

# 2016 CERTIFIED MILK INSPECTOR REGIONAL UPDATES

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NYS DEPT. OF AGRICULTURE & MARKETS

SIGN IN

FILL OUT DMC 284 CONTINUING  
EDUCATION FORM AND HAND IN

WRITE DOWN QUESTIONS AND GET  
THEM TO US BEFORE YOU LEAVE

Presentations will be on our website at

<http://www.agriculture.ny.gov/DI/DInews.html>



# Automatic Milking Installations: Planning, Start – Up & Routine Inspections

 DeLaval

 LELY

It's Not Complicated



# Planning Stage

**GET INVOLVED EARLY**

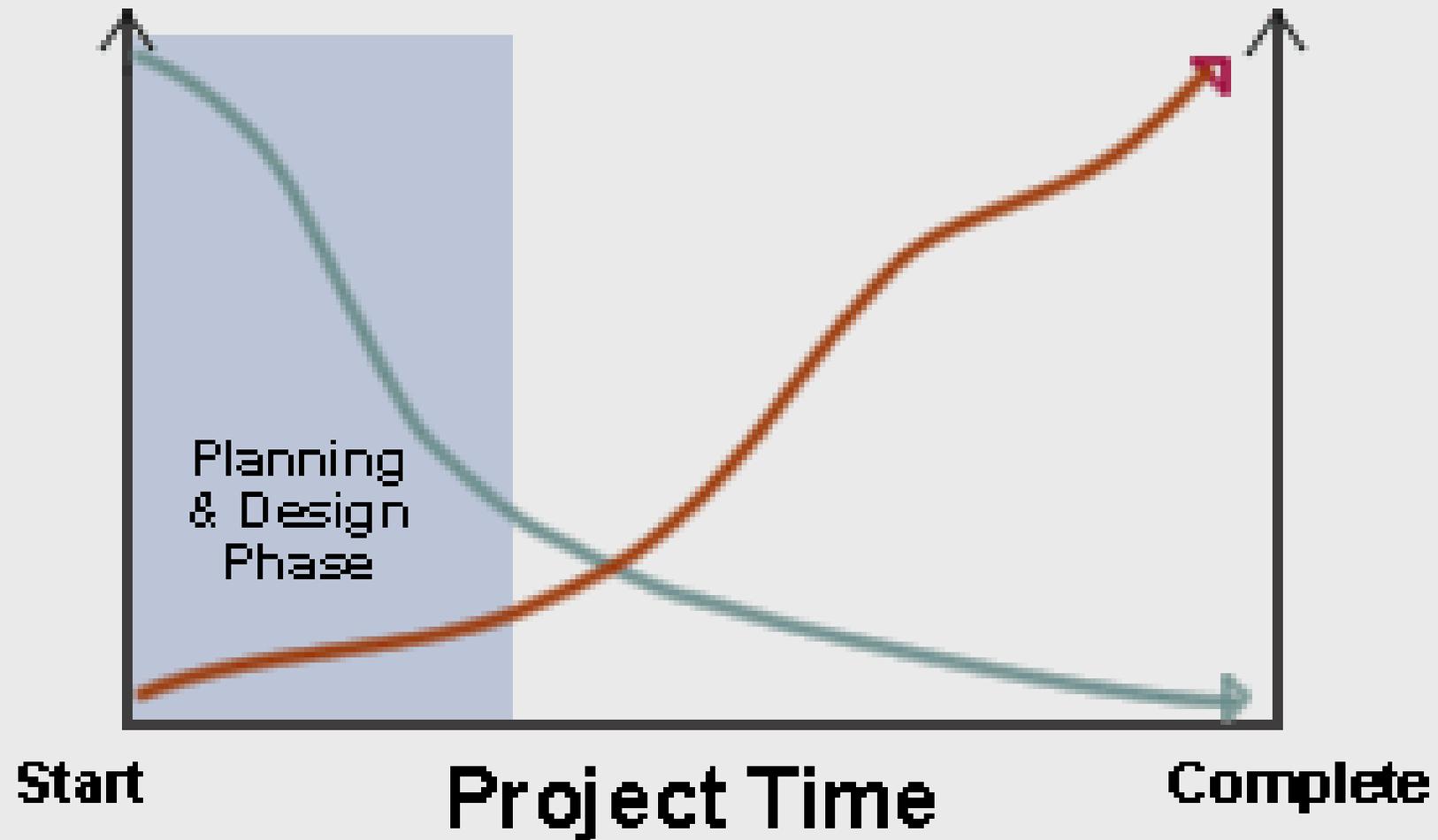
**REQUIRE EARLY INVOLVEMENT**

If you haven't already – make sure your producers are aware that they need to let you know when they are planning an installation or an upgrade to their facility and milking system

# Cost Influence Curve

Ability to Influence Cost

Cumulative Project Cost

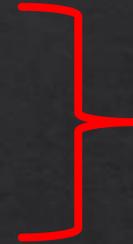


# What can you bring to the table - Planning – items related to conventional dairies

- ◆ Wall and floor material and construction
- ◆ Drain locations, considerations and options – direct wash water
- ◆ Labeling water systems
- ◆ Ventilation and lighting plan – for both MH and AMI room
- ◆ Traffic flow, boot wash station – clean access for all personnel
- ◆ Storage – utensils (brushes, etc.), single service items – air blow filters, milk filters, etc.

## PLANNING - Items unique to AMIs and Appendix Q

- ◇ Documentation for computer control systems
- ◇ Abnormal Milk Detection
- ◇ Teat Prep protocol

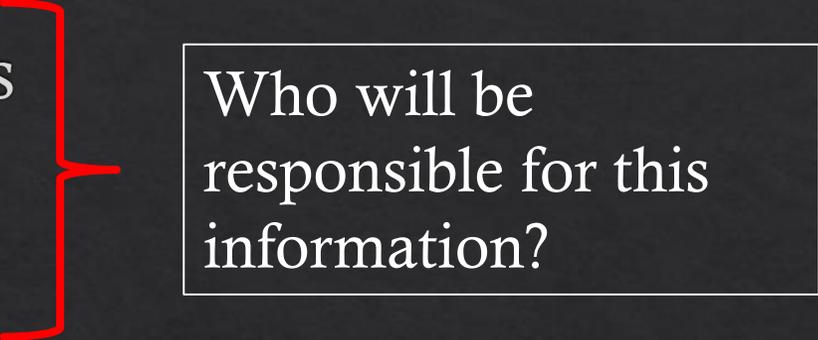


Who will be responsible for this information?

- ◇ Block and bleed valve testing – who will work with you on this, installer or rep
- ◇ Positive Air Ventilation System – who is responsible for design and installation
- ◇ Clean access – good layout
- ◇ How to inspect the unit – schedule to work with installer or rep
- ◇ Wash systems – hot water makeup (on board vs. external source), pipeline length
- ◇ Contact for a technical rep for the manufacturer to ask questions

## PLANNING - Items unique to AMIs and Appendix Q

- ◆ Documentation for computer control systems
- ◆ Abnormal Milk Detection (1r)
- ◆ Teat Prep protocol (13r)



Who will be responsible for this information?

- ◆ Binder at farm
- ◆ File on computer

# PMO - Appendix Q

## **GENERAL REQUIREMENTS FOR AMI COMPUTER SYSTEMS**

AMIs have computer systems that are programmed for monitoring and/or controlling various sensors, instrumentation and the operational state of various devices such as pumps and valves; have data collection, storage and reporting systems; and have communication network capabilities for multiple uses and locations. While electronic and computer systems can furnish a wide range of process verification and anomaly reporting, these are criteria only for compliance with Items 1r, 13r and 14r of this Appendix.

## PMO - Appendix Q

The dairy farm shall have an identified representative(s) that has been trained by the AMI manufacturer or AMI manufacturer's designated representative to make program changes to the AMI system.

A manufacturer's written or electronic documentation addressing the computer system's monitoring and controlling functions related to Items 1r, 13r, and 14r shall explain the devices controlled, the sensors or instruments monitored, and testing procedures.

A document shall bear the name of the identified representative of the dairy farm and shall be available for review at the dairy farm upon request by the Regulatory Agency, Rating Agency and/or FDA.

# PMO - Appendix Q

This documentation shall address Items 1r, 13r, and 14r:

1. The software version used, the devices controlled or monitored and their locations, and the sensors or instruments monitored and their locations;
2. The testing procedures for all of the computer system's controlled and monitoring devices;
3. The procedure for any changes or maintenance to the computers, devices, instrumentation, sensors hardware, etc. and
4. Instructions on how to access the information available on the computer system.

## ITEM 1r. ABNORMAL MILK

AMIs shall have the capability to identify and discard milk from animals that are producing milk with abnormalities. Odor is currently evaluated on a farm bulk milk tank/silo basis and shall not be any different for a herd using AMI technology.

*The dairy farm shall have a documented procedure in place describing how abnormal milk is properly detected and diverted; and that equipment used for the milking of healthy animals has not become contaminated.* The procedure shall also document that a physical change to the AMI system has occurred.

*A verification of all computer system's controlled functions responsible for properly detecting and diverting abnormal milk, shall be conducted and documented at the commissioning of the computer system. This verification means the visual observation by Regulatory Agency personnel; or documentation indicating the testing that was completed by an AMI manufacturer's designated representative; or other means accepted by the Regulatory Agency.* Written or electronic information for all required actions shall be maintained at the dairy farm and shall be made available upon request to the Regulatory Agency, Rating Agency and/or FDA.

Animals producing milk with abnormalities shall be diverted to a holding pen to be milked immediately prior to the milking system being cleaned and sanitized, or the animal(s) are identified through an appropriate identification system so that their milk will be automatically excluded from the milk offered for sale, provided that the parts of the milking system that came into contact with the milk with abnormalities are immediately cleaned and sanitized.

## ITEM 13r. MILKING – FLANKS, UDDERS AND TEATS

AMI manufacturers shall submit data to FDA to show that the teat prepping system employed in their milking system is equivalent to Item 13r., **ADMINISTRATIVE PROCEDURES #4** of this *Ordinance*: “Teats shall be treated with a sanitizing solution just prior to the time of milking and shall be dry before milking.” Each AMI installer shall provide the dairy producer and the Regulatory Agency with a copy of this FDA acceptance, including a detailed description of the accepted equivalent procedure. Each dairy producer shall keep a copy of the accepted teat prep protocol along with the appropriate AMI manufacturer’s teat prep protocol verification procedures on file at the dairy farm.

A verification of all computer system’s controlled functions responsible for proper teat preparation shall be conducted and documented at the commissioning of the computer system. This verification means the visual observation by Regulatory Agency personnel; or documentation indicating the testing that was completed by an AMI manufacturer’s designated representative; or other means accepted by the Regulatory Agency. Written or electronic information for all required actions shall be maintained at the dairy farm and shall be made available upon request to the Regulatory Agency, Rating Agency and/or FDA.

# PLANNING - Items unique to AMIs and Appendix Q

◆ Block and bleed valve testing – 14r Protection

## ITEM 14r. PROTECTION FROM CONTAMINATION

The teat cups (inflations) of the milking cluster shall be adequately shielded, or variations may be individually evaluated and found to also be acceptable by FDA and the Regulatory Agency, during the teat prepping process to assure that contaminants shall not enter through the teat cups and get into the milk.

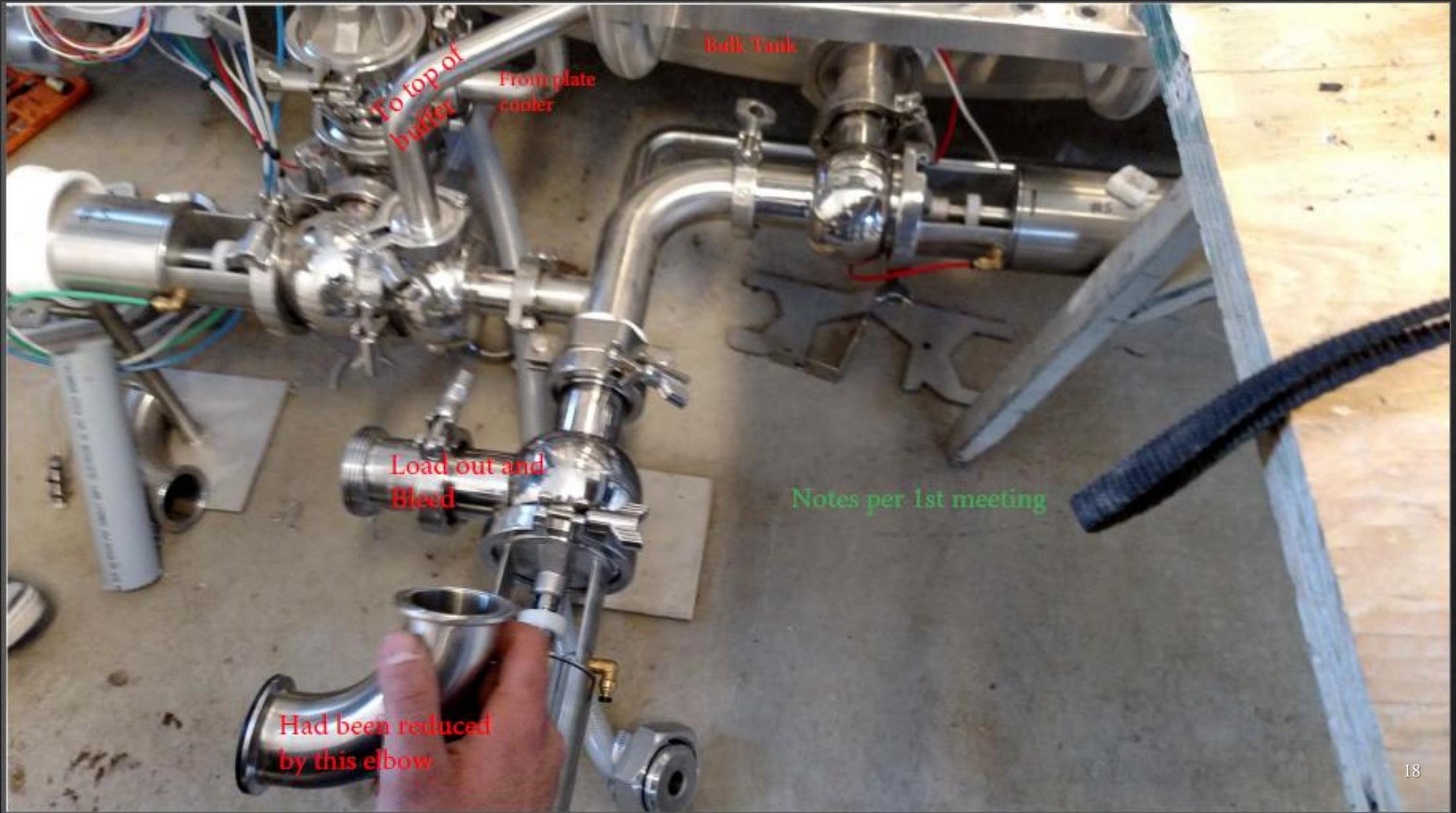
AMIs are designed to automatically shift from milking to cleaning/sanitizing positions; therefore, adequate separation of milk and CIP solution shall be provided to minimize the risk of cross contamination of milk with cleaning and/or sanitizing solutions. A fail-safe valve system providing protection equivalent to an inter-wired block-and-bleed valve arrangement, as referenced in Item 14r of this Ordinance, shall be located as needed to prevent cross contamination. Separation shall be provided between milk with abnormalities and milk intended for sale, and between cleaning/sanitizing solutions and milk intended for sale.

Each dairy producer shall keep a copy of the AMI manufacturer's testing verification procedures for the fail-safe valve systems on file at the dairy farm.

AMIs, which have a wash line extending into the wash vat that is continuously connected to the milking system, shall have a valving arrangement that provides for an air break equal to the diameter of the wash line.

*From 14r of Section 7(6): Controls for the fail-safe system are tested and secured as directed by the Regulatory Agency in order to prevent unauthorized changes.*

- ◆ Block and bleed valve testing – who will work with you on this, installer or rep
  
- ◆ Each system is unique – very important to learn the unit you are inspecting
  - ◆ Bulk tank valves – buffer tank, two tank system, one tank system
  - ◆ CLOSE COUPLING – pic next slide
  - ◆ Valves on the unit
    - ◆ Protection of milk line during wash after abnormal or treated cow
    - ◆ Protection of milking system during teat prep – DeLaval, GEA



To top of  
buffer

From plate  
cooler

Bulk Tank

Load out and  
Bleed

Notes per 1st meeting

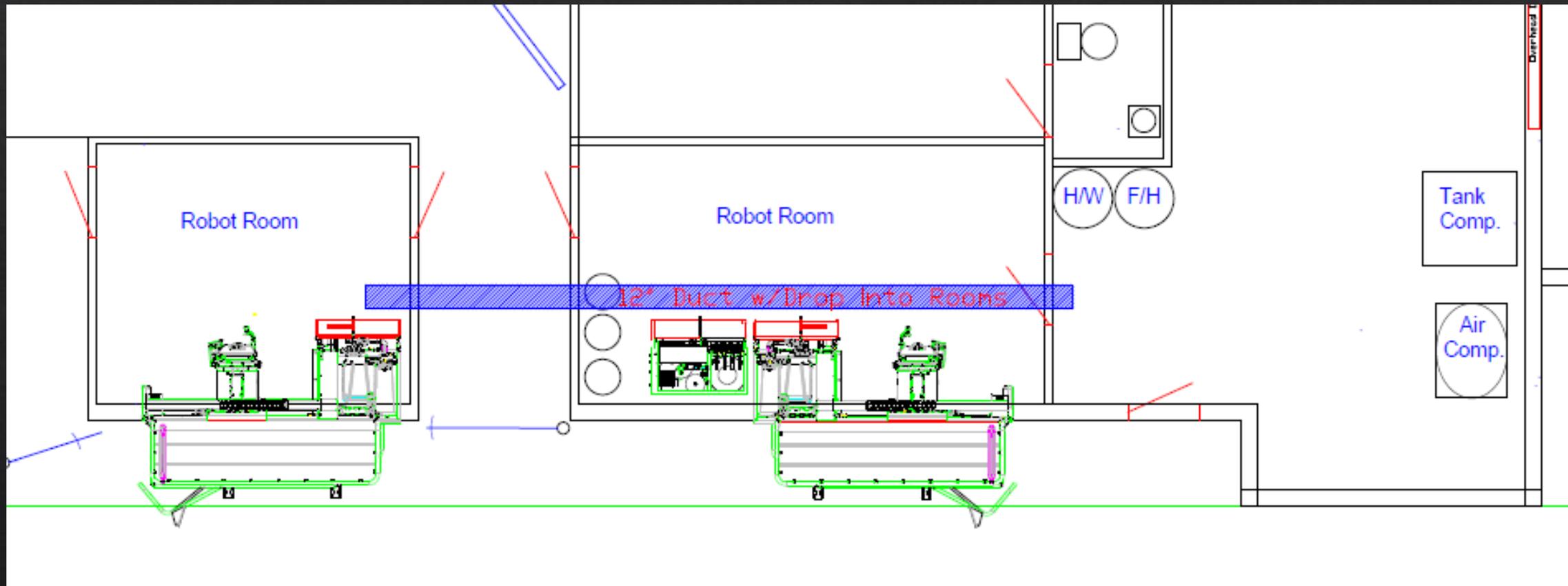
Had been reduced  
by this elbow

- ◆ Positive Air Ventilation System – who is responsible for design and installation
  - ◆ Fan sized to provide 40 ACH when operating – this is not in the PMO

## ITEM 12r. UTENSILS AND EQUIPMENT – STORAGE

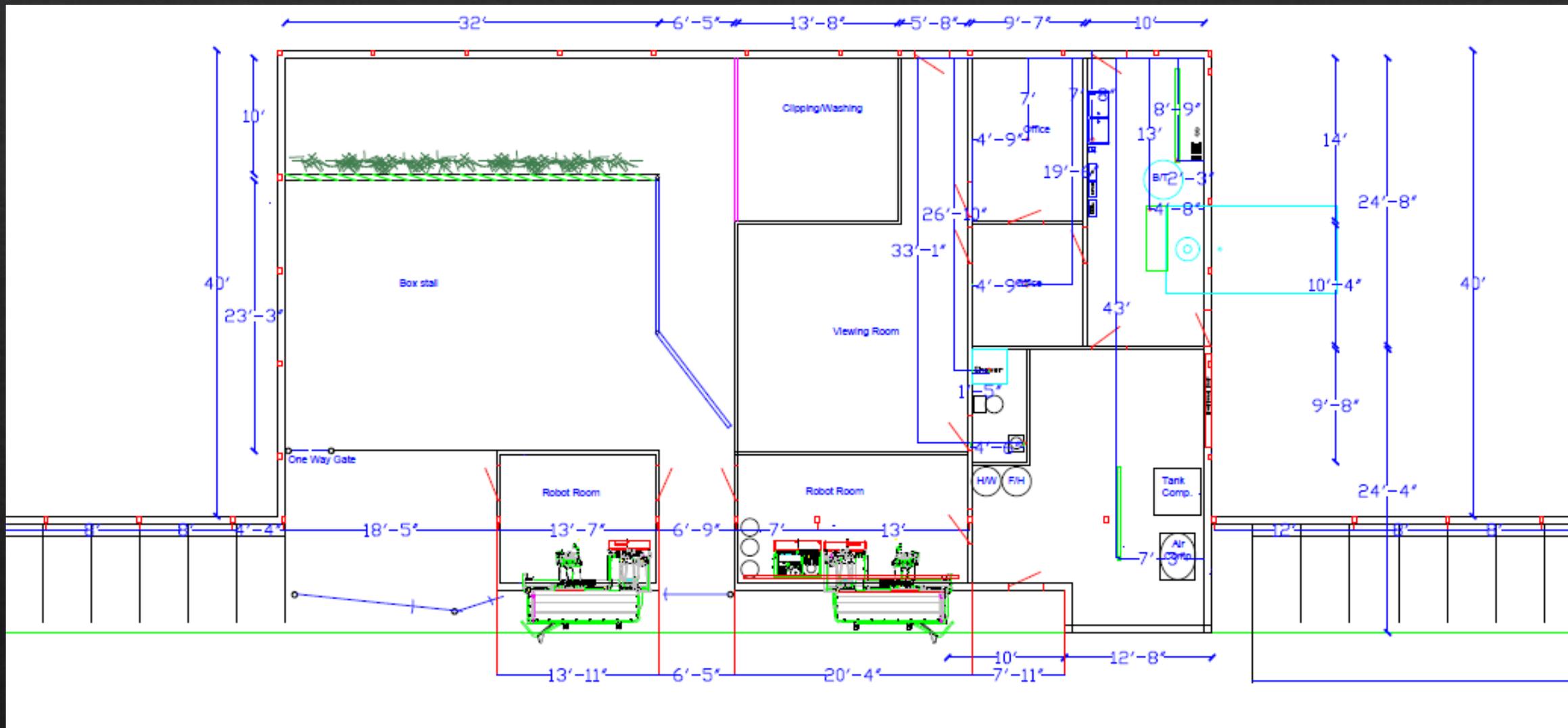
*AMIs shall have positive air ventilation systems in operation whenever the milking system is being cleaned and/or sanitized. The air for this ventilation system shall come from outside the cattle housing area and shall be as clean and dry as practical.*

This positive air ventilation system shall also run during milking if needed to minimize odors, moisture and/or for pest control.



◇ Clean access (2r) – requires a good layout

\* Wash systems – hot water makeup (on board vs. external source), pipeline length – some manufacturers specify a **MAXIMUM** pipeline length





◆ How to inspect the unit – schedule to work with installer or rep



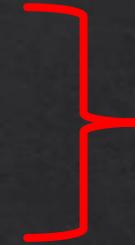
# Commissioning / Routine Inspections

- ◆ Valve Testing – at commissioning
- ◆ Abnormal milk detection – at commissioning; records review during routine
- ◆ Teat prep – at commissioning; routine - operating as designed?
- ◆ Binder at farm with computer documentation – updated when necessary
- ◆ Positive air system – built as designed; is it working (i.e. effective), IS IT ON WHEN IT'S SUPPOSED TO BE
- ◆ Wash records / temp records / abnormal milk diversions – can you access this
- ◆ Component cleanliness – those items you can take apart, air blow filters

- ◆ So is everything all worked out and just peachy in robot land????????????????
- ◆ Going to need some push to get the computer documentation presented in a format that follows Appendix Q, easy to inspect – will recruit some help from YOU!
- ◆ Not sure that all manufacturers have come up with a field verification for the abnormal milk detection system
- ◆ Still some outstanding construction items on FDAs radar

## PLANNING - Items unique to AMIs and Appendix Q

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Who will be responsible for this information?

# Help and Assistance

[Christopher.Hylkema@agriculture.ny.gov](mailto:Christopher.Hylkema@agriculture.ny.gov) (716) 725-5080

AMI Manufacturer

FDA AMI Training 2017 – *may* be open to NY CMIs

Milking Equipment Installer Guideline

<http://www.agriculture.ny.gov/DI/DIprograms.html>

YOU HAVE QUESTIONS?

