

# KPB SOLDOTNA ELEMENTARY RELOCATION CONDITION SURVEY AND FEASIBILITY REPORT

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Prepared by



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## **BUILDING CONDITION SURVEY**

### **EXECUTIVE SUMMARY**

A multi-discipline team traveled to Soldotna, Alaska on June 30, 2020 to conduct a survey of the existing Redoubt Elementary School and Soldotna Middle School. The goal of the survey was to document the existing conditions and layout for these two buildings. This information will be used by the design team to make recommendations about the feasibility of relocating students and programs to these two buildings from the Soldotna Elementary building and Skyview Middle School.

The survey team consisted of five members from Architects Alaska, Inc. and PDC Engineering. David Moore and Stephen Henri conducted the architectural portion of the survey, and Amy Mestas, Jeremy Egger and Brian Hayden performed the structural, mechanical and electrical surveys, respectively. The team documented the condition of the buildings with digital photographs and a written survey. Information collected at the site has been presented in the attached condition survey report.

The initial finding from the condition survey is that the exterior shell of both Redoubt Elementary and Soldotna Middle School is in fair condition. The existing mechanical and electrical building systems are functional, but many of the key parts are outdated and do not function efficiently. The team also noted several code and energy efficiency deficiencies that need to be addressed.

The interior layout of the Redoubt Elementary School was designed with elementary age children in mind, and does not require substantial modification to be suitable for the space functions anticipated in the program. The original roof assembly is due for replacement, but that is already being addressed by the Kenai Peninsula Borough. Other than replacement of worn down finishes such as the carpet, the current condition of the building is fair to good.

The Soldotna Middle School building was originally designed as a junior high school and then became a prep school. The intended student population was older, with the result that many of the rooms require some level of remodeling to serve young children. For example, many fixtures and pieces of equipment needed for younger students are either not provided at all, or not mounted at appropriate heights for them to use. Parts of the building are also at least ten years older than Redoubt Elementary, meaning that many parts of the mechanical and electrical infrastructure are in need of replacement.

The first section of the report evaluates the existing condition of the Redoubt Elementary and Soldotna Middle Schools. The second section of the report presents recommendations for the changes needed to make Redoubt and Soldotna Middle Schools serviceable for the proposed program.

The proposed space program and conceptual layouts for the renovation of the two school buildings are provided as Appendices A and B to this report. Appendix C contains a brief analysis of the remaining service life for the main building systems at Soldotna Elementary School. The concept level cost estimate for the proposed renovations is attached as Appendix D.

## PART 1 – CONDITION SURVEY

### REDOUBT ELEMENTARY SCHOOL

#### ARCHITECTURE

##### EXISTING CONDITIONS

###### A. BUILDING SITE

The Redoubt Elementary School is located along West Redoubt Avenue on its own lot adjacent to the Soldotna Middle School. The facility was constructed in 1979, and largely retains its original floor plan today. The area of the main floor is approximately 45,500 SF. Primary access to the school is from the south off a parking lot along West Redoubt Avenue.

The building is arranged in the shape of a rectangular bar running east to west, with the main multi-purpose space projecting out to the north. Utilities enter the building from the east and south. The main mechanical room is located above the first floor on the north side of the building adjacent to the gymnasium.

There is a paved drop-off and parking area immediately to the south of the building. A second parking lot is located on the building's west side. There is a small playground located to the north of the east classroom wing. A sidewalk runs along the north edge of the main parking lot, connecting it to the main entrance.



*The main entry into Redoubt Elementary School.*

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B. EXTERIOR ENVELOPE

1. EXTERIOR WALLS

The exterior shell of the Redoubt Elementary School also consists of CMU wall. The wall assembly is constructed of 8" thick CMU, with gypsum board interior finish on a 2 x 4 wood stud framed wall with vapor barrier and batt insulation. There is a band of wood paneling covering the upper

Most of the building's exterior walls are approximately 13 feet high. The central section of the building includes several double height spaces such as the gym and a storage area that are approximately thirty four feet high. The same fluted CMU block is used throughout; the only exception is a relatively new addition at the back of the gym, which is covered with metal siding.

2. ROOF ASSEMBLY

This building currently still has its original BUR roof, which is a little over forty years old. The existing roof assembly (from exterior to interior) consists of layers of built-up asphalt over 4 inches of rigid insulation on top of a vapor barrier. The assembly is supported by laminated wood decking held up by laminated wood beams.

The existing roof has performed well, and the maintenance staff was not aware of any complaints about leaks or water damage. A visual inspection of the roof indicated that there are several locations on the higher section of the roof where the asphalt layers have developed "blisters" over time. This is likely a sign that the asphalt roof layers are reaching the end of their useful life and need replacement.

At the time of the site visit, the survey team was told that KPB is in the process of bidding a new roof for the school. The new roof will also be a BUR type assembly. The District can expect an additional thirty to forty years of service before this new roof needs to be replaced.

C. INTERIOR CONSTRUCTION AND FINISHES

1. BUILDING STRUCTURE

The main floor of the facility is a concrete slab on grade with concrete footing and foundation walls. The primary structural support frame consists of wood glu-lam beams spanning between the load-bearing exterior CMU walls. The roof assembly is supported on wood decking spanning between the glu-lam beams.

In most of the classroom spaces and the main multi-purpose/gym area, the glu-lam beams are left exposed. The warm color of the beams and decking helps create a friendly atmosphere appropriate to an elementary school environment. The choice to run the main supporting beams perpendicular to the long axis of the building allows some flexibility in where the partition walls separating particular classrooms are placed.

## 2. MAIN CIRCULATION SPINE

Main circulation is by means of a double loaded east-west corridor running the length of the building. This space acts as the 'spine' of the building, and most of the rooms within the school are accessed directly off this corridor. Wall assemblies along the corridor are typically bare, painted 6" CMU. The ceiling is composed of 2 x 4 lay-in acoustical ceiling tiles in a standard metal grid. The floor finish is carpet.

The CMU walls appear to be in good condition. No cracks or damage were visible, and the paint appears to have been regularly maintained. The CMU blocks are stacked one above the other, not arranged in a "running" bond, which is typically a stronger arrangement. Regardless, the CMU block appears to be performing well. Facilities was unaware of any major damage from the recent large earthquake.

The team did notice signs of wear in the main corridor carpet. Some of the ceiling tiles also appear to have minor damage or staining. The rubber wall base appears to be in fair condition. Signs of wear were largely cosmetic, and not unusual for an educational building with a high level of student traffic.

The entries to individual classrooms are grouped as "nodes" occurring every fifty six feet. The doorways are typically recessed off the main hallway. Doors and frames are hollow metal with half height relites



*Redoubt is organized around a single main corridor running east-west.*

The main mechanical supply ducts for the building are routed parallel to the course of the 'spine', above the lay-in ceiling. The main sewer line also runs east-west in line with the corridor. Please see the mechanical section of the report for additional information.

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3. OFFICES AND RECEPTION

The main administrative and reception area is a cluster of rooms immediately to the left as one enters the building. The reception/check-in area opens directly off the main entry. It has generous quantities of glazing to allow visual monitoring of traffic in and out of the building.



*The reception area acts as a central control point for traffic through the building.*

This cluster of spaces acts as the main 'hub' of the building. It is where the majority of the teachers' work space and record storage are located. Occupied spaces like the teachers' lounge, the principal's office, and a special services room are located against the exterior wall where they can receive daylight. Service spaces like admin restrooms and storage rooms are positioned in the center. A 'u' shaped corridor provides access into the area.

The floor finish is carpet tile, and the ceilings are lay-in acoustical ceiling tiles in a standard metal grid. Per the as-built drawings, the interior partitions are framed out of 3-5/8" metal studs with 5/8" thick painted gypsum board as the finish.

4. LIBRARY

The library space is located just to the west of the admin area. Together with the reception area, admin offices and teacher lounge, it makes up the central node tying the school's two wings together. Unlike the admin office area, the library does not have a ceiling. The glu-lam beams and wood decking of the roof are left exposed.

The library is a single, large, undivided space with a reception desk located next to the entrance. There is a line of steel columns within the footprint of the room running north to south. A series of smaller rooms off the east side provide space for the librarian as a work room and storage room. There is also an audio/visual equipment room.

The floor finish is carpet tiles. The wall finish is generally exposed, painted CMU.



*The library is a large double height space open to structure above.*

5. MULTI-PURPOSE SPACE/GYM/CAFETERIA

The school's main multi-purpose space is located directly to the north of the library and admin area. This large rectangular room serves as the main assembly room, gymnasium and cafeteria. During lunch time, students are served from a kitchen space located along the south wall of the multi-purpose room. Collapsible bleachers are located along the south wall.



*The multi-purpose space has exposed wood beams and roof decking.*

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Similar to the library, the multi-purpose room has exposed glu-lam beams and wood roof decking. Mechanical ducts are run exposed between the beams. Acoustical panels have been adhered to the underside of the wood decking to help control sound.

Most of the room is a double height space with a vertical height of approximately 22 feet. An equipment area along the south edge is 9 feet 6 inches high. The main mechanical room is located above this storage area and the kitchen is next to it.

The wall finish at the interior walls of the multi-purpose room is typically painted CMU. The floor itself is vinyl sheet flooring. The wall finish at the exterior walls is painted cement asbestos board over plywood sheathing and insulation, mounted on the exterior CMU.

6. CLASSROOMS

The school includes twenty classroom spaces, each measuring about 1,000 SF in floor area. The classrooms are typically oriented with their long axis running north-south. This ensures that the south side classrooms receive relatively good solar exposure throughout the school day.

The rooms are arranged in clusters of four classrooms each, with all four having doors located on the same "node" along the main hallway. The classrooms have carpet floor finish, and the walls are typically finished with painted gypsum board. The spaces have no ceiling, and are left open to the wood decking and glu-lam beams above.



*Classrooms are open to the glu-lam structure above.*

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An interesting feature of the classrooms is the use of operable partitions as the dividing walls between pairs of classrooms. This feature was included to allow the formation of a single, larger classroom when needed. It is a design idea incorporated into many Alaska schools constructed around this time.

Based on reports from the facilities staff, the option of moving the operable partitions is very seldom used. Although the partitions bring the advantage of greater flexibility in layout, they also have some disadvantages. One of these is easier transmission of sound from room to room. One of the facilities staff noted that the movable partition separating the intensive needs classroom from other classrooms had to be replaced with a permanent wall to cut down on disruptive sounds from some of the special needs students.



*Pairs of classrooms are separated by operable partitions that can be manually opened.*

Without the sound deadening mass of a typical, sound batt insulated partition wall, sound typically finds flanking paths around the top and bottom of an operable partition. The sound transmission can be reduced with careful sealing of the top, bottom and edges of the partition, but this is still not as effective as a well-built permanent wall.

7. SUPPORT AND UTILITY SPACES

There are two main custodial spaces flanking the multi-purpose room, one each for both the west and east wings of the school. These rooms are finished with bare, sealed concrete floors. The walls are typically exposed, painted CMU.

The custodial spaces are a primary storage space for tools and maintenance materials such as paint. The team noted the presence of a flammable storage cabinet for hazardous materials in the west side custodial room. There were also several wall mounted electrical

panels. The space in front of the spaces has been kept clear in compliance with the electrical code.



*The restrooms are showing signs of wear and do not have ADA compliant toilet stalls.*

Restrooms for the school are located immediately to either side of the central section, on the south side of the main corridor. These rooms typically have a ceramic tile floor. The wall behind the fixtures is finished with ceramic tile, while the rest of the space is finished with exposed, painted CMU. The ceilings of the restrooms are painted hard lid gypsum board.

In general, the restroom finishes were in fair condition. The ceramic tile floor finish looked clean and well cared for. The team did note that the ceramic floor tile looks worn in some locations, and the grout appears to have collected some dirt over the years. The ceramic tile wall base was chipped in at least two locations in Boys Restroom 52.

## 8. MECHANICAL SPACE

As noted above, the main mechanical space is located above an equipment storage room and kitchen below. The main boilers are located in this space. At the time that the team visited the site, the replacement of the existing boilers was in progress. The main air handler is located in an adjacent room on the same level.

The floor finish in the mechanical room is bare concrete slab. The walls are bare, painted CMU, or painted cement asbestos board. The room finishes are in generally good condition, with little chipping or staining of the concrete floor. The interior wall finishes appear to have been well maintained.

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The primary means of access to the roof is through a hatch located in the ceiling of this space.



*A view of the main boiler room.*

Please refer to the mechanical and electrical sections of the report for more detailed information on the equipment in this space.

D. BUILDING CODE REQUIREMENTS

This section includes an abbreviated analysis of the building code (IBC 2012 Edition) as it relates to this building.

1. BUILDING OCCUPANCY

Per Section 305 of the IBC, the building is a Group 'E' occupancy, with the multi-purpose room considered a Group A-1 Assembly occupancy.

2. BUILDING HEIGHT AND AREA

Per Table 503, maximum allowable area per floor for a TypeV-A (protected) building with an E occupancy = 18,500 SF with a maximum height of two stories (50 ft).

3. ALLOWABLE AREA AND HEIGHT INCREASES

Per Section 506 of the IBC, the allowable area of a building may be increased if it adjoins or has access to a public way or open space. The allowable area may be increased by up to 175% depending on how much of the building fronts on the open space. The Redoubt building qualifies for the full frontage increase.

If a sprinkler system is provided, the height of the building may be increased by one story, and the allowable area may be increased by 200%. (Note: If = Frontage Increase, and Is =

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Sprinkler Increase.) No sprinklers are present, so the school does not qualify for the sprinkler increase.

AREA INCREASE CALCS: (Note: If = Frontage Increase, and Is = Sprinkler Increase.)

Total Allowable Area = Allowable Area per story (Aa) + (Aa X If) + (Aa X Is)  
Total Allowable Area = 18,500 SF + (18,500 SF X 0.75) + (14,500 SF X 0) = 32,375 SF per floor

Actual Floor Area = 44,486 SF

No. of Stories Allowed = 2 (50 ft)      Actual No. of Stories = 2 (24 ft – 2 inches)

The building area is not in compliance with this section of the code.

4. RATED SEPARATIONS

Per Table 508.4, no rated separations are required between the E and A-1 Group occupancies. Per Table 509, boiler and furnace rooms typically require a one hour separation or the presence of a sprinkler system. (Table 509.)

5. AUTOMATIC FIRE SUPPRESSION SYSTEM

The IBC as amended by the State of Alaska requires a fire sprinkler system throughout any E Group educational occupancy with more than 49 occupants. The calculated occupant load of the Redoubt Elementary School is greater than 49 occupants, and would require sprinklers.

An existing fire sprinkler system does not appear to be present throughout the building. Based on the date of construction, the school building was constructed prior to the state amendment that would require a sprinkler system to be installed. The building has not had any major modifications made to it, and has therefore been 'grandfathered in' from having to install a sprinkler system up to this point.

If major remodel work is proposed, addition of a fire sprinkler system would be required under the IBC as adopted and amended by the State of Alaska.

6. EXITING

*Number of Exits*

The IBC (Section 1015.1) allows E occupancy spaces to have one exit if the occupant load is less than 49 people. All of the classroom spaces have an occupant load less than 49 people, or have two exits out of the room.

The multi-purpose space would be classed as a Group A-2 occupancy. For the majority of the time, the space is used as a cafeteria; using the occupant load for this use, the occupant load would be approximately 225 people. Per Section 1015.1.1, a space with an occupant load greater than 500 people must have three exits. Based on the calculated occupant load, only two exits would be required. The multi-purpose space currently has two interior facing exits.

E. SPACE RELATIONSHIPS/ BUILDING FUNCTIONALITY

1. PLAN LAYOUT

The general layout of the school building is a long rectangle divided by a double loaded corridor running east to west. The east and west ends of the building are occupied by classrooms. The two wings are connected by a central area that houses the admin and reception area, and the library. Directly north of the admin/office spaces and library are the main multi-purpose room, kitchen, and storage room.

This layout generally works well in terms of basic organization. Double loaded corridors are inherently efficient ways to arrange the circulation through the building. Classrooms are located against exterior walls, giving them priority access to natural daylight where windows exist.

2. SERVICE AND SUPPORT SPACES

Main support spaces like the custodial rooms and restrooms are located on either side of the central hub of the school. This also tends to be an efficient way of providing service to the students. One disadvantage of this approach is that students from the classrooms at the extreme west and east ends have farther to travel to reach the restrooms or other areas located in the center.

3. MECHANICAL AND ELECTRICAL DEFICIENCIES

The main heating and cooling systems for the facility have not been changed or updated since its construction almost forty years ago. Although the main ductwork is in good condition, the piping and heating systems are reaching the end of their useful service lives. The District should look at replacement of these systems as part of any major upgrade.

For additional discussion, see the mechanical and electrical portions of the report.

F. ENERGY EFFICIENCY

1. EXTERIOR WALL ASSEMBLY

The typical exterior wall assembly consists of 8" thick CMU, with an interior finish of painted 5/8" thick gypsum board supported on 2 x 2 treated wood furring. The wall is insulated with fiberglass batt insulation placed in between the wood furring.

Based on a typical R-value of 3.5 per inch, 3.5 inches of older style fiberglass batt has an insulating value of R-12.25. Including the insulating value of the gypsum board and CMU, the total R-value for the assembly is about R-14. This value would have been more than adequate for any energy code requirements at the time of construction. It is not an acceptable value under current guidelines. The IECC calls for a total insulating value of R-20.5 for exterior walls in a Zone 7 climate like Soldotna.

Studies conducted by ASHRAE comparing the R value of different exterior assemblies have caused the International Code Council to change the requirement for most types of buildings to include a continuous, uninterrupted layer of insulation in the exterior assembly. The presence of wood studs in between fiberglass batts means that the actual R-value of the wall assembly is reduced wherever a stud occurs – by as much as 10 - 15% in some cases. (ANSI/ASHRAE Standard 90-1-2007 Table A9-26)

The effect is not as bad as using metal studs, which would conduct heat to the outside far more efficiently. However, the building is still losing more heat to the outside colder air in winter months than it would with additional insulation. Adding to the overall amount of insulation for the building's exterior wall assembly would help improve its energy efficiency.

## 2. ROOF ASSEMBLY

The main roof assembly consists of a built-up roof (BUR) composed of layers of asphalt felts laid down over 4 inches of rigid insulation on top of a vapor retarder on wood deck. The total R-value for the assembly is approximately R-22. For comparison, the 2012 IECC would normally require an R-value of R-35.

Similar to the wall assembly, additional continuous rigid insulation would be a way to increase the thermal efficiency of the roof by raising the roof assembly's overall R-value. The design team's understanding is that this is being addressed as part of the reroof of the school that was already designed and put out to bid.

## 3. WINDOWS

Elsewhere in this report, we talk about thermal efficiency using R-value, where the higher the number, the better the insulating performance. The window industry typically measures the thermal performance of a window unit using its U-value. This is simply 1 divided by the sum of the window components' R values. From a thermal performance perspective, the lower the U-value, the better.

The original exterior windows for the school building were typically double-pane windows with aluminum frames and insulated glazing. They perform better than single pane windows, or windows with steel frames, but they are still not the best type of window unit for thermal performance. An average U-value for this type of existing window would be 0.85. By contrast, the 2012 IECC typically requires a window to have a U-value of 0.32 or lower.

It is our understanding that the District replaced the windows on the north side of the building as of the summer of 2020. Windows on the south side will be replaced on an "as needed basis." The new window units should help boost the overall thermal efficiency of the school's exterior envelope.

## RECOMMENDATIONS

### G. LIFE SAFETY CODE ISSUES/ ADA ACCESSIBILITY

#### 1. LIFE SAFETY/BUILDING CODE

##### *Fire Sprinklers*

As noted previously, the building appears not to have a fire sprinkler system throughout. Under the 2012 edition of the IBC as adopted and amended by the State of Alaska, all E occupancies with more than 49 occupants are required to have a fire sprinkler system throughout the structure. The Redoubt School would be required to include fire sprinklers if it were being constructed today.

The school lies within the jurisdiction of the City of Soldotna, not the State of Alaska, but that doesn't make a difference in terms of how the building code is applied. For all but the most minor of remodels, the Authority Having Jurisdiction (AHJ) will likely insist on sprinklers being provided. A new fire sprinkler system would be beneficial to the protection of health and safety of the occupants, and would help the District better preserve its property in case of a fire.

#### 2. ADA/ACCESSIBILITY

##### *Restrooms*

Per Section 1109.2 of the IBC, restrooms on every floor of a building are required to be accessible. At a minimum, stall doors are required to be at least thirty six inches wide, and at least one of each type of each bathroom fixture (such as toilets and urinals) must be accessible. An accessible restroom must also have room for a five foot wheelchair turning radius, as well as designated clear areas around toilets and sinks.

At least one toilet stall must be equipped with grab bars, and have enough room in the stall to accommodate a five foot by five foot clear area around the toilet fixture. At least one lavatory must also be accessible (that is, mounted at 34 inches above finished floor with the requisite clear floor area below.) Section 1109.5 requires a minimum of two drinking fountains to be provided. One must be mounted with the height range required by ADA.

The existing restrooms do not comply with these requirements. The layout of the rooms does not allow sufficient room for the required five foot turning radius. In addition, none of the restrooms have a toilet stall that complies with the minimum ADA required dimensions. The gang type handwashing fixture provided in place of actual sinks is also difficult to use for a person in a wheelchair.

There are two possible options for gaining the additional space needed for an accessible toilet stall and ADA required clearances. One is to expand the overall footprint of the restrooms. The other would be to reduce the overall number of stalls in each restroom to allow one of them to grow in size. The second option appears more practical given the difficulty and expense of expanding the restroom footprint.

*General ADA Accessibility at Main Corridor*

ADA also requires that doors have lever style handles which are operable by a person in a wheel chair. A lever style handle is typically easier to use for a disabled person than a residential knob style handle that requires a pinching motion and twisting of the wrist. Virtually all the doors along the main corridor have 'knob' style handles. This door hardware does not comply with accessibility requirements and should be replaced.



*The doors along the main hallway do not have ADA compliant lever style handles.*

3. ENERGY EFFICIENCY/PROTECTION OF STRUCTURE

*Exterior Walls*

As noted above, the presence of wood studs in the plane of the batt insulation tends to diminish the actual R-value of the wall assembly. The exposed CMU finish of the exterior walls makes it difficult to add any continuous insulation at the exterior. A possible solution would involve replacing the batt insulation at the interior with rigid insulation that has a higher R-value per inch.

Four inches of rigid insulation would provide an R-value of R-22. Combined with the R-value of the CMU blocks and the gypsum board, the total wall assembly would have an R-value of about R-24. This would actually exceed the minimum recommended value of R-20.5 in the IECC.

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*Roof Assembly*

Based on the available information, the roof assembly could use additional rigid insulation to bring it more in line with current IECC guidelines. As the roof is already slated to be replaced as part of a separate remodel, no specific recommendation is provided.

*Windows*

The existing windows on the north side of the building were replaced earlier this year. The south side windows will be replaced on an “as needed” basis during the District’s regular maintenance cycle.



*The existing windows have been partially replaced with newer, more energy efficient insulated units. The remainder will be replaced over the next few years.*

## STRUCTURAL SURVEY

### EXISTING CONDITIONS

- A. The original facility was constructed in 1978.
- B. FOUNDATION
  - 1. The building is supported on a reinforced concrete foundation extending to a depth of 6'-0" below the first floor.
- C. FLOOR STRUCTURE
  - 1. The first floor above the crawlspace is plywood over built up 2x members supported on concrete walls with continuous footings.
  - 2. The gym and storage floors are concrete slab on grade.
  - 3. All floor elements are in good condition with no excessive deflection.
- D. MEZZANINE STRUCTURE
  - 1. The Mezzanine floor of the mechanical and storage spaces is concrete over metal deck supported by steel beams. There is no evidence of excessive cracking damage to the concrete or metal deck.
  - 2. All floor elements are in good condition with no evidence of damage or deflection present in the accessible areas.
- E. MAIN BUILDING FRAMING
  - 1. The main frame of the building framing consists of Glu-lam beams supported by steel columns and stack bond CMU walls. The CMU walls act as the lateral force resisting system. Structural elements that are visible appear to be in good condition.
  - 2. Non-load bearing partition walls CMU walls can be removed for programmatic needs.
- F. ROOF STRUCTURE
  - 1. The roof structure is comprised of 3" Tongue and Groove wood decking over GLBs. The fit-up of the tongue and groove roof deck is questionable and may be askew due to several earthquakes that could have caused movement within the roof. Overall, the roof structure is in good condition. No excessive deflection, water damage, nor rot was noted during the site inspection.
- G. PORTABLES
  - 1. The portable structures appear to be in poor condition overall. The roof, flooring, and skirt walls all have experience expected creep deflection over time and the buildings appear to be nearing the end of their useful life.

### RECOMMENDATIONS

- H. STRUCTURAL REMODEL
  - 1. From a structural aspect the building is in good condition and suited to revision for future use.

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- a. We recommend viewing the tongue and groove decking from above when the reroofing effort is completed to assure there are no issues with fit-up that will prevent the structure from performing as intended.



*Poor fit-up in tongue and groove deck*

- b. It would be beneficial to conduct a tier 1 seismic investigation of this facility prior to a full remodel effort. There are several red flags indicating the building would benefit from moderate seismic upgrades which could increase the safety performance of the structure. The red flags include:
  - 1) Stack bond CMU
  - 2) Tongue and groove wood decking installed perpendicular to the glu-lam beams
  - 3) Exterior foundation wall footings do not have lateral restraint at the base.

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2. The portables are in poor condition. We recommend making plans to relocate the space and either discontinuing the use of the structures or having the structural members inspected for damage.



*Portables in poor condition*

- I. STRUCTURAL LIFE SAFETY ITEMS
  1. No structural life safety items were observed.

## MECHANICAL SURVEY

### EXISTING CONDITIONS

#### *Redoubt Elementary School*

- A. The original facility was constructed in 1978. The mechanical room was undergoing a boiler replacement at the time of the site visit for this survey.

A. SITE UTILITIES

1. An Enstar natural gas meter is located on the exterior north side of the building. The gas meter and regulator is in fair condition.



*Gas meter at rear exterior of school*

- 2.
3. A 3" water entry comes up through the floor in the generator room. Piping and valves are in fair condition.
4. There are six drywells. Two are located to the north and four are located on the south side of the building. These are each served by 4" rain leader lines.
5. A 6" waste line exits under the east side of the school.
6. Utilities are in fair shape and the services can be reused.

B. PLUMBING

1. The bathroom plumbing fixtures, in general, are in fair condition. Minimal staining is present on all of the toilet, urinal, and sink surfaces, and there is some corrosion on flush valves and water piping joints.

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2. Stainless steel group handwashing stations in restrooms are in good condition and are motion sensor activated. These are easily activated when simply walking past them; water is potentially wasted because of this.
3. The toilets in boy's and girls' restrooms are not ADA accessible.
4. The kitchen plumbing fixtures and floor drains are in good condition. All fixtures appeared clean and well maintained.
5. The school was undergoing a hot water heater replacement at the time of this condition assessment. This is being done as part of a boiler replacement design. Design documents for the design indicate two 113 gallon indirect type water heaters with double wall heat exchanger coils will be installed in the boiler room.

C. FIRE PROTECTION

1. There is no sprinkler system present for this facility.
2. For fire alarm systems present in the building, see electrical.

D. VENTILATION SYSTEM

1. One fan room comprises of multiple fan units with heating coils that distribute constant volume ventilation to the gymnasium and core areas of the building, including the library.



*Multiple fan units are original construction*

2. Each classroom has a dedicated ventilation unit built into the cabinetry under the windows. Each ventilation unit has a heating coil. Air is relieved from each classroom through a single large wall grille that is ducted to individual exhaust fans located on the roof.

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*Fan coil units built into classroom cabinetry*

3. No VAV boxes are present. Instead, the building uses duct reheat coils for each zone of the building.
4. The air handling units and fans are the original equipment installed. These units are in working order, but are at the end of their useful life.
5. Heating coil piping and valves for air units show external signs of age and corrosion.



*Air unit heating coil piping with pneumatic line disconnected*

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6. Fan damper actuators are all pneumatic and are original construction. One damper actuator has pneumatic line tubing disconnected.
7. No VFD's (Variable Frequency Drives) are used for any of the fans.
8. Ducts and diffusers are generally in good condition. Some diffuser faces have light surface wear that includes scratches and chipped paint. Wall and ceiling grilles are dusty or dirty and require cleaning.



*Ventilation grilles and diffusers require cleaning*

9. Ventilation equipment, though aging, appears very well maintained.

E. RELATIVE HUMIDITY CONTROL

1. A humidification system is not present in this facility.

F. HEATING SYSTEM

1. This school was undergoing a boiler replacement at the time of this survey, and no boilers were present on site to observe. Design documents for the boiler replacement project show that three 725 MBH natural gas condensing boilers will be installed that will operate with outdoor reset controls and sequence.
2. Heating water is the medium that circulates through perimeter finned tube, unit heaters, and ventilation units that deliver heat to all building spaces. Cold water service is tied into the heating system for boiler water makeup.
3. Control valves for all terminal units are pneumatic and appear to all be from original construction.
4. The existing heating water pumps are all in good working order and in good condition. All pumps appear to have been replaced with modern equipment. The heating system operates on constant volume pumps. No VFD's are used on any of the pumps.
5. Ceiling mounted cabinet unit heaters are making rattling noises.

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6. Piping in the mechanical room is in good condition. Some of this piping is being replaced in the current boiler upgrade project. General building heat piping shows signs of external corrosion. Piping insulation is in generally fair or poor shape from what was exposed. There are no signs of system leaks.



*Piping conditions above ceiling with external corrosion and missing insulation*

7. Overall the heating system is very well maintained and in good condition for it being mostly original 1978 construction. However, the piping and valves are at the end of their useful life at 40+ years.

G. COOLING SYSTEMS

1. No cooling system is present in the building for general HVAC.

H. BUILDING AUTOMATION SYSTEM (BAS):

1. The entire building utilizes pneumatic controls. The associated air compressor is located in the Boiler Room.
2. All thermostats are original equipment installed in the building and are generally in fair condition.

**RECOMMENDATIONS**

- I. For all items below – the owner retains first rights to salvage/reuse of all demolished equipment.

J. PLUMBING

1. Replace all above grade domestic water piping back to the isolation valves at the water heater and the cold water entrance.

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2. Replace plumbing fixtures with ADA compliant fixtures in the appropriate quantities and locations. Add tempering valves to prevent scalding.
3. Add emergency eyewash and shower stations where required by room usage type.
4. Adjust visibility of motion sensors for restroom handwashing stations

K. FIRE PROTECTION

1. A complete and total fire protection system will need to be provided for this facility, as all spaces are considered Light Hazard Occupancy. A wet sprinkler piping system is recommended. This will require either an upsize of the current cold water utility line for the building, or a separate water service line to the building that is dedicated to fire service which can meet flow and pressure demands.
2. For fire alarm, see electrical section of the report for specific recommendations.

L. VENTILATION SYSTEM

1. Retain ductwork and reroute as necessary to accommodate any floor plan changes.
2. Demolish fan units and replace with new, appropriately sized fan units that include heat recovery.
3. Provide VAV boxes at Demolish all heating coils and valves and replace with modern DDC capable equivalents.
4. Clean existing diffusers and grilles and relocate to accommodate floor plan changes.
5. Add volume dampers to all diffusers and grilles.
6. Demolish the exhaust fan for the bathrooms and janitor closet and tie these spaces into a heat recovery ventilation system.
7. Provide demand control ventilation by using CO2 sensors in spaces that are greater than 500 sq. ft. and also have an occupancy density greater than 40 people per 1000 sq ft.

M. RELATIVE HUMIDITY CONTROL

1. Humidification is not recommended for this type of facility.

N. HYDRONIC HEATING

1. Reuse boilers that will be upgraded in the boiler replacement project.
2. Provide variable frequency drives for all pumps. Provide new pumps as necessary to coordinate with flow changes to other parts of the building heating system.
3. Replace all terminal heating units, which include:
  - a. Finned Tube
  - b. Unit Heaters
  - c. Cabinet Unit Heaters
4. Replace all building heat piping and replace all pneumatic control valves with modern electric actuator type.

O. SPACE COOLING

- a. Cooling equipment is not needed or recommended at this time due to the location, weather conditions, and winter month occupancy schedule of the building.
- b. It is recommended that the new ventilation system equipment be sized to meet potential future cooling needs. This will entail the following three provisions:
  - 1) A blank space in the new air handling unit will be allotted for a future DX or water cooling coil.
  - 2) The fans for the AHU will be sized to meet CFM cooling loads with a future cooling coil in mind. The fan motors will use VFD's to allow each fan to operate

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at minimum ventilation airflows and minimal energy draw during normal operation in the heating season. Even without a cooling coil, the fans will still be capable of increasing speed and airflow to provide economizer cooling during summer months if needed.

- 3) The VAV boxes will be sized to meet maximum airflows for future cooling needs.

P. BUILDING AUTOMATION

1. The existing DDC workstation and control panel should be upgraded to modern equivalents. The new DDC system will also provide new DDC points for the new pumps and air handling units mentioned in the recommendations above.
2. New thermostats would be provided for all zones as part of upgrading to DDC.

## ELECTRICAL SURVEY

### EXISTING CONDITIONS

#### A. SERVICE ENTRANCE, MDP, AND GENERATOR

1. Service Entrance  
An underground power service from the Utility is via a ground mounted transformer (150KVA, 208Y/120V secondary) near the back (north) side of the building. It has a Utility meter (HEA 2005974) mounted on the side of the transformer enclosure. There is currently no way to shut off power from the exterior of the facility (both normal and generator backup), violating NEC Article 230. The enclosure and meter housing are in good condition.
2. MDP  
The MDP is in the main electrical area and is rated for 800 amps, 208Y/120V. MDP is a Cutler Hammer type MP2DB switchboard with an 800 amp main circuit breaker. The MDP is in good condition.
3. Generator and ATS  
There is a backup generator located in the generator room. This powers an automatic transfer switch and certain emergency and optional standby loads which are shared on one distribution branch. The generator is a Kohler 30 kW standby (model 30R0Z81). The ATS is a Westinghouse ATS; 125amp, 120/208V, 3ph, 4 wire per record drawings. Generator and ATS are in fair condition.

#### B. POWER DISTRIBUTION

1. Interior  
Interior panels in the main electrical area appear to have been replaced since original construction and are in good condition. The panels in the halls of the school appear older and are in fair condition. The portable panels are slightly older than the hall panels in the main school and are in poor condition.

There are distributed starter/disconnects at each piece of equipment in the fan room. These are in good condition.

Receptacles were in good to fair condition, though some are approaching end of life. Currently, power strips are in use in several locations, including the offices and some classrooms. It is not ideal to use power strips. Additional receptacles will need to be installed in all re-purposed spaces to serve the ever-growing need for electronic devices. GFCI devices are required within 6 feet of water sources such as sinks and currently most receptacles near water sources are not code compliant.

2. Exterior  
Power to the portables comes from the school and serves a panel in each portable. The power to the first (east) portable is routed overhead, and the power to the Boys

and Girls club portable (west) routes underground. Exterior raceways and enclosures are in good condition.

There is a 30A/1P circuit breaker and NEMA 30 receptacle on the front (south) side of the school for trailer plug in (MIDWEST POWER BR32U - 30A 125V RECEPTACLE). This enclosure is in fair condition and has rusted some.

### C. LIGHTING

#### 1. Interior Lighting

Interior luminaires utilize T8 fluorescent lamps in the majority of the spaces (with very few exceptions). Luminaires are generally in fair to poor condition. Most classroom and hallway spaces are recessed grid troffers, though some spaces have surface mounted luminaires. Utility type rooms have strip or wrap type fluorescent luminaires. The gym has high bay HID luminaires. The kitchen has sealed surface fluorescent luminaires. Some of the original fluorescent luminaires have been retrofitted with LED tube sources.

#### 2. Exterior Lighting

Exterior luminaires primarily utilize HID lamps (with a few exceptions). Luminaires are generally in fair to poor condition. Exterior building mounted luminaires were wall pack or flood styles. Exterior front canopy luminaires are semi-recessed drop lensed downlights. A few of the pole mounted luminaires on the plan south side of the property have recently been replaced with LED flood lights. Flood luminaires on those same poles are older and appear to utilize HID sources. Poles behind the playground on the plan north side of the school are older and appear to utilize HID sources.

#### 3. Emergency Lighting

Emergency lighting is provided primarily by one light in each room being on the backup generator per record drawings. There are additional "bug-eye" style luminaires with integral batteries in a few locations in the school as well. Emergency lights on generator are older and in fair to poor condition. The bug eyes are newer and are in good condition. Most exit signs were self-luminous type. There were some locations where they did not likely get enough ambient light to charge the sign. Signs were installed at most egress path locations but it appeared a few exit sign locations were missing.

#### 4. Lighting Controls

Lighting controls consisted of manual wall switches only. There were no automatic controls i.e. occupancy sensors, timer switches, photocells, etc. The entire facility's lighting controls should be updated with a new networked system. This will include all new occupancy sensors and wall switches throughout.

### D. SIGNAL

#### 1. Communications

There are 2 observed communication areas/rooms/closets at this facility:

- wall rack by library office has main servers and patch panels

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- generator room has fiber patch panel, punch down blocks, and 1 @ 2-port data jack

These appear to be served from 2 communication services (phone pedestal at north by power transformer and phone pedestal at southwest corner of property). There is a phone pedestal located new the southwest corner of the school. Portables are fed from the school communication system.

There is not a dedicated communication room or communication floor mounted cabinet. Most connections are exposed 66 or 110 block type connections of wall telephone terminal boards. Most cabling is Category 5 or 5E. There are a few wireless access points installed. There was not cable tray or j-hooks observed to support communications cabling. Communications equipment and cabling are in good condition.

2. Cameras

There is an IP camera system that is functional and appears to be in good condition. Camera views cover most common interior spaces and the exterior perimeter of the facility. Cameras are typically dome style, appear to be manufactured by Axis and in good condition. See comment above about communication cabling routing.

3. Intercom

There is an older intercom system (Dukane model MCS350/64-25-1) that is in fair condition in the administration reception area at the south end of the building. Speakers are ceiling mounted throughout the school and a few wall locations including some exterior speakers. Wall and ceiling speakers were in good condition, older, and nearing end of life.

4. Sound Amplification

There is a sound amplification system on a cart in the storage room next to the gym and connects to 4 large wall mounted JBL speakers in the gym. The cart has a Mackie 808S 8-Channel Stereo Powered Mixer, Pyle Pro Wireless Professional Microphone System, and a CD/cassette player. Equipment and speakers were in good condition.

## RECOMMENDATIONS

### A. POWER DISTRIBUTION

1. Provide exterior disconnects for normal and backup power services.
2. Install GFCI receptacles at locations within 6 feet of water source (sink, shower, etc.)
3. Install GFCI receptacles with weatherproof covers along the exterior of the building at approximately 60 feet on center and at least one on the roof. Code requires roof receptacles within 25 feet of mechanical equipment, but even though there is no roof mounted mechanical equipment, there are also advantageous for other roof equipment.
4. Provide NEC compliant emergency branch of the power distribution system. Most items currently on backup generator are optional standby. These, in the current code, are required to be on separate transfer switches and separate branches of the power distribution system.
5. Replace generator and ATS.
6. Replace older panels that are deemed beyond their useful life, typically considered to be 30 years.
7. Install additional power panelboards to meet the increased power demand of the facility.
8. Provide short circuit and arc flash study and provide labels required under 2017 NEC 70E and OSHA requirements.

### B. LIGHTING

1. Replace exterior HID wall and remaining pole lighting with LED lighting which are more efficient and typically have less than a 5 year payback.
2. Replace remaining interior fluorescent, compact fluorescent, and HID lighting with LED lighting which are more efficient and typically have less than a 5 year payback.
3. Install occupancy control in all interior spaces, and photocell control for exterior spaces. The installation of highly efficient, long life, and low maintenance LED lighting fixtures and an automatic lighting control system will benefit the Owner in the form of a short payback period.
4. Provide a central inverter for all interior and exterior emergency egress lighting. Central inverters limit the need to have remote battery packs scattered throughout the facility and provide a central point for testing of code-required egress lighting. In addition, remote battery packs will not have to be connected up from inside the facility to the exterior egress lights, easing the overall installation. This option would reduce the need for a separate emergency branch of the power distribution system. Not having to add an ATS and panel with new raceway and wiring.
5. Remove nuclear exit signs and provide powered LED exit signs.

### C. TELECOM

1. Provided dedicated communication rooms with dedicated racks and proper cooling. Overheating servers and equipment shortens life expectancy of the equipment. Also unnecessarily heats the space.
2. Provide cable tray and raceways for all exposed communication cabling.
3. Replace intercom system.

## CODE DEFICIENCIES/LIFE SAFETY VIOLATIONS

- A. NFPA 70 – No ability to shut off power from outside of building.
- B. NFPA 70 – No GFCI receptacles within 6 feet of water source.

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- C. NFPA 70 – Not having a dedicated emergency branch of the power distribution system.
- D. NFPA 70E – No arc flash hazard warnings.
- E. NFPA 101 – Inadequate emergency lighting and exit signs throughout facility.

## FIRE ALARM/FIRE PROTECTION SYSTEM

### EXISTING CONDITIONS

#### *General System Description*

The fire alarm panels and devices were replaced/added recently (2005). The fire alarm system (Edwards EST3) is in good condition. The main fire alarm panel is in the reception area. The fire alarm remote annunciator panel is in the front vestibule. There are booster panels in the janitorial area and in the upstairs mechanical room. Devices are typically surface mounted with surface conduit and boxes. There is a fire alarm bell near the back (north) entrance.



*Redoubt main fire alarm panel in reception area*

As noted in the architectural and mechanical sections of the report, there is no fire sprinkler system in the building. If a sprinkler system is installed, code compliant tamper switches and a flow alarm will need to be added to the water service.

### RECOMMENDATIONS

- A. Provide code study and provide additional detection and notification devices where required to meet current code.
- B. If a new fire sprinkler system is installed in the building, provide sprinkler system flow and tamper switches, water flow alarms, and other related contacts that interface with the fire alarm panel. See mechanical for specific fire protection recommendations.

### CODE DEFICIENCIES/LIFE SAFETY VIOLATIONS

- A. IBC 2012 – Inadequate fire alarm detection devices present throughout the facility.
- B. IBC 2012 – Inadequate fire alarm visual devices present throughout the facility.
- C. IBC 2012 – Inadequate fire alarm audible coverage throughout the facility.
- D. IBC 2012 – No fire sprinkler system provided in the building.

## SOLDOTNA MIDDLE SCHOOL

### ARCHITECTURE

#### EXISTING CONDITIONS

##### A. BUILDING SITE

The Soldotna Middle School was previously known as the Soldotna Prep School. The original facility was constructed in 1969 as the Soldotna Junior High School. The school was doubled in size by an addition in 1986.

The Soldotna Middle School is a single story structure arranged roughly in the form of a 230 foot wide by 370 foot long rectangle, running north to south in the long direction. The area of the first floor is approximately 86,000 SF. Primary access is from the south, off of a drop-off lane. A parking area is located along the east edge of the site.

Utilities enter the building from the west side of the building. The main mechanical and electrical spaces are located along the west side with direct access from the exterior. The main sewer line exits the building on the east side and turns south to connect into the city main under the road.

There are sidewalks located on the east and south sides of the lot connecting the facility to the drop off lane and the east side parking area. Tennis courts and a jogging track are located directly to the north of the building. The site appears to be generally level with a gentle slope to the north side of the lot.



*Main entry to Soldotna Middle School at the south elevation.*

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A. EXTERIOR ENVELOPE

1. EXTERIOR WALLS

The exterior shell of the Soldotna Middle School is CMU wall. The wall assembly at the original portion of the school consists of 6" non-bearing CMU wall with a gypsum board interior finish over 2 inches of rigid insulation. The wall assembly for the 1986 addition is slightly different. It is constructed using 8" CMU with a gypsum board interior finish over 6 inch fiberglass batt insulation held in place with 3.5" deep metal studs.

The exposed CMU of the exterior envelope appears to be in relatively good condition. The surface paint is not chipped or spalling. No obvious signs of earthquake damage were visible in the form of large cracks or missing blocks.

Window glazing typically takes the form of tall, thin rectangular openings on the original section of the building. These openings run from the floor up to the underside of the roof soffit. On the newer northern half, the thin rectangular windows are interspersed with more standard sized square window openings. The windows are insulated glazing units with aluminum clad wood frames.



*The exterior CMU is in good condition and shows no signs of damage.*

2. ROOF ASSEMBLY

The original IRMA (inverted roof membrane assembly) roof for the Soldotna Middle School was replaced in 2015 with a BUR (built-up roof) membrane. The new assembly (from exterior to interior) consists of a built-up asphalt roof on 1/2-inch thick glass matt gypsum cover board over

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two layers of rigid EPS foam insulation. The insulation rests on a polyethylene vapor retarder on top of gypsum board placed over the existing metal deck.

The roof is relatively new and appears to be in good condition. Based on a walkthrough of the building and information from users, there have not been any noticeable roof leaks. There were no pools of water or stains that would indicate ponding water. Slope for drainage is generally provided by sloping the metal deck and supporting structural beams, rather than tapered insulation. A new BUR roof can have a useful lifespan of twenty-five to thirty years, so this roof should not need replacement for at least another twenty to twenty five years if properly maintained.

The majority of the roof is at one level, approximately 13 feet above grade. The roof at two areas in the center of the building jumps up to approximately 35 feet above grade. These higher roofs are located over the main gymnasium and multi-purpose room, respectively. The main mechanical fan rooms are also located within these higher spaces.

B. INTERIOR CONSTRUCTION AND FINISHES

1. BUILDING STRUCTURE

The main floor of the facility is a concrete slab on grade with concrete footing and foundation walls. The primary structural frame consists of open work steel joists supported by steel beams resting on steel columns that are partly within the cavity of the CMU walls. The CMU walls themselves are generally non-load bearing. The main roof assembly is supported on structural steel decking resting on the main roof joists below.

2. MAIN ENTRY/ADMIN AREA

The original main entry for the building is located at the south end of the structure. The main administrative hub for the school is located immediately to the east of the main entry. The floor finish in this area is typically carpet tiles. Wall finishes are a mix of exposed, painted CMU and glazed storefront style partitions.

A portion of the open space in the main entry was taken over by an enclosed classroom immediately to the west of the entry vestibule. During the site visit, it became clear that this enclosing of previously open space has happened in many locations throughout the school building. Although it was driven by the changing needs of the users over time, one of the side effects has been to create more complicated, less efficient circulation through the spaces.

The main administrative hub includes a main reception/admin station, the principal's office, offices, a teach workroom and the teachers' lounge. Due to multiple divisions of the space over time, the circulation path through the area is not as clear as it originally was.

The main reception/front desk admin area has a band of curtain wall glazing on the west and north walls to allow staff to maintain visual surveillance of traffic coming through the south entry vestibule and entry. Two offices for the principal and secretary are located to the south of

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the main desk, against the west exterior wall. A teachers' lounge and conference room are located against the east exterior wall, with restrooms positioned in between.

The team observed that the painted CMU walls were generally in good to fair condition. Upper and lower cabinets in many rooms appear to date to the late seventies or early eighties, and are showing signs of wear. The window blinds appear to date to the same era, and many of them are broken, or in poor condition. Carpet by the main reception desk was very worn down.



*The main reception area maintains good visual site lines to the traffic at the entry.*

### 3. LIBRARY

The main library space is located to the west of the main entry. It has a roughly seventy foot long by thirty foot wide footprint. This space was once divided by a wall into a separate reading area and library, but has since been opened up in a single large room.

The library receives abundant natural light from the exterior windows on its south and east walls. It previously had a strip of interior windows or relites along its common wall with the main east-west corridor, but this was removed during the 2003 remodel. The intent of the change was to gain more space for the library by straightening out the stepped north wall.

The library has a carpet floor finish. Wall finishes are typically painted CMU or painted gypsum board. The ceiling is a lay-in acoustical tile ceiling at the same 9 foot height as the main corridor.

A row of spaces running north-south along the west edge of the library provide support areas for library-related functions. These include the librarian's office, a magazine room and an audio/visual storage space.



*The library is a large, open plan room with plentiful natural light.*

#### 4. MULTIPURPOSE ROOM

The multipurpose room is the first of the two main central spaces. It was the original gym when the school was first constructed in the late 60s. The room currently functions as the cafeteria as well as the main assembly room. It is served by a kitchen, storage rooms and a janitor space located along its southern edge.

This room is a double-height space with a clear vertical distance of twenty feet from floor to ceiling. The floor is finished with stained wood planks protected by a coating of varnish. The ceiling is lay-in acoustical ceiling tile. The wall finishes are a mix of wood paneling and painted, exposed CMU.

The design team noticed that the flooring is very noisy in some areas when walked on. This is usually either a sign of water damage, or an indication that the planks are not adequately attached to wood blocking below. A member of the facilities staff noted that numerous planks had been replaced due to dents from gym equipment.

As a cafeteria, the multipurpose room is conveniently located for those classrooms and spaces close to the southern edge of the school. It is a longer trip to reach the space from the classrooms at the north end. Given that the majority of the general classrooms are located toward the opposite end of the building, this suggests that the gymnasium might work better as a lunch room space.

## 5. GYMNASIUM AND LOCKER ROOMS

The gymnasium is located to the north of the multipurpose room. The two spaces are separated by a belt of smaller rooms that serve the gym. These include the boys and girls locker rooms and showers, a weight room, office space and a first aid room.

Similar to the multipurpose room, the floor finish for the gym is wood planking. The walls are generally exposed, painted CMU. The room is open to the underside of the roof above. The steel joists supporting the roof are left exposed and painted.

The main entry to the space is by means of the common vestibules shared with the multipurpose space that open on to the main corridors to the west and east of the central zone of the school. The space itself is oriented with the long axis running north-south. A bank of extendable bleachers is located along the east wall of the gym.

A separate storage area runs along the north edge of the space. A portion of it is raised approximately four feet above the level of the gym floor, and is accessed by a stair. The storage room can be closed off from the gym with a coiling door.

### *Lockers and Showers*

Boys and girls locker rooms are located along the south edge of the gym. These rooms typically have double tier lockers running around the perimeter of the room, with banks of lockers located out in the center of the spaces. The tops of these lockers are held down at four feet above the floor to avoid creating any hidden areas where students aren't visible.



*The gym is a double height space measuring 32 feet tall at its high point.*



*The locker rooms and shower areas are in good condition, but unlikely to be used by elementary students.*

Common shower areas are located along the south edge of each locker room. The shower areas are equipped with “gang showers” that have multiple shower heads attached to a single column. A raised, six inch curb helps prevent water from draining onto the locker room floor.

The floor finish in the shower areas is a smaller 2 x 2 ceramic tile. The walls are finished with a larger format ceramic tile, and the ceilings are painted gypsum board. The shower and locker room finishes appeared to be in fair condition.

Group showers of this type are not unusual for older school children in middle grades, but would not be typical for an elementary school. These spaces will not be useful for many of the children intended to go to this school building.

## 6. KITCHEN

The school’s kitchen is positioned at the center of a row of spaces along the south edge of the multipurpose room. It is flanked on either side by storage rooms for food and dry goods supplies required for meal service. At lunch time, a coiling door is raised to open the kitchen to the multipurpose space, which acts as the school cafeteria.

The floor finish for the kitchen is ceramic tile. Walls are a combination of painted CMU, and FRP (fiber reinforced panels.) The storage spaces have painted concrete floors and exposed, painted CMU walls. All of the rooms have the same type of lay-in acoustical tile ceiling.



*The tile base in the kitchen is chipped or cracked in a few locations.*

The kitchen itself is in fair condition. The tile floor is generally performing well, although some of the ceramic tile base was chipped or worn in a few locations. A walk-in freezer was present on one side of the kitchen space. Fixtures such as mop sinks and work counters are stainless steel, and appear to be in good condition.

The team noted water stains on the ceiling tiles in the west side storage room. A fairly significant crack was also visible in the concrete floor.

## 7. MUSIC AND PRACTICE ROOMS

A music room and associated practice rooms are located along the west wall of the school, near the main mechanical and electrical rooms. This area was designed for band practice and music classes. There is a main performance space with built-in tiered seating levels that descend below the elevation of the main floor. There is also a row of smaller rooms along the main corridor that are used as practice spaces for students.

The floor finish in these rooms is typically carpet. The wall finish is painted CMU. Oversized lockers were located along one wall for instrument storage. Ceilings are generally lay-in acoustical ceiling tile. Angled acoustical panels are located along several of the walls to help control loud sounds bouncing off the hard surface of the CMU walls.

When the tiered seating for the main music room was constructed, it did not include any provision for accessibility. The school apparently addressed this issue with a sloped plywood

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ramp that had been installed over part of the tiered seating. The tiers themselves are fairly deep in terms of their horizontal depth, but shallow in height. (The as-built drawings show them as being approximately 8 inches high.)



*The tiered seating in the main music room/band practice space is not accessible.*

The tiered floor in the main music room makes this room difficult to convert to another function without some sort of alteration to level out the floor. The tiers are formed out of cast in place concrete and will not be easy to remove.

## 8. SHOP ROOM AREA

This area is located at the midpoint of the west side of the school, just to the north of the mechanical and electrical rooms. The group of spaces is arranged in an arc with the focus being the instructor's office. Wood and metal shop spaces are separated by a materials storage space in between. The two shop areas are designed to be able to be closed off with coiling doors when required.

This part of the building was used for vocational education related classes from the beginning. The original plan of the school labels the rooms as being for "industrial arts" and "mechanical drawing." However, there was a major remodel of the area during the 1986 expansion, giving it its current layout. Primary structural elements like columns were not moved, but all the non-load bearing interior partitions were completely replaced.



*The shop spaces are arranged in an arc around the central hub of the shop instructor's office.*

The walls of the shop spaces are generally painted, exposed CMU. The floor finish is painted concrete. The ceiling is painted gypsum board. The main room has electrical power boxes suspended from the ceiling on flexible whips, for use with various power tools. A structural column located out in the middle of the space has been protected with metal plate from its base to a height of about seven feet.

The team found the floor and wall finishes to generally be in fair condition. Similar to other areas of the school, the finishes of the base and upper wall cabinets appeared to be worn, and in need of some repair.

The shop area appears to be well laid out and in fair condition. However, out of all the spaces in the school, this one is perhaps the least suited for use in an elementary school setting.

## 9. CLASSROOMS

### Southside Classrooms

There are relatively few classrooms located along the south end of the school. The majority of this area is taken up by the main entry, the library and the administrative hub. A cluster of four classrooms is located in the southwest corner. The main egress route is west along the main east-west corridor which cuts through this cluster of space.

The classrooms are labeled on the existing plans as a computer lab, a home economics classroom, a computer lab, a typing classroom, and one 'generic' classroom that can

accommodate multiple subjects. The team found these labels to be generally accurate to the rooms' current functions.

The original home economics classroom was a rectangle running east-west. That space was subdivided into two smaller classrooms during the 2003 remodel of the school. The entry into the existing computer lab was modified at the same time.

These classrooms typically have a carpet floor finish. The wall finish is painted CMU, and the ceilings are lay-in acoustical ceiling tiles. The finishes were generally in fair condition.

One noticeable exception to this was the floor in the computer lab. Several power and data boxes are set in the concrete floor slab for use by students. The design team noticed at least two of them popping up above the finished surface of the slab. This in turn caused the carpet to mound up over the floor box. It appears as though a portion of the floor slab is sinking in this location.

### Eastside Classrooms

On the original 1960s floor plan, the classrooms along the east side of the building were either generic classroom spaces, or science classrooms. The 1986 addition expanded this area to the north by adding five more classrooms. An area measuring about twenty feet deep separated these rooms from the main north-south hallway. This was done to provide space for rows of additional student lockers.

An interesting feature of the new locker space was the construction of a raised "monitor" style roof above it. The walls supporting this raised roof included clerestory windows. The idea was to allow students at least indirect access to natural light, even if they were deep within the footprint of the building.

This new locker area was eventually removed as part of a 2003 remodel. The space was taken over by two smaller classrooms, with the result that the original classrooms along the east wall must now be accessed by a hallway. The classrooms along the 'inner ring' have no views to the outside, and are smaller and less easy to reconfigure than the original rooms against the exterior wall of the building.

All the 80s era classrooms along the east and north sides of the building have a similar configuration. A row of upper and lower cabinets against the corridor side wall provides storage for supplies and materials. The teaching wall is usually the long side wall opposite from the entry door. The typical floor finish is carpet, and the wall finish is painted gypsum board. The ceilings are lay-in acoustical tile.



*New classrooms added in the 2003 renovation are smaller, and have only indirect access to natural light.*

The carpet in some of the classrooms is worn. In one case, a hole or gap in the carpet had been patched with a piece from a different carpet of another color.

#### *Science Lab*

The main exception to the standard layout is the science lab. This classroom is located approximately at the center of the east side of the building, next to one of the groups of restrooms. The space is organized as a long rectangle running north-south, parallel to the exterior east wall of the building.

The lab is focused on a demonstration table near the south end of the classroom. The main teaching wall is behind this demonstration table. Counters run along the long east and west walls of the room where students can sit in teams to perform experiments.

The floor finish for the room is resilient tile. The wall finish is exposed, painted CMU, and the ceiling consists of lay-in acoustical ceiling tiles.

#### Northside Classrooms

A line of three classrooms stretches along the north end of the school. The main north-side entry vestibule is located immediately to the east. The dock/receiving room and a maintenance room are located to the west. As noted above, these classrooms are similar in layout to the classroom spaces along the east side of the school.

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The team found that the carpet finish in many of the classrooms is in poor condition. There were several cases of long bumps in the surface where the carpet material has detached from the substrate beneath. Some of the plastic laminate casework in the classrooms is worn and showing signs of the laminate beginning to crack or detach.

Art & Special Needs Classrooms

This cluster of rooms in the northwest corner of the building includes an art classroom, and two special needs classrooms. The arts classroom includes an enclosed area for a kiln, as well as a general storage room for art supplies located along the east wall. The center of the space is open for student seating.

The wall finishes of the art classroom are typically painted CMU. The ceiling is constructed of lay-in acoustical ceiling panels, and the floor finish is resilient tile flooring. The art room has a set of double doors that open directly on to the outdoor dock area for deliveries.

The pottery kiln was still present at the time of the site visit. The kiln room is ventilated by means of a metal hood spanning the short dimension of the room. The walls of the room are bare, painted CMU.

Further to the south of the art classroom are two special needs classrooms. These rooms are laid out as twin "mirror image" spaces with casework along the common wall separating them. A conference room and adjoining office are located between the two classrooms and the main north-south corridor.

The conference space appears to have been designed to allow the occupants to monitor activity in both classrooms while a meeting is going on. The room has two 'faceted' walls with windows in them that look into one of the two classrooms. The special needs student population can include children who are violent or disruptive, and an instructor must be able to maintain good visual surveillance of students at all times.

10. SUPPORT/UTILITY ROOMS

*Main Mechanical and Electrical Rooms*

The main mechanical and electrical rooms for the building are located approximately midway up the west exterior wall of the school, across a hallway from the music area. The floors of the rooms are bare, sealed concrete. The wall finish is a mix of painted gypsum board and CMU.

From the interior of the school, the boiler room must be accessed by going through the main electrical room. An exterior set of double doors allows direct access from outside for deliveries. Both the boiler room and the electrical room appear to have been kept relatively clean. The team did not see inappropriate storage of furniture or flammable items that sometimes occurs in mechanical spaces.

The school's main electrical panels were located in a smaller room off the back of the larger electrical room space. Although the space met the minimum dimensions for code required working space in front of the electrical panels, the team noted that it was tight, narrow area.



*The main boiler room is clean and well maintained.*

These rooms were the original utility spaces for the school when it was first constructed in the late 60s. The layout has not been substantially changed, but one of the boilers was replaced in 2017.

#### *Restrooms*

Groups of boys and girls restrooms are located at regular intervals around the perimeter of the school. One group is located near the arts and special needs classrooms in the northwest area of the school. A second group is located about midway along the east side of the school, opposite one of the main entrances into the gymnasium. A third group is located near the southwest corner of the school, near the library.

The restrooms typically have a ceramic tile floor finish. Walls are generally exposed, painted CMU. Toilet partitions are metal with an enamel finish. The restrooms added during the 1986 expansion all have at least one accessible toilet stall equipped with grab bars. The restrooms located in the original 1969 portion of the school generally do not.



*Restrooms in the south half of the school typically have some ADA accessibility issues.*

The restrooms used by the administrative staff and teachers were updated to comply with ADA requirements in 2003.

#### C. BUILDING CODE REQUIREMENTS

This section includes an abbreviated analysis of the building code (IBC 2012 Edition) as it relates to this building.

##### 1. BUILDING OCCUPANCY

Per Section 305 of the IBC, the building is a Group 'E' occupancy, with the gym and multipurpose spaces considered a Group A-1 Assembly occupancy.

##### 2. BUILDING HEIGHT AND AREA

Per Table 503, maximum allowable area per floor for a Type II-B (non-rated) building with an E occupancy = 14,500 SF with a maximum height of two stories (55 ft.).

##### 3. ALLOWABLE AREA AND HEIGHT INCREASES

Per Section 506 of the IBC, the allowable area of a building may be increased if it adjoins or has access to a public way or open space. The allowable area may be increased by up to 175% depending on how much of the building fronts on the open space. The Composite Building qualifies for the full increase.

If a sprinkler system is provided, the height of the building may be increased by one story, and the allowable area may be increased by 200%. (Note: If = Frontage Increase, and Is = Sprinkler Increase.)

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AREA INCREASE CALCS: (Note: If = Frontage Increase, and Is = Sprinkler Increase.)

Total Allowable Area = Allowable Area per story (Aa) + (Aa X If) + (Aa X Is)  
Total Allowable Area = 14,500 SF + (14,500 SF X 0.75) + (14,500 SF X 2) = 54,375 SF per floor

Actual Floor Area = 81,643 SF

No. of Stories Allowed = 2 (60 ft.)      Actual No. of Stories = 1 (14 ft.)

The building is divided by fire walls into two sections of 49,074 SF and 32,446 respectively. Each of these smaller areas is in compliance with this section of the code.

4. RATED SEPARATIONS

Per Table 508.4, no rated separations are required between the E and A-1 Group occupancies. Per Table 509, boiler and furnace rooms, as well as vocational shop spaces, typically require a one hour separation or the presence of a sprinkler system. (Table 509.)

5. AUTOMATIC FIRE SUPPRESSION SYSTEM

The IBC as amended by the State of Alaska requires a fire sprinkler system throughout any E Group educational occupancy with more than 49 occupants. The calculated occupant load of the Soldotna Middle School is greater than 49 occupants, and would require sprinklers. An existing fire sprinkler system is already present throughout the building.

6. EXITING

*Number of Exits*

The IBC (Section 1015.1) allows E occupancy spaces to have one exit if the occupant load is less than 49 people. All of the classroom spaces either have an occupant load less than 49 people, or have two exits out of the room.

The gym and multi-purpose spaces would be classed as a Group A occupancy, with an occupant load of approximately 1,380 and 830 people, respectively. Per Section 1015.1.1, a space with an occupant load greater than 500 people must have three exits. A space with an occupant load greater than 1000 people must have four exits.

Based on the gym's calculated occupant load, four exits would be required. Four exits are currently provided. The multipurpose room would require three exits. Four exits are currently provided.

D. SPACE RELATIONSHIPS/ BUILDING FUNCTIONALITY

1. PLAN LAYOUT

The general layout of the school is a long rectangle running north-south. Primary circulation is along a series of main corridors configured in a 'race track' arrangement. The gym, cafeteria and their supporting spaces are located in the center of the school, and take up

over a third of its total area. Classrooms are located along the outside of the racetrack at the west, north and east sides.

The layout has some advantages, in that the main admin cluster of spaces is located very close to the main south entry point. This allows staff to efficiently monitor traffic into and out of the school. Locating the main double height spaces such as the gym and multipurpose room at the center of the building interior means that students can travel a relatively short distance to reach those spaces from anywhere in the school. It also allows the classrooms along the exterior to have priority access to natural daylight.

A major disadvantage of the layout is the sheer amount of distance between the administrative hub and classrooms and other spaces located at the far north end of the school. The travel distance is close to two hundred and sixty feet from the front end of the school to the extreme north end. Under normal circumstances, this may not be an issue; during emergencies, or when a swift response is needed to a situation, the time required to reach outlying parts of the school could be a problem.

A second disadvantage arises from the changes made to the school layout over time. The original plan for the school and the north addition included more open space between the main 'racetrack' corridors and the classrooms along the building's perimeter. Over time, this open space has been gradually enclosed to provide more areas for classrooms.

The long term effect has been to create an inner ring of classrooms along the main corridors that are smaller, and do not have direct access to natural light. In some areas, such as the classrooms along the east side of the building, daylight is accessed through creative use of clerestory windows.

The smaller classrooms along the inner ring are also generally below the size of footprint that would allow for a well laid out teaching space. A typical classroom for thirty students usually needs to be about 950 to 1000 SF in area to provide the code mandated area per student plus some circulation. Classrooms along the inner ring of spaces tend to be about half that size.

## 2. GYM AND MULTIPURPOSE ROOMS

A comment made by several facilities staff is that a larger than normal percentage of the overall floor area is given over to the main multi-purpose room and gymnasium. The arrangement of the school is somewhat unusual in that many schools for younger children often have a single space that serves as the cafeteria, assembly area, and gym.

Having a dedicated gymnasium space that doesn't have other functions is a desirable feature for some members of the community. Students from the local high schools have occasionally used this space for inter-school games. The drawback of having both this space and the multipurpose room is that the building loses a large amount of floor space that cannot be used for actual teaching.

If the current gymnasium could be used for multiple program functions, such as a cafeteria space, it would allow the multipurpose room to be taken over for instructional classroom space.

3. SERVICE AND SUPPORT SPACES

As noted earlier in the report, the restrooms in the 1986 addition generally comply with accessibility requirements. This is not true for all of the restrooms in the original portion of the school. These spaces need to be reconfigured to better comply with ADA regulations.

4. MECHANICAL AND ELECTRICAL DEFICIENCIES

The main boiler for the school was replaced within the last five years. However, the main ductwork and piping for the facility have not been changed or updated since its construction almost fifty years ago. Based on industry accepted estimates of useful life for plumbing systems and mechanical HVAC equipment, the piping and ductwork are likely due for replacement.

For additional discussion, see the mechanical and electrical portions of the report.

E. ENERGY EFFICIENCY

1. EXTERIOR WALL ASSEMBLY

The typical exterior wall assembly consists of 8" non-load bearing CMU walls insulated with 6" of fiberglass batt insulation placed between 3-5/8" metal studs at sixteen inches on center. The interior finish of the wall consists of 5/8" painted gypsum board installed over a vapor retarder on top of the metal stud furring and insulation. The top four feet of the exterior walls consists of an insulated panel that serves as a 'fascia' for the roof.

The exterior walls of the smaller second floor mechanical area have a different exterior wall assembly. Based on the as-built drawings, this assembly consists of insulated exterior panels, which appear to be composed of a metal facing on a plywood panel over 2 x 4 wood studs insulated with fiberglass insulation. The walls of the other second floor mechanical space further to the north have a similar exterior panel supported on 6 inch metal studs insulated with fiberglass batt.

Based on a typical R-value of 3.5 per inch, 6 inches of older style fiberglass batt has an insulating value of R-21. Assuming a standard insulating value of 1.11 for CMU brings the total to R-22.11. The walls of the original upper mechanical story would come in at an R-value of approximately R-13. The walls of the upper story over the 1986 addition have an R-value of approximately R-22.

It was not clear from the as-built drawings of the newer, more highly insulated wall assembly was retrofitted throughout the building when the addition was constructed. If it was, then the R-value of the existing walls is actually better than current IECC guidelines. The IECC calls for a total insulating value of R-20.5 for exterior walls in a Zone 7 climate like Soldotna.

The walls of the original second story do not perform as well. Their overall R-value of R-13 is significantly below the IECC recommendation. In this location, the design team would recommend looking at either increasing the total amount of insulation, or possible replacing the existing batt insulation with a higher R-value material like rigid foam board.

Advances in material science and research carried out on the efficiency of insulation systems have led the International Code Council (ICC) to move toward requiring at least some of the insulation in exterior envelopes to be 'continuous insulation' that is uninterrupted by studs or framing members. Studies conducted by ASHRAE indicate that the effectiveness of a wall assembly can be reduced by as much as 25% or more through the introduction of metal studs. Wood studs are less of an issue, but both kinds of framing members serve as "cold bridges" that conduct heat from the warm interior to the colder exterior during the winter months.

In order to address thermal bridging, the 2012 IECC requires that part of the total R-value of the wall assembly come from continuous insulation (R-7.5). The best approach for meeting this requirement would be to add a layer of rigid insulation to the wall assembly, or to replace the existing batt insulation entirely with rigid insulation. Rigid insulation typically has an R-value of approximately 4.5 per inch, which would mean installing a minimum of 4 inches to provide an R-value of 20.5.

## 2. ROOF ASSEMBLY

The main roof assembly consists of layers of asphalt impregnated felts (a built-up roof or BUR) laid down over a 1/2" thick gypsum cover board on top of multiple layers of extruded polystyrene insulation (XPS.) Underneath the insulation is a two ply polyethylene vapor retarder on top of 5/8" thick Type X gypsum board mechanically fastened to the existing metal roof deck. The average thickness of the rigid insulation is about 8 inches.

A competently installed membrane roof system helps protect against moisture seeping into rigid insulation by placing it below the membrane and its supporting cover boards. In this particular installation, glass matt gypsum cover boards were specified and provided. This type of gypsum board is particularly resistant to moisture and fire, giving another layer of protection to the insulation below.

The roof assembly at the slope roof over the clerestory consists of asphalt shingles installed over a synthetic underlayment and 3/4" plywood sheathing on top of 7 inches of XPS. Underneath the insulation is a polyethylene vapor retarder installed over structural steel decking. The asphalt shingles and underlayment were replaced in 2015, but the original clerestory roof assembly was installed as part of the original construction of the building in 1986.

The total R value for the low slope roof assembly is approximately R-44.6. Per the guidelines of the 2012 IECC, the minimum required R-value for Soldotna would be R-35. The low-slope roof assembly exceeds this minimum requirement.

The total R value for the sloped roof assembly is approximately R-39. The sloped roof assembly also exceeds the minimum requirement of the IECC.

3. WINDOWS

Exterior windows for the Soldotna Middle School building are typically double-pane windows with aluminum clad wood frames. They perform better than single pane windows, or windows with steel frames, but they are not as thermally efficient as fiberglass or vinyl framed window units. An average U-value for this type of existing window would be approximately 0.99. By contrast, the 2012 IECC typically requires a window to have a U-value of 0.29 or lower.

**RECOMMENDATIONS**

F. LIFE SAFETY CODE ISSUES/ ADA ACCESSIBILITY

1. ADA/ACCESSIBILITY

*Accessibility in the Music Room*

The main music room space has a tiered floor that descends in three steps to the lowest level of the music room. The room is configured this way to allow the school band to practice together as a group. Each level is roughly five feet deep, with an eight inch riser between each level.



*The tiered performance area in the music room does not have an accessible means of access.*

Per the requirements of the ADA, an accessible path must be provided anywhere there is a change in level. In this case, the preferred method would most likely be a ramp. The school staff apparently improvised a ramp in order to provide some form of accessibility. Unfortunately, the improvised solution does not fully comply with ADA requirements. A true ADA compliant ramp requires handrails, and must be sloped a maximum of 1: 12. The total

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drop in elevation in this room is about twenty four inches. At a 1:12 slope, this would require a twenty four foot long ramp to provide an ADA compliant accessible route from the main floor level down to the low point of the room.

A possible alternate solution to providing a ramp is to set aside an accessible wheel chair seating space on the top tier that could be used by a band student with a disability. Having said this, the design team notes that having a tiered floor like this would be unusual in an elementary level school environment. The best solution is probably to level out the floor.

The most cost effective way to accomplish that is to provide steel framing within the area of the floor recess that can support steel decking up near the level of the surface of the surrounding concrete slab. A new, thin section of floor slab could be poured over the decking. This approach is more efficient of material and cost than trying to fill the depression with a solid concrete plug.

### *Restrooms*

Per Section 1109.2 of the IBC, restrooms on every floor of a building are required to be accessible. At a minimum, stall doors are required to be at least thirty six inches wide, and at least one of each type of each bathroom fixture (such as toilets and urinals) must be accessible. An accessible restroom must also have room for a five foot wheelchair turning radius, as well as designated clear areas around toilets and sinks.

At least one toilet stall must be equipped with grab bars, and have enough room in the stall to accommodate a five foot by five foot clear area around the toilet fixture. At least one lavatory must also be accessible (that is, mounted at 34 inches above finished floor with the requisite clear floor area below.) Section 1109.5 requires a minimum of two drinking fountains to be provided. One must be mounted with the height range required by ADA.





*Neither the boy's or girl's restrooms in the south end of the building complies with the ADA guidelines for layout or fixtures.*

The existing restrooms in the south half of the building do not comply with these requirements. The layout of the rooms appears to allow sufficient room for the required five foot turning radius. However, neither of the blocks of restrooms have a toilet stall that complies with the minimum ADA required dimensions.

The simplest solution is to reduce the number of fixtures in each restroom to allow construction of an ADA compliant toilet stall. The one caution to taking this approach is that the District would need to ensure that the reduced number of fixtures would still meet code requirements for the building. An analysis would need to be done to confirm that the number of fixtures can be decreased will still providing the minimum needed for the occupants.

ADA also requires that doors have lever style handles which are operable by a person in a wheel chair. A lever style handle is typically easier to use than a residential knob style handle that requires a pinching motion and twisting of the wrist. Virtually all the doors in the facility (including the doors to the restrooms) have 'knob' style handles. This door hardware does not comply with accessibility requirements and should be replaced.

AAI recommends expanding the footprint of the existing restrooms approximately ten feet south to include the code required number of fixtures. As part of that remodel, existing fixtures would be replaced with new fixtures at ADA mandated mounting heights, and existing door hardware would be replaced with ADA compliant level style hardware.

In order to best accommodate the increased number of fixtures for females, AAI recommends reversing the location of the men's and women's restrooms. This would give the women's restroom the larger footprint it will need to house the additional fixtures.

2. ENERGY EFFICIENCY/PROTECTION OF STRUCTURE

*Exterior Walls*

The existing exterior wall assembly has a lower R-value than the R-20 minimum established by the IECC. The simplest solution for increasing the overall R-value of the assembly would be to replace the batt insulation at the exterior walls with a similar amount of rigid foam board insulation. Rigid foam board typically has a higher R-value per inch than fiberglass batt (R-5.5 versus R-3.5 on average.)

A four inch thick layer of rigid foam board insulation would have an R-value of R-22. This would raise the R-value of the total wall assembly to approximately R-24. Doing this work as a project of its own would be difficult, as it would require disruption to activities in almost every classroom space. However, it would be more practical as part of a large scale renovation.

*Roof Assembly*

As noted earlier, the roof assembly for the entire school building was replaced in 2015. Based on the available information, the new roof assembly meets or exceeds the minimum guideline of R-35 in the IECC.



*The roof of the school was replaced five years before the date of this report.*

*Windows*

Even in perfect condition, the existing aluminum windows would be underperforming compared to current energy efficiency guidelines in the IECC. Please see the discussion in the recommendations section for Redoubt Elementary for more details.

Based on the as-built information provided, the windows have not been upgraded since the major addition in 1986. The District should consider replacement of existing windows with more energy efficient, thermally broken metal or vinyl windows as part of its normal maintenance cycle for the school.

## **STRUCTURAL SURVEY**

### **EXISTING CONDITIONS**

- G. The original facility was constructed in 1969. The building had an addition constructed in 1986 and a remodel done in 2003.
- H. FOUNDATION
1. The building is supported on a reinforced concrete foundation extending to a depth of 4'-1 1/2" below top of slab. Interior footings are located at the slab level and interior wall continuous footings are thickened slab-on-grade.
- I. MEZZANINE STRUCTURE
1. The Mezzanine floor of the building is a reinforced concrete slab over metal deck supported by steel beams. There is no evidence of excessive cracking damage to the concrete or metal deck.
  2. All floor elements are in good condition with no excessive rust, corrosion or deflection present in the accessible areas.
- J. MAIN BUILDING FRAMING
1. The main frame of the building is a steel frame with CMU shear walls. Bracing is located on the exterior walls and interior columns walls supporting the gymnasium. The supports for clear span roof joist are located on the exterior walls and interior beams and columns. Structural elements that are visible appear to be in excellent condition.
  2. Interior CMU walls are partition walls and can be removed for programmatic needs.
  3. The building has some minor cracking around the exterior of the building, but nothing concerning for the structural integrity of the structure.
  4. At the entrance area of the school there are steel columns surrounded by concrete. The concrete has experienced weathering and has cracked at the base.
- K. ROOF STRUCTURE
1. The low roof structure is comprised of metal deck supported by clear span metal joists. Steel beams support the joists. The high roof above the gym is metal deck over steel beams and trusses. The roof structure is in good condition. No excessive deflection, corrosion or structural damage was noted during the site inspection.

### **RECOMMENDATIONS**

- L. STRUCTURAL REMODEL
1. From a structural aspect the building is in good condition and suited to the concept renovation plan.
    - a. The structure of the main building frames is in excellent condition.
    - b. We recommend injecting any exterior crack exceeding 1/32" in width with epoxy to prevent future damage from weathering.

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*Cracking in exterior CMU walls*



*Enlarged view of cracking in CMU walls*

- c. We recommend the damage at the exterior columns be cleared away to competent concrete, any rust present be removed, and patched with new material to prevent future damage to the steel columns.



*Typical damaged column base at school entrance*



*Typical damaged column base at school entrance*

- M. STRUCTURAL LIFE SAFETY ITEMS
1. No structural life safety items were observed.

## MECHANICAL SURVEY

### EXISTING CONDITIONS

- N. The original facility was constructed in 1969. The building had an addition added in 1986 and a remodel done in 2003.
- O. SITE UTILITIES
1. An Enstar natural gas meter is located on the exterior west side of the building outside the mechanical room. The gas meter and regulator is in fair condition.
  2. The water entry comes up through the mechanical room floor at 4" with a reducer to 3". Water service entry piping and valves are in good condition.



*Water entry in boiler room*



*Gas meter on west side of school*

3. There are three drywells. One is located to the north and two are located on the west side of the building. These are each served by 6" waste lines.
4. Utilities are in fair shape and the services can be reused.

### P. PLUMBING

1. The bathroom plumbing fixtures, in general, are in fair condition. Minimal staining is present on all of the toilet, urinal, and sink surfaces, and there is minimal corrosion on flush valves.
2. The toilets in both men's and women's restrooms are not ADA accessible.
3. Moderate levels of corrosion are present on and water piping, valves, and joints present in the janitorial closet.
4. The kitchen plumbing fixtures and floor drains are in good condition. All fixtures appeared very clean and well maintained.

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5. Roof drains were in weathered yet fair condition. There were no signs of drain pipe blockage.
6. The hot water generator in the mechanical space is a 740 gallon shell and tube indirect type that was built in 1994. It is in fair condition. It is nearing the end of its useful life of 30 years.



*Water heater in boiler room*

7. Many of the classrooms do not have sinks, which is a common need for elementary age students.
- Q. FIRE PROTECTION
1. Fire service entry enters the building in a designated fire protection room in the building. The building is divided into two primary zones for fire protection service. Each zone main valve is tagged with hydraulic testing and flow data from 2003 and 2004 with Light Occupancy classification.



*Fire riser with two zones in fire sprinkler room*

2. The entire building is covered by a wet sprinkler system with upright pendant style sprinkler heads.
3. Fire sprinkler piping appeared to be in good condition. Internal or corrosive condition of the fire piping could not be verified.
4. For fire alarm systems present in the building, see electrical.

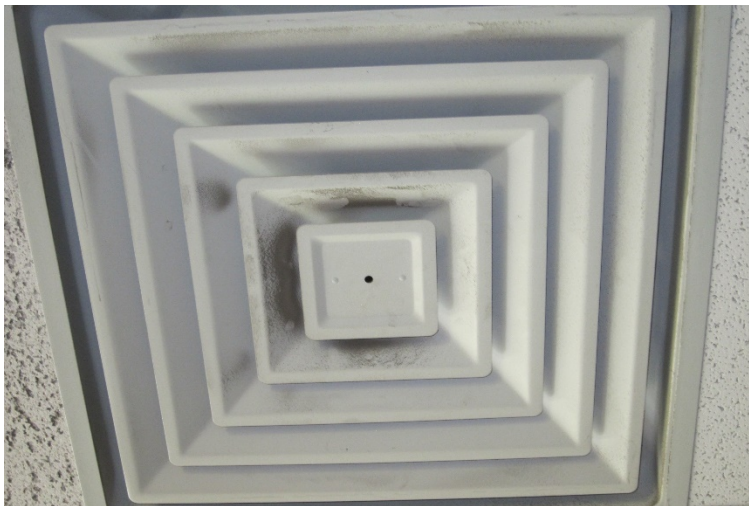
R. VENTILATION SYSTEM

1. Two fan rooms comprise of multiple fan units with heating coils that distribute constant volume ventilation to all classroom and building spaces. One fan room primarily serves one of the gymnasiums.
2. No VAV boxes are present. Instead, the building uses duct reheat coils for each zone of the building.
3. No heat recovery systems for any of the ventilation equipment are present. The air handling units and fans are the original equipment installed. These units are in working order, but are at the end of their useful life.



*Fan units are all original installed equipment*

4. Heating coil piping and valves for air units show external signs of age and corrosion.
5. Fan damper actuators are all pneumatic and are original construction.
6. No VFD's (Variable Frequency Drives) are used for any of the fans. All of the fans operate with constant volume.
7. Ducts and diffusers are generally in good condition. Some diffuser faces have light surface wear that includes scratches and chipped paint. Wall and ceiling grilles are dusty or dirty and require cleaning.



*Diffusers require general cleaning*

8. Ventilation equipment, though aging, appears very well maintained.
  9. There is a dust collector on the north side of the building outside. This unit appears in poor condition. Unknown if it is operable.
- S. RELATIVE HUMIDITY CONTROL
1. A humidification system is not present in this facility.

T. HEATING SYSTEM

1. The heating plant comprises of a pair of natural gas fired hot water boilers in the boiler room. Propylene glycol is the fluid medium that circulates through perimeter finned tube and unit heaters that deliver heat to all the other building spaces.
2. One boiler was replaced in 2017 renovation, which is a multi-burner fire tube type. This boiler covers heat for the entire building while the older 1969 single fire tube boiler sits idle. Though functional, the older boiler is very inefficient and only serves as a backup boiler. Maintenance stated that there is a desire to also replace this older fire tube boiler so that they can have a proper efficient lead/lag arrangement for the heating plant.



*Older fire tube boiler at end of life*



*New boiler installed in 2017*

3. Control valves for all terminal units are pneumatic and appear to all be from original construction.
4. The existing heating glycol pumps are all in good working order and in good condition. All pumps appear to have been replaced with modern equipment. The heating system operates on constant volume pumps. No VFD's are used on any of the pumps.
5. Terminal units are operable, but show signs of wear and are at the end of their useful life. Finned tube enclosures are damaged in some classrooms or completely missing. Exposed finned tube elements have bent and damaged fins.



*Classroom finned tube exposed with bent fins*



*Terminal unit valves and piping in aging condition with pneumatic control valves*

6. Piping in the mechanical room is in good or like new condition. Much of the piping was replaced in 2017 with the new boiler. General building heat piping shows signs of external corrosion. No leaks were visible.
7. Overall the heating system is very well maintained and in good condition for it being mostly original 1969 and 1986 construction. However, the piping and valves are at the end of their useful life at 30 to 50+ years.

U. COOLING SYSTEMS

1. No cooling system is present in the building for general HVAC.
2. A walk in freezer with a freezer cooling unit is located in the kitchen. This cooling unit appears older (at least 20 years old), but is in fair condition.

V. SCIENCE AND LAB CLASSROOM

1. There is a lab gas system present in a science & chemistry classroom. The lab gas cabinet was locked, so observations of gas system conditions could not be made.
2. A lab hood is present in the lab class. Fan and motor appear to be very aged and may be from original construction.

W. BUILDING AUTOMATION SYSTEM (BAS):

1. The entire building utilizes pneumatic controls. The associated air compressor is located in the Mechanical Room. The air compressor is a more modern piece of equipment, potentially recently replaced, and is in very good condition.
2. No reports of pneumatic control system problems by maintenance.
3. Room thermostats are original construction. Unable to verify functionality.

## RECOMMENDATIONS

X. For all items below – the owner retains first rights to salvage/reuse of all demolished equipment.

### Y. PLUMBING

1. Replace all above grade domestic water piping back to the isolation valves at the water heater and the cold water entrance.
2. Replace plumbing fixtures with ADA compliant fixtures in the appropriate quantities and locations. Add tempering valves to prevent scalding.
3. Replace the aging water heater with a modern equivalent.
4. Add new sinks in elementary classrooms per modern design practice.
5. Provide sinks in all classroom where elementary age students are expected and route new waste lines as required for new sinks.

### Z. FIRE PROTECTION

1. Retain existing sprinkler system, flush system, and perform maintenance as required by NFPA 25. Add sprinklers to the existing system to provide suppression coverage in areas with new ceilings or walls relocated by the proposed renovation.
2. Existing fire extinguishers are recommended to remain. Continue maintenance and inspection of extinguishers and cabinets per State requirements. Service tags noted were from Chinook. Maintain fire extinguisher placement in accordance with NFPA 10, with minimum access travel distance not exceeding 75 feet.
3. See Electrical for fire alarm recommendations.

### AA. VENTILATION SYSTEM

1. Retain ductwork and reroute as necessary to accommodate floor plan changes.
2. Demolish ventilation fans and provide air handling units that includes heat recovery and variable frequency drive fans.
3. Demolish all duct heating coils and provide VAV boxes with new reheat coils and electronic controls.
4. Clean existing diffusers and grilles and relocate to accommodate floor plan changes. Provide new diffusers and grilles as necessary.
5. Demolish the exhaust fan for the bathrooms and janitor closet and tie these spaces into a heat recovery ventilation system.
6. Demolish and replace the dust collector if a woodshop will still exist in the remodeled building.
7. Provide demand control ventilation by using CO2 sensors in spaces that are greater than 500 sq. ft. and also have an occupancy density greater than 40 people per 1000 sq. ft.

### BB. RELATIVE HUMIDITY CONTROL

1. Humidification is not recommended for this type of facility.

### CC. HYDRONIC HEATING

1. Demolish the aging backup boiler and replace with a boiler that is the same make and model as the boiler provided in the 2017 renovation. Modify mechanical room piping and controls to accommodate new boiler for lead/lag operation with the 2017 boiler.
2. Provide variable frequency drives for all pumps. Provide new pumps as necessary to coordinate with flow changes to other parts of the building heating system.
3. Replace all terminal heating units, which include:

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- a. Finned Tube
  - b. Unit Heaters
  - c. Cabinet Unit Heaters
4. Replace all building heat piping and replace all pneumatic control valves with modern electric actuator type.

DD. SPACE COOLING

- a. Cooling equipment is not needed or recommended at this time due to the location, weather conditions, and winter month occupancy schedule of the building.
- b. It is recommended that the new ventilation system equipment be sized to meet potential future cooling needs. This will entail the following three provisions:
  - 1) A blank space in the new air handling unit will be allotted for a future DX or water cooling coil.
  - 2) The fans for the AHU will be sized to meet CFM cooling loads with a future cooling coil in mind. The fan motors will use VFD's to allow each fan to operate at minimum ventilation airflows and minimal energy draw during normal operation in the heating season. Even without a cooling coil, the fans will still be capable of increasing speed and airflow to provide economizer cooling during summer months if needed.
  - 3) The VAV boxes will be sized to meet maximum airflows for future cooling needs.

EE. BUILDING AUTOMATION

1. The existing pneumatic control system should be upgraded to modern DDC with a DDC workstation located in the Mechanical Room.
2. Electronic control valves and actuators should be provided for all zone valves and ventilation dampers.
3. Provide new thermostats for all zones.

## ELECTRICAL SURVEY

### EXISTING CONDITIONS

#### A. SERVICE ENTRANCE, MDP, AND GENERATOR

##### 1. Service Entrance

An underground power service from the Utility is installed on the plan west side of the facility. There is a pad mounted transformer and the meter is mounted on the side of the transformer enclosure. Service equipment enclosures are in fair condition. There is currently no way to shut off power from the exterior of the facility (both normal and generator backup), violating NEC Article 230.



*Main power service on west side of school*

##### 2. MDP

The MDP is in the main electrical area, which is inside of a gated room and is rated for 800 amps, 480Y/277V (Square D Power-Style Switchboard). The MDP is older but in fair condition.

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*Main Distribution Panel and ATS*

3. Generator and ATS

There is a backup generator located in the mechanical room. This powers an automatic transfer switch and certain emergency and optional standby loads which are shared on one distribution branch. The generator is a Cummins 60 kW standby (model GGHE-4387209). The ATS is an Onan 60amp, 120/240V, 1ph, 4 wire ATS (model LTCU 60-L/86H). The generator and ATS are in good condition and these appear to have been recently installed.



*Backup power generator*

B. POWER DISTRIBUTION

1. Interior

Interior power is distributed via power panels throughout the facility and serves local loads. Interior panels are older and are in fair to poor condition. Panels are fairly full in terms of the number of pole spaces used, and have limited spares and spaces.



*Example panel in hallway (no spares or spaces)*

The shops and art spaces have dedicated panels and multiple emergency shut off mushroom style pushbuttons. When a button is pushed, power at the source panel is disconnected and shut off for safety. The shop and art panels are in fair condition. There is a dust collector outside of the wood shop that is in poor condition, and it appears to be a unit that was installed per 1977 record drawings.



*Shop panels and emergency shut down button in shop office*

There is a motor control center in one fan room that provides the local disconnect and starter for each fan. The motor control center is a Square D QMB Saflex distribution panelboard. The other fan room had distributed starter/disconnects at each piece of equipment. MCC and the distributed starter/disconnects were generally in good condition.

Receptacles were in fair to good condition, though some are older and approaching end of life. Currently, power strips are in use in several locations, including offices and some classrooms. It is not ideal to use power strips. Additional receptacles will need to be installed in all re-purposed spaces to serve the ever-growing need for electronic devices. GFCI devices are required within 6 feet of water sources such as sinks and currently most receptacles near water sources are not code compliant. There are power poles in certain spaces to provide power in the middle of rooms. These power poles were generally in fair to poor condition.

2. Exterior

There are separate power feeders to the both the exterior sheds and an exterior panel that used to serve exterior portables. Exterior cabinets and enclosures are rusted and aging and are in fair condition. There are many exterior surface conduits and boxes installed and they range in condition from good to poor.



*Exterior panel for previous portables*

## C. LIGHTING

### 1. Interior Lighting

Interior luminaires utilize T8 fluorescent lamps in the majority of the spaces (with very few exceptions). Luminaires are generally in fair to poor condition. Most classroom and hallway spaces are a combination of recessed grid troffers and downlights. Most downlights had compact fluorescent lamps as the source. Utility type rooms have strip or wrap type fluorescent luminaires. The gym and MPR have high bay HID luminaires. The kitchen has a combination of sealed surface fluorescent luminaires, sealed downlights, and pendant luminaires. Some of the original fluorescent luminaires have been retrofitted with LED tube sources.



*Lighting near front entry and typical classroom lighting*

2. Exterior Lighting

Exterior luminaires primarily utilize HID lamps (with a few exceptions). Luminaires are generally in fair to poor condition. Exterior building mounted luminaires were wall pack style. Exterior canopy luminaires are recessed lensed downlights. A few of the pole mounted luminaires on the plan east side of the property have recently been replaced with LED flood lights. Luminaires on the poles at the front of the school are older and appear to utilize HID sources.



*Pole lighting near front and front canopy lighting*



*Wall pack lighting on east side of school*

3. Emergency Lighting

Emergency lighting is provided by “bug-eye” style luminaires with integral batteries. These typically had surface wiremold down from ceiling to surface wall mounted bug-eyes. The quantity and location of the bug eyes likely do not provide adequate emergency egress illumination.

Most exit signs were self-luminous type. There were some locations where they did not likely get enough ambient light to charge the sign. Signs were installed at most egress path locations but it appeared a few exit sign locations were missing.

4. Lighting Controls

Lighting controls consisted of manual wall switches or controlled at breakers. Some areas/rooms do not currently have lighting control and are turned on/off via circuit breakers in nearby power panel. There were no automatic controls i.e. occupancy sensors, timer switches, photocells, etc. The entire facility’s lighting controls should be updated with a new networked system. This will include all new occupancy sensors and wall switches throughout.

D. SIGNAL

1. Communications

There are 5 observed communication areas/rooms/closets at this facility:

- cabinets by middle office have main servers and patch panels
- fiber splice cabinet in classroom near southeast corner of school (single mode fiber)
- main elec room punch down blocks and 2 @ 4-port data jacks
- storage room in admin area punch down blocks

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- shelf in north loading dock/water service area (one switch and 3 patch panels)

These appear to be served from at least 3 communication services (fiber at southeast, phone at southwest, and phone at northwest). There is a phone pedestal located near the southwest corner of the school.

There is not a dedicated communication room or communication floor mounted cabinet. Most connections are exposed 66 or 110 block type connections of wall telephone terminal boards. Most cabling is Category 5 or 5E. There was not cable tray or j-hooks observed that supported communication cabling. Appears most cabling is loosely installed above drop ceilings. Communication equipment and cabling are generally in good condition.



## **FIRE ALARM SYSTEM**

### **EXISTING CONDITIONS**

#### General System Description

The fire alarm panels and devices were replaced/added recently. The fire alarm system (EST3) is in good condition. The main fire alarm control panel is in the laundry room by the main electrical and mechanical rooms. There is a fire alarm annunciator in the front office admin area. There is also a fire alarm annunciator in the rear (north end) vestibule. It appears for a school occupancy, additional devices would be required for both visual and audible coverage throughout this facility. Additional smoke detection and manual pull station devices are likely to be required as well to meet current code. The water service and sprinkler riser appears to have compliant flow and tamper switches. There are sprinkler bells near the front main entrance as well as near the northwest corner loading dock area.

Sprinkler System Information is described in the Mechanical Section of the narrative.

### **RECOMMENDATIONS**

- A. Provide code study and provide additional detection and notification devices were required to meet current code.

### **CODE DEFICIENCIES/LIFE SAFETY VIOLATIONS**

- E. IBC 2012 – Inadequate fire alarm detection devices present throughout the facility.
- F. IBC 2012 – Inadequate fire alarm visual devices present throughout the facility.
- G. IBC 2012 – Inadequate fire alarm audible coverage throughout the facility.

## **PART 2 – FEASIBILITY OF RENOVATION/CONVERSION**

### **INTRODUCTION**

The purpose of the second part of this report is to look at the feasibility of renovating the existing Redoubt Elementary and Soldotna Middle Schools to serve elementary students relocated from other schools in the Soldotna community. The report will examine the challenges of renovating each school, and offer recommendations on the most appropriate changes needed to accomplish this goal.

#### *Program Goals & Approach*

In order to evaluate whether Redoubt or Soldotna Middle School can be used effectively, the owner needs some kind of criteria or yardstick to measure against. The criteria in this case is the space program developed by AAI in collaboration with the Kenai Peninsula Borough School District.

The design team had to partially “back into” the program requirements by looking at the total number of students from other schools and programs that the District wanted to accommodate. The District wants to move in students from the following schools or programs:

- Redoubt Elementary School – 348 students
- Soldotna Elementary School – 262 students
- Soldotna Montessori School – 164 students
- River City Academy – 85 students

Added together, that yields a total population of approximately 860 students.

These numbers come from figures for average daily membership or ADM. The actual student numbers for the space program were derived from the Borough’s 2020 enrollment figures by classroom group.

The program needs of the students from the Redoubt Elementary School and the Soldotna Elementary school are generally compatible, because the students would be taught the same academic curriculum with the same teaching approach. The Soldotna Montessori School students would need their own area because the teaching approach is different, and the students would have a different schedule. River City Academy students are generally middle school aged, and would need their own independent space as well.

Based on these facts, the District decided that it would make the most sense to try and co-locate as many of the students from Soldotna and Redoubt Elementary as possible in the Redoubt Elementary building. This building would be renamed the Soldotna Primary School.

Any students that could not be served at the old Redoubt school building would go to the neighboring Soldotna Middle School. The students from the Soldotna Montessori School, and the River City Academy would go to the Soldotna Middle School as well. This building would be renamed Soldotna Intermediate School.

#### *Allocation of Students*

The design team determined how many elementary students could fit into each school building using the square foot per student ratio established by statute for the KPB School District. Using these ratios,

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the team calculated that the footprint of Redoubt School could accommodate 302 students. Soldotna Middle School's footprint could accommodate 610 students.

For a fuller description of the space program, please see the detailed space breakout in Appendix A.

## **REDOUBT ELEMENTARY**

The program calls for accommodating approximately 302 elementary age students at Redoubt Elementary. These students would be children in classes from pre-Kindergarten to second grade. For a detailed list of the spaces, please see the space program included in Appendix A. In the following section of the report, we will review how well each type of space can be provided for in the Redoubt School building.

### **SUITABILITY OF THE BUILDING**

#### *Accessibility for Young Children*

Redoubt was designed from the start to serve elementary age children. This makes it relatively easy to accommodate activities for elementary age children in this facility. Drinking fountains, bathroom fixtures and other fixed equipment are already located at the right height for younger children to use.

#### *Classroom Quantity and Size*

Based on the program developed, the students need fourteen classroom type spaces, most of which need to be approximately 980 SF in area. A further four classrooms are needed for pre-K and Kindergarten level intensive needs classrooms of between 900 and 980 SF. The Redoubt school building has twenty classrooms, currently, each of which is approximately 1000 SF in area. Redoubt has sufficient space for these classrooms.

#### *Administrative Space*

The program calls for six administrative office spaces (including main reception). It also calls for a teacher work room, toilets and space for records. Redoubt already has spaces for reception, a principal's office, staff toilets, a health (nurse) office, and testing, and special services.

There are also some flexible spaces like the teacher lounge and the work room and storage areas that can be reconfigured to meet the need for psychologist and counselor rooms. The administrative needs of the program should be able to be accounted for using the space already provided in the central admin 'hub' of the building.

#### *Common Spaces*

The program also includes common spaces for use by all the students. These spaces are the gym, kitchen, and library, as well as supporting storage areas and restrooms. An existing library, gym and kitchen are already provided within Redoubt's footprint. The areas of the existing spaces are comparable to the space requirements of the program.

The school also has sufficient restrooms to meet the commons space program requirements. The document calls for four restroom space, and Redoubt has four common restrooms (two restroom spaces for each gender.)

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*Condition of Building Infrastructure*

As noted in Part 1 of the report, the physical structure of the building is in good condition. The main CMU walls are structurally sound. The roof of the building is being replaced in 2020 with a new BUR roof that should serve the District for another thirty years. The main boilers were in the process of being replaced when the design team visited the site. The plumbing piping and heating system are reaching the end of their useful lives, but these elements could be replaced as part of a building-wide remodel.

With careful maintenance, the school building should serve the District well for at least another twenty five to thirty years. Limited renovation of the building to house the new program should only enhance and extend the life of its physical structure.

CHALLENGES

There are some challenges in getting the existing Redoubt School footprint to completely fill the needs of the proposed program. They are presented in more detail below:

*Absence of Automatic Fire Sprinklers*

At the time Redoubt was constructed, the building code actually had less restrictive fire protection requirements for educational occupancies relative to other types of occupancies in the code. That situation has since changed with the State of Alaska's adoption of a code amendment to require fire sprinklers in any educational occupancy with more than 49 students.

If this building lay within the jurisdiction of the Alaska State Fire Marshal, the state plan reviewers would likely require installation of a fire sprinkler system as part of any significant remodel. This requirement would not be an impossible obstacle, as the building is connected to the municipal water main and would not require on-site storage of fire protection water. The main issue for the project would be the additional cost, which typically runs to about \$8 - \$10 per square foot according to recent cost data available to local cost estimators.

*Restrooms*

Standard practice for pre-kindergarten and Kindergarten type classrooms is to have toilets for the younger children located directly within the footprint of the classroom. This is done for two reasons. The first reason is that younger children sometimes have difficulty making longer trips to the bathroom without accidents, and can often require an adult to accompany them.

The second reason is that the District is required by law to maintain a certain ratio of teachers to students. If a teacher has to leave the classroom to accompany a student to the restroom, an additional person must be present to watch the students who remain behind. In order to better maintain supervision of the children, it is simpler and more practical to have a 'one hole' restroom located within the classroom itself.

Redoubt was designed prior to this approach becoming common practice. For that reason, it does not have any restrooms located within the elementary classrooms. Restrooms for the pre-kindergarten and kindergarten level children will need to be added within the classrooms dedicated to those students.

Eight single person toilets would need to be added in the elementary classrooms per the program. This will require installation of additional fixtures, as well cutting out portions of the concrete floor to run

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additional piping to the fixtures. The amount of work required can be limited by locating these new restrooms as close to the main corridor as possible.

*Music Space and Boys & Girls Club Room*

The program includes a requirement for a music space, and a room for meetings of the Boys and Girls club. There are currently no permanent spaces in the Redoubt building that would be easily available for these activities once the other programmed classrooms are accounted for. An addition to the building would likely be required to provide the needed space.

*Complying with ADA Accessibility Requirements*

As noted in Part 1 of the report, the Redoubt School does have some issues to resolve in order to comply with current ADA requirements. The two main issues are:

- Configuration of the common restrooms, and
- Existing door hardware for the classroom doors

The common restrooms do not include an ADA compliant stall that meets ADA dimensional requirements and includes the ADA mandated grab bars. The door handles for the doors accessing the classrooms of the main corridor do not have the lever design that would be required to comply with ADA.

*Operable Wall Partitions*

At the time Redoubt was constructed, it was part of a great educational experiment in seeing how teachers and students could be provided with more flexible teaching environments. Part of this experiment was the wide spread use of operable partitions between classrooms in many buildings across the state.

In general, the experience of most instructors and school staff is that these partitions are rarely used for the intended purpose of reconfiguring rooms “on the fly.” They tend to be left in place for decades without much adjustment. The end result is that the users of the space are left to deal with ‘false’ walls that do not block sound as well as a permanent partition would have done.

This has already become a long term issue for the intensive needs classrooms, where the higher sound level of some of the students tends to bleed over to adjacent classrooms.

## **RECOMMENDATIONS**

1. Renovation of the Main Administrative Hub

In order to fully accommodate the administrative spaces called for in the program, limited renovation of some the central ‘hub’ area will be needed. This would include turning the current teachers’ lounge into a teacher work room, and taking over the current testing room as the secretary’s office.

The existing special service room 153 would be divided into an intervention room and a speech room. Storage room 145 would be turned into spaces for the on staff counselor and psychologist.

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2. Renovation of the general classroom spaces  
The existing classrooms provided within the Redoubt school are already of the right size and general shape to serve as elementary classrooms. Recommended changes will largely be limited to adding pre-K and Kindergarten toilets in the classrooms dedicated to those children.
3. Building Additions  
The design team recommends making two small additions to the school footprint for a music room and Boys and Girls club spaces. These additions would replace the additional floor area originally provided through the use of 'portable classroom' units.
4. Installation of a Fire Sprinkler System  
Installation of an automatic fire sprinkler is not required for the needs of the program. However, it would bring the existing building more into compliance with the State version of the building code. It would also increase the life safety of the occupants in the event of a major emergency.
5. Replacement of Operable Partitions with Permanent Walls  
Based on the previous experience of the building's occupants, it would improve the quality of the teaching environment to replace the existing operable partitions with permanent walls throughout the facility.

## **SOLDOTNA MIDDLE SCHOOL**

### *Program Goals & Approach*

Using the process described above, the design team and the District have worked together to develop a proposed program of spaces for the Soldotna Middle School building. The program is based partly on one-to-one replacement of program spaces being relocated from other school buildings. It is also based on an analysis using the student to teacher ratios and space allocation requirements established by Borough statutes.

The situation is complicated by the fact that there are three distinct populations that would need to have space within the school building. The first group is the younger elementary students from Redoubt and Soldotna Elementary that cannot be accommodated in the Redoubt school. The second group is students coming over from the Soldotna Montessori School. The third group is students from the River City Academy.

### SUITABILITY OF THE BUILDING

#### *Accessibility for Young Children*

In contrast to Redoubt, Soldotna Middle School was originally designed for older children. Middle schools typically serve students in the 6<sup>th</sup> to 8<sup>th</sup> grade (usually eleven to thirteen year old children.) Children of this age are taller, more physically strong, and more able to operate independently.

Equipment and fixtures that are suitable for older students are often too high for young children to reach. This is particularly true when it comes to restroom equipment such as paper towel dispensers, toilets or sinks. The toilet fixtures and sinks in the Middle School's restrooms would likely be mounted too high for the youngest students coming to the facility. Some modifications will need to be made in order to properly serve these children.

#### *Classroom Quantity and Size*

As can be seen from the program document, there is a high demand for classroom space. Between them, the three different populations of students need approximately thirty two classroom spaces. Per the program, these spaces are typically required to be about 900 SF in area.

As currently laid out, the Soldotna Middle School has twenty six classroom spaces, not counting spaces with dedicated functions like the music area or the shop area. The majority of the classrooms are in the 700 – 850 SF range, with a few being as small as 376 SF. There are definitely fewer existing classrooms than the total number desired by the program. The areas of many classrooms are also smaller than what is needed for the program.

#### *Administrative Space*

The program calls for the overall school administrative staff to have eleven offices, including general reception, offices for the principal and school secretary, a nurse, psychologist, counselor and itinerant or visiting staff that come to the school periodically.

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The space available in the administrative hub located in the southeast corner of the building should accommodate most of the required administration spaces for the general student population coming from Soldotna and Redoubt Elementary. The hub already has space for a main reception area, principal's office, secretary office, and some 'soft space' that can be converted to offices for the counselor, psychologist, and itinerant admin staff.

However, this location will not work for the administrative spaces needed for the other two student populations. The administrative spaces required for the Montessori and River City Academy students would need to be located much closer to their actual classrooms. In other words, existing space in the building would need to be converted for this function.

### *Common Spaces*

The program calls for a gym, lunch room, kitchen, library, computer lab and supporting restrooms. As described in Part 1, the existing building has an abundance of common space in the form of a separate gym and a multipurpose room. The existing library room is entirely suitable to meet the library space requirements. Space is also available for a computer room, though it would likely need to be in a different location from the present one in order to allow enough area for all the program required classrooms.

The six restroom spaces called for in the program can be adequately met by the restrooms already provided within the footprint of the school.

### *Separation of Different Student Populations*

The three different populations of students going to the school will have different teaching approaches and different schedules. (For example, younger elementary students will tend to finish school earlier than some of the older students, and may have lunch at different times during the day.) The building would support these different groups best if they can hold their classes in physically separate locations within the larger building.

A review of the physical layout of the school suggests that this could be easily done. There are two main entry points at the south and north ends, and multiple exist corridors that divide the blocks of classroom space along the perimeter into smaller sections. The result is that there are multiple 'clusters' of connected rooms that are separate from other clusters of space but connected by the main circulation corridors.

The best way to accommodate all three populations of students is to give the two smaller groups (Soldotna Montessori and River City) their own 'clusters' or zones of space within the school. They will be in the same physical footprint, and be able to make use of the same common facilities; but their space will be independent enough to allow each program to maintain its own routine and schedule.

### *Pick-up and Drop Off for Students*

Along with the separate student populations and differing schedules comes the need to accommodate different arrival points at the building. The different groups of students will coexist better if they can go straight to their respective 'clusters' or zones without having to cross traffic headed to another zone.

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Fortunately, the current layout of Soldotna Middle School's physical site supports this approach. There is a drop off zone at the south end of the school, and the opportunity for a second drop off zone at the east side. The exit vestibule located at the midpoint of the east side of the building could become the entry point for students in the Soldotna Montessori and River City Academy populations.

Having this secondary drop off and pick up point would help avoid conflict between different flows of traffic. This is key to reducing the potential for accidents that might arise from a single drop off and pick up point at the main entry. Note that the existing bus drop-off area would likely need to be relocated to better serve the students at both the Soldotna Preliminary and Soldotna Intermediate schools.

### *Condition of Building Infrastructure*

As described in Part 1 of the report, the physical infrastructure of the Soldotna Middle School is in fair condition. The exterior envelope has not been damaged by the recent earthquakes of the last few years. The building's roof was replaced only five years before this report was written, and looks to be able to perform well for another twenty five to thirty years.

One of the main boilers was replaced within the last five years, but the main fan units and building heating system are approaching the end of their useful service life. Although they have been well maintained, the time has come to replace them. This work could be accomplished as part of a larger renovation of the building.

The main issues discovered by the design team during its site visit related mostly to condition of interior building finishes like carpet or ceiling tile. The building's casework and window blinds are also in need of renewal. Apart from these concerns, the only area requiring further investigation is the sinking of the floor slab in the current Computer Lab 23B.

## CHALLENGES

### *Providing More Classroom and Admin Space*

The single biggest obstacle to meeting the requirements of the proposed program is the lack of sufficient existing classroom space in the building. As stated above, the building would need at least six more classroom spaces, as well as additional administrative space, to properly provide for the different student populations that would relocate to the school. There is a potential solution, but it will require limited remodel of some of the existing classrooms, and major remodel of a portion of one of the large common spaces.

The required changes would be achievable without impacting the usefulness of the school for the other elementary age students. This is possible because some of the spaces currently provided in the building footprint are not required for an elementary student population. For example, a separate, stand-alone gym is a nice feature, but unnecessary for younger students who do not have middle school or high school level gym classes. The same statement would be true for the associated weight room and locker room/shower rooms.

If the space currently devoted to some of these functions can be 'freed up' for other uses, the amount of physical floor area for classrooms can increase significantly. Relative to the overall footprint, it would be

the equivalent of adding 13,000 SF back to the school's teaching spaces. To provide the same amount of space with a new addition, the school's size would need to grow by about fifteen percent.

#### *Complying with ADA Accessibility Requirements*

Earlier in the report, it was noted that the school does have some accessibility issues. While the building's education spaces are all on one level, and the general route into and out of the school is accessible, some of its restrooms and classroom space are not. This is particularly true of some of the restrooms located in the original, southern half of the building.

A 2003 remodel addressed accessibility concerns for the restrooms serving the administrative staff. It did not touch restrooms used by students. The restrooms located adjacent to Computer Lab 23B and Science Lab 6 do not comply with ADA requirements. They lack an accessible toilet stall with grab bars and appropriate maneuvering room. The mounting height of existing toilet fixtures and sinks also does not comply with ADA.

There is also an issue with accessibility in the main music room/band practice area. The tiered levels provided for musical performances do not have any accommodation for disabled students. ADA regulations would typically require a ramp with handrails to allow disabled students to safely transition between levels. This particular issue may become moot in the event of a remodel, as the music room would likely be repurposed for a program space that does not require a tiered floor.

## **RECOMMENDATIONS**

### 1. Renovation of Administrative Hub

In order to house the administrative spaces called for in the program, limited renovation of the admin 'hub' area will be needed. This would include converting some of the space along the east exterior wall into offices for the counselor and psychologist, as well as converting the teachers' lounge to a workroom.

### 2. Renovation/remodel of the Existing Multipurpose Space & Gym

Space for classrooms is at a premium within the existing school, and the propose program requires more classroom space than is currently available. The existing multipurpose space should be remodeled as new classroom space for River City Academy students, giving them their own distinct zone within the school.

The gymnasium to the north would become the new multipurpose space. Very little would need to change about the gym itself, but the current weight room and flanking offices would be repurposed as the new kitchen and associated food storage spaces. The existing locker room and shower spaces would be remodeled as new classroom space.

### 3. Create a New East-West Hallway

As noted previously, there is currently no easy way to cross from the east to the west side of the building through the central zone without having to pass through either the gym or the multipurpose room. A new hallway aligned with the east side exit vestibule would be created as part of the remodel of the multipurpose space. This will enable students to more efficiently access the new classrooms being created in this area.

KPB SOLDOTNA ELEMENTARY RELOCATION CONDITION SURVEY  
SOLDOTNA, ALASKA

4. **Remodel of Shop Area**  
The existing shop space is well laid out and maintained, but it is one of the least useful spaces in the school for elementary age children. This area would be remodeled to house three additional classrooms.
5. **Remodel of Art Room & Intensive Needs Spaces**  
The existing art room is a good amenity for older students, but it is not as useful for younger elementary age students. This room and the adjacent intensive needs classrooms can be reconfigured to allow space for additional general classrooms and a more efficiently laid out intensive needs space.
6. **Repurposing of East Side Classrooms**  
The classrooms north of the exit vestibule on the east side of the building can be taken over as a distinct zone of space for the Soldotna Montessori School. This area would provide almost all of the required classrooms for this group with relatively little remodeling. The existing Science Lab would require some remodeling to provide additional classroom space in the right configuration.
7. **Remodel Southside Restrooms to Comply with ADA**  
The two existing blocks of restrooms located next to the current computer lab and science lab need to be remodeled to comply with ADA requirements. This would include creating one larger ADA compliant toilet stall in each restroom, and replacing the existing group hand wash fixtures with ADA compliant sinks.
8. **Provide Additional Sinks in Classrooms**  
It is standard practice in the design of elementary level classrooms to include sinks in the classrooms themselves. This helps avoid the need for constant student trips to the restroom to wash dirty hands. In order to provide the most useful spaces possible, the design team recommends installing new sinks in all the classrooms to be used by elementary age children.

## **EXTERIOR SITE WORK**

In order to give a full picture of the work required to remodel or convert the two school buildings, the design team was also asked to look at the exterior site work required to help support the interior changes. A concept level site plan was prepared based on direction from the District as to student needs.

The changes to the site would include:

- Construction of a larger, common bus drop-off area that is strategically located between the two buildings;
- Removal and reconfiguration of existing driveways to separate the drive path to and from each school from the separate approach to the bus parking area;
- New concrete sidewalk linking the bus drop-off area to the adjacent schools;
- A potential driveway leading to the Soldotna High School building further north on the site;

The site plan can be found in Appendix B of the report with the other concept layout drawings. The cost for the site work is included in the cost estimate as a single line item.

**APPENDIX A - SPACE PROGRAM**

| EXISTING FACILITIES                                     |               |  |                                     |                          |                     |
|---|---------------|--|-------------------------------------|--------------------------|---------------------|
|   | ADM           |  | DEED<br>Allowable<br>S.f.           | DEED<br>Existing<br>Area | S.F. Per<br>Student |
| Soldotna Elementary School                              | 262.80        |  | 32,984                              |                          |                     |
| Soldotna Montessori School                              | <u>164.00</u> |  | <u>23,403</u>                       |                          |                     |
|   | 426.80        |  | 56,387                              | 54,177                   | 127                 |
| Redoubt Elementary School                               | 348.30        |  | 41,537                              | 49,442                   | 119                 |
| Soldotna Middle (Preparatory) School                    |               |  | N/A                                 | 84,755                   |                     |
| River City Academy                                      | 85.10         |  | * Existing                          | 6,740                    | 79                  |
| <b>TOTAL ADM</b>  | <b>860.20</b> |  | <b>TOTAL EXISTING BUILDING AREA</b> | <b>195,114</b>           | <b>227</b>          |
| * DEED Bldg. Area not available (Included with Skyview) |               |  |                                     |                          |                     |
| RECONFIGURED SCHOOLS                                    |               |  |                                     |                          |                     |
|   |               |  |                                     |                          | SF/Student          |
| Soldotna Primary School                                 | 140.00        | 2020 Pre-K - 2 enrollment from Soldotna Elementary |                                     |                          |                     |
|   | <u>162.00</u> | 2020 Pre-K - 2 enrollment from Redoubt Elementary  |                                     |                          |                     |
|   | <b>302.00</b> |  |                                     |                          |                     |
|   |               | Existing Building Area                             | 49,442                              |                          |                     |
|   |               | Additon to replace Music and B&G portables         | <u>1,992</u>                        |                          |                     |
|   |               | <b>Total Building Area</b>                         |                                     | <b>51,434</b>            | <b>170</b>          |
| Soldotna Intermediate School                            | 150.00        | 2020 3-6 enrollment from Soldotna Elementary       |                                     |                          |                     |
|   | 206.00        | 2020 3-6 Enrollment from Redoubt Elementary        |                                     |                          |                     |
|   | 164.00        | 2020 Enrollment from Soldotna Montessori           |                                     |                          |                     |
|   | <u>90.00</u>  | 2020 Enrollment from River City Academy            |                                     |                          |                     |
|   | <b>610.00</b> |  |                                     |                          |                     |
|   |               | Existing Soldotna Middle School Building Area      |                                     | 84,755                   | 139                 |
| <b>TOTAL ENROLLMENT</b>                                 | <b>912.00</b> |  | <b>TOTAL EXISTING BUILDING AREA</b> | <b>136,189</b>           | <b>149</b>          |

| Program Space Summary Table - Soldotna Primary School                     |                               |              |              |            |                       |                         |                    |              |   |
|---|-------------------------------|--------------|--------------|------------|-----------------------|-------------------------|--------------------|--------------|---|
| Space Data  | Room                          | No. of Rooms | Program Area | Total Area | Students per Classrm. | Students Total capacity | Adults per Classrm | Adults Total | Notes                                     |
| <b>Combined Soldotna Elementary and Redoubt Elementary Academic Areas</b> |                               |              |              |            |                       |                         |                    |              |   |
| PK1   | Pre-K Classroom               | 2            | 980          | 1,800      | 20                    | 40                      | 2                  | 4            | 2020 Pre-K enrollment: 38 SE / 20 RE = 58 |
| PK2   | Pre-K Toilet                  | 2            | 65           | 130        |                       |                         |                    |              |   |
| PK3   | Pre-K Intensive Needs (S.C.)  | 2            | 900          | 1,800      | 10                    | 20                      | 4                  | 8            | not additional to enrollment              |
| PK4   | Pre-K Inten. Needs Quite Room | 2            | 80           | 160        |                       |                         |                    |              |   |
| K1  | Kindergarten Classroom        | 4            | 980          | 3,600      | 20                    | 80                      | 1                  | 4            | 2020 K enrollment: 37 SE / 48 RE = 85     |
| K2  | Kindergarten Toilet           | 4            | 65           | 260        |                       |                         |                    |              |   |
| K3  | Flex Kindergarten             | 1            | 980          | 900        | 20                    | 20                      | 1                  | 1            | not additional to enrollment              |
| K4  | Flex Kindergarten Toilet      | 1            | 65           | 65         |                       |                         |                    |              |   |
| R1  | Resource (K/Pre-K) Classroom  | 1            | 980          | 900        | 10                    | 10                      | 4                  | 4            | not additional to enrollment              |
| R2  | Resource (K/Pre-K) Toilet     | 1            | 65           | 65         |                       |                         |                    |              |   |
| C1  | 1st Grade Classroom           | 4            | 980          | 3,600      | 24                    | 96                      | 1                  | 4            | 2020 1st enrollment: SE 32 / RE 38 = 70   |
| C2  | 2nd Grade Classroom           | 4            | 980          | 3,600      | 24                    | 96                      | 1                  | 4            | 2020 2nd enrollment: SE 33 / RE 56 = 89   |
| R3  | Resource - Primary            | 1            | 660          | 660        | 10                    | 10                      | 4                  | 4            | Includes support spaces                   |
| R4  | OT/PT                         | 1            | 240          | 240        |                       |                         | 1                  | 1            | not additional to enrollment              |
| R5  | Speech                        | 1            | 200          | 200        |                       |                         | 1                  | 1            | not additional to enrollment              |
| IN1   | Primary Intensive Needs       | 2            | 980          | 1,800      | 10                    | 20                      | 4                  | 8            | not additional to enrollment              |
| IN2   | Intensive Needs Quite Room    | 2            | 80           | 160        | 1                     | 2                       |                    |              | not additional to enrollment              |
| M1  | Music                         | 1            | 980          | 980        | 24                    | *                       |                    | 1            | not additional to enrollment              |
| BG1   | Boys and Girls Club           | 1            | 980          | 980        | 24                    | *                       |                    | 1            | not additional to enrollment              |
| <b>Administrative Areas</b>   |                               |              |              |            |                       |                         |                    |              |   |
| AD1   | Principal                     | 1            | 320          | 320        |                       |                         |                    | 1            |   |
| AD2   | Secretary                     | 1            | 240          | 240        |                       |                         |                    | 2            |   |
| AD3   | Reception/Waiting             | 1            | 240          | 240        |                       |                         |                    |              |   |
| AD4   | Nurse                         | 1            | 300          | 300        |                       |                         |                    | 1            |   |
| AD5   | Psychologist                  | 2            | 110          | 220        |                       |                         |                    | 1            |   |
| AD6   | Counselor                     | 1            | 230          | 230        |                       |                         |                    | 1            |   |
| AD7   | Intervention                  | 1            | 100          | 100        |                       |                         |                    |              |   |
| AD8   | Itinerant                     | 1            | 100          | 100        |                       |                         |                    | 1            |   |
| AD9   | Teacher Work Room             | 1            | 520          | 520        |                       |                         |                    |              |   |
| AD10  | Admin Toilets                 | 2            | 70           | 140        |                       |                         |                    |              |   |
| AD11  | Records                       | 2            | 50           | 100        |                       |                         |                    |              |   |
| AD12  | Storage                       | 1            | 300          | 300        |                       |                         |                    |              |   |
| <b>Common Areas</b>   |                               |              |              |            |                       |                         |                    |              |   |
| CM1   | Gymnasium                     | 1            | 4,460        | 4,460      |                       |                         | 1                  | 1            |   |
| CM2   | Gym Storage                   | 1            | 1,820        | 1,820      |                       |                         |                    |              |   |
| CM3   | Kitchen                       | 1            | 550          | 550        |                       |                         | 1                  | 1            |   |
| CM4   | Restrooms                     | 4            | 300          | 1,200      |                       |                         |                    |              | 2 Boys / 2 Girls                          |
| CM5   | Library                       | 1            | 2,500        | 2,500      |                       |                         | 1                  | 1            |   |
| CM6   | Library Support               | 1            | 500          | 500        |                       |                         |                    |              |   |

| Support                          |                               |   |               |                 |                  |            |                         |                                   |
|----------------------------------|-------------------------------|---|---------------|-----------------|------------------|------------|-------------------------|-----------------------------------|
| S1                               | Custodian                     | 1 | 200           | 200             |                  |            | 1                       |                                   |
|                                  |                               |   |               |                 |                  |            |                         |                                   |
|                                  | <b>Total Program Space</b>    |   |               | <b>35,940</b>   | <b>Students:</b> | <b>394</b> | <b>Adults:</b>          | <b>56</b>                         |
|                                  | Walls (10%)                   |   |               | 3,594           |                  |            |                         | 2020 Enrollment Total: 302        |
|                                  | Circulation Space (20%)       |   |               | 7,188           |                  |            |                         | Soldotna Elem: 140 (Pre-K to 2nd) |
|                                  | Mechanical/Electrical (10%)   |   |               | 3,594           |                  |            |                         | Redoubt Elem: 162 (Pre-K to 2nd)  |
|                                  |                               |   |               |                 |                  |            |                         |                                   |
| <b>Total Space Required</b>      |                               |   |               | <b>50,316</b>   |                  |            |                         |                                   |
| <b>Redoubt Elementary School</b> |                               |   |               |                 |                  |            |                         |                                   |
|                                  | DEED Existing Building Area   |   | 49,442        |                 |                  |            |                         |                                   |
|                                  | Music Portable                |   | 996           |                 |                  |            |                         |                                   |
|                                  | B&G Club Portable             |   | <u>996</u>    |                 |                  |            |                         |                                   |
|                                  | <b>Existing Building Area</b> |   | <b>51,434</b> | <b>Students</b> | <b>302</b>       |            | <b>170 S.F./Student</b> |                                   |

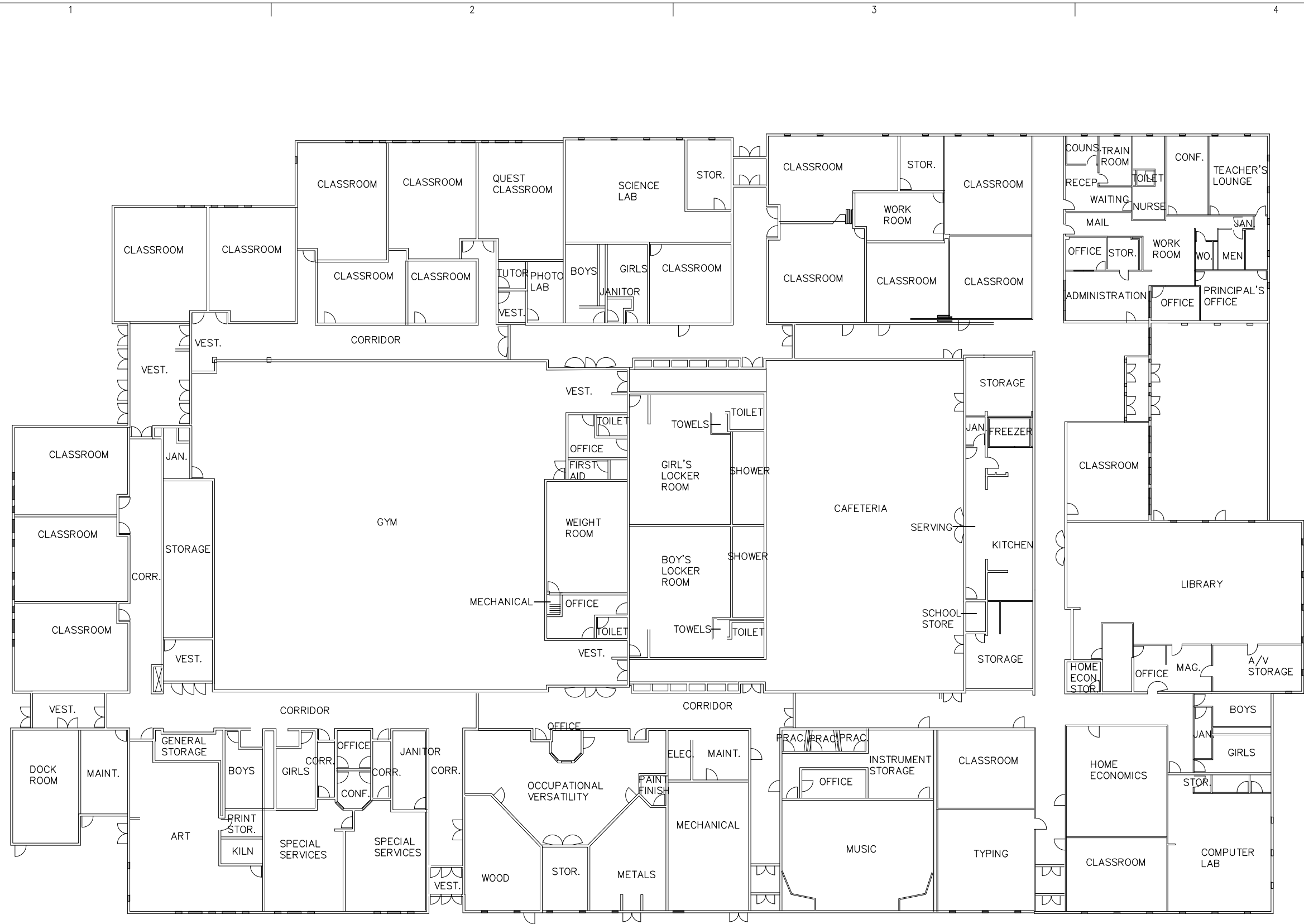
### Program Space Summary Table - Soldotna Intermediate School

| Space Data  | Room                      | No. of Rooms | Program Area | Total Area | Students per Classrm. | Students Total capacity | Adults per Classrm | Adults Total | Notes                               |
|---|---------------------------|--------------|--------------|------------|-----------------------|-------------------------|--------------------|--------------|-------------------------------------|
| <b>Combined Soldotna Elementary and Redoubt Elementary Academic Areas</b> |                           |              |              |            |                       |                         |                    |              |                                     |
| CR3   | 3rd Grade Classroom       | 4            | 900          | 3,600      | 26                    | 104                     | 1                  | 4            | 2020 enrollment: SE 34 / RE 57 = 91 |
| CR4   | 4th Grade Classroom       | 3            | 900          | 2,700      | 26                    | 78                      | 1                  | 3            | 2020 enrollment: SE 37 / RE 44 = 81 |
| CR5   | 5th Grade Classroom       | 4            | 900          | 2,700      | 26                    | 104                     | 1                  | 4            | 2020 enrollment: SE 40 / RE 54 = 94 |
| CR6   | 6th Grade Classroom       | 3            | 900          | 2,700      | 26                    | 78                      | 1                  | 3            | 2020 enrollment: SE 39 / RE 51 = 90 |
| CR7   | STEM Classroom            | 2            | 1,200        | 2,400      | 26                    | 52                      | 1                  | 2            | Not additional to enrollment        |
| CR8   | Resource Classroom        | 2            | 900          | 1,800      | 10                    | 20                      | 4                  | 8            | Not additional to enrollment        |
| CR9   | Intention                 | 3            | 500          | 1,500      | 10                    | 30                      | 3                  | 9            | Not additional to enrollment        |
| IN1   | Intensive Needs Classroom | 2            | 900          | 1,800      | 20                    | 40                      | 4                  | 8            | Not additional to enrollment        |
| IN2   | Intensive Needs Toilet    | 2            | 80           | 160        |                       |                         |                    |              |                                     |
| IN3   | Intensive Needs Office    | 2            | 80           | 160        |                       |                         |                    |              |                                     |
| M1  | Music                     | 1            | 1,200        | 1,200      | 24                    | 24                      | 1                  | 1            | Not additional to enrollment        |
| M2  | Music Storage             | 1            | 300          | 300        |                       |                         |                    |              |                                     |
| <b>Soldotna Montessori Academic Areas</b>                                 |                           |              |              |            |                       |                         |                    |              |                                     |
| MCR1  | Montessori Kindergarten   | 1            | 900          | 900        | 24                    | 24                      | 1                  | 1            | 2020 enrollment: 21                 |
| MCR2  | Kindergarten Toilet       | 1            | 60           | 60         |                       |                         |                    |              |                                     |
| MCR3  | Montessori 1-3 Classroom  | 3            | 900          | 2,700      | 24                    | 72                      | 1                  | 3            | 2020 enrollment: 72                 |
| MCR4  | Montessori 4-6 Classroom  | 3            | 900          | 2,700      | 24                    | 72                      | 1                  | 3            | 2020 enrollment: 71                 |
| MCR5  | Breakout Workspace        | 1            | 400          | 400        |                       |                         |                    |              |                                     |
| MCR6  | Resource Classroom        | 1            | 400          | 400        | 10                    | 10                      | 1                  | 1            | not additional to enrollment        |
| MCR7  | Montessori Pre-K          | 1            | 900          | 900        | 24                    | 24                      | 1                  | 1            |                                     |
| MCR8  | Pre-K Toilet              | 1            | 60           | 60         |                       | -                       |                    | 0            |                                     |
| <b>River City Academy Academic Area</b>                                   |                           |              |              |            |                       |                         |                    |              |                                     |
| RCA1  | English Classroom         | 1            | 900          | 900        | 24                    | 24                      | 1                  | 1            | 2020 Enrollment: 90                 |
| RCA2  | History Classroom         | 1            | 900          | 900        | 24                    | 24                      | 1                  | 1            |                                     |
| RCA3  | Math Classroom            | 1            | 900          | 900        | 24                    | 24                      | 1                  | 1            |                                     |
| RCA4  | Science Classroom         | 1            | 900          | 900        | 24                    | 24                      | 1                  | 1            |                                     |
| RCA5  | Resource Room             | 1            | 300          | 300        | 5                     | 5                       | 1                  | 1            | not additional to enrollment        |
| RCA6  | Resource Quiet Room       | 1            | 100          | 100        | 1                     | 1                       | 1                  | 1            | not additional to enrollment        |
| RCA7  | Culinary Kitchen          | 1            | 500          | 500        | 15                    | 15                      | 1                  | 1            | not additional to enrollment        |
| RCA8  | Art                       | 1            | 500          | 500        | 15                    | 15                      | 1                  | 1            | not additional to enrollment        |
| RCA9  | Common Area               | 1            | 1,500        | 1,500      |                       |                         |                    |              | Large open area for all students    |
| <b>Soldotna Intermediate Administrative Areas</b>                         |                           |              |              |            |                       |                         |                    |              |                                     |
| AD1   | Principal                 | 1            | 200          | 200        |                       |                         | 1                  | 1            |                                     |
| AD2   | Secretary                 | 1            | 175          | 175        |                       |                         | 2                  | 2            |                                     |
| AD3   | Support Staff             | 1            | 240          | 240        |                       |                         | 1                  | 1            |                                     |
| AD4   | Nurse                     | 1            | 300          | 300        |                       |                         | 1                  | 1            |                                     |
| AD5   | Psychologist              | 1            | 110          | 110        |                       |                         | 1                  | 1            |                                     |
| AD6   | Counselor                 | 1            | 230          | 230        |                       |                         | 1                  | 1            |                                     |
| AD7   | Behavior                  | 1            | 100          | 100        | 1                     | 1                       |                    |              |                                     |
| AD8   | Itinerant                 | 4            | 100          | 400        |                       |                         | 1                  | 4            |                                     |
| AD9   | Teacher Work Room         | 1            | 520          | 520        |                       |                         |                    |              |                                     |
| AD10  | Admin Toilets             | 2            | 70           | 140        |                       |                         |                    |              |                                     |
| AD11  | Records                   | 1            | 100          | 100        |                       |                         |                    |              |                                     |
| AD12  | Storage                   | 1            | 300          | 300        |                       |                         |                    |              |                                     |
| <b>Soldotna Montessori Administrative Areas</b>                           |                           |              |              |            |                       |                         |                    |              |                                     |
| MAD1  | Principal                 | 1            | 200          | 200        |                       |                         |                    |              |                                     |
| MAD2  | Secretary                 | 1            | 100          | 100        |                       |                         |                    |              |                                     |
| MAD3  | Teacher Work Room         | 1            | 200          | 200        |                       |                         |                    |              |                                     |
| MAD4  | Itinerant Office          | 1            | 100          | 100        |                       |                         |                    |              |                                     |

|  |                     |   |               |                  |            |                |           |                                |  |
|--|---------------------|---|---------------|------------------|------------|----------------|-----------|--------------------------------|--|
| MAD5   | Reception           | 1 | 300           | 300              |            |                |           |                                |  |
| MAD6   | Intervention        | 1 | 100           | 100              |            |                |           |                                |  |
| MAD7   | Record              | 1 | 100           | 100              |            |                |           |                                |  |
| <b>River City Academy Administrative Areas</b> |                     |   |               |                  |            |                |           |                                |  |
| RAD1   | Principal           | 1 | 200           | 200              |            |                |           |                                |  |
| RAD2   | Secretary/Reception | 1 | 250           | 250              |            |                |           |                                |  |
| RAD3   | Itinerant Office    | 2 | 100           | 200              |            |                |           |                                |  |
| RAD4   | Storage             | 1 | 300           | 300              |            |                |           |                                |  |
| <b>Common Areas</b>                            |                     |   |               |                  |            |                |           |                                |  |
| CM1  | Gymnasium           | 1 | 7,000         | 7,000            |            |                | 1         | 1                              | Existing Gym is approx 10,000 s.f.       |
| CM2  | Gym Storage         | 1 | 1,820         | 1,820            |            |                |           |                                |  |
| CM3  | Kitchen             | 1 | 550           | 550              |            |                | 1         | 1                              | Including Suport Spaces                  |
| CM4  | Restrooms           | 6 | 300           | 1,200            |            |                |           |                                | 3 Boys / 3 Girls                         |
| CM5  | Library             | 1 | 2,500         | 2,500            |            |                | 1         | 1                              |  |
| CM6  | Computer Lab        | 1 | 900           | 900              |            |                |           | 1                              |  |
| CM7  | Printer Room        | 1 | 200           | 200              |            |                |           |                                |  |
| CM8  | Lunch Room          | 1 | 6,000         | 6,000            |            |                |           |                                | Seating for 500 (existing is 6,000 s.f.) |
| <b>Support Areas</b>                           |                     |   |               |                  |            |                |           |                                |  |
| S1   | Custodian           | 1 | 200           | 200              |            |                |           | 1                              |  |
| <b>Total Program Space</b>                     |                     |   | <b>60,875</b> | <b>Students:</b> | <b>865</b> | <b>Adults:</b> | <b>75</b> | 2020 Enrollment Total: 610     |  |
| Walls (10%)                                    |                     |   | 6,088         |                  |            |                |           | Soldotna Elem: 150 (3-6 grade) |  |
| Circulation Space (20%)                        |                     |   | 12,175        |                  |            |                |           | Redoubt Elem: 206 (3-6 grade)  |  |
| Mechanical/Electrical (10%)                    |                     |   | 6,088         |                  |            |                |           | Soldotna Montessori: 164       |  |
|  |                     |   |               |                  |            |                |           | River City Academy: 90         |  |
| <b>Total Space Required</b>                    |                     |   | <b>85,225</b> |                  |            |                |           |                                |  |
| <b>Soldotna Preparatory School</b>             |                     |   |               |                  |            |                |           |                                |  |
| <b>DEED Existing Building Area</b>             |                     |   | <b>84,755</b> | <b>Students</b>  | <b>610</b> |                |           | <b>139 S.F./Student</b>        |  |

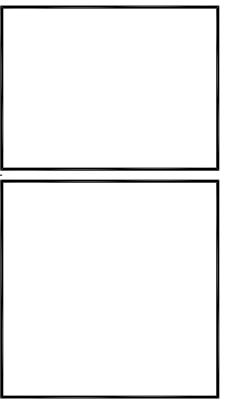
**APPENDIX B – EXISTING SCHOOL PLANS & PROPOSED LAYOUTS**

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PLOT DATE: 7/24/2020 10:15 AM



**1** SOLDOTNA MIDDLE SCHOOL - EXISTING FLOOR PLAN  
EX1 1/16" = 1'-0" (1/32" = 1'-0" @ 11 X 17)

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**KENAI PENINSULA BOROUGH  
SOLDOTNA ELEMENTARY SCHOOL RELOCATION  
SOLDOTNA, ALASKA**

| Revisions |             |      |
|-----------|-------------|------|
| No.       | Description | Date |
|           |             |      |
|           |             |      |
|           |             |      |

|          |          |
|----------|----------|
| Drawn by | Date     |
| Checked  | Job No.  |
|          | 20022.01 |

Sheet Contents  
SOLDOTNA MIDDLE SCHOOL -  
EXISTING FLOOR PLAN

Sheet No.  
**EX1**

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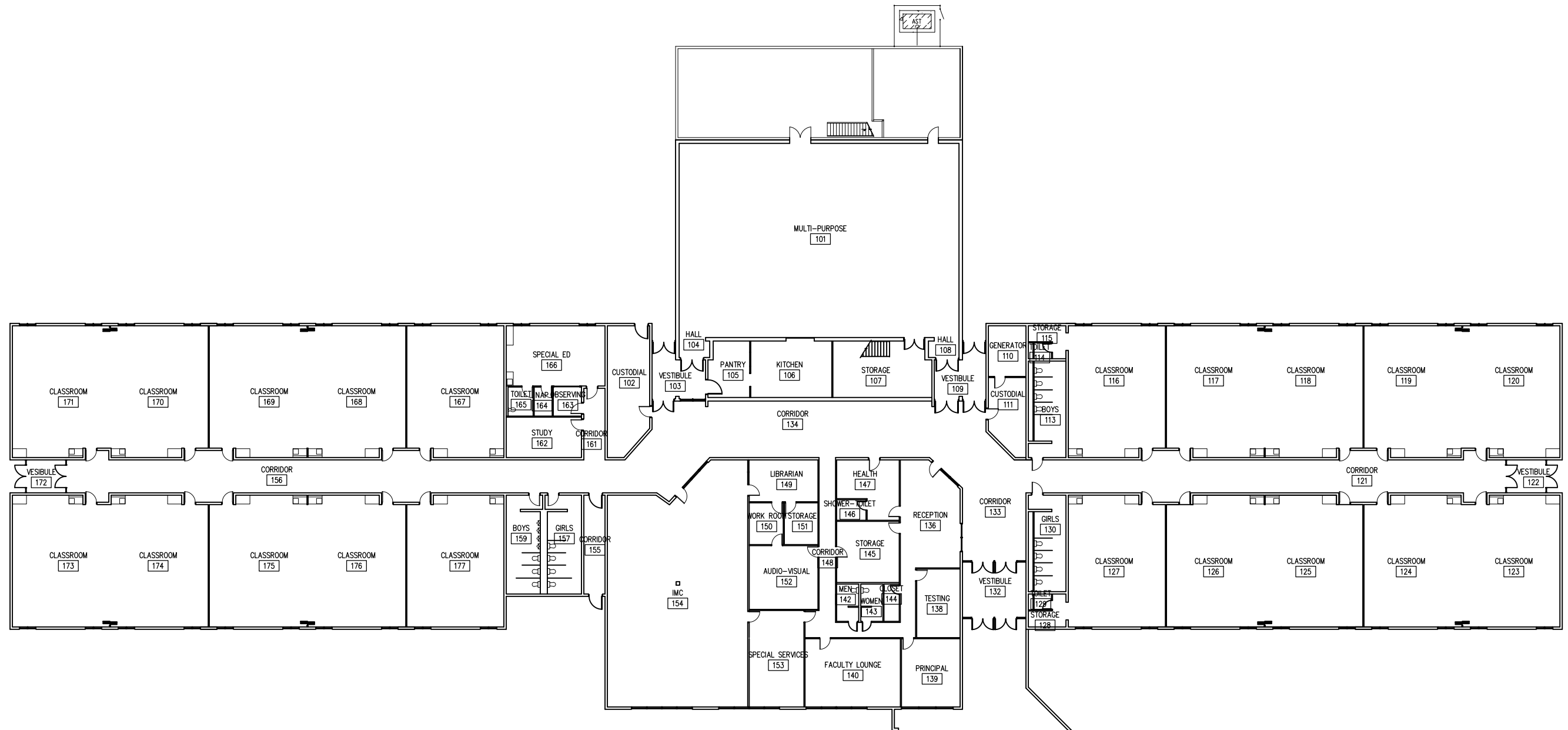
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Revisions

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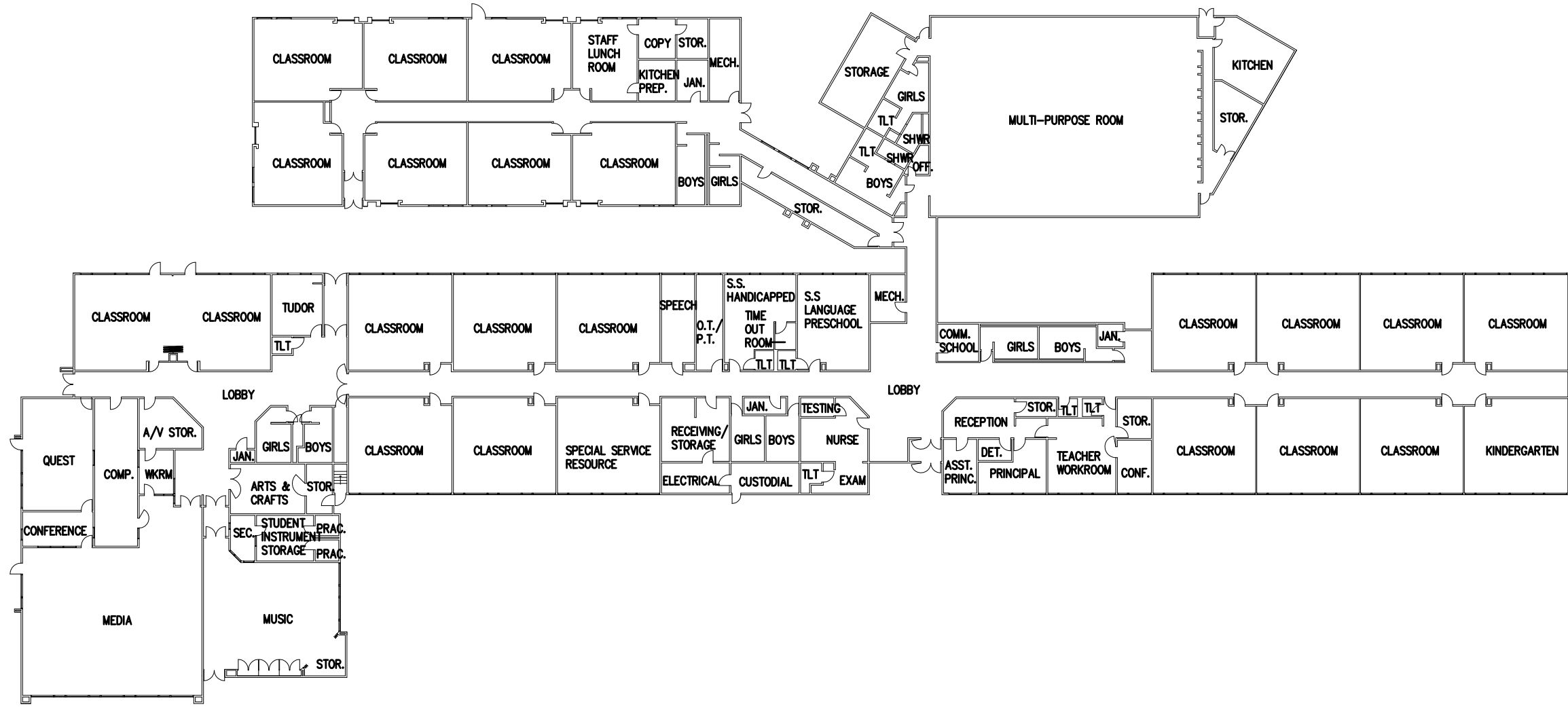
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Sheet Contents  
REDOUBT ELEMENTARY  
SCHOOL - EXISTING  
FLOOR PLAN

Sheet No.  
**EX2**

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**1** **SOLDOTNA ELEMENTARY SCHOOL - EXISTING FLOOR PLAN**  
 1" = 20' (1" = 40' @ 11 X 17)

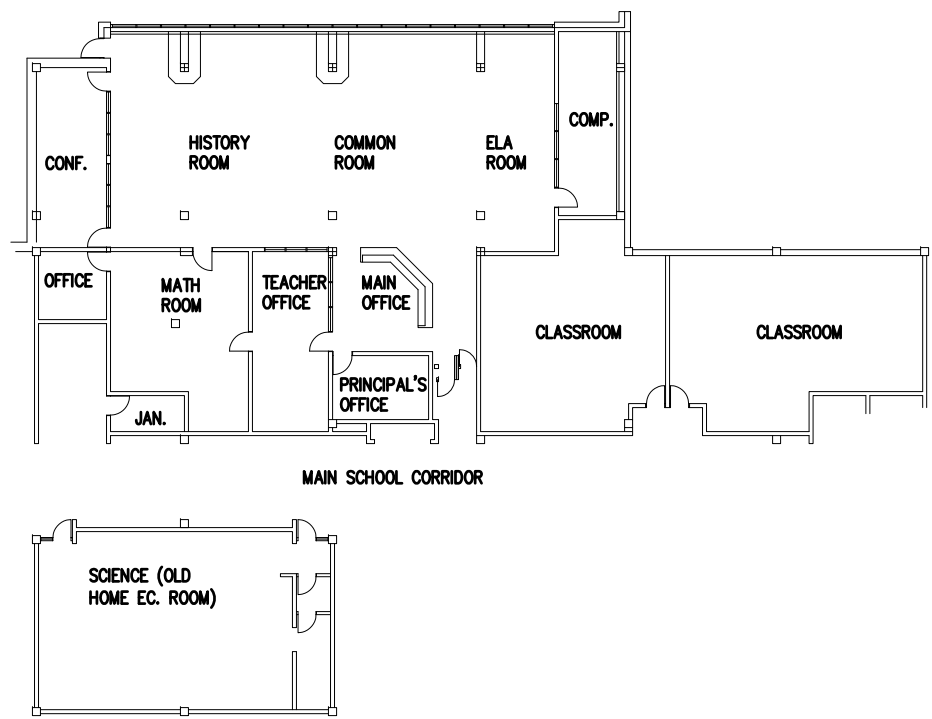
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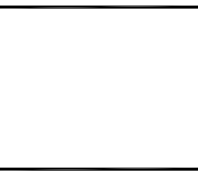
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 PLOT DATE: 7/24/2020 10:32 AM



**1**  
**EX1** **RIVER CITY ACADEMY - EXISTING FLOOR PLAN**  
 1/16" = 1'-0" (1/32" K- 1'-0" @ 11 X 17)

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KENAI PENINSULA BOROUGH  
 SOLDOTNA ELEMENTARY SCHOOL RELOCATION  
 SOLDOTNA, ALASKA

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Sheet Contents  
 RIVER CITY ACADEMY -  
 EXISTING FLOOR PLAN

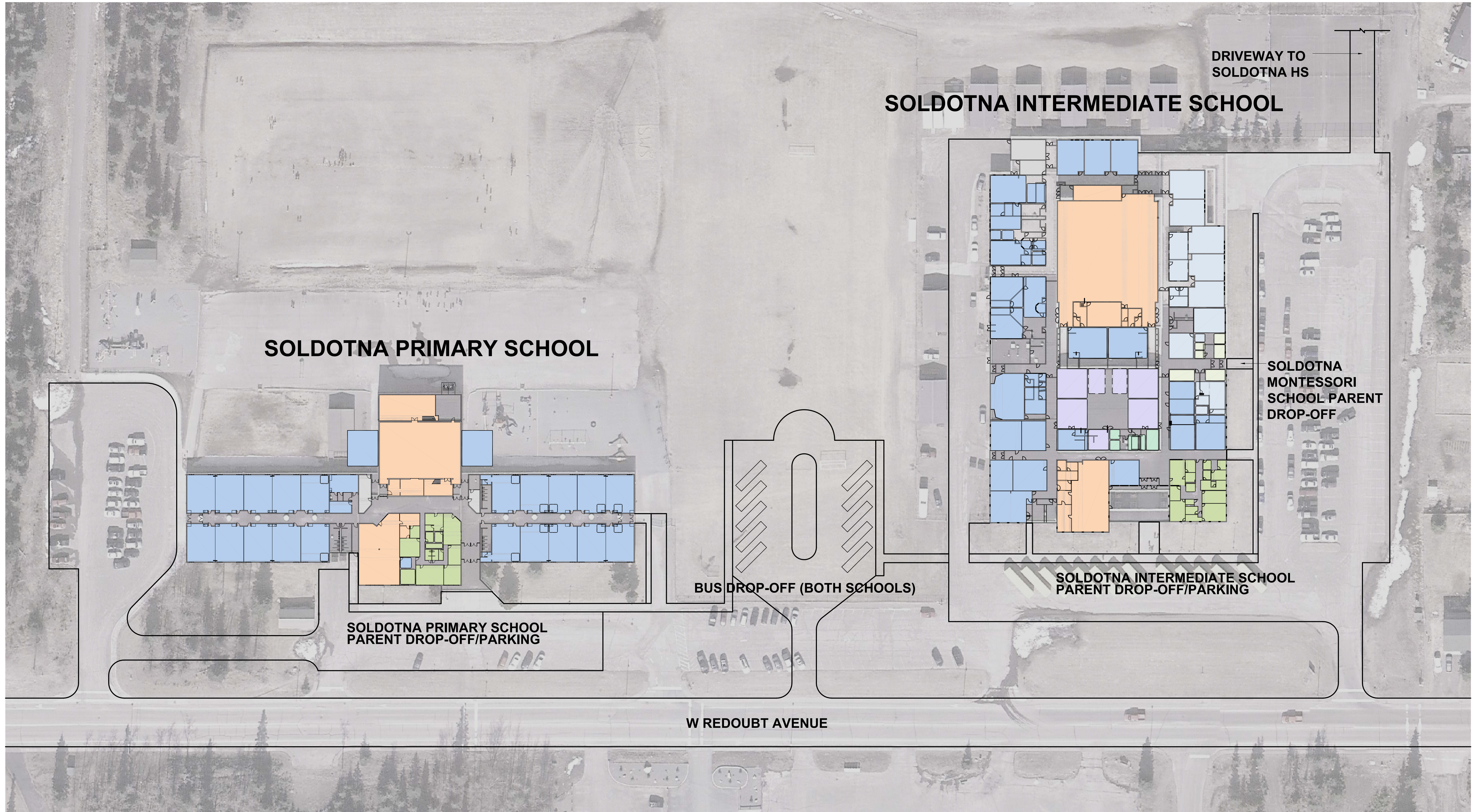
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**EX1**

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KENAI PENINSULA BOROUGH  
SOLDOTNA ELEMENTARY SCHOOL RELOCATION  
SOLDOTNA, ALASKA

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Sheet Contents  
SCHOOL SITE PLAN

Sheet No.  
**A1**

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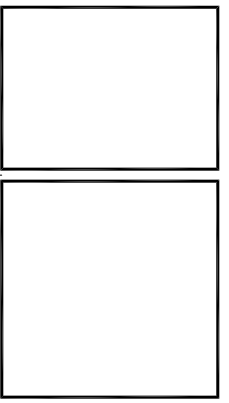
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 SOLDOTNA, ALASKA

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Sheet Contents  
 SOLDOTNA INTERMEDIATE  
 SCHOOL - PROGRAM AREA  
 FLOOR PLAN

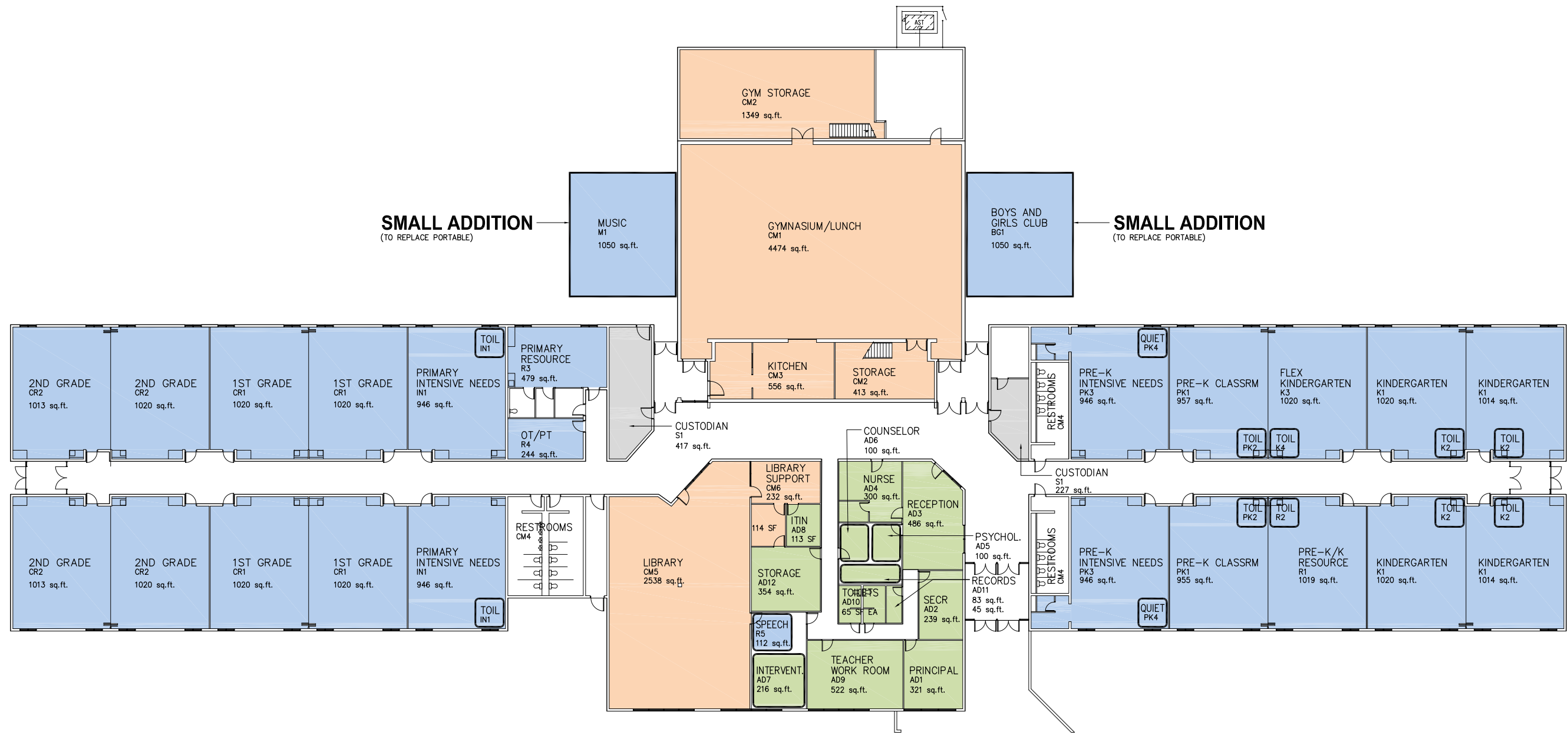
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**A2**

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 A2  
**SOLDOTNA INTERMEDIATE SCHOOL – PROGRAM AREA FLOOR PLAN**  
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SOLDOTNA ELEMENTARY SCHOOL RELOCATION  
SOLDOTNA, ALASKA

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Sheet Contents  
SOLDOTNA PRIMARY  
SCHOOL - PROGRAM AREA  
FLOOR PLAN

1  
A3  
**SOLDOTNA PRIMARY SCHOOL – PROGRAM AREA FLOOR PLAN**  
1/16" = 1'-0" (1/32" = 1'-0" @ 11X17)

Sheet No.  
**A3**

**APPENDIX C – SOLDOTNA ELEMENTARY SCHOOL ANALYSIS**

## SOLDOTNA ELEMENTARY SCHOOL CONDITION ANALYSIS

### INTRODUCTION

As part of the overall feasibility study, the design team was also asked to analyze the condition of the existing Soldotna Elementary School. If the proposed relocation of students goes forward, the Montessori School currently using this building will move across town to the Soldotna Middle School building. That raises the question of how this existing facility will be used once its current program has moved.

This portion of the study was not intended to be as in-depth as the condition studies for Redoubt Elementary and Soldotna Middle School. The purpose is to develop an estimate of the remaining service life for the major components of the facility. This information will factor in to how the District decides to repurpose the building.



*A view of the main entrance to the Soldotna Elementary School.*

The core of the Soldotna Elementary School was constructed in 1950. This cluster of a few classrooms was expanded several times in the 1960s and 70s. A very unique multipurpose room was constructed in 1965. An expansion in 1986 added a music room, library/media space, and a new main entry area.

The final form of the school is a long, rectangular bar with a parallel rectangle of classrooms and the multipurpose structure connected to it by an enclosed corridor. The main parking area is located directly to the south. A ball field and outdoor athletic spaces are located to the west of the building. A sledding hill is located to the east side of the building.

## CONDITION ASSESSMENT OF MAIN BUILDING ASSEMBLIES

### Exterior Wall Assembly

The exterior wall assembly for the school at the entry and the west end is primarily painted horizontal wood siding over two layers of ½ inch thick plywood sheathing, supported by wood stud walls framed out of 2 x 6s at 16 inches on center insulated with fiberglass batt insulation. The interior finish is typically 5/8" thick painted gypsum board installed over a polyethylene vapor retarder. The total R-value for the assembly is approximately R-20.

The exterior wall assembly for much of the rest of the building is essentially replicating the look of a wood "curtain wall" style assembly, with long ribbons of window glazing. Painted MDO plywood panels are located above and below these ribbons of glass. The wall assembly is again framed out of 2 x 6 wood studs at 16 inches on center, insulated with fiberglass batts.

No evidence of obvious rot or peeling paint was visible during the site visit. The school building appears to be well maintained. Wood material is inherently more susceptible to deterioration from water and moisture than other materials such as steel or masonry, but it can last for decades with proper maintenance. The longest standard warranty available for most wood siding is about fifty years, and a service life of about twenty to thirty years would be a reasonable expectation.

The oldest parts of the building envelope are nearly seventy years old, with various additions and expansions over the decades. A little over three quarters of the building envelope was constructed prior to 1965, and is over fifty five years old. Based on industry standards and data, a seventy five year service life for a wood building is achievable with proper maintenance and upkeep. However, the building is approaching the point of needing renewal of much of the existing wood siding and glazing.

### Exterior Roof Assembly

The roof assembly installed at the school in 1986 consisted of a built-up roof made of asphalt impregnated felts on top of six inches of rigid foam insulation. This insulation sat on ¾ inch thick plywood sheathing on open work wood joists. The total estimated R-value for this assembly is approximately R-34.

Given the standards of the time when the roof was installed, this was a very well insulated roof assembly. It would still compare favorably with the current recommendations in the 2012 edition of the International Energy Conservation Code (IECC). The only concern the design team would have is the age of the roof assembly.

The roof of the school was replaced and expanded in the major 1986 addition, but little major work was done in the thirty years between that time and the present. Built-up roofs have an expected service life of about thirty years, but can be made to last around thirty five to forty years with careful maintenance. That was likely why the District moved to do a reroof of the building in 2015.

The design team understands that the new roof is also a BUR roof assembly. Again, this would have an expected future life expectancy of about twenty five to thirty years. The District should have another twenty to twenty five years before it needs to think about replacing the current roof assembly.

KPB SOLDOTNA ELEMENTARY RELOCATION CONDITION SURVEY  
SOLDOTNA, ALASKA

### Main Building Structure

The main structural system for the building consists of exterior bearing walls framed from 2x dimensional wood studs. These framed walls are supporting open-work roof joists that in turn hold up the roof assembly. The structural floor assembly is a framed wood floor over a crawlspace.

No obvious visual marks of cracking drywall or split wood structural members were visible during the site visit. Based on information from the District facilities team, the building passed through the recent major earthquake with little or no damage to the structure. There is no evidence of any major structural problems.

As long as the main structural elements are protected from rain, wind and moisture, they could potentially last at least another decade or two. However, at this point much of the wood stud exterior wall framing for the original core is approaching the end of its useful life. The wall framing should be inspected for signs of rot or mold.

### Mechanical and Electrical Systems

No detailed analysis was made of the condition of the building's mechanical or electrical systems. The main mechanical systems were last renovated during the major addition in 1986. The main air handler and boilers were upgraded at that time. As a result, the main mechanical equipment is approximately thirty four to thirty five years old.

Most mechanical equipment can be made to last for about twenty to thirty years with good maintenance. Unless the boiler and main air handler have been replaced in the last five years, the existing equipment is probably due to be swapped out for newer models.

### Interior Finishes

Interior floor and wall finishes for a high-traffic environment like a school typically do not last as long as other components of the building. That being said, a number of durable floor and wall finishes are present in the school. For example, the floor in the multipurpose room is varnished wood planks.

With yearly upkeep, a wood floor can last for up to a hundred years, and forty to fifty years is not unreasonable to expect. Please note, however, that the floor was installed in 1965 and is now over fifty five years old. A replacement of the floor will likely be needed within the next ten to fifteen years.

The primary floor finish in the classrooms and hallways is carpet tile, with some ceramic tile at the main entry lobby. There are also areas of vinyl tile or resilient flooring at some of the support rooms. Wall finishes are generally painted gypsum board. The restrooms walls are finished with ceramic tile or hardboard wainscot.

According to industry estimates, carpet floor finishes last approximately five to ten years, with vinyl flooring lasting longer at about ten to twenty years with maintenance. Ceramic tile is longer lasting than either, with an expected service life of as much as fifty years. Given the appearance of the carpet finishes during the site visit, they appear to have been replaced relatively recently and kept in good condition. The other floor finishes also appeared to be in fair to good condition.

KPB SOLDOTNA ELEMENTARY RELOCATION CONDITION SURVEY  
SOLDOTNA, ALASKA

Hazardous Materials

No hazardous materials investigation was performed as part of the site visit to Soldotna Elementary School. However, the age of the school makes it very likely that hazardous materials are present in the building materials used to construct it. The locations where hazardous materials are generally found are:

- Resilient vinyl floor tiles or floor mastic
- Joint compound for gypsum board wall finish
- Mechanical piping insulation
- Fire resistant materials of many types
- Ceiling tiles

The 1986 addition took place at a time when the building industry was starting to try and phase out asbestos containing materials (ACM), but there is no way to be sure that such materials are not present without doing a thorough inspection and testing effort. Any major remodel of the Soldotna Elementary School building would likely involve some abatement efforts. Depending on the level of air monitoring and containment procedures required, this could add to the cost a potential remodel.

The presence of ACM would also increase the cost of building demolition, but the impact would be less. In the case of demolition, there will be no occupants to protect while the work is under way. The focus of the effort would be on making sure that any ACM is properly disposed of in an EPA approved landfill or other waste disposal site.

Per Estimations Inc., a good rule of thumb square foot cost for demolition of the building would be \$10 per SF without hazardous material abatement, and \$30 per SF if hazardous abatement is required. The school measures approximately 52,250 SF. Assuming that hazardous materials are present, a rough cost for the building's demolition would be about \$1.6 million dollars.

It is likely that the cost of demolition would be less expensive than a major remodel of the building. For comparison, the cost of even a smaller remodel can easily be as much as \$180 - \$200 per SF based on recent cost data for other projects.

SUMMARY

Given the general age of many of the components, the Soldotna Elementary School is in relatively good condition at present. However, the wood siding of the exterior envelope, the wood subfloor, and the main mechanical systems are approaching the point of needing major maintenance and upgrades. At thirty five years plus since the last major remodel, the school is also likely to need significant changes to accommodate current teaching practices. The building has reached the point where the District either needs to make a large investment in updating the building, or consider demolishing it so that something else can take its place.

**APPENDIX D – CONCEPT LEVEL CONSTRUCTION COST ESTIMATE**

## INTRODUCTION

### *Concept Level Estimates*

The numbers in the estimate are primarily based on solutions from previous projects that the estimator has seen used to address similar deficiencies or needs. They apply current construction costs to an anticipated solution. The costs used are based on current material, labor and equipment rates, and include allowances for the general and subcontractors' overhead and profit. The estimate also includes an estimating contingency to help cover unknown costs at this early stage of the project.

Even with the experience of past projects, the estimator cannot fully anticipate the complete cost of the construction until more developed design documents are available. Including a contingency helps to allow for the 'X factor' of not having final drawings and specifications that would define quantities of materials and labor required.

### *Format of the Estimate*

Following the organization of the report, the attached cost estimate is divided into two parts. The first part covers the expected cost to address the recommendations in the condition study portion of the report. Each recommended improvement is estimated separately as a discrete cost. This allows the District to approach the recommendations like a menu and pick the ones that are the most important or desirable to do. A total number is given for Redoubt Elementary, and for Soldotna Middle School. These figures are listed on Page 2 and 3 of the estimate.

The second part has to with the cost required to convert the two buildings for use as the Soldotna Preliminary and Soldotna Intermediate Schools under the new program. Again, the cost of each recommended upgrade or change is broken out as a discrete cost number. One grand total number is given for the remodel/conversion of the Redoubt building. Another number is given for the remodel/conversion of the Soldotna Middle School. These figures are summarized on Page 4 of the estimate.

Not all of the upgrades or changes recommended in the Part 1 condition study would have to be done in order to convert the two existing schools to serve the new educational program. Some of the items are useful to address from the point of view of energy efficiency or maintenance, but are not required by code. Others of these items, such as the addition of a fire sprinkler system for Redoubt, are code required life safety upgrades.

The totals given for the remodel/conversion of each building include both the cost of the specific recommendations under Part 2 of the report, as well as the cost of code-required items from the condition survey under Part 1. The intent is to provide an estimated cost that includes everything required to serve the students, as well as bring the buildings into code compliance.

### *Hard vs. Soft Costs*

Note that the costs included in the estimate are 'hard costs' only. These are costs relating directly to construction, including cost of materials and labor. The project will have additional 'soft costs' such as the following:

KPB SOLDOTNA ELEMENTARY RELOCATION CONDITION SURVEY  
SOLDOTNA, ALASKA

- Structural seismic evaluation (for Redoubt Elementary)
- design fees for the A/E firm providing the construction documents for the remodels,
- building permits
- cost of equipment and technology to equip the remodeled buildings
- the District's administrative costs to manage the project

An estimate of these additional soft costs is included in below. These costs are typically estimated as a percentage of the construction cost.

**BUILDING CONDITION SURVEY  
CONSTRUCTION COST ESTIMATE**

**KPB Soldotna Elementary School**

**SOLDOTNA, ALASKA**

Prepared for:

**ARCHITECTS ALASKA  
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Anchorage, Alaska 99501  
907.272.3567**

Prepared by:

The logo for ESTIMATIONS features a green square icon with a white stylized 'E' on the left, followed by the word 'ESTIMATIONS' in a bold, green, sans-serif font.

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907.561.0790

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

**NOTES REGARDING THE PREPARATION OF THIS ESTIMATE**

**DRAWINGS AND DOCUMENTS**

*Level of Documents:* Program Analysis Report  
*Date:* January 18, 2019  
*Provided By:* Architects Alaska

**RATES**

Pricing is based on current material, equipment and freight costs.

*Labor Rates:* A.S. Title 36

**BIDDING ASSUMPTIONS**

*Contract:*  
*Bidding Situation:* Design-Bid-Build  
*Bid Date:* Spring 2021  
*Start of Construction:* Spring 2021

**EXCLUDED COSTS**

1. A/E design fees
2. Administrative and management costs
3. Furniture, furnishings and equipment (except those specifically included)

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| <i>ELEMENT</i>  | <i>Total<br/>Mat/Labor</i> | <i>Plus Contingency<br/>15%</i> | <i>TOTAL<br/>COST</i> |
|---|----------------------------|---------------------------------|-----------------------|
| <b>SOLDOTNA PRIMARY SCHOOL - CONDITION SURVEY</b>                 |                            |                                 | <b>\$ 9,726,315</b>   |
| LS-1 Fire Sprinklers  | \$1,339,295                | \$1,540,189                     |                       |
| ADA-1 Restrooms   | \$27,712                   | \$31,869                        |                       |
| ADA-2 Main Corridor, Door Hardware                                | \$21,468                   | \$24,688                        |                       |
| ENERGY-1 Exterior Wall  | \$609,436                  | \$700,851                       |                       |
| ENERGY-2 Roof Replacement - Separate Contract                     | \$0                        | \$0                             |                       |
| ENERGY-3 Windows - Replace as Maintenance Item                    | \$0                        | \$0                             |                       |
| STRUCT-1a Roof Deck - Examine During Replacement, Separate C      | \$0                        | \$0                             |                       |
| STRUCT-1b Tier One Seismic Investigation                          | \$18,000                   | \$20,700                        |                       |
| STRUCT-2 Portables - See Feasibility of Renovation/Conversion Ite | \$0                        | \$0                             |                       |
| PLUMB-1 Replace all Above Grade Domestic Water Piping             | \$346,063                  | \$397,972                       |                       |
| PLUMB-2 ADA Compliant Fixtures & Tempering Valves                 | \$3,505                    | \$4,031                         |                       |
| PLUMB-3 Emergency Eyewash and Shower                              | \$12,160                   | \$13,984                        |                       |
| PLUMB-4 Adjust Visibility of Motion Sensor at Handwash            | \$383                      | \$440                           |                       |
| FIRE-1 See LS-1   | \$0                        | \$0                             |                       |
| FIRE-2 See LS-1   | \$0                        | \$0                             |                       |
| VENT-1 Reroute Duct for Renovations                               | \$116,745                  | \$134,257                       |                       |
| VENT-2 Replace Fan with HRV                                       | \$387,604                  | \$445,745                       |                       |
| VENT-3 Replace Heating Coils with VAV add DDC Controls            | \$105,342                  | \$121,143                       |                       |
| VENT-4 Clean Diffuser and Grilles                                 | \$6,162                    | \$7,086                         |                       |
| VENT-5 Add Volume Dampers   | \$132,539                  | \$152,420                       |                       |
| VENT-6 Demo Exhaust Fan, Tie Exhaust Ducts to HRV                 | \$3,979                    | \$4,576                         |                       |
| VENT-7 Demand Control Ventilation in Large Spaces                 | \$146,986                  | \$169,034                       |                       |
| HEAT-1 Reuse Boiler - No Cost Estimated                           | \$0                        | \$0                             |                       |
| HEAT-2 Provide VFD Pumps  | \$31,328                   | \$36,027                        |                       |
| HEAT-3 Replace All Terminal Heating Units                         | \$153,740                  | \$176,801                       |                       |
| HEAT-4 Replace All Building Heat Piping and Control Valves        | \$404,971                  | \$465,717                       |                       |
| COOLING-1 Upsize AHU and VAV for Cooling in Future                | \$1,272,460                | \$1,463,329                     |                       |
| DDC-1 Building Automation   | \$1,162,112                | \$1,336,429                     |                       |
| ELEC-1 Exterior Disconnects                                       | \$21,513                   | \$24,740                        |                       |
| ELEC-2 GFI Receptacles  | \$2,691                    | \$3,095                         |                       |
| ELEC-3 Exterior Weatherproof GFI Receptacles                      | \$49,311                   | \$56,708                        |                       |
| ELEC-4 Emergency Branch Power                                     | \$54,922                   | \$63,160                        |                       |
| ELEC-5 Replace Generator and ATS                                  | \$97,783                   | \$112,450                       |                       |
| ELEC-6 Replace Panels   | \$29,626                   | \$34,070                        |                       |
| ELEC-7 Additional Panels  | \$77,507                   | \$89,133                        |                       |
| ELEC-8 Short Circuit Arc Flash Study                              | \$13,844                   | \$15,921                        |                       |
| LIGHTING-1 Replace Exterior HID Wall and Pole Mtd Lights          | \$44,880                   | \$51,612                        |                       |
| LIGHTING-2 Replace Interior Lighting                              | \$839,011                  | \$964,863                       |                       |
| LIGHTING-3 Lighting Controls                                      | \$48,441                   | \$55,707                        |                       |
| LIGHTING-4 Central Inverter for Emergency Lights                  | \$78,248                   | \$89,985                        |                       |
| LIGHTING-5 Replace Exit Signs                                     | \$27,212                   | \$31,294                        |                       |
| TELECOM-1 Dedicated Com Room                                      | \$37,224                   | \$42,808                        |                       |
| TELECOM-2 Cable Tray and Raceways                                 | \$42,684                   | \$49,087                        |                       |
| TELECOM-3 Replace Intercom  | \$346,010                  | \$397,912                       |                       |
| FA/FP-1 Upgrade Fire Alarm  | \$344,768                  | \$396,483                       |                       |
| FA/FP-1 Fire Sprinklers - See A1                                  | \$0                        | \$0                             |                       |

SOLDOTNA, ALASKA  
 BUILDING CONDITION SURVEY

| <i>ELEMENT</i>   | <i>Total<br/>Mat/Labor</i> | <i>Plus Contingency<br/>15%</i> | <i>TOTAL<br/>COST</i> |
|--|----------------------------|---------------------------------|-----------------------|
| <b>SOLDOTNA MIDDLE SCHOOL - CONDITION SURVEY</b>         |                            |                                 | <b>\$ 11,977,705</b>  |
| ADA-1 Infill Music Room Floor                            | \$67,694                   | \$77,848                        |                       |
| ADA-1 Restrooms  | \$207,192                  | \$238,271                       |                       |
| ENERGY-1 Exterior Walls                                  | \$722,980                  | \$831,427                       |                       |
| ENERGY-2 Roof - Replaced in 2015, no action needed.      | \$0                        | \$0                             |                       |
| ENERGY-3 Windows - Replace as Maintenance Item           | \$0                        | \$0                             |                       |
| STRUCT-1 Grouting and Repair Columns                     | \$43,141                   | \$49,612                        |                       |
| PLUMB-1 Replace Domestic Water Piping                    | \$529,016                  | \$608,368                       |                       |
| PLUMB-2 Replace with ADA                                 | \$27,019                   | \$31,072                        |                       |
| PLUMB-3 Replace Water Heater                             | \$51,773                   | \$59,539                        |                       |
| PLUMB-4 Add Sinks in Elementary Classrooms               | \$187,805                  | \$215,976                       |                       |
| FIRE-1 Modify for Remodel                                | \$176,940                  | \$203,481                       |                       |
| FIRE-2 Fire Extinguishers to Remain                      | \$0                        | \$0                             |                       |
| VENT-1 Reroute Ducts for Floor Plan Changes              | \$540,514                  | \$621,591                       |                       |
| VENT-2 Replace Fans with AHU with Heat Recovery          | \$722,321                  | \$830,669                       |                       |
| VENT-3 Demo Duct Heat Coil Replace with VAV              | \$133,237                  | \$153,223                       |                       |
| VENT-4 Clean Diffuser and Grilles                        | \$13,199                   | \$15,179                        |                       |
| VENT-5 Demo Exhaust Fan, Tie Exhaust Ducts to HRV        | \$7,957                    | \$9,151                         |                       |
| VENT-6 Demo and Replace Dust Collector                   | \$119,373                  | \$137,279                       |                       |
| VENT-7 Demand Control Ventilation in Large Spaces        | \$287,291                  | \$330,385                       |                       |
| HEAT-1 Replace Boiler                                    | \$179,821                  | \$206,794                       |                       |
| HEAT-2 Provided VFD for Pumps                            | \$51,774                   | \$59,540                        |                       |
| HEAT-3 Replace Terminal Heating Units                    | \$80,224                   | \$92,258                        |                       |
| HEAT-4 Replace Heat Piping and Control Valves            | \$688,644                  | \$791,941                       |                       |
| COOLING-1 Upsize AHU and VAV for Cooling in Future       | \$1,446,116                | \$1,663,033                     |                       |
| DDC-1 Upgrade Controls to DDC                            | \$752,118                  | \$864,936                       |                       |
| ELEC-1 Exterior Disconnects                              | \$20,268                   | \$23,308                        |                       |
| ELEC-2 GFI Receptacles                                   | \$6,273                    | \$7,214                         |                       |
| ELEC-3 Exterior Weatherproof GFI Receptacles             | \$56,356                   | \$64,809                        |                       |
| ELEC-4 Emergency Branch Power                            | \$99,104                   | \$113,970                       |                       |
| ELEC-5 Replace MDP and Panels                            | \$130,961                  | \$150,605                       |                       |
| ELEC-6 Additional Panels                                 | \$155,014                  | \$178,266                       |                       |
| LIGHTING-1 Replace Exterior HID Wall and Pole Mtd Lights | \$50,738                   | \$58,349                        |                       |
| LIGHTING-2 Replace Interior Lighting                     | \$1,539,661                | \$1,770,610                     |                       |
| LIGHTING-3 Lighting Controls                             | \$113,027                  | \$129,981                       |                       |
| LIGHTING-4 Central Inverter for Emergency Lights         | \$156,495                  | \$179,969                       |                       |
| LIGHTING-5 Replace Exit Signs                            | \$34,050                   | \$39,158                        |                       |
| TELECOM-1 Dedicated Com Room                             | \$53,776                   | \$61,842                        |                       |
| TELECOM-2 Cable Tray and Raceways                        | \$81,064                   | \$93,224                        |                       |
| TELECOM-3 Replace Intercom                               | \$634,741                  | \$729,952                       |                       |
| TELECOM-4 Replace Sound Amplification System             | \$42,597                   | \$48,987                        |                       |
| FA/FP-1 Addition Detection/Notification Devices          | \$205,122                  | \$235,890                       |                       |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| <i>ELEMENT</i>   | <i>Total<br/>Mat/Labor</i> | <i>Plus Contingency<br/>15%</i> | <i>TOTAL<br/>COST</i> |
|--|----------------------------|---------------------------------|-----------------------|
| <b>SOLDOTNA PRIMARY SCHOOL - RENOVATION/CONVERSION</b> |                            |                                 | <b>\$ 5,243,472</b>   |
| SPS-1 Renovate Admin                                   | \$692,413                  | \$796,275                       |                       |
| SPS-2 Renovation of General Classroom Spaces           | \$592,552                  | \$681,435                       |                       |
| SPS-3 Building Addition                                | \$1,049,783                | \$1,207,250                     |                       |
| SPS-4 Fire Sprinklers See LS-1                         | \$0                        | \$0                             |                       |
| SPS-5 Replace Operable Partitions with Permanent Wall  | \$260,598                  | \$299,688                       |                       |
| LS-1 Fire Sprinklers                                   | \$1,339,295                | \$1,540,189                     |                       |
| ADA-1 Restrooms  | \$27,712                   | \$31,869                        |                       |
| ADA-2 Main Corridor, Door Hardware                     | \$21,468                   | \$24,688                        |                       |
| PLUMB-2 ADA Compliant Fixtures & Tempering Valves      | \$3,505                    | \$4,031                         |                       |
| ELEC-1 Exterior Disconnects                            | \$21,513                   | \$24,740                        |                       |
| ELEC-2 GFI Receptacles                                 | \$2,691                    | \$3,095                         |                       |
| ELEC-5 Replace Generator and ATS                       | \$97,783                   | \$112,450                       |                       |
| LIGHTING-4 Central Inverter for Emergency Lights       | \$78,248                   | \$89,985                        |                       |
| LIGHTING-5 Replace Exit Signs                          | \$27,212                   | \$31,294                        |                       |
| FA/FP-1 Upgrade Fire Alarm                             | \$344,768                  | \$396,483                       |                       |
| <b>SOLDOTNA MIDDLE SCHOOL - RENOVATION/CONVERSION</b>  |                            |                                 | <b>\$ 10,252,255</b>  |
| SMS-1 Renovate Administrative Hub                      | \$948,931                  | \$1,091,271                     |                       |
| SMS-2 Renovate Multipurpose Space & Gym                | \$1,589,744                | \$1,828,206                     |                       |
| SMS-3 Create New East-West Hallway                     | \$361,459                  | \$415,678                       |                       |
| SMS-4 Remodel Shop                                     | \$747,756                  | \$859,919                       |                       |
| SMS-5 Remodel Art Room & Intensive Needs               | \$1,046,357                | \$1,203,311                     |                       |
| SMS-6 Repurposing East Side Classrooms                 | \$1,824,228                | \$2,097,862                     |                       |
| SMS-7 Remodel Southside Restrooms                      | \$128,730                  | \$148,040                       |                       |
| SMS-8 Additional Classroom Sinks                       | \$318,824                  | \$366,648                       |                       |
| SMS-9 Sitework   | \$1,427,663                | \$1,641,812                     |                       |
| ELEC-1 Exterior Disconnects                            | \$20,268                   | \$23,308                        |                       |
| ELEC-2 GFI Receptacles                                 | \$6,273                    | \$7,214                         |                       |
| ELEC-4 Emergency Branch Power                          | \$99,104                   | \$113,970                       |                       |
| LIGHTING-4 Central Inverter for Emergency Lights       | \$156,495                  | \$179,969                       |                       |
| LIGHTING-5 Replace Exit Signs                          | \$34,050                   | \$39,158                        |                       |
| FA/FP-1 Addition Detection/Notification Devices        | \$205,122                  | \$235,890                       |                       |
| <b>RIVER CITY ACADEMY</b>                              |                            |                                 | <b>\$ 2,086,190</b>   |
| RCA-1 Renovate River City Academy Area                 | \$1,814,078                | \$2,086,190                     |                       |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description                                       | Qty           | UNITS     | Total Cost |                    |
|----------|---|---------------|-----------|------------|--------------------|
|          |   |               |           | Unit \$    | Matl/Labor \$      |
| 1        |   |               |           |            |                    |
| 2        | <b>SOLDOTNA PRIMARY SCHOOL - CONDITION SURVEY</b> |               |           |            |                    |
| 3        |   |               |           |            |                    |
| 4        | <b>LS-1 Fire Sprinklers</b>                       | <b>45,500</b> | <b>SF</b> |            |                    |
| 5        | Demo Ceilings                                     | 45,500        | SF        | \$1.37     | \$62,335           |
| 6        | Replace Ceilings, ACT                             | 38,675        | SF        | \$7.91     | \$305,920          |
| 7        | Replace Ceilings, GWB                             | 6,825         | SF        | \$15.37    | \$104,900          |
| 8        | Fire Sprinkler System                             | 45,500        | SF        | \$7.16     | \$325,780          |
| 9        | Upgrade Water Service                             | <b>490</b>    | <b>LF</b> |            |                    |
| 10       | Trench Excavation W/ Hyd. Exc.                    | 1,815         | CY        | \$12.99    | \$23,574           |
| 11       | Backfill In Trenches                              | 1,815         | CY        | \$28.09    | \$50,978           |
| 12       | Pipe Bedding                                      | 123           | CY        | \$27.56    | \$3,376            |
| 13       | 6" DIP CL 52                                      | 490           | LF        | \$51.11    | \$25,044           |
| 14       | 6" DIP Fittings                                   | 2             | EA        | \$708.61   | \$1,417            |
| 15       | Connect To Existing                               | 1             | EA        | \$4,676.04 | \$4,676            |
| 16       | 6" Gate Valve W/ Valve Box                        | 1             | EA        | \$2,324.81 | \$2,325            |
| 17       | Hydrostatic Testing                               | 490           | LF        | \$3.38     | \$1,656            |
| 18       | Fire Hydrants                                     | 1             | EA        | \$8,794.44 | \$8,794            |
| 19       | Patch Asphalt                                     | 8,000         | SF        | \$7.20     | \$57,600           |
| 20       | Repair Lawns                                      | 1,800         | SF        | \$1.44     | \$2,592            |
| 21       |   |               |           |            |                    |
| 22       |   |               |           |            |                    |
| 23       | <b>General Requirements</b>                       | <b>12.0%</b>  |           |            | \$117,716.00       |
| 24       | <b>Contractors Fee</b>                            | <b>6.0%</b>   |           |            | \$65,921.00        |
| 25       | <b>Contingency</b>                                | <b>15.0%</b>  |           |            | \$174,691.00       |
| 26       |   |               |           |            |                    |
| 27       | <b>Subtotal: LS-1 Fire Sprinklers</b>             |               |           |            | <b>\$1,339,295</b> |
| 28       |   |               |           |            |                    |
| 29       |   |               |           |            |                    |
| 30       | <b>ADA-1 Restrooms</b>                            | <b>4</b>      | <b>EA</b> |            |                    |
| 31       |   |               |           |            |                    |
| 32       | Remove Toilets                                    | 4             | EA        | \$118.27   | \$473              |
| 33       | Demo Toilet Partitions                            | 8             | EA        | \$140.03   | \$1,120            |
| 34       | Lower Toilets                                     | 4             | EA        | \$358.07   | \$1,432            |
| 35       | Lower Urinals                                     | 1             | EA        | \$358.07   | \$358              |
| 36       | New Toilet Partitions ADA                         | 4             | EA        | \$2,227.24 | \$8,909            |
| 37       | Grab Bars, Set                                    | 4             | EA        | \$393.62   | \$1,574            |
| 38       | Toilet Paper Dispensers                           | 4             | EA        | \$98.70    | \$395              |
| 39       | Repair Wall, Tile Finish assumed                  | 12            | EA        | \$502.99   | \$6,036            |
| 40       |   |               |           |            |                    |
| 41       | <b>General Requirements</b>                       | <b>12.0%</b>  |           |            | \$2,436.00         |
| 42       | <b>Contractors Fee</b>                            | <b>6.0%</b>   |           |            | \$1,364.00         |
| 43       | <b>Contingency</b>                                | <b>15.0%</b>  |           |            | \$3,615.00         |
| 44       |   |               |           |            |                    |
| 45       | <b>Subtotal: ADA-1 Restrooms</b>                  |               |           |            | <b>\$27,712</b>    |
| 46       |   |               |           |            |                    |
| 47       |   |               |           |            |                    |
| 48       |   |               |           |            |                    |
| 49       |   |               |           |            |                    |
| 50       |   |               |           |            |                    |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description  | Qty           | UNITS     | Total Cost |                  |
|----------|--|---------------|-----------|------------|------------------|
|          |  |               |           | Unit \$    | Matl/Labor \$    |
| 51       | <b>ADA-2 Main Corridor, Door Hardware</b>  | <b>32</b>     | <b>EA</b> |            |                  |
| 52       |  |               |           |            |                  |
| 53       | Remove Lockset   | 32            | EA        | \$26.70    | \$854            |
| 54       | Lever Type Locksets  | 32            | EA        | \$464.70   | \$14,870         |
| 55       |  |               |           |            |                  |
| 56       | <b>General Requirements</b>  | <b>12.0%</b>  |           |            | \$1,887.00       |
| 57       | <b>Contractors Fee</b>   | <b>6.0%</b>   |           |            | \$1,057.00       |
| 58       | <b>Contingency</b>   | <b>15.0%</b>  |           |            | \$2,800.00       |
| 59       |  |               |           |            |                  |
| 60       | <b>Subtotal: ADA-2 Main Corridor, Door Hardware</b>                                  |               |           |            | <b>\$21,468</b>  |
| 61       |  |               |           |            |                  |
| 62       |  |               |           |            |                  |
| 63       | <b>ENERGY-1 Exterior Wall</b>  | <b>25,120</b> | <b>SF</b> |            |                  |
| 64       |  |               |           |            |                  |
| 65       | Demo GWB   | 25,120        | SF        | \$1.07     | \$26,878         |
| 66       | Allow for Removal/Replace of Wall Mtd Devices  | 25,120        | SF        | \$0.61     | \$15,323         |
| 67       | Remove VB and Batt Insulation  | 25,120        | SF        | \$0.61     | \$15,323         |
| 68       | Rigid Insulation 4"  | 25,120        | SF        | \$6.00     | \$150,720        |
| 69       | Vapor Retarder   | 25,120        | SF        | \$1.52     | \$38,182         |
| 70       | GWB  | 25,120        | SF        | \$5.14     | \$129,116        |
| 71       | Paint  | 25,120        | SF        | \$2.82     | \$70,839         |
| 72       |  |               |           |            |                  |
| 73       | <b>General Requirements</b>  | <b>12.0%</b>  |           |            | \$53,566.00      |
| 74       | <b>Contractors Fee</b>   | <b>6.0%</b>   |           |            | \$29,997.00      |
| 75       | <b>Contingency</b>   | <b>15.0%</b>  |           |            | \$79,492.00      |
| 76       |  |               |           |            |                  |
| 77       | <b>Subtotal: ENERGY-1 Exterior Wall</b>  |               |           |            | <b>\$609,436</b> |
| 78       |  |               |           |            |                  |
| 79       |  |               |           |            |                  |
| 80       | <b>ENERGY-2 Roof Replacement - Separate Contract</b>                                 |               |           |            |                  |
| 81       |  |               |           |            |                  |
| 82       |  |               |           |            |                  |
| 83       | <b>Subtotal: ENERGY-2 Roof Replacement - Separate Contract</b>                       |               |           |            |                  |
| 84       |  |               |           |            |                  |
| 85       |  |               |           |            |                  |
| 86       | <b>ENERGY-3 Windows - Replace as Maintenance Item</b>                                |               |           |            |                  |
| 87       |  |               |           |            |                  |
| 88       |  |               |           |            |                  |
| 89       | <b>Subtotal: ENERGY-3 Windows - Replace as Maintenance Item</b>                      |               |           |            |                  |
| 90       |  |               |           |            |                  |
| 91       |  |               |           |            |                  |
| 92       | <b>STRUCT-1a Roof Deck - Examine During Replacement, Separate Contract</b>           |               |           |            |                  |
| 93       |  |               |           |            |                  |
| 94       |  |               |           |            |                  |
| 95       | <b>Subtotal: STRUCT-1a Roof Deck - Examine During Replacement, Separate Contract</b> |               |           |            |                  |
| 96       |  |               |           |            |                  |
| 97       |  |               |           |            |                  |
| 98       |  |               |           |            |                  |
| 99       |  |               |           |            |                  |
| 100      |  |               |           |            |                  |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description   | Qty           | UNITS     | Total Cost  |                 |
|----------|---|---------------|-----------|-------------|-----------------|
|          |   |               |           | Unit \$     | Matl/Labor \$   |
| 101      | <b>STRUCT-1b Tier One Seismic Investigation</b>                                       | <b>45,500</b> | <b>SF</b> |             |                 |
| 102      |   |               |           |             |                 |
| 103      | Tier One Seismic Investigation  | 1             | LS        | \$18,000.00 | \$18,000        |
| 104      |   |               |           |             |                 |
| 105      |   |               |           |             |                 |
| 106      | <b>Subtotal: STRUCT-1b Tier One Seismic Investigation</b>                             |               |           |             | <b>\$18,000</b> |
| 107      |   |               |           |             |                 |
| 108      |   |               |           |             |                 |
| 109      | <b>STRUCT-2 Portables - See Feasibility of Renovation/Conversion Items.</b>           |               |           |             |                 |
| 110      |   |               |           |             |                 |
| 111      |   |               |           |             |                 |
| 112      | <b>Subtotal: STRUCT-2 Portables - See Feasibility of Renovation/Conversion Items.</b> |               |           |             |                 |
| 113      |   |               |           |             |                 |
| 114      |   |               |           |             |                 |
| 115      | <b>PLUMB-1 Replace all Above Grade Domestic Water Piping</b>                          | <b>45,500</b> | <b>SF</b> |             |                 |
| 116      |   |               |           |             |                 |
| 117      | Ceilings are being replaced for Fire Alarm, assume work will be done concurrently     |               |           |             |                 |
| 118      | Misc Demo - GWB Walls   | 1,900         | SF        | \$1.37      | \$2,603         |
| 119      | Repair - GWB Walls  | 1,900         | SF        | \$8.09      | \$15,371        |
| 120      | Paint   | 11,400        | SF        | \$2.82      | \$32,148        |
| 121      |   |               |           |             |                 |
| 122      | Demo DW Piping 0.5  | 440           | FT        | \$6.00      | \$2,640         |
| 123      | Demo DW Piping 0.75   | 870           | FT        | \$6.00      | \$5,220         |
| 124      | Demo DW Piping 1  | 300           | FT        | \$6.00      | \$1,800         |
| 125      | Demo DW Piping 1.25   | 300           | FT        | \$8.00      | \$2,400         |
| 126      | Demo DW Piping 1.5  | 300           | FT        | \$8.00      | \$2,400         |
| 127      | Demo DW Piping 2  | 600           | FT        | \$12.00     | \$7,200         |
| 128      | Demo DW Piping 2.5  |               | FT        | \$12.00     |                 |
| 129      | Demo DW Piping 3  |               | FT        | \$14.00     |                 |
| 130      | Demo BFW Valve Train  | 1             | EA        | \$840.20    | \$840           |
| 131      | Demo Flow Control Valve   | 2             | EA        | \$23.34     | \$47            |
| 132      |   |               |           |             |                 |
| 133      | Domestic HW/CW Supply, CPVC - in Ceilings   |               |           |             |                 |
| 134      | 1/2" Pipe   | 440           | LF        | \$7.42      | \$3,265         |
| 135      | 3/4" Pipe   | 870           | LF        | \$8.36      | \$7,274         |
| 136      | 1" Pipe   | 300           | LF        | \$9.29      | \$2,787         |
| 137      | 1-1/4" Pipe   | 300           | LF        | \$11.17     | \$3,351         |
| 138      | 1-1/2" Pipe   | 300           | LF        | \$13.94     | \$4,182         |
| 139      | 2" Pipe   | 600           | LF        | \$18.60     | \$11,160        |
| 140      | Hangers   | 432           | EA        | \$110.58    | \$47,771        |
| 141      | Fittings  | 1             | LS        | \$36,049.33 | \$36,049        |
| 142      | Sterilization   | 1             | LS        | \$1,060.07  | \$1,060         |
| 143      |   |               |           |             |                 |
| 144      | Circuit Setter 3/4"   | 4             | EA        | \$327.23    | \$1,309         |
| 145      | Ball Valve 3/4"   | 40            | EA        | \$178.02    | \$7,121         |
| 146      | Ball Valve 1"   | 4             | EA        | \$178.02    | \$712           |
| 147      | Ball Valve 2"   | 4             | EA        | \$412.85    | \$1,651         |
| 148      |   |               |           |             |                 |
| 149      |   |               |           |             |                 |
| 150      |   |               |           |             |                 |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description  | Qty          | UNITS | Total Cost |                  |
|----------|--|--------------|-------|------------|------------------|
|          |  |              |       | Unit \$    | Matl/Labor \$    |
| 151      | Fiberglass Pipe Insulation, 1" Thick W/ ASJ                            |              |       |            |                  |
| 152      | 1/2" Pipe, Fittings  | 440          | LF    | \$16.44    | \$7,234          |
| 153      | 3/4" Pipe, Fittings  | 870          | LF    | \$17.69    | \$15,390         |
| 154      | 1" Pipe, Fittings  | 300          | LF    | \$18.66    | \$5,598          |
| 155      | 1-1/4" Pipe, Fittings  | 300          | LF    | \$19.70    | \$5,910          |
| 156      | 1-1/2" Pipe, Fittings  | 300          | LF    | \$20.29    | \$6,087          |
| 157      | 2" Pipe, Fittings  | 600          | LF    | \$21.49    | \$12,894         |
| 158      |  |              |       |            |                  |
| 159      |  |              |       |            |                  |
| 160      | <b>General Requirements</b>  | <b>12.0%</b> |       |            | \$30,417.00      |
| 161      | <b>Contractors Fee</b>   | <b>6.0%</b>  |       |            | \$17,033.00      |
| 162      | <b>Contingency</b>   | <b>15.0%</b> |       |            | \$45,139.00      |
| 163      |  |              |       |            |                  |
| 164      | <b>Subtotal: PLUMB-1 Replace all Above Grade Domestic Water Piping</b> |              |       |            | <b>\$346,063</b> |
| 165      |  |              |       |            |                  |
| 166      |  |              |       |            |                  |
| 167      | <b>PLUMB-2 ADA Compliant Fixtures &amp; Tempering Valves</b>           |              |       |            |                  |
| 168      |  |              |       |            |                  |
| 169      | <b>See ADA-1 for Plumbing Fixtures</b>                                 |              |       |            |                  |
| 170      | Tempering Valves   | 4            | EA    | \$641.82   | \$2,567          |
| 171      |  |              |       |            |                  |
| 172      | <b>General Requirements</b>  | <b>12.0%</b> |       |            | \$308.00         |
| 173      | <b>Contractors Fee</b>   | <b>6.0%</b>  |       |            | \$173.00         |
| 174      | <b>Contingency and Escalation</b>                                      | <b>15.0%</b> |       |            | \$457.00         |
| 175      |  |              |       |            |                  |
| 176      | <b>Subtotal: PLUMB-2 ADA Compliant Fixtures &amp; Tempering Valves</b> |              |       |            | <b>\$3,505</b>   |
| 177      |  |              |       |            |                  |
| 178      |  |              |       |            |                  |
| 179      | <b>PLUMB-3 Emergency Eyewash and Shower</b>                            |              |       |            |                  |
| 180      |  |              |       |            |                  |
| 181      | Emergency Eyewash/Shower with Tempering Valve                          | 1            | EA    | \$4,510.65 | \$4,511          |
| 182      | Floor Drain  | 1            | EA    | \$491.32   | \$491            |
| 183      | Concrete Floor demo  | 40           | SF    | \$11.97    | \$479            |
| 184      | Sawcutting Concrete  | 44           | LF    | \$7.20     | \$317            |
| 185      | Patch Concrete   | 40           | SF    | \$44.79    | \$1,792          |
| 186      | DWV Piping to Floor Drain  | 1            | EA    | \$35.76    | \$35             |
| 187      | Roughin DW for Eyewash Shower  | 1            | EA    | \$976.86   | \$977            |
| 188      | Trap Primer  | 1            | EA    | \$303.62   | \$304            |
| 189      |  |              |       |            |                  |
| 190      | <b>General Requirements</b>  | <b>12.0%</b> |       |            | \$1,069.00       |
| 191      | <b>Contractors Fee</b>   | <b>6.0%</b>  |       |            | \$599.00         |
| 192      | <b>Contingency and Escalation</b>                                      | <b>15.0%</b> |       |            | \$1,586.00       |
| 193      |  |              |       |            |                  |
| 194      | <b>Subtotal: PLUMB-3 Emergency Eyewash and Shower</b>                  |              |       |            | <b>\$12,160</b>  |
| 195      |  |              |       |            |                  |
| 196      |  |              |       |            |                  |
| 197      |  |              |       |            |                  |
| 198      |  |              |       |            |                  |
| 199      |  |              |       |            |                  |
| 200      |  |              |       |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty          | UNITS | Total Cost  |                  |
|----------|---|--------------|-------|-------------|------------------|
|          |   |              |       | Unit \$     | Matl/Labor \$    |
| 201      | <b>PLUMB-4 Adjust Visibility of Motion Sensor at Handwash</b>           | 4            | EA    |             |                  |
| 202      |   |              |       |             |                  |
| 203      | Adjust Sensor   | 4            | EA    | \$70.02     | \$280            |
| 204      |   |              |       |             |                  |
| 205      |   |              |       |             |                  |
| 206      | <b>General Requirements</b>   | <b>12.0%</b> |       |             | \$34.00          |
| 207      | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$19.00          |
| 208      | <b>Contingency and Escalation</b>                                       | <b>15.0%</b> |       |             | \$50.00          |
| 209      |   |              |       |             |                  |
| 210      | <b>Subtotal: PLUMB-4 Adjust Visibility of Motion Sensor at Handwash</b> |              |       |             | <b>\$383</b>     |
| 211      |   |              |       |             |                  |
| 212      |   |              |       |             |                  |
| 213      | <b>FIRE-1 See LS-1</b>  |              |       |             |                  |
| 214      |   |              |       |             |                  |
| 215      |   |              |       |             |                  |
| 216      | <b>Subtotal: FIRE-1 See LS-1</b>  |              |       |             |                  |
| 217      |   |              |       |             |                  |
| 218      |   |              |       |             |                  |
| 219      | <b>FIRE-2 See LS-1</b>  |              |       |             |                  |
| 220      |   |              |       |             |                  |
| 221      |   |              |       |             |                  |
| 222      | <b>Subtotal: FIRE-2 See LS-1</b>  |              |       |             |                  |
| 223      |   |              |       |             |                  |
| 224      |   |              |       |             |                  |
| 225      | <b>VENT-1 Reroute Duct for Renovations</b>                              | 1            | LS    |             |                  |
| 226      |   |              |       |             |                  |
| 227      | Demo and Replace Duct for Remodel                                       | 4,000        | LBS   | \$19.48     | \$77,920         |
| 228      | Diffusers   | 25           | EA    | \$299.62    | \$7,590          |
| 229      |   |              |       |             |                  |
| 230      |   |              |       |             |                  |
| 231      | <b>General Requirements</b>   | <b>12.0%</b> |       |             | \$10,261.00      |
| 232      | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$5,746.00       |
| 233      | <b>Contingency and Escalation</b>                                       | <b>15.0%</b> |       |             | \$15,228.00      |
| 234      |   |              |       |             |                  |
| 235      | <b>Subtotal: VENT-1 Reroute Duct for Renovations</b>                    |              |       |             | <b>\$116,745</b> |
| 236      |   |              |       |             |                  |
| 237      |   |              |       |             |                  |
| 238      | <b>VENT-2 Replace Fan with HRV</b>                                      | 2            | EA    |             |                  |
| 239      | <b>Based on 19,400 CFM total airflow for building</b>                   |              |       |             |                  |
| 240      | Demo Fans   | 2            | EA    | \$427.24    | \$854            |
| 241      | HRV 5590 CFM  | 2            | EA    | \$64,350.88 | \$128,702        |
| 242      | HRV 8105 CFM  | 2            | EA    | \$77,172.39 | \$154,345        |
| 243      | Electrical Connection   | 2            | EA    |             |                  |
| 244      |   |              |       |             |                  |
| 245      | <b>General Requirements</b>   | <b>12.0%</b> |       |             | \$34,068.00      |
| 246      | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$19,078.00      |
| 247      | <b>Contingency and Escalation</b>                                       | <b>15.0%</b> |       |             | \$50,557.00      |
| 248      |   |              |       |             |                  |
| 249      | <b>Subtotal: VENT-2 Replace Fan with HRV</b>                            |              |       |             | <b>\$387,604</b> |
| 250      |   |              |       |             |                  |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description   | Qty          | UNITS     | Total Cost |                  |
|----------|---|--------------|-----------|------------|------------------|
|          |   |              |           | Unit \$    | Matl/Labor \$    |
| 251      |   |              |           |            |                  |
| 252      | <b>VENT-3 Replace Heating Coils with VAV add DDC Controls</b>           | <b>16</b>    | <b>EA</b> |            |                  |
| 253      |   |              |           |            |                  |
| 254      | Demo Heating Coil   | 16           | EA        | \$280.07   | \$4,481          |
| 255      | VAV Box   | 16           | EA        | \$911.24   | \$14,580         |
| 256      | New Valving   | 16           | EA        | \$631.07   | \$10,097         |
| 257      | DDC   | 16           | EA        | \$3,000.00 | \$48,000         |
| 258      |   |              |           |            |                  |
| 259      | <b>General Requirements</b>   | <b>12.0%</b> |           |            | \$9,259.00       |
| 260      | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |            | \$5,185.00       |
| 261      | <b>Contingency and Escalation</b>                                       | <b>15.0%</b> |           |            | \$13,740.00      |
| 262      |   |              |           |            |                  |
| 263      | <b>Subtotal: VENT-3 Replace Heating Coils with VAV add DDC Controls</b> |              |           |            | <b>\$105,342</b> |
| 264      |   |              |           |            |                  |
| 265      |   |              |           |            |                  |
| 266      | <b>VENT-4 Clean Diffuser and Grilles</b>                                | <b>53</b>    | <b>EA</b> |            |                  |
| 267      |   |              |           |            |                  |
| 268      | Clean Diffusers   | 35           | EA        | \$13.37    | \$468            |
| 269      | Clean Grilles   | 18           | EA        | \$13.37    | \$241            |
| 270      | Relocate for Renovations  | 20           | EA        | \$190.21   | \$3,804          |
| 271      |   |              |           |            |                  |
| 272      |   |              |           |            |                  |
| 273      | <b>General Requirements</b>   | <b>12.0%</b> |           |            | \$542.00         |
| 274      | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |            | \$303.00         |
| 275      | <b>Contingency and Escalation</b>                                       | <b>15.0%</b> |           |            | \$804.00         |
| 276      |   |              |           |            |                  |
| 277      | <b>Subtotal: VENT-4 Clean Diffuser and Grilles</b>                      |              |           |            | <b>\$6,162</b>   |
| 278      |   |              |           |            |                  |
| 279      |   |              |           |            |                  |
| 280      | <b>VENT-5 Add Volume Dampers</b>  | <b>53</b>    | <b>EA</b> |            |                  |
| 281      |   |              |           |            |                  |
| 282      | Add Volume Dampers to Diffusers   | 35           | EA        | \$157.61   | \$5,516          |
| 283      | Add Volume Dampers to Grilles (1/500SF) (based on 8")                   | 18           | EA        | \$157.61   | \$2,837          |
| 284      | Balancing   | 45,500       | SF        | \$1.95     | \$88,725         |
| 285      |   |              |           |            |                  |
| 286      | <b>General Requirements</b>   | <b>12.0%</b> |           |            | \$11,649.00      |
| 287      | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |            | \$6,524.00       |
| 288      | <b>Contingency and Escalation</b>                                       | <b>15.0%</b> |           |            | \$17,288.00      |
| 289      |   |              |           |            |                  |
| 290      | <b>Subtotal: VENT-5 Add Volume Dampers</b>                              |              |           |            | <b>\$132,539</b> |
| 291      |   |              |           |            |                  |
| 292      |   |              |           |            |                  |
| 293      |   |              |           |            |                  |
| 294      |   |              |           |            |                  |
| 295      |   |              |           |            |                  |
| 296      |   |              |           |            |                  |
| 297      |   |              |           |            |                  |
| 298      |   |              |           |            |                  |
| 299      |   |              |           |            |                  |
| 300      |   |              |           |            |                  |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description  | Qty          | UNITS | Total Cost |                  |
|----------|--|--------------|-------|------------|------------------|
|          |  |              |       | Unit \$    | Matl/Labor \$    |
| 301      | <b>VENT-6 Demo Exhaust Fan, Tie Exhaust Ducts to HRV</b>           | 2            | EA    |            |                  |
| 302      |  |              |       |            |                  |
| 303      | Demo EF  | 2            | EA    | \$430.87   | \$862            |
| 304      | Ductwork   | 110          | LBS   | \$18.66    | \$2,052          |
| 305      |  |              |       |            |                  |
| 306      | <b>General Requirements</b>  | <b>12.0%</b> |       |            | \$350.00         |
| 307      | <b>Contractors Fee</b>   | <b>6.0%</b>  |       |            | \$196.00         |
| 308      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b> |       |            | \$519.00         |
| 309      |  |              |       |            |                  |
| 310      | <b>Subtotal: VENT-6 Demo Exhaust Fan, Tie Exhaust Ducts to HRV</b> |              |       |            | <b>\$3,979</b>   |
| 311      |  |              |       |            |                  |
| 312      |  |              |       |            |                  |
| 313      | <b>VENT-7 Demand Control Ventilation in Large Spaces</b>           | 22           | EA    |            |                  |
| 314      | Spaces   |              |       |            |                  |
| 315      | Classrooms   | 20           | EA    |            |                  |
| 316      | Library  | 1            | EA    |            |                  |
| 317      | Gym/Lunch  | 1            | EA    |            |                  |
| 318      | Add CO2 Detection  | 22           | EA    | \$2,013.62 | \$44,300         |
| 319      | Control Points   | 44           | EA    | \$1,440.00 | \$63,360         |
| 320      |  |              |       |            |                  |
| 321      | <b>General Requirements</b>  | <b>12.0%</b> |       |            | \$12,919.00      |
| 322      | <b>Contractors Fee</b>   | <b>6.0%</b>  |       |            | \$7,235.00       |
| 323      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b> |       |            | \$19,172.00      |
| 324      |  |              |       |            |                  |
| 325      | <b>Subtotal: VENT-7 Demand Control Ventilation in Large Spaces</b> |              |       |            | <b>\$146,986</b> |
| 326      |  |              |       |            |                  |
| 327      |  |              |       |            |                  |
| 328      | <b>HEAT-1 Reuse Boiler - No Cost Estimated</b>                     |              |       |            |                  |
| 329      |  |              |       |            |                  |
| 330      |  |              |       |            |                  |
| 331      | <b>Subtotal: HEAT-1 Reuse Boiler - No Cost Estimated</b>           |              |       |            |                  |
| 332      |  |              |       |            |                  |
| 333      |  |              |       |            |                  |
| 334      | <b>HEAT-2 Provide VFD Pumps</b>                                    | 4            | EA    |            |                  |
| 335      |  |              |       |            |                  |
| 336      | Demo Pumps   | 4            | EA    | \$140.03   | \$560            |
| 337      | New Circ Pumps with VFD  | 4            | EA    | \$3,368.13 | \$13,473         |
| 338      | Piping And Valving   | 4            | SETS  | \$2,228.24 | \$8,913          |
| 339      |  |              |       |            |                  |
| 340      | <b>General Requirements</b>  | <b>12.0%</b> |       |            | \$2,754.00       |
| 341      | <b>Contractors Fee</b>   | <b>6.0%</b>  |       |            | \$1,542.00       |
| 342      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b> |       |            | \$4,086.00       |
| 343      |  |              |       |            |                  |
| 344      | <b>Subtotal: HEAT-2 Provide VFD Pumps</b>                          |              |       |            | <b>\$31,328</b>  |
| 345      |  |              |       |            |                  |
| 346      |  |              |       |            |                  |
| 347      |  |              |       |            |                  |
| 348      |  |              |       |            |                  |
| 349      |  |              |       |            |                  |
| 350      |  |              |       |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty           | UNITS     | Total Cost  |                  |
|----------|---|---------------|-----------|-------------|------------------|
|          |   |               |           | Unit \$     | Matl/Labor \$    |
| 351      | <b>HEAT-3 Replace All Terminal Heating Units</b>                  | <b>45,500</b> | <b>SF</b> |             |                  |
| 352      |   |               |           |             |                  |
| 353      | Demo Fintube  | 515           | LF        | \$35.01     | \$18,030         |
| 354      | Demo UH/CUH   | 5             | EA        | \$280.07    | \$1,400          |
| 355      | Fintube   | 515           | LF        | \$148.02    | \$76,230         |
| 356      | UH  | 1             | EA        | \$2,042.13  | \$2,042          |
| 357      | CUH   | 4             | EA        | \$3,726.20  | \$14,905         |
| 358      |   |               |           |             |                  |
| 359      | <b>General Requirements</b>                                       | <b>12.0%</b>  |           |             | \$13,513.00      |
| 360      | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |             | \$7,567.00       |
| 361      | <b>Contingency and Escalation</b>                                 | <b>15.0%</b>  |           |             | \$20,053.00      |
| 362      |   |               |           |             |                  |
| 363      | <b>Subtotal: HEAT-3 Replace All Terminal Heating Units</b>        |               |           |             | <b>\$153,740</b> |
| 364      |   |               |           |             |                  |
| 365      |   |               |           |             |                  |
| 366      | <b>HEAT-4 Replace All Building Heat Piping and Control Valves</b> | <b>45,500</b> | <b>SF</b> |             |                  |
| 367      |   |               |           |             |                  |
| 368      | Demo Piping 0.5   | 790           | FT        | \$6.00      | \$4,740          |
| 369      | Demo Piping 0.75  | 420           | FT        | \$6.00      | \$2,520          |
| 370      | Demo Piping 1   | 1,200         | FT        | \$6.00      | \$7,200          |
| 371      | Demo Piping 1.25  | 485           | FT        | \$8.00      | \$3,880          |
| 372      | Demo Piping 1.5   | 790           | FT        | \$8.00      | \$6,320          |
| 373      | Demo Piping 2   | 390           | FT        | \$12.00     | \$4,680          |
| 374      | Demo Piping 2.5   | 140           | FT        | \$12.00     | \$1,680          |
| 375      |   |               |           |             |                  |
| 376      | HWS/R Piping, Copper  |               |           |             |                  |
| 377      | 1/2" Pipe   | 790           | LF        | \$7.42      | \$5,862          |
| 378      | 3/4" Pipe   | 420           | LF        | \$8.36      | \$3,511          |
| 379      | 1" Pipe   | 1,200         | LF        | \$9.29      | \$11,148         |
| 380      | 1-1/4" Pipe   | 485           | LF        | \$11.17     | \$5,418          |
| 381      | 1-1/2" Pipe   | 790           | LF        | \$13.94     | \$11,013         |
| 382      | 2" Pipe   | 390           | LF        | \$18.60     | \$7,254          |
| 383      | Hangers   | 627           | EA        | \$110.58    | \$69,334         |
| 384      | Fittings  | 1             | LS        | \$49,895.89 | \$49,896         |
| 385      | Sterilization   | 1             | LS        | \$1,060.07  | \$1,060          |
| 386      | Allow for Valving   | 1             | LS        | \$11,221.01 | \$11,221         |
| 387      |   |               |           |             |                  |
| 388      |   |               |           |             |                  |
| 389      |   |               |           |             |                  |
| 390      |   |               |           |             |                  |
| 391      |   |               |           |             |                  |
| 392      |   |               |           |             |                  |
| 393      |   |               |           |             |                  |
| 394      |   |               |           |             |                  |
| 395      |   |               |           |             |                  |
| 396      |   |               |           |             |                  |
| 397      |   |               |           |             |                  |
| 398      |   |               |           |             |                  |
| 399      |   |               |           |             |                  |
| 400      |   |               |           |             |                  |
| 401      |   |               |           |             |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty            | UNITS     | Total Cost |                    |
|----------|--|----------------|-----------|------------|--------------------|
|          |  |                |           | Unit \$    | Matl/Labor \$      |
| 402      | Fiberglass Pipe Insulation, 1" Thick W/ ASJ  |                |           |            |                    |
| 403      | 1/2" Pipe, Fittings  | 790            | LF        | \$16.44    | \$12,988           |
| 404      | 3/4" Pipe, Fittings  | 420            | LF        | \$17.69    | \$7,429            |
| 405      | 1" Pipe, Fittings  | 1,200          | LF        | \$18.66    | \$22,392           |
| 406      | 1-1/4" Pipe, Fittings  | 485            | LF        | \$19.70    | \$9,554            |
| 407      | 1-1/2" Pipe, Fittings  | 790            | LF        | \$20.29    | \$16,029           |
| 408      | 2" Pipe, Fittings  | 390            | LF        | \$21.49    | \$8,381            |
| 409      | 2-1/2" Pipe, Fittings  | 627            | LF        | \$20.91    | \$13,111           |
| 410      |  |                |           |            |                    |
| 411      | <b>General Requirements</b>  | <b>12.0%</b>   |           |            | \$35,595.00        |
| 412      | <b>Contractors Fee</b>   | <b>6.0%</b>    |           |            | \$19,933.00        |
| 413      | <b>Contingency and Escalation</b>  | <b>15.0%</b>   |           |            | \$52,822.00        |
| 414      |  |                |           |            |                    |
| 415      | <b>Subtotal: HEAT-4 Replace All Building Heat Piping and Control Valves</b>            |                |           |            | <b>\$404,971</b>   |
| 416      |  |                |           |            |                    |
| 417      |  |                |           |            |                    |
| 418      | <b>COOLING-1 Upsize AHU and VAV for Cooling in Future</b>                              | <b>45,500</b>  | <b>SF</b> |            |                    |
| 419      | <b>Based on 19,400 CFM total airflow for building</b>                                  |                |           |            |                    |
| 420      | <b>13,395 CFM included in Vent corrections, leaving 6,005 CFM additional required.</b> |                |           |            |                    |
| 421      | Upsize HRV for cooling   | 6,005          | CFM       | \$15.07    | \$90,495           |
| 422      | Add for New Duct Mains   | 13,650         | LBS       | \$22.55    | \$307,808          |
| 423      | Additional Diffusers   | 40             | EA        | \$335.53   | \$13,421           |
| 424      | Add for VAV with Reheat  | 49             | EA        | \$1,549.49 | \$75,925           |
| 425      | Heating Piping, Insulated, to Supply VAV   | 1,470          | LF        | \$35.35    | \$51,965           |
| 426      | Added Control for VAV  | 109            | EA        | \$3,600.00 | \$392,400          |
| 427      |  |                |           |            |                    |
| 428      | <b>General Requirements</b>  | <b>12.0%</b>   |           |            | \$111,842.00       |
| 429      | <b>Contractors Fee</b>   | <b>6.0%</b>    |           |            | \$62,631.00        |
| 430      | <b>Contingency and Escalation</b>  | <b>15.0%</b>   |           |            | \$165,973.00       |
| 431      |  |                |           |            |                    |
| 432      | <b>Subtotal: COOLING-1 Upsize AHU and VAV for Cooling in Future</b>                    |                |           |            | <b>\$1,272,460</b> |
| 433      |  |                |           |            |                    |
| 434      |  |                |           |            |                    |
| 435      | <b>DDC-1 Building Automation</b>   | <b>128,968</b> | <b>SF</b> |            |                    |
| 436      |  |                |           |            |                    |
| 437      | New DDC (See Cooling-1 for added controls for vat sys upgrade)                         | 128,968        | SF        | \$6.60     | \$851,189          |
| 438      |  |                |           |            |                    |
| 439      | <b>General Requirements</b>  | <b>12.0%</b>   |           |            | \$102,143.00       |
| 440      | <b>Contractors Fee</b>   | <b>6.0%</b>    |           |            | \$57,200.00        |
| 441      | <b>Contingency and Escalation</b>  | <b>15.0%</b>   |           |            | \$151,580.00       |
| 442      |  |                |           |            |                    |
| 443      | <b>Subtotal: DDC-1 Building Automation</b>   |                |           |            | <b>\$1,162,112</b> |
| 444      |  |                |           |            |                    |
| 445      |  |                |           |            |                    |
| 446      |  |                |           |            |                    |
| 447      |  |                |           |            |                    |
| 448      |  |                |           |            |                    |
| 449      |  |                |           |            |                    |
| 450      |  |                |           |            |                    |
| 451      |  |                |           |            |                    |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty          | UNITS     | Total Cost  |                 |
|----------|---|--------------|-----------|-------------|-----------------|
|          |   |              |           | Unit \$     | Matl/Labor \$   |
| 452      | <b>ELEC-1 Exterior Disconnects</b>                            | <b>1</b>     | <b>LS</b> |             |                 |
| 453      |   |              |           |             |                 |
| 454      | Main Disconnect 800A  | 1            | EA        | \$13,021.27 | \$13,021        |
| 455      | Generator Disconnect 125A                                     | 1            | EA        | \$2,736.38  | \$2,736         |
| 456      |   |              |           |             |                 |
| 457      |   |              |           |             |                 |
| 458      | <b>General Requirements</b>                                   | <b>12.0%</b> |           |             | \$1,891.00      |
| 459      | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |             | \$1,059.00      |
| 460      | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |           |             | \$2,806.00      |
| 461      |   |              |           |             |                 |
| 462      | <b>Subtotal: ELEC-1 Exterior Disconnects</b>                  |              |           |             | <b>\$21,513</b> |
| 463      |   |              |           |             |                 |
| 464      |   |              |           |             |                 |
| 465      | <b>ELEC-2 GFI Receptacles</b>                                 | <b>40</b>    | <b>EA</b> |             |                 |
| 466      |   |              |           |             |                 |
| 467      | GFCI Receptacles  | 40           | EA        | \$49.26     | \$1,971         |
| 468      |   |              |           |             |                 |
| 469      | <b>General Requirements</b>                                   | <b>12.0%</b> |           |             | \$237.00        |
| 470      | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |             | \$132.00        |
| 471      | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |           |             | \$351.00        |
| 472      |   |              |           |             |                 |
| 473      | <b>Subtotal: ELEC-2 GFI Receptacles</b>                       |              |           |             | <b>\$2,691</b>  |
| 474      |   |              |           |             |                 |
| 475      |   |              |           |             |                 |
| 476      | <b>ELEC-3 Exterior Weatherproof GFI Receptacles</b>           | <b>28</b>    | <b>EA</b> |             |                 |
| 477      |   |              |           |             |                 |
| 478      | WP GFI Receptacles  | 28           | EA        | \$84.54     | \$2,367         |
| 479      | 3/4" EMT, 3#10, 1#10  | 1,960        | LF        | \$17.22     | \$33,751        |
| 480      |   |              |           |             |                 |
| 481      | <b>General Requirements</b>                                   | <b>12.0%</b> |           |             | \$4,334.00      |
| 482      | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |             | \$2,427.00      |
| 483      | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |           |             | \$6,432.00      |
| 484      |   |              |           |             |                 |
| 485      | <b>Subtotal: ELEC-3 Exterior Weatherproof GFI Receptacles</b> |              |           |             | <b>\$49,311</b> |
| 486      |   |              |           |             |                 |
| 487      |   |              |           |             |                 |
| 488      | <b>ELEC-4 Emergency Branch Power</b>                          | <b>1</b>     | <b>LS</b> |             |                 |
| 489      |   |              |           |             |                 |
| 490      | Panelboard 100A 208/120v MLO                                  | 2            | EA        | \$3,468.63  | \$6,937         |
| 491      | Distribution Panels 225A 208/120v MLO                         | 1            | EA        | \$5,628.76  | \$5,629         |
| 492      | ATS 4 Pole, 100A  | 1            | EA        | \$4,764.38  | \$4,764         |
| 493      | 100 Amp: 1-1/4" EMT, 4#2, 1#8                                 | 300          | LF        | \$38.95     | \$11,685        |
| 494      | 225 Amp: 2" EMT, 4#4/0, 1#4                                   | 150          | LF        | \$74.75     | \$11,213        |
| 495      |   |              |           |             |                 |
| 496      | <b>General Requirements</b>                                   | <b>12.0%</b> |           |             | \$4,827.00      |
| 497      | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |             | \$2,703.00      |
| 498      | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |           |             | \$7,164.00      |
| 499      |   |              |           |             |                 |
| 500      | <b>Subtotal: ELEC-4 Emergency Branch Power</b>                |              |           |             | <b>\$54,922</b> |
| 501      |   |              |           |             |                 |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty          | UNITS     | Total Cost  |                 |
|----------|---|--------------|-----------|-------------|-----------------|
|          |   |              |           | Unit \$     | Matl/Labor \$   |
| 502      |   |              |           |             |                 |
| 503      | <b>ELEC-5 Replace Generator and ATS</b>               | <b>1</b>     | <b>EA</b> |             |                 |
| 504      |   |              |           |             |                 |
| 505      | Demo Generator 37.5 KW                                | 1            | EA        | \$2,881.27  | \$2,881         |
| 506      | Demo ATS 125A   | 1            | EA        | \$576.25    | \$576           |
| 507      | Generator   | 1            | EA        | \$63,243.80 | \$63,244        |
| 508      | ATS 125A  | 1            | EA        | \$4,920.38  | \$4,920         |
| 509      |   |              |           |             |                 |
| 510      | <b>General Requirements</b>                           | <b>12.0%</b> |           |             | \$8,595.00      |
| 511      | <b>Contractors Fee</b>                                | <b>6.0%</b>  |           |             | \$4,813.00      |
| 512      | <b>Contingency and Escalation</b>                     | <b>15.0%</b> |           |             | \$12,754.00     |
| 513      |   |              |           |             |                 |
| 514      | <b>Subtotal: ELEC-5 Replace Generator and ATS</b>     |              |           |             | <b>\$97,783</b> |
| 515      |   |              |           |             |                 |
| 516      |   |              |           |             |                 |
| 517      | <b>ELEC-6 Replace Panels</b>                          | <b>4</b>     | <b>EA</b> |             |                 |
| 518      |   |              |           |             |                 |
| 519      | Demo Panelboards                                      | 4            | EA        | \$576.25    | \$2,305         |
| 520      | Panelboards 225A                                      | 4            | EA        | \$4,848.76  | \$19,395        |
| 521      | Reuse Feeders   |              |           |             |                 |
| 522      |   |              |           |             |                 |
| 523      | <b>General Requirements</b>                           | <b>12.0%</b> |           |             | \$2,604.00      |
| 524      | <b>Contractors Fee</b>                                | <b>6.0%</b>  |           |             | \$1,458.00      |
| 525      | <b>Contingency and Escalation</b>                     | <b>15.0%</b> |           |             | \$3,864.00      |
| 526      |   |              |           |             |                 |
| 527      | <b>Subtotal: ELEC-6 Replace Panels</b>                |              |           |             | <b>\$29,626</b> |
| 528      |   |              |           |             |                 |
| 529      |   |              |           |             |                 |
| 530      | <b>ELEC-7 Additional Panels</b>                       | <b>4</b>     | <b>EA</b> |             |                 |
| 531      |   |              |           |             |                 |
| 532      | Panelboards   | 4            | EA        | \$4,848.76  | \$19,395        |
| 533      | 225 Amp: 2" EMT, 4#4/0, 1#4                           | 500          | LF        | \$74.75     | \$37,375        |
| 534      |   |              |           |             |                 |
| 535      | <b>General Requirements</b>                           | <b>12.0%</b> |           |             | \$6,812.00      |
| 536      | <b>Contractors Fee</b>                                | <b>6.0%</b>  |           |             | \$3,815.00      |
| 537      | <b>Contingency and Escalation</b>                     | <b>15.0%</b> |           |             | \$10,110.00     |
| 538      |   |              |           |             |                 |
| 539      | <b>Subtotal: ELEC-7 Additional Panels</b>             |              |           |             | <b>\$77,507</b> |
| 540      |   |              |           |             |                 |
| 541      |   |              |           |             |                 |
| 542      | <b>ELEC-8 Short Circuit Arc Flash Study</b>           | <b>1</b>     | <b>LS</b> |             |                 |
| 543      |   |              |           |             |                 |
| 544      | Short Circuit Arc Flash Study                         | 1            | EA        | \$10,140.00 | \$10,140        |
| 545      |   |              |           |             |                 |
| 546      | <b>General Requirements</b>                           | <b>12.0%</b> |           |             | \$1,217.00      |
| 547      | <b>Contractors Fee</b>                                | <b>6.0%</b>  |           |             | \$681.00        |
| 548      | <b>Contingency and Escalation</b>                     | <b>15.0%</b> |           |             | \$1,806.00      |
| 549      |   |              |           |             |                 |
| 550      | <b>Subtotal: ELEC-8 Short Circuit Arc Flash Study</b> |              |           |             | <b>\$13,844</b> |
| 551      |   |              |           |             |                 |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description   | Qty           | UNITS     | Total Cost |                  |
|----------|---|---------------|-----------|------------|------------------|
|          |   |               |           | Unit \$    | Matl/Labor \$    |
| 552      |   |               |           |            |                  |
| 553      | <b>LIGHTING-1 Replace Exterior HID Wall and Pole Mtd Lights</b>           | <b>21</b>     | <b>EA</b> |            |                  |
| 554      |   |               |           |            |                  |
| 555      | Demo Fixtures   | 15            | EA        | \$144.06   | \$2,161          |
| 556      | Demo Pole Mounted Fixtures  | 6             | EA        | \$144.06   | \$864            |
| 557      | Wall Mounted Fixtures   | 15            | EA        | \$912.13   | \$13,682         |
| 558      | Pole Mounted Fixtures   | 6             | EA        | \$2,694.19 | \$16,165         |
| 559      |   |               |           |            |                  |
| 560      | <b>General Requirements</b>   | <b>12.0%</b>  |           |            | \$3,945.00       |
| 561      | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |            | \$2,209.00       |
| 562      | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |            | \$5,854.00       |
| 563      |   |               |           |            |                  |
| 564      | <b>Subtotal: LIGHTING-1 Replace Exterior HID Wall and Pole Mtd Lights</b> |               |           |            | <b>\$44,880</b>  |
| 565      |   |               |           |            |                  |
| 566      |   |               |           |            |                  |
| 567      | <b>LIGHTING-2 Replace Interior Lighting</b>                               | <b>45,500</b> | <b>SF</b> |            |                  |
| 568      |   |               |           |            |                  |
| 569      | Demolition  | 758           | EA        | \$72.03    | \$54,599         |
| 570      | School Lighting Fixtures  | 758           | EA        | \$663.68   | \$503,070        |
| 571      | New Whips for Fixture Relocation  | 758           | EA        | \$75.02    | \$56,865         |
| 572      |   |               |           |            |                  |
| 573      | <b>General Requirements</b>   | <b>12.0%</b>  |           |            | \$73,744.00      |
| 574      | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |            | \$41,297.00      |
| 575      | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |            | \$109,436.00     |
| 576      |   |               |           |            |                  |
| 577      | <b>Subtotal: LIGHTING-2 Replace Interior Lighting</b>                     |               |           |            | <b>\$839,011</b> |
| 578      |   |               |           |            |                  |
| 579      |   |               |           |            |                  |
| 580      | <b>LIGHTING-3 Lighting Controls</b>                                       | <b>60</b>     | <b>EA</b> |            |                  |
| 581      |   |               |           |            |                  |
| 582      | Add Occupancy Sensors   | 30            | EA        | \$378.06   | \$11,342         |
| 583      | Add Occupancy Sensor Switches   | 30            | EA        | \$153.02   | \$4,591          |
| 584      | Circuiting  | 1,200         | LF        | \$16.29    | \$19,548         |
| 585      |   |               |           |            |                  |
| 586      | <b>General Requirements</b>   | <b>12.0%</b>  |           |            | \$4,258.00       |
| 587      | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |            | \$2,384.00       |
| 588      | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |            | \$6,318.00       |
| 589      |   |               |           |            |                  |
| 590      | <b>Subtotal: LIGHTING-3 Lighting Controls</b>                             |               |           |            | <b>\$48,441</b>  |
| 591      |   |               |           |            |                  |
| 592      |   |               |           |            |                  |
| 593      |   |               |           |            |                  |
| 594      |   |               |           |            |                  |
| 595      |   |               |           |            |                  |
| 596      |   |               |           |            |                  |
| 597      |   |               |           |            |                  |
| 598      |   |               |           |            |                  |
| 599      |   |               |           |            |                  |
| 600      |   |               |           |            |                  |
| 601      |   |               |           |            |                  |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description   | Qty          | UNITS | Total Cost  |                 |
|----------|---|--------------|-------|-------------|-----------------|
|          |   |              |       | Unit \$     | Matl/Labor \$   |
| 602      | <b>LIGHTING-4 Central Inverter for Emergency Lights</b>           | 2            | EA    |             |                 |
| 603      |   |              |       |             |                 |
| 604      | Inverters 3KW   | 2            | EA    | \$28,656.25 | \$57,313        |
| 605      |   |              |       |             |                 |
| 606      | <b>General Requirements</b>                                       | <b>12.0%</b> |       |             | \$6,878.00      |
| 607      | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$3,851.00      |
| 608      | <b>Contingency and Escalation</b>                                 | <b>15.0%</b> |       |             | \$10,206.00     |
| 609      |   |              |       |             |                 |
| 610      | <b>Subtotal: LIGHTING-4 Central Inverter for Emergency Lights</b> |              |       |             | <b>\$78,248</b> |
| 611      |   |              |       |             |                 |
| 612      |   |              |       |             |                 |
| 613      | <b>LIGHTING-5 Replace Exit Signs</b>                              | 14           | EA    |             |                 |
| 614      |   |              |       |             |                 |
| 615      | Remove/Dispose of Radio Active Exit Signs                         | 14           | EA    | \$378.06    | \$5,293         |
| 616      | Exit Signs  | 30           | EA    | \$245.46    | \$7,364         |
| 617      | Add Circuiting  | 16           | EA    | \$454.69    | \$7,275         |
| 618      |   |              |       |             |                 |
| 619      | <b>General Requirements</b>                                       | <b>12.0%</b> |       |             | \$2,392.00      |
| 620      | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$1,339.00      |
| 621      | <b>Contingency and Escalation</b>                                 | <b>15.0%</b> |       |             | \$3,549.00      |
| 622      |   |              |       |             |                 |
| 623      | <b>Subtotal: LIGHTING-5 Replace Exit Signs</b>                    |              |       |             | <b>\$27,212</b> |
| 624      |   |              |       |             |                 |
| 625      |   |              |       |             |                 |
| 626      | <b>TELECOM-1 Dedicated Com Room</b>                               | 1            | EA    |             |                 |
| 627      |   |              |       |             |                 |
| 628      | Partitions  | 20           | LF    | \$349.09    | \$6,982         |
| 629      | Doors   | 1            | EA    | \$2,821.29  | \$2,821         |
| 630      | Telecom Equipment Racks and Appurtenances                         | 1            | LS    | \$6,781.27  | \$6,781         |
| 631      | Main Switches, not included                                       |              |       |             |                 |
| 632      | Telecom Cooling   | 1            | EA    | \$10,681.27 | \$10,681        |
| 633      |   |              |       |             |                 |
| 634      | <b>General Requirements</b>                                       | <b>12.0%</b> |       |             | \$3,272.00      |
| 635      | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$1,832.00      |
| 636      | <b>Contingency</b>  | <b>15.0%</b> |       |             | \$4,855.00      |
| 637      |   |              |       |             |                 |
| 638      | <b>Subtotal: TELECOM-1 Dedicated Com Room</b>                     |              |       |             | <b>\$37,224</b> |
| 639      |   |              |       |             |                 |
| 640      |   |              |       |             |                 |
| 641      | <b>TELECOM-2 Cable Tray and Raceways</b>                          |              |       |             |                 |
| 642      |   |              |       |             |                 |
| 643      | Cable Trays   | 470          | LF    | \$36.25     | \$17,038        |
| 644      | Raceways  | 68           | EA    | \$285.62    | \$19,422        |
| 645      |   |              |       |             |                 |
| 646      | <b>General Requirements</b>                                       | <b>12.0%</b> |       |             | \$2,045.00      |
| 647      | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$1,145.00      |
| 648      | <b>Contingency and Escalation</b>                                 | <b>15.0%</b> |       |             | \$3,034.00      |
| 649      |   |              |       |             |                 |
| 650      | <b>Subtotal: TELECOM-2 Cable Tray and Raceways</b>                |              |       |             | <b>\$42,684</b> |
| 651      |   |              |       |             |                 |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description                                       | Qty           | UNITS     | Total Cost |                  |
|----------|---|---------------|-----------|------------|------------------|
|          |   |               |           | Unit \$    | Matl/Labor \$    |
| 652      |   |               |           |            |                  |
| 653      | <b>TELECOM-3 Replace Intercom</b>                 | <b>45,500</b> | <b>SF</b> |            |                  |
| 654      |   |               |           |            |                  |
| 655      | Replace School Intercom                           | 45,500        | SF        | \$5.57     | \$253,435        |
| 656      |   |               |           |            |                  |
| 657      | <b>General Requirements</b>                       | <b>12.0%</b>  |           |            | \$30,412.00      |
| 658      | <b>Contractors Fee</b>                            | <b>6.0%</b>   |           |            | \$17,031.00      |
| 659      | <b>Contingency and Escalation</b>                 | <b>15.0%</b>  |           |            | \$45,132.00      |
| 660      |   |               |           |            |                  |
| 661      | <b>Subtotal: TELECOM-3 Replace Intercom</b>       |               |           |            | <b>\$346,010</b> |
| 662      |   |               |           |            |                  |
| 663      |   |               |           |            |                  |
| 664      | <b>FA/FP-1 Upgrade Fire Alarm</b>                 | <b>45,500</b> | <b>SF</b> |            |                  |
| 665      |   |               |           |            |                  |
| 666      | Upgrade Fire Alarm                                | 45,500        | SF        | \$5.55     | \$252,525        |
| 667      |   |               |           |            |                  |
| 668      | <b>General Requirements</b>                       | <b>12.0%</b>  |           |            | \$30,303.00      |
| 669      | <b>Contractors Fee</b>                            | <b>6.0%</b>   |           |            | \$16,970.00      |
| 670      | <b>Contingency and Escalation</b>                 | <b>15.0%</b>  |           |            | \$44,970.00      |
| 671      |   |               |           |            |                  |
| 672      | <b>Subtotal: FA/FP-1 Upgrade Fire Alarm</b>       |               |           |            | <b>\$344,768</b> |
| 673      |   |               |           |            |                  |
| 674      |   |               |           |            |                  |
| 675      | <b>FA/FP-1 Fire Sprinklers - See A1</b>           |               |           |            |                  |
| 676      |   |               |           |            |                  |
| 677      |   |               |           |            |                  |
| 678      | <b>Subtotal: FA/FP-1 Fire Sprinklers - See A1</b> |               |           |            |                  |
| 679      |   |               |           |            |                  |
| 680      |   |               |           |            |                  |
| 681      | <b>SOLDOTNA MIDDLE SCHOOL - CONDITION SURVEY</b>  |               |           |            |                  |
| 682      | <b>ADA-1 Infill Music Room Floor</b>              | <b>1,525</b>  | <b>SF</b> |            |                  |
| 683      |   |               |           |            |                  |
| 684      | Steel Framed Pony Walls                           | 809           | SF        | \$31.91    | \$25,816         |
| 685      | Metal Decking                                     | 1,525         | SF        | \$6.34     | \$9,669          |
| 686      | Closure Angle                                     | 158           | LF        | \$23.39    | \$3,696          |
| 687      | Concrete Deck                                     | 1,525         | SF        | \$6.82     | \$10,401         |
| 688      |   |               |           |            |                  |
| 689      | <b>General Requirements</b>                       | <b>12.0%</b>  |           |            | \$5,950.00       |
| 690      | <b>Contractors Fee</b>                            | <b>6.0%</b>   |           |            | \$3,332.00       |
| 691      | <b>Contingency and Escalation</b>                 | <b>15.0%</b>  |           |            | \$8,830.00       |
| 692      |   |               |           |            |                  |
| 693      | <b>Subtotal: ADA-1 Infill Music Room Floor</b>    |               |           |            | <b>\$67,694</b>  |
| 694      |   |               |           |            |                  |
| 695      |   |               |           |            |                  |
| 696      |   |               |           |            |                  |
| 697      |   |               |           |            |                  |
| 698      |   |               |           |            |                  |
| 699      |   |               |           |            |                  |
| 700      |   |               |           |            |                  |
| 701      |   |               |           |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty    | UNITS | Total Cost  |                  |
|----------|--|--------|-------|-------------|------------------|
|          |  |        |       | Unit \$     | Matl/Labor \$    |
| 702      | <b>ADA-1 Restrooms</b>   | 2      | EA    |             |                  |
| 703      |  |        |       |             |                  |
| 704      | Renovate and Expand Toilet Rooms                                     | 2      | EA    | \$75,878.96 | \$151,758        |
| 705      |  |        |       |             |                  |
| 706      | <b>General Requirements</b>  | 12.0%  |       |             | \$18,211.00      |
| 707      | <b>Contractors Fee</b>   | 6.0%   |       |             | \$10,198.00      |
| 708      | <b>Contingency and Escalation</b>                                    | 15.0%  |       |             | \$27,025.00      |
| 709      |  |        |       |             |                  |
| 710      | <b>Subtotal: ADA-1 Restrooms</b>                                     |        |       |             | <b>\$207,192</b> |
| 711      |  |        |       |             |                  |
| 712      |  |        |       |             |                  |
| 713      | <b>ENERGY-1 Exterior Walls</b>                                       | 29,800 | SF    |             |                  |
| 714      |  |        |       |             |                  |
| 715      | Demo GWB   | 29,800 | SF    | \$1.07      | \$31,886         |
| 716      | Allow for Removal/Replace of Wall Mtd Devices                        | 29,800 | SF    | \$0.61      | \$18,178         |
| 717      | Remove VB and Batt Insulation  | 29,800 | SF    | \$0.61      | \$18,178         |
| 718      | Rigid Insulation 4"  | 29,800 | SF    | \$6.00      | \$178,800        |
| 719      | Vapor Retarder   | 29,800 | SF    | \$1.52      | \$45,296         |
| 720      | GWB  | 29,800 | SF    | \$5.14      | \$153,172        |
| 721      | Paint  | 29,800 | SF    | \$2.82      | \$84,036         |
| 722      |  |        |       |             |                  |
| 723      | <b>General Requirements</b>  | 12.0%  |       |             | \$63,546.00      |
| 724      | <b>Contractors Fee</b>   | 6.0%   |       |             | \$35,586.00      |
| 725      | <b>Contingency and Escalation</b>                                    | 15.0%  |       |             | \$94,302.00      |
| 726      |  |        |       |             |                  |
| 727      | <b>Subtotal: ENERGY-1 Exterior Walls</b>                             |        |       |             | <b>\$722,980</b> |
| 728      |  |        |       |             |                  |
| 729      |  |        |       |             |                  |
| 730      | <b>ENERGY-2 Roof - Replaced in 2015, no action needed.</b>           |        |       |             |                  |
| 731      |  |        |       |             |                  |
| 732      |  |        |       |             |                  |
| 733      | <b>Subtotal: ENERGY-2 Roof - Replaced in 2015, no action needed.</b> |        |       |             |                  |
| 734      |  |        |       |             |                  |
| 735      |  |        |       |             |                  |
| 736      | <b>ENERGY-3 Windows - Replace as Maintenance Item</b>                |        |       |             |                  |
| 737      |  |        |       |             |                  |
| 738      |  |        |       |             |                  |
| 739      | <b>Subtotal: ENERGY-3 Windows - Replace as Maintenance Item</b>      |        |       |             |                  |
| 740      |  |        |       |             |                  |
| 741      |  |        |       |             |                  |
| 742      |  |        |       |             |                  |
| 743      |  |        |       |             |                  |
| 744      |  |        |       |             |                  |
| 745      |  |        |       |             |                  |
| 746      |  |        |       |             |                  |
| 747      |  |        |       |             |                  |
| 748      |  |        |       |             |                  |
| 749      |  |        |       |             |                  |
| 750      |  |        |       |             |                  |
| 751      |  |        |       |             |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty           | UNITS     | Total Cost  |                 |
|----------|---|---------------|-----------|-------------|-----------------|
|          |   |               |           | Unit \$     | Matl/Labor \$   |
| 752      | <b>STRUCT-1 Grouting and Repair Columns</b>               |               |           |             |                 |
| 753      |   |               |           |             |                 |
| 754      | Grout Exterior Cracks, assume 10'l crack at 20' intervals | 760           | LF        | \$17.55     | \$13,338        |
| 755      | Repair Columns  | 6             | EA        | \$3,043.43  | \$18,261        |
| 756      |   |               |           |             |                 |
| 757      | <b>General Requirements</b>                               | <b>12.0%</b>  |           |             | \$3,792.00      |
| 758      | <b>Contractors Fee</b>                                    | <b>6.0%</b>   |           |             | \$2,123.00      |
| 759      | <b>Contingency and Escalation</b>                         | <b>15.0%</b>  |           |             | \$5,627.00      |
| 760      |   |               |           |             |                 |
| 761      | <b>Subtotal: STRUCT-1 Grouting and Repair Columns</b>     |               |           |             | <b>\$43,141</b> |
| 762      |   |               |           |             |                 |
| 763      |   |               |           |             |                 |
| 764      | <b>PLUMB-1 Replace Domestic Water Piping</b>              | <b>83,468</b> | <b>SF</b> |             |                 |
| 765      |   |               |           |             |                 |
| 766      | Demo /Replace Ceilings as needed                          | 12,000        | SF        | \$9.08      | \$108,960       |
| 767      | Misc Demo - GWB Walls                                     | 1,900         | SF        | \$1.37      | \$2,603         |
| 768      | Repair - GWB Walls  | 1,900         | SF        | \$8.09      | \$15,371        |
| 769      | Paint   | 11,400        | SF        | \$2.82      | \$32,148        |
| 770      |   |               |           |             |                 |
| 771      | Demo DW Piping 0.5  | 250           | FT        | \$6.00      | \$1,500         |
| 772      | Demo DW Piping 0.75                                       | 1,465         | FT        | \$6.00      | \$8,790         |
| 773      | Demo DW Piping 1  | 825           | FT        | \$6.00      | \$4,950         |
| 774      | Demo DW Piping 1.25                                       | 250           | FT        | \$8.00      | \$2,000         |
| 775      | Demo DW Piping 1.5  | 55            | FT        | \$8.00      | \$440           |
| 776      | Demo DW Piping 2  | 260           | FT        | \$12.00     | \$3,120         |
| 777      | Demo DW Piping 2.5  | 100           | FT        | \$12.00     | \$1,200         |
| 778      | Demo DW Piping 3  | 70            | FT        | \$14.00     | \$980           |
| 779      |   |               |           |             |                 |
| 780      | Domestic HW/CW Supply, CPVC - in Ceilings                 |               |           |             |                 |
| 781      | 1/2" Pipe   | 250           | LF        | \$7.42      | \$1,856         |
| 782      | 3/4" Pipe   | 1,465         | LF        | \$8.36      | \$12,248        |
| 783      | 1" Pipe   | 825           | LF        | \$9.29      | \$7,665         |
| 784      | 1-1/4" Pipe   | 250           | LF        | \$11.17     | \$2,793         |
| 785      | 1-1/2" Pipe   | 55            | LF        | \$13.94     | \$766           |
| 786      | 2" Pipe   | 260           | LF        | \$18.60     | \$4,836         |
| 787      | 2-1/2" Pipe   | 100           | LF        | \$45.66     | \$4,566         |
| 788      | 3" Pipe   | 70            | LF        | \$56.89     | \$3,982         |
| 789      | Hangers   | 504           | EA        | \$110.58    | \$55,732        |
| 790      | Fittings  | 1             | LS        | \$38,481.37 | \$38,482        |
| 791      | Sterilization   | 1             | LS        | \$1,060.07  | \$1,060         |
| 792      |   |               |           |             |                 |
| 793      | Circuit Setter 3/4"                                       | 4             | EA        | \$327.23    | \$1,309         |
| 794      | Ball Valve 3/4"   | 40            | EA        | \$178.02    | \$7,121         |
| 795      | Ball Valve 1"   | 4             | EA        | \$178.02    | \$712           |
| 796      | Ball Valve 2"   | 4             | EA        | \$412.85    | \$1,651         |
| 797      |   |               |           |             |                 |
| 798      |   |               |           |             |                 |
| 799      |   |               |           |             |                 |
| 800      |   |               |           |             |                 |
| 801      |   |               |           |             |                 |
| 802      |   |               |           |             |                 |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty          | UNITS     | Total Cost  |                  |
|----------|--|--------------|-----------|-------------|------------------|
|          |  |              |           | Unit \$     | Matl/Labor \$    |
| 803      | Fiberglass Pipe Insulation, 1" Thick W/ ASJ            |              |           |             |                  |
| 804      | 1/2" Pipe, Fittings                                    | 250          | LF        | \$16.44     | \$4,110          |
| 805      | 3/4" Pipe, Fittings                                    | 1,465        | LF        | \$17.69     | \$25,916         |
| 806      | 1" Pipe, Fittings                                      | 825          | LF        | \$18.66     | \$15,395         |
| 807      | 1-1/4" Pipe, Fittings                                  | 250          | LF        | \$19.70     | \$4,925          |
| 808      | 1-1/2" Pipe, Fittings                                  | 55           | LF        | \$20.29     | \$1,116          |
| 809      | 2" Pipe, Fittings                                      | 260          | LF        | \$21.49     | \$5,587          |
| 810      | 2-1/2" Pipe, Fittings                                  | 100          | LF        | \$20.91     | \$2,091          |
| 811      | 3" Pipe, Fittings                                      | 70           | LF        | \$21.39     | \$1,497          |
| 812      |  |              |           |             |                  |
| 813      | <b>General Requirements</b>                            | <b>12.0%</b> |           |             | \$46,497.00      |
| 814      | <b>Contractors Fee</b>                                 | <b>6.0%</b>  |           |             | \$26,039.00      |
| 815      | <b>Contingency and Escalation</b>                      | <b>15.0%</b> |           |             | \$69,002.00      |
| 816      |  |              |           |             |                  |
| 817      | <b>Subtotal: PLUMB-1 Replace Domestic Water Piping</b> |              |           |             | <b>\$529,016</b> |
| 818      |  |              |           |             |                  |
| 819      |  |              |           |             |                  |
| 820      | <b>PLUMB-2 Replace with ADA</b>                        | <b>8</b>     | <b>EA</b> |             |                  |
| 821      |  |              |           |             |                  |
| 822      | Demo Plumbing Fixtures                                 | 8            | EA        | \$280.07    | \$2,241          |
| 823      | Water Closets  | 4            | EA        | \$2,556.20  | \$10,225         |
| 824      | Urinals  | 2            | EA        | \$2,478.20  | \$4,956          |
| 825      | Lavatories   | 2            | EA        | \$1,184.13  | \$2,368          |
| 826      |  |              |           |             |                  |
| 827      | <b>General Requirements</b>                            | <b>12.0%</b> |           |             | \$2,375.00       |
| 828      | <b>Contractors Fee</b>                                 | <b>6.0%</b>  |           |             | \$1,330.00       |
| 829      | <b>Contingency and Escalation</b>                      | <b>15.0%</b> |           |             | \$3,524.00       |
| 830      |  |              |           |             |                  |
| 831      | <b>Subtotal: PLUMB-2 Replace with ADA</b>              |              |           |             | <b>\$27,019</b>  |
| 832      |  |              |           |             |                  |
| 833      |  |              |           |             |                  |
| 834      | <b>PLUMB-3 Replace Water Heater</b>                    | <b>1</b>     | <b>EA</b> |             |                  |
| 835      |  |              |           |             |                  |
| 836      | Demo Water Heater                                      | 1            | EA        | \$1,120.27  | \$1,120          |
| 837      | Water Heater   | 1            | EA        | \$36,801.35 | \$36,801         |
| 838      |  |              |           |             |                  |
| 839      | <b>General Requirements</b>                            | <b>12.0%</b> |           |             | \$4,551.00       |
| 840      | <b>Contractors Fee</b>                                 | <b>6.0%</b>  |           |             | \$2,548.00       |
| 841      | <b>Contingency and Escalation</b>                      | <b>15.0%</b> |           |             | \$6,753.00       |
| 842      |  |              |           |             |                  |
| 843      | <b>Subtotal: PLUMB-3 Replace Water Heater</b>          |              |           |             | <b>\$51,773</b>  |
| 844      |  |              |           |             |                  |
| 845      |  |              |           |             |                  |
| 846      |  |              |           |             |                  |
| 847      |  |              |           |             |                  |
| 848      |  |              |           |             |                  |
| 849      |  |              |           |             |                  |
| 850      |  |              |           |             |                  |
| 851      |  |              |           |             |                  |
| 852      |  |              |           |             |                  |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description  | Qty           | UNITS     | Total Cost    |                  |
|----------|--|---------------|-----------|---------------|------------------|
|          |  |               |           | Unit \$       | Matl/Labor \$    |
| 853      | <b>PLUMB-4 Add Sinks in Elementary Classrooms</b>            | <b>18</b>     | <b>EA</b> |               |                  |
| 854      |  |               |           |               |                  |
| 855      | Demo Concrete Floor  | 1,080         | SF        | \$10.68       | \$11,534         |
| 856      | Slab Cutting   | 1,188         | LF        | \$7.20        | \$8,554          |
| 857      | Repair Slab on Grade   | 1,080         | SF        | \$44.79       | \$48,374         |
| 858      | Domestic Water Piping Roughin                                | 18            | EA        | \$1,277.00    | \$22,986         |
| 859      | Waste Piping   | 450           | LF        | \$46.73       | \$21,029         |
| 860      | Vent Piping  | 360           | LF        | \$46.73       | \$16,823         |
| 861      | Wall Repairs   | 18            | EA        | \$458.75      | \$8,258          |
| 862      |  |               |           |               |                  |
| 863      | <b>General Requirements</b>                                  | <b>12.0%</b>  |           |               | \$16,507.00      |
| 864      | <b>Contractors Fee</b>                                       | <b>6.0%</b>   |           |               | \$9,244.00       |
| 865      | <b>Contingency and Escalation</b>                            | <b>15.0%</b>  |           |               | \$24,496.00      |
| 866      |  |               |           |               |                  |
| 867      | <b>Subtotal: PLUMB-4 Add Sinks in Elementary Classrooms</b>  |               |           |               | <b>\$187,805</b> |
| 868      |  |               |           |               |                  |
| 869      |  |               |           |               |                  |
| 870      | <b>FIRE-1 Modify for Remodel</b>                             | <b>54,000</b> | <b>SF</b> | <b>\$2.40</b> | <b>\$129,600</b> |
| 871      |  |               |           |               |                  |
| 872      | <b>General Requirements</b>                                  | <b>12.0%</b>  |           |               | \$15,552.00      |
| 873      | <b>Contractors Fee</b>                                       | <b>6.0%</b>   |           |               | \$8,709.00       |
| 874      | <b>Contingency and Escalation</b>                            | <b>15.0%</b>  |           |               | \$23,079.00      |
| 875      |  |               |           |               |                  |
| 876      | <b>Subtotal: FIRE-1 Modify for Remodel</b>                   |               |           |               | <b>\$176,940</b> |
| 877      |  |               |           |               |                  |
| 878      |  |               |           |               |                  |
| 879      | <b>FIRE-2 Fire Extinguishers to Remain</b>                   |               |           |               |                  |
| 880      |  |               |           |               |                  |
| 881      |  |               |           |               |                  |
| 882      | <b>Subtotal: FIRE-2 Fire Extinguishers to Remain</b>         |               |           |               |                  |
| 883      |  |               |           |               |                  |
| 884      |  |               |           |               |                  |
| 885      | <b>VENT-1 Reroute Ducts for Floor Plan Changes</b>           | <b>54,000</b> | <b>SF</b> |               |                  |
| 886      |  |               |           |               |                  |
| 887      | Demo Duct  | 5,000         | LF        | \$8.21        | \$41,050         |
| 888      | Reroute Ducts  | 19,710        | LBS       | \$16.88       | \$332,705        |
| 889      | New Diffusers  | 66            | LF        | \$335.53      | \$22,145         |
| 890      |  |               |           |               |                  |
| 891      | <b>General Requirements</b>                                  | <b>12.0%</b>  |           |               | \$47,508.00      |
| 892      | <b>Contractors Fee</b>                                       | <b>6.0%</b>   |           |               | \$26,604.00      |
| 893      | <b>Contingency and Escalation</b>                            | <b>15.0%</b>  |           |               | \$70,502.00      |
| 894      |  |               |           |               |                  |
| 895      | <b>Subtotal: VENT-1 Reroute Ducts for Floor Plan Changes</b> |               |           |               | <b>\$540,514</b> |
| 896      |  |               |           |               |                  |
| 897      |  |               |           |               |                  |
| 898      |  |               |           |               |                  |
| 899      |  |               |           |               |                  |
| 900      |  |               |           |               |                  |
| 901      |  |               |           |               |                  |
| 902      |  |               |           |               |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty           | UNITS     | Total Cost   |                  |
|----------|--|---------------|-----------|--------------|------------------|
|          |  |               |           | Unit \$      | Matl/Labor \$    |
| 903      | <b>VENT-2 Replace Fans with AHU with Heat Recovery</b>             |               |           |              |                  |
| 904      | <b>Based on 36,500 CFM total airflow for building</b>              |               |           |              |                  |
| 905      | Demo Fans to 10000 Plus CFM  | 3             | EA        | \$5,744.87   | \$17,235         |
| 906      | AHU with Heat Recovery Approx. 12K CFM                             | 3             | EA        | \$170,609.74 | \$511,829        |
| 907      |  |               |           |              |                  |
| 908      | <b>General Requirements</b>  | <b>12.0%</b>  |           |              | \$63,488.00      |
| 909      | <b>Contractors Fee</b>   | <b>6.0%</b>   |           |              | \$35,553.00      |
| 910      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b>  |           |              | \$94,216.00      |
| 911      |  |               |           |              |                  |
| 912      | <b>Subtotal: VENT-2 Replace Fans with AHU with Heat Recovery</b>   |               |           |              | <b>\$722,321</b> |
| 913      |  |               |           |              |                  |
| 914      |  |               |           |              |                  |
| 915      | <b>VENT-3 Demo Duct Heat Coil Replace with VAV</b>                 | <b>18</b>     | <b>EA</b> |              |                  |
| 916      |  |               |           |              |                  |
| 917      | Demo Heating Coil  | 18            | EA        | \$280.07     | \$5,041          |
| 918      | VAV Box  | 18            | EA        | \$1,510.49   | \$27,189         |
| 919      | New Valving  | 18            | EA        | \$631.07     | \$11,359         |
| 920      | DDC  | 18            | EA        | \$3,000.00   | \$54,000         |
| 921      |  |               |           |              |                  |
| 922      | <b>General Requirements</b>  | <b>12.0%</b>  |           |              | \$11,711.00      |
| 923      | <b>Contractors Fee</b>   | <b>6.0%</b>   |           |              | \$6,558.00       |
| 924      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b>  |           |              | \$17,379.00      |
| 925      |  |               |           |              |                  |
| 926      | <b>Subtotal: VENT-3 Demo Duct Heat Coil Replace with VAV</b>       |               |           |              | <b>\$133,237</b> |
| 927      |  |               |           |              |                  |
| 928      |  |               |           |              |                  |
| 929      | <b>VENT-4 Clean Diffuser and Grilles</b>                           | <b>83,468</b> | <b>SF</b> |              |                  |
| 930      |  |               |           |              |                  |
| 931      | Clean Diffusers (1/150SF)  | 556           | EA        | \$13.37      | \$7,434          |
| 932      | Clean Grilles (1/500SF)  | 167           | EA        | \$13.37      | \$2,233          |
| 933      |  |               |           |              |                  |
| 934      | <b>General Requirements</b>  | <b>12.0%</b>  |           |              | \$1,160.00       |
| 935      | <b>Contractors Fee</b>   | <b>6.0%</b>   |           |              | \$650.00         |
| 936      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b>  |           |              | \$1,722.00       |
| 937      |  |               |           |              |                  |
| 938      | <b>Subtotal: VENT-4 Clean Diffuser and Grilles</b>                 |               |           |              | <b>\$13,199</b>  |
| 939      |  |               |           |              |                  |
| 940      |  |               |           |              |                  |
| 941      | <b>VENT-5 Demo Exhaust Fan, Tie Exhaust Ducts to HRV</b>           | <b>4</b>      | <b>EA</b> |              |                  |
| 942      |  |               |           |              |                  |
| 943      | Demo EF  | 4             | EA        | \$430.87     | \$1,723          |
| 944      | Ductwork   | 220           | LBS       | \$18.66      | \$4,105          |
| 945      |  |               |           |              |                  |
| 946      | <b>General Requirements</b>  | <b>12.0%</b>  |           |              | \$699.00         |
| 947      | <b>Contractors Fee</b>   | <b>6.0%</b>   |           |              | \$392.00         |
| 948      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b>  |           |              | \$1,038.00       |
| 949      |  |               |           |              |                  |
| 950      | <b>Subtotal: VENT-5 Demo Exhaust Fan, Tie Exhaust Ducts to HRV</b> |               |           |              | <b>\$7,957</b>   |
| 951      |  |               |           |              |                  |
| 952      |  |               |           |              |                  |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description  | Qty          | UNITS     | Total Cost  |                  |
|----------|--|--------------|-----------|-------------|------------------|
|          |  |              |           | Unit \$     | Matl/Labor \$    |
| 953      | <b>VENT-6 Demo and Replace Dust Collector</b>                      | 1            | EA        |             |                  |
| 954      |  |              |           |             |                  |
| 955      | Demo Dust Collector  | 1            | EA        | \$5,744.87  | \$5,745          |
| 956      | New Dust Collector   | 1            | EA        | \$81,689.74 | \$81,690         |
| 957      |  |              |           |             |                  |
| 958      | <b>General Requirements</b>  | <b>12.0%</b> |           |             | \$10,492.00      |
| 959      | <b>Contractors Fee</b>   | <b>6.0%</b>  |           |             | \$5,876.00       |
| 960      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b> |           |             | \$15,570.00      |
| 961      |  |              |           |             |                  |
| 962      | <b>Subtotal: VENT-6 Demo and Replace Dust Collector</b>            |              |           |             | <b>\$119,373</b> |
| 963      |  |              |           |             |                  |
| 964      |  |              |           |             |                  |
| 965      | <b>VENT-7 Demand Control Ventilation in Large Spaces</b>           | <b>43</b>    | <b>EA</b> |             |                  |
| 966      | Spaces   |              |           |             |                  |
| 967      | Classrooms   | 40           | EA        |             |                  |
| 968      | Music  | 1            | EA        |             |                  |
| 969      | Library  | 1            | EA        |             |                  |
| 970      | Gym/Lunch  | 1            | EA        |             |                  |
| 971      | Add CO2 Detection  | 43           | EA        | \$2,013.62  | \$86,586         |
| 972      | Control Points   | 86           | EA        | \$1,440.00  | \$123,840        |
| 973      |  |              |           |             |                  |
| 974      | <b>General Requirements</b>  | <b>12.0%</b> |           |             | \$25,251.00      |
| 975      | <b>Contractors Fee</b>   | <b>6.0%</b>  |           |             | \$14,141.00      |
| 976      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b> |           |             | \$37,473.00      |
| 977      |  |              |           |             |                  |
| 978      | <b>Subtotal: VENT-7 Demand Control Ventilation in Large Spaces</b> |              |           |             | <b>\$287,291</b> |
| 979      |  |              |           |             |                  |
| 980      |  |              |           |             |                  |
| 981      | <b>HEAT-1 Replace Boiler</b>                                       |              |           |             |                  |
| 982      |  |              |           |             |                  |
| 983      | Demo Boilers   | 1            | EA        | \$8,402.02  | \$8,402          |
| 984      | New Boilers 2000 MBH   | 1            | EA        | \$97,604.72 | \$97,605         |
| 985      | Boiler Room Piping and Equipment Allowance                         | 1            | LS        | \$25,703.37 | \$25,703         |
| 986      |  |              |           |             |                  |
| 987      | <b>General Requirements</b>  | <b>12.0%</b> |           |             | \$15,805.00      |
| 988      | <b>Contractors Fee</b>   | <b>6.0%</b>  |           |             | \$8,851.00       |
| 989      | <b>Contingency and Escalation</b>                                  | <b>15.0%</b> |           |             | \$23,455.00      |
| 990      |  |              |           |             |                  |
| 991      | <b>Subtotal: HEAT-1 Replace Boiler</b>                             |              |           |             | <b>\$179,821</b> |
| 992      |  |              |           |             |                  |
| 993      |  |              |           |             |                  |
| 994      |  |              |           |             |                  |
| 995      |  |              |           |             |                  |
| 996      |  |              |           |             |                  |
| 997      |  |              |           |             |                  |
| 998      |  |              |           |             |                  |
| 999      |  |              |           |             |                  |
| 1,000    |  |              |           |             |                  |
| 1,001    |  |              |           |             |                  |
| 1,002    |  |              |           |             |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty   | UNITS | Total Cost   |                 |
|----------|--|-------|-------|--------------|-----------------|
|          |  |       |       | Unit \$      | Matl/Labor \$   |
| 1,003    | <b>HEAT-2 Provided VFD for Pumps</b>                   | 4     | EA    |              |                 |
| 1,004    |  |       |       |              |                 |
| 1,005    | Demo Pumps   | 4     | EA    | \$560.13     | \$2,241         |
| 1,006    | New Pumps with VFD                                     | 4     | EA    | \$8,920.27   | \$35,681        |
| 1,007    |  |       |       |              |                 |
| 1,008    | <b>General Requirements</b>                            | 12.0% |       |              | \$4,551.00      |
| 1,009    | <b>Contractors Fee</b>                                 | 6.0%  |       |              | \$2,548.00      |
| 1,010    | <b>Contingency and Escalation</b>                      | 15.0% |       |              | \$6,753.00      |
| 1,011    |  |       |       |              |                 |
| 1,012    | <b>Subtotal: HEAT-2 Provided VFD for Pumps</b>         |       |       |              | <b>\$51,774</b> |
| 1,013    |  |       |       |              |                 |
| 1,014    |  |       |       |              |                 |
| 1,015    | <b>HEAT-3 Replace Terminal Heating Units</b>           |       |       |              |                 |
| 1,016    |  |       |       |              |                 |
| 1,017    | Demo Fintube   | 230   | LF    | \$35.01      | \$8,052         |
| 1,018    | Demo UH/CUH  | 5     | EA    | \$280.07     | \$1,400         |
| 1,019    | Fintube  | 230   | LF    | \$148.02     | \$34,045        |
| 1,020    | UH   | 2     | EA    | \$2,042.13   | \$4,084         |
| 1,021    | CUH  | 3     | EA    | \$3,726.20   | \$11,179        |
| 1,022    |  |       |       |              |                 |
| 1,023    | <b>General Requirements</b>                            | 12.0% |       |              | \$7,051.00      |
| 1,024    | <b>Contractors Fee</b>                                 | 6.0%  |       |              | \$3,949.00      |
| 1,025    | <b>Contingency and Escalation</b>                      | 15.0% |       |              | \$10,464.00     |
| 1,026    |  |       |       |              |                 |
| 1,027    | <b>Subtotal: HEAT-3 Replace Terminal Heating Units</b> |       |       |              | <b>\$80,224</b> |
| 1,028    |  |       |       |              |                 |
| 1,029    |  |       |       |              |                 |
| 1,030    | <b>HEAT-4 Replace Heat Piping and Control Valves</b>   |       |       |              |                 |
| 1,031    | Demo Piping 0.75                                       | 1,440 | FT    | \$6.00       | \$8,640         |
| 1,032    | Demo Piping 1  | 1,070 | FT    | \$6.00       | \$6,420         |
| 1,033    | Demo Piping 1.25                                       | 80    | FT    | \$8.00       | \$640           |
| 1,034    | Demo Piping 1.5  | 40    | FT    | \$8.00       | \$320           |
| 1,035    | Demo Piping 2  | 220   | FT    | \$12.00      | \$2,640         |
| 1,036    | Demo Piping 2.5  | 410   | FT    | \$12.00      | \$4,920         |
| 1,037    | Demo Piping 3  | 600   | FT    | \$14.00      | \$8,400         |
| 1,038    | Demo Piping 4  | 465   | FT    | \$14.00      | \$6,510         |
| 1,039    |  |       |       |              |                 |
| 1,040    | HWS/R Piping, Copper                                   |       |       |              |                 |
| 1,041    | 3/4" Pipe  | 1,440 | LF    | \$8.36       | \$12,038        |
| 1,042    | 1" Pipe  | 1,070 | LF    | \$9.29       | \$9,941         |
| 1,043    | 1-1/4" Pipe  | 80    | LF    | \$11.17      | \$894           |
| 1,044    | 1-1/2" Pipe  | 40    | LF    | \$13.94      | \$558           |
| 1,045    | 2" Pipe  | 220   | LF    | \$18.60      | \$4,092         |
| 1,046    | 2-1/2" Pipe  | 410   | LF    | \$45.66      | \$18,721        |
| 1,047    | 3" Pipe  | 600   | LF    | \$64.88      | \$38,928        |
| 1,048    | 4" Pipe  | 600   | LF    | \$93.13      | \$55,878        |
| 1,049    | Hangers  | 686   | EA    | \$110.58     | \$75,858        |
| 1,050    | Fittings   | 1     | LS    | \$146,778.76 | \$146,778       |
| 1,051    | Sterilization  | 1     | LS    | \$1,060.07   | \$1,060         |
| 1,052    | Allow for Valving                                      | 1     | LS    | \$11,221.01  | \$11,221        |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty           | UNITS     | Total Cost |                    |
|----------|---|---------------|-----------|------------|--------------------|
|          |   |               |           | Unit \$    | Matl/Labor \$      |
| 1,053    |   |               |           |            |                    |
| 1,054    | Fiberglass Pipe Insulation, 1" Thick W/ ASJ   |               |           |            |                    |
| 1,055    | 3/4" Pipe, Fittings   | 1,440         | LF        | \$17.69    | \$25,474           |
| 1,056    | 1" Pipe, Fittings   | 1,070         | LF        | \$18.66    | \$19,966           |
| 1,057    | 1-1/4" Pipe, Fittings   | 80            | LF        | \$19.70    | \$1,576            |
| 1,058    | 1-1/2" Pipe, Fittings   | 40            | LF        | \$20.29    | \$811              |
| 1,059    | 2" Pipe, Fittings   | 220           | LF        | \$21.49    | \$4,727            |
| 1,060    | 2-1/2" Pipe, Fittings   | 410           | LF        | \$20.91    | \$8,574            |
| 1,061    | 3" Pipe, Fittings   | 600           | LF        | \$21.39    | \$12,834           |
| 1,062    | 4" Pipe, Fittings   | 600           | LF        | \$26.63    | \$15,978           |
| 1,063    |   |               |           |            |                    |
| 1,064    | <b>General Requirements</b>   | <b>12.0%</b>  |           |            | \$60,528.00        |
| 1,065    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |            | \$33,896.00        |
| 1,066    | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |            | \$89,823.00        |
| 1,067    |   |               |           |            |                    |
| 1,068    | <b>Subtotal: HEAT-4 Replace Heat Piping and Control Valves</b>  |               |           |            | <b>\$688,644</b>   |
| 1,069    |   |               |           |            |                    |
| 1,070    |   |               |           |            |                    |
| 1,071    | <b>COOLING-1 Upsize AHU and VAV for Cooling in Future</b>   | <b>83,468</b> | <b>SF</b> |            |                    |
| 1,072    | <b>Based on 36,500 CFM total airflow for building Item VENT-2 capture the cost of the ventilation air required.</b> |               |           |            |                    |
| 1,073    |   |               |           |            |                    |
| 1,074    |   |               |           |            |                    |
| 1,075    | Add for VAV with Reheat   | 101           | EA        | \$1,549.49 | \$156,498          |
| 1,076    | Heating Piping, Insulated, to Supply VAV  | 3,030         | LF        | \$35.35    | \$107,110          |
| 1,077    | Added Control for VAV   | 221           | EA        | \$3,600.00 | \$795,600          |
| 1,078    |   |               |           |            |                    |
| 1,079    | <b>General Requirements</b>   | <b>12.0%</b>  |           |            | \$127,105.00       |
| 1,080    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |            | \$71,179.00        |
| 1,081    | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |            | \$188,624.00       |
| 1,082    |   |               |           |            |                    |
| 1,083    | <b>Subtotal: COOLING-1 Upsize AHU and VAV for Cooling in Future</b>   |               |           |            | <b>\$1,446,116</b> |
| 1,084    |   |               |           |            |                    |
| 1,085    |   |               |           |            |                    |
| 1,086    | <b>DDC-1 Upgrade Controls to DDC</b>  | <b>83,468</b> | <b>SF</b> |            |                    |
| 1,087    |   |               |           |            |                    |
| 1,088    | New DDC (See Cooling-1 for added controls for vat sys upgrade)  | 83,468        | SF        | \$6.60     | \$550,889          |
| 1,089    |   |               |           |            |                    |
| 1,090    | <b>General Requirements</b>   | <b>12.0%</b>  |           |            | \$66,107.00        |
| 1,091    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |            | \$37,020.00        |
| 1,092    | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |            | \$98,102.00        |
| 1,093    |   |               |           |            |                    |
| 1,094    | <b>Subtotal: DDC-1 Upgrade Controls to DDC</b>  |               |           |            | <b>\$752,118</b>   |
| 1,095    |   |               |           |            |                    |
| 1,096    |   |               |           |            |                    |
| 1,097    |   |               |           |            |                    |
| 1,098    |   |               |           |            |                    |
| 1,099    |   |               |           |            |                    |
| 1,100    |   |               |           |            |                    |
| 1,101    |   |               |           |            |                    |
| 1,102    |   |               |           |            |                    |

SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY

| Line No. | Description   | Qty          | UNITS | Total Cost  |                 |
|----------|---|--------------|-------|-------------|-----------------|
|          |   |              |       | Unit \$     | Matl/Labor \$   |
| 1,103    | <b>ELEC-1 Exterior Disconnects</b>                            | 1            | LS    |             |                 |
| 1,104    |   |              |       |             |                 |
| 1,105    | Main Disconnect 800A  | 1            | EA    | \$13,021.27 | \$13,021        |
| 1,106    | Generator Disconnect 60A                                      | 1            | EA    | \$1,824.25  | \$1,824         |
| 1,107    |   |              |       |             |                 |
| 1,108    | <b>General Requirements</b>                                   | <b>12.0%</b> |       |             | \$1,781.00      |
| 1,109    | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$998.00        |
| 1,110    | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |       |             | \$2,644.00      |
| 1,111    |   |              |       |             |                 |
| 1,112    | <b>Subtotal: ELEC-1 Exterior Disconnects</b>                  |              |       |             | <b>\$20,268</b> |
| 1,113    |   |              |       |             |                 |
| 1,114    |   |              |       |             |                 |
| 1,115    | <b>ELEC-2 GFI Receptacles</b>                                 | 60           | EA    |             |                 |
| 1,116    |   |              |       |             |                 |
| 1,117    | GFCI Receptacles  | 60           | EA    | \$76.58     | \$4,595         |
| 1,118    |   |              |       |             |                 |
| 1,119    | <b>General Requirements</b>                                   | <b>12.0%</b> |       |             | \$551.00        |
| 1,120    | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$309.00        |
| 1,121    | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |       |             | \$818.00        |
| 1,122    |   |              |       |             |                 |
| 1,123    | <b>Subtotal: ELEC-2 GFI Receptacles</b>                       |              |       |             | <b>\$6,273</b>  |
| 1,124    |   |              |       |             |                 |
| 1,125    |   |              |       |             |                 |
| 1,126    | <b>ELEC-3 Exterior Weatherproof GFI Receptacles</b>           | 32           | EA    |             |                 |
| 1,127    |   |              |       |             |                 |
| 1,128    | WP GFI Receptacles  | 32           | EA    | \$84.54     | \$2,705         |
| 1,129    | 3/4" EMT, 3#10, 1#10  | 2,240        | LF    | \$17.22     | \$38,573        |
| 1,130    |   |              |       |             |                 |
| 1,131    | <b>General Requirements</b>                                   | <b>12.0%</b> |       |             | \$4,953.00      |
| 1,132    | <b>Contractors Fee</b>  | <b>6.0%</b>  |       |             | \$2,774.00      |
| 1,133    | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |       |             | \$7,351.00      |
| 1,134    |   |              |       |             |                 |
| 1,135    | <b>Subtotal: ELEC-3 Exterior Weatherproof GFI Receptacles</b> |              |       |             | <b>\$56,356</b> |
| 1,136    |   |              |       |             |                 |
| 1,137    |   |              |       |             |                 |
| 1,138    |   |              |       |             |                 |
| 1,139    |   |              |       |             |                 |
| 1,140    |   |              |       |             |                 |
| 1,141    |   |              |       |             |                 |
| 1,142    |   |              |       |             |                 |
| 1,143    |   |              |       |             |                 |
| 1,144    |   |              |       |             |                 |
| 1,145    |   |              |       |             |                 |
| 1,146    |   |              |       |             |                 |
| 1,147    |   |              |       |             |                 |
| 1,148    |   |              |       |             |                 |
| 1,149    |   |              |       |             |                 |
| 1,150    |   |              |       |             |                 |
| 1,151    |   |              |       |             |                 |
| 1,152    |   |              |       |             |                 |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description                                    | Qty          | UNITS     | Total Cost  |                  |
|----------|--|--------------|-----------|-------------|------------------|
|          |  |              |           | Unit \$     | Matl/Labor \$    |
| 1,153    | <b>ELEC-4 Emergency Branch Power</b>           |              |           |             |                  |
| 1,154    |  |              |           |             |                  |
| 1,155    | Panelboard 100A 480/277v MLO                   | 1            | EA        | \$5,628.76  | \$5,629          |
| 1,156    | Panelboard 225A 208/120v MLO                   | 3            | EA        | \$4,848.76  | \$14,546         |
| 1,157    | Transformer 45 KVA                             | 2            | EA        | \$6,313.27  | \$12,627         |
| 1,158    | Distribution Panels 225A 488/277v MLO          | 1            | EA        | \$6,696.89  | \$6,697          |
| 1,159    | ATS 4 Pole, 225A                               | 1            | EA        | \$6,768.51  | \$6,769          |
| 1,160    |  |              |           |             |                  |
| 1,161    | 100 Amp: 1-1/4" EMT, 4#2, 1#8                  | 100          | LF        | \$38.95     | \$3,895          |
| 1,162    | 225 Amp: 2" EMT, 4#4/0, 1#4                    | 300          | LF        | \$74.75     | \$22,425         |
| 1,163    |  |              |           |             |                  |
| 1,164    | <b>General Requirements</b>                    | <b>12.0%</b> |           |             | \$8,711.00       |
| 1,165    | <b>Contractors Fee</b>                         | <b>6.0%</b>  |           |             | \$4,878.00       |
| 1,166    | <b>Contingency and Escalation</b>              | <b>15.0%</b> |           |             | \$12,927.00      |
| 1,167    |  |              |           |             |                  |
| 1,168    | <b>Subtotal: ELEC-4 Emergency Branch Power</b> |              |           |             | <b>\$99,104</b>  |
| 1,169    |  |              |           |             |                  |
| 1,170    |  |              |           |             |                  |
| 1,171    | <b>ELEC-5 Replace MDP and Panels</b>           | <b>1</b>     | <b>LS</b> |             |                  |
| 1,172    |  |              |           |             |                  |
| 1,173    | Demo MDP                                       | 1            | EA        | \$2,305.01  | \$2,305          |
| 1,174    | Demo Panelboards                               | 10           | EA        | \$576.25    | \$5,763          |
| 1,175    | MDP 800A                                       | 1            | EA        | \$39,366.33 | \$39,366         |
| 1,176    | Panelboards 225A                               | 10           | EA        | \$4,848.76  | \$48,488         |
| 1,177    | Reuse Feeders                                  |              |           |             |                  |
| 1,178    |  |              |           |             |                  |
| 1,179    |  |              |           |             |                  |
| 1,180    | <b>General Requirements</b>                    | <b>12.0%</b> |           |             | \$11,511.00      |
| 1,181    | <b>Contractors Fee</b>                         | <b>6.0%</b>  |           |             | \$6,446.00       |
| 1,182    | <b>Contingency and Escalation</b>              | <b>15.0%</b> |           |             | \$17,082.00      |
| 1,183    |  |              |           |             |                  |
| 1,184    | <b>Subtotal: ELEC-5 Replace MDP and Panels</b> |              |           |             | <b>\$130,961</b> |
| 1,185    |  |              |           |             |                  |
| 1,186    |  |              |           |             |                  |
| 1,187    | <b>ELEC-6 Additional Panels</b>                | <b>8</b>     | <b>EA</b> |             |                  |
| 1,188    |  |              |           |             |                  |
| 1,189    | Panelboards                                    | 8            | EA        | \$4,848.76  | \$38,790         |
| 1,190    | 225 Amp: 2" EMT, 4#4/0, 1#4                    | 1,000        | LF        | \$74.75     | \$74,750         |
| 1,191    |  |              |           |             |                  |
| 1,192    | <b>General Requirements</b>                    | <b>12.0%</b> |           |             | \$13,625.00      |
| 1,193    | <b>Contractors Fee</b>                         | <b>6.0%</b>  |           |             | \$7,630.00       |
| 1,194    | <b>Contingency and Escalation</b>              | <b>15.0%</b> |           |             | \$20,219.00      |
| 1,195    |  |              |           |             |                  |
| 1,196    | <b>Subtotal: ELEC-6 Additional Panels</b>      |              |           |             | <b>\$155,014</b> |
| 1,197    |  |              |           |             |                  |
| 1,198    |  |              |           |             |                  |
| 1,199    |  |              |           |             |                  |
| 1,200    |  |              |           |             |                  |
| 1,201    |  |              |           |             |                  |
| 1,202    |  |              |           |             |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty           | UNITS     | Total Cost  |                    |
|----------|---|---------------|-----------|-------------|--------------------|
|          |   |               |           | Unit \$     | Matl/Labor \$      |
| 1,203    | <b>LIGHTING-1 Replace Exterior HID Wall and Pole Mtd Lights</b>           | <b>20</b>     | <b>EA</b> |             |                    |
| 1,204    |   |               |           |             |                    |
| 1,205    | Demo Fixtures   | 11            | EA        | \$144.06    | \$1,585            |
| 1,206    | Demo Pole Mounted Fixtures  | 9             | EA        | \$144.06    | \$1,297            |
| 1,207    | Wall Mounted Fixtures   | 11            | EA        | \$912.13    | \$10,033           |
| 1,208    | Pole Mounted Fixtures   | 9             | EA        | \$2,694.19  | \$24,248           |
| 1,209    |   |               |           |             |                    |
| 1,210    | <b>General Requirements</b>   | <b>12.0%</b>  |           |             | \$4,460.00         |
| 1,211    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |             | \$2,497.00         |
| 1,212    | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |             | \$6,618.00         |
| 1,213    |   |               |           |             |                    |
| 1,214    | <b>Subtotal: LIGHTING-1 Replace Exterior HID Wall and Pole Mtd Lights</b> |               |           |             | <b>\$50,738</b>    |
| 1,215    |   |               |           |             |                    |
| 1,216    |   |               |           |             |                    |
| 1,217    | <b>LIGHTING-2 Replace Interior Lighting</b>                               | <b>83,468</b> | <b>SF</b> |             |                    |
| 1,218    |   |               |           |             |                    |
| 1,219    | Demolition  | 1,391         | EA        | \$72.03     | \$100,194          |
| 1,220    | School Lighting Fixtures  | 1,391         | EA        | \$663.68    | \$923,179          |
| 1,221    | New Whips for Fixture Relocation  | 1,391         | EA        | \$75.02     | \$104,353          |
| 1,222    |   |               |           |             |                    |
| 1,223    | <b>General Requirements</b>   | <b>12.0%</b>  |           |             | \$135,327.00       |
| 1,224    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |             | \$75,783.00        |
| 1,225    | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |             | \$200,825.00       |
| 1,226    |   |               |           |             |                    |
| 1,227    | <b>Subtotal: LIGHTING-2 Replace Interior Lighting</b>                     |               |           |             | <b>\$1,539,661</b> |
| 1,228    |   |               |           |             |                    |
| 1,229    |   |               |           |             |                    |
| 1,230    | <b>LIGHTING-3 Lighting Controls</b>                                       | <b>140</b>    | <b>EA</b> |             |                    |
| 1,231    |   |               |           |             |                    |
| 1,232    | Add Occupancy Sensors   | 70            | EA        | \$378.06    | \$26,464           |
| 1,233    | Add Occupancy Sensor Switches   | 70            | EA        | \$153.02    | \$10,711           |
| 1,234    | Circuiting  | 2,800         | LF        | \$16.29     | \$45,612           |
| 1,235    |   |               |           |             |                    |
| 1,236    | <b>General Requirements</b>   | <b>12.0%</b>  |           |             | \$9,934.00         |
| 1,237    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |             | \$5,563.00         |
| 1,238    | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |             | \$14,743.00        |
| 1,239    |   |               |           |             |                    |
| 1,240    | <b>Subtotal: LIGHTING-3 Lighting Controls</b>                             |               |           |             | <b>\$113,027</b>   |
| 1,241    |   |               |           |             |                    |
| 1,242    |   |               |           |             |                    |
| 1,243    | <b>LIGHTING-4 Central Inverter for Emergency Lights</b>                   | <b>4</b>      | <b>EA</b> |             |                    |
| 1,244    |   |               |           |             |                    |
| 1,245    | Inverters 3KW   | 4             | EA        | \$28,656.25 | \$114,625          |
| 1,246    |   |               |           |             |                    |
| 1,247    | <b>General Requirements</b>   | <b>12.0%</b>  |           |             | \$13,755.00        |
| 1,248    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |             | \$7,703.00         |
| 1,249    | <b>Contingency and Escalation</b>   | <b>15.0%</b>  |           |             | \$20,412.00        |
| 1,250    |   |               |           |             |                    |
| 1,251    | <b>Subtotal: LIGHTING-4 Central Inverter for Emergency Lights</b>         |               |           |             | <b>\$156,495</b>   |
| 1,252    |   |               |           |             |                    |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty           | UNITS     | Total Cost  |                  |
|----------|--|---------------|-----------|-------------|------------------|
|          |  |               |           | Unit \$     | Matl/Labor \$    |
| 1,253    |  |               |           |             |                  |
| 1,254    | <b>LIGHTING-5 Replace Exit Signs</b>               | <b>40</b>     | <b>EA</b> |             |                  |
| 1,255    |  |               |           |             |                  |
| 1,256    | Remove/Dispose of Radio Active Exit Signs          | 40            | EA        | \$378.06    | \$15,122         |
| 1,257    | Exit Signs   | 40            | EA        | \$245.46    | \$9,818          |
| 1,258    |  |               |           |             |                  |
| 1,259    | <b>General Requirements</b>                        | <b>12.0%</b>  |           |             | \$2,993.00       |
| 1,260    | <b>Contractors Fee</b>                             | <b>6.0%</b>   |           |             | \$1,676.00       |
| 1,261    | <b>Contingency and Escalation</b>                  | <b>15.0%</b>  |           |             | \$4,441.00       |
| 1,262    |  |               |           |             |                  |
| 1,263    | <b>Subtotal: LIGHTING-5 Replace Exit Signs</b>     |               |           |             | <b>\$34,050</b>  |
| 1,264    |  |               |           |             |                  |
| 1,265    |  |               |           |             |                  |
| 1,266    | <b>TELECOM-1 Dedicated Com Room</b>                |               |           |             |                  |
| 1,267    |  |               |           |             |                  |
| 1,268    | Partitions   | 20            | LF        | \$349.09    | \$6,982          |
| 1,269    | Doors  | 1             | EA        | \$2,821.29  | \$2,821          |
| 1,270    | Telecom Equipment Racks and Appurtenances          | 1             | LS        | \$13,562.53 | \$13,563         |
| 1,271    | Main Switches, not included                        |               |           |             |                  |
| 1,272    | Telecom Cooling                                    | 1             | EA        | \$16,021.90 | \$16,022         |
| 1,273    |  |               |           |             |                  |
| 1,274    | <b>General Requirements</b>                        | <b>12.0%</b>  |           |             | \$4,727.00       |
| 1,275    | <b>Contractors Fee</b>                             | <b>6.0%</b>   |           |             | \$2,647.00       |
| 1,276    | <b>Contingency and Escalation</b>                  | <b>15.0%</b>  |           |             | \$7,014.00       |
| 1,277    |  |               |           |             |                  |
| 1,278    | <b>Subtotal: TELECOM-1 Dedicated Com Room</b>      |               |           |             | <b>\$53,776</b>  |
| 1,279    |  |               |           |             |                  |
| 1,280    |  |               |           |             |                  |
| 1,281    | <b>TELECOM-2 Cable Tray and Raceways</b>           |               |           |             |                  |
| 1,282    |  |               |           |             |                  |
| 1,283    | Cable Trays  | 850           | LF        | \$36.25     | \$30,813         |
| 1,284    | Raceways   | 100           | EA        | \$285.62    | \$28,562         |
| 1,285    |  |               |           |             |                  |
| 1,286    | <b>General Requirements</b>                        | <b>12.0%</b>  |           |             | \$7,125.00       |
| 1,287    | <b>Contractors Fee</b>                             | <b>6.0%</b>   |           |             | \$3,990.00       |
| 1,288    | <b>Contingency and Escalation</b>                  | <b>15.0%</b>  |           |             | \$10,574.00      |
| 1,289    |  |               |           |             |                  |
| 1,290    | <b>Subtotal: TELECOM-2 Cable Tray and Raceways</b> |               |           |             | <b>\$81,064</b>  |
| 1,291    |  |               |           |             |                  |
| 1,292    |  |               |           |             |                  |
| 1,293    | <b>TELECOM-3 Replace Intercom</b>                  | <b>83,468</b> | <b>SF</b> |             |                  |
| 1,294    |  |               |           |             |                  |
| 1,295    | Replace School Intercom                            | 83,468        | SF        | \$5.57      | \$464,917        |
| 1,296    |  |               |           |             |                  |
| 1,297    | <b>General Requirements</b>                        | <b>12.0%</b>  |           |             | \$55,790.00      |
| 1,298    | <b>Contractors Fee</b>                             | <b>6.0%</b>   |           |             | \$31,242.00      |
| 1,299    | <b>Contingency and Escalation</b>                  | <b>15.0%</b>  |           |             | \$82,792.00      |
| 1,300    |  |               |           |             |                  |
| 1,301    | <b>Subtotal: TELECOM-3 Replace Intercom</b>        |               |           |             | <b>\$634,741</b> |
| 1,302    |  |               |           |             |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty          | UNITS     | Total Cost  |                  |
|----------|--|--------------|-----------|-------------|------------------|
|          |  |              |           | Unit \$     | Matl/Labor \$    |
| 1,303    |  |              |           |             |                  |
| 1,304    | <b>TELECOM-4 Replace Sound Amplification System</b>              | <b>1</b>     | <b>LS</b> |             |                  |
| 1,305    | Replace Sound Amplification System                               | 1            | LS        | \$31,200.00 | \$31,200         |
| 1,306    |  |              |           |             |                  |
| 1,307    | <b>General Requirements</b>                                      | <b>12.0%</b> |           |             | \$3,744.00       |
| 1,308    | <b>Contractors Fee</b>   | <b>6.0%</b>  |           |             | \$2,097.00       |
| 1,309    | <b>Contingency and Escalation</b>                                | <b>15.0%</b> |           |             | \$5,556.00       |
| 1,310    |  |              |           |             |                  |
| 1,311    | <b>Subtotal: TELECOM-4 Replace Sound Amplification System</b>    |              |           |             | <b>\$42,597</b>  |
| 1,312    |  |              |           |             |                  |
| 1,313    |  |              |           |             |                  |
| 1,314    | <b>FA/FP-1 Addition Detection/Notification Devices</b>           | <b>1</b>     | <b>LS</b> |             |                  |
| 1,315    | Add Additional Devices   | 83,468       | SF        | \$1.80      | \$150,242        |
| 1,316    |  |              |           |             |                  |
| 1,317    | <b>General Requirements</b>                                      | <b>12.0%</b> |           |             | \$18,029.00      |
| 1,318    | <b>Contractors Fee</b>   | <b>6.0%</b>  |           |             | \$10,096.00      |
| 1,319    | <b>Contingency and Escalation</b>                                | <b>15.0%</b> |           |             | \$26,755.00      |
| 1,320    |  |              |           |             |                  |
| 1,321    | <b>Subtotal: FA/FP-1 Addition Detection/Notification Devices</b> |              |           |             | <b>\$205,122</b> |
| 1,322    |  |              |           |             |                  |
| 1,323    |  |              |           |             |                  |
| 1,324    | <b>SOLDOTNA PRIMARY SCHOOL - RENOVATION/CONVERSION</b>           |              |           |             |                  |
| 1,325    | <b>SPS-1 Renovate Admin</b>                                      | <b>3,900</b> | <b>SF</b> |             |                  |
| 1,326    |  |              |           |             |                  |
| 1,327    | Demo Existing Construction                                       | 3,900        | SF        | \$24.00     | \$93,600         |
| 1,328    | Partitions   | 5,600        | SF        | \$25.68     | \$143,808        |
| 1,329    | Doors  | 15           | EA        | \$2,809.29  | \$42,139         |
| 1,330    | Flooring   | 3,900        | SF        | \$10.01     | \$39,039         |
| 1,331    | Ceilings   | 3,900        | SF        | \$7.91      | \$30,849         |
| 1,332    | HVAC   | 3,900        | SF        | \$26.95     | \$105,105        |
| 1,333    | Plumbing Fixtures  | 6            | EA        |             |                  |
| 1,334    | Lavatories   | 2            | EA        | \$1,184.13  | \$2,368          |
| 1,335    | Water Closets  | 2            | EA        | \$2,400.20  | \$4,800          |
| 1,336    | Floor Drains   | 2            | EA        | \$553.07    | \$1,106          |
| 1,337    | Plumbing Roughin   | 6            | EA        | \$2,149.50  | \$12,897         |
| 1,338    | Power Receptacles  | 32           | EA        | \$578.10    | \$18,499         |
| 1,339    | Lighting - Replaced in Corrections Above                         |              |           |             |                  |
| 1,340    | Telecom  | 14           | EA        | \$924.86    | \$12,948         |
| 1,341    | FA - Added in Above  |              |           |             |                  |
| 1,342    |  |              |           |             |                  |
| 1,343    | <b>General Requirements</b>                                      | <b>12.0%</b> |           |             | \$60,859.00      |
| 1,344    | <b>Contractors Fee</b>   | <b>6.0%</b>  |           |             | \$34,081.00      |
| 1,345    | <b>Contingency and Escalation</b>                                | <b>15.0%</b> |           |             | \$90,315.00      |
| 1,346    |  |              |           |             |                  |
| 1,347    | <b>Subtotal: SPS-1 Renovate Admin</b>                            |              |           |             | <b>\$692,413</b> |
| 1,348    |  |              |           |             |                  |
| 1,349    |  |              |           |             |                  |
| 1,350    |  |              |           |             |                  |
| 1,351    |  |              |           |             |                  |
| 1,352    |  |              |           |             |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty           | UNITS     | Total Cost |                  |
|----------|---|---------------|-----------|------------|------------------|
|          |   |               |           | Unit \$    | Matl/Labor \$    |
| 1,353    | <b>SPS-2 Renovation of General Classroom Spaces</b>           | <b>22,266</b> | <b>SF</b> |            |                  |
| 1,354    |   |               |           |            |                  |
| 1,355    | Add Toilet Rooms  | 14            | EA        |            |                  |
| 1,356    | Partitions  | 2,352         | SF        | \$25.68    | \$60,399         |
| 1,357    | Doors   | 14            | EA        | \$2,809.29 | \$39,330         |
| 1,358    | Flooring  | 504           | SF        | \$10.01    | \$5,045          |
| 1,359    | Wall Coving PVC   |               |           |            |                  |
| 1,360    | Ceilings  | 504           | SF        | \$7.91     | \$3,987          |
| 1,361    | Exhaust   | 14            | EA        | \$1,198.49 | \$16,779         |
| 1,362    | Demo Slab on Grade  |               |           |            |                  |
| 1,363    | Plumbing Fixtures   | 42            | EA        |            |                  |
| 1,364    | Lavatories  | 14            | EA        | \$1,184.13 | \$16,578         |
| 1,365    | Water Closets   | 14            | EA        | \$2,400.20 | \$33,603         |
| 1,366    | Floor Drains  | 14            | EA        | \$553.07   | \$7,743          |
| 1,367    | Plumbing Roughin  | 42            | EA        | \$2,149.50 | \$90,279         |
| 1,368    | Power Receptacles   | 32            | EA        | \$578.10   | \$18,499         |
| 1,369    | Lighting - Replaced in Corrections Above                      |               |           |            |                  |
| 1,370    | Telecom - 4 per room  | 14            | EA        | \$3,699.42 | \$51,792         |
| 1,371    | Outlet for Display screen included in above                   |               |           |            |                  |
| 1,372    | FA - Added in Above   |               |           |            |                  |
| 1,373    | Smart Boards  | 14            | EA        | \$2,827.24 | \$39,581         |
| 1,374    | Sound Amplification system                                    | 14            | EA        | \$3,600.00 | \$50,400         |
| 1,375    |   |               |           |            |                  |
| 1,376    | <b>General Requirements</b>                                   | <b>12.0%</b>  |           |            | \$52,082.00      |
| 1,377    | <b>Contractors Fee</b>  | <b>6.0%</b>   |           |            | \$29,166.00      |
| 1,378    | <b>Contingency and Escalation</b>                             | <b>15.0%</b>  |           |            | \$77,289.00      |
| 1,379    |   |               |           |            |                  |
| 1,380    | <b>Subtotal: SPS-2 Renovation of General Classroom Spaces</b> |               |           |            | <b>\$592,552</b> |
| 1,381    |   |               |           |            |                  |
| 1,382    |   |               |           |            |                  |
| 1,383    |   |               |           |            |                  |
| 1,384    |   |               |           |            |                  |
| 1,385    |   |               |           |            |                  |
| 1,386    |   |               |           |            |                  |
| 1,387    |   |               |           |            |                  |
| 1,388    |   |               |           |            |                  |
| 1,389    |   |               |           |            |                  |
| 1,390    |   |               |           |            |                  |
| 1,391    |   |               |           |            |                  |
| 1,392    |   |               |           |            |                  |
| 1,393    |   |               |           |            |                  |
| 1,394    |   |               |           |            |                  |
| 1,395    |   |               |           |            |                  |
| 1,396    |   |               |           |            |                  |
| 1,397    |   |               |           |            |                  |
| 1,398    |   |               |           |            |                  |
| 1,399    |   |               |           |            |                  |
| 1,400    |   |               |           |            |                  |
| 1,401    |   |               |           |            |                  |
| 1,402    |   |               |           |            |                  |
| 1,403    |   |               |           |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description                              | Qty          | UNITS     | Total Cost |                    |
|----------|--|--------------|-----------|------------|--------------------|
|          |  |              |           | Unit \$    | Matl/Labor \$      |
| 1,404    | <b>SPS-3 Building Addition</b>           |              |           |            |                    |
| 1,405    |  |              |           |            |                    |
| 1,406    | <b>Music</b>                             | <b>1,050</b> | <b>SF</b> |            |                    |
| 1,407    | Earthwork                                | 1,050        | SF        | \$11.02    | \$11,571           |
| 1,408    | Foundations                              | 95           | LF        | \$246.90   | \$23,456           |
| 1,409    | Slab On Grade                            | 1,050        | SF        | \$9.48     | \$9,955            |
| 1,410    | Roof Structure                           | 1,050        | SF        | \$55.27    | \$58,034           |
| 1,411    | Roofing                                  | 1,050        | SF        | \$46.08    | \$48,384           |
| 1,412    | Ext Wall, Framed                         | 1,520        | SF        | \$54.00    | \$82,080           |
| 1,413    | Exterior Doors                           | 1            | EA        | \$4,281.72 | \$4,282            |
| 1,414    | Windows                                  | 230          | SF        | \$99.26    | \$22,830           |
| 1,415    | Finishes                                 | 1,050        | SF        | \$23.04    | \$24,192           |
| 1,416    | Interior Doors                           | 4            | EA        | \$2,560.86 | \$10,243           |
| 1,417    | Ventilation                              | 1,050        | SF        | \$34.32    | \$36,036           |
| 1,418    | Baseboard Heat                           | 95           | LF        | \$244.63   | \$23,240           |
| 1,419    | Lighting                                 | 20           | EA        | \$759.11   | \$15,182           |
| 1,420    | Power Outlets                            | 8            | EA        | \$493.33   | \$3,947            |
| 1,421    | FA                                       | 1,050        | SF        | \$5.46     | \$5,733            |
| 1,422    | Data Outlets                             | 4            | EA        | \$624.00   | \$2,496            |
| 1,423    | Intercom Station                         | 1            | EA        | \$775.20   | \$775              |
| 1,424    | Speakers                                 | 6            | EA        | \$336.84   | \$2,021            |
| 1,425    |  |              |           |            |                    |
| 1,426    | <b>Boys and Girls Club</b>               | <b>1,050</b> | <b>SF</b> |            |                    |
| 1,427    | Earthwork                                | 1,050        | SF        | \$11.02    | \$11,571           |
| 1,428    | Foundations                              | 95           | LF        | \$246.90   | \$23,456           |
| 1,429    | Slab On Grade                            | 1,050        | SF        | \$9.48     | \$9,955            |
| 1,430    | Roof Structure                           | 1,050        | SF        | \$55.27    | \$58,034           |
| 1,431    | Roofing                                  | 1,050        | SF        | \$46.08    | \$48,384           |
| 1,432    | Ext Wall, Framed                         | 1,520        | SF        | \$54.00    | \$82,080           |
| 1,433    | Exterior Doors                           | 1            | EA        | \$4,281.72 | \$4,282            |
| 1,434    | Windows                                  | 230          | SF        | \$99.26    | \$22,830           |
| 1,435    | Finishes                                 | 1,050        | SF        | \$23.04    | \$24,192           |
| 1,436    | Interior Doors                           | 4            | EA        | \$2,560.86 | \$10,243           |
| 1,437    | Ventilation                              | 1,050        | SF        | \$34.32    | \$36,036           |
| 1,438    | Baseboard Heat                           | 95           | LF        | \$244.63   | \$23,240           |
| 1,439    | Lighting                                 | 20           | EA        | \$759.11   | \$15,182           |
| 1,440    | Power Outlets                            | 8            | EA        | \$493.33   | \$3,947            |
| 1,441    | FA                                       | 1,050        | SF        | \$5.46     | \$5,733            |
| 1,442    | Data Outlets                             | 4            | EA        | \$624.00   | \$2,496            |
| 1,443    | Intercom Station                         | 1            | EA        | \$775.20   | \$775              |
| 1,444    | Speakers                                 | 6            | EA        | \$336.84   | \$2,021            |
| 1,445    | <b>General Requirements</b>              | <b>12.0%</b> |           |            | \$92,270.00        |
| 1,446    | <b>Contractors Fee</b>                   | <b>6.0%</b>  |           |            | \$51,671.00        |
| 1,447    | <b>Contingency and Escalation</b>        | <b>15.0%</b> |           |            | \$136,928.00       |
| 1,448    |  |              |           |            |                    |
| 1,449    | <b>Subtotal: SPS-3 Building Addition</b> |              |           |            | <b>\$1,049,783</b> |
| 1,450    |  |              |           |            |                    |
| 1,451    |  |              |           |            |                    |
| 1,452    |  |              |           |            |                    |
| 1,453    |  |              |           |            |                    |
| 1,454    |  |              |           |            |                    |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty          | UNITS | Total Cost |                  |
|----------|--|--------------|-------|------------|------------------|
|          |  |              |       | Unit \$    | Matl/Labor \$    |
| 1,455    | <b>SPS-4 Fire Sprinklers See LS-1</b>                                  |              |       |            |                  |
| 1,456    |  |              |       |            |                  |
| 1,457    |  |              |       |            |                  |
| 1,458    | <b>Subtotal: SPS-4 Fire Sprinklers See LS-1</b>                        |              |       |            |                  |
| 1,459    |  |              |       |            |                  |
| 1,460    |  |              |       |            |                  |
| 1,461    | <b>SPS-5 Replace Operable Partitions with Permanent Wall</b>           |              |       |            |                  |
| 1,462    |  |              |       |            |                  |
| 1,463    | Demo Operable Partitions   | 285          | LF    | \$53.40    | \$15,219         |
| 1,464    | Partitions   | 3,990        | SF    | \$25.97    | \$103,620        |
| 1,465    | Patch Finishes   | 285          | LF    | \$86.43    | \$24,633         |
| 1,466    | New Receptacles  | 48           | EA    | \$620.44   | \$29,782         |
| 1,467    | Data Outlets   | 24           | EA    | \$734.19   | \$17,621         |
| 1,468    |  |              |       |            |                  |
| 1,469    | <b>General Requirements</b>  | <b>12.0%</b> |       |            | \$22,905.00      |
| 1,470    | <b>Contractors Fee</b>   | <b>6.0%</b>  |       |            | \$12,827.00      |
| 1,471    | <b>Contingency and Escalation</b>                                      | <b>15.0%</b> |       |            | \$33,991.00      |
| 1,472    |  |              |       |            |                  |
| 1,473    | <b>Subtotal: SPS-5 Replace Operable Partitions with Permanent Wall</b> |              |       |            | <b>\$260,598</b> |
| 1,474    |  |              |       |            |                  |
| 1,475    |  |              |       |            |                  |
| 1,476    |  |              |       |            |                  |
| 1,477    |  |              |       |            |                  |
| 1,478    |  |              |       |            |                  |
| 1,479    |  |              |       |            |                  |
| 1,480    |  |              |       |            |                  |
| 1,481    |  |              |       |            |                  |
| 1,482    |  |              |       |            |                  |
| 1,483    |  |              |       |            |                  |
| 1,484    |  |              |       |            |                  |
| 1,485    |  |              |       |            |                  |
| 1,486    |  |              |       |            |                  |
| 1,487    |  |              |       |            |                  |
| 1,488    |  |              |       |            |                  |
| 1,489    |  |              |       |            |                  |
| 1,490    |  |              |       |            |                  |
| 1,491    |  |              |       |            |                  |
| 1,492    |  |              |       |            |                  |
| 1,493    |  |              |       |            |                  |
| 1,494    |  |              |       |            |                  |
| 1,495    |  |              |       |            |                  |
| 1,496    |  |              |       |            |                  |
| 1,497    |  |              |       |            |                  |
| 1,498    |  |              |       |            |                  |
| 1,499    |  |              |       |            |                  |
| 1,500    |  |              |       |            |                  |
| 1,501    |  |              |       |            |                  |
| 1,502    |  |              |       |            |                  |
| 1,503    |  |              |       |            |                  |
| 1,504    |  |              |       |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty          | UNITS     | Total Cost |                  |
|----------|---|--------------|-----------|------------|------------------|
|          |   |              |           | Unit \$    | Matl/Labor \$    |
| 1,505    | <b>SOLDOTNA MIDDLE SCHOOL - RENOVATION/CONVERSION</b> |              |           |            |                  |
| 1,506    | <b>SMS-1 Renovate Administrative Hub</b>              | <b>3,400</b> | <b>SF</b> |            |                  |
| 1,507    |   |              |           |            |                  |
| 1,508    | Demo, Gut Area  | 3,400        | SF        | \$25.61    | \$87,074         |
| 1,509    | Demo Concrete Floor                                   | 400          | SF        | \$10.68    | \$4,272          |
| 1,510    | Slab Cutting  | 440          | LF        | \$7.20     | \$3,168          |
| 1,511    | Repair Slab on Grade                                  | 400          | SF        | \$44.26    | \$17,704         |
| 1,512    | New Partitions  | 5,544        | SF        | \$25.31    | \$140,319        |
| 1,513    | New Interior Door                                     | 17           | EA        | \$2,917.29 | \$49,594         |
| 1,514    | Flooring  | 3,400        | SF        | \$15.77    | \$53,618         |
| 1,515    | Ceilings  | 3,400        | SF        | \$8.21     | \$27,914         |
| 1,516    | Toilet Accessories                                    | 2            | SETS      | \$620.43   | \$1,241          |
| 1,517    | Cabinets, Base and Countertop SS                      | 20           | LF        | \$612.72   | \$12,254         |
| 1,518    | Cabinets, Wall  | 20           | LF        | \$225.57   | \$4,511          |
| 1,519    | Reception Casework with SS Tops                       | 20           | LF        | \$826.81   | \$16,536         |
| 1,520    | Plumbing  | 4            | EA        | \$1,792.17 | \$7,169          |
| 1,521    | Plumbing Roughin                                      | 4            | EA        | \$2,149.50 | \$8,598          |
| 1,522    | HVAC Revisions  | 3,400        | SF        | \$25.42    | \$86,428         |
| 1,523    | Fire Sprinkler Revisions                              | 3,400        | SF        | \$4.68     | \$15,912         |
| 1,524    | Lighting  | 68           | EA        | \$1,173.64 | \$79,808         |
| 1,525    | Lighting Controls                                     | 3,400        | SF        | \$2.34     | \$7,956          |
| 1,526    | Power Receptacles                                     | 58           | EA        | \$578.10   | \$33,529         |
| 1,527    | FA  | 3,400        | SF        | \$6.24     | \$21,216         |
| 1,528    | Data Outlets  | 26           | EA        | \$624.00   | \$16,224         |
| 1,529    |   |              |           |            |                  |
| 1,530    |   |              |           |            |                  |
| 1,531    | <b>General Requirements</b>                           | <b>12.0%</b> |           |            | \$83,405.00      |
| 1,532    | <b>Contractors Fee</b>                                | <b>6.0%</b>  |           |            | \$46,707.00      |
| 1,533    | <b>Contingency and Escalation</b>                     | <b>15.0%</b> |           |            | \$123,774.00     |
| 1,534    |   |              |           |            |                  |
| 1,535    | <b>Subtotal: SMS-1 Renovate Administrative Hub</b>    |              |           |            | <b>\$948,931</b> |
| 1,536    |   |              |           |            |                  |
| 1,537    |   |              |           |            |                  |
| 1,538    |   |              |           |            |                  |
| 1,539    |   |              |           |            |                  |
| 1,540    |   |              |           |            |                  |
| 1,541    |   |              |           |            |                  |
| 1,542    |   |              |           |            |                  |
| 1,543    |   |              |           |            |                  |
| 1,544    |   |              |           |            |                  |
| 1,545    |   |              |           |            |                  |
| 1,546    |   |              |           |            |                  |
| 1,547    |   |              |           |            |                  |
| 1,548    |   |              |           |            |                  |
| 1,549    |   |              |           |            |                  |
| 1,550    |   |              |           |            |                  |
| 1,551    |   |              |           |            |                  |
| 1,552    |   |              |           |            |                  |
| 1,553    |   |              |           |            |                  |
| 1,554    |   |              |           |            |                  |
| 1,555    |   |              |           |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty          | UNITS     | Total Cost   |                    |
|----------|--|--------------|-----------|--------------|--------------------|
|          |  |              |           | Unit \$      | Matl/Labor \$      |
| 1,556    | <b>SMS-2 Renovate Multipurpose Space &amp; Gym</b>           | <b>4,440</b> | <b>SF</b> |              |                    |
| 1,557    |  |              |           |              |                    |
| 1,558    | Demo, Gut Area, weight rooms, offices, lockers, showers      | 4,440        | SF        | \$37.82      | \$167,921          |
| 1,559    | Demo Concrete Floor  | 1,000        | SF        | \$10.68      | \$10,680           |
| 1,560    | Slab Cutting   | 400          | LF        | \$7.20       | \$2,880            |
| 1,561    | Repair Slab on Grade   | 1,000        | SF        | \$44.26      | \$44,260           |
| 1,562    | New Partitions   | 5,952        | SF        | \$25.31      | \$150,645          |
| 1,563    | New Interior Door  | 10           | EA        | \$2,917.29   | \$29,173           |
| 1,564    | New Interior Door, Dbl                                       | 4            | EA        | \$4,545.72   | \$18,183           |
| 1,565    | Flooring   | 4,440        | SF        | \$15.77      | \$70,018           |
| 1,566    | Ceilings   | 4,440        | SF        | \$8.21       | \$36,452           |
| 1,567    | Markerboards   | 128          | SF        | \$22.25      | \$2,848            |
| 1,568    | Tackboards   | 64           | SF        | \$7.85       | \$502              |
| 1,569    | Cabinets, Base and Countertop SS                             | 40           | LF        | \$612.72     | \$24,509           |
| 1,570    | Cabinets, Wall   | 40           | LF        | \$225.57     | \$9,023            |
| 1,571    | Kitchen Equipment  | 1            | LS        | \$201,361.93 | \$201,362          |
| 1,572    | Plumbing   | 6            | EA        | \$1,792.17   | \$10,753           |
| 1,573    | Plumbing Roughin   | 6            | EA        | \$2,149.50   | \$12,897           |
| 1,574    | HVAC Revisions   | 4,440        | SF        | \$25.42      | \$112,864          |
| 1,575    | Fire Sprinkler Revisions                                     | 4,440        | SF        | \$4.68       | \$20,779           |
| 1,576    | Lighting   | 111          | EA        | \$1,173.64   | \$130,274          |
| 1,577    | Lighting Controls  | 4,440        | SF        | \$2.34       | \$10,390           |
| 1,578    | Power Receptacles  | 100          | EA        | \$578.10     | \$57,810           |
| 1,579    | FA   | 4,440        | SF        | \$6.24       | \$27,706           |
| 1,580    | Data Outlets   | 20           | EA        | \$624.00     | \$12,480           |
| 1,581    |  |              |           |              |                    |
| 1,582    | <b>General Requirements</b>                                  | <b>12.0%</b> |           |              | \$139,729.00       |
| 1,583    | <b>Contractors Fee</b>                                       | <b>6.0%</b>  |           |              | \$78,248.00        |
| 1,584    | <b>Contingency and Escalation</b>                            | <b>15.0%</b> |           |              | \$207,358.00       |
| 1,585    |  |              |           |              |                    |
| 1,586    | <b>Subtotal: SMS-2 Renovate Multipurpose Space &amp; Gym</b> |              |           |              | <b>\$1,589,744</b> |
| 1,587    |  |              |           |              |                    |
| 1,588    |  |              |           |              |                    |
| 1,589    |  |              |           |              |                    |
| 1,590    |  |              |           |              |                    |
| 1,591    |  |              |           |              |                    |
| 1,592    |  |              |           |              |                    |
| 1,593    |  |              |           |              |                    |
| 1,594    |  |              |           |              |                    |
| 1,595    |  |              |           |              |                    |
| 1,596    |  |              |           |              |                    |
| 1,597    |  |              |           |              |                    |
| 1,598    |  |              |           |              |                    |
| 1,599    |  |              |           |              |                    |
| 1,600    |  |              |           |              |                    |
| 1,601    |  |              |           |              |                    |
| 1,602    |  |              |           |              |                    |
| 1,603    |  |              |           |              |                    |
| 1,604    |  |              |           |              |                    |
| 1,605    |  |              |           |              |                    |
| 1,606    |  |              |           |              |                    |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty          | UNITS     | Total Cost |                  |
|----------|---|--------------|-----------|------------|------------------|
|          |   |              |           | Unit \$    | Matl/Labor \$    |
| 1,607    | <b>SMS-3 Create New East-West Hallway</b>           | <b>960</b>   | <b>SF</b> |            |                  |
| 1,608    |   |              |           |            |                  |
| 1,609    | Demo, Gut Area, lockers, showers                    | 960          | SF        | \$37.82    | \$36,307         |
| 1,610    | Demo Concrete Floor                                 | 960          | SF        | \$10.68    | \$10,253         |
| 1,611    | Slab Cutting  | 200          | LF        | \$7.20     | \$1,440          |
| 1,612    | Repair Slab on Grade                                | 960          | SF        | \$44.26    | \$42,489         |
| 1,613    | New Partitions                                      | 1,600        | SF        | \$25.31    | \$40,496         |
| 1,614    | New Finish on Existing Partitions                   | 1,600        | SF        | \$9.80     | \$15,680         |
| 1,615    | New Interior Door, Dbl                              | 4            | EA        | \$4,545.72 | \$18,183         |
| 1,616    | Flooring  | 960          | SF        | \$15.77    | \$15,140         |
| 1,617    | Ceilings  | 960          | SF        | \$8.21     | \$7,882          |
| 1,618    | HVAC Revisions                                      | 960          | SF        | \$25.42    | \$24,404         |
| 1,619    | Fire Sprinkler Revisions                            | 960          | SF        | \$4.68     | \$4,493          |
| 1,620    | Lighting  | 16           | EA        | \$1,173.64 | \$18,779         |
| 1,621    | Lighting Controls                                   | 960          | SF        | \$1.56     | \$1,498          |
| 1,622    | Power Receptacles                                   | 10           | EA        | \$578.10   | \$5,781          |
| 1,623    | Fire Sprinkler Revisions                            | 960          | SF        | \$3.60     | \$3,456          |
| 1,624    | FA  | 960          | SF        | \$6.24     | \$5,990          |
| 1,625    | Data Outlets  | 20           | EA        | \$624.00   | \$12,480         |
| 1,626    |   |              |           |            |                  |
| 1,627    |   |              |           |            |                  |
| 1,628    | <b>General Requirements</b>                         | <b>12.0%</b> |           |            | \$31,770.00      |
| 1,629    | <b>Contractors Fee</b>                              | <b>6.0%</b>  |           |            | \$17,791.00      |
| 1,630    | <b>Contingency and Escalation</b>                   | <b>15.0%</b> |           |            | \$47,147.00      |
| 1,631    |   |              |           |            |                  |
| 1,632    | <b>Subtotal: SMS-3 Create New East-West Hallway</b> |              |           |            | <b>\$361,459</b> |
| 1,633    |   |              |           |            |                  |
| 1,634    |   |              |           |            |                  |
| 1,635    |   |              |           |            |                  |
| 1,636    |   |              |           |            |                  |
| 1,637    |   |              |           |            |                  |
| 1,638    |   |              |           |            |                  |
| 1,639    |   |              |           |            |                  |
| 1,640    |   |              |           |            |                  |
| 1,641    |   |              |           |            |                  |
| 1,642    |   |              |           |            |                  |
| 1,643    |   |              |           |            |                  |
| 1,644    |   |              |           |            |                  |
| 1,645    |   |              |           |            |                  |
| 1,646    |   |              |           |            |                  |
| 1,647    |   |              |           |            |                  |
| 1,648    |   |              |           |            |                  |
| 1,649    |   |              |           |            |                  |
| 1,650    |   |              |           |            |                  |
| 1,651    |   |              |           |            |                  |
| 1,652    |   |              |           |            |                  |
| 1,653    |   |              |           |            |                  |
| 1,654    |   |              |           |            |                  |
| 1,655    |   |              |           |            |                  |
| 1,656    |   |              |           |            |                  |
| 1,657    |   |              |           |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description                         | Qty          | UNITS     | Total Cost |                  |
|----------|-------------------------------------|--------------|-----------|------------|------------------|
|          |                                     |              |           | Unit \$    | Matl/Labor \$    |
| 1,658    | <b>SMS-4 Remodel Shop</b>           | <b>3,335</b> | <b>SF</b> |            |                  |
| 1,659    |                                     |              |           |            |                  |
| 1,660    | Demo, Gut Area, shop                | 3,335        | SF        | \$25.61    | \$85,409         |
| 1,661    | Patch Floors                        | 3,335        | SF        | \$1.20     | \$4,002          |
| 1,662    | New Partitions                      | 1,568        | SF        | \$25.31    | \$39,686         |
| 1,663    | New Finish on Existing Partitions   | 2,300        | SF        | \$9.80     | \$22,540         |
| 1,664    | New Interior Door                   | 4            | EA        | \$2,917.29 | \$11,669         |
| 1,665    | Flooring                            | 3,335        | SF        | \$15.77    | \$52,593         |
| 1,666    | Ceilings                            | 3,335        | SF        | \$8.21     | \$27,380         |
| 1,667    | Markerboards                        | 192          | SF        | \$22.25    | \$4,272          |
| 1,668    | Tackboards                          | 96           | SF        | \$7.85     | \$754            |
| 1,669    | Cabinets, Base and Countertop SS    | 60           | LF        | \$612.72   | \$36,763         |
| 1,670    | Cabinets, Wall                      | 60           | LF        | \$225.57   | \$13,534         |
| 1,671    | HVAC Revisions                      | 3,335        | SF        | \$25.42    | \$84,775         |
| 1,672    | Fire Sprinkler Revisions            | 3,335        | SF        | \$4.68     | \$15,608         |
| 1,673    | Lighting                            | 67           | EA        | \$1,173.64 | \$78,634         |
| 1,674    | Lighting Controls                   | 3,335        | SF        | \$2.34     | \$7,804          |
| 1,675    | Power Receptacles                   | 38           | EA        | \$578.10   | \$21,968         |
| 1,676    | Fire Sprinkler Revisions            | 3,335        | SF        | \$3.60     | \$12,006         |
| 1,677    | FA                                  | 3,335        | SF        | \$6.24     | \$20,810         |
| 1,678    | Data Outlets                        | 12           | EA        | \$624.00   | \$7,488          |
| 1,679    |                                     |              |           |            |                  |
| 1,680    | <b>General Requirements</b>         | <b>12.0%</b> |           |            | \$65,723.00      |
| 1,681    | <b>Contractors Fee</b>              | <b>6.0%</b>  |           |            | \$36,805.00      |
| 1,682    | <b>Contingency and Escalation</b>   | <b>15.0%</b> |           |            | \$97,533.00      |
| 1,683    |                                     |              |           |            |                  |
| 1,684    | <b>Subtotal: SMS-4 Remodel Shop</b> |              |           |            | <b>\$747,756</b> |
| 1,685    |                                     |              |           |            |                  |
| 1,686    |                                     |              |           |            |                  |
| 1,687    |                                     |              |           |            |                  |
| 1,688    |                                     |              |           |            |                  |
| 1,689    |                                     |              |           |            |                  |
| 1,690    |                                     |              |           |            |                  |
| 1,691    |                                     |              |           |            |                  |
| 1,692    |                                     |              |           |            |                  |
| 1,693    |                                     |              |           |            |                  |
| 1,694    |                                     |              |           |            |                  |
| 1,695    |                                     |              |           |            |                  |
| 1,696    |                                     |              |           |            |                  |
| 1,697    |                                     |              |           |            |                  |
| 1,698    |                                     |              |           |            |                  |
| 1,699    |                                     |              |           |            |                  |
| 1,700    |                                     |              |           |            |                  |
| 1,701    |                                     |              |           |            |                  |
| 1,702    |                                     |              |           |            |                  |
| 1,703    |                                     |              |           |            |                  |
| 1,704    |                                     |              |           |            |                  |
| 1,705    |                                     |              |           |            |                  |
| 1,706    |                                     |              |           |            |                  |
| 1,707    |                                     |              |           |            |                  |
| 1,708    |                                     |              |           |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty          | UNITS     | Total Cost |                    |
|----------|---|--------------|-----------|------------|--------------------|
|          |   |              |           | Unit \$    | Matl/Labor \$      |
| 1,709    | <b>SMS-5 Remodel Art Room &amp; Intensive Needs</b>           | <b>4,080</b> | <b>SF</b> |            |                    |
| 1,710    |   |              |           |            |                    |
| 1,711    | Demo, Gut Area  | 4,080        | SF        | \$25.61    | \$104,489          |
| 1,712    | Demo Concrete Floor   | 400          | SF        | \$10.68    | \$4,272            |
| 1,713    | Slab Cutting  | 200          | LF        | \$7.20     | \$1,440            |
| 1,714    | Repair Slab on Grade  | 400          | SF        | \$44.26    | \$17,704           |
| 1,715    | New Partitions  | 3,612        | SF        | \$25.31    | \$91,420           |
| 1,716    | New Finish on Existing Partitions                             | 3,360        | SF        | \$9.80     | \$32,928           |
| 1,717    | New Interior Door   | 9            | EA        | \$2,917.29 | \$26,256           |
| 1,718    | Flooring  | 4,080        | SF        | \$15.77    | \$64,342           |
| 1,719    | Ceilings  | 4,080        | SF        | \$8.21     | \$33,497           |
| 1,720    | Markerboards  | 192          | SF        | \$22.25    | \$4,272            |
| 1,721    | Tackboards  | 96           | SF        | \$7.85     | \$754              |
| 1,722    | Toilet Accessories  | 2            | SETS      | \$847.24   | \$1,694            |
| 1,723    | Cabinets, Base and Countertop SS                              | 60           | LF        | \$612.72   | \$36,763           |
| 1,724    | Cabinets, Wall  | 60           | LF        | \$225.57   | \$13,534           |
| 1,725    | Plumbing  | 4            | EA        | \$1,792.17 | \$7,169            |
| 1,726    | Plumbing Roughin  | 4            | EA        | \$2,149.50 | \$8,598            |
| 1,727    | HVAC Revisions  | 4,080        | SF        | \$25.42    | \$103,714          |
| 1,728    | Fire Sprinkler Revisions                                      | 4,080        | SF        | \$4.68     | \$19,094           |
| 1,729    | Lighting  | 82           | EA        | \$1,173.64 | \$96,238           |
| 1,730    | Lighting Controls   | 4,080        | SF        | \$2.34     | \$9,547            |
| 1,731    | Power Receptacles   | 71           | EA        | \$578.10   | \$41,045           |
| 1,732    | Fire Sprinkler Revisions                                      | 4,080        | SF        | \$3.60     | \$14,688           |
| 1,733    | FA  | 4,080        | SF        | \$6.24     | \$25,459           |
| 1,734    | Data Outlets  | 12           | EA        | \$624.00   | \$7,488            |
| 1,735    |   |              |           |            |                    |
| 1,736    | <b>General Requirements</b>                                   | <b>12.0%</b> |           |            | \$91,969.00        |
| 1,737    | <b>Contractors Fee</b>  | <b>6.0%</b>  |           |            | \$51,502.00        |
| 1,738    | <b>Contingency and Escalation</b>                             | <b>15.0%</b> |           |            | \$136,481.00       |
| 1,739    |   |              |           |            |                    |
| 1,740    | <b>Subtotal: SMS-5 Remodel Art Room &amp; Intensive Needs</b> |              |           |            | <b>\$1,046,357</b> |
| 1,741    |   |              |           |            |                    |
| 1,742    |   |              |           |            |                    |
| 1,743    |   |              |           |            |                    |
| 1,744    |   |              |           |            |                    |
| 1,745    |   |              |           |            |                    |
| 1,746    |   |              |           |            |                    |
| 1,747    |   |              |           |            |                    |
| 1,748    |   |              |           |            |                    |
| 1,749    |   |              |           |            |                    |
| 1,750    |   |              |           |            |                    |
| 1,751    |   |              |           |            |                    |
| 1,752    |   |              |           |            |                    |
| 1,753    |   |              |           |            |                    |
| 1,754    |   |              |           |            |                    |
| 1,755    |   |              |           |            |                    |
| 1,756    |   |              |           |            |                    |
| 1,757    |   |              |           |            |                    |
| 1,758    |   |              |           |            |                    |
| 1,759    |   |              |           |            |                    |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty           | UNITS     | Total Cost |                    |
|----------|---|---------------|-----------|------------|--------------------|
|          |   |               |           | Unit \$    | Matl/Labor \$      |
| 1,760    | <b>SMS-6 Repurposing East Side Classrooms</b>           | <b>12,580</b> | <b>SF</b> |            |                    |
| 1,761    |   |               |           |            |                    |
| 1,762    | <b>Minor Renovation Area</b>                            | <b>5,722</b>  | <b>SF</b> |            |                    |
| 1,763    | Demo, minor   | 5,722         | SF        | \$6.10     | \$34,904           |
| 1,764    | Flooring  | 5,722         | SF        | \$15.77    | \$90,236           |
| 1,765    | Ceilings  | 5,722         | SF        | \$8.21     | \$46,978           |
| 1,766    |   |               |           |            |                    |
| 1,767    | <b>Major Renovation Ara</b>                             | <b>6,858</b>  | <b>SF</b> |            |                    |
| 1,768    | Demo, Gut Area  | 6,858         | SF        | \$25.61    | \$175,634          |
| 1,769    | Demo Concrete Floor                                     | 400           | SF        | \$10.68    | \$4,272            |
| 1,770    | Slab Cutting  | 400           | LF        | \$7.20     | \$2,880            |
| 1,771    | Repair Slab on Grade                                    | 400           | SF        | \$44.26    | \$17,704           |
| 1,772    | New Partitions  | 4,844         | SF        | \$25.31    | \$122,602          |
| 1,773    | New Finish on Existing Partitions                       | 4,800         | SF        | \$9.80     | \$47,040           |
| 1,774    | New Interior Door                                       | 8             | EA        | \$2,917.29 | \$23,338           |
| 1,775    | Flooring  | 6,858         | SF        | \$15.77    | \$108,151          |
| 1,776    | Ceilings  | 6,858         | SF        | \$8.21     | \$56,304           |
| 1,777    | Markerboards  | 256           | SF        | \$22.25    | \$5,696            |
| 1,778    | Tackboards  | 128           | SF        | \$7.85     | \$1,004            |
| 1,779    | Toilet Accessories                                      | 2             | SETS      | \$847.24   | \$1,694            |
| 1,780    | Cabinets, Base and Countertop SS                        | 80            | LF        | \$612.72   | \$49,018           |
| 1,781    | Cabinets, Wall  | 80            | LF        | \$225.57   | \$18,046           |
| 1,782    | Plumbing  | 4             | EA        | \$1,792.17 | \$7,169            |
| 1,783    | Plumbing Roughin  | 4             | EA        | \$2,149.50 | \$8,598            |
| 1,784    | HVAC Revisions  | 6,858         | SF        | \$25.42    | \$174,331          |
| 1,785    | Fire Sprinkler Revisions                                | 6,858         | SF        | \$4.68     | \$32,095           |
| 1,786    | Lighting  | 137           | EA        | \$1,173.64 | \$160,789          |
| 1,787    | Lighting Controls                                       | 6,858         | SF        | \$2.34     | \$16,048           |
| 1,788    | Power Receptacles                                       | 98            | EA        | \$578.10   | \$56,654           |
| 1,789    | Fire Sprinkler Revisions                                | 6,858         | SF        | \$3.60     | \$24,689           |
| 1,790    | FA  | 6,858         | SF        | \$6.24     | \$42,794           |
| 1,791    | Data Outlets  | 12            | EA        | \$624.00   | \$7,488            |
| 1,792    |   |               |           |            |                    |
| 1,793    | <b>General Requirements</b>                             | <b>12.0%</b>  |           |            | \$160,339.00       |
| 1,794    | <b>Contractors Fee</b>                                  | <b>6.0%</b>   |           |            | \$89,790.00        |
| 1,795    | <b>Contingency and Escalation</b>                       | <b>15.0%</b>  |           |            | \$237,943.00       |
| 1,796    |   |               |           |            |                    |
| 1,797    | <b>Subtotal: SMS-6 Repurposing East Side Classrooms</b> |               |           |            | <b>\$1,824,228</b> |
| 1,798    |   |               |           |            |                    |
| 1,799    |   |               |           |            |                    |
| 1,800    |   |               |           |            |                    |
| 1,801    |   |               |           |            |                    |
| 1,802    |   |               |           |            |                    |
| 1,803    |   |               |           |            |                    |
| 1,804    |   |               |           |            |                    |
| 1,805    |   |               |           |            |                    |
| 1,806    |   |               |           |            |                    |
| 1,807    |   |               |           |            |                    |
| 1,808    |   |               |           |            |                    |
| 1,809    |   |               |           |            |                    |
| 1,810    |   |               |           |            |                    |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description  | Qty          | UNITS     | Total Cost |                  |
|----------|--|--------------|-----------|------------|------------------|
|          |  |              |           | Unit \$    | Matl/Labor \$    |
| 1,811    | <b>SMS-7 Remodel Southside Restrooms</b>           |              |           |            |                  |
| 1,812    |  |              |           |            |                  |
| 1,813    | Demo Toilets                                       | 2            | EA        | \$280.07   | \$560            |
| 1,814    | Demo Toilet Partitions                             | 4            | EA        | \$25.61    | \$103            |
| 1,815    | Wall Finish Repairs                                | 2            | EA        | \$7,200.00 | \$14,400         |
| 1,816    | Toilet Accessories                                 | 2            | SETS      | \$847.24   | \$1,694          |
| 1,817    | Cabinets, Base and Countertop SS                   | 60           | LF        | \$612.72   | \$36,763         |
| 1,818    | Cabinets, Wall                                     | 60           | LF        | \$225.57   | \$13,534         |
| 1,819    | Plumbing   | 8            | EA        | \$1,792.17 | \$14,337         |
| 1,820    | Plumbing Roughin                                   | 6            | EA        | \$2,149.50 | \$12,897         |
| 1,821    |  |              |           |            |                  |
| 1,822    | <b>General Requirements</b>                        | <b>12.0%</b> |           |            | \$11,315.00      |
| 1,823    | <b>Contractors Fee</b>                             | <b>6.0%</b>  |           |            | \$6,336.00       |
| 1,824    | <b>Contingency and Escalation</b>                  | <b>15.0%</b> |           |            | \$16,791.00      |
| 1,825    |  |              |           |            |                  |
| 1,826    | <b>Subtotal: SMS-7 Remodel Southside Restrooms</b> |              |           |            | <b>\$128,730</b> |
| 1,827    |  |              |           |            |                  |
| 1,828    |  |              |           |            |                  |
| 1,829    | <b>SMS-8 Additional Classroom Sinks</b>            | <b>23</b>    | <b>EA</b> |            |                  |
| 1,830    |  |              |           |            |                  |
| 1,831    | Demo, Walls for Access                             | 1,150        | SF        | \$6.10     | \$7,015          |
| 1,832    | Demo Concrete Floor                                | 920          | SF        | \$10.68    | \$9,826          |
| 1,833    | Slab Cutting                                       | 920          | LF        | \$7.20     | \$6,624          |
| 1,834    | Repair Slab on Grade                               | 920          | SF        | \$44.26    | \$40,719         |
| 1,835    | Repair Walls                                       | 1,150        | SF        | \$9.80     | \$11,271         |
| 1,836    | Toilet Accessories, Paper Towel Dispenser, Soap    | 23           | SETS      | \$137.40   | \$3,160          |
| 1,837    | Cabinets, Base and Countertop SS                   | 69           | LF        | \$612.72   | \$42,278         |
| 1,838    | Plumbing   | 23           | EA        | \$1,792.17 | \$41,220         |
| 1,839    | Plumbing Roughin                                   | 23           | EA        | \$2,149.50 | \$49,439         |
| 1,840    | Lighting   | 23           | EA        | \$955.24   | \$21,970         |
| 1,841    |  |              |           |            |                  |
| 1,842    | <b>General Requirements</b>                        | <b>12.0%</b> |           |            | \$28,023.00      |
| 1,843    | <b>Contractors Fee</b>                             | <b>6.0%</b>  |           |            | \$15,693.00      |
| 1,844    | <b>Contingency and Escalation</b>                  | <b>15.0%</b> |           |            | \$41,586.00      |
| 1,845    |  |              |           |            |                  |
| 1,846    | <b>Subtotal: SMS-8 Additional Classroom Sinks</b>  |              |           |            | <b>\$318,824</b> |
| 1,847    |  |              |           |            |                  |
| 1,848    |  |              |           |            |                  |
| 1,849    |  |              |           |            |                  |
| 1,850    |  |              |           |            |                  |
| 1,851    |  |              |           |            |                  |
| 1,852    |  |              |           |            |                  |
| 1,853    |  |              |           |            |                  |
| 1,854    |  |              |           |            |                  |
| 1,855    |  |              |           |            |                  |
| 1,856    |  |              |           |            |                  |
| 1,857    |  |              |           |            |                  |
| 1,858    |  |              |           |            |                  |
| 1,859    |  |              |           |            |                  |
| 1,860    |  |              |           |            |                  |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty           | UNITS     | Total Cost          |                    |
|----------|---|---------------|-----------|---------------------|--------------------|
|          |   |               |           | Unit \$             | Matl/Labor \$      |
| 1,861    | <b>SMS-9 Sitework</b>                               | <b>1</b>      | <b>LS</b> |                     |                    |
| 1,862    | <b>Remove Driveways</b>                             | <b>3</b>      | <b>EA</b> |                     |                    |
| 1,863    | Demo AC Paving                                      | 3,125         | SF        | \$0.88              | \$2,750            |
| 1,864    | Demo Curbs  | 360           | LF        | \$6.04              | \$2,174            |
| 1,865    | Curbs   | 180           | LF        | \$43.88             | \$7,899            |
| 1,866    | Landscaping   | 3,125         | SF        | \$5.76              | \$18,000           |
| 1,867    |   |               |           |                     |                    |
| 1,868    | <b>New Drive Accessing SPS</b>                      | <b>5,040</b>  | <b>SF</b> |                     |                    |
| 1,869    | Demo Curbs  | 360           | LF        | \$6.04              | \$2,174            |
| 1,870    | Excavation  | 448           | CY        | \$16.18             | \$7,249            |
| 1,871    | Backfill  | 448           | CY        | \$28.62             | \$12,822           |
| 1,872    | Curbs   | 430           | LF        | \$43.88             | \$18,869           |
| 1,873    | Site Light  | 1             | EA        | \$7,052.83          | \$7,053            |
| 1,874    | Signage   | 3             | EA        | \$503.60            | \$1,511            |
| 1,875    |   |               |           |                     |                    |
| 1,876    | <b>Reconfiguring Bus Parking</b>                    | <b>25,400</b> | <b>SF</b> |                     |                    |
| 1,877    | Demo AC Paving                                      | 17,000        | SF        | \$0.88              | \$14,960           |
| 1,878    | Demo Curbs  | 320           | LF        | \$6.04              | \$1,933            |
| 1,879    | Excavation  | 2,258         | CY        | \$16.18             | \$36,530           |
| 1,880    | Backfill  | 2,258         | CY        | \$28.62             | \$64,618           |
| 1,881    | AC Paving   | 2,822         | SY        | \$34.56             | \$97,536           |
| 1,882    | Curbs   | 775           | LF        | \$43.88             | \$34,007           |
| 1,883    | Site Light  | 1             | EA        | \$7,052.83          | \$7,053            |
| 1,884    | Signage   | 3             | EA        | \$503.60            | \$1,511            |
| 1,885    | Landscape Island                                    | 2,600         | SF        | \$14.40             | \$37,440           |
| 1,886    |   |               |           |                     |                    |
| 1,887    | <b>Drive to High School</b>                         | <b>27,480</b> | <b>SF</b> |                     |                    |
| 1,888    | Minor Clearing                                      | 1             | LS        | \$7,200.00          | \$7,200            |
| 1,889    | Excavation  | 2,443         | CY        | \$16.18             | \$39,522           |
| 1,890    | Backfill  | 2,443         | CY        | \$28.62             | \$69,909           |
| 1,891    | AC Paving   | 3,053         | SY        | \$34.56             | \$105,523          |
| 1,892    | Curbs   | 1,145         | LF        | \$43.88             | \$50,242           |
| 1,893    | Sidewalks   | 5,725         | SF        | \$10.23             | \$58,567           |
| 1,894    | Site Light  | 1             | EA        | \$7,052.83          | \$7,053            |
| 1,895    | Signage   | 3             | EA        | \$503.60            | \$1,511            |
| 1,896    | Landscape Island                                    | 2,600         | SF        | \$14.40             | \$37,440           |
| 1,897    | Assume that Tennis Court does not need to be moved. |               |           |                     |                    |
| 1,898    |   |               |           |                     |                    |
| 1,899    | <b>Sidewalks</b>                                    | <b>3,000</b>  | <b>SF</b> |                     |                    |
| 1,900    | Excavation  | 267           | CY        | \$16.18             | \$4,314            |
| 1,901    | Backfill  | 267           | CY        | \$28.62             | \$7,632            |
| 1,902    | Sidewalks   | 3,000         | SF        | \$10.23             | \$30,690           |
| 1,903    |   |               |           |                     |                    |
| 1,904    | <b>Lanscaping</b>                                   | <b>1</b>      | <b>LS</b> | <b>\$250,000.00</b> | <b>\$250,000</b>   |
| 1,905    |   |               |           |                     |                    |
| 1,906    | <b>General Requirements</b>                         | <b>12.0%</b>  |           |                     | \$125,483.00       |
| 1,907    | <b>Contractors Fee</b>                              | <b>6.0%</b>   |           |                     | \$70,271.00        |
| 1,908    | <b>Contingency and Escalation</b>                   | <b>15.0%</b>  |           |                     | \$186,217.00       |
| 1,909    |   |               |           |                     |                    |
| 1,910    | <b>Subtotal: SMS-9 Sitework</b>                     |               |           |                     | <b>\$1,427,663</b> |
| 1,911    |   |               |           |                     |                    |

**SOLDOTNA, ALASKA  
BUILDING CONDITION SURVEY**

| Line No. | Description   | Qty          | UNITS     | Total Cost |                    |
|----------|---|--------------|-----------|------------|--------------------|
|          |   |              |           | Unit \$    | Matl/Labor \$      |
| 1,912    |   |              |           |            |                    |
| 1,913    | <b>RIVER CITY ACADEMY</b>                               |              |           |            |                    |
| 1,914    | <b>RCA-1 Renovate River City Academy Area</b>           | <b>8,025</b> | <b>SF</b> |            |                    |
| 1,915    |   |              |           |            |                    |
| 1,916    | Demo, Gut Area  | 8,025        | SF        | \$25.61    | \$205,520          |
| 1,917    | Demo Concrete Floor                                     | 200          | SF        | \$10.68    | \$2,136            |
| 1,918    | Slab Cutting  | 200          | LF        | \$7.20     | \$1,440            |
| 1,919    | Repair Slab on Grade                                    | 200          | SF        | \$44.26    | \$8,852            |
| 1,920    | New Partitions  | 6,020        | SF        | \$25.31    | \$152,367          |
| 1,921    | New Finish on Existing Partitions                       | 3,600        | SF        | \$9.80     | \$35,280           |
| 1,922    | New Interior Door                                       | 11           | EA        | \$2,917.29 | \$32,090           |
| 1,923    | Flooring  | 8,025        | SF        | \$15.77    | \$126,554          |
| 1,924    | Ceilings  | 8,025        | SF        | \$8.21     | \$65,885           |
| 1,925    | Markerboards  | 256          | SF        | \$22.25    | \$5,696            |
| 1,926    | Tackboards  | 128          | SF        | \$7.85     | \$1,004            |
| 1,927    | Residential Kitchen Equipment                           | 1            | LS        | \$6,374.48 | \$6,374            |
| 1,928    | Cabinets, Base and Countertop SS                        | 90           | LF        | \$612.72   | \$55,145           |
| 1,929    | Cabinets, Wall  | 90           | LF        | \$225.57   | \$20,301           |
| 1,930    | Plumbing  | 2            | EA        | \$1,792.17 | \$3,584            |
| 1,931    | Plumbing Roughin  | 2            | EA        | \$2,149.50 | \$4,299            |
| 1,932    | HVAC Revisions  | 8,025        | SF        | \$25.42    | \$203,995          |
| 1,933    | Fire Sprinkler Revisions                                | 8,025        | SF        | \$4.68     | \$37,557           |
| 1,934    | Lighting  | 161          | EA        | \$1,173.64 | \$188,956          |
| 1,935    | Lighting Controls                                       | 8,025        | SF        | \$2.34     | \$18,779           |
| 1,936    | Power Receptacles                                       | 102          | EA        | \$578.10   | \$58,966           |
| 1,937    | Fire Sprinkler Revisions                                | 8,025        | SF        | \$3.60     | \$28,890           |
| 1,938    | FA  | 8,025        | SF        | \$6.24     | \$50,076           |
| 1,939    | Data Outlets  | 24           | EA        | \$624.00   | \$14,976           |
| 1,940    |   |              |           |            |                    |
| 1,941    | <b>General Requirements</b>                             | <b>12.0%</b> |           |            | \$159,447.00       |
| 1,942    | <b>Contractors Fee</b>                                  | <b>6.0%</b>  |           |            | \$89,290.00        |
| 1,943    | <b>Contingency and Escalation</b>                       | <b>15.0%</b> |           |            | \$236,619.00       |
| 1,944    |   |              |           |            |                    |
| 1,945    | <b>Subtotal: RCA-1 Renovate River City Academy Area</b> |              |           |            | <b>\$1,814,078</b> |
| 1,946    |   |              |           |            |                    |

### SOLDOTNA PRIMARY SCHOOL PROJECT COST SUMMARY

| Budget Category                                      | Percentage of<br>Construction Cost | Project Total       |
|--|------------------------------------|---------------------|
| CM - by consultant (not required for this project)   |                                    |                     |
| Land Acquisition (not required for this project)     |                                    |                     |
| Site Investigation (not required for this project)   |                                    |                     |
| Design Services                                      | 10%                                | \$ 524,347.20       |
| Seismic Hazard (Tier 1 of Redoubt Elementary School) |                                    | \$ 20,700.00        |
| Construction (From Estimations, Inc.)                | n/a                                | \$ 5,243,472.00     |
| Equipment and Technology                             | 4%                                 | \$ 209,738.88       |
| District Administrative Overhead                     | 9%                                 | \$ 471,912.48       |
| Art  | 1%                                 | \$ 52,434.72        |
| Project Contingency                                  | 5%                                 | \$ 262,173.60       |
| <b>Project Total</b>                                 | <b>29%</b>                         | <b>\$ 6,784,779</b> |

### SOLDOTNA INTERMEDIATE SCHOOL PROJECT COST SUMMARY

| Budget Category                                    | Percentage of<br>Construction Cost | Project Total        |
|--|------------------------------------|----------------------|
| CM - by consultant (not required for this project) |                                    |                      |
| Land Acquisition (not required for this project)   |                                    |                      |
| Site Investigation (not required for this project) |                                    |                      |
| Design Services                                    | 10%                                | \$ 1,025,225.50      |
| Seismic Hazard (not required for this project)     |                                    |                      |
| Construction (From Estimations, Inc.)              | n/a                                | \$ 10,252,255.00     |
| Equipment and Technology                           | 4%                                 | \$ 410,090.20        |
| District Administrative Overhead                   | 9%                                 | \$ 922,702.95        |
| Art  | 1%                                 | \$ 102,522.55        |
| Project Contingency                                | 5%                                 | \$ 512,612.75        |
| <b>Project Total</b>                               | <b>29%</b>                         | <b>\$ 13,225,409</b> |

**RIVER CITY ACADEMY**

| Budget Category                                    | Percentage of<br>Construction Cost | Project Total       |
|--|------------------------------------|---------------------|
| CM - by consultant (not required for this project) |                                    |                     |
| Land Acquisition (not required for this project)   |                                    |                     |
| Site Investigation (not required for this project) |                                    |                     |
| Design Services                                    | 10%                                | \$ 208,619.00       |
| Seismic Hazard (not required for this project)     |                                    |                     |
| Construction (From Estimations, Inc.)              | n/a                                | \$ 2,086,190.00     |
| Equipment and Technology                           | 4%                                 | \$ 83,447.60        |
| District Administrative Overhead                   | 9%                                 | \$ 187,757.10       |
| Art  | 1%                                 | \$ 20,861.90        |
| Project Contingency                                | 5%                                 | \$ 104,309.50       |
| <b>Project Total</b>                               | <b>29%</b>                         | <b>\$ 2,691,185</b> |