

# ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

Project Number	Project Name (15 characters)	Case Number <i>USE 70130032</i>	Date Received
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## TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED

- Accessory Apartment\*\*\* (AAP)     Driveway in Right-of-Way (ADW)  
 Use Listed in §49.25.300 (USE)  
 (Table of Permissible Uses)

Please list the Table of Permissible Uses Category: 1.300 Multifamily Dwelling

\*\*\*An Accessory Apartment Application will also be required.

## DESCRIBE THE PROJECT FOR WHICH AN ALLOWABLE OR CONDITIONAL USE APPROVAL IS NEEDED.

*Multifamily Housing Development off Vista Drive. Four 10-unit buildings for 040 units total.*

IS THIS A MODIFICATION OF AN EXISTING APPROVAL?     NO     YES - Case # \_\_\_\_\_

CURRENT USE OF LAND OR BUILDING(S): Undeveloped

PROPOSED USE OF LAND OR BUILDING(S): Residential, multifamily apartments.

UTILITIES PROPOSED:    WATER:     Public     On Site    SEWER:     Public     On Site

## SITE AND BUILDING SPECIFICS:

Total Area of Lot 133,763 square feet    Total Area of Existing Structure(s) 0 square feet  
 Total Area of Proposed Structure(s) 20,930 square feet (Footprint 5,232.5 Bldg = 5,232.5 f)

## EXTERNAL LIGHTING:

Existing to remain NA     No     Yes - Provide fixture information, cutoff sheets, and location of lighting fixtures  
 Proposed     No     Yes - Provide fixture information, cutoff sheets, and location of lighting fixtures

## PROJECT NARRATIVE AND SUBMITTAL CHECKLIST:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Site Plan                              | <input checked="" type="checkbox"/> Existing and proposed parking areas (including dimensions) and proposed traffic circulation |
| <input type="checkbox"/> Floor Plan of proposed buildings                  | <input checked="" type="checkbox"/> Existing Physical Features of the site (drainage, habitat, hazard areas, etc.)              |
| <input type="checkbox"/> Elevation view of existing and proposed buildings |   |
| <input checked="" type="checkbox"/> Proposed Vegetative Cover              |   |

For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side.

If you need any assistance filling out this form, please contact the Permit Center at 586-0770.

## ALLOWABLE/CONDITIONAL USE FEES

Fees	Check No.	Receipt	Date
Application Fees <i>CL IV</i> \$ <u>1,000</u>	_____	_____	_____
Admin. of Guarantee \$ _____	_____	_____	_____
Adjustment \$ _____	_____	_____	_____
Pub. Not. Sign Fee \$ <u>50.00</u>	_____	_____	_____
Pub. Not. Sign Deposit \$ <u>100.00</u>	_____	_____	_____
Total Fee \$ <u>1,150.00</u>	_____	_____	_____

**NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM**

TO BE COMPLETED BY THE APPLICANT

# DEVELOPMENT PERMIT APPLICATION

Project Number	<b>CITY and BOROUGH of JUNEAU</b>	Date Received:
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Project Name  
(City Staff to Assign Name)

Project Description Phase 1 of a housing development off Vista Drive

<b>PROPERTY LOCATION</b>	
Street Address <u>Vista Drive, Douglas, Alaska</u>	City/Zip
Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) <u>Lot 3 &amp; Tract B1A, Emerald 2 Subdivision</u>	
Assessor's Parcel Number(s) <u>Lot 3: 2D040C050070; Lot B1A: 1D050L510012</u>	
<b>LANDOWNER/LESSEE</b>	
Property Owner's Name <u>JLC Properties, Inc</u>	Contact Person: <u>Dave Hanna</u>
Mailing Address <u>PO Box 20834, Juneau, AK 99803</u>	Work Phone: <u>907-723-1502</u>
E-mail Address <u>hannaco@gcinet</u>	Home Phone: Fax Number:
Other Contact Phone Number(s):	

<b>LANDOWNER/LESSEE CONSENT</b> <small>***Required for Planning Permits; not needed on Building/Engineering Permits***</small>	
I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows:	
A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.	
B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.	
X <u>[Signature]</u> Landowner/Lessee Signature	Date <u>9-3-13</u>
X _____ Landowner/Lessee Signature	Date _____
NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.	

<b>APPLICANT</b> <small>If the same as OWNER, write "SAME" and sign and date as below.</small>	
Applicant's Name <u>DOWL HKM</u>	Contact Person: <u>Gary Jenkins</u>
Mailing Address <u>5368 Commercial Blvd. Juneau 99801</u>	Work Phone: <u>907-374-0275</u>
E-mail Address <u>gjenkins@dowlhkm.com</u>	Home Phone: Fax Number:
X <u>[Signature]</u> Applicant's Signature	Other Contact Phone Number(s): <u>907-750-3674</u>
	Date of Application <u>8-30-13</u>

-----OFFICE USE ONLY BELOW THIS LINE-----

<b>STAFF APPROVALS</b>	<input checked="" type="checkbox"/> <b>Permit Type</b>	<b>REASON</b>	<b>Date Received</b>	<b>Application Number(s)</b>
	Building/Grading Permit			
	City/State Project Review and City Land Action			
	Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)			
	Mining Case (Small, Large, Rural, Extraction, Exploration)			
	Sign Approval (If more than one, fill in all applicable permit #'s)			
	Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)			
	Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)		<u>9/24/13</u>	<u>Use 2013 0032</u>
	Variance Case (De Minimis and all other Variance case types)			
	Wetlands Permits			
Zone Change Application				
Other (Describe)				

\*\*\*Public Notice Sign Form filled out and in the file.

Comments:	<b>Permit Intake Initials</b>

# ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

Project Number	Project Name (15 characters)	Case Number <i>USE 20130033</i>	Date Received
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## TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED

- Accessory Apartment\*\*\* (AAP)     Driveway in Right-of-Way (ADW)  
 Use Listed in §49.25.300 (USE)  
 (Table of Permissible Uses)

Please list the Table of Permissible Uses Category: 1.300 Multifamily Dwelling

\*\*\*An Accessory Apartment Application will also be required.

## DESCRIBE THE PROJECT FOR WHICH AN ALLOWABLE OR CONDITIONAL USE APPROVAL IS NEEDED.

Multifamily housing development. Includes 35 units divided between (4) buildings.

## IS THIS A MODIFICATION OF AN EXISTING APPROVAL?

- NO     YES - Case # \_\_\_\_\_

CURRENT USE OF LAND OR BUILDING(S): Undeveloped

PROPOSED USE OF LAND OR BUILDING(S): Residential housing, multi family apartments

## UTILITIES PROPOSED:

WATER:  Public     On Site

SEWER:  Public     On Site

## SITE AND BUILDING SPECIFICS:

Total Area of Lot 134338 square feet    Total Area of Existing Structure(s) 0 square feet

Total Area of Proposed Structure(s) 17,765 square feet (4 Buildings, Footprint only)

## EXTERNAL LIGHTING:

- Existing to remain NA  No     Yes - Provide fixture information, cutoff sheets, and location of lighting fixtures  
 Proposed  No     Yes - Provide fixture information, cutoff sheets, and location of lighting fixtures

## PROJECT NARRATIVE AND SUBMITTAL CHECKLIST:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Site Plan                              | <input checked="" type="checkbox"/> Existing and proposed parking areas (including dimensions) and proposed traffic circulation |
| <input type="checkbox"/> Floor Plan of proposed buildings                  | <input checked="" type="checkbox"/> Existing Physical Features of the site (drainage, habitat, hazard areas, etc.)              |
| <input type="checkbox"/> Elevation view of existing and proposed buildings |   |
| <input checked="" type="checkbox"/> Proposed Vegetative Cover              |   |

For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side.

If you need any assistance filling out this form, please contact the Permit Center at 586-0770.

### ALLOWABLE/CONDITIONAL USE FEES

	Fees	Check No.	Receipt	Date
Application Fees	\$ <u>1,000.00</u>	_____	_____	_____
Admin. of Guarantee	\$ _____	_____	_____	_____
Adjustment	\$ _____	_____	_____	_____
Pub. Not. Sign Fee	\$ <u>50.00</u>	_____	_____	_____
Pub. Not. Sign Deposit	\$ <u>100.00</u>	_____	_____	_____
Total Fee	\$ <u>1,150.00</u>	_____	_____	_____

**NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM**

TO BE COMPLETED BY THE APPLICANT

# DEVELOPMENT PERMIT APPLICATION

Project Number	<b>CITY and BOROUGH of JUNEAU</b>	Date Received:
Project Name (City Staff to Assign Name)		

PROJECT / APPLICANT INFORMATION	Project Description <i>Phase 2 of a housing development off Vista Drive</i>		
	<b>PROPERTY LOCATION</b>		
	Street Address <i>Vista Drive, Douglas, Alaska</i>	City/Zip	
	Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) <i>Lot 3 &amp; Tract B1A, Emerald 2 Subdivision</i>		
	Assessor's Parcel Number(s) <i>Lot 3: 2D040C050070; Lot B1A: 1D050L510012</i>		
	<b>LANDOWNER/LESSEE</b>		
	Property Owner's Name <i>JLC Properties, Inc</i>	Contact Person: <i>Lave Hanna</i>	Work Phone: <i>907-723-1902</i>
	Mailing Address <i>PO Box 20834, Juneau, AK 99803</i>	Home Phone:	Fax Number:
	E-mail Address <i>hannaco@gcinet</i>	Other Contact Phone Number(s):	
	<b>LANDOWNER/LESSEE CONSENT</b> <small>****Required for Planning Permits, not needed on Building/Engineering Permits****</small>		
<p>I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows:</p> <p>A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.</p> <p>B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.</p>			
X	<i>[Signature]</i> Landowner/Lessee Signature	<i>9-7-13</i> Date	
X	Landowner/Lessee Signature	Date	
NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.			
<b>APPLICANT</b> <small>If the same as OWNER, write "SAME" and sign and date at X below</small>			
Applicant's Name <i>DOWL HKM</i>	Contact Person: <i>Gary Jenkins</i>	Work Phone: <i>907-374-0275</i>	
Mailing Address <i>5368 Commercial Blvd. Juneau 99801</i>	Home Phone:	Fax Number:	
E-mail Address <i>gjenkins@dowlhkm.com</i>	Other Contact Phone Number(s): <i>907-750-3674</i>		
X	<i>[Signature]</i> Applicant's Signature	<i>8-30-13</i> Date of Application	

OFFICE USE ONLY BELOW THIS LINE

STAFF APPROVALS	<input checked="" type="checkbox"/>	<b>Permit Type</b>	<b>***SIGN</b>	<b>Date Received</b>	<b>Application Number(s)</b>
		Building/Grading Permit			
		City/State Project Review and City Land Action			
		Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)			
		Mining Case (Small, Large, Rural, Extraction, Exploration)			
		Sign Approval (If more than one, fill in all applicable permit #'s)			
		Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)			
		Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)		<i>9/24/13</i>	<i>USE 2013 0033</i>
		Variance Case (De Minimis and all other Variance case types)			
		Wetlands Permits			
	Zone Change Application				
	Other (Describe)				
***Public Notice Sign Form filled out and in the file.					
Comments:				Permit Intake Initials	
				<i>ESF</i>	



August 30, 2013

Beth McKibben, Planner  
CBJ Community Development  
155 S. Seward Street  
Juneau, AK 99801

RECEIVED  
SEP 24 2013  
PERMIT CENTER/CDD

RE: Juneau Volunteers of America – Juneau I Housing  
Phase 1 Conditional Use Permit Application

Dear Ms. McKibben:

This is a cover letter to the Conditional Use (CU) application for Phase 1 of the Juneau Volunteers of America housing project off Vista Drive in Douglas. Because the land is still owned by JLC Properties, Inc., Dave Hanna (President) is signing the Development Permit application as the Owner. A separate CU application is being concurrently submitted for Phase 2. In support of both CU permit applications, a single Hillside Endorsement application has been prepared.

The proposed site is land originally intended for additional phases of the Crest condominium project. Civil drawings for those additional phases have been in existence since the first phase was built.

The current developer, Volunteers of America, owns more than 17,000 housing units nationwide. VOA is a faith based organization that provides a wide range of volunteer and professional support services to veterans, seniors, single moms, and families in need. Decent, affordable housing is a small part of their work. They are one of the oldest and largest charitable services organizations in the country. See [www.voa.org](http://www.voa.org) for more information. The development group at VOA National Services will be leading the Alaska VOA group in the development of this project, providing funds and development expertise.

Members of the VOA development team met with Crest Condo homeowners in June of this year to discuss the project and gather comments. As a result of that meeting, the Crest Phase 1 and Phase 2 civil plan was abandoned in its entirety.

The revised site plan:

1. Maintains existing vegetation along Vista drive.
2. Concentrates dwelling units further up the hill, away from properties below.
3. Locates outdoor family activity spaces at the top of the site, out of eyesight and earshot from the properties below.
4. Preserves approximately 25% of the existing large trees. (All trees would have been removed if the original Crest plan had been used.)
5. Revises the road design to conform with current CBJ standards for width, lighting, sidewalks and maximum slopes.

The property will have:

1. Forty 1, 2, and 3 bedroom units in Phase 1. Phase 2 will have thirty five units. (11 handicap units site wide)
2. Onsite property management and a resident property manager.
3. A community building and service coordinator, who arranges activities and services for the residents.
4. Strong financial reserves to insure the property is well maintained.

907-374-0275 ■ 907-865-1399 (fax) ■ 1901 Airport Way ■ Fairbanks, Alaska 99701 ■ [www.dowlhkm.com](http://www.dowlhkm.com)

5. Quality building materials, chosen for durability and appropriateness.
6. Buildings similar in scale to adjacent properties.
7. Generous laundry and resident storage areas and covered parking.
8. A geothermal heating system.
9. AHFC BEES 5 Star + energy ratings on each dwelling unit.
10. A construction value of about \$250,000 per dwelling unit.
11. A written conflict resolution plan, to help mitigate problems within and without the community.
12. A written safety plan, to be established with the school district, to ensure children get to and from school safely.

The following items are specifically required on the CU permit application form. Information concerning each item is described below, including where to find the information in the Conditional Use application or in the Hillside Endorsement submittal package.

1. Plans – A site plan is included in the Hillside Endorsement Drawings Permit Package (HE Drawings). Architectural Floor Plans and Elevations (Architectural Drawings) of the buildings are included herein as Attachment 1.
2. Parking – proposed parking spaces and dimensions are included on the HE Drawings. Parking stalls are also depicted on the architectural floor plan drawings (Attachment 1).
3. Traffic Patterns – Vista Drive, driveway and parking areas are shown on the HE Drawings.
4. Proposed Lighting:
  - a. ROW and Site Lighting - Vista Drive will have CBJ Standard street lighting, with light poles located shown on the HE Drawings. North of Building 4 and to the parking lot adjacent to the Community Center, standard pole mounted streets lights will be utilized to match Vista Drive.
  - b. Driveway Lighting – The driveways for all Phase 1 Buildings will be lit by building mounted fixtures. Fixture locations are shown on the Architectural Drawings. Cut sheets are included herein as Attachment 2.
5. Vegetation – The HE Drawings include a Landscaping Plan (Sht C3.2) depicting both existing and proposed vegetation.
6. Existing Physical Features - See the HE Drawings, Sheet C3.0. No known eagle trees or salmon streams are on the site.

#### Summary

People often assume that affordable housing means substandard housing that has a negative impact on existing neighborhoods. This is not the case. See <http://www.habitat.org/how/propertyvalues.aspx> or <http://www.nhc.org/media/documents/Dontputithere.pdf>.

Volunteers of America is an experienced and dedicated property developer and owner. The proposed property will exceed the present value of adjacent properties. It will be less dense, more energy efficient, have better ventilation, better exterior finish materials, more parking, more common open space, and a community center. The VOA project completed June 2013 in Anchorage has a waiting list of more than 400. This VOA property will be a great place to live.

I am acting as the Owner's representative (both JLC Properties and JVOA) in this application. Please contact me as needed with questions.

Regards,  
DOWL HKM

  
Gary L. Jenkins II, PE

RECEIVED  
SEP 24 2008  
PERMIT CENTER/CDD



August 30, 2013

Beth McKibben, Planner  
CBJ Community Development  
155 S. Seward Street  
Juneau, AK 99801

RECEIVED  
SEP 24 2013  
PERMIT CENTER/CDD

RE: Juneau Volunteers of America – Juneau I Housing  
Phase 2 Conditional Use Permit Application

Dear Ms. McKibben:

This is a cover letter to the Conditional Use (CU) application for Phase 2 of the Juneau Volunteers of America housing project off Vista Drive in Douglas. Because the land is still owned by JLC Properties, Inc., Dave Hanna (President) is signing the Development Permit application as the Owner. A separate CU application is being concurrently submitted for Phase 1. In support of both CU permit applications, a single Hillside Endorsement application has been prepared.

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3. A community building and service coordinator, who arranges activities and services for the residents.
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5. Quality building materials, chosen for durability and appropriateness.
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8. A geothermal heating system.
9. AHFC BEES 5 Star + energy ratings on each dwelling unit.
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3. Traffic Patterns – Driveways and parking areas are shown on the HE Drawings.
4. Proposed Lighting – All driveway and parking lot lighting will be building mounted fixtures. Fixture locations are shown on the Architectural Drawings. Cut sheets are included herein as Attachment 2.
5. Vegetation – The HE Drawings include a Landscaping Plan (Sht C3.2) depicting both existing and proposed vegetation for Phase 2.
6. Existing Physical Features - See the HE Drawings, Sheet C3.0. No known eagle trees or salmon streams are on the site.

Summary

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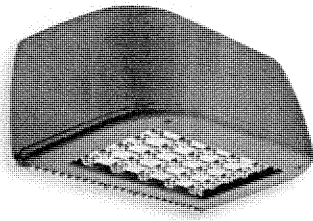
I am acting as the Owner’s representative (both JLC Properties and JVOA) in this application. Please contact me as needed with questions.

Regards,  
DOWL HKM

  
Gary L. Jenkins II, PE

RECEIVED  
SEP 24 2013  
PERMIT CENTER/ODD





# CSXW LED LED Wall Luminaire



Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see 2D interactive elements.

**CONTOUR**

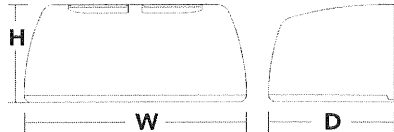
## Specifications

**Height:** 7-1/8"  
(29.2 cm)

**Width:** 16-3/8"  
(41.6cm)

**Depth:** 9-5/16"  
(23.6 cm)

**Weight (max):** 30 lbs  
(13.6 kg)



## Introduction

The Contour® Series luminaires offer traditional square dayforms with softened edges for a versatile look that complements many applications.

The CSXW LED combines the latest in LED technology with the familiar aesthetic of the Contour® Series for stylish, high-performance illumination that lasts. It is ideal for replacing 100-400W metal halide in wall-mounted applications with typical energy savings of 80% and expected service life of over 100,000 hours.

## Ordering Information

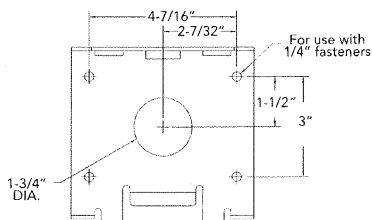
**EXAMPLE: CSXW LED 1 30B700/40K SR3 MVOLT DDBTXD**

### CSXW LED

Series	Light Engines	Performance Package <sup>1</sup>	Distribution	Voltage	Mounting	Options	Finish <sup>(required)</sup>
CSXW LED	1 One engine (30 LEDs)	<b>350 mA options:</b> 30B350/30K 3000K 30B350/40K 4000K 30B350/50K 5000K  <b>530 mA options:</b> 30B530/30K 3000K 30B530/40K 4000K 30B530/50K 5000K  <b>700 mA options:</b> 30B700/30K 3000K 30B700/40K 4000K 30B700/50K 5000K	SR2 Type II SR3 Type III SR4 Type IV FT Forward throw	MVOLT <sup>2</sup> 120 <sup>2</sup> 208 <sup>2</sup> 240 <sup>2</sup> 277 <sup>2</sup> 347 <sup>3</sup> 480 <sup>3</sup>	<b>Shipped included</b> (blank) Surface mount  <b>Shipped separately</b> BBW Surface-mounted back box (for conduit entry) <sup>4</sup>	<b>Shipped installed</b> PE Photoelectric cell, button type <sup>5,6</sup> DMG 0-10V dimming driver (no controls) <sup>7</sup> SF Single fuse (120, 277, 347V) <sup>8</sup> DF Double fuse (208, 240, 480V) <sup>8</sup>  <b>Shipped separately<sup>4</sup></b> VG Vandal guard WG Wire guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLTXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

- Forward throw mounted to bldg.  
- Type 3 mounted to carport (Bldg. 4)

## Mounting Detail



## Accessories

Ordered and shipped separately.

CSXWBBW DDBXD U	Back box accessory (specify finish)
CSXWWGU	Wire guard accessory
CSXWVG U	Vandal guard accessory

## NOTES

- Configured with 4000K (40K) provides the shortest lead times. Consult factory for 3000K (30K) and 5000K (50K) lead times.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options) or photocontrol (PE option).
- Available with 700 mA options only (30B700).
- Also available as a separate accessory; see Accessories information at left.
- Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option.
- Must be ordered with fixture; cannot be field installed.
- Not available with 530 mA options (30B530) or 347 or 480V.
- Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.

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SEP 24 2013

PERMIT CENTER/CDD



## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

Light Engines	Drive Current (mA)	Performance Package	System Watts	Dist. Type	40K (4000K, 67 CRI)				
					Lumens	B	U	G	LPW
1 (30 LEDs)	350	30B350/--K	38W	SR2	3259	1	0	1	85
				SR3	3233	1	0	1	85
				SR4	3308	1	0	1	87
				FT	3311	1	0	1	87
	530	30B530/--K	57W	SR2	4522	1	0	1	79
				SR3	4475	1	0	1	79
				SR4	4583	1	0	2	80
				FT	4613	1	0	2	81
	700	30B700/--K	74W	SR2	5514	1	0	2	75
				SR3	5403	1	0	2	73
				SR4	5565	1	0	2	75
				FT	5601	1	0	2	76

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Lumen Multiplier
0°C	1.02
10°C	1.01
20°C	1.00
25°C	1.00
30°C	1.00
40°C	0.99

### Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the CSXW LED 1 30B700 platform in a 40°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.92	0.87

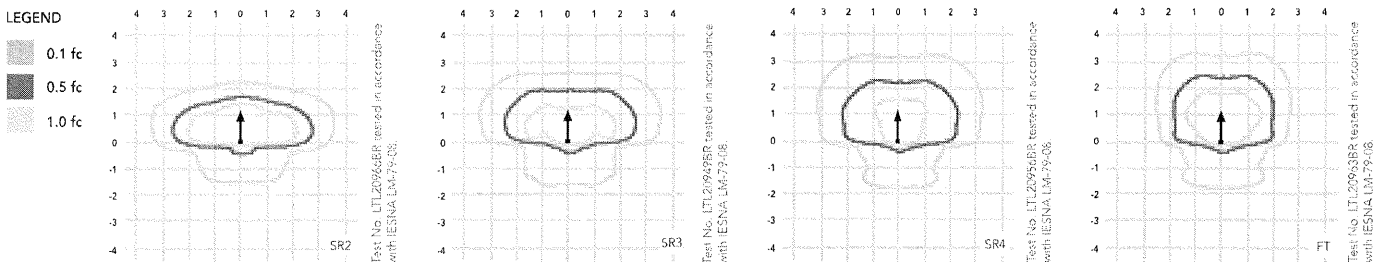
### Electrical Load

Light Engines	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
1	350	38W	0.35	0.20	0.18	0.15	0.12	0.09
	530	57W	0.53	0.30	0.26	0.23	0.18	0.13
	700	74W	0.69	0.40	0.34	0.30	0.24	0.17

## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's CSXW homepage.

Isfootcandle plots for the CSXW LED 1 30B700/40K. Distances are in units of mounting height (20').



## FEATURES & SPECIFICATIONS

### INTENDED USE

The Contour Series Wall LED luminaire is ideal for commercial building mounted applications from over-the-door to 20 ft mounting heights.

### CONSTRUCTION

Rugged, die-cast, single-piece aluminum housing. Unique flow through design for optimized thermal management. Modularity allows for ease of maintenance and potential for future system upgrades. Metallic screen covers the top of the housing, preventing debris build-up while allowing for air flow. Housing is completely sealed against moisture and environmental contaminants.

### FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

### OPTICS

Precision-molded acrylic lenses provide optimal luminaire spacing and improved uniformity. Lenses are indexed to the circuit board to ensure consistent optical alignment and delivering repeatable photometric performance. Light engines are available in standard 4000K (67 CRI) or optional 3000K (80 CRI) or 5000K (67 CRI) configurations. The CSXW has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

### ELECTRICAL

Light engine consists of 30 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (100,000 hrs at 40°C, L87). Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

### INSTALLATION

Universal mounting mechanism with integral mounting support allows fixture to hinge down. Bubble level provides correct alignment with every installation.

### LISTINGS

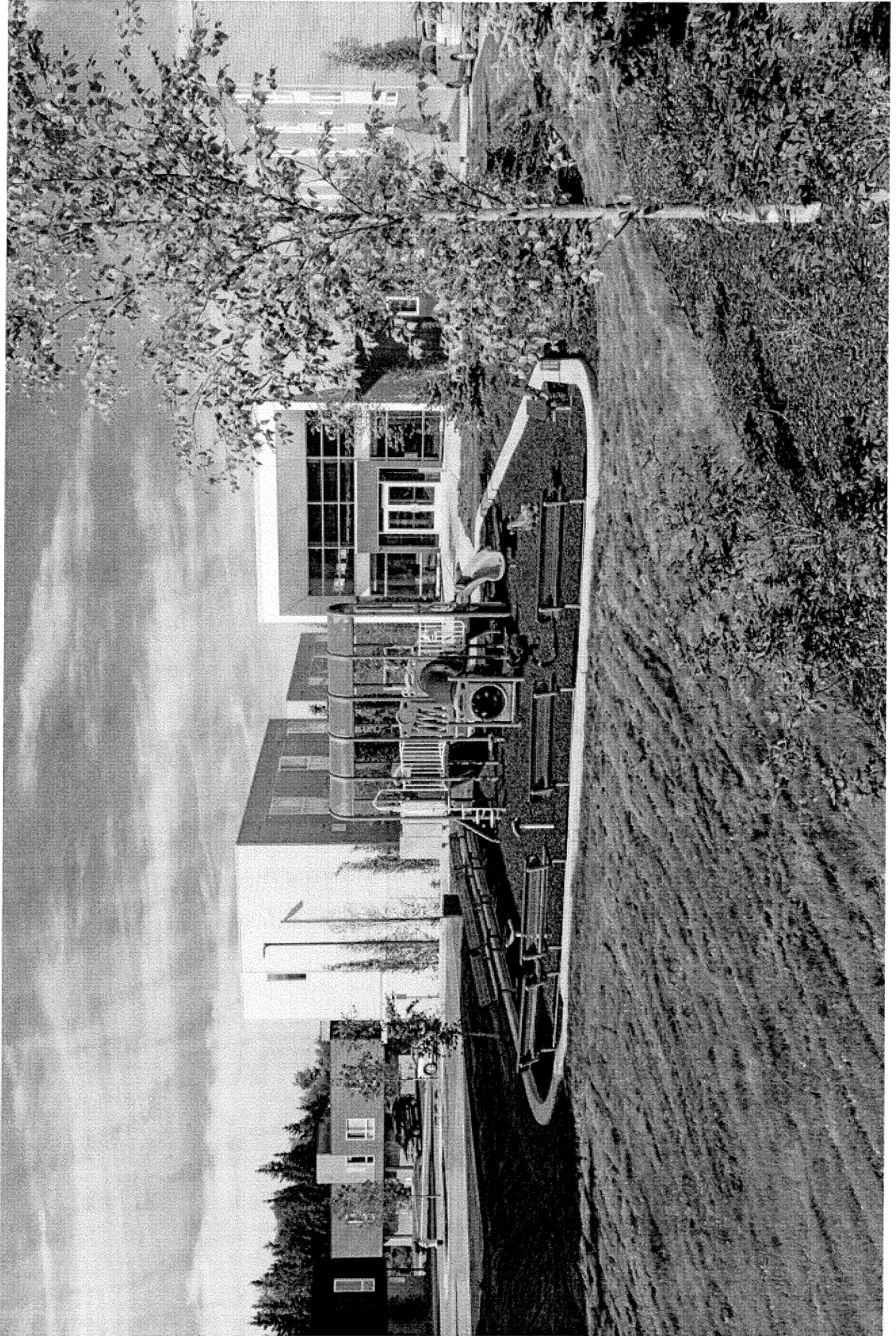
CSA Certified to U.S. and Canadian standards. Light engine is IP66 rated. Luminaire is IP65 rated.

### WARRANTY

Five year limited warranty. Full warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx).

**Note:** Specifications subject to change without notice.





VISTA DRIVE - PHASE 1 ( 40 UNITS)

- BUILDING 4 (10 UNITS)**  
 (4) 3- BEDROOM APARTMENT  
 (4) 2- BEDROOM APARTMENT  
 (2) 1-BEDROOM APARTMENT

- BUILDING 3 (10 UNITS)**  
 (2) 3- BEDROOM APARTMENT  
 (6) 2- BEDROOM APARTMENT  
 (2) 1-BEDROOM APARTMENT

- BUILDING 2 (10 UNITS)**  
 (2) 3- BEDROOM APARTMENT  
 (6) 2- BEDROOM APARTMENT  
 (2) 1-BEDROOM APARTMENT

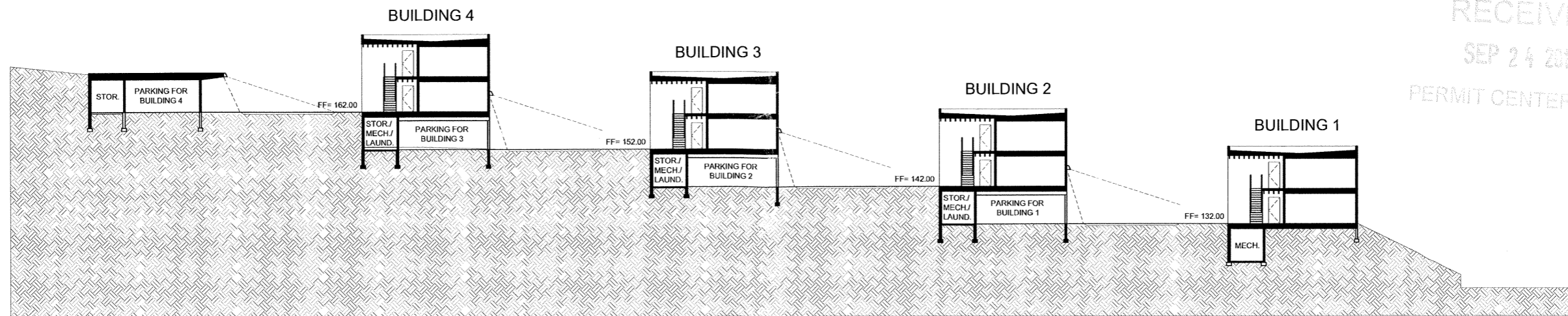
- BUILDING 1 (10 UNITS)**  
 (2) 3- BEDROOM APARTMENT  
 (6) 2- BEDROOM APARTMENT  
 (2) 1-BEDROOM APARTMENT

**BUILDING 4**  
 16 PARKING SPACES REQUIRED  
 16 PARKING SPACES PROVIDED

**BUILDING 3**  
 15 PARKING SPACES REQUIRED  
 16 PARKING SPACES PROVIDED

**BUILDING 2**  
 15 PARKING SPACES REQUIRED  
 16 PARKING SPACES PROVIDED

**BUILDING 1**  
 15 PARKING SPACES REQUIRED  
 16 PARKING SPACES PROVIDED



**1** SITE SECTION  
 1/16" = 1'-0"

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 907 771 9940 office 907 771 9996 fax

**VISTA DRIVE PHASE 1**  
 Volunteers of America Juneau, Alaska

REVISIONS

JOB NO. VISTA  
 DATE 08/14/2013  
 XXX

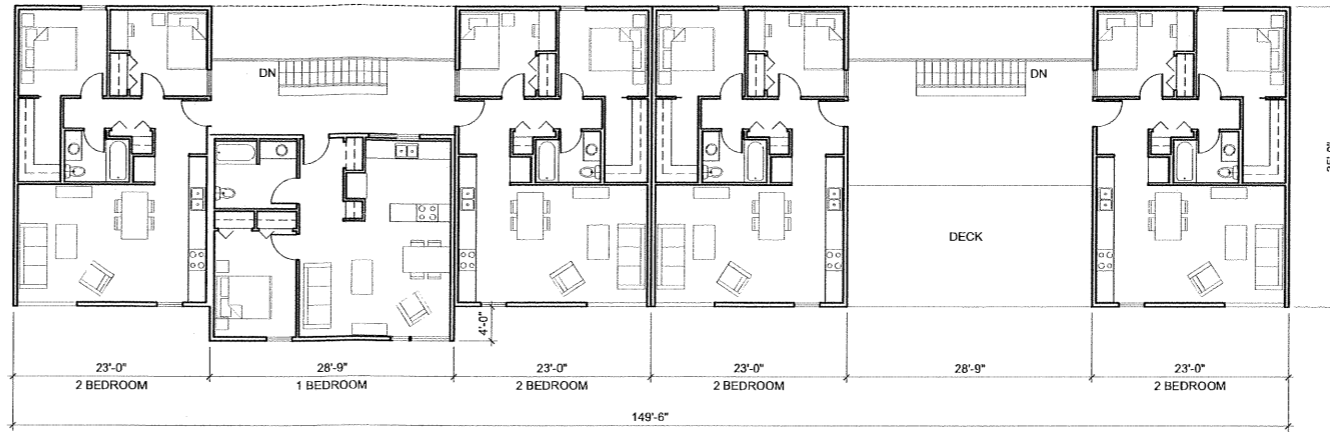
SITE SECTION

SHEET NO.  
**A2**

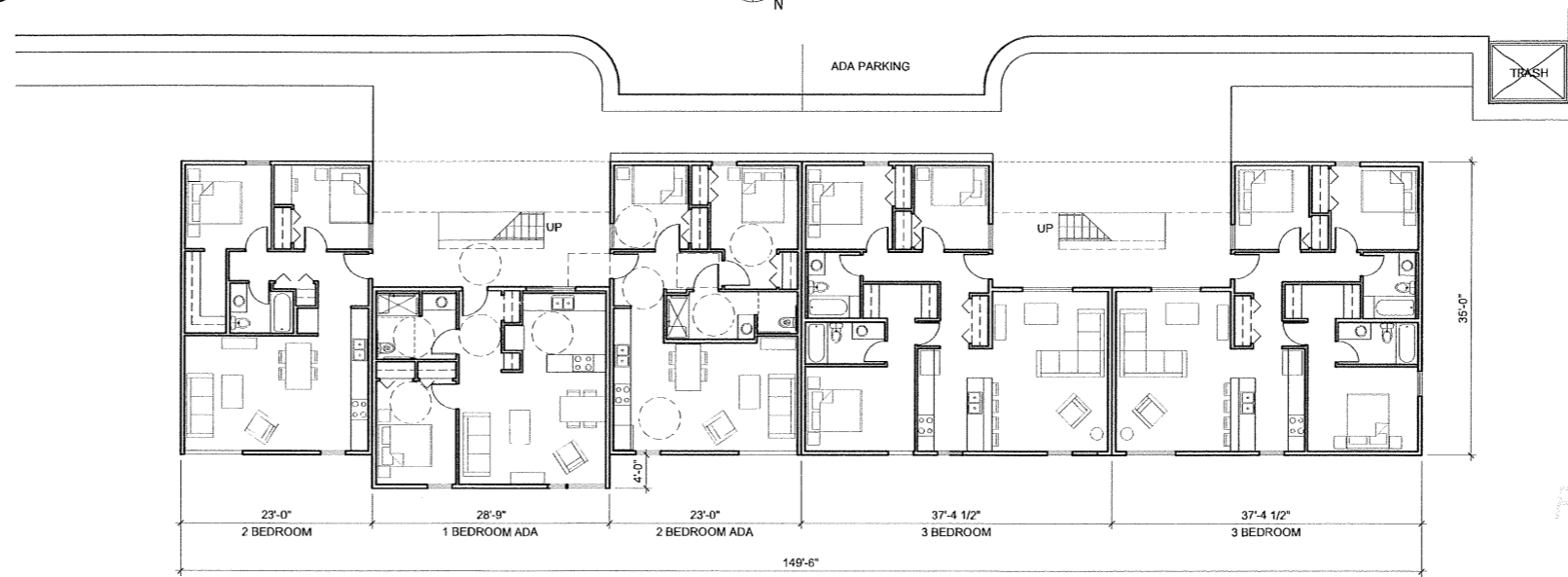
CONCEPT DRAWING



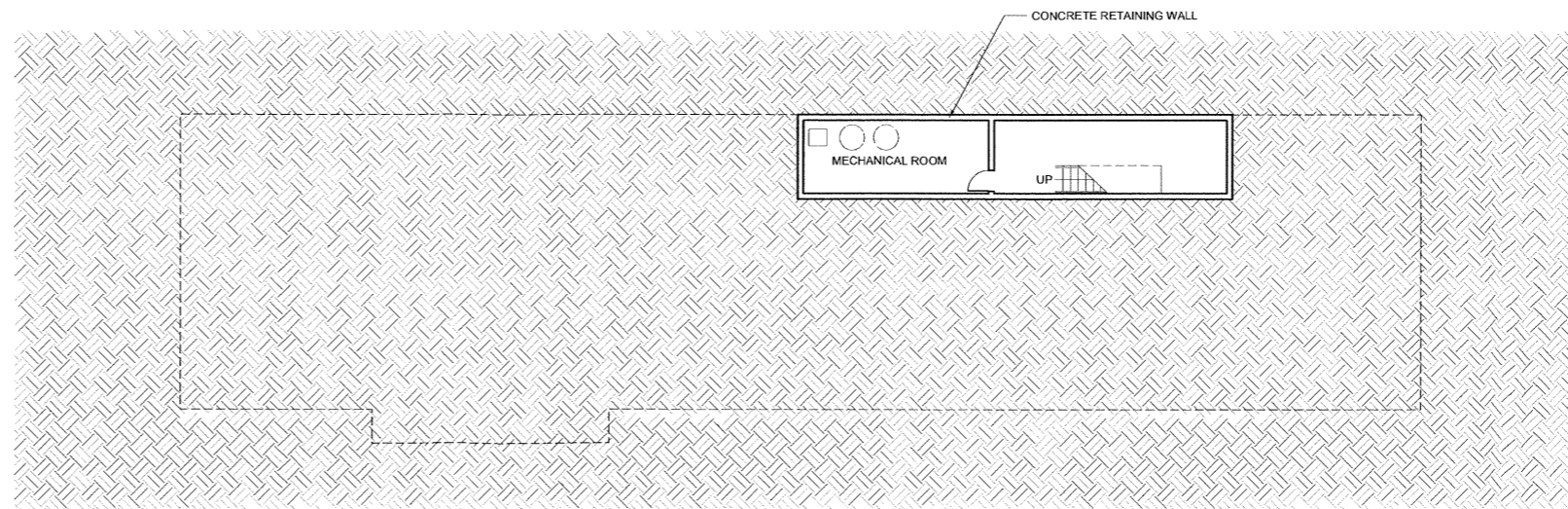
SITE KEY PLAN



3 SECOND FLOOR PLAN (BUILDING 1)  
3/32" = 1'-0"



2 FIRST FLOOR PLAN (BUILDING 1)  
3/32" = 1'-0"



1 BASEMENT FLOOR PLAN (BUILDING 1)  
3/32" = 1'-0"

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VISTA DRIVE  
PHASE I  
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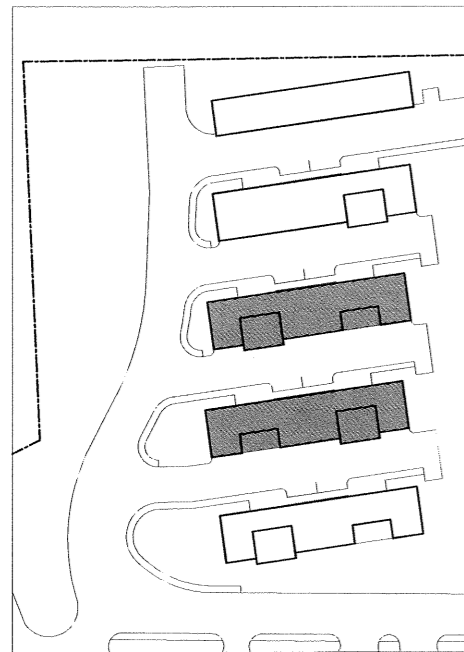
REVISIONS
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JOB NO.	VISTA
DATE	08/14/2013
	XXX

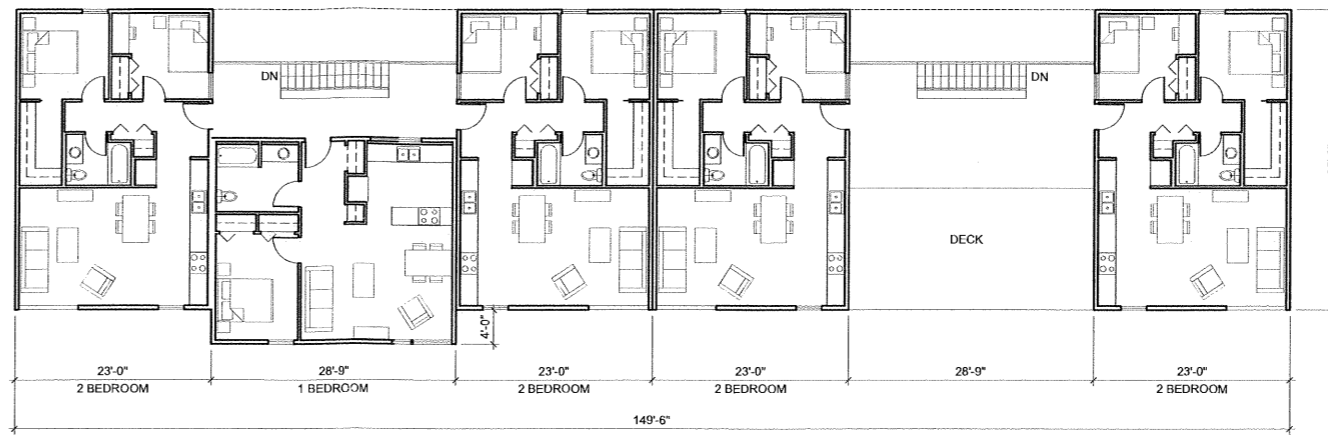
BUILDING 1  
FLOOR PLANS

SHEET NO.  
**A3**

CONCEPT DRAWING

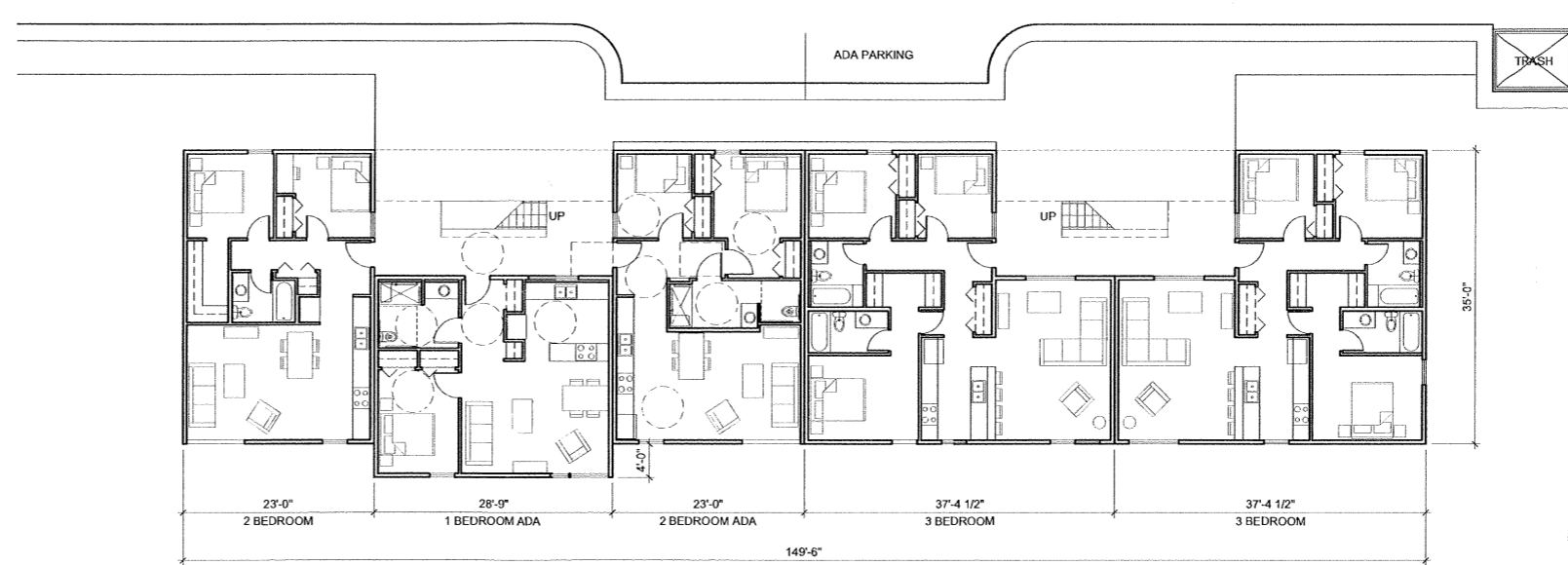


SITE KEY PLAN



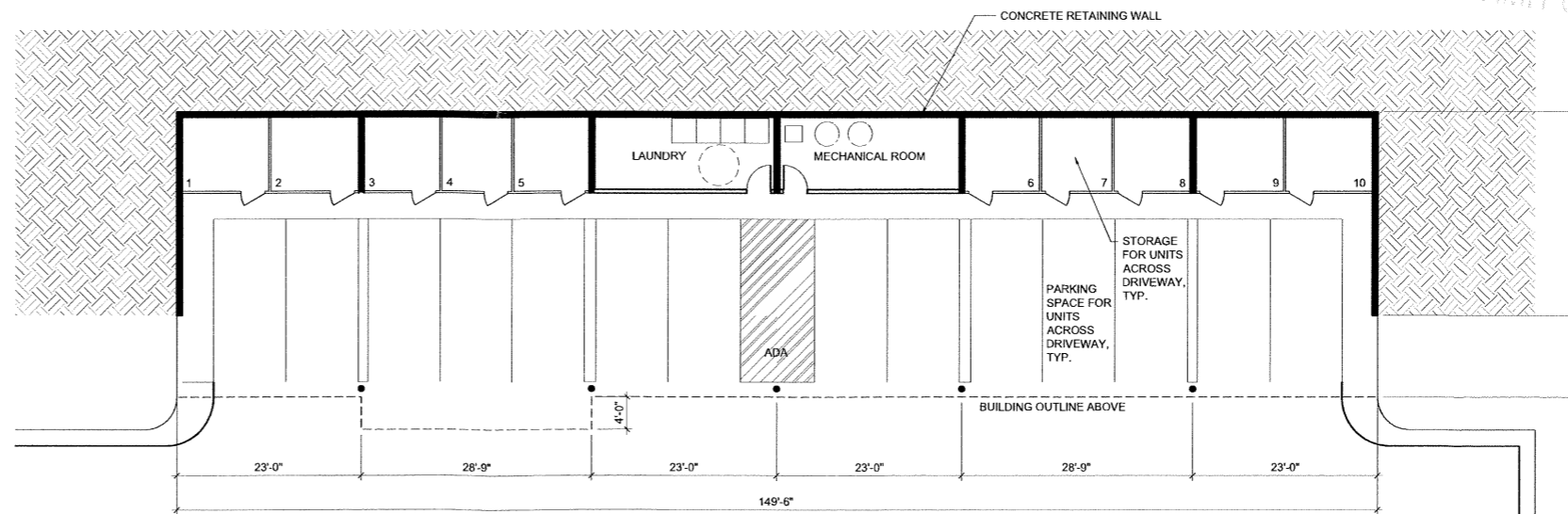
3 SECOND FLOOR PLAN (BUILDING 2 AND 3)

3/32" = 1'-0"



2 FIRST FLOOR PLAN (BUILDING 2 AND 3)

3/32" = 1'-0"



1 PARKING LEVEL PLAN (BUILDING 2 AND 3)

3/32" = 1'-0"



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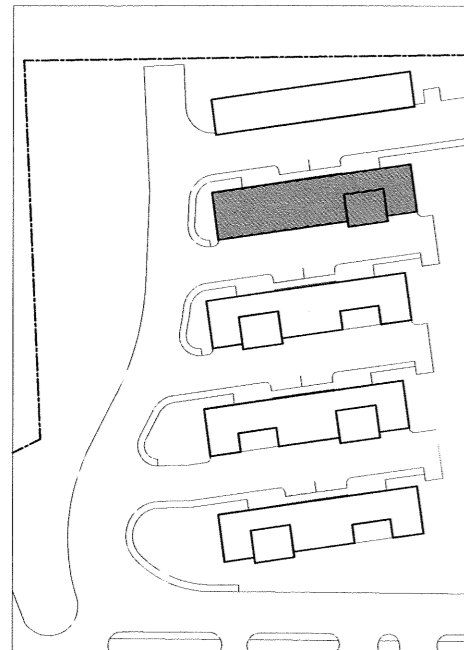
VISTA DRIVE  
PHASE I  
Volunteers of America Juneau, Alaska

REVISIONS	
JOB NO.	VISTA
DATE	08/14/2013
	XXX

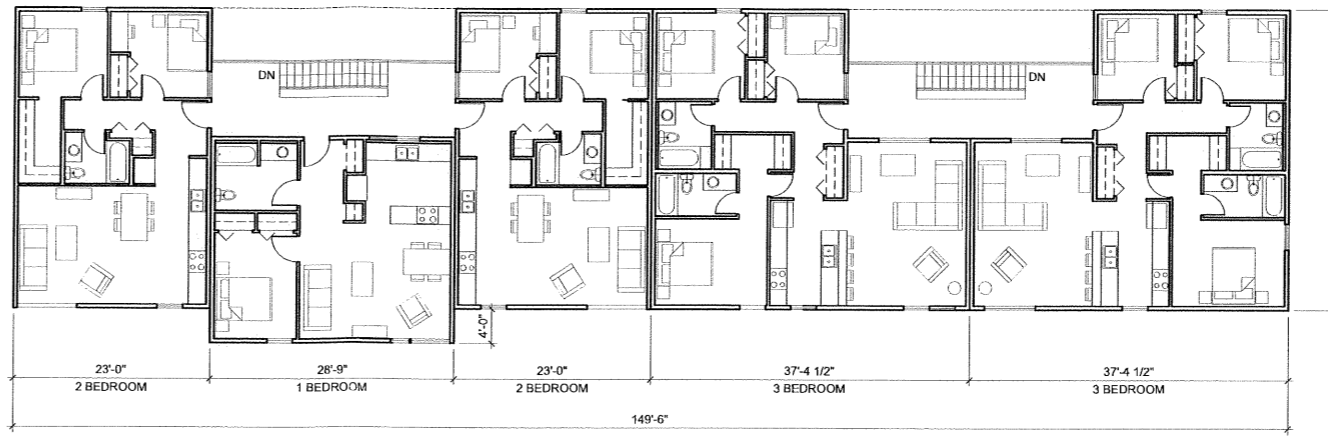
BUILDING 2 AND 3  
FLOOR PLANS

SHEET NO.  
**A4**

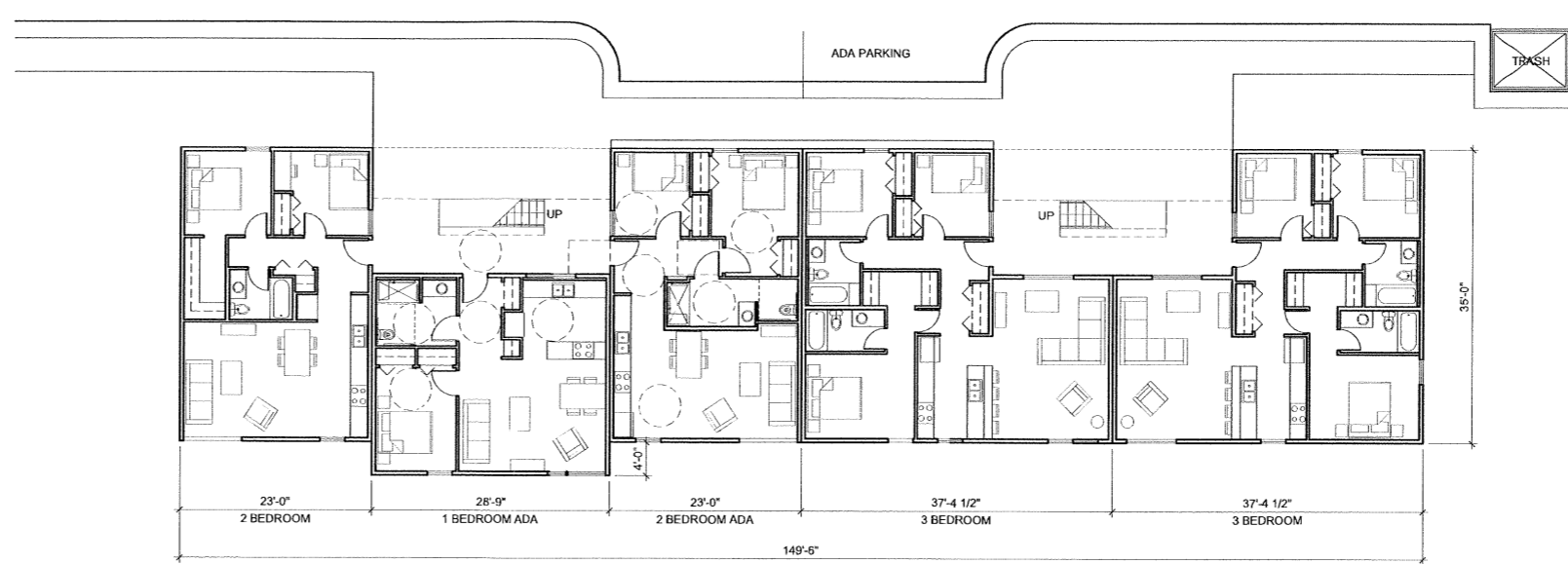
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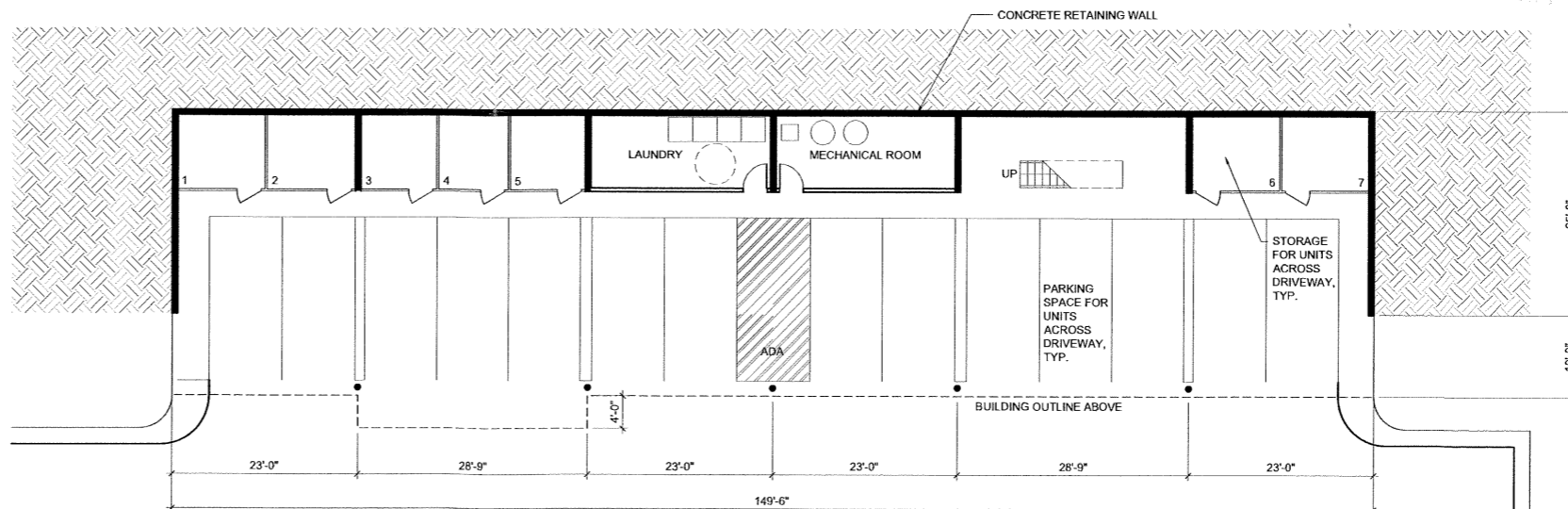
SITE KEY PLAN



3 SECOND FLOOR PLAN (BUILDING 4)  
3/32" = 1'-0"



2 FIRST FLOOR PLAN (BUILDING 4)  
3/32" = 1'-0"



1 PARKING LEVEL PLAN (BUILDING 4)  
3/32" = 1'-0"

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VISTA DRIVE  
PHASE I  
Volunteers of America Juneau, Alaska

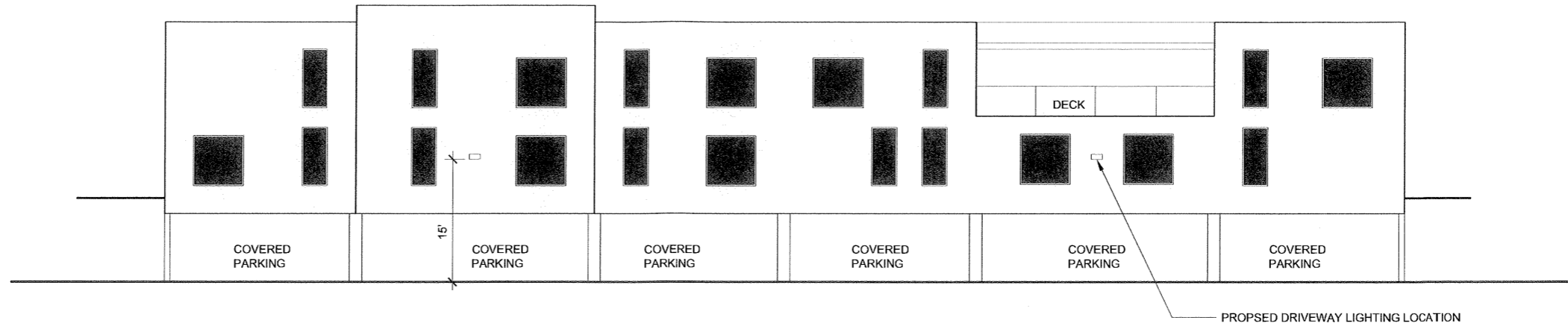
REVISIONS	

JOB NO.	VISTA
DATE	08/14/2013
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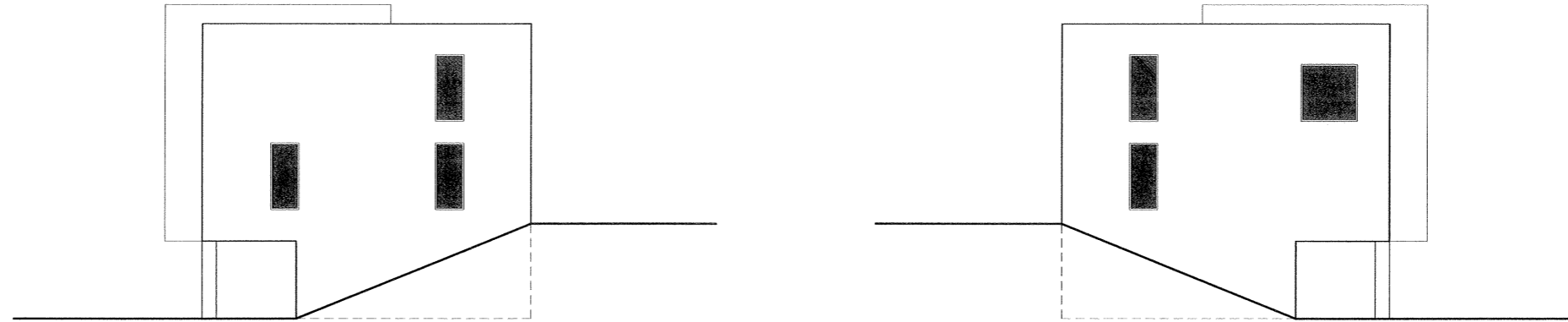
BUILDING 4  
FLOOR PLANS

SHEET NO.  
A5

CONCEPT DRAWING

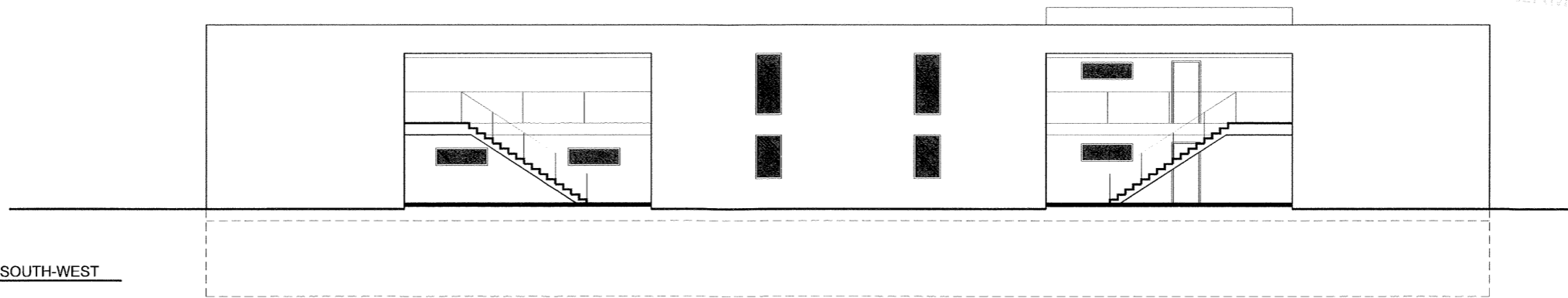


4 ELEVATION NORTH-EAST  
1/8" = 1'-0"



2 ELEVATION NORTH-WEST  
1/8" = 1'-0"

3 ELEVATION SOUTH-EAST  
1/8" = 1'-0"



1 ELEVATION SOUTH-WEST  
1/8" = 1'-0"

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VISTA DRIVE  
PHASE 1  
Volunteers of America Juneau, Alaska

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REVISIONS

JOB NO. VISTA  
DATE 08/14/2013  
XXX

ELEVATIONS  
BUILDING 2

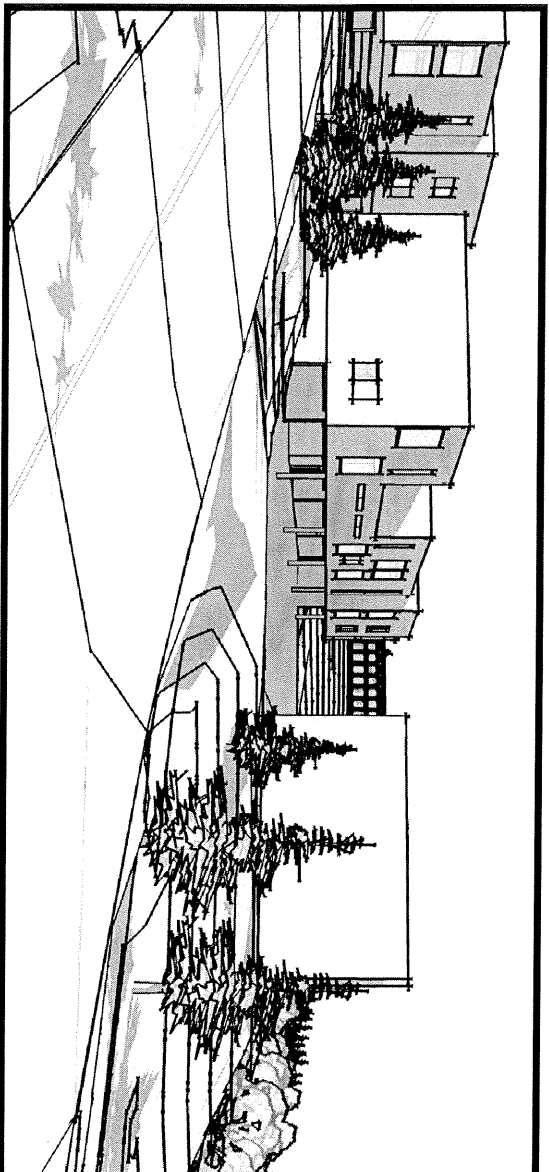
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A6

CONCEPT DRAWING



# 35% PRICING SET

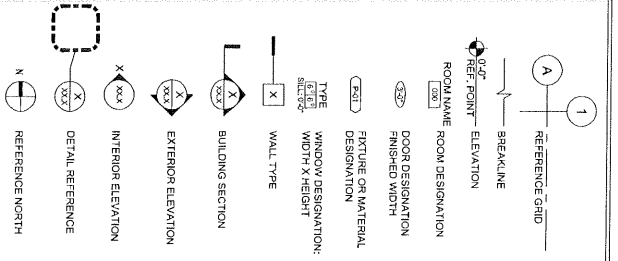
09/15/13



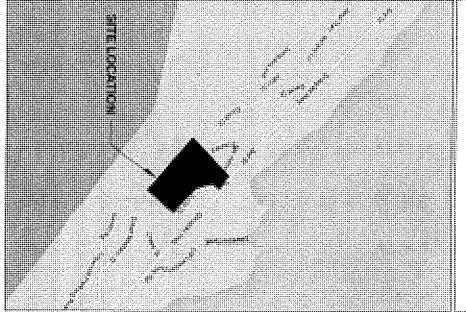
# JUNEAU VOA HOUSING PHASE 1 COMMUNITY CENTER

LUMEN design, LLC  
907 771 9940

**SYMBOLS**



**SITE LOCATION MAP**



**ZONING CODE STUDY**

**ZONING CATEGORY:** D18- RESIDENTIAL DISTRICT (HIGH-DENSITY MULTIFAMILY ZONING DISTRICT)  
 MAX. 18 UNITS PER ACRES

**PROPERTY STREET ADDRESS:** VISTA DRIVE, DOUGLAS ISLAND

**CURRENT LEGAL DESCRIPTION:** JUNEAU VQA HOUSING EMERALD 2 SUBDIVISION, TRACT B1A JUNEAU, AK

**LOT SIZE:** 3.08 ACRES /133,709 SF (PHASE 1)

**PROPOSED BUILDINGS (PHASE 1):** 40 UNITS TOTAL  
 BUILDING 1: 10 UNITS  
 BUILDING 2: 10 UNITS  
 BUILDING 3: 10 UNITS  
 BUILDING 4: 10 UNITS  
 COMMUNITY CENTER

**LOT COVERAGE:** MAX LOT COVERAGE = 50%  
 ACTUAL LOT COVERAGE = 20.5% (27,492 SF)

**BUILDING HEIGHT:** MAX ALLOWABLE HT = 35'-0"

**SETBACK REQUIREMENTS:** FRONT YARD: 20'  
 STREET SIDE YARD: 15'  
 REAR YARD: 15'

**COMMUNITY CENTER**  
 PROPOSED BUILDING AREA: 1,800 SF = 1.1 STORY  
 PROPOSED BUILDING HEIGHT: 15'-7"

OFF STREET PARKING:	# UNITS	REQUIRED	PROVIDED
COMMUNITY CENTER GUEST PARKING			6

**BUILDING CODE STUDY**

**INTERNATIONAL BUILDING CODE 2008**

TYPE VA CONSTRUCTION	NON-SPRINKLERED BUILDING
<b>OCCUPANCY A3 COMMUNITY CENTER</b>	1,180 SF : 15 79 OCC.
<b>B MANAGER OFFICE</b>	138 SF : 10 8 OCC.
<b>SERVICE COORDINATOR</b>	132 SF : 100 2 OCC.
<b>TOTAL 89 OCCUPANTS</b>	

**TABLE 503 A3 MAX 6,000 SF BUILDING AREA ALLOWED, 1 STORY**

**TABLE 1019.2 2 EXITS REQUIRED**

**TABLE 1016.1 MAX 200 FEET EXT ACCESS TRAVEL DISTANCE WITHOUT SPRINKLER SYSTEM**

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE CODES AND REGULATIONS OF THE STATE OF ALASKA AND THE CITY OF JUNEAU.
- DRAWINGS ARE SUPPLIED TO THE OWNER AND THE CONTRACTOR FOR HIS SPECIFIC PROJECT AND ARE NOT TO BE REPRODUCED OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF LUMEN DESIGN LLC.
- THE ORGANIZATION OF DOCUMENTS ARE NOT INTENDED TO CONTROL THE DIVISION OF WORK. RESPONSIBILITY OF THE OWNER.
- DIMENSIONS ARE TO FACE OF STUD OR GRIDLINE UNLESS OTHERWISE NOTED.
- CONTRACTORS SHALL VERIFY DIMENSIONS, REQUIRED CLEARANCES AND POWER AND PLUMBING REQUIREMENTS FOR ALL ITEMS. NOTIFY THE OWNERS REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.

**SHEET INDEX**

GENERAL SYMBOLS	GEN. NOTES, & CODE STUDY, GEN. NOTES, & GEN.
ARCHITECTURAL	FLOOR PLAN
A1.1	ELEVATIONS
A2.1	BUILDING SECTION
A3.1	

MECHANICAL	MECHANICAL SYMBOL, LEGEND AND ABBREVIATIONS
M1	Mechanical Schedules
M2	Mechanical Schedules
M3	Mechanical Schedules
M4	Mechanical Schedules
M5	Mechanical Schedules
M6	Mechanical Schedules
M7	Mechanical Schedules
M8	Mechanical Schedules
M9	Mechanical Schedules
M10	Mechanical Schedules
M11	Mechanical Schedules
M12	Mechanical Schedules
M13	Mechanical Schedules
M14	Mechanical Schedules
M15	Mechanical Schedules
M16	Mechanical Schedules
M17	Mechanical Schedules
M18	Mechanical Schedules
M19	Mechanical Schedules
M20	Mechanical Schedules
M21	Mechanical Schedules
M22	Mechanical Schedules
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M26	Mechanical Schedules
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M31	Mechanical Schedules
M32	Mechanical Schedules
M33	Mechanical Schedules
M34	Mechanical Schedules
M35	Mechanical Schedules
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M38	Mechanical Schedules
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M95	Mechanical Schedules
M96	Mechanical Schedules
M97	Mechanical Schedules
M98	Mechanical Schedules
M99	Mechanical Schedules
M100	Mechanical Schedules

<b>REVISIONS</b>
JOB NO. VISTA
DATE 09/19/2013
WFS
<b>CODE STUDY GENERAL SYMBOLS</b>
<b>G0.1</b>
<b>SHEET NO.</b>

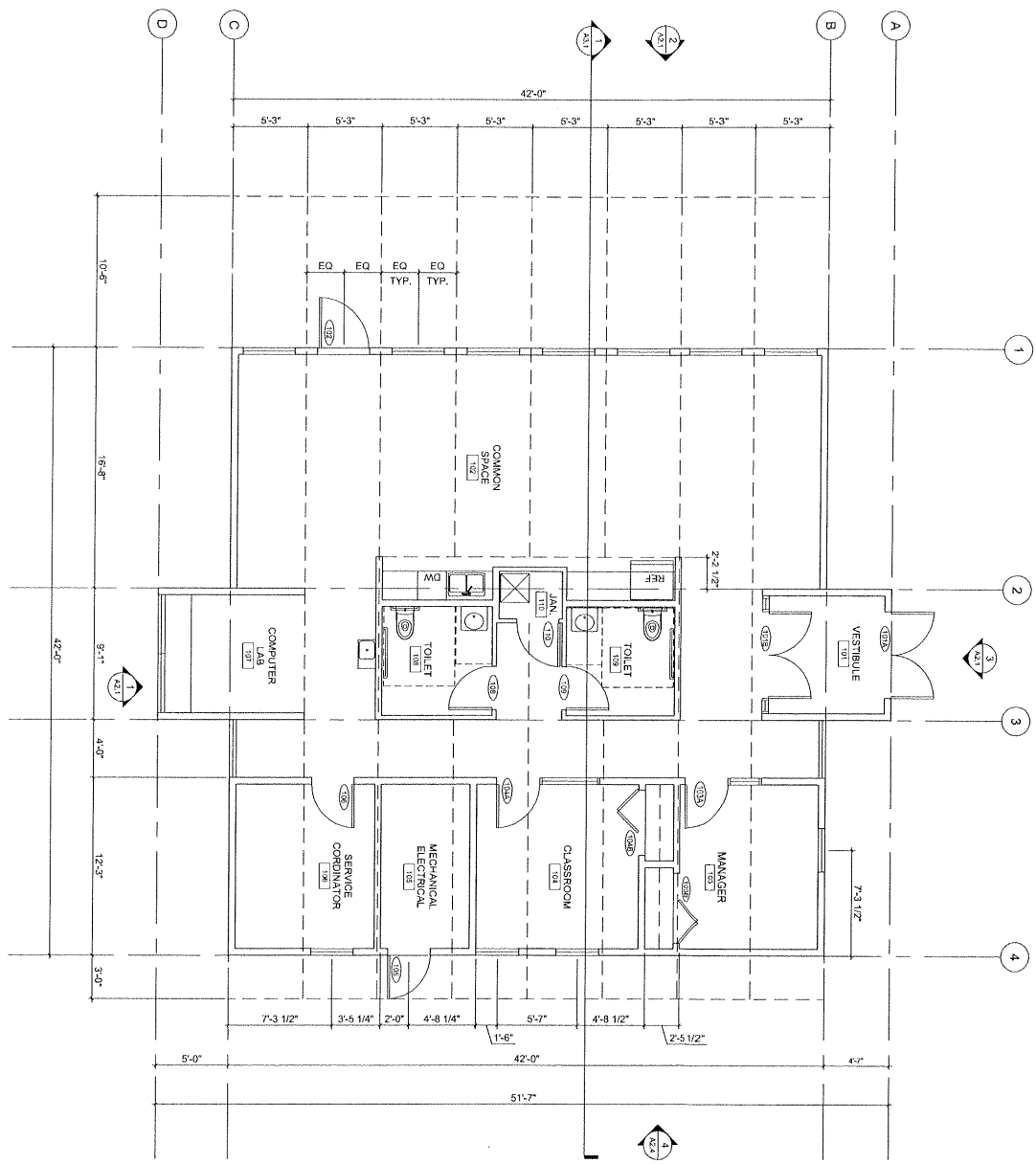
**VISTA DRIVE PHASE 1  
 COMMUNITY CENTER**

Volunteers of America Juneau, Alaska

**LUMEN design, LLC**

5201 E Northern Lights Blvd Anchorage, AK 99508  
 907 771 9940 office 907 771 9996 fax

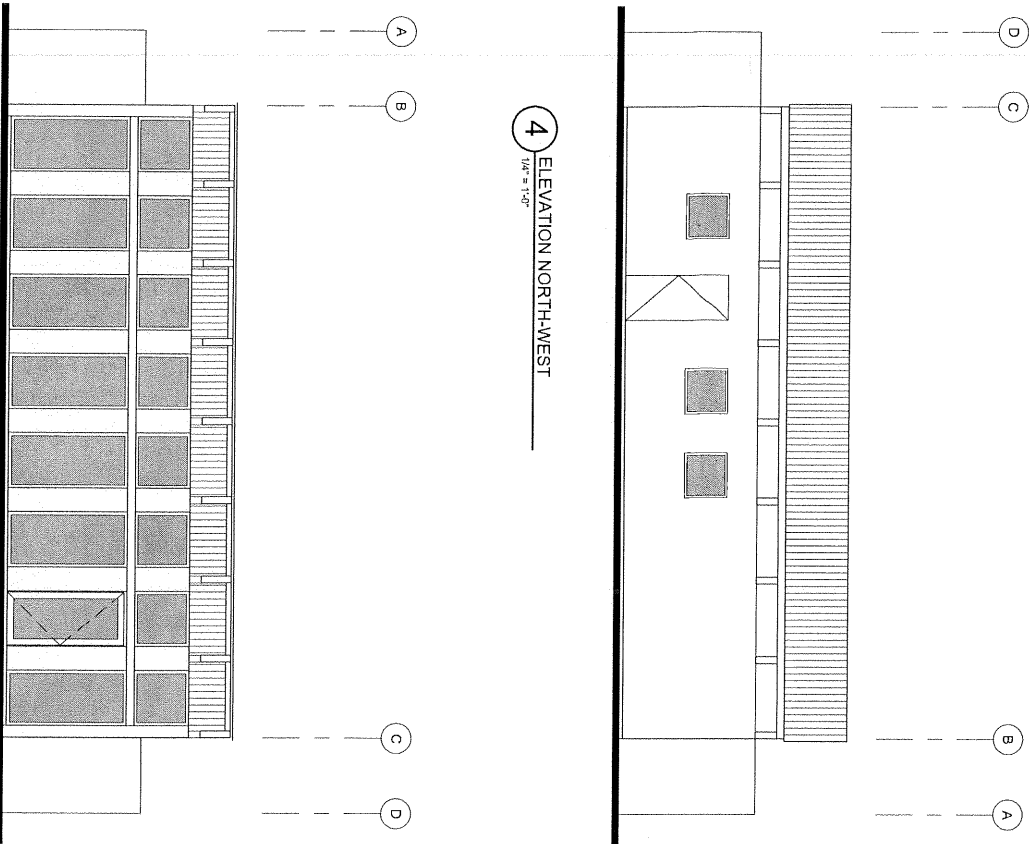
**1** FLOOR PLAN  
1/4" = 1'-0"



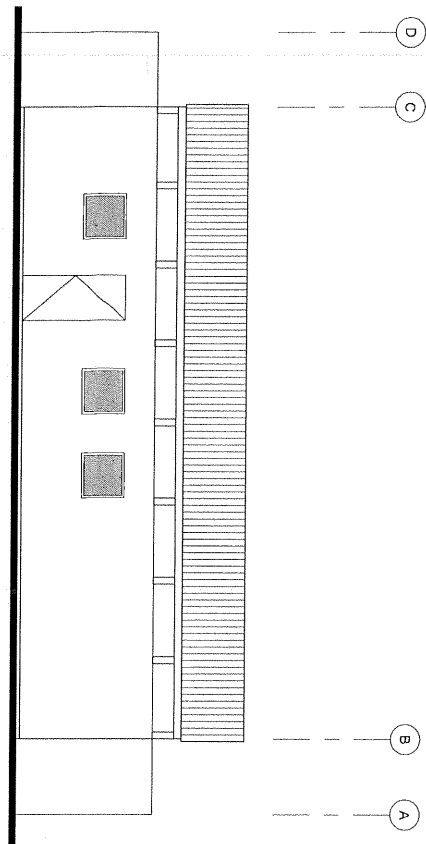
GENERAL PLAN NOTES:  
1. ALL DIMENSIONS ARE FROM FACE OF STUD UNLESS NOTED OTHERWISE.

35% DRAWING | "COMMUNITY CENTER"

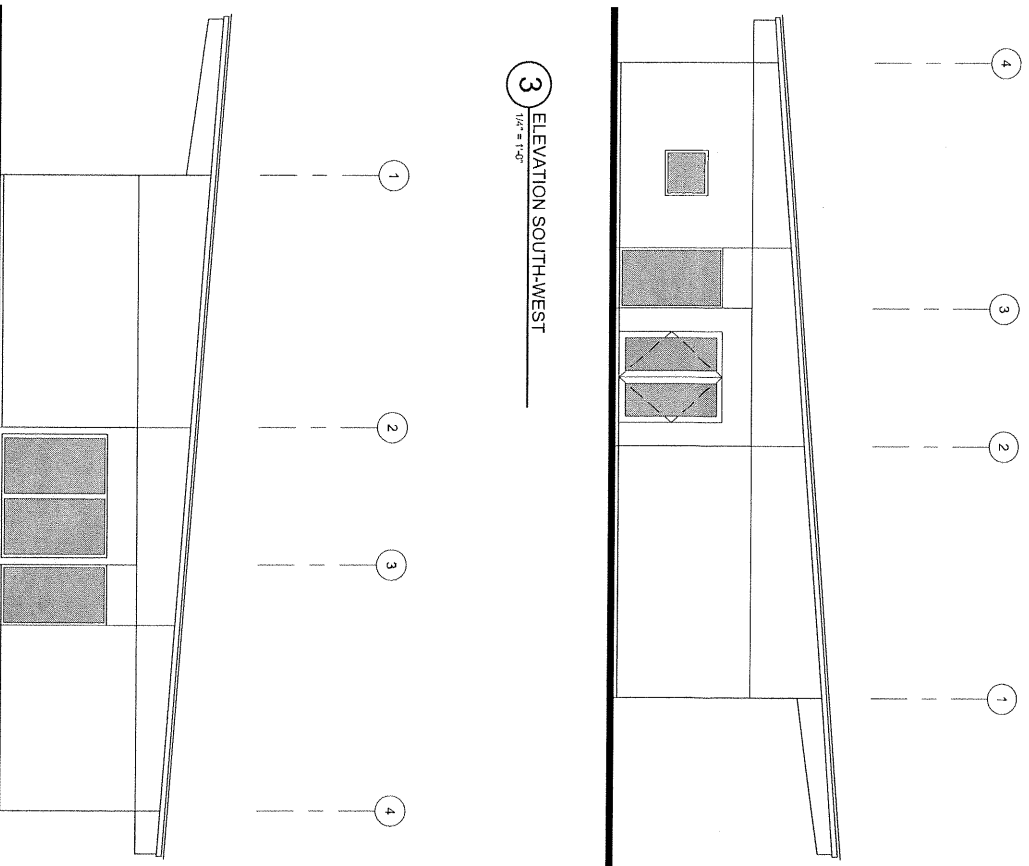
JOB NO. VISTA DATE 09/15/2013 MFG	SHEET NO. <b>A1.1</b>	FLOOR PLAN	<b>VISTA DRIVE PHASE 1 COMMUNITY CENTER</b> Volunteers of America Juneau, Alaska		<b>LUMEN design, LLC</b> 5201 E Northern Lights blvd Anchorage, AK 99508 907 771 9940 office 907 771 9996 fax	
			REVISIONS	1	1	1



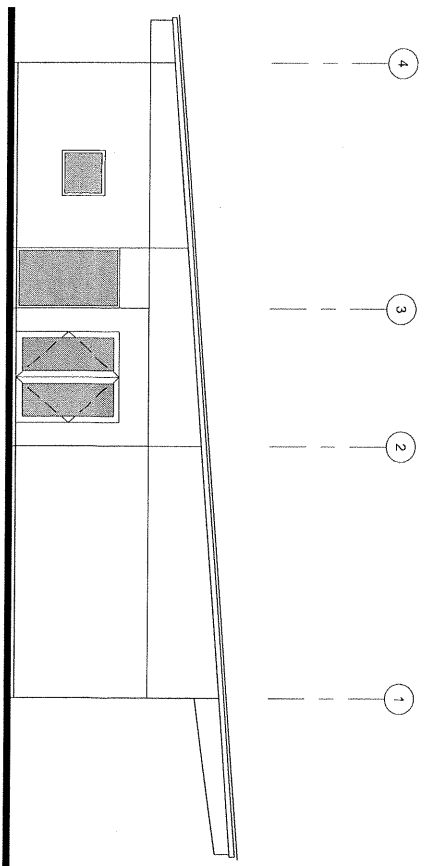
2 ELEVATION SOUTH-EAST  
1/4" = 1'-0"



4 ELEVATION NORTH-WEST  
1/4" = 1'-0"



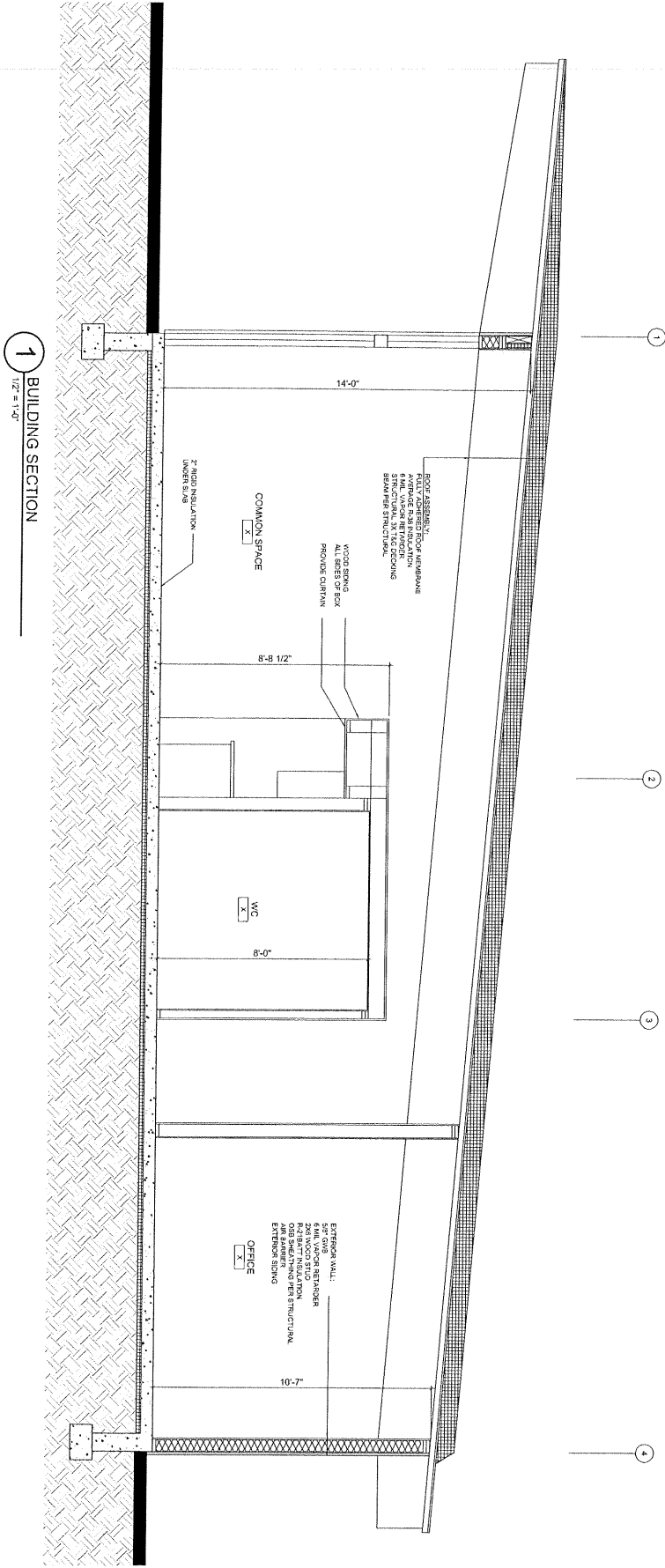
1 ELEVATION NORTH-EAST  
1/4" = 1'-0"



3 ELEVATION SOUTH-WEST  
1/4" = 1'-0"

35% DRAWING | "COMMUNITY CENTER"

JOB NO. VISTA DATE 08/15/2013 MFG	ELEVATIONS	SHEET NO. A2.1	REVISIONS	<b>VISTA DRIVE PHASE 1 COMMUNITY CENTER</b>		<b>LUMEN design, LLC</b>	
				Volunteers of America Juneau, Alaska		5201 E Northern Lights blvd Anchorage, AK 99508 907 771 9940 office 907 771 9996 fax	



35% DRAWING "COMMUNITY CENTER"

<p>SHEET NO. <b>A3.1</b></p>	<p>BUILDING SECTION</p>	<p>JOB NO. VISTA DATE 09/15/2013 WFO</p>	<p>REVISIONS</p> <p><b>VISTA DRIVE PHASE 1 COMMUNITY CENTER</b></p> <p>Volunteers of America Juneau, Alaska</p>	<p>LUMEN design, LLC 5201 E Northern Lights Blvd Anchorage, AK 99508 907 771 9940 office 907 771 9996 fax</p>
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**JUNEAU VOA HOUSING - PHASE 2**

ZONING CATEGORY:

D18- RESIDENTIAL DISTRICT  
 (HIGH-DENSITY MULTI-FAMILY ZONING DISTRICT)  
 MAX. 18 UNITS PER ACRES

PROPERTY STREET ADDRESS: VISTA DRIVE, DOUGLAS ISLAND

JUNEAU VOA HOUSING  
 EMERALD 2 SUBDIVISION, TRACT B1A  
 JUNEAU, AK

CURRENT LEGAL DESCRIPTION:

LOT SIZE: 3.08 ACRES /134,300 SF (PHASE 2)

INTERNATIONAL BUILDING CODE 2006

TYPE VB CONSTRUCTION - SPRINKLERED NFPA 13R

R-2 OCCUPANCY APARTMENTS

PROPOSED BUILDINGS (PHASE 2) 35 UNITS TOTAL

- BUILDING 5 18 UNITS
- BUILDING 6 6 UNITS
- BUILDING 7 6 UNITS
- BUILDING 8 5 UNITS

LOT COVERAGE: MAX LOT COVERAGE = 50%  
 ACTUAL LOT COVERAGE = 13.5% (18,186 SF)

BUILDING HEIGHT: MAX ALLOWABLE HT = 35'-0"

SETBACK REQUIREMENTS:

- FRONT YARD 20'
- STREET SIDE YARD 13'
- SIDE YARD 5'
- REAR YARD 10'

BUILDING 5

AREA	1 FLOOR	2 FLOOR	BASEMENT/CARPORIT
	9,990 SF	9,990 SF	9,990 SF
PROPOSED BUILDING HEIGHT	32'-7"		

18 UNITS TOTAL  
 (6) 2-BEDROOM  
 (12) 3-BEDROOM

OFF STREET PARKING:	# UNITS	REQUIRED	PROVIDED
2 BEDROOM UNITS = 1.5 SPACES EA.	6	9	
3 BEDROOM UNITS = 2 SPACES EA.	12	24	
	18	33	33

BUILDING 8		PROPOSED BUILDING HEIGHT		OFF STREET PARKING:	
SIZE	AREA	# UNITS	REQUIRED	PROVIDED	
1. FLOOR	1,132 SF	2	2	2	1 BEDROOM UNITS = 1 SPACE EA.
2. FLOOR	2,732 SF	3	5	5	2 BEDROOM UNITS = 1.5 SPACES EA.
3. FLOOR	805 SF	5	7	7	
10 UNITS TOTAL					
(2) 1-BEDROOM					
(3) 2-BEDROOM					
33'-5"					

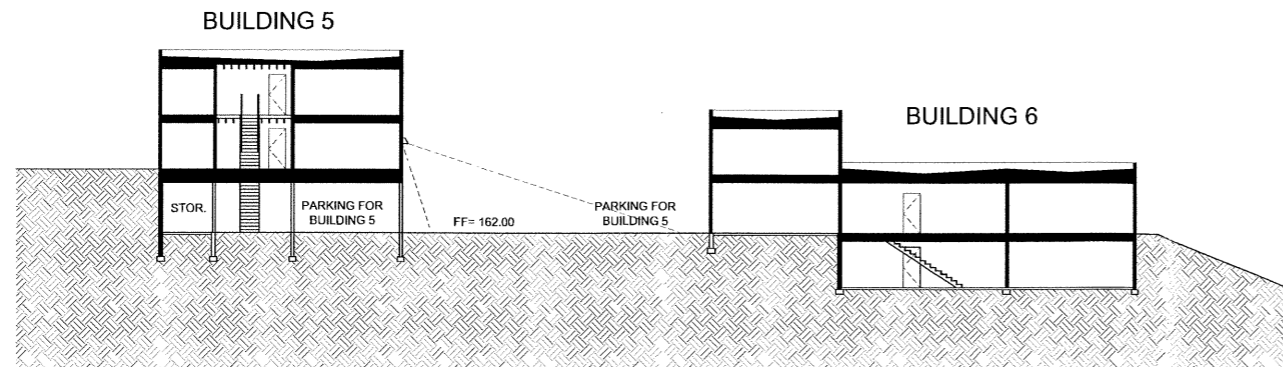
BUILDING 7		PROPOSED BUILDING HEIGHT		OFF STREET PARKING:	
SIZE	AREA	# UNITS	REQUIRED	PROVIDED	
1. FLOOR	1,952 SF	2	2	2	1 BEDROOM UNITS = 1 SPACE EA.
2. FLOOR	2,732 SF	4	6	6	2 BEDROOM UNITS = 1.5 SPACES EA.
3. FLOOR	805 SF	6	8	8	
10 UNITS TOTAL					
(2) 1-BEDROOM (1 ADA-UNIT)					
(6) 2-BEDROOM					
(2) 3-BEDROOM					
33'-5"					

BUILDING 6		PROPOSED BUILDING HEIGHT		OFF STREET PARKING:	
AREA	AREA	# UNITS	REQUIRED	PROVIDED	
1. FLOOR	1,952 SF	2	2	2	1 BEDROOM UNITS = 1 SPACE EA.
2. FLOOR	2,732 SF	4	6	6	2 BEDROOM UNITS = 1.5 SPACES EA.
3. FLOOR	805 SF	6	8	8	
6 UNITS TOTAL					
(2) 1-BEDROOM (1 ADA-UNIT)					
(4) 2-BEDROOM (1 ADA-UNIT)					
33'-5"					

VISTA DRIVE - PHASE 2 ( 35 UNITS)

- BUILDING 5 (18 UNITS)
- (6) 2- BEDROOM APARTMENT
- (12) 3-BEDROOM APARTMENT
- BUILDING 6 (6 UNITS)
- (4) 2- BEDROOM APARTMENT
- (2) 1-BEDROOM APARTMENT
- BUILDING 7 (6 UNITS)
- (4) 2- BEDROOM APARTMENT
- (2) 1-BEDROOM APARTMENT
- BUILDING 8 (5 UNITS)
- (3) 2- BEDROOM APARTMENT
- (2) 1-BEDROOM APARTMENT

- BUILDING 5
- 33 PARKING SPACES REQUIRED
- 33 PARKING SPACES PROVIDED
- BUILDING 6
- 8 PARKING SPACES REQUIRED
- 8 PARKING SPACES PROVIDED
- BUILDING 7
- 8 PARKING SPACES REQUIRED
- 8 PARKING SPACES PROVIDED
- BUILDING 8
- 8 PARKING SPACES REQUIRED
- 8 PARKING SPACES PROVIDED



1 SITE SECTION  
1/16" = 1'-0"

LUMEN design, LLC  
5201 E Northern Lights Blvd Anchorage, AK 99508  
907 771 9940 office 907 771 9996 fax

VISTA DRIVE  
PHASE 2  
Volunteers of America Juneau, Alaska

REVISIONS	
JOB NO.	VISTA
DATE	08/30/2013
	XXX

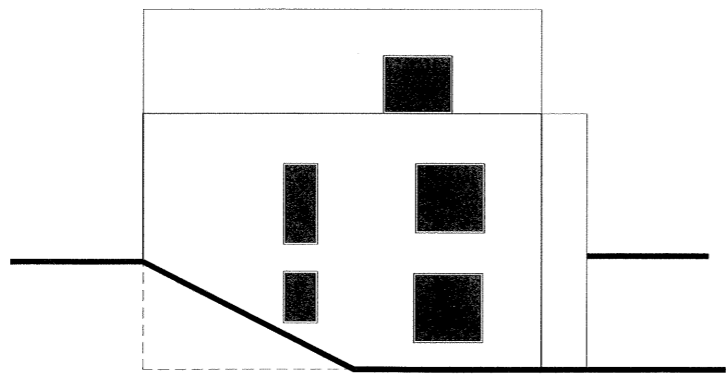
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SHEET NO.  
A7

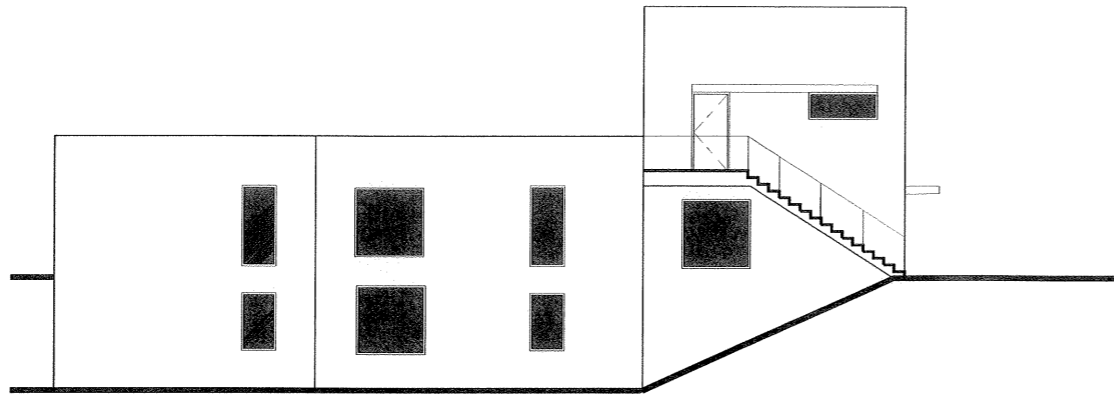
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CONCEPT DRAWING

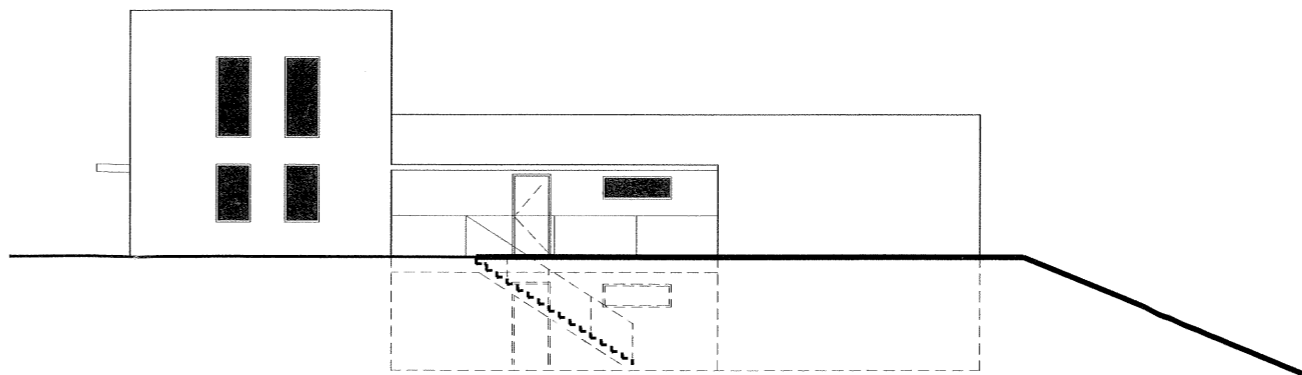




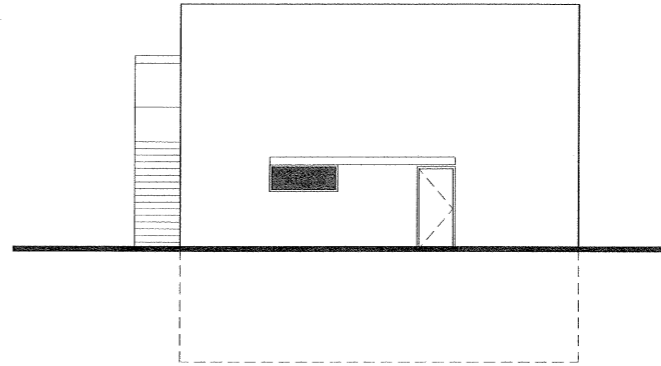
1 ELEVATION NORTH- EAST (BUILDING 6)  
1/8" = 1'-0"



3 ELEVATION NORTH-WEST (BUILDING 6)  
1/8" = 1'-0"



2 ELEVATION SOUTH-EAST (BUILDING 6)  
1/8" = 1'-0"



4 ELEVATION SOUTH-WEST (BUILDING 6)  
1/8" = 1'-0"

CONCEPT DRAWING

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JOB NO. VISTA  
DATE 08/00/2013  
XXX

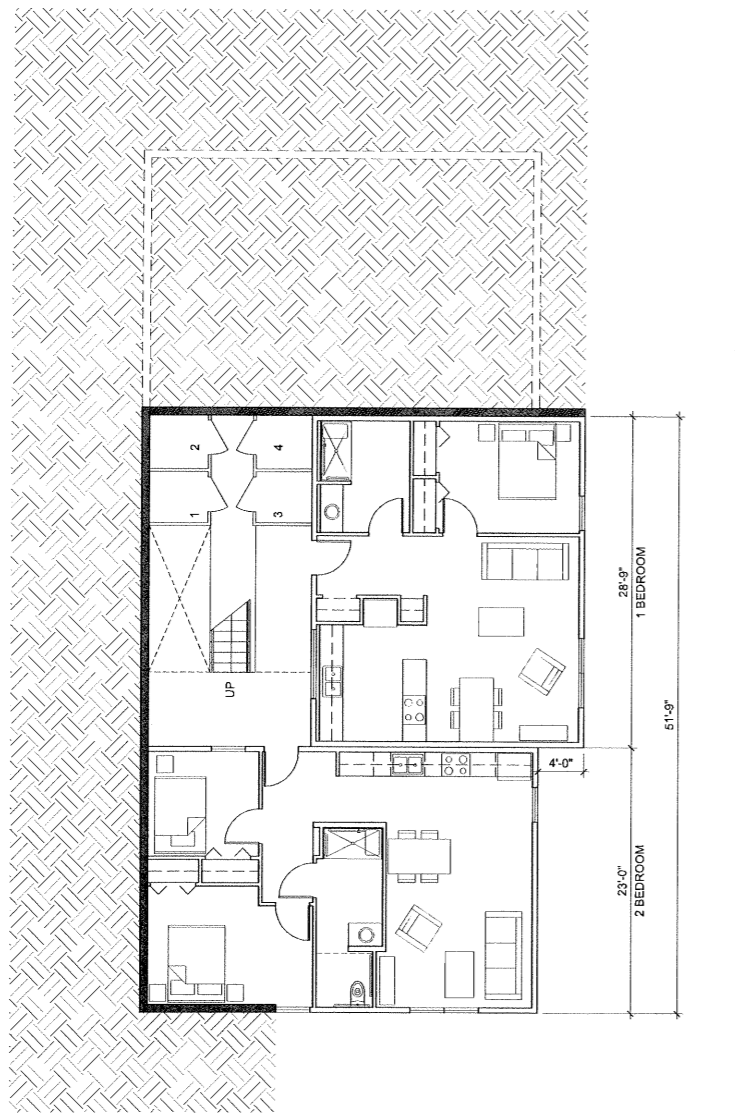
ELEVATIONS  
BUILDING 6


SHEET NO.  
A9

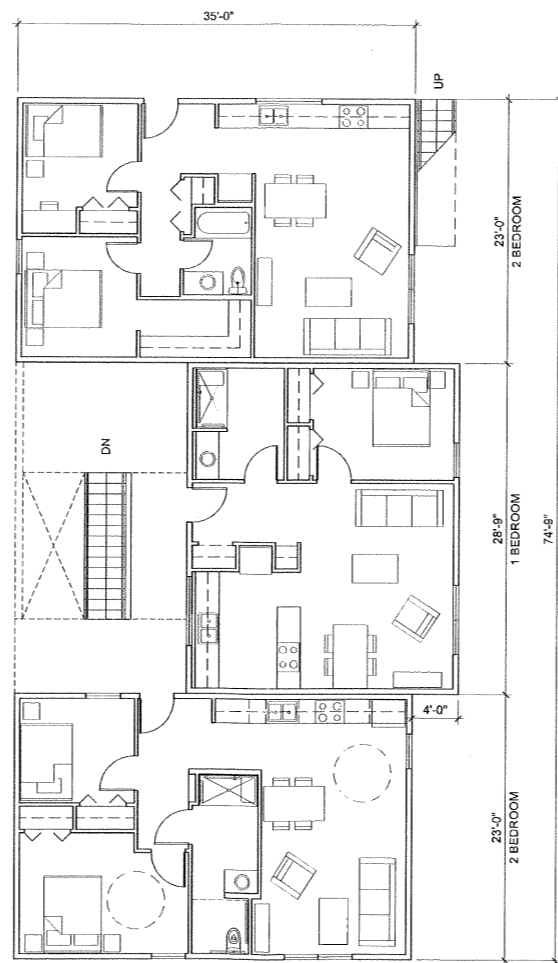
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VISTA DRIVE  
PHASE 2  
Volunteers of America Juneau, Alaska

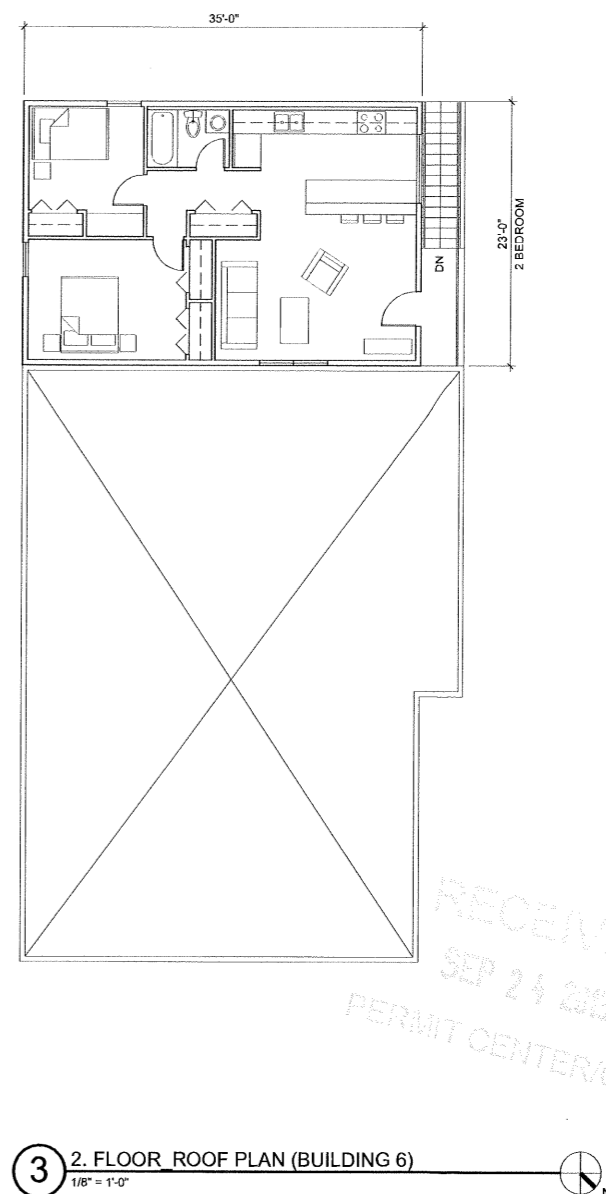
LUMEN design, LLC  
5201 E Northern Lights Blvd Anchorage, AK 99508  
907 771 9940 office 907 771 9996 fax




**1** FLOOR PLAN LOWER LEVEL (BUILDING 6)  
1/8" = 1'-0" 



**2** FLOOR PLAN UPPER LEVEL (BUILDING 6)  
1/8" = 1'-0" 



**3** 2. FLOOR ROOF PLAN (BUILDING 6)  
1/8" = 1'-0" 

**LUMEN design, LLC**  
5201 E Northern Lights Blvd Anchorage, AK 99508  
907 771 9940 office 907 771 9996 fax

**VISTA DRIVE PHASE 2**  
Volunteers of America Juneau, Alaska

REVISIONS

JOB NO. VISTA  
DATE 08/30/2013  
XXX

FLOOR PLANS  
BUILDING 6

SHEET NO.  
**A8**

CONCEPT DRAWING

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**JUNEAU VOLUNTEERS OF AMERICA, LLC**

**JUNEAU I HOUSING**

**HILLSIDE ENDORSEMENT APPLICATION NARRATIVE**

**Prepared for:**

Juneau I VOA, LLC  
1660 Duke Street  
Alexandria, VA 22314

**Prepared by:**

DOWL HKM  
5368 Commercial Boulevard  
Juneau, Alaska 99801  
(907) 780-3533

August 30, 2013

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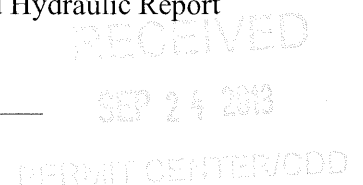
**APPENDICES**

Appendix A ..... Hillside Endorsement Permit Drawing Set

Appendix B ..... Engineering Geologic Report

Appendix C ..... Traffic Assessment

Appendix D ..... Hydrology and Hydraulic Report



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Appendix E ..... Previous Final Site Plan (2005)  
Appendix F..... Approved Wetland Permit

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## 1.0 EXECUTIVE SUMMARY

Juneau Volunteers of America, LLC (JVOA) is proposing a housing development on Douglas Island off Vista Drive, immediately north of Lawson Creek. The property is currently owned by JLC Properties, Inc., who is working in coordination with JVOA. The project involves two Phases. DOWL HKM is completing the civil design with assistance from R&M Engineering for the Engineering Geological Report, Morris Engineering Group for street lighting, and Lumen design+build, llc (and subconsultants) for the architectural, structural, electrical, and mechanical disciplines. It is understood that a Hillside Endorsement is required for this project in support of the Conditional Use approval process. The purpose of the endorsement is to show how erosion and drainage control are being implemented, that waterways are protected from sedimentation and pollution, that the development is being designed to minimize injury or damage to people or property, and that adverse aesthetic impacts are minimized. The following items summarize the key features of this project:

- Two Conditional Use permits are being applied for, one for each phase of development;
- Phase I includes Vista Drive, Buildings 1-4, the Community Center, and the driveway and a portion of the adjacent parking lot to serve the Community Center;
- Phase 2 includes Buildings 5-8 and associated driveways and parking lots;
- Phase 1 Construction is scheduled to begin in Spring 2014;
- 75 Total Dwelling Units: 40 in Phase I and 35 in Phase II;
- The footprint has been minimized to protect natural vegetation and aesthetic concerns;
- Retaining walls have been minimized;
- Fill slopes 2:1 or flatter have been maintained;
- A Wetlands permit has been obtained;
- The unnamed drainage through the site is not listed as an anadromous fish stream so a habit permit has not been obtained;

This application will address the above items and more in greater detail. The following Sections are arranged in accordance with the Submission Requirements outlined in CBJ Ordinance 49.70.240. For the maps and drawings requested, a Hillside Endorsement Permit Drawing Set is included for reference in Appendix A.

## 2.0 SUBMISSION REQUIREMENTS

### 2.1 Vicinity Map

A vicinity map is included on the cover page of the Drawings (Sheet G1.0).

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## 2.2 Site Maps – Present Condition

Existing contours, drainage ways, lot boundaries, easements, and improvements on the site and adjacent properties are shown on the Existing Site Conditions drawing (Sheet C3.0) and on the Plan & Profile and Site Grading sheets where applicable (Sheets C4.0 – C5.2).

## 2.3 Site Plan – Proposed Finished Improvements

Drawings showing the proposed finished development improvements and extent of work are included in the permit set as follows:

- Finished Site Plan (Sheet C3.1) - This drawing provides an overview of the improvements for the entire site showing roadway, driveways, buildings, parking, utilities, drainage, storm water treatment facilities, retaining walls, clearing limits, and final site topography (2 foot contours). Lot boundaries and proposed easements are shown. Drainage is shown to the existing culvert crossing Douglas Highway.
- Site Sections (Sheets C7.0 – C7.1) – Four cross sections of the development site are included. The locations of the sections are shown on the Finished Site Plan (C3.1).

## 2.4 Detailed Engineering Drawings

The following detailed engineering plans are included in the permit set:

- Typical Sections (Sheet C1.0) – Three typical sections are included: Vista Drive, Parking Lot (Phase 1 specifically depicted), and the Driveway (to Phase 2). The typical section for Vista Drive is a modification from the CBJ Standard Details and is discussed in further detail in Section 3.1 - Roads.
- Details (Sheet C2.0) – Details of key features related to the Hillside Endorsement are included, such as Energy Dissipation Pad, Discharge Channel Section, Structural Improvements for Foundations (per the Geological Report), and others as deemed pertinent.
- Vista Drive Plan & Profile (Sheet C4.0) – The plan and profile for Vista Drive is depicted from its connection to the existing Vista Drive road grade to the top of the hill for this project. All ROW improvements are depicted including roadway, curbing, sidewalk, ditching, storm drainage, utilities, cut and fill slopes, and clearing limits. Final ground contours are shown as background to better correlate development improvements.
- Site Grading Plans (Sheets C5.0-C5.2) – Site grading plans are provided for each building / driveway / parking area combination. General grading, flow arrows, and finished elevations are included. Curbing, sidewalk, slope limits, clearing limits, and retaining walls are shown. No off-site stormwater runoff improvements are included. The on-site runoff is routed through stormwater treatment facilities that detain the runoff and then discharges into an existing stabilized drainage. Off site (from higher elevation) runoff is passed through the site, through an energy dissipation pad, and into an existing

36" CMP culvert under Douglas Highway. The capacity of the culvert is discussed further in Section 3.4.1 – Off-Site Hydrology.

- Vista Drive Cross Sections (Sheets C6.0-6.2) – Cross sections for Vista Drive are included every 20 feet.

## **2.5 Off-Site Fill and Excess Fill Considerations**

### **2.5.1 Off-Site Fill**

The only off-site fill will be shot rock, 2" crushed stone, and D-1 base course as required for the typical sections (see Sheet C1.0). This will be obtained from existing permitted material sources in Juneau.

### **2.5.2 Excess Fill**

Site soils consist of overburden, sands, gravels, silts, and rock (see the Engineering Geologic Report by R&M Engineering, Inc.). All excavated soils will be disposed of on-site as shown on the Finished Site Plan (C3.1) and Development Site Cross Sections (Sheets C7.0-7.1).

## **2.6 Landscaping Plan**

This drawing depicts natural vegetation to be retained and areas of new vegetative plantings for stabilizing cut and fill slopes, as well as to beautify the development. At present, this drawing focuses on the areas that will be re-planted and the types of plants, trees, and shrubs to be used.

## **2.7 Engineering Geologic Report**

R&M Engineering, Inc., completed an Engineering Geologic Report in 1995 - 1996. This included logging and sampling 13 test pits and summarizing the results in a letter and two drawings. The test pit locations were limited by topography as a ravine through the property is not passable without extensive earthwork. To supplement that work for this project, R&M Engineering walked the site and performed hand auger test holes. A supplemental Engineering Geologic Report was prepared from this investigation. Both the 1997 and current results are included as Appendix B.

## **2.8 Work Schedule**

The project is divided into two Phases. Phase 1 includes the extension of Vista Drive as a CBJ Standard Street, the development of four (4) multi-unit buildings with associated parking and storm water treatment, plus a Community Building which is centered between Phase I and Phase II. Phase I therefore includes construction of a portion of the driveway to Phase 2 (see the Finished Site Plan, Sheet C3.0) and at least a portion of the first parking lot for Phase 2. Phase 1 will also include rough grading and development of engineered fill embankments for Phase 2 buildings. This will allow approximately one year for additional soil consolidation where Phase 2 buildings will be placed on fill. These areas will be graded to control runoff and stabilized with vegetation and wood chips.



The following milestones are planned for the work schedule:

PHASE 1:

- |  |                              |
|--|------------------------------|
| 1. Begin Construction, Phase 1               | Feb / March 2014             |
| 2. Stabilize Cut and Fill Slopes             | Within 2 weeks of completion |
| 3. Complete Earthwork, Ph 1 and Ph 2 (rough) | June 2014                    |
| 4. Pour Foundations, Buildings 1-4 & CC*     | July 2014                    |
| 5. Complete Buildings 1-4 & CC*              | April 2015                   |

\*CC = Community Center

PHASE 2:

- |  |                              |
|--|------------------------------|
| 1. Begin Construction, Phase 2 **        | Feb / March 2015             |
| 2. Stabilize Cut and Fill Slopes         | Within 2 weeks of completion |
| 3. Complete Earthwork, Remainder Phase 2 | June 2015                    |
| 4. Pour Foundations, Buildings 5-8       | July 2015                    |
| 5. Complete Buildings 5-8                | April 2016                   |

\*\* This assumes AHFC funding the following year. The possibility exists that Phase 2 will be funded this year, in which case Phase 1 and Phase 2 would be built concurrently.

**2.9 Other Submittals - None**

**3.0 STANDARDS FOR APPROVAL**

**3.1 Roads**

A modification to the CBJ Standard Detail for the roadway typical section is proposed in accordance with 49.70.250(1) (A) and (B). The proposed modification provides the CBJ standard sidewalk on the right side of the roadway. This is consistent with the existing typical section for Vista Drive, which has a 4 foot wide asphalt sidewalk, and reduces the earthwork as described below in 3.1.2.

**3.1.1 Traffic Analysis**

Kittleston & Associates completed an assessment of the requirements for a Traffic Impact Analysis for the site. A copy of the assessment is included in Appendix C. The assessment gives trip generations that classify the extension of Vista Drive at less than Collector Street levels.

### 3.1.2 Meet Criteria of 49.70.260

Providing a sidewalk on the development side of the street reduces the earthwork impact by allowing Vista Drive to be closer to the Lawson Creek drainage without sacrificing safety. The hillside slope down to the creek is steep and the development has sought to maintain a safety buffer for vehicles, as well as direct pedestrians to the development side of the street. A sidewalk on the Lawson Creek side would encourage pedestrians near Lawson Creek and push the roadway and the buildings closer to the first on-site ravine. The developer is seeking to minimize placement of building foundation on fill which will provide for a more stable hillside.

### 3.1.3 Cul-de-sac or Secondary Access

This project proposes to terminate Vista Drive in a hammer head configuration that complies with the Fire Apparatus Access Roads, Section D103.4 Dead Ends standard. A full CBJ Standard cul-de-sac would result in greater excavation and put the edge of the cul-de-sac very near to the Lawson Creek hillside. The hammer head configuration facilitates vehicle turnaround while minimizing hillside cut.

### 3.1.4 Road Width

The development proposes to maintain the standard CBJ Street width, and to provide a single five-foot pedestrian way (sidewalk). We are proposing this for the entire extension of Vista Drive for the following reasons:

- The existing Vista Drive typical section includes a four-foot sidewalk on only the uphill (right) side. The proposed typical section matches this, while also improving to a five-foot sidewalk.
- All pedestrians from the development will be originating from or traveling to housing on the right side of Vista Drive. This is an improvement over the existing condominiums arrangement, which requires pedestrians to cross Vista Drive to access the sidewalk.
- Snow storage can be provided along the left side of the street in the relatively flat area between the curb and hillside.

There are driveway entrances along the stretch, but they are not compromised by this modification because the roadway width and grade meet CBJ standards.

### 3.1.5 Road Grade

No modification is proposed.

## 3.2 **Weather**

The developer will coordinate their work schedule with predominant weather conditions and CBJ requirements.

## **5.2 Winter Maintenance & Snow Storage**

The extension of Vista Drive will be a CBJ Street. Maintenance will be by CBJ Public Works. The housing will have a manager who will manage maintenance and snow removal. Areas for snow storage are indicated on the Finished Site Plan (C3.1).

## **5.3 Lighting**

Street lighting will be in accordance with CBJ standard street lights, or better. Standard glare cutoff shields will be used. Building lighting is being submitted as part of the Conditional Use permit application, which will address glare and related issues.

## **5.4 Common Areas**

A Community Building and Playground are proposed for the project and are shown on the Final Site Plan and the Engineering Drawings. Both are located near the top of the development between Phase 1 and Phase 2. They are expected to be shielded by Building 1 from the condominiums view plane up the hill. Due to the elevation difference (the playground is over 30 feet higher than the existing condominiums), sound is expected to be minimal.

## **5.5 Other Permits**

A USACE Wetlands permit has already been obtained for the project area based on the previous project footprint, which is larger than this site. A copy of this permit is included for reference.



September 11, 2013

Beth McKibben, Senior Planner  
CBJ Community Development  
155 S. Seward Street  
Juneau, AK 99801

RE: Juneau Volunteers of America – Juneau I Housing  
Hillside Endorsement – Amendment No. 1

Dear Ms. McKibben:

This letter summarizes modifications or additions we are making to the Hillside Endorsement application package submitted on August 30, 2013. These changes are being made to better address or clarify items in the application package. We are referencing specific sections of the application with direction on supplementing the existing information or replacing it in its entirety.

Please make the following amendments to the Hillside Endorsement application package:

1. Project Narrative, Section 2.6 Landscaping Plan. **ADD** the following:

*The landscape design for the JVOA- Juneau I Housing has been prepared in accordance with 04 CBJAC 060 Landscape Requirements, as modified to best suit the site. The project site abuts properties zoned D-5 on the south side of the site, D-18 on the northwest side of the site, D-18 on the southeast side of the site (or Urban Street depending on interpretation). Based on Table 1 and Table 2, the site requires 5-foot landscape buffering on the northwest side of the site and the south east side of the site. Much of the required buffering on the northwest side of the site will be met with existing natural vegetation. During construction, the natural vegetation area to remain will be fenced off with temporary construction fencing for protection and to ensure that care is taken to maintain this vegetation. For other areas with perimeter landscape requirements, we have included landscape quantities to match the ordinance requirements. It is not reasonably possible to plant the quantity of landscape materials (two rows of trees at 15 feet on center, five feet apart) in a 5-foot wide buffer. As can be seen on Sheet L1.1, we have dispersed those plantings to visually enhance the proposed new buildings. It should be noted that screening on this side of the development is achieved by the mature vegetation that exists on either side of Lawson Creek, which will not be disturbed.*

*Interior Landscape has been developed to accent and complement the buildings. Larger trees are placed in groupings near corners of buildings and in smaller groupings away from buildings. Shrubs and perennial plantings are used for building accents near entries and focal points where the scale is appropriate. Plant materials have been selected to provide color, texture and form throughout the year.*

*Due to the slope of the site, tree plantings are located nearer the buildings. On the steeper fill slopes of the site, we are proposing a native grass mix or a mix of native grasses and wildflowers to stabilize the slope and to provide seasonal interest until other native vegetation volunteers on those slopes.*

907-374-0275 ■ 877-375-8335 (fax) ■ 1901 Airport Way ■ Fairbanks, Alaska 99701 ■ [www.dowlhkm.com](http://www.dowlhkm.com)

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2. Appendix A: Hillside Endorsement Permit Drawing Set (see Attachment 1).

**REPLACE** the following sheets (changes are noted with a revision cloud on the new sheets):

- a. COVER SHEET, G1.0 – Changes as noted.
- b. LANDSCAPING SITE PLAN, C3.2 – Sheet name and purpose is changed to Vegetative Cover. Separate Landscaping sheets are added included below.
- c. SITE GRADING PLANS, C5.1 & C5.2 – Luminaire pole locations corrected and other minor changes.

**ADD** the following sheets (see Attachment 2):


- a. LANDSCAPING PLAN (1 OF 2), L1.1
- b. LANDSCAPING PLAN (2 OF 2), L1.2
- c. LANDSCAPING DETAILS, L2.1

3. Appendix B: Engineering Geologic Report.

- a. **REPLACE** the “piece-meal” drawings associated with the 1995 Engineering Geologic Report with the attached 11x17 pdf “complete” versions (see Attachment 3).
- b. **ADD** the current Engineering Geological Report, titled “Juneau Housing I – Lawson Creek, Geotechnical Letter Report,” by R&M Engineering (see Attachment 4).

We trust this new information assists with your review effort. Please contact me with any questions you may have.

Regards,  
DOWL HKM

  
Gary L. Jenkins II, PE  
Civil Engineer

cc: Ron Bateman, Lumen design+build, LLC  
Glenn Gellert, Developer  
file



R&M ENGINEERING, INC.  
ENGINEERS  
GEOLOGISTS  
SURVEYORS

6205 GLACIER HWY. «» JUNEAU, ALASKA 99801  
PHONE: 907-780-6060 «» FAX: 907-780-4611  
EMAIL: rmengineering@rmjuneau.com

September 3, 2013

DOWL HKM  
5386 Commercial Boulevard  
Juneau, Alaska 99801

Attention: Pete Hildre, P.E.  
Principal

Re: Juneau Housing I - Lawson Creek  
Geotechnical Letter Report  
R&M Project No. 131183

Dear Mr. Hildre,

As authorized by DOWL HKM, a notice to proceed was issued on August 7, 2013, R&M Engineering, Inc. (R&M) conducted a field reconnaissance on the proposed Juneau Housing I-Lawson Creek project on August 21, 2013. The field reconnaissance was accomplished by conducting a study of the general features of the site, identifying ground features of engineering significance, i.e., slope conditions, drainage and streams, presence of bedrock; and by random soil probing to determine thickness of soft or unsuitable soil layer. The field work was performed in reference to the preliminary site plan and building cross sections furnished to R&M by Gary Jenkins, P.E., DOWL HKM on August 20, 2013.

### Introduction

The agreed scope of work for this project included reviewing the 1995 R&M geologic assessment information in conjunction with our geotechnical engineer walking the subject property to visually observe any bedrock outcroppings and perform random hand auger probes on the north side of the main drainage channel. A letter report would be prepared that describes site preparation recommendations for constructing two story buildings grouped as shown in the concept plan, brief geologic description of the site, groundwater control suggestions, frost penetration depth, weather sensitivity issues, allowable soil bearing pressures, suitability of existing soils for reuse on the project and site drainage recommendations.

The geological assessment letter by R&M for the Gastineau Vista Park Development in October 12, 1995, is cited and referenced in generating this geotechnical letter report. A total of 13 machine dug test pits were completed in 1995. Some of the test pits fall within the proposed Juneau Housing I – Lawson Creek buildings. See the attached Test Pits and Soil Probing Location Map. Selected photos taken during the field reconnaissance and selected photos of the 1995 machine dug test pits were included in this report to depict the general soil and site conditions of the project. The recommendations presented in this letter report may be used for the preliminary design of the project. For report purposes Gastineau Channel is considered east.

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PAUL J. CANTERUDO

### **Site Description**

The project site is located on Douglas Island on a moderately sloping upland bounded by steep stream valleys on each side. Unnamed Creek is located on the north side and Lawson Creek on its south side. According to the R&M 1995 Geological Assessment Report, the project site was formed by glacial till, deposited by the glacier that carved the Gastineau Channel Fiord. The terrain is generally sloping towards Douglas Highway (east side). The site is covered by sparse to dense Spruce Hemlock forest with Blueberry and devils club underbrush. Second growth Alder trees were noted at the northeast portion of the site.

### **Subsurface Conditions**

Based on the machine dug test pits in 1995, the subsurface conditions at the project site consists of peat and organic material and/or organic rich soil cover from 0.5 to 4.0 feet thick. The south side represented by TP-9, TP-10, TP-11, TP-12 & TP-13, underlying the organic mat and/or organic soil, is the well drained, coarse and angular sand and gravel deposits persisted to 12 to 18 feet depth between test pits location. The sand and gravel deposits are probable mountain stream fan deposits laid down as the glacier receded. Underlying the organic mat and/or organic soil on TH-7 and TH-8 is the stiff blue gray poorly sorted silty sandy gravel with cobbles (glacial till) persistent to 15 to 18 feet in depth between the two test pits.



**Figure 1: 1995 TP-3 showing a bluish gray glacial till common beneath all 1995 test pits.**

Hand soil probes at the south side, P-1, P-2, & P-3, revealed soft and unsuitable soil thickness from 1.5 to 6 feet below the surface. The rest of the soil probes revealed that thickness of soft and unsuitable soil varies from 1 to 3 feet. Underlying the soft and unsuitable soil is either the stiff glacial till or medium dense sand layer where the soil probe refused to penetrate.

In the north stream valley (unnamed creek), coarse gravel to boulders are scattered and deposited upstream and downstream of the creek. The coarse gravel to boulders materials are generally sub-rounded to angular and likely eroded from the glacial till formation described in the test pits. In elevated areas at the sides of the creek, the coarse gravel to boulder materials are covered with 0.5 to 2 feet thick of silty sand sediments. Soil probing depths were limited to 1 to 2 feet depth because of the large size materials. No bedrock outcrops were visually observed during the site reconnaissance visit.

### **Drainage and Slope Conditions**

Water seepage and runoffs were noted discharging towards the steep stream valleys on each side of the site. The creek water level of unnamed creek varied from 6" deep to less than 12".

In the 1995 test pits, ground water level was observed where the surface of the glacial till layer was encountered. It is likely the observed ground water levels are perched or trapped water over the impermeable glacial till layer.

Slope erosions were mostly noted on the north stream valley. By visual inspection, the slope erosions were mainly of shallow failure type, emanating from the upper loose or soft layer and exited on the firm glacial till. The eroded materials were mostly sand and gravel mixed with gray silt. Several trees were observed uprooted at the steep side slope of the north stream valley and fell over the creek.



**Figure 2: Photo showing shallow erosion at the steep slope on south side of unnamed creek**

### **RECOMMENDATIONS**

#### **Soil Bearing Capacity & Settlement**

Site cross section A-A provided by DOWL HKM indicates building and parking structure excavation depths from 20-30 feet below original ground. The 1995 test pit depths were a maximum of 18 feet. Where the site excavation for the building/parking foundation is in the 20-foot depth, the indicated footings are likely to bear on the stiff glacial till material. As described in the R&M's October 12, 1995 Geologic Assessment Report for the Gastineau Vista Park Development, the glacial till is generally stable when undisturbed and not saturated. In those areas where excavation depth is greater than 20 feet, the glacial till formations could become very dense requiring a pneumatic impact breaker and/or bedrock could be present. Additional borehole exploration program is recommended on this site since the planned excavation cut depths are well below the depths of the test pits. The boreholes will verify the soil conditions below the deep cuts for building/parking foundations and supplement this letter report.

For preliminary design and analysis of the building footings, a maximum allowable soil bearing of 2.0 kips/ft<sup>2</sup> (2,000 psf) may be assumed for spread and continuous footings designed and constructed on the stiff glacial till layer. Settlement for the recommended soil bearing capacity is practically negligible. In designing the foundation to resist lateral loads, an allowable passive resistance (SF=2) of 200 lb/ft<sup>2</sup> per foot of depth and a coefficient of friction equal to 0.35 may be utilized for footings embedment into the stiff glacial till.



For the analysis of earthquake loading, the above values of allowable bearing pressure and passive resistance may be increased by a factor of one-third. This material is not expected to be weakened by the earthquake-induced ground motion.

**Seismic Zone and Site Class**

The Latest International Building Code (IBC 2009) uses a recurrence level of 2% chance of exceedance in 50 years (a 2,500 year recurrence interval) as a basis for design. For a recurrence level of 2% in 50 years, the following seismic accelerations were derived from USGS probabilistic seismic hazard (AK 1999).

Peak Ground Acceleration (PGA) = 0.246g  
 Spectral Response: 0.2 Sec ( $S_s$ ) = 56.04%  
 1.0 Sec ( $S_1$ ) = 26.77%

The spectral response was derived based on Latitude = 58.3 and Longitude = -134.4.  
 The IBC 2009 soil classification for the site based on the limited geotechnical data, in our opinion, may be taken as Class D.

**Lateral Earth Pressure**

In general, lateral loads can be resisted through frictional resistance to sliding along the base of the foundation and the sides of the foundation walls (if any), and through passive resistance against the foundation. Both earth pressure coefficients at rest  $K_0$  (to be applied for stiff structures at rest, non-yielding) and active earth pressure coefficients  $K_a$  (to be applied for cantilever retaining walls, yielding) are derived from the frictional angles of the actual applied backfill materials, assumed roughness and inclination of surface of backfill. For stiff constructions at rest, the degree of compaction applied will affect the earth pressure on the structure. Over-compaction of any backfill behind the wall should be prevented, especially on walls design for at-rest lateral pressure.

The following active and at-rest lateral earth pressures coefficient may be used in designing yielding and non-yielding walls.

**Table 1: Coefficient of Lateral Earth Pressure**

Soil/Rock type	Total Unit Weight, $\gamma_{total}$ [PCF]	Angle of Friction, $\phi$ [°]	Active Pressure Coeff. $K_a$	At-Rest Pressure Coeff. $K_0$	Additional Earth Pressure (Seismic)*
Compacted Gravel/ Shot rock Fill	135	36	0.26	0.41	$\frac{3}{4}$ of PGA=0.18
Loose to Med. Dense Sand/Gravel	130	32	0.31	0.47	
Soft to Stiff Clay/Glacial Till	127	30	0.33	0.50	
Very dense Glacial Till	138	40	0.22	0.36	

\*-The NAVFAC DM.7-2 suggest that the earth pressure coefficient for dynamic increase in lateral force can be approximated as  $\frac{3}{4}$  of the horizontal acceleration. The dynamic lateral force is assumed to act at 0.6H above the wall base.

### Dewatering

Based on the 1995 machine dug test pits, the ground water level appeared to be perched water table. Controlling ground water during excavation will require implementation of vertical sumps with submersible pumps to dewater the site. On days with high precipitation from rain additional sumps and pumps may be necessary to control the water. Dewatering discharge shall comply with local, state and federal requirements.

### Slope Protection/Construction

We understand based on the proposed building cross sections that permanent slope protection is required to support the proposed cut and existing slopes, and footings that are located near the slopes. Based on the soil information of the site, in our opinion, the proposed high cut slopes and the existing slopes may be stabilized or protected by externally stabilized concrete retaining structures (i.e., concrete cantilever wall or MSE wall if space allows).

With the anticipated cut depth of 20 to 30 feet for the proposed building construction, it is assumed that the slope protection or retaining wall will also be founded on the stiff Glacial Till layer. Thus, the soil bearing capacity recommended in Soil Bearing Capacity and Settlement Section and the Coefficient of Lateral Earth Pressures in Table 1 may be used in the design.

Aside from designing the slope protection or retaining walls for the superimposed effect of lateral earth pressure and lateral force due to seismic, it is recommended that the retaining walls be designed assuming the full height of the wall, so that high water seepage and runoffs that may develop unwanted build-up of hydrostatic pressure behind the wall will be taken into consideration. Drainage behind walls should use a NFS free draining, clean gravel or 2" minus shot rock to help relieve any unwanted build-up of hydrostatic pressure.

Based on the subsurface soil layers that we know of at the site, the exposed Glacial Till soils should be covered with visqueen or protected with permanent shot rock slope protection as soon as possible to avoid saturation and potential slope failure. Erosion protection measures such as Coir jute mesh with hydroseed mix or rock slope protection with a blanket of 12" minus well graded shot rock 12" thick should be implemented to protect final surface sloughing or erosion.

The table below shall serve as a guide in the selection of an appropriate temporary cut slope based on soil formation encountered.

**Table 2: Suggested Temporary Cut Slope**

Soil Material	Height of Cut (feet)	Slope Gradient H:V
Muskeg, organic mat	Up to 5 feet	2:1
	> 5 ft to 10 feet	3:1
Soft to Stiff clayey Soil/Glacial Till, Sand	Up to 10 feet	1.5:1
	> 10 to 20 feet	2:1 or flatter

It is recommended that the stability of the slope should be monitored especially during and after heavy rainfall events. The above cut slopes are temporary and a flatter or stepped cut slopes should be constructed depending on the actual type of soil material and terrain encountered.

**Foundation/Parking Pad Preparation**

It is recommended that the foundation/parking pad excavations be kept as dry as possible during construction. If the glacial till foundation soils are allowed to become wet and saturated, it will become soft, shear strength decrease, and compaction of the engineered shot rock fill will become a problem. If the engineered fill is not well compacted the recommended allowable soil bearing pressure will not be valid. After approved erosion control devices installed and the site is cleared/grubbed the existing soft organic soils should be removed and disposed. The sand gravel layer would be excavated and stockpiled on site for future use. Glacial till soils are recommended to be excavated to a depth of 12" below the bottom of the footing and 2" minus compacted shot rock placed. Soft spots encountered will need to be over-excavated and replaced in compacted lifts with 12" minus shot rock.

If additional backfill is required, compacted shot rock borrow may be used to protect the glacial till material from potential swelling and loss of shear strength.

**Usable Excavation**

In the R&M 1995 Geologic Assessment Report, the sand and gravel deposits at the site were considered as a usable construction material. Sand/gravel materials are moisture sensitive and on site quality testing of this material during construction to determine the optimum moisture density curves is recommended. From our initial geotechnical work we can not confirm the quantity or quality of this material.

**Embankment Fill**

Review of the concept cross sections provided show a proposed fill area at the north creek side has coarse gravel and boulders exposed in the creek bottom. No soil data was obtained underneath the coarse gravel and boulders at the creek so we have no knowledge if soft or compressible layers exist or not. Assuming the existing subsurface soil conditions are stable, we recommend durable, non-frost susceptible, free draining 12" shot rock borrow to be placed and compacted to a 6' depth above the ground prior to the placement of usable on site

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excavated material. Scour protection should be designed to prevent the toe of the embankment from undermining especially during high precipitation events.

The non-frost susceptible (NFS) shot rock borrow should be compacted with a vibratory grid roller (minimum centrifugal force shall be 50,000 lb) with a minimum of 8 passes prior to placement of subsequent lifts or until no more settlement and movement is observed. Lift thickness should not exceed 18-inch depth of 12-inch minus material.

### **Drainage**

During and after construction, it is equally important to grade the site to divert surface water away from the foundation and provide a properly designed drainage system to intercept concentrated runoffs. Engineering measures must be initiated to prevent water inflow into the building foundation excavation and all other areas during construction. The excavation bottom must be kept dry as possible or the glacial till materials may become unmanageable even if it was originally found to be dry. Excessive rain or snow might have a similar effect during construction. The existing drainage channels on the north side of the site where parking lots and building E is planned will require careful sizing of the storm drain pipe with adequate inlet and out headwall control devices to prevent scour and erosion in storm events. Installation of drainage culverts and design of energy dissipater for culverts is necessary to prevent the embankment fill from absorbing high water velocity impacts.

Post construction surface and groundwater problems should not occur as long as:

1. All below-grade portions of the building are properly water and moisture-proofed by waterproofing the below grade foundation walls and placement of a plastic vapor barrier below the floor slabs.
2. Surface water is effectively isolated from entering all soils below foundation footings and floor slabs.
3. Surface grading is accomplished in a manner that will positively divert surface water runoff away from the proposed building.
4. Concentrated runoff is controlled by installing perimeter foundation and roof drain systems to route surface and subsurface drainage away from the proposed building.

### **Frost Protection**

The CBJ building department specifies a minimum foundation depth of 32 inches to minimize frost problems; however in some situations, frost has been measured in the CBJ over 4' deep.

Several techniques can be used to alleviate frost problems including burying foundations to depths lower than the frost will penetrate, and designing the building to withstand the frost heaving and jacking forces.

### **LIMITATIONS**

This letter report was prepared to aid DOWL HKM in the design of this specific project. Its scope is limited to the project and location described herein and represents our understanding of the surface and subsurface conditions at the site, at the time of the letter report.

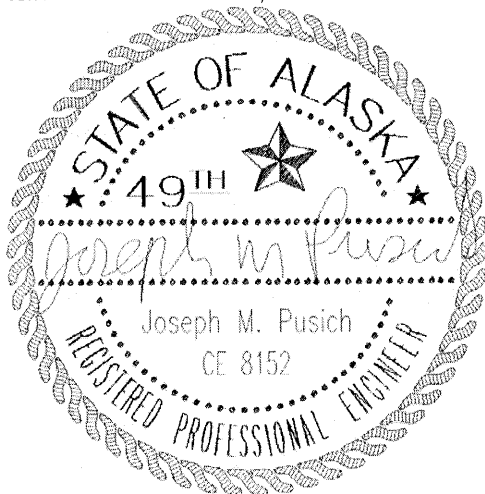
The geotechnical recommendations presented in this geotechnical letter report are developed from the limited information obtained from R&M's 1995 Geologic Assessment Report for the Gastineau Vista Park Development project and the present field reconnaissance survey and random soil probing. Soil conditions may differ from those described in the 1995 tests pits and from the assumed soil layer from random soil probing which may not become evident until during actual construction. Construction monitoring by the geotechnical engineer or a representative is therefore considered necessary to verify the subsurface conditions.

R&M is not responsible for safety programs, methods or procedures of operation, or the construction of the design recommendations provided in this report. Where recommendations are general, or not called out, the recommendations shall conform to standards of the industry. This geotechnical report is for use on this project only and is not intended for reuse without written approval from R&M. This geotechnical report is not to be used in a manner that would constitute a detriment directly, or indirectly, to R&M.

Furthermore, if the project characteristics are altered significantly from those furnished to us and discussed in this report, or if additional information becomes available, a review must be made by R&M office to determine if any modification in the recommendations will be required.

Should you have any questions concerning this report, please contact us at 780-6060.  
Sincerely,

R&M ENGINEERING, INC.



J. Mark Pusich, P.E.  
Civil Engineer

A handwritten signature in black ink, appearing to read "Edmon S. Cruz".

Edmon S. Cruz  
Geotechnical Engineer

Attachments: Test Pit and Soil Probe Location Map  
Selected Photos



**LEGEND**

TP-6 1995 TEST PIT

P-5 2013 TEST PROBE

**NOTE:**  
 THIS SITE PLAN INFORMATION SHOWN  
 PROVIDED TO R&M ENGINEERING, INC. FROM  
 DOWL, H&M ON AUGUST 20, 2013.



**Juneau Housing 1 - Lawson Creek**

Probe No.	Organic Matter (Depth in inches)	Organic rich Gravelly Silt (Depth in inches)	Silty Sand w/ trace of Gravel (Depth in inches)	Sandy Gravel w/ trace of Silt (Depth in inches)	Sand (Depth in inches)	Gravelly Sand (Depth in inches)	Sandy Gravel (Depth in inches)	Gravel (Depth in inches)	Blue Gray Silty Sand/ Gravel w/ Cobble (Depth in inches)	Global Till (Depth in inches)	Notes
TP-7	0-24	0-24	35-72		24-192				102 (16'-0")	192-210 (16'-0")	GROUND WATER AT 90
TP-9	0-30	0-6				30-216 (2'-5"-18)					GROUND WATER AT 192
TP-10	0-6	0-6				6-72		72-84			
TP-11	0-6	0-6				6-72		72-84			
TP-12	0-24	0-24	12-48			24-192 (2'-12)		60-72			
TP-13	0-12	0-12	42-*								
P-1	0-18	18-36	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-2	0-18	18-36	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-3	0-18	18-36	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-4	0-12	0-6	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-5	0-6	0-6	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-6	0-6	0-6	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-7	0-18	0-24	24-54	36-*		60-72					* PROBE HARD TO PENETRATE
P-8	0-18	0-24	24-54	36-*		60-72					* PROBE HARD TO PENETRATE
P-9	0-18	0-24	24-54	36-*		60-72					* PROBE HARD TO PENETRATE
P-10	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-11	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-12	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-13	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-14	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-15	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-16	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-17	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-18	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-19	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-20	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE
P-21	0-12	0-12	12-24	36-*		60-72					* PROBE HARD TO PENETRATE

**R & M ENGINEERING, INC.**  
 ENGINEERS  
 6205 GLACIER HIGHWAY  
 JUNEAU, AK 99801  
 Phone: 907-786-0465  
 Fax: 907-786-4611  
[www.rmengineering.com](http://www.rmengineering.com)

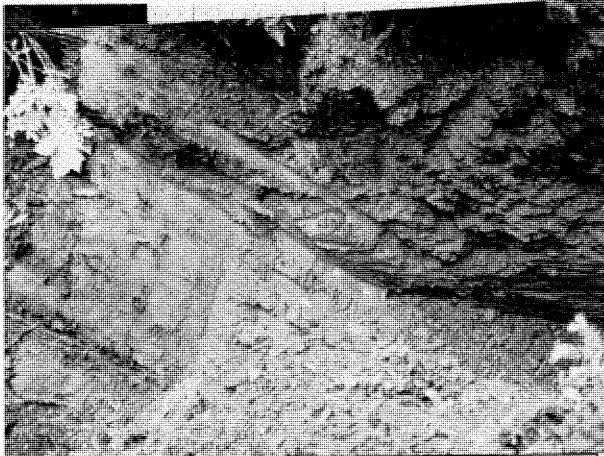
JUNEAU HOUSING 1 - LAWSON CREEK  
 GEOTECHNICAL INVESTIGATION  
 CITY & BOROUGH OF JUNEAU, ALASKA

DESIGN: [ ]  
 DRAWN: [ ]  
 CHECK: [ ]  
 APPROVED: [ ]  
 FILE: [ ]

NO. DATE BY APPROV.  
 REVISION

DATE: SEPTEMBER 3, 2013  
 DRAW NO.: 131123  
 SHEET: 1 of 1

**SELECTED PHOTOS**



Typical glacial till layer found in the 1995 machine dug test pits.



Usable sand and gravel materials observed in the 1995 test pits.



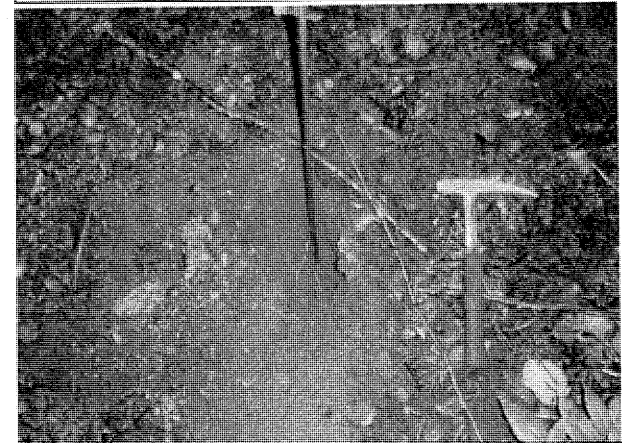
Photo showing the steep slope at the north creek



Coarse gravel to boulders materials covering the north creek



The steep slope at the Lawson Creek side with soil probe pushed to 6 feet depth.



Sand and gravel materials at side of the steep slope, north end of the proposed building A.

LOG OF TEST PITS  
GASTINEAU VISTA PARK

TEST PIT NO.	ORGANIC MAT. & WATTER	FEET	DEPTH TO DESCRIBED MATERIAL							COMMENTS
			SILTY SAND	SANDY SILT	SAND	GRAVELLY SAND	SANDY GRAVEL	GRAVEL	BLUE-GRAY SILT	
1	0 - 0.5	0.5 - 1.5								GROUND WATER AT 2.0
2	0 - 1.0	1.0 - 2.0								
3	0 - 2.0	2.0 - 11.0								TRACE OF SILT 1.0-12.0
4	0 - 4.0	4.0 - 8.0								GROUND WATER AT 10.50
5	0 - 2.0	2.0 - 6.0								GROUND WATER AT 5.0
6	0 - 2.0	2.0 - 18.0								GROUND WATER AT 12.5
7	0 - 2.0	2.0 - 18.0								GROUND WATER AT 16.0
8	0 - 2.0	2.0 - 18.0								GROUND WATER AT 16.0
9	0 - 2.0	2.0 - 18.0								GROUND WATER AT 16.0
10	0 - 0.5	0.5 - 7.0								GROUND WATER AT 7.0
11	0 - 0.5	0.5 - 2.0								GROUND WATER AT 2.0
12	0 - 2.0	2.0 - 14.0								GROUND WATER AT 14.0
13	0 - 1.0	1.0 - 14.0								GROUND WATER AT 14.0

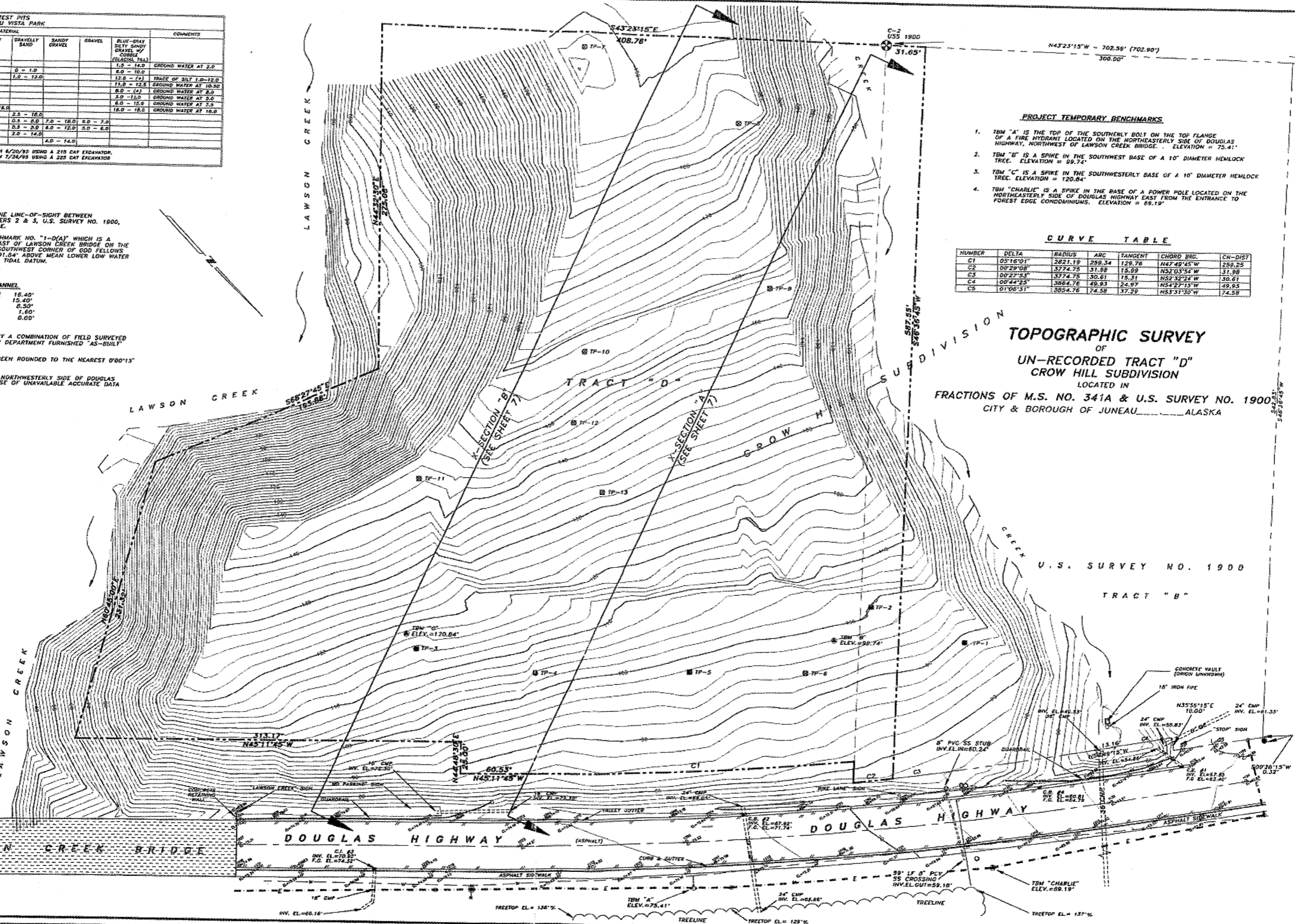
TEST PITS 1 - 8 WERE CONDUCTED ON 6/20/96 USING A 210 CAT EXCAVATOR  
TEST PITS 9 - 13 WERE CONDUCTED ON 7/24/96 USING A 225 CAT EXCAVATOR

- GENERAL NOTES:
- BASIS OF BEARING FOR THIS SURVEY WAS THE LINE-OF-SIGHT BETWEEN RECOVERED ORIGINAL OLD MONUMENTS CORNERS 2 & 3, U.S. SURVEY NO. 1900, HAVING A RECORD BEARING OF S 43°23'15" E.
  - BASIS OF VERTICAL CONTROL WAS CBJ BENCHMARK NO. "1-D(A)" WHICH IS A SPIKE NEAR THE BASE OF A POWER POLE EAST OF LAWSON CREEK BRIDGE ON THE NORTH SIDE OF DOUGLAS HIGHWAY AT THE SOUTHWEST CORNER OF GOD FELLOWS CEMETERY. ELEVATION OF BENCHMARK IS 101.84' ABOVE MEAN LOWER LOW WATER (M.L.L.W.), U.S.C. & G.S. GASTINEAU CHANNEL TIDAL DATUM.
- TIDAL DATUM  
JUNEAU, GASTINEAU CHANNEL
- |                        |        |
|------------------------|--------|
| MEAN HIGHER HIGH WATER | 16.40' |
| MEAN HIGH WATER        | 15.40' |
| MEAN TIDE LEVEL        | 0.50'  |
| MEAN LOW WATER         | 1.80'  |
| MEAN LOWER LOW WATER   | 0.00'  |
- UTILITIES SHOWN HEREON WERE DETERMINED BY A COMBINATION OF FIELD SURVEYED LOCATIONS AND CBJ UTILITY AND ENGINEERING DEPARTMENT FURNISHED "AS-BUILT" INFORMATION.
  - ALL BEARINGS DENOTED BY THIS PLAT HAVE BEEN ROUNDED TO THE NEAREST 0'00"15" OF ARC.
  - AN 8" DIAMETER WATER MAIN EXISTS ON THE NORTHWESTERLY SIDE OF DOUGLAS HIGHWAY BUT IS NOT PLOTTED HEREON BECAUSE OF UNAVAILABLE ACCURATE DATA PER CBJ WATER UTILITIES DEPARTMENT.

- SYMBOLS
- OLD/BLM MONUMENT (RECOVERED)
  - 3003-S SECONDARY MONUMENT (RECOVERED)
  - PROPERTY / BOUNDARY LINE
  - CENTERLINE
  - EXISTING OVERHEAD POWERLINE
  - EDGE OF PAVEMENT
  - EXISTING CULVERT
  - EXISTING WATER LINE
  - CONTOUR LINE
  - SPOT ELEVATION
  - ⊙ WATER VAULT MANHOLE
  - ⊕ EXISTING WATER VALVE
  - ⊕ EXISTING FIRE HYDRANT
  - EXPOSED END OF PVC CONDUIT
  - EXISTING UTILITY POLE
  - ⊕ EXISTING CURB INLET / CATCH BASIN
  - ⊕ EXISTING SIGN POST
  - TP-# SUBSURFACE TEST PIT LOCATION & NUMBER (BY SURVEY)
  - TP-# EXISTING TEST PIT LOCATION (APPROXIMATE)
  - ⊕ TEMPORARY BENCHMARK (TBM)

SCALE 1" = 40'

CONTOUR INTERVAL = 2 FEET



- PROJECT TEMPORARY BENCHMARKS
- TBM "A" IS THE TOP OF THE SOUTHERLY BOLT ON THE TOP FLANGE OF A FIRE HYDRANT LOCATED ON THE NORTHEASTERLY SIDE OF DOUGLAS HIGHWAY, NORTHWEST OF LAWSON CREEK BRIDGE. ELEVATION = 75.41'
  - TBM "B" IS A SPIKE IN THE SOUTHWEST BASE OF A 10" DIAMETER HEMLOCK TREE. ELEVATION = 59.74'
  - TBM "C" IS A SPIKE IN THE SOUTHWESTERLY BASE OF A 10" DIAMETER HEMLOCK TREE. ELEVATION = 120.84'
  - TBM "CHARLIE" IS A SPIKE IN THE BASE OF A POWER POLE LOCATED ON THE NORTHEASTERLY SIDE OF DOUGLAS HIGHWAY EAST FROM THE ENTRANCE TO FOREST EDGE CONDOMINIUMS. ELEVATION = 89.19'

CURVE TABLE

NUMBER	DELTA	RADIUS	ARC	TANGENT	CHORD BRG.	CH-DIST
C1	05°16'01"	2821.19	259.54	129.76	N47°40'45" W	259.25
C2	00°27'00"	1374.75	31.98	15.99	N52°03'54" W	31.98
C3	00°27'55"	1374.75	30.61	15.31	N52°22'24" W	30.61
C4	00°44'25"	1084.76	48.93	24.47	N54°27'15" W	48.93
C5	01°08'51"	1084.76	74.58	37.29	N53°31'30" W	74.58

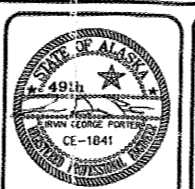
TOPOGRAPHIC SURVEY  
OF  
UN-RECORDED TRACT "D"  
CROW HILL SUBDIVISION  
LOCATED IN  
FRACTIONS OF M.S. NO. 341A & U.S. SURVEY NO. 1900  
CITY & BOROUGH OF JUNEAU, ALASKA

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SEP 24 1996  
FBI CENTER/CDD

EP/G-VISTA CN-TOPD.DWG/1:40 PLOT DATE: 04/10/96 at 8:35

DESIGN	I.G.P.			
DRAWN	N.R.S.			
CHECK	I.G.P.			
APPROVED	M.A.M.			
NO.	DATE	REVISION	BY	APPRVD.

TOPOGRAPHIC SURVEY MAP  
EXISTING PRE-CONSTRUCTION  
SITE CONDITIONS

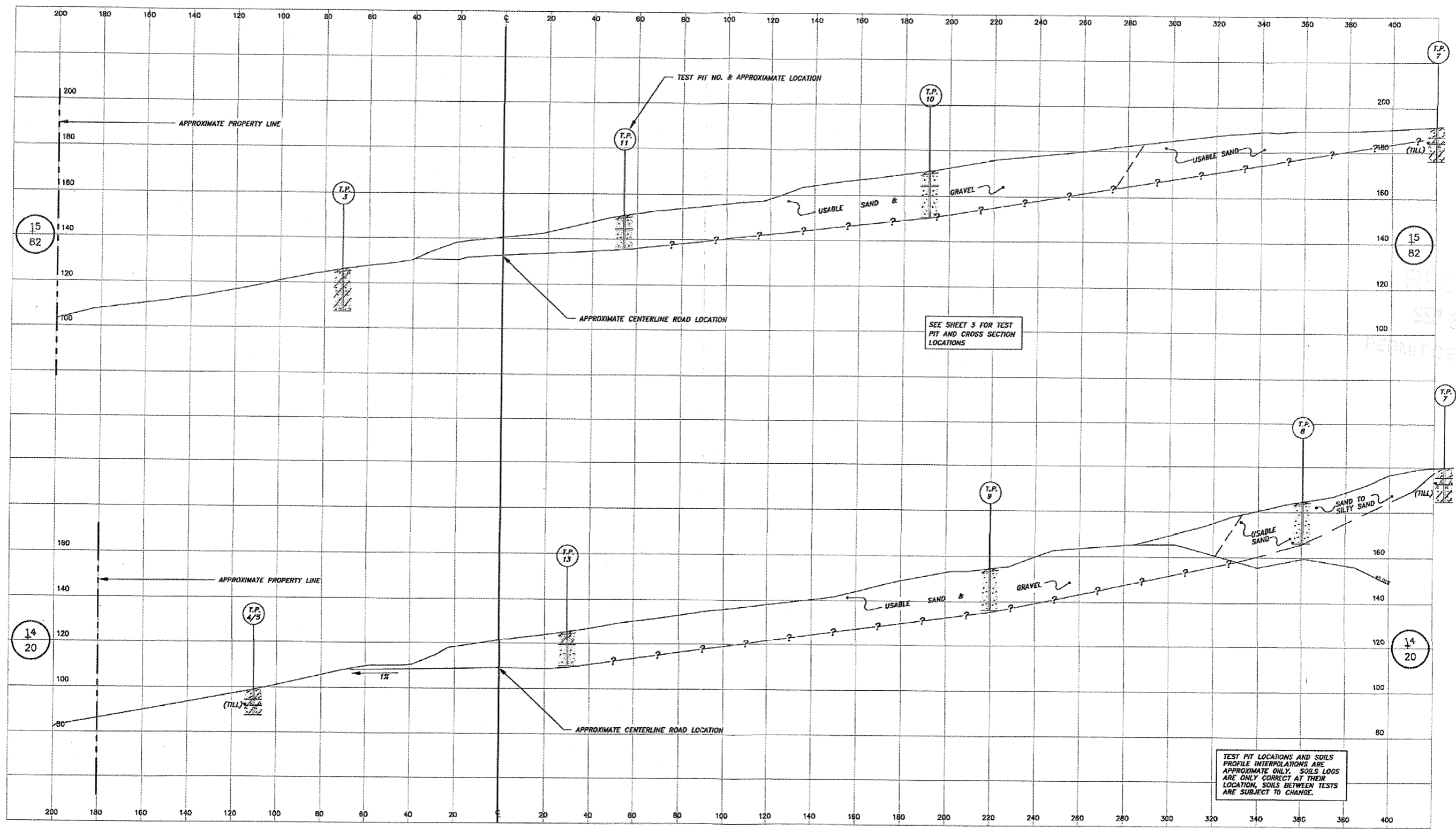


**R & M**  
R & M ENGINEERING, INC.  
ENGINEERS GEOLOGISTS SURVEYORS

CREST @ LAWSON CREEK  
CONDOMINIUMS  
CONSTRUCTION IMPROVEMENT PLANS  
CITY & BOROUGH OF JUNEAU, ALASKA

DATE: 3/19/96  
R & M NO. 951235  
SHEET 3 of 14





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951386/EP/C-VISTA/TPXSEC.DWG RGT DATE: 04/10/96 of 7-48

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DRAWN	N.R.S.
CHECK	M.A.M.
APPROVED	M.A.M.
FILE:	?

NO.	DATE	REVISION	BY	APPROV

**GENERALIZED CROSS SECTIONS  
WITH SOILS PROFILE  
INTERPOLATIONS**



**R & M ENGINEERING, INC.**  
ENGINEERS    GEOLOGISTS    SURVEYORS

**CREST @ LAWSON CREEK  
CONDOMINIUMS**  
CONSTRUCTION IMPROVEMENT PLANS  
JUNEAU, ALASKA

CLIENT: EMERALD DEVELOPMENT  
P.O. BOX 186  
BELLEVUE, WASHINGTON 98009

DATE:	3/19/96
R & M NO.	951386
SHEET	8 of 14

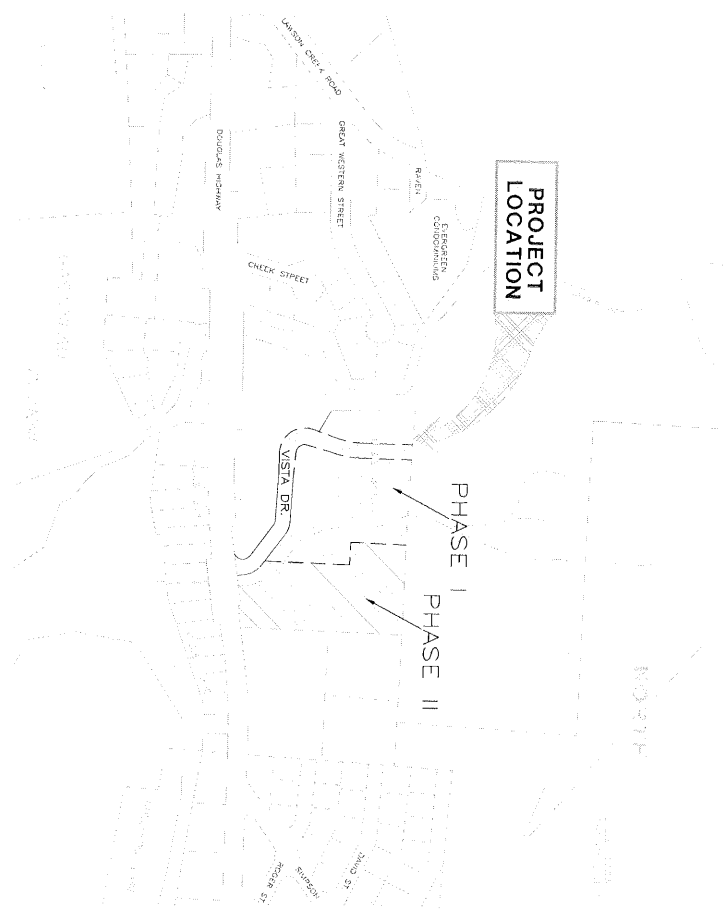
**APPENDIX A:**  
**HILLSIDE ENDORSEMENT PERMIT DRAWING SET**

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SEP 24 2023  
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# JUNEAU VOLUNTEERS OF AMERICA JUNEAU 1 HOUSING

## INDEX

DESCRIPTION	SHEET NO.
COVER SHEET	G1.0
LEGEND, ABBREVIATIONS, AND GENERAL NOTES	G1.1
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SITE DEVELOPMENT SECTIONS	C7.0-C7.1



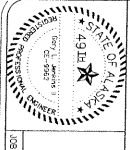
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DESIGN DEVELOPMENT:  
 HILLSIDE ENDORSEMENT  
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**DOWL HKM**  
 Consulting Engineers • Land Surveyors • Construction Administration

5368 Commercial Blvd.  
 Juneau, Alaska 99801  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAY SAFETY AND PLANNING  
 49th Anniversary



DRAWN BY: STAFF  
 CHECKED BY: STAFF  
 DATE: AUG 2013

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LEGEND, ABBREVIATIONS, AND  
 GENERAL NOTES

SHEET NO. 16 of 16

### LEGEND

DESCRIPTION	EXISTING	PROPOSED
AREA DRAIN		
BURIED ELECTRICAL UTILITIES		
CABLE TV		
TELEPHONE		
CATCH BASIN		
CATCH BASIN (REMOVE)		
CURB & GUTTER		
CUT LIMITS		
DITCH FLOW LINE		
FILL LIMITS		
FIRE HYDRANT		
HOUSE NO.		
MAIL BOX		
LIGHT POLE		
PROJECT CENTERLINE		
PROPERTY LINE		
POWER POLE		
SANITARY SEWER		
SANITARY SEWER CLEANOUT		
SANITARY SEWER MANHOLE		
STORM DRAIN MANHOLE		
STORM DRAIN PIPE		
STORM DRAIN PIPE (REMOVE)		
UNDERDRAIN		
WATER LINE		
WATER VALVE		

### ABBREVIATIONS

ACP	ASPHALT CONCRETE PAVEMENT
BOP	BEGINNING OF PROJECT
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CPP	CORRUGATED POLYETHYLENE PIPE
CTE	CONDUIT TO EXISTING
CU	COPPER
DI	DUCTILE IRON
DIA	DIAMETER
DTL	DETAIL
EG	EXISTING GROUND
GV	GATE VALVE
FG	FINISHED GRADE
FH	FIRE HYDRANT
HP	HIGH POINT
INV	INVERT
LG	UP OF GUTTER
LT	LEFT
LUM	LUMINAIRE
MH	MANHOLE
MN	MAGNETIC NAIL
MTE	MATCH TO EXISTING
NO	NUMBER
NIS	NOT TO SCALE
PC	POINT OF CURVATURE
PT	POINT OF TANGENT
PVI	POINT OF VERTICAL INTERSECTION
POC	POINT ON CURVE
PCC	POINT OF COMPOUND CURVE
PVC	POLYVINYL CHLORIDE PIPE
RT	RIGHT
SD	STORM DRAIN
SHD	SHOULDER
SHT	SHEET
SS	SANITARY SEWER
STA	STATION
STD	STANDARD
TBC	TOP BACK OF CURB
TP	TOP OF PAVEMENT
TSW	TOP OF SIDEWALK
UD	UNDERDRAIN
WV	WATER VALVE

ABBREVIATIONS TO BE USED WITHOUT PERIODS

### GENERAL NOTES

1. BEGIN SUBMIT AT 24 INCHES FROM PAVEMENT SAWCUT LINE AT STREET CONNECTIONS UNLESS OTHERWISE SHOWN ON THE PLANS. CURB AND GUTTER SHALL BE REMOVED AND REPLACED BASE COURSE WITH 6 INCHES OF 2" MINUS SHOT ROCK/BASE COURSE TO 12 INCHES DEPTH. THE ENGINEER REMOVE AND REPLACE NEARBY SIDEWALKS AND DRIVEWAYS TO MATCH CURB AND GUTTER APPROACHES TO PROVIDE A NEAT MATCH LINE. SAWCUT AS NECESSARY ALONG ALL STREET, DRIVEWAY AND SIDEWALK APPROACHES TO PROVIDE EXCAVATION OPERATIONS.
2. LARGE Boulders, stumps, logs, organics and ground water may be encountered at various depths during trenching, ditching and roadway excavation operations.
3. CONTRACTOR SHALL ASSURE GARAGE PICKUP, FREIGHT DELIVERIES AND DAILY WALK SERVICE WILL BE UNINTERRUPTED TO ALL RESIDENTS AFFECTED BY THIS PROJECT.
4. THE 4TH EDITION OF THE CBI STANDARD DETAILS, DATED AUGUST 14, 2011, AND THE STANDARD SPECIFICATIONS FOR CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS, DECEMBER 2003, ARE MADE PART OF THIS CONTRACT, WITH CURBENT REVISIONS AS APPLICABLE.
5. EXISTING PIPE LOCATIONS ARE DERIVED FROM CBI AS-BUILTS OR FIELD LOCATED. ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING PIPE PRIOR TO INSTALLING THE STORM DRAIN PIPES. DIAL BEFORE YOU DIG 588-1333.
6. GRADING AND ALIGNMENT ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
7. LOCATION OF STORM CATCH BASINS, STORM PIPING AND PIPE LENGTHS ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER.
8. PROVIDE KNOCKOUTS IN CATCH BASINS FOR ALL PIPES SHOWN ON THE PLANS.
9. THE CONTRACTOR SHALL NOTIFY CBI WATER UTILITIES AT 786-6898 OF PROPOSED WATER MAIN INTERRUPTION AND SUBMIT THE WATER SYSTEM SPECIAL USE PERMIT (COISSUED BY THE ENGINEER) AT LEAST ONE WEEK PRIOR TO SHUT DOWN OF MAINLINE WATER PIPE.
10. PROPERTY LINE LOCATIONS SHOWN IN THESE PLANS ARE DERIVED FROM RECORD PLATS AND DO NOT REPRESENT BOUNDARY SURVEY. EXISTING RECORD PLATS DO NOT CLOSE WITH EXISTING WATER UTILITY LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING WATER UTILITY LOCATIONS AND INSURE THAT THE PROPERTY LINES SHOWN ON THESE PLANS ARE A BEST FIT APPROXIMATION OF CLOSURE.
11. WHEN INSTALLING WATER PIPE UNDER DRAINAGE CURVATURES AS NECESSARY TO PROVIDE 12" OF SEPARATION AND INSULATE AS SHOWN ON THE PLAN, UNLESS APPROVED BY THE CBI.
12. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING WATER AND SEWER PIPES, INCLUDING ALL SERVICES ALONG THE STORM DRAIN ALIGNMENT, TO DETERMINE PIPE INSULATION LOCATIONS, AND TO ENSURE DAMAGED DOES NOT OCCUR TO THE SERVICE PIPES.
13. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE, EXCEPT AS NOTED IN THE CONTRACT DOCUMENTS.
14. SAWCUT AS NECESSARY ALONG ALL DRIVEWAY APPROACHES TO PROVIDE NEAT MATCH LINE.
15. CONTRACTOR SHALL REFERENCE ALL EXISTING PROPERTY CORNER MONUMENTS (I.E. REBAR, CONCRETE NAILS, BRASS CAP MONUMENT AND ETC.) PRIOR TO CONSTRUCTION AND RE-MONUMENT AFTER SURVIVING IS REPLACED. ALL WORK SHALL BE DONE BY, OR UNDER THE DIRECTION OF, AN ALASKA REGISTERED LAND SURVEYOR.
16. ALL ELECTRICAL AND GAS WILL BE CONDUCTING UTILITY INSTALLATION WORK WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH EACH UTILITY COMPANY AND PROVIDE ACCESS AS NECESSARY FOR UTILITY COMPANIES TO CONDUCT THEIR WORK.
17. ONLY HORIZONTAL ELBOW FITTINGS (BENDS) ARE SHOWN ON PLANS. ADDITIONAL FITTINGS WILL BE REQUIRED FOR VERTICAL DEFLECTIONS NEAR CONNECTIONS TO EXISTING PIPES AND AT OTHER LOCATIONS REQUIRING GRADE CHANGES TO AVOID CONFLICTS.
18. THE CONTRACTOR SHALL RESPECT THE COMPACT AND OTHER NEARBY NEIGHBORING OPERATIONS AS NECESSARY TO ASSURE NO DAMAGE OCCURS TO ADJACENT BUILDINGS OR STRUCTURES. REFER TO SECTION 01530, ARTICLE 1.7 FOR FURTHER REQUIREMENTS.
19. CLEAR AND GRUB ALL TREES, BRUSH AND OTHER VEGETATION WITHIN THE SLOPE LIMITS, EXCEPT AS NOTED IN THE PLANS.
20. THE CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT, OR OPERATIVE EQUIPMENT WITH ITS TRACKS OR WHEELS PLACED ON PRIVATE PROPERTY, WITHOUT WRITTEN APPROVAL OF THE PROPERTY OWNER.
21. IF EXISTING SOILS WITHIN THE PLANNED SUBMIT LAYER ARE FOUND TO BE SUITABLE AS DETERMINED BY THE ENGINEER, THE DEPTH OF EXCAVATION AND EMBANKMENT MAY BE DECREASED.
22. THE USE OF GROUT AND QUICSET GROUT PRODUCTS WITH ADJUSTING RINGS, BRICKS, WOOD, STONES AND OTHER SIMILAR GRADE ADJUSTMENT DEVICES TO SUPPORT CATCH BASIN FRAMES OVER EXISTING GROUND SHALL BE PERMITTED TO AVOID CONFLICTS TRANSITIONS TO BOTH SIDES OF GRADE.
23. THE CONTRACTOR SHALL NOTIFY EACH RESIDENT OF EACH DRIVEWAY CLOSURE THE DAY PRECEDING THE DAY THE DRIVEWAY IS TO BE CLOSED TO VEHICULAR ACCESS. THE RESIDENT SHALL BE INFORMED THAT THE CLOSURE WILL BE IN EFFECT UNTIL THE DRIVEWAY CLOSURES WILL BE PERMITTED UNTIL THIS REQUIREMENT HAS BEEN MET TO THE SATISFACTION OF THE ENGINEER. SHALL BE USED WITHIN THE CURVED SEGMENTS.
24. ALL FORMS FOR CONCRETE BETWEEN POTS AND PITS SHALL BE ARCED TO MATCH REQUIRED CURVATURE. NO STRAIGHT FORMS SHALL BE USED WITHIN THE CURVED SEGMENTS.
25. APPLY "CONCRETE INTERNATIONAL CORPORATION" ASSESSOR FORMULA GRINDING COMPOUND, OR APPROVED EQUAL, TO ALL NEWLY PLACED CONCRETE SURFACES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
26. "TAMPING MAT" OR SIMILAR TYPE COMPACTORS SHALL BE USED TO THOROUGHLY COMPACT ALL LAYERS OF MATERIAL AROUND WATER VALVE BOXES, CATCH BASINS, MANHOLES AND OTHER STRUCTURES.
27. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ADEC APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND CBI APPROVED DRAINAGE PERMIT.
28. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL PERMITS REQUIRED FOR THIS PROJECT.



OS No. J2094 DRAWN BY: STAFF CHECKED BY: STAFF DATE: AUG 2010

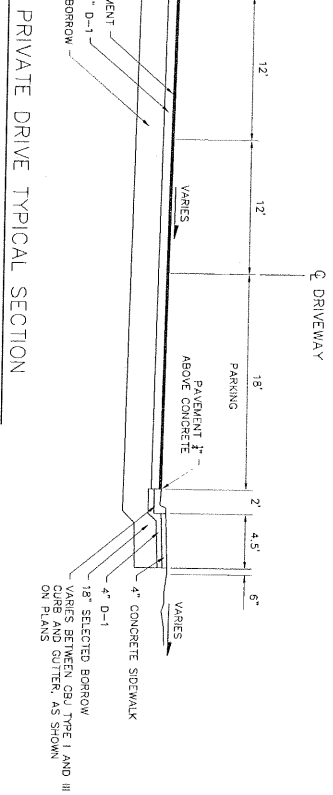
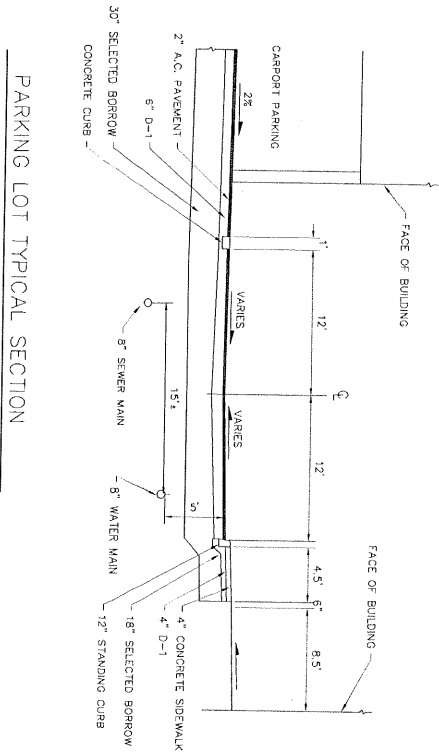
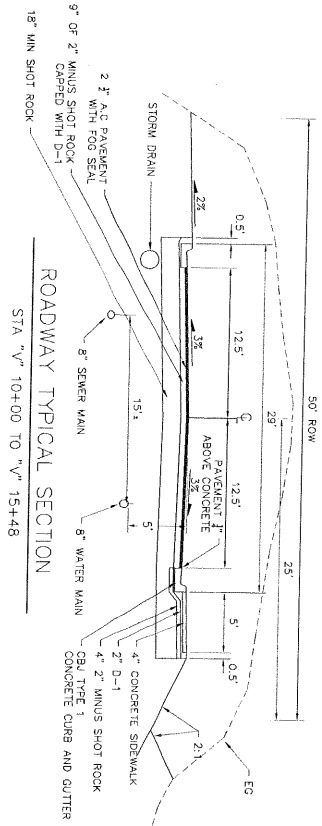
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**TYPICAL SECTIONS**

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**C10**  
 of  
**16**



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CDR No. J0284 DRAWN BY: STAFF REVISION BY: G.U. CHECKED BY: STAFF DATE: AUG 2013

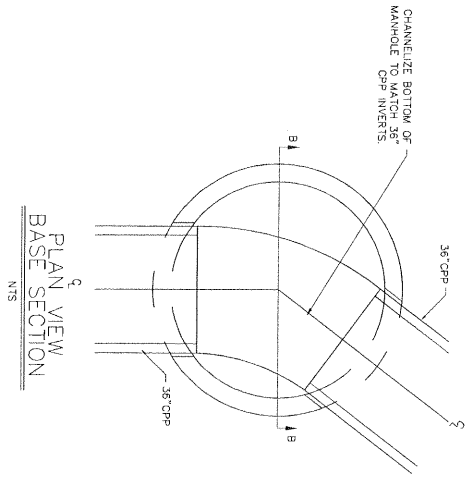
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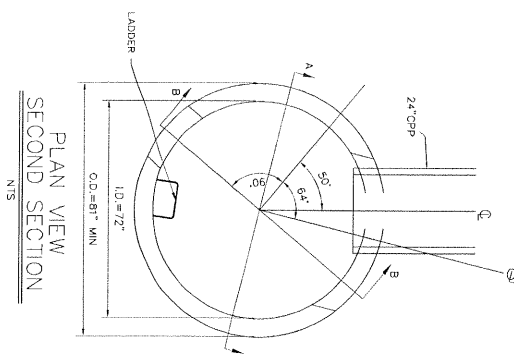
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Details

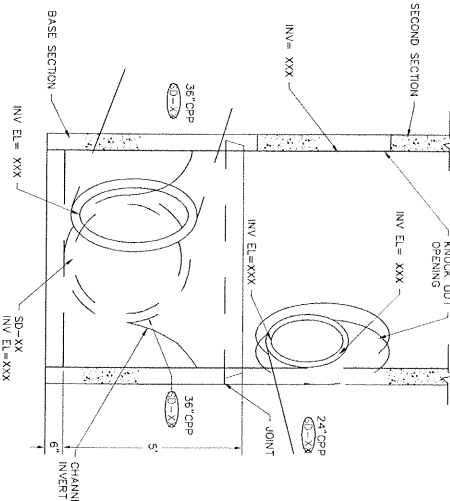
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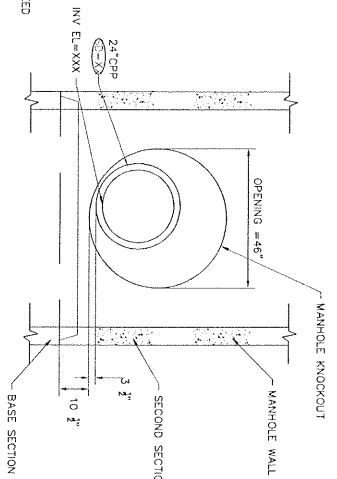
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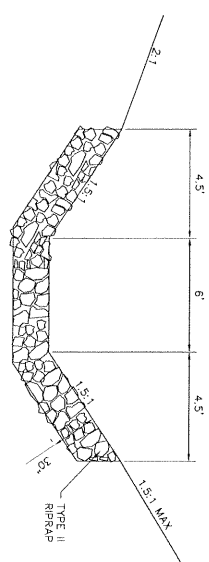
**PLAN VIEW  
 SECOND SECTION**  
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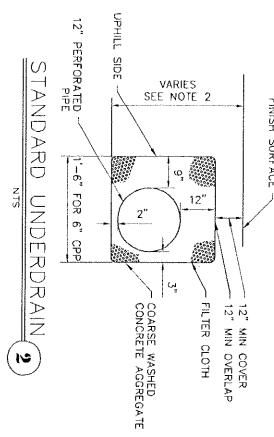
**SECTION B-B**  
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**SECTION A-A**  
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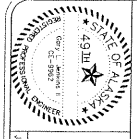
**ENERGY DISSIPATION PAD SECTION**  
 NTS



**STANDARD UNDERDRAIN**  
 NTS

- NOTES:
- 1) THIS DETAIL TO BE USED FOR THE 6"CPP (UD) PIPE LYING IN FRONT OF THE BUILDING.
  - 2) DEPTH AS REQUIRED TO CONNECT OTHER FOOTING DRAINS FROM AROUND BUILDING.
  - 3) ORIENT PIPE SO PERFORATIONS ARE NOT IN THE BOTTOM 1/3 OF THE PIPE.

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DESIGN BY: JHS/BA  
 DRAWN BY: STAFF  
 CHECKED BY: STAFF  
 DATE: AUG 2011

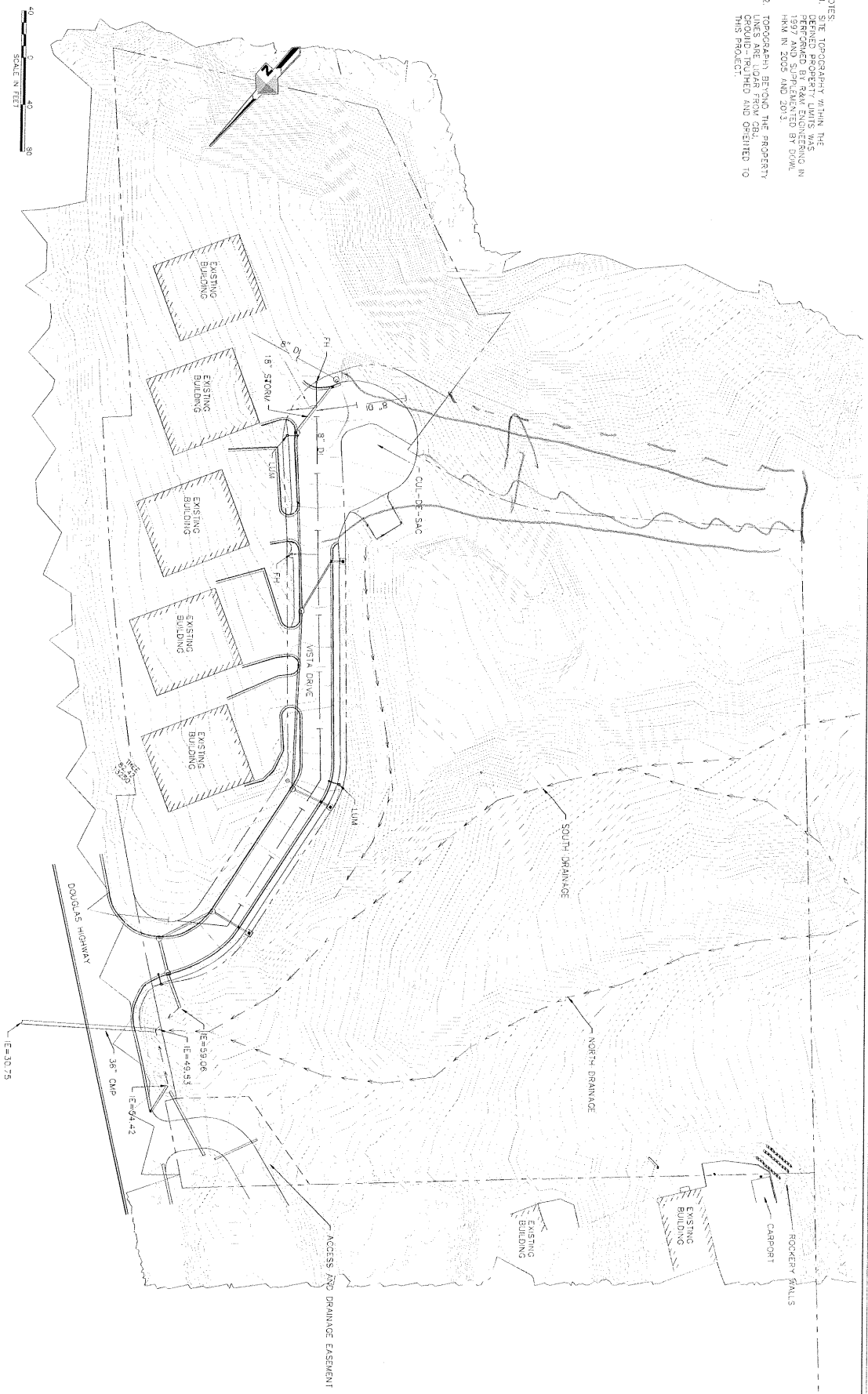


JVOA - JUNEAU 1 HOUSING  
 HILLSIDE ENDORSEMENT  
 PERMIT SET

EXISTING CONDITIONS

SHEET NO  
 C3.0  
 of  
 16

- NOTES
1. SITE TOPOGRAPHY WITHIN THE STUDIED AREA WAS OBTAINED AND PERFORMED BY RAW ENGINEERING IN 1999 AND SUPPLEMENTED BY DOWL HKM IN 2005 AND 2011.
  2. TOPOGRAPHY BEYOND THE PROPERTY LINES ARE LOAN FROM CBL. THIS TOPOGRAPHY HAS BEEN ADJUSTED TO THIS ROAD.



RECEIVED  
 AUG 17 2011  
 JVOA



DESIGNER: JAMES H. JENSEN  
 DRAWN BY: STAFF  
 CHECKED BY: STAFF  
 DATE: AUG 2013

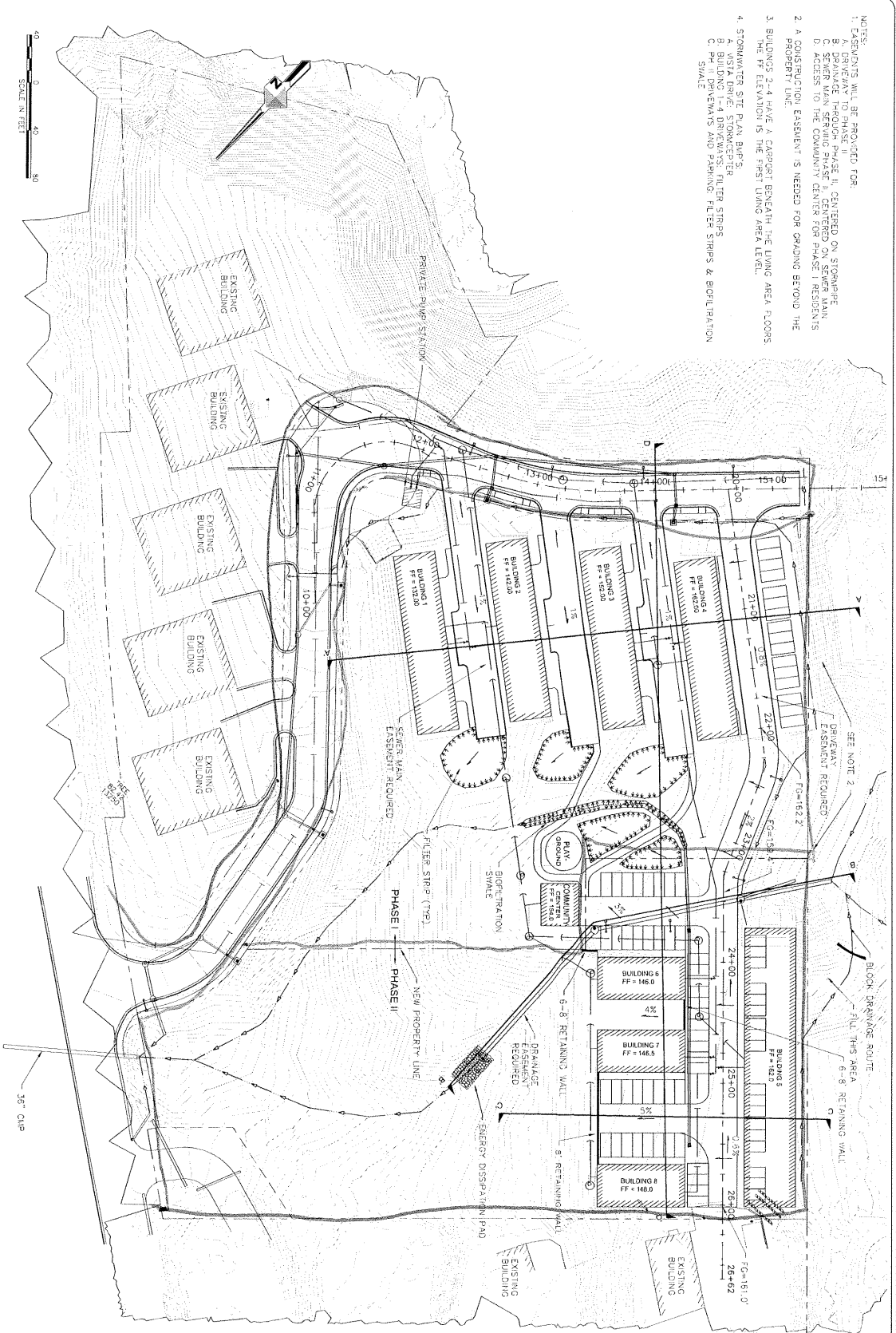
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 HILLSIDE ENDORSEMENT  
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**FINISHED SITE AND  
 STORMWATER SITE PLAN**

SHEET NO.  
**C3.1**  
 of  
**16**



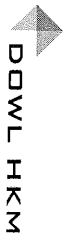
- NOTES:
1. EXISTENTS WILL BE PROTECTED FOR:
  - A. DRAINAGE THROUGH PHASE II, CENTERED ON STORMWATER
  - B. SEWER MAIN SERVING PHASE II, CENTERED ON SEWER MAIN
  - C. ACCESS TO THE COMMUNITY CENTER FOR PHASE I RESIDENTS
  - D. ACCESS TO THE COMMUNITY CENTER FOR PHASE I RESIDENTS
2. A CONSTRUCTION EASEMENT IS NEEDED FOR GRADING BEYOND THE PROPERTY LINE.
3. BUILDINGS 2-4 HAVE A CARPORT BENEATH THE LIVING AREA FLOORS. THE FF ELEVATION IS THE FIRST LIVING AREA LEVEL.
4. STORMWATER SITE PLAN BARS:
- A. BUILDING 1-4 DRIVEWAYS
  - B. PH II DRIVEWAYS AND PARKING, FILTER STRIPS & BIOFILTRATION SWALE

PERMIT FOR...





JOB NO. J2934 DRAWN BY: STAFF DESIGNED BY: GJD CHECKED BY: STAFF DATE: AUG 2013



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 HILLSIDE ENDORSEMENT  
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LANDSCAPING PLAN  
 (FINAL CONTOURS)

SHEET NO.  
 C3.2  
 of  
 16

LEGEND

EXISTING

PROPOSED

NATURAL VEGETATION & TREES

GRASS

CONIFER TREES

DECIDUOUS TREES

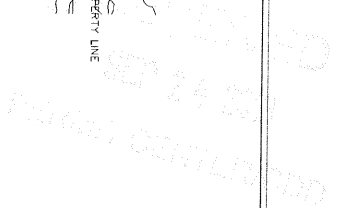
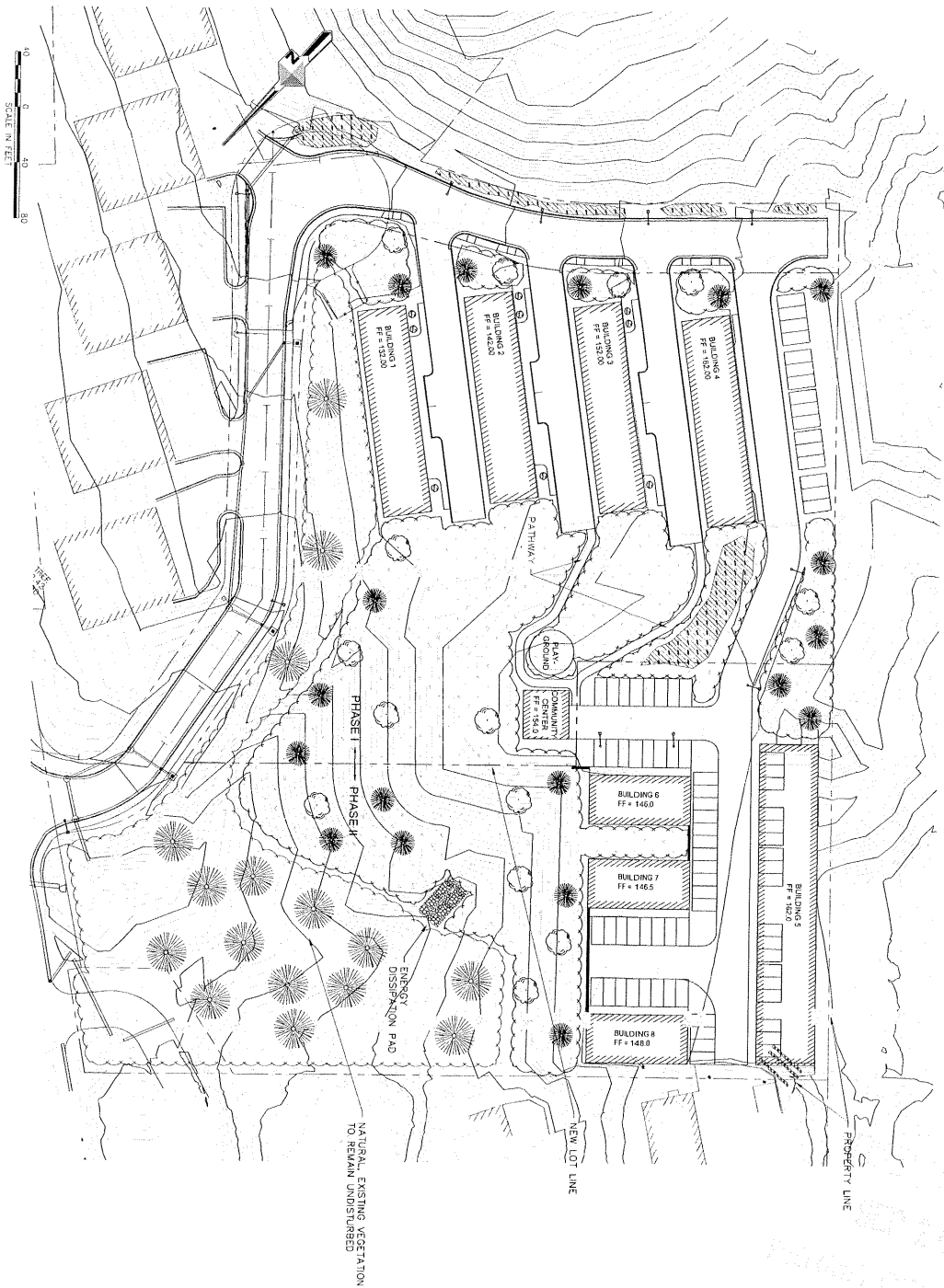
SHRUBS

SNOW STORAGE

(NOTE: PROPOSED TREE AND SHRUB COUNT IS YET TO BE DETERMINED.)

VEGETATION SUMMARY

	PH. I (SF)	PH. II (SF)
LOT SIZE	133,700	134,300
NATURAL VEG.	12,100	35,500
NEW LANDSCAPING	47,354	26,200
% VEGETATION	44%	49%





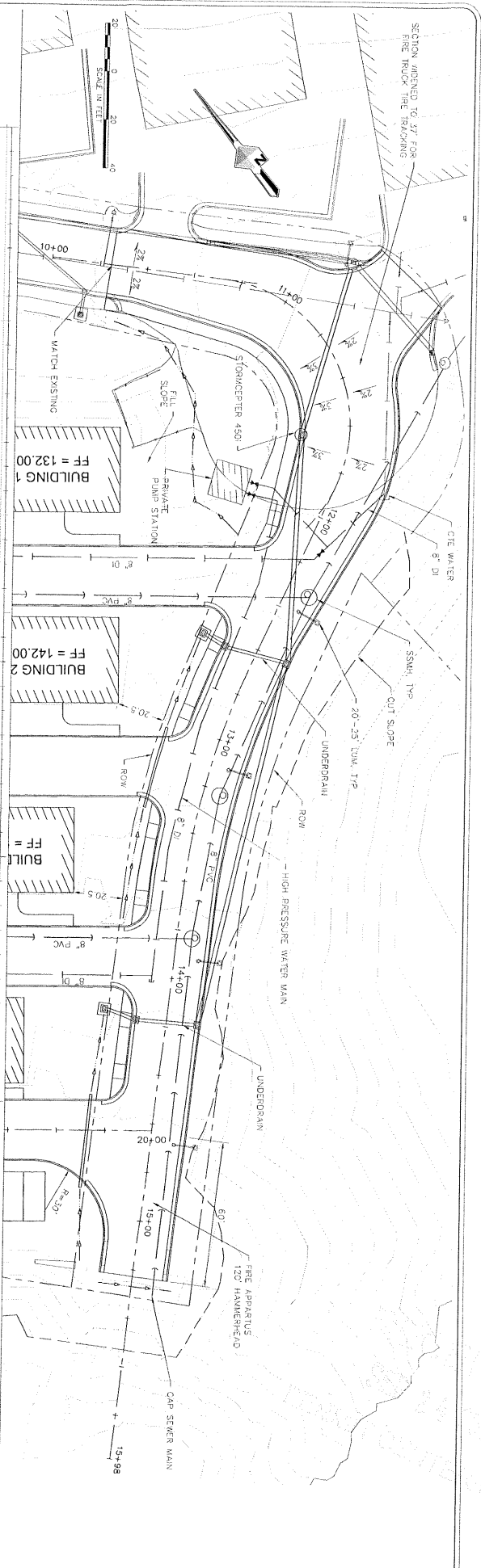
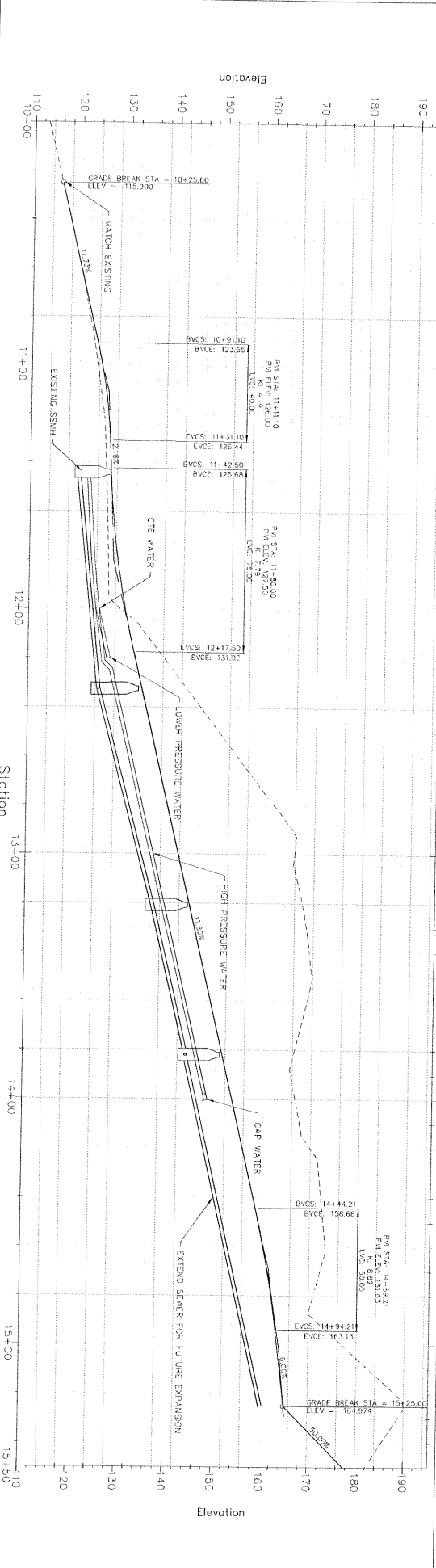
4912  
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAY PLANNING AND CONSTRUCTION  
1952

JOE BO JENSEN DRAWN BY STATE DESIGNED BY GUL  
DOWL HKM  
CHECKED BY STATE DATE AUG 2011

JVOA - JUNEAU 1 HOUSING  
HILLSIDE ENDORSEMENT  
PERMIT SET

WISTA DRIVE  
PLAN & PROFILE

SHEET NO  
C40  
of  
16





JOB No. 070594 DRAWN BY: STAFF DESIGNED BY: GJJ CHECKED BY: STAFF DATE: AUG 2003

**DOWL HKM**

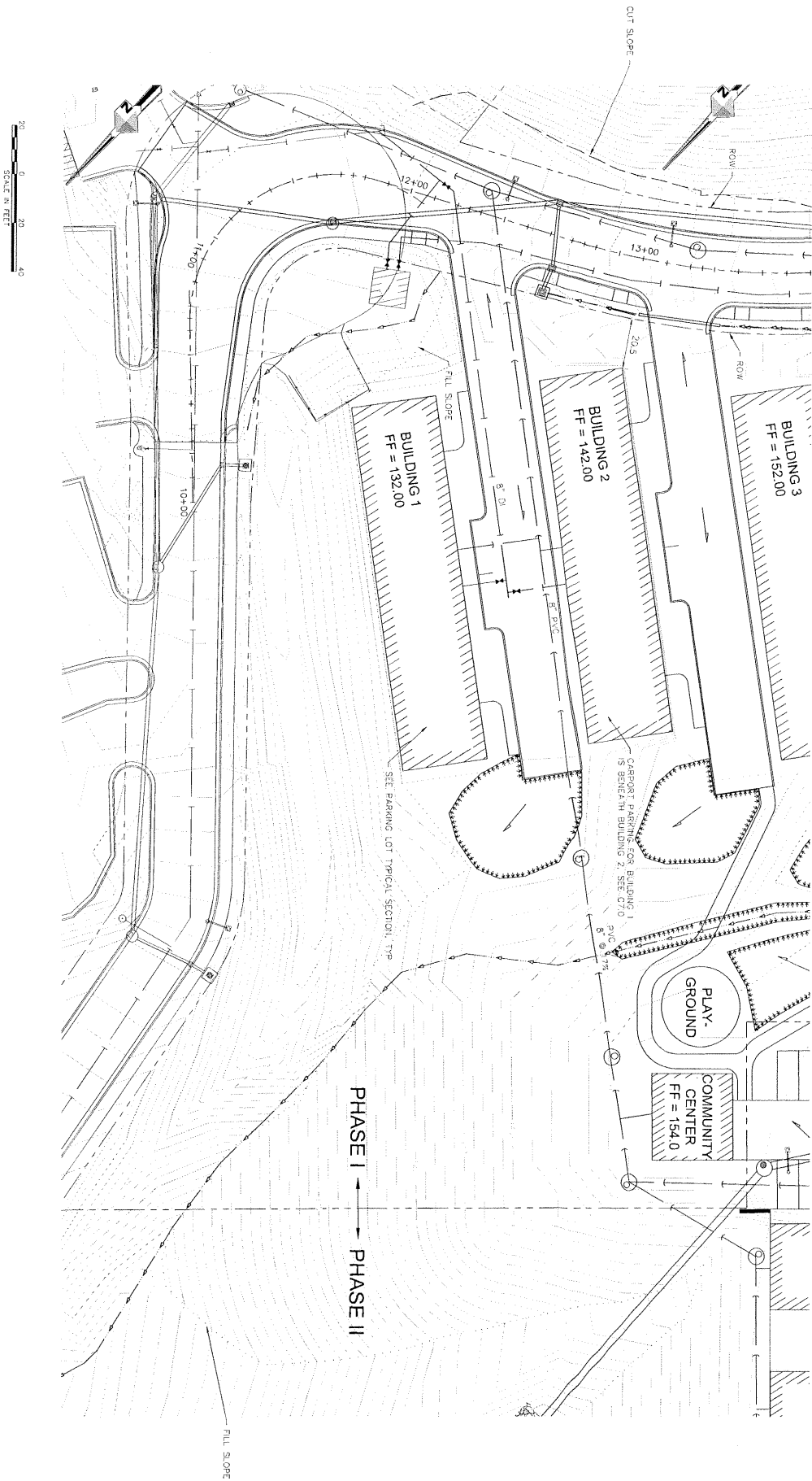


**JVOA - JUNEAU I HOUSING  
HILLSIDE ENDORSEMENT  
PERMIT SET**

**SITE GRADING PLAN:  
BUILDINGS 1, 2,  
AND COMMUNITY CENTER**

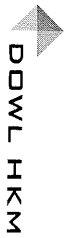
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**C5.0**  
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**16**

NOTE: CONTOURS SHOWN ARE FINAL.





JOE M. JENSEN | DRAWN BY: STAFF | DESIGNED BY: GJ | CHECKED BY: STAFF | DATE: AUG 2013

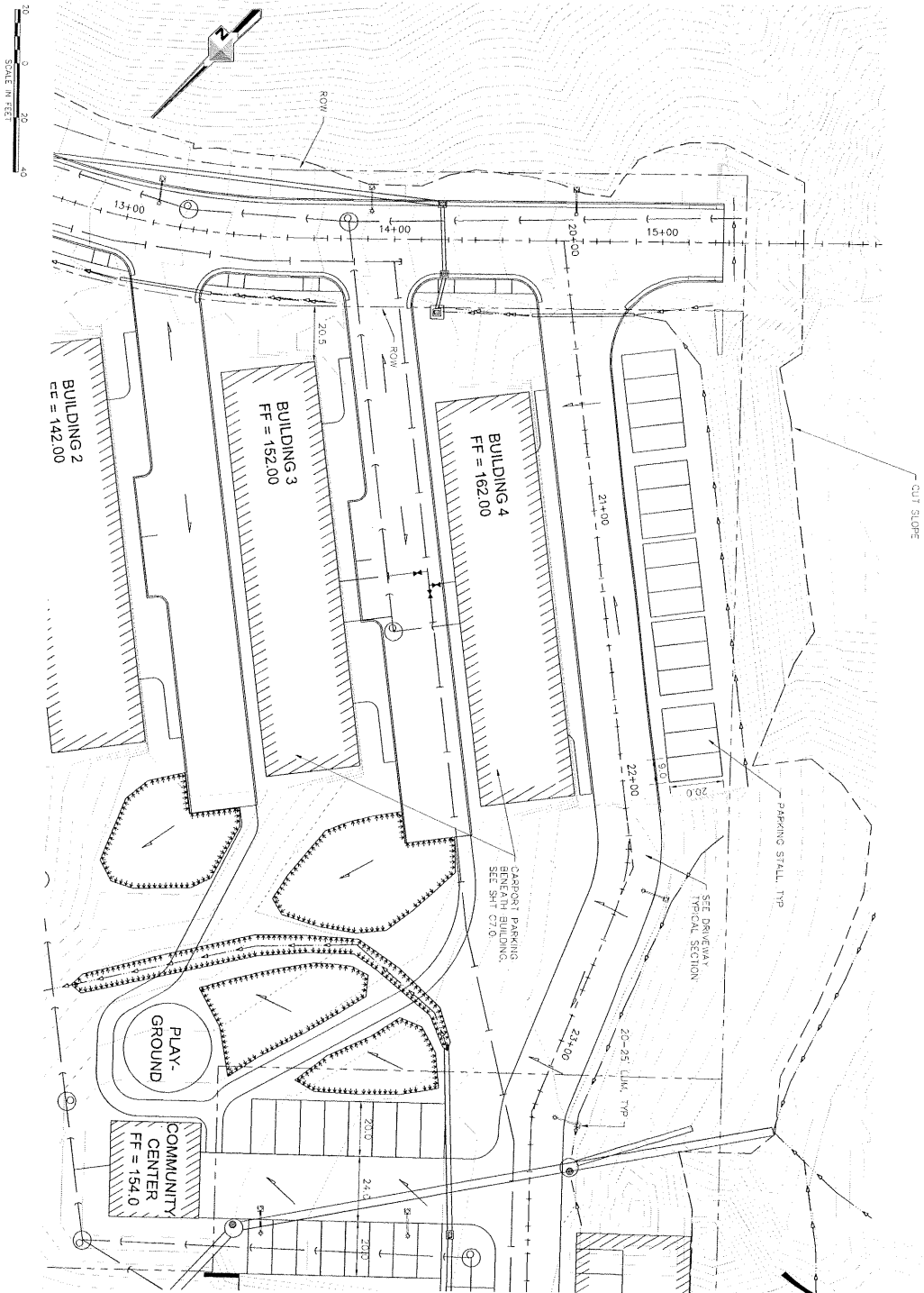


JVOA - JUNEAU I HOUSING  
 HILLSIDE ENDORSEMENT  
 PERMIT SET

SITE GRADING PLAN:  
 BUILDINGS 3 AND 4

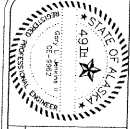
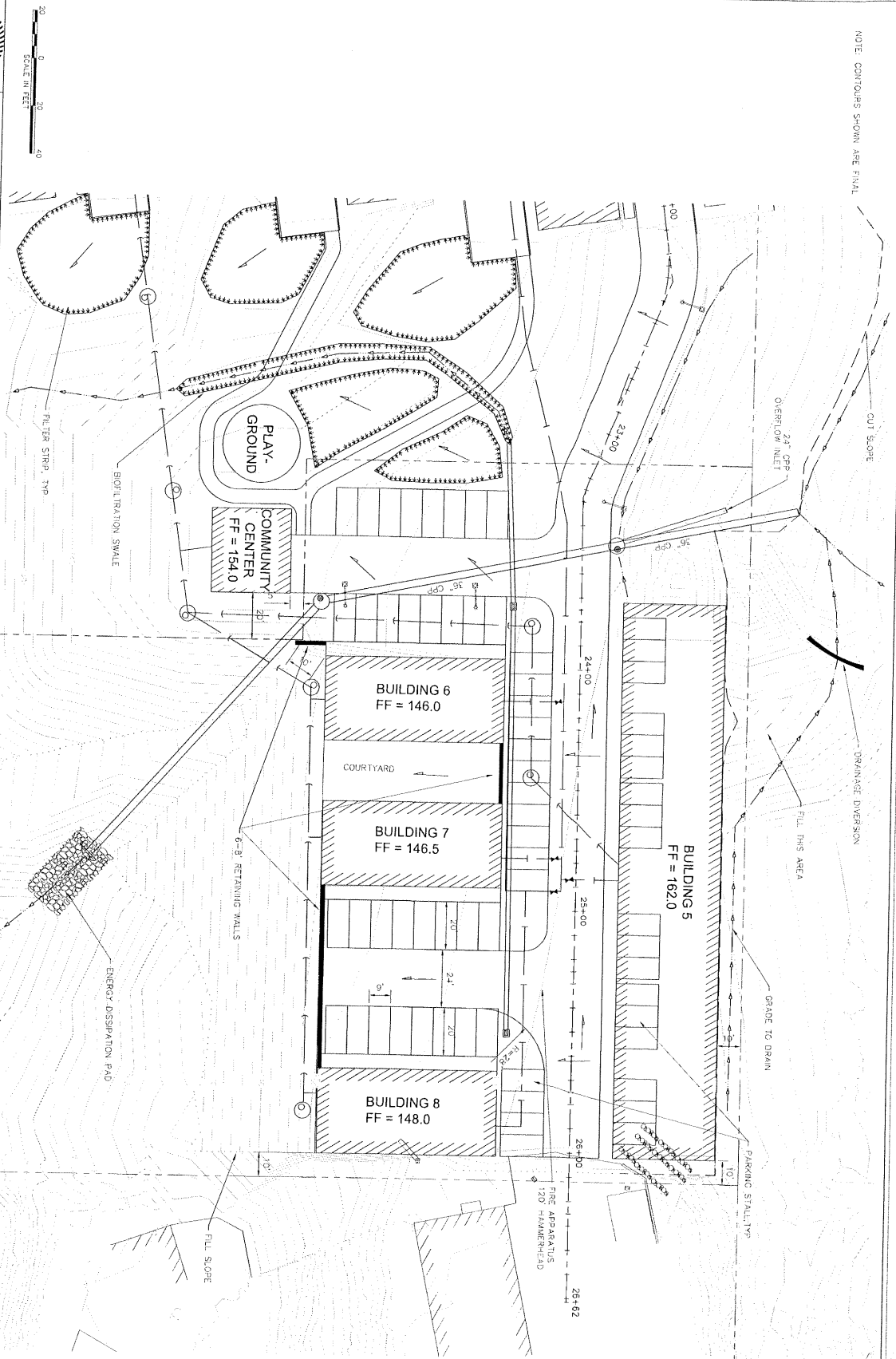
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NOTE: CONTOURS SHOWN ARE FINAL.

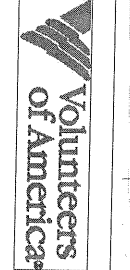


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 8/21/13  
 NIGHT CENTER

NOTE: CONTOURS SHOWN ARE FINAL



DOWL HKM  
DESIGNED BY: QU  
CHECKED BY: STAF  
DATE: AUG 2010



JVOA - JUNEAU I HOUSING  
HILLSIDE ENDORSEMENT  
PERMIT SET

SITE GRADING PLAN:  
BUILDINGS 5, 6, 7, 8



DESIGNER: JENNIFER STAFF / REVISIONS BY: GJJ

CHECKED BY: STAFF

DATE: AUG 2013

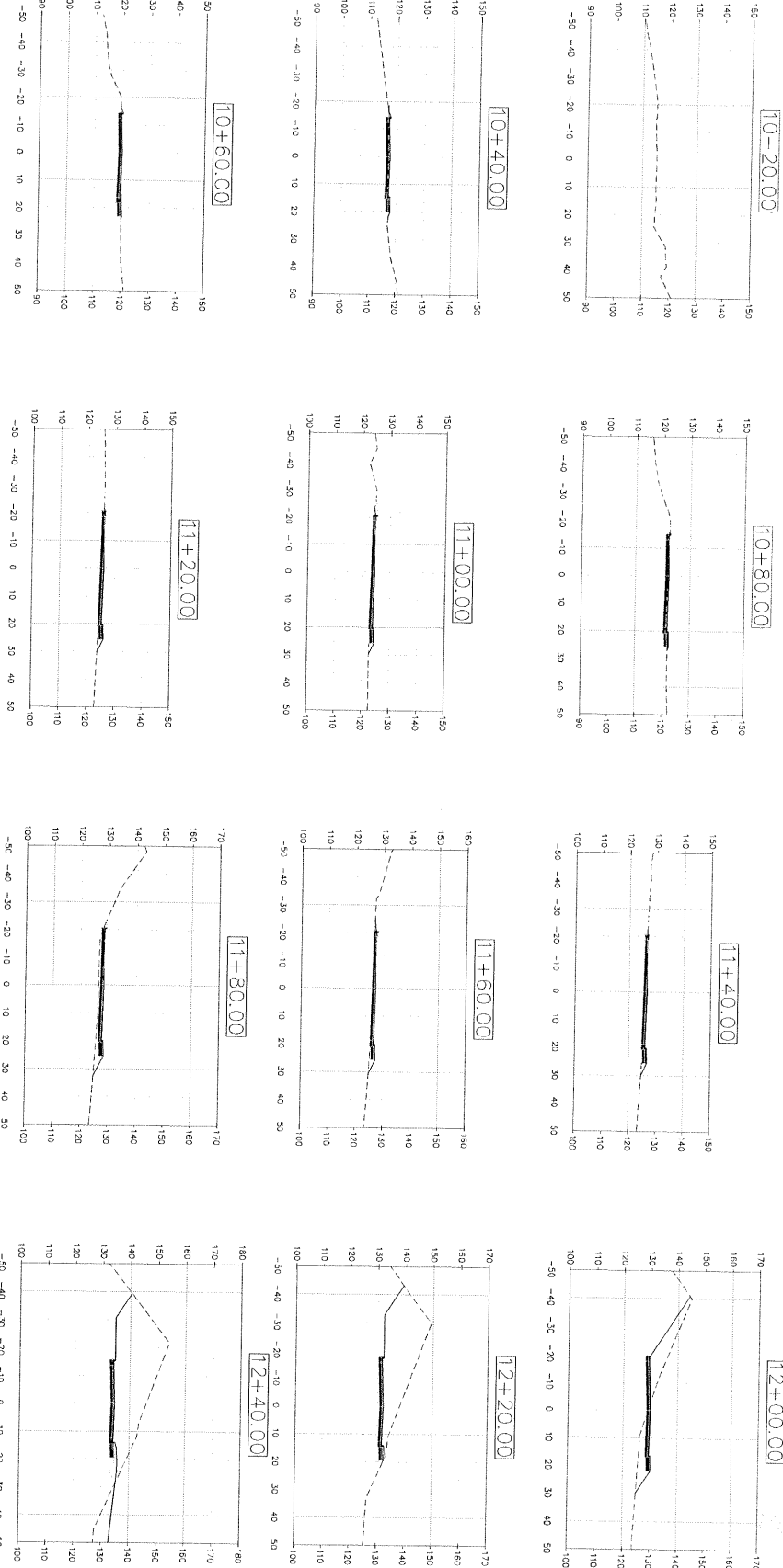
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**JVOA - JUNEAU I HOUSING  
HILLSIDE ENDORSEMENT  
PERMIT SET**

**SITE GRADING**

SHEET NO.  
**C6.0**  
of  
**16**



APPROVED FOR CONSTRUCTION



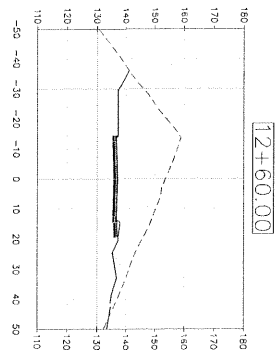
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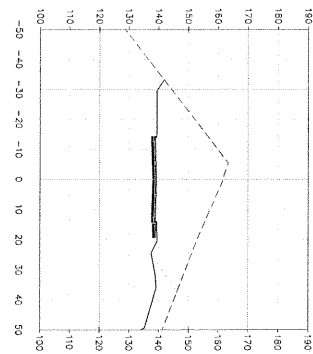
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SITE GRADING

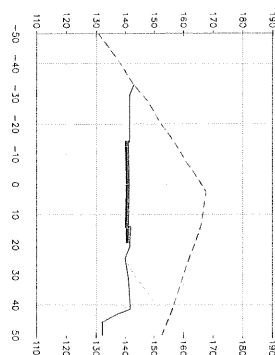
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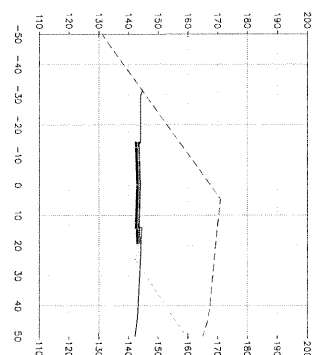
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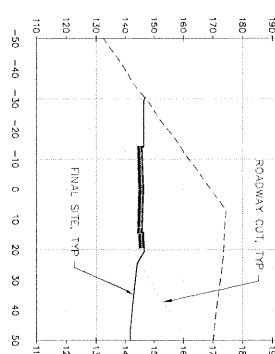
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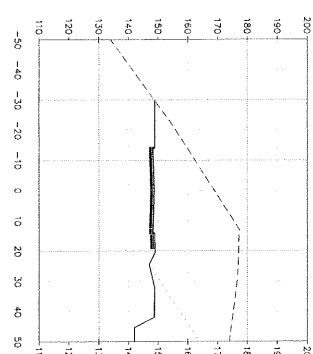
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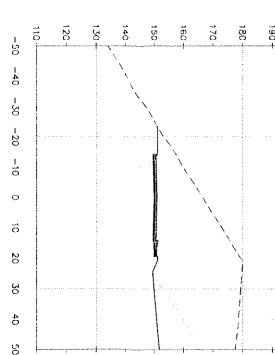
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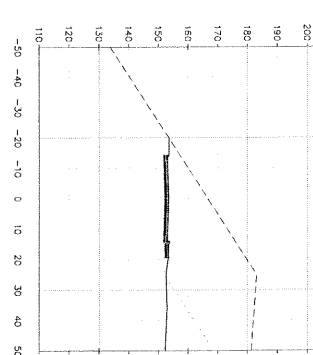
13+40.00



13+60.00



13+80.00



14+00.00

APPROVED  
DATE: 8/10/13  
BY: [Signature]



DRAWN BY: STAFF DESIGNED BY: GJD CHECKED BY: STAFF DATE: AUG 2013

**DOWL HKM**



**JVOA - JUNEAU I HOUSING  
 HILLSIDE ENDORSEMENT  
 PERMIT SET**

**SITE GRADING**

SHEET NO.  
**C6.2**  
 of  
**16**

