# **City of Grand Island**



# Tuesday, March 01, 2005

# **Study Session/Special Mtg Packet**

**City Council:** 

Carole Cornelius Peg Gilbert Joyce Haase Margaret Hornady Robert Meyer Mitchell Nickerson Don Pauly Jackie Pielstick Scott Walker Fred Whitesides Mayor: Jay Vavricek

City Administrator: Gary Greer

City Clerk: RaNae Edwards

7:00:00 PM Council Chambers - City Hall 100 East First Street **Pledge of Allegiance** 

**Roll Call** 

## **A - SUBMITTAL OF REQUESTS FOR FUTURE ITEMS**

Individuals who have appropriate items for City Council consideration should complete the Request for Future Agenda Items form located at the Information Booth. If the issue can be handled administratively without Council action, notification will be provided. If the item is scheduled for a meeting or study session, notification of the date will be given.

## **B - RESERVE TIME TO SPEAK ON AGENDA ITEMS**

This is an opportunity for individuals wishing to provide input on any of tonight's agenda items to reserve time to speak. Please come forward, state your name and address, and the Agenda topic on which you will be speaking.

## MAYOR COMMUNICATION

This is an opportunity for the Mayor to comment on current events, activities, and issues of interest to the community.



# **City of Grand Island**

Tuesday, March 01, 2005 Study Session/Special Mtg

## Item -1

Presentation of Site & Needs Study for the Fire Department

Staff Contact: Jim Rowell

# **Council Agenda Memo**

From:	Fire Chief Jim Rowell
Meeting:	March 1, 2005
Subject:	Fire Station #1 and Training Center Site and Needs Study
Item #'s:	1
Presenter(s):	RDG Group

## **Background**

Following a City Council decision to move forward on replacement of Fire Station #1, a fire Training Center and other public facilities, a public vote was held to approve the sales tax as support for funding these facilities. Following this vote departments were directed to proceed with the identified projects.

The fire department staff presented a proposal identifying a location west of Locust Street to be the new station location; and a site north of Capital Avenue for the training center. Following public comment the Council approved the establishment of a committee and the hiring of a consultant to conduct a study to determine the best options for replacement of the fire station and the location for a fire training center.

## **Discussion**

The presentation will provide the results of the consultants and committees effort to provide viable options for consideration by City Council. The report is the culmination of months of process and work, gathering the information, conducting meetings and reviewing the work as it progressed.

The consultants provided expertise from several areas including architecture, community planning, fire station design, training center design and fire department response planning. These areas were covered by the three companies composing the consulting group RDG, BKV, and ESCI. RDG was primary provider of the report and coordinated the efforts of the group.

The committee included Fire Department staff, City Councilmember Bob Meyer, and a member of the public Mr. Duane Donaldson. The committee's first task was to determine the best response to the request for proposals for the consultants and provide that to City Council for

approval. Following the consultant selection and Council approval several public meetings were held with the committee and consultants over a period of three months.

## **Conclusion**

The report will provide the results of the consultants work and give the Council information on which to base discussion and ultimately determine the best solution for the replacement of Fire Station #1 and the location of the Fire Training Center. This was a site and needs study and will provide information not only about location, but the size and space needs for both the training center and the fire station. The consultants will present the information using PowerPoint and answer questions as needed. Fire Department staff will also be available for questions.

This item is presented to the City Council in a Study Session to allow for any questions to be answered and to create a greater understanding of the issue at hand.

It is the intent of City Administration to bring this issue to a future council meeting for the site recommendation approval.



FIRE

Site and Needs Study for the Grand Island Fire Department Grand Island, NE

## **GRAND ISLAND FIRE DEPARTMENT**

Site and Needs Study



in association with





for the Grand Island Fire Department Grand Island, Nebraska

February 2005



Table of Contents

## TAB

- 1. **Executive Summary**
- 2. Introduction

#### 3. **Fire and EMS Services Facility and Location Study**

#### 4. **Fire Station**

- Space Program a.
- Space Standards Diagrams b.
- C. Concept Station Plans and "Fit" Concept Site Plans
- d. Site Identification Mapping
- Site and Infrastructure Criteria e.
- f. Site Master Plan Concepts g. Preliminary Site Master Plan Ranking Final Site Master Planning
- **Opinion of Probable Construction Costs** i.

#### 5. **Training Center**

- **Needs Assessment** a.
- b. Program
- c. Site Identification Mappingd. Site and Infrastructure Criteria
- Site Master Plan Concepts e.
- f. **Opinion of Probable Construction Costs**

#### **Training Center Site Location Analysis** 6.

#### Α. Appendix

**Powerpoint Presentation** Surveys









**Executive Summary** 

The City of Grand Island engaged RDG Planning & Design of Omaha, Nebraska, and its associates from ESCI (Wilsonville, Oregon) and BKV Group (Minneapolis, Minnesota) to provide an independent report regarding the planned site acquisition, design, and construction of a new fire station and fire-training center.

The report that follows includes a fire-station and training-center location analysis. The training-center requires preparation of a business plan as well.

Through charrette workshops and other means, the RDG team:

- Collected data from the fire department.
- Interviewed representatives of the fire department, city administration, city planning, the community, and other interested parties.
- Toured the city of Grand Island.
- Toured existing fire stations in Grand Island.
- Developed a preliminary program for the fire station and training center.
- Recommended strategies for the fire station and training center, taking into account

   (a) GIS modeling, (b) Grand Island's comprehensive plan, (c) growth projections, (d) a
   windshield survey of the city and its immediate surroundings, and (e) the data gath ered through charrettes and interviews.
- Translated the programs into sample graphic footprint block diagrams and tested them on potential sites.
- Analyzed each potential site according to its strengths, weaknesses, and cost impact.

Drawing on the process described above and on team members' expertise in city planning and fire-facility planning, the team developed the report that follows. This report is intended to help decision-makers in their deliberations on the planned headquarters fire station and training center.

The rest of this executive summary and the report itself address the fire station and the training center separately. Fire-station strategies are identified by letter and training-site strategies by number. Depending on the site selected, the two programs may combine as a single project at a single site.

## **Fire Station**

In the long run, upon full development and buildout of its response territory and through continued use of its existing location deployment scheme, the Grand Island Fire Department will be able to maintain the city's response-time objective—six minutes or less—for first-due company arrival. After anticipated real-estate development, response times could increase by about 3 percent.



Performance Projection on Future Development and Service Demand						
Deployment Strategy	Percent of Service Demand <6:00	Percent of Road Segments <6:00				
Status Quo at Full Future Buildout	92%	73%				
Strategy "A"	93%	82%				
Strategy "B"	91%	82%				
Strategy "C"	93%	82%				
Strategy "D"	92%	85%				
Strategy "E"	90%	81%				
Strategy "F"	94%	84%				

## **Deployment Strategy Performance Projection Summary**

As indicated by the table above, Site Strategy F is projected to offer the greatest improvement over continued use of the current deployment locations.

Site Strategies A and C could offer slight performance improvement, though all six deployment site strategies are projected to vary only a little in performance. Accordingly, the city could adopt any one of the site strategies and maintain service levels; that is, each site strategy would accommodate a first-unit arrival of six minutes or less.

Because each site strategy meets the fire department's 90-percent response-time standard, the fire department—after reviewing an early draft of this report—concluded that Site Strategy D could be eliminated as an option: any growth in service need could be accommodated on the airport. Thus Site Strategy D would not be reviewed as part of the architectural analysis.

Site Strategy C was seen as having operational limitations for response times when the Heartland Events Center was in use. Site Strategy C *was* included in the architectural review, however, since response-time delays would occur primarily during events, and since these delays could be alleviated through traffic planning, traffic-control technology, and public/private involvement.

Thus, the team evaluated Site Strategies A, B, C, E, and F. Because of the existing coverage percentages, ESCI determined that the station should be located within one-quarter mile of the intersections recommended in the operational analysis.

The RDG team proceeded to identify several potential sites within the recommended location envelope. We found that:

- Site Strategies B, C, E, and F have no architectural limitations that would eliminate them from consideration.
- Site F would require the city to use Lyons Park for the proposed Station 2.
- Site Strategies A and E would involve site-acquisition costs.
- Site Strategy C has operational limitations.



As part of the review of site locations, we divided the fire station program into two components: administration and operations. If administration could be located at the training center or another facility, then the team could consider smaller sites for the fire station, making site acquisition less of a hurdle.

Based on site reviews, strengths, weaknesses, and costs, we recommend that Site Strategy F be implemented for the fire station.

## **Training Center**

Training-center programming was done in the same way as that for the fire station, though operational issues played a smaller role. Response times for potential training center sites were considered. Business planning for the training center, however, should be completed before any location is selected.

The principal factors in training-center location appear to be operational and business models. Answers to the following questions would be determined by the business plan procedures. Without these answers it is impossible to program the training center in detail for its use as a regional or state fire-training asset or to determine its cost.

- 1. How many students would use the training center?
- 2. How many classes would be held?
- 3. How many and what types of departments would use the training center?
- 4. How would the Nebraska Fire Marshal and other interested entities (including educational institutions) use the training center?
- 5. How would training be funded?
- 6. How would funding influence the number of classrooms and training props?
- 7. How would the training center be operated (for example, by a facility manager)?

This information was not available to the design team and thus is not a factor in this report. Programming was based on assumptions made by the design team and on information provided by the Grand Island Fire Department. Accordingly, the recommended square footage is based on the fire departments stated needs and will be impacted once a business plan is completed.

For example, our programming calls for three classrooms in addition to the proposed training room in the new fire station. If our assumptions are incorrect and the training center is instead programmed to accommodate only the Grand Island Fire Department, one additional classroom would be sufficient, and that classroom could be accommodated in the College Park facility (per a discussion with College Park's executive director); the two additional classrooms might never be used.



All potential sites meet the architectural and planning criteria. The team ranked potential training center sites based on the following criteria:

- Cost of land
- Impact on neighbors
- Response time/depth of coverage during training
- Impact of prevailing winds
- Availability of infrastructure
- Ability to co-locate the fire station
- Ability to co-locate fire department administration
- Access to the interstate
- Availability of existing teaching infrastructure (classrooms)
- Availability of existing high bay
- Availability of EVOC
- Capital cost of facilities
- Potential of site to allow growth
- Willingness of site owner to sell or allow use of property

Based on these factors, the site's ability to accommodate the architectural program, and input from property owners, the team has ranked potential sites as follows:

- 1. Site #1, land adjacent to Central Community College and College Park
- 2. Site #3, land adjacent to the proposed law enforcement center
- 3. Site #4, the northern farm property along Capital Avenue E
- 4. Site #2, land available at Fonner Park

This study recommends that training center site #1 be implemented in conjunction with fire station Site Strategy F.









Introduction

## Introduction

### **INTRODUCTION**

RDG Planning & Design was retained to help the City of Grand Island determine locations for the planned headquarters station and fire training center. The city requested a fair and independent review of its current proposed sites and welcomed documentation of sites not proposed as they would relate to the city's future expansion and its current emergency-services coverage. Recent annexations have included the regional airport.

Grand Island covers 21 square miles with a population of 44,000. The city is served by four fire stations. The fire department employs 24 paramedics and 39 EMT-basics for a total of 63, on a three-platoon system, plus 6 administrative staff members. In 2003 the department responded to 2,565 calls, most of which were medical assists.

Emergency Medical Services comprise two front-line ambulances staffed with two paramedics each. Grand Island has four reserve ambulances staffed with a combination of paramedics and EMT-B's. Ambulance service is contracted with the county for transports and covers multiple counties in central Nebraska.

Fire suppression is limited to the city limits. Grand Island is in a Mutual Aid District and responds with appropriate apparatus when requested. The hazmat team is regional and covers central Nebraska.

Station #1 is responsible for structural firefighting and also supports the airport in ARFF emergencies. Station #2 houses technical rescue. Station #3 houses extrication. Station #4 houses the hazmat assets.

The following items are addressed in this report:

## **Fire Station**

- o Consideration of response times
- o ISO consideration
- o Deployment of resources
- o Apparatus
- o NFPA 1710, 2 in 2 out response
- o Coverage in depth
- o Essential response force
- o Future growth and development
- o Condition of existing Fire Station 1
- o Ability of sites to accommodate building program
- o Adjacency diagrams
- o Site-planning diagrams



## **Fire Training Center**

- o Appropriate facility program
- o Consideration of response times
- o Adjacency diagrams
- o Site-planning diagrams
- o Impact on neighbors
- o Ability to co-locate other facilities
- o Ability of the sites to accommodate the training program
- o Cost of the facility

The programs were developed to comply with typical industry standards for fire stations and training facilities.

Fire department personnel to be located at these two facilities are currently housed at City Hall, Station #1 and Station #2.

The fire department had proposed replacing Station #1 near fire station Site Strategy A. The team agreed that it was a strong location and should be included in this report. We understand that there has been community resistance to this site, however, as well as encouragement to use land at Fonner Park, which may entail little or no cost. These factors were considered in our review of the proposed strategies.

This report will outline six site strategies for replacing Station #1 and four site strategies for locating the training center. The report also considers how the facilities would fit on the potential fire-station and training sites. Several specialized spaces will require special design attention, including a training tower, an emergency-vehicle operations course, water supply, and a rescue pond.

The nature of the fire department's work demands continuity and unhindered access to the community as well as academic and practical training facilities. Planning and construction considerations center on the need for an environment that promotes functionality, responsiveness, and good training. Currently, the Grand Island Fire Department does not have physical resources conducive to good training.



Acknowledgements

## **Grand Island Fire Department**

Jim Rowel Chris Hoffman Fred Hotz Troy Hughes Terry Leslie Curt Rohling Duane Donaldson Bob Meyer

Committee Member

Administrative Assistant

**Division Chiefs** 

Chief

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Fire and EMS Services Facility and Location Study

## **TABLE OF CONTENTS**

Population and Community Risk	13
Current Population Information	
Census-based Growth Projections	
Community Risk Analysis	
Workload History	
Workload Projections	
System Benchmark Comparisons	
Current Resources and Deployment	24
Current Facility and Apparatus Deployment	24
Current Staffing Deployment	
Current Staffing Evaluation	
Service Delivery Options	
Future "Full Buildout" Deployment Strategy	
Deployment Strategy A- New Station #1 at Walnut and Charles Streets	39
Strategy A Projected Performance	41
Deployment Strategy B- New Station #1 at Sycamore and First Streets	42
Strategy B Projected Performance	
Deployment Strategy C- New Station #1 on E. Fonner Park Road	45
Strategy C Projected Performance	49
Deployment Strategy D- Relocations of Station #1 and Station #2	
Strategy D Projected Performance	53
Deployment Strategy E- Relocations of Station #1 at Training Site Three	55
Strategy E Projected Performance	57
Deployment Strategy F- Relocations of Station #1 and Station #2, Retention of Old Station #2 as EMS Station	58
Strategy F Projected Performance	
Findings and Conclusions	
-	02 65
muh Uhheimiy	05

## **TABLE OF FIGURES**

Figure 1: Grand Island Population By Age	13
Figure 2: Grand Island Housing By Occupancy	14
Figure 3: Census-based Population Forecast	15
Figure 4: Community Fire Impact Risk Assessment Map	20
Figure 5: Workload Historical Data	21
Figure 6: Emergency Incident Volume Projection By Type And Year	22
Figure 7: Comparative Analysis- All Apparatus and Facilities	23
Figure 8: Current Response Time Capability Of GIFD Stations	25
Figure 9: Service Demand- Fire and Other Non-EMS Calls Preceding 24 Months	26
Figure 10: Service Demand- Emergency Medical Calls Preceding 24 Months	27
Figure 11: Actual Response Time Performance By Type Of Incident	
Figure 12: Staffing Needs By Risk	
Figure 13: Average Staffing Performance By Type Of Call	
Figure 14: Future Street Network Buildout Projection	
Figure 15: Future Service Demand Buildout Projection	
Figure 16: Deployment Strategy "A"	
Figure 17: Strategy A Coverage and Community Risk	40
Figure 18: Strategy "A" Performance Analysis	41
Figure 19: Deployment Strategy "B"	42
Figure 17: Strategy B Coverage and Community Risk	43
Figure 18: Strategy "B" Performance Analysis	44
Figure 21: Deployment Strategy "C"	
Figure 17: Strategy C Coverage and Community Risk	46
Figure 18: Strategy "C" Performance Analysis	
Figure 23: Deployment Strategy "D"	
Figure 17: Strategy D Coverage and Community Risk	53
Figure 18: Strategy "D" Performance Analysis	54
Figure 23: Deployment Strategy "E"	55
Figure 17: Strategy E Coverage and Community Risk	
Figure 18: Strategy "E" Performance Analysis	
Figure 23: Deployment Strategy "F"	



Fire and EMS Services Facility and Location Study

Figure 17: Strategy F Coverage and Community Risk	60
Figure 18: Strategy "F" Performance Analysis	61
Figure 25: Deployment Strategy Performance Projection Summary	62
Figure 26: Projected Performance of All Strategies at Four Minutes	63



## **POPULATION AND COMMUNITY RISK**

## **Current Population Information**

The population of Grand Island was 42,940 residents in the 2000 U.S. Census. This population figures represented a moderate 9% increase over the 1990 Census, when the population of Grand Island was 39,386, and slows the trend of the 1980's when the population increased by over 18%.

The following figures provide some general demographic information on population and housing for the City of Grand Island.

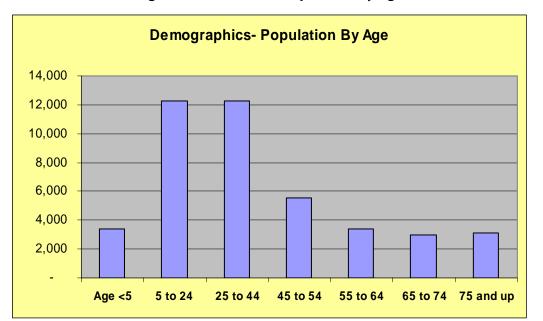


Figure 1: Grand Island Population By Age

Selected Demographic Information- City of Grand Island- 1990 to 2000								
	Total Pop	Age <5	5 to 24	25 to 44	45 to 54	55 to 64	65 to 74	75 and up
2000	42,940	3,369	12,285	12,295	5,554	3,364	2,946	3,127
1990	39,386	3,086	11,473	12,264	3,493	3,306	3,086	2,678
change	9%	9%	7%	0%	59%	2%	-5%	17%

As can be seen from the figure, 14% of the population is 65 years of age or older, representing a significant target age group for increased service demand in emergency medical incidents. When analyzing trends, this target age group has increased by 5% from 1990 levels. At the same time, the age group under 5 years of

age, also widely recognized as a significant risk group in fire and emergency medical incidents, has increased by 8% since 1990.

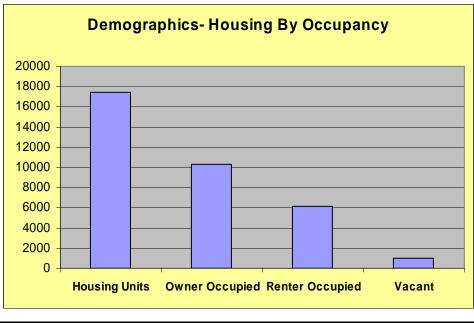


Figure 2: Grand Island Housing By Occupancy

Selected Housing Information- City of Grand Island- 1990 to 2000					
	Housing Units	Owner Occupied	Renter Occupied	Vacant	
2000	17421	10307	6119	995	
1990	15855	9270	5974	611	
change	10%	11%	2%	63%	

As can be seen from the above figures, Grand Island has a significant number of renter-occupied housing units. Statistics often show a higher than average service demand for emergency services in communities with high rates of rental housing.

From the demographic information reviewed here, it can be projected that Grand Island may experience a slightly higher demand for emergency services than other communities of its size.

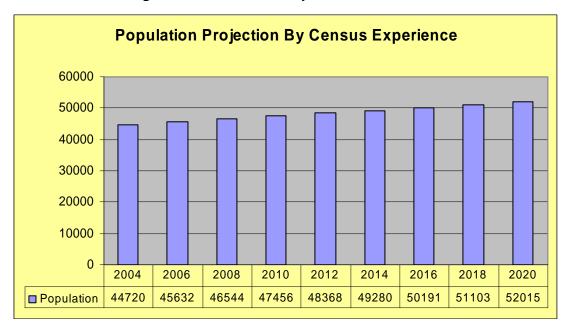
### **Census-based Growth Projections**

As indicated earlier in this section, the population of Grand Island has grown by about 9% in the last decade. In developing forecasts for population growth, we typically



develop a forecast based on several decades of census experience. We have chosen to use the growth rate for the previous three decades, along with the 2003 Census Bureau estimate of population, as the basis for this population forecast, and project another 11% increase in the coming decade.

Were this projected population increase to occur in a fairly even fashion, the resulting population forecast would appear as follows.



**Figure 3: Census-based Population Forecast** 

The population projection provided in this chart reflects changes in resident (permanent) population only. It should also be anticipated that additional growth in transient (mostly daytime) population can be expected as expansion in the City's regional commerce develops. Developments such as "big-box" retail, regional shopping centers, and regional entertainment facilities tend to draw transient population from a larger area than just the City of Grand Island.

#### **Community Risk Analysis**

#### Fire Protection Risk Factors

While there are many considerations that can be assessed when evaluating a community's fire protection risks, the issues can be narrowed into two major



Fire and EMS Services Facility and Location Study

categories. How likely is it that a fire will occur within a given area and how much impact will the fire have if it does occur? The geographic community risk analysis involves the answers to both of these questions.

The first phase of the fire protection risk analysis involves statistical analysis of the risk of fire occurrence. The second involves an analysis of the consequences, or community impact, of a fire if it does occur.

In a community with stable growth, this likelihood of fire occurrence is reasonably tracked through an analysis of fire incident experience. In the absence of significant physical or cultural change, such as major factory closings or civil unrest, the analysis of fire experience yields a fair insight into the likelihood that a fire will occur within a given time period and within a given area. This fire incident experience analysis can be conducted on a regular, annual basis by the fire department.

How much impact a fire is likely to have on a community if it does occur is a factor involving more prediction than experience? For instance, a fire in a vacant garage has little overall impact on the economic welfare of a community while a fire in the primary facility of a city's major employer can be devastating. Even if an analysis of fire experience shows both are equally likely to occur, one fire carries far more dire consequences that the other. A complete community fire protection risk analysis must involve some process of identifying the areas within the community where a fire will have greatest negative impact.

#### **Consequence Factors**

The consequence evaluation in our community fire risk analysis takes into account several major factors in an effort to geographically identify those areas of the community where fire is likely to have greatest impact. During our community evaluation, these consequence factors are assessed and utilized in placing structures into risk categories that carry numerical weight in the overall risk analysis formula.

➢ Life Risk:

Structures within a given community that present a significant risk for large



loss of life are assessed a higher risk score, despite what may appear to be a smaller size. As an example, even a relatively small apartment structure with multiple families will assess as a higher risk than a comparatively large single-family dwelling. Hotels or high-rise occupancies will assess as higher risks than a commercial or light industrial occupancy. Structures used to house or assemble high-risk populations, such as elderly or disabled persons, will also assess at high risk. In general, the consequences of fire incidents in such structures can be a significant loss of life and is weighted accordingly in the risk analysis.

Economic Impact:

Even though the destruction of a particular property may not result in any loss of life, the impact on a community can be devastating if it has a strong effect on the economy. Loss of employment, decreased taxable value, reduction or losses of associated service industry are all examples of the negative economic impact that fire can have on a community. However, economic impact of a fire depends on the type, use, and size of the structure involved. Even total destruction of a single-family dwelling will have little overall impact on a community's economy, no matter how large the house. Likewise, loss of a single commercial entity, such as a restaurant or auto repair shop, may have an economic impact that is both temporary and limited to the local neighborhood. Loss of significant industrial facility or manufacturer, however, can cripple an entire community's economy for months or even years. The predictable economic impact, therefore, is also considered when placing structures into risk categories in the analysis.

Resource Demand:

The outcome of a fire incident in comparison with the resources available is somewhat predictable. For instance, a study by the National Fire Protection Association on residential structure fires from 1994 to 1998 indicated that fatalities and dollar loss were over 85% lower in those incidents where the fire was contained to the room of origin. Doing so requires the proper number of



firefighters and resources to arrive on the incident quickly enough to effectively deploy and contain the fire in its early stages. An ineffective number of resources or a later arrival would permit the fire to spread beyond the room of origin with predictable results. For this reason, we evaluate the approximate number of firefighters and engine companies necessary to rapidly and effectively contain a fire within given structures. The structures are generally categorized within the medium, high, or maximum range for needed resources in accordance with the resource table utilized in the International Fire Service Accreditation Congress (IFSAC) model. The quantity and density of each category within given geographical areas (in this case using zoning classes) are utilized within the overall risk formula.

#### Methodology

Our geographic community risk analysis begins with a basic review of the land use classifications for the area studied. Future land use classifications are utilized because they are an existing regulated classification that typically involves the type, use, size, and density of structures within a given geographical boundary. As indicated earlier, these factors weigh heavily in the evaluation of both the likelihood of fire occurrence and the anticipated impact of a fire incident. By utilizing the land use classes, we take advantage of existing classifications that have already been defined and involve these factors.

Each community, however, differs slightly in the specifications for structure size, use, and density from class to class in their future land use plan. Therefore, we conduct a basic review of each land use classification in areas already developed for purposes of establishing a standard risk-density factor that is based on true counts of structures within each class. This process is conducted by actually driving through, street-bystreet, representative areas of the various land use classes and conducting a "windshield assessment" of structure type, use, and risk category.

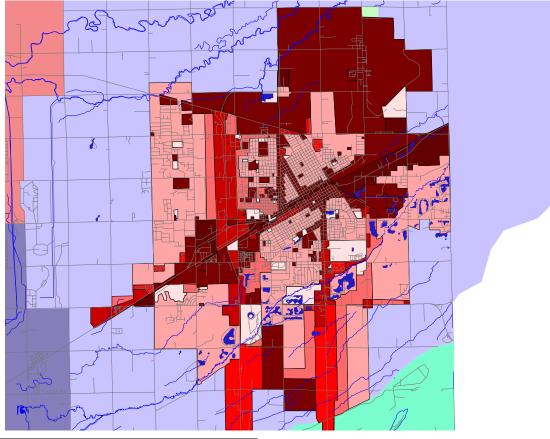
These physical counts are translated into the community risk assessment using mathematical formulas and geographic information systems software (GIS). A

Fire and EMS Services Facility and Location Study

mathematical formula is utilized that considers the number and density of structures as categorized by potential community impact, consequence factors, and resource demand. In the next step, geographic information systems (GIS) software is used to determine the precise size of the sample areas evaluated. The total risk score of each area is divided by the size of the sample area in acres to arrive at the risk density factor. In most cases, several sample areas of each land use class are used and then averaged to increase dependability of the results. This risk density factor can be used for comparison purposes when evaluating the overall fire risk within the community by each land use class.

A graphical representation of this risk analysis can then be derived from the numerical risk factor. The figure below shows each future land use classification from the community's Comprehensive Plan with colored shading that corresponds to the relative fire risk/impact in comparison with the overall community. Areas are shaded in progressive depths of red color to indicate relative fire risk/impact. Again, it should be remembered that the risk ratings shown are derived using the *future* land use classifications. This means that the relative risk of areas not yet developed are shown in the shade of their future intended use, not their current use.





### Figure 4: Community Fire Impact Risk Assessment Map

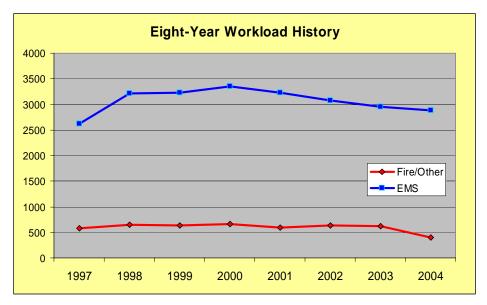
Darker shading indicates areas of higher fire risk

As stated earlier, the geographic representation of relative community fire risk/impact is useful as one element in staff and resource deployment planning.

## Workload History

The City of Grand Island has experienced a reasonably stable number of emergency responses.

The following chart shows how response volume has changed over the last eight years. The chart is inclusive of mutual aid calls provided to areas outside the city limits of Grand Island.



#### **Figure 5: Workload Historical Data**

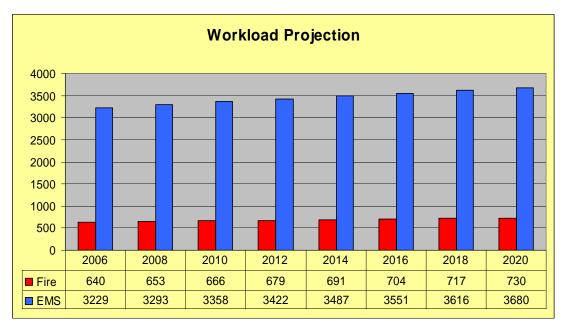
## Workload Projections

In evaluating the deployment of facilities, resources and staffing, it is important that consideration be given to potential changes in workload that could directly affect such deployment. Radical changes in service demand can require changes and adjustments in the deployment of staff and resources in order to maintain acceptable levels of performance.

For purposes of this study, we utilized population projections obtained through census information and multiplied these by incident rate figures to identify workload potential through the year 2020. The incident rate figures for fire and EMS for each year are an average of the incident rate per thousand residents experienced during the previous twelve years for fire and eight years for EMS. These numbers should provide a reasonable reflection of the anticipated trends.

The results of the analysis are shown, by year, in the following chart and table.





## Figure 6: Emergency Incident Volume Projection By Type And Year



## SYSTEM BENCHMARK COMPARISONS

The following chart compares the number of apparatus and facility resources, by type, of the Grand Island Fire Department to other cities of similar size in the north central region of the United States<sup>1</sup>. The chart indicates that the City of Grand Island is operating with a fairly normal number of fire stations, engines, and aerial devices as a typical community of this population size. Comparison data is from the National Fire Protection Association "2002 Fire Department Profiles" publication.

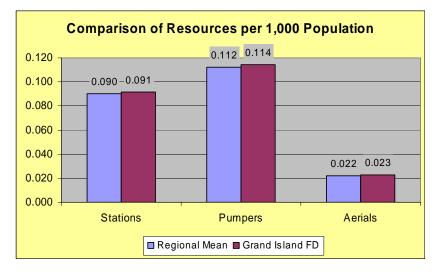


Figure 7: Comparative Analysis- All Apparatus and Facilities

We note that the chart compares physical assets available to the department (reserve apparatus not included). It is not intended to reflect the number of in-service companies that are staffed and available for dispatch. In Grand Island, two of the pumpers shown above are actually cross-staffed with another vehicle. When one vehicle is on a call, the remaining fire suppression resource with which it is cross-staffed is no longer available for a call. Were the two cross-staffed pumpers removed from the benchmark comparison, Grand Island's pumper ratio would drop to .069.



<sup>&</sup>lt;sup>1</sup> The NFPA statistical data breaks the U.S. into four regional areas: north east, south east, north central and west. Nebraska falls into the north central region and comparison data is taken from that group.

## **Current Resources and Deployment**

### **Current Facility and Apparatus Deployment**

The Grand Island Fire Department operates out of four facilities, distributed across the urbanized areas of the city. The following information provides a photo of each facility, its location, and the front-line apparatus<sup>2</sup> assigned to the facility at the time of the study.

#### Station # 1- 302 Pine Street S.



### Station # 2- 1720 Broadwell Avenue N.



Station # 3- 2310 Webb Road S.





#### Station # 4- 3690 State Street W.

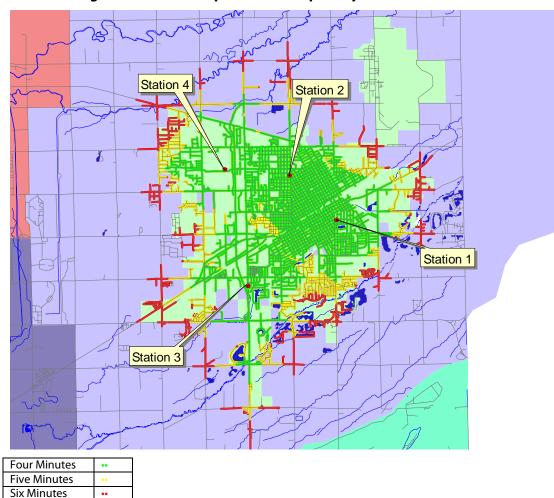


 $<sup>^2</sup>$  The pumper and ladder shown at station #2 and the pumper and rescue shown at station #3 are considered front-line apparatus, but are cross-staffed with a single three-person crew.



Fire and EMS Services Facility and Location Study

The following map depicts the locations of the four current fire stations, and demonstrates the response time capabilities of these stations. The response time is modeled using a one-minute turnout time and projected travel time on the actual roadway network, with travel speeds of based on road classifications. The portions of streets shown with a green overlay are within a four-minute response profile of a fire station. Portions of streets shown with a yellow overlay are within a five-minute response profile of a fire station. Portions of streets shown with a red overlay are within a six-minute response profile of a fire station. The intent of this map is to provide quick visual display of the response times that can be anticipated to be "normal" within the various geographic areas of the City.







Fire and EMS Services Facility and Location Study

A detailed geographic analysis indicates that this current station deployment is capable of reaching 90% of the City's developed areas within a six-minute response time, 78% within a five-minute response time and 63% within a four-minute response time.

In addition to the geographic coverage of the current station, it is also useful to examine the location of the station in comparison to the actual service demand within the area. The following map indicates the geographical location of fire incidents and other non-medical calls responded to by the Grand Island Fire Department during the previous twenty-four calendar month period.

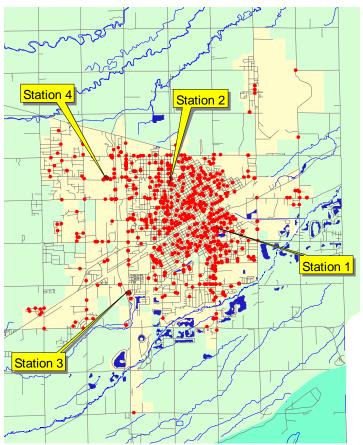
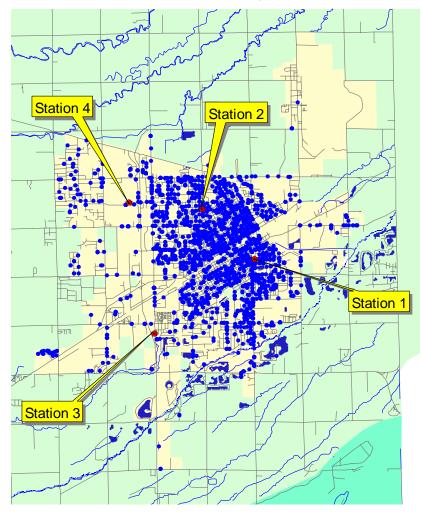


Figure 9: Service Demand- Fire and Other Non-EMS Calls Preceding 24 Months



Fire and EMS Services Facility and Location Study

The following map indicates the geographical location of emergency medical incidents responded to by the Grand Island Fire Department during the previous twenty-four calendar month period. For purposes of this study, the figure displays only the immediate Grand Island area and is not intended to be inclusive of the entire region under GIFD's EMS jurisdiction.







#### GRAND ISLAND FIRE DEPARMENT SITE AND NEEDS STUDY

Fire and EMS Services Facility and Location Study

A detailed service demand analysis indicates that this current station deployment is capable of reaching over 96% of the City's fire-related incidents and over 95% of the City's emergency medical incidents within a six-minute response time.

In fact, review of statistical information reveals that the department's average response time within the City during the last two years is five minutes. The following figure provides greater detail of the actual response time performance of the department. Average and 90<sup>th</sup> percentile response times are shown for various types of emergency incidents.

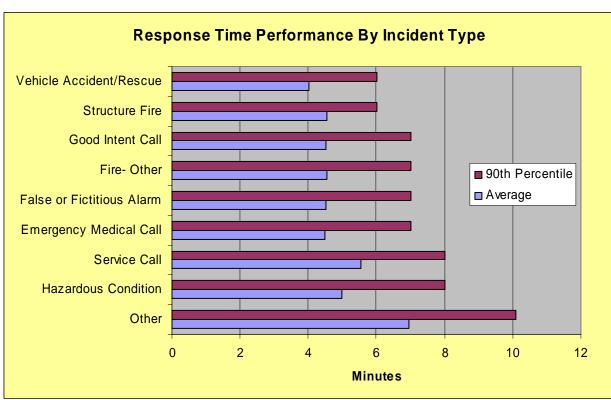


Figure 11: Actual Response Time Performance By Type Of Incident

### **Current Staffing Deployment**

Grand Island currently staffs its station with personnel who are cross-trained to operate in both fire suppression and emergency medical services and whose assignment to apparatus or companies may vary from incident to incident.



#### GRAND ISLAND FIRE DEPARMENT SITE AND NEEDS STUDY

Fire and EMS Services Facility and Location Study

Up to twenty-one personnel may be assigned to each of three rotating 24-hour shifts. When all positions are filled and no leave vacancies are occurring, all twenty-one of these personnel would be on-duty, with five of these being company officers. Given the standard leave time per employee provided in the employment policies, this level of staffing is the exception rather than the rule. Minimum staffing levels are set at sixteen per shift, with at least four company officers.

A structure fire dispatch<sup>3</sup> in Grand Island receives a standard of coverage that includes the dispatch of two engines, one ambulance, and one truck (aerial), along with either a rescue or a third pumper (geography dependent). This standard of coverage provides for a maximum initial response staffing of nineteen and a minimum staffing of fourteen personnel at a structure fire.

Low-risk incidents, such as vehicle fires, rubbish fires and other such calls are typically provided a standard of coverage involving a single engine. This standard of coverage provides for a maximum initial response staffing of four and a minimum staffing of three personnel at a low-risk fire incident. Those incidents involving, or potentially involving, emergency medical needs are also provided an ambulance and an additional two persons.

An eight-agency regional mutual aid system is in place. This system has the capability for expanding the response to major incidents at the fourth alarm and higher, providing additional staffing to the incident from surrounding agencies. Agencies involved in the regional system include Alda, Cairo, Chapman, Doniphan, Grand Island Rural, Phillips, and Wood River, and Saint Libory Fire Departments.



<sup>&</sup>lt;sup>3</sup> Other classes of moderate and high risk incidents are typically also given this full-alarm response protocol.

### **Current Staffing Evaluation**

Tasks that must be performed at a fire can be broken down into two key components, life safety, and fire flow. The life safety tasks are based upon the number of building occupants, their location, status, and ability to take self-preservation action. Life safety related tasks involve the search, rescue, and evacuation of victims. The fire flow component involves delivering sufficient water to extinguish the fire and create an environment within the building that allows entry by firefighters.



The number and types of tasks needing simultaneous action will dictate the minimum number of firefighters required to combat different types of fires. In the absence of adequate personnel to perform concurrent action, the command officer must prioritize the tasks and complete some in chronological order rather than concurrently. These tasks include:

- Command
- Scene safety/Accountability
- Search and rescue
- Fire attack

- Water supply
- Pump operation
- Ventilation
- Back-up/Rapid intervention

The Commission on Fire Accreditation International of the International Association of Fire Chiefs (IAFC) has produced benchmarks for the number of personnel required on scene for various levels of risk. Low-risk incidents typically refer to trash and small vehicle fires, investigations, wires down, or other incidents with little threat of spread. Moderate risk typically refers to structure fires up to and including single family residential structures of 2,200 square feet. High risk typically refers to commercial or industrial buildings, and single or multi-family residential structures up to three stories. Maximum risk refers to large-scale conflagrations, multiple building involvement, high-rise structures, large square-footage structures, extensive hazardous materials incidents and other types of calls requiring large amounts of manpower and equipment beyond the third or fourth alarm. This information is shown in the following chart.



Task⁴	Max. Risk	Max. Risk High Risk		Low Risk
TUSK	Mux. Misk	Thigh thisk	Mod. Risk	LOW MISK
Attack line	4	4	2	2
Search and rescue	4	2	2	
Ventilation	4	2	2	
Backup line/rapid intervention	4	3	2	2
Pump operator	1	1	1	1
Water supply	1	1	1	
Utilities support	1	1	1	
Command/safety	2	2	2	1#
Forcible entry	*			
Salvage	*			
Overhaul	1*			
Communication	1			
Chief's aide	1	1		
Operations section chief	1			
Logistics	1			
Planning	1*			
Staging	1*			
Rehabilitation	1			
Division/group supervisors	2*			
High-rise evacuation	10*			
Stairwell support	10*			
Total	49	17	13	6

#### Figure 12: Staffing Needs By Risk

# Can often be handled by the first due officer.

\* At maximum and high-risk fires, additional personnel may be needed.

The other widely accepted model for incident staffing is the National Fire Protection Association Standard 1710 "Organization and Deployment of Fire Suppression Operations... By Career Fire Departments". Like the Accreditation Model, this standard calls for the assignment of at least 13 personnel on a first-alarm structural fire incident response, 14 personnel when an aerial device is in operation. This standard calls for all companies to be staffed by four personnel, either responding together as a single company or in multiple vehicles with pre-designated assignment to assemble as a four-person company upon arrival.

Utilizing the standard of coverage currently adopted by Grand Island Fire Department for low-risk incidents does not provide for a six-person response as provided by



<sup>&</sup>lt;sup>4</sup> All tasks may be functional during the early moments of firefighting, but sometimes certain duties take place in sequence depending on the situation, thus reducing the total number of people needed.

#### GRAND ISLAND FIRE DEPARMENT SITE AND NEEDS STUDY

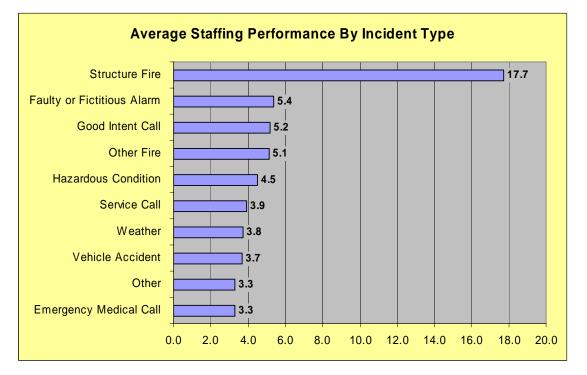
Fire and EMS Services Facility and Location Study

example in the Accreditation Model. However, since the model does not require these personnel to arrive within any specific time frame, it is assumed that additional manpower can be requested when attack lines are put in operation at such incidents to achieve six-person incident staffing when necessary. However, current procedures also do not provide consistent four-person first-due company staffing as required by NFPA 1710 during periods of minimum engine staffing.

Utilizing the standard of coverage currently adopted by Grand Island Fire Department will provide sufficient staffing to both match the Accreditation Model for all moderate risk incidents and meet the recommendations of NFPA 1710 for initial alarm structure fire assignments. The department uses additional alarm assignments and call-back of off-duty personnel to meet the staffing requirements for high-risk incidents. Maximum risk incidents are rare and are typically considered to be incidents that, by their nature, involve the use of extensive special-called mutual aid, as provided by the regional program.

In addition to reviewing the department's standard or cover to evaluate the sufficiency of its staffing, we also analyzed data from the past two years and identified the actual incident staffing performance by type of call. The following figure provides the average on-scene staffing by various classifications of incidents.





### Figure 13: Average Staffing Performance By Type Of Call

The figure indicates that GIFD has had relatively good success at achieving higher staffing on structural fire incidents through the use of call-back of off-duty personnel.



## SERVICE DELIVERY OPTIONS

During the course of this study, we have extensively utilized Geographic Information Systems (GIS) software to analyze response times of both apparatus and personnel by modeling this response against the actual roadway network. This process allows us to create and model various deployment strategies with surprising accuracy.

In addition, the use of geographic placement of data relating to actual incident service demand from the previous two calendar years allows us to summarize the modeled performance of these deployment strategies, again with great detail.

The analysis of the current resource and staffing deployment is found in a previous section of this report, including performance levels in both geographic coverage and service demand coverage. The following sections describe our analysis of four additional deployment strategies.

#### Future "Full Buildout" Deployment Strategy

In a jurisdiction experiencing growth and development, it is critical to think well in advance when developing strategies for station deployment. Failure to do so can often require the later relocation of stations built with insufficient consideration to the buildout of the community. As a community develops, there tends to be a natural urge to build fire stations where they are best suited to serve the development as it exists at the moment when funds are made available for the project. However, these locations often turn out to be inadequate when further development occurs later on.

For this reason, we strongly recommend that growing communities begin by developing "buildout projections" of street networks and service demand as it may exist in the distant future. This can provide the foundation for a station deployment strategy that will provide adequate and effective service delivery when full development of the community is completed.

#### GRAND ISLAND FIRE DEPARMENT SITE AND NEEDS STUDY

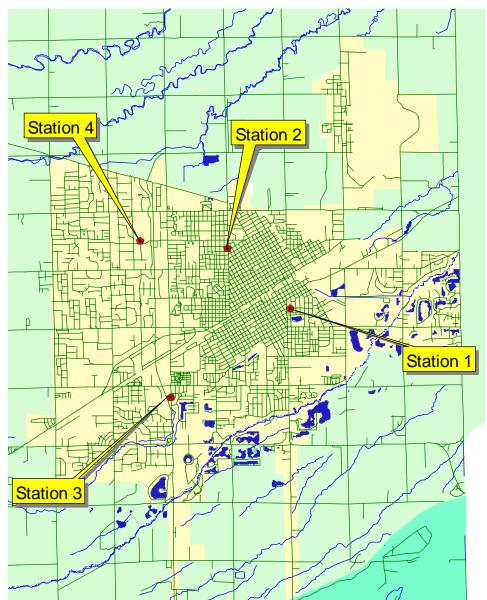
Fire and EMS Services Facility and Location Study

The response time performance benchmark for this study was the standard used by the Grand Island Fire Department of first-due unit arrival of six-minutes or less to 90% of incidents, with a full-alarm arrival of ten minutes or less.

As indicated earlier, we begin by creating a "buildout projection" of the community served by GIFD. This is done by taking the street networks in existing neighborhoods and replicating them in undeveloped areas of the community that have similar assigned land-use and zoning in the community's comprehensive plans and are expected to fully develop within the planning period covered by this study. Consideration of potential annexations by the City is also depicted in the buildout. Major thoroughfare networks and transportation corridor improvements that are identified in the plans are also considered, to the extent possible. The information used in the construction of this model is derived from interviews with City planning officials, along with the City's comprehensive plan.

While this results in, at best, a sort of "artist's rendition" of what the community may be like in the future, it does provide some basis on which to model the effectiveness of various deployment strategies that depend on street networks for analysis. The following map depicts this "buildout projection" of future community development.

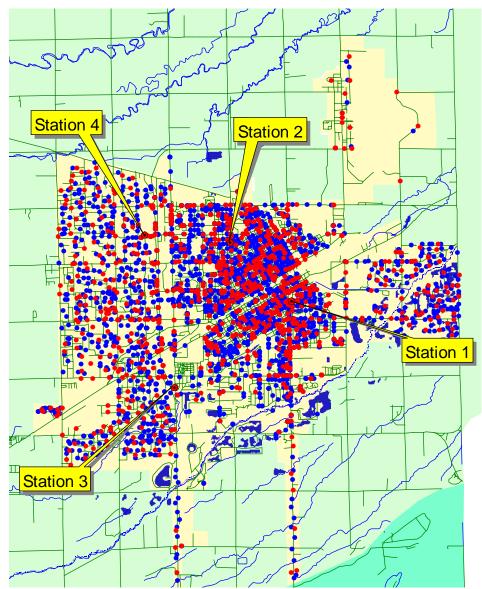




### Figure 14: Future Street Network Buildout Projection

In similar fashion, service demand is modeled by replicating the service demand within existing neighborhoods. Service demand from the previous twelve months was used as the basis for this projection. Red dots represent projected future fire incidents and green dots represent projected future EMS incidents for graphic depiction of potential service demand.





### Figure 15: Future Service Demand Buildout Projection

Under this projected service demand, the current GIFD facility deployment would be capable of a six-minute response time to only 73% of the road miles of the City<sup>5</sup> and about 93% of incidents in the future. This is would be a slight degradation from current service delivery levels.

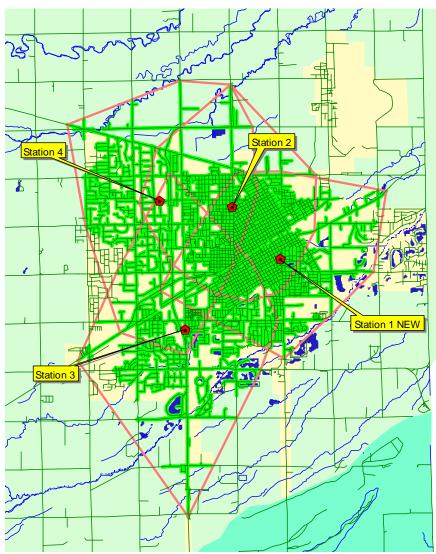


<sup>&</sup>lt;sup>5</sup> Number represents a percentage of total number of miles of developed roadways in the City.

### Deployment Strategy A- New Station #1 at Walnut and Charles Streets

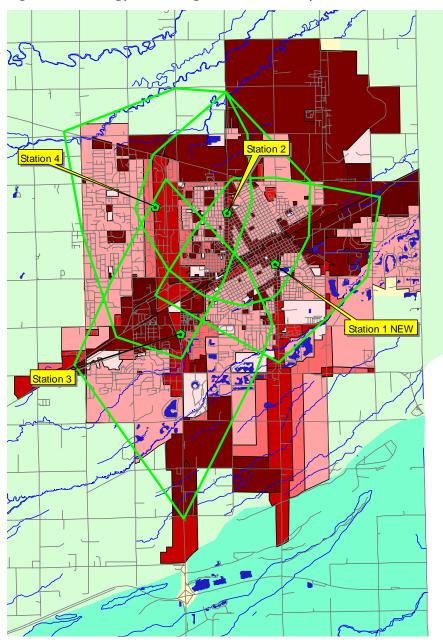
This strategy would involve the abandonment of the current fire station #1 and the establishment of a new fire station at or near the intersection of **Walnut and Charles** streets.

The following figure demonstrates this deployment strategy. The six-minute response capability of this proposed station deployment are shown in green overlays.



### Figure 16: Deployment Strategy "A"

The following map demonstrates the six-minute coverage areas of each proposed station location overlaid on the community risk designations. This view permits the reader to visually appraise the depth of six-minute station coverages against areas of highest fire impact risk.







### **Strategy A Projected Performance**

This deployment strategy demonstrates only a slight improvement in target-level service performance when compared to what would be provided by the current deployment after projected community development. Performance models for the strategy, along with comparison figures, are shown in the following tables.

The first table provides the projected performance of this deployment strategy for the community as it exists today. The comparison figures are the current levels of service experienced by the community. Current service demand and the current street network were used in this analysis.

Performance Projection on Current City Streets and Service Demand			
	Percent of Service	Percent of Road	
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Current Deployment Capability	95%	90%	
Strategy "A"	98%	90%	

#### Figure 18: Strategy "A" Performance Analysis

The next table provides the projected performance of this deployment strategy were the community to develop to the full extent discussed in previous sections of this study. The comparison figures are the levels of service projected if current deployment is continued without change (status quo). Projected service demand and a projected street network similar in nature to that which may be present if the City develops as expected were used in this analysis.

Performance Projection on Future Development and Service Demand			
	Percent of Service Percent of Road		
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Status Quo at Full Future Buildout	92%	73%	
Strategy "A"	93%	82%	

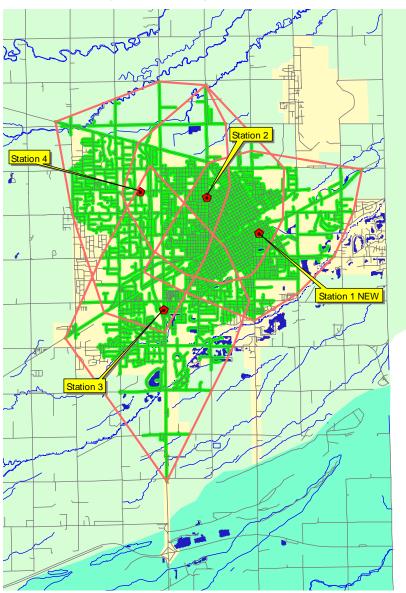
As can be seen in the table, response time performance, even after full community buildout, would be below six minutes for well over 90% of all incidents. This strategy **will** achieve the target objective of six minutes or less to at least 90% of the incidents.

### **Deployment Strategy B- New Station #1 at Sycamore and First Streets**

This strategy would involve the abandonment of the current fire station #1 and the establishment of a new fire station at or near the intersection of **N. Sycamore and E. First** Streets.

The following figure demonstrates this deployment strategy. The six-minute response capability of this proposed station deployment are shown in green overlays.

#### Figure 19: Deployment Strategy "B"





The following map demonstrates the six-minute coverage areas of each proposed station location overlaid on the community risk designations. This view permits the reader to visually appraise the depth of six-minute station coverages against areas of highest fire impact risk.

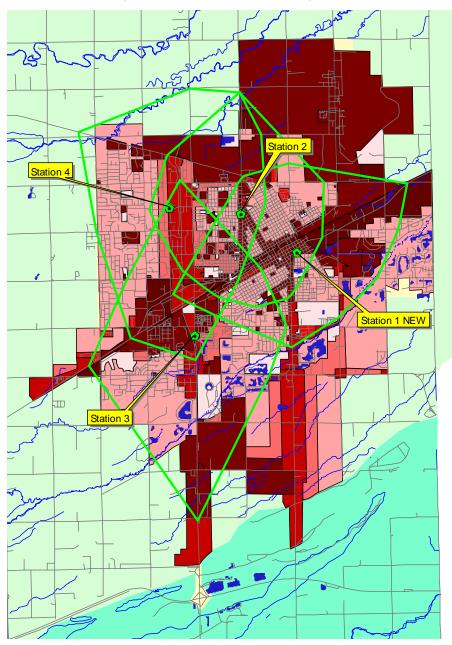


Figure 20: Strategy B Coverage and Community Risk



### **Strategy B Projected Performance**

This deployment strategy demonstrates a slight regression in target-level service performance when compared to what would be provided by the current deployment after projected community development. Performance models for the strategy, along with comparison figures, are shown in the following tables.

The first table provides the projected performance of this deployment strategy for the community as it exists today. The comparison figures are the current levels of service experienced by the community. Current service demand and the current street network were used in this analysis.

Figure 21: Strategy "B	" Performance Analysis
------------------------	------------------------

Performance Projection on Current City Streets and Service Demand			
Percent of Service Percent of Deployment Strategy Demand Segment			
	<6:00	<6:00	
Current Deployment Capability	95%	90%	
Strategy "B"	95%	90%	

The next table provides the projected performance of this deployment strategy were the community to develop to the full extent discussed in previous sections of this study. The comparison figures are the levels of service projected if current deployment is continued without change (status quo). Projected service demand and a projected street network similar in nature to that which may be present if the City develops as expected were used in this analysis.

Performance Projection on Future Development and Service Demand			
	Percent of Service Percent of Ro		
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Status Quo at Full Future Buildout	92%	73%	
Strategy "B"	91%	82%	

#### GRAND ISLAND FIRE DEPARMENT SITE AND NEEDS STUDY

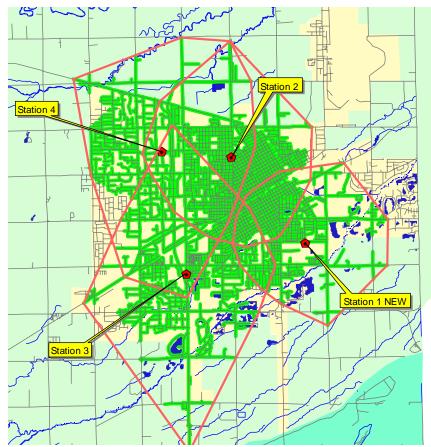
Fire and EMS Services Facility and Location Study

As can be seen in the table, response time performance, even after full community buildout, would be below six minutes for over 90% of all incidents. This strategy **will** achieve the target objective of six minutes or less to at least 90% of the incidents.

### Deployment Strategy C- New Station #1 on E. Fonner Park Road

This strategy would involve the abandonment of the current fire station #1 and the establishment of a new fire station on **E. Fonner Park Road** between Pleasant View Drive and Stuhr Road.

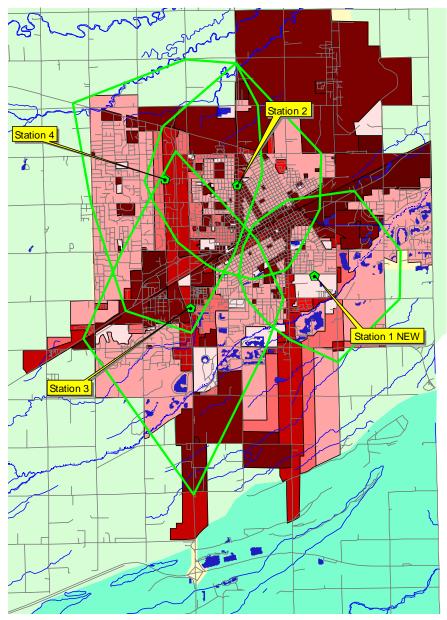
The following figure demonstrates this deployment strategy. The six-minute response capability of this proposed station deployment is shown in green overlays.



#### Figure 22: Deployment Strategy "C"



The following map demonstrates the six-minute coverage areas of each proposed station location overlaid on the community risk designations. This view permits the reader to visually appraise the depth of six-minute station coverages against areas of highest fire impact risk.







#### GRAND ISLAND FIRE DEPARMENT SITE AND NEEDS STUDY

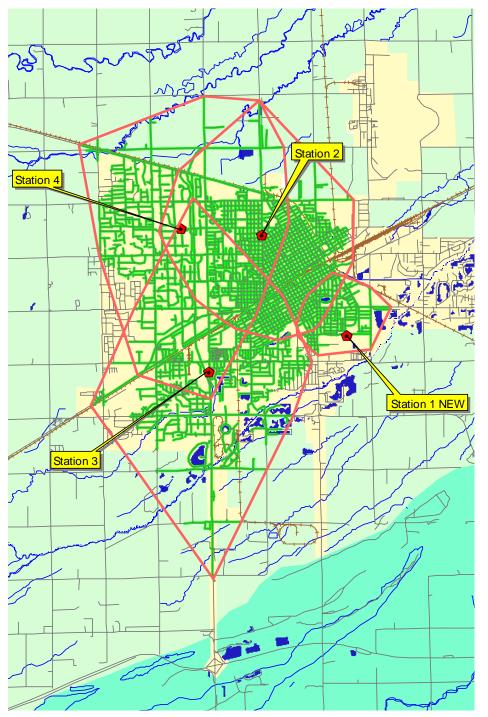
Fire and EMS Services Facility and Location Study

In the explanation of this strategy, it is important to mention that the area surrounding this potential fire station site is likely to develop with a multi-purpose entertainment center known as the "Heartland Center". Events at this center are anticipated to draw crowds as large as 7,000 persons. Main entrances to the complex are initially expected to exit onto Fonner Park Road in the vicinity of this potential fire station site.

As a result, we caution the City to consider how the development of the entrance and exit system for the complex might affect the fire station, were it to be located in this area. Clearly, several thousand people exiting the complex simultaneously could result in significant traffic congestion that would adversely impact response time from that station.

To demonstrate this possible impact, we prepared a second map of the response capability of the proposed deployment, but reduced travel speeds on all road segments in the immediate four block area surrounding the proposed Fonner Park Road fire station. The map vividly shows the significantly reduced response time capability of that station through traffic congestion in just the immediate area of the station.





### Figure 24: Deployment Strategy "C" with Area Traffic Congestion

We are not suggesting that the traffic congestion from the Heartland Complex would not be manageable. Indeed, many other fire departments across the country have been able to successfully deal with venues such as this, and even much larger, without



compromising public safety. It does, however, point out the need for extremely thorough planning if this site were chosen as part of the deployment. The City, the fire department, the police department, and other agencies both public and private will need to work together to develop an emergency traffic route plan for periods of major congestion.

#### **Strategy C Projected Performance**

This deployment strategy demonstrates only a slight improvement in target-level service performance when compared to what would be provided by the current deployment after projected community development. Performance models for the strategy, along with comparison figures, are shown in the following tables.

The first table provides the projected performance of this deployment strategy for the community as it exists today. The comparison figures are the current levels of service experienced by the community. Current service demand and the current street network were used in this analysis.

Performance Projection on Current City Streets and Service Demand			
	Percent of Service	Percent of Road	
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Current Deployment Capability	95%	90%	
Strategy "C"	97%	89%	

Figure 25: Strategy "C" Performance Analysis

The next table provides the projected performance of this deployment strategy were the community to develop to the full extent discussed in previous sections of this study. The comparison figures are the levels of service projected if current deployment is continued without change (status quo). Projected service demand and a projected street network similar in nature to that which may be present if the City develops as expected were used in this analysis.

Performance Projection on Future Development and Service Demand			
	Percent of Service	Percent of Road	
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Status Quo at Full Future Buildout	92%	73%	
Strategy "C"	93%	82%	

As can be seen in the table, response time performance, even after full community buildout, would be below six minutes for over 90% of all incidents. This strategy **will** achieve the target objective of six minutes or less to at least 90% of the incidents.

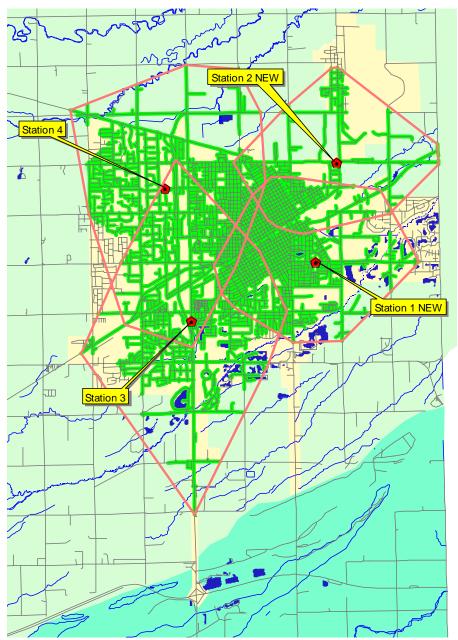


#### **Deployment Strategy D- Relocations of Station #1 and Station #2**

This strategy would involve the abandonment of the current fire station #1 and the establishment of a new fire station #1 on **Bismark Road** near its intersection with Plum Road. In addition, the deployment strategy would also call for eventual relocation of Station #2 to **Sky Park Road near Capital Avenue East**. The strategy was designed and analyzed specifically for consideration by the City in the event there were anticipation of the need to improve response times or capability at the regional airport facility and the manufacturing and industrial areas around it. This strategy should be considered if future airport service upgrades are expected that would require a fire station to be located on airport property.

The following figure demonstrates this deployment strategy. The six-minute response capability of this proposed station deployment is shown in green overlays.

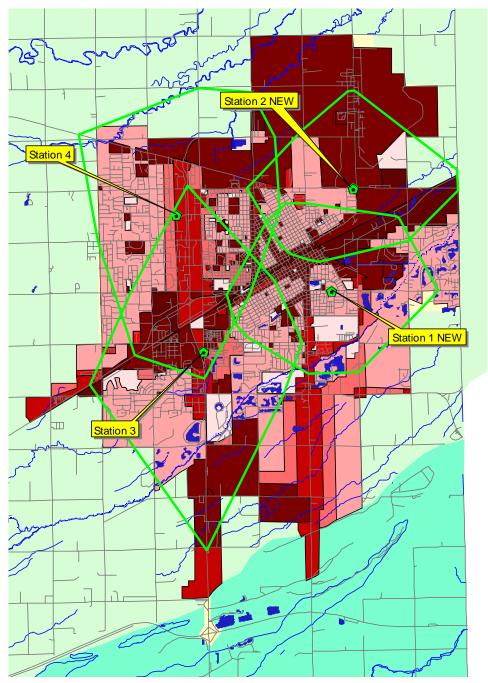




### Figure 26: Deployment Strategy "D"

The following map demonstrates the six-minute coverage areas of each proposed station location overlaid on the community risk designations. This view permits the reader to visually appraise the depth of six-minute station coverages against areas of highest fire impact risk.





### Figure 27: Strategy D Coverage and Community Risk

### **Strategy D Projected Performance**

This deployment strategy demonstrates little or no change in target-level service performance when compared to what would be provided by the current deployment



after projected community development. Performance models for the strategy, along with comparison figures, are shown in the following tables.

The first table provides the projected performance of this deployment strategy for the community as it exists today. The comparison figures are the current levels of service experienced by the community. Current service demand and the current street network were used in this analysis.

Performance Projection on Current City Streets and Service Demand			
Percent of Service Percent of I			
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Current Deployment Capability	95%	90%	
Strategy "D"	96%	93%	

Figure 28: Strategy "D" Performance Analysis

The next table provides the projected performance of this deployment strategy were the community to develop to the full extent discussed in previous sections of this study. The comparison figures are the levels of service projected if current deployment is continued without change (status quo). Projected service demand and a projected street network similar in nature to that which may be present if the City develops as expected were used in this analysis.

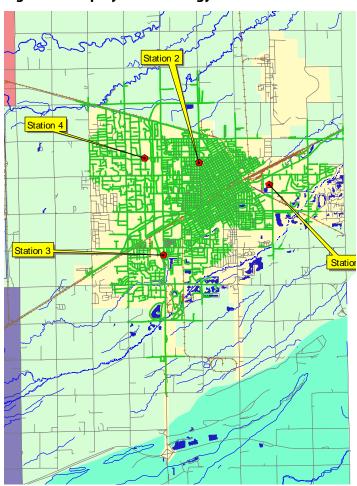
Performance Projection on Future Development and Service Demand			
	Percent of Service Percent of R		
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Status Quo at Full Future Buildout	92%	73%	
Strategy "D"	92%	85%	

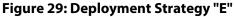
As can be seen in the table, response time performance, even after full community buildout, would be below six minutes for over 90% of all incidents. This strategy **will** achieve the target objective of six minutes or less to at least 90% of the incidents.

### **Deployment Strategy E- Relocations of Station #1 at Training Site Three**

This strategy would involve the abandonment of the current fire station #1 and the establishment of a new fire station #1 built in conjunction with a new Training Center on the proposed site #3 at **Stuhr Road** near its intersection with **Seedling Mile Road**. The strategy was designed and analyzed specifically for consideration by the City in order to conserve costs associated with site acquisition and development. This strategy should be considered if the City wishes to take advantage of having an active fire station at their fire training facility.

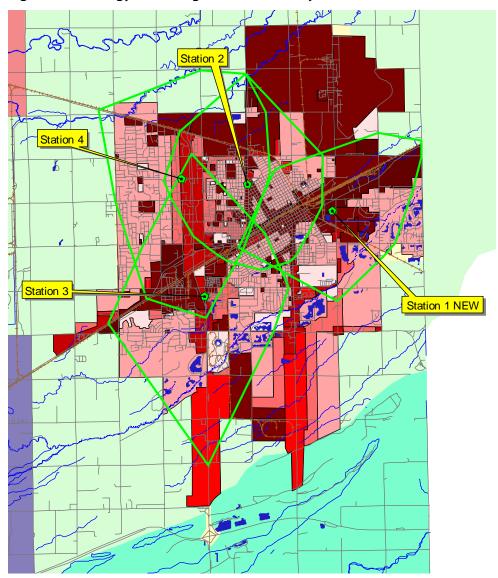
The following figure demonstrates this deployment strategy. The six-minute response capability of this proposed station deployment is shown in green overlays.







The following map demonstrates the six-minute coverage areas of each proposed station location overlaid on the community risk designations. This view permits the reader to visually appraise the depth of six-minute station coverages against areas of highest fire impact risk.







### Strategy E Projected Performance

This deployment strategy demonstrates slight degradation in target-level service performance when compared to what would be provided by the current deployment after projected community development. Performance models for the strategy, along with comparison figures, are shown in the following tables.

The first table provides the projected performance of this deployment strategy for the community as it exists today. The comparison figures are the current levels of service experienced by the community. Current service demand and the current street network were used in this analysis.

Performance Projection on Current City Streets and Service Demand			
Percent of Service Percent of Ro			
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Current Deployment Capability	95%	90%	
Strategy "E"	92%	87%	

Figure 31: Strategy "E" Performance Analysis

The next table provides the projected performance of this deployment strategy were the community to develop to the full extent discussed in previous sections of this study. The comparison figures are the levels of service projected if current deployment is continued without change (status quo). Projected service demand and a projected street network similar in nature to that which may be present if the City develops as expected were used in this analysis.

Performance Projection on Future Development and Service Demand			
Percent of Service Percent of Re			
Deployment Strategy	Demand	Segments	
	<6:00	<6:00	
Status Quo at Full Future Buildout	92%	73%	
Strategy "E"	90%	81%	

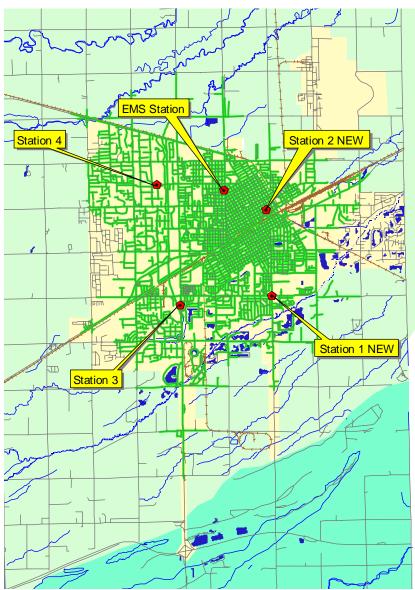
As can be seen in the table, response time performance, even after full community buildout, would be below six minutes for just 90% of all incidents. This strategy **will** achieve the target objective of six minutes or less to at least 90% of the incidents, but that performance achievement is likely to be marginal.

## Deployment Strategy F- Relocations of Station #1 and Station #2, Retention of Old Station #2 as EMS Station

This strategy would involve the abandonment of the current fire station #1 and the establishment of a new fire station #1 near the intersection of **Locust Street and Stolley Park Road**. In addition, the deployment strategy would also call for relocation of Fire Station #2 to the area of **Sycamore Street and 5<sup>th</sup> Street**. However, the strategy would involve the continued use of the old Station #2 as an EMS station, from which transport ambulance crews would be dispatched.

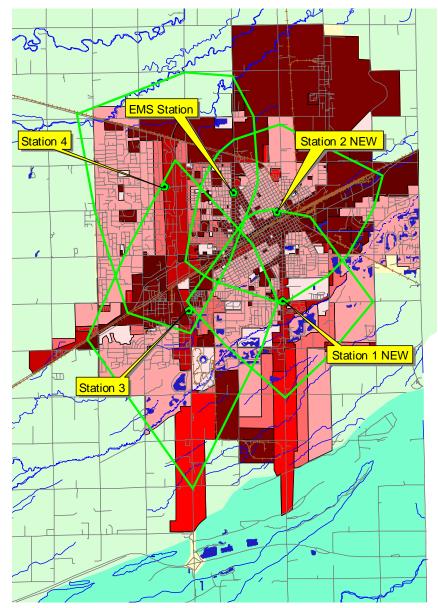
The following figure demonstrates this deployment strategy. The six-minute response capability of fire suppression units (ambulance station excluded) for this proposed station deployment is shown in green overlays.





### Figure 32: Deployment Strategy "F"

The following map demonstrates the six-minute coverage areas of each proposed fire suppression station location overlaid on the community risk designations. This view permits the reader to visually appraise the depth of six-minute station coverages against areas of highest fire impact risk.



#### Figure 33: Strategy F Coverage and Community Risk

### **Strategy F Projected Performance**

This deployment strategy demonstrates improvement in target-level service performance when compared to what would be provided by the current deployment after projected community development. Performance models for the strategy, along with comparison figures, are shown in the following tables.



The first table provides the projected performance of this deployment strategy for the community as it exists today. The comparison figures are the current levels of service experienced by the community. Current service demand and the current street network were used in this analysis.

Performance Projection on Current City Streets and Service Demand			
Deployment Strategy	Percent of Service Demand	Percent of Road Segments	
	<6:00	<6:00	
Current Deployment Capability	95%	90%	
Strategy "F"	99%	93%	

The next table provides the projected performance of this deployment strategy were the community to develop to the full extent discussed in previous sections of this study. The comparison figures are the levels of service projected if current deployment is continued without change (status quo). Projected service demand and a projected street network similar in nature to that which may be present if the City develops as expected were used in this analysis.

Performance Projection on Future Development and Service Demand		
	Percent of Service	Percent of Road
Deployment Strategy	Demand	Segments
	<6:00	<6:00
Status Quo at Full Future Buildout	92%	73%
Strategy "F"	94%	84%

As can be seen in the table, response time performance, even after full community buildout, would be below six minutes for well over 90% of all incidents. This strategy **will** achieve the target objective of six minutes or less to at least 90% of the incidents.



# FINDINGS AND CONCLUSIONS

In the long-range future, upon full development and buildout of its response territory, the Grand Island City Fire Department will be able to maintain the response time performance objective adopted for the City for first-due company arrival of 6:00 or less through continued use of its existing location deployment scheme, if desired. After anticipated development, response time performance levels could be expected to degrade by approximately only 3%.

The City of Grand Island can also meet the response time performance objective through the adoption of one of the deployment strategies provided in this report involving the use of new locations. The summary of six-minute response time performance projections for each strategy is shown in the figure below.

Performance Projection on Future Development and Service Demand		
	Percent of Service	Percent of Road
Deployment Strategy	Demand	Segments
	<6:00	<6:00
Status Quo at Full Future Buildout	92%	73%
Strategy "A"	93%	82%
Strategy "B"	91%	82%
Strategy "C"	93%	82%
Strategy "D"	92%	85%
Strategy "E"	90%	81%
Strategy "F"	94%	84%

Figure 35: Deployment Strategy Performance Projection Summary

From the table, it can be seen that Strategy F provides the most significant projected improvement over what would exist if use of the current deployment locations were continued. Strategies A and C provide the potential for slight performance improvement, but all six deployment strategies show only small variation in projected performance. This is a good indication that the City has the flexibility to adopt any one of the adopted strategies without fear of causing significant deterioration of service levels. Each strategy could be expected to provide a first unit arrival of six minutes or less.



In cases such as this, it is sometimes helpful to analyze the anticipated performance of each strategy at a lower response time model. While each strategy may meet the stated performance objective of six minutes, one or more strategies may show a distinct advantage in response time performance at a lower level, such as four minutes.

The following figure provides the projected performance of each strategy if a fourminute response time objective is analyzed through GIS.

Performance Projection on Current City Streets and Service Demand		
	Percent of Service	Percent of Road
Deployment Strategy	Demand	Segments
	<4:00	<4:00
Strategy "A"	81%	61%
Strategy "B"	80%	61%
Strategy "C"	70%	48%
Strategy "D"	40%	36%
Strategy "E"	69%	47%
Strategy "F"	84%	58%
Performance Projection on Futur		
		vice Demand
	re Development and Ser	vice Demand
Performance Projection on Futur	re Development and Ser Percent of Service Demand <4:00	vice Demand Percent of Road
Performance Projection on Futur	re Development and Ser Percent of Service Demand	vice Demand Percent of Road Segments
Performance Projection on Futur Deployment Strategy	re Development and Ser Percent of Service Demand <4:00	vice Demand Percent of Road Segments <4:00
Performance Projection on Futur Deployment Strategy Strategy "A"	re Development and Ser Percent of Service Demand <4:00 75%	vice Demand Percent of Road Segments <4:00 54%
Performance Projection on Futur Deployment Strategy Strategy "A" Strategy "B"	re Development and Ser Percent of Service Demand <4:00 75% 74%	vice Demand Percent of Road Segments <4:00 54% 53%
Performance Projection on Futur Deployment Strategy Strategy "A" Strategy "B" Strategy "C"	re Development and Ser Percent of Service Demand <4:00 75% 74% 67%	vice Demand Percent of Road Segments <4:00 54% 53% 43%

Figure 36: Projected Performance of All Strategies at Four Minutes

These figures demonstrate that Strategy D is the least desirable from a short-time response performance standpoint. Thus, it should only be considered in the event that airport development will make it necessary to locate a station on or near airport property. Strategy E is the next least desirable from a short-time response performance standpoint, but could result in much lower capital costs since the new station would be combined with the Training Center site.



Fire and EMS Services Facility and Location Study

The figures also demonstrate that Strategy F can be expected to provide the greatest response time benefit to the largest number of service users. Strategies A and B can be expected to provide a three to four percent lower performance at the four-minute level than Strategy F. The difference between the projected performances of the three strategies is reasonably minor and the City should feel comfortable making the final location decision between these strategies based on other issues unrelated to service performance such as cost, land availability, site suitability, and roadway access.



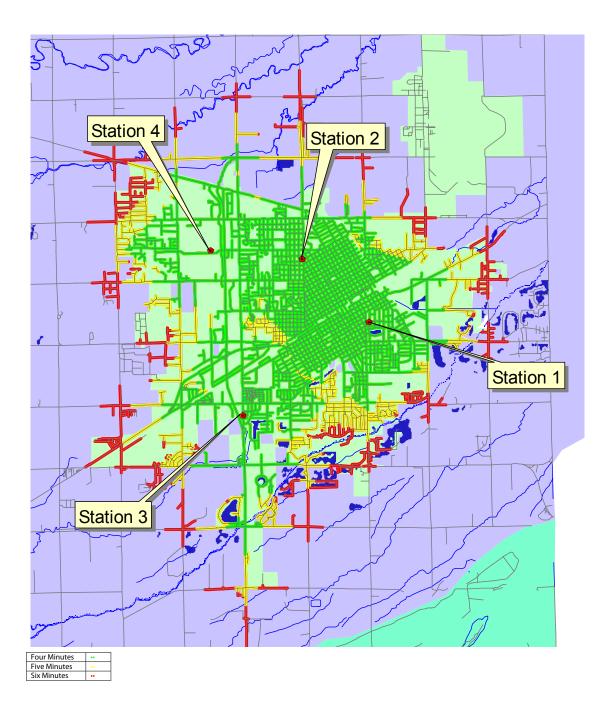
Fire and EMS Services Facility and Location Study

# **MAP APPENDIX**

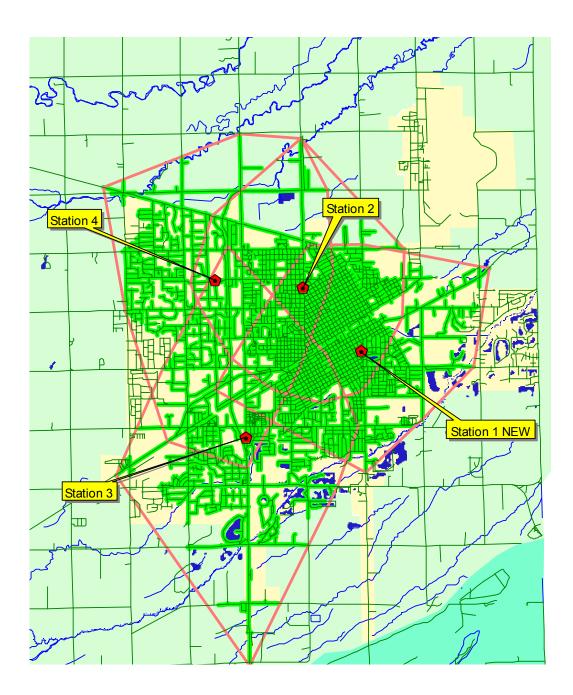


Fire and EMS Services Facility and Location Study

# **Current Station Deployment and Response Time Capability**

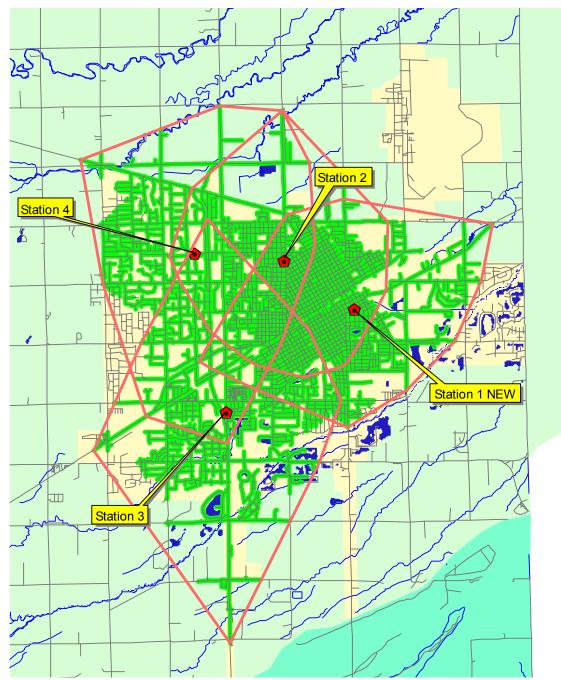






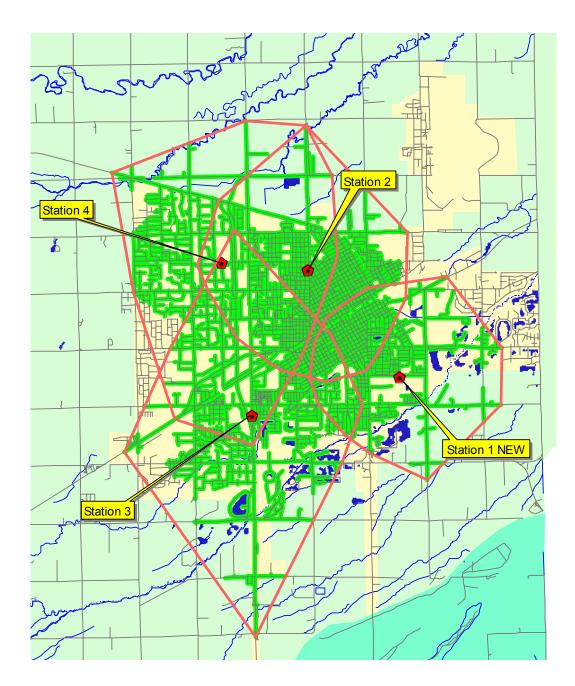
# Strategy "A" Six-Minute Response Time Performance





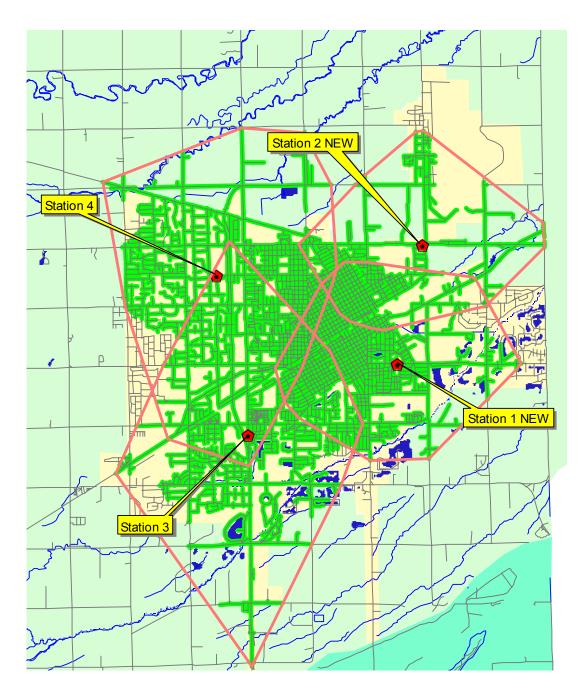
# Strategy "B" Six-Minute Response Time Performance





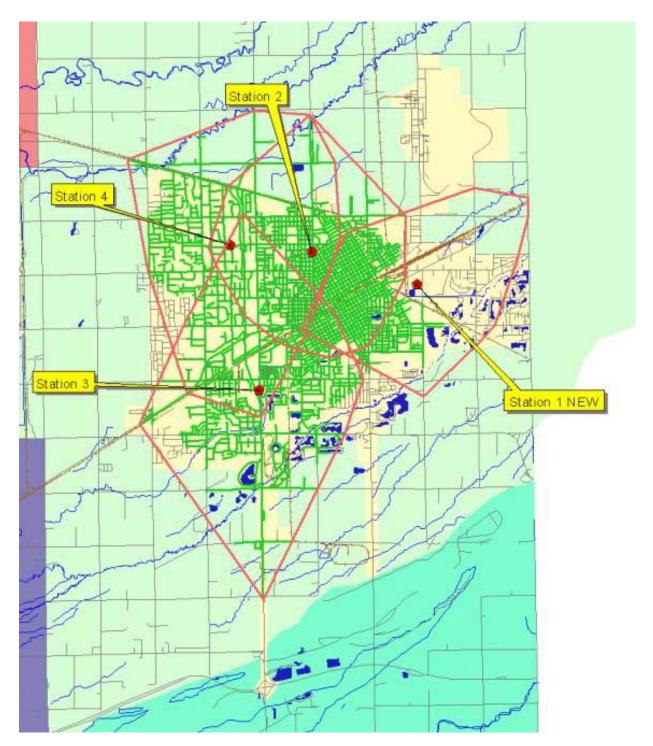
Strategy "C" Six-Minute Response Time Performance





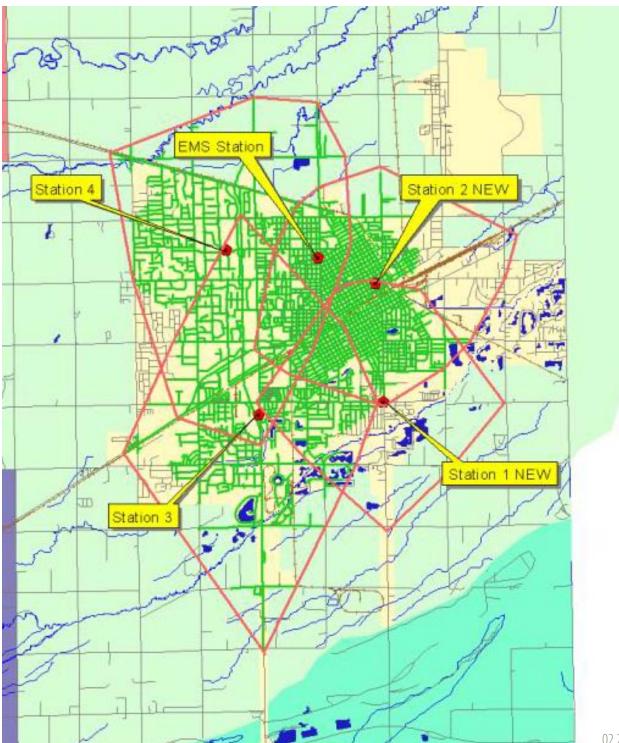
Strategy "D" Six-Minute Response Time Performance











Strategy "F" Six-Minute Response Time Performance







## Fire Station

# **Fire Station Space Program**

The following are Architectural Space Programs for implementation of Fire Station site strategies. The programs were developed during a workshop session on December 15th, 16th, and 17th with Fire Department and City Leadership. The programs were developed through one-on-one interviews with departmental leadership, and were based on Programming Questionnaires which are included in an appendix of this report. The areas indicated for each space are based on the Space Standard Diagrams included in this section. The space programs were used in developing the concept station plans and site "fit" plans detailed in this section and which formed the basis of the site Master Plan concepts included in this report.

The final programs included are:

- *Option 1 and 2* Headquarters Station including Fire Administration and (5) bay Fire Station (full program included in this report)
- *Option 3A* Fire Administration with (2) bay satellite station (summary of space program only included in this report)
- *Option 3B* (5) bay Fire Station without Fire Administration (summary of space program only included in this report)
- *Option 4* (3) bay Fire Station without Fire Administration (summary of space program only included in this report)

Programs 1 and 2, and summary pages for 3A, 3B, and 4 follows:

# SPACE PROGRAM



Fire Station

	ISLAND HEADQUARTER FIRE STATION SLAND, NEBRASKA	SPA	CE P	ROG	RAM					SUPPORT	SPACE PROGRAI	
	EDS ASSESSMENT										COMM.#: 1637.01	
	February 3, 2005										BKV GROUP	
	DEPARTMENT:			NUMB			2005	AREA REQU	-		MAGNIZO	
SHEET CODE	SITE REQUIREMENTS	2005		ACES		NET UNIT P		5-YR. PROJECTED	10-YF PROJEC		MMENTS	
		1	, ŭ						1.110020			
	Support Areas	1	T	T					Ι			
	Emergency Generator	1		1	1	-	-	-		- Ext	erior location with screen	
	Public Parking Stalls	12		12	12	-	-	-			erior location	
	Staff Parking Stalls Vechile Pad	35		35 2	35 2	-	-	-			erior location erior locations at front and back	
	Staff Picnic Area	1		1	1						erior locations at front and back	
	Fire Hydrant	2		2	2	-	-	-			cate for training and funcitonal	
	Subtotal, Departmental S	oaces					-	-		-		
	Total Net SF						-	-		-		
	Efficiency Factor TOTAL PROPOSED/PRO.					15%		-		-		
	TOTAL PROPOSED/PRO	COTED	000	JUPIAL			-	-		-		
5) BAY	ISLAND HEADQUARTER FIRE STATION SLAND, NEBRASKA EDS ASSESSMENT	SF	ACE	E PRO	OGRAI	Λ					FIRE ADMINISTRATION	
ATE:	February 3, 2005										BKV GROUP	
SPACE	DEPARTMENT:		REQUI	RED NU	IMBER			NET AREA R	EQUIRED			
SHEET CODE	FIRE ADMINISTRATION		05	SPACE 5-YR.			2005	5-YR ED PROJEC		10-YR.	COMMENTS	
				<u>3-1K.</u>	10-11	UNIT	FROSECT			OJECTED		
i i i i i i i i i i i i i i i i i i i	Personnel Spaces											
	Fire Chief's Office Fire Prevention Division Chief's Office		1	1	1	19			192 168	192 168		
	Training Division Chief's Office		1	1	1	16			168	168		
	Operations Division Chief's Office		1	1	1	16			168	168		
	EMS Division Chief's Office		1	1	1	16			168	168		
	Shift Commanders' Office		1	1	1	14			144	144		
	EMS Shift Office Public Safety Secretary		1	1	1	14 12		44 20	144 120	144 120		
	Clerical		2	2	2				120	120		
	Fire inspectors		3	3					192	192		
	Subtotal, Personnel Space	ces	13	13	13		1,5	92 1	,592	1,592		
	Departmental Spaces											
	Public Vestibule / Lobby		1	1	1	45	0 4	50	450	450		
R-450	Plan Review Area		1	1	1			96	196	196		
R-450 A-196PR	Mail / Copy Area		1	1	1	12			120	120		
R-450 A-196PR A-120A			1	1	1			30 80	130 80	130 80		
R-450 A-196PR A-120A R-130	File Room		11		1 1	1	-					
R-450 A-196PR A-120A R-130 R-80E			1 1	1	1	19	15 1	95	195	195		
R-450 A-196PR A-120A R-130 R-80E R-195	File Room Fire Prevention Storage		· · · ·	1 1					280		Adjacent to Chief's Office	
R-450 A-196PR A-120A R-130 R-80E R-195 C-280	File Room Fire Prevention Storage Break Room		1		1	28	i0 2	80		280		
R-450 A-196PR A-120A R-130 R-80E R-195 C-280	File Room Fire Prevention Storage Break Room Conference Room	paces	1 1	1	1	28	i0 2	80 71	280	280	Adjacent to Chief's Office Adjacent to Lobby / Training Room	
R-450 A-196PR A-120A R-130 R-80E R-195 C-280	File Room Fire Prevention Storage Break Room Conference Room Public toilets	paces	1 1	1	1	28	30 2 '1 1	80 71	280 171	280 171	Adjacent to Chief's Office Adjacent to Lobby / Training Room	
R-450 A-196PR A-120A R-130 R-80E R-195 C-280	File Room Fire Prevention Storage Break Room Conference Room Public toilets	paces	1 1	1	1	28	00 2 11 1 1,6 3,2	80 71 22 1 14 3	280 171	280 171	Adjacent to Chief's Office Adjacent to Lobby / Training Room	

(O)Office (W)Workstation (R)Room (A)Area (L)Lobby (SW)Shared Workstation (M)Millwork



Fire Station

Delivery Vestibule EMS Storage

Liquid Storage

General Storage

EMS Clean-up Room

Arson Evidence Storage

Total Net SF

Subtotal, Departmental Spaces

Efficiency Factor
TOTAL PROPOSED/PROJECTED OCCUPIABLE

EMS Oxygen fill and storage

1 1 1

1

1

1

1

80 144

10%

R-80E

R-36E

R-119

R-80D

R-80F

R-80G

R-144

GRANI (5) BAY GRAND	N 1 AND 2 D ISLAND HEADQUARTER Y FIRE STATION ISLAND, NEBRASKA EDG ASSESSMENT	SPAC	E PRO	GRAN	1				APPARATUS 
DATE:	February 3, 2005								BKV GROUP
SPACE	DEPARTMENT:	REOL	JIRED NU	MBER		NE	T AREA REQU	IRED	
SHEET			OF SPACE		NET	2005	5-YR.	10-YR.	COMMENTS
CODE	STATION ADMINISTRATION	2005	5-YR.	10-YR.	UNIT	PROJECTED	PROJECTED	PROJECTED	
	Personnel Spaces								
R-192	Captain's Office / Base Room	1	1	1	240	240	240	240	Shared each shift
W-36	EMS Workstation	1	1	1	36	36	36	36	Shared by EMS
W-36	Report / Shared Workstation	1	1	1	36	36	36	36	Shared by firefighers
	Subtotal, Personnel Spaces	3	3	3	-	312	312	312	
	Departmental Spaces	-							
R-120C	Station Public Entry / Lobby	1	1	1	120	120	120	120	Includes seats for waiting
R-96	Work / Copy	1	1	1	96	96	96	96	includes seats for waiting
	Subtotal, Departmental Space	ces				216	216	216	
	Total Net SF					528	528	528	
	Efficiency Factor				20%	132	132	132	
	TOTAL PROPOSED/PROJEC	TED O	CCUPIA	BLE		660	660	660	
RAN	N 1 AND 2 D ISLAND HEADQUARTER								
,	FIRE STATION	SPAC	E PRO	GRAM	1				APPARATUS
	ISLAND, NEBRASKA								
PACE NE	EEDS ASSESSMENT								COMM.#: 1637.01
ATE:	February 3, 2005								BKV GROUP
SPACE	DEPARTMENT:		JIRED NU				T AREA REQUI		4
SHEET			OF SPACE	-	NET	2005	5-YR.	10-YR.	COMMENTS
CODE	APPARATUS	2005	5-YR.	10-YR.	UNIT	PROJECTED	PROJECTED		
	Personnel Spaces			l					T
									-
	Subtotal, Personnel Spaces	-	-	-	-	-	-	-	-
							1		
	Departmental Spaces	1							
R-7840		1	1	1	7,840	7,840	7,840	7,840	Include Fire Pole in space (functional or dis
R-7840 R-594	Departmental Spaces Apparatus Bays Turn Out	1	1	1	7,840 594	7,840 594	7,840 594	7,840 594	Include Fire Pole in space (functional or dis
	Apparatus Bays	· ·							Include Fire Pole in space (functional or dis Included in Turn Out
	Apparatus Bays Turn Out	1	1	1			594	594	
	Apparatus Bays Turn Out Turn Out Gear Maintenance	1	1	1	- 594	594	- 594	594	Included in Turn Out
R-594 R-102	Apparatus Bays Turn Out Turn Out Gear Maintenance Wash Room Eye Wash Maintenance Workroom	1	1 1 1	1 1 1 1	594 - - 102	594 - - 102	594 - - 102	594 - - 102	Included in Turn Out
R-594	Apparatus Bays Turn Out Turn Out Gear Maintenance Wash Room Eye Wash	1 1 1 1	1 1 1	1 1 1 1	594 - - -	594 - -	594 - - -	594 - - -	Included in Turn Out Included in Turn Out

(O)Office (W)Workstation (R)Room (A)Area (L)Lobby (SW)Shared Workstation (M)Millwork

80 36 119

80 80

80

144

9,489

9,489

1,054 10,543

80 36 119

80 80

80

144

9,489

9,489

1,054 10,543

Provide mezz above

36 Adj to Ap bay 119 Provide mezz above

80

119

80

80

80

144

9,489

9,489

1,054 10,543

**SPACE** 

**PROGRAM** 



Fire Station

GRANE (5) BAY	N 1 AND 2 D ISLAND HEADQUARTER Y FIRE STATION ISLAND. NEBRASKA	SPAC	E PRO	GRAM	,				SUPPOR
-	EEDS ASSESSMENT								СОММ.#: 1637.0
DATE:	February 3, 2005								BKV GROUP
SPACE	DEPARTMENT:	REQU	IRED NU	MBER		NE	T AREA REQU	RED	
SHEET		OF SPACES			NET	2005	5-YR.	10-YR.	COMMENTS
CODE	STAFF SUPPORT	2005	5-YR.	10-YR.	UNIT	PROJECTED	PROJECTED	PROJECTED	
	Staff Areas								
R-40	Staff Entry / Vestibule	1	1	1	40	40	40	40	
R-58	Bunk Room	10	10	10	58	580	580	580	
R-16	Linen closet	1	1	1	16	16	16	16	Locate adj to bunk rooms
R-928	Locker Room	1	1	1	928	928	928	928	
	Changing / Shower	1	1	1	-	-	-	-	included in Locker Room
	Men's Toilet	1	1	1	-	-	-	-	included in Locker Room
	Women's Toilet	1	1	1	-	-	-	-	included in Locker Room
	Laundry	1	1	1	-	-	-	-	included in Locker Room
R-384	Dayroom / Lounge	1	1	1	384	384	384	384	
R-1018	Community / EOC Room	1	1	1	1,018	1,018	1,018	.,	Provide for Teleconf closet room
	A/V Teleconference Storage	1	1	1	-	-	-		Included in Training
	Training Storage	1	1	1	-	-	-		Included in Training
R-323	Kitchen	1	1	1	323	323	323	323	locate adj to training and dayroom
R-545	Exersize Room	1	1	1	545	545	545	545	
R-280	Library	1	1	1	280	280	280	280	
	Subtotal, Departmental Sp	aces				4,114	4,114	4,114	
	Total Net SF					4,114	4,114	4,114	
	Efficiency Factor				20%	1,029	1,029	1,029	
	TOTAL PROPOSED/PROJ	CTFD	OCCUP	ABLE		5.143	5.143	5.143	

R-350 Dormatory

DATE:

1 1 1 350 350 350

350 Add Closets???

OPTION 1 AND 2 GRAND ISLAND HEADQUARTER (5) BAY FIRE STATION SUPPORT SPACE PROGRAM GRAND ISLAND, NEBRASKA COMM.#: 1637.01 SPACE NEEDS ASSESSMENT **BKV GROUP** February 3, 2005 
 BERT GROUP

 SPACE
 REQUIRED NUMBER
 NET AREA REQUIRED

 SHEET
 OF SPACES
 NET

 CODE
 BUILDING SUPPORT
 2005
 5-YR.

 10-YR.
 UNIT
 PROJECTED

 Support Areas
 Image: Construction of the second secon

R-48A	Janitorial Storage	2	2	2	48	96	96	96	
R-42B	Telephone / Data Room	2	2	2	42	84	84	84	
R-500	Mechanical Room	1	1	1	500	500	500	500	
R-150	Electrical Room	1	1	1	150	150	150	150	
	Subtotal, Departmental Sp	oaces				830	830	830	
	Total Net SF					830	830	830	
	Efficiency Factor				15%	146	146	146	
	TOTAL PROPOSED/PROJ	ECTED	OCCUP	IABLE		976	976	976	

**SPACE** 

**PROGRAM** 



Fire Station

OPTION	1 1 AND 2								
GRAND	ISLAND HEADQUARTER								
(5) BAY	FIRE STATION	SPAC	E PRC	GRAM	1		SUPPORT		
GRAND I	SLAND, NEBRASKA								
SPACE NE	EDS ASSESSMENT								COMM.#: 1637.01
DATE:	February 3, 2005								BKV GROUP
SPACE	DEPARTMENT:	REQU	JIRED NU	MBER		NE	T AREA REQU	IRED	
SHEET		0	OF SPACE	S	NET	2005	5-YR.	10-YR.	COMMENTS
CODE	SITE REQUIREMENTS	2005	5-YR.	10-YR.	UNIT	PROJECTED	PROJECTED	PROJECTED	
	Support Areas								
	Emergency Generator	1	1	1	-	-	-	-	Exterior location with screen
	Public Parking Stalls	12	12	12	-	-	-	-	Exterior location
	Staff Parking Stalls	35	35	35	-	-	-	-	Exterior location
	Vechile Pad	2	2	2	-	-	-	-	Exterior locations at front and back
	Staff Picnic Area	1	1	1	-	-	-	-	Exterior location with screening
	Fire Hydrant	2	2	2	-	-	-	-	Locate for training and funcitonal
	Subtotal, Department	al Spaces							
	Total Net SF					-	-	-	
	Efficiency Factor				15%	-	-	-	
	TOTAL PROPOSED/P	ROJECTED	OCCUP	IABLE		-	-	-	
	L								1

(O)Office (W)Workstation (R)Room (A)Area (L)Lobby (SW)Shared Workstation (M)Millwork

SPACE

PROGRAM



Fire Station

PARTIA	N 3A DMINISTRATION WITH (2) AL BAY SATILITE FIRE STATION ISLAND, NEBRASKA	SPAC	E PRO	OGRAM	1				SUMMARY TOTALS	
SPACE NE	EEDS ASSESSMENT								COMM.#: 1637.01	
DATE:	February 3, 2005								BKV GROUP	
SPACE	DEPARTMENT:	PROJE	ECTED N	JMBER		OCCUPI	ABLE AREA R	EQUIRED		
SHEET			OF STAF	F	NET	2005	5-YR	10-YR.	COMMENTS	
CODE	SUMMARY TOTAL	2005	5-YR	10-YR.	UNIT	PROJECTED	PROJECTED	PROJECTED		EXISTING
	Departments									
	Fire Administration	13	13	13		4,018	4,018	4,018		
	Station Administration	3	3	3		510	510	510		
	Apparatus	-	-	-		2,249	2,249	2,249		
	Staff Support	-	-	-		1,960	1,960	1,960		
	Building Support	-	-	-		435	435	435		
	Site Requirements		-	-		-	-	-		
	Total Usable SF					9,172	9,172	9,172		
	Building Factor				15%	1,619	1,619	1,619		
	TOTAL PROJECTED BUILDING GRO	SS AREA				10,790	10,790	10,790		

OPTION	N 3B / FIRE STATION	6040		GRAN			SUMMARY TOTALS						
• •	ISLAND. NEBRASKA	SPAC		GRAN	SUMMARY TUTALS								
-	EEDS ASSESSMENT					COMM #: 1627.01							
DATE:	February 3, 2005		COMM.#: 1637.0 BKV GROUF										
SPACE	DEPARTMENT:	PROJE	ECTED NU	JMBER		OCCUPI	IABLE AREA R	EQUIRED					
SHEET			OF STAFF	-	NET	2005	5-YR	10-YR.	COMMENTS				
CODE	SUMMARY TOTAL	2005	5-YR	10-YR.	UNIT	PROJECTED	PROJECTED	PROJECTED		EXISTIN			
	O												
	Departments												
	Station Administration	3	3	3		660	660	660					
	Apparatus	-	-	-		8,943	8,943	8,943					
	Staff Support	-	-	-		4,641	4,641	4,641					
	Building Support	-	-	-		871	871	871					
	Site Requirements	-	-	-		-	-	-					
	Total Usable SF					15,115	15,115	15,115					
	Building Factor				10%	1,679	1,679	1,679					
	TOTAL PROJECTED BUILDING GR	ROSS AREA				16,795	16,795	16,795					

OPTIOI (3) BAY	N 4 Y FIRE STATION	SPAC	E PRC	GRAN	1	SUMMARY TOTALS				
GRAND I	ISLAND, NEBRASKA									
SPACE NE	EEDS ASSESSMENT								COMM.#: 1637.01	
DATE:	February 3, 2005								BKV GROUP	
SPACE	DEPARTMENT:	PROJE	CTED N	JMBER		OCCUP	ABLE AREA R	EQUIRED		
SHEET			OF STAF	-	NET	2005	5-YR	10-YR.	COMMENTS	
CODE	SUMMARY TOTAL	2005	5-YR	10-YR.	UNIT	PROJECTED	PROJECTED	PROJECTED		EXISTING
	Departments									
	Station Administration	3	3	3		660	660	660		
	Apparatus	-	-	-		6,166	6,166	6,166		
	Staff Support	-	-	-		3,148	3,148	3,148		
	Building Support	-	-	-		871	871	871		
	Site Requirements	-	-	-		-	-	-		
	Total Usable SF					10,844	10,844	10,844		
	Building Factor				10%	1,205	1,205	1,205		
	TOTAL PROJECTED BUILDING G	ROSS AREA				12,049	12,049	12,049		

# SPACE PROGRAM

Fire Station

# **Fire Station Space Standard Diagrams**

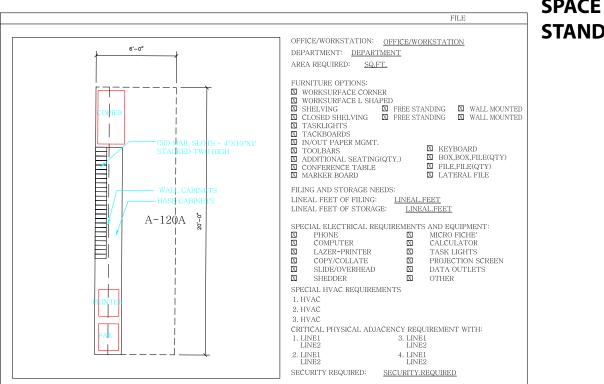
The following Architectural Space Standard Diagrams were developed during a workshop session on December 15th, 16th, and 17th with Fire Department and City Leadership. The diagrams provide an overview of programmatic requirements for all spaces of the facility options, but are not intended to be exhaustive, or final space designs. The space areas indicated on each space standard are used in the Space Programs to assure the highest degree of area projections. The diagrams themselves are used in the preliminary concept floor plans included in this section.

SPACE STANDARDS

Space programs follow.

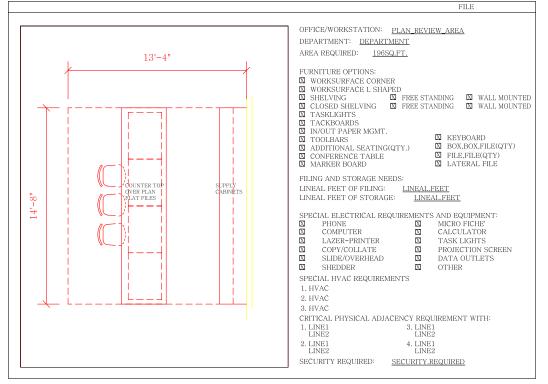


Fire Station



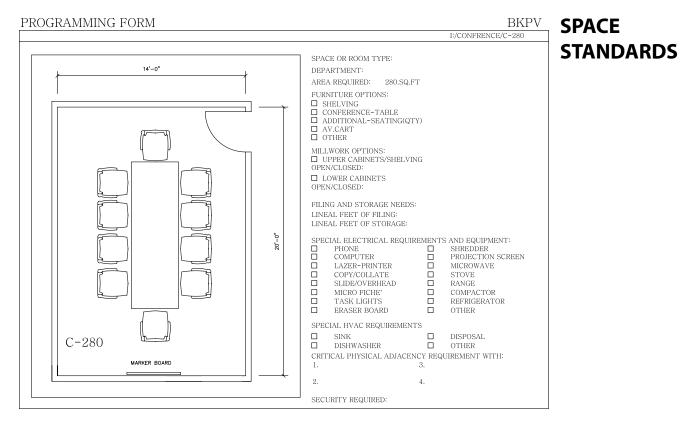
## PROGRAMMING FORM





SPACE STANDARDS

## **Fire Station**



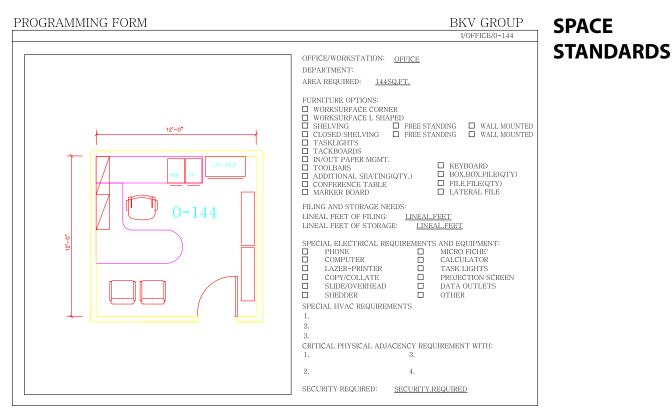
BKV GROUP

## PROGRAMMING FORM

#### I:/OFFICE/0-120 OFFICE/WORKSTATION: OFFICE DEPARTMENT: AREA REQUIRED: 120SQ.FT. FURNITURE OPTIONS: 10'-0' □ WORKSURFACE CORNER WALL MOUNTED □ KEYBOARD □ BOX,BOX,FILE(QTY) □ FILE,FILE(QTY) 0 - 120CONFERENCE TABLE □ LATERAL FILE 12'-0" FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: LINEAL FEET OF STORAGE: SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER TASK LIGHTS PROJECTION SCREEN DATA OUTLETS COPY/COLLATE SLIDE/OVERHEAD SHEDDER OTHER SPECIAL HVAC REQUIREMENTS 1. 2. 3. CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 3. 1. 2. 4. SECURITY REQUIRED:



## **Fire Station**

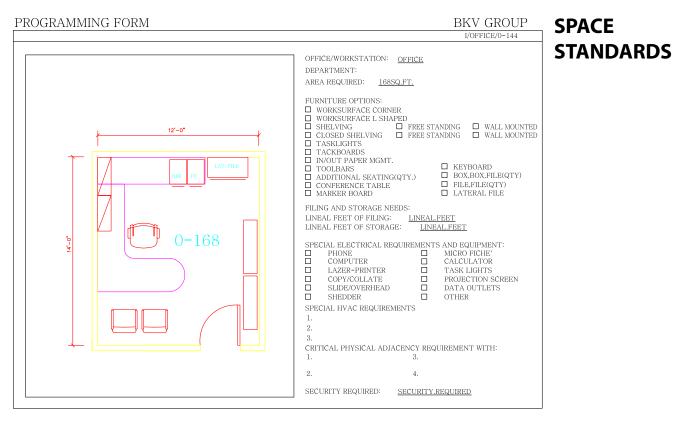


## PROGRAMMING FORM

#### BKV GROUP I/OFFICE/0-144DT OFFICE/WORKSTATION: OFFICE DEPARTMENT: AREA REQUIRED: 144SQ.FT. FURNITURE OPTIONS: □ WORKSURFACE CORNER WORKSURFACE CORNE WORKSURFACE L SHAP SHELVING ICLOSED SHELVING TASKLIGHTS TACKBOARDS IN/OUT PAPER MGMT. TOOLBARS ADDITIONAL SEATING( CONFERENCE TABLE MARKER BOARD WORKSURFACE L SHAPED □ FREE STANDING □ WALL MOUNTED □ FREE STANDING □ WALL MOUNTED 12'-□ KEYBOARD TOOLBARS ADDITIONAL SEATING(QTY.) ■ BOX,BOX,FILE(QTY) ■ FILE,FILE(QTY) □ LATERAL FILE FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: LINEAL FEET LINEAL FEET OF STORAGE: LINEAL FP LINEAL.FEET ŧ, SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER TASK LIGHTS COPY/COLLATE PROJECTION SCREEN SLIDE/OVERHEAD DATA OUTLETS SHEDDER OTHER SPECIAL HVAC REQUIREMENTS 1. 2. 3 CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 3. 1. 2. 4. SECURITY REQUIRED: SECURITY.REQUIRED

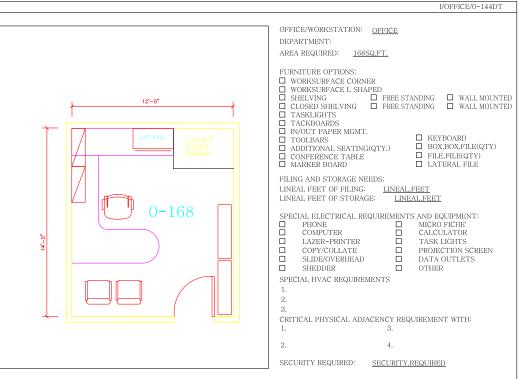


## **Fire Station**



BKV GROUP

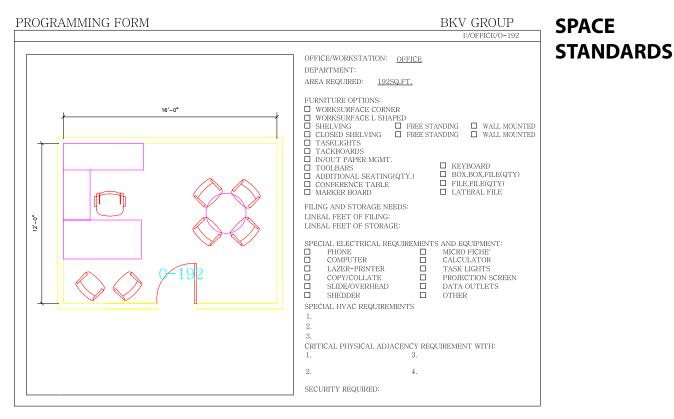
## PROGRAMMING FORM



## 12 25 05



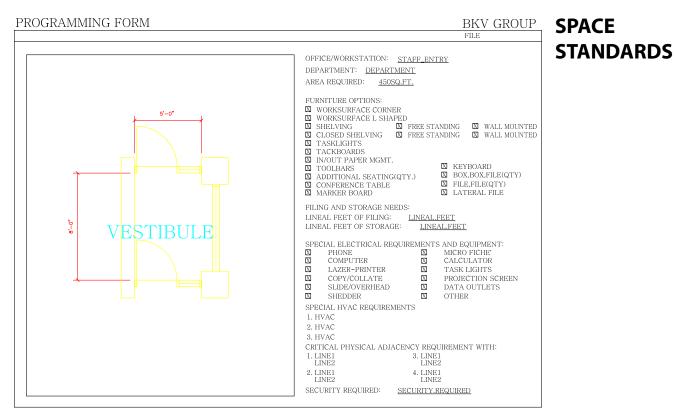
## **Fire Station**



#### PROGRAMMING FORM BKV GI OFFICE/WORKSTATION: <u>DELIVERY\_VESTIBULE</u> DEPARTMENT: DEPARTMENT AREA REQUIRED: 80SQ.FT. FURNITURE OPTIONS: 6'-6" FURNITURE OPTIONS: Si WORKSURFACE CORNER SU WORKSURFACE CORNER Si SU WORKSURFACE CORNER Si SU WORKSURFACE L SHAPED Si SU SI FREE STANDING SI WALL MOUNTED FREE STANDING SI WALL MOUNTED SU TASKLIGHTS SI TASKLOARDS SU TACKDOARDS SI FREE STANDING KEYBOARD ☑ TOOLBARS ☑ ADDITIONAL SEATING(QTY.) BOX,BOX,FILE(QTY) **.**0-.9 CONFERENCE TABLE MARKER BOARD I LATERAL FILE FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: <u>LINEAL.FEET</u> LINEAL FEET OF STORAGE: <u>LINEAL.FEET</u> SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER COPY/COLLATE TASK LIGHTS PROJECTION SCREEN SLIDE/OVERHEAD X X DATA OUTLETS $\square$ SHEDDER $\square$ OTHER SPECIAL HVAC REQUIREMENTS 1. HVAC 2. HVAC 3. HVAC CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 1. LINE1 LINE2 3. LINE1 LINE2 2. LINE1 LINE2 4. LINE1 LINE2 SECURITY REQUIRED: SECURITY.REQUIRED



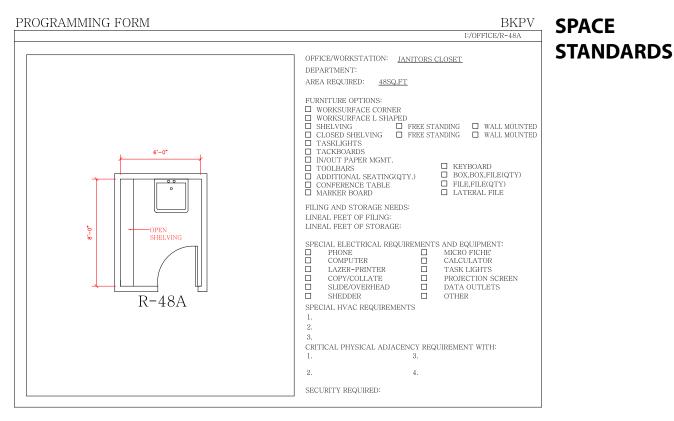
## **Fire Station**



#### PROGRAMMING FORM BKPV I:/OFFICE/R-42 OFFICE/WORKSTATION: DATA/TELEPHONE ROOM DEPARTMENT: AREA REQUIRED: 42.SQ.FT FURNITURE OPTIONS: □ WORKSURFACE CORNER □ WORKSURFACE CORNER □ WORKSURFACE L SHAPED □ SHELVING □ FREE STANDING □ CLOSED SHELVING □ FREE STANDING □ TASKLIGHTS □ TASKLIGHTS □ TACKBOARDS □ IN/OUT PAPER MGMT. WALL MOUNTED KEYBOARD BOX,BOX,FILE(QTY) FILE,FILE(QTY) □ TOOLBARS □ ADDITIONAL SEATING(QTY.) CONFERENCE TABLE □ LATERAL FILE FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: LINEAL FEET OF STORAGE: SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER TASK LIGHTS COPY/COLLATE PROJECTION SCREEN DATA OUTLETS SLIDE/OVERHEAD SHEDDER OTHER SPECIAL HVAC REQUIREMENTS 1. 2. 3. CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 3. 1. 2. 4. SECURITY REQUIRED:



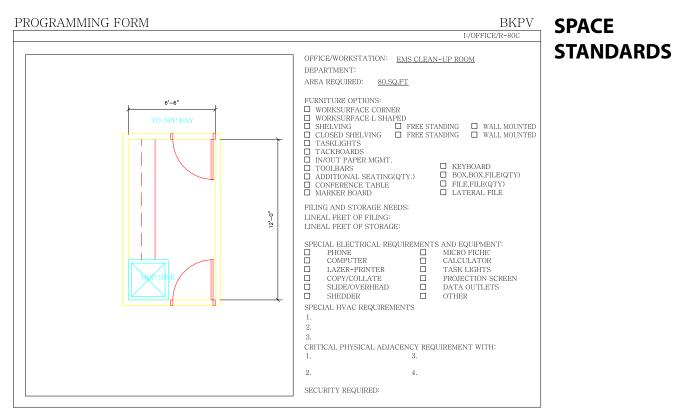
## **Fire Station**

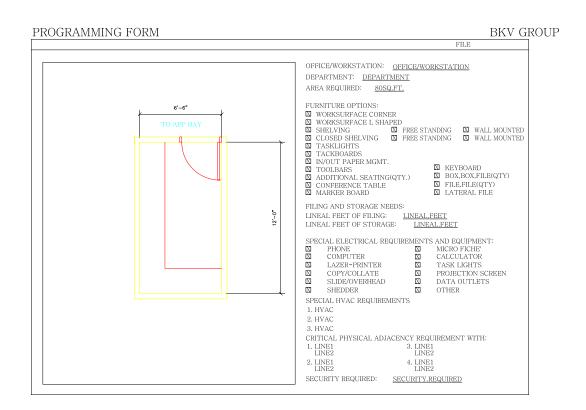


#### PROGRAMMING FORM BKPV I:/OFFICE/R-58 OFFICE/WORKSTATION: BUNK ROOM DEPARTMENT: AREA REQUIRED: <u>58.SQ.FT</u> FURNITURE OPTIONS: □ WORKSURFACE CORNER WORKSURFACE CONNE WORKSURFACE L SHAI SHELVING CLOSED SHELVING TASKLIGHTS TACKBOARDS IN/OUT PAPER MGMT. WORKSURFACE L SHAPED □ FREE STANDING □ FREE STANDING WALL MOUNTED KEYBOARD BOX,BOX,FILE(QTY) FILE,FILE(QTY) TOOLBARS ADDITIONAL SEATING(QTY.) CONFERENCE TABLE □ LATERAL FILE 7.-0" FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: LINEAL FEET OF STORAGE: SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER TASK LIGHTS COPY/COLLATE PROJECTION SCREEN SLIDE/OVERHEAD DATA OUTLETS 7'-0" SHEDDER OTHER SPECIAL HVAC REQUIREMENTS 1. 2. 3. CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 3. 1. 2. 4. SECURITY REQUIRED:



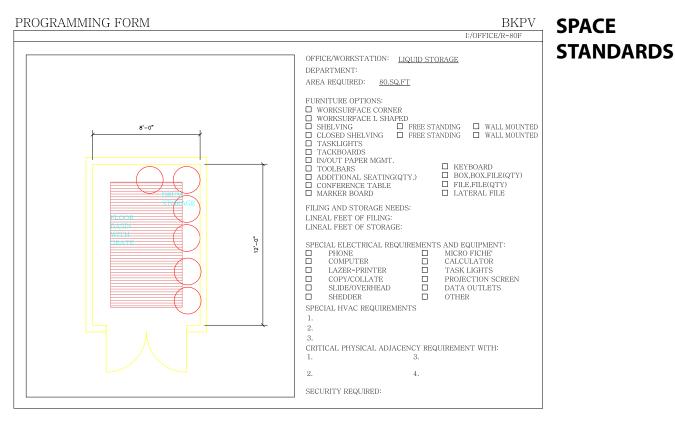
## **Fire Station**





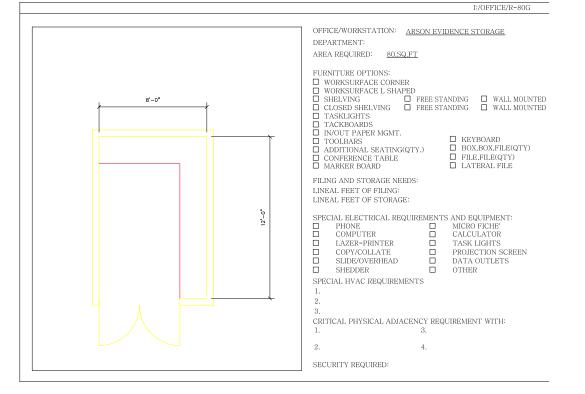


## Fire Station



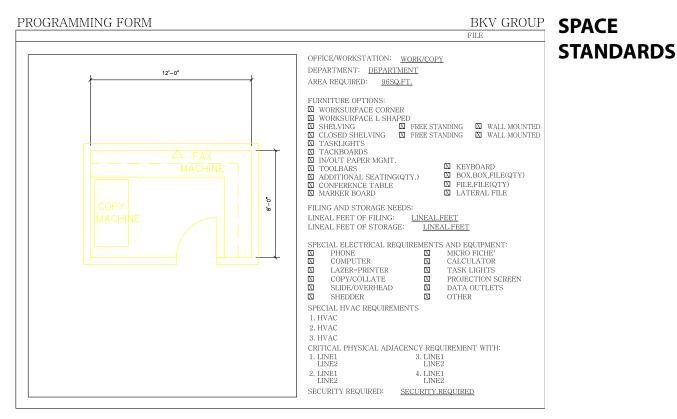
### PROGRAMMING FORM





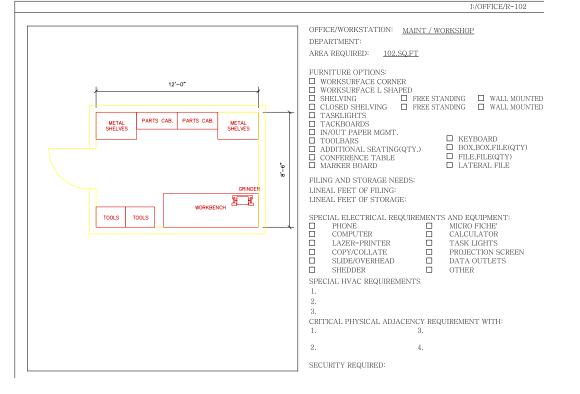


## Fire Station

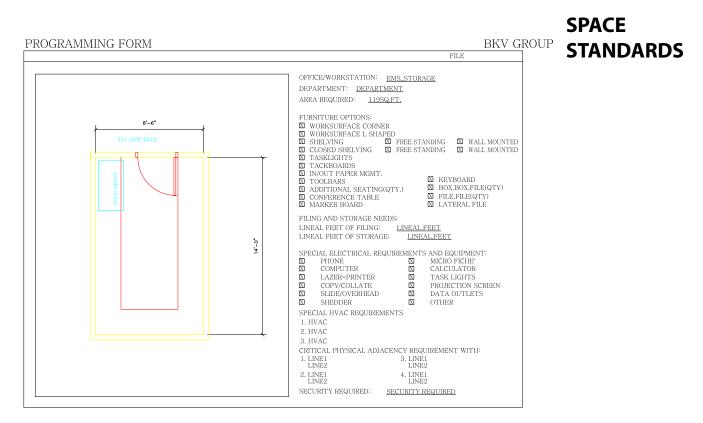


## PROGRAMMING FORM

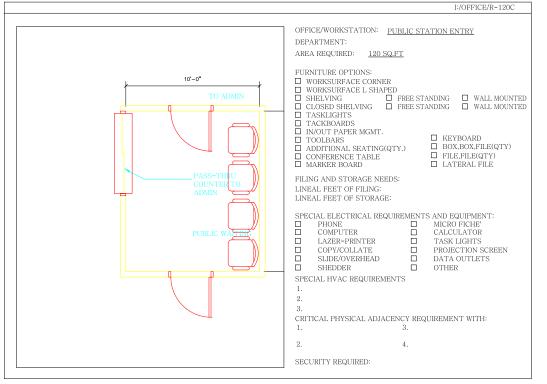




**Fire Station** 



## PROGRAMMING FORM

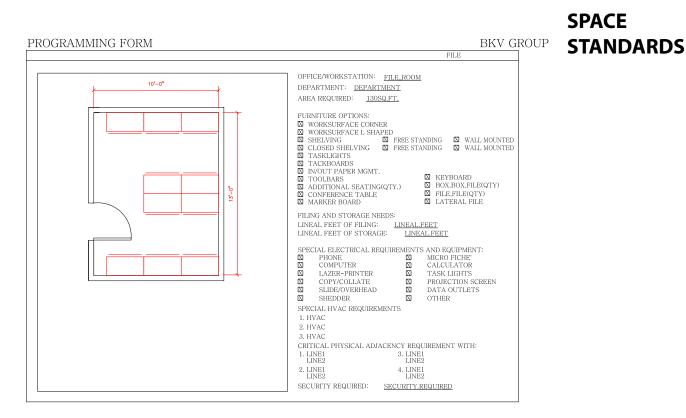


02.25.05

BKPV



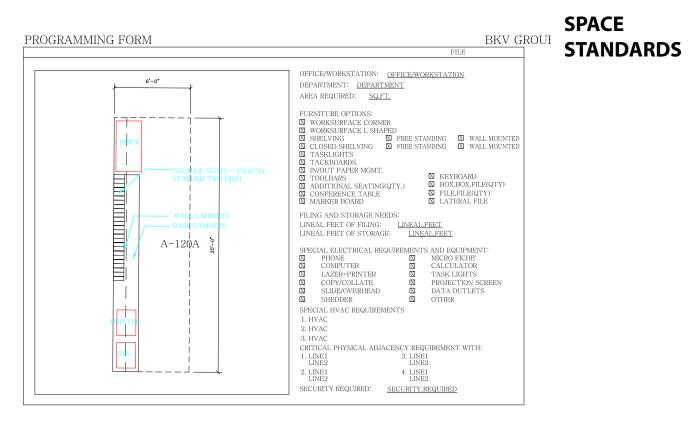
**Fire Station** 



#### PROGRAMMING FORM BKPV I:/OFFICE/R-144 OFFICE/WORKSTATION: GENERAL STORAGE DEPARTMENT: 12'-0" AREA REQUIRED: 144.SQ.FT FURNITURE OPTIONS: □ WORKSURFACE CORNER □ WORKSURFACE CORNER □ WORKSURFACE L SHAPED □ SHELVING □ FREE STANDING □ WALL MOUNTED □ CLOSED SHELVING □ FREE STANDING □ WALL MOUNTED □ TASKLIGHTS □ TASKLIGHT KEYBOARD BOX,BOX,FILE(QTY) FILE,FILE(QTY) INVOUTPAPER MGMT. TOOLBARS ADDITIONAL SEATING(QTY.) CONFERENCE TABLE MARKER BOARD □ LATERAL FILE FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: LINEAL FEET OF STORAGE: 14'-0" SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER TASK LIGHTS COPY/COLLATE PROJECTION SCREEN SLIDE/OVERHEAD DATA OUTLETS SHEDDER OTHER SPECIAL HVAC REQUIREMENTS 1. 2. 3. CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 3. 1. 2. 4. SECURITY REQUIRED:



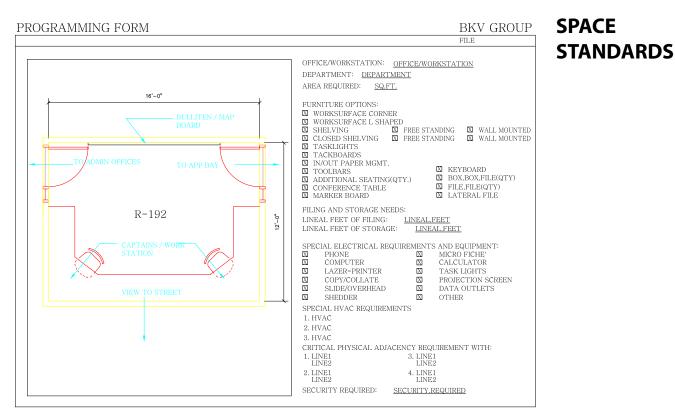
**Fire Station** 

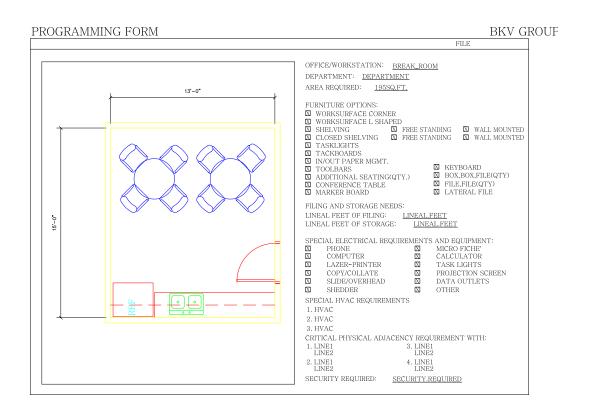


#### BKV GROUP PROGRAMMING FORM FILE OFFICE/WORKSTATION: PUBLIC\_TOILETS 9'-0" DEPARTMENT: <u>DEPARTMENT</u> AREA REQUIRED: 171SQ.FT. FURNITURE OPTIONS: FURNITURE OPTIONS: WORKSURFACE L SHAPED WORKSURFACE L SHAPED CLOSED SHELVING TASKLIGHTS TACKBOARDS IN/OUT PAPER MGMT. NOLDBARS DADREMAN CRATTINGCOTX ☑ KEYBOARD ☑ BOX,BOX,FILE(QTY) ☑ FILE,FILE(QTY) ☑ LATERAL FILE ADDITIONAL SEATING CONFERENCE TABLE ADDITIONAL SEATING(QTY.) FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: <u>LINEAL.FEET</u> LINEAL FEET OF STORAGE: <u>LINEAL.FEET</u> .0-,61 SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: XX PHONE XX MICRO FICHE' XX COMPUTER XX CALCULATOR XX LAZER-PRINTER XX TASK LIGHTS XX COPY/COLLATE XX PROJECTION SCRI TASK LIGHTS PROJECTION SCREEN SLIDE/OVERHEAD X X DATA OUTLETS $\square$ SHEDDER $\square$ OTHER SPECIAL HVAC REQUIREMENTS 1. HVAC 2. HVAC 3. HVAC CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 3. LINE1 LINE2 1. LINE1 LINE2 2. LINE1 LINE2 4. LINE1 LINE2 SECURITY REQUIRED: SECURITY.REQUIRED



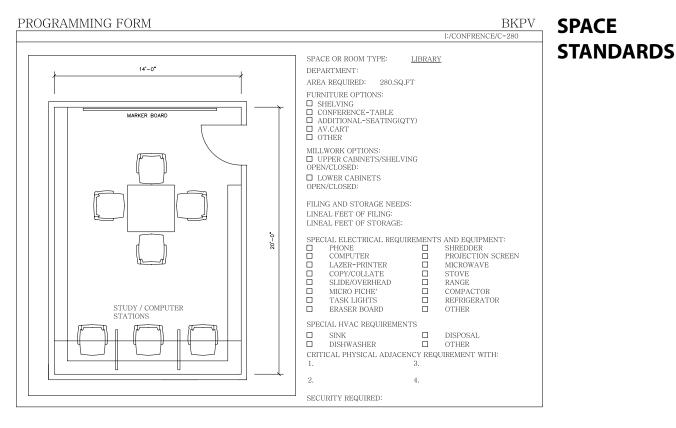
**Fire Station** 



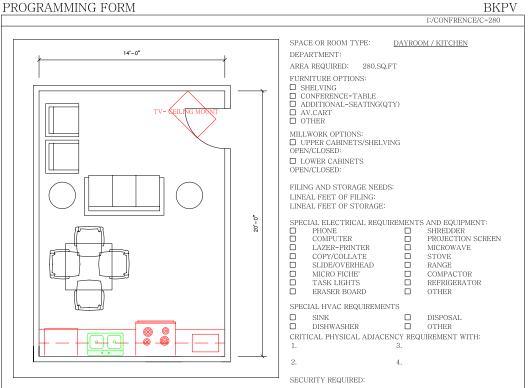




## **Fire Station**

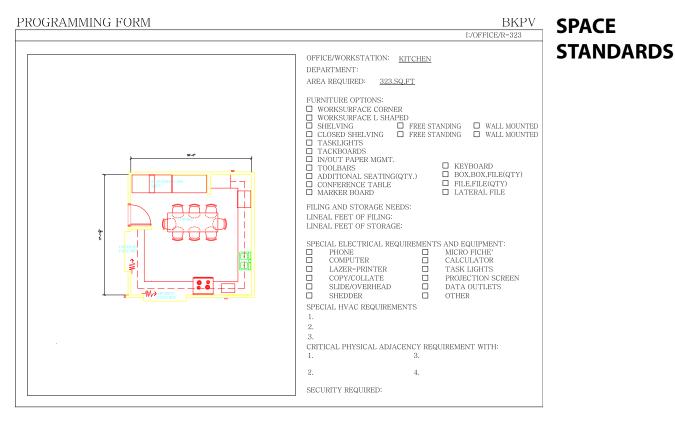


## PROGRAMMING FORM

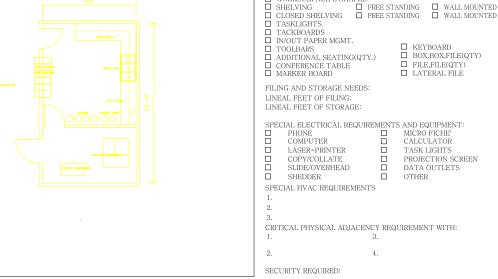




## **Fire Station**



# PROGRAMMING FORM OFFICE/WORKSTATION: <u>SCBA ROOM</u> DEPARTMENT: AREA REQUIRED: <u>334SQ.FT</u> FURNITURE OPTIONS: WORKSURFACE L SHAPED SHELVING — FREE STAL CLOSED SHELVING — FREE STAL TASKLIGHTS IN/OUT PAPER MGMT. TOOLBARS DIN/OUT PAPER MGMT.

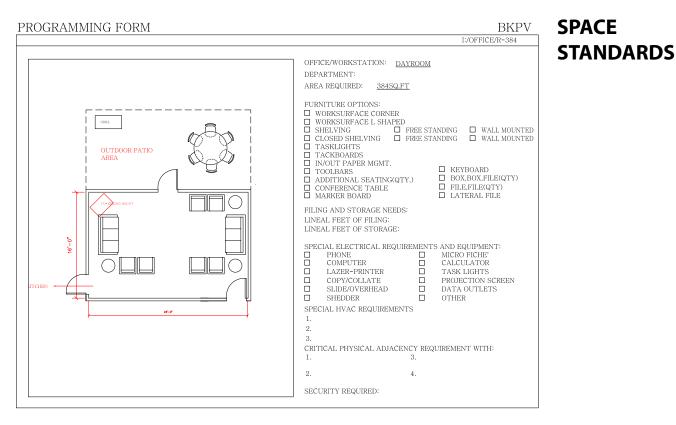


02.25.05

BKV GROUP I:/OFFICE/R-334



## **Fire Station**



#### PROGRAMMING FORM BKV GROUP FILE OFFICE/WORKSTATION: OFFICE/WORKSTATION DEPARTMENT: DEPARTMENT AREA REQUIRED: 450SQ.FT. FURNITURE OPTIONS: WORKSURFACE CORNER WORKSURFACE L SHAPED SHELVING FREE STANDING SHELVING FREE STANDING TASKLIGHTS AUL MOUNTED TASKLIGHTS AUL MOUNTED TASKLOARDS IN/OUT PAPER MGMT. TOOLBARS KEYBOARD MOUNTIONAL SEATING(QTY.) DOX,BOX,FILE(QTY) ONCEPERINCE TABLE NOLL FUL FUL FOLY ☑ BOX,BOX,FILE(QTY) ☑ FILE,FILE(QTY) CONFERENCE TABLE MARKER BOARD DISPL X LATERAL FILE AYS FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: <u>LINEAL FEET</u> LINEAL FEET OF STORAGE: <u>LINEAL FE</u> LINEAL.FEET SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER COPY/COLLATE TASK LIGHTS $\square$ PROJECTION SCREEN SLIDE/OVERHEAD BENCH X DATA OUTLETS SHEDDER $\mathbb{X}$ OTHER SEATING SPECIAL HVAC REQUIREMENTS 1. HVAC retractin<mark>g secutity</mark> 2. HVAC oote 3. HVAC CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 3. LINE1 LINE2 1. LINE1 LINE2 2. LINE1 LINE2 4. LINE1 LINE2

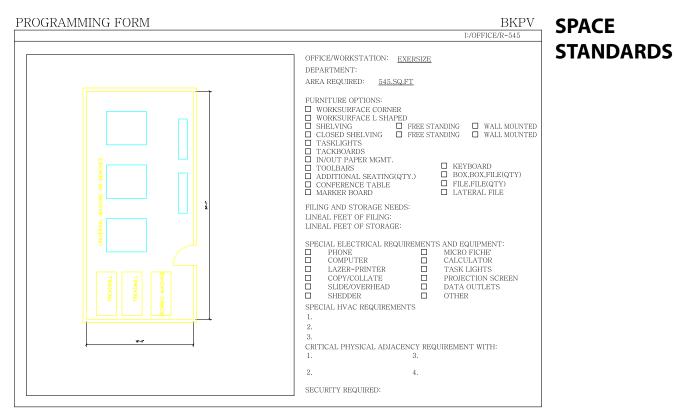
02.25.05



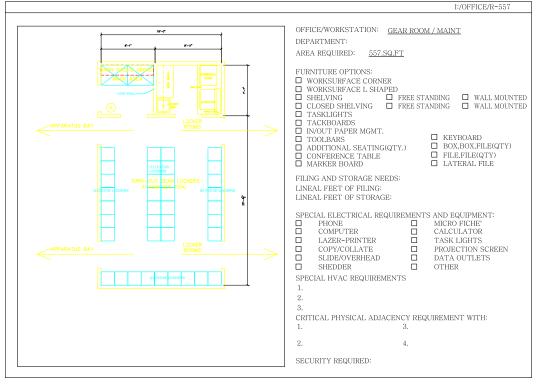
SECURITY REQUIRED:

SECURITY.REQUIRED

## **Fire Station**



## PROGRAMMING FORM

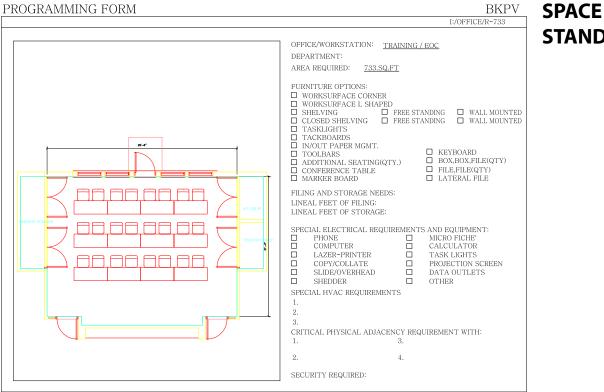


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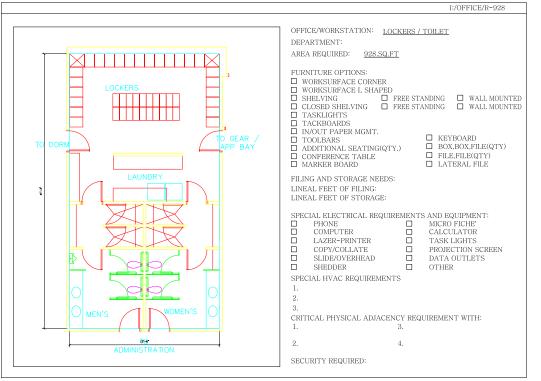
BKPV



## **Fire Station**



## PROGRAMMING FORM

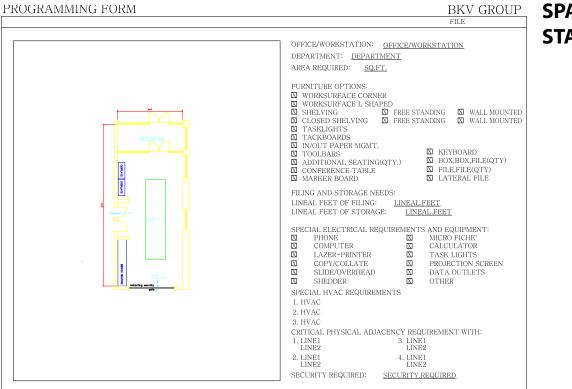


12 25 05

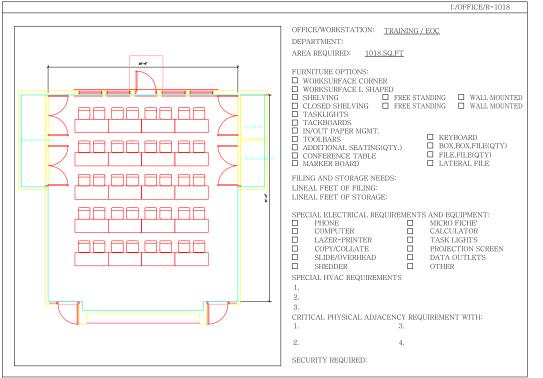


BKPV

### **Fire Station**



### PROGRAMMING FORM

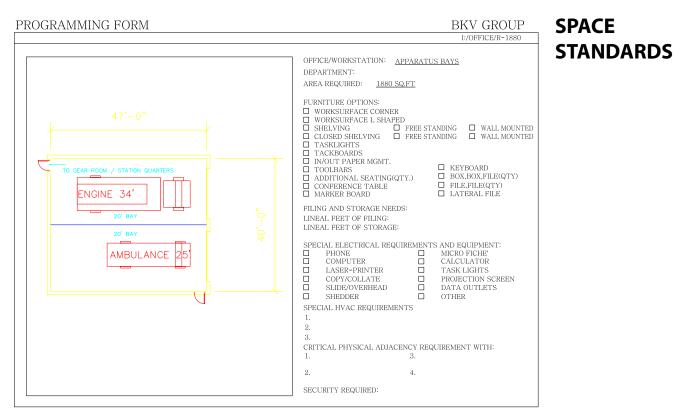


SPACE STANDARDS

BKPV

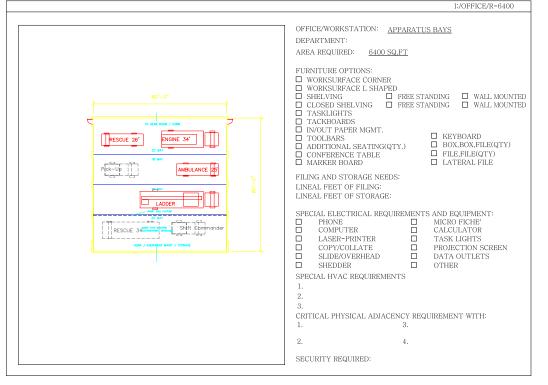
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### **Fire Station**



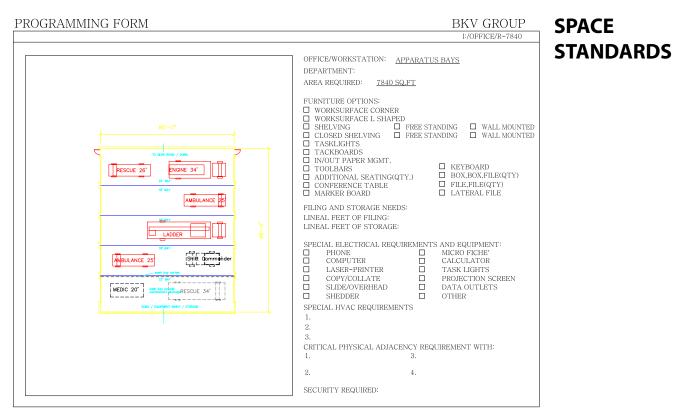
### PROGRAMMING FORM

### BKV GROUP





### **Fire Station**

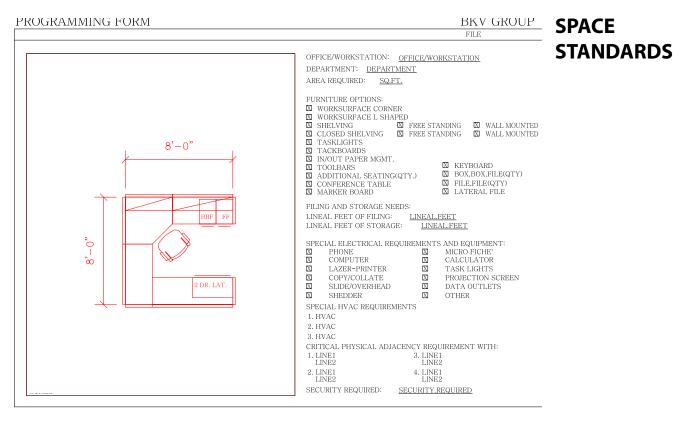


### PROGRAMMING FORM I:/OFFICE/W-36 OFFICE/WORKSTATION: WORKSTATION DEPARTMENT: AREA REQUIRED: <u>36.SQ.FT</u> FURNITURE OPTIONS: □ WORKSURFACE CORNER □ WORKSURFACE L SHAPED □ SHELVING □ FREE STANDING FREE STANDING FREE STANDING □ WALL MOUNTED CLOSED SHELVING TASKLIGHTS □ WALL MOUNTED TACKBOARDS □ TACKBOARDS □ IN/OUT PAPER MGMT. □ TOOLBARS □ ADDITIONAL SEATING(QTY.) □ CONFERENCE TABLE □ MARKER BOARD □ KEYBOARD □ BOX,BOX,FILE(QTY) □ FILE,FILE(QTY) □ LATERAL FILE 9-0 FILING AND STORAGE NEEDS: LINEAL FEET OF FILING: LINEAL FEET OF STORAGE: SPECIAL ELECTRICAL REQUIREMENTS AND EQUIPMENT: W-36 PHONE COMPUTER MICRO FICHE' CALCULATOR LAZER-PRINTER COPY/COLLATE TASK LIGHTS PROJECTION SCREEN SLIDE/OVERHEAD DATA OUTLETS SHEDDER OTHER SPECIAL HVAC REQUIREMENTS 1. 2. 3. CRITICAL PHYSICAL ADJACENCY REQUIREMENT WITH: 1. 3. 2. 4. SECURITY REQUIRED:

BKPV



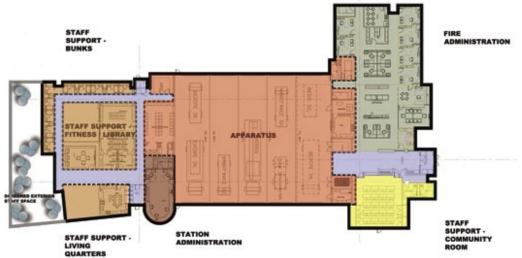
### Fire Station





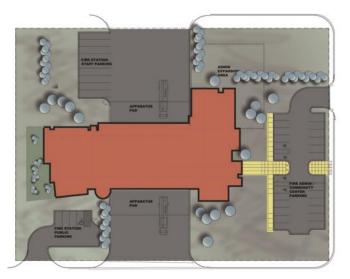
## Concept Station Plans and "Fit" Concept Site Plans

The following diagrams depict preliminary plan concepts for the Plan Options 1, 2, 3A, 3B, and 4 as programmed in this report. The plan diagrams are used to validate the space program, while the "Fit" site plans are used to determine site configuration and area requirements used in the assessment of the preliminary and final sites selected.



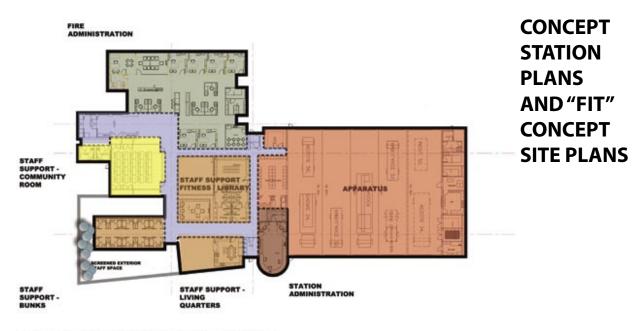
## CONCEPT STATION PLANS AND "FIT" CONCEPT SITE PLANS

### GRAND ISLAND FIRE DEPARTMENT OPTION 1 -HEADQUARTER FIRE STATION

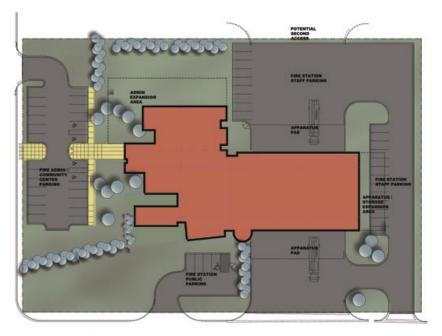


GRAND ISLAND FIRE DEPARTMENT OPTION 1 -HEADQUARTER FIRE STATION SITE PLAN 2.25 - 3 ACRES 12/1704





### **GRAND ISLAND FIRE DEPARTMENT OPTION 2** -**HEADQUARTER FIRE STATION** 12/17/04



GRAND ISLAND FIRE DEPARTMENT OPTION 2 -HEADQUARTER FIRE STATION SITE PLAN 2.25 - 3 ACRES 12/17/04

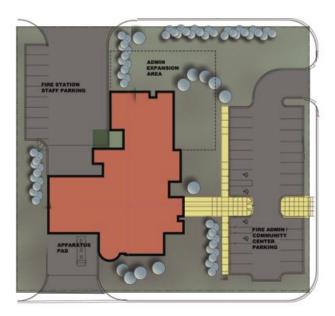


Fire Station



CONCEPT **STATION PLANS** AND "FIT" CONCEPT **SITE PLANS** 

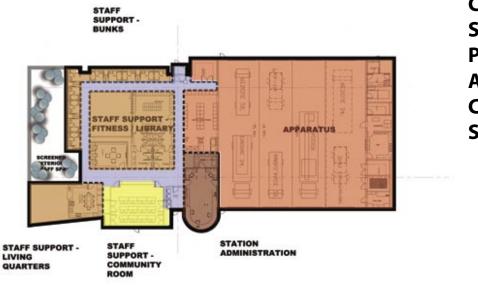
### **GRAND ISLAND FIRE DEPARTMENT OPTION 3A -**FIRE ADMINISTRATION 12/17/04



**GRAND ISLAND FIRE DEPARTMENT OPTION 3A** -FIRE ADMINISTRATION SITE PLAN 1.25 - 1.75 ACRES 12/17/04



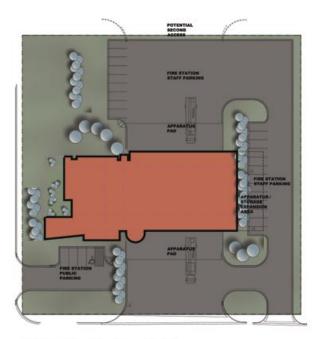
Fire Station



CONCEPT STATION PLANS AND "FIT" CONCEPT SITE PLANS

### GRAND ISLAND FIRE DEPARTMENT OPTION 3B -FIRE STATION NO 1

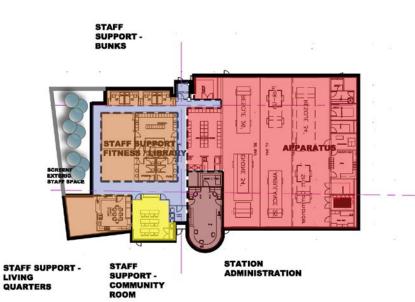
12/17/04



GRAND ISLAND FIRE DEPARTMENT OPTION 3B -FIRE STATION NO 1 SITE PLAN 1.75 - 2.5 ACRES 1217704



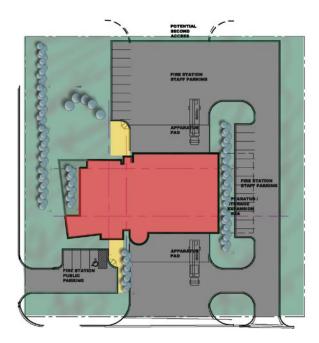
Fire Station



CONCEPT STATION PLANS AND "FIT" CONCEPT SITE PLANS

## GRAND ISLAND FIRE DEPARTMENT OPTION 4 -FIRE STATION NO 1 AND 2 (3) BAY

2/3/05



GRAND ISLAND FIRE DEPARTMENT OPTION 4 -FIRE STATION NO 1 SITE PLAN 1.78 - 2.5 ACRE8 2/304



Fire Station



# SITE IDENTIFICA-TION MAPPING

### Site Identification Mapping

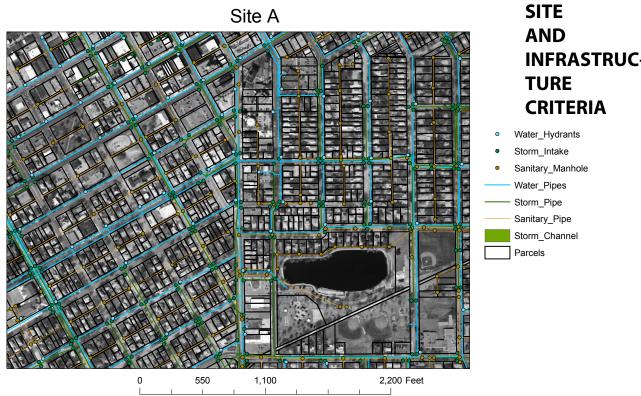
The map depicts the sites selected for preliminary and final site assessment based on the Fire and EMS Services Facility and Location Study included in Section 3 of this report.

### Site Infrastructure and Criteria

The following diagrams depict existing infrastructural conditions, land-use and zoning for each of the sites reviewed for potential Fire Station locations. The information provided formed the basis for the assessment / discussion points included for each site in the Preliminary Site Master Plan Concepts.

SITE AND INFRSTRUC-TURE CRITERIA





Site A

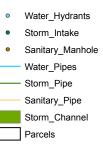


**INFRASTRUC-**





SITE AND **INFRASTRUC-**TURE **CRITERIA** 



Site B





EX\_PUBBuild EX\_PUBSchool EX\_SingleFamily EX\_VacantCorp





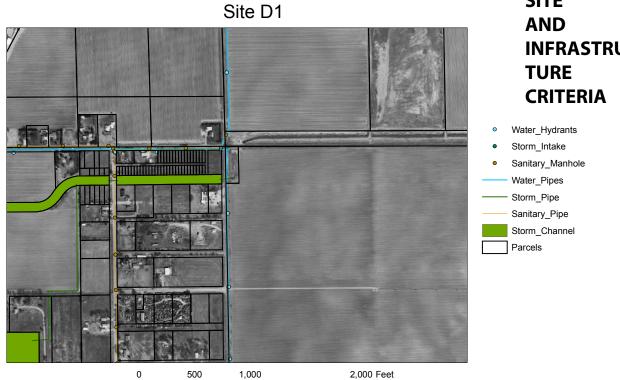
Site C



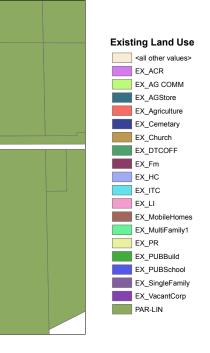
SITE **INFRASTRUC-CRITERIA** 



### Fire Station







02.25.05



Site D1

1,250

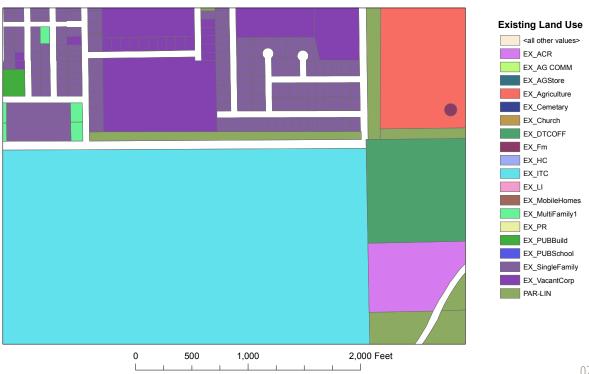
0

625

2,500 Feet

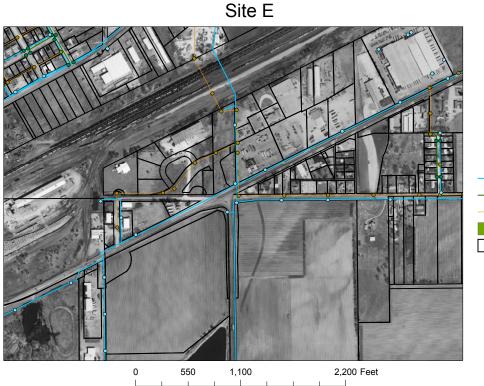


Site D2

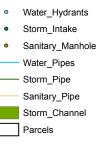


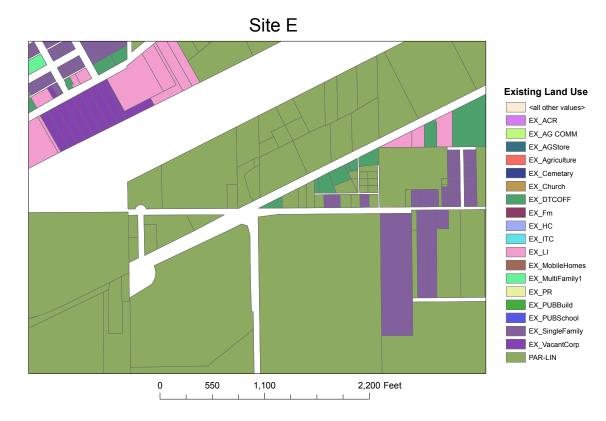




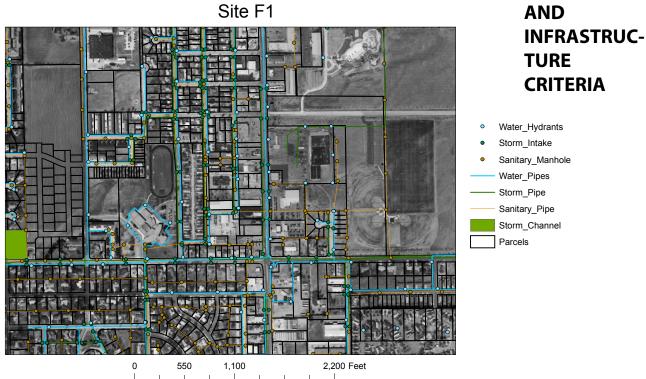


## SITE AND INFRASTRUC-TURE CRITERIA









Site F1 EX\_LI PAR-LIN 0 550 1,100 2,200 Feet 

**Existing Land Use** <all other values> EX\_ACR EX\_AG COMM EX\_AGStore EX\_Agriculture EX\_Cemetary EX\_Church EX\_DTCOFF EX\_Fm EX\_HC EX\_ITC EX\_MobileHomes EX\_MultiFamily1 EX\_PR EX\_PUBBuild EX\_PUBSchool EX\_SingleFamily EX\_VacantCorp

02.25.05



SITE

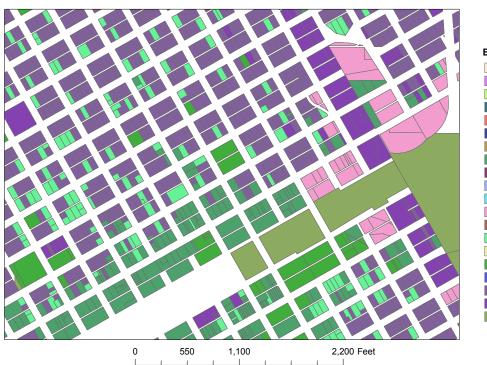
Site F2

## SITE AND INFRASTRUC-TURE CRITERIA



# Water\_Hydrants Storm\_Intake Sanitary\_Manhole Water\_Pipes Storm\_Pipe Sanitary\_Pipe Storm\_Channel Parcels

Site F2



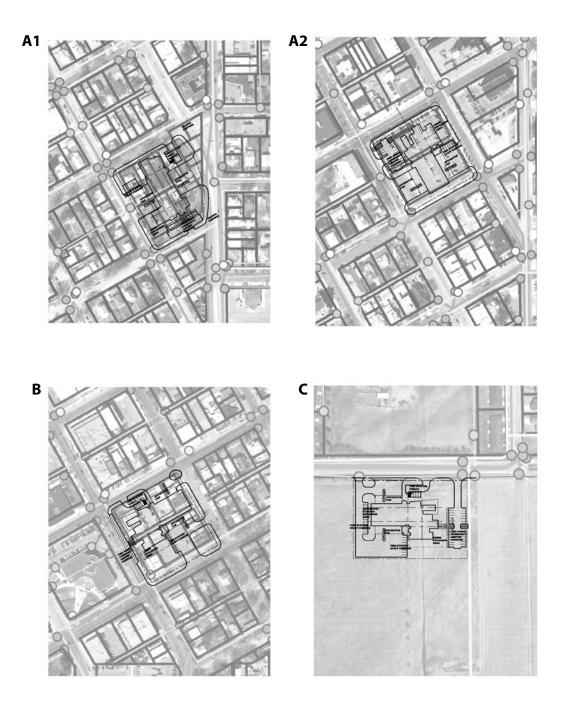




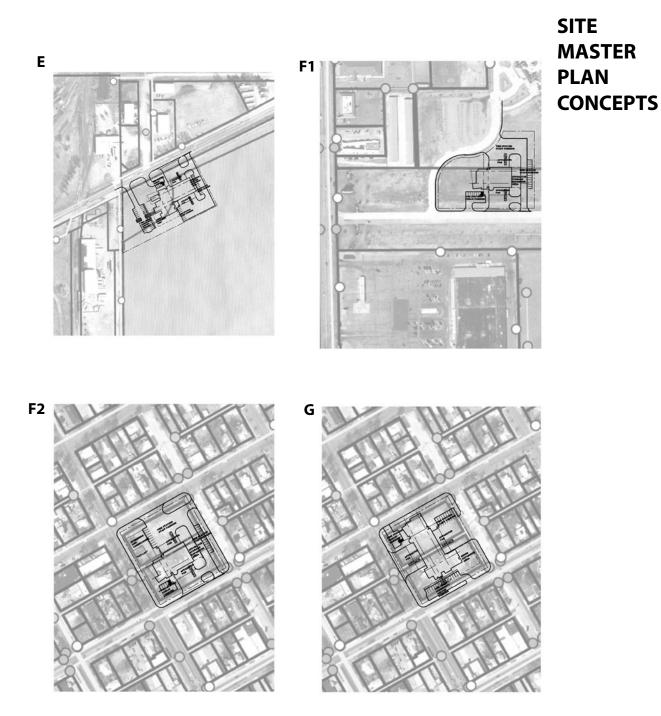
## **Site Master Plan Concepts**

Based on the Fire and EMS Location Study, Preliminary Site Master Plan Concepts were developed for sites A1, A2, B, C, E, F1, F2, and G. Included with each option is an overview of Fire Station Criteria and discussion points of each preliminary option. These preliminary options, with discussion points, form the basis of the Preliminary Option

## SITE MASTER PLAN CONCEPTS







Site D - Preliminary site plan not considered since site is unfeasible for response time coverage and cost.



## **Preliminary Site Master Plan Ranking**

Based on the Preliminary Site Master Plan Concepts and discussion points the following represents the assessment of the seven sites master planned. Following site assessment, Sites F, A1, and A2 are the preferred sites, while sites B, C, E, and G are not feasible or appropriate for further consideration due to emergency response times and impact on operations of the Fire Department.

OWNER: PROJ: LOC.: TITLE:	City of Grand Island Grand Island Fire Station Grand Island, Nebraska PRELIMINARY CONCEPTUAL ESTIMAT!			DATE: REV#: PROJ#: FILE#:	03-Feb-05 1637		BGR	ΚV
	Preliminary Fire Station Site Ranking Consensu	s Site A	Site A2	Site B	Site C	Site E	Site F	Site G
	Access to Site	2	1	6	6	4	3	5
	Response from Site	2	2	3	4	7	1	6
	Anticipation of Future Fire Needs	2	2	3	4	7	1	6
	Site Configuration / Flexibility	5	4	6	2	1	3	7
	Expansion Potential	5	4	7	3	2	1	6
	Compatibility With Surroundings	6	4	5	3	1	2	7
	Support of Economic Development	4	1	2	6	5	3	7
	Relationship to Other Municipal Facilities	4	2	1	7	3	5	6
	Land Acquisition / Development Costs	7	6	5	2	3	4	1
	Overall Project Costs	7	5	4	2	3	6	1
	Anticipated Willingness of Seller	7	6	5	2	3	1	6
	Totals (lower score = Higher preference)	51	37	47	41	39	30	58
	Rank	6	2	5	4	3	1	7

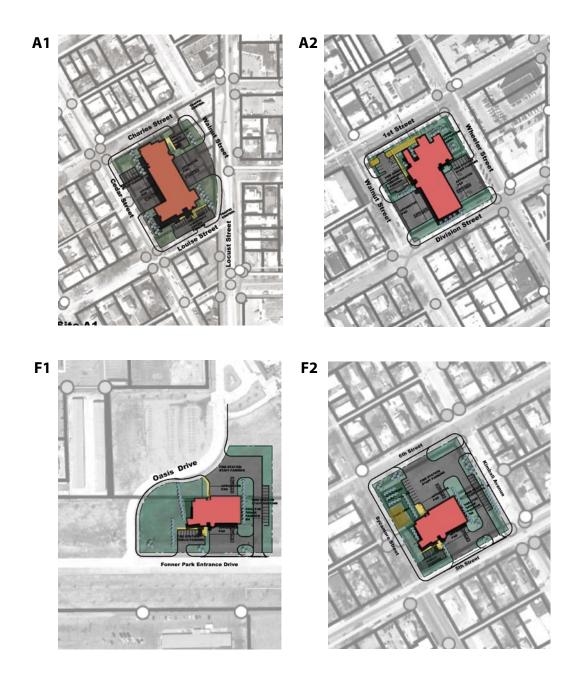
PRELIMI-NARY SITE MASTER PLAN RANKING



## **Final Site Master Planning**

Based on the Preliminary Site Master Plan Concepts and site ranking, Sites F, A1, and A2 are the preferred sites, with Site F (including site F1 and F2) being the recommended sites/strategy. The Master Plan options which follow are preliminary, and as a Master Plan are intended to assess site configurations, more detailed planning should occur to determine optimum building configurations, site access points, and circulation. The Master Plans provided should be considered a flexible guide for future development of design concepts.

## FINAL SITE MASTER PLANNING





Fire Station

OWNER: PROJ: LOC.:	City of Grand Island Grand Island Fire Station Grand Island, Nebraska		DATE: REV#: PROJ#:	03-Feb-05 1637	BKV
TITLE:	PRELIMINARY CONCEPTUAL ESTIMATE		FILE#:		GROUP
	Option Comparisons				
	OPTION A1		TOTAL PROJ	ECT COSTS	\$4,978,530
	LAND ACQUISITION / DEVELOPMENT COSTS CONSTRUCITON COSTS SOFT COSTS / CONTINGENCIES	\$1,147,500 \$2,995,710 \$835,320			
	OPTION A2		TOTAL PROJ	ECT COSTS	\$4.463.904
	LAND ACQUISITION / DEVELOPMENT COSTS CONSTRUCITON COSTS SOFT COSTS / CONTINGENCIES	\$696,000 \$3,034,210 \$733,694			
	OPTION B		TOTAL PROJ	ECT COSTS	\$4,433,324
	LAND ACQUISITION / DEVELOPMENT COSTS CONSTRUCITON COSTS SOFT COSTS / CONTINGENCIES	\$670,500 \$3,023,710 \$739,114			
	OPTION C		TOTAL PROJ	ECT COSTS	\$4,039,153
	LAND ACQUISITION / DEVELOPMENT COSTS CONSTRUCITON COSTS SOFT COSTS / CONTINGENCIES	\$336,000 \$2,944,210 \$758,943			
	OPTION E		TOTAL PROJ	ECT COSTS	\$4,195,317
	LAND ACQUISITION / DEVELOPMENT COSTS CONSTRUCITON COSTS SOFT COSTS / CONTINGENCIES	\$471,250 \$2,949,460 \$774,607			
	OPTION F (F1 AND F2)		TOTAL PROJ	ECT COSTS	\$4,941,829
	LAND ACQUISITION / DEVELOPMENT COSTS CONSTRUCITON COSTS SOFT COSTS / CONTINGENCIES	\$576,000 \$3,467,760 \$898,069			
	OPTION G LAND ACQUISITION / DEVELOPMENT COSTS	\$240.000	TOTAL PROJ	ECT COSTS	\$3,917,285
	CONSTRUCITON COSTS SOFT COSTS / CONTINGENCIES	\$2,848,210 \$829,075			

## OPINION OF PROBABLE CONSTRUC-TION COSTS

Fianancing costs should be verified by Bond consultant. Data/Telephone costs are allowance only - County would be responsible for data and telephone cabeling costs separately from Building construction bids. All amounts are based on December 2004 dollar



Fire Station

OWNER: PROJ:	City of Grand Island Grand Island Fire Station		DATE: REV#:	03-Feb-05	B	ΚV
OC.: ITLE:	Grand Island, Nebraska PRELIMINARY CONCEPTUAL ESTIMATE		PROJ#: FILE# :	1637	GR	OUP
	Site Option A - With Concept Plan 1		NEW SQ FT HQ SQ FT HQ		23,711 0	
			TOTAL NEW SF		23,711	
			AREA TO REMA	IN	-	
	Acres: 2		TOTAL SQ FT		23,711	
Cost P	Per Acre 150000	0007/		COST	0.15	DEDOEN
	DESCRIPTION	COST/ BUILDING	BUILDING SF	SF	SUB TOTAL	PERCEN TOTA
			00 744	¢20.44	¢700 500	4 - 440
	ADMINISTRATION LAND ACQUISITION	\$760.000	23,711	\$32.41	\$768,500	15.44% 15.27%
	LEGAL, FISCAL & ADMINISTRATIVE	\$760,000 \$0				0.00%
	SOIL BORINGS	\$5,000				0.007
	SURVEY	\$3,500				0.079
	CONSTRUCTION COSTS		23,711	\$126.34	\$2,995,710	60.17%
	SITEWORK - DEMO	\$40,000	,			0.80%
	SITEWORK - UTILITIES RELOCATION	\$19,500				0.39%
	SITEWORK - PAVEMENT / LANDSCAPING	\$200,000				4.029
	BUILDING DEMOLITION	\$128,000				2.57%
	BUILDING CONSTRUCTION - RENOVATION	\$0				0.00%
	BUILDING CONSTRUCTION - NEW	\$2,608,210				52.399
	ABATEMENT ALLOWANCE	\$0				0.00%
	FEES		23,711	\$14.99	\$355,325	7.14%
	A/E DESIGN AND BIDDING FEES	\$259,091				5.20%
	CIVIL ENGINEERING	\$6,500				0.139
	LANDSCAPE ARCHITECT	\$5,200				0.109
	REIMBURSABLE EXPENSES	\$19,432				0.399
	PLAN REVIEW FEES & PERMITS	\$30,481				0.619
	SPECIAL INSPECTIONS AND TESTING CITY SAC/WAC (PRELIM ALLOWANCE)	\$7,620 \$27,000				0.159
		\$21,000				
	FURNISHINGS, FIXTURES & EQUIPMENT (FF&E) OFFICE FURNITURE ALLOWANCE	\$118,555	23,711	\$6.63	\$157,199	3.16 2.38
	KITCHEN EQUIPMENT ALLOWANCE	\$15.000				0.30
	LAUNDRY EQUIPMENT ALLOWANCE	\$12,000				0.249
	FF&E DESIGN FEES	\$11,644				0.239
	TECHNOLOGY		23,711	\$2.21	\$52,422	1.05%
	DATA / TELEPHONE ALLOWANCE	\$5,000				0.10%
	SECURITY / VIDEO SYSTEMS	\$47,422				0.95%
	CONTINGENCY		23,711	\$27.39	\$649,373	13.04
	ESTIMATING (5%)	\$216,458				4.35%
	PROJECT (10%)	\$432,916				8.70%
	FINANCING		23,711	\$0.00	\$0	0.00
	BOND ISSUANCE COSTS	\$0				0.00%
	INVESTMENT EARNINGS	\$0				0.00%

## OPINION OF PROBABLE CONSTRUC-TION COSTS

Financing costs should be verified by Bond consultant. Data/Telephone costs are allowance only - County would be responsible for data and telephone cabeling costs separately from Building construction bids. All amounts are based on December 2004 dollars and are subject to inflation and market variations.

Fire Station

DWNER: PROJ: LOC.: TITLE:	Grand I Grand I	Grand Island Island Fire Station Island, Nebraska IINARY CONCEPTUAL ESTIMATE		DATE: REV#: PROJ#: FILE#:	03-Feb-05 1637	B	K V
	Site 0	Option A2 - With Concept Plan 2		NEW SQ FT HQ S NEW SQ FT BUILI		23,711 0	
				TOTAL NEW SF		23,711	
				AREA TO REMAIN	1	-	
	Acres:	1.8		TOTAL SQ FT		23,711	
Cost F	Per Acre	150000			COST		
	DESCR	IPTION	COST/ BUILDING	BUILDING SF	SF	SUB TOTAL	PERCENT TOTAL
	ADMIN	IISTRATION		23,711	\$11.75	\$278,500	6.24%
		LAND ACQUISITION (REPLACEMENT PARKING)	\$270,000				6.05%
		LEGAL, FISCAL & ADMINISTRATIVE	\$0				0.00%
		SOIL BORINGS	\$5,000				0.11%
		SURVEY	\$3,500				0.08%
	CONS	TRUCTION COSTS		23,711	\$127.97	\$3.034.210	67.97%
		SITEWORK - DEMO	\$36.000			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.81%
		SITEWORK - UTILITIES RELOCATION	\$0				0.00%
		SITEWORK - PAVEMENT / LANDSCAPING	\$180,000				4.03%
		REPLACEMNET PARKING	\$210,000				4.70%
		BUILDING DEMOLITION	\$0				0.00%
		BUILDING CONSTRUCTION - RENOVATION	\$0				0.00%
		BUILDING CONSTRUCTION - NEW	\$2,608,210				58.43%
		ABATEMENT ALLOWANCE	\$0				0.00%
	FEES			23,711	\$15.15	\$359,324	8.05%
	FEES	A/E DESIGN AND BIDDING FEES	\$262,364	23,711	φ13.13	<i>\$</i> 339,324	5.88%
		CIVIL ENGINEERING	\$6.500				0.15%
		LANDSCAPE ARCHITECT	\$5,200				0.129
		REIMBURSABLE EXPENSES	\$19,677				0.449
		PLAN REVIEW FEES & PERMITS	\$30,866				0.69%
		SPECIAL INSPECTIONS AND TESTING	\$7.717				0.179
		CITY SAC/WAC (PRELIM ALLOWANCE)	\$27,000				0.60%
				00 744	<b>**</b> • • • •	£457.400	2 500
	FURNI	SHINGS, FIXTURES & EQUIPMENT (FF&E) OFFICE FURNITURE ALLOWANCE	\$118,555	23,711	\$6.63	\$157,199	3.52 2.66
		KITCHEN EQUIPMENT ALLOWANCE	\$15,000				0.34%
		LAUNDRY EQUIPMENT ALLOWANCE	\$12,000				0.27%
		FF&E DESIGN FEES	\$11,644				0.26%
	TECHN	NOLOGY		23,711	\$2.21	\$52,422	1.179
		DATA / TELEPHONE ALLOWANCE SECURITY / VIDEO SYSTEMS	\$5,000 \$47,422				0.11% 1.06%
		SECORITY VIDEO STSTEMS	<b>\$</b> 47,422				1.007
	CONTI	NGENCY		23,711	\$24.56	\$582,248	13.04%
		ESTIMATING (5%)	\$194,083				4.35%
		PROJECT (10%)	\$388,166				8.70%
	FINAN	CINC		23,711	\$0.00	\$0	0.00%
	r in/An	BOND ISSUANCE COSTS	\$0	23,711	\$0.00		0.009
		INVESTMENT EARNINGS	\$0				0.00%

## OPINION OF PROBABLE CONSTRUC-TION COSTS

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Fire Station

OWNER: PROJ: LOC.: TITLE:	City of Grand Island Grand Island Fire Station Grand Island, Nebraska PRELIMINARY CONCEPTUAL ESTIMATE		DATE: REV#: PROJ#: FILE#:	03-Feb-05 1637	B	K V
	Site Option B - With Concept Plan 2		NEW SQ FT HQ SQ FT BUI		23,711 0	
			TOTAL NEW SF		23,711	
			AREA TO REMA	IN	-	
	Acres: 1.7		TOTAL SQ FT		23,711	
Cost F	Per Acre 150000					
	DESCRIPTION	COST/ BUILDING	BUILDING SF	COST SF	SUB TOTAL	PERCENT TOTAL
	ADMINISTRATION		23,711	\$11.11	\$263,500	5.94%
	LAND ACQUISITION	\$255,000				5.75%
	LEGAL, FISCAL & ADMINISTRATIVE	\$0				0.00%
	SOIL BORINGS SURVEY	\$5,000 \$3,500				0.11% 0.08%
	CONSTRUCTION COSTS		23,711	\$127.52	\$3,023,710	68.20%
	SITEWORK - DEMO	\$34.000	23,711	ψ121.52	ψ <b>3,023,</b> 710	0.77%
	SITEWORK - UTILITIES RELOCATION	\$19,500				0.44%
	SITEWORK - PAVEMENT / LANDSCAPING	\$170,000				3.83%
	BUILDING DEMOLITION	\$192,000				4.33%
	BUILDING CONSTRUCTION - RENOVATION	\$0				0.00%
	BUILDING CONSTRUCTION - NEW	\$2,608,210				58.83%
	ABATEMENT ALLOWANCE	\$0				0.00%
	FEES		23,711	\$15.11	\$358,233	8.08%
	A/E DESIGN AND BIDDING FEES	\$261,471				5.90%
	CIVIL ENGINEERING	\$6,500				0.15%
		\$5,200				0.12%
	REIMBURSABLE EXPENSES PLAN REVIEW FEES & PERMITS	\$19,610 \$30,761				0.44% 0.69%
	SPECIAL INSPECTIONS AND TESTING	\$7,690				0.09%
	CITY SAC/WAC (PRELIM ALLOWANCE)	\$27,000				0.61%
	FURNISHINGS, FIXTURES & EQUIPMENT (FF&E)		23.711	\$6.63	\$157,199	3.55%
	OFFICE FURNITURE ALLOWANCE	\$118,555				2.67%
	KITCHEN EQUIPMENT ALLOWANCE	\$15,000				0.34%
	LAUNDRY EQUIPMENT ALLOWANCE	\$12,000				0.27%
	FF&E DESIGN FEES	\$11,644				0.26%
	TECHNOLOGY		23,711	\$2.21	\$52,422	1.18%
	DATA / TELEPHONE ALLOWANCE	\$5,000				0.11%
	SECURITY / VIDEO SYSTEMS	\$47,422				1.07%
	CONTINGENCY	8400 750	23,711	\$24.39	\$578,260	13.04%
	ESTIMATING (5%) PROJECT (10%)	\$192,753 \$385,506				4.35% 8.70%
	FINANCING		23,711	\$0.00	\$0	0.00%
	BOND ISSUANCE COSTS	\$0	20,711	ę0.00		0.00%
	INVESTMENT EARNINGS	\$0				0.00%

OPINION OF PROBABLE CONSTRUC-TION COSTS

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Fire Station

DWNER: PROJ: LOC.: FITLE:	City of Grand Island Grand Island Fire Station Grand Island, Nebraska PRELIMINARY CONCEPTUAL ESTIMATE		DATE: REV#: PROJ#: FILE#:	03-Feb-05 1637	B	K V
	Site Option C - With Concept Plan 2		NEW SQ FT HQ S NEW SQ FT BUII		23,711 0	
			TOTAL NEW SF		23,711	
			AREA TO REMA	IN	-	
	Acres: 2.8		TOTAL SQ FT		23,711	
Cost I	Per Acre 150000					
	DESCRIPTION	COST/ BUILDING	BUILDING SF	COST SF	SUB TOTAL	PERCENT TOTAL
	ADMINISTRATION		23,711	\$0.36	\$8,500	0.21%
	LAND ACQUISITION	\$0				0.00%
	LEGAL, FISCAL & ADMINISTRATIVE	\$0				0.00%
	SOIL BORINGS SURVEY	\$5,000 \$3,500				0.12% 0.09%
	CONSTRUCTION COSTS		23,711	\$124.17	\$2,944,210	72.89%
	SITEWORK - DEMO	\$56.000	29,711	Ψ12-7.17	Ψ <b>Ζ,344,</b> Ζ10	1.39%
	SITEWORK - UTILITIES RELOCATION	\$30,000 \$0				0.00%
	SITEWORK - PAVEMENT / LANDSCAPING	\$280.000				6.93%
	BUILDING DEMOLITION	¢200,000 \$0				0.00%
	BUILDING CONSTRUCTION - RENOVATION	\$0				0.00%
	BUILDING CONSTRUCTION - NEW	\$2.608.210				64.57%
	ABATEMENT ALLOWANCE	\$0				0.00%
	FEES		23,711	\$14.76	\$349,975	8.66%
	A/E DESIGN AND BIDDING FEES	\$254,714				6.31%
	CIVIL ENGINEERING	\$6,500				0.16%
	LANDSCAPE ARCHITECT	\$5,200				0.13%
	REIMBURSABLE EXPENSES	\$19,104				0.47%
	PLAN REVIEW FEES & PERMITS	\$29,966				0.74%
	SPECIAL INSPECTIONS AND TESTING	\$7,492				0.19%
	CITY SAC/WAC (PRELIM ALLOWANCE)	\$27,000				0.67%
	FURNISHINGS, FIXTURES & EQUIPMENT (FF&E)		23,711	\$6.63	\$157,199	3.89%
	OFFICE FURNITURE ALLOWANCE	\$118,555				2.94%
	KITCHEN EQUIPMENT ALLOWANCE	\$15,000				0.37%
	LAUNDRY EQUIPMENT ALLOWANCE FF&E DESIGN FEES	\$12,000 \$11,644				0.30% 0.29%
	TECHNOLOGY		23.711	\$2.21	\$52.422	1.30%
	DATA / TELEPHONE ALLOWANCE	\$5.000				0.12%
	SECURITY / VIDEO SYSTEMS	\$47,422				1.17%
	CONTINGENCY		23,711	\$22.22	\$526,846	13.04%
	ESTIMATING (5%)	\$175,615				4.35%
	PROJECT (10%)	\$351,231				8.70%
	FINANCING		23,711	\$0.00	\$0	0.00%
	BOND ISSUANCE COSTS INVESTMENT EARNINGS	\$0 \$0				0.00% 0.00%

OPINION OF PROBABLE CONSTRUC-TION COSTS

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Fire Station

OWNER: PROJ: LOC.: TITLE:	City of Grand Island Grand Island Fire Station Grand Island, Nebraska PRELIMINARY CONCEPTUAL ESTIMATE		DATE: REV#: PROJ#: FILE#:	03-Feb-05 1637	B	K V
	Site Option E - With Concept Plan 2		NEW SQ FT HQ S NEW SQ FT BUII		23,711 0	
			TOTAL NEW SF		23,711	
			AREA TO REMA	IN	-	
	Acres: 3.25		TOTAL SQ FT		23,711	
Cost F	Per Acre 40000					
	DESCRIPTION	COST/ BUILDING	BUILDING SF	COST SF	SUB TOTAL	PERCENT TOTAL
	ADMINISTRATION		23,711	\$5.84	\$138,500	3.30%
	LAND ACQUISITION	\$130,000	,		, ,	3.10%
	LEGAL, FISCAL & ADMINISTRATIVE	\$0				0.00%
	SOIL BORINGS	\$5,000				0.12%
	SURVEY	\$3,500				0.08%
	CONSTRUCTION COSTS		23,711	\$124.39	\$2,949,460	70.30%
	SITEWORK - DEMO	\$16.250	20,711	ψ1 <u>2</u> -1.00	φ <u>2</u> ,040,400	0.39%
	SITEWORK - UTILITIES RELOCATION	\$0				0.00%
	SITEWORK - PAVEMENT / LANDSCAPING	\$325,000				7.75%
	BUILDING DEMOLITION	\$0				0.00%
	BUILDING CONSTRUCTION - RENOVATION	\$0				0.00%
	BUILDING CONSTRUCTION - NEW ABATEMENT ALLOWANCE	\$2,608,210 \$0				62.17% 0.00%
	FEES		23,711	\$14.78	\$350,520	8.36%
	A/E DESIGN AND BIDDING FEES	\$255,160				6.08%
	CIVIL ENGINEERING	\$6,500				0.15%
	LANDSCAPE ARCHITECT	\$5,200				0.12%
	REIMBURSABLE EXPENSES PLAN REVIEW FEES & PERMITS	\$19,137 \$30,019				0.46% 0.72%
	SPECIAL INSPECTIONS AND TESTING	\$7,505				0.72%
	CITY SAC/WAC (PRELIM ALLOWANCE)	\$27,000				0.64%
	FURNISHINGS, FIXTURES & EQUIPMENT (FF&E)		23,711	\$6.63	\$157,199	3.75%
	OFFICE FURNITURE ALLOWANCE	\$118,555				2.83%
	KITCHEN EQUIPMENT ALLOWANCE	\$15,000				0.36%
	LAUNDRY EQUIPMENT ALLOWANCE FF&E DESIGN FEES	\$12,000 \$11,644				0.29% 0.28%
	FF&E DESIGN FEES	\$11,0 <del>44</del>				0.20%
	TECHNOLOGY		23,711	\$2.21	\$52,422	1.25%
	DATA / TELEPHONE ALLOWANCE	\$5,000				0.12%
	SECURITY / VIDEO SYSTEMS	\$47,422				1.13%
	CONTINGENCY		23,711	\$23.08	\$547,215	13.04%
	ESTIMATING (5%)	\$182.405	20,711	φ£0.00		4.35%
	PROJECT (10%)	\$364,810				8.70%
	FINANCING		23,711	\$0.00	\$0	0.00%
	BOND ISSUANCE COSTS	\$0				0.00%
	INVESTMENT EARNINGS	\$0				0.00%
	TOTAL		23,711	\$176.94	\$4,195,317	100.00%

OPINION OF PROBABLE CONSTRUC-TION COSTS

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Fire Station

WNER: PROJ:	City of Grand Island		DATE:	03-Feb-05	D	KV/
ROJ: OC.:	Grand Island Fire Station Grand Island. Nebraska		REV#: PROJ#:	1637	D	ΝV
TLE:	PRELIMINARY CONCEPTUAL ESTIMA	TE	FILE#:	1007	GR	OUP
			NEW SQ FT HQ	STATION	24,098	
	Blended Site Option		NEW SQ FT BU	ILDING 2	0	
	Site F1 and F2 - 3 Bay Stat	ions with Plan				
	Option 4		TOTAL NEW SF		24,098	
	option 4		AREA TO REMA			
	Acres: 4.8				04.000	
Cost F	Acres: 4.8 Per Acre 40000		TOTAL SQ FT		24,098	
00001		COST/	BUILDING	COST	SUB	PERCEN
	DESCRIPTION	BUILDING	SF	SF	TOTAL	TOTA
				<u> </u>		
	ADMINISTRATION	<u></u>	24,098	\$0.91	\$22,000	0.45
	LAND ACQUISITION LEGAL, FISCAL & ADMINISTR	\$0 ATIVE \$0				0.00' 0.00'
	SOIL BORINGS	\$15,000				0.00
	SURVEY	\$7,000				0.30
		÷-,				
	CONSTRUCTION COSTS		24,098	\$143.90	\$3,467,760	70.17
	SITEWORK - DEMO	\$96,000				1.94
	SITEWORK - UTILITIES RELO					0.00
	SITEWORK - PAVEMENT / LAN					9.71
	BUILDING DEMOLITION	\$0				0.00
	BUILDING CONSTRUCTION - I					0.00
	BUILDING CONSTRUCTION - I ABATEMENT ALLOWANCE					58.52 0.00
	ABATEMENTALLOWANCE	\$0				0.00
	FEES		24,098	\$20.25	\$487,875	9.87
	A/E DESIGN AND BIDDING FE	ES \$337,255				6.82
	CIVIL ENGINEERING	\$13,000				0.26
	LANDSCAPE ARCHITECT	\$10,400				0.21
	REIMBURSABLE EXPENSES	\$25,294				0.51
	PLAN REVIEW FEES & PERMI	TS \$35,501				0.72
	SPECIAL INSPECTIONS AND	TESTING \$12,425				0.25
	CITY SAC/WAC (PRELIM ALLC	OWANCE) \$54,000				1.09
	FURNISHINGS, FIXTURES & EQUI		24.098	\$9.85	\$237,314	4.80
	OFFICE FURNITURE ALLOWA		,	\$9.05	\$ <b>2</b> 37,314	3.66
	KITCHEN EQUIPMENT ALLOW					0.30
	LAUNDRY EQUIPMENT ALLO					0.49
	FF&E DESIGN FEES	\$17,579				0.36
	TECHNOLOGY	NOE 640.000	24,098	\$3.41	\$82,294	1.67
	DATA / TELEPHONE ALLOWA SECURITY / VIDEO SYSTEMS					0.20 1.46
	SECONT / VIDEO STOTEMO	\$72,2 <del>34</del>				1.40
	CONTINGENCY		24,098	\$26.75	\$644,586	13.04
	ESTIMATING (5%)	\$214,862				4.35
	PROJECT (10%)	\$429,724				8.70
	FINANCING		24,098	\$0.00	\$0	0.00
	BOND ISSUANCE COSTS	\$0	24,090	\$0.00		0.00
	INVESTMENT EARNINGS	\$0				0.00
	707.1		04.000			
	TOTAL		24,098	\$205.07	\$4,941,829	100.00

OPINION OF PROBABLE CONSTRUC-TION COSTS

Fianancing costs should be verified by Bond consultant. Data/Telephone costs are allowance only - County would be responsible for data and telephone cabeling costs separately from Building construction bids. All amounts are based on December 2004 dollar



Fire Station

OWNER: PROJ: LOC.: TITLE:	City of Grand Island Grand Island Fire Station Grand Island, Nebraska PRELIMINARY CONCEPTUAL ESTIMATE		DATE: REV#: PROJ#: FILE# :	03-Feb-05 1637	B	K V
	Site Option G - With Concept Plan 1		NEW SQ FT HQ SQ FT BUI		23,711 0	
			TOTAL NEW SF		23,711	
			AREA TO REMA	IN	-	
	Acres: 2		TOTAL SQ FT		23,711	
Cost	Per Acre 40000					
	DESCRIPTION	COST/ BUILDING	BUILDING SF	COST SF	SUB TOTAL	PERCENT TOTAL
	BESCHETION	BOILDING	51	51	TOTAL	TOTAL
	ADMINISTRATION		23,711	\$0.36	\$8,500	0.22%
	LAND ACQUISITION	\$0				0.00%
	LEGAL, FISCAL & ADMINISTRATIVE	\$0				0.00%
	SOIL BORINGS	\$5,000				0.13%
	SURVEY	\$3,500				0.09%
	CONSTRUCTION COSTS		23,711	\$120.12	\$2,848,210	72.71%
	SITEWORK - DEMO	\$40,000			v_jonoj_no	1.02%
	SITEWORK - UTILITIES RELOCATION	\$0				0.00%
	SITEWORK - PAVEMENT / LANDSCAPING	\$200,000				5.11%
	BUILDING DEMOLITION	\$0				0.00%
	BUILDING CONSTRUCTION - RENOVATION	\$0				0.00%
	BUILDING CONSTRUCTION - NEW	\$2,608,210				66.58%
	ABATEMENT ALLOWANCE	\$0				0.00%
	FEES		23,711	\$14.34	\$340,003	8.68%
	A/E DESIGN AND BIDDING FEES	\$246,554				6.29%
	CIVIL ENGINEERING	\$6,500				0.17%
	LANDSCAPE ARCHITECT	\$5,200				0.13%
	REIMBURSABLE EXPENSES	\$18,492				0.47%
	PLAN REVIEW FEES & PERMITS	\$29,006				0.74%
	SPECIAL INSPECTIONS AND TESTING	\$7,252				0.19%
	CITY SAC/WAC (PRELIM ALLOWANCE)	\$27,000				0.69%
	FURNISHINGS, FIXTURES & EQUIPMENT (FF&E)		23,711	\$6.63	\$157,199	4.01%
	OFFICE FURNITURE ALLOWANCE	\$118,555				3.03%
	KITCHEN EQUIPMENT ALLOWANCE	\$15,000				0.38%
	LAUNDRY EQUIPMENT ALLOWANCE	\$12,000				0.31%
	FF&E DESIGN FEES	\$11,644				0.30%
	TECHNOLOGY		23,711	\$2.21	\$52,422	1.34%
	DATA / TELEPHONE ALLOWANCE	\$5,000				0.13%
	SECURITY / VIDEO SYSTEMS	\$47,422				1.21%
	CONTINGENCY		23,711	\$21.55	\$510,950	13.04%
	ESTIMATING (5%)	\$170,317	23,711	φ21.55	\$510,550	4.35%
	PROJECT (10%)	\$340,633				8.70%
	FINANCING		23,711	\$0.00	\$0	0.00%
	BOND ISSUANCE COSTS	\$0	23,711	\$0.00	\$0	0.00%
	INVESTMENT EARNINGS	\$0				0.00%
	TOTAL		23.711	\$165.21	\$3,917,285	100.00%

OPINION OF PROBABLE CONSTRUC-TION COSTS

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Fire Station

OWNER: PROJ: LOC.: TITLE:	City of Grand Island Grand Island Fire Station Grand Island, Nebraska PRELIMINARY CONCEPTUAL ESTIMATE		DATE: REV#: PROJ#: FILE# :	03-Feb-05 1637	B	K V
	Site Option A - Without Admir		NEW SQ FT HQ S NEW SQ FT BUII		16,795 0	
	(5) Bay Station		TOTAL NEW SF		16,795	
			AREA TO REMA	IN	-	
	Acres: 2		TOTAL SQ FT		16,795	
Cost F	Per Acre 150000					
	DESCRIPTION	COST/ BUILDING	BUILDING SF	COST SF	SUB TOTAL	PERCENT TOTAL
	DESCRIPTION	BUILDING	35	36	TOTAL	TOTAL
	ADMINISTRATION		16,795	\$60.05	\$1,008,500	22.71%
	LAND ACQUISITION	\$1,000,000				22.52%
	LEGAL, FISCAL & ADMINISTRATIVE	\$0				0.00%
	SOIL BORINGS	\$5,000				0.11%
	SURVEY	\$3,500				0.08%
	CONSTRUCTION COSTS		16,795	\$143.07	\$2,402,900	54.10%
	SITEWORK - DEMO	\$40,000	10,700	ψ1 <del>1</del> 0.01	ψ <u>2</u> ,402,000	0.90%
	SITEWORK - UTILITIES RELOCATION	\$19,500				0.44%
	SITEWORK - PAVEMENT / LANDSCAPING	\$200.000				4.50%
	BUILDING DEMOLITION	\$128,000				2.88%
	BUILDING CONSTRUCTION - RENOVATION	\$0				0.00%
	BUILDING CONSTRUCTION - NEW	\$2,015,400				45.38%
	ABATEMENT ALLOWANCE	\$0				0.00%
	FEES		16,795	\$17.40	\$292,310	6.58%
	A/E DESIGN AND BIDDING FEES	\$207,527	,.		,,,,,,,,,,,,,	4.67%
	CIVIL ENGINEERING	\$6,500				0.15%
	LANDSCAPE ARCHITECT	\$5,200				0.12%
	REIMBURSABLE EXPENSES	\$15,564				0.35%
	PLAN REVIEW FEES & PERMITS	\$24,415				0.55%
	SPECIAL INSPECTIONS AND TESTING	\$6,104				0.14%
	CITY SAC/WAC (PRELIM ALLOWANCE)	\$27,000				0.61%
	FURNISHINGS, FIXTURES & EQUIPMENT (FF&E)		16,795	\$7.14	\$119,853	2.70%
	OFFICE FURNITURE ALLOWANCE	\$83,975				1.89%
	KITCHEN EQUIPMENT ALLOWANCE	\$15,000				0.34%
	LAUNDRY EQUIPMENT ALLOWANCE	\$12,000				0.27%
	FF&E DESIGN FEES	\$8,878				0.20%
	TECHNOLOGY		16.795	\$2.30	\$38,590	0.87%
	DATA / TELEPHONE ALLOWANCE	\$5,000				0.11%
	SECURITY / VIDEO SYSTEMS	\$33,590				0.76%
	CONTINGENCY		16,795	\$34.49	\$579,323	13.04%
	ESTIMATING (5%)	\$193,108	10,755	\$34.49	\$313,323	4.35%
	PROJECT (10%)	\$386,215				4.35%
			40 705	¢0.00	<u>60</u>	
	FINANCING BOND ISSUANCE COSTS	\$0	16,795	\$0.00	\$0	0.00% 0.00%
	INVESTMENT EARNINGS	\$0				0.00%

SITE MASTER PLAN CONCEPTS

Fianancing costs should be verified by Bond consultant. Data/Telephone costs are allowance only - County would be responsible for data and telephone cabeling costs separately from Building construction bids. All amounts are based on December 2004 dollar







Training Center

### Grand Island Fire Training Center Feasibility Study Education Building Summary

## NEEDS ASSESSMENT PROGRAM

Draft         Quantity         Unit Area         Total           Clean Areas <th></th>	
Clean Areas           Classrooms         Capacity           Presentation         50           Computer         20           Classroom         40           Classroom         40           Classroom         1           Adjunct Instructor Storage         1           Breakout Rooms         0           Audio/Visual Storage         1           A/V Studio Room         1           A/V Production Room         1           Curriculum Storage         1           Vending         1           Lunch Room         1           Efficiency         65%           Office Spaces         0	
Classrooms         Capacity           Presentation         50           Computer         20           Classroom         40           Classroom         40           Classroom         40           Classroom         40           Classroom         40           Classroom         1           Adjunct Instructor Storage         1           Breakout Rooms         0           Audio/Visual Storage         1           A/V Studio Room         1           A/V Production Room         1           Curriculum Storage         1           Vending         1           Lunch Room         1           Efficiency         65%           Total         0	
Presentation         50         1         2,000         2,000           Computer         20         1         900         900           Classroom         40         3         1,200         3,600           Classroom         15         0         1,900         -           Adjunct Instructor Storage         1         850         850           Breakout Rooms         0         800         -           Audio/Visual Storage         1         300         300           A/V Studio Room         1         400         400           A/V Production Room         1         250         250           Curriculum Storage         1         1,000         1,000           Vending         1         200         200           Lunch Room         0         16         -           Subtotal         9,500         65%         65%           Total         -         -         -	
Computer         20         1         900         900           Classroom         40         3         1,200         3,600           Classroom         15         0         1,900         -           Adjunct Instructor Storage         1         850         850           Breakout Rooms         0         800         -           Audio/Visual Storage         1         300         300           A/V Studio Room         1         400         400           A/V Production Room         1         250         250           Curriculum Storage         1         1,000         1,000           Vending         1         200         200           Lunch Room         0         16         -           Subtotal         9,500         65%         65%           Total         -         -         -	
Classroom       40       3       1,200       3,600         Classroom       15       0       1,900       -         Adjunct Instructor Storage       1       850       850         Breakout Rooms       0       800       -         Audio/Visual Storage       1       300       300         A/V Studio Room       1       400       400         A/V Production Room       1       250       250         Curriculum Storage       1       1,000       1,000         Vending       1       200       200         Lunch Room       0       16       -         Subtotal       9,500       65%       65%         Office Spaces       -       -       -	
Classroom       15       0       1,900       -         Adjunct Instructor Storage       1       850       850         Breakout Rooms       0       800       -         Audio/Visual Storage       1       300       300         A/V Studio Room       1       400       400         A/V Production Room       1       250       250         Curriculum Storage       1       1,000       1,000         Vending       1       200       200         Lunch Room       0       16       -         Subtotal       9,500       65%       65%         Office Spaces	
Adjunct Instructor Storage       1       850         Breakout Rooms       0       800       -         Audio/Visual Storage       1       300       300         A/V Studio Room       1       400       400         A/V Production Room       1       250       250         Curriculum Storage       1       1,000       1,000         Vending       1       200       200         Lunch Room       0       16       -         Subtotal       9,500       65%       65%         Office Spaces       -       -       -	
Breakout Rooms         0         800         -           Audio/Visual Storage         1         300         300           A/V Studio Room         1         400         400           A/V Production Room         1         250         250           Curriculum Storage         1         1,000         1,000           Vending         1         200         200           Lunch Room         0         16         -           Subtotal         9,500         65%         65%           Office Spaces         -         -         -	
Audio/Visual Storage       1       300       300         A/V Studio Room       1       400       400         A/V Production Room       1       250       250         Curriculum Storage       1       1,000       1,000         Vending       1       200       200         Lunch Room       0       16       -         Subtotal       9,500       65%       65%         Office Spaces       -       -       -	
A/V Studio Room       1       400       400         A/V Production Room       1       250       250         Curriculum Storage       1       1,000       1,000         Vending       1       200       200         Lunch Room       0       16       -         Subtotal       9,500       65%       65%         Office Spaces       -       -       -	
A/V Production Room       1       250         Curriculum Storage       1       1,000         Vending       1       200         Lunch Room       0       16         Subtotal       9,500         Efficiency       65%         Total	
Curriculum Storage         1         1,000         1,000           Vending         1         200         200           Lunch Room         0         16         -           Subtotal         9,500         65%         65%           Total         0         1         -	
Vending         1         200         200           Lunch Room         0         16         -           Subtotal         9,500         65%           Efficiency         65%         -           Total         -         -	
Lunch Room         0         16         -           Subtotal         9,500         65%           Efficiency         65%         -           Total         -         -	
Subtotal     9,500       Efficiency     65%       Total     9	1
Efficiency     65%       Total     0	
Total       Office Spaces	
Office Spaces	
	14,615
Waiting	
Receptionist 1 150 150	
Visitor/Guest Instructor Cubes 1 48 48	
Conference Room (6 person) 0 48 -	
Archive File Storage 0 48 -	
Central Copy and Storage	
Library 10 48 480	
Breakout Offices 10 48 480	
Facility Coordinator 1 150 150	
Facility Coordinator Secretary	
30 10 300	
Outside Users 20 10 200	
Training Director 1 300 300	
Instructors 1 330 330	
Secretary 1 300 300	
Personnel File Area (based on number of file cabinets) 6 150 900	
Server Room 1 150 150	
Communications Closet 1 100 100	
Grand Jeland Fire	
Grand Island Fire	
Training Coordinator 1 150 150	
Secretary 0 48 -	
Drill Master - Fire 3 150 450	
Drill Master - EMS 0 150 -	
Personnel File Area (based on number of file cabinets) 0 150 -	
Communications Closet         1         80         80           1         80	
Subtotal	
Efficiency	
Total 1 150 150	
0 48 -	

Training Center

Wellness Area	0	48 150	- 150	
Fitness Equipment		150	150	
Open Fitness		150	150	
Multipurpose		80	80	
Chair and Table Storage		80 80	80 80	
Kitchen	1 1 '	80	80	
			-	
Mens Locker Rooms			5,456	
Womens Locker Rooms			55%	
Bunks				9,92
Linens				
Ice/Vending				
Student laundry	1	1,280	1,280	
Lounge	1	7,000	7,000	
-	1	375	375	
Subtotal	1 1	1,000	1,000	
Efficiency	1	2,000	2,000	
Total	<b>1</b>   1	1,000	1,000	
	1			
Practical Areas Capacity			12,655	
Classroom (Sector) 40			70%	
Adjunct Instructor Storage 40				18,07
Breakout Rooms 8				,
SCBA Storage Room				
Compressed Air Room	20	450	9,000	
Fire Turnout and Storage	20	200	400	
Fire Equipment Storage	2	200	200	
			200	
Practical Application		100		
Maze Area	1	1,000	1,000	
Apparatus Bays (20x100' - Drive Through Bay)			10 0	
Student lounge			10,700	
Vending Area			70%	
	┥╽────			15,28
Subtotal				
Efficiency	4 1			
Total	2	1,900	3,800	
	6	200	1,200	
Misc. Spaces	5	200	1,000	
General Storage	1	600	600	
Gear Extractor	1	100	100	
Receiving Area/Building Engineer	1	500	500	
Commons/History Area	1	1,000	1,000	
Restrooms	0	4,000	-	
Janitor Closet		600	600	
Archive Storage		6,480	6,480	
Subtotal		0,400 16	16	
Efficiency		200	200	
Total	4 1 '	200	200	
Grand Total	┥ ┟────		- 15,496	
			10.490	

## NEEDS ASSESSMENT PROGRAM

### **GRAND ISLAND TOTAL**

84,323 SQ. FT.



Training Center

Grand Island Fire Training Center Feasibility Study Order of Magnitude of Site Development

### 12/15/2004

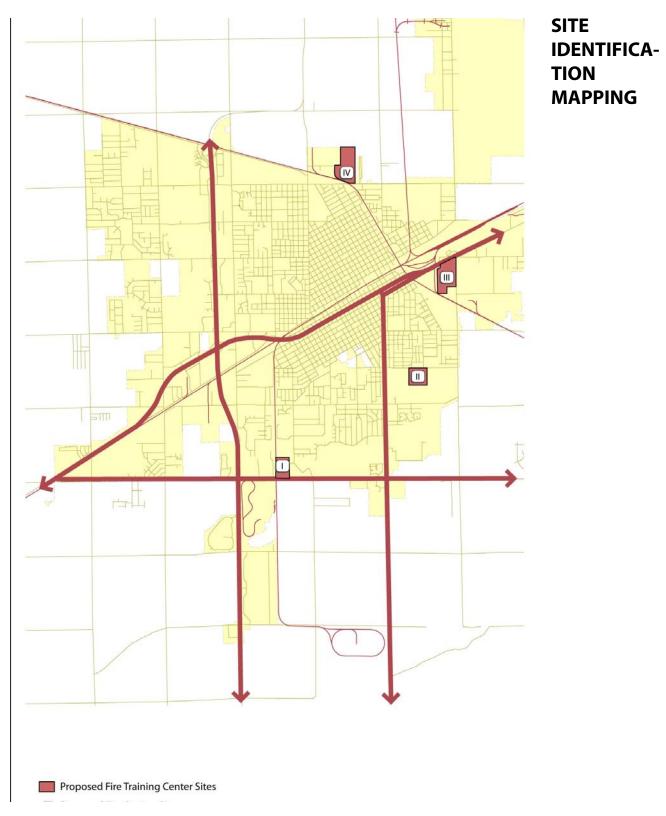
## **NEEDS** ASSESSMENT PROGRAM

DETAILS

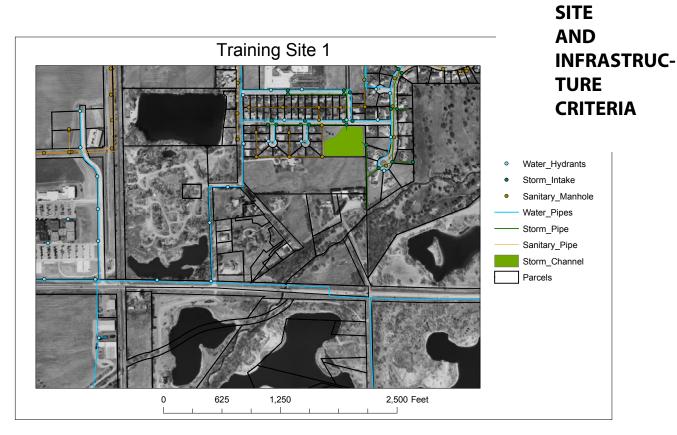
DESCRIPTION					QTY.	UNIT	UNIT COST	ITEM TOTAL	SUB-TOTAL
		<u></u>			<u>ω</u> ιΤ.		UNITCOST	TENTUAL	SUD-IUIAL
ombined Education & Training Bldg.									1
Building- New Elevator					84,323	SF LS	\$100.00 \$60,000.00	\$8,432,253 \$60,000	
Stairway						EA	\$25,000.00	\$100,000	
Furniture, Fixtures & Equipment					84,323		\$6.00	\$505,935	
									\$10,917,8
river Training Facilities									
VOC									
Paving					27,000	SY	\$30.00	\$810,000	
Gravel safety perimeter- at curves & dead ends					0	SY	\$19.00	\$0	
Observation tower- allowance					1		\$35,000.00	\$35,000	
Covered bleacher-allowance Light Poles (175 foot staggered)					1	EA EA	\$25,000.00 \$4,000.00	\$25,000 \$24,000	(175 foot staggere
Grade Crossing					1		\$40,000.00	\$40,000	(175 loor staggen
Driver Control System						EA	\$30,000.00	\$30,000	
Traffic Light					1	EA	\$70,000.00	\$70,000	
Driving Simulator Culvert allowance- 18"					2		\$50,000.00 \$1,000.00	\$100,000 \$0	
					0		\$1,000.00	<del>0</del> 0	\$1,360,80
waining Village									
Cold Training Puilding					1	LS	\$1,855,000.00	\$1,855,000	1
Cold Training Building Live Fire Simulators	2	EA	\$275,000.00	\$550,000.00	1	1.5	¢1,053,000.00	\$1,655,000	
Standpipe and Stairs	5	EA	\$15,000.00	\$75,000.00					
Lining	600	SF	\$50.00	\$30,000.00					
Structure	12000	SF	\$100.00	\$1,200,000.00	1	LS	\$1 105 000 00	\$1 105 000	
Live Fire Training Building Live Fire Simulators	0	EA	\$275,000.00	\$0.00	1	1.5	\$1,105,000.00	\$1,105,000	
Standpipe and Stairs		EA	\$15,000.00	\$45,000.00					
Lining	5000	SF	\$80.00	\$400,000.00					
Structure	4400	SF	\$150.00	\$660,000.00		1.0	0000		
Strip Commercial Training Building Live Fire Simulators	-	EA	\$275,000.00	\$0.00	1	LS	\$860,000.00	\$860,000	
Standpipe and Stairs		EA	\$15,000.00	\$0.00					
Lining	4000	SF	\$80.00	\$320,000.00					
Structure	3600		\$150.00	\$540,000.00					
Residential Building Live Fire Simulators	-	EA	\$275,000.00	\$0.00	1	LS	\$430,000.00	\$430,000	
Standpipe and Stairs		EA	\$15,000.00	\$0.00		<u> </u>			
Lining	2000	SF	\$80.00	\$160,000.00					
Structure	1800	SF	\$150.00	\$270,000.00					
Outdoor Pavilion Facility						SF	\$75.00	\$0	
Incline and Flat Roof on the Ground Control/Refreshment/Restroom Building					0	EA SF	\$10,000.00 \$100.00	\$10,000 \$0	
Maintenance/Storage					16,000	SF	\$65.00	\$1,040,000	
Props Allowance					1	EA	\$20,000.00	\$20,000	
									\$6,384,00
ire Training Burn Pad									
Flammable Liquids Simulator					1	EA EA	\$90,000.00 \$40,000.00	\$90,000 \$40,000	
Flange fire simulator Fire tree simulator					1		\$40,000.00	\$40,000	
Propane tank relief valve simulator						EA	\$40,000.00	\$40,000	
Aircraft SAFT Prop					0	EA	\$500,000.00	\$0	
Propane supply tank & control panel					1		\$80,000.00	\$80,000	
Car Fire Simulator					1	SY	\$90,000.00	\$90,000	\$456,00
									\$400,00
ire Training Features							00 000 003	\$60.000	25 000 gellen sens å
Drafting Tank 35,000 gallon conc. tank w/ hood Trench Simulator						LS LS	\$60,000.00 \$60,000.00	\$60,000	35,000 gallon conc. t
Collapse Simulator						LS	\$300,000.00	\$300,000	
Urban Search and Rescue Pile					1	LS	\$30,000.00	\$30,000	
Vehicle Extrication Area 50x150					280	SY	\$30.00	\$8,400	
Confined Space Simulator					1	LS	\$50,000.00	\$50,000	6640.00
									\$610,08
imulated Haz-Mat Training Area									
Donated Highway vehicle placement-allowance						EA EA	\$10,000.00	\$10,000	
Liquid leak simulation allowance (no fire) HAZMAT Training Simulation Area						EA SY	\$15,000.00 \$19.00	\$15,000	Gravel Paving W/Fal
Railroad track w/ ditches & ballast						LF	\$255.00	\$76,500	
Donated Railcar transport & placement-allowance					1	EA	\$20,000.00	\$20,000	
Liquid leak simulation allowance (no fire)					1		\$15,000.00	\$15,000	
Rail Tank Car Fire Simulation					1		\$60,000.00	\$60,000	
Graded Crossing						EA	\$20,000.00	\$20,000	
Graded Crossing Gated Siding		-							\$362,18
Chadda Choballig									
Gated Siding								\$112,500	
Gated Siding					50,000	CY	\$2.25		
Cated Siding Cated Siding Ater Rescue Pond Excavation Excavation (wet soils)					0	CY	\$5.00	\$0	
Gated Siding fater Rescue Pond Excavation Excavation Ruber Liner Excelore E					0 90,000	CY SF	\$5.00 \$3.00	\$0 \$270,000	
Cated Siding Cated Siding Vater Rescue Pond Excavation Excavation (vet soils) Rubber Liner Pumps					0 90,000 2	CY SF EA	\$5.00 \$3.00 \$50,000.00	\$0 \$270,000 \$100,000	
Gated Siding Tater Rescue Pond Excavation Excavation (wet soils) Rubber Liner Pumps Pump House					0 90,000 2 1	CY SF EA EA	\$5.00 \$3.00 \$50,000.00 \$40,000.00	\$0 \$270,000 \$100,000 \$40,000	
Cated Sting Cated Sting Cated Sting Cated Stand Excavation Ex					0 90,000 2 1 5,000	CY SF EA EA	\$5.00 \$3.00 \$50,000.00	\$0 \$270,000 \$100,000	
Atter Rescue Pond Excavation Excavation (vet soils) Rubber Liner Pump House 24" PVC Pipe Aerating Fountain Concrete Pad and Vehicle on bottom					0 90,000 2 1 5,000 2 2 2	CY SF EA EA LF EA EA	\$5.00 \$3.00 \$50,000.00 \$40,000.00 \$18.00 \$20,000.00 \$10,000.00	\$0 \$270,000 \$100,000 \$40,000 \$90,000 \$40,000 \$20,000	
Gated Siding  ater Rescue Pond Excavation Excavation (wet soils) Rubber Liner Pump House 24° FVC Pipe Ararting Fountain Concrete Pad and Vehicle on bottom Boat ram & Dock					0 90,000 2 1 5,000 2 2 2 1	CY SF EA EA LF EA EA EA	\$5.00 \$3.00 \$50,000.00 \$40,000.00 \$18.00 \$20,000.00 \$10,000.00 \$20,000.00	\$0 \$270,000 \$100,000 \$40,000 \$90,000 \$40,000 \$20,000 \$20,000	
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Cated Siding State Rescue Pond Excavation (wet soils) Rubber Liner Pumps Pump House 24" PVC Pipe Ararting Fountain Concrete Pad and Vehicle on bottom Boat ram, 8 Dook					0 99,000 2 1 5,000 2 2 2 2 1 1	CY SF EA EA LF EA EA EA	\$5.00 \$3.00 \$50,000.00 \$40,000.00 \$18.00 \$20,000.00 \$10,000.00 \$20,000.00	\$0 \$270,000 \$100,000 \$40,000 \$90,000 \$40,000 \$20,000 \$20,000	\$1.005.0
Gated Siding  ater Rescue Pond Excavation (wet soils) Rubber Liner Pumps Pump House 24" FVC Pipe Areating Fountain Concrete Pad and Vehicle on bottom Boat ramp & Dock Water Source Allowance Settling Basin					0 99,000 2 1 5,000 2 2 2 2 1 1	CY SF EA EA LF EA EA EA EA	\$5.00 \$3.00 \$50,000.00 \$40,000.00 \$18.00 \$20,000.00 \$20,000.00 \$20,000.00 \$25,000.00	\$0 \$270,000 \$100,000 \$90,000 \$40,000 \$20,000 \$20,000 \$25,000	\$1,005,0
Cated Skilling           Vater Rescue Pond           Excavation           Excavation (wel soils)           Rubber Liner           Pumps           Pump House           24" PVC Pipe           Concrete Pad and Vehicle on bottom           Boat ramp & Dock           Water Source Allowance	20.0%				0 99,000 2 1 5,000 2 2 2 2 1 1	CY SF EA EA LF EA EA EA EA	\$5.00 \$3.00 \$50,000.00 \$40,000.00 \$18.00 \$20,000.00 \$20,000.00 \$20,000.00 \$25,000.00	\$0 \$270,000 \$100,000 \$90,000 \$40,000 \$20,000 \$20,000 \$25,000	\$1,005,0



Training Center



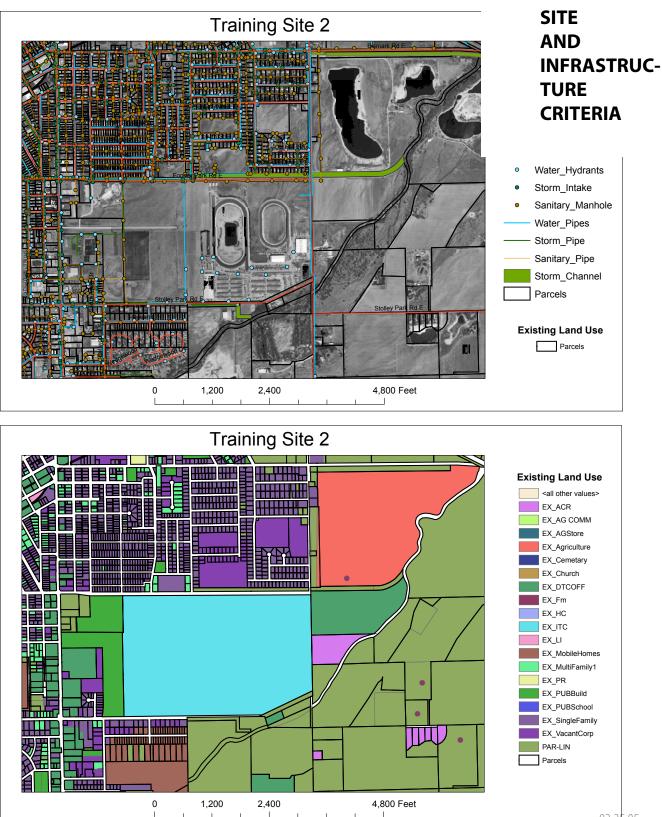
Training Center





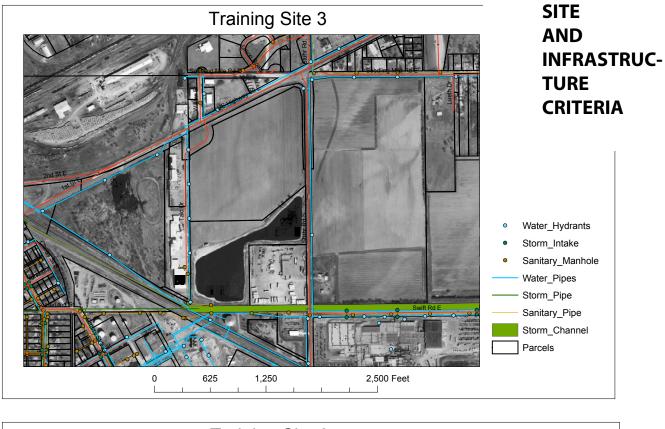


**Training Center** 





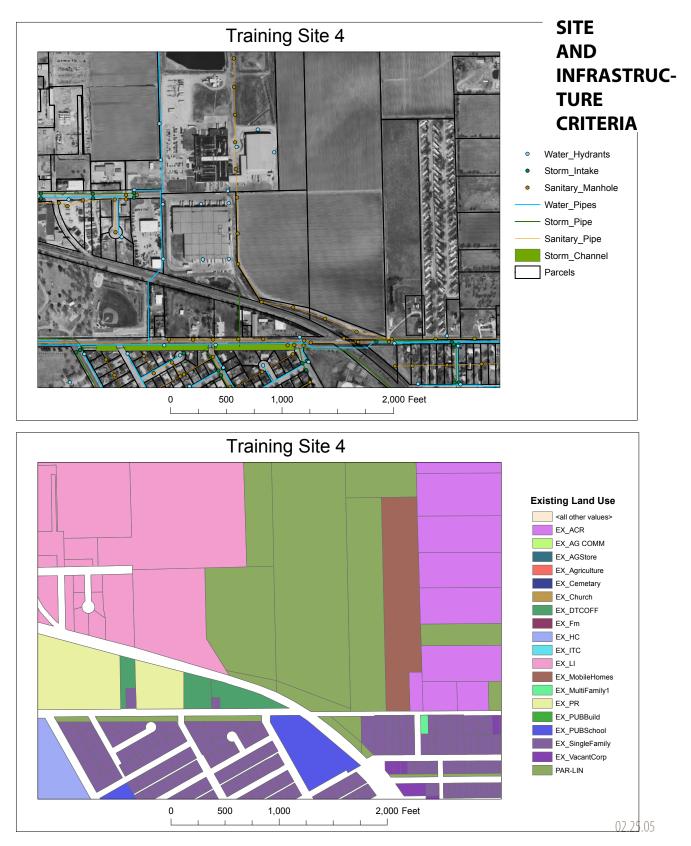
Training Center







#### Training Center

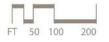




Training Center

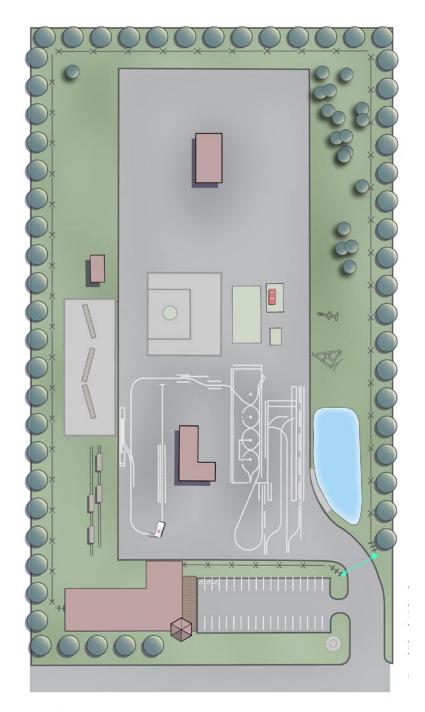
SITE MASTER PLAN CONCEPTS 0 Or 0 Al 00  $\bigcirc$ 00 00

# Grand Island, Nebraska FIRE TRAINING CENTER Conceptual Design December, 2004





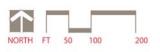
Training Center



SITE MASTER PLAN CONCEPTS

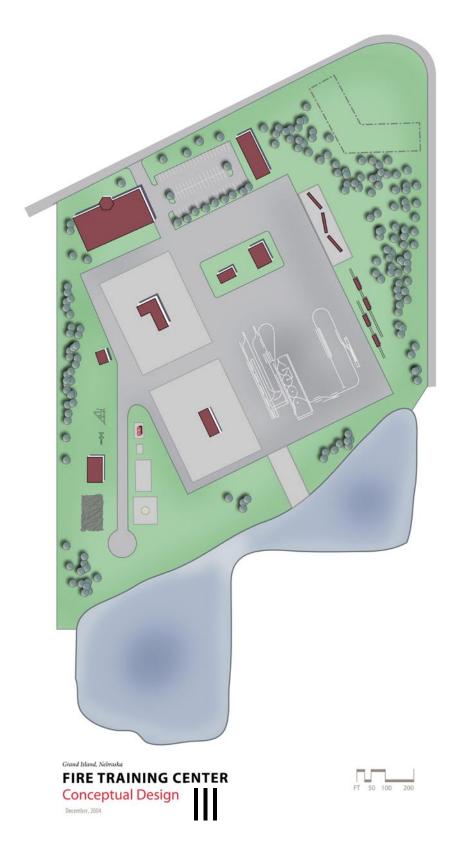
Grand Island, Nebraska

# FIRE TRAINING CENTER Conceptual Design





Training Center



SITE MASTER PLAN CONCEPTS



Training Center



SITE MASTER PLAN CONCEPTS

200

02.25.05

Conceptual Design

December, 2004





# Training Site #1 - Central Community College and College Park Area

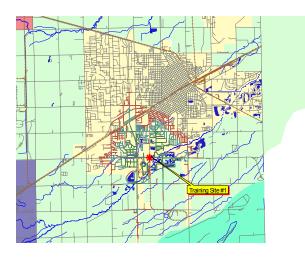
#### <u>Pros</u>

- 1. Potential partnership between training center and college for providing classrooms, administration offices, conference rooms, auditorium and dormatories.
- 2. College could begin curricula for fire training.
- 3. Training center extends the college campus, creating a more prominate civic presence.
- 4. Adjacent land sufficient for fire training props.
- 5. Site is in close proximity to freeway and arterial streets, providing good access to the entire community.
- 6. City desires to redevelop blighted property.
- 7. Trees screens property from adjacent land uses, limiting the presence of the burn building to neighboring properties.
- 8. Site could maintain debris for USAR
- 9. Access to existing standing water

#### <u>Cons</u>

- 1. Purchasing a site.
- 2. Rehabilitating site for development.
- 3. Prevailing winds to be reviewed.
- 4. Limited space for future expansion.
- 5. Longer response time to downtown.





TRAINING CENTER SITE LOCATION ANALYSIS







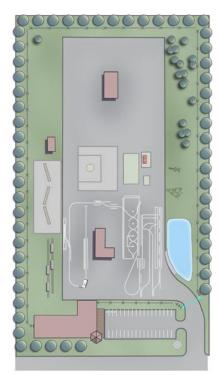
#### Training Site #2 - Fonner Park

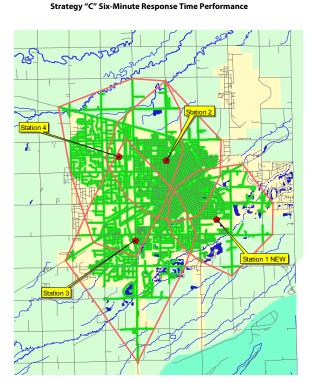
#### <u>Pros</u>

- 1. Land available at no cost.
- 2. Opportunity to share cost of parking and EVOC with Fonner Park
- 3. Close proximity to freeway and arterials.
- 4. Infrastructure available

#### <u>Cons</u>

- 1. Potential traffic congestion during events at Heartland of America Park.
- 2. Potential issues with neighbors, resulting from smoke and noise.
- 3. Limited buffer area
- 4. The build-out of Fonner Park lends itself to entertainment uses, not neccessarilly a fire training facility.





TRAINING CENTER SITE LOCATION ANALYSIS



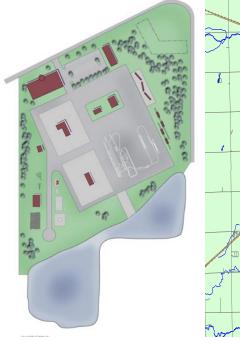
#### Training Site #3 - Near Law Enforcement Center

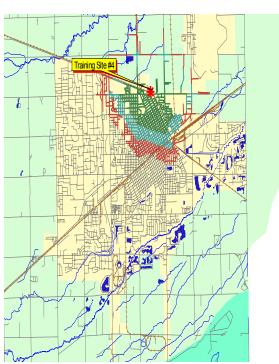
#### <u>Pros</u>

- 1. Creates civic public safety campus for Grand Island
- 2. Large unencumbered site
- 3. Water available nearby
- 4. May be able to utilize existing industrial buildings
- 6. Good response times to downtown density.
- 7. Minimal neighbor issues
- 8. Allows a fire station to be co-located at the site
- 9. Easy access to city administration

#### <u>Cons</u>

- 1. Water is currently used for recreation
- 2. Land has to be purchased.
- 3. Impedes developable land to downtown
- 4. Limited area for future development
- 5. Odor from processing plant may influence visitors perception of facility
- 6. Traffic issue with associated police station
- 7. Poor access to freeway





TRAINING CENTER SITE LOCATION ANALYSIS





#### Training Site #4 - Capital Avenue E Farm Land

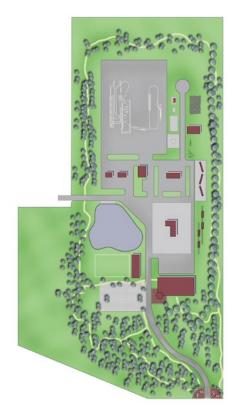
#### <u>Pros</u>

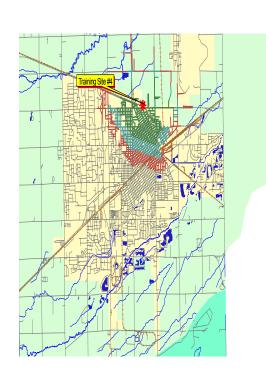
- 1. Large site with no foreseeable limits on future site development.
- 2. Utilities are available.
- 3. Good response times to downtown.
- 4. No foreseeable neighbor concerns.
- 5. Allows administration to be co-located at training center.
- 6. Potential to extend a recreational trail around the training center.

#### <u>Cons</u>

- 1. Land has to be purchased, which could be high.
- 2. Would require an entire campus to be built at site
- 3. Cost to bring infrastructure on site.

TRAINING CENTER SITE LOCATION ANALYSIS







#### **Training Center Site Grading Matrix**

Four sites throughout Grand Island were considered for the city's proposed fire training center. Land adjacent to the community college, on the Fonner Park complex, and adjacent to the proposed police training center, and on the city's north side were all reviewed and graded. Using a six-point scale, as shown by the following matrix, the most favorable location is Site #1 (community college and College Park area), followed closely by Site #2 (the Fonner Park complex). As shown, all four sites are suitable for the development of a high-quality fire training center.

TRAINING CENTER SITE LOCATION ANALYSIS

		Site No. 1 (College)	Site No. 2 (Fonner Park)	Site No. 3 (Public Safety)	Site No. 4 (North Site)
1	Land Costs	3	4	2	1
2	Neighborhood Impact	3	1	4	4
3	Infrastructure Availability	3	4	3	4
4	Response Time/Coverage	2	1	3	3
5	Co-locate Station	1	2	4	1
6	Co-locate Administration	4	4	4	4
7	Access to Freeway	4	3	2	1
8	Availabilty to Classrooms	4	2	1	1
9	High Bay	1	2	1	1
10	Facility Cost of Option	4	3	2	1
11	Growth Potential	3	1	3	4
12	Redevelopment of Sites	4	1	2	2
13	Existing Learning Infrastructure	4	1	1	1
14	EVOC - Emergency Vehicle	2	4	1	1
15	Potential State/Federal Aid	6	3	2	2
16	Local Partnering Resources	6	1	2	1
17	Willingness of Seller	3	4	2	1
	Total	57	41	39	33

\* Graded as 1 being acceptable to 6 being favorable



## **Training Center Site Conclusion**

The team's site-selection criteria included response times from the site, the site-selection matrix, the ability to co-locate the new fire station, impact on neighbors, infrastructure access, availability and cost of land, ability of the site to accommodate growth, and access to existing teaching infrastructure. It should be noted that a business plan was not factored into the selection of the sites. A completed business plan would provide additional information that could have an impact on the final selection.

Based on these factors, the RDG team recommends Site #1 because of its proximity to the educational infrastructure available at Central Community College and College Park. Both administrations are willing to discuss partnering for facilities and operations of the facility. Both institutions have indicated that they would consider developing land they already own for the fire training center's needs. The fire department could purchase land adjacent to both intuitions in addition to any land that may be available to them on either institution's site. This land would be well suited for the placement of the burn building. Moreover, selection of this site would be a vehicle for cleaning a blighted area. The training center, by sharing either institution's facilities, may have additional state and federal resources made available.

The RDG team recommends Site #3 as a second choice for the training site. It offers the fire department the quickest response times to the densest part of Grand Island, allows the co-location of both the fire headquarters and fire station on the site with easy access to city hall, and will have minimal impact on its neighbors. This site will require the purchase of land, which will impact the overall cost of the project.

Sites #2, located at Fonner Park, ranks second by the matrix. Because of the impact that the noise and smoke from the training center might have on neighbors and because of the inability to provide major buffering, the team feels it would be irresponsible to select Fonner Park. Doing so would restrict future entertainment development that may be better suited for Fonner Park. However, it is recommended that the city discuss possible cost sharing for upgrading the facility's parking lot to accommodate an emergency vehicle operations course (EVOC) at this site and review the schedule for the facilities for possible high-bay opportunities.

Site #4, on the north side of Grand Island, is in many ways the most suitable because of the industrial use of the area, availability of utility infrastructure, acreage for future growth, strong response times, and good coverage of downtown Grand Island. However, it would be the most costly to develop from the standpoint of total project cost—land costs, facility development, and phasing costs.

In conclusion, the above site recommendations are based on information provided to the team as well as on the team members' background and expertise. These recommendations are made without benefit of a detailed business plan. We recommend that a business plan be performed prior to finalizing the selection of the site for the training center.

TRAINING CENTER SITE LOCATION ANALYSIS

Training Center Site Location Analysis

Based on our involvement with comparable facilities, we think it is likely that a business plan would support Site #1 as the most economically and operationally viable for the City of Grand Island. Even if the main functions of the training center are located elsewhere, we recommend evaluating whether the EVOC functions can be located at **LOCATION** Fonner Park.

TRAINING CENTER SITE **ANALYSIS** 





# **City of Grand Island**

Tuesday, March 01, 2005 Study Session/Special Mtg

# Item I1

#2005-58 - Approving Agreement with Grand Island Public School for Acquisition of Former Wasmer School Property

Staff Contact: Doug Walker

# **Council Agenda Memo**

From:	Douglas R. Walker, City Attorney
Meeting:	January 11, 2005
Subject:	Resolution Authorizing the Purchase of the Old Wasmer School Property; Located at 1613 West Division Street
Item #'s:	I-1
Presenter(s):	Douglas R. Walker, City Attorney

## **Background**

A public hearing was held on January 11, 2005, regarding the acquisition of the Old Wasmer School Property. City Council action must also be taken by resolution for the City of Grand Island to acquire property. Grand Island Public Schools own the property at 1613 West Division Street and have agreed to sell this property.

## **Discussion**

The city has been working with the Nebraska Department of Roads on a project to widen Second Street (US Highway 30) between Grant Street and Greenwich Street. The area experiences significant ponding of storm water runoff. The City of Grand Island is interested in the old Wasmer Elementary School Site for use as a detention cell. The Grand Island Public Schools advertised for bids on November 12, 2004. The City of Grand Island submitted a bid for \$180,100 on December 1, 2004. At the December 9, 2004 school board meeting, the school board members voted to accept the City of Grand Island's bid to purchase the property. The bid must be approved by the Mayor and the City Council. There are sufficient funds in account 40015025-90005 to purchase the property.

## **Alternatives**

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

- 1. Move to approve the purchase of the property.
- 2. Refer the issue to a Committee.

- 3. Postpone the issue to future date.
- 4. Take no action on the issue.

# **Recommendation**

City Administration recommends that the Council approve the purchase of the Old Wasmer School property for \$180,100 and pass a resolution authorizing the Mayor to sign an agreement with the Grand Island Public Schools for the purchase.

# **Sample Motion**

Move to approve the acquisition of the Old Wasmer School Property.

#### AGREEMENT FOR SALE AND PURCHASE OF REAL ESTATE

#### KNOW ALL MEN BY THESE PRESENTS:

The undersigned Seller does hereby sell to the undersigned Buyer the following-described real estate for the price and upon the terms and conditions set forth herein, and the undersigned Buyer does hereby accept said terms and conditions, agrees to pay the purchase price, and to perform the obligations of Buyer hereunder.

1. The Seller is: Hall County School District 2, known as Grand Island Public Schools. Seller's address and telephone number are: 123 South Webb Road, Grand Island, Nebraska 68803; (308) 385-5900.

2. The Buyer is: City of Grand Island, Nebraska, a City of the First Class of the State of Nebraska. Buyer's address and telephone number are: 100 E. 1<sup>st</sup> Street, Grand Island, Nebraska 68801; (308) 385-5444.

3. The legal description of the real estate is:

Lots One (1) through Ten (10), Block Twelve (12), Wasmer's Addition to the City of Grand Island, Hall County, Nebraska

4. The purchase price is One Hundred Eighty Thousand One Hundred and No/100 Dollars (\$180,100.00).

5. The purchase price shall be paid to Seller by Buyer as follows:

- (a) The sum of EIGHTEEN THOUSAND TEN and NO/100 DOLLARS (\$18,010.00) was paid to Seller by Buyer on November 30, 2004, receipt of which is hereby acknowledged.
- (b) The balance of the purchase price in the amount of ONE HUNDRED SIXTY-TWO THOUSAND NINETY AND NO/100 Dollars (\$162,090.00) shall be paid in cash by cashier's check or certified funds at closing as hereinafter provided.

6. The Buyer shall be entitled to possession of the subject property upon the closing of this transaction, and the closing shall be on or before February 28, 2005, which is herein called the closing date.

7. The following contingency provisions shall be applicable to this Agreement and must be satisfied prior to the date of closing:

- (a) The City of Grand Island, Nebraska shall comply with the requirements of NEB. REV. STAT. §18-1755 (Reissue 1997) requiring authorization of acquisition by action taken in a public meeting after notice and a public hearing; and
- (b) The Board of Education for the Hall County School District 2 shall comply with the requirements of NEB. REV. STAT. §79-10,114 (Reissue 2003) requiring approval at a regular meeting of the Board of Education with an affirmative recorded vote of at least two-thirds (2/3) of all the members of the Board.

8. As soon as reasonably possible after the execution of this agreement, the Seller shall furnish the Buyer with an Owner's Title Insurance Commitment showing marketable title to the premises to be vested in the Seller subject only to easements, restrictions and conditions of record. Within a reasonable time after the Buyer's receipt of said title insurance commitment, the Buyer shall furnish the Seller with a written opinion from the Buyer's attorney containing any objections to the Seller's title which the Buyer claims to exist. If the Buyer finds any meritorious defects in the Seller's title, then the Seller shall have the option of canceling this agreement and refunding the Buyer's down payment in full or of correcting and curing the defect in title. If the Seller elects to cancel this agreement, the Seller shall refund the Buyer's down payment here-under in full and this agreement shall thereafter be of no further force or effect whatsoever. If the Seller elects to cure and correct the defect in title, the Seller shall have a reasonable time within which to do so.

The parties hereto agree that the cost of the Owner's Title Insurance Policy in the amount of the purchase price shall be paid equally by the Buyer and the Seller; however, the cost of the Mortgagee's endorsement or any other requirements imposed by Buyer's lender, if any, including any surveying costs, loan origination fees and/or discount points, shall be paid entirely by the Buyer.

9. The parties acknowledge that there are currently no real estate taxes assessed against the subject property for the year 2004 and all prior years by reason of exemption pursuant to NEB. REV. STAT. §77-202(a) (Cum. Supp. 2003). The real estate taxes for the year 2005, if any, shall be assumed and paid by the Buyer. The parties also acknowledge that this transaction is exempt from any real estate transfer tax by reason of NEB. REV. STAT. §76-902(2).

10. The Seller shall pay all special tax assessments, if any, against the subject property prior to the closing date, and the Buyer shall pay all special tax assessments levied against the subject property from and after the closing date.

11. The closing will be at the offices of Leininger, Smith, Johnson, Baack, Placzek, Steele & Allen, 104 N. Wheeler, Grand Island, Nebraska, on or before February 28, 2005, at which time the Seller shall deliver to Buyer a fully executed Warranty Deed conveying valid marketable title to the subject real estate to the Buyer free and clear of all special assessments and free and clear of all liens and encumbrances, and Buyer shall remit to Seller the balance of the purchase price as provided hereinabove at Paragraph 5.

12. The parties agree that the property is being sold and purchased upon an "as is" condition and based upon the Buyer's inspection of the property and not upon any representations or warranties by the Seller. The Buyer acknowledges that they have viewed the premises, including improvements and any fence/boundary line establishing the boundaries, and accept the same in their present condition.

13. Risk of loss to the real estate shall be upon the Seller until the time of closing and thereafter shall be upon the Buyer. The Seller shall continue in force until closing all insurance now in force on the real estate.

14. The Seller and the Buyer each agree that time is an essential element of this agreement.

15. If the Buyer breaches this agreement, the down payment shall be forfeited to the Seller as liquidated damages. In addition, the Seller shall be permitted to pursue such other equitable and legal remedies as may be available to the Seller.

2

All covenants and conditions herein contained shall extend to and be obligatory 16. upon the parties hereto and their heirs, assigns, successors and legal representatives.

IN WITNESS WHEREOF, the undersigned have executed this Agreement for Sale and Purchase of Real Estate on the date first noted above.

HALL COUNTY SCHOOL DISTRICT 2

Amp Έy (

Lynn R. Cronk, I Board of Education

"SELLER"

ATTEST:

#### CITY OF GRAND ISLAND, NEBRASKA

RaNae Edwards, City Clerk

By Jay Vavricek, Mayor

"BUYER"

#### STATE OF NEBRASKA ) ) ss: COUNTY OF HALL )

Before me, a Notary Public qualified in said County, personally came Lynn R. Cronk, President, Board of Education, on behalf of Hall County School District 2, known to me to be the identical person whose name is affixed to the foregoing instrument, and acknowledged the execution thereof to be her voluntary act and deed, and her voluntary act and deed as President of the Board of Education.

Witness my hand and Notarial Seal on February 3, 2005.						
GENERAL NOTARY - State of Nebraska BETTY L. WAGNER Ny Comm. Exp. July 1, 2005	Betty) 2 Notary Public	L Wagner				
My commission expires: <u>7-1-08</u>	0					

#### STATE OF NEBRASKA ) ) ss: COUNTY OF HALL )

Before me, a Notary Public qualified in said County, personally came Jay Vavricek, Mayor of the City of Grand Island, Nebraska, a city of the first class of the State of Nebraska, on behalf of such city, known to me to be the identical person whose name is affixed to the foregoing instrument, and acknowledged the execution thereof to be his voluntary act and deed, and his voluntary act and deed as Mayor of the City of Grand Island, Nebraska.

Witness my hand and notarial seal, this \_\_\_\_\_ day of \_\_\_\_\_, 2005.

Notary Public

My commission expires:

1446-87/108504

#### RESOLUTION 2005-58

WHEREAS, on December 21, 2005, by Resolution 2004-320, the City Council of the City of Grand Island approved the acquisition of real estate comprising all of Block Twelve (12), Charles Wasmer's Addition to the city of Grand Island, Hall County, Nebraska to convert such property into a detention cell; and

WHEREAS, the terms and conditions of such conveyance are set out in an Agreement for Sale and Purchase of Real Estate; and

WHEREAS, the City Attorney has reviewed and approved the Agreement for Sale and Purchase of Real Estate.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the Agreement for Sale and Purchase of Real Estate by and between the City and Hall County School District No. 2, known as Grand Island Public Schools for the purchase of Block Twelve (12), Wasmer's Addition to the city of Grand Island, Hall County, Nebraska, for the amount of \$180,100 is hereby approved.

BE IT FURTHER RESOLVED, that the Mayor is hereby authorized and directed to execute such agreement on behalf of the City of Grand Island.

- - -

Adopted by the City Council of the City of Grand Island, Nebraska, March 8, 2005.

RaNae Edwards, City Clerk

Approved as to Form ¤ \_\_\_\_\_ February 24, 2005 ¤ City Attorney