

Requirement Detail

by Asset Name and Category

WOODLAND MS

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland - Parking
Asset Number: 335a

Requirement Name	Vehicular Paving: Asphalt Parking Lots		
Linked System	Parking Lots	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	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:	17,700
Funding Year	-	Funding Type	-
Requirement Location	Asphalt Lots	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Asphalt parking lots at site are in excellent condition but should be seal coated in about five years.

PHOTOS

ACTION DESCRIPTION

Crack seal and seal coat asphalt parking lot at site in 3-5 years.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland - Parking
Asset Number: 335a

Requirement Name	Vehicular Parking: Gravel Parking Lot		
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:	177,000
Funding Year	-	Funding Type	-
Requirement Location	East of Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Gravel parking lot east of building should be paved in future and new curbing installed.

PHOTOS

ACTION DESCRIPTION

Install new concrete curbing and pave existing gravel parking lot east of building.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland - Sidewalks
Asset Number: 335b

Requirement Name	Pedestrian Paving: Concrete Dock Area		
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:	11,800
Funding Year	-	Funding Type	-
Requirement Location	SW Corner of Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Concrete dock at southwest corner of building is damaged. Obsolete coal catch also present.

PHOTOS

ACTION DESCRIPTION

Repair damaged area of concrete dock southwest corner of building and also improve or remove old coal catch structure.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland - Sidewalks
Asset Number: 335b

Requirement Name	Pedestrian Paving: Sidewalks and Stairs		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	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:	23,600
Funding Year	-	Funding Type	-
Requirement Location	East and South Side	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Concrete sidewalk east of building is old. Stairs south of building are also old. Will need to replace in 3-5 years.

PHOTOS

ACTION DESCRIPTION

Replace east sidewalk and south stairs.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Accessibility

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Equipment and Furnishings: Accessibility		
Linked System	Equipment and Furnishings	Inspection Date	11/12/2006
Prime System	Equipment and Furnishings	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:	42,133
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

This requirement includes accessibility issues related to high public use areas of the school, including auditoriums, stadiums, gymnasiums, ticket counters, and the main office. Items include: providing wheelchair viewing positions, providing access to the stage, providing an assistive listening system and lowering counters.

It also includes accessibility issues found in Specialty Areas (science labs, cooking labs, industrial arts areas, as well as the media center/library). Items include: providing accessible work stations in kitchens, providing accessible labs and lowering eyewashes.

PHOTOS



Equipment and Furnishings: Accessibility

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ACTION DESCRIPTION

Correct accessibility issues as required.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Accessibility

Asset Name: Woodland Middle School
Asset Number: 335

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:	28,315
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

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ACTION DESCRIPTION

Make necessary modifications to correct accessibility issues as needed.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Accessibility

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Plumbing: Accessibility	Inspection Date	11/12/2006
Linked System	Plumbing	Finish Date	-
Prime System	Plumbing	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	JQP Inc.	Total Estimated Cost:	51,108
Action Date	11/12/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Plumbing throughout		
Savings Description	-		

REQUIREMENT DESCRIPTION

This requirement includes accessibility issues in toilet rooms, locker/shower rooms and drinking fountains. All requirements for upgrading a toilet or locker/shower room are included in this category, even if they are not plumbing (i.e. relocating stall partitions to provide 60 in. wide stall, relocating toilet paper dispenser or grab bars, etc.). Items include: replacing drinking fountains, raising/lowering toilets, installing grab bars, relocating toilet paper or towel dispensers, adding handheld shower wands, and providing 60 in. wide fully compliant toilet stalls.

Note: the actual cost to complete work in toilet rooms may be increased by a decision to do work beyond what is required for accessibility, such as re-tiling, replacing all fixtures, replacing all stall partitions, etc.

PHOTOS



Plumbing: Accessibility

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ACTION DESCRIPTION

Upgrades as needed to meet plumbing accessibility requirements.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Accessibility

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Site Improvements: Accessibility		
Linked System	Site Improvements	Inspection Date	11/12/2006
Prime System	Site Improvements	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:	5,517
Funding Year	-	Funding Type	-
Requirement Location	Exterior	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

This requirement includes accessibility issues from the moment you are on school grounds until you get to the front door. Items include: adding and identifying accessible parking and adding or modifying accessible routes (sidewalks).

PHOTOS



Site Improvements: Accessibility

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ACTION DESCRIPTION

Correct exterior accessibility issues as required.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Air and Water Quality

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC - Add Ventilation and Replace Wood Shop Dust Collector and Upgrade Shop Hood Exhaust		
Linked System	Air Distribution Systems	Inspection Date	07/25/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/25/2009	Total Estimated Cost:	218,300
Funding Year	-	Funding Type	-
Requirement Location	Wood Working and Sheet Metal - 1958 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The dust collector for the wood shop is 48 years old and is beyond it's recommended useful life. The exhaust duct is located below grade and has had water intrude into the ductwork. In addition, make up air is not being supplied to the wood shop as required by the 2000 International Mechanical Code.

The soldering exhaust hood needs to be upgraded to better exhaust the space. Make up air is not being supplied as required by the International Mechanical Code.

The classroom unit ventilators serving these areas are not capable of providing 2000 International Mechanical Code required ventilation air.

PHOTOS



HVAC - Add Ventilation and Replace Wood Shop Dust Collector and Upgrade Weld Hood Exhaust

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ACTION DESCRIPTION

Replace the wood shop dust exhaust system with a new re-circulating dust collector and pipe the exhaust duct overhead.

All Costs in USD.

Install new capture type solder exhaust stations and install new exhaust fans.

Install a new air handling unit for the wood shop and an new air handling unit for the sheet metal area.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Air and Water Quality

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC - Dehumidification Chiller and Piping Mains		
Linked System	Chilled Water Distribution	Inspection Date	06/28/2006
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:	463,622
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Woodland Middle School has no means of dehumidification, other than the office and boys club area. Without de-humidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions.

PHOTOS



HVAC - Dehumidification Chiller and Piping Mains

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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: Woodland Middle School
Category: Air and Water Quality

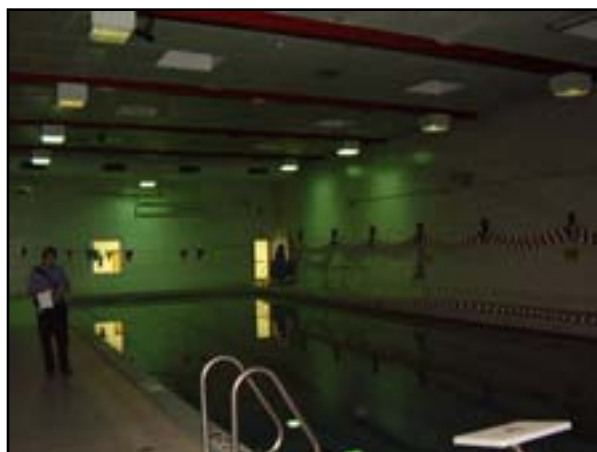
Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC: Pool Unit Replacement along with Automatic Pool Cover		
Linked System	Aquatic Facilities	Inspection Date	07/18/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/18/2007	Total Estimated Cost:	354,000
Funding Year	-	Funding Type	-
Requirement Location	1958 Building	Annual Energy/Ops Savings \$	5,874
Savings Description	Pool cover saving heat and evaporation losses from pool. The pool area also required less ventilation when the pool is covered which results in additional savings. A sensible heat exchanger recovers heat from exhaust to preheat air during the winter. Additional energy will be consumed during the cooling season when mechanical dehumidification is required.		

REQUIREMENT DESCRIPTION

The existing pool air handling unit was installed in 2002 but has no means of energy recovery or dehumidification. It is located in a difficult to service area. In addition, the pool is uncovered during unoccupied times during the nights and weekends.

PHOTOS



HVAC: Pool Unit Replacement along with Automatic Pool Cover

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ACTION DESCRIPTION

Replace the pool air handling unit with a pool dehumidification unit. This will help maintain acceptable temperature and humidity.

All Costs in USD.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Air and Water Quality

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC: Replace Classroom Unit Ventilators		
Linked System	Air Distribution Systems	Inspection Date	07/12/2006
Prime System	Air Distribution 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:	2,111,610
Funding Year	-	Funding Type	-
Requirement Location	1958 and 1993 Addition	Annual Energy/Ops Savings \$	1,127
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 forty nine (49) classroom unit ventilators are not capable of meeting current ASHRAE indoor air quality standards.

In addition classrooms have had walls added and some of the spaces have no means of ventilation. This does not meet 2000 International Mechanical Code. As part of this upgrade, the new mechanical system will incorporated heat recovery and classroom occupancy / CO2 controls to save energy.

PHOTOS



HVAC: Replace Classroom Unit Ventilators

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ACTION DESCRIPTION

All Costs in USD.

Remove existing classroom unit ventilators, patch wall to match existing. Replace with modern ventilation system with energy recovery with dehumidification, duct distribution system, and variable air volume boxes with hot water reheat coils and hot water finned tube radiation on exterior walls. Upgrade the controls systems to DDC and commission the new system.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Air and Water Quality

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC: Replace Ventilation in the Gym/Auditorium/Cafeteria Areas/Locker Rooms		
Linked System	Air Distribution Systems	Inspection Date	07/11/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/11/2009	Total Estimated Cost:	531,000
Funding Year	-	Funding Type	-
Requirement Location	Gymnasium/Auditorium/Cafeteria in 1958 Building	Annual Energy/Ops Savings \$	2,143
Savings Description	Energy savings will be generated by reducing the fan cfm and OA ventilation during part load operation utilizing variable speed drives and CO2 controls as well as recovering heat from the locker room exhaust. Additional energy will be consumed during the cooling season to provide dehumidification.		

REQUIREMENT DESCRIPTION

The four (4) air handling systems serving the gym/auditorium/cafeteria are 48 years old and has exceed it's recommended service life. In addition the air handling unit has no means of dehumidification. Without dehumidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions. As part of the upgrade the air handling units will come with variable speed drive and CO2 controls to reduce ventilation rates during part load operation as well as a heat recovery unit for the locker room exhaust.

PHOTOS



HVAC: Replace Ventilation in the Gym/Auditorium/Cafeteria Areas

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ACTION DESCRIPTION

All Costs in USD.

Addition of four air handling units. One AHU to serve the Gym, one to serve the Auditorium, and one to serve the Cafeteria, one to serve the music practice rooms. Installation of new external insulated supply duct systems. Upgrade Controls System. Test and Balance and Commissioning of air handling units.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Air and Water Quality

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC: Add Dehumidification 1994 Units		
Linked System	Cooling Generating Systems	Inspection Date	06/28/2006
Prime System	Cooling Generating Systems	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	302,552
Funding Year	-	Funding Type	-
Requirement Location	Media Center, Offices, and Computer Labs - 1994 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The two air handling systems serving the 1994 addition have no means of dehumidification. Without de-humidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions.

PHOTOS



HVAC: Add Dehumidification 1994 Units

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ACTION DESCRIPTION

Addition of dehumidification coils to the existing unit via modification and internal closed cell AHU liner. Installation of external duct insulation, new acoustical ceiling tile, lighting removal and re-installation or new lights where required. Variable Air Volume box installation. Rezone ductwork where required. Upgrade Controls System to DDC. Test and Balance and Commissioning of entire system.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Air and Water Quality

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Plumbing: Replace Galvanized Domestic Water Piping		
Linked System	Domestic Water Distribution	Inspection Date	06/28/2006
Prime System	Domestic Water Distribution	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2007	Total Estimated Cost:	78,588
Funding Year	-	Funding Type	-
Requirement Location	Building Wide - Except for 1993/1994 Addition and 1999 Boys and Girls Club	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Most of the galvanized plumbing in the tunnels and crawlspaces has been replaced and two of the toilet groups have been remodeled with copper piping.

The remaining 48 year old domestic water distribution piping consists of galvanized piping which is connected together via lead based solder. Current flushing procedures have maintained lead levels at an acceptable level. As the piping continues to age, this may not be possible.

PHOTOS



Plumbing: Replace Galvanized Domestic Water Piping

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ACTION DESCRIPTION

Remove all the remaining galvanized domestic water distribution piping as well as faucets and fixtures containing lead solder. Install insulated copper piping and fixtures/faucets where required. Wall cutting and patching would be required.

This includes the bradley shower stations in the locker rooms.

Addition of a plumbing re-circulation line.

All Costs in USD.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Appearance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Floor Finishes: Refinish Hardwood Floor		
Linked System	Floor Finishes	Inspection Date	08/24/2006
Prime System	Floor Finishes	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/24/2012	Total Estimated Cost:	31,093
Funding Year	-	Funding Type	-
Requirement Location	Gymnasium, Auditorium Stage	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Refinish existing hardwood floor due to wear and appearance.

PHOTOS



Floor Finishes: Refinish Hardwood Floor

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ACTION DESCRIPTION

Strip, sand and refinish hardwood floor. Approximately 4750 S.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Appearance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Floor Finishes: Replace Carpet	Inspection Date	08/25/2006
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:	57,206
Action Date	08/25/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Library, 148, 161, Faculty, 172, 214, 215, 217, 214, 216, 220, 221,		
Savings Description	-		

REQUIREMENT DESCRIPTION

Replace carpet with new.

PHOTOS



Floor Finishes: Replace Carpet

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ACTION DESCRIPTION

Replace existing carpet with new. Approximately 7800 S.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Appearance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Interior Doors: Refinish Wood Gym Doors		
Linked System	Interior Doors	Inspection Date	08/24/2006
Prime System	Interior Doors	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/24/2007	Total Estimated Cost:	1,310
Funding Year	-	Funding Type	-
Requirement Location	Gymnasium	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

All wood gym doors exhibit worn and aged finish.

PHOTOS



Interior Doors: Refinish Wood Doors

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ACTION DESCRIPTION

Strip, sand and refinish wood doors. Approximately 10 doors.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Appearance

Asset Name: Woodland Middle School
Asset Number: 335

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:	6,981
Funding Year	-	Funding Type	-
Requirement Location	Property around facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There are areas around the facility (lawn, trees, shrubs and perennials) that require care to improve appearance. There are negative slope areas around the facility bringing drainage towards the facility instead of away from the facility. There are lawn areas around the immediate building requiring restoration.

PHOTOS

ACTION DESCRIPTION

Pruning, cultivating and mulching of existing trees, shrubs and perennials. Correct negative slope around foundations by installing soil and sod. Restore lawn at stressed and/or non existing lawn areas around immediate building by installing soil and sod.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Appearance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Wall Finishes: Paint Interior	Inspection Date	08/24/2006
Linked System	Wall Finishes	Finish Date	-
Prime System	Wall Finishes	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	182,696
Action Date	08/24/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire building EXCEPT 1994 addition		
Savings Description	-		

REQUIREMENT DESCRIPTION

Routine maintenance painting will be required in most spaces.

PHOTOS



Wall Finishes: Paint Interior

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ACTION DESCRIPTION

Repaint wall surfaces and ceiling surfaces

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Asbestos

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Floor Finishes: Replace VAT	Inspection Date	08/24/2006
Linked System	Floor Finishes	Finish Date	-
Prime System	Floor Finishes	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	168,976
Action Date	08/24/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	First Floor: music wing: 115, 116, 117, 118, 119, 120, 109, 107, Corridor, Vestibule, Industrial Arts: Corridor, 103, Auditorium: Corridor, Administration/Cafeteria: main office work room, cot room, storage rooms, cafeteria, dishwash, storage, Classroom Wing: 166, Corridor, 167, 169, Second Floor: Classroom wing: Corridor, 225, 226, 227, 234, 240, 241, 242, 243, 244, 232,		
Savings Description	-		

REQUIREMENT DESCRIPTION

Vinyl Asbestos Tile exists and will require abatement.

PHOTOS



Floor Finishes: Replace VAT

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ACTION DESCRIPTION

Replace Existing VAT withVCT. Approximately 17,200 S.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Asbestos

Asset Name: Woodland Middle School
Asset Number: 335

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:	92,547
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 throughtout facility.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Aquatic Facilities: Filtration System Upgrade		
Linked System	Aquatic Facilities	Inspection Date	11/05/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	USAquatics	Actual Cost	0
Action Date	-	Total Estimated Cost:	54,516
Funding Year	-	Funding Type	-
Requirement	Pool Mechanical	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing filtration system is a diatomaceous earth (DE) filter. The DE filter is a waste media filter since you must continuously buy DE. Depending on the bather load, the filters are backwashed weekly. DE has been found to be a carcinogen by several testing agencies. Its handling characteristics are similar to asbestos. When wetted it can be handled safely, when it is a dry dust it can be inhaled into the lungs. There has been a trend nationally away from DE filters because of operational costs and health concerns. The filter is being backwashed down the sewer. In many jurisdictions, DE is considered a hazardous waste and must be separated from the water during the backwash process with the DE material being sent to the proper disposal sites. The DE system used requires dual pumps and a governor valve. Flooding is always a possibility and two pumps require twice the power of a single pump system.

PHOTOS



Aquatic Facilities: Filtration System Upgrade

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ACTION DESCRIPTION

Install a high rate pressure sand filter system with backwash retention capability. Pressure sand filters are a permanent media filter, which are more efficient to operate than other types of filters. Backwashing the filters take approximately 10 minutes per filter as compared to several hours for the DE filter. When proper sizing methods are used and the correct type of filter is specified, filtration effectiveness comparable to DE can be achieved without the associated dangers. The filters are also non-metallic, so rusting will not be an issue. Since backwashing is a process of reversing flow in the filter, the only

All Costs in USD.

elements going to waste are pool water and organics.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Electrical Service: Outdated Switchgear	Inspection Date	09/12/2006
Linked System	Electrical Service and Distribution	Finish Date	-
Prime System	Electrical Service and Distribution	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	Crotteau, Paul	Total Estimated Cost:	33,040
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Main Electrical Room		
Savings Description	-		

REQUIREMENT DESCRIPTION

Electrical Service has become outdated which make it difficult to maintain and find the correct replacement parts.

PHOTOS



Electrical Service: Outdated Switchgear

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ACTION DESCRIPTION

A new switchboard will replace the outdated one and existing feeders will be reconnected. The new switchboard will be easier to find parts for and to maintain.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC: Heating System Conversion - Steam to Hot Water		
Linked System	Steam Distribution Systems	Inspection Date	06/28/2006
Prime System	Steam Distribution Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2009	Total Estimated Cost:	352,348
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building Except for 1994 Addition	Annual Energy/Ops Savings \$	10,321
Savings Description	Energy savings generated from converting from a steam system with old boilers to a how water system that includes condensing style boiler(s).		

REQUIREMENT DESCRIPTION

The steam system (48 years old) has exceeded the recommended useful life. Most of the steam system is a one pipe system which is difficult to control/maintain/service. A steam system requires substantially more maintenance than a modern hot water heating system due to steam traps, condensate pumps, and chemical treatment.

PHOTOS



HVAC: Heating System Conversion - Steam to Hot Water

-

ACTION DESCRIPTION

Install new high efficiency hot water condensing boilers and hot water piping system. Retrofit the small steam boiler to hot water and utilize for interruptible fuel rates. Replace all steam terminal heating devices and coils with hot water devices and coils.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

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:	12,681
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: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Plumbing - Sump Pump Replacement		
Linked System	Plumbing	Inspection Date	07/18/2006
Prime System	Plumbing	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/18/2012	Total Estimated Cost:	11,800
Funding Year	-	Funding Type	-
Requirement Location	Boiler Room - 1958 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The sump pump in the boiler room is 48 years old and beyond it's recommended service life.

PHOTOS



Plumbing - Sump Pump Replacement

-

ACTION DESCRIPTION

Replace the existing vertical sump pumps with a new vertical duplex set of sump pumps with new duplex control panel.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

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:	177,000
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: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	198,976
Action Date	08/01/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	302
Requirement Location	Multiple Locations		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system beyond rated service life. Includes roof Areas 7 and 10.

PHOTOS

ACTION DESCRIPTION

Replace the EPDM roof system. Sequence work with roof-level wall restoration.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Beyond Rated Life

Asset Name: Woodland Middle School
Asset Number: 335

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:	236,401
Action Date	08/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	360
Requirement Location	Multiple Locations		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system is beyond rated service life. Includes roof Areas 5,6, and 15.

PHOTOS



Roof System: Replace Roof

-

ACTION DESCRIPTION

Replace EPDM roof system. Sequence work with roof-level wall restoration.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Building Code

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Aquatic Facilities: Accent Stripe and Thermometer		
Linked System	Aquatic Facilities	Inspection Date	11/05/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	USAquatics	Actual Cost	0
Action Date	11/05/2006	Total Estimated Cost:	4,154
Funding Year	-	Funding Type	-
Requirement Location	Pool	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

ACCENT AT 5 FT. TRANSITION

An accent is required where there is a transition to a steeper slope. The existing accent was painted on and has faded.

THERMOMETER

A full flow thermometer is required to measure the water temperature of the water entering the pool.

PHOTOS



Aquatic Facilities: Accent Stripe and Thermometer

-

ACTION DESCRIPTION

ACCENT AT 5 FT. TRANSITION

Add the required accent stripe.

THERMOMETER

Install a code compliant thermometer on the full flow recirculation line.

All Costs in USD.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Building Code

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Elevators and Lifts: Elevator Repair	Inspection Date	08/28/2006
Linked System	Elevators and Lifts	Finish Date	-
Prime System	Elevators and Lifts	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Schindler Elevator Corp.	Total Estimated Cost:	10,254
Action Date	08/28/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Classroom Wing		
Savings Description	-		

REQUIREMENT DESCRIPTION

Work required falls into three categories: Code Compliance A17.3, Life Safety Issues and Product Upgrades.

PHOTOS

ACTION DESCRIPTION

Upgrade elevators for code compliance, life safety issues and product upgrades.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Building Code

Asset Name: Woodland Middle School
Asset Number: 335

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 1958 Building Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing dishwasher has an existing exhaust hood but is not effective. 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: Woodland Middle School
Category: Building Code

Asset Name: Woodland Middle School
Asset Number: 335

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 - 1958 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing grease exhaust hood has been written up as a non compliant hood by the State Fire Marshall. 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.

All Costs in USD.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Building Code

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Plumbing: Replace Underground Sanitary Sewer Mains in Crawlspace/Tunnel Areas		
Linked System	Plumbing	Inspection Date	06/21/2006
Prime System	Plumbing	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/21/2007	Total Estimated Cost:	88,500
Funding Year	FY 2006	Funding Type	-
Requirement Location	Boiler Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The 48 year old sanitary sewer lines buried underground are failing due to the moisture in the tunnels. A portion of these lines have been replaced in recent years.

PHOTOS



Plumbing: Replace Underground Sanitary Sewer Mains in Crawlspace/Tunnel Areas

-

ACTION DESCRIPTION

Replace the 48 year old remaining underground sanitary sewer lines in the crawlspace/tunnel area.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Capacity

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Electrical Distribution: Insufficient Capacity		
Linked System	Electrical Service and Distribution	Inspection Date	09/12/2006
Prime System	Electrical Service and Distribution	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/12/2009	Total Estimated Cost:	44,604
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. Panels must be added to accommodate circuits needed for additional receptacles in classrooms.

PHOTOS



Electrical Distribution: Insufficient Capacity

ACTION DESCRIPTION

Provide three new 45 KVA transformers along with 100 amp feeders and panels to help carry the extra load of additional receptacles throughout the building.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Capacity

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC: Add Cooling Capability to Computer Lab and IT Data Rooms		
Linked System	Cooling Generating Systems	Inspection Date	07/11/2006
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	07/11/2007	Total Estimated Cost:	303,378
Funding Year	-	Funding Type	-
Requirement Location	IT Data Room Located in Office Room 140a - 1958 Building	Annual Energy/Ops Savings \$	-
Savings Description	3 IT rooms 2 Computer		

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 Rooms

ACTION DESCRIPTION

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

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Capacity

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Wiring Devices: Insufficient Receptacles		
Linked System	Branch Wiring Devices	Inspection Date	09/12/2006
Prime System	Branch Wiring Devices	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/12/2009	Total Estimated Cost:	76,700
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

In general, classrooms have an insufficient number of receptacles. Computers and other electronics are plugged into power strips due to the lack of receptacles. This limits future addition of electronic devices and presents a fire hazard.

PHOTOS



Wiring Devices: Insufficient Receptacles

-

ACTION DESCRIPTION

Provide six additional 20 amp receptacle per classroom and associated branch wiring. Upgrade will first require additional branch panel boards and service modifications.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Aquatic Facilities: Deferred Maintenance Items		
Linked System	Aquatic Facilities	Inspection Date	11/05/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	USAquatics	Actual Cost	0
Action Date	11/05/2007	Total Estimated Cost:	73,207
Funding Year	-	Funding Type	-
Requirement	Pool	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

REQUIREMENT DESCRIPTION

The main drains are cast iron and over time the piping either corrodes or scales shut. Long term maintenance should include replacement of the main drains. Similar to the cast iron main drains, the cast iron gutter drop-outs either corrode or scale shut. Long term maintenance should include replacement of the drop outs.

Like the main drains and gutter drop outs, the inlets are cast iron / galvanized pipe and either corrode or scale shut. Long term maintenance should include replacement of the inlets. The inlet grates (by Josam) are no longer made and the grates cannot be replaced. The inlet fittings should be replaced with a different model to facilitate easier repair and replacement in the future. Inlets are required to be adjustable. The pool tile must be re-grouted in order to preclude the delaminating of the tile from the pool shell. Years of diatomaceous earth (DE) going down the drain clog the drain. The piping should be inspected.

PHOTOS



Aquatic Facilities: Deferred Maintenance Items

-

ACTION DESCRIPTION

Replace main drain grates and related piping. Replace gutter drop-outs and connect to existing piping. Complete inlet pipe loop.

Replace inlet fittings with adjustable eyeball fittings. Re-grout pool.

All Costs in USD.

Ream out waste piping.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Equipment and Furnishings: Paint Locker Room Lockers		
Linked System	Equipment and Furnishings	Inspection Date	08/24/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/24/2012	Total Estimated Cost:	9,169
Funding Year	-	Funding Type	-
Requirement Location	Boys/ Girls Locker Rooms	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing lockers should be painted.

PHOTOS



E-Equipment and Furnishings: Paint Locker Room Lockers

-

ACTION DESCRIPTION

Prep surfaces and paint lockers.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Equipment and Furnishings: Replace Stage Curtains		
Linked System	Equipment and Furnishings	Inspection Date	08/24/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/24/2012	Total Estimated Cost:	54,988
Funding Year	-	Funding Type	-
Requirement Location	Auditorium Stage	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing stage curtains are old, worn and torn.

PHOTOS



E-Equipment and Furnishings: Replace Stage Curtains

-

ACTION DESCRIPTION

Replace existing stage curtains, draw cords and hooks with new.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Exterior Walls: Roof-Level Wall Restoration		
Linked System	Exterior Walls	Inspection Date	08/01/2006
Prime System	Exterior Walls	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:	59,000
Funding Year	-	Funding Type	-
Requirement Location	Multiple Locations	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated roof-level walls and chimney at roof Areas 5,7,8, and 13.

PHOTOS



Exterior Walls: Roof-Level Wall Restoration

-

ACTION DESCRIPTION

Tuck pointing, spot brick replacement, cut in new masonry expansion joint, and joint sealant replacement. Sequence work with reroofing Areas 5,7,8, and 13.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Exterior Walls: Wall Restoration		
Linked System	Roofing	Inspection Date	08/01/2006
Prime System	Roofing	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:	295,000
Funding Year	-	Funding Type	-
Requirement Location	Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated roof-level and grade level-walls at roof Areas 2,4, and 6 and around entire building perimeter.

PHOTOS



Exterior Walls: Wall Restoration

-

ACTION DESCRIPTION

Tuck pointing, spot brick and glass block replacement, new chimney cap, painting, and concrete repair. Sequence work with reroofing Areas 2,4, and 6.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Deferred Maintenance

Asset Name: Woodland Middle School
Asset Number: 335

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: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Aquatic Facilities: Operational Upgrades		
Linked System	Aquatic Facilities	Inspection Date	11/05/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	USAquatics	Actual Cost	0
Action Date	11/05/2007	Total Estimated Cost:	13,759
Funding Year	-	Funding Type	-
Requirement	Pool	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

REQUIREMENT DESCRIPTION

PORTABLE LIFE GUARD CHAIR

A portable lifeguard chair is recommended to replace the existing chairs and give more programming options.

Moving the chair will help maintain the code required 5 ft. deck.

A lifeguard chair is not required by code for a pool this size.

pH ADJUSTMENT

The Duluth school pools are unique in their chemical feed needs. Limited adjustment is required for pH control. This is unusual in that the use of gas chlorine (pH = 1) drives the pool water pH lower, generally requiring the use of caustic soda or soda ash to maintain the required pH. Due to this limited adjustment, the pool pH is maintained manually. Despite the limited adjustment necessary, it is still necessary. The installation of automatic pH adjustment chemicals will reduce the potential for peak and valley pH changes which can reduce the chlorine effectiveness.

UPGRADE CHEMICAL CONTROLLER

The chemical controller should include a memory with down load and modem capabilities. These features give the ability to store the history of the pool chemistry to protect the owner in case of liability issues. It allows trouble shooting and is controllable from remote locations via the modem for management of the facility or assistance from outside parties who can download the pools data.

PHOTOS



Aquatic Facilities: Operational Upgrades

-

ACTION DESCRIPTION

PORTABLE LIFE GUARD CHAIR

Replace existing fixed guard chairs with portable chairs.

ADD Ph FEED EQUIPMENT

INSTALL AN UPDATED AUTOMATED CHEMICAL CONTROLLER

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Aquatic Facilities: Pool Pump VFD		
Linked System	Aquatic Facilities	Inspection Date	09/11/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/11/2006	Total Estimated Cost:	2,360
Funding Year	-	Funding Type	-
Requirement Location	Pool Mechanical	Annual Energy/Ops Savings \$	73
Savings Description	Pool pump saving from VFD controls to reduce flow during low filter head conditions or elimination of balancing valves.		

REQUIREMENT DESCRIPTION

Install VFD on pool pump and control to maintain constant flow.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Controls: VendingMiser Controls	Inspection Date	11/02/2006
Linked System	Controls and Instrumentation	Finish Date	-
Prime System	Controls and Instrumentation	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Ruud, Mark	Total Estimated Cost:	826
Action Date	11/02/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	86
Requirement Location	Vending Machines		
Savings Description	Save energy during unoccupied conditions.		

REQUIREMENT DESCRIPTION

Install vending miser controls on vending machines.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	HVAC: Steam System Steam Trap Upgrades		
Linked System	Steam Distribution Systems	Inspection Date	09/07/2006
Prime System	Steam Distribution Systems	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/07/2006	Total Estimated Cost:	13,340
Funding Year	-	Funding Type	-
Requirement Location	Facility Wide	Annual Energy/Ops Savings \$	2,818
Savings Description	Heating savings attributed to leaking steam traps that result in the overheating of tunnel areas or steam venting in condensate receiver tanks.		

REQUIREMENT DESCRIPTION

- 1) Complete survey all steam traps system wide to locate failed traps.
- 2) Replace or repair of failed traps depending on trap age, condition, and availability of replacement part kits.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Kitchen Equipment: Replace Remote Kitchen Condensers		
Linked System	Equipment and Furnishings	Inspection Date	07/12/2006
Prime System	Equipment and Furnishings	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:	11,800
Funding Year	-	Funding Type	-
Requirement Location	Kitchen - 1958 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The cooler and freezer condensers are located outside and appear not be rated for outdoor operation. Heat tape has been added to the compressors, but compressors fail when during sub zero winter temperatures.

In addition, the unit mounted compressors drain to the tunnel, which has a dirt floor. This is making the tunnel very wet.

PHOTOS



Kitchen Equipment: Replace Remote Kitchen Condensers

-

ACTION DESCRIPTION

Replace the kitchen condensers with units rated for outdoors and pipe the existing condenser drains for the remaining condensers to a newly installed floor drain.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

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	177,073
Inspector Name	Ruud, Mark	Total Estimated Cost:	208,946
Action Date	09/20/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	8,000
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: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Plumbing: Add Domestic Water Heat Exchanger		
Linked System	Plumbing	Inspection Date	07/12/2006
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	Boiler Room - 1948 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

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

The unit to be located in the boiler room and shall connect to the areas of the building currently being served by the two (2) steam to domestic hot water heat exchangers located in the crawlspaces. Pipe new mixing valves as well.

PHOTOS



Plumbing: Add Domestic Water Heat Exchanger

-

ACTION DESCRIPTION

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

Connect to areas served by two (2) steam to domestic hot water heat exchangers.

Provide new mixing valves for the hot water.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Energy and Operational Efficiency

Asset Name: Woodland Middle School
Asset Number: 335

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:	15,827
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	3,699
Savings Description	Reduce water and sewer usage using new low flow devices. Savings includes constant flow urinals - Savings from urinals \$920, savings from other improvements \$2,779.		

REQUIREMENT DESCRIPTION

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

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Life Safety

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Fire Protection: Extend Fire Protection Sprinkler System		
Linked System	Fire Protection	Inspection Date	07/13/2006
Prime System	Fire Protection	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	440,848
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Woodland Middle School doe not currently have a fire protection sprinkler system that serves the entire facility. Although this was not required by code during the original construction, the district may want to consider sprinkling this building for facility consistency.

PHOTOS



Fire Protection: Extend Fire Protection Sprinkler System

-

ACTION DESCRIPTION

Extend wet fire protection sprinkler system throughout building.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Life Safety

Asset Name: Woodland Middle School
Asset Number: 335

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:	30,019
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: Woodland Middle School
Category: Occupant Security

Asset Name: Woodland Middle School
Asset Number: 335

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: Woodland Middle School
Category: Occupant Security

Asset Name: Woodland Middle School
Asset Number: 335

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:	149,425
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: Woodland Middle School
Category: Occupant Security

Asset Name: Woodland Middle School
Asset Number: 335

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:	165,200
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: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Ceiling Finishes: Replace Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	08/24/2006
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	08/24/2012	Total Estimated Cost:	83,426
Funding Year	-	Funding Type	-
Requirement Location	1st Floor Rooms: 107, 108, 109, music corridor, industrial arts corridor, auditorium corridor, cafeteria, 148, 1994 addition corridor, 174, 176, 169, 167, 166, 115, 116, 117, 118, 119, 120, 2nd Floor Rooms: 1994 Addition Corridor, 224, 216, 220, 225, 226, 227, 228, 229, 230, 232, 241, 242, 243, 244,	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing 12x12 adhesive applied acoustical tile is aged mostly ineffective and doesn't meet district standardization goal.

PHOTOS



Ceiling Finishes: Replace Acoustical Tile

-



Ceiling Finishes: Replace Acoustical Tile

-

ACTION DESCRIPTION

Replace 12x12 adhesive applied acoustical tile with 2x2 acoustical tile. Approximately 18200 S.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Ceiling Finishes: Replace Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	08/24/2006
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	08/24/2012	Total Estimated Cost:	25,901
Funding Year	-	Funding Type	-
Requirement Location	First Floor Rooms: Industrial Arts Corridor, Main Office Area, 149, 150, 151, 152, 153, 159, 161, Library, Second Floor Rooms: South Classrooms Corridor, 200, 202, 204, 206, 208, 210, 214, 215, 217, 221, 240,	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing 2x4 suspended acoustical tile ceilings do not meet district standardization goal to convert to 2x2 suspended acoustical tile.

PHOTOS



Ceiling Finishes: Replace Acoustical Tile

-

ACTION DESCRIPTION

Replace existing 2x4 suspended acoustical tile with 2x2 suspended acoustical tile. Approximately 17,000 S.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Ceiling Finishes: Replace Perforated Acoustical Metal Panels		
Linked System	Ceiling Finishes	Inspection Date	08/24/2006
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	08/24/2012	Total Estimated Cost:	45,371
Funding Year	-	Funding Type	-
Requirement Location	pool	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing perforated, suspended acoustical metal ceiling panels are noted for replacement on districts 10 year plan.

PHOTOS



Ceiling Finishes: Replace Perforated Acoustical Metal Panels

-

ACTION DESCRIPTION

Replace suspended perforated acoustical metal panels. Approximately 1650 S.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	168,740
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing building cabling has been installed in several stages over the years and contains different 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. Add high bandwidth Fiber Optic Cabling between wiring closets. Standardize quantity of phone and data in classroom and offices.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	33,040
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: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	33,040
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: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	6,490
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

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

PHOTOS

ACTION DESCRIPTION

Install a new CISCO phone system. Add paging interface. Remove old system after installation of new.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	38,940
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: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Communications and Security: Sound Systems, Auditorium Control Booth 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:	341,374
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There is currently little or no audio enhancement systems in the classrooms.

The Auditorium sound system is older, but functional. The Auditorium control booth components (video/projection) needs upgrading. The Pool has three paging horns. Gymnasium sound system is portable and does not cover area well.

PHOTOS

ACTION DESCRIPTION

Replace Auditorium, Gymnasium and Pool sound systems.

Upgrade Auditorium video/projection systems.

Add audio enhancement systems to Classrooms.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	194,700
Funding Year	-	Funding Type	-
Requirement Location	Entire building	Annual Energy/Ops Savings \$	4,430
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.

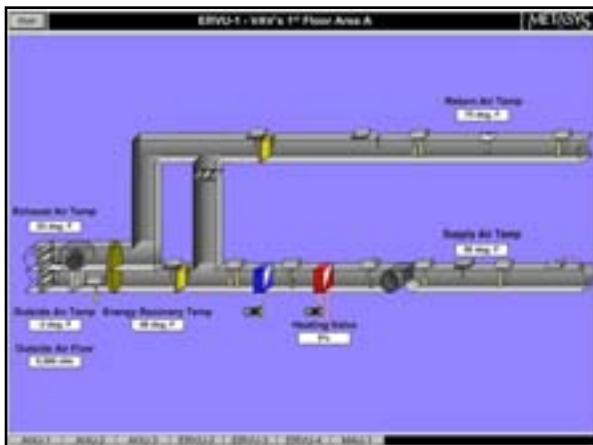
Upgrade existing pneumatic controls (old technology) to new Direct Digital controls.

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. added to the BAS system.

PHOTOS



BAS Graphic

All Costs in USD.

ACTION DESCRIPTION

Upgrade existing BAS to new web based to tie to District-wide BAS network. Add additional monitoring and control points to optimize BAS system.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	99,415
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: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Equipment and Furnishings: Construct Computer Stations		
Linked System	Equipment and Furnishings	Inspection Date	08/24/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	51,920
Funding Year	-	Funding Type	-
Requirement Location	Library, computer lab 161	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Upgrade computer work stations per district standardization goal.

PHOTOS



E-Equipment and Furnishings: Construct Computer Stations

-

ACTION DESCRIPTION

Replace computer stations with standardized. Approximately 66 stations.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Equipment and Furnishings: Replace Auditorium Seating		
Linked System	Equipment and Furnishings	Inspection Date	08/24/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	367,393
Funding Year	-	Funding Type	-
Requirement Location	Auditorium	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Replace auditorium seats (old)

PHOTOS



E-Equipment and Furnishings: Replace Auditorium Seating

-

ACTION DESCRIPTION

Replace old stock of seating with new. Approximately 790 seats.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Equipment and Furnishings: Replace Casework		
Linked System	Equipment and Furnishings	Inspection Date	08/25/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	128,667
Funding Year	-	Funding Type	-
Requirement Location	Art Rooms 240, 242	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Wood cabinets and countertops are in poor condition and unsightly.

PHOTOS



E-Equipment and Furnishings: Replace Casework

-

ACTION DESCRIPTION

Replace existing deteriorated wood cabinets and countertops with new.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Equipment and Furnishings: Replace Gym Bleachers		
Linked System	Equipment and Furnishings	Inspection Date	08/24/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/24/2012	Total Estimated Cost:	69,419
Funding Year	-	Funding Type	-
Requirement Location	Gymnasium	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing folding wood bleachers are old, worn, unsightly and beyond rated life.

PHOTOS



E-Equipment and Furnishings: Replace Gym Bleachers

-

ACTION DESCRIPTION

Replace folding wood bleachers with new. Approximately 350 L.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

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:	506,220
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Site has one projector and no Smart Boards installed. Three Smart Boards are on order.

PHOTOS

ACTION DESCRIPTION

Install additional Smart Boards.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Fittings: Replace Chalkboard		
Linked System	Fittings	Inspection Date	08/25/2006
Prime System	Fittings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	24,780
Funding Year	-	Funding Type	-
Requirement Location	Rooms: 166, 167, 169, 153, 149, 174, 216, 220, 224, 226, 228, 230, 227, 225, 232, 234, 240,	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Replace existing chalkboards with markerboards per district standardization.

PHOTOS



Fittings: Replace Chalkboard

-

ACTION DESCRIPTION

Replace existing chalkboard with markerboard. Approximately 1350 S.F.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Floor Finishes: Replace Kitchen Flooring	Inspection Date	08/24/2006
Linked System	Interior Doors	Finish Date	-
Prime System	Interior Doors	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	25,134
Action Date	08/24/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Kitchen		
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing floor tile is not functional for kitchen and needs to be replaced.

PHOTOS



Floor Finishes: Replace Kitchen Flooring

-

ACTION DESCRIPTION

Remove (abate) existing flooring, install quarry tile.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Lighting Equipment: Dimming System		
Linked System	Lighting Equipment	Inspection Date	09/19/2006
Prime System	Lighting Equipment	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	-	Total Estimated Cost:	118,000
Funding Year	-	Funding Type	-
Requirement Location	Stage Area	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Dimming system could be improved with newer system and better technology.

PHOTOS



Lighting Equipment: Dimming System

-

ACTION DESCRIPTION

Replace dimming system with newer system for better stage lighting and control.

District: Duluth Public Schools
Facility: Woodland Middle School
Category: Upgrades

Asset Name: Woodland Middle School
Asset Number: 335

Requirement Name	Stairs: Replace Applied Non-slip Treads	Inspection Date	08/24/2006
Linked System	Stairs	Finish Date	-
Prime System	Stairs	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	10,950
Action Date	08/24/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Front exterior concrete stairs		
Savings Description	-		

REQUIREMENT DESCRIPTION

Complete installation of mechanically fastened, surface metal non-slip stair treads for safety.

PHOTOS



Stairs: Replace Applied Non-slip Treads

-

ACTION DESCRIPTION

Complete installation of metal non-slip treads. Approximately 220 L.F.