



# 1<sup>st</sup> Informational Briefing

## Scope of Work Items #4, 8, 9 & 10

March 25, 2019

- Scope of Work Item #4 – Review of Current CAD/RMS Systems
- Scope of Work Item #8 – Recommendations on Existing Technologies
- Scope of Work Item #9 – Evaluate Designated Space
- Scope of Work Item #10 – Recommendations on Radio Systems

Text from the SoW: *“Review Current CAD/RMS systems and make recommendations for future use.”*

- From IXP’s experience, it is best to not force a change in Records Management Systems (RMS) as part of a dispatch consolidation.
- The best approach is to develop interfaces from whatever Computer Aided Dispatch (CAD) product is used for consolidated dispatching to transfer CAD/dispatch information into RMS:
  - Allows each agency to continue their RMS operations as they are today
  - Allows each agency to have full access to their legacy data
  - Allows CAD to push information out for each RMS system at prescribed intervals (such as at “dispatch” and at incident “closure”) so field personnel can complete their RMS processes
- Regardless of the CAD product, the regional dispatch center should be configured to allow queries directly into Valcour (for Burlington, South Burlington, Colchester and Winooski PDs) and Spillman (for Williston PD) to allow them to support field personnel as needed as is done today.

- The Tyler Technologies/New World CAD product is capable of multi-jurisdictional and multi-disciplinary functionality.
- IXP has seen this product used successfully in many other centers with similar needs. We also conducted an online demonstration session with them to help confirm system functionality.
- The product is already in use in Burlington as the Fire CAD, and initial licensing was set in anticipation of this becoming a regional solution. It should be easy to make any additional licensing adjustments needed to accommodate the number of workstations and users within the regional center.

- Text from the SoW:

*“Provide recommendations on the most efficient way to incorporate the use of existing technologies, including the following:*

- *9-1-1 customer premises equipment*
- *Computer-aided dispatch (CAD)*
- *Recording equipment*
- *Radio equipment*
- *Networking*
- *Workstation equipment*
- *Fire alarm monitoring system”*

- From IXP's experience, there are seldom many opportunities to re-use existing technology systems in new consolidated communications centers.
- This primarily due to the need to get the new center fully built-out, tested and functional before the cutover of operations from existing centers.
- There are sometimes opportunities to re-use some components from legacy systems depending on their age, suitability for the new operation, ability to be reconfigured into the new center's operations, etc.

- Telephone Systems
  - A new stand-alone telephone system will be needed for the new Center so it can be fully installed and operationally trained on prior to cutover.
  - 9-1-1 system workstations would be added later once the State is ready to allow the Center to become a PSAP.
  - The telephone system at the current center selected as the backup location will need to be reconfigured to allow it to fully function as a backup (and 9-1-1 calls are automatically backed up by other PSAPs within the state network).
- CAD System
  - As discussed in Item #4, the Tyler Technologies/New World CAD system currently used by Burlington for Fire/EMS dispatching could be reconfigured to support CCPSA's multi-jurisdictional and multi-disciplinary CAD needs.

- **Logging and Recording Systems**
  - A new stand-alone logging and recording (L&R) system will be needed for the new Center so it can be fully installed and operationally trained on prior to cutover.
  - One of the existing L&R systems from the existing centers (except for the one chosen as the backup location) could later be moved and reconfigured to allow it to serve as the backup L&R system at the regional center.
  
- **Radio Console System**
  - A new stand-alone radio console system will be needed for the new Center so it can be fully installed (with enough workstation positions to meet initial needs) and operationally trained on prior to cutover.
  - Currently, the centers use a variety of radio console products (Motorola MCC5500, Motorola MIP5000 and Avtec Scout (now owned by Motorola)). Depending on the console system selected for the new Center, some of the existing workstations may be able to be reconfigured and moved over to the new center to complete the outfitting of positions.



- Fire Station Alerting System
  - A new stand-alone fire station alerting (FSA) system will be needed for the new Center so it can be fully installed and operationally trained on prior to cutover.
- Networking and Local Domain
  - A new stand-alone local domain and network will be needed for the new Center so that all of its systems can be properly configured and tested prior to cutover.
  - This will also allow the new center to be protected within its own firewalls and security systems and to tightly control/monitor any interfaces with external systems.
- “Administrative” Workstations
  - Beyond workstations for things like telephones, 9-1-1, CAD and radio console each position in the new center will need to be equipped with an “administrative” workstation at each position for access to other internal and/or external systems.
  - Typically these would all be newly installed for a new Center, but some re-use might be possible to complete the filling in of all positions.

- **Fire Alarm Monitoring System**
  - Burlington is the only comm center currently providing direct monitoring of fire alarm systems.
  - All other jurisdictions have their local alarm systems first report to a Central Station Alarm monitoring company, and these companies then call in alarms to the dispatch centers with 10-digit phone calls.
  - The new Center should establish a specific 10-digit number for alarm companies to report into so that it is easier in the Center to recognize calls that are coming in from alarm companies.
  - The new Center will need to be set up with Burlington's monitoring system (Sigcom TRX50) so that it can be fully installed and tested prior to Burlington migrating. The system currently at Burlington dispatch could be left in place if Burlington is used as the backup center, or relocated to whatever location is selected for the backup location.
- **Master Time Synchronization System**
  - A new Master Time Synch system will be needed for the new Center so it can be fully integrated with all systems as they are deployed within the center.
- **Video Displays and Workstations**
  - Depending on the specific systems that the Center might need to access, a variety of video display monitors and/or workstations will need to be added at the center to accommodate this functionality.

- Text from the SoW:

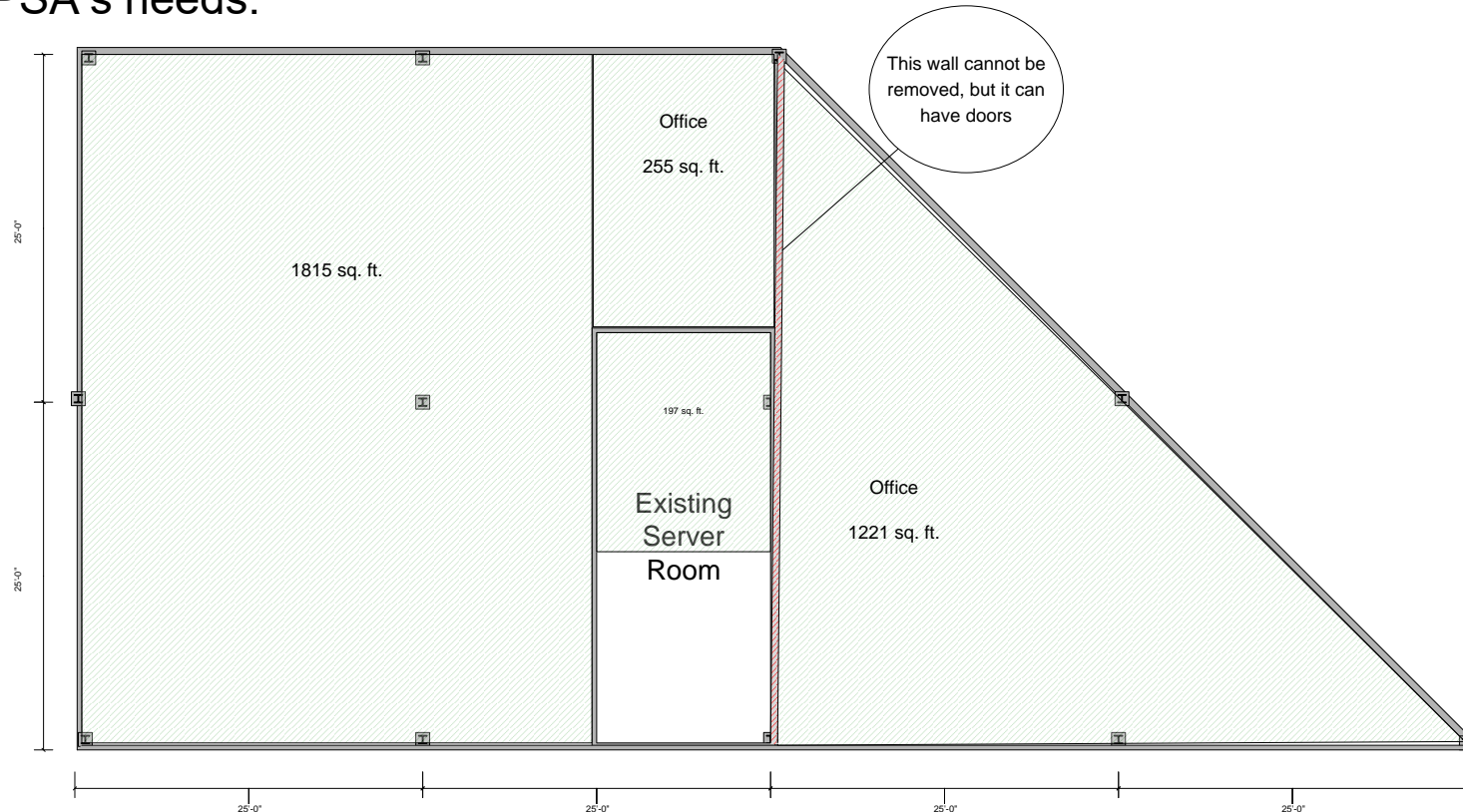
*“Evaluate the designated space and provide recommendations for configuration based on the operational and staffing requirements, including:*

- *Comfort*
- *Security*
- *Utilities*
- *Technology*
- *Environment Needs*
- *Console position, configuration and planned assigned use*
- *Adjacency access such as lockers, break room, storage, and access to restrooms”*

# #9 – Evaluate Designated Space

*Tackling the toughest challenges in public safety!*

- The existing 2<sup>nd</sup> floor of the building where South Burlington PD is located has approximately 3,450 s.f. of space that could be converted into the regional dispatch center.
- While this space has some odd geometry and constraints (an existing server room that can't be moved, and a triangular area on one side of wall that can't be removed) there are several possible layouts that could meet CCPSA's needs.



## #9 – Evaluate Designated Space

- Industry best practices, and NFPA Standard 1221, identify certain functional capabilities that are needed for emergency communications centers. Among these are that centers should have restroom, kitchen/break spaces and adequate operational space (and storage) within their secure perimeter so that personnel don't need to leave that security environment to conduct their work.
- In addition, best practices also include features such as a 'quiet room' to allow personnel a space to use if needed after difficult incidents.
- It is also advisable to include some degree of meeting/training space to allow those activities (at least to some degree) to be integrated into the secure operational area.
- IXP has developed a number of floor-plan alternatives that could meet most of these goals within the space available (examples follow). In addition, South Burlington PD has advised that scheduled use of their larger meeting/training space could be accommodated.

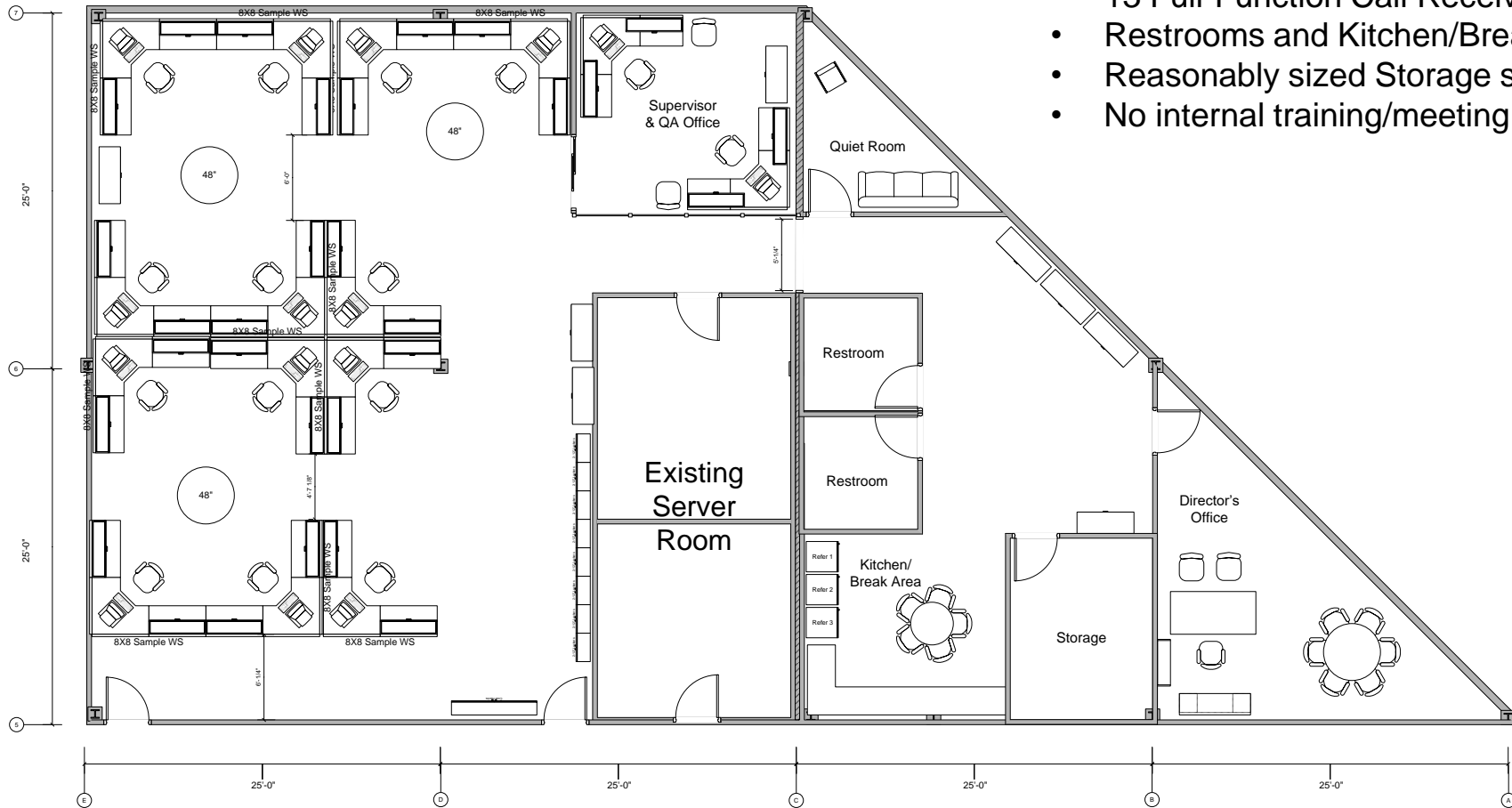
# #9 – Evaluate Designated Space

*Tackling the toughest challenges in public safety!*

- Idea 1A

This layout could support:

- 13 Full-Function Call Receiving/Dispatching Workstations
- Restrooms and Kitchen/Break area internal to the Center
- Reasonably sized Storage space
- No internal training/meeting room



# #9 – Evaluate Designated Space

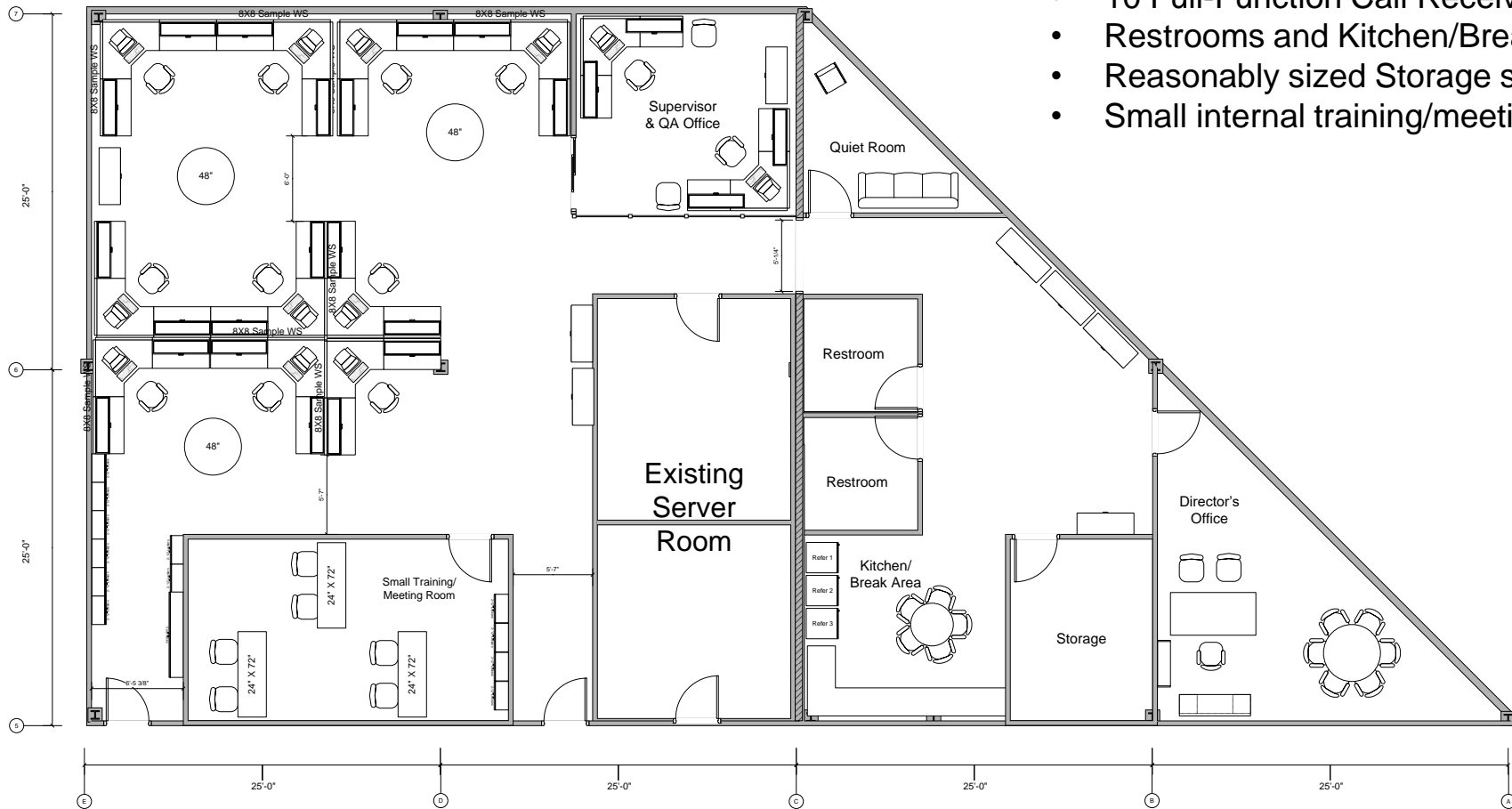
*Tackling the toughest challenges in public safety!*

- Idea 1B

Additional idea, Not Presented at Meeting

This layout could support:

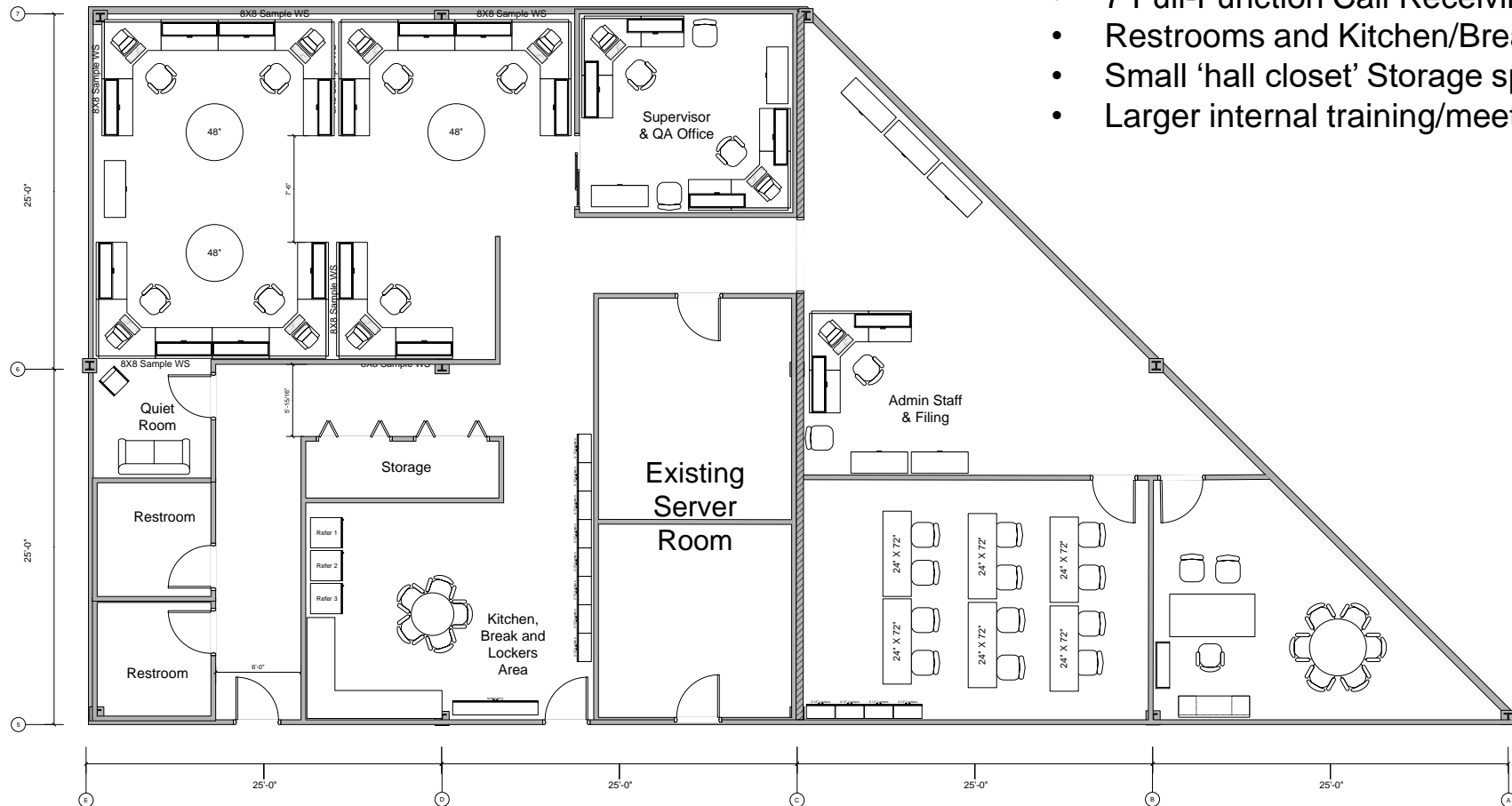
- 10 Full-Function Call Receiving/Dispatching Workstations
- Restrooms and Kitchen/Break area internal to the Center
- Reasonably sized Storage space
- Small internal training/meeting room



# #9 – Evaluate Designated Space

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- Idea 2A



This layout could support:

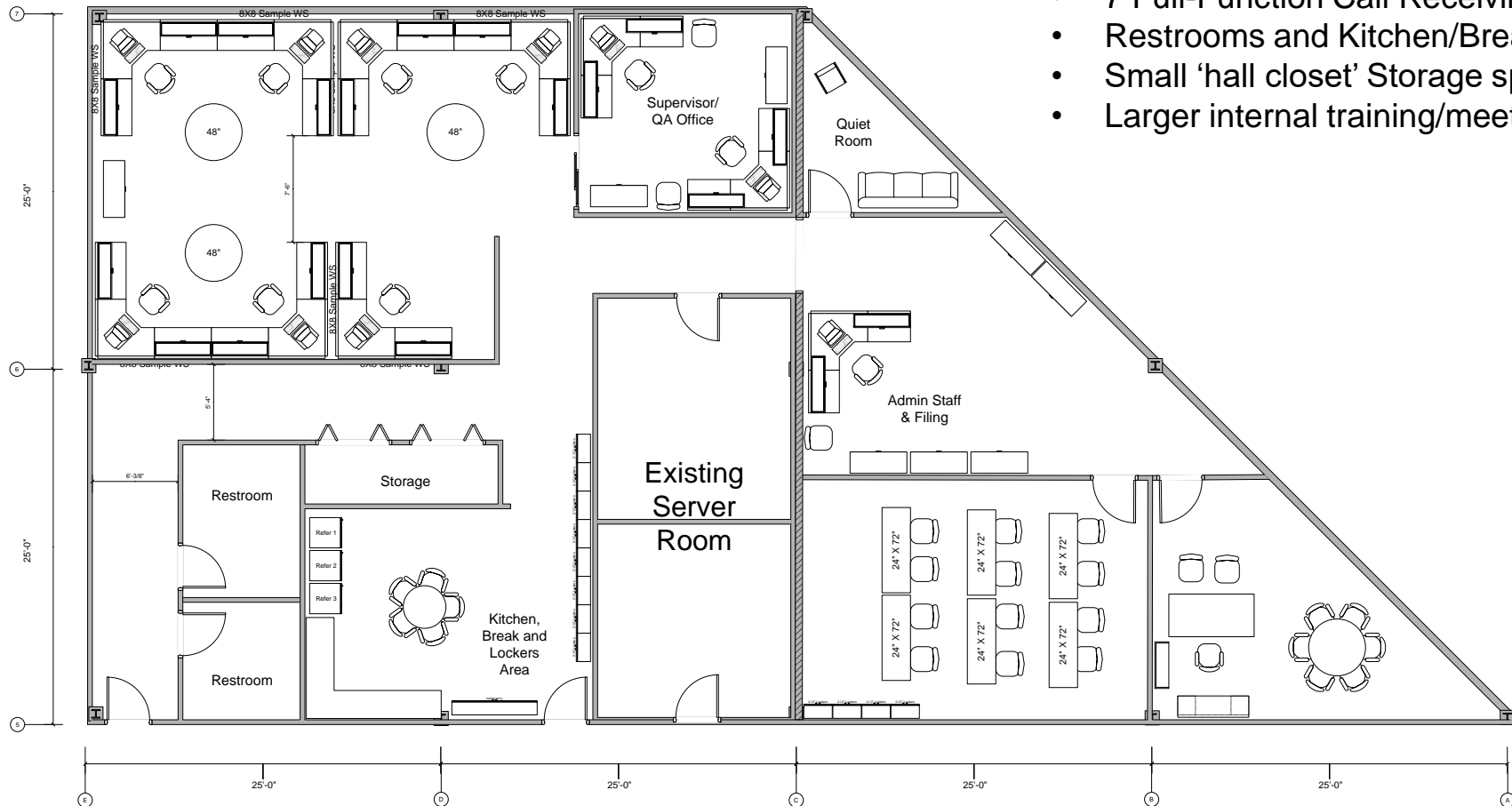
- 7 Full-Function Call Receiving/Dispatching Workstations
- Restrooms and Kitchen/Break area internal to the Center
- Small 'hall closet' Storage space
- Larger internal training/meeting room



# #9 – Evaluate Designated Space

*Tackling the toughest challenges in public safety!*

- Idea 3A



This layout could support:

- 7 Full-Function Call Receiving/Dispatching Workstations
- Restrooms and Kitchen/Break area internal to the Center
- Small 'hall closet' Storage space
- Larger internal training/meeting room

- Text from SoW:

*“Using information provided by a single representative of CCPSA, including a list of all member community public safety radio channels, their current use, frequency licenses, and approximate coverage per channel, provide recommendations on radio system(s), head end, microwave, back-haul, frequencies, licensing, the reuse or repurposing of existing (in place) equipment and frequencies, considering end of useful life of current equipment, replacement and upgrades. (This should not be an ultimate radio system for CCPSA but rather one that will be sufficiently robust, efficient, and effective until such time as CCPSA determines if it wishes to develop, or own, or operate a radio system covering all of its member communities. CCPSA does not plan on even such an endeavor until CCPSA has been operating with all its member communities.) Please note however, that CCPSA prefers copper back haul vs. internet back haul for resiliency purposes.”*

- Regional dispatch consolidations are easiest to execute if the agencies being served are already operating on a unifying radio system infrastructure.
- Recognizing that a single unified radio system is not currently in place, and that consideration of development of such a system won't take place until after CCPSA is fully operational, it will be necessary to integrate all of the existing systems into the radio console system implemented for the new regional Center.
- This is a very common situation for consolidations of your size and sequencing, and should be effective as long as staffing levels and roles/responsibilities are properly defined.

- Where possible (within technology and encryption constraints) some channels can/should be patched together within the Center to improve dispatcher capabilities and overall comm center functionality. This will be discussed more when we review staffing model considerations in a later briefing.
- In addition to the specific wireline links to the existing radio systems that will need to be put in place, the Center should be equipped with several multi-channel VHF and UHF control station radios to be used as a back-up to the wireline interfaces and to access regional channels that are not otherwise used on a routine basis.
- Further, multi-channel radios will likely need to be added to whichever center is chosen as the backup so it can function on all of the most important channels utilized by the Center.

- Schedule look-ahead:
  - 04/29/2019 – IXP will deliver the draft results of our analysis and recommendations in a briefing that will focus on the following SOW items:
    - Section A, #11 – Recommend Options for Backup Center
    - Section A, #1 – Transition Plan for Dispatch Centers
    - Section A, #2 – Handling of Phone Calls from Jurisdictions
    - Section A, #3 – Recommendations on Development of SOPs
  - 05/20/2019 – IXP will deliver the draft results of our analysis in a briefing that will focus on the following SOW items:
    - Section A, #5 – Staffing Levels and Shift Configurations
    - Section A, #6 – Strategy for Transition of Existing Workforce
    - Section A, #7 – Best Call Taking Strategy for Combined PSAP/Dispatch
    - Section A, #12 – Review of Alarm Ordinances

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