.1	5.2	Ditch	10	0.1	0.5	0.3	0	3	2	2.5	2.2	0.035	0.7	0.1	A
6	5.2	Ditch	10	0.1	0.5	0.2	0	3	2	2.5	2.3	0.035	0.7	0.1	A
6	7	Ditch	10	0.1	0.5	0.2	0	3	2	2.5	2.3	0.035	0.7	0.1	A
8	7	Ditch	10	0.1	0.5	0.2	0	3	2	2.5	2.3	0.035	0.7	0.1	A
8	9	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.9	0.1	A
10	9	Ditch	10	0.1	0.5	0.3	0	3	2	2.5	2.2	0.035	0.7	0.1	A
10	11	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
12	11	Ditch	10	0.3	0.5	0.4	0	3	2	2.5	2.1	0.035	0.9	0.1	A
13	14	Ditch	10	0.3	0.5	0.4	0	3	2	2.5	2.1	0.035	0.9	0.1	A
15	14	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
15	16	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
17	16	Ditch	10	0.4	0.5	0.4	0	3	2	2.5	2.1	0.035	1.0	0.1	A
17	18	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
19	18	Ditch	10	0.4	0.5	0.4	0	3	2	2.5	2.1	0.035	1.0	0.1	A
19	20	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.9	0.1	A
20	24	Ditch	10	0.3	0.5	0.4	0	3	2	2.5	2.1	0.035	0.9	0.1	A
20	21	Ditch	10	0.5	0.5	0.4	0	3	2	2.5	2.1	0.035	1.0	0.2	A
21	22	CUL4	10	5.2	0.5	1.1	0	3	2	2.5	1.4	0.035	1.9	0.5	A
22	23	Ditch1	10	6.0	0.5	1.1	0	3	2	2.5	1.4	0.035	1.9	0.6	A
27	28	Ditch	10	0.1	0.5	0.3	0	2	2	2.5	2.2	0.035	0.8	0.1	A
23	24	CUL5	10	6.0	0.5	1.1	0	3	2	2.5	1.4	0.035	1.9	0.6	A
24	25	Ditch2	10	6.9	0.5	1.3	0	2	2	2.5	1.2	0.035	2.1	0.7	A
26	28	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
26	31	Ditch	10	0.7	0.5	0.5	0	3	2	2.5	2.0	0.035	1.1	0.2	A
25	29	NA	10	7.6	0.5	1.3	0	2	2	2.5	1.2	0.035	2.1	0.7	A
30	33	Ditch	10	0.4	0.5	0.4	0	3	2	2.5	2.1	0.035	1.0	0.2	A
31	35	Ditch	10	1.3	0.5	0.6	0	3	2	2.5	1.9	0.035	1.3	0.3	A
35	14	Ditch	10	1.7	0.5	0.7	0	3	2	2.5	1.8	0.035	1.4	0.3	A
36	37	Ditch	10	2.3	0.5	0.8	0	3	2	2.5	1.7	0.035	1.5	0.4	A
37	40	Ditch	10	2.3	0.5	0.8	0	3	2	2.5	1.7	0.035	1.5	0.4	A
38	40	Ditch	10	0.1	0.5	0.3	0	3	2	2.5	2.2	0.035	0.7	0.1	A
44	43.1	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
42.1	41	Ditch	10	0.3	0.5	0.4	0	3	2	2.5	2.1	0.035	0.9	0.1	A
41	11	CUL3	10	1.1	0.5	0.6	0	3	2	2.5	1.9	0.035	1.3	0.3	A
43.2	42.2	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
43.2	43.1	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.8	0.1	A
44	45	Ditch	10	0.0	0.5	0.2	0	3	2	2.5	2.3	0.035	0.6	0.0	A
46	45	Ditch	10	0.0	0.5	0.2	0	3	2	2.5	2.3	0.035	0.6	0.0	A
42.1	42.2	Ditch	10	0.7	0.5	0.5	0	3	2	2.5	2.0	0.035	1.1	0.2	A
48	46	Ditch	10	0.3	0.5	0.4	0	3	2	2.5	2.1	0.035	0.9	0.1	A
44	43.1	Ditch	10	0.3	0.5	0.4	0	3	2	2.5	2.1	0.035	0.9	0.1	A
48	49	Ditch	10	0.2	0.5	0.3	0	3	2	2.5	2.2	0.035	0.9	0.1	A

FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
50	49	Ditch	10	0.1	0.5	0.3	0	3	2	2.5	2.2	0.035	0.7	0.1	A
50	52	Ditch	10	0.1	0.5	0.2	0	3	2	2.5	2.3	0.035	0.7	0.1	A
53	52	Ditch	10	0.6	0.5	0.5	0	3	2	2.5	2.0	0.035	1.1	0.2	A
52	4	CUL1	10	0.6	0.5	0.5	0	3	2	2.5	2.0	0.035	1.1	0.2	A
53	54	Ditch	10	0.0	0.5	0.2	0	3	2	2.5	2.3	0.035	0.6	0.0	A
55	54	Ditch	10	0.1	0.5	0.3	0	3	2	2.5	2.2	0.035	0.7	0.1	A
42.2	9	CUL2	10	0.8	0.5	0.5	0	3	2	2.5	2.0	0.035	1.2	0.2	A
MAX				7.6	0.5	1.3	0.0	3	2	2.5	2.3	0.035	2.1	0.7	A
MIN				0.0	0.5	0.2	0.0	2	2	2.5	1.2	0.035	0.6	0.0	A
AVG	52	NODE COUNT		1.0	0.5	0.4	0.0	3	2	2.5	2.1	0.035	1.0	0.2	A
Note: See Appendix for detailed calculations for Type 'A' lining.															
Note: 100-Year storm is peak flow for 24-Hr duration. 10-Year peak flow is short duration.															

FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
1	2	Ditch	10	0.3	5.0	0.2	0	3	2	2.5	2.3	0.035	2.1	0.7	A
3	4	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	2.0	0.6	A
5.1	4	Ditch	10	0.1	5.0	0.1	0	3	2	2.5	2.4	0.035	1.6	0.4	A
5.1	5.2	Ditch	10	0.1	5.0	0.2	0	3	2	2.5	2.3	0.035	1.7	0.5	A
6	5.2	Ditch	10	0.1	5.0	0.1	0	3	2	2.5	2.4	0.035	1.6	0.4	A
6	7	Ditch	10	0.1	5.0	0.1	0	3	2	2.5	2.4	0.035	1.6	0.4	A
8	7	Ditch	10	0.1	5.0	0.1	0	3	2	2.5	2.4	0.035	1.6	0.4	A
8	9	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	2.0	0.7	A
10	9	Ditch	10	0.1	5.0	0.2	0	3	2	2.5	2.3	0.035	1.7	0.5	A
10	11	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	1.9	0.5	A
12	11	Ditch	10	0.3	5.0	0.2	0	3	2	2.5	2.3	0.035	2.1	0.7	A
13	14	Ditch	10	0.3	5.0	0.2	0	3	2	2.5	2.3	0.035	2.2	0.8	A
15	14	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	1.9	0.5	A
15	16	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	1.9	0.5	A
17	16	Ditch	10	0.4	5.0	0.3	0	3	2	2.5	2.2	0.035	2.3	0.8	A
17	18	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	1.9	0.5	A
19	18	Ditch	10	0.4	5.0	0.3	0	3	2	2.5	2.2	0.035	2.3	0.8	A
19	20	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	2.0	0.7	A
20	24	Ditch	10	0.3	5.0	0.2	0	3	2	2.5	2.3	0.035	2.1	0.7	A
20	21	Ditch	10	0.5	5.0	0.3	0	3	2	2.5	2.2	0.035	2.5	1.0	A
21	22	CUL4	10	5.2	5.0	0.7	0	3	2	2.5	1.8	0.035	4.4	3.1	B
22	23	Ditch1	10	6.0	5.0	0.7	0	3	2	2.5	1.8	0.035	4.6	3.3	B
27	28	Ditch	10	0.1	5.0	0.2	0	2	2	2.5	2.3	0.035	1.8	0.5	A
23	24	CUL5	10	6.0	5.0	0.7	0	3	2	2.5	1.8	0.035	4.6	3.3	B
24	25	Ditch2	10	6.9	5.0	0.8	0	2	2	2.5	1.7	0.035	4.9	3.8	B
26	28	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	2.0	0.6	A
26	31	Ditch	10	0.7	5.0	0.3	0	3	2	2.5	2.2	0.035	2.7	1.1	A
25	29	NA	10	7.6	5.0	0.9	0	2	2	2.5	1.6	0.035	5.1	4.0	B
30	33	Ditch	10	0.4	5.0	0.3	0	3	2	2.5	2.2	0.035	2.4	0.9	A
31	35	Ditch	10	1.3	5.0	0.4	0	3	2	2.5	2.1	0.035	3.2	1.6	A
35	14	Ditch	10	1.7	5.0	0.4	0	3	2	2.5	2.1	0.035	3.3	1.7	A
36	37	Ditch	10	2.3	5.0	0.5	0	3	2	2.5	2.0	0.035	3.6	2.0	A
37	40	Ditch	10	2.3	5.0	0.5	0	3	2	2.5	2.0	0.035	3.6	2.0	A
38	40	Ditch	10	0.1	5.0	0.2	0	3	2	2.5	2.3	0.035	1.7	0.5	A
44	43.1	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	1.9	0.5	A
42.1	41	Ditch	10	0.3	5.0	0.2	0	3	2	2.5	2.3	0.035	2.2	0.8	A
41	11	CUL3	10	1.1	5.0	0.4	0	3	2	2.5	2.1	0.035	3.0	1.4	A
43.2	42.2	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	1.9	0.5	A
43.2	43.1	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	1.9	0.5	A
44	45	Ditch	10	0.0	5.0	0.1	0	3	2	2.5	2.4	0.035	1.3	0.3	A
46	45	Ditch	10	0.0	5.0	0.1	0	3	2	2.5	2.4	0.035	1.3	0.3	A
42.1	42.2	Ditch	10	0.7	5.0	0.3	0	3	2	2.5	2.2	0.035	2.7	1.1	A
48	46	Ditch	10	0.3	5.0	0.2	0	3	2	2.5	2.3	0.035	2.2	0.8	A
44	43.1	Ditch	10	0.3	5.0	0.2	0	3	2	2.5	2.3	0.035	2.1	0.7	A
48	49	Ditch	10	0.2	5.0	0.2	0	3	2	2.5	2.3	0.035	2.0	0.7	A

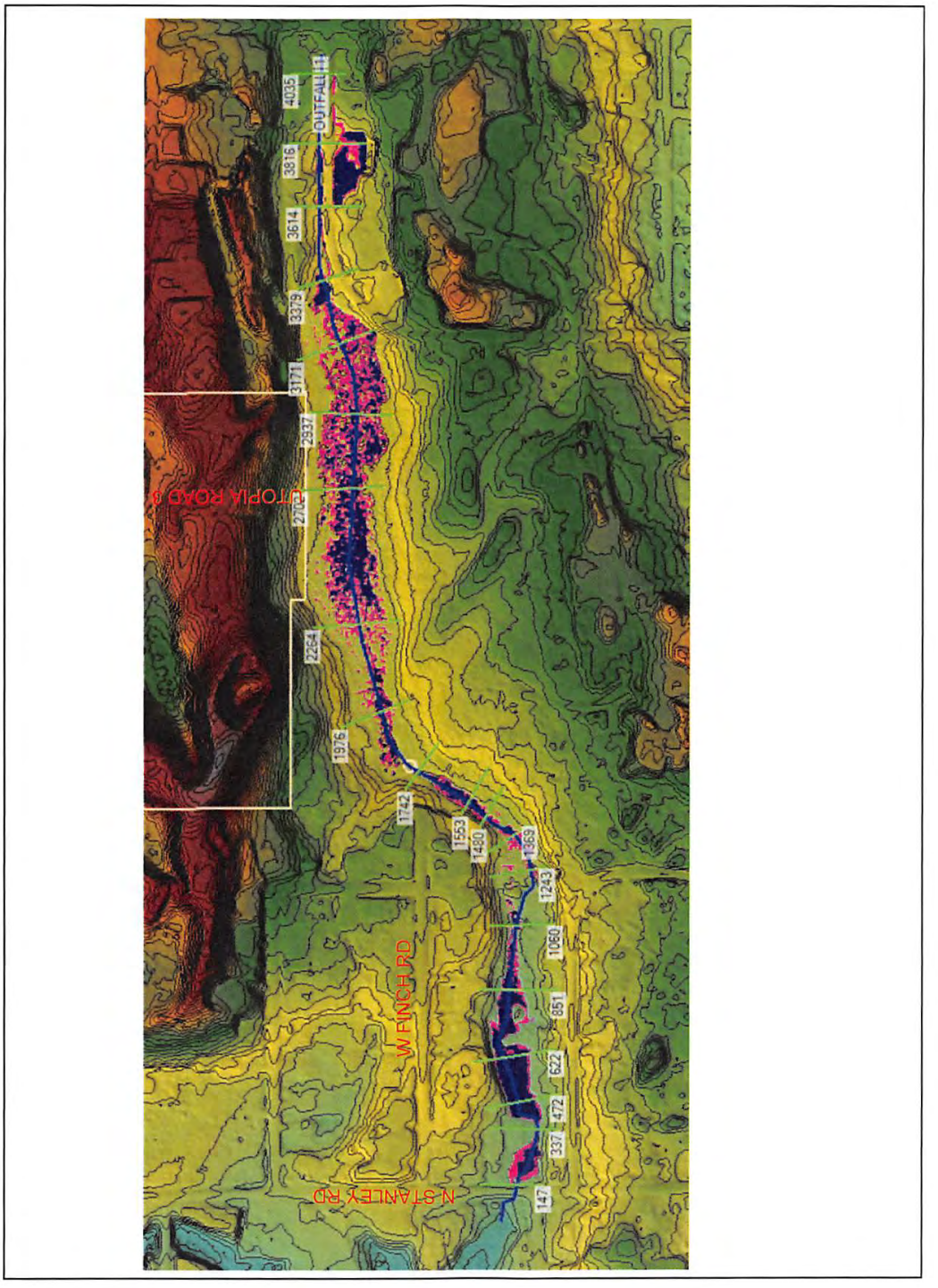
FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
50	49	Ditch	10	0.1	5.0	0.2	0	3	2	2.5	2.3	0.035	1.7	0.5	A
50	52	Ditch	10	0.1	5.0	0.1	0	3	2	2.5	2.4	0.035	1.6	0.4	A
53	52	Ditch	10	0.6	5.0	0.3	0	3	2	2.5	2.2	0.035	2.5	1.0	A
52	4	CUL1	10	0.6	5.0	0.3	0	3	2	2.5	2.2	0.035	2.6	1.1	A
53	54	Ditch	10	0.0	5.0	0.1	0	3	2	2.5	2.4	0.035	1.3	0.3	A
55	54	Ditch	10	0.1	5.0	0.2	0	3	2	2.5	2.3	0.035	1.7	0.5	A
42.2	9	CUL2	10	0.8	5.0	0.3	0	3	2	2.5	2.2	0.035	2.8	1.2	A
MAX				7.6	5.0	0.9	0.0	3	2	2.5	2.4	0.035	5.1	4.0	B
MIN				0.0	5.0	0.1	0.0	2	2	2.5	1.6	0.035	1.3	0.3	A
AVG	52	NODE COUNT		1.0	5.0	0.3	0.0	3	2	2.5	2.2	0.035	2.4	1.0	A
Note: See Appendix for detailed calculations for Type 'A' lining.															
Note: 100-Year storm is peak flow for 24-Hr duration. 10-Year peak flow is short duration.															

FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
1	2	Ditch	10	0.3	10.0	0.2	0	3	2	2.5	2.3	0.035	2.8	1.2	A
3	4	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.5	1.0	A
5.1	4	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.0	0.6	A
5.1	5.2	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.2	0.8	A
6	5.2	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.0	0.6	A
6	7	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.0	0.6	A
8	7	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.0	0.6	A
8	9	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.7	1.1	A
10	9	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.2	0.8	A
10	11	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.4	0.9	A
12	11	Ditch	10	0.3	10.0	0.2	0	3	2	2.5	2.3	0.035	2.8	1.2	A
13	14	Ditch	10	0.3	10.0	0.2	0	3	2	2.5	2.3	0.035	2.9	1.3	A
15	14	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.4	0.9	A
15	16	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.4	0.9	A
17	16	Ditch	10	0.4	10.0	0.2	0	3	2	2.5	2.3	0.035	2.9	1.3	A
17	18	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.4	0.9	A
19	18	Ditch	10	0.4	10.0	0.2	0	3	2	2.5	2.3	0.035	3.0	1.4	A
19	20	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.7	1.1	A
20	24	Ditch	10	0.3	10.0	0.2	0	3	2	2.5	2.3	0.035	2.8	1.2	A
20	21	Ditch	10	0.5	10.0	0.3	0	3	2	2.5	2.2	0.035	3.2	1.6	A
21	22	CUL4	10	5.2	10.0	0.6	0	3	2	2.5	1.9	0.035	5.8	5.1	B
22	23	Ditch1	10	6.0	10.0	0.6	0	3	2	2.5	1.9	0.035	6.0	5.5	B
27	28	Ditch	10	0.1	10.0	0.2	0	2	2	2.5	2.3	0.035	2.3	0.8	A
23	24	CUL5	10	6.0	10.0	0.6	0	3	2	2.5	1.9	0.035	6.0	5.5	B
24	25	Ditch2	10	6.9	10.0	0.7	0	2	2	2.5	1.8	0.035	6.4	6.4	C
26	28	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.5	1.0	A
26	31	Ditch	10	0.7	10.0	0.3	0	3	2	2.5	2.2	0.035	3.4	1.8	A
25	29	NA	10	7.6	10.0	0.8	0	2	2	2.5	1.7	0.035	6.6	6.7	C
30	33	Ditch	10	0.4	10.0	0.2	0	3	2	2.5	2.3	0.035	3.1	1.5	A
31	35	Ditch	10	1.3	10.0	0.4	0	3	2	2.5	2.1	0.035	4.1	2.6	A
35	14	Ditch	10	1.7	10.0	0.4	0	3	2	2.5	2.1	0.035	4.3	2.9	A
36	37	Ditch	10	2.3	10.0	0.4	0	3	2	2.5	2.1	0.035	4.7	3.4	B
37	40	Ditch	10	2.3	10.0	0.4	0	3	2	2.5	2.1	0.035	4.7	3.4	B
38	40	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.2	0.8	A
44	43.1	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.4	0.9	A
42.1	41	Ditch	10	0.3	10.0	0.2	0	3	2	2.5	2.3	0.035	2.9	1.3	A
41	11	CUL3	10	1.1	10.0	0.3	0	3	2	2.5	2.2	0.035	3.9	2.4	A
43.2	42.2	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.4	0.9	A
43.2	43.1	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.4	0.9	A
44	45	Ditch	10	0.0	10.0	0.1	0	3	2	2.5	2.4	0.035	1.7	0.4	A
46	45	Ditch	10	0.0	10.0	0.1	0	3	2	2.5	2.4	0.035	1.7	0.4	A
42.1	42.2	Ditch	10	0.7	10.0	0.3	0	3	2	2.5	2.2	0.035	3.4	1.8	A
48	46	Ditch	10	0.3	10.0	0.2	0	3	2	2.5	2.3	0.035	2.9	1.3	A
44	43.1	Ditch	10	0.3	10.0	0.2	0	3	2	2.5	2.3	0.035	2.8	1.2	A
48	49	Ditch	10	0.2	10.0	0.2	0	3	2	2.5	2.3	0.035	2.7	1.1	A

FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
50	49	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.2	0.8	A
50	52	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.0	0.6	A
53	52	Ditch	10	0.6	10.0	0.3	0	3	2	2.5	2.2	0.035	3.3	1.7	A
52	4	CUL1	10	0.6	10.0	0.3	0	3	2	2.5	2.2	0.035	3.4	1.8	A
53	54	Ditch	10	0.0	10.0	0.1	0	3	2	2.5	2.4	0.035	1.7	0.4	A
55	54	Ditch	10	0.1	10.0	0.1	0	3	2	2.5	2.4	0.035	2.2	0.8	A
42.2	9	CUL2	10	0.8	10.0	0.3	0	3	2	2.5	2.2	0.035	3.6	2.0	A
MAX				7.6	10.0	0.8	0.0	3	2	2.5	2.4	0.035	6.6	6.7	C
MIN				0.0	10.0	0.1	0.0	2	2	2.5	1.7	0.035	1.7	0.4	A
AVG	52	NODE COUNT		1.0	10.0	0.2	0.0	3	2	2.5	2.3	0.035	3.1	1.7	A
Note: See Appendix for detailed calculations for Type 'A' lining.															
Note: 100-Year storm is peak flow for 24-Hr duration. 10-Year peak flow is short duration.															

FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
1	2	Ditch	10	0.3	50.0	0.1	0	3	2	2.5	2.4	0.035	5.0	4.0	B
3	4	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.6	3.3	B
5.1	4	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	3.7	2.1	A
5.1	5.2	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	4.1	2.6	A
6	5.2	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	3.7	2.1	A
6	7	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	3.7	2.1	A
8	7	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	3.7	2.1	A
8	9	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.9	3.7	B
10	9	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	4.1	2.6	A
10	11	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.4	3.0	A
12	11	Ditch	10	0.3	50.0	0.1	0	3	2	2.5	2.4	0.035	5.0	4.0	B
13	14	Ditch	10	0.3	50.0	0.2	0	3	2	2.5	2.3	0.035	5.2	4.2	B
15	14	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.4	3.0	A
15	16	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.4	3.0	A
17	16	Ditch	10	0.4	50.0	0.2	0	3	2	2.5	2.3	0.035	5.4	4.5	B
17	18	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.4	3.0	A
19	18	Ditch	10	0.4	50.0	0.2	0	3	2	2.5	2.3	0.035	5.5	4.7	B
19	20	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.9	3.7	B
20	24	Ditch	10	0.3	50.0	0.1	0	3	2	2.5	2.4	0.035	5.0	4.0	B
20	21	Ditch	10	0.5	50.0	0.2	0	3	2	2.5	2.3	0.035	5.9	5.4	B
21	22	CUL4	10	5.2	50.0	0.4	0	3	2	2.5	2.1	0.035	10.5	17.2	E
22	23	Ditch1	10	6.0	50.0	0.5	0	3	2	2.5	2.0	0.035	10.9	18.4	F
27	28	Ditch	10	0.1	50.0	0.1	0	2	2	2.5	2.4	0.035	4.2	2.8	A
23	24	CUL5	10	6.0	50.0	0.5	0	3	2	2.5	2.0	0.035	10.9	18.4	F
24	25	Ditch2	10	6.9	50.0	0.5	0	2	2	2.5	2.0	0.035	11.7	21.2	F
26	28	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.6	3.3	B
26	31	Ditch	10	0.7	50.0	0.2	0	3	2	2.5	2.3	0.035	6.3	6.2	C
25	29	NA	10	7.6	50.0	0.6	0	2	2	2.5	1.9	0.035	12.0	22.3	F
30	33	Ditch	10	0.4	50.0	0.2	0	3	2	2.5	2.3	0.035	5.6	5.0	B
31	35	Ditch	10	1.3	50.0	0.3	0	3	2	2.5	2.2	0.035	7.5	8.7	C
35	14	Ditch	10	1.7	50.0	0.3	0	3	2	2.5	2.2	0.035	7.9	9.7	D
36	37	Ditch	10	2.3	50.0	0.3	0	3	2	2.5	2.2	0.035	8.6	11.5	D
37	40	Ditch	10	2.3	50.0	0.3	0	3	2	2.5	2.2	0.035	8.6	11.5	D
38	40	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	4.1	2.6	A
44	43.1	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.4	3.0	A
42.1	41	Ditch	10	0.3	50.0	0.2	0	3	2	2.5	2.3	0.035	5.2	4.2	B
41	11	CUL3	10	1.1	50.0	0.2	0	3	2	2.5	2.3	0.035	7.1	7.9	C
43.2	42.2	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.4	3.0	A
43.2	43.1	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.4	3.0	A
44	45	Ditch	10	0.0	50.0	0.1	0	3	2	2.5	2.4	0.035	3.1	1.5	A
46	45	Ditch	10	0.0	50.0	0.1	0	3	2	2.5	2.4	0.035	3.1	1.5	A
42.1	42.2	Ditch	10	0.7	50.0	0.2	0	3	2	2.5	2.3	0.035	6.3	6.2	C
48	46	Ditch	10	0.3	50.0	0.2	0	3	2	2.5	2.3	0.035	5.2	4.2	B
44	43.1	Ditch	10	0.3	50.0	0.1	0	3	2	2.5	2.4	0.035	5.0	4.0	B
48	49	Ditch	10	0.2	50.0	0.1	0	3	2	2.5	2.4	0.035	4.9	3.7	B
50	49	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	4.1	2.6	A

FROM NODE	TO NODE	FEATURE	Storm	Qd (CFS)	S (%)	D (FT)	B (FT)	z1	z2	Y (FT)	FB (FT)	N	V (FPS)	D50	Lining
50	52	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	3.7	2.1	A
53	52	Ditch	10	0.6	50.0	0.2	0	3	2	2.5	2.3	0.035	6.0	5.6	B
52	4	CUL1	10	0.6	50.0	0.2	0	3	2	2.5	2.3	0.035	6.2	6.0	B
53	54	Ditch	10	0.0	50.0	0.1	0	3	2	2.5	2.4	0.035	3.1	1.5	A
55	54	Ditch	10	0.1	50.0	0.1	0	3	2	2.5	2.4	0.035	4.1	2.6	A
42.2	9	CUL2	10	0.8	50.0	0.2	0	3	2	2.5	2.3	0.035	6.6	6.9	C
MAX				7.6	50.0	0.6	0.0	3	2	2.5	2.4	0.035	12.0	22.3	F
MIN				0.0	50.0	0.1	0.0	2	2	2.5	1.9	0.035	3.1	1.5	A
AVG	52	NODE COUNT		1.0	50.0	0.2	0.0	3	2	2.5	2.3	0.035	5.6	5.7	B
Note: See Appendix for detailed calculations for Type 'A' lining.															
Note: 100-Year storm is peak flow for 24-Hr duration. 10-Year peak flow is short duration.															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OUTFALL #1
3816
3614
3379
3171
2937
2704
2264
1976
1742
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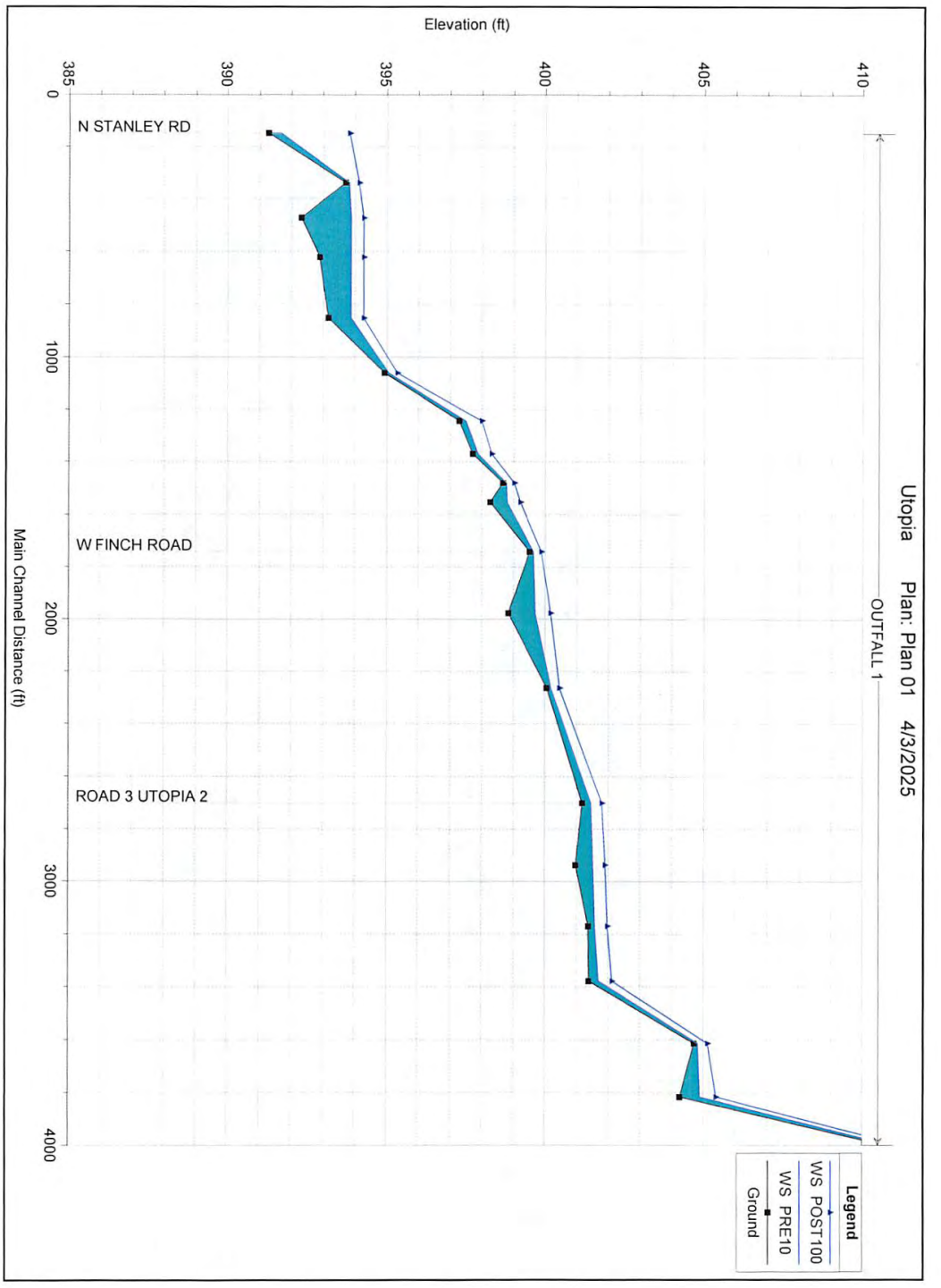
1369
1243
1060
851
622
472
337
147
UTOPIA ROAD
W FINCH RD
N STANLEY RD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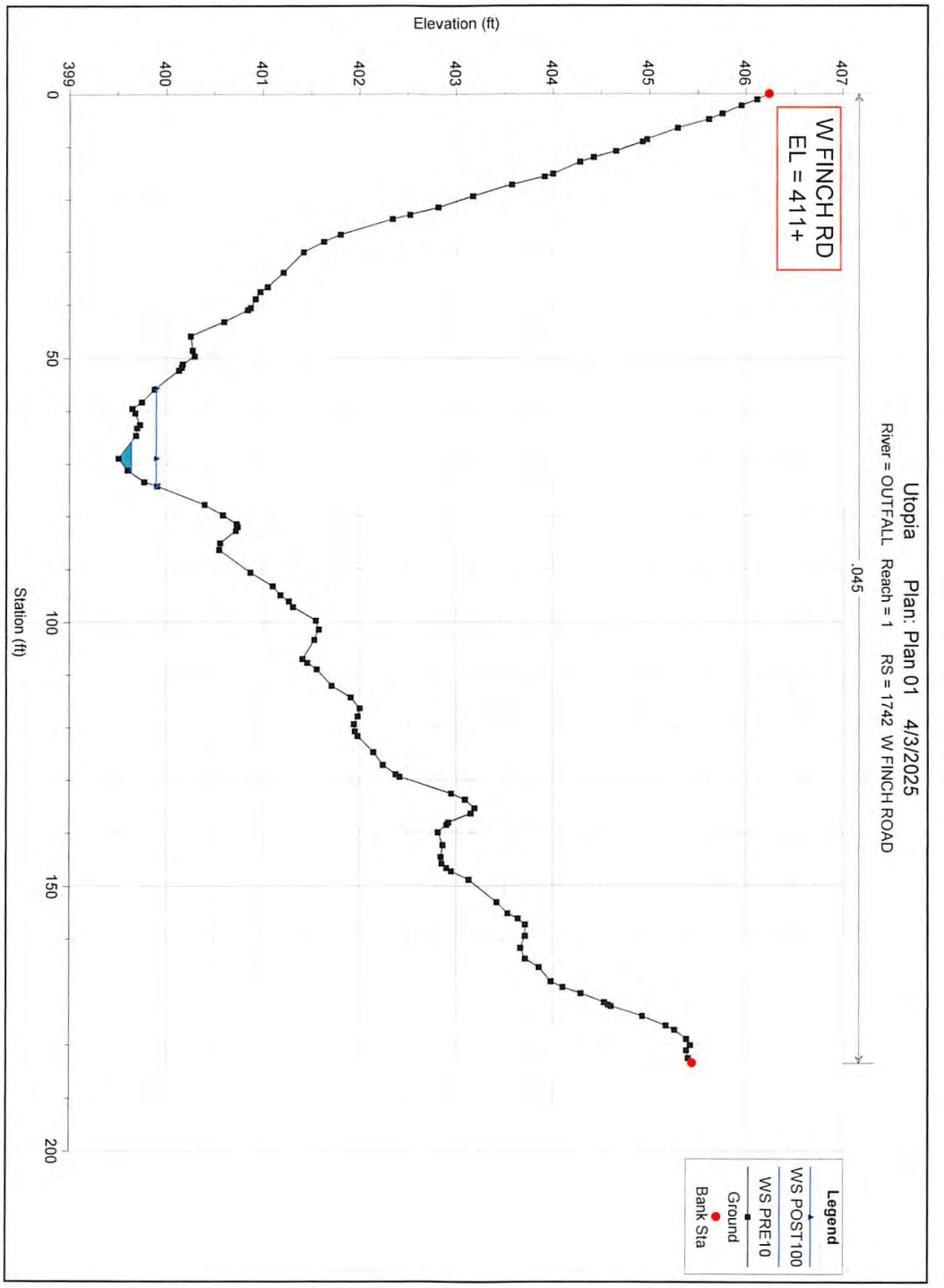
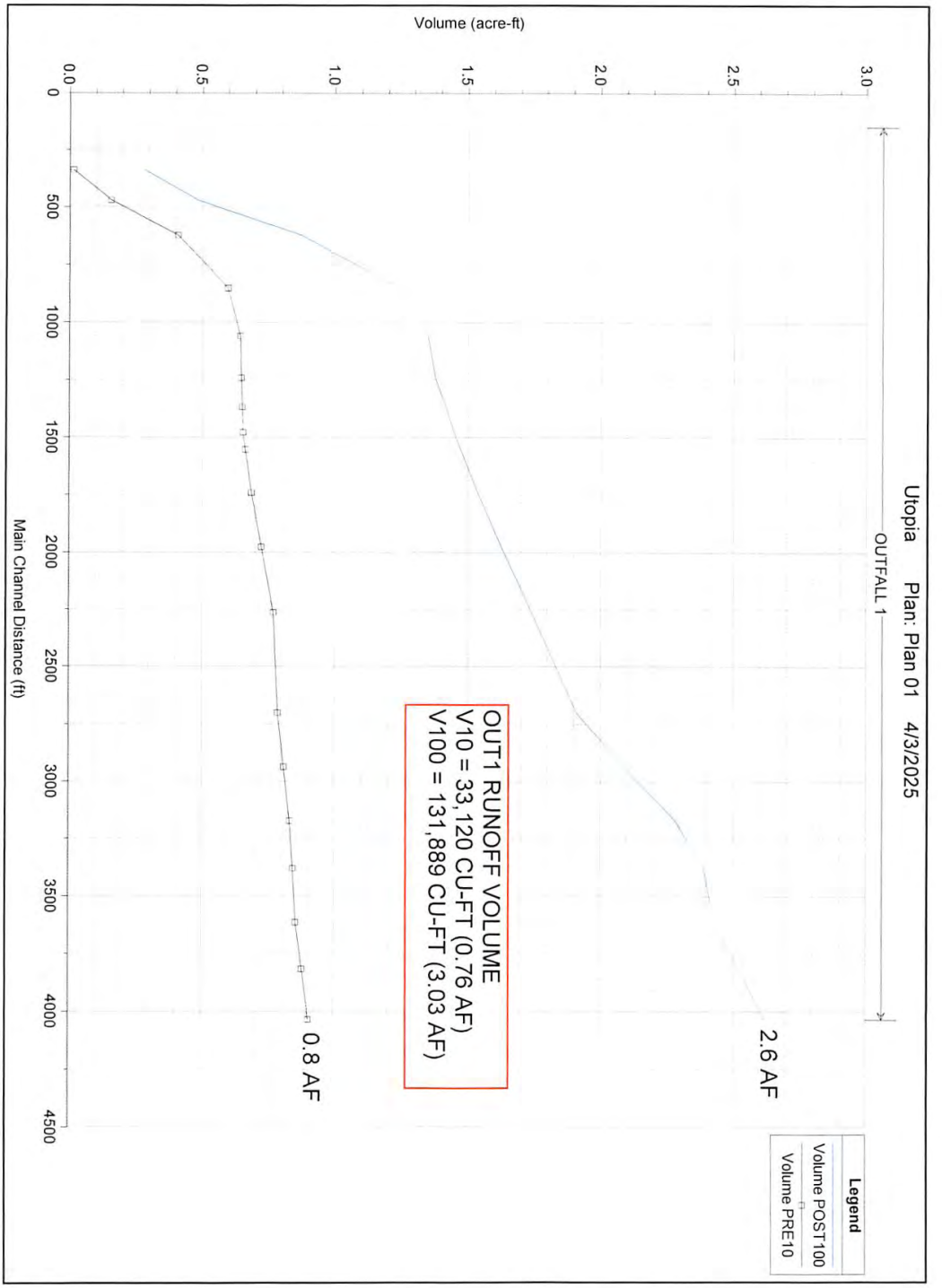
390
395
400
405
410
0
1000
2000
3000
4000
Main Channel Distance (ft)
N STANLEY RD
W FINCH ROAD
ROAD 3 UTOPIA 2
OUTFALL 1
Utopia Plan: Plan 01 4/3/2025
Legend
WS POST100
WS PRE10
Ground


Utopia Plan: Plan 01 4/3/2025
River = OUTFALL Reach = 1 RS = 1742 W FINCH ROAD
W FINCH RD
EL = 411+
045
Elevation (ft)
Station (ft)
Legend
WS POST100
WS PRE10
Ground
Bank Sta


Utopia Plan: Plan 01 4/3/2025
OUTFALL 1
Volume (acre-ft)
Main Channel Distance (ft)
Legend
Volume POST100
Volume PRE10
2.6 AF
0.8 AF
OUT1 RUNOFF VOLUME
V10 = 33,120 CU-FT (0.76 AF)
V100 = 131,889 CU-FT (3.03 AF)

Culvert Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Thursday, Apr 3 2025

OUTFALL CULVERT STA 120<Name>

Invert Elev Dn (ft)	= 391.00
Pipe Length (ft)	= 60.00
Slope (%)	= 0.50
Invert Elev Up (ft)	= 391.30
Rise (in)	= 24.0
Shape	= Circular
Span (in)	= 24.0
No. Barrels	= 1
n-Value	= 0.024
Culvert Type	= Circular Corrugate Metal Pipe
Culvert Entrance	= Projecting
Coeff. K,M,c,Y,k	= 0.034, 1.5, 0.0553, 0.54, 0.9

Embankment

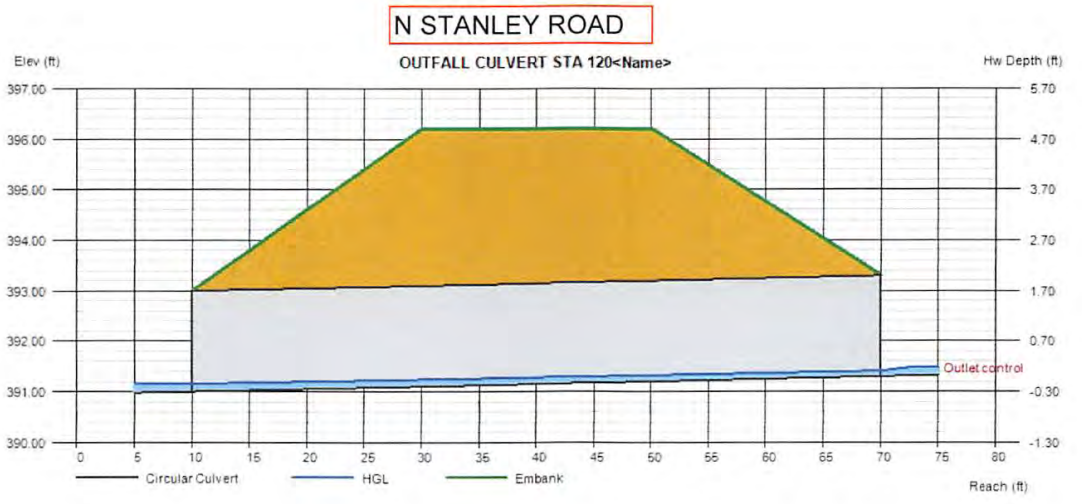
Top Elevation (ft)	= 396.20
Top Width (ft)	= 20.00
Crest Width (ft)	= 20.00

Calculations

Qmin (cfs)	= 0.10
Qmax (cfs)	= 12.00
Tailwater Elev (ft)	= Normal

Highlighted

Qtotal (cfs)	= 0.10
Qpipe (cfs)	= 0.10
Qovertop (cfs)	= 0.00
Veloc Dn (ft/s)	= 0.91
Veloc Up (ft/s)	= 1.53
HGL Dn (ft)	= 391.15
HGL Up (ft)	= 391.41
Hw Elev (ft)	= 391.48
Hw/D (ft)	= 0.09
Flow Regime	= Outlet Control



Q			Veloc		Depth		HGL	
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)
0.10	0.10	0.00	0.91	1.53	1.83	1.29	391.15	391.41
1.10	1.10	0.00	1.87	2.85	5.82	4.34	391.49	391.66
2.10	2.10	0.00	2.25	3.39	8.10	6.03	391.68	391.80
3.10	3.10	0.00	2.52	3.78	9.96	7.37	391.83	391.91
4.10	4.10	0.00	2.72	4.10	11.63	8.52	391.97	392.01
5.10	5.10	0.00	2.87	4.38	13.25	9.54	392.10	392.10
6.10	6.10	0.00	2.98	4.63	14.90	10.48	392.24	392.17
7.10	7.10	0.00	3.07	4.86	16.55	11.34	392.38	392.25
8.10	8.10	0.00	3.13	5.07	18.42	12.15	392.53	392.31
9.10	9.10	0.00	3.12	5.28	21.01	12.91	392.75	392.38
10.10	10.10	0.00	3.22	3.21	24.00	24.00	393.00	393.41
11.10	11.10	0.00	3.53	3.53	24.00	24.00	393.00	393.49

HGL	
Hw	Hw/D
(ft)	
391.48	0.09
391.79	0.25
392.00	0.35
392.17	0.44
392.33	0.51
392.47	0.59
392.61	0.66
392.74	0.72
392.88	0.79
393.00	0.85
393.71	1.21
393.86	1.28

HECRAS OUTPUT DATA

Reach	River Sta	Profile	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
1	4035	PRE10	0.62	412.1	1.6	5.3	0.1
1	4035	PRE100	8.95	412.4	3.1	10.3	0.4
1	4035	POST10	0.66	412.1	1.7	5.3	0.1
1	4035	POST100	9.14	412.4	3.1	10.4	0.4
1	3816	PRE10	0.62	404.9	0.1	27.8	0.6
1	3816	PRE100	8.95	405.4	0.2	83.1	1.1
1	3816	POST10	0.66	404.9	0.1	28.2	0.6
1	3816	POST100	9.14	405.4	0.2	83.2	1.1
1	3614	PRE10	0.62	404.8	1.7	5.1	0.1
1	3614	PRE100	8.95	405.1	2.8	12.5	0.4
1	3614	POST10	0.66	404.8	1.7	5.1	0.1
1	3614	POST100	9.14	405.1	2.9	12.5	0.4
1	3379	PRE10	0.62	401.7	0.2	15.7	0.3
1	3379	PRE100	8.95	402.1	0.8	21.3	0.7
1	3379	POST10	0.66	401.7	0.2	16	0.3
1	3379	POST100	9.14	402.1	0.8	21.3	0.7
1	3171	PRE10	0.62	401.6	0.2	26.6	0.2
1	3171	PRE100	8.95	402	0.3	121.3	0.6
1	3171	POST10	0.66	401.6	0.2	29.4	0.2
1	3171	POST100	9.14	402	0.3	122.5	0.6
1	2937	PRE10	0.62	401.5	0.1	35.9	0.5
1	2937	PRE100	8.95	401.9	0.2	129.3	0.9
1	2937	POST10	0.66	401.5	0.1	38.5	0.6
1	2937	POST100	9.14	401.9	0.2	133.8	0.9
1	2702	PRE10	0.69	401.5	0.2	22.9	0.3
1	2702	PRE100	9.9	401.8	0.4	114	0.6
1	2702	POST10	0.75	401.5	0.2	24.1	0.3
1	2702	POST100	10.91	401.8	0.4	115.8	0.6
1	2264	PRE10	0.69	400.2	1.5	6	0.2
1	2264	PRE100	9.9	400.4	2.2	29.5	0.4
1	2264	POST10	0.75	400.2	1.6	6.4	0.2
1	2264	POST100	10.91	400.5	2	40.7	0.4
1	1976	PRE10	0.69	399.7	0.1	24	0.9
1	1976	PRE100	9.9	400.2	0.4	40.6	1.3
1	1976	POST10	0.75	399.7	0.1	24.1	0.9

1	1976	POST100	10.91	400.2	0.4	41.5	1.3
1	1742	PRE10	0.69	399.6	1.6	6.1	0.1
1	1742	PRE100	9.9	399.9	2.6	18.2	0.4
1	1742	POST10	0.75	399.7	1.5	6.5	0.1
1	1742	POST100	10.91	399.9	2.7	18.5	0.4
1	1553	PRE10	0.69	398.8	0.1	34.4	0.5
1	1553	PRE100	9.9	399.2	0.4	39	0.9
1	1553	POST10	0.75	398.8	0.1	34.5	0.5
1	1553	POST100	10.91	399.2	0.4	39.3	1
1	1480	PRE10	0.69	398.8	1.2	7.5	0.1
1	1480	PRE100	9.9	399	2.5	20.5	0.4
1	1480	POST10	0.75	398.8	1.3	7.5	0.1
1	1480	POST100	10.91	399	2.6	20.7	0.4
1	1369	PRE10	0.69	397.9	0.3	21.2	0.2
1	1369	PRE100	9.9	398.3	0.5	52	0.6
1	1369	POST10	0.75	397.9	0.3	22.1	0.2
1	1369	POST100	10.91	398.3	0.6	53.2	0.6
1	1243	PRE10	0.69	397.5	0.7	6.3	0.2
1	1243	PRE100	9.9	398	1.2	29.1	0.7
1	1243	POST10	0.75	397.5	0.7	6.4	0.2
1	1243	POST100	10.91	398	1.2	30.6	0.7
1	1060	PRE10	0.69	395.1	1.4	6.7	0.2
1	1060	PRE100	9.9	395.3	2.5	19.2	0.4
1	1060	POST10	0.75	395.1	1.4	6.9	0.2
1	1060	POST100	10.91	395.3	2.6	20.1	0.4
1	851	PRE10	0.69	393.9	0	46.8	0.7
1	851	PRE100	9.9	394.3	0.2	66.3	1.1
1	851	POST10	0.75	393.9	0	47	0.7
1	851	POST100	10.91	394.3	0.3	66.9	1.1
1	622	PRE10	0.69	393.9	0	98.6	1
1	622	PRE100	9.9	394.3	0.1	116.3	1.4
1	622	POST10	0.75	393.9	0	99.2	1
1	622	POST100	10.91	394.3	0.1	117.1	1.4
1	472	PRE10	0.69	393.9	0	83.5	1.6
1	472	PRE100	9.9	394.3	0.1	89	2
1	472	POST10	0.75	393.9	0	83.7	1.6

1	472	POST100	10.91	394.3	0.1	89.4	2
1	337	PRE10	0.69	393.8	1.7	6.3	0.1
1	337	PRE100	9.9	394.1	2.8	14.7	0.4
1	337	POST10	0.75	393.8	1.8	6.4	0.1
1	337	POST100	10.91	394.1	2.8	15.2	0.4
1	147	PRE10	0.69	391.7	0.1	23.1	0.4
1	147	PRE100	9.9	393.6	0.1	82.2	2.3
1	147	POST10	0.75	391.7	0.1	23.5	0.4
1	147	POST100	10.91	393.8	0.1	89	2.6

PRE-DEVELOPMENT HECRAS RESULTS FOR 10-YEAR STORM EVENT							
Reach	River Sta	Profile	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
			CFS	FEET	FPS	FEET	FEET
1	4035	PRE10	0.62	412.1	1.6	5.3	0.1
1	3816	PRE10	0.62	404.9	0.1	27.8	0.6
1	3614	PRE10	0.62	404.8	1.7	5.1	0.1
1	3379	PRE10	0.62	401.7	0.2	15.7	0.3
1	3171	PRE10	0.62	401.6	0.2	26.6	0.2
1	2937	PRE10	0.62	401.5	0.1	35.9	0.5
1	2702	PRE10	0.69	401.5	0.2	22.9	0.3
1	2264	PRE10	0.69	400.2	1.5	6.0	0.2
1	1976	PRE10	0.69	399.7	0.1	24.0	0.9
1	1742	PRE10	0.69	399.6	1.6	6.1	0.1
1	1553	PRE10	0.69	398.8	0.1	34.4	0.5
1	1480	PRE10	0.69	398.8	1.2	7.5	0.1
1	1369	PRE10	0.69	397.9	0.3	21.2	0.2
1	1243	PRE10	0.69	397.5	0.7	6.3	0.2
1	1060	PRE10	0.69	395.1	1.4	6.7	0.2
1	851	PRE10	0.69	393.9	0.0	46.8	0.7
1	622	PRE10	0.69	393.9	0.0	98.6	1.0
1	472	PRE10	0.69	393.9	0.0	83.5	1.6
1	337	PRE10	0.69	393.8	1.7	6.3	0.1
1	147	PRE10	0.69	391.7	0.1	23.1	0.4
MIN			0.62	391.7	0.0	5.1	0.1
AVG			0.67	399.1	0.6	25.5	0.4
MAX			0.69	412.1	1.7	98.6	1.6

PRE-DEVELOPMENT HECRAS RESULTS FOR 100-YEAR STORM EVENT							
Reach	River Sta	Profile	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
			CFS	FEET	FPS	FEET	FEET
1	4035	PRE100	8.95	412.4	3.1	10.3	0.4
1	3816	PRE100	8.95	405.4	0.2	83.1	1.1
1	3614	PRE100	8.95	405.1	2.8	12.5	0.4
1	3379	PRE100	8.95	402.1	0.8	21.3	0.7
1	3171	PRE100	8.95	402.0	0.3	121.3	0.6
1	2937	PRE100	8.95	401.9	0.2	129.3	0.9
1	2702	PRE100	9.90	401.8	0.4	114.0	0.6
1	2264	PRE100	9.90	400.4	2.2	29.5	0.4
1	1976	PRE100	9.90	400.2	0.4	40.6	1.3
1	1742	PRE100	9.90	399.9	2.6	18.2	0.4
1	1553	PRE100	9.90	399.2	0.4	39.0	0.9
1	1480	PRE100	9.90	399.0	2.5	20.5	0.4
1	1369	PRE100	9.90	398.3	0.5	52.0	0.6
1	1243	PRE100	9.90	398.0	1.2	29.1	0.7
1	1060	PRE100	9.90	395.3	2.5	19.2	0.4
1	851	PRE100	9.90	394.3	0.2	66.3	1.1
1	622	PRE100	9.90	394.3	0.1	116.3	1.4
1	472	PRE100	9.90	394.3	0.1	89.0	2.0
1	337	PRE100	9.90	394.1	2.8	14.7	0.4
1	147	PRE100	9.90	393.6	0.1	82.2	2.3
MIN			8.95	393.6	0.1	10.3	0.4
AVG			9.62	399.6	1.2	55.4	0.9
MAX			9.90	412.4	3.1	129.3	2.3

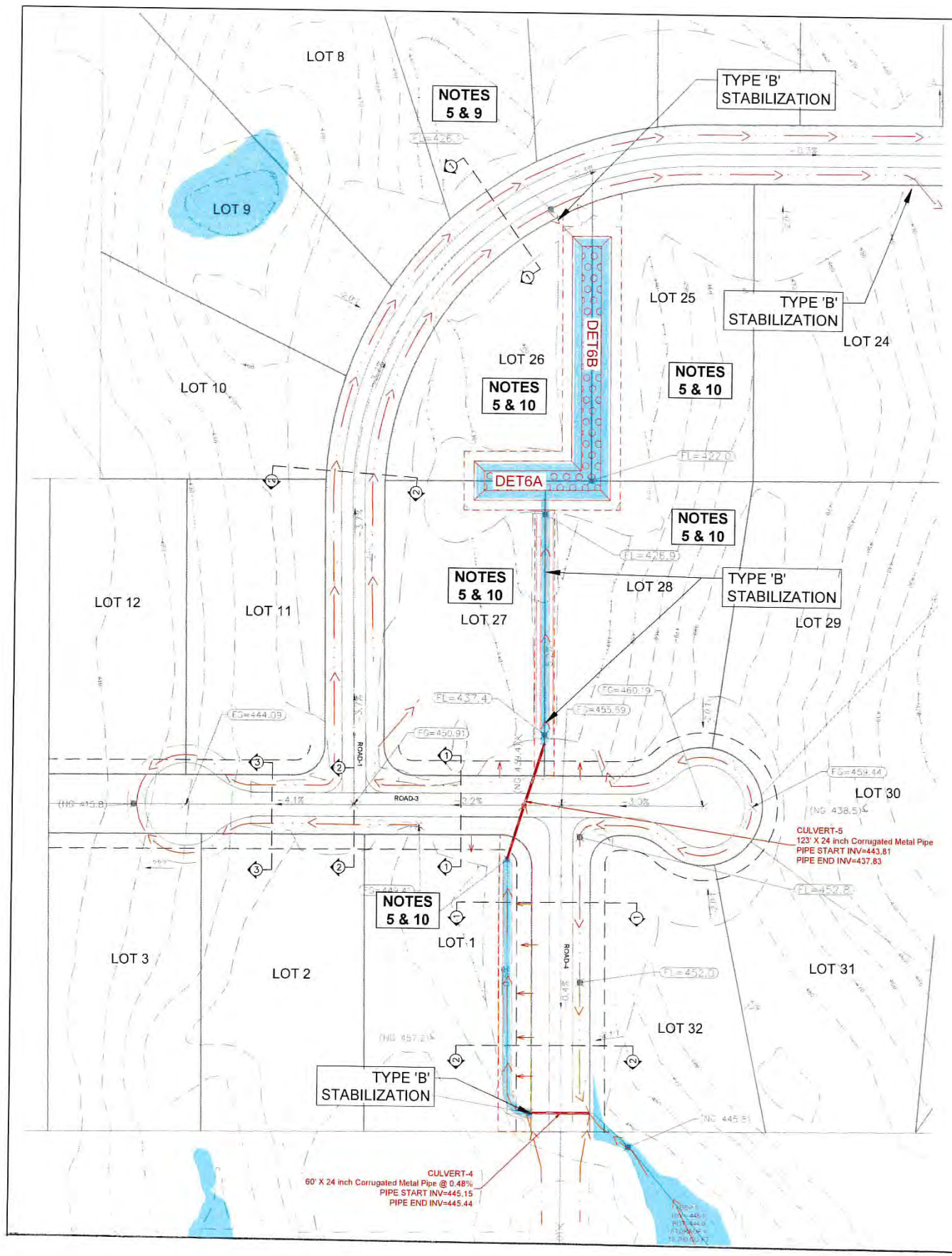
POST-DEVELOPMENT HECRAS RESULTS FOR 10-YEAR STORM EVENT							
Reach	River Sta	Profile	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
			CFS	FEET	FPS	FEET	FEET
1	4035	POST10	0.66	412.1	1.7	5.3	0.1
1	3816	POST10	0.66	404.9	0.1	28.2	0.6
1	3614	POST10	0.66	404.8	1.7	5.1	0.1
1	3379	POST10	0.66	401.7	0.2	16.0	0.3
1	3171	POST10	0.66	401.6	0.2	29.4	0.2
1	2937	POST10	0.66	401.5	0.1	38.5	0.6
1	2702	POST10	0.75	401.5	0.2	24.1	0.3
1	2264	POST10	0.75	400.2	1.6	6.4	0.2
1	1976	POST10	0.75	399.7	0.1	24.1	0.9
1	1742	POST10	0.75	399.7	1.5	6.5	0.1
1	1553	POST10	0.75	398.8	0.1	34.5	0.5
1	1480	POST10	0.75	398.8	1.3	7.5	0.1
1	1369	POST10	0.75	397.9	0.3	22.1	0.2
1	1243	POST10	0.75	397.5	0.7	6.4	0.2
1	1060	POST10	0.75	395.1	1.4	6.9	0.2
1	851	POST10	0.75	393.9	0.0	47.0	0.7
1	622	POST10	0.75	393.9	0.0	99.2	1.0
1	472	POST10	0.75	393.9	0.0	83.7	1.6
1	337	POST10	0.75	393.8	1.8	6.4	0.1
1	147	POST10	0.75	391.7	0.1	23.5	0.4
MIN			0.66	391.7	0.0	5.1	0.1
AVG			0.72	399.2	0.7	26.0	0.4
MAX			0.75	412.1	1.8	99.2	1.6

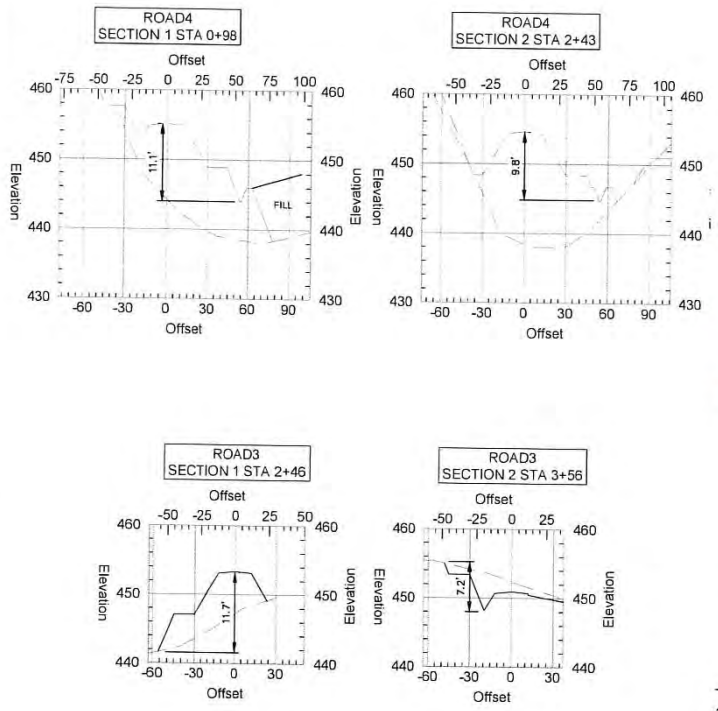
POST-DEVELOPMENT HECRAS RESULTS FOR 100-YEAR STORM EVENT							
Reach	River Sta	Profile	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
			CFS	FEET	FPS	FEET	FEET
1	4035	POST100	9.14	412.4	3.1	10.4	0.4
1	3816	POST100	9.14	405.4	0.2	83.2	1.1
1	3614	POST100	9.14	405.1	2.9	12.5	0.4
1	3379	POST100	9.14	402.1	0.8	21.3	0.7
1	3171	POST100	9.14	402.0	0.3	122.5	0.6
1	2937	POST100	9.14	401.9	0.2	133.8	0.9
1	2702	POST100	10.91	401.8	0.4	115.8	0.6
1	2264	POST100	10.91	400.5	2.0	40.7	0.4
1	1976	POST100	10.91	400.2	0.4	41.5	1.3
1	1742	POST100	10.91	399.9	2.7	18.5	0.4
1	1553	POST100	10.91	399.2	0.4	39.3	1.0
1	1480	POST100	10.91	399.0	2.6	20.7	0.4
1	1369	POST100	10.91	398.3	0.6	53.2	0.6
1	1243	POST100	10.91	398.0	1.2	30.6	0.7
1	1060	POST100	10.91	395.3	2.6	20.1	0.4
1	851	POST100	10.91	394.3	0.3	66.9	1.1
1	622	POST100	10.91	394.3	0.1	117.1	1.4
1	472	POST100	10.91	394.3	0.1	89.4	2.0
1	337	POST100	10.91	394.1	2.8	15.2	0.4
1	147	POST100	10.91	393.8	0.1	89.0	2.6
MIN			9.14	393.8	0.1	10.4	0.4
AVG			10.38	399.6	1.2	57.1	0.9
MAX			10.91	412.4	3.1	133.8	2.6

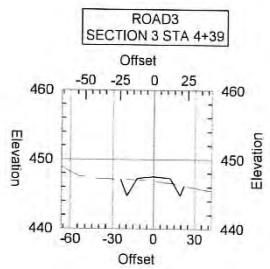
Civil Resources, LLC POST10 INCREASE Utopia Phase 2

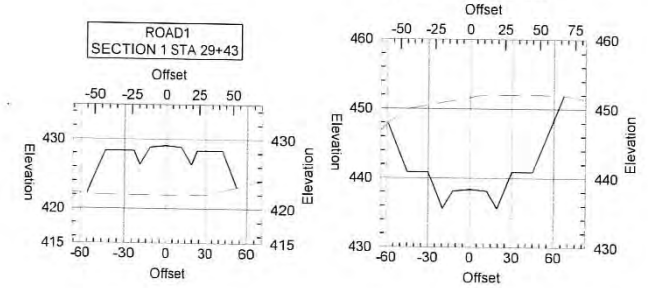
PRE-POST INCREASE FOR 10-YEAR STORM EVENT							
Reach	River Sta	Increase	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
			CFS	FEET	FPS	FEET	FEET
1	4035	6%	0.04	0.0	0.1	0.0	0.0
1	3816	6%	0.04	0.0	0.0	0.4	0.0
1	3614	6%	0.04	0.0	0.0	0.0	0.0
1	3379	6%	0.04	0.0	0.0	0.3	0.0
1	3171	6%	0.04	0.0	0.0	2.8	0.0
1	2937	6%	0.04	0.0	0.0	2.6	0.1
1	2702	9%	0.06	0.0	0.0	1.2	0.0
1	2264	9%	0.06	0.0	0.1	0.4	0.0
1	1976	9%	0.06	0.0	0.0	0.1	0.0
1	**1742**	**9%**	**0.06**	**0.1**	**-0.1**	**0.4**	**0.0**
1	1553	9%	0.06	0.0	0.0	0.1	0.0
1	1480	9%	0.06	0.0	0.1	0.0	0.0
1	1369	9%	0.06	0.0	0.0	0.9	0.0
1	1243	9%	0.06	0.0	0.0	0.1	0.0
1	1060	9%	0.06	0.0	0.0	0.2	0.0
1	851	9%	0.06	0.0	0.0	0.2	0.0
1	622	9%	0.06	0.0	0.0	0.6	0.0
1	472	9%	0.06	0.0	0.0	0.2	0.0
1	337	9%	0.06	0.0	0.1	0.1	0.0
1	147	9%	0.06	0.0	0.0	0.4	0.0
MIN			0.04	0.0	-0.1	0.0	0.0
AVG			0.05	0.0	0.0	0.6	0.0
MAX			0.06	0.1	0.1	2.8	0.1

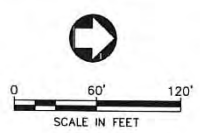
PRE-POST INCREASE FOR 100-YEAR STORM EVENT							
Reach	River Sta	Increase	Q Total	W.S. Elev	Vel Chnl	Top Width	Max Chl Dpth
			CFS	FEET	FPS	FEET	FEET
1	4035	2%	0.19	0.0	0.0	0.1	0.0
1	3816	2%	0.19	0.0	0.0	0.1	0.0
1	3614	2%	0.19	0.0	0.1	0.0	0.0
1	3379	2%	0.19	0.0	0.0	0.0	0.0
1	3171	2%	0.19	0.0	0.0	1.2	0.0
1	2937	2%	0.19	0.0	0.0	4.5	0.0
1	2702	10%	1.01	0.0	0.0	1.8	0.0
1	**2264**	**10%**	**1.01**	**0.1**	**-0.2**	**11.2**	**0.0**
1	1976	10%	1.01	0.0	0.0	0.9	0.0
1	1742	10%	1.01	0.0	0.1	0.3	0.0
1	1553	10%	1.01	0.0	0.0	0.3	0.1
1	1480	10%	1.01	0.0	0.1	0.2	0.0
1	1369	10%	1.01	0.0	0.1	1.2	0.0
1	1243	10%	1.01	0.0	0.0	1.5	0.0
1	1060	10%	1.01	0.0	0.1	0.9	0.0
1	851	10%	1.01	0.0	0.1	0.6	0.0
1	622	10%	1.01	0.0	0.0	0.8	0.0
1	472	10%	1.01	0.0	0.0	0.4	0.0
1	337	10%	1.01	0.0	0.0	0.5	0.0
1	**147**	**10%**	**1.01**	**0.2**	**0.0**	**6.8**	**0.3**
MIN			0.19	0.0	-0.2	0.0	0.0
AVG			0.76	0.0	0.0	1.7	0.0
MAX			1.01	0.2	0.1	11.2	0.3











LEGEND

- PROPERTY LINES
- 490 10' CONTOUR
- 2' CONTOUR
- DRAINAGE SWALE FLOW LINE EXISTING
- DRAINAGE SWALE FLOW LINE NEW
- TOP OF SLOPE
- WATERSHED BOUNDARY
- DRAINAGE DIVIDE
- NATURAL DEPRESSION STORAGE
- WETLAND
- CULVERT
- CULVERT WITH FLOW CONTROL RISER
- FLOW DIRECTION
- CONCENTRATION POINT (NODE)
- WATER QUALITY BASIN
- DRAINAGE EASEMENT

NOTES

1. DITCHES AND CULVERT ARE DESIGNED FOR 10-YEAR PEAK FLOW PLUS 10%.
2. USE RIPRAP ENERGY DISSIPATERS AT BASIN OUTLETS, AND BASIN INLETS.
3. ALL CULVERTS ARE A MINIMUM OF 18" DIAMETER CORRUGATED METAL PIPE.
4. SEE REPORT FOR DETENTION BASIN VOLUME. CONFIGURATION TO BE DETERMINED DURING FINAL DESIGN.
5. BUILDING AND DRIVEWAY IMPROVEMENTS SHALL NOT BLOCK FLOWING WATER IN DRAINAGE SWALE THROUGH FRONT OF LOT.
6. FINISHED FLOOR ELEVATIONS AND OPENINGS SHALL BE A MINIMUM OF 18" ABOVE HIGHEST ADJACENT GRADE WITHIN 10' OF BUILDING AND 24" ABOVE ADJACENT 100-YEAR HIGH WATER LEVEL IN ADJACENT WASHES, DITCHES, OR DETENTION BASINS.
7. USE TYPE 'A' STABILIZATION FOR ALL DITCHES UNLESS NOTED OTHERWISE (MAP 6.4 DETAILS).
8. NO FILL ALLOWED IN DRAINAGE EASEMENTS.
9. FILL LOT AND GRADE TO DRAIN TO ROAD.
10. FILL LOT AND GRADE TO DRAIN TO DETENTION BASIN DRAINAGE EASEMENT.

NOTE

DESIGN AND DETAILS ARE SCHEMATIC AND REQUIRE FIELD ADJUSTMENT BY CONTRACTOR AND ENGINEER DURING CONSTRUCTION.

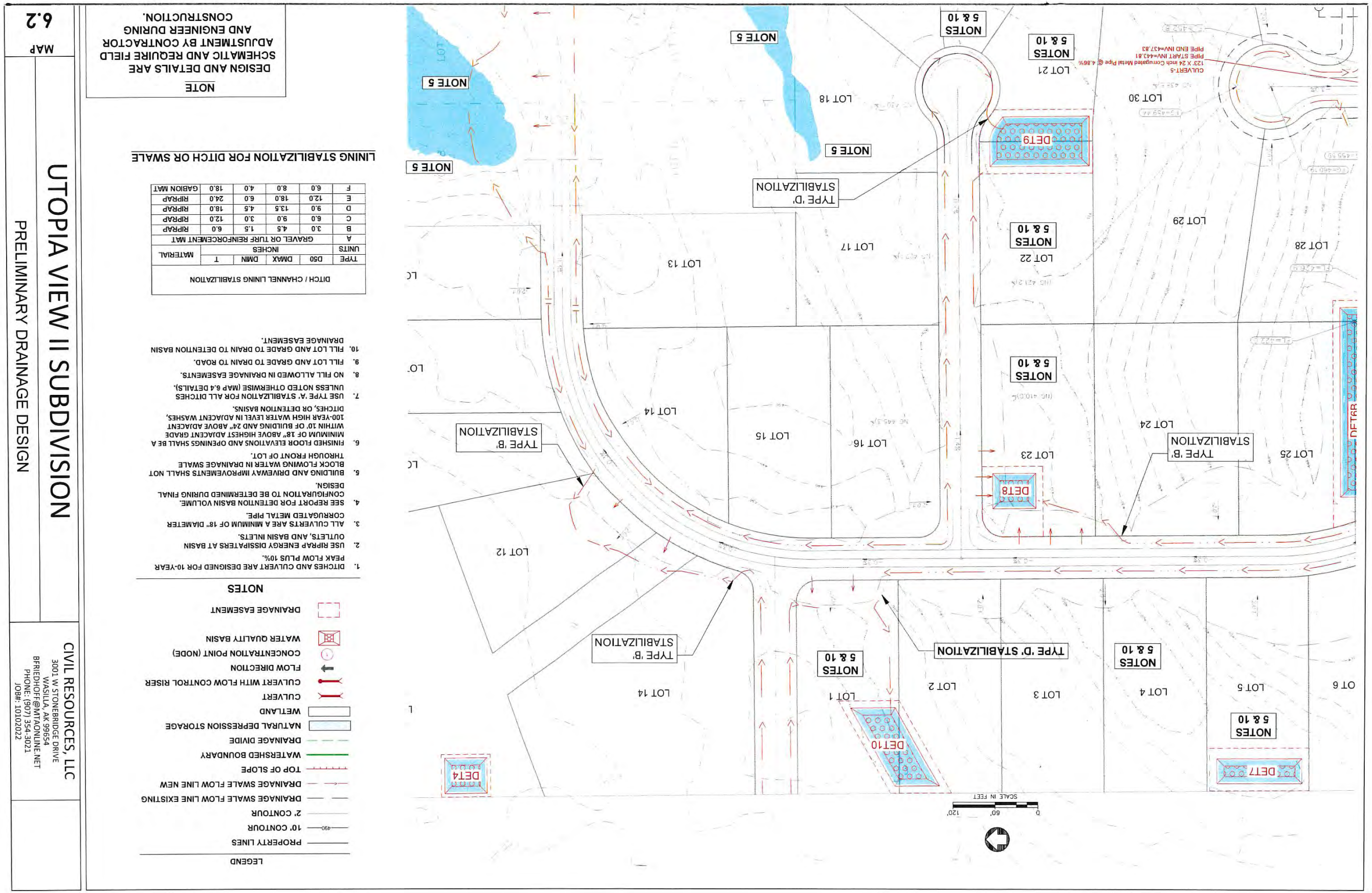
STATE OF ALASKA
49TH
BRUCE I. FRIEDHOFF
No. CE 13163
04-07-2025
REGISTERED PROFESSIONAL ENGINEER

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
WASILLA, AK 99654
BFRIEDHOFF@MTAONLINE.NET
PHONE: (907) 354-3021
JOB#: 10102022

UTOPIA VIEW II SUBDIVISION

PRELIMINARY DRAINAGE DESIGN

MAP 6.1

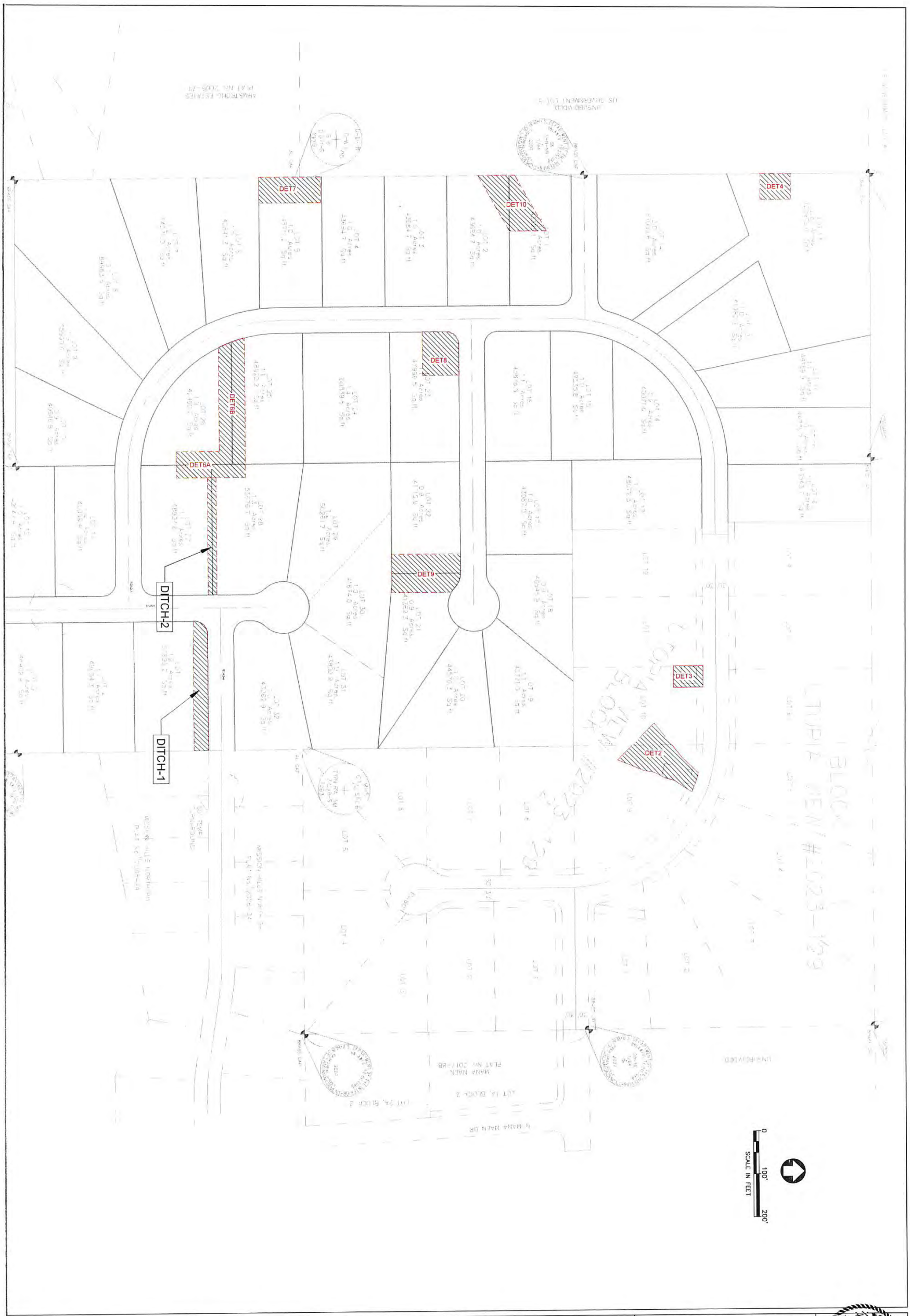


MAP 6.2

UTOPIA VIEW II SUBDIVISION

PRELIMINARY DRAINAGE DESIGN

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
WASILLA, AK 99654
BFRIEDHOFF@MTAONLINE.NET
PHONE: (907) 354-3021
JOB#: 10102022



MAP 6.3

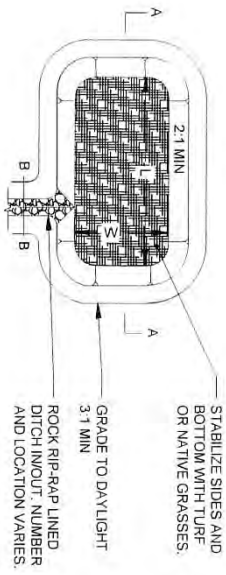
UTOPIA VIEW II SUBDIVISION

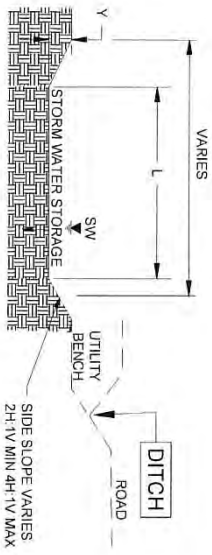
DRAINAGE EASEMENTS

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
WASILLA, AK 99654
BFRIEDHOFF@MTAONLINE.NET
PHONE: (907) 354-3021
JOB#: 10102022

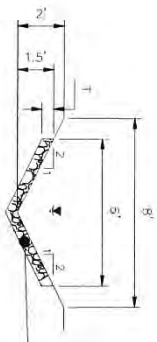
BRUCE J. FRIEDHOFF
No. CE 13183
04-07-2025
STATE OF ALASKA
49TH
REGISTERED PROFESSIONAL ENGINEER

PLAN



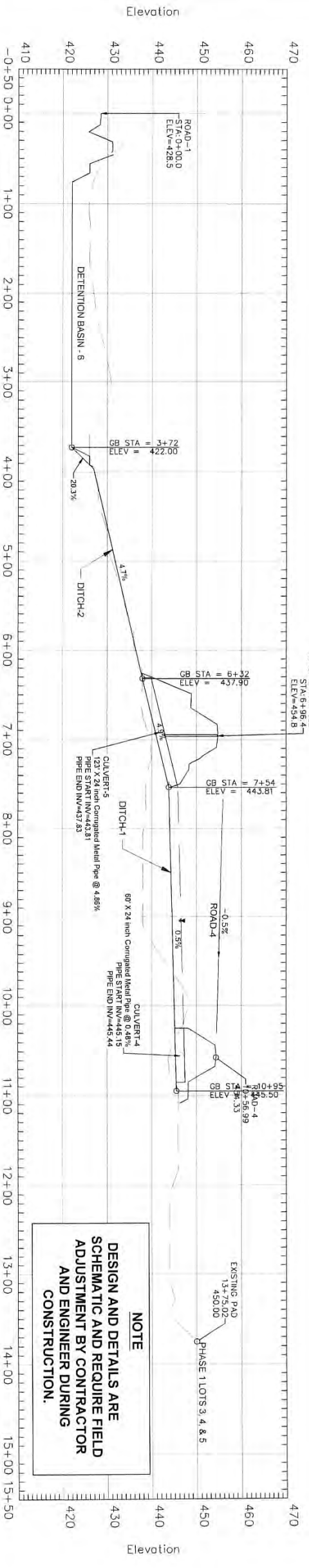


A-A



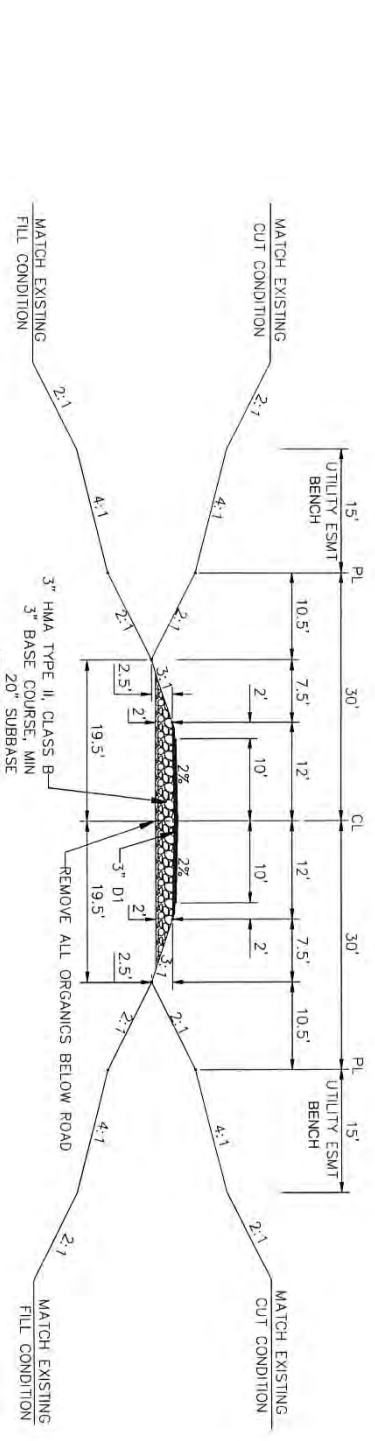
B-B
DITCH SECTION

DETENTION BASIN

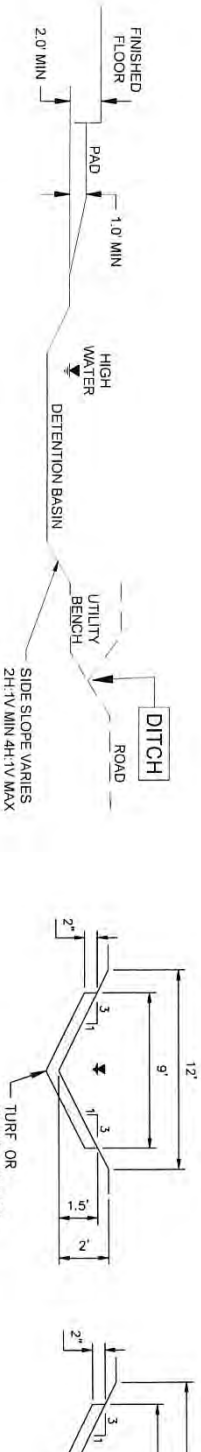


DITCH1 PROFILE

TYPICAL ROAD SECTION



BUILDING PAD AND FINISHED FLOOR ELEVATIONS



SWALE

ROADSIDE DITCH

NOTE

DESIGN AND DETAILS ARE SCHEMATIC AND REQUIRE FIELD ADJUSTMENT BY CONTRACTOR AND ENGINEER DURING CONSTRUCTION.

UTOPIA VIEW II SUBDIVISION

SECTIONS AND DETAILS

CIVIL RESOURCES, LLC
3001 W STONEBRIDGE DRIVE
WASILLA, AK 99654
BFRIEDHOFF@MTAONLINE.NET
PHONE: (907) 354-3021
JOB#: 10102022

STATE OF ALASKA — 49TH — BRUCE J. FRIEDHOFF — AK CE 13163 — 04-07-2025 — PROFESSIONAL ENGINEER

MAP 6.4

ADT Phase II

PLANNING AND LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THE SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY THE PLAT RESOLUTION No. _____ DATED _____ 20___, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE RECORDER IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA.

_____, 20____.
Date

_____ ATTEST: _____
Planning and Land Use Director Platting Clerk

CERTIFICATION OF PAYMENT OF TAXES

I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH _____, 20___, AGAINST THE PROPERTY INCLUDED IN THE SUBDIVISION, OR RESUBDIVISION, HEREON, HAVE BEEN PAID.

_____, 20___. _____
Date Tax Collection Official (MATANUSKA-SUSITNA BOROUGH)

OWNERSHIP & DEDICATION CERTIFICATE

WE CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE HEREBY ADOPT THIS PLAN OF SUBDIVISION BY OUR FREE CONSENT, AND WE HEREBY DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH AND GRANT ALL EASEMENTS TO THE USE SHOWN.

_____ _____
Date

FOXGLOVE LLC
ASHLEE S. STETSON - MANAGER
3201 E. TAMARAK AVE
WASILLA , AK 99654

NOTARY'S ACKNOWLEDGMENT

SUBSCRIBED AND SWORN TO ME THIS _____ DAY

OF _____, 20___,

FOR _____.

MY COMMISSION EXPIRES: _____.

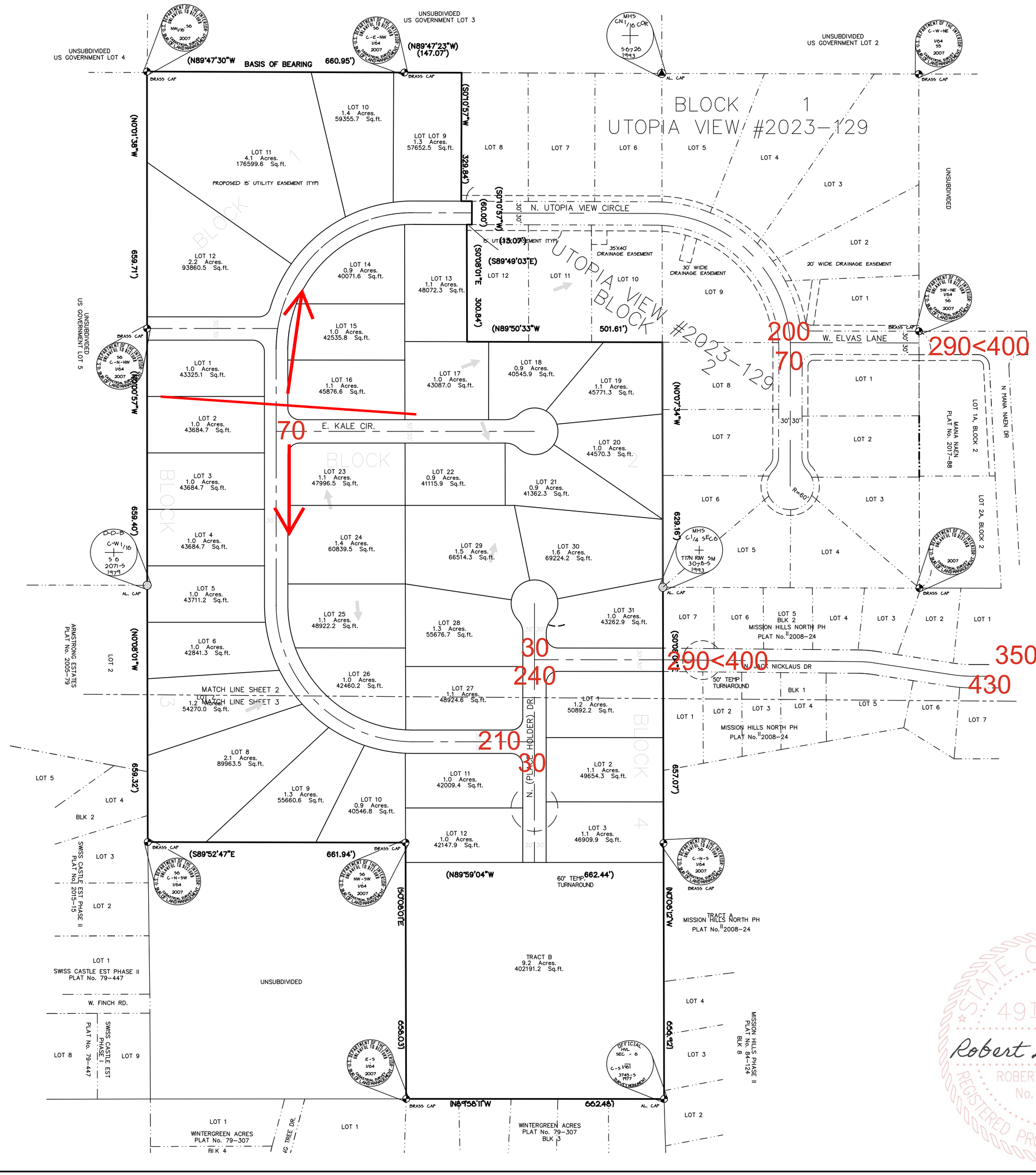
_____
NOTARY PUBLIC FOR ALASKA

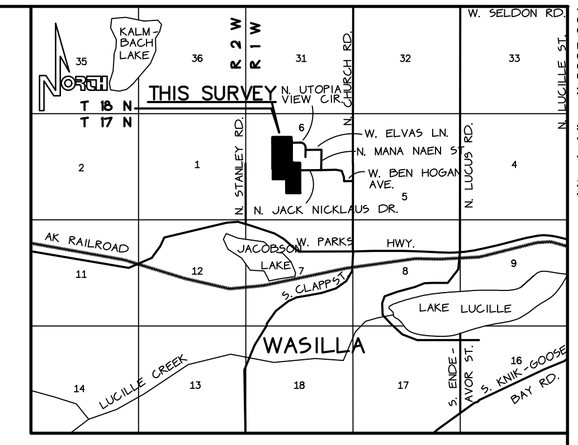
GENERAL NOTES

1. THERE MAY BE FEDERAL, STATE AND LOCAL REQUIREMENTS GOVERNING LAND USE. THE INDIVIDUAL PARCEL OWNER SHALL OBTAIN A DETERMINATION WHETHER THESE REQUIREMENTS APPLY TO THE DEVELOPMENT OF THE PARCELS SHOWN ON THE PLAT TO BE RECORDED.
2. ALL RECORD INFORMATION TAKEN FROM THE G.L.O. PLAT OF TOWNSHIP 17 NORTH RANGE 1 WEST SEWARD MERIDIAN, ALASKA; RECORD PLAT OF UTOPIA MEADOWS (PLAT No. ****_**) OFFICIALLY FILED IN THE OFFICE OF THE PALMER RECORDING DISTRICT.
3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS AND RECOMMENDATIONS OF THE STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERNS THOSE SYSTEMS.
4. BLANKET EASEMENT GRANTED TO MATANUSKA ELECTRIC ASSOCIATION, INC., RECORDED SEPTEMBER 1, 2021, AS RECEPTION NO. 2021-025870-0. DOUBLE CHECK

TERMS, COVENANTS, CONDITIONS AND PROVISIONS, INCLUDING RIGHTS-OF-WAY AND EASEMENTS AS CONTAINED IN THE ALASKA NATIVE CLAIMS SETTLEMENT ACT DATED DECEMBER 18, 1971, U.S. PUBLIC LAW 92-203, 85 STAT. 688, 43 U.S.C.A. 1601, ET SEQ, AND ANY AMENDMENTS AND ADDITIONS THERETO, AND ANY REGULATIONS ARISING THEREFROM.DOUBLE CHECK

5. BLANKET EASEMENT GRANTED TO MATANUSKA TELECOM ASSOCIATION, INC., RECORDED APRIL 29, 2022 AS RECEPTION NO. 2022-00926-0.DOUBLE CHECK





VICINITY MAP
1" = 1 MILE

NORTH

CAP DETAIL:
N.T.S.

ACUTEK GEOMATICS 9106-S

LEGEND

RECORD DATA GLO	(N 90°00'00" E)
RECORD DATA (PLAT No. 2017-88)	(N 90°00'00" E)
MEASURED DATA	N 90°00'00" E
PROPERTY LINES	
ADJACENT PROPERTY LINES	
CENTER LINE	
FOUND 3" BRASS CAP	
FOUND 3" ALUMINUM CAP	
SET 5/8" REBAR W/PLASTIC CAP ON ALL TANGENCY AND CURVATURE POINTS, SEE CAP DETAIL:	

SURVEYOR'S CERTIFICATE

I, TERRY L. NICODEMUS, L.S. 9106, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

STATE OF ALASKA 49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
6/2/25
REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY PLAT OF

UTOPIA VIEW II

CONTAINING 62.049 ACRES

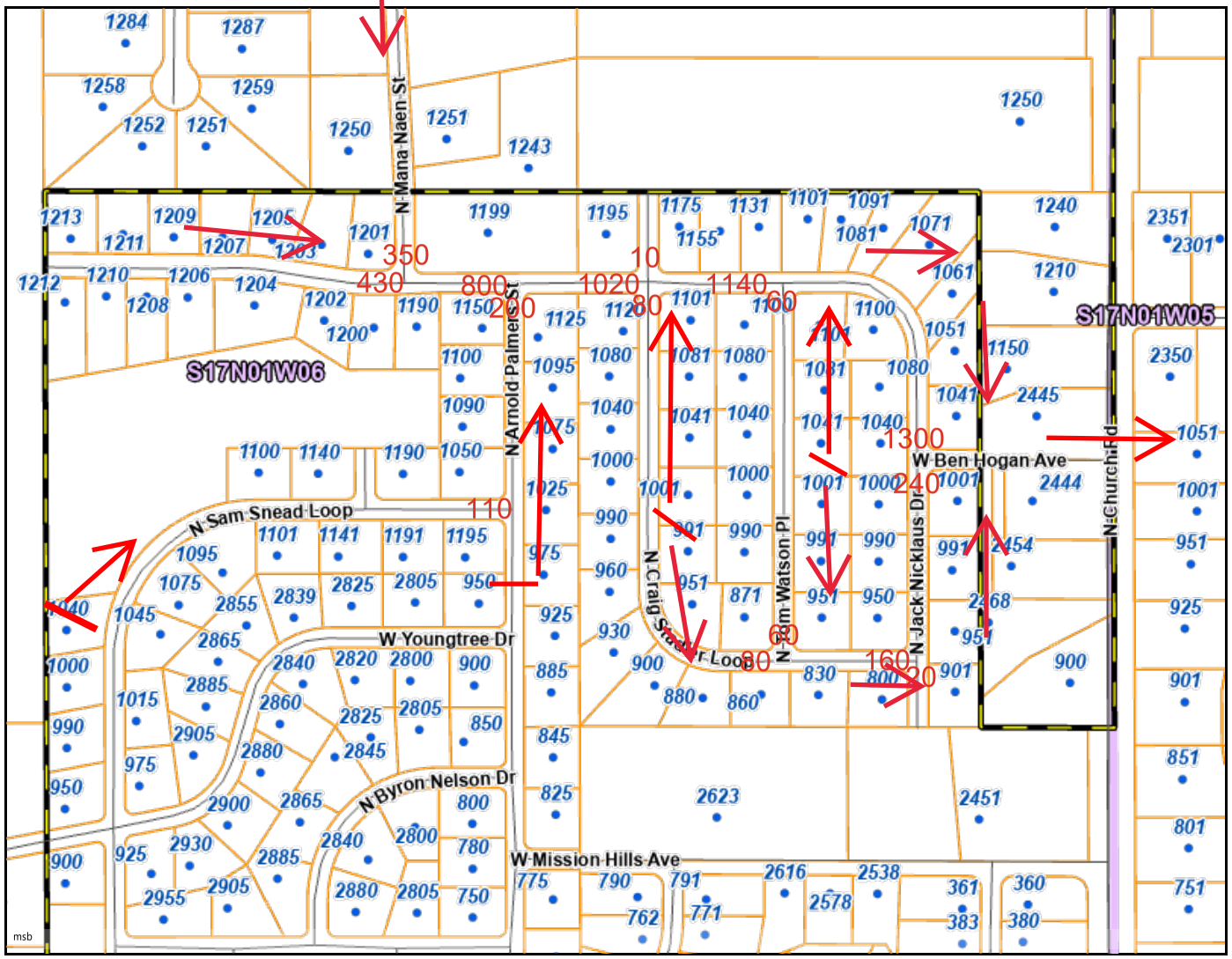
A RE-SUBDIVISION OF TRACT A, UTOPIA VIEW, RECORDED AS PLAT NO. 2023-129, WITHIN SECTION 6, TOWNSHIP 17 NORTH, RANGE 1 WEST, SEWARD MERIDIAN, ALASKA.

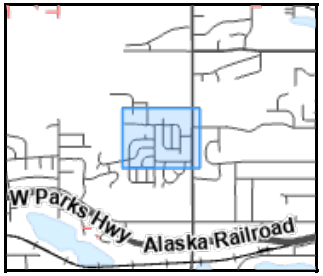
PALMER RECORDING DISTRICT

PREPARED BY
ACUTEK GEOMATICS LLC
5099 E. BLUE LUPINE DR, SUITE 104, WASILLA AK 99654
(907) 376-8800 FAX (907) 376-9629 E-MAIL admin@acutekSurvey.com

DESIGNED BY:	TLN	SCALE: NOT TO SCALE	FIELD BOOK: 19-01 23
DRAWN BY:	TAN	DATE: 5/14/2024	MAP NO.: WA 12
CHECKED:	TLN	FILE No. 19-10.2	SHEET: 1 OF 3

ADT to Ben Hogan Ave





Ben Hogan Ave upgraded 2023 to Residential Collector

Rest of the south of Mission hills goes out W Mission Hills Ave.

STATE OF ALASKA
49TH
Robert L Walden
ROBERT L. WALDEN
No. CE13874
6/2/25
REGISTERED PROFESSIONAL ENGINEER

1 : 9028

THIS MAP IS NOT TO BE USED FOR NAVIGATION

0 500 1000 ft

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is solely for informational purposes only. The Borough makes no express or implied warranties with respect to the character, function, or capabilities of the map or the suitability of the map for any particular purpose beyond those originally intended by the Borough. For information regarding the full disclaimer and policies related to acceptable uses of this map, please contact the Matanuska-Susitna Borough GIS Division at 907-861-7858.

Notes

Matthew Goddard

From: Mazer, Gregory J CIV USARMY CEPOA (USA) <Gregory.J.Mazer@usace.army.mil>
Sent: Wednesday, May 14, 2025 9:18 AM
To: Matthew Goddard
Subject: Utopia View II

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
Hello,

I'm responding to your inquiry about U.S. Army Corps of Engineers (USACE) permitting for the planned Utopia View II project in Wasilla, Alaska. Department of the Army authorization from USACE is required for placement of dredged and/or fill material into waters of the U.S., including wetlands and/or performing work in waters protected by the Rivers and Harbors Act. Information about USACE permitting as well as access to a permit application and detailed instructions for preparing and submitting a complete application can be found online at www.poa.usace.army.mil/Missions/Regulatory.

The parcel where the development would occur contains two areas mapped by the Mat-Su Borough as wetlands – the entirety of a 0.7 acre wetland and a portion of a 2.93 acre wetland. Upon review of the Borough's data, other information and recent aerial imagery, neither of these mapped wetlands appear to have a continuous surface connection with a relative permanent water such as a tributary or a navigable water. Hence, it appears that even if wetlands are present at the property (presuming that the mapping is accurate), the wetlands would not be considered waters of the U.S. subject to regulation under the Clean Water Act. Please note that this assessment is unofficial and does not serve as an approved or preliminary jurisdictional determination.

V/r, Greg

US Army Corps of Engineers®

Greg Mazer
Project Manager, North Central Section | Regulatory Division | U.S. Army Corps of Engineers | Alaska District
Cell: 907.347.9059 | Regulatory Main Line: 907.753.2717
Website: www.poa.usace.army.mil/missions/regulatory

Matthew Goddard

From: Jamie Taylor
Sent: Monday, June 9, 2025 1:02 PM
To: Matthew Goddard; Pre-Design & Engineering
Cc: Erich E. Schaal; Daniel Dahms; Tammy Simmons; Brad Sworts
Subject: Re: Utopia ADT

Hi Matthew,

Soils:
The soils report appears to be incomplete:

- Of the test holes shown on the test hole location map, sieve analysis results were not provided for test holes 2, 11, 14, 23, 24, and 41
  - it was noted on the test hole logs for test holes 23 and 24 that samples were not taken, but the soil types reported require sieve analysis or percolation tests per 43.20.281(A)(1)(f).
- Of the test holes shown on the test hole location map, test hole logs were not provided for test holes 1, 12, 26, 28, 29, 31, 36, and 40
- according to the test hole log for test hole 35, ground water seeps were found at 7 feet below ground on 4/28/2021 - per 43.20.281(A)(1)(a) "where water is encountered at ten feet or less below the surface, the seasonal high subsurface water is to be determined between May 1st and October 30th)

PD&E recommends a condition of approval to submit a complete soils report containing all necessary and pertinent information, including test hole logs, sieve analyses, and ground water monitoring results, as well as updated soils and useable area information post-regrading. Soils information outside of the boundary of the subdivision should not be included in the report.

Jack Nicklaus Drive:
ADT estimate shows potential traffic volumes as high as 1300 on Jack Nicklaus Drive. This is over the allowed traffic volume for a local road per the 2022 Subdivision Construction Manual. Since Jack Nicklaus Drive is a City of Wasilla owned and maintained road, the developer should coordinate with the City to determine if this is allowable and/or what upgrades or traffic impact mitigation measures will be required.

PD&E recommends the developer coordinate with the City of Wasilla to determine if a permanent turnaround is needed where Jack Nicklaus Drive exits the City of Wasilla and enters RSA 27. The existing cul-de-sac is located within a temporary turnaround easement which will automatically terminate when the road is extended.

Internal Subdivision Roads:
PD&E recommends the extension of Jack Nicklaus Drive, the extension of Utopia View Circle, Joseb Drive, and Jimmys Way be constructed to Residential Subcollector standard and the remaining cul-de-sac roads be constructed to Residential standard.

Access must be constructed to proposed Tract B. The temporary cul-de-sac on Jimmys Way should be relocated to give Tract B constructed frontage.

A permanent turnaround is needed at the north end of Utopia View Circle within the RSA 27 boundary.

Thank you,
PD&E Review Group

From: Erich E. Schaal <eschaal@cityofwasilla.gov>
Sent: Tuesday, June 3, 2025 11:38 AM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>
Subject: RE: Utopia ADT

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hi Matthew,

It does not appear that the impacts to the exiting neighborhood have been adequately addressed, and the applicant did not identify the new traffic forecast at W Ben Hogan Ave. N Jack Nicklaus Dr will need to be upgraded due to the increase in traffic. The current traffic load from just the contractors has forced the city to make the intersection of N Jack Nicklaus and N Arnold Palmers a 3 way stop (which is often ignored).

This is important due to the lack of connection to W Youngtree Drive.

Thank,

Erich

Erich Schaal P.E.
Director of Public Works
City of Wasilla
290 E. Herning Avenue
Wasilla, AK 99654-7091
Office: (907) 373-9018
Cell: (907) 232-9678

Book time with Erich E. Schaal

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Tuesday, June 3, 2025 7:24 AM
To: Pre-Design & Engineering <pde@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Erich E. Schaal <eschaal@cityofwasilla.gov>
Subject: FW: Utopia ADT

Good morning,

Please find attached the revised ADT for Utopia View II.
If possible, please ensure any comments you have are submitted by Friday, 6/6/2025, so they can be incorporated in the staff report packet.

Thank you,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

From: Robert Walden, PE <robertwcce@gmail.com>
Sent: Monday, June 2, 2025 6:25 PM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>; Wyatt Anderson <Wyatt.Anderson@matsugov.us>
Cc: Acutek Geomatics <admin@acuteksurvey.com>; Michelle Clapp <Michelle@wsiak.com>; Bill Van Buskirk <bill@wsiak.com>
Subject: Re: Utopia ADT

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Matthew/Wyatt,

Thanks for the nudge. I had got through most of it then got busy with other side stuff and buried it again. Attached revised ADT to Ben Hogan with two maps to stretch that far. Please replace the previous single ADT Map. Revised engineering letter to replace the old letter.

Sincerely,
Robert L Walden, PE

On Mon, Jun 2, 2025 at 12:30 PM Matthew Goddard <Matthew.Goddard@matsugov.us> wrote:

> Good morning,
>
> I am following up on the request for an updated ADT. The supplied ADT does not meet the requirements as noted in the SCM section A15.
> I have since received comments from the City of Wasilla also requesting the ADT as this impacts City of Wasilla Roads (see attached).
> I will need the updated ADT no later than Wednesday, June 4, 2025, or this case will need to be continued to a later hearing date.
>
> Please submit the revised ADT as soon as possible.
>
> Thank you,
>
> Matthew Goddard
> Platting Technician
> 907-861-7881
> Matthew.Goddard@matsugov.us

From: Matthew Goddard
Sent: Thursday, May 22, 2025 6:31 PM
To: Robert Walden, PE <robertwcce@gmail.com>; Acutek Geomatics <admin@acuteksurvey.com>
Subject: Utopia ADT

Hello,

Upon conversation with MSB DPW it was noted that the submitted ADT does not meet the requirements for an ADT submittal.
The internal street intersections do not show the ADT counts and the shown ADT stops short of connecting with a Residential Collector Street or higher.
A revised ADT will be required. This should be submitted as soon as possible to allow time for proper review prior to the Public Hearing.

2022 Subdivision Construction Manual
A15 Average Daily Traffic
(a) The following formula shall be used to determine the required classification of streets:
ADT = Number of lots x 10 for single-family residential use.
(b) See Section G for other land uses.
(c) For subdivisions of five or more lots, submit potential ADT calculations for the following locations with the preliminary plat:
(1) at each intersection within the subdivision,
(2) at each intersection en route to an existing Residential Collector street or higher classification, and
(3) at an existing Residential Collector street or higher classification.

Thank you and have a great day,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

--
Sincerely,
Robert L Walden, PE

Matthew Goddard

From: Erich E. Schaal <eschaal@cityofwasilla.gov>
Sent: Monday, June 9, 2025 1:14 PM
To: Jamie Taylor; Matthew Goddard; Pre-Design & Engineering
Cc: Daniel Dahms; Tammy Simmons; Brad Sworts
Subject: RE: Utopia ADT

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hi Matthew,

For Jack Nicklaus Dr, the City will require the certification to Residential Collector to match Ben Hogan Ave. If certification to Residential Collector is not possible due to ROW width or geometry, then the applicant may propose other traffic mitigation measures, to be approved by the City of Wasilla Public Works.

Thanks,

Erich

Erich Schaal P.E.
Director of Public Works
City of Wasilla
290 E. Herning Avenue
Wasilla, AK 99654-7091
Office: (907) 373-9018
Cell: (907) 232-9678

Book time with Erich E. Schaal

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
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To: Matthew Goddard <Matthew.Goddard@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>
Cc: Erich E. Schaal <eschaal@cityofwasilla.gov>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>
Subject: Re: Utopia ADT

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  - it was noted on the test hole logs for test holes 23 and 24 that samples were not taken, but the soil types reported require sieve analysis or percolation tests per 43.20.281(A)(1)(f).
- Of the test holes shown on the test hole location map, test hole logs were not provided for test holes 1, 12, 26, 28, 29, 31, 36, and 40

- according to the test hole log for test hole 35, ground water seeps were found at 7 feet below ground on 4/28/2021 - per 43.20.281(A)(1)(a) "where water is encountered at ten feet or less below the surface, the seasonal high subsurface water is to be determined between May 1st and October 30th)

PD&E recommends a condition of approval to submit a complete soils report containing all necessary and pertinent information, including test hole logs, sieve analyses, and ground water monitoring results, as well as updated soils and useable area information post-regrading. Soils information outside of the boundary of the subdivision should not be included in the report.

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PD&E recommends the developer coordinate with the City of Wasilla to determine if a permanent turnaround is needed where Jack Nicklaus Drive exits the City of Wasilla and enters RSA 27. The existing cul-de-sac is located within a temporary turnaround easement which will automatically terminate when the road is extended.

Internal Subdivision Roads:
PD&E recommends the extension of Jack Nicklaus Drive, the extension of Utopia View Circle, Joseb Drive, and Jimmys Way be constructed to Residential Subcollector standard and the remaining cul-de-sac roads be constructed to Residential standard.

Access must be constructed to proposed Tract B. The temporary cul-de-sac on Jimmys Way should be relocated to give Tract B constructed frontage.

A permanent turnaround is needed at the north end of Utopia View Circle within the RSA 27 boundary.

Thank you,
PD&E Review Group

From: Erich E. Schaal <eschaal@cityofwasilla.gov>
Sent: Tuesday, June 3, 2025 11:38 AM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>
Subject: RE: Utopia ADT

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

Hi Matthew,

It does not appear that the impacts to the exiting neighborhood have been adequately addressed, and the applicant did not identify the new traffic forecast at W Ben Hogan Ave. N Jack Nicklaus Dr will need to be upgraded due to the increase in traffic. The current traffic load from just the contractors has forced the city to make the intersection of N Jack Nicklaus and N Arnold Palmers a 3 way stop (which is often ignored).

This is important due to the lack of connection to W Youngtree Drive.

Thank,

Erich

Erich Schaal P.E.

Director of Public Works

City of Wasilla

290 E. Herning Avenue

Wasilla, AK 99654-7091

Office: (907) 373-9018

Cell: (907) 232-9678

Book time with Erich E. Schaal

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Tuesday, June 3, 2025 7:24 AM
To: Pre-Design & Engineering <pde@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Erich E. Schaal <eschaal@cityofwasilla.gov>
Subject: FW: Utopia ADT

Matthew Goddard

From: Erich E. Schaal <eschaal@cityofwasilla.gov>
Sent: Tuesday, June 3, 2025 11:39 AM
To: Matthew Goddard; Pre-Design & Engineering; Jamie Taylor; Daniel Dahms; Tammy Simmons
Subject: RE: Utopia ADT

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hi Matthew,

It does not appear that the impacts to the exiting neighborhood have been adequately addressed, and the applicant did not identify the new traffic forecast at W Ben Hogan Ave. N Jack Nicklaus Dr will need to be upgraded due to the increase in traffic. The current traffic load from just the contractors has forced the city to make the intersection of N Jack Nicklaus and N Arnold Palmers a 3 way stop (which is often ignored).

This is important due to the lack of connection to W Youngtree Drive.

Thank,

Erich

Erich Schaal P.E.
Director of Public Works
City of Wasilla
290 E. Herning Avenue
Wasilla, AK 99654-7091
Office: (907) 373-9018
Cell: (907) 232-9678

Book time with Erich E. Schaal

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Tuesday, June 3, 2025 7:24 AM
To: Pre-Design & Engineering <pde@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Erich E. Schaal <eschaal@cityofwasilla.gov>
Subject: FW: Utopia ADT

Good morning,

Please find attached the revised ADT for Utopia View II.
If possible, please ensure any comments you have are submitted by Friday, 6/6/2025, so they can be incorporated in the staff report packet.

Thank you,

Matthew Goddard
Platting Technician

Matthew Goddard

From: Matthew.Goddard@matsugov.us
To: Erich E. Schaal
Subject: RE: RFC Utopia View II (MG)

From: Erich E. Schaal <eschaal@cityofwasilla.gov>
Sent: Monday, June 2, 2025 12:13 PM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>
Subject: RE: RFC Utopia View II (MG)

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hi Matthew,

We'll need the average daily traffic load at the entrance into the Mission Hills neighborhood at Church Rd.

We're very concerned about the additional traffic on N. Jack Nicklaus Dr and will likely require the applicant to bring that road up to a higher level of service due to those impacts.

Thanks,

Erich

Erich Schaal P.E.
Director of Public Works
City of Wasilla
290 E. Herning Avenue
Wasilla, AK 99654-7091
Office: (907) 373-9018
Cell: (907) 232-9678

Book time with Erich E. Schaal

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Monday, June 2, 2025 12:06 PM
To: Erich E. Schaal <eschaal@cityofwasilla.gov>
Subject: RE: RFC Utopia View II (MG)

Hello Erich,

The following link is the requested Utopia View II

Utopia View II

Matthew Goddard

Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

From: Erich E. Schaal <eschaal@cityofwasilla.gov>
Sent: Friday, May 30, 2025 4:05 PM
To: Matthew Goddard <Matthew.Goddard@matsugov.us>
Cc: Robert Walden <rwalden@cityofwasilla.gov>; Richard Antonio <rantonio@cityofwasilla.gov>
Subject: RE: RFC Utopia View II (MG)

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Hi Matthew,

COW comments are that the drainage report is important to the city and that the system should be built to the report to prevent drainage issues within the city.

Thanks,

Erich

Erich Schaal P.E.
Director of Public Works

City of Wasilla
290 E. Herning Avenue
Wasilla, AK 99654-7091
Office: (907) 373-9018
Cell: (907) 232-9678

Book time with Erich E. Schaal

From: PW Shared <publicworks@cityofwasilla.gov>
Sent: Wednesday, May 14, 2025 7:11 AM
To: Erich E. Schaal <eschaal@cityofwasilla.gov>; Robert Walden <rwalden@cityofwasilla.gov>; Richard Antonio <rantonio@cityofwasilla.gov>
Subject: FW: RFC Utopia View II (MG)

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Tuesday, May 13, 2025 12:53 PM
To: sarah.myers@alaska.gov; colton.percy@alaska.gov; Cindy Wellman <cwellman@cityofwasilla.gov>; Planning <Planning@cityofwasilla.gov>; PW Shared <publicworks@cityofwasilla.gov>; Crystal Nygard <cnygard@cityofwasilla.gov>; Juliah Barnett <jbarnett@cityofwasilla.gov>; Tim Swezey <tim.swezey@mlccak.org>; Patricia Fisher <psfisherak49@gmail.com>; information@mlccak.org; camden.yehle@gmail.com; lana@mtaonline.net; Michael Keenan <Michael.Keenan@matsugov.us>; Jeffrey Anderson <Jeffrey.Anderson@matsugov.us>; Fire Code <Fire.Code@matsugov.us>; Brian Davis <Brian.Davis@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; Land Management <Land.Management@matsugov.us>; Jillian Morrissey <Jillian.Morrissey@matsugov.us>; Tom Adams <Tom.Adams@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>;

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Code Compliance Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 745-9876
E-mail: ccb@matsugov.us

MEMORANDUM

DATE: 05/13/2025

TO: Matthew Goddard, Platting Tech

FROM: Kendra Johnson, CFM
Senior Code Compliance Office

SUBJECT: Proposed Platting action for Utopia View II Subdivision case #2025-061

No open Code Compliance cases on MSB Tax ID 8415000T00A at this time.

Code Compliance has no objection of subdividing Tract A into 42 lots.

Matthew Goddard

From: Permit Center
Sent: Tuesday, May 13, 2025 4:56 PM
To: Matthew Goddard
Subject: RE: RFC Utopia View II (MG)

Each access or encroachment constructed during subdivision road development shall be reported to the Permit Center for documentation. Cluster box pullout locations should be designed using the MSB Standard Drawing – Mailbox Pullouts, and in alignment with lot lines as shown on the plat layout.

No other comments from the Permit Center.

Brandon Tucker
Permit Technician
Matanuska-Susitna Borough Permit Center
350 E Dahlia Ave
Palmer AK 99645
P (907) 861-7871
F (907) 861-8158

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Tuesday, May 13, 2025 12:53 PM
To: sarah.myers@alaska.gov; colton.percy@alaska.gov; Cindy Wellman <cwellman@cityofwasilla.gov>; Planning <planning@cityofwasilla.gov>; PW Shared <publicworks@cityofwasilla.gov>; Crystal Nygard <cnygard@cityofwasilla.gov>; jbarnett@cityofwasilla.gov; Tim Swezey <tim.swezey@mlccak.org>; Patricia Fisher <psfisherak49@gmail.com>; information@mlccak.org; camden.yehle@gmail.com; lana@mtaonline.net; Michael Keenan <Michael.Keenan@matsugov.us>; Jeffrey Anderson <Jeffrey.Anderson@matsugov.us>; Fire Code <Fire.Code@matsugov.us>; Brian Davis <Brian.Davis@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; Land Management <Land.Management@matsugov.us>; Jillian Morrissey <Jillian.Morrissey@matsugov.us>; Tom Adams <Tom.Adams@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Code Compliance <Code.Compliance@matsugov.us>; Kendra Johnson <Kendra.Johnson@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Taunnie Boothby <Taunnie.Boothby@matsugov.us>; msbaddressing <msbaddressing@matsugov.us>; eric.r.schuler@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; ROW <row@enstarnaturalgas.com>; Right of Way Dept. <row@mtasolutions.com>; OSP Design Group <ospdesign@gci.com>; mearow@mea.coop
Subject: RFC Utopia View II (MG)

Hello,

The following link is a request for comments for the proposed Utopia View II.
Please ensure all comments have been submitted by May 30, 2025, so they can be incorporated in the staff report packet that will be presented at the platting board hearing.

Utopia View II

Matthew Goddard

From: Stephen Edwards <sledwards4959@gmail.com>
Sent: Monday, June 9, 2025 9:21 AM
To: Platting
Subject: Utopia View II subdivision

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Please add the following comments from Stephen Edwards RSA 27 Meadow Lakes.

Suggest altering the design to allow connectivity to adjacent parcels for future connectivity. Road maintenance costs are lower when equipment can flow thru from one subdivision to the next without backtracking.

Culdesacs are more difficult (expensive) to maintain than strait roads. Suggest requiring snow storage pocket on each in the best location for drainage. Include drainage easements to prevent water accumulation in ditches resulting in damage to the road bed.
Stephen Edwards

MEADOW LAKES
Community Council

1210 N Kim Drive, Suite B, Meadow Lakes, Alaska 99623
Phone: 907-232-2845 - Email: info@mlccak.org - Website: www.mlccak.org

Matanuska Susitna Borough
Platting Board and staff
Attn: matthew.goddard@matsugov.us

June 3, 2025

RE: Utopia View MSP platting action

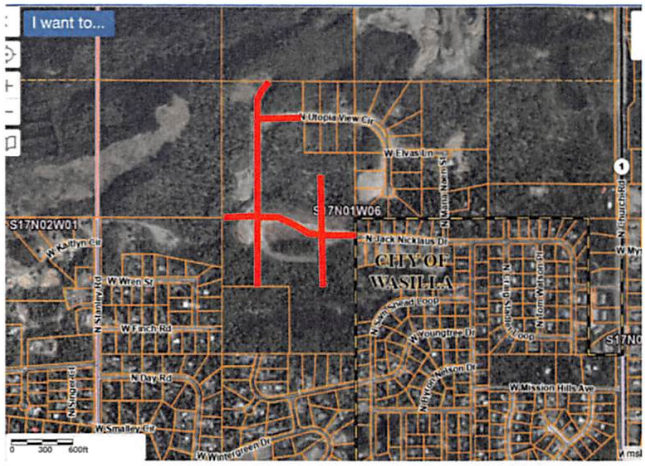
Dear Platting Board members and staff:

The Meadow Lakes Community Council membership would like to submit the following comments.

We would like to see construction of additional roads with temporary turnarounds to the north and south sides for future development and connectivity. Key concerns were:

A. We are aware of future development in area.
B. Emergency vehicle access.
C. Snow plowing efficiency.

The image below is an example.



The Council membership voted to submit these comments at our May 14, 2025, meeting.

Sincerely,

Camden Yehle

Camden Yehle, Meadow Lakes Community Council Secretary

Matthew Goddard

From: Ardie Buechner <asbuechner@gmail.com>
Sent: Friday, May 30, 2025 7:26 PM
To: Platting
Subject: 19 June Public Hearing: Utopia View II Subdivision

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
To the MatSu Borough Platting Board

It is with an emphatic OBJECTION for the proposed subdivision by FOXGLOVE, LLC. There is no plan for an additional roadway outlet for the subdivision. Planning a new subdivision/neighborhood with the disregard of traffic is shortsighted. Until the owner can also plan for an additional outlet to Spruce onto Church Road for the newest subdivision it will be an objection and concern.

Ardie Buechner

ENSTAR Natural Gas Company, LLC
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

May 19, 2025

Matanuska-Susitna Borough, Platting Division
350 East Dahlia Avenue
Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company, LLC has reviewed preliminary plat **UTOPIA VIEW II (MSB Case # 2025-061)** and advises that ENSTAR has an existing 15FT wide natural gas easement located within Utopia View II.

1. Please add a note which refers to ENSTAR 15FT wide natural gas easement, said easement can be found under recording number 2022-011389-0.

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

James Christopher
Right Of Way & Permitting Agent
ENSTAR Natural Gas Company, LLC

ALASKA

2022 – 011389 – 0

Recording District 311 Palmer **CC**

05/17/2022 02:12 PM **Page 1 of 2**

ENSTAR Natural Gas Company
RIGHT-OF-WAY EASEMENT

FOXGLOVE, LLC, whose current mailing address is 3201 E Tamarak Ave, Wasilla, AK 99654, hereinafter called Grantor, for Ten Dollars, ($10.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, does hereby convey and warrant to **ENSTAR Natural Gas Company, a division of SEMCO Energy, Inc., whose address is P.O. Box 190288, Anchorage, Alaska 99519-0288,** hereinafter called Grantee, its successors and assigns, a right-of-way easement to construct, lay, maintain, operate, alter, repair, remove, and replace pipelines and appurtenance, including metering and regulation facilities, thereto for the transportation of natural gas under, upon, over and through lands which the Grantor owns or in which the Grantor has an interest, situated in the **Palmer** Recording District, Third Judicial District, State of Alaska, and more particularly described as follows:

A natural gas easement situated over all that part of the West one-half of the Southwest one-quarter of the Northeast one-quarter (W1/2 SW1/4 NE1/4), and the Northeast one-quarter of the Southeast one-quarter of the Northwest one-quarter (NE1/4 SE1/4 NW1/4), and the Northwest one-quarter of the Southeast one-quarter of the Northwest one-quarter, and the Southwest one-quarter of the Southeast one-quarter of the Northwest one-quarter (SW1/4 SE1/4 NW1/4), of Section 6, Township 17 North, Range 1 West, Seward Meridian, State of Alaska.

Providing that said easement shall reduce to a fifteen feet (15 FT) wide natural gas easement, centered on the natural gas pipelines installed under, over, upon, and through said parcel.

This easement shall automatically vacate upon dedication of a valid public right-of-way in which to install, maintain, repair, and replace natural gas facilities is appropriately situated over the natural gas facilities installed hereunder, and an adequate utility permit allowing for installation of natural gas facilities is conveyed from the permitting authority.

The Grantee, its successor and assigns, is hereby expressly given and granted the right to assign said right-of-way easement herein granted and conveyed, or any part thereof or interest herein. The same shall be divisible among two or more owners as to any right or rights granted hereunder so that each assignee or owner shall have the rights and privileges herein granted, to be enjoyed either in common or in severalty.

This easement is given to the Grantee, its successors and assigns, with right of ingress and egress from the premises for the purposes herein granted:

The said Grantor is to fully use and enjoy said premises except for the purposes herein granted to the said Grantee and the said Grantor shall not construct or permit to be constructed any house, structures or obstructions on or over said gas easement that will interfere with the construction, maintenance, repair or operation of pipelines or appurtenance, including metering and regulation facilities, constructed hereunder and will not change the grade of such pipelines.

Grantee hereby agrees to bury all pipeline improvements to sufficient depth to not interfere with cultivation of the soil and agrees to repair or replace in kind, to prior existing condition, damaged landscaping, fencing, roads, parking areas and related improvements which may arise from the construction, maintenance, operation of said lines, and replacement, upgrade or addition of new gas lines.

The Grantor covenants with ENSTAR that they have good title to said lands and have full authority to grant said easement, either jointly or severally, and acknowledge they executed this agreement freely and voluntarily for the uses and purposes herein stated, in all cases holding ENSTAR harmless against claimants, heirs, successors, assigns and remaindermen.

FOXGLOVE, LLC

By: Ashlee Stetson
Its: MANAGER
Date: 3-21-22

CORPORATE ACKNOWLEDGMENT

STATE OF ALASKA)
) SS
THIRD JUDICIAL DISTRICT)

This certifies that on this 21st day of MARCH, 2022, before me, the undersigned, a Notary Public in and for the State of ALASKA, personally appeared Ashlee Stetson, authorized representative of **FOXGLOVE, LLC,** and known to me to be the person named as the Grantor in the foregoing easement and they acknowledged to me that they executed the same freely and voluntarily for the uses and purposes therein stated, and of oath stated they have Full Authority to grant said easement:

WITNESS my hand and official seal the day and year in this certificate first above written.

Michelle Clapp
Notary Public, State of ALASKA

STATE OF ALASKA
NOTARY PUBLIC
Michelle Clapp
My Commission Expires Mar 12, 2023

Please Return To:
ENSTAR Natural Gas Company
Engineering Department, Right of Way Section
PO Box 190288
Anchorage, AK 99519-0288

Grid: NW3954 & NW3955
Prop: 8286

Page 2 of 2
2022 – 011389 – 0

Matthew Goddard

From: OSP Design Group <ospdesign@gci.com>
Sent: Thursday, May 29, 2025 5:17 PM
To: Matthew Goddard
Cc: OSP Design Group
Subject: RE: RFC Utopia View II (MG)
Attachments: Agenda Plat (40).pdf

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Matthew,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,
GCI | OSP Design
1001 Northway Dr., 1st Floor, Anchorage, AK 99508
e: OSPDesign@gci.com | **w:** www.gci.com

From: Matthew Goddard <Matthew.Goddard@matsugov.us>
Sent: Tuesday, May 13, 2025 12:53 PM
To: sarah.myers@alaska.gov; colton.percy@alaska.gov; Cindy Wellman <cwellman@cityofwasilla.gov>; Planning <planning@cityofwasilla.gov>; PW Shared <publicworks@cityofwasilla.gov>; Crystal Nygard <cnygard@cityofwasilla.gov>; jbarnett@cityofwasilla.gov; Tim Swezey <tim.swezey@mlccak.org>; Patricia Fisher <psfisherak49@gmail.com>; information@mlccak.org; camden.yehle@gmail.com; lana@mtaonline.net; Michael Keenan <Michael.Keenan@matsugov.us>; Jeffrey Anderson <Jeffrey.Anderson@matsugov.us>; Fire Code <Fire.Code@matsugov.us>; Brian Davis <Brian.Davis@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; Land Management <Land.Management@matsugov.us>; Jillian Morrissey <Jillian.Morrissey@matsugov.us>; Tom Adams <Tom.Adams@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Daniel Dahms <Daniel.Dahms@matsugov.us>; Tammy Simmons <Tammy.Simmons@matsugov.us>; Pre-Design & Engineering <pde@matsugov.us>; Amie Jacobs <Amie.Jacobs@matsugov.us>; Katrina Kline <katrina.kline@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Code Compliance <Code.Compliance@matsugov.us>; Kendra Johnson <Kendra.Johnson@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Taunnie Boothby <Taunnie.Boothby@matsugov.us>; msbaddressing <msbaddressing@matsugov.us>; eric.r.schuler@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Andrew Fraiser <andrew.fraiser@enstarnaturalgas.com>; ROW <row@enstarnaturalgas.com>; Right of Way Dept. <row@mtasolutions.com>; OSP Design Group <ospdesign@gci.com>; mearow@mea.coop
Subject: RFC Utopia View II (MG)

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

Hello,

The following link is a request for comments for the proposed Utopia View II.
Please ensure all comments have been submitted by May 30, 2025, so they can be incorporated in the staff report packet that will be presented at the platting board hearing.

Utopia View II

Feel free to contact me if you have any questions.

Thank you,

Matthew Goddard
Platting Technician
907-861-7881
Matthew.Goddard@matsugov.us

PLANNING AND LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THE SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY THE PLAT RESOLUTION No. __________ DATED __________ 20___, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE RECORDER IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA.

____________________, 20___
Date

____________________ ATTEST: ____________________
Planning and Land Use Director Platting Clerk

CERTIFICATION OF PAYMENT OF TAXES

I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH ____________________, 20___, AGAINST THE PROPERTY INCLUDED IN THE SUBDIVISION, OR RESUBDIVISION, HEREON, HAVE BEEN PAID.

____________________, 20___ ____________________
Date Tax Collection Official (MATANUSKA-SUSITNA BOROUGH)

OWNERSHIP & DEDICATION CERTIFICATE

WE CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE HEREBY ADOPT THIS PLAN OF SUBDIVISION BY OUR FREE CONSENT, AND WE HEREBY DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH AND GRANT ALL EASEMENTS TO THE USE SHOWN.

____________________ ____________________
FOXGLOVE LLC Date
ASHLEE S. STETSON - MANAGER
3201 E. TAMARAK AVE
WASILLA, AK 99654

NOTARY'S ACKNOWLEDGMENT

SUBSCRIBED AND SWORN TO ME THIS ________ DAY

OF ____________, 20___

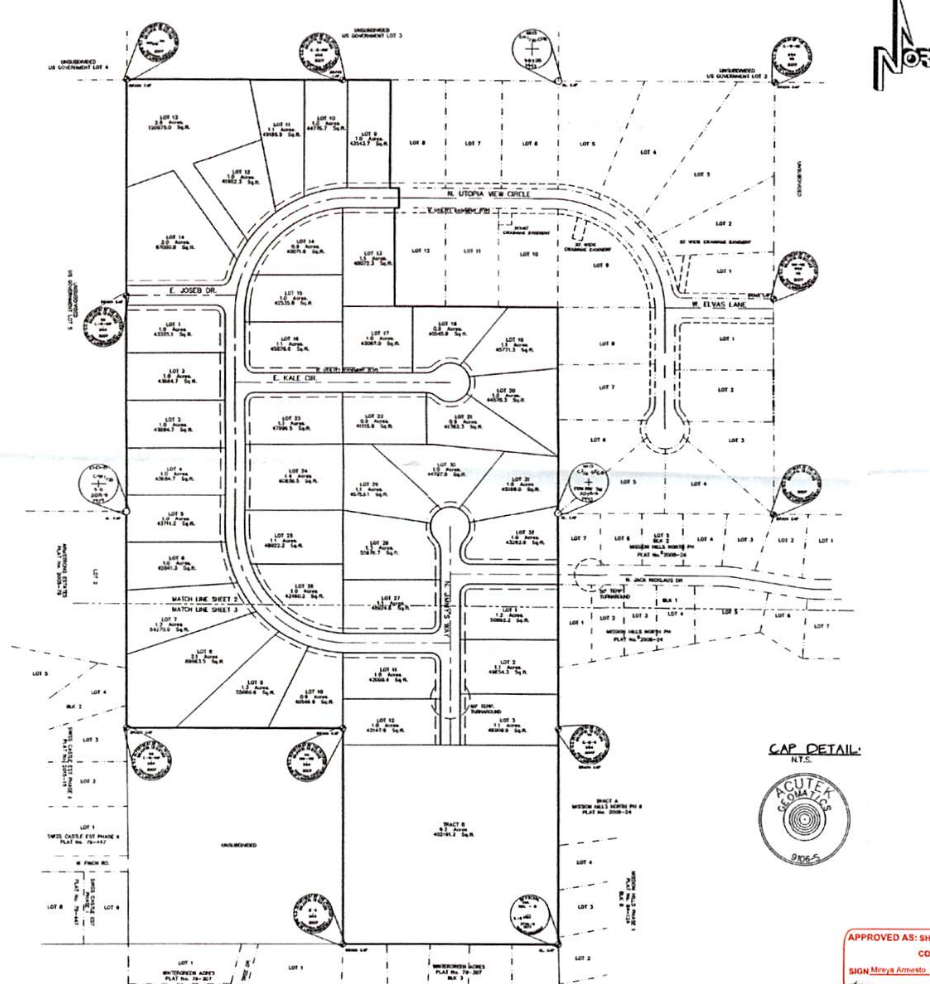
FOR ____________________

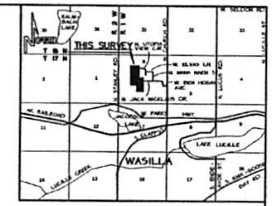
MY COMMISSION EXPIRES: ____________________

____
NOTARY PUBLIC FOR ALASKA

GENERAL NOTES

1. THERE MAY BE FEDERAL, STATE AND LOCAL REQUIREMENTS GOVERNING LAND USE. THE INDIVIDUAL PARCEL OWNER SHALL OBTAIN A DETERMINATION WHETHER THESE REQUIREMENTS APPLY TO THE DEVELOPMENT OF THE PARCELS SHOWN ON THE PLAT TO BE RECORDED.
2. ALL RECORD INFORMATION DERIVED FROM UTOPIA MEADOWS PLAT NO. 2023-129, THE PALMER RECORDING DISTRICT.
3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS AND RECOMMENDATIONS OF THE STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERNS THOSE SYSTEMS.
4. BLANKET EASEMENT GRANTED TO MATANUSKA ELECTRIC ASSOCIATION, INC., RECORDED SEPTEMBER 1, 2021, AS RECEPTION NO. 2021-025870-0 AND JUNE 23, 2023 AS RECEPTION NO. 2023-010747-0.
5. TERMS, COVENANTS, CONDITIONS AND PROVISIONS, INCLUDING RIGHTS-OF-WAY AND EASEMENTS AS CONTAINED IN THE ALASKA NATIVE CLAIMS SETTLEMENT ACT DATED DECEMBER 18, 1971, U.S. PUBLIC LAW 92-203, 85 STAT. 688, 43 U.S.C.A. 1601, ET SEQ, AND ANY AMENDMENTS AND ADDITIONS THERETO, AND ANY REGULATIONS ARISING THEREFROM.
6. BLANKET EASEMENT GRANTED TO MATANUSKA TELECOM ASSOCIATION, INC., RECORDED APRIL 29, 2022 AS RECEPTION NO. 2022-009626-0.





VICINITY MAP
1" = 1 MILE

LEGEND

RECORD & MEASURED DATA (PLAT No. 2023-129)	(N 90°00'00" E)
MEASURED DATA	N 90°00'00" E
PROPERTY LINES	
ADJACENT PROPERTY LINES	
EASEMENT LINES	
CENTER LINE	
FOUND 3" BRASS CAP	
FOUND 3" ALUMINUM CAP	
SET 5/8" REBAR W/PLASTIC CAP ON ALL TANGENCY AND CURVATURE POINTS, SEE CAP DETAIL	
RADIAL LINES	(R)
NON-RADIAL LINES	(NR)

SURVEYOR'S CERTIFICATE

I, TERRY L. NICODEMUS, L.S. 9106, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Agenda Copy

STATE OF ALASKA 49th Terry L. Nicodemus No. 9106-S REGISTERED PROFESSIONAL LAND SURVEYOR 4/11/25

RECEIVED
APR 15 2025
PLATTING

CAP DETAIL:
N.T.S.

APPROVED AS: SHOWN ☒
CORRECTED ☐
SIGN Mireya Armesto DATE 05/29/2025
GCI ENGINEERING & DESIGN

PRELIMINARY PLAT OF

UTOPIA VIEW II

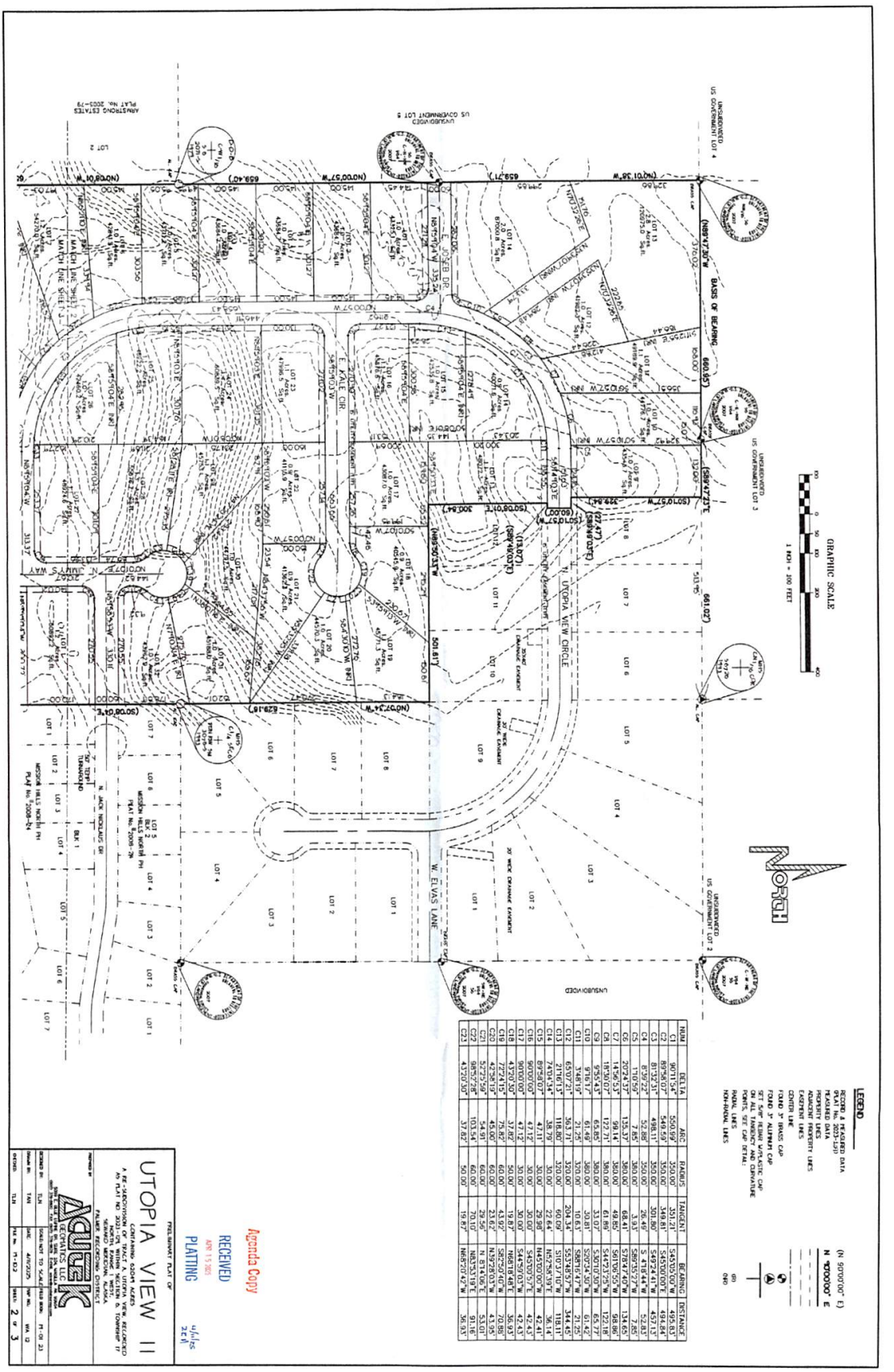
CONTAINING 62.049 ACRES

A RE-SUBDIVISION OF TRACT A, UTOPIA VIEW, RECORDED AS PLAT NO. 2023-129, WITHIN SECTION 6, TOWNSHIP 17 NORTH, RANGE 1 WEST, SEWARD MERIDIAN, ALASKA.

PALMER RECORDING DISTRICT

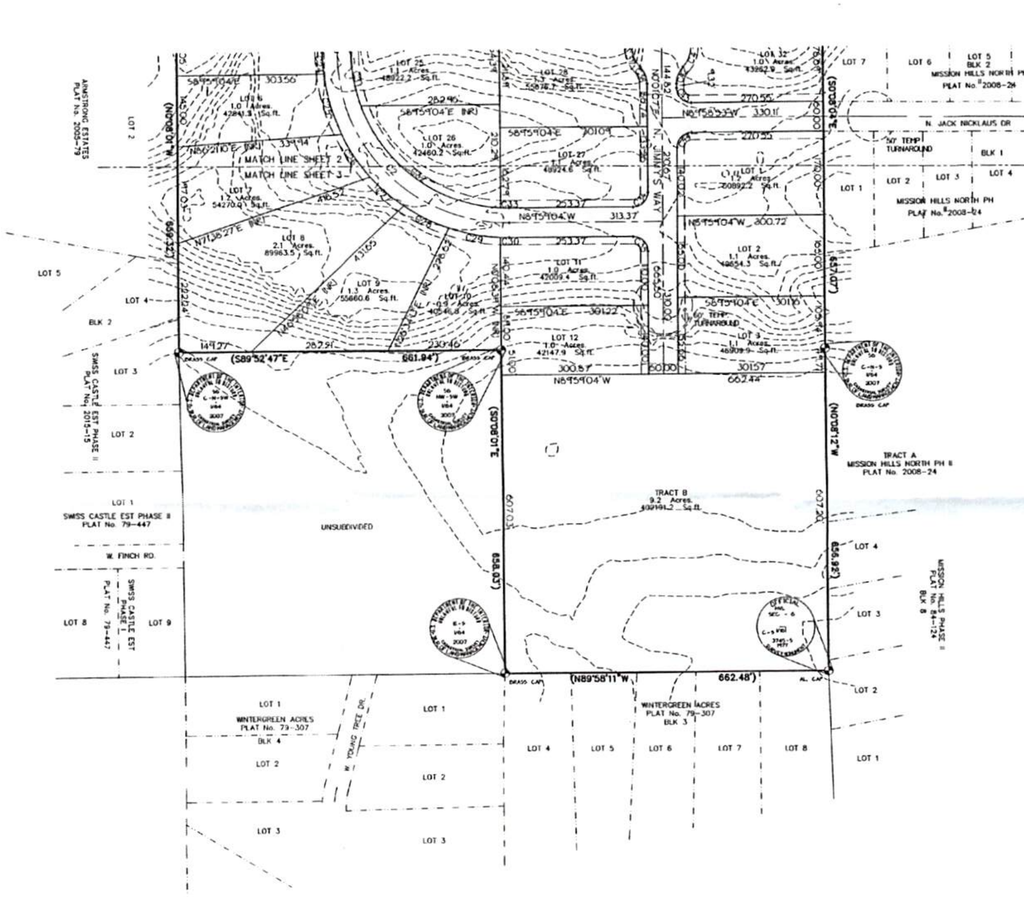
PREPARED BY
ACUTEK GEOMATICS LLC
5009 E. BLUE LUPINE DR. SUITE 104, WASILLA AK 99654

DESIGNED BY:	TLN	SCALE:	NOT TO SCALE	FIELD BOOK:	M-01 23
DRAWN BY:	TAN	DATE:	4/11/2025	MAP NO.:	WA 12
CHECKED:	TLN	FILE No.	M-10.2	SHEET:	1 of 3



NUM	DELTA	ARC	RADIUS	TANGENT	BEARING	DISTANCE
C1	90°01'34"	550.69'	350.00'	351.21'	S45°00'00"W	495.83'
C2	89°58'26"	549.81'	350.00'	350.79'	S45°00'00"E	495.24'
C3	81°32'01"	498.11'	350.00'	300.80'	S45°00'00"W	457.14'
C4	8°29'22"	52.88'	350.00'	26.49'	S 41°14'41" W	52.83'
C5	1°10'59"	7.85'	380.00'	3.93'	S89°35'27"W	7.85'
C6	20°24'37"	135.37'	380.00'	68.41'	S78°47'40"W	134.65'
C7	14°56'03"	99.14'	380.00'	49.85'	S61°06'56"W	98.86'
C8	19°30'01"	122.21'	380.00'	61.69'	S44°23'25"W	121.68'
C9	9°16'11"	61.49'	380.00'	30.81'	S32°04'30"W	61.42'
C10	1°46'19"	21.25'	320.00'	10.63'	S58°16'47"W	21.25'
C11	65°07'21"	363.71'	320.00'	204.34'	S53°48'57"W	344.45'
C12	21°16'13"	118.80'	320.00'	60.09'	S10°37'10"W	118.11'
C13	7°43'34"	38.70'	320.00'	22.64'	N52°58'39"E	38.14'
C14	90°00'00"	47.12'	30.00'	30.00'	S45°00'00"W	42.43'
C15	90°00'00"	47.12'	30.00'	30.00'	S45°00'00"E	42.43'
C16	90°00'00"	47.12'	30.00'	30.00'	S45°00'00"W	42.43'
C17	43°30'30"	37.82'	50.00'	19.87'	N68°16'45"E	36.93'
C18	77°24'15"	75.82'	60.00'	43.92'	S82°20'40"W	70.86'
C19	43°30'30"	45.00'	60.00'	23.62'	N39°28'05"W	43.95'
C20	42°58'10"	44.98'	60.00'	23.62'	S 3°43'05" E	43.95'
C21	98°57'38"	103.61'	60.00'	70.56'	N 83°43'05" E	91.31'
C22	43°30'30"	37.82'	50.00'	19.87'	N68°20'45"W	36.93'

NUM	BEARING	DISTANCE
L1	S45°00'00"W	495.83'
L2	S45°00'00"W	457.14'
L3	S45°00'00"W	457.14'
L4	S 41°14'41" W	52.83'
L5	S89°35'27"W	7.85'
L6	S78°47'40"W	134.65'
L7	S61°06'56"W	98.86'
L8	S44°23'25"W	122.18'
L9	S32°04'30"W	61.42'
L10	S58°16'47"W	21.25'
L11	S53°48'57"W	344.45'
L12	S10°37'10"W	118.11'
L13	N52°58'39"E	36.14'
L14	S45°00'00"W	42.43'
L15	S45°00'00"W	42.43'
L16	S45°00'00"W	42.43'
L17	N68°16'45"E	36.93'
L18	S82°20'40"W	70.86'
L19	N39°28'05"W	43.95'
L20	S 3°43'05" E	43.95'
L21	N 83°43'05" E	53.01'
L22	N68°20'45"W	36.93'



LEGEND

RECORD & MEASURED DATA (PLAT No. 2023-124)	(N 90°00'00" E)
MEASURED DATA	N 90°00'00" E
PROPERTY LINES	
ADJACENT PROPERTY LINES	
EASEMENT LINES	
CENTER LINE	
FOUND 3" BRASS CAP	
FOUND 3" ALUMINUM CAP	
SET 5/8" REBAR W/PLASTIC CAP ON ALL TANGENCY AND CURVATURE POINTS, SEE CAP DETAIL:	
RADIAL LINES	(R)
NON-RADIAL LINES	(NR)

GRAPHIC SCALE

100 0 50 100 200 400

1 INCH = 100 FEET

NUM	DELTA	ARC	RADIUS	TANGENT	BEARING	DISTANCE
C24	6°32'45"	43.41'	380.00'	21.73'	S 3°17'19"E	43.39'
C25	19°27'38"	129.07'	380.00'	65.16'	S16°17'30"E	128.45'
C26	15°49'50"	104.99'	380.00'	52.83'	S33°56'14"E	104.66'
C27	13°41'57"	90.86'	380.00'	49.65'	S48°42'08"E	90.64'
C28	15°27'31"	102.52'	380.00'	51.58'	S63°16'52"E	102.21'
C29	16°13'18"	107.59'	380.00'	54.15'	S79°07'17"E	107.23'
C30	2°45'08"	18.25'	380.00'	9.13'	S88°36'30"E	18.25'
C31	19°55'46"	111.31'	320.00'	56.22'	S 9°58'50"E	110.75'
C32	66°56'31"	373.87'	320.00'	211.57'	S53°24'58"E	352.97'
C33	3°05'50"	17.30'	320.00'	8.65'	S88°26'09"E	17.30'
C34	89°59'49"	47.12'	30.00'	30.00'	N45°01'02"E	42.43'
C35	90°00'11"	47.13'	30.00'	30.00'	N44°58'58"W	42.43'
C36	43°20'30"	37.82'	50.00'	19.87'	N21°39'08"W	36.93'
C37	51°51'12"	54.30'	60.00'	29.17'	S17°23'47"E	52.47'
C38	53°30'28"	56.03'	60.00'	30.25'	S35°17'03"W	54.02'
C39	53°30'28"	56.03'	60.00'	30.25'	S88°47'32"W	54.02'
C40	53°30'28"	56.03'	60.00'	30.25'	N37°42'00"W	54.02'
C41	54°18'24"	56.87'	60.00'	30.77'	N16°12'26"E	54.76'
C42	43°20'30"	37.82'	50.00'	19.87'	S21°41'22"W	36.93'
C43	90°00'00"	47.12'	30.00'	30.00'	S44°58'53"E	42.43'
C44	90°00'00"	47.12'	30.00'	30.00'	S45°01'07"W	42.43'

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4/11/25
2CA

PRELIMINARY PLAT OF

UTOPIA VIEW II

CONTAINING 62049 ACRES

A RE-SUBDIVISION OF TRACT A, UTOPIA VIEW, RECORDED AS PLAT NO. 2023-124, WITHIN SECTION 6, TOWNSHIP 17 NORTH, RANGE 1 WEST, SEWARD MERIDIAN, ALASKA. PALMER RECORDING DISTRICT

PREPARED BY

ACUTEK GEOMATICS LLC

DESIGNED BY:	TLN	SCALE:	NOT TO SCALE	FIELD BOOK:	M-01 23
DRAWN BY:	TAN	DATE:	4/11/2025	MAP NO.:	WA 12
CHECKED:	TLN	FILE No.	M-10.2	SHEET:	3 of 3

PLANNING AND LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THE SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY THE PLAT RESOLUTION No. _____ DATED _____ 20____, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE RECORDER IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA.

_____, 20____.
Date

_____ ATTEST: _____
Planning and Land Use Director Platting Clerk

CERTIFICATION OF PAYMENT OF TAXES

I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH _____, 20___, AGAINST THE PROPERTY INCLUDED IN THE SUBDIVISION, OR RESUBDIVISION, HEREON, HAVE BEEN PAID.

_____, 20___. _____
Date Tax Collection Official (MATANUSKA-SUSITNA BOROUGH)

OWNERSHIP & DEDICATION CERTIFICATE

WE CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE HEREBY ADOPT THIS PLAN OF SUBDIVISION BY OUR FREE CONSENT, AND WE HEREBY DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH AND GRANT ALL EASEMENTS TO THE USE SHOWN.

_____ _____
Date

FOXGLOVE LLC
ASHLEE S. STETSON - MANAGER
3201 E. TAMARAK AVE
WASILLA , AK 99654

NOTARY'S ACKNOWLEDGMENT

SUBSCRIBED AND SWORN TO ME THIS _____ DAY

OF _____, 20___.

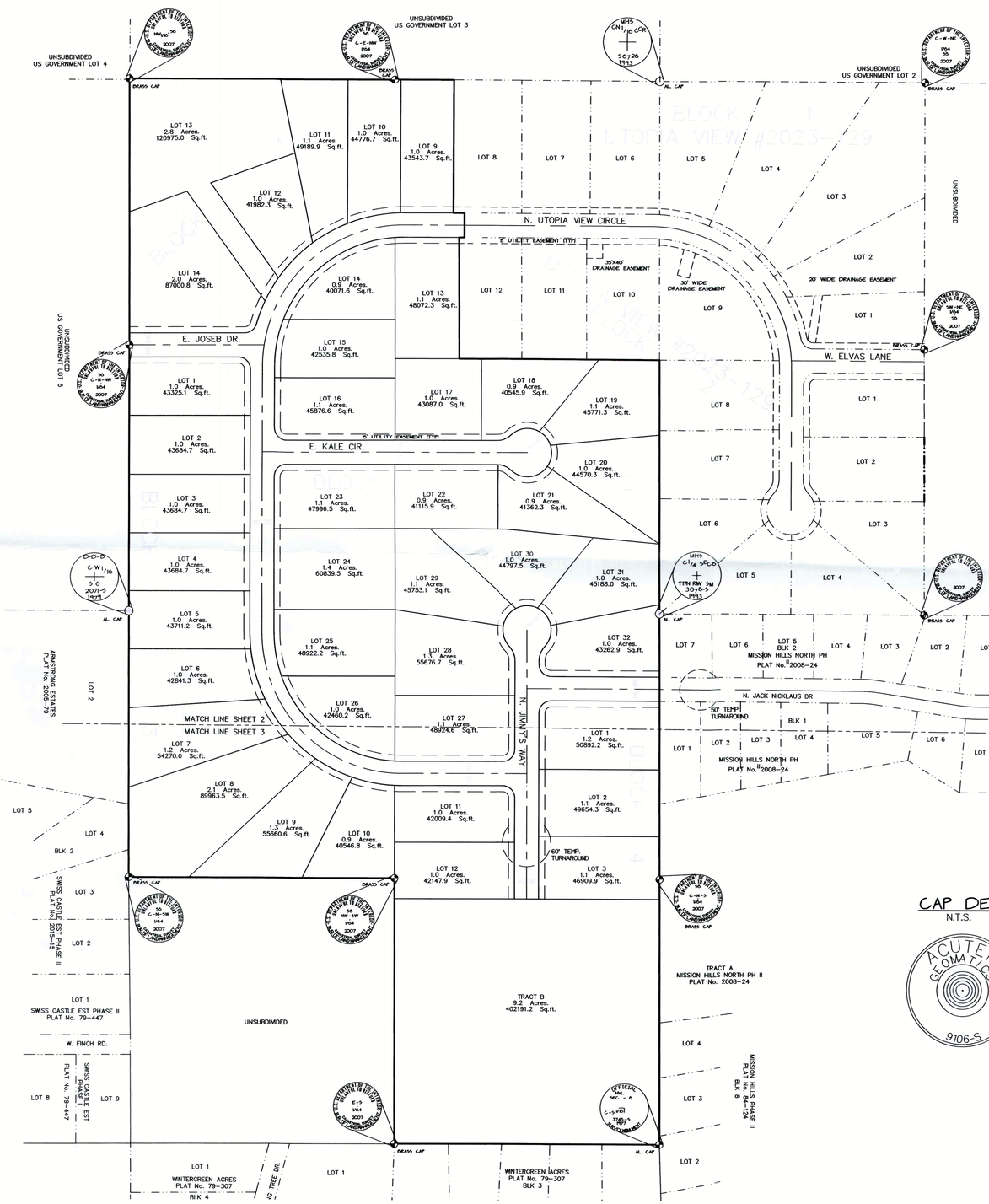
FOR _____.

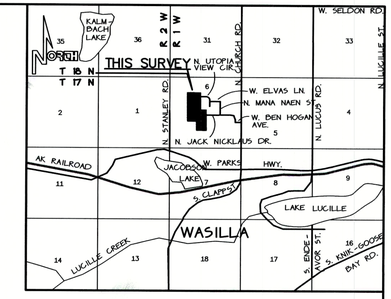
MY COMMISSION EXPIRES: _____.

_____
NOTARY PUBLIC FOR ALASKA

GENERAL NOTES

1. THERE MAY BE FEDERAL, STATE AND LOCAL REQUIREMENTS GOVERNING LAND USE. THE INDIVIDUAL PARCEL OWNER SHALL OBTAIN A DETERMINATION WHETHER THESE REQUIREMENTS APPLY TO THE DEVELOPMENT OF THE PARCELS SHOWN ON THE PLAT TO BE RECORDED.
2. ALL RECORD INFORMATION DERIVED FROM UTOPIA MEADOWS PLAT NO. 2023-129, THE PALMER RECORDING DISTRICT.
3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS AND RECOMMENDATIONS OF THE STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERNS THOSE SYSTEMS.
4. BLANKET EASEMENT GRANTED TO MATANUSKA ELECTRIC ASSOCIATION, INC., RECORDED SEPTEMBER 1, 2021, AS RECEPTION NO. 2021-025870-0 AND JUNE 23, 2023 AS RECEPTION NO. 2023-010747-0.
5. TERMS, COVENANTS, CONDITIONS AND PROVISIONS, INCLUDING RIGHTS-OF-WAY AND EASEMENTS AS CONTAINED IN THE ALASKA NATIVE CLAIMS SETTLEMENT ACT DATED DECEMBER 18, 1971, U.S. PUBLIC LAW 92-203, 85 STAT. 688, 43 U.S.C.A. 1601, ET SEQ, AND ANY AMENDMENTS AND ADDITIONS THERETO, AND ANY REGULATIONS ARISING THEREFROM.
6. BLANKET EASEMENT GRANTED TO MATANUSKA TELECOM ASSOCIATION, INC., RECORDED APRIL 29, 2022 AS RECEPTION NO. 2022-009626-0.





VICINITY MAP
1" = 1 MILE

NORTH

LEGEND

RECORD & MEASURED DATA (PLAT No. 2023-129)	(N 90°00'00" E)
MEASURED DATA	N 90°00'00" E
PROPERTY LINES	
ADJACENT PROPERTY LINES	
EASEMENT LINES	
CENTER LINE	
FOUND 3" BRASS CAP	
FOUND 3" ALUMINUM CAP	
SET 5/8" REBAR W/PLASTIC CAP ON ALL TANGENCY AND CURVATURE POINTS, SEE CAP DETAIL:	
RADIAL LINES	(R)
NON-RADIAL LINES	(NR)

CAP DETAIL:
N.T.S.

ACUTEK GEOMATICS 9106-S

SURVEYOR'S CERTIFICATE

I, TERRY L. NICODEMUS, L.S. 9106, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

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APR 15 2025
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STATE OF ALASKA 49th
Terry L. Nicodemus
No. 9106-S
4/11/25
REGISTERED PROFESSIONAL LAND SURVEYOR

PRELIMINARY PLAT OF

UTOPIA VIEW II

CONTAINING 62.049 ACRES

A RE-SUBDIVISION OF TRACT A, UTOPIA VIEW, RECORDED AS PLAT NO. 2023-129, WITHIN SECTION 6, TOWNSHIP 17 NORTH, RANGE 1 WEST, SEWARD MERIDIAN, ALASKA.

PALMER RECORDING DISTRICT

PREPARED BY
ACUTEK GEOMATICS LLC
5099 E. BLUE LUPINE DR. SUITE 104, WASILLA AK 99654
(907) 376-8900 FAX (907) 376-9629 E-MAIL admin@acuteksurvey.com

DESIGNED BY: TLN	SCALE: NOT TO SCALE	FIELD BOOK:	19-01 23
DRAWN BY: TAN	DATE: 4/11/2025	MAP NO.:	WA 12
CHECKED: TLN	FILE No. 19-10.2	SHEET:	1 OF 3

GRAPHIC SCALE

100 0 50 100 200 400

1 INCH = 100 FEET

NORTH

LEGEND

RECORD & MEASURED DATA (PLAT No. 2023-129)	(N 90°00'00" E)
MEASURED DATA	N 90°00'00" E
PROPERTY LINES	
ADJACENT PROPERTY LINES	
EASEMENT LINES	
CENTER LINE	
FOUND 3" BRASS CAP	
FOUND 3" ALUMINUM CAP	
SET 5/8" REBAR W/PLASTIC CAP ON ALL TANGENCY AND CURVATURE POINTS, SEE CAP DETAIL:	
RADIAL LINES	(R)
NON-RADIAL LINES	(NR)

NUM	DELTA	ARC	RADIUS	TANGENT	BEARING	DISTANCE
C1	90°11'54"	550.99'	350.00'	351.21'	S45°05'00"W	495.83'
C2	89°58'07"	549.59'	350.00'	349.81'	S45°00'00"E	494.84'
C3	81°32'31"	498.11'	350.00'	301.80'	S49°24'41"W	457.13'
C4	8°39'22"	52.88'	350.00'	26.49'	S 4°18'44"W	52.83'
C5	1°10'59"	7.85'	380.00'	3.93'	S89°35'27"W	7.85'
C6	20°24'37"	135.37'	380.00'	68.41'	S78°47'40"W	134.65'
C7	14°56'53"	99.14'	380.00'	49.85'	S61°06'55"W	98.86'
C8	18°30'07"	122.71'	380.00'	61.89'	S44°23'25"W	122.18'
C9	9°55'43"	65.85'	380.00'	33.07'	S30°10'30"W	65.77'
C10	9°16'17"	61.49'	380.00'	30.81'	S20°34'30"W	61.42'
C11	3°48'19"	21.25'	320.00'	10.63'	S88°16'47"W	21.25'
C12	65°07'21"	363.71'	320.00'	204.34'	S53°48'57"W	344.45'
C13	21°16'13"	118.80'	320.00'	60.09'	S10°37'10"W	118.11'
C14	74°04'34"	38.79'	30.00'	22.64'	N52°58'39"E	36.14'
C15	89°58'07"	47.11'	30.00'	29.98'	N45°00'00"W	42.41'
C16	90°00'00"	47.12'	30.00'	30.00'	S45°00'57"E	42.43'
C17	90°00'00"	47.12'	30.00'	30.00'	S44°59'03"W	42.43'
C18	43°20'30"	37.82'	50.00'	19.87'	N68°18'48"E	36.93'
C19	72°24'15"	75.82'	60.00'	43.92'	S82°50'40"W	70.88'
C20	42°58'19"	45.00'	60.00'	23.62'	N39°28'03"W	43.95'
C21	52°25'59"	54.91'	60.00'	29.56'	N 8°14'06"E	53.01'
C22	98°52'28"	103.54'	60.00'	70.10'	N83°53'19"E	91.16'
C23	43°20'30"	37.82'	50.00'	19.87'	N68°20'42"W	36.93'

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4/11/25
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PRELIMINARY PLAT OF

UTOPIA VIEW II

CONTAINING 62.049 ACRES

A RE-SUBDIVISION OF TRACT A, UTOPIA VIEW, RECORDED AS PLAT NO. 2023-129, WITHIN SECTION 6, TOWNSHIP 17 NORTH, RANGE 1 WEST, SEWARD MERIDIAN, ALASKA.
PALMER RECORDING DISTRICT

PREPARED BY
ACUTEK GEOMATICS LLC
5099 E. BLUE LUPINE DR. SUITE 104, WASILLA AK 99654
(907) 376-8800 FAX (907) 376-8629 E-MAIL admin@acutekurvey.com

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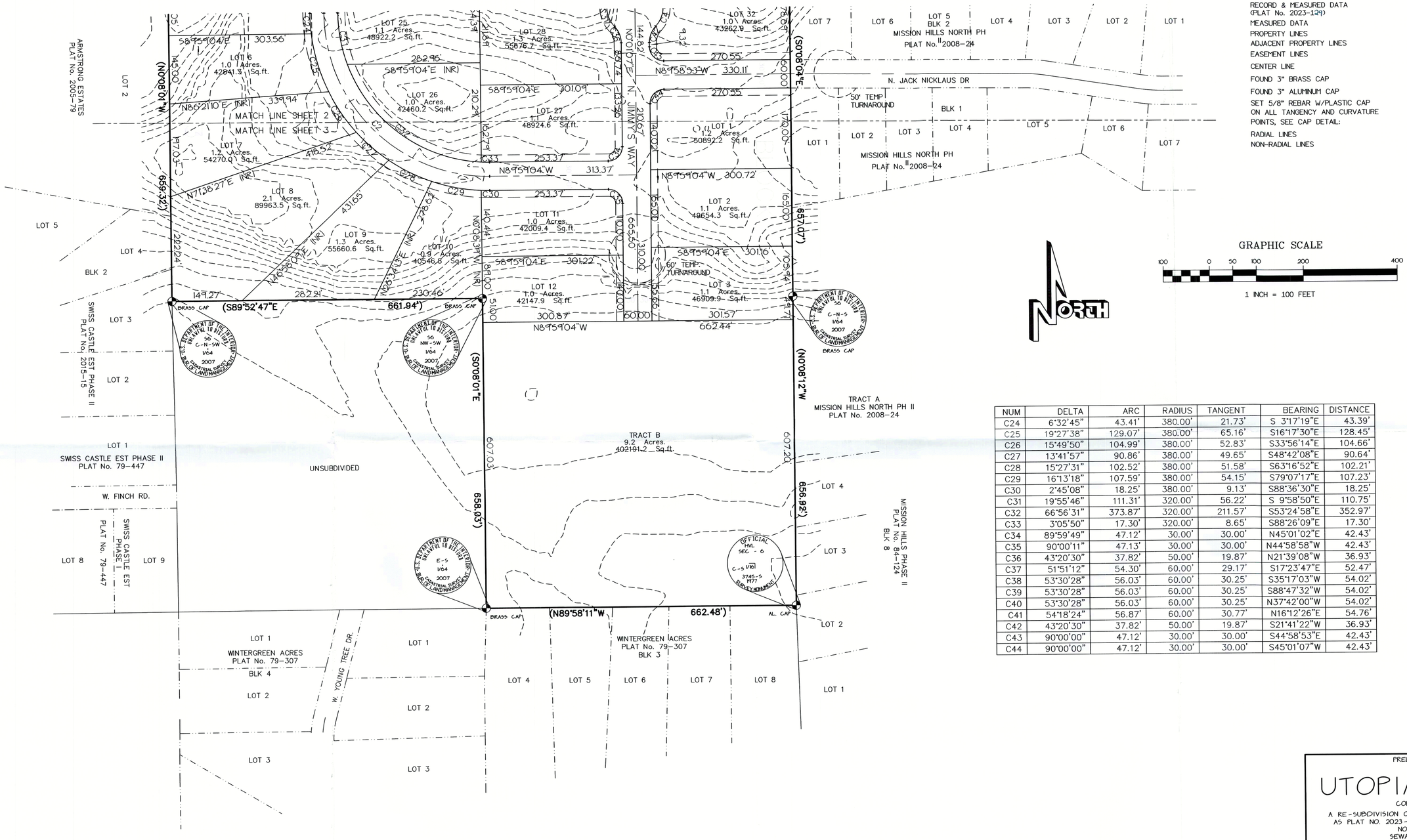
DRAWN BY:	TAN	DATE: 4/11/2025	MAP NO.: WA 12
CHECKED:	TLN	FILE No. 19-10.2	SHEET: 2 OF 3



LEGEND

- RECORD & MEASURED DATA (PLAT No. 2023-129)
- MEASURED DATA
- PROPERTY LINES
- ADJACENT PROPERTY LINES
- EASEMENT LINES
- CENTER LINE
- FOUND 3" BRASS CAP
- FOUND 3" ALUMINUM CAP
- SET 5/8" REBAR W/PLASTIC CAP ON ALL TANGENCY AND CURVATURE POINTS, SEE CAP DETAIL:
- RADIAL LINES
- NON-RADIAL LINES

(N 90°00'00" E)
N 90°00'00" E
(R)
(NR)

GRAPHIC SCALE

100 0 50 100 200 400

1 INCH = 100 FEET

NORTH

NUM	DELTA	ARC	RADIUS	TANGENT	BEARING	DISTANCE
C24	6°32'45"	43.41'	380.00'	21.73'	S 3°17'19"E	43.39'
C25	19°27'38"	129.07'	380.00'	65.16'	S16°17'30"E	128.45'
C26	15°49'50"	104.99'	380.00'	52.83'	S33°56'14"E	104.66'
C27	13°41'57"	90.86'	380.00'	49.65'	S48°42'08"E	90.64'
C28	15°27'31"	102.52'	380.00'	51.58'	S63°16'52"E	102.21'
C29	16°13'18"	107.59'	380.00'	54.15'	S79°07'17"E	107.23'
C30	2°45'08"	18.25'	380.00'	9.13'	S88°36'30"E	18.25'
C31	19°55'46"	111.31'	320.00'	56.22'	S 9°58'50"E	110.75'
C32	66°56'31"	373.87'	320.00'	211.57'	S53°24'58"E	352.97'
C33	3°05'50"	17.30'	320.00'	8.65'	S88°26'09"E	17.30'
C34	89°59'49"	47.12'	30.00'	30.00'	N45°01'02"E	42.43'
C35	90°00'11"	47.13'	30.00'	30.00'	N44°58'58"W	42.43'
C36	43°20'30"	37.82'	50.00'	19.87'	N21°39'08"W	36.93'
C37	51°51'12"	54.30'	60.00'	29.17'	S17°23'47"E	52.47'
C38	53°30'28"	56.03'	60.00'	30.25'	S35°17'03"W	54.02'
C39	53°30'28"	56.03'	60.00'	30.25'	S88°47'32"W	54.02'
C40	53°30'28"	56.03'	60.00'	30.25'	N37°42'00"W	54.02'
C41	54°18'24"	56.87'	60.00'	30.77'	N16°12'26"E	54.76'
C42	43°20'30"	37.82'	50.00'	19.87'	S21°41'22"W	36.93'
C43	90°00'00"	47.12'	30.00'	30.00'	S44°58'53"E	42.43'
C44	90°00'00"	47.12'	30.00'	30.00'	S45°01'07"W	42.43'

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4/11/25
2 of 4

PRELIMINARY PLAT OF

UTOPIA VIEW II

CONTAINING 62.049 ACRES
A RE-SUBDIVISION OF TRACT A, UTOPIA VIEW, RECORDED AS PLAT NO. 2023-129, WITHIN SECTION 6, TOWNSHIP 17 NORTH, RANGE 1 WEST, SEWARD MERIDIAN, ALASKA.
PALMER RECORDING DISTRICT

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DRAWN BY: TAN	DATE: 4/11/2025	MAP NO.:	WA 12
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