



SELECTBOARD PRESENTATION  
SEPTEMBER 25, 2013

TOWN OF NORWICH, VERMONT  
FIRE, POLICE & PUBLIC WORKS FACILITIES STUDY



### Bread Loaf Corporation

- Founded in Middlebury, VT in 1968.
- Firm of 60+ professionals.
- 11 LEED accredited professionals.
- 7 LEED projects throughout New England.
- 26 municipal projects in 20 communities throughout New England.
- Assume single-source responsibility on projects.
- Integrated approach from planning through construction.



## Project History

PART 1- Code and Regulation Deficiencies

PART 2- Functional Deficiencies

PART 3- Functional and Space Needs Program

PART 4- Alternatives Development and Analysis

- 2010-2011 study done for the public works facility by American Consulting Engineers & Surveyors and Wiemann Lamphere Architects
- 2006-2008 study done for the public safety facility by Black River Design Architects, ORW Landscape Architects and SVE Associates
- 2012 Mink Brook Management Fire Station code and functional deficiencies
- 2012 Mink Brook Management Police Station code and functional deficiencies
- 2012 Mink Brook Management Public Works code and functional deficiencies



### Norwich Fire, Police, and Public Works Facilities

IPM<sup>SM</sup> FACILITIES STUDY SCHEDULE  
September 10, 2013

Bread Loaf Corporation

	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14
<b>Part 3 - Functional and Space Needs Program</b>												
Programming kick-off meeting with Departments												
Programming meetings with Departments												
Two Meetings with Capital Facilities Planning and Budgeting Committee												
Selectboard Meeting												
Public Forum Meetings												
<b>Part 4 - Alternative Development and Analysis</b>												
Site Evaluations												
Schematic Design - Three Options												
Estimates of Probable Costs												
Schematic Design - Three Options Ranking												
Refine Selected Schematic Design												
Total Project Budget and Overall Project Schedule												
Two Meetings with Capital Facilities Planning and Budgeting Committee												
Selectboard Meeting												
Public Forum Meetings												



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Norwich Fire Department

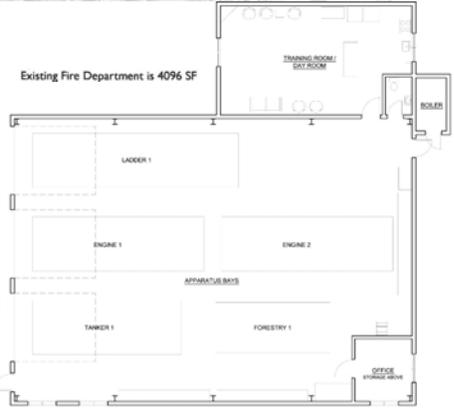
Location: 11 Firehouse Lane  
Chief: Stephen Leinoff  
Staff: 37 members



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Existing Conditions

Existing Fire Department is 4096 SF



TRAINING ROOM /  
SIT ROOM

BOILER

LADDER 1

ENGINE 1

ENGINE 2

APPARATUS BAYS

TANKER 1

FORESTRY 1

OFFICE  
LIVING ROOM



**Need:**

- Poor sight lines to Main Street
- Access to front of building is through easement of adjacent property
- Cannot pull all apparatus onto apron
- Inadequate space for parking, especially on training nights
- Traffic safety when pulling out on to Main Street
- Courtesy an issue when pulling out between houses with lights & siren



**Need:**





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**Need:**

- Lack of clearance around apparatus inside the building is a safety issue
- Inadequate space for department training
- Training space only accessible through apparatus bay
- No dedicated space for hose drying
- Built in 1980



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**Need:**

- Inadequate departmental storage
- Inadequate gear/equipment storage
- No secure storage space
- No decontamination room
- No hose drying facilities
- No fire suppression system
- No office for Fire Chief





**Need:**

**Code Deficiencies:**

- Previous study indicated that the building does not meet structural requirements for the occupancy type determined by IBC.
- Kitchen counter tops and sink are not at ADA required 34" height.
- Bathroom does not provide ADA required clearances to fixtures and clear floor space.
- Ceiling in Training room does not meet IBC minimum height requirement.
- Decontamination area does not meet NFPA 1500 regulations.
- Floor drains in the Apparatus Bay do not drain to an approved oil separator.
- No fire separation between boiler room and building.



**Need:**

**Energy Deficiencies:**

- Exterior wall insulation does not meet current Vermont Commercial Building Energy Standards.
- OH Doors are not insulated.
- Windows are single pane glass.
- No fresh air intake for the furnace.
- Boiler is undersized for area it is heating.



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### Program:

Program Spaces	Existing	Proposed	Common Practice	Adjacencies	Interior Floor Finishes	Notes
a. Vestibule	0 sf	100 sf	100 sf	Other admin spaces	Porcelain Tile	Potential shared space with Police
b. Lobby	0 sf	300 sf	300 sf	Other admin spaces	Porcelain Tile	Potential shared space with Police
c. Chief's Office	0 sf	180 sf	200 sf	Other admin spaces, Apparatus floor	VCT	To include space for a small table and chairs
d. FD Office	110 sf	100 sf	150 sf	Other admin spaces, Apparatus floor	VCT	
e. Training Room	619 sf	670 sf	700 sf	Other admin spaces	Carpet	Potential shared space with Police. Direct access for public use
f. Small Conference Room	0 sf	200 sf	200 sf	Adj to Chief's Office	Carpet	For seating up to 8
g. Dispatch	0 sf	0 sf	200 sf			Future?
h. Public Toilets	30 sf	66 sf	66 sf	Other admin spaces	Ceramic Tile	
Apparatus Bays	3,250 sf	4,488 sf	4,600 sf	Includes SCBA, Turnout Gear, Hose Storage	Sealed Concrete or Epoxy	Four Bays @ 16' O.C. with 14"x14" OH doors.
i. Uni-Sex Bathroom w/ Shower	0 sf	121 sf	150 sf	Apparatus Bays	VCT	Private bathroom for department use
j. Gear Laundry	0 sf	0 sf	0 sf	Apparatus Bays	Concrete	Contained within Apparatus Bay
k. Technical Rescue Storage	0 sf	0 sf	100 sf	Apparatus Bays	Concrete	Contained within Apparatus Bay
l. Hazmat Equipment Storage	0 sf	0 sf	100 sf	Apparatus Bays	Concrete	Contained within Apparatus Bay
m. EMS Secure Storage	0 sf	0 sf	100 sf	Apparatus Bays	Concrete	Contained within Apparatus Bay
n. Day Room and Kitchen	0 sf	300 sf	300 sf		VCT	
o. Dorm Rooms	0 sf	0 sf	0 sf		Carpet	
p. Fitness Room	0 sf	0 sf	500 sf			Future?
q. Men's Locker Room	0 sf	0 sf	250 sf			Future?
r. Women's Locker Room	0 sf	0 sf	150 sf			Future?
s. Mechanical Room	80 sf	200 sf	200 sf	Includes Electrical Equipment and Compressor	Concrete	
t. Shop/Tool Room	0 sf	250 sf	250 sf	Apparatus Bays	Sealed Concrete or Epoxy	
u. Janitor Closet	0 sf	80 sf	75 sf		VCT	
v. I.T. Closet	0 sf	70 sf	75 sf		VCT	
w. General Storage	0 sf	300 sf	300 sf		VCT	Could be one space or multiple.

<b>Total Net Square Footage</b>	<b>4,096 sf</b>	<b>7,427 sf</b>	<b>9,238 sf</b>	<b>NOTES:</b> Existing Chief's Office located in existing Police Station.
(net/gross %)	0%	10%	10%	
<b>TOTAL GROSS SQUARE FOOTAGE</b>	<b>4,096 sf</b>	<b>8,179 sf</b>	<b>10,182 sf</b>	

**TOTAL AREA PROPOSED: 8,170 SF**



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### Program Summary – 5 year outlook:

**FIRE OPERATIONS SPACES:**

Apparatus Bays

- Ladder 1, Engine 1, Engine 2, Tanker 1, Forestry 1, Car 1
- Turnout Gear Lockers
- SCBA Filling Station
- Adjacent to EMS, Hazmat and Tech Rescue Storage

**ADMINISTRATION SPACES:**

- Chief's Office
- Small Conference Room
- Training Room
- Day Room / Kitchen
- FD Office

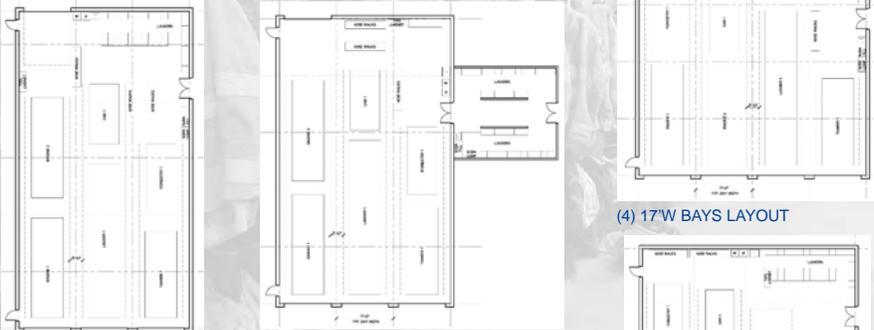
**SUPPORT SPACES:**

- Public Restroom
- Uni-Sex Restroom with shower (FD Use Only)
- Mechanical Room
- I.T. Closet
- Janitor Closet
- General Storage



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### Program Summary – Space Diagrams:



(3) 17'W BAYS LAYOUT  
- (1) DRIVE THRU

(3) 17'W BAYS LAYOUT  
- (1) DRIVE THRU

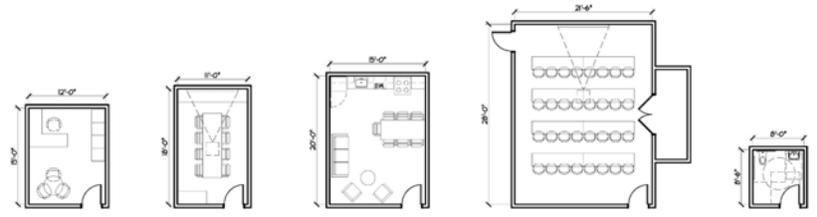
(4) 17'W BAYS LAYOUT

(4) 16'W BAYS LAYOUT



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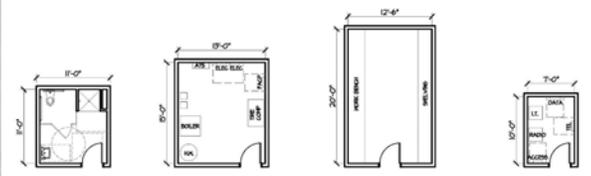
### Program Summary – Space Diagrams:



180 SF OFFICE    200 SF CONF. RM.    300 SF DAY ROOM    670 SF MEETING RM    68 SF PUBLIC TOILET



**Program Summary – Space Diagrams:**



121 SF UNI-SEX TOILET (DEPT USE)    200 SF MECH. RM.    250 SF TOOL ROOM    70 SF I.T. CLOSET

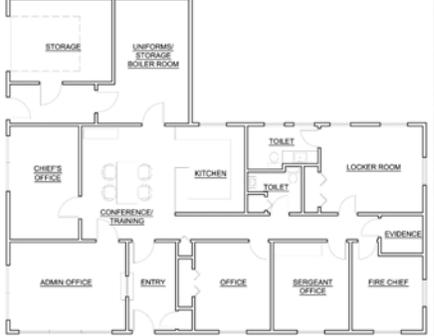


**Norwich Police Department**

Location: 10 Hazen Street  
Chief: Douglas A. Robinson  
Staff: Chief, 3-Full time officers, 2-Part time officers, 1 Administrative Asst.



### Existing Conditions



Existing Police Department is 2137 SF



### Need

- Congested parking, especially when there is a fire call
- Inadequate space to maintain equipment and vehicles





### Need

- Existing building is in poor condition
- Rot, moisture and pest problems are evident
- Existing roof leaks
- Pest issues
- Built in 1950's
- Converted Residence
- Originally intended to be a temporary solution



### Need

- Inadequate department training facilities
- Inadequate departmental storage
- Inadequate space for evidence storage
- No fire suppression system





### Need

Code Deficiencies:

- Previous study indicated that the building does not meet structural requirements for the occupancy type determined by IBC.
- Main entry does not have ADA required exterior landing.
- Receptionist counter is not at required ADA height of 34".
- Kitchen counter and sink is not at required ADA height of 34".
- Existing tile ceilings do not meet minimum IBC requirements for flame spread.
- Exposed paper-faced insulation in garage area is a building code violation.
- Bathrooms do not provide ADA required clearances to fixtures or clear floor space.



### Need

Energy Deficiencies:

- Exterior wall insulation does not meet current Vermont Commercial Building Energy Standards.
- Existing roof needs to be replaced.
- Moisture problems have cause excessive rotting of exterior wood.









## Need

**Functional Deficiencies:**

- No sallyport for secure transfer of suspects.
- No private interview room for suspects or witness/victims.
- Inadequate evidence storage.
- Inadequate space for departmental storage.
- Inadequate maneuvering space within corridors and small rooms.
- Lack of exterior security surveillance.
- No secure weapon storage.










## Program

Program Spaces	Existing	Proposed	Common Practice	Adjacencies	Interior Floor Finishes	Notes
a. Vestibule	0 sf	100 sf	100 sf		Promotional Tile	Potential shared space with Fire
b. Lobby	84 sf	150 sf	150 sf		Promotional Tile	Potential shared space with Fire
c. Administrative Office	208 sf	150 sf	150 sf	Lobby	Carpet	This is a separate office, includes files, copier, dispatch radio, and transaction window
d. Chief's Office	208 sf	180 sf	180 sf	Lobby	Carpet	Space for a small table and chairs
e. Dispatch/Reception	0 sf	0 sf	120 sf			
f. I/O Supervisor Office	144 sf	150 sf	150 sf	Chief's Office	Carpet	Future Investigative Officer or Sergeant
g. I/O Shared Office for Officers	115 sf	250 sf	300 sf	Chief's Office	Carpet	Area for four workstations, report writing
h. Training Room	370 sf	0 sf	500 sf			
i. Small Conference Room	370 sf	0 sf	200 sf			
j. Region Writing	138 sf	0 sf	0 sf		Carpet	To be in I/O shared office for officers
k. Interview - (x2)	0 sf	100 sf	200 sf		VCT	2 Separate suspect and victim/witness rooms for security & privacy
l. Public Tables	47 sf	68 sf	68 sf	Lobby, Training Room	Ceramic Tile	Uni-Sex ADA restroom
m. Processing/Booking	0 sf	0 sf	250 sf			Future
n. Holding Cell - (x2)	0 sf	0 sf	150 sf			1. Health (2) cells minimum
o. Sally Port	0 sf	0 sf	350 sf		Flame	Flame
p. Carport	0 sf	350 sf	350 sf			For the duty officer's patrol vehicle
q. Evidence Processing	0 sf	50 sf	80 sf	Processing	VCT	Will also serve as Armory with SS table
r. Evidence Storage	35 sf	100 sf	150 sf	Evidence Processing	VCT	
s. Archival Storage	0 sf	100 sf	200 sf		VCT	Required for records storage
t. Break Room	120 sf	120 sf	150 sf	Chief's Office, I/O Offices	VCT	Includes micro, sink, and ref serving 4 people
u. Men's Locker Room	98 sf	196 sf	250 sf	Fitness Room, I/O Offices	Ceramic Tile	Includes 6 lockers, restroom, and shower
v. Women's Locker Room	98 sf	144 sf	150 sf		Ceramic Tile	Includes 2 lockers, restroom, and shower
w. General Storage	250 sf	100 sf	200 sf		VCT	
x. Mechanical Room	0 sf	196 sf	200 sf	Includes Electric Equipment	Concrete	
y. Janitor Closet	0 sf	50 sf	70 sf		VCT	
zz. I.T. Closet	0 sf	0 sf	80 sf		VCT	Contained within Mechanical Room

**TOTAL NET SQUARE FOOTAGE** 2,282 sf    2,552 sf    4,728 sf    **NOTES:**  
(net/gross %) 0%    10%    10%    Existing Fire Chief's office located in existing Police Station and the area is captured within the net/gross ratio.

**TOTAL GROSS SQUARE FOOTAGE** 2,282 sf    2,887 sf    5,291 sf

250 sf  
 2,557 sf    Potential shared spaces with Fire including grossing factor.  
 Total Police if shared spaces with Fire.

**TOTAL AREA PROPOSED: 2,807 SF**



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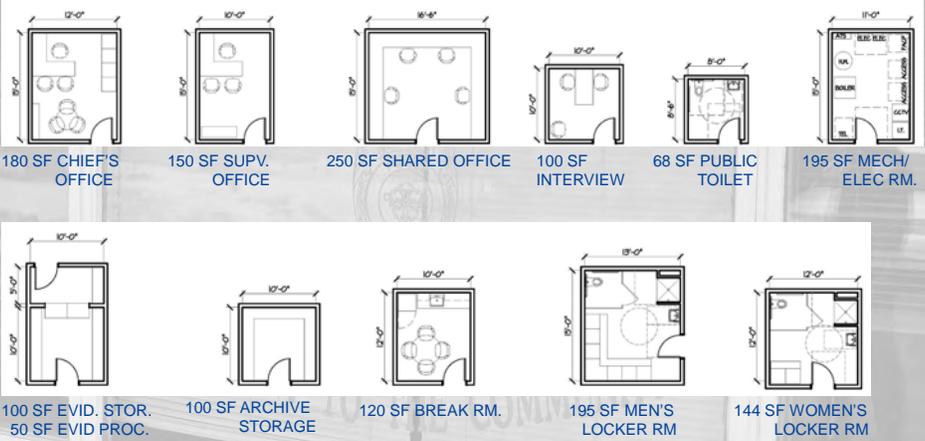
### Program Summary – 5 Year Outlook:

<b>SECURE SPACES:</b>	<b>ADMINISTRATION SPACES:</b>	<b>SUPPORT SPACES:</b>
Interview Room	Lobby	Public Restroom
Evidence Processing	PD Offices	Mechanical Room
Evidence Storage	Admin Office	I.T. Closet
	Locker Rooms	Janitor Closet
	General Storage	



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### Program Summary – Space Diagrams:



180 SF CHIEF'S OFFICE	150 SF SUPV. OFFICE	250 SF SHARED OFFICE	100 SF INTERVIEW	68 SF PUBLIC TOILET	195 SF MECH/ELEC RM.
100 SF EVID. STOR. 50 SF EVID PROC.	100 SF ARCHIVE STORAGE	120 SF BREAK RM.	195 SF MEN'S LOCKER RM	144 SF WOMEN'S LOCKER RM	



[Norwich Department of Public Works](#)

Location: 26 New Boston Road  
Director: Andy Hodgdon



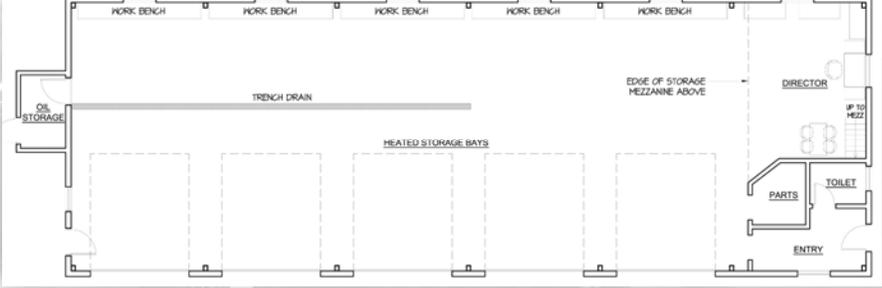
Existing Conditions



NORWICH DEPARTMENT OF PUBLIC WORKS PROPERTY APPROX. 27 ACRES




## Existing Conditions



EXISTING FOOTPRINT: 4,517 SF  
OFF-SITE COLD STORAGE: 2,400 SF




## Need

- Existing garage constructed in 1976 to house 3 trucks and 1 loader
- 1 Backhoe, 1 Loader, 8 Trucks, 2 Graders and 2 Mowers stored outside, uncovered. Cost of equipment stored outdoors = \$1,058,532
- No private office for department director
- Lack of separation between different functions within garage
- Existing roof leaks year round due to corroded fasteners
- Inadequate wall and roof insulation results in excessive loss of heat
- No fire suppression system
- No vehicle exhaust removal system





### Need

Code Deficiencies:

- Previous study indicated that the building does not meet structural requirements for the occupancy type determined by IBC.
- Electrical wiring and equipment in spray spaces and vapor areas are not code required explosion proof types.
- Storage areas do not meet NFPA 1 requirements.
- Guard rail on stairs is non code compliant.



### Need

Energy Deficiencies:

- Existing roof insulation value is R-3 which does not meet Vermont Commercial Building Energy Standards.
- Lack of proper roof insulation causes ice damming and subsequent leaks.
- Exterior wall insulation does not meet Vermont Commercial Building Energy Standards.
- Mechanical systems are outdated and inefficient.





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## Program

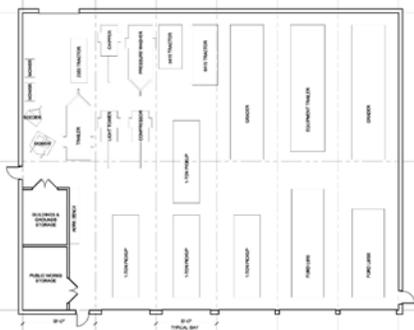
Program Spaces	Existing	Proposed	Adjacencies	Interior Floor Finishes	Notes
a. Vestibule	0 sf	50 sf	other admin functions	Vinyl composition tile	
b. Lobby	102 sf	200 sf	other admin functions	Vinyl composition tile	
c. Toilet	52 sf	68 sf	other admin functions	Vinyl composition tile	Existing office space contains multiple functions.
d. Parts	48 sf	100 sf			
e. Director's Work Area	55 sf	100 sf			
f. Future Assistant Office	0 sf	120 sf	Other admin spaces. Apparatus floor.	VCT	To be used by 2 people. Future expansion potential?
h. Break Room	85 sf	175 sf	other admin functions	Vinyl composition tile	
i. Lockers	0 sf	0 sf	other admin functions	Vinyl composition tile	Contained within Corridor
j. Unisex Restroom	0 sf	121 sf	other admin functions	Ceramic tile	Includes a shower
k. Office/Unheated Equipment Storage	2,400 sf	0 sf			Onsite Outside Equipment Storage = 1,200 sf
l. Unheated Equipment Storage	0 sf	6,557 sf		Sealed concrete	(3) 14x14 OH Doors, (2) 12x12 OH Doors, (1) B&G steel w/ 10x10 OH Door and Storage.
m. Heated Equipment Storage	3,520 sf	4,340 sf		Sealed concrete	(4) 14x14 OH Doors and work bench behind equipment Includes 2 maintenance bays, approximately 60x17. Requires additional space exhaust, plus vehicle exhaust collection. Includes space for spare parts, tools and a work bench. Interior wall surface should be non-combustible.
n. Maintenance Bays	0 sf	1,406 sf		Sealed concrete	
o. Mechanical Room	0 sf	200 sf		Sealed concrete	Includes electric and IT/Data.
p. Oil Room	50 sf	150 sf		Sealed concrete	Whole room is containment room. 55 gal drums, room to have a step down.
q. General Storage	630 sf	300 sf		Sealed concrete	174 sf of storage space contained within cold storage bays.
<b>Total Net Square Footage (net/gross %)</b>					
	6,917 sf	13,967 sf			
	0%	10%			Site parking for 7employee vehicles
<b>TOTAL GROSS SQUARE FOOTAGE</b>					
	6,917 sf	15,364 sf			

TOTAL AREA PROPOSED: 15,364 SF

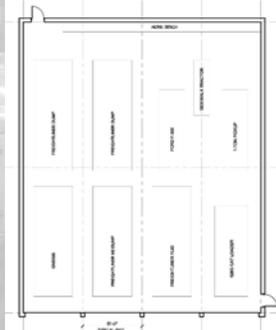


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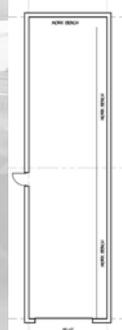
## Program Summary – Space Diagrams:



6,882 SF COLD STORAGE BAYS



4,440 SF HEATED STORAGE BAYS

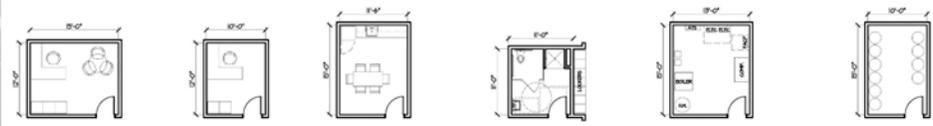


1,406 SF MAINT. BAYS



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### Program Summary – Space Diagrams:



180 SF DIRECTOR OFFICE	120 SF OFFICE	175 SF BREAK RM	121 SF UNI-SEX TOILET	200 SF MECH RM.	150 SF OIL RM.
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