

Requirement Detail

by Asset Name and Category

EAST HS

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H. S. - Site
Asset Number: 220e

Requirement Name	Site: Athletic Track	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Playing Fields	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	11,800
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Athletic Track		
Savings Description	-		

REQUIREMENT DESCRIPTION

Damaged areas on track surface. Hole in Lane 5.

PHOTOS

ACTION DESCRIPTION

Repair damaged areas on athletic track.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H. S. - Site
Asset Number: 220e

Requirement Name	Site: Athletic Track	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Playing Fields	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	94,400
Action Date	08/01/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Athletic Track		
Savings Description	-		

REQUIREMENT DESCRIPTION

Typical maintenance for athletic track of this type.

PHOTOS

ACTION DESCRIPTION

Repair any damaged areas on track and install new black structural spray over entire track and field events areas.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H. S. - Site
Asset Number: 220e

Requirement Name	Site: Fencing	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Fences and Gates	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	3,540
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Athletic Track		
Savings Description	-		

REQUIREMENT DESCRIPTION

Portions of chain link fence by athletic track is leaning.

PHOTOS

ACTION DESCRIPTION

Replace leaning chain link fence.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H. S. - Site
Asset Number: 220e

Requirement Name	Site: Football Field	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Playing Fields	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	88,500
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Football Field		
Savings Description	-		

REQUIREMENT DESCRIPTION

Turf in poor condition, drainage poor.

PHOTOS

ACTION DESCRIPTION

Regrade football field and install new natural turf. Improve drainage.

District: Duluth Public Schools
Facility: East High School
Category: Beyond Rated Life

Asset Name: East H.S. - Parking
Asset Number: 220b

Requirement Name	Vehicular Paving: South East Parking Lots		
Linked System	Parking Lots	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2007	Total Estimated Cost:	436,600
Funding Year	-	Funding Type	-
Requirement Location	South East Parking Lots and Drive by Receiving Area on South Side of School	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated parking lots and drive.

PHOTOS



Parking Lots

-

ACTION DESCRIPTION

Reconstruct bituminous pavement and replace sections of curbs and gutter and improve drainage.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H.S. - Parking
Asset Number: 220b

Requirement Name	Vehicular Parking: East/Upper Parking Lot and Drive		
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:	5,900
Funding Year	-	Funding Type	-
Requirement Location	East/Upper Parking Lot and Main Entrance Drive	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated lot and drive.

PHOTOS



Parking Lot and Drive

-

ACTION DESCRIPTION

Crack seal and seal coat bituminous pavement, with some repairs.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H.S. - Parking
Asset Number: 220b

Requirement Name	Vehicular Traffic: Back/South Parking Lot		
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	Inspecc	Actual Cost	0
Action Date	08/01/2009	Total Estimated Cost:	5,900
Funding Year	-	Funding Type	-
Requirement Location	Back/South Parking Lot	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated parking lot.

PHOTOS

ACTION DESCRIPTION

Crack seal and seal coat bituminous pavement.

District: Duluth Public Schools
Facility: East High School
Category: Beyond Rated Life

Asset Name: East H.S. - Sidewalks
Asset Number: 220c

Requirement Name	Pedestrian Paving: Stair to track/football field		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Exterior Steps	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	Stair to Track/Football Field	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated steps.

PHOTOS



Stair

-

ACTION DESCRIPTION

Reconstruct broken/unlevel portland cement concrete stairs.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H.S. - Sidewalks
Asset Number: 220c

Requirement Name	Pedestrian Paving: Stair at Southeast Corner		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Exterior Steps	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:	5,900
Funding Year	-	Funding Type	-
Requirement Location	Stair at Southeast Corner	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated stairway.

PHOTOS



Stair

-

ACTION DESCRIPTION

Repair/replace broken areas of portland cement concrete.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East H.S. - Sidewalks
Asset Number: 220c

Requirement Name	Pedestrian Paving: Stairway to South Lower Parking Lot		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Exterior Steps	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:	11,800
Funding Year	-	Funding Type	-
Requirement Location	Stairway to South Lower Lot	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated stairway.

PHOTOS



Stairway

-

ACTION DESCRIPTION

Replace broken/unlevel areas of portland cement concrete (stairs and sidewalk), including handrails.

District: Duluth Public Schools
Facility: East High School
Category: Life Safety

Asset Name: East H.S. - Sidewalks
Asset Number: 220c

Requirement Name	Pedestrian Traffic: Front Entrance Sidewalk		
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:	4,720
Funding Year	-	Funding Type	-
Requirement Location	Front Entrance	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated front entrance.

PHOTOS



Front Entrance Sidewalk

-

ACTION DESCRIPTION

Replace broken/unlevel sections of portland cement sidewalk.

District: Duluth Public Schools
Facility: East High School
Category: Life Safety

Asset Name: East H.S. - Sidewalks
Asset Number: 220c

Requirement Name	Pedestrian Traffic: South Entrance Sidewalk		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2006	Total Estimated Cost:	5,900
Funding Year	-	Funding Type	-
Requirement Location	South Entrance Sidewalk	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated sidewalk.

PHOTOS



Entrance Sidewalk

-

ACTION DESCRIPTION

Replace broken/unlevel sections of portland cement concrete.

District: Duluth Public Schools
Facility: East High School
Category: Life Safety

Asset Name: East H.S. - Sidewalks
Asset Number: 220c

Requirement Name	Pedestrian Traffic: Street Sidewalk A-Wing and Fourth Street		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2006	Total Estimated Cost:	5,900
Funding Year	-	Funding Type	-
Requirement Location	Street Sidewalk	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Erosion along sidewalk at northwest sidewalk along east fourth street.

PHOTOS



Street Sidewalk

-

ACTION DESCRIPTION

Degrade/Stabilize/Improve drainage (city's responsibility?), and replace sections of portland cement concrete sidewalk.

District: Duluth Public Schools

Asset Name: East H.S. - Storage Bldg. (Athletic Field)

Facility: East High School

Asset Number: 220d

Category: Beyond Rated Life

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	Inspe	Total Estimated Cost:	5,900
Action Date	08/01/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Storage Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Roof beyond rated life.

PHOTOS



Roof System: Replace Roof

-

ACTION DESCRIPTION

Replace roof.

District: Duluth Public Schools
Facility: East High School
Category: Accessibility

Asset Name: East High School
Asset Number: 220

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:	58,851
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

-

ACTION DESCRIPTION

Correct accessibility issues as required.

District: Duluth Public Schools
Facility: East High School
Category: Accessibility

Asset Name: East High School
Asset Number: 220

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:	48,792
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: East High School
Category: Accessibility

Asset Name: East High School
Asset Number: 220

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:	79,729
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: East High School
Category: Accessibility

Asset Name: East High School
Asset Number: 220

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:	4,354
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: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

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:	707,292
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

East High 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

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: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC - Upgrade Ventilation and Replace Wood Shop Dust Collector		
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:	197,650
Funding Year	-	Funding Type	-
Requirement Location	Wood Shop - 1987 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The dust collector for the wood shop is 20 years old and is operational, but does not provide any re-circulated air. This requires more make up air than the existing ventilation system can provide. In addition, many pieces of equipment have been added without adding dust exhaust ductwork. As mentioned previously, make up air is not being supplied to the wood shop as required by the 2000 International Mechanical Code.

PHOTOS



HVAC - Upgrade Ventilation and Replace Wood Shop Dust Collector

-

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: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Humidity Control in Orchestra Areas		
Linked System	Air Distribution Systems	Inspection Date	11/29/2006
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	11/29/2007	Total Estimated Cost:	100,300
Funding Year	-	Funding Type	-
Requirement Location	Orchestra Equipment Areas	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing orchestra equipment areas lack humidity control. This causes instrument damage.

PHOTOS

ACTION DESCRIPTION

Provide a self contained HVAC fan coil system which will dehumidify in the summer and humidify in the winter to protect the instruments.

District: Duluth Public Schools
Facility: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Provide Negative Pressure in Crawlspace/Tunnels		
Linked System	Exhaust Ventilation Systems	Inspection Date	07/15/2006
Prime System	Exhaust Ventilation Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/15/2007	Total Estimated Cost:	27,494
Funding Year	-	Funding Type	-
Requirement Location	1926 and 1967 Crawlspace/Tunnel	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

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

PHOTOS



HVAC: Provide Negative Pressure in Crawlspace/Tunnels

ACTION DESCRIPTION

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

Two Locations 1926 and 1967 Additions.

District: Duluth Public Schools
Facility: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Replace Classroom Unit Ventilators and Upgrade of Library Ventilation		
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:	1,504,972
Funding Year	-	Funding Type	-
Requirement Location	1st Floor Math Rooms and 2nd Floor Library - 1967 Addition	Annual Energy/Ops Savings \$	1,927
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 seven (7) classroom unit ventilators are not capable of meeting current ASHRAE indoor air quality standards.

In addition, the Library air handling unit is 39 years old and has exceed it's recommended operational life and has operational issues. This unit has no means of dehumidification.

PHOTOS



HVAC: Replace Classroom Unit Ventilators and Upgrade of Library Ventilation

-

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.

Replace the library air handling unit with a new modern unit with dehumidification coil.

District: Duluth Public Schools
Facility: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Upgrade Ventilation and Add Dehumidification 1926 Science Area		
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:	649,000
Funding Year	-	Funding Type	-
Requirement Location	2nd Floor Science Area - 1926 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The air handling systems serving the 1926 Science Room Areas is located above the ceiling in room 270 and is very difficult to get to. There is not a catwalk installed for service. In addition, this unit has no means of dehumidification. Without dehumidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions.

PHOTOS



HVAC: Upgrade Ventilation and Add Dehumidification 1926 Science Area

-

ACTION DESCRIPTION

Addition of dehumidification coils to the existing air handling unit which is double wall. Installation of external duct insulation where not exposed, new acoustical ceiling tile, lighting removal and reinstallation or new lights where required. Upgrade Controls System to DDC. Test and Balance and Commissioning of entire system.

In addition, the unit would have to be relocated or a catwalk system needs to be built so the unit could be serviced.

District: Duluth Public Schools
Facility: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Upgrade Ventilation and Add Dehumidification 1958 Music Addition		
Linked System	Air Distribution Systems	Inspection Date	06/28/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	115,286
Funding Year	-	Funding Type	-
Requirement Location	Music Wing Addition - 1958 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The air handling systems serving the 1958 was installed in 2001 and is in good working order but has no means of dehumidification. Without dehumidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions.

PHOTOS



HVAC: Upgrade Ventilation and Add Dehumidification 1958 Music Additon

-

ACTION DESCRIPTION

Addition of dehumidification coils to the existing air handling unit which is double wall. Installation of external duct insulation where not exposed, new acoustical ceiling tile, lighting removal and reinstallation or new lights where required. Upgrade Controls System to DDC. Test and Balance and Commissioning of entire system.

District: Duluth Public Schools
Facility: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

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:	559,910
Funding Year	-	Funding Type	-
Requirement Location	Building Wide - Except for 1987 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The 39-80 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 includes the bradley shower stations in the locker rooms.

District: Duluth Public Schools
Facility: East High School
Category: Air and Water Quality

Asset Name: East High School
Asset Number: 220

Requirement Name	Service Tunnels: Floor Vapor Barrier		
Linked System	Other Site Construction	Inspection Date	08/01/2006
Prime System	Service and Pedestrian Tunnels	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	-	Total Estimated Cost:	3,101
Funding Year	-	Funding Type	-
Requirement Location	1926 Building and Old Gym	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Exposed dirt areas contributing to air quality issues.

PHOTOS



Service Tunnels: Floor Vapor Barrier

-

ACTION DESCRIPTION

Install poly vapor barrier over exposed earth areas.

District: Duluth Public Schools
Facility: East High School
Category: Appearance

Asset Name: East High School
Asset Number: 220

Requirement Name	Ceiling Finishes: Replace 12x12 Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	09/01/2006
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	09/01/2012	Total Estimated Cost:	66,493
Funding Year	-	Funding Type	-
Requirement Location	First Floor Rooms: 1926 Building Corridor, Stairs, 126, Second Floor Rooms: 1926 Building Corridor, 1967 Building Corridor, Old Gym Corridor, 1958 Music Wing Addition, Third Floor Rooms: 1926 Building Corridor, Old Gym Corridor, 1958 Music Wing Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

-

PHOTOS



Ceiling Finishes: Replace 12x12 Acoustical Tile

-

ACTION DESCRIPTION

Replace existing 12x12 adhesive applied acoustical tile with 2x2 suspended acoustical tile. Approximately 14, 500 S.F.

District: Duluth Public Schools
Facility: East High School
Category: Appearance

Asset Name: East High School
Asset Number: 220

Requirement Name	Site Improvements: General Landscaping	Inspection Date	10/03/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Site Improvements	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Northern Lights Landscaping	Total Estimated Cost:	8,923
Action Date	10/03/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Property around facility		
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: East High School
Category: Appearance

Asset Name: East High School
Asset Number: 220

Requirement Name	Stairs: Refinish Ramp Handrails	Inspection Date	09/01/2006
Linked System	Stairs	Finish Date	-
Prime System	Stairs	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	1,038
Action Date	09/01/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops	-
Requirement	Second Floor Ramps (Old Gym, Auditorium	Savings \$	
Location	Bldg.), Third Floor Ramps (Auditorium Bldg.)		
Savings Description	-		

REQUIREMENT DESCRIPTION

Ramp handrails are in need of refinishing. (Finish gone).

PHOTOS

ACTION DESCRIPTION

Strip, sand and refinish ramp wood handrails and wall caps. Approximately 260 L.F.

District: Duluth Public Schools
Facility: East High School
Category: Appearance

Asset Name: East High School
Asset Number: 220

Requirement Name	Wall Finishes: Paint Interior	Inspection Date	09/01/2006
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:	314,878
Action Date	09/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Corridors, Classrooms		
Savings Description	-		

REQUIREMENT DESCRIPTION

Repainting will be required as routine maintenance.

PHOTOS



Wall Finishes: Paint Interior

-

ACTION DESCRIPTION

Repaint existing corridor and classroom walls.

District: Duluth Public Schools
Facility: East High School
Category: Asbestos

Asset Name: East High School
Asset Number: 220

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	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Wormuth, Kevin	Total Estimated Cost:	183,018
Action Date	07/01/2007	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. Most has been abated, but in some areas it is still present.

PHOTOS

ACTION DESCRIPTION

Abatement of asbestos containing materials througout facility.

District: Duluth Public Schools
Facility: East High School
Category: Beyond Rated Life

Asset Name: East High School
Asset Number: 220

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:	779,272
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building Except for most of the 1987 Additions	Annual Energy/Ops Savings \$	11,951
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 (39 - 80 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. Replace all steam terminal heating devices and coils with hot water devices and coils.

Extend HW system to units in 1987 not currently served by how water (kitchen MUA).

Budgeted costs of \$187,500 are avoided by converting the steam system to hot water.

All Costs in USD.

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

District: Duluth Public Schools
Facility: East High School
Category: Beyond Rated Life

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Replace Ventilation All Floors 1926 Building Classrooms and Auditorium		
Linked System	Air Distribution Systems	Inspection Date	06/28/2006
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	06/28/2009	Total Estimated Cost:	2,529,920
Funding Year	-	Funding Type	-
Requirement Location	All Floors - 1926 Building Classrooms and Auditorium	Annual Energy/Ops Savings \$	1,927
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 year old ventilation system has exceeded the recommended useful life expectancy and currently poorly distributes ventilation air. 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 All Floors 1926 Building Classrooms and Auditorium

-

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
All Costs in USD.

Finned Tube Radiation.

District: Duluth Public Schools
Facility: East High School
Category: Beyond Rated Life

Asset Name: East High School
Asset Number: 220

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:	20,938
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: East High School
Category: Beyond Rated Life

Asset Name: East High School
Asset Number: 220

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:	253,700
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: East High School
Category: Beyond Rated Life

Asset Name: East High School
Asset Number: 220

Requirement Name	Roof System: Replace Roof		
Linked System	Roofing	Inspection Date	08/01/2006
Prime System	Roofing	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Inspe	Actual Cost	0
Action Date	08/01/2009	Total Estimated Cost:	131,518
Funding Year	-	Funding Type	-
Requirement Location	1967 Addition	Annual Energy/Ops Savings \$	206
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system beyond rated life. Includes roof Area 6.

PHOTOS



Roof System: Replace Roof

ACTION DESCRIPTION

Replace roof. Sequence roof-level wall restoration with reroofing.

District: Duluth Public Schools
Facility: East High School
Category: Building Code

Asset Name: East High School
Asset Number: 220

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:	12,201
Action Date	08/28/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	1926 Building		
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: East High School
Category: Building Code

Asset Name: East High School
Asset Number: 220

Requirement Name	Elevators and Lifts: Elevator Repair		
Linked System	Elevators and Lifts	Inspection Date	08/28/2006
Prime System	Elevators and Lifts	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schindler Elevator Corp.	Actual Cost	0
Action Date	08/28/2007	Total Estimated Cost:	12,201
Funding Year	-	Funding Type	-
Requirement Location	1987 Addition - North	Annual Energy/Ops Savings \$	-
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: East High School
Category: Building Code

Asset Name: East High School
Asset Number: 220

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 1987 Building Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

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

PHOTOS



HVAC: Replace Dishwasher Exhaust Hood

-

ACTION DESCRIPTION

Demolish the existing dishwasher hood and fan system.

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

District: Duluth Public Schools
Facility: East High School
Category: Building Code

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Replace Kitchen Grease Exhaust Hood / Replace 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:	100,300
Funding Year	-	Funding Type	-
Requirement Location	Kitchen - 1987 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. In addition, the grease exhaust duct is not insulated as required by code and is not constructed airtight, thus leaking grease. This hood needs to be replaced with a code compliant grease exhaust hood and fan.

In addition, the kitchen make up air has operational issues requires an upgrade Make up air for the kitchen hood is required by the 2000 International Mechanical Code.

PHOTOS



HVAC: Replace Kitchen Grease Exhaust Hood / Replace 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.

Replace make up air unit with make up air unit with dehumidification.

All Costs in USD.

District: Duluth Public Schools
Facility: East High School
Category: Capacity

Asset Name: East High School
Asset Number: 220

Requirement Name	Electrical Distribution: Insufficient Capacity		
Linked System	Electrical Service and Distribution	Inspection Date	09/18/2006
Prime System	Electrical Service and Distribution	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/18/2012	Total Estimated Cost:	37,170
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 four new 100 amp feeders and panels to help carry the extra load of additional receptacles throughout the building. A new distribution panel will also be required to feed new branch panels

District: Duluth Public Schools
Facility: East High School
Category: Capacity

Asset Name: East High School
Asset Number: 220

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:	267,742
Funding Year	-	Funding Type	-
Requirement Location	IT Data Rooms - 1926 Building and 1967 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The Computer Labs 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: East High School
Category: Capacity

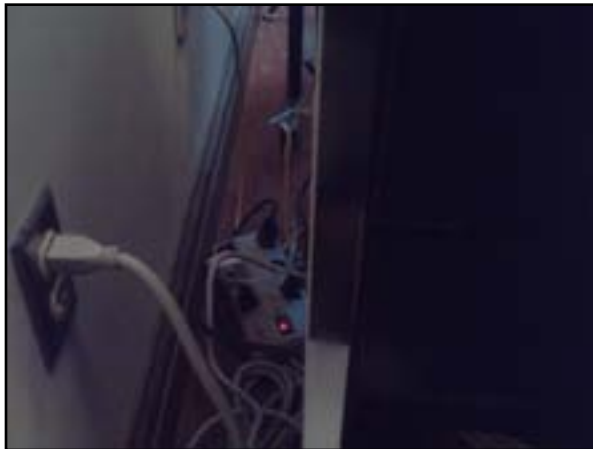
Asset Name: East High School
Asset Number: 220

Requirement Name	Wiring Devices: Insufficient Receptacles		
Linked System	Branch Wiring Devices	Inspection Date	09/18/2006
Prime System	Branch Wiring Devices	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/18/2012	Total Estimated Cost:	122,720
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

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

PHOTOS



Wiring Devices: Insufficient Receptacles

-

ACTION DESCRIPTION

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

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Ceiling Finishes: Repair Splined Ceiling		
Linked System	Ceiling Finishes	Inspection Date	09/01/2006
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	09/01/2009	Total Estimated Cost:	3,304
Funding Year	-	Funding Type	-
Requirement Location	Commons 1967 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Splined ceiling is missing tile and damaged from making repairs above.

PHOTOS



Ceiling Finishes: Repair Splined Ceiling

-

ACTION DESCRIPTION

Repair splined ceiling areas. Approximately 300 S.F.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

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:	1,475,000
Funding Year	-	Funding Type	-
Requirement Location	Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated grade-level walls for the entire building perimeter.

PHOTOS



Exterior Walls: Grade-Level Wall Restoration
 -

ACTION DESCRIPTION

Tuck pointing, spot brick replacement, stone repair and resetting, joint sealant replacement, through-wall flashing, and lintel replacement.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

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:	153,400
Funding Year	-	Funding Type	-
Requirement Location	1926 Building and Old Gym	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated roof-level walls and chimney at roof Areas 7, 7A, 7B, 7C, 8, and 10. Leaks reported below these areas.

PHOTOS



Exterior Walls: Roof-Level Wall Restoration
-

ACTION DESCRIPTION

Tuck pointing, rebuild a portion of a parapet, spot brick replacement, door replacement, and misc. items. Sequence work with reroofing in these areas.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

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:	82,600
Funding Year	-	Funding Type	-
Requirement Location	1958 Addition, Auditorium, 1926 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated roof-level walls.

PHOTOS



Exterior Walls: Roof-Level Wall Restoration

-

ACTION DESCRIPTION

Tuck pointing, parapet rebuilding, spot brick replacement, joint sealant replacement, and door replacement. Sequence work with reroofing in these areas.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

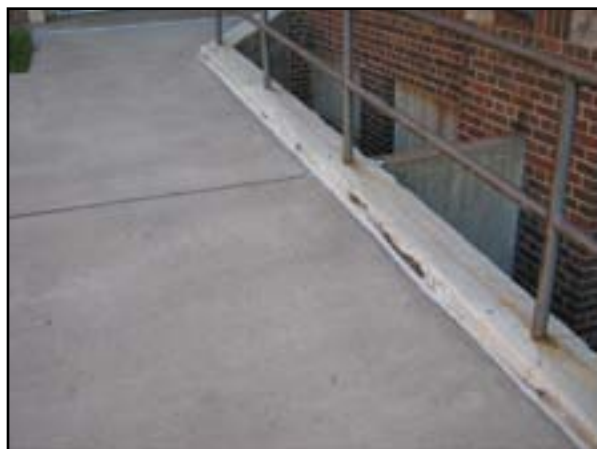
Asset Name: East High School
Asset Number: 220

Requirement Name	Exterior Walls: Window Well		
Linked System	Exterior Walls	Inspection Date	08/01/2006
Prime System	Exterior Louvers, Screens, and Fencing	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2009	Total Estimated Cost:	5,900
Funding Year	-	Funding Type	-
Requirement Location	South Side adjacent to Receiving	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated window well.

PHOTOS



Exterior Walls: Window Well

-

ACTION DESCRIPTION

Repair curbing and handrail and clean/maintain drains at window wells.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Fittings: Replace Toilet Partitions	Inspection Date	09/01/2006
Linked System	Fittings	Finish Date	-
Prime System	Fittings	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	30,975
Action Date	09/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Toilet Rooms, 210		
Savings Description	-		

REQUIREMENT DESCRIPTION

Plastic laminate stalls will need to be replaced in future. Exhibiting wear and appearance issues.

PHOTOS

ACTION DESCRIPTION

Replace toilet partitions with new plastic laminate partitions. Approximately 35 stalls.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Floor Finishes: Refinish Hardwood		
Linked System	Floor Finishes	Inspection Date	09/01/2006
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	09/01/2012	Total Estimated Cost:	10,502
Funding Year	-	Funding Type	-
Requirement Location	Room 301 Stage	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing hardwood floor finishes are in need of refinishing.

PHOTOS



Floor Finishes: Refinish Hardwood

-

ACTION DESCRIPTION

Strip, sand and refinish hardwood floor. Approximately 2000 S.F.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Floor Finishes: Replace Carpet	Inspection Date	09/01/2006
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:	272,840
Action Date	09/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	First Floor: 101, 106, 109, 111, 113, 127 office, 131, 133, 135, 140, 146, 148 office, 151 office, 152 office, 140 office, Second Floor Rooms: 201, 200, 202, 203, 205, 206, 207, 215, 217, 218, 219, 220, 222, 224, Guidance, Main Office, Asst. Principal, Attendance, Audio Visual, Library, 243, 245, 246, 272, 275, 277, Third Floor Rooms: 301, 303, 304, 312, 313, 314, 315, 317, 319, 321		
Savings Description	-		

REQUIREMENT DESCRIPTION

Carpet is exhibiting various degrees of wear and will need replacement as routine maintenance.

PHOTOS



Floor Finishes: Replace Carpet

-

ACTION DESCRIPTION

Replace existing carpet with new. Approximately 37, 200 S.F.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

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:	112,100
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: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Interior Doors: Replace Wood Doors		
Linked System	Interior Doors	Inspection Date	09/01/2006
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	09/01/2012	Total Estimated Cost:	70,800
Funding Year	-	Funding Type	-
Requirement Location	Primarily 1926 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Original wood panel doors are extremey old and worn.

PHOTOS



Interior Doors: Replace Wood Doors

-

ACTION DESCRIPTION

Replace existing wood panel doors with new solid core wood doors. Approximately 60 Doors.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Plumbing: Replace Lavatory Wash Fountains		
Linked System	Plumbing Fixtures	Inspection Date	07/11/2006
Prime System	Plumbing Fixtures	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/11/2012	Total Estimated Cost:	8,850
Funding Year	-	Funding Type	-
Requirement Location	1987 Wood Shop	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The one lavatory wash fountain in the wood shop will need to be replaced in the upcoming years.

PHOTOS

ACTION DESCRIPTION

Replace wash fountain with new wash fountain with infrared mixing stations.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Roof System: Repair Roof	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:	23,600
Action Date	08/01/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Plugged drain at 1926 Building stairwell small roof.
 Broken ceramic tiles.
 Debris.
 Displaced electrical conduit on 1958 Addition.
 Displaced copper flashing at 1926 Center south dormer.
 EPDM holes and open laps.

PHOTOS

ACTION DESCRIPTION

Misc. roof repairs.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

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:	79,261
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	50
Requirement Location	1926 Building		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system beyond rated life. Includes roof Areas 7A, 7B, 7C, 8 and 10.

PHOTOS



Roof System: Replace Roof

-

ACTION DESCRIPTION

Replace EPDM and tin roofs. Sequence roof-level wall restoration with reroofing.

District: Duluth Public Schools
Facility: East High School
Category: Deferred Maintenance

Asset Name: East High School
Asset Number: 220

Requirement Name	Wall Finishes: Repair Wall Leak	Inspection Date	09/01/2006
Linked System	Wall Finishes	Finish Date	-
Prime System	Wall Finishes	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	188,623
Action Date	09/01/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Rooms 114, 128		
Savings Description	-		

REQUIREMENT DESCRIPTION

Wall and floor juncture admits water. Grade is above floor.

PHOTOS



Wall Finishes: Repair Wall Leak

-

ACTION DESCRIPTION

Evacuate exterior grade and waterproof wall.

District: Duluth Public Schools
Facility: East High School
Category: Energy and Operational Efficiency

Asset Name: East High School
Asset Number: 220

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:	6,608
Funding Year	-	Funding Type	-
Requirement Location	Vending Machines	Annual Energy/Ops Savings \$	660
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: East High School
Category: Energy and Operational Efficiency

Asset Name: East High School
Asset Number: 220

Requirement Name	HVAC: Remote Condenser Heat Removal		
Linked System	Exhaust Ventilation Systems	Inspection Date	07/12/2006
Prime System	Exhaust Ventilation Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/12/2007	Total Estimated Cost:	4,484
Funding Year	-	Funding Type	-
Requirement Location	Kitchen - 1987 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The cooler is located in the dry food storage area, which overheats this area.

PHOTOS



HVAC: Remote Condenser Heat Removal

-

ACTION DESCRIPTION

Add an roof exhaust fan above the condensers for summer operation.

District: Duluth Public Schools
Facility: East High School
Category: Energy and Operational Efficiency

Asset Name: East High School
Asset Number: 220

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:	30,149
Funding Year	-	Funding Type	-
Requirement Location	Facility Wide	Annual Energy/Ops Savings \$	3,197
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 stream traps system wide to locate failed traps.
- 2) Replace or repair of failed traps depending on trap age, condition, and availbity of replacement part kits.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: East High School
Category: Energy and Operational Efficiency

Asset Name: East High School
Asset Number: 220

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:	167,644
Action Date	09/20/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	14,917
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 Controls

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: East High School
Category: Energy and Operational Efficiency

Asset Name: East High School
Asset Number: 220

Requirement Name	Plumbing - Addition of Natural Gas Water Heater		
Linked System	Plumbing	Inspection Date	07/17/2006
Prime System	Plumbing	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	29,500
Funding Year	-	Funding Type	-
Requirement Location	Boiler Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The domestic hot water is currently generated by a steam to hot water heat exchanger, with electric coil for summer operation. A natural gas water heater is desired for summer operation.

PHOTOS



Plumbing - Addition of Natural Gas Water Heater

-

ACTION DESCRIPTION

Add Natural Gas Water Heater for summer operation.

District: Duluth Public Schools
Facility: East High School
Category: Energy and Operational Efficiency

Asset Name: East High School
Asset Number: 220

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:	35,046
Funding Year	-	Funding Type	-
Requirement Location	Boiler Room - 1926 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.

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.

District: Duluth Public Schools
Facility: East High School
Category: Energy and Operational Efficiency

Asset Name: East High School
Asset Number: 220

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:	36,926
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	2,945
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: East High School
Category: Life Safety

Asset Name: East High School
Asset Number: 220

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:	43,353
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: East High School
Category: Occupant Security

Asset Name: East High School
Asset Number: 220

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: East High School
Category: Occupant Security

Asset Name: East High School
Asset Number: 220

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	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:	102,896
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: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Ceiling Finishes: Replace 2x4 Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	09/01/2006
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	09/01/2012	Total Estimated Cost:	37,760
Funding Year	-	Funding Type	-
Requirement Location	First Floor Rooms: 128, Second Floor Rooms: Corridor Auditorium Wing, 203, 202, 205, 206, Third Floor Rooms: 304 Storage Rooms, 330	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

District standardization goal is to convert all acoustical tile to 2x2.

PHOTOS



Ceiling Finishes: Replace 2x4 Acoustical Tile

-

ACTION DESCRIPTION

Replace 2x4 suspended acoustical tile with 2x2 suspended acoustical tile. Approximately 6400 S.F.

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

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:	272,580
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



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: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Communication and Security: Clock System		
Linked System	Communications and Security	Inspection Date	09/19/2006
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	09/19/2009	Total Estimated Cost:	53,100
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



Communications 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: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Communication and Security: Public Address and Sound System		
Linked System	Communications and Security	Inspection Date	09/19/2006
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	09/19/2009	Total Estimated Cost:	11,800
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The paging is done over the telephone system only. There are no speakers in the hallways or commons area.

PHOTOS



Communication and Security: Public Address and Sound System

-

ACTION DESCRIPTION

Install additional speakers as required and amplifier from telephone for hallway and common areas.

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

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:	7,788
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: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

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:	59,059
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: East High School
Category: Upgrades

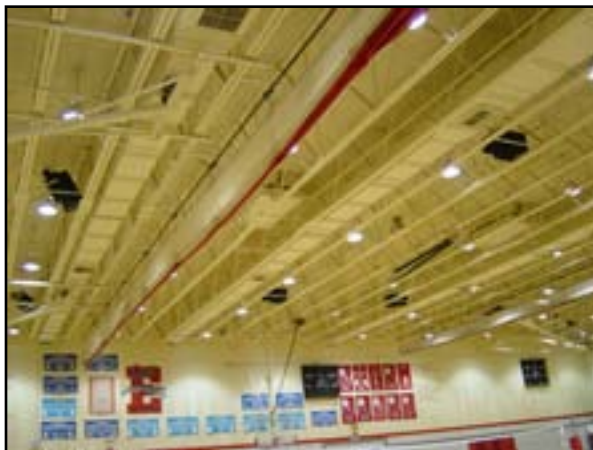
Asset Name: East High School
Asset Number: 220

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:	288,156
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There are little or no Audio Enhancement systems in the Classrooms. The Auditorium Sound System has had some updates, needs a new mixer and for the most part is not working well. Control booth components (video/projection) also needs upgrades. The Gymnasium Sound System is really bad and nothing works.

PHOTOS



Communications and Security: Sound System Upgrades

-

ACTION DESCRIPTION

- Upgrade Auditorium sound and video/projection system.
- Add audio enhancement systems to Classrooms.
- Replace Gymnasium sound system.

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Controls and Instrumentation: BAS and Controls Upgrade		
Linked System	Controls and Instrumentation	Inspection Date	08/08/2006
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	08/08/2007	Total Estimated Cost:	200,600
Funding Year	-	Funding Type	-
Requirement Location	Entire building	Annual Energy/Ops Savings \$	4,775
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.

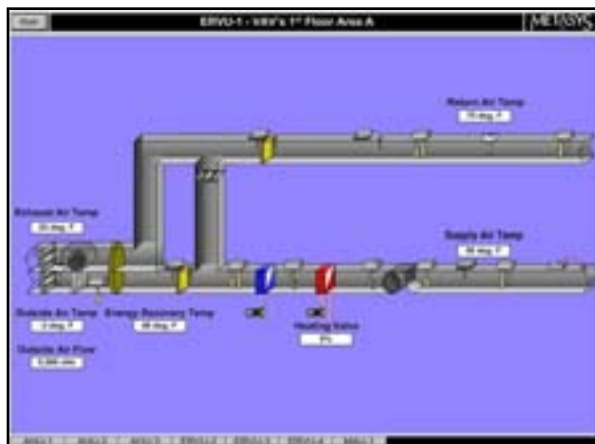
Upgrade existing pneumatic controls (old technology) to new Direct Digital controls.

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: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Elevators and Lifts: Elevator Modernization		
Linked System	Elevators and Lifts	Inspection Date	08/28/2006
Prime System	Elevators and Lifts	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schindler Elevator Corp.	Actual Cost	0
Action Date	-	Total Estimated Cost:	77,880
Funding Year	-	Funding Type	-
Requirement Location	1987 Addition - North	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Future Modernizations - Control changes, door operator, power unit change, car station, fixtures.

PHOTOS

ACTION DESCRIPTION

Modernization

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Elevators and Lifts: Elevator Modernization		
Linked System	Elevators and Lifts	Inspection Date	08/28/2006
Prime System	Elevators and Lifts	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schindler Elevator Corp.	Actual Cost	0
Action Date	-	Total Estimated Cost:	81,774
Funding Year	-	Funding Type	-
Requirement Location	1926 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Future Modernizations - Control changes, door operator, power unit change, car station, fixtures.

PHOTOS

ACTION DESCRIPTION

Modernization

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

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:	222,076
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: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Equipment and Furnishings: Construct New Computer Stations		
Linked System	Equipment and Furnishings	Inspection Date	09/01/2006
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:	174,227
Funding Year	-	Funding Type	-
Requirement Location	Rooms: Library, G7, 313, 118, Yearbook, 135	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing computer work stations are in various degrees serviceability.

PHOTOS



E-Equipment and Furnishings: Construct New Computer Stations

-

ACTION DESCRIPTION

Standardize existing computer stations. Approximately 133 stations.

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

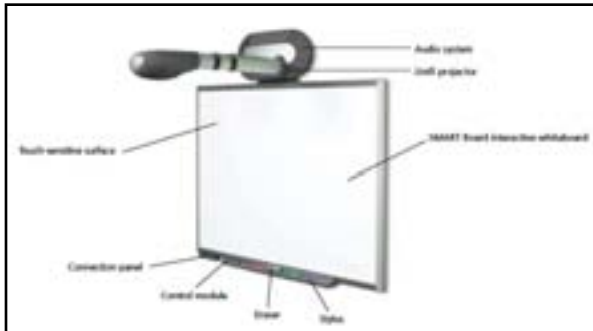
Asset Name: East High School
Asset Number: 220

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:	791,780
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Site has one projector in the media center, two in classrooms. Four Smart Boards are on order.

PHOTOS



Equipment and Furnishings: Visual Systems (Smart Boards)

ACTION DESCRIPTION

Install additional Smart Boards.

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Fittings: Replace Chalkboards	Inspection Date	09/01/2006
Linked System	Fittings	Finish Date	-
Prime System	Fittings	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	54,044
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Basement Floor Rooms: G11, First Floor Rooms: 101, 106, 107, 111, 113, 114, 119, 120, 121, 123, 127, 128, Second Floor Rooms: 201, 200, 202, 205, 206, 215, 217, 218, 220, 222, 242, 243, 244, 245, 246, 247, Third Floor Rooms: 313, 217, 318, 321,		
Savings Description	-		

REQUIREMENT DESCRIPTION

District future standardization goal is to replace chalkboard with markerboard.

PHOTOS

ACTION DESCRIPTION

Replace existing chalkboards with markerboard. Approximately 2950 S.F.

District: Duluth Public Schools
Facility: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

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: East High School
Category: Upgrades

Asset Name: East High School
Asset Number: 220

Requirement Name	Superstructure: Create Multi-purpose Space		
Linked System	Superstructure	Inspection Date	09/01/2006
Prime System	Superstructure	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	09/01/2012	Total Estimated Cost:	172,894
Funding Year	-	Funding Type	-
Requirement Location	Ground level unused locker room (Old Gym Building)	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Convert present storage room to multi-purpose room per district 10 year plan.

PHOTOS

ACTION DESCRIPTION

Renovate space; demolish partitions, install new floor, wall and ceiling finishes. 2200 SQFT