

Requirement Detail

by Asset Name and Category

HISTORIC OLD CENTRAL

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: HOCHS - Parking
Asset Number: 12a

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:	47,200
Funding Year	-	Funding Type	-
Requirement Location	All Asphalt Lots	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

All asphalt parking lots at site will need overlay in 3-5 years.

PHOTOS

ACTION DESCRIPTION

Overlay asphalt parking lots at site.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: HOCHS - Parking
Asset Number: 12a

Requirement Name	Vehicular Paving: West Disability Entrance Drive		
Linked System	Parking Lots	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	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:	94,400
Funding Year	-	Funding Type	-
Requirement Location	Entrance Drive	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing concrete drive exhibits significant cracking and other distress, but still good overall condition.

PHOTOS

ACTION DESCRIPTION

Reconstruct existing concrete drive west of building.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Upgrades

Asset Name: HOCHS - Parking
Asset Number: 12a

Requirement Name	Vehicular Paving: 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:	118,000
Funding Year	-	Funding Type	-
Requirement Location	Gravel Lot West of Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Gravel parking lot west of building could be paved in future, including new concrete curbing.

PHOTOS

ACTION DESCRIPTION

Install new concrete curbing and pave gravel parking lot.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Life Safety

Asset Name: HOCHS - Sidewalks
Asset Number: 12b

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:	94,400
Funding Year	-	Funding Type	-
Requirement Location	2nd Street and 1st Avenue	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Sidewalks along 2nd St. and 1st Ave. are in poor condition. Also some smaller areas in the sidewalk along 3rd St.

PHOTOS

ACTION DESCRIPTION

Replace concrete sidewalks along 2nd St. and 1st Ave. and smaller areas of damaged sidewalk along 3rd St.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Life Safety

Asset Name: HOCHS - Sidewalks
Asset Number: 12b

Requirement Name	Pedestrian Paving: Exterior Stairs		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Exterior Steps	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2006	Total Estimated Cost:	354,000
Funding Year	-	Funding Type	-
Requirement Location	South and East of Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Exterior stairs south of building and east of building are in poor to very poor condition.

PHOTOS

ACTION DESCRIPTION

Repair/replace damaged exterior stairs wouth and east of building.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Life Safety

Asset Name: HOCHS - Site
Asset Number: 12c

Requirement Name	Site: Stone Retaining Wall	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Site Improvements	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	295,000
Action Date	08/01/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Intersection of 2nd St and 1st Ave		
Savings Description	-		

REQUIREMENT DESCRIPTION

Stone retaining wall adjacent to intersection of 2nd St and 1st Ave is leaning towards the public sidewalk.

PHOTOS

ACTION DESCRIPTION

Replace stone retaining wall along 2nd Street from Lake to previously repaired section of wall

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Accessibility

Asset Name: Historic Old Central High School
Asset Number: 12

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:	10,514
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 ewashes.

PHOTOS



Equipment and Furnishings: Accessibility

-

ACTION DESCRIPTION

Correct accessibility issues as required.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Accessibility

Asset Name: Historic Old Central High School
Asset Number: 12

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:	32,606
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: Historic Old Central High School
Category: Accessibility

Asset Name: Historic Old Central High School
Asset Number: 12

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:	71,407
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

-

ACTION DESCRIPTION

Upgrades as needed to meet plumbing accessibility requirements.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Accessibility

Asset Name: Historic Old Central High School
Asset Number: 12

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:	5,370
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

-

ACTION DESCRIPTION

Correct exterior accessibility issues as required.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Air and Water Quality

Asset Name: Historic Old Central High School
Asset Number: 12

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:	713,782
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Historic Old Central High School has no means of dehumidification. Without de-humidification 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: Historic Old Central High School
Category: Air and Water Quality

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	HVAC - Upgrade Ventilation and Replace Wood Shop Dust Collector and Upgrade Shop Hood Exhaust		
Linked System	Exhaust Ventilation Systems	Inspection Date	07/25/2006
Prime System	Exhaust Ventilation Systems	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/25/2012	Total Estimated Cost:	218,300
Funding Year	-	Funding Type	-
Requirement Location	Industrial Tech Lab - 1890 Building Above Boiler Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The dust collector for the wood shop has been replaced within the last 20 years and has had filters added to the re-circulated supply air. This exhaust system appears to be operating well, but planned replacement is required.

The air handling unit has exceeded it's recommended useful life and needs to be replaced in order to provide the 2000 International Mechanical Code required ventilation air.

PHOTOS



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

-

ACTION DESCRIPTION

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

Install a new air handling unit for the wood shop.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Air and Water Quality

Asset Name: Historic Old Central High School
Asset Number: 12

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:	623,512
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The 80-116 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

-

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 would include directly connecting the drinking fountain sumps.

This includes the bradley shower stations in the locker rooms.

All Costs in USD.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Air and Water Quality

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Service Tunnels: Floor Vapor Barrier	Inspection Date	08/01/2006
Linked System	Other Site Construction	Finish Date	-
Prime System	Service and Pedestrian Tunnels	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	4,248
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	1926 Addition		
Savings Description	-		

REQUIREMENT DESCRIPTION

Exposed dirt areas contributing to air quality issues.

PHOTOS

ACTION DESCRIPTION

Install poly vapor barrier over exposed earth areas.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Ceiling Finishes: Replace Gymnasium Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	09/19/2006
Prime System	Ceiling Finishes	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	09/19/2009	Total Estimated Cost:	45,843
Funding Year	-	Funding Type	-
Requirement Location	Gymnasium	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

12 X 12 adhesive applied acoustical tile is damaged, unsightly. Replacement required.

PHOTOS



Ceiling Finishes: Replace Gymnasium Acoustical Tile

ACTION DESCRIPTION

Replace 12 x 12 adhesive applied acoustical tile
 2 x 2 suspended acoustical tile. Approximately 7000 S.F.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Ceiling Finishes: Replace Suspended Ceiling Tile		
Linked System	Ceiling Finishes	Inspection Date	09/19/2006
Prime System	Ceiling Finishes	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2012	Total Estimated Cost:	44,296
Funding Year	-	Funding Type	-
Requirement Location	Basement Areas: Printshop, corridors, B3, B5, B19	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing ceiling tile is dirty/worn. Recommend panel replacement.

PHOTOS



Ceiling Finishes: Replace Suspended Ceiling Tile

-

ACTION DESCRIPTION

Remove existing panels and replace with new.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Floor Finishes: Refinish Hardwood Floor	Inspection Date	09/19/2006
Linked System	Floor Finishes	Finish Date	-
Prime System	Floor Finishes	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	31,978
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Venditeria Balcony, 112		
Savings Description	-		

REQUIREMENT DESCRIPTION

Hardwood flooring is worn and unsightly.

PHOTOS



Floor Finishes: Refinish Hardwood Floor

-

ACTION DESCRIPTION

Strip, Sand and Finish hardwood flooring. Approximately 4,850 S.F.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Floor Finishes: Replace Carpet Areas with VCT		
Linked System	Floor Finishes	Inspection Date	09/19/2006
Prime System	Floor Finishes	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2012	Total Estimated Cost:	14,221
Funding Year	-	Funding Type	-
Requirement Location	Basement Areas: Storeroom adjacent to mailroom, B18, B20 including offices	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing carpet is worn and not suited for current use, replace carpet with VCT.

PHOTOS



Floor Finishes: Replace Carpet Areas with VCT

-

ACTION DESCRIPTION

Remove existing carpet, prep floor as required, install new VCT.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Floor Finishes: Replace Carpet	Inspection Date	09/19/2006
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:	330,070
Action Date	09/19/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	First Floor, Second Floor, Third Floor		
Savings Description	-		

REQUIREMENT DESCRIPTION

Carpet is exhibiting wear at normal and accelerated levels.

PHOTOS



Floor Finishes: Replace Carpet

-

ACTION DESCRIPTION

Replace carpet with new. Approximately 45,000 S.F.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Floor Finishes: Replace VCT	Inspection Date	09/19/2006
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	Fern, Bob	Total Estimated Cost:	67,459
Action Date	09/19/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Basement Print Shop, Corridors, Storage Rooms		
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing VCT is dated and currently in serviceable condition, but should be replaced for long term use.

PHOTOS



Floor Finishes: Replace VCT

-

ACTION DESCRIPTION

Remove existing VCT, prep floor, install new tile.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Interior Doors: Refurbish Wood Doors		
Linked System	Interior Doors	Inspection Date	09/19/2006
Prime System	Interior Doors	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	09/19/2012	Total Estimated Cost:	13,086
Funding Year	-	Funding Type	-
Requirement Location	1st Floor Vestibules	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Wood panel doors and sidelights are old and in need of refinishing. Glass lites do not have safety glazing.

PHOTOS



Interior Doors: Refurbish Wood Doors

-

ACTION DESCRIPTION

Strip and refinish wood panel vestibule doors and sidelights (where applicable). Reglaze. Approximately 18 Doors

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

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:	8,387
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 retaining walls in need of repair.

PHOTOS

ACTION DESCRIPTION

Pruning, cultivating and mulching of existing trees, shrubs and perennials. Correct negative slope around foundations by installing soil and sod. Reconstruct retaining walls that are either collapsed or include wall material degradation.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Appearance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Wall Finishes: Repaint Interior	Inspection Date	09/19/2006
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	Fern, Bob	Total Estimated Cost:	328,236
Action Date	09/19/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

All interior surfaces will require repainting at some point to maintain appearance.

PHOTOS



Wall Finishes: Repaint Interior

-

ACTION DESCRIPTION

Prep painted surfaces as required and repaint.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Asbestos

Asset Name: Historic Old Central High School
Asset Number: 12

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:	109,032
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: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Exterior Doors: Replace Overhead Doors		
Linked System	Exterior Doors	Inspection Date	09/19/2006
Prime System	Exterior Doors	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2009	Total Estimated Cost:	21,830
Funding Year	-	Funding Type	-
Requirement Location	Garage	Annual Energy/Ops Savings \$	619
Savings Description	Energy savings generated from improved door insulation values and reduced infiltration.		

REQUIREMENT DESCRIPTION

Existing overhead doors appear to be the original wood doors, doors are showing their age and should be replaced.

PHOTOS



Exterior Doors: Replace Overhead Doors

-

ACTION DESCRIPTION

Remove (5) overhead doors and replace with new.

10x12 Each

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

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	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2012	Total Estimated Cost:	946,242
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building	Annual Energy/Ops Savings \$	812
Savings Description	Energy savings generated from converting from a steam system to a how water system using a steam / hot water heat exchanger to handle the city steam supply.		

REQUIREMENT DESCRIPTION

The steam system which is 80-116 years old has exceeded the recommended useful life. 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 a steam to hot water heat exchanger and hot water piping system. Replace all steam terminal heating devices and coils with hot water devices and coils.

Budgeted costs of \$32,100 are avoided by converting the steam system to hot water.

This is due to the terminal steam devices requiring custom covers to be installed to eliminate the burn hazard.

All Costs in USD.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	HVAC: Install Ventilation Storage and Print Shop Areas		
Linked System	Air Distribution Systems	Inspection Date	06/28/2006
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	06/28/2007	Total Estimated Cost:	560,854
Funding Year	-	Funding Type	-
Requirement Location	Basement - 1890 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There is one air handling unit serving this area which has exceeded the recommended useful life expectancy and currently poorly distribute ventilation air.

Much of the supply duct consists of fiberglass ductboard, which is failing.

In addition, the lack of dehumidification capability is creating "musty" areas in many of the paper and record storage areas. Spot coolers have been added to some of the areas, but the remaining spaces require not only improved ventilation, but dehumidification in order to help protect the documents.

PHOTOS



HVAC: Install Ventilation Storage and Print Shop Areas

-

ACTION DESCRIPTION

Installation of ventilation System with a Modern Ventilation System consisting of Air Handling Units with Energy Recovery, Duct Distribution System, and Variable Air Volume Boxes with Hot Water Reheat Coils and Hot Water Finned Tube Radiation.

All Costs in USD.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	HVAC: Replace Ventilation All Floors 1890 and 1926 Classroom and Administration Areas		
Linked System	Air Distribution Systems	Inspection Date	06/28/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2012	Total Estimated Cost:	4,309,360
Funding Year	-	Funding Type	-
Requirement Location	All Floors - 1890 and 1926 Building Classroom and Administration Areas	Annual Energy/Ops Savings \$	3,955
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 80-116 year old ventilation systems have exceeded the recommended useful life expectancy and currently poorly distribute ventilation air.

Much of the supply and return duct consists of fiberglass ductboard, which is failing.

There are three air handling units currently serving these areas, two of which are extremely large. Not only would these units be removed but more units would be added to provide improved air handling unit zoning.

PHOTOS



HVAC: Replace Ventilation All Floors 1890 and 1926 Classroom and Administration Areas

ACTION DESCRIPTION

Replacement of the Existing Ventilation System with a Modern Ventilation System consisting of Air Handling Units with Energy Recovery, Duct Distribution System, and Variable Air Volume Boxes with Hot Water Reheat Coils and Hot Water Finned Tube Radiation.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	HVAC: Replace Ventilation Venditeria Area		
Linked System	Air Distribution Systems	Inspection Date	06/28/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2012	Total Estimated Cost:	346,212
Funding Year	-	Funding Type	-
Requirement Location	All Floors - 1890 Center Section	Annual Energy/Ops Savings \$	698
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 33 year old ventilation system has exceeded the recommended useful life expectancy and currently poorly distribute ventilation air. Much of the supply duct consists of fiberglass ductboard, which is failing. As part of this upgrade, the new mechanical system will incorporated heat recovery and classroom occupancy / CO2 controls to save energy.

PHOTOS



HVAC: Replace Ventilation Venditeria Area

-

ACTION DESCRIPTION

Replacement of the Existing Ventilation System with a Modern Ventilation System consisting of Air Handling Units with Energy Recovery, Duct Distribution System, and Variable Air Volume Boxes with Hot Water Reheat Coils and Hot Water Finned Tube Radiation.

All Costs in USD.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

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:	13,270
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: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

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:	14,750
Funding Year	-	Funding Type	-
Requirement Location	Boiler Room - 1890 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The sump pump in the boiler room is utilized to transfer some ground water overflow from the loading dock. The piping needs to be reconfigured to discharge in an alternate location and the pump should be replaced.

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.

Re-pipe the discharge as required.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

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:	283,200
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: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

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:	476,578
Action Date	08/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	258
Requirement Location	1926 Additiona		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system beyond rated service life. Includes areas 7 and 7A.

PHOTOS

ACTION DESCRIPTION

Replace slate roof with slate with built-in copper gutter and snow guard system. Replace standing seam roof. Replace ventilators at same time.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

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:	7,646
Action Date	08/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Tower Roof by Clocks		
Savings Description	-		

REQUIREMENT DESCRIPTION

Roof system beyond rated service life.

PHOTOS

ACTION DESCRIPTION

Replace EPDM roof.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Beyond Rated Life

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Superstructure: Preserve/ Refurbish Clock Tower Stairway and Room		
Linked System	Superstructure	Inspection Date	09/19/2006
Prime System	Superstructure	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2009	Total Estimated Cost:	32,804
Funding Year	-	Funding Type	-
Requirement Location	Clock Tower	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing wood stair and railing is original; treads are cupped from wear, railing are non-code compliant floor boards are questionable.

PHOTOS



Superstructure: Preserve/ Refurbish Clock Tower Stairway and Room

-

ACTION DESCRIPTION

Replace stair treads and enclose risers. Replace stair railing and guard railing at landings. Install plywood over entire landing.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Building Code

Asset Name: Historic Old Central High School
Asset Number: 12

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:	63,472
Action Date	08/28/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	1890 Building - Center Section		
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: Historic Old Central High School
Category: Building Code

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	HVAC: Add Exhaust Hood to Dishwasher	
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: 16,520
Funding Year	-	Funding Type -
Requirement Location	Kitchen 1890 Building Addition	Annual Energy/Ops Savings \$ -
Savings Description	-	

REQUIREMENT DESCRIPTION

The existing dishwasher 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: Add Exhaust Hood to Dishwasher

-

ACTION DESCRIPTION

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: Historic Old Central High School
Category: Capacity

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Electrical Distribution: Insufficient Capacity		
Linked System	Electrical Service and Distribution	Inspection Date	09/15/2006
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	09/15/2009	Total Estimated Cost:	17,582
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 two new 100 amp feeders and panels to help carry the extra load of additional receptacles throughout the building.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Capacity

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	HVAC: Add Cooling Capability to Computer Labs 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:	324,500
Funding Year	-	Funding Type	-
Requirement Location	IT Data Rooms - 1890 Building and 1926 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The Computer Labs and IT Data rooms gets hot, which could cause technology equipment failure.

In the main IT Data room, two (2) spot coolers and two (2) window air conditioners have been added, but even these have a difficult time keeping up with the heat load and can't make use of free cooling when outdoor conditions allow.

There are three IT data rooms in Historic Old Central High School.

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 conditions allow.

This would be done for all three IT rooms.

All Costs in USD.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Capacity

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Wiring Devices: Insufficient Receptacles		
Linked System	Branch Wiring Devices	Inspection Date	09/15/2006
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	09/15/2009	Total Estimated Cost:	55,224
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

In general, offices 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 four additional 20 amp receptacle per office and associated branch wiring. Upgrade will first require additional branch panel boards.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Exterior Doors: Replace Basement Door at Main Entrance		
Linked System	Exterior Doors	Inspection Date	09/19/2006
Prime System	Exterior Doors	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2007	Total Estimated Cost:	2,130
Funding Year	-	Funding Type	-
Requirement Location	Basement Door Below Main Entrance Stair	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing door is an old interior door that has been modified for opening. Gap all around. Replace door and frame.

PHOTOS



Exterior Doors: Replace Basement Door at Main Entrance

-

ACTION DESCRIPTION

Remove exist door/frame and replace with new galvanized frame, and exterior hollow metal door, paint.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Exterior Walls: Grade Level 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:	472,000
Funding Year	-	Funding Type	-
Requirement Location	Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated grade-level walls. Efflorescence is present at several locations.

PHOTOS



Exterior Grade-Level Walls

-

ACTION DESCRIPTION

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

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Exterior Walls: Roof-Level Wall Restoration		
Linked System	Exterior Walls	Inspection Date	08/01/2006
Prime System	Exterior Walls	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:	271,400
Funding Year	-	Funding Type	-
Requirement Location	Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated roof-level walls at the entire building. Leakage reported at Boiler Room.

PHOTOS



Roof-Level Wall Restoration

-

ACTION DESCRIPTION

Tuck point, spot brick replacement, stone repair, resetting and replacement; joint sealant replacement and misc. items. Sequence work with reroofing in these areas.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

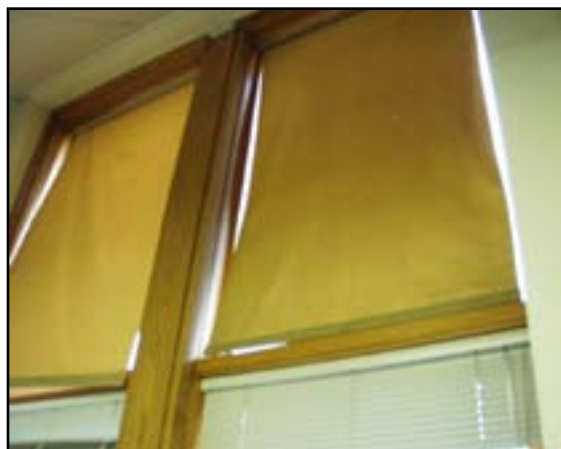
Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Exterior Windows: Replace Blinds		
Linked System	Exterior Windows	Inspection Date	09/19/2006
Prime System	Exterior Windows	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2007	Total Estimated Cost:	172,778
Funding Year	-	Funding Type	-
Requirement Location	All Windows Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing roller blinds are very yellowed and torn. Replace with new.

PHOTOS



Exterior Windows: Replace Blinds

-

ACTION DESCRIPTION

Remove existing blinds and replace with new.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Interior Doors: Replace Boiler Room Door		
Linked System	Interior Doors	Inspection Date	09/19/2006
Prime System	Interior Doors	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2007	Total Estimated Cost:	2,366
Funding Year	-	Funding Type	-
Requirement Location	Boiler Room Entrance	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing fire door is very rusted and in poor condition. Replacement required.

PHOTOS



Interior Doors: Replace Boiler Room Door

-

ACTION DESCRIPTION

Remove existing door and frame, replace with new rated hollow metal door and frame.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Repair Roof (annual)	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	25,960
Action Date	08/01/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Concrete tile and slate tile roofs have broken/missing tiles. Continuously breaking concrete tile pose life safety concerns. Other misc. repairs included. Each year district repairs roof.

PHOTOS

ACTION DESCRIPTION

- Replace concrete and slate tiles, approx. 80 ea.
- Replace damaged copper flashing on tower: approx 20 lf.
- Unplug vent stack on garage.
- Misc. patches on EPDM roofs for watertight condition until replacement.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Repair Roof (annual)	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	51,920
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Concrete tile and slate tile roofs have broken/missing tiles. Continuously breaking concrete tile pose life safety concerns. Other misc. repairs included. Each year district repairs roof.

PHOTOS

ACTION DESCRIPTION

- Each year for 2 years:
- Replace concrete and slate tiles, approx. 80 ea.
- Replace damaged copper flashing on tower: approx 20 lf.
- Unplug vent stack on garage.
- Misc. patches on EPDM roofs for watertight condition until replacement.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Repair Roof (annual)	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:	77,880
Action Date	08/01/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Concrete tile and slate tile roofs have broken/missing tiles. Continuously breaking concrete tile pose life safety concerns. Other misc. repairs included. Each year district repairs roof.

PHOTOS

ACTION DESCRIPTION

- Each year for 3 years:
- Replace concrete and slate tiles, approx. 80 ea.
- Replace damaged copper flashing on tower: approx 20 lf.
- Unplug vent stack on garage.
- Misc. patches on EPDM roofs for watertight condition until replacement.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Repair Roof (annual)	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:	129,800
Action Date	08/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Concrete tile and slate tile roofs have broken/missing tiles. Continuously breaking concrete tile pose life safety concerns. Other misc. repairs included. Each year district repairs roof.

PHOTOS

ACTION DESCRIPTION

- Each year for 5 years:
- Replace concrete and slate tiles, approx. 80 ea.
- Replace damaged copper flashing on tower: approx 20 lf.
- Unplug vent stack on garage.
- Misc. patches on EPDM roofs for watertight condition until replacement.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	97,501
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	151
Requirement Location	1973 Loading Dock Addition and all Entries		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system beyond rated service life. Includes Areas 2B, 7B, 7C, 8, 3A, 4A.

PHOTOS



Roof System: Replace Roof

-



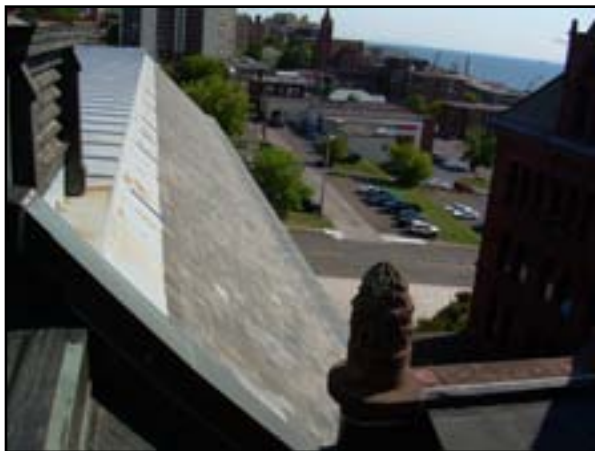
Roof System: Replace Roof

-



Roof System: Replace Roof

-



Roof System: Replace Roof

-



Roof System: Replace Roof

-



Roof System: Replace Roof

-



Roof System: Replace Roof

-

ACTION DESCRIPTION

Replace the EPDM roofs. Sequence roof-level wall restoration with reroofing. Provide added durability to loading dock roof due to potential falling snow and ice.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	183,405
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	284
Requirement Location	1980 Building: Center,East,West		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system beyond rated life. Includes areas 1 and 2.

PHOTOS

ACTION DESCRIPTION

Replace fully-adhered EPDM roof. Replace ventilator roofs at same time. Sequence roof-level wall restoration with reroofing.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	19,116
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Tower Roof at Bells		
Savings Description	-		

REQUIREMENT DESCRIPTION

Roof system is beyond rated service life.

PHOTOS

ACTION DESCRIPTION

Replace soldered flat seam roof with copper roof.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	30,975
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	23
Requirement Location	Boiler Room		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system is beyond rated service life. Includes area 5A.

PHOTOS

ACTION DESCRIPTION

Replace ballasted EPDM roof system. Sequence roof-level wall restoration with reroofing.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Superstructure: Patch Miscellaneous Walls		
Linked System	Superstructure	Inspection Date	09/19/2006
Prime System	Superstructure	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2009	Total Estimated Cost:	52,392
Funding Year	-	Funding Type	-
Requirement Location	Basement Areas: Main Store Room, Sump Room, Engine Room, Boiler Room, B19, North Fan Room, B5	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing walls have various degrees of deterioration and should be repair to stop or slow further degradation.

PHOTOS



Superstructure: Patch Miscellaneous Walls

-

ACTION DESCRIPTION

Investigation source of deterioration, patch/repair as necessary.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Superstructure: Patch Plaster at Exterior Walls		
Linked System	Superstructure	Inspection Date	09/19/2006
Prime System	Superstructure	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2009	Total Estimated Cost:	19,647
Funding Year	-	Funding Type	-
Requirement Location	Basement rooms from main entrance East to room B22, West	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing plaster is damaged from water through walls, at partial basement.

PHOTOS



Superstructure: Patch Plaster at Exterior Walls

-

ACTION DESCRIPTION

Remove deteriorated plaster, repair substrate, patch/paint.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Deferred Maintenance

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Superstructure: Refinish Steel Beams		
Linked System	Superstructure	Inspection Date	09/19/2006
Prime System	Superstructure	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Fern, Bob	Actual Cost	0
Action Date	09/19/2007	Total Estimated Cost:	6,549
Funding Year	-	Funding Type	-
Requirement Location	Basement storage below main entrance plaza.	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing steel beams are severely rusted from room moisture, and leakage from exterior plaza above.

PHOTOS



Superstructure: Refinish Steel Beams

-

ACTION DESCRIPTION

Strip existing beams, prime, and coat with industrial paint.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Energy and Operational Efficiency

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Controls: VendingMiser Vending Machine Controls		
Linked System	Controls and Instrumentation	Inspection Date	09/23/2006
Prime System	Controls and Instrumentation	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/23/2006	Total Estimated Cost:	3,304
Funding Year	-	Funding Type	-
Requirement Location	Vending Machines	Annual Energy/Ops Savings \$	346
Savings Description	VeningMiser 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: Historic Old Central High School
Category: Energy and Operational Efficiency

Asset Name: Historic Old Central High School
Asset Number: 12

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:	32,421
Funding Year	-	Funding Type	-
Requirement Location	Facility Wide - Occupied Areas	Annual Energy/Ops Savings \$	693
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: Historic Old Central High School
Category: Energy and Operational Efficiency

Asset Name: Historic Old Central High School
Asset Number: 12

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:	161,812
Action Date	09/20/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	17,517
Requirement Location	Entire Facility		
Savings Description	Energy savings generated through more efficient lighting technology.		

REQUIREMENT DESCRIPTION

Lighting project consists of the following:

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

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Energy and Operational Efficiency

Asset Name: Historic Old Central High School
Asset Number: 12

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:	23,326
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	748
Savings Description	Reduce water and sewer usage using new low flow devices.		

REQUIREMENT DESCRIPTION

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

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Life Safety

Asset Name: Historic Old Central High School
Asset Number: 12

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:	48,262
Action Date	09/19/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Exterior		
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.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Life Safety

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Roof System: Install Snow Guards	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	118,000
Action Date	08/01/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Owner has expressed concern with falling snow and ice from indicated roof areas. Large sheets of ice have fallen and pose a life safety concern. The roof areas will require proper assessment and design for feasibility and design and cost.

PHOTOS

ACTION DESCRIPTION

Install snow guards

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Occupant Security

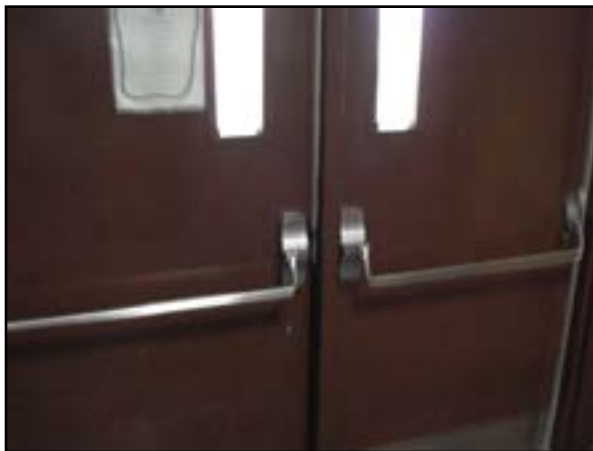
Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Communication and Security: Access Control		
Linked System	Communications and Security	Inspection Date	09/19/2006
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	09/19/2009	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: Historic Old Central High School
Category: Occupant Security

Asset Name: Historic Old Central High School
Asset Number: 12

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:	218,206
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: Historic Old Central High School
Category: Occupant Security

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Fire Alarm Systems: Outdated System		
Linked System	Fire Alarm Systems	Inspection Date	09/19/2006
Prime System	Fire Alarm Systems	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/19/2012	Total Estimated Cost:	125,080
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: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Ceiling Finishes: Replace 2 x 4 and 2 x 5 Suspended Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	09/19/2006
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	09/19/2012	Total Estimated Cost:	372,507
Funding Year	-	Funding Type	-
Requirement Location	First, Second and Third Floors	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing 2 x 4 and 2 x 5 suspended acoustical tile is damaged at various locations and does not meet districts standardization goal to convert to 2 x 2 suspended acoustical tile.

PHOTOS



Ceiling Finishes: Replace 2 x 4 and 2 x 5 Suspended Acoustical Tile

-

ACTION DESCRIPTION

Replace 2 x 4 and 2 x 5 suspended acoustical tile ceilings with 2 x 2. Approximately 63,200 S.F.

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Communication and Security: Cabling Upgrade		
Linked System	Communications and Security	Inspection Date	08/15/2006
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:	214,170
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing building has older categories of cabling.

PHOTOS



Communication and Security: Cabling Upgrade

-

ACTION DESCRIPTION

Replace old and mixed telephone/data cabling with up to date category 6 or 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: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Communication and Security: Clock System		
Linked System	Communications and Security	Inspection Date	11/30/2006
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	11/30/2009	Total Estimated Cost:	110,478
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There is currently no master clock system. A master clock system is necessary to synchronize clocks throughout the building helping students and faculty stay on time.

PHOTOS

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: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Communication and Security: Public Address and Sound System		
Linked System	Communications and Security	Inspection Date	11/30/2006
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	11/30/2009	Total Estimated Cost:	90,388
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There is currently no paging system installed. A paging system may be needed for security reason.

PHOTOS

ACTION DESCRIPTION

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

District: Duluth Public Schools
Facility: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Communication and Security: Video/TV Distribution Upgrade		
Linked System	Communications and Security	Inspection Date	08/15/2006
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	08/15/2009	Total Estimated Cost:	52,894
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: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Controls and Instrumentation: BAS and Controls Upgrade		
Linked System	Controls and Instrumentation	Inspection Date	07/18/2006
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	07/18/2007	Total Estimated Cost:	135,700
Funding Year	-	Funding Type	-
Requirement Location	Entire building	Annual Energy/Ops Savings \$	2,602
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.

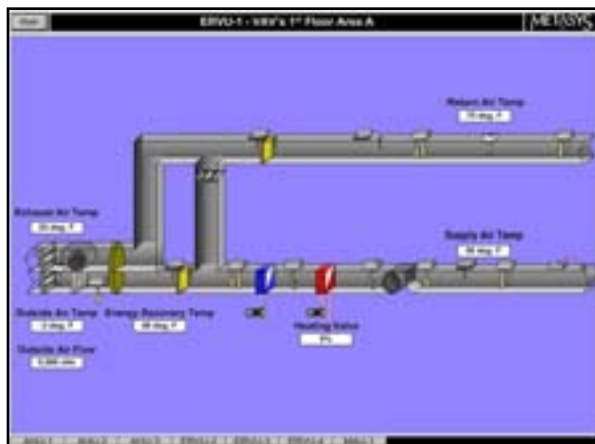
Upgrade existing pneumatic controls (old technology) to new Direct Digital controls.

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



Controls and Instrumentation: BAS and Controls Upgrade

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: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Emergency Power Distribution: Generator Backup		
Linked System	Emergency Light and Power Systems	Inspection Date	11/30/2006
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	11/30/2007	Total Estimated Cost:	99,710
Funding Year	-	Funding Type	-
Requirement Location	Exterior near Electrical Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

School currently does not have a backup power system large enough to power the entire building during power failure. To keep occupancy during power outage sufficient lighting must be maintained along with necessary life safety systems

PHOTOS

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: Historic Old Central High School
Category: Upgrades

Asset Name: Historic Old Central High School
Asset Number: 12

Requirement Name	Fittings: Replace Chalkboards and Tackboards		
Linked System	Fittings	Inspection Date	09/19/2006
Prime System	Fittings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	4,602
Funding Year	-	Funding Type	-
Requirement Location	Rooms 128, 130, 132, 132A	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Chalkboards do not meet district's standardization goal to convert to markerboard.

PHOTOS



Fittings: Replace Chalkboards and Tackboards
 -

ACTION DESCRIPTION

Replace chalkboard with markerboard. Approximately 250 S.F.