CITY OF LOVELAND
BUSINESS DEVELOPMENT OFFICE
Civic Center • 500 East Third • Loveland, Colorado 80537
(970) 962-2304 • FAX (970) 962-2900 • TDD (970) 962-2620

AGENDA ITEM: **1**
MEETING DATE: 2/8/2011
TO: City Council
FROM: Betsey Hale, Business Development
PRESENTER: Betsey Hale, Business Development Manager

TITLE: Cardinal CG Company Business Assistance Request

DESCRIPTION: Cardinal CG Company also known as Cardinal Glass has requested City Council consideration of a $57,000.00 economic incentive package for the relocation and expansion of the company to be located at 999 Van Buren.

BUDGET IMPACT: $57,000.00

☒ Yes ☐ No

The applicant has requested: a waiver of the City of Loveland construction materials use taxes up to but not to exceed $28,000.00, a waiver of the building permit and inspection fees of up to but not to exceed $20,000.00, a "backfilling" of $4,000.00 of capital expansion fees, and $5,000.00 of job training funds if the applicant successfully receives State of Colorado Job Training dollars.

SUMMARY: Cardinal CG Company operates a manufacturing facility in North Salt Lake, Utah which primarily serves the Northern Colorado market. Since 2007, the company has been investigating relocation to Northern Colorado and they have successfully identified a suitable location at 999 Van Buren. The company will make a $7,000,000.00 investment in real estate, building improvements, manufacturing equipment and relocation costs. They will be relocating 7 full time employees and will be hiring an additional 10 employees in the first full year of operation. Cardinal CG employees receive an average base pay of $39,000.00 and have a bonus program which provides the employees an average annual wage of $55,000.00. The results of the Colorado State University economic impact analysis project Cardinal Glass having a net new revenue impact of $65,000.00 over the next 5 years.

LIST OF ATTACHMENTS:
1. Staff Report and CSU Economic Impact Analysis
2. Company Information

RECOMMENDED CITY COUNCIL ACTION:
Consideration and discussion, staff is seeking direction on next steps.

REVIEWED BY CITY MANAGER:

Memo:

To: Loveland City Council

From: Betsey Hale, Business Development Manager

Re: Cardinal Glass Business Assistance Request

Comprehensive Plan:
Support for the Cardinal Glass Business Assistance Request is consistent with Guiding Principal 13 of the City of Loveland Comprehensive Plan adopted in 2005 states, "The City will promote the adequate provision of employment opportunities in an effort to sustain the economic health of the Loveland community and the Northern Colorado region." The applicant has completed the tasks as required by the City of Loveland Economic Incentive Policy and met the minimum standards as outlined on the minimum standards checklist included in the City Council packet.

Citizens Survey:
In the 2010 City of Loveland Quality of Life Survey the City received a rating of 30% when the citizen was asked if Loveland is attracting jobs that pay well from employers who give benefits. Support for the Cardinal Glass request would bring 7 new positions to Loveland and an additional 10 employees would be hired in year 1. These are high quality Blue-Collar positions which pay 130% of the 2010 Larimer County Average annual wage of $39,525.00.

Cardinal Glass Company Information:
Cardinal Glass Industries is a management owned S Corporation and a leader in the development of residential glass for windows and doors. The company employs 5500 individuals and has 27 manufacturing locations in the United States. The Loveland facility will be tempering and custom cutting glass. Attached to this report is additional company information, company history and sample product brochures.

Unexpected budget impacts at Loveland Location:
The applicant is faced with unexpected budget increases due to an environmental issue which has been addressed and the lack of a 6" floor thickness required for industrial use and heavy equipment. These two items added $275,000.00 to the project budget. The applicant was also not anticipating the replacement of two 4' sidewalks with 6' sidewalks on Van Buren and 8th Streets. The Transportation Development Review (TDR) Team and the City Traffic Engineer have agreed to waive the requirements as the sidewalks are in excellent condition and the pedestrian traffic is minimal. Should the applicant significantly expand the building in the future, this requirement will be requested by TDR.

The property at 999 Van Buren has been vacant on numerous occasions over the past ten years and it has often had uses that did not fit the neighborhood or tenants that had made building improvements that did not meet City Code. The purchase of the property by Cardinal Glass would make the property owner occupied by a successful primary employer committed to maintaining the property and providing a safe work environment for the employees.

Staff recommendation: Discussion item in study session and move forward for formal consideration.

City of Loveland Economic Development Policy Project Checklist		Jan-11	Page 1 Cardinal Glass
Primary Employer Guidelines			
Company Name : Cardinal Glass			
Requirement	**Completed**	**Date**	**Details**
Meeting with the Business Development Manager	**X**	**Aug-10**	
Letter of Intent/Request	**X**	**Nov-10**	
Economic Impact Analysis Data Submitted	**X**	**Sep-10**	
Impact Analysis shows Positive Net New Revenue	**X**		
Pays 80% of Employee Health Ins. Premium	**X**		
Offers Group Health Ins. Coverage to Dependents	**X**		
Performance Agreement	**X**	**Need a copy**	**Copy of Purchase Agreement**
Minimum investment of $500,000	**X**		**$7 million investment**
Net New Jobs to Loveland	**X**	**17**	**2011 only**
Project Budget Submitted	**X**	**Nov-10**	
Study Session	**X**	**1-Feb-10**	
Council Meeting and Approval			
Average Annual Wages Company wide	**Meets**		**Details**
100% of Larimer County Ave Annual Wage	**X**		**Base only**
110% of Larimer County Ave Annual Wage			
120% of Larimer County Ave Annual Wage			
130% of Larimer County Ave Annual Wage	**X**		**With Performance Bonus**
140% of Larimer County Ave Annual Wage			
150% or > Larimer County Ave Annual Wage			
Encouraged but not required	**Meets**		**Details**
Located in an Enterprise Zone			
Located in Downtown Loveland			
Reuse of an existing vacant facility	**X**		**999 Van Buren**
Clean Energy Company			
Health Care			
Aerospace/Aviation			
Bio-Science			
Arts/Sculpture Related			
Rocky Mountain Innovation Intiative Client			

Proposed Incentive			Page 2 Cardinal Glass
Waiver of Sidewalk Replacement(s) on 8th and Van Buren (valued at $20,000.00)			
Waiver of up to $28,000.00 Construction Materials Use Taxes			
Waiver of up to $20,000.00 in Building Permit and Inspection Fees			
City Council Backfill of $4000.00 in CEFs			
$5000.00 matching training grant dollars			
Total Incentive: $57,000.00 for Fee waivers, backfill and training			

City of Loveland

CITY MANAGER

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(970) 962-2303 • Fax (970) 962-2900 • TDD (970) 962-2620
www.cityofloveland.org

December 10, 2010

Chris Moore, Plant Manager
Cardinal CG Company
680 West 200 North
North Salt Lake, Utah 84054

Dear Mr. Moore

The City of Loveland looks forward to partnering with you on Cardinal CG Company's expansion in Loveland. City Staff has reviewed your recent request for financial assistance to facilitate your redevelopment of the property at 999 Van Buren.

Based on the results of the Economic Impact Analysis and your budget submittal, City staff will support and recommend the following assistance, contingent upon the approval of the Loveland City Council.

1. Waiver of the replacement requirement of the 4 foot sidewalk on Van Buren.
2. Waiver of the City of Loveland Construction Materials Use Taxes up to but not to exceed $28,000.00.
3. Waiver of the City of Loveland Building Permit and Inspection Fees up to but not to exceed $20,000.00.
4. Backfilling of the City's Capital Expansion Fees up to but not to exceed $4000.00.

It is our understanding that the State of Colorado Training dollars have been distributed in full until July of 2011. After that time, if you make application for those funds the City staff will recommend an additional match of up to $5000.00 for training of your new employees.

To expedite the completion of your project the City will provide an expedited review of your building permit application. We are initiating an electronic submittal process on January 1st. Please let Betsey Hale, Business Development Manager know when your application has been submitted to ensure expedited processing.

The City is looking forward to working with you as your company relocates and grows here. The total of this assistance package is $57,000.00 and the waiver of the sidewalk replacement is valued as a savings of $20,000.00. Please contact me if you need further information at 970-962-2303.

Sincerely;

William D. Cahill
City Manager
City of Loveland
cahilb@ci.loveland.co.us

Cardinal CG Company, North Salt Lake Division
680 West 200 North, North Salt Lake, Utah 84054

November 18, 2010

Bill Cahill
City Manager
500 East Third Street
Loveland, CO 80537

Dear Mr. Cahill,

Cardinal CG Company operates a manufacturing facility in North Salt Lake, Utah, which for the past four years has largely serviced customers in Northern Colorado. I have attempted to find means to relocate our operations throughout that time. I have enjoyed visits to Loveland and have been encouraged by the benefits operating in Loveland would achieve. We have searched for possible Loveland locations, and have actually found a suitable property at 999 Van Buren Avenue.

I enjoyed meeting with your city departments during our September Concept Review. I left that engagement with a stronger conviction that this project was viable and that economic incentives existed to ensure that. Considering Loveland's 2009 Economic Development Policy, this is to request total economic incentives of $350,000.00, in the form of waived or rebated fees and personal property taxes or cash grants, to be used to make structural and other improvements to the property necessary for it to comply with applicable codes and to accommodate Cardinal's use.

While operating in Loveland would certainly benefit us, the realities and costs of relocating have prevented us from realizing those benefits. Our projected budget for relocating to Loveland reaches $7,000,000.00 reflecting the purchase of property, construction costs to meet current city building codes and manufacturing requirements, relocating current employees, hiring and training new local employees, relocating existing equipment and purchasing new equipment. I know you will consider the benefits this project will immediately and for many years bring to the City of Loveland, including new jobs and tax base and one of the city's largest and most responsible power customers.

We would like to begin this project early in January, 2011 and would appreciate your decision and response as quickly as possible.

Sincerely,

CARDINAL CG COMPANY

Chris Moore

Christopher James Moore
Plant Manager

Cardinal CG Company, North Salt Lake Division
680 West 200 North, North Salt Lake, Utah 84054

November 30, 2010

Betsey Hale
City Manager
500 East Third Street
Loveland, CO 80537

Dear Mrs. Hale,

As requested, the following outlines the budget for our project to establish business operations at 999 Van Buren Avenue.

Building Purchase	$ 2,300,000
Professional legal, engineering, and environmental consultation expenses	$ 100,000
Building Remodeling	$ 1,650,000
Concrete replacement	$ 250,000
Electrical Upgrades	$ 500,000
New Glass Cutting and Handling Equipment	$ 1,000,000
New Heating, Ventilation, and A/C	$ 150,000
Relocating Employees	$ 250,000
Relocating Tempering Furnace	$ 100,000
Professional Electrical Contractors	$ 600,000
Hiring and Training new employees	$ 80,000
Relocating equipment	$ 100,000
Total	$ 7,080,000

Respectfully,

CARDINAL CG COMPANY

Christopher James Moore
Plant Manager

Cardinal CG Economic Impact Analysis for the City of Loveland

Martin Shields, Associate Professor of Economics
Michael Marturana, Research Economist
Colorado State University

14 September 2010

About Cardinal CG

- Cardinal CG is a manufacturer of energy efficient glass products and is considering purchasing a building at 999 Van Buren in Loveland for $2.3 million
- Cardinal expects to relocate 7 FTEs and hire an additional 10 workers in the first year
- Cardinal CG expects 10 annual overnight visitors

Notes About the Calculations

- We assume 30 percent of Cardinal employees reside in Loveland (we provide a range of estimates based on different commuting patterns in Table 5)
    - According to the US Census Bureau, roughly 30 percent of Loveland workers in goods producing industries reside in Loveland
- Per Cardinal CG, the average expected earnings per worker is $39,000 and is assumed to grow at an annual rate of 3 percent. The average earnings per worker in Larimer County was $40,003 in 2009.
- A discount rate of 3 percent is assumed for present value calculations
- Fiscal impacts are calculated using CSU's Insight-based fiscal impact model

Estimated Revenue Impacts to the City of Loveland from Cardinal CG

- Over five years, city tax revenue generated is estimated at $133,730 (Table 1)
- The greatest municipal revenue impact is $101,332, over five years, from operations (Table 1)
    - $43,794 in sales tax utility purchases
    - $35,817 from real property tax during operations
    - $24,933 in personal property taxes from operations
- $29,116 from employees effects, over five years
    - $27,878 in retail sales tax
    - $905 from single family property taxes
    - $332 in multifamily property tax

Estimated Cost Impacts to the City of Loveland

- $67,853 over five years in providing government services (Table 2)
    - $44,147 over five years in services to Cardinal
    - $23,706 over five years in government services to Cardinal employees residing in Loveland

Net Fiscal Impacts of Cardinal CG

- The City of Loveland is estimated to experience a net revenue gain of $65,877 over a period of five years (Table 3)
    - Five year net present value: $58,531
- Ten year estimates show a net public revenue of $135,654

- Ten year net present value: $103,967

- The net revenue gain per new employee over the next five years is reported in Table 4
- If a larger percentage of Cardinal's workers reside in Loveland, then the net public gain to the City decreases (Table 5)
- Table 6 details the major expenses in the next 5 years and corresponding present values, excluding construction expenses, for Cardinal CG

Table 1: Revenue benefits to Loveland from Cardinal CG

Revenue Source and Breakdown	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Operations	**$14,179**	**$23,080**	**$22,680**	**$22,410**	**$22,194**	**$104,544**
Real property taxes during operations	$6,379	$6,749	$7,141	$7,555	$7,993	$35,817
Personal property taxes during operations		$8,078	$6,808	$5,618	$4,428	$24,933
Sales taxes on utility consumption	$7,800	$8,252	$8,731	$9,237	$9,773	$43,794
Offsite Employee Effects	**$5,251**	**$5,703**	**$5,875**	**$6,052**	**$6,235**	**$29,116**
City sales tax on retail sales	$5,251	$5,408	$5,571	$5,738	$5,910	$27,878
Single family property taxes	$0	$215	$223	$230	$237	$905
Multifamily property taxes	$0	$79	$82	$84	$87	$332
Visitor Impacts	**$13**	**$14**	**$14**	**$15**	**$15**	**$71**
Total Public Revenues	**$19,443**	**$28,797**	**$28,569**	**$28,477**	**$28,444**	**$133,730**

Sources: Cardinal CG, Insight, and Colorado State University

Table 2: Costs to Loveland from providing government services to Cardinal CG

Public Cost Source	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year
Operations	$8,399	$8,609	$8,824	$9,045	$9,271	$44,147
City Residents	$4,510	$4,623	$4,738	$4,857	$4,978	$23,706
Total Public Costs	**$12,909**	**$13,232**	**$13,562**	**$13,901**	**$14,249**	**$67,853**

Sources: Cardinal CG, Insight, and Colorado State University

Table 3: Net revenue to Loveland from Cardinal CG

	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total	5 Year Average
Total Public Revenues	$19,443	$28,797	$28,569	$28,477	$28,444	$133,730	$26,746
Total Public Costs	$12,909	$13,232	$13,562	$13,901	$14,249	$67,853	$13,571
Net Public Revenue	**$6,534**	**$15,565**	**$15,007**	**$14,576**	**$14,195**	**$65,877**	**$13,175**

Sources: Cardinal CG, Insight, and Colorado State University

Table 4: Net public revenues per new worker over five years

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Revenue	$6,534	$15,565	$15,007	$14,576	$14,195
Total New Jobs	17	17	17	17	17
Net Public Revenue per New Worker	**$384**	**$916**	**$883**	**$857**	**$835**

Sources: Cardinal CG, Insight, and Colorado State University

Table 5: Net revenue to the City of Loveland for different commuting patterns over 5 and 10 years

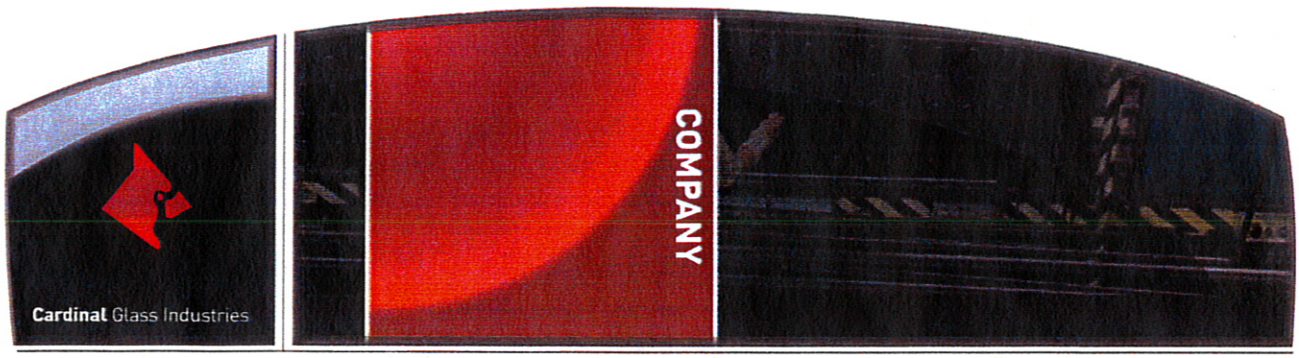
Percent of workers residing in Loveland	5 Year Net Gain	Present Value of 5 Year Net Gain	10 Year Net Gain	Present Value of 10 Year Net Gain
30%	$65,877	$58,531	$135,654	$103,967
40%	$49,003	$43,539	$99,975	$76,623
55%	$38,055	$33,811	$76,927	$58,958

Sources: Cardinal CG, Insight, and Colorado State University

Table 6: Net present value of major expenses for Cardinal CG

Expense	Computer Equipment	Manufacturing Equipment	Operational Materials	Utilities	**Total**
5 Year Total	$80,000	$800,000	$10.6 mil	$1.4 mil	**$12.9 mil**
Expense Spent in Loveland	0%	0%	0%	100%	
Present Value of Expense	$80,000	$800,000	$10.0 mil	$1.3 mil	**$12.8 mil**
Present Value of Expense Spent in Loveland	$0	$0	$0	$1.3 mil	**$1.3 mil**

Sources: Cardinal CG and Colorado State University



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About Us

Cardinal in brief

Cardinal Glass Industries is a management-owned S-Corporation leading the industry in the development of residential glass for windows and doors. We have grown to more than 5,300 employees located at 27 manufacturing locations around the United States.

At Cardinal, we try to maintain a clear vision: design and fabricate the most advanced residential glass products in the industry.

We start with a heavy investment in research and development. Our twin R&D centers in Minnesota and Wisconsin provide the basis for new advances in glazing fenestration.

We turn around those fresh ideas into useful products that regular homeowners can use. We provide a turnkey solution to window manufacturers: whether it starts with insulating glass, coated, laminated, tempered or just plain float glass, it is all designed to provide the latest in applied glass science.

Company structure

Cardinal Glass Industries is a corporation with these wholly-owned subsidiaries:

- Cardinal IG Company (insulating glass)
- Cardinal CG Company (coated glass and optical mirrors)
- Cardinal LG Company (laminated glass)
- Cardinal FG Company (float and tempered glass)
- Cardinal ST Company (solar technologies)
- Cardinal AG Company (automation equipment)

Cardinal enjoys a broad base of domestic and foreign customers. These include the 48 states, Alaska, Canada, France, Germany, Hungary, Japan, Mexico and Scotland.

Certification programs

Certification programs like these help us make sure that our product designs comply with government safety and durability requirements.

Insulating Glass Certification Council
National Fenestration Rating Council
Safety Glazing Certification Council

CE Certification

The following Cardinal products have met the requirements of CEN (European Committee for Standardization) certification:

- Cardinal float glass
- Cardinal tempered glass
- Cardinal laminated glass
- Cardinal coated glass
- Cardinal insulating glass

CE marked products are available from our manufacturing facilities.

Standards and codes

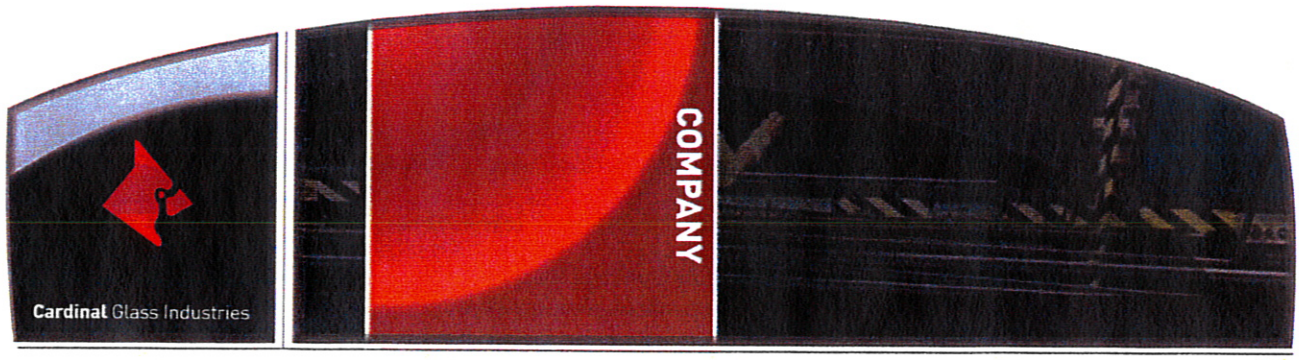
With compliance with established standards, our inherent quality and product performance are fully recognized.

ASHRAE
ASTM International
Canadian Standards Organization
International Code Council

Trade associations

Cardinal supports industry efforts in research, education and the advancement of building science through work with these organizations.

American Architectural Manufacturers Association
Center for Glass Research
Insulating Glass Manufacturers Alliance
Society of Vacuum Coaters
Window & Door Manufacturers Association



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A Snapshot in Time

- **1962 –** Founded in Minneapolis, Minnesota by M.L. Gordon
- **1977 –** Introduced triple-pane insulating glass for energy savings
- **1978 –** Began use of silicone dual-seal insulating glass for improved durability
- **1983 –** Introduced LoÉ™ coatings to produce triple-pane performance in dual-pane construction
- **1983 –** Built dedicated factory to supply LoÉ coatings for residential windows
- **1987 –** Introduced argon gas filling of insulating glass units with LoÉ to provide quad-pane performance in a 2-pane construction
- **1991 –** Introduced LoÉ²˙³ coatings for year-round energy performance
- **1992 –** Built first float glass plant to stabilize a glass supply chain to its IG plants
- **1993 –** Launched XL Edge® glass, a durable, warm edge IG spacer system
- **2002 –** Introduction of easier-to-clean LoÉ² Plus® glass – built for the busy lifestyle
- **2002 –** Preserve® film application launched. Protects windows through the entire construction process
- **2006 –** Neat® glass introduced, the next generation of easier-to-clean glazing
- **2006 –** Introduced LoÉ³-366®, the ultimate performance Low-E glass. An ideal balance of solar control and high visibility

Technology leader

Cardinal has always positioned itself as a technology leader. Here are some of the many new developments that Cardinal has presented to the industry:

- Dual seal insulating glass
- Sealed corners on IG spacer frames
- Volume introduction of heat-strengthened 2.3mm glass for resistance to thermal stress breakage
- Steel packing pallets for all glass products, eliminating waste of wooden shipping boxes
- Cullet repurchase program for float glass recycling
- Rotating targets for sputtering on new coating materials
- Post-temperable LoE and LoE² coatings
- On-line color measurement and quality assurance (QA) for coated glass
- On-line laser inspection/QA control of float glass
- On-line measurement of IG unit air space thickness

Success is at our core

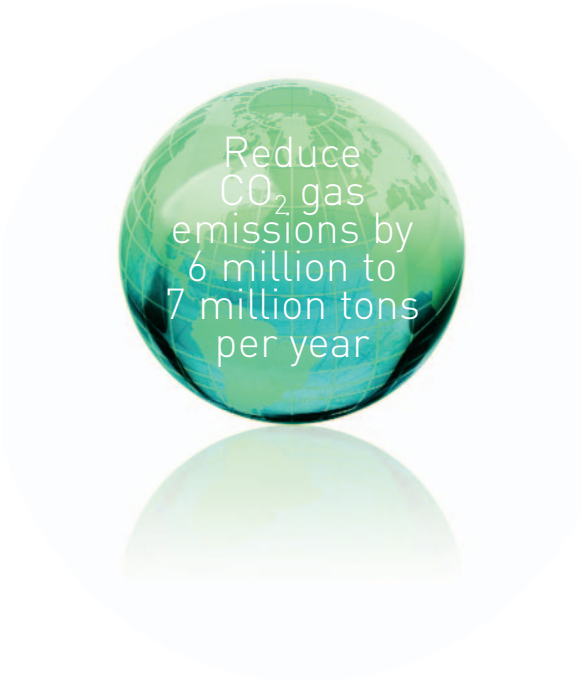
Our success in the residential glass industry is due to three core ambitions: Providing superior-quality products, staying highly competitive in the marketplace and executing high-end customer service every day.

Thanks to the entrepreneurial spirit of our employees, we consistently meet these objectives and continue to maintain our leadership position in the glazing industry.

Energy-Efficient Residential Windows and Doors Can Make a Difference.

Climate Change

The topic of climate change is uppermost in many people's minds and is in the news on a regular basis. A growing number of people and many scientists worldwide believe that the earth is warming due to human generation of "greenhouse" gasses. This belief may not be scientifically conclusive, but the potential consequences of climate change are projected to be so severe that the argument in favor of limiting "greenhouse" gas emissions is compelling.



Yet few are aware of how much energy-efficient windows and doors can do to help. They can significantly reduce energy consumption in both hot and cold climates. • What about emissions from Cardinal plants in manufacturing these products? In fact, the energy saved by Cardinal glass products neutralizes our entire carbon footprint within twelve months. What's more, the windows continue conserving energy for many years to come.

How residential windows and doors can fight climate change.

The facts are persuasive. And the opportunity is enormous.

- Eleven U.S. states still do not have a building energy code.
- Only twelve states enforce a current version of the residential model energy code (2006) as it relates to windows and doors.
- Twenty-three years after commercialization, only 58% of residential windows and doors sold in the United States contain energy-efficient LoĒ glass.
- Second generation LoĒ^2 (low-e squared) products are now commonly available in every state with adequate production capacity already installed to handle 100% of the nation's window demand.
- LoĒ^2 glass contains two layers of silver which selectively transmit visible light and reflect solar heat and far infrared, making it efficient in both hot and cold climates.
- The U. S. Census Bureau reports that more than 91% of all new homes built in America have mechanical air conditioning, pushing up peak electrical demand.

The cost is minimal.

- Efficient LoĒ windows cost about $15 more per window than clear double-pane windows, on average.
- Builders experience an additional cost of about $350 per average house (2,500 ft^2 of floor space, 22 windows) for these energy-efficient window products. But with proper engineering, builders would save up to $1,000 in first-time HVAC costs.

All states should adopt an energy-conserving building code requiring at least second generation LoĒ^2 glass in all residential windows and patio doors. This equates to a solar heat gain coefficient (SHGC) < 0.40 in the South and a U-value of < 0.35 in the North. No exceptions. No substitutions.

The energy savings are huge.

Currently, the residential windows and doors sold with energy-efficient glass (58%) are reducing peak energy demand enough to eliminate the need for eight new 200 MW coal-fired power plants each year.

If the remaining inefficient windows and doors (42%) sold each year were required to have LoĒ^2 glass:

- Peak U.S. energy demands would be reduced sufficiently to eliminate the need to construct six additional new 200 MW coal-fired power plants each year.
- Greenhouse gas emissions (CO_2) from heating and cooling U.S. homes would be reduced by 2.5 million tons each year.
- The annual CO_2 emissions prevented by converting an average house to energy-efficient LoĒ^2 windows and doors equate to the difference between the volume of CO_2 emitted by driving an SUV versus a small hybrid vehicle.
- More than 50% of all windows manufactured in the United States are installed as remodeling or replacement windows in older homes. If these were energy-efficient windows, the improved energy performance would become actual reductions in the total U.S. consumption.

The future appears even brighter.

- The third generation of LoĒ window and door products (LoĒ^3 pronounced low-e cubed) is now entering the market. These products incorporate a triple layer of silver with still more efficient solar selectivity.
- If all windows and patio doors in the U.S. were required to use this third generation of LoĒ products, greenhouse gas emissions (CO_2) from heating and cooling U.S. homes would be reduced by 7.0 million tons each year.
- This would amount to eliminating two new coal-fired power plants per year, or a total elimination of eight new coal-fired power plants per year.

Cardinal energy-conserving products neutralize our own carbon footprint.

Cardinal's business of manufacturing insulating glass products is fully integrated. Therefore we experience significant gas emissions through the combustion of natural gas in glass melting and the consumption of electrical power in glass coating, tempering and insulating glass fabrication. We believe it is important to judge ourselves on the entire enterprise including the energy-conserving nature and performance of our products.

Nitrous oxide, sulfur dioxide and particulates are all emissions from our float glass operations which are controlled and monitored by Federal EPA requirements. Carbon dioxide, a byproduct of combustion, is measured but is not controlled; it is carbon dioxide which is commonly believed to be the most important of all of the "greenhouse" gasses. There are no known methods of controlling the carbon dioxide generated by the combustion of natural gas in glass melting furnaces.

Cardinal's generation of carbon dioxide from all of its manufacturing and transportation activities is 1.1 million tons per year.

However, our product performance offsets our production emissions – and a lot more.

Our advanced energy-conserving LoE^3 (low-e cubed) insulating glass products help homes to significantly reduce peak and annual energy consumption. The prevention of CO_2 emissions through conservation must also be considered when judging industrial activity such as Cardinal's. Without the production of efficient glass products, significant emission savings would not be accomplished in the housing sector which is the largest single consumer of energy in the United States (40% of all U.S. energy is consumed by buildings).

Cardinal's entire carbon footprint is neutralized within the first twelve months after its products have been installed in North American homes. After this point of neutralization, significant conservation of energy – and consequently the prevention of the generation of "greenhouse" gasses – begins to take place.

Our environmental story: *going beyond energy conservation.*

All of Cardinal's float glass manufacturing activities meet or exceed Federal EPA emission standards. When operating at full capacity, Cardinal's latest plant in Winlock, Washington will have the lowest total emissions per ton of glass shipped of any conventional float glass plant in the world.

We are also a glass industry leader in controlling and reducing waste.

- Captured emission particulates and chemicals from our float glass facilities reenter the raw material stream eliminating the need to dispose of these wastes while at the same time improving the quality of the new glass produced.
- Cardinal conducts an aggressive cullet (broken glass) recycling program with its customers. This glass is returned, remelted and formed into pristine product. Each year this program prevents more than 150,000 tons of broken glass from being discarded.
- Corrugated packaging material is reused numerous times and recycled at the end of its useful life. Additionally, all plastic stretch wrap materials are bundled and recycled from all Cardinal plants.
- Throughout the entire Cardinal system, steel reusable racks and glass packs are used for the most efficient and effective packaging and transportation systems. The use of reusable steel racks alone saves the construction and disposal of more than 500,000 wooden boxes per year.

Cardinal's roots are in energy-conserving glass products for windows and doors. Today, Cardinal's annual output of high performance, energy-conserving products prevents the need for construction of three and one-half new coal fired power plants each year.

With widespread usage of our next generation LoE^3 (low-e cubed) products, Cardinal's total integrated "greenhouse" gas emissions will be neutralized within less than twelve months through annual savings by window consumers. Best of all, the reduced gas emissions and annual energy savings will continue for years to come.

Resources and Notes:

1. Average house size and housing start information from U.S. Census Bureau
   http://www.census.gov/const/C25Ann/sftotalmedavgsqftfinance.pdf
   http://www.census.gov/const/www/permitsindex.html#estimates

2. Window unit sales from Ducker 2005, Exhibit D.1 Patio door sales from Exhibit E.1

3. Average window size is 15ft^2, which approximates a vertical slider of 3-0 x 5-0 or double casement of 4-0 x 4-0

4. Distribution of national window sales to housing starts yields "typical" single family house with 22 windows

5. Energy analysis details are consistent with the National Fenestration Rating Council (www.nfrc.org) draft procedure 901: "Guidelines to Estimate the Effects of Fenestration on Heating and Cooling Energy Consumption in Single Family Residences". Total window area is set to 18% of the conditioned floor area and are distributed equally on all four facades. The analysis uses a thermostat offset to accomplish equal comfort. For windows with clear double pane glass the heating setpoint is 2°F higher than for low-E windows. For windows with high solar gain glass (clear and LoE-178) the cooling setpoint needs to be lowered by 4°F to maintain the same comfort as windows using LoE^2 or LoE^3 .

6. Gas heat at $1.20 per therm; 90% AFUE new north, 78% AFUE for southern and existing.

7. Electric cool at $0.12 per kW; 13SEER new construction, 10SEER existing homes.

8. Average coal power plant size and CO_2 emissions
   http://buildingsdatabook.eere.energy.gov/docs/6.2.1.pdf
   http://buildingsdatabook.eere.energy.gov/docs/6.1.3.pdf

9. CO_2 emissions for cars and SUV:
   http://buildingsdatabook.eere.energy.gov/docs/6.1.4.pdf

Cardinal Glass Industries

Superior glass products for residential windows and doors

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LoE-i81

Enhanced Performance Glass

Cardinal Coated Glass

Superior glass products
for residential windows and doors

Introducing LoĒ-i81™, the new Cardinal glass that takes center of glass U-factors to a remarkable 0.20 when coupled with our LoĒ²® or LoĒ³® glass and argon fill in a double-pane unit. Without argon and with or without capillary tubes, the unit still delivers a U-factor of just 0.23 – perfect for high altitudes. You get triple-pane performance in a double-pane window. So take your window U-factors to a new low ...with LoĒ-i81.

We've got your number.

Turn your double-pane windows into triple-pane performers.

There's no need to go to triple-pane windows to meet the various energy-saving guidelines. No need to invest in redesigning your windows and altering your manufacturing processes either. A double-pane IG unit with LoĒ-i81 can meet the guidelines.

LoĒ-i81 is sputtered onto the indoor lite, the #4 surface, thus reflecting escaping heat back into the room and lowering U-factors. Coupled with our LoĒ^{2} or LoĒ^{3} glass and argon fill, this double-pane unit delivers performance much better than clear triple-pane – a center of glass U-factor of just 0.20 compared to 0.35 with clear triple-pane.

To surpass the U-factor performance of our LoĒ-i81 IG double-pane unit, you would need to go to a triple-pane unit with a low-E coating in each gap.

IG UNIT	U-FACTOR
Double-Pane, Clear, Air	0.48
Double-Pane w/LoĒ^{3}-366, Argon	0.24
Double-Pane w/LoĒ^{3}-366 and LoĒ-i81, Air	0.23
Double-Pane w/LoĒ^{3}-366 and LoĒ-i81, Argon	0.20

1" IG UNIT	U-FACTOR
Triple-Pane, Clear	0.35
Triple-Pane w/LoĒ^{3}-366, Argon	0.22
Triple-Pane w/LoĒ^{3}-366, LoĒ-179, Argon	0.17
Triple-Pane w/LoĒ^{3}-366, LoĒ-179, LoĒ-i81, Argon	0.15

Meet today's strictest energy efficiency guidelines.

With a center of glass U-factor of only 0.20 (0.23 without argon) and SHGC of just 0.25, an insulating glass unit with LoE^{3}-366 and LoE-i81 meets the most stringent energy standards – without going to a triple-pane unit.

This allows you to offer more double-pane window options that can meet current ENERGY STAR guidelines everywhere in the country, including high altitudes, regardless of window size.

The advantages are more than clear.

In addition to providing maximum energy efficiency in a double-pane unit, LoĒ-i81 offers several other customer-pleasing benefits.

Its surface is smooth, making it easier to remove label residue and clean. And perhaps most importantly, there's no haze to mar the view.

Cardinal IG units with LoĒ-i81 also incorporate our XL Edge® spacer, one of the reasons we have the industry's lowest failure rate – only 0.20% over 20 years.

Give homeowners another reason to love LoĒ-i81 units – include Neat® naturally clean glass on the outside. Your windows stay cleaner longer and clean easier.

Finally, protect your windows in transit as well as on the job site with Preserve® protective film.

To learn more about LoĒ-i81 and other Cardinal glass products, ask your contractor or architect, or visit our web site at www.cardinalcorp.com.

Note: All values calculated using Window 5.2. (See http://windows.lbl.gov/software/window/window.html and http//windows.lbl.gov/materials/igdb/ for more information on glass optical data and the Windows 5.2 program.)

Solar Heat Gain Coefficient – (SHGC). The amount of solar radiation that enters a building as heat. The lower the number, the better the glazing is at preventing solar gain.

Fading Transmission – The portion of energy transmitted in a spectral region from 300 to 700 nanometers. This region includes all of the ultraviolet energy and most of the visible spectrum, and will give the best representation of relative fading rates. The lower the number, the better the glass is for reducing fading potential of carpets and interior furnishings.

U-Factor – This represents the heat flow rate through a window expressed in BTU/hr/ft^2/°F, using winter weather conditions of 0°F outside and 70°F inside. The smaller the number, the better the window system is at reducing heat loss.

Cardinal actively supports and participates in The National Fenestration Rating Council (NFRC). Windows with LoE^3-366 that are rated and certified by the NFRC can comply with Energy Star™ requirements for all climates in the country.

(See http://www.energystar.gov/products/windows/ for more information on the Energy Star windows program.)

GLASS PERFORMANCE

	VISIBLE LIGHT TRANSMITTANCE %	SOLAR HEAT GAIN COEFFICIENT	U-FACTOR (AIR-ARGON)	FADE UV	FADE ISO
DOUBLE-PANE PRODUCT					
LoE-179 w/LoE-i81	71%	0.59	0.25-0.22	0.23	0.54
LoE^2-272 w/LoE-i81	64%	0.38	0.23-0.20	0.15	0.48
LoE^2-270 w/LoE-i81	63%	0.34	0.23-0.20	0.14	0.46
LoE^3-366 w/LoE-i81	58%	0.25	0.23-0.20	0.05	0.37
TRIPLE-PANE PRODUCT					
LoE-179, LoE-179, LoE-i81	62%	0.50	0.19-0.16	0.09	0.42
LoE^2-272, LoE-179, LoE-i81	57%	0.34	0.19-0.15	0.06	0.39
LoE^2-270, LoE-179, LoE-i81	55%	0.30	0.19-0.15	0.06	0.37
LoE^3-366, LoE-179, LoE-i81	51%	0.22	0.19-0.15	0.02	0.31

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270

Cardinal Coated Glass

Superior glass products
for residential windows and doors

106 degrees outside

The sun doesn't stand a chance against Cardinal LoE²-270 (pronounced low E squared-270). It's the perfect glass for fighting the heat. It reduces solar heat gain by 50% or more when compared to ordinary glass. In fact, its solar heat gain coefficient is better than code requirements. And because of its clarity, LoE²-270 outperforms tinted glass typically used in sunny climates.

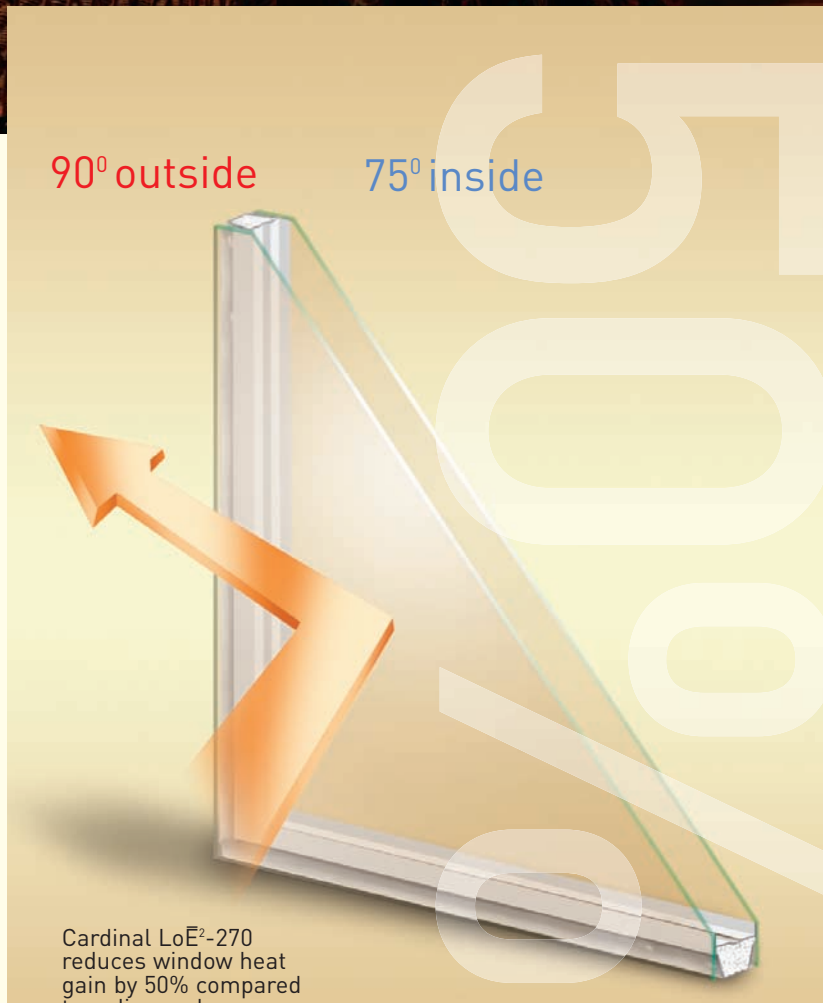
Cardinal comfort inside.

Regardless of where your home is located, choosing windows that provide you with the highest level of comfort and energy savings year-round is extremely important. And choosing the right glass for your windows is the most important factor in that decision. Go beyond ordinary low-e glass. Let LoE²-270 help you handle the weather – any weather.

Solar control
for just about the coolest windows under the sun.

When the temperature is heading to the top of the thermometer, ordinary window glass simply welcomes in the heat. Cardinal LoÉ²-270, however, has been specially formulated to reject the sun's heat and damaging rays and keep your home cool and comfortable. The patented LoÉ²-270 coating provides the best clarity and highest performance of all low solar gain low-emissivity glass products.

The end result of all this engineering is that Cardinal LoÉ²-270 provides the ultimate in comfort because it reduces window heat gain by 50% or more when compared to ordinary glass.



Cardinal LoÉ²-270 reduces window heat gain by 50% compared to ordinary glass.

Frigid outside, cozy inside.

During cold weather, the insulating effect of your windows has a direct impact on how your rooms feel. Typically, 75% of the exposed surface of a window is glass, and the temperature of the room-side of the glass directly affects the air temperature in the room. The better insulated the window glass, the warmer your room will be.

In fact, the Efficient Windows Collaborative (www.efficientwindows.org) suggests that when glass surface temperature falls below 52°F, there is a risk of thermal discomfort. To maintain the best comfort during the winter, select a glass product that produces surface temperatures that will stay above this point during the coldest outdoor conditions.

Inside Glass and Outside Temperatures

The table below compares the room-side center of glass temperatures of four different glass types against two different winter conditions

	-20°F	+20°
Single-pane, clear	0°	31°
Double-pane, clear	37°	51°
Ordinary low-e	47°	58°
LoĒ²-270	**52°**	**61°**

The superior insulating capability of Cardinal LoĒ²-270 is a key factor in the construction of comfortable windows for cold climates. The dramatic comfort improvement from windows with warm glass surfaces also means the relative humidity of the indoor air can be controlled and maintained properly. Proper humidity levels (not too much, not too little) will improve comfort and promote a healthier living environment.

Save energy with glass so smart,

Although windows provide beautiful views and wonderful natural light, they can also account for up to 30% of the annual energy consumed in a home. In the summer, Cardinal's LoE²-270 keeps your home cool and comfortable by rejecting the sun's heat and damaging rays. In the winter, LoE²-270 helps your home stay warm and cozy by blocking heat loss to the cold weather outside.

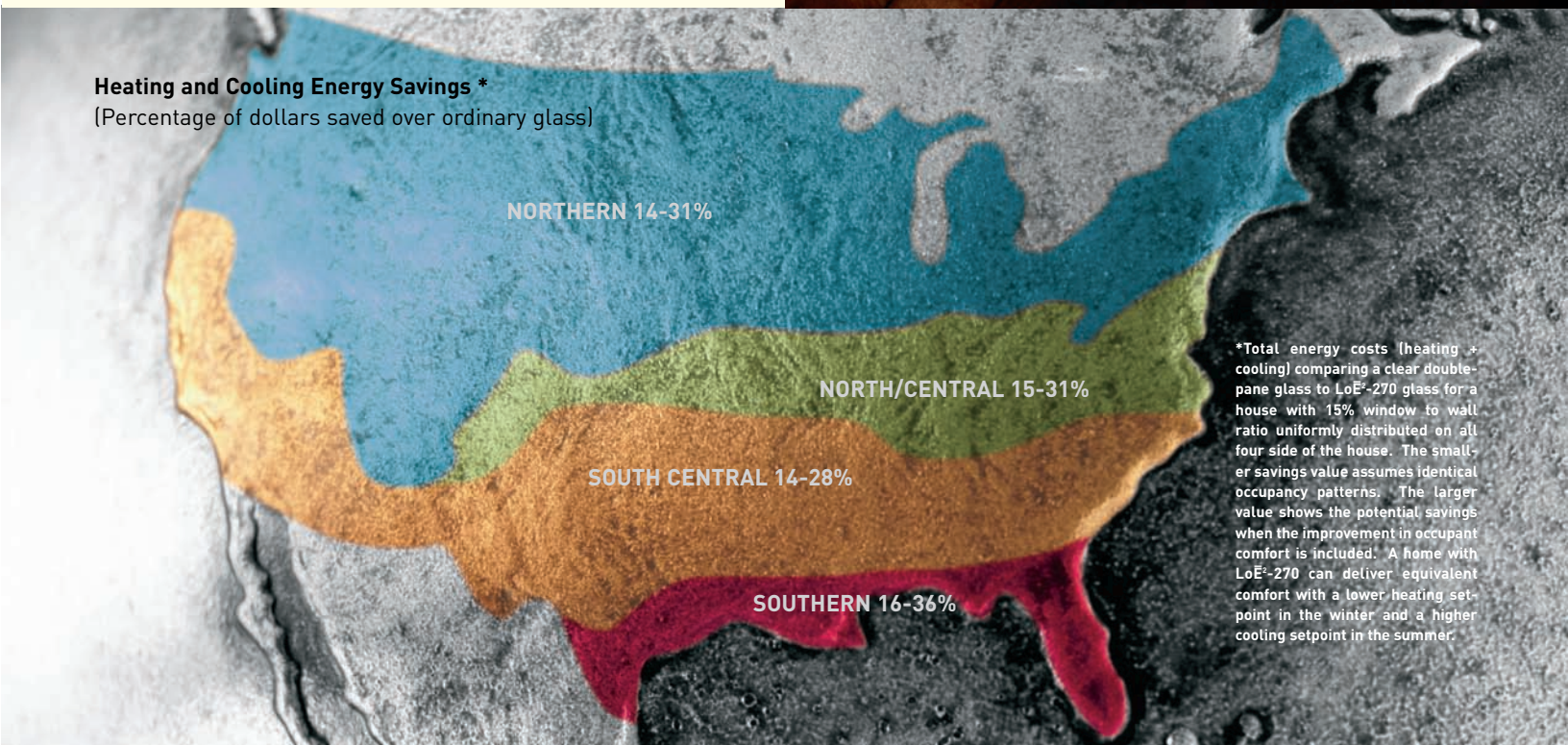
The difference is clear.

Cardinal LoE²-270's patented coating blocks 86% of the sun's harmful ultraviolet rays and 86% of the sun's infrared heat. LoE²-270 even outperforms the tinted glass often used in warm climates. You can see out and the light shines in, with no heavy bronze or smoke colored tints to darken the personality of your home. And because LoE²-270 blocks most of the sun's damaging ultraviolet rays, it will help your curtains, carpets, furniture and wall coverings stay beautiful for years to come.

it can control your your comfort.

Also, LoE²-270 can be purchased in hurricane-resistant laminated glass, in a variety of custom shapes and sizes.

To learn more about LoE²-270 and other Cardinal glass products, ask you contractor or architect, or visit our web site at www.cardinalcorp.com.



*Total energy costs (heating + cooling) comparing a clear double-pane glass to LoE²-270 glass for a house with 15% window to wall ratio uniformly distributed on all four side of the house. The smaller savings value assumes identical occupancy patterns. The larger value shows the potential savings when the improvement in occupant comfort is included. A home with LoE²-270 can deliver equivalent comfort with a lower heating setpoint in the winter and a higher cooling setpoint in the summer.

Note: All values calculated using Window 5.2. (See http://windows.lbl.gov/software/window/window.html and http://windows/lbl.gov/materials/optical_data/default.html for more information on glass optical data and the Windows 5.2 program.) Emittance of ordinary low-e is 0.20.

Solar Heat Gain Coefficient – (SHGC). The amount of solar radiation that enters a building as heat. The lower the number, the better the glazing is at preventing solar gain.

Fading Transmission – The portion of energy transmitted in a spectral region from 300 to 700 nanometers. This region includes all of the ultraviolet energy and most of the visible spectrum, and will give the best representation of relative fading rates. The lower the number, the better the glass is for reducing fading potential of carpets and interior furnishings.

U-Factor – This represents the heat flow rate through a window expressed in BTU/hr/ft^2/°F, using winter weather conditions of 0°F outside and 70°F inside. The smaller the number, the better the window system is at reducing heat loss.

Cardinal actively supports and participates in The National Fenestration Rating Council (NFRC). Windows with LoĒ^2-270 that are rated and certified by the NFRC can comply with Energy Star™ requirements for all climates in the country.

(See http://www.energystar.gov/products/windows/ for more information on the Energy Star windows program.)

GLASS PERFORMANCE

PRODUCT	VISIBLE LIGHT TRANSMITTANCE %	SOLAR HEAT GAIN COEFFICIENT	WINTER U-FACTOR (AIR/ARGON)	UV	FADING TRANSMISSION
Single-pane, clear	90%	.86	1.04/---	.71	.84
Double-pane, clear	81%	.76	.48/--	.56	.74
Ordinary low-e	75%	.72	.35/.31	.44	.63
LoĒ^2-270	**70%**	**.37**	**.30/.25**	**.14**	**.53**

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Cardinal Coated Glass

Superior glass products
for residential windows and doors

CITY OF LOVELAND
FIRE & RESCUE DEPARTMENT
Administration Offices • 410 East Fifth Street • Loveland, Colorado 80537
(970) 962-2471 • FAX (970) 962-2922 • TDD (970) 962-2620

AGENDA ITEM: **2**

MEETING DATE: 2/8/2011

TO: City Council

FROM: Randy Mirowski, Fire Chief, Loveland Fire and Rescue *rm*

PRESENTER: Randy Mirowski

TITLE: Fire Authority Review for Loveland Fire and Rescue

DESCRIPTION:
The fire authority would result in an intergovernmental agreement to create a partnership between the City of Loveland and the Loveland Rural Fire Protection District to provide all fire and rescue services to the citizens living within the boundary lines of both governing bodies' areas of responsibility. This presentation, along with the included attachments, will act as a progress report to City Council from the Fire Authority Review Committee.

BUDGET IMPACT:

☐ Yes ☒ No

SUMMARY:

The review of the needs and requirements for the formation of a fire authority was undertaken by a committee with representation from City Council, the Rural District, and the City Manager's office. Staff support was provided by members of Loveland Fire and Rescue's administration, City of Loveland Attorney's office, and with assistance from the attorney and treasurer of the Rural District. There has been more than two years of work and research conducted to determine the best governance model for Loveland Fire & Rescue (LFR), the feasibility of a fire authority for LFR and changes that would be required in order to implement a fire authority for Loveland Fire and Rescue.

The lion's share of the time and research has gone into the evaluation of the financial needs for LFR and the needed improvements in operations for citizen service. Specifically, during the committee's research, much has been learned about the past, present and future needs of the organization and how a fire authority could impact, in a positive way, the future of LFR.

The fire Authority Review Committee is at an important place in its work. The research on current and needed service levels, and the various models for staffing and deployment to meet those desired service levels, has been completed. The presentation for the February 8th study session will focus on the work that has been done thus far and the conclusions that the committee has made. What is needed now from City Council is direction for the next steps in the process for the formation of a fire authority.

BACKGROUND:
Loveland Fire and Rescue (LFR) currently operates as a City fire department with a contract to provide fire/rescue related services to the Loveland Rural Fire Protection District (Rural District). The City and Rural District have had an association through contract for more than fifty years with essentially the same type of governance model. However, significant changes have occurred over the years in the department's responsibilities and their requirements for providing service. The control of the department has also shifted from a basic volunteer-combination organization to a career paid department with a limited number of volunteers acting in an adjunct capacity. Numerous problems have been identified with the current governance model from both the City's perspective and the perspective of the Rural District. Examples include:

- ♦ Financial fairness/equity of the current contract (City)
- ♦ Security and stability for future fire/rescue services (Rural District)
- ♦ Input and control over fire/rescue operations (Both)
- ♦ Improving relationships and building a strong partnership (Both)

In addition to these issues, serious questions have emerged about the existing governance model's ability to address and resolve the current financial problems facing the department and for problems that will arise in the future. Research data (see Attachment #1) clearly suggests that the department is considerably underfunded and understaffed when compared to other like departments in the region. The department is also lacking in strategic and operational level plans to address critical issues. A change in the governance model for LFR was one option submitted to City Council by the Fire Chief during a study session, on November 10, 2009, as a possible means to improve the department's administrative management and operations. The Fire Chief was directed by Council, and the Rural Board, to conduct a comprehensive feasibility study for the implementation of a fire authority governance model for LFR's future. The feasibility study concluded that a fire authority was achievable for LFR with a restructured revenue allocation formula and funding increases as appropriate from both the City and the Rural District. In addition, operational details would need to be constructed into an intergovernmental agreement (IGA) that would address such issues as the make-up of the governing board, organizational responsibilities and procedures, services provided, capital improvement and termination of the agreement. Furthermore, a comprehensive review of the current services provided and needed staffing and deployment levels, along with estimated cost increases to provide the appropriate level of service, would need to be conducted.

In July of 2010, the Fire Authority Review Committee, made up of two members of City Council, two members of the Rural District's Board, and a representative from the City Manager's Office was formed. This committee began meeting monthly from August of 2010 to address the abovementioned issues and formalize a plan and an IGA that would later be presented to each governing body for approval for the formation of a fire authority for Loveland Fire and Rescue.

CONCLUSION:

The analysis of previous committees revealed that a fire authority would be the best governance model for LFR and would be feasible. What the current committee has concluded is that the fire authority has great potential for improving the administrative and governance operations for Loveland Fire and Rescue. It is also believed that a fire authority would be the vehicle that would allow the department to solve community problems that currently exist within the City and Rural District. It is further believed that both strategic and operational planning would improve significantly under this governance model. It is also believed that continuing the relationship between the City and the Rural District, in the form of a fire authority, would allow for more efficient operations, a leveraging of citizen's tax dollars for greater overall benefit, and a vehicle for more effective future planning for fire/rescue operations.

Financial increases from both the City and the Rural District will be needed in the future to allow for the needed improvement in the fire department. Adequate service levels to the citizens in the Loveland community do not match those of comparison departments and need to be improved. The research conducted by the Fire Authority Review Committee showed a clear need to improve the service levels and staffing by nearly 30% to meet the averages of comparison departments in the region. It is clear that the current governance model has not been able to keep pace with the demands placed on LFR for providing adequate fire/rescue services to the community. Adequate funding, adequate staffing and providing an adequate means for large capital replacement have all fallen short of the needs of the community for fire/rescue services. Implementation of a fire authority alone won't provide resolution. However, if implemented, the research certainly suggests that the fire authority will provide the greatest chance to improve the fire department, enhance citizen service levels and improve firefighter safety for LFR.

LIST OF ATTACHMENTS:

A. **STATISTICAL INFORMATION:** ***Loveland Fire and Rescue Statistical Data for Northern Colorado/Southern Wyoming Comparison Departments 2011 Data***

B. **FIRE AUTHORITY REVIEW COMMITTEE MEETING PACKET- JANUARY 2011**

RECOMMENDED CITY COUNCIL ACTION:
In order to address the remaining details within the context of the development of a plan for the implementation of a fire authority, there is a need for City Council to provide the committee with direction for the next steps in the process. There will be several specific questions and targeted areas of discussion brought before Council during the study session that the committee would like input on and direction from Council for future work and actions.

REVIEWED BY CITY MANAGER:

Loveland Fire and Rescue Statistical Data for Northern Colorado/Southern Wyoming Comparison Departments

2011 Data

Executive Summary-

Research completed by the Fire Authority Review Committee clearly suggests that Loveland Fire and Rescue is underfunded and understaffed by nearly 30% when matched to its comparison departments in the region. Statistical data has been compiled in this brief report to give a more detailed view utilizing standard performance measurement data recognized throughout the industry.

Comparison data was reviewed from six other similar sized departments within the region. Five of these departments are in Northern Colorado and one is in Southern Wyoming. All of these comparison departments provide similar emergency response profiles with relatively common citizen demographics. All of these departments are joint members and partners within the Front Range Fire Consortium (FRFC). Three of these departments are city fire departments with no rural responsibilities, one is a city department that contracts with a rural area on one side of their boundary line, one is a fire protection district, one is a fire authority, and one (LFR) is a city fire department contracting to the rural fire district that surrounds the entire city.

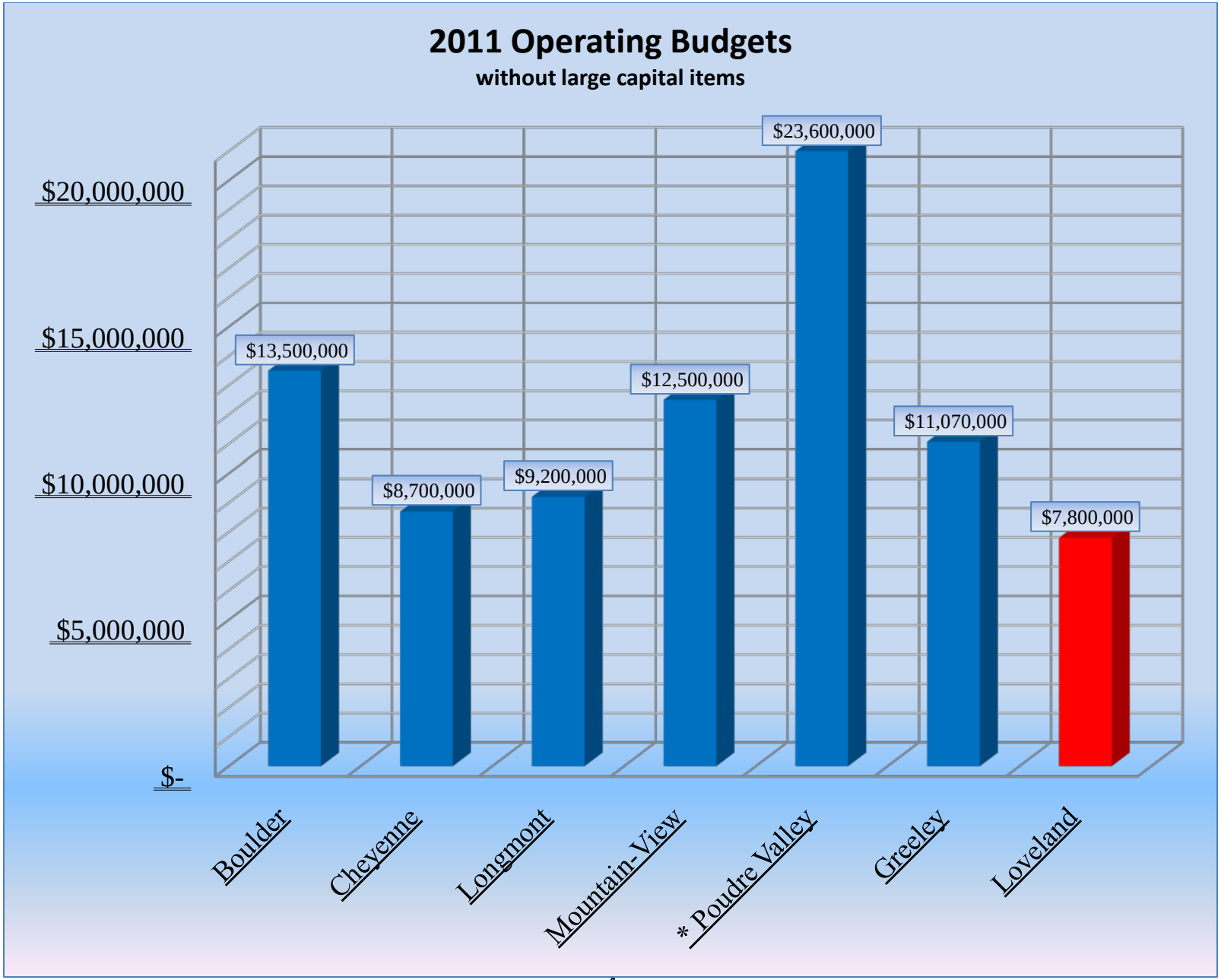
The list of the comparison departments include (in alphabetical order):

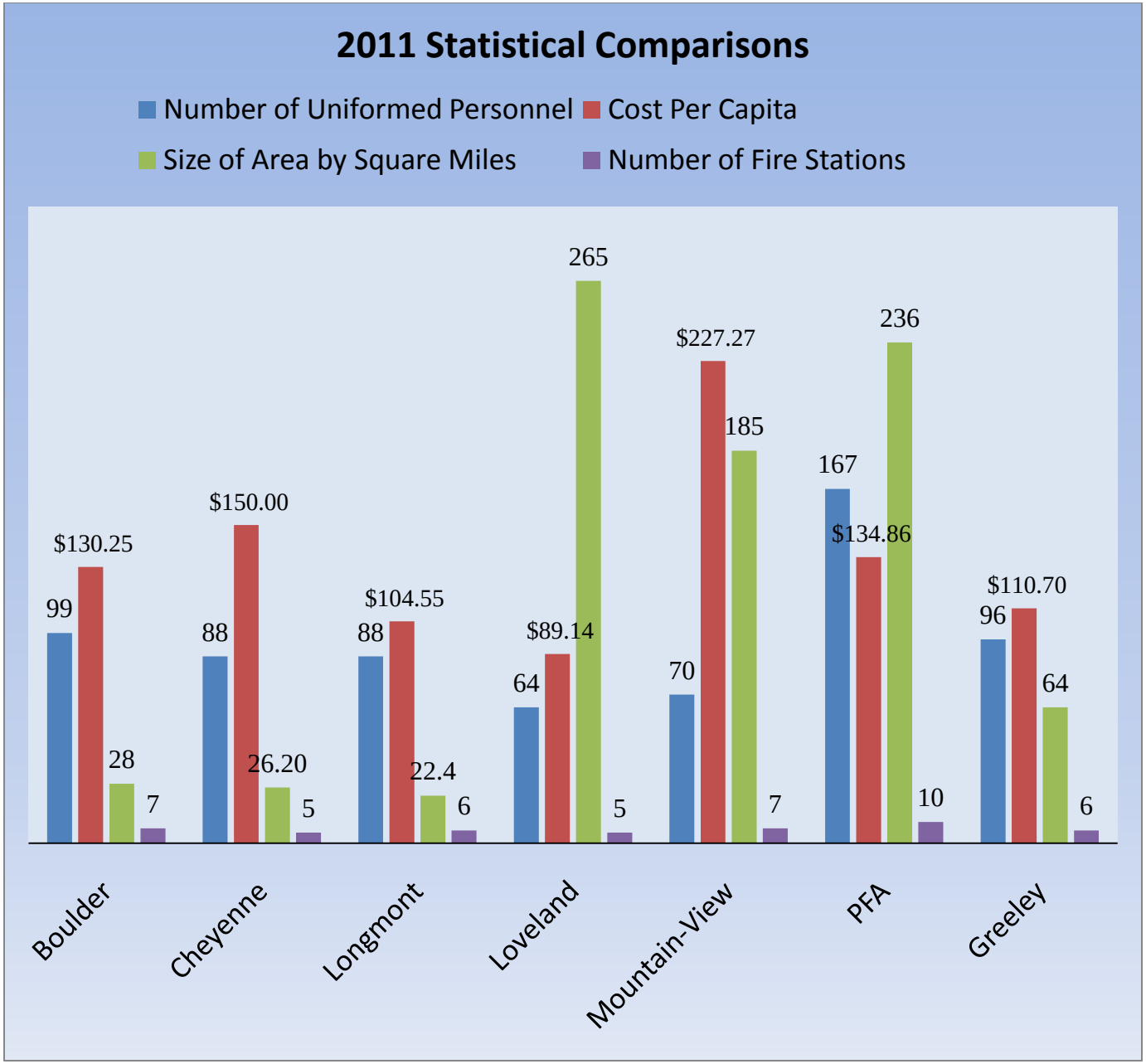
- Boulder Fire Department
- Cheyenne Fire Department
- Greeley Fire Department
- Longmont Fire Department
- Loveland Fire and Rescue
- Mountainview Fire Protection District
- Poudre Fire Authority (Fort Collins)

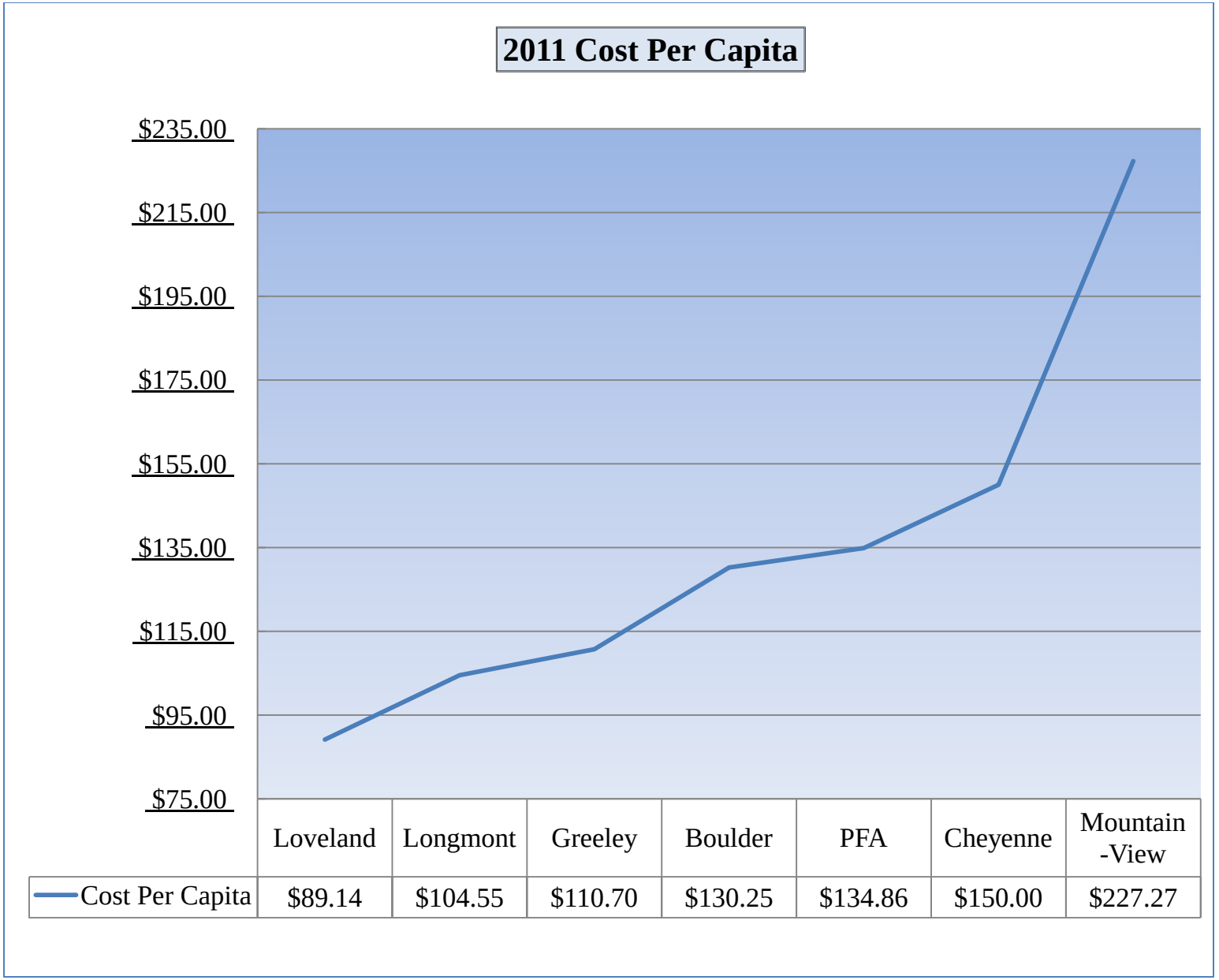
Critical comparison dimensions in this report include:

► Operating Budget
► Number of Uniformed Personnel
► Population Served
► Costs Per Capita for Services
►Size of Area in Square Miles
► Number of Fire Stations
► Number of Firefighters per 1000 Population

City of Town	Operating Budget	Number of Uniformed Personnel	Population Served	Cost Per Capita	Size of Area by Square Miles	Number of Fire Stations	Number of Firefighters per 1,000 Population
Boulder	$13,500,000	99	103,650	$ 130.25	28	7	0.96
Cheyenne	$8,700,000	88	58,000	$ 150.00	26.2	5	1.52
Longmont	$9,200,000	88	88,000	$ 104.55	22.4	6	1.00
Mountain-View	$12,500,000	70	55,000	$ 227.27	185	7	1.27
* Poudre Fire Authority	$23,600,000	167	175,000	$ 134.86	236	10	0.95
Greeley	$11,070,000	96	100,000	$ 110.70	64	6	0.96
Loveland	$ 7,800,000	64	87,500	$ 89.14	265	5	0.73
TOTALS	$86,370,000	672	667,150	$ 946.76	826.6	46	7.39
Mean/Average	**$12,338,571**	**96**	**95,307**	**$ 135.25**	**118**	**7**	**1.06**
Wtd. Average	**$10,994,000**	**88**	**87,430**	**$ 126.07**	**108**	**6**	**1.03**
Source of Data is FRFC							
* Includes 12 that are to be hired in 2011.							


2011 Operating Budgets
without large capital items
$20,000,000
$15,000,000
$10,000,000
$5,000,000
$-
$13,500,000
$8,700,000
$9,200,000
$12,500,000
$23,600,000
$11,070,000
$7,800,000
Boulder
Cheyenne
Longmont
Mountain-View
* Poudre Valley
Greeley
Loveland


2011 Statistical Comparisons
Number of Uniformed Personnel
Cost Per Capita
Size of Area by Square Miles
Number of Fire Stations
99
$130.25
28
7
88
$150.00
26.20
5
88
$104.55
22.4
6
64
$89.14
265
5
70
$227.27
185
7
167
$134.86
236
10
96
$110.70
64
6
Boulder
Cheyenne
Longmont
Loveland
Mountain-View
PFA
Greeley


2011 Cost Per Capita
$235.00
$215.00
$195.00
$175.00
$155.00
$135.00
$115.00
$95.00
$75.00
Loveland
Longmont
Greeley
Boulder
PFA
Cheyenne
Mountain -View
Cost Per Capita
$89.14
$104.55
$110.70
$130.25
$134.86
$150.00
$227.27

Loveland Fire and Rescue
Present and Future Comparisons

This chart shows a comparison between Loveland Fire and Rescues current dimensions (from page #3) and the mean/weighted averages. It also shows a comparison between the future dimensions (2013) after the proposed expansions and the mean/weighted averages from that same year. In each dimension for comparison, the lower number between mean and weighted average was utilized. Expansion numbers for the mean/weighted average was calculated on a 3.5% expansion per year, except for population increases, which were increased at a rate of 2% per year. This chart will provide a view of the impact of the implementation of Model#1 Basic Services Plan, which can be found in the Fire Authority Review Committee meeting Packet for 01-11 (Attachment B).

Present Comparisons 2011

	Operating Budget	# of Uniform Personnel	Population Served	Cost Per Capita	Size of Area	# of Fire Stations	# of F/Fs per 1000 pop.
Average	$10,994,000	88	87,430	$126.07	108 Sq. Miles	6	1.03
LFR	$7,800,000	64	87,500	$89.14	265	5	0.73
Difference In % + or -	(-29%)	(-27%)	Even	(-29%)	+ Nearly 2 ½ times the size	(-17%)	(-29%)

Future Comparisons 2013 (Impacts from Implementation of Model #1)

	Operating Budget	# of Uniform Personnel	Population Served	Cost Per Capita	Size of Area	# of Fire Stations	# of F/Fs per 1000 pop.
Average	$11,777,047	94	88,000	$135.05	108 Sq. Miles	6	1.10
LFR	$10,851,468	85	88,000	$89.14	265	6	0.96
Difference In % + or -	(-8%)	(-10%)	Even	(-9%)	+ Nearly 2 ½ times size	Even	(-7%)

Fire Authority Review Committee

Discussion Points for January Meeting 01-13-11

Item #1: Review of Meeting Minutes-

Review (and approval) of the 12-02-10 meeting minutes, as submitted by Kim.

Item #2: Planning Assumptions Review-

The group will revisit the *Planning Assumptions* that we reviewed during the December meeting. These planning assumptions will be utilized as a guideline for strategic discussions concerning staffing levels and capital expansion. A proposed list is attached *(Attachment #1)* for review and approval as the plan for future discussion (three minor changes were made- listed in red in this packet). We will revisit, review and revise this list periodically as necessary.

Item #3: Follow-Up Discussions for Future Fire Station/Service Level Enhancement 2011-2020

We want to review the expansion plan presented in December for any further comments or thoughts from the committee. We would appreciate your thoughts and input on the expansion plan. We will post the station coverage map and the truck/support coverage map for your review at the meeting. In addition there are several related areas of follow-up from the December meeting. These include:

* Station Two Land Acquisition — Randy
* Airport Station (Sta.4) Plan — Randy
* Automatic Aid Agreement with WSFPD — Randy

Item #4: Further Discussion on Staffing and Deployment Levels and Projected Costs-

(Attachment #2) contains two plan options for staffing and deployment of resources for Loveland Fire and Rescue. You may recall that originally Committee Chairman Swanty requested staff to create three option plans with differing levels of service and costs. In this attachment we have converted the three models to a more manageable two service models; a basic and a standard service plan.

Model#1- Basic Services Plan: The staffing and deployment options outlined in Model #1 would represent basic, acceptable minimum staffing levels, using a three-tiered workforce model that includes volunteers, part-time paid and full-time paid firefighters. In addition, it bases response on a minimum of three (3) firefighters per company (Engine and Truck) and targets staffing levels at .94 FFs/ per 1000 population.

Model #2- Standard Services Plan: The staffing and deployment options outlined in Model #2 provides for all of the service levels listed in Model #1, but meets the national standards set forth in NFPA 1710, "*Standard for the Organization and Deployment of Fire Suppression Operations…"* Model #2 uses only full-time and part-time paid firefighters and improves staffing levels to four (4) on all tactical apparatus except engine companies that operate from a station with a support apparatus (Truck or Squad).

We will review these models and the costs for each and get feedback from the Committee for the direction to proceed for more complete and detailed proposal.

Item #5: Discussion on Financial Impact for Improvements and Full-Cost Budgeting Numbers and Large Capital Replacement Costs-

We will overview/discuss the next steps in the review analysis from the financial perspective. This discussion will include a look at the projected costs for full-cost budgeting and the expected costs for large capital replacement including apparatus, radios, air-paks and thermal imagers- *(Attachment #3)* lists a schedule and projected costs for apparatus and large capital replacement beyond the current City of Loveland Capital Plan, which extends until 2016. We will also begin discussions for methods of funding the various plans listed.

Item #6: Discussion on Topics for Next Meeting in February-

We will line out our discussion topics from the December meeting that we will bring forward to the next meeting in February, and identify other related areas for discussion and review. The February meeting is on the 3rd.

Attachment #1- Planning Assumptions for Loveland Fire and Rescue

Analysis and projections will cover two phases over a twenty year period of time:

- **Phase 1** *(2012-2020): will include organizational strategic goals and objectives with identified funding streams*
- **Phase 2** *(2021-2030) will include planning expectations/goals without identified funding streams*

Phase 1 Planning Assumptions

1. ***Service Levels Provided-*** Current service levels, and those projected for future expansion, provided for City and Rural District responses are expected to be maintained, with the noted exceptions listed for new stations and service areas (see Item #3 below and Attachment #2 below).

2. ***Population Expansion-*** Projections for expansion will assume a flat growth for the next 2-3 years (2011-2013) and project an approximate 2-3% growth per year from 2014-2020. This would calculate into a population for the City/District at approximately 99,936 in 2020.

3. ***Station/Fire Company Expansion-*** Projections for replacement or addition of new service fire stations and staffing would include:
   - *Adding six FTEs for minimum staffing at Station Three and Station Five*
   - *Adding of one Heavy Rescue Company to Station Two- (6 FTE's)*
   - *Adding one new Engine Company to the West area of District (9 FTE's)*

   These projections would include building a new fire station in the northwest portion of the district to replace the current Station Two, and building a new fire station in the west part of the district (Hwy 34 and Co Road 27 area). Projections for fire company expansion would be a target for minimum fire company staffing at three firefighters per company and a targeted goal of .94 firefighters per 1000 population.

4. ***Workforce Staffing Methods-*** Projections for this phase would include the utilization of the three-tiered system of Volunteers, Part-Time-Paid, and Full-Time Paid Firefighters. The expectation would include assigning of volunteers on an as-needed basis for accomplishing the criteria for

minimum hours worked (currently 36 hours/month). It is expected that part-time paid firefighters would be assigned shifts as part of the daily minimum staffing criteria for no more than 15% of the paid workforce, or no more than three on duty fire companies utilizing a part-time firefighter for minimum staffing criteria.

5. ***Additional Non-Uniformed FTE's-*** Projections for workforce expansion should include a minimum of two additional administrative assistants and one Technical Specialist or Inspection Services Manager in the Community Safety Division.

Phase 2 Planning Assumptions

6. ***Organizational Planning Goals/Expectations-*** Projections for this next phase (2021-2030) should include consideration for :

   - *Re-staffing of the airport station (Station 4) for area coverage and addressing expanded airport operations, and/or expansion in the commercial business park or commercial area around the airport-this will be reviewed on an "as needed basis" within the City of Loveland, and the Rural District's planning, and periodically with the Airport Director and the Director of Public Works to insure proper service level needs are maintained.*

   - Hiring of three additional FTEs for rovers/coverage

   - Hiring of three additional firefighters for station one/ heavy engine

   - Adding one fire station to the south/southeast corridor

   - Expansion of an additional truck/ rescue company out of fire station one

7. ***Workforce Staffing Analysis-*** Projections in Phase 2 should include a comprehensive analysis of the three-tiered workforce plan with recommendations for revision or change to the most appropriate workforce-staffing system to best meet the community's fire/rescue needs.

Attachment #2- Staffing and Deployment Options-

Within this document there are two service expansion plans that have been calculated out for workforce expansion and funding increases; an ***added option*** for expansion of Plan #1 is also included on page #10. The two plans are listed as:

* Model #1- Basic Services Plan
* Model #2- Standard Services Plan

Both plans have costs calculated out for the needed O&M increases along with a cost estimate for annual large capital replacement. Both plans are listed in their entirety at 2013 costs for actual side-by-side comparisons. Actual implementation costs can be found on pages #4 and #5. Neither plan includes estimates for full cost budgeting, however Renee will provide this information in spread sheets.

MODEL #1- BASIC SERVICES PLAN-

This plan offers the following:

- Minimum Staffing at 3 firefighters per company
- Utilization of 3-tiered workforce: volunteers, part-time-paid and full-time
- Full shift staffing would be @ 28 with min. staffing @ 25 (3 rovers)
- 1st Alarm response would be 13 personnel
- . 95 FFs/ 1000 population

This plan would not meet the minimum firefighting standards as set forth by the National Fire Protection Association in NFPA 1710, yet would be a significant improvement over the current model for both 1st Alarm resources and those resources remaining in the system for subsequent emergency calls.

MODEL #2- STANDARD SERVICES PLAN-

This plan offers the following:

- Minimum Staffing at 4 firefighters per company
- Utilization of 2-tiered workforce: part-time-paid and full-time
- Full shift staffing would be @ 35 with min. staffing @ 31 (4 rovers)
- 1st Alarm response would be 16 personnel
- 1.11 FFs/ 1000 population

This plan would meet the minimum firefighting standards as set forth by the National Fire Protection Association in NFPA 1710.

MODEL #1- EXPANSION OPTION FOR FULL STAFFING-

This option provides additional staffing to add a 4th firefighter to all apparatus, using FT and PTP, except for engines in a two-company firehouse (see page #6).

MODEL #1- BASIC SERVICES PLAN 2013-2020

This Basic Service Plan offers a minimum staffing of each fire company with 3 firefighters and utilizes the current 3-tiered workforce of volunteers, part-time paid (PTP) and full-time (FT) firefighters. The total build-out of this plan would result in the targeted numbers of .95 ffs/1000 population or 95 FTEs/99,936 pop.

ADDITIONS/CHANGES	INCREASED COSTS @ 2013 Dollars
* Add 6 FT firefighters for Station 3 and Station 5	$426,777
* Add 6 FT positions (Lts & Engs.) for Heavy Rescue Company, Sta. 2	$564,767
* Add 9 FT positions (LTs/Engs./FF) for new Station 10	$778,156
* Continue funding for PTP program expanding to include 18 total PTP FFs	$147,160
* Fund Volunteer and PTP Coordinator	$ 89,500
* Add 1 Lieutenant for FPB/CSD	$ 106,140
* Add 2 Administrative Assts.	$ 101,660
BASIC SERVICES PLAN COST INCREASES FOR O &M[1]	**$2,214,160**
ADD IN ANNUAL COSTS FOR LG. CAPITAL REPLACEMENT	**$ 575,000***
TOTAL ADDITIONAL COSTS FOR BASIC PLAN----------►	**$2,789,160**

1. Does not reflect full-cost budgeting

* This figure does not add in to the total costs until 2016

MODEL #2- STANDARD SERVICES PLAN **2013-2020**

This Standard Service Plan offers a minimum staffing of each fire company with 4 firefighters and utilizes a 2-tiered workforce of part-time paid (PTP) and full-time (FT) firefighters. The total build-out of this plan would result in the targeted numbers of 1.11 ffs/1000 population or 111 FTEs/99,936 pop.

ADDITIONS/CHANGES	**INCREASED COSTS @ 2013 Dollars**
* Add 9 FT firefighters for minimum company staffing to 3	$640,161
* Add 9 FT positions (LTs/ Engs./FFs) for Heavy Rescue Company- Sta.2	$778,156
* Add 9 FT positions (LTs/Engs./FF)- Sta. 10	$778,156
* Add 9 FT positions (FFs) for Truck 6, Squad 2 and increasing to 4 shift rovers	$640,161
* Continue funding for PTP program expanding to include 24 total PTP FFs	$196,224
* Fund Volunteer and PTP Coordinator	$ 89,500
* Add 1 Lieutenant for FPB/CSD	$106,140
* Add 2 Administrative Assts.	$101,660
STANDARD SERVICES PLAN COST INCREASES FOR O &M[2]	**$3,330,158**
ADD IN ANNUAL COSTS FOR LG. CAPITAL REPLACEMENT	**$ 575,000***
TOTAL ADDITIONAL COSTS FOR BASIC PLAN----------►	**$3,905,158**

2. **Does not reflect full-cost budgeting**

*** This figure does not add in to the total costs until 2016**

PLAN IMPLEMENTATION SCHEDULE

MODEL #1- BASIC SERVICES PLAN **2013-2020**

2013 ADDITIONS-

* Add 6 FT firefighters for Station 3 and Station 5	$426,777
* Add 6 FT positions (Lts. & Engs.) for Heavy Rescue Company, Sta. 2	$564,767
* Continue funding for PTP program expanding to include 18 total PTP FFs	$147,160
* Fund Volunteer and PTP Coordinator	$ 89, 500
* Add 1 Lieutenant for FPB/CSD	$106, 140
* Add 1 Administrative Assist.	$ 50,830

	2013	2016
TOTAL 2013 COSTS FOR ADDITIONS	**$1,385,174**	**$1,535,767**

2016 ADDITIONS-

* Add 9 FT positions (LTs/Engs./FF) for new Station 10	$862,755
* Add 1 Administrative Asst.	$ 58,328
* Add costs for large capital replacement	$ 575,000
TOTAL 2016 COSTS FOR ADDITIONS	**$1,496,083**

TOTAL FOR PLAN #1 ADDITIONS (2016)----------► $3,031,850

MODEL #2- STANDARD SERVICES PLAN 2013-2020

2013 ADDITIONS-

* Add 9 FT firefighters for Minimum company staffing to 3	$640,161
* Add 9 FT positions (Lts/Engs/FFs) for Heavy Rescue Company- Sta.2	$778,156
* Continue funding for PTP program expanding to include 24 total PTP FFs	$196,224
* Fund Volunteer and PTP Coordinator Position	$ 89,500
* Add 1 Lieutenant for FPB/CSD	$106,140
* Add 1 Administrative Assistant	$ 50,830

	2013	2016	2019
TOTAL 2013 COSTS FOR ADDITIONS	**$1,861,011**	**$2,063,336**	**$2,287,658**
2016 ADDITIONS-			
* Add 9 FT positions (LTs/Engs/FF) for new Station 10		$ 862,755	
* Add 1 Administrative Assistant		$ 58,328	
* Add cost: large capital replacement		$ 575,000	
SUB-TOTAL FOR 2016 ADDITIONS		**$1,496,083**	**$1,596,221**
TOTAL 2016 COSTS FOR ADDITIONS		**$3,559,419**	
2019 ADDITIONS-			
* Add 9 FT positions (FFs) for Truck 6, Squad 2 and increasing to 4 shift rovers			$786,924
TOTAL 2019 COSTS FOR ADDITIONS			**$ 786,924**

TOTAL FOR PLAN #2 ADDITIONS----------► $4,670,803

MODEL #1 EXPANSION OF BASIC SERVICES PLAN TO INCLUDE MINIMUM STAFFING AT 4 PER COMPANY* 2013-2020

2019 ADDITIONS-

* Add 9 FT positions (FFs) for Truck 6, Squad 2 and increasing to 4 shift rovers	$786,924
* Expand PTP program to 24 firefighters to Help cover the 4th firefighter on companies	60,265
TOTAL 2019 COSTS FOR ADDITIONS	**$ 847,189**

Add this to the previous expansion for Basic Services Plan:

	2013	2016	2019
*** TOTAL 2013 COSTS**	**$1,385,174**	**$1,535,767**	**$1,702,732**
*** TOTAL 2016 COSTS**		**$1,496,083**	**$1,596,221**
TOTAL COSTS FOR BASIC PLAN WITH EXPANSION FOR MINIMUM STAFFING AT 4 PER COMAPNY			**$847,189**
TOTAL COSTS FOR IMPLEMENATION BY YEAR	**$1,385,174**	**$3,031,850**	**$4,146,142**

Attachment #3- Large Capital Replacement Options-

Fire Authority Large Capital Replacement Plan
2010-2025

■ Apparatus Remaining from Current 2010 Capital Program-

- 2010 SVI Engine Replaces 1995 General Telesqurt
- 2012 New Engine Replaces 1998 General ALF
- 2014 New Aerial Replaces 2000 Smeal HME
- 2016 New Engine Replaces 2004 General Spartan

■ Primary Apparatus Replacement Schedule 2016-2025-

Primary Vehicle/		Year In Service	Replace (12)	New/Old Plan	Reserve/Retire (3)
E-1	SVI/Spartan	2011	2023	New	2026
E-2	Crim./Spart.	2008	2020	New	2023
E-3	Crim./Intl.	2009	2021	New	2024
E-5	Pierce	2010	2022	New	2025
E-6	Gen./Spart.	2004	2016	Old	2019
Trk.6	Smeal/HME	2000	2014	Old	2020 (refurb?)
Res. 6	SVI/Spart.	2003	---	New	2024 (refurb?)
Eng R	Smeal/Spart.	2003	2015	---	2020
Eng. R	Gen./ALF	1998	2010	---	2016
Trk. R	Gen./T-Sq.	1995	2010	---	2014

■ New Plan Replacement Costs for Primary Apparatus-

1. 2020	Engine 2	Crimson/Spartan	$ 597,388
2. 2021	Engine 3	Crimson/International	$ 618,297
3. 2022	Engine 5	Pierce	$ 639,937
4. 2023	Engine 1	SVI/Spartan	$ 662,335
5. 2024	Rescue 6	SVI/Spartan	$ 390,000 (Refurbished)
TOTAL COSTS -PRIMARY APPARATUS REPLACEMENT			**$2,907,957**

■ Secondary Apparatus Replacement Schedule 2016-2025-

Secondary Vehicle/	Year In Service	Replace (20)	New/Old Plan	Reserve/Retire
WT-1 Gen./Frtlin.	1996	2016	New (RF)	2026
WT-8 Gen./Frtlin.	1996	2017	New (RF)	2027
WT-5 Gen./F.L. 4x4	1998	2018	New (RF)	2028
D-2 SVI/Frtlin.	2004	2024	New (RF)	2034
HR-2 Hackney	2006	2026	New (RF)	2034

*** Note: All of these secondary apparatus, except D-2, are planned for a refurb. (RF) with replacement of cab and chassis as opposed to new replacement vehicles**

■ New Plan Refurbishment Costs for Secondary Apparatus-

1. 2016	WT-1	Gen./Frtlin.	$ 237,000
2. 2017	WT-8	Gen/Frtlin.	$ 245,295
3. 2018	WT-5	Gen./Frtlin. (4x4)	$ 305,000
4. 2024	D-2	SVI/Frtlin.	$ 180,000
5. 2026	HR-2	Hackney	$ 357,000

TOTAL COSTS -SECONDARY APPARATUS REPLACEMENT $1,324,000

Available Capital Funds 2016-2025 ($575,000 X 10 years) **$5,750,000**

- **Primary Apparatus Costs 2016-2025** **- ($2,907,957)**
- **Secondary Apparatus Costs 2016-2025** **- ($1,324,000)**
- **Misc. Equipment (Air-Paks, Radios TICs)** **- ($1,518,043)**
  (The need for this equipment has been need estimated at $150,000/ per year)

TOTAL NEEDED FOR LG. CAPITAL REPLACEMENT (2016-2025) $5,750,000