

Requirement Detail

by Asset Name and Category

ROCKRIDGE

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge - Parking
Asset Number: 560a

Requirement Name	Vehicular Paving: East Drive/Parking Area		
Linked System	Parking Lots	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2007	Total Estimated Cost:	177,000
Funding Year	-	Funding Type	-
Requirement Location	East Drive/Parking Area	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing asphalt drive/parking area east of building is in very poor condition.

PHOTOS

ACTION DESCRIPTION

Reconstruct asphalt drive and parking area east of building.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge - Parking
Asset Number: 560a

Requirement Name	Vehicular Paving: Gravel Drive/Parking Area		
Linked System	Parking Lots	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	-	Total Estimated Cost:	118,000
Funding Year	-	Funding Type	-
Requirement Location	South of Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Gravel drive and parking area south of building should be paved and new curbing installed in the future. Drainage problems southwest of building.

PHOTOS

ACTION DESCRIPTION

Install new curbing and pave gravel drive and parking area south of building. Improve drainage southwest of building.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Life Safety

Asset Name: Rockridge - Sidewalks
Asset Number: 560b

Requirement Name	Pedestrian Paving: Concrete Sidewalks		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2007	Total Estimated Cost:	7,080
Funding Year	-	Funding Type	-
Requirement	Sidewalks	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

REQUIREMENT DESCRIPTION

Portions of concrete sidewalk at site are damaged.

PHOTOS

ACTION DESCRIPTION

Repair/replace damaged portions of concrete sidewalks at site.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge - Site
Asset Number: 560c

Requirement Name	Site: Ballfield Bakstop Fencing	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Site Improvements	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	5,900
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Fence at Ballfield south of building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Chain link fence at ballfield south of building is leaning and needs to be replaced.

PHOTOS

ACTION DESCRIPTION

Replace chain link backstop at ballfield south of building.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Deferred Maintenance

Asset Name: Rockridge - Site
Asset Number: 560c

Requirement Name	Site: Asphalt Basketball Court		
Linked System	Site Improvements	Inspection Date	08/01/2006
Prime System	Site Improvements	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2009	Total Estimated Cost:	5,900
Funding Year	-	Funding Type	-
Requirement Location	Asphalt Basketball Court	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Asphalt basketball court south of building is very weathered and rough, but structurally sound.

PHOTOS

ACTION DESCRIPTION

Overlay basketball court south of building.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Accessibility

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Interior Construction: Accessibility		
Linked System	Interior Construction	Inspection Date	11/12/2006
Prime System	Interior Construction	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	JQP Inc.	Actual Cost	0
Action Date	11/12/2009	Total Estimated Cost:	13,603
Funding Year	-	Funding Type	-
Requirement Location	Interior	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

This requirement includes accessibility issues encountered while you move through the school. Items include: providing elevator or ramp, adding/modifying handrails (only if the level is not served by an elevator or other accessible route), widening doors, replacing door hardware, eliminating protruding hazards and all permanent room identification signage as well as directional signage (adding signs, replacing signs and relocating signs).

PHOTOS



Interior Construction: Accessibility

-

ACTION DESCRIPTION

Make necessary modifications to correct accessibility issues as needed.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Accessibility

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Superstructure: Reconstruct Toilet Rooms for Accessibility		
Linked System	Partitions	Inspection Date	08/09/2006
Prime System	Partitions	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/09/2009	Total Estimated Cost:	39,294
Funding Year	-	Funding Type	-
Requirement Location	Faculty men and women toilets	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Toilet stalls, urinals and lavatories need to be reconfigured to meet current accessibility (ADA) standards.

PHOTOS



Superstructure: Reconstruct Toilet Rooms for Accessibility

-

ACTION DESCRIPTION

Modify toilet stalls and plumbing fixtures for accessibility.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Air and Water Quality

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC - Dehumidification Chiller and Piping Mains		
Linked System	Chilled Water Distribution	Inspection Date	07/12/2006
Prime System	Chilled Water Distribution	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	194,936
Funding Year	-	Funding Type	-
Requirement Location	Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Rockridge Elementary School has no means of dehumidification. Without dehumidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions.

PHOTOS



HVAC - Dehumidification Chiller and Piping Mains

ACTION DESCRIPTION

Addition of an air cooled chiller, pumps, and insulated chilled water pipe distribution system. Chiller to be screened for appearance purposes.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Air and Water Quality

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Add Dehumidification to the 1965 Building and 1992 Addition Classrooms		
Linked System	Air Distribution Systems	Inspection Date	07/12/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	502,326
Funding Year	-	Funding Type	-
Requirement Location	1965 Building Classrooms and 1992 Addition	Annual Energy/Ops Savings \$	941
Savings Description	Energy savings will be generated by using heat exchangers to recover exhaust air energy in order to pre-condition make-up air. In addition, each classroom occupancy controls will reduce ventilation rates and control the lighting to save energy when rooms are not in use. Additional energy will be consumed to provide dehumidification during the cooling months.		

REQUIREMENT DESCRIPTION

The air handling unit serving the all of the 1992 Addition and all of the 1965 Building (except for the gym, kitchen, and latchkey room) has no means of dehumidification. Without dehumidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions. As part of this upgrade, the new mechanical system will incorporated heat recovery and classroom occupancy / CO2 controls to save energy.

PHOTOS



HVAC: Add Dehumidification to the 1965 Building and 1992 Addition Classrooms

-

ACTION DESCRIPTION

All Costs in USD.

Addition of a dehumidification coil to the air handling unit serving the classrooms for this area via modification and internal closed cell AHU liner. The supply duct would be externally insulated in mechanical rooms and above ceilings. Upgrade the controls system. Test and Balance and Commissioning of the air handling systems.

VAV boxes with hot water reheat coils would be added to the ductwork in the classrooms. New acoustical tile ceilings would be installed. New lighting as well.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Air and Water Quality

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Provide Negative Pressure in Crawlspace/Tunnels		
Linked System	Air Distribution Systems	Inspection Date	07/15/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/15/2007	Total Estimated Cost:	70,800
Funding Year	-	Funding Type	-
Requirement Location	1965 and 1992 Crawlspace/Tunnel	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The tunnels have concrete floors and are wet. If not under negative pressure can transfer odors to the floors above due to the pipe and duct penetrations. The tunnels are also present opportunity for mold growth.

In addition, there is a ground water issue on site and additional sump pumps are required in the tunnels.

PHOTOS



HVAC: Provide Negative Pressure in Crawlspace/Tunnels

-

ACTION DESCRIPTION

Install exhaust fans and outdoor air intakes as required to ventilate tunnels, as well as maintain negative pressure. Plan on 4 areas.

In addition, 5 more sump pumps are budgeted to be added.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Appearance

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Exterior Doors: Paint Doors	
Linked System	Exterior Doors	Inspection Date 08/09/2006
Prime System	Exterior Doors	Finish Date -
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status Open
Inspector Name	Siddens, Lance	Actual Cost 0
Action Date	08/09/2009	Total Estimated Cost: 43,601
Funding Year	-	Funding Type -
Requirement Location	Old Addition	Annual Energy/Ops Savings \$ -
Savings Description	-	

REQUIREMENT DESCRIPTION

Metal exterior and interior vestibule doors and frames exhibit damaged finish and rust.

PHOTOS



Exterior Doors: Paint Doors

-

ACTION DESCRIPTION

Paint Exterior metal doors and interior vestibule doors in old addition approximately 19 doors.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Appearance

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Site Improvements: General Landscaping		
Linked System	Site Improvements	Inspection Date	10/03/2006
Prime System	Site Improvements	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Northern Lights Landscaping	Actual Cost	0
Action Date	10/03/2007	Total Estimated Cost:	2,190
Funding Year	-	Funding Type	-
Requirement Location	Property around facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There are negative slope areas around the facility bringing drainage towards the facility instead of away from the facility.

PHOTOS

ACTION DESCRIPTION

Correct negative slope around foundations by installing soil and sod.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Asbestos

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Hazardous Components: Abatement	Inspection Date	07/01/2006
Linked System	Hazardous Components Abatement	Finish Date	-
Prime System	Hazardous Components Abatement	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Wormuth, Kevin	Total Estimated Cost:	12,850
Action Date	07/01/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Facility		
Savings Description	-		

REQUIREMENT DESCRIPTION

This facility was built when asbestos was a common component of many building materials. The majority of asbestos in this facility was part of the insulating materials. Some has been abated, but in some areas it is still present.

PHOTOS

ACTION DESCRIPTION

Abatement of asbestos containing materials throughout facility.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Ceiling Finishes: Replace Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	08/09/2006
Prime System	Ceiling Finishes	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/09/2012	Total Estimated Cost:	10,030
Funding Year	-	Funding Type	-
Requirement Location	Old buildings kitchen and adjacent storage dishwahr and corridor spaces. Faculty toilet/locker room boys and girls toilets and storage rooms off gymnasium.	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing 2 X 4 suspended acoustical tile is beyond rated life and does not meet district standardization/modernization plan to convert to 2 X 2 suspended acoustical tile.

PHOTOS



Ceiling Finishes: Replace Acoustical Tile

ACTION DESCRIPTION

Replace 2 X 4 suspended acoustical tile with 2 X 2 suspended acoustical tile approximately 1700 S.F.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Floor Finishes: Replace Carpet	Inspection Date	08/09/2006
Linked System	Floor Finishes	Finish Date	-
Prime System	Floor Finishes	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	80,712
Action Date	08/09/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Classrooms		
Savings Description	-		

REQUIREMENT DESCRIPTION

Carpet in classrooms is worn and beyond rated life.

PHOTOS



Floor Finishes: Carpet

-

ACTION DESCRIPTION

Replace classroom carpet with new carpet, approximately 11,000 S.F.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Floor Finishes: Replace Carpet	Inspection Date	08/09/2006
Linked System	Floor Finishes	Finish Date	-
Prime System	Floor Finishes	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	16,697
Action Date	08/09/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Corridors		
Savings Description	-		

REQUIREMENT DESCRIPTION

Carpet in corridors is beyond useful life and does not meet districts standardization to VCT in corridors.

PHOTOS



Floor Finishes: Replace Carpet

-

ACTION DESCRIPTION

Replace carpet in corridors with VCT approximately 2500 S.F.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Lighting Equipment: Occupancy Sensors		
Linked System	Lighting Equipment	Inspection Date	09/19/2006
Prime System	Lighting Equipment	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/19/2012	Total Estimated Cost:	4,424
Funding Year	-	Funding Type	-
Requirement	Classrooms	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing classroom occupancy sensors are single technology sensors and will need replacement in the mid term future. Dual technology sensors offer improved performance.

PHOTOS

ACTION DESCRIPTION

Remove and replace existing classroom occupancy sensors with dual technology occupancy sensors.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Plumbing: Replace Underground Sanitary Sewer Lines		
Linked System	Plumbing	Inspection Date	11/29/2006
Prime System	Plumbing	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	35,400
Funding Year	-	Funding Type	-
Requirement Location	All Building Areas 35 Years or Older	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Underground sanitary sewer lines require replacement due to tree roots, pipe degradation, and pipe damage due to ground shifting over time.

PHOTOS

ACTION DESCRIPTION

Replace the underground sanitary sewer lines with new.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	185,553
Action Date	08/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	321
Requirement Location	1992 Addition		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof is performing as intended. Replace in 10 years. Includes roof Area 4.

PHOTOS

ACTION DESCRIPTION

Replace the adhered EPDM roof on this building.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	314,437
Action Date	08/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	543
Requirement Location	1965 Building		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system is performing as expected. Replace in 10 years. Includes roof Areas 1-3.

PHOTOS



Roof System: Replace Roof

-

ACTION DESCRIPTION

Replace the adhered EPDM roof in this area.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Beyond Rated Life

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Site Furnishings: Playground Upgrade / Replacement		
Linked System	Site Furnishings	Inspection Date	10/03/2006
Prime System	Site Furnishings	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Earl F. Anderson	Actual Cost	0
Action Date	10/03/2009	Total Estimated Cost:	82,305
Funding Year	-	Funding Type	-
Requirement Location	Facility Grounds	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Playground equipment was built in 1991 and 1998. Swings are non-conforming to safety standards (not enough room). Has "pea rock" which does not meet ADA. The playground equipment does not meet current safety and ADA requirements. Site is close to adequate for population size.

PHOTOS



Site Furnishings: Playground Upgrade / Replacement

-

ACTION DESCRIPTION

Replace existing playground with new equipment to meet needs of enrollment. Replace surface material with district standard and replace edging as needed.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Building Code

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Replace Dishwasher Exhaust Hood		
Linked System	Exhaust Ventilation Systems	Inspection Date	06/28/2006
Prime System	Exhaust Ventilation Systems	Finish Date	-
Priority	6- Does Not Meet Current Codes/Standards	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	17,700
Funding Year	-	Funding Type	-
Requirement Location	Kitchen 1965 Building Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing dishwasher has an existing exhaust hood but is not tagged as a type II Hood. It does not have an exhaust hood as required by the 2000 International Mechanical Code. Exhausting the dishwasher steam is critical in maintaining proper indoor air quality in the kitchen.

PHOTOS



HVAC: Replace Dishwasher Exhaust Hood

-

ACTION DESCRIPTION

Demolish the existing dishwasher hood and fan system.

Add a Type II hood and dishwasher exhaust fan with the required externally insulated aluminum ductwork. Installation to comply with the 2000 International Mechanical Code.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Building Code

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Replace Kitchen Grease Exhaust Hood / Add Kitchen Make Up Air		
Linked System	Exhaust Ventilation Systems	Inspection Date	07/12/2006
Prime System	Exhaust Ventilation Systems	Finish Date	-
Priority	6- Does Not Meet Current Codes/Standards	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	120,950
Funding Year	-	Funding Type	-
Requirement Location	Kitchen - 1965 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing grease exhaust hood does not appear to be drawing the exhaust airflow as required by the 2000 Uniform Mechanical Code. This hood needs to be replaced with a code compliant grease exhaust hood and fan.

In addition, the kitchen does not have a dedicated make up air unit. Make up air for the kitchen hood is required by the 2000 International Mechanical Code.

PHOTOS



HVAC: Replace Kitchen Grease Exhaust Hood / Add Kitchen Make Up Air

-

ACTION DESCRIPTION

Replace the existing grease exhaust hood and fan and grease duct with 2000 International Mechanical Code compliant kitchen grease hood exhaust system.

Add a dedicated make up air unit with dehumidification.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Capacity

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Electrical Distribution: Insufficient Capacity		
Linked System	Electrical Service and Distribution	Inspection Date	08/14/2006
Prime System	Electrical Service and Distribution	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	08/14/2012	Total Estimated Cost:	15,222
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing Branch Panels are lacking capacity for additional circuits. A panel must be added to accommodate circuits needed for additional receptacles.

PHOTOS



Electrical Distribution: Insufficient Capacity

ACTION DESCRIPTION

Provide a new 200 amp feeder and panel to help carry the extra load of additional receptacles throughout the building.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Capacity

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Add Cooling Capability to Computer Lab and IT Data Room		
Linked System	Cooling Generating Systems	Inspection Date	07/12/2006
Prime System	Cooling Generating Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/12/2007	Total Estimated Cost:	133,930
Funding Year	-	Funding Type	-
Requirement Location	IT Data Room Located in Faculty Lounge - 1965 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The Computer Lab and IT Data rooms get hot, which could cause technology equipment failure.

PHOTOS



HVAC: Add Cooling Capability to IT Data Room

-

ACTION DESCRIPTION

Provide a fan coil with a DX cooling coil with full economizer capability to utilize free cooling when outdoor conditions allow.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Capacity

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Wiring Devices: Insufficient Receptacles		
Linked System	Branch Wiring Devices	Inspection Date	07/17/2006
Prime System	Branch Wiring Devices	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	07/17/2012	Total Estimated Cost:	5,900
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

With rapid advances in technology, additional receptacles may be required in 6 to 10 years. The Addition of receptacles will require additional branch panels.

PHOTOS



Wiring Devices: Insufficient Receptacles

-

ACTION DESCRIPTION

Provide additional 20 amp receptacle throughout building and associated branch wiring. Upgrade will first require additional branch panel boards.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Deferred Maintenance

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Exterior Walls: Wall Restoration		
Linked System	Exterior Walls	Inspection Date	08/01/2006
Prime System	Exterior Walls	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2012	Total Estimated Cost:	35,400
Funding Year	-	Funding Type	-
Requirement Location	Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated walls around the entire perimeter of building.

PHOTOS



Exterior Walls: Wall Restoration

-

ACTION DESCRIPTION

Tuck pointing, spot brick replacement, joint sealant replacement, painting, and other misc. items.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Deferred Maintenance

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Ductwork Cleaning	Inspection Date	11/29/2006
Linked System	Air Distribution Systems	Finish Date	-
Prime System	Air Distribution Systems	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Schumacher, Russ	Total Estimated Cost:	41,300
Action Date	11/29/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Building Wide		
Savings Description	-		

REQUIREMENT DESCRIPTION

Clean the duct systems that are not replaced by the indoor air quality upgrade.

PHOTOS

ACTION DESCRIPTION

Clean ductwork that is not replaced due to indoor air quality upgrades.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Deferred Maintenance

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Plumbing: Replace Lavatory Wash Fountains		
Linked System	Plumbing Fixtures	Inspection Date	07/11/2006
Prime System	Plumbing Fixtures	Finish Date	-
Priority	6- Does Not Meet Current Codes/Standards	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	21,240
Funding Year	-	Funding Type	-
Requirement Location	1965 Building Toilet Rooms	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There are two(2) old style lavatory wash fountains are in need of constant maintenance and most leak water. They are also located inside the toilet rooms. These wash fountains have exceeded the recommended useful life.

PHOTOS



Plumbing: Replace Lavatory Wash Fountains

-

ACTION DESCRIPTION

Replace two wash fountains with new wash fountains with infrared mixing stations.

Locate these outside the toilet rooms.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Energy and Operational Efficiency

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Controls: VendingMiser Vending Machine Controls		
Linked System	Controls and Instrumentation	Inspection Date	10/02/2006
Prime System	Controls and Instrumentation	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	10/02/2006	Total Estimated Cost:	826
Funding Year	-	Funding Type	-
Requirement Location	Vending Machines	Annual Energy/Ops Savings \$	92
Savings Description	VendingMiser controls cycle power to the vending machine during unoccupied times to save energy.		

REQUIREMENT DESCRIPTION

Install VendingMiser controls on vending machines.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Energy and Operational Efficiency

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Boiler Room Upgrades	Inspection Date	07/12/2006
Linked System	Heat Generating Systems	Finish Date	-
Prime System	Heat Generating Systems	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Schumacher, Russ	Total Estimated Cost:	159,064
Action Date	07/12/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	1,167
Requirement Location	Boiler Room - 1965 Building		
Savings Description	Energy savings generated from installing condensing style hot water boiler(s).		

REQUIREMENT DESCRIPTION

The existing boiler has exceeded the recommended useful life expectancy. The boiler shell is in poor condition and rust has formed. The building has only one boiler, thus backup heating capacity is not present. This could lead to building freeze up if the boiler fails. The existing boiler should be replaced with two high efficiency hot water boilers to increase the efficiency of the boiler plant.

This would also provide heating backup for the building.

PHOTOS



HVAC: Boiler Room Upgrades

-

ACTION DESCRIPTION

Install one high efficiency condensing boiler for increased boiler efficiency. Install one gas/fuel oil boiler to provide backup and allow interruptible gas rates for the heating plant system.

Install primary circulating pump for the dual fuel boiler.

Combine the pump system to a parallel pumping system and eliminate the multiple zone pumps.

All Costs in USD.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Energy and Operational Efficiency

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Lighting: Lighting Retrofit	Inspection Date	09/20/2006
Linked System	Lighting Equipment	Finish Date	-
Prime System	Lighting Equipment	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Ruud, Mark	Total Estimated Cost:	39,197
Action Date	09/20/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	2,786
Requirement Location	Entire Facility		
Savings Description	Energy savings generated through more efficient lighting technology.		

REQUIREMENT DESCRIPTION

Lighting project consists of the following:

- 1) Retrofit/Replace 34w T12 fixtures with 25w T8 lighting
- 2) Relamp 32w T8 lamps with 25w T8 lamps
- 3) Replace HID lighting with T8 lighting fixtures
- 4) Replace Incand. lighting with Fluorescent
- 5) Upgrade exit signs with LED technology
- 6) Gym Occupancy Sensors

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Energy and Operational Efficiency

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Plumbing: Add Domestic Water Heat Exchanger	Inspection Date	07/12/2006
Linked System	Plumbing	Finish Date	-
Prime System	Plumbing	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	Schumacher, Russ	Total Estimated Cost:	35,046
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Boiler Room - 1965 Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Provide a domestic hot water heat exchanger. This will allow for an interruptible natural gas rate.

PHOTOS



Plumbing: Add Water to Water Heat Exchanger for Domestic Hot Water

-

ACTION DESCRIPTION

Provide a new domestic hot water heat exchanger and all required piping and controls.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Energy and Operational Efficiency

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Plumbing: Water Conservation Upgrades		
Linked System	Plumbing Fixtures	Inspection Date	09/21/2006
Prime System	Plumbing Fixtures	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/21/2006	Total Estimated Cost:	13,412
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	1,231
Savings Description	Reduce water and sewer usage using new low flow devices. Project contains replacement of constant flow urinals - Savings for urinals \$757, savings for remaining items \$474.		

REQUIREMENT DESCRIPTION

Replace / Retrofit standard flow flush valves and faucets with low flow devices.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Life Safety

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Lighting Equipment: Exterior Lighting	Inspection Date	09/19/2006
Linked System	Lighting Equipment	Finish Date	-
Prime System	Lighting Equipment	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Ruud, Mark	Total Estimated Cost:	21,323
Action Date	09/19/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Building Perimeter Parking		
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing exterior lighting for this facility is getting old and the light levels and coverage for adequate safety is a concern.

PHOTOS

ACTION DESCRIPTION

Replace and add exterior fixtures as needed to improve light levels and coverage. To discourage vandalism and increase occupant safety.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Occupant Security

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communication and Security: Access Control		
Linked System	Communications and Security	Inspection Date	09/20/2006
Prime System	Security and Detection Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/20/2009	Total Estimated Cost:	23,600
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Doors need ability to be locked down with access allowed only to authorized people. Also doors without card readers should be monitored for unauthorized access.

PHOTOS



Communication and Security: Access Control
-

ACTION DESCRIPTION

Install 6 proximity card readers at main entry doors for both public and personal
 And add magnetic door contacts to all other exterior doors on a alarm system.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Occupant Security

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communications and Security: CCTV		
Linked System	Communications and Security	Inspection Date	11/30/2006
Prime System	Communications and Security	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	11/30/2007	Total Estimated Cost:	0
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There are currently no cameras located in the school. Cameras would add an increased security throughout the school which is becoming more critical.

PHOTOS

ACTION DESCRIPTION

Provide cameras throughout school. Camera locations provided by ISD 709.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Occupant Security

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Fire Alarm Systems: Outdated System		
Linked System	Fire Alarm Systems	Inspection Date	09/20/2006
Prime System	Fire Alarm Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/20/2009	Total Estimated Cost:	47,200
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Fire alarm systems are old analog system. System is prone to malfunctions and is very hard to identify exact area of alarm. It is also difficult to troubleshoot and find malfunctions.

PHOTOS



Fire Alarm Systems: Outdated System

-

ACTION DESCRIPTION

Replace fire system with a fully addressable fire system.
 This will allow for quick response to exact alarm device
 And allow for better maintenance and safety

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communication and Security: Cabling Upgrade		
Linked System	Communications and Security	Inspection Date	08/16/2006
Prime System	Local Area Networks	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	-	Total Estimated Cost:	46,728
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing building has older categories of cabling.

PHOTOS

ACTION DESCRIPTION

Replace old and mixed telephone/data cabling with up to date category 6 of 6A. Add basic wireless coverage. Standardize quantity of phone and data in classroom and offices.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communication and Security: Clock System		
Linked System	Communications and Security	Inspection Date	09/20/2006
Prime System	Clock and Program Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/20/2009	Total Estimated Cost:	10,620
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Master clock systems no longer keep clocks in time. Most are only used for running the bells. Atomic clocks may not receive a signal through the brick buildings. Many clocks do not work at all.

PHOTOS



Communication and Security: Clock System

-

ACTION DESCRIPTION

Install new wireless master clock system. The main clock receives the GPS signal for exact time and then sends signal to other clocks in facility. This will allow for accurate time and less tardiness between classes.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communication and Security: Public Address and Sound System		
Linked System	Communications and Security	Inspection Date	09/20/2006
Prime System	Intercommunication and Paging System	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/20/2009	Total Estimated Cost:	19,588
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

PA system is 25+ years old but is still functional.
 There are no speakers located in hallways or commons areas.

PHOTOS



Communication and Security: Public Address and Sound System
 -

ACTION DESCRIPTION

Update paging head end with new system and amplifier
 And install speakers where needed.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communication and Security: Telephone System Upgrade		
Linked System	Communications and Security	Inspection Date	08/16/2006
Prime System	Telephone Systems	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	08/16/2006	Total Estimated Cost:	3,894
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The telephone system should be updated to the new District standard of CISCO VOIP. The telephone system should include port for paging/intercom system. The Paging/Intercom system should be modified to allow access from the new telephone system.

PHOTOS

ACTION DESCRIPTION

Install new CISCO telephone system. Add paging interface. Remove old telephone system.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communication and Security: Video/TV Distribution Upgrade		
Linked System	Communications and Security	Inspection Date	08/16/2006
Prime System	Television Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	08/16/2009	Total Estimated Cost:	19,795
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Analog Broadcast TV Signals are required by the FCC to be turned off in the Spring of 2009.

PHOTOS

ACTION DESCRIPTION

Install new TV Distribution System capable of digital signals in all classrooms and administrative areas as required.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Communications and Security: Sound System Upgrades		
Linked System	Communications and Security	Inspection Date	08/15/2006
Prime System	Classroom Sound Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	08/15/2007	Total Estimated Cost:	183,018
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Currently there is audio enhancement systems in the K, 1st and 2nd grade classrooms. The Gymnasium/Cafeteria sound system is minimal and inadequate.

PHOTOS

ACTION DESCRIPTION

Add audio enhancement systems to remaining classrooms.
 Replace Gymnasium/Cafeteria sound system.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Controls and Instrumentation: BAS and Controls Upgrade		
Linked System	Controls and Instrumentation	Inspection Date	08/09/2006
Prime System	Building Automation Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schmidt, Brian	Actual Cost	0
Action Date	08/09/2007	Total Estimated Cost:	118,000
Funding Year	-	Funding Type	-
Requirement Location	Entire building	Annual Energy/Ops Savings \$	981
Savings Description	Energy saving through optimization and repairs of existing control system.		

REQUIREMENT DESCRIPTION

Upgrade existing, outdated BAS to new Web-based BAS and tie to new District-wide BAS network. This will allow for central monitoring and control of all buildings from the Facilities Management building.

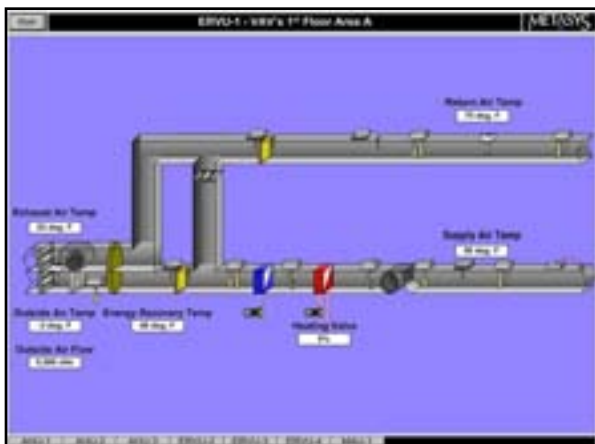
Upgrade existing pneumatic controls (old technology) to new Direct Digital controls.

Upgrade/replace existing temperature control valves, dampers, and actuators. The majority are beyond rated life and many are disconnected and not functioning, thus not operating as energy efficiently as possible.

Replace existing temperature control air compressor and air dryer with new and repair control air line leaks. This will improve the energy efficiency of the existing control system.

The existing controls shall be recommissioned to verify proper sequence of operation and optimize energy efficiency. Additional control and monitoring points shall also be added to the BAS system to optimize HVAC system performance.

PHOTOS



BAS Graphic

ACTION DESCRIPTION

Replace existing BAS headend to Web-based headend to tie District wide BAS. Replace existing DDC and pneumatic controls with new JCI DDC controls to allow integration to District wide BAS.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Emergency Power Distribution: Generator Backup		
Linked System	Emergency Light and Power Systems	Inspection Date	09/19/2006
Prime System	Emergency Light and Power Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/19/2007	Total Estimated Cost:	54,457
Funding Year	-	Funding Type	-
Requirement Location	Exterior near Electrical Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

School currently has no backup power system to be used during a power failure. To keep students in school during power outage sufficient lighting must be maintained along with necessary life safety systems.

PHOTOS



Emergency Power Distribution: Generator Backup

-

ACTION DESCRIPTION

Install transfer switch and generator to feed distribution system during a power outage. Generator will be sized to handle the full building demand.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Equipment and Furnishings: Visual Systems (Smart Boards)		
Linked System	Equipment and Furnishings	Inspection Date	08/15/2006
Prime System	Audio-visual Equipment	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	-	Total Estimated Cost:	142,780
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Site has no Smart Boards installed. Three Smart Boards are on order.

PHOTOS

ACTION DESCRIPTION

Install additional Smart Boards.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	Fittings: Chalkboard	Inspection Date	08/09/2006
Linked System	Fittings	Finish Date	-
Prime System	Fittings	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	2,054
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Rooms 110, 121, 127		
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing Chalkboard does not meet district standardization/ modernization plan to replace with markerboard.

PHOTOS



Fittings: Chalkboard

-

ACTION DESCRIPTION

Replace existing chalkboard with markerboard approximately 112 S. F.

District: Duluth Public Schools
Facility: Rockridge Elementary School
Category: Upgrades

Asset Name: Rockridge Elementary School
Asset Number: 560

Requirement Name	HVAC: Add Propylene Glycol to Heating System		
Linked System	Hot Water Distribution	Inspection Date	07/12/2006
Prime System	Hot Water Distribution	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/12/2007	Total Estimated Cost:	23,600
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The heating system currently serving the air handling units does not contain glycol, which creates the opportunity for heating coil freeze up.

A separate pump has been added to the 1992 air handling unit to reduce the chance of freeze up, but this adds an un-necessary piece of equipment to the system if glycol is present.

PHOTOS

ACTION DESCRIPTION

Add Propylene Glycol into the entire heating system to prevent coil freeze up.

Remove pump on 1992 air handling unit.