Committee Members
David Reggiani, Chair
Robert Baty
Martin Moe
Jim Kacsh
Dick Groff
Mike Hicks
Tom Bailer

City Deputy Clerk
Robyn Kincaid

CITY OF CORDOVA
PUBLIC SAFETY BUILDING DESIGN COMMITTEE
RESOURCE PACKET

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Geotechnical Report
Cordova Center

August 2002

Prepared for:
Minch Ritter Voelckers Architects

Prepared by:
Peratrovich, Nottingham & Drage, Inc.
1506 West 36th Ave
Anchorage, Alaska, 99503

PN&D No. 02040.01

Peratrovich, Nottingham, & Drage, Inc.
consultants

1. Introduction

This report presents the results of the subsurface explorations, laboratory testing and geotechnical engineering study for the proposed Cordova Center in Cordova, Alaska. The purpose of this geotechnical study was to determine subsurface conditions at two sites being considered for the facility, and provide engineering recommendations regarding soil placement for building foundations. This study was performed by Peratrovich, Nottingham and Drage (PN&D) of Anchorage, Alaska through a contract with Paul Voelckers of Minch Ritter Voelckers Architects.

2. Site Conditions

The Cordova Center is to be located at one of two sites along 1st street in Cordova. Site A is level graded and includes the Cordova Public Library in the southwest corner of the site. Site B is a vacant lot, with an existing gravel pad in the southeast quarter, and a steep slope toward the west in the southwestern third of the site. The locations of sites A and B are shown in Figure 1, Site Location Map.

3. Investigation Equipment and Methods

PN&D conducted this subsurface investigation at the two sites on July 1, 2002. This investigation consisted of 10 test pits, 5 at each site. Test pits were excavated using a Hitachi EX230LC excavator operated under subcontract to PN&D by Eagle Construction. Test pits were identified as TP-1 through TP-10, excavated to bedrock at depths of 2 to 13 feet. Test pit locations are depicted on the Test Pit Location and Topographical Survey (Figures 2 and 3) for the respective sites. Soils were identified in the field by a PN&D engineer in accordance with ASTM D 2488 – Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Samples were gathered as grab samples in different soil strata at the discretion of the field engineer. Several samples taken in the field were tested in the laboratory to identify the engineering classification and organic content of the samples. A summary of the test pit logs are presented in Table 1, Test Pit Summary. Laboratory analysis results are included as Original Laboratory Reports and summarized in Table 2.

Field and laboratory soil classification and testing was conducted in general accordance with the Unified Soil Classification System (USCS) and the following ASTM Standards:

D 422 Method for Particle-Size Analysis of Soils
D 1586 Method for Penetration Test and Split-Barrel Sampling of Soils
D 2216 Test Method for Lab Determination of Water (moisture) Content of Soils and Rock
D 2487 Test Method for Classification of Soils for Engineering Purposes
D 2488 Practice for Description and Identifications of Soils (Visual-Manual Procedure)
D 2974 Test Method for Moisture, Ash and Organic Matter of Peat and other Organic

Soils
D 4318 Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

4. Geotechnical Findings

Site A: The subsurface of site A was found to consist of several layers of fill extending to bedrock. Fill included sands and gravels extending from the surface to depths of 3 to 8 feet. These sands and gravels are underlain by an organic fill extending an additional 3 to 5 feet to bedrock. All test holes were terminated at bedrock, encountered at depths of 5.5 to 13 feet below the surface.

Site B: Site B has a gravel pad in the southeast corner with 1½ feet of stone, gravel and sand fill underlain by 1½ feet of silty sand fill with organics. A steep bank slopes down to the west of this leveled area. At the toe of this slope, in the southwestern portion of the site, 2 feet of stone fill with silty sand and organics covers bedrock. In the northern half of site B peat is prevalent at the surface extending to depths of 4 to 9 feet. This peat is underlain by several feet of sands and gravel. Bedrock was encountered at depths between 5 and 9 feet in the northern half of the site.

5. Engineering Recommendations

Site A: Underlying organic material must be removed from beneath the building area before construction. This will require removing of the entire fill within the vicinity of the building to remove the underlying organic fill. Excavation will need to extend to bedrock throughout the site at depths between 5 ½ to 13 feet. This area must then be brought back to grade with properly placed structural fill.

Site B: Organic material must be removed from beneath the building area before construction. Excavation must include both the peat found in the northern half of the site and organic fill in the south. Fill to be removed in the south portion of the site is 2 to 3 feet deep. Peat in the northern half of the site is 4 to 9 feet in depth. Underlying sands and gravels are suitable for supporting fill.

5.1 Footing Design

Where building foundations will be heated in the winter, the top of interior footings should be placed a minimum of 24 inches below finished floor elevation. Exterior footings of heated buildings should also be founded a minimum of 24-inches below the ground surface. To provide drainage away from buildings a 5% slope must be maintained at the surface, for a minimum of 10 feet from the edge of buildings.

5.2 Floor Slab Support

Floor slabs on grade should be placed on compacted structural fill containing less than 10 percent by weight of its material passing the #200 sieve. Floor slabs should be placed on a

drainage blanket consisting of a granular, non-frost susceptible (NFS) material containing less than 6 percent by weight passing the #200 sieve, based on the fraction passing the ¾-inch mesh sieve. The designer may also employ other vapor-retarding measures such as impermeable liners.

5.3 Asphalt Pavement Foundation

It is anticipated that asphalt pavement will be used at the site for general access and vehicle parking. Anticipated wheel loads for the parking area are assumed to be less than 6,000 pounds (lbs). Paved areas should be sloped a minimum of 1% such that runoff will be directed to the edge of the pavement, into drainage ditches or to a collection system. The following pavement section is recommended, referring to the Municipality of Anchorage Standard Construction Specifications for Earthwork Section 20.05.

Recommended Pavement Section:

	Material Thickness (inches)
Asphalt thickness	2
Leveling Course	2
Base (MOA Type II-a, NFS)	6
Subbase (MOA Type II, NFS)	18

5.4 Settlement

The magnitude of settlement that will develop at the building site is dependent upon loads, the density of the granular material, and the care with which structural fills are placed and compacted. For the typical loads anticipated for the proposed structure, it is estimated that total maximum settlement will be less than 1/2-inch with a maximum differential settlement approximately 3/4 of the total settlement. Total and differential settlement could increase significantly if structural fill beneath footings is not adequately compacted. The majority of settlement should occur rapidly, essentially as loads are applied during construction.

5.5 Seismic Design Criteria

Peak ground accelerations of 0.5 and 0.9 g are predicted for this site with a 10% and 2% probability of exceedance in 50 years respectively. Shallow bedrock will allow these peak ground accelerations to be transmitted to a structure at these sites with little soil dampening. Ground accelerations are based on United States Geological Survey (USGS) Earthquake Hazards Program mapping.

5.6 Fill and Compaction Requirements

All fills should be placed in lifts not to exceed 12-inches in loose thickness. Fill material must be non-frost susceptible material. Compaction specifications should be to a density as a percentage of the maximum density as determined by the Modified Proctor compaction procedure (ASTM D-1557). When backfilling within 18-inches of the building wall, fill should be placed in layers not to exceed 6-inches in loose thickness and densely compacted with hand-operated equipment. Before placing floor slabs or footings the subgrade should be proof-rolled to compact material that may have been loosened during excavation or placement of formwork.

6. References

Bowles, J.E. 1996. *Foundation Analysis and Design*, 5th edition. McGraw-Hill Company.

McCarthy, David F. 1993. *Essentials of Soil Mechanics and Foundations*. Regents/Prentice Hall, Englewood Cliffs, New Jersey.

Municipality of Anchorage Department of Public Works. 1988. *Design Criteria Manual*.

Winterkorn, H.F. and Fang, H. 1975. *Foundation Engineering Handbook*. Van Nostrand Reinhold Company, New York, NY.

Table 1. Test Pit Summary
Cordova Center - Cordova, Alaska
GEOTECHNICAL INVESTIGATION

Performed by Peratrovich, Nottingham & Drage
7/1/02
Cloudy - Temperatures in the 60's

TEST PIT #	TYPE[1]	DEPTH	DESCRIPTION
1	EX	0-8"	sandy gravel surface course
		8"-2.5'	silty sand and gravel fill with organics
		2.5'-7'	rock fill, <1'
		7'-8.5'	sand with gravel fill- water seepage at 11.5'
		8.5'-12'	organic fill [3]
		12'-13'	fractured rock, water seepage
		13'	bedrock (BOP)[2]
2	EX	0-2'	brown silty sand and gravel fill
		2'-3'	gray sandy gravel
		3'-5.5'	organic fill
		5.5'	bedrock (BOP)
3	EX	0-0.5'	gravel fill
		0.5'-6.5'	brown silty sand and gravel fill, trace organics, <12" [3]
		6.5'-9.5	organic fill
		9.5'	bedrock (BOP)
4	EX	0-2.5'	brown silty sand with cobble fill, <12"
		2.5'-8'	gray silty sand with gravel, fill [3]
		8'-13'	organic fill, seepage at 8'
		13'	bedrock (BOP)
5	EX	0-2'	sand with silt and cobbles
		2'-5'	brown silty sand with gravel and cobble fill
		5'-8.5'	gray sandy gravel with silt
		8.5'-12'	organic fill with debris (pipe, boards and wire)
		12'	bedrock (BOP), water at 12'
6	EX	0-1.5'	shot rock fill with sandy gravel, <8"
		1.5'-3'	brown silty sand fill with cobbles and debris and organics
		3'-7'	silty gravel with sand and cobbles [3]
		7'	bedrock (BOP)
7	EX	0-4'	peat - brown silty sand with organics
		4'-9'	sandy silt with gravel and cobbles [3]
		9'	bedrock (BOP)
8	EX	0-4'	peat - brown silty sand with organics and cobbles, water seepage at 2'
		4'-5'	sandy silt with cobbles
		5'	bedrock (BOP)
9	EX	0-9'	peat - brown silty sand with organics and debris
		9'	bedrock (BOP)
10	EX	0-2'	shot rock fill with organics and brown silty sand
		2'	bedrock (BOP)

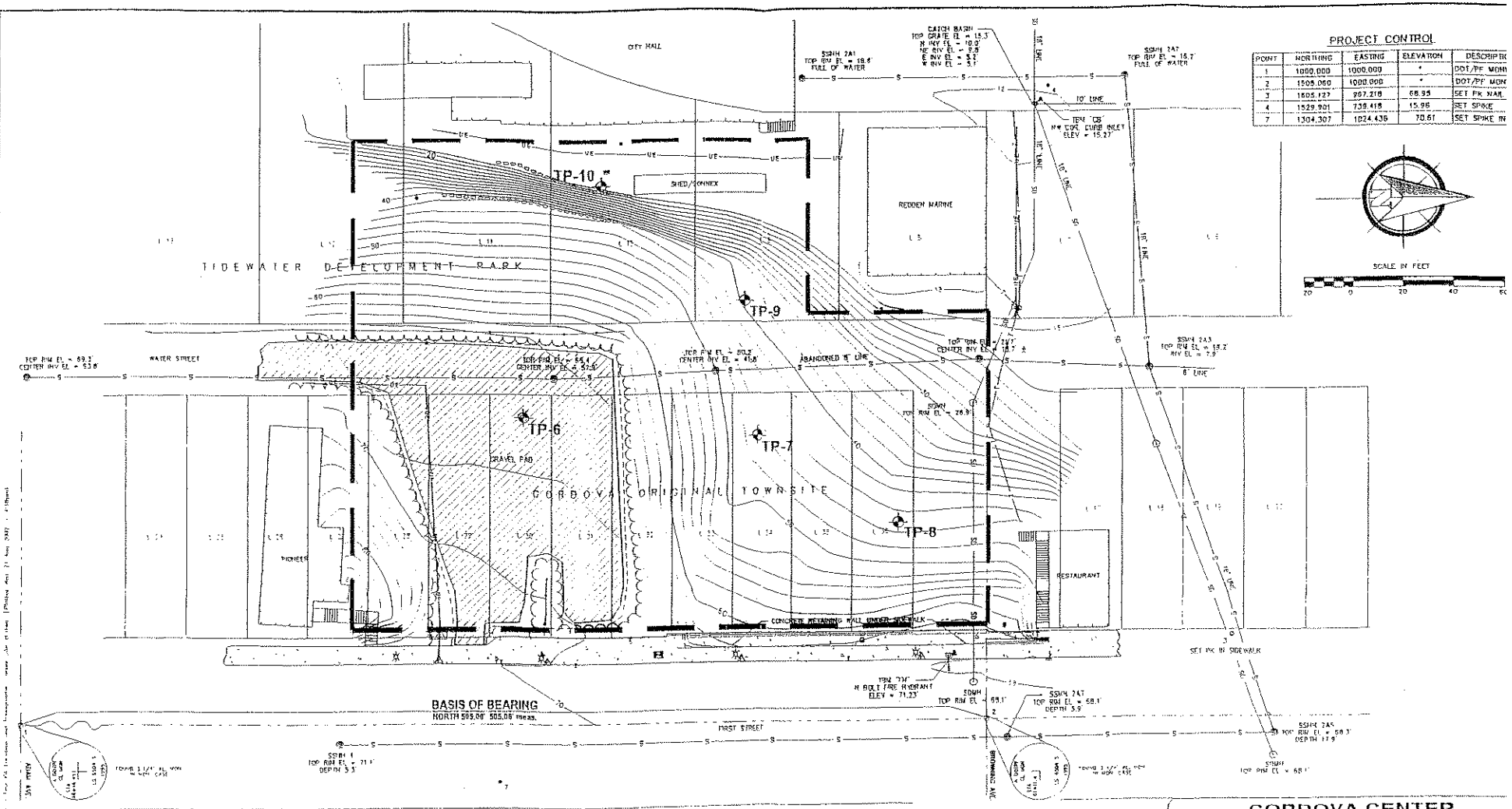
[1] EX = Excavated test pit
[2] BOP = Bottom of pit
[3] Laboratory analysis performed

Table 2. Laboratory Analysis Summary
Cordova Center - Cordova, Alaska
GEOTECHNICAL INVESTIGATION

Performed by Peratrovich, Nottingham & Drage
7/1/02
Cloudy - Temperatures in the 60's

TEST PIT #	DEPTH	DESCRIPTION
1	11'	GW-GM - well graded GRAVEL with silt and sand. Water content = 51.5%, organic content = 27.4%
3	6'	GW-GM - well graded GRAVEL with silt and sand
4	5'	SM - silty SAND with gravel, water content = 2.0%
6	5'	GM - silty GRAVEL with sand
7	7'	SM - silty SAND with gravel
All laboratory analysis performed by Alaska Testlab		


FIRST STREET
SECOND STREET
MH83
MH4
MH70
MH305
MH72
TP-1
TP-2
TP-3
TP-4
TP-5
82
84
86
88
SCALE IN FEET
20 0 20 40 60
LEGEND
PROPOSED TEST PIT
ACTUAL TEST PIT (DUG)
NOTE:
BASEMAP SUPPLIED BY MINCH RITTER VOELKERS ARCHITECTS
CORDOVA CENTER
GEOTECHNICAL REPORT
Peratrovich, Nottingham & Drage, Inc.
Engineering Consultants
1506 West 36th Avenue,
Anchorage, Alaska 99503
(907) 561-1011 FAX (907) 563-4
Designed: AFS
Drawn: RLC
Checked: -
Project No. 02040
Date: 8/14/02
Scale: AS SHOWN
TEST PIT LOCATIONS AND
TOPOGRAPHICAL SURVEY - SITE A
Figu
2



POINT	NORTHING	EASTING	ELEVATION	DESCRIPTIO
1	1000.000	1000.000	*	DOT/PF MON
2	1505.060	1000.000	*	DOT/PF MON
3	1505.127	997.218	68.95	SET PK NAIL
4	1529.901	738.418	15.96	SET SPIKE
7	1304.307	1024.436	70.61	SET SPIKE IN

NOTES:

1. VERTICAL DATUM GIVEN TO PHAD BY JOHN PAULSON ENGINEER DOT/PF.
2. BASIS FOR VERTICAL DATUM FOR THIS TOPOGRAPHIC SURVEY IS FROM USC&GS BM "A-71 1952", ELEVATION 100.84', PUBLISHED ELEVATION DIFFERS FROM ELEVATION USED FOR THIS SURVEY IN ORDER TO MATCH DOT/PF DATUM (VALDEZ OFFICE, 835-1033).
3. BASIS OF BEARING FOR THIS TOPOGRAPHIC SURVEY IS NORTH AND IS BASED ON THE LINE BETWEEN TWO FOUND DOT/PF CENTERLINE MONUMENTS LOCATED ALONG FIRST STREET WHERE ADAMS AND BROADWAY AVENUES INTERSECT, AS SHOWN ON THE RECORD OF SURVEY OF A PORTION OF THE CORDOVA TOWNSITE within U.S.S. 449 RS No. 83-5.
4. CONTOURS ARE IN FEET WITH TWO FOOT INTERVALS.
5. ALL DEPTHS SHOWN ON MANHOLES ARE TAKEN FROM CITY OF CORDOVA DRAWINGS. NO INVERT ELEVATIONS ON THESE MANHOLES WERE TAKEN AT THIS TIME.
6. PROPERTY LINES WERE PLOTTED BASED ON NON PUBLISHED INFORMATION. NO BOUNDARY SURVEY WAS PERFORMED TO DETERMINE PROPERTY LINES AT THIS TIME.
7. TOPOGRAPHIC SURVEY PERFORMED BY PHAD JULY 24 THRU 27, 2002.
8. GEOTECHNICAL INVESTIGATION PERFORMED BY PHAD JULY 1, 2002.

LEGEND

- TEST PIT LOCATION
- PROPOSED BUILDING OUTLINE
- FOUND DOT/PF MONUMENT
- SET PK NAIL IN CONCRETE
- SET SPIKE
- ELECTRIC J BOX
- LIGHT POLE
- ELECTRIC TRANSFORMER
- CABLE PEDESTAL
- PHONE PEDESTAL
- SIGN
- STORM DRAIN MANHOLE
- STORM DRAIN CATCH BASIN
- FIRE HYDRANT
- WATER VALVE BOX
- SANITARY SEWER MANHOLE
- CONCRETE
- PAVED AREA
- GUARD RAIL
- EXPOSED ROCK CLIFF
- HARD BARING
- UG ELECTRIC
- UG TELEPHONE
- STORM DRAIN LINE
- WATERLINE
- SANITARY SEWER LINE
- BRUSH LINE

CORDOVA CENTER GEOTECHNICAL REPORT

Peratrovich, Nottingham & Drage, Inc.
Engineering Consultants
1506 West 36th Avenue,
Anchorage, Alaska 99503
(907) 561-1011 FAX (907) 563

AFS
REC
EM
02040

8/14/03
AS SHOWN

TEST PIT LOCATIONS AND TOPOGRAPHICAL SURVEY - SITE B

Fig

Test Pit Summary
Cordova Center - Cordova, Alaska
GEOTECHNICAL INVESTIGATION

Performed by Peratrovich, Nottingham & Drage
7/1/02
Cloudy - Temperatures in the 60's

TEST PIT #	TYPE	DEPTH	DESCRIPTION
1	EX	0-8"	sandy gravel surface course
		8"-2.5'	silty sand and gravel fill with organics
		2.5'-7'	rock fill, <1'
		7'-8.5'	sand with gravel fill- water seepage at 11.5'
		8.5'-12'	organic fill [3]
		12'-13'	fractured rock, water seepage
		13'	bedrock (BOP)[2]
2	EX	0-2'	brown silty sand and gravel fill
		2'-3'	gray sandy gravel
		3'-5.5'	organic fill
		5.5'	bedrock (BOP)
3	EX	0-0.5'	gravel fill
		0.5'-6.5'	brown silty sand and gravel fill, trace organics, <12" [3]
		6.5'-9.5	organic fill
		9.5'	bedrock (BOP)
4	EX	0-2.5'	brown silty sand with cobble fill, <12"
		2.5'-8'	gray silty sand with gravel, fill [3]
		8'-13'	organic fill, seepage at 8'
		13'	bedrock (BOP)
5	EX	0-2'	sand with silt and cobbles
		2'-5'	brown silty sand with gravel and cobble fill
		5'-8.5'	gray sandy gravel with silt
		8.5'-12'	organic fill with debris (pipe, boards and wire)
		12'	bedrock (BOP), water at 12'
6	EX	0-1.5'	shot rock fill with sandy gravel, <8"
		1.5'-3'	brown silty sand fill with cobbles and debris and organics
		3'-7'	silty gravel with sand and cobbles [3]
		7'	bedrock (BOP)
7	EX	0-4'	peat - brown silty sand with organics
		4'-9'	sandy silt with gravel and cobbles [3]
		9'	bedrock (BOP)
8	EX	0-4'	peat - brown silty sand with organics and cobbles, water seepage at 2'
		4'-5'	sandy silt with cobbles
		5'	bedrock (BOP)
9	EX	0-9'	peat - brown silty sand with organics and debris
		9'	bedrock (BOP)
10	EX	0-2'	shot rock fill with organics and brown silty sand
		2'	bedrock (BOP)

[1] EX = Excavated test pit
[2] BOP = Bottom of pit
[3] Laboratory analysis performed

Laboratory Analysis Summary
Cordova Center - Cordova, Alaska
GEOTECHNICAL INVESTIGATION

Performed by Peratrovich, Nottingham & Drage
7/1/02
Cloudy - Temperatures in the 60's

TEST PIT #	DEPTH	DESCRIPTION
1	11'	GW-GM - well graded GRAVEL with silt and sand. Water content = 51.5%, organic content = 27.4%
3	6'	GW-GM - well graded GRAVEL with silt and sand
4	5'	SM - silty SAND with gravel, water content = 2.0%
6	5'	GM - silty GRAVEL with sand
7	7'	SM - silty SAND with gravel
All laboratory analysis performed by Alaska Testlab		

ALASKA TESTLAB
A Division of DOWL LLC

Client: Peratrovich Nottingham & Drage

Project: Job 02040.0

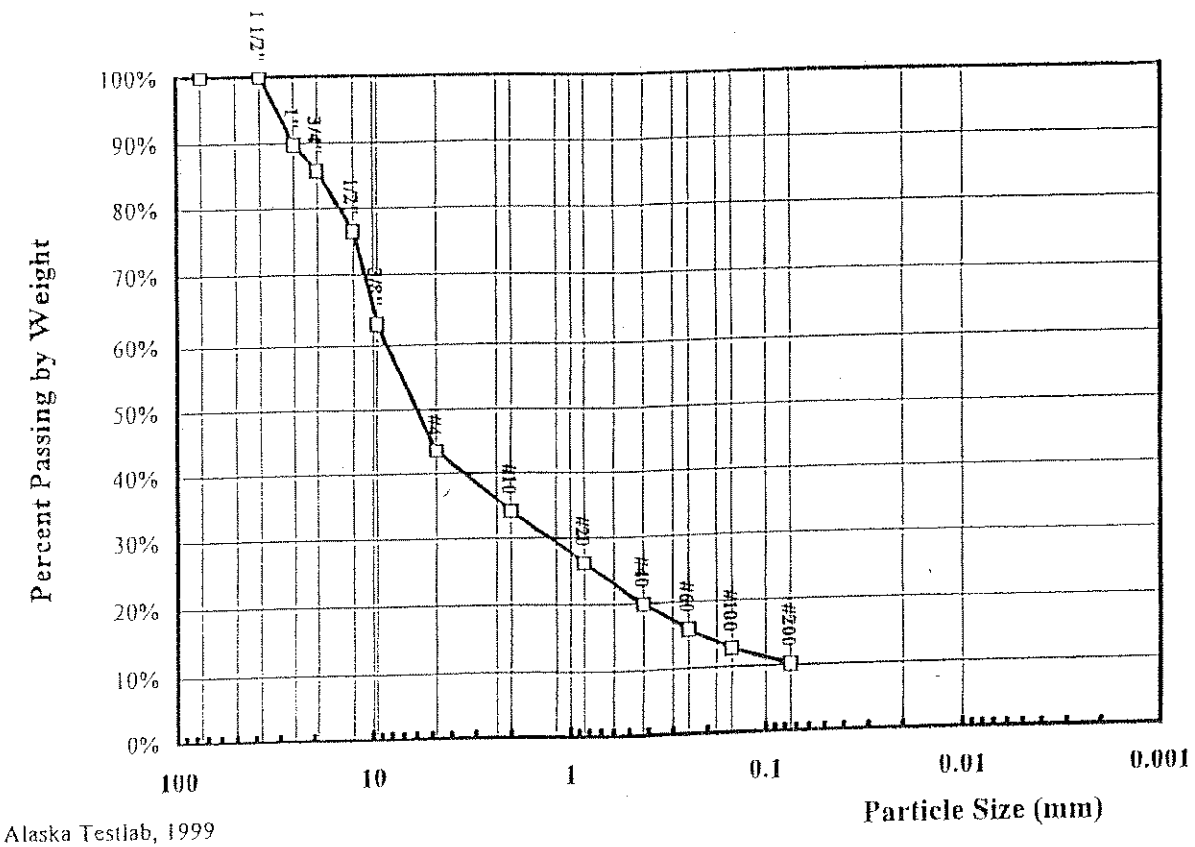
Location: Pit No. 1 @ 11'

Submitted by Client

Moisture Content = 51.5%, Organic Content = 27.4%

Engineering Classification: Well Graded GRAVEL with Silt and Sand, GW-GM

Frost Classification: Not Measured



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David L Andersen

David L. Andersen, P.E., General Manager

PARTICLE-SIZE

DIST. ASTM D422

W.O. A29888

Lab No. 1139

Received: 7/8/02

Reported:

SIZE	PASSING	SPECIFICATION
+3 in Not Included in Test = ~0%		
3"		
2"		
1 1/2"	100%	
1"	90%	
3/4"	86%	
1/2"	76%	
3/8"	63%	
No. 4	44%	
Total Wt. = 1080g		
No. 8		
No. 10	34%	
No. 16		
No. 20	26%	
No. 30		
No. 40	20%	
No. 50		
No. 60	16%	
No. 80		
No. 100	13%	
No. 200	10%	
Total Wt. of Fine Fraction = 466.5g		
0.02 mm		

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ALASKA TESTLAB
A Division of DOWL LLC

Client: Peratrovich Nottingham & Drage

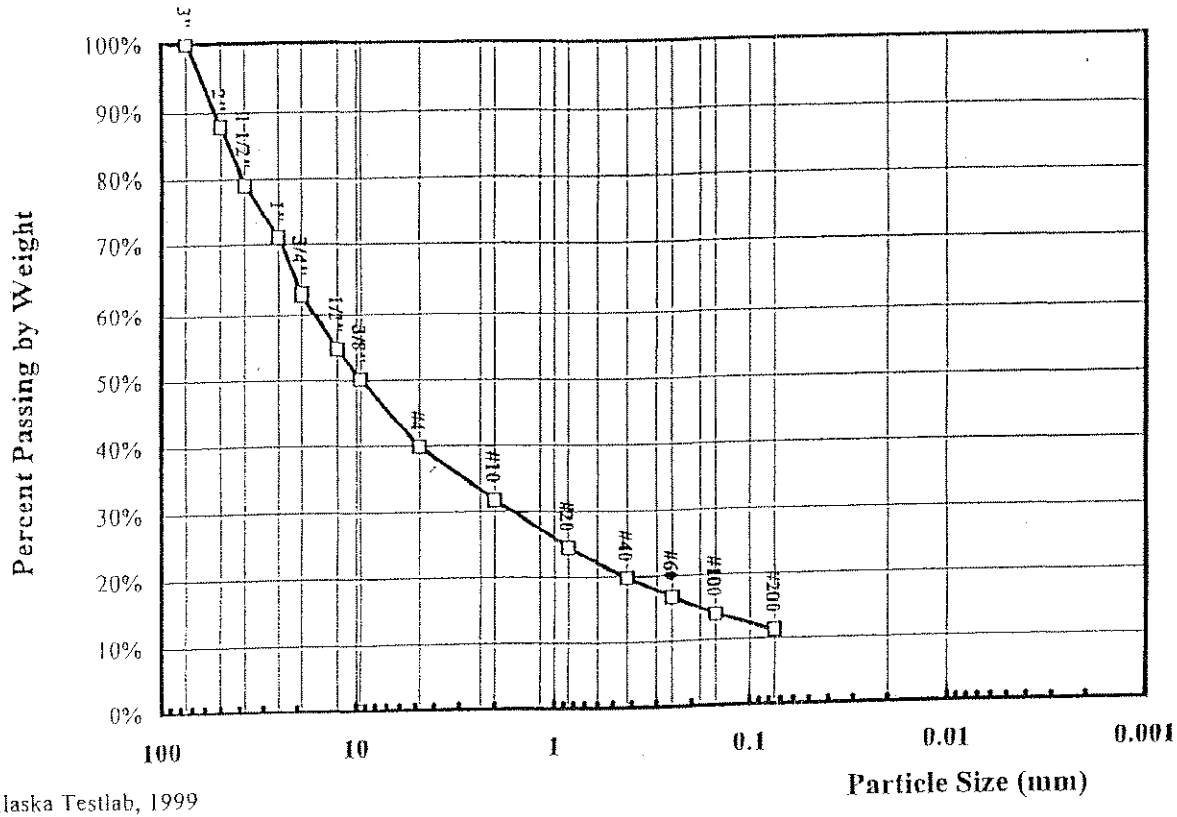
Project: Job 02040.0

Location: Pit No. 3 @ 6'

Submitted by Client

Engineering Classification: Well Graded GRAVEL with Silt and Sand, GW-GM

Frost Classification: Not Measured



David L Andersen

David L. Andersen, P.E., General Manager

PARTICLE-SIZE
DIST. ASTM D422

W.O. A29888

Lab No. 1141

Received: 7/8/02

Reported:

SIZE	PASSING	SPECIFICATION
+3 in Not Included in Test = ~0%		
3"	100%	
2"	88%	
1 1/2"	79%	
1"	71%	
3/4"	63%	
1/2"	55%	
3/8"	50%	
No. 4	40%	
Total Wt. = 6095.2g		
No. 8		
No. 10	32%	
No. 16		
No. 20	24%	
No. 30		
No. 40	20%	
No. 50		
No. 60	17%	
No. 80		
No. 100	14%	
No. 200	11%	
Total Wt. of Fine Fraction = 554.9g		
0.02 mm		

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ALASKA TESTLAB
A Division of DOWL LLC

Client: Peratrovich Nottingham & Drage

Project: Job 02040.0

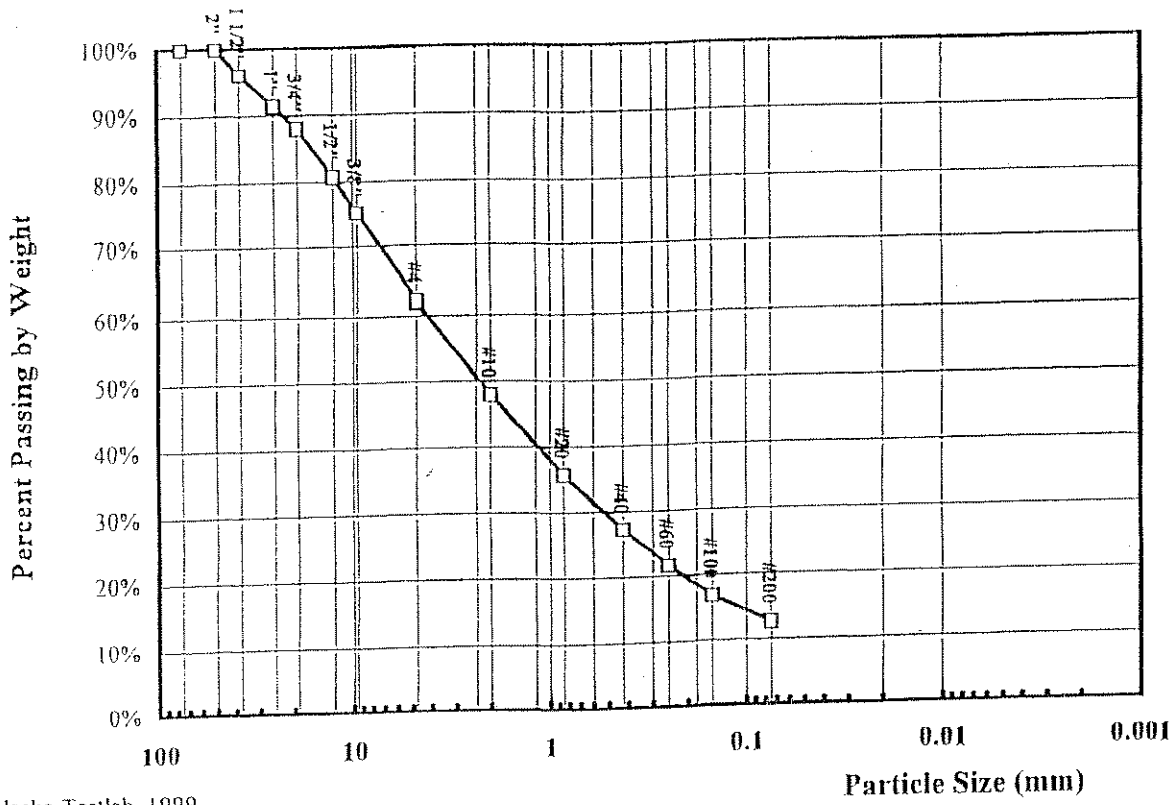
Location: Pit No. 4 @ 5'

Submitted by Client

Moisture Content = 2.0%

Engineering Classification: Silty SAND with Gravel, SM

Frost Classification: Not Measured



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David L Andersen

David L. Andersen, P.E., General Manager

PARTICLE-SIZE

DIST. ASTM D422

W.O. A29888

Lab No. 1140

Received: 7/8/02

Reported:

SIZE	PASSING	SPECIFICATION
+3 in Not Included in Test = ~0%		
3"		
2"	100%	
1 1/2"	96%	
1"	91%	
3/4"	88%	
1/2"	81%	
3/8"	75%	
No. 4	62%	
Total Wt. = 6083g		
No. 8		
No. 10	48%	
No. 16		
No. 20	36%	
No. 30		
No. 40	27%	
No. 50		
No. 60	22%	
No. 80		
No. 100	17%	
No. 200	13%	
Total Wt. of Fine Fraction = 398.7g		
0.02 mm		

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ALASKA TESTLAB
A Division of DOWL LLC

Client: Peratrovich Nottingham & Drage

Project: Job 02040.0

Location: Pit No. 6 @ 5'

Submitted by Client

PARTICLE-SIZE DIST. ASTM D422

W.O. A29888

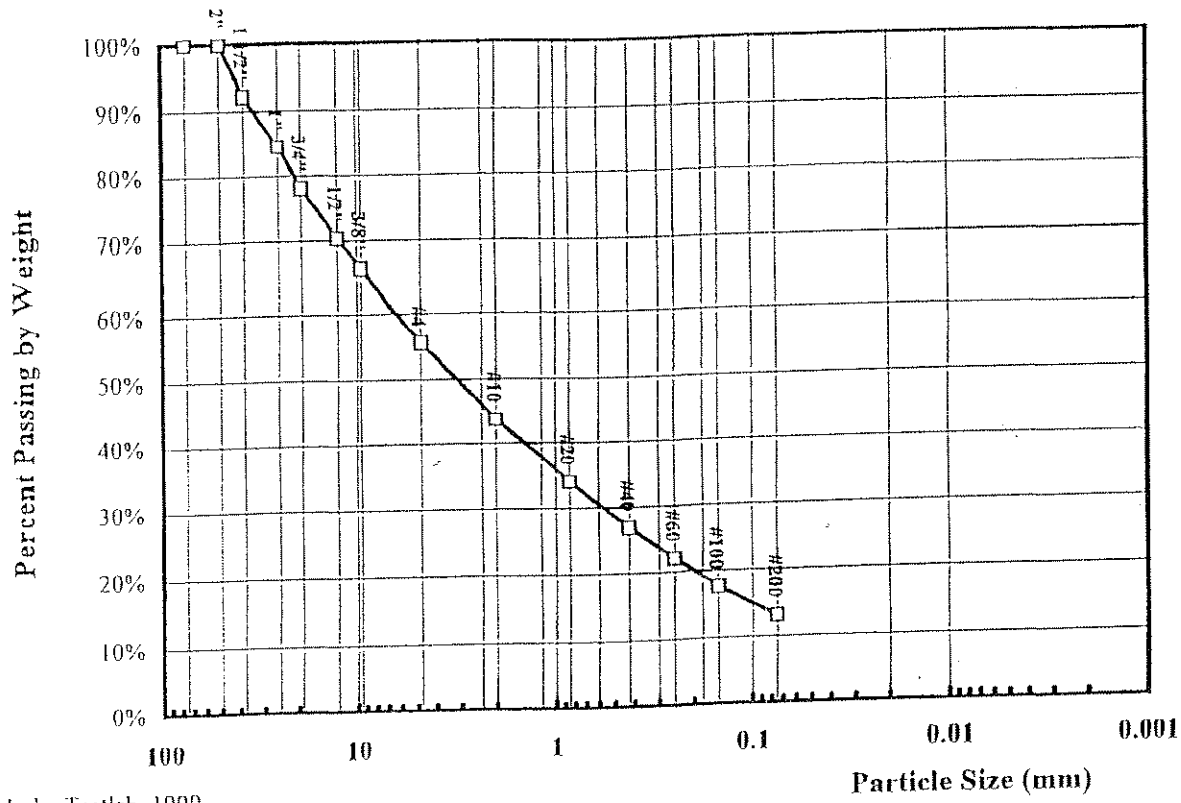
Lab No. 1143

Received: 7/18/02

Reported:

Engineering Classification: Silty GRAVEL with Sand, GM

Frost Classification: Not Measured



SIZE	PASSING	SPECIFICATION
+3 in Not Included in Test = ~0%		
3"		
2"	100%	
1 1/2"	92%	
1"	85%	
3/4"	78%	
1/2"	70%	
3/8"	66%	
No. 4	56%	
Total Wt. = 6558g		
No. 8		
No. 10	44%	
No. 16		
No. 20	34%	
No. 30		
No. 40	27%	
No. 50		
No. 60	22%	
No. 80		
No. 100	18%	
No. 200	13%	
Total Wt. of Fine Fraction = 456.8g		
0.02 mm		

David L Andersen

David L. Andersen, P.E., General Manager

4040 B Street Anchorage Alaska 99503 • 907/562-2000 • 907/563-3953

ALASKA TESTLAB
A Division of DOWL LLC

Client: Peratrovich Nottingham & Drage

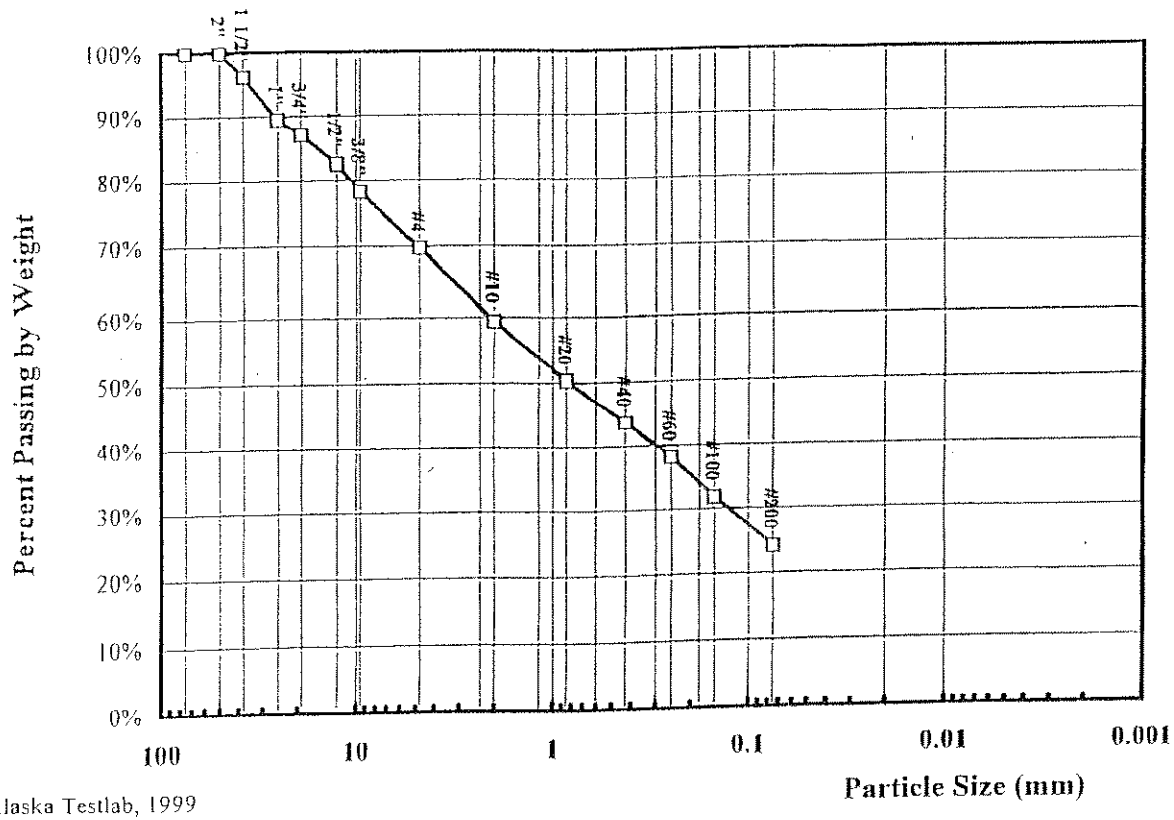
Project: Job 02040.0

Location: Pit No. 7 @ 7'

Submitted by Client

Engineering Classification: Silty SAND with Gravel, SM

Frost Classification: Not Measured



PARTICLE-SIZE DIST. ASTM D422

W.O. A29888

Lab No. 1142

Received: 7/8/02

Reported:

SIZE	PASSING	SPECIFICATION
+3 in Not Included in Test = ~0%		
3"		
2"	100%	
1 1/2"	96%	
1"	89%	
3/4"	87%	
1/2"	83%	
3/8"	78%	
No. 4	70%	
Total Wt. = 3927g		
No. 8		
No. 10	59%	
No. 16		
No. 20	50%	
No. 30		
No. 40	44%	
No. 50		
No. 60	38%	
No. 80		
No. 100	32%	
No. 200	24%	
Total Wt. of Fine Fraction = 432.2g		
0.02 mm		

David L Andersen

David L. Andersen, P.E., General Manager

4040 B Street Anchorage Alaska 99503 • 907/562-2000 • 907/563-3953

Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. *No one except you* should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one—not even you*—should apply the report for any purpose or project except the one originally contemplated.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, *do not rely on a geotechnical engineering report* that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions *only* at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an *opinion* about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject To Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce such risks, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations", many of these provisions indicate where geotechnical engineers responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Rely on Your Geotechnical Engineer for Additional Assistance

Membership in ASFE exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE PROFESSIONAL FIRMS PRACTICING IN THE GEOSCIENCES

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IIGER06983.5M

Bedrock Exploration
Cordova Center

March 2005

Prepared for:
Minch Ritter Voelckers Architects

Prepared by:
Peratrovich, Nottingham & Drage, Inc.
1506 West 36th Ave
Anchorage, Alaska, 99503

PN&D No. 02040.01

Incorporated CONSULTING ENGINEERS

Cordova Community Center Bedrock Exploration
Field Report

Date Performed: March 8th 2005
Time: 8:00am – 3:00pm
Weather: Very Rainy, Windy
Location: Proposed site for Cordova Community Center
People present: Paul Kendall (PND), Samantha Spindler (BBFM), Don Sjosted (Eagle Contracting (EC)), Travis (EC backhoe operator), John (EC Drill Operator)

Introduction

PND was asked to determine the depth and nature of the bedrock that would support the foundation system for the proposed Cordova Community Center. Eagle Contracting was retained to perform the excavation necessary to uncover bedrock and determine its suitability for the project. BBFM was present to identify particular areas of exploration critical to design of the structure.

A series of test pits and "scratch bedrock" areas were chosen for exploration. These areas are indicated on the attached drawing.

Summary

Seven areas were explored for bedrock and associated competency. A combination of a small excavator and rock drill were used for exploration. Of the areas probed, two pits uncovered bedrock (TP-C&D). The bedrock in those areas appeared structurally sound with little friable material, less than 12", on the top. The bedrock uncovered was typical of what the contractor has generally experienced in the Cordova area. The solid rock face on the west side of the proposed building could not be probed for access and safety reasons. The face itself was weathered and cracked, but exploration of bedrock 20 feet from the face indicated sound bedrock (TP-D). Bedrock was not reached within 11' of the surface in areas where BBFM is likely to locate lateral rock anchors (BH-1,2&3 and TP-A&B). However, Test Pit TP-6 dug in 2002 indicated bedrock at 7' depth in the middle of the upper parking lot. Also, based on previous test pits within the project limits, there is good reason to believe bed rock is no deeper then 13' and of the same quality determined at TP-C&D. If more specific information is required, then further exploration should be provided within the areas associated with the proposed rock anchor system.

Test Pits

The Contractor initially provided a Komatsu 120LC excavator for the excavation work. The first two test pits dug(TP A&B, see attached drawing for locations) did not encounter bedrock within the reach of the excavator (approx. 6-7' deep). The first pit was approximately 6 feet deep and the second was 7 feet. Access was limited by guardrail at the western edge of the existing parking lot. The contractor stated that they were unable to provide a larger excavator with a deeper reach due to load restrictions on the roads during breakup. An operator thought that the restrictions were lifted sometime in May. However, they had a rock drill that was available that the contractor felt could detect the presence of bedrock. It was decided that we should switch over to the drill rig for the remaining exploration areas within the parking lot. BBFM indicated

areas that were particularly important in determining the feasibility and depth of the planned foundation system for the community center. While the drilling was occurring, the excavator was digging in two locations below the upper parking lot (TP-C&D). In TP-C, bedrock was found at 8-8.5' below the surface, and at TP-D bedrock was 3 -3.5' below the surface. The bedrock layer was covered with very little friable material, less than 12" thick. The excavator scratched at the bedrock layer until it was exhibiting nearly no effectiveness at rock removal. Further descriptions of the test pits are provided in the Summary of Exploration Results.

Bore Holes

The contractor was asked to drill the areas within the parking lot area chosen by BBFM. A rock drill was used for the drilling; therefore no soil samples could be taken.
Ultimately, the drill was unable to detect bedrock within 11 feet of the surface at the indicated areas BH 1,2,&3. Additionally, the drill was experiencing operational difficulties due to the nature of the soil and eventually became stuck within the third test hole. Due to the fact drilling did not uncover bedrock in the first three areas and was not showing promise of finding bedrock within its practical reach, compounded with operational difficulties, drilling was abandoned. A more detailed description is provided in the Summary of Exploration Results.

Scratch Bedrock

It was desired to determine the friability of the rock at the western rock face on the back side of the existing City Hall. However, site access from the top was limited by the parking lot guardrail, and performing the work form the bottom of the rock face with the small excavator would have created unnecessary risk to the operator as well as City Hall itself. One test pit was within 20' of the rock face, and bedrock was encountered at 3-3.5' below the surface there. Additionally, numerous photos were taken of the rock face for later examination. It should be noted that BBFM did not indicate any plan to use rock anchors at the face.

Interviews with Contractor

Through discussion and questioning of the contractor, some history of the site was determined. The area next to the concrete retaining wall was used to dump debris from the Cordova Fire, hence the large thickness of the organic layer within the area. Also, one of the operators noted that the bedrock in the area is typically friable for the first 12 inches of depth. He felt this was due to freeze-thaw cycles. Furthermore, they felt that the bedrock layer typically was not an even surface, making excavation with machinery (bulldozers and excavators) a difficult task.

Summary of Exploration Results

Test Pit A – dug with 120LC, depth 6-6.5', organic from 0-6" deep. Silty Gravel with sand w/ 4-6" stone from 6"-6.5', uniform and gray. Water leaking into pit from walls(raining throughout the night before and at time pit was dug)

Test Pit B – dug with 120LC, depth approximately -7-7.5' deep. Organics from 0-12" deep, 12"—18" silty clay appearance, 18"-bottom Silty Gravel w/ sand w/ 4-6" stones, uniform and gray (hard sand). Water accumulation was noted similar to TP-A, nearly 4ft depth after 4 hours.

Test Pit C – Dug with 120LC, Depth was 8-8.5' deep, Organics from 0-30", 30"-7' gravelly silt with small stones, 7'-8.5' silty gravel with 4-6" stones, brown & gray. 8.5' bedrock (no longer possible to excavate with backhoe)

Test Pit D – Dug with 120LC, Depth was 3-3.5' deep, Organics from top to within 6" of bottom. Brown gravelly silt within 6" of bottom. 3.5' bedrock.

Bore Holes 1,2,3
Holes drilled with rock drill, bit was 2" in diameter with a hole approximately 3" in diameter. Typically, within 4' of the surface a layer of hard compacted material (acted like bedrock) was encountered for several feet up to 6' below surface. A layer of loose material was then found below 6' to the extent of the practical depth the drill could reach (11'). The same basic results were found with each drilling. The BH-3 hole was drilled to full depth and the drill was stuck while pulling it from the hole. The areas drilled were based on likely location of lateral anchors for the Foundation system.

Exploration Pictures

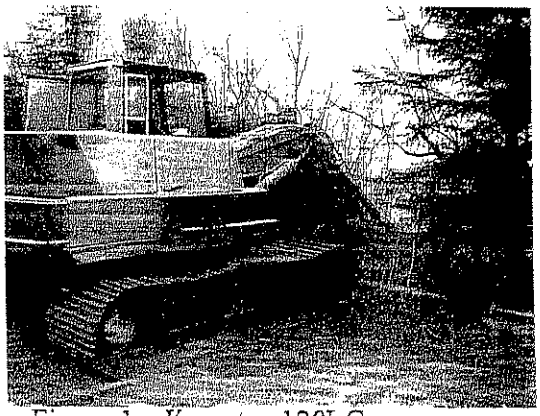


Figure 1 – Komatsu 120LC

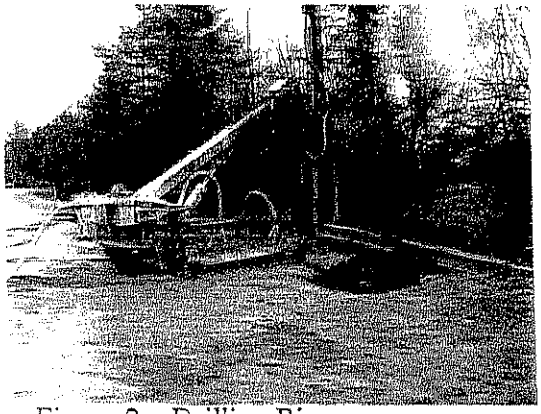


Figure 2 – Drilling Rig


Figure 3 – Test Pit A

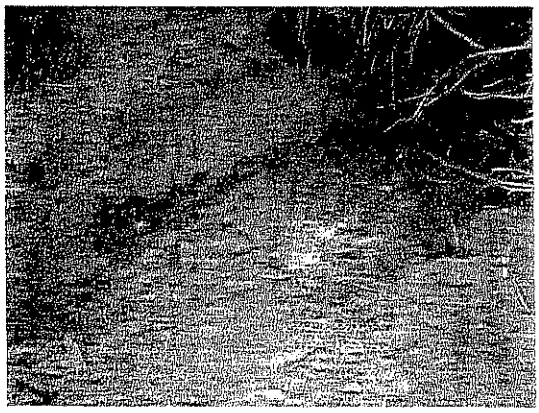


Figure 4 – Test Pit D

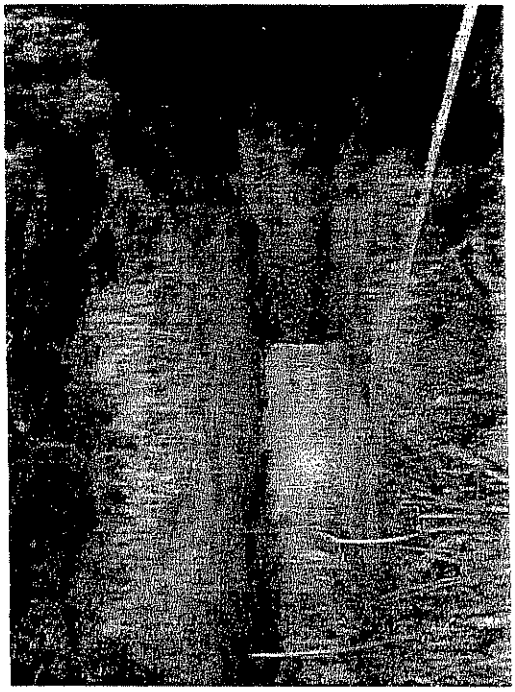


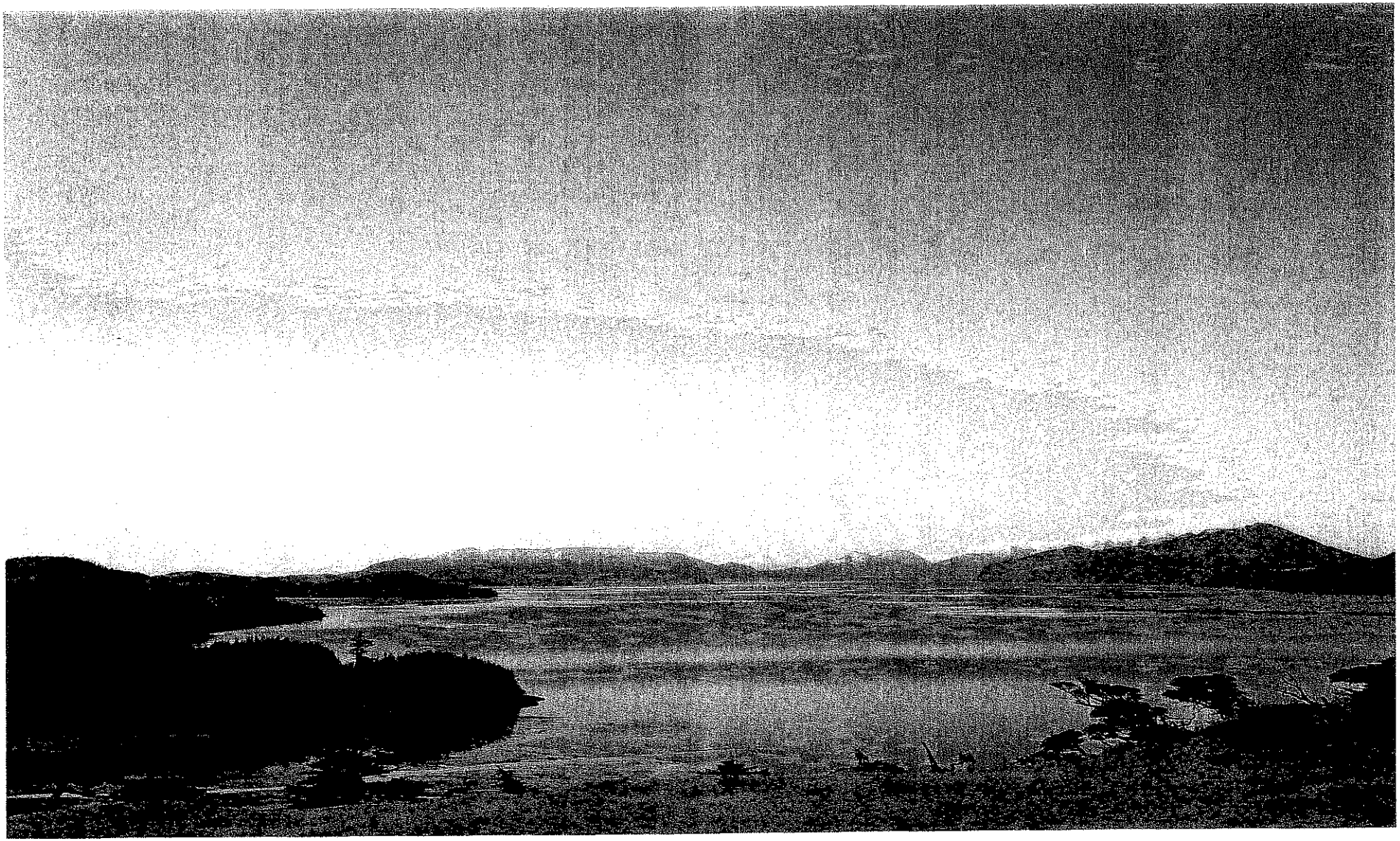
Figure 5 – Test Pit C

Figure 6 – Western Rock Face Pic #1

Figure 7 – Western Rock Face Pic #2

Figure 8 – Western Rock Face Pic #3

2008 CITY OF CORDOVA COMPREHENSIVE PLAN



[An in depth look at today, tomorrow, and the future]

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INTRODUCTION
UPDATE 2008

A. THE CITY'S MISSION

This document serves as the City of Cordova's 2008 Comprehensive Plan (Plan) updating the comprehensive plan of 1995. The Cordova City Council has officially approved this Plan in its effort to shape an even better place to live and work highlighting improved standards and conditions while simultaneously avoiding costly mistakes that may be detrimental to the community's well being. Guidance for civic decision makers and citizens alike is presented in the Plan as binding elements of land use, advisory elements of growth and development, and a selected series of actions designed to enhance the quality of life in Cordova.

Current and certain background information regarding the community's history, natural environment, economy, structure, and infrastructure is discussed in the document with the intent of presenting a realistic blueprint to aide it's users in establishing a positive vision of short-term comprehensive planning for the next ten (10) to twenty (20) years and no later than the year 2028 under this distinct criteria. The Plan is envisioned in part by many entities including community residents, landowners, business owners, public officials, and City management as a measure to present a clearly defined view of what the community is today, both strengths and weaknesses, and what is preferred to happen in the future.

The Cordova Planning and Zoning Commission, with technical assistance from consulting and the City Planning Department, prepared this document using the results of numerous community planning meetings and workshops. The goals and objectives identified under each vision element were developed based on public input and form the basis for land use regulations and future policy decision-making throughout the term of this document.

The City in accordance with this document will provide the following:

- Offer quality leadership, operate efficiently, and be responsive to the desires of its residents.
- Preserve and promote the unique heritage, culture, natural setting, and beauty of the Cordova area.
- Create a safe place to live and further the social and economic well being of its citizens.

The local government and the community in accordance with this Plan will provide the following as needed or as envisioned:

- Anticipate potential growth and forecast needs for land use, city infrastructure, service improvements, and economic development.
- Provide guidance on how land use and infrastructure decisions can facilitate economic development.
- Present an opportunity for the community and government to assess how it is doing, identify strengths and values to preserve and on which to build upon; identify weaknesses and problems to address; and examine current trends affecting the community.

- Facilitate community and government consensus on direction for the future, such as where growth should occur, what improvements are needed in roads, recreation facilities and utilities, and what types of development the community should encourage.

- Develop strategies to accomplish community goals and objectives and assign responsibility for acting on those strategies to the City and other groups.

Through the process of comprehensive planning, Cordova can promote, protect, and prepare for the task of improving public health and safety with the intent of preserving comfort, good order, and appearance. The Plan, with some foresight, can be used to prevent overcrowding and forecast transportation needs including those needs for water, sewer, and power systems. A balance can be struck in conserving, developing, utilizing, and protecting natural resources within its jurisdiction.

The Plan is intended to be a meaningful and effective document; therefore, it is highly advised and urged that it be used consistently by the citizens of Cordova, City government, and City management as a means to fulfill the Plan's intended purpose. It should be kept current. Discussions related to community growth, re-development, capital and social improvements or budget, should always occur in consultation to the Plan and used as a resource and referred to when making decisions. Use of the Plan in this way will help to bring into focus sufficient detailed information and data so that the best possible objective judgment can be made.

Implementation of the Plan is meant to bring an enhancement of quality of life and success to Cordova. The Cordova of the future will be known for its high standards of community appearance complimented by a healthy and diverse economy. It will be a town that is easily accessible with modern air, marine, and overland highways to and from points throughout the world; it will be a city with a full range of educational opportunities for children and adults alike accompanied by a full range of modern public facilities and services. Cordova will be known for its beautiful landscaping and a level of cleanliness unsurpassed reflecting its community pride. Cordova's success will be evidenced by its vibrant downtown, expanded recreational and commercial small boat harbor, fully developed industrial center, and a showcase of historic Alaskan structures on permanent display for the public to view and appreciate. But most of all, Cordova will become a better place to live in which City government operates efficiently and is responsive to the desires of its residents.

B. BASIS FOR REVISING THE COMPREHENSIVE PLAN

Cordova has experienced significant changes in the years since the 1995 comprehensive plan was adopted. The community retains many of the values and characteristics of a small town that should be preserved. Cordova is however, a growing community with an evolving economy and a changing character. Changes in the nature of commercial fishing and the number of visitors arriving in Cordova in recent years have caused some diversification accompanied by the associated economic benefits and impacts. This Cordova 2008 Comprehensive Plan addresses these issues.

C. LOCATION AND EXISTING CONDITIONS

The incorporated City of Cordova (core-DOH-vuh), Alaska, home of the world famous Copper River Wild Salmon, is a small coastal Home Rule City with an official population of 2,194 residents as censused in 2007 by the Alaska Department of Commerce - Community and Economic Development Council (ADCCEDC). It is located within the northern most reaches of the Pacific temperate rain forest along the coastal region of the eastern Prince William Sound in the Gulf of Alaska approximately 25 miles west by highway from the Copper River as it meanders through the

Copper River Delta to the ocean waters of the Gulf of Alaska. The entire shoreline in this area consists predominantly of a rugged combination of old and new growth forests, jagged mountains, rolling foothills, numerous lakes and rivers, expansive wetlands and marshes, with near-shore and tidewater glaciers in close proximity. Cordova is globally positioned at 60 degrees, 32 minutes, 34.1 seconds North and 145 degrees, 45 minutes, 36.59 seconds West (60.54805, - 145.760164) - Section 28, Township 15South; Copper River Meridian.

Cordova's average annual precipitation is recorded at 168 inches per year with a snowfall of 80 inches and is considered to be one of the highest averages precipitation for any given town or city in the entire continental United States, including Hawaii. Seattle, Washington for example, is considered a very wet and rainy city but by contrast, averages only 37.1 inches of precipitation per year in comparison.

One of Cordova's greatest strengths is its location being strategically placed by its founders to provide safe harbor for shipping vessels, commercial fishing vessels, and others for relatively easy and safe access to shipping lanes to commercial markets and needed local infrastructure for maintenance and mooring of sea-going vessels. Cordova is home to one of the largest harbors in the State of Alaska and is reinforced through a series of natural ocean barriers described by the USFS as the "Big Islands". These Islands in conjunction with the surrounding upland foothills and mountain ranges fortify the community and provide shelter against the sometimes extremely turbulent conditions associated with the Gulf of Alaska and inland storms.

Cordova has a resident population of 2,194 citizens who live in Cordova year around. However, the local population increases during the summer months to upward of 5,000 people as a result of the salmon drift net and purse seining season and the associated on-shore fresh market and canning industries. Together, these two industries provide the foundation for the community's economy. In addition, state, federal, and non-profit resource agencies such as the U.S. Forest Service (USFS), the Alaska Department of Fish and Game (ADFG), Prince William Sound Science Center (PWSSC) and the Copper River Delta Institute employ significant numbers of seasonal workers, researchers, and students.

Cordova is connected to state and world infrastructure by air and ocean lanes only. The community is served by two main sources of alternative commercial travel throughout the year. The *Alaska Marine Highway* has traditionally provided ocean travel opportunity for visitors and commerce in the Price William Sound connecting to Whittier, Valdez and Seward, each with rail or road access to the rest of the state. The State of Alaska recently improved the ferry service to Cordova with the addition of the M/V Aurora and M/V Chenega providing faster travel time and increased passenger amenities such as an increased number of trips per week during the summer months. *Jet and small plane services* continue to be an important link to Cordova's commercially developing economy as the fresh market of wild salmon sector continues to grow and prosper.

CHAPTER 1
ECONOMIC DEVELOPMENT

GOAL: Enhance the existing business and economic environment and attract a diversified economy that creates quality employment opportunities.

A. ECONOMIC OVERVIEW

We are a community that wants a strong and diverse economy with year-round employment, and we choose to promote environmentally responsible industries and jobs that create a higher standard of living. Since its beginning, the City of Cordova's economy has been directly linked to the fishing industry. Cordova currently is one of the higher-ranking harbor communities in Alaska known all over the world for the quality and value of fish landed; Cordova and the Prince William Sound in general, experienced a decline in related fisheries following the Exxon Valdez oil spill in 1989, but some industries such as the salmon drift/gill net have rebounded quite well. It is not unusual for local fish processors operating cold storage facilities, canneries, custom packing, and value added services to employ as many transient seasonal workers during the run of each season as there are permanent residents that live in Cordova. Salmon are the species of fish that Cordova depends on for its livelihood. However, halibut, herring, sablefish and ground fish are also an important part of Cordova's waterfront industry. Crab, shrimp and clams also exist in the near vicinity of Cordova, with potential as a future viable industry.

Commercial/recreational use activities in southeastern Prince William Sound have been on the increase in recent years bringing with it more independent sportsmen and visitors utilizing the local charter boats and lodges. Small cruise ships are accommodated in the small boat harbor up to a certain size and draft. There is the possibility that a deep water port facility may be established at Shepard Point for oil spill response purposes, but could be used for other local industry development too.

Cordova continues to experience a robust residential development climate at the time of this writing. Five (5) new subdivisions have been approved to date within Cordova City limits. There is no indication that the construction pace is slowing and the City is currently enjoying a higher than normal construction rate in 2007-2008.

B. ECONOMIC DEVELOPMENT STRATEGIES

It is the intent of the City to maintain and develop a strong downtown business district by using strategies as follows:

- Systematically promote economic development and diversification.
- Work with government to enhance Cordova's position as a government administration center.
- Work with the Cordova Electric Cooperative to promote projects that will result in lower power rates and increased benefits to its residents and customers, such as the development of solar, wind, tidal, and hydro-electric energy.
- Enter into a memorandum of understanding with the Native Village of Eyak to work cooperatively on mutual projects and work to enhance long-term communication.

- Evaluate the feasibility of incentives to include infrastructure improvements and low interest loans for building improvements (exterior, fire suppression, heating efficiency).

- Support and assist in the on-going cost/benefit and impact analysis of large projects as follows:
  - Investigate the costs/benefits of a deep-water port for the staging of oil spill response equipment, cruise ship docking and related development activity.
  - Support efforts to construct facilities capable of handling conventions, symposiums, conferences, and the arts.

- Identify grant opportunities and funding resources for City projects.

- Develop productive working relationships with other organizations working on local and regional economic development projects.

C. FISHING AND FISH PROCESSING DEVELOPMENT STRATEGIES

It is the intent of the City to stimulate growth and diversification in the local fishing and fish processing industries using the following strategies:

- Support efforts to diversify the salmon hatchery program.

- Support efforts to aggressively market Cordova fish products.

- Work towards development of sustainable, under-utilized fisheries.

- Support on-shore processing

- Support on-shore fish offal processing

- Support development of the local mariculture industry.

- Increase incentives for fish processors by working to:
  - Lower power rates.
  - Promote new and value-added products.
  - Construct a deep-water port.
  - Provide for best and most efficient use of remaining waterfront land.

- Enhance the harbor and port facilities by:
  - Acquiring a new travel lift facility.
  - Building a deep-water port.
  - Maintaining the small boat harbor.

D. VALUE ADDED INDUSTRY STRATEGIES:

It is the intent of the City to support value-added manufacturing industries such as fishing, timber, and mining using the following strategies:

- Identify feasible value-added industries and sources of raw materials to develop value-added products (i.e., specialized fish processing products, wood cabinet making, log house kits, etc.).
- Identify and/or make available sites which are appropriately zoned, with access to roads and utilities for individuals or businesses interested in value-added manufacturing.
- Identify City facilities and services that can be utilized to assist feasible value-added manufacturing.
- Identify opportunities and/or build a structure that could be utilized as a business incubator.
- Investigate sources of low interest loans or incentives to attract and support value-added manufacturing.
- Investigate the development of alternative fisheries and processing products.
- Be open to the development of environmentally benign mineral exploration efforts region wide, including logistical support services from Cordova.

E. VISTOR INDUSTRY

The visitor industry is rapidly becoming an important component of Cordova's economy. As early as 1998 the Cordova Chamber of Commerce, along with the Copper River Watershed Project, began the development of a tourism plan for the community. A Tourism Advisory Committee was formed in 2000 and has worked since that time to implement plan recommendations. This committee also identified the development of a year-round visitor industry as an opportunity for economic growth within the community. The City Council adopted the **Cordova Community Tourism Plan** on October 2, 2002; this plan remains in effect today and is used by the Chamber of Commerce and the City for the promotion of tourism within the community.

Cordova has experienced a growth in the visitor industry with the establishment of fish charter operations, sightseeing businesses, bed and breakfasts, and other visitor related industries. Public hearings have been held on a number of occasions since 1998 to provide input into the development of the tourism plan. Most input was directed towards a desire that Cordova develop plans to manage growth of the visitor industry and to provide for more tourism during the fall and winter seasons. The on-going development within the harbor will continue to provide docking facilities for small cruise ships and increase the safety and usability of the harbor.

Several air taxi operators currently provide flight-seeing trips that include wildlife viewing opportunities. Visitors with a vehicle can see a variety of wildlife along the State owned and maintained Copper River Highway. Wildlife viewing is also available by boat where seagoing creatures such as seals, otters and whales can be seen.

F. VISITOR INDUSTRY IMPROVEMENT STRATEGIES

It is the intent of the City to develop a visitor industry in Cordova that fits the character of the community and retains the quality of life expected in the community by using the following strategies:

- Make Cordova a more visitor-friendly community through signage, adequate restroom facilities, and other amenities that enhance the existing character of Cordova.

- Develop more visitor attractions in Cordova by:
  - Creating a historic district.
  - Completing Railroad Park.
  - Building an auditorium/convention center.
  - Expanding the museum and library.

- Enhance recreational and outdoor opportunities by:
  - Developing recreation and sport fishing areas.
  - Establishing a state park.
  - Encourage the development of more campgrounds and trails.
  - Develop other visitor facilities.

- Work toward better and more convenient access to Cordova, including:
  - More convenient ferry schedule.

- Increase marketing and promotion activities.

G. ASTHETIC IMPROVEMENT STRATEGIES

It is the intent of the City to clean up Cordova and make it more visually attractive by using the following strategies.

- Continue to promote recycling.

- Revise and enforce sidewalk ordinance.

- Enforce litter, junkyard and nuisance laws.

- Create a Historic/Main Street District.
- Provide incentives to encourage property owners to fix up their property and buildings.
- Support those efforts by the Chamber of Commerce

CHAPTER 2
LAND USE

GOAL: To guide the orderly and efficient use of private and public land in a manner that maintains a small–town atmosphere, encourages a rural lifestyle, recognizes the natural environment, and enhances the quality of life for present and future generations without infringing on the rights of private land owners.

A. LAND USE OVERVIEW

The development of this land use plan is based upon existing land use, anticipated growth in population and employment, planned infrastructure development, projected economic trends, and the results of many meetings with the Planning Commission. The community will be given the opportunity to participate in periodic updates of the Comprehensive Plan through a series of meetings and public hearings to ensure the residents are aware of proposals related to land uses and are able to comment on such proposals.

Development strategies of the land use plan are discussed for all areas of the community including residential, commercial, industrial, and public lands and are listed as follows:

- Provide land use guidance for the City.
- Plan for organized future growth and development.
- Anticipate and respond to trends in development patterns.
- Maintain and provide for a balanced and complementary pattern of land uses.
- Ensure growth patterns respect the natural environment.
- Protect the citizens of the community and the investments that have been made.
- Protect property values.
- Provide a clear and concise direction towards future growth within the community.

B. RESIDENTIAL

The major subdivision plats for the City are old type grids, which in many cases have been overlaid on irregular and mountainous terrain. These plats also do not take into consideration the topography, small streams and drainages, and the ever-present wetlands and muskeg areas. The results are a large grid type system of streets and lots that are only moderately developed and only partially able to be developed if landowners re-plat these

subdivisions. Typical lot sizes range from 4,000 square feet within the traditional downtown area, to large acreage in the outlying areas. The area adjacent to the MT. EYAK SKI Area has many privately owned residential lots that are mostly undeveloped. The eastern part of the community along the Copper River Highway, and the western part of the community along Whitshed Road are much more rural in character than the remainder of the community, with lot sizes much larger than in the urban areas. Several short roads lead off from these two state highways into small subdivisions that contain large residential lots.

The high cost of residential development and private ownership of platted lands has been a major factor that shapes the density, quality and placement of residential development within the community. Lands adjacent to existing roads and utilities are typically less expensive to develop than other lands. A lack of the necessary infrastructure development tends to slow the development in the undeveloped areas due to the higher cost incurred by the developer to provide this infrastructure. In Cordova, all buildings within 150 feet of a collector are required to hookup to the municipal sewer and water systems. The poorly drained soils that exist in parts of the community often make installation of on-site sewage treatment systems difficult and expensive making installation not feasible or within the price range of developers. Cordova has a wide range of residential areas available for development; this includes every zoning district except for industrial.

Cordova faces some unusual housing predicaments. The fishing and fish processing industries require a great deal of seasonal labor. Supplying housing for the seasonal workers has been a challenge for everyone. Ongoing changes in the seafood industry affect the timing and size of this temporary work force and also the demand for housing.

C. COMMERCIAL

The core commercial areas of the community are located immediately adjacent to the boat harbor and two blocks inland from the harbor is the central business district. All transportation to and from Cordova is either by air, boat, barge or the Alaska Marine Highway. Shipping by water has continued to be the main means by which freight enters and leaves the community. Cordova's commercial area developed as means to supply the fishing fleet and to provide for the retail needs of the expanding community. Cordova's commercial development is characterized by individual businesses. Franchise businesses and chain stores are not prevalent in the community, but a few do exist. The central business district and the South Fill Development Park have an excellent variety of goods and services to offer and the clustering of retail and service activities in these two areas has promoted many businesses not found in cities of comparable size.

The business community has long recognized the importance of location, access, and visibility for economic success. Areas along major highways with a high traffic volume that can provide maximum visibility and access to prime commercial sites are considered a prime location factor. Thus, it is not surprising that the older businesses in Cordova are located along First Street and that new businesses are expanding along Whitshed Road and the Copper River Highway. Commercial uses are also interested in development of the South Fill Development Park due to its location adjacent to the boat harbor.

The downtown area will likely remain as the important center of Cordova. Its architecture, feeling and style are becoming a rarity in other communities and are definite assets for the visitors and residents alike.

D. INDUSTRIAL

The Cordova industrial district is located along the waterfront of Orca Bay and extends in a linear fashion from the boat harbor north to an area on the other side of Fleming Spit. The industrial area of Cordova is a specialized fixed asset with limited flexibility. The seafood processing industry has been the mainstay of the Cordova economy since its beginnings. Like most small cities in Alaska the industrial base is specialized and diversification is low. The fishing industry infrastructure is favorably located along the waterfront and is considered modern and competitive in comparison to other facilities located in rural Alaska. Utilities are adequate and transportation links existing to both the waterfront and airport are available. While expensive to alter, the infrastructure in the industrial district has shown the flexibility necessary to change with shifting markets. The industrial district area lacks room for large scale expansion and additional industrial lands will be needed in the near future.

. The industrial lands located along the waterfront offer many advantages for the district. They are Ocean Dock Fill; North Fill Development Park; Cordova Industrial Park; and, the Tidewater Development Park. It is a compact area that provides interaction between operations. It has excellent access to water borne transportation due to the facilities being built over the water and on the adjacent tidelands. It is within walking distance of the labor supply. The industrial district is located close to equipment supply houses. Utilities are in place and an adequate supply of water and electricity are currently in place. The area is well buffered from the majority of residential uses, but is close enough to provide easy and quick access for the labor force.

While adequate waterfront industrial land for current use is available, it is limited. There is a very real need to encourage the development of industrial land for non-marine uses such as junkyards, construction yards and storage. If the city's efforts toward the implementation of a boatlift are successful, waterfront lands will be near their limits.

The City should be prepared to acquire tidelands adjacent the North Fill and Ocean Dock Fill for future fill expansion should they become available. The City should be instrumental in the development of the upland bench above the ocean dock fill between Flemming Spit and Cannery Row. The City should also identify and encourage the development of industrial land near Merle K. "Mudhole" Smith airport.

In the mid 1990's the City received 68.23 square miles of land through annexation from the Local Boundary Commission. The land annexed at this time is presently zoned as an Unrestricted District.

Shepard Point, owned in part by both the Eyak Corporation and the Chugach Corporation, is the potential site for the development of a Deep Water Port and the storage of Oil Spill Response Equipment. This land is also located within the unrestricted district and located at the far northern boundary of the community. This site is slated for development in the near future, depending on the results of an ongoing environmental impact statement and the threat of law suits by environmental groups attempting to halt this project. The Cordova "Mud Hole" Smith Airport, located at 13 Mile Copper River Highway, is the only jet serviced airport on the eastern side of Prince William Sound. Cordova is also home to a small airport located on the north shore of Eyak Lake. This airport is home to a number of charter services, a heliport is located there, and a number of private plane owners keep their planes in hangars or are tied town in the open areas. The Eyak Lake Airport has all the necessary utilities located along Power Creek Road.

While the jet-serviced airport has been and will remain as an important transportation link for the movement of people, it is increasingly taking on an expanded role in the movement of general freight. The airport, due to the development restrictions around its area, has large areas available for storage, parking, and buildings within the height restrictions imposed by the federal government. The airport is self-contained except for power that is supplied by the Cordova Electric Cooperative. Residential uses have not established themselves in the area and are buffered by distance from most of the area's activity.

Both airports are owned and managed by the Alaska Department of Transportation and Public Facilities (ADOT/PF). The Airport Leasing Section has the primary responsibility for marketing airport lands for development and leasing. Development on the airport lands must be compatible with the operations of the airport facility. In general, industrial uses are allowed on state owned airport property. The Division manages over 200 airports located throughout the state. Due to budget constraints within the state government, an active marketing plan for the majority of the airports is not conducted.

E. CITY OWNED - PUBLIC LANDS. PUBLIC LAND OWNERSHIP

Cordova owns a variety of public lands. The City owns open areas, several developed parks and public buildings for major municipal services. As the residential density expands beyond the urban core, there will be a need for additional neighborhood parks and for municipal services. The City does not have a strong regulatory requirement for private developers to dedicate property other than for streets, utilities and snow dumps for public use. When development occurs in the outlying areas, the City should work with the developer to provide for lands needed for local parks and municipal services.

Developed city-owned lands, fire halls, parking lots, schools, pool, hospital, and the recreation center are located on the fringes of the central business district and are within walking distance of the residential neighborhoods. The City maintains a number of parcels of land for recreational purposes. These parcels are located around the central core of the community near the elementary school and the high school as well as the hospital. There are other public lands dedicated for recreational purposes at Fleming Spit and on Eyak Lake at Nirvana Park and several small sites located in or near the residential district adjacent to the central business district. The City also has undeveloped park lands located in the South Fill Development Park on Center Drive, the Whitshed Road Wayside - Ball Diamond Area /RV park, and immediately adjacent to the cemetery on Eyak Lake Road. A number of small pocket parks exist throughout the community. The City also maintains two parking lots within the central business district as well as parking lots located on the north and south fills for the storage of boat trailers under a lease program for the fishing season.

Cordova has several developed recreational areas. The Cordova Municipal Park is a combination basketball court and tennis court as well as a baseball field located at the high school site. The Children's Memorial Park is a playground located behind the library. The Hollis Henrich Memorial Park is a large grassy field located adjacent to the hospital. This park contains a gazebo and picnic tables. Much of the area in and around Cordova is managed by the state or the U.S. Forest Service for multiple uses, including public recreation.

F. AIRPORT

The Cordova airport, located at 13 Mile of the Copper River Highway, has an excellent potential for new industrial expansion. The airport is serviced by local carriers, as well as Alaska and Era airlines providing commercial jet service. Air-freight is expensive. However, the demand for fresh seafood and products that can only be marketed as fresh cargo need air transportation. In most cases, as supply and demand increases, air

transportation rates decrease and competition increases. The airport facility should attract increasing interest as a place to process for trans-shipment of goods out of Cordova. The airport area is just beginning to realize its importance as an industrial development area. The airport can expect an increase in use as a trans-shipment point for small-scale and specialty or value-added seafood products. The primary advantage for the airport for industrial uses is the ability to supply a quick access to markets for fresh and specialty products. The airport has adequate space to meet the needs for significant industrial expansion, but will probably require an upgrade in infrastructure needed to maintain an industrial district.

Cordova has an ample supply of industrial land, some of which is yet to be developed. This supply should enable the City to meet expected demands and adjust to changes in the industrial needs of its main industrial base. Industrial uses which do not require access to air transportation, but do have needs for large areas of land should be encouraged to contact the City on their needs for development. Other industrial uses whose needs for land are modest should be encouraged to locate in the industrial district north of the central business district.

CHAPTER 3
PARKS AND RECREATION

Goal: To provide and foster parks, programs, and facilities for all in pursuit of a healthy sustainable community.

A. PARKS AND RECREATION OVERVIEW

The natural attractions and extensive outdoor recreational opportunities of Prince William Sound are among the leading reasons why people choose to visit and live in the region. Pristine natural features such as glaciers, wetlands, streams, and forests, located in a maritime setting, all provide recreational opportunities for local residents and visitors alike. Cordova and the surrounding area offer a wide spectrum of opportunities for a variety of recreational activities.

Challenges to recreational opportunities in Cordova are very similar to those of many other Prince William Sound communities. Large tracts of land are held by numerous governmental entities as well as Native corporations and private individuals. Because these lands are not owned by the City, opportunities for development of public facilities in the vicinity of Cordova are limited.

Indoor recreation facilities are important due to the wet and windy climactic conditions prevalent throughout the area. With a growing desire to use these facilities, space on the gym floor, in the weight room, and at the pool has become extremely limited, especially during winter months.

With the development of Orca Inlet Recreation Area, a potentially dangerous situation exists to the public due to the lack of bike and or pedestrian paths along the roadways.

B. PARKS AND RECREATION DEPARTMENT

The Cordova Parks and Recreation Department consists of a director, an administrative assistant, a recreational supervisor and an aquatics supervisor. All other employees are hired on a monthly temporary basis. There is also a volunteer community advisory Parks and Recreation Commission. The

Parks and Recreations Commission has recommended to City Council to employ a full time maintenance worker. This is vital considering the condition of the aging facilities and growing needs.

The Cordova Parks and Recreation Department offers a variety of youth and adult programs. Activities offered are diverse; aquatics, organized sports, fitness programs, summer camps and communities events.

C. PARKS AND RECREATION COMMISSION

The Parks and Recreation Commission meet on a monthly basis and served in an advisory capacity providing guidance concerning the park and facilities system. The Commissions' comprehensive perspective on park and recreation issues is crucial to the implementation of the comprehensive plan. This perspective is a result of its varied responsibilities, which include:

- Developing and maintaining the park system master plan.
- Creating an annual action plan for development of facilities, programming recreation, and gathering support for the parks system.
- Informing the community of the needs and benefits of the park system improvement plan.
- Acting as a sounding board for public input concerning park and recreation concerns.
- Serving as liaison between the City Council, Planning Commission, City staff, and the general public.

The Parks and Recreation Department (CPRD) maintain a capital improvement plan that identifies the department priorities. The Parks and Recreations Commission, in concert with staff, will annually update the plan.

D. PARKS AND RECREATION MASTER PLAN

This project is the efforts of the Parks and Recreation staff and Parks and Recreation Commission and Community Planning Workshops. This Master Plan was created and shaped by:

- Reviewing the current services CPRD offers.
- Reviewing the current and future needs of the community for parks and recreation services.
- Reviewing national and state trends for parks and recreation services, open space and trails.
- Survey's distributed to the community and community planning workshops.
- Developing a minimum five year plan providing recommendations for the future of the parks and Recreation Department of Cordova.

E. PARKS AND RECREATION PROPERTIES AND FACILITIES

Below is a list of the Parks and Recreation Department properties and facilities. You will find each property/facility has a classification according to the National Parks and Recreational Association. In 2008, the Parks and Recreation Department and Commission held a Community Planning Workshop. This workshop allowed for interested community members to take part in the revision of our Parks and Recreation Master Plan. Prior to this workshop the Commission drafted and distributed a survey to the community. This survey was used in conjunction with data collected at the workshop to create a new vision for the Parks and Recreation department, facilities and parks. This "vision" is our Master Plan. Each facility/park listed is identified in the Current Parks and Recreation Master Plan as follows.

1. Bob Korn Memorial Indoor Swimming Pool:

Classification: Recreational Area

- Search for funding designated to new aquatics facility.
- Make a recommendation to City Council to set money aside over the 10 years to help fund the eventual renovations or new facility.

2. Bidarki Recreational Center:

Classification: Recreation Area

- Have an engineer determine a timeline for large scale renovation to the recreation center
- Research new facility design options and cost
- Research properties available for a future recreation center
- Develop indoor space for a climbing wall in existing recreation center

3. Skater's Cabin:

Classification: Recreation Area

- Research new options for a foundation and replace current log foundation with something that will not decompose.

4. Odiak Camper Park:

Classification: Camper Park

- Support the development of an R/V park in the private sector
- Continue to adjust the rates in the interim to keep revenue and expenditures in balance
- Put meters on each site and have long term tenants pay their own electrical expenditures

5. Mt. Eyak Ski Area:

Classification: Recreation Area

- New bottom deck
- Insulate buildings
- Work for sustainability
- Replace main hall cable

6. Nirvana Park:

Classification: Community Park/Natural Resource Area

- Thin the tree's to increase light in the park /Continue to maintain brush control on an annual basis.
- Purchase a port-a-potty for the park
- Re-create the original artistic essence of this park

7. Hollis Henrich's Memorial Park:

Classification: Community Park/Natural Resource Area

- Complete trail and bridge loop.
- Construct a hand rail on one side of the board walk.
- Establish water quality maintenance program for pond.
- Consider a spur trail heading cast to have views of salmon creek.
- Officially designate Odiak pond area as "open space and natural area".
- Address drainage issues on the grassy field.
- Install BBQ pits near pavilion.
- Keep park looking as natural as possible.

8. Orca Inlet Recreation Park.

Classification: Recreation Area/Community Park

- Complete phase II of the construction of recreational area.
- Install path lights on trail surrounding Rec. area. Keep low for easy maintenance

9. Orca Inlet Recreation Area:

Classification: Recreation Area/Community Park

- Complete phase II of the construction of recreational area

10. Fleming Spit:

Classification: Community Park/Natural Resource Area/Camping/Recreation Area

- Create a picnic area
- Make single sided fish cleaning station a double sided station

11. Cordova Municipal Park

Classification: Community Park; Recreation Area

- Repair skate surface in Skate Park.
- Replace or repair the fencing.

12. Children's Memorial Park:

Classification: Neighborhood Park

- Replace all equipment
- Plant tree's and place very large boulders to create a boundary between snow storage area and the park.

13. Jerry Bendzak Playground

Classification: Neighborhood Park

- Replace all equipment

- Mt Eccles Elementary is currently renovating playground. Parks and Rec. should discuss maintenance responsibilities for future.

14. Nettie Hansen Park:

Classification: Pocket Park

- New Picnic table

15. Mt Eccles Estates Park

Classification: Pocket Park

- Survey neighborhood for possible future renovations to park.

16. Fisherman's Memorial Park:

Classification: Pocket Park

- Offer flower vases that attach to the Memorial. The vases should be uniform to maintain visual consistency.
- They will be predetermined by the Parks and Recreation Department and an additional fee for the family.

17. Fisherman's Park and breakwater trail:

Classification: Pocket Park/Neighborhood Park

Continue to work with the Copper River Watershed Project to complete the construction of this park.

18. Proposed Park - 5 Mile Avalanche area

Classification: Undetermined

- Survey neighborhood on future site plan
- Berry patches for the community

19. Soccer Field

Classification: Undetermined

- Create a sight and sound shield between the Copper River Highway and park area
- Create a picnic area that includes picnic tables, trash receptacles and BBQ grills
- Remove alders that have taken over

20. Proposed Park - Murchesson Creek

Classification: Undetermined

- Small picnic table area and trash receptacle.
- Interpretive signage with historical content
- Based on data collected at the 2008 Planning Workshop both cemeteries and trails should be addressed as areas of improvement and/or development

21. Cemeteries and Trails

a. Cemeteries:

- Have the Parks Maintenance pick up the care and maintenance of every cemetery located in City limits
- Parks and Recreation should Department should sponsor and annual community cemetery clean up day.
- Parks and recreation will ask for additional funds to hire staff to focus on cemeteries

b. Trails

- Parks and Recreation Commission will facilitate community workshops for those interested in developing walking and biking trails in the City.
- The Commission will help foster a "trail committee" to create goals and objectives for the development and maintenance of inter-city trails. The Commission will find safe routes to the new Orca Inlet Recreational Area

CHAPTER 4
PUBLIC FACILITIES AND SERVICES

GOAL: To provide efficient, high quality, and cost effective public services to meet the needs of existing and future residents and customers.

A. PUBLIC FACILITIES AND SERVICES OVERVIEW

The City of Cordova provides a number of important services to residents of the community. Some services are provided while others are provided indirectly or are funded to some degree by municipal government. Services which are provided directly include education, planning, public safety, fire protection, emergency medical services, emergency rescue, 911 dispatch, road maintenance, snow removal, water, sewer, refuse collection, the harbor, the library, the museum, and parks. Services provided indirectly or funded by the City include the hospital, alcohol and mental health counseling, and recreational facilities and programs such as the Bidarki Recreation Center, the Bob Korn Pool, and the Mt. Eyak Ski Area.

The City owns and/or maintains a number of public facilities. These include the City Hall building, the Library/Museum complex, the Harbormaster building, the City shop, the sewage disposal plant, the water treatment plant, the solid waste baler building, water storage tanks and reservoirs, all municipal streets, and all city parks. Facilities which the City owns but only partially or indirectly maintains include the hospital, the schools, the pool, Bidarki Recreation Center, the Chamber of Commerce building, the old harbormaster building (Prince William Sound Science Center), building and equipment in the Mt. Eyak Ski Area, and the sanitary landfill. The City also owns, operates and maintains the harbor facilities.

A description of some of the more prominent community services and facilities is a follows:

B. POLICE DEPARTMENT

The Cordova Police Department and Jail are housed on the ground floor of the Cordova City Hall. The facility contains a reception/dispatch office, Chief's office, squad room, and administrative assistant's office, three cell jail with day room, interview room, and equipment room. Current staffing includes the following: Chief of Police, four police officers, one seasonal code enforcement officer, administrative assistant, dispatch supervisor and three dispatchers, with one open dispatcher position. A full-time Department of Motor Vehicles clerk is located in the Prince William Sound College building.

Duties of the Police Department require enforcement of all municipal, state, and federal laws, investigation and prevention of crimes against persons and/or property, and assisting with and promoting any program that helps with public safety concerns. The Cordova Police Department works closely with the Alaska State Troopers, U.S. Forest Service law enforcement, United States Coast Guard, National Marine Fisheries Service, MATSU Drug Enforcement Unit, and federal law enforcement agencies.

The Cordova Police Department fortunately does not have to deal with numerous major violent crimes found in many other jurisdictions. The department does however; encounter many alcohol related offenses such as driving while under the influence of alcohol (D.U.I.), domestic violence, misdemeanor and felony assaults, and minors consuming alcohol. The department also encounters numerous violations of the conditions of release and probation violations from these offenses. These offenses are very time consuming since the officers not only have to arrest and book the offenders into the jail, they have to feed and care for the prisoners, bring them to court hearings, and participate in those hearings. One arrest can tie up an officer for hours. Additionally, officers are first responders, initial investigating officers, the crime scene technician, and the detective. A crime with several witnesses, evidence, and a crime scene can involve many hours of police work.

Other calls for service include persons and property offenses, traffic accidents, parking issues, loose dogs, vehicle and building unlocks, speeding vehicles, suspicious persons calls, and many other citizen's calls for service. All of this leads into the short term goals for the department.

Presently, the department has to assign officers to be "on call", especially at night and on weekends. This means there is no officer on duty in a police car patrolling the approximately 64 square mile city limits. This also means a slower response time, even to emergency calls. Presently, three officer positions are filled with full time certified officers and a fourth has been hired, but will be assigned to a field training officer for an extended period until she attends the Police Academy in February 2009.

Fully staffed with four full-time officers, the patrol schedule could be 12 hour shifts to provide an around the clock police officer on duty. Of course, there is an officer safety issue of having only one officer on duty especially at night, without on duty back-up. Additionally, when factoring in vacation, sick time, and training time, there is a disruption in providing 24 hour on duty police protection.

Short term goals: Five (5) authorized full time police officer and a year around full time code enforcement officer. Presently, the code enforcement officer handles, parking issues, abandoned cars (year around issue), loose dog calls, car unlocks, and cleans and supplies the jail as well as feeding and caring for prisoners. The code enforcement officer also works on maintenance of vehicles, police department equipment, and facilities. The code enforcement officer frees up the police officers to be on the street on patrol and visible in the community.

Other short term goals are a new police reporting system and computer aided dispatch (CAD) system and laptop and desktop computers (Through homeland security grant). The present police reporting system is 90's technology, is not user friendly, and keeps officers in the office with needless wastes of time completing paperwork. Long term goal in this regard would be wireless laptops in patrol cars for reporting, dispatching, and record checks.

Fleet upgrade is another short term goal with fleet rotation policy. Two new Ford Expedition 4WD patrol units are going into service this year. 4WD is essential in the winter months and off road for search and rescue etc. Purchasing one new vehicle each of the next three years would provide a new fleet with lower maintenance and fuel costs. Replacing and rolling vehicles over to other city departments after 6 years or 80,000 miles would be a good practice.

Long term goal: A new public safety building located away from a flood zone. Coordination with state agencies to construct a building that includes Alaska State Troopers, Department of Motor Vehicles, and the court system. Another goal would be the purchase of a rescue patrol boat for joint use between the police and fire departments for search and rescue, D.U.I. on the water, and give law enforcement greater access to waterways for enforcement duties.

C. FIRE PROTECTION/RESCUE/EMERGENCY MEDICAL SERVICES

The Cordova Volunteer Fire Department (CVFD) has two stations. One main station that operates out of an annex to City Hall located at 602 Railroad Avenue. The full time city fire marshal has an office within the public safety annex which also houses the police department. The main station housed two pumper engines, one rescue truck, one harbor mini-pumper, two ambulances, one brush truck, and several other pieces of equipment. The second station (Station 2) operates at 4.5 mile of the Copper River Highway and houses two (2) pumpers and one (1) 3000 gal pumper/tanker, which served the non-hydrant annexed area. Station 2 also houses extra equipment some of which includes a mass casualty trailer, two all terrain vehicles, a portable AED, oxygen trauma bags, portable radio for a faster response to emergencies in the annexed area. There are currently forty-nine (49) volunteer staffing the department. This includes eighteen (18) members who make up the Emergency Medical Service division assigned to the two (2) ambulances and nine (9) members who make up the disaster Management Team.

Main Station;
E-2 1984 Pierreville Spartan Pumper with 500 gal tank at 2000gpm.
E-3 2003 Pierce Saber Pumper with 1000 gal tank at 1500gpm
H-10 1994 Kawasaki Mini-pumper draft at 500gpm
T-5 2003 Ford F-350 Brush Truck with a Portable pump at 500gpm
R-1 2005 Pierce Contender Rescue Truck
M-7 1996 Ford E-350 Marquee Ambulance
M-8 2007 Ford E-450 Taylor Ambulance
Station 2
E-1 1963 Ford John Bean Pumper with 500gal tank at 750gpm
E-4 1974 Seagrave FWD Pumper with 1000gal tank at 1250gpm
T-9 2005 Pierce Contender Tanker/Pumper with 3000gal tank at 1000gpm

2 Honda all terrain vehicles
1 mass casualty trailer

Cordova has an excellent fire rating for a small community with a volunteer force. The fire protection area within the previous city limits was given a rating of four (4) on a scale of one (1) to ten (10) by the Insurance Services Office (ISO) and a rating of nine (9) on the non-hydrant areas in town; but with the completion of the station two (2) and the new tanker with pumping capabilities the department may have the ability to retain a higher rating thereby lowering building insurance rates cost paid by citizens and building owners.

Cordova has a Tsunami warning system consisting of one siren at this time. The siren is placed on a 50' steel piling at the end of Nicholoff Way in the new harbor. The siren is a 360 degree rotating horn that will deliver excellent coverage for all of the downtown area and have the capability of being heard between the Ocean dock and Eyak Lake. Two Additional sirens are awaiting installation.

Some of the services provided by the Department besides Fire and EMS are as follows: Mountain Rescue, Search and Rescue, Underwater rescues and recovery, Medical evacuations from remote areas within Prince William Sound, and an ongoing public educations program.

D. STRATEGIES TO PROMOTE PUBLIC SAFETY:

The strategies for promoting Public Safety are as follows:

- Continue working to reduce ISO fire rating outside the old city limits.
- Revise the flood ordinance and flood maps.
- Update the Emergency Preparedness Plan to include adding a terrorism annex.
- Upgrade capabilities in Haz-Mat, Terrorism response, and Disaster management.
- Continue rewriting and upgrading the Master Plan.
- Make the City of Cordova a Tsunami ready city.
- Complete construction of the remote training facility located at station 2.
- Continue working to reduce ISO fire rating outside the old city limits.

E. LIBRARY

The first library began as a "reading room" within the Red Dragon building, a railroad workers social club in 1908. In June of 1925, the women's guild of St. George's Episcopal Church opened the book collection to the public creating Cordova's first public library. The Cordova Public Library now provides services to patrons throughout the community of Cordova and surrounding area from Icy Bay to hatcheries in remote area of Prince William Sound. The library also serves as the elementary school library for 200 pre-kindergarten to sixth grade children. Since 1971, the library has been housed in the Centennial Building with the museum.

The Cordova Public Library facilitates public access to information through a current collection of over 25,000 books, periodicals, and audiovisual materials to patrons. Access to the Internet has also become an important service for the community bridging the digital divide with wireless internet access. The library also services as a cultural facility, providing film festivals, author visits, and other programs to enhance the quality of life for residents in the community. The library experiences increasing use each year and is particularly busy during the summer months when tourists and seasonal workers flood the community.

Housed in an aging Butler building, the facility does not meet ADA requirements and is not adequately meeting the demanding electrical and mechanical needs for the increased and new uses. With the current rates for both fuel and electricity the costs to operate the library have greatly increased over the past five years.

F. MUSEUM

Established in 1967 as a centennial museum by the Cordova Historical Society, the Cordova Museum is operated under the auspices of the City of Cordova while the collection is owned by the Cordova Historical Society. It is housed in the Centennial Building on First Street. The museum offers exhibitions, program publications and other activities that engage, enlighten, educate, and entertain both community residents and visitors of all ages. Museum attendance has steadily increased over the past twenty years with significant increases in the pasts two years. Attendance for 2006 was 13,268; attendance for 2007 was 11,140 and attendance for 2008 is on track to match or supersede the 2006 numbers.

The museum staff works closely with the school district and presents an educational curriculum through class visits during which the community's story is shared with the children. School classes grades K-6 visit the museum once a month from September through May. For the past five years, the Museum has organized an After School Art program, designed to introduce elementary age students to various masters of art and art techniques culminating with a Children's Art exhibition.

G. CITY HALL BUILDING

City Hall was constructed in 1976. It is a two-story building with approximately 11,700 square feet of usable space. The building is located on Railroad Avenue and it houses the City administrative offices, the police department, and the fire and rescue department. Although the City administrative offices are becoming slightly crowded, the building can be expected to serve the city's needs for the next 5 years at least, assuming proper maintenance. The City Hall building is located on low-lying landfill that is subject to evacuation during seismic activity; it should be re-located.

H. BIDARKI RECREATION CENTER

The Bidarki Recreation Center is located at the corner of Second Street and Council Avenue. It is a wooden structure that was constructed in 1935. There are many community and school-related activities which take place at Bidarki. The facility contains a basketball court which doubles as a multipurpose room, an activities room, a weight room, locker rooms and administrative offices. The recreation center, formerly housed the old City hall, high school gymnasium, public works, fire, and public safety departments. In 1976 it was leased to the Bidarki Corporation, a non-profit organization, and in 1992 it became the city's parks and recreation department. The community uses the facility for both youth and adult programs. The facility has seen much renovation over the past twenty-eight years and will continue to require additional maintenance projects throughout its continued life. Although the structure is 73 years old, it is still in fairly good condition. The facility does not meet many of the code requirements of Americans with Disabilities Act (ADA) and City code requirements. The community's demand for programs and space is quickly outgrowing the current space at the recreation center. As the population continues to grow, a new center or expansion and renovation of the current center will be required to meet the needs of the community.

I. CITY SHOP

The City shop is located on Whitshed Road in a warehouse facility that is 60'X120'. It has three (3) bays with two (2) doors to each bay. The first bay has a concrete floor with heat tubes in the floor for heat. This bay is where most of the maintenance and repairs on City owned equipment is accomplished. The second bay has a concrete floor on one half of the bay and the other half is gravel. This bay is heated with a forced air furnace and has a small shop for woodworking. This bay is also used for tire repair and storing equipment. The third bay is used for equipment storage. The City shop is desperately in need of additional equipment storage areas. This additional storage is essential in order to provide an area for equipment that is out of the weather. Storing heavy equipment out of the inclement weather will extend the useful life of this equipment and save the community money in the long run. The shop area is in need of an overhead hoist and a floor hoist to aid in the repair of city owned equipment.

J. MUNICIPAL BUILDINGS

It is an objective of the City to provide maximum benefit from municipal buildings and prolong their useful life by expanding, renovating and/or rebuilding the municipal buildings in a manner that supports the safe, reliable, efficient, and cost-effective provisions of public services and strategize towards this objective as follows:

- Complete necessary plans to relocate and/or renovate City Hall.
- Design and build a municipal building with city offices, council chambers, museum, library, and conference area.
- Develop a comprehensive municipal facilities maintenance plan.
- Examine the necessity and feasibility of either replacing the present museum/library or relocating to another site.
- Expand museum exhibit space and collections; complete new interior design.
- Design and build a new public safety building.

- Investigate partnerships with other governmental agencies for use of the public safety facility.

It is an objective of the city to maintain viable public facilities in the downtown area using strategies as follows:

- Create and maintain in a clean and acceptable manner public restroom facilities in the downtown area.

K. POTABLE WATER SYSTEM

The majority of city residents are provided with municipal water service, with the noted exception of those residents included in the most recent annexation into the City. Municipal water stops at approximately milepost 2.5 along the Copper River Highway, and approximately at milepost 1 along Whitshed Road. Those residents outside the serviced area are required to provide private systems that comply with Alaska Department of Environmental Conservation approval and inspection.

As the community continues to grow outside of the presently served areas with residential, commercial, and industrial development, the City will need to look towards the expansion and construction of new water mains and a source for the required additional capacity. It is expected that with the development of new subdivisions the demand for water will continue to increase.

L. WATER SUPPLY

Cordova's water supply, distribution, and treatment systems were greatly upgraded and expanded in the early 1980's. There is now only a small portion of the previous city limits that is not served by municipal water. The city diverts and treats water from four sources. These sources are Heney Creek, Murcheson Creek, Orca Creek, and Eyak Lake.

Cordova recently completed expansion and improvements to the water system and now has the ability to provide enough high quality water for domestic and industrial uses. Since Cordova's economy is based on fishing and fish processing, it is critical that the city be able to provide enough water to serve the processing plants, both now and into the future. The city is currently planning for and implementing future improvements to the system. The city also recently conducted a leak detection study and was able to isolate areas where water was being lost through leakage.

The City has contracted with an engineer who has developed an overall water master plan that is assisting the City in addressing future water needs and new facilities. An important part of the work that went into the plan is identifying potential new sources of municipal drinking water. Long-term planning is particularly important now because of the new Environmental Protection Agency (EPA) regulations that require filtration systems for all surface water drinking sources, however, the EPA also provides avoidance criteria to filtration that the City currently meets. The only water source that is filtered is the Eyak Lake water supply. The Murcheson Creek water supply is set up with a filtration system that is not currently in use. It is also important because the residents of the newly annexed areas have identified municipal water as a service they want the City to provide.

Strategies for assuring adequate supplies of safe drinking water for both current and future needs are as follows:

- Protect existing and potential watersheds and sources through land use regulations or acquisition of important parcels.

- Complete and implement the Water Master Plan.
- Continue upgrades of the existing system.
- Plan for system expansion to the newly annexed areas.

M. WATER TREATMENT

The Cordova water utility has improved compliance with Alaska Department of Environmental Conservation (ADEC) regulations. The water treatment plant received a major upgrade to the computer controls in 2005. The facility can now produce 6.3 million gallons per day of treated water. Cordova's drinking water treatment plant consists of chlorination only. The treatment plant should be able to meet demands for the next ten (10) to fifteen (15) years, provided that no major extensions to the current distribution system are implemented, or the demand for water in the annexed area is required.

N. SEWER SYSTEM

An adequate sewer system serving all developed areas of a community, together with sewage treatment, is essential to good community development. A community-wide sewer system is of critical importance in Cordova because sub-surface conditions prevalent limiting the effectiveness of septic tanks. The sewer system has been extended to most of the developed areas within the old Cordova city limits.

The City of Cordova's Sewer Collection System has been plagued with inflow and infiltration problems for a number of years. Roof drains in Cordova are a major contributor to the inflow of water into the sewage system. At the present time, the City crews are replacing manhole lids that have pick holes or do not have a gasket to seal them from water runoff from the paved streets. The City Wastewater Department has purchased a sewer inspection camera to inspect sewer mains in an effort to identify leaks in the systems that are in need of repair.

The City sewer plant is currently running at about sixty-six percent of its design capacity. Therefore, it has the ability to handle a significant amount of additional sewage if all roof drains and sump pumps are removed from the system, an important factor in the City's ability to encourage future community growth. This is also important because many residents of the newly annexed areas have stated that they wish to be connected to the public sewer system.

Strategies to maintain and upgrade the sewage collection and treatment system so that it has the capacity to handle present and future demands:

- Complete the INI project by continuing to eliminate storm infiltration. Incorporate findings of the recently completed drainage study.
- Investigate future sewage disposal needs in problem areas.
- Plan for system expansion into the newly annexed areas.

Strategies for providing adequate solid waste disposal into the future:

- Complete and implement the recommendations of the Solid Waste Master Plan.
- Continue to develop recycling capacity.
- Acquire land and permits for new landfill.

Strategies to expand water, sewer, and power to areas of the community that are yet to be served, and to new areas in a manner that supports practical residential, commercial, and industrial growth:

- Assess utility demand and capacity on an annual basis and continue water, sewer, and power extensions as necessary and economically feasible.
- Identify appropriate areas for improvement or expansion of basic utilities for the community.
- Develop infrastructure incentives such as extension or improvements of public utilities, to promote commercial and industrial development in appropriate areas.
- Work with private developers to ensure that utilities in new subdivisions will meet city code and maintenance standards.

O. SURFACE WATER DRAINAGE

The majority of Cordova is drained by natural streams, drainage ditches, and culverts. The city tries to keep surface drainage water out of the sewer system. Storm water enters the sewer system through cracked and shifting pipe joints and failing manholes. During heavy and sustained rainfall the estimated peak flow through the treatment plant is as high as 1.5 million gallons per day. An effort is underway to reduce the infiltration and inflow problem so that the surface water drainage will not bypass its intended system. The city also continues to work on improvements to the surface water drainage system. As streets are improved and sidewalks planned, storm drains will be incorporated into the design.

P. SOLID WASTE

The city landfill is located at 17 mile on the Copper River Highway, with the baler located at mile 1 Whitshed Road. The landfill operates under the approval of the State of Alaska as a bale fill facility. A new baler was installed at the Whitshed Road facility in 2003 with additional improvements completed in early 2004. Most solid waste can be baled and 3,500 tons of solid waste is generated each year. The expected life of the landfill, using bales, is approximately 50 years into the future. When the landfill is closed out in the future, it must meet all new regulations.

The city also operates a site known as the "burn pile", which is located at mile 1 New England Cannery Road. This site is provided for the public to dispose of and burn certain items such as wood, brush, cardboard and burnable construction waste material. All other items are prohibited from

entering this site and must be disposed of at the landfill or the baler facility. The city fire department also issues open burn permits for specific items such as brush, leaves and wood materials.

Once the current landfill reaches full capacity and must be closed out, the city may wish to investigate the feasibility of exporting their solid waste to the lower 48 in an effort to save money and to prevent future rate increases. Bales could be shipped out to a regional landfill in the lower 48 under a solid waste contract with a local shipper. The bales could then be picked up and loaded into the containers at the baler facility and shipped out via a barge system to an out of state facility. This action would reduce the number of employees at the landfill site and may reduce rates across the board for the local citizens.

It is difficult to accurately forecast electric power demand, since it depends on the cost of competing sources of energy (for example, heating oil in the case of residential customers) as well as the condition of Cordova's economy. However, a few observations can be made. There will be a demand to extend the distribution system to residential areas that are currently without service. In the fishing industry, fresh and frozen products have recently come into high demand. Compared with canning, these require more energy to produce the same amount of product. Future fisheries development will likely follow this same trend. Hence, at least some increase in electrical energy demand can be expected from the fishing industry. Reliability will also become increasingly important, as the fresh and frozen products need to be kept cold until shipment.

Other growth in industrial power demand will depend primarily on the delivered of electrical power as compared with that of power generated from diesel or other fuels. Because of the importance of industry to the local economy, the electrical supply system should include multiple power sources so as to ensure adequate backup capacity in case of failures.

Q. PUBLIC SCHOOLS OVERVIEW

As a home rule municipality under Alaska Statutes, Cordova not only owns the facility, but has the responsibility of operating its own public school system. This includes building and maintaining the necessary buildings and other facilities. The school district boundary coincides with Cordova's corporate limits. The Cordova School District has a contract with a private business the for bus service for children living further than 1-1/2 miles from town.

Administratively, the Cordova School District is divided into an elementary school (kindergarten through 6th grade) and Junior/Senior high school (7th through 12th grade). This administrative division is also a physical building division.

Financial support for the operation and maintenance of the school district is a combination of local, state, and federal funds. The majority of funding is provided by the state, though the local contribution has steadily increased in recent years.

R. MT. ECCLES ELEMENTARY SCHOOL

The Mt. Eccles Elementary School occupies a 35,000 square foot site that is bounded by Second Street and Adams Avenue. All elementary school functions are housed within this single two-story structure with a basement. This facility provides spaces for seventeen classrooms, two multi-purpose rooms, a kitchen, a teacher's lounge, offices, and a storage area.

An addition of five classrooms to the second story in 1963, a covered play area in 1983, and some remodeling work was done in 1991. A major renovation was done the summer/fall 2001 concerning ADA accessibility issues. An elevator and 3 ramps were added to the school along with a new front entrance. Although there is an indoor play area a gym is still needed. A swimming pool, located two blocks away, is used for the swimming program. The 2005-2006 enrollments at the elementary school were 210 students. All classroom space (17 classrooms) is currently utilized.

S. CORDOVA HIGH SCHOOL

The Cordova High School is located at Second and Fisherman Avenues. The 2005-2006 enrollments was 240 students but has substantially reduced to a population of 186 students in the 2007-2008 enrollment year. All classrooms are currently in use and needed. This facility contains 14 classrooms, including one for special education, band room, multi-purpose gymnasium, library, audio/visual equipment room, nurse's room, teacher's lounge, offices, welding/auto/wood shop, home economics room, storage area and a lunch room/cafeteria/kitchen.

The science rooms were renovated during the late 1990's. A major renovation project spanning 2 years was accomplished during 2000-2002. This included replacing all the windows, re-working the entire heating system, some electrical work and the addition of an elevator to the basement locker/shower and the stage area to address ADA accessibility issues. At the same time major renovation was done in the basement locker/shower rooms and new bleachers added to the gym making all of these areas ADA accessible. The shop/welding/woodshop areas were also renovated at this time.

On-site recreation space for high school students is limited since an estimated 75% of the site is occupied either by buildings or by streets and parking area. To some extent, this limited outdoor recreation space is off-set by the presence of tennis courts and the municipal ballpark adjacent to the school site. However, additional space is still needed. The High School gymnasium and the community swimming pool are utilized for indoor activities and physical education. Both facilities are heavily used.

Requests for facility expansion based on increased enrollment should be conservative and studied carefully. Facility expansion based on program needs is governed by the educational offerings of the district and the desires of the community. At this time, recommending new facilities based on program needs are probably the more viable argument. Overall enrollment forecasts are difficult to make because future population characteristics are contingent upon a wide variety of social and economic variables. The best projection for future school enrollment is probably moderate growth. In the meantime, the City is examining ways to reserve land for future school sites.

The strategies for providing high quality, diversified, and locally controlled educational opportunities for elementary, secondary, and adult students are as follows:

- Coordinate with the School Board in reviewing the status of State assistance in school funding on an annual basis.

- Evaluate the feasibility of Borough formation and annexation options and the effect on school district funding and administration.

The strategies for providing adequate school facilities and excellent education programs for local residents are as follows:

- Expand school district facilities as dictated by enrollment and/or program requirements.
- Continue funding school district at adequate levels to assure quality education programs.
- Identify land for future school expansions.

The strategies for providing adequate post-secondary educational opportunities for local residents are as follows:

- Encourage continued development of Prince William Sound Community College.
- Encourage continued development of the Prince William Sound Science Center and the Copper River Delta Institute.

Cordova has a strong base of higher education and science based organizations. The community has supported a college since the mid 1970's and has particularly supported the growth of science related industries since the 1989 Exxon Valdez oil spill. This development is healthy because it not only enhances educational opportunities for residents but also diversifies the economy and adds stability to the seasonal fishing economy. It is an environmentally benign industry and the research topics undertaken will likely benefit other industries Cordova depends upon, particularly the fishing and tourism industries.

T. PRINCE WILLIAM SOUND SCIENCE CENTER

The City of Cordova helped establish the Prince William Sound Science Center in 1989, just three weeks after the Exxon Valdez oil spill. While science related work had been occurring for decades, the Science Center's founders saw the need for an independent research organization to both provide logistical support for visiting scientists, and also implement ongoing research and education programs focused on resources of importance to the region's residents. Since its establishment as a non-profit committed to enhancing research and science education for this region, the Science Center's staff has averaged about 16 year-round employees with a payroll contributing approximately $750,000 annually to the city's economy. The Science Center is supported through a combination of foundation grants, research grants, corporate sponsorships, membership and other donations.

The Science Center also houses and administers programs of the Prince William Sound Oil Spill Recovery Institute (OSRI) which was established by Congress in 1990. OSRI's mission is to support research, education and demonstration projects all of which are designed to address oil spills in Arctic and sub-Arctic marine environments. OSRI is funded through the interest earnings from a fund maintained within the National Oil Spill Liability Trust Fund. It awards grants to a wide range of organizations and universities for projects to achieve its mission. Congress has mandated OSRI to continue as long as oil and gas exploration and development is occurring in Alaska.

The Science Center has partnered with other agencies and organizations in the community on both research and science education programs. These include the Alaska Department of Fish and Game, the U.S. Forest Service, the Native Village of Eyak and the Copper River Watershed Project, as well as the Cordova School District and the Prince William Sound Community College.

U. SCIENCE AND EDUCATION

Strategies to promote Cordova as a science and education center include:

- Continue to support stability for the Prince William Sound Science Center and the Oil Spill Recovery Institute.
- Support expansion of courses and programs at the Prince William Sound Community College.
- Support the acquisition of new education and research facilities and equipment that these institutions can use, such as laboratories, library facilities, telecommunications capabilities, and computer equipment.
- Promote efforts to construct facilities capable of handling conventions, symposiums, and conferences.
- Support efforts to construct science camps.

V. CORDOVA COMMUNITY MEDICAL CENTER SERVICES

The Cordova Community Medical Center (CCMC), owned by the City of Cordova, is a 23 bed, dually certified Critical Access Hospital and Long Term Care Facility located on Chase Avenue, just east of its intersection with the Copper River Highway. The 49,621 square foot facility contains a 24/7 emergency department, 13 dual-use acute care or swing beds, an outpatient physician's clinic, a dual disorder treatment capable behavioral health (mental health and substance abuse) department, and a long term care facility with 10 beds. The radiology department utilizes modern digital x-ray equipment, plus offers ultrasonography services and bone densitometry; CCMC also offers an extensive array of laboratory services. Both the laboratory and radiology departments are on call 24/7 in support of the emergency department. Cordova Community Medical Center's physical therapy department is staffed by a full time MPT, providing outpatient and inpatient (swing bed and LTC patients) physical therapy services.

The hospital medical staff includes family practice physicians, an ER physician, plus PA-Cs with extensive ER and clinic experience; it is supplemented by regular visits from physicians in various specialties which include psychiatry, ophthalmology, family practice/women's health, orthopedics, and ear, nose and throat; internal medicine is to be added in the near future. The hospital also hosts a naturopathic physician as part of the specialty clinic program.

Funding to add a CT scanner to the radiology department is being sought this year. The hospital is exploring the feasibility of adding one or two designated detoxification, evaluation and stabilization beds for acute/emergent substance abuse patients.

W. BEHAVIORAL HEALTH AND DEVELOPMENTAL DISABILITIES

Cordova Community Medical Center is one of the few remaining small hospitals in Alaska fortunate enough to have a comprehensive behavioral health clinic (Sound Alternatives) as one of its departments, thus providing the opportunity for patients to receive professional care for both their behavioral health and physical health care needs in the same setting. Research has shown that this type of collaborative care is instrumental in extending the life span of patients with serious behavioral health diagnoses by more than 15 years (as compared to patients receiving treatment from nonconnected programs). Sound Alternatives provides services to children, adults, couples, and families who are experiencing problems related to any aspect of mental health, substance abuse, or developmental disability issues. Services offered include substance abuse evaluation and treatment (up to intensive outpatient treatment), mental health assessment, diagnosis and treatment, outpatient psychotherapy and counseling, developmental disability respite care, psychiatric medication evaluation and management, critical incident stress management (CISM), traditional case management services and skills development training for those adults suffering from a chronic mental illness or for children who experience severe emotional disturbance. Sound Alternatives is on-call to the ER 24/7 for emergency psychiatric evaluations.

As mentioned above, CCMC/SA is evaluating the possibility of expanded allopathic and behavioral health services through the addition of designated substance abuse detoxification, evaluation and stabilization beds. Sound Alternatives is in the planning stage for expanding its offering of prevention services in various areas, including substance abuse, mental health, women's issues, plus family and couples relationships.

X. HEALTH CARE

Historically, health care services in Cordova have been provided primarily through the Cordova Community Medical Center (CCMC), a Critical Access Hospital with acute, primary and long-term care capabilities. Please refer to the description of services, above.

In addition to CCMC, the community also has a public health nurse, a dentist, and the Ilanka Community Health Center, operated by the Native Village of Eyak.

The public health nurse provides supplemental health care for the community. These services include prenatal training, infant checkups and public immunizations. The nurse also administers to those who cannot afford health care through normal means and helps them obtain funding for needed services.

With the hospital and the physician clinic, as well as the Ilanka Health Center, the community's basic health and emergency care needs are being met. State and federal agencies tightly control expansion of hospital services, and any plans for additional expansions would be carefully scrutinized on both health care and economic grounds.

The strategies for providing adequate facilities for short-term and long-term medical care are as follows:

- Maintain hospital designation as a Critical Access Hospital, with 24/7 ER, acute, primary and long term care capabilities.
- Enhance the hospital's care delivery by supporting CCMC ongoing upgrade of medical equipment, including a CT scanner, new cardiac stress test equipment and new endoscopic (upper and lower) equipment, etc.

- Support hospital's continuing repair and modernization of its physical plant, including replacing the roof, installing a more efficient heating and cooling system, etc.

- Continue support of the hospital's behavioral health programs, including substance abuse acute care beds plus expanded education and prevention services.

CHAPTER 5
TRANSPORTATION

GOAL: Provide adequate transportation infrastructure to meet the needs of the community and promote a diversified economy.

A. TRANSPORTATION OVERVIEW

Cordova's transportation links to other communities are by water or air; there are no road connections. Connections to both northbound and southbound destinations are available, although service is limited in some seasons of the year due to weather and lack of demand.

The City has an ad-hoc transportation committee comprised of city staff including the city manager, city planner, public works director and his staff. This committee's purpose is to review the overall transportation needs of the community. This same ad-hoc committee also reviews the State of Alaska transportation projects prior to being placed into consideration of the State Transportation Improvement Plan.

B. TRANSPORTATION AND STREETS

Cordova currently maintains 9.8 miles of streets, which includes those areas annexed in the 1990's. The majority of these streets are substandard and in need of constant repair and maintenance. Maintenance of the substandard streets is extremely expensive and in some cases impossible given the resources normally not available in Cordova, i.e. asphalt products. In the late 90's a number of streets were paved, but due to poor road preparation prior to the paving, and a thin layer of pavement, much of that paving is being lost. Older paving structures are being lost due to the lack of maintenance in the form of overlays and seal coats. Subsidence and frost heaving is the major cause of surface deformation in many of our paved streets, and given the lack of adequate maintenance funding the condition of these facilities will continue to decline until they are reverted back to gravel streets again. Maintenance of gravel streets/roads is substantially more expensive than paved or surface treated streets/roads due to the grading, surface gravel replacement and dust control required.

Population trends have not been a friend of the transportation budget. Originally, the community's population was centered close to 'downtown' and housing was compacted into a relatively small area. Residences per mile of road were high and the miles of road requiring maintenance were small. Recent trends are towards a much more spread out population. Although Cordova's population has not grown appreciably, the number of residences per mile of road has decreased substantially, resulting in many more miles of road to maintain given the same population base. The area annexed in

the 90's resulted in a large increase in the miles of transportation system to maintain and only through the use of larger, more efficient equipment, has it been possible to keep up with even a basic level of maintenance.

In 2004 the City invested in 'chip sealing' equipment with the intention that 'chip sealing' will provide a surface treatment that will substantially reduce street maintenance costs. Although a chip sealed surface does not provide a smooth, aesthetic, long life surface as does normal asphalt paving, the cost per mile is one third to one quarter of asphalt and should produce a savings in the reduced amount of grading, surface gravel replacement and dust control required. The intent is to rely more heavily on this type of a surface treatment in lieu of normal asphalt pavement.

Storm drainage deficiencies must be addressed in the 'Core' area as noted in the 1993 Storm Drainage Study, and deficiencies in the annexed areas must be identified and corrected. Good drainage is a must for a good transportation system. Given the amount of precipitation experienced by Cordova, the existing storm drainage system is relatively effective but with minor deficiencies, identified or newly discovered, must be given a high priority due to the considerable damage that can occur in a short period of time during a major runoff event.

Accommodations for the disposal and storage of snow need to be recognized in existing as well as new developments. The trend has been towards using historic snow dumps for development or permanent facilities that restrict or eliminate them for use as a snow disposal area. This trend will continue to result in much higher costs for snow removal and may even result in the need to close certain major streets for long periods of time until the accumulation of snow can be hauled away. This can be exemplified by the loss of the majority of the snow dump at Second and Adams Streets to play ground equipment, which may well result in the closure of Second Street from Adams Avenue to Council Avenue during a heavy snow event.

C. STREET AND FACILITY UPGRADES

Just to maintain the existing transportation infrastructure at its present level is a concerted effort that must be expended. These would include surface treatment or overlays on existing pavements, surface treatment of existing gravel streets, correction of deformed and subsided surfaces from various causes as they occur, and improvements of drainage where necessary. The 1993 Drainage Study must be updated and suggested improvements addressed to accommodate existing as well as future developments. Planning for drainage in the annexed areas must be developed, required easements obtained, and proper drainage constructed.

It goes without saying that the community is not going to experience a huge infusion of funds to reconstruct their entire transportation system, and therefore must assign priorities for the limited funds. In establishing these priorities the following should be considered:

- safety
- volume of traffic
- cost of maintenance
- value to the community (industrial, tourism, residential density)
- environmental (erosion, dust)
- existing condition
- cost of 'no action'

Given these priorities, the existing street/road transportation could be broken up into groups based on use and/or conditions:

Heavy Industrial: Included in this category would be those facilities that serve the commercial fishing industry, waterfront activity, Coast Guard activities, and inbound and outbound freight. These are typified by those streets and roads on the North Fill (Sorrel Way, Seafood Lane, Industry Way, Breakwater Avenue, Railroad Avenue, Sedge Way), and those in the Ocean Dock Subdivision. These facilities should have a high priority as they serve the industries that are presently the economic base of the entire Community.

Business: Includes those facilities that accommodate normal commerce, predominately light duty but generally considered to have a higher traffic volume than in other areas, or may represent some of the major use routes. 1st Street (Copper River Hwy.), 2nd Street, Council Avenue (2nd to Railroad Avenue), Railroad Avenue, Nicholoff Way, Harbor Loop Road, Breakwater Avenue, High School area (Fishermen Avenue, South Second Street, South Orca Street), Chase Avenue, Lake Avenue.

High Density Residential: These streets are where there are a large number of residences served per mile of street and are most common in the older portions of the Community.

Low Density Residential: These streets are where there are a relatively smaller number of residences served per mile of street typified but not exclusive to the annexed areas.

Condition: Within the above groups, subgroups can be further developed based on 'conditions'. A higher priority should be assigned to streets with steeper grades due to the increased cost of maintenance resulting from increased erosion, more lost surfacing gravel, more grading required because of wash boarding, all common to the steeper grades. Paved streets that are on the verge of reverting back to a gravel surface due to the deteriorating asphalt needs a higher maintenance priority than paved streets with only minor blemishes.

That's not to say that all available funding should go, as an example, to the Heavy Industrial or Business areas at the complete exclusion of the residential areas. Rational judgment has to be utilized when establishing priorities for the anticipated limited funds available. It must be recognized that the priorities shall be based on the above evaluation criteria, but it will always continue to be fluid as conditions and demands change. As the Community grows, evolves and changes, the infrastructures and the priorities for them must be adjusted to meet the most current demand and needs. It has been only in recent history that larger traffic volumes in the North Fill area are creating a need for an improved transportation system in this vicinity.

D. CORDOVA TRANSPORTATION PROJECTS

The following projects (Table 7-2) were listed in the 2004 Transportation Needs and Priorities for Alaska (Needs List). The Needs List is an ever-changing inventory of needed transportation projects already identified by various groups, communities, state and federal sources. The purpose of the Needs List is an important step in selecting transportation projects for funding. The Needs List inventory is the foundation for the Statewide Transportation Improvement Program (STIP), the Aviation Transportation Improvement Program (AIP), and the Harbors Improvement Program (HIP), and the capital budget.

The STIP is the state's plan for allocating funding for surface transportation – highways, transit, trails and ferries for a three-year period. The following projects cover the time period from October 2004 through September 2006. The STIP is competitive and is the final step in a broad public process through which projects are selected and programmed for funding based on need. Alaska's STIP is prepared from a document know as the Needs List. Approximately two years lead-time is required to receive project nominations to the Needs List. Project nominations are received from various groups, local governments, state and federal agencies. Using the scoring criteria, the large pool of projects were scored and ranked. Only projects receiving the highest scores in the Needs List became eligible for the statewide consideration and possible Priority 1 ranking – a prerequisite for inclusion in the STIP.

Five of the projects from the Needs List ranked high enough to make it into the STIP. The following are proposed projects that are included in the STIP:

1. The Shepard Point Oil Spill Response Project
2. The Pedestrian Walkway from town to the Eyak River Bridge (MP 5.5) of the Copper River Highway
3. Copper River Hydrology Study from MP 29 to MP 49.
4. MP 18 to MP 37 Improvements –Reconstruction including widening, straightening, guardrail, snow poles, snow fence and asphalt paving.
5. MP 37 to MP 49 Paving – Pave existing crushed aggregate surface from MP 37 to MP 49 (Million Dollar Bridge).

Table 7-1 (Reviewed in 2008)
2004 Transportation Needs and Priorities (Needs List)

Name	Description	Cost Estimate
	Trails	
Interpretive Boardwalk	Construct Boardwalk along Cordova breakwater. Include a kiosk and interpretive signs.	$500,000
Prince William Sound Sea Kayak Trail	Trail will designate 3 communities, Cordova, Whittier, Valdez, as start points. Includes approximately 20 camp sites throughout Prince William Sound	$2,020,000
Whitshed Road Bike Path and Wayside	Construct a pedestrian/bicycle facility along the first mile of Whitshed Road, develop the Orca Inlet Recreational Wayside at MP 0.5 mile and improve the access trail to the Meals Lake Recreational area	$1,400,000

Whitshed Road MP 1 to 2.5 Ped/Bike Path	Construct a pedestrian/bicycle facility along Whitshed Road in Cordova	$900,000
MP 0 to 5.5 Ped/Bicycle Path	Construct a pedestrian/bicycle facility along the Copper River Highway from downtown Cordova to the Eyak River	$2,100,000
MP 10 to 18 Ped/Bike Path	Construct a pedestrian/bicycle facility along the Copper River Highway from 10 mile to 18 mile	$2,450,000
Whitshed Road/Heney Ridge Trail	Construct trail from Whitshed Road at Hartney Bay to Heney Ridge (approximately 4 miles)	$100,000
MP 5.5 – CRH Bridge/Pedestrian Walkway	Attach pedestrian walkway to Eyak River bridge, MP 5.5 Copper River Highway	$1,100,000
MP 5.5 – 10 Ped/Bike Path	Construct a pedestrian/bicycle facility along the Copper River Highway from the Eyak River to 10 mile	$2,750,000
Copper River Highway/1st Street Sidewalks	Replace sidewalk, curb, gutter and railings from ferry terminal to high school	$510,000
	Airport	
Airport Rescue & Firefighting Equipment	Purchase new rescue and firefighting equipment	$250,000
Airport Threshold Relocation and SA Extension	Relocate existing thresholds, extend runway safety areas and construct blast pad	$8,000,000
Crosswind Runway Improvements	Lengthen and widen the crosswind runway at Merle K. "Mudhole" Smith Airport and provide required safety areas based on recommendations in the recent airport master plan update	$2,500,000
Eyak Lake Airport Resurfacing	Resurface runway and taxiways, fill and provide area for helicopter landings, construct float system for float planes	$2,050,000
	State Highways	
Power Creek Road Improvements	Repair flood damage	$375,000 Funded by FEMA
Shepard Point Road	Construct approximately 4 miles of road from Orca Cannery to the deep water site at Shepard Point	$5,000,000
Whitshed Road	Realign road on right-of-way, install curb, gutter	$10,710,000

	and sidewalks to baler facility	
Whitshed Road – Heney Creek Bridge	Replace bridge	$600,000
Copper River Hydrology Study	Conduct a hydrology study of the Copper River Highway from MP 29 to MP 49	
Miles Glacier Viewing Area	Construct turn-off and viewing area at Miles Glacier	$700,000
MP 12.5 to 18 Paving	Repave and widen the Copper River Highway from MP 12.5 to MP 18	$9,000,000
MP 18 to 37 Improvements	Reconstruction including widening, straightening, guardrail, snow poles, snow fence and asphalt paving	$7,250,000
MP 37 to 49 Paving	Pave existing crushed aggregate surface from MP 37 to MP 49 (Million Dollar Bridge)	$1,250,000
	City	
Sawmill Extension	Extend Sawmill Avenue through to the North Fill Development Park	
Breakwater Extension	Construct 150' extension to east breakwater to reduce maintenance, increase facility life and reduce damage to vessels. Crest elevation s/b 18' or higher	$750,000
Covered Pedestrian Walkways	Construct covered walkways at 4 locations in Cordova	$275,000

E. SIDEWALKS AND BIKE PATHS

It is anticipated that an influx of the tourism trade would result from the development of a new fast ferry system. Changes in the demands of our transportation systems should be planned for and given a priority. Additionally, an increase in the number of tour boats visiting Cordova should be anticipated and planned for. The biggest impact anticipated from these sources would be pedestrian traffic, requiring a program to upgrade our sidewalks from the points of debarkation to and around the downtown area, boat harbor, and other areas that present themselves as a potential destination for pedestrians.

Priority should also be given to sidewalks in areas where pedestrians and motor vehicles share the same travel way, and where potential safety issues are prevalent. Most notably, this would include the steep streets in the area of Mt. Eccles School where grade school children compete for space with vehicles, and which is greatly exacerbated during winter conditions when drivers are not always in complete control of their vehicle. This is exemplified by Browning Avenue. A sidewalk/bike path along Whitshed Road from the Copper River Highway to the planned recreation site

adjacent to the Camper Park should also be given a priority due to the anticipated influx of pedestrian traffic in this area once the recreation site has been developed.

F. STORM DRAINAGE

Adequate drainage is essential for a good transportation system. Uncontrolled surface water is a street/roads worst enemy, result in surface and ditch erosion and sub base saturation, which leads to instability, frost heaving and road failure. The existing drainage system in the City's 'core' is relatively effective. As new subdivisions and developments are planned and constructed in the higher elevations, new storm drain systems must be designed in a manner compatible with the existing system.

Hawthorne Engineering conducted a comprehensive Drainage Study for the 'core' in 1993. Many of the deficiencies noted in this study were corrected with the reconstruction of Lake Avenue in 2004. Other deficiencies that were pointed out in this study and which need to be addressed are:

1) Additional culverts to prevent flooding of the Post Office;
2) Upgrade of the 48" culvert inlet on 3rd Street between Council Avenue and Davis Avenue;
3) Enlarge the 24" culvert in the downstream end on Center Drive;
4) Upgrade the Davis Street drainage from 4th Street to 2nd Street and the inlet configuration at 2nd Street and Davis Avenue;
5) Enlarge culvert in 6th Street north of Lake Avenue. Since the study was completed other deficiencies have been noted:
6) Improve overall drainage in Browning Avenue from 4th Street to 2nd Street;
7) Improve drainage in 3rd Street from Council Avenue to Browning Avenue to avoid continued flooding of residences and apartments in this area;
8) Enhance drainage in Vina Young Subdivision, particularly that in the full length of Birch Street.

Outside the 'core' community, typically the annexed areas, storm runoff creates damage to roads/streets, but generally speaking, in these instances the problems are easier and cheaper to resolve. This is due to the nature of the developments and a 'tree' type drainage system would not be necessary. In these areas drainage should be given a priority. In most of these areas the plan would include individual culverts and ditches to follow the traditional drainage routes. This would require 'drainage easements' which were not a consideration during annexation.

G. SNOW REMOVAL

The Cordova Public Works Department provides snow removal services on City owned right-of-ways. Cordova receives an average of 116 inches of snow per year. This coupled with steep grades in much of the town, makes efficient snow removal essential to the community's well being and its ability to function normally.

Snow dumps are sited at a number of locations around town. The City has designated some of these sites as snow dumpsites; others are identified as parks that provide additional snow storage for the community. A number of snow dumps have been lost in the past few years due to development and pressures to use land for other purposes. It is very important to the public works department that these sites remain as snow dumps. It is also important that additional sites be identified and added to the inventory as dedicated snow dumpsites. Hauling snow long distances for disposal is time consuming and prohibitively expensive. The planning and zoning commission has suggested that long term planning for snow dumps be undertaken and that snow dumps be designated on city maps.

H. SIGNAGE

To-date, informational signs have not garnered a high priority within the community. The majority of the residences had been in the community long enough that the demand for informational signs was not of a high priority. With an anticipated increase in the Tourism use of Cordova, this type of signage should be given a priority. The types of informational signs envisioned would be map signs, interpretive signs, and directional signs directing pedestrians to potential points of interest.

I. PEDESTRIAN CIRCULATION

Although Cordova is relatively small and compact, foot travel is often inconvenient, especially during wet or snowy weather. Foot travel can become hazardous when snow and slush pile up in and adjacent to the street, forcing pedestrians to walk in traffic lanes.

Even though it is sometimes difficult, pedestrian travel is an important part of the circulation movement in Cordova. Some downtown employees walk to work. Children walk to school and to the downtown area after school. Elderly citizens are able to walk to and within the downtown due to the community's compactness.

Improved pedestrian ways can be an economical benefit, particularly for the visitor trade. Retail areas with enhanced pedestrian amenities are often more successful because they attract shoppers. Cordova's considerable rainfall, inadequate sidewalks, unpaved side streets and parking areas, and uncontrolled traffic patterns contribute to discourage pedestrian traffic in the downtown. Pedestrian use could be encouraged by the installation of covered walkways (marquees), provision of sidewalks up the side streets, paving and traffic control crosswalks. If these suggestions were implemented, workers and shoppers would be more inclined to walk to and between locations, lessening the need for expensive and space consuming downtown parking.

An interconnecting network of trails should be planned and implemented as part of the community's overall transportation network. Pedestrian routes could consist of sidewalks along a roadway, or a walking path that is marked and maintained in association with open spaces. Bicycle paths and corridors could also be included as part of a trail system to improve safety and further link the community together.

Bicycles are used for both recreation and transportation. However, bicycling can be hazardous in Cordova because of the poor surface condition of the streets, the traffic loads on arterial and collector streets and the lack of a dedicated bike lane. Improvements to major streets and roads should include pedestrian ways and bicycle paths. Such paths should connect community facilities and businesses with the residential areas of the community.

Minimum path width for either pedestrian or bicycle paths should be 8 feet to allow for movement in both directions. Overhead clearance should be at least 7 feet, 4 inches. When associated with a street, the path should be clearly marked with signs and striping (if the street is paved) to alert drivers, pedestrians and bicyclists.

The strategies for building, improving, and maintaining suitable streets, roads, and pedestrian/bicycle path systems to increased land use density in developed areas, and the efficient use of available land:

- Identify specific existing roads and streets for upgrading and paving.
- Identify and set priorities for expansion of the road system.
- Work with developers to ensure that roads in new subdivisions meet city code and standard specifications.
- Develop a comprehensive parking plan for the Central Business District and waterfront areas.
- Develop a comprehensive plan for bicycle and walking trails, and identify and seek funding options for bicycle and walking trails.

The strategies for upgrading local streets are as follows:

- Support the upgrading of local streets by widening, paving, re-platting, and acquiring land.
- Develop revisions to the City's subdivision regulations to include standard details for residential streets, sidewalks, and drainage.
- Develop revisions to the subdivision regulations to require that all newly constructed collector streets have a right-of-way of at least 60 feet and that all new residential streets have a right-of-way of at least 50 feet.
- Implement the Comprehensive Drainage Study and prepare a plan to improve drainage. The plan should consider drainage options in areas likely to be developed in the future.
- Support the development of the Sawmill Avenue connector to the South Fill Development Park.

The strategies for upgrading State maintained roads in Cordova and the surrounding area are as follows:

- Promote the widening of Whitshed Road in the area of Odiak Camper Park. Request a pedestrian/bicycle path from the camper park/playfield on Whitshed Road to Copper River Highway.
- Promote the upgrade of Power Creek Road. Widen and pave it to at least Davis Island.

The strategies for continuing to evaluate the on-going cost/benefit analysis on pending and proposed regional transportation projects are as follows:

- Support regional transportation projects that are found to be in the best interest of the City of Cordova.

J. PORT AND HARBOR

Several disasters along the Cordova waterfront have played a large part in shaping how the area looks today. The March 1964 earthquake caused a bottom uplift of about 6.5 feet in the Cordova harbor area, leaving the harbor and most docks high and dry. The Urban Renewal Project, which followed, resulted in a major revamping of the community's port facilities. (However, as extensive as the restoration efforts were, they did not restore Cordova's ability to serve as a deep-water port). In 1968, the destruction by fire of the city's main dock created the need to construct the present Ocean Dock complex. These disasters had a positive outcome because Cordova's port facilities today rate among the best in Alaska.

Cordova's existing port facilities include three docks for large vessels, two boat ramps, a three-tier dock, a small boat harbor, and a few piers associated with the cannery complexes. All three docks are owned by the City of Cordova. The small boat harbor facilities are owned and operated by the City.

The Municipal Dock (Ocean Dock) is located approximately three-quarter of a mile north of the small boat harbor just off Orca Road. Ocean Dock is Cordova's main commercial port facility. The dock's outside face is 408 feet long with an average draft of approximately 25 feet. The inside face of the dock is 325 feet long with an average depth of 16 feet. The dock is equipped with potable water, and gasoline and diesel fuel pumps. This dock is utilized primarily for the transfer of petroleum products and general cargo as well as freight and passengers arriving via the ferry system. Immediately east of the north end of the Ocean Dock is the Ocean Dock Subdivision; an approximately 12-acre fill area currently used as a staging area and open storage area for shipping containers and fishing vessels. This is also the site of the new ferry staging area and the City's 150 ton travel-lift facility for the maintenance and storage of vessels.

The City Dock is used primarily for the transfer of fishing gear and light cargo. The dock is located at the west end of Breakwater Avenue and immediately north of the harbor entrance. The seaward face of the City Dock is 280 feet long with an average draft of 23 feet. The dock is equipped with two 1-ton hoists, electricity, and potable water. A $4,000,000.00 renovation of this facility was completed in 2007 to include new decking, pile replacement, and the installation of a new lighting and fender system.

The North Containment Dock is located on the west face of the North Fill Development Park; a fill area reserved for waterfront industrial uses. The area features a boat ramp. This is Cordova's newest dock. The dock's outside face is 213 feet long with a 50 feet dolphin and an average depth of 19 feet. It is used primarily by the Coast Guard for moorage of the buoy tender ship "Sycamore".

The Cordova Small Boat Harbor has 727 slips available within a basin that is approximately 30 acres in area making it the fifth largest harbor in the state. Electricity, telephone and potable water are provided on all floats.

The Harbormaster's office is located in the northwest corner of the South Fill Development Park on Nicholoff Drive. It provides a center for Harbor Department office space and equipment storage.

The fleet using the harbor is dominated by commercial fishing vessels, most of which engage in salmon fishing. During the salmon and herring-seining season, there is a significant influx of transient fishing boats. The commercial fleet is expected to remain essentially stable over the next few years. There is a small possibility that a local bottom fishery will be established here, however, this would have little effect on the small boat harbor since most of these boats are too large to use it.

The future demand for slips for recreational boats remains unknown. At this time, it is premature to make predictions about future needs for slips for recreational boats. A stable fleet size of approximately 1,000 user vessels of every nature can be reliably predicted. Following is a projected fleet mix for the immediate future:

TABLE 7-2

Projected Fleet Mix

Craft Use	Boat Equiv.	Average Length	Average Width	Average Draft	Governing Draft
Salmon	390	34	10	4	- 8ft MLLW
Crab	12	80	24	8	-10ft MLLW
Halibut	11	80	26	12	-14ft MLLW
Utility	288	20	6	8	-10ft MLLW
Heavy					
Commercial	50	68	22	14	-16ft MLLW
Bottom Fish	20	80	30	14	-16ft MLLW
Recreation	86	22	6	2	- 8ft MLLW

Source: U.S. Army Corps of Engineers

From this data it would appear that, barring any significant growth in the fishing industry or in the visitor industry, Cordova's harbor facilities are adequate for the near future. However, because of the inherent nature of the fishing industry, it is very difficult at best to make predictions concerning the demand and need for harbor expansion. Further, as noted above, projections regarding the demand for slips for recreational boats are also highly speculative.

The fishing industry is critical to the economic survival of Cordova. The community is hoping that the visitor industry will also become a significant component of the economy in future years. Both industries are unpredictable and both could require additions to the community's port facilities in the future. One possible addition to Port & Harbor facilities, to support the fishing industry and to help boost the local economy, is a travel lift facility. The City of Cordova completed a Travel Lift Feasibility Study in 2004 with intentions to collect grant funds to complete the construction of the facility and purchase of equipment. The City should position itself to be able to respond quickly to any demand for harbor expansion by identifying site locations and initiating permitting and preliminary planning.

The strategies for providing adequate port and harbor facilities for present and future needs are as follows:

- Continue proper maintenance of all harbor facilities and provide for future needs through the development and implementation of a maintenance schedule

- Support the development of a large vessel haul out.

- Continue to evaluate and promote the Deep Water Port.

- Add float to boat ramp at North Fill Development Park.

- Upgrade and make necessary repairs to cathodic and fender systems.

- Implement the Waterfront Master Plan.

K. MARINE TRANSPORTATION

Hundreds of private marine craft call on Cordova each year, with boat traffic reaching its peak during the summer season. Many are commercial fishing vessels; the remainders of the boats are pleasure craft. In addition, Cordova is a regular port of call of the Alaska Marine Highway System (AMHS). The City of Cordova is a major point for passengers and vehicular disembarkment, traffic has been steadily increasing.

To keep healthy and growing, the community must be able to offer moorage space and the necessary related amenities. The development of mining activities in the area could also impact demand for marine transportation facilities.

Cordova has been working towards the expansion of the visitor industry in the area. Most visitors arrive by ferry or small cruise ships, and the number of private vessels visiting Cordova has been growing. Current dock facilities are inadequate for deep draft cruise ships and would require lightering from the ship that is anchored in Orca Inlet. However, recent surveys of Cordova residents indicate a desire to limit the scale of the visitor industry to minimize impacts on the character of the community.

L. FERRY SERVICE

The AMHS operates several vessels, some of which provide ferry service to Cordova and other communities in Prince William Sound. The smaller vessels are used to provide feeder service to other communities, including Whittier and Valdez in the Prince William Sound. A mainline ferry that connects the Prince William Sound to Juneau and points south to Bellingham also serves Valdez. Year round ferry service is provided to Cordova with approximately 3 sailings per week during the winter months.

The strategies for maintaining and improving the ferry connections between Cordova and the rest of Prince William Sound are as follows:

- Work with the Alaska Marine Highway System to maintain a viable system, which provides regular service at reasonable hours.

- Continue to lobby for scheduling and rate improvements.

- Support State efforts to improve the Marine Highway Service to Cordova.

M. AIR TRANSPORTATION

The Cordova Mudhole Smith Airport is located approximately 13 miles east of the urban center. Owned by the State and utilized by Alaska Airlines, this facility includes a paved single 7,500' by 150' wide runway. There is no parallel taxiway serving the runway. This single exit taxiway connects the runway to the apron area and parking ramps for all aircraft at the airport. The airport also has a gravel crosswind runway that is 1,800' by 30' wide; the crosswind runway also does not have a parallel taxiway. All aircraft using the airport must back-taxi on the runway upon landing or during take-off.

The Cordova Eyak airport, also owned by the state, is located on the northern shore of Eyak Lake. This airport has a gravel runway that is 1,900' by 60' wide and offers no parallel taxiway. This airport is also home to a large contingent of private commercial light single engine aircraft both land based and float based aircraft. This airport also contains a heliport. The majority of the planes based at this airport are commercial in nature and offer flight seeing tours, fly-in fishing and hunting trips, and also provide customer with service to individual destinations.

The Cordova Mudhole Smith Airport is an all-weather airport which allows for regular air freight service and also provides emergency evacuation capabilities.

N. LOCAL AIR SERVICE

The Cordova Mudhole Smith Airport is served by two scheduled air carriers, Alaska Airlines and ERA Aviation. Alaska Airlines currently operates two jet flights per day (one northbound, one southbound); service on the northbound flight is to Anchorage, while the southbound flight originates in Anchorage with stops in Cordova, Yakutat, Juneau and Seattle. ERA Aviation typically operates two (2) flight per day during the summer months but reduces their services during the winter months. These above flights are regularly scheduled during the winter months; both airlines add additional flights during the tourist season from May to October. The level of air carrier scheduled service has remained relatively steady at two flights per day. Local carriers provide flight service to surrounding communities with light single and multi-engine aircraft; other fixed wing and helicopter operators provide non-scheduled service at Cordova Airport and non-scheduled floatplane service to nearby communities from the Cordova waterfront.

O. AIRPORT TERMINAL FACILITIES

The facilities located at the Cordova "Mudhole Smith" Airport consist mainly of privately owned buildings used by individual air carriers and commercial operators. Alaska Airlines operates a private terminal building which houses airline offices, passenger ticketing, waiting area, public restrooms, telephones and air cargo storage. Also available at the airport is a restaurant and a rental car agency, which are located adjacent to the terminal in a separate building.

The strategies for developing the Cordova Airport and adjacent lands to support commercial and industrial activity are as follows:

- Identify commercial and industrial activities that need airport access.

- Work with air carriers to maintain regular daily service into Cordova.
- Provide suitable sites and facilities for airport related activities, such as air cargo and other specialized services, and work to make city and state lands available for such activities.
- Encourage the Alaska Department of Transportation & Public Facilities to develop, along with community participation, aesthetic standards for properties along the roaded system to the airport.

CONCLUSION
UPDATE 2008

Cordova is at an important turning point in its evolution that will have significant implications regarding its future. The community has the potential to grow and prosper in a positive way if important steps are taken to provide for the enhancement of quality of life.

Cordova gains most of its economic stability from the commercial fishing industry and the global marketing of those products. Many in the community have a strong determination and willingness to strive for a greater future of prosperity through productivity utilizing their entrepreneurial talents in other new industries including value added; but it is also important that the natural environment is protected and preserved highlighting those limited resources that the community and visitors alike rely on for a quality of life and livelihood associated with the great outdoors. The citizens, government and City management recognize how essential it is to preserve its heritage and tradition while enjoying its beautiful environment and utilizing its many assets and opportunities for growth.

Cordova can reach its goals through planning and working to meet its future needs with a forward thinking attitude and open minded approach. Quality of life can be improved in Cordova through the guidance of the Comprehensive Plan.

CORDOVA PUBLIC WORKS DEPARTMENT
INTEROFFICE MEMORANDUM

DATE: November 10, 2008

TO: Tim Joyce, Mayor
Scott Hahn, CM

FROM: Gary Squires, PWD

RE: Disposal of City Buildings

This is a follow up to our discussion last week concerning plans for the possible disposal of City buildings that may be vacated when the proposed new Civic Center is constructed and occupied. The following is offered based on my observations of these facilities over the past few years and represent only my opinion.

CITY HALL/EMERGENCY RESPONSE CENTER:
I have heard the opinion that the City Hall portion of this structure should be demolished and leave the ERC in place and active. I do not think this prudent.
- At about 26 feet above sea level and only a stones throw from salt water, this entire facility is located in a Tsunami zone. It is true that a tsunami of a magnitude that would impact this facility has not occurred in recent history but one only need look at world events over the past few years and the geophysics of this region to realize that a tsunami of consequence could be a very real possibility. This does not seem the place to locate and maintain the personnel and equipment that would be most in demand in the event of a tsunami.
- The center of the mechanical, heat and ventilation systems that serves the entire facility is located in the extreme south end of the building. The center of the electrical system is in the City Hall portion of the facility. To demolish the City Hall portion while leaving the ERC in the north portion would require a project to completely reconstruct these above mentioned systems. Often, the cost of such systems in a new building exceeds the cost of the building itself. Approximately four years ago we retained an electrical contractor to install new main electrical panels in City Hall. As part of their work they were to identify all circuits and their location but after many days of tracing and analyzing, many circuits or their termini could not be found. Over the years of the buildings existence, numerous unrecorded modifications, many probably not to any known building code, have been made which defies their identification. We have seen examples of this in the police squad room. This would complicate any project to completely revamp the electrical system to serve just the ERC. All of this is not impossible, just costly.

As a side note, approximately twelve years ago I sat in on a City Council meet where a contract to reconstruct the facilities roof was being discussed. The topic of the buildings roof capabilities came up and a person in the audience that seemed to speak with knowledge stood up with some clarification. He said he was at a Council meeting to discuss the facility before it was originally built and the powers-that-be at the time decided to approve a design that included only a '20 pound per square foot' snow load, this to cut costs. The current Cordova Building Code calls for a

minimum of a '100 pound per square foot' snow load. This may be a consideration for any extended use of the building after its use as the City Hall is abandoned.

LIBRARY/MUSEUM:

- In my estimation, this was not a quality building when it was constructed. It was a cheap, pre-engineered metal building and the roof design has and does cause many problems. Metal roof snow sliding onto a flat composition roof is a very poor design for a region that experiences as much snow as Cordova.
- All of the sewer and water lines are buried in the concrete slab-on-grade and access to them is only with the use of a jack hammer to take out portions of the floor. The sewer system, particularly the floor drains, have been a constant problem as they often plug due to the lack of slope and there is speculation they are corroding to the point of failure.
- At some point the front windows of the museum portion were boarded up. Due to the lack of air circulation this resulted in considerable condensation of these large windows which continues to be a problem. Many of the floor tiles have peeled up and it's a good possibility that corrosion in that portion of the buildings structure has occurred.
- A crease in the metal siding is evident in the majority of the buildings perimeter. It's as if the distance between eves and foundation has become less. I first noticed this about five years ago but it does not appear to be getting worse. I do not know the cause of this but I would be concerned were I looking at any long term use.
- There are diagonal cracks in the interior sheet rock at locations such as some of the upper door jam corners. This may have been caused by the lack of roof snow removal when it should have been at some time in the past. Its hard to tell if this caused any long term or permanent damage.

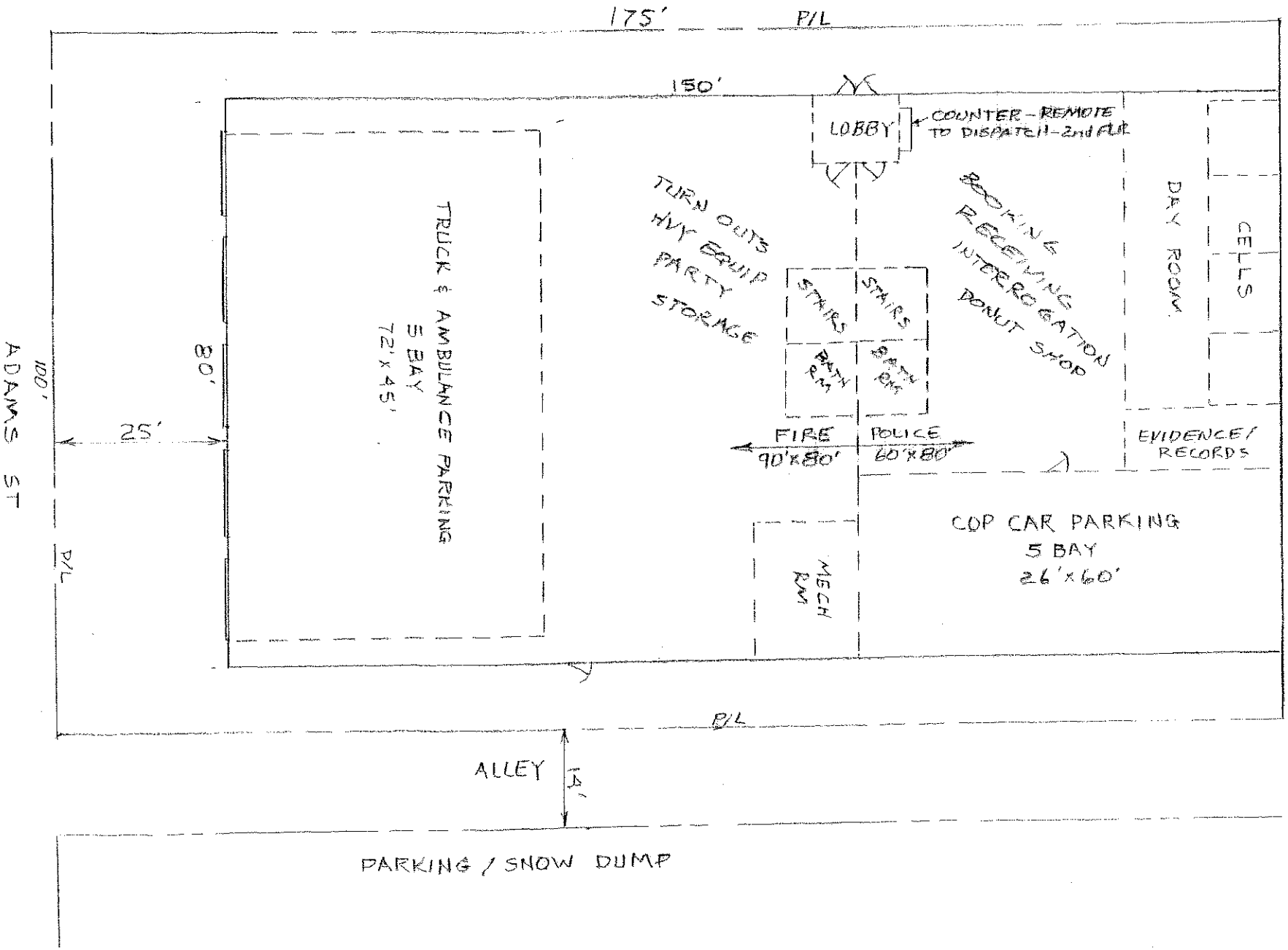
THOUGHTS, OPINIONS AND RECOMMENDATIONS:

- The ERC (Police & Fire) should be moved to a higher elevation. Due to the lack of available places to put these facilities, they may have to be separated which is the case in most communities. If it is decided to demolish the existing Library/Museum building, I believe this 175'x 100' parcel of City owned property could be utilized for a combined ERC facility, especially if a two story building is constructed. The down side to this concept is that it sets at an elevation of 82' which is not above the magical 100' elevation that has been advertised as the demarcation of the 'Tsunami Zone', however it is 56' above the existing facility and considerably further from the salt water.
- It has been my observation that there seems to be a considerable number of grants available for 'Emergency Response' facilities such as police and fire stations but the number one concern in Cordova is 'location and available space'.
- The ERC personnel have expressed a need to be centrally located within the community. This coupled with the steep terrain immediately outside of the potential tsunami zone makes the possibilities extremely limited. Given the difficulties we experience on our steeper streets in the winter, I think it inadvisable to locate any part of an ERC in our steeper terrain areas. Baring an expensive buy out of properties in the ideal locations or the use of the present Library/Museum site, a compromise to the 'centrally located' concept may have to be made.
- At the termination of its use as a Library/Museum, I believe the L/M building should be demolished or made available to salvagers. Its over all condition just does not lend itself to too many more years of use. The building was constructed when 'energy conservation' was not a consideration and the cost to power and heat this building can only be expected to rise further.

- I would suggest the existing City Hall/ERC be sold to the highest bidder upon the termination of its present use. Here again, this building was constructed when 'energy conservation' was not a consideration and the energy costs continue to escalate. For this same reason I would not advocate attempts to lease the building. I can not visualize a private business entity that could afford the heat and electrical costs while maintaining a reasonable profit margin. One of the City's major sewer lines crosses directly beneath this building and one of the largest storm drain in town passes immediately in front of it which may impact its value in any potential sale. I suppose the structure could be torn down and replaced with yet another park or playground.
- Many times, in reference to these two main City buildings, I have heard the comment 'Well, it has lasted for 30 years', as if one can not expect much better than this. A normal quality house lasts longer than this. In the construction of any new building I believe the City should target something much better. Quality buildings should last well in excess of 100 years, even in the harsh climate common to Cordova, which does not include pre-engineered, metal buildings. It is hard to beat concrete and heavy structural steel when looking at longevity. The USFS office building was built in 1926 of concrete and, with the exception of some bad concrete that was used which has caused some superficial problems, it is still going strong. Spending less on a pre-engineered building that lasts only 30 years rather than more on a concrete building that lasts in excess of 100 years does not pencil out in the long run. I would advise the City to look more at 'utility' and less at 'frills' which could go to offset the added cost of a quality structure. Structural Engineers, not Architects, should be retained to design City buildings.

FIRE - 2nd FLR - 90'x80'
- TRAINING
- OFFICES
- RECORDS & STORAGE

POLICE - 2ND FLR - 60'x80'
- DISPATCH
- SQUAD ROOM
- OFFICES
- RECORDS & STORAGE



A MEMO FROM LILA KOPLIN, CITY CLERK

DATE: March 12, 2009

TO: Mayor and City Council

CC: File

SUBJECT: Recommendation to City Council regarding old City Buildings

The City Buildings Committee met during the months of December, January and February to discuss options to eliminate one City structure (the library/museum or city hall) after completion of the Cordova Center and the library museum and city hall employees have moved into the new building.

The Committee did select a preferred option and held public hearings on February 9th and 23rd. The recommended option is as follows:

1. Sell the Library/Museum Building;
2. Lease the City Hall Building once the staff has been moved into the Cordova Center or zone it cold;
3. Begin immediately searching for grants that can be secured to fund the relocation of the Police and Fire Departments; and
4. Demolish the City Hall Building once it is vacated in order to provide additional parking for the Cordova Center.

The Committee also selected relocation options for the Police and Fire Departments as follows:

1. Second Street, Memorial Park location
2. Copper River Highway near cemetery
3. LeFevre Street near old power plant

Advantages:

- Revenue generated from sales
- Police and Fire departments out of tsunami zone
- Second Street provides a downtown location for Fire and Police departments
- CRH lot has ample space
- LeFevre Street lot has good earthwork which will cost less to develop than the CRH lot
- Both LeFevre Street and CRH locations have multiple access routes in a less congested traffic area

Disadvantages:

- LeFevre Street lot is too small, adjacent property would need to be purchased

CRH location would cost more to develop and is on the shady north side of the hill

POLICE AND FIRE FACILITIES COMMITTEE
December 2, 2009

Fire Department Requirements—Preliminary

Apparatus Bay—6 double deep bays, 15' wide by 80' long	7,440 sq ft
Fire Chief's Office—10' X 10'	100
Fire Marshal's Office—10' X 14'	140
Library/Conference—16' X 20'	320
Administrative Storage/Copy Room—14' X 16'	224
Administrative Office—10' X 16'	160
Workshop/Toolroom—16' X 16'	256
Laundry (inc. slop sink and drying rack)—9' X 5'	45
EMS Supply Room—10' X 14'	140
Compressor, Bottle Storage, SCBA Maint.—10' X 15'	150
Firematic Storage—12' X 14'	168
Hose Tower—12' X 12'	144
Medical Cleanup/Decon Room—10' X 10'	100
Technical Rescue Locker—10' X 14'	140
Fire Dept. Specific Net Requirements	9,527 sq ft
F.D. Specific Gross Requirements (net X 1.15)	10,956

Police and Fire Shared Spaces—Preliminary

Mechanical Spaces:	
Boiler Room—10' X 20'	200 sq ft
Electrical Switch Gear—6' X 12'	72
Water Service—2' X 8'	16
Emergency Generator—10' X 20'	200
Vertical Movement:	
Stairways—2 @ 8' X 20' each	320
Elevator—7' X 9'	63
Elevator Machine Room—6' X 8'	48
Dispatch Center (inc. Console, Radio, Computer Equipment, Toilet, and Kitchenette—16' X 30'	480
Entry Vestibule, Lobby, Reception	100
Janitors Closets (one each floor @ 16 sq ft)	32
Drinking Fountains (one each floor @ 6 sq ft)	12
Toilet Facilities ADA Compliant	
Men's (one each floor @ 100 sq ft	200
Women's (one each floor @ 128 sq ft)	256
Fitness Room—12' X 16'	192
Lounge/Day Room—25' X 30'	750
Training/Conference Room (16 sq ft per person @ 80)	1280
Conference Room Storage—12' X 16'	192

Commercial Kitchen—16' X 24'	384 sq ft
Pantry/Storage—8' X 12'	96
Shared Space Net Requirements	4893 sq ft
Shared Space Gross Requirements (net X 1.15)	5627

POLICE AND FIRE FACILITIES COMMITTEE

JAN. 4, 2010

POLICE FACILITIES:

TWO STORY, 2800 SQ FT PER FLOOR (40X70) DOUBLE PRESENT SPACE

FIRST FLOOR

1. THREE JAIL CELLS, 12X20 EACH (240 SQ FT EACH)
2. ONE JAIL DAY ROOM, 11 X 40 (440 SQ FT)
3. JAIL INTAKE AREA, 12 X 20 (240 SQ FT
4. BOOKING AREA, 20 X 20 (400 SQ FT)
5. EQUIPMENT ROOM, 20 X 20 (400 SQ FT)
6. ADMIN ASSISTANT OFFICE, 15 X 15 (225 SQ FT)
7. RECEPTION AREA, 15 X 15 (225 SQ FT)
8. SUPPLY ROOM, 10 X 15 (150 SQ FT)

SECOND FLOOR

1. SQUAD ROOM 25 X 30, (750 SQ FT)
2. INTERVIEW ROOM, 15 X 15 (225 SQ FT)
3. KITCHEN, 15 X 15 (225 SQ FT)
4. EVIDENCE ROOM, 15 X 15 (225 SQ FT)
5. BATHROOM/SHOWER, 10 X 15 (150 SQ FT)
6. CONFERENCE ROOM, 15 X 15 (225 SQ FT)
7. CHIEF'S OFFICE, 20 X 20 (400 SQ FT)
8. DISPATCH CENTER 20 X 20 (400 SQ FT)
9. HALLWAY, 5 X 40 (200 SQ FT)

5600 TOTAL SQ FT. DIMENSIONS CAN BE ADJUSTED.

Police & Fire Facilities Committee Report

DATE: February 8, 2010
TO: Mayor Tim Joyce and Council Members
FROM: P&F Committee Members:
David Reggiani, Dick Groff, Tom Bailer, Mike Hicks, and Chris Canaski

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The Police and Fire Facilities Committee (PFFC) began its work on November 3, 2009 after receiving its assignment from Mayor Joyce. With the completion of the Cordova Center on the horizon, the Mayor asked the committee to identify several locations outside the tsunami zone for a combined Police and Fire facility. He is aware of possible FEMA grants and other funds that could be attained for the construction of a new energy efficient facility. The Mayor asked that the committee provide a recommendation to the City Council of their top two or three locations along with a list of advantages and disadvantages of each.

During the first meeting, the PFFC reviewed the City Buildings Committee recommendations made to the City Council on March 12, 2009. Three locations were identified as options for the Police and Fire Departments once the Cordova Center was complete: 1) Second Street, Memorial Park; 2) Copper River Highway between the City Cemetery and Eagle Construction; and 3) LeFevre Street near the old power plant (see attached).

The PFFC met again on January 4, 2010 to identify space needs of the different agencies and review the Plat for each location. The Fire Department (FD) calculated needing approximately 11,000 square feet of dedicated FD space along with approximately 5,600 square feet of shared space (hallways, mechanical, restrooms, training room, fitness room, etc.). The Police Department (PD) identified approximately 5,600 square feet needed for dispatch, offices, DMV, and the jail. Another 520 square feet would be required to incorporate the Alaska State Troopers into the facility.

Upon review of the Plats, it was apparent that the LeFevre Street location was too small to be considered. Also, the Second Street location would need to be expanded to include the Library/Museum property along with the alleyway.

The PFFC confirmed the current City Hall property dimensions of 160′ x 200′ during its January 25, 2010 meeting. This established that the combined lots of the Second Street/Museum/Library complex is large enough (175′ x 214′) for the facility and would also allow approximately 75′ x 100′ to remain available as a snow dump location.

The PFFC developed the lists below regarding the two locations. Both locations are consistent with the City of Cordova Comprehensive Plan.

Second Street/Museum/Library

Advantages

- Centrally located in town and in close proximity to the majority of PD and FD calls
- Accessible to the public
- A modern attractive building would compliment and enhance the downtown area
- Increased visibility on First Street for both FD and PD
- Space can accommodate the space requirements of the facility with the FD vehicle apron access to Adams Street
- Close to Mt. Eccles and Cordova Center for training events
- Multi-Street design potential, FD on First Street and PD on Second Street
- Design potential to save important snow dump

Disadvantages

- Increased traffic in the downtown area
- Use of prime retail location, however, there are several lots and buildings currently available on First Street
- May reduce the size of the current snow dump

Copper River Highway

Advantages

- Easy access to travel corridors
- Large tract of land available
- Not too far from the downtown area

Disadvantages

- The geography of the location will make it very expensive to develop the site. In fact, it may not be feasible
- Potential landslide hazard after site excavation
- Farther away from canneries and harbor
- Not within walking distance of downtown area
- Not easily accessible for public/tourists

It is the opinion of the PFFC that the Second Street/Museum/Library complex has tremendous potential and is the ideal location for the new Police and Fire Facility. Therefore, it is the committee's sole recommendation for facility location. The PFFC further recommends that well-balanced advisory team be created as this project moves into the design phase to ensure that elements are integrated to minimize traffic congestion and issues related to snow storage during the winter months.

PROS AND CONS OF FIRST STREET AND COPPER RIVER HIGHWAY LOCATIONS FOR A POLICE/FIRE BLDG

FIRST STREET LOCATION:

PROS: Centrally located in town and in close proximity to the majority of police and fire calls

Accessible to the public; residents, visitors, tourists

A modern, attractive police/fire complex would be a great compliment to the Cordova Center and the downtown area.

Increased police visibility on Main Street, especially in the summer months

The location can accommodate the facilities needed

CONS: Increased traffic and emergency traffic in downtown area near elementary school

The property is prime retail area in downtown, although there hasn't been an influx of new business downtown

COPPER RIVER HIGHWAY LOCATION:

PROS: Being on the highway makes it easy to get in and out in either direction

Apparently a large tract of land to accommodate the required building

Not too far from downtown

CONS: Further from harbor and canneries where accidents have happened

Location needs heavy excavation of the mountain before building

Energy efficiency may be an issue in the winter because the area is continually shaded

Not within normal walking distance of downtown and harbor

Not easily accessible for tourists or persons not familiar with town

increased response time

Could be avalanche problem after excavation?

Further from center of downtown activities (Ice Worm, 4th of July celebration etc)

STATE OF ALASKA

SEAN PARNELL, GOVERNOR

P.O. Box 5750
Ft. Richardson, AK 99505-5750
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Fax: (907) 428-7009
Toll Free: (800) 478-2337
www.ready.alaska.gov

DEPARTMENT OF MILITARY
AND VETERANS AFFAIRS
DIVISION OF HOMELAND SECURITY
AND EMERGENCY MANAGEMENT

June 25, 2010

Mr. Oscar Delpino
Fire Chief
P.O. Box 1210
Cordova, AK 99574

RE: 2011 Pre-Disaster Mitigation- National Competitive (PDM-C) Grant Announcement

Dear Mr. Delpino:

Alaska's Division of Homeland Security & Emergency Management (DHS&EM) is actively pursuing opportunities to assist Alaskan communities with comprehensive mitigation activities that will lead to disaster resilient communities. One of these opportunities is the Federal Emergency Management Agency (FEMA) National Pre-Disaster Mitigation (PDM) grant program. The application period for this program is now open. This year's national funding is expected to be $100 million on a nationally competitive basis.

Communities through hazard mitigation planning identify and prioritize threats, risks and recurring issues. Through mitigation projects communities address their identified mitigation needs. The State of Alaska and FEMA have found mitigation efforts to be very effective in reducing future losses and building disaster resilient communities.

The Pre-Disaster Mitigation (PDM) program was authorized by §203 of the Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 USC. Funding for the program is provided through the National Pre-Disaster Mitigation Fund to assist States and local governments (to include Indian Tribal governments) in implementing cost-effective hazard mitigation activities that support a comprehensive mitigation program. The PDM grant program is voluntary, and requires a local match.

All Applicants and Sub-applicants must be participating in the National Flood Insurance Program (NFIP) if they have been identified through the NFIP as having a Special Flood Hazard Area, a Flood Hazard Boundary Map, or if a Flood Insurance Rate Map has been issued. In addition, the Applicant/Sub-applicant must not be withdrawn, suspended, or on probation from the NFIP.

As of November 1, 2004, local and Indian tribal governments and public universities applying as sub-applicants must have a FEMA-approved mitigation plan by the PDM application date to be eligible to receive project grant funding under the PDM program. PDM planning grants will continue to be available to States, Indian tribes, local governments, and public universities that do not have a FEMA-approved Mitigation Plan to enable them to meet the planning requirements. 44 CFR Part 201, Hazard Mitigation Planning, establishes requirements for State, tribal, and local hazard mitigation planning. Eligible entities may apply for plan development funding through this PDM program.

PDM grant applicants must submit their applications through the Federal e-Grants system. Applicants awarded a grant must adhere to the State's reporting and financial documentation requirements which may be more stringent than Federal requirements.

If you are interested in submitting a Sub-Grant Application please return the attached PDM Grant Intent Form by September 1, 2010. Only those communities or organizations which have submitted intent forms by the deadline will be considered for the 2011 PDM application. The actual deadline for submitting your Sub-grant Application to DHS&EM in e-Grants is November 1, 2010. The DHS&EM Mitigation Staff will guide you through the application process with additional instructions and guidelines after receiving your intent for an eligible project.

Please go to DHS & EM's Grants Information webpage at http://ready.alaska.gov/grants.htm to view the 2011 PDM guidance documents. Please contact the State Hazard Mitigation Officer, Mark Roberts, if you need further information at (907) 428-7016, 1-800-478-2337 or by e-mail at mark.roberts@alaska.gov.

Sincerely,

Mark W Roberts
Alaska State Hazard Mitigation Officer

mwr:bkd

Enclosures: as stated

2011 PDM State Grant Guidance

The Division of Homeland Security & Emergency Management (DHS&EM), as the designated State of Alaska Applicant (grantee), announces the Federal Fiscal Year 2011 Pre-Disaster Mitigation Program (PDM) nationally competitive grant open application period. This year's national funding is expected to be $100 million on a nationally competitive basis. This State-level grant guidance shall be incorporated into DHS&EM obligating award documents for successful Sub-Grant Applicants (Sub-Grantees) selected in the National Evaluation.

Mitigation is defined as sustained action taken to reduce or eliminate long-term risk to people and property from hazards and their effects, thus reducing community vulnerabilities. The purpose of the FY 2011 PDM grant encompasses:

Hazard Mitigation Planning:

A Planning Application is only available for communities who do not have a FEMA/State-approved and community- adopted All-Hazard Mitigation Plan or are updating their approved plan for five-year renewal.

The advantages of a community developing a local All-Hazard Mitigation Plan include:

- Integration with Alaska's State Hazard Mitigation Plan and National Mitigation Planning efforts
- An increase in community risk awareness and analysis
- A reduction in disaster losses
- Planning for mitigation projects that will protect life and property
- Eligibility for Hazard Mitigation Grant Funding for projects

The deliverable from a planning grant must be a FEMA/State-approved and community-adopted new hazard mitigation plan or an updated plan.

Hazard Mitigation Projects:

A Project Application is only available for communities who have a FEMA/State-approved and community- adopted Hazard Mitigation Plan by December 3, 2010. Projects must be consistent with the goals and objectives identified in the community's local hazard mitigation plan and the Alaska State Hazard Mitigation Plan (http://ready.alaska.gov/plans/mitigation/statehazmitplan07.htm).

Hazard Mitigation Projects are intended to reduce risk to life and property. Examples include:

- Elevation of flood-prone structures;
- Structural and non-structural seismic and hazard retrofits of existing structures;
- Voluntary acquisition or relocation of structures out of the floodplain
- Natural hazard protective measures for existing utility systems, roads and bridges
- Minor localized storm water management and flood control projects.
- "Dry flood proofing" existing structures in accordance with FEMA technical requirements
- Soil stabilization projects to protect existing structures and infrastructure that do not duplicate the activities of other federal agencies.
- Wildfire mitigation including defensible space, ignition resistant construction, and hazardous fuels reduction for existing structures and critical facilities that is in accordance with FEMA requirements.
- Post-Disaster code enforcement that ensures rebuilding is in accordance with applicable codes and standards.

Application:

DHS&EM invites State-level agencies, State- and Federally-recognized Indian Tribal Governments, local governments, authorized Indian tribal organizations and universities, Alaska Native villages, public and tribal colleges and universities to apply as Sub-Grant Applicants (Sub-Grantees) for *Planning* or *Project* funds. Private non-profit organizations and private colleges and universities are not eligible.

use its eminent domain authority to acquire the property for open space purposes should negotiations fail. Documentation of signature for each property is required;

- Submit a Cost Estimate of sufficient detail across categories such as labor, materials, equipment, subcontract costs, and include cash and in-kind non-Federal cost share. Full and credible back-up documentation is required for all costs, such as salary and fringe benefit rates for personnel, bids from qualified professionals, or published cost estimating guides. "Lump sum" and "contingency" items are not acceptable;
- Complete responses for each question, even if information is duplicated in another part of the application;
- Submit all 13 items listed on the Sub-Grant Application Planning Checklist, or the 17 items listed on the Sub-Grant Application Project Checklist. Answers must be complete and responsive;
- Comply with the Eligible and Ineligible Project and Planning activities listed in the Program Guidance manual;
- Comply with FEMA's environmental and historical preservation process, which includes a Scope of Work indicating how well the Sub-Grant Applicant understands and addresses potential project impacts and disturbances;
- Ensure projects are technically feasible and ready for implementation. Schematics or detailed engineering drawings or designs must be included in the Project Sub-Application. Applications must include a graphic and visual representation of the Project location on at least a 1:24,000 scale US Geological Survey (USGS) topographic map, site plan, and relevant photographs with the Sub-Application. Engineering feasibility is a critical factor in both the National Ranking and the National Evaluation process; and
- Provide a FEMA-approved Benefit-Cost Analysis (BCA) resulting in a Benefit-Cost Ratio (BCR) of 1.1 or greater. This is required for Project consideration. A maintenance plan identifying tasks, budget, and the entity that will perform long-term maintenance must be submitted. Maintenance costs must be included in the BCA. Management costs, if listed as a separate line item in the Cost Estimate, must be included in the BCA. Guidance is available in OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs.* The methodology used to determine the BCA must be identified in the Sub-Grant project application. The credibility of data sources is extremely important, as is professional licensure. Information on FEMA-approved BCA is available online at: http://www.fema.gov/government/grant/bca.shtm.

Management Costs:

DHS&EM as the State Applicant (grantee) is eligible for up to 10% management costs, and pre-award management costs, for activities specified in the Program Guidance manual. Pre-award management costs are only reimbursable if the State's application is selected through the national competition.

Sub-Grant Applicants are eligible for up to 5% direct management costs of the total Planning or Project funds applied for. Sub-Grant Applicant management costs require supporting documentation and must be included as a separate line item in the Cost Estimate and also in the BCA. Indirect costs are not allowed by DHS&EM.

State Review

DHS&EM as the State Applicant (grantee) will review applications from Sub-Grant Applicants for eligibility and completeness and will prioritize them according to the goals and objectives outlined in the State Hazard Mitigation Plan. The State Hazard Mitigation Plan may be viewed on the DHS&EM web site at: http://www.ak-prepared.com/plans/mitigation/statehazmitplan07.htm or by mail upon request. Sub-Grant Applicants (Sub-Grantees) are strongly encouraged to emphasize and review their responses to the Evaluation Information questions and the BCA which will support competitiveness in both the National Ranking and Evaluation processes.

Please use the following format to submit your letter of intent to participate in the FEMA 2011 Nationally Competitive Pre-Disaster Mitigation Grant Program.

Project Intent to Apply

Submit as an email attachment to:

State Hazard Mitigation Officer
Division of Homeland Security and Emergency Management
P. O. Box 5750
Fort Richardson, AK 99505-5750

Applicant / Agency:	CITY OF CORDOVA
Signature of person applying:	
Typed / Printed Name	OSCAR DELPINO
Primary Name:	OSCAR DELPINO
Title:	FIRE MARSHAL
Address:	PO. BOX 304 CORDOVA, AK 99574
Phone:	907-424-6117
Fax:	907-424-6000
Email:	fire@cityofcordova.net
Alternate Name:	RICHARD GROFF
Title:	
Address:	PO. BOX 1210
Phone:	CORDOVA, AK. 99574
Fax:	907-424-6117
Email:	
Name of Community/State Agency	CITY OF CORDOVA
Eligibility:	☐ Tribe, ☒ Community, ☐ State Agency, ☐ Private Non-Profit (PNP)
If PNP	☐ Attach copy of documentation (By-Laws, Charter, IRS)
Federal Employer Identification Number (EIN)	
If Indian Tribe, use Tribal Identification Number (TIN)	
Is the applicant delinquent on any Federal debt?	☐ Yes ☒ No Explain:
Is the community a small and impoverished community as defined by the State Hazard Mitigation Plan (Appendix 9)	☐ Yes ☒ No
Activity Cost Estimate:	$ 12'000,000.00

Describe below how the proposed activity relates to or is consistent with Alaska's FEMA-approved State Hazard Mitigation Plan.

IT RELATES UNDER 2.2.1 PROTECTIVE.
PROTECTION OF CRITICAL FACILITIES.

Project Grant Summary:

Project Name:	REZOCATION OF FIRE/POLICE BUILDING.
Project Location:	CITY OF CORDOVA

Project Description (attach additional pages as needed):

THE CITY OF CORDOVA WOULD LIKE TO RELOCATE THE CITY PUBLIC SAFETY / FIRE - POLICE BUILDING OUT OF THE TSUNAMI ZONE LOCATED AT 602 RAILROAD AVE. TO A SITE IN THE CENTRAL BUSINESS DISTRICT ON HIGHER GROUND.

Does your community participate in NFIP?	☒ Yes ☐ No
Is your community eligible to join NFIP?	☒ Yes ☐ No
Does your community have a Local Hazard Mitigation Plan?	☒ Yes ☐ No
Is the recipient participating in the Community Rating System (CRS)?	☐ Yes ☒ No
Is the recipient a Firewise Community?	☒ Yes ☐ No
* Has the recipient adopted building codes consistent with the International Codes?	☒ Yes ☐ No
* Has the recipient adopted the National Fire Protection Association (NFPA) 5000 Code?	☐ Yes ☒ No
* Have the recipient's building codes been assessed on the Building Code Effectiveness Grading Schedule (BCEGS)?	☐ Yes ☒ No
If yes, what is their BCEGS rating?	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Environmental/Historic Preservation Information	
Is CATEX review applicable?	☐ Yes ☒ No
Is CATEX review completed?	☐ Yes ☒ No
Does this project involve a historical structure or edifice?	☐ Yes ☒ No Explain:

Oscar Delpino

From: Roberts, Mark W (MVA) [mark.roberts@alaska.gov]
Sent: Thursday, September 16, 2010 2:37 PM
To: Oscar Delpino
Subject: 2011 PDM Cordova City
Attachments: City of Cordova Intent Evaluation.docx

Categories: To File

Oscar,

Thank you for the Intent to Apply for the public safety relocation building project you submitted under the 2011 Pre-Disaster Mitigation (PDM) grant program. We really appreciate you considering this.

We have preformed our initial review of the 2011 PDM project Intent to Apply that you submitted. Unfortunately, while it is a solid mitigation project, I do not think it will meet the eligibility requirements for the PDM grant. I don't want you to use valuable time working on a difficult application that will end up being rejected by FEMA.

I have attached my review so you can see my reasoning.

We believe this is a solid mitigation project and will support you as you seek other funds to accomplish it. We also would gladly receive future mitigation project ideas from you and will work with you to funding for them.

Thank you – Feel free to contact me with any questions.

Mark W Roberts

Alaska State Hazard Mitigation Officer
Alaska Division of Homeland Security and Emergency Management
P.O. Box 5750
Fort Richardson, AK 99505-5750
(907) 428-7016
FX: (907) 428-7009
Toll Free: (800) 478-2337
mark.roberts@alaska.gov
http://www.ready.alaska.gov

City of Cordova – 2011 Pre-Disaster Mitigation (PDM) Grant Intent to Apply Evaluation

State of Alaska, Division of Homeland Security and Emergency Management (DHS&EM)

State Hazard Mitigation Officer – Mark W Roberts

Project Description: Relocate City Public Safety / Fire / Police Building out of the Tsunami Inundation Zone.

Project Estimate: 12,000,000

Evaluation:

Protecting critical public safety facilities, as is proposed in this Cordova project, is a high priority in the statewide mitigation strategy. Unfortunately the proposed project does not meet the eligibility requirements for the PDM grant program for the following reasons.

1. The maximum allowed under the PDM grant program is three million dollars. The project estimate exceeds this by nine million dollars. Therefore it would not be an eligible project unless the City could provide the additional project funds, in addition to the required local match to federal fund limit (25% of 3 million = $750,000, + 9 million).
2. Under the PDM program all project applications require a benefit cost analysis (BCA) conducted using the FEMA calculation software that demonstrates the benefit of the project equals or exceeds the cost. The software uses available data for more frequent and/or studied disasters such as flood, earthquake and wildland fire. When the hazard being mitigated is a frequent one and data is routinely recorded – such as flood – the BCA is relatively easy to calculate and demonstrate. When the hazard is not frequent and data is very limited, often the calculation using the FEMA system is difficult and the cost exceeds the benefit. In those cases, the project is ineligible for funding. While it is clear that the current public safety building is in the tsunami inundation zone as listed on page 100 of the Cordova Hazard Mitigation Plan, a superficial BCA for the twelve million dollar cost of the public safety relocation project suggests that it would be difficult to demonstrate the FEMA required cost effectiveness of the project so that it would qualify for FEMA PDM funding.

Suggestions:

While this project will not qualify for PDM funding based on FEMA regulations, it is a legitimate mitigation project that addresses a critical facility in the City against a potential high consequence hazard. One possible source of funding is through State Legislative grant through the Capital Improvement Project (CIP) budget.

Mark W Roberts
Alaska State Hazard Mitigation Officer
Alaska Division of Homeland Security and Emergency Management
mark.roberts@alaska.gov (907) 428-7016
P.O. Box 5750
Fort Richardson, AK 99505-5750

CITY OF CORDOVA, ALASKA
RESOLUTION 01-11-04

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORDOVA, ALASKA, AUTHORIZING CREATION OF A PUBLIC SERVICE BUILDING DESIGN COMMITTEE TO ADVISE COUNCIL ON A BUILDING AND SITE PLAN FOR A NEW PUBLIC SERVICE BUILDING.

WHEREAS, City Council previously created a Police & Fire Facilities Committee to determine and recommend a location for a new Police & Fire building; and

WHEREAS, the Police & Fire Facilities Committee made their recommendation to Council concerning the location, and Council adopted the recommended location by Resolution 10-10-55; and

WHEREAS, City Council supports establishing a committee of local citizens to continue work on building design for a Public Service Building, to include Police, Fire, DMV, and other potential Public Service entities; and

WHEREAS, the Public Service Building Design Committee shall consist of 7 members and remain in force until such time that the Committee files its final report to Council concerning building and site design.

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Cordova, Alaska, hereby authorizes the creation of a Public Service Building Design Committee to advise Council on a building and site plan for a new Public Services Building.

PASSED AND APPROVED THIS 5TH DAY OF JANUARY, 2011.

Dave Reggiani, Vice Mayor

CITY OF CORDOVA CORPORATE SEAL JULY 8, 1909 ALASKA

ATTEST:

Erika Empey, Deputy City Clerk

CITY OF CORDOVA, ALASKA
RESOLUTION 10-10-55

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORDOVA, ALASKA, TO DESIGNATE THE PROPERTIES PREVIOUSLY OCCUPIED BY CHILDREN'S MEMORIAL PARK AND CURRENTLY OCCUPIED BY THE CORDOVA LIBRARY AND MUSEUM AS THE FUTURE LOCATION OF A NEW CORDOVA POLICE & FIRE STATION.

WHEREAS, in 2009 a Committee was formed by then Mayor Tim Joyce to consider location options for a new primary Police and Fire Station for the City of Cordova. This committee was known as the Police and Fire Facilities Committee (PFFC); and

WHEREAS, during 2009 and 2010 the PFFC examined several potential locations in and around the City of Cordova; and

WHEREAS, on February 2, 2010 the PFFC presented a formal report to then Mayor Joyce and City Council detailing their efforts and recommending a location comprising the previous location of Children's Memorial Park and the current location of the Cordova Library and Museum; and

WHEREAS, the Cordova Center is now under construction and it is imminent that the Police and Fire Departments will need to move so that the existing City Hall/Police/Fire structure can be razed for aesthetic reasons and future Cordova Center parking.

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Cordova, Alaska, hereby designates the properties previously occupied by Children's Memorial Park, and currently occupied by the Cordova Library and Museum as the future site of a new Cordova Police and Fire Station.

PASSED AND APPROVED THIS 6th DAY OF OCTOBER, 2010

James Kallander, Mayor

CITY OF CORDOVA CORPORATE SEAL JULY 8, 1909 ALASKA

ATTEST:

Susan Bourgeois, City Clerk

CITY OF CORDOVA, ALASKA
RESOLUTION 04-09-25

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CORDOVA, ALASKA, AUTHORIZING CREATION OF THE POLICE AND FIRE FACILITIES COMMITTEE TO ADVISE CITY COUNCIL ON FUNDING OPTIONS, POTENTIAL SITE LOCATIONS, AND BUILDING DESIGN FOR THE POLICE AND FIRE DEPARTMENTS

WHEREAS, it is the City's intent to replace some of the older City buildings with a more energy-efficient Cordova Center and to move the Police and Fire Departments out of the tsunami zone; and

WHEREAS, the City Council supports establishing a committee of local citizens to advise Council on funding options and potential site locations for new Police and Fire Facilities located above the tsunami hazard area; and

WHEREAS, the Police and Fire Facilities Committee shall consist of 5 members and remain in force until such time Council deems the Committee is no longer needed.

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Cordova, Alaska, hereby authorizes the creation of the Police and Fire Facilities Committee to advise City Council on funding options, potential site locations, and building design for the Police and Fire Departments.

PASSED AND APPROVED THIS 1ST DAY OF APRIL, 2009.

CITY OF CORDOVA CORPORATE SEAL JULY 8, 1909 ALASKA

Timothy L. Joyce, Mayor

ATTEST:

Lila J. Koplin, CMC, City Clerk