

SUBJECT: A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY SELECTING A PERMANENT SITE FOR BIRCHTREE CHARTER SCHOOL WITHIN A PORTION OF GOVERNMENT LOT 1 AND THE NE 1/4 NW1/4, SECTION 30, TOWNSHIP 18 NORTH, RANGE 1 EAST, S.M., PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA.

AGENDA OF: October 19, 2021

Assembly Action:

Approved under the consent  
Agenda 10-19-21 (BOM)

MANAGER RECOMMENDATION: Present to the Assembly for consideration.

APPROVED BY MICHAEL BROWN, BOROUGH MANAGER:

MB

Route To:	Department/Individual	Initials	Remarks
	Originator - A. Bradway	MB	
	Public Works Director	TDL	8 Oct 2021
	Planning and Land Use Director	J.D. (ACTIVE)	
	Community Development Director	CP	
	Emergency Services Director	KB	
	Finance Director	XXPOXH	10.8.21
	Borough Attorney	NS	
	Borough Clerk	ym 10/11/21	(BOM)

ATTACHMENT(S): Fiscal Note: YES \_\_\_\_\_ NO x  
 Resolution Serial No. 21-110 (3 pp)  
 Matanuska Susitna Borough School Board Resolution 20-007 (1 pp)  
 Borough Area Schools Site Selection Committee Resolution 21-03 (3 pp)  
 Planning Commission Resolution 21-25 (3 pp)  
 Site Map (1 pp)

Rough Order of Magnitude Cost Estimates Birchtree  
Charter School and Mat-Su Central School (8 pp)  
Rough Order of Magnitude Cost Estimates Birchtree  
Charter School Relocation to Shaw Elementary Parcel  
(10 pp)

**SUMMARY STATEMENT:**

On February 5, 2020, the Matanuska-Susitna Borough School Board approved Resolution 20-007, *A Resolution of the Matanuska-Susitna Borough School Board in support of the initiation of the formal process to identify the location, funding, and building of a permanent facility for Birchtree Charter School*. Birchtree Charter School and the District have leased a commercial building and property located near Trunk Road and the Palmer-Wasilla Highway from a private entity for ten years. Birchtree offers a unique educational program and serves around 400 students annually. Birchtree has requested a permanent facility and the District believes that a permanent site would be in the best interest of the school and the District. MSB 19.08.20(F) lays out the process for charter school site selection. Only charter schools in existence five years or more may request a permanent site.

In accordance with MSB 19.08.020 the Borough Area Schools Site Selection Committee (BASSSC) shall make recommendations to the Assembly regarding the location of school buildings. The BASSSC consists of Assembly members, School Board members, Planning Commission members, and at-large members. Charter schools may also select two members to sit on the BASSSC for matters related to their school's site selection process. The BASSSC was provided with detailed reports from MSB and District Staff and held three meetings (February 18, 2021; April 14, 2021; and August 4, 2021) to review potential school sites.

Note: Sites for Mat-Su Central School, Birchtree Charter School, and American Charter Academy were reviewed concurrently by the BASSSC, though each school was considered for its unique needs and characteristics.

Eight Matanuska Susitna Borough-owned sites were reviewed as potential permanent sites for Birchtree Charter School. Only MSB owned land was reviewed because; site-selection procedure is to review MSB-owned land before looking at agency or privately owned land, there were potentially suitable MSB-owned sites, and there is currently no funding allocated towards school site acquisition. These eight sites were selected for review after an evaluation by Borough Staff that included, in accordance with MSB 19.08.20, review of student population, school enrollment, transportation, relationship of proposed sites to other community facilities, multiple uses of the site, and other appropriate criteria. These criteria were reviewed by MSB staff in part through staff-scored

site suitability matrices.

After initial review by the BASSSC, only the Shaw Elementary site, the Stringfield site, and the Church-Seldon site were considered as potential sites for Birchtree. Once these potential sites were identified, more in depth site analyses including site development costs and access were, requested.

The attached documents *Rough Order of Magnitude Cost Estimates Birchtree Charter School and Mat-Su Central School*, and *Rough Order of Magnitude Cost Estimates Birchtree Charter School Relocation to Shaw Elementary Parcel* summarize the site-suitability and rough development cost for the three potential sites.

The Church-Seldon site was eliminated by the BASSSC after discussion, as it was too far outside of Birchtree's student cloud. This site was also shown to be the most expensive to develop, and Birchtree would likely be co-located with American Charter Academy on this site.

The Stringfield site, though the least expensive to develop and most centrally located, was eliminated by the BASSSC. This site is already the location of Pioneer Peak Elementary School and is the preferred site for Mat-Su Central School. If Birchtree were to also co-locate on this site, the representatives from Birchtree Charter expressed that there may not be a suitable amount of land for the school's needs.

Birchtree Charter School is a Waldorf philosophy based charter school currently located near the intersection of Trunk Road and the Palmer Wasilla Highway. This school has an enrollment of about 400 children annually, about the enrollment of a district elementary school. While charter schools do not have traditional location-based enrollment, the school has operated for about ten years and desires a permanent site proximate to its current location, to remain accessible to its current families. The school also prefers a location with ample open space to allow for their unique learning experience.

On June 28, 2021 Jeremy Chadwell, Chair of Birchtree's Academic Policy Committee, drafted a letter endorsing Site 4 the Shaw Elementary site. The two Birchtree representatives on the BASSSC endorsed this selection and stated that members of their Academic Policy Committee have toured the potential sites and determined that Shaw Elementary would fit their needs best. This site is located near Birchtree's current enrollment and provides ample open space.

After final review, the BASSSC unanimously approved Resolution 21-03 recommending the Shaw Elementary site as a permanent location

for Birchtree Charter School.

On October 18, 2021, the Matanuska Susitna Borough Planning Commission concurred with the findings of the School Board and BASSSC, approving Resolution 21-25 recommending the Shaw Elementary site.

**RECOMMENDATION OF ADMINISTRATION:**

Staff respectfully recommends that the Assembly adopt Resolution 21-110, selecting a site for the permanent location of Birchtree Charter School, with due consideration of the recommendation of the School Board, Planning Commission, and Borough Area Schools Site Selection Committee.





**OFFICE OF THE SCHOOL BOARD**

**MATANUSKA-SUSITNA BOROUGH SCHOOL BOARD  
RESOLUTION 20-007**

**A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH SCHOOL DISTRICT SCHOOL BOARD IN SUPPORT OF THE INITIATION OF THE FORMAL PROCESS TO IDENTIFY THE LOCATION, FUNDING, AND BUILDING OF A PERMANENT FACILITY FOR BIRCHTREE CHARTER SCHOOL.**

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**WHEREAS**, Birchtree Charter School and the Matanuska-Susitna Borough School District have leased a commercial building and property located near Trunk Road and the Palmer-Wasilla Highway from a private entity for 10 years for the purpose of a public charter school; and

**WHEREAS**, Birchtree Charter School continues to bring a unique and highly desired educational program to many families across the District, serving around 400 students annually; and

**WHEREAS**, Birchtree Charter School and its families are looking for the least expensive building options while meeting the needs of Birchtree's students through a Waldorf driven philosophy; and

**WHEREAS**, the location for Birchtree Charter School's future site needs to be centrally located between Wasilla and Palmer to provide a location allowing accessibility to our families throughout the District; and

**WHEREAS**, the Matanuska Borough has an Area School Site Selection Committee to ensure selection criteria are in place and addressed; and

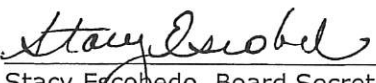
**WHEREAS**, funding sources and building types for Birchtree Charter School to move forward require a location, road, and land specifics; and

**NOW, THEREFORE BE IT RESOLVED** that the Mat-Su School Board support the initiation of the formal process to identify the location, funding, and building of a permanent facility for Birchtree Charter School.

**APPROVED** by the Mat-Su School Board this 5th day of February, 2020.

  
Mr. Thomas Bergey, Board President

  
Dr. Monica Goyette, Superintendent

ATTEST:   
Stacy Escobedo, Board Secretary

**MATANUSKA-SUSITNA BOROUGH  
AREA SCHOOLS SITE SELECTION COMMITTEE  
RESOLUTION SERIAL NO. 21-03**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH AREA SCHOOLS SITE SELECTION COMMITTEE RECOMMENDING A SITE FOR BIRCHTREE CHARTER SCHOOL.

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WHEREAS, the Matanuska-Susitna Borough School District is seeking to identify a site for the permanent location of Birchtree Charter School; and

WHEREAS, Matanuska-Susitna Borough 19.08.020(F) provides that charter schools existing five years or more may request a permanent facility; and

WHEREAS, Birchtree Charter School has leased a commercial building and property located near Trunk Road and the Palmer-Wasilla Highway from a private entity for 10 years; and

WHEREAS, the Mat-Su Borough Area Schools Site Selection Committee (the Committee) received a request from the Matanuska-Susitna School District to identify a suitable location for this school; and

WHEREAS, Matanuska-Susitna Borough 19.08.020(B) provides that the Committee make recommendations to the Assembly on requested school sites; and

WHEREAS, there is currently no funding allocated to school site procurement, thus, only Matanuska-Susitna Borough owned property was considered for selection; and

WHEREAS, Matanuska-Susitna Borough owned property within the area of Birchtree Charter School's families was reviewed for school site suitability, using criteria outlined in Matanuska-Susitna Borough code and represented through a site suitability criteria scoring matrix; and

WHEREAS, the review of Matanuska-Susitna Borough property, returned the "Shaw Elementary" site as a potential preferred location; and

WHEREAS, the preferred location is legally described as Government Lot 1 and the NE1/4NW1/4, Section 30, Township 18 North, Range 1 East, S.M., Palmer Recording District, Third Judicial District, State of Alaska.(Tax ID 18N01E30B002).

NOW THEREFORE BE IT RESOLVED that the Matanuska-Susitna Borough Area Schools Site Selection Committee does hereby recommend to the Matanuska-Susitna Borough School Board, Planning Commission, and Assembly that Government Lot 1 and the NE1/4NW1/4 be identified as a preferred location of a permanent facility for Birchtree Charter School.

ADOPTED by the Matanuska-Susitna Borough Area Schools Site Selection Committee this 4th day of August, 2021.

  
Thomas Bergey, Chairperson

Attest:

  
Adam Bradway, Planner II



By: Adam Bradway  
Introduced: October 4, 2021  
Public Hearing: October 18, 2021  
Action: Approved

**MATANUSKA-SUSITNA BOROUGH  
PLANNING COMMISSION RESOLUTION NO. PC 21-25**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION RECOMMENDING A PERMANENT SITE FOR BIRCHTREE CHARTER SCHOOL AT GOVERNMENT LOT 1 AND THE NE1/4NW1/4, SECTION 30, TOWNSHIP 18 NORTH, RANGE 1 EAST, S.M., PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA.

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WHEREAS, the Matanuska-Susitna Borough School District is seeking to identify a site for the permanent location of Birchtree Charter School; and

WHEREAS, Matanuska-Susitna Borough 19.08.020(F) provides that charter schools existing five years or more may request a permanent facility; and

WHEREAS, the Borough Area Schools Site Selection Committee (Site Selection Committee) received a request from the Matanuska-Susitna School Board to identify a suitable location for this school; and

WHEREAS, Matanuska-Susitna Borough Code 19.08.020 provides that the Site Selection Committee make recommendations to the Planning Commission, School Board, and Assembly on requested school sites; and



WHEREAS, the Site Selection Committee reviewed Matanuska-Susitna Borough owned property within the area of Birchtree's families for school site suitability, using criteria outlined in Matanuska-Susitna Borough Code and represented through a site suitability criteria scoring matrix; and

WHEREAS, the review of Matanuska-Susitna Borough property, returned the "Shaw Elementary" site as the potential preferred location; and

WHEREAS, the preferred location is legally described as Government Lot 1 and the NE1/4NW1/4, Section 30, Township 18 North, Range 1 East, S.M., Palmer Recording District, Third Judicial District, State of Alaska. (Tax ID 18N01E30B002); and

WHEREAS, a professional engineering firm performed a preliminary site evaluation, and a rough order of magnitude cost estimate for the development of the site; and

WHEREAS, the Site Selection Committee unanimously recommended Government Lot 1 and the NE1/4NW1/4as as a preferred location; and

WHEREAS, Matanuska-Susitna Borough Code 19.08.020 provides, the Assembly shall determine the location of school buildings with due consideration of the recommendation of the school board, planning commission and school site selection committee; and

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby concurs with the Borough Area Schools Site Selection Committee, recommending to the Assembly that Government Lot 1 and the NE1/4NW1/4 be identified as the preferred location of a permanent facility for Birchtree Charter School.

ADOPTED by the Matanuska-Susitna Borough Planning Commission this 18<sup>th</sup> day of October, 2021.

  
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COLLEEN VAGUE, Chair

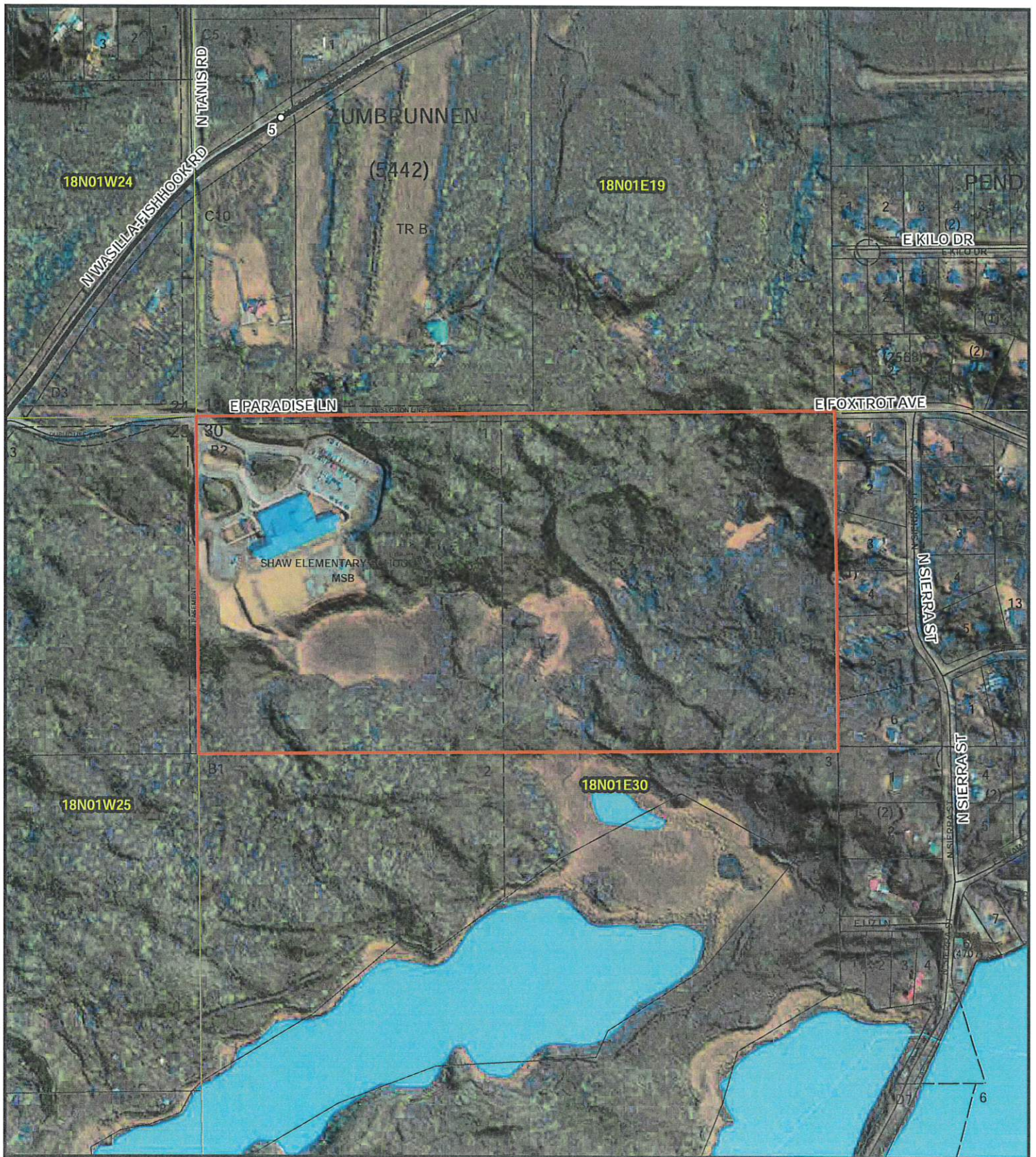
ATTEST

  
\_\_\_\_\_  
KAROL RIESE, Planning Clerk

(SEAL)

YES: 6 Commissioner Elder, Vague, Anderson, Allen, Chesbro, Mossanen  
NO: 1 Commissioner Glashan

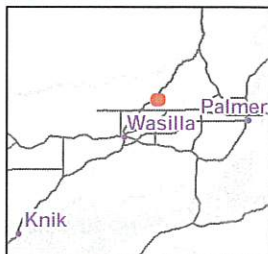




Matanuska - Susitna Borough  
Land and Resource  
Management Division



Potential School Sites  
MSB Land



  SELECTED PARCEL

SITE 4  
18N01E30B002  
76.81 ACRES  
SCHOOL/ SHAW ELEMENTARY



0 75 150 300 450 600  
Feet

Date: July 2019  
Source: MSB GIS, MSB LRMD, AK DOT  
Projection: NAD 83 AK ST PLN 24  
Location: SITE MSB  
Author: MSB LRMD

1M 21-214 RS 21-110



## MEMORANDUM

**DATE:** June 18, 2021

**TO:** Tony Weese, MSBSD

**FROM:** David Lundin, PE 

**RE:** ROM Site Development Cost Estimates  
Birchtree Charter School and Mat-Su Central School

### INTRODUCTION

The Matanuska-Susitna Borough School District (District) intends to relocate Birchtree Charter School (BTC) and Mat-Su Central School (MCS) to Matanuska-Susitna Borough (Borough)-owned land. Several parcels were proposed and two parcels were identified for further consideration for the construction of one or both schools on each parcel. To assist the Matanuska-Susitna Borough Area School Site Selection Committee, District staff tasked HDL Engineering Consultants, LLC (HDL) to prepare a rough order of magnitude (ROM) site improvement cost estimate for each school on each prospective parcel based on generalized requirements for each school. No site plans or building plans exist, so quantities and cost estimates are based upon generic school layouts scaled to meet the needs of each school using information provided by District staff. ROM estimates are valuable for planning and comparison only and will change once the actual design process starts and more information becomes available.

Both parcels were previously evaluated in the *2018 Mixed-Use Campus Preliminary Site Evaluation Study* performed by HDL for the District and much of that information was useful in preparing the ROM estimates.

### SITE CONSIDERATIONS

#### Parcel A

Located north of Pioneer Peak Elementary School (PPE) and between Trunk Road and Stringfield Road, Parcel A consists of approximately 37 acres of mostly usable land (see Figures 1 and 2). The majority of the parcel is relatively flat with a large hill in the southwest corner of the parcel. Topography varies from a maximum elevation of 350 feet at the top of the hill to low elevation of 325 feet. The majority of the parcel has an average elevation of about 330 feet.

Stringfield Road cuts across the northwest and southwest corners of the parcel. Wasilla Creek is located on the west side of Stringfield Road, leaving approximately 30 acres to the east of the road for development.

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A narrow band of wetlands crosses the northwest corner of the parcel from about 220 feet east of Stringfield Road along the north property line, then intersecting Stringfield Road approximately 400 feet south of the north property line. This removes about 2 acres from the parcel, leaving about 28 acres of developable land.

Basic soils information is available for Parcel A from *Stringfield Subdivision Geotechnical Investigation* performed by Mark Hansen, PE in January 2020. Ground water in the relatively flat area of the site varied from depths of 1.7 feet to 6 feet below ground surface and was expected to vary seasonally. Development in this portion of the parcel would necessitate adding sufficient fill to obtain soil strength to support improvements. Due to the high water table, a mounded septic system would also likely be required.

Soils in the hill on the southwest corner of the property consist of 4 feet to 6 feet of silt over gravel. The gravel is noted as usable as structural fill (DOT&PF Selected Material, Type A) under buildings and paved areas. The silt can be usable in deep fill areas and under playfields or playgrounds.

A well would need to be developed for domestic water for each school. PPE currently utilizes a 118-foot-deep well; wells for new schools would likely be similar depth.

Currently there is no vehicle access to the parcel from either Trunk Road or Stringfield Road. The Borough has plans to build a connector road between Stringfield Road and Trunk Road along the north property line of Parcel A. The Trunk Road Connector intersection with Trunk Road is eventually planned for a traffic signal. As Stringfield Road is already heavily impacted by local traffic, including traffic from PPE, it is strongly recommended that additional school traffic not be added to Stringfield Road. The cost to develop a portion of the Trunk Connector, from Trunk Road to the proposed school driveway, without signalization, is included in the site development estimates.

Utilities are located adjacent to the parcel. A 6-inch natural gas main runs along the east side of Stringfield Road approximately 600 feet up the west property line. A gas service will need to be extended to new school building(s). A three-phase overhead power line and an overhead fiber optic communications line run along the west side of the parcel for the length of Stringfield Road and would require service extensions to the proposed building(s).

## **Parcel B**

Parcel B consists of approximately 156 acres, located at the northwest corner of the intersection of Seldon Road and Church Road (see Figures 1 and 3). The majority of the parcel (approximately the northern half) is relatively flat, low-lying wetlands and bog with some standing water, while the land closer to Seldon Road is moderately to steeply sloped terrain varying in elevation from 400 feet to 465 feet with slopes as steep as 40%. This southern portion, approximately 70 acres, is assumed to be developable.

While no site specific soils investigation has been made available by the District, the Borough provided the *Geotechnical Engineering Report – Seldon Road Extension* prepared by Shannon & Wilson, Inc. in 2014. Test pits and borings were performed along the Seldon Road corridor and provide insight into the soils that may be found along the southern portion of Parcel B. Soils in the corridor generally consisted of 1 foot to 3 feet of organics and silt over



silty gravel with sand, with soils towards the Seldon-Church intersection being moderately to highly frost susceptible. Soils of this type would be adequate for use in deep fills and in non-paved or non-structural areas of the site.

A septic system would need to be developed for each school site. As fill will be needed to level the site, we anticipate a standard, below grade system would be utilized.

A well would need to be developed for each school site. Well logs for properties to the east of Church Road indicate depths varying from 51 feet to 147 feet and are likely affected by topography. The actual depth of a well on Parcel B will depend on final ground elevation, but would likely be approximately 140 feet.

There is currently vehicle access to the site directly from Church Road. A rough dirt road connects some log deck sites located in the southeast portion of the parcel. Access to Seldon Road may be problematic, as Seldon Road is Borough-owned and is classified as a minor arterial. The *Corridor Access Management Plan – Seldon Road Extension, Church Road to Pittman Road* prepared in January 2017 by Stantec Consulting Services Inc. provides recommendations to the Borough to “maintain the mobility and safety benefits of this minor arterial road” by “limit[ing] access along the new roadway to the extent possible.” The plan states that “access to Seldon Road shall be limited to public roads, and no new driveways shall be permitted.” However, the Plan also allows for the possibility of “restricted” access near the Church intersection for commercial development. The Plan recommends the use of a parallel collector road to collect traffic and route it to access points spaced 1/3-mile to 1/2-mile apart. Direct driveway access to Seldon Road may not be allowed, and the site may need to be designed with access to Church Road only.

Utilities are located adjacent to Parcel B along Church Road. Overhead three-phase power lines and overhead fiber optic communication lines are located along the east property line and would require service extensions to the proposed building(s). A 6-inch natural gas line is located along the east side of Church Road and would necessitate boring a service line, or small main for multiple schools, under the road.

According to the District, Parcel B is also planned as the new location for American Charter Academy (ACA). We have assumed ACA will be located in the southwest corner of the parcel. However, due to the *Corridor Access Management Plan*, access to this school may also need to be to Church Road, resulting in up to three schools accessing one driveway.

## METHODOLOGY

For evaluation of the two parcels for each school, simplified, generic school sites were developed that meet the needs of BTC and MCS. District staff provided required square footage and a building footprint size for each school, as well as other site component needs.

- BTC, with an enrollment of 396 students, requires an overall site of approximately 15 acres, a playfield, a playground, a building footprint of 35,000 square feet, a small bus loop, and adequate parking to meet the needs of staff, parents, and visitors.
- MCS, with an enrollment of 1,801 students, but an onsite requirement of 200 students at any one time, requires a playground, green space for a possible pavilion, a building

footprint of 25,000 square feet, and adequate parking to meet the needs of staff, parents, and visitors.

The generic school site component dimensions were based on sizes of similar components at existing schools with comparable enrollments. Once generic school sites were laid out, the sites were located on the developable land of each parcel.

Building finish floor and site elevations were established based on the existing topography, soils information, and other considerations such as fill quantities.

## **COST CONSIDERATIONS**

### **Parcel A**

Parcel A has room to construct both school sites, providing BTC approximately 18 acres and MCS approximately 10 acres, without encroaching on the identified wetland area. Much of the site has shallow groundwater and will require fill for adequate soil strength. The hill in the southwest corner can be excavated to provide much of this fill.

PPE, located directly south of this parcel, was also constructed in high ground water that necessitated a shallow septic system. While a mounded septic system is more expensive than a below grade system, the additional cost (approximately \$25,000) will be a relatively small percentage of the overall school construction cost.

To provide vehicle access to the site, a portion of the Trunk Road Connector will need to be built. Although the Trunk Road Connector project is included in the Borough's current legislative funding request package, the District may have to construct a portion of the road to meet the District's timeline. The cost is included in the ROM estimate for both schools for comparison purposes; however, it will only need to be constructed by one school project, if any. This road will give the school(s) direct access to a major arterial road, and eventually a signalized intersection, providing safe access to the school(s).

### **Parcel B**

At 156 acres, Parcel B has more than adequate area to construct both schools without encroaching on the wetland areas; however, the parcel does have topographic challenges. Generally, it is recommended to position a school at or above the adjacent roadways for student safety and to reduce roadway noise impacts. In addition, depending on how much lower the school is, the roadway may block sunlight in the winter months. As the existing ground elevations on this parcel are up to 60 feet below the adjacent roadways, positioning the school(s) at or above the roadways is not reasonable.

Some of the higher elevation soils may be used to level the site for one school; however, a significant volume of imported fill will be required to raise one or both sites to an acceptable elevation. While our estimate might include more fill than may eventually be needed once a design is prepared, the cost of any excess fill will likely be offset by retaining walls, elongated drive areas, drainage structures, extraordinary accessibility measures, and other items that may be needed for steeply sloping sites. Understanding and balancing the development costs on this parcel will be a significant part of the design process.



In addition to the terrain, limitations to direct access to Seldon Road may significantly impact the site design cost. Additional consideration to access will need to be included in the design process.

## ROUGH ORDER OF MAGNITUDE SITE DEVELOPMENT COSTS

For the purpose of these ROM estimates, site development costs include:

- Site grading
- Site drainage
- Paved parking, roadway, and bus loop
- Exterior concrete (sidewalk, curb and gutter)
- Well System
- Septic System
- Fencing
- Utility Extensions (Natural Gas, Communications, Electric)

ROM cost estimates are based on current unit prices for similar publicly bid construction items, including industry standard percentages for items such as mobilization, construction surveying, District administration, architectural and engineering design, and construction contract administration.

For paved areas, the assumed paving section is:

- 2 inches Asphalt Pavement
- 4 inches Crushed Aggregate Base
- 36 inches Classified Fill, Type A

For building areas, an average of 36 inches Structural Fill was assumed within the building footprint. This should be a conservative estimate of the structural fill needed for a slab-on-grade structure with deep footings.

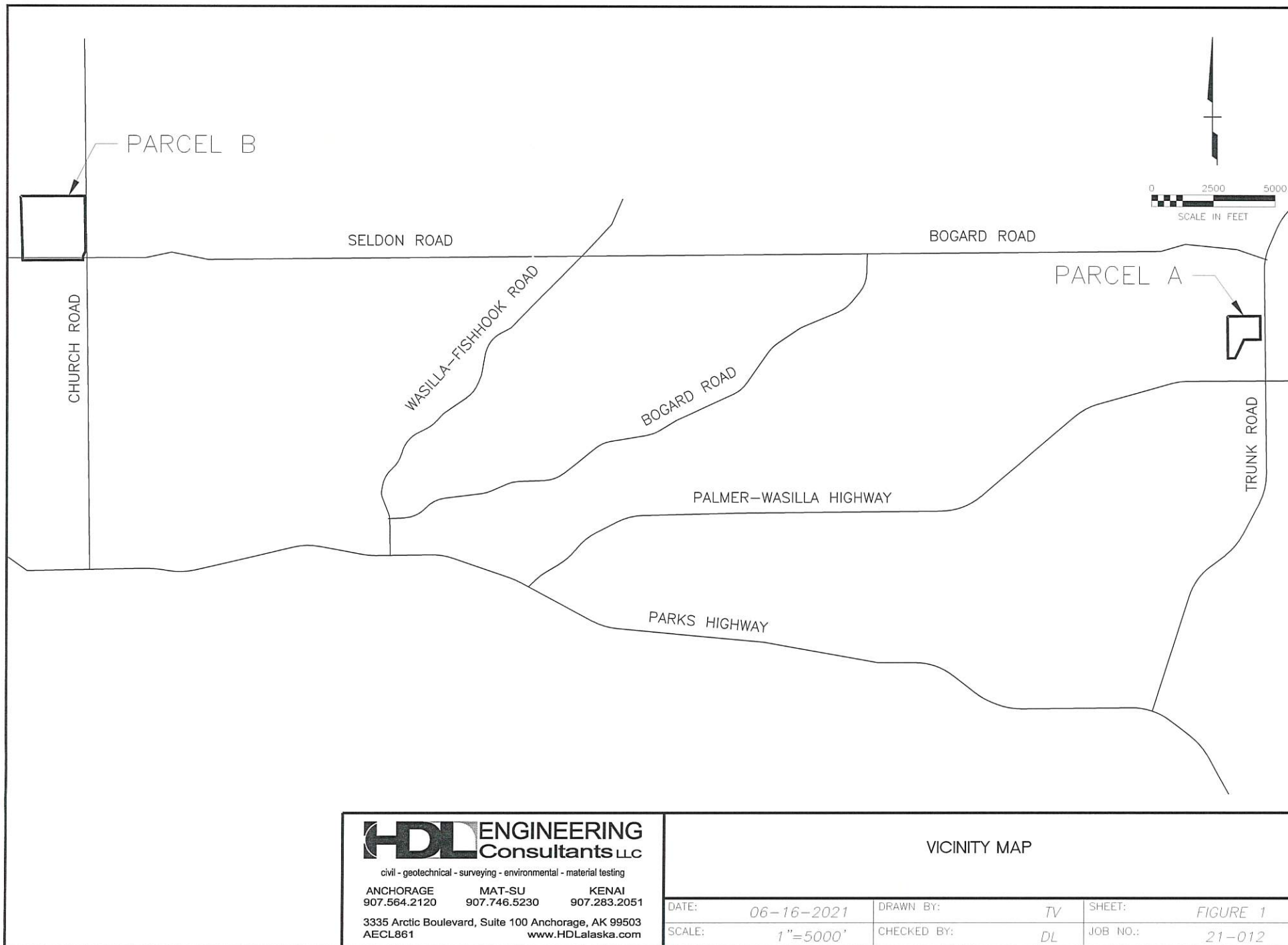
With these and many other assumptions, the rough order of magnitude costs for developing the proposed schools on each of the proposed sites are as follows:

Table 1: ROM Site Development Cost Estimate.

	Parcel A	Parcel B
Birchtree Charter	\$4.7 million	\$5.7 million
Mat-Su Central	\$2.4 million	\$5.2 million

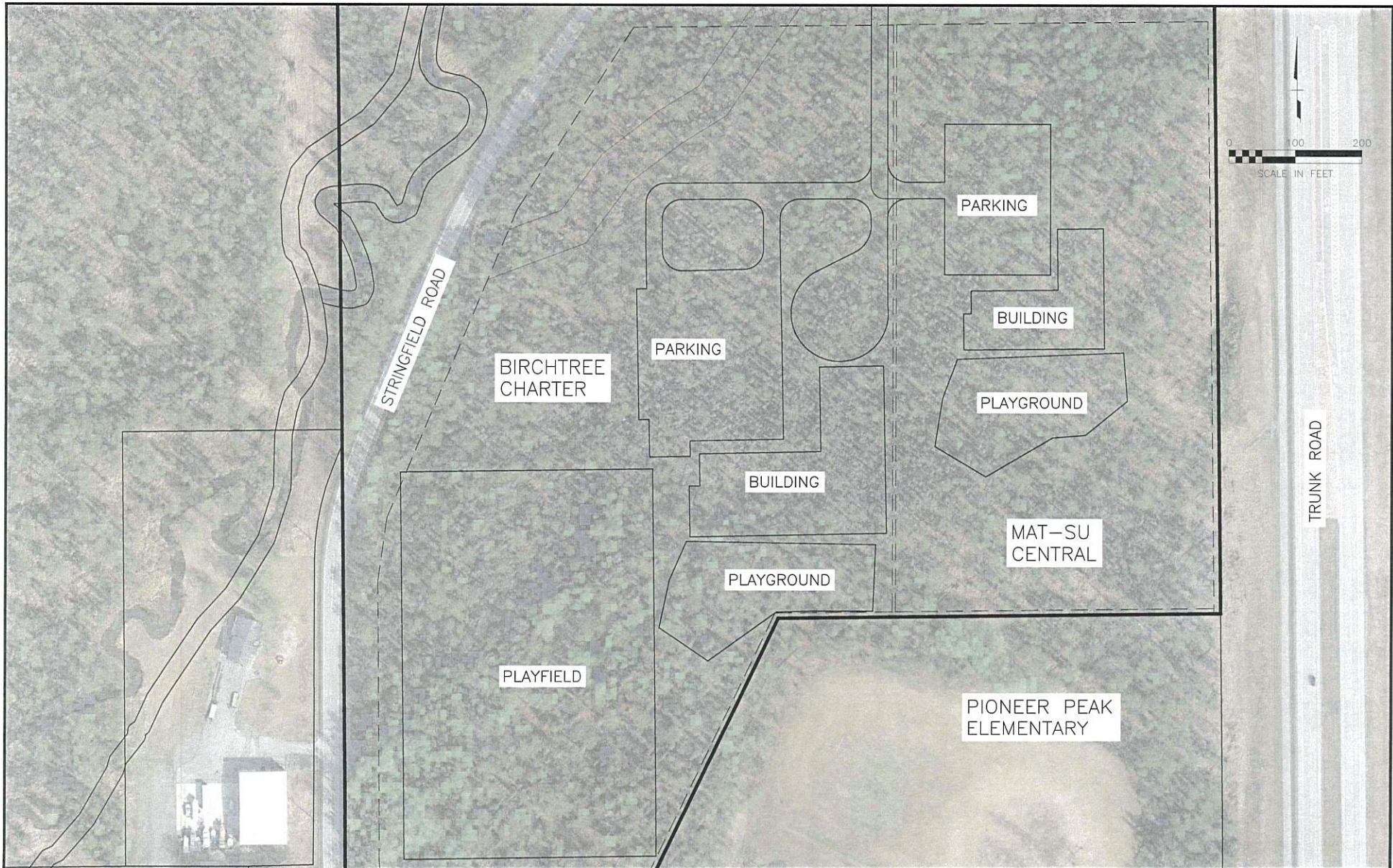
Please contact us if you have any questions or require additional information.

1M 21-214 RS 21-110





1M 21-214 RS 21-110



civil - geotechnical - surveying - environmental - material testing

ANCHORAGE 907.564.2120 MAT-SU 907.746.5230 KENAI 907.283.2051

3335 Arctic Boulevard, Suite 100 Anchorage, AK 99503  
AECL861 www.HDLalaska.com

PARCEL A

DATE:	06-16-2021	DRAWN BY:	TV	SHEET:	FIGURE 2
SCALE:	1"=200'	CHECKED BY:	DL	JOB NO.:	21-012



1M 21-214 RS 21-110



**HDL** ENGINEERING  
Consultants LLC

civil - geotechnical - surveying - environmental - material testing

ANCHORAGE      MAT-SU      KENAI  
907.564.2120      907.746.5230      907.283.2051

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PARCEL B


DATE:	06-16-2021	DRAWN BY:	TV	SHEET:	FIGURE 3
SCALE:	1"=200'	CHECKED BY:	DL	JOB NO.:	21-012



## MEMORANDUM

**DATE:** July 29, 2021

**TO:** Tony Weese, MSBSD

**FROM:** David Lundin, PE 

**RE:** ROM Site Development Cost Estimates  
Birchtree Charter School Relocation to Shaw Elementary Parcel

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### INTRODUCTION

The Matanuska-Susitna Borough School District (District) intends to relocate Birchtree Charter School (BTC) to Matanuska-Susitna Borough (Borough)-owned land. Several parcels were identified by the Matanuska-Susitna Borough Area School Site Selection Committee for further research. HDL developed rough order of magnitude (ROM) costs for two of the sites, both of which were previously evaluated in the *2018 Mixed-Use Campus Preliminary Site Evaluation Study* performed by HDL for the District: the 37-acre Pioneer Peak Elementary School parcel on Stringfield Road, and a 156-acre parcel at the northwest corner of the intersection of Seldon Road and Church Road (see memo *ROM Site Development Cost Estimates, Birchtree Charter School and Mat-Su Central School* dated June 18, 2021).

The District then requested HDL prepare a similar evaluation and ROM cost for relocating BTC to the Shaw Elementary School (Shaw) parcel. Similar to previous work, the following evaluation and ROM cost estimate are based upon a generic school layout scaled to meet the needs of BTC using information provided by District staff. ROM costs are valuable for planning and comparison only and will change once the actual design process starts and more information becomes available.

### SITE CONSIDERATIONS

#### Existing Conditions

The Shaw parcel consists of 76.81 acres and is located at 3750 E. Paradise Lane east of Wasilla-Fishhook Road (WFR), approximately 1-mile north of Seldon Road, north of the City of Wasilla (see attached Exhibits 1-3). The parcel is owned by the Borough.

According to the Borough Parcel Viewer, a section line easement extends from WFR along the north property line to provide legal access to the parcel; however, Paradise Lane is located primarily in a public use easement to the south of the section line easement to provide a curve which results in a right-angle approach to WFR. (A title report was not obtained for this study due to time constraints; additional easement may exist that are not identified herein.) Shaw Elementary School is located in the north-west corner of the parcel; the remainder is undeveloped and is either forested with mixed spruce and birch or is wetlands. The

undeveloped portion of the parcel contains ample area to develop a new facility on the eastern quadrant of the property; unfortunately, the location of Shaw Elementary School in the northwest corner and wetlands in the south limits the available area for additional development on the remainder of the parcel.

## **Access**

The only road to the parcel is Paradise Lane, which currently functions as a driveway to Shaw Elementary School. While this driveway is marginally adequate for one school, the District reports significant congestion along Paradise Lane and at the WFR intersection from pick up/drop off traffic before and after school. Adding a school the size of BTC will almost double the traffic accessing WFR and will have a detrimental effect on safety and congestion. It is likely that development of a second school here will necessitate intersection improvements, in the form of turn lanes, signalization, or a roundabout as well as improvements on Paradise Lane itself. The ROM cost includes \$1 million as an allowance for these offsite improvements.

Additionally, the Central Mat-Su Fire Department, through the Borough, has proposed to locate a new fire apparatus fill station on this same parcel, which would consist of a building and water storage tank and is planned to occupy about 1.5 acres east of the Shaw Elementary School parking lot. Co-locating two schools and a fire station on the same parcel, and accessing WFR from a common, relatively narrow, driveway will require significant coordination and consideration regarding student safety, congestion, and noise, among a myriad of other real and perceived potential concerns. The location of Shaw Elementary in the north-west corner of the lot exacerbates the concerns, as both fire department traffic and BTC traffic will have to pass adjacent to Shaw and access WFR via Paradise Lane.

## **Utilities**

A summary of utilities has been compiled using as-built information provided by Enstar Natural Gas (Enstar), Matanuska Electric Association (MEA), Matanuska Telephone Association (MTA), the District, and the Alaska State Department of Natural Resources (DNR). The existing utility information is described below.

### *Water Service*

There is no public water service in the area. Per DNR well records, Shaw Elementary School utilizes a 305-foot-deep well. New development on the parcel would likely require development of a new well at the facility site in accordance with DNR and Borough regulations.

### *Sanitary Sewer Service*

There is no public sanitary sewer service in the area. Shaw Elementary School utilizes an on-site septic system to serve the school. New development on the Shaw parcel would require development of a new septic system at the site in accordance with Borough and DEC regulations.

### *Electric*

Three phase power from MEA is available along the west side of WFR. Currently there is one underground service to the Shaw parcel to supply power to Shaw Elementary School. MEA



does not anticipate any issues with adding another school; however, a new line extension would need to be constructed to the new school facility.

#### *Telecommunications*

Fiber optic communications from MTA is available from WFR. Currently there is one fiber optic line to the Shaw parcel to provide telecommunication service to Shaw Elementary School. A fiber optic service will need to be constructed to the new school facility.

#### *Natural Gas*

Natural gas service for the Shaw parcel is provided from a 2-inch gas line running along Paradise Lane and ending at the north-west corner of the parcel. A service supplies Shaw Elementary School. A 2-inch gas main is also available at the northeast corner of the parcel and the end of Foxtrot Avenue. A gas service will need to be constructed to the new school facility.

#### *Drainage and Storm Water Run-off*

There is no public storm water catchment system in the area. Current storm water runoff infiltrates on site. Any development would have to consider run off direction and volume as well as best management practices for transport of sediments and contaminants in storm water.

#### **Soils**

Several borings were performed in 2004 in support of the design and construction of Shaw Elementary School. The borings performed generally encountered 6 inches of organic topsoil followed by a layer of silt ranging from 2 feet to 3.5 feet thick. The silt was generally underlain by sand and gravel with varying amounts of silt extending to the boring termination depths. Subsurface conditions will likely vary based on topography with lowland areas having thicker layers of organics and silt. Groundwater conditions at the time of drilling suggest groundwater will be encountered near the surface in the lowland areas at an elevation of approximately 445 feet above mean sea level.

A shallow, spread footing foundation system is typical for buildings in the area. To support the shallow foundation system, the organic surface soils are typically removed and replaced with low to non-frost susceptible fill. Geotextile separation fabric may be used to separate the fill from the underlying silty soils, if present. To reduce the risk of frost related issues, the highly frost susceptible silty soils may be removed and replaced with low to non-frost susceptible fill.

Groundwater will not likely be encountered during construction at higher elevations. However, groundwater will likely be encountered during construction in low areas and dewatering of excavations should be expected.

A site specific geotechnical investigation is recommended to evaluate the subsurface conditions prior to design of any development. A typical subsurface evaluation would include geotechnical borings or test pits and temporary standpipe piezometers to determine groundwater elevations. Laboratory testing of soil samples is recommended to evaluate the

frost susceptibility of the existing soils and the usability of the on-site materials for construction.

## **Topography**

According to the most current Borough LiDAR topography, the parcel has varying topographic relief across the property. The north half of the property has rolling terrain with 70 foot topographic differences, whereas the south half of the property has portions that are relatively flat to rolling in the southwest corner of the property.

## **Environmental**

Preliminary research was conducted using the most current available data from the Borough, state and federal agencies to identify environmental resources that may be affected by the proposed development. The purpose of this research was to identify permitting and regulation requirements, and to ensure environmental considerations are adequately addressed during the planning and design phases. The following resource categories have been identified within the parcel. Other environmental resources not described here may become present or applicable at a later time depending on changes to site condition or changes to local, state, or federal regulations during the course of development of the project.

### *Anadromous/Resident Fish Habitat*

There is no fish habitat present on the parcel.

### *Floodplains*

According the Federal Emergency Management Agency Flood Insurance Map number 02170C7238F, no flood zones have been identified within the parcel.

### *Wetlands*

A review of publicly available base wetlands mapping provided by the Borough and the US Fish and Wildlife Service National Wetlands Inventory indicates wetlands are present in the southern half of the parcel as shown in Figure 1.

## **Zoning**

The Borough does not currently have zoning regulations in place that would affect development of the parcel. However, any new development would have to go through an approval process with the Alaska State Fire Marshal's Office and the Central Mat-Su Fire Department.

## **Setbacks**

*Matanuska-Susitna Borough Code, Chapter 17.55, Setback and Easements*, provides general requirements for site development. Per Section 17.55.010 Setbacks, no structure or building may be placed within 25 feet from the right-of-way line of a public right-of-way, no furthestmost protruding portion of the structure or building may be located nearer than 10 feet from any side or rear lot line, and eaves may project a maximum of 3 feet into required setback areas. Setbacks do not severely limit the buildable area of the parcel.



### Surrounding area

The parcel is surrounded on the north, west and south sides by large residential lots. The east property line is bounded by a residential subdivision. The only major roadway near the parcel is Wasilla-Fishhook Road, a narrow, curvy, two-lane roadway running southwest to northeast and connecting the City of Wasilla to the community of Fishhook near Hatcher Pass. Foxtrot Avenue connects to the northeast corner of the parcel, and could provide a secondary access. However, school access through a residential subdivision is not recommended, nor is there direct access to any major collector or arterial roads.

### METHODOLOGY

For evaluation of the parcel, the same simplified, generic school site was used from the previous ROM evaluations of the Stringfield Road (Pioneer Peak) parcel and the Church

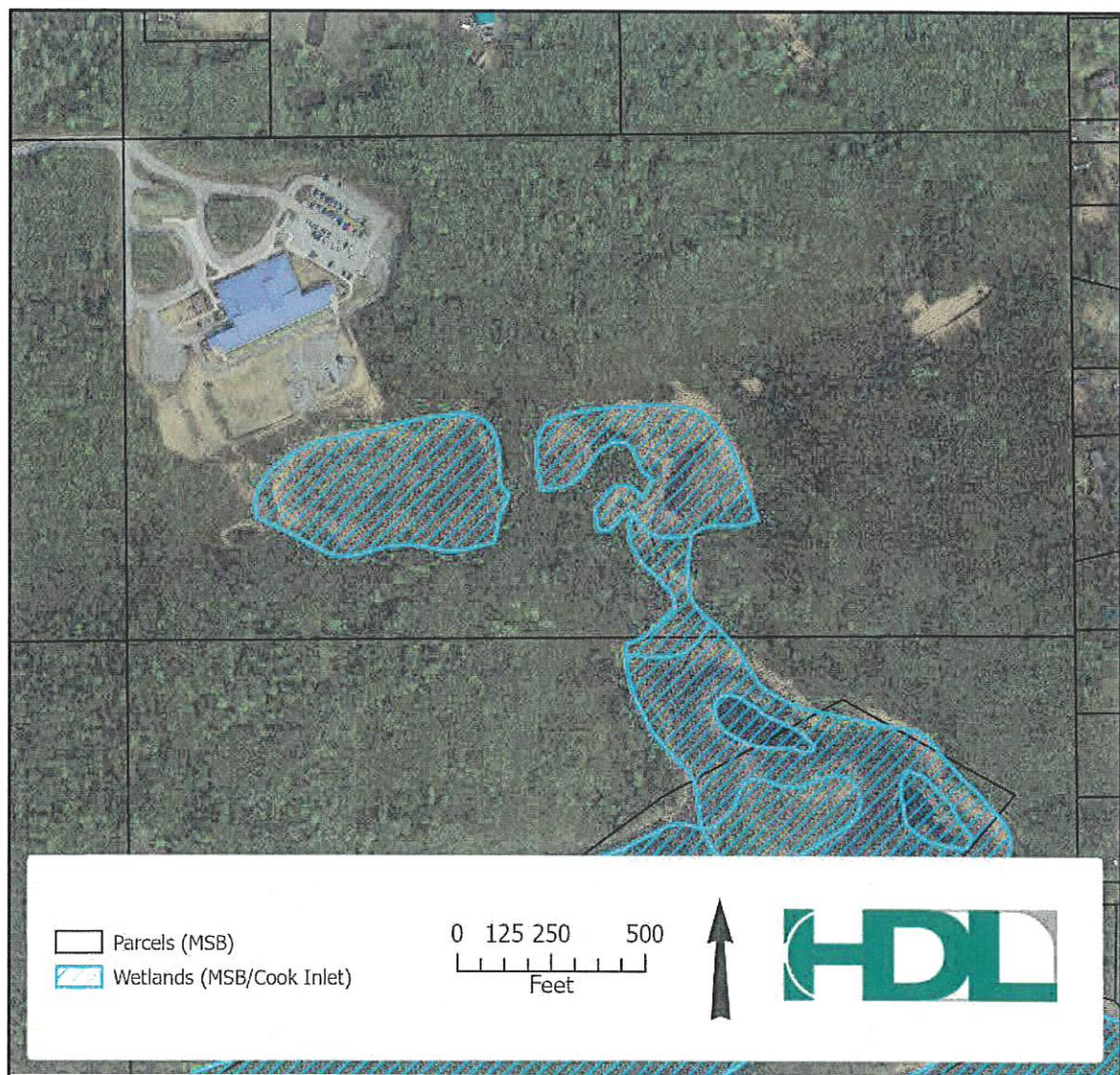


Figure 1: Wetlands



Road/Seldon Road parcel. District staff provided required square footage and the building footprint size for BTC, as well as site component needs:

- BTC, with an enrollment of 396 students, requires an overall site of approximately 15 acres, a playfield, a playground, a building footprint of 35,000 square feet, a small bus loop, and adequate parking to meet the needs of staff, parents, and visitors.

The generic school site component dimensions were based on sizes on similar components at existing schools with comparable enrollments. Building finish floors and site elevations were established based on existing topography, soils information, and other considerations such as fill quantities.

## **COST CONSIDERATIONS**

The parcel has room to construct a new BTC school site without encroaching on either the identified wetlands or the existing Shaw Elementary School campus. There are two possible locations for the BTC site:

- Site A is located in the eastern portion of the parcel and is on relatively flat terrain. This site will require a long extension of Paradise Lane as well as electric and telecommunications utilities. Below grade construction at Site A may encounter groundwater and require dewatering as well as extensive excavation and replacement of unsuitable soils around the parking and building areas.
- Site B is located in the center of the north portion of the parcel. This site would require a shorter extension of Paradise Lane and utilities; however, the terrain is steeply rolling (up to 70 feet of grade change) and will require significantly more excavation, grading, and borrow to provide a relatively flat site for the new BTC campus. Retaining structures, drainage structures, extraordinary accessibility measures, and other items may be needed to minimize earthwork due to the steeply sloping site. Costs for these items have not been included and will need to be balanced with savings in earthwork costs during the design process.

Vehicle access to a new school at either site will necessitate extending Paradise Lane and reconfiguring a portion of the Shaw Elementary School entrance, bus and drop-off loops, and parking lot to allow BTC traffic access past the Shaw campus and to minimize congestion. The Paradise Lane extension would be located between the Shaw Elementary School parking lot and the north property line. This location includes steeply rolling terrain and construction may be challenging; however, these costs do not vary with the site for the new school on the parcel.

Improvements to the Paradise Lane intersection with WFR, such as turn lanes, signalization, or a roundabout may also be required, but does not vary by the site on the parcel. WFR is already heavily impacted by traffic from Shaw Elementary and adding an additional school for nearly 400 students, almost all of whom are parent-transported, will have a detrimental effect on safety and congestion that will need to be mitigated. The addition of a fire station on the parcel, with fire department traffic passing through school traffic and the Shaw access may also have an impact on safety and congestion.

## ROUGH ORDER OF MAGNITUDE SITE DEVELOPMENT COSTS

For the purpose of these ROM estimates, site development costs include:

- Site grading
- Site drainage
- Paved parking, roadway, and bus loop
- Exterior concrete (sidewalk, curb and gutter)
- Well System
- Septic System
- Fencing
- Utility Extensions (Natural Gas, Communications, Electric)

ROM cost estimates are based on current unit prices for similar publicly bid construction items, including industry standard percentages for items such as mobilization, construction surveying, District administration, architectural and engineering design, and construction contract administration.

For paved areas, the assumed paving section is:

- 2 inches Asphalt Pavement
- 4 inches Crushed Aggregate Base
- 36 inches Classified Fill, Type A

For building areas, an average of 36 inches Structural Fill was assumed within the building footprint. This should be a conservative estimate of the structural fill needed for a slab-on-grade structure with deep footings.

With these and many other assumptions, including a \$1 million allowance for off-site intersection improvements on WFR at Paradise Lane, the rough order of magnitude costs for developing the proposed school on the proposed sites are as follows:

**Table 1: ROM Site Development Cost Estimates**

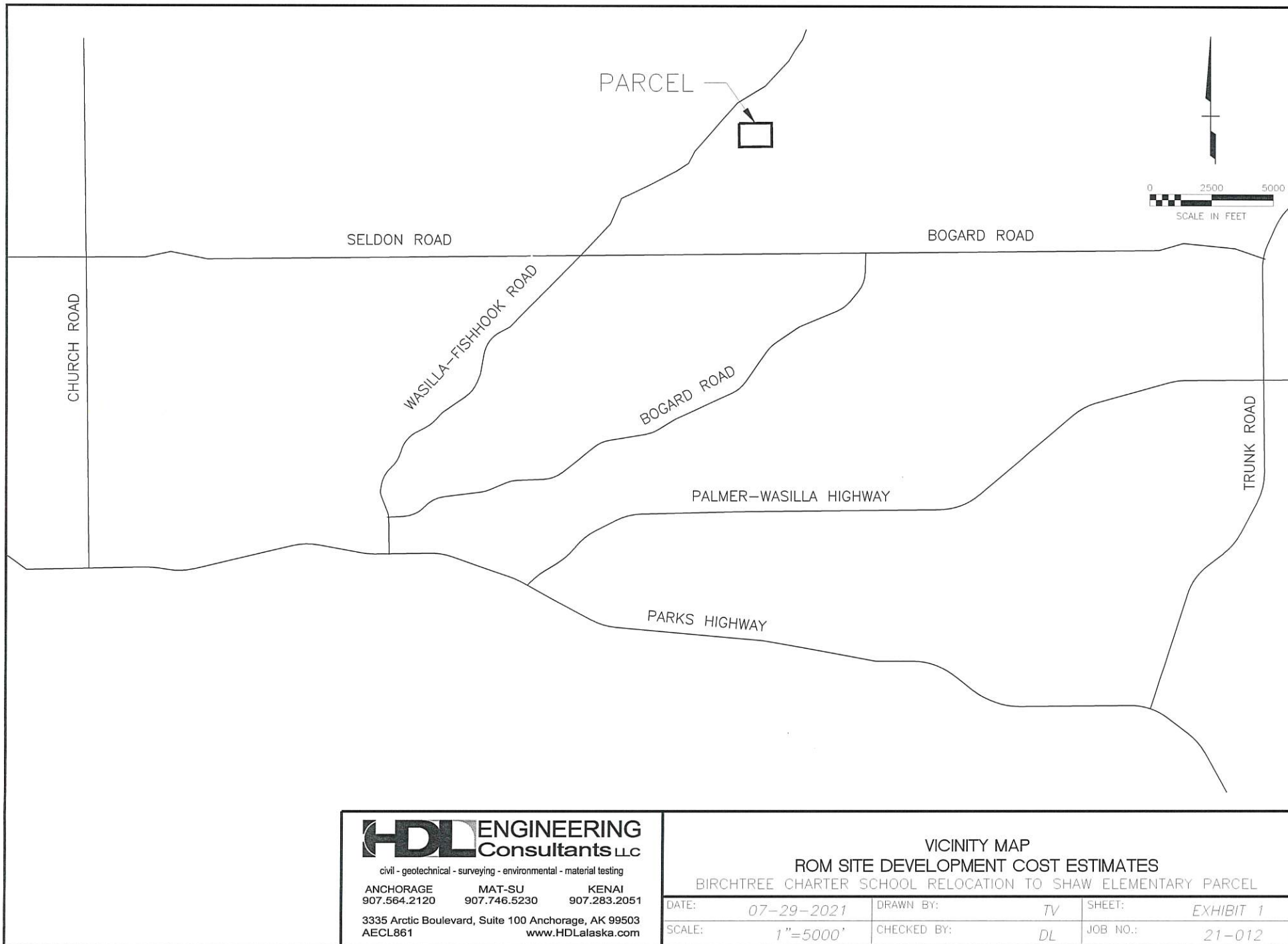
	Site A (east)	Site B (north)
<b>Birchtree Charter</b>	<b>\$6.4 million</b>	<b>\$7.8 million</b>

Please contact us if you have any questions or require additional information.

Attach: Exhibits 1-3



1M 21-214 RS 21-110



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VICINITY MAP  
ROM SITE DEVELOPMENT COST ESTIMATES  
BIRCHTREE CHARTER SCHOOL RELOCATION TO SHAW ELEMENTARY PARCEL

DATE:	07-29-2021	DRAWN BY:	TV	SHEET:	EXHIBIT 1
SCALE:	1"=5000'	CHECKED BY:	DL	JOB NO.:	21-012



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 WETLANDS

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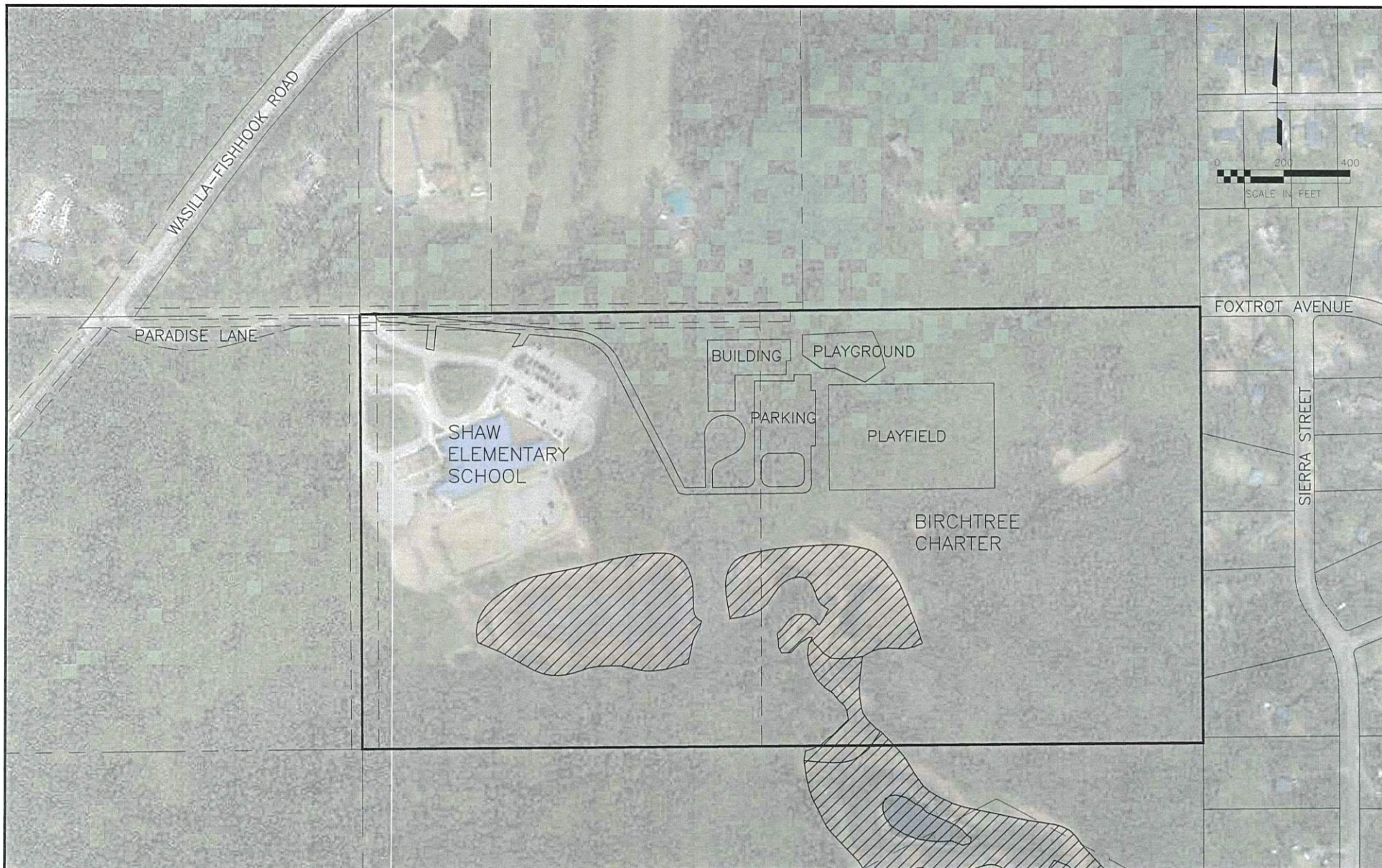
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SITE A  
ROM SITE DEVELOPMENT COST ESTIMATES  
BIRCHTREE CHARTER SCHOOL RELOCATION TO SHAW ELEMENTARY PARCEL

DATE:	07-29-2021	DRAWN BY:	TV	SHEET:	EXHIBIT 2
SCALE:	1"=400'	CHECKED BY:	DL	JOB NO.:	21-012



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 WETLANDS

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SITE B  
ROM SITE DEVELOPMENT COST ESTIMATES  
BIRCHTREE CHARTER SCHOOL RELOCATION TO SHAW ELEMENTARY PARCEL

DATE: 07-29-2021	DRAWN BY: TV	SHEET: EXHIBIT 3
SCALE: 1"=400'	CHECKED BY: DL	JOB NO.: 21-012